

SURVEY OF THE FISH RESOURCES OF ANGOLA

Cruise Report No.1/2005

**Survey of the demersal resources
25 March – 24 April 2005**

**Institute of Marine Research
IMR, Bergen
Norway**

**Instituto Nacional de Investigação Pesqueira
INIP, Luanda
Angola**

The DR FRIDTJOF NANSEN RESEARCH PROGRAMME is sponsored by the Norwegian Agency for Development Cooperation (NORAD). The Food and Agriculture Organization of the United Nations (FAO) provides support to the Programme through Project GCP/INT/730/NOR: International Cooperation with the Nansen Programme: Fisheries Management and Marine Environment. This project is the follow-up to the Project NORAD/FAO/UNDP GLO/92/013. The Institute of Marine Research (IMR), Bergen, Norway is responsible for the implementation of the Programme in cooperation with FAO Fisheries Department and the local fisheries administrations. The aim of the Nansen Programme is to assist developing countries in fisheries research, management and institutional strengthening.

The programme has previously conducted the following demersal surveys in the area:

| | | | |
|--------------|---|----------------|--------------|
| January 1985 | - | June 1986 | (6 surveys) |
| January 1989 | - | December 1989 | (3 surveys) |
| May 1991 | - | September 1992 | (3 surveys) |
| January 1994 | - | March 2004 | (14 surveys) |

CRUISE REPORTS "DR. FRIDTJOF NANSEN"

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**Survey of the demersal resources
25 March – 24 April 2005**

by

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Bergen, 2005

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CHAPTER 1 INTRODUCTION

1.1 Objectives

The objectives of the cruise had been previously discussed and agreed upon by the responsible of the Demersal Programme of the Instituto Nacional de Investigação das Pescas (INIP), of Angola, and the responsible from the Institute of Marine Research, Bergen (IMR) for the Angolan Demersal Programme, and were the following:

To survey, map, and describe the distribution, composition and abundance of the main demersal species, with special emphasis on seabreams (Sparidae), croakers (Sciaenidae), grunts (Haemulidae), groupers (Serranidae), hakes (Merlucciidae) and shrimps (*Parapenaeus longirostris* and *Aristeus varidens*) on the Angolan shelf and slope (down to 800 m). The regions from Cunene River (17°14'S) to Tombua (15°40'S), and from Benguela (12°35'S) to Congo River (06°00'S) are surveyed by using bottom trawl and the swept-area method.

To collect biological data as length, weight, sex and maturity of *Dentex macrophthalmus*, *D. angolensis*, *Pagellus bellottii*, *Pseudotolithus typus*, *Merluccius polli*, *Aristeus varidens*, *Parapenaeus longirostris*, *Chaceon maritae* and the commercially important flatfish (Citharidae, Soleidae, Cynoglossidae and Bothidae) for future analyses.

To monitor the general hydrographic conditions using a CTD-sonde on each trawl station and map the temperature, salinity and oxygen along standard INIP hydrographic profiles.

1.2 Participation

The scientific staff consisted of:

From INIP, Angola: Moustapha DIEDHIU (25/3-24/4, Local Cruise Leader), Vírgilio ESTEVÃO (25/3-24/4), Pedro PANZO (14/4-24/4), Silvi EDITH (25/3-24/4), Gisela RAMOS (25/3-24/4), Nilsa ALVES (25/3-14/4), Alberto FILOMENA (25/3-14/4), Mário FORTUNATO (14/4-24/4), Domingos PEDRO (14/4-24/4), Guilherme CAMARADA (14/4-24/4)

From CRIM, Angola: António BUCO (25/3-14/4), Miguel GOURGEL (25/3-14/4), Enoque CANGAJO (25/3-14/4), Fernando GOMBO (14/4-24/4), David QUISSUNGO (14/4-24/4)

From IMR, Norway: Espen JOHNSEN (25/3-24/4, Cruise Leader), Diana ZAERA (25/3-24/4), Thor Egil JOHANSSON (25/3-24/4), Ole Sverre FOSSHEIM (25/3-24/4)

From California Academy of Science, USA: Tomio IWAMOTO (25/3-24/4)

1.3 Narrative

R/V “Dr Fridtjof Nansen” left Walvis Bay, Namibia at 16h00 on the 25th of March 2005 and steamed northwards. The sampling started the morning of 27th of March with trawl and hydrographic stations off the mouth of Cunene River. A standard geographical allocation of the trawl stations was implemented in 2003. Therefore, the station positions in the southern region have been similar in the 2000, 2003, 2004 and 2005 surveys. The southern region was finished surveyed in the late evening of the 29th of March. Standard hydrographic transects were carried out west off Baía dos Tigres and Pta. Albina. The slope off Baía dos Tigres has a very steep and rough bottom between 200 and 600 m, hence this area was not adequately trawled. The shelf between Tombua and Benguela is very narrow and steep and the bottom conditions are not suitable for trawling.

An acoustic calibration was carried out on the 30th and 31st of March in Baía dos Elephantes of frequencies 18kHz, 38kHz and 120kHz. The trawling started the afternoon of 1st of March in the central region. The positions of the trawl stations in the central and northern regions were the same as during the demersal surveys of 2002, which have been used as the standard geographical allocation of the trawl stations for the 2002-2005 surveys. In the central region, five standard hydrographic transects were carried out at Lobito, Pta. do Morro, Rio Longa, Cabo Ledo and Pta. das Palmerinhas. On the 11th of April the survey of the central region was completed and the survey continued into the northern region. The vessel arrived Luanda in the morning of 13th of April to change crew and some Angolans scientists. It departed on the 15th of April to continue the survey in the northern region. The northern region was completed on the 24th of April and R/V “Dr. Fridtjof Nansen” called port in Luanda the evening of the 24th of April. In the northern region, three standard hydrographic transects were carried out at Ambriz, Ambrizete and Ponta da Moita Seca.

CHAPTER 2 METHODS

2.1 Survey effort

Table 2.1 presents the survey area by depth strata, allocation of trawl stations, total number of successful swept-area hauls, number of hauls failed, number of CTD stations, and the distance surveyed. Table 2.1 also shows the allocation of effort relative to the stratum size as percentage hauls versus percentage area, by depth, by region, and by the total area. The overall average coverage was 1 valid trawl station per 80 NM². Figures 2.1-2.3 show the cruise tracks in the southern, central and northern regions, respectively, and the locations of bottom trawl stations and hydrographic transects.

Table 2.1 Survey design and effort of the 2005 demersal survey. Size of the survey area by depth stratum, allocation of trawl stations, proportion of stations relative to stratum size, total number of successful swept-area hauls, number of hauls failed (in brackets), number of CTD stations, and the distance surveyed, divided in to: southern region (Cunene to Tombua), central region (Benguela to Luanda) and northern region (Luanda to Congo River).

| Region | Depth strata (m) | | | | | | | | | Valid | Failures | CTD | Distance |
|---------------------------|------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------------|----------|-----|-------------|
| | 20-50 | 50-100 | 100-200 | 200-300 | 300-400 | 400-500 | 500-600 | 600-700 | 700-800 | | | | |
| Cunene-Tombua | | | | | | | | | | | | | |
| Area (NM ²) | 507 | 591 | 594 | 100 | 77 | 48 | 39 | | | 1956 | | 38 | 315.8 |
| # hauls (BT) | 7 | 5(4) | 7 | 1 | 1 | | 1 | 1 | 1 | 24 | 4 | | |
| %area | 25.9 | 30.2 | 30.4 | 5.1 | 3.9 | 2.5 | 2.0 | 0.0 | 0.0 | 11.8 | | | |
| %hauls | 29.2 | 20.8 | 29.2 | 4.1 | 4.1 | | 4.1 | 4.1 | 4.1 | | | | |
| Benguela-Luanda | | | | | | | | | | | | | |
| Area (NM ²) | 1068 | 1586 | 1439 | 407 | 372 | 343 | 346 | 268 | 357 | 6186 | | 126 | 1092.3 |
| # hauls (BT) | 17 | 20(1) | 14(1) | 6 | 6(1) | 4 | 5 | 6 | 6 | 84* | 3 | | |
| %area | 17.3 | 25.6 | 23.3 | 6.6 | 6.0 | 5.5 | 5.6 | 4.3 | 5.8 | 37.4 | | | |
| %hauls | 21.4 | 23.8 | 16.6 | 7.1 | 7.1 | 4.8 | 5.9 | 7.1 | 7.1 | | | | |
| Luanda-Congo River | | | | | | | | | | | | | |
| Area (NM ²) | 1379 | 1969 | 1940 | 601 | 550 | 437 | 409 | 408 | 702 | 8395 | | 111 | 1334.0 |
| # hauls (BT) | 14 | 20(3) | 21(1) | 7 | 6 | 6 | 7 | 7 | 10 | 99** | 4 | | |
| %area | 16.4 | 23.5 | 23.1 | 7.2 | 6.6 | 5.2 | 4.9 | 4.9 | 8.4 | 50.8 | | | |
| %hauls | 14.2 | 20.4 | 21.4 | 7.1 | 6.1 | 6.1 | 7.1 | 7.1 | 10.2 | | | | |
| Grand total | | | | | | | | | | | | | |
| Area (NM ²) | 2954 | 4146 | 3973 | 1108 | 999 | 828 | 794 | 676 | 1059 | 16537 | | | |
| # hauls (BT) | 38 | 45(8) | 42(2) | 14 | 13 | 10 | 13 | 14 | 17 | 207*** | 11 | 275 | 2742.1 |
| %area | 17.9 | 25.1 | 24.0 | 6.7 | 6.0 | 5.0 | 4.8 | 4.1 | 6.4 | | | | |
| %hauls | | | | | | | | | | | | | Total hauls |

*Two hauls deeper than 800 m not included.

**One haul deeper than 800 m not included.

***Three hauls deeper than 800m not included.

A stratified semi-random survey design was used (see Table 2.1) with depth and area as stratifying variables. Hauls were carried out along transects perpendicular to the coast, which were approximately 15 NM apart as shown in Figure 2.1-2.3. Trawl station allocation was approximately proportional to stratum size. The planned design was sometimes slightly modified due to unsuitable bottom conditions or, in the northern region, non-accessible areas with oil exploitation.

In a meeting in 2003 it was decided that the trawl positions of the 2000 demersal survey off southern Angola should be used as standard for future surveys as it had a reasonable good coverage of the southern region. Furthermore, it was decided that the trawl positions of the 2002 demersal survey should be used as standard for future surveys in the central and northern regions as the 2002 survey had a good coverage of these regions. Therefore, the station positions and effort have been similar during the 2000, 2003, 2004 and 2005 surveys

in the southern region and during the 2002, 2003, 2004 and 2005 surveys in the central and northern regions (see Annex VIII)

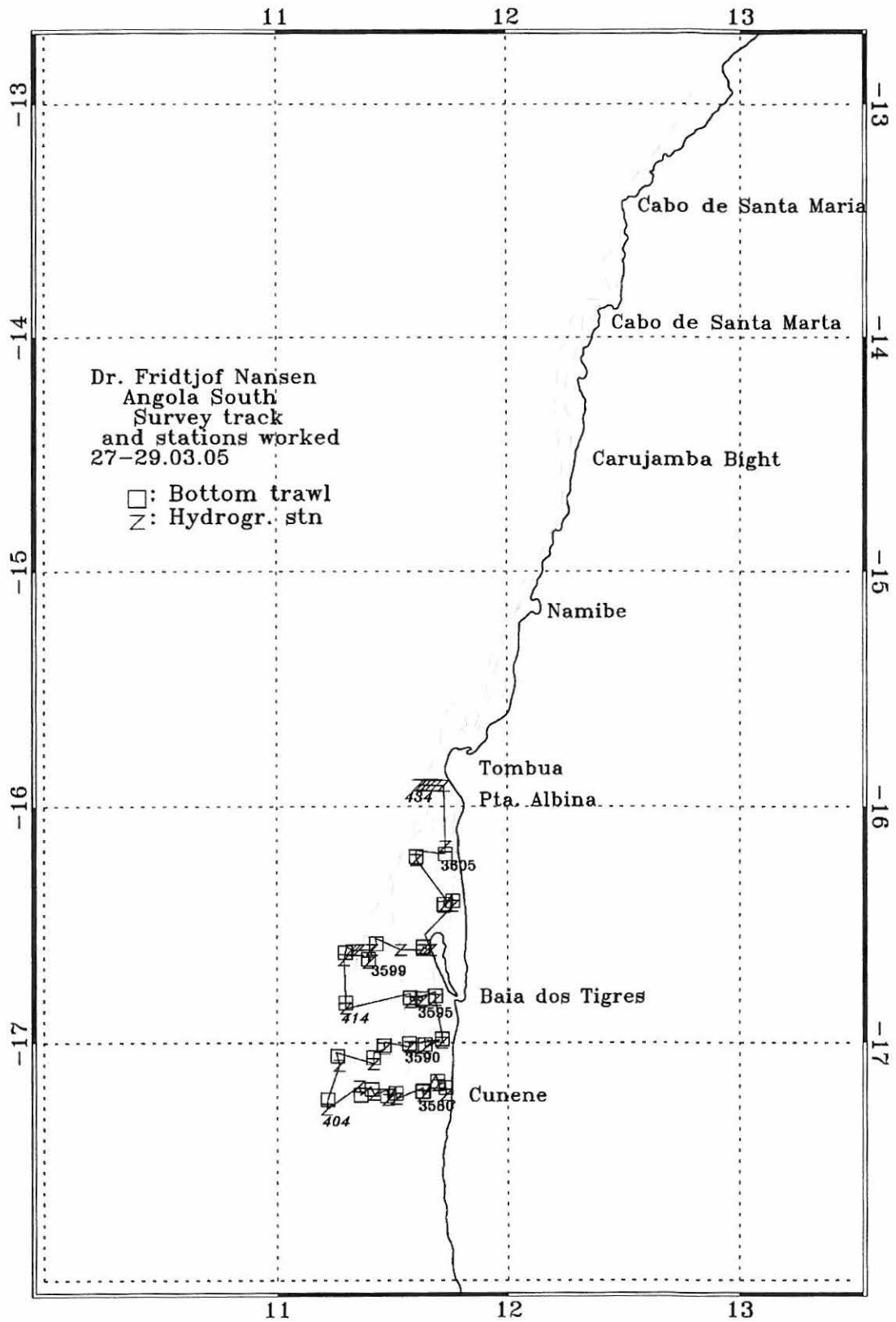


Figure 2.1 Angola south: Cunene to Tombua. Course track with trawl stations and hydrographic transects. Hydrographic stations were also taken at the fishing stations. Depth contours at 20, 50, 100 and 200m.

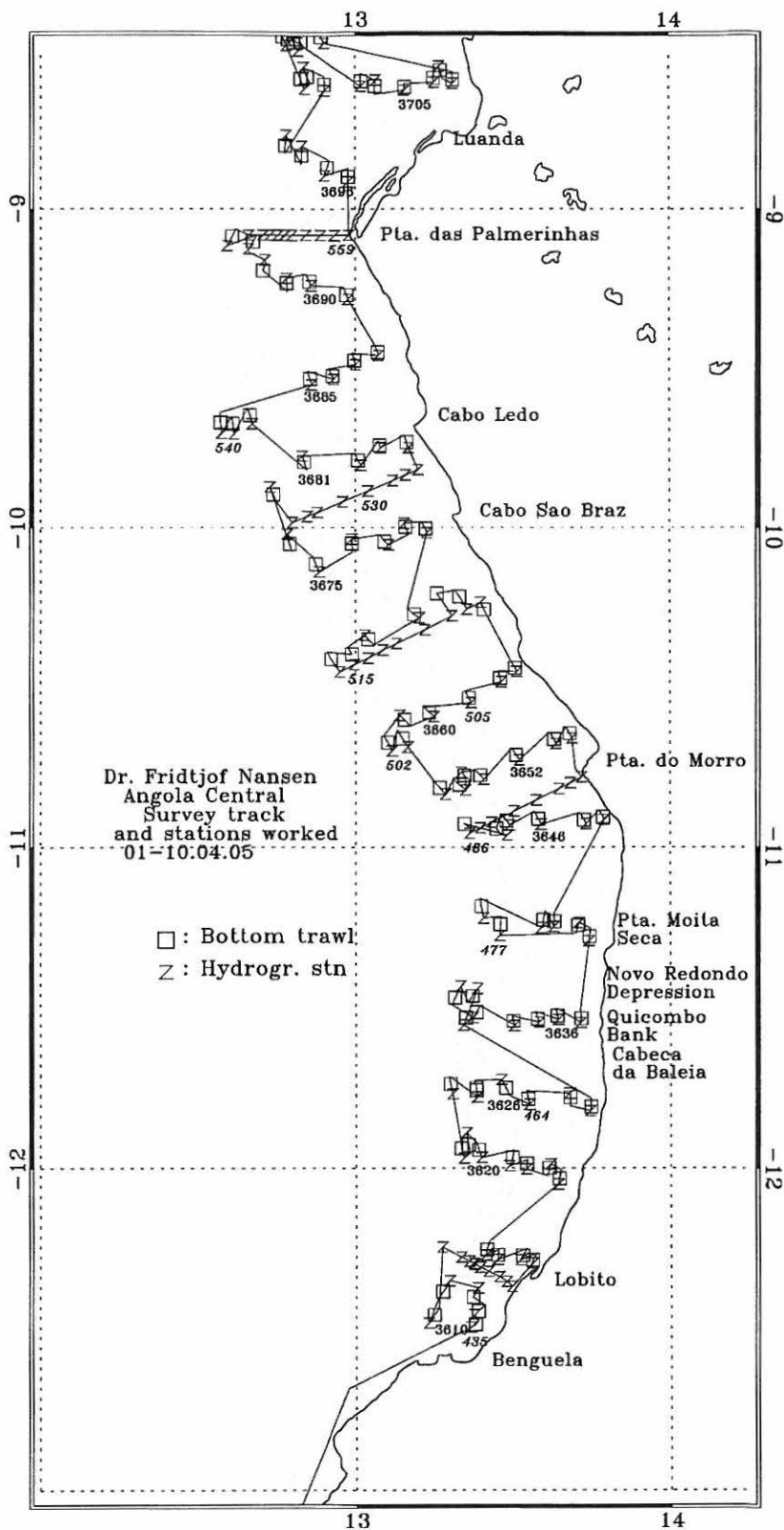


Figure 2.2 Angola central: Benguela to Luanda. Course track with trawl stations and hydrographic transects. Hydrographic stations were also taken at the fishing stations. Depth contours at 20, 50, 100, 200 and 500m.

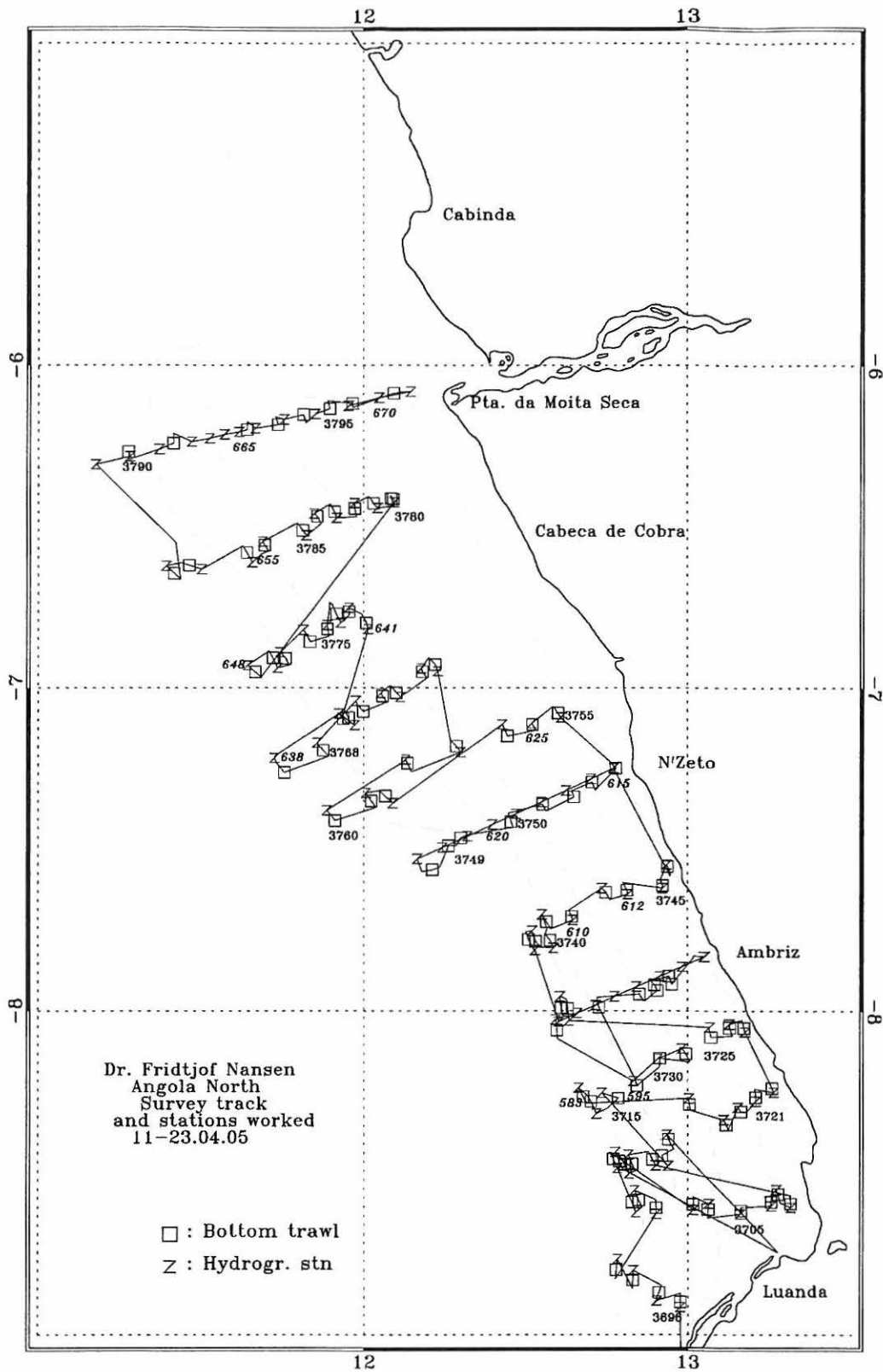


Figure 2.3 Angola north: Luanda to Congo River. Course track with trawl stations and hydrographic transects. Hydrographic stations were also taken at the fishing stations. Depth contours at 20, 50, 100, 200 and 500 m.

2.2 Meteorological and hydrographic sampling

Meteorological observations including wind direction and speed, air temperature, global radiation and sea surface temperature (SST) were automatically logged every nautical mile using an Aanderaa meteorological station. CTD-stations and current profiles with ADCP were recorded at all trawl stations and at the standard hydrographic transects.

ADCP current measurements

A ship-born Acoustic Doppler Current Profiler (ADCP) from RD Instruments was activated on every CTD station. The ADCP was set to ping every 4 seconds, the depth cell interval set to 8m and the number of cells was set to 40. The data were routinely averaged over 300 seconds and averaged data stored on files. The data have not been analysed in this report, but this can be done by *e.g.* the PC software UMS (Underway Mapping System), supported by Marine and Coastal Management in Cape Town, South Africa.

Conductivity, salinity and oxygen measurements and water sampling

A Seabird 911+ CTD probe was used to obtain vertical profiles of temperature, salinity and oxygen. Real time plotting and logging was done using the customised Seabird Seasave software installed on a PC. Profile data were logged down to a few meters above the bottom for all station shallower than 500m. For deeper stations the data were logged until 700m. No calibration of the oxygen sensor was carried out, as the new oxygen sensor is very reliable and accurate.

2.3 Biological sampling

Sampling gear

A Gisund Super bottom trawl with a headline height of 4.3-4.8 m was used during the survey. The distance between the front parts of the wings was about 21 m during deployment at a speed of 3 NM/hour. The doors are of Thyborøn' combi type. These settings have been the standard on all swept area surveys with R/V "Dr. Fridtjof Nansen". As in previous surveys, except during the 2002 survey, a 44 m long tickler chain was attached to the footrope on depth of more than 300 m in order to catch more of the bottom dwelling deep-water shrimps. During all tows deeper than 80 m, a 10 m long constraining rope was attached between the wires 125 m in front of the trawl doors. This kept a constant distance between the doors of about 50 m during the trawling. For shallow station with depth of less than 80 m the door-to-door distance varied more, depending of bottom type and currents. Data from the door and depth/trawl-height sensors were logged for all tows and are stored in files with CMG format, which makes it possible to study the trawl performance in more detail.

Trawl duration was standardized to 30 minutes. The trawling start time is controlled by using SCANMAR sensors to detect when the trawl is on the bottom while the end time is defined to be when the wires starts to haul the net. In some cases the tows was terminated early due to indications of bad trawling performance. These tows were rejected as valid stations because they were not trusted to reflect the density of fish on the bottom. Table 2.1 shows the numbers of valid and rejected stations. A detailed description of the fishing gear is given in Annex VI.

Acoustic recordings were carried out at four frequencies: 18, 38, 120 and 200 kHz using a SIMRAD EK500 Echosounder. Acoustic data were not processed on board, but all data were stored to files using the EchoLog.

Sampling the catches

Catches were sampled (or sub-sampled for large catches) for species composition by weight and numbers. Length measurements were taken as follows: for fish, total body length (cm) was measured to the nearest 1 cm below from the tip of the snout to the longest lobe of caudal fin, and for shrimp carapace length to 1 mm below was recorded. The records of fishing stations are presented in Annex I. For commercially important species, pooled length frequency distributions, in which individual samples are raised to total catch, are shown by area in Annex II.

All sharks were sexed, measured and weighted. Some results are presented in Annex IX.

2.4 Areas and depth strata

Table 2.1 shows the areas (NM²) in the southern region (Cunene-Tombua: S17°14'-S16°00'), in the central region (Benguela-Luanda: S12°40'-S09°00'), and the northern region (Luanda-Congo River: S09°00'-S06°00') by depth strata. These strata are used in the swept-area biomass estimates in the time series. All samples are treated as representative for the relevant depth intervals where the species, or species groups, were caught.

2.5 Calculations

All equations for the calculations are given in Annex IV. The effective fishing width of trawl gear used by R/V "Dr Fridtjof Nansen" is considered to be 18.5 m. The effective fishing area is the product of the fishing width multiplied by the towing distance measured by the GPS. It is assumed that all fish within the trawling path are caught, which gives a catchability coefficient (q), *i.e.* the fraction of the fish encountered by the trawl that was actually caught, equal to 1.

The catchability coefficient is seldom known. However, because the coefficient is assumed to be constant between surveys the swept area estimates reflect changes in population abundances between surveys.

The survey design and effort have not been consistent throughout the time series, which make comparisons between surveys difficult. Therefore, it was discussed and agreed upon by the responsible of the Demersal Programme of the Instituto Nacional de Investigação das Pescas of Angola, and the responsible for the Angolan Demersal Programme at the Institute of Marine Research, Norway that all biomass estimates since 1985 should be calculated in a standardized way.

Data from the projects AN, A2, A3 and A4 in NAN-SIS were exported using the "Export to flat ASCII file" and "Export to Statgraf A" in NAN-SIS. The latter export function was used to get a better accuracy of the log-duration information (two decimals). The free software

R 1.9.0[®] was used to calculate stratified density estimates sorted by survey and stratified by depth and latitude. Biomass estimates by species or species groups were obtained from a stratified mean density estimator using the equations in Annex IV.

[®] R Development Core Team (2004). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. <http://www.R-project.org>.

CHAPTER 3 OCEANOGRAPHIC CONDITIONS

3.1 Surface distribution

The salient feature of the hydrographic conditions in Angolan waters between December and March is the drop in the salinity at the surface, associated to the seasonal rise in the precipitation over the continent and the consequent increase in the discharge of freshwater carried to the ocean by the Congo River and by other rivers along the Angolan coast. The regular demersal surveys carried out by R/V “Dr. Fridtjof Nansen” in March are coincident with the late phase of the wet season and, typically, it is observed low salinity in the surface waters in the shelf off the northern and central Angola regions. No salinity decrease has been observed off the southern Angola (15-17°S), except of one survey conducted during the anomalous “Benguela Niño” event in February-March 1995.

The surface temperature in the southern region (Figure 3.1) was significantly higher during the 2005 survey than during the demersal survey in 2004. The surface temperatures ranged from 20 to 25°C in 2005, while the temperatures ranged from 18 to 20°C in 2004. The temperatures in 2005 were more similar to the conditions observed during the 2003 demersal survey, and as in 2003 a warm front of water was observed off Baía dos Tigres.

Except for some rough sea during a couple of days in the southern region, the weather was favourable during the survey in the central and northern regions.

Both the salinity and temperature distribution patterns in the central region were similar to the patterns observed during the 2004 demersal survey (Figures 3.3-3.4). The surface salinities were in the range between 34.8 and 35.7 psu and temperatures were in the range between 23 and 27°C. The warmest and the least saline surface waters were typically observed offshore. The narrow bands of colder and more saline water ($T < 24$ °C and $S > 35.5$ psu) were observed inshore off Cabeça da Baleia and between Pta. Moita and Pta. das Palmerinhas. The relatively high salinity values were probably caused by little discharge of freshwater from the rivers to the Atlantic Ocean. Since these regions have calm wind conditions with a varying direction it is unlikely that the observed surface upwelling signature was related to a typical wind-induced coastal upwelling process. It is more likely that the upwelling was coupled to the seasonal intensification of the Equatorial Counter Current (ECC), which during March assumes its southernmost position located off Angola at approximately 9°S.

In the northern region the temperature was lowest inshore with about 24°C, while the offshore surface water temperature was between 25 and 26°C (Figure 3.5). No difference was observed between the salinity values in inshore and offshore waters (Figure 3.6). As in the central region, the temperature and salinity values observed were similar to the values observed during the March 2004 demersal survey. The sea surface temperatures during the 2004 and 2005 surveys were about 4°C lower than the values of 2003, and the salinity values in 2003 about 2.3 psu higher in 2004 and 2005. Little discharge of freshwater from Congo River and other rivers during 2005 is probably the reason to the high salinity values in 2005.

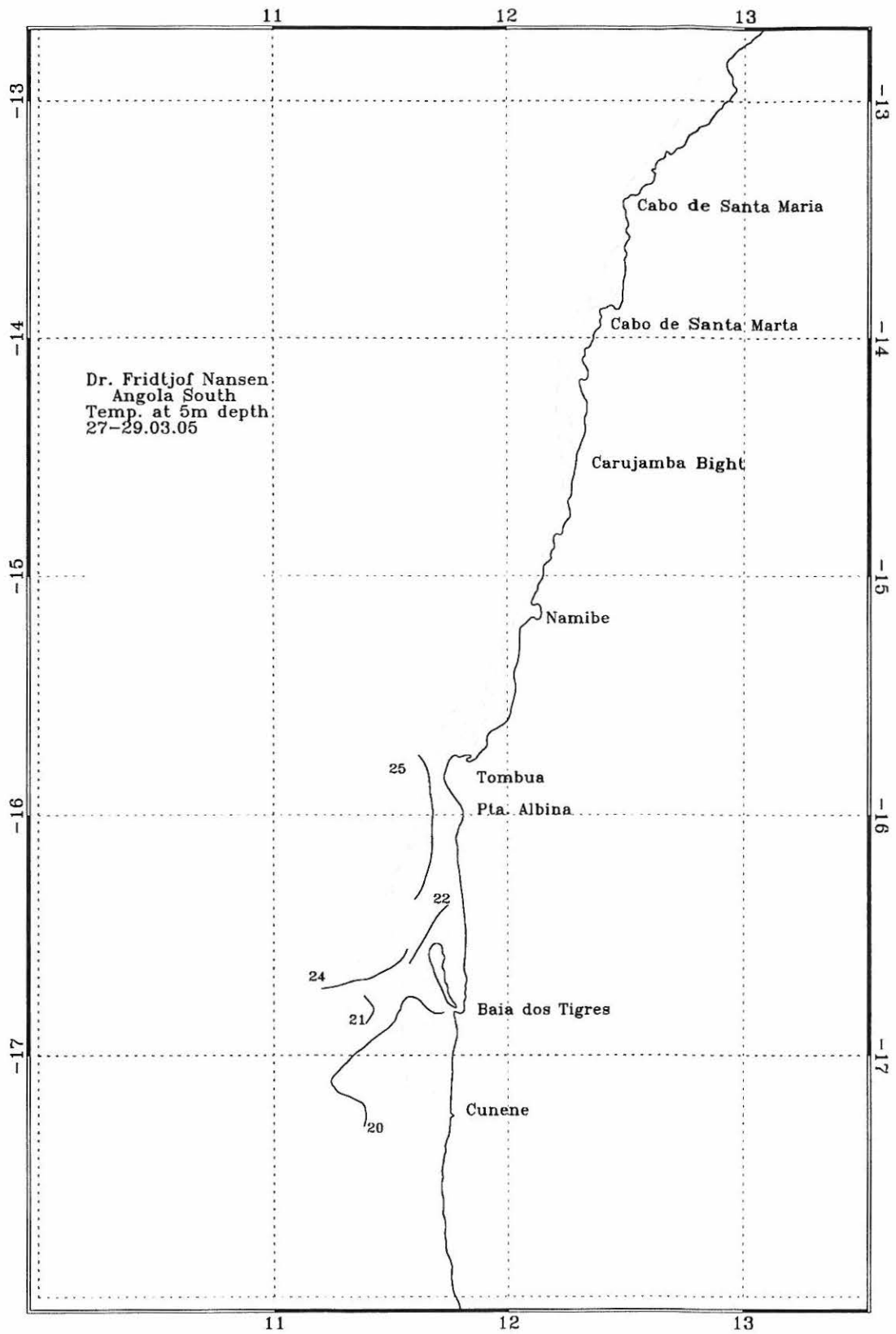


Figure 3.1 Angola south. Horizontal distribution of surface temperatures (5 m depth). Depth contours at 20, 50, 100 and 200 m.

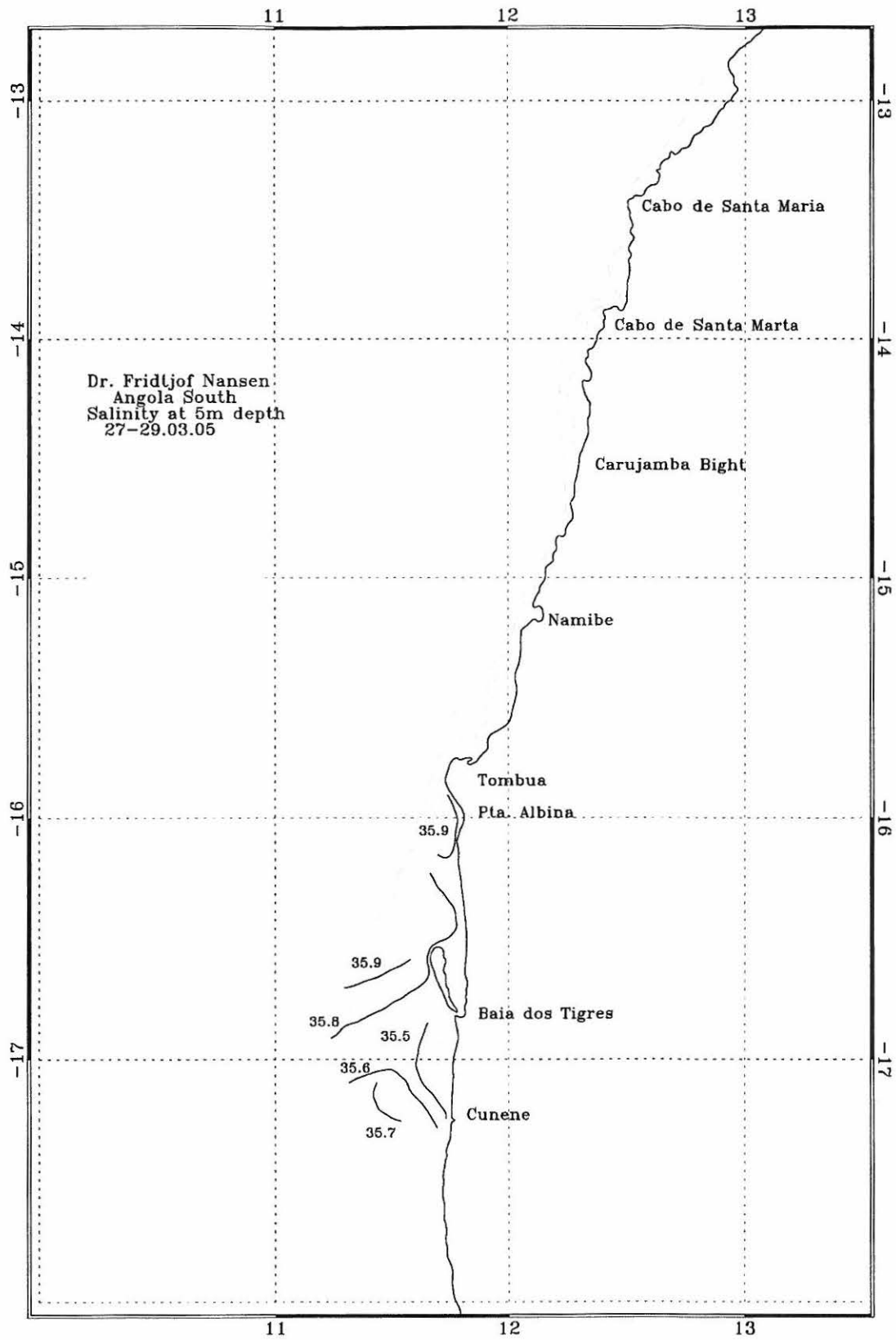


Figure 3.2 Angola south. Horizontal distribution of surface salinity (5m depth). Depth contours at 20, 50, 100 and 200 m.

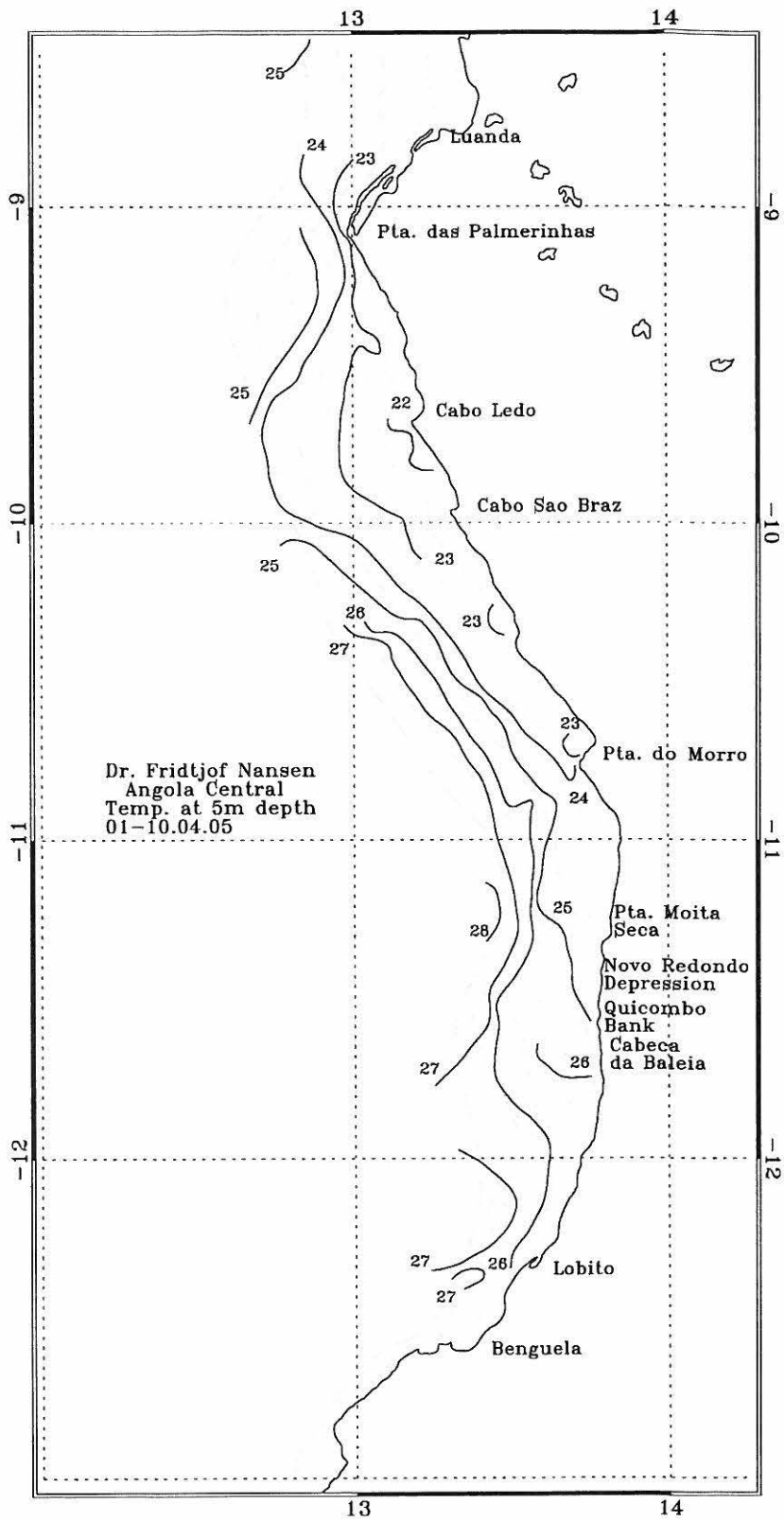


Figure 3.3 Angola central. Horizontal distribution of surface temperatures (5 m depth).). Depth contours at 20, 50, 100, 200 and 500 m.

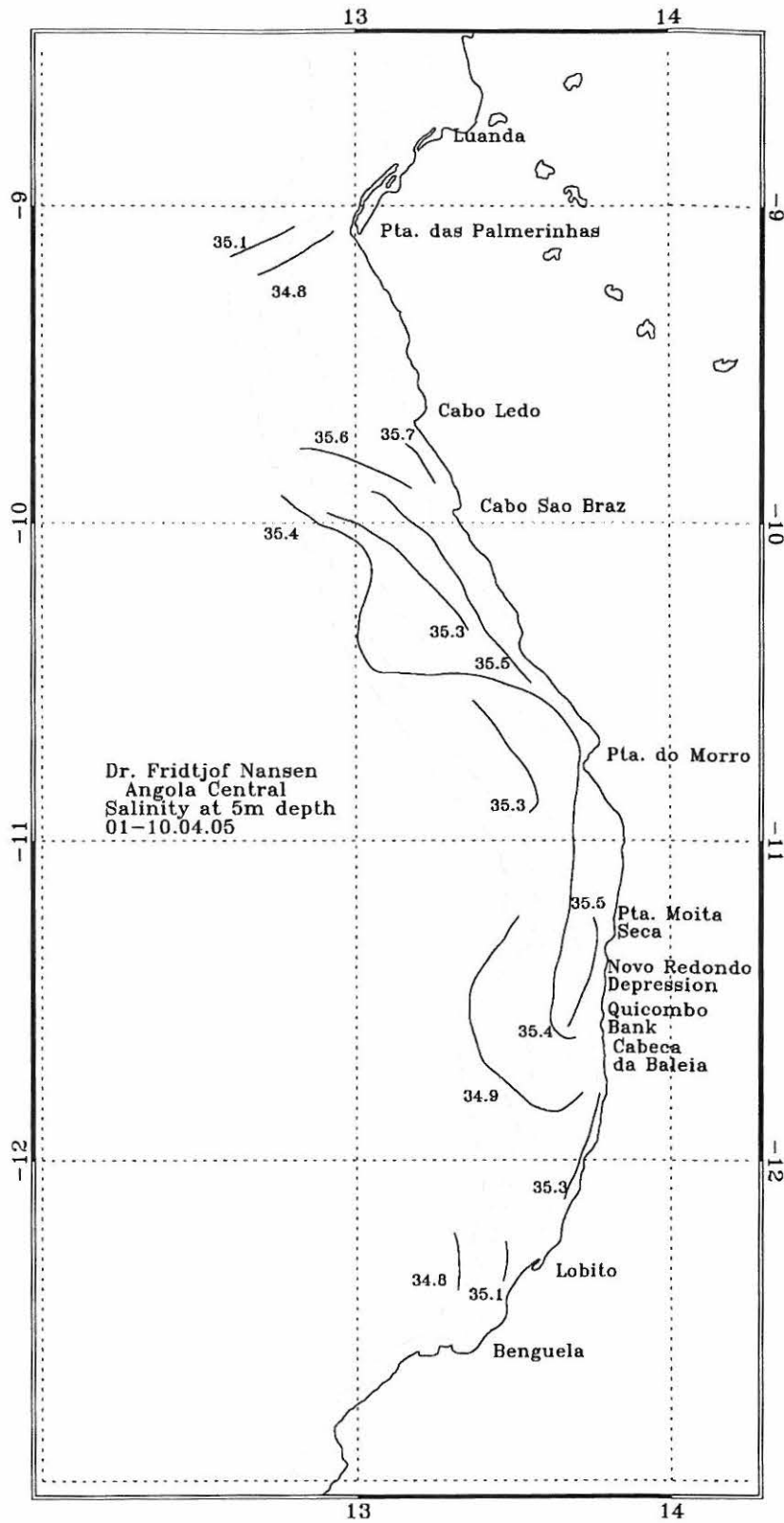


Figure 3.4 Angola central. Horizontal distribution of surface salinity (5m depth). Depth contours at 20, 50, 100, 200 and 500 m.

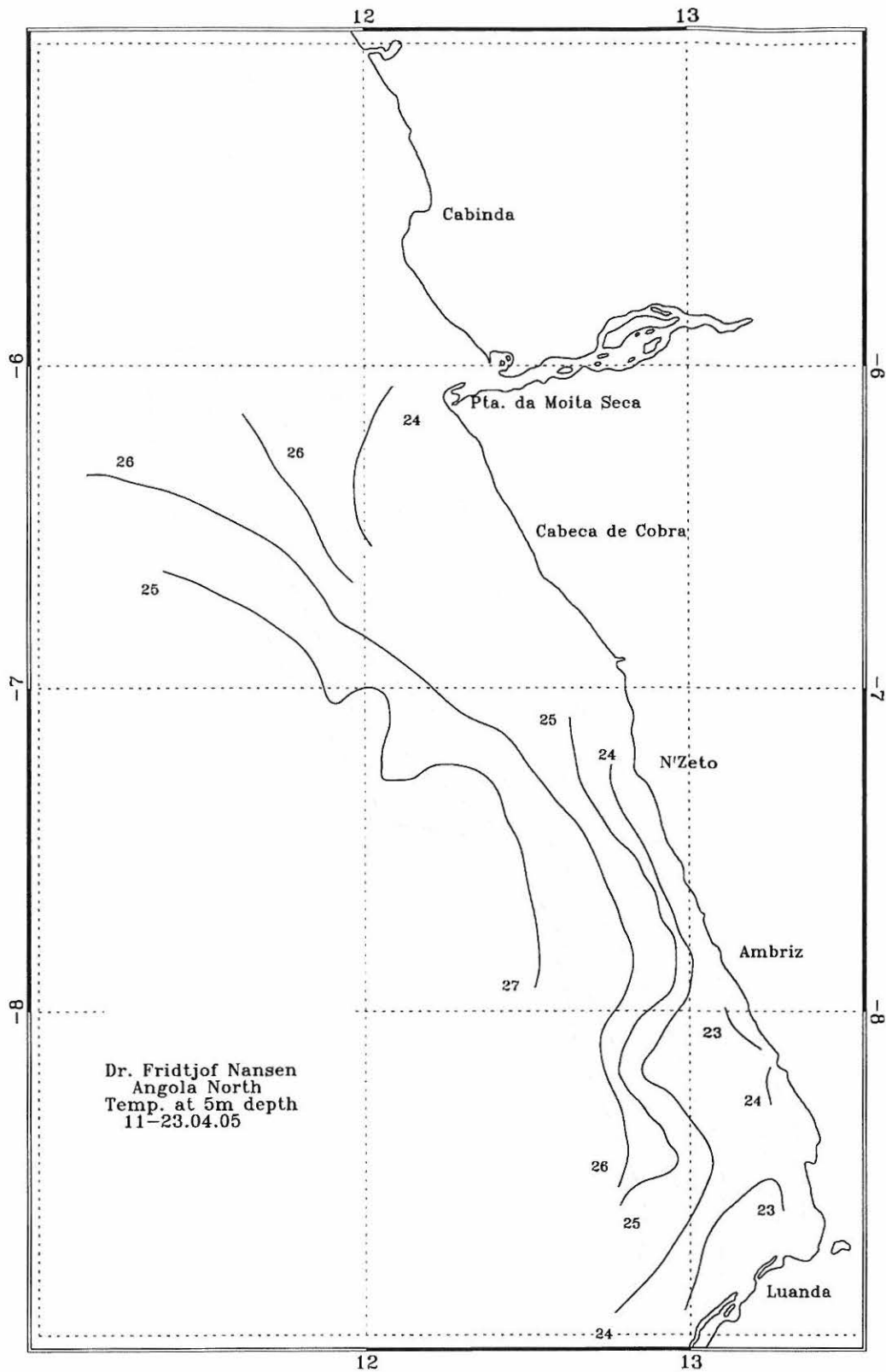


Figure 3.5 Angola north. Horizontal distribution of surface temperature (5m depth). Depth contours at 20, 50, 100, 200 and 500 m.

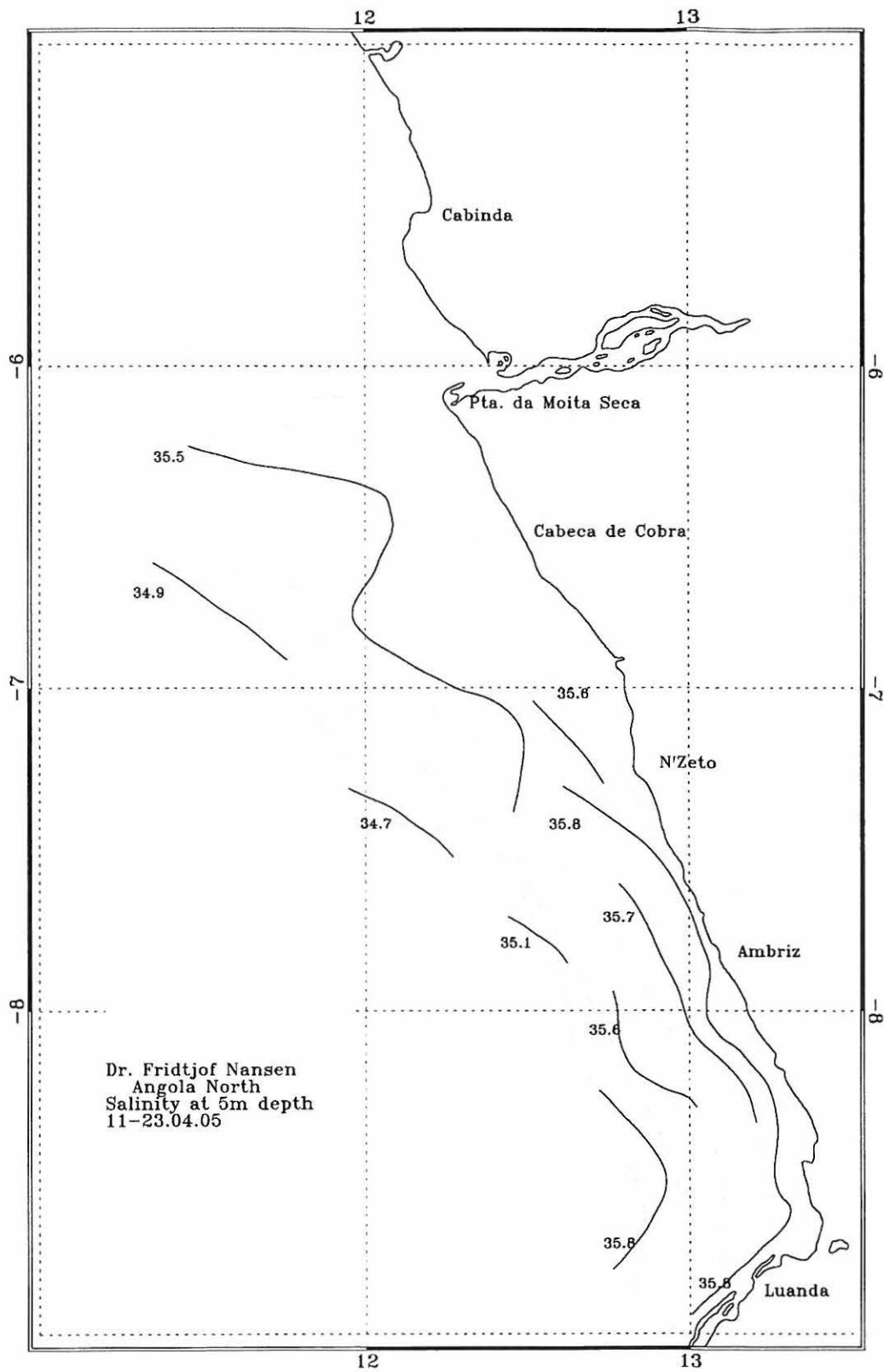


Figure 3.6 Angola north. Horizontal distribution of surface salinity (5m depth). Depth contours at 20, 50, 100, 200 and 500 m.

3.2 Vertical sections

The sections off Baía dos Tigres (Figure 3.7) and Pta. Albina (Figure 3.8) showed similar conditions. The surface layer temperature off Baía dos Tigres and Pta. Albina were respectively 24 and 25°C, the salinity 35.9 psu and O₂ 4.0 ml/l. The temperature at 100m depth was about 14°C off Baía dos Tigres and about 18°C off Pta. Albina. The surface temperature was about 5°C higher during the 2005 survey than the observed temperatures of the March 2004 survey. As in 2003, the core of Tropical Surface Water characterized by T>21°C, S >35.8 psu and O₂>5 ml/l, dominated the offshore part north of Baía dos Tigres. This layer is separated from the underlying Central Water Mass. Inshore, the typical distributions in the surface water that are characterized by the up sloping isolines and reveal the coastal upwelling pattern were not as clear as in 2003.

The five sections in the central Angola, presented in Figures 3.9-3.13, show the distribution patterns in temperature, salinity and oxygen in the region. The temperature and O₂ values are higher in the central than in the southern region. The bottom shelf layers were rather well saturated in oxygen, which decreased gradually from 4ml/l at the surface reaching 2 ml/l at a depth between 90 and 100 m. The temperatures at 100m depths ranged from 16 to 18°C. The surface temperatures were similar in 2005 to the temperatures observed during the March 2004 survey.

Three transects were sampled in the northern region between Luanda and Congo River. The vertical profiles of Ambriz, Ambrizete and Pta. da Moita Seca are shown in Figures 3.14-3.16. The temperature in the inshore surface water was about 25°C, the salinity about 35.7 psu and the O₂ 4.0 ml/l in the Ambriz and Ambrizete transects. The hydrographic conditions were similar to the conditions observed in March 2004, but the salinity and O₂ values in the water column from 5-50 m were higher than in March 2003, while the temperature was about 3°C lower than in 2003. The transect at Pta. da Moita Seca is often very influenced by the water from the Congo River, but during 2005 it seems that the temperature, salinity and O₂ were less influenced by the water flow from Congo than during the 2003 survey as the values observed in this transect were similar to the two other transects in the northern region.

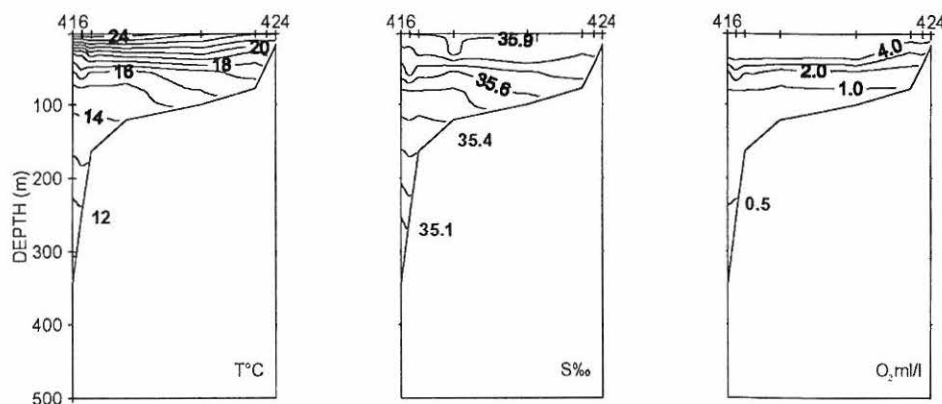


Figure 3.7 Angola south. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Baía dos Tigres.

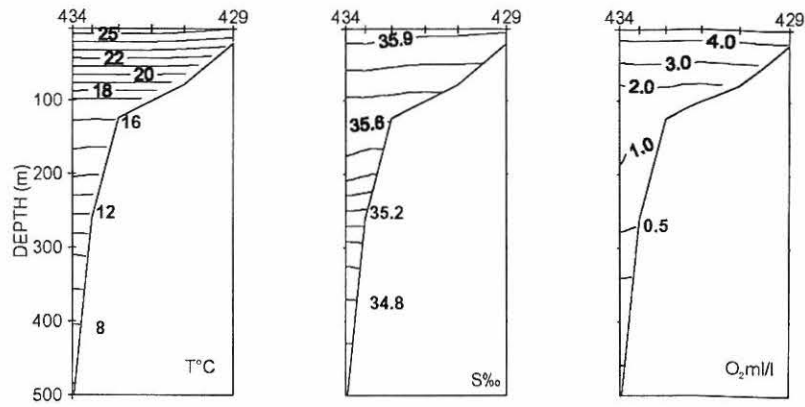


Figure 3.8 Angola south. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Pta. Albina.

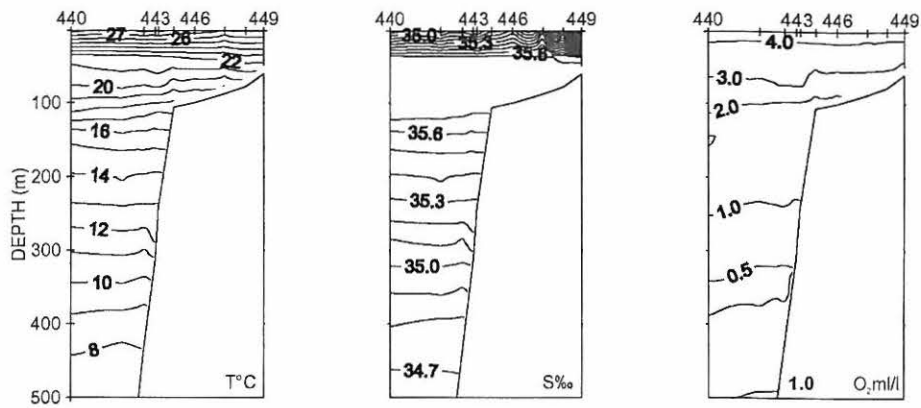


Figure 3.9 Angola central. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Lobito.

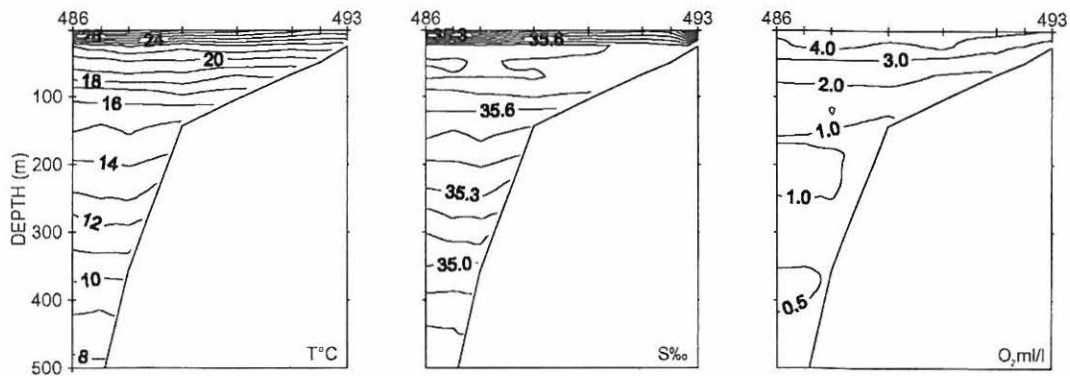


Figure 3.10 Angola central. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Ponta do Morro.

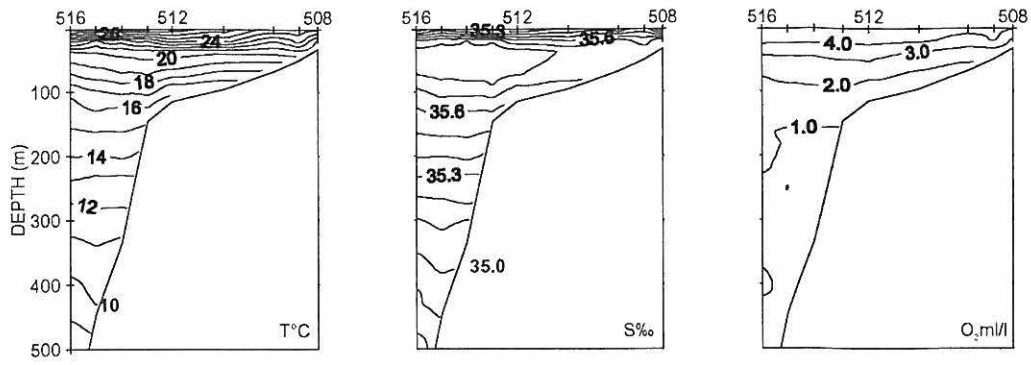


Figure 3.11 Angola central. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Rio Longa.

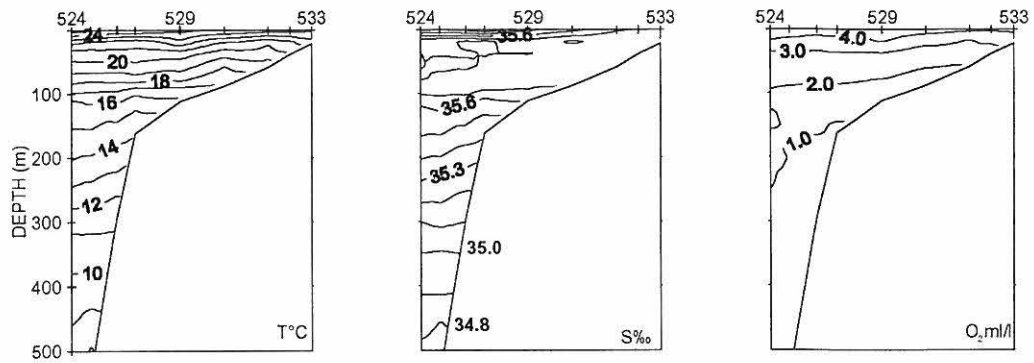


Figure 3.12 Angola central. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Cabo Ledo.

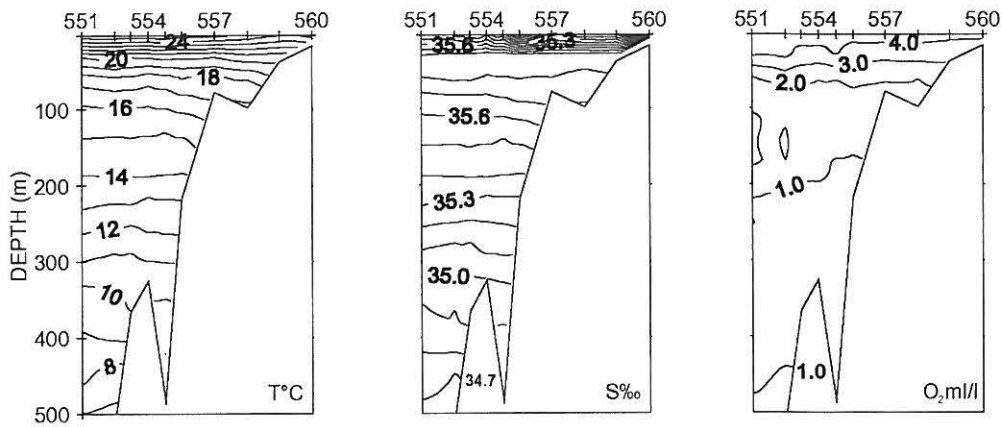


Figure 3.13 Angola central. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Pta. das Palmerinhas.

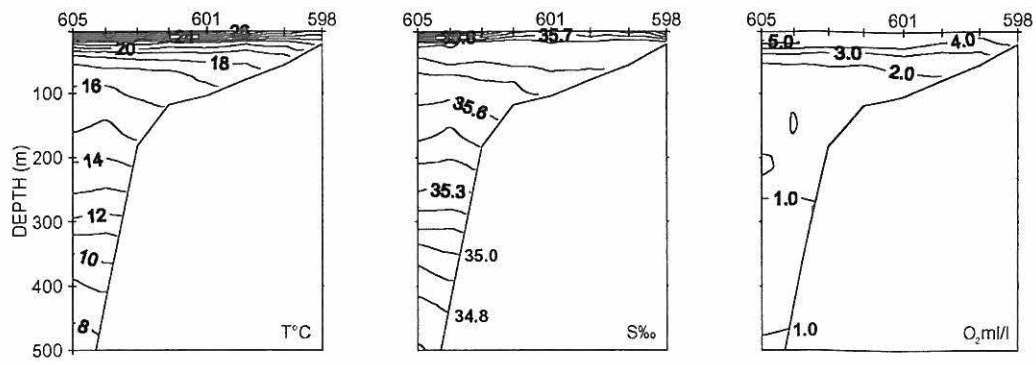


Figure 3.14 Angola north. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Ambriz.

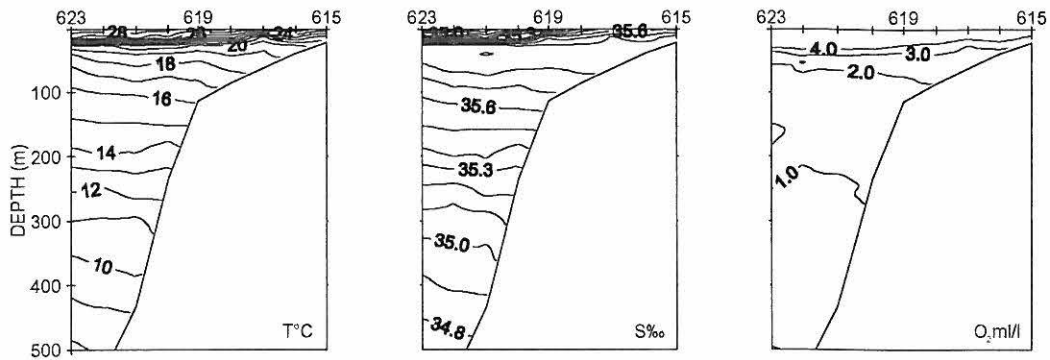


Figure 3.15 Angola north. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Ambrizete.

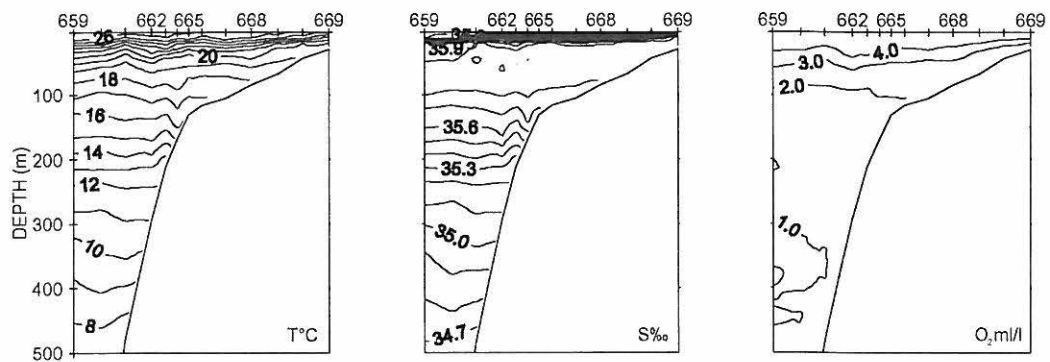


Figure 3.16 Angola north. Vertical sections of a) temperature, b) salinity and c) oxygen on the oceanographic transect at Pta. da Moita Seca.

CHAPTER 4 CATCH RATES, DISTRIBUTION, COMPOSITION AND BIOMASS ESTIMATES OF DEMERSAL RESOURCES ON THE SHELF

The inner shelf is defined to be the area between 20 and 70 m bottom depth while the outer shelf to be from 71 to 200 m depth. Several of the species, which inhabit the shelf, particularly the seabreams (Sparidae), are also found in deeper waters, and are presented in Chapter 5.

The trawl positions are mapped in Figures 2.1-2.3, and station information and catch by species are presented in Annex I. Pooled length distributions weighted by the catch of the main species by sector region are shown in Annex II. Mean densities (t/NM²) of the main species sorted by abundance and depth strata, the frequency of occurrence and the catch distributions are shown in Annex III. Annex VII presents the catch rates of the different species and species groups, and Annex V shows the NAN-SIS species codes used to extract the information in the various tables.

4.1 Cunene-Tombua shelf

During 3 days 23 trawl stations were sampled on the shelf in the southern region, where 19 were successfully accomplished. The southern region has not been regularly sampled throughout the years, except for the 2000, 2003, 2004 and 2005 surveys. Therefore, the time series of the biomass estimates should be interpreted with caution since the survey strategies have not been standardized.

The average catch per hour on the inner shelf was 2 000 kg/hour and 4 300 kg/hour on the outer shelf (Annex VII). Carangids, mainly horse mackerel (*T. capensis*), dominated the catches on the shelf with about 34% and 77% of the catch on the inner and outer shelf, respectively. Clupeids contributed to 2.4% on the inner and <1% on the outer shelf and seabreams (Sparidae except *Boops boops*) contributed to only 1% of the catch on the inner shelf and about 8% on the outer shelf. Sharks and cephalopods contributed to respectively 1% and 1.9% on the inner shelf and 0.4% and 9% on the outer shelf.

Biomass estimates

Table 4.1 shows the time series from 1986 to 2005 of the swept-area biomass estimates for demersal and pelagic species groups in the southern region. The biomass estimates were calculated by stratifying by depth (20-49m, 50-99m and 100-199m). The sampling intensity in the southern region has been variable throughout the years and only surveys that have covered each of the strata with at least two stations are included in the time series presented in Table 4.1. The high coefficient of variations (CV) shown in Table 4.1 indicates that the trends in the time series should be interpreted with care.

The biomass estimate of horse mackerel in 2005 was 129 000 tons while the 2004 estimate was almost 240 000 tons. However, it must be noted that a swept-area survey will not give an accurate estimate of a pelagic stock as horse mackerel as the trawl is only catching fish that is

on or close to the bottom. *Trachurus capensis* contributed to >99% of the horse mackerel biomass estimate during the present survey, while during the three previous surveys *T. trecae* contributed to between 31 and 67% of the horse mackerel biomass.

The seabream biomass was about 12 600 tons and consisted mainly of *Dentex macrophthalmus*. This is a 53% decrease from the 2004 survey, and is the lowest estimate since 1986. The 2005 estimate is only about 20% of the high 2000 survey estimate.

The biomass estimate of shallow water Cape hake, *Merluccius capensis*, was about 4 700 tons. Even though, the present biomass estimate is higher than both the 2001 and 2002 hake biomass estimates, the 2005 estimate is only 43% of the high 2004 estimate of about 11 900 tons and 28% less than the 2003 estimate. The Benguela hake, *M. polli*, was not caught during the 2005 survey in the southern region, while the biomass estimate in 2000 was 3 200t. This discrepancy, with the large biomass of *M. polli* and the absence of *M. capensis* may be explained by misidentification of the two hake species in 2000.

As also noted in last year survey report, the croakers showed a downward trend in the period 2000-2004. However, the high estimate of about 6 200 tones in 2005 indicates a large increase in the croakers stock. The abundance of sharks also seems to have improved considerable since 2004. The biomass of the cephalopods belonging to the Ommastrephidae family (*i.e. Illex coindettii*) was estimated to about 1 650 tons and is about three times higher than the estimate in 2004, while the total biomass for the Cephalopods seem to have been relative stable during the last 5 surveys.

Table 4.1 Biomass estimates (tons) of important species on the shelf (20-200m) in the southern region. CV values are indicated in brackets.

| survey | Hake | T. trecae | Horsemackerel | Cephalopod | Sharks | Clupeids | Carangids | Scombrids |
|--------|--------------|---------------|---------------|-------------|--------------|--------------|---------------|------------|
| 1986.1 | 1099 (0.55) | 14235 (0.59) | 23059 (0.46) | 1188 (1.00) | 618 (0.65) | 51 (1.83) | 23059 (0.46) | 43 (1.00) |
| 1986.2 | 3709 (0.81) | 69542 (0.49) | 78132 (0.53) | 1555 (0.47) | 2593 (0.92) | 0 NA | 78165 (0.53) | 173 (0.89) |
| 1989.1 | 349 (0.88) | 2883 (1.09) | 15681 (0.90) | 776 (0.61) | 188 (0.88) | 0 NA | 15681 (0.90) | 60 (0.79) |
| 1989.2 | 1121 (1.30) | 979 (0.94) | 13706 (0.75) | 6114 (0.83) | 12200 (1.37) | 0 NA | 13706 (0.75) | 35 (1.11) |
| 1989.3 | 6739 | 9047 | 36619 | 1616 | 602 | 78 | 36619 | 146 |
| 1991.1 | 2920 (1.28) | 21429 (0.59) | 50458 (0.51) | 732 (0.42) | 4005 (1.48) | 6 (1.69) | 50459 (0.51) | 106 (1.48) |
| 1991.2 | 4385 (0.68) | 25595 (0.60) | 62961 (0.58) | 2192 (1.71) | 957 (0.53) | 444 (1.61) | 62961 (0.58) | 0 |
| 1992 | 6756 (0.46) | 8106 (0.91) | 95433 (0.41) | 744 (0.63) | 2220 (0.65) | 70 (1.54) | 95436 (0.41) | 0 |
| 1993 | 4023 (0.40) | 52839 (0.91) | 64235 (0.75) | 2502 (0.81) | 2278 (0.71) | 8 (1.55) | 64235 (0.75) | 347 (1.03) |
| 2000 | 3559 (0.80) | 185345 (1.05) | 218410 (0.86) | 1934 (0.29) | 2051 (0.48) | 43 (1.76) | 218473 (0.86) | 28 (0.87) |
| 2002 | 3779 (0.81) | 116985 (1.30) | 237050 (0.63) | 1937 (0.96) | 69 (0.94) | 1217 (1.69) | 237058 (0.63) | 711 (1.76) |
| 2003 | 7014 (0.64) | 76533 (0.80) | 113879 (0.74) | 1630 (0.86) | 1163 (1.16) | 3601 (1.55) | 114293 (0.75) | 546 (1.83) |
| 2004 | 11860 (0.64) | 72982 (0.56) | 237659 (0.80) | 2547 (0.71) | 348 (0.72) | 12998 (1.82) | 237659 (0.80) | 5 (1.83) |
| 2005 | 5067 (0.65) | 114 (1.83) | 129071 (0.52) | 2309 (0.81) | 1067 (0.38) | 2410 (0.74) | 129088 (0.52) | 1 (1.83) |

| survey | Hairtails | Croakers | Seabreams | Ommastrephidae | Sepiidae | D. macro | D. angolensis | U. canariensis |
|--------|-------------|-------------|--------------|----------------|-------------|--------------|---------------|----------------|
| 1986.1 | 334 (0.85) | 1560 (0.94) | 9736 (0.33) | 31 (0.64) | 138 (0.88) | 8304 (0.34) | 81 (1.15) | 135 (1.26) |
| 1986.2 | 1694 (1.30) | 3960 (0.96) | 19201 (0.49) | 0 | 726 (0.74) | 17054 (0.54) | 5 (1.69) | 86 (1.48) |
| 1989.1 | 965 (1.36) | 1492 (0.63) | 17853 (0.47) | 61 (0.54) | 159 (1.08) | 17020 (0.47) | 139 (1.59) | 361 (1.04) |
| 1989.2 | 510 (0.99) | 3601 (0.93) | 32669 (0.43) | 7 (1.69) | 0 | 31615 (0.44) | 16 (1.69) | 442 (0.75) |
| 1989.3 | 1747 | 1438 | 15105 | 192 | 14 | 15035 | 27 | 86 |
| 1991.1 | 1335 (0.71) | 1341 (0.54) | 22333 (0.33) | 25 (1.09) | 20 (1.55) | 20180 (0.37) | 6 (1.69) | 118 (0.93) |
| 1991.2 | 255 (0.61) | 567 (0.51) | 22536 (0.43) | 25 (0.91) | 31 (0.98) | 21994 (0.44) | 7 (1.69) | 102 (1.10) |
| 1992 | 13 (1.42) | 576 (0.91) | 32666 (0.54) | 428 (1.16) | 148 (0.71) | 31822 (0.55) | 118 (1.69) | 30 (0.99) |
| 1993 | 361 (1.38) | 2744 (0.60) | 58399 (0.52) | 145 (0.40) | 126 (1.57) | 57722 (0.51) | 238 (1.58) | 496 (0.87) |
| 2000 | 1008 (1.45) | 3623 (0.61) | 61693 (0.95) | 9 (1.69) | 400 (0.50) | 58636 (1.01) | 63 (1.29) | 306 (0.72) |
| 2002 | 0 | 1046 (1.18) | 24802 (1.00) | 21 (1.69) | 1043 (1.64) | 23819 (0.98) | 0 | 12 (1.69) |
| 2003 | 48 (1.16) | 1115 (0.39) | 15856 (0.39) | 397 (0.69) | 53 (1.40) | 13313 (0.38) | 0 | 172 (0.84) |
| 2004 | 1 (1.69) | 518 (1.18) | 26946 (0.69) | 549 (0.86) | 920 (1.54) | 24702 (0.74) | 1 (1.69) | 8 (1.83) |
| 2005 | 274 (1.53) | 6164 (0.71) | 12654 (0.50) | 1655 (0.86) | 63 (1.43) | 12121 (0.50) | 221 (1.69) | 330 (1.20) |

Distribution

Figure 4.1 shows the distribution of seabreams in the southern survey area. The seabream distribution covered the whole survey area shallower than 300 m, and the highest concentrations were found on the outer shelf between Cunene River and Baía dos Tigres, as during the 2004 survey.

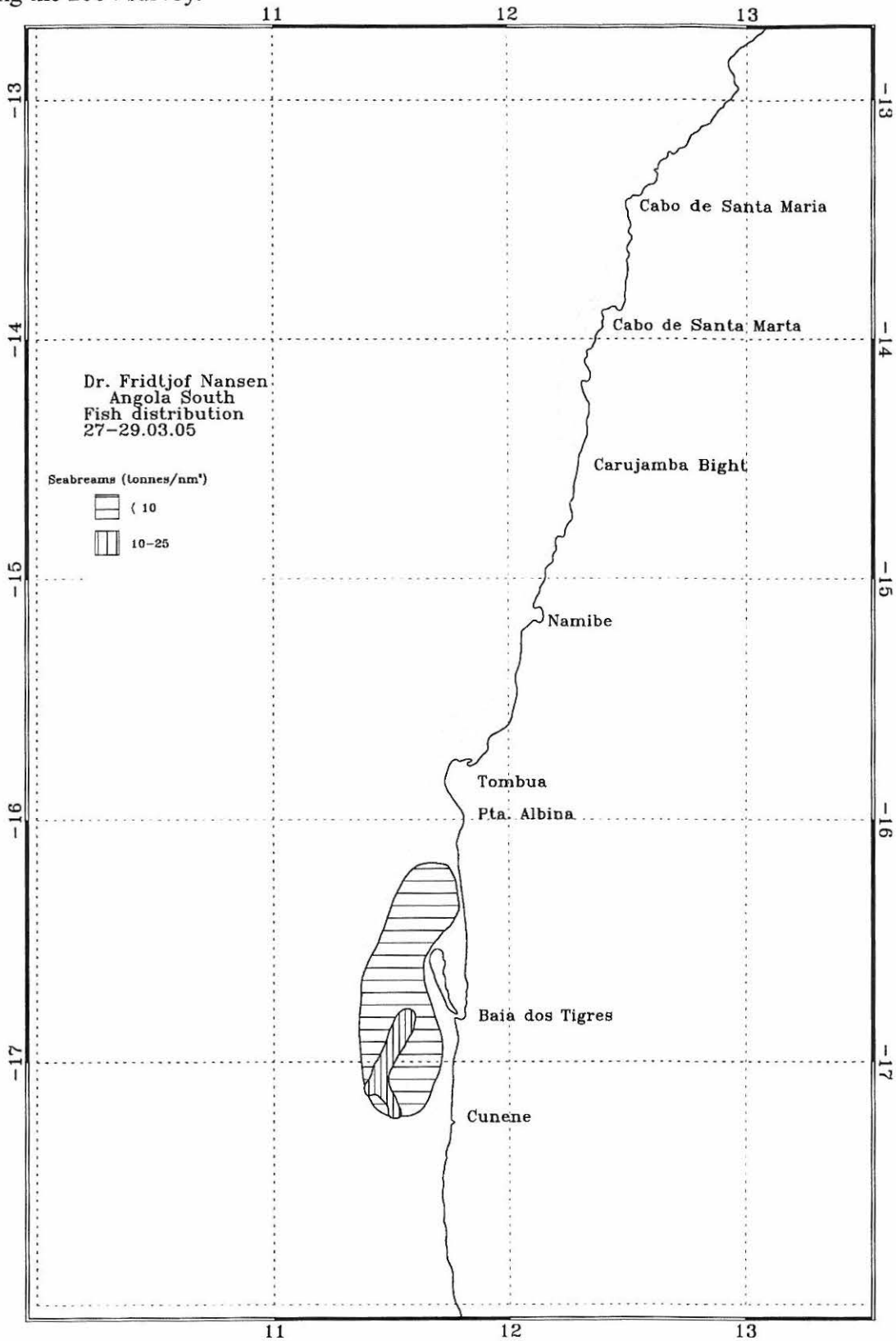


Figure 4.1 Distribution of seabreams (family Sparidae) in the southern region, Cunene-Tombua. Depth contours at 20, 50, 100 and 200 m.

4.2 Benguela - Luanda shelf

The central region of Angolan waters is from Benguela to Luanda. A total of 51 successful swept-area trawl stations were accomplished on the central shelf area (Table 2.1).

The average catch per hour on the inner shelf was 1 985 kg/hour and 710 kg/hour on the outer shelf (Annex VII). The 'demersal' group contributed to 37% of the mean catch rate on the inner shelf and the 'pelagic' group to 18%, while shrimps, cephalopods and sharks each contributed less than 1%. Pelagic fish were more abundant than demersal fish on the outer shelf, and contributed to 36% of the catches. The 'demersal' group contributed to 32% and the 'other' group contributed to about 30% of the total mean catch rate. Shrimps and sharks contributed to less than 1% each, while cephalopods contributed to 1.8%.

Biomass estimates

Table 4.2 shows the time series from 1985 to 2005 of swept-area biomass estimates for commercial species and groups of species on the shelf off central Angola. The biomass estimates were calculated by stratifying by depth (20-49m, 50-99m and 100-199m). The different strata have been sampled with different intensity throughout the time series and Annex VIII shows the numbers of trawls that have been done by strata by survey. Again, it must be noted that the biomass estimates presented for the pelagic species cannot be trusted as a good reflection of the true biomass. Pelagic species are often not available for the bottom trawl as the fish often swim to high above the seabed. Therefore, the biomass estimates given in Table 4.2 for the pelagic species may reflect their availability to the trawl and not only their abundance. Some of the biomass estimates in Table 4.2 have a high coefficient of variations (CV), which indicates that the trends in the time series should be interpreted with care. In the central and northern regions, *T. capensis* do not contribute anything to the horse mackerel biomass estimates. Since 2002, the biomass estimates of *T. trecae* have been reduced annually, and the 2005 biomass estimate is 42% lower than the 2004 estimate.

North of Benguela, no other hake species than *M. polli* were caught during the 2005 survey, and on the central shelf the biomass of *M. polli* is in general low, and as seen in Table 4.2 the biomass estimate was only 44 tons in 2005. However, the large decrease from the high 2003 estimate of almost 1 800 tons needs further investigation.

Seabreams is the most important commercial demersal group in Angola. The biomass estimates of this species group in the central region have fluctuated largely throughout the years. The 2002 biomass estimate was about 22 200 tons while the estimates of 2003 and 2004 were 5 600 and 9 600 tons, respectively. The 2005 biomass estimate of 7 800 tons is about 19% lower than the 2004 estimate. This decrease was mainly caused by a large reduction in the abundance of *Dentex macrophthalmus*, which was about 3 500 tons in 2004 and less than 900 tons in 2005. The biomass estimates of *D. angolensis* have been more stable during the last surveys, and have been around 1000 tons since 2002. Other important seabreams are *Pagellus bellottii*, *D. canariensis* and *D. barnardi*, which all contribute to the total biomass of seabreams on the central shelf.

The croakers, mainly *Umbrina canariensis*, *Atractoscion aequidens* and *Pseudotolithus typus* showed a 16% reduction in the biomass estimate compared to last year. The biomass of *Umbrina canariensis* contributed to about 41% of the total croakers biomass in 2005, and the 2005 estimate of 2 300 tons is 60% lower than the 2004 estimate. However, the biomass estimates of *Umbrina canariensis* have fluctuated considerably during the last six years and

no clear trend in the annual estimates can be seen. The biomass estimate of grunts (*Pomadasys incisus*, *P. jubelini* and *P. peroteti*) was 6 000 tons and is 71% larger than the 2004 estimate. Again, the estimates vary considerably between surveys and no clear trend can be seen in the time series. The snappers are rare in the catches as they inhabit rocky and often unavailable areas, hence the biomass estimates of snappers may not adequately reflect the state of the stock. Groupers, mainly *Epinephelus aeneus*, are seldom found on the outer shelf, and as the high CVs indicate, the biomass estimates should be considered with care. Consequently, the large increase in the biomass estimate of groupers in 2005 compared to the 2004 estimate may not reflect a true increase in the grouper stock.

The biomass estimate of *P. longirostris* in 2005 was 50 tons, which is a large decrease from the high estimate in 2004 of 970 tons. It is possible that a movement of the shrimp into deep waters causes much of this increase, but further investigations should be done. The biomass estimate of Sepiidae was 565 tons in 2005, which is the highest since 1998 and it seems like the abundance of Sepiidae has increased the last three years on the central shelf. The biomass estimate of Ommastrephidae was 233 tons in 2005. This is a 25% reduction from 2004, but the annual biomass estimates vary and no clear trend in the abundance of Ommastrephidae can be seen in Table 4.2.

Table 4.2 Biomass estimates (tonnes) of important species on the shelf (20–200m) in the central region. CV values are indicated in brackets.

| survey | M.polli | T.treace | Shrimps | Cephalopod | Sharks | Clupeids | Carangids | Scomberids | Hairtails | Barracudas | Snappers |
|--------|-------------|--------------|-------------|-------------|------------|-------------|--------------|------------|--------------|-------------|------------|
| 1985 | 124 (0.93) | 74892 (0.98) | 58 (1.61) | 5372 (0.77) | 0 | 423 (1.33) | 75408 (0.98) | 0 | 2568 (1.16) | 253 (1.26) | 0 |
| 1986 | 276 (1.02) | 17875 (0.62) | 1632 (0.92) | 1439 (0.47) | 228 (1.47) | 717 (0.69) | 20440 (0.54) | 34 (1.29) | 15125 (0.67) | 1019 (0.62) | 36 (1.96) |
| 1986 | 207 (0.97) | 22596 (0.79) | 371 (1.12) | 1423 (0.78) | 0 | 328 (0.89) | 24625 (0.72) | 16 (1.61) | 1089 (0.70) | 1117 (0.77) | 0 |
| 1989 | 121 (1.62) | 6999 (0.41) | 237 (1.05) | 1864 (0.59) | 148 (0.94) | 560 (1.54) | 12736 (0.49) | 155 (0.67) | 9992 (0.60) | 1936 (1.34) | 0 |
| 1989 | 1013 (0.80) | 21473 (0.51) | 677 (0.75) | 2206 (0.33) | 105 (1.06) | 359 (0.94) | 26453 (0.47) | 95 (0.50) | 2128 (0.80) | 701 (0.60) | 20 (1.96) |
| 1989 | 480 (1.10) | 9579 (0.94) | 453 (1.41) | 2015 (0.79) | 285 (1.29) | 1707 (0.81) | 12816 (0.90) | 310 (1.21) | 8488 (1.45) | 704 (0.74) | 0 |
| 1991 | 0 (1.69) | 86136 (0.77) | 39 (1.11) | 850 (0.31) | 746 (1.00) | 508 (0.94) | 87396 (0.76) | 277 (0.81) | 7664 (0.72) | 583 (0.72) | 106 (1.96) |
| 1991 | 618 (1.20) | 47927 (0.85) | 125 (1.04) | 2021 (0.50) | 115 (1.69) | 36 (1.61) | 48814 (0.83) | 126 (1.30) | 3174 (0.45) | 82 (0.85) | 0 |
| 1992 | 1641 (0.62) | 32878 (0.46) | 106 (1.13) | 2597 (0.30) | 483 (1.11) | 70 (1.16) | 35314 (0.46) | 64 (0.89) | 11105 (0.58) | 89 (1.29) | 0 |
| 1994 | 2393 (1.35) | 61886 (0.53) | 292 (0.92) | 2696 (0.41) | 269 (0.83) | 22 (0.96) | 63569 (0.51) | 580 (0.80) | 24185 (1.44) | 4 (1.96) | 262 (1.96) |
| 1995 | 167 (0.77) | 4875 (0.99) | 323 (0.80) | 807 (0.42) | 121 (0.88) | 245 (0.59) | 12635 (0.51) | 213 (1.06) | 3885 (0.43) | 2113 (0.65) | 113 (1.96) |
| 1996 | 713 (1.09) | 51220 (0.77) | 116 (0.98) | 2402 (0.41) | 496 (1.08) | 589 (0.89) | 55751 (0.71) | 53 (1.77) | 3443 (0.44) | 946 (0.87) | 109 (1.96) |
| 1997 | 4557 (1.20) | 27729 (0.74) | 1088 (0.94) | 3268 (0.44) | 208 (0.99) | 3442 (1.89) | 38606 (0.59) | 46 (1.61) | 21454 (0.60) | 496 (1.80) | 0 |
| 1997 | 7395 | 65224 | 1364 | 2391 | 149 | 125 | 67113 | 279 | 13804 | 0 | 0 |
| 1998 | 375 (1.45) | 4630 (0.89) | 365 (0.82) | 2587 (0.34) | 310 (0.96) | 2860 (1.57) | 7606 (0.64) | 52 (1.35) | 29020 (1.52) | 454 (0.82) | 0 |
| 1999 | 15 (1.69) | 13012 (0.53) | 14 (0.83) | 964 (0.35) | 112 (1.17) | 2014 (0.90) | 20579 (0.43) | 34 (1.27) | 8251 (0.66) | 1660 (0.53) | 565 (1.87) |
| 2000 | 240 (1.53) | 19114 (0.49) | 314 (0.91) | 1744 (0.30) | 560 (0.82) | 1594 (0.90) | 25052 (0.41) | 275 (1.20) | 11002 (0.41) | 3321 (0.58) | 98 (1.50) |
| 2001 | 123 (1.15) | 16510 (0.48) | 212 (1.28) | 1374 (1.06) | 343 (0.78) | 80 (1.01) | 20942 (0.42) | 97 (0.77) | 5595 (0.54) | 957 (0.41) | 3 (1.96) |
| 2002 | 1189 (0.83) | 78646 (0.41) | 531 (0.74) | 2962 (0.56) | 120 (0.81) | 1625 (0.64) | 85797 (0.38) | 745 (1.51) | 8190 (0.45) | 667 (0.63) | 0 (1.96) |
| 2003 | 1774 (0.85) | 25494 (0.54) | 515 (0.70) | 1327 (0.44) | 266 (0.78) | 1439 (0.64) | 29369 (0.47) | 55 (0.85) | 12067 (0.52) | 480 (0.61) | 44 (1.96) |
| 2004 | 174 (1.53) | 12263 (0.58) | 974 (1.11) | 1026 (0.34) | 586 (0.85) | 2193 (0.79) | 15324 (0.47) | 41 (1.03) | 12405 (1.01) | 401 (0.85) | 42 (1.96) |
| 2005 | 44 (1.42) | 7137 (0.52) | 84 (0.71) | 1427 (0.16) | 201 (0.66) | 1535 (0.84) | 9357 (0.44) | 216 (1.30) | 31672 (0.84) | 258 (0.75) | 6 (1.96) |

| survey | Groupers | Grunts | Croakers | Seabreams | P.longirostris | Ommastrephidae | Sepiidae | D.macro | D.angolensis | U.cariensis |
|--------|-------------|-------------|--------------|--------------|----------------|----------------|-------------|--------------|--------------|--------------|
| 1985 | 1253 (0.95) | 5706 (1.37) | 10235 (1.45) | 18406 (0.72) | 58 (1.61) | 0 | 0 | 6123 (1.31) | 2697 (0.31) | 6271 (1.83) |
| 1986 | 411 (0.81) | 2237 (0.73) | 4649 (0.50) | 9161 (0.46) | 1483 (1.01) | 273 (1.68) | 525 (0.64) | 220 (1.25) | 1314 (1.16) | 2327 (0.86) |
| 1986 | 518 (1.15) | 5301 (0.66) | 4510 (0.77) | 13819 (0.46) | 0 | 0 | 1132 (1.00) | 1268 (1.46) | 4010 (0.39) | 2018 (1.15) |
| 1989 | 580 (0.78) | 3681 (1.02) | 1395 (0.72) | 11443 (0.48) | 235 (1.05) | 1236 (0.86) | 64 (0.93) | 6498 (0.66) | 956 (0.48) | 865 (0.88) |
| 1989 | 3093 (1.55) | 1126 (0.92) | 2972 (0.72) | 12167 (0.36) | 667 (0.76) | 750 (0.51) | 1168 (0.41) | 1115 (0.93) | 3628 (0.48) | 1130 (0.82) |
| 1989 | 659 (1.62) | 82 (1.18) | 595 (1.38) | 4531 (0.56) | 445 (1.43) | 1476 (0.98) | 124 (1.12) | 1530 (1.50) | 1667 (0.52) | 0 |
| 1991 | 176 (1.12) | 425 (0.51) | 2048 (0.85) | 9068 (0.31) | 10 (1.19) | 344 (0.63) | 235 (0.46) | 2210 (0.88) | 1212 (0.40) | 1160 (1.44) |
| 1991 | 1021 (0.93) | 1882 (0.87) | 20081 (1.33) | 25675 (0.36) | 117 (1.11) | 693 (0.71) | 561 (1.00) | 17098 (0.54) | 956 (0.39) | 18422 (1.45) |
| 1992 | 1140 (0.88) | 765 (1.13) | 1546 (0.70) | 25033 (0.44) | 106 (1.13) | 2163 (0.35) | 159 (1.16) | 18182 (0.58) | 1514 (0.32) | 1023 (0.98) |
| 1994 | 417 (0.62) | 68 (0.81) | 10292 (0.99) | 29548 (0.37) | 168 (0.70) | 1041 (0.57) | 1192 (0.70) | 20365 (0.52) | 2383 (0.45) | 3280 (1.27) |
| 1995 | 376 (0.77) | 3105 (1.12) | 15510 (1.05) | 14161 (0.47) | 258 (0.95) | 2 (1.69) | 385 (0.70) | 7719 (0.81) | 1877 (0.79) | 11538 (1.16) |
| 1996 | 690 (0.81) | 3095 (0.65) | 5866 (0.51) | 18323 (0.27) | 25 (1.34) | 210 (0.52) | 28 (1.32) | 11195 (0.43) | 1546 (0.43) | 1077 (0.96) |
| 1997 | 233 (1.10) | 1592 (1.54) | 9033 (0.60) | 21952 (0.58) | 1087 (0.94) | 1324 (0.47) | 1323 (0.94) | 12220 (1.03) | 1497 (0.37) | 4599 (0.60) |
| 1997 | 1023 | 293 | 7099 | 31612 | 1238 | 285 | 1245 | 24314 | 1198 | 4995 |
| 1998 | 198 (1.24) | 9117 (0.82) | 8609 (0.86) | 63225 (1.22) | 186 (0.84) | 376 (0.65) | 1293 (0.58) | 50925 (1.50) | 1991 (0.38) | 2239 (0.77) |
| 1999 | 643 (0.77) | 3327 (0.86) | 9943 (0.89) | 17483 (0.38) | 7 (1.06) | 201 (1.28) | 113 (0.64) | 5178 (0.79) | 1142 (0.41) | 7996 (1.08) |
| 2000 | 882 (0.87) | 6824 (0.51) | 5391 (0.44) | 19310 (0.31) | 290 (0.98) | 586 (0.61) | 418 (0.71) | 6060 (0.76) | 1639 (0.59) | 2499 (0.51) |
| 2001 | 64 (1.08) | 1329 (0.60) | 1744 (0.70) | 12617 (0.53) | 198 (1.36) | 186 (0.96) | 178 (0.83) | 5680 (0.72) | 1670 (0.44) | 1076 (1.04) |
| 2002 | 233 (1.01) | 2982 (0.57) | 6334 (0.42) | 22198 (0.61) | 402 (0.88) | 2363 (0.70) | 172 (0.91) | 11512 (1.16) | 923 (0.47) | 3492 (0.54) |
| 2003 | 702 (0.73) | 8649 (1.12) | 5369 (0.41) | 5595 (0.33) | 449 (0.80) | 230 (0.58) | 101 (0.82) | 557 (0.66) | 1046 (0.50) | 1001 (0.51) |
| 2004 | 175 (0.99) | 3494 (0.95) | 6602 (1.08) | 9583 (0.55) | 969 (1.11) | 310 (0.89) | 206 (0.65) | 3525 (1.27) | 1015 (0.41) | 5700 (1.21) |
| 2005 | 608 (0.84) | 5980 (0.77) | 5530 (0.55) | 7752 (0.31) | 50 (0.87) | 233 (0.61) | 565 (0.27) | 879 (0.59) | 991 (0.39) | 2279 (0.64) |

Distribution

Figure 4.2 shows the distribution of seabreams in the central region between Benguela and Luanda. The distribution was spread out over the whole central shelf with some high concentrations north of Lobito.

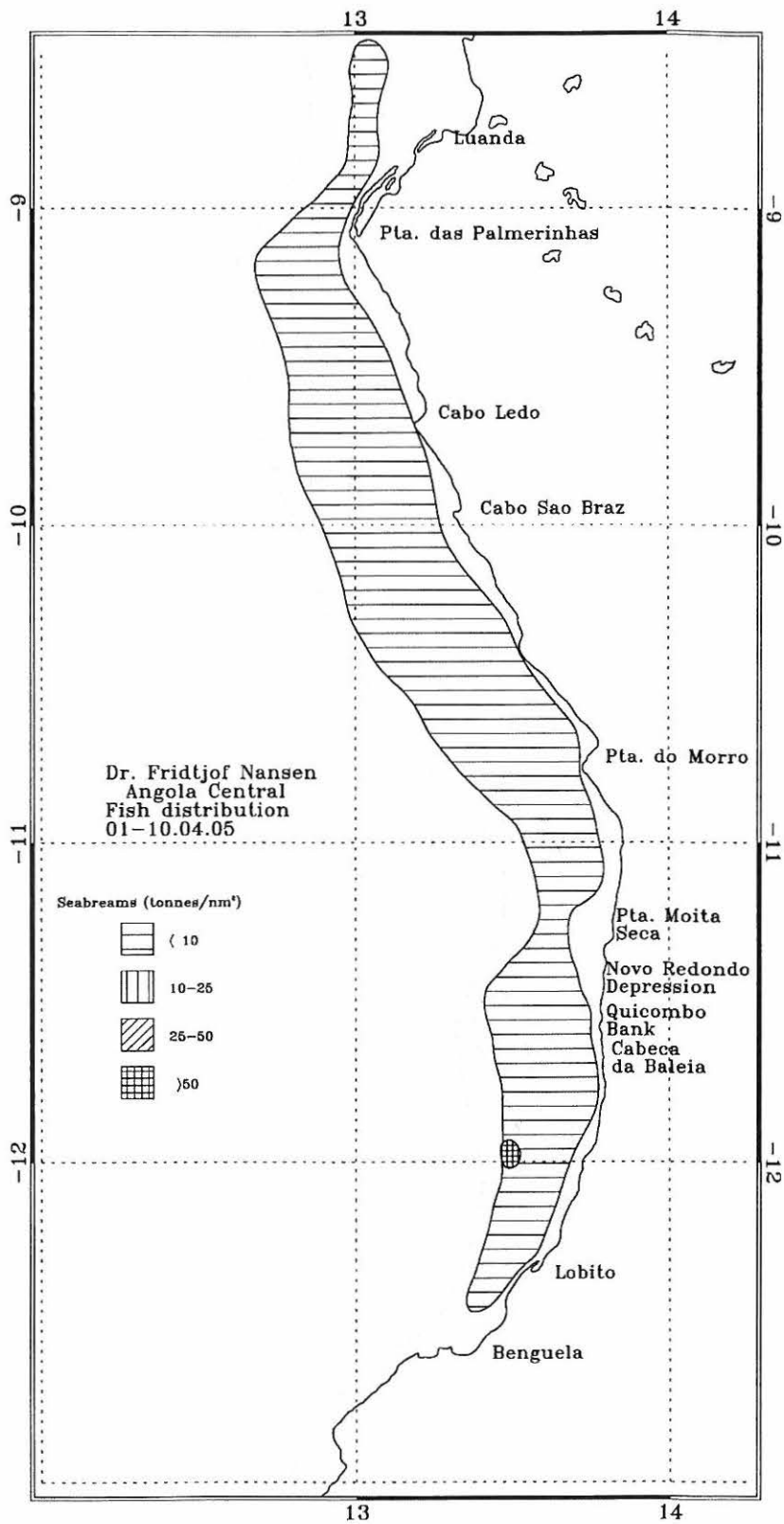


Figure 4.2 Distribution of seabreams (Sparidae) in the central region, Benguela – Luanda. Depth contours at 20, 50, 100, 200 and 500 m.

4.3 Luanda – Congo River shelf

The survey covered the northern region of Angolan waters from Luanda to Congo River. The area north of Congo River is inaccessible to fisheries surveys due to the restricted oil exploitation areas. During some of the previous surveys the area north of Congo River was covered, but to make plausible comparisons the biomass estimates in Table 4.3 are only including trawl stations south of Congo River. A total of 55 successful swept-area trawl stations were accomplished on the shelf area (Table 2.1).

The average catch per hour on the inner shelf was 1 050 kg/hour and 500 kg/hour on the outer shelf (Annex VII). The ‘demersal’ group dominated on the inner shelf with an average catch rate of 760 kg/hour and a relative contribution of 73%. The ‘pelagic’ group contributed about 14%, while shrimps, cephalopods and sharks each contributed less than 1%. On the outer shelf, the demersal fish contributed to 66% of the mean catch rate and the ‘pelagic’ group to about 14%. Shrimps were observed only in very low numbers, while the cephalopods and sharks each contributed to 2.3% and 1.1% of the mean catch rate.

Biomass estimates

Table 4.3 shows the time series from 1985 to 2005 of swept-area biomass estimates for commercial species and groups of species on the shelf off central Angola. The biomass estimates were calculated by stratifying by depth (20-49m, 50-99m and 100-199m). The different strata have been sampled with different intensity throughout the time series and Annex VIII shows the numbers of trawls that have been done by strata by survey. Again, it must be noted that the biomass estimates presented for the pelagic species cannot be trusted as a good reflection of the true biomass as the species are often not available for the bottom trawl. Some of the biomass estimates in Table 4.3 have a high coefficient of variations (CV), which indicates that the trends in the time series should be interpreted with care.

The 2005 biomass estimate of seabreams on the northern shelf was about 18 200 t and is the highest estimate since 1996. The 2005 estimate is considerably higher than the estimates in 2003 and 2004. *Dentex angolensis* contributes to about one third of the total estimate of seabreams. As in previous years, the biomass of *Dentex macrophthalmus* is low in the northern region and contribute marginal to the total seabream estimate. Other important seabreams are *Pagellus bellottii*, *D. canariensis* and *D. barnardi*, which all contribute to the high estimate.

As in several of previous surveys no *M. polli* was found on the northern shelf. The estimate of *T. trecae* in 2005 is marked lower than the recent surveys, but as stressed previously the swept-area estimate of horse mackerel is rather unreliable.

The biomass estimate of croakers, mainly *Umbrina canariensis*, *Atractoscion aequidens* and *Pseudolithus typus*, was 7 950 tons in 2005, which is 30% higher than the estimate in 2004. It seems like the abundance of croakers has improved since 2000. Generally, the biomass of *Umbrina canariensis* has contributed to about 30-45% of the total biomass of croakers and has fluctuated in a similar way as the total biomass of croakers.

The biomass estimate of grunts (*Pomadasyus incisus*, *P. jubelini* and *P. peroteti*) was 5 750 tons in 2005, which is 74% larger than the 2004 estimate and the abundance of grunts seem to have improved on the northern shelf since 2002. The snappers are rare in the catch as they

inhabit rocky and often unavailable areas, hence the biomass estimates of snappers may not adequately reflect the state of the stock. Groupers, mainly *Epinephelus aeneus*, are seldom found on the outer shelf, and as the high CVs indicate the biomass estimates should be considered with care. Nevertheless, the biomass estimates since 2000 have been relative stable, and no trend in the abundance of groupers on the northern shelf can be seen from the estimates in Table 4.3.

The biomass estimate of *P. longirostris* in 2005 was only 5 tons on the northern shelf. Further investigations are needed to explain the large variation in biomass of *P. longirostris* between surveys. As on the central shelf, the biomass estimate of Sepiidae in 2005 was significantly higher than the 2004 estimate, which indicates that the overall abundance of Sepiidae has improve the last years. The biomass estimate of Ommastrephidae was 146 tons in 2005. This is a 58% reduction from 2004, but the annual biomass estimates vary and no clear trend in the abundance of Ommastrephidae can be seen in Table 4.3, but it seems like the biomass estimates on the central and northern shelves are correlated.

Table 4.3 Biomass estimates (tonnes) of important species on the shelf (20-200m) in the northern region. CV values are indicated in brackets.

| Survey | M.polli | T.treace | Shrimps | Cephalopod | Sharks | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Snappers |
|--------|--------------|---------------|--------------|---------------|---------------|--------------|----------------|------------|---------------|--------------|------------|
| 1985.1 | 9 (1.65) | 4 496 (1.11) | 302 (0.79) | 10 463 (1.25) | 498 (0.93) | 364 (1.16) | 9 986 (0.92) | 44 (1.96) | 15 711 (0.87) | 254 (0.90) | 0 NA |
| 1985.2 | 0 NA | 3 324 (1.17) | 139 (1.88) | 694 (0.57) | 451 (0.64) | 3 907 (1.91) | 3 740 (1.04) | 30 (1.64) | 1 200 (1.65) | 75 (0.81) | 63 (1.26) |
| 1985.3 | 3 459 (1.65) | 16 486 (1.20) | 1 448 (1.38) | 2 046 (0.67) | 870 (1.23) | 205 (1.94) | 17 742 (1.09) | 146 (1.30) | 2 709 (0.73) | 26 (1.65) | 62 (1.96) |
| 1985.4 | 7 415 (1.65) | 36 044 (1.14) | 107 (1.37) | 436 (0.72) | 78 (1.55) | 483 (1.15) | 42 506 (1.02) | 88 (1.26) | 3 608 (0.70) | 780 (1.46) | 0 NA |
| 1986.1 | 56 (1.64) | 13 438 (0.81) | 1 445 (0.90) | 2 853 (0.87) | 496 (0.76) | 2 053 (0.73) | 17 950 (0.62) | 30 (1.96) | 8 078 (1.11) | 2 080 (0.67) | 434 (1.96) |
| 1986.2 | 290 (1.21) | 8 053 (0.37) | 486 (0.72) | 1 179 (0.38) | 825 (0.56) | 1 365 (0.67) | 10 364 (0.32) | 210 (0.97) | 8 640 (0.82) | 756 (0.51) | 0 NA |
| 1989.1 | 62 (1.46) | 12 681 (0.90) | 92 (1.08) | 931 (0.53) | 497 (0.97) | 1 578 (1.87) | 13 264 (0.86) | 97 (1.18) | 2 277 (0.71) | 345 (0.80) | 0 NA |
| 1989.2 | 250 (1.65) | 11 535 (0.66) | 509 (0.61) | 549 (0.38) | 729 (0.85) | 1 924 (0.53) | 13 966 (0.57) | 220 (0.98) | 3 712 (0.46) | 2 973 (0.89) | 33 (1.64) |
| 1989.3 | 1 029 (1.62) | 39 959 (0.58) | 256 (1.04) | 1 715 (0.90) | 15 984 (1.10) | 5 043 (0.73) | 46 704 (0.59) | 208 (0.59) | 21 132 (1.13) | 364 (1.02) | 316 (1.96) |
| 1991.1 | 0 NA | 21 484 (0.57) | 381 (1.69) | 935 (0.37) | 705 (0.67) | 1 841 (0.96) | 43 614 (0.68) | 96 (1.36) | 11 448 (0.88) | 2 739 (1.40) | 0 NA |
| 1991.2 | 312 (1.14) | 14 727 (0.71) | 2 554 (1.79) | 4 225 (0.60) | 107 (0.82) | 55 (0.78) | 14 928 (0.70) | 318 (0.74) | 4 949 (0.57) | 79 (1.27) | 0 NA |
| 1992 | 1 304 (1.04) | 15 520 (0.65) | 79 (1.19) | 3 114 (0.38) | 298 (1.10) | 8 (1.96) | 17 942 (0.59) | 158 (0.87) | 4 588 (0.47) | 14 (1.29) | 0 NA |
| 1994 | 51 (1.21) | 14 309 (0.81) | 478 (1.40) | 3 643 (0.48) | 52 (1.09) | 184 (1.96) | 21 225 (0.62) | 337 (0.87) | 4 423 (0.45) | 325 (1.03) | 0 NA |
| 1995.1 | 127 (1.17) | 305 (0.80) | 951 (0.98) | 451 (0.40) | 679 (0.64) | 1 369 (0.79) | 7 078 (0.69) | 181 (0.81) | 7 208 (0.58) | 2 109 (1.10) | 481 (1.50) |
| 1996 | 0 NA | 32 155 (0.54) | 347 (0.64) | 2 203 (0.33) | 256 (0.67) | 782 (1.62) | 33 700 (0.51) | 137 (1.14) | 3 939 (0.43) | 89 (1.35) | 0 NA |
| 1997.1 | 25 (1.50) | 37 093 (0.51) | 474 (0.89) | 6 218 (0.50) | 758 (0.67) | 6 391 (1.14) | 130 055 (0.87) | 288 (1.18) | 6 323 (0.41) | 57 (1.70) | 73 (1.96) |
| 1999 | 6 (1.17) | 4 106 (0.47) | 326 (0.96) | 1 433 (0.30) | 1 297 (0.54) | 6 392 (0.60) | 16 570 (0.54) | 36 (1.65) | 14 001 (0.39) | 2 711 (0.70) | 5 (1.64) |
| 2000 | 12 (1.65) | 6 583 (0.56) | 150 (0.92) | 609 (0.65) | 3 302 (1.70) | 619 (1.54) | 22 483 (0.88) | 70 (1.20) | 4 216 (0.75) | 1 231 (1.37) | 196 (1.64) |
| 2001 | 6 (1.65) | 5 502 (0.87) | 212 (0.80) | 866 (0.88) | 391 (0.74) | 517 (0.71) | 9 560 (0.71) | 37 (0.93) | 17 036 (0.94) | 856 (0.86) | 723 (1.91) |
| 2002 | 0 NA | 9 765 (0.52) | 52 (0.52) | 956 (0.51) | 178 (0.64) | 1 442 (0.57) | 13 125 (0.41) | 75 (0.61) | 19 374 (0.60) | 1 651 (0.78) | 63 (1.96) |
| 2003 | 0 NA | 9 766 (0.53) | 497 (0.81) | 481 (0.57) | 243 (0.51) | 2 816 (0.60) | 28 286 (0.94) | 81 (1.64) | 6 716 (0.56) | 2 344 (1.34) | 142 (1.96) |
| 2004 | 0 (1.65) | 9 146 (0.49) | 196 (1.14) | 1 059 (0.26) | 492 (0.44) | 1 567 (0.70) | 12 764 (0.42) | 22 (1.00) | 4 668 (0.47) | 1 455 (1.15) | 37 (1.87) |
| 2005 | 0 NA | 3 792 (0.52) | 146 (0.66) | 1 674 (0.31) | 734 (0.31) | 599 (0.79) | 10 292 (0.63) | 116 (1.11) | 5 632 (0.54) | 705 (1.35) | 278 (1.27) |

| Survey | Groupers | Grunts | Croakers | Seabreams | P.longirostris | Ommastrephidae | Sepiidae | D. Macro. | D. angolensis | U. Canariensis |
|--------|--------------|---------------|---------------|---------------|----------------|----------------|--------------|--------------|---------------|----------------|
| 1985.1 | 479 (1.09) | 248 (1.02) | 1 519 (1.00) | 14 690 (0.57) | 117 (1.38) | 10 273 (1.27) | 0 NA | 200 (1.65) | 2 196 (0.55) | 1 132 (1.21) |
| 1985.2 | 1 771 (0.78) | 381 (1.31) | 1 302 (1.10) | 12 881 (0.34) | 0 NA | 0 NA | 0 NA | 0 NA | 2 495 (0.57) | 521 (1.46) |
| 1985.3 | 1 978 (0.84) | 3 629 (0.94) | 8 695 (0.94) | 20 897 (0.67) | 0 NA | 0 NA | 154 (0.97) | 0 NA | 2 949 (0.69) | 602 (1.14) |
| 1985.4 | 3 054 (0.63) | 14 806 (1.14) | 3 692 (0.93) | 31 078 (0.45) | 10 (1.65) | 84 (1.34) | 215 (1.28) | 125 (1.64) | 6 371 (0.97) | 2 650 (0.95) |
| 1986.1 | 676 (0.80) | 1 231 (0.98) | 2 307 (0.97) | 17 193 (0.40) | 521 (1.09) | 1 531 (1.23) | 808 (0.72) | 2 058 (0.56) | 3 814 (0.54) | 279 (0.74) |
| 1986.2 | 1 515 (0.51) | 1 694 (0.59) | 5 049 (0.37) | 25 098 (0.28) | 0 NA | 0 NA | 696 (0.60) | 1 483 (0.48) | 11 220 (0.35) | 1 350 (0.48) |
| 1989.1 | 989 (1.17) | 135 (0.96) | 4 469 (0.88) | 12 958 (0.37) | 60 (1.29) | 506 (0.85) | 286 (0.94) | 0 NA | 1 612 (0.34) | 542 (0.80) |
| 1989.2 | 841 (0.68) | 1 102 (0.72) | 3 231 (0.34) | 7 283 (0.34) | 22 (0.90) | 161 (0.53) | 272 (0.72) | 222 (0.87) | 2 299 (0.57) | 172 (0.54) |
| 1989.3 | 315 (0.73) | 1 788 (0.86) | 4 214 (0.70) | 15 344 (0.58) | 31 (1.50) | 1 661 (0.93) | 45 (1.08) | 100 (0.95) | 2 614 (0.46) | 1 194 (1.37) |
| 1991.1 | 642 (0.92) | 822 (0.85) | 3 797 (0.83) | 4 826 (0.23) | 0 NA | 368 (0.53) | 261 (0.72) | 158 (1.06) | 1 317 (0.37) | 496 (0.72) |
| 1991.2 | 1 022 (0.69) | 860 (1.21) | 6 450 (0.93) | 15 741 (0.39) | 129 (0.94) | 2 092 (1.05) | 226 (0.74) | 690 (0.95) | 3 198 (0.41) | 4 375 (1.32) |
| 1992 | 1 844 (0.80) | 932 (0.90) | 2 778 (0.59) | 14 551 (0.22) | 49 (1.65) | 1 071 (0.40) | 901 (0.64) | 1 532 (1.10) | 5 112 (0.26) | 680 (0.65) |
| 1994 | 2 474 (0.75) | 612 (0.83) | 4 095 (0.80) | 19 599 (0.47) | 478 (1.40) | 441 (0.35) | 1 910 (0.45) | 1 741 (0.78) | 3 451 (0.37) | 2 740 (1.13) |
| 1995.1 | 807 (0.70) | 2 921 (1.08) | 2 882 (0.73) | 8 341 (0.30) | 477 (1.13) | 72 (0.58) | 236 (0.48) | 197 (1.11) | 2 143 (0.38) | 342 (1.15) |
| 1996 | 2 002 (0.97) | 5 161 (0.90) | 9 292 (0.49) | 19 985 (0.68) | 10 (1.60) | 589 (0.27) | 106 (1.19) | 2 169 (0.80) | 4 303 (0.40) | 2 073 (1.15) |
| 1997.1 | 549 (0.76) | 4 836 (1.05) | 12 451 (0.53) | 9 009 (0.28) | 124 (1.38) | 1 017 (0.71) | 4 468 (0.68) | 323 (0.78) | 2 837 (0.41) | 1 161 (0.79) |
| 1999 | 1 011 (0.60) | 5 600 (0.80) | 8 528 (0.91) | 13 304 (0.25) | 113 (0.79) | 391 (0.45) | 254 (0.55) | 146 (0.76) | 2 881 (0.19) | 3 582 (1.45) |
| 2000 | 620 (0.48) | 388 (0.98) | 2 450 (0.66) | 13 424 (0.35) | 18 (0.91) | 214 (0.83) | 46 (0.66) | 65 (0.86) | 4 053 (0.77) | 1 271 (1.08) |
| 2001 | 793 (0.97) | 2 271 (1.04) | 1 458 (0.80) | 8 928 (0.40) | 101 (0.86) | 98 (0.51) | 196 (0.63) | 417 (0.85) | 1 228 (0.39) | 188 (1.36) |
| 2002 | 509 (0.88) | 241 (0.54) | 2 834 (0.53) | 9 187 (0.35) | 21 (1.00) | 660 (0.72) | 67 (0.64) | 102 (1.18) | 2 089 (0.52) | 835 (0.83) |
| 2003 | 334 (0.68) | 1 375 (0.60) | 8 078 (0.62) | 11 346 (0.33) | 62 (1.42) | 115 (0.80) | 198 (1.36) | 16 (0.80) | 3 491 (0.28) | 3 239 (1.27) |
| 2004 | 502 (0.63) | 3 316 (0.86) | 5 545 (0.74) | 11 924 (0.28) | 6 (1.28) | 344 (0.42) | 185 (0.83) | 79 (1.12) | 5 214 (0.39) | 1 236 (0.53) |
| 2005 | 568 (0.40) | 5 754 (0.96) | 7 949 (0.59) | 18 282 (0.25) | 5 (0.87) | 146 (0.33) | 427 (0.51) | 136 (0.84) | 6 727 (0.17) | 3 640 (0.76) |

Distribution

Seabreams were distributed on the whole northern shelf (Figure 4.3). The highest densities were found off N'Zeto.

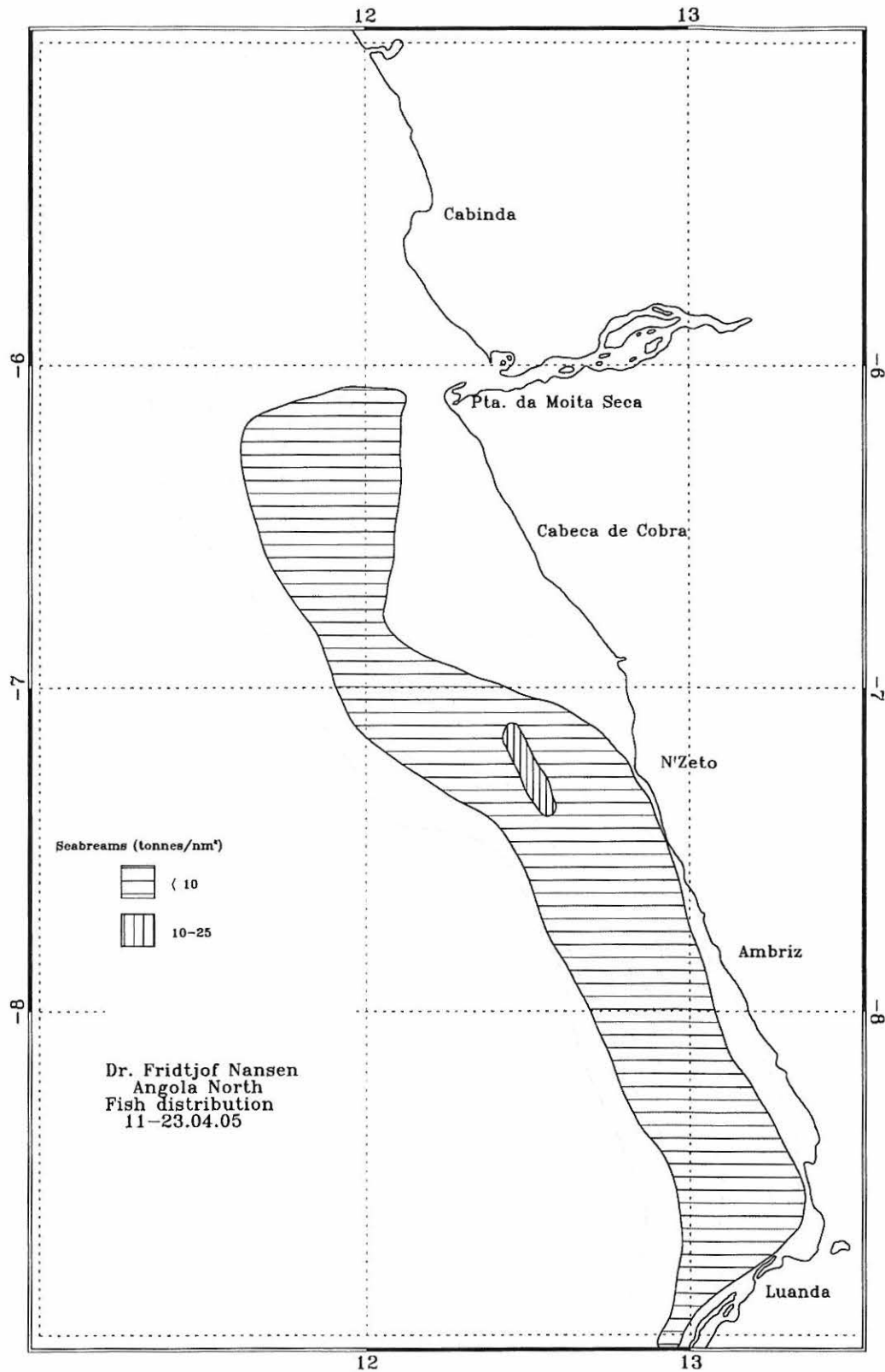


Figure 4.3 Distribution of seabreams (Sparidae) in the northern region, Luanda-Congo River. Depth contours at 20, 50, 100, 200 and 500 m.

CHAPTER 5 CATCH RATES, DISTRIBUTION, COMPOSITION AND BIOMASS ESTIMATES OF DEEP-WATER SHRIMP AND HAKE (SLOPE)

The slope is defined to be the area between 201 and 800 m bottom depth. The trawl positions are mapped in Figure 2.1-2.3, and station information and catch by species are presented in Annex I. Pooled length distributions weighted by the catch of the main species by region are shown in Annex II. Mean densities (t/NM²) of the main species sorted by abundance and depth strata, the frequency of occurrence and the catch distributions are shown in Annex III. Annex VII presents the catch rates of the different species and species groups, and Annex V shows the NAN-SIS species codes used to extract the information in the various tables.

5.1 Cunene – Tombua slope

During 3 days only 5 trawl stations were sampled on the slope in the southern region. Unsuitable bottom and a very steep slope make trawling very difficult on the southern slope. The average catch per hour was 930 kg/hour, where the “other” group (mainly non-commercial species) contributed to about 82% of the catch rate.

Biomass were caught in 2000.

Table 5.1 shows the time series from 1986 to 2005 of the swept-area biomass estimates for different species and species groups on the southern slope. Only stations in the depth range 201-600m were included in the biomass estimates, and no stratifying by depth was done, as the numbers of trawl stations on the southern slope is very low (see Annex VIII). The high coefficients of variation (CV) shown in Table 5.1 indicate that the trends in the time series should be interpreted with care.

The southern slope has not been systematic surveyed during the years and the low sampling effort makes the estimates imprecise and makes any biomass comparison difficult. However, as the trawl station positions of the 2000, 2003, 2004 and 2005 surveys are similar some comparisons between these surveys may be done.

No seabreams were caught on the slope and horse mackerel were found in low densities on only two trawl stations. On the southern slope the commercial important shrimp species are only found in low densities (see Table 5.1 and Annex III).

The biomass estimates of hake have fluctuated since 2000, but the 2005 biomass estimate of 882 tons of hake is 85% less than the 2004 estimate. The 2005 survey is also much lower than the 2000 hake estimate, but higher than the 2003 estimate. Therefore, it is difficult to see any clear trend. However, the 2000 survey identified all hake as *M. polli* while only *M. capensis* was caught during the 2005 survey. It seems like that the hake were misidentified in 2000, as it is unlikely that no *M. capensis* were caught in 2000.

Table 5.1 Biomass estimates (tonnes) of important species group on the slope (200-600m) in the southern region. CV values are indicated in brackets.

| survey | Hake | Horsemackerel | Shrimps | Cephalopod | Sharks |
|--------|--------------|---------------|------------|------------|------------|
| 1986.1 | 2754 (0.84) | 26 (1.00) | 182 (0.16) | 15 (1.00) | 66 (0.40) |
| 1991.1 | 3285 (0.52) | 62 (0.02) | 47 (0.43) | 43 (0.14) | 463 (0.33) |
| 1991.2 | 19798 (0.62) | 549 (0.48) | 0 | 0 | 506 (0.68) |
| 1992 | 10793 (0.82) | 58 (1.00) | 235 (0.88) | 0 | 49 (0.19) |
| 1997.2 | 3411 | 13 | 13 | 0 | 917 |
| 2000 | 3358 (0.86) | 0 | 44 (0.84) | 0 | 73 (0.47) |
| 2002 | 1245 | 0 | 20 | 14 | 104 |
| 2003 | 454 (1.00) | 0 | 156 (0.91) | 0 | 226 (0.34) |
| 2004 | 5749 (0.53) | 50 (0.62) | 97 (0.40) | 34 (0.93) | 40 (0.97) |
| 2005 | 882 (0.48) | 24 (0.84) | 134 (0.71) | 15 (1.00) | 56 (0.62) |

| survey | Carangids | Seabreams | P.longirostris | A.varidens | Denlex.macro |
|--------|------------|-------------|----------------|------------|--------------|
| 1986.1 | 26 (1.00) | 1261 (0.95) | 0 | 106 (1.00) | 1261 (0.95) |
| 1991.1 | 62 (0.02) | 325 (0.83) | 21 (0.77) | 0 | 325 (0.83) |
| 1991.2 | 549 (0.48) | 2669 (0.08) | 0 | 0 | 2669 (0.08) |
| 1992 | 58 (1.00) | 2035 (1.00) | 15 (1.00) | 161 (1.00) | 2035 (1.00) |
| 1997.2 | 13 | 413 | 13 | 0 | 413 |
| 2000 | 0 | 0 | 44 (0.84) | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 (1.00) | 0 | 79 (1.00) | 0 | 0 |
| 2004 | 50 (0.62) | 579 (0.57) | 57 (0.75) | 30 (1.00) | 579 (0.57) |
| 2005 | 24 (0.84) | 0 | 3 (0.55) | 57 (0.87) | 0 |

Distribution

Figure 5.1 shows the distribution of *M. capensis* in the southern region. The distribution covers large parts of the outer shelf and the slope from Cunene to Baia Dos Tigres. In previous surveys the hake has also been found to cover the area north of Baia Dos Tigres, but no hake was found in that area during this survey. The highest densities of hake were found just north off the mouth of Cunene River.

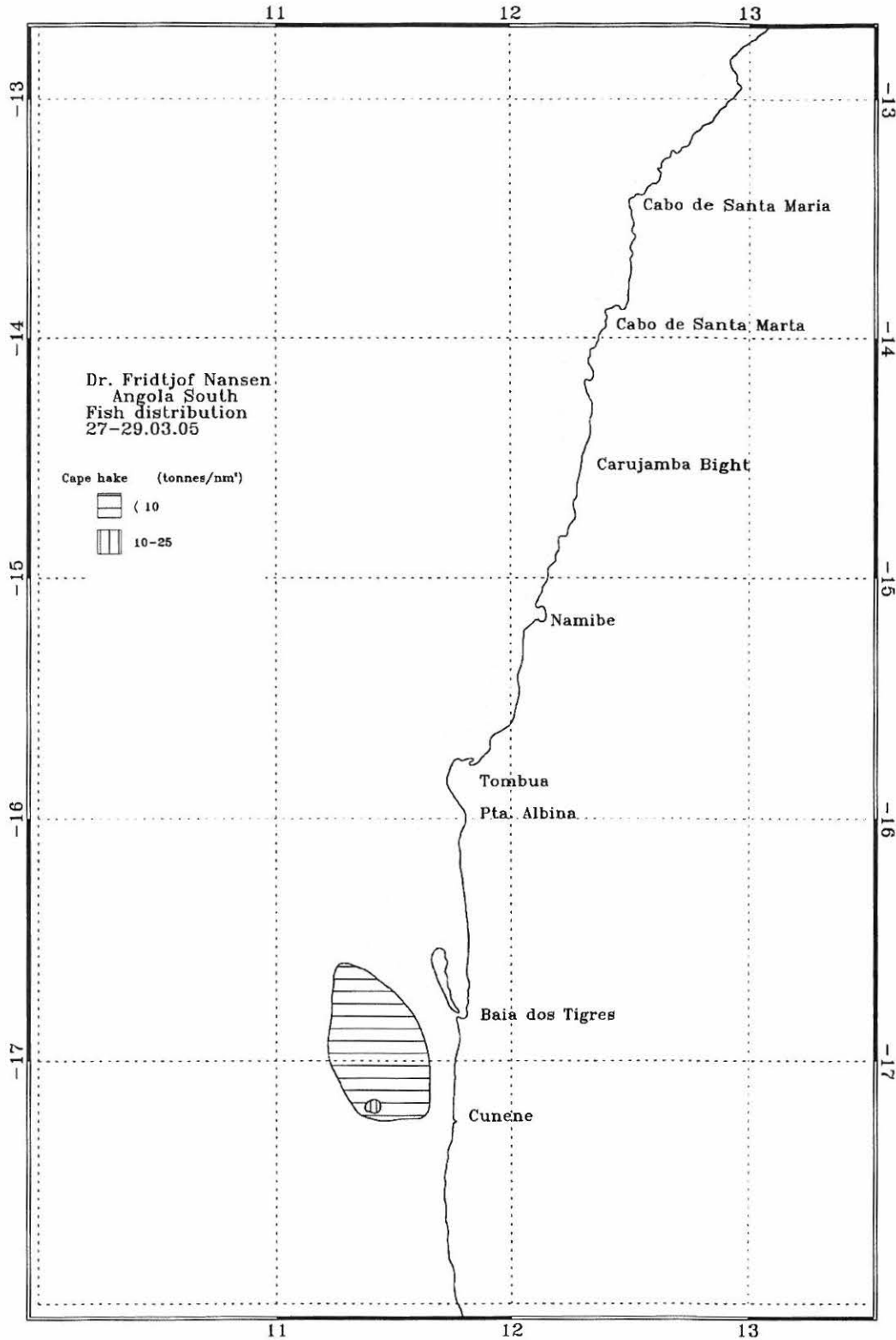


Figure 5.1 Distribution of hake (*Merluccius capensis*) in the southern region, Cunene - Tombua. Depth contours at 20, 50, 100 and 200 m.

5.2 Benguela – Luanda slope

The central region of Angolan waters is from Benguela to Luanda, and a total of 33 successful swept-area trawl stations were accomplished on the central slope (Table 2.1).

The average catch per hour on the slope was 844 kg/hour (Annex VII). The ‘demersal’ group contributed to 28% of the mean catch rate and the ‘pelagic’ group to 4%, while shrimps, cephalopods and sharks each contributed to 12, 1 and 0.5%, respectively. The “other” group dominated the catches and contributed to 55% of the total mean catch rate. *M. polli* was caught in almost every station on the central slope and the average catch rate was 118 kg/hour. The average catch rate of seabreams was 83 kg/hour, but the group was only caught at five out of 33 stations. Only *D. macrophthalmus* and *D. angolensis*, of the seabreams, were caught on the central slope. The averages catch rates of the three shrimp species *P. longirostris*; *A. varidens* and *N. africana* were respectively 8, 11 and 76 kg/hour.

Biomass

Biomass estimates in tonnes of the most important species groups are presented in Table 5.2. The biomasses were calculated by stratifying by depth (200-299, 300-399, 400-499, 500-599, 600-699 and 700-799m). The CVs are weighted by stratum size.

The different strata have been sampled with different intensity throughout the time series and Annex VIII shows the numbers of trawls that have been done by strata by survey. The biomass estimates presented for the pelagic species cannot be trusted as a good reflection of the true biomass of those species. Pelagic species are often not available for the bottom trawl as the fish swim to high above the seabed and the biomass estimates of the pelagic species may reflect their availability to the trawl and not only their abundance. Some of the biomass estimates in Table 5.2 have a high coefficient of variations (CV), which indicates that the trends in the time series should be interpreted with care.

Seabreams were only found in a few stations in the shallow area of the slope (<280m), and as result of the large variability in the catch rates of this group the CVs are very high. The biomass estimate of seabreams in 2005 was about 6 500 tons, which is a 40% reduction from the 2004 estimate. However, both the 2004 and 2005 estimates are higher than the previous estimates, but as seen from the very high CVs care should be taken when comparing the biomass estimates of seabreams on the central slope. As in previous surveys, *D. macrophthalmus* was the most abundant seabream species on the central slope in 2005.

The 2005 biomass estimate of 10 000 tons of *M. polli* is 37% lower than the 2004 estimate, but as seen in Table 5.2 the two most recent biomass estimates indicate that the biomass of *M. polli* has increased in recent years on the central slope. However, a large component of the biomass consists of small and medium sized fish.

It seems like it has been an increase in the biomass of the shrimp species *P. longirostris*, *A. varidens* and *N. africana* on the central shelf during the last few years. Even though the biomass estimate of *N. africana* decreased from 6 204 tons in 2004 to 5 640 tons in 2005, the estimates of the two most recent surveys indicate that the abundance of *N. africana* is higher than in previous years.

The biomass estimate of Ommastrephidae in 2005 was 510 tones on the central slope, which is a 46% increase from 2004. The biomass estimates of Ommastrephidae show a positive trend from 2001, but as the CVs are very high it is difficult to conclude that the abundance

has improved during this period. In Table 5.2, the biomass estimate of hairtails in 2005 shows a marked increase from the 2004 estimate and is the highest estimate since 1991.

Table 5.2 Biomass estimates (tonnes) of important species on the slope (200-800m) in the central region. CV values are indicated in brackets.

| survey | M.poli | Shrimps | Cephalopod | Sharks | Hairtails | Seabreams |
|--------|--------------|--------------|-------------|-------------|---------------|--------------|
| 1985 | 18790 (1.03) | 2916 (1.20) | 301 (1.10) | 17 (2.47) | 420 (1.56) | 253 (1.25) |
| 1986 | 17757 (0.74) | 6306 (0.70) | 1003 (0.85) | 557 (0.88) | 16 (2.27) | 972 (2.14) |
| 1986 | 24611 (0.00) | 13247 (0.00) | 57 (0.00) | 0 | 498917 (0.00) | 6446 (0.00) |
| 1989 | 2803 (1.26) | 1008 (0.95) | 39 (0.76) | 65 (0.69) | 60 (2.06) | 804 (2.17) |
| 1989 | 4940 (0.81) | 1963 (0.84) | 277 (1.34) | 263 (1.17) | 142 (0.59) | 58 (1.64) |
| 1989 | 12633 (1.00) | 1546 (0.57) | 410 (0.76) | 3247 (0.34) | 35703 (0.01) | 435 (0.98) |
| 1991 | 11939 (0.33) | 4950 (0.35) | 315 (0.45) | 732 (0.54) | 2606 (2.13) | 780 (2.05) |
| 1991 | 10539 (0.52) | 3016 (0.55) | 114 (0.82) | 1487 (0.88) | 395 (1.25) | 488 (1.12) |
| 1992 | 6999 (0.28) | 4436 (0.60) | 189 (0.51) | 2920 (0.88) | 410 (1.28) | 496 (1.03) |
| 1994 | 3803 (0.71) | 3457 (0.69) | 219 (0.60) | 707 (0.60) | 1213 (0.82) | 1188 (1.50) |
| 1995 | 4391 (0.41) | 4480 (0.69) | 214 (0.79) | 1216 (0.91) | 1145 (0.53) | 6264 (1.24) |
| 1995 | 4791 (0.38) | 4323 (0.25) | 153 (0.46) | 1068 (0.44) | 2235 (1.21) | 1291 (0.66) |
| 1996 | 6440 (0.74) | 6457 (0.59) | 97 (0.90) | 1581 (0.89) | 244 (0.62) | 1016 (0.47) |
| 1997 | 10375 (0.59) | 6969 (0.37) | 557 (0.62) | 1214 (0.87) | 902 (1.01) | 1858 (1.14) |
| 1997 | 8363 (0.34) | 2690 (0.53) | 166 (0.28) | 42 (1.23) | 1013 (0.21) | 5045 (1.25) |
| 1998 | 9991 (0.50) | 9048 (0.39) | 428 (0.76) | 812 (0.63) | 1840 (1.46) | 1643 (1.06) |
| 1999 | 2995 (0.74) | 1806 (0.49) | 343 (0.63) | 728 (0.91) | 728 (0.61) | 2900 (0.82) |
| 2000 | 5482 (0.60) | 2445 (0.45) | 717 (0.50) | 639 (0.74) | 871 (0.91) | 2059 (1.01) |
| 2001 | 4763 (0.81) | 2575 (0.72) | 623 (0.66) | 818 (1.77) | 297 (1.05) | 767 (1.43) |
| 2002 | 3012 (0.65) | 3749 (0.60) | 470 (0.63) | 212 (0.92) | 269 (0.57) | 2418 (1.98) |
| 2003 | 7155 (0.90) | 4086 (0.83) | 420 (0.64) | 104 (1.02) | 178 (1.33) | 606 (1.55) |
| 2004 | 16127 (0.77) | 7350 (0.42) | 444 (0.85) | 476 (1.51) | 1581 (1.06) | 10840 (2.00) |
| 2005 | 10074 (0.58) | 7135 (0.37) | 611 (0.98) | 307 (0.46) | 2655 (1.55) | 6468 (2.11) |

| survey | P.longirostris | A.varidens | N.africanus | Ommastrephidae | Dentex macro | DentexAngolensis |
|--------|----------------|-------------|-------------|----------------|--------------|------------------|
| 1985 | 886 (1.47) | 942 (2.08) | 714 (1.21) | 0 | 39 (2.37) | 215 (1.41) |
| 1986 | 653 (0.89) | 492 (0.90) | 3173 (1.25) | 74 (1.13) | 499 (2.10) | 474 (2.18) |
| 1986 | 0 | 0 | 0 | 0 | 6446 (0.00) | 0 |
| 1989 | 181 (1.22) | 194 (1.13) | 592 (1.86) | 39 (0.76) | 804 (2.17) | 0 |
| 1989 | 505 (0.84) | 228 (0.74) | 1020 (1.45) | 240 (1.66) | 26 (2.37) | 33 (2.27) |
| 1989 | 375 (0.32) | 194 (0.68) | 958 (1.01) | 409 (0.77) | 324 (1.14) | 110 (2.13) |
| 1991 | 204 (0.75) | 653 (0.21) | 3879 (0.45) | 195 (0.75) | 706 (2.09) | 74 (1.79) |
| 1991 | 190 (0.57) | 105 (1.53) | 2659 (0.63) | 114 (0.82) | 249 (1.79) | 239 (1.88) |
| 1992 | 610 (0.95) | 366 (0.63) | 3224 (0.79) | 141 (0.61) | 358 (1.42) | 138 (1.87) |
| 1994 | 579 (0.85) | 647 (0.67) | 2199 (1.07) | 168 (0.59) | 1113 (1.55) | 40 (2.27) |
| 1995 | 425 (0.95) | 753 (0.45) | 2460 (1.32) | 30 (1.34) | 6037 (1.30) | 226 (0.98) |
| 1995 | 479 (0.45) | 699 (0.23) | 2790 (0.36) | 85 (0.64) | 1196 (0.73) | 95 (1.42) |
| 1996 | 114 (0.53) | 671 (0.37) | 4971 (0.71) | 41 (0.67) | 974 (0.48) | 42 (2.27) |
| 1997 | 685 (0.50) | 305 (0.54) | 4093 (0.68) | 474 (0.65) | 1700 (1.29) | 158 (1.61) |
| 1997 | 2679 (0.54) | 0 | 11 (2.27) | 134 (0.24) | 4864 (1.25) | 180 (1.10) |
| 1998 | 556 (0.63) | 1191 (1.10) | 7000 (0.52) | 389 (0.84) | 1549 (1.15) | 94 (2.23) |
| 1999 | 214 (0.87) | 337 (1.06) | 1206 (0.75) | 315 (0.61) | 2806 (0.87) | 94 (1.60) |
| 2000 | 455 (1.05) | 379 (0.35) | 1043 (1.02) | 426 (0.57) | 1954 (1.01) | 105 (1.44) |
| 2001 | 186 (0.44) | 456 (0.63) | 517 (2.35) | 340 (1.08) | 663 (1.70) | 102 (2.27) |
| 2002 | 341 (1.23) | 243 (0.52) | 3039 (0.75) | 242 (0.77) | 2307 (2.19) | 111 (2.27) |
| 2003 | 223 (0.44) | 498 (1.07) | 3284 (1.02) | 409 (0.65) | 514 (1.97) | 92 (2.27) |
| 2004 | 419 (1.08) | 576 (0.44) | 6204 (0.47) | 350 (1.04) | 10265 (2.24) | 572 (2.27) |
| 2005 | 574 (0.71) | 792 (0.41) | 5640 (0.46) | 510 (1.15) | 6260 (2.19) | 208 (1.43) |

Distribution

Figure 5.2 shows the distribution of hake (*Merluccius polli*) in the central region. The distribution covers the whole central slope and is similar to the observations of last year survey. The hake stock mainly covers areas deeper than 200 m, and as during the 2004 survey, the highest densities were found in the regions off Pta. do Morro, south Cabo São Braz and north Pta. das Palmerinhas, in the depth interval of 300-500 m, which is similar to the one found in 2004.

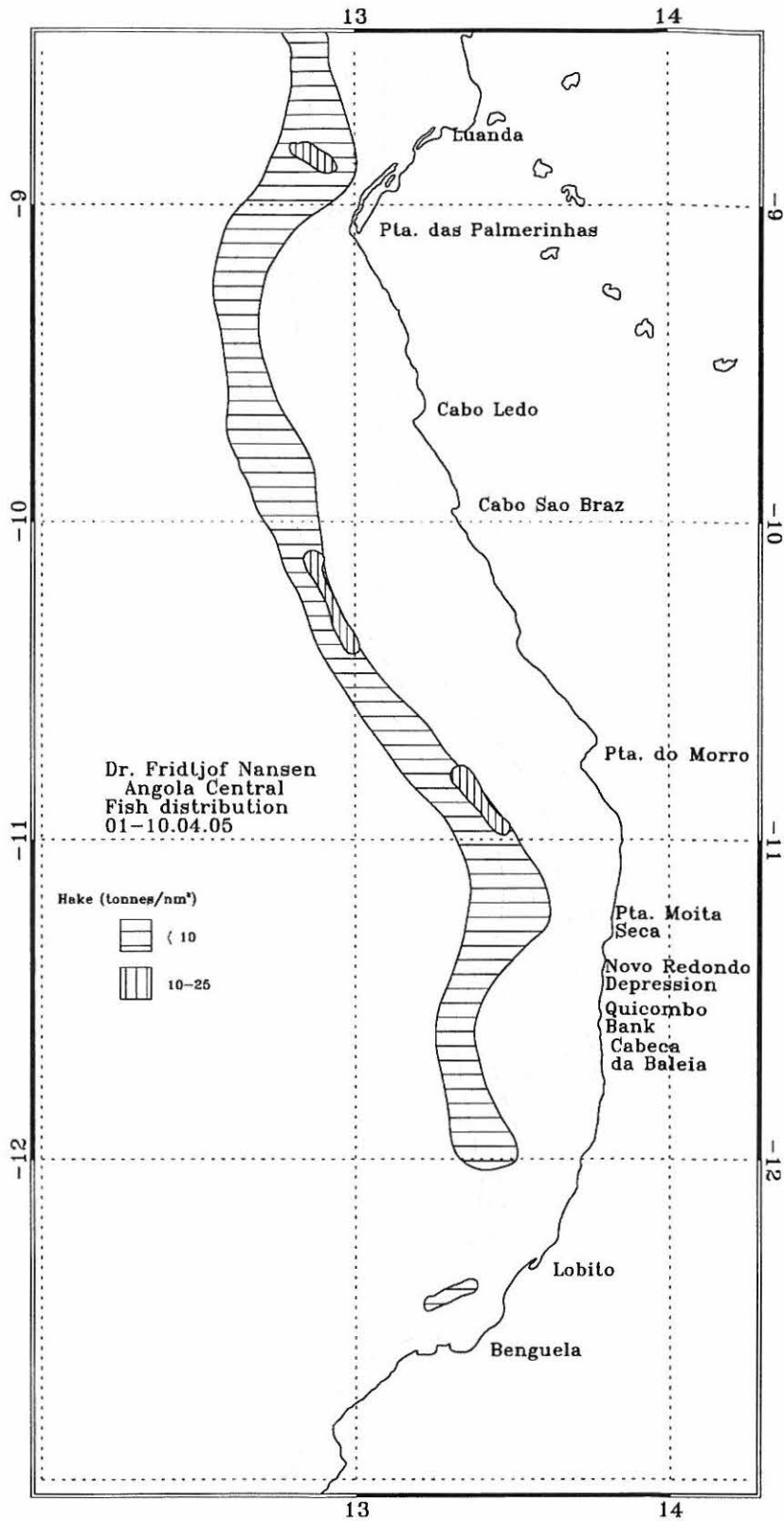


Figure 5.2 Distribution of Benguela hake (*Merluccius polli*) in the central region, Benguela-Luanda. Depth contours at 20, 50, 100, 200 and 500 m.

5.3 Luanda – Congo River slope

The survey covered the northern region of Angolan waters from Luanda to Congo River, and a total of 43 successful swept-area trawl stations were accomplished on the northern slope (Table 2.1). The area north of Congo River is inaccessible to fisheries surveys due to the restricted oil exploitation areas. During some of the previous surveys the area north of Congo River was covered, but to make plausible comparisons the biomass estimates in Table 5.3 are only including trawl stations south of Congo River. The different strata have been sampled with different intensities throughout the time series and Annex VIII shows the numbers of trawls that have been done by strata by survey.

The average catch per hour on the slope was 505 kg/hour (Annex VII). The ‘demersal’ group contributed to 18% of the mean catch rate and the ‘pelagic’ group to 2.5%, while shrimps, cephalopods and sharks each contributed to 17, 0.7 and 1.7%, respectively. The “other” group dominated the catches and contributed to 60% of the total mean catch rate. *M. polli* was caught in all but five station and the average catch rate was 95 kg/hour. The average catch rate of seabreams (only *D. macrophthalmus* and *D. angolensis* were caught) was 4.5 kg/hour and they were only caught at six stations on the northern slope. The averages catch rates of the three shrimp species *P. longirostris*, *A. varidens* and *N. africana* were respectively 8, 7 and 89 kg/hour.

Biomass

Biomass estimates in tonnes of the most important species groups are presented in Table 5.3. The biomasses were calculated by stratifying by depth (200-299, 300-399, 400-499, 500-599, 600-699 and 700-799m). The CVs are weighted by stratum size.

The biomass estimates presented for the pelagic species cannot be trusted as a good reflection of the true biomass of those species. Pelagic species are often not available for the bottom trawl as the fish swim to high above the seabed and the biomass estimates of the pelagic species may reflect their availability to the trawl and not only their abundance. Some of the biomass estimates in Table 5.3 have a high coefficient of variations (CV), which indicates that the trends in the time series should be interpreted with care.

Seabreams were only found in six stations in the shallow area of the slope (<270m), and as a result of the large variability in the catch rates of this group the CVs are very high. The biomass estimate of seabreams in 2005 was about 560 t, which is about 80% higher than the 2004 estimate. The 2005 estimate is also relative high compare to previous surveys, but is still considerable lower than the high estimate in 2000 (see Table 5.3). As in previous surveys, *D. angolensis* was the most abundant seabream on the northern slope.

The 2005 biomass estimate of *M. polli* was about 11 000 t, which is a reduction of 30% from the 2004 estimate, but as on the northern slope the two most recent survey estimates are marked higher than the previous survey estimates of *M. polli*.

As on the central slope the biomass of the shrimp species *P. longirostris*, *A. varidens* and *N. africana* seem to have increased the last few years even though the biomass estimate of *N. africana* decreased from 10 900 t in 2004 to 8 500 t in 2005. The 2005 estimate of *P. longirostris* is the highest since 1997 and the 2005 estimate of *A. varidens* is the highest

since 1989. The biomass of Ommastrephidae has been relative stable since 2002 on the northern slope and the 2005 estimate of 330 tons is similar to the 2004 estimate.

Table 5.3 Biomass estimates (tonnes) of important species on the slope (200-800m) in the northern region. CV values are indicated in brackets.

| survey | M.polli | Shrimps | Cephalopod | Sharks | Halrtails | Croakers | Seabreams |
|--------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|
| 1985.1 | 202 (0.00) | 21 (0.00) | 976 (0.00) | 344 (0.00) | 0 | 0 | 0 |
| 1985.3 | 3 065 (0.86) | 767 (1.27) | 251 (0.68) | 209 (1.36) | 511 (2.38) | 285 (0.87) | 1 541 (0.00) |
| 1985.4 | 28 753 (0.95) | 11 989 (0.48) | 260 (1.25) | 0 | 1 342 (0.67) | 8 (2.38) | 0 |
| 1986.1 | 11 409 (0.39) | 14 960 (0.25) | 1 630 (0.81) | 3 724 (1.41) | 3 383 (0.64) | 0 | 108 (2.02) |
| 1986.2 | 27 562 (0.67) | 7 854 (0.56) | 277 (0.85) | 4 431 (0.75) | 3 228 (0.61) | 19 (2.27) | 288 (2.27) |
| 1989.1 | 13 518 (0.78) | 7 772 (1.34) | 1 631 (1.23) | 2 376 (1.44) | 795 (0.81) | 0 | 66 (2.27) |
| 1989.2 | 8 168 (0.42) | 4 370 (0.67) | 166 (1.11) | 375 (1.39) | 352 (1.45) | 1 624 (1.21) | 4 061 (2.24) |
| 1989.3 | 11 265 (0.91) | 5 137 (0.36) | 657 (1.05) | 2 372 (0.57) | 1 579 (1.97) | 3 (2.27) | 497 (1.79) |
| 1991.1 | 19 540 (0.65) | 8 671 (0.68) | 135 (1.45) | 1 376 (1.25) | 65 (1.03) | 3 (2.27) | 49 (1.66) |
| 1991.2 | 19 498 (0.67) | 2 732 (0.34) | 991 (1.05) | 2 381 (0.80) | 699 (0.61) | 64 (1.82) | 527 (0.66) |
| 1992 | 13 290 (0.44) | 8 992 (0.74) | 209 (0.69) | 1 462 (1.01) | 1 148 (0.55) | 244 (1.41) | 510 (0.90) |
| 1994 | 4 096 (0.48) | 7 529 (0.61) | 328 (0.48) | 841 (0.66) | 1 753 (0.37) | 134 (1.36) | 1 045 (0.91) |
| 1995.1 | 5 892 (1.01) | 9 641 (0.56) | 316 (1.55) | 1 367 (0.52) | 2 284 (0.72) | 0 | 506 (0.98) |
| 1996 | 5 065 (0.31) | 4 435 (0.43) | 566 (1.03) | 307 (0.71) | 1 627 (0.69) | 34 (1.36) | 597 (1.43) |
| 1997.1 | 6 954 (0.28) | 14 107 (0.38) | 672 (0.34) | 824 (1.12) | 3 399 (1.26) | 0 | 871 (1.08) |
| 1997.2 | 8 101 (0.39) | 5 676 (1.67) | 330 (1.80) | 10 (2.27) | 1 972 (1.37) | 35 (2.27) | 878 (2.27) |
| 1999 | 3 624 (0.52) | 11 539 (0.52) | 1 512 (1.10) | 1 060 (0.43) | 3 088 (0.83) | 113 (1.07) | 389 (0.58) |
| 2000 | 4 385 (0.54) | 4 683 (0.49) | 709 (0.47) | 597 (0.89) | 1 978 (1.04) | 0 | 1 650 (2.05) |
| 2001 | 4 840 (0.71) | 8 283 (0.73) | 1 477 (1.55) | 1 966 (1.23) | 1 531 (0.74) | 0 | 494 (2.27) |
| 2002 | 3 479 (0.60) | 6 415 (0.74) | 849 (0.63) | 118 (0.74) | 3 022 (1.01) | 27 (1.73) | 213 (1.45) |
| 2003 | 5 310 (0.76) | 7 986 (0.38) | 421 (0.61) | 1 305 (1.29) | 1 237 (1.15) | 27 (1.70) | 141 (1.10) |
| 2004 | 15 327 (1.33) | 12 343 (0.33) | 892 (0.68) | 1 571 (0.78) | 1 695 (0.57) | 49 (1.91) | 299 (0.69) |
| 2005 | 10 994 (0.60) | 10 285 (0.35) | 464 (0.44) | 1 180 (1.00) | 1 468 (0.44) | 20 (1.05) | 562 (0.81) |

| survey | P.longirostris | A.varidens | N.africanus | Ommastrephidae | D.macro | D.angolensis |
|--------|----------------|--------------|---------------|----------------|------------|--------------|
| 1985.1 | 21 (0.00) | 0 | 0 | 976 (0.00) | 0 | 0 |
| 1985.3 | 0 | 0 | 0 | 0 | 0 | 1 541 (0.00) |
| 1985.4 | 2108 (0.88) | 6 691 (0.69) | 2 864 (0.90) | 142 (1.78) | 0 | 0 |
| 1986.1 | 1166 (1.29) | 538 (2.09) | 12 631 (0.23) | 261 (0.33) | 10 (2.27) | 98 (2.27) |
| 1986.2 | 0 | 1 008 (0.48) | 4 643 (0.88) | 0 | 19 (2.27) | 269 (2.27) |
| 1989.1 | 419 (1.15) | 204 (0.50) | 6 953 (1.48) | 1 429 (1.40) | 0 | 0 |
| 1989.2 | 366 (1.01) | 164 (1.14) | 3 682 (0.81) | 135 (1.37) | 23 (2.27) | 4 038 (2.26) |
| 1989.3 | 243 (0.67) | 91 (0.40) | 4 699 (0.38) | 645 (1.07) | 2 (2.27) | 496 (1.80) |
| 1991.1 | 88 (1.00) | 70 (1.37) | 8 315 (0.72) | 129 (1.47) | 0 | 49 (1.66) |
| 1991.2 | 205 (0.98) | 15 (2.67) | 2 445 (0.37) | 619 (1.11) | 16 (1.55) | 510 (0.66) |
| 1992 | 170 (1.05) | 272 (0.80) | 8 439 (0.80) | 143 (0.73) | 45 (2.27) | 465 (0.85) |
| 1994 | 532 (0.58) | 370 (0.75) | 6 602 (0.69) | 281 (0.55) | 0 | 1 045 (0.91) |
| 1995.1 | 860 (0.88) | 326 (0.67) | 7 269 (0.73) | 61 (1.17) | 57 (1.29) | 449 (1.08) |
| 1996 | 162 (0.62) | 267 (0.45) | 3 859 (0.50) | 228 (0.66) | 252 (1.43) | 345 (1.50) |
| 1997.1 | 605 (1.14) | 333 (0.35) | 13 096 (0.40) | 622 (0.37) | 45 (1.26) | 826 (1.13) |
| 1997.2 | 1317 (1.41) | 0 | 4 088 (1.92) | 317 (1.85) | 3 (2.27) | 876 (2.27) |
| 1999 | 542 (0.43) | 237 (0.42) | 10 540 (0.58) | 1 121 (1.52) | 51 (1.51) | 339 (0.69) |
| 2000 | 497 (0.44) | 222 (0.50) | 3 777 (0.63) | 509 (0.64) | 7 (2.27) | 1 588 (2.14) |
| 2001 | 535 (0.53) | 243 (0.47) | 6 746 (0.90) | 1 001 (2.17) | 12 (2.27) | 481 (2.27) |
| 2002 | 800 (1.04) | 127 (0.57) | 5 337 (0.89) | 364 (1.27) | 13 (2.27) | 200 (1.54) |
| 2003 | 629 (1.01) | 383 (0.83) | 6 873 (0.42) | 216 (0.83) | 5 (2.27) | 135 (1.08) |
| 2004 | 749 (0.98) | 359 (0.39) | 10 930 (0.37) | 316 (0.56) | 16 (1.54) | 284 (0.71) |
| 2005 | 984 (0.63) | 639 (0.51) | 8 535 (0.42) | 330 (0.53) | 16 (2.11) | 547 (0.85) |

Distribution

Figure 5.3 shows the estimated distribution of hake (*Merluccius polli*) in the northern region. The stock distribution covers the slope from Luanda to the Congo River deeper than about 200 meter, and the highest densities were found just west and north of Luanda on depths between 200 and 500 m.

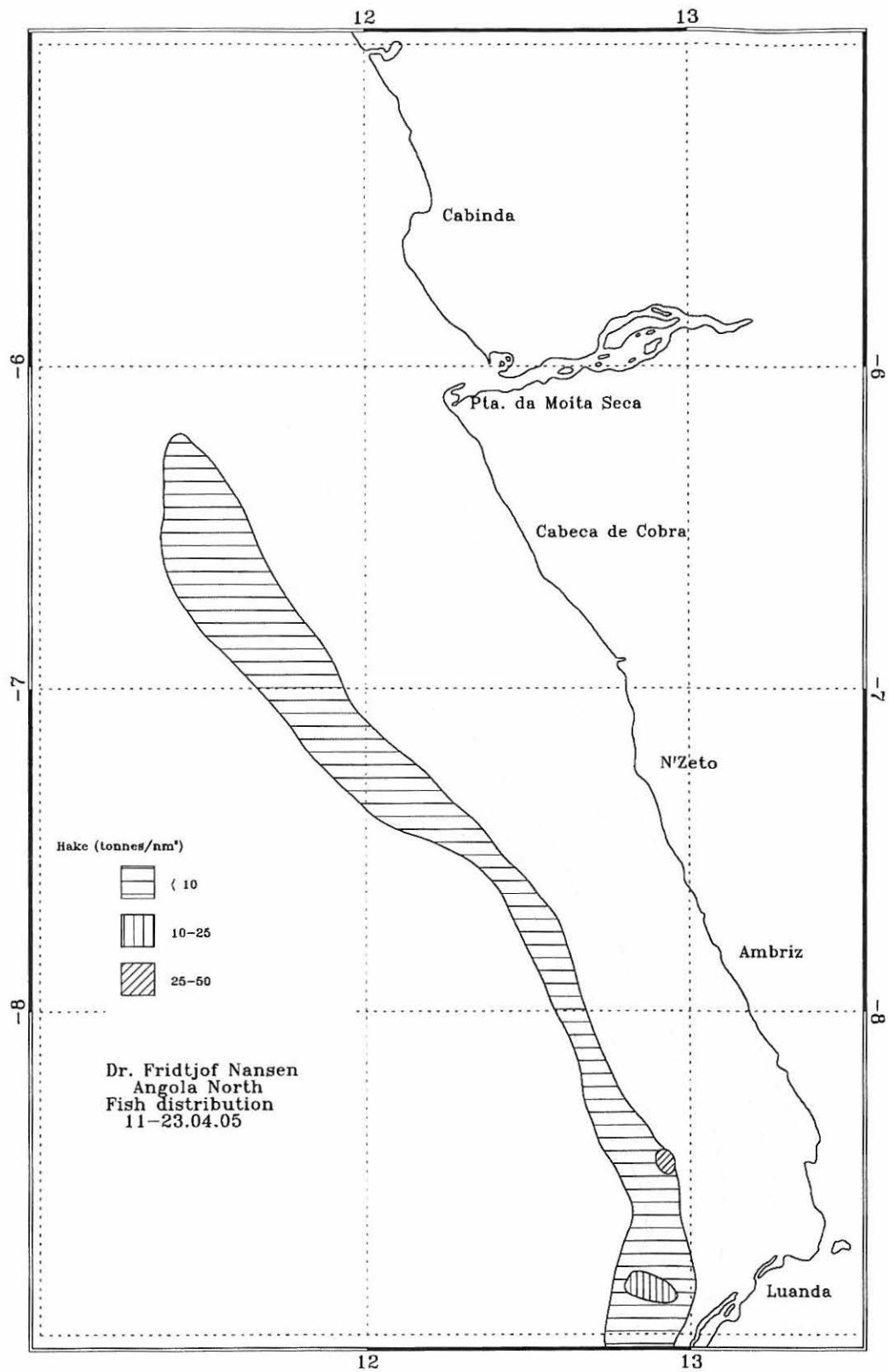


Figure 5.3 Distribution of hake (*Merluccius spp.*) in the northern region, Luanda – Congo River. Depth contours at 20, 50, 100, 200 and 500 m.

CHAPTER 6 SUMMARY

From 25 March to 24 April the 2005 demersal resource survey of Angola was successfully carried out using R/V “Dr. Fridtjof Nansen”. Except from the area between Tombua and Benguela, which is unsuitable for trawling due to poor bottom conditions, the shelf and upper slope (20-800 m) from Cunene River to Congo River was covered. In total 224 trawl stations were conducted of which 11 hauls were interrupted, 207 were classified as valid and used to estimate the biomass of the demersal stock, and 6 hauls at depths over 800 m were sampled to investigate the species diversity in deep waters. To map the oceanographic conditions 275 CTD samples were carried out.

The surface temperature in the southern area ranged from 20 to 25°C in March 2005 and was higher than in March in 2004, which ranged from 18 to 20°C. The conditions in 2005 were similar to the conditions observed during March 2003 and as in 2003 a warm front of water was observed off Baía dos Tigres. The regular demersal surveys in March are coincident with the late phase of the wet season, which causes low salinity in the surface waters on the shelf off northern and central Angola. Both the salinity and temperature distribution patterns in the central region were similar to the patterns observed during the 2004 survey. The surface salinity was ranging from 34.8 to 35.7 psu, and temperature was between 23 to 27°C during this survey, but the warmest and least saline surface waters were typically observed offshore. The narrow bands of colder and more saline water ($T < 24^\circ\text{C}$ and $S > 35.5$ psu) were observed inshore off Cabeça da Baleia and between Pta. Moita and Pta. das Palmerinhas. There is no reason to believe that the abundance estimates of the demersal resources were biased by the oceanographic conditions.

Table 6.1 presents the time series from 1985 to 2004 of the biomass estimates of the most important species on the shelf and slope in the central and northern regions in Angola. The southern region is not included, as the surveys in this region have not been properly standardized throughout the years. However, the effort, *i.e.* the number of stations by stratum, is relatively similar from 2000 to 2005 (Annex VIII) and the estimates in this period are comparable. Table 4.1 and Table 5.1 show the biomass estimates of the important species on the southern shelf and slope, respectively.

The seabreams (*Boops boops* not included) biomass estimate on the southern shelf decreased from 27 000 tonnes in 2004 to 12 700 tonnes in 2005, and consisted mainly of big-eye dentex (*Dentex macrophthalmus*). In the central and northern regions, the biomass estimate of seabreams in 2005 was about 33 000 tonnes, which is almost identical to the estimate of 2004. *D. macrophthalmus* and *D. angolensis* comprised respectively 22% and 26% to the 2005 estimate. Other abundant seabreams are *Pagellus bellottii*, *D. canariensis* and *D. barnardi*. The biomass estimates of seabreams have fluctuated since 2000, and there is no clear long-term trend in the time series.

The biomass estimates of grunts in the central and northern regions in 2005 was 11 700 tons, which is 42% higher than the 2004 estimate. It seems like the biomass of grunts has increased during the last 6 years and the state of the grunt stocks seems to be relatively good. Commercially important grunt species are *Pomadasyus incisus* and *P. rogeri*.

The estimated biomass of hake (*M. polli*) in 2005 was 21 100 tons, which is a 33% reduction from 2004. However, the 2005 estimate is the second highest estimate since 2000 and the *M. polli* stock seems to be relatively high. *M. capensis* is the dominating hake species in the

south and Angola share this stock with Namibia. The *M. capensis* biomass estimate on the southern slope in 2005 was 880 tons, which is considerably lower than the 2004 estimate of 5 700 tons.

The biomass estimate of croakers, mainly *Umbrina canariensis*, *Atractoscion aequidens* and *Pseudolithus typus*, was 13 500 tons in 2005, which is similar to the 2004 and 2003 estimates of 12 200 and 13 500 tons, respectively. Compared to the low estimates in 2000-2002 the abundance of croakers is currently relatively high. Generally, the biomass of *Umbrina canariensis* has contributed to about 30-45% of the total biomass of croakers and has fluctuated in a similar way as the total biomass of croakers.

In 2005, the biomass estimate of *P. longirostris* was 1 600 tons and 33% lower than the high 2004 estimate. Still, it seems as if the abundance of *P. longirostris* has been relatively stable since 2000. The biomass estimate of *A. varidens* in 2005 was 1 400 tons and is the highest recorded in the period 2000-2005. The estimates of *A. varidens* have increase each year since 2000 (except in 2002 when the tickler chain in front of the trawl was not used), and the state of the *A. varidens* stock seem to be fairly good.

The biomass estimates of groupers and snappers are relatively imprecise as showed by the high CVs and the estimates also show large fluctuation between surveys, which therefore make it difficult to identify any trend in the time series and to comment on the current state of these stocks.

For the pelagic species, the estimates of the biomass are characterized by the high variability throughout the years, particularly for horse mackerel, hairtail and barracuda. The bottom trawl is not an adequate sampling gear for the pelagic fish species; therefore no certain conclusion may be drawn for these resources. More adequate conclusion may be drawn after the forthcoming pelagic survey. Nevertheless, the biomass of *T. trecae* decreased to 10 900 tons in 2005 from 21 400 tons in 2004 and 35 500 tons in 2003, and it should be noted that the biomass estimate of 2002 was 88 400 tons and the long-time trend is hence negative.

Table 6.1 Biomass estimates (tonnes) of important species in the central and northern regions. CVs are in brackets

| survey | M polli | T treace | Shrnmps | Cephalopod | Sharks | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Sppers | Groupers |
|--------|---------------|----------------|---------------|---------------|---------------|--------------|----------------|------------|----------------|--------------|------------|--------------|
| 1985.1 | 211 (0.12) | 4 496 (1.85) | 323 (1.22) | 11 438 (1.90) | 841 (0.92) | 364 (1.93) | 9 986 (1.52) | 44 (3.25) | 15 711 (1.45) | 254 (1.50) | 0 | 479 (1.81) |
| 1985.2 | 0 | 3 324 (1.94) | 139 (3.12) | 694 (0.95) | 451 (1.06) | 3 907 (3.17) | 3 740 (1.73) | 30 (2.72) | 1 200 (2.75) | 75 (1.35) | 63 (2.09) | 1 771 (1.30) |
| 1985.3 | 6 524 (1.70) | 16 486 (1.99) | 2 215 (1.77) | 2 297 (1.00) | 1 079 (1.74) | 205 (3.23) | 17 742 (1.81) | 146 (2.16) | 3 219 (1.31) | 26 (2.74) | 62 (3.25) | 1 978 (1.39) |
| 1985.4 | 55 083 (1.46) | 110 950 (1.39) | 15 069 (1.04) | 6 369 (1.24) | 95 (2.42) | 906 (1.55) | 117 929 (1.33) | 88 (2.09) | 7 937 (0.94) | 1 034 (1.93) | 0 | 4 307 (0.91) |
| 1986.1 | 29 498 (1.21) | 31 313 (0.88) | 24 342 (0.60) | 6 925 (0.81) | 5 004 (2.30) | 2 770 (0.96) | 38 390 (0.72) | 64 (2.00) | 26 602 (0.92) | 3 099 (0.84) | 470 (3.02) | 1 087 (1.01) |
| 1986.2 | 52 670 (0.76) | 30 649 (1.11) | 21 957 (0.43) | 2 935 (0.78) | 5 256 (1.38) | 1 693 (0.95) | 34 989 (0.97) | 226 (1.51) | 511 874 (0.02) | 1 874 (0.93) | 0 | 2 033 (0.84) |
| 1989.1 | 16 503 (1.50) | 19 681 (1.00) | 9 110 (2.48) | 4 465 (1.10) | 3 086 (2.42) | 2 137 (2.42) | 26 000 (0.85) | 252 (1.08) | 13 125 (0.89) | 2 281 (2.15) | 0 | 1 569 (1.34) |
| 1989.2 | 14 371 (0.90) | 33 008 (0.74) | 7 519 (1.03) | 3 198 (0.56) | 1 472 (1.18) | 2 282 (0.79) | 40 419 (0.66) | 333 (1.16) | 6 333 (0.70) | 3 674 (1.21) | 53 (2.19) | 3 937 (2.31) |
| 1989.3 | 25 407 (1.58) | 49 538 (0.85) | 7 393 (0.65) | 4 797 (0.90) | 21 887 (1.35) | 6 749 (0.99) | 59 519 (0.85) | 518 (1.43) | 66 901 (0.69) | 1 068 (1.09) | 316 (3.25) | 1 107 (1.95) |
| 1991.1 | 31 479 (0.93) | 107 626 (1.18) | 14 041 (0.97) | 2 235 (0.43) | 3 559 (1.18) | 2 349 (1.31) | 131 016 (1.03) | 373 (1.28) | 21 783 (1.13) | 3 322 (1.93) | 106 (3.69) | 817 (1.28) |
| 1991.2 | 30 986 (1.03) | 62 772 (1.25) | 8 426 (1.07) | 7 351 (0.70) | 4 090 (1.31) | 91 (1.43) | 63 901 (1.23) | 444 (1.13) | 9 218 (0.61) | 161 (1.32) | 0 | 2 043 (1.05) |
| 1992 | 23 233 (0.60) | 48 453 (0.69) | 13 613 (1.17) | 6 109 (0.41) | 5 163 (1.47) | 82 (1.92) | 53 311 (0.67) | 223 (1.14) | 17 251 (0.74) | 103 (2.12) | 0 | 3 359 (1.08) |
| 1994 | 10 343 (1.00) | 77 944 (0.83) | 11 756 (1.00) | 6 886 (0.52) | 1 869 (0.91) | 206 (2.91) | 86 549 (0.75) | 926 (1.08) | 31 574 (2.09) | 329 (1.69) | 262 (3.69) | 2 908 (1.07) |
| 1995.1 | 10 577 (1.30) | 5 224 (1.74) | 15 395 (0.93) | 1 789 (0.76) | 3 382 (1.00) | 1 679 (1.09) | 19 756 (0.74) | 393 (1.24) | 14 521 (0.59) | 4 222 (1.10) | 594 (2.14) | 1 397 (1.05) |
| 1995.2 | 6 889 (0.81) | 11 258 (1.17) | 4 527 (0.64) | 979 (1.08) | 1 294 (1.00) | 0 | 11 370 (1.15) | 201 (1.88) | 5 113 (1.63) | 0 | 45 (3.18) | 348 (3.18) |
| 1996 | 12 219 (1.08) | 83 774 (0.95) | 11 356 (0.96) | 5 268 (0.49) | 2 641 (1.47) | 1 371 (1.69) | 89 864 (0.89) | 190 (1.65) | 9 254 (0.51) | 1 035 (1.51) | 109 (3.69) | 2 692 (1.26) |
| 1997.1 | 21 911 (0.90) | 64 832 (0.77) | 22 638 (0.60) | 10 715 (0.56) | 3 004 (1.18) | 9 833 (1.75) | 168 670 (1.14) | 334 (1.74) | 32 077 (0.82) | 553 (3.05) | 73 (3.25) | 781 (1.08) |
| 1997.2 | 25 341 (0.72) | 94 098 (0.61) | 9 950 (2.10) | 6 120 (0.43) | 500 (1.73) | 132 (2.45) | 95 987 (0.59) | 289 (2.20) | 23 519 (0.56) | 0 | 0 | 2 840 (1.33) |
| 1998 | 10 366 (1.27) | 4 630 (1.67) | 9 412 (0.98) | 3 016 (0.62) | 1 122 (1.30) | 2 860 (2.97) | 7 606 (1.20) | 52 (2.54) | 30 861 (2.71) | 454 (1.54) | 0 | 198 (2.33) |
| 1999 | 6 640 (1.08) | 17 119 (0.78) | 13 685 (0.97) | 4 253 (0.88) | 3 197 (0.73) | 8 406 (0.87) | 37 149 (0.60) | 70 (1.83) | 26 067 (0.57) | 4 371 (0.82) | 570 (3.50) | 1 654 (0.83) |
| 2000 | 10 118 (1.00) | 25 701 (0.72) | 7 591 (0.76) | 3 778 (0.44) | 5 098 (1.86) | 2 215 (1.41) | 47 540 (0.80) | 349 (1.83) | 18 068 (0.62) | 4 556 (1.00) | 294 (2.04) | 1 647 (1.01) |
| 2001 | 9 732 (1.30) | 22 012 (0.77) | 11 282 (1.23) | 4 340 (1.36) | 3 519 (1.85) | 598 (1.06) | 30 501 (0.66) | 139 (1.11) | 24 459 (1.12) | 1 818 (0.79) | 726 (3.16) | 859 (1.50) |
| 2002 | 7 680 (0.93) | 88 411 (0.70) | 10 747 (1.11) | 5 237 (0.67) | 629 (0.97) | 3 067 (0.78) | 98 922 (0.63) | 820 (2.58) | 30 855 (0.70) | 2 318 (0.99) | 251 (4.74) | 742 (1.17) |
| 2003 | 14 240 (1.35) | 35 260 (0.78) | 13 085 (0.85) | 2 649 (0.57) | 1 917 (1.93) | 4 255 (0.78) | 57 659 (0.89) | 137 (1.75) | 20 199 (0.68) | 2 824 (1.86) | 186 (2.63) | 1 037 (1.00) |
| 2004 | 31 628 (1.73) | 21 409 (0.71) | 20 863 (0.59) | 3 421 (0.54) | 3 125 (1.09) | 3 760 (1.00) | 28 068 (0.58) | 63 (1.39) | 20 349 (1.20) | 1 856 (1.54) | 79 (2.44) | 681 (0.91) |
| 2005 | 21 112 (0.99) | 10 931 (0.70) | 17 650 (0.59) | 4 177 (0.46) | 2 421 (1.08) | 2 134 (1.19) | 20 025 (0.67) | 332 (1.72) | 41 427 (1.25) | 963 (1.68) | 284 (2.07) | 1 176 (0.88) |

| survey | Grunts | Croakers | Seabreams | P longirostris | A vardens | N africanus | Ommastrephidae | Sepiidae | D macro | D anqolensis | U cariensis |
|--------|---------------|---------------|---------------|----------------|--------------|---------------|----------------|--------------|---------------|---------------|---------------|
| 1985.1 | 248 (1.69) | 1 519 (1.67) | 14 690 (0.94) | 138 (1.93) | 0 | 0 | 11 249 (1.93) | 0 | 200 (2.74) | 2 196 (0.92) | 1 132 (2.01) |
| 1985.2 | 381 (2.18) | 1 302 (1.82) | 12 881 (0.57) | 0 | 0 | 0 | 0 | 0 | 0 | 2 495 (0.94) | 521 (2.43) |
| 1985.3 | 3 629 (1.56) | 8 979 (1.52) | 22 438 (1.03) | 0 | 0 | 0 | 0 | 154 (1.61) | 0 | 4 490 (0.75) | 602 (1.89) |
| 1985.4 | 20 511 (1.54) | 13 935 (2.05) | 49 737 (0.69) | 3 062 (1.72) | 7 633 (1.47) | 3 578 (1.69) | 225 (2.56) | 215 (2.12) | 6 286 (2.41) | 9 283 (1.12) | 8 921 (2.47) |
| 1986.1 | 3 468 (1.06) | 6 956 (0.82) | 27 435 (0.54) | 3 823 (1.22) | 1 030 (2.63) | 15 804 (0.77) | 2 140 (1.52) | 1 334 (0.86) | 2 787 (1.22) | 5 700 (0.92) | 2 606 (1.45) |
| 1986.2 | 6 995 (0.98) | 9 578 (0.76) | 45 651 (0.36) | 0 | 1 485 (0.90) | 4 643 (1.90) | 0 | 1 828 (1.23) | 9 215 (0.40) | 15 499 (0.47) | 3 387 (1.33) |
| 1989.1 | 3 816 (1.85) | 5 864 (1.15) | 25 271 (0.55) | 895 (1.44) | 397 (1.56) | 7 545 (2.98) | 3 209 (1.51) | 350 (1.31) | 7 302 (1.28) | 2 568 (0.49) | 1 427 (1.14) |
| 1989.2 | 2 226 (1.06) | 7 826 (0.78) | 23 589 (0.92) | 1 559 (1.07) | 400 (1.50) | 4 702 (1.61) | 1 286 (1.04) | 1 440 (0.67) | 1 386 (1.44) | 9 997 (2.01) | 1 302 (1.34) |
| 1989.3 | 1 870 (1.37) | 4 812 (1.06) | 20 807 (0.76) | 1 094 (1.18) | 285 (1.25) | 5 657 (0.81) | 4 191 (0.98) | 169 (1.63) | 1 956 (2.27) | 4 888 (0.68) | 1 194 (2.28) |
| 1991.1 | 1 247 (0.99) | 5 848 (1.05) | 14 722 (0.48) | 302 (1.48) | 723 (0.58) | 12 194 (1.13) | 1 036 (0.74) | 500 (0.75) | 3 075 (1.74) | 2 651 (0.49) | 1 656 (1.94) |
| 1991.2 | 2 742 (1.29) | 26 595 (1.93) | 42 431 (0.47) | 640 (0.95) | 119 (3.61) | 5 104 (0.95) | 3 517 (1.15) | 793 (1.38) | 18 054 (0.97) | 4 903 (0.54) | 22 849 (2.25) |
| 1992 | 1 698 (1.27) | 4 772 (0.76) | 40 589 (0.52) | 935 (1.71) | 638 (1.21) | 11 662 (1.38) | 3 519 (0.46) | 1 074 (0.95) | 20 117 (0.99) | 7 229 (0.37) | 1 719 (1.18) |
| 1994 | 680 (1.25) | 18 320 (1.46) | 51 379 (0.51) | 1 757 (1.05) | 1 017 (1.28) | 8 801 (1.33) | 1 931 (0.63) | 3 166 (0.67) | 23 219 (0.88) | 6 918 (0.52) | 6 075 (1.55) |
| 1995.1 | 6 027 (1.40) | 18 472 (1.67) | 29 271 (0.83) | 2 020 (1.09) | 1 078 (0.95) | 9 729 (1.47) | 164 (1.21) | 637 (0.86) | 14 010 (1.70) | 4 695 (0.71) | 11 929 (2.11) |
| 1995.2 | 0 | 245 (1.89) | 11 363 (0.86) | 680 (1.02) | 699 (0.61) | 2 790 (0.96) | 730 (0.84) | 219 (2.48) | 10 083 (0.99) | 1 280 (0.74) | 209 (2.22) |
| 1996 | 8 256 (1.04) | 15 215 (0.62) | 39 921 (0.62) | 310 (0.89) | 938 (0.76) | 8 830 (1.16) | 1 069 (0.45) | 143 (1.55) | 14 591 (0.66) | 6 236 (0.54) | 3 150 (1.40) |
| 1997.1 | 6 427 (1.49) | 21 483 (0.69) | 33 690 (0.75) | 2 501 (1.05) | 639 (0.79) | 17 189 (0.79) | 3 437 (0.56) | 5 824 (0.95) | 14 289 (1.72) | 5 318 (0.57) | 5 760 (0.94) |
| 1997.2 | 500 (0.84) | 36 999 (1.82) | 49 085 (0.64) | 5 454 (1.07) | 0 | 4 098 (4.15) | 2 358 (0.92) | 1 879 (0.33) | 31 505 (0.96) | 5 651 (0.91) | 33 214 (2.03) |
| 1998 | 9 117 (1.56) | 8 609 (1.62) | 64 867 (2.24) | 742 (1.32) | 1 191 (2.89) | 7 000 (1.37) | 765 (1.28) | 1 293 (1.10) | 52 473 (2.75) | 2 084 (0.74) | 2 239 (1.46) |
| 1999 | 8 927 (1.03) | 18 586 (1.14) | 34 076 (0.45) | 876 (0.83) | 574 (1.66) | 11 746 (1.14) | 2 028 (1.86) | 375 (0.72) | 8 181 (1.23) | 4 455 (0.32) | 11 577 (1.59) |
| 2000 | 7 213 (0.91) | 7 842 (0.67) | 36 443 (0.45) | 1 259 (1.15) | 601 (0.71) | 4 820 (1.21) | 1 735 (0.69) | 501 (1.14) | 8 086 (1.25) | 7 385 (1.25) | 3 771 (0.88) |
| 2001 | 3 600 (1.17) | 3 203 (0.94) | 22 805 (0.64) | 1 020 (0.83) | 699 (1.14) | 7 263 (1.87) | 1 625 (2.97) | 376 (0.92) | 6 772 (1.22) | 3 482 (0.84) | 1 264 (1.70) |
| 2002 | 3 223 (0.99) | 9 196 (0.61) | 34 016 (0.85) | 1 565 (1.42) | 371 (0.99) | 8 375 (1.42) | 3 629 (0.94) | 239 (1.27) | 13 935 (2.04) | 3 323 (0.66) | 4 326 (0.86) |
| 2003 | 10 025 (1.83) | 13 474 (0.69) | 17 687 (0.42) | 1 363 (1.15) | 881 (1.78) | 10 157 (1.06) | 970 (0.88) | 299 (1.58) | 1 092 (2.52) | 4 765 (0.42) | 4 260 (1.62) |
| 2004 | 6 810 (1.15) | 12 196 (1.24) | 32 647 (1.79) | 2 143 (1.33) | 935 (0.78) | 17 133 (0.68) | 1 320 (0.89) | 394 (0.92) | 13 884 (4.41) | 7 084 (0.69) | 6 977 (1.87) |
| 2005 | 11 735 (1.08) | 13 501 (0.72) | 33 064 (1.12) | 1 613 (1.07) | 1 430 (0.77) | 14 188 (0.73) | 1 219 (1.33) | 992 (0.46) | 7 290 (4.97) | 8 473 (0.29) | 5 933 (0.91) |

ANNEX I Records of fishing stations

PROJECT STATION:3578
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1711 Long E 1144
 start stop duration
 TIME :06:19:11 06:49:04 30 (min) Purpose code: 3
 LOG :6729.78 6731.25 1.46 Area code : 1
 FDEPTH: 25 26 GearCond.code:
 BDEPTH: 25 26 Validity code:
 Towing dir: 355ø Wire out: 150 m Speed: 30 kn*10
 Sorted: 255 Kg Total catch: 3129.81 CATCH/HOUR: 6259.62

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|------------------------|----------------|-------------|-------|
| | weight numbers | | |
| JELLYFISH | 5208.00 | 57370 | 83.20 |
| Trachurus capensis | 224.70 | 6384 | 3.59 |
| Sea cucumbers | 141.12 | 4242 | 2.25 |
| Arius parkii | 122.80 | 420 | 1.96 |
| Gymnura micrura | 97.44 | 26 | 1.56 |
| Trichiurus lepturus | 91.56 | 2268 | 1.46 |
| Atractoscion aequidens | 72.24 | 1428 | 1.15 |
| Raja miraletus | 70.12 | 6 | 1.12 |
| Sepiella ornata | 47.88 | 42 | 0.76 |
| Sardinops ocellatus | 46.20 | 2562 | 0.74 |
| Sardinella maderensis | 42.00 | 126 | 0.67 |
| Mustelus sp. | 29.40 | 14 | 0.47 |
| Pomatomus saltatrix | 17.64 | 42 | 0.28 |
| Dicologlossa cuneata | 17.22 | 42 | 0.28 |
| Mustelus mustelus | 12.48 | 6 | 0.20 |
| Squalus megalops | 10.12 | 14 | 0.16 |
| Pterothrissus belloci | 5.02 | 168 | 0.08 |
| Sphyrna zygaena | 2.84 | 2 | 0.05 |
| Engraulis encrasicolus | 0.84 | 84 | 0.01 |
| Total | 6259.62 | 99.99 | |

PROJECT STATION:3581
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1712 Long E 1138
 start stop duration
 TIME :10:27:58 10:43:20 15 (min) Purpose code: 3
 LOG :6748.86 6749.68 0.81 Area code : 1
 FDEPTH: 84 83 GearCond.code:
 BDEPTH: 84 83 Validity code:
 Towing dir: 360ø Wire out: 240 m Speed: 31 kn*10
 Sorted: 96 Kg Total catch: 469.00 CATCH/HOUR: 1876.00

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|------------------------------|----------------|-------------|-------|
| | weight numbers | | |
| Trachurus capensis, juvenile | 1160.92 | 19152 | 61.88 |
| Todaropsis eblanae | 204.44 | 284 | 10.90 |
| Dentex macrocephalus Juv. | 170.24 | 3400 | 9.07 |
| Merluccius capensis | 75.64 | 572 | 4.03 |
| Cynoglossus canariensis | 44.48 | 1596 | 2.37 |
| Pterothrissus belloci | 40.12 | 932 | 2.14 |
| Squalus megalops | 38.80 | 108 | 2.07 |
| Chelidonichthys capensis | 37.04 | 456 | 1.97 |
| Zeus faber | 30.80 | 40 | 1.64 |
| B I V A L V E S | 18.44 | 8816 | 0.98 |
| Raja miraletus | 16.16 | 40 | 0.86 |
| Sepia orbignyana | 8.92 | 76 | 0.48 |
| Atractoscion aequidens | 8.92 | 40 | 0.48 |
| Erymus whiteheadi | 6.64 | 152 | 0.35 |
| Synbranchus afer | 5.92 | 116 | 0.32 |
| Arius parkii | 4.16 | 16 | 0.22 |
| Synagrops microlepis | 2.84 | 1560 | 0.15 |
| Squilla mantis | 0.96 | 116 | 0.05 |
| GOBIIDAE | 0.56 | 116 | 0.03 |
| Total | 1876.00 | 99.99 | |

PROJECT STATION:3579
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1710 Long E 1142
 start stop duration
 TIME :07:46:21 08:16:04 30 (min) Purpose code: 3
 LOG :6735.06 6736.57 1.51 Area code : 1
 FDEPTH: 43 44 GearCond.code:
 BDEPTH: 43 44 Validity code:
 Towing dir: 355ø Wire out: 160 m Speed: 30 kn*10
 Sorted: 229 Kg Total catch: 1988.58 CATCH/HOUR: 3977.16

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|------------------------------|----------------|-------------|-------|
| | weight numbers | | |
| Trachurus capensis | 1933.40 | 9342 | 48.61 |
| Trachurus capensis, juvenile | 889.60 | 25794 | 22.37 |
| Argyrosomus hololepidotus | 677.52 | 140 | 17.04 |
| Myliobatis aquila | 121.88 | 58 | 3.06 |
| Dasysatis marmorata | 90.56 | 28 | 2.28 |
| Stromateus fiatola | 51.88 | 56 | 1.30 |
| Sardinops ocellatus | 51.58 | 980 | 1.30 |
| Callorhynchus capensis | 32.60 | 12 | 0.82 |
| Pomatomus saltatrix | 27.80 | 84 | 0.70 |
| Trigla lyra | 27.08 | 42 | 0.68 |
| Sardinella maderensis | 20.06 | 56 | 0.50 |
| Umbra canariensis | 14.62 | 140 | 0.37 |
| Rhinobatos rhinobatos | 12.64 | 6 | 0.32 |
| Engraulis encrasicolus | 12.60 | 1232 | 0.32 |
| Arius parkii | 11.74 | 84 | 0.30 |
| Raja miraletus | 1.62 | 2 | 0.04 |
| Total | 3977.16 | 100.01 | |

PROJECT STATION:3582
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1713 Long E 1131
 start stop duration
 TIME :12:06:42 12:37:12 31 (min) Purpose code: 3
 LOG :6759.21 6760.83 1.62 Area code : 1
 FDEPTH: 130 128 GearCond.code:
 BDEPTH: 130 128 Validity code:
 Towing dir: 360ø Wire out: 390 m Speed: 30 kn*10
 Sorted: 144 Kg Total catch: 7464.92 CATCH/HOUR: 14448.23

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|------------------------------|----------------|-------------|-------|
| | weight numbers | | |
| Trachurus capensis, juvenile | 12353.81 | 245865 | 85.50 |
| Dentex macrocephalus Juv. | 1193.57 | 12060 | 8.26 |
| Atractoscion aequidens | 344.90 | 627 | 2.39 |
| Pterothrissus belloci | 179.77 | 3345 | 1.24 |
| Synagrops microlepis | 164.09 | 40866 | 1.14 |
| Merluccius capensis | 103.47 | 627 | 0.72 |
| Cynoglossus canariensis | 48.08 | 1672 | 0.33 |
| Octopus vulgaris | 45.99 | 209 | 0.32 |
| Hexanchus griseus | 14.55 | 2 | 0.10 |
| Total | 14448.23 | 100.00 | |

PROJECT STATION:3583
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1714 Long E 1129
 start stop duration
 TIME :14:10:59 14:40:58 30 (min) Purpose code: 3
 LOG :6767.49 6769.06 1.57 Area code : 1
 FDEPTH: 150 144 GearCond.code:
 BDEPTH: 150 144 Validity code:
 Towing dir: 360ø Wire out: 450 m Speed:150 kn*10
 Sorted: 125 Kg Total catch: 1758.82 CATCH/HOUR: 3517.64

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|------------------------------|----------------|-------------|-------|
| | weight numbers | | |
| Trachurus capensis, juvenile | 2857.12 | 53112 | 81.22 |
| Dentex macrocephalus Juv. | 311.36 | 2686 | 8.85 |
| Synagrops microlepis | 164.08 | 33964 | 4.66 |
| Merluccius capensis | 114.52 | 840 | 3.26 |
| Pterothrissus belloci | 33.60 | 392 | 0.96 |
| Lepidotrigla cadmani | 29.58 | 420 | 0.84 |
| Sepia orbignyana | 4.48 | 28 | 0.13 |
| Brotula barbata | 2.80 | 28 | 0.08 |
| Galeus polli | 0.00 | | |
| Total | 3517.64 | 100.00 | |

PROJECT STATION:3580
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1712 Long E 1138
 start stop duration
 TIME :09:38:18 09:46:08 8 (min) Purpose code:
 LOG :6744.70 6745.08 0.38 Area code :
 FDEPTH: 85 85 GearCond.code:
 BDEPTH: 85 85 Validity code:
 Towing dir: 360ø Wire out: 270 m Speed: 30 kn*10
 Sorted: 38 Kg Total catch: 154.30 CATCH/HOUR: 1157.25

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|------------------------------|----------------|-------------|-------|
| | weight numbers | | |
| B I V A L V E S | 539.70 | 176918 | 46.64 |
| Trachurus capensis, juvenile | 116.20 | 3240 | 27.32 |
| Merluccius capensis | 118.80 | 420 | 10.27 |
| Dentex macrocephalus Juv. | 48.30 | 780 | 4.17 |
| Cynoglossus canariensis | 38.70 | 135 | 3.34 |
| C A S T R O P O D S | 34.80 | 7350 | 3.01 |
| Pterothrissus belloci | 16.80 | 480 | 1.45 |
| Atractoscion aequidens | 13.20 | 30 | 1.14 |
| Arius parkii | 7.20 | 30 | 0.62 |
| Sepia orbignyana | 4.50 | 30 | 0.39 |
| Chelidonichthys capensis | 4.20 | 240 | 0.36 |
| Synagrops microlepis | 3.90 | 1470 | 0.34 |
| Synbranchus afer | 3.90 | 210 | 0.34 |
| Squalus megalops | 2.55 | 8 | 0.22 |
| GOBIIDAE | 2.40 | 510 | 0.21 |
| Zeus faber | 1.50 | 30 | 0.13 |
| Callinectes sp. | 0.60 | 120 | 0.05 |
| Total | 1157.25 | 100.00 | |

PROJECT STATION:3584
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1712 Long E 1125
 start stop duration
 TIME :15:50:02 16:04:34 15 (min) Purpose code: 3
 LOG :6774.89 6775.66 0.76 Area code : 1
 FDEPTH: 178 175 GearCond.code: 9
 BDEPTH: 178 175 Validity code:
 Towing dir: 340ø Wire out: 560 m Speed: 30 kn*10
 Sorted: 100 Kg Total catch: 835.59 CATCH/HOUR: 3342.36

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|----------------------------|----------------|-------------|-------|
| | weight numbers | | |
| Trachurus capensis | 987.60 | 10944 | 29.55 |
| Merluccius capensis | 681.04 | 5132 | 20.38 |
| Chlorophthalmus atlanticus | 491.12 | 26400 | 14.69 |
| Synagrops microlepis | 447.80 | 5088 | 13.40 |
| Helicolenus dactylopterus | 244.56 | 11456 | 7.32 |
| Dentex macrocephalus | 193.92 | 1184 | 5.80 |
| Pterothrissus belloci | 138.92 | 1344 | 4.16 |
| Callinectes sp. | 51.28 | 3104 | 1.53 |
| Dicologlossa cuneata | 34.64 | 672 | 1.04 |
| Eumunida squamifera * | 21.68 | 288 | 0.65 |
| Trigla lyra | 15.96 | 224 | 0.51 |
| Uranoscopus sp. | 15.64 | 32 | 0.47 |
| Sepiella ornata | 6.32 | 96 | 0.19 |
| C A S T R O P O D S | 4.96 | 32 | 0.15 |
| SCYLLARIDAE | 2.32 | 224 | 0.07 |
| Parapenaeus longirostris | 1.96 | 352 | 0.06 |
| Zenopsis conchifer | 1.64 | 32 | 0.05 |
| Total | 3342.36 | 100.02 | |

PROJECT STATION:3585
 DATE:27/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1713 Long E 1122
 start stop duration
 TIME :17:24:07 17:55:06 31 (min) Purpose code: 3
 LOG :6784.62 6786.14 1.51 Area code : 1
 FDEPTH: 294 288 GearCond.code:
 BDEPTH: 294 288 Validity code:
 Towing dir: 355e Wire out: 850 m Speed: 30 kn*10
 Sorted: 45 Kg Total catch: 273.18 CATCH/HOUR: 528.74

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Chlorophthalmus atlanticus | 170.01 | 5098 | 32.15 | |
| Merluccius capensis | 156.08 | 430 | 29.52 | 7523 |
| Helicolenus dactylopterus | 144.70 | 5818 | 27.37 | |
| Bathynectes piperitus | 24.62 | 615 | 4.66 | |
| Nezumia sp. | 14.98 | 441 | 2.83 | |
| Parapandalus narval | 6.74 | 2381 | 1.27 | |
| Lophius sp. | 3.83 | 23 | 0.72 | |
| G A S T R O P O D S | 3.25 | 453 | 0.61 | |
| Galeus pollii | 1.86 | 23 | 0.35 | |
| Calappa sp. | 1.05 | 12 | 0.20 | |
| PORTUNIDAE | 0.70 | 35 | 0.13 | |
| MYCTOPHIDAE | 0.58 | 93 | 0.11 | |
| Parapenaeus longirostris | 0.35 | 70 | 0.07 | |
| Total | 528.75 | | 99.99 | |

PROJECT STATION:3588
 DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1704 Long E 1125
 start stop duration
 TIME :05:23:45 05:48:14 24 (min) Purpose code: 3
 LOG :6831.37 6832.63 1.24 Area code : 1
 FDEPTH: 139 135 GearCond.code:
 BDEPTH: 139 135 Validity code:
 Towing dir: 10e Wire out: 400 m Speed: 30 kn*10
 Sorted: 105 Kg Total catch: 3229.96 CATCH/HOUR: 8074.90

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis | 6310.15 | 114950 | 78.15 | 7530 |
| Dentex macrocephalus | 486.03 | 4778 | 6.02 | 7531 |
| Atractoscion aeguidens | 420.83 | 455 | 5.21 | 7533 |
| Pterothrissus belloci | 283.28 | 4245 | 3.51 | |
| Synagrops microlepis | 282.08 | 225200 | 3.49 | |
| Dicologlossa cuneata | 153.93 | 4550 | 1.91 | |
| Merluccius capensis | 75.83 | 1138 | 0.94 | 7532 |
| Carcharhinus isodon | 32.05 | 5 | 0.40 | |
| Sepia sp. | 18.95 | 153 | 0.23 | |
| Callorhynchus capensis | 11.80 | 5 | 0.15 | |
| Total | 8074.93 | | 100.01 | |

PROJECT STATION:3589
 DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1701 Long E 1128
 start stop duration
 TIME :06:51:39 07:11:18 18 (min) Purpose code: 3
 LOG :6837.20 6838.12 0.68 Area code : 1
 FDEPTH: 112 114 GearCond.code: 9
 BDEPTH: 112 114 Validity code:
 Towing dir: 355e Wire out: 350 m Speed: 30 kn*10
 Sorted: 100 Kg Total catch: 3153.16 CATCH/HOUR: 10510.53

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis | 9273.13 | 159960 | 88.23 | 7534 |
| Dentex macrocephalus | 448.47 | 3513 | 4.27 | 7535 |
| Sardinops ocellatus | 223.13 | 4237 | 2.10 | |
| Trigla lyra | 156.03 | 207 | 1.48 | |
| Umbrina canariensis | 59.93 | 207 | 0.57 | |
| Dentex angolensis | 58.90 | 103 | 0.56 | |
| G A S T R O P O D S | 52.70 | 620 | 0.50 | |
| Dasyatis centroura | 52.27 | 3 | 0.50 | |
| Myliobatis aquila | 51.73 | 20 | 0.49 | |
| Merluccius capensis | 38.23 | 103 | 0.26 | |
| Todaropsis oblanae | 36.17 | 103 | 0.34 | |
| Pagellus bellottii | 28.93 | 103 | 0.28 | |
| Illex coindetii | 15.50 | 103 | 0.15 | |
| Dicologlossa cuneata | 8.27 | 103 | 0.08 | |
| Anthias anthias | 6.20 | 103 | 0.06 | |
| Scyllorhinus canicula | 2.93 | 3 | 0.03 | |
| Total | 10510.52 | | 100.00 | |

PROJECT STATION:3590
 DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1700 Long E 1134
 start stop duration
 TIME :08:46:42 09:10:18 24 (min) Purpose code: 3
 LOG :6846.55 6847.66 2.87 Area code : 1
 FDEPTH: 96 96 GearCond.code: 9
 BDEPTH: 96 96 Validity code:
 Towing dir: 360e Wire out: 280 m Speed: 30 kn*10
 Sorted: 34 Kg Total catch: 247.00 CATCH/HOUR: 617.50

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex macrocephalus Juv. | 320.78 | 4713 | 51.95 | 7536 |
| Pterothrissus belloci | 63.05 | 1105 | 10.21 | |
| Cynoglossus capensis | 49.08 | 4760 | 7.95 | |
| B I V A L V E S | 44.70 | 3818 | 7.24 | |
| Sepia orbignyana | 21.95 | 373 | 3.55 | |
| Chelidonichthys capensis | 16.43 | 98 | 2.56 | |
| Merluccius capensis | 15.60 | 118 | 2.53 | 7538 |
| Zeus faber | 15.45 | 80 | 2.50 | |
| Squalus megalops | 12.50 | 25 | 2.02 | |
| Raja miraletus | 11.30 | 20 | 1.83 | |
| Arius parkii | 9.60 | 33 | 1.55 | |
| G A S T R O P O D S | 8.78 | 2875 | 1.42 | |
| Atractoscion aeguidens | 8.75 | 18 | 1.42 | |
| Octopus vulgaris | 6.70 | 3 | 1.09 | |
| Trachurus capensis, juvenile | 5.20 | 73 | 0.84 | 7537 |
| Callorhynchus capensis | 2.30 | 3 | 0.37 | |
| Pagellus bellottii | 2.28 | 15 | 0.37 | |
| Synagrops microlepis | 1.48 | 488 | 0.24 | |
| Myxine capensis | 0.95 | 3 | 0.15 | |
| Squilla mantis | 0.33 | 48 | 0.05 | |
| GOBIIDAE | 0.33 | 80 | 0.05 | |
| Total | 617.54 | | 99.99 | |

PROJECT STATION:3587
 DATE:28/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 1703 Long E 1116
 start stop duration
 TIME :23:55:37 00:15:31 20 (min) Purpose code: 3
 LOG :6814.65 6815.66 1.00 Area code : 1
 FDEPTH: 686 695 GearCond.code:
 BDEPTH: 686 695 Validity code:
 Towing dir: 350e Wire out: 1750 m Speed: 30 kn*10
 Sorted: 40 Kg Total catch: 353.35 CATCH/HOUR: 1060.05

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nezumia aequalis | 459.00 | 14610 | 43.30 | |
| Coelorhynchus coelorhynchus | 298.35 | 1095 | 28.14 | |
| Illex coindetii | 52.53 | 102 | 4.96 | |
| Taliesmania longifilis | 39.54 | 153 | 3.73 | |
| Chaceon maritae | 32.13 | 51 | 3.03 | |
| Merluccius capensis | 26.52 | 27 | 2.50 | |
| Ebinania costaecanarie | 23.73 | 24 | 2.24 | |
| Raja alba | 22.02 | 102 | 2.08 | |
| Hoplostethus cadonati | 20.91 | 483 | 1.97 | |
| Taliesmania sp. | 17.34 | 585 | 1.64 | |
| Conger conger | 14.04 | 177 | 1.32 | |
| PLATYTRICHTIDAE | 13.77 | 24 | 1.30 | |
| Stomias boa boa | 7.14 | 255 | 0.67 | |
| Scymnodon obscurus | 5.40 | 12 | 0.51 | |
| Triplophos hemingi | 5.10 | 687 | 0.48 | |
| Selachophidium guentheri | 4.86 | 51 | 0.46 | |
| Aristeus varidens, female | 3.06 | 306 | 0.29 | |
| Nemichthys curvirostris | 3.06 | 177 | 0.29 | |
| LIPARIDAE | 2.55 | 24 | 0.24 | |
| Neocyttus rhomboidalis | 2.55 | 24 | 0.24 | |
| Yarella blackfordi | 2.55 | 75 | 0.24 | |
| Notacanthus sexspinis | 1.29 | 24 | 0.12 | |
| Deania calcea | 1.20 | 3 | 0.11 | |
| Etmopterus pusillus | 0.90 | 3 | 0.08 | |
| Aristeus varidens, male | 0.51 | 51 | 0.05 | |
| Total | 1060.05 | | 99.99 | |

PROJECT STATION:3591
 DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1700 Long E 1138
 start stop duration
 TIME :10:18:24 10:42:22 24 (min) Purpose code: 3
 LOG :6854.20 6855.49 1.29 Area code : 1
 FDEPTH: 65 66 GearCond.code: 9
 BDEPTH: 65 66 Validity code:
 Towing dir: 360e Wire out: 210 m Speed: 30 kn*10
 Sorted: 50 Kg Total catch: 1500.01 CATCH/HOUR: 3750.03

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis | 1457.78 | 13110 | 38.87 | 7541 |
| Atractoscion aeguidens | 353.38 | 855 | 9.69 | 7542 |
| Trachurus capensis, juvenile | 353.40 | 68045 | 9.42 | 7540 |
| Merluccius capensis | 278.58 | 1925 | 7.43 | 7543 |
| Raja miraletus | 250.80 | 643 | 6.69 | |
| Sardinops ocellatus | 171.70 | 3705 | 4.58 | |
| B I V A L V E S | 147.48 | 128250 | 3.93 | |
| Illex coindetii | 144.63 | 2780 | 3.86 | |
| Dentex macrocephalus | 140.35 | 6128 | 3.74 | 7539 |
| Chelidonichthys gabonensis | 107.58 | 713 | 2.87 | |
| Myliobatis aquila | 98.50 | 60 | 2.63 | |
| Cynoglossus canariensis | 89.78 | 7173 | 2.39 | |
| Dasyatis sp. | 33.15 | 3 | 0.88 | |
| Callorhynchus capensis | 24.55 | 18 | 0.65 | |
| Zeus faber | 15.68 | 73 | 0.42 | |
| Umbrina canariensis | 14.95 | 285 | 0.40 | |
| Arius parkii | 12.83 | 73 | 0.34 | |
| G A S T R O P O D S | 10.68 | 3563 | 0.28 | |
| Sepia orbignyana | 10.68 | 73 | 0.28 | |
| Trichlurus lepturus | 9.98 | 73 | 0.27 | |
| Octopus vulgaris | 7.13 | 73 | 0.19 | |
| Squalus megalops | 6.40 | 18 | 0.17 | |
| Total | 3749.99 | | 99.98 | |

PROJECT STATION:3592
DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1659 Long E 1143
start stop duration
TIME :11:51:19 12:21:08 30 (min) Purpose code: 3
LOG :6861.69 6863.48 1.70 Area code : 1
FDEPTH: 23 22 GearCond.code:
BDEPTH: 23 22 Validity code:
Towing dir: 360ø Wire out: 100 m Speed: 33 kn*10
Sorted: 49 Kg Total catch: 300.32 CATCH/HOUR: 600.64

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Sea cucumbers | 359.04 | 3972 | 59.78 | |
| Todaropsis eblanae | 79.56 | 288 | 13.25 | |
| Raja alba | 68.64 | 24 | 11.43 | |
| Trachurus capensis, juvenile | 55.08 | 4416 | 9.17 | |
| Raja miraletus | 8.76 | 12 | 1.46 | |
| Trachurus capensis | 8.76 | 60 | 1.46 | |
| Decapterus rhonchus | 8.28 | 24 | 1.38 | |
| Carcharhinus signatus | 8.08 | 2 | 1.35 | |
| Dentex canariensis | 3.12 | 134 | 0.52 | |
| Callorhynchus capensis | 0.72 | 60 | 0.12 | |
| Pagellus bellottii | 0.36 | 12 | 0.06 | |
| Pistularia petimba | 0.24 | 12 | 0.04 | |
| Total | 600.64 | | 100.02 | |

PROJECT STATION:3593
DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1648 Long E 1141
start stop duration
TIME :13:34:26 13:54:05 20 (min) Purpose code: 3
LOG :6872.80 6873.84 1.02 Area code : 1
FDEPTH: 24 25 GearCond.code:
BDEPTH: 24 25 Validity code:
Towing dir: 360ø Wire out: 125 m Speed: 31 kn*10
Sorted: 105 Kg Total catch: 211.98 CATCH/HOUR: 635.94

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Sea cucumbers | 337.80 | 4572 | 53.12 | |
| Trachurus capensis, juvenile | 264.48 | 5130 | 41.59 | 7526 |
| Engraulis encrasicolus | 19.14 | 3438 | 3.01 | |
| Pomatomus saltatrix | 8.64 | 54 | 1.36 | |
| Sardinella aurita | 3.00 | 30 | 0.47 | |
| Atractoscion aequidens | 1.44 | 24 | 0.23 | |
| Illex coindetii | 0.78 | 6 | 0.12 | |
| Pistularia petimba | 0.48 | 18 | 0.08 | |
| Dentex canariensis | 0.18 | 6 | 0.03 | |
| Total | 635.94 | | 100.01 | |

PROJECT STATION:3594
DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1649 Long E 1135
start stop duration
TIME :15:07:17 15:18:35 11 (min) Purpose code: 3
LOG :6882.14 6882.66 0.52 Area code : 1
FDEPTH: 96 97 GearCond.code:
BDEPTH: 96 97 Validity code:
Towing dir: 360ø Wire out: 250 m Speed: 30 kn*10
Sorted: 33 Kg Total catch: 135.32 CATCH/HOUR: 738.11

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis | 453.82 | 17324 | 61.48 | 7544 |
| Dentex macrocephalus | 123.49 | 1964 | 16.73 | 7546 |
| Trigla lyra | 61.31 | 327 | 8.31 | |
| G A S T R O P O D S | 34.91 | 15360 | 4.73 | |
| Merluccius capensis | 23.35 | 175 | 3.16 | 7545 |
| B I V A L V E S | 16.15 | 8880 | 2.19 | |
| Dicologlossa cuneata | 13.96 | 960 | 1.89 | |
| Pagellus bellottii | 5.02 | 44 | 0.68 | |
| Squalus megalops | 3.27 | 5 | 0.44 | |
| Sepia sp. | 2.84 | 44 | 0.38 | |
| Total | 738.12 | | 99.99 | |

PROJECT STATION:3595
DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1649 Long E 1138
start stop duration
TIME :16:19:31 16:26:18 7 (min) Purpose code: 3
LOG :6887.93 6888.26 0.32 Area code : 1
FDEPTH: 74 74 GearCond.code:
BDEPTH: 74 74 Validity code:
Towing dir: 355ø Wire out: 225 m Speed: 30 kn*10
Sorted: 16 Kg Total catch: 165.50 CATCH/HOUR: 1418.57

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| B I V A L V E S | 697.71 | 35914 | 49.18 | |
| Trachurus capensis | 447.43 | 18343 | 31.54 | 7548 |
| Dicologlossa cuneata | 114.86 | 5486 | 8.10 | |
| Merluccius capensis | 66.86 | 600 | 4.71 | 7547 |
| Sea cucumbers | 60.00 | 18000 | 4.23 | |
| G A S T R O P O D S | 15.43 | 6000 | 1.09 | |
| Todaropsis eblanae | 11.14 | 86 | 0.79 | |
| Sepia sp. | 2.57 | 257 | 0.18 | |
| Illex coindetii | 2.57 | 86 | 0.18 | |
| Total | 1418.57 | | 100.00 | |

PROJECT STATION:3596
DATE:28/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1649 Long E 1135
start stop duration
TIME :17:16:15 17:35:01 19 (min) Purpose code: 3
LOG :6893.18 6894.16 0.97 Area code : 1
FDEPTH: 96 96 GearCond.code: 9
BDEPTH: 96 96 Validity code: 1
Towing dir: 360ø Wire out: 290 m Speed: 30 kn*10
Sorted: 105 Kg Total catch: 1054.90 CATCH/HOUR: 3331.26

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis | 2256.63 | 89779 | 67.74 | 7551 |
| Dentex macrocephalus | 656.21 | 8684 | 19.70 | 7550 |
| Merluccius capensis | 143.37 | 884 | 4.30 | 7552 |
| Atractoscion aequidens | 130.74 | 253 | 3.92 | 7549 |
| Trigla lyra | 36.95 | 221 | 1.11 | |
| Sepia orbignyana | 34.74 | 32 | 1.04 | |
| Squalus megalops | 29.05 | 32 | 0.87 | |
| Pagellus bellottii | 23.37 | 13 | 0.70 | |
| Dicologlossa cuneata | 11.05 | 411 | 0.33 | |
| Pterothrissus belloci | 9.16 | 95 | 0.27 | |
| Total | 3331.27 | | 99.98 | |

PROJECT STATION:3597
DATE:28/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 1650 Long E 1118
start stop duration
TIME :20:16:08 20:46:12 30 (min) Purpose code: 3
LOG :6915.03 6916.52 1.47 Area code : 1
FDEPTH: 338 359 GearCond.code:
BDEPTH: 338 359 Validity code:
Towing dir: 360ø Wire out:1000 m Speed: 30 kn*10
Sorted: 104 Kg Total catch: 1017.28 CATCH/HOUR: 2034.56

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Scorpaena stephanica | 1199.32 | 14522 | 58.95 | |
| Chlorophthalmus atlanticus | 496.86 | 17098 | 24.42 | |
| Hymenoccephalus italicus | 120.30 | 3728 | 5.91 | |
| Nezumia aequalis | 53.34 | 1380 | 2.62 | |
| Pterothrissus belloci | 34.60 | 186 | 1.70 | |
| Hoplostethus cadenati | 30.28 | 1278 | 1.49 | |
| Trigla lyra | 21.62 | 62 | 1.06 | |
| Aristeus varidens, female | 16.28 | 1442 | 0.80 | 7553 |
| Plesionika acanthurus | 14.22 | 5108 | 0.70 | |
| Galeus pollii | 12.80 | 104 | 0.63 | |
| Callinectes sp. | 9.68 | 206 | 0.48 | |
| Trachurus capensis | 7.20 | 82 | 0.35 | |
| Merluccius capensis | 5.52 | 164 | 0.27 | |
| Acanthephyra sp. | 3.92 | 1236 | 0.19 | |
| MYCTOPHIDAE | 3.08 | 1442 | 0.15 | |
| Cynoglossus canariensis | 1.86 | 62 | 0.09 | |
| Synagrops microlepis | 1.04 | 82 | 0.05 | |
| Aristeus varidens, male | 1.02 | 186 | 0.05 | 7554 |
| Scylliorhinus canicula | 1.00 | 2 | 0.05 | |
| Parapenaeus longirostris, fem. | 0.42 | 84 | 0.02 | 7556 |
| Parapenaeus longirostris, male | 0.20 | 62 | 0.01 | 7555 |
| Total | 2034.56 | | 99.99 | |

PROJECT STATION:3598
DATE:28/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 1637 Long E 1118
start stop duration
TIME :22:55:53 23:25:24 30 (min) Purpose code: 3
LOG :6928.43 6929.91 1.46 Area code : 1
FDEPTH: 590 608 GearCond.code:
BDEPTH: 590 608 Validity code:
Towing dir: 10ø Wire out:1500 m Speed: 30 kn*10
Sorted: 50 Kg Total catch: 174.61 CATCH/HOUR: 349.22

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius capensis | 131.04 | 152 | 37.52 | 7557 |
| Hymenoccephalus italicus | 67.60 | 2600 | 19.36 | |
| Trachyrhynchus scabrus | 64.56 | 336 | 18.49 | |
| Ebinania costaeacanarie | 24.64 | 16 | 7.06 | |
| Chaeon maritae, male | 15.76 | 38 | 4.51 | |
| Talismania longifilis | 14.40 | 456 | 4.12 | |
| Illex coindetii | 5.12 | 8 | 1.47 | |
| Yarekella blackfordi | 4.08 | 168 | 1.37 | |
| Chaeon maritae, female | 3.76 | 16 | 1.08 | |
| Hoplostethus cadenati | 2.48 | 80 | 0.71 | |
| Centrophorus squamosus | 2.00 | 6 | 0.57 | |
| Lanprogrammum sp. | 1.68 | 64 | 0.48 | |
| Scorpaena sp. | 1.68 | 32 | 0.48 | |
| Synaphobranchus kaupii | 1.60 | 40 | 0.46 | |
| Aristeus varidens, female | 1.60 | 128 | 0.46 | 7559 |
| MAJIDAE | 0.96 | 8 | 0.27 | |
| Elmopteropus pusillus | 0.90 | 4 | 0.26 | |
| Trachurus capensis | 0.88 | 8 | 0.25 | |
| Laemonea laureysi | 0.80 | 8 | 0.23 | |
| Conger conger | 0.80 | 24 | 0.23 | |
| Lithodes ferox | 0.64 | 8 | 0.18 | |
| Dibranchius atlanticus | 0.56 | 8 | 0.16 | |
| Melanconemus sp. | 0.40 | 8 | 0.11 | |
| Benthodesmus tenuis | 0.32 | 8 | 0.09 | |
| Gadella maraldi | 0.32 | 16 | 0.09 | |
| Triplophos hemingi | 0.32 | 40 | 0.09 | |
| Chlorophthalmus atlanticus | 0.24 | 8 | 0.07 | |
| Aristeus varidens, male | 0.08 | 16 | 0.02 | 7558 |
| Total | 349.22 | | 99.99 | |

PROJECT STATION:3599
DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1639 Long E 1124
start stop duration
TIME :05:27:29 05:59:35 32 (min) Purpose code: 3
LOG :6947.42 6948.94 1.50 Area code : 1
FDEPTH: 125 124 GearCond.code:
BDEPTH: 125 124 Validity code:
Towing dir: 360ø Wire out: 360 m Speed: 30 kn*10
Sorted: 104 Kg Total catch: 234.02 CATCH/HOUR: 438.79

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius capensis | 114.23 | 338 | 26.03 | 7561 |
| Trachurus capensis | 93.08 | 705 | 21.21 | 7560 |
| Sardinops ocellatus | 69.85 | 1181 | 20.48 | |
| Dentex macrocephalus | 52.80 | 435 | 12.03 | 7562 |
| Squalus megalops | 45.98 | 120 | 10.48 | |
| Pterothrissus belloci | 15.30 | 116 | 3.49 | |
| Chelidonichthys capensis | 11.06 | 19 | 2.52 | |
| Zeus faber | 7.16 | 8 | 1.63 | |
| Trigla lyra | 3.98 | 45 | 0.91 | |
| Dicologlossa cuneata | 1.50 | 19 | 0.34 | |
| Octopus vulgaris | 1.46 | 2 | 0.33 | |
| Sepia bertheloti | 1.05 | 8 | 0.24 | |
| Pontinus accraensis | 0.83 | 8 | 0.19 | |
| Illex coindetii | 0.53 | 4 | 0.12 | |
| Total | 438.81 | | 100.00 | |

PROJECT STATION:3600
DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1635 Long E 1126
start stop duration
TIME :06:53:11 07:23:47 31 (min) Purpose code: 3
LOG :6953.47 6954.94 1.47 Area code : 1
FDEPTH: 116 115 GearCond.code:
BDEPTH: 116 115 Validity code:
Towing dir: 90ø Wire out: 350 m Speed: 30 kn*10
Sorted: 103 Kg Total catch: 835.22 CATCH/HOUR: 1616.55

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis | 1492.34 | 8237 | 92.32 | 7563 |
| Sardinops ocellatus | 53.57 | 821 | 3.31 | |
| Dentex macrocephalus | 42.43 | 465 | 2.62 | 7564 |
| Squalus megalops | 11.81 | 14 | 0.73 | |
| Chelidonichthys capensis | 8.98 | 15 | 0.56 | |
| Dicologlossa cuneata | 3.87 | 46 | 0.24 | |
| Pontinus accraensis | 3.56 | 46 | 0.22 | |
| Total | 1616.56 | | 100.00 | |

PROJECT STATION:3601
 DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1636 Long E 1138
 start stop duration
 TIME :09:33:11 09:35:09 2 (min) Purpose code: ;
 LOG :6969.62 6969.69 0.09 Area code :
 FDEPTH: 75 75 GearCond.code:
 BDEPTH: 75 75 Validity code:
 Towing dir: 360ø Wire out: 240 m Speed: 30 kn*10
 Sorted: 22 Kg Total catch: 109.80 CATCH/HOUR: 3294.00

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis, juvenile | 2670.00 | 261900 | 81.06 | 7565 |
| B I V A L V E S | 376.50 | 106800 | 11.43 | |
| Dentex macrocephthalmus Juv. | 90.00 | 9450 | 2.73 | 7527 |
| G A S T R O P O D S | 55.50 | 29250 | 1.68 | |
| Sea cucumbers | 43.50 | 3450 | 1.32 | |
| Illex coindetii | 28.50 | 2250 | 0.87 | |
| Pythyonichthys microcephthalmus | 9.00 | 150 | 0.27 | |
| Cynoglossus capensis | 7.50 | 750 | 0.23 | |
| Sepia orbignyana | 7.50 | 600 | 0.23 | |
| Chelidonichthys capensis | 6.00 | 150 | 0.18 | |
| Total | 3294.00 | | 100.00 | |

PROJECT STATION:3602
 DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1624 Long E 1146
 start stop duration
 TIME :12:14:09 12:43:56 30 (min) Purpose code: 3
 LOG :6988.15 6989.74 1.58 Area code : 1
 FDEPTH: 21 23 GearCond.code:
 BDEPTH: 21 23 Validity code:
 Towing dir: 360ø Wire out: 100 m Speed: 31 kn*10
 Sorted: 57 Kg Total catch: 118.78 CATCH/HOUR: 237.56

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| J E L L Y F I S H | 138.88 | 1280 | 56.46 | |
| Trachurus capensis, juvenile | 52.40 | 3400 | 22.06 | 7566 |
| Lithognathus mormyrus | 18.88 | 136 | 7.95 | |
| Loligo vulgaris | 7.84 | 24 | 3.30 | |
| Carcharhinus signatus | 6.00 | 14 | 2.53 | |
| Stromateus fiatola | 5.24 | 8 | 2.21 | |
| Sphyrna zygaena | 2.80 | 2 | 1.18 | |
| Dentex canariensis | 1.88 | 60 | 0.79 | |
| Octopus vulgaris | 1.56 | 4 | 0.66 | |
| Pagellus bellottii | 0.96 | 12 | 0.40 | |
| Pemmatcus saltatrix | 0.76 | 4 | 0.32 | |
| Scomber japonicus | 0.36 | 8 | 0.15 | |
| Total | 237.56 | | 100.01 | |

PROJECT STATION:3603
 DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1625 Long E 1143
 start stop duration
 TIME :13:36:53 14:06:57 30 (min) Purpose code: 3
 LOG :6995.10 6996.82 1.72 Area code : 1
 FDEPTH: 50 49 GearCond.code:
 BDEPTH: 50 49 Validity code:
 Towing dir: 5ø Wire out: 150 m Speed: 32 kn*10
 Sorted: 52 Kg Total catch: 162.55 CATCH/HOUR: 325.10

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus capensis, juvenile | 182.64 | 7638 | 56.18 | 7567 |
| Myliobatis aquila | 110.28 | 102 | 33.92 | |
| Engraulis encrasicolus | 8.88 | 1122 | 2.73 | |
| Lithognathus mormyrus | 8.16 | 30 | 2.51 | |
| Rhinobatos albomaculatus | 7.24 | 2 | 2.23 | |
| Carcharhinus signatus | 3.04 | 2 | 0.94 | |
| Sepia orbignyana | 1.74 | 6 | 0.54 | |
| Pemmatcus saltatrix | 1.32 | 6 | 0.41 | |
| Loligo vulgaris | 1.02 | 66 | 0.31 | |
| Dentex macrocephthalmus Juv. | 0.48 | 54 | 0.15 | |
| Pagellus bellottii | 0.30 | 6 | 0.09 | |
| Total | 325.10 | | 100.01 | |

PROJECT STATION:3604
 DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1613 Long E 1136
 start stop duration
 TIME :15:46:10 16:16:03 30 (min) Purpose code: 3
 LOG :7009.82 7011.41 1.59 Area code : 1
 FDEPTH: 73 72 GearCond.code:
 BDEPTH: 73 72 Validity code:
 Towing dir: 355ø Wire out: 200 m Speed: 30 kn*10
 Sorted: 9 Kg Total catch: 9.86 CATCH/HOUR: 19.72

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Squalus megalops | 7.12 | 8 | 36.11 | |
| Atractoscion aeguidens | 3.32 | 4 | 16.84 | |
| Zeus faber | 2.98 | 6 | 15.11 | |
| Spondyliosoma cantharus | 2.76 | 6 | 14.00 | |
| Todaropsis eblanae | 1.44 | 6 | 7.30 | |
| Trigla lyra | 0.80 | 14 | 4.06 | |
| Trachurus capensis, juvenile | 0.30 | 12 | 1.52 | |
| B I V A L V E S | 0.28 | 54 | 1.42 | |
| Pagellus bellottii | 0.24 | 2 | 1.22 | |
| Brotula barbata | 0.22 | 2 | 1.12 | |
| Fistularia petimba | 0.16 | 2 | 0.81 | |
| Citharus linguatula | 0.06 | 4 | 0.30 | |
| G A S T R O P O D S | 0.04 | 8 | 0.20 | |
| Total | 19.72 | | 100.01 | |

PROJECT STATION:3605
 DATE:29/ 3/05 GEAR TYPE: BT No:16 POSITION:Lat S 1612 Long E 1144
 start stop duration
 TIME :17:18:28 17:48:09 30 (min) Purpose code: 3
 LOG :7020.29 7021.83 1.53 Area code : 1
 FDEPTH: 47 49 GearCond.code:
 BDEPTH: 47 49 Validity code:
 Towing dir: 360ø Wire out: 150 m Speed: 30 kn*10
 Sorted: 102 Kg Total catch: 102.26 CATCH/HOUR: 204.52

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 48.00 | 1514 | 23.47 | 7568 |
| Dasyatis centroura | 27.48 | 4 | 13.44 | |
| Dicologlossus cuneata | 25.76 | 3624 | 12.60 | |
| Mustelus mustelus | 18.52 | 20 | 9.06 | |
| Atractoscion aeguidens | 16.38 | 186 | 8.01 | 7570 |
| Dasyatis marmorata | 10.96 | 4 | 5.36 | |
| Pagellus bellottii | 9.80 | 76 | 4.79 | |
| Raja miraletus | 7.48 | 10 | 3.66 | |
| Umbrina canariensis | 6.68 | 136 | 3.27 | 7569 |
| Torpedo torpedo | 6.64 | 32 | 3.25 | |
| Trichurus lepturus | 4.08 | 38 | 1.99 | |
| Myliobatis aquila | 3.92 | 4 | 1.92 | |
| Trachinus armatus | 3.74 | 134 | 1.83 | |
| Sepia sp. | 2.50 | 232 | 1.22 | |
| Todaropsis eblanae | 2.50 | 152 | 1.22 | |
| Sepia officinalis hierredda | 2.20 | 6 | 1.08 | |
| C R A B S | 2.04 | 234 | 1.00 | |
| Sepia orbignyana | 1.16 | 12 | 0.57 | |
| Pterothrissus belloci | 1.04 | 20 | 0.51 | |
| Arius parkii | 1.04 | 2 | 0.51 | |
| Dentex macrocephthalmus Juv. | 0.98 | 392 | 0.48 | 7571 |
| GOBIIDAE | 0.80 | 504 | 0.39 | |
| Sardinella aurita | 0.36 | 2 | 0.18 | |
| Calappa sp. | 0.30 | 10 | 0.15 | |
| Sardinops ocellatus | 0.14 | 2 | 0.07 | |
| Lagocephalus laevigatus | 0.02 | 2 | 0.01 | |
| Total | 204.52 | | 100.04 | |

PROJECT STATION:3606
 DATE:1/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1229 Long E 1323
 start stop duration
 TIME :13:44:58 14:00:02 15 (min) Purpose code: 3
 LOG :7288.44 7289.19 0.74 Area code : 2
 FDEPTH: 72 71 GearCond.code:
 BDEPTH: 72 71 Validity code:
 Towing dir: 45ø Wire out: 200 m Speed: 30 kn*10
 Sorted: 25 Kg Total catch: 198.88 CATCH/HOUR: 795.52

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Sepia orbignyana | 146.72 | 392 | 18.44 | |
| Pagellus bellottii | 112.56 | 756 | 14.15 | 7574 |
| Brachydeuterus auritus | 74.20 | 532 | 9.33 | 7573 |
| Trachurus capensis, juvenile | 57.56 | 700 | 7.29 | 7572 |
| Chloroscombrus chrysurus | 50.40 | 308 | 6.34 | |
| Citharus linguatula | 47.04 | 980 | 5.91 | |
| Raja miraletus | 46.48 | 56 | 5.84 | |
| Bembrops greyi | 42.28 | 476 | 5.31 | |
| Trigla lyra | 42.28 | 308 | 5.31 | |
| Torpedo torpedo | 28.80 | 112 | 3.62 | |
| G A S T R O P O D S | 27.72 | 8596 | 3.48 | |
| Stromateus fiatola | 23.80 | 28 | 2.99 | |
| HOLOCENTRIDAE | 15.40 | 196 | 1.94 | |
| Fistularia petimba | 12.60 | 56 | 1.58 | |
| Dentex macrocephthalmus | 12.60 | 84 | 1.58 | |
| Brotula barbata | 10.64 | 84 | 1.34 | |
| Pomadourus incisus | 9.24 | 28 | 1.16 | |
| B I V A L V E S | 7.00 | 252 | 0.88 | |
| Selene dorsalis | 6.72 | 56 | 0.84 | |
| Zeus faber | 6.16 | 28 | 0.77 | |
| Trichurus sp. | 6.16 | 56 | 0.77 | |
| Dentex barnardi | 2.24 | 28 | 0.28 | |
| Pterothrissus belloci | 1.96 | 28 | 0.25 | |
| Parapanaeus longirostris, fem. | 1.68 | 644 | 0.21 | 7576 |
| Chilomycterus spinosus mauret. | 1.48 | 4 | 0.19 | |
| Microchirus frechkopi | 0.84 | 28 | 0.11 | |
| Parapanaeus longirostris, male | 0.56 | 364 | 0.07 | 7575 |
| Total | 795.52 | | 99.98 | |

PROJECT STATION:3607
 DATE:1/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1227 Long E 1323
 start stop duration
 TIME :14:49:02 15:19:04 30 (min) Purpose code: 3
 LOG :7292.31 7293.92 1.60 Area code : 2
 FDEPTH: 92 88 GearCond.code:
 BDEPTH: 92 88 Validity code:
 Towing dir: 40ø Wire out: 225 m Speed: 30 kn*10
 Sorted: 39 Kg Total catch: 39.57 CATCH/HOUR: 79.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichurus lepturus | 40.68 | 660 | 51.40 | |
| Dentex macrocephthalmus | 7.92 | 46 | 10.01 | 7577 |
| Torpedo torpedo | 6.02 | 14 | 7.61 | |
| Brotula barbata | 4.50 | 14 | 5.69 | |
| Fistularia petimba | 3.64 | 6 | 4.60 | |
| Raja miraletus | 3.42 | 6 | 4.32 | |
| Zeus faber | 2.56 | 6 | 3.23 | |
| Brachydeuterus auritus | 2.12 | 14 | 2.68 | 7579 |
| Trachurus trecae | 2.04 | 24 | 2.58 | 7578 |
| Bembrops greyi | 1.08 | 12 | 1.36 | |
| Citharus linguatula | 0.92 | 28 | 1.16 | |
| Synagrops microlepis | 0.72 | 146 | 0.91 | |
| Microchirus frechkopi | 0.44 | 22 | 0.56 | |
| G A S T R O P O D S | 0.42 | 176 | 0.53 | |
| Boops boops | 0.42 | 4 | 0.53 | |
| Engraulis encrasicolus | 0.40 | 14 | 0.51 | |
| Parapanaeus longirostris, fem. | 0.34 | 84 | 0.43 | 7581 |
| Pterothrissus belloci | 0.30 | 4 | 0.38 | |
| Alloteuthis africana | 0.28 | 108 | 0.35 | |
| Myceroperca rubra | 0.24 | 4 | 0.30 | |
| Dentex barnardi | 0.20 | 2 | 0.25 | |
| B I V A L V E S | 0.18 | 18 | 0.23 | |
| Parapanaeus longirostris, male | 0.14 | 58 | 0.18 | 7580 |
| C R A B S | 0.14 | 58 | 0.18 | |
| GOBIIDAE | 0.02 | 2 | 0.03 | |
| Total | 79.14 | | 100.01 | |

PROJECT STATION:3609
 DATE: 1/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1224 Long E 1322
 start stop duration
 TIME :16:04:32 16:34:33 30 (min) Purpose code: 3
 LOG :7298.38 7299.94 1.56 Area code: 2
 FDEPTH: 107 106 GearCond.code:
 BDEPTH: 107 106 Validity code:
 Towing dir: 20ø Wire out: 280 m Speed: 30 kn*10
 Sorted: 139 Kg Total catch: 139.59 CATCH/HOUR: 279.18

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichiurus lepturus | 71.92 | 132 | 25.76 | |
| Dentex macrophthalmeus | 46.96 | 338 | 16.82 | 7624 |
| Umbryna canariensis | 39.60 | 126 | 14.18 | 7529 |
| Boops boops | 39.60 | 432 | 14.18 | |
| Pagellus bellottii | 20.48 | 116 | 7.34 | 7625 |
| Trigla lyra | 9.56 | 88 | 3.42 | |
| Zeus faber | 8.80 | 26 | 3.15 | |
| Scorpaena normani | 7.14 | 64 | 2.56 | |
| Sepia officinalis hierredda | 6.22 | 10 | 2.23 | |
| Pterothrissus belloci | 6.08 | 86 | 2.18 | |
| Raja miraletus | 5.82 | 8 | 2.08 | |
| Miracorvina angolensis | 3.32 | 12 | 1.19 | |
| Ephippion guttifer | 3.14 | 10 | 1.12 | |
| Uranoscopus sp. | 2.98 | 10 | 1.07 | |
| Merluccius polli | 1.70 | 70 | 0.61 | 7528 |
| Sepia orbignyana | 1.58 | 16 | 0.57 | |
| Uranoscopus albesca | 1.10 | 2 | 0.39 | |
| Citharus linguatula | 0.86 | 32 | 0.31 | |
| Lophodes kempfi | 0.52 | 4 | 0.19 | |
| Brotula barbata | 0.46 | 2 | 0.16 | |
| C E P H A L O P O D S | 0.44 | 40 | 0.16 | |
| Perulibranchius rossignoli | 0.30 | 2 | 0.11 | |
| Saurida brasiliensis | 0.24 | 38 | 0.09 | |
| Cynopterus ferox | 0.22 | 4 | 0.08 | |
| Ilex coindetii | 0.14 | 8 | 0.05 | |
| Total | 279.18 | | 100.00 | |

PROJECT STATION:3609
 DATE: 1/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1223 Long E 1317
 start stop duration
 TIME :18:37:27 19:07:14 30 (min) Purpose code: 3
 LOG :7309.28 7310.70 1.42 Area code: 2
 FDEPTH: 729 733 GearCond.code:
 BDEPTH: 729 733 Validity code:
 Towing dir: 213ø Wire out: 1800 m Speed: 30 kn*10
 Sorted: 48 Kg Total catch: 150.19 CATCH/HOUR: 300.38

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus cadonati | 112.56 | 4146 | 37.47 | |
| Nezumia micronychodon | 47.04 | 2268 | 15.66 | |
| Yarella blackfordi * | 43.08 | 1320 | 14.34 | |
| Lamprogrammus exultus | 26.52 | 216 | 8.83 | |
| Chaceon maritae, female | 13.12 | 48 | 4.37 | 7583 |
| Alepocephalus sp. | 8.04 | 222 | 2.68 | |
| Conger conger | 7.44 | 156 | 2.48 | |
| UNIDENTIFIED FISH | 7.26 | 414 | 2.42 | |
| Etmopterus pusillus | 4.56 | 54 | 1.52 | |
| Aristeus varidens, female | 3.96 | 234 | 1.32 | 7585 |
| Triplophos hemingi | 3.96 | 538 | 1.32 | |
| Haloaenus sp. | 3.90 | 60 | 1.30 | |
| Neobythites sp. | 2.64 | 516 | 0.88 | |
| Aristeus varidens, male | 1.92 | 270 | 0.64 | 7584 |
| Etmopterus polli | 1.80 | 24 | 0.60 | |
| Ebinania costaeanarie | 1.50 | 12 | 0.50 | |
| Malacocephalus laevis | 1.38 | 6 | 0.46 | |
| Chaceon maritae, male | 1.36 | 4 | 0.45 | 7582 |
| Melanostomias sp. | 1.32 | 36 | 0.44 | |
| Deania calcea | 1.20 | 12 | 0.40 | |
| Heterocarpus ensifer | 1.20 | 6 | 0.40 | |
| Synaphobranchus kaupii | 0.66 | 6 | 0.22 | |
| Deania profundorum | 0.60 | 12 | 0.20 | |
| Shrimps, small, non comm. | 0.54 | 156 | 0.18 | |
| Dibranchius atlanticus | 0.48 | 12 | 0.16 | |
| Bathyleptis sp. | 0.42 | 18 | 0.14 | |
| NEMATOCARCINIDAE | 0.36 | 36 | 0.12 | |
| Nemichthys scolopaceus | 0.30 | 6 | 0.10 | |
| Nematocarcinus africanus | 0.24 | 30 | 0.08 | |
| Cubicops sp. | 0.24 | 6 | 0.08 | |
| C E P H A L O P O D A | 0.18 | 6 | 0.06 | |
| Benthodesmus sp. | 0.18 | 6 | 0.06 | |
| Talismania longifilis | 0.12 | 6 | 0.04 | |
| Chauliodon sp. | 0.12 | 6 | 0.04 | |
| Phrynichthys wedli | 0.06 | 24 | 0.02 | |
| ZOARCIDAE | 0.06 | 6 | 0.02 | |
| MYCTOPHIDAE | 0.06 | 54 | 0.02 | |
| Total | 300.38 | | 100.02 | |

PROJECT STATION:3610
 DATE: 1/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1227 Long E 1315
 start stop duration
 TIME :21:07:11 21:37:10 30 (min) Purpose code: 3
 LOG :7319.52 7321.06 1.53 Area code: 2
 FDEPTH: 650 646 GearCond.code:
 BDEPTH: 650 646 Validity code:
 Towing dir: 38ø Wire out: 1600 m Speed: 30 kn*10
 Sorted: 68 Kg Total catch: 138.72 CATCH/HOUR: 277.44

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus cadonati | 60.06 | 2016 | 21.66 | |
| Yarella blackfordi | 40.40 | 1240 | 14.56 | |
| Lamprogrammus exultus | 33.68 | 288 | 12.14 | |
| Merluccius polli | 27.84 | 36 | 10.03 | |
| Nematocarcinus africanus | 22.80 | 7048 | 8.22 | 7588 |
| Aristeus varidens, female | 18.00 | 1112 | 6.49 | 7587 |
| Chaceon maritae, female | 14.12 | 52 | 5.09 | |
| L O B S T E R S | 10.40 | 940 | 3.75 | |
| Nezumia micronychodon | 8.72 | 368 | 3.14 | |
| Raja alba | 5.84 | 16 | 2.10 | |
| Chaceon maritae, male | 3.92 | 8 | 1.41 | |
| Aristeus varidens, male | 3.20 | 368 | 1.15 | 7586 |
| Brotula barbata | 3.08 | 52 | 1.11 | |
| Phrynichthys wedli | 2.52 | 20 | 0.91 | |
| Neobythites sp. | 2.16 | 304 | 0.78 | |
| Laemonema laureysi | 2.12 | 24 | 0.76 | |
| Conger conger | 2.08 | 64 | 0.75 | |
| Stomias boa boa | 1.96 | 44 | 0.71 | |
| Triplophos hemingi | 1.68 | 188 | 0.61 | |
| Gadella imberbis | 1.56 | 72 | 0.56 | |
| Talismania sp. | 1.52 | 56 | 0.55 | |
| Etmopterus sp. | 1.40 | 16 | 0.50 | |
| Nezumia sp. | 1.16 | 92 | 0.42 | |
| Synaphobranchus kaupii | 1.12 | 24 | 0.40 | |
| Coloconger sp. | 1.04 | 4 | 0.37 | |
| Solenocera africana | 0.96 | 72 | 0.35 | |
| Ommastrephes bartrami | 0.76 | 4 | 0.27 | |
| Chlorophthalmus atlanticus | 0.68 | 12 | 0.25 | |
| Etmopterus spinax | 0.60 | 12 | 0.22 | |
| Ebinania costaeanarie | 0.56 | 4 | 0.20 | |
| Heterocarpus ensifer | 0.44 | 88 | 0.16 | |
| Galeus polli | 0.40 | 4 | 0.14 | |
| Nezumia sp. | 0.24 | 4 | 0.09 | |
| Mycteroperca rubra | 0.24 | 8 | 0.09 | |
| Dibranchius sp. | 0.16 | 4 | 0.06 | |
| Total | 277.44 | | 100.00 | |

PROJECT STATION:3611
 DATE: 2/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1217 Long E 1334
 start stop duration
 TIME :05:34:47 06:04:30 30 (min) Purpose code: 3
 LOG :7355.81 7357.30 1.48 Area code: 2
 FDEPTH: 57 53 GearCond.code:
 BDEPTH: 57 53 Validity code:
 Towing dir: 30ø Wire out: 160 m Speed: 30 kn*10
 Sorted: 140 Kg Total catch: 1041.95 CATCH/HOUR: 2083.90

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pomadasyx incisus | 478.16 | 4042 | 22.95 | |
| Brachydeuterus auritus | 312.00 | 4574 | 14.97 | |
| Argyrosomus hololepidotus | 288.00 | 102 | 13.82 | |
| Galeoides decadactylus | 232.20 | 624 | 11.14 | |
| Trachurus trachurus | 193.32 | 3594 | 9.28 | 7589 |
| Pagellus bellottii | 154.80 | 1134 | 7.43 | 7626 |
| Lithognathus moryurus | 87.88 | 344 | 4.22 | |
| Selene dorsalis | 42.82 | 584 | 2.05 | |
| Denlex barnardi | 41.44 | 636 | 1.99 | 7591 |
| Umbryna canariensis | 34.04 | 240 | 1.63 | 7590 |
| Bombrops heterurus | 30.10 | 446 | 1.44 | |
| Rhinobatos rhinobatos | 29.92 | 18 | 1.44 | |
| Trichiurus lepturus | 27.68 | 154 | 1.33 | |
| Citharus linguatula | 19.60 | 652 | 0.94 | |
| Lagocephalus sp. | 18.22 | 50 | 0.87 | |
| Stromateus fiatola | 13.40 | 50 | 0.64 | |
| Zeus faber | 12.38 | 16 | 0.59 | |
| Brachydeuterus auritus Juv. | 11.86 | 222 | 0.57 | |
| Chaetodon hoefleri | 10.32 | 50 | 0.50 | |
| Brotula barbata | 8.94 | 68 | 0.43 | |
| Pseudupeneus prayensis | 7.38 | 68 | 0.35 | |
| Raja miraletus | 6.00 | 8 | 0.29 | |
| Sepia officinalis hierredda | 4.64 | 34 | 0.22 | |
| C E P H A L O P O D A | 3.60 | 824 | 0.17 | |
| Miracorvina angolensis | 3.44 | 16 | 0.17 | |
| Scorpaena stephanica | 2.92 | 34 | 0.14 | |
| Sphyræna guachancho | 2.74 | 34 | 0.13 | |
| Torpedo torpedo | 2.60 | 4 | 0.12 | |
| Torpedo marmorata | 2.60 | 2 | 0.12 | |
| Boops boops | 0.90 | 8 | 0.04 | |
| Total | 2083.90 | | 99.98 | |

PROJECT STATION:3612
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1216 Long E 1332
 start stop duration
 TIME :08:22:02 08:52:11 30 (min) Purpose code: 3
 LOG :7364.32 7365.87 1.54 Area code : 2
 FDEPTH: 76 73 GearCond.code:
 BDEPTH: 76 73 Validity code:
 Towing dir: 40° Wire out: 240 m Speed: 30 kn*10
 Sorted: 127 Kg Total catch: 867.83 CATCH/HOUR: 1735.66

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pomadasy jubelini | 780.26 | 1664 | 44.95 | |
| Brachydeuterus auritus | 182.78 | 1704 | 10.53 | |
| Pomadasy incisus | 180.18 | 1132 | 10.38 | |
| Galeoides decadactylus | 131.04 | 260 | 7.55 | |
| Trichiurus lepturus | 117.00 | 430 | 6.74 | |
| Pagellus bellottii | 102.96 | 754 | 5.93 | 7593 |
| Umbrina canariensis | 26.92 | 182 | 1.55 | 7592 |
| Rhinobatos rhinobatos | 25.80 | 18 | 1.49 | |
| Brotula barbata | 23.00 | 66 | 1.33 | |
| Raja miraletus | 22.32 | 38 | 1.29 | |
| Citharus linguatula | 21.72 | 404 | 1.25 | |
| Miracorvina angolensis | 18.98 | 52 | 1.09 | |
| Trigla lyra | 16.50 | 144 | 0.95 | |
| Cynoponticus ferox | 15.04 | 2 | 0.87 | |
| G A S T R O P O D S | 11.96 | 14 | 0.69 | |
| Pseudotolithus senegalensis | 10.78 | 14 | 0.62 | |
| Torpedo torpedo | 9.44 | 26 | 0.54 | |
| Dentex macrocephthalmus | 5.08 | 26 | 0.29 | |
| Dentex angolensis | 3.90 | 66 | 0.22 | |
| Chelidonichthys capensis | 3.64 | 26 | 0.21 | |
| Sepia orbignyana | 3.50 | 52 | 0.20 | |
| Boops boops | 3.38 | 26 | 0.19 | |
| Dentex barnardi | 2.98 | 52 | 0.17 | |
| Pterothrissus belloci | 2.98 | 40 | 0.17 | |
| Sepia officinalis hierredda | 2.86 | 26 | 0.16 | |
| Selene dorsalis | 2.72 | 14 | 0.16 | |
| Scorpaena stephanica | 2.60 | 26 | 0.15 | |
| Zeus faber | 2.34 | 14 | 0.13 | |
| Pistularia petimba | 1.70 | 14 | 0.10 | |
| Torpedo marmorata | 1.30 | 6 | 0.07 | |
| Total | 1735.66 | | 99.97 | |

PROJECT STATION:3613
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1216 Long E 1327
 start stop duration
 TIME :10:01:25 10:22:18 21 (min) Purpose code: 3
 LOG :7373.43 7374.44 1.00 Area code : 2
 FDEPTH: 99 98 GearCond.code: 9
 BDEPTH: 99 98 Validity code:
 Towing dir: 10° Wire out: 300 m Speed: 30 kn*10
 Sorted: 101 Kg Total catch: 101.26 CATCH/HOUR: 289.31

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagellus bellottii | 71.89 | 380 | 24.85 | 7594 |
| Umbrina canariensis | 71.77 | 229 | 24.81 | |
| Dentex barnardi | 52.23 | 223 | 18.05 | 7597 |
| Dentex macrocephthalmus | 27.03 | 154 | 9.34 | 7596 |
| Dentex angolensis | 23.09 | 163 | 7.98 | 7595 |
| Raja miraletus | 7.20 | 9 | 2.49 | |
| Trichiurus lepturus | 6.91 | 14 | 2.39 | |
| Chelidonichthys capensis | 5.29 | 46 | 1.83 | |
| Sepiella ornata | 4.26 | 3 | 1.47 | |
| Chaetodon hoefleri | 4.20 | 26 | 1.45 | |
| Branchiostegus semifasciatus | 3.94 | 3 | 1.36 | |
| Brotula barbata | 3.43 | 3 | 1.19 | |
| Zeus faber | 3.17 | 11 | 1.16 | |
| Lagocephalus laevigatus | 2.14 | 6 | 0.74 | |
| Pontinus sp. | 0.60 | 3 | 0.21 | |
| Octopus vulgaris | 0.57 | 3 | 0.20 | |
| Citharus linguatula | 0.43 | 9 | 0.15 | |
| Sepia orbignyana | 0.40 | 14 | 0.14 | |
| Torpedo torpedo | 0.20 | 3 | 0.07 | |
| G A S T R O P O D S | 0.14 | 14 | 0.05 | |
| Alloteuthis africana | 0.14 | 9 | 0.05 | |
| Illex coindetii | 0.09 | 11 | 0.03 | |
| Total | 289.32 | | 100.01 | |

PROJECT STATION:3614
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1215 Long E 1325
 start stop duration
 TIME :11:17:25 11:20:35 3 (min) Purpose code: 3
 LOG :7378.69 7378.77 0.09 Area code : 2
 FDEPTH: 108 109 GearCond.code: 9
 BDEPTH: 108 109 Validity code: 4
 Towing dir: 20° Wire out: 300 m Speed: 30 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------|------------|---------|-------------|------|
| | weight | numbers | | |
| Total | | | | |

PROJECT STATION:3615
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1215 Long E 1325
 start stop duration
 TIME :11:48:40 12:18:40 30 (min) Purpose code: 3
 LOG :7380.98 7382.59 1.60 Area code : 2
 FDEPTH: 108 109 GearCond.code:
 BDEPTH: 108 109 Validity code:
 Towing dir: 25° Wire out: 275 m Speed: 30 kn*10
 Sorted: 108 Kg Total catch: 108.42 CATCH/HOUR: 216.84

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Umbrina canariensis | 162.44 | 570 | 74.91 | |
| Dentex macrocephthalmus | 13.76 | 84 | 6.35 | 7598 |
| Dentex barnardi | 8.72 | 26 | 4.02 | 7600 |
| Dentex angolensis | 7.12 | 34 | 3.28 | 7599 |
| Sparus pagrus africanus * | 6.12 | 2 | 2.82 | |
| Raja straeleni | 5.12 | 2 | 2.36 | |
| Erythrocles monodi | 4.32 | 6 | 1.99 | |
| Zeus faber | 3.14 | 10 | 1.45 | |
| Chelidonichthys capensis | 2.12 | 18 | 0.98 | |
| Pagellus bellottii | 1.36 | 8 | 0.63 | |
| Boops boops | 1.14 | 16 | 0.53 | |
| Brotula barbata | 0.62 | 2 | 0.29 | |
| Anthias anthias | 0.60 | 8 | 0.28 | |
| Illex coindetii | 0.26 | 10 | 0.12 | |
| Total | 216.84 | | 100.01 | |

PROJECT STATION:3616
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1202 Long E 1339
 start stop duration
 TIME :14:26:27 14:56:09 30 (min) Purpose code: 3
 LOG :7400.56 7402.22 1.66 Area code : 2
 FDEPTH: 57 58 GearCond.code:
 BDEPTH: 57 58 Validity code:
 Towing dir: 15° Wire out: 200 m Speed: 32 kn*10
 Sorted: 171 Kg Total catch: 790.69 CATCH/HOUR: 1581.38

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pomadasy incisus | 385.44 | 3268 | 24.37 | |
| Pagellus bellottii | 322.50 | 2322 | 20.39 | 7603 |
| Trachurus trecae | 180.08 | 3112 | 11.39 | 7601 |
| Brachydeuterus auritus | 145.84 | 3740 | 9.22 | |
| Lithognathus mormyrus | 122.20 | 584 | 7.73 | |
| Serranus accraensis | 111.80 | 16 | 7.07 | |
| Sarda sarda | 72.58 | 662 | 4.59 | |
| Galeoides decadactylus | 34.30 | 172 | 2.17 | |
| Boops boops | 33.88 | 334 | 2.14 | |
| Selene dorsalis | 28.46 | 446 | 1.80 | |
| Raja miraletus | 26.04 | 50 | 1.65 | |
| Dentex barnardi | 20.12 | 282 | 1.27 | 7602 |
| Pseudupeneus prayensis | 14.70 | 128 | 0.93 | |
| Atractoscion aeguidens | 12.90 | 34 | 0.82 | |
| Trichiurus lepturus | 9.96 | 136 | 0.63 | |
| Pomadasy jubelini | 8.84 | 24 | 0.56 | |
| Sphyræna gusanchcho | 7.48 | 60 | 0.47 | |
| Citharus linguatula | 7.22 | 162 | 0.46 | |
| Alloteuthis africana | 6.18 | 1684 | 0.39 | |
| Bombrops heterurus | 5.32 | 94 | 0.34 | |
| Zeus faber | 4.54 | 16 | 0.29 | |
| Lagocephalus laevigatus | 4.38 | 8 | 0.28 | |
| Brotula barbata | 3.18 | 24 | 0.20 | |
| Sardinella maderensis | 3.08 | 34 | 0.19 | |
| Sepiella ornata | 2.58 | 8 | 0.16 | |
| Torpedo nobiliana | 2.40 | 8 | 0.15 | |
| Umbrina canariensis | 2.32 | 16 | 0.15 | |
| Chloroscombrus chrysurus | 1.62 | 8 | 0.10 | |
| Torpedo torpedo | 0.86 | 16 | 0.05 | |
| Stromateus fiatola | 0.50 | 8 | 0.03 | |
| Ilisha africana | 0.08 | 8 | 0.01 | |
| Total | 1581.38 | | 100.00 | |

PROJECT STATION:3617
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1200 Long E 1337
 start stop duration
 TIME :15:41:19 16:11:18 30 (min) Purpose code: 3
 LOG :7405.61 7407.15 1.51 Area code : 2
 FDEPTH: 72 71 GearCond.code:
 BDEPTH: 72 71 Validity code:
 Towing dir: 190° Wire out: 210 m Speed: 30 kn*10
 Sorted: 99 Kg Total catch: 99.57 CATCH/HOUR: 199.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 41.24 | 692 | 20.71 | 7604 |
| Pseudupeneus prayensis | 40.36 | 462 | 20.27 | |
| Pagellus bellottii | 26.84 | 292 | 13.48 | 7605 |
| Raja miraletus | 22.00 | 34 | 11.05 | |
| Dentex barnardi | 21.36 | 140 | 10.73 | 7605 |
| C E P H A L O P O D A | 8.52 | 3156 | 4.28 | |
| Pomadasy incisus | 7.88 | 62 | 3.96 | |
| Boops boops | 6.82 | 70 | 3.42 | |
| Citharus linguatula | 4.82 | 168 | 2.42 | |
| Brachydeuterus auritus | 3.30 | 24 | 1.66 | |
| Trichiurus lepturus | 2.80 | 6 | 1.41 | |
| Torpedo torpedo | 1.64 | 4 | 0.82 | |
| Zeus faber | 1.52 | 6 | 0.76 | |
| Uraspis secunda | 1.46 | 2 | 0.73 | |
| Bombrops heterurus | 1.18 | 18 | 0.59 | |
| Uranoscopus albesca | 1.16 | 4 | 0.58 | |
| Chaetodon hoefleri | 1.14 | 8 | 0.57 | |
| Sepia orbignyana | 1.00 | 10 | 0.50 | |
| Sardinella aurita | 0.98 | 8 | 0.49 | |
| Lagocephalus laevigatus | 0.85 | 2 | 0.43 | |
| Trigla lyra | 0.78 | 14 | 0.39 | |
| Pistularia petimba | 0.56 | 4 | 0.28 | |
| Plectorhynchus mediterraneus | 0.54 | 2 | 0.27 | |
| Serranus accraensis | 0.38 | 6 | 0.19 | |
| Total | 199.14 | | 99.99 | |

PROJECT STATION:3618
 DATE: 2/ 4/05 GEAR TYPE: BT No.16 POSITION:Lat S 1159 Long E 1333
 start stop duration
 TIME :17:09:07 17:23:07 14 (min) Purpose code: 3
 LOG :7412.79 7413.51 0.71 Area code : 2
 FDEPTH: 99 98 GearCond.code:
 BDEPTH: 99 98 Validity code: 1
 Towing dir: 15° Wire out: 300 m Speed: 30 kn*10
 Sorted: 142 Kg Total catch: 142.35 CATCH/HOUR: 610.07

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Umbrina canariensis | 266.49 | 737 | 43.68 | 7609 |
| Pagellus bellottii | 139.71 | 591 | 22.90 | 7607 |
| Dentex barnardi | 69.00 | 223 | 11.31 | 7610 |
| Raja miraletus | 53.31 | 81 | 8.74 | |
| Dentex angolensis | 18.13 | 73 | 2.97 | 7608 |
| Trigla lyra | 10.24 | 81 | 1.68 | |
| Zeus faber | 7.16 | 21 | 1.17 | |
| Gephyroberyx darwini | 6.86 | 4 | 1.12 | |
| Boops boops | 5.70 | 64 | 0.93 | |
| Brotula barbata | 5.61 | 9 | 0.92 | |
| Parapristipoma humile | 5.57 | 9 | 0.91 | |
| Sphoeroides pachgaster | 5.06 | 9 | 0.83 | |
| Dentex macrocephthalmus | 4.46 | 30 | 0.73 | |
| Scorpaena stephanica | 4.46 | 17 | 0.73 | |
| Chaetodon hoefleri | 2.74 | 17 | 0.45 | |
| Citharus linguatula | 2.19 | 47 | 0.36 | |
| Sepia orbignyana | 1.71 | 17 | 0.28 | |
| G A S T R O P O D S | 1.16 | 167 | 0.19 | |
| PANDALIDAE | 0.51 | 107 | 0.08 | |
| Total | 610.07 | | 99.98 | |

PROJECT STATION:3619
 DATE: 2/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1158 Long E 1330
 start stop duration
 TIME :19:27:27 19:57:02 30 (min) Purpose code: 3
 LOG :7421.38 7422.83 1.44 Area code : 2
 FDEPTH: 261 261 GearCond.code:
 BDEPTH: 261 261 Validity code:
 Towing dir: 150 Wire out: 750 m Speed: 30 kn*10
 Sorted: 128 Kg Total catch: 1822.67 CATCH/HOUR: 3645.34

PROJECT STATION:3622
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1156 Long E 1320
 start stop duration
 TIME :02:00:44 02:30:35 30 (min) Purpose code: 3
 LOG :7444.41 7445.96 1.56 Area code : 2
 FDEPTH: 658 652 GearCond.code:
 BDEPTH: 658 652 Validity code:
 Towing dir: 350 Wire out:1650 m Speed: 30 kn*10
 Sorted: 21 Kg Total catch: 100.32 CATCH/HOUR: 200.64

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex macropthalmus | 2582.38 | 11000 | 70.84 | 7611 |
| Chlorophthalmus atlanticus | 813.96 | 23084 | 22.33 | |
| Synagrops microlepis | 117.14 | 5158 | 3.21 | |
| Merluccius pollii | 81.22 | 1168 | 2.23 | 7612 |
| Nezumia sp. | 12.54 | 770 | 0.34 | |
| Todarodes angolensis | 11.12 | 86 | 0.31 | |
| Scorpaena normani | 9.04 | 342 | 0.25 | |
| Parapenaeus longirostris, fem. | 5.98 | 940 | 0.16 | 7613 |
| Eumunida squamifera * | 3.14 | 284 | 0.09 | |
| Trichiurus lepturus | 2.56 | 58 | 0.07 | |
| Peristedion cataphractum | 2.28 | 370 | 0.06 | |
| Coelorinchus coelorrhinc. pollii | 1.98 | 142 | 0.05 | |
| Parapenaeus longirostris, male | 1.72 | 542 | 0.05 | 7614 |
| Malacocephalus occidentalis | 0.28 | 28 | 0.01 | |
| Total | 3645.34 | | 100.00 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus cadonati | 81.92 | 2808 | 40.83 | |
| Yarella blackfordi * | 27.52 | 792 | 13.72 | |
| Nematocarcinus africanus | 23.44 | 6768 | 11.68 | |
| Merluccius pollii | 14.44 | 24 | 7.20 | 7621 |
| Triplophos hemingi | 13.76 | 1632 | 6.86 | |
| Geryon maritae | 9.28 | 36 | 4.63 | |
| Coelorinchus sp. | 6.56 | 272 | 3.27 | |
| Aristeus varidens, female | 6.24 | 352 | 3.11 | 7623 |
| L O B S T E R S | 4.48 | 576 | 2.23 | |
| Lamprogrammus exutus | 2.32 | 8 | 1.16 | |
| Melanostomias sp. | 2.24 | 48 | 1.12 | |
| Aristeus varidens, male | 1.20 | 176 | 0.60 | 7622 |
| Nezumia aequalis | 1.12 | 72 | 0.56 | |
| Etmopterus pusillus | 1.00 | 10 | 0.50 | |
| Conger conger | 0.96 | 32 | 0.48 | |
| Etmopterus pollii | 0.80 | 4 | 0.40 | |
| MYCTOPHIDAE | 0.64 | 544 | 0.32 | |
| Scymnodon obscurus | 0.60 | 2 | 0.30 | |
| Lophiodes kempi | 0.56 | 2 | 0.28 | |
| Trichiurus lepturus | 0.48 | 24 | 0.24 | |
| Selachophidium guentheri | 0.32 | 48 | 0.16 | |
| Ariomma bondi | 0.24 | 8 | 0.12 | |
| Etmopterus spinax | 0.20 | 12 | 0.10 | |
| Dibranchius atlanticus | 0.16 | 24 | 0.08 | |
| Xenodermichthys copei | 0.16 | 8 | 0.08 | |
| Total | 200.64 | | 100.03 | |

PROJECT STATION:3620
 DATE: 2/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1157 Long E 1323
 start stop duration
 TIME :21:35:15 22:05:20 30 (min) Purpose code: 3
 LOG :7431.34 7432.85 1.50 Area code : 2
 FDEPTH: 470 475 GearCond.code:
 BDEPTH: 470 475 Validity code:
 Towing dir: 346 Wire out:1300 m Speed: 30 kn*10
 Sorted: 24 Kg Total catch: 137.56 CATCH/HOUR: 275.12

PROJECT STATION:3623
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1144 Long E 1318
 start stop duration
 TIME :04:50:52 05:20:31 30 (min) Purpose code: 3
 LOG :7457.03 7458.51 1.47 Area code : 2
 FDEPTH: 682 683 GearCond.code:
 BDEPTH: 682 683 Validity code:
 Towing dir: 355 Wire out:1600 m Speed: 30 kn*10
 Sorted: 53 Kg Total catch: 118.68 CATCH/HOUR: 237.36

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 150.00 | 47020 | 54.52 | |
| Yarella blackfordi * | 37.50 | 1200 | 13.63 | |
| Aristeus varidens, female | 19.60 | 1100 | 7.12 | 7617 |
| Merluccius pollii | 14.96 | 24 | 5.44 | 7615 |
| Centrophorus granulosus | 8.68 | 2 | 3.15 | |
| Hoplostethus cadonati | 5.50 | 3270 | 2.00 | |
| Laemonema laureysi | 4.80 | 410 | 1.74 | |
| Melanostomias sp. | 4.50 | 110 | 1.64 | |
| Aristeus varidens, male | 4.10 | 620 | 1.49 | 7616 |
| Chlorophthalmus atlanticus | 3.40 | 110 | 1.24 | |
| Scymnodon obscurus | 3.20 | 20 | 1.16 | |
| Etmopterus pollii | 2.72 | 72 | 0.99 | |
| Triplophos hemingi | 2.50 | 410 | 0.91 | |
| Halosaurus ovenii | 2.20 | 100 | 0.80 | |
| Loligo vulgaris | 2.10 | 10 | 0.76 | |
| Coelorinchus coelorrhincus | 1.80 | 50 | 0.58 | |
| L O B S T E R S | 1.30 | 150 | 0.47 | |
| Solenocera africana | 1.00 | 510 | 0.36 | |
| Bathynectes piperitus | 0.90 | 60 | 0.33 | |
| Xenodermichthys copei | 0.90 | 190 | 0.33 | |
| MYCTOPHIDAE | 0.90 | 1220 | 0.33 | |
| Geryon maritae | 0.76 | 2 | 0.28 | |
| Chlorophthalmus punctatus | 0.60 | 120 | 0.22 | |
| Coelorinchus sp. | 0.60 | 100 | 0.22 | |
| Conger conger | 0.40 | 50 | 0.15 | |
| Galeus pollii | 0.20 | 6 | 0.07 | |
| Etmopterus pusillus | 0.20 | 10 | 0.07 | |
| Total | 275.12 | | 100.00 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Yarella blackfordi * | 69.12 | 2248 | 29.12 | |
| Hoplostethus cadonati | 24.40 | 808 | 10.28 | |
| Lamprogrammus exutus | 21.24 | 100 | 8.95 | |
| Chauliodus sloani | 16.04 | 376 | 6.76 | |
| Aristeus varidens, female | 15.16 | 792 | 6.39 | 7628 |
| Triplophos hemingi | 11.20 | 1144 | 4.72 | |
| Coelorinchus coelorrhinc. pollii | 10.64 | 404 | 4.48 | |
| Merluccius pollii | 9.90 | 16 | 4.17 | |
| TRICHIURIDAE | 9.28 | 288 | 3.91 | |
| Nematocarcinus africanus | 8.56 | 4636 | 3.61 | |
| Gadella imberbis | 5.68 | 292 | 2.39 | |
| Starostomias sp. | 4.96 | 624 | 2.09 | |
| Chaceon maritae, male | 4.20 | 12 | 1.77 | |
| Etmopterus pollii | 3.60 | 60 | 1.52 | |
| Bathyroconger vicinus | 3.36 | 72 | 1.42 | |
| Lophiodes kempi | 3.16 | 4 | 1.33 | |
| Chaceon maritae, female | 2.88 | 14 | 1.21 | |
| Scymnodon obscurus | 2.16 | 12 | 0.91 | |
| Aristeus varidens, male | 1.48 | 168 | 0.62 | 7627 |
| Solenocera africana | 1.12 | 440 | 0.47 | |
| MYCTOPHIDAE | 1.00 | 900 | 0.42 | |
| Glyphus marsupialis | 0.88 | 76 | 0.37 | |
| Chlorophthalmus atlanticus | 0.88 | 20 | 0.37 | |
| Bathyrja smithii | 0.84 | 4 | 0.35 | |
| Trachipterus trachipterus | 0.84 | 4 | 0.35 | |
| Xenodermichthys copei | 0.84 | 104 | 0.35 | |
| Halosaurus ovenii | 0.76 | 12 | 0.32 | |
| Todaropsis sp. | 0.64 | 4 | 0.27 | |
| Malacocephalus occidentalis | 0.56 | 8 | 0.24 | |
| Neobythites sp. | 0.44 | 92 | 0.19 | |
| ALEPOCEPHALUS ROSFRATUS | 0.44 | 20 | 0.19 | |
| Unidentified fish | 0.24 | 4 | 0.10 | |
| Leptocephalus | 0.20 | 20 | 0.08 | |
| Cryptosaras couesii | 0.20 | 16 | 0.08 | |
| Unidentified fish | 0.16 | 44 | 0.07 | |
| Etmopterus spinax | 0.14 | 2 | 0.06 | |
| Caristius groenlandicus | 0.08 | 4 | 0.03 | |
| Synagrops microlepis | 0.04 | 12 | 0.02 | |
| Dibranchius atlanticus | 0.04 | 8 | 0.02 | |
| Total | 237.36 | | 100.00 | |

PROJECT STATION:3621
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1156 Long E 1322
 start stop duration
 TIME :23:55:17 00:25:00 30 (min) Purpose code: 3
 LOG :7438.58 7440.11 1.52 Area code : 2
 FDEPTH: 576 574 GearCond.code:
 BDEPTH: 576 574 Validity code:
 Towing dir: 170 Wire out:1500 m Speed: 30 kn*10
 Sorted: 33 Kg Total catch: 248.28 CATCH/HOUR: 496.56

PROJECT STATION:3624
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1145 Long E 1321
 start stop duration
 TIME :07:22:42 07:26:12 4 (min) Purpose code: 3
 LOG :7468.44 7468.62 0.17 Area code : 2
 FDEPTH: 355 354 GearCond.code: 9
 BDEPTH: 355 354 Validity code: 9
 Towing dir: 350 Wire out:1000 m Speed: 30 kn*10
 Sorted: 23 Kg Total catch: 31.60 CATCH/HOUR: 474.00

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus cadonati | 141.40 | 4536 | 28.48 | |
| Yarella blackfordi * | 137.20 | 4396 | 27.63 | |
| Lamprogrammus exutus | 70.56 | 406 | 14.21 | |
| Nematocarcinus africanus | 34.16 | 13230 | 6.88 | |
| Geryon maritae | 23.62 | 84 | 4.74 | |
| Merluccius pollii | 19.12 | 30 | 3.85 | 7620 |
| Coelorinchus sp. | 10.36 | 336 | 2.09 | |
| Melanostomias sp. | 9.52 | 196 | 1.92 | |
| Chlorophthalmus atlanticus | 8.68 | 224 | 1.75 | |
| Aristeus varidens, female | 8.12 | 476 | 1.64 | 7619 |
| Triplophos hemingi | 7.70 | 896 | 1.55 | |
| Conger conger | 5.32 | 210 | 1.07 | |
| Trichiurus lepturus | 3.92 | 140 | 0.79 | |
| Gadella imberbis | 3.08 | 196 | 0.62 | |
| L O B S T E R S | 2.80 | 406 | 0.56 | |
| Talismania longifilis | 2.52 | 266 | 0.51 | |
| Scymnodon obscurus | 1.90 | 10 | 0.38 | |
| Etmopterus pollii | 1.52 | 28 | 0.31 | |
| Xenodermichthys copei | 1.40 | 210 | 0.28 | |
| Halosaurus ovenii | 1.40 | 56 | 0.28 | |
| Aristeus varidens, male | 0.70 | 182 | 0.14 | 7618 |
| Ariomma bondi | 0.42 | 14 | 0.08 | |
| Bathynectes piperitus | 0.42 | 42 | 0.08 | |
| Selachophidium guentheri | 0.28 | 126 | 0.06 | |
| Galeus pollii | 0.20 | 2 | 0.04 | |
| Etmopterus spinax | 0.20 | 4 | 0.04 | |
| MYCTOPHIDAE | 0.14 | 392 | 0.03 | |
| Total | 496.56 | | 100.01 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Centrophorus granulosus | 105.00 | 30 | 22.15 | |
| Nematocarcinus africanus | 78.90 | 38910 | 16.65 | |
| Merluccius pollii | 50.40 | 270 | 10.63 | |
| Gadella sp. | 42.90 | 435 | 9.05 | |
| Etmopterus pollii | 31.80 | 675 | 6.71 | |
| MYXINIDAE | 31.05 | | 6.55 | |
| Malacocephalus occidentalis | 24.30 | | 5.13 | |
| Exhipolysmata hastatoides | 17.40 | 14940 | 3.67 | |
| Lophiodes kempi | 17.10 | 105 | 3.61 | |
| MYCTOPHIDAE | 14.10 | 13110 | 2.97 | |
| Chauliodus sloani | 10.50 | 360 | 2.22 | |
| Chaceon maritae, female | 8.25 | 30 | 1.74 | |
| Bathyrja smithii | 8.10 | 30 | 1.71 | |
| Bathyroconger vicinus | 8.10 | 30 | 1.71 | |
| Bathynectes piperitus | 6.45 | 180 | 1.36 | |
| Shrimps, small, non comm. | 5.10 | 3810 | 1.08 | |
| Epigonus telescopus | 3.60 | 30 | 0.76 | |
| Etmopterus spinax | 3.30 | 60 | 0.70 | |
| Coelorinchus coelorrhinc. pollii | 2.70 | 120 | 0.57 | |
| Lophius sp. | 1.95 | 75 | 0.41 | |
| Aristeus varidens | 1.80 | 240 | 0.38 | |
| Solenocera africana | 0.60 | 60 | 0.13 | |
| Parapenaeus longirostris | 0.60 | 30 | 0.13 | |
| Total | 474.00 | | 100.02 | |

PROJECT STATION:3625
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1145
 start stop duration Long E 1323
 TIME :08:15:00 08:44:51 30 (min) Purpose code: 3
 LOG :7472.10 7473.55 1.45 Area code : 2
 FDEPTH: 348 349 GearCond.code:
 BDEPTH: 348 349 Validity code:
 Towing dir: 350e Wire out: 970 m Speed: 30 kn*10
 Sorted: 23 Kg Total catch: 102.07 CATCH/HOUR: 204.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Malaccocephalus laevis | 78.10 | 5808 | 38.26 | |
| Gadella sp. | 21.12 | 242 | 10.35 | |
| Trichurus lepturus | 18.24 | 18 | 8.94 | |
| Lophius sp. | 11.88 | 22 | 5.82 | |
| Synagrops microlepis | 9.02 | 880 | 4.42 | |
| Parapenaeus longirostris, fem. | 8.58 | 1188 | 4.20 | 7630 |
| Merluccius pollii | 8.56 | 44 | 4.19 | 7633 |
| MYCTOPHIDAE | 6.16 | 2838 | 3.02 | |
| Chaunax sp. | 5.72 | 132 | 2.80 | |
| Illex coindetii | 5.06 | 22 | 2.48 | |
| Etmopterus pollii | 4.42 | 198 | 2.17 | |
| Benthodesmus tenuis | 3.96 | 198 | 1.94 | |
| PALAEMONIDAE | 3.96 | 1760 | 1.94 | |
| Aristeus varidens, female | 3.08 | 198 | 1.51 | 7632 |
| Zenopsis conchifer | 3.08 | 22 | 1.51 | |
| Aristeus varidens, male | 2.64 | 374 | 1.29 | 7631 |
| Nezumia sp. | 2.20 | 22 | 1.08 | |
| Chlorophthalmus atlanticus | 2.20 | 22 | 1.08 | |
| Caelorinchus caelorrhinc. pollii | 1.98 | 66 | 0.97 | |
| Solenocera africana | 1.10 | 132 | 0.54 | |
| Callinectes sp. | 1.10 | 22 | 0.54 | |
| Stomatias boa boa | 1.10 | 44 | 0.54 | |
| Conger conger | 0.66 | 22 | 0.32 | |
| Parapenaeus longirostris, male | 0.22 | 44 | 0.11 | 7629 |
| Total | 204.14 | | 100.02 | |

PROJECT STATION:3628
 DATE: 3/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1147
 start stop duration Long E 1341
 TIME :13:34:45 14:05:05 30 (min) Purpose code: 3
 LOG :7499.16 7500.76 1.59 Area code : 2
 FDEPTH: 64 63 GearCond.code:
 BDEPTH: 64 63 Validity code:
 Towing dir: 185e Wire out: 200 m Speed: 31 kn*10
 Sorted: 86 Kg Total catch: 360.27 CATCH/HOUR: 720.54

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 238.46 | 3072 | 33.09 | |
| Trachurus trecae | 171.86 | 2770 | 23.85 | 7641 |
| Trichurus lepturus | 59.16 | 2934 | 8.21 | |
| Pagellus bellottii | 51.98 | 358 | 7.21 | 7640 |
| Umbrina canariensis | 33.36 | 304 | 4.63 | |
| Lithognathus mormyrus | 32.94 | 74 | 4.57 | |
| Citharus linguatula | 25.86 | 884 | 3.59 | |
| Boops boops | 21.44 | 212 | 2.98 | |
| Raja miraletus | 17.72 | 46 | 2.46 | |
| Selene dorsalis | 11.32 | 120 | 1.57 | |
| Pomadasy jubelini | 8.74 | 10 | 1.21 | |
| Stromateus fiatola | 8.46 | 10 | 1.17 | |
| Pomadasy incisus | 7.92 | 46 | 1.10 | |
| Allotautis africana | 6.90 | 1298 | 0.96 | |
| Dentex canariensis | 6.44 | 102 | 0.89 | |
| Sepia officinalis hierredda | 5.88 | 56 | 0.82 | |
| Sardinella aurita | 5.52 | 56 | 0.77 | |
| Chelidonichthys capensis | 2.48 | 18 | 0.34 | |
| Pseudupeneus prayensis | 1.56 | 36 | 0.22 | |
| Torpedo torpedo | 1.52 | 2 | 0.21 | |
| Pontinus accraensis | 0.74 | 10 | 0.10 | |
| Parapenaeus longirostris | 0.18 | 46 | 0.02 | |
| Saurida brasiliensis | 0.08 | 18 | 0.01 | |
| Total | 720.54 | | 99.98 | |

PROJECT STATION:3626
 DATE: 3/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1145
 start stop duration Long E 1329
 TIME :10:08:30 10:38:32 30 (min) Purpose code: 3
 LOG :7481.10 7482.64 1.53 Area code : 2
 FDEPTH: 160 160 GearCond.code:
 BDEPTH: 160 160 Validity code:
 Towing dir: 150e Wire out: 450 m Speed: 30 kn*10
 Sorted: 120 Kg Total catch: 1424.30 CATCH/HOUR: 2848.60

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 2389.48 | 325294 | 83.88 | |
| Trichurus lepturus | 142.76 | 1946 | 5.01 | 1 |
| Pterothrissus belloci | 123.00 | 738 | 4.32 | |
| Dentex macrophthalmus | 64.96 | 234 | 2.28 | 7637 |
| Brotula barbata | 30.60 | 34 | 1.07 | |
| Dentex angolensis | 27.30 | 76 | 0.96 | 7634 |
| Illex coindetii | 19.68 | 820 | 0.69 | |
| Citharus linguatula | 13.12 | 492 | 0.46 | |
| Zeus faber | 6.92 | 26 | 0.24 | |
| Squilla sp. | 5.74 | 82 | 0.20 | |
| Peristedion cataphractum | 5.74 | 164 | 0.20 | |
| Parapenaeus longirostris, fem. | 4.10 | 738 | 0.14 | 7635 |
| Scorpaena normani | 3.22 | 14 | 0.11 | |
| Zenopsis conchifer | 3.14 | 16 | 0.11 | |
| Raja straeleni | 1.94 | 4 | 0.07 | |
| Parapenaeus longirostris, male | 1.64 | 328 | 0.06 | 7636 |
| Scyllorhinus canaliculatus | 1.40 | 4 | 0.05 | |
| Sepia officinalis hierredda | 1.30 | 10 | 0.05 | |
| Chelidonichthys capensis | 1.24 | 10 | 0.04 | |
| Torpedo torpedo | 0.84 | 2 | 0.03 | |
| Bembrops heterurus | 0.48 | 4 | 0.02 | |
| Total | 2848.60 | | 99.99 | |

PROJECT STATION:3629
 DATE: 3/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1149
 start stop duration Long E 1345
 TIME :15:00:13 15:30:05 30 (min) Purpose code: 3
 LOG :7505.85 7507.49 1.62 Area code : 2
 FDEPTH: 29 28 GearCond.code:
 BDEPTH: 29 28 Validity code:
 Towing dir: ø Wire out: 120 m Speed: 32 kn*10
 Sorted: 111 Kg Total catch: 417.71 CATCH/HOUR: 835.42

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pomadasy incisus | 222.74 | 2496 | 26.66 | |
| Brachydeuterus auritus | 166.20 | 18276 | 19.89 | |
| Trachurus trecae | 128.10 | 1410 | 15.33 | 7642 |
| Lithognathus mormyrus | 103.80 | 734 | 12.42 | |
| Pseudupeneus prayensis | 51.06 | 720 | 6.11 | |
| Pseudotolithus typus | 42.66 | 66 | 5.11 | |
| Galeodes decadactylus | 28.34 | 344 | 3.39 | |
| Trichurus lepturus | 24.66 | 186 | 2.95 | |
| Pagellus bellottii | 9.82 | 82 | 1.18 | |
| Sepia officinalis hierredda | 9.00 | 14 | 1.08 | |
| Ilisha africana | 7.34 | 74 | 0.88 | |
| Raja miraletus | 5.76 | 14 | 0.69 | |
| Sphyræna sphyraena | 5.62 | 66 | 0.67 | |
| Chloroconbrus chrysurus | 4.64 | 44 | 0.56 | |
| Lagocephalus laevigatus | 4.12 | 30 | 0.49 | |
| Pentheroscion mbizi | 3.52 | 44 | 0.42 | |
| Aluterus scriptus | 3.14 | 22 | 0.38 | |
| Selene dorsalis | 3.14 | 112 | 0.38 | |
| Sardinella aurita | 3.06 | 36 | 0.37 | |
| Sepia orbignyana | 2.24 | 14 | 0.27 | |
| Umbrina canariensis | 2.24 | 22 | 0.27 | |
| Pomadasy jubelini | 2.16 | 6 | 0.26 | |
| Dentex canariensis | 0.96 | 14 | 0.11 | |
| Citharus linguatula | 0.74 | 30 | 0.09 | |
| Torpedo torpedo | 0.36 | 14 | 0.04 | |
| Total | 835.42 | | 100.00 | |

PROJECT STATION:3627
 DATE: 3/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1147
 start stop duration Long E 1333
 TIME :11:44:16 12:14:25 30 (min) Purpose code: 3
 LOG :7488.03 7489.62 1.57 Area code : 2
 FDEPTH: 111 110 GearCond.code:
 BDEPTH: 111 110 Validity code:
 Towing dir: 345e Wire out: 280 m Speed: 30 kn*10
 Sorted: 56 Kg Total catch: 56.15 CATCH/HOUR: 112.30

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichurus lepturus | 37.72 | 70 | 33.59 | |
| Dentex macrophthalmus | 17.04 | 114 | 15.17 | 7639 |
| Zeus faber | 8.00 | 28 | 7.12 | |
| Sepia officinalis hierredda | 7.92 | 6 | 7.05 | |
| Dentex angolensis | 6.76 | 48 | 6.02 | 7638 |
| Rhinobatos albomaculatus | 6.72 | 2 | 5.98 | |
| Chelidonichthys capensis | 4.72 | 46 | 4.20 | |
| Citharus linguatula | 4.58 | 100 | 4.08 | |
| Dentex barnardi | 3.36 | 10 | 2.99 | |
| Raja miraletus | 2.82 | 4 | 2.51 | |
| Sphyræna sphyraena | 2.56 | 8 | 2.28 | |
| C A S T R O P O D S | 2.22 | 370 | 1.98 | |
| Brotula barbata | 1.92 | 4 | 1.71 | |
| Pagellus bellottii | 1.60 | 12 | 1.42 | |
| Lagocephalus laevigatus | 1.12 | 2 | 1.00 | |
| Sepia orbignyana | 0.86 | 6 | 0.77 | |
| Illex coindetii | 0.68 | 4 | 0.61 | |
| Loligo vulgaris | 0.60 | 8 | 0.53 | |
| Octopus vulgaris | 0.42 | 2 | 0.37 | |
| Saurida brasiliensis | 0.28 | 116 | 0.25 | |
| Chelidonichthys lucerna | 0.22 | 2 | 0.20 | |
| Pontinus accraensis | 0.18 | 2 | 0.16 | |
| Total | 112.30 | | 99.99 | |

PROJECT STATION:3630
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1132
 start stop duration Long E 1321
 TIME :18:52:59 19:24:25 31 (min) Purpose code: 3
 LOG :7536.87 7538.46 1.58 Area code : 2
 FDEPTH: 361 364 GearCond.code:
 BDEPTH: 361 364 Validity code:
 Towing dir: 25e Wire out: 270 m Speed: 30 kn*10
 Sorted: 74 Kg Total catch: 296.60 CATCH/HOUR: 574.06

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius pollii | 178.53 | 602 | 31.10 | 7645 |
| Nematocarcinus africanus | 156.85 | 51236 | 27.32 | |
| Laemonema laureysi | 71.54 | 1123 | 12.46 | |
| Parapenaeus longirostris, male | 51.48 | 2346 | 8.97 | 7644 |
| Chlorophthalmus atlanticus | 33.75 | 790 | 5.88 | |
| Gobiidae | 26.71 | 5280 | 4.65 | |
| Parapenaeus longirostris, fem. | 11.69 | 2787 | 2.04 | 7643 |
| Hymenoccephalus italicus | 9.29 | 1006 | 1.62 | |
| Pterothrissus belloci | 7.28 | 39 | 1.27 | |
| Hellcolenus dactylopterus | 4.80 | 366 | 0.84 | |
| Etmopterus pollii | 3.10 | 255 | 0.54 | |
| Bathymectes piperitus | 2.01 | 39 | 0.35 | |
| Todaropsis eblanae | 1.78 | 8 | 0.31 | |
| Lophiodes kempii | 1.70 | 8 | 0.30 | |
| Chaunax sp. | 1.70 | 77 | 0.30 | |
| Caelorinchus sp. | 1.47 | 62 | 0.26 | |
| Malaccocephalus occidentalis | 1.47 | 23 | 0.26 | |
| Aristeus varidens, male | 1.39 | 108 | 0.24 | 7647 |
| Peristedion cataphractum | 1.39 | 263 | 0.24 | |
| Epigonus sp. | 1.24 | 8 | 0.22 | |
| Solenocera africana | 1.16 | 255 | 0.20 | |
| Eumunida squamifera * | 1.16 | 449 | 0.20 | |
| CCNCRIDAE | 0.85 | 8 | 0.15 | |
| Aristeus varidens, female | 0.85 | 62 | 0.15 | 7646 |
| Synagrops microlepis | 0.70 | 23 | 0.12 | |
| Nemichthys scolopaceus | 0.15 | 8 | 0.03 | |
| Total | 574.04 | | 100.02 | |

PROJECT STATION:3631
 DATE: 3/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1128 Long E 1322
 start stop duration
 TIME :21:03:18 21:34:18 31 (min) Purpose code: 3
 LOG :7546.32 7547.85 1.52 Area code : 2
 FDEPTH: 444 444 GearCond.code: 2
 BDEPTH: 444 444 Validity code: 1
 Towing dir: 213ø Wire out:1300 m Speed: 30 kn*10
 Sorted: 40 Kg Total catch: 301.43 CATCH/HOUR: 583.41

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 391.74 | 112754 | 67.15 | |
| Yarella blackfordi * | 49.61 | 1512 | 8.50 | |
| Laemonema sp. | 38.11 | 3492 | 6.53 | |
| Hoplostethus cadenati | 24.91 | 1001 | 4.27 | |
| Merluccius polli | 13.35 | 27 | 2.29 | 7648 |
| Malacocephalus occidentalis | 12.14 | 149 | 2.08 | |
| Aristeus varidens, female | 9.37 | 490 | 1.61 | 7652 |
| Chaceon maritae, female | 6.79 | 29 | 1.16 | 7650 |
| Chlorophthalmus atlanticus | 5.75 | 149 | 0.99 | |
| Illex coindetii | 5.54 | 21 | 0.95 | |
| Etmopterus polli | 3.87 | 116 | 0.66 | |
| Chaceon maritae, male | 3.48 | 6 | 0.60 | 7649 |
| Aristeus varidens, male | 3.41 | 447 | 0.58 | 7651 |
| Halosaurus sp. | 3.41 | 341 | 0.58 | |
| Stomias boa boa | 2.55 | 85 | 0.44 | |
| Chauliognathus | 2.13 | 21 | 0.37 | |
| Solenocera africana | 1.92 | 192 | 0.33 | |
| Gadella maraldi | 1.92 | 85 | 0.33 | |
| Nezumia milleri | 1.70 | 85 | 0.29 | |
| Coelorrinchus sp. | 1.49 | | 0.26 | |
| Small shrimps | 0.23 | | 0.04 | |
| Total | 583.42 | | 100.01 | |

PROJECT STATION:3634
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1133 Long E 1330
 start stop duration
 TIME :07:41:09 08:00:37 19 (min) Purpose code: 3
 LOG :7596.58 7597.60 1.01 Area code : 2
 FDEPTH: 103 102 GearCond.code: 9
 BDEPTH: 103 102 Validity code: 1
 Towing dir: 350ø Wire out: 310 m Speed: 30 kn*10
 Sorted: 998 Kg Total catch: 998.03 CATCH/HOUR: 3151.67

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichiurus lepturus | 2970.95 | 5072 | 94.27 | |
| Brotula barbata | 41.68 | 63 | 1.32 | |
| Trigla sp. | 26.08 | 196 | 0.83 | |
| Torpedo torpedo | 18.65 | 35 | 0.59 | |
| Citharus linguatula | 18.41 | 224 | 0.58 | |
| Zeus faber | 15.98 | 79 | 0.51 | |
| Sepia officinalis hierredda | 13.14 | 9 | 0.42 | |
| Raja miraletus | 10.23 | 16 | 0.32 | |
| Dentex angolensis | 6.73 | 35 | 0.21 | 7661 |
| Brachydeuterus auritus | 5.46 | 32 | 0.17 | |
| Octopus vulgaris | 5.37 | 9 | 0.17 | |
| Fistularia petimba | 4.86 | 9 | 0.15 | |
| Scorpaena normani | 4.33 | 25 | 0.14 | |
| Trachurus trecae | 3.85 | 51 | 0.12 | 7662 |
| Selene dorsalis | 2.18 | 6 | 0.07 | |
| Pterothrissus belloci | 2.05 | 13 | 0.07 | |
| Sphyræna guanchancho | 1.01 | 3 | 0.03 | |
| Sepia orbignyana | 0.69 | 6 | 0.02 | |
| Total | 3151.66 | | 99.99 | |

PROJECT STATION:3632
 DATE: 4/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1128 Long E 1319
 start stop duration
 TIME :23:44:06 00:14:06 30 (min) Purpose code: 3
 LOG :7558.36 7559.87 1.50 Area code : 2
 FDEPTH: 733 735 GearCond.code: 2
 BDEPTH: 733 735 Validity code: 1
 Towing dir: 205ø Wire out:1800 m Speed: 30 kn*10
 Sorted: 22 Kg Total catch: 119.57 CATCH/HOUR: 239.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus cadenati | 89.80 | 1860 | 37.55 | |
| Yarella blackfordi * | 68.00 | 2030 | 28.44 | |
| Nezumia sp. | 10.20 | 250 | 4.27 | |
| Lamprogrammus exotus | 8.10 | 20 | 3.39 | |
| Triplicphos nemingi | 7.40 | 970 | 3.09 | |
| Talismania sp. | 7.00 | 250 | 2.93 | |
| Nezumia micronychodon | 5.60 | 210 | 2.34 | |
| Nematocarcinus africanus | 5.30 | 1010 | 2.22 | |
| Aristeus varidens, female | 4.90 | 250 | 2.05 | 7653 |
| Merluccius polli | 4.54 | 6 | 1.90 | |
| Neobythites sp. | 3.90 | 180 | 1.63 | |
| Chaceon maritae, male | 3.90 | 18 | 1.63 | 7655 |
| Lophius sp. | 3.30 | 10 | 1.38 | |
| L O B S T E R S | 3.10 | 320 | 1.30 | |
| Loligo vulgaris | 2.70 | 10 | 1.13 | |
| Aristeus varidens, male | 2.00 | 270 | 0.84 | 7654 |
| Glyptus marsupialis | 1.80 | 170 | 0.75 | |
| Stomias boa boa | 1.60 | 80 | 0.67 | |
| Halosaurus sp. | 1.20 | 100 | 0.50 | |
| Chaceon maritae, female | 1.20 | 4 | 0.50 | 7656 |
| Conger conger | 1.10 | 30 | 0.46 | |
| Etmopterus pusillus | 0.80 | 8 | 0.33 | |
| Gadella imberbis | 0.50 | 10 | 0.21 | |
| Plesionanema edwardsianus | 0.30 | 20 | 0.13 | |
| Nemichthys scolopaceus | 0.30 | 10 | 0.13 | |
| Etmopterus polli | 0.20 | 30 | 0.08 | |
| SERGESTIDAE | 0.10 | 10 | 0.04 | |
| MYCTOPHIDAE | 0.10 | 20 | 0.04 | |
| Melanonus zugmayeri | 0.10 | 10 | 0.04 | |
| Synaphobranchus kaupii | 0.10 | 10 | 0.04 | |
| Total | 239.14 | | 100.01 | |

PROJECT STATION:3635
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1132 Long E 1335
 start stop duration
 TIME :09:08:56 09:37:34 29 (min) Purpose code: 3
 LOG :7604.41 7605.88 1.47 Area code : 2
 FDEPTH: 62 61 GearCond.code: 2
 BDEPTH: 62 61 Validity code: 1
 Towing dir: 350ø Wire out: 180 m Speed: 30 kn*10
 Sorted: 67 Kg Total catch: 282.37 CATCH/HOUR: 584.21

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Sardinella aurita | 279.39 | 3079 | 47.82 | 7666 |
| Pseudupeneus prayensis | 111.23 | 2623 | 19.04 | |
| Trachurus trecae | 110.73 | 2566 | 18.95 | 7665 |
| Pagellus bellottii | 27.72 | 1399 | 4.74 | 7663 |
| Sepia officinalis hierredda | 13.74 | 12 | 2.35 | |
| Sphyræna guanchancho | 11.95 | 91 | 2.01 | |
| Raja miraletus | 10.49 | 17 | 1.80 | |
| Zeus faber | 5.54 | 17 | 0.95 | |
| Brachydeuterus auritus | 3.97 | 41 | 0.68 | |
| Dentex barnardi | 2.32 | 66 | 0.40 | |
| Bembrops heterurus | 2.07 | 41 | 0.35 | |
| Selene dorsalis | 1.57 | 17 | 0.27 | |
| Citharus linguatula | 1.49 | 91 | 0.26 | |
| Dentex angolensis | 1.41 | 132 | 0.24 | 7664 |
| Octopus vulgaris | 0.43 | 4 | 0.07 | |
| Sepia orbignyana | 0.35 | 2 | 0.06 | |
| Total | 584.20 | | 99.99 | |

PROJECT STATION:3633
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1131 Long E 1323
 start stop duration
 TIME :05:39:56 06:09:31 30 (min) Purpose code: 3
 LOG :7585.89 7587.36 1.46 Area code : 2
 FDEPTH: 269 273 GearCond.code: 2
 BDEPTH: 269 273 Validity code: 1
 Towing dir: 27ø Wire out: 750 m Speed: 30 kn*10
 Sorted: 130 Kg Total catch: 1168.07 CATCH/HOUR: 2336.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 1192.80 | 66466 | 51.06 | |
| Trichiurus lepturus | 807.44 | 11130 | 34.56 | |
| Merluccius polli | 148.74 | 1620 | 6.37 | 7658 |
| Chlorophthalmus atlanticus | 69.12 | 2766 | 2.96 | |
| Dentex macrocephalus | 40.76 | 140 | 1.74 | 7657 |
| Parapenaeus longirostris, male | 22.74 | 6196 | 0.97 | 7659 |
| Parapenaeus longirostris, fem. | 18.02 | 4866 | 0.77 | 7660 |
| Zenopsis conchifer | 12.16 | 28 | 0.52 | |
| Pterothrissus belloci | 8.92 | 52 | 0.38 | |
| Coelorrinchus sp. | 3.84 | 140 | 0.16 | |
| Todaropsis eblanae | 3.66 | 36 | 0.16 | |
| Bathylagrus vicinus | 2.80 | 88 | 0.12 | |
| Laemonema laureysi | 1.40 | 52 | 0.06 | |
| Lophicodes kempii | 1.22 | 18 | 0.05 | |
| Malacocephalus occidentalis | 1.22 | 36 | 0.05 | |
| Citharus linguatula | 1.22 | 88 | 0.05 | |
| Total | 2336.06 | | 99.98 | |

PROJECT STATION:3636
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1132 Long E 1339
 start stop duration
 TIME :10:41:06 11:11:19 30 (min) Purpose code: 3
 LOG :7612.05 7613.59 1.53 Area code : 2
 FDEPTH: 42 42 GearCond.code: 2
 BDEPTH: 42 42 Validity code: 1
 Towing dir: 350ø Wire out: 150 m Speed: 30 kn*10
 Sorted: 99 Kg Total catch: 99.05 CATCH/HOUR: 198.10

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pseudupeneus prayensis | 78.92 | 1148 | 39.84 | |
| Epinephelus aeneus | 17.56 | 6 | 8.86 | |
| Dentex barnardi | 16.86 | 90 | 8.51 | |
| Trichiurus lepturus | 12.92 | 18 | 6.52 | |
| Pomadourus incisus | 9.38 | 40 | 4.73 | |
| Sepia officinalis hierredda | 9.32 | 22 | 4.70 | |
| Raja miraletus | 8.80 | 22 | 4.44 | |
| Epinephelus goreensis | 6.24 | 2 | 3.15 | |
| Pagellus bellottii | 5.76 | 34 | 2.91 | 7667 |
| Citharus linguatula | 4.60 | 110 | 2.32 | |
| Sepia orbignyana | 4.36 | 10 | 2.20 | |
| Acanthurus monroviae | 3.66 | 4 | 1.85 | |
| Bembrops heterurus | 3.20 | 62 | 1.62 | |
| Sardinella aurita | 3.14 | 38 | 1.59 | |
| Plectrohinchus mediterraneus | 2.02 | 2 | 1.02 | |
| Lithomathus momyrus | 1.62 | 4 | 0.82 | |
| Cynoglossus senegalensis | 1.46 | 6 | 0.74 | |
| Pagrus caeruleostictus | 1.42 | 4 | 0.72 | |
| Diplodus cervinus cervinus | 1.32 | 2 | 0.67 | |
| Loligo vulgaris | 0.88 | 262 | 0.44 | |
| Chaetodon hoeferi | 0.80 | 6 | 0.40 | |
| Fistularia petimba | 0.64 | 12 | 0.32 | |
| Chelidonichthys capensis | 0.56 | 4 | 0.28 | |
| Chilomycterus spinosus mauret. | 0.52 | 2 | 0.26 | |
| Lagocephalus laevigatus | 0.44 | 2 | 0.22 | |
| Chloroscobrus chrysurus | 0.38 | 2 | 0.19 | |
| Chatrabus melanurus | 0.34 | 6 | 0.17 | |
| Arnoglossus imperialis | 0.28 | 26 | 0.14 | |
| Selene dorsalis | 0.28 | 2 | 0.14 | |
| Boops boops | 0.24 | 26 | 0.12 | |
| Chaetodon robustus | 0.10 | 2 | 0.05 | |
| Chaetodon macollae | 0.08 | 2 | 0.04 | |
| Spiceroides pachgaster | 0.06 | 2 | 0.03 | |
| Total | 198.16 | | 100.01 | |

PROJECT STATION:3637
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1132 Long E 1343
 start stop duration Purpose code: 3
 TIME :13:13:07 13:43:05 30 (min)
 LOG :7622.77 7624.46 1.69 Area code : 2
 FDEPTH: 29 27 GearCond.code:
 BDEPTH: 29 27 Validity code:
 Towing dir: ø Wire out: 120 m Speed: 31 kn*10
 Sorted: 11 Kg Total catch: 11.05 CATCH/HOUR: 22.10

| SPECIES | CATCH/HOUR weight | % OF TOT. C numbers | SAMP |
|-----------------------------|-------------------|---------------------|-------|
| Raja miraletus | 6.68 | 12 | 30.23 |
| Acanthurus monroviae | 2.04 | 2 | 9.23 |
| Pistularia peltata | 1.94 | 16 | 8.78 |
| Sepia officinalis hierredda | 1.76 | 6 | 7.96 |
| Pomadasy incisus | 1.74 | 8 | 7.87 |
| Pseudupeneus prayensis | 1.50 | 10 | 6.79 |
| Epinephelus aeneus | 1.46 | 6 | 6.61 |
| Lagocephalus laevigatus | 1.28 | 10 | 5.79 |
| Grammolites gruvelli | 0.52 | 10 | 2.35 |
| Dicologlossa cuneata | 0.46 | 6 | 2.08 |
| Chloroscobrus chrysurus | 0.44 | 2 | 1.99 |
| Alloteuthis africana | 0.44 | 106 | 1.99 |
| Sardinella aurita | 0.42 | 6 | 1.90 |
| Citharus linguatula | 0.34 | 8 | 1.54 |
| Cynoglossus canariensis | 0.30 | 2 | 1.36 |
| Pagellus bellottii | 0.26 | 2 | 1.18 |
| LOLIGINIDAE | 0.20 | 190 | 0.90 |
| Dentex barnardi | 0.14 | 2 | 0.63 |
| Brachydeuterus auritus | 0.06 | 40 | 0.27 |
| Trachurus trecae | 0.04 | 6 | 0.18 |
| Arnoglossus imperialis | 0.04 | 2 | 0.18 |
| Calappa sp. | 0.02 | 2 | 0.09 |
| COBIIDAE | 0.02 | 4 | 0.09 |
| Total | 22.10 | | 99.99 |

PROJECT STATION:3638
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1117 Long E 1345
 start stop duration Purpose code: 3
 TIME :15:24:59 15:53:05 28 (min)
 LOG :7638.19 7639.70 1.51 Area code : 2
 FDEPTH: 22 25 GearCond.code:
 BDEPTH: 22 25 Validity code:
 Towing dir: 10ø Wire out: 120 m Speed: 31 kn*10
 Sorted: 107 Kg Total catch: 107.86 CATCH/HOUR: 231.13

| SPECIES | CATCH/HOUR weight | % OF TOT. C numbers | SAMP |
|----------------------------|-------------------|---------------------|--------|
| Cephalopholis sp. | 39.43 | 9 | 17.06 |
| Lagocephalus laevigatus | 37.71 | 54 | 16.32 |
| Gymnura altavela | 37.54 | 6 | 16.24 |
| Pomadasy jubelinii | 16.39 | 36 | 7.09 |
| Epinephelus guaza ? | 12.64 | 2 | 5.47 |
| Sphyraena sphyraena | 8.68 | 45 | 3.76 |
| SPARIDAE | 8.10 | 17 | 3.50 |
| Pseudoclitius senegalensis | 7.46 | 9 | 3.23 |
| Epinephelus aeneus | 7.33 | 4 | 3.17 |
| Raja miraletus | 6.90 | 13 | 2.99 |
| Calceoides decadactylus | 6.84 | 9 | 2.96 |
| Ballistes sp. | 5.70 | 26 | 2.47 |
| Panulirus regius | 5.36 | 11 | 2.32 |
| Pistularia peltata | 4.67 | 47 | 2.02 |
| Ephippion guttifer | 4.63 | 2 | 2.00 |
| Sepia orbignyana | 4.54 | 11 | 1.96 |
| Syacium micrurus | 3.32 | 69 | 1.44 |
| Brachydeuterus auritus | 2.70 | 1086 | 1.17 |
| Fistularia tabacaria | 2.66 | 2 | 1.15 |
| Trachinotus goreensis | 1.52 | 4 | 0.66 |
| Scomber japonicus | 1.11 | 2 | 0.48 |
| Citharus linguatula | 1.09 | 13 | 0.47 |
| Chaelodon hoesleri | 0.94 | 11 | 0.41 |
| Pseudupeneus prayensis | 0.90 | 17 | 0.39 |
| Lethrinus atlanticus | 0.86 | 2 | 0.37 |
| Pomadasy incisus | 0.51 | 2 | 0.22 |
| Alectis alexandrinus | 0.36 | 2 | 0.16 |
| Cynoglossus canariensis | 0.32 | 2 | 0.14 |
| Trichiurus lepturus | 0.26 | 4 | 0.11 |
| Eucinostomus melanopterus | 0.24 | 2 | 0.10 |
| Bembrops heterurus | 0.19 | 2 | 0.08 |
| Sphyraena sphyraena | 0.17 | 4 | 0.07 |
| Sardinella maderensis | 0.04 | 13 | 0.02 |
| Total | 231.11 | | 100.00 |

PROJECT STATION:3639
 DATE: 4/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1115 Long E 1342
 start stop duration Purpose code: 3
 TIME :16:17:25 17:07:14 30 (min)
 LOG :7643.06 7644.62 1.56 Area code : 2
 FDEPTH: 20 21 GearCond.code:
 BDEPTH: 20 21 Validity code:
 Towing dir: 190ø Wire out: 120 m Speed: 30 kn*10
 Sorted: Kg Total catch: 11.57 CATCH/HOUR: 23.14

| SPECIES | CATCH/HOUR weight | % OF TOT. C numbers | SAMP |
|---------------------------------|-------------------|---------------------|--------|
| Raja miraletus | 4.58 | 8 | 19.79 |
| Sepia officinalis hierredda | 4.08 | 6 | 17.63 |
| Ballistes sp. | 2.94 | 10 | 12.71 |
| Pistularia peltata | 2.82 | 30 | 12.19 |
| Ballistes capricus | 2.42 | 4 | 10.46 |
| Lagocephalus laevigatus | 1.50 | 4 | 6.48 |
| Brachydeuterus auritus | 1.18 | 8 | 5.10 |
| Syacium micrurus | 0.92 | 4 | 3.98 |
| Scorpaena "africana" | 0.82 | 8 | 3.54 |
| Uranoscopus sp. | 0.76 | 2 | 3.28 |
| Chilomycterus spinescus nauret. | 0.62 | 4 | 2.68 |
| Rypticus saponaceus | 0.26 | 4 | 1.12 |
| Bothus podas africanus | 0.24 | 6 | 1.04 |
| Total | 23.14 | | 100.00 |

PROJECT STATION:3640
 DATE: 4/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1114 Long E 1328
 start stop duration Purpose code: 3
 TIME :19:25:39 19:55:17 30 (min)
 LOG :7661.51 7662.97 1.45 Area code : 2
 FDEPTH: 521 524 GearCond.code:
 BDEPTH: 521 524 Validity code:
 Towing dir: 5ø Wire out:1500 m Speed: 30 kn*10
 Sorted: 47 Kg Total catch: 126.43 CATCH/HOUR: 252.86

| SPECIES | CATCH/HOUR weight | % OF TOT. C numbers | SAMP |
|-----------------------------|-------------------|---------------------|--------|
| Nematocarcinus africanus | 130.10 | 48266 | 51.45 |
| Yarella blackfordi * | 42.40 | 1550 | 16.77 |
| Hoplostethus cadenati | 15.76 | 740 | 6.23 |
| Aristeus varidens, female | 13.80 | 836 | 5.46 |
| Merluccius polli | 13.60 | 20 | 5.38 |
| Chauliichthys sp. | 9.46 | 1226 | 3.74 |
| Aristeus varidens, male | 5.94 | 666 | 2.35 |
| Gadella imberbis | 4.06 | 156 | 1.61 |
| Melanostomias sp. | 1.90 | 46 | 0.75 |
| Laemonema laureysi | 1.86 | 80 | 0.74 |
| Malacocephalus occidentalis | 1.74 | 16 | 0.69 |
| Chaceon maritae, female | 1.60 | 6 | 0.63 |
| Stereocastis sp. | 1.50 | 206 | 0.59 |
| Lophodes kempi | 1.34 | 6 | 0.53 |
| Etmopterus polli | 1.06 | 26 | 0.42 |
| Nezumia micromyctodon | 1.00 | 80 | 0.40 |
| Lamprogrammus exotus | 1.00 | 60 | 0.40 |
| Benthodesmus sp. | 0.70 | 30 | 0.28 |
| Epigonus sp. | 0.50 | 6 | 0.20 |
| Small shrimps | 0.46 | 216 | 0.18 |
| Stomias boa boa | 0.46 | 90 | 0.18 |
| Xenodermichthys copei | 0.40 | 66 | 0.16 |
| Halosaurus oventis | 0.34 | 26 | 0.13 |
| Nezumia milleri | 0.30 | 20 | 0.12 |
| Bathyrcongus vicinus | 0.30 | 26 | 0.12 |
| Gnathophausia zoea | 0.26 | 6 | 0.10 |
| Etmopterus spinax | 0.20 | 4 | 0.08 |
| Chlorophthalmus atlanticus | 0.20 | 10 | 0.08 |
| Cryptosaras coeuii | 0.14 | 6 | 0.06 |
| Exhipolisata hastatoides | 0.10 | 10 | 0.04 |
| Unidentified fish | 0.10 | 6 | 0.04 |
| Nemichthys scolopaceus | 0.10 | 10 | 0.04 |
| Dibranchius sp. | 0.06 | 6 | 0.02 |
| Glypto marsupialis | 0.06 | 20 | 0.02 |
| Catactyx laticeps | 0.06 | 46 | 0.02 |
| Total | 252.86 | | 100.01 |

PROJECT STATION:3641
 DATE: 4/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1111 Long E 1324
 start stop duration Purpose code: 3
 TIME :22:40:05 23:10:07 30 (min)
 LOG :7669.46 7670.96 1.50 Area code : 2
 FDEPTH: 806 809 GearCond.code:
 BDEPTH: 806 809 Validity code:
 Towing dir: 355ø Wire out:1850 m Speed: 30 kn*10
 Sorted: 37 Kg Total catch: 150.40 CATCH/HOUR: 300.80

| SPECIES | CATCH/HOUR weight | % OF TOT. C numbers | SAMP |
|----------------------------|-------------------|---------------------|--------|
| Nematocarcinus africanus | 43.04 | 10944 | 14.31 |
| Chaceon maritae, male | 34.16 | 96 | 11.36 |
| Yarella blackfordi * | 33.60 | 456 | 11.17 |
| Merluccius polli | 31.52 | 40 | 10.48 |
| Hoplostethus cadenati | 25.92 | 216 | 8.62 |
| Nezumia micromyctodon | 21.84 | 448 | 7.26 |
| Melanostomias sp. | 13.52 | 240 | 4.49 |
| L O B S T E R S | 13.28 | 728 | 4.41 |
| Lamprogrammus exotus | 12.88 | 40 | 4.28 |
| Aristeus varidens, female | 11.76 | 608 | 3.91 |
| Talismania longifilis | 9.92 | 136 | 3.30 |
| Gadella imberbis | 9.04 | 272 | 3.01 |
| Synbranchius kaupii | 6.08 | 128 | 2.02 |
| OCTOPUTRIDAE | 5.36 | 40 | 1.78 |
| Triplophos haini | 5.12 | 552 | 1.70 |
| Chaceon maritae, female | 5.04 | 56 | 1.68 |
| Conger conger | 4.96 | 64 | 1.65 |
| Aristeus varidens, male | 3.04 | 384 | 1.01 |
| Melanonus zugmayeri | 2.64 | 48 | 0.88 |
| Benthodesmus tenuis | 2.00 | 16 | 0.66 |
| Nettastoma sp. | 1.92 | 8 | 0.64 |
| Bassanago albescens | 1.44 | 40 | 0.48 |
| Ebinania costaeanarie | 0.64 | 8 | 0.21 |
| Acanthephyra sp. | 0.56 | 352 | 0.19 |
| Dasyatis margarita | 0.40 | 8 | 0.13 |
| Lophius vaillanti | 0.40 | 16 | 0.13 |
| Gadella maraldi | 0.32 | 72 | 0.11 |
| Plesicopaneus edwardsianus | 0.24 | 16 | 0.08 |
| Dibranchius atlanticus | 0.16 | 16 | 0.05 |
| Total | 300.80 | | 100.00 |

PROJECT STATION:3642
 DATE: 5/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1114 Long E 1336
 start stop duration Purpose code: 3
 TIME :05:17:41 06:10:27 33 (min)
 LOG :7688.37 7690.14 1.76 Area code : 2
 FDEPTH: 148 143 GearCond.code:
 BDEPTH: 148 143 Validity code:
 Towing dir: 10ø Wire out: 450 m Speed: 30 kn*10
 Sorted: 239 Kg Total catch: 872.06 CATCH/HOUR: 1585.56

| SPECIES | CATCH/HOUR weight | % OF TOT. C numbers | SAMP |
|--------------------------------|-------------------|---------------------|--------|
| Synagrops microlepis | 1105.09 | 166687 | 69.70 |
| Trichiurus lepturus | 283.20 | 8671 | 17.86 |
| Brotula barbata | 87.60 | 176 | 5.52 |
| Dentex angolensis | 21.49 | 98 | 1.48 |
| Uranoscopus sp. | 12.71 | 55 | 0.80 |
| Merluccius polli | 11.60 | 193 | 0.73 |
| Bembrops heterurus | 11.60 | 69 | 0.73 |
| Illex coindetii | 11.45 | 33 | 0.72 |
| Pterothrissus bellotti | 10.07 | 40 | 0.64 |
| Sepia orbignyana | 7.50 | 27 | 0.48 |
| Todaropsis eblanae | 6.62 | 82 | 0.42 |
| Citharus linguatula | 6.07 | 69 | 0.38 |
| Parapenaeus longirostris, fem. | 4.55 | 995 | 0.29 |
| Dentex macrocephalus | 1.67 | 4 | 0.11 |
| Parapenaeus longirostris, male | 1.38 | 304 | 0.09 |
| Umbrina canariensis | 1.22 | 2 | 0.08 |
| Total | 1585.92 | | 100.03 |

PROJECT STATION:3643
 DATE: 5/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1114
 start stop duration Long E 1338
 TIME :07:35:38 08:05:01 29 (min) Purpose code: 3
 LOG :7696.36 7697.93 1.57 Area code : 2
 FDEPTH: 115 114 GearCond.code:
 BDEPTH: 115 114 Validity code:
 Towing dir: 350ø Wire out: 330 m Speed: 30 kn*10

Sorted: 448 Kg Total catch: 448.70 CATCH/HOUR: 928.35

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|-----------------------------|------------|-------------|-------|
| weight | numbers | | |
| Trichiurus lepturus | 803.36 | 2799 | 86.54 |
| Umbrina canariensis | 53.54 | 132 | 5.77 |
| Brotula barbata | 17.46 | 37 | 1.88 |
| Dentex angolensis | 8.59 | 60 | 0.93 |
| Sepia officinalis hierredda | 8.09 | 23 | 0.87 |
| Octopus vulgaris | 7.84 | 6 | 0.84 |
| Zeus faber | 7.55 | 31 | 0.81 |
| Pterothrissus belloci | 4.32 | 46 | 0.47 |
| Citharus linguatula | 4.26 | 68 | 0.46 |
| Dentex macrophthalmus | 3.87 | 19 | 0.42 |
| Raja miraletus | 3.27 | 4 | 0.35 |
| Scorpaena normani | 1.78 | 25 | 0.19 |
| Uranoscopus sp. | 1.43 | 6 | 0.15 |
| C E P H A L O P O D A | 1.30 | 163 | 0.14 |
| Bachyuroconger vicinus | 0.60 | 2 | 0.06 |
| Trigla lyra | 0.41 | 17 | 0.04 |
| Bembrops heterurus | 0.29 | 8 | 0.03 |
| GOBIIDAE | 0.27 | 35 | 0.03 |
| B I V A L V E S | 0.08 | 4 | 0.01 |
| Saurida brasiliensis | 0.02 | 8 | |
| Total | 928.33 | | 99.99 |

PROJECT STATION:3644
 DATE: 5/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1054
 start stop duration Long E 1347
 TIME :10:24:42 10:54:39 30 (min) Purpose code: 3
 LOG :7718.65 7720.17 1.52 Area code : 2
 FDEPTH: 34 33 GearCond.code:
 BDEPTH: 34 33 Validity code:
 Towing dir: 340ø Wire out: 140 m Speed: 30 kn*10

Sorted: 107 Kg Total catch: 3050.83 CATCH/HOUR: 6101.66

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|-------------------------|------------|-------------|--------|
| weight | numbers | | |
| Brachydeuterus auritus | 4736.88 | 101490 | 77.63 |
| Pteroscion pelli | 289.68 | 8160 | 4.75 |
| Chloroscobrus chrysurus | 202.98 | 2958 | 3.33 |
| Dicologlossa cuneata | 180.54 | 3468 | 2.96 |
| Galeoides decadactylus | 166.26 | 714 | 2.72 |
| Bembrops heterurus | 81.60 | 510 | 1.34 |
| Trichiurus lepturus | 67.32 | 1428 | 1.10 |
| Trachurus trecae | 64.26 | 1122 | 1.05 |
| Conger conger | 63.20 | 28 | 1.04 |
| Pseudolithus typus | 58.02 | 306 | 0.95 |
| Sphyræna guachancho | 43.86 | 102 | 0.72 |
| Ilisa africana | 23.46 | 106 | 0.38 |
| Myliobatis aquila | 18.16 | 2 | 0.30 |
| Dasyatis sp. | 10.88 | 2 | 0.18 |
| Pomadasys incisus | 8.16 | 102 | 0.13 |
| Cynnura altavela | 4.80 | 2 | 0.08 |
| Total | 6101.66 | | 100.00 |

PROJECT STATION:3645
 DATE: 5/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1055
 start stop duration Long E 1344
 TIME :11:55:53 12:25:45 30 (min) Purpose code: 3
 LOG :7725.42 7727.01 1.58 Area code : 2
 FDEPTH: 53 53 GearCond.code:
 BDEPTH: 53 53 Validity code:
 Towing dir: 335ø Wire out: 160 m Speed: 31 kn*10

Sorted: 90 Kg Total catch: 3145.68 CATCH/HOUR: 6291.36

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|--------------------------|------------|-------------|-------|
| weight | numbers | | |
| Brachydeuterus auritus | 4136.08 | 78734 | 68.92 |
| Trachurus trecae | 721.06 | 7404 | 11.46 |
| Pseudolithus typus | 397.20 | 754 | 6.31 |
| Galeoides decadactylus | 292.02 | 968 | 4.64 |
| Pagellus bellottii | 121.10 | 692 | 1.92 |
| Trichiurus lepturus | 83.74 | 3322 | 1.33 |
| Pteroscion pelli | 56.74 | 1108 | 0.90 |
| Umbrina canariensis | 53.28 | 554 | 0.85 |
| Grammopites gruvelli | 47.74 | 830 | 0.76 |
| Sardinella madorensis | 35.98 | 208 | 0.57 |
| Citharus linguatula | 33.90 | 900 | 0.54 |
| Dentex barnardi | 28.38 | 416 | 0.45 |
| Selene dorsalis | 16.60 | 350 | 0.26 |
| Pomadasys incisus | 15.22 | 70 | 0.24 |
| Chloroscobrus chrysurus | 11.08 | 70 | 0.18 |
| Brotula barbata | 11.08 | 70 | 0.18 |
| Pontinus accraensis | 9.58 | 554 | 0.15 |
| Ilisa africana | 5.54 | 70 | 0.09 |
| Dicologlossa cuneata | 4.16 | 70 | 0.07 |
| GOBIIDAE | 2.76 | 416 | 0.04 |
| Antennarius sp. | 2.08 | 70 | 0.03 |
| Serranus accraensis | 1.38 | 70 | 0.02 |
| Parapanaeus longirostris | 1.38 | 484 | 0.02 |
| Raja miraletus | 1.20 | 2 | 0.02 |
| Parcmola cavieri | 0.70 | 208 | 0.01 |
| Squilla mantis | 0.70 | 70 | 0.01 |
| Sphyræna sphyraena | 0.58 | 6 | 0.01 |
| Total | 6291.36 | | 99.98 |

PROJECT STATION:3646
 DATE: 5/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1055
 start stop duration Long E 1335
 TIME :13:49:43 14:21:02 31 (min) Purpose code: 3
 LOG :7736.13 7737.75 1.62 Area code : 2
 FDEPTH: 116 115 GearCond.code:
 BDEPTH: 116 115 Validity code:
 Towing dir: 336ø Wire out: 300 m Speed: 31 kn*10

Sorted: 91 Kg Total catch: 90.89 CATCH/HOUR: 175.92

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|--------------------------------|------------|-------------|-------|
| weight | numbers | | |
| Trichiurus lepturus | 63.10 | 226 | 35.87 |
| Synagrops microlepis | 38.71 | 8961 | 22.00 |
| Brotula barbata | 27.83 | 46 | 15.82 |
| Dentex angolensis | 10.24 | 83 | 5.82 |
| Uranoscopus cadenati | 5.88 | 39 | 3.34 |
| Raja miraletus | 5.86 | 8 | 3.33 |
| Sepia officinalis hierredda | 3.95 | 4 | 2.25 |
| Citharus linguatula | 2.73 | 66 | 1.55 |
| Bembrops heterurus | 2.61 | 54 | 1.48 |
| Scorpaena normani | 2.23 | 21 | 1.27 |
| Zeus faber | 2.17 | 14 | 1.23 |
| Torpedo torpedo | 2.03 | 8 | 1.15 |
| Branchiostegus semifasciatus | 1.45 | 2 | 0.82 |
| Fistularia petimba | 1.24 | 2 | 0.70 |
| Trachurus trecae | 1.18 | 46 | 0.67 |
| Sepia orbignyana | 0.95 | 12 | 0.54 |
| GOBIIDAE | 0.77 | 612 | 0.44 |
| Dicologlossa cuneata | 0.45 | 8 | 0.26 |
| Calappa sp. | 0.43 | 8 | 0.24 |
| Merluccius polli | 0.37 | 15 | 0.21 |
| Parapanaeus longirostris, fem. | 0.35 | 77 | 0.20 |
| Saurida brasiliensis | 0.33 | 33 | 0.19 |
| Chaetodon hoefleri | 0.23 | 2 | 0.13 |
| Gadella sp. | 0.21 | 6 | 0.12 |
| Chelidonichthys capensis | 0.19 | 2 | 0.11 |
| Allotautis africana | 0.17 | 43 | 0.10 |
| Parapanaeus longirostris, male | 0.12 | 33 | 0.07 |
| Toxarespis eblanae | 0.08 | 2 | 0.05 |
| Squilla mantis | 0.06 | 2 | 0.03 |
| Total | 175.92 | | 99.99 |

PROJECT STATION:3647
 DATE: 5/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1055
 start stop duration Long E 1329
 TIME :15:33:53 16:03:45 30 (min) Purpose code: 3
 LOG :7744.97 7746.55 1.56 Area code : 2
 FDEPTH: 220 224 GearCond.code:
 BDEPTH: 220 224 Validity code:
 Towing dir: 220ø Wire out: 550 m Speed: 30 kn*10

Sorted: 119 Kg Total catch: 937.03 CATCH/HOUR: 1874.06

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|--------------------------------|------------|-------------|-------|
| weight | numbers | | |
| Synagrops microlepis | 1290.96 | 180936 | 68.89 |
| Merluccius polli, juveniles | 155.52 | 2646 | 8.30 |
| Illex coindetii | 84.78 | 828 | 4.52 |
| Chlorophthalmus atlanticus | 68.94 | 4842 | 3.68 |
| MYCTOPHIDAE | 65.34 | 31536 | 3.49 |
| Parapanaeus longirostris, fem. | 39.78 | 1080 | 2.12 |
| Zenopsis concinifer | 39.78 | 252 | 2.12 |
| Trichiurus lepturus | 35.48 | 74 | 1.89 |
| Pterothrissus belloci | 26.46 | 252 | 1.41 |
| Parapanaeus longirostris, male | 23.22 | 1026 | 1.24 |
| GADIDAE | 17.70 | 954 | 0.94 |
| C E P H A L O P O D A | 9.72 | 3528 | 0.52 |
| Bembrops heterurus | 4.86 | 126 | 0.26 |
| Nezumia milleri | 4.50 | 252 | 0.24 |
| Dentex macrophthalmus | 3.24 | 36 | 0.17 |
| Squilla mantis | 2.34 | 108 | 0.12 |
| Trichiurus lepturus | 0.90 | 36 | 0.05 |
| BOTHIDAE | 0.36 | 36 | 0.02 |
| Sepia orbignyana | 0.18 | 36 | 0.01 |
| Total | 1874.06 | | 99.99 |

PROJECT STATION:3648
 DATE: 5/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1057
 start stop duration Long E 1327
 TIME :16:58:45 17:28:01 29 (min) Purpose code: 3
 LOG :7751.27 7752.76 1.48 Area code : 2
 FDEPTH: 360 355 GearCond.code:
 BDEPTH: 360 355 Validity code:
 Towing dir: 145ø Wire out: 900 m Speed: 30 kn*10

Sorted: 63 Kg Total catch: 604.43 CATCH/HOUR: 1250.55

| SPECIES | CATCH/HOUR | % OF TOT. C | SAMP |
|--------------------------------|------------|-------------|--------|
| weight | numbers | | |
| Merluccius polli | 601.93 | 6621 | 64.13 |
| Nematocarcinus africanus | 298.76 | 100092 | 23.89 |
| Laemonesa laureysi | 38.90 | 683 | 3.11 |
| Chlorophthalmus atlanticus | 26.48 | 662 | 2.12 |
| Malacocephalus laevis | 14.48 | 4655 | 1.16 |
| MYCTOPHIDAE | 13.66 | 290 | 1.09 |
| Illex coindetii | 12.00 | 103 | 0.96 |
| Malacocephalus occidentalis | 9.52 | 145 | 0.76 |
| MYCTOPHIDAE | 8.69 | 8483 | 0.69 |
| Parapanaeus longirostris, fem. | 8.28 | 1428 | 0.66 |
| Trichiurus lepturus | 5.92 | 6 | 0.47 |
| Chaunax pictus | 2.07 | 145 | 0.17 |
| Peristedion cataphractum | 1.86 | 248 | 0.15 |
| Dibranchius atlanticus | 1.86 | 186 | 0.15 |
| Aristeus varidens, male | 1.45 | 166 | 0.12 |
| Bathynectes piperitus | 1.24 | 21 | 0.10 |
| Aristeus varidens, female | 1.03 | 41 | 0.08 |
| Cephyroberyx darwini | 0.97 | 2 | 0.08 |
| Parapanaeus longirostris, male | 0.82 | 21 | 0.07 |
| Solenocera africana | 0.62 | 62 | 0.05 |
| Total | 1250.55 | | 100.01 |

PROJECT STATION:3649
DATE: 5/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1056
start stop duration Long E 1321
TIME :19:53:42 20:23:16 30 (min) Purpose code: 3
LOG :7767.10 7768.58 1.46 Area code : 2
FDEPTH: 640 647 GearCond.code:
BDEPTH: 640 647 Validity code:
Towing dir: 140e Wire out:1650 m Speed: 30 kn*10

Sorted: 72 Kg Total catch: 212.84 CATCH/HOUR: 425.68

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 127.68 | 31920 | 29.99 | |
| Merluccius polli | 82.60 | 154 | 19.40 | 7692 |
| Hoplostethus cadenati | 79.92 | 2580 | 18.77 | |
| Lamprogrammus sp. | 38.16 | 300 | 8.96 | |
| Yarella blackfordi * | 35.76 | 1044 | 8.40 | |
| Stereomastix sp. | 12.12 | 1188 | 2.85 | |
| Diplophos sp. | 11.16 | 1296 | 2.62 | |
| Nezumia sp. | 9.72 | 360 | 2.28 | |
| Aristeus varidens, female | 6.96 | 264 | 1.64 | 7691 |
| Neobythites sp. | 3.72 | 636 | 0.87 | |
| Aristeus varidens, male | 2.40 | 300 | 0.56 | 7690 |
| Etmopterus polli | 2.38 | 30 | 0.56 | |
| Bathyrcongery vicinus | 2.28 | 96 | 0.54 | |
| Illex coindetii | 1.60 | 8 | 0.38 | |
| Stomias boa boa | 1.56 | 36 | 0.37 | |
| Melanostomias sp. | 1.32 | 24 | 0.31 | |
| Alepocephalus sp. | 1.32 | 144 | 0.31 | |
| Chaceon maritae, female | 1.02 | 6 | 0.24 | |
| Dibranchius sp. | 0.72 | 36 | 0.17 | |
| Phrynichthys wedli | 0.72 | 48 | 0.17 | |
| Lampadena sp. | 0.60 | 12 | 0.14 | |
| Xenodermichthys copei | 0.48 | 84 | 0.11 | |
| Halosaurus cyrenii | 0.48 | 12 | 0.11 | |
| Scymnodon obscurus | 0.40 | 2 | 0.09 | |
| Chaceon maritae, male | 0.34 | 2 | 0.08 | |
| Cataetys laticeps | 0.24 | 48 | 0.06 | |
| Etmopterus spinax | 0.02 | 2 | | |
| Total | 425.68 | | 99.98 | |

PROJECT STATION:3650
DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1039
start stop duration Long E 1341
TIME :05:33:14 06:03:02 30 (min) Purpose code: 3
LOG :7805.60 7807.09 1.49 Area code : 2
FDEPTH: 29 28 GearCond.code:
BDEPTH: 29 28 Validity code:
Towing dir: 330e Wire out: 120 m Speed: 30 kn*10

Sorted: 91 Kg Total catch: 450.29 CATCH/HOUR: 900.58

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 599.20 | 9954 | 66.53 | |
| Pomadasy incisus | 74.20 | 1092 | 8.24 | |
| Trichiurus lepturus | 41.40 | 124 | 4.60 | |
| Trichiurus lepturus | 31.22 | 1750 | 3.47 | |
| Galeoides decadactylus | 23.66 | 252 | 2.63 | |
| Brachydeuterus auritus Juv. | 23.38 | 2954 | 2.60 | |
| Pteroscion peli | 20.30 | 854 | 2.25 | |
| Illisha africana | 14.42 | 238 | 1.60 | |
| Chloroscombrus chrysurus | 14.14 | 182 | 1.57 | |
| Dicologlossa cuneata | 12.18 | 210 | 1.35 | |
| Penaeus notialis | 6.96 | 128 | 0.77 | |
| Pseudopeneus prayonsis | 5.72 | 84 | 0.75 | |
| Stromateus fiatola | 5.00 | 8 | 0.56 | |
| Gymnura micrura | 4.26 | 4 | 0.47 | |
| Pomadasy perotati | 3.78 | 14 | 0.42 | |
| Trachurus trecae | 3.78 | 42 | 0.42 | |
| Squilla mantis | 2.38 | 70 | 0.26 | |
| Pagellus bellottii | 2.38 | 14 | 0.26 | |
| Sepia orbignyana | 1.74 | 6 | 0.19 | |
| Torpedo marmorata | 1.48 | 2 | 0.16 | |
| Epinephelus aeneus | 1.30 | 2 | 0.14 | |
| Cymoglossus canariensis | 1.26 | 14 | 0.14 | |
| Citharus linguatula | 1.12 | 14 | 0.12 | |
| Calappa sp. | 0.98 | 56 | 0.11 | |
| Selene dorsalis, juveniles | 0.98 | 210 | 0.11 | |
| C E P H A L O P O D A | 0.84 | 154 | 0.09 | |
| Octopus vulgaris | 0.82 | 2 | 0.09 | |
| Penaeus kerathurus | 0.70 | 14 | 0.08 | |
| Total | 900.58 | | 99.98 | |

PROJECT STATION:3651
DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1040
start stop duration Long E 1338
TIME :07:08:00 07:38:04 30 (min) Purpose code: 3
LOG :7812.39 7813.98 1.58 Area code : 2
FDEPTH: 46 45 GearCond.code:
BDEPTH: 46 45 Validity code:
Towing dir: 330e Wire out: 150 m Speed: 30 kn*10

Sorted: 80 Kg Total catch: 276.07 CATCH/HOUR: 552.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 148.14 | 1546 | 26.83 | |
| Galeoides decadactylus | 105.00 | 266 | 19.02 | |
| Trichiurus lepturus | 78.74 | 1724 | 14.26 | |
| Pagellus bellottii | 45.06 | 222 | 8.16 | 7695 |
| Pomadasy incisus | 37.80 | 222 | 6.85 | |
| Umbrina canariensis | 15.64 | 148 | 2.87 | 7694 |
| Dasyatis centroura | 12.98 | 2 | 2.35 | |
| Trachurus trecae | 12.72 | 126 | 2.30 | 7693 |
| Brachydeuterus auritus Juv | 11.84 | 2102 | 2.14 | |
| Raja miraletus | 11.10 | 44 | 2.01 | |
| Chloroscombrus chrysurus | 9.70 | 74 | 1.76 | |
| Pseudocottius senegalensis | 7.84 | 22 | 1.42 | |
| Torpedo torpedo | 7.10 | 96 | 1.29 | |
| Dentex barnardi | 6.94 | 82 | 1.26 | 7696 |
| Pomadasy jubelini | 6.74 | 8 | 1.22 | |
| Pteroscion peli | 6.30 | 74 | 1.14 | |
| Trichiurus lepturus | 6.06 | 60 | 1.10 | |
| Citharus linguatula | 5.40 | 112 | 0.98 | |
| Bembrops heterurus | 3.78 | 66 | 0.68 | |
| Brotula barbata | 3.10 | 30 | 0.56 | |
| Sepia officinalis hierredda | 2.96 | 14 | 0.54 | |
| Argyrosomus hololepidotus | 2.28 | 14 | 0.41 | |
| Scomberomorus tritor | 1.84 | 6 | 0.33 | |
| Selene dorsalis | 1.54 | 8 | 0.28 | |
| Dicologlossa cuneata | 0.52 | 8 | 0.09 | |
| CONGR IDAE | 0.44 | 8 | 0.08 | |
| Scorpaena stephanica | 0.38 | 8 | 0.07 | |
| Total | 552.14 | | 100.00 | |

PROJECT STATION:3652
DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1043
start stop duration Long E 1331
TIME :09:10:02 09:40:07 30 (min) Purpose code: 3
LOG :7823.92 7825.47 1.55 Area code : 2
FDEPTH: 90 90 GearCond.code:
BDEPTH: 90 90 Validity code:
Towing dir: 330e Wire out: 270 m Speed: 30 kn*10

Sorted: 85 Kg Total catch: 85.31 CATCH/HOUR: 170.62

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 56.08 | 424 | 32.87 | |
| Raja miraletus | 30.40 | 50 | 17.82 | |
| Zeus faber | 15.04 | 84 | 8.81 | |
| Dentex angolensis | 9.34 | 100 | 5.47 | 7697 |
| Citharus linguatula | 7.26 | 222 | 4.26 | |
| Octopus vulgaris | 6.40 | 12 | 3.75 | |
| Brotula barbata | 5.68 | 10 | 3.33 | |
| Trichiurus lepturus | 5.66 | 24 | 3.32 | |
| Trachurus trecae, juvenile | 5.46 | 240 | 3.20 | 7698 |
| Torpedo torpedo | 4.70 | 16 | 2.75 | |
| Scorpaena stephanica | 4.54 | 58 | 2.66 | |
| Uranoscopus polli | 4.04 | 14 | 2.37 | |
| Umbrina canariensis | 3.02 | 4 | 1.77 | |
| Pterothrissus bellocci | 1.94 | 32 | 1.14 | |
| Pistularia pelimba | 1.84 | 4 | 1.08 | |
| C E P H A L O P O D A | 1.28 | 442 | 0.75 | |
| Sepia orbignyana | 0.98 | 4 | 0.57 | |
| Sepia orbignyana | 0.84 | 8 | 0.49 | |
| Uranoscopus cadenati | 0.82 | 8 | 0.48 | |
| Trigla lyra | 0.72 | 8 | 0.42 | |
| Illex coindetii | 0.72 | 8 | 0.42 | |
| Saurida brasiliensis | 0.68 | 120 | 0.40 | |
| Antennarius sp. | 0.66 | 10 | 0.39 | |
| Peristedion sp. | 0.66 | 10 | 0.39 | |
| Boops boops | 0.60 | 6 | 0.35 | |
| Dentex barnardi | 0.42 | 2 | 0.25 | |
| Torpedo marmorata | 0.40 | 2 | 0.23 | |
| Pagellus bellottii | 0.36 | 2 | 0.21 | |
| Chaetodon hoefleri | 0.22 | 2 | 0.13 | |
| Brachydeuterus auritus Juv. | 0.22 | 24 | 0.13 | |
| Pistularia tabacaria | 0.14 | 2 | 0.08 | |
| Squilla mantis | 0.12 | 2 | 0.07 | |
| Sphaeroides sp. | 0.10 | 2 | 0.06 | |
| Total | 170.62 | | 100.00 | |

PROJECT STATION:3653
DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1047
start stop duration Long E 1324
TIME :11:11:30 11:36:27 25 (min) Purpose code: 3
LOG :7835.30 7836.60 1.30 Area code : 2
FDEPTH: 146 146 GearCond.code: 9
BDEPTH: 146 146 Validity code:
Towing dir: 315e Wire out: 375 m Speed: 30 kn*10

Sorted: 46 Kg Total catch: 45.94 CATCH/HOUR: 110.26

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 21.55 | 101 | 19.54 | 7699 |
| Zenopsis conchifer | 10.56 | 55 | 9.58 | |
| Sepia orbignyana | 10.54 | 91 | 9.56 | |
| Dentex macrophthalmus | 10.44 | 91 | 9.47 | 7700 |
| Squatina oculata | 9.89 | 2 | 8.97 | |
| Raja miraletus | 8.71 | 14 | 7.90 | |
| Brotula barbata | 6.26 | 12 | 5.68 | |
| Zeus faber | 4.49 | 29 | 4.07 | |
| Chelidonichthys capensis | 4.34 | 34 | 3.94 | |
| Uranoscopus albesca | 4.30 | 26 | 3.90 | |
| Sepia officinalis hierredda | 3.55 | 29 | 3.22 | |
| Pterothrissus bellocci | 3.00 | 29 | 2.72 | |
| Grammolites gruvelli | 2.95 | 139 | 2.68 | |
| Torpedo sp. | 1.87 | 5 | 1.70 | |
| Peristedion cataphractum | 1.73 | 36 | 1.57 | |
| Syacium micrum | 1.63 | 66 | 1.48 | |
| Trichiurus lepturus | 1.33 | 5 | 1.02 | |
| Umbrina canariensis | 0.86 | 5 | 0.78 | |
| Scorpaena normani | 0.55 | 5 | 0.50 | |
| Citharus linguatula | 0.53 | 10 | 0.48 | |
| Todarodes sagittatus | 0.50 | 22 | 0.45 | |
| Scylliorhinus canicula | 0.48 | 5 | 0.44 | |
| Todaropsis eblanae | 0.19 | 5 | 0.17 | |
| Physiculus sp. | 0.17 | 5 | 0.15 | |
| Saurida brasiliensis | 0.02 | 2 | 0.02 | |
| Total | 110.24 | | 99.99 | |

PROJECT STATION:3654
DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1047
start stop duration Long E 1321
TIME :12:36:47 13:06:45 30 (min) Purpose code: 3
LOG :7841.05 7842.62 1.55 Area code : 2
FDEPTH: 221 220 GearCond.code:
BDEPTH: 221 220 Validity code:
Towing dir: 135e Wire out: 550 m Speed: 30 kn*10

Sorted: 167 Kg Total catch: 750.22 CATCH/HOUR: 1500.44

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli, juveniles | 464.60 | 7772 | 30.96 | 7703 |
| Synagrops microlepis | 441.18 | 53200 | 29.40 | |
| Chlorophthalmus atlanticus | 342.38 | 13936 | 22.82 | |
| Todarodes sagittatus | 91.96 | 864 | 4.88 | |
| Zenopsis conchifer | 72.96 | 484 | 4.88 | |
| Torpedo torpedo | 26.32 | 48 | 1.75 | |
| Trichiurus lepturus | 17.88 | 44 | 1.19 | |
| Todaropsis eblanae | 10.64 | 114 | 0.71 | |
| Parapanaeus longirostris, fem. | 8.36 | 1672 | 0.56 | 7701 |
| Pterothrissus bellocci | 8.08 | 58 | 0.54 | |
| Parapanaeus longirostris, male | 5.32 | 1502 | 0.35 | 7702 |
| Squatina oculata | 4.84 | 2 | 0.32 | |
| Carcharias sp. | 2.48 | 76 | 0.17 | |
| Bembrops heterurus | 1.62 | 38 | 0.11 | |
| Syacium micrum | 0.86 | 66 | 0.06 | |
| Dentex macrophthalmus | 0.46 | 4 | 0.03 | |
| Hymenoccephalus italicus | 0.28 | 10 | 0.02 | |
| Trichiurus lepturus | 0.22 | 8 | 0.01 | |
| Total | 1500.44 | | 99.99 | |

PROJECT STATION:3655
 DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1048 Long E 1320
 start stop duration
 TIME :14:09:19 14:39:13 30 (min) Purpose code: 3
 LOG :7846.66 7848.21 1.54 Area code : 2
 FDEPTH: 328 328 GearCond.code:
 BDEPTH: 328 328 Validity code:
 Towing dir: 315ø Wire out: 830 m Speed: 30 kn*10
 Sorted: 261 Kg Total catch: 1687.27 CATCH/HOUR: 3374.54

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 1576.50 | 95934 | 46.72 | |
| Chlorophthalmus atlanticus | 1108.94 | 26478 | 32.86 | |
| Merluccius polli | 482.12 | 3904 | 14.29 | 7704 |
| Laemonema laureysi | 100.08 | 1876 | 2.97 | |
| Pterothrissus belloci | 41.60 | 258 | 1.23 | |
| Trichurus lepturus | 30.46 | 66 | 0.90 | |
| Epigonus telescopus | 11.28 | 558 | 0.33 | |
| Hymenocephalus italicus | 8.84 | 164 | 0.26 | |
| Chlorophthalmus atlanticus | 3.80 | 82 | 0.11 | |
| Lophius vaillanti | 2.44 | 14 | 0.07 | |
| MYCTOPHIDAE | 2.44 | 708 | 0.07 | |
| Todarodes sagittatus | 1.76 | 14 | 0.05 | |
| Parapenaeus longirostris, fem. | 1.22 | 176 | 0.04 | 7706 |
| Gadella imberbis | 1.22 | 28 | 0.04 | |
| Scorpaena stephanica | 1.08 | 14 | 0.03 | |
| Solemaea africana | 0.40 | 108 | 0.01 | |
| Plesionika sp. | 0.12 | 82 | | |
| L O B S T E R S | 0.12 | 28 | | |
| Parapenaeus longirostris, male | 0.12 | 24 | | 7705 |
| Total | 3374.54 | | 99.98 | |

PROJECT STATION:3656
 DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1049 Long E 1316
 start stop duration
 TIME :16:03:02 16:32:56 30 (min) Purpose code: 3
 LOG :7853.90 7855.45 1.53 Area code : 2
 FDEPTH: 504 501 GearCond.code:
 BDEPTH: 504 501 Validity code:
 Towing dir: 315ø Wire out: 1250 m Speed: 30 kn*10
 Sorted: 31 Kg Total catch: 129.78 CATCH/HOUR: 259.56

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 104.60 | 28450 | 40.30 | |
| Aristeus varidens, female | 43.00 | 2290 | 16.57 | 7708 |
| Hoplostethus cadonati | 36.70 | 1520 | 14.14 | |
| Lamprogrammus exutus | 13.70 | 1270 | 5.28 | |
| Yarella blackfordi | 8.60 | 300 | 3.31 | |
| Aristeus varidens, male | 7.60 | 760 | 2.93 | 7707 |
| Merluccius polli | 7.02 | 12 | 2.70 | |
| Laemonema laureysi | 5.80 | 380 | 2.23 | |
| Gadella imberbis | 5.20 | 150 | 2.00 | |
| Lophiodes kempi | 4.30 | 6 | 1.56 | |
| Melanostomias sp. | 3.90 | 80 | 1.50 | |
| Illex coindetii | 3.30 | 18 | 1.27 | |
| Bathyrcongus vicinus | 2.90 | 180 | 1.12 | |
| Chlorophthalmus atlanticus | 2.50 | 70 | 0.96 | |
| Malacocephalus occidentalis | 2.00 | 30 | 0.77 | |
| Stereomastis sp. | 1.40 | 180 | 0.54 | |
| MYCTOPHIDAE | 1.40 | 1290 | 0.54 | |
| Lestidicps sp. | 0.80 | 10 | 0.31 | |
| Trachipterus trachipterus | 0.60 | 10 | 0.23 | |
| Chaceon maritae, female | 0.56 | 4 | 0.22 | |
| Triplophos hemingi | 0.50 | 30 | 0.19 | |
| Benthodesmus sp. | 0.50 | 20 | 0.19 | |
| Stomias boa boa | 0.50 | 20 | 0.19 | |
| Chaceon maritae, male | 0.48 | 2 | 0.18 | |
| Xenodermichthys copei | 0.40 | 50 | 0.15 | |
| C E P H A L O P O D A | 0.40 | 80 | 0.15 | |
| Chaunax pictus | 0.30 | 10 | 0.12 | |
| S H R I M P S | 0.20 | 140 | 0.12 | |
| Cataetyx laticeps | 0.20 | 40 | 0.08 | |
| Leptocephalus | 0.10 | 10 | 0.04 | |
| Total | 259.56 | | 99.99 | |

PROJECT STATION:3667
 DATE: 6/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1040 Long E 1309
 start stop duration
 TIME :18:24:23 18:55:08 31 (min) Purpose code: 3
 LOG :7865.78 7867.37 1.58 Area code : 2
 FDEPTH: 521 518 GearCond.code:
 BDEPTH: 521 518 Validity code:
 Towing dir: 324ø Wire out: 1350 m Speed: 30 kn*10
 Sorted: 44 Kg Total catch: 160.04 CATCH/HOUR: 309.75

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 183.29 | 53913 | 59.17 | |
| Yarella blackfordi | 27.39 | 1094 | 8.84 | |
| Merluccius polli | 26.36 | 45 | 8.51 | 7711 |
| Aristeus varidens, female | 25.55 | 1326 | 8.25 | 7710 |
| Hoplostethus cadonati | 9.48 | 348 | 3.06 | |
| Benthodesmus tenuis | 8.13 | 348 | 2.62 | |
| Stereomastis sp. | 5.03 | 610 | 1.62 | |
| Aristeus varidens, male | 4.16 | 610 | 1.34 | 7709 |
| Triplophos hemingi | 2.71 | 416 | 0.87 | |
| Melanostomias sp. | 2.71 | 77 | 0.87 | |
| Laemonema laureysi | 2.42 | 145 | 0.78 | |
| C E P H A L O P O D A | 1.66 | 12 | 0.54 | |
| Lophiodes kempi | 1.37 | 2 | 0.44 | |
| Gadella imberbis | 1.16 | 39 | 0.37 | |
| Lamprogrammus exutus | 0.97 | 29 | 0.31 | |
| Illex coindetii | 0.77 | 4 | 0.25 | |
| Epigonus telescopus | 0.68 | 10 | 0.22 | |
| Malacocephalus occidentalis | 0.68 | 10 | 0.22 | |
| S H R I M P S | 0.58 | 64 | 0.19 | |
| Plesionaeus edwardsianus | 0.48 | 19 | 0.15 | |
| Cataetyx laticeps | 0.48 | 106 | 0.15 | |
| Bathynectes piperitus | 0.48 | 19 | 0.15 | |
| Xenodermichthys copei | 0.48 | 29 | 0.15 | |
| Stomias boa boa | 0.48 | 19 | 0.15 | |
| Chaceon maritae, male | 0.48 | 2 | 0.15 | |
| Halosaurus oventi | 0.39 | 19 | 0.13 | |
| Bathyrcongus vicinus | 0.39 | 29 | 0.13 | |
| MYCTOPHIDAE | 0.39 | 281 | 0.13 | |
| Avocetina acuticeps | 0.29 | 10 | 0.09 | |
| Chaulichthys sloani | 0.29 | 10 | 0.09 | |
| Total | 309.73 | | 99.94 | |

PROJECT STATION:3658
 DATE: 6/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1036 Long E 1305
 start stop duration
 TIME :21:09:57 21:39:53 30 (min) Purpose code: 3
 LOG :7878.80 7880.32 1.51 Area code : 2
 FDEPTH: 724 727 GearCond.code:
 BDEPTH: 724 727 Validity code:
 Towing dir: 330ø Wire out: 1700 m Speed: 30 kn*10
 Sorted: 44 Kg Total catch: 124.59 CATCH/HOUR: 249.18

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 73.12 | 28336 | 29.34 | |
| Lamprogrammus exutus | 28.16 | 176 | 11.30 | |
| Stereomastis sp. | 24.80 | 1608 | 9.95 | |
| Yarella blackfordi * | 15.60 | 416 | 6.26 | |
| Merluccius polli | 12.68 | 18 | 5.09 | 7712 |
| Chaceon maritae, female | 11.40 | 22 | 4.58 | 7716 |
| Hoplostethus cadonati | 10.08 | 344 | 4.05 | |
| Bathyrcongus vicinus | 9.92 | 144 | 3.98 | |
| OMMASTREPHIDAE | 9.84 | 56 | 3.95 | |
| Chaceon maritae, male | 8.62 | 20 | 3.46 | 7715 |
| Nezumia sp. | 7.76 | 152 | 3.11 | |
| Aristeus varidens, female | 7.36 | 344 | 2.95 | 7714 |
| Dibranchius sp. | 6.40 | 240 | 2.57 | |
| Ebiannia costaeacanarie | 2.96 | 16 | 1.19 | |
| Triplophos hemingi | 2.72 | 312 | 1.09 | |
| Bathyrax sp. | 2.72 | 8 | 1.09 | |
| Synsphyrobranchius kaupii | 2.40 | 88 | 0.96 | |
| Stomias boa boa | 2.16 | 48 | 0.87 | |
| Etmopterus polli | 1.60 | 24 | 0.64 | |
| Melanostomias sp. | 1.52 | 48 | 0.61 | |
| Xenodermichthys copei | 1.20 | 96 | 0.48 | |
| Lophiodes kempi | 1.14 | 2 | 0.46 | |
| Aristeus varidens, male | 1.12 | 144 | 0.45 | 7713 |
| Plesionaeus edwardsianus | 0.80 | 64 | 0.32 | |
| Alepocephalus sp. | 0.64 | 2 | 0.26 | |
| GALATHEIDAE * | 0.56 | 488 | 0.22 | |
| Dicorene intronigra | 0.40 | 328 | 0.16 | |
| Synnodon obscurus | 0.40 | 2 | 0.16 | |
| Chlorophthalmus atlanticus | 0.32 | 8 | 0.13 | |
| Cataetyx laticeps | 0.32 | 56 | 0.13 | |
| Brama brama | 0.22 | 2 | 0.09 | |
| Talismania sp. | 0.16 | 8 | 0.06 | |
| MYCTOPHIDAE | 0.08 | 64 | 0.03 | |
| Total | 249.18 | | 99.99 | |

PROJECT STATION:3659
 DATE: 7/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1036 Long E 1309
 start stop duration
 TIME :00:05:35 00:35:42 30 (min) Purpose code: 3
 LOG :7888.37 7889.92 1.54 Area code : 2
 FDEPTH: 346 351 GearCond.code:
 BDEPTH: 346 351 Validity code:
 Towing dir: 135ø Wire out: 880 m Speed: 30 kn*10
 Sorted: 100 Kg Total catch: 599.84 CATCH/HOUR: 1199.68

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Chlorophthalmus atlanticus | 852.00 | 18156 | 71.02 | |
| Merluccius polli | 233.28 | 2088 | 19.45 | 7717 |
| Small shrimps | 35.16 | 21348 | 2.93 | |
| Laemonema laureysi | 29.40 | 760 | 2.45 | |
| Pterothrissus belloci | 17.16 | 108 | 1.43 | |
| GALATHEIDAE * | 9.36 | 2304 | 0.78 | |
| Lophius sp. | 5.16 | 36 | 0.43 | |
| Scorpaena normani | 4.68 | 108 | 0.39 | |
| Parapenaeus longirostris, fem. | 2.64 | 372 | 0.22 | 7720 |
| MYCTOPHIDAE | 2.52 | 2136 | 0.21 | |
| Nezumia micronychodon | 1.32 | 24 | 0.11 | |
| Aristeus varidens, male | 1.08 | 132 | 0.09 | 7718 |
| Dibranchius sp. | 1.08 | 48 | 0.09 | |
| Epigonus telescopus | 0.96 | 24 | 0.08 | |
| Todarodes sagittatus | 0.96 | 12 | 0.08 | |
| Synagrops microlepis | 0.96 | 48 | 0.08 | |
| Todaropsis eblanae | 0.60 | 12 | 0.05 | |
| L O B S T E R S | 0.48 | 60 | 0.04 | |
| Aristeus varidens, female | 0.48 | 24 | 0.04 | 7719 |
| Scylliorhinus canicula | 0.40 | 2 | 0.03 | |
| Total | 1199.68 | | 100.00 | |

PROJECT STATION:3660
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1035 Long E 1314
 start stop duration
 TIME :05:35:25 06:00:32 25 (min) Purpose code: 3
 LOG :7898.45 7899.75 1.28 Area code : 2
 FDEPTH: 131 130 GearCond.code: 9
 BDEPTH: 131 130 Validity code:
 Towing dir: 312ø Wire out: 370 m Speed: 30 kn*10
 Sorted: 54 Kg Total catch: 54.40 CATCH/HOUR: 130.56

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 65.57 | 314 | 50.22 | 7722 |
| Brotula barbata | 12.02 | 14 | 9.21 | |
| Trigla lyra | 7.01 | 77 | 5.37 | |
| Illex coindetii | 6.24 | 170 | 4.78 | |
| Dentex macropthalmus | 5.88 | 36 | 4.50 | 7723 |
| Raja airaletus | 4.80 | 10 | 3.68 | |
| Trichurus lepturus | 4.27 | 5 | 3.27 | |
| Sepia orsignyana | 4.06 | 41 | 3.11 | |
| Citharus linguatula | 3.62 | 86 | 2.77 | |
| Sphoroides pachgaster | 3.31 | 7 | 2.54 | |
| Branchiostegus semifasciatus | 3.07 | 2 | 2.35 | |
| Zenopsis conchifer | 3.02 | 5 | 2.31 | |
| G A S T R O P O D S | 1.42 | 142 | 1.09 | |
| Uranoscopus polli | 1.42 | 5 | 1.09 | |
| Peristedion cataphractum | 1.10 | 24 | 0.84 | |
| Torpedo torpedo | 0.94 | 2 | 0.72 | |
| Sepia officinalis hierredda | 0.60 | 5 | 0.46 | |
| Zeus faber | 0.53 | 5 | 0.41 | |
| Pterothrissus belloci | 0.41 | 2 | 0.31 | |
| Saurida brasiliensis | 0.31 | 46 | 0.24 | |
| SOLEIDAE | 0.22 | 2 | 0.17 | |
| Dentex congoensis | 0.22 | 2 | 0.17 | |
| B I V A L V E S | 0.19 | 67 | 0.15 | |
| Bembrops heterurus | 0.17 | 2 | 0.13 | |
| Artocma bondi | 0.17 | 2 | 0.13 | |
| Total | 130.57 | | 100.02 | |

PROJECT STATION:3661
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1032 Long E 1322
 start stop duration
 TIME :07:33:15 08:03:04 30 (min) Purpose code: 3
 LOG :7910.65 7912.18 1.52 Area code : 2
 FDEPTH: 94 93 GearCond.code: 2
 BDEPTH: 94 93 Validity code:
 Towing dir: 330° Wire out: 280 m Speed: 30 kn*10
 Sorted: 74 Kg Total catch: 396.36 CATCH/HOUR: 792.72

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 411.40 | 10318 | 51.90 | 7726 |
| Sardinella aurita | 98.12 | 1502 | 12.38 | 7725 |
| Trigla lyra | 62.60 | 374 | 7.90 | |
| Zeus faber | 48.40 | 242 | 6.11 | |
| Raja miraletus | 33.46 | 92 | 4.22 | |
| Citharus linguatula | 23.86 | 716 | 3.01 | |
| Trichiurus lepturus | 16.32 | 26 | 2.06 | |
| Pagellus bellottii | 14.74 | 242 | 1.86 | 7724 |
| Saurida brasiliensis | 13.86 | 2420 | 1.75 | |
| Fistularia petimba | 13.52 | 34 | 1.71 | |
| Brachydeuterus auritus | 9.34 | 66 | 1.18 | |
| Selene dorsalis | 8.32 | 16 | 1.05 | |
| Sepia officinalis hierredda | 7.30 | 6 | 0.92 | |
| Lagocephalus laevigatus | 5.06 | 12 | 0.64 | |
| Scorpaena normani | 3.84 | 44 | 0.48 | |
| Dentex angolensis | 3.52 | 78 | 0.44 | |
| Illex coindetii | 3.30 | 66 | 0.42 | |
| Torpedo torpedo | 2.98 | 6 | 0.18 | |
| Peristedion cataphractum | 2.96 | 56 | 0.37 | |
| Brotula barbata | 2.32 | 2 | 0.29 | |
| Sarda sarda | 2.24 | 2 | 0.28 | |
| Octopus vulgaris | 2.14 | 6 | 0.27 | |
| Fistularia tabacaria | 1.26 | 8 | 0.16 | |
| C E P H A L O P O D A | 1.22 | 254 | 0.15 | |
| Sepia orbignyana | 0.64 | 4 | 0.08 | |
| Total | 792.72 | | 100.01 | |

PROJECT STATION:3663
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1026 Long E 1331
 start stop duration
 TIME :10:40:44 11:10:39 30 (min) Purpose code: 3
 LOG :7927.28 7928.90 1.61 Area code : 2
 FDEPTH: 30 32 GearCond.code: 2
 BDEPTH: 30 32 Validity code:
 Towing dir: 327° Wire out: 140 m Speed: 31 kn*10
 Sorted: 173 Kg Total catch: 172.82 CATCH/HOUR: 345.64

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 109.56 | 1158 | 31.70 | |
| Brachydeuterus auritus Juv. | 75.60 | 15414 | 21.87 | |
| Galeoides decadactylus | 44.20 | 80 | 12.79 | |
| Pseudotolithus elongatus | 25.44 | 72 | 7.26 | |
| Pomadasy incisus | 14.20 | 142 | 4.11 | |
| Selene dorsalis | 11.46 | 134 | 3.32 | |
| Rhizoprionodon acutus | 10.00 | 4 | 2.89 | |
| Sepia officinalis hierredda | 5.00 | 12 | 1.45 | |
| Euclinostomus melanopterus | 4.84 | 28 | 1.40 | |
| Pagellus bellottii | 4.82 | 18 | 1.39 | |
| Alektis alexandrinus | 4.44 | 12 | 1.28 | |
| Syngnathus microlophus | 3.38 | 14 | 0.98 | |
| Pentheroscion mbizi | 3.26 | 98 | 0.94 | |
| Trichiurus lepturus | 3.08 | 128 | 0.89 | |
| Epinephelus aeneus | 2.84 | 4 | 0.82 | |
| Dicologlossa cuneata | 2.84 | 46 | 0.82 | |
| Ephippium guttifer | 2.68 | 2 | 0.78 | |
| Sphyræna guachancho | 2.64 | 46 | 0.76 | |
| Trachurus trecae | 2.50 | 40 | 0.72 | |
| Trichiurus lepturus | 2.22 | 6 | 0.64 | |
| Crammoplites gruvelli | 1.90 | 36 | 0.55 | |
| Chloroscombrus chrysurus | 1.80 | 8 | 0.52 | |
| Trachinotus ovatus | 1.68 | 2 | 0.49 | |
| Pseudupeneus sp. | 1.36 | 10 | 0.39 | |
| Pomadasy rogeri | 1.16 | 2 | 0.34 | |
| Syacium micurum | 1.08 | 12 | 0.31 | |
| Ilisha africana | 0.38 | 6 | 0.11 | |
| Umbrina canariensis | 0.36 | 4 | 0.10 | |
| Squilla mantis | 0.26 | 10 | 0.08 | |
| Penaeus notialis | 0.16 | 6 | 0.05 | |
| Fistularia petimba | 0.14 | 2 | 0.04 | |
| Boops boops | 0.10 | 2 | 0.03 | |
| Citharus linguatula | 0.10 | 2 | 0.03 | |
| Antennarius sp. | 0.08 | 2 | 0.02 | |
| Calappa pelii | 0.08 | 8 | 0.02 | |
| Total | 345.64 | | 99.99 | |

PROJECT STATION:3662
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1028 Long E 1328
 start stop duration
 TIME :09:22:17 09:48:12 26 (min) Purpose code: 3
 LOG :7920.90 7922.21 1.31 Area code : 2
 FDEPTH: 50 47 GearCond.code: 9
 BDEPTH: 50 47 Validity code:
 Towing dir: 340° Wire out: 170 m Speed: 30 kn*10
 Sorted: 173 Kg Total catch: 172.90 CATCH/HOUR: 399.00

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex barnardi | 149.45 | 1103 | 37.46 | 7729 |
| Pseudupeneus sp. | 97.11 | 1424 | 24.34 | |
| Pomadasy incisus | 38.60 | | 9.69 | |
| Pagellus bellottii | 14.17 | 81 | 3.55 | 7728 |
| Umbrina canariensis | 14.12 | 51 | 3.54 | 7727 |
| Raja miraletus | 12.58 | 18 | 3.15 | |
| Plectorhynchus mediterraneus | 9.83 | 18 | 2.46 | |
| Octopus vulgaris | 9.12 | 9 | 2.29 | |
| Sepia officinalis hierredda | 8.75 | 16 | 2.19 | |
| Boops boops | 8.72 | 208 | 2.19 | |
| Brachydeuterus auritus | 6.72 | 35 | 1.68 | |
| Epinephelus aeneus | 5.91 | 5 | 1.48 | |
| Chaetodon hoefleri | 4.15 | 14 | 1.04 | |
| Bombrops grayi | 2.93 | 48 | 0.73 | |
| Sepiella sp. | 2.54 | 95 | 0.64 | |
| Decapterus rhonchus | 2.08 | 55 | 0.52 | |
| Chilomycterus spinosus mauret. | 2.05 | 7 | 0.51 | |
| Citharus linguatula | 2.05 | 81 | 0.51 | |
| Sphyræna guachancho | 1.75 | 2 | 0.44 | |
| Selene dorsalis | 1.62 | 14 | 0.41 | |
| Fistularia petimba | 1.18 | 5 | 0.10 | |
| Sparus pagrus africanus * | 1.02 | 2 | 0.26 | |
| Lagocephalus laevigatus | 0.69 | 2 | 0.17 | |
| Syacium micurum | 0.48 | 5 | 0.12 | |
| Peristedion cataphractum | 0.32 | 7 | 0.08 | |
| Scorpaena normani | 0.23 | 2 | 0.06 | |
| Scorpaena stephanica | 0.23 | 7 | 0.06 | |
| Chaetodon humeralis | 0.18 | 7 | 0.05 | |
| Brotula barbata | 0.18 | 2 | 0.05 | |
| Malanostomias sp. | 0.09 | 14 | 0.02 | |
| Saurida brasiliensis | 0.07 | 16 | 0.02 | |
| Total | 399.00 | | 100.01 | |

PROJECT STATION:3664
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1015 Long E 1325
 start stop duration
 TIME :12:29:16 12:59:03 30 (min) Purpose code: 3
 LOG :7919.75 7941.33 1.56 Area code : 2
 FDEPTH: 34 32 GearCond.code: 2
 BDEPTH: 34 32 Validity code:
 Towing dir: 330° Wire out: 140 m Speed: 31 kn*10
 Sorted: 300 Kg Total catch: 11108.59 CATCH/HOUR: 22217.18

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Galeoides decadactylus | 19295.00 | 2312 | 86.85 | |
| Brachydeuterus auritus | 2273.58 | 33372 | 10.23 | |
| Trichiurus lepturus | 264.76 | 796 | 1.19 | |
| Trachurus trecae | 153.00 | 1224 | 0.69 | 7730 |
| Pteroscacion pelli | 55.08 | 1054 | 0.25 | |
| Ilisha africana | 45.22 | 562 | 0.20 | |
| Pomadasy incisus | 37.40 | 324 | 0.17 | |
| Selene dorsalis | 33.16 | 426 | 0.15 | |
| Cynoglossus canariensis | 10.20 | 52 | 0.05 | |
| Sphyræna sphyræna | 9.00 | 306 | 0.04 | |
| Umbrina canariensis | 8.84 | 34 | 0.04 | |
| Grammoplites gruvelli | 6.80 | 120 | 0.03 | |
| Chloroscombrus chrysurus | 4.42 | 34 | 0.02 | |
| Dicologlossa cuneata | 4.26 | 68 | 0.02 | |
| Aluterus scriptus | 4.08 | 2058 | 0.02 | |
| Citharus linguatula | 3.58 | 102 | 0.02 | |
| Lagocephalus laevigatus | 2.38 | 18 | 0.01 | |
| Sardinella maderensis | 2.04 | 18 | 0.01 | |
| Torpedo marmorata | 1.88 | 18 | 0.01 | |
| Epinephelus aeneus | 1.20 | 2 | 0.01 | |
| Pagellus bellottii | 0.56 | 4 | 0.01 | |
| Torpedo torpedo | 0.52 | 18 | 0.01 | |
| Penaeus notialis | 0.22 | 4 | 0.01 | |
| Total | 22217.18 | | 100.01 | |

PROJECT STATION:3665
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1013 Long E 1320
 start stop duration
 TIME :14:12:27 14:42:07 30 (min) Purpose code: 3
 LOG :7948.06 7949.58 1.50 Area code : 2
 FDEPTH: 47 47 GearCond.code: 2
 BDEPTH: 47 47 Validity code:
 Towing dir: 320° Wire out: 150 m Speed: 30 kn*10
 Sorted: 10 Kg Total catch: 9.48 CATCH/HOUR: 18.96

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Caranx hippos | 2.78 | 2 | 14.66 | |
| Pagellus bellottii | 2.60 | 8 | 13.71 | |
| Sepia officinalis hierredda | 2.02 | 2 | 10.65 | |
| Fistularia petimba | 1.92 | 8 | 10.13 | |
| Caranx crysos | 1.72 | 2 | 9.07 | |
| Torpedo torpedo | 1.44 | 20 | 7.59 | |
| Pomadasy jubelini | 1.24 | 2 | 6.54 | |
| Sardinella aurita | 1.20 | 12 | 6.33 | |
| Lagocephalus laevigatus | 1.04 | 4 | 5.49 | |
| Cynoglossus senegalensis | 0.84 | 4 | 4.43 | |
| Calappa pelii | 0.62 | 4 | 3.27 | |
| Raja miraletus | 0.40 | 2 | 2.11 | |
| Sepia orbignyana | 0.34 | 2 | 1.79 | |
| GRAMMICOLEPIDAE | 0.34 | 6 | 1.79 | |
| Citharus linguatula | 0.22 | 12 | 1.16 | |
| GOMIIDE | 0.12 | 88 | 0.63 | |
| Alloteuthis africana | 0.10 | 24 | 0.53 | |
| Monoleone microstoma | 0.02 | 4 | 0.11 | |
| Total | 18.96 | | 99.99 | |

PROJECT STATION:3666
 DATE: 7/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1012 Long E 1316
 start stop duration
 TIME :15:28:03 15:58:07 30 (min) Purpose code: 3
 LOG :7954.42 7955.92 1.50 Area code : 2
 FDEPTH: 68 68 GearCond.code:
 BDEPTH: 68 68 Validity code:
 Towing dir: 140° Wire out: 210 m Speed: 30 kn*10
 Sorted: 260 Kg Total catch: 2604.53 CATCH/HOUR: 5209.06

PROJECT STATION:3669
 DATE: 8/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1021 Long E 1302
 start stop duration
 TIME :05:37:18 06:07:18 30 (min) Purpose code: 3
 LOG :8009.37 8010.88 1.51 Area code : 2
 FDEPTH: 170 172 GearCond.code:
 BDEPTH: 170 172 Validity code:
 Towing dir: 135° Wire out: 500 m Speed: 30 kn*10
 Sorted: 131 Kg Total catch: 153.43 CATCH/HOUR: 306.86

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichurus lepturus | 5058.42 | 8386 | 97.11 | |
| Brachydeuterus auritus | 39.80 | 288 | 0.76 | |
| Pagellus bellottii | 24.88 | 152 | 0.45 | 7731 |
| Raja miraletus | 15.20 | 36 | 0.29 | |
| Sepia officinalis hierredda | 11.94 | 8 | 0.23 | |
| Trigla lyra | 10.46 | 108 | 0.20 | |
| Citharus linguatula | 7.84 | 166 | 0.15 | |
| Lagocephalus laevigatus | 7.14 | 34 | 0.14 | |
| Brotula barbata | 6.06 | 20 | 0.12 | |
| Dentex barnardi | 4.42 | 44 | 0.08 | 7732 |
| Octopus vulgaris | 4.10 | 4 | 0.08 | |
| Pomadasy incisus | 2.68 | 12 | 0.05 | |
| Sepia orbignyana | 2.00 | 18 | 0.04 | |
| Bembrops greyi | 1.76 | 36 | 0.03 | |
| Zeus faber | 1.68 | 8 | 0.03 | |
| Fistularia petimba | 1.60 | 2 | 0.03 | |
| Sardinella aurita | 1.58 | 14 | 0.03 | |
| Pseudupeneus prayensis | 1.50 | 26 | 0.03 | |
| Torpedo torpedo | 1.48 | 12 | 0.03 | |
| Chaetodon hoefleri | 1.22 | 8 | 0.02 | |
| Serranus accraensis | 1.10 | 18 | 0.02 | |
| Sphyræna sphyraena | 0.88 | 6 | 0.02 | |
| Dentex angolensis | 0.58 | 14 | 0.01 | |
| Ecops boops | 0.28 | 4 | 0.01 | |
| Selene dorsalis, juveniles | 0.18 | 2 | | |
| Saurida brasiliensis | 0.14 | 10 | | |
| Sphaeroides marmoratus | 0.08 | 2 | | |
| GOBIIDAE | 0.06 | 2 | | |
| Total | 5209.06 | | 99.99 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Zenopsis conchifer | 68.44 | 246 | 22.30 | |
| Dentex macrophthalmus | 62.24 | 308 | 20.28 | 7739 |
| Trichurus lepturus | 45.76 | 52 | 14.91 | |
| Synagrops microlepis | 25.60 | 3296 | 8.34 | |
| Brotula barbata | 25.04 | 26 | 8.16 | |
| Dentex angolensis | 21.20 | 84 | 6.91 | 7740 |
| Zeus faber | 16.24 | 66 | 5.29 | |
| Sepia officinalis hierredda | 9.92 | 8 | 3.23 | |
| Illex coindetii | 8.24 | 144 | 2.69 | |
| Citharus linguatula | 6.24 | 80 | 2.03 | |
| Bembrops heterurus | 4.24 | 32 | 1.38 | |
| Raja miraletus | 2.98 | 6 | 0.97 | |
| Atractoscion aequidens | 2.90 | 2 | 0.95 | |
| Uranoscopus polli | 2.64 | 40 | 0.86 | |
| Raja straeleni | 1.42 | 2 | 0.46 | |
| SOLIIDAE | 1.32 | 2 | 0.43 | |
| Squatina oculata | 0.94 | 4 | 0.31 | |
| Spicar alta | 0.78 | 2 | 0.25 | |
| Torpedo torpedo | 0.72 | 2 | 0.23 | |
| Total | 306.86 | | 99.98 | |

PROJECT STATION:3667
 DATE: 7/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1025 Long E 1255
 start stop duration
 TIME :21:12:45 21:44:05 31 (min) Purpose code: 3
 LOG :7987.56 7989.11 1.53 Area code : 2
 FDEPTH: 605 608 GearCond.code:
 BDEPTH: 605 608 Validity code:
 Towing dir: 330° Wire out: 1600 m Speed: 30 kn*10
 Sorted: 50 Kg Total catch: 178.48 CATCH/HOUR: 345.45

PROJECT STATION:3670
 DATE: 8/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1016 Long E 1311
 start stop duration
 TIME :07:49:57 08:22:17 32 (min) Purpose code: 3
 LOG :8022.79 8024.46 1.68 Area code : 2
 FDEPTH: 94 96 GearCond.code:
 BDEPTH: 94 96 Validity code:
 Towing dir: 315° Wire out: 180 m Speed: 30 kn*10
 Sorted: 90 Kg Total catch: 330.16 CATCH/HOUR: 619.05

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 174.19 | 45163 | 50.42 | |
| Hoplostethus cadonati | 38.21 | 1452 | 11.06 | |
| Yarella blackfordi | 37.28 | 1022 | 10.79 | |
| Merluccius polli | 33.10 | 56 | 9.58 | 7733 |
| Stenopus hispidus | 8.59 | 964 | 2.49 | |
| Bathyrhynchus vicinus | 8.25 | 232 | 2.39 | |
| NGMIDAE | 6.74 | 12 | 1.95 | |
| Aristeus varidens, female | 4.76 | 267 | 1.38 | 7735 |
| Nezumia micronechodon | 3.72 | 116 | 1.08 | |
| Illex coindetii | 3.37 | 12 | 0.98 | |
| Nemichthys sp. | 2.90 | 279 | 0.84 | |
| Aristeus varidens, male | 2.67 | 348 | 0.77 | 7734 |
| Nezumia sp. | 2.67 | 58 | 0.77 | |
| Melanostomias sp. | 2.67 | 23 | 0.77 | |
| Etmopterus polli | 2.32 | 41 | 0.67 | |
| Chaceon maritae, male | 1.99 | 4 | 0.58 | |
| Malacocephalus laevis | 1.86 | 12 | 0.54 | |
| Tripterygion hennigi | 1.74 | 267 | 0.50 | |
| Xenodermichthys copei | 1.74 | 93 | 0.50 | |
| Halosaurus ovenii | 1.28 | 35 | 0.37 | |
| Chaceon maritae, female | 1.18 | 4 | 0.34 | |
| Scymnodon obscurus | 0.97 | 4 | 0.28 | |
| Bathysgadus macrops | 0.58 | 12 | 0.17 | |
| Catactyx laticeps | 0.58 | 70 | 0.17 | |
| Stomias boa boa | 0.46 | 23 | 0.13 | |
| Squalus acanthias | 0.39 | 2 | 0.11 | |
| Dibranchius sp. | 0.35 | 23 | 0.10 | |
| Nemichthys scolopaceus | 0.23 | 12 | 0.07 | |
| Nezumia aequalis | 0.23 | 12 | 0.07 | |
| Trachyrincus scabrus | 0.23 | 12 | 0.07 | |
| Etmopterus spinax | 0.19 | 2 | 0.06 | |
| Total | 345.44 | | 100.00 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 473.34 | 9384 | 76.45 | 7741 |
| Raja miraletus | 28.20 | 47 | 4.56 | |
| Trigla lyra | 24.13 | 176 | 3.90 | |
| Zeus faber | 19.91 | 69 | 3.22 | |
| Pagellus bellottii | 16.50 | 156 | 2.67 | 7742 |
| Sepia officinalis hierredda | 12.41 | 6 | 2.00 | |
| Sphaeroides pachygaster | 9.60 | 11 | 1.55 | |
| Citharus linguatula | 6.92 | 103 | 1.32 | |
| Sardinella aurita | 6.81 | 1341 | 1.10 | |
| Trichurus lepturus | 4.35 | 4 | 0.70 | |
| Uranoscopus polli | 4.33 | 11 | 0.70 | |
| Fistularia petimba | 3.24 | 11 | 0.52 | |
| Illex coindetii | 2.38 | 21 | 0.38 | |
| Pseudupeneus prayensis | 2.16 | 11 | 0.35 | |
| Scorpaena normani | 1.65 | 11 | 0.27 | |
| Dentex angolensis | 1.13 | 11 | 0.18 | |
| Octopus vulgaris | 0.71 | 2 | 0.11 | |
| Sepia orbignyana | 0.69 | 11 | 0.11 | |
| Dentex barnardi | 0.53 | 2 | 0.09 | |
| Fistularia tabacaria | 0.06 | 2 | 0.01 | |
| Total | 619.05 | | 100.00 | |

PROJECT STATION:3668
 DATE: 8/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 1024 Long E 1259
 start stop duration
 TIME :23:41:22 00:11:34 30 (min) Purpose code: 3
 LOG :7999.00 8000.57 1.56 Area code : 2
 FDEPTH: 422 417 GearCond.code:
 BDEPTH: 422 417 Validity code:
 Towing dir: 335° Wire out: 1050 m Speed: 31 kn*10
 Sorted: 164 Kg Total catch: 483.48 CATCH/HOUR: 966.90

PROJECT STATION:3671
 DATE: 8/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 1000 Long E 1313
 start stop duration
 TIME :10:15:49 10:46:06 30 (min) Purpose code: 3
 LOG :8040.51 8042.07 1.55 Area code : 2
 FDEPTH: 32 34 GearCond.code:
 BDEPTH: 32 34 Validity code:
 Towing dir: 330° Wire out: 60 m Speed: 30 kn*10
 Sorted: 48 Kg Total catch: 46.70 CATCH/HOUR: 97.40

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 713.28 | 2400 | 73.77 | 7736 |
| Nematocarcinus africanus | 116.04 | 35688 | 12.00 | |
| Nezumia aequalis | 48.36 | 702 | 5.00 | |
| Dibranchius atlanticus | 32.22 | 3330 | 3.33 | |
| Laetionema laureysi | 17.52 | 882 | 1.81 | |
| Chaunax pictus | 9.78 | 300 | 1.01 | |
| Centrophorus granulosus | 5.46 | 136 | 0.56 | 7738 |
| Aristeus varidens, female | 3.12 | 30 | 0.32 | |
| Chaceon maritae, male | 2.76 | 18 | 0.29 | |
| Malacocephalus occidentalis | 1.62 | 42 | 0.17 | |
| Nezumia sp. | 1.38 | 78 | 0.14 | |
| Halosaurus ovenii | 1.38 | 162 | 0.14 | 7737 |
| Aristeus varidens, male | 1.20 | 30 | 0.12 | |
| Etmopterus polli | 0.90 | 174 | 0.09 | |
| Plesionika martia | 0.72 | 108 | 0.07 | |
| L O B S T E R S | 0.66 | 12 | 0.07 | |
| Chlorophthalmus atlanticus | 0.60 | 42 | 0.06 | |
| Solenocera africana | 0.48 | 18 | 0.05 | |
| Bathyrhynchus vicinus | 0.48 | 6 | 0.05 | |
| Conger conger | 0.42 | 12 | 0.04 | |
| Chaceon maritae, female | 0.36 | 258 | 0.04 | |
| MYCTOPHIDAE | 0.20 | 2 | 0.02 | |
| Galeus polli | 0.18 | 24 | 0.02 | |
| Peristedion sp. | 0.12 | 24 | 0.01 | |
| Avocettina acuticeps | 0.12 | 24 | 0.01 | |
| Total | 966.90 | | 99.97 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Alectis alexandrinus | 24.28 | 20 | 24.93 | |
| Galeoides decadactylus | 13.68 | 40 | 14.05 | |
| Pomadasy jubelini | 9.26 | 22 | 9.51 | |
| Trachurus trecae | 7.46 | 138 | 7.66 | 7743 |
| Brachydeuterus auritus | 6.22 | 44 | 6.39 | |
| Chloroscombrus chrysurus | 5.66 | 36 | 5.81 | |
| Selene dorsalis | 4.04 | 34 | 4.15 | |
| Trichurus lepturus | 3.32 | 6 | 3.41 | |
| Caranx sp. | 3.02 | 4 | 3.10 | |
| Pseudotolithus typus | 2.88 | 6 | 2.96 | |
| Pagellus bellottii | 2.70 | 12 | 2.77 | |
| Raja miraletus | 2.66 | 4 | 2.73 | |
| Sphyraena sphyraena | 1.82 | 6 | 1.87 | |
| Sphyraena guachancho | 1.68 | 4 | 1.72 | |
| Epinephelus aeneus | 1.42 | 2 | 1.46 | |
| Syacium micurus | 1.32 | 12 | 1.38 | |
| Scorpaenocorpus tritor | 0.98 | 2 | 1.01 | |
| Sepia orbignyana | 0.90 | 2 | 0.92 | |
| Grammoclitus gruvelli | 0.70 | 2 | 0.72 | |
| Citharus linguatula | 0.70 | 20 | 0.72 | |
| Torpedo nobiliana | 0.68 | 4 | 0.70 | |
| Fistularia petimba | 0.54 | 2 | 0.55 | |
| Aluterus sp. | 0.34 | 10 | 0.35 | |
| Calappa rubroguttata | 0.34 | 2 | 0.35 | |
| Torpedo torpedo | 0.32 | 6 | 0.33 | |
| Decapterus rhanchnus | 0.20 | 2 | 0.21 | |
| Sardinella aurita | 0.12 | 2 | 0.12 | |
| Alloteuthis africana | 0.06 | 12 | 0.06 | |
| GOBIIDAE | 0.06 | 30 | 0.06 | |
| Penaeus notialis, female | 0.04 | 4 | 0.04 | |
| Total | 97.40 | | 100.02 | |

PROJECT STATION: 3672
 DATE: 8/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 1000 Long E 1310
 start stop duration Purpose code: 3
 TIME :11:34:24 12:04:22 30 (min) Area code : 2
 LOG :8046.51 8048.03 1.43 GearCond.code: 2
 FDEPTH: 61 60 Validity code:
 BDEPTH: 61 60
 Towing dir: 153ø Wire out: 200 m Speed: 30 kn*10
 Sorted: 56 Kg Total catch: 56.61 CATCH/HOUR: 113.22

PROJECT STATION: 3675
 DATE: 8/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 1007 Long E 1252
 start stop duration Purpose code: 3
 TIME :16:31:30 17:01:44 30 (min) Area code : 2
 LOG :8072.51 8074.05 1.53 GearCond.code: 2
 FDEPTH: 381 385 Validity code:
 BDEPTH: 381 385
 Towing dir: 340ø Wire out: 950 m Speed: 30 kn*10
 Sorted: 121 Kg Total catch: 333.40 CATCH/HOUR: 666.80

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagellus bellottii | 34.12 | 248 | 30.14 | 7744 |
| Squatina aculeata | 14.20 | 2 | 12.54 | |
| Pomadouris incisus | 12.28 | 68 | 10.85 | |
| Lagocephalus laevis | 8.00 | 36 | 7.07 | |
| Alloteuthis africana | 7.78 | 1784 | 6.87 | |
| Raja miraletus | 7.70 | 16 | 6.80 | |
| Pseudupeneus prayensis | 6.08 | 72 | 5.37 | |
| Citharus linguatula | 5.62 | 208 | 4.96 | |
| Bembrops heterurus | 3.04 | 82 | 2.69 | |
| Sepia orbignyana | 1.92 | 64 | 1.70 | |
| Serranus accraensis | 1.88 | 34 | 1.66 | |
| Brotula barbata | 1.70 | 12 | 1.50 | |
| Sarda sarda | 1.64 | 2 | 1.45 | |
| Sphyraena sphyraena | 1.44 | 6 | 1.27 | |
| Sepia officinalis hierreda | 1.32 | 4 | 1.17 | |
| Zeus faber | 1.24 | 8 | 1.10 | |
| Dentex angolensis | 0.72 | 44 | 0.64 | |
| Dentex canariensis | 0.64 | 8 | 0.57 | |
| Torpedo torpedo | 0.56 | 4 | 0.49 | |
| Sardinella aurita | 0.54 | 4 | 0.48 | |
| Brachydeuterus auritus | 0.26 | 2 | 0.23 | |
| Selene dorsalis | 0.16 | 2 | 0.14 | |
| Echeneis naucrates | 0.14 | 2 | 0.12 | |
| Saurida brasiliensis | 0.08 | 14 | 0.07 | |
| Scyllarides herklotsii | 0.04 | 4 | 0.04 | |
| Scorpaena normani | 0.04 | 2 | 0.04 | |
| Antennarius sp. | 0.04 | 2 | 0.04 | |
| Arnoglossus imperialis | 0.04 | 6 | 0.04 | |
| Total | 113.22 | | 100.04 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 378.78 | 1612 | 56.81 | 7751 |
| Nematocarcinus africanus | 147.60 | 31206 | 22.14 | |
| Trichiurus lepturus | 90.26 | 104 | 13.54 | |
| Pterothrissus belloci | 10.94 | 608 | 1.64 | |
| Malacocephalus occidentalis | 8.42 | 76 | 1.26 | |
| Dibranchius sp. | 8.36 | 692 | 1.25 | |
| Paraponeus longirostris, fem. | 6.24 | 744 | 0.94 | 7750 |
| Laemonea laureysi | 4.72 | 68 | 0.71 | |
| Chaunax pictus | 2.44 | 38 | 0.37 | |
| Chlorophthalmus atlanticus | 2.28 | 456 | 0.34 | |
| Trichiurus lepturus juv. | 2.12 | 98 | 0.32 | |
| Hymenocephalus italicus | 1.36 | 160 | 0.20 | |
| Benthodesmus sp. | 0.98 | 30 | 0.15 | |
| Gadella imberbis | 0.84 | 30 | 0.13 | |
| MYCTOPHIDAE | 0.60 | 364 | 0.09 | |
| Paraponeus longirostris, male | 0.46 | 54 | 0.07 | 7749 |
| Bathyrcongus vicinus | 0.22 | 8 | 0.03 | |
| Lestidium atlanticum | 0.16 | 8 | 0.02 | |
| Total | 666.80 | | 100.01 | |

PROJECT STATION: 3673
 DATE: 8/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 1003 Long E 1306
 start stop duration Purpose code: 3
 TIME :13:00:49 13:30:48 30 (min) Area code : 2
 LOG :8053.76 8055.33 1.55 GearCond.code: 2
 FDEPTH: 87 87 Validity code:
 BDEPTH: 87 87
 Towing dir: 330ø Wire out: 240 m Speed: 30 kn*10
 Sorted: 46 Kg Total catch: 46.14 CATCH/HOUR: 92.28

PROJECT STATION: 3676
 DATE: 8/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 1003 Long E 1247
 start stop duration Purpose code: 3
 TIME :18:58:51 19:28:31 30 (min) Area code : 2
 LOG :8084.40 8085.89 1.48 GearCond.code: 2
 FDEPTH: 725 734 Validity code:
 BDEPTH: 725 734
 Towing dir: 165ø Wire out: 1750 m Speed: 30 kn*10
 Sorted: 58 Kg Total catch: 189.15 CATCH/HOUR: 378.30

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Raja miraletus | 17.48 | 38 | 18.94 | |
| Trigla sp. | 8.08 | 112 | 8.76 | |
| Citharus linguatula | 8.08 | 252 | 8.76 | |
| Pagellus bellottii | 7.88 | 88 | 8.54 | 7745 |
| Squatina aculeata | 7.00 | 2 | 7.59 | |
| Pseudupeneus prayensis | 5.96 | 36 | 6.46 | |
| Sepia officinalis hierreda | 5.12 | 2 | 5.55 | |
| Trichiurus lepturus | 5.04 | 10 | 5.46 | |
| Sepia orbignyana | 4.54 | 30 | 4.92 | |
| Trachurus truceae | 4.20 | 142 | 4.55 | 7746 |
| Zeus faber | 2.74 | 8 | 2.97 | |
| Alloteuthis africana | 2.24 | 764 | 2.43 | |
| Uranoscopus polli | 2.22 | 8 | 2.41 | |
| Torpedo torpedo | 2.10 | 4 | 2.28 | |
| Sphoeroides pachgaster | 2.04 | 2 | 2.21 | |
| Saurida brasiliensis | 1.88 | 324 | 2.04 | |
| Pistularia petimba | 1.76 | 12 | 1.91 | |
| Ocopeus vulgaris | 1.00 | 2 | 1.08 | |
| Lagocephalus laevis | 0.76 | 8 | 0.82 | |
| Dentex macrocephalus juv. | 0.76 | 18 | 0.82 | |
| Dentex canariensis | 0.64 | 8 | 0.69 | |
| Brotula barbata | 0.34 | 2 | 0.37 | |
| Microchirus frechkopi | 0.20 | 4 | 0.22 | |
| Blennius normani | 0.12 | 6 | 0.13 | |
| Gobiidae | 0.06 | 2 | 0.07 | |
| Arnoglossus imperialis | 0.04 | 2 | 0.04 | |
| Total | 92.28 | | 100.02 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| UNIDENTIFIED FISH | 85.82 | 196 | 23.69 | |
| Yarella blackfordi | 64.54 | 1722 | 17.06 | |
| Aristeus varidensis, female | 47.60 | 2450 | 12.58 | 7753 |
| Stereonastis sp. | 29.34 | 294 | 7.76 | |
| Lamprogrammus exotus | 25.98 | 92 | 6.87 | |
| Nezumia sp. | 25.28 | 498 | 6.68 | |
| Bathyrcongus vicinus | 15.06 | 224 | 3.98 | |
| Hymenocephalus sp. | 11.48 | 204 | 3.03 | |
| Dicrolene intronigra | 10.84 | 154 | 2.87 | |
| Merluccius polli | 9.56 | 16 | 2.53 | |
| Chaceon maritae, male | 8.32 | 18 | 2.20 | |
| Bathyraxa smithii | 6.30 | 28 | 1.67 | |
| Scymnodon obscurus | 5.00 | 16 | 1.32 | |
| Dibranchius sp. | 4.90 | 322 | 1.30 | |
| Nematocarcinus africanus | 3.36 | 1022 | 0.89 | |
| Melanostomias sp. | 3.14 | 78 | 0.83 | |
| Etmopterus polli | 3.00 | 56 | 0.79 | |
| Chaceon maritae, female | 2.54 | 10 | 0.67 | |
| Glyphis marsupialis | 1.88 | 112 | 0.50 | |
| Aristeus varidensis, male | 1.76 | 252 | 0.47 | 7752 |
| Etmopterus pusillus | 1.60 | 4 | 0.42 | |
| Ebinania costaecanariae | 1.54 | 22 | 0.41 | |
| Illex coindetii | 1.48 | 8 | 0.39 | |
| Munida sp. * | 1.26 | 1044 | 0.33 | |
| Lophodes kempii | 0.92 | 8 | 0.24 | |
| Hopllostethus cadonati | 0.90 | 350 | 0.24 | |
| Gadella maraldi | 0.78 | 134 | 0.21 | |
| Lithodes ferax | 0.70 | 8 | 0.19 | |
| MYCTOPHIDAE | 0.70 | 476 | 0.19 | |
| MYXINIDAE | 0.50 | 8 | 0.13 | |
| Synaphobranchus kaupii | 0.42 | 14 | 0.11 | |
| Stenias boa boa | 0.34 | 22 | 0.09 | |
| Xenodermichthys copei | 0.28 | 28 | 0.07 | |
| Halosaurus owstoni | 0.22 | 22 | 0.06 | |
| Chlorophthalmus atlanticus | 0.22 | 14 | 0.06 | |
| Cataetix laticeps | 0.22 | 126 | 0.06 | |
| Bathypterois sp. | 0.22 | 22 | 0.06 | |
| Avocettina acuticeps | 0.14 | 8 | 0.04 | |
| Leptoderma sp. | 0.08 | 8 | 0.02 | |
| ZOARCIDAE | 0.08 | 8 | 0.02 | |
| Total | 378.30 | | 100.03 | |

PROJECT STATION: 3674
 DATE: 8/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 1003 Long E 1259
 start stop duration Purpose code: 3
 TIME :14:34:30 15:03:41 29 (min) Area code : 2
 LOG :8061.81 8063.44 1.62 GearCond.code: 2
 FDEPTH: 107 107 Validity code:
 BDEPTH: 107 107
 Towing dir: 150ø Wire out: 300 m Speed: 30 kn*10
 Sorted: 120 Kg Total catch: 120.60 CATCH/HOUR: 249.52

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichiurus lepturus | 68.36 | 89 | 27.40 | |
| Trachurus truceae, juvenile | 44.57 | 1206 | 17.86 | 7748 |
| Zeus faber | 40.76 | 145 | 16.34 | |
| Trigla sp. | 33.60 | 263 | 13.47 | |
| Unidentified fish | 7.57 | 8 | 3.03 | |
| Sepia orbignyana | 7.43 | 62 | 2.98 | |
| Dentex congoensis | 6.97 | 118 | 2.79 | |
| Citharus linguatula | 6.54 | 226 | 2.62 | |
| Dentex angolensis | 5.23 | 85 | 2.10 | 7747 |
| Raja miraletus | 4.74 | 12 | 1.90 | |
| Uranoscopus sp. | 3.39 | 17 | 1.36 | |
| Pseudupeneus prayensis | 3.29 | 31 | 1.32 | |
| Scorpaena normani | 2.65 | 33 | 1.06 | |
| Squatina aculeata | 2.50 | 2 | 1.00 | |
| Pagellus bellottii | 2.32 | 19 | 0.93 | |
| Pistularia petimba | 2.21 | 4 | 0.89 | |
| Torpedo torpedo | 1.92 | 4 | 0.77 | |
| Illex coindetii | 1.78 | 95 | 0.71 | |
| Priacanthus arenatus | 1.10 | 2 | 0.44 | |
| Saurida brasiliensis | 0.93 | 122 | 0.37 | |
| Brachydeuterus auritus | 0.74 | 4 | 0.30 | |
| Dentex canariensis | 0.41 | 2 | 0.16 | |
| Blennius normani | 0.19 | 4 | 0.08 | |
| Coops coops | 0.17 | 2 | 0.07 | |
| Arnoglossus sp. | 0.12 | 4 | 0.05 | |
| Spicara alta | 0.02 | 2 | 0.01 | |
| Total | 249.51 | | 100.01 | |

PROJECT STATION:3677
 DATE: 8/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 954 Long E 1244
 start stop duration
 TIME :22:07:52 22:37:46 30 (min) Purpose code: 3
 LOG :8101.94 8103.41 1.47 Area code : 2
 FDEPTH: 623 618 GearCond.code:
 BDEPTH: 623 618 Validity code:
 Towing dir: 150° Wire out:1600 m Speed: 30 kn*10
 Sorted: 41 Kg Total catch: 145.33 CATCH/HOUR: 290.66

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 108.64 | 27376 | 37.38 | |
| Yareella blackfordi | 75.54 | 2208 | 25.99 | |
| L O B S T E R S | 15.92 | 1440 | 5.48 | |
| Chaceon maritae, male | 11.84 | 48 | 4.07 | |
| Chaceon maritae, female | 10.24 | 48 | 3.52 | |
| Merluccius polli | 9.36 | 18 | 3.22 | |
| Aristeus varidens, female | 8.08 | 400 | 2.78 | 7754 |
| Malacocephalus occidentalis | 7.52 | 16 | 2.59 | |
| Stomias boa boa | 4.56 | 160 | 1.57 | |
| Nezumia micronychodon | 4.24 | 128 | 1.45 | |
| Etmopterus polli | 4.00 | 66 | 1.38 | |
| Lamprogrammus exultus | 3.20 | 56 | 1.10 | |
| Todaropsis eblanae | 2.96 | 16 | 1.02 | |
| Hoplostethus cadonati | 2.88 | 104 | 0.99 | |
| Aristeus varidens, male | 2.64 | 344 | 0.91 | 7755 |
| Bajacalifornia magalops | 2.56 | 224 | 0.88 | |
| Conger conger | 1.92 | 56 | 0.66 | |
| Chlorophthalmus atlanticus | 1.84 | 40 | 0.63 | |
| GALATHEIDAE * | 1.76 | 1712 | 0.61 | |
| Dibranchius sp. | 1.44 | 104 | 0.50 | |
| Xenodermichthys copei | 1.44 | 120 | 0.50 | |
| Dirolene intronigra | 1.28 | 152 | 0.44 | |
| Raja confundens | 1.28 | 48 | 0.44 | |
| Benthodesmus tenuis | 1.04 | 40 | 0.36 | |
| Laemonema laureysi | 0.96 | 40 | 0.33 | |
| Ebinania costaecanarie | 0.88 | 8 | 0.30 | |
| Tripliphus hemingi | 0.88 | 128 | 0.30 | |
| Plesiocyprinaus edwardsianus | 0.48 | 32 | 0.17 | |
| MYCTOPHIDAE | 0.40 | 320 | 0.14 | |
| Notacanthus sexspinis | 0.32 | 8 | 0.11 | |
| DICERATIIDAE | 0.32 | 8 | 0.11 | |
| Catastyx laticeps | 0.16 | 40 | 0.06 | |
| Bathypterois sp. | 0.08 | 8 | 0.03 | |
| Total | | 290.66 | 100.03 | |

PROJECT STATION:3679
 DATE: 9/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 945 Long E 1305
 start stop duration
 TIME :07:13:07 07:31:39 19 (min) Purpose code: 3
 LOG :8150.52 8151.43 0.90 Area code : 3
 FDEPTH: 69 69 GearCond.code:9
 BDEPTH: 69 69 Validity code:1
 Towing dir: 350° Wire out: 200 m Speed: 30 kn*10
 Sorted: Kg Total catch: 106.72 CATCH/HOUR: 337.01

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagellus bellottii | 98.72 | 843 | 29.29 | 7761 |
| Trachurus trecae | 48.13 | 382 | 14.28 | 7758 |
| Pseudupeneus prayensis | 42.51 | 379 | 12.61 | |
| ECHENEIDIDAE | 34.07 | 5286 | 10.11 | |
| Sphyraena guachancho | 19.23 | 73 | 5.71 | |
| Raja miraletus | 16.01 | 28 | 4.75 | |
| Dentex angolensis | 14.05 | 193 | 4.17 | 7760 |
| Dentex barnardi | 13.11 | 145 | 3.89 | 7759 |
| C E P H A L O P O D A | 6.03 | 3793 | 1.79 | |
| Citharus linguatula | 6.03 | 208 | 1.79 | |
| Brotula barbata | 4.71 | 13 | 1.40 | |
| Dentex congensis | 4.20 | 28 | 1.25 | |
| Trichiurus lepturus | 4.07 | 6 | 1.21 | |
| Uranoscopus polli | 3.88 | 3 | 1.15 | |
| Zeus faber | 3.76 | 13 | 1.12 | |
| Bembrops greyi | 3.57 | 76 | 1.06 | |
| Sepia officinalis hierredda | 3.25 | 9 | 0.96 | |
| Chaetodon hoefleri | 2.81 | 19 | 0.83 | |
| Octopus vulgaris | 1.77 | 6 | 0.53 | |
| Brachydeuterus auritus | 1.71 | 38 | 0.51 | |
| Epinephelus guaza ? | 0.88 | 3 | 0.26 | |
| Sepia orbignyana | 0.79 | 3 | 0.23 | |
| Fistularia petimba | 0.79 | 19 | 0.23 | |
| Dentex gibbosus | 0.76 | 3 | 0.23 | |
| Chelidichthys capensis | 0.57 | 6 | 0.17 | |
| Chilomycterus spinosus mauret. | 0.54 | 3 | 0.16 | |
| Monolele microstoma | 0.44 | 25 | 0.13 | |
| Sardinella aurita | 0.19 | 3 | 0.06 | |
| Dicologlossa cuneata | 0.13 | 3 | 0.04 | |
| Saurida brasiliensis | 0.13 | 19 | 0.04 | |
| Scorpaena normani | 0.09 | 3 | 0.03 | |
| Boops boops | 0.09 | 6 | 0.03 | |
| Total | | 337.02 | 100.02 | |

PROJECT STATION:3680
 DATE: 9/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 947 Long E 1300
 start stop duration
 TIME :08:46:11 09:16:11 30 (min) Purpose code: 3
 LOG :8159.71 8161.21 1.46 Area code : 2
 FDEPTH: 95 96 GearCond.code:
 BDEPTH: 95 96 Validity code:
 Towing dir: 345° Wire out: 280 m Speed: 30 kn*10
 Sorted: 168 Kg Total catch: 258.33 CATCH/HOUR: 516.66

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 159.90 | 1230 | 30.95 | |
| Trichiurus lepturus | 138.00 | 182 | 26.71 | |
| Saurida brasiliensis | 27.90 | 4280 | 5.40 | |
| Dentex angolensis | 22.86 | 256 | 4.42 | 7764 |
| Raja miraletus | 21.12 | 36 | 4.09 | |
| Squatina oculata | 20.52 | 10 | 3.97 | |
| Citharus linguatula | 19.26 | 546 | 3.73 | |
| Pagellus bellottii | 19.10 | 100 | 3.70 | 7763 |
| Sepia officinalis hierredda | 15.82 | 12 | 3.06 | |
| Trachurus trecae | 11.60 | 256 | 2.25 | 7762 |
| Zeus faber | 9.86 | 80 | 1.91 | |
| Brotula barbata | 8.32 | 10 | 1.61 | |
| Dentex barnardi | 7.10 | 20 | 1.37 | |
| Trigla lyra | 6.60 | 60 | 1.26 | |
| Raja straeleni | 6.20 | 2 | 1.20 | |
| Octopus vulgaris | 6.16 | 8 | 1.19 | |
| Uranoscopus polli | 5.66 | 26 | 1.08 | |
| Sphaeroides pachgaster | 4.30 | 10 | 0.83 | |
| Illex coindetii | 3.06 | 190 | 0.59 | |
| C E P H A L O P O D A | 3.00 | 1040 | 0.58 | |
| Monolele microstoma | 0.36 | 16 | 0.07 | |
| Scorpaena normani | 0.16 | 10 | 0.03 | |
| Total | | 516.66 | 100.00 | |

PROJECT STATION:3681
 DATE: 9/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 948 Long E 1250
 start stop duration
 TIME :11:24:21 11:54:14 30 (min) Purpose code: 3
 LOG :8178.30 8179.91 1.61 Area code : 2
 FDEPTH: 215 211 GearCond.code:
 BDEPTH: 215 211 Validity code:
 Towing dir: 160° Wire out: 550 m Speed: 30 kn*10
 Sorted: 332 Kg Total catch: 1276.02 CATCH/HOUR: 2552.04

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 2169.34 | 182354 | 85.00 | |
| Trichiurus lepturus | 98.56 | 178 | 3.86 | |
| Merluccius polli | 97.08 | 474 | 3.80 | 7765 |
| Dentex angolensis | 50.68 | 146 | 1.99 | 7766 |
| Brotula barbata | 41.88 | 40 | 1.63 | |
| Zenopsis conchifer | 29.28 | 120 | 1.15 | |
| Squatina aculeata | 20.76 | 8 | 0.81 | |
| Raja sp. | 10.74 | 14 | 0.42 | |
| Bembrops heterurus | 7.92 | 70 | 0.31 | |
| Dentex macrophthalmus | 5.80 | 18 | 0.23 | |
| Raja miraletus | 4.18 | 8 | 0.16 | |
| Branchiostegus semifasciatus | 2.72 | 4 | 0.11 | |
| Uranoscopus sp. | 2.38 | 8 | 0.09 | |
| Scorpaena normani | 2.22 | 6 | 0.09 | |
| Parapanaeus longirostris, fem. | 1.82 | 562 | 0.07 | 7768 |
| Pterothrissus belloci | 1.48 | 14 | 0.06 | |
| Torpedo torpedo | 1.24 | 2 | 0.05 | |
| Parapanaeus longirostris, male | 1.22 | 426 | 0.05 | 7767 |
| Todaropsis eblanae | 1.18 | 12 | 0.05 | |
| Todarodes sagittatus | 0.68 | 4 | 0.03 | |
| Galappa sp. | 0.46 | 8 | 0.02 | |
| Monolele microstoma | 0.26 | 12 | 0.01 | |
| B I V A L V E S | 0.16 | 6 | 0.01 | |
| Total | | 2552.04 | 100.01 | |

PROJECT STATION:3678
 DATE: 9/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 944 Long E 1310
 start stop duration
 TIME :05:32:11 06:02:00 30 (min) Purpose code: 3
 LOG :8140.89 8142.31 1.42 Area code : 2
 FDEPTH: 31 31 GearCond.code:
 BDEPTH: 31 31 Validity code:
 Towing dir: 346° Wire out: 130 m Speed: 30 kn*10
 Sorted: 47 Kg Total catch: 47.64 CATCH/HOUR: 95.28

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagellus bellottii | 14.84 | 98 | 15.58 | 7757 |
| Lagocephalus laevigatus | 10.05 | 42 | 10.56 | |
| Chloroscombrus chrysurus | 9.12 | 64 | 9.57 | |
| Balistes sp. | 7.04 | 22 | 7.39 | |
| Pomadasys poroteti | 6.96 | 8 | 7.30 | |
| Decapterus rhonchus | 6.02 | 60 | 6.32 | |
| Sepia officinalis hierredda | 5.32 | 4 | 5.58 | |
| Rhinobatos albonaculatus | 5.04 | 4 | 5.29 | |
| Lithognathus mormyrus | 4.50 | 20 | 4.72 | |
| Chilomycterus spinosus mauret. | 3.98 | 10 | 4.18 | |
| Trachurus trecae | 3.94 | 22 | 4.14 | 7756 |
| Syacium micrurum | 3.12 | 46 | 3.27 | |
| Chelidichthys capensis | 1.54 | 10 | 1.62 | |
| Raja miraletus | 1.42 | 4 | 1.49 | |
| Pseudupeneus prayensis | 1.40 | 10 | 1.47 | |
| Balistes capricus | 1.26 | 2 | 1.32 | |
| Cynoglossus canariensis | 1.24 | 4 | 1.30 | |
| Sepia orbignyana | 1.22 | 12 | 1.28 | |
| Dasyatis marmorata | 1.22 | 4 | 1.28 | |
| Brachydeuterus auritus | 1.20 | 12 | 1.26 | |
| Uranoscopus polli | 1.12 | 4 | 1.18 | |
| Bembrops greyi | 0.96 | 22 | 1.01 | |
| Dentex barnardi | 0.94 | 6 | 0.99 | |
| Sphyraena guachancho | 0.76 | 4 | 0.80 | |
| Chaetodon hoefleri | 0.42 | 2 | 0.44 | |
| Trachincephalus myops | 0.40 | 8 | 0.42 | |
| Selene dorsalis | 0.24 | 2 | 0.25 | |
| Total | | 95.28 | 100.01 | |

PROJECT STATION:3682
 DATE: 9/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 939
 start stop duration Long E 1240
 TIME :16:15:08 16:44:55 30 (min) Purpose code: 3
 LOG :8214.46 8215.98 1.52 Area code : 2
 FDEPTH: 535 535 GearCond.code:
 BDEPTH: 535 535 Validity code:
 Towing dir: 345ø Wire out:1250 m Speed: 30 kn*10
 Sorted: 71 Kg Total catch: 126.79 CATCH/HOUR: 253.58

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 92.24 | 210 | 36.38 | 7769 |
| Nematocarcinus africanus | 81.84 | 28644 | 32.27 | |
| SCORPAENIDAE | 16.36 | 6 | 6.45 | |
| Laemonema laureysi | 9.90 | 114 | 3.90 | |
| Aristeus varidens, female | 8.34 | 420 | 3.29 | 7771 |
| Storocnastis sp. | 7.62 | 828 | 3.00 | |
| Yarrella blackfordi | 7.44 | 204 | 2.93 | |
| Lamprogrammus exultus | 5.34 | 258 | 2.11 | |
| Melanostomias sp. | 3.54 | 66 | 1.40 | |
| Nezumia sp. | 2.58 | 36 | 1.02 | |
| Aristeus varidens, male | 1.92 | 226 | 0.76 | 7770 |
| Trichurus lepturus | 1.70 | 2 | 0.67 | |
| Benthodesmus sp. | 1.56 | 54 | 0.62 | |
| Dibranchius sp. | 1.56 | 54 | 0.62 | |
| Gadella maraldi | 1.56 | 66 | 0.62 | |
| Bathyraya sp. | 1.50 | 18 | 0.59 | |
| Hoplostethus cadenati | 1.02 | 42 | 0.40 | |
| Illex coindetii | 0.96 | 6 | 0.38 | |
| Tripliphos hemingi | 0.96 | 96 | 0.38 | |
| Echeneis naucrates | 0.96 | 2 | 0.38 | |
| Chaceon maritae, male | 0.84 | 4 | 0.33 | |
| C E P H A L O P O D A | 0.72 | 6 | 0.28 | |
| Halosaurus ovenii | 0.72 | 18 | 0.28 | |
| Chaunax pictus | 0.54 | 18 | 0.21 | |
| Chaceon maritae, female | 0.48 | 2 | 0.19 | |
| Nettastoma sp. | 0.30 | 6 | 0.12 | |
| Cataetyx laticeps | 0.30 | 54 | 0.12 | |
| Lophiodes kempi | 0.24 | 6 | 0.09 | |
| Luciobrotula hartschi | 0.24 | 6 | 0.09 | |
| Bathyroconger vicinus | 0.18 | 12 | 0.07 | |
| Bathypterois sp. | 0.06 | 6 | 0.02 | |
| Nezumia micronychodon | 0.06 | 6 | 0.02 | |
| Total | 253.58 | | 99.99 | |

PROJECT STATION:3684
 DATE: 9/ 4/05 GEAR TYPE: ET No:15 POSITION:Lat S 940
 start stop duration Long E 1234
 TIME :22:06:06 22:45:46 40 (min) Purpose code: 3
 LOG :8240.23 8242.21 1.98 Area code : 2
 FDEPTH: 891 884 GearCond.code:
 BDEPTH: 891 884 Validity code:
 Towing dir: 355ø Wire out:2000 m Speed: 30 kn*10
 Sorted: 42 Kg Total catch: 125.96 CATCH/HOUR: 189.94

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nezumia aequalis | 54.99 | 810 | 29.10 | |
| Conger conger | 41.90 | 248 | 22.18 | |
| Halosaurus ovenii | 15.39 | 441 | 8.15 | |
| Talismania sp. | 15.17 | 104 | 8.03 | |
| L O B S T E R S | 13.91 | 945 | 7.36 | |
| Leptoderma sp. | 11.34 | 1737 | 6.00 | |
| LOPHIIDAE | 7.34 | 5 | 1.88 | |
| Glyphus marsupialis | 5.04 | 54 | 2.67 | |
| Yarrella blackfordi | 4.68 | 77 | 2.48 | |
| Dicrolene intronigra | 4.14 | 59 | 2.19 | |
| Chaceon maritae | 3.38 | 18 | 1.79 | |
| Nezumia sp. | 1.67 | 9 | 0.88 | |
| Scymnodon obscurus | 1.60 | 3 | 0.79 | |
| Stomias boa boa | 1.40 | 36 | 0.74 | |
| Ebinania costaeanarie | 1.17 | 5 | 0.62 | |
| Dibranchius atlanticus | 1.04 | 36 | 0.55 | |
| Lamprogrammus exultus | 0.86 | 9 | 0.46 | |
| Apristurus sp. | 0.75 | 2 | 0.40 | |
| Plesiopeana edwardsianus | 0.63 | 41 | 0.33 | |
| Aristeus varidens, male | 0.63 | 81 | 0.33 | 7775 |
| Aristeus varidens, female | 0.59 | 32 | 0.31 | 7776 |
| MYCTOPHIDAE | 0.59 | 320 | 0.31 | |
| Unidentified fish | 0.53 | 2 | 0.28 | |
| Cataetyx laticeps | 0.23 | 18 | 0.12 | |
| Bathypterois sp. | 0.09 | 14 | 0.05 | |
| Tripliphos hemingi | 0.05 | 14 | 0.03 | |
| Total | 189.01 | | 100.03 | |

PROJECT STATION:3685
 DATE:10/ 4/05 GEAR TYPE: ET No:16 POSITION:Lat S 932
 start stop duration Long E 1251
 TIME :05:36:23 06:06:02 30 (min) Purpose code: 3
 LOG :8263.17 8264.73 1.55 Area code : 2
 FDEPTH: 115 112 GearCond.code:
 BDEPTH: 115 112 Validity code:
 Towing dir: 340ø Wire out: 360 m Speed: 30 kn*10
 Sorted: 216 Kg Total catch: 216.05 CATCH/HOUR: 432.10

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Selene dorsalis | 159.68 | 444 | 39.27 | |
| Brachydeuterus auritus | 96.52 | 550 | 22.34 | |
| Brotula barbata | 37.20 | 52 | 8.61 | |
| Pterothrissus bellotti | 20.56 | 126 | 4.76 | |
| Zeus faber | 20.08 | 86 | 4.65 | |
| Trichurus lepturus | 14.96 | 32 | 3.46 | |
| Trigla lyra | 10.20 | 68 | 2.36 | |
| Citharus linguatula | 9.12 | 150 | 2.11 | |
| Sepia officinalis hierredda | 6.78 | 12 | 1.57 | |
| Uranoscopus albesca | 5.80 | 52 | 1.34 | |
| Illex coindetii | 5.60 | 148 | 1.30 | |
| Umbrina canariensis | 5.36 | 10 | 1.24 | |
| Squatina aculeata | 5.28 | 4 | 1.22 | |
| Bembrops heterurus | 4.46 | 48 | 1.03 | |
| Dentex angolensis | 4.20 | 28 | 0.97 | 7777 |
| Atractoscion aequidens | 3.56 | 2 | 0.82 | |
| Torpedo torpedo | 3.18 | 8 | 0.74 | |
| Saurida brasiliensis | 2.68 | 376 | 0.62 | |
| Trigla sp. | 1.46 | 6 | 0.34 | |
| Scorpaena normani | 1.46 | 8 | 0.34 | |
| Sepia orbignyana | 1.28 | 12 | 0.30 | |
| Parapenaeus longirostris, male | 0.88 | 28 | 0.20 | |
| Bathypterois sp. | 0.46 | 2 | 0.11 | |
| Arnoglossus sp. | 0.46 | 2 | 0.11 | |
| Parapenaeus longirostris, fem. | 0.46 | 2 | 0.11 | |
| COBIIDAE | 0.20 | 14 | 0.05 | |
| Dentex congoensis | 0.10 | 2 | 0.02 | |
| Boops boops | 0.08 | 2 | 0.02 | |
| Lophiodes kempi | 0.04 | 2 | 0.01 | |
| Total | 432.10 | | 100.02 | |

PROJECT STATION:3683
 DATE: 9/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 941
 start stop duration Long E 1237
 TIME :19:00:39 19:30:17 30 (min) Purpose code: 3
 LOG :8227.60 8229.02 1.42 Area code : 2
 FDEPTH: 766 764 GearCond.code:
 BDEPTH: 766 764 Validity code:
 Towing dir: 355ø Wire out:1600 m Speed: 30 kn*10
 Sorted: 46 Kg Total catch: 291.34 CATCH/HOUR: 582.68

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| PAGURIDAE | 236.88 | 3312 | 40.65 | |
| Talismania oregonia | 72.36 | 900 | 12.42 | |
| Sterocnastis sp. | 48.06 | 3024 | 8.25 | |
| Hoplostethus atlanticus | 38.34 | 180 | 6.58 | |
| Nezumia sp. | 28.08 | 756 | 4.82 | |
| Yarrella blackfordi | 21.78 | 432 | 3.74 | |
| Merluccius polli | 20.12 | 28 | 3.45 | 7774 |
| Dibranchius sp. | 16.92 | 558 | 2.90 | |
| Synphobranchius kaupii | 15.12 | 324 | 2.59 | |
| Ebinania costaeanarie | 12.96 | 18 | 2.22 | |
| Halosaurus ovenii | 9.54 | 666 | 1.64 | |
| Aristeus varidens, female | 9.36 | 450 | 1.61 | 7773 |
| GALATHEIDAE * | 7.20 | 5166 | 1.24 | |
| Dicrolene intronigra | 5.22 | 234 | 0.90 | |
| C R U S T A C E A N S | 4.68 | 234 | 0.80 | |
| Melanostomias sp. | 4.32 | 72 | 0.74 | |
| Chaceon maritae, male | 3.88 | 20 | 0.67 | |
| OPHIDIIDAE | 2.88 | 378 | 0.49 | |
| Gadella maraldi | 2.88 | 18 | 0.49 | |
| Bathyroconger vicinus | 2.88 | 288 | 0.49 | |
| Chaceon maritae, female | 2.88 | 20 | 0.49 | |
| Hoplostethus cadenati | 1.98 | 36 | 0.34 | |
| UNIDENTIFIED FISH | 1.80 | 72 | 0.31 | |
| Aristeus varidens, male | 1.62 | 252 | 0.28 | 7772 |
| Lamprogrammus exultus | 1.62 | 72 | 0.28 | |
| Scymnodon obscurus | 1.60 | 16 | 0.27 | |
| Lophiodes kempi | 1.26 | 18 | 0.22 | |
| Bathypterois sp. | 1.08 | 162 | 0.19 | |
| Bathyraya sp. | 0.90 | 18 | 0.15 | |
| Tripliphos hemingi | 0.90 | 288 | 0.15 | |
| MYCTOPHIDAE | 0.90 | 900 | 0.15 | |
| Leptoderma sp. | 0.72 | 414 | 0.12 | |
| Heterocarpus ensifer | 0.54 | 18 | 0.09 | |
| S H R I M P S | 0.54 | 18 | 0.09 | |
| Avocettina aculeiceps | 0.54 | 126 | 0.09 | |
| Cataetyx laticeps | 0.36 | 90 | 0.06 | |
| Total | 582.68 | | 99.97 | |

PROJECT STATION:3686
 DATE:10/ 4/05 GEAR TYPE: ET No:16 POSITION:Lat S 931
 start stop duration Long E 1256
 TIME :07:24:05 07:54:03 30 (min) Purpose code: 3
 LOG :8272.55 8274.05 1.50 Area code : 2
 FDEPTH: 91 90 GearCond.code:
 BDEPTH: 91 90 Validity code:
 Towing dir: 330ø Wire out: 270 m Speed: 30 kn*10
 Sorted: 130 Kg Total catch: 1102.57 CATCH/HOUR: 2205.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 1692.18 | 32436 | 76.74 | |
| Pagellus bellottii | 133.62 | 680 | 6.06 | 7778 |
| Trachurus trecae | 88.40 | 1530 | 4.01 | |
| Brotula barbata | 63.40 | 68 | 2.88 | |
| Dentex barnardi | 54.40 | 120 | 2.47 | |
| Raja miraletus | 30.08 | 34 | 1.36 | |
| Octopus vulgaris | 18.70 | 18 | 0.85 | |
| Atractoscion aequidens | 18.70 | 34 | 0.85 | |
| Dentex angolensis | 18.02 | 170 | 0.82 | 7779 |
| Decapterus rhonchus | 12.92 | 18 | 0.59 | |
| Priacanthus arenatus | 9.18 | 18 | 0.42 | |
| Trigla sp. | 8.32 | 34 | 0.38 | |
| Citharus linguatula | 7.30 | 140 | 0.33 | |
| Umbrina canariensis | 6.96 | 34 | 0.32 | |
| Trichurus lepturus | 6.28 | 18 | 0.28 | |
| Chaetodon hoefleri | 5.78 | 34 | 0.26 | |
| Zeus faber | 5.28 | 18 | 0.24 | |
| C E P H A L O P O D A | 4.42 | 1174 | 0.20 | |
| Pterothrissus bellotti | 4.08 | 18 | 0.19 | |
| Sepia orbignyana | 3.92 | 52 | 0.18 | |
| Saurida brasiliensis | 2.88 | 476 | 0.13 | |
| Scorpaenopsis japonicus | 2.72 | 18 | 0.12 | |
| Torpedo torpedo | 2.72 | 18 | 0.12 | |
| Epinephelus guaza ? | 1.82 | 2 | 0.08 | |
| Illex coindetii | 1.70 | 18 | 0.08 | |
| Antennarius sp. | 1.36 | 136 | 0.06 | |
| Total | 2205.14 | | 100.02 | |

PROJECT STATION:3687
DATE:10/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 929
start stop duration Long E 1300
TIME :08:58:17 09:28:02 30 (min) Purpose code: 3
LOG :8280.61 8282.13 1.60 Area code : 2
FDEPTH: 51 50 GearCond.code:
BDEPTH: 51 50 Validity code:
Towing dir: 345ø Wire out: 150 m Speed: 30 kn*10

Sorted: 69 Kg Total catch: 69.90 CATCH/HOUR: 139.80

| SPECIES | weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|--------------------------------|--------|--------------------|-------------|------|
| ECHENEIDIDAE | 25.28 | 1904 | 18.08 | |
| Rhinobatos albomaculatus | 20.80 | 10 | 14.88 | |
| Raja miraletus | 18.34 | 42 | 13.12 | |
| Sepia officinalis hierredda | 14.10 | 18 | 10.09 | |
| Epinephelus aeneus | 13.68 | 4 | 9.79 | |
| C E P H A L O P O D A | 10.94 | 3212 | 7.83 | |
| Pagellus bellottii | 10.20 | 84 | 7.30 | 7781 |
| UNIDENTIFIED FISH | 4.02 | 334 | 2.88 | |
| Aluterus scriptus | 3.04 | 4 | 2.17 | |
| Bembrops greyi | 2.94 | 72 | 2.10 | |
| Dentex barnardi | 2.60 | 2 | 1.86 | |
| Pomadasy incisus | 2.56 | 26 | 1.83 | |
| Brachydeuterus auritus | 1.68 | 14 | 1.20 | |
| Fistularia petimba | 1.52 | 4 | 1.09 | |
| Cynoglossus canariensis | 1.34 | 4 | 0.96 | |
| Chilomycterus spinosus mauret. | 1.16 | 6 | 0.83 | |
| Sphyræna guachancho | 1.16 | 4 | 0.83 | |
| Citharus linguatula | 1.06 | 70 | 0.76 | |
| Trigla lyra | 0.98 | 6 | 0.70 | |
| Pseudupeneus prayensis | 0.80 | 4 | 0.57 | |
| Monolene microstoma | 0.46 | 56 | 0.33 | |
| Chilomycterus sp. | 0.42 | 2 | 0.30 | |
| Serranus accraensis | 0.40 | 14 | 0.29 | |
| Sepia orbignyana | 0.22 | 2 | 0.16 | |
| Saurida brasiliensis | 0.10 | 20 | 0.07 | |
| Total | 139.80 | | 100.02 | |

PROJECT STATION:3688
DATE:10/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 927
start stop duration Long E 1304
TIME :10:28:40 10:58:36 30 (min) Purpose code: 3
LOG :8289.34 8289.85 1.50 Area code : 2
FDEPTH: 25 25 GearCond.code:
BDEPTH: 25 25 Validity code:
Towing dir: 335ø Wire out: 130 m Speed: 30 kn*10

Sorted: 213 Kg Total catch: 213.02 CATCH/HOUR: 426.04

| SPECIES | weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|-------------------------------|--------|--------------------|-------------|------|
| Alectis alexandrinus | 166.44 | 250 | 39.07 | |
| Acanthurus monroviae | 56.68 | 82 | 13.30 | |
| Bodianus speciosus | 32.68 | 22 | 7.67 | |
| Mycteroperca rubra | 27.88 | 2 | 6.54 | |
| Dentex barnardi | 21.32 | 74 | 5.00 | 7782 |
| Zenopsis conchifer | 20.52 | 30 | 4.82 | |
| Sparus pagrus africanus * | 18.44 | 70 | 4.33 | |
| Pomadasy rogeri | 16.68 | 16 | 3.92 | |
| Dentex gibbosus | 8.38 | 8 | 1.97 | |
| Scorpaenurus tritor | 6.88 | 6 | 1.61 | |
| Mycteroperca rubra | 5.88 | 4 | 1.38 | |
| Sparus auriga * | 4.40 | 2 | 1.03 | |
| Lagocephalus laevigatus | 3.60 | 6 | 0.84 | |
| Muraenesox bagio | 3.56 | 2 | 0.84 | |
| Sphyræna guachancho | 3.44 | 4 | 0.81 | |
| Raja miraletus | 3.10 | 10 | 0.73 | |
| Lutjanus fulgens | 2.70 | 4 | 0.63 | |
| Caranx hippos | 2.50 | 4 | 0.59 | |
| Dasyatis marmorata | 2.50 | 2 | 0.59 | |
| Trachinotus goreensis | 1.78 | 4 | 0.42 | |
| Cephalopholis taeniceps | 1.64 | 4 | 0.38 | |
| Electrorhynchus mediterraneus | 1.60 | 4 | 0.38 | |
| Chaetodon hoefleri | 1.52 | 18 | 0.36 | |
| Caranx crysos | 1.50 | 2 | 0.35 | |
| Diplodus cervinus cervinus | 1.32 | 2 | 0.31 | |
| Fistularia petimba | 1.16 | 6 | 0.27 | |
| Caranx senegalus | 1.10 | 2 | 0.26 | |
| Pomadasy incisus | 1.06 | 6 | 0.25 | |
| Pseudupeneus prayensis | 1.00 | 10 | 0.23 | |
| Fistularia tabacaria | 0.92 | 2 | 0.22 | |
| Lehrinus atlanticus | 0.84 | 2 | 0.20 | |
| Octopus vulgaris | 0.70 | 2 | 0.16 | |
| Citharus linguatula | 0.56 | 4 | 0.13 | |
| Bodianus speciosus | 0.56 | 4 | 0.13 | |
| Scorpaena stephanica | 0.44 | 12 | 0.10 | |
| Rypticus saponaceus | 0.38 | 6 | 0.09 | |
| Trachinus araneus | 0.36 | 2 | 0.08 | |
| Penaeus notialis | 0.02 | 2 | | |
| Total | 426.04 | | 99.99 | |

PROJECT STATION:3689
DATE:10/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 916
start stop duration Long E 1258
TIME :12:20:35 12:50:31 30 (min) Purpose code: 3
LOG :8300.75 8302.34 1.57 Area code : 2
FDEPTH: 27 23 GearCond.code:
BDEPTH: 27 23 Validity code:
Towing dir: 340ø Wire out: 130 m Speed: 30 kn*10

Sorted: 58 Kg Total catch: 57.24 CATCH/HOUR: 114.48

| SPECIES | weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---------------------------|--------|--------------------|-------------|------|
| Alectis alexandrinus | 35.60 | 92 | 31.10 | |
| Stromateus fiatola | 20.40 | 28 | 17.82 | |
| Sardinella maderensis | 17.08 | 180 | 14.92 | |
| Pagellus bellottii | 7.64 | 34 | 6.67 | 7783 |
| Ephippion tuffler | 5.52 | 2 | 4.82 | |
| Acanthurus monroviae | 4.84 | 6 | 4.23 | |
| Rhinobatos albomaculatus | 4.22 | 4 | 3.69 | |
| Cynoglossus canariensis | 2.32 | 16 | 2.03 | |
| Lagocephalus lunaris | 2.18 | 8 | 1.90 | |
| Raja miraletus | 2.04 | 4 | 1.78 | |
| Arius parkii | 1.88 | 6 | 1.64 | |
| Epinephelus aeneus | 1.78 | 6 | 1.55 | |
| Caranx crysos | 1.54 | 2 | 1.35 | |
| Portunus validus | 1.04 | 4 | 0.91 | |
| Citharus linguatula | 0.72 | 6 | 0.63 | |
| Rypticus saponaceus | 0.70 | 6 | 0.61 | |
| Scorpaena stephanica | 0.70 | 6 | 0.61 | |
| Sphyræna sphyraena | 0.66 | 2 | 0.58 | |
| Pseudupeneus prayensis | 0.56 | 6 | 0.49 | |
| Dasyatis margarita | 0.54 | 2 | 0.47 | |
| Bembrops greyi | 0.52 | 8 | 0.45 | |
| Torpedo marmorata | 0.48 | 2 | 0.42 | |
| Penaeus notialis | 0.48 | 16 | 0.42 | |
| Brachydeuterus auritus | 0.44 | 6 | 0.38 | |
| Calappa sp. | 0.28 | 2 | 0.24 | |
| Eucinostomus melanopterus | 0.28 | 2 | 0.24 | |
| Torpedo torpedo | 0.04 | 2 | 0.03 | |
| Total | 114.48 | | 99.98 | |

PROJECT STATION:3690
DATE:10/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 914
start stop duration Long E 1251
TIME :14:01:46 14:31:47 30 (min) Purpose code: 3
LOG :8309.72 8311.30 1.57 Area code : 2
FDEPTH: 74 62 GearCond.code:
BDEPTH: 74 62 Validity code:
Towing dir: 340ø Wire out: 225 m Speed: 31 kn*10

Sorted: 90 Kg Total catch: 90.89 CATCH/HOUR: 181.78

| SPECIES | weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|--------------------------------|--------|--------------------|-------------|------|
| Brachydeuterus auritus | 41.72 | 3566 | 22.95 | |
| Selene dorsalis | 18.56 | 130 | 10.21 | |
| Citharus linguatula | 18.32 | 360 | 10.08 | |
| Raja miraletus | 15.32 | 20 | 8.43 | |
| Umbrina canariensis | 15.16 | 134 | 8.34 | |
| Trachurus trerca, juvenile | 11.28 | 262 | 6.21 | 7786 |
| Arius parkii | 10.82 | 4 | 5.95 | |
| Trichurus lepturus | 8.00 | 50 | 4.40 | |
| Torpedo torpedo | 5.84 | 14 | 3.21 | |
| Octopus vulgaris | 5.52 | 4 | 3.04 | |
| Nematocarcinus africanus | 5.32 | 2094 | 2.93 | |
| Brotula barbata | 4.94 | 14 | 2.72 | |
| Sepia officinalis hierredda | 4.74 | 8 | 2.61 | |
| Pagellus bellottii | 3.32 | 34 | 1.83 | |
| Sphyræna sphyraena | 2.74 | 10 | 1.51 | |
| Zeus faber | 2.04 | 6 | 1.12 | |
| Saurida brasiliensis | 1.74 | 16 | 0.96 | |
| Microchirus frechkopi | 1.28 | 26 | 0.70 | |
| Pterothrissus belloci | 0.92 | 8 | 0.51 | |
| Sardinella maderensis | 0.52 | 6 | 0.29 | |
| Scomber japonicus | 0.36 | 2 | 0.20 | |
| Pentheroscion mbizi | 0.32 | 2 | 0.18 | |
| Gobiidae | 0.24 | 130 | 0.13 | |
| Darapanaeus longirostris, male | 0.24 | 78 | 0.13 | 7784 |
| Pseudupeneus prayensis | 0.18 | 4 | 0.10 | |
| Bembrops greyi | 0.16 | 6 | 0.09 | |
| Parapanaeus longirostris, fem. | 0.12 | 46 | 0.07 | 7785 |
| SEAHORSES | 0.02 | 2 | 0.01 | |
| Total | 181.78 | | 100.03 | |

PROJECT STATION:3691
DATE:10/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 914
start stop duration Long E 1247
TIME :15:27:09 15:56:34 29 (min) Purpose code: 3
LOG :8316.43 8317.94 1.51 Area code : 2
FDEPTH: 114 116 GearCond.code:
BDEPTH: 114 116 Validity code:
Towing dir: 175ø Wire out: 300 m Speed: 31 kn*10

Sorted: 229 Kg Total catch: 229.63 CATCH/HOUR: 475.10

| SPECIES | weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|----------------------------|--------|--------------------|-------------|------|
| Trichurus lepturus | 364.34 | 1332 | 76.69 | |
| Chelidonicichthys capensis | 22.51 | 166 | 4.74 | |
| Zeus faber | 16.78 | 62 | 3.53 | |
| Loligo vulgaris | 15.39 | 1231 | 3.24 | |
| Raja miraletus | 11.23 | 14 | 2.36 | |
| Raja clavata | 9.48 | 4 | 2.00 | |
| Dentex angolensis | 8.83 | 41 | 1.86 | 7787 |
| Pterothrissus belloci | 6.95 | 48 | 1.46 | |
| Zenopsis conchifer | 4.74 | 6 | 1.00 | |
| Saurida brasiliensis | 3.25 | 567 | 0.68 | |
| Scorpaena angolensis | 3.14 | 6 | 0.66 | |
| Octopus vulgaris | 2.19 | 2 | 0.46 | |
| Brotula barbata | 2.01 | 4 | 0.42 | |
| Citharus linguatula | 1.47 | 31 | 0.31 | |
| Bembrops greyi | 1.03 | 8 | 0.22 | |
| Uranoscopus cadonati | 0.87 | 4 | 0.18 | |
| Monolene microstoma | 0.52 | 19 | 0.11 | |
| Pontinus accraensis | 0.33 | 2 | 0.07 | |
| Microchirus frechkopi | 0.02 | 2 | | |
| Total | 475.08 | | 99.99 | |

PROJECT STATION:3692
DATE:10/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 912
start stop duration Long E 1242
TIME :16:58:13 17:27:44 30 (min) Purpose code: 3
LOG :8325.51 8326.98 1.46 Area code : 2
FDEPTH: 260 259 GearCond.code:
BDEPTH: 260 259 Validity code:
Towing dir: 27ø Wire out: 700 m Speed: 30 kn*10

Sorted: 174 Kg Total catch: 454.01 CATCH/HOUR: 908.02

| SPECIES | weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|--------------------------------|--------|--------------------|-------------|------|
| Synagrops microlepis | 474.32 | 34200 | 52.24 | |
| Brotula barbata | 98.56 | 62 | 10.85 | |
| Merluccius polli | 78.54 | 374 | 8.65 | 7788 |
| Dentex angolensis | 43.56 | 106 | 4.80 | 7789 |
| Trichurus lepturus | 32.20 | 52 | 3.55 | |
| Bembrops heterurus | 24.42 | 286 | 2.69 | |
| Dentex macrophtthalmus | 23.96 | 48 | 2.64 | 7790 |
| Parapanaeus longirostris, fem. | 20.68 | 6510 | 2.28 | 7792 |
| Parapanaeus longirostris, male | 20.68 | 7096 | 2.28 | 7791 |
| Gephyrobryx darwini | 16.60 | 34 | 1.83 | |
| Nezumia sp. | 14.96 | 562 | 1.65 | |
| Malacocephalus occidentalis | 13.96 | 110 | 1.54 | |
| Pterothrissus belloci | 10.78 | 250 | 1.19 | |
| Chlorophthalmus atlanticus | 9.56 | 342 | 1.05 | |
| Epigonus telescopus | 6.48 | 44 | 0.71 | |
| Zenopsis conchifer | 5.28 | 12 | 0.58 | |
| Myxistrophis rostellatus | 4.62 | 22 | 0.51 | |
| Raja straeleni | 2.68 | 2 | 0.30 | |
| Pontinus kuhlii | 2.52 | 22 | 0.28 | |
| Miracorvina angolensis | 1.24 | 2 | 0.14 | |
| Syacium micrurus | 1.22 | 44 | 0.13 | |
| Calappa sp. | 0.88 | 22 | 0.10 | |
| Ophiodon sp. | 0.22 | 12 | 0.02 | |
| Solenocera africana | 0.10 | 44 | 0.01 | |
| Total | 908.02 | | 100.02 | |

PROJECT STATION:3693
 DATE:10/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 906
 start stop duration Long E 1241
 TIME :20:01:40 20:31:07 29 (min) Purpose code: 3
 LOG :841.55 8343.04 1.48 Area code : 2
 FDEPTH: 436 432 GearCond.code:
 BDEPTH: 436 432 Validity code:
 Towing dir: 30ø Wire out:1200 m Speed: 30 kn*10

Sorted: 74 Kg Total catch: 313.21 CATCH/HOUR: 648.02

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 280.18 | 1028 | 43.24 | 7796 |
| Nematocarcinus africanus | 145.22 | 39943 | 22.41 | |
| Lophiodes kempi | 42.54 | 48 | 6.56 | |
| Chaunax pictus | 41.59 | 410 | 6.42 | |
| Dibranchius sp. | 26.07 | 1742 | 4.02 | |
| Aristeus varidens, female | 20.83 | 981 | 3.21 | 7795 |
| RHINOCHIMAERIDAE | 15.41 | 2 | 2.38 | |
| Malacocephalus occidentalis | 14.94 | 132 | 2.31 | |
| Laemonema laureysi | 13.32 | 267 | 2.06 | |
| Hymenoccephalus italicus | 8.86 | 1589 | 1.37 | |
| Pterothrissus belloci | 8.09 | 48 | 1.25 | |
| B I V A L V E S | 7.99 | 381 | 1.23 | |
| Aristeus varidens, male | 5.52 | 799 | 0.85 | 7794 |
| Nezumia sp. | 2.75 | 114 | 0.42 | |
| Halosaurus sp. | 2.48 | 143 | 0.38 | |
| Benthodesmus tenuis | 1.90 | 77 | 0.29 | |
| Chlorophthalmus atlanticus | 1.90 | 48 | 0.29 | |
| Peristedion sp. | 1.61 | 228 | 0.25 | |
| Parapeneaus longirostris, fem. | 1.43 | 180 | 0.22 | 7793 |
| Avocetina acuticeps | 1.24 | 10 | 0.19 | |
| Etmopterus polli | 1.03 | 35 | 0.16 | |
| Gadella maraldi | 0.95 | 37 | 0.15 | |
| MYCTOPHIDAE | 0.85 | 656 | 0.13 | |
| Galeus polli | 0.52 | 8 | 0.08 | |
| Nettastoma sp. | 0.29 | 10 | 0.04 | |
| Bathynectes piperitus | 0.29 | 19 | 0.04 | |
| Epigonus sp. | 0.10 | 10 | 0.02 | |
| Xenodermichthys copei | 0.10 | 19 | 0.02 | |
| Total | 648.00 | | 99.99 | |

PROJECT STATION:3695
 DATE:11/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 854
 start stop duration Long E 1259
 TIME :07:13:57 07:44:33 31 (min) Purpose code: 3
 LOG :8403.42 8404.99 1.57 Area code : 3
 FDEPTH: 216 216 GearCond.code:
 BDEPTH: 216 216 Validity code:
 Towing dir: 3ø Wire out: 620 m Speed: 30 kn*10

Sorted: 205 Kg Total catch: 681.08 CATCH/HOUR: 1318.22

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 360.93 | 25485 | 27.38 | |
| G A S T R O P O D S | 231.68 | 55777 | 17.58 | |
| Pterothrissus belloci | 188.83 | 139 | 14.32 | |
| Brotula barbata | 123.91 | 120 | 9.40 | |
| Merluccius polli | 75.60 | 627 | 5.74 | 7801 |
| Bembrops heterurus | 65.32 | 1202 | 4.96 | |
| Trichiurus lepturus | 48.81 | 46 | 3.70 | |
| Dentex angolensis | 48.23 | 172 | 3.66 | 7802 |
| Nezumia sp. | 34.14 | 3223 | 2.59 | |
| Zenopsis canchifer | 26.59 | 50 | 2.02 | |
| Parapeneaus longirostris, fem. | 14.81 | 5243 | 1.12 | 7800 |
| Squatina aculeata | 12.77 | 12 | 0.97 | |
| Bathyrocoenger vicinus | 11.15 | 35 | 0.85 | |
| COBLIDAE | 10.45 | 1707 | 0.79 | |
| Trigla lyra | 9.41 | 52 | 0.71 | |
| Dicologlossa cuneata | 7.66 | 122 | 0.58 | |
| Raja straeleni | 7.32 | 2 | 0.56 | |
| Pontinus accraensis | 6.79 | 35 | 0.52 | |
| Calappa sp. | 5.92 | 105 | 0.45 | |
| Syacium micrurus | 5.57 | 383 | 0.42 | |
| Branchiostegus semifasciatus | 5.07 | 4 | 0.38 | |
| Bathyraya sp. | 4.37 | 4 | 0.33 | |
| Illex coindetii | 3.66 | 52 | 0.28 | |
| Umbrina canariensis | 2.98 | 4 | 0.23 | |
| Zeus faber | 1.88 | 4 | 0.14 | |
| Squilla cadenati | 1.57 | 52 | 0.12 | |
| Gephyroberyx darwini | 1.05 | 35 | 0.08 | |
| Peristedion sp. | 0.70 | 105 | 0.05 | |
| Parapeneaus longirostris, male | 0.52 | 296 | 0.04 | 7799 |
| Chlorophthalmus atlanticus | 0.52 | 70 | 0.04 | |
| Total | 1318.21 | | 100.01 | |

PROJECT STATION:3696
 DATE:11/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 852
 start stop duration Long E 1255
 TIME :09:08:46 09:38:54 30 (min) Purpose code: 3
 LOG :8411.78 8413.20 1.41 Area code : 3
 FDEPTH: 312 309 GearCond.code:
 BDEPTH: 312 309 Validity code:
 Towing dir: 20ø Wire out: 920 m Speed: 20 kn*10

Sorted: 127 Kg Total catch: 666.60 CATCH/HOUR: 1333.20

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 478.90 | 32260 | 35.92 | |
| Merluccius polli | 469.12 | 3708 | 35.19 | 7803 |
| Chlorophthalmus atlanticus | 208.56 | 4040 | 15.64 | |
| Laemonema laureysi | 38.42 | 486 | 2.88 | |
| Zeus faber | 20.44 | 22 | 1.53 | |
| Parapeneaus longirostris, fem. | 19.00 | 766 | 1.43 | 7805 |
| Parapeneaus longirostris, male | 13.06 | 528 | 0.98 | 7804 |
| Scorpaena normani | 12.68 | 92 | 0.95 | |
| Centroprorus granulatus | 12.52 | 2 | 0.94 | |
| Trichiurus lepturus | 7.92 | 8 | 0.59 | |
| Gadella maraldi | 7.78 | 304 | 0.58 | |
| Helicolenus dactylopterus | 6.22 | 6 | 0.54 | |
| Bathyrocoenger vicinus | 7.74 | 118 | 0.51 | |
| Nezumia sp. | 5.80 | 146 | 0.44 | |
| Epigonus telescopus | 5.42 | 40 | 0.41 | |
| Heptranchias perlo | 5.04 | 2 | 0.38 | |
| Neomerinthe folgori | 4.68 | 4 | 0.35 | |
| Bembrops heterurus | 2.90 | 80 | 0.22 | |
| Scyllorhinus canicula | 2.28 | 2 | 0.17 | |
| Raja straeleni | 1.66 | 2 | 0.12 | |
| Gephyroberyx darwini | 1.60 | 4 | 0.12 | |
| Malacocephalus laevis | 1.06 | 26 | 0.08 | |
| MYCTOPHIDAE | 0.40 | 370 | 0.03 | |
| Total | 1333.20 | | 100.00 | |

PROJECT STATION:3694
 DATE:10/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 905
 start stop duration Long E 1237
 TIME :22:39:00 23:08:50 30 (min) Purpose code: 3
 LOG :8352.04 8353.52 1.49 Area code : 2
 FDEPTH: 727 734 GearCond.code:
 BDEPTH: 727 734 Validity code:
 Towing dir: 30ø Wire out:1750 m Speed: 30 kn*10

Sorted: 46 Kg Total catch: 103.62 CATCH/HOUR: 207.24

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Yarellia blackfordi | 50.60 | 1156 | 24.42 | |
| ALEPOCEPHALIDAE | 18.56 | 366 | 8.96 | |
| Lamprogrammus exultus | 14.16 | 26 | 6.83 | |
| L O B S T E R S | 14.06 | 696 | 6.78 | |
| Nematocarcinus africanus | 12.40 | 2840 | 5.98 | |
| Merluccius polli | 11.20 | 16 | 5.40 | |
| Nezumia microrychodon | 9.60 | 220 | 4.63 | |
| Aristeus varidens, female | 9.50 | 456 | 4.58 | 7798 |
| Lophius vomerinus | 8.26 | 16 | 3.99 | |
| Dibranchius atlanticus | 7.80 | 476 | 3.76 | |
| OMMASTREPHIDAE | 7.20 | 26 | 3.47 | |
| Scymnodon obovatus | 6.80 | 16 | 3.28 | |
| Triplophos hemingi | 6.60 | 730 | 3.18 | |
| Raja confundens | 5.40 | 10 | 2.61 | |
| Ebinania costae-canarie | 4.96 | 6 | 2.39 | |
| Chaceon maritae, male | 3.46 | 6 | 1.67 | |
| Stomias boa boa | 2.76 | 60 | 1.33 | |
| Hoplostethus cadenati | 2.66 | 30 | 1.28 | |
| Aristeus varidens, male | 1.90 | 330 | 0.92 | 7797 |
| Malacocephalus occidentalis | 1.70 | 20 | 0.82 | |
| Chaceon maritae, female | 1.40 | 6 | 0.68 | |
| Conger conger | 1.06 | 16 | 0.51 | |
| Nezumia sp. | 0.96 | 20 | 0.46 | |
| Xenodermichthys copei | 0.90 | 60 | 0.43 | |
| Plesionotus edwardsianus | 0.66 | 56 | 0.32 | |
| Dicrolene intronigra | 0.36 | 30 | 0.17 | |
| Synaphobranchius kaupii | 0.36 | 10 | 0.17 | |
| Acanthephyra sp. | 0.30 | 76 | 0.14 | |
| Glyphus marsupialis | 0.30 | 20 | 0.14 | |
| NEPHROPHIDAE | 0.26 | 30 | 0.13 | |
| Peristedion cataphractum | 0.26 | 36 | 0.13 | |
| Nephropsis atlantica | 0.16 | 10 | 0.08 | |
| Nemichthys curvirostris | 0.16 | 6 | 0.08 | |
| Halosaurus ovenii | 0.16 | 6 | 0.08 | |
| GALATHEIDAE * | 0.16 | 86 | 0.08 | |
| Symphurus sp. | 0.10 | 16 | 0.05 | |
| Heterocarpus grimaldii | 0.10 | 6 | 0.05 | |
| Bathypterois sp. | 0.06 | 16 | 0.03 | |
| Total | 207.30 | | 100.01 | |

PROJECT STATION:3697
 DATE:11/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 850
 start stop duration Long E 1250
 TIME :11:46:15 12:16:28 30 (min) Purpose code: 3
 LOG :8425.03 8426.57 1.54 Area code : 3
 FDEPTH: 479 474 GearCond.code:
 BDEPTH: 479 474 Validity code:
 Towing dir: 185ø Wire out:1200 m Speed: 30 kn*10

Sorted: 331 Kg Total catch: 480.43 CATCH/HOUR: 960.86

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 389.88 | 980 | 40.58 | 7808 |
| Nematocarcinus africanus | 184.20 | 312 | 19.17 | |
| Centroprorus granulatus | 140.00 | 40 | 14.57 | |
| Yarellia blackfordi | 52.80 | 2112 | 5.50 | |
| Hymenoccephalus italicus | 34.32 | 6792 | 3.57 | |
| Neoharriotta pinnata | 27.40 | 2 | 2.85 | |
| Aristeus varidens, female | 27.12 | 1440 | 2.82 | 7807 |
| Lophiodes kempi | 26.26 | 10 | 2.73 | |
| Alepocephalus sp. | 18.72 | 108 | 1.95 | |
| Trichiurus lepturus | 15.20 | 16 | 1.58 | |
| Chaunax pictus | 7.32 | 120 | 0.76 | |
| Aristeus varidens, male | 6.84 | 792 | 0.71 | 7806 |
| L O B S T E R S | 5.88 | 636 | 0.61 | |
| Galeus polli | 4.00 | 200 | 0.42 | |
| Halosaurus ovenii | 3.48 | 216 | 0.36 | |
| Lamprogrammus exultus | 3.24 | 12 | 0.34 | |
| Gadella maraldi | 2.88 | 252 | 0.30 | |
| Chlorophthalmus atlanticus | 2.52 | 72 | 0.26 | |
| Triplophos hemingi | 2.16 | 504 | 0.22 | |
| ARISTEIDAE | 2.04 | 36 | 0.21 | |
| Coelorrhinus coelorrhinus | 1.56 | 36 | 0.16 | |
| Etmopterus polli | 1.00 | 100 | 0.10 | |
| Stomias boa boa | 0.72 | 12 | 0.07 | |
| SERGESTIDAE | 0.48 | 72 | 0.05 | |
| Dibranchius sp. | 0.36 | 24 | 0.04 | |
| Bembrops greyi | 0.24 | 12 | 0.02 | |
| Lepidopus caudatus | 0.24 | 96 | 0.02 | |
| Total | 960.86 | | 99.97 | |

PROJECT STATION: 1698
 DATE: 11/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 848 Long E 1247
 start stop duration
 TIME : 14:46:10 15:17:29 31 (min) Purpose code: 3
 LOC : 8437.32 8438.98 1.65 Area code : 3
 FDEPTH: 666 662 GearCond.code:
 BDEPTH: 666 662 Validity code:
 Towing dir: 180° Wire out: 1650 m Speed: 300 kn*10

Sorted: 76 Kg Total catch: 201.26 CATCH/HOUR: 389.54

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 121.01 | 27517 | 31.06 | |
| Lamprogrammus exutus | 77.52 | 174 | 19.90 | |
| Yarella blackfordi | 33.50 | 685 | 8.60 | |
| Hoplostethus cadenati | 23.63 | 1562 | 6.07 | |
| L O B S T E R S | 20.26 | 296 | 5.20 | |
| Merluccius polli | 17.07 | 29 | 4.38 | 7811 |
| Lithodes ferox | 16.03 | 12 | 4.12 | |
| Aristeus varidens, female | 12.48 | 633 | 3.20 | 7810 |
| Nezumia sp. | 11.38 | 232 | 2.92 | |
| Bajaalifornia nagalops | 9.17 | 244 | 2.35 | |
| Lophodes kemp | 6.97 | 12 | 1.79 | |
| Psenes sp. | 6.79 | 12 | 1.74 | |
| Chaceon maritae | 5.67 | 12 | 1.46 | |
| Gadella imberbis | 4.99 | 197 | 1.28 | |
| Scymnodon obscurus | 4.53 | 35 | 1.16 | |
| Triplophos hemingi | 3.14 | 401 | 0.81 | |
| Halosaurus oventi | 3.02 | 67 | 0.78 | |
| Aristeus varidens, male | 2.38 | 395 | 0.61 | 7809 |
| Illex coindetii | 2.09 | 5 | 0.54 | |
| Etmopterus polli | 1.16 | 4 | 0.30 | |
| Synphobranchus kaupii | 1.15 | 29 | 0.30 | |
| Dicrolene intronigra | 0.99 | 163 | 0.25 | |
| Bathyrcoconger vicinus | 0.87 | 35 | 0.22 | |
| Dibranchus sp. | 0.87 | 35 | 0.22 | |
| Chaulichthys sicani | 0.41 | 6 | 0.11 | |
| Schedophilus huttoni | 0.41 | 12 | 0.11 | |
| S H R I M P S | 0.35 | 81 | 0.09 | |
| Cataetx laticeps | 0.35 | 17 | 0.09 | |
| Alepocephalus sp. | 0.29 | 12 | 0.07 | |
| Malaccocephalus occidentalis | 0.29 | 6 | 0.07 | |
| Glyphus marsupialis | 0.23 | 6 | 0.06 | |
| Xenodermichthys copei | 0.23 | 17 | 0.06 | |
| Melanostomias sp. | 0.17 | 6 | 0.04 | |
| Bathynectes piperitus | 0.05 | 6 | 0.02 | |
| Avocettina acuticeps | 0.05 | 12 | 0.02 | |
| Total | 389.53 | | 100.00 | |

PROJECT STATION: 3700
 DATE: 11/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 835 Long E 1251
 start stop duration
 TIME : 20:04:28 20:34:02 30 (min) Purpose code: 3
 LOC : 8464.68 8466.16 1.47 Area code : 3
 FDEPTH: 548 526 GearCond.code:
 BDEPTH: 548 526 Validity code:
 Towing dir: 160° Wire out: 1500 m Speed: 30 kn*10

Sorted: 66 Kg Total catch: 195.73 CATCH/HOUR: 391.46

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 198.80 | 67824 | 50.78 | |
| Yarella blackfordi | 78.40 | 2346 | 20.03 | |
| Hoplostethus cadenati | 15.40 | 526 | 3.93 | |
| Lophodes kemp | 15.20 | 8 | 3.88 | |
| Aristeus varidens, female | 14.35 | 770 | 3.67 | 7816 |
| Merluccius polli | 10.40 | 20 | 2.66 | 7817 |
| Diplophos sp. | 10.36 | 1358 | 2.65 | |
| Stereocastis sp. | 8.26 | 1092 | 2.11 | |
| Aristeus varidens, male | 4.84 | 638 | 1.24 | 7815 |
| Melanostomias sp. | 4.34 | 120 | 1.11 | |
| Illex coindetii | 3.72 | 22 | 0.95 | |
| Gadella maraldi | 2.94 | 98 | 0.75 | |
| Nezumia sp. | 2.46 | 196 | 0.63 | |
| Malaccocephalus occidentalis | 2.32 | 28 | 0.59 | |
| Benthodesmus tenuis | 2.10 | 70 | 0.54 | |
| Dicrolene intronigra | 1.62 | 266 | 0.41 | |
| C E P H A L O P O D A | 1.54 | 8 | 0.39 | |
| Lamprogrammus exutus | 1.54 | 120 | 0.39 | |
| Bathynectes piperitus | 1.34 | 14 | 0.34 | |
| Laemonema laureysi | 1.26 | 70 | 0.32 | |
| Chaceon maritae, male | 1.10 | 2 | 0.28 | |
| Chlorophthalmus atlanticus | 1.05 | 14 | 0.27 | |
| Chaunax pictus | 1.05 | 14 | 0.27 | |
| Xenodermichthys copei | 0.98 | 92 | 0.25 | |
| Dibranchus sp. | 0.98 | 84 | 0.25 | |
| Bathyraxa sp. | 0.92 | 4 | 0.24 | |
| Chaceon maritae, female | 0.86 | 4 | 0.22 | |
| Trichiurus lepturus | 0.84 | 22 | 0.21 | |
| Bathyrcoconger vicinus | 0.78 | 70 | 0.20 | |
| Etmopterus polli | 0.62 | 14 | 0.16 | |
| S H R I M P S | 0.42 | 36 | 0.11 | |
| Cataetx laticeps | 0.28 | 64 | 0.07 | |
| Halosaurus oventi | 0.22 | 22 | 0.06 | |
| UNIDENTIFIED FISH | 0.14 | 8 | 0.04 | |
| Total | 391.46 | | 100.00 | |

PROJECT STATION: 3701
 DATE: 11/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 835 Long E 1250
 start stop duration
 TIME : 22:23:39 22:53:08 29 (min) Purpose code: 3
 LOC : 8470.84 8472.29 1.44 Area code : 3
 FDEPTH: 702 696 GearCond.code:
 BDEPTH: 702 696 Validity code:
 Towing dir: 340° Wire out: 1750 m Speed: 30 kn*10

Sorted: 86 Kg Total catch: 195.08 CATCH/HOUR: 403.61

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 149.23 | 37754 | 36.97 | |
| Hoplostethus cadenati | 131.63 | 3617 | 32.61 | |
| L O B S T E R S | 27.89 | 2003 | 6.91 | |
| ALEPOCEPHALIDAE | 20.75 | 205 | 5.14 | |
| Yarella blackfordi | 20.65 | 542 | 5.12 | |
| Chaceon maritae, male | 12.95 | 33 | 3.21 | |
| Aristeus varidens, female | 5.28 | 275 | 1.31 | 7819 |
| Lamprogrammus exutus | 5.19 | 14 | 1.29 | |
| Merluccius polli | 5.09 | 10 | 1.26 | |
| Nezumia micronychodon | 3.23 | 85 | 0.80 | |
| REGALECIDAE | 3.21 | 2 | 0.80 | |
| Triplophos hemingi | 3.14 | 399 | 0.78 | |
| Gadella imberbis | 2.71 | 176 | 0.67 | |
| Stomias boa boa | 1.80 | 58 | 0.45 | |
| Aristeus varidens, male | 1.68 | 190 | 0.42 | 7818 |
| Scymnodon obscurus | 1.66 | 6 | 0.41 | |
| Raja confundens | 1.53 | 10 | 0.38 | |
| Conger conger | 1.24 | 19 | 0.31 | |
| Dibranchus atlanticus | 1.14 | 85 | 0.28 | |
| Ethinania cottaecanarie | 0.66 | 10 | 0.16 | |
| Halosaurus oventi | 0.58 | 10 | 0.14 | |
| Plesionopeus edwardsianus | 0.48 | 19 | 0.12 | |
| Lophodes kemp | 0.43 | 4 | 0.11 | |
| Xenodermichthys copei | 0.37 | 29 | 0.09 | |
| Synphobranchus kaupii | 0.33 | 14 | 0.08 | |
| Nezumia sp. | 0.29 | 4 | 0.07 | |
| NEPHROPIDAE | 0.24 | 4 | 0.03 | |
| GALATHEIDAE * | 0.14 | 91 | 0.03 | |
| Glyphus marsupialis | 0.10 | 10 | 0.02 | |
| Cataetx laticeps | 0.04 | 14 | 0.01 | |
| Bathypterois sp. | 0.04 | 14 | 0.01 | |
| Total | 403.60 | | 99.99 | |

PROJECT STATION: 3702
 DATE: 12/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 827 Long E 1246
 start stop duration
 TIME : 00:47:44 01:17:44 30 (min) Purpose code: 3
 LOC : 8479.80 8481.30 1.49 Area code : 3
 FDEPTH: 704 716 GearCond.code:
 BDEPTH: 704 716 Validity code:
 Towing dir: 330° Wire out: 1800 m Speed: 30 kn*10

Sorted: 46 Kg Total catch: 162.27 CATCH/HOUR: 324.54

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 118.16 | 35616 | 36.41 | |
| Chaceon maritae, male | 43.82 | 106 | 13.50 | 7823 |
| L O B S T E R S | 41.58 | 3920 | 12.81 | |
| Hoplostethus cadenati | 28.36 | 616 | 8.74 | |
| Nezumia micronychodon | 23.32 | 904 | 7.19 | |
| Dicrolene intronigra | 12.88 | 588 | 3.97 | |
| Merluccius polli | 11.42 | 14 | 3.52 | |
| Yarella blackfordi | 8.06 | 218 | 2.48 | |
| Xenodermichthys copei | 7.28 | 98 | 2.24 | |
| Aristeus varidens, female | 6.66 | 280 | 2.05 | 7821 |
| Conger conger | 6.44 | 134 | 1.98 | |
| Lamprogrammus exutus | 5.96 | 14 | 1.84 | |
| Dibranchus atlanticus | 4.14 | 252 | 1.28 | |
| Chaceon maritae, female | 2.74 | 14 | 0.84 | 7822 |
| Stomias boa boa | 0.92 | 50 | 0.28 | |
| GALATHEIDAE * | 0.92 | 672 | 0.28 | |
| Triplophos hemingi | 0.64 | 78 | 0.20 | |
| Plesionopeus edwardsianus | 0.42 | 28 | 0.13 | |
| Etmopterus polli | 0.30 | 4 | 0.09 | |
| Aristeus varidens, male | 0.22 | 56 | 0.07 | 7820 |
| MICTOPHIDAE | 0.22 | 148 | 0.07 | |
| Bathypterois sp. | 0.08 | 14 | 0.02 | |
| Total | 324.54 | | 99.99 | |

PROJECT STATION: 3699
 DATE: 11/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 837 Long E 1254
 start stop duration
 TIME : 17:54:38 18:24:15 30 (min) Purpose code: 3
 LOC : 8456.11 8457.60 1.50 Area code : 3
 FDEPTH: 410 411 GearCond.code:
 BDEPTH: 410 411 Validity code:
 Towing dir: 360° Wire out: 1150 m Speed: 30 kn*10

Sorted: 53 Kg Total catch: 295.41 CATCH/HOUR: 590.82

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 297.88 | 86262 | 50.42 | |
| Merluccius polli | 234.74 | 638 | 39.73 | 7814 |
| Lophodes kemp | 9.90 | 34 | 1.68 | |
| Chaunax pictus | 9.78 | 210 | 1.66 | |
| Laemonema laureysi | 5.84 | 144 | 0.99 | |
| Yarella blackfordi * | 5.38 | 166 | 0.91 | |
| Aristeus varidens, female | 4.94 | 386 | 0.84 | 7813 |
| Nezumia sp. | 3.30 | 132 | 0.56 | |
| Dibranchus atlanticus | 3.18 | 166 | 0.54 | |
| C E P H A L O P O D A | 2.42 | 12 | 0.41 | |
| Aristeus varidens, male | 2.20 | 286 | 0.37 | 7812 |
| Benthodesmus sp. | 1.44 | 44 | 0.24 | |
| Diplophos sp. | 1.32 | 66 | 0.22 | |
| Malaccocephalus occidentalis | 1.32 | 12 | 0.22 | |
| Hymenoccephalus italicus | 1.22 | 176 | 0.21 | |
| Halosaurus oventi | 1.22 | 78 | 0.21 | |
| Gadella maraldi | 1.10 | 34 | 0.19 | |
| MYCTOPHIDAE | 0.88 | 880 | 0.15 | |
| Etmopterus pusillus | 0.80 | 12 | 0.14 | |
| Parasudis sp. | 0.44 | 12 | 0.07 | |
| Stereocastis sp. | 0.44 | 100 | 0.07 | |
| Hoplostethus cadenati | 0.34 | 12 | 0.06 | |
| Chlorophthalmus atlanticus | 0.34 | 22 | 0.06 | |
| Etmopterus polli | 0.20 | 22 | 0.03 | |
| Epigonus pandionis | 0.10 | 12 | 0.02 | |
| Solenocera africana | 0.10 | 22 | 0.02 | |
| Total | 590.82 | | 100.02 | |

PROJECT STATION:3703
 DATE:12/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 836
 start stop duration Longitude E 1301
 TIME :05:31:18 06:01:09 30 (min) Purpose code: 3
 LOC :8502.65 8504.12 1.46 Area code : 3
 FDEPTH: 150 146 GearCond.code:
 BDEPTH: 150 146 Validity code:
 Towing dir: 360ø Wire out: 450 m Speed: 30 kn*10
 Sorted: 258 Kg Total catch: 258.26 CATCH/HOUR: 516.52

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichurus lepturus | 274.76 | 452 | 53.19 | |
| Brotula barbata | 57.56 | 54 | 11.14 | |
| Umbrina canariensis | 39.68 | 122 | 7.68 | 7826 |
| Pterothrissus belloci | 21.12 | 156 | 4.09 | |
| Dentex angolensis | 19.64 | 68 | 3.80 | 7827 |
| Miracorvina angolensis | 13.80 | 82 | 2.67 | |
| Zenopsis conchifer | 10.40 | 26 | 2.01 | |
| Uranoscopus albesca | 9.12 | 54 | 1.77 | |
| C A S T R O P O D S | 8.40 | 2520 | 1.63 | |
| Raja straeleni | 8.40 | 4 | 1.63 | |
| Mustelus mustelus | 7.00 | 2 | 1.36 | |
| Zeus faber | 6.30 | 40 | 1.22 | |
| Spicara alta | 6.12 | 24 | 1.18 | |
| Bembrops heterurus | 6.00 | 136 | 1.16 | |
| Dentex macrophthalmus | 4.52 | 14 | 0.88 | |
| Pontinus accraensis | 3.80 | 22 | 0.74 | |
| Illex coindetii | 3.22 | 108 | 0.62 | |
| Sarda sarda | 3.16 | 2 | 0.61 | |
| Trigla lyra | 3.00 | 16 | 0.58 | |
| Saurida brasiliensis | 2.74 | 298 | 0.53 | |
| Octopus vulgaris | 2.00 | 4 | 0.39 | |
| Syacium micrurus | 1.52 | 56 | 0.29 | |
| Scyliorhinus canicula | 0.80 | 2 | 0.15 | |
| BATRACHOIDIDAE | 0.64 | 2 | 0.12 | |
| Torpedo sp. | 0.62 | 2 | 0.12 | |
| Trichurus lepturus | 0.60 | 10 | 0.12 | |
| Peristedion sp. | 0.32 | 10 | 0.06 | |
| Dicologlossa cuneata | 0.32 | 2 | 0.06 | |
| Gadella imberbis | 0.32 | 14 | 0.06 | |
| Parapanaeus longirostris, fem. | 0.30 | 100 | 0.06 | 7825 |
| Citharus linguatula | 0.16 | 2 | 0.03 | |
| GOBIIDAE | 0.10 | 14 | 0.02 | |
| Parapanaeus longirostris, male | 0.08 | 20 | 0.02 | 7824 |
| Total | 516.52 | | 99.99 | |

PROJECT STATION:3704
 DATE:12/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 837
 start stop duration Longitude E 1304
 TIME :07:17:03 07:47:04 30 (min) Purpose code: 3
 LOC :8509.16 8510.71 1.54 Area code : 3
 FDEPTH: 114 114 GearCond.code:
 BDEPTH: 114 114 Validity code:
 Towing dir: 175ø Wire out: 330 m Speed: 30 kn*10
 Sorted: 144 Kg Total catch: 144.61 CATCH/HOUR: 289.22

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Umbrina canariensis | 88.36 | 302 | 30.55 | 7828 |
| Dentex angolensis | 75.60 | 346 | 26.14 | 7829 |
| Trichurus lepturus | 58.08 | 194 | 20.08 | |
| Dentex congcoensis | 10.22 | 58 | 3.53 | |
| Zeus faber | 8.56 | 34 | 2.96 | |
| Illex coindetii | 6.56 | 498 | 2.27 | |
| Trigla lyra | 6.30 | 52 | 2.18 | |
| Brotula barbata | 4.76 | 6 | 1.65 | |
| Dentex macrophthalmus | 4.52 | 12 | 1.56 | |
| Dentex barnardi | 3.64 | 8 | 1.26 | |
| Mustelus mustelus | 3.56 | 2 | 1.23 | |
| C A S T R O P O D S | 3.06 | 360 | 1.06 | |
| Pterothrissus belloci | 2.66 | 20 | 0.92 | |
| Sepia officinalis hierredda | 2.24 | 4 | 0.77 | |
| Chaetodon hoefleri | 2.08 | 14 | 0.72 | |
| Octopus vulgaris | 1.86 | 4 | 0.64 | |
| Spicara alta | 1.28 | 20 | 0.44 | |
| Torpedo torpedo | 1.08 | 2 | 0.37 | |
| Trachurus trecae | 1.06 | 26 | 0.37 | |
| Pontinus accraensis | 0.80 | 4 | 0.28 | |
| B I V A L V E S | 0.76 | 130 | 0.26 | |
| Scorpaena stephanica | 0.44 | 2 | 0.15 | |
| Sepia orbignyana | 0.42 | 8 | 0.15 | |
| Citharus linguatula | 0.40 | 10 | 0.14 | |
| Trichurus lepturus | 0.30 | 6 | 0.10 | |
| Uranoscopus polli | 0.28 | 2 | 0.10 | |
| Peristedion sp. | 0.16 | 2 | 0.06 | |
| Syacium micrurus | 0.10 | 4 | 0.03 | |
| Microchirus trechkepi | 0.08 | 2 | 0.03 | |
| Total | 289.22 | | 100.00 | |

PROJECT STATION:3705
 DATE:12/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 837
 start stop duration Longitude E 1309
 TIME :09:08:24 09:21:39 13 (min) Purpose code: 3
 LOC :8518.89 8519.53 0.63 Area code : 3
 FDEPTH: 83 83 GearCond.code: 9
 BDEPTH: 83 83 Validity code: 4
 Towing dir: 360ø Wire out: 220 m Speed: 30 kn*10
 Sorted: Kg Total catch: 522.78 CATCH/HOUR: 2412.83

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 1143.69 | 7477 | 47.40 | |
| Brachydeuterus auritus Juv. | 819.69 | 33092 | 33.97 | |
| Sepia officinalis hierredda | 101.08 | 138 | 4.19 | |
| Dicologlossa cuneata | 84.46 | 138 | 3.50 | |
| Raja miraletus | 57.42 | 102 | 2.38 | |
| Trigla sp. | 54.00 | 208 | 2.24 | |
| Citharus linguatula | 28.38 | 485 | 1.18 | |
| Pontinus accraensis | 22.85 | 346 | 0.95 | |
| Pagellus bellottii | 20.77 | 138 | 0.86 | |
| Umbrina canariensis | 18.69 | 69 | 0.77 | |
| Dentex angolensis | 18.00 | 138 | 0.75 | |
| Zeus faber | 14.54 | 138 | 0.60 | |
| Trichurus lepturus | 9.88 | 9 | 0.41 | |
| Trachurus trecae | 7.62 | 277 | 0.32 | |
| GOBIIDAE | 6.92 | 1662 | 0.29 | |
| Saurida brasiliensis | 4.85 | 831 | 0.20 | |
| Total | 2412.84 | | 100.01 | |

PROJECT STATION:3706
 DATE:12/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 835
 start stop duration Longitude E 1315
 TIME :10:31:38 11:01:20 30 (min) Purpose code: 3
 LOC :8526.50 8528.03 1.52 Area code : 3
 FDEPTH: 53 51 GearCond.code:
 BDEPTH: 53 51 Validity code:
 Towing dir: 360ø Wire out: 130 m Speed: 30 kn*10
 Sorted: 373 Kg Total catch: 373.94 CATCH/HOUR: 747.88

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Galeoides decadactylus | 186.00 | 586 | 24.87 | |
| Brachydeuterus auritus | 131.36 | 2326 | 17.54 | |
| Pagellus bellottii | 101.96 | 550 | 13.63 | 7830 |
| Chloroscombrus chrysurus | 99.96 | 1040 | 13.37 | |
| Pomadasys incisus | 88.76 | 824 | 11.87 | |
| Dentex barnardi | 44.14 | 112 | 5.90 | |
| Trichurus lepturus | 18.44 | 60 | 2.47 | |
| Aleotis alexandrinus | 14.88 | 12 | 1.99 | |
| Selene dorsalis | 12.74 | 176 | 1.70 | |
| Pseudolithus typus | 8.56 | 12 | 1.14 | |
| Raja miraletus | 7.76 | 14 | 1.04 | |
| Zenopsis conchifer | 6.10 | 22 | 0.82 | |
| Rhizoprionodon acutus | 6.08 | 2 | 0.81 | |
| Atractoscion aequidens | 5.76 | 12 | 0.77 | |
| Sphyræna sphyraena | 3.44 | 14 | 0.46 | |
| Torpedo torpedo | 3.30 | 22 | 0.44 | |
| Sepia officinalis hierredda | 1.74 | 6 | 0.23 | |
| Citharus linguatula | 1.52 | 42 | 0.20 | |
| Lagocephalus laevigatus | 1.34 | 4 | 0.18 | |
| Pseudupeneus prayensis | 1.32 | 8 | 0.18 | |
| Bembrops heterurus | 0.80 | 16 | 0.11 | |
| Lithognathus mormyrus | 0.74 | 2 | 0.10 | |
| Torpedo nobiliana | 0.46 | 2 | 0.06 | |
| Chaetodon hoefleri | 0.38 | 2 | 0.05 | |
| Calappa pelii | 0.34 | 2 | 0.05 | |
| Calappa sp. | 0.10 | 2 | 0.01 | |
| GOBIIDAE | 0.08 | 6 | 0.01 | |
| Todaropsis eblanae - juvenile | 0.02 | 22 | | |
| Total | 747.88 | | 100.00 | |

PROJECT STATION:3707
 DATE:12/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 834
 start stop duration Longitude E 1316
 TIME :11:38:19 12:08:03 30 (min) Purpose code: 3
 LOC :8530.25 8531.85 1.60 Area code : 3
 FDEPTH: 43 43 GearCond.code:
 BDEPTH: 43 43 Validity code:
 Towing dir: 165ø Wire out: 150 m Speed: 30 kn*10
 Sorted: 199 Kg Total catch: 199.70 CATCH/HOUR: 399.40

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 130.04 | 3302 | 32.56 | |
| Chloroscombrus chrysurus | 68.04 | 744 | 17.04 | |
| Galeoides decadactylus | 35.16 | 80 | 8.80 | |
| Myliobatis aquila | 27.56 | 26 | 6.90 | 7721 |
| Pagellus bellottii | 27.44 | 146 | 6.87 | |
| Raja miraletus | 15.00 | 26 | 3.76 | |
| Aleotis alexandrinus | 14.60 | 16 | 3.66 | |
| Pomadasys incisus | 12.96 | 68 | 3.24 | |
| Pseudolithus typus | 11.78 | 14 | 2.95 | |
| Pomadasys rogeri | 9.80 | 26 | 2.45 | |
| Trichurus lepturus | 9.18 | 24 | 2.30 | |
| Selene dorsalis | 8.78 | 122 | 2.20 | |
| Lithognathus mormyrus | 5.72 | 24 | 1.43 | |
| Lagocephalus laevigatus | 4.28 | 16 | 1.07 | |
| Cynoglossus canariensis | 3.66 | 18 | 0.92 | |
| Citharus linguatula | 3.12 | 94 | 0.78 | |
| Bembrops heterurus | 2.82 | 64 | 0.71 | |
| Conger conger | 1.50 | 2 | 0.38 | |
| Caranx hippos | 1.38 | 2 | 0.35 | |
| Sphyræna sphyraena | 1.24 | 4 | 0.31 | |
| Epinephelus aeneus | 1.10 | 6 | 0.28 | |
| Penaeus notialis | 0.98 | 44 | 0.25 | |
| Chaetodon hoefleri | 0.86 | 4 | 0.22 | |
| Sardinella maderensis | 0.54 | 4 | 0.14 | |
| GOBIIDAE | 0.34 | 70 | 0.09 | |
| Dicologlossa cuneata | 0.32 | 8 | 0.08 | |
| Decapterus rhonchus | 0.30 | 2 | 0.08 | |
| Sepia orbignyana | 0.30 | 6 | 0.08 | |
| Decapterus punctatus | 0.20 | 2 | 0.05 | |
| Alloteuthis africana | 0.20 | 24 | 0.05 | |
| Brotula barbata | 0.20 | 2 | 0.05 | |
| Total | 399.40 | | 100.05 | |

PROJECT STATION:3708
 DATE:12/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 836
 start stop duration Longitude E 1319
 TIME :12:45:51 13:15:38 30 (min) Purpose code: 3
 LOC :8534.97 8536.50 1.53 Area code : 3
 FDEPTH: 31 30 GearCond.code:
 BDEPTH: 31 30 Validity code:
 Towing dir: 360ø Wire out: 130 m Speed: 30 kn*10
 Sorted: 178 Kg Total catch: 810.62 CATCH/HOUR: 1621.24

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 815.00 | 13010 | 50.27 | |
| Pseudolithus typus | 206.60 | 330 | 12.74 | |
| Galeoides decadactylus | 173.00 | 460 | 10.67 | |
| Chloroscombrus chrysurus | 153.00 | 1720 | 9.44 | |
| Pomadasys peroteti | 75.10 | 250 | 4.63 | |
| Selene dorsalis | 50.60 | 1060 | 3.13 | |
| Trichurus lepturus | 28.56 | 70 | 1.76 | |
| Raja miraletus | 25.10 | 30 | 1.55 | |
| Stromateus fiatola | 17.90 | 30 | 1.10 | |
| Sphyræna sphyraena | 15.10 | 40 | 0.93 | |
| Sepia officinalis hierredda | 10.00 | 20 | 0.62 | |
| Sepia orbignyana | 9.20 | 30 | 0.57 | |
| Lithognathus mormyrus | 8.60 | 30 | 0.53 | |
| Eucinostomus melanopterus | 7.10 | 60 | 0.44 | |
| Sardinella maderensis | 6.40 | 40 | 0.39 | |
| Rhizoprionodon acutus | 4.80 | 4 | 0.30 | |
| Pagellus bellottii | 4.28 | 18 | 0.26 | |
| Pentheroscion mbizi | 3.60 | 30 | 0.22 | |
| Penaeus notialis | 3.50 | 76 | 0.22 | |
| Chelidonichthys capensis | 2.30 | 10 | 0.14 | |
| Ilisha africana | 1.30 | 10 | 0.08 | |
| Total | 1621.24 | | 99.99 | |

PROJECT STATION: 3709
 DATE: 12/4/05 GEAR TYPE: BT No:16 POSITION: Lat S 828 Long E 1253
 start stop duration Purpose code: 3
 TIME :16:27:51 16:57:53 30 (min) Area code : 3
 LOG :8563.38 8565.00 1.61 GearCond.code: 3
 FDEPTH: 304 305 Validity code:
 BDEPTH: 304 305
 Towing dir: 330e Wire out: 800 m Speed: 30 kn*10

Sorted: 117 Kg Total catch: 707.22 CATCH/HOUR: 1414.44

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 625.78 | 35000 | 44.24 | |
| Merluccius polli | 316.50 | 1126 | 22.38 | 7833 |
| Chlorophthalmus atlanticus | 294.52 | 4932 | 20.82 | |
| Hymenocephalus italicus | 29.74 | 11524 | 2.10 | |
| Trichiurus lepturus | 29.08 | 36 | 2.06 | |
| Pontinus kuhlii | 21.16 | 174 | 1.50 | |
| Pterothrissus bellocci | 19.02 | 134 | 1.34 | |
| Laemonema lauroysi | 18.10 | 214 | 1.28 | |
| Lestrolepis intermedia | 12.06 | 54 | 0.85 | |
| Parapenaeus longirostris, fem. | 9.64 | 1220 | 0.68 | 7832 |
| Gadella maraldi | 8.16 | 322 | 0.58 | |
| Epigonus sp. | 6.70 | 40 | 0.47 | |
| Parapenaeus longirostris, male | 6.56 | 964 | 0.46 | 7831 |
| Malacocephalus occidentalis | 5.76 | 134 | 0.41 | |
| Plesionika martia | 3.26 | 932 | 0.16 | |
| Nezumia sp. | 2.02 | 40 | 0.14 | |
| Illex coindetii | 1.88 | 14 | 0.13 | |
| Bathyrhynchus piperitus | 1.74 | 14 | 0.12 | |
| COBIIDAE | 1.74 | 992 | 0.12 | |
| Solenocera africana | 1.08 | 376 | 0.08 | |
| Bathyrhynchus vicinus | 0.94 | 26 | 0.07 | |
| Total | 1414.44 | | 99.99 | |

PROJECT STATION: 3710
 DATE: 12/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 828 Long E 1250
 start stop duration Purpose code: 3
 TIME :18:21:10 18:51:04 30 (min) Area code : 3
 LOG :8571.80 8573.23 1.46 GearCond.code: 3
 FDEPTH: 448 447 Validity code:
 BDEPTH: 448 447
 Towing dir: 160e Wire out: 1200 m Speed: 30 kn*10

Sorted: 93 Kg Total catch: 268.51 CATCH/HOUR: 537.02

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 289.80 | 364 | 53.96 | |
| Merluccius polli | 117.00 | 236 | 21.79 | 7834 |
| Triplophos hemingi | 28.42 | 490 | 5.29 | |
| Yarella blackfordi | 17.78 | 658 | 3.31 | |
| Chaunax pictus | 15.26 | 98 | 2.84 | |
| B I V A L V E S | 13.58 | 70 | 2.53 | |
| Aristeus varidens, female | 10.36 | 714 | 1.93 | 7836 |
| Centroprorus granulatus | 7.80 | 2 | 1.45 | |
| Benthodesmus sp. | 4.58 | 238 | 1.23 | |
| Illex coindetii | 5.18 | 42 | 0.96 | |
| Laemonema lauroysi | 4.06 | 112 | 0.76 | |
| Aristeus varidens, male | 2.94 | 364 | 0.55 | 7835 |
| Dibranchius sp. | 2.52 | 112 | 0.47 | |
| Stereomastis sp. | 2.38 | 42 | 0.44 | |
| Hymenocephalus italicus | 2.24 | 280 | 0.42 | |
| Gadella maraldi | 2.10 | 70 | 0.39 | |
| Melanostomias sp. | 1.68 | 28 | 0.31 | |
| Chlorophthalmus atlanticus | 1.54 | 42 | 0.29 | |
| Chacon maritae, male | 1.34 | 4 | 0.25 | |
| Halosaurus cventii | 1.12 | 84 | 0.21 | |
| Galeus polli | 1.00 | 24 | 0.19 | |
| Malacocephalus occidentalis | 0.84 | 14 | 0.16 | |
| Heptranchias perlo | 0.60 | 2 | 0.11 | |
| Plesionika edwardsianus | 0.42 | 28 | 0.08 | |
| Bathyrhynchus piperitus | 0.28 | 14 | 0.05 | |
| Etmopterus polli | 0.20 | 4 | 0.04 | |
| Total | 537.02 | | 100.01 | |

PROJECT STATION: 3711
 DATE: 12/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 829 Long E 1248
 start stop duration Purpose code: 3
 TIME :20:16:51 20:47:17 30 (min) Area code : 3
 LOG :8577.44 8578.92 1.46 GearCond.code: 3
 FDEPTH: 535 539 Validity code:
 BDEPTH: 535 539
 Towing dir: 335e Wire out: 1400 m Speed: 30 kn*10

Sorted: 37 Kg Total catch: 251.04 CATCH/HOUR: 502.08

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 217.60 | 13504 | 43.34 | |
| Yarella blackfordi | 107.20 | 3136 | 21.35 | |
| Hoplostethus cadenati | 34.08 | 1136 | 6.79 | |
| Aristeus varidens, female | 30.88 | 1648 | 6.15 | 7838 |
| Triplophos hemingi | 20.48 | 3248 | 4.08 | |
| Stereomastis sp. | 17.28 | 1632 | 3.44 | |
| Melanostomias sp. | 13.92 | 336 | 2.77 | |
| Benthodesmus sp. | 10.88 | 368 | 2.17 | |
| Aristeus varidens, male | 10.24 | 1136 | 2.04 | 7837 |
| Centroprorus granulatus | 4.60 | 2 | 0.92 | |
| Illex coindetii | 4.48 | 16 | 0.89 | |
| Xenodermichthys copei | 4.48 | 336 | 0.89 | |
| Gadella maraldi | 3.68 | 288 | 0.73 | |
| Lamprogrammus exutus | 3.52 | 384 | 0.70 | |
| Chacon maritae, male | 3.46 | 8 | 0.69 | |
| Merluccius polli | 2.36 | 2 | 0.47 | |
| Lithodes ferax | 2.24 | 32 | 0.45 | |
| Malacocephalus occidentalis | 2.02 | 4 | 0.40 | |
| Merluccius polli | 2.00 | 10 | 0.40 | |
| Etmopterus pusillus | 1.44 | 112 | 0.29 | |
| Bathyrhynchus vicinus | 1.28 | 64 | 0.25 | |
| Dibranchius sp. | 0.64 | 32 | 0.13 | |
| Bathyrhynchus mactrops | 0.64 | 16 | 0.13 | |
| Halosaurus cventii | 0.64 | 32 | 0.13 | |
| Nezumia sp. | 0.48 | 16 | 0.10 | |
| Coloconger cadenati | 0.40 | 14 | 0.08 | |
| Symnodon obscurus | 0.32 | 96 | 0.06 | |
| S H R I M P S | 0.32 | 16 | 0.06 | |
| DICERATIIDAE | 0.20 | 4 | 0.04 | |
| Galeus polli | 0.20 | 4 | 0.04 | |
| GOBIIDAE | 0.16 | 16 | 0.03 | |
| Hymenocephalus italicus | 0.16 | 16 | 0.03 | |
| Total | 502.08 | | 100.00 | |

PROJECT STATION: 3712
 DATE: 12/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 828 Long E 1247
 start stop duration Purpose code: 3
 TIME :22:20:16 22:50:05 30 (min) Area code : 3
 LOG :8583.04 8584.56 1.51 GearCond.code: 3
 FDEPTH: 599 603 Validity code:
 BDEPTH: 599 603
 Towing dir: 160e Wire out: 1600 m Speed: 30 kn*10

Sorted: 52 Kg Total catch: 144.86 CATCH/HOUR: 289.72

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 183.12 | 60972 | 63.21 | |
| Yarella blackfordi | 35.04 | 1158 | 12.09 | |
| Hoplostethus cadenati | 17.58 | 534 | 6.07 | |
| L O B S T E R S | 14.76 | 1530 | 5.09 | |
| Merluccius polli | 10.04 | 18 | 3.47 | |
| Stomias boa boa | 5.52 | 126 | 1.91 | |
| Triplophos hemingi | 5.12 | 690 | 1.77 | |
| Lamprogrammus exutus | 3.48 | 18 | 1.20 | |
| Benthodesmus sp. | 3.00 | 108 | 1.04 | |
| ALPEPOCEPHALIDAE | 2.46 | 12 | 0.85 | |
| Dicrolene intronigra | 2.16 | 252 | 0.75 | |
| Chacon maritae, male | 2.00 | 2 | 0.69 | |
| Aristeus varidens, female | 0.96 | 66 | 0.33 | 7840 |
| Aristeus varidens, male | 0.96 | 144 | 0.33 | 7839 |
| Symnodon obscurus | 0.80 | 2 | 0.28 | |
| Xenodermichthys copei | 0.72 | 72 | 0.25 | |
| Nezumia micronychodon | 0.60 | 42 | 0.21 | |
| Etmopterus polli | 0.40 | 6 | 0.14 | |
| Chacon maritae, female | 0.34 | 2 | 0.12 | |
| Chaunax sp. | 0.18 | 12 | 0.06 | |
| Plesionika edwardsianus | 0.18 | 18 | 0.06 | |
| Nemichthys scolopaceus | 0.12 | 6 | 0.04 | |
| Ebinania costaeannarie | 0.12 | 6 | 0.04 | |
| Conger conger | 0.06 | 6 | 0.02 | |
| Total | 289.72 | | 100.02 | |

PROJECT STATION: 3713
 DATE: 15/4/05 GEAR TYPE: BT No:16 POSITION: Lat S 824 Long E 1256
 start stop duration Purpose code: 3
 TIME :15:02:35 15:33:00 30 (min) Area code : 3
 LOG :8663.31 8664.85 1.53 GearCond.code: 3
 FDEPTH: 166 162 Validity code:
 BDEPTH: 166 162
 Towing dir: 155e Wire out: 530 m Speed: 30 kn*10

Sorted: 319 Kg Total catch: 336.65 CATCH/HOUR: 673.30

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichiurus lepturus | 349.40 | 442 | 51.89 | |
| Dentex angolensis | 81.12 | 268 | 12.05 | 7841 |
| Synagrops microlepis | 71.22 | 4482 | 10.58 | |
| Brotula barbata | 62.36 | 54 | 9.26 | |
| Spicara alta | 25.96 | 110 | 3.86 | |
| Umbrina canariensis | 17.52 | 28 | 2.60 | 7842 |
| Zeus faber | 14.46 | 50 | 2.15 | |
| Pterostion pelli | 11.56 | 56 | 1.72 | |
| Pterothrissus bellocci | 8.86 | 64 | 1.32 | |
| Lepidotrigla cadmani | 6.82 | 48 | 1.01 | |
| Illex coindetii | 5.10 | 228 | 0.76 | |
| Bembrops heterurus | 3.52 | 36 | 0.52 | |
| Uranoscopus polli | 2.82 | 12 | 0.42 | |
| Dentex macrophthalmus | 2.36 | 12 | 0.35 | |
| Saurida brasiliensis | 1.96 | 322 | 0.29 | |
| Citharus linguatula | 1.50 | 72 | 0.22 | |
| Scyllorhinus canalicula | 1.40 | 6 | 0.21 | |
| Pontinus kuhlii | 1.36 | 12 | 0.20 | |
| G A S T R O P O D S | 1.00 | 228 | 0.15 | |
| Zenopsis conchifer | 0.78 | 2 | 0.12 | |
| Lophodes kempi | 0.78 | 2 | 0.12 | |
| Aulopus cadenati | 0.52 | 4 | 0.08 | |
| Parapenaeus longirostris, fem. | 0.42 | 156 | 0.06 | 7844 |
| Trichiurus lepturus juv. | 0.24 | 6 | 0.04 | |
| Parapenaeus longirostris, male | 0.18 | 46 | 0.03 | 7843 |
| GOBIIDAE | 0.04 | 18 | 0.01 | |
| Physiculus sp. | 0.04 | 4 | 0.01 | |
| Total | 673.30 | | 100.03 | |

PROJECT STATION: 3714
 DATE: 15/4/05 GEAR TYPE: BT No:16 POSITION: Lat S 827 Long E 1255
 start stop duration Purpose code: 3
 TIME :16:27:19 16:57:26 30 (min) Area code : 3
 LOG :8669.81 8671.37 1.54 GearCond.code: 3
 FDEPTH: 231 234 Validity code:
 BDEPTH: 231 234
 Towing dir: 155e Wire out: 711 m Speed: 30 kn*10

Sorted: 157 Kg Total catch: 1727.34 CATCH/HOUR: 3454.68

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 1936.70 | 137496 | 56.06 | |
| Merluccius polli | 888.10 | 5618 | 25.71 | 7847 |
| Chlorophthalmus atlanticus | 238.62 | 8132 | 6.91 | |
| Zenopsis conchifer | 124.28 | 264 | 3.60 | |
| Pterothrissus bellocci | 61.00 | 536 | 1.77 | |
| Parapenaeus longirostris, male | 49.74 | 13368 | 1.44 | 7848 |
| Trichiurus lepturus | 38.36 | 50 | 1.11 | |
| Parapenaeus longirostris, fem. | 28.88 | 3438 | 0.84 | 7849 |
| Pontinus kuhlii | 16.06 | 160 | 0.46 | |
| Nezumia sp. | 11.24 | 268 | 0.33 | |
| Bembrops heterurus | 10.70 | 160 | 0.31 | |
| Brotula barbata | 10.40 | 14 | 0.30 | |
| Todaropsis eblanae | 9.10 | 108 | 0.26 | |
| Dentex angolensis | 6.08 | 26 | 0.18 | 7846 |
| Dentex macrophthalmus | 5.22 | 20 | 0.15 | 7845 |
| Zeus faber | 4.80 | 10 | 0.14 | |
| Peristedion cataphractum | 3.22 | 108 | 0.09 | |
| Squilla sp. | 3.22 | 54 | 0.09 | |
| Illex coindetii | 3.20 | 54 | 0.09 | |
| MYCTOPHIDAE | 2.68 | 482 | 0.08 | |
| Umbrina canariensis | 1.66 | 4 | 0.05 | |
| Calappa sp. | 1.08 | 54 | 0.03 | |
| Zenopsis conchifer | 0.78 | 2 | 0.02 | |
| Spicara alta | 0.38 | 2 | 0.01 | |
| Total | 3455.50 | | 100.03 | |

PROJECT STATION:3715
 DATE:15/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 816 Long E 1244
 start stop duration
 TIME :20:11:49 20:41:47 30 (min) Purpose code: 3
 LOG :8692.67 8694.09 1.42 Area code : 3
 FDEPTH: 419 427 GearCond.code:
 BDEPTH: 419 427 Validity code:
 Towing dir: 170e Wire out:1200 m Speed: 29 kn*10
 Sorted: 132 Kg Total catch: 239.34 CATCH/HOUR: 478.68

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 234.40 | 69874 | 48.97 | |
| Merluccius polli | 193.32 | 446 | 40.39 | 7850 |
| Chaunax pictus | 10.16 | 120 | 2.12 | |
| Laemonema laureysi | 8.60 | 232 | 1.84 | |
| Hymenocephalus italicus | 8.48 | 936 | 1.77 | |
| Dibranchus sp. | 6.08 | 424 | 1.27 | |
| Malacocephalus occidentalis | 3.36 | 48 | 0.70 | |
| B I V A L V E S | 2.24 | 16 | 0.47 | |
| Todaropsis eblanae | 2.00 | 8 | 0.42 | |
| Nezumia sp. | 1.60 | 40 | 0.33 | |
| Gadella imberbis | 1.20 | 40 | 0.25 | |
| Chlorophthalmus atlanticus | 1.12 | 24 | 0.23 | |
| Aristeus varidens, male | 1.04 | 128 | 0.22 | 7851 |
| MYCTOPHIDAE | 1.04 | 1264 | 0.22 | |
| Glyphus marsupialis | 0.56 | 136 | 0.12 | |
| Aristeus varidens, female | 0.56 | 64 | 0.12 | 7852 |
| Stereomastix sp. | 0.56 | 48 | 0.12 | |
| Benthodesmus sp. | 0.48 | 16 | 0.10 | |
| Plectrochinchus sp. | 0.40 | 56 | 0.08 | |
| Lophodes kempfi | 0.40 | 8 | 0.08 | |
| Melanostomias sp. | 0.32 | 8 | 0.07 | |
| Triplicphos hemingi | 0.24 | 64 | 0.05 | |
| Halosaurus oventii | 0.16 | 8 | 0.03 | |
| CONGRIDAE | 0.08 | 8 | 0.02 | |
| Cataetix laticeps | 0.08 | 8 | 0.02 | |
| Total | 478.68 | | 100.01 | |

PROJECT STATION:3716
 DATE:15/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 817 Long E 1242
 start stop duration
 TIME :22:28:07 22:59:53 32 (min) Purpose code: 3
 LOG :8700.30 8701.77 1.46 Area code : 3
 FDEPTH: 617 632 GearCond.code:
 BDEPTH: 617 632 Validity code:
 Towing dir: 330e Wire out:1530 m Speed: 29 kn*10
 Sorted: 69 Kg Total catch: 223.11 CATCH/HOUR: 416.33

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 155.25 | 34200 | 37.11 | |
| Yarella blackfordi | 112.50 | 2843 | 26.89 | |
| Hoplostethus cadonati | 32.25 | 1043 | 7.71 | |
| LOPHIDAE | 25.74 | 6 | 6.15 | |
| Lamprogrammus exutus | 18.45 | 1058 | 4.41 | |
| Stomias boa boa | 12.90 | 368 | 3.08 | |
| L O B S T E R S | 10.95 | 1538 | 2.62 | |
| OMMASTREPHIDAE | 8.48 | 38 | 2.03 | |
| Merluccius polli | 4.97 | 13 | 1.19 | |
| Lepidopus caudatus | 4.65 | 120 | 1.11 | |
| Chaceon maritae | 4.14 | 9 | 0.99 | |
| Triplicphos hemingi | 4.05 | 630 | 0.97 | |
| Conger conger | 3.68 | 135 | 0.88 | |
| Aristeus varidens, female | 3.08 | 135 | 0.74 | 7854 |
| Dibranchus sp. | 2.78 | 218 | 0.66 | |
| Aristeus varidens, male | 2.55 | 308 | 0.61 | 7853 |
| Dicrolene intronigra | 1.95 | 233 | 0.47 | |
| Chlorophthalmus atlanticus | 1.80 | 45 | 0.43 | |
| Nezumia milleri | 1.50 | 105 | 0.36 | |
| Xenodermichthys copei | 0.98 | 68 | 0.23 | |
| Cataetix laticeps | 0.90 | 158 | 0.22 | |
| Malacocephalus laevis | 0.83 | 38 | 0.20 | |
| Nemichthys scolopaceus | 0.60 | 8 | 0.14 | |
| Sergestes sp. | 0.45 | 23 | 0.11 | |
| Melanconus zugmayeri | 0.38 | 2 | 0.09 | |
| Halosaurus oventii | 0.38 | 8 | 0.09 | |
| MYCTOPHIDAE | 0.38 | 75 | 0.09 | |
| Callinectes sp. | 0.38 | 8 | 0.09 | |
| Scymnodon obscurus | 0.38 | 2 | 0.09 | |
| Hymenocephalus italicus | 0.30 | 23 | 0.07 | |
| Borostomias sp. | 0.30 | 8 | 0.07 | |
| OPHIIDAE | 0.23 | 23 | 0.05 | |
| Ceolorinchus sp. | 0.15 | 8 | 0.04 | |
| Laemonema laureysi | 0.08 | 8 | 0.02 | |
| Total | 418.39 | | 100.01 | |

PROJECT STATION:3717
 DATE:16/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 816 Long E 1241
 start stop duration
 TIME :00:36:38 01:06:21 30 (min) Purpose code: 3
 LOG :8707.49 8708.95 1.45 Area code : 3
 FDEPTH: 705 706 GearCond.code:
 BDEPTH: 705 706 Validity code:
 Towing dir: 150e Wire out:1750 m Speed: 30 kn*10
 Sorted: 73 Kg Total catch: 205.97 CATCH/HOUR: 411.94

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Yarella blackfordi * | 125.02 | 3270 | 30.35 | |
| Nematocarcinus africanus | 113.54 | 31270 | 27.56 | |
| Lamprogrammus exutus | 40.54 | 322 | 9.84 | |
| Merluccius polli | 34.88 | 62 | 8.47 | 7857 |
| L O B S T E R S | 26.60 | 2052 | 6.46 | |
| Stomias boa boa | 11.62 | 322 | 2.82 | |
| Hoplostethus cadonati | 9.74 | 316 | 2.36 | |
| Aristeus varidens, female | 7.28 | 316 | 1.77 | 7855 |
| OMMASTREPHIDAE | 5.32 | 22 | 1.29 | |
| Bajacalifornia magalops | 4.42 | 78 | 1.07 | |
| Gadella imberbis | 4.14 | 302 | 1.01 | |
| Triplicphos hemingi | 3.72 | 560 | 0.90 | |
| Nezumia sp. | 3.58 | 78 | 0.87 | |
| Chaceon maritae | 3.34 | 10 | 0.81 | |
| Conger conger | 3.30 | 78 | 0.80 | |
| Malacocephalus sp. | 2.94 | 112 | 0.73 | |
| Raja alba | 1.50 | 2 | 0.36 | |
| Plesionotus edwardsianus | 1.48 | 134 | 0.36 | |
| CALATHEIDAE * | 1.40 | 330 | 0.34 | |
| Lophodes kempfi | 1.34 | 28 | 0.33 | |
| Dibranchus sp. | 1.06 | 64 | 0.26 | |
| Halosaurus oventii | 0.92 | 8 | 0.22 | |
| Aristeus varidens, male | 0.84 | 112 | 0.20 | 7856 |
| Synaphobranchus kaupii | 0.78 | 14 | 0.19 | |
| Cataetix laticeps | 0.78 | 140 | 0.19 | |
| Scymnodon obscurus | 0.70 | 2 | 0.17 | |
| Hirundichthys affinis | 0.42 | 2 | 0.10 | |
| Talismania sp. | 0.22 | 8 | 0.05 | |
| Xenodermichthys copei | 0.22 | 36 | 0.05 | |
| MYCTOPHIDAE | 0.22 | 28 | 0.05 | |
| Etmopterus spinax | 0.08 | 2 | 0.02 | |
| Total | 411.94 | | 99.98 | |

PROJECT STATION:3718
 DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 817 Long E 1300
 start stop duration
 TIME :05:43:39 06:04:23 21 (min) Purpose code: 3
 LOG :8734.58 8735.64 1.07 Area code : 3
 FDEPTH: 111 113 GearCond.code: 9
 BDEPTH: 111 113 Validity code: 1
 Towing dir: 180e Wire out: 300 m Speed: 30 kn*10
 Sorted: 118 Kg Total catch: 118.25 CATCH/HOUR: 337.86

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trichurus lepturus | 118.80 | 274 | 35.16 | |
| Umbrina canariensis | 28.46 | 86 | 8.42 | 7861 |
| Dentex angolensis | 21.03 | 177 | 6.22 | 7858 |
| Brotula barbata | 20.69 | 34 | 6.12 | |
| Uranoscopus polli | 19.77 | 109 | 5.85 | |
| Mustelus mustelus | 18.97 | 9 | 5.61 | |
| Sepia orbignyana | 17.91 | 29 | 5.30 | |
| Argyrosomus hololepidotus | 17.49 | 3 | 5.18 | |
| Zeus faber | 12.86 | 54 | 3.81 | |
| Dentex barnardi | 11.17 | 34 | 3.31 | 7860 |
| Citharus linguatula | 8.14 | 186 | 2.41 | |
| Pagellus bellottii | 6.57 | 26 | 1.94 | 7859 |
| Saurida brasiliensis | 6.20 | 917 | 1.84 | |
| Sepia officinalis hierredda | 5.97 | 3 | 1.77 | |
| Stromateus fiatola | 5.80 | 6 | 1.72 | |
| Pistularia petimba | 3.80 | 6 | 1.12 | |
| Illex coindetii | 3.37 | 360 | 1.00 | |
| Plectoichthys bellotti | 2.51 | 11 | 0.74 | |
| Pontinus kuhlii | 1.14 | 9 | 0.34 | |
| Branchiolepis semifasciatus | 1.09 | 6 | 0.32 | |
| Bembrps heelerus | 1.06 | 23 | 0.31 | |
| Syacium micrum | 0.83 | 63 | 0.25 | |
| Nematopalaeon hastatus | 0.77 | 337 | 0.23 | |
| Trigla lyra | 0.74 | 6 | 0.22 | |
| Pontinus accraensis | 0.71 | 9 | 0.21 | |
| Dicologlossa cuneata | 0.63 | 3 | 0.19 | |
| Dentex congoensis | 0.54 | 17 | 0.16 | |
| Brachydeuterus auritus | 0.51 | 3 | 0.15 | |
| Trachurus capensis, juvenile | 0.17 | 3 | 0.05 | |
| Octopus vulgaris | 0.09 | 3 | 0.03 | |
| GADIDAE | 0.06 | 6 | 0.02 | |
| Total | 337.85 | | 100.00 | |

PROJECT STATION:3719
 DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 821 Long E 1307
 start stop duration
 TIME :07:13:54 07:33:40 20 (min) Purpose code: 3
 LOG :8743.21 8744.23 1.00 Area code : 3
 FDEPTH: 84 83 GearCond.code: 9
 BDEPTH: 84 83 Validity code: 1
 Towing dir: 170e Wire out: 260 m Speed: 30 kn*10
 Sorted: 236 Kg Total catch: 1016.12 CATCH/HOUR: 3048.36

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 2452.80 | 55107 | 80.46 | |
| Trichurus lepturus | 303.87 | 609 | 9.97 | |
| Selene dorsalis | 93.60 | 786 | 3.07 | |
| Dentex angolensis | 46.29 | 297 | 1.52 | 7862 |
| Zeus faber | 28.32 | 66 | 0.93 | |
| Brotula barbata | 22.23 | 12 | 0.73 | |
| Cynoglossus sp. | 17.97 | 168 | 0.59 | |
| Torpedo torpedo | 17.07 | 51 | 0.56 | |
| Citharus linguatula | 12.00 | 285 | 0.39 | |
| Pistularia petimba | 10.47 | 27 | 0.34 | |
| B I V A L V E S | 10.20 | 336 | 0.33 | |
| Umbrina canariensis | 7.89 | 66 | 0.26 | |
| Sepia orbignyana | 7.23 | 234 | 0.24 | |
| Trigla lyra | 6.18 | 39 | 0.20 | |
| Umbrina canariensis | 5.94 | 39 | 0.19 | |
| Pagellus bellottii | 3.48 | 27 | 0.11 | |
| Uranoscopus cadonati | 2.82 | 12 | 0.09 | |
| Total | 3048.36 | | 99.98 | |

PROJECT STATION:3720
 DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 819 Long E 1309
 start stop duration
 TIME :08:42:54 08:47:22 4 (min) Purpose code: 3
 LOG :8750.44 8750.50 0.20 Area code : 3
 FDEPTH: 65 60 GearCond.code: 9
 BDEPTH: 65 60 Validity code: 9
 Towing dir: 170e Wire out: 200 m Speed: 29 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------|------------|---------|-------------|------|
| | weight | numbers | | |
| N O C A T C H | 0.00 | | | |
| Total | | | | |

PROJECT STATION:3721
DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 816
start stop duration Long E 1312
TIME :09:53:11 10:23:37 30 (min) Purpose code: 3
LOG :8756.36 8757.99 1.63 Area code : 3
FDEPTH: 46 43 GearCond.code:
BDEPTH: 46 43 Validity code:
Towing dir: 350° Wire out: 200 m Speed: 32 kn*10

Sorted: 71 Kg Total catch: 388.78 CATCH/HOUR: 777.56

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus Juv. | 200.00 | 7320 | 25.72 | |
| Brachydeuterus auritus | 169.76 | 2968 | 21.63 | |
| Trichiurus lepturus | 155.76 | 424 | 20.03 | |
| Pteroscion pelli | 69.44 | 1352 | 8.93 | |
| Galeoides decadactylus | 68.48 | 240 | 8.81 | |
| Pseudotolithus typus | 23.80 | 48 | 3.06 | 7863 |
| Pomadasy incisus | 11.28 | 80 | 1.45 | |
| Ilisha africana | 10.96 | 168 | 1.41 | |
| Grammolites gruveli | 7.12 | 166 | 0.92 | |
| Arius parkii | 7.12 | 2 | 0.92 | |
| Cynoponticus ferox | 5.68 | 16 | 0.73 | |
| Chloroscombrus chrysurus | 5.44 | 48 | 0.70 | |
| Sepia officinalis hierredda | 4.80 | 6 | 0.62 | |
| Penaeus notialis, female | 4.46 | 160 | 0.57 | 7864 |
| Cynoglossus canariensis | 4.40 | 32 | 0.57 | |
| Trichiurus lepturus juv. | 4.24 | 192 | 0.55 | |
| Ephippion guttifer | 4.18 | 2 | 0.54 | |
| Citharus linguatula | 3.68 | 136 | 0.47 | |
| Epinephelus aeneus | 3.56 | 8 | 0.46 | |
| Torpedo torpedo | 2.96 | 96 | 0.38 | |
| Atractoscion aequidens | 2.50 | 2 | 0.32 | |
| Raja miraletus | 2.48 | 8 | 0.32 | |
| Penaeus notialis, male | 2.18 | 134 | 0.28 | 7865 |
| Dicologlossa cuneata | 1.20 | 24 | 0.15 | |
| MUCILIDAE | 0.88 | 8 | 0.11 | |
| Dentex congoensis | 0.64 | 8 | 0.08 | |
| Selene dorsalis | 0.40 | 8 | 0.05 | |
| Gobiidae | 0.16 | 64 | 0.02 | |
| Total | 777.56 | | 100.00 | |

PROJECT STATION:3723
DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 803
start stop duration Long E 1310
TIME :13:25:35 13:56:32 31 (min) Purpose code: 3
LOG :8776.03 8777.59 1.56 Area code : 3
FDEPTH: 27 25 GearCond.code:
BDEPTH: 27 25 Validity code:
Towing dir: 340° Wire out: 130 m Speed: 30 kn*10

Sorted: 734 Kg Total catch: 734.71 CATCH/HOUR: 1422.02

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pseudotolithus typus | 550.51 | 590 | 38.71 | |
| Pomadasy rogeri | 257.23 | 542 | 18.09 | |
| Brachydeuterus auritus | 95.65 | 2646 | 6.73 | |
| Galeoides decadactylus | 80.59 | 190 | 5.67 | |
| Rhinoptera marginata | 61.24 | 12 | 4.31 | |
| Arius parkii | 59.69 | 178 | 4.20 | |
| Chloroscombrus chrysurus | 57.60 | 703 | 4.05 | |
| Ilisha africana | 47.65 | 2009 | 3.35 | |
| Cynoponticus ferox | 30.85 | 8 | 2.17 | |
| Lutjanus dentatus | 24.31 | 2 | 1.71 | |
| Trichiurus lepturus | 16.84 | 79 | 1.18 | |
| Sphyraena sphyraena | 12.58 | 35 | 0.88 | |
| Selene dorsalis | 10.45 | 182 | 0.73 | |
| Pteroscion sp. | 10.34 | 166 | 0.73 | |
| Pontanemus quinquarius | 10.05 | 143 | 0.71 | |
| Dasyatis margarita | 9.83 | 14 | 0.69 | |
| Argyrocentrus hololepidotus | 8.17 | 2 | 0.57 | |
| Trichiurus lepturus juv. | 8.15 | 317 | 0.57 | |
| Banulirus regius | 7.74 | 15 | 0.54 | |
| Atractoscion aequidens | 7.57 | 2 | 0.53 | |
| Diceterhinchus mediterraneus | 7.03 | 6 | 0.49 | |
| Raja miraletus | 6.99 | 10 | 0.49 | |
| Epinephelus gorseensis | 6.48 | 2 | 0.46 | |
| Epinephelus aeneus | 5.94 | 2 | 0.42 | |
| Centrarchops chapini | 5.09 | 12 | 0.36 | |
| Torpedo marmorata | 3.25 | 8 | 0.23 | |
| Sepia orbignyana | 3.14 | 4 | 0.22 | |
| Drepane africana | 2.30 | 2 | 0.16 | |
| Pseudotolithus moorii | 2.21 | 6 | 0.16 | |
| Penaeus notialis | 1.80 | 370 | 0.13 | |
| Umbrina canariensis | 1.53 | 4 | 0.11 | |
| Scomberomorus tritor | 1.49 | 2 | 0.10 | |
| Cynoglossus canariensis | 1.24 | 12 | 0.09 | |
| Cynoglossus canariensis | 1.03 | 6 | 0.07 | |
| Cephalopholis taeniceps | 0.99 | 17 | 0.07 | |
| Pomadasy incisus | 0.97 | 6 | 0.07 | |
| Dicologlossa hexophthalma | 0.83 | 17 | 0.06 | |
| Stromateus fiatola | 0.68 | 4 | 0.05 | |
| Scorpaena sp. | 0.54 | 21 | 0.04 | |
| Calappa sp. | 0.52 | 4 | 0.04 | |
| Alectis alexandrinus | 0.46 | 4 | 0.03 | |
| Pseudupeneus prayensis | 0.19 | 2 | 0.01 | |
| Sardinella aurita | 0.17 | 2 | 0.01 | |
| Lagocephalus laevigatus | 0.12 | 2 | 0.01 | |
| Total | 1422.03 | | 100.00 | |

PROJECT STATION:3722
DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 814
start stop duration Long E 1315
TIME :11:24:13 11:57:01 33 (min) Purpose code: 3
LOG :8763.50 8765.26 1.77 Area code : 3
FDEPTH: 28 27 GearCond.code:
BDEPTH: 28 27 Validity code:
Towing dir: 335° Wire out: 130 m Speed: 30 kn*10

Sorted: 366 Kg Total catch: 366.08 CATCH/HOUR: 665.60

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Chloroscombrus chrysurus | 150.76 | 1640 | 22.65 | |
| Cynoponticus ferox | 124.31 | 87 | 18.68 | |
| Brachydeuterus auritus | 83.24 | 2869 | 12.51 | |
| Pseudotolithus typus | 67.16 | 556 | 10.09 | 7866 |
| Ilisha africana | 67.02 | 1684 | 10.07 | |
| Galeoides decadactylus | 63.29 | 140 | 9.51 | |
| Pteroscion pelli | 27.31 | 496 | 4.10 | |
| Trichiurus lepturus | 20.15 | 102 | 3.03 | |
| Pomadasy rogeri | 11.96 | 16 | 1.80 | |
| Stromateus fiatola | 9.96 | 51 | 1.50 | |
| Torpedo marmorata | 6.55 | 16 | 0.98 | |
| Dasyatis margarita | 6.40 | 7 | 0.96 | |
| Penaeus notialis | 4.84 | 109 | 0.73 | |
| Sepia orbignyana | 4.47 | 2 | 0.67 | |
| Raja miraletus | 4.02 | 7 | 0.60 | |
| Selene dorsalis | 3.58 | 55 | 0.54 | |
| Arius parkii | 2.75 | 4 | 0.41 | |
| Trichiurus lepturus juv. | 2.51 | 213 | 0.38 | |
| Cynoglossus canariensis | 1.82 | 42 | 0.27 | |
| Pentanemus quinquarius | 1.76 | 18 | 0.26 | |
| Lagocephalus laevigatus | 0.44 | 2 | 0.07 | |
| Pisodonophis semicinctus | 0.40 | 2 | 0.06 | |
| Atractoscion aequidens | 0.31 | 2 | 0.05 | |
| Sardinella maderensis | 0.27 | 2 | 0.04 | |
| Pomadasy incisus | 0.25 | 2 | 0.04 | |
| Torpedo torpedo | 0.05 | 4 | 0.01 | |
| Total | 665.58 | | 100.01 | |

PROJECT STATION:3724
DATE:16/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 803
start stop duration Long E 1307
TIME :14:53:28 15:23:15 30 (min) Purpose code: 3
LOG :8781.33 8782.91 1.59 Area code : 3
FDEPTH: 42 42 GearCond.code:
BDEPTH: 42 42 Validity code:
Towing dir: 170° Wire out: 161 m Speed: 31 kn*10

Sorted: 220 Kg Total catch: 220.80 CATCH/HOUR: 441.60

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 101.48 | 3032 | 22.98 | |
| Pseudotolithus typus | 55.84 | 358 | 12.64 | 7867 |
| Galeoides decadactylus | 46.92 | 114 | 10.63 | |
| Pteroscion mbizi | 28.88 | 436 | 6.54 | |
| Trichiurus lepturus | 27.76 | 72 | 6.29 | |
| CONGRIDAE | 25.00 | 54 | 5.66 | |
| Dasyatis marmorata | 23.92 | 22 | 5.42 | |
| Selene dorsalis | 20.62 | 288 | 4.67 | |
| Pomadasy incisus | 17.38 | 84 | 3.94 | |
| Ilisha africana | 17.02 | 310 | 3.85 | |
| Stromateus fiatola | 13.80 | 52 | 3.13 | |
| Pentanemus quinquarius | 13.68 | 150 | 3.10 | |
| Bembraps sp. | 9.72 | 224 | 2.20 | |
| Rhizoprionodon acutus | 7.00 | 2 | 1.59 | |
| Epinephelus aeneus | 5.88 | 8 | 1.33 | |
| Arius parkii | 5.14 | 8 | 1.16 | |
| Calappa sp. | 4.78 | 44 | 1.08 | |
| Trichiurus lepturus juv. | 4.36 | 314 | 0.99 | |
| Sepia officinalis hierredda | 4.14 | 4 | 0.94 | |
| Umbrina canariensis | 3.08 | 6 | 0.70 | |
| Torpedo torpedo | 1.62 | 34 | 0.37 | |
| Pomadasy jubelini | 1.36 | 4 | 0.31 | |
| Penaeus notialis | 1.02 | 36 | 0.23 | |
| Lagocephalus laevigatus | 0.64 | 2 | 0.14 | |
| C A S T R O P O D S | 0.38 | 2 | 0.09 | |
| Sphyraena guachancho | 0.14 | 4 | 0.03 | |
| Penaeus kerathurus | 0.04 | 2 | 0.01 | |
| Total | 441.60 | | 100.02 | |

PROJECT STATION: 3725
 DATE: 16/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 805 Long E 1204
 start stop duration
 TIME :16:10:54 16:40:47 30 (min) Purpose code: 3
 LOG :8788.08 8789.58 1.50 Area code : 3
 FDEPTH: 66 64 GearCond.code:
 BDEPTH: 66 64 Validity code:
 Towing dir: 355° Wire out: 222 m Speed: 30 kn*10
 Sorted: 273 Kg Total catch: 737.11 CATCH/HOUR: 1474.22

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 973.60 | 20910 | 66.04 | |
| Pomadasy jubelini | 78.48 | 160 | 5.32 | |
| Trichurus lepturus | 69.92 | 146 | 4.74 | |
| Galeoides decadactylus | 42.50 | 370 | 2.88 | |
| Dentex angolensis | 38.28 | 228 | 2.60 | 7859 |
| Pentheroscion mbizi | 35.50 | 330 | 2.41 | |
| Pagellus bellottii | 32.52 | 192 | 2.21 | 7870 |
| Pomadasy incisus | 30.80 | 360 | 2.09 | |
| Cynoglossus sp. | 22.30 | 110 | 1.51 | |
| Pseudotolithus typus | 20.36 | 22 | 1.38 | |
| Raja alba | 19.60 | 8 | 1.33 | |
| Conger conger | 17.88 | 28 | 1.21 | |
| Trachurus trecae | 13.90 | 170 | 0.94 | 7868 |
| Ubrina canariensis | 13.80 | 100 | 0.94 | |
| Brotula barbata | 12.88 | 18 | 0.87 | |
| Citharus linguatula | 12.50 | 280 | 0.85 | |
| Atractoscion sequidens | 6.44 | 8 | 0.44 | |
| Raja miraletus | 5.42 | 8 | 0.37 | |
| Bembriceps sp. | 4.50 | 10 | 0.31 | |
| Raja sp. | 3.06 | 2 | 0.21 | |
| Chloroscombrus chrysurus | 3.00 | 20 | 0.20 | |
| Miracorvina angolensis | 3.00 | 10 | 0.20 | |
| Sepia officinalis hierredda | 2.98 | 6 | 0.20 | |
| Lithognathus normys | 2.70 | 10 | 0.18 | |
| Branchiostegus semifasciatus | 2.10 | 2 | 0.14 | |
| Zeus faber | 2.08 | 6 | 0.14 | |
| Penaeus notialis | 1.62 | 74 | 0.11 | |
| Chaetodon hoefleri | 1.30 | 10 | 0.09 | |
| Trigla sp. | 1.20 | 10 | 0.08 | |
| Total | 1474.22 | | 99.99 | |

PROJECT STATION: 3726
 DATE: 16/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 800 Long E 1238
 start stop duration
 TIME :20:46:40 21:16:40 30 (min) Purpose code: 3
 LOG :8819.40 8820.93 1.97 Area code : 3
 FDEPTH: 528 522 GearCond.code:
 BDEPTH: 528 522 Validity code:
 Towing dir: 350° Wire out: 1350 m Speed: 29 kn*10
 Sorted: 40 Kg Total catch: 196.98 CATCH/HOUR: 393.96

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 254.24 | 67116 | 64.53 | |
| Yarella blackfordi | 43.58 | 2004 | 11.06 | |
| Melanostomias sp. | 19.58 | 396 | 4.97 | |
| Triplicphos hemingi | 16.18 | 2230 | 4.11 | |
| Stereomastis sp. | 10.86 | 1132 | 2.76 | |
| C E P H A L O P O D A | 10.86 | 80 | 2.76 | |
| Hoplostethus cadenati | 8.04 | 284 | 2.04 | |
| Aristeus varidens, female | 6.34 | 306 | 1.61 | 7872 |
| Benthodesmus sp. | 5.74 | 192 | 1.46 | |
| Aristeus varidens, male | 3.16 | 340 | 0.80 | 7871 |
| Todaropsis eblanae | 2.26 | 12 | 0.57 | |
| Laemonema laureysi | 1.92 | 158 | 0.49 | |
| Chaecon maritae, male | 1.72 | 4 | 0.44 | |
| Dicrolene intronigra | 1.24 | 124 | 0.31 | |
| Chaecon maritae, female | 1.04 | 6 | 0.26 | |
| Gadella imberbis | 1.02 | 34 | 0.26 | |
| Chaunax pictus | 0.96 | 22 | 0.24 | |
| MYCTOPHIDAE | 0.80 | 872 | 0.20 | |
| Galeus polli | 0.74 | 2 | 0.19 | |
| MELANONIDAE | 0.68 | 22 | 0.17 | |
| Nezumia sp. | 0.68 | 34 | 0.17 | |
| Conostoma denudata | 0.56 | 22 | 0.14 | |
| Merluccius polli | 0.54 | 2 | 0.14 | |
| Cataetix laticeps | 0.46 | 136 | 0.12 | |
| Lampadena sp. | 0.34 | 12 | 0.09 | |
| Lamprogrammus exotus | 0.12 | 12 | 0.03 | |
| Glyphus marsupialis | 0.12 | 22 | 0.03 | |
| Solenocera africana | 0.12 | 12 | 0.03 | |
| Etmopterus polli | 0.06 | 2 | 0.02 | |
| Total | 393.96 | | 100.00 | |

PROJECT STATION: 3727
 DATE: 16/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 759 Long E 1236
 start stop duration
 TIME :22:45:46 23:15:34 30 (min) Purpose code: 3
 LOG :8825.43 8826.82 1.38 Area code : 3
 FDEPTH: 634 630 GearCond.code:
 BDEPTH: 634 630 Validity code:
 Towing dir: 170° Wire out: 1550 m Speed: 30 kn*10
 Sorted: 54 Kg Total catch: 205.90 CATCH/HOUR: 411.80

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 216.54 | 52604 | 52.58 | |
| Yarella blackfordi | 88.56 | 2466 | 21.51 | |
| Hoplostethus cadenati | 24.30 | 712 | 5.90 | |
| Merluccius polli | 11.64 | 20 | 2.83 | |
| L O B S T E R S | 8.74 | 1054 | 2.12 | |
| Triplicphos hemingi | 7.92 | 1026 | 1.92 | |
| Stomias boa boa | 7.84 | 190 | 1.90 | |
| Centroprichthys granulosa | 7.60 | 2 | 1.85 | |
| Benthodesmus sp. | 6.84 | 208 | 1.66 | |
| Aristeus varidens, female | 6.12 | 234 | 1.49 | 7874 |
| ALEPOCEPHALIDAE | 6.04 | 28 | 1.47 | |
| Lamprogrammus exotus | 3.60 | 18 | 0.87 | |
| Aristeus varidens, male | 2.34 | 360 | 0.57 | 7873 |
| Cataetix laticeps | 2.16 | 82 | 0.52 | |
| Chaunax pictus | 1.98 | 10 | 0.48 | |
| Chaecon maritae | 1.90 | 4 | 0.46 | |
| Conger conger | 1.80 | 54 | 0.44 | |
| Gadella imberbis | 1.54 | 216 | 0.37 | |
| Caelorhynchus sp. | 1.54 | 72 | 0.37 | |
| Xenodermichthys copei | 1.18 | 108 | 0.29 | |
| Dicrolene intronigra | 0.72 | 28 | 0.17 | |
| Laemonema laureysi | 0.64 | 10 | 0.16 | |
| MYCTOPHIDAE | 0.18 | 36 | 0.04 | |
| Scymnodon obscurus | 0.08 | 2 | 0.02 | |
| Total | 411.80 | | 99.99 | |

PROJECT STATION: 3728
 DATE: 17/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 804 Long E 1236
 start stop duration
 TIME :00:47:06 01:17:44 31 (min) Purpose code: 3
 LOG :8831.81 8833.37 1.55 Area code : 3
 FDEPTH: 726 732 GearCond.code:
 BDEPTH: 726 732 Validity code:
 Towing dir: 175° Wire out: 1771 m Speed: 30 kn*10
 Sorted: 43 Kg Total catch: 148.96 CATCH/HOUR: 288.31

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 110.96 | 33139 | 38.49 | |
| Yarella blackfordi | 46.55 | 854 | 16.15 | |
| Hoplostethus cadenati | 36.93 | 339 | 12.81 | |
| L O B S T E R S | 34.55 | 1146 | 11.98 | |
| Trachyrhynchus scabrus | 12.00 | 62 | 4.16 | |
| Lamprogrammus exotus | 7.59 | 21 | 2.63 | |
| Nezumia sp. | 6.31 | 143 | 2.19 | |
| Stomias boa boa | 5.50 | 170 | 1.91 | |
| Gadella imberbis | 5.36 | 312 | 1.86 | |
| Aristeus varidens, female | 4.68 | 203 | 1.62 | 7876 |
| Lophiodon kempfi | 4.20 | 8 | 1.45 | |
| Chaecon maritae | 3.25 | 8 | 1.13 | |
| Triplicphos hemingi | 3.25 | 379 | 1.13 | |
| Xenodermichthys copei | 1.70 | 54 | 0.59 | |
| GALATHEIDAE * | 0.95 | 434 | 0.33 | |
| Synbranchichthys kaupii | 0.89 | 21 | 0.31 | |
| Talismania sp. | 0.81 | 21 | 0.28 | |
| Conger conger | 0.68 | 8 | 0.24 | |
| Isistius brasiliensis | 0.46 | 2 | 0.16 | |
| Dibranchius sp. | 0.41 | 14 | 0.14 | |
| Plesicpeneaeus edwardsianus | 0.27 | 14 | 0.09 | |
| CALATANASSIDAE | 0.21 | 8 | 0.07 | |
| Benthodesmus sp. | 0.21 | 14 | 0.07 | |
| Raja alba | 0.21 | 8 | 0.07 | |
| Aristeus varidens, male | 0.21 | 35 | 0.07 | 7875 |
| Nemichthys scolopaceus | 0.08 | 8 | 0.03 | |
| MYCTOPHIDAE | 0.08 | 14 | 0.03 | |
| Total | 288.30 | | 100.00 | |

PROJECT STATION: 3729
 DATE: 17/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 808 Long E 1300
 start stop duration
 TIME :05:37:51 06:08:46 31 (min) Purpose code: 3
 LOG :8862.94 8864.66 1.57 Area code : 3
 FDEPTH: 95 94 GearCond.code:
 BDEPTH: 95 94 Validity code:
 Towing dir: 145° Wire out: 300 m Speed: 32 kn*10
 Sorted: 693 Kg Total catch: 693.39 CATCH/HOUR: 1342.05

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pomadasy jubelini | 987.99 | 1283 | 73.62 | |
| Ubrina canariensis | 105.91 | 482 | 7.89 | 7879 |
| Dentex angolensis | 57.41 | 265 | 4.28 | 7878 |
| Raja miraletus | 33.70 | 72 | 2.51 | |
| Trachurus trecae | 31.55 | 844 | 2.35 | 7877 |
| Sepia officinalis hierredda | 19.47 | 14 | 1.45 | |
| Trichurus lepturus | 17.13 | 27 | 1.28 | |
| C E P H A L O P G D A | 10.78 | 2965 | 0.80 | |
| Zeus faber | 10.28 | 45 | 0.77 | |
| Trigla lyra | 9.27 | 54 | 0.69 | |
| Uranoscopus polli | 9.17 | 43 | 0.68 | |
| Brotula barbata | 8.59 | 10 | 0.64 | |
| Citharus linguatula | 7.84 | 153 | 0.58 | |
| Lagoocephalus laevigatus | 6.08 | 14 | 0.45 | |
| Torpedo marmorata | 5.79 | 2 | 0.43 | |
| Mustelus mustelus | 4.65 | 2 | 0.35 | |
| Chaetodon hoefleri | 2.92 | 21 | 0.22 | |
| Octopus vulgaris | 2.67 | 4 | 0.20 | |
| Torpedo torpedo | 2.65 | 8 | 0.20 | |
| Miracorvina angolensis | 1.99 | 10 | 0.15 | |
| Dicologlossa cuneata | 1.68 | 8 | 0.13 | |
| Brachydeuterus auritus | 1.43 | 95 | 0.11 | |
| C R U S T A C E A N S | 0.81 | 122 | 0.06 | |
| Pontinus accraensis | 0.64 | 6 | 0.05 | |
| Fistularia petimba | 0.56 | 2 | 0.04 | |
| Pagellus bellottii | 0.41 | 6 | 0.03 | |
| Todaropsis eblanae | 0.25 | 2 | 0.02 | |
| Saurida brasiliensis | 0.21 | 41 | 0.02 | |
| Decapterus rhonchus | 0.21 | 2 | 0.02 | |
| Total | 1342.04 | | 100.02 | |

PROJECT STATION: 3730
 DATE: 17/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 809 Long E 1255
 start stop duration
 TIME :07:15:27 07:46:32 31 (min) Purpose code: 3
 LOG :8872.84 8874.43 1.59 Area code : 3
 FDEPTH: 115 116 GearCond.code:
 BDEPTH: 115 116 Validity code:
 Towing dir: 180° Wire out: 320 m Speed: 30 kn*10
 Sorted: 208 Kg Total catch: 208.32 CATCH/HOUR: 403.20

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 139.70 | 679 | 34.65 | 7880 |
| Ubrina canariensis | 107.88 | 358 | 26.76 | 7882 |
| Brachydeuterus auritus | 21.58 | 165 | 5.35 | |
| Trigla lyra | 21.37 | 163 | 5.30 | |
| Dentex macropthalmus | 19.32 | 43 | 4.79 | 7881 |
| Raja miraletus | 18.35 | 29 | 4.55 | |
| Dentex canariensis | 9.14 | 23 | 2.27 | |
| Trichurus lepturus | 7.92 | 21 | 1.96 | |
| Dentex gibbosus | 6.74 | 2 | 1.67 | |
| Sepia officinalis hierredda | 6.46 | 12 | 1.60 | |
| Scorpaena normani | 5.59 | 17 | 1.39 | |
| Coops coops | 5.42 | 43 | 1.34 | |
| Plectorhynchus mediterraneus | 4.95 | 2 | 1.23 | |
| Brotula barbata | 4.74 | 4 | 1.18 | |
| Zeus faber | 4.49 | 23 | 1.11 | |
| Pagellus bellottii | 3.97 | 8 | 0.96 | |
| Citharus linguatula | 3.64 | 77 | 0.90 | |
| Octopus vulgaris | 2.03 | 4 | 0.50 | |
| Anthias anthias | 1.90 | 64 | 0.47 | |
| Dicologlossa sp. | 1.76 | 10 | 0.44 | |
| Dentex congensis | 1.45 | 6 | 0.36 | |
| Trachurus trecae | 1.41 | 37 | 0.35 | |
| Chaetodon hoefleri | 1.20 | 10 | 0.30 | |
| Salene dorsalis | 0.66 | 2 | 0.16 | |
| Uranoscopus polli | 0.37 | 4 | 0.09 | |
| Lophys sp. | 0.35 | 2 | 0.09 | |
| Citharichthys stampflii | 0.33 | 6 | 0.08 | |
| Loligo vulgaris | 0.27 | 29 | 0.07 | |
| Saurida brasiliensis | 0.14 | 14 | 0.03 | |
| Arnoglossus imperialis | 0.08 | 10 | 0.02 | |
| Total | 403.21 | | 99.99 | |

PROJECT STATION: 3731
 DATE: 17/ 4/05 GEAR TYPE: BT No.16 POSITION: Lat S 814
 start stop duration Long E 1251
 TIME :08:41:40 09:11:42 30 (min) Purpose code: 3
 LOG :8881.06 8882.54 1.48 Area code : 3
 FDEPTH: 142 134 GearCond.code: 3
 BDEPTH: 142 134 Validity code: 9
 Towing dir: 350° Wire out: 420 m Speed: 30 kn*10
 Sorted: Kg Total catch: 171.53 CATCH/HOUR: 343.06

PROJECT STATION: 3734
 DATE: 17/ 4/05 GEAR TYPE: BT No.16 POSITION: Lat S 756
 start stop duration Long E 1254
 TIME :13:54:17 14:14:57 21 (min) Purpose code: 3
 LOG :8914.38 8915.42 1.02 Area code : 3
 FDEPTH: 86 86 GearCond.code: 9
 BDEPTH: 86 86 Validity code: 9
 Towing dir: 325° Wire out: m Speed: kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|---------------|---------|---------------|------|
| | weight | numbers | | |
| Spicara alta | 104.36 | 948 | 30.42 | |
| Erythrocles monodi | 96.96 | 740 | 28.26 | |
| Dentex angolensis | 52.52 | 240 | 15.31 | 7883 |
| Zenopsis conchifer | 16.88 | 26 | 4.92 | |
| Zeus faber | 13.12 | 78 | 3.82 | |
| Dentex macrophthalms | 12.92 | 4 | 3.77 | |
| Scops boops | 12.68 | 212 | 3.70 | |
| Dentex congoensis | 7.40 | 106 | 2.16 | |
| Brotula barbata | 5.34 | 6 | 1.56 | |
| Mustelus mustelus | 4.60 | 2 | 1.34 | |
| Pterothrissus belloci | 3.94 | 22 | 0.86 | |
| Citharus linguatula | 1.84 | 52 | 0.54 | |
| Chaetodon hoefleri | 1.84 | 10 | 0.54 | |
| Trachurus trecae | 1.32 | 10 | 0.38 | |
| Uranoscopus cadonati | 1.04 | 2 | 0.30 | |
| Octopus vulgaris | 1.00 | 2 | 0.29 | |
| Lagoccephalus laevigatus | 0.92 | 2 | 0.27 | |
| Scylliorhinus canicula | 0.92 | 2 | 0.27 | |
| Trigla lyra | 0.90 | 30 | 0.26 | |
| B I V A L V E S | 0.68 | 128 | 0.20 | |
| Illex coindetii | 0.64 | 14 | 0.19 | |
| Scorpaena normani | 0.50 | 2 | 0.15 | |
| Brachydeuterus auritus | 0.50 | 4 | 0.15 | |
| C A S T R O P O D S | 0.42 | 42 | 0.12 | |
| Scorpaena stephanica | 0.40 | 4 | 0.12 | |
| Aulopus cadonati | 0.34 | 2 | 0.10 | |
| Saurida brasiliensis | 0.08 | 6 | 0.02 | |
| Total | 343.06 | | 100.02 | |

SPECIES CATCH/HOUR % OF TOT. C SAMP
 weight numbers
 Total

PROJECT STATION: 3736
 DATE: 17/ 4/05 GEAR TYPE: BT No.16 POSITION: Lat S 755
 start stop duration Long E 1254
 TIME :14:17:02 14:37:20 20 (min) Purpose code: 3
 LOG :8915.55 8916.48 0.91 Area code : 3
 FDEPTH: 86 87 GearCond.code: 9
 BDEPTH: 86 87 Validity code: 9
 Towing dir: 325° Wire out: 299 m Speed: 30 kn*10
 Sorted: 146 Kg Total catch: 145.08 CATCH/HOUR: 435.24

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|---------------|---------|---------------|------|
| | weight | numbers | | |
| Dentex congoensis | 65.64 | 2103 | 15.08 | |
| Lepidotrigla cadmani | 64.26 | 489 | 14.76 | |
| Dentex angolensis | 44.16 | 849 | 10.15 | 7888 |
| Pagellus bellottii | 34.98 | 1002 | 8.04 | 7890 |
| Atractoscion aequidens | 33.54 | 24 | 7.71 | |
| Sepia orbignyana | 28.35 | 33 | 5.51 | |
| Zeus faber | 26.70 | 96 | 6.13 | |
| Trachurus trecae, juvenile | 24.78 | 216 | 5.69 | 7889 |
| Fistularia petimba | 22.62 | 48 | 5.20 | |
| Raja miraletus | 20.97 | 36 | 4.82 | |
| Rhinobatos albomaculatus | 12.60 | 6 | 2.89 | |
| Citharus linguatula | 11.73 | 369 | 2.70 | |
| Saurida brasiliensis | 8.85 | 2277 | 2.03 | |
| Brotula barbata | 8.13 | 9 | 1.87 | |
| Pseuduponus prayensis | 6.66 | 54 | 1.53 | |
| Torpedo torpedo | 5.28 | 6 | 1.21 | |
| Dentex gibbosus | 3.51 | 15 | 0.81 | |
| Sparus pagrus africanus * | 3.00 | 3 | 0.69 | |
| Uranoscopus cadonati | 2.64 | 6 | 0.61 | |
| Illex coindetii | 2.64 | 759 | 0.57 | |
| Chaetodon hoefleri | 2.04 | 21 | 0.47 | |
| Ubrina canariensis | 1.80 | 18 | 0.41 | |
| Brachydeuterus auritus | 0.48 | 6 | 0.11 | |
| Trachinus araneus | 0.06 | 3 | 0.01 | |
| Total | 435.24 | | 100.00 | |

PROJECT STATION: 3732
 DATE: 17/ 4/05 GEAR TYPE: BT No.16 POSITION: Lat S 759
 start stop duration Long E 1244
 TIME :10:58:50 11:28:36 30 (min) Purpose code: 3
 LOG :8897.68 8899.13 1.45 Area code : 3
 FDEPTH: 165 151 GearCond.code: 3
 BDEPTH: 165 151 Validity code: 9
 Towing dir: 350° Wire out: 470 m Speed: 30 kn*10
 Sorted: 128 Kg Total catch: 128.16 CATCH/HOUR: 256.32

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|---------------|---------|---------------|------|
| | weight | numbers | | |
| Spicara alta | 95.16 | 1196 | 37.13 | |
| Dentex angolensis | 33.00 | 116 | 12.87 | 7884 |
| Zenopsis conchifer | 32.80 | 54 | 12.80 | |
| Erythrocles monodi | 20.80 | 204 | 8.11 | |
| Pterothrissus belloci | 15.00 | 116 | 5.85 | |
| Trichurus lepturus | 12.92 | 18 | 5.04 | |
| Brotula barbata | 12.38 | 14 | 4.83 | |
| Squatina aculeata | 9.00 | 4 | 3.51 | |
| Zeus faber | 8.32 | 34 | 3.25 | |
| Raja clavata | 3.50 | 2 | 1.37 | |
| Raja miraletus | 2.88 | 4 | 1.12 | |
| Saurida brasiliensis | 1.90 | 402 | 0.74 | |
| Illex coindetii | 1.64 | 104 | 0.64 | |
| C A S T R O P O D S | 1.56 | 100 | 0.59 | |
| Citharus linguatula | 1.26 | 22 | 0.49 | |
| Lophiodes kemp | 1.12 | 4 | 0.44 | |
| Lepidotrigla cadmani | 1.10 | 10 | 0.43 | |
| Bombrops heterurus | 0.82 | 12 | 0.32 | |
| Uranoscopus polli | 0.56 | 4 | 0.22 | |
| Boops boops | 0.32 | 4 | 0.12 | |
| Aricoma bondi | 0.16 | 2 | 0.06 | |
| Syacium micrurus | 0.16 | 12 | 0.06 | |
| Peristedion cataphractum | 0.02 | 2 | 0.01 | |
| Total | 256.32 | | 100.00 | |

PROJECT STATION: 3736
 DATE: 17/ 4/05 GEAR TYPE: BT No.16 POSITION: Lat S 754
 start stop duration Long E 1257
 TIME :15:17:22 15:48:06 31 (min) Purpose code: 3
 LOG :8920.82 8922.44 1.62 Area code : 3
 FDEPTH: 71 73 GearCond.code: 3
 BDEPTH: 71 73 Validity code: 9
 Towing dir: 170° Wire out: 299 m Speed: 30 kn*10
 Sorted: 202 Kg Total catch: 201.81 CATCH/HOUR: 390.60

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|---------------|---------|--------------|------|
| | weight | numbers | | |
| Trachurus trecae | 140.90 | 2164 | 36.07 | 7893 |
| Pagellus bellottii | 54.97 | 1455 | 14.07 | 7892 |
| Dentex congoensis | 35.19 | 776 | 9.01 | |
| Raja miraletus | 32.15 | 62 | 8.23 | |
| Sepia officinalis hlerredda | 30.50 | 21 | 7.81 | |
| Dentex angolensis | 14.98 | 316 | 3.84 | 7891 |
| Trigla lyra | 14.71 | 163 | 3.77 | |
| Zeus faber | 13.92 | 33 | 3.05 | |
| Pseuduponus prayensis | 10.88 | 155 | 2.79 | |
| Citharus linguatula | 5.67 | 283 | 1.45 | |
| Bombrops sp. | 5.11 | 105 | 1.31 | |
| Mustelus mustelus | 4.65 | 2 | 1.19 | |
| Torpedo torpedo | 3.97 | 6 | 1.02 | |
| Loligo vulgaris | 3.95 | 776 | 1.01 | |
| Rhinobatos albomaculatus | 3.79 | 2 | 0.97 | |
| Scomber japonicus | 3.04 | 10 | 0.78 | |
| Fistularia petimba | 2.40 | 4 | 0.61 | |
| Octopus vulgaris | 1.90 | 2 | 0.49 | |
| Sardinella aurita | 1.45 | 4 | 0.37 | |
| Gobiidae | 1.34 | 15 | 0.34 | |
| Saurida brasiliensis | 1.28 | 87 | 0.33 | |
| Lagoccephalus laevigatus | 1.24 | 2 | 0.32 | |
| Sepia orbignyana | 0.85 | 2 | 0.22 | |
| Cynoglossus sp. | 0.83 | 6 | 0.21 | |
| ArnoGLOSSUS imperialis | 0.83 | 19 | 0.21 | |
| Uranoscopus polli | 0.81 | 2 | 0.21 | |
| Synaptura lusitanica | 0.64 | 4 | 0.16 | |
| Sufflogobius bibarbatus | 0.60 | 8 | 0.15 | |
| Total | 390.55 | | 99.99 | |

PROJECT STATION: 3733
 DATE: 17/ 4/05 GEAR TYPE: BT No.16 POSITION: Lat S 757
 start stop duration Long E 1251
 TIME :12:40:43 13:10:30 30 (min) Purpose code: 3
 LOG :8908.16 8909.82 1.64 Area code : 3
 FDEPTH: 105 104 GearCond.code: 3
 BDEPTH: 105 104 Validity code: 9
 Towing dir: 150° Wire out: 333 m Speed: 30 kn*10
 Sorted: 146 Kg Total catch: 146.72 CATCH/HOUR: 293.44

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|---------------|---------|--------------|------|
| | weight | numbers | | |
| Ubrina canariensis | 131.00 | 1016 | 44.64 | 7886 |
| Dentex angolensis | 62.60 | 626 | 21.33 | 7887 |
| Lepidotrigla cadmani | 20.76 | 164 | 7.07 | |
| Zeus faber | 17.36 | 60 | 5.92 | |
| Trachurus trecae, juvenile | 13.14 | 354 | 4.48 | 7885 |
| Sepia orbignyana | 12.78 | 28 | 4.36 | |
| Citharus linguatula | 9.02 | 210 | 3.07 | |
| Uranoscopus polli | 3.90 | 16 | 1.33 | |
| Trichurus lepturus | 3.52 | 2 | 1.20 | |
| Dentex barnardi | 2.90 | 8 | 0.99 | |
| Dentex congoensis | 2.78 | 62 | 0.95 | |
| Octopus vulgaris | 2.76 | 4 | 0.94 | |
| Brotula barbata | 2.56 | 6 | 0.87 | |
| Scorpaena normani | 1.92 | 20 | 0.65 | |
| Raja miraletus | 1.58 | 2 | 0.54 | |
| Pagellus bellottii | 1.06 | 16 | 0.36 | |
| Pterothrissus belloci | 0.68 | 6 | 0.23 | |
| Fistularia petimba | 0.66 | 2 | 0.22 | |
| Branchiostegus semifasciatus | 0.62 | 2 | 0.21 | |
| Lophiodes kemp | 0.62 | 2 | 0.21 | |
| Uranoscopus cadonati | 0.62 | 2 | 0.21 | |
| Illex coindetii | 0.60 | 8 | 0.20 | |
| Total | 293.44 | | 99.98 | |

PROJECT STATION: 3737
 DATE: 17/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 751 Long E 1201
 start stop duration
 TIME :15:00:26 16:40:45 23 (min) Purpose code: 3
 LOG :8929.15 8930.30 1.15 Area code : 3
 FDEPTH: 44 42 GearCond.code:
 BDEPTH: 44 42 Validity code:
 Towing dir: 345° Wire out: 170 m Speed: 30 kn*10
 Sorted: 561 Kg Total catch: 560.51 CATCH/HOUR: 1462.20

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 704.92 | 24149 | 48.21 | |
| Trichiurus lepturus | 156.16 | 417 | 10.68 | |
| Stromateus fiatola | 144.47 | 389 | 9.88 | |
| Pomadasys incisus | 105.10 | 644 | 7.19 | |
| Pseudocolithus typus | 67.72 | 177 | 4.63 | 7895 |
| Galeoides decadactylus | 52.10 | 475 | 3.56 | |
| Selene dorsalis | 37.70 | 475 | 2.58 | |
| Sphyraena guachancho | 23.97 | 63 | 1.64 | |
| Miracorvina angolensis | 23.58 | 994 | 1.61 | |
| Ilisha africana | 22.64 | 350 | 1.55 | |
| Raja miraletus | 17.06 | 31 | 1.17 | |
| Alectis alexandrinus | 15.18 | 16 | 1.04 | |
| Trachurus trcaea | 13.17 | 123 | 0.90 | 7894 |
| Zeus faber | 11.92 | 18 | 0.82 | |
| Chloroscombrus chrysurus | 10.80 | 94 | 0.74 | |
| Penaeus notialis, female | 7.30 | 157 | 0.50 | |
| Sepia officinalis hierredda | 7.10 | 13 | 0.49 | |
| Cynoglossus canariensis | 6.91 | 104 | 0.47 | |
| Torpedo torpedo | 5.22 | 39 | 0.36 | |
| Arius parkii | 4.96 | 3 | 0.34 | |
| Dasyatis marmorata | 4.57 | 3 | 0.31 | |
| Bembraps greyi | 4.17 | 94 | 0.29 | |
| Rhinobatos albomaculatus | 2.45 | 3 | 0.17 | |
| Penaeus notialis, male | 2.30 | 143 | 0.16 | |
| Epinephelus aeneus | 2.27 | 10 | 0.16 | |
| Conger conger | 1.80 | 3 | 0.12 | |
| Fistularia petimba | 1.70 | 3 | 0.12 | |
| Dicloglossa cuneata | 1.33 | 29 | 0.09 | |
| Sycaum micrum | 1.15 | 10 | 0.08 | |
| Calappa sp. | 0.94 | 18 | 0.06 | |
| SOLIFIDAE | 0.86 | 10 | 0.06 | |
| Uranoscopus albesca | 0.47 | 10 | 0.03 | |
| Scorpaena normani | 0.29 | 18 | 0.02 | |
| Total | 1462.28 | | 100.03 | |

PROJECT STATION: 3739
 DATE: 18/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 747 Long E 1232
 start stop duration
 TIME :02:47:55 03:17:39 30 (min) Purpose code: 3
 LOG :8986.53 8987.97 1.43 Area code : 3
 FDEPTH: 642 651 GearCond.code:
 BDEPTH: 642 651 Validity code:
 Towing dir: 140° Wire out: 1661 m Speed: 30 kn*10
 Sorted: 36 Kg Total catch: 167.76 CATCH/HOUR: 335.52

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 136.98 | 30438 | 40.83 | |
| Yarrella blackfordi | 111.06 | 180 | 33.10 | |
| Stomias boa boa | 15.30 | 360 | 4.56 | |
| Merluccius polli | 13.28 | 32 | 3.96 | 7899 |
| L O B S T E R S | 12.42 | 1448 | 3.70 | |
| Hoplostethus cadenati | 8.64 | 252 | 2.58 | |
| Triplophos hemingi | 8.10 | 1162 | 2.41 | |
| Lamprogrammus exitus | 6.48 | 28 | 1.93 | |
| Benthodesmus tenuis | 5.50 | 170 | 1.64 | |
| Aristeus varidens, female | 3.34 | 136 | 1.00 | 7898 |
| Nezumia sp. | 2.26 | 62 | 0.67 | |
| Xenodermichthys copei | 2.26 | 180 | 0.67 | |
| OMMASTREPHIDAE | 1.54 | 36 | 0.46 | |
| Bathygadus macrops | 1.36 | 64 | 0.41 | |
| Gadella imberbis | 1.26 | 144 | 0.38 | |
| Chaceon maritae | 0.90 | 4 | 0.27 | |
| GALATHEIDAE * | 0.82 | 530 | 0.24 | |
| Laemonema laureysi | 0.72 | 28 | 0.21 | |
| Talismania sp. | 0.54 | 28 | 0.16 | |
| Dibranchius sp. | 0.54 | 18 | 0.16 | |
| Cataetyx laticeps | 0.54 | 72 | 0.16 | |
| Etmopterus pusillus | 0.40 | 2 | 0.12 | |
| Halosaurus oventi | 0.36 | 10 | 0.11 | |
| Conger conger | 0.28 | 10 | 0.08 | |
| MYCTOPHIDAE | 0.24 | 28 | 0.07 | |
| Sergestes sp. | 0.08 | 10 | 0.02 | |
| Callinectes sp. | 0.08 | 10 | 0.02 | |
| Acanthephyra sp. | 0.08 | 10 | 0.02 | |
| Glyphus marsupialis | 0.08 | 10 | 0.02 | |
| Nemichthys scolopaceus | 0.08 | 10 | 0.02 | |
| Total | 335.52 | | 99.98 | |

PROJECT STATION: 3740
 DATE: 18/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 747 Long E 1234
 start stop duration
 TIME :04:34:39 05:04:51 30 (min) Purpose code: 3
 LOG :8992.35 8993.86 1.49 Area code : 3
 FDEPTH: 378 389 GearCond.code:
 BDEPTH: 378 389 Validity code:
 Towing dir: 330° Wire out: 1222 m Speed: 30 kn*10
 Sorted: 34 Kg Total catch: 307.05 CATCH/HOUR: 614.10

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 352.44 | 110888 | 57.39 | |
| Merluccius polli | 176.04 | 720 | 28.67 | 7900 |
| Centrophorus granulosus | 9.32 | 2 | 1.52 | |
| Laemonema laureysi | 7.98 | 392 | 1.30 | |
| Zenopsis conchifer | 5.82 | 12 | 0.95 | |
| Chaunax pictus | 5.56 | 278 | 0.91 | |
| Hymenocephalus italicus | 5.44 | 822 | 0.89 | |
| Gadella imberbis | 5.18 | 216 | 0.84 | |
| Dibranchius sp. | 5.06 | 544 | 0.82 | |
| Scorpaena normani | 4.92 | 12 | 0.80 | |
| Malacocephalus occidentalis | 4.68 | 38 | 0.76 | |
| Parapenaeus longirostris, fem. | 4.56 | 608 | 0.74 | |
| Bathyrhoconger vicinus | 4.06 | 12 | 0.66 | |
| Yarrella blackfordi | 3.78 | 216 | 0.62 | |
| MYCTOPHIDAE | 3.40 | 4038 | 0.55 | |
| Nezumia milleri | 2.52 | 50 | 0.41 | |
| Stereomastis sp. | 2.40 | 330 | 0.39 | |
| Melanostomias sp. | 2.02 | 64 | 0.33 | |
| Stomias boa boa | 1.90 | 88 | 0.31 | |
| Chlorophthalmus atlanticus | 1.50 | 164 | 0.24 | |
| Gadella maraldi | 1.26 | 38 | 0.21 | |
| TRICHIURIDAE | 0.88 | 36 | 0.14 | |
| Bathynectes piperitus | 0.74 | 12 | 0.12 | |
| Solenocera africana | 0.64 | 76 | 0.10 | |
| Epigonus telescopus | 0.50 | 12 | 0.08 | |
| Triplophos hemingi | 0.50 | 64 | 0.08 | |
| Helicolenus dactylopterus | 0.38 | 12 | 0.06 | |
| Trichiurus lepturus juv. | 0.38 | 12 | 0.06 | |
| Halosaurus oventi | 0.12 | 12 | 0.02 | |
| Peristedion cataphractum | 0.12 | 26 | 0.02 | |
| Total | 614.10 | | 99.99 | |

PROJECT STATION: 3738
 DATE: 18/ 4/05 GEAR TYPE: BT No:15 POSITION: Lat S 747 Long E 1230
 start stop duration
 TIME :00:39:21 01:09:22 30 (min) Purpose code: 3
 LOG :8979.99 8981.50 1.51 Area code : 3
 FDEPTH: 749 758 GearCond.code:
 BDEPTH: 749 758 Validity code:
 Towing dir: 340° Wire out: 1799 m Speed: 30 kn*10
 Sorted: 61 Kg Total catch: 212.74 CATCH/HOUR: 425.48

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Yarrella blackfordi | 130.60 | 3398 | 30.69 | |
| Nematocarcinus africanus | 85.68 | 11692 | 20.14 | |
| Hoplostethus cadenati | 66.24 | 1468 | 15.57 | |
| L O B S T E R S | 38.44 | 2044 | 9.03 | |
| Nezumia aequalis | 29.80 | 656 | 7.00 | |
| Conger conger | 14.12 | 172 | 3.32 | |
| Bajaocalfornia magalops | 9.80 | 100 | 2.30 | |
| Lamprogrammus exitus | 7.98 | 36 | 1.88 | |
| Lephtus vomerinus | 7.34 | 8 | 1.73 | |
| Stomias boa boa | 6.04 | 158 | 1.42 | |
| Gadella imberbis | 4.24 | 260 | 1.00 | |
| Triplophos hemingi | 4.18 | 476 | 0.98 | |
| Aristeus varidens, female | 4.10 | 166 | 0.96 | 7897 |
| OMMASTREPHIDAE | 4.04 | 28 | 0.95 | |
| Chaceon maritae | 2.72 | 6 | 0.64 | |
| Merluccius polli | 1.60 | 4 | 0.38 | |
| Xenodermichthys copei | 1.44 | 72 | 0.34 | |
| Benthodesmus tenuis | 1.36 | 8 | 0.32 | |
| Dibranchius atlanticus | 1.08 | 64 | 0.25 | |
| GALATHEIDAE * | 1.00 | 598 | 0.24 | |
| Seymionon obscurus | 1.00 | 4 | 0.24 | |
| Halosaurus oventi | 0.64 | 28 | 0.15 | |
| Laemonema laureysi | 0.58 | 8 | 0.14 | |
| Glyphus marsupialis | 0.44 | 172 | 0.10 | |
| Plescopenaeus edwardsianus | 0.36 | 22 | 0.08 | |
| Cataetyx laticeps | 0.22 | 44 | 0.05 | |
| S H R I M P S | 0.14 | 14 | 0.03 | |
| MYCTOPHIDAE | 0.14 | 58 | 0.03 | |
| Aristeus varidens, male | 0.08 | 8 | 0.02 | 7896 |
| Bathypetrolis sp. | 0.08 | 14 | 0.02 | |
| Total | 425.48 | | 100.00 | |

PROJECT STATION: 3741
 DATE: 18/ 4/05 GEAR TYPE: BT No:16 POSITION: Lat S 743 Long E 1234
 start stop duration
 TIME :05:01:13 06:40:40 31 (min) Purpose code: 3
 LOG :9000.12 9001.70 1.57 Area code : 3
 FDEPTH: 253 255 GearCond.code:
 BDEPTH: 253 255 Validity code:
 Towing dir: 152° Wire out: 750 m Speed: 30 kn*10
 Sorted: 34 Kg Total catch: 1360.07 CATCH/HOUR: 2632.39

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 1900.49 | 112897 | 72.20 | |
| Chlorophthalmus atlanticus | 261.10 | 11179 | 9.92 | |
| Merluccius polli | 137.54 | 2427 | 5.22 | 7901 |
| CHLOROPHTHALMIDAE | 81.64 | 2795 | 3.10 | |
| Parapenaeus longirostris, fem. | 58.84 | 9488 | 2.24 | 7903 |
| Zenopsis conchifer | 54.89 | 151 | 2.09 | |
| Trichiurus lepturus | 47.42 | 64 | 1.80 | |
| Parapenaeus longirostris, male | 28.68 | 5957 | 1.09 | 7902 |
| Illex coindetii | 24.27 | 294 | 0.92 | |
| Pterothrissus belloci | 22.06 | 74 | 0.84 | |
| Eumunida squamifera * | 13.24 | 3089 | 0.50 | |
| Raja miraletus | 1.45 | 2 | 0.06 | |
| Scyliorhinus canicula | 0.43 | 2 | 0.02 | |
| Dentex macrophthalmus | 0.35 | 4 | 0.01 | |
| Total | 2632.40 | | 100.01 | |

PROJECT STATION:3742
 DATE:18/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 742 Long E 1238
 start stop duration
 TIME :07:54:55 08:19:11 24 (min) Purpose code: 3
 LOG :9007.41 9008.65 1.23 Area code : 3
 FDEPTH: 115 114 GearCond.code: 9
 BDEPTH: 115 114 Validity code:
 Towing dir: 340° Wire out: 350 m Speed: 31 kn*10
 Sorted: Kg Total catch: 294.28 CATCH/HOUR: 735.70

PROJECT STATION:3745
 DATE:18/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 737 Long E 1255
 start stop duration
 TIME :12:48:16 13:10:58 23 (min) Purpose code: 3
 LOG :9035.29 9036.44 1.15 Area code : 3
 FDEPTH: 38 38 GearCond.code: 9
 BDEPTH: 38 38 Validity code:
 Towing dir: 340° Wire out: 150 m Speed: 30 kn*10
 Sorted: 174 Kg Total catch: 174.72 CATCH/HOUR: 455.79

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Umbrina canariensis | 543.50 | 2288 | 73.88 | 7904 |
| Dentex angolensis | 58.60 | 248 | 7.97 | 7905 |
| Dentex congoensis | 37.00 | 250 | 5.03 | |
| Dentex barnardi | 28.50 | 80 | 3.87 | 7907 |
| Epinephelus aeneus | 15.10 | 3 | 2.05 | |
| Mustelus mustelus | 11.50 | 5 | 1.56 | |
| Trigla lyra | 8.23 | 63 | 1.12 | |
| Raja miraletus | 5.95 | 10 | 0.81 | |
| Pagellus bellottii | 5.60 | 25 | 0.76 | 7906 |
| Trichurus lepturus | 4.65 | 5 | 0.63 | |
| Anthias anthias | 3.93 | 10 | 0.53 | |
| Zenopsis conchifer | 3.13 | 3 | 0.43 | |
| Brotula barbata | 2.70 | 5 | 0.37 | |
| Torpedo marmorata | 2.43 | 3 | 0.33 | |
| Zeus faber | 2.13 | 8 | 0.29 | |
| Chaetodon hoeferi | 1.25 | 10 | 0.17 | |
| C A S T R O P O D S | 0.68 | 40 | 0.09 | |
| Branchiostegus semifasciatus | 0.33 | 3 | 0.04 | |
| Scorpaena normani | 0.33 | 3 | 0.04 | |
| B I V A L V E S | 0.20 | 30 | 0.03 | |
| Total | 735.74 | | 100.00 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 190.28 | 759 | 41.75 | 7913 |
| Pagellus bellottii | 145.62 | 892 | 31.95 | 7912 |
| Dentex barnardi | 30.00 | 104 | 6.58 | |
| Decapterus rhonchus | 23.90 | 128 | 5.24 | |
| Pseudupeneus prayensis | 12.80 | 81 | 3.03 | |
| Rhinobatos albomaculatus | 10.90 | 5 | 2.39 | |
| Raja miraletus | 10.02 | 23 | 2.20 | |
| Pagrus caeruleostictus | 6.91 | 21 | 1.52 | |
| Epinephelus aeneus | 6.16 | 10 | 1.35 | |
| Citharus linguatula | 3.08 | 37 | 0.68 | |
| Dentex canariensis | 2.95 | 5 | 0.65 | |
| Pomadasy s rogeri | 2.37 | 3 | 0.52 | |
| Aluterus scriptus | 1.85 | 5 | 0.41 | |
| Caranx hippos | 1.85 | 3 | 0.41 | |
| Chilomycterus spinosus mauret. | 1.49 | 10 | 0.33 | |
| Dactylopterus volitans | 1.43 | 5 | 0.31 | |
| Zeus faber | 1.12 | 3 | 0.25 | |
| Fistularia petimba | 0.70 | 3 | 0.15 | |
| Cynoglossus canariensis | 0.60 | 3 | 0.13 | |
| Priacanthus cruentatus | 0.23 | 3 | 0.05 | |
| Illex coindetii | 0.21 | 73 | 0.05 | |
| Bombrops heterurus | 0.18 | 16 | 0.04 | |
| Rypticus saponaceus | 0.13 | 18 | 0.03 | |
| Total | 455.78 | | 100.02 | |

PROJECT STATION:3743
 DATE:18/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 738 Long E 1245
 start stop duration
 TIME :09:37:04 10:08:27 31 (min) Purpose code: 3
 LOG :9017.47 9019.03 1.54 Area code : 3
 FDEPTH: 88 89 GearCond.code:
 BDEPTH: 88 89 Validity code:
 Towing dir: 150° Wire out: 250 m Speed: 30 kn*10
 Sorted: 112 Kg Total catch: 429.86 CATCH/HOUR: 831.99

PROJECT STATION:3746
 DATE:18/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 733 Long E 1256
 start stop duration
 TIME :14:06:17 14:36:09 30 (min) Purpose code: 3
 LOG :9041.47 9042.99 1.53 Area code : 3
 FDEPTH: 27 28 GearCond.code:
 BDEPTH: 27 28 Validity code:
 Towing dir: 160° Wire out: 130 m Speed: 30 kn*10
 Sorted: 224 Kg Total catch: 5048.09 CATCH/HOUR: 10096.18

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 487.49 | 3912 | 58.59 | |
| Sepia orbignyana | 74.96 | 75 | 9.01 | |
| Dentex congoensis | 51.04 | 1185 | 6.13 | |
| Dentex angolensis | 50.23 | 612 | 6.04 | 7908 |
| Trigla lyra | 48.58 | 439 | 5.84 | |
| Sarda sarda | 23.55 | 15 | 2.83 | |
| Trachurus trecae, juvenile | 22.88 | 528 | 2.75 | 7909 |
| Zeus faber | 21.39 | 60 | 2.57 | |
| Umbrina canariensis | 14.01 | 29 | 1.68 | |
| Raja miraletus | 10.28 | 23 | 1.24 | |
| Citharus linguatula | 9.46 | 367 | 1.14 | |
| Octopus vulgaris | 5.44 | 8 | 0.65 | |
| Spicara alta | 4.24 | 813 | 0.51 | |
| Pagellus bellottii | 2.69 | 45 | 0.32 | |
| Uranoscopus cadenati | 2.09 | 15 | 0.25 | |
| Chaetodon hoeferi | 1.26 | 8 | 0.15 | |
| Branchiostegus semifasciatus | 1.05 | 8 | 0.13 | |
| Boops boops | 0.52 | 15 | 0.06 | |
| Sardinella aurita | 0.52 | 8 | 0.06 | |
| Syacium micurum | 0.23 | 23 | 0.03 | |
| Scorpaena normani | 0.08 | 8 | 0.01 | |
| Total | 831.99 | | 99.99 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 821.50 | 96570 | 81.43 | |
| Pagellus bellottii | 362.70 | 2296 | 3.59 | 7914 |
| Decapterus rhonchus | 358.20 | 4500 | 3.55 | |
| Chloroscombrus chrysurus | 355.96 | 3466 | 3.53 | |
| Galeoides decadactylus | 247.50 | 2206 | 2.45 | |
| Selene dorsalis | 153.00 | 1576 | 1.52 | |
| Sphyræna sphyraena | 152.10 | 450 | 1.51 | |
| Trachurus trecae | 137.70 | 810 | 1.36 | 7915 |
| Pomadasy s incisus | 42.68 | 180 | 0.42 | |
| Pomadasy s peroteti | 21.16 | 46 | 0.21 | |
| Raja miraletus | 15.76 | 46 | 0.16 | |
| Pseudupeneus prayensis | 14.40 | 90 | 0.14 | |
| Caranx crysos | 9.46 | 90 | 0.09 | |
| Sardinella maderensis | 4.06 | 46 | 0.04 | |
| Total | 10096.18 | | 100.00 | |

PROJECT STATION:3744
 DATE:18/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 738 Long E 1249
 start stop duration
 TIME :10:57:59 11:27:46 30 (min) Purpose code: 3
 LOG :9023.92 9025.39 1.46 Area code : 3
 FDEPTH: 69 70 GearCond.code:
 BDEPTH: 69 70 Validity code:
 Towing dir: 340° Wire out: 215 m Speed: 30 kn*10
 Sorted: Kg Total catch: 32.70 CATCH/HOUR: 65.40

PROJECT STATION:3747
 DATE:19/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 734 Long E 1213
 start stop duration
 TIME :23:51:41 00:21:35 30 (min) Purpose code: 3
 LOG :9113.40 9114.92 1.48 Area code : 3
 FDEPTH: 718 716 GearCond.code:
 BDEPTH: 718 716 Validity code:
 Towing dir: 88° Wire out: 1750 m Speed: 30 kn*10
 Sorted: 33 Kg Total catch: 33.13 CATCH/HOUR: 66.26

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Sepia orbignyana | 32.12 | 42 | 49.11 | |
| Pagellus bellottii | 4.58 | 140 | 7.00 | 7910 |
| Zeus faber | 4.54 | 14 | 6.94 | |
| Octopus vulgaris | 4.48 | 4 | 6.85 | |
| Rhinobatos albomaculatus | 3.26 | 2 | 4.98 | |
| Alloteuthis africana | 2.22 | 970 | 3.39 | |
| Brachydeuterus auritus | 2.04 | 18 | 3.12 | |
| Sparus pagrus africanus * | 1.74 | 6 | 2.66 | |
| Raja miraletus | 1.30 | 2 | 1.99 | |
| Torpedo torpedo | 1.26 | 4 | 1.93 | |
| Saurida brasiliensis | 1.18 | 254 | 1.80 | |
| Dentex angolensis | 1.00 | 112 | 1.53 | 7911 |
| Fistularia petimba | 0.86 | 2 | 1.31 | |
| Chelidonicichthys capensis | 0.76 | 4 | 1.16 | |
| Uranoscopus polli | 0.76 | 10 | 1.16 | |
| Lophiodon kempii | 0.52 | 4 | 0.80 | |
| Lepidotrigla cadmani | 0.50 | 6 | 0.76 | |
| Citharus linguatula | 0.48 | 46 | 0.73 | |
| Grammoplites gruvelli | 0.48 | 22 | 0.73 | |
| Cynoglossus canariensis | 0.46 | 2 | 0.70 | |
| Syacium micurum | 0.28 | 8 | 0.43 | |
| Monolepis microstoma | 0.26 | 28 | 0.40 | |
| Serranus accraensis | 0.18 | 6 | 0.28 | |
| Sepiella sp. | 0.10 | 8 | 0.15 | |
| Sphoeroides marmoratus | 0.04 | 2 | 0.06 | |
| Total | 65.40 | | 99.97 | |

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Yarellia blackfordi | 17.32 | 324 | 26.14 | |
| Nezumia sp. | 9.32 | 198 | 14.07 | |
| Stomias boa boa | 8.04 | 194 | 12.13 | |
| L O B S T E R S | 6.64 | 628 | 10.02 | |
| Triptophos hemingi | 5.76 | 648 | 8.69 | |
| Lamprogannus exultans | 4.76 | 10 | 7.18 | |
| Hoplostethus cadenati | 4.30 | 78 | 6.49 | |
| Dibranchius sp. | 2.62 | 216 | 3.95 | |
| OMMASTREPHIDAE | 2.18 | 12 | 3.29 | |
| Aristeus varidensis, female | 0.78 | 32 | 1.18 | 7917 |
| Xenodermichthys copei | 0.76 | 38 | 1.15 | |
| Nematocarcinus africanus | 0.52 | 112 | 0.78 | |
| Cunicops sp. | 0.48 | 26 | 0.72 | |
| Talismania longifiliis | 0.46 | 4 | 0.69 | |
| Raja alba | 0.38 | 10 | 0.57 | |
| Caristius sp. | 0.34 | 2 | 0.51 | |
| Melanonus zugmayeri | 0.26 | 4 | 0.39 | |
| Plesiocopeus edwardsianus | 0.20 | 20 | 0.30 | |
| Dicrolene sp. | 0.20 | 12 | 0.30 | |
| MYCTOPHIDAE | 0.18 | 162 | 0.27 | |
| Nezumia micronychodon | 0.14 | 2 | 0.21 | |
| Glyphus marsupialis | 0.12 | 12 | 0.18 | |
| Dicrolene intronigra | 0.12 | 2 | 0.18 | |
| Etmopterus spinax | 0.06 | 2 | 0.09 | |
| PARALEPIDIDAE | 0.06 | 2 | 0.09 | |
| Aristeus varidensis, male | 0.06 | 10 | 0.09 | 7916 |
| Heterocarpus ensifer | 0.04 | 6 | 0.06 | |
| Sepiella sp. | 0.04 | 6 | 0.06 | |
| GALATHEIDAE * | 0.04 | 16 | 0.06 | |
| PLATYTRICHTIDAE | 0.04 | 2 | 0.06 | |
| CALLIANASSIDAE | 0.02 | 4 | 0.03 | |
| Leptodermis sp. | 0.02 | 2 | 0.03 | |
| Total | 66.26 | | 99.96 | |

PROJECT STATION:3748
 DATE:19/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 729 Long E 1216
 start stop duration
 TIME :01:51:16 02:21:13 30 (min) Purpose code: 3
 LOG :9121.45 9122.90 1.42 Area code : 3
 FDEPTH: 528 527 GearCond.code:
 BDEPTH: 528 527 Validity code:
 Towing dir: 85ø Wire out:1375 m Speed: 30 kn*10

Sorted: 28 Kg Total catch: 97.57 CATCH/HOUR: 195.14

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 70.80 | 17304 | 36.28 | |
| Morluccius polli | 17.08 | 40 | 8.75 | 7920 |
| L O B S T E R S | 16.50 | 6 | 8.46 | |
| Lamprogrammus exultus | 14.22 | 54 | 7.29 | |
| Tripliphos hemingi | 10.80 | 1740 | 5.53 | |
| Stomias boa boa | 9.24 | 288 | 4.74 | |
| Yarrella blackfordi | 8.94 | 282 | 4.58 | |
| Hoplostethus cadonati | 7.32 | 168 | 3.75 | |
| Benthodesmus tenuis | 7.02 | 252 | 3.60 | |
| Aristeus varidensis, female | 5.34 | 246 | 2.74 | 7919 |
| OMMASTREPHIDAE | 4.02 | 24 | 2.06 | |
| Chaceon maritae, male | 3.82 | 10 | 1.96 | |
| Calappa sp. | 3.36 | 192 | 1.72 | |
| Chaceon maritae, female | 3.02 | 10 | 1.56 | |
| Caelorinchus simorhynchus | 2.52 | 72 | 1.29 | |
| Nezumia micronychodon | 2.04 | 72 | 1.05 | |
| Seymonca obscurus | 1.40 | 6 | 0.72 | |
| Chaunax pictus | 1.20 | 6 | 0.61 | |
| Lophiodon kempfi | 0.96 | 6 | 0.49 | |
| Gadella imberbis | 0.78 | 114 | 0.40 | |
| MYCTOPHIDAE | 0.72 | 366 | 0.37 | |
| Plesionchus edwardsianus | 0.68 | 16 | 0.35 | |
| Dibranchius sp. | 0.66 | 60 | 0.34 | |
| Shrimps, small, non comm. | 0.54 | 66 | 0.28 | |
| Heterocarpus ensifer | 0.54 | 18 | 0.28 | |
| Epigonus telescopus | 0.30 | 12 | 0.15 | |
| Conger conger | 0.24 | 24 | 0.12 | |
| Dicrolene intronigra | 0.24 | 54 | 0.12 | |
| Xenodermichthys copei | 0.24 | 36 | 0.12 | |
| Aristeus varidensis, male | 0.18 | 36 | 0.09 | 7918 |
| Melanostomias sp. | 0.18 | 6 | 0.09 | |
| GALATHEIDAE * | 0.18 | 96 | 0.09 | |
| Nemichthys scolopaceus | 0.06 | 18 | 0.03 | |
| Total | 195.14 | | 100.00 | |

PROJECT STATION:3751
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 722 Long E 1233
 start stop duration
 TIME :07:14:23 07:45:18 31 (min) Purpose code: 3
 LOG :9148.52 9150.02 1.48 Area code : 3
 FDEPTH: 84 87 GearCond.code:
 BDEPTH: 84 87 Validity code:
 Towing dir: 145ø Wire out: 250 m Speed: 29 kn*10

Sorted: 216 Kg Total catch: 216.49 CATCH/HOUR: 419.01

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex congocensis | 132.50 | 1455 | 31.62 | |
| Dentex angloensis | 94.37 | 643 | 22.52 | 7928 |
| Pagellus bellottii | 70.18 | 470 | 16.75 | 7927 |
| Fistularia petimba | 58.45 | 19 | 13.95 | |
| Sepia officinalis hierredda | 11.85 | 12 | 2.83 | |
| Zeus faber | 9.19 | 27 | 2.19 | |
| Trigla lyra | 7.06 | 72 | 1.68 | |
| Epinephelus aeneus | 6.50 | 2 | 1.56 | |
| Chaetodon hoefleri | 4.88 | 33 | 1.15 | |
| Raja miraletus | 4.59 | 10 | 1.10 | |
| Chelidonichthys capensis | 2.79 | 15 | 0.67 | |
| Citharus linguatula | 2.50 | 56 | 0.60 | |
| Brotula barbata | 2.21 | 2 | 0.53 | |
| Umbrina canariensis | 2.13 | 8 | 0.51 | |
| Octopus vulgaris | 1.63 | 2 | 0.39 | |
| Sphyræna sphyraena | 1.41 | 4 | 0.34 | |
| Trachurus trecae | 1.26 | 15 | 0.30 | |
| Pseudupeneus prayensis | 1.10 | 6 | 0.26 | |
| Sparus pagrus africanus * | 1.01 | 2 | 0.24 | |
| B I V A L V E S | 0.72 | 2 | 0.17 | |
| Sepia orbignyana | 0.56 | 17 | 0.13 | |
| Illex coindetii | 0.52 | 33 | 0.12 | |
| G A S T R O P O D S | 0.29 | 46 | 0.07 | |
| Monolele microstoma | 0.29 | 27 | 0.07 | |
| Boops boops | 0.23 | 6 | 0.05 | |
| Syacium micrurum | 0.08 | 8 | 0.02 | |
| Total | 418.30 | | 99.99 | |

PROJECT STATION:3749
 DATE:19/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 728 Long E 1218
 start stop duration
 TIME :03:32:10 04:02:11 30 (min) Purpose code: 3
 LOG :9126.50 9128.11 1.57 Area code : 3
 FDEPTH: 427 418 GearCond.code:
 BDEPTH: 427 418 Validity code:
 Towing dir: 80ø Wire out:1179 m Speed: 30 kn*10

Sorted: 33 Kg Total catch: 296.34 CATCH/HOUR: 592.68

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 394.78 | 1358 | 66.61 | 7921 |
| Nematocarcinus africanus | 109.50 | 36040 | 18.48 | |
| RHINOCHAMERIDAE | 16.64 | 2 | 2.81 | |
| Chlorophthalmus atlanticus | 8.80 | 124 | 1.48 | |
| Centropristis granulosa | 8.00 | 2 | 1.35 | |
| Centropristis uyato | 7.32 | 2 | 1.24 | |
| Dibranchius sp. | 6.94 | 580 | 1.17 | |
| Hymenoccephalus italicus | 6.90 | 740 | 1.16 | |
| Benthodesmus sp. | 6.74 | 220 | 1.14 | |
| Laemonema laureysi | 4.00 | 134 | 0.67 | |
| Paromola cuvieri | 3.50 | 6 | 0.59 | |
| Stereomastis sp. | 3.50 | 304 | 0.59 | |
| Aristeus varidensis, male | 3.46 | 146 | 0.58 | 7922 |
| Malacocephalus occidentalis | 1.96 | 24 | 0.33 | |
| Chaunax pictus | 1.90 | 94 | 0.32 | |
| Yarrella blackfordi | 1.70 | 80 | 0.29 | |
| Nezumia sp. | 1.30 | 44 | 0.22 | |
| Aristeus varidensis, female | 1.26 | 318 | 0.21 | 7923 |
| Gadella maraldi | 0.76 | 84 | 0.13 | |
| Tripliphos hemingi | 0.74 | 104 | 0.12 | |
| MYCTOPHIDAE | 0.60 | 764 | 0.10 | |
| Halicampus evanii | 0.50 | 24 | 0.08 | |
| Melanostomias sp. | 0.44 | 14 | 0.07 | |
| Stomias boa boa | 0.30 | 16 | 0.05 | |
| CONGRIDAE | 0.26 | 10 | 0.04 | |
| Plesionika maritima | 0.26 | 40 | 0.04 | |
| Solenocera africana | 0.26 | 26 | 0.04 | |
| Etmopterus sp. | 0.20 | 8 | 0.03 | |
| Xenodermichthys copei | 0.10 | 14 | 0.02 | |
| Olyphus marsupialis | 0.06 | 24 | 0.01 | |
| Total | 592.68 | | 99.97 | |

PROJECT STATION:3752
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 720 Long E 1239
 start stop duration
 TIME :08:44:53 09:06:21 21 (min) Purpose code: 3
 LOG :9157.21 9158.45 1.24 Area code : 3
 FDEPTH: 59 57 GearCond.code: 9
 BDEPTH: 59 57 Validity code: 1
 Towing dir: 340ø Wire out: 200 m Speed: 31 kn*10

Sorted: 59 Kg Total catch: 59.87 CATCH/HOUR: 171.06

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagrus caeruleostictus | 33.83 | 143 | 19.78 | |
| Dentex barnardi | 33.09 | 103 | 19.34 | 7929 |
| Citharus linguatula | 30.23 | 103 | 17.67 | |
| Torpedo marmorata | 14.11 | 11 | 8.25 | |
| Sparus auriga * | 12.83 | 9 | 8.08 | |
| Pagellus bellottii | 11.71 | 80 | 6.85 | 7930 |
| Zeus faber | 5.91 | 14 | 3.45 | |
| Raja miraletus | 5.37 | 11 | 3.14 | |
| Sepia officinalis hierredda | 3.94 | 3 | 2.30 | |
| G A S T R O P O D S | 2.63 | 14 | 1.54 | |
| Bodianus speciosus | 2.34 | 6 | 1.37 | |
| Epinephelus alexandrinus * | 2.31 | 3 | 1.35 | |
| Chaetodon hoefleri | 1.89 | 11 | 1.10 | |
| Epinephelus marginatus | 1.60 | 9 | 0.94 | |
| Scorpaena normani | 1.51 | 14 | 0.88 | |
| Chelidonichthys capensis | 1.51 | 14 | 0.88 | |
| Fistularia tabacaria | 1.29 | 11 | 0.75 | |
| Fistularia petimba | 1.03 | 3 | 0.60 | |
| Dactylopterus volitans | 0.83 | 3 | 0.49 | |
| Loligo sp. | 0.54 | 197 | 0.32 | |
| B I V A L V E S | 0.46 | 37 | 0.27 | |
| Pseudupeneus prayensis | 0.37 | 3 | 0.22 | |
| Sepia orbignyana | 0.34 | 3 | 0.20 | |
| Decapterus punctatus | 0.11 | 3 | 0.06 | |
| Bembrops greyi | 0.06 | 3 | 0.04 | |
| Total | 170.84 | | 99.99 | |

PROJECT STATION:3750
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 725 Long E 1227
 start stop duration
 TIME :05:41:40 06:10:56 29 (min) Purpose code: 3
 LOG :9139.38 9141.05 1.66 Area code : 3
 FDEPTH: 115 113 GearCond.code:
 BDEPTH: 115 113 Validity code:
 Towing dir: 340ø Wire out: 350 m Speed: 33 kn*10

Sorted: 92 Kg Total catch: 92.66 CATCH/HOUR: 191.71

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angloensis | 61.53 | 273 | 32.10 | 7924 |
| Dentex congocensis | 22.68 | 321 | 11.83 | |
| Umbrina canariensis | 21.81 | 387 | 11.38 | 7926 |
| Spicara alta | 17.75 | 101 | 9.26 | |
| Brotula barbata | 15.56 | 17 | 8.12 | |
| Trigla lyra | 12.72 | 108 | 6.64 | |
| Trachurus trecae | 9.06 | 180 | 4.73 | 7925 |
| Trichurus lepturus | 6.35 | 8 | 3.31 | |
| Scorpaena normani | 6.00 | 10 | 3.13 | |
| Raja miraletus | 3.41 | 8 | 1.78 | |
| Zeus faber | 2.44 | 8 | 1.27 | |
| Chelidonichthys capensis | 2.26 | 2 | 1.18 | |
| G A S T R O P O D S | 1.94 | 168 | 1.01 | |
| Pagellus bellottii | 1.39 | 10 | 0.73 | |
| Sepia orbignyana | 1.32 | 12 | 0.69 | |
| Boops boops | 1.03 | 29 | 0.54 | |
| Dentex barnardi | 0.91 | 2 | 0.47 | |
| Illex coindetii | 0.70 | 48 | 0.37 | |
| Chaetodon sp. | 0.62 | 4 | 0.32 | |
| Citharus linguatula | 0.56 | 23 | 0.29 | |
| BATRACHOIDIDAE | 0.52 | 2 | 0.27 | |
| Lophiodon kempfi | 0.37 | 2 | 0.19 | |
| Aricima bondi | 0.25 | 4 | 0.13 | |
| Syacium micrurum | 0.19 | 12 | 0.10 | |
| B I V A L V E S | 0.17 | 27 | 0.09 | |
| Monolele microstoma | 0.12 | 17 | 0.06 | |
| Uranoscopus albesca | 0.04 | 2 | 0.02 | |
| Total | 191.70 | | 100.01 | |

PROJECT STATION:3753
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 718 Long E 1242
 start stop duration
 TIME :09:57:34 10:30:35 33 (min) Purpose code: 3
 LOG :9163.99 9165.61 1.57 Area code : 3
 FDEPTH: 41 43 GearCond.code:
 BDEPTH: 41 43 Validity code:
 Towing dir: 165ø Wire out: 200 m Speed: 31 kn*10

Sorted: 49 Kg Total catch: 49.35 CATCH/HOUR: 89.73

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagrus caeruleostictus | 34.80 | 89 | 38.78 | |
| Sparus pagrus africanus * | 19.75 | 44 | 22.01 | |
| Pagellus bellottii | 5.33 | 29 | 5.94 | 7931 |
| Aluterus scriptus | 5.22 | 5 | 5.82 | |
| Rhinobatos albomaculatus | 4.00 | 5 | 4.46 | |
| Lagocephalus laswigatus | 3.98 | 4 | 4.44 | |
| Dactylopterus volitans | 2.82 | 11 | 3.14 | |
| Epinephelus aeneus | 2.73 | 4 | 3.04 | |
| Raja miraletus | 2.15 | 4 | 2.40 | |
| Citharus linguatula | 2.04 | 15 | 2.27 | |
| Trachinus radiatus | 1.64 | 5 | 1.63 | |
| Chelidonichthys gabonensis | 1.15 | 5 | 1.28 | |
| Chilomycterus spinosus mauret. | 1.11 | 4 | 1.24 | |
| Dentex barnardi | 0.76 | 4 | 0.85 | |
| Sepia orbignyana | 0.56 | 4 | 0.62 | |
| Trachinocephalus myops | 0.47 | 4 | 0.52 | |
| Trachinus armatus | 0.40 | 5 | 0.45 | |
| Rypticus saponaceus | 0.27 | 5 | 0.30 | |
| Fistularia petimba | 0.22 | 2 | 0.25 | |
| Chaetodon hoefleri | 0.15 | 2 | 0.17 | |
| Bembrops heterurus | 0.11 | 2 | 0.12 | |
| Alloteuthis africana | 0.09 | 36 | 0.10 | |
| Total | 89.75 | | 100.03 | |

PROJECT STATION:3754
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 715
 start stop duration Long E 1247
 TIME :11:20:02 11:50:04 30 (min) Purpose code: 3
 LOG :9171.96 9173.63 1.65 Area code : 3
 FDEPTH: 25 26 GearCond.code:
 BDEPTH: 25 26 Validity code:
 Towing dir: 330 Wire out: 140 m Speed: 30 kn*10
 Sorted: 162 Kg Total catch: 162.38 CATCH/HOUR: 324.76

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pseudupeneus prayensis | 61.40 | 746 | 18.91 | |
| Lutjanus agennes | 47.96 | 8 | 14.77 | |
| Pagrus caeruleostictus | 42.36 | 198 | 13.04 | |
| Pagellus bellottii | 23.12 | 124 | 7.12 | 7932 |
| Acanthurus monroviae | 22.48 | 46 | 6.92 | |
| Balistes punctatus | 22.00 | 26 | 6.77 | |
| Pagrus africanus | 18.32 | 44 | 5.64 | |
| Aluterus scriptus | 17.52 | 18 | 5.39 | |
| Podiamus speciosus | 17.20 | 8 | 5.30 | |
| Lutjanus goreensis | 8.40 | 6 | 2.59 | |
| Epinephelus aeneus | 8.00 | 4 | 2.46 | |
| Fistularia tabacaria | 3.94 | 4 | 1.21 | |
| Raja miraletus | 3.86 | 6 | 1.19 | |
| Zanclus cornutus | 3.82 | 6 | 1.18 | |
| Seriola rivoliana | 3.56 | 2 | 1.10 | |
| Fistularia petimba | 3.38 | 22 | 1.04 | |
| Chaetodon hoefleri | 2.06 | 34 | 0.63 | |
| Albula vulpes | 2.02 | 2 | 0.62 | |
| Caranx crysos | 1.88 | 2 | 0.58 | |
| Chilomycterus spinosus mauret. | 1.68 | 4 | 0.52 | |
| Chloroscombus chrysurus | 1.64 | 14 | 0.50 | |
| Dontex barnardi | 1.48 | 28 | 0.46 | |
| Lagoccephalus laevigatus | 1.36 | 2 | 0.42 | |
| Dactylopterus volitans | 1.24 | 4 | 0.38 | |
| Sardinella aurita | 0.90 | 4 | 0.28 | |
| Decapterus rhonchus | 0.72 | 2 | 0.22 | |
| Sphyraena sphyraena | 0.70 | 2 | 0.22 | |
| Chaetodipterus goreensis | 0.66 | 2 | 0.20 | |
| Daeyatis margarita | 0.48 | 2 | 0.15 | |
| Lutjanus fulgens | 0.36 | 4 | 0.11 | |
| Alectis alexandrinus | 0.26 | 4 | 0.08 | |
| Total | 324.76 | | 100.00 | |

PROJECT STATION:3755
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 705
 start stop duration Long E 1236
 TIME :13:25:56 13:55:55 30 (min) Purpose code: 3
 LOG :9187.26 9188.84 1.57 Area code : 3
 FDEPTH: 37 38 GearCond.code:
 BDEPTH: 37 38 Validity code:
 Towing dir: 325 Wire out: 150 m Speed: 30 kn*10
 Sorted: 124 Kg Total catch: 124.72 CATCH/HOUR: 249.44

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Stromateus fiatola | 201.00 | 230 | 80.58 | |
| Pagellus bellottii | 10.36 | 62 | 4.15 | 7933 |
| Sepia officinalis hierradna | 9.28 | 10 | 3.72 | |
| Lutjanus agennes | 9.24 | 2 | 3.70 | |
| Trachinocephalus myops | 5.82 | 32 | 2.33 | |
| Mustelus mustelus | 4.00 | 2 | 1.60 | |
| Lagoccephalus laevigatus | 1.90 | 6 | 0.76 | |
| Pegusa lascaris | 1.06 | 4 | 0.42 | |
| Chilomycterus spinosus mauret. | 1.00 | 4 | 0.40 | |
| Raja miraletus | 0.96 | 2 | 0.38 | |
| Chelidonichthys capensis | 0.96 | 4 | 0.38 | |
| Pegusa triophthalmus | 0.80 | 4 | 0.32 | |
| Decapterus punctatus | 0.78 | 2 | 0.31 | |
| Xyrichtys novacula | 0.78 | 8 | 0.31 | |
| Zeus faber | 0.74 | 2 | 0.30 | |
| Citharichthys stampflii | 0.44 | 6 | 0.18 | |
| Fistularia petimba | 0.24 | 2 | 0.10 | |
| Sphoeroides narmoratus | 0.08 | 2 | 0.03 | |
| Total | 249.44 | | 99.97 | |

PROJECT STATION:3756
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 707
 start stop duration Long E 1231
 TIME :15:02:59 15:32:50 30 (min) Purpose code: 3
 LOG :9196.36 9197.65 1.29 Area code : 3
 FDEPTH: 49 49 GearCond.code:
 BDEPTH: 49 49 Validity code:
 Towing dir: 150 Wire out: 199 m Speed: 30 kn*10
 Sorted: 43 Kg Total catch: 43.38 CATCH/HOUR: 86.76

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagrus caeruleostictus | 20.36 | 62 | 23.47 | |
| Solenocera africana | 10.72 | 22 | 12.36 | |
| Epinephelus aeneus | 8.12 | 4 | 9.36 | |
| Mustelus mustelus | 7.80 | 4 | 8.99 | |
| Sepia orbignyana | 6.52 | 10 | 7.51 | |
| Epinephelus alexandrinus * | 6.32 | 8 | 7.28 | |
| Scorpaena normani | 3.14 | 28 | 3.62 | |
| Pagellus bellottii | 3.02 | 10 | 3.48 | |
| Dactylopterus volitans | 3.00 | 10 | 3.46 | |
| Rypticus saponaceus | 2.88 | 26 | 3.32 | |
| Acanthurus monroviae | 2.28 | 2 | 2.63 | |
| SEPARSIIDAE | 2.22 | 14 | 2.56 | |
| Citharichthys stampflii | 1.82 | 14 | 2.10 | |
| Octopus vulgaris | 1.36 | 2 | 1.57 | |
| Chaetodon hoefleri | 1.10 | 6 | 1.27 | |
| Pseudupeneus prayensis | 1.06 | 16 | 1.22 | |
| Raja miraletus | 1.02 | 2 | 1.18 | |
| Trachinus araneus | 0.78 | 2 | 0.90 | |
| Chelidonichthys lucerna | 0.68 | 6 | 0.78 | |
| Zeus faber | 0.68 | 2 | 0.78 | |
| Boops boops | 0.66 | 74 | 0.76 | |
| Fistularia petimba | 0.62 | 2 | 0.71 | |
| Trachinus armatus | 0.34 | 4 | 0.39 | |
| Illex coindetii | 0.22 | 156 | 0.25 | |
| Total | 86.72 | | 99.95 | |

PROJECT STATION:3757
 DATE:19/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 709
 start stop duration Long E 1227
 TIME :16:25:17 16:55:13 30 (min) Purpose code: 3
 LOG :9204.49 9206.19 1.67 Area code : 3
 FDEPTH: 75 74 GearCond.code:
 BDEPTH: 75 74 Validity code:
 Towing dir: 330 Wire out: 279 m Speed: 30 kn*10
 Sorted: 89 Kg Total catch: 359.15 CATCH/HOUR: 718.30

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Pagellus bellottii | 604.68 | 3976 | 84.18 | 7935 |
| Mustelus mustelus | 21.14 | 16 | 2.94 | |
| Umbrina canariensis | 16.62 | 46 | 2.31 | 7934 |
| Pagrus caeruleostictus | 14.56 | 38 | 2.03 | |
| Dentex barnardi | 9.20 | 22 | 1.28 | |
| Pseudupeneus prayensis | 7.50 | 84 | 1.04 | |
| Priacanthus aronatus | 7.36 | 16 | 1.02 | |
| Scorpaena stephanica | 6.58 | 8 | 0.92 | |
| Dactylopterus volitans | 6.20 | 22 | 0.86 | |
| Raja miraletus | 5.36 | 8 | 0.75 | |
| Fistularia petimba | 3.80 | 14 | 0.53 | |
| Trichiurus lepturus | 2.82 | 4 | 0.39 | |
| Seriola carpenteri | 2.66 | 2 | 0.37 | |
| Rhinobatos albomaculatus | 2.26 | 2 | 0.31 | |
| Sphyraena sphyraena | 2.06 | 8 | 0.29 | |
| Alloteuthis africana | 1.92 | 1034 | 0.27 | |
| Zeus faber | 1.90 | 6 | 0.26 | |
| Chaetodon hoefleri | 1.08 | 8 | 0.15 | |
| G A S T R O P O D S | 0.62 | 8 | 0.09 | |
| Total | 718.32 | | 99.99 | |

PROJECT STATION:3758
 DATE:19/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 721
 start stop duration Long E 1201
 TIME :23:12:11 23:43:32 31 (min) Purpose code: 3
 LOG :9248.64 9250.11 1.46 Area code : 3
 FDEPTH: 522 514 GearCond.code:
 BDEPTH: 522 514 Validity code:
 Towing dir: 140 Wire out:1300 m Speed: 30 kn*10
 Sorted: 49 Kg Total catch: 99.86 CATCH/HOUR: 193.28

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 64.03 | 236 | 33.13 | 7936 |
| Laemonema laureysi | 19.78 | 217 | 10.23 | |
| Hymenocephalus italicus | 19.74 | 1665 | 10.21 | |
| Chaunax pictus | 13.12 | 279 | 6.79 | |
| Benthoemus tenuis | 10.72 | 375 | 5.55 | |
| L O B S T E R S | 10.57 | 1057 | 5.47 | |
| Dibranchius sp. | 8.32 | 941 | 4.30 | |
| Chlorophthalmus atlanticus | 5.85 | 93 | 3.03 | |
| Malacocephalus laevis | 5.50 | 43 | 2.85 | |
| Aristeus varidens, female | 4.68 | 325 | 2.42 | 7938 |
| Nematocarcinus africanus | 4.45 | 979 | 2.30 | |
| Gadella imberbis | 3.75 | 124 | 1.94 | |
| Paromola cuvieri | 3.45 | 2 | 1.78 | |
| Coloconger cadenati * | 3.06 | 23 | 1.58 | |
| OMMASTREPHIDAE | 2.86 | 23 | 1.48 | |
| Aristeus varidens, male | 2.55 | 356 | 1.32 | 7937 |
| Synagrops microlepis | 2.48 | 4 | 1.28 | |
| MYCTOPHIDAE | 1.12 | 1308 | 0.58 | |
| GALATHEIDAE * | 0.97 | 128 | 0.50 | |
| Halosaurus owenii | 0.93 | 46 | 0.48 | |
| Conger conger | 0.89 | 27 | 0.46 | |
| Callinectes sp. | 0.85 | 31 | 0.44 | |
| Nezumia micronychodon | 0.81 | 62 | 0.42 | |
| Plesionika martia | 0.77 | 124 | 0.40 | |
| Galeus polli | 0.58 | 8 | 0.30 | |
| Illex coindetii | 0.46 | 4 | 0.24 | |
| Lophodes kempfi | 0.43 | 4 | 0.22 | |
| Trachyrhynchus scabrus | 0.23 | 4 | 0.12 | |
| Parasudis sp. | 0.15 | 4 | 0.08 | |
| Astronesthes sp. | 0.04 | 4 | 0.02 | |
| Small shrimps | 0.04 | 4 | 0.02 | |
| Epigonus telescopus | 0.04 | 4 | 0.02 | |
| Nemichthys scolopaceus | 0.04 | 8 | 0.02 | |
| Total | 193.26 | | 99.98 | |

PROJECT STATION:3759
 DATE:19/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 721
 start stop duration Long E 1201
 TIME :23:12:11 23:43:32 31 (min) Purpose code: 3
 LOG :9248.64 9250.11 1.46 Area code : 3
 FDEPTH: 522 514 GearCond.code:
 BDEPTH: 522 514 Validity code:
 Towing dir: 140 Wire out:1300 m Speed: 30 kn*10
 Sorted: 34 Kg Total catch: 134.42 CATCH/HOUR: 260.17

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 64.72 | 155 | 24.88 | 7939 |
| Nematocarcinus africanus | 36.85 | 8121 | 14.16 | |
| Lamprogrammus exultans | 35.77 | 85 | 13.75 | |
| Chaceon maritae, male | 25.94 | 62 | 9.97 | 7940 |
| L O B S T E R S | 24.15 | 1641 | 9.28 | |
| Chaceon maritae, female | 13.47 | 62 | 5.18 | 7941 |
| Benthoemus tenuis | 10.14 | 333 | 3.90 | |
| Yarella blackfordi * | 9.45 | 317 | 3.63 | |
| Chaunax pictus | 8.59 | 85 | 3.30 | |
| Aristeus varidens, female | 4.95 | 209 | 1.90 | 7943 |
| Stomias boa boa | 4.80 | 93 | 1.84 | |
| Triplophos hemingi | 4.10 | 635 | 1.58 | |
| Dibranchius atlanticus | 4.03 | 526 | 1.55 | |
| OMMASTREPHIDAE | 2.63 | 15 | 1.01 | |
| Caiappa sp. | 1.70 | 39 | 0.65 | |
| Lophodes kempfi | 1.32 | 8 | 0.51 | |
| Scymnodon obscurus | 1.16 | 8 | 0.45 | |
| Gadella imberbis | 1.08 | 77 | 0.42 | |
| Nezumia aequalis | 0.93 | 39 | 0.36 | |
| Hymenocephalus italicus | 0.93 | 15 | 0.36 | |
| Melanostomias sp. | 0.62 | 23 | 0.24 | |
| MYCTOPHIDAE | 0.62 | 480 | 0.24 | |
| Hoplostethus cadenati | 0.39 | 15 | 0.15 | |
| Aristeus varidens, male | 0.39 | 46 | 0.15 | 7942 |
| Plesiopeanaeus edwardsianus | 0.31 | 6 | 0.12 | |
| Saurida brasiliensis | 0.23 | 8 | 0.09 | |
| Etmopterus polli | 0.19 | 4 | 0.07 | |
| Sergestes sp. | 0.15 | 23 | 0.06 | |
| Ectreposebastes imus | 0.15 | 8 | 0.06 | |
| Xenodermichthys copei | 0.15 | 15 | 0.06 | |
| Nemichthys scolopaceus | 0.15 | 23 | 0.06 | |
| Dicrolene intronigra | 0.08 | 8 | 0.03 | |
| Total | 260.14 | | 100.01 | |

PROJECT STATION:3760
 DATE:20/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 725 Long E 1155
 start stop duration
 TIME :01:54:03 02:24:09 30 (min) Purpose code: 3
 LOG :9265.00 9266.24 1.52 Area code : 3
 FDEPTH: 765 770 GearCond.code:
 BDEPTH: 765 770 Validity code:
 Towing dir: 325ø Wire out: 1820 m Speed: 30 kn*10
 Sorted: 26 Kg Total catch: 50.99 CATCH/HOUR: 101.98

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Stomias boa boa | 26.16 | 512 | 25.65 | |
| Hoplostethus cadenati | 22.72 | 516 | 22.28 | |
| Nezumia aequalis | 13.24 | 268 | 12.98 | |
| Lamprogrammus exotus | 7.88 | 20 | 7.73 | |
| L O B S T E R S | 5.80 | 524 | 5.69 | |
| Talismania longifilis | 4.20 | 44 | 4.12 | |
| Lophiodes kemp | 4.16 | 4 | 4.08 | |
| Xenodermichthys copei | 4.04 | 100 | 3.96 | |
| OMMASTREPHIDAE | 2.68 | 8 | 2.63 | |
| Conger conger | 2.36 | 12 | 2.31 | |
| Triplophos hemingi | 1.92 | 244 | 1.88 | |
| Hymenoccephalus italicus | 1.64 | 20 | 1.51 | |
| Benthodesmus tenuis | 1.32 | 52 | 1.29 | |
| Dibranchius atlanticus | 0.80 | 68 | 0.78 | |
| Glyphis marsupialis | 0.78 | 38 | 0.76 | |
| Aristeus varidens, female | 0.52 | 20 | 0.51 | |
| Lamprogrammus sp. | 0.28 | 4 | 0.27 | |
| Nemichthys scolopaceus | 0.28 | 20 | 0.27 | |
| MYCTOPHIDAE | 0.24 | 32 | 0.24 | |
| Plesicpenaeus edwardsianus | 0.24 | 12 | 0.24 | |
| Epigonus telescopus | 0.20 | 8 | 0.20 | |
| Illex coindetii | 0.16 | 8 | 0.16 | |
| Callinectes sp. | 0.12 | 4 | 0.12 | |
| Scopelosaurus sp. | 0.12 | 4 | 0.12 | |
| Phrynychthys wedli | 0.08 | 4 | 0.08 | |
| Sergestes sp. | 0.04 | 4 | 0.04 | |
| Total | 101.98 | | 100.00 | |

PROJECT STATION:3763
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 656 Long E 1213
 start stop duration
 TIME :10:15:26 10:48:38 33 (min) Purpose code: 3
 LOG :9315.30 9317.06 1.76 Area code : 3
 FDEPTH: 80 81 GearCond.code:
 BDEPTH: 80 81 Validity code:
 Towing dir: 330ø Wire out: 240 m Speed: 31 kn*10
 Sorted: 281 Kg Total catch: 281.44 CATCH/HOUR: 511.71

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 188.55 | 1398 | 36.85 | 7949 |
| Dentex angolensis | 93.38 | 385 | 18.25 | 7948 |
| Dentex congensis | 79.38 | 827 | 15.51 | |
| Pagellus bellottii | 68.64 | 771 | 13.41 | 7950 |
| Squatina oculata | 11.45 | 2 | 2.24 | |
| Lagocephalus laevigatus | 10.76 | 11 | 2.10 | |
| Epinephelus aeneus | 10.04 | 5 | 1.96 | |
| Dentex barnardi | 7.49 | 25 | 1.46 | |
| Pagrus caeruleostictus | 6.31 | 16 | 1.23 | |
| Sardinella aurita | 5.60 | 53 | 1.09 | |
| Raja miraletus | 5.24 | 9 | 1.02 | |
| Chelidonichthys capensis | 4.27 | 35 | 0.83 | |
| Sepia orbignyana | 3.75 | 2 | 0.73 | |
| Fistularia petimba | 3.44 | 15 | 0.67 | |
| Priacanthus arenatus | 3.29 | 7 | 0.64 | |
| Allotauhis africana | 3.15 | 1638 | 0.62 | |
| Pseudupeneus prayensis | 2.35 | 13 | 0.45 | |
| Scomber japonicus | 1.45 | 4 | 0.28 | |
| Rhinobatos albomaculatus | 1.20 | 2 | 0.23 | |
| Chaetodon hoefleri | 0.73 | 4 | 0.14 | |
| G A S T R O P O D S | 0.56 | 58 | 0.11 | |
| Syacium micrurum | 0.40 | 18 | 0.08 | |
| Ariomma bondi | 0.13 | 2 | 0.03 | |
| Illex coindetii | 0.09 | 4 | 0.02 | |
| Arnoglossus imperialis | 0.07 | 11 | 0.01 | |
| Total | 511.72 | | 99.97 | |

PROJECT STATION:3761
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 714 Long E 1208
 start stop duration
 TIME :05:40:07 06:11:49 32 (min) Purpose code: 3
 LOG :9285.99 9287.60 1.61 Area code : 3
 FDEPTH: 227 231 GearCond.code:
 BDEPTH: 227 231 Validity code:
 Towing dir: 150ø Wire out: 650 m Speed: 30 kn*10
 Sorted: 140 Kg Total catch: 140.85 CATCH/HOUR: 264.09

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Zenopsis conchifer | 46.58 | 204 | 17.64 | |
| Dentex angolensis | 41.66 | 122 | 15.77 | 7944 |
| Chlorophthalmus atlanticus | 33.75 | 2591 | 12.78 | |
| Synagrops microlopis | 32.29 | 1802 | 12.23 | |
| Trichiurus lepturus | 24.90 | 34 | 9.43 | |
| Pterothrissus belloci | 19.61 | 199 | 7.43 | |
| Nezumia sp. | 13.99 | 398 | 5.30 | |
| Brotula barbata | 11.53 | 13 | 4.37 | |
| Todaropsis eblanae | 9.86 | 118 | 3.73 | |
| Bembrops heterurus | 5.76 | 79 | 2.18 | |
| Torpedo torpedo | 4.84 | 6 | 1.83 | |
| Raja miraletus | 2.36 | 4 | 0.89 | |
| G A S T R O P O D S | 2.23 | 43 | 0.84 | |
| Illex coindetii | 1.93 | 30 | 0.73 | |
| Parapenaeus longirostris, fem. | 1.89 | 446 | 0.72 | 7946 |
| Zenopsis conchifer | 1.78 | 4 | 0.67 | |
| Syacium micrurum | 1.11 | 6 | 0.61 | |
| Squatina oculata | 1.54 | 6 | 0.58 | |
| Parapenaeus longirostris, male | 1.31 | 368 | 0.50 | 7945 |
| Pentimius kuhlii | 1.03 | 9 | 0.39 | |
| GOBIIDAE | 0.77 | 227 | 0.29 | |
| Peristedion cataphractum | 0.54 | 15 | 0.20 | |
| Merluccius polli | 0.45 | 4 | 0.17 | |
| Calappa sp. | 0.45 | 8 | 0.17 | |
| PAGURIDAE | 0.38 | 39 | 0.14 | |
| Lophiodes kemp | 0.36 | 2 | 0.14 | |
| Ubrina canariensis | 0.34 | 2 | 0.13 | |
| Dicologlossa cuneata | 0.32 | 8 | 0.12 | |
| Total | 264.06 | | 99.98 | |

PROJECT STATION:3764
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 657 Long E 1211
 start stop duration
 TIME :11:43:57 12:13:45 30 (min) Purpose code: 3
 LOG :9321.27 9322.67 1.39 Area code : 3
 FDEPTH: 88 88 GearCond.code:
 BDEPTH: 88 88 Validity code:
 Towing dir: 142ø Wire out: 299 m Speed: 30 kn*10
 Sorted: 182 Kg Total catch: 182.36 CATCH/HOUR: 364.72

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex congensis | 206.32 | 3672 | 56.57 | |
| Pagellus bellottii | 32.24 | 314 | 8.84 | 7953 |
| Trachurus trecae | 31.32 | 460 | 8.59 | 7952 |
| Dentex angolensis | 26.28 | 378 | 7.21 | 7951 |
| Sepia orbignyana | 14.40 | 26 | 3.95 | |
| Epinephelus aeneus | 12.64 | 2 | 3.47 | |
| Raja miraletus | 7.04 | 12 | 1.93 | |
| Fistularia petimba | 5.12 | 12 | 1.40 | |
| Priacanthus arenatus | 4.72 | 10 | 1.29 | |
| Pseudupeneus prayensis | 4.04 | 24 | 1.11 | |
| Chelidonichthys capensis | 3.70 | 62 | 1.01 | |
| Lagocephalus laevigatus | 3.04 | 2 | 0.83 | |
| Rhinobatos albomaculatus | 2.66 | 2 | 0.73 | |
| Sardinella aurita | 1.96 | 24 | 0.54 | |
| Zeus faber | 1.88 | 8 | 0.52 | |
| Dentex barnardi | 1.66 | 6 | 0.46 | |
| Citharus linguatula | 1.60 | 112 | 0.44 | |
| Chaetodon hoefleri | 1.18 | 8 | 0.32 | |
| Trichiurus lepturus | 1.14 | 2 | 0.31 | |
| Pagrus caeruleostictus | 0.82 | 2 | 0.21 | |
| Arnoglossus imperialis | 0.38 | 50 | 0.10 | |
| Allotauhis africana | 0.28 | 106 | 0.08 | |
| Illex coindetii | 0.18 | 6 | 0.05 | |
| Octopus vulgaris | 0.12 | 2 | 0.03 | |
| Total | 364.72 | | 100.00 | |

PROJECT STATION:3762
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 711 Long E 1217
 start stop duration
 TIME :08:02:23 08:31:40 29 (min) Purpose code: 3
 LOG :9299.12 9300.70 1.57 Area code : 3
 FDEPTH: 119 118 GearCond.code:
 BDEPTH: 119 118 Validity code:
 Towing dir: 340ø Wire out: 360 m Speed: 30 kn*10
 Sorted: 51 Kg Total catch: 50.94 CATCH/HOUR: 105.39

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 34.26 | 217 | 32.51 | 7947 |
| Squatina oculata | 18.87 | 6 | 17.90 | |
| Trigla lyra | 16.97 | 155 | 16.10 | |
| Brotula barbata | 6.56 | 8 | 6.22 | |
| Zeus faber | 6.29 | 19 | 5.97 | |
| Zenopsis conchifer | 5.65 | 19 | 5.36 | |
| Mustelus mustelus | 3.39 | 2 | 3.22 | |
| Citharus linguatula | 2.48 | 56 | 2.35 | |
| Raja miraletus | 2.21 | 4 | 2.10 | |
| Sepia orbignyana | 1.76 | 10 | 1.67 | |
| Dentex congensis | 1.39 | 14 | 1.32 | |
| Fistularia petimba | 1.14 | 2 | 1.08 | |
| Lophiodes kemp | 1.08 | 4 | 1.02 | |
| G A S T R O P O D S | 0.99 | 64 | 0.94 | |
| Todaropsis eblanae | 0.97 | 17 | 0.92 | |
| PARAPAGURIDAE | 0.37 | 25 | 0.35 | |
| Nezumia sp. | 0.27 | 4 | 0.26 | |
| Syacium micrurum | 0.21 | 6 | 0.20 | |
| Illex coindetii | 0.19 | 14 | 0.18 | |
| Spicara alta | 0.17 | 2 | 0.16 | |
| Trachurus trecae | 0.08 | 2 | 0.08 | |
| Dicologlossa cuneata | 0.06 | 2 | 0.06 | |
| B I V A L V E S | 0.04 | 14 | 0.04 | |
| Total | 105.40 | | 100.01 | |

PROJECT STATION:3765
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 701 Long E 1206
 start stop duration
 TIME :13:24:05 13:54:40 31 (min) Purpose code: 3
 LOG :9330.10 9331.89 1.42 Area code : 3
 FDEPTH: 112 110 GearCond.code:
 BDEPTH: 112 110 Validity code:
 Towing dir: 326ø Wire out: 361 m Speed: 30 kn*10
 Sorted: 146 Kg Total catch: 146.00 CATCH/HOUR: 282.58

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Lagocephalus laevigatus | 70.30 | 95 | 24.88 | |
| Dentex angolensis | 61.97 | 654 | 21.93 | 7954 |
| Chelidonichthys capensis | 32.86 | 323 | 11.63 | |
| Dentex congensis | 29.88 | 486 | 10.57 | |
| Sepia orbignyana | 18.27 | 23 | 6.47 | |
| Trachurus trecae | 14.13 | 203 | 5.00 | 7955 |
| Mustelus mustelus | 10.84 | 6 | 3.64 | |
| Squatina oculata | 7.94 | 4 | 2.61 | |
| Zeus faber | 6.93 | 25 | 2.45 | |
| Priacanthus arenatus | 5.96 | 12 | 2.11 | |
| Brotula barbata | 4.74 | 6 | 1.68 | |
| Trichiurus lepturus | 3.48 | 2 | 1.23 | |
| Fistularia petimba | 3.19 | 6 | 1.13 | |
| Citharus linguatula | 3.02 | 130 | 1.07 | |
| Pagellus bellottii | 2.23 | 14 | 0.79 | |
| G A S T R O P O D S | 1.26 | 135 | 0.45 | |
| Illex coindetii | 1.06 | 54 | 0.38 | |
| Brachydeuterus auritus | 1.01 | 12 | 0.36 | |
| Raja miraletus | 0.77 | 2 | 0.27 | |
| Sphyrna sphyraena | 0.75 | 2 | 0.27 | |
| Torpedo marmorata | 0.70 | 2 | 0.25 | |
| Uranoscopus polli | 0.56 | 2 | 0.20 | |
| Ariomma bondi | 0.29 | 2 | 0.10 | |
| Scorpaena stephanica | 0.29 | 4 | 0.10 | |
| Saurida brasiliensis | 0.14 | 6 | 0.05 | |
| Total | 282.57 | | 100.02 | |

PROJECT STATION:3766
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 702 Long E 1204
 start stop duration
 TIME :14:50:10 15:20:23 30 (min) Purpose code: 3
 LOG :9335.84 9337.20 1.35 Area code : 3
 FDEPTH: 119 121 GearCond.code:
 BDEPTH: 119 121 Validity code:
 Towing dir: 140° Wire out: 381 m Speed: 30 kn*10

Sorted: 73 Kg Total catch: 73.32 CATCH/HOUR: 146.64

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 53.12 | 346 | 36.22 | 7956 |
| Chelidomichthys capensis | 40.48 | 372 | 27.61 | |
| Trachurus trecae, juvenile | 10.32 | 164 | 7.04 | 7957 |
| Dentex congogensis | 8.92 | 126 | 6.08 | |
| Zeus faber | 5.30 | 22 | 3.61 | |
| Lagocephalus laevigatus | 4.98 | 6 | 3.40 | |
| Brotula barbata | 4.14 | 4 | 2.82 | |
| Citharus linguatula | 3.58 | 88 | 2.44 | |
| Raja miraletus | 2.48 | 6 | 1.69 | |
| Octopus vulgaris | 2.40 | 2 | 1.64 | |
| Priacanthus arenatus | 1.90 | 4 | 1.30 | |
| Sepia orbignyana | 1.66 | 6 | 1.13 | |
| Trichiurus lepturus | 1.52 | 2 | 1.04 | |
| Uranoscopus cadenati | 1.40 | 4 | 0.95 | |
| Auxis thazard | 1.22 | 2 | 0.83 | |
| Squatina oculata | 1.20 | 2 | 0.82 | |
| Illex coindetii | 0.58 | 42 | 0.40 | |
| Aricma bondi | 0.50 | 6 | 0.34 | |
| G A S T R O P O D S | 0.38 | 84 | 0.26 | |
| Pagellus bellottii | 0.34 | 2 | 0.23 | |
| Arncglossus imperialis | 0.12 | 14 | 0.08 | |
| Microchirus frechkopi | 0.10 | 2 | 0.07 | |
| Total | 146.64 | | 100.00 | |

PROJECT STATION:3767
 DATE:20/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 704 Long E 1200
 start stop duration
 TIME :16:15:55 16:45:47 30 (min) Purpose code: 3
 LOG :9343.32 9345.03 1.76 Area code : 3
 FDEPTH: 154 150 GearCond.code:
 BDEPTH: 154 150 Validity code:
 Towing dir: 320° Wire out: 494 m Speed: 30 kn*10

Sorted: 73 Kg Total catch: 72.54 CATCH/HOUR: 145.08

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 64.04 | 194 | 44.14 | 7958 |
| Zenopsis conchifer | 25.52 | 32 | 17.59 | |
| Brotula barbata | 19.00 | 12 | 13.10 | |
| Trichiurus lepturus | 7.28 | 10 | 5.02 | |
| Trigla lyra | 5.30 | 50 | 3.65 | |
| Pterothrissus belloci | 4.36 | 32 | 3.01 | |
| Citharus linguatula | 3.10 | 64 | 2.14 | |
| Raja miraletus | 2.46 | 4 | 1.70 | |
| Trachurus trecae | 2.10 | 30 | 1.45 | |
| Illex coindetii | 1.66 | 70 | 1.14 | |
| G A S T R O P O D S | 1.50 | 204 | 1.03 | |
| Zenopsis conchifer | 1.38 | 12 | 0.95 | |
| Todaropsis oblanae | 1.34 | 94 | 0.92 | |
| Squatina oculata | 1.08 | 2 | 0.74 | |
| Saurida brasiliensis | 1.04 | 288 | 0.72 | |
| Uranoscopus cadenati | 0.92 | 6 | 0.63 | |
| HOLOTURIDAE | 0.72 | 2 | 0.50 | |
| Bembrrops heterurus | 0.64 | 8 | 0.44 | |
| B I V A L V E S | 0.62 | 114 | 0.43 | |
| Sepia orbignyana | 0.58 | 6 | 0.40 | |
| Dentex congogensis | 0.18 | 4 | 0.12 | |
| Spicara alta | 0.16 | 2 | 0.11 | |
| Peristedion cataphractum | 0.08 | 2 | 0.06 | |
| Total | 145.06 | | 99.99 | |

PROJECT STATION:3768
 DATE:20/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 712 Long E 1152
 start stop duration
 TIME :19:12:16 19:42:57 31 (min) Purpose code: 3
 LOG :9358.55 9360.01 1.46 Area code : 3
 FDEPTH: 625 613 GearCond.code:
 BDEPTH: 625 613 Validity code:
 Towing dir: 140° Wire out:1550 m Speed: 29 kn*10

Sorted: 47 Kg Total catch: 92.23 CATCH/HOUR: 178.51

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Yarella blackfordi | 33.48 | 914 | 18.76 | |
| Lamprogrammus exutus | 24.14 | 58 | 13.52 | |
| Stereomastis sp. | 22.35 | 1603 | 12.52 | |
| Merluccius polli | 12.39 | 25 | 6.94 | 7959 |
| Nematocarcinus africanus | 11.61 | 3374 | 6.50 | |
| Ijimaia leppoi | 10.30 | 2 | 5.77 | |
| Glyphus marsupialis | 8.90 | 10 | 4.99 | |
| Triplophos hewingi | 6.95 | 904 | 3.89 | |
| Nezumia sp. | 6.85 | 120 | 3.84 | |
| Hoplostethus cadenati | 6.14 | 201 | 3.44 | |
| Aristeus varidens, female | 4.32 | 137 | 2.42 | 7961 |
| Chaceon maritae, male | 3.75 | 6 | 2.10 | |
| Necythis sp. | 3.08 | 201 | 1.73 | |
| C E F H A L O P O D A | 2.57 | 14 | 1.44 | |
| CONGRIDAE | 2.32 | 31 | 1.30 | |
| PAGURIDAE | 1.92 | 58 | 1.08 | |
| Gadella maraldi | 1.65 | 4 | 0.92 | |
| S H R I M P S | 1.61 | 557 | 0.90 | |
| Benthodesmus sp. | 1.57 | 45 | 0.88 | |
| Raja dcutrei | 1.53 | 6 | 0.86 | |
| Aristeus varidens, male | 1.47 | 174 | 0.82 | 7960 |
| Bathyroconger vicinus | 1.37 | 23 | 0.77 | |
| Melanostomias sp. | 1.16 | 27 | 0.65 | |
| UNIDENTIFIED FISH | 0.93 | 14 | 0.52 | |
| Stomias boa boa | 0.68 | 27 | 0.38 | |
| Etmopterus polli | 0.58 | 8 | 0.32 | |
| Halosaurus ovenii | 0.58 | 4 | 0.32 | |
| Dicrolene intronigra | 0.45 | 10 | 0.25 | |
| Laemonema laureysi | 0.41 | 4 | 0.23 | |
| Melanomus zugmayori | 0.35 | 4 | 0.20 | |
| DICERATIIDAE | 0.35 | 10 | 0.20 | |
| Xenodermichthys copei | 0.35 | 23 | 0.20 | |
| Symphurus sp. | 0.27 | 4 | 0.15 | |
| PASIPHAEIDAE | 0.27 | 14 | 0.15 | |
| MYCTOPHIDAE | 0.27 | 116 | 0.15 | |
| Ectreposebastes imus | 0.23 | 4 | 0.13 | |
| Scymnodon obscurus | 0.19 | 2 | 0.11 | |
| Talismania sp. | 0.17 | 10 | 0.10 | |
| Catastyx laticeps | 0.17 | 31 | 0.10 | |
| Heterocarpus grimaldii | 0.17 | 4 | 0.10 | |
| GALATHEIDAE * | 0.14 | 31 | 0.08 | |
| Scopelosaurus sp. | 0.14 | 4 | 0.08 | |
| Lampadena sp. | 0.14 | 4 | 0.08 | |
| Emunida squamifera * | 0.10 | 58 | 0.06 | |
| Gonostoma sp. | 0.04 | 4 | 0.02 | |
| Cubiceps sp. | 0.04 | 4 | 0.02 | |
| Bathypterois sp. | 0.04 | 4 | 0.02 | |
| Leptocephalus | 0.04 | 4 | 0.02 | |
| Total | 178.53 | | 100.03 | |

PROJECT STATION:3769
 DATE:20/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 716 Long E 1145
 start stop duration
 TIME :21:37:54 22:22:24 45 (min) Purpose code: 3
 LOG :9371.80 9373.96 2.15 Area code : 3
 FDEPTH: 912 919 GearCond.code:
 BDEPTH: 912 919 Validity code: 1
 Towing dir: 315° Wire out:2250 m Speed: 29 kn*10

Sorted: 62 Kg Total catch: 529.12 CATCH/HOUR: 705.49

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| HOLOTURIDAE | 640.64 | 191 | 90.81 | |
| Raja confundens | 9.12 | 5 | 1.29 | |
| MACROURIDAE | 7.73 | 13 | 1.10 | |
| Halosaurus ovenii | 7.44 | 112 | 1.05 | |
| Nezumia aequalis | 5.71 | 112 | 0.81 | |
| Talismania longifilis | 5.07 | 21 | 0.72 | |
| L O E S T E R S | 4.99 | 232 | 0.71 | |
| Conger conger | 4.45 | 8 | 0.63 | |
| Lepidodes Kempf | 3.31 | 3 | 0.47 | |
| Stomias boa boa | 2.59 | 128 | 0.37 | |
| Yarella blackfordi * | 2.32 | 29 | 0.33 | |
| S H R I M P S | 2.16 | 333 | 0.31 | |
| ALEPOCEPHALIDAE | 2.13 | 3 | 0.30 | |
| Deania calcea | 1.33 | 4 | 0.19 | |
| Xenodermichthys copei | 1.15 | 29 | 0.16 | |
| Aristeus varidens, female | 1.04 | 32 | 0.15 | 7962 |
| Scymnodon obscurus | 0.96 | 1 | 0.14 | |
| Synaphobranchus kaupii | 0.88 | 5 | 0.12 | |
| Gadella imberbis | 0.77 | 32 | 0.11 | |
| Bathygadus melanobranchus | 0.29 | 21 | 0.04 | |
| Bathypterois sp. | 0.29 | 29 | 0.04 | |
| Triplophos hewingi | 0.29 | 40 | 0.04 | |
| OMMASTREPHIDAE | 0.21 | 3 | 0.03 | |
| Glyphus marsupialis | 0.16 | 8 | 0.02 | |
| NOSSCI | 0.11 | 3 | 0.02 | |
| Dibranchius sp. | 0.11 | 3 | 0.02 | |
| Acanthephyra sp. | 0.05 | 8 | 0.01 | |
| Heterocarpus grimaldii | 0.05 | 3 | 0.01 | |
| Hoplostethus cadenati | 0.05 | 3 | 0.01 | |
| Nemichthys scolopaceus | 0.03 | 3 | | |
| Leptodema sp. | 0.03 | 32 | | |
| MYCTOPHIDAE | 0.03 | 3 | | |
| Total | 705.49 | | 100.01 | |

PROJECT STATION:3770
 DATE:21/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 706 Long E 1156
 start stop duration
 TIME :05:57:00 06:28:57 32 (min) Purpose code: 3
 LOG :9404.51 9406.08 1.55 Area code : 3
 FDEPTH: 316 311 GearCond.code: 3
 BDEPTH: 316 311 Validity code: 3
 Towing dir: 142° Wire out: 850 m Speed: 29 kn*10
 Sorted: 92 Kg Total catch: 557.49 CATCH/HOUR: 1045.29

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 713.19 | 41409 | 68.23 | |
| Chlorophthalmus atlanticus | 192.05 | 4322 | 18.47 | |
| Merluccius polli | 34.76 | 514 | 3.33 | 7963 |
| Squatina oculata | 30.75 | 75 | 2.94 | |
| Pterothrissus belloci | 9.77 | 54 | 0.93 | |
| Trichiurus lepturus | 8.01 | 11 | 0.77 | |
| Chaetodon hoefleri | 7.01 | 793 | 0.67 | |
| Illex coindetii | 6.92 | 99 | 0.66 | |
| Laemonema lauroysi | 5.49 | 23 | 0.53 | |
| Todaropsis oblanae | 4.93 | 66 | 0.47 | |
| C E P H A L O P O D A | 4.39 | 1350 | 0.42 | |
| Aricomma bondi | 3.96 | 120 | 0.38 | |
| Pontinus kuhlii | 3.62 | 43 | 0.35 | |
| Parapenaeus longirostris, male | 3.51 | 643 | 0.34 | 7964 |
| Arneglossus sp. | 2.74 | 34 | 0.26 | |
| Benthodesmus sp. | 2.53 | 34 | 0.24 | |
| Lophocodes Kempf | 2.31 | 43 | 0.22 | |
| Parapenaeus longirostris, fem. | 1.99 | 278 | 0.19 | 7965 |
| Nozumia sp. | 1.54 | 99 | 0.15 | |
| Zenopsis conchifer | 1.54 | 4 | 0.15 | |
| MYCTOPHIDAE | 1.11 | 1009 | 0.11 | |
| Plesicpenaeus edwardsianus | 0.54 | 186 | 0.05 | |
| Dibranchius sp. | 0.43 | 34 | 0.04 | |
| Peristedion cataphractum | 0.43 | 23 | 0.04 | |
| Solenocera africana | 0.23 | 34 | 0.02 | |
| Gadella maraldi | 0.23 | 34 | 0.02 | |
| Epigonus telescopus | 0.11 | 11 | 0.01 | |
| Arneglossus capensis | 0.11 | 11 | 0.01 | |
| Zenion sp. | 0.11 | 11 | 0.01 | |
| Total | 1045.31 | | 100.01 | |

PROJECT STATION:3771
 DATE:21/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 706 Long E 1157
 start stop duration
 TIME :07:22:01 07:51:44 30 (min) Purpose code: 3
 LOG :9408.98 9410.54 1.57 Area code : 3
 FDEPTH: 268 263 GearCond.code: 3
 BDEPTH: 268 263 Validity code: 3
 Towing dir: 320° Wire out: 750 m Speed: 31 kn*10
 Sorted: 78 Kg Total catch: 924.87 CATCH/HOUR: 1849.74

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 1466.64 | 86508 | 79.29 | |
| Merluccius polli | 99.90 | 1532 | 5.40 | 7967 |
| Chlorophthalmus atlanticus | 41.04 | 1728 | 2.22 | |
| Trichiurus lepturus | 38.20 | 42 | 2.07 | |
| Dentex angolensis | 27.20 | 68 | 1.47 | 7966 |
| Pterothrissus belloci | 23.22 | 162 | 1.26 | |
| Parasudis sp. | 23.22 | 864 | 1.26 | |
| Parapenaeus longirostris, male | 17.82 | 3294 | 0.96 | 7968 |
| Raja straeleni | 16.20 | 54 | 0.88 | |
| Parapenaeus longirostris, fem. | 14.58 | 2052 | 0.79 | 7969 |
| Todaropsis oblanae | 13.50 | 108 | 0.73 | |
| Aricomma bondi | 11.88 | 432 | 0.64 | |
| Zenopsis conchifer | 10.88 | 14 | 0.59 | |
| Chloroscombrus chrysurus | 10.26 | 918 | 0.55 | |
| Bembrops heterurus | 7.56 | 108 | 0.41 | |
| Raja clavata | 6.40 | 4 | 0.35 | |
| Illex coindetii | 5.94 | 108 | 0.32 | |
| Brotula barbata | 4.28 | 6 | 0.23 | |
| C E P H A L O P O D A | 2.16 | 648 | 0.12 | |
| Miracorvina angolensis | 2.00 | 2 | 0.11 | |
| Paronola cuvieri | 1.70 | 2 | 0.09 | |
| Epigonus telescopus | 1.62 | 162 | 0.09 | |
| Dibranchius sp. | 1.08 | 108 | 0.06 | |
| Pontinus kuhlii | 0.84 | 6 | 0.05 | |
| PAGURIDAE | 0.54 | 54 | 0.03 | |
| Peristedion cataphractum | 0.54 | 54 | 0.03 | |
| MYCTOPHIDAE | 0.54 | 108 | 0.03 | |
| Total | 1849.74 | | 100.03 | |

PROJECT STATION:3772
 DATE:21/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 648 Long E 1201
 start stop duration
 TIME :10:07:52 10:38:58 31 (min) Purpose code: 3
 LOG :9428.12 9430.00 1.74 Area code : 3
 FDEPTH: 90 89 GearCond.code: 3
 BDEPTH: 90 89 Validity code: 3
 Towing dir: 340° Wire out: 270 m Speed: 30 kn*10
 Sorted: 53 Kg Total catch: 53.50 CATCH/HOUR: 103.55

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Lagocephalus laevigatus | 35.38 | 48 | 34.17 | |
| Dentex canariensis | 31.01 | 68 | 29.95 | |
| Rhinobatos albomaculatus | 19.32 | 10 | 18.66 | |
| Fistularia petimba | 5.96 | 19 | 5.76 | |
| Chelidonichthys capensis | 2.71 | 14 | 2.62 | |
| Pagellus bellottii | 2.59 | 19 | 2.50 | |
| Chaetodon hoefleri | 1.88 | 12 | 1.82 | |
| Sepia orbignyana | 1.70 | 6 | 1.64 | |
| Illex coindetii | 0.95 | 48 | 0.92 | |
| Zenopsis conchifer | 0.91 | 6 | 0.88 | |
| Uranoscopus cadenati | 0.45 | 2 | 0.43 | |
| Citharus linguatula | 0.17 | 14 | 0.16 | |
| GALATHEIDAE | 0.15 | 12 | 0.14 | |
| Todaropsis oblanae | 0.10 | 25 | 0.10 | |
| Saurida brasiliensis | 0.06 | 17 | 0.06 | |
| Alloteuthis africana | 0.06 | 6 | 0.06 | |
| Serranus sp. | 0.04 | 2 | 0.04 | |
| Dibranchius atlanticus | 0.04 | 4 | 0.04 | |
| Anthias anthias | 0.02 | 2 | 0.02 | |
| Antigonia sp. | 0.02 | 2 | 0.02 | |
| Bembrops sp. | 0.02 | 2 | 0.02 | |
| Peristedion cataphractum | 0.02 | 2 | 0.02 | |
| Total | 103.56 | | 100.03 | |

PROJECT STATION:3773
 DATE:21/ 4/05 GEAR TYPE: BT No:16 POSITION:Lat S 646 Long E 1157
 start stop duration
 TIME :11:32:09 11:44:21 12 (min) Purpose code: 3
 LOG :9433.77 9434.30 0.52 Area code : 3
 FDEPTH: 103 101 GearCond.code: 9
 BDEPTH: 103 101 Validity code: 4
 Towing dir: 170° Wire out: 313 m Speed: 20 kn*10
 Sorted: 241 Kg Total catch: 241.38 CATCH/HOUR: 1206.90

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex canariensis | 1083.50 | 2605 | 89.78 | |
| Umbrina canariensis | 53.70 | 105 | 4.45 | |
| Carcharhinus signatus | 27.50 | 15 | 2.28 | |
| Dentex congoensis | 14.15 | 80 | 1.17 | |
| Fistularia petimba | 6.35 | 25 | 0.53 | |
| Octopus vulgaris | 6.15 | 5 | 0.51 | |
| Lagocephalus laevigatus | 3.10 | 5 | 0.26 | |
| Scorpaena normani | 2.85 | 5 | 0.24 | |
| Pagellus bellottii | 2.60 | 10 | 0.22 | |
| Torpedo torpedo | 2.30 | 5 | 0.19 | |
| Zeus faber | 1.75 | 5 | 0.14 | |
| Chelidonichthys capensis | 1.45 | 5 | 0.12 | |
| HOLCOUTRIDAE | 1.15 | 5 | 0.10 | |
| Illex coindetii | 0.30 | 25 | 0.02 | |
| Parapandalus narval | 0.05 | 10 | | |
| Total | 1206.90 | | 100.01 | |

PROJECT STATION:3774
 DATE:21/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 646 Long E 1155
 start stop duration
 TIME :12:45:46 13:15:32 30 (min) Purpose code: 3
 LOG :9438.70 9440.52 1.83 Area code : 3
 FDEPTH: 115 121 GearCond.code: 3
 BDEPTH: 115 121 Validity code: 3
 Towing dir: 350° Wire out: 333 m Speed: 30 kn*10
 Sorted: 40 Kg Total catch: 39.76 CATCH/HOUR: 79.52

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 42.76 | 194 | 53.77 | 7970 |
| Dentex congoensis | 24.72 | 330 | 31.09 | |
| Rhinobatos albomaculatus | 2.62 | 2 | 3.29 | |
| Zeus faber | 2.08 | 6 | 2.62 | |
| Spicara alta | 1.86 | 40 | 2.34 | |
| Chelidonichthys capensis | 1.20 | 14 | 1.51 | |
| Squatina aculeata | 1.20 | 6 | 1.51 | |
| Pagellus bellottii | 0.84 | 4 | 1.06 | |
| Scorpaena stephanica | 0.78 | 2 | 0.98 | |
| Illex coindetii | 0.64 | 38 | 0.80 | |
| Boops boops | 0.42 | 12 | 0.53 | |
| Sepia orbignyana | 0.22 | 2 | 0.28 | |
| Citharus linguatula | 0.08 | 2 | 0.10 | |
| Aricomma bondi | 0.08 | 2 | 0.10 | |
| Arneglossus imperialis | 0.02 | 2 | 0.03 | |
| Total | 79.52 | | 100.01 | |

PROJECT STATION:3775
 DATE:21/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 648 Long E 1153
 start stop duration
 TIME :14:21:50 14:51:33 30 (min) Purpose code: 3
 LOG :9446.48 9447.81 1.32 Area code : 3
 FDEPTH: 134 133 GearCond.code: 3
 BDEPTH: 134 133 Validity code: 3
 Towing dir: 170° Wire out: 404 m Speed: 30 kn*10
 Sorted: 88 Kg Total catch: 88.44 CATCH/HOUR: 176.88

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Spicara alta | 60.80 | 724 | 34.37 | |
| Dentex angolensis | 51.72 | 380 | 29.24 | 7971 |
| Dentex congoensis | 42.48 | 536 | 24.02 | |
| Carcharhinus signatus | 4.00 | 2 | 2.26 | |
| Chelidonichthys capensis | 3.82 | 46 | 2.16 | |
| Zenopsis conchifer | 3.20 | 2 | 1.61 | |
| Squalus megalops | 2.28 | 2 | 1.29 | |
| Zeus faber | 1.62 | 10 | 0.92 | |
| Raja miraletus | 1.18 | 2 | 0.67 | |
| Citharus linguatula | 1.08 | 28 | 0.61 | |
| Aricomma bondi | 0.80 | 14 | 0.45 | |
| Illex coindetii | 0.70 | 38 | 0.40 | |
| Dentex macrophthalmus | 0.66 | 2 | 0.37 | |
| Brotula barbata | 0.64 | 2 | 0.36 | |
| Trachurus trecae | 0.62 | 4 | 0.35 | |
| Pagellus bellottii | 0.60 | 4 | 0.34 | |
| Sepia orbignyana | 0.50 | 6 | 0.28 | |
| Peristedion cataphractum | 0.12 | 2 | 0.07 | |
| Saurida brasiliensis | 0.04 | 8 | 0.02 | |
| Parapandalus narval | 0.02 | 2 | 0.01 | |
| Total | 176.88 | | 100.00 | |

PROJECT STATION: 3776
 DATE: 21/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 651 Long E 1150
 start stop duration
 TIME :15:48:51 16:18:34 30 (min) Purpose code: 3
 LOG :9453.21 9454.87 1.66 Area code : 3
 FDEPTH: 270 272 GearCond.code: 3
 BDEPTH: 270 272 Validity code:
 Towing dir: 330° Wire out: 777 m Speed: 30 kn*10
 Sorted: 82 Kg Total catch: 536.39 CATCH/HOUR: 1072.78

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 680.54 | 39944 | 63.44 | |
| Chloroscombrus chrysurus | 133.40 | 754 | 12.43 | |
| Parasudis sp. | 99.72 | 5208 | 9.30 | |
| Merluccius polli | 41.98 | 466 | 3.91 | 7972 |
| Parapenaeus longirostris, male | 27.74 | 6418 | 2.59 | 7973 |
| Chlorophthalmus atlanticus | 21.48 | 974 | 2.00 | |
| Nezumia sp. | 11.78 | 374 | 1.10 | |
| Chascanopsetta lugubris | 10.42 | 204 | 0.97 | |
| Parapenaeus longirostris, fem. | 8.38 | 1846 | 0.78 | 7974 |
| Zenopsis conchifer | 7.26 | 8 | 0.68 | |
| Protula barbata | 6.32 | 4 | 0.59 | |
| Trichiurus lepturus | 4.76 | 8 | 0.44 | |
| Bembrops heterurus | 4.52 | 78 | 0.42 | |
| MYCTOPHIDAE | 2.72 | 2762 | 0.25 | |
| Pontinus kuhlii | 2.72 | 24 | 0.25 | |
| Todaropsis eblanae | 2.60 | 34 | 0.24 | |
| Pterothrissus belloci | 2.38 | 22 | 0.22 | |
| Malacocephalus occidentalis | 1.36 | 12 | 0.13 | |
| Aricomma bondi | 1.14 | 22 | 0.11 | |
| Bathyraya sp. | 0.56 | 12 | 0.05 | |
| Illex coindetii | 0.56 | 12 | 0.05 | |
| C E P H A L O P O D A | 0.22 | 68 | 0.02 | |
| Xenolepidichthys dagleishi | 0.22 | 12 | 0.02 | |
| Total | 1072.78 | | 99.99 | |

PROJECT STATION: 3779
 DATE: 21/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 657 Long E 1140
 start stop duration
 TIME :22:46:21 23:16:20 30 (min) Purpose code: 3
 LOG :9482.51 9483.94 1.41 Area code : 3
 FDEPTH: 708 705 GearCond.code: 3
 BDEPTH: 708 705 Validity code:
 Towing dir: 140° Wire out: 1750 m Speed: 30 kn*10
 Sorted: 32 Kg Total catch: 60.48 CATCH/HOUR: 120.96

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| L O P S T E R S | 21.54 | 1632 | 17.81 | |
| Nematocarcinus africanus | 14.58 | 2640 | 12.05 | |
| Triplophos hemingi | 10.44 | 1482 | 8.63 | |
| Nezumia sp. | 8.52 | 204 | 7.04 | |
| Merluccius polli | 8.00 | 12 | 6.61 | |
| Conger conger | 6.12 | 54 | 5.06 | |
| Yarella blackfordi | 5.34 | 108 | 4.41 | |
| Lamprogrammus exultus | 4.80 | 84 | 3.97 | |
| Chaceon maritae, male | 4.22 | 6 | 3.49 | |
| Hoplostethus cadonati | 3.54 | 750 | 2.93 | |
| Stomias boa boa | 3.00 | 84 | 2.48 | |
| S H R I M P S | 2.64 | 468 | 2.18 | |
| Synaphobranchus kaupii | 2.64 | 42 | 2.18 | |
| Xenodermichthys copei | 2.40 | 78 | 1.98 | |
| Aristeus varidens, female | 2.28 | 102 | 1.88 | 7982 |
| Lophiodex kempi | 2.22 | 6 | 1.84 | |
| Hydrolagus sp. | 2.14 | 6 | 1.77 | |
| Bathygadus macrops | 1.98 | 12 | 1.64 | |
| Halosaurus ovenii | 1.80 | 24 | 1.49 | |
| Nezumia micronychodon | 1.62 | 30 | 1.34 | |
| Etmopterus pusillus | 1.60 | 8 | 1.32 | |
| OMMASTREPHIDAE | 1.44 | 12 | 1.19 | |
| Deania calcea | 1.20 | 6 | 0.99 | |
| Dibranchius sp. | 0.90 | 42 | 0.74 | |
| Etmopterus polli | 0.80 | 2 | 0.66 | |
| OBHIDIIDAE | 0.72 | 84 | 0.60 | |
| Benthodesmus tenuis | 0.66 | 18 | 0.55 | |
| Leptoderma sp. | 0.60 | 90 | 0.50 | |
| Glyphus marsupialis | 0.54 | 42 | 0.45 | |
| Aristeus varidens, male | 0.42 | 48 | 0.35 | 7981 |
| Bajacalifornia magalops | 0.42 | 12 | 0.35 | |
| Chaceon maritae, female | 0.40 | 2 | 0.33 | |
| GALATHEIDAE * | 0.36 | 240 | 0.30 | |
| Raja sp. | 0.24 | 6 | 0.20 | |
| Heterocarpus grimaldii | 0.24 | 6 | 0.20 | |
| Sergestes sp. | 0.18 | 36 | 0.15 | |
| NEPHROPIDAE | 0.18 | 12 | 0.15 | |
| Acanthephyra sp. | 0.12 | 54 | 0.10 | |
| Nemichthys scolopaceus | 0.06 | 6 | 0.05 | |
| MYCTOPHIDAE | 0.06 | 42 | 0.05 | |
| Total | 120.96 | | 100.01 | |

PROJECT STATION: 3777
 DATE: 21/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 655 Long E 1146
 start stop duration
 TIME :18:12:58 18:43:56 31 (min) Purpose code: 3
 LOG :9464.03 9465.46 1.41 Area code : 3
 FDEPTH: 440 440 GearCond.code: 3
 BDEPTH: 440 440 Validity code:
 Towing dir: 150° Wire out: 1150 m Speed: 30 kn*10
 Sorted: 67 Kg Total catch: 152.78 CATCH/HOUR: 295.70

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 64.80 | 263 | 21.91 | 7975 |
| Benthodesmus sp. | 38.17 | 1208 | 12.91 | |
| Nematocarcinus africanus | 30.81 | 7874 | 10.42 | |
| Aristeus varidens, female | 29.19 | 1765 | 9.87 | 7977 |
| Stereomastis sp. | 26.09 | 2276 | 8.82 | |
| Laemonema laureysi | 23.23 | 503 | 7.86 | |
| Hymenoccephalus italicus | 22.61 | 2632 | 7.65 | |
| Chaunax pictus | 12.23 | 201 | 4.14 | |
| Malacocephalus occidentalis | 9.91 | 62 | 3.35 | |
| Torpedo nobiliana | 9.72 | 2 | 3.29 | |
| Aristeus varidens, male | 6.43 | 968 | 2.17 | 7976 |
| Coloconger cadonati | 4.65 | 15 | 1.57 | |
| Dibranchius sp. | 4.34 | 453 | 1.47 | |
| Cadella maraldi | 2.71 | 85 | 0.92 | |
| Todaropsis eblanae | 2.09 | 15 | 0.71 | |
| MYCTOPHIDAE | 2.09 | 1231 | 0.71 | |
| Illex coindetii | 1.86 | 15 | 0.63 | |
| Halosaurus ovenii | 1.55 | 54 | 0.52 | |
| Nezumia sp. | 1.47 | 70 | 0.50 | |
| C E P H A L O P O D A | 0.46 | 190 | 0.16 | |
| Dicrolene intronigra | 0.46 | 31 | 0.16 | |
| Bathyracconger vicinus | 0.46 | 8 | 0.16 | |
| NETTASTOMATIDAE | 0.23 | 15 | 0.08 | |
| Triplophos hemingi | 0.15 | 15 | 0.05 | |
| Total | 295.71 | | 100.03 | |

PROJECT STATION: 3780
 DATE: 22/4/05 GEAR TYPE: BT No:17 POSITION: Lat S 625 Long E 1205
 start stop duration
 TIME :05:53:47 06:23:03 29 (min) Purpose code: 3
 LOG :9528.97 9530.46 1.48 Area code : 3
 FDEPTH: 54 53 GearCond.code: 3
 BDEPTH: 54 53 Validity code:
 Towing dir: 150° Wire out: 150 m Speed: 30 kn*10
 Sorted: 41 Kg Total catch: 41.79 CATCH/HOUR: 86.46

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Lagocephalus laevigatus | 40.47 | 85 | 46.81 | |
| Dentex canariensis | 22.88 | 327 | 26.46 | 7983 |
| Raja miraletus | 3.37 | 10 | 3.90 | |
| Pseudupeneus prayensis | 2.11 | 17 | 2.44 | |
| Caranx crysos | 2.03 | 2 | 2.35 | |
| Uranoscopus albesca | 2.01 | 17 | 2.32 | |
| Pomadourus incisus | 1.90 | 2 | 2.20 | |
| Trachinus araneus | 1.39 | 6 | 1.61 | |
| Allotautis africana | 0.99 | 726 | 1.15 | |
| Priacanthus cruentatus | 0.97 | 2 | 1.12 | |
| Syacium micrum | 0.89 | 56 | 1.03 | |
| Bembrops heterurus | 0.87 | 43 | 1.01 | |
| Chelidonichthys capensis | 0.87 | 4 | 1.01 | |
| Trachinus armatus | 0.85 | 17 | 0.98 | |
| Trichiurus lepturus | 0.70 | 2 | 0.81 | |
| Trachurus trecae | 0.58 | 4 | 0.67 | |
| Monolene microstoma | 0.58 | 87 | 0.67 | |
| Trachinocephalus myops | 0.54 | 6 | 0.62 | |
| Brachydeuterus auritus | 0.54 | 4 | 0.62 | |
| Chilomycterus spinosus mauret. | 0.48 | 2 | 0.56 | |
| Sepia officinalis hierredra | 0.43 | 6 | 0.50 | |
| Conger conger | 0.29 | 2 | 0.34 | |
| Decapterus punctatus | 0.29 | 4 | 0.34 | |
| Citharus linguatula | 0.23 | 4 | 0.27 | |
| Saurida brasiliensis | 0.21 | 23 | 0.24 | |
| Total | 86.47 | | 100.03 | |

PROJECT STATION: 3778
 DATE: 21/4/05 GEAR TYPE: BT No:15 POSITION: Lat S 655 Long E 1143
 start stop duration
 TIME :20:23:49 20:55:17 31 (min) Purpose code: 3
 LOG :9472.82 9474.35 1.50 Area code : 3
 FDEPTH: 519 518 GearCond.code: 3
 BDEPTH: 519 518 Validity code:
 Towing dir: 240° Wire out: 1300 m Speed: 31 kn*10
 Sorted: 55 Kg Total catch: 131.84 CATCH/HOUR: 255.17

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Nematocarcinus africanus | 58.97 | 18937 | 23.11 | |
| Triplophos hemingi | 57.17 | 8574 | 22.40 | |
| Lamprogrammus exultus | 22.95 | 66 | 8.99 | |
| Yarella blackfordi | 22.05 | 679 | 8.64 | |
| Stereomastis sp. | 21.48 | 1680 | 8.42 | |
| Aristeus varidens, female | 16.70 | 695 | 6.54 | 7980 |
| Hoplostethus cadonati | 11.01 | 267 | 4.31 | |
| Merluccius polli | 10.45 | 27 | 4.10 | 7978 |
| Melanostomias sp. | 6.10 | 116 | 2.39 | |
| Aristeus varidens, male | 4.72 | 548 | 1.85 | 7979 |
| Cadella maraldi | 4.47 | 166 | 1.75 | |
| Chaunax pictus | 4.43 | 41 | 1.74 | |
| Benthodesmus tenuis | 4.10 | 126 | 1.61 | |
| Chaceon maritae, male | 1.24 | 4 | 0.49 | |
| Malacocephalus occidentalis | 1.10 | 15 | 0.43 | |
| Laemonema laureysi | 1.06 | 50 | 0.42 | |
| Ebinania costaecanaria | 0.91 | 6 | 0.36 | |
| Glyphus marsupialis | 0.66 | 157 | 0.26 | |
| Dibranchius sp. | 0.56 | 75 | 0.22 | |
| Galeus polli | 0.48 | 6 | 0.19 | |
| Etmopterus polli | 0.48 | 10 | 0.19 | |
| Chaceon maritae, female | 0.46 | 2 | 0.18 | |
| Bathygadus macrops | 0.45 | 19 | 0.18 | |
| Hymenoccephalus italicus | 0.45 | 56 | 0.18 | |
| Nezumia sp. | 0.45 | 10 | 0.18 | |
| Dicrolene intronigra | 0.45 | 50 | 0.18 | |
| Halosaurus ovenii | 0.35 | 10 | 0.14 | |
| Borostomias sp. | 0.31 | 6 | 0.12 | |
| Cataetyx laticeps | 0.25 | 56 | 0.10 | |
| Etmopterus pusillus | 0.19 | 2 | 0.07 | |
| Conostoma elongatum | 0.15 | 6 | 0.06 | |
| Bathynectes piperitus | 0.15 | 15 | 0.06 | |
| MYCTOPHIDAE | 0.14 | 66 | 0.05 | |
| Synaphobranchus kaupii | 0.10 | 6 | 0.04 | |
| Xenodermichthys copei | 0.10 | 10 | 0.04 | |
| Nemichthys scolopaceus | 0.06 | 6 | 0.02 | |
| Total | 255.15 | | 100.01 | |

PROJECT STATION:3781
 DATE:22/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 626
 start stop duration Long E 1202
 TIME :94:31:52 67:50:38 29 (min) Purpose code: 3
 LOG :9534.95 9536.48 1.53 Area code : 3
 FDEPTH: 80 80 GearCond.code:
 BDEPTH: 80 80 Validity code:
 Towing dir: 350ø Wire out: 240 m Speed: 31 kn*10

Sorted: 107 Kg Total catch: 738.13 CATCH/HOUR: 1527.17

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 1189.82 | 9923 | 77.91 | |
| Trachurus trecae | 143.83 | 2412 | 9.42 | 7984 |
| Pagellus bellottii | 42.79 | 223 | 2.80 | 7986 |
| Dentex angolensis | 41.96 | 205 | 2.75 | 7985 |
| Trichiurus lepturus | 33.48 | 58 | 2.19 | |
| Dentex barnardi | 23.75 | 50 | 1.56 | 7987 |
| Boops boops | 16.84 | 546 | 1.10 | |
| Raja miraletus | 7.18 | 17 | 0.47 | |
| Aliceuthis africana | 5.01 | 2913 | 0.33 | |
| Chaetodon hoefleri | 5.01 | 46 | 0.33 | |
| Dentex congoensis | 3.25 | 39 | 0.21 | |
| Citharus linguatula | 2.73 | 91 | 0.18 | |
| Mustelus mustelus | 2.52 | 2 | 0.17 | |
| Brotula barbata | 2.13 | 4 | 0.14 | |
| Octopus vulgaris | 2.11 | 2 | 0.14 | |
| Sepia officinalis hierredda | 1.37 | 46 | 0.09 | |
| Saurida brasiliensis | 1.37 | 364 | 0.09 | |
| B I V A L V E S | 0.91 | 137 | 0.06 | |
| Torpedo torpedo | 0.66 | 4 | 0.04 | |
| Total | 1526.72 | | 99.98 | |

PROJECT STATION:3782
 DATE:22/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 627
 start stop duration Long E 1158
 TIME :08:37:05 09:08:29 31 (min) Purpose code: 3
 LOG :9541.26 9542.80 1.53 Area code : 3
 FDEPTH: 95 97 GearCond.code:
 BDEPTH: 95 97 Validity code:
 Towing dir: 170ø Wire out: 300 m Speed: 29 kn*10

Sorted: 100 Kg Total catch: 261.44 CATCH/HOUR: 506.01

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Brachydeuterus auritus | 253.55 | 3029 | 50.11 | |
| Saurida brasiliensis | 63.10 | 4316 | 12.47 | |
| Dentex angolensis | 50.21 | 209 | 9.92 | 7989 |
| Trachurus trecae, juvenile | 45.19 | 1006 | 8.93 | 7988 |
| Epinephelus aeneus | 13.90 | 2 | 2.75 | |
| Raja miraletus | 12.21 | 23 | 2.41 | |
| Uranoscopus albesca | 11.23 | 106 | 2.22 | |
| Dentex congoensis | 10.30 | 105 | 2.04 | |
| Citharus linguatula | 7.16 | 290 | 1.41 | |
| Mustelus mustelus | 6.19 | 4 | 1.22 | |
| Pterothrissus belloci | 5.61 | 39 | 1.11 | |
| Trichiurus lepturus | 5.15 | 6 | 1.02 | |
| Squatina oculata | 4.53 | 2 | 0.90 | |
| Pistularia petimba | 4.18 | 14 | 0.83 | |
| Zeus faber | 3.06 | 17 | 0.60 | |
| Boops boops | 1.55 | 48 | 0.31 | |
| Illex coindetii | 1.45 | 77 | 0.29 | |
| Torpedo torpedo | 1.16 | 6 | 0.23 | |
| Sepia officinalis hierredda | 1.05 | 15 | 0.21 | |
| Priacanthus cruentatus | 1.03 | 2 | 0.20 | |
| Selene dorsalis | 0.74 | 4 | 0.15 | |
| B I V A L V E S | 0.58 | 97 | 0.11 | |
| Brotula barbata | 0.50 | 2 | 0.10 | |
| G A S T R O P O D S | 0.48 | 165 | 0.09 | |
| Monclene microstoma | 0.48 | 48 | 0.09 | |
| Pagellus bellottii | 0.46 | 4 | 0.09 | |
| Uranoscopus polli | 0.39 | 19 | 0.08 | |
| Trigla lyra | 0.29 | 10 | 0.06 | |
| PORTUNIDAE | 0.19 | 97 | 0.04 | |
| GOBIIDAE | 0.10 | 10 | 0.02 | |
| Total | 506.02 | | 100.01 | |

PROJECT STATION:3783
 DATE:22/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 627
 start stop duration Long E 1155
 TIME :10:10:49 10:42:49 32 (min) Purpose code: 3
 LOG :9548.16 9549.83 1.66 Area code : 3
 FDEPTH: 109 108 GearCond.code:
 BDEPTH: 109 108 Validity code:
 Towing dir: 340ø Wire out: 330 m Speed: 30 kn*10

Sorted: 176 Kg Total catch: 175.75 CATCH/HOUR: 329.53

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Trachurus trecae | 82.09 | 983 | 24.91 | 7990 |
| Brachydeuterus auritus | 76.73 | 733 | 23.28 | |
| Dentex angolensis | 36.60 | 251 | 11.11 | 7991 |
| Dentex congoensis | 22.05 | 212 | 6.69 | |
| Chelidonichthys capensis | 13.16 | 143 | 3.99 | |
| Squatina oculata | 11.81 | 8 | 3.58 | |
| Sepia officinalis hierredda | 10.78 | 28 | 3.27 | |
| Brotula barbata | 7.89 | 8 | 2.39 | |
| Citharus linguatula | 6.51 | 156 | 1.98 | |
| Uranoscopus cadenati | 6.21 | 64 | 1.88 | |
| Raja miraletus | 6.15 | 11 | 1.87 | |
| Umbrina canariensis | 5.79 | 15 | 1.76 | |
| Torpedo torpedo | 5.72 | 19 | 1.74 | |
| Saurida brasiliensis | 5.34 | 1614 | 1.62 | |
| Pterothrissus belloci | 5.16 | 34 | 1.57 | |
| Pistularia petimba | 4.28 | 11 | 1.30 | |
| Trichiurus lepturus | 3.56 | 6 | 1.08 | |
| Zeus faber | 3.41 | 17 | 1.03 | |
| Cynoglossus ferox | 2.40 | 2 | 0.73 | |
| Raja clavata | 2.33 | 2 | 0.71 | |
| Scorpaena stephanica | 2.06 | 4 | 0.63 | |
| Scorpaena angolensis | 1.99 | 8 | 0.60 | |
| Sarda sarda | 1.71 | 2 | 0.52 | |
| Priacanthus arenatus | 1.71 | 4 | 0.52 | |
| Cynoglossus canariensis | 1.20 | 2 | 0.36 | |
| Illex coindetii | 0.88 | 64 | 0.27 | |
| Selene dorsalis | 0.83 | 4 | 0.25 | |
| G A S T R O P O D S | 0.69 | 182 | 0.21 | |
| C R A B S | 0.17 | 56 | 0.05 | |
| GOBIIDAE | 0.11 | 13 | 0.03 | |
| Parapenaeus longirostris, fem. | 0.08 | 23 | 0.02 | 7993 |
| Dicolloglossa cuneata | 0.06 | 2 | 0.02 | |
| Parapenaeus longirostris, male | 0.06 | 21 | 0.02 | 7992 |
| Parapandalus narval | 0.02 | 2 | 0.01 | |
| Bembrops sp. | 0.02 | 2 | 0.01 | |
| Total | 329.56 | | 100.01 | |

PROJECT STATION:3784
 DATE:22/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 628
 start stop duration Long E 1151
 TIME :11:42:59 12:15:08 32 (min) Purpose code: 3
 LOG :9555.04 9556.58 1.52 Area code : 3
 FDEPTH: 115 116 GearCond.code:
 BDEPTH: 115 116 Validity code:
 Towing dir: 140ø Wire out: 353 m Speed: 30 kn*10

Sorted: 124 Kg Total catch: 124.30 CATCH/HOUR: 233.06

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex congoensis | 70.13 | 1133 | 30.09 | |
| Dentex angolensis | 54.56 | 259 | 23.41 | 7994 |
| Umbrina canariensis | 22.39 | 77 | 9.61 | 7996 |
| Trachurus trecae | 13.09 | 165 | 5.62 | 7995 |
| Selene dorsalis | 10.13 | 39 | 4.35 | |
| Priacanthus arenatus | 9.62 | 23 | 4.13 | |
| Chelidonichthys capensis | 8.78 | 186 | 3.77 | |
| Dentex canariensis | 5.36 | 15 | 2.30 | |
| Citharus linguatula | 5.33 | 401 | 2.29 | |
| Mustelus mustelus | 5.06 | 4 | 2.17 | |
| G A S T R O P O D S | 3.56 | 459 | 1.53 | |
| Branchiostegus semifasciatus | 3.56 | 4 | 1.53 | |
| Trichiurus lepturus | 3.49 | 4 | 1.50 | |
| Sepia orbignyana | 3.13 | 60 | 1.34 | |
| Scorpaena normani | 2.68 | 8 | 1.15 | |
| Raja miraletus | 2.04 | 6 | 0.88 | |
| Octopus vulgaris | 1.91 | 6 | 0.82 | |
| Dentex gibbosus | 1.26 | 2 | 0.55 | |
| Zeus faber | 1.11 | 8 | 0.48 | |
| Torpedo torpedo | 1.09 | 4 | 0.47 | |
| Saurida brasiliensis | 0.98 | 319 | 0.42 | |
| Peristedion cataphractum | 0.69 | 15 | 0.30 | |
| Fistularia petimba | 0.47 | 2 | 0.20 | |
| Arnglossus imperialis | 0.45 | 64 | 0.19 | |
| Uranoscopus cadenati | 0.45 | 4 | 0.19 | |
| Chaetodon hoefleri | 0.34 | 2 | 0.15 | |
| Brachydeuterus auritus | 0.32 | 4 | 0.14 | |
| Perulibatrachus elminensis | 0.26 | 2 | 0.11 | |
| Pterothrissus belloci | 0.23 | 2 | 0.10 | |
| Illex coindetii | 0.21 | 26 | 0.09 | |
| Lophiodes kempi | 0.19 | 2 | 0.08 | |
| Aulopus cadenati | 0.09 | 2 | 0.04 | |
| Dicolloglossa cuneata | 0.06 | 2 | 0.03 | |
| GOBIIDAE | 0.04 | 6 | 0.02 | |
| Bembrops heterurus | 0.02 | 2 | 0.01 | |
| Total | 233.10 | | 100.06 | |

PROJECT STATION:3785
 DATE:22/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 631
 start stop duration Long E 1149
 TIME :13:21:54 13:51:22 29 (min) Purpose code: 3
 LOG :9561.99 9563.64 1.63 Area code : 3
 FDEPTH: 125 125 GearCond.code:
 BDEPTH: 125 125 Validity code:
 Towing dir: 330ø Wire out: 383 m Speed: 30 kn*10

Sorted: 171 Kg Total catch: 170.91 CATCH/HOUR: 353.61

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Lepidochelys olivacea | 103.45 | 2 | 29.26 | |
| Dentex congoensis | 99.85 | 1142 | 28.24 | |
| Dentex angolensis | 75.52 | 343 | 21.36 | 7998 |
| Chelidonichthys capensis | 13.32 | 199 | 3.77 | |
| G A S T R O P O D S | 13.12 | 2408 | 3.71 | |
| Trachurus trecae | 9.48 | 103 | 2.68 | 7997 |
| Squatina oculata | 4.97 | 2 | 1.41 | |
| Spicara alta | 4.88 | 66 | 1.38 | |
| Pterothrissus belloci | 4.47 | 35 | 1.26 | |
| Raja miraletus | 3.27 | 8 | 0.92 | |
| Trichiurus lepturus | 3.06 | 17 | 0.87 | |
| Brotula barbata | 2.77 | 2 | 0.78 | |
| Ariomma bondi | 2.69 | 46 | 0.76 | |
| Zenopsis conchifer | 2.67 | 2 | 0.76 | |
| Priacanthus arenatus | 2.50 | 6 | 0.71 | |
| Peristedion cataphractum | 1.92 | 41 | 0.54 | |
| Zeus faber | 1.24 | 6 | 0.35 | |
| Citharus linguatula | 1.20 | 91 | 0.34 | |
| Pagellus bellottii | 0.85 | 8 | 0.24 | |
| Selene dorsalis | 0.74 | 2 | 0.21 | |
| Illex coindetii | 0.62 | 62 | 0.18 | |
| Dicolloglossa cuneata | 0.25 | 6 | 0.07 | |
| Aulopus cadenati | 0.23 | 4 | 0.07 | |
| Lophiodes sp. | 0.21 | 2 | 0.06 | |
| Arnglossus imperialis | 0.14 | 27 | 0.04 | |
| Scorpaena normani | 0.14 | 2 | 0.04 | |
| Saurida brasiliensis | 0.04 | 21 | 0.01 | |
| Total | 353.60 | | 100.02 | |

PROJECT STATION:3786
 DATE:22/ 4/05 GEAR TYPE: ,0 No:17 POSITION:Lat S 634
 start stop duration Long E 1142
 TIME :15:18:49 15:48:34 30 (min) Purpose code: 3
 LOG :9572.80 9574.19 1.38 Area code : 3
 FDEPTH: 226 226 GearCond.code:
 BDEPTH: 226 226 Validity code:
 Towing dir: 145ø Wire out: 666 m Speed: 30 kn*10

Sorted: 90 Kg Total catch: 127.16 CATCH/HOUR: 254.32

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 131.92 | 12312 | 51.87 | |
| Dentex angolensis | 64.36 | 160 | 25.31 | 7999 |
| Brotula barbata | 14.58 | 10 | 5.73 | |
| Saurida brasiliensis | 9.80 | 112 | 3.85 | |
| Trichiurus lepturus | 8.02 | 14 | 3.15 | |
| Uranoscopus cadenati | 4.06 | 16 | 1.60 | |
| Zenopsis conchifer | 3.22 | 20 | 1.27 | |
| Zeus faber | 2.86 | 6 | 1.12 | |
| Bembrops heterurus | 2.78 | 50 | 1.09 | |
| Priacanthus arenatus | 2.46 | 30 | 0.97 | |
| Todaropsis eblanæa | 1.70 | 30 | 0.67 | |
| G A S T R O P O D S | 1.40 | 170 | 0.55 | |
| Squatina oculata | 1.40 | 4 | 0.55 | |
| Raja miraletus | 1.32 | 4 | 0.52 | |
| Trachurus trecae | 0.96 | 10 | 0.38 | |
| Pterothrissus belloci | 0.86 | 10 | 0.34 | |
| Peristedion cataphractum | 0.56 | 14 | 0.22 | |
| Coeleorinchus coeleorinchus | 0.54 | 16 | 0.21 | |
| Hymenocephalus italicus | 0.44 | 36 | 0.17 | |
| Citharus linguatula | 0.34 | 44 | 0.13 | |
| Parapenaeus longirostris, fem. | 0.30 | 86 | 0.12 | |
| Gadella imberbis | 0.18 | 6 | 0.07 | |
| Scorpaena normani | 0.08 | 14 | 0.03 | |
| Parapenaeus longirostris, male | 0.06 | 30 | 0.02 | |
| Zenion sp. | 0.06 | 10 | 0.02 | |
| GOBIIDAE | 0.06 | 6 | 0.02 | |
| Total | 254.32 | | 99.98 | |

PROJECT STATION:3787
 DATE:22/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 635
 start stop duration Long E 1138
 TIME :17:11:21 17:39:05 28 (min) Purpose code: 3
 LOG :9561.17 9582.65 1.47 Area code : 3
 FDEPTH: 339 321 GearCond.code:
 BDEPTH: 339 321 Validity code:
 Towing dir: 330° Wire out: 980 m Speed:300 kn*10
 Sorted: 46 Kg Total catch: 154.30 CATCH/HOUR: 330.64

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Synagrops microlepis | 85.95 | 3051 | 26.00 | |
| Benthodesmus sp. | 77.87 | 3746 | 23.55 | |
| Chloropthalmus atlanticus | 67.41 | 1850 | 20.39 | |
| Hymenocephalus italicus | 20.74 | 2906 | 6.27 | |
| Parasudis sp. | 13.80 | 501 | 4.17 | |
| Parapenaeus longirostris, fem. | 10.46 | 1562 | 3.16 | 8001 |
| Merluccius pollii | 10.03 | 77 | 3.03 | |
| Laemonema laureysi | 7.03 | 167 | 2.13 | |
| Pterothrissus belloci | 4.89 | 34 | 1.48 | |
| Malacocephalus occidentalis | 3.90 | 43 | 1.18 | |
| COBIIDAE | 3.34 | 3776 | 1.01 | |
| UNIDENTIFIED FISH | 2.94 | 15 | 0.89 | |
| Eumunida squamifera * | 2.79 | 433 | 0.84 | |
| Nezumia sp. | 2.38 | 56 | 0.72 | |
| Pontinus accraensis | 2.16 | 21 | 0.65 | |
| Illex coindetii | 2.10 | 21 | 0.64 | |
| Chascancopsetta lugubris | 2.01 | 77 | 0.61 | |
| Gadella maraldi | 1.95 | 84 | 0.59 | |
| Parapenaeus longirostris, male | 1.67 | 251 | 0.51 | 8000 |
| Lestrolepis intermedia | 1.54 | 64 | 0.47 | |
| Bombrops greyi | 1.26 | 28 | 0.38 | |
| Dibranchus sp. | 0.84 | 99 | 0.25 | |
| Aricomma bondi | 0.77 | 21 | 0.23 | |
| Synagrops sp. | 0.62 | 34 | 0.19 | |
| Solenocera africana | 0.56 | 146 | 0.17 | |
| Bathyleptoris sp. | 0.49 | 6 | 0.15 | |
| Peristedion cataphractum | 0.49 | 84 | 0.15 | |
| Chaunax pictus | 0.28 | 21 | 0.08 | |
| Lophodes kempi | 0.21 | 6 | 0.06 | |
| FORTUNIDAE | 0.06 | 6 | 0.02 | |
| Unidentified fish | 0.06 | 6 | 0.02 | |
| Total | 330.60 | | 99.99 | |

PROJECT STATION:3789
 DATE:22/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 639
 start stop duration Long E 1125
 TIME :21:56:18 22:28:50 33 (min) Purpose code: 3
 LOG :9601.61 9603.17 1.54 Area code : 3
 FDEPTH: 711 715 GearCond.code:
 BDEPTH: 711 715 Validity code:
 Towing dir: 130° Wire out:1700 m Speed: 29 kn*10
 Sorted: 49 Kg Total catch: 105.96 CATCH/HOUR: 192.65

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus atlanticus | 46.58 | 676 | 24.18 | |
| Deania calcea | 22.55 | 16 | 11.71 | |
| Lamprogrammus exotus | 16.91 | 44 | 8.78 | |
| L O B S T E R S | 14.13 | 1015 | 7.33 | |
| Nezumia micronychodon | 13.85 | 300 | 7.19 | |
| Yarrella blackfordi | 11.67 | 16 | 6.06 | |
| Bathygadus macrops | 8.84 | 27 | 4.59 | |
| Nematocarcinus africanus | 8.02 | 1445 | 4.16 | |
| Scymnodon obscurus | 5.71 | 2 | 2.96 | |
| Merluccius pollii | 5.64 | 9 | 2.93 | |
| Halosaurus ovenii | 5.18 | 76 | 2.69 | |
| Trachyrincus scabrus | 4.25 | 27 | 2.21 | |
| Trichiurus lepturus | 3.93 | 5 | 2.04 | |
| Stomias boa boa | 3.65 | 120 | 1.89 | |
| Aristeus varidens, female | 3.05 | 115 | 1.58 | 8005 |
| Synaphobranchus kaupii | 3.05 | 71 | 1.58 | |
| Gadella imberbis | 2.89 | 147 | 1.50 | |
| Chaceon maritae, male | 1.42 | 4 | 0.74 | |
| Raja confundens | 1.15 | 16 | 0.60 | |
| Triplophos heningi | 1.15 | 169 | 0.60 | |
| OMMASTREPHIDAE | 1.09 | 5 | 0.57 | |
| Conger conger | 1.04 | 5 | 0.54 | |
| Xenodermichthys copei | 1.04 | 27 | 0.54 | |
| Etmopterus pusillus | 0.91 | 4 | 0.47 | |
| Lophodes kempi | 0.82 | 5 | 0.43 | |
| Bathylagus glacialis | 0.65 | 60 | 0.34 | |
| Isistius brasiliensis | 0.55 | 2 | 0.29 | |
| MYCTOPHIDAE | 0.55 | 551 | 0.29 | |
| Chaceon maritae, female | 0.47 | 2 | 0.24 | |
| GALATHEIDAE * | 0.38 | 202 | 0.20 | |
| Dicrolene intronigra | 0.33 | 60 | 0.17 | |
| Talismania sp. | 0.22 | 5 | 0.11 | |
| Etmopterus pollii | 0.18 | 4 | 0.09 | |
| Aristeus varidens, male | 0.16 | 22 | 0.08 | 8004 |
| PARALEPIDIDAE | 0.16 | 5 | 0.08 | |
| Heterocarpus grimaldii | 0.16 | 5 | 0.08 | |
| Plesionenaeus edwardsianus | 0.16 | 16 | 0.08 | |
| Dibranchus atlanticus | 0.16 | 16 | 0.08 | |
| Total | 192.65 | | 100.00 | |

PROJECT STATION:3788
 DATE:22/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 637
 start stop duration Long E 1127
 TIME :19:48:33 20:21:11 33 (min) Purpose code: 3
 LOG :9594.56 9596.15 1.56 Area code : 3
 FDEPTH: 654 655 GearCond.code:
 BDEPTH: 654 655 Validity code:
 Towing dir: 280° Wire out:1600 m Speed: 30 kn*10
 Sorted: 55 Kg Total catch: 104.40 CATCH/HOUR: 189.82

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Hoplostethus cadonati | 30.55 | 949 | 16.09 | |
| Nezumia sp. | 26.40 | 596 | 13.91 | |
| Yarrella blackfordi | 26.04 | 502 | 13.72 | |
| Lamprogrammus exotus | 16.51 | 29 | 8.70 | |
| Stereomastis sp. | 12.87 | 720 | 6.78 | |
| Nematocarcinus africanus | 8.73 | 1567 | 4.60 | |
| Merluccius pollii | 8.73 | 15 | 4.60 | |
| Glyphus marsupialis | 8.07 | 3407 | 4.25 | |
| Aristeus varidens, female | 5.82 | 204 | 3.07 | 8003 |
| Triplophos heningi | 5.67 | 793 | 2.99 | |
| Nephropsis atlantica | 5.09 | 25 | 2.68 | |
| Bathygadus macrops | 4.91 | 15 | 2.59 | |
| Dicrolene intronigra | 4.00 | 313 | 2.11 | |
| Lophodes kempi | 3.56 | 7 | 1.88 | |
| Xenodermichthys copei | 3.35 | 113 | 1.76 | |
| S H R I M P S | 3.27 | 655 | 1.72 | |
| Halosaurus ovenii | 2.87 | 44 | 1.51 | |
| Aristeus varidens, male | 2.29 | 142 | 1.21 | 8002 |
| Bathyracconger vicinus | 1.96 | 25 | 1.03 | |
| Melanostomias sp. | 1.53 | 44 | 0.81 | |
| Chaceon maritae, female | 1.20 | 4 | 0.63 | |
| Deania calcea | 1.09 | 7 | 0.57 | |
| Synaphobranchus kaupii | 1.09 | 25 | 0.57 | |
| Chaceon maritae, male | 0.95 | 2 | 0.50 | |
| B I V A L V E S | 0.91 | 4 | 0.48 | |
| Dibranchus sp. | 0.58 | 33 | 0.31 | |
| Etmopterus pollii | 0.36 | 4 | 0.19 | |
| Leptoderma sp. | 0.25 | 22 | 0.13 | |
| Bathyraya sp. | 0.22 | 4 | 0.12 | |
| CARISTIIDAE | 0.22 | 4 | 0.12 | |
| Alepocephalus sp. | 0.15 | 7 | 0.08 | |
| Peristedion cataphractum | 0.15 | 18 | 0.08 | |
| Eumunida squamifera * | 0.11 | 18 | 0.06 | |
| Chascancopsetta lugubris | 0.11 | 4 | 0.06 | |
| MYCTOPHIDAE | 0.11 | 51 | 0.06 | |
| Cataetx laticeps | 0.07 | 11 | 0.04 | |
| Cryptopsaras couesii | 0.04 | 15 | 0.02 | |
| Total | 189.83 | | 100.03 | |

PROJECT STATION:3790
 DATE:23/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 616
 start stop duration Long E 1116
 TIME :03:40:39 04:11:25 31 (min) Purpose code: 3
 LOG :9642.68 9644.15 1.47 Area code : 3
 FDEPTH: 740 736 GearCond.code:
 BDEPTH: 740 736 Validity code:
 Towing dir: 175° Wire out:1750 m Speed: 30 kn*10
 Sorted: 69 Kg Total catch: 264.79 CATCH/HOUR: 512.50

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|---------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| HOLCOUTURIDAE | 455.46 | 105 | 88.87 | |
| Deania calcea | 11.03 | 29 | 2.35 | |
| Nezumia sp. | 7.26 | 64 | 1.42 | |
| Unidentified fish | 4.84 | 2 | 0.94 | |
| MACROURIDAE | 4.80 | 15 | 0.94 | |
| Stereomastis sp. | 4.45 | 246 | 0.87 | |
| Etmopterus pusillus | 3.67 | 14 | 0.76 | |
| Bathyracconger vicinus | 2.57 | 4 | 0.50 | |
| Raja sp. | 2.50 | 12 | 0.49 | |
| Bathygadus macrops | 2.11 | 14 | 0.41 | |
| Leptoderma sp. | 1.97 | 19 | 0.38 | |
| Synaphobranchus kaupii | 1.80 | 6 | 0.35 | |
| Lamprogrammus exotus | 1.51 | 4 | 0.29 | |
| Lophodes kempi | 1.37 | 4 | 0.27 | |
| Shrimps, small, non comm. | 0.95 | 168 | 0.19 | |
| Aristeus varidens, female | 0.87 | 41 | 0.17 | 8010 |
| Melanostomias sp. | 0.81 | 17 | 0.16 | |
| Glyphus marsupialis | 0.77 | 23 | 0.15 | |
| Xenodermichthys copei | 0.64 | 31 | 0.12 | |
| Halosaurus ovenii | 0.56 | 15 | 0.11 | |
| Dicrolene intronigra | 0.54 | 23 | 0.11 | |
| Stomias boa boa | 0.45 | 19 | 0.09 | |
| Hoplostethus atlanticus | 0.37 | 2 | 0.07 | |
| Bathygadus sp. | 0.23 | 2 | 0.04 | |
| Dibranchus sp. | 0.17 | 4 | 0.03 | |
| L O B S T E R S | 0.15 | 93 | 0.03 | |
| Conostoma sp. | 0.10 | 4 | 0.02 | |
| Benthodesmus sp. | 0.10 | 2 | 0.02 | |
| Bathyleptoris sp. | 0.08 | 14 | 0.02 | |
| Aristeus varidens, male | 0.08 | 12 | 0.02 | 8009 |
| Triplophos heningi | 0.06 | 8 | 0.01 | |
| Cataetx laticeps | 0.02 | 2 | | |
| Total | 512.49 | | 100.00 | |

PROJECT STATION:3791
 DATE:23/ 4/05 GEAR TYPE: BT No:15 POSITION:Lat S 615 Long E 1125
 start stop duration
 TIME :06:21:30 06:52:24 31 (min) Purpose code: 3
 LOG :9656.45 9657.92 1.47 Area code : 3
 FDEPTH: 382 378 GearCond.code:
 BDEPTH: 382 378 Validity code:
 Towing dir: 360ø Wire out: 950 m Speed: 30 kn*10

Sorted: 201 Kg Total catch: 290.57 CATCH/HOUR: 562.39

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Merluccius polli | 120.54 | 546 | 21.43 | 8006 |
| Carcharhinus signatus | 70.57 | 4 | 12.55 | |
| Nematocarcinus africanus | 46.22 | 13291 | 8.22 | |
| Trichiurus lepturus juv. | 44.48 | 66 | 7.91 | |
| Hypoclydonia bella ? | 37.97 | 656 | 6.75 | |
| SCORPAENIDAE | 35.07 | 1103 | 6.24 | |
| Pterothrissus belloci | 34.26 | 285 | 6.09 | |
| Torpedo nobiliana | 27.95 | 8 | 4.97 | |
| Laemonea laureysi | 24.74 | 575 | 4.40 | |
| Malacocephalus occidentalis | 24.27 | 168 | 4.32 | |
| Hymenocephalus italicus | 22.41 | 2630 | 3.98 | |
| Parapanaeus longirostris, fem. | 19.57 | 2768 | 3.48 | 8008 |
| Gadella maraldi | 9.06 | 337 | 1.61 | |
| Benthodesmus sp. | 7.08 | 261 | 1.26 | |
| Epigonus telescopus | 3.89 | 75 | 0.69 | |
| Glyptus marsupialis | 3.83 | 592 | 0.68 | |
| Todaropsis eblanae | 3.83 | 23 | 0.68 | |
| MYCTOPHIDAE | 2.79 | 1875 | 0.50 | |
| Chamaea pictus | 2.61 | 70 | 0.46 | |
| Solenocera africana | 2.55 | 319 | 0.45 | |
| Nezumia sp. | 2.32 | 81 | 0.41 | |
| Raja confundens | 1.97 | 17 | 0.35 | |
| Chascanopsetta lugubris | 1.97 | 29 | 0.35 | |
| Halosaurus oventi | 1.97 | 81 | 0.35 | |
| Stereomastis sp. | 1.39 | 93 | 0.25 | |
| Parasudis sp. | 1.39 | 23 | 0.25 | |
| Bathyraccongrus sp. | 1.16 | 17 | 0.21 | |
| Lophocodes kempfi | 0.87 | 6 | 0.15 | |
| L O B S T E R S | 0.81 | 476 | 0.14 | |
| Dibranchius sp. | 0.75 | 81 | 0.13 | |
| Illex coindetii | 0.75 | 6 | 0.13 | |
| Hoplostethus cadenati | 0.58 | 6 | 0.10 | |
| Nemichthys sp. | 0.58 | 6 | 0.10 | |
| Chlorophthalmus atlanticus | 0.58 | 6 | 0.10 | |
| Ariomma bondi | 0.52 | 6 | 0.09 | |
| PARALEPIDIDAE | 0.46 | 17 | 0.08 | |
| Parapanaeus longirostris, male | 0.41 | 81 | 0.07 | 8007 |
| Diretmus argenteus | 0.12 | 6 | 0.02 | |
| Nephropsis atlantica | 0.06 | 6 | 0.01 | |
| Total | 562.35 | | 99.96 | |

PROJECT STATION:3792
 DATE:23/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 612 Long E 1138
 start stop duration
 TIME :09:39:28 10:10:03 31 (min) Purpose code: 3
 LOG :9674.38 9675.86 1.47 Area code : 3
 FDEPTH: 122 121 GearCond.code:
 BDEPTH: 122 121 Validity code:
 Towing dir: 10ø Wire out: 375 m Speed: 30 kn*10

Sorted: 382 Kg Total catch: 381.93 CATCH/HOUR: 739.22

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex congoensis | 316.88 | 3159 | 42.87 | |
| Spicara alta | 179.85 | 2460 | 24.33 | |
| Dentex angolensis | 146.09 | 643 | 19.76 | |
| Trachurus trecae | 36.15 | 337 | 4.89 | 8011 |
| Chelidonichthys capensis | 20.52 | 225 | 2.78 | |
| Brotula barbata | 10.28 | 15 | 1.39 | |
| Ariomma bondi | 8.85 | 124 | 1.20 | |
| Illex coindetii | 5.26 | 238 | 0.71 | |
| G A S T R O P O D S | 3.27 | 563 | 0.44 | |
| Branchiostegus semifasciatus | 1.86 | 4 | 0.25 | |
| Raja miraletus | 1.59 | 6 | 0.22 | |
| Zeus faber | 1.51 | 4 | 0.20 | |
| Torpedo torpedo | 1.22 | 2 | 0.17 | |
| Dentex gibbosus | 1.05 | 2 | 0.14 | |
| Citharus linguatula | 1.05 | 43 | 0.14 | |
| Pristigaster cataphractum | 1.05 | 21 | 0.14 | |
| Pagellus bellottii | 0.87 | 8 | 0.12 | |
| Chaetodon hoefleri | 0.85 | 6 | 0.11 | |
| Sepia orbignyana | 0.54 | 8 | 0.07 | |
| Bembrops heterurus | 0.25 | 4 | 0.03 | |
| Uranoscopus polli | 0.15 | 2 | 0.02 | |
| Arnoglossus imperialis | 0.10 | 21 | 0.01 | |
| Total | 739.24 | | 99.99 | |

PROJECT STATION:3793
 DATE:23/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 611 Long E 1144
 start stop duration
 TIME :11:29:25 11:59:10 30 (min) Purpose code: 3
 LOG :9684.32 9685.88 1.55 Area code : 3
 FDEPTH: 109 108 GearCond.code:
 BDEPTH: 109 108 Validity code:
 Towing dir: 350ø Wire out: 333 m Speed: 30 kn*10

Sorted: 105 Kg Total catch: 104.93 CATCH/HOUR: 209.86

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 136.60 | 884 | 65.09 | 8014 |
| Chelidonichthys capensis | 13.72 | 174 | 6.54 | |
| Epinephelus aeneus | 12.44 | 4 | 5.93 | |
| Dentex congoensis | 10.60 | 154 | 5.05 | |
| G A S T R O P O D S | 4.20 | 626 | 2.00 | |
| Octopus vulgaris | 3.86 | 6 | 2.00 | |
| Trachurus Trecae | 3.44 | 6 | 1.64 | 8013 |
| Torpedo torpedo | 3.44 | 6 | 1.64 | |
| Illex coindetii | 3.40 | 214 | 1.62 | |
| Sepia orbignyana | 3.30 | 14 | 1.57 | |
| Brotula barbata | 2.66 | 6 | 1.27 | |
| Spicara alta | 2.14 | 34 | 1.02 | |
| Zeus faber | 1.96 | 6 | 0.93 | |
| Trichiurus lepturus | 1.70 | 2 | 0.81 | |
| Citharus linguatula | 1.48 | 70 | 0.71 | |
| Pagellus bellottii | 1.22 | 12 | 0.58 | |
| Ariomma bondi | 1.08 | 14 | 0.51 | |
| Uranoscopus polli | 0.88 | 4 | 0.42 | |
| Chaetodon hoefleri | 0.82 | 6 | 0.39 | |
| Arnoglossus imperialis | 0.16 | 22 | 0.08 | |
| Total | 209.86 | | 100.00 | |

PROJECT STATION:3794
 DATE:23/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 609 Long E 1149
 start stop duration
 TIME :13:10:11 13:40:07 30 (min) Purpose code: 3
 LOG :9693.11 9694.67 1.55 Area code : 3
 FDEPTH: 91 92 GearCond.code:
 BDEPTH: 91 92 Validity code:
 Towing dir: 150ø Wire out: 303 m Speed: 30 kn*10

Sorted: 94 Kg Total catch: 93.73 CATCH/HOUR: 187.46

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 86.16 | 486 | 45.96 | 8015 |
| Dentex congoensis | 30.60 | 320 | 16.32 | |
| Lepidotrigla cadmani | 19.84 | 192 | 10.58 | |
| Raja miraletus | 14.74 | 30 | 7.86 | |
| Epinephelus aeneus | 10.64 | 4 | 5.68 | |
| Sepia orbignyana | 8.08 | 12 | 4.31 | |
| Trachurus trecae | 4.30 | 42 | 2.29 | 8016 |
| Zeus faber | 2.56 | 8 | 1.37 | |
| Trichiurus lepturus | 2.22 | 4 | 1.18 | |
| Citharus linguatula | 2.04 | 118 | 1.09 | |
| Dentex barnardi | 1.56 | 12 | 0.83 | |
| Chaetodon marcellae | 1.48 | 10 | 0.79 | |
| G A S T R O P O D S | 1.10 | 196 | 0.59 | |
| Illex coindetii | 0.82 | 32 | 0.44 | |
| Scorpaena senegalensis | 0.50 | 4 | 0.27 | |
| Uranoscopus polli | 0.38 | 2 | 0.20 | |
| Arnoglossus imperialis | 0.28 | 36 | 0.15 | |
| Saurida brasiliensis | 0.06 | 22 | 0.03 | |
| Boops boops | 0.06 | 2 | 0.03 | |
| Scorpaena stephanica | 0.04 | 2 | 0.02 | |
| Total | 187.46 | | 99.99 | |

PROJECT STATION:3795
 DATE:23/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 608 Long E 1154
 start stop duration
 TIME :14:58:54 15:28:40 30 (min) Purpose code: 3
 LOG :9702.58 9704.13 1.55 Area code : 3
 FDEPTH: 76 76 GearCond.code:
 BDEPTH: 76 76 Validity code:
 Towing dir: 350ø Wire out: 266 m Speed: 30 kn*10

Sorted: 219 Kg Total catch: 219.47 CATCH/HOUR: 438.94

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Selene dorsalis | 262.20 | 1610 | 59.73 | |
| Dentex congoensis | 98.64 | 558 | 22.47 | 8017 |
| Dentex angolensis | 26.56 | 310 | 6.05 | |
| Pagellus bellottii | 10.68 | 114 | 2.43 | 8018 |
| Raja miraletus | 7.06 | 10 | 1.61 | |
| Epinephelus aeneus | 6.98 | 2 | 1.59 | |
| Sepia orbignyana | 5.12 | 4 | 1.17 | |
| Trichiurus lepturus | 5.08 | 14 | 1.16 | |
| Brotula barbata | 4.54 | 10 | 1.03 | |
| Sphyraena squarancha | 2.36 | 2 | 0.54 | |
| Trachurus trecae | 2.28 | 36 | 0.52 | |
| Chloroscombus chrysurus | 1.78 | 4 | 0.41 | |
| Chelidonichthys capensis | 1.06 | 10 | 0.24 | |
| Citharus linguatula | 0.98 | 46 | 0.22 | |
| Illex coindetii | 0.78 | 146 | 0.18 | |
| Arnoglossus imperialis | 0.52 | 18 | 0.12 | |
| Brachydeuterus auritus | 0.48 | 4 | 0.11 | |
| Pseudupeneus prayensis | 0.48 | 6 | 0.11 | |
| Fistularia petimba | 0.48 | 2 | 0.11 | |
| Chaetodon hoefleri | 0.46 | 4 | 0.10 | |
| Grammoplites gruvelli | 0.32 | 8 | 0.07 | |
| Saurida brasiliensis | 0.04 | 12 | 0.01 | |
| Scorpaena stephanica | 0.04 | 2 | 0.01 | |
| GOBIIDAE | 0.02 | 2 | | |
| Total | 438.94 | | 99.99 | |

PROJECT STATION:3796
 DATE:23/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 607 Long E 1158
 start stop duration
 TIME :15:00:10 15:01:10 13 (min) Purpose code: 3
 LOG :9710.52 9711.26 0.73 Area code : 3
 FDEPTH: 68 67 GearCond.code: 9
 BDEPTH: 68 67 Validity code: 1
 Towing dir: 175ø Wire out: 239 m Speed: 30 kn*10

Sorted: 46 Kg Total catch: 45.85 CATCH/HOUR: 211.62

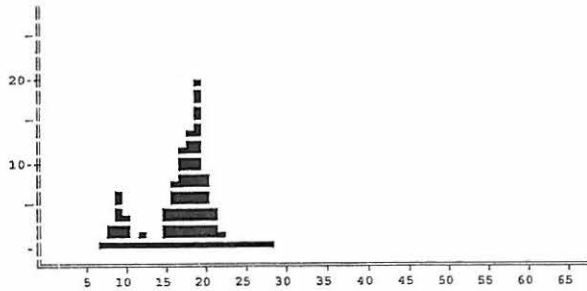
| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|-----------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Dentex angolensis | 57.14 | 309 | 27.00 | 8019 |
| Brotula barbata | 25.02 | 37 | 11.82 | |
| Trichiurus lepturus | 22.06 | 60 | 10.42 | |
| Epinephelus aeneus | 21.88 | 9 | 10.34 | |
| Umbriina canariensis | 18.92 | 120 | 8.94 | 8020 |
| Pagellus bellottii | 13.06 | 88 | 6.17 | 8021 |
| Brachydeuterus auritus | 11.91 | 129 | 5.63 | |
| Mustelus mustelus | 8.31 | 5 | 3.93 | |
| Raja miraletus | 5.17 | 55 | 2.44 | |
| Uranoscopus albesca | 3.88 | 23 | 1.83 | |
| Dentex congoensis | 3.55 | 51 | 1.68 | |
| Sphyraena squarancha | 2.68 | 9 | 1.27 | |
| Trigla lyra | 2.49 | 18 | 1.18 | |
| Allotcauthis africana | 1.98 | 1015 | 0.94 | |
| Saurida brasiliensis | 1.89 | 420 | 0.89 | |
| Bembrops greyi | 1.60 | 42 | 0.85 | |
| P J V A L W E S | 1.62 | 65 | 0.77 | |
| Sardinella maderensis | 1.29 | 5 | 0.61 | |
| Selene dorsalis | 1.25 | 9 | 0.59 | |
| Chelidonichthys capensis | 1.25 | 5 | 0.59 | |
| Sepia officinalis hierredda | 1.11 | 14 | 0.52 | |
| Citharus linguatula | 0.92 | 74 | 0.43 | |
| Rumunida squamifera | 0.74 | 5 | 0.35 | |
| Parapanaeus longirostris | 0.46 | 51 | 0.22 | |
| Dicologlossa cuneata | 0.46 | 9 | 0.22 | |
| PORTUNIDAE | 0.32 | 69 | 0.15 | |
| Trachurus trecae | 0.28 | 5 | 0.13 | |
| G A S T R O P O D S | 0.09 | 14 | 0.04 | |
| PAGURIDAE | 0.09 | 9 | 0.04 | |
| Total | 211.62 | | 99.99 | |

PROJECT STATION:3797
 DATE:23/ 4/05 GEAR TYPE: BT No:17 POSITION:Lat S 605
 start stop duration Long E 1206
 TIME :17:47:22 18:18:55 32 (min) Purpose code: 3
 LOG :9720.57 9722.25 1.66 Area code : 3
 FDEPTH: 41 31 GearCond.code:
 BDEPTH: 41 31 Validity code:
 Towing dir: 90ø Wire cut: 160 m Speed: 30 kn*10

Sorted: 97 Kg Total catch: 96.60 CATCH/HOUR: 181.13

| SPECIES | CATCH/HOUR | | % OF TOT. C | SAMP |
|--------------------------|------------|---------|-------------|------|
| | weight | numbers | | |
| Calooides decadactylus | 57.49 | 274 | 31.74 | |
| Pagellus bellottii | 20.40 | 75 | 11.26 | 8023 |
| Trichiurus lepturus | 15.41 | 13 | 8.51 | |
| Dasyatis marmorata | 13.16 | 6 | 7.27 | |
| Pseudotolithus typus | 12.38 | 8 | 6.83 | |
| Mustelus mustelus | 12.19 | 8 | 6.73 | |
| Raja miraletus | 6.43 | 21 | 3.55 | |
| Ubrina canariensis | 6.23 | 24 | 3.44 | 8022 |
| Brachydeuterus auritus | 4.41 | 476 | 2.43 | |
| Pseudascys incisus | 3.06 | 15 | 1.69 | |
| Zeus faber | 2.68 | 6 | 1.48 | |
| Sepia orbignyana | 2.55 | 11 | 1.41 | |
| Rhinobatos sp. | 2.48 | 2 | 1.37 | |
| Trichiurus lepturus juv. | 2.14 | 178 | 1.18 | |
| Cyclopterus ferox | 2.04 | 4 | 1.13 | |
| Cyclopterus sp. | 1.80 | 6 | 0.99 | |
| Pagrus caeruleostictus | 1.69 | 8 | 0.93 | |
| Uranoscopus polli | 1.65 | 11 | 0.91 | |
| Pseudascys jubelini | 1.58 | 2 | 0.87 | |
| Pseudupeneus prayensis | 1.52 | 9 | 0.84 | |
| Citharus linguatula | 1.37 | 21 | 0.76 | |
| Trachinus radiatus | 1.09 | 28 | 0.60 | |
| GRAMMISTIDAE | 1.07 | 47 | 0.59 | |
| Trachinocephalus mycops | 1.07 | 28 | 0.59 | |
| Raja clavata | 0.88 | 2 | 0.49 | |
| Dentex angolensis | 0.77 | 4 | 0.43 | |
| S H R I M P S | 0.71 | 428 | 0.39 | |
| SCIPITO2 | 0.71 | 11 | 0.39 | |
| Scorpaena stephanica | 0.53 | 6 | 0.29 | |
| Calappa sp. | 0.51 | 6 | 0.28 | |
| Miracorvina angolensis | 0.30 | 2 | 0.17 | |
| Bothus pedas africanus | 0.26 | 6 | 0.14 | |
| Ophidion sp. | 0.26 | 53 | 0.14 | |
| Scyllarides sp. | 0.11 | 26 | 0.06 | |
| C R A B S | 0.11 | 30 | 0.06 | |
| Penaeus notialis, female | 0.11 | 2 | 0.06 | |
| Total | 181.15 | | 100.00 | |

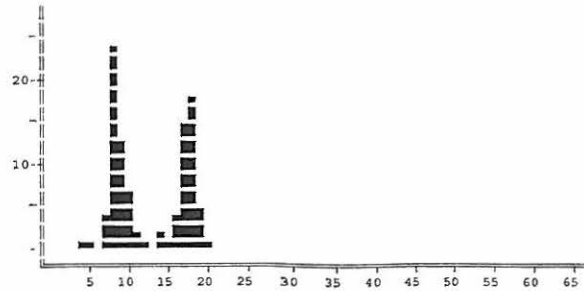
ANNEX II. Length distribution of main species.



Trachurus capensis

Pooled sample (weighted by catch).

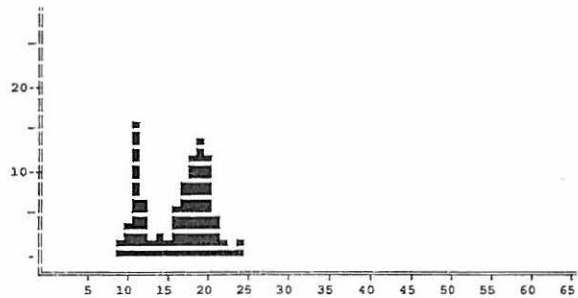
MEAN LENGTH = 17.62cm N= 926
 NUMBER OF SUBSAMPLES : 11
 SAMPLES FOUND BETWEEN ST. NO.3578 AND 3600.
 SAMPLES SEARCHED BETWEEN ST. NO.3578 AND 3605 .



Trachurus capensis, juvenile

Pooled sample (weighted by catch).

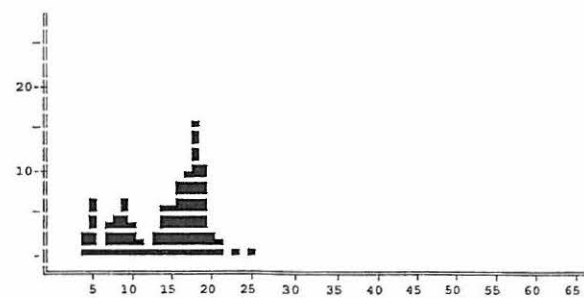
MEAN LENGTH = 13.22cm N= 1233
 NUMBER OF SUBSAMPLES : 10
 SAMPLES FOUND BETWEEN ST. NO.3579 AND 3603.
 SAMPLES SEARCHED BETWEEN ST. NO.3578 AND 3605 .



Dentex macrophthalmus

Pooled sample (weighted by catch).

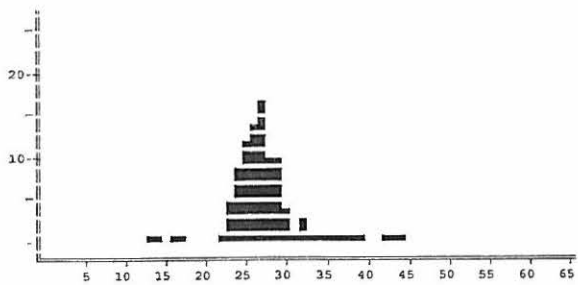
MEAN LENGTH = 16.78cm N= 422
 NUMBER OF SUBSAMPLES : 8
 SAMPLES FOUND BETWEEN ST. NO.3584 AND 3600.
 SAMPLES SEARCHED BETWEEN ST. NO.3578 AND 3605 .



Dentex macrophthalmus Juv.

Pooled sample (weighted by catch).

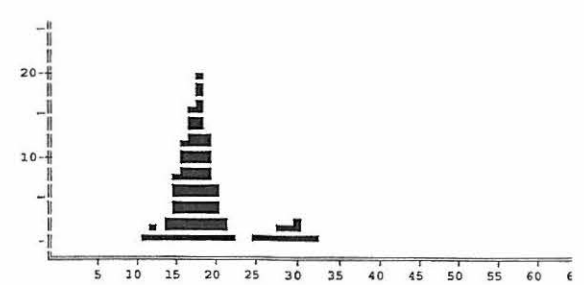
MEAN LENGTH = 14.56cm N= 492
 NUMBER OF SUBSAMPLES : 7
 SAMPLES FOUND BETWEEN ST. NO.3580 AND 3605.
 SAMPLES SEARCHED BETWEEN ST. NO.3578 AND 3605 .



Merluccius capensis

Pooled sample (weighted by catch).

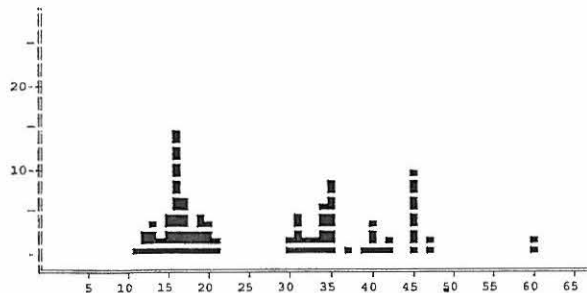
MEAN LENGTH = 28.00cm N= 323
 NUMBER OF SUBSAMPLES : 14
 SAMPLES FOUND BETWEEN ST. NO.3580 AND 3599.
 SAMPLES SEARCHED BETWEEN ST. NO.3578 AND 3605 .



Trachurus trecae

Pooled sample (weighted by catch)

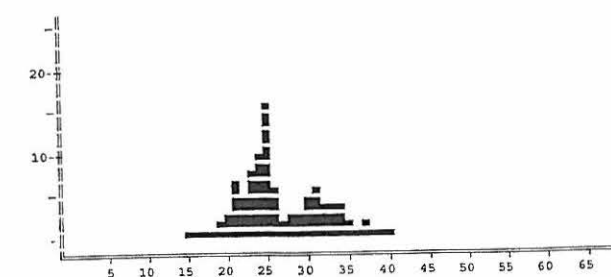
MEAN LENGTH = 19.23cm N= 1169
 NUMBER OF SUBSAMPLES : 19
 SAMPLES FOUND BETWEEN ST. NO.3607 AND 3686.
 SAMPLES SEARCHED BETWEEN ST. NO.3606 AND 3694 .



Atractoscion aequidens

Pooled sample (weighted by catch).

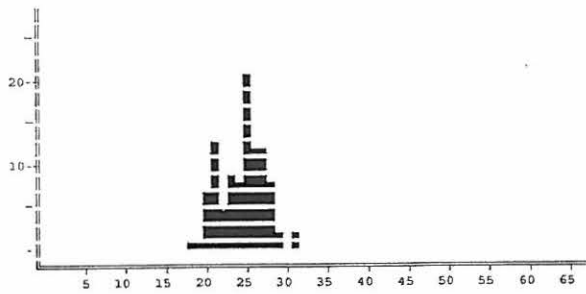
MEAN LENGTH = 28.04cm N= 120
 NUMBER OF SUBSAMPLES : 5
 SAMPLES FOUND BETWEEN ST. NO.3578 AND 3605.
 SAMPLES SEARCHED BETWEEN ST. NO.3578 AND 3605 .



Merluccius polli

Pooled sample (weighted by catch).

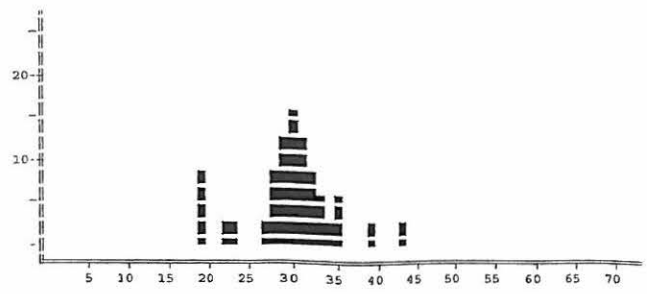
MEAN LENGTH = 27.18cm N= 825
 NUMBER OF SUBSAMPLES : 26
 SAMPLES FOUND BETWEEN ST. NO.3608 AND 3693.
 SAMPLES SEARCHED BETWEEN ST. NO.3606 AND 3694 .



Dentex macrophthalmus

Pooled sample (weighted by catch).

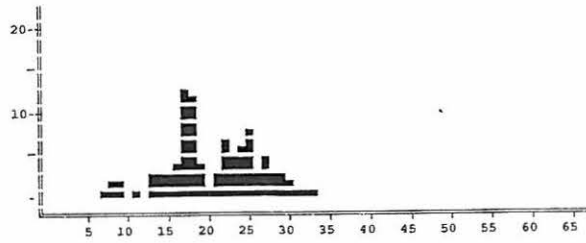
MEAN LENGTH = 24.84cm N= 462
 NUMBER OF SUBSAMPLES : 12
 SAMPLES FOUND BETWEEN ST. NO.3607 AND 3692.
 SAMPLES SEARCHED BETWEEN ST. NO.3606 AND 3694 .



Dentex macrophthalmus

Pooled sample (weighted by catch).

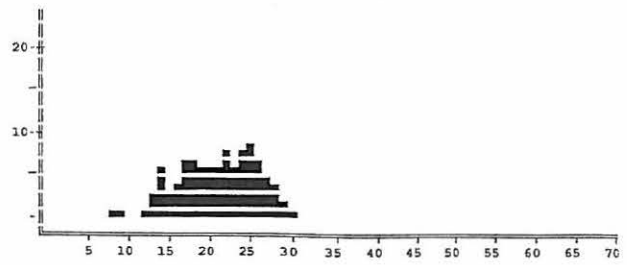
MEAN LENGTH = 30.22cm N= 32
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FOUND BETWEEN ST. NO.3714 AND 3730.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .



Dentex angolensis

Pooled sample (weighted by catch).

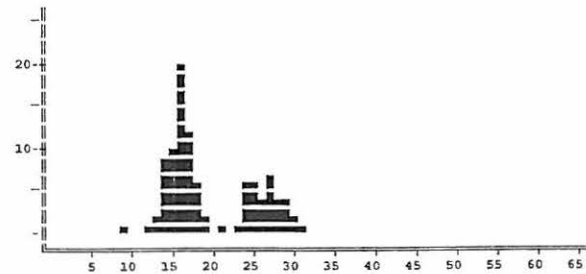
MEAN LENGTH = 21.15cm N= 723
 NUMBER OF SUBSAMPLES : 21
 SAMPLES FOUND BETWEEN ST. NO.3613 AND 3692.
 SAMPLES SEARCHED BETWEEN ST. NO.3606 AND 3694 .



Dentex angolensis

Pooled sample (weighted by catch).

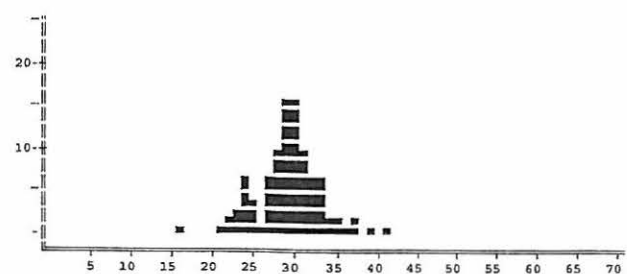
MEAN LENGTH = 21.57cm N= 1965
 NUMBER OF SUBSAMPLES : 41
 SAMPLES FOUND BETWEEN ST. NO.3695 AND 3796.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .



Dentex barnardi

Pooled sample (weighted by catch).

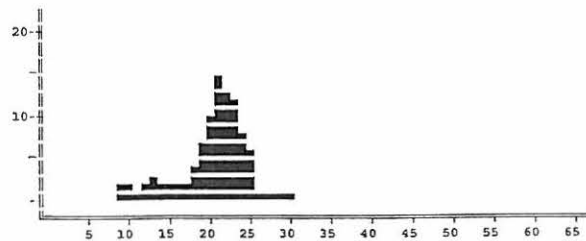
MEAN LENGTH = 20.25cm N= 399
 NUMBER OF SUBSAMPLES : 11
 SAMPLES FOUND BETWEEN ST. NO.3611 AND 3688.
 SAMPLES SEARCHED BETWEEN ST. NO.3606 AND 3694 .



Dentex barnardi

Pooled sample (weighted by catch).

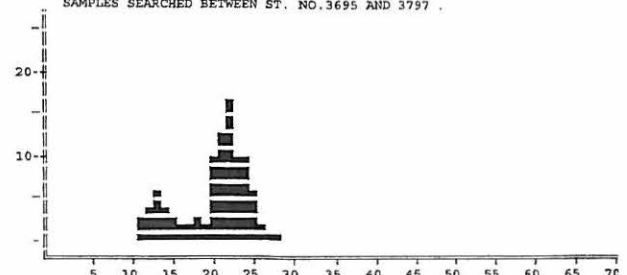
MEAN LENGTH = 29.54cm N= 104
 NUMBER OF SUBSAMPLES : 4
 SAMPLES FOUND BETWEEN ST. NO.3718 AND 3781.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .



Pagellus bellottii

Pooled sample (weighted by catch).

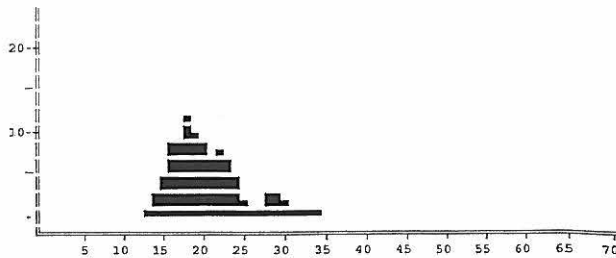
MEAN LENGTH = 20.98cm N= 994
 NUMBER OF SUBSAMPLES : 24
 SAMPLES FOUND BETWEEN ST. NO.3606 AND 3689.
 SAMPLES SEARCHED BETWEEN ST. NO.3606 AND 3694 .



Pagellus bellottii

Pooled sample (weighted by catch).

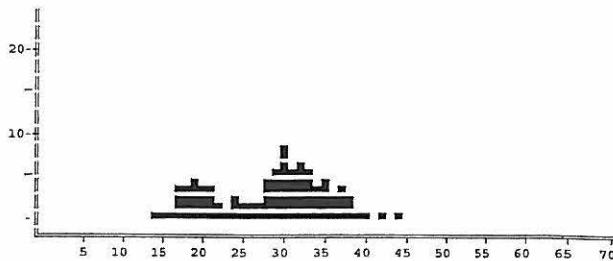
MEAN LENGTH = 20.58cm N= 1123
 NUMBER OF SUBSAMPLES : 22
 SAMPLES FOUND BETWEEN ST. NO.3706 AND 3797.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .



Trachurus trecae

Pooled sample (weighted by catch).

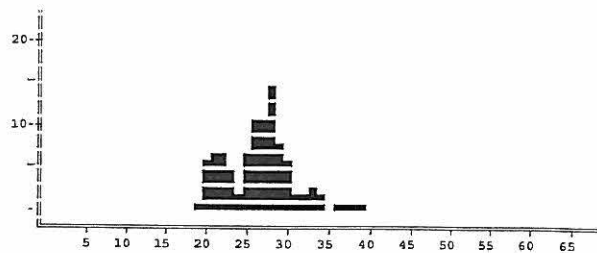
MEAN LENGTH = 20.90cm N= 1017
 NUMBER OF SUBSAMPLES : 17
 SAMPLES FOUND BETWEEN ST. NO.3725 AND 3794.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .



Merluccius polli

Pooled sample (weighted by catch).

MEAN LENGTH = 28.60cm N= 785
 NUMBER OF SUBSAMPLES : 25
 SAMPLES FOUND BETWEEN ST. NO.3695 AND 3791.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .



Umbrina canariensis

Pooled sample (weighted by catch).

MEAN LENGTH = 26.97cm N= 482
 NUMBER OF SUBSAMPLES : 13
 SAMPLES FOUND BETWEEN ST. NO.3703 AND 3797.
 SAMPLES SEARCHED BETWEEN ST. NO.3695 AND 3797 .

ANNEX III. Swept area estimates.

SWEPT AREA ANALYSIS FROM STATION 3578 TO STATION 3605

A. Cunene - Tombua. Shelf

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | | % incidence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | | |
|------------------------------|----------------------------------|----|----|-----|-----|------|-------------|------------------------------|---------------------------------------------------------|---------|----------|----------|--|
| | Lower limits, Kg/nm | | | | | | | | 20- 50m | 50-100m | 100-200m | 200-200m | |
| | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | | | |
| Trachurus capensis | 1 | | 2 | | 5 | 2 | 53 | 46.94 | 12.00 | 19.81 | 100.13 | | |
| Trachurus capensis, juvenile | 2 | 2 | 2 | 2 | 2 | 1 | 58 | 30.45 | 6.90 | 8.70 | 69.28 | | |
| JELLYFISH | | | | | | 1 | 5 | 9.39 | 29.73 | | | | |
| Dentex macrophthalmus | | 2 | 2 | 3 | | | 37 | 3.74 | | 4.30 | 6.46 | | |
| Dentex macrophthalmus Juv. | 2 | | 3 | | 1 | | 32 | 3.04 | 0.01 | 1.62 | 6.86 | | |
| Merluccius capensis | 1 | 3 | 5 | 1 | | | 53 | 2.81 | | 2.65 | 5.36 | | |
| Atractoscion aequidens | 5 | 1 | 1 | 3 | | | 53 | 2.30 | 0.51 | 2.67 | 3.51 | | |
| Synagrops microlepis | 2 | | 3 | 1 | | | 32 | 1.81 | | 0.02 | 4.90 | | |
| Sea cucumbers | | | 1 | 2 | | | 16 | 1.39 | 4.41 | | | | |
| Pterothrissus bellocci | 5 | 2 | 3 | | | | 53 | 1.25 | 0.03 | 0.40 | 3.01 | | |
| Sardinops ocellatus | 1 | 3 | 3 | | | | 37 | 1.23 | 0.55 | 0.89 | 2.12 | | |
| Argyrosomus hololepidotus | | | | 1 | | | 5 | 1.18 | 3.74 | | | | |
| Chlorophthalmus atlanticus | | | | 1 | | | 5 | 0.85 | | | 2.31 | | |
| Myliobatis aquila | 1 | 1 | 3 | | | | 26 | 0.67 | 0.69 | 1.04 | 0.33 | | |
| Raja miraletus | 5 | 1 | 1 | | | | 37 | 0.60 | 0.49 | 1.41 | | | |
| Todaropsis eblanae | 2 | 2 | 1 | | | | 26 | 0.55 | 0.40 | 1.06 | 0.23 | | |
| Trigla lyra | 4 | 1 | 1 | | | | 32 | 0.51 | 0.15 | 0.21 | 1.08 | | |
| Dicologoglossa cuneata | 6 | 1 | 1 | | | | 42 | 0.45 | 0.24 | 0.06 | 0.95 | | |
| Helicolenus dactylopterus | | | 1 | | | | 5 | 0.42 | | | 1.15 | | |
| Cynoglossus canariensis | | 3 | | | | | 16 | 0.30 | | 0.69 | 0.22 | | |
| B I V A L V E S | 3 | | 1 | | | | 21 | 0.30 | | 0.96 | | | |
| Arius parkii | 5 | | 1 | | | | 32 | 0.28 | 0.77 | 0.11 | | | |
| Illex coindetii | 3 | | 1 | | | | 21 | 0.27 | | 0.75 | 0.10 | | |
| Squalus megalops | 6 | 2 | | | | | 42 | 0.27 | 0.06 | 0.46 | 0.29 | | |
| J E L L Y F I S H | | | 1 | | | | 5 | 0.23 | 0.73 | | | | |
| Umbrina canariensis | 3 | 1 | | | | | 21 | 0.20 | 0.12 | 0.08 | 0.38 | | |
| Trichiurus lepturus | 2 | | 1 | | | | 16 | 0.19 | 0.55 | 0.05 | | | |
| Chelidonichthys gabonensis | | | 1 | | | | 5 | 0.18 | | 0.56 | | | |
| Gymnura micrura | | | 1 | | | | 5 | 0.18 | 0.56 | | | | |
| Dasyatis marmorata | 1 | 1 | | | | | 11 | 0.18 | 0.56 | | | | |
| Dasyatis centrooura | 1 | 1 | | | | | 11 | 0.17 | 0.15 | | 0.33 | | |
| G A S T R O P O D S | 4 | 1 | | | | | 26 | 0.16 | | 0.08 | 0.36 | | |
| Dentex angolensis | | 1 | | | | | 5 | 0.14 | | | 0.37 | | |
| Pagellus bellottii | 7 | 1 | | | | | 42 | 0.13 | 0.06 | 0.14 | 0.18 | | |
| Sepia orbignyana | 6 | 1 | | | | | 37 | 0.12 | 0.01 | 0.35 | 0.02 | | |
| Callorhynchus capensis | 4 | 1 | | | | | 26 | 0.12 | 0.18 | 0.13 | 0.05 | | |
| Zeus faber | 5 | | | | | | 26 | 0.11 | | 0.29 | 0.04 | | |
| Chelidonichthys capensis | 3 | 1 | | | | | 21 | 0.11 | | 0.23 | 0.10 | | |
| Raja alba | | 1 | | | | | 5 | 0.11 | 0.34 | | | | |
| Sardinella maderensis | 1 | 1 | | | | | 11 | 0.11 | 0.35 | | | | |
| Stromateus fiatola | 1 | 1 | | | | | 11 | 0.10 | 0.31 | | | | |
| Sepiella ornata | 1 | 1 | | | | | 11 | 0.10 | 0.27 | | 0.03 | | |
| Octopus vulgaris | 4 | 1 | | | | | 26 | 0.10 | 0.01 | 0.05 | 0.22 | | |
| Pomatopus saltatrix | 5 | | | | | | 26 | 0.10 | 0.31 | 0.01 | | | |
| Callinectes sp. | | 1 | | | | | | 0.09 | | | 0.24 | | |
| Trachurus trecae | | 1 | | | | | 5 | 0.08 | 0.26 | | | | |
| Engraulis encrasicolus | 4 | | | | | | 21 | 0.07 | 0.18 | 0.04 | | | |
| Lepidotrigla cadmani | 1 | | | | | | 5 | 0.05 | | | 0.14 | | |
| Mustelus mustelus | 2 | | | | | | 5 | 0.05 | 0.17 | | | | |
| Mustelus sp. | | 1 | | | | | 5 | 0.05 | 0.17 | | | | |
| Carcharhinus isodon | | 1 | | | | | 5 | 0.05 | | | 0.15 | | |
| Dasyatis sp. | | 1 | | | | | 5 | 0.05 | | 0.17 | | | |
| Parapenaeus longirostris | 1 | | | | | | 5 | | | | 0.01 | | |
| Other fish | | | | | | | | 0.42 | 0.49 | 0.31 | 0.45 | | |
| Sum all species | | | | | | | | 114.75 | 66.46 | 50.30 | 211.36 | | |
| Sum Snappers | | | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | | | |
| Sum Croakers | | | | | | | | 3.68 | 4.37 | 2.75 | 3.89 | | |
| Sum Seabreams | | | | | | | | 7.11 | 0.20 | 6.12 | 13.87 | | |
| Sum Sharks | | | | | | | | 0.61 | 0.68 | 0.61 | 0.58 | | |
| Sum Rays | | | | | | | | 2.00 | 2.90 | 2.66 | 0.66 | | |
| Sum Squids | | | | | | | | 1.20 | 0.75 | 2.22 | 0.70 | | |
| Sum | | | | | | | | | | | | | |

SWEPT AREA ANALYSIS FROM STATION 3578 TO STATION 3605

B. Cunene - Tombua. Slope

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | % inci- dence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | |
|--------------------------------|----------------------------------|----|----|-----|-----|------------------|------------------------------------|---------------------------------------------------------|----------|----------|----------|
| | Lower limits, Kg/nm | | | | | | | 200-300m | 300-400m | 400-500m | 500-500m |
| | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | |
| Scorpaena stephanica | | | | | 1 | | 50 | 20.40 | | 40.79 | |
| Chlorophthalmus atlanticus | | | 1 | 1 | | | 100 | 11.36 | 5.82 | 16.90 | |
| Merluccius capensis | 1 | | 1 | | | | 100 | 2.76 | 5.34 | 0.19 | |
| Helicolenus dactylopterus | | | 1 | | | | 50 | 2.48 | 4.95 | | |
| Hymenocephalus italicus | | | 1 | | | | 50 | 2.05 | | 4.09 | |
| Nezumia aequalis | | 1 | | | | | 50 | 0.91 | | 1.81 | |
| Pterothrissus bellocci | | 1 | | | | | | 0.59 | | 1.18 | |
| Hoplostethus cadenati | | | 1 | | | | | 0.52 | | 1.03 | |
| Bathynectes piperitus | 1 | | | | | | 50 | 0.42 | 0.84 | | |
| Trigla lyra | 1 | | | | | | | 0.37 | | 0.74 | |
| Aristeus varidens, female | 1 | | | | | | | 0.28 | | 0.55 | |
| Nezumia sp. | 1 | | | | | | 50 | 0.26 | 0.51 | | |
| Galeus polli | 2 | | | | | | 100 | 0.25 | 0.06 | 0.44 | |
| Plesionika acanthurus | 1 | | | | | | 50 | 0.24 | | 0.48 | |
| Callinectes sp. | 1 | | | | | | 50 | 0.17 | | 0.33 | |
| Parapandalus narval | 1 | | | | | | 50 | 0.12 | 0.23 | | |
| Trachurus capensis | 1 | | | | | | | 0.12 | | 0.25 | |
| AcanthePHYRA sp. | 1 | | | | | | | 0.07 | | 0.13 | |
| Lophius sp. | 1 | | | | | | | 0.07 | 0.13 | | |
| MYCTOPHIDAE | 2 | | | | | | 100 | 0.06 | 0.02 | 0.11 | |
| G A S T R O P O D S | 1 | | | | | | 50 | 0.06 | 0.11 | | |
| Aristeus varidens, male | 1 | | | | | | | 0.02 | | 0.04 | |
| Parapenaeus longirostris, fem. | 1 | | | | | | | 0.01 | | 0.01 | |
| Parapenaeus longirostris | 1 | | | | | | 50 | 0.01 | 0.01 | | |
| Parapenaeus longirostris, male | 1 | | | | | | 50 | | | 0.01 | |
| Other fish | | | | | | | | 0.10 | 0.06 | 0.13 | |
| Sum all species | | | | | | | | 43.70 | 18.08 | 69.21 | |
| Sum Snappers | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | |
| Sum Croakers | | | | | | | | | | | |
| Sum Seabreams | | | | | | | | | | | |
| Sum Sharks | | | | | | | | 0.27 | 0.06 | 0.47 | |
| Sum Rays | | | | | | | | | | | |
| Sum Squids | | | | | | | | | | | |
| Sum | | | | | | | | | | | |
| 1.22 | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

2 1 1

SWEPT AREA ANALYSIS FROM STATION 3578 TO STATION 3605

C. Cunene - Tombua. Slope

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | % inci- dence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | |
|---------------------------|----------------------------------|----|----|-----|----------|------------------|------------------------------------|---------------------------------------------------------|----------|----------|----------|
| | Lower limits, Kg/nm | | | | | | | 500-600m | 600-700m | 700-800m | 800-800m |
| | >0 | 10 | 30 | 100 | 300 1000 | | | | | | |
| Nezumia aequalis | | | 1 | 1 | | 67 | 6.21 | | 15.30 | 3.34 | |
| Coelorinchus coelorhincus | | 1 | 1 | | | 67 | 4.24 | | 9.95 | 2.78 | |
| Alopias superciliosus | | | 1 | | | 33 | 1.85 | | | 5.56 | |
| Merluccius capensis | 1 | | 1 | | | 67 | 1.79 | 4.49 | 0.88 | | |
| Hymenocephalus italicus | | 1 | | | | 33 | 0.77 | 2.32 | | | |
| Trachyrincus scabrus | | 1 | | | | 33 | 0.74 | 2.21 | | | |
| Talismania longifilis | 2 | 1 | | | | 67 | 0.74 | 0.49 | 1.32 | 0.40 | |
| Illex coindetii | 1 | 1 | | | | 67 | 0.64 | 0.18 | 1.75 | | |
| Raja alba | 1 | 1 | | | | 67 | 0.64 | | 0.73 | 1.18 | |
| Ebinania costaecanarie | 3 | | | | | 100 | 0.61 | 0.84 | 0.79 | 0.18 | |
| Chaceon maritae | 1 | 1 | | | | 67 | 0.61 | | 1.07 | 0.74 | |
| Hoplostethus cadenati | 3 | | | | | 100 | 0.39 | 0.09 | 0.70 | 0.39 | |
| Yarrella blackfordi | 3 | | | | | 100 | 0.31 | 0.14 | 0.09 | 0.71 | |
| Talismania sp. | 2 | | | | | 33 | 0.26 | | 0.58 | 0.21 | |
| Todarodes sp. | 1 | | | | | 33 | 0.25 | | | 0.75 | |
| Stomias boa boa | 2 | | | | | 67 | 0.22 | | 0.24 | 0.43 | |
| Conger conger | 3 | | | | | 100 | 0.20 | 0.03 | 0.47 | 0.10 | |
| Aristeus varidens, female | 3 | | | | | 100 | 0.19 | 0.06 | 0.10 | 0.42 | |
| Scymnodon obscurus | 2 | | | | | 67 | 0.18 | | 0.18 | 0.35 | |
| Chaceon maritae, male | 1 | | | | | 33 | 0.18 | 0.54 | | | |
| PLATYTROCTIDAE | 1 | | | | | 33 | 0.15 | | 0.46 | | |
| Schedophilus sp. | 1 | | | | | 33 | 0.10 | | | 0.29 | |
| Synaphobranchus kaupii | 2 | | | | | 67 | 0.08 | 0.06 | | 0.19 | |
| Triplophos hemingi | 3 | | | | | 67 | 0.07 | 0.01 | 0.17 | 0.02 | |
| Acanthephyra sp. | 1 | | | | | 33 | 0.05 | | | 0.16 | |
| Selachophidium guentheri | 1 | | | | | 33 | 0.05 | | 0.16 | | |
| Heterocarpus ensifer | 1 | | | | | | 0.02 | | | 0.07 | |
| Aristeus varidens, male | 3 | | | | | 100 | 0.01 | | 0.02 | 0.02 | |
| Other fish | | | | | | | 0.42 | 0.52 | 0.39 | 0.34 | |
| Sum all species | | | | | | | 21.97 | 11.98 | 35.35 | 18.63 | |
| Sum Snappers | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | |
| Sum Croakers | | | | | | | | | | | |
| Sum Seabreams | | | | | | | | | | | |
| Sum Sharks | | | | | | | 2.08 | 0.10 | 0.25 | 5.91 | |
| Sum Rays | | | | | | | 0.64 | | 0.73 | 1.18 | |
| Sum Squids | | | | | | | 0.89 | 0.18 | 1.75 | 0.75 | |
| Sum | | | | | | | | | | | |
| 0.12 | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

3 1 1 1

SWEPT AREA ANALYSIS FROM STATION 3606 TO STATION 3694

A. Benguela - Luanda. Shelf

| SPECIES NAME | SAMPLE | DISTRIB. BY CATCH CLASSES | | | | | | % inci- dence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | |
|--------------------------------|--------|---------------------------|----|----|-----|-----|------|------------------|------------------------------------|---------------------------------------------------------|---------|----------|----------|
| | | Lower limits, Kg/nm | | | | | | | | 20- 50m | 50-100m | 100-200m | 200-200m |
| | | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | | |
| Galeoides decadactylus | 4 | 2 | 5 | | | | 1 | 24 | 12.81 | 39.43 | 1.07 | | |
| Brachydeuterus auritus | 16 | 3 | 8 | 2 | 2 | 2 | 2 | 65 | 9.78 | 16.41 | 11.08 | 0.24 | |
| Trichiurus lepturus | 21 | 12 | 5 | 2 | 1 | | 1 | 76 | 6.99 | 1.11 | 8.86 | 10.91 | |
| Synagrops microlepis | 3 | 1 | | | | | 2 | 12 | 2.25 | 0.01 | | 8.19 | |
| Trachurus trecae | 11 | 4 | 6 | 3 | | | | 47 | 1.79 | 0.75 | 3.76 | 0.01 | |
| Pagellus bellottii | 25 | 4 | 7 | | | | | 71 | 0.97 | 0.22 | 2.14 | 0.06 | |
| Pomadasyd incisus | 12 | 4 | 2 | 2 | | | | 39 | 0.97 | 0.89 | 1.68 | | |
| Pomadasyd jubelini | 7 | | | 1 | | | | 16 | 0.53 | 0.07 | 1.23 | | |
| Umbrina canariensis | 13 | 6 | 2 | | | | | 41 | 0.52 | 0.08 | 0.81 | 0.59 | |
| Dentex barnardi | 19 | 4 | 1 | | | | | 47 | 0.34 | 0.40 | 0.51 | 0.03 | |
| Raja miraletus | 40 | 3 | | | | | | 84 | 0.34 | 0.13 | 0.63 | 0.14 | |
| Pseudotolithus typus | 1 | 2 | | 1 | | | | 8 | 0.31 | 0.21 | 0.60 | | |
| Sardinella aurita | 11 | 1 | 2 | | | | | 27 | 0.30 | 0.15 | 0.62 | | |
| Brotula barbata | 27 | 4 | | | | | | 61 | 0.29 | 0.01 | 0.25 | 0.66 | |
| Pteroscion peli | 2 | 2 | 1 | | | | | 10 | 0.27 | 0.76 | 0.09 | | |
| Pseudupeneus prayensis | 16 | 4 | 1 | | | | | 41 | 0.24 | 0.29 | 0.37 | 0.01 | |
| Selene dorsalis | 16 | 2 | 1 | | | | | 37 | 0.23 | 0.11 | 0.20 | 0.40 | |
| Lithognathus mormyrus | 2 | 2 | 2 | | | | | 12 | 0.22 | 0.21 | 0.37 | | |
| Dentex angolensis | 24 | 1 | | | | | | 49 | 0.21 | | 0.19 | 0.50 | |
| Citharus linguatula | 46 | 1 | | | | | | 92 | 0.21 | 0.04 | 0.36 | 0.18 | |
| Zeus faber | 29 | 2 | | | | | | 61 | 0.19 | | 0.23 | 0.34 | |
| Argyrosomus hololepidotus | 1 | | 1 | | | | | 4 | 0.19 | 0.01 | 0.46 | | |
| Dentex macrophthalmus | 10 | 3 | | | | | | 25 | 0.17 | | 0.07 | 0.53 | |
| Chloroscombrus chrysurus | 11 | | 1 | | | | | 24 | 0.17 | 0.52 | 0.02 | | |
| Alectis alexandrinus | 3 | 1 | 1 | | | | | 10 | 0.15 | 0.48 | | | |
| Sepia officinalis hierredda | 32 | | | | | | | 63 | 0.14 | 0.10 | 0.16 | 0.14 | |
| Dicologlossa cuneata | 8 | | 1 | | | | | 18 | 0.13 | 0.41 | 0.01 | | |
| Pterothrissus belloci | 13 | | 1 | | | | | 27 | 0.12 | | 0.02 | 0.41 | |
| Trigla lyra | 12 | 1 | | | | | | 25 | 0.10 | | 0.21 | 0.06 | |
| Bembrops heterurus | 14 | 2 | | | | | | 31 | 0.10 | 0.18 | 0.07 | 0.05 | |
| Boops boops | 15 | 2 | | | | | | 33 | 0.08 | 0.02 | 0.11 | 0.09 | |
| Brachydeuterus auritus Juv. | 4 | 1 | | | | | | 10 | 0.08 | 0.22 | 0.02 | | |
| Zenopsis conchifer | 5 | 1 | | | | | | 12 | 0.07 | 0.04 | | 0.21 | |
| Serranus accraensis | 5 | | 1 | | | | | 12 | 0.07 | | 0.17 | | |
| Lagocephalus laevigatus | 17 | 1 | | | | | | 35 | 0.06 | 0.13 | 0.05 | | |
| Sphyræna guachancho | 11 | 1 | | | | | | 24 | 0.06 | 0.11 | 0.07 | | |
| Pseudupeneus sp. | 1 | | 1 | | | | | 4 | 0.06 | 0.20 | | | |
| Ilisha africana | 6 | 1 | | | | | | 14 | 0.06 | 0.18 | 0.01 | | |
| Trigla sp. | 4 | 1 | | | | | | 10 | 0.05 | | 0.03 | 0.13 | |
| Sepia orbignyana | 30 | | | | | | | 59 | 0.05 | 0.03 | 0.04 | 0.08 | |
| Octopus vulgaris | 18 | | | | | | | 35 | 0.05 | 0.02 | 0.08 | 0.04 | |
| Sarda sarda | 2 | 1 | | | | | | 6 | 0.05 | | 0.11 | | |
| Torpedo torpedo | 27 | | | | | | | 53 | 0.05 | 0.02 | 0.07 | 0.06 | |
| Parapenaeus longirostris, fem. | 6 | | | | | | | 12 | 0.01 | | | 0.02 | |
| Penaeus notialis | 5 | | | | | | | 10 | 0.01 | 0.02 | | | |
| Penaeus notialis, female | 1 | | | | | | | 2 | | | | | |
| Parapenaeus longirostris, male | 6 | | | | | | | 12 | | | | 0.01 | |
| Penaeus kerathurus | 1 | | | | | | | 2 | | | | | |
| Parapenaeus longirostris | 2 | | | | | | | 4 | | | | | |
| PANDALIDAE | 1 | | | | | | | 2 | | | | | |
| Nematocarcinus africanus | 1 | | | | | | | 2 | | | 0.01 | | |
| Other fish | | | | | | | | | 1.27 | 1.66 | 1.34 | 0.90 | |
| Sum all species | | | | | | | | | 43.11 | 65.63 | 38.18 | 24.99 | |
| Sum Snappers | | | | | | | | | | 0.01 | | | |
| Sum Groupers | | | | | | | | | 0.15 | 0.26 | 0.19 | | |
| Sum Grunts | | | | | | | | | 11.39 | 17.68 | 14.02 | 0.24 | |
| Sum Croakers | | | | | | | | | 1.37 | 1.15 | 2.07 | 0.62 | |
| Sum Seabreams | | | | | | | | | 2.05 | 0.95 | 3.41 | 1.24 | |
| Sum Sharks | | | | | | | | | 0.05 | 0.02 | 0.06 | 0.05 | |
| Sum Rays | | | | | | | | | 0.54 | 0.37 | 0.84 | 0.26 | |
| Sum Squids | | | | | | | | | 0.34 | 0.16 | 0.41 | 0.45 | |
| Sum | | | | | | | | | | | | | |
| 0.01 | | | | | | | | | | | | | |

SWEPT AREA ANALYSIS FROM STATION 3606 TO STATION 3694

B. Benguela - Luanda. Slope

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | % inci- dence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | |
|--------------------------------|----------------------------------|----|----|-----|-----|------------------|------------------------------------|---------------------------------------------------------|----------|----------|----------|
| | Lower limits, Kg/nm | | | | | | | 200-300m | 300-400m | 400-500m | 500-500m |
| | >0 | 10 | 30 | 100 | 300 | | | | | | |
| Synagrops microlepis | 3 | | 1 | 2 | 4 | 63 | 14.73 | 30.69 | 8.59 | | |
| Merluccius polli | 3 | 2 | 5 | 4 | | 88 | 7.16 | 2.27 | 11.32 | 8.24 | |
| Chlorophthalmus atlanticus | 9 | 3 | | 3 | 1 | 94 | 6.91 | 7.37 | 10.99 | 0.10 | |
| Dentex macrophthalmus | 4 | 1 | | | 1 | 38 | 5.76 | 15.36 | | | |
| Nematocarcinus africanus | | | 6 | 1 | | 44 | 2.91 | | 3.29 | 6.70 | |
| Trichiurus lepturus | 7 | 3 | 1 | 1 | | 63 | 2.40 | 5.61 | 0.79 | | |
| Merluccius polli, juveniles | | | 1 | 1 | | 13 | 1.25 | 3.33 | | | |
| Laemonema laureysi | 6 | 2 | 1 | | | 56 | 0.57 | 0.01 | 1.33 | 0.29 | |
| Zenopsis conchifer | 4 | 2 | | | | 38 | 0.33 | 0.86 | 0.02 | | |
| Brotula barbata | | 1 | 1 | | | 13 | 0.29 | 0.78 | | | |
| Pterothrissus belloci | 9 | 1 | | | | 63 | 0.29 | 0.31 | 0.42 | 0.07 | |
| Parapenaeus longirostris, fem. | 12 | 1 | | | | 81 | 0.28 | 0.52 | 0.21 | 0.01 | |
| Parapenaeus longirostris, male | 10 | 1 | | | | 69 | 0.27 | 0.42 | 0.29 | | |
| Illex coindetii | 3 | 1 | | | | 25 | 0.22 | 0.45 | 0.09 | 0.05 | |
| Malacocephalus laevis | 1 | 1 | | | | 13 | 0.20 | | 0.53 | | |
| Todarodes sagittatus | 3 | 1 | | | | 25 | 0.19 | 0.50 | 0.02 | | |
| Dentex angolensis | | 2 | | | | 13 | 0.19 | 0.51 | | | |
| MYCTOPHIDAE | 8 | 1 | | | | 56 | 0.18 | 0.35 | 0.11 | 0.02 | |
| Yarella blackfordi * | | 2 | | | | 6 | 0.18 | | | 0.73 | |
| Malacocephalus occidentalis | 9 | | | | | 56 | 0.14 | 0.09 | 0.11 | 0.25 | |
| Aristeus varidens, female | 8 | | | | | 50 | 0.13 | | 0.03 | 0.46 | |
| Chaunax pictus | 3 | 1 | | | | 25 | 0.11 | | 0.03 | 0.42 | |
| Nezumia aequalis | | 1 | | | | 6 | 0.10 | | | 0.39 | |
| Lophiodes kempfi | 2 | 1 | | | | 19 | 0.09 | 0.01 | 0.01 | 0.35 | |
| Bembrops heterurus | 4 | | | | | 25 | 0.08 | 0.22 | | | |
| Laemonema sp. | | 1 | | | | 6 | 0.08 | | | 0.32 | |
| Small shrimps | 1 | 1 | | | | 13 | 0.07 | | 0.19 | | |
| Dibranchius atlanticus | 1 | 1 | | | | 13 | 0.07 | | 0.01 | 0.26 | |
| Dibranchius sp. | 3 | | | | | 19 | 0.07 | | 0.05 | 0.21 | |
| Nezumia sp. | 5 | | | | | 31 | 0.07 | 0.16 | 0.01 | 0.04 | |
| Hoplostethus cadenati | 2 | | | | | 13 | 0.06 | | | 0.26 | |
| Torpedo torpedo | 2 | | | | | 13 | 0.06 | 0.15 | | | |
| Hymenocephalus italicus | 5 | | | | | 31 | 0.06 | | 0.11 | 0.07 | |
| GOBIIDAE | 1 | | | | | 6 | 0.06 | | 0.15 | | |
| Gadella sp. | 1 | | | | | 6 | 0.05 | | 0.12 | | |
| Aristeus varidens, male | 8 | | | | | 50 | 0.04 | | 0.04 | 0.12 | |
| Solenocera africana | 8 | | | | | 50 | 0.01 | | 0.02 | 0.03 | |
| PALAEEMONIDAE | 1 | | | | | 6 | 0.01 | | 0.02 | | |
| Plesionika martia | 1 | | | | | 6 | | | | 0.01 | |
| Plesionika sp. | 1 | | | | | 6 | | | | | |
| Other fish | | | | | | | 0.82 | 0.95 | 0.64 | 0.95 | |
| Sum all species | | | | | | | 46.49 | 70.92 | 39.54 | 20.35 | |
| Sum Snappers | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | |
| Sum Croakers | | | | | | | | 0.01 | | | |
| Sum Seabreams | | | | | | | 5.95 | 15.87 | | | |
| Sum Sharks | | | | | | | 0.16 | 0.15 | 0.04 | 0.37 | |
| Sum Rays | | | | | | | 0.10 | 0.25 | | | |
| Sum Squids | | | | | | | 0.49 | 1.14 | 0.12 | 0.07 | |
| Sum | | | | | | | | | | | |
| 4.09 | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

16 6 6 4

SWEPT AREA ANALYSIS FROM STATION 3606 TO STATION 3694

C. Benguela - Luanda. Slope

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | % inci- dence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | |
|----------------------------|----------------------------------|----|----|-----|-----|------------------|------------------------------------|---------------------------------------------------------|----------|----------|----------|
| | Lower limits, Kg/nm | | | | | | | 500-600m | 600-700m | 700-800m | 800-800m |
| | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | |
| Nematocarcinus africanus | 7 | 3 | 6 | | | | 94 | 2.15 | 3.54 | 2.62 | 0.52 |
| Hoplostethus cadenati | 9 | 6 | 2 | | | | 100 | 1.40 | 1.35 | 1.59 | 1.25 |
| Yarella blackfordi * | 2 | 6 | 1 | | | | 53 | 0.94 | 1.20 | 0.95 | 0.72 |
| Merluccius polli | 13 | 2 | 1 | | | | 94 | 0.78 | 1.05 | 1.00 | 0.33 |
| Yarella blackfordi | 4 | 4 | | | | | 47 | 0.59 | 0.28 | 0.65 | 0.77 |
| Lamprogrammus exutus | 13 | 2 | | | | | 88 | 0.50 | 0.60 | 0.33 | 0.59 |
| PAGURIDAE | | | 1 | | | | 6 | 0.49 | | | 1.39 |
| Aristeus varidens, female | 15 | 2 | | | | | 100 | 0.47 | 0.65 | 0.33 | 0.47 |
| Stereomastis sp. | 9 | 1 | | | | | 59 | 0.29 | 0.10 | 0.15 | 0.58 |
| UNIDENTIFIED FISH | 2 | 1 | | | | | 18 | 0.19 | | | 0.54 |
| Nezumia sp. | 10 | | | | | | 53 | 0.18 | 0.02 | 0.08 | 0.41 |
| Nezumia micronychodon | 7 | 1 | | | | | 47 | 0.16 | 0.01 | 0.09 | 0.36 |
| Talismania oregonia | | 1 | | | | | 6 | 0.15 | | | 0.43 |
| Chaceon maritae, female | 14 | | | | | | 82 | 0.13 | 0.02 | 0.16 | 0.19 |
| Triplophos hemingi | 12 | | | | | | 71 | 0.11 | 0.06 | 0.15 | 0.12 |
| Chaceon maritae, male | 14 | | | | | | 82 | 0.11 | 0.01 | 0.13 | 0.17 |
| L O B S T E R S | 6 | | | | | | 35 | 0.10 | 0.02 | 0.17 | 0.10 |
| Aristeus varidens, male | 17 | | | | | | 100 | 0.09 | 0.14 | 0.08 | 0.06 |
| Bathyrcongus vicinus | 10 | | | | | | 59 | 0.09 | 0.03 | 0.08 | 0.16 |
| Hoplostethus atlanticus | | 1 | | | | | 6 | 0.08 | | | 0.23 |
| Lamprogrammus sp. | | 1 | | | | | 6 | 0.08 | | 0.22 | |
| Melanostomias sp. | 12 | | | | | | 71 | 0.08 | 0.14 | 0.04 | 0.06 |
| Dibranchius sp. | 9 | | | | | | 53 | 0.07 | 0.01 | 0.02 | 0.16 |
| Geryon maritae | 2 | | | | | | 12 | 0.06 | 0.16 | 0.05 | |
| Ebinania costaecanarie | 7 | | | | | | 41 | 0.05 | | 0.01 | 0.14 |
| Laemonema laureysi | 6 | | | | | | 35 | 0.05 | 0.13 | 0.02 | |
| Glyphus marsupialis | 5 | | | | | | 29 | 0.01 | | 0.01 | 0.02 |
| Plesiopenaeus edwardsianus | 5 | | | | | | 29 | 0.01 | | | 0.01 |
| Solenocera africana | 2 | | | | | | 12 | | | 0.01 | |
| SERGESTIDAE | 1 | | | | | | 6 | | | | |
| Heterocarpus grimaldii | 1 | | | | | | 6 | | | | |
| Heterocarpus ensifer | 3 | | | | | | 18 | | | | 0.01 |
| Acanthephyra sp. | 1 | | | | | | 6 | | | | |
| NEMATOCARCINIDAE | 1 | | | | | | 6 | | | | |
| Exhippolysmata hastatoides | 1 | | | | | | 6 | | | | |
| Small shrimps | 1 | | | | | | 6 | | | | |
| Shrimps, small, non comm. | 1 | | | | | | 6 | | | | |
| S H R I M P S | 3 | | | | | | 18 | | 0.01 | | |
| Other fish | | | | | | | | 1.10 | 0.90 | 1.06 | 1.43 |
| Sum all species | | | | | | | | 10.51 | 10.43 | 10.00 | 11.22 |
| Sum Snappers | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | |
| Sum Croakers | | | | | | | | | | | |
| Sum Seabreams | | | | | | | | | | | |
| Sum Sharks | | | | | | | | 0.10 | 0.03 | 0.12 | 0.17 |
| Sum Rays | | | | | | | | 0.04 | 0.01 | 0.05 | 0.09 |
| Sum Squids | | | | | | | | 0.08 | 0.05 | 0.05 | 0.13 |
| Sum | | | | | | | | | | | |
| 3.05 | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

17

5

6

6

SWEPT AREA ANALYSIS FROM STATION 3695 TO STATION 3797

A Luanda - Congo River (shelf)

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | | % incidence | Mean dens t/nm ² | Mean densities by bottom depth strata t/nm ² | | | | |
|---------------------------------------|----------------------------------|----|----|-----|-----|------|-------------|-----------------------------|---------------------------------------------------------|---------|----------|----------|--|
| | Lower limits, Kg/nm | | | | | | | | 20- 50m | 50-100m | 100-200m | 200-200m | |
| | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | | | |
| <i>Brachydeuterus auritus</i> | 12 | 2 | 6 | 3 | 3 | 1 | 49 | 9.49 | 24.08 | 9.08 | 0.16 | | |
| <i>Dentex angolensis</i> | 6 | 26 | 5 | | | | 67 | 1.29 | | 1.32 | 2.13 | | |
| <i>Trichurus lepturus</i> | 29 | 3 | 4 | 2 | | | 65 | 1.06 | 0.98 | 0.80 | 1.36 | | |
| <i>Pagellus bellottii</i> | 28 | 7 | 2 | 2 | | | 71 | 1.00 | 1.43 | 1.71 | 0.04 | | |
| <i>Dentex congolensis</i> | 18 | 9 | 2 | 1 | | | 55 | 0.84 | | 1.11 | 1.14 | | |
| <i>Umbrina canariensis</i> | 16 | 2 | 3 | 1 | | | 38 | 0.71 | 0.03 | 0.30 | 1.55 | | |
| <i>Pomadasyus jubelini</i> | 2 | 1 | | | 1 | | 7 | 0.64 | 0.01 | 1.76 | | | |
| <i>Trachurus trecae</i> | 18 | 4 | 5 | | | | 49 | 0.63 | 0.81 | 0.89 | 0.27 | | |
| <i>Galeoides decadactylus</i> | | 8 | 3 | | | | 20 | 0.62 | 1.90 | 0.38 | | | |
| <i>Pseudotolithus typus</i> | 5 | 3 | 1 | 1 | | | 18 | 0.61 | 2.33 | 0.05 | | | |
| <i>Chloroscombrus chrysurus</i> | 5 | 2 | 3 | 1 | | | 20 | 0.53 | 1.85 | 0.17 | | | |
| <i>Selene dorsalis</i> | 12 | 2 | 3 | | | | 31 | 0.40 | 0.67 | 0.60 | 0.02 | | |
| <i>Spicara alta</i> | 10 | 1 | 3 | | | | 25 | 0.32 | | 0.01 | 0.83 | | |
| <i>Stromateus fiatola</i> | 5 | | 2 | | | | 13 | 0.23 | 0.90 | | 0.01 | | |
| <i>Decapterus rhonchus</i> | 4 | | | 1 | | | 9 | 0.23 | 0.90 | | | | |
| <i>Raja miraletus</i> | 43 | 2 | | | | | 82 | 0.21 | 0.26 | 0.31 | 0.08 | | |
| <i>Brotula barbata</i> | 27 | 2 | | | | | 53 | 0.20 | | 0.14 | 0.39 | | |
| <i>Pomadasyus incisus</i> | 7 | 3 | 1 | | | | 20 | 0.19 | 0.45 | 0.20 | | | |
| <i>Sepia orbignyana</i> | 29 | 3 | | | | | 58 | 0.17 | 0.07 | 0.30 | 0.10 | | |
| <i>Pomadasyus rogeri</i> | 3 | | 1 | | | | 7 | 0.17 | 0.66 | | | | |
| <i>Zeus faber</i> | 38 | | | | | | 69 | 0.16 | 0.04 | 0.22 | 0.19 | | |
| <i>Dentex barnardi</i> | 14 | 1 | | | | | 27 | 0.12 | 0.08 | 0.19 | 0.07 | | |
| <i>Chelidonichthys capensis</i> | 19 | 2 | | | | | 38 | 0.11 | 0.01 | 0.03 | 0.25 | | |
| <i>Legocephalus laevigatus</i> | 14 | 3 | | | | | 31 | 0.11 | 0.03 | 0.16 | 0.13 | | |
| <i>Sphyræna sphyraena</i> | 8 | | 1 | | | | 16 | 0.11 | 0.42 | 0.01 | | | |
| <i>Brachydeuterus auritus</i> Juv. | | | | 1 | | | 2 | 0.11 | 0.44 | | | | |
| <i>Citharus linguatula</i> | 43 | | | | | | 78 | 0.11 | 0.03 | 0.18 | 0.09 | | |
| <i>Trigla lyra</i> | 15 | 1 | | | | | 29 | 0.10 | | 0.15 | 0.11 | | |
| <i>Cynoponticus ferox</i> | 3 | 1 | 1 | | | | 9 | 0.10 | 0.37 | | | | |
| <i>Ilisha africana</i> | 4 | 2 | | | | | 11 | 0.10 | 0.38 | | | | |
| <i>Pagrus caeruleostictus</i> | 7 | 2 | | | | | 16 | 0.09 | 0.26 | 0.08 | | | |
| <i>Epinephelus aeneus</i> | 18 | | | | | | 33 | 0.09 | 0.10 | 0.13 | 0.04 | | |
| <i>Fistularia petimba</i> | 24 | 1 | | | | | 45 | 0.09 | 0.02 | 0.21 | 0.02 | | |
| <i>Sepia officinalis hierredda</i> | 19 | | | | | | 35 | 0.08 | 0.08 | 0.12 | 0.04 | | |
| <i>Mustelus mustelus</i> | 17 | | | | | | 31 | 0.08 | 0.06 | 0.07 | 0.10 | | |
| <i>Zenopsis conchifer</i> | 11 | 1 | | | | | 20 | 0.07 | | 0.01 | 0.16 | | |
| <i>Lepidotrigla cadmani</i> | 5 | 1 | | | | | 11 | 0.07 | | 0.15 | 0.04 | | |
| <i>Pseudupeneus prayensis</i> | 15 | 1 | | | | | 29 | 0.07 | 0.21 | 0.06 | | | |
| <i>Erythrocles monodi</i> | 1 | | 1 | | | | 4 | 0.07 | | | 0.19 | | |
| <i>Trachurus trecae, juvenile</i> | 4 | 1 | | | | | 9 | 0.07 | | 0.16 | 0.04 | | |
| <i>Lepidochelys olivacea</i> | | | | 1 | | | 2 | 0.06 | | | 0.15 | | |
| <i>Saurida brasiliensis</i> | 22 | 1 | | | | | 42 | 0.06 | | 0.13 | 0.03 | | |
| <i>Pteroscion peli</i> | 2 | 1 | | | | | 5 | 0.06 | 0.21 | | 0.02 | | |
| <i>Pomadasyus peroteti</i> | 1 | 1 | | | | | 4 | 0.06 | 0.23 | | | | |
| <i>Arius parkii</i> | 4 | 1 | | | | | 9 | 0.05 | 0.19 | | | | |
| <i>Solenocera africana</i> | 1 | | | | | | 2 | 0.01 | 0.03 | | | | |
| <i>Penaeus notialis, female</i> | 3 | | | | | | 5 | 0.01 | 0.03 | | | | |
| <i>Penaeus notialis</i> | 6 | | | | | | 11 | 0.01 | 0.03 | | | | |
| <i>Nematopalaemon hastatus</i> | 1 | | | | | | 2 | | | | | | |
| <i>Penaeus notialis, male</i> | 2 | | | | | | 4 | | 0.01 | | | | |
| <i>Parapenaeus longirostris, fem.</i> | 3 | | | | | | 5 | | | | | | |
| <i>Parapenaeus longirostris, male</i> | 3 | | | | | | 5 | | | | | | |
| <i>Penaeus kerathurus</i> | 1 | | | | | | 2 | | | | | | |
| <i>Parapenaeus longirostris</i> | 1 | | | | | | 2 | | | | | | |
| <i>Parapandalus narval</i> | 2 | | | | | | 4 | | | | | | |
| S H R I M P S | 1 | | | | | | | | | | | | |
| Other fish | | | | | | | | 1.25 | 2.01 | 1.07 | 1.02 | | |
| Sum all species | | | | | | | | 23.02 | 42.58 | 22.26 | 10.77 | | |
| Sum Snappers | | | | | | | | 0.06 | 0.21 | | | | |
| Sum Groupers | | | | | | | | 0.10 | 0.15 | 0.13 | 0.04 | | |
| Sum Grunts | | | | | | | | 10.67 | 25.89 | 11.04 | 0.17 | | |
| Sum Croakers | | | | | | | | 1.52 | 2.77 | 0.50 | 1.62 | | |
| Sum Seabreams | | | | | | | | 3.49 | 1.88 | 4.57 | 3.51 | | |
| Sum Sharks | | | | | | | | 0.14 | 0.09 | 0.11 | 0.21 | | |
| Sum Rays | | | | | | | | 0.42 | 0.71 | 0.51 | 0.13 | | |
| Sum Squids | | | | | | | | 0.32 | 0.15 | 0.52 | 0.23 | | |
| Sum | | | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

55 14 20 21

SWEPT AREA ANALYSIS FROM STATION 3695 TO STATION 3797

B. Luanda - Congo River (slope).

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | t incidence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | | |
|--------------------------------|----------------------------------|----|----|-----|-----|-------------|------------------------------|---------------------------------------------------------|----------|----------|----------|-------|
| | Lower limits, Kg/nm | | | | | | | 200-300m | 300-400m | 400-500m | 500-600m | |
| | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | | |
| Synagrops microlepis | 1 | 2 | 1 | 5 | 3 | | 46 | 10.54 | 30.05 | 10.61 | | 0.01 |
| Merluccius polli | 7 | 6 | 8 | 4 | | | 96 | 5.02 | 5.76 | 6.35 | 7.71 | 0.85 |
| Nematocarcinus africanus | 1 | 5 | 8 | 1 | | | 58 | 3.03 | | 2.24 | 6.45 | 3.81 |
| Chlorophthalmus atlanticus | 11 | 3 | 5 | | | | 73 | 1.75 | 2.78 | 4.23 | 0.08 | 0.04 |
| Pterothrissus belloei | 8 | 2 | 1 | | | | 42 | 0.49 | 1.49 | 0.38 | | |
| Yarrella blackfordi | 5 | 3 | 1 | | | | 35 | 0.42 | | 0.02 | 0.40 | 1.22 |
| Zenopsis conchifer | 8 | 2 | 1 | | | | 35 | 0.36 | 1.29 | 0.04 | | |
| Trichiurus lepturus | 8 | 4 | | | | | 46 | 0.34 | 0.98 | 0.24 | 0.08 | |
| G A S T R O P O D S | 2 | | 1 | | | | 12 | 0.30 | 1.11 | | | |
| Dentex angolensis | 2 | 3 | | | | | 19 | 0.25 | 0.91 | | | |
| Parapenaeus longirostris, fem. | 12 | 1 | | | | | 50 | 0.25 | 0.59 | 0.37 | | |
| Centrophorus granulosus | 5 | | 1 | | | | 23 | 0.23 | | 0.13 | 0.85 | 0.02 |
| Laemonema laureysi | 14 | 1 | | | | | 58 | 0.23 | | 0.58 | 0.27 | 0.12 |
| Hymenocephalus italicus | 14 | 1 | | | | | 58 | 0.23 | | 0.43 | 0.43 | 0.11 |
| Brotula barbata | 5 | | 1 | | | | 23 | 0.22 | 0.81 | | | |
| Aristeus varidens, female | 11 | 2 | | | | | 50 | 0.21 | | | 0.42 | 0.40 |
| Benthodesmus sp. | 8 | 2 | | | | | 38 | 0.20 | | 0.47 | 0.32 | 0.07 |
| Parapenaeus longirostris, male | 11 | 1 | | | | | 46 | 0.19 | 0.58 | 0.14 | | |
| Triplophos hemingi | 10 | 1 | | | | | 42 | 0.18 | | | 0.18 | 0.52 |
| Chloroscombrus chrysurus | 1 | | 1 | | | | 4 | 0.17 | 0.62 | | | |
| Parasudis sp. | 5 | | 1 | | | | 23 | 0.16 | 0.54 | 0.08 | | |
| Bembrops heterurus | 6 | 1 | | | | | 27 | 0.13 | 0.45 | 0.02 | | |
| Chaunax pictus | 15 | | | | | | 58 | 0.13 | | 0.05 | 0.33 | 0.15 |
| Nezumia sp. | 16 | 1 | | | | | 65 | 0.12 | 0.33 | 0.08 | 0.04 | 0.02 |
| Stereomastis sp. | 11 | | | | | | 42 | 0.12 | | 0.02 | 0.20 | 0.27 |
| Lamprogrammus exultus | 6 | 1 | | | | | 27 | 0.11 | | | 0.02 | 0.39 |
| Hoplostethus cadenati | 7 | 1 | | | | | 31 | 0.10 | | | | 0.36 |
| Carcharhinus signatus | 1 | | | | | | 4 | 0.10 | | 0.41 | | |
| CHLOROPHTHALMIDAE | 1 | | | | | | 4 | 0.10 | 0.38 | | | |
| Illex coindetii | 15 | | | | | | 58 | 0.09 | 0.19 | 0.07 | 0.04 | 0.04 |
| Malacocephalus occidentalis | 13 | | | | | | 50 | 0.08 | 0.01 | 0.22 | 0.10 | 0.03 |
| Lophiodes kempii | 11 | | | | | | 42 | 0.08 | | 0.02 | 0.20 | 0.09 |
| L O B S T E R S | 5 | | | | | | 19 | 0.08 | | 0.01 | 0.03 | 0.26 |
| Todaropsis eblanae | 10 | | | | | | 38 | 0.07 | 0.17 | 0.05 | 0.03 | 0.01 |
| Trichiurus lepturus juv. | 1 | 1 | | | | | 8 | 0.06 | | 0.26 | | |
| Aristeus varidens, male | 13 | | | | | | 50 | 0.06 | | | 0.13 | 0.12 |
| Pontinus kuhlii | 6 | | | | | | 23 | 0.06 | 0.10 | 0.13 | | |
| Gadella maraldi | 14 | | | | | | 54 | 0.06 | | 0.16 | 0.05 | 0.05 |
| Melanostomias sp. | 10 | | | | | | 38 | 0.06 | | 0.01 | 0.01 | 0.19 |
| Benthodesmus tenuis | 5 | | | | | | 19 | 0.05 | | | | 0.17 |
| SCORPAENIDAE | 1 | | | | | | 4 | 0.05 | | 0.21 | | |
| Torpedo nobiliana | 2 | | | | | | 8 | 0.05 | | 0.16 | 0.06 | |
| Dibranchius sp. | 15 | | | | | | 58 | 0.05 | 0.01 | 0.04 | 0.12 | 0.06 |
| Chaceon maritae, male | 7 | | | | | | 27 | 0.05 | | | 0.01 | 0.19 |
| Hypoclydonia bella ? | 1 | | 1 | | | | 4 | 0.05 | | 0.22 | | |
| Solenocera africana | 8 | | | | | | 31 | 0.01 | | 0.03 | | |
| Glyphus marsupialis | 5 | | | | | | 19 | 0.01 | | 0.02 | | |
| Sergestes sp. | 1 | | | | | | 4 | | | | | |
| SERGESTIDAE | 1 | | | | | | 4 | | | | | |
| Plesionika martin | 3 | | | | | | 12 | | | 0.01 | | |
| Heterocarpus ensifer | 1 | | | | | | 4 | | | | | |
| Plesioniparus edwardsianus | 4 | | | | | | 15 | | | | 0.01 | 0.01 |
| ARISTEIDAE | 1 | | | | | | 4 | | | | | |
| Small shrimps | 1 | | | | | | 4 | | | | | |
| Shrimps, small, non comm. | 1 | | | | | | 4 | | | | | |
| S H R I M P S | 2 | | | | | | 8 | | | | | |
| Other fish | | | | | | | | 0.89 | 1.08 | 1.17 | 0.76 | 0.73 |
| Sum all species | | | | | | | | 27.59 | 50.23 | 29.68 | 19.33 | 10.31 |
| Sum Snappers | | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | | |
| Sum Croakers | | | | | | | | 0.01 | 0.03 | | | |
| Sum Seabreams | | | | | | | | 0.26 | 0.94 | | | |
| Sum Sharks | | | | | | | | 0.47 | 0.08 | 0.76 | 1.18 | 0.07 |
| Sum Rays | | | | | | | | 0.12 | 0.21 | 0.18 | 0.06 | |
| Sum Squids | | | | | | | | 0.20 | 0.37 | 0.15 | 0.09 | 0.15 |
| Sum | | | | | | | | | | | | |
| 2.81 | | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

26 7 6 6 7

SWEPT AREA ANALYSIS FROM STATION 3695 TO STATION 3797

C. Luanda - Congo River (slope).

| SPECIES NAME | SAMPLE DISTRIB. BY CATCH CLASSES | | | | | | % inci- dence | Mean dens. t/nm ² | Mean densities by bottom depth strata t/nm ² | | | |
|--------------------|----------------------------------|----|----|-----|-----|------|------------------|------------------------------------|---------------------------------------------------------|----------|----------|----------|
| | Lower limits, Kg/nm | | | | | | | | 600-700m | 700-800m | 800-500m | 500-600m |
| | >0 | 10 | 30 | 100 | 300 | 1000 | | | | | | |
| Zenopsis conchifer | 1 | | | | | | | 0.10 | 1.17 | | | |
| Other fish | | | | | | | | | | | | |
| Sum all species | | | | | | | | 0.10 | 1.17 | | | |
| Sum Snappers | | | | | | | | | | | | |
| Sum Groupers | | | | | | | | | | | | |
| Sum Grunts | | | | | | | | | | | | |
| Sum Croakers | | | | | | | | | | | | |
| Sum Seabreams | | | | | | | | | | | | |
| Sum Sharks | | | | | | | | | | | | |
| Sum Rays | | | | | | | | | | | | |
| Sum Squids | | | | | | | | | | | | |
| Sum | | | | | | | | | | | | |

Number of stations included in analysis, total and by depth strata

ANNEX IV Equations

1. Biomass estimates

The stratified estimator of mean density in the entire area is calculated as

$$\bar{y}_{st} = \sum_{i=1}^L W_i \bar{y}_i, \quad (1)$$

where

L is the number of strata,

$W_i = \frac{area_i}{total\ area}$ is the proportion of the i^{th} stratum of the total survey area,

$\bar{y}_i = \frac{\sum_{k=1}^{n_i} y_{i,k}}{n_i}$ is the average density in the i^{th} stratum

$y_{i,k}$ is the density [tonnes/NM²] by the k^{th} tow in stratum i

n_i is the number of tows in the i^{th} stratum.

The total biomass in the area is calculated by

$$B = \bar{y}_{st} \cdot total\ area \quad (2)$$

The estimated variance of the biomass (var(biomass)) was calculated by:

$$var(biomass) = \left(\sum \frac{W_i^2 s_i^2}{n_i} \right) A^2 \quad (3)$$

where

$$s_i^2 = \frac{\sum_{k=1}^{n_i} (y_{i,k} - \bar{y}_i)^2}{n_i - 1}, \text{ and } A \text{ is total area}$$

The standard error (SE) of the stratified mean was calculated as:

$$SE = \sqrt{var(biomass)} \quad (4)$$

The precision for the estimates (CV) was calculated by:

$$CV = \frac{SE}{biomass} \quad (5)$$

If the sample size is “large” enough, then the Central Limit Theorem states that each time a survey is conducted there is a 95% chance that the true mean is in the interval

$$biomass \pm t_{(n-1)}SE \quad (6)$$

where t is from Students t -table with $(n-1)$ degrees of freedom and $\alpha = 0.025$.

Annex V Species codes

NAN-SIS species codes used in defining the 'grouped species' tables

| MAIN GROUP | Demersal | Pelagic | Shrimp | Cephalopod | Sharks |
|------------|----------|----------------|-----------------------|-------------------|-----------------------|
| | SPA0000 | ENG0000 | SHR0000 | SQU0000 | SHA0000 |
| | POD0000 | CLU0000 | | | |
| | SCI0000 | CAR0000 | | | |
| | ARD0000 | SCM0000 | | | |
| | SER0000 | SPH0000 | | | |
| | LUT0000 | TRI0000 | | | |
| | OPDAA00 | STRAA00 | | | |
| | MERME00 | | | | |
| PELAGIC | Clupeids | Carangids | Scombrids | Hairtails | Barracudas |
| | ENG0000 | CAR0000 | SCM0000 | TRI0000 | SPH0000 |
| | CLU0000 | | | | |
| DEMERSAL | Seabream | Snappers | Groupers | Grunts | Croakers |
| | SPADE00 | LUT0000 | SER0000 | PODPO00 | SCI0000 |
| | SPADI00 | | | | |
| | SPALI00 | | | | |
| | SPAPA00 | | | | |
| | SPAPR00 | | | | |
| | SPASP00 | | | | |
| DEEP 1 | Seabream | Hake | <i>P.longirostris</i> | <i>A.varidens</i> | <i>N.africanus</i> |
| | SPADE00 | MERME03 | SHRPE31 | SHRAR22 | SHRNE21 |
| | SPADI00 | MERME04 | SHRPEP1 | SHRARA1 | |
| | SPALI00 | MERME12 | SHRPEP2 | SHRARA2 | |
| | SPAPA00 | MERME13 | | | |
| | SPAPR00 | MERME92 | | | |
| | SPASA00 | | | | |
| | SPASP00 | | | | |
| DEEP 2 | Hake | Ommastrephidae | Sepiidae | <i>A.varidens</i> | <i>P.longirostris</i> |
| | MERME03 | SQUOM21 | SQUSE10 | SHRAR22 | SHRPE31 |
| | MERME12 | SQUOM31 | SQUSE11 | SHRARA1 | SHRPEP1 |
| | MERME13 | SQUOM51 | SQUSE12 | SHRARA2 | SHRPEP2 |
| | MERME92 | | SQUSE13 | | |
| | | | SQUSE15 | | |

NAN-SIS sectors in Angola

| Latitude | Sector | Region |
|----------------|--------|------------------------------------|
| 17°14' - 13° S | 1 | Cunene River – Benguela* |
| 13° - 9° S | 2 | Benguela – Pta. das Palmerinhas |
| 9° - 6° S | 3 | Pta. das Palmerinhas – Congo River |

* The area covered goes from Cunene River to Tombua

ANNEX VI Instruments and fishing gear used

The Simrad EK-500/38kHz scientific sounder was run during the survey only for observation of fish and bottom conditions.

The details of the settings of the 38kHz echo sounder where as follows:

Transceiver-1 menu (38 kHz lowering keel)

| | |
|--------------------|------------------------------------|
| Transducer depth | 5.50 m |
| Absorbtion coeff. | 10 dB/km |
| Pulse length | medium (1ms) |
| Bandwidth | wide |
| Max power | 2000 Watt |
| 2-way beam angle | -21.0 dB |
| SV transducer gain | 27.39 dB |
| TS transducer gain | 27.52 dB |
| Angle sensitivity | 21.9 |
| 3 dB beamwidth | 6.8 dg along / athwardship: 6.7 dg |
| Alongship offset | -0.03 " |
| Athwardship offset | 0.06 " |

Display menu

| | |
|---------------|------------|
| Echogram | 1 (38 kHz) |
| Sv colour min | -67 dB |

Printer- menu

| | |
|--------------------|-----------------------------------|
| Echogram | 1 (38 kHz) |
| Range | 50, 100, 250, 500, 750 and 1000 m |
| Range start | 0 |
| Bottom range | 15 m |
| Bottom range start | 10 m |
| Sv colour min | -67 dB |
| TVG | 20 log R |

Bottom detection menu Minimum level -40 dB

Fishing gear

The trawl used during the present survey was of the type "Gisund super bottom trawl". This bottom trawl has a headline of 31 m, footrope 47 m and 20 mm meshsize in the codend with an inner net of 10 mm meshsize. The estimated opening is 6 m (observed 5.7) and distance between wings during towing about 18 m. The sweeps are 40 m long. The trawl is equipped with a 12" rubber bobbins gear. The doors are of 'Thyborøn' combi type, 7.81 m², 1670 kg, their distance while trawling was about 45-55 m in average, depending on the depth (least distance at low depths). During the present survey this distance was kept nearly constant (about 50 m) at all depths by the use of a 9.5 m strap between the wires at 130 m distance from the doors (normally applied at depths greater than 80 m). At depths greater than 300 m the trawl was equipped with a tickler chain, which is supposed to improve the catchability of bottom living and borrowing species, particularly shrimps.

The SCANMAR system was used on all trawl hauls. This equipment consists of sensors, a hydrophone, a receiver, a display unit and a battery charger. Communication between sensors and ship is based on acoustic transmission. The doors are fitted with sensors to provide information on their distance and a height sensor is fitted to the bottom trawl to measure the trawl opening and provide information on clearance and bottom contact.

ANNEX VII. Catch rates

Families included under each group:

Demersal: Sciaenidae, Sparidae, Pomadasysidae, Ariidae, Serranidae, Lutjanidae, Merlucciidae, Ophidiidae, Lethrinidae.

Pelagic: Scombridae, Sphyrnidae, Trichiuridae, Clupeidae, Engraulidae, Carangidae.

Cephalopods: squids and octopuses.

Catch rates (kg/hour) by main groups caught in valid swept area bottom trawl hauls on the shelf. Southern region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m), C: Slope (201-800 m).

A. Inner shelf (20-70 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|---------|---------|
| | 26 | 195.0 | 405.3 | | 47.9 | 54.8 | 5 556.6 | 6 259.6 |
| 3579 | 44 | 703.9 | 2 907.2 | | | 32.6 | 333.4 | 3 977.2 |
| 3591 | 66 | 810.1 | 1 992.9 | | 162.4 | 31.0 | 753.7 | 3 750.0 |
| 3592 | 23 | 3.5 | 72.1 | | 79.6 | 8.8 | 436.7 | 600.6 |
| 3593 | 25 | 1.6 | 286.6 | | 0.8 | | 346.9 | 635.9 |
| 3602 | 22 | 21.7 | 52.8 | | 9.4 | 8.8 | 144.9 | 237.6 |
| 3603 | 50 | 8.9 | 191.5 | | 2.8 | 3.0 | 118.8 | 325.1 |
| 3605 | 48 | 34.0 | 52.0 | | 8.0 | 18.0 | 90.0 | 202.0 |
| MEAN | 38.0 | 222.3 | 745.1 | | 38.9 | 19.6 | 972.6 | 1 998.5 |
| SD | | 337.2 | 1 087.4 | | 57.4 | 18.6 | 1 864.7 | 2 332.4 |
| %CATCH | | 11.1 | 37.3 | | 1.9 | 1.0 | 48.7 | |

B. Outer shelf (71-200 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|----------|---------|-------------|--------|---------|----------|
| 3581 | 84 | 259.0 | 1 167.6 | | 213.4 | 38.8 | 197.3 | 1 876.0 |
| 3582 | 129 | 1 641.9 | 12 353.8 | | 46.0 | 14.6 | 391.9 | 14 448.2 |
| 3583 | 147 | 428.7 | 2 857.1 | | 4.5 | | 227.4 | 3 517.6 |
| 3584 | 177 | 875.0 | 987.6 | 2.0 | 6.3 | | 1 471.5 | 3 342.4 |
| 3588 | 137 | 982.7 | 6 310.2 | 0.0 | 19.0 | 43.9 | 719.3 | 8 074.9 |
| 3589 | 113 | 634.5 | 9 494.3 | 0.0 | 51.7 | 2.9 | 327.2 | 10 510.5 |
| 3590 | 96 | 357.0 | 5.2 | 0.0 | 28.7 | 14.8 | 211.8 | 617.5 |
| 3596 | 96 | 953.7 | 2 256.6 | 0.0 | 34.7 | 29.1 | 57.2 | 3 331.3 |
| 3599 | 125 | 167.0 | 182.9 | 0.0 | 3.0 | 46.0 | 39.8 | 438.8 |
| 3600 | 116 | 42.4 | 1 545.9 | 0.0 | | 11.8 | 16.4 | 1 616.6 |
| 3604 | 73 | 6.5 | 0.3 | 0.0 | 1.4 | 7.1 | 4.3 | 19.7 |
| MEAN | 117.5 | 577.1 | 3 378.3 | 0.2 | 37.1 | 19.0 | 333.1 | 4 344.9 |
| SD | | 498.3 | 4 183.9 | 0.6 | 61.3 | 17.5 | 431.7 | 4 670.3 |
| %CATCH | | 13.3 | 77.8 | 0.0 | 0.9 | 0.4 | 7.7 | |

C. Slope (201-800 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|---------|---------|
| 3585 | 291 | 156.1 | | 7.1 | | 1.9 | 363.7 | 528.8 |
| 3586 | 718 | | | 19.3 | 21.6 | 170.0 | 325.8 | 536.7 |
| 3587 | 691 | 31.4 | | 3.6 | 52.5 | 7.5 | 965.1 | 1 060.1 |
| 3597 | 349 | 5.5 | 7.2 | 36.1 | | 13.8 | 1 972.0 | 2 034.6 |
| 3598 | 599 | 132.7 | 1.2 | 1.7 | 5.1 | 2.9 | 205.6 | 349.2 |
| MEAN | 529.6 | 65.1 | 1.7 | 13.5 | 15.9 | 39.2 | 766.4 | 901.9 |
| SD | | 73.8 | 3.1 | 14.3 | 22.3 | 73.2 | 735.5 | 686.7 |
| %CATCH | | 7.2 | 0.2 | 1.5 | 1.8 | 4.3 | 85.0 | |

Catch rates (kg/hour) by main demersal groups caught in valid swept area bottom trawl hauls on the shelf. Southern region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m).

A. Inner shelf (20-70 m)

| Station | Depth | Seabreams | Stappers | Groupers | Grunts | Croakers | Other | Total |
|---------|-------|-----------|----------|----------|--------|----------|---------|---------|
| 3578 | 26 | | | | | 72.24 | 6187.38 | 6259.62 |
| 3579 | 44 | | | | | 692.14 | 3285.02 | 3977.16 |
| 3591 | 66 | 140.35 | | | | 378.33 | 3231.31 | 3749.99 |
| 3592 | 23 | 3.48 | | | | | 597.16 | 600.64 |
| 3593 | 25 | 0.18 | | | | 1.44 | 634.32 | 635.94 |
| 3602 | 22 | 21.72 | | | | | 215.84 | 237.56 |
| 3603 | 50 | 8.94 | | | | | 316.16 | 325.1 |
| 3605 | 48 | 10 | | | | 23 | 170 | 203 |
| MEAN | 38.0 | 23.1 | | | | 145.9 | 1 829.6 | 1 998.6 |
| SD | | 48.0 | | | | 255.7 | 2 193.2 | 2 332.2 |
| %CATCH | | 1.2 | | | | 7.3 | 91.5 | |

B. Outer shelf (71-200 m).

| Station | Depth | Seabreams | Shappers | Groupers | Grunts | Croakers | Other | Total |
|---------|-------|-----------|----------|----------|--------|----------|----------|----------|
| 3581 | 84 | 170.2 | | | | 8.9 | 1 696.8 | 1 876.0 |
| 3582 | 129 | 1 193.6 | | | | 344.9 | 12 909.8 | 14 448.2 |
| 3583 | 147 | 311.4 | | | | | 3 206.3 | 3 517.6 |
| 3584 | 177 | 193.9 | | | | | 3 148.4 | 3 342.4 |
| 3588 | 137 | 486.0 | | | | 420.8 | 7 168.1 | 8 074.9 |
| 3589 | 113 | 536.3 | | | | 59.9 | 9 914.3 | 10 510.5 |
| 3590 | 96 | 323.1 | | | | 8.8 | 285.7 | 617.5 |
| 3596 | 96 | 679.6 | | | | 130.7 | 2 521.0 | 3 331.3 |
| 3599 | 125 | 52.8 | | | | | 386.0 | 438.8 |
| 3600 | 116 | 42.4 | | | | | 1 574.1 | 1 616.6 |
| 3604 | 73 | 0.2 | | | | 3.3 | 16.2 | 19.7 |
| MEAN | 117.5 | 362.7 | | | | 88.9 | 3 893.3 | 4 344.9 |
| SD | | 351.5 | | | | 151.7 | 4 263.0 | 4 670.3 |
| %CATCH | | 8.3 | | | | 2.0 | 89.6 | |

Catch rates (kg/hour) by main pelagic groups caught in valid swept area bottom trawl hauls on the shelf. Southern region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m).

A. Inner shelf (20-70 m).

| Station | Depth | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Other | Total |
|---------|-------|----------|-----------|-----------|-----------|------------|---------|---------|
| 3578 | 26 | 89.0 | 224.7 | | 91.6 | | 5 854.3 | 6 259.6 |
| 3579 | 44 | 84.2 | 2 823.0 | | | | 1 069.9 | 3 977.2 |
| 3591 | 66 | 171.7 | 1 811.2 | | 10.0 | | 1 757.1 | 3 750.0 |
| 3592 | 23 | | 72.1 | | | | 528.5 | 600.6 |
| 3593 | 25 | 22.1 | 264.5 | | | | 349.3 | 635.9 |
| 3602 | 22 | | 52.4 | 0.4 | | | 184.8 | 237.6 |
| 3603 | 50 | 8.9 | 182.6 | | | | 133.6 | 325.1 |
| 3605 | 48 | | 48.0 | | 4.0 | | 151.0 | 203.0 |
| MEAN | 38.0 | 47.0 | 684.8 | 0.0 | 13.2 | | 1 253.6 | 1 998.6 |
| SD | | 62.6 | 1 046.2 | 0.1 | 31.9 | | 1 942.4 | 2 332.2 |
| %CATCH | | 2.4 | 34.3 | 0.0 | 0.7 | | 62.7 | |

B. Outer shelf (71-200 m).

| Station | Depth | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Other | Total |
|---------|-------|----------|-----------|-----------|-----------|------------|---------|----------|
| 3581 | 84 | 6.6 | 1 160.9 | | | | 708.4 | 1 876.0 |
| 3582 | 129 | | 12 353.8 | | | | 2 094.4 | 14 448.2 |
| 3583 | 147 | | 2 857.1 | | | | 660.5 | 3 517.6 |
| 3584 | 177 | | 987.6 | | | | 2 354.8 | 3 342.4 |
| 3588 | 137 | | 6 310.2 | | | | 1 764.8 | 8 074.9 |
| 3589 | 113 | 221.1 | 9 273.1 | | | | 1 016.3 | 10 510.5 |
| 3590 | 96 | | 5.2 | | | | 612.3 | 617.5 |
| 3596 | 96 | | 2 256.6 | | | | 1 074.6 | 3 331.3 |
| 3599 | 125 | 89.9 | 93.1 | | | | 255.9 | 438.8 |
| 3600 | 116 | 53.6 | 1 492.3 | | | | 70.7 | 1 616.6 |
| 3604 | 73 | | 0.3 | | | | 19.4 | 19.7 |
| MEAN | 117.5 | 33.7 | 3 344.6 | | | | 966.6 | 4 344.9 |
| SD | | 68.8 | 4 161.6 | | | | 796.3 | 4 670.3 |
| %CATCH | | 0.8 | 77.0 | | | | 22.2 | |

Catch rates (kg/hour) by main deep-water groups caught in valid swept area bottom trawl hauls on the shelf. Southern region. Slope (201-800 m).

Slope (201-800 m)

| Station | Depth | Seabreams | Hake | <i>P. longirostris</i> | <i>A. avardens</i> | <i>N. africana</i> | Other | Total |
|---------|-------|-----------|-------|------------------------|--------------------|--------------------|---------|---------|
| 3585 | 291 | | 156.1 | | | | 372.7 | 528.8 |
| 3586 | 718 | | | | 12.7 | | 524.0 | 536.7 |
| 3587 | 691 | | 26.5 | | | 3.6 | 1 030.0 | 1 060.1 |
| 3597 | 349 | | 5.5 | 0.6 | 17.3 | | 2 130.2 | 2 153.6 |
| 3598 | 599 | | 131.0 | | 1.7 | | 216.5 | 349.2 |
| MEAN | 529.6 | | 63.8 | 0.1 | 7.1 | | 854.7 | 925.7 |
| SD | | | 74.0 | 0.3 | 7.5 | | 775.7 | 736.0 |
| %CATCH | | | 6.9 | 0.0 | 0.8 | | 92.3 | |

Catch rates (kg/hour) by main groups caught in valid swept area bottom trawl hauls on the shelf, Central region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m), C: Slope (201-800 m).

A. Inner shells (20-70 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|----------|----------|
| 3611 | 55 | 1 421.5 | 266.6 | | 8.2 | | 387.6 | 2 083.9 |
| 3616 | 58 | 1 169.0 | 305.3 | | 8.8 | | 100.3 | 1 581.4 |
| 3628 | 64 | 401.3 | 247.9 | 0.2 | 12.8 | | 58.4 | 720.5 |
| 3629 | 29 | 554.1 | 176.6 | | 11.2 | | 93.5 | 835.4 |
| 3635 | 62 | 35.4 | 403.4 | | 14.5 | | 130.8 | 584.2 |
| 3636 | 42 | 62.4 | 16.7 | | 14.6 | | 104.5 | 198.2 |
| 3637 | 28 | 3.7 | 0.9 | | 2.4 | | 15.1 | 22.1 |
| 3638 | 24 | 95.4 | 12.1 | | 4.5 | | 119.0 | 231.1 |
| 3639 | 21 | 1.2 | | | 4.1 | | 17.9 | 23.1 |
| 3644 | 34 | 5 092.7 | 483.5 | | | | 525.4 | 6 101.7 |
| 3645 | 53 | 5 020.5 | 874.6 | 1.4 | | | 394.9 | 6 291.4 |
| 3650 | 29 | 724.5 | 105.9 | 7.7 | 3.4 | | 59.0 | 900.6 |
| 3651 | 46 | 291.9 | 110.6 | | 3.0 | | 146.7 | 552.1 |
| 3662 | 49 | 248.8 | 5.5 | | 20.4 | | 124.3 | 399.0 |
| 3663 | 31 | 237.3 | 30.2 | 0.2 | 5.0 | 10.0 | 62.9 | 345.6 |
| 3664 | 33 | 2 376.7 | 511.6 | 0.2 | | | 19 328.7 | 22 217.2 |
| 3665 | 47 | 3.8 | 5.7 | | 2.5 | | 7.0 | 19.0 |
| 3666 | 68 | 79.8 | 5 061.1 | | 18.0 | | 50.2 | 5 209.1 |
| 3671 | 33 | 22.5 | 52.6 | | 1.0 | | 21.3 | 97.4 |
| 3672 | 61 | 51.6 | 3.8 | | 11.0 | 14.2 | 32.6 | 113.2 |
| 3678 | 31 | 28.4 | 20.1 | | 6.5 | | 40.2 | 95.3 |
| 3679 | 69 | 138.2 | 71.6 | | 11.8 | | 115.3 | 337.0 |
| 3687 | 51 | 31.1 | 1.2 | | 25.3 | | 82.3 | 139.8 |
| 3688 | 25 | 112.1 | 183.6 | | 0.7 | | 129.5 | 426.0 |
| 3389 | 25 | 11.7 | 54.9 | 0.5 | | | 47.4 | 114.5 |
| MEAN | 42.7 | 728.6 | 360.2 | 0.4 | 7.6 | 1.0 | 887.8 | 1 985.6 |
| SD | | 1 416.5 | 1 002.5 | 1.5 | 7.1 | 3.4 | 3 844.0 | 4 606.3 |
| %CATCH | | 36.7 | 18.1 | 0.0 | 0.4 | 0.0 | 44.7 | |

B. Outer shelf (71-200 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|---------|---------|
| 3607 | 90 | 15.4 | 43.1 | 0.5 | 0.3 | | 19.9 | 79.1 |
| 3608 | 107 | 152.1 | 71.9 | | 7.9 | | 47.2 | 279.2 |
| 3612 | 75 | 1 341.2 | 119.7 | | 6.4 | | 268.4 | 1 735.7 |
| 3613 | 99 | 249.4 | 6.9 | | 5.5 | | 27.5 | 289.3 |
| 3615 | 109 | 201.3 | | | 0.3 | | 15.3 | 216.8 |
| 3617 | 72 | 67.1 | 46.5 | | 9.5 | | 76.0 | 199.1 |
| 3618 | 99 | 514.7 | | 0.5 | 1.7 | | 93.2 | 610.1 |
| 3626 | 160 | 122.9 | 142.8 | 5.7 | 21.0 | 1.4 | 2 554.9 | 2 848.6 |
| 3627 | 111 | 30.7 | 40.3 | | 10.5 | | 30.9 | 112.3 |
| 3634 | 103 | 53.9 | 2 978.0 | | 19.2 | | 100.6 | 3 151.7 |
| 3642 | 146 | 125.6 | 283.2 | 5.9 | 25.7 | | 1 145.5 | 1 585.9 |
| 3643 | 115 | 83.5 | 805.4 | | 17.2 | | 24.3 | 928.3 |
| 3646 | 116 | 38.4 | 64.3 | 0.5 | 5.2 | | 67.6 | 175.9 |
| 3652 | 90 | 75.7 | 11.1 | | 9.4 | | 74.4 | 170.6 |
| 3653 | 146 | 39.1 | 1.1 | | 14.8 | 10.4 | 44.9 | 110.2 |
| 3660 | 131 | 83.7 | 4.3 | | 10.9 | | 31.7 | 130.6 |
| 3661 | 94 | 29.9 | 536.4 | | 14.6 | | 211.8 | 792.7 |
| 3669 | 171 | 111.4 | 45.8 | | 18.2 | 0.8 | 130.8 | 306.9 |
| 3670 | 95 | 18.2 | 484.5 | | 16.2 | | 100.2 | 619.1 |
| 3673 | 87 | 9.6 | 9.2 | | 12.7 | 7.0 | 53.8 | 92.3 |
| 3674 | 107 | 15.8 | 112.9 | | 9.2 | 2.5 | 109.0 | 249.5 |
| 3680 | 96 | 217.3 | 149.6 | | 28.0 | 20.5 | 101.2 | 516.7 |
| 3685 | 114 | 147.0 | 184.6 | 1.3 | 13.7 | 5.3 | 80.2 | 432.1 |
| 3686 | 91 | 1 989.1 | 110.3 | | 28.7 | | 77.0 | 2 205.1 |
| 3690 | 78 | 76.3 | 41.5 | 5.7 | 10.3 | | 48.1 | 181.8 |
| 3691 | 115 | 10.8 | 364.3 | | 17.6 | | 82.3 | 475.1 |
| MEAN | 108.3 | 223.8 | 256.0 | 0.8 | 12.9 | 1.8 | 216.0 | 711.3 |
| SD | | 447.0 | 589.3 | 1.9 | 7.8 | 4.6 | 523.8 | 866.3 |
| %CATCH | | 31.5 | 36.0 | 0.1 | 1.8 | 0.3 | 30.4 | |

C. Slope (201-800 m).

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|---------|---------|
| 3609 | 731 | 29.2 | 0.2 | 8.2 | 0.2 | 8.2 | 254.5 | 300.4 |
| 3610 | 648 | 67.0 | | 45.4 | 0.8 | 2.4 | 161.9 | 277.4 |
| 3619 | 261 | 2 663.6 | 2.6 | 7.7 | 11.1 | | 960.3 | 3 645.3 |
| 3620 | 473 | 15.0 | 0.0 | 174.7 | 2.1 | 15.0 | 68.4 | 275.1 |
| 3621 | 575 | 90.0 | 3.9 | 43.0 | | 3.8 | 355.9 | 496.6 |
| 3622 | 655 | 17.1 | 0.5 | 30.9 | | 2.6 | 149.6 | 200.6 |
| 3623 | 683 | 31.1 | 9.3 | 27.2 | 0.6 | 5.9 | 162.8 | 236.9 |
| 3625 | 349 | 8.6 | 22.2 | 19.6 | 5.1 | 4.4 | 144.3 | 204.1 |
| 3630 | 363 | 178.5 | | 223.5 | 1.8 | 3.1 | 167.2 | 574.1 |
| 3631 | 444 | 13.4 | | 406.7 | 5.5 | 3.9 | 154.0 | 583.4 |
| 3632 | 734 | 16.5 | | 14.4 | 2.7 | 1.0 | 204.5 | 239.1 |
| 3633 | 271 | 189.5 | 807.4 | 40.8 | 3.7 | | 1 294.7 | 2 336.1 |
| 3640 | 523 | 14.6 | 0.7 | 150.5 | | 1.3 | 85.8 | 252.9 |
| 3647 | 222 | 155.5 | 36.4 | 63.0 | 94.7 | | 1 505.2 | 1 854.8 |
| 3648 | 358 | 801.9 | 5.9 | 311.0 | 12.0 | | 119.7 | 1 250.6 |
| 3649 | 644 | 124.5 | | 137.0 | 1.6 | 2.8 | 159.8 | 425.7 |
| 3654 | 221 | 465.1 | 18.1 | 13.7 | 102.6 | 7.3 | 893.7 | 1 500.4 |
| 3655 | 328 | 482.1 | 30.5 | 1.9 | 1.8 | | 2 858.3 | 3 374.5 |
| 3656 | 503 | 20.7 | 0.5 | 155.5 | 3.7 | | 79.1 | 259.6 |
| 3657 | 520 | 27.3 | 8.1 | 214.1 | 2.4 | | 57.8 | 309.7 |
| 3658 | 726 | 41.2 | | 82.4 | 9.8 | 2.0 | 113.7 | 249.2 |
| 3659 | 349 | 233.3 | | 39.4 | 1.6 | 0.4 | 925.1 | 1 199.7 |
| 3667 | 607 | 33.1 | | 181.6 | 3.4 | 3.9 | 123.5 | 345.4 |
| 3668 | 420 | 713.3 | | 124.4 | | 9.1 | 120.2 | 966.9 |
| 3675 | 383 | 378.8 | 93.4 | 154.3 | | | 40.3 | 666.8 |
| 3676 | 730 | 46.4 | | 54.6 | 1.5 | 9.6 | 266.2 | 378.3 |
| 3677 | 621 | 13.8 | 1.0 | 119.8 | 3.0 | 4.0 | 149.0 | 290.7 |
| 3681 | 213 | 195.4 | 98.6 | 3.0 | 1.9 | 20.8 | 2 232.4 | 2 552.0 |
| 3682 | 535 | 97.8 | 3.3 | 92.1 | 1.7 | | 58.7 | 253.6 |
| 3683 | 765 | 29.8 | | 12.1 | | 1.6 | 539.2 | 582.7 |
| 3692 | 260 | 246.1 | 32.2 | 41.5 | | | 588.3 | 908.0 |
| 3693 | 434 | 280.2 | 1.9 | 173.0 | | 17.0 | 176.0 | 648.0 |
| 3694 | 731 | 25.7 | | 25.2 | 7.2 | 6.8 | 142.4 | 207.3 |
| MEAN | 493.3 | 234.7 | 35.7 | 96.7 | 8.6 | 4.1 | 464.0 | 843.8 |
| SD | | 480.7 | 140.6 | 96.2 | 23.5 | 5.2 | 657.6 | 920.0 |
| %CATCH | | 27.8 | 4.2 | 11.5 | 1.0 | 0.5 | 55.0 | |

Catch rates (kg/hour) by main demersal groups caught in valid swept area bottom trawl hauls on the shelf, Central region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m).

A. Inner shelf (20-70 m)

| Station | Depth | Seabreams | Snappers | Groupers | Grunts | Croakers | Other | Total |
|---------|-------|-----------|----------|----------|---------|----------|----------|----------|
| 3611 | 55 | 284.1 | | | 802.0 | 325.5 | 672.3 | 2 083.9 |
| 3616 | 58 | 464.8 | | 111.8 | 540.1 | 15.2 | 449.4 | 1 581.4 |
| 3628 | 64 | 91.4 | | | 255.1 | 33.4 | 340.7 | 720.5 |
| 3629 | 29 | 114.6 | | | 391.1 | 48.4 | 281.3 | 835.4 |
| 3635 | 62 | 31.5 | | | 4.0 | | 548.8 | 584.2 |
| 3636 | 42 | 27.0 | | 23.8 | 11.4 | | 136.0 | 198.2 |
| 3637 | 28 | 0.4 | | 1.5 | 1.8 | | 18.4 | 22.1 |
| 3638 | 24 | | | 59.4 | 19.6 | 7.5 | 144.7 | 231.1 |
| 3639 | 21 | | | | 1.2 | | 22.0 | 23.1 |
| 3644 | 34 | | | | 4 745.0 | 347.7 | 1 008.9 | 6 101.7 |
| 3645 | 53 | 149.5 | | 1.4 | 4 351.3 | 507.2 | 1 282.0 | 6 291.4 |
| 3650 | 29 | 2.4 | | 1.3 | 700.6 | 20.3 | 176.0 | 900.6 |
| 3651 | 46 | 52.0 | | | 204.5 | 32.3 | 263.4 | 552.1 |
| 3662 | 49 | 164.6 | | 5.9 | 55.2 | 14.1 | 159.1 | 399.0 |
| 3663 | 31 | 4.8 | | 2.8 | 200.5 | 29.1 | 108.4 | 345.6 |
| 3664 | 33 | 0.6 | | 1.2 | 2 311.0 | 63.9 | 19 840.5 | 22 217.2 |
| 3665 | 47 | 2.6 | | | 1.2 | | 15.1 | 19.0 |
| 3666 | 68 | 29.9 | | 1.1 | 42.5 | | 5 135.6 | 5 209.1 |
| 3671 | 33 | 2.7 | | 1.4 | 15.5 | 2.9 | 74.9 | 97.4 |
| 3672 | 61 | 35.5 | | 1.9 | 12.5 | | 63.3 | 113.2 |
| 3678 | 31 | 20.3 | | | 8.2 | | 66.8 | 95.3 |
| 3679 | 69 | 130.8 | | 0.9 | 1.7 | | 203.6 | 337.0 |
| 3687 | 51 | 12.8 | | 14.1 | 4.2 | | 108.7 | 139.8 |
| 3688 | 25 | 53.9 | 2.7 | 35.4 | 19.3 | | 314.7 | 426.0 |
| 3389 | 25 | 7.6 | | 1.8 | 0.4 | | 104.6 | 114.5 |
| MEAN | 42.7 | 67.3 | 0.1 | 10.6 | 588.0 | 57.9 | 1 261.6 | 1 985.6 |
| SD | | 108.3 | 0.5 | 25.2 | 1 289.0 | 130.8 | 4 002.1 | 4 606.3 |
| %CATCH | | 3.4 | 0.0 | 0.5 | 29.6 | 2.9 | 63.5 | |

B. Outer shelf (71-200 m)

| Station | Depth | Seabreams | Snappers | Groupers | Grunts | Croakers | Other | Total |
|---------|-------|-----------|----------|----------|--------|----------|--------|--------|
| 3607 | 90 | 8.1 | | 0.2 | 2.1 | | 68.7 | 79.1 |
| 3608 | 107 | 67.4 | | | | 42.9 | 168.8 | 279.2 |
| 3612 | 75 | 114.9 | | | 1143.2 | 56.7 | 420.8 | 1735.7 |
| 3613 | 99 | 174.2 | | | | 71.8 | 43.3 | 289.3 |
| 3615 | 109 | 37.1 | | | | 162.4 | 17.3 | 216.8 |
| 3617 | 72 | 48.2 | | 0.4 | 11.7 | | 138.8 | 199.1 |
| 3618 | 99 | 231.3 | | | 5.6 | 266.5 | 106.7 | 610.1 |
| 3626 | 160 | 92.3 | | | | | 2756.3 | 2848.6 |
| 3627 | 111 | 28.8 | | | | | 83.5 | 112.3 |
| 3634 | 103 | 6.7 | | | 5.5 | | 3139.5 | 3151.7 |
| 3642 | 146 | 25.2 | | | | 1.2 | 1559.5 | 1585.9 |
| 3643 | 115 | 12.5 | | | | 53.5 | 862.3 | 928.3 |
| 3646 | 116 | 10.2 | | | | | 165.7 | 175.9 |
| 3652 | 90 | 10.1 | | | 56.3 | 3.0 | 101.2 | 170.6 |
| 3653 | 146 | 32.0 | | | | 0.9 | 77.4 | 110.2 |
| 3660 | 131 | 71.7 | | | | | 58.9 | 130.6 |
| 3661 | 94 | 18.3 | | | 9.3 | | 765.1 | 792.7 |
| 3669 | 171 | 83.4 | | | | 2.9 | 220.5 | 306.9 |
| 3670 | 95 | 18.2 | | | | | 600.9 | 619.1 |
| 3673 | 87 | 9.3 | | | | | 83.0 | 92.3 |
| 3674 | 107 | 14.9 | | | 0.7 | | 233.8 | 249.5 |
| 3680 | 96 | 49.1 | | | 159.9 | | 307.7 | 516.7 |
| 3685 | 114 | 4.3 | | | 96.5 | 8.9 | 322.4 | 432.1 |
| 3686 | 91 | 206.0 | | 1.8 | 1692.2 | 25.7 | 279.4 | 2205.1 |
| 3690 | 78 | 3.3 | | | 41.7 | 15.5 | 121.3 | 181.8 |
| 3691 | 115 | 8.8 | | | | | 466.3 | 475.1 |
| MEAN | 108.3 | 53.3 | | 0.1 | 124.0 | 27.4 | 506.5 | 711.3 |
| SD | | 63.5 | | 0.4 | 390.4 | 60.7 | 795.5 | 866.3 |
| %CATCH | | 7.5 | | 0.0 | 17.4 | 3.8 | 71.2 | |

Catch rates (kg/hour) by main pelagic groups caught in valid swept area bottom trawl hauls on the shelf. Central region. A. Inner shelf (20-70 m), B. Outer shelf (71-200 m).

A. Inner shelf (20-70 m)

| Station | Depth | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Other | Total |
|---------|-------|----------|-----------|-----------|-----------|------------|---------|---------|
| 3611 | 55 | | 236.1 | | 27.7 | 2.7 | 1817.3 | 2083.9 |
| 3616 | 58 | 3.2 | 210.2 | 72.6 | 10.0 | 7.5 | 1278.0 | 1581.4 |
| 3628 | 64 | 5.5 | 183.2 | | 59.2 | | 472.7 | 720.5 |
| 3629 | 29 | 10.4 | 135.9 | | 24.7 | 5.6 | 658.9 | 835.4 |
| 3635 | 62 | 279.4 | 112.3 | | | 11.8 | 180.8 | 584.2 |
| 3636 | 42 | 3.1 | 0.7 | | 12.9 | | 181.4 | 198.2 |
| 3637 | 28 | 0.4 | 0.5 | | | | 21.2 | 22.1 |
| 3638 | 24 | | 1.9 | 1.1 | 0.3 | 8.9 | 219.0 | 231.1 |
| 3639 | 21 | | | | | | 23.1 | 23.1 |
| 3644 | 34 | 87.7 | 270.3 | | 81.6 | 43.9 | 5618.2 | 6101.7 |
| 3645 | 53 | 41.5 | 748.7 | | 83.7 | 0.6 | 5416.8 | 6291.4 |
| 3650 | 29 | 14.4 | 18.9 | | 72.6 | | 794.6 | 900.6 |
| 3651 | 46 | | 24.0 | 1.8 | 84.8 | | 441.5 | 552.1 |
| 3662 | 49 | | 3.7 | | | 1.8 | 393.6 | 399.0 |
| 3663 | 31 | 0.4 | 21.9 | | 5.3 | 2.6 | 315.4 | 345.6 |
| 3664 | 33 | 47.3 | 190.6 | | 264.8 | 9.0 | 21705.6 | 22217.2 |
| 3665 | 47 | 1.2 | 4.5 | | | | 13.3 | 19.0 |
| 3666 | 68 | 1.6 | 0.2 | | 5058.4 | 0.9 | 148.0 | 5209.1 |
| 3671 | 33 | 0.1 | 44.7 | 1.0 | 3.3 | 3.5 | 44.8 | 97.4 |
| 3672 | 61 | 0.5 | 0.2 | 1.6 | | 1.4 | 109.4 | 113.2 |
| 3678 | 31 | | 19.3 | | | 0.8 | 75.2 | 95.3 |
| 3679 | 69 | 0.2 | 48.1 | | 4.1 | 19.2 | 265.4 | 337.0 |
| 3687 | 51 | | | | | 1.2 | 138.6 | 139.8 |
| 3688 | 25 | | 173.3 | 6.9 | | 3.4 | 242.4 | 426.0 |
| 3389 | 25 | 17.1 | 37.1 | | | 0.7 | 59.6 | 114.5 |
| MEAN | 42.7 | 20.6 | 99.4 | 3.4 | 231.7 | 5.0 | 1625.4 | 1985.6 |
| SD | | 57.7 | 161.4 | 14.5 | 1007.2 | 9.3 | 4439.3 | 4606.3 |
| %CATCH | | 1.0 | 5.0 | 0.2 | 11.7 | 0.3 | 81.9 | |

B. Outer shelf (71-200 m)

| Station | Depth | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Other | Total |
|---------|-------|----------|-----------|-----------|-----------|------------|---------|---------|
| 3607 | 90 | 0.4 | 2.0 | | 40.7 | | 36.0 | 79.1 |
| 3608 | 107 | | | | 71.9 | | 207.3 | 279.2 |
| 3612 | 75 | | 2.7 | | 117.0 | | 1 615.9 | 1 735.7 |
| 3613 | 99 | | | | 6.9 | | 282.4 | 289.3 |
| 3615 | 109 | | | | | | 216.8 | 216.8 |
| 3617 | 72 | 1.0 | 42.7 | | 2.8 | | 152.7 | 199.1 |
| 3618 | 99 | | | | | | 610.1 | 610.1 |
| 3626 | 160 | | | | 142.8 | | 2 705.8 | 2 848.6 |
| 3627 | 111 | | | | 37.7 | 2.6 | 72.0 | 112.3 |
| 3634 | 103 | | 6.0 | | 2 971.0 | 1.0 | 173.7 | 3 151.7 |
| 3642 | 146 | | | | 283.2 | | 1 302.7 | 1 585.9 |
| 3643 | 115 | | | | 803.4 | | 125.0 | 928.3 |
| 3646 | 116 | | 1.2 | | 63.1 | | 111.6 | 175.9 |
| 3652 | 90 | | 5.5 | | 5.7 | | 159.5 | 170.6 |
| 3653 | 146 | | | | 1.1 | | 109.1 | 110.2 |
| 3660 | 131 | | | | 4.3 | | 126.3 | 130.6 |
| 3661 | 94 | 98.1 | 419.7 | 2.2 | 16.3 | | 256.3 | 792.7 |
| 3669 | 171 | | | | 45.8 | | 261.1 | 306.9 |
| 3670 | 95 | 6.8 | 473.3 | | 4.4 | | 134.6 | 619.1 |
| 3673 | 87 | | 4.2 | | 5.0 | | 83.0 | 92.3 |
| 3674 | 107 | | 44.6 | | 68.4 | | 136.6 | 249.5 |
| 3680 | 96 | | 11.6 | | 138.0 | | 367.1 | 516.7 |
| 3685 | 114 | | 169.7 | | 15.0 | | 247.5 | 432.1 |
| 3686 | 91 | | 101.3 | 2.7 | 6.3 | | 2 094.8 | 2 205.1 |
| 3690 | 78 | 0.5 | 29.8 | 0.4 | 8.0 | 2.7 | 140.3 | 181.8 |
| 3691 | 115 | | | | 364.3 | | 110.7 | 475.1 |
| MEAN | 108.3 | 4.1 | 50.6 | 0.2 | 200.9 | 0.2 | 455.3 | 711.3 |
| SD | | 19.2 | 122.9 | 0.7 | 590.2 | 0.7 | 684.6 | 866.3 |
| %CATCH | | 0.6 | 7.1 | 0.0 | 28.2 | 0.0 | 64.0 | |

Catch rates (kg/hour) by main deep-water groups caught in valid swept area bottom trawl hauls on the shelf Central region, Slope (201-800 m)

Slope (201-800 m)

| Station | Depth | Seabreams | Hake | <i>P longirostris</i> | <i>Avarikus</i> | <i>N africana</i> | Other | Total |
|---------|-------|-----------|-------|-----------------------|-----------------|-------------------|---------|---------|
| 3609 | 731 | | | | 5.9 | 0.2 | 294.3 | 300.4 |
| 3610 | 648 | | 27.8 | | 21.2 | 22.8 | 205.6 | 277.4 |
| 3619 | 261 | 2 582.4 | 81.2 | 7.7 | | | 974.0 | 3 645.3 |
| 3620 | 473 | | 15.0 | | 23.7 | 150.0 | 86.5 | 275.1 |
| 3621 | 575 | | 19.1 | | 8.8 | 34.2 | 434.5 | 496.6 |
| 3622 | 655 | | 14.4 | | 7.4 | 23.4 | 155.3 | 200.6 |
| 3623 | 683 | | 9.9 | | 16.6 | 8.6 | 202.3 | 237.4 |
| 3625 | 349 | | 8.6 | 8.8 | 5.7 | | 181.1 | 204.1 |
| 3630 | 363 | | 178.5 | 63.3 | 2.2 | 156.9 | 173.3 | 574.1 |
| 3631 | 444 | | 13.4 | | 12.8 | 391.7 | 165.6 | 583.4 |
| 3632 | 734 | | 4.5 | | 6.9 | 5.3 | 222.4 | 239.1 |
| 3633 | 271 | 40.8 | 148.4 | 40.8 | | | 2 105.8 | 2 335.7 |
| 3640 | 523 | | 13.6 | | 19.7 | 130.1 | 89.4 | 252.9 |
| 3647 | 222 | | | 63.0 | | | 1 807.8 | 1 870.8 |
| 3648 | 358 | | 801.9 | 9.1 | 2.5 | 298.8 | 138.3 | 1 250.6 |
| 3649 | 644 | | 82.6 | | 9.4 | 127.7 | 206.0 | 425.7 |
| 3654 | 221 | 0.5 | 0.0 | 13.7 | | | 1 486.3 | 1 500.4 |
| 3655 | 328 | | 482.1 | 1.3 | | | 2 891.1 | 3 374.5 |
| 3656 | 503 | | 7.0 | | 50.6 | 104.6 | 97.3 | 259.6 |
| 3657 | 520 | | 26.4 | | 29.7 | 183.3 | 70.4 | 309.7 |
| 3658 | 726 | | 12.7 | | 8.5 | 73.1 | 154.9 | 249.2 |
| 3659 | 349 | | 233.3 | 2.6 | 1.6 | | 962.2 | 1 199.7 |
| 3667 | 607 | | 33.1 | | 7.4 | 174.2 | 130.7 | 345.4 |
| 3668 | 420 | | 713.3 | | 6.8 | 116.0 | 130.7 | 966.9 |
| 3675 | 383 | | 378.8 | 6.7 | | 147.6 | 133.7 | 666.8 |
| 3676 | 730 | | 9.6 | | 49.4 | 3.4 | 316.0 | 378.3 |
| 3677 | 621 | | 9.4 | | 10.7 | 108.6 | 161.9 | 290.7 |
| 3681 | 213 | 56.5 | 97.1 | 3.0 | | | 2 395.4 | 2 552.0 |
| 3682 | 535 | | 92.2 | | 10.3 | 81.8 | 69.2 | 253.6 |
| 3683 | 766 | | 20.1 | | 11.0 | | 551.6 | 582.7 |
| 3692 | 260 | 67.5 | 78.5 | 41.4 | | | 720.6 | 908.0 |
| 3693 | 434 | | 280.2 | 1.4 | 26.4 | 145.2 | 194.8 | 648.0 |
| 3694 | 731 | | 11.2 | | 11.4 | 12.4 | 172.3 | 207.3 |
| MEAN | 493.3 | 83.3 | 118.3 | 8.0 | 11.1 | 75.8 | 547.9 | 844.3 |
| SD | | 448.9 | 201.2 | 17.4 | 12.9 | 95.4 | 743.5 | 920.6 |
| %CATCH | | 9.9 | 14.0 | 0.9 | 1.3 | 9.0 | 64.9 | |

Catch rates (kg/ha) by main groups caught in valid swept area bottom trawl hauls on the shelf, Northern region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m), C: Slope (201-800 m).

A. Inner shelf (20-70 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|-------|----------|
| 3706 | 52 | 381.1 | 149.5 | | 1.8 | 6.1 | 209.5 | 747.9 |
| 3707 | 43 | 199.0 | 104.3 | 1.0 | 0.5 | | 94.6 | 399.4 |
| 3708 | 31 | 1 113.2 | 255.2 | 3.5 | 19.2 | 4.8 | 225.4 | 1 621.2 |
| 3721 | 45 | 488.1 | 176.8 | 6.6 | 4.8 | | 101.2 | 777.6 |
| 3722 | 28 | 193.0 | 244.3 | 4.8 | 4.5 | | 219.0 | 665.6 |
| 3723 | 26 | 1 043.7 | 155.4 | 1.8 | 3.1 | | 218.0 | 1 422.0 |
| 3724 | 42 | 219.0 | 69.9 | 1.1 | 4.1 | 7.0 | 140.5 | 441.6 |
| 3725 | 65 | 1 248.4 | 86.8 | 1.6 | 3.0 | | 134.4 | 1 474.2 |
| 3737 | 43 | 908.6 | 279.6 | 9.6 | 7.1 | | 257.4 | 1 462.3 |
| 3744 | 70 | 9.5 | | | 38.9 | | 16.9 | 65.4 |
| 3745 | 38 | 194.0 | 216.0 | | 0.2 | | 45.5 | 455.8 |
| 3746 | 28 | 8 648.0 | 1 170.5 | | | | 277.7 | 10 096.2 |
| 3752 | 58 | 96.4 | 0.1 | | 4.8 | | 69.5 | 170.8 |
| 3753 | 42 | 63.4 | | | 0.7 | | 25.7 | 89.8 |
| 3754 | 26 | 150.0 | 9.7 | | | | 165.1 | 324.8 |
| 3755 | 38 | 19.6 | 0.8 | | 9.3 | 4.0 | 215.8 | 249.4 |
| 3756 | 49 | 38.5 | | 10.7 | 8.1 | 7.8 | 21.6 | 86.7 |
| 3780 | 54 | 25.3 | 3.6 | | 1.4 | | 56.1 | 86.5 |
| 3796 | 68 | 151.5 | 27.6 | 0.5 | 3.1 | 8.3 | 20.7 | 211.6 |
| 3797 | 36 | 51.0 | 17.0 | | 2.0 | 12.0 | 96.0 | 178.0 |
| MEAN | 44.1 | 762.1 | 148.3 | 2.1 | 5.8 | 2.5 | 130.5 | 1051.3 |
| SD | | 1 898.7 | 259.7 | 3.3 | 9.0 | 3.8 | 87.3 | 2 191.6 |
| %CATCH | | 72.5 | 14.1 | 0.2 | 0.6 | 0.2 | 12.4 | |

B. Outer shelf (71-200 m)

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|-------|---------|
| 3703 | 148 | 135.2 | 278.5 | 0.4 | 5.2 | 7.8 | 89.4 | 516.5 |
| 3704 | 114 | 187.1 | 59.4 | | 11.1 | 3.6 | 28.0 | 289.2 |
| 3713 | 164 | 174.9 | 349.6 | 0.6 | 5.1 | 1.4 | 141.6 | 673.3 |
| 3718 | 112 | 106.5 | 119.0 | 0.8 | 27.3 | 19.0 | 65.3 | 337.9 |
| 3719 | 84 | 2 538.6 | 397.5 | | 7.2 | | 105.0 | 3 048.4 |
| 3729 | 95 | 1 163.7 | 48.9 | | 33.2 | 4.7 | 91.6 | 1 342.0 |
| 3730 | 116 | 324.9 | 10.0 | | 8.8 | 0.0 | 59.6 | 403.2 |
| 3731 | 138 | 91.4 | 1.3 | | 1.6 | 5.5 | 243.2 | 343.1 |
| 3732 | 158 | 45.7 | 12.9 | | 1.6 | 9.0 | 187.1 | 256.3 |
| 3733 | 105 | 202.9 | 16.7 | | 16.1 | | 57.7 | 293.4 |
| 3735 | 87 | 195.2 | 24.8 | | 30.8 | | 184.4 | 435.2 |
| 3736 | 72 | 105.1 | 145.4 | | 37.2 | 4.7 | 98.2 | 390.6 |
| 3742 | 115 | 691.0 | 4.7 | | 0.0 | 11.5 | 28.6 | 735.7 |
| 3743 | 89 | 606.0 | 47.0 | | 80.4 | | 98.7 | 832.0 |
| 3750 | 114 | 124.9 | 15.4 | | 2.0 | | 49.4 | 191.7 |
| 3751 | 86 | 309.1 | 2.7 | | 14.6 | | 91.9 | 418.3 |
| 3757 | 75 | 645.1 | 7.5 | | 1.9 | 21.1 | 42.7 | 718.3 |
| 3762 | 119 | 42.2 | 0.1 | | 2.9 | 22.3 | 37.9 | 105.4 |
| 3763 | 81 | 265.2 | 195.6 | | 7.0 | 11.5 | 32.4 | 511.7 |
| 3764 | 88 | 280.0 | 34.4 | | 15.0 | | 35.4 | 364.7 |
| 3765 | 111 | 99.8 | 18.4 | | 19.3 | 18.8 | 126.3 | 282.6 |
| 3766 | 120 | 66.5 | 13.1 | | 4.6 | 1.2 | 61.2 | 146.6 |
| 3767 | 152 | 83.2 | 9.4 | | 3.6 | 1.1 | 47.8 | 145.1 |
| 3772 | 90 | 33.6 | | | 2.8 | | 67.1 | 103.6 |
| 3774 | 118 | 68.7 | | | 0.9 | 1.2 | 8.7 | 79.5 |
| 3775 | 134 | 96.1 | 0.6 | | 1.2 | 6.3 | 72.7 | 176.9 |
| 3781 | 80 | 1 320.5 | 177.3 | | 8.5 | 2.5 | 17.9 | 1 526.7 |
| 3782 | 96 | 330.5 | 51.1 | | 2.5 | 10.7 | 111.3 | 506.0 |
| 3783 | 109 | 149.1 | 88.2 | 0.2 | 11.7 | 11.8 | 68.7 | 329.6 |
| 3784 | 116 | 154.0 | 26.7 | | 5.3 | 5.1 | 42.0 | 233.1 |
| 3785 | 125 | 179.0 | 13.3 | | 0.6 | 5.0 | 155.7 | 353.6 |
| 3792 | 122 | 475.2 | 36.2 | | 5.8 | | 222.1 | 739.2 |
| 3793 | 109 | 163.5 | 5.6 | | 10.9 | | 29.9 | 209.9 |
| 3794 | 92 | 129.0 | 6.5 | | 8.9 | | 43.0 | 187.5 |
| 3795 | 76 | 147.9 | 273.7 | | 5.9 | | 11.5 | 438.9 |
| MEAN | 108.9 | 335.2 | 71.2 | 0.1 | 11.5 | 5.3 | 81.5 | 504.7 |
| SD | | 483.5 | 106.3 | 0.2 | 15.4 | 6.7 | 59.2 | 545.0 |
| %CATCH | | 66.4 | 14.1 | | 2.3 | 1.1 | 16.2 | |

| Station | Depth | Demersal | Pelagic | Shrimps | Cephalopods | Sharks | Other | Total |
|---------|-------|----------|---------|---------|-------------|--------|---------|---------|
| 3695 | 216 | 250.7 | 48.8 | 15.3 | 3.7 | 12.8 | 986.9 | 1 318.2 |
| 3696 | 311 | 469.1 | 7.9 | 32.1 | | 19.8 | 804.3 | 1 333.2 |
| 3697 | 477 | 393.1 | 15.4 | 220.7 | | 172.4 | 159.2 | 960.9 |
| 3698 | 664 | 95.6 | | 136.5 | 2.1 | 5.7 | 149.7 | 389.5 |
| 3699 | 411 | 234.7 | 1.4 | 305.1 | 2.4 | 1.0 | 46.1 | 590.8 |
| 3700 | 537 | 13.6 | 2.9 | 218.4 | 5.3 | 0.6 | 150.7 | 391.5 |
| 3701 | 699 | 10.3 | | 156.8 | | 1.7 | 234.9 | 403.6 |
| 3702 | 710 | 30.3 | | 125.5 | | 0.3 | 168.5 | 324.5 |
| 3709 | 305 | 316.5 | 29.1 | 19.5 | 1.9 | | 1 047.4 | 1 414.4 |
| 3710 | 448 | 117.0 | 6.6 | 303.5 | 5.2 | 9.6 | 95.1 | 537.0 |
| 3711 | 537 | 5.5 | 10.9 | 259.0 | 4.5 | 7.2 | 214.9 | 502.1 |
| 3712 | 601 | 15.7 | 3.0 | 185.2 | | 1.2 | 84.6 | 289.7 |
| 3714 | 233 | 911.5 | 38.4 | 78.6 | 12.3 | | 2 414.8 | 3 455.5 |
| 3715 | 423 | 193.7 | 0.5 | 236.6 | 2.0 | | 45.9 | 478.7 |
| 3716 | 625 | 25.6 | 4.7 | 161.3 | 8.5 | 0.4 | 218.0 | 418.4 |
| 3717 | 706 | 75.4 | | 123.1 | 5.3 | 0.8 | 207.3 | 411.9 |
| 3726 | 525 | 1.9 | 5.7 | 264.0 | 13.1 | 0.8 | 108.4 | 394.0 |
| 3727 | 632 | 16.0 | 6.8 | 225.0 | | 7.7 | 156.3 | 411.8 |
| 3728 | 729 | 7.6 | 0.2 | 116.1 | | 0.5 | 163.9 | 288.3 |
| 3738 | 754 | 9.6 | 1.4 | 90.8 | 4.0 | 1.0 | 318.7 | 425.5 |
| 3739 | 647 | 19.8 | 5.5 | 140.6 | 1.5 | 0.4 | 167.8 | 335.5 |
| 3740 | 384 | 176.0 | 1.3 | 357.6 | | 9.3 | 69.8 | 614.1 |
| 3741 | 254 | 137.9 | 47.4 | 87.5 | 24.3 | 0.4 | 2 334.9 | 2 632.4 |
| 3747 | 717 | 5.1 | | 1.7 | 2.2 | 0.1 | 57.2 | 66.3 |
| 3748 | 528 | 31.5 | 7.0 | 78.1 | 4.0 | 1.4 | 73.1 | 195.1 |
| 3749 | 423 | 394.8 | 6.7 | 114.8 | | 32.2 | 44.2 | 592.7 |
| 3758 | 518 | 64.0 | 10.7 | 12.5 | 3.3 | 0.6 | 102.1 | 193.3 |
| 3759 | 518 | 100.6 | 10.1 | 42.7 | 2.6 | 1.4 | 102.8 | 260.1 |
| 3760 | 768 | 8.2 | 1.3 | 1.6 | 2.8 | | 88.1 | 102.0 |
| 3761 | 229 | 54.0 | 24.9 | 3.2 | 11.8 | 1.5 | 168.7 | 264.1 |
| 3768 | 619 | 40.1 | 1.6 | 28.4 | 2.6 | 0.8 | 105.2 | 178.5 |
| 3770 | 314 | 34.8 | 10.5 | 6.3 | 16.2 | 30.8 | 946.8 | 1 045.3 |
| 3771 | 266 | 133.4 | 48.5 | 32.4 | 21.6 | | 1 613.9 | 1 849.7 |
| 3776 | 271 | 48.3 | 138.2 | 36.1 | 3.4 | | 846.8 | 1 072.8 |
| 3777 | 440 | 65.3 | 38.2 | 66.4 | 4.4 | | 121.4 | 295.7 |
| 3778 | 519 | 33.9 | 4.1 | 81.1 | | 1.2 | 135.0 | 255.2 |
| 3779 | 707 | 13.5 | 0.7 | 21.0 | 1.4 | 5.7 | 78.6 | 121.0 |
| 3786 | 226 | 78.9 | 9.0 | 0.4 | 1.7 | 1.4 | 162.9 | 254.3 |
| 3787 | 330 | 10.0 | 77.9 | 12.7 | 2.1 | | 227.9 | 330.6 |
| 3788 | 655 | 29.2 | | 28.2 | | 1.5 | 131.0 | 189.8 |
| 3789 | 713 | 22.9 | 3.9 | 11.6 | 1.1 | 29.9 | 123.3 | 192.7 |
| 3790 | 738 | 2.1 | 0.1 | 2.7 | | 14.9 | 492.8 | 512.5 |
| 3791 | 380 | 120.5 | 51.6 | 72.6 | 4.6 | 70.6 | 242.5 | 562.4 |
| MEAN | 504.8 | 112.0 | 15.9 | 105.0 | 4.2 | 10.4 | 377.0 | 624.5 |
| SD | | 171.0 | 26.5 | 99.2 | 5.7 | 28.5 | 559.5 | 672.7 |
| %CATCH | | 17.9 | 2.5 | 16.8 | 0.7 | 1.7 | 60.4 | |

Catch rates (kg/hour) by main demersal groups caught in valid swept area bottom trawl hauls on the shelf, Northern region. A: Inner shelf (20-70 m), B: Outer shelf (71-200 m).

| Station | Depth | Scabreans | Snappers | Groupers | Grunts | Croakers | Other | Total |
|---------|-------|-----------|----------|----------|---------|----------|---------|----------|
| 3706 | 52 | 146.8 | | | 219.9 | 14.3 | 366.8 | 747.9 |
| 3707 | 43 | 33.2 | | 1.1 | 152.8 | 11.8 | 200.6 | 399.4 |
| 3708 | 31 | 12.9 | | | 890.1 | 210.2 | 508.1 | 1 621.2 |
| 3721 | 45 | 0.6 | | 3.6 | 381.0 | 95.7 | 296.6 | 777.6 |
| 3722 | 28 | | | | 95.5 | 94.8 | 475.4 | 665.6 |
| 3723 | 26 | | 24.3 | 18.5 | 360.9 | 580.3 | 438.0 | 1 422.0 |
| 3724 | 42 | | | 5.9 | 120.2 | 87.8 | 227.7 | 441.6 |
| 3725 | 65 | 73.5 | | | 1 082.9 | 79.1 | 238.7 | 1 474.2 |
| 3737 | 43 | | | 2.3 | 810.0 | 91.3 | 558.7 | 1 462.3 |
| 3744 | 70 | 7.3 | | 0.2 | 2.0 | | 55.9 | 65.4 |
| 3745 | 38 | 185.5 | | 6.2 | 2.4 | | 261.8 | 455.8 |
| 3746 | 28 | 362.7 | | | 8 285.3 | | 1 448.1 | 10 096.2 |
| 3752 | 58 | 92.5 | | 3.9 | | | 74.5 | 170.8 |
| 3753 | 42 | 60.6 | | 2.7 | | | 26.4 | 89.8 |
| 3754 | 26 | 85.3 | 56.7 | 8.0 | | | 174.8 | 324.8 |
| 3755 | 38 | 10.4 | 9.2 | | | | 229.8 | 249.4 |
| 3756 | 49 | 23.4 | | 14.4 | | | 48.9 | 86.7 |
| 3780 | 54 | 22.9 | | | 2.4 | | 61.2 | 86.5 |
| 3796 | 68 | 73.8 | | 21.9 | 11.9 | 18.9 | 85.2 | 211.6 |
| 3797 | 36 | 22.0 | | | 9.0 | 19.0 | 129.0 | 179.0 |
| MEAN | 44.1 | 60.7 | 4.5 | 4.4 | 621.3 | 65.2 | 295.3 | 1051.4 |
| SD | | 88.0 | 13.5 | 6.6 | 1 834.2 | 133.3 | 316.6 | 2 191.6 |
| %CATCH | | 5.8 | 0.4 | 0.4 | 59.1 | 6.2 | 28.1 | |

B. Outer shelf (71-200 m)

| Station | Depth | Seabreams | Snappers | Groupers | Grunts | Croakers | Other | Total |
|---------|-------|-----------|----------|----------|---------|----------|-------|---------|
| 3703 | 148 | 24.2 | | | | 53.5 | 438.9 | 516.5 |
| 3704 | 114 | 94.0 | | | | 88.4 | 106.9 | 289.2 |
| 3713 | 164 | 83.5 | | | | 29.1 | 560.7 | 673.3 |
| 3718 | 112 | 39.3 | | | 0.5 | 46.0 | 252.1 | 337.9 |
| 3719 | 84 | 49.8 | | | 2 452.8 | 13.8 | 532.0 | 3 048.4 |
| 3729 | 95 | 57.8 | | | 989.4 | 107.9 | 186.9 | 1 342.0 |
| 3730 | 116 | 180.3 | | | 26.5 | 107.9 | 88.5 | 403.2 |
| 3731 | 138 | 72.8 | | | 0.5 | | 269.7 | 343.1 |
| 3732 | 158 | 33.0 | | | | | 223.3 | 256.3 |
| 3733 | 105 | 69.3 | | | | 131.0 | 93.1 | 293.4 |
| 3735 | 87 | 151.3 | | | 0.5 | 35.3 | 248.1 | 435.2 |
| 3736 | 72 | 105.1 | | | | | 285.4 | 390.6 |
| 3742 | 115 | 129.7 | | 15.1 | | 543.5 | 47.4 | 735.7 |
| 3743 | 89 | 104.0 | | | 487.5 | 14.0 | 226.5 | 832.0 |
| 3750 | 114 | 86.5 | | | | 21.8 | 83.4 | 191.7 |
| 3751 | 86 | 298.1 | | 6.5 | | 2.1 | 111.6 | 418.3 |
| 3757 | 75 | 628.4 | | | | 16.6 | 73.3 | 718.3 |
| 3762 | 119 | 35.7 | | | | | 69.8 | 105.4 |
| 3763 | 81 | 255.2 | | 10.0 | | | 246.5 | 511.7 |
| 3764 | 88 | 267.3 | | 12.6 | | | 84.8 | 364.7 |
| 3765 | 111 | 94.1 | | | 1.0 | | 187.5 | 282.6 |
| 3766 | 120 | 62.4 | | | | | 84.3 | 146.6 |
| 3767 | 152 | 64.2 | | | | | 80.8 | 145.1 |
| 3772 | 90 | 33.6 | | | | | 69.9 | 103.6 |
| 3774 | 118 | 68.3 | | | | | 11.2 | 79.5 |
| 3775 | 134 | 95.5 | | | | | 81.4 | 176.9 |
| 3781 | 80 | 111.8 | | | 1 189.8 | | 225.2 | 1 526.7 |
| 3782 | 96 | 61.0 | | 13.9 | 253.6 | | 177.6 | 506.0 |
| 3783 | 109 | 58.7 | | | 76.7 | | 188.4 | 323.8 |
| 3784 | 116 | 131.3 | | | 0.3 | 5.8 | 79.1 | 216.5 |
| 3785 | 125 | 176.2 | | | | 22.4 | 177.4 | 376.0 |
| 3792 | 122 | 464.9 | | | | | 274.4 | 739.2 |
| 3793 | 109 | 148.4 | | 12.4 | | | 49.0 | 209.9 |
| 3794 | 92 | 118.3 | | 10.6 | | | 58.5 | 187.5 |
| 3795 | 76 | 135.9 | | 7.0 | 0.5 | | 295.6 | 438.9 |
| MEAN | 108.9 | 131.1 | | 2.5 | 156.6 | 35.4 | 179.1 | 504.7 |
| SD | | 124.5 | | 4.9 | 480.9 | 95.3 | 132.3 | 545.2 |
| %CATCH | | 26.0 | | 0.5 | 31.0 | 7.0 | 35.5 | |

Catch rates (kg/hour) by main pelagic groups caught in valid swept area bottom trawl hauls on the shelf Northern region. A. Inner shelf (20-70 m), B. Outer shelf (71-200 m).

A. Inner shelf (20-70 m)

| Station | Depth | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Other | Total |
|---------|-------|----------|-----------|-----------|-----------|------------|---------|----------|
| 3706 | 52 | | 127.6 | | 18.4 | 3.4 | 598.4 | 747.9 |
| 3707 | 43 | 0.5 | 93.3 | | 9.2 | 1.2 | 295.1 | 399.4 |
| 3708 | 31 | 7.7 | 203.8 | | 28.6 | 15.1 | 1 366.1 | 1 621.2 |
| 3721 | 45 | 11.0 | 5.8 | | 160.0 | | 600.8 | 777.6 |
| 3722 | 28 | 67.3 | 154.3 | | 22.6 | | 421.3 | 665.5 |
| 3723 | 26 | 47.8 | 68.5 | 1.5 | 25.0 | 12.6 | 1 266.6 | 1 422.0 |
| 3724 | 42 | 17.0 | 20.6 | | 32.1 | 0.1 | 371.7 | 441.6 |
| 3725 | 65 | | 16.9 | | 69.9 | | 1 387.4 | 1 474.2 |
| 3737 | 43 | 22.6 | 76.9 | | 156.2 | 24.0 | 1 182.7 | 1 462.3 |
| 3744 | 70 | | | | | | 65.4 | 65.4 |
| 3745 | 38 | | 216.0 | | | | 239.8 | 455.8 |
| 3746 | 28 | 4.1 | 1 014.3 | | | 152.1 | 8 925.7 | 10 096.2 |
| 3752 | 58 | | 0.1 | | | | 170.7 | 170.8 |
| 3753 | 42 | | | | | | 89.8 | 89.8 |
| 3754 | 26 | 0.9 | 8.1 | | | 0.7 | 315.1 | 324.8 |
| 3755 | 38 | | 0.8 | | | | 248.7 | 249.4 |
| 3756 | 49 | | | | | | 86.7 | 86.7 |
| 3780 | 54 | | 2.9 | | 0.7 | | 82.9 | 86.5 |
| 3796 | 68 | 1.3 | 1.5 | | 22.1 | 2.3 | 184.1 | 211.2 |
| 3797 | 36 | | | | 17.0 | | 163.0 | 180.0 |
| MEAN | 44.1 | 9.0 | 100.6 | 0.1 | 28.1 | 10.6 | 903.1 | 1051.4 |
| SD | | 18.1 | 226.5 | 0.3 | 47.7 | 33.9 | 1 941.3 | 2 191.6 |
| %CATCH | | 0.9 | 9.6 | 0.0 | 2.7 | 1.0 | 85.9 | |

B. Outer shelf (71-200 m)

| Station | Depth | Clupeids | Carangids | Scombrids | Hairtails | Barracudas | Other | Total |
|---------|-------|----------|-----------|-----------|-----------|------------|--------|--------|
| 3703 | 148 | | | 3.2 | 275.4 | | 238.0 | 516.5 |
| 3704 | 114 | | 1.1 | | 58.4 | | 229.8 | 289.2 |
| 3713 | 164 | | | | 349.6 | | 323.7 | 673.3 |
| 3718 | 112 | | 0.2 | | 118.8 | | 218.9 | 337.9 |
| 3719 | 84 | | 93.6 | | 303.9 | | 2650.9 | 3048.4 |
| 3729 | 95 | | 31.8 | | 17.1 | | 1293.2 | 1342.0 |
| 3730 | 116 | | 2.1 | | 7.9 | | 393.2 | 403.2 |
| 3731 | 138 | | 1.3 | | | | 341.7 | 343.1 |
| 3732 | 158 | | | | 12.9 | | 243.4 | 256.3 |
| 3733 | 105 | | 13.1 | | 3.5 | | 276.8 | 293.4 |
| 3735 | 87 | | 24.8 | | | | 410.5 | 435.2 |
| 3736 | 72 | 1.5 | 140.9 | 3.0 | | | 245.2 | 390.6 |
| 3742 | 115 | | | | 4.7 | | 731.1 | 735.7 |
| 3743 | 89 | 0.5 | 22.9 | 23.6 | | | 785.0 | 832.0 |
| 3750 | 114 | | 9.1 | | 6.4 | | 176.3 | 191.7 |
| 3751 | 86 | | 1.3 | | | 1.4 | 415.6 | 418.3 |
| 3757 | 75 | | 2.7 | | 2.8 | 2.1 | 710.8 | 718.3 |
| 3762 | 119 | | 0.1 | | | | 105.3 | 105.4 |
| 3763 | 81 | 5.6 | 188.6 | 1.5 | | | 316.1 | 511.7 |
| 3764 | 88 | 2.0 | 31.3 | | 1.1 | | 330.3 | 364.7 |
| 3765 | 111 | | 14.1 | | 3.5 | 0.8 | 264.2 | 282.6 |
| 3766 | 120 | | 10.3 | 1.2 | 1.5 | | 133.6 | 146.6 |
| 3767 | 152 | | 2.1 | | 7.3 | | 135.7 | 145.1 |
| 3772 | 90 | | | | | | 103.6 | 103.6 |
| 3774 | 118 | | | | | | 79.5 | 79.5 |
| 3775 | 134 | | 0.6 | | | | 176.3 | 176.9 |
| 3781 | 80 | | 143.8 | | 33.5 | | 1349.4 | 1526.7 |
| 3782 | 96 | | 45.9 | | 5.2 | | 454.9 | 506.0 |
| 3783 | 109 | | 85.9 | 1.7 | 3.6 | | 241.4 | 332.6 |
| 3784 | 116 | | 23.2 | | 3.5 | | 206.4 | 233.1 |
| 3785 | 125 | | 10.2 | | 3.1 | | 340.3 | 353.6 |
| 3792 | 122 | | 36.2 | | | | 703.1 | 739.2 |
| 3793 | 109 | | 3.9 | | 1.7 | | 204.3 | 209.9 |
| 3794 | 92 | | 4.3 | | 2.2 | | 180.9 | 187.5 |
| 3795 | 76 | | 266.3 | | 5.1 | 2.4 | 165.2 | 438.9 |
| MEAN | 108.9 | 0.3 | 34.6 | 1.0 | 35.2 | 0.2 | 433.6 | 504.8 |
| SD | | 1.0 | 61.6 | 4.0 | 88.5 | 0.6 | 487.9 | 545.0 |
| %CATCH | | 0.1 | 6.9 | 0.2 | 7.0 | 0.0 | 85.9 | |

Catch rates (kg/hour) by main deep-water groups caught in valid swept area bottom trawl hauls on the shelf, Northern region, Slope (201-800 m).

| Station | Depth | Seabreams | Hake | <i>Plongrostris</i> | <i>Avarikus</i> | <i>Nafricama</i> | Other | Total |
|---------|-------|-----------|-------|---------------------|-----------------|------------------|---------|---------|
| 3695 | 216 | 48.2 | 75.6 | 15.3 | | | 1 179.1 | 1 318.2 |
| 3696 | 311 | | 469.1 | 32.1 | | | 832.0 | 1 333.2 |
| 3697 | 477 | | 389.9 | | 34.0 | 184.2 | 352.8 | 960.9 |
| 3698 | 664 | | 17.1 | | 14.9 | 121.0 | 236.6 | 389.5 |
| 3699 | 411 | | 234.7 | | 7.1 | 297.9 | 51.1 | 590.8 |
| 3700 | 537 | | 10.4 | | 19.2 | 198.8 | 163.1 | 391.5 |
| 3701 | 699 | | 5.1 | | 7.0 | 149.2 | 242.3 | 403.6 |
| 3702 | 710 | | 11.4 | | 6.9 | 118.2 | 188.1 | 324.5 |
| 3709 | 305 | | 316.5 | 16.2 | | | 1 081.7 | 1 414.4 |
| 3710 | 448 | | 117.0 | | 13.3 | 289.8 | 116.9 | 537.0 |
| 3711 | 537 | | 2.0 | | 41.1 | 217.6 | 241.3 | 502.1 |
| 3712 | 601 | | 10.0 | | 1.9 | 183.1 | 94.6 | 289.7 |
| 3714 | 233 | 11.3 | 888.1 | 78.6 | | | 2 477.5 | 3 455.5 |
| 3715 | 423 | | 193.3 | | 1.6 | 234.4 | 49.4 | 478.7 |
| 3716 | 625 | | 5.0 | | 5.6 | 155.3 | 252.5 | 418.4 |
| 3717 | 706 | | 34.9 | | 8.1 | 113.5 | 255.4 | 411.9 |
| 3726 | 525 | | 0.5 | | 9.5 | 254.2 | 129.7 | 394.0 |
| 3727 | 632 | | 11.6 | | 8.5 | 216.5 | 175.2 | 411.8 |
| 3728 | 729 | | | | 4.9 | 111.0 | 172.5 | 288.3 |
| 3738 | 754 | | 1.6 | | 4.2 | 85.7 | 334.0 | 425.5 |
| 3739 | 647 | | 13.3 | | 3.3 | 137.0 | 181.9 | 335.5 |
| 3740 | 384 | | 176.0 | 4.6 | | 352.4 | 81.1 | 614.1 |
| 3741 | 254 | 0.4 | 137.5 | 87.5 | | | 2 407.0 | 2 632.4 |
| 3747 | 717 | | | | 0.8 | 0.5 | 64.9 | 66.3 |
| 3748 | 528 | | 17.1 | | 5.5 | 70.8 | 101.7 | 195.1 |
| 3749 | 423 | | 394.8 | | 4.7 | 109.5 | 83.7 | 592.7 |
| 3758 | 518 | | 64.0 | | 7.2 | 4.5 | 117.6 | 193.3 |
| 3759 | 518 | | 64.7 | | 5.3 | 36.9 | 153.2 | 260.1 |
| 3760 | 768 | | | | 0.5 | | 101.5 | 102.0 |
| 3761 | 229 | 41.7 | 0.5 | 3.2 | | | 218.8 | 264.1 |
| 3768 | 619 | | 12.4 | | 5.8 | 11.6 | 148.7 | 178.5 |
| 3770 | 314 | | 34.8 | 5.5 | | | 1 005.1 | 1 045.3 |
| 3771 | 266 | 27.2 | 99.9 | 32.4 | | | 1 690.2 | 1 849.7 |
| 3776 | 271 | | 42.0 | 36.1 | | | 994.7 | 1 072.8 |
| 3777 | 440 | | 64.8 | | 35.6 | 30.8 | 164.5 | 295.7 |
| 3778 | 519 | | 10.5 | | 21.4 | 59.0 | 164.3 | 255.2 |
| 3779 | 707 | | 8.0 | | 2.7 | 14.6 | 95.7 | 121.0 |
| 3786 | 226 | 64.4 | | 0.4 | | | 189.6 | 254.3 |
| 3787 | 330 | | 10.0 | 12.1 | | | 308.4 | 330.6 |
| 3788 | 655 | | 8.7 | | 8.1 | 8.7 | 164.3 | 189.8 |
| 3789 | 713 | | 5.6 | | 3.2 | 8.0 | 175.8 | 192.7 |
| 3790 | 738 | | | | 1.0 | | 511.5 | 512.5 |
| 3791 | 380 | | 120.5 | 20.0 | | 46.2 | 375.6 | 562.4 |
| MEAN | 504.8 | 4.5 | 94.9 | 8.0 | 6.8 | 88.9 | 421.5 | 624.5 |
| SD | | 14.0 | 171.5 | 19.3 | 9.8 | 101.2 | 576.1 | 672.7 |
| %CATCH | | 0.7 | 15.2 | 1.3 | 1.1 | 14.2 | 67.5 | |

ANNEX VIII. Station allocation's by depth strata and survey

Number of valid bottom trawl stations conducted in the different Angolans demersal surveys by depth strata.

| | 1985,1 | 1985,2 | 1985,3 | 1985,4 | 1986,1 | 1986,2 | 1989,1 | 1989,2 | 1989,3 | 1991,1 | 1991,2 | 1992 | 1993 | 1994 | 1995,1 | 1995,2 | 1996 | 1997,1 | 1997,2 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|--------|--------|------|--------|--------|------|------|------|------|------|------|------|------|----|
| OUTSIDE | 11 | 13 | 13 | 11 | 28 | 24 | 31 | 23 | 10 | 30 | 57 | 55 | 1 | 19 | 16 | | 5 | 1 | 62 | | 1 | 1 | | | 1 | | 3 | |
| 20-50south | | 2 | | | 6 | 3 | 5 | 2 | 4 | 6 | 2 | 4 | 3 | | | | | | | | | 8 | | 2 | 4 | 8 | 7 | |
| 50-100south | | 1 | | | 8 | 6 | 8 | 8 | 1 | 14 | 12 | 20 | 11 | | | | | | 4 | | | 9 | | 5 | 7 | 7 | 5 | |
| 100-200south | | | | | 8 | 3 | 9 | 8 | 6 | 10 | 12 | 7 | 9 | | | | | | 6 | | | 7 | | 3 | 7 | 5 | 7 | |
| 200-300south | | | | | 1 | | | | | 1 | 2 | | | | | | | | | | | 1 | | | | 1 | 1 | |
| 300-400south | | | | | 1 | | | | | 2 | | 1 | | | | | | | 1 | | | 1 | | 1 | 2 | 2 | 1 | |
| 400-500south | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 500-600south | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | 1 | 1 |
| 600-700south | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 3 | 1 | |
| 700-800south | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | |
| 20-50central | | | | 3 | 8 | 11 | 17 | 24 | 5 | 17 | 13 | 15 | | 9 | 14 | | 10 | 6 | 1 | 9 | 13 | 23 | 12 | 16 | 16 | 17 | 16 | |
| 50-100central | | | | 4 | 15 | 14 | 21 | 29 | 4 | 26 | 13 | 16 | | 12 | 13 | | 12 | 9 | 10 | 17 | 19 | 27 | 18 | 18 | 19 | 18 | 20 | |
| 100-200central | | | | 2 | 2 | 4 | 13 | 11 | 3 | 15 | 10 | 12 | | 14 | 15 | 12 | 12 | 8 | 13 | 12 | 14 | 22 | 16 | 15 | 13 | 14 | 14 | |
| 200-300central | | | | 4 | 3 | 1 | 4 | 3 | 3 | 10 | 6 | 8 | | 8 | 9 | 21 | 9 | 7 | 11 | 8 | 8 | 12 | 4 | 2 | 3 | 2 | 6 | |
| 300-400central | | | | 2 | 4 | 1 | | 7 | 1 | 7 | 3 | 9 | | 9 | 11 | 15 | 10 | 7 | 1 | 6 | 6 | 10 | 4 | 6 | 4 | 6 | 6 | |
| 500-600central | | | | 1 | 2 | | 1 | 2 | 4 | 1 | | 9 | | 5 | 7 | 14 | 8 | 7 | | 7 | 5 | 9 | 3 | 5 | 3 | 3 | 5 | |
| 600-700central | | | | | | | | | | | | 6 | | 1 | 3 | 10 | 3 | | | 5 | 1 | 6 | 3 | 4 | 4 | 4 | 6 | |
| 700-800central | | | | | | | | | | | | 4 | | 2 | 4 | 1 | 4 | | | 3 | | 7 | 4 | 4 | 4 | 4 | 6 | |
| 300-400north | | | 5 | 6 | 15 | 4 | 2 | 4 | 4 | 6 | 6 | 5 | | 9 | 8 | | 9 | 8 | 2 | | | 12 | 10 | 11 | 6 | 6 | 6 | |
| 400-500central | | | | 4 | 5 | | 3 | 4 | 3 | 6 | 3 | 7 | | 8 | 9 | 18 | 9 | 7 | | 4 | 6 | 8 | 6 | 2 | 3 | 3 | 4 | |
| 20-50north | 5 | 4 | 7 | 6 | 14 | 13 | 3 | 14 | 3 | 7 | 8 | 12 | | 9 | 9 | | 9 | 8 | | | | 14 | 11 | 11 | 16 | 13 | 15 | 14 |
| 50-100north | 9 | 8 | 7 | 7 | 25 | 28 | 19 | 33 | 14 | 20 | 19 | 17 | | 9 | 12 | | 12 | 10 | 4 | | | 24 | 24 | 14 | 23 | 20 | 24 | 20 |
| 100-200north | 5 | 5 | 3 | 6 | 5 | 20 | 6 | 6 | 4 | 11 | 12 | 10 | | 11 | 11 | | 12 | 11 | 8 | | | 29 | 24 | 18 | 23 | 21 | 21 | 21 |
| 200-300north | 1 | | 1 | 5 | 5 | 6 | 8 | 6 | 4 | 4 | 14 | 9 | | 8 | 7 | | 10 | 9 | 3 | | | 12 | 11 | 7 | 7 | 8 | 7 | |
| 400-500north | | | 1 | 2 | 3 | 6 | 5 | 4 | 4 | 6 | 2 | 6 | | 6 | 4 | | 8 | 7 | | | | 7 | 8 | 5 | 6 | 6 | 6 | |
| 500-600north | | | 3 | 3 | 3 | 3 | 3 | 6 | | 1 | | 5 | | 5 | 5 | | 10 | 8 | | | | 6 | 7 | 8 | 6 | 6 | 7 | |
| 600-700north | | | | | | 1 | | | 1 | | | 3 | | 2 | 3 | | | | | | | 1 | 7 | 5 | 6 | 6 | 7 | 8 |
| 700-800north | | | | | | | 1 | | | | | 4 | | 3 | 2 | | 5 | 5 | | | | 8 | 3 | 9 | 9 | 8 | 9 | |
| TOTAL | 31 | 33 | 40 | 66 | 161 | 148 | 159 | 194 | 78 | 200 | 194 | 245 | 24 | 149 | 162 | 91 | 157 | 118 | 126 | 71 | 178 | 264 | 152 | 186 | 186 | 200 | 208 | |

ANNEX IX Shark sampling

Diana Zaera

This is the continuation of a sampling programme presented to the direction of the INIP in Luanda, which started in 2002. We have followed the same methodology and pursuing the objectives described in previous reports.

Remarkable this year was the large quantity of specimens caught as shown in Table 1. This is a non-exhaustive list of 26 shark species, as the surveys were targeted to the commercial fauna. We expect to analyse the data further both as individual species and as a group. The surveys have revealed the same range extensions for several groups of the down mentioned species, with similar depth and latitudinal distributions

Table 1. List of species caught and measured during the demersal surveys in Angola, 2002-2005.

| Species | 2002 | 2003 | 2004 | 2005 | TOTAL |
|-----------------------------------|------------|------------|------------|-------------|-------------|
| <i>Galeus polli</i> | 3 | 27 | 33 | 114 | 177 |
| <i>Mustelus mustelus</i> | 6 | 21 | 5 | 46 | 78 |
| <i>Etmopterus spinax</i> | 6 | 65 | 162 | 344 | 577 |
| <i>Etmopterus polli</i> | 1 | 5 | 127 | 519 | 652 |
| <i>Etmopterus pusillus</i> | 18 | 41 | 86 | 88 | 233 |
| <i>Deania profundorum</i> | 4 | 2 | 2 | 2 | 10 |
| <i>Deania calcea</i> | 6 | 12 | 10 | 34 | 62 |
| <i>Scyliorhinus cervigoni</i> | 10 | 3 | 1 | 14 | 28 |
| <i>Squalus megalops</i> | 3 | 27 | 70 | 133 | 233 |
| <i>Rhizoprionodon acutus</i> | 21 | 1 | | 6 | 28 |
| <i>Isistius brasiliensis</i> | 1 | 3 | 2 | 2 | 8 |
| <i>Squatina oculata</i> | 10 | | | 27 | 37 |
| <i>Centroscyllium fabricii</i> | 5 | | | | 5 |
| <i>Centrophorus granulosus</i> | 1 | 11 | 11 | 50 | 73 |
| <i>Centrophorus uyato</i> | 2 | 1 | 2 | 1 | 6 |
| <i>Centrophorus squamosus</i> | 1 | 10 | 2 | 4 | 17 |
| <i>Centroscymnus crepidater</i> | 4 | 3 | 12 | | 19 |
| <i>Leptocharias smithii</i> | 4 | 9 | 2 | | 15 |
| <i>Carcharhinus signatus</i> | 1 | 19 | 32 | 16 | 68 |
| <i>Galeorhinus galeus</i> | | 12 | 7 | | 19 |
| <i>Heptranchias perlo</i> | | | 3 | 2 | 5 |
| <i>archarhinus sp.</i> | | | 1 | | 1 |
| <i>Sphyrna lewini</i> | | 1 | | | 1 |
| <i>Sphyrna zygaena</i> | | 4 | | 2 | 6 |
| <i>Alopias vulpinus</i> | | 2 | | | 2 |
| <i>Chlamydoselachus anguineus</i> | | 2 | 2 | | 4 |
| <i>Hexanchus griseus</i> | | | | 1 | 1 |
| TOTAL | 107 | 281 | 572 | 1405 | 2365 |

ANNEX X Report on fish collecting off Angola

Tomio Iwamoto

The *R/V Dr. Fridtjof Nansen* demersal survey of the shelf and continental slope of Angola offered an exceptional opportunity to make valuable collections of fishes for taxonomic studies of the different groups represented in the fauna. Most of the collections made will be deposited in the California Academy of Sciences (CAS) in San Francisco, California, USA, which houses one of the premier natural history research collections in the world. Our ichthyological collections currently number well over two million specimens, with more than 14,000 species represented. These specimens are held in perpetuity and made available for study by the world's scientific community. Duplicates of all species collected will be deposited in the Instituto Nacional de Investigação das Pescas (INIP) in Luanda, in accord with recent legislation stating this requirements in regards to natural history collections made in Angola. In this regard, when a species was represented by only a single individual, that specimen will remain in Angola. It was unfortunate that I was informed of this requirement for providing duplicates very late in the cruise, more specifically on the 19th of April, when more than three-quarters of the 229 stations had already been occupied and we had moved far to the north where many of the southern species had dropped out. Several species, especially the larger and more common ones, were either not collected or only a single specimen was kept, and lacking duplicates, that specimen had to go to INIP.

Collections

A total of 1143 fish specimens (approximately 174 species) and 143 invertebrate specimens were collected during the cruise (see attachments). Several of these specimens represent new records of species in Angola, extensions of distributional ranges, and in a few cases, new taxa. In many instances, a correct or reliable identification has been impossible to make aboard ship, owing to the lack of the necessary literature and comparative material. This is especially true of groups that still remain poorly known on a world-wide basis, for example the Alepocephalidae, Ophidiidae, and many of the Stomiiformes. Once the specimens have been accessioned into the CAS collections and properly curated for long-term storage, the material will be studied more carefully to confirm or make identifications.

It should be noted the collections kept for CAS are far from comprehensive, in that many species were not preserved because of the limited capacity available to hold (and funds to ship) the larger specimens. Space and weight limitations in transporting these specimens dictated the preservation of mostly small individuals for CAS. This was particularly the situation with the more common shallow-water species and the elasmobranches, which on the whole were much larger than could be adequately kept. In regards to the elasmobranches, all of the shark specimens were dissected on board by Diana Zaera of the Institute of Marine Research, Bergen, for her biological studies. The dissections rendered the specimens somewhat inadequate or undesirable to keep. Most of the batoid species encountered were represented by adults too large to keep, and few are consequently represented in the collections bound for CAS. Since space and weight

limitations did not apply to specimens for the INIP, the more-desirable adults and larger individuals were kept for that institution.

My primary goal for this cruise is to enhance the materials of gadiform fishes that I have available for my taxonomic research and to gain a better knowledge of the fishery and biology of the concerned taxa. I am currently completing chapters on gadiform families for the new edition of the FAO Guide to the Fishery Resources of the Eastern-Central Atlantic. A second goal was to enhance the representation of species from this area in the Academy's collections and to make them available for other researchers in the international community, in particular those ichthyologists who are working on chapters for the FAO Guide. Although not a motivating factor for this collecting trip, I have taken tissue samples for Adela Roa-Varon, a student at the University of Nebraska, Lincoln, who is working a molecular phylogenetic study of gadiform fishes. I am currently advising her on aspects of her Ph.D. studies. Forty-eight tissue samples were taken from 23 different gadiform species.

Identifications

It was noted that most of the common and commercially important species of fishes were well known and competently identified by the fishery scientists aboard. However, when it came to the less common species and the by-catch, there were many disparities between their identifications and mine. In many instances with these species, it was necessary to question or inform the fishery scientists of the proper identifications. Part of the problem with the identifications of these less well-known groups lies with the primary literature source used for their identifications: the FAO field guides to the marine resources of Angola (Bianco, 1989) and Namibia (Bianco et al. 1999). Although quite useful for the identification of most of the common and important species, these guides are inadequate and much too incomplete to deal with the lesser known and rarer species, which are not covered by those references. When faced with the inadequacy of the FAO guides, the scientists most often turned to two other sources: the photographic album of Angolan marine resources put together by Oddgeir Alvheim of IMR and the FAO Eastern Central Atlantic Species Identification Sheets for Fishery Purposes, usually in that order. The former I will subsequently discuss in detail; the latter was not used as much as it should have, perhaps owing to the necessity of having a fairly good taxonomic knowledge to use it to its potential. A third reference that I found highly useful, but was rarely used by the fishery scientists, was *Smith's Sea Fishes* (Smith & Heemstra, 1996). That reference was particularly useful in determining the more rare species or those that are normally extralimital to the region. However, because the geographic coverage of that book does not extend to Angola, many species are not treated in that reference.

Oddgeir Alvheim Photographs

There were three binders with photographs taken by Alvheim of IMR: one each on the fauna of Namibia, Angola, and Tropical West Africa. The one used most was obviously that on Angola, even though the species from adjacent areas often overlapped. In many cases, species not represented in the Angola binder were actually found in binders from one or the other region. The photographs in these binders are of exceptional quality, and usually are all that are necessary to determine the identification of a species. However, the binders are cumbersome to use, being large with only one species

illustrated per sheet. Each binder is also not as comprehensive in coverage as possible, with photographs of many species encountered not present in the Angola binder but available in other binders. This may have occurred because of an inadequate list of the species found in Angola when the binder was put together.

The massive collection of excellent photographs made by Alvheim should be used to their fullest potential. They should be properly sized to fit several on a sheet, each labeled with names (including family and species), diagnostic characters pointed out with arrows, and photographs grouped to aid comparison of closely similar species. The taxa should be arranged in a classical systematic hierarchy, not by family name (it makes little sense, for example, to have to look under a dozen different family names, many of which few people even know, to look at photographs of all of the eels likely to be encountered). A small distribution map for each species would be highly useful and could be easily generated with the data available from *Nansen* cruises. A table of contents and an index with the species code should be included. Such a project would take considerable time and effort, especially in getting things initially set up, but once protocols are established and a template set up for the photographs, the production should proceed rapidly. The photographic guide could be produced in versions, with new information and expansion of text and photographs in each later version. I would highly recommend a hard-copy version as well as a CD version be made available in the vessel laboratories. A hard-copy version printed on high-quality paper is essential in the wet lab, as fishery workers most often attempt identifications with fresh specimens and wet, slimy hands. The ideal, to my mind, would be a printed version modeled after the FAO guides to the marine resources of Namibia and Angola, with special emphasis on the paper quality, format size, and the use of binders, where the pages fold flat.

I can see this photographic guide evolving into a published book that would serve a wide audience, mainly owing to the rich, highly diverse fauna of this region where many of the species encountered, especially those of the continental slope, are widespread throughout the Atlantic and into the Indo-West Pacific. It would complement two major works that are used extensively: *Smith's Sea Fishes* and *FAO Guide to the Fishery Resources of the Eastern Central Atlantic* (a new version to be published within the next couple of years). Neither of these works have the number and quality of photographs of the species from this area. The former work does not treat many of the species found north of Namibia, and the latter work, although very comprehensive with an emphasis on keys and good drawings, does not make extensive use of color photographs. I would be most interested and happy to assist in the production of such a volume.

Improvements in on-board identifications

As mentioned early, the identifications of most of the common and commercially important fish species were competently made by the fishery scientists aboard, especially those with extensive experience on the *Nansen*. However, I can cite two instances concerning my group of expertise where their identifications would have lead to totally erroneous fishery data. The first concerned the grenadier genus *Coelorinchus*, where in southern Angola the genus was represented by *C. polli*, but in central and northern Angola was represented by *C. geronimoi*. These species were formerly treated as subspecies of the widespread North Atlantic *C. coelorhinus*, and that is what the

scientists initially called them. The species form a significant, but not dominant part of the upper-slope fauna. Members of the genus *Nezumia*, however, are at times a dominant part of the catch. Five species of *Nezumia* were taken along the Angolan slopes: *N. aequalis*, *N. africana*, *N. milleri*, *N. duodecim*, and *N. micronychodon*. The first two species are not significant in terms of number and biomass, but the last two are, and each was sometimes a dominant entity of the catch, with *N. micronychodon* somewhat more abundant in the shallower slope waters and *N. duodecim* becoming more dominant with depth. The first two species of *Nezumia* are easily characterized and there can be little mistaking them; the third, *N. milleri*, is so closely similar to *N. aequalis* that field determination is difficult but geographically they are separated. The last two species are superficially quite similar, and without a close examination, one could easily confuse them. Furthermore, they are not treated in the FAO guides and not differentiated from *N. aequalis*, with which they have been confused in the past. The consequences of misidentification of these two species could easily have altered the catch statistics.

From this experience, I would recommend two measures that would help avoid or lessen identification problems. The first is to improve the identification guides available to the shipboard scientists. The aforementioned pictorial guide based on the photographs of Oddgeir Alvheim would go a long ways toward assuring the correct identification of perhaps 95 percent or more of the major species taken. The second measure is to have representative samples of questionable species preserved and subsequently examined by competent taxonomists in Norway. If a species cannot be determined in the field, it could be assigned a code number that could be referred to once the correct identification is established, and the data sheets could be later changed to reflect that identification.

Towards a national collection

Hand in hand with this second measure is the establishment of reference collections in Bergen as well as in Angola. Such collections would serve educational purposes—to train fishery scientists to identify the species properly—and research purposes—to provide the reference materials by which scientists can dig deeper into the taxonomic problems that always remain. A national systematics research collection of marine organisms of Angola, housed in a national museum of natural history of Angola, would be the ultimate goal, and this reference collection could serve as the core around which it would be built.

The establishment of a proper natural history collection will entail the commitment of government resources in trained personnel, space and adequate facilities for the collection, and annual, line-item funding. The initial phase in the development of a reference collection need not be labor and cost intensive. It can begin with a set of shelves in the back of a laboratory, with specimens arranged in glass jars, properly inventoried (viz., cataloged) and preferably preserved in 70-75% ethyl or isopropyl alcohol, although a dilute buffered formalin solution (<5%) would serve adequately. (For specimens that are liable to much handling, formalin is undesirable for long-term storage because of its hazards to health.) Curatorial needs of the collection could be adequately met by a single person working on a part-time basis. As the collection develops, more trained personnel time will become necessary. The very nature of collection building involves growth and the concomitant need for increase in space, personnel time, and curatorial supplies and equipment. The increases can be at a measured pace, however, but

plans should be made for five, 10, and 20 years down the line. In the initial 5-10 years, with proper commitment, one can expect growth at 50-100% or more per annum. As collections become more complete in their representation of the national fauna and flora, one can expect a lowering of the growth rate, and a mature collection (as for example CAS, which has operated continuously for more than 150 years) will have a variable growth rate of between 5 and 10%. For an active research collection of 10,000 to 30,000 cataloged lots, the services of at least one half-time curator and one assistant will be needed. The assistant can be an interested student of marine biology working on a part-time basis. The training that the student can obtain from such work can be highly rewarding in itself and would spur and help develop the core group of students who will one day become the professionals in marine sciences who will lead the nation in their field.

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