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REPORT ON SURVEYS OF
GABON MARINE FISH RESOURCES
MARCH - DECEMBER 1985





«Dr. Fridtjof Nansen»

The fishery research vessel «Dr. Fridtjof Nansen» belongs to the Norwegian Agency for Development Cooperation (NORAD). It was designed and built for scientific and exploratory investigations of fishery resources of developing countries, under a joint plan with the Fisheries Department of FAO.

A list of the vessels operational assignment from 1975 to 1987 is shown on the back cover.

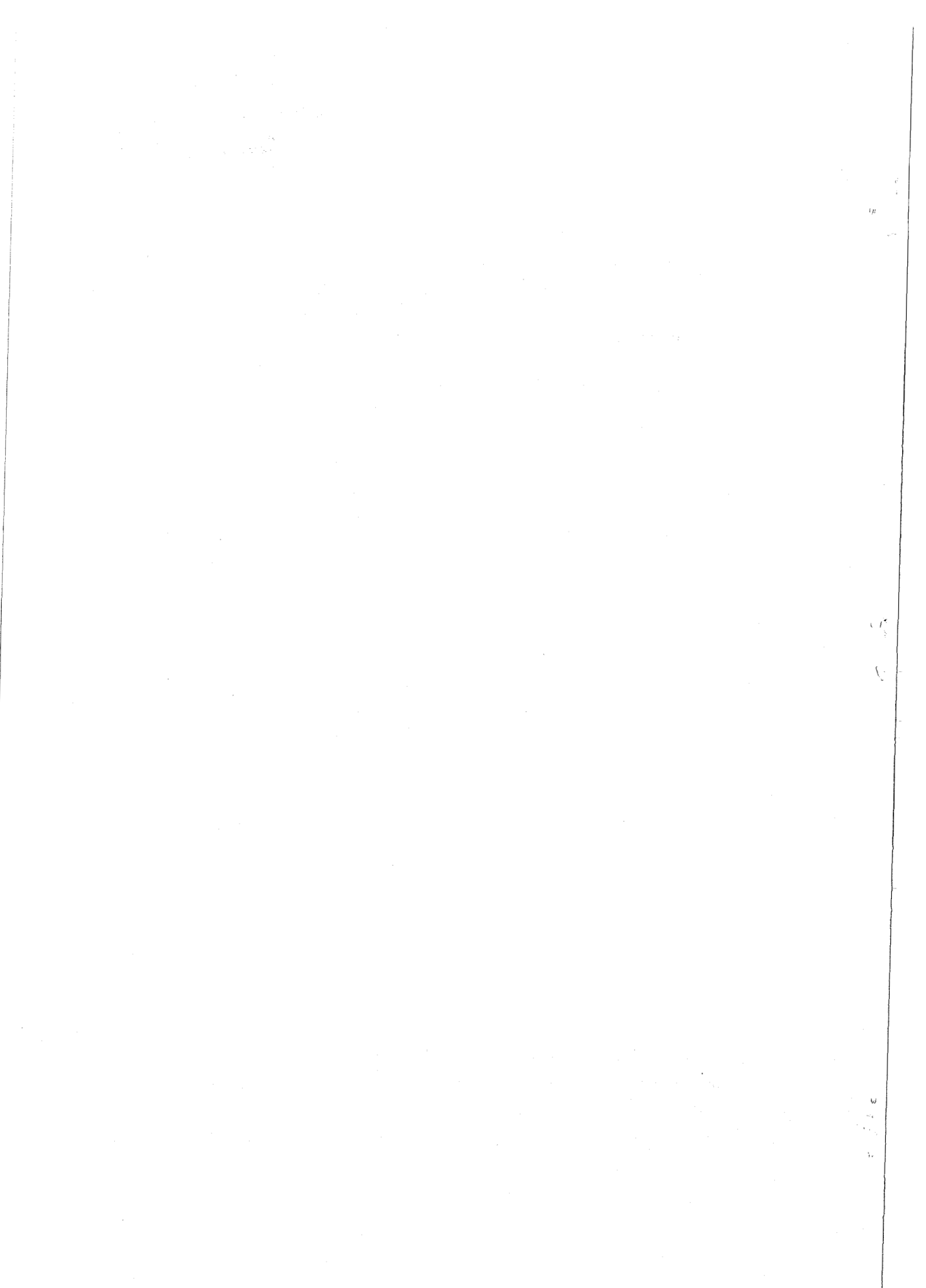
The Institute of Marine Research, Bergen is under a subcontract with NORAD responsible for the operation of the vessel, and the various research programmes were planned and conducted jointly with FAO and the relevant fisheries research organizations in the countries concerned.

Results of the previous surveys have been presented in a number of cruise- and progress reports under each programme.

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The research programme of the R/V DR. FRIDTJOF NANSEN is sponsored by The Norwegian Agency for Development Cooperation, NORAD, The Food and Agriculture Organization of the United Nations, FAO and the United Nations Development Programme, UNDP. The execution of the programme is the responsibility of the Institute of Marine Research, Bergen in cooperation with FAO's Department of Fisheries and national fisheries administrations.



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CHAPTER 1. INTRODUCTION

1.1 Programme background

Within the framework of the UNDP/FAO project GLO/001/82 arrangements were made for a programme of fish resource surveys of the continental shelf from Angola to Gabon with the R/V DR FRIDTJOF NANSEN in four seasonal coverages during 1985. The programme was based on an agreement between the governments of Gabon, Congo, Zaire and Angola, the Food and Agriculture Organisation of the United Nations (FAO) and the Norwegian Agency for Development Cooperation (NORAD).

A planning mission was carried out in November 1984, in which background information were collected and the survey plans adjusted to the specific requests of the fishery management and research units of the respective countries. National scientists participated onboard on all surveys.

The objectives were to investigate the marine fish resources of Gabon with emphasis on surveys using acoustic integration technique to study the distribution, composition and abundance of the stocks of small pelagic schooling fish. Additional objectives were to investigate the stocks of demersal fish on the shelf by random trawling, using the swept area method. The plan comprised four seasonal coverages in a full year-cycle.

Cruise reports with a description of the work conducted and outlining some main findings were issued after each of the surveys. A brief summary report was submitted to the Gabonese authorities upon request in May 1986.

This final report contains an analysis of all main findings concerning Gabon. It is however recognized that the amount of observations and data collected during the four surveys will allow more detailed analyses of the biology and distribution of the commercial species than has been possible in this report. To facilitate such further work, complete data files have been compiled and included.

1.2 Investigational effort

The survey programme covered a period of 1 year from January until December 1985. The details of the four coverages are set out in Table 1.

All surveys covered the shelf area from a depth of about 10 fathoms along the shore out to the shelf edge at about 200m depth. The density of the course track are indicated in Table 1 as the ratio between nautical miles steamed and units of 100nm covered. The acoustic transects were usually laid out with an interdistance of 10nm, which is generally dense compared with other surveys of similar resources.

SURVEY DAYS	DATES	DISTANCE (nm) TRAELED IN SURVEY AREA	SURVEY INTENSITY nm/100nm ²	NUMBER OF FISHING STATIONS	NUMBER HYDROGR. STATION
I / 8	4-12/3	1393	11.7	36	9
II / 11	1-12/6	1583	13.2	57	9
III / 8	16-23/9	1663	13.9	45	9
IV / 8	9-16/12	1414	11.9	32	9

The total survey effort of the programme is demonstrated by the following statistics:

Days at sea:	35
Distance steamed:	6053 nm
Number of fishing stations:	170
Number of hydrographic stations:	36

The layout of the course tracks and the positions of fishing stations are shown in maps in Annex 1.

1.3 Methods of investigations

The main survey effort was spent in investigating the small pelagic fish using acoustic integration technique combined with fishing with bottom and mid water trawls for identification and sampling. Fish near the surface and close to the bottom are not properly observed by this system.

Horisontal ranging sonars were used to observe surface schooling fish, but such observations are not easily quantified in terms of measures of biomass. To include bottom dwelling fish and shrimp a programme of preallocated trawl stations were worked to provide data for swept-area measurements.

The reliability of the acoustic technique in providing estimates of biomass is under continuous reiew by the scientific community. A problem is the limited information available on the acoustic target strength of the species surveyed. Some efforts were made to acquire direct observatins of this during the surveys, but the results were not comprehensive, and for the biomass estimates data on target strenght of herring in European waters have been made use of throughout. Another limitation is found in the incomplete coverage of inshore waters by the survey, since the parts of the shelf with depths less than about 10 fathoms could not be navigated by the vessel. Lastly, the oil-drilling area from Cape Lopez and southwards is a restricted area for sea navigation. As no permit was received for the vessel to operate in this zone, the investigations do not incorporate this area.

The overall effect of these limitations are assessed to lead to an underestimation of the biomasses.

When allocating the integrator readings on different types of resources use is made of the following categories:

- Pelagic fish type 1, clupeids and engraulids;
- Pelagic fish type 2, carangids, smaller scombrids, barracudas, hairtails
- Demersal fish, seabreams, croakers, snappers etc.

The allocation is based on the catch compositions and on general knowledge of the schooling behaviour of the various species. One should, however, note that this allocation is approximate and that the total biomass estimates are thus more reliable than those of the subgroups.

The swept area method involves a special problem of estimation viz. what value to assign to the catchability quotient, q . We have in this case used 1, which implies that all organisms in the path of the trawl are caught and contained in the catch. This is likely to be true for certain types of shrimp, but for fish the q will take values that may be lower than 1, with more fish escaping through meshes or outside the trawl opening than is aggregated by the herding effect of the trawl wires. The assumption $q=1$ thus tends to give underestimates of biomass.

All catches were sampled for species and sizes so that a total composition by weight and usually also number could be estimated.

The sea surface temperature was observed continuously and the hydrographic profiles were worked with Nansen bottles, with salinity and oxygen analysed onboard.

A record of the acoustic instruments used and their calibration is presented in Annex 10 together with a description of the fishing gears.

CHAPTER 2. THE GABON SEA

2.1 The shelf area

Gabon has a coastline of 380 nm. The total shelf area is about 11911 nm and the mean width is thus about 30 nm. The extension of the shelf by depth ranges is shown in Table 2.

	North of C. Lopez	South of C. Lopez
0 - 50m	2340 nm ²	4182 nm ²
50 - 100m	442 nm ²	2893 nm ²
100 - 200m	576 nm ²	1478 nm ²

During the first survey the seabed was mapped in four types according to the bottom traces on the echosounder. The result is shown in Figure 1, and demonstrates that most of the shelf is trawlable, with only patches of generally rough character.

2.2 Hydrography

During the surveys the sea temperature at 4 m of depth was observed on a continuous basis along the course tracks and hydrographic profiles were worked over the shelf and off the slope offshore to 500m of depth in the positions shown in the maps in Annex I. In order to obtain a meaningful picture of the hydrographic regime and the seasonal changes in this region, observations from the Congo and northern Angola have been included in the following analysis. In this we will briefly describe the characteristics of the water masses as observed in February- March, May-June, September and December 1985 and conclude by outlining the dynamics of the regimes.

The region is situated in the southern meteorological hemisphere and characterized by southerly trade winds regulated by the South Atlantic Pressure Cell and the high pressure field over the northern region of the African Continent. The winds are therefore stable in direction and weak in speed during most of the year.

The hydrographical parameters especially in the surface layers are modified by the intensive solar radiation, the rainfalls and the river discharges notably that from the Congo, the second largest river in the world.

The circulation pattern is dominated by the South Equatorial Current which flows to the west seawards from the northern Gabon coast. The northern inshore branch of this current transports low-saline warm water from the Gulf of Biafra southwest along the north Gabon coast. Of importance is also the Congo Current which in summer flows north-

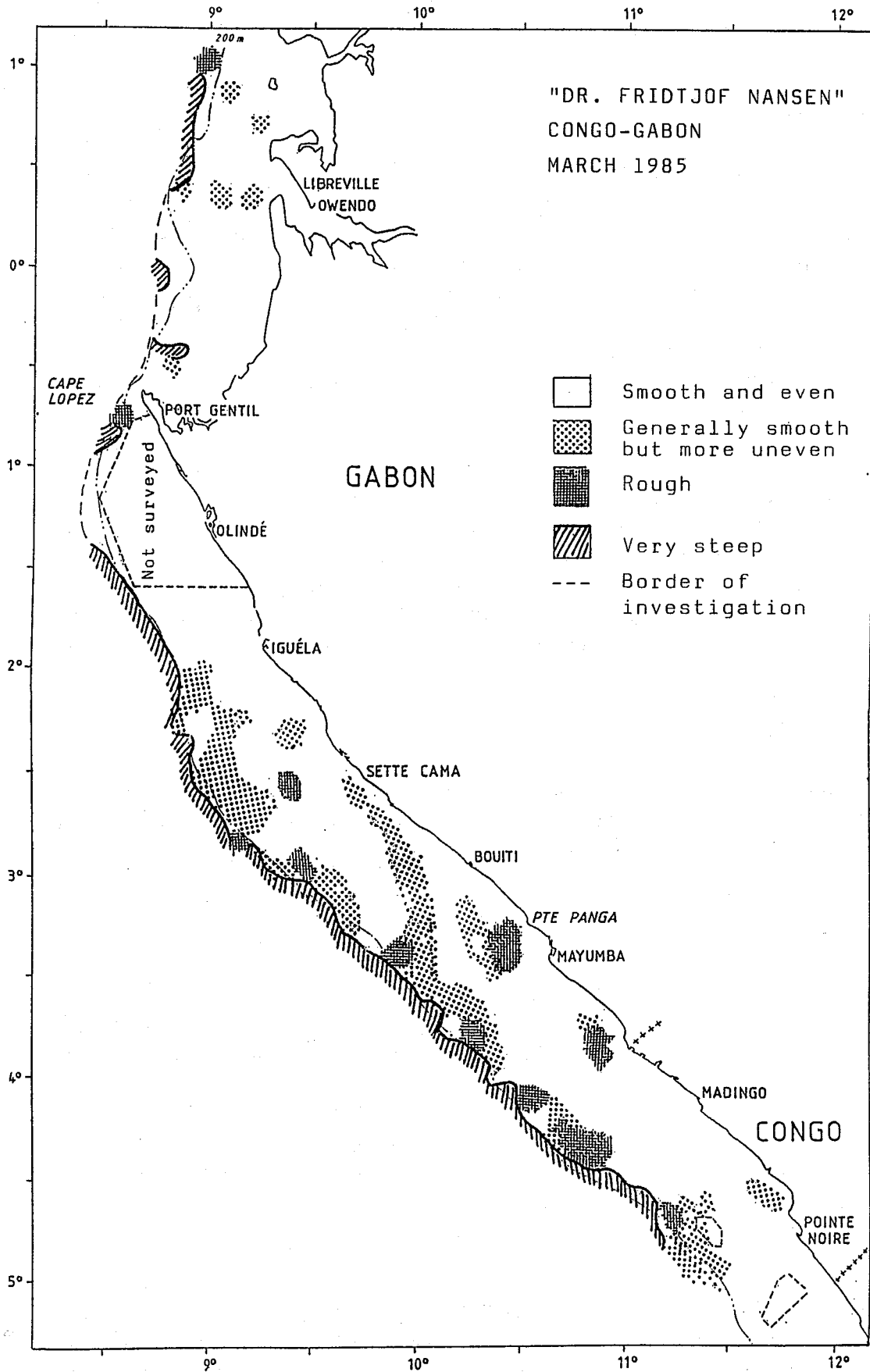


Figure 1. The bottom conditions as registered by the acoustic system.

hwards transporting low saline water originating from the Congo River along the coast as far as Cape Lopez. In austral winter the Congo Current flows offshore towards the west.

March 1985

Figure 2 shows the hydrographical sections worked. The surface temperatures are high and show only slight variations within the range 28 - 30°C as a result of intensive solar radiation which is a characteristic of this time of the year, austral summer. There is a well developed shallow thermocline in all sections. The effects of the Congo discharges are particularly noteable in this season of heavy rainfalls, and low salinity surface waters are found both to the south and to the north of the river indicating the directions at this time of the Angola - respectively Congo currents. The intermediate layer of high salinity at 50 - 100m of depth probably has its origin in the Equatorial Counter Current.

May - June 1985

The hydrographical profiles worked are shown in Figure 3. In the southern region the surface temperature are now with 21 - 22°C well below the values found in March and the profiles indicate that some slight process of upwelling may occur here, while further north the surface temperatures inshore are still high. The low salinity surface water in the Equator profile derives from the Gulf of Biafra. No low-salinity water is found in the profiles north and south of the Congo indicating the offshore westward direction of the current in this season.

September 1985

The distribution of surface temperature shows pockets of cool water ,22 - 23°C outside Pointe Noire, perhaps indicating local upwelling, but the profiles, Figure 4 show well stratified water further north. The low-salinity surface water on the Equator profile indicates transport from the north.

December 1985

Again pockets of cool water off the Congo may indicate local upwelling processes, but there is little evidence of this in the profiles further north, Figure 5. A northward flow of surface water along the coast is indicated by the relatively low surface salinity in the Pte. Panga profile.

In all profiles oxygen inside the shelf edge is about 3 ml/l or more, i.e. values which are not likely to affect fish distribution. Oxygen contents of less than 1 ml/l are only observed off the shelf at depths of 300m or more.

Discussion

Two main hydrographical seasons may be distinguished, relating to the austral summer, about December to March, and to the austral winter about June to September . With the intensive solar radiation in summer surface temperatures are high, 28 - 30°C and a strong thermocline is usually found at 20 - 30 m of depth. Being the period of maximum rain-

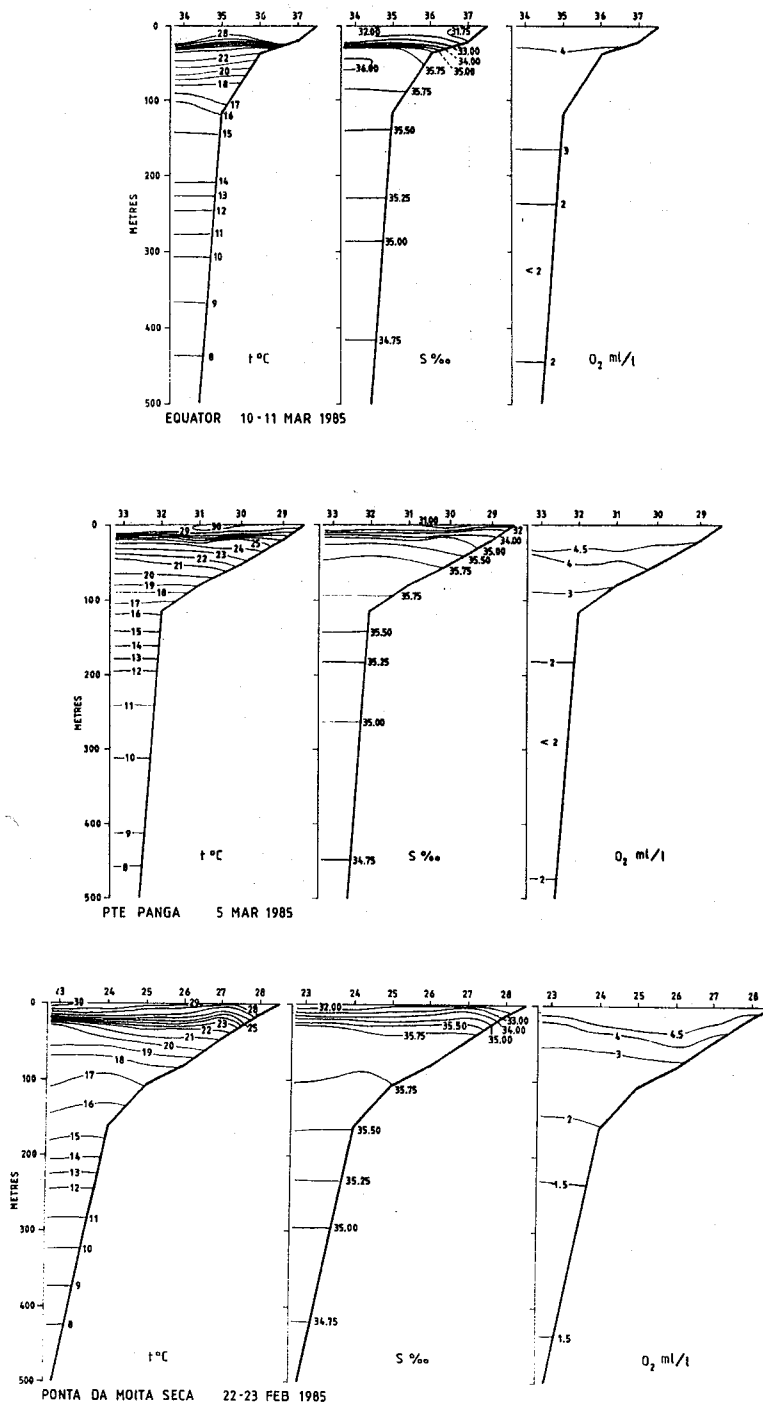
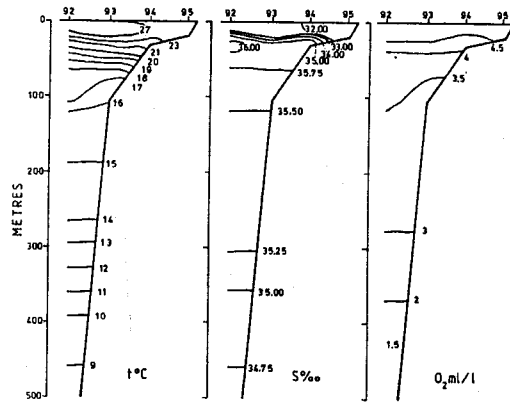
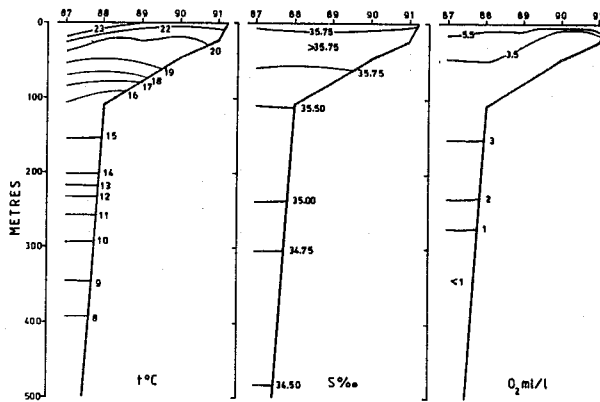


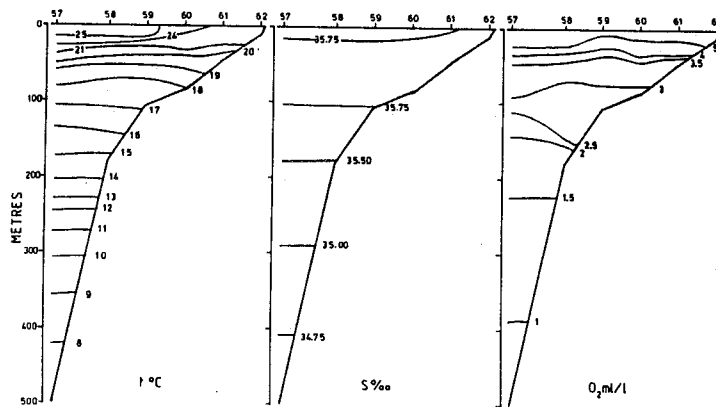
Figure 2. Hydrographic sections from the February-March survey.



EQUATOR 10 JUN 1985



PTE MILANGO 6 JUN 1985



PTA DA MOITA SECA 23-24 MAY 1985

Figure 3. Hydrographic sections from the May-June survey.

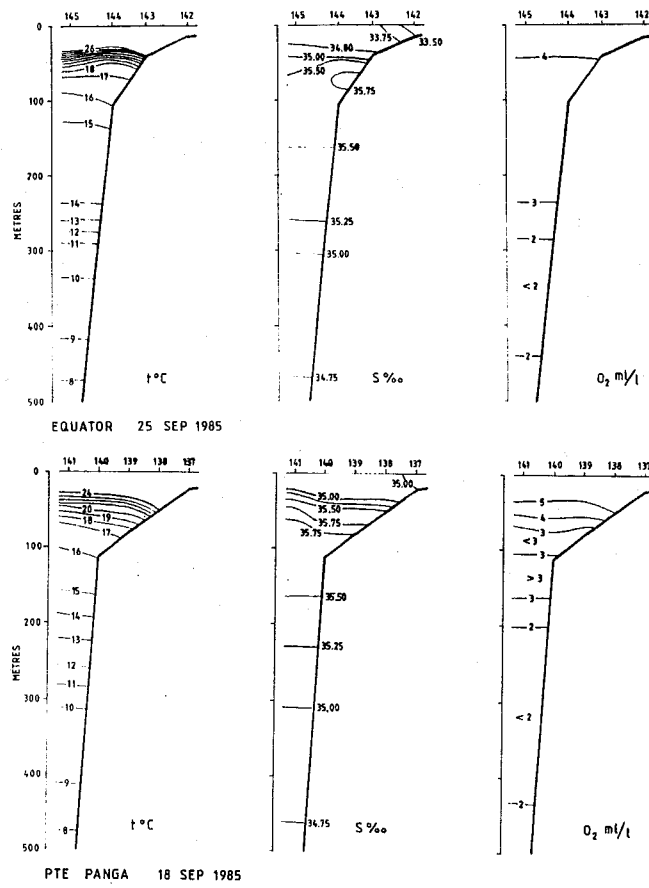


Figure 4. Hydrographic sections from the September survey.

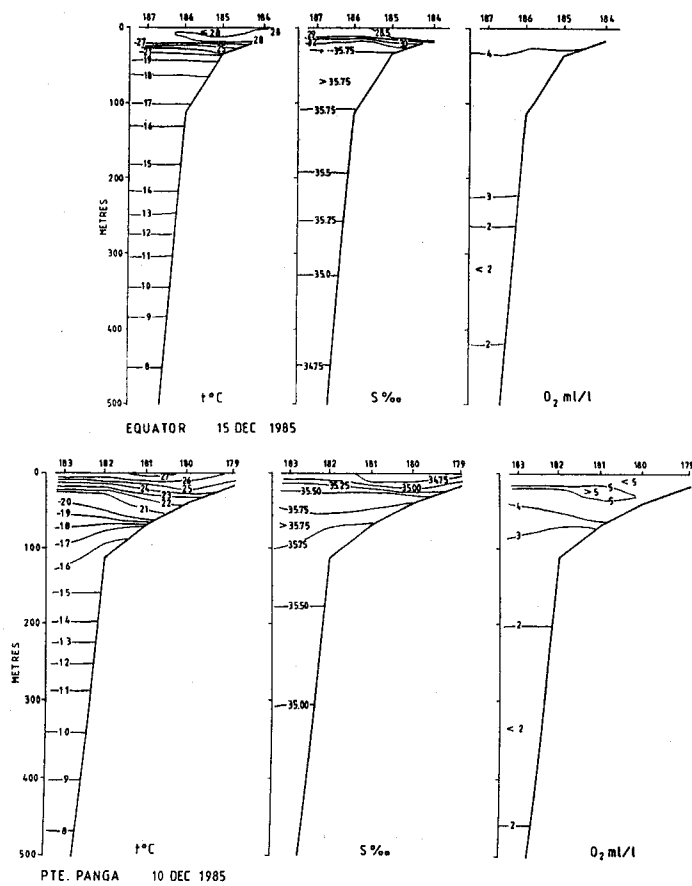


Figure 6. Hydrographic sections from the December survey.

fall there is a high input of fresh water through the discharges of the Congo River and from the Gulf of Biafra.

The fresh water outflows reduces the salinity of the surface layers and the currents along the coast may be revealed by tracing the low-salinity water. It is thus evident that in summer the Congo Current flows northwards along the coast up to and perhaps somewhat beyond Cape Lopez. In winter there is some decrease of surface temperature over the shelf, with the lowest values in the inshore southern parts where some upwelling seem to take place. This upwelling may be related to the changed direction in winter of the Congo Current now flowing westwards off the shelf and merging seawards with the South Equatorial Current. The Gabon coast north of Cape Lopez is apparently affected by the shoreward branch of the South Equatorial Current throughout the year carrying warm low salinity surface water from the Gulf of Biafra. The circulation pattern of the surface waters as described here is illustrated in Figure 6.

The thermocline is strongest during summer, being situated at 20-30m of depth, and moves slightly higher during winter weakening somewhat. An intermediate layer of maximum salinity occurs at about 50 - 100m presumably originating from the Equatorial Counter Current.

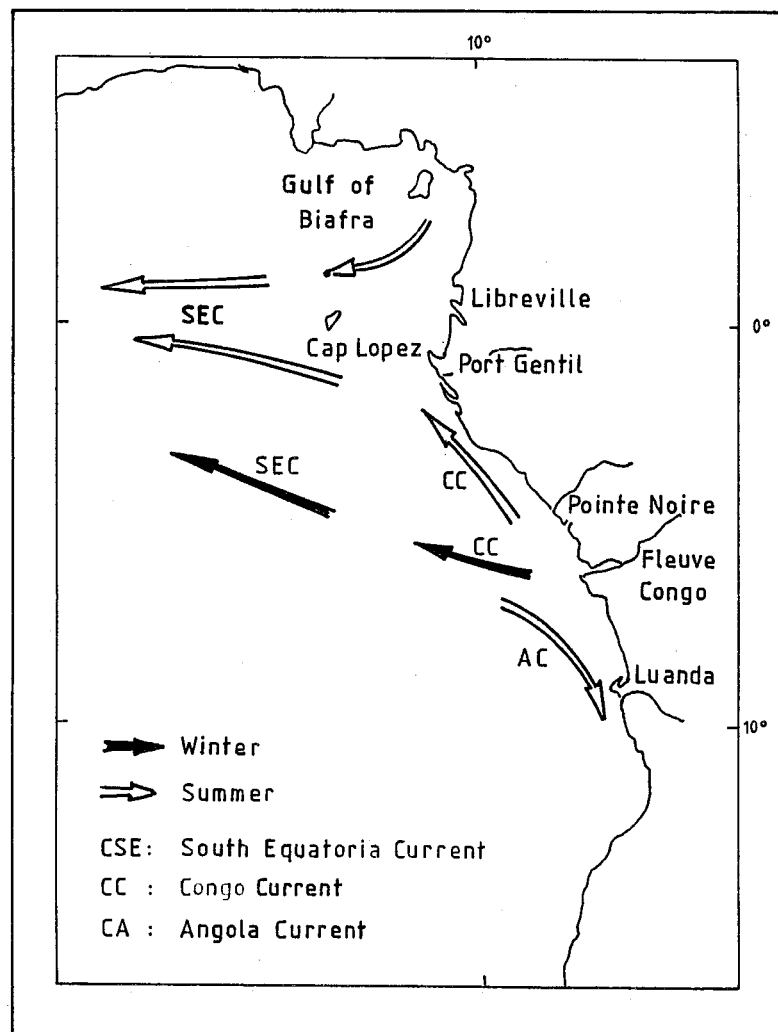


Figure 6. General circulation pattern of surface layers in austral summer and winter.

CHAPTER 3. THE COMPOSITION, DISTRIBUTION AND ABUNDANCE OF THE FISH RESOURCES.

3.1 Introduction

Based on their behaviour fish species are generally classified as demersal or pelagic. Although many demersal fish often occur in mid water and pelagic fish near the bottom this is still a useful classification. One further classification is possible in presenting the results of acoustic-cum-fishing surveys, that of the triggerfish which is mostly found by itself in mid water and can easily be recognized in echo diagrams and sampled with fishing gear. The larger species of pelagic fish, tunas and billfishes are for methodical reasons not included in the survey.

The environmental regimes largely determine the species composition and abundance of the fish faunas contained within them. As described in Chapter 2 above the hydrographical environment off Gabon is characterized by an equatorial regime north of Cape Lopez and a regime south of the Cape influenced by the Angola Current which during a period of the year flows northwards and carries cooler water along the coast.

The pelagic species on the Gabon shelf can be divided into those with affinity for cooler waters and those with preference for warmer tropical waters. The former group is found in highest abundance south of Cape Lopez during the period when cool water from the south flows along the coast. The most important representative of this group is the round sardinella *Sardinella aurita* known to carry out extensive seasonal migrations along the coast southwards. The second group includes mainly species found in more shallow waters. In response to the inflow of cooler water from the south, they either move into shallower waters, as *Ilisha africana* or are pushed northwards, as the bumper *Chloroscombrus chrysurus*.

The demersal fish communities are very similar to those of the Gulf of Guinea. Abundance is higher south of Cape Lopez probably because of the seasonal effects of the cool rich waters from the south. Three main groups can be recognized: those living very close to the coast such as the croakers *Pseudolithus senegalensis* and *P. typus*, the threaddfin *Galeoides decadactylus* and others; those of deeper waters, usually below the thermocline such as the seabreams *Dentex angolensis* and *D. congoensis*, the driftfish *Ariomma bondi* and others; and finally those found above and below the thermocline some of them at times off the bottom such as the silverside grunt *Brachydeuterus auritus* and the triggerfish *Balistes capriscus*. Also the demersal communities are affected by the seasonal hydrographical changes: some of the shallow water species with high affinity for warm waters are pushed inshore during the cold season. Some of the species living below the thermocline are also able to move toward more shallow water during the cold season. For some of the seabreams, e.g. *Dentex canariensis*, *Pagellus bellottii* this movement is associated with spawning.

In the following we will describe the composition, distribution and abundance of the main groups of resources based on the four coverages during :

Survey 1, 2 - 15 March	1985
" 2, 30 May - 12 June	"
" 3, 14 - 27 September	"
" 4, 7 - 18 December	"

As mentioned in Chapter 1 above the special oil drilling area south of Cape Lopez had to be omitted from the investigations since permission to operate there was not obtained. This detracts somewhat from the value of the survey. For the abundance estimates attempts have, however, been made to make adjustments for this omission by assuming that the closed area holds the same densities of fish as those found in the adjacent area.

3.2 Small pelagic fish

Figure 7 shows the distribution of pelagic fish as observed with the acoustic integration system for each of the surveys. The coverage off Congo has been included since the observations made there may help to demonstrate the migrational pattern of part of the resources.

The chart from Survey 1 shows that only low levels of densities of pelagic fish were recorded at that time. Sardinellas only occurred in a few cases as incidental by-catches. Otherwise the small pelagic resources were identified as scattered distributions of horse mackerel *Trachurus trecae*, round scad *Decapterus punctatus*, and bumper *Chloroscombrus chrysurus*. The main part of the pelagics north of Cape Lopez was identified as triggerfish *Balistes capriscus*. The samples of horse mackerel, scad and triggerfish all show small sized fish, mainly 10 - 15 cm of length.

Also during Survey 2 only relatively low density levels of pelagic fish were located over the shelf, but some denser recordings were made off Congo some of which were identified as round sardinella *Sardinella aurita* perhaps indicating a northward migration. In shallow waters the pelagic community up to Sette Cama consisted of bumper, West African ilisha *Ilisha africana*, barracuda *Sphyræna gauchancho* and lookdown *Selene dorsalis*, while that further offshore was dominated by horse mackerel and false scad *Decapterus rhonchus*. Inshore further north to abt. Iguela juveniles of both sardinella species and of scad and silverside grunt *Brachydeuterus auritus* were located. North of Cape Lopez the triggerfish was again the dominating species.

During Survey 3 in September a number of denser aggregations of pelagic fish were located over the whole shelf up to the closed area south of Port Gentil indicating an increase in abundance compared with the two previous coverages. The increase is represented mainly by juvenile stages of horse mackerel and round sardinella commonly found at 50 - 100 m depth up past Iguela. Also some anchovy *Engraulis encrasicolus* were caught. Round sardinella 12 - 15 cm of length dominated in the north outside Iguela where during daytime they aggregated in schools on the bottom and was fairly easy to catch with demersal trawl. From Pte. Panga south horse mackerel was caught together with hairtail *Trichiurus lepturus*. In shallow waters catches of pelagic fish consisted of bum-

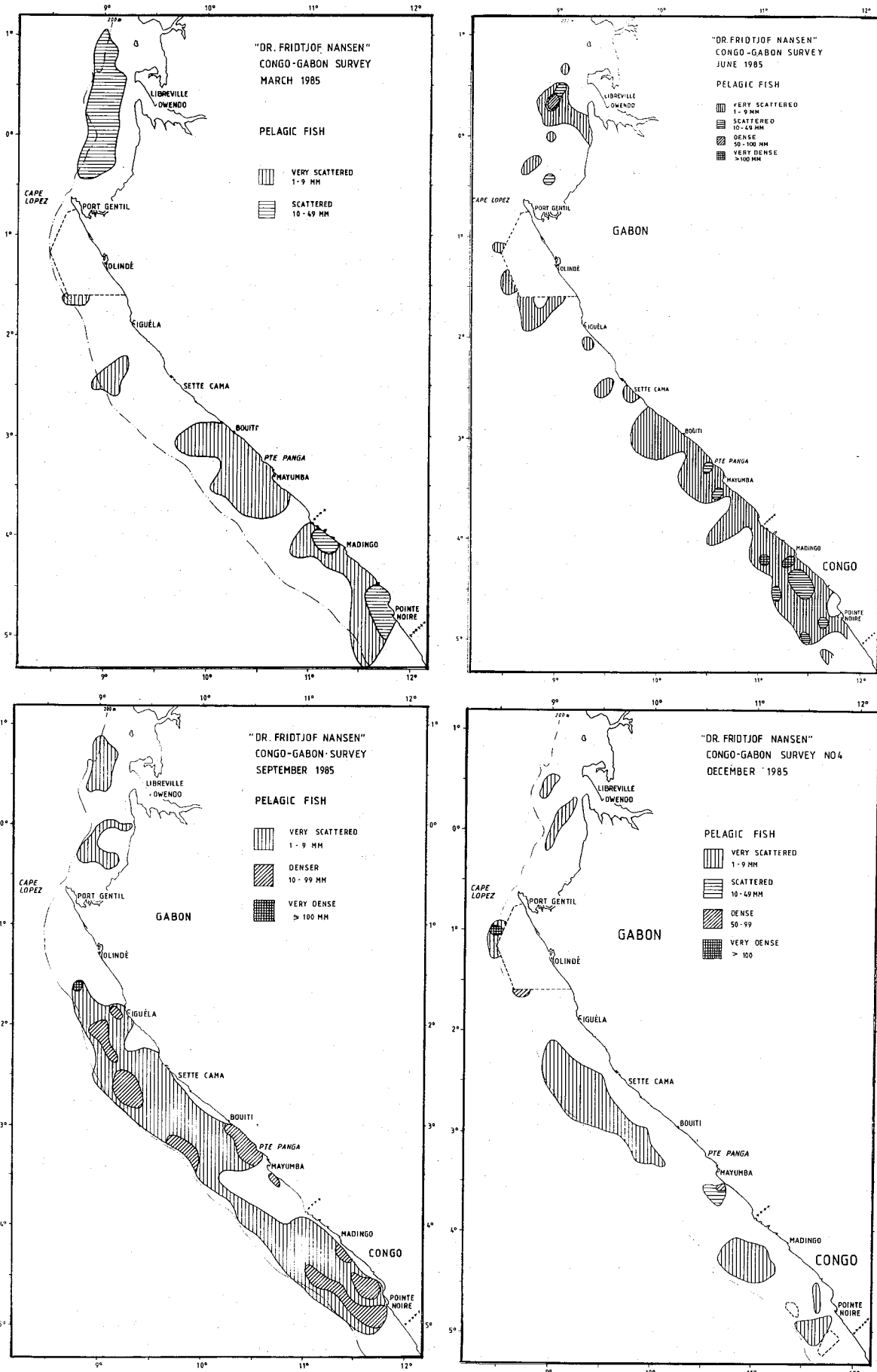


Figure 7. Distribution of pelagic fish by surveys.

per, ilisha and barracuda in addition to sardinellas and horse mackerel. North of Port Gentil pelagic fish was scarce and only some small sized horse mackerel was caught. In this survey no triggerfish was observed in Gabon waters.

During Survey 4 in December the pelagic fish was found nearly exclusively in very scattered distributions and the abundance had clearly declined since the September coverage. The small pelagics were located over the outer parts of the shelf and consisted of the two sardinella species, round scad and horse mackerel, all juvenile or immature stages and the pooled length samples show for all four species bi-modal distributions, one between 10 and 15 cm and one between 15 and 20 cm. No significant amounts of triggerfish was found during this survey.

In addition to providing observations for description of the distribution of pelagic fish the acoustic integration system also allows assessments to be made of the absolute abundance of the fish expressed in weight of standing biomass. The methodical basis for this is briefly explained in Chapter 1 above. Table 3.1 presents the estimates of abundance of small pelagic fish and trigger fish for each of the surveys and for the shelf areas north and south of Cape Lopez separately. An attempt has been made to adjust for the non-coverage of the restricted area south of Cape Lopez on the basis of an assumption that the mean density in this area is the same as that observed over the shelf southwards

	N of Cape Lopez Small pelagic	Triggerf.	S of Cape Lopez Small pelagic	Total
Survey 1		52	24	76
Survey 2		15	30	45
Survey 3	10		160	170
Survey 4	3		54	57

The general picture of the distribution, composition and abundance of small pelagic fish over the Gabon shelf obtained from these four surveys is thus as follows:

Cape Lopez seems to represent a point of division in the distribution of these fish. No significant aggregations were located north of the Cape in any of the surveys. The scattered fish found here was identified as horse mackerel and round scad. South of Cape Lopez the March - and June surveys gave biomass estimates of 25 - 30 thousand tonnes which consisted of horse mackerel and scads offshore and bumper and ilisha in the inshore waters. Sardinellas were only found incidentally. The September survey showed, however, a marked increased biomass estimate with 170 thousand tonnes. The main part of this consisted of juvenile and immature stages (less than 20 cm total length) of horse mackerel and of sardinellas, mostly round sardinella. Some anchovy also formed part of the biomass. Finally in December the estimated biomass is about 100 thousand tonnes less than that found in September, but still some aggregations of small sized sardinellas and horse mackerel were found over the outer parts of the shelf.

The biological interpretation suggested by these findings is that the Gabon shelf south of Cape Lopez serves as a nursery ground for the sardinellas especially the round sardinella and for the horse mackerel. The main spawning grounds from which the juveniles are recruited are located to the south probably off the Congo and Cabinda. The current system transports the eggs and larvae northwards along the shelf in the early cold season and then perhaps also with a seasonal shift of direction contributes to the southward movement of the immature fish towards the end of the year. The main resources of small pelagic fish of Gabon would thus seem to be part of stocks shared with the Congo and Angola. The exploitation and management of these stocks is thus a matter of regional concern in the area. The inshore resources of bumper, ilisha, anchovy and barracudas probably represent local stocks, but their total abundance seems to be small compared to that of the sardinellas.

The comprehensive surveys of the area undertaken with the R/V NIZERY and CAPRICORNE in April, May and August 1982 (ORSTOM, 1983) showed a very similar pattern of distribution along the shelf with markedly reduced densities of fish north of Cape Lopez. There was also a similar increase of estimated biomass of pelagic fish south of Cape Lopez from April-May till August as that found in our data. The absolute levels of the estimates were, however, considerably higher than ours and this will be commented on in Chapter 4 below.

3.3 Trigger fish

The trigger fish is a species of wide distribution off West Africa ranging from southern Angola to Morocco. It is found both pelagic and close to the bottom and can be fished with mid water and demersal trawls. Stocks off Ghana and Guinea are known to have fluctuated greatly in size. The trigger fish was found in some quantities in the March and June surveys on the northern part of the Gabon shelf mostly to the north of Cape Lopez. Samples showed mostly juvenile fish. Its occurrence is possibly seasonal. There could also be a long term stock change since the CAPRICORN-NIZERY surveys only found insignificant amounts of the species off north Gabon and Equatorial Guinea.

3.4 Demersal fish

As described in Chapter 1 above two types of assessments have been made of the demersal fish, an acoustic estimate of the bottom fish which are observed in mid water and a "swept area estimate" based on catches in bottom trawl surveys. Figure 2 shows the distribution of the demersal fish in each of the surveys based on the acoustic observations. They indicate that also for this category of resource fish densities are lower on the shelf north of Cape Lopez than in the southern part. There are no indications of any great seasonal change in densities. General features of the composition is that silverside grunt *Brachydeuterus auritus* dominated in shallow waters in the south while further offshore and northwards towards Cape Lopez commercially valuable groups such as seabreams, snappers and groupers made out the main part of the catches. Table 3.2 shows the biomass estimates of the demersal fish that could be observed in mid water and thus

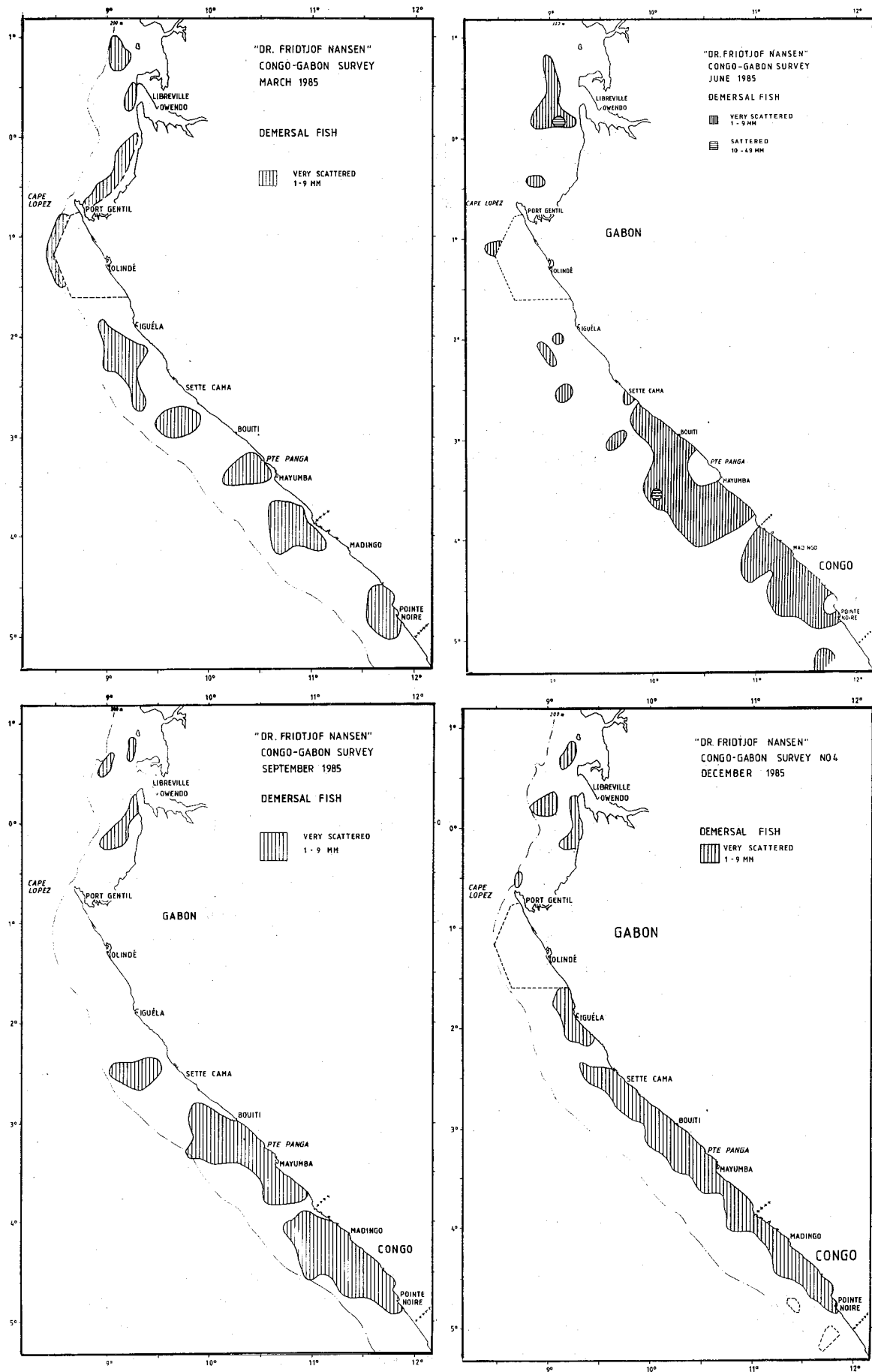


Figure 8. Distribution of demersal fish observed with the acoustic system by surveys.

assessed with the acoustic integration system. They range from 19 to 37 thousand tonnes, but it is clear that this method grossly underestimates the total demersal biomass.

Survey 1	20
Survey 2	25
Survey 3	19
Survey 4	37

The catches in the hauls with the bottom trawl represent the other source of information for a description of the composition, distribution and abundance of the demersal fish. The catch records by species for all the 139 bottom trawl hauls and the 37 hauls with the mid water trawl are presented in Annex 2. A further analysis of these data to demonstrate the species composition and their catch rates by surveys and depth intervals and for the shelf north - and south of Cape Lopez separately is shown in Annex 7.

The catch rates can be converted into a simple measure of fish density by assuming a certain efficiency of the trawl, estimate the area swept by the gear and then calculate the fish density corresponding to the catch rates obtained. Annex 8 shows the mean densities obtained in this way by species and with the data pooled for the shelf north, respectively south of Cape Lopez for each survey and for all surveys analysed together. In these data the typically pelagic species have been excluded. The mean densities for all demersal fish taken together are shown in Table 3.3. From this it is evident that the mean density (per unit area) is consistently two to three times higher in the southern area.

	North of Cape Lopez		South of Cape Lopez	
	No of hauls	Density	No of hauls	Density
Survey 1	12	4.6	15	10.8
Survey 2	13	5.6	21	16.0
Survey 3	7	6.6	23	13.9
Survey 4	7	2.3	18	13.8
All data	39	4.8	77	13.9

By planimetry the shelf off Gabon was been estimated as shown in table 2, Chapter 2.1. Assuming that the estimated mean densities are representative for the total shelf areas, estimates of the standing biomass of demersal fish are obtained by simple multiplication. Table 3.4 gives the results for all surveys combined for the total shelf and for the different depth ranges down to 200m. The estimates for the depth

intervals are based on fewer hauls, especially those from the deeper waters and thus less reliable. The results demonstrate, however, that the main part of the biomass is found south of Cape Lopez and it is distributed over the shelf down to about 100m of depth. Annex 8 shows that the densities of demersal fish even beyond this depth does not decline, but only a small number of species occur in these waters and they are not likely to be of high commercial value.

	North of Cape Lopez	South of Cape Lopez	Total
Total shelf	16	120	136
0 - 50 m	6	41	47
50 - 100m	3	56	59
100 - 200m	4	20	24

There are a great number of species among the demersal fish. An illustrated list of all main species caught is shown in Annex 9. And a record of the stations at which each species has been caught together with the catch is shown in Annex Table 3. Not all species are of commercial interest and the value differ among the various types of commercial fish. The main groups found and their part of the total biomass measured by weight are shown in Table 3.5.

	North of Cape Lopez	South of Cape Lopez
Commercial groups:		
Seabreams, Sparidae	42	26
Snappers, Lutjanidae	3	8
Groupers, Serranidae	5	4
Grunts, Pomadasysidae	-	3
Jacks, Carangidae	3	1
Barracudas, Sphyraenidae	3	5
Squids, Cephalopoda		
Cuttlefish, "		
Croakers, Sciaenidae		
Threadfins, Polynemidae		
Emperors, Lethrinidae		
Possibly commercial:		
Atlantic bigeye, Priacanthus	12	9
Other abundant species:		
Bigeye grunt, <i>Brachydeuterus auritus</i>	1	20
Deep water:		
Driftfish, <i>Ariomma</i> sp.	23	5
Picarel, <i>Spicara alta</i>	2	5

About 50 per cent of the estimated total biomass are groups of well known commercial interest. Various species of seabreams dominate, but snappers, groupers and jack macerels are also important. It is not unlikely that the Atlantic bigeye, *Priacanthus arena-tus* could have a market in Gabon and the commercially valuable part of the biomass then increases to some 60 per cent.

A further 30 per cent of the demersal fish consists of three relatively abundant species: bigeye grunt, driftfish and picarel. The bigeye grunt is abundant in inshore waters in the south, the other two are found in deep water northwards. These fish are of acceptable quality for consumption, but their smallish size, commonly around 20 cm makes them less attractive for commercial fishing.

The composition of the demersal fish resources found in this survey and demonstrated in Table 3.5 above is somewhat different from that described in the report of the CAPRICORN/NIZERY survey, the most notable difference being the much higher relative abundance of croakers, Sciaenidae in their findings. Croakers also form an important part of the commercial catches of Gabon as do also catfishes and threadfins, all shallow water species. These forms are all poorly represented in our data, and one must conclude that the shallow water fauna was not well covered by our surveys. This is partly an effect of the abt. 10 fathoms limit of operability of the vessel.

The size compositions of samples of the main species of demersal fish are listed in Annex 5, and pooled length frequency diagrams by species and surveys are shown in Annex 6. These data are insufficient for a detailed analysis, but it is of interest to compare the sizes observed with the recorded maximum sizes in the region. For the most important commercial group, the seabreams, the common maximum sizes listed in FAO's Field Guide for Angola are as follows:

<i>Dentex canariensis</i>	35 cm
" <i>angolensis</i>	25 "
" <i>congoensis</i>	20 "
" <i>gibbosus</i>	60 "
<i>Pagellus bellotti</i>	25 "
<i>Sparus caeruleostictus</i>	50 "

It is seen from Annex 6 that most of the size frequency distributions for these species reach well into these common maximum sizes. This is a rough indication that this group is not exposed to a high rate of exploitation.

3.5 Assemblages of demersal fish

An analysis of the communities formed by the demersal fish would aid the further understanding of the composition and distribution of these resources.

As seen in the introduction to section 3.1, the demersal species south and north of Cape Lopez resemble greatly those found in the Gulf of Guinea. This conclusion is based on the analysis of the catch composition in the demersal trawl in the course of the four surveys. Due to the different hydrological regimes found north and south of Cape Lopez, a

separate analysis of the data from these two areas was carried out in order to detect possible differences. Fig. 9a and b shows the abundance repartition for the main demersal species south and north of Cape Lopez respectively, from about 10 to 200 m depth. Selection of the species to be included was based on abundance and/or frequency in the catches. Furthermore, those species also found off the bottom (i.e. *Brachydeuterus auritus*) were not included because not considered as typical demersal. Species were arranged according to their bottom preference (muddy, sandy, rocky, various bottoms) as reported in the literature. Also, because no significant seasonal difference in the depth distribution of most species could clearly be detected, the description is generalized, without taking into account seasonal changes.

A more rich fauna seems to characterize the southern part of the shelf. However, practically all the species found in the southern part are also known to occur in the northern part and they may not have appeared in the catches because they were present only at very low densities.

3.5.1 Shallow-water communities

The shallow-water fish communities can be classified according to their bottom preference. Some species have a higher affinity for muddy/soft bottoms such as *Pseudotolithus typus*, *Galeoides decadactylus*, *Pteroscion peli* and *Pseudupeneus prayensis*, among those fished by "Dr. F. Nansen". Species of Ariidae and Mugilidae are also very important components of these community, but they are mostly found in those shallow waters not accessible to the vessel. *Mustelus mustelus*, *Raja miraletus* and *Torpedo torpedo* are the representatives for sharks and rays within this assemblage. *Penaeus notialis* has also been included in this category, north of Cape Lopez only. *Pseudotolithus senegalensis*, although often very abundant over muddy bottoms, is actually reported on various types of bottoms and for this reason it has been included in the right part of the illustration, under "various". Another group of shallow-water species has a clear preference for sandy and /or rocky bottoms. Among these *Sparus caeruleostictus*, *Epinephelus aeneus*, *Lutjanus agennes* and *L. fulgens* and *Apsilus fuscus*. Some of these species were caught at highest rates between 30 and 50 meters. More ubiquitous species are *Pagellus bellotti* and *Pomadasyd jubelini*.

3.5.2 Deep-water communities

The subthermocline sparid community is well represented in Gabon waters. *Dentex angolensis*, *Dentex congoensis* and *Sparus pagrus africanus* have their maximum densities below 70 meters. *Pagellus bellotti* was also found in association with these species but it also occurs in shallower waters. Sometimes associated with this group were *Ariomma bondi* and *Spicara alta*. This latter species is known to occur from Senegal to Angola. It is reported to be abundant off Senegal and Angola, but only as rare in Congo waters. However, good catches of this species were obtained by "Dr. F. Nansen" between 100 and 150 m. depth off Gabon, which probably constitutes a new finding. Also, *Priacanthus arenatus* described in the literature as occurring only sporadically, was caught at rates over 1 tonne / hour.

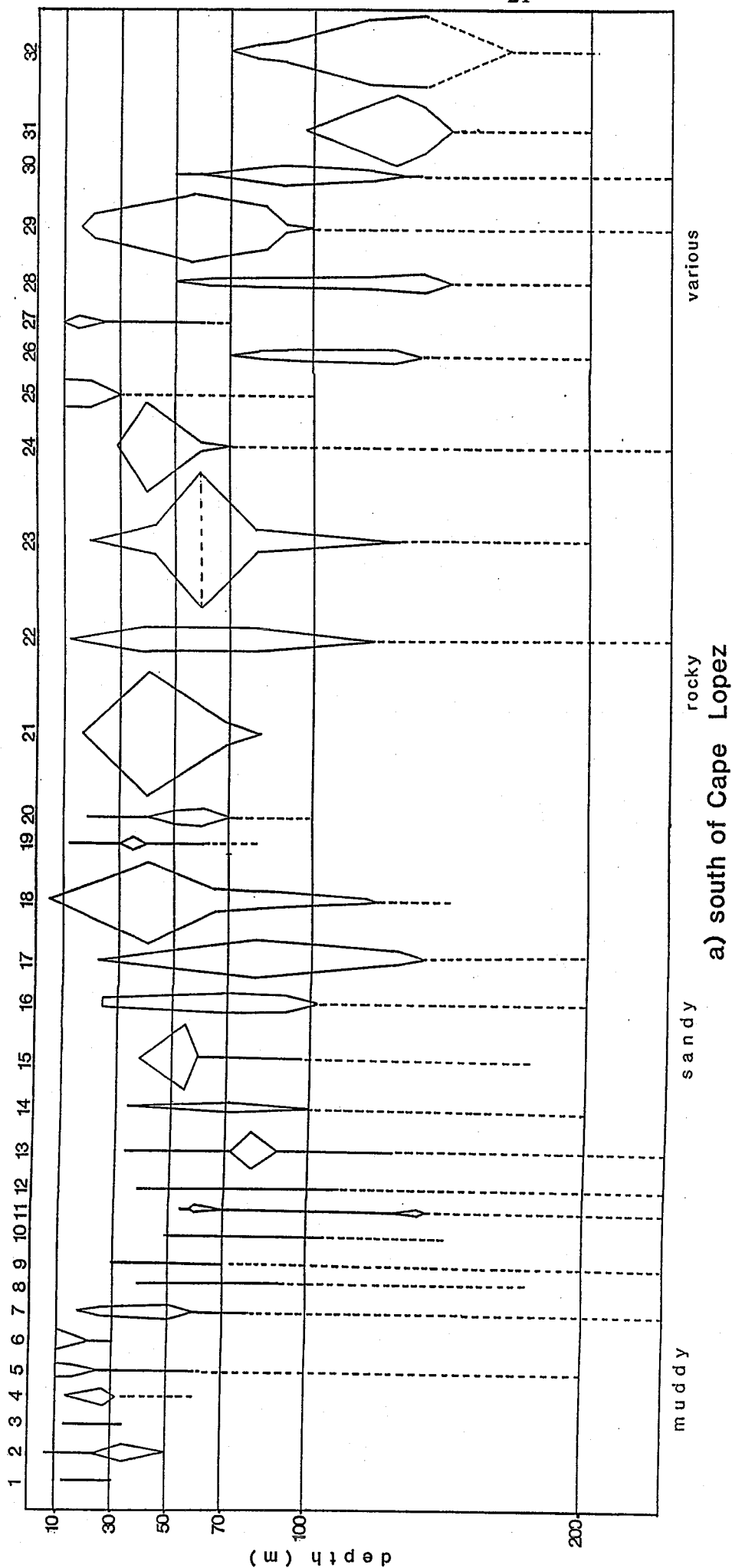
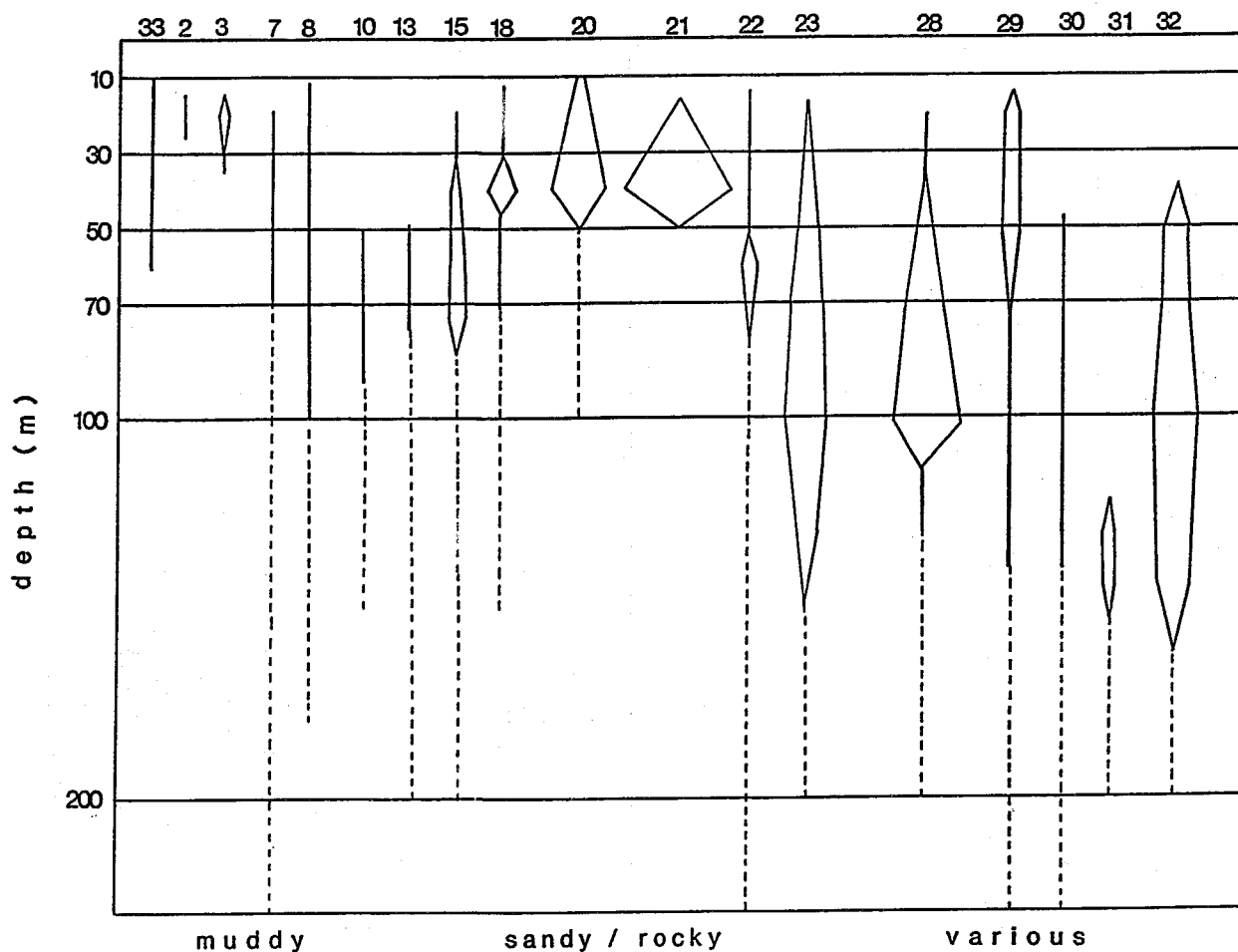


Fig 3a. Abundance repartition of the main demersal species in relation to depth obtained from catch rates in bottom trawl. — = 100 Kg/ 1/2 h. trawling. Broken lines extend the depth distribution of each species to its known range.

- | | | | |
|-----------------------------------|---|-----------------------------------|--------------------------------------|
| 1. <u>Arius</u> species | 9. <u>Raja miraletus</u> | 17. <u>Dentex gibbosus</u> | 25. <u>Pomadasy jubelini</u> |
| 2. <u>Drepane africana</u> | 10. <u>Mustelus mustelus</u> | 18. <u>Sparus caeruleostictus</u> | 26. <u>Sparus pagrus africanus</u> |
| 3. <u>Ephippion guttifer</u> | 11. <u>Torpedo torpedo</u> | 19. <u>Pomadasy incisus</u> | 27. <u>Pseudolithus senegalensis</u> |
| 4. <u>Pseudolithus typus</u> | 12. <u>Citharus linguatula</u> | 20. <u>Lutjanus agennes</u> | 28. <u>Dentex congoensis</u> |
| 5. <u>Pteroscion peli</u> | 13. <u>Unbrina canariensis</u> | 21. <u>Lutjanus fulgens</u> | 29. <u>Pagellus bellottii</u> |
| 6. <u>Galeoides decadactylus</u> | 14. <u>Chelidonichthys gabonensis</u> | 22. <u>Dentex canariensis</u> | 30. <u>Dentex angolensis</u> |
| 7. <u>Pseudupaneus prayvensis</u> | 15. <u>Plectorhynchus mediterraneus</u> | 23. <u>Priacanthus arenatus</u> | 31. <u>Spicara alta</u> |
| 8. <u>Lagocephalus laevigatus</u> | 16. <u>Epinephelus aeneus</u> | 24. <u>Apsilus fuscus</u> | 32. <u>Ariomma bondi</u> |



b) north of Cape Lopez

Fig 3 b. Abundance repartition of the main demersal species in relation to depth, obtained from catch rates in bottom trawl. \dashv = 100 Kg/1/2 h trawling. Broken lines extend the depth distribution of each species to its known range.

- | | |
|---|---------------------------------|
| 2. <u>Drepane africana</u> | 21. <u>Lutjanus fulgens</u> |
| 3. <u>Ehippion guttifer</u> | 22. <u>Dentex canariensis</u> |
| 7. <u>Pseudupeneus prayensis</u> | 23. <u>Priacanthus arenatus</u> |
| 8. <u>Lagocephalus laevigatus</u> | 28. <u>Dentex congoensis</u> |
| 10. <u>Mustelus mustelus</u> | 29. <u>Pagellus bellottii</u> |
| 13. <u>Umbrina canariensis</u> | 30. <u>Dentex angolensis</u> |
| 15. <u>Plectorhynchus mediterraneus</u> | 31. <u>Spicara alta</u> |
| 18. <u>Sparus caeruleostictus</u> | 32. <u>Ariomma bondi</u> |
| 20. <u>Lutjanus agennes</u> | 33. <u>Penaeus notialis</u> |

CHAPTER 4. OVERVIEW OF BIOMASS ESTIMATES, DISCUSSION OF RESULTS AND ESTIMATES OF RESOURCE POTENTIALS.

4.1 Review and discussion of biomass estimates

Table 4.1 shows the biomass estimates described above presented by areas and types of resources. For the small pelagics two sets of estimates are given, a "seasonal" estimate representing the September survey and a mean value representing the other three surveys. The estimate for trigger-fish represents the March survey since this may also be a seasonal occurrence. The acoustic biomass estimates of demersal fish are believed to be gross underestimates and we have more confidence in the swept area results.

	North of Cape Lopez	South of Cape Lopez	Totals
Small pelagic	10	30	40
" " seasonal		160	170
Triggerfish, seasonal	50		50
Demersal (acoustic estimate)			30
(swept area estim.)	20	120	140
Totals	80 (30)	280 (150)	360 (180)

The results presented in Table 4.1 should be compared with data from previous surveys and discussed. This will be done in the following by types of resources.

Pelagic fish

For this group there is clearly a seasonal pattern in abundance which must be considered when comparing different data. Three sets of survey data are available from recent years. The Gabon shelf was covered briefly with DR FRIDTJOF NANSEN at the end of August 1981, the season of assumed high biomass of pelagics. The biomass was estimated at 360 000 tonnes and samples gave small sized sardinellas, mostly *S. aurita* and some carangids. The extensive two-vessel surveys by NIZERY/CAPRICORN in 1982 gave biomass estimates for the shelf south of Cape Lopez of 80 000 tonnes in April and May and abt. 330 000 tonnes in August. North of Cape Lopez the estimate was 38 000 tonnes in May and 76 000 tonnes in August. The Oceanographic Institute of Spain, Coastal Centre of the Balears surveyed the Gabon shelf with the R/V CORNIDE DE SAAVEDRA 8 - 17 June 1983 and found an estimated biomass of abt 175 000 tonnes, the major components being round sardinella and horse mackerel.

The estimates based on our 1985 survey and made at the corresponding seasons of the year are one to two times lower than these previous findings. Although all of these surveys are based on acoustic techniques there may still be a problem of comparability of methods related to the difficulties of distinguishing echo-records of fish in records of dense plankton. This will, however, remain unresolved. There occur on the other hand very often large scale variations in the size of small pelagic stocks between periods. These may be related to natural fluctuations in recruitment or to fishing pressure and the Gabon stocks would seem to be vulnerable to both of these effects. They consist to a large extent of immature fish deriving from one years spawning only. Since the Gabon shelf forms nursery grounds for the northern part of the sardinella - and perhaps also horse mackerel stocks of the Congo and Angola the fisheries in these southern areas may well affect the Gabon parts of the stocks. The 1985 Angolan catch of sardinella was abt. 240 000 tonnes out of an estimated total biomass of abt. 400 000 tonnes. This represents a high rate of exploitation which caused a reduction in stock size in Angola and may have affected also the Gabon area. The lower biomass estimate of small pelagic fish in Gabon in 1985 as compared with previous surveys may thus at least in part have been caused by a declining stock. There is also a decline in the reported landings of carangids and sardinellas in Gabon from 3 200 tonnes in 1983 to 2 600 tonnes in 1984 and 1 800 tonnes in 1985.

Demersal fish

There are no reasons to expect fluctuations in biomass of demersal fish caused by migrations in and out of the area, but there could still be seasonal changes of availability caused by inshore and offshore movements. There are no previous swept area surveys. The acoustic estimates of demersal fish were as follows: DR FRIDTJOF NANSEN, 1981, 130 000 tonnes; NIZERY/CAPRICORN 1982, April and May 40 - 50 000 tonnes, August 212 000 tonnes; CORNIDE DE SAAVEDRA 1983, ("other fish"), June 55 000 tonnes. Also these estimates are considerably higher than our acoustic biomass estimates. It seems unlikely that any great change can have occurred in the stocks of demersal fish and we think it justified to have more confidence in the swept area method for assessment of demersal stocks.

There is, however, a need to evaluate also this estimate. In our application of the method it is based on an assumption of a 100 per cent efficiency of the trawl gear i.e. all the fish located in the path of the trawl will be caught. This is perhaps unlikely to be the case and lower figures for gear efficiency down to 50 per cent are some times used in these calculations. Our assumption of a high gear efficiency may thus tend to produce conservative estimates of biomass. Another problem is as mentioned under 3.4 above that the shallow water fauna of croakers, catfishes, threadfins and others are not well represented in our sampling. The fish densities in these shallow waters is probably higher than the mean densities which have been used to estimate the total biomass, and although the shallow water areas which represent some 15 % of the shelf are included in calculation the effect will again be a tendency of underestimation of the total biomass of demersal fish in Gabon. Taking these various effects into account we propose that our figure of 140 000 tonnes can be used as a likely estimate of the demersal stocks less the part representing the shallow water community of croakers etc.

Trigger fish

The trigger fish is reported as occurring only sporadically in previous surveys. The significance of the findings of aggregations of the species off northern Gabon in the March and June surveys is thus uncertain. The fish was of small size and could represent recruitment in an increasing stock.

4.2 Estimate of resource potentials

In order to maintain the fish stocks as a lasting resource only a part of the standing biomass should be fished. The proportion of this long term yield varies between types of fish, and in the following we will use 40 per cent for small pelagic fish and 25 per cent for demersal species. Existing fisheries must also be taken into account in calculating the total potentials.

Pelagic fish

There is a need to distinguish between the exclusive resource found throughout the year in Gabon and that shared with Congo and Angola which is available only during part of the year. The exclusive resource consists mostly of carangids, bumper, horse mackerel and scads, some sardinellas and ilisha and anchovy. With a standing biomass of 40 000 tonnes the potential yield is abt. 16 000 tonnes.

Another 130 000 tonnes of mainly round sardinella and perhaps some horse mackerel is according to our findings available in Gabon waters during part of the year, probably over some months. This biomass seems, however, to represent mainly juvenile and immature fish of stocks shared with Congo and Angola and the exploitation and management of these resources should be a matter for regional deliberations. In theory the potential yield from this biomass might be of the order of 50 000 tonnes, but the development of such a fishery on these resources may not be commercially feasible, nor would it seem to be desirable from the point of view of good biological management. There is, however, a basis for Gabon to claim an access to this resource which corresponds to the biomass found within Gabons EEZ.

The reported annual landings of small pelagic fish in Gabons present fisheries is according to FAO's Yearbook of Fishery Statistics (Vol.60) abt. 2 000 - 3 000 tonnes. Some further quantities of these stocks are no doubt taken as bycatch in the shrimp fisheries and discarded, but there exists clearly a considerable biological potential for increased yield from these resources.

Demersal fish

Of the estimated biomass of 140 000 tonnes (shallow water community excluded), 50-60 per cent represent fish of commercial interest. With a yield proportion of 25 per cent, the potential long term catch with no existing fishery would approach 20 000 tonnes. Present catches of groupers, grunts, seabreams and barracudas are reported to be abt. 5 000 tonnes and the total potential would thus exceed 20 000 tonnes.

Trigger fish

The uncertainties regarding the future existence of this stock have been mentioned several times above. This is a slow growing fish and the long term potential should be estimated at 12 000 tonnes from a biomass of 50 000 tonnes.

General development considerations

The estimated biomass for the various types of resources and the calculated long term yields can be summarized as follows, (1 000 tonnes):

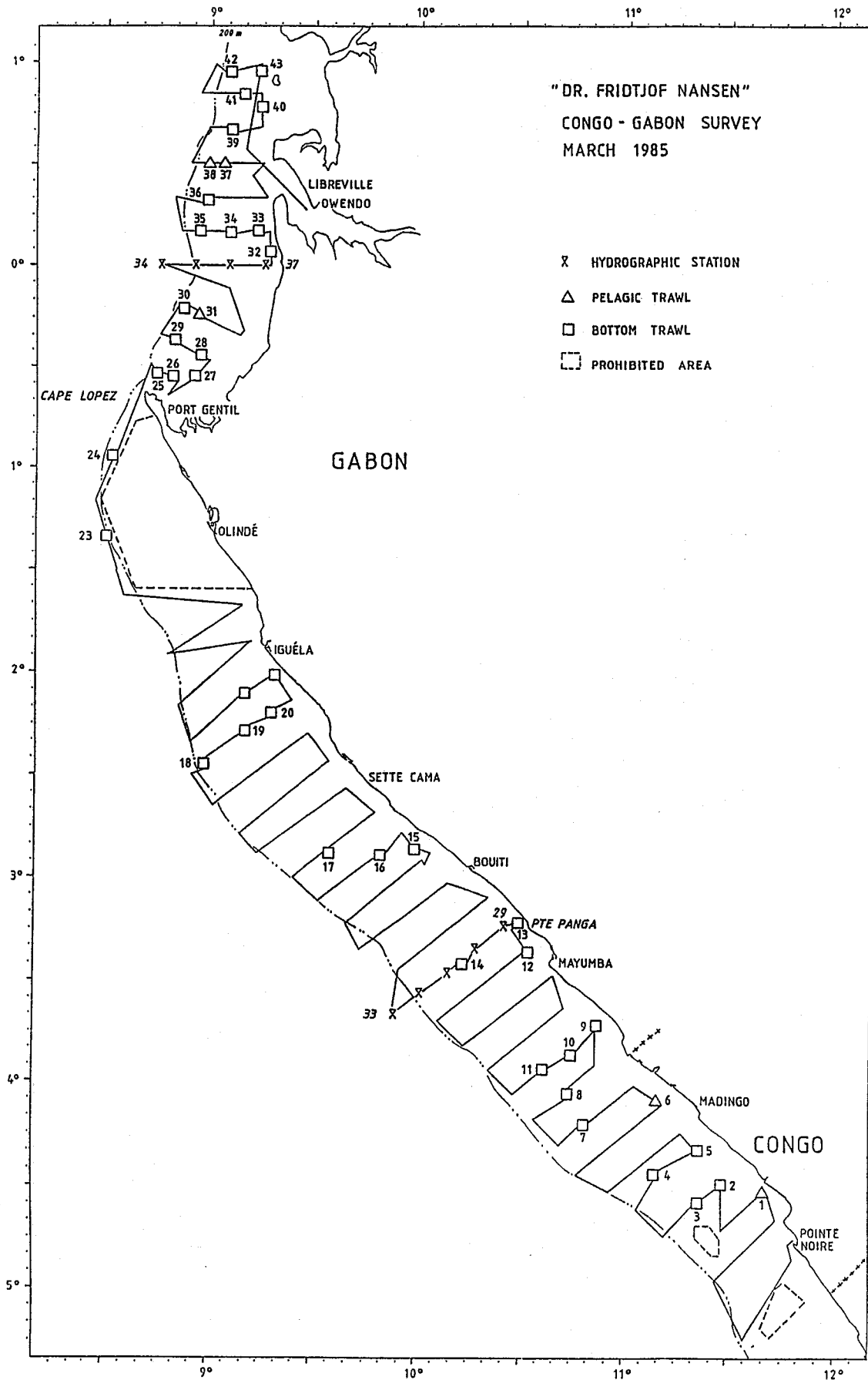
	Biomass	Yield	Present landings
Small pelagics, Gabon stocks	40	16	2
Small pelagics, seasonal	130	50	
Demersal, excluding shallow water	140	>20	5
Trigger fish, uncertain	50	12	

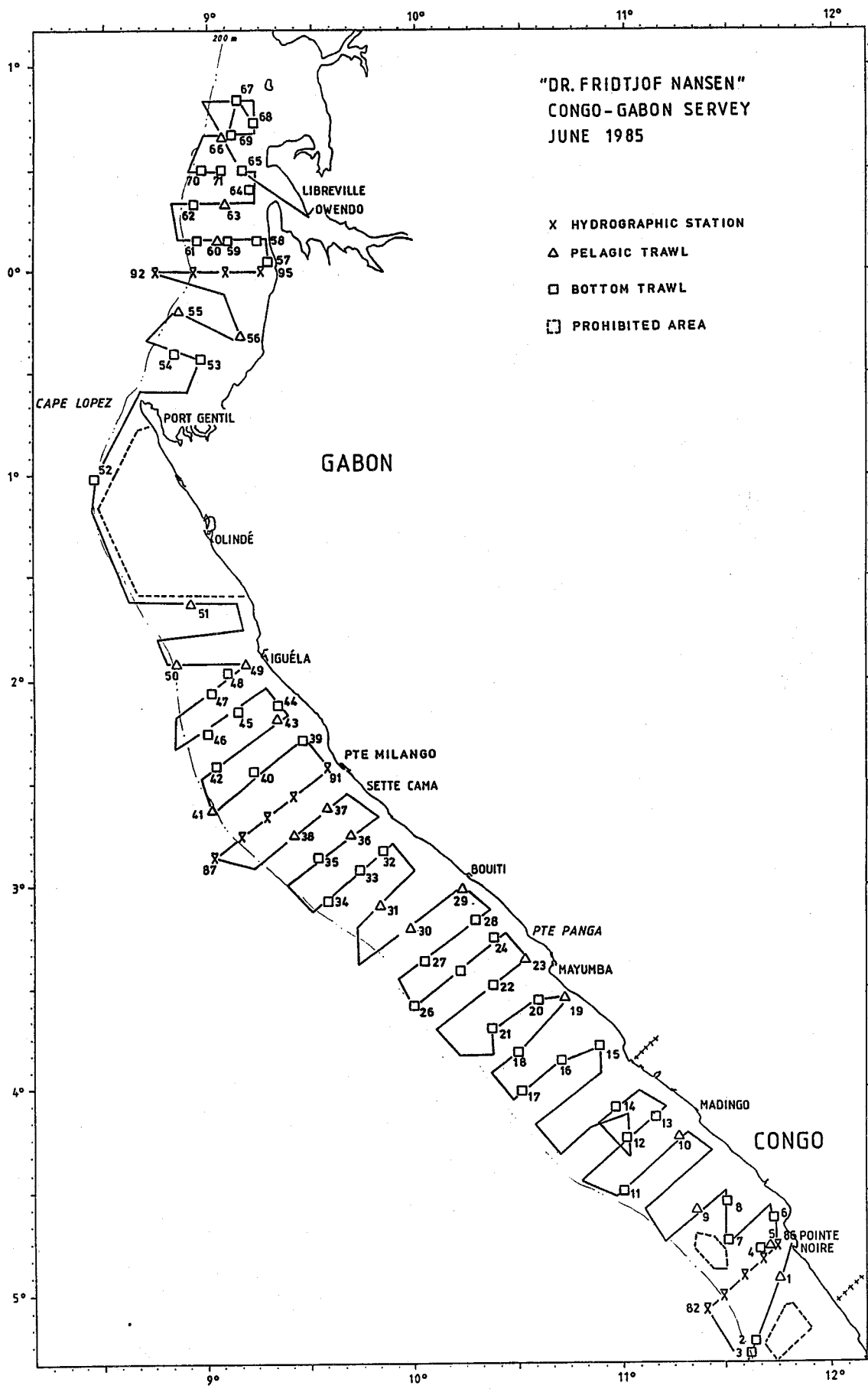
The survey findings thus demonstrate some significant biological potentials for increases of yields. These should be further considered with reference to fishing technology and the present fisheries and in an economic, social and nutritional context within Gabon. Special studies and evaluations within these various fields will probably be needed.

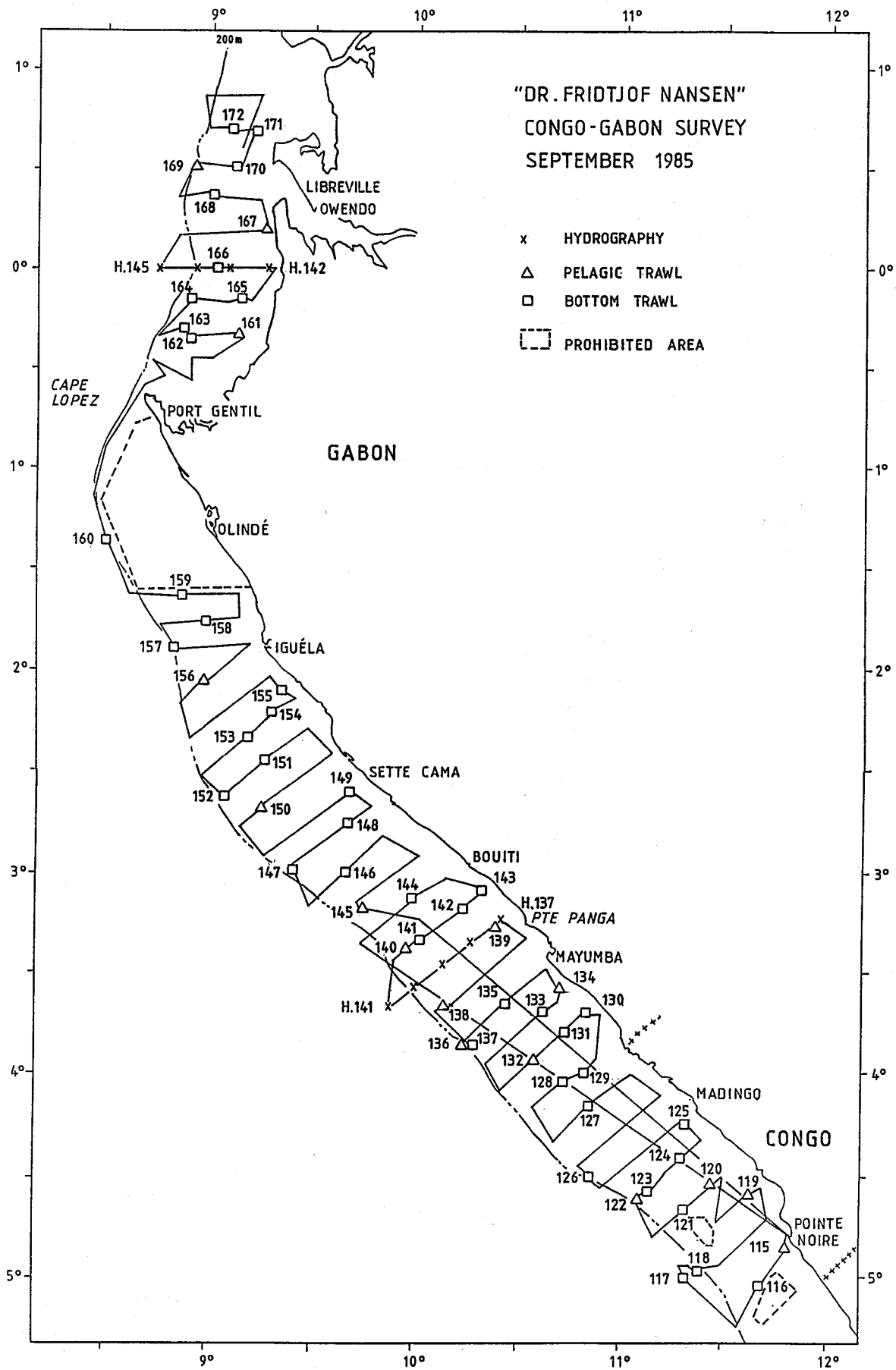
We would, however, still like to offer a few comments of a general nature concerning the feasibility of utilizing these resources. The only resource of a magnitude which might warrant a fishery on an industrial scale is the seasonal sardinella stock. The behaviour of this generally small sized fish does not, however, seem favourable for industrial purse seining and there is also the problem of a restricted availability during the year. A use of this resource on a regional basis should perhaps be considered. An alternative or complementary use in a semi-industrial fishery by a technically advanced artisan fleet could also be a possibility.

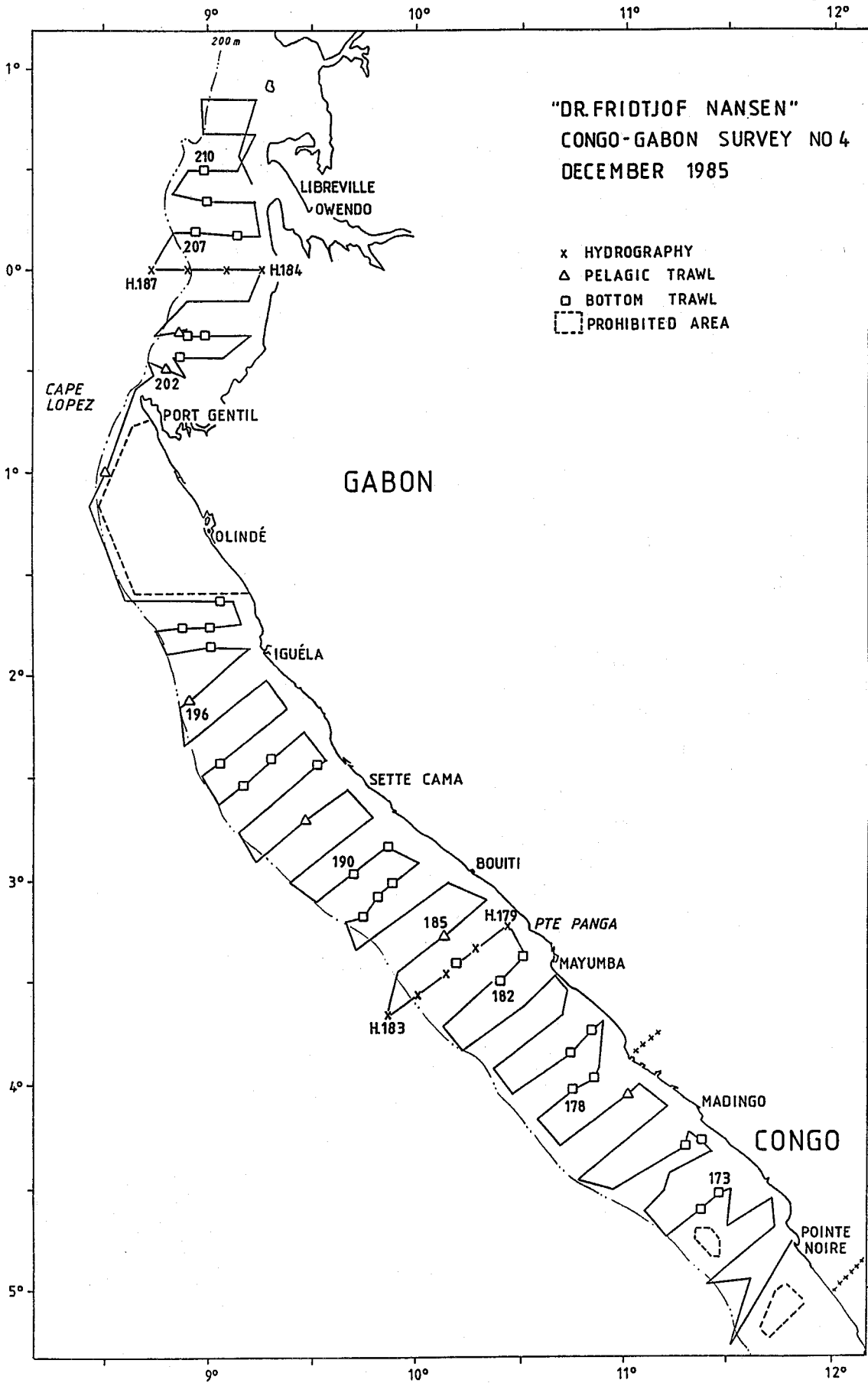
The other resources, Gabon's exclusive stocks of small pelagics and the demersal fish out on the shelf have relatively low abundance and the fish densities are nowhere very high in their rather extensive distributions along the coast. These are not favourable characteristics for the development of fishing on a full industrial scale. In order to utilize these resources, and in particular the valuable demersal fish considerations should also be given to an exploitation at an intermediate level of technology by artisan units fishing with long lines and gillnets. The inshore components of the small pelagics, ilisha, bumper, anchovy and others probably already form part of the bycatch of the shrimp- and trawler fleets. If market outlets exist or can be developed for these types of fish the use of this bycatch should be attempted and the direct exploitation of these resources by the fleets could be considered. Lastly we want to point out that the stocks of silverside grunt, Atlantic bigeye, driftfish and picarel represent a considerable source of cheap fish for internal consumption in Gabon if simple arrangements for exploitation and marketing could be made.

Annex 1. Course tracks with fishing- and hydrographic stations.









B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :126
N. STAT. CAMPAGNE:010

PROJET :SW
DATE: 04/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0353
dep. fin duree Long E 01045
TEMPS : 1700 1730 030(min) Code objectif:3
LOG : 9453 9454 1,0 CAP :306
PROF.P: 050 051 LONG.FUNE :0200m VIT:2,5
FDND : 0050 0051

CAPT.TOTALE: 00036,4KG. CAPT/HEURE: 00072,8KG. ECHANT:036,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Epinephelus aeneus	22,40	8	30,7	
Sphyræna sphyræna	15,60	118	21,4	
Brachydeuterus auritus	14,20	418	19,5	
Sphyræna guachancho	7,60	28	10,4	
Pagellus bellottii	3,20	26	4,3	
Decapterus punctatus	2,90	46	3,9	
Sparus caeruleostictus	1,50	2	2,0	
Dentex angolensis	1,20	4	1,6	
Fistularia petimba	,90	2	1,2	
Priacanthus arenatus	,70	2	,9	
Illex coindetii	,60	10	,8	
Seriola carpenteri	,60	4	,8	
Alloteuthis africana	,60	0	,8	
Trachurus trecae	,50	6	,6	
Lagocephalus laevigatus	,10	2	,1	
Sardinella maderensis	,08	8	,1	
Boops boops	,06	2	,0	
	72,74		99,1	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :127
N. STAT. CAMPAGNE:011

PROJET :SW
DATE: 04/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0357
dep. fin duree Long E 01037
TEMPS : 1850 1920 030(min) Code objectif:3
LOG : 9466 9467 1,1 CAP :305
PROF.P: 092 092 LONG.FUNE :0450m VIT:2,5
FOND : 0092 0092

CAPT.TOTALE: 00254,4KG. CAPT/HEURE: 00508,8KG. ECHANT:031,6KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Trachurus trecae	440,00	14666	86,4	163
Chelidonichthys gabonensis	12,80	96	2,5	
Brachydeuterus auritus	12,00	288	2,3	
Dentex angolensis	9,60	160	1,8	
Torpedo torpedo	8,00	16	1,5	
Lepidotrigla carolae	7,20	208	1,4	
SEPIIDAE	6,40	144	1,2	
Boops boops	4,00	80	,7	
Illex coindetii	3,20	32	,6	
Brotula barbata	3,20	4	,6	
Citharus linguatula	2,40	64	,4	
	508,80		99,4	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :128
N. STAT. CAMPAGNE:012

PROJET :SW
DATE: 05/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0323
dep. fin duree Long E 01033
TEMPS : 0855 0925 030(min) Code objectif:3
LOG : 9604 9606 1,6 CAP :310
PROF.P: 018 019 LONG.FUNE :0100m VIT:3,0
FDND : 0018 0019

CAPT.TOTALE: 00006,2KG. CAPT/HEURE: 00012,4KG. ECHANT:006,2KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Alectis alexandrinus	5,70	2	45,9	
Caranx crysos	4,10	4	33,0	
Sepia officinalis hierredda	1,80	2	14,5	
Decapterus punctatus	,70	56	5,6	164
	12,30		99,0	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :129
 N. STAT. CAMPAGNE:013
 PROJET :SW
 DATE: 05/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0313
 dep. fin duree Long E 01030
 TEMPS : 1055 1125 030(min) Code objectif:3
 LOG : 9619 9620 1,6 CAP :290
 PROF.P: 006 010 LONG.FUNE :0075m VIT:3,0
 FOND : 0006 0010
 CAPT.TOTALE: 00195,5KG. CAPT/HEURE: 00391,0KG. ECHANT:079,3KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Sphyræna guachancho	132,00	614	33,7	165
Ilisha africana	80,20	4900	20,5	166
Chloroscombrus chrysurus	79,80	1706	20,4	
Brachydeuterus auritus	44,40	900	11,3	
Galeoides decadactylus	15,00	126	3,8	
Pseudotolithus senegalensis	12,20	34	3,1	
Selene dorsalis	9,80	172	2,5	
Pseudotolithus typus	4,60	6	1,1	
Pteromylaeus bovinus	4,40	2	1,1	
Pteroscion peli	2,80	60	,7	
Trichiurus lepturus	1,60	42	,4	
Pomadasyr rogeri	1,60	14	,4	
Cynoglossus senegalensis	,90	4	,2	
Sardinella maderensis	,70	10	,1	
Pentanemus quinquarius	,50	18	,1	
Drepane africana	,50	10	,1	
	-----		-----	
	391,00		99,5	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :130
 N. STAT. CAMPAGNE:014
 PROJET :SW
 DATE: 05/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0326
 dep. fin duree Long E 01014
 TEMPS : 1450 1520 030(min) Code objectif:3
 LOG : 9647 9648 1,0 CAP :297
 PROF.P: 063 066 LONG.FUNE :0250m VIT:2,1
 FOND : 0063 0066
 CAPT.TOTALE: 00017,8KG. CAPT/HEURE: 00035,6KG. ECHANT:017,8KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Decapterus punctatus	19,20	916	53,9	167
Epinephelus aeneus	6,60	2	18,5	
Pagellus bellottii	4,20	74	11,7	168
Sardinella aurita	3,20	52	8,9	169
Sepia sp	1,20	6	3,3	
Illex coindetii	,60	10	1,6	
Lagocephalus laevigatus	,50	8	1,4	
Alloteuthis africana	,10	26	,2	
Priacanthus arenatus	,04	2	,1	
	-----		-----	
	35,64		99,6	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :131
 N. STAT. CAMPAGNE:015
 PROJET :SW
 DATE: 06/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0251
 dep. fin duree Long E 00959
 TEMPS : 0820 0827 007(min) Code objectif:3
 LOG : 9808 9808 0,3 CAP :125
 PROF.P: 015 016 LONG.FUNE :0075m VIT:3,0
 FOND : 0015 0016
 CAPT.TOTALE: 00003,4KG. CAPT/HEURE: 00029,1KG. ECHANT:003,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Dentex canariensis	14,14	17	48,5	
Sparus caeruleostictus	9,85	17	33,8	
Drepane africana	4,28	8	14,7	
Brachydeuterus auritus	,08	179	,2	
Decapterus rhonchus	,00	8	,0	
	-----		-----	
	28,35		97,2	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :132
N. STAT. CAMPAGNE:016

PROJET :SW
DATE: 06/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0253
dep. fin duree Long E 00930
TEMPS : 1017 1042 030(min) Code objectif:3
LOG : 9825 9826 1,0 CAP :300
PROF.P: 039 040 LONG.FUNE :0200m VIT:2,0
FOND : 0039 0040

CAPT.TOTALE: 00020,0KG. CAPT/HEURE: 00040,0KG. ECHANT:020,0KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Pagellus bellottii	30,40	364	76,0	170
Epinephelus aeneus	4,80	4	12,0	
Dentex canariensis	1,70	2	4,2	
Decapterus punctatus	1,50	64	3,7	
Sepia sp	,80	4	2,0	
Lagocephalus laevigatus	,60	8	1,5	
Fistularia petimba	,20	4	,5	
	40,00		99,9	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :133
N. STAT. CAMPAGNE:017

PROJET :SW
DATE: 06/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0253
dep. fin duree Long E 00934
TEMPS : 1542 1612 030(min) Code objectif:3
LOG : 9873 9874 1,1 CAP :315
PROF.P: 081 080 LONG.FUNE :0400m VIT:2,3
FOND : 0081 0080

CAPT.TOTALE: 00363,5KG. CAPT/HEURE: 00727,0KG. ECHANT:363,5KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Dentex gibbosus	188,60	192	25,9	171
Dentex canariensis	176,00	202	24,2	172
Epinephelus aeneus	146,00	20	20,0	173
Sparus caeruleostictus	88,40	134	12,1	174
Pagellus bellottii	44,60	714	6,1	
Ariomma bondi	39,60	550	5,4	
Sparus pagrus africanus	18,80	36	2,5	175
Decapterus punctatus	12,00	474	1,6	176
Umbrina canariensis	8,40	22	1,1	
Trachurus trecae	2,40	48	,3	
Sardinella aurita	1,50	26	,2	
Chaetodon hoepleri	,40	2	,0	
Illex coindetii	,20	2	,0	
	726,90		99,4	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :134
N. STAT. CAMPAGNE:018

PROJET :SW
DATE: 07/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0228
dep. fin duree Long E 00859
TEMPS : 0750 0820 030(min) Code objectif:3
LOG : 0035 0036 1,1 CAP :320
PROF.P: 122 136 LONG.FUNE :0550m VIT:2,5
FOND : 0122 0136

CAPT.TOTALE: 00575,4KG. CAPT/HEURE: 01150,8KG. ECHANT:056,0KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Spicara alta	590,00	19564	51,2	177
Boops boops	240,00	6044	20,8	178
Ariomma bondi	124,00	4770	10,7	179
Trachurus trecae	94,00	2060	8,1	180
Dentex congensis	56,00	1300	4,8	181
Mustelus mustelus	30,80	4	2,6	
Priacanthus arenatus	11,00	500	,9	
Zeus faber	5,00	20	,4	
	1150,80		99,5	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :135
 N.TRAIT. CAMPAGNE:019
 PROJET :SW
 DATE: 07/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0218
 dep. fin duree Long E 00911
 TEMPS : 1035 1105 030(min) Code objectif:3
 LOG : 0056 0057 1,1 CAP :330
 PROF.P: 050 051 LONG.FUNE :0300m VIT:2,0
 FOND : 0050 0051
 CAPT.TOTALE: 00481,3KG. CAPT/HEURE: 00962,6KG. ECHANT:481,3KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Dentex canariensis	207,60	296	21,5	182
Sparus caeruleostictus	197,60	340	20,5	183
Lutjanus fulgens	164,80	262	17,1	184
Epinephelus aeneus	135,40	36	14,0	185
Acanthurus monroviae	96,00	110	9,9	
Lutjanus agennes	65,60	8	6,8	
Sparus auriga	40,00	18	4,1	
Seriola carpenteri	12,00	8	1,2	
Mustelus mustelus	11,20	2	1,1	
Plectorhynchus mediterraneus	10,00	4	1,0	
Bodianus speciosus	8,60	10	,8	
Dentex gibbosus	5,20	6	,5	
Pagellus bellottii	3,60	10	,3	
Uraspis secunda	1,80	2	,1	
Dactylopterus volitans	1,60	4	,1	
Fistularia petimba	1,30	8	,1	
Pseudupeneus prayensis	,40	2	,0	
	962,70		99,1	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :136
 N. STAT. CAMPAGNE:020
 PROJET :SW
 DATE: 07/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0212
 dep. fin duree Long E 00919
 TEMPS : 1240 1310 030(min) Code objectif:3
 LOG : 0071 0072 0,9 CAP :316
 PROF.P: 026 029 LONG.FUNE :0150m VIT:1,8
 FOND : 0026 0029
 CAPT.TOTALE: 00016,5KG. CAPT/HEURE: 00033,0KG. ECHANT:016,5KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Alectis alexandrinus	12,60	8	38,1	
Pagellus bellottii	7,40	166	22,4	
Ephippion guttifer	5,20	2	15,7	
Decapterus punctatus	4,40	628	13,3	
Rachycentron canadus	2,90	2	8,7	
Lagocephalus laevigatus	,40	2	1,2	
Alloteuthis africana	,20	24	,6	
Sardinella aurita	,08	4	,2	
	33,18		100,2	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :137
 N. STAT. CAMPAGNE:021
 PROJET :SW
 DATE: 07/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0202
 dep. fin duree Long E 00919
 TEMPS : 1438 1450 012(min) Code objectif:3
 LOG : 0084 0085 0,7 CAP :147
 PROF.P: 013 013 LONG.FUNE :0075m VIT:4,1
 FOND : 0013 0013
 CAPT.TOTALE: 00013,4KG. CAPT/HEURE: 00067,0KG. ECHANT:013,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Alectis alexandrinus	44,00	30	65,6	
Drepane africana	17,00	25	25,3	
Scomberomorus tritor	5,00	10	7,4	
Chaetodipterus goreensis	1,00	5	1,4	
	67,00		99,7	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :138
 N. STAT. CAMPAGNE:022

PROJET :SW
 DATE: 07/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0209
 dep. fin duree Long E 00910
 TEMPS : 1655 1725 030(min) Code objectif:3
 LOG : 0100 0102 1,2 CAP :006
 PROF.P: 044 044 LONG.FUNE :0250m VIT:2,3
 FOND : 0044 0044

CAPT.TOTALE: 00008,1KG. CAPT/HEURE: 00016,2KG. ECHANT:008,1KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Pagellus bellottii	10,20	324	62,9	
Decapterus punctatus	5,40	80	33,3	186
Fistularia petimba	,30	4	1,8	
Zeus faber	,30	2	1,8	
	-----		-----	
	16,20		99,8	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :139
 N. STAT. CAMPAGNE:023

PROJET :SW
 DATE: 08/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0121
 dep. fin duree Long E 00830
 TEMPS : 0915 0945 030(min) Code objectif:3
 LOG : 0263 0265 1,3 CAP :350
 PROF.P: 121 120 LONG.FUNE :0550m VIT:2,5
 FOND : 0121 0120

CAPT.TOTALE: 00131,9KG. CAPT/HEURE: 00263,8KG. ECHANT:030,9KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Ariomma bondi	141,60	5728	53,6	187
Spicara alta	41,60	576	15,7	
Dentex congolensis	32,80	712	12,4	
Epinephelus aeneus	16,60	2	6,2	
Trachurus trecae	20,00	512	7,5	188
Boops boops	10,40	256	3,9	
Illex coindetii	,80	40	,3	
	-----		-----	
	263,80		99,6	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :140
 N. STAT. CAMPAGNE:024

PROJET :SW
 DATE: 08/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0056
 dep. fin duree Long E 00832
 TEMPS : 1240 1310 030(min) Code objectif:3
 LOG : 0291 0293 1,5 CAP :195
 PROF.P: 044 046 LONG.FUNE :0250m VIT:3,2
 FOND : 0044 0046

CAPT.TOTALE: 00001,2KG. CAPT/HEURE: 00002,4KG. ECHANT:001,2KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Pagellus bellottii	1,00	20	41,6	
Fistularia petimba	,40	6	16,6	
Lagocephalus laevigatus	,40	2	16,6	
Chelidonichthys gabonensis	,30	2	12,5	
LOLIGINIDAE	,30	12	12,5	
	-----		-----	
	2,40		99,8	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :141
 N. STAT. CAMPAGNE:025

PROJET :SW
 DATE: 08/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0033
 dep. fin duree Long E 00844
 TEMPS : 1703 1713 010(min) Code objectif:3
 LOG : 0330 0330 0,3 CAP :029
 PROF.P: 095 099 LONG.FUNE :0400m VIT:2,7
 FOND : 0095 0099

CAPT.TOTALE: 00011,0KG. CAPT/HEURE: 00066,0KG. ECHANT:011,0KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Ariomma bondi	34,80	738	52,7	
Dentex canariensis	28,20	288	42,7	
Illex coindetii	3,00	84	4,5	
	-----		-----	
	66,00		99,9	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :142
N. STAT. CAMPAGNE:026

PROJET :SW
DATE: 08/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0034
dep. fin duree Long E 00849
TEMPS : 1815 1845 030(min) Code objectif:1
LOG : 0337 0339 1,3 CAP :296
PROF.P: 062 069 LONG.FUNE :0300m VIT:2,5
FOND : 0062 0069

CAPT.TOTALE: 00023,4KG. CAPT/HEURE: 00046,8KG. ECHANT:023,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Trachurus trcae	10,90	258	23,2	189
Epinephelus aeneus	8,70	6	18,5	
Sphyraena sphyraena	5,20	42	11,1	
Priacanthus arenatus	4,20	24	8,9	
Illex coindetii	3,40	328	7,2	
Dentex congoensis	3,40	60	7,2	
Dentex canariensis	2,60	52	5,5	
Sparus caeruleostictus	2,30	4	4,9	
Pagellus bellottii	1,60	18	3,4	
Penaeus notialis	1,30	24	2,7	
Saurida brasiliensis	1,30	356	2,7	
Brachydeuterus auritus	1,10	48	2,3	
Aricomma bondi	,70	32	1,4	
Decapterus punctatus	,10	4	,2	
	46,80		99,2	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :143
N. STAT. CAMPAGNE:027

PROJET :SW
DATE: 10/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0032
dep. fin duree Long E 00856
TEMPS : 0935 1005 030(min) Code objectif:3
LOG : 0370 0372 1,5 CAP :225
PROF.P: 016 024 LONG.FUNE :0075m VIT:3,0
FOND : 0016 0024

CAPT.TOTALE: 00007,0KG. CAPT/HEURE: 00014,0KG. ECHANT:007,0KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Alectis alexandrinus	7,80	4	55,7	
Sparus caeruleostictus	2,70	8	19,2	
Psettodes belcheri	1,70	10	12,1	
Selene dorsalis	1,60	6	11,4	
Alloteuthis africana	,20	36	1,4	
Penaeus notialis	,04	4	,2	
	14,04		100,0	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :144
N. STAT. CAMPAGNE:028

PROJET :SW
DATE: 10/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0026
dep. fin duree Long E 00853
TEMPS : 1134 1204 030(min) Code objectif:1
LOG : 0385 0387 1,8 CAP :120
PROF.P: 025 024 LONG.FUNE :0150m VIT:3,0
FOND : 0025 0024

CAPT.TOTALE: 00015,4KG. CAPT/HEURE: 00030,8KG. ECHANT:015,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Pagellus bellottii	21,20	554	68,8	190
Balistes capriscus	4,40	48	14,2	
Sparus caeruleostictus	1,30	22	4,2	
Decapterus punctatus	1,00	42	3,2	
Caranx crysos	1,00	10	3,2	
Pseudupeneus prayensis	,90	18	2,9	
Sardinella aurita	,40	6	1,2	
Lagocephalus laevigatus	,40	2	1,2	
Priacanthus arenatus	,20	4	,6	
	30,80		99,5	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :145
 N. STAT. CAMPAGNE:029

PROJET :SW
 DATE: 10/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0022
 dep. fin duree Long E 00849
 TEMPS : 1335 1405 030(min) Code objectif:3
 LDB : 0400 0401 1,4 CAP :026
 PROF.P: 145 137 LONG.FUNE :0700m VIT:2,9
 FOND : 0145 0137

CAPT.TOTALE: 00115,8KG. CAPT/HEURE: 00231,6KG. ECHANT:029,0KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Ariomma bondi	142,40	3030	61,4	
Spicara alta	64,00	1392	27,6	
Dentex angolensis	13,60	80	5,8	
Trachurus trecae	8,00	160	3,4	
Illex coindetii	2,40	24	1,0	
Pterothrissus belloci	1,20	8	,5	
	<u>231,60</u>		<u>99,7</u>	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :146
 N. STAT. CAMPAGNE:030

PROJET :SW
 DATE: 10/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0014
 dep. fin duree Long E 00852
 TEMPS : 1620 1650 030(min) Code objectif:3
 LDB : 0421 0422 1,5 CAP :016
 PROF.P: 132 125 LONG.FUNE :0550m VIT:3,0
 FOND : 0132 0125

CAPT.TOTALE: 00132,3KG. CAPT/HEURE: 00264,6KG. ECHANT:025,3KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Priacanthus arenatus	125,00	5430	47,2	
Ariomma bondi	67,00	2090	25,3	
Spicara alta	24,50	330	9,2	
Dentex angolensis	17,50	130	6,6	
Mustelus sp	12,00	2	4,5	
Illex coindetii	9,50	160	3,5	
Dentex congoensis	5,00	110	1,8	
Balistes capriscus	4,00	260	1,5	191
	<u>264,50</u>		<u>99,6</u>	

B/R DR. FRIDTJOF NANSEN DON. STAT N. STAT. ANNEE :147
 N. STAT. CAMPAGNE:031

PROJET :SW
 DATE: 10/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat S 0015
 dep. fin duree Long E 00856
 TEMPS : 1755 1825 030(min) Code objectif:1
 LDB : 0430 0431 1,3 CAP :280
 PROF.P: 010 010 LONG.FUNE :0050m VIT:3,0
 FOND : 0066 0069

CAPT.TOTALE: 00069,3KG. CAPT/HEURE: 00138,6KG. ECHANT:023,1KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Balistes capriscus	138,60	9150	100,0	192
	<u>138,60</u>		<u>100,0</u>	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :148
N.TRAIT. CAMPAGNE:032

PROJET :SW
DATE: 11/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0006
dep. fin duree Long E 00917
TEMPS : 0704 0734 030(min) Code objectif:3
LOG : 0524 0525 1,6 CAP :180
PROF.P: 016 017 LONG.FUNE :0100m VIT:3,0
FOND : 0016 0017

CAPT.TOTALE: 00042,7KG. CAPT/HEURE: 00085,4KG. ECHANT:042,7KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Alectis alexandrinus	62,00	128	72,5	
Scomberomus tritor	7,80	14	9,1	
Sparus caeruleostictus	4,30	18	5,0	
Sphyaena guachancho	2,40	6	2,8	
Pomadasys jubelini	1,70	6	1,9	
Caranx senegallus	1,90	4	2,2	
Pomadasys rogeri	,90	2	1,0	
Chloroscombrus chrysurus	,80	14	,9	
Chaetodipterus goreensis	,70	2	,8	
Balistes capriscus	,60	4	,7	
Sphyaena sphyaena	,60	2	,7	
Selene dorsalis	,40	4	,4	
Drepane africana	,30	2	,3	
Caranx crysos	,30	2	,3	
Dentex canariensis	,30	2	,3	
Sardinella maderensis	,10	2	,1	
Illex coindetii	,06	6	,0	
Sphaeroides spengleri	,02	2	,0	
	85,18		99,0	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :149
N.TRAIT. CAMPAGNE:033

PROJET :SW
DATE: 11/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0009
dep. fin duree Long E 00914
TEMPS : 0900 0930 030(min) Code objectif:3
LOG : 0538 0540 1,8 CAP :350
PROF.P: 025 025 LONG.FUNE :0100m VIT:3,0
FOND : 0025 0025

CAPT.TOTALE: 00004,2KG. CAPT/HEURE: 00008,4KG. ECHANT:004,2KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Alectis alexandrinus	3,10	4	36,9	
Arius heudeloti	1,60	2	19,0	
Selene dorsalis	,80	10	9,5	
Chloroscombrus chrysurus	,70	12	8,3	
Brachydeuterus auritus	,60	14	7,1	
Sphyaena guachancho	,50	2	5,9	
Pomadasys jubelini	,40	2	4,7	
Alloteuthis africana	,30	54	3,5	
Eucinostomus melanopterus	,20	4	2,3	
Caranx crysos	,20	2	2,3	
Penaeus notialis	,08	4	,9	
	8,48		100,4	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :150
N.TRAIT. CAMPAGNE:034

PROJET :SW
DATE: 11/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0009
dep. fin duree Long E 00906
TEMPS : 1050 1120 030(min) Code objectif:1
LOG : 0551 0552 1,3 CAP :000
PROF.P: 047 047 LONG.FUNE :0200m VIT:3,0
FOND : 0047 0047

CAPT.TOTALE: 00043,2KG. CAPT/HEURE: 00086,4KG. ECHANT:043,2KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Priacanthus arenatus	37,00	1372	42,8	
Dentex congouensis	18,00	600	20,8	193
Pagellus bellottii	13,40	234	15,5	194
Sparus caeruleostictus	4,80	36	5,5	
Dentex angouensis	3,80	36	4,3	
Epinephelus aeneus	3,40	6	3,9	
Decapterus punctatus	2,70	230	3,1	195
Lagocephalus laevigatus	1,66	14	1,9	
Sphyaena guachancho	1,40	12	1,6	
Balistes capriscus	,20	2	,2	
Balistes capriscus	,00	0	,0	
	86,36		99,6	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :151
 N.TRAIT. CAMPAGNE:035
 PROJET :SW
 DATE: 11/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0010
 dep. fin duree Long E 00856
 TEMPS : 1240 1310 030(min) Code objectif:3
 LOG : 0563 0565 1,5 CAP :090
 PROF.P: 070 065 LONG.FUNE :0330m VIT:3,0
 FOND : 0070 0065

CAPT.TOTALE: 00251,0KG. CAPT/HEURE: 00502,0KG. ECHANT:024,2KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Dentex congoensis	240,00	7058	47,8	
Priacanthus arenatus	134,00	7880	26,6	
Trachurus trecae	70,00	1700	13,9	196
Ariomma bondi	22,00	1200	4,3	
Epinephelus aeneus	18,00	2	3,5	
Sardinella aurita	6,00	30	1,1	
Pagellus bellottii	4,00	80	,7	
Pseudupeneus prayensis	4,00	20	,7	
Boops boops	4,00	40	,7	
	502,00		99,3	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :152
 N.TRAIT. CAMPAGNE:036
 PROJET :SW
 DATE: 11/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0018
 dep. fin duree Long E 00859
 TEMPS : 1635 1705 030(min) Code objectif:3
 LOG : 0596 0598 1,5 CAP :001
 PROF.P: 063 062 LONG.FUNE :0300m VIT:2,9
 FOND : 0063 0062

CAPT.TOTALE: 00128,5KG. CAPT/HEURE: 00257,0KG. ECHANT:023,8KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Dentex congoensis	117,60	4524	45,7	
Epinephelus aeneus	56,80	14	22,1	
Dentex canariensis	42,00	50	16,3	
Trachurus trecae	10,80	240	4,2	
Sparus caeruleostictus	7,80	26	3,0	
Lutjanus fulgens	6,40	6	2,4	
Pagellus bellottii	5,40	96	2,1	
Dentex angolensis	5,40	48	2,1	
Balistes capriscus	1,80	96	,7	
Bodianus speciosus	1,30	2	,5	
Boops boops	1,00	24	,3	
Chaetodon hoefleri	,60	6	,2	
	256,90		99,6	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :153
 N.TRAIT. CAMPAGNE:037
 PROJET :SW
 DATE: 11/03 1985 TYPE ENGIN:PT No:2 POSITION:Lat N 0030
 dep. fin duree Long E 00902
 TEMPS : 2155 2225 030(min) Code objectif:1
 LOG : 0642 0643 1,3 CAP :090
 PROF.P: 018 024 LONG.FUNE :0050m VIT:3,0
 FOND : 0052 0074

CAPT.TOTALE: 00046,4KG. CAPT/HEURE: 00092,8KG. ECHANT:046,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Balistes capriscus	65,20	4074	70,2	
Lutjanus agennes	18,80	2	20,2	
Saurida brasiliensis	6,00	1500	6,4	
Ariomma bondi	,80	28	,8	
Priacanthus arenatus	,80	118	,8	
LDLIGINIDAE	,60	0	,6	
Sphyraena sphyraena	,30	2	,3	
Bregmaceros sp	,30	0	,3	
	92,80		99,6	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :154
N.TRAIT. CAMPAGNE:038

PROJET :SW
DATE: 11/03 1985 TYPE ENGIN:PT No:2 POSITION:Lat N 0029
dep. fin duree Long E 00859
TEMPS : 2355 0008 013(min) Code objectif:1
LOG : 0654 0655 0,5 CAP :090
PROF.P: 044 044 LONG.FUNE :0150m VIT:3,0
FOND : 0059 0059

CAPT.TOTALE: 00030,8KG. CAPT/HEURE: 00141,9KG. ECHANT:030,8KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Balistes capriscus	138,30	8643	97,4	
Ariomma bondi	1,61	46	1,1	
Decapterus punctatus	,92	50	,6	
Caranx crysos	,23	4	,1	
Friacanthus arenatus	,23	13	,1	
Dactylopterus volitans	,23	32	,1	
Hypoclydonia bella	,23	23	,1	
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	141,75		99,5	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :155
N.TRAIT. CAMPAGNE:039

PROJET :SW
DATE: 12/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0041
dep. fin duree Long E 00906
TEMPS : 0707 0737 030(min) Code objectif:1
LOG : 0684 0686 1,4 CAP :180
PROF.P: 039 034 LONG.FUNE :0250m VIT:3,0
FOND : 0039 0034

CAPT.TOTALE: 00533,2KG. CAPT/HEURE: 01066,4KG. ECHANT:533,2KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Lutjanus fulgens	628,00	1116	58,8	197
Lutjanus agennes	259,60	34	24,3	198
Sparus caeruleostictus	89,60	88	8,4	199
Dentex canariensis	31,00	20	2,9	
Lutjanus gorensis	26,00	8	2,4	
Epinephelus aeneus	24,40	4	2,2	
Epinephelus gorensis	4,40	2	,4	
Pagellus bellottii	1,50	24	,1	
Apsilus fuscus	1,20	8	,1	
Lethrinus atlanticus	,70	2	,0	
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	1066,40		99,6	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :156
N.TRAIT. CAMPAGNE:040

PROJET :SW
DATE: 12/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0048
dep. fin duree Long E 00914
TEMPS : 0905 1035 030(min) Code objectif:3
LOG : 0699 0700 1,7 CAP :180
PROF.P: 018 018 LONG.FUNE :0100m VIT:3,0
FOND : 0018 0018

CAPT.TOTALE: 00018,5KG. CAPT/HEURE: 00037,0KG. ECHANT:018,5KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Ephippion guttifer	13,20	6	35,6	
Sparus caeruleostictus	11,20	28	30,2	
Sphyræna guachancho	10,40	2	28,1	
Alectis alexandrinus	1,40	2	3,7	
Alutera punctata	,70	2	1,8	
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	36,90		99,4	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :157
 N.TRAIT. CAMPAGNE:041
 PROJET :SW
 DATE: 12/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0050
 dep. fin duree Long E 00909
 TEMPS : 1058 1128 030(min) Code objectif:3
 LOG : 0713 0715 1,6 CAP :360
 PROF.P: 043 042 LDNG.FUNE :0250m VIT:3,0
 FOND : 0043 0042

CAPT.TOTALE: 00056,4KG. CAPT/HEURE: 00112,8KG. ECHANT:056,4KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Sparus caeruleostictus	64,20	126	56,9	200
Epinephelus aeneus	22,00	10	19,5	
Selene dorsalis	9,00	48	7,9	
Epinephelus guaza	6,80	2	6,0	
Lutjanus agennes	5,80	2	5,1	
Pagellus bellottii	2,20	28	1,9	
Dentex canariensis	1,40	2	1,2	
Sphyræna sphyræna	,90	4	,7	
Illex coindetii	,20	2	,1	
Penæus sp	,20	2	,1	
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	112,70		99,4	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :158
 N.TRAIT. CAMPAGNE:042
 PROJET :SW
 DATE: 12/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0056
 dep. fin duree Long E 00905
 TEMPS : 1430 1500 030(min) Code objectif:3
 LOG : 0744 0746 1,8 CAP :002
 PROF.P: 054 053 LDNG.FUNE :0300m VIT:3,8
 FOND : 0054 0053

CAPT.TOTALE: 00072,5KG. CAPT/HEURE: 00145,0KG. ECHANT:023,1KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Priacanthus arenatus	99,00	6126	68,2	201
Decapterus punctatus	16,20	582	11,1	202
Dentex angolensis	12,00	104	8,2	
Pagellus bellottii	4,80	66	3,3	
Epinephelus aeneus	4,40	6	3,0	
Dentex congolensis	2,40	78	1,6	
Sepia officinalis hierredda	2,00	4	1,3	
Ariomma bondi	1,80	24	1,2	
Brachydeuterus auritus	1,20	60	,8	
Illex coindetii	,60	6	,4	
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	144,40		99,1	

N/O DR. FRIDTJOF NANSEN DON. TRAIT N.TRAIT. ANNEE :159
 N.TRAIT. CAMPAGNE:043
 PROJET :SW
 DATE: 12/03 1985 TYPE ENGIN:BT No:1 POSITION:Lat N 0056
 dep. fin duree Long E 00914
 TEMPS : 1617 1647 030(min) Code objectif:3
 LOG : 0757 0759 1,6 CAP :003
 PROF.P: 027 028 LDNG.FUNE :0150m VIT:3,0
 FOND : 0027 0028

CAPT.TOTALE: 00013,6KG. CAPT/HEURE: 00027,2KG. ECHANT:013,6KG.

ESPECES	CAPT.PAR HEURE		% CAPT.TOT.	ECH. N.
	poids	nombre		
Epinephelus aeneus	7,80	4	28,6	
Alectis alexandrinus	6,60	8	24,2	
Selene dorsalis	5,40	32	19,8	
Ephippion guttifer	3,40	2	12,5	
Scomberomorus tritor	2,60	4	9,5	
Psettodes belcheri	,40	2	1,4	
Lagocephalus laevigatus	,40	2	1,4	
Alloteuthis africana	,40	80	1,4	
Brachydeuterus auritus	,20	2	,7	
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	27,20		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:305
 PROJECT STATION NO.:058
 PROJECT:SW
 DATE: 02/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0346
 start stop duration Long E 01051
 TIME : 0643 0713 030(min) Purpose code:3
 LOG : 6909 6911 1,6 TOWING DIR:110
 FDEPTH: 027 024 WIRE OUT :0150m SPEED:3,5
 BDEPTH: 0027 0024
 TOTAL CATCH: 00242,1KG. CATCH/HOUR: 00484,2KG. SORTED:127,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Mobula diabolus	140,00	4	28,9	
Sparus caeruleostictus	90,00	78	18,5	
Pseudolithus typus	73,80	66	15,2	
Lutjanus fulgens	49,20	78	10,1	
Lutjanus goreensis	19,20	12	3,9	
Pomadasys incisus	15,60	126	3,2	
Chaetodipterus goreensis	14,40	30	2,9	
Ilisha africana	11,40	312	2,3	
Plectorhynchus mediterraneus	10,20	6	2,1	
Lutjanus sp	7,80	6	1,6	
Umbrina canariensis	6,60	6	1,3	
Pomadasys jubelini	4,80	6	,9	
Selene dorsalis	4,80	48	,9	
Drepane africana	4,80	12	,9	
Bodianus speciosus	4,20	6	,8	
Galeoides decadactylus	3,60	18	,7	
Lethrinus atlanticus	3,60	6	,7	
Panulirus regius	3,00	6	,6	
Pseudolithus moorii	3,00	12	,6	
Pseudupeneus prayensis	2,40	24	,4	
Pteroscion peli	2,40	24	,4	
Albula vulpes	2,40	6	,4	
Brachydeuterus auritus	1,50	30	,3	
Pentaneus quinquarius	1,20	6	,2	
Alectis alexandrinus	1,20	6	,2	
Chloroscombrus chrysurus	1,20	6	,2	
Decapterus rhonchus	1,20	6	,2	
Alutera punctata	,60	6	,1	
	484,10		98,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:306
 PROJECT STATION NO.:059
 PROJECT:SW
 DATE: 02/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0352
 start stop duration Long E 01042
 TIME : 0850 0920 030(min) Purpose code:3
 LOG : 6925 6926 1,6 TOWING DIR:069
 FDEPTH: 064 055 WIRE OUT :0300m SPEED:2,9
 BDEPTH: 0064 0055
 TOTAL CATCH: 00095,2KG. CATCH/HOUR: 00190,4KG. SORTED:095,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Selene dorsalis	25,40	334	13,3	7
Pagellus bellottii	24,60	174	12,9	8
Brachydeuterus auritus	16,00	198	8,4	9
Trichiurus lepturus	14,20	224	7,4	
Dentex angolensis	6,80	26	3,5	
Sphyræna guachancho	6,60	16	3,4	
Stromateus fiatola	5,00	8	2,6	
Pseudolithus senegalensis	4,20	4	2,2	
Epinephelus aeneus	2,60	2	1,3	
Pteroscion peli	1,60	20	,8	
Pomadasys incisus	1,00	4	,5	
Chelidonichthys gabonensis	,80	8	,4	
Friacanthus arenatus	,50	4	,2	
Penaeus notialis	,40	4	,2	
Umbrina canariensis	,30	2	,1	
Pseudupeneus prayensis	,20	2	,1	
Illex coindetii	,20	2	,1	
Gymnura sp	80,00	2	42,0	
	190,40		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:307
PROJECT STATION NO.:060

PROJECT:SW
DATE: 02/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0402
start stop duration Long E 01030
TIME : 1145 1215 030(min) Purpose code:3
LOG : 6947 6948 1,1 TOWING DIR:320
FDEPTH: 111 112 WIRE OUT :0500m SPEED:2,4
BDEPTH: 0111 0112

TOTAL CATCH: 00005,0KG. CATCH/HOUR: 00010,0KG. SORTED:005,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex angolensis	7,00	26	70,0	
Echeneis naucrates	1,80	4	18,0	
Dentex canariensis	1,00	2	10,0	
Anthias anthias	,20	2	2,0	
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	10,00		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:308
PROJECT STATION NO.:061

PROJECT:SW
DATE: 02/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0350
start stop duration Long E 01029
TIME : 1455 1505 010(min) Purpose code:3
LOG : 6975 6975 0,4 TOWING DIR:230
FDEPTH: 086 089 WIRE OUT :0450m SPEED:3,0
BDEPTH: 0086 0089

TOTAL CATCH: 00000,0KG. CATCH/HOUR: 00000,0KG. SORTED:000,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
N O C A T C H	,00	0	,0	
	-----		-----	
	,00		,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:309
PROJECT STATION NO.:062

PROJECT:SW
DATE: 03/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0331
start stop duration Long E 01042
TIME : 0853 0923 030(min) Purpose code:1
LOG : 7005 7006 1,6 TOWING DIR:125
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,0
BDEPTH: 0020 0021

TOTAL CATCH: 00285,3KG. CATCH/HOUR: 00570,6KG. SORTED:031,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Chloroscombrus chrysurus	352,80	5346	61,8	10
Sphyræna guachancho	86,40	360	15,1	
Brachydeuterus auritus	63,00	3618	11,0	11
Stromateus fiatola	32,40	54	5,6	
Ilisha africana	18,00	1044	3,1	
Sardinella aurita	10,80	108	1,8	
Selene dorsalis	3,60	90	,6	
Trichiurus lepturus	3,60	54	,6	
	-----		-----	
	570,60		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:310
PROJECT STATION NO.:063

PROJECT:SW
DATE: 03/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0333
start stop duration Long E 01036
TIME : 1040 1117 037(min) Purpose code:3
LOG : 7017 7018 1,4 TOWING DIR:085
FDEPTH: 035 033 WIRE OUT :0150m SPEED:3,1
BDEPTH: 0035 0033

TOTAL CATCH: 00070,0KG. CATCH/HOUR: 00113,4KG. SORTED:070,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pseudotolithus senegalensis	23,32	11	20,5	
Sphyræna guachancho	15,22	40	13,4	
Sparus caeruleostictus	12,15	19	10,7	
Selene dorsalis	11,17	230	9,8	
Chloroscombrus chrysurus	9,72	98	8,5	
Galeoides decadactylus	8,10	45	7,1	
Pagellus bellottii	5,34	30	4,7	
Trichiurus lepturus	5,34	42	4,7	
Ephippion guttifer	5,02	1	4,4	
Pomadasys jubelini	4,37	9	3,8	
Stromateus fiatola	3,88	6	3,4	
Pomadasys rogeri	3,56	8	3,1	
Pomadasys incisus	3,24	16	2,8	
Arius parkii	,97	1	,8	
Pteroscion peli	,64	6	,5	
Brachydeuterus auritus	,64	12	,5	
Ilisha africana	,48	11	,4	
Pseudupeneus prayensis	,16	1	,1	
	-----		-----	
	113,32		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:311
 PROJECT STATION NO.:064
 PROJECT:SW
 DATE: 03/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0342
 start stop duration Long E 01032
 TIME : 1255 1335 030(min) Purpose code:3
 LOG : 7034 7035 1,9 TOWING DIR:052
 FDEPTH: 066 057 WIRE OUT :0300m SPEED:3,5
 BDEPTH: 0066 0057

TOTAL CATCH: 05000,0KG. CATCH/HOUR: 10000,0KG. SORTED:060,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Brachydeuterus auritus	5836,20	104952	58,3	12
Priacanthus arenatus	3017,60	49906	30,1	13
Trachurus trecae	547,80	13596	5,4	14
Boops boops	281,80	8124	2,8	
Pagellus bellottii	165,80	3150	1,6	
Selene dorsalis	83,00	664	,8	
Dentex angolensis	24,80	166	,2	
Pseudupeneus prayensis	16,60	334	,1	
Sardinella aurita	16,60	334	,1	
Decapterus rhonchus	8,20	166	,0	
	9998,40		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:312
 PROJECT STATION NO.:065
 PROJECT:SW
 DATE: 03/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0331
 start stop duration Long E 01019
 TIME : 1815 1845 030(min) Purpose code:3
 LOG : 7085 7086 1,5 TOWING DIR:230
 FDEPTH: 057 065 WIRE OUT :0300m SPEED:3,0
 BDEPTH: 0057 0065

TOTAL CATCH: 00067,3KG. CATCH/HOUR: 00134,6KG. SORTED:033,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	68,00	700	50,5	15
Decapterus sp	28,40	1136	21,0	16
Trachurus trecae	11,20	240	8,3	
Priacanthus arenatus	8,60	68	6,3	
Brachydeuterus auritus	6,80	88	5,0	
Boops boops	2,00	56	1,4	
Ariomma bondi	2,00	24	1,4	
Pseudupeneus prayensis	2,00	24	1,4	
Dactylopterus volitans	1,60	8	1,1	
Cheilodichthys gabonensis	1,20	8	,8	
Sardinella aurita	,80	20	,5	
Pomadasys incisus	,80	4	,5	
Dentex angolensis	,60	4	,4	
Illex coindetii	,60	4	,4	
	134,60		99,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:313
 PROJECT STATION NO.:066
 PROJECT:SW
 DATE: 03/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0319
 start stop duration Long E 01026
 TIME : 2120 2150 030(min) Purpose code:1
 LOG : 7113 7114 1,6 TOWING DIR:100
 FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,2
 BDEPTH: 0024 0021

TOTAL CATCH: 00126,2KG. CATCH/HOUR: 00252,4KG. SORTED:099,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sphyraena guachancho	68,80	152	27,2	17
Scomberomorus tritor	28,00	36	11,0	
Lutjanus agennes	24,60	2	9,7	
Stromateus fiatola	2,80	4	1,1	
Selene dorsalis	2,20	16	,8	
Ilisha africana	1,88	56	,7	
Elops senegalensis	1,80	4	,7	
Sardinella aurita	,60	172	,2	
Brachydeuterus auritus	,60	16	,2	
Galeoides decadactylus	,44	4	,1	
Chloroscombrus chrysurus	,32	72	,1	
Decapterus sp	,28	184	,1	
Mobula sp	120,00	6	47,5	
	252,32		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:314
PROJECT STATION NO.:067

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0315
start stop duration Long E 01023
TIME : 0640 0710 030(min) Purpose code:3
LOG : 7126 7128 1,9 TOWING DIR:120
FDEPTH: 024 023 WIRE OUT :0150m SPEED:3,6
BDEPTH: 0024 0023

TOTAL CATCH: 00045,5KG. CATCH/HOUR: 00091,0KG. SORTED:045,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Selene dorsalis	32,20	166	35,3	18
Sparus caeruleostictus	18,00	40	19,7	
Sphyraena guachancho	10,00	34	10,9	
Ephippion guttifer	7,40	4	8,1	
Brachydeuterus auritus	6,20	112	6,8	
Pagellus bellottii	4,40	32	4,8	
Galeoides decadactylus	3,80	38	4,1	
Arius parkii	1,80	2	1,9	
Dactylopterus volitans	1,80	4	1,9	
Drepane africana	1,60	4	1,7	
Pomadasy incisus	1,40	8	1,5	
Selar crumenophthalmus	,60	4	,6	
Pseudupeneus prayensis	,40	4	,4	
Chelidonichthys gabonensis	,40	2	,4	
Pteroscion peli	,30	2	,3	
Dicologlossa hexophtalma	,30	2	,3	
Trachinocephalus myops	,20	2	,2	
Ilisha africana	,20	2	,2	
Trachinus draco	,10	2	,1	
	91,10		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:315
PROJECT STATION NO.:068

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0325
start stop duration Long E 01013
TIME : 0910 0940 030(min) Purpose code:3
LOG : 7144 7146 1,4 TOWING DIR:300
FDEPTH: 062 065 WIRE OUT :0350m SPEED:2,8
BDEPTH: 0062 0065

TOTAL CATCH: 00066,7KG. CATCH/HOUR: 00133,4KG. SORTED:033,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus sp	30,80	1100	23,0	19
Pagellus bellottii	30,40	428	22,7	
Decapterus rhonchus	28,00	36	20,9	
Epinephelus aeneus	20,40	8	15,2	
Dentex gibbosus	6,80	4	5,0	
Echeneis naucrates	4,40	8	3,2	
Brachydeuterus auritus	2,80	40	2,0	
Squatina oculata	2,80	4	2,0	
Sparus caeruleostictus	2,40	4	1,7	
Zeus faber	1,60	8	1,1	
Chelidonichthys gabonensis	,80	8	,5	
Boops boops	,80	12	,5	
Fistularia petimba	,60	4	,4	
Pseudupeneus prayensis	,40	4	,2	
Sardinella aurita	,40	8	,2	
	133,40		98,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:316
PROJECT STATION NO.:069

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0336
start stop duration Long E 01000
TIME : 1132 1202 030(min) Purpose code:1
LOG : 7164 7166 1,3 TOWING DIR:300
FDEPTH: 120 125 WIRE OUT :0500m SPEED:2,5
BDEPTH: 0120 0125

TOTAL CATCH: 00024,9KG. CATCH/HOUR: 00049,8KG. SORTED:024,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex gibbosus	13,80	2	27,7	
Mustelus mustelus	13,00	4	26,1	
Dentex canariensis	12,80	16	25,7	
Sparus pagrus africanus	5,70	6	11,4	
Trachyscorpna cristulata ech	1,70	2	3,4	
Umbrina canariensis	1,30	2	2,6	
Anthias anthias	,60	26	1,2	
Dentex angolensis	,60	2	1,2	
Dactylopterus volitans	,40	2	,8	
	49,90		100,1	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:317
PROJECT STATION NO.:070

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0323
start stop duration Long E 01004
TIME : 1430 1500 030(min) Purpose code:3
LOG : 7191 7192 1,2 TOWING DIR:320
FDEPTH: 075 077 WIRE OUT :0350m SPEED:2,8
BDEPTH: 0075 0077

TOTAL CATCH: 00006,8KG. CATCH/HOUR: 00013,6KG. SORTED:006,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex gibbosus	5,40	2	39,7	
SEPIIDAE	5,20	6	38,2	
Pagellus bellottii	1,40	14	10,2	
Dentex congoensis	,60	20	4,4	
Illex coindetii	,40	4	2,9	
Zeus faber	,40	2	2,9	
Lepidotrigla carolae	,20	6	1,4	
	13,60		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:318
PROJECT STATION NO.:071

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0310
start stop duration Long E 01017
TIME : 1705 1735 030(min) Purpose code:3
LOG : 7212 7214 1,5 TOWING DIR:300
FDEPTH: 027 028 WIRE OUT :0150m SPEED:3,1
BDEPTH: 0027 0028

TOTAL CATCH: 00130,5KG. CATCH/HOUR: 00261,0KG. SORTED:026,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sphyræna guachancho	135,00	460	51,7	
Decapterus rhonchus	46,00	90	17,6	
Sparus caeruleostictus	45,00	80	17,2	
Pseudolithus senegalensis	7,00	10	2,6	
Pomadasys jubelini	7,00	10	2,6	
Galeoides decadactylus	7,00	30	2,6	
Dentex canariensis	5,00	10	1,9	
Drepana africana	5,00	10	1,9	
Pomadasys incisus	2,00	10	,7	
Brachydeuterus auritus	2,00	30	,7	
	261,00		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:319
PROJECT STATION NO.:072

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0302
start stop duration Long E 01013
TIME : 1922 1952 030(min) Purpose code:1
LOG : 7231 7233 1,8 TOWING DIR:122
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,7
BDEPTH: 0021 0018

TOTAL CATCH: 00090,6KG. CATCH/HOUR: 00181,2KG. SORTED:030,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ilisha africana	94,02	5048	51,8	20
Sphyræna guachancho	43,20	222	23,8	
Brachydeuterus auritus	31,80	3180	17,5	
Galeoides decadactylus	4,80	78	2,6	
Sardinella maderensis	1,80	126	,9	
Pteroscion peli	1,80	36	,9	
Trichiurus lepturus	1,20	42	,6	
Chloroscombrus chrysurus	,90	438	,4	
Decapterus sp	,60	114	,3	
Selene dorsalis	,60	84	,3	
Parapenaeopsis atlantica	,60	12	,3	
	181,32		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:320
PROJECT STATION NO.:073

PROJECT:SW
DATE: 04/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0313
start stop duration Long E 00958
TIME : 2220 2250 030(min) Purpose code:1
LOG : 7255 7256 1,4 TOWING DIR:060
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,1
BDEPTH: 0067 0059

TOTAL CATCH: 00107,2KG. CATCH/HOUR: 00214,4KG. SORTED:053,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus rhonchus	192,00	252	89,5	21
Decapterus sp	10,40	348	4,8	
Sarda sarda	6,80	4	3,1	
Echeneis naucrates	3,00	4	1,3	
Scomber japonicus	1,40	4	,6	
Saurida brasiliensis	,80	68	,3	
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	214,40		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:321
PROJECT STATION NO.:074

PROJECT:SW
DATE: 05/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0306
start stop duration Long E 00949
TIME : 0250 0320 030(min) Purpose code:1
LOG : 7295 7297 1,7 TOWING DIR:225
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,6
BDEPTH: 0070 0081

TOTAL CATCH: 00043,0KG. CATCH/HOUR: 00086,0KG. SORTED:028,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus sp	82,80	3450	96,2	22
Trachurus trecae	1,40	36	1,6	
Saurida brasiliensis	,90	104	1,0	
Lagocephalus laevigatus	,60	4	,6	
Ariomma bondi	,40	10	,4	
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	86,10		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:322
PROJECT STATION NO.:075

PROJECT:SW
DATE: 05/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0251
start stop duration Long E 00952
TIME : 0640 0710 030(min) Purpose code:3
LOG : 7330 7331 1,5 TOWING DIR:300
FDEPTH: 032 034 WIRE OUT :0200m SPEED:3,1
BDEPTH: 0032 0034

TOTAL CATCH: 00057,6KG. CATCH/HOUR: 00115,2KG. SORTED:057,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Drepane africana	37,00	114	32,1	
Brachydeuterus auritus	31,80	390	27,6	23
Pomadourys jubelini	25,60	42	22,2	
Pagellus bellottii	7,40	92	6,4	
Sparus caeruleostictus	7,20	10	6,2	
Sphyrasna quachancho	5,40	28	4,6	
Galeoides decadactylus	,40	2	,3	
Decapterus rhonchus	,30	8	,2	
Penaeus notialis	,20	16	,1	
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	115,30		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:323
PROJECT STATION NO.:076

PROJECT:SW
DATE: 05/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0256
start stop duration Long E 00943
TIME : 0825 0955 030(min) Purpose code:3
LOG : 7343 7344 1,7 TOWING DIR:050
FDEPTH: 062 056 WIRE OUT :0350m SPEED:3,1
BDEPTH: 0062 0056

TOTAL CATCH: 00057,5KG. CATCH/HOUR: 00115,0KG. SORTED:028,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Seriola carpenteri	90,00	144	78,2	
Decapterus sp	15,20	500	13,2	
Scyllarides herklotsii	2,80	4	2,4	
Pagellus bellottii	2,40	28	2,0	
Fistularia petimba	2,00	4	1,7	
Trachinus radiatus	1,80	4	1,5	
Sardinella maderensis	,80	4	,6	
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	115,00		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:324
PROJECT STATION NO.:077

PROJECT:SW
DATE: 05/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0305
start stop duration Long E 00935
TIME : 1040 1110 030(min) Purpose code:3
LOG : 7360 7361 1,3 TOWING DIR:320
FDEPTH: 107 109 WIRE OUT :0500m SPEED:2,3
BDEPTH: 0107 0109

TOTAL CATCH: 00056,4KG. CATCH/HOUR: 00112,8KG. SORTED:036,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Spicara alta	46,40	2320	41,1	
Epinephelus aeneus	22,00	4	19,5	
Dentex gibbosus	12,60	4	11,1	
Dentex congolensis	10,00	84	8,8	
Dentex angolensis	9,60	28	8,5	
Sparus pagrus africanus	6,40	8	5,6	
Trachyscorpna cristulata ech	3,32	4	2,9	
Decapterus sp	1,20	32	1,0	
Anthias anthias	,80	8	,7	
Trachurus trecae	,60	8	,5	
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	112,92		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:325
PROJECT STATION NO.:078

PROJECT:SW
DATE: 05/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0252
start stop duration Long E 00933
TIME : 1415 1445 030(min) Purpose code:3
LOG : 7391 7392 1,4 TOWING DIR:250
FDEPTH: 078 084 WIRE OUT :0400m SPEED:2,8
BDEPTH: 0078 0084

TOTAL CATCH: 00151,1KG. CATCH/HOUR: 00302,2KG. SORTED:086,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus pagrus africanus	57,60	12	19,0	
Dentex gibbosus	57,60	12	19,0	
Epinephelus aeneus	52,00	8	17,2	
Sparus caeruleostictus	43,40	54	14,3	
Dentex canariensis	34,20	54	11,3	
Dentex gibbosus	21,00	24	6,9	
Decapterus rhonchus	16,80	18	5,5	
Decapterus sp	5,58	150	1,8	
Trachurus trecae	5,40	108	1,7	
Priacanthus arenatus	3,00	6	,9	
Illex coindetii	2,10	60	,6	
Ariomma bondi	1,50	12	,4	
Adioryx hastatus	1,50	6	,4	
Pagellus bellottii	1,20	30	,3	
Pseudupeneus prayensis	,90	6	,2	
Dentex congolensis	,30	6	,0	
Saurida brasiliensis	,30	12	,0	
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	304,38		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:326
PROJECT STATION NO.:079

PROJECT:SW
DATE: 05/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0247
start stop duration Long E 00939
TIME : 1610 1640 030(min) Purpose code:1
LOG : 7404 7405 1,4 TOWING DIR:230
FDEPTH: 001 001 WIRE OUT :0050m SPEED:2,8
BDEPTH: 0047 0054

TOTAL CATCH: 00000,3KG. CATCH/HOUR: 00000,7KG. SORTED:000,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Echeneis naucrates	,40	2	57,1	
Lagocephalus laevigatus	,30	2	42,8	
	-----		-----	
	,70		99,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:327
 PROJECT STATION NO.:080
 PROJECT:SW
 DATE: 05/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0237
 start stop duration Long E 00934
 TIME : 2008 2038 030(min) Purpose code:1
 LOG : 7436 7438 1,5 TOWING DIR:050
 FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,0
 BDEPTH: 0041 0038
 TOTAL CATCH: 00010,7KG. CATCH/HOUR: 00021,4KG. SORTED:010,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus sp	5,00	1428	23,3	
Sphyraena guachancho	4,68	114	21,8	
Scomberomorus tritor	4,20	4	19,6	
Brachydeuterus auritus	3,00	262	14,0	
Stromateus fiatola	2,00	2	9,3	
Scomber japonicus	,72	2	3,3	
Decapterus rhonchus	,62	18	2,8	
Sardinella aurita	,44	98	2,0	
Decapterus sp	,40	6	1,8	
Saurida brasiliensis	,32	46	1,4	
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	21,38		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:328
 PROJECT STATION NO.:081
 PROJECT:SW
 DATE: 05/06 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0245
 start stop duration Long E 00925
 TIME : 2235 2253 018(min) Purpose code:1
 LOG : 7454 7455 1,2 TOWING DIR:050
 FDEPTH: 065 060 WIRE OUT :0250m SPEED:3,6
 BDEPTH: 0079 0076
 TOTAL CATCH: 00001,7KG. CATCH/HOUR: 00005,6KG. SORTED:001,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Torpedo torpedo	1,66	3	29,6	
Saurida brasiliensis	1,33	179	23,7	
Trigla capensis	,63	16	11,2	
Trachurus trecae	,49	3	8,7	
Priacanthus arenatus	,49	3	8,7	
Parapenaeus sp	,49	99	8,7	
Carcharhinus sp.	,46	3	8,2	
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	5,55		98,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:329
 PROJECT STATION NO.:082
 PROJECT:SW
 DATE: 06/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0217
 start stop duration Long E 00926
 TIME : 0902 0925 023(min) Purpose code:3
 LOG : 7539 7540 1,1 TOWING DIR:315
 FDEPTH: 018 018 WIRE OUT :0125m SPEED:3,1
 BDEPTH: 0018 0018
 TOTAL CATCH: 00044,0KG. CATCH/HOUR: 00114,4KG. SORTED:044,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Lutjanus goreensis	30,94	5	27,0	
Selene dorsalis	20,54	98	17,9	
Dentex canariensis	10,40	18	9,0	
Chaetodipterus goreensis	9,62	26	8,4	
Galeoides decadactylus	9,10	39	7,9	
Sparus caeruleostictus	8,32	15	7,2	
Scomberomorus tritor	7,80	10	6,8	
Elops lacerta	4,42	10	3,8	
Bodianus speciosus	2,86	2	2,5	
Arius parkii	2,08	2	1,8	
Lutjanus fulgens	1,82	2	1,5	
Scyllarides herklotsii	1,30	2	1,1	
Albula vulpes	1,30	2	1,1	
Pomadasyx incisus	1,04	7	,9	
Balistes punctatus	,78	2	,6	
Caranx crysos	,78	2	,6	
Priacanthus arenatus	,52	2	,4	
Decapterus sp	,52	49	,4	
Selar crumenophthalmus	,26	2	,2	
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	114,40		99,1	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:330
PROJECT STATION NO.:083

PROJECT:SW
DATE: 06/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0228
start stop duration Long E 00914
TIME : 1130 1200 030(min) Purpose code:3
LOG : 7559 7560 1,8 TOWING DIR:320
FDEPTH: 063 063 WIRE OUT :0350m SPEED:3,4
BDEPTH: 0063 0063

TOTAL CATCH: 00006,8KG. CATCH/HOUR: 00013,6KG. SORTED:006,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	4,00	90	29,4	
Sparus caeruleostictus	2,00	2	14,7	
Torpedo torpedo	1,90	4	13,9	
Decapterus sp	1,70	62	12,5	
Pagellus bellottii	1,50	36	11,0	
Dactylopterus volitans	1,00	4	7,3	
Priacanthus arenatus	,90	12	6,6	
Boops boops	,64	14	4,7	
	13,64		100,1	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:331
PROJECT STATION NO.:084

PROJECT:SW
DATE: 06/06 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0238
start stop duration Long E 00901
TIME : 1440 1530 050(min) Purpose code:1
LOG : 7583 7586 3,0 TOWING DIR:160
FDEPTH: 150 170 WIRE OUT :0400m SPEED:3,5
BDEPTH: 0190 0220

TOTAL CATCH: 00031,2KG. CATCH/HOUR: 00037,4KG. SORTED:031,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Myctophum sp	36,00	12720	96,2	24
Dactylopterus volitans	1,50	6	4,0	
	37,50		100,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:332
PROJECT STATION NO.:085

PROJECT:SW
DATE: 06/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0227
start stop duration Long E 00903
TIME : 1745 1815 030(min) Purpose code:3
LOG : 7605 7606 1,4 TOWING DIR:325
FDEPTH: 101 101 WIRE OUT :0450m SPEED:2,7
BDEPTH: 0101 0101

TOTAL CATCH: 00040,2KG. CATCH/HOUR: 00080,4KG. SORTED:040,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Spicara alta	20,06	1432	24,9	
Dentex gibbosus	16,80	4	20,8	
Squatina oculata	12,60	2	15,6	
Squalus blainvillei	10,80	4	13,4	
Ariomma bondi	6,60	160	8,2	
Dentex congoensis	4,38	126	5,4	
Mustelus mustelus	4,20	2	5,2	
LOLIGINIDAE	1,10	40	1,3	
Saurida brasiliensis	1,00	146	1,2	
Trachurus trecae	,90	44	1,1	
Pagellus bellottii	,60	10	,7	
Priacanthus arenatus	,40	6	,4	
Boops boops	,36	36	,4	
Lepidotrigla carolae	,26	6	,3	
Citharus linguatula	,20	2	,2	
Trachinus radiatus	,20	2	,2	
	80,46		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:333
PROJECT STATION NO.:086

PROJECT:SW
DATE: 06/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0213
start stop duration Long E 00920
TIME : 2110 2135 025(min) Purpose code:1
LOG : 7632 7634 1,3 TOWING DIR:052
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,3
BDEPTH: 0024 0019

TOTAL CATCH: 00063,9KG. CATCH/HOUR: 00153,3KG. SORTED:016,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sphyraena guachancho	69,60	283	45,4	
Sardinella aurita	34,80	13939	22,7	
Brachydeuterus auritus	18,33	5575	11,9	
Decapterus sp	10,99	5575	7,1	
Decapterus rhonchus	9,91	36	6,4	
Saurida brasiliensis	4,75	367	3,0	
Engraulis encrasicolus	3,28	588	2,1	
Sardinella maderensis	1,82	36	1,1	
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	153,48		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:334
PROJECT STATION NO.:087

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0207
start stop duration Long E 00920
TIME : 0645 0715 030(min) Purpose code:3
LOG : 7641 7643 1,9 TOWING DIR:145
FDEPTH: 016 015 WIRE OUT :0100m SPEED:3,5
BDEPTH: 0016 0015

TOTAL CATCH: 00012,3KG. CATCH/HOUR: 00024,6KG. SORTED:012,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pomadasys rogeri	7,60	14	30,8	
Decapterus rhonchus	3,40	64	13,8	
Chloroscombrus chrysurus	3,40	36	13,8	
Brachydeuterus auritus	2,80	222	11,3	
Salene dorsalis	2,40	20	9,7	
Galeoides decadactylus	2,00	14	8,1	
Sardinella maderensis	1,08	60	4,3	
Sphyraena guachancho	1,00	14	4,0	
Sparus caeruleostictus	,70	4	2,8	
Ilisha africana	,40	4	1,6	
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	24,78		100,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:335
PROJECT STATION NO.:088

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0208
start stop duration Long E 00909
TIME : 0920 0920 030(min) Purpose code:3
LOG : 7661 7663 1,6 TOWING DIR:050
FDEPTH: 048 044 WIRE OUT :0250m SPEED:3,3
BDEPTH: 0048 0044

TOTAL CATCH: 00004,4KG. CATCH/HOUR: 00008,7KG. SORTED:004,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex canariensis	3,56	6	40,9	
Sparus caeruleostictus	2,74	4	31,4	
Epinephelus aeneus	2,44	2	28,0	
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	8,74		100,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:336
PROJECT STATION NO.:089

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0216
start stop duration Long E 00900
TIME : 1140 1200 020(min) Purpose code:3
LOG : 7679 7680 1,2 TOWING DIR:325
FDEPTH: 090 089 WIRE OUT :0450m SPEED:3,1
BDEPTH: 0090 0089

TOTAL CATCH: 00047,7KG. CATCH/HOUR: 00143,1KG. SORTED:047,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Epinephelus aeneus	66,60	6	46,5	
Dentex gibbosus	53,40	30	37,3	
Sparus pagrus africanus	21,90	24	15,3	
Priacanthus arenatus	,75	6	,5	
Zeus faber	,60	3	,4	
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	143,25		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:337
PROJECT STATION NO.:090

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0203
start stop duration Long E 00901
TIME : 1530 1600 030(min) Purpose code:3
LOG : 7712 7713 1,5 TOWING DIR:300
FDEPTH: 065 059 WIRE OUT :0300m SPEED:2,8
BDEPTH: 0065 0059

TOTAL CATCH: 00178,9KG. CATCH/HOUR: 00357,8KG. SORTED:129,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex gibbosus	93,40	14	26,1	
Epinephelus aeneus	72,40	14	20,2	
Dentex canariensis	59,40	96	16,6	
Sparus caeruleostictus	58,80	78	16,4	
Lutjanus fulgens	25,64	28	7,1	
Sparus auriga	10,50	6	2,9	
Parapristipoma octolineatum	7,60	12	2,1	
Apsilus fuscus	7,24	12	2,0	
Sparus pagrus africanus	5,20	8	1,4	
Decapterus sp	4,80	114	1,3	
Plagiogenion sp	4,00	48	1,1	
Trichiurus lepturus	3,60	4	1,0	
Trachurus trecae	1,80	18	,5	
LOLIGINIDAE	1,80	30	,5	
Chaetodon hoefleri	1,20	6	,3	
Chaetodon marcellae	,60	6	,1	
	357,98		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:338
PROJECT STATION NO.:091

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0156
start stop duration Long E 00906
TIME : 1735 1805 030(min) Purpose code:3
LOG : 7724 7725 1,4 TOWING DIR:240
FDEPTH: 044 048 WIRE OUT :0250m SPEED:2,8
BDEPTH: 0044 0048

TOTAL CATCH: 00004,4KG. CATCH/HOUR: 00008,8KG. SORTED:004,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus sp	2,64	162	30,0	
Lagocephalus laevigatus	1,20	2	13,6	
Pagallus bellottii	1,00	18	11,3	
Torpedo torpedo	,84	2	9,5	
Trachinus radiatus	,80	2	9,0	
Trachinocephalus myops	,46	2	5,2	
Brachydeuterus auritus	,44	16	5,0	
Trachinus armatus	,44	4	5,0	
Syacium micrurum	,40	2	4,5	
Illex coindetii	,40	2	4,5	
Bothus guibei	,20	2	2,2	
	8,82		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:339
PROJECT STATION NO.:092

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0153
start stop duration Long E 00911
TIME : 1940 2010 030(min) Purpose code:1
LOG : 7736 7738 1,9 TOWING DIR:145
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,1
BDEPTH: 0023 0021

TOTAL CATCH: 00060,0KG. CATCH/HOUR: 00120,0KG. SORTED:002,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Brachydeuterus auritus	63,86	6076	53,2	
Sardinella aurita	30,82	8234	25,6	
Sphyræna guachancho	22,00	528	18,3	
Sardinella maderensis	2,64	88	2,2	
Decapterus sp	,44	132	,3	
Chloroscombrus chrysurus	,22	88	,1	
	119,98		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:340
PROJECT STATION NO.:093

PROJECT:SW
DATE: 07/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0154
start stop duration Long E 00853
TIME : 2250 2320 030(min) Purpose code:1
LOG : 7758 7760 1,8 TOWING DIR:107
FDEPTH: 010 010 WIRE OUT :0050m SPEED:3,
BDEPTH: 0109 0099

TOTAL CATCH: 01200,0KG. CATCH/HOUR: 02400,0KG. SORTED:002,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Balistes capriscus	2400,00	71440	100,0	25
	-----		-----	
	2400,00		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:341
PROJECT STATION NO.:094

PROJECT:SW
DATE: 08/06 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0138
start stop duration Long E 00853
TIME : 0555 0625 030(min) Purpose code:1
LOG : 7820 7821 1,3 TOWING DIR:090
FDEPTH: 030 030 WIRE OUT :0100m SPEED:2,
BDEPTH: 0055 0049

TOTAL CATCH: 00000,0KG. CATCH/HOUR: 00000,0KG. SORTED:000,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
N O C A T C H	,00	0	,0	
	-----		-----	
	,00		,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:342
PROJECT STATION NO.:095

PROJECT:SW
DATE: 08/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0102
start stop duration Long E 00829
TIME : 1143 1213 030(min) Purpose code:1
LOG : 7877 7878 1,4 TOWING DIR:180
FDEPTH: 068 071 WIRE OUT :0350m SPEED:3,
BDEPTH: 0068 0071

TOTAL CATCH: 00054,0KG. CATCH/HOUR: 00108,0KG. SORTED:027,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trcaae	61,60	1712	57,0	26
Dentex congolensis	27,20	1600	25,1	27
Ariomma bondi	10,00	548	9,2	
Decapterus punctatus	5,20	168	4,8	
Pagellus bellottii	2,00	104	1,8	
Seriola carpenteri	2,00	4	1,8	
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	108,00		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:343
PROJECT STATION NO.:096

PROJECT:SW
DATE: 09/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0026
start stop duration Long E 00856
TIME : 1350 1420 030(min) Purpose code:3
LOG : 7933 7935 1,4 TOWING DIR:295
FDEPTH: 024 026 WIRE OUT :0150m SPEED:3,0
BDEPTH: 0024 0026

TOTAL CATCH: 00092,1KG. CATCH/HOUR: 00184,2KG. SORTED:038,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	146,40	2152	79,4	
Epinephelus aeneus	16,00	2	8,6	
Alectis alexandrinus	8,40	2	4,5	
Balistes capriscus	5,22	48	2,8	
Pseudupeneus prayensis	2,70	36	1,4	
Sparus caeruleostictus	2,58	18	1,4	
Lagocephalus laevigatus	1,80	6	,9	
Decapterus punctatus	1,20	12	,6	
	-----		-----	
	184,30		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:344
 PROJECT STATION NO.:097
 PROJECT:SW
 DATE: 09/06 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0024
 start stop duration Long E 00850
 TIME : 1525 1555 030(min) Purpose code:3
 LOG : 7943 7944 1,3 TOWING DIR:020
 FDEPTH: 148 134 WIRE OUT :0600m SPEED:2,7
 BDEPTH: 0148 0134

TOTAL CATCH: 00060,5KG. CATCH/HOUR: 00121,0KG. SORTED:031,0KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Ariomma bondi	40,00	1070	33,0	28
Dentex angolensis	25,20	192	20,8	
Priacanthus arenatus	22,00	580	18,1	
Spicara alba	10,60	136	8,7	
Trichiurus lepturus	5,80	8	4,7	
Illex coindetii	5,60	112	4,6	
Brotula barbata	3,00	2	2,4	
Dentex congoensis	2,80	44	2,3	
Dactylopterus volitans	2,00	4	1,6	
Pagellus bellottii	1,20	12	,9	
Balistes capriscus	1,20	28	,9	
Lepidotrigla carolae	,80	4	,6	
Decapterus sp	,80	12	,6	
	-----		-----	
	121,00		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:345
 PROJECT STATION NO.:098
 PROJECT:SW
 DATE: 09/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0012
 start stop duration Long E 00851
 TIME : 1830 1900 030(min) Purpose code:1
 LOG : 7966 7967 1,5 TOWING DIR:300
 FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,0
 BDEPTH: 0149 0155

TOTAL CATCH: 00000,1KG. CATCH/HOUR: 00000,3KG. SORTED:000,1KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
MYCTOPHIDAE	,30	30	100,0	
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	,30		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:346
 PROJECT STATION NO.:099
 PROJECT:SW
 DATE: 09/06 1985 GEAR TYPE:PT No:4 POSITION:Lat S 0017
 start stop duration Long E 00908
 TIME : 2200 2230 030(min) Purpose code:1
 LOG : 7992 7994 1,4 TOWING DIR:161
 FDEPTH: 001 001 WIRE OUT :0050m SPEED:2,7
 BDEPTH: 0025 0022

TOTAL CATCH: 00039,1KG. CATCH/HOUR: 00078,2KG. SORTED:011,0KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Brachydeuterus auritus	17,74	6644	22,6	
Rachycentron canadus	17,00	2	21,7	
Sphyræna guachancho	16,12	322	20,6	
Saurida brasiliensis	14,50	5032	18,5	
Sardinella maderensis	6,78	64	8,6	
Decapterus punctatus	4,82	32	6,1	
Scomberomorus tritor	1,40	2	1,7	
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	78,36		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:347
 PROJECT STATION NO.:100
 PROJECT:SW
 DATE: 10/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0003
 start stop duration Long E 00917
 TIME : 0735 0805 030(min) Purpose code:3
 LOG : 8063 8065 1,6 TOWING DIR:170
 FDEPTH: 017 017 WIRE OUT :0100m SPEED:3,2
 BDEPTH: 0017 0017
 TOTAL CATCH: 00011,4KG. CATCH/HOUR: 00022,8KG. SORTED:011,4KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Alectis alexandrinus	9,60	20	42,1	
Ephippion guttifer	5,00	4	21,9	
Sparus caeruleostictus	3,00	10	13,1	
Psettodes belcheri	1,60	6	7,0	
Lethrinus atlanticus	1,02	2	4,4	
Sphyræna guachancho	,80	2	3,5	
Lagocephalus laevigatus	,80	2	3,5	
Selene dorsalis	,40	4	2,6	
Portunus validus	,40	2	1,7	
	-----		-----	
	22,82		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:348
 PROJECT STATION NO.:101
 PROJECT:SW
 DATE: 10/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0010
 start stop duration Long E 00914
 TIME : 0940 1010 030(min) Purpose code:3
 LOG : 8078 8079 1,2 TOWING DIR:010
 FDEPTH: 024 022 WIRE OUT :0150m SPEED:2,4
 BDEPTH: 0024 0022
 TOTAL CATCH: 00014,6KG. CATCH/HOUR: 00029,2KG. SORTED:014,6KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Alectis alexandrinus	13,20	10	45,2	
Sparus caeruleostictus	6,84	28	23,4	
Caranx hippos	2,50	6	8,5	
Epinephelus aeneus	2,00	2	6,8	
Scomberomorus tritor	1,20	2	4,1	
Selene dorsalis	,94	6	3,2	
Chloroscombrus chrysurus	,80	20	2,7	
Brachydeuterus auritus	,70	14	2,3	
Drepane africana	,50	2	1,7	
Eucinostomus melanopterus	,46	6	1,5	
Parapenaeopsis atlantica	,20	4	,6	
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	29,34		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:349
 PROJECT STATION NO.:102
 PROJECT:SW
 DATE: 10/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0010
 start stop duration Long E 00906
 TIME : 1132 1202 030(min) Purpose code:3
 LOG : 8091 8092 1,6 TOWING DIR:360
 FDEPTH: 047 046 WIRE OUT :0250m SPEED:3,2
 BDEPTH: 0047 0046
 TOTAL CATCH: 00111,1KG. CATCH/HOUR: 00222,2KG. SORTED:027,7KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Pagellus bellottii	157,60	2408	70,9	
Priacanthus arenatus	22,00	192	9,9	
Sparus caeruleostictus	10,80	40	4,8	
Decapterus punctatus	6,56	136	2,9	
Ariomma bondi	6,00	104	2,7	
Caranx crysos	6,00	48	2,7	
Dentex congolensis	3,20	48	1,4	
Sphyræna guachancho	3,20	16	1,4	
Dentex angolensis	2,00	8	,9	
Pseudupeneus prayensis	1,76	16	,7	
Balistes capriscus	1,20	24	,5	
Trachurus trecae	1,20	8	,5	
Brachydeuterus auritus	,80	8	,3	
	-----		-----	
	222,32		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:350
PROJECT STATION NO.:103

PROJECT:SW
DATE: 10/06 1985 GEAR TYPE:PT No:2 POSITION:Lat N 0011
start stop duration Long E 00903
TIME : 1305 1335 030(min) Purpose code:1
LOG : 8098 8099 1,4 TOWING DIR:090
FDEPTH: 020 020 WIRE OUT :0075m SPEED:2,1
BDEPTH: 0054 0051

TOTAL CATCH: 00000,0KG. CATCH/HOUR: 00000,0KG. SORTED:000,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
N O C A T C H	,00	0	,0	
	-----		-----	
	,00		,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:351
PROJECT STATION NO.:104

PROJECT:SW
DATE: 10/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0010
start stop duration Long E 00857
TIME : 1500 1530 030(min) Purpose code:3
LOG : 8110 8111 1,5 TOWING DIR:080
FDEPTH: 072 070 WIRE OUT :0350m SPEED:3,0
BDEPTH: 0072 0070

TOTAL CATCH: 00134,1KG. CATCH/HOUR: 00268,2KG. SORTED:040,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex congoensis	170,00	4680	63,3	29
Epinephelus aeneus	33,60	4	12,5	
Priacanthus arenatus	18,00	740	6,7	
Sparus caeruleostictus	11,20	20	4,1	
Dentex canariensis	10,00	10	3,7	
Dentex macrophthalmus	8,00	100	2,9	
Pagellus bellottii	4,50	70	1,6	
Pseudupeneus prayensis	3,50	40	1,3	
Lagocephalus laevigatus	3,40	10	1,2	
Fistularia petimba	2,50	20	,9	
Dactylopterus volitans	2,00	40	,7	
Lophiodes kempfi	1,50	10	,5	
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	268,20		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:352
PROJECT STATION NO.:105

PROJECT:SW
DATE: 10/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0020
start stop duration Long E 00856
TIME : 1815 1817 002(min) Purpose code:3
LOG : 8136 8136 0,0 TOWING DIR:022
FDEPTH: 090 090 WIRE OUT :0400m SPEED:2,0
BDEPTH: 0090 0090

TOTAL CATCH: 00011,2KG. CATCH/HOUR: 00336,0KG. SORTED:011,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Priacanthus arenatus	198,00	5640	58,9	
Dentex congoensis	48,00	1140	14,2	
Dentex angolensis	34,80	390	10,3	
Torpedo marmorata	30,00	30	6,9	
Lagocephalus laevigatus	15,00	90	4,4	
Trachurus trecae	6,00	30	1,7	
Syacium micrurum	3,00	30	,8	
Lepidotrigla carolae	3,00	30	,8	
	-----		-----	
	337,80		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:353
PROJECT STATION NO.:106

PROJECT:SW
DATE: 10/06 1985 GEAR TYPE:PT No:2 POSITION:Lat N 0020
start stop duration Long E 00902
TIME : 1940 2010 030(min) Purpose code:1
LOG : 8144 8146 1,4 TOWING DIR:267
FDEPTH: 010 015 WIRE OUT :0050m SPEED:2,
BDEPTH: 0052 0057

TOTAL CATCH: 00300,0KG. CATCH/HOUR: 00600,0KG. SORTED:003,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Balistes capriscus	493,40	16332	82,2	30
Dactylopterus volitans	62,00	1242	10,3	
Decapterus sp	26,60	354	4,4	
Ariomma bondi	17,80	178	2,9	
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	599,80		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:354
PROJECT STATION NO.:107

PROJECT:SW
DATE: 11/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0024
start stop duration Long E 00912
TIME : 0635 0705 030(min) Purpose code:3
LOG : 8164 8166 1,5 TOWING DIR:171
FDEPTH: 020 021 WIRE OUT :0125m SPEED:3,
BDEPTH: 0020 0021

TOTAL CATCH: 00008,9KG. CATCH/HOUR: 00017,8KG. SORTED:008,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	8,00	80	44,9	
Pagellus bellottii	2,70	32	15,1	
Psettodes belcheri	2,40	4	13,4	
Balistes capriscus	2,20	2	12,3	
Eucinostomus melanopterus	1,20	22	6,7	
Sardinella maderensis	1,00	12	5,6	
Decapterus sp	,40	4	2,2	
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	17,90		100,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:355
PROJECT STATION NO.:108

PROJECT:SW
DATE: 11/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0030
start stop duration Long E 00910
TIME : 0845 0915 030(min) Purpose code:3
LOG : 8179 8181 1,2 TOWING DIR:090
FDEPTH: 031 028 WIRE OUT :0150m SPEED:2,3
BDEPTH: 0031 0028

TOTAL CATCH: 00013,9KG. CATCH/HOUR: 00027,8KG. SORTED:013,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Alectis alexandrinus	26,40	12	94,9	
Pomadasys jubelini	,90	2	3,2	
Selene dorsalis	,54	2	1,9	
Engraulis encrasicolus	,02	2	,0	
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	27,86		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:356
PROJECT STATION NO.:109

PROJECT:SW
DATE: 11/06 1985 GEAR TYPE:PT No:2 POSITION:Lat N 0040
start stop duration Long E 00905
TIME : 2255 2325 030(min) Purpose code:1
LOG : 8243 8245 1,7 TOWING DIR:150
FDEPTH: 013 013 WIRE OUT :0075m SPEED:3,
BDEPTH: 0053 0053

TOTAL CATCH: 00005,3KG. CATCH/HOUR: 00010,6KG. SORTED:005,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
MISCELLANEOUS	9,30	200	87,7	
Ariomma bondi	,66	44	6,2	
Decapterus sp	,40	18	3,7	
Cynoponticus ferox	,20	2	1,8	
Brachydeuterus auritus	,10	2	,9	
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	10,66		100,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:357
PROJECT STATION NO.:110

PROJECT:SW
DATE: 12/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0050
start stop duration Long E 00908
TIME : 0630 0700 030(min) Purpose code:3
LOG : 8298 8300 1,5 TOWING DIR:360
FDEPTH: 043 043 WIRE OUT :0250m SPEED:2,0
BDEPTH: 0043 0042

TOTAL CATCH: 00004,8KG. CATCH/HOUR: 00009,6KG. SORTED:004,8KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Pagellus bellottii	3,10	54	32,2	
Balistes capriciscus	1,60	2	16,6	
Epinephelus aeneus	1,40	2	14,5	
Fistularia petimba	1,20	6	12,5	
Penaeus notialis	1,10	22	11,4	
Sphyaena guachancho	,60	2	6,2	
Decapterus sp	,60	8	6,2	
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	9,60		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:358
PROJECT STATION NO.:111

PROJECT:SW
DATE: 12/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0044
start stop duration Long E 00913
TIME : 0835 0905 030(min) Purpose code:3
LOG : 8312 8313 1,6 TOWING DIR:360
FDEPTH: 017 014 WIRE OUT :0100m SPEED:3,0
BDEPTH: 0017 0014

TOTAL CATCH: 00016,8KG. CATCH/HOUR: 00033,6KG. SORTED:016,8KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Ephippion guttifer	15,00	10	44,6	
SEPIIDAE	14,00	22	41,6	
Lagocephalus laevigatus	1,20	4	3,5	
Priacanthus arenatus	1,00	4	2,9	
Sphyaena guachancho	1,00	4	2,9	
Eucinostomus melanopterus	,60	6	1,7	
Alutera punctata	,60	2	1,7	
Decapterus sp	,20	2	,5	
	-----		-----	
	33,60		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:359
PROJECT STATION NO.:112

PROJECT:SW
DATE: 12/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0040
start stop duration Long E 00906
TIME : 1035 1100 025(min) Purpose code:3
LOG : 8325 8326 0,9 TOWING DIR:010
FDEPTH: 052 050 WIRE OUT :0300m SPEED:2,0
BDEPTH: 0052 0050

TOTAL CATCH: 00024,0KG. CATCH/HOUR: 00057,6KG. SORTED:024,0KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Pagellus bellottii	31,20	285	54,1	
Dentex canariensis	9,60	9	16,6	
Epinephelus aeneus	7,20	2	12,5	
Sparus caeruleostictus	5,28	12	9,1	
Torpedo torpedo	1,44	2	2,5	
Dentex angolensis	1,20	9	2,0	
Penaeus notialis	,72	19	1,2	
Priacanthus arenatus	,67	2	1,1	
Pseudupeneus prayensis	,36	2	,6	
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	57,67		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:360
PROJECT STATION NO.:113

PROJECT:SW
DATE: 12/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0027
start stop duration Long E 00857
TIME : 1412 1442 030(min) Purpose code:3
LOG : 8356 8357 1,3 TOWING DIR:015
FDEPTH: 085 100 WIRE OUT :0450m SPEED:2,
BDEPTH: 0085 0100

TOTAL CATCH: 00385,5KG. CATCH/HOUR: 00771,0KG. SORTED:025,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	298,50	8640	38,7	
Dentex congocensis	253,50	9930	32,8	
Priacanthus arenatus	189,00	7110	24,5	
Pagellus bellottii	12,00	120	1,5	
Trachurus trecae	9,00	90	1,1	
Lepidotrigla carolae	6,00	30	,7	
Lagocephalus laevigatus	3,00	30	,3	
	771,00		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:361
PROJECT STATION NO.:114

PROJECT:SW
DATE: 12/06 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0029
start stop duration Long E 00903
TIME : 1553 1623 030(min) Purpose code:3
LOG : 8367 8368 1,0 TOWING DIR:360
FDEPTH: 052 051 WIRE OUT :0250m SPEED:2,
BDEPTH: 0052 0051

TOTAL CATCH: 00097,3KG. CATCH/HOUR: 00194,6KG. SORTED:032,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	126,00	2862	64,7	
Dentex congocensis	28,80	1050	14,7	
Trachurus trecae	14,40	198	7,3	
Priacanthus arenatus	9,00	240	4,6	
Decapterus sp	3,60	78	1,8	
Dentex angolensis	2,40	18	1,2	
Illex coindetii	1,80	6	,9	
Fistularia petimba	1,80	12	,9	
Pagellus bellottii	1,80	30	,9	
Boops boops	1,74	18	,8	
Sparus caeruleostictus	1,20	6	,6	
Balistes capriscus	,90	12	,4	
Pseudupeneus prayensis	,60	6	,3	
Lepidotrigla carolae	,60	6	,3	
	194,64		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:529
 PROJECT STATION NO.:128
 PROJECT:SW
 DATE: 16/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0402
 start stop duration Long E 01044
 TIME : 1025 1055 030(min) Purpose code:3
 LOG : 4754 4756 1,5 TOWING DIR:233
 FDEPTH: 083 090 WIRE OUT :0450m SPEED:3,0
 BDEPTH: 0083 0090
 TOTAL CATCH: 00117,0KG. CATCH/HOUR: 00234,0KG. SORTED:028,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex angolensis	134,40	1120	57,4	28
Pagellus bellottii	30,40	296	12,9	29
SEPIIDAE	21,60	8	9,2	
OMMASTREPHIDAE	11,20	0	4,7	
Branchiostegus semifasciatus	10,00	8	4,2	
Priacanthus arenatus	8,80	72	3,7	
TRICHOI ???	6,00	88	2,5	
Brotula barbata	3,60	8	1,5	
S H A R K S	3,00	2	1,2	
Octopus vulgaris	3,00	4	1,2	
Umbrina canariensis	1,60	8	,6	
Zeus faber	,40	8	,1	
	234,00		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:530
 PROJECT STATION NO.:129
 PROJECT:SW
 DATE: 16/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0359
 start stop duration Long E 01050
 TIME : 1210 1240 030(min) Purpose code:3
 LOG : 4765 4766 1,4 TOWING DIR:214
 FDEPTH: 050 062 WIRE OUT :0250m SPEED:3,0
 BDEPTH: 0050 0062
 TOTAL CATCH: 01500,0KG. CATCH/HOUR: 03000,0KG. SORTED:033,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Brachydeuterus auritus	806,60	15158	26,8	30
Engraulis encrasicolus	602,80	86114	20,0	31
Trachurus trecae	576,20	104868	19,2	32
Pagellus bellottii	531,80	15156	17,7	33
Alectis alexandrinus	159,60	88	5,3	
Sardinella aurita	124,00	7882	4,1	34
Decapterus rhonchus	79,80	178	2,6	
Cynoglossus sp	53,20	88	1,7	
Chelidonichthys gabonensis	26,60	178	,8	
Pseudupeneus prayensis	17,80	452	,5	
Priacanthus arenatus	8,80	88	,2	
Saurida brasiliensis	8,80	1496	,2	
Mustelus mustelus	4,00	2	,1	
	3000,00		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:531
 PROJECT STATION NO.:130
 PROJECT:SW
 DATE: 16/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0343
 start stop duration Long E 01050
 TIME : 1525 1555 030(min) Purpose code:3
 LOG : 4791 4792 1,4 TOWING DIR:041
 FDEPTH: 030 024 WIRE OUT :0100m SPEED:3,0
 BDEPTH: 0030 0024
 TOTAL CATCH: 00030,1KG. CATCH/HOUR: 00060,2KG. SORTED:030,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sphyræna guachancho	30,00	72	49,8	35
Chloroscombrus chrysurus	10,20	118	16,9	36
Stromateus fiatola	12,00	18	19,9	
Pomadasys jubelini	3,20	6	5,3	
Scomberomorus tritor	2,00	2	3,3	
Sparus caeruleostictus	1,20	2	1,9	
Elops lacerta	1,00	2	1,6	
Selene dorsalis	,60	2	,9	
	60,20		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:532
 PROJECT STATION NO.:131
 PROJECT:SW
 DATE: 16/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0348
 start stop duration Long E 01044
 TIME : 1720 1750 030(min) Purpose code:3
 LOG : 4803 4805 1,4 TOWING DIR:046
 FDEPTH: 043 037 WIRE OUT :0250m SPEED:3,0
 BDEPTH: 0043 0037

TOTAL CATCH: 00126,6KG. CATCH/HOUR: 00253,2KG. SORTED:126,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Epinephelus aeneus	80,60	16	31,8	
Sparus caeruleostictus	80,00	96	31,5	37
Dentex canariensis	31,00	38	12,2	
Pagellus bellottii	27,20	216	10,7	38
Pseudupeneus prayensis	6,80	66	2,6	
Seriola sp.	5,20	4	2,0	
Sepia officinalis hierredda	3,60	6	1,4	
Lagocephalus laevigatus	3,50	16	1,3	
Chelidonichthys gabonensis	3,20	28	1,2	
Raja miraletus	2,70	8	1,0	
Sphyræna viridensis	2,40	6	,9	
Fistularia petimba	2,00	6	,7	
Scyllarides latus	1,40	2	,5	
Uranoscopus polli	1,20	4	,4	
Sphyræna guachancho	1,00	2	,3	
Balistes capricus	,60	6	,2	
Trachinus armatus	,50	8	,1	
Brachydeuterus auritus	,30	6	,1	
	253,20		98,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:533
 PROJECT STATION NO.:132
 PROJECT:SW
 DATE: 16/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0357
 start stop duration Long E 01034
 TIME : 1955 2025 030(min) Purpose code:1
 LOG : 4822 4824 1,7 TOWING DIR:045
 FDEPTH: 012 020 WIRE OUT :0075m SPEED:3,0
 BDEPTH: 0099 0089

TOTAL CATCH: 00066,9KG. CATCH/HOUR: 00133,8KG. SORTED:033,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	96,40	17160	72,0	39
Trichiurus lepturus	32,00	68	23,9	
Saurida brasiliensis	5,40	1890	4,0	
	133,80		99,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:534
 PROJECT STATION NO.:133
 PROJECT:SW
 DATE: 17/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0341
 start stop duration Long E 01038
 TIME : 0220 0250 030(min) Purpose code:1
 LOG : 4873 4874 1,6 TOWING DIR:229
 FDEPTH: 042 045 WIRE OUT :0250m SPEED:3,0
 BDEPTH: 0042 0045

TOTAL CATCH: 00149,2KG. CATCH/HOUR: 00298,4KG. SORTED:024,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	114,00	1176	38,2	40
Pomadasys incisus	50,40	240	16,8	
SEPIIDAE	26,40	132	8,8	
Sparus caeruleostictus	18,00	36	6,0	
Chelidonichthys gabonensis	18,00	276	6,0	
Pseudupeneus prayensis	15,60	144	5,2	
Lagocephalus laevigatus	12,60	12	4,2	
Syacium micrurum	7,20	132	2,4	
Trachinus armatus	6,60	204	2,2	
Boops boops	6,36	408	2,1	
Dactylopterus volitans	6,36	72	2,1	
Trachinus radiatus	4,80	12	1,6	
Trachurus trecae	3,60	36	1,2	
Bothus podas africanus	1,20	48	,4	
Saurida brasiliensis	1,20	72	,4	
Hoplunnis punctata	1,20	24	,4	
Paraconger notialis	1,20	12	,4	
Raja miraletus	1,20	12	,4	
Monochirus hispidus	,60	12	,2	
Fistularia petimba	,60	12	,2	
OPHIDIIDAE	,60	12	,2	
Citharus linguatula	,24	12	,0	
Uranoscopus sp	,24	12	,0	
Decapterus rhonchus	,24	24	,0	
	298,44		99,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:535
PROJECT STATION NO.:134

PROJECT:SW
DATE: 17/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0334
start stop duration Long E 01043
TIME : 0425 0455 030(min) Purpose code:1
LOG : 4886 4888 1,7 TOWING DIR:189
FDEPTH: 015 020 WIRE OUT :0050m SPEED:3,0
BDEPTH: 0027 0030

TOTAL CATCH: 00138,2KG. CATCH/HOUR: 00276,4KG. SORTED:027,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Brachydeuterus auritus	230,00	30960	83,2	41
Sardinella aurita	15,50	1230	5,6	42
Trachurus trecae	10,00	1170	3,6	43
Chloroscombrus chrysurus	10,00	1580	3,6	44
Sphyraena guachancho	6,00	100	2,1	
Sardinella maderensis	4,00	310	1,4	45
Selene dorsalis	1,00	10	,3	
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	276,50		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:536
PROJECT STATION NO.:135

PROJECT:SW
DATE: 17/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0339
start stop duration Long E 01027
TIME : 0755 0825 030(min) Purpose code:3
LOG : 4910 4911 1,6 TOWING DIR:050
FDEPTH: 064 058 WIRE OUT :0300m SPEED:3,0
BDEPTH: 0064 0058

TOTAL CATCH: 00416,1KG. CATCH/HOUR: 00832,2KG. SORTED:029,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	460,80	5530	55,3	46
Priacanthus arenatus	156,00	0	18,7	
R A Y S	120,00	2	14,4	
Dentex congoensis	43,20	696	5,1	47
Trachurus trecae	36,00	6408	4,3	
SEPIIDAE	7,20	72	,8	
Raja miraletus	4,80	24	,5	
Scyllarides latus	1,80	2	,2	
Lepidotrigla carolae	1,20	24	,1	
Citharus linguatula	1,20	24	,1	
	-----		-----	
	832,20		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:537
PROJECT STATION NO.:136

PROJECT:SW
DATE: 17/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0351
start stop duration Long E 01014
TIME : 1120 1140 020(min) Purpose code:1
LOG : 4933 4933 0,7 TOWING DIR:140
FDEPTH: 135 115 WIRE OUT :0400m SPEED:3,0
BDEPTH: 0150 0135

TOTAL CATCH: 00000,0KG. CATCH/HOUR: 00000,0KG. SORTED:000,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
N O C A T C H	,00	0	,0	
	-----		-----	
	,00		,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:538
PROJECT STATION NO.:137

PROJECT:SW
DATE: 17/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0352
start stop duration Long E 01017
TIME : 1235 1305 030(min) Purpose code:3
LOG : 4937 4938 1,7 TOWING DIR:312
FDEPTH: 128 124 WIRE OUT :0600m SPEED:3,0
BDEPTH: 0128 0124

TOTAL CATCH: 00114,9KG. CATCH/HOUR: 00229,8KG. SORTED:114,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus pagrus africanus	98,60	182	42,9	48
Dentex gibbosus	60,00	32	26,1	49
Illex coindetii	16,60	470	7,2	
Dentex congoensis	16,40	322	7,1	50
Squatina oculata	12,80	2	5,5	
Dentex angolensis	7,00	32	3,0	51
Heptranchias perlo	5,20	2	2,2	
Mustelus mustelus	4,60	2	2,0	
Octopus vulgaris	3,20	2	1,3	
Raja miraletus	2,00	6	,8	
Brotula barbata	1,80	4	,7	
Zeus faber	,60	2	,2	
Anthias anthias	,40	20	,1	
Chaetodon hoefleri	,40	2	,1	
SEPIIDAE	,20	2	,0	
	-----		-----	
	229,80		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:539
PROJECT STATION NO.:138

PROJECT:SW
DATE: 17/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0340
start stop duration Long E 01008
TIME : 1540 1555 015(min) Purpose code:1
LOG : 4957 4958 0,9 TOWING DIR:240
FDEPTH: 090 095 WIRE OUT :0350m SPEED:3,0
BDEPTH: 0108 0112

TOTAL CATCH: 00000,0KG. CATCH/HOUR: 00000,0KG. SORTED:000,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
N O C A T C H	,00	0	,0	
	-----		-----	
	,00		,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:540
PROJECT STATION NO.:139

PROJECT:SW
DATE: 17/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0316
start stop duration Long E 01022
TIME : 2115 2145 030(min) Purpose code:1
LOG : 5003 5005 1,8 TOWING DIR:231
FDEPTH: 006 010 WIRE OUT :0050m SPEED:3,5
BDEPTH: 0024 0029

TOTAL CATCH: 00011,5KG. CATCH/HOUR: 00023,0KG. SORTED:007,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Engraulis encrasicolus	7,20	3612	31,3	
Scomberomorus tritor	4,60	6	20,0	
Trachurus trecae	4,50	288	19,5	
Sphyraena guachancho	2,80	6	12,1	
Sardinella maderensis	1,26	32	5,4	
Elops lacerta	1,00	2	4,3	
Sardinella aurita	,90	64	3,9	
Brachydeuterus auritus	,90	172	3,9	
Chloroscombrus chrysurus	,00	18	,0	
	-----		-----	
	23,16		100,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:541
PROJECT STATION NO.:140

PROJECT:SW
DATE: 18/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0322
start stop duration Long E 00958
TIME : 0530 0550 020(min) Purpose code:1
LOG : 5061 5062 0,7 TOWING DIR:232
FDEPTH: 020 025 WIRE OUT :0100m SPEED:3,0
BDEPTH: 0092 0097

TOTAL CATCH: 00026,8KG. CATCH/HOUR: 00080,4KG. SORTED:001,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	76,80	8544	95,5	52
Sardinella aurita	4,50	270	5,5	53
Trichiurus lepturus	3,00	6	3,7	
Saurida brasiliensis	2,10	126	2,6	
	86,40		107,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:542
PROJECT STATION NO.:141

PROJECT:SW
DATE: 18/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0319
start stop duration Long E 01002
TIME : 0650 0720 030(min) Purpose code:3
LOG : 5069 5070 1,6 TOWING DIR:232
FDEPTH: 077 085 WIRE OUT :0300m SPEED:3,0
BDEPTH: 0077 0085

TOTAL CATCH: 00453,6KG. CATCH/HOUR: 00907,2KG. SORTED:030,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	336,00	0	37,0	
Sardinella aurita	171,00	2700	18,8	54
Trachurus trecae	141,00	15000	15,5	55
Priacanthus arenatus	87,00	900	9,5	
Ariomma bondi	57,00	930	6,2	
Sepia officinalis hierredda	51,00	120	5,6	
Dentex congouensis	21,00	540	2,3	
Chelidonicthys gabonensis	21,00	180	2,3	
Decapterus punctatus	15,00	330	1,6	
Lepidotrigla cadmani	3,00	30	,3	
Scyllarides latus	2,40	2	,2	
Lepidotrigla carolae	1,50	30	,1	
Chilomycterus sp.	,40	2	,0	
	907,30		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:543
PROJECT STATION NO.:142

PROJECT:SW
DATE: 18/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0310
start stop duration Long E 01014
TIME : 0940 1005 025(min) Purpose code:3
LOG : 5090 5092 1,2 TOWING DIR:232
FDEPTH: 030 031 WIRE OUT :0150m SPEED:3,0
BDEPTH: 0030 0031

TOTAL CATCH: 00189,4KG. CATCH/HOUR: 00454,5KG. SORTED:053,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Brachydeuterus auritus	147,60	5608	32,4	57
Sparus caeruleostictus	74,88	158	16,4	58
Dentex canariensis	65,52	151	14,4	59
R A Y S	36,00	2	7,9	
Paragaleus pectoralis	18,72	7	4,1	
Sphyræna guachancho	18,72	43	4,1	
Galeoides decadactylus	14,40	129	3,1	60
Alectis alexandrinus	14,40	7	3,1	
Trachurus trecae	12,96	2280	2,8	61
Pseudotolithus typus	10,80	14	2,3	
Epinephelus aeneus	10,80	2	2,3	
Sepia officinalis hierredda	5,04	7	1,1	
Pagellus bellottii	4,32	21	,9	
Pseudupeneus prayensis	3,60	36	,7	
Pentheroscion mbizi	2,88	21	,6	
Decapterus punctatus	2,16	216	,4	62
Decapterus rhonchus	2,16	50	,4	63
Dactylopterus volitans	2,16	7	,4	
Drepane africana	1,68	2	,3	
Selene dorsalis	1,44	7	,3	
PALINURIDAE	1,44	2	,3	
Balistes punctatus	,96	2	,2	
Engraulis encrasicolus	,72	201	,1	
Boops boops	,36	14	,0	
Apsilus fuscus	,36	7	,0	
Lepidotrigla carolae	,21	7	,0	
Chloroscombrus chrysurus	,21	36	,0	
	454,50		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:544
PROJECT STATION NO.:143

PROJECT:SW
DATE: 18/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0304
start stop duration Long E 01017
TIME : 1145 1215 030(min) Purpose code:3
LOG : 5106 5107 1,6 TOWING DIR:102
FDEPTH: 016 015 WIRE OUT :0100m SPEED:3,0
BDEPTH: 0016 0015

TOTAL CATCH: 00732,0KG. CATCH/HOUR: 01464,0KG. SORTED:051,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Chloroscombrus chrysurus	531,20	48040	36,2	64
Ilisha africana	222,40	7404	15,1	65
Pomadasys jubelini	159,40	564	10,8	
Brachydeuterus auritus	156,00	4382	10,6	
Scomberomorus tritor	69,80	66	4,7	
Trichiurus lepturus	66,40	1560	4,5	
Pseudotolithus senegalensis	66,40	100	4,5	
Sphyrna couardi	36,60	66	2,5	
Galeoides decadactylus	33,20	200	2,2	
SCIAENIDAE	23,60	2	1,6	
Selene dorsalis	23,20	1294	1,5	
Pteroscion peli	23,20	532	1,5	
Pentanemus quinquarius	10,00	498	,6	
Sardinella maderensis	6,64	532	,4	
Stromateus fiatola	6,64	34	,4	
Sparus caeruleostictus	5,00	34	,3	
Arius parkii	3,20	34	,2	
Parapenaopsis atlantica	3,20	100	,2	
Carcharhinus limbatus	10,00	2	,6	
Panulirus sp	8,00	10	,5	
	1464,08		98,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:545
PROJECT STATION NO.:144

PROJECT:SW
DATE: 18/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0307
start stop duration Long E 01059
TIME : 1455 1515 020(min) Purpose code:3
LOG : 5130 5131 1,0 TOWING DIR:050
FDEPTH: 050 047 WIRE OUT :0200m SPEED:3,0
BDEPTH: 0050 0047

TOTAL CATCH: 00100,7KG. CATCH/HOUR: 00302,1KG. SORTED:100,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Lutjanus fulgens	155,40	249	51,4	66
Apsilus fuscus	55,50	69	18,3	67
Sparus caeruleostictus	28,50	24	9,4	68
Dentex canariensis	24,60	45	8,1	69
Mustelus mustelus	18,30	3	6,0	
Epinephelus alexandrinus	11,10	3	3,6	
Epinephelus goreensis	8,70	3	2,8	
	302,10		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:546
PROJECT STATION NO.:145

PROJECT:SW
DATE: 20/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0310
start stop duration Long E 00946
TIME : 0155 0225 030(min) Purpose code:1
LOG : 5439 5441 1,4 TOWING DIR:283
FDEPTH: 010 010 WIRE OUT :0050m SPEED:3,0
BDEPTH: 0098 0100

TOTAL CATCH: 00123,6KG. CATCH/HOUR: 00247,2KG. SORTED:030,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	240,00	20600	97,0	70
Saurida brasiliensis	3,60	520	1,4	
Engraulis encrasicolus	2,00	176	,8	71
Ariomma bondi	,80	32	,3	
Sardinella aurita	,80	56	,3	
BREGMACEROTIDAE	,16	40	,0	
	247,36		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:547
 PROJECT STATION NO.:146
 PROJECT:SW
 DATE: 20/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0300
 start stop duration Long E 00939
 TIME : 0800 0830 030(min) Purpose code:3
 LOG : 5491 5492 1,6 TOWING DIR:052
 FDEPTH: 095 085 WIRE OUT :0400m SPEED:3,0
 BDEPTH: 0095 0085
 TOTAL CATCH: 00481,1KG. CATCH/HOUR: 00962,2KG. SORTED:029,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	260,00	9312	27,0	72
Trachurus trecae	216,00	20880	22,4	73
Argyrosomus regius	163,60	26	17,0	74
Dentex gibbosus	104,80	44	10,8	75
Sparus pagrus africanus	57,20	38	5,9	76
Ariomma bondi	40,00	1000	4,1	77
Engraulis encrasicolus	38,00	4484	3,9	78
Decapterus punctatus	18,00	440	1,8	79
Sparus caeruleostictus	16,60	14	1,7	
Epinephelus aeneus	15,60	2	1,6	
Sepia sp	6,00	40	,6	
Illex coindetii	4,00	40	,4	
Priacanthus arenatus	4,00	60	,4	
Fistularia petimba	,40	2	,0	
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	944,20		97,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:548
 PROJECT STATION NO.:147
 PROJECT:SW
 DATE: 20/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0258
 start stop duration Long E 00925
 TIME : 1148 1218 030(min) Purpose code:3
 LOG : 5521 5523 1,6 TOWING DIR:330
 FDEPTH: 138 134 WIRE OUT :0750m SPEED:3,0
 BDEPTH: 0138 0134
 TOTAL CATCH: 00534,4KG. CATCH/HOUR: 01068,8KG. SORTED:032,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	500,00	10000	46,7	80
Spicara alta	450,00	15000	42,1	81
Dentex congoensis	75,00	1450	7,0	
Dentex angolensis	10,00	100	,9	
Trachurus trecae	10,00	150	,9	
Dentex gibbosus	13,00	2	1,2	
Squalus megalops	9,00	2	,8	
Mystriophus rostellatus	1,40	2	,1	
Fistularia petimba	,40	2	,0	
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	1068,80		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:549
 PROJECT STATION NO.:148
 PROJECT:SW
 DATE: 20/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0245
 start stop duration Long E 00940
 TIME : 1445 1510 025(min) Purpose code:3
 LOG : 5544 5545 1,4 TOWING DIR:236
 FDEPTH: 042 044 WIRE OUT :0200m SPEED:3,0
 BDEPTH: 0042 0044
 TOTAL CATCH: 00238,4KG. CATCH/HOUR: 00572,1KG. SORTED:158,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Lutjanus fulgens	216,00	304	37,7	82
Plectorhynchus mediterraneus	110,40	52	19,2	
Dentex canariensis	110,40	115	19,2	83
Lutjanus agennes	50,40	7	8,8	
Sparus caeruleostictus	24,48	33	4,2	
Apsilus fuscus	22,56	38	3,9	
Pagellus bellottii	13,44	144	2,3	
Pomadasys incisus	10,56	57	1,8	
SEPIIDAE	3,36	4	,5	
Acanthurus monroviae	2,64	2	,4	
Boops boops	2,40	129	,4	
Fistularia petimba	1,92	9	,3	
Decapterus rhonchus	1,44	4	,2	
Decapterus punctatus	,96	62	,1	
Sphyræna viridensis	,72	4	,1	
Sardinella aurita	,48	9	,0	
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	572,16		99,1	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:550
 PROJECT STATION NO.:149
 PROJECT:SW
 DATE: 20/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0253
 start stop duration Long E 00940
 TIME : 1720 1750 030(min) Purpose code:3
 LOG : 5564 5565 1,6 TOWING DIR:120
 FDEPTH: 027 019 WIRE OUT :0075m SPEED:3,0
 BDEPTH: 0027 0019

TOTAL CATCH: 00104,2KG. CATCH/HOUR: 00208,4KG. SORTED:104,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	48,20	82	23,1	84
Chloroscombrus chrysurus	41,60	738	19,9	85
Lutjanus fulgens	21,80	8	10,4	
Drepane africana	17,20	34	8,2	
Sphyræna guachancho	13,80	44	6,6	
Alectis alexandrinus	13,40	4	6,4	
Arius parkii	12,00	10	5,7	
Brachydeuterus auritus	9,40	630	4,5	86
Gymnura altavela	7,20	2	3,4	
Trachurus trecae	5,60	374	2,6	87
Seriola rivoliana	4,80	74	2,3	88
Galeoides decadactylus	4,40	54	2,1	89
Ilisha africana	2,40	78	1,1	90
Raja miraletus	2,00	4	,9	
Pseudolithus senegalensis	1,60	2	,7	
Lethrinus atlanticus	,90	2	,4	
Pomadasys jubelini	,90	2	,4	
Decapterus punctatus	,60	66	,2	
Scyllarides latus	,40	2	,1	
Sardinella maderensis	,20	12	,0	
	208,40		99,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:551
 PROJECT STATION NO.:150
 PROJECT:SW
 DATE: 21/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0243
 start stop duration Long E 00913
 TIME : 0030 0105 035(min) Purpose code:1
 LOG : 5626 5628 1,8 TOWING DIR:050
 FDEPTH: 020 020 WIRE OUT :0075m SPEED:3,0
 BDEPTH: 0094 0090

TOTAL CATCH: 00171,6KG. CATCH/HOUR: 00293,4KG. SORTED:029,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	102,60	7734	34,9	91
Saurida brasiliensis	87,21	12455	29,7	
Sardinella aurita	46,17	2284	15,7	92
Engraulis encrasicolus	40,01	3632	13,6	93
Ariomma bondi	16,41	348	5,5	
Trichiurus lepturus	1,53	1	,5	
Dactylopterus volitans	,76	1	,2	
Bregmaceros sp	,30	164	,1	
Lagocephalus sp	,08	5	,0	
	295,07		100,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:552
PROJECT STATION NO.:151

PROJECT:SW
DATE: 21/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0226
start stop duration Long E 00916
TIME : 0450 0720 030(min) Purpose code:3
LOG : 5480 5481 1,5 TOWING DIR:038
FDEPTH: 057 048 WIRE OUT :0300m SPEED:3,0
BDEPTH: 0057 0048

TOTAL CATCH: 00064,1KG. CATCH/HOUR: 00128,2KG. SORTED:064,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	46,80	60	36,5	
Dentex canariensis	17,20	26	13,4	
Epinephelus aeneus	13,80	4	10,7	
Epinephelus alexandrinus	11,40	2	8,8	
Sardinella aurita	11,20	248	8,7	94
Lutjanus fulgens	7,20	10	5,6	
Decapterus punctatus	5,60	264	4,3	95
Sepia officinalis hierredda	5,20	10	4,0	
Bodianus speciosus	1,80	2	1,4	
Torpedo torpedo	1,60	2	1,2	
Apsilus fuscus	1,10	88	,8	
Trachinus armatus	1,00	2	,7	
Fistularia petimba	,80	6	,6	
Pagellus bellottii	,60	8	,4	
Anthias anthias	,60	8	,4	
Scomber japonicus	,60	10	,4	
Lagocephalus laevigatus	,60	2	,4	
Pseudupeneus prayensis	,50	6	,3	
Cromis cadenati	,20	2	,1	
Citharus linguatula	,20	2	,1	
Boops boops	,20	4	,1	
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	128,20		98,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:553
PROJECT STATION NO.:152

PROJECT:SW
DATE: 21/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0238
start stop duration Long E 00905
TIME : 0930 1000 030(min) Purpose code:3
LOG : 5701 5703 1,6 TOWING DIR:330
FDEPTH: 120 118 WIRE OUT :0450m SPEED:3,0
BDEPTH: 0120 0118

TOTAL CATCH: 00304,2KG. CATCH/HOUR: 00608,4KG. SORTED:060,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	443,00	7200	72,8	96
Dentex congolensis	62,00	970	10,1	97
Sparus caeruleostictus	33,00	30	5,4	
Dentex angolensis	27,00	80	4,4	
Dentex canariensis	15,00	20	2,4	
Dentex gibbosus	13,00	20	2,1	
Spicara alta	8,00	260	1,3	98
Pagellus bellottii	3,00	20	,4	
S H A R K S	2,00	2	,3	
Trachurus trecae	2,00	30	,3	
Boops boops	,50	10	,0	
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	608,50		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:554
PROJECT STATION NO.:153

PROJECT:SW
DATE: 21/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0218
start stop duration Long E 00912
TIME : 1330 1400 030(min) Purpose code:3
LOG : 5736 5737 1,6 TOWING DIR:230
FDEPTH: 048 056 WIRE OUT :0250m SPEED:3,0
BDEPTH: 0048 0056

TOTAL CATCH: 00035,1KG. CATCH/HOUR: 00070,2KG. SORTED:035,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	48,00	1440	68,3	99
Decapterus punctatus	8,40	466	11,9	100
Pagellus bellottii	4,40	94	6,2	
SEPIIDAE	3,20	8	4,5	
Trachurus trecae	2,60	54	3,7	101
Torpedo torpedo	2,08	2	2,9	
Fistularia petimba	,50	4	,7	
Trachinus radiatus	,40	4	,5	
Illex coindetii	,40	4	,5	
Xyrichtys novacula	,20	2	,2	
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	70,18		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:555
PROJECT STATION NO.:154

PROJECT:SW
DATE: 21/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0212
start stop duration Long E 00918
TIME : 1535 1605 030(min) Purpose code:3
LOG : 5750 5752 1,7 TOWING DIR:240
FDEPTH: 032 036 WIRE OUT :0200m SPEED:3,0
BDEPTH: 0032 0036

TOTAL CATCH: 00160,1KG. CATCH/HOUR: 00320,2KG. SORTED:046,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sphyræna guachancho	240,00	3690	74,9	
Brachydeuterus auritus	19,00	830	5,9	102
Pagellus bellottii	13,00	180	4,0	
Sparus caeruleostictus	8,40	12	2,6	
Paragaleus sp.	8,40	2	2,6	
Alectis alexandrinus	8,00	8	2,4	
Epinephelus aeneus	8,00	2	2,4	
Chloroscombrus chrysurus	4,00	130	1,2	
Decapterus rhonchus	2,00	80	,6	
Sphyræna viridensis	2,00	10	,6	
Decapterus punctatus	2,00	120	,6	
SEPIIDAE	1,00	140	,3	
Sardinella maderensis	1,00	10	,3	
Balistes capriscus	,60	2	,1	
Torpedo torpedo	,60	4	,1	
Dentex canariensis	,60	2	,1	
Fistularia petimba	,60	2	,1	
Selene dorsalis	,60	6	,1	
Chelidonichthys gabonensis	,40	4	,1	
	320,20		99,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:556
PROJECT STATION NO.:155

PROJECT:SW
DATE: 21/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0205
start stop duration Long E 00919
TIME : 1745 1815 030(min) Purpose code:3
LOG : 5766 5767 1,6 TOWING DIR:130
FDEPTH: 014 010 WIRE OUT :0075m SPEED:3,0
BDEPTH: 0014 0010

TOTAL CATCH: 00418,1KG. CATCH/HOUR: 00836,2KG. SORTED:055,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Chloroscombrus chrysurus	540,40	8944	64,6	103
Galeoides decadactylus	88,20	1344	10,5	
Pomadasya jubelini	72,80	168	8,7	
Selene dorsalis	48,20	124	5,7	
Sphyræna guachancho	35,00	238	4,1	
Scomberomorus tritor	14,60	16	1,7	
Brachydeuterus auritus	9,80	728	1,1	104
Sparus caeruleostictus	7,00	14	,8	
Sardinella maderensis	5,60	70	,6	
Drepane africana	4,20	14	,5	
Pteroscion peli	2,80	28	,3	
Eucinostomus melanopterus	2,80	28	,3	
Rhizoprionodon acutus	2,00	2	,2	
Trachurus trecae	1,40	42	,1	
Liza ramada	1,40	2	,1	
	836,20		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:557
PROJECT STATION NO.:156

PROJECT:SW
DATE: 22/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0203
start stop duration Long E 00858
TIME : 0020 0050 030(min) Purpose code:1
LOG : 5820 5821 1,4 TOWING DIR:240
FDEPTH: 015 015 WIRE OUT :0050m SPEED:3,0
BDEPTH: 0075 0078

TOTAL CATCH: 00019,6KG. CATCH/HOUR: 00039,2KG. SORTED:019,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Saurida brasiliensis	16,40	2342	41,8	
Sardinella aurita	13,40	478	34,1	105
Decapterus punctatus	9,40	588	23,9	106
	39,20		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:558
PROJECT STATION NO.:157

PROJECT:SW
DATE: 22/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0154
start stop duration Long E 00850
TIME : 0550 0620 030(min) Purpose code:3
LOG : 5867 5868 1,3 TOWING DIR:330
FDEPTH: 112 112 WIRE OUT :0450m SPEED:3,0
BDEPTH: 0112 0112

TOTAL CATCH: 00017,9KG. CATCH/HOUR: 00035,8KG. SORTED:017,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Illex coindetii	20,80	0	58,1	
Ariomma bondi	9,60	206	26,8	
Pagellus bellottii	1,40	10	3,9	
Dentex congoensis	1,20	24	3,3	
Saurida brasiliensis	,80	136	2,2	
Sphyræna guachancho	,60	2	1,6	
Spicara alta	,40	10	1,1	
Citharus linguatula	,40	16	1,1	
Sepia officinalis hierredda	,30	4	,8	
Chelidonichthys gabonensis	,20	2	,5	
Anthias anthias	,20	4	,5	
Merluccius polli	,20	2	,5	
Zeus faber	,20	2	,5	
ARGENTINIDAE	,20	2	,5	
Trachinus lineolatus	,20	2	,5	
TETRAODONTIDAE	,20	2	,5	
Calappa rubroguttata	,20	2	,5	
	37,10		102,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:559
PROJECT STATION NO.:158

PROJECT:SW
DATE: 22/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0146
start stop duration Long E 00900
TIME : 0905 0935 030(min) Purpose code:3
LOG : 5890 5892 1,7 TOWING DIR:330
FDEPTH: 046 047 WIRE OUT :0250m SPEED:3,0
BDEPTH: 0046 0047

TOTAL CATCH: 00023,1KG. CATCH/HOUR: 00046,2KG. SORTED:023,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	17,20	406	37,2	107
Alectis alexandrinus	14,00	4	30,3	
Decapterus punctatus	13,60	616	29,4	108
Sepia officinalis hierredda	,60	4	1,2	
Lagocephalus laevigatus	,40	10	,8	
Citharus linguatula	,20	2	,4	
Trachurus trecae	,20	10	,4	
Engraulis encrasicolus	,02	2	,0	
	46,22		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:560
PROJECT STATION NO.:159

PROJECT:SW
DATE: 22/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0138
start stop duration Long E 00851
TIME : 1325 1355 030(min) Purpose code:3
LOG : 5926 5928 1,7 TOWING DIR:090
FDEPTH: 060 050 WIRE OUT :0250m SPEED:3,0
BDEPTH: 0060 0050

TOTAL CATCH: 02000,3KG. CATCH/HOUR: 04000,6KG. SORTED:158,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	2898,00	181090	72,4	109
Engraulis encrasicolus	238,00	23582	5,9	110
Brachydeuterus auritus	151,40	3352	3,7	111
Lutjanus fulgens	144,00	218	3,5	112
Decapterus punctatus	97,40	7568	2,4	113
Pagellus bellottii	97,40	648	2,4	
Priacanthus arenatus	86,40	98	2,1	
Trachurus trecae	64,80	6810	1,6	114
Dentex canariensis	51,40	74	1,2	
Boops boops	32,40	2918	,8	
Pseudupeneus prayensis	32,40	324	,8	
Apsilus fuscus	21,60	108	,5	
Dentex congoensis	21,60	108	,5	
Sparus caeruleostictus	17,00	30	,4	
Anthias anthias	10,80	108	,2	
Dentex gibbosus	7,40	8	,1	
Decapterus rhonchus	6,00	12	,1	
Sparus auriga	3,60	2	,0	
LOLIGINIDAE	1,08	974	,0	
	3982,68		98,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:561
 PROJECT STATION NO.:160
 PROJECT:SW
 DATE: 22/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0122
 start stop duration Long E 00830
 TIME : 1730 1800 030(min) Purpose code:3
 LOG : 5962 5963 1,6 TOWING DIR:165
 FDEPTH: 117 120 WIRE OUT :0600m SPEED:3,0
 BDEPTH: 0117 0120

TOTAL CATCH: 00269,9KG. CATCH/HOUR: 00539,8KG. SORTED:029,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Spicara alta	297,00	5716	55,0	115
Ariomma bondi	90,00	1656	16,6	116
Dentex congoensis	59,40	1314	11,0	117
Priacanthus arenatus	37,80	324	7,0	
Trachurus trecae	28,80	630	5,3	118
Dentex angolensis	7,20	36	1,3	
Boops boops	7,20	126	1,3	
Squatina oculata	5,00	2	,9	
Pagellus bellottii	3,60	18	,6	
Trichiurus lepturus	2,60	4	,4	
Torpedo torpedo	1,20	2	,2	
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	539,80		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:562
 PROJECT STATION NO.:161
 PROJECT:SW
 DATE: 23/09 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0020
 start stop duration Long E 00904
 TIME : 0535 0605 030(min) Purpose code:1
 LOG : 6074 6075 1,5 TOWING DIR:090
 FDEPTH: 015 020 WIRE OUT :0050m SPEED:3,0
 BDEPTH: 0026 0025

TOTAL CATCH: 00007,4KG. CATCH/HOUR: 00014,8KG. SORTED:007,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Rachycentron canadus	10,00	2	67,5	
Scomberomorus tritor	4,20	4	28,3	
Brachydeuterus auritus	,30	2	2,0	
Balistes capriscus	,20	4	1,3	
Sardinella maderensis	,10	2	,6	
	-----		-----	
	14,80		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:563
 PROJECT STATION NO.:162
 PROJECT:SW
 DATE: 23/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0021
 start stop duration Long E 00854
 TIME : 0810 0840 030(min) Purpose code:3
 LOG : 6092 6094 1,4 TOWING DIR:340
 FDEPTH: 103 107 WIRE OUT :0350m SPEED:3,0
 BDEPTH: 0103 0107

TOTAL CATCH: 00000,0KG. CATCH/HOUR: 00000,0KG. SORTED:000,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
N O C A T C H	,00	0	,0	
	-----		-----	
	,00		,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:564
 PROJECT STATION NO.:163
 PROJECT:SW
 DATE: 23/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0019
 start stop duration Long E 00852
 TIME : 0925 0955 030(min) Purpose code:3
 LOG : 6098 6099 1,4 TOWING DIR:000
 FDEPTH: 115 118 WIRE OUT :0550m SPEED:3,0
 BDEPTH: 0115 0118

TOTAL CATCH: 00032,1KG. CATCH/HOUR: 00064,2KG. SORTED:032,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	40,00	720	62,3	
Illex coindetii	14,40	0	22,4	
Dentex congoensis	3,60	58	5,6	
Priacanthus arenatus	3,20	38	4,9	
Dentex angolensis	2,60	20	4,0	
Trachurus trecae	,40	4	,6	
	-----		-----	
	64,20		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:565
 PROJECT STATION NO.:164
 PROJECT:SW
 DATE: 23/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0009
 start stop duration Long E 00855
 TIME : 1305 1335 030(min) Purpose code:3
 LOG : 6125 6127 1,6 TOWING DIR:270
 FDEPTH: 063 070 WIRE OUT :0350m SPEED:3,0
 BDEPTH: 0063 0070
 TOTAL CATCH: 00178,0KG. CATCH/HOUR: 00356,0KG. SORTED:052,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	200,00	11286	56,1	119
Dentex congoensis	100,00	3000	28,0	120
Sparus caeruleostictus	20,00	60	5,6	121
Dentex canariensis	17,00	24	4,7	
Priacanthus arenatus	7,00	130	1,9	
Pagellus bellottii	6,00	80	1,6	
Trachurus trecae	2,00	30	,5	
Epinephelus aeneus	1,80	2	,5	
Dentex angolensis	,60	2	,1	
Pseudupeneus prayensis	,60	6	,1	
Fistularia petimba	,60	6	,1	
Scomber japonicus	,40	2	,1	
	356,00		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:566
 PROJECT STATION NO.:165
 PROJECT:SW
 DATE: 23/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0010
 start stop duration Long E 00905
 TIME : 1535 1605 030(min) Purpose code:3
 LOG : 6144 6145 1,6 TOWING DIR:350
 FDEPTH: 027 029 WIRE OUT :0150m SPEED:3,0
 BDEPTH: 0027 0029
 TOTAL CATCH: 00087,7KG. CATCH/HOUR: 00175,4KG. SORTED:048,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Galeoides decadactylus	30,40	240	17,3	
Brachydeuterus auritus	26,00	636	14,8	122
Caranx crysos	18,00	116	10,2	
Chloroscombrus chrysurus	14,80	260	8,4	123
Caranx latus	14,80	48	8,4	
Sparus caeruleostictus	14,40	44	8,2	
Sphyraena guachancho	12,60	40	7,1	
Epinephelus aeneus	8,20	4	4,6	
Pomadoury jubelini	5,20	28	2,9	
Scomberomorus tritor	4,80	6	2,7	
Balistes capricus	4,00	88	2,2	
Sardinella maderensis	3,20	48	1,8	
Selene dorsalis	3,20	36	1,8	
Caranx senegallus	3,20	32	1,8	
Priacanthus arenatus	2,40	24	1,3	
Pagellus bellottii	2,40	24	1,3	
Fistularia petimba	2,20	12	1,2	
Dentex congoensis	2,00	52	1,1	
Sufflamen frenatus	1,60	2	,9	
Chaetodipterus goreensis	1,20	8	,6	
Psettodes belcheri	,40	2	,2	
Decapterus punctatus	,40	100	,2	
Sphaeroides sp.	,10	2	,0	
	175,50		99,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:567
PROJECT STATION NO.:166

PROJECT:SW
DATE: 23/09 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0001
Long E 00902
TIME : 2015 2045 030(min) Purpose code:0
LOG : 6175 6176 1,4 TOWING DIR:350
FDEPTH: 055 047 WIRE OUT :0300m SPEED:3,0
BDEPTH: 0055 0047

TOTAL CATCH: 00041,9KG. CATCH/HOUR: 00083,8KG. SORTED:041,9KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Pagellus bellottii	50,80	1006	60,6	124
Priacanthus arenatus	3,80	32	4,5	
Pseudupeneus prayensis	3,00	38	3,5	
Epinephelus aeneus	2,60	4	3,1	
Penaeus notialis	1,80	52	2,1	
Balistes capriscus	1,60	20	1,9	
Sphyræna guachancho	,60	2	,7	
Dactylopterus volitans	,60	10	,7	
Synodus saurus	,40	8	,4	
Dentex congocensis	,40	12	,4	
Ariomma bondi	,40	6	,4	
Boops boops	,36	34	,4	
Chloroscombrus chrysurus	,30	4	,3	
Galeoides decadactylus	,30	2	,3	
Lepidotrigla cadmani	,20	14	,2	
Saurida brasiliensis	,20	26	,2	
Illex coindetii	,20	2	,2	
Chelidonichthys lastoviza	,04	2	,0	
	67,60		79,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:568
PROJECT STATION NO.:167

PROJECT:SW
DATE: 24/09 1985 GEAR TYPE:PT No:4 POSITION:Lat N 0011
Long E 00915
TIME : 0350 0420 030(min) Purpose code:1
LOG : 6231 6233 1,4 TOWING DIR:351
FDEPTH: 001 001 WIRE OUT :0050m SPEED:3,0
BDEPTH: 0018 0018

TOTAL CATCH: 00007,4KG. CATCH/HOUR: 00014,8KG. SORTED:007,4KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Carcharhinus sp.	4,80	2	32,4	
Ilisha africana	3,40	198	22,9	126
Sphyræna guachancho	2,40	16	16,2	
Sardinella maderensis	1,60	152	10,8	127
Selene dorsalis	1,40	8	9,4	
LOLIGINIDAE	,30	78	2,0	
Brachydeuterus auritus	,20	54	1,3	
Chloroscombrus chrysurus	,20	2	1,3	
Lutjanus fulgens	,20	2	1,3	
Decapterus sp	,10	18	,6	
Pseudupeneus prayensis	,10	14	,6	
BREGMACEROTIDAE	,10	18	,6	
Saurida brasiliensis	,04	4	,2	
	14,84		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:569
PROJECT STATION NO.:168

PROJECT:SW
DATE: 24/09 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0021
Long E 00901
TIME : 0655 0725 030(min) Purpose code:3
LOG : 6254 6256 1,4 TOWING DIR:000
FDEPTH: 058 059 WIRE OUT :0350m SPEED:3,0
BDEPTH: 0058 0059

TOTAL CATCH: 00078,8KG. CATCH/HOUR: 00157,6KG. SORTED:078,8KG.

SPECIES	CATCH weight	PER HOUR numbers	% OF TOT.C.	SAMP.NO
Epinephelus aeneus	63,00	12	39,9	
Decapterus punctatus	39,00	1332	24,7	128
Ariomma bondi	15,40	246	9,7	129
Pagellus bellottii	10,80	306	6,8	130
Dentex congocensis	8,20	240	5,2	131
Sparus caeruleostictus	6,80	16	4,3	
Boops boops	5,00	324	3,1	132
Dentex canariensis	1,80	6	1,1	
Priacanthus arenatus	1,60	24	1,0	
Pseudupeneus prayensis	1,40	32	,8	
Illex coindetii	1,40	36	,8	
Dentex angolensis	1,00	6	,6	
Raja miraletus	,80	2	,5	
Anthias anthias	,80	112	,5	
Fistularia petimba	,40	2	,2	
Erythrocles monodi	,10	2	,0	
Citharus linguatula	,10	2	,0	
	157,60		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:570
PROJECT STATION NO.:169

PROJECT:SW
DATE: 24/09 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0030
start stop duration Long E 00856
TIME : 1005 1035 030(min) Purpose code:3
LOG : 6279 6281 1,5 TOWING DIR:000
FDEPTH: 100 130 WIRE OUT :0600m SPEED:3,0
BDEPTH: 0100 0130

TOTAL CATCH: 00312,6KG. CATCH/HOUR: 00625,2KG. SORTED:062,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex congoensis	280,00	7134	44,7	133
Trachurus trecae	170,00	3220	27,1	134
Decapterus punctatus	122,00	2470	19,5	135
Illex coindetii	28,00	0	4,4	
Ariomma bondi	9,00	240	1,4	
Scomber japonicus	6,00	30	,9	
Dentex angolensis	5,00	40	,7	
Alectis alexandrinus	3,20	2	,5	
Boops boops	1,00	10	,1	
Priacanthus arenatus	1,00	10	,1	
	625,20		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:571
PROJECT STATION NO.:170

PROJECT:SW
DATE: 24/09 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0030
start stop duration Long E 00907
TIME : 1210 1240 030(min) Purpose code:1
LOG : 6293 6295 1,3 TOWING DIR:000
FDEPTH: 039 039 WIRE OUT :0200m SPEED:3,0
BDEPTH: 0039 0039

TOTAL CATCH: 00007,8KG. CATCH/HOUR: 00015,6KG. SORTED:007,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Alectis alexandrinus	5,80	2	37,1	
Caranx crysos	4,00	12	25,6	
Trachurus trecae	1,80	34	11,5	
Decapterus punctatus	1,40	24	8,9	
Selene dorsalis	1,00	6	6,4	
Lagocephalus laevigatus	1,00	2	6,4	
Sparus caeruleostictus	,40	4	2,5	
Decapterus sp	,20	28	1,2	
	15,60		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:572
PROJECT STATION NO.:171

PROJECT:SW
DATE: 24/09 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0039
start stop duration Long E 00912
TIME : 1405 1435 030(min) Purpose code:3
LOG : 6306 6307 1,4 TOWING DIR:041
FDEPTH: 024 020 WIRE OUT :0150m SPEED:3,0
BDEPTH: 0024 0020

TOTAL CATCH: 00148,6KG. CATCH/HOUR: 00297,2KG. SORTED:148,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Lutjanus fulgens	68,00	180	22,8	
Chaetodipterus goreensis	54,00	170	18,1	
Lutjanus agennes	53,00	12	17,8	
Lethrinus atlanticus	50,00	160	16,8	
Sparus caeruleostictus	19,40	32	6,5	
Umbrina steindachneri	17,00	24	5,7	
Acanthurus monroviae	10,60	16	3,5	
Dentex canariensis	5,00	14	1,6	
Ephippion guttifer	5,00	4	1,6	
Plectorhynchus mediterraneus	4,60	2	1,5	
Alectis alexandrinus	3,20	4	1,0	
Balistes punctatus	2,80	10	,9	
Pomadasys rogeri	1,60	2	,5	
Alutera sp	,60	2	,2	
Chaetodon hoefleri	,40	2	,1	
Sphyaena viridensis	,40	2	,1	
Balistes capricus	,40	2	,1	
Psettodes belcheri	,40	2	,1	
Pagellus bellottii	,20	2	,0	
Dentex congoensis	,20	4	,0	
Pseudupeneus prayensis	,20	2	,0	
Eucinostomus melanopterus	,20	2	,0	
	297,20		98,9	

R/V DR. FRIDTJOF NANSEN

CATCH DATA

FISHING STATION NO.:573

PROJECT STATION NO.:172

PROJECT:SW

DATE: 24/09 1985

GEAR TYPE:BT No:1

POSITION:Lat N 0040

start stop duration

Long E 00906

TIME : 1555 1625 030(min)

Purpose code:3

LOG : 6317 6319 1,5

TOWING DIR:000

FDEPTH: 053 052

WIRE OUT :0250m

SPEED:3,0

BDEPTH: 0053 0052

TOTAL CATCH: 00029,1KG.

CATCH/HOUR: 00058,2KG. SORTED:023,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
OMMASTREPHIDAE	21,20	0	36,4	
Sparus caeruleostictus	13,60	14	23,3	
Dentex angolensis	7,40	28	12,7	
Dentex canariensis	4,60	4	7,9	
Priacanthus arenatus	4,00	26	6,8	
Lutjanus fulgens	2,20	4	3,7	
Epinephelus aeneus	2,00	2	3,4	
Pseudupeneus prayensis	1,00	8	1,7	
Torpedo torpedo	,80	2	1,3	
Pagellus bellottii	,30	2	,5	
Penaeus notialis	,30	4	,5	
Saurida brasiliensis	,20	12	,3	
Decapterus sp	,20	14	,3	
Chaetodon marcellae	,14	2	,2	
Serranus accraensis	,14	2	,2	
Fistularia petimba	,10	2	,1	
APOGONIDAE	,06	6	,1	
Ariomma bondi	,04	8	,0	
LOPHIIDAE	,02	2	,0	
	58,30		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:711
 PROJECT STATION NO.:179
 PROJECT:SW
 DATE: 09/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0403
 start stop duration Long E 01045
 TIME : 0822 0852 030(min) Purpose code:3
 LOG : 2408 2410 1,7 TOWING DIR:230
 FDEPTH: 086 094 WIRE OUT :0450m SPEED:3,
 BDEPTH: 0086 0094

TOTAL CATCH: 00291,4KG. CATCH/HOUR: 00562,8KG. SORTED:110,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Engraulis encrasicolus	154,00	14938	27,3	192
Saurida brasiliensis	112,00	16002	19,9	
Trachurus trecae	105,00	7498	18,6	193
Dentex angolensis	45,50	210	8,0	
Epinephelus aeneus	40,00	8	7,1	
Dentex gibbosus	40,00	6	7,1	
Priacanthus arenatus	32,20	168	5,7	
Dentex canariensis	10,50	14	1,8	
Dentex gibbosus	6,30	6	1,1	
Sparus pagrus africanus	5,60	6	,9	
Umbrina canariensis	4,20	6	,7	
Ariomma bondi	2,80	20	,4	
Sarda sarda	2,60	4	,4	
Zeus faber	2,00	2	,3	
	562,70		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:712
 PROJECT STATION NO.:179
 PROJECT:SW
 DATE: 09/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0359
 start stop duration Long E 01051
 TIME : 1012 1042 030(min) Purpose code:3
 LOG : 2420 2422 1,7 TOWING DIR:300
 FDEPTH: 053 056 WIRE OUT :0300m SPEED:3,
 BDEPTH: 0053 0056

TOTAL CATCH: 00137,4KG. CATCH/HOUR: 00274,8KG. SORTED:059,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Brachydeuterus auritus	195,60	3372	71,1	194
Trachurus trecae	62,10	4180	22,5	195
Sarda sarda	5,00	8	1,8	
Sphyræna guachancho	5,40	14	1,9	
Pagellus bellottii	2,20	26	,8	
Sardinella aurita	2,20	144	,8	196
Scomber japonicus	1,20	4	,4	
Fistularia petimba	,80	2	,2	
Decapterus punctatus	,30	4	,1	
	274,80		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:713
 PROJECT STATION NO.:180
 PROJECT:SW
 DATE: 09/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0345
 start stop duration Long E 01051
 TIME : 1320 1350 030(min) Purpose code:3
 LOG : 2446 2448 1,4 TOWING DIR:050
 FDEPTH: 028 025 WIRE OUT :0150m SPEED:2,
 BDEPTH: 0028 0025

TOTAL CATCH: 00108,6KG. CATCH/HOUR: 00217,2KG. SORTED:093,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	72,00	620	33,1	
Sparus caeruleostictus	72,00	124	33,1	
Chaetodipterus gorensis	24,20	72	11,1	
Alectis alexandrinus	12,00	2	5,5	
Lutjanus agennes	12,00	2	5,5	
Decapterus rhonchus	8,40	130	3,8	197
Paragaleus pectoralis	8,00	6	3,6	
Epinephelus aeneus	3,40	2	1,5	
Caranx crysos	2,00	4	,9	
Sardinella aurita	1,68	28	,7	
Pseudupeneus prayensis	1,44	10	,6	
	217,12		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:714
 PROJECT STATION NO.:181
 PROJECT:SW
 DATE: 09/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0352
 start stop duration Long E 01044
 TIME : 1530 1555 025(min) Purpose code:3
 LOG : 2462 2463 1,0 TOWING DIR:055
 FDEPTH: 051 046 WIRE OUT :0300m SPEED:2,
 BDEPTH: 0051 0046

TOTAL CATCH: 00202,4KG. CATCH/HOUR: 00485,7KG. SORTED:032,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	319,20	15657	65,7	198
Trachurus trecae	117,60	10684	24,2	199
Drepane africana	11,76	33	2,4	
Decapterus punctatus	10,08	336	2,0	
Sphyraena sphyraena	6,72	16	1,3	
Epinephelus aeneus	6,24	2	1,2	
Saurida brasiliensis	5,04	336	1,0	
Sarda sarda	4,80	4	,9	
Priacanthus arenatus	3,36	16	,6	
Engraulis encrasicolus	,84	16	,1	
	485,64		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:715
 PROJECT STATION NO.:182
 PROJECT:SW
 DATE: 10/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0330
 start stop duration Long E 01024
 TIME : 0626 0656 030(min) Purpose code:3
 LOG : 2598 2600 1,5 TOWING DIR:270
 FDEPTH: 042 045 WIRE OUT :0250m SPEED:3,
 BDEPTH: 0042 0045

TOTAL CATCH: 02032,5KG. CATCH/HOUR: 04065,0KG. SORTED:261,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Lutjanus fulgens	900,00	1230	22,1	
Acanthurus monroviae	720,00	870	17,7	
Sparus caeruleostictus	630,00	600	15,4	
Apsilus fuscus	510,00	990	12,5	
Dentex canariensis	495,00	660	12,1	
Plectorhynchus mediterraneus	420,00	330	10,3	
Dentex barnardi	120,00	480	2,9	
Epinephelus aeneus	70,00	12	1,7	
Seriola dumerilii	64,00	26	1,5	
Lutjanus agennes	48,00	4	1,1	
Dentex gibbosus	38,00	8	,9	
Lutjanus dentatus	20,00	2	,4	
Epinephelus alexandrinus	16,00	4	,3	
Mycteroperca rubra	14,00	2	,3	
	4065,00		99,2	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:716
 PROJECT STATION NO.:183
 PROJECT:SW
 DATE: 10/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0323
 start stop duration Long E 01031
 TIME : 0822 0852 030(min) Purpose code:3
 LOG : 2611 2613 1,6 TOWING DIR:210
 FDEPTH: 022 027 WIRE OUT :0150m SPEED:3,
 BDEPTH: 0022 0027

TOTAL CATCH: 00120,4KG. CATCH/HOUR: 00240,8KG. SORTED:120,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	206,00	1734	85,5	200
Alectis alexandrinus	16,80	6	6,9	
Pseudupeneus prayensis	5,20	48	2,1	
Decapterus rhonchus	3,40	38	1,4	
Caranx crysos	3,00	12	1,2	
Selene dorsalis	2,80	10	1,1	
Lagocephalus laevigatus	1,60	6	,6	
Brachydeuterus auritus	1,00	12	,4	
Sparus caeruleostictus	,60	4	,2	
Chloroscombrus chrysurus	,20	2	,0	
Decapterus punctatus	,20	4	,0	
	240,80		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:717
 PROJECT STATION NO.:184
 PROJECT:SW
 DATE: 10/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0325
 start stop duration Long E 01011
 TIME : 1322 1352 030(min) Purpose code:3
 LOG : 2652 2653 1,3 TOWING DIR:140
 FDEPTH: 063 061 WIRE OUT :0300m SPEED:2,4
 BDEPTH: 0063 0061

TOTAL CATCH: 00168,9KG. CATCH/HOUR: 00337,8KG. SORTED:048,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus natalensis	200,20	3640	59,2	201
Trachurus trecae	84,00	2400	24,8	202
Dentex congoensis	35,00	350	10,3	
Sepia officinalis hierredda	12,60	22	3,7	
Boops boops	2,20	42	,6	
Sardinella aurita	1,40	42	,4	
Brachydeuterus auritus	,80	8	,2	
Chelidonichthys gabonensis	,80	8	,2	
Sphyræna guachancho	,40	8	,1	
Decapterus rhonchus	,20	36	,0	
Saurida brasiliensis	,20	22	,0	
	337,80		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:718
 PROJECT STATION NO.:185
 PROJECT:SW
 DATE: 10/12 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0317
 start stop duration Long E 01007
 TIME : 2200 2230 030(min) Purpose code:1
 LOG : 2715 2717 1,7 TOWING DIR:230
 FDEPTH: 010 010 WIRE OUT :0050m SPEED:3,4
 BDEPTH: 0050 0055

TOTAL CATCH: 00052,5KG. CATCH/HOUR: 00105,0KG. SORTED:035,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus punctatus	69,00	1040	65,7	203
Sardinella aurita	36,00	558	34,2	204
	105,00		99,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:719
 PROJECT STATION NO.:186
 PROJECT:SW
 DATE: 11/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0312
 start stop duration Long E 00944
 TIME : 0713 0730 017(min) Purpose code:3
 LOG : 2800 2801 0,8 TOWING DIR:360
 FDEPTH: 105 102 WIRE OUT :0500m SPEED:2,4
 BDEPTH: 0105 0102

TOTAL CATCH: 00050,0KG. CATCH/HOUR: 00176,0KG. SORTED:050,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Saurida brasiliensis	78,49	13083	44,5	
Dentex canariensis	42,24	91	24,0	
Epinephelus aeneus	23,58	3	13,3	
Dentex angolensis	14,08	70	8,0	
Spicara alta	11,26	1126	6,3	
Dentex gibbosus	4,22	3	2,3	
Dentex congoensis	3,16	63	1,7	
Pagellus bellottii	1,40	7	,7	
Chaetodon hoefleri	,70	3	,3	
	179,13		101,1	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:720
 PROJECT STATION NO.:187
 PROJECT:SW
 DATE: 11/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0305
 start stop duration Long E 00949
 TIME : 0857 0927 030(min) Purpose code:1
 LOG : 2810 2812 1,6 TOWING DIR:050
 FDEPTH: 069 077 WIRE OUT :0350m SPEED:3,2
 BDEPTH: 0069 0077
 TOTAL CATCH: 00699,5KG. CATCH/HOUR: 01399,0KG. SORTED:070,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Engraulis encrasicolus	862,00	64980	61,6	205
Sardinella aurita	340,00	17880	24,3	206
Trachurus trecae	160,00	10780	11,4	207
Pagellus bellottii	14,00	440	1,0	
Dentex congoensis	10,00	280	,7	
Ariomma bondi	6,00	80	,4	
Decapterus punctatus	4,00	100	,2	
Boops boops	2,00	20	,1	
Lagocephalus laevigatus	1,00	20	,0	
	1399,00		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:721
 PROJECT STATION NO.:188
 PROJECT:SW
 DATE: 11/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0302
 start stop duration Long E 00953
 TIME : 1034 1104 030(min) Purpose code:3
 LOG : 2020 2022 1,5 TOWING DIR:230
 FDEPTH: 048 050 WIRE OUT :0250m SPEED:3,0
 BDEPTH: 0048 0050
 TOTAL CATCH: 00074,9KG. CATCH/HOUR: 00149,8KG. SORTED:074,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	78,00	1200	52,0	208
Epinephelus aeneus	41,60	8	27,7	
Sparus caeruleostictus	8,80	10	5,8	
Dentex canariensis	8,60	10	5,7	
Sepia sp	4,40	6	2,9	
Dentex gibbosus	3,40	2	2,2	
Dactylopterus volitans	2,00	6	1,3	
Mustelus mustelus	1,20	2	,8	
Priacanthus arenatus	,40	2	,2	
Pseudupeneus prayensis	,40	2	,2	
Chelidonichthys gabonensis	,40	4	,2	
Trachurus trecae	,30	4	,2	
Fistularia petimba	,24	2	,1	
	149,74		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:722
 PROJECT STATION NO.:189
 PROJECT:SW
 DATE: 11/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0250
 start stop duration Long E 00952
 TIME : 1355 1414 019(min) Purpose code:1
 LOG : 2848 2849 0,7 TOWING DIR:110
 FDEPTH: 029 029 WIRE OUT :0200m SPEED:2,2
 BDEPTH: 0029 0029
 TOTAL CATCH: 00012,3KG. CATCH/HOUR: 00038,7KG. SORTED:012,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	14,17	22	36,6	
Epinephelus aeneus	12,60	3	32,5	
Pagellus bellottii	10,08	94	26,0	
Caranx crysos	1,57	3	4,0	
Decapterus rhonchus	,25	3	,6	
Canthigaster sp.	,15	9	,3	
Lagocephalus sp	,03	3	,0	
	38,85		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:723
 PROJECT STATION NO.:190
 PROJECT:SW
 DATE: 11/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0258
 start stop duration Long E 00942
 TIME : 1555 1625 030(min) Purpose code:3
 LOG : 2864 2866 1,6 TOWING DIR:055
 FDEPTH: 069 060 WIRE OUT :0350m SPEED:3,1
 BDEPTH: 0069 0040
 TOTAL CATCH: 00329,5KG. CATCH/HOUR: 00659,0KG. SORTED:056,7KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Epinephelus aeneus	92,00	14	13,9	
Umbrina canariensis	250,00	780	37,9	
Sparus caeruleostictus	130,00	270	19,7	
Lutjanus agennes	90,00	80	13,6	
Pagellus bellottii	50,00	60	7,5	
Decapterus punctatus	21,00	180	3,1	
Sardinella maderensis	17,00	1000	2,5	209
Dentex congocensis	7,00	230	1,0	
Trachurus trecae	2,00	160	,3	
Boops boops	,10	10	,0	
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	659,10		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:724
 PROJECT STATION NO.:191
 PROJECT:SW
 DATE: 12/12 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0243
 start stop duration Long E 00928
 TIME : 0100 0130 030(min) Purpose code:1
 LOG : 2951 2952 1,2 TOWING DIR:050
 FDEPTH: 022 024 WIRE OUT :0050m SPEED:2,4
 BDEPTH: 0060 0060
 TOTAL CATCH: 00116,2KG. CATCH/HOUR: 00232,4KG. SORTED:019,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	176,40	17640	75,9	210
Trachurus trecae	48,00	2820	20,6	211
Decapterus punctatus	6,00	144	2,5	
Engraulis encrasicolus	1,20	72	,5	
Saurida brasiliensis	,60	48	,2	
Arionma bondi	,24	12	,1	
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	232,44		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:725
 PROJECT STATION NO.:192
 PROJECT:SW
 DATE: 12/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0227
 start stop duration Long E 00931
 TIME : 0756 0826 030(min) Purpose code:3
 LOG : 3015 3017 1,6 TOWING DIR:230
 FDEPTH: 029 033 WIRE OUT :0200m SPEED:3,2
 BDEPTH: 0029 0033
 TOTAL CATCH: 00068,3KG. CATCH/HOUR: 00136,6KG. SORTED:068,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Pagellus bellottii	50,80	458	37,1	212
Sepia sp	44,80	830	32,7	
Epinephelus aeneus	16,00	8	11,7	
Sparus caeruleostictus	13,00	20	9,5	
Alectis alexandrinus	6,00	2	4,3	
Lagocephalus laevigatus	2,40	84	1,7	
Balistes capriscus	2,00	2	1,4	
Canthigaster sp.	1,00	212	,7	
Decapterus punctatus	,40	8	,2	
Pseudupeneus prayensis	,20	2	,1	
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	136,60		99,4	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:726
PROJECT STATION NO.:193

PROJECT:SW
DATE: 12/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0225
start stop duration Long E 00918
TIME : 1135 1205 030(min) Purpose code:3
LOG : 3046 3048 1,4 TOWING DIR:050
FDEPTH: 046 043 WIRE OUT :0250m SPEED:2,8
BDEPTH: 0046 0043

TOTAL CATCH: 00197,7KG. CATCH/HOUR: 00395,4KG. SORTED:065,9KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sepia sp	318,00	1644	80,4	
Pagellus bellottii	51,00	1020	12,8	213
Decapterus rhonchus	18,60	312	4,7	
Fistularia petimba	4,80	102	1,2	
Sphyraena guachancho	1,80	6	,4	
Lepidotrigla carolae	1,20	6	,3	
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	395,40		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:727
PROJECT STATION NO.:194

PROJECT:SW
DATE: 12/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0233
start stop duration Long E 00910
TIME : 1355 1425 030(min) Purpose code:3
LOG : 3063 3065 1,6 TOWING DIR:050
FDEPTH: 080 078 WIRE OUT :0350m SPEED:3,2
BDEPTH: 0080 0078

TOTAL CATCH: 01045,2KG. CATCH/HOUR: 02090,4KG. SORTED:026,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sardinella aurita	2028,00	47190	97,0	214
Decapterus punctatus	39,00	936	1,8	
Pagellus bellottii	15,60	156	,7	
Zeus faber	7,80	78	,3	
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	2090,40		99,8	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:728
PROJECT STATION NO.:195

PROJECT:SW
DATE: 12/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0226
start stop duration Long E 00903
TIME : 1732 1802 030(min) Purpose code:3
LOG : 3094 3096 1,4 TOWING DIR:227
FDEPTH: 100 103 WIRE OUT :0500m SPEED:2,8
BDEPTH: 0100 0103

TOTAL CATCH: 00076,9KG. CATCH/HOUR: 00153,8KG. SORTED:030,8KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	50,00	4164	32,5	215
Saurida brasiliensis	40,00	5710	26,0	
Sardinella aurita	27,50	1374	17,8	216
Dentex congoensis	12,50	440	8,1	
Engraulis encrasicolus	9,00	764	5,8	217
Loligo sp	7,00	524	4,5	
Pagellus bellottii	4,00	130	2,6	
Sepia sp	3,00	10	1,9	
Decapterus punctatus	,74	20	,4	
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	153,74		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:729
PROJECT STATION NO.:196

PROJECT:SW
DATE: 13/12 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0208
start stop duration Long E 00855
TIME : 0235 0305 030(min) Purpose code:1
LOG : 3178 3200 1,4 TOWING DIR:225
FDEPTH: 020 020 WIRE OUT :0050m SPEED:2,8
BDEPTH: 0097 0104

TOTAL CATCH: 00105,0KG. CATCH/HOUR: 00210,0KG. SORTED:017,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Trachurus trecae	171,60	12258	81,7	218
Echeneis naucrates	18,00	12	8,5	
Sardinella aurita	6,00	240	2,8	
Arionna bondi	4,80	96	2,2	
Engraulis encrasicolus	4,80	468	2,2	
Saurida brasiliensis	3,60	504	1,7	
Sepia sp	1,20	24	,5	
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	210,00		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:730
 PROJECT STATION NO.:197
 PROJECT:SW
 DATE: 13/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0152
 start stop duration Long E 00901
 TIME : 0740 0740 030(min) Purpose code:3
 LOG : 3217 3219 1,6 TOWING DIR:085
 FDEPTH: 050 046 WIRE OUT :0250m SPEED:3,2
 BDEPTH: 0050 0046
 TOTAL CATCH: 00041,0KG. CATCH/HOUR: 00082,0KG. SORTED:041,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sepia sp	72,00	88	87,8	
Pagellus bellottii	8,20	174	10,0	219
Lagocephalus laevigatus	,60	6	,7	
Decapterus rhonchus	,40	2	,4	
Pseudupeneus prayensis	,40	4	,4	
Illex coindetii	,40	2	,4	
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	82,00		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:731
 PROJECT STATION NO.:198
 PROJECT:SW
 DATE: 13/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0146
 start stop duration Long E 00853
 TIME : 1112 1142 030(min) Purpose code:3
 LOG : 3252 3253 1,5 TOWING DIR:265
 FDEPTH: 070 080 WIRE OUT :0350m SPEED:3,0
 BDEPTH: 0070 0080
 TOTAL CATCH: 00209,1KG. CATCH/HOUR: 00418,2KG. SORTED:184,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Epinephelus aeneus	117,80	20	28,1	
Dentex gibbosus	96,00	64	22,9	
Dentex congoensis	42,00	2100	10,0	
Boops boops	35,20	2934	8,4	
Lutjanus fulgens	33,00	30	7,8	
Sparus caeruleostictus	24,00	34	5,7	
Seriola carpenteri	22,00	2	5,2	
Dentex canariensis	14,00	50	3,3	
Sardinella maderensis	12,80	800	3,0	
SPASAO4 ???	6,00	8	1,4	
Decapterus punctatus	5,20	424	1,2	
Plectorhynchus mediterraneus	4,80	2	1,1	
Spicara alta	2,00	352	,4	
Dentex sp	1,00	2	,2	
Cromis cadenati	,80	8	,1	
Lagocephalus laevigatus	,80	12	,1	
Anthias anthias	,40	48	,0	
Pseudupeneus prayensis	,40	8	,0	
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	418,20		98,9	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:732
 PROJECT STATION NO.:199
 PROJECT:SW
 DATE: 13/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0146
 start stop duration Long E 00901
 TIME : 1305 1335 030(min) Purpose code:3
 LOG : 3265 3267 1,8 TOWING DIR:270
 FDEPTH: 040 046 WIRE OUT :0250m SPEED:3,4
 BDEPTH: 0040 0046
 TOTAL CATCH: 00072,6KG. CATCH/HOUR: 00145,2KG. SORTED:072,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sepia officinalis hierredda	124,00	158	85,3	
Dentex congoensis	9,00	244	6,1	
Sardinella aurita	5,00	180	3,4	220
Decapterus punctatus	3,00	216	2,0	
Illex coindetii	2,00	4	1,3	
Brachydeuterus auritus	1,00	280	,6	
Fistularia petimba	,60	4	,4	
Decapterus rhonchus	,60	6	,4	
Lagocephalus sp	,08	2	,0	
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	145,28		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:733
 PROJECT STATION NO.:200
 PROJECT:SW
 DATE: 13/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0138
 start stop duration Long E 00904
 TIME : 1600 1630 030(min) Purpose code:3
 LOG : 3288 3290 1,7 TOWING DIR:090
 FDEPTH: 019 017 WIRE OUT :0100m SPEED:3,4
 BDEPTH: 0019 0017
 TOTAL CATCH: 00019,5KG. CATCH/HOUR: 00039,0KG. SORTED:019,5KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	12,00	14	30,7	
Fistularia petimba	8,00	66	20,5	
Sepia sp	4,40	4	11,2	
Pagellus bellottii	4,00	32	10,2	
Dentex canariensis	3,00	14	7,6	
Sphyræna guachancho	3,00	12	7,6	
Balistes punctatus	1,08	4	2,7	
Selene dorsalis	1,00	6	2,5	
Psettodes belcheri	1,00	2	2,5	
Balistes capricus	,80	6	2,0	
Chloroscombrus chrysurus	,60	6	1,5	
Brachydeuterus auritus	,04	2	,1	
Decapterus punctatus	,02	2	,0	
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	38,94		99,1	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:734
 PROJECT STATION NO.:201
 PROJECT:SW
 DATE: 14/12 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0100
 start stop duration Long E 00830
 TIME : 0005 0035 030(min) Purpose code:1
 LOG : 3364 3366 1,4 TOWING DIR:205
 FDEPTH: 021 020 WIRE OUT :0050m SPEED:2,8
 BDEPTH: 0060 0064
 TOTAL CATCH: 00009,4KG. CATCH/HOUR: 00018,8KG. SORTED:009,4KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Decapterus punctatus	11,00	578	58,5	
Sardinella aurita	5,04	94	26,8	
Saurida brasiliensis	2,00	256	10,6	
Sphyræna guachancho	,80	6	4,2	
Ariomma bondi	,02	8	,1	
Lagocephalus sp	,02	4	,1	
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	18,88		100,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:735
 PROJECT STATION NO.:202
 PROJECT:SW
 DATE: 14/12 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0030
 start stop duration Long E 00848
 TIME : 0548 0618 030(min) Purpose code:1
 LOG : 3413 3414 1,5 TOWING DIR:300
 FDEPTH: 020 020 WIRE OUT :0050m SPEED:3,0
 BDEPTH: 0065 0074
 TOTAL CATCH: 00002,1KG. CATCH/HOUR: 00004,2KG. SORTED:002,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Canthigaster sp.	4,00	800	95,2	
Sepia sp	,10	4	2,3	
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	4,10		97,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:736
 PROJECT STATION NO.:203
 PROJECT:SW
 DATE: 14/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0026
 start stop duration Long E 00852
 TIME : 0857 0927 030(min) Purpose code:3
 LOG : 3439 3441 1,6 TOWING DIR:270
 FDEPTH: 034 042 WIRE OUT :0200m SPEED:3,2
 BDEPTH: 0034 0042

TOTAL CATCH: 00007,2KG. CATCH/HOUR: 00014,4KG. SORTED:007,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	9,00	6	62,5	
Sepia sp	3,20	8	22,2	
Pagellus bellottii	,80	10	5,5	
Balistes capriscus	,40	4	2,7	
Illex coindetii	,30	2	2,0	
Decapterus punctatus	,20	8	1,3	
Fistularia petimba	,20	2	1,3	
Canthigaster sp.	,18	12	1,2	
Ariomma bondi	,14	20	,9	
	14,42		99,6	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:737
 PROJECT STATION NO.:204
 PROJECT:SW
 DATE: 14/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0020
 start stop duration Long E 00859
 TIME : 1338 1408 030(min) Purpose code:3
 LOG : 3480 3482 1,8 TOWING DIR:090
 FDEPTH: 043 027 WIRE OUT :0200m SPEED:3,6
 BDEPTH: 0043 0027

TOTAL CATCH: 00015,2KG. CATCH/HOUR: 00030,4KG. SORTED:015,2KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sepia sp	21,40	208	70,3	
Dentex congoensis	5,00	38	16,4	
Fistularia petimba	,80	2	2,6	
Decapterus punctatus	,80	50	2,6	
Illex coindetii	,70	2	2,3	
Lagocephalus sp	,60	2	1,9	
Ariomma bondi	,60	4	1,9	
Pseudupeneus prayensis	,40	4	1,3	
Balistes sp.	,08	4	,2	
	30,38		99,5	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:738
 PROJECT STATION NO.:205
 PROJECT:SW
 DATE: 14/12 1985 GEAR TYPE:BT No:1 POSITION:Lat S 0021
 start stop duration Long E 00854
 TIME : 1538 1608 030(min) Purpose code:3
 LOG : 3494 3496 1,6 TOWING DIR:330
 FDEPTH: 096 099 WIRE OUT :0400m SPEED:3,2
 BDEPTH: 0096 0099

TOTAL CATCH: 00083,2KG. CATCH/HOUR: 00166,4KG. SORTED:028,1KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Ariomma bondi	132,00	2400	79,3	221
Dentex congoensis	15,12	288	9,0	
Dentex angolensis	9,12	96	5,4	
Spicara alta	3,12	24	1,8	
Illex coindetii	3,06	48	1,8	
Priacanthus arenatus	3,00	24	1,8	
Epinephelus goreensis	1,04	2	,6	
	166,46		99,7	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:739
 PROJECT STATION NO.:206
 PROJECT:SW
 DATE: 14/12 1985 GEAR TYPE:PT No:2 POSITION:Lat S 0019
 start stop duration Long E 00852
 TIME : 1440 1740 060(min) Purpose code:1
 LOG : 3497 3501 3,6 TOWING DIR:262
 FDEPTH: 010 009 WIRE OUT :0050m SPEED:3,6
 BDEPTH: 0115 0100

TOTAL CATCH: 00090,0KG. CATCH/HOUR: 00090,0KG. SORTED:090,0KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Canthigaster sp.	90,00	20000	100,0	
	90,00		100,0	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:740
 PROJECT STATION NO.:207
 PROJECT:SW
 DATE: 15/12 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0011
 start stop duration Long E 00857
 TIME : 0630 0700 030(min) Purpose code:3
 LOG : 3610 3612 1,7 TOWING DIR:270
 FDEPTH: 071 071 WIRE OUT :0350m SPEED:3,4
 BDEPTH: 0071 0071

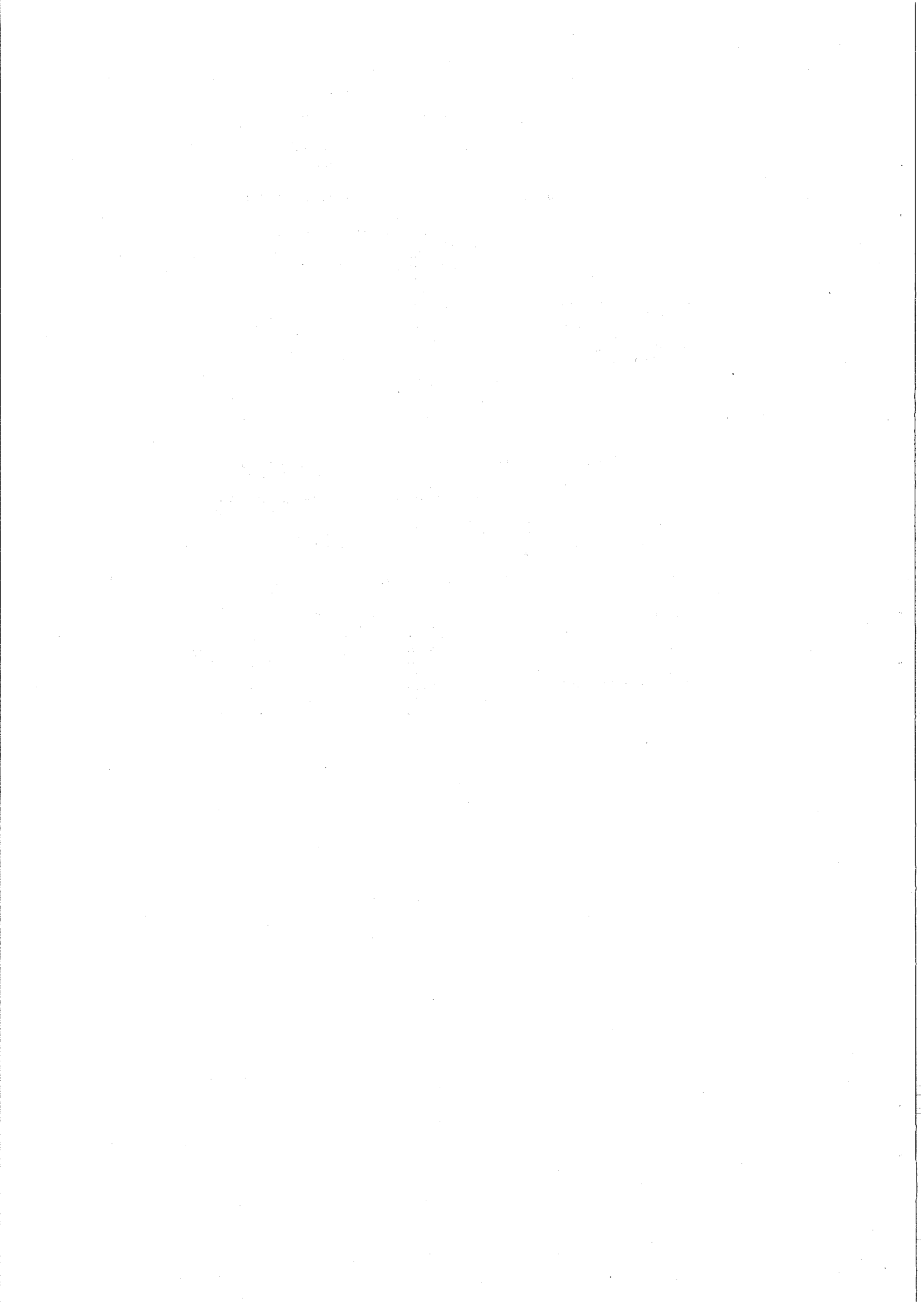
TOTAL CATCH: 00091,3KG. CATCH/HOUR: 00182,6KG. SORTED:091,3KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Dentex congoensis	110,00	2722	60,2	222
Epinephelus aeneus	29,20	4	15,9	
Dentex canariensis	12,00	12	6,5	
Ariomma bondi	11,60	320	6,3	223
Sparus caeruleostictus	6,00	12	3,2	
Pagellus bellottii	4,80	68	2,6	
Trachurus trecae	3,20	60	1,7	224
Priacanthus arenatus	2,40	30	1,3	
Dentex angolensis	1,20	8	,6	
Roops boops	,50	8	,2	
Decapterus punctatus	,40	4	,2	
Fistularia petimba	,40	2	,2	
Dactylopterus volitans	,20	2	,1	
Chelidonichthys gabonensis	,20	2	,1	
Sepia officinalis hierredda	,20	2	,1	
Illex coindetii	,20	6	,1	
Spicara alta	,14	10	,0	
	182,64		99,3	

R/V DR. FRIDTJOF NANSEN CATCH DATA FISHING STATION NO.:741
 PROJECT STATION NO.:208
 PROJECT:SW
 DATE: 15/12 1985 GEAR TYPE:BT No:1 POSITION:Lat N 0010
 start stop duration Long E 00908
 TIME : 0901 0931 030(min) Purpose code:3
 LOG : 3628 3630 1,4 TOWING DIR:270
 FDEPTH: 045 048 WIRE OUT :0250m SPEED:2,8
 BDEPTH: 0045 0048

TOTAL CATCH: 00012,6KG. CATCH/HOUR: 00025,2KG. SORTED:012,6KG.

SPECIES	CATCH PER HOUR		% OF TOT.C.	SAMP.NO
	weight	numbers		
Sparus caeruleostictus	11,00	46	43,6	
Pagellus bellottii	5,60	78	22,2	225
Decapterus punctatus	4,40	224	17,4	226
Dentex congoensis	2,20	66	8,7	227
Priacanthus arenatus	,80	4	3,1	
Dentex canariensis	,60	2	2,3	
Brachydeuterus auritus	,50	20	1,9	
Sardinella aurita	,10	2	,3	
Canthigaster sp.	,04	2	,1	
	25,24		99,6	



<i>Selene dorsalis</i>	9(.3), 13(9.8), 27(1.6), 32(.4), 33(.8), 41(9.0), 43(5.4), 58(4.8), 59(25.4), 62(3.6), 63(11.2), 64(83.0), 66(2.2), 67(32.2), 72(.6), 82(20.5), 87(2.4), 100(.6), 101(.9), 108(.5), 130(.6), 134(1.0), 142(1.4), 143(23.2), 154(.6), 155(48.2), 165(3.2), 167(1.4), 170(1.0), 183(2.8), 200(1.0),
<i>Trachurus trecae</i>	8(4.8), 10(.5), 11(440.0), 17(2.4), 18(94.0), 23(20.0), 26(10.9), 29(8.0), 35(70.0), 36(10.8), 64(547.8), 65(11.2), 74(1.4), 77(.6), 78(5.4), 81(.5), 83(4.0), 85(.9), 90(1.8), 95(61.6), 102(1.2), 105(6.0), 113(9.0), 114(14.4), 129(576.2), 132(96.4), 133(3.6), 134(10.0), 135(36.0), 139(4.5), 140(76.8), 141(141.0), 142(13.0), 145(240.0), 146(216.0), 147(10.0), 149(5.6), 150(102.6), 152(2.0), 153(2.6), 155(1.4), 158(.2), 159(64.8), 160(28.8), 163(.4), 164(2.0), 169(170.0), 170(1.8), 178(105.0), 179(62.1), 181(117.6), 184(84.0), 187(160.0), 188(.3), 190(2.0), 191(48.0), 195(50.0), 196(171.6), 207(3.2), 209(1.0), 210(112.0), 19(1.8),
<i>Uraspis secunda</i>	19(1.8),
CENTRACHANTIDAE	
<i>Spicara alta</i>	18(590.0), 23(41.6), 29(64.0), 30(24.5), 77(46.4), 85(20.1), 97(10.6), 147(450.0), 152(8.0), 157(.4), 160(297.0), 186(11.3), 198(2.0), 205(3.1), 207(.1),
CHAETODONTIDAE	
<i>Chaetodon hoefleri</i>	17(.4), 36(.6), 90(1.2), 137(.4), 171(.4), 186(.7),
<i>Chaetodon marcellae</i>	90(.6), 172(.1),
CHILODIPTERIDAE	
<i>Hypoclydonia bella</i>	38(.2),
CITHARIDAE	
<i>Citharus linguatula</i>	11(2.4), 85(.2), 133(.2), 135(1.2), 151(.2), 157(.4), 158(.2), 168(.1),
CLUPEIDAE	
<i>Ilisha africana</i>	13(80.2), 58(11.4), 62(18.0), 63(.5), 66(1.9), 67(.2), 72(94.0), 87(.4), 143(222.4), 149(2.4), 167(3.4),
<i>Sardinella aurita</i>	14(3.2), 17(1.5), 20(.1), 28(.4), 35(6.0), 62(10.8), 64(16.6), 65(.8), 66(.6), 68(.4), 80(.4), 86(34.8), 92(30.8), 129(124.0), 134(15.5), 139(.9), 140(4.5), 141(171.0), 145(.8), 146(260.0), 148(.5), 150(46.2), 151(11.2), 153(48.0), 156(13.4), 158(17.2), 159(2898.0), 179(2.2), 180(1.7), 181(319.2), 184(1.4), 185(36.0), 187(340.0), 191(176.4), 194(2028.0), 195(27.5), 196(6.0), 199(5.0), 201(5.0), 208(.1),
<i>Sardinella maderensis</i>	9(.5), 10(.1), 13(.7), 32(.1), 72(1.8), 76(.8), 86(1.8), 87(1.1), 92(2.6), 99(6.8), 107(1.0), 134(4.0), 139(1.3), 143(6.6), 149(.2), 154(1.0), 155(5.6), 161(.1), 165(3.2), 167(1.6), 190(17.0), 198(12.8),
CONGRIDAE	
<i>Paraconger notialis</i>	133(1.2),
C R A B S	
<i>Calappa rubroguttata</i>	157(.2),
<i>Portunus validus</i>	100(.4),
CYNOGLOSSIDAE	
<i>Cynoglossus</i> sp	129(53.2),
<i>Cynoglossus senegalensis</i>	13(.9),
DACTYLOPTERIDAE	
<i>Dactylopterus volitans</i>	19(1.6), 38(.2), 65(1.6), 67(1.8), 69(.4), 83(1.0), 84(1.5), 97(2.0), 104(2.0), 106(62.0), 133(6.4), 142(2.2), 150(.8), 166(.6), 188(2.0), 207(.2), 210(2.8),
DICODONTIDAE	
<i>Chilomycterus</i> sp.	141(.4),
DREPANIDAE	
<i>Drepane africana</i>	9(7.8), 13(.5), 15(4.3), 21(17.0), 32(.3), 58(4.8), 67(1.6), 71(5.0), 75(37.0), 101(.5), 142(1.7), 149(17.2), 155(4.2), 181(11.8),
ECHENEIDAE	
<i>Echeneis naucrates</i>	60(1.8), 68(4.4), 73(3.0), 79(.4), 196(18.0),
ELOPIDAE	
<i>Elops senegalensis</i>	66(1.8),
<i>Elops lacerta</i>	82(4.4), 130(1.0), 139(1.0),
EMMELICHTHYIDAE	
<i>Erythrocles monodi</i>	168(.1),
<i>Plagiogenion</i> sp	90(4.0),
ENGRAULIDAE	
<i>Engraulis encrasicolus</i>	8(.5), 86(3.3), 108(.0), 129(602.8), 139(7.2), 142(.7), 145(2.0), 146(38.0), 150(40.0), 158(.0), 159(238.0), 178(154.0), 181(.8), 187(862.0), 191(1.2), 195(9.0), 196(4.8),
EPHIPPIDAE	
<i>Chaetodipterus goreensis</i>	9(14.4), 21(1.0), 32(.7), 58(14.4), 82(9.6), 165(1.2), 171(54.0), 180(24.2),

FISTULARIIDAE								
Fistularia petimba	10(.9), 16(.2), 19(1.3), 22(.3), 24(.4), 68(.6), 76(2.0), 104(2.5), 110(1.2), 114(1.8), 131(2.0), 133(.6), 146(.4), 147(.4), 148(1.9), 151(.8), 153(.5), 154(.6), 164(.6), 165(2.2), 168(.4), 172(.1), 179(.8), 188(.2), 193(4.8), 199(.6), 200(8.0), 203(.2), 204(.8), 207(.4), 209(.1),							
GERREIDAE								
Eucinostomus melanopterus	33(.2), 101(.5), 107(1.2), 111(.6), 155(2.8), 171(.2),							
HOLOCENTRIDAE								
Adioryx hastatus	78(1.5),							
LABRIDAE								
Bodianus speciosus	9(.6), 19(8.6), 36(1.3), 58(4.2), 82(2.9), 151(1.8),							
Xyrichtys novacula	153(.2),							
LETHRINIDAE								
Lethrimus atlanticus	39(.7), 58(3.6), 100(1.0), 149(.9), 171(50.0),							
L O B S T E R S								
PALINURIDAE								
Pamulirus sp	142(1.4),							
Pamulirus regius	143(8.0),							
Scyllarides herklotsii	58(3.0),							
Scyllarides latus	9(1.3), 76(2.8), 82(1.3), 131(1.4), 135(1.8), 141(2.4), 149(.4),							
LOPHIIDAE								
Lophiodes kempii	172(.0), 104(1.5),							
LUTJANIDAE								
Apsilus fuscus	39(1.2), 90(7.2), 142(.4), 144(55.5), 148(22.6), 151(1.1), 159(21.6), 182(510.0),							
Lutjanus sp	58(7.8),							
Lutjanus goreensis	9(23.6), 39(26.0), 58(19.2), 82(30.9),							
Lutjanus agennes	19(65.6), 37(18.8), 39(259.6), 41(5.8), 66(24.6), 148(50.4),							
Lutjanus fulgens	171(53.0), 180(12.0), 182(48.0), 190(90.0), 19(164.8), 36(6.4), 39(628.0), 58(49.2), 82(1.8), 90(25.6), 144(155.4), 148(216.0), 149(21.8), 151(7.2), 159(144.0), 167(.2), 171(68.0), 172(2.2), 182(900.0), 198(33.0), 182(20.0),							
Lutjanus dentatus	182(20.0),							
MERLUCCIIDAE								
Merluccius polli	157(.2),							
MISCELLANEOUS								
MISCELLANEOUS	109(9.3),							
MONACANTHIDAE								
Alutera sp	171(.6),							
Alutera punctata	9(3.3), 40(.7), 58(.6), 111(.6),							
MUGILIDAE								
Liza ramada	155(1.4),							
MULLIDAE								
Pseudupeneus prayensis	9(30.6), 19(.4), 28(.9), 35(4.0), 58(2.4), 59(.2), 63(.2), 64(16.6), 65(2.0), 67(.4), 68(.4), 78(.9), 96(2.7), 102(1.8), 104(3.5), 112(.4), 114(.6), 129(17.8), 131(6.8), 133(15.6), 142(3.6), 151(.5), 159(32.4), 164(.6), 166(3.0), 167(.1), 168(1.4), 171(.2), 172(1.0), 180(1.4), 183(5.2), 188(.4), 192(.2), 197(.4), 198(.4), 204(.4),							
MURAENESOCIDAE								
Cynoponticus ferox	109(.2),							
Hoplunnis punctata	133(1.2),							
MYCTOPHIDAE								
Myctophum sp	98(.3), 84(36.0),							
N O C A T C H								
61(.0), 94(.0), 103(.0), 136(.0), 138(.0), 162(.0),								
OPHIDIIDAE								
Brotula barbata	133(.6), 11(3.2), 97(3.0), 128(3.6), 137(1.8),							
OPHICHTHIDAE								
Mystricophus rostellatus	147(1.4),							
POLYNEMIDAE								
Galeoides decadactylus	13(15.0), 58(3.6), 63(8.1), 66(.4), 67(3.8), 71(7.0), 72(4.8), 75(.4), 82(9.1), 87(2.0), 142(14.4), 143(33.2), 149(4.4), 155(88.2), 165(30.4), 166(.3), 13(.5), 58(1.2), 143(10.0),							
Pentanemus quinquarius	13(.5), 58(1.2), 143(10.0),							
POMACENTRIDAE								
Cromis cadenati	151(.2), 198(.8),							

POMADASYIDAE

Brachydeuterus auritus	8(24.0), 10(14.2), 11(12.0), 13(44.4), 15(.1), 26(1.1),
	33(.6), 42(1.2), 43(.2), 58(1.5), 59(16.0), 62(63.0),
	63(.6), 64(5836.2), 65(6.8), 66(.6), 67(6.2), 68(2.8),
	71(2.0), 72(31.8), 75(31.8), 80(3.0), 86(18.3), 87(2.8),
	91(.4), 92(63.9), 99(17.7), 101(.7), 102(.8), 109(.1),
	129(806.6), 131(.3), 134(230.0), 139(.9), 142(147.6), 143(156.0),
	149(9.4), 154(19.0), 155(9.8), 159(151.4), 161(.3), 165(26.0),
	167(.2), 179(195.6), 183(1.0), 184(.8), 199(1.0), 200(.0),
	208(.5),
Parapristipoma octolineatum	90(7.6),
Plectorhynchus mediterraneus	19(10.0), 58(10.2), 148(110.4), 171(4.6), 182(420.0), 198(4.8),
Pomadasys jubelini	9(96.8), 32(1.7), 33(.4), 58(4.8), 63(4.4), 71(7.0),
	75(25.6), 108(.9), 130(3.2), 143(159.4), 149(.9), 155(72.8),
	165(5.2),
Pomadasys incisus	9(.4), 58(15.6), 59(1.0), 63(3.2), 65(.8), 67(1.4),
	71(2.0), 82(1.0), 133(50.4), 148(10.6),
Pomadasys rogeri	9(24.0), 13(1.6), 32(.9), 63(3.6), 87(7.6), 171(1.6),

PRIACANTHIDAE

Priacanthus arenatus	8(1.2), 10(.7), 14(.0), 18(11.0), 26(4.2), 28(.2),
	30(125.0), 34(37.0), 35(134.0), 37(.8), 38(.2), 42(99.0),
	59(.5), 64(3017.6), 65(8.6), 78(3.0), 81(.5), 82(.5),
	83(.9), 85(.4), 89(.7), 97(22.0), 102(22.0), 104(18.0),
	105(198.0), 111(1.0), 112(.7), 113(189.0), 114(9.0), 128(8.8),
	129(8.8), 135(156.0), 141(87.0), 146(4.0), 159(86.4), 160(37.8),

Priacanthus arenatus	163(3.2), 164(7.0), 165(2.4), 166(3.8), 168(1.6), 169(1.0),
	172(4.0), 178(32.2), 181(3.4), 188(.4), 205(3.0), 207(2.4),
	208(.8), 209(3.0),

PSETTODIDAE

Psettodes belcheri	27(1.7), 43(.4), 100(1.6), 107(2.4), 165(.4), 171(.4),
	200(1.0),

RACHYCENTRIDAE

Rachycentron canadus	20(2.9), 99(17.0), 161(10.0),
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R A Y S

R A Y S	135(120.0), 142(36.0),
Dasyatis marmorata	9(5.5),
Gymnura sp	59(80.0),
Gymnura altavela	149(7.2),
Mobula sp	66(120.0),
Mobula diabolus	58(140.0),
Pteromylaeus bovinus	13(4.4),
Raja miraletus	131(2.7), 133(1.2), 135(4.8), 137(2.0), 149(2.0), 168(.8),
Torpedo torpedo	8(1.2), 11(8.0), 81(1.7), 83(1.9), 91(.8), 112(1.4),
	151(1.6), 153(2.1), 154(.6), 160(1.2), 172(.8),
Torpedo marmorata	105(30.0),

SCIAENIDAE

SCIAENIDAE	143(23.6),
Argyrosomus regius	146(163.6),
Pentheroscion mbizi	142(2.9),
Pseudolithus senegalensis	13(12.2), 59(4.2), 63(23.3), 71(7.0), 143(66.4), 149(1.6),
Pseudolithus typus	13(4.6), 58(73.8), 142(10.8),
Pseudolithus moorii	58(3.0),
Pteroscion peli	13(2.8), 58(2.4), 59(1.6), 63(.6), 67(.3), 72(1.8),
	143(23.2), 155(2.8),
Umbrina canariensis	8(.8), 17(8.4), 58(6.6), 59(.3), 69(1.3), 128(1.6),
	178(4.2), 190(250.0),
Umbrina steindachneri	171(17.0),

SCOMBRIDAE

Sarda sarda	73(6.8), 178(2.6), 179(5.0), 181(4.8),
Scomber japonicus	73(1.4), 80(.7), 151(.6), 164(.4), 169(6.0), 179(1.2),
Scomberomorus tritor	9(19.0), 21(5.0), 32(7.8), 43(2.6), 66(28.0), 80(4.2),
	82(7.8), 99(1.4), 101(1.2), 130(2.0), 139(4.6), 143(69.8),
	155(14.6), 161(4.2), 165(4.8),

SCORPAENIDAE

Trachyscorpina cristulata echi	69(1.7), 77(3.3),
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SERRANIDAE

Epinephelus aeneus	9(32.0), 10(22.4), 14(6.6), 16(4.8), 17(146.0), 19(135.4),
	23(16.6), 26(8.7), 34(3.4), 35(18.0), 36(56.8), 39(24.4),
	41(22.0), 42(4.4), 43(7.8), 59(2.6), 68(20.4), 77(22.0),
	78(52.0), 88(2.4), 89(66.6), 90(72.4), 96(16.0), 101(2.0),
	104(33.6), 110(1.4), 112(7.2), 131(80.6), 142(10.8), 146(15.6),
	151(13.8), 154(8.0), 164(1.8), 165(8.2), 166(2.6), 168(63.0),
	172(2.0), 178(40.0), 180(3.4), 181(6.2), 182(70.0), 186(23.6),
	188(41.6), 189(12.6), 190(92.0), 192(16.0), 198(117.8), 207(29.2),
	41(6.8),
Epinephelus alexandrinus	144(11.1), 151(11.4), 182(16.0),
Epinephelus goreensis	39(4.4), 144(8.7), 205(1.0),
Mycteroperca rubra	182(14.0),
Serranus accraensis	172(.1),

S H A R K S

S H A R K S	128(	3.0),	152(	2.0),						
Carcharhinus sp.	81(	.5),	167(	4.8),						
Carcharhinus limbatus	143(	10.0),									
Rhizoprionodon acutus	155(	2.0),									
Paragaleus sp.	9(	14.4),	154(	8.4),						
Paragaleus pectoralis	142(	18.7),	180(	8.0),						
Heptranchias perlo	137(	5.2),									
Sphyrna couardi	143(	36.6),									
Squalus blainvillei	85(	10.8),									
Squalus megalops	147(	9.0),									
Squatina oculata	68(	2.8),	85(	12.6),	137(	12.8),	160(	5.0),	
Mustelus sp	30(	12.0),									
Mustelus mustelus	18(30.8),	19(11.2),	69(13.0),	85(4.2),	129(4.0),	137(4.6),
	144(18.3),	188(1.2),								

S H R I M P S

Parapenaeopsis atlantica	72(	.6),	101(	.2),	143(	3.2),			
Penaeus sp	41(	.2),									
Penaeus notialis	26(1.3),	27(.0),	33(.1),	59(.4),	75(.2),	110(1.1),
	112(.7),	166(1.8),	172(.3),						
Parapenaeus sp	81(.5),										

SOLEIDAE

Dicologlossa hexophtalma	67(	.3),							
Monochirus hispidus	133(	.6),							

SPARIDAE

Boops boops	10(	.1),	11(	4.0),	18(	240.0),	23(	10.4),	35(	4.0),	36(	1.0),
	64(	281.8),	65(	2.0),	68(	.8),	83(	.6),	85(	.4),	114(	1.7),
	133(	6.4),	142(	.4),	148(	2.4),	151(	.2),	152(	.5),	159(	32.4),
	160(	7.2),	166(	.4),	168(	5.0),	169(	1.0),	184(	2.2),	187(	2.0),
	190(	.1),	198(	35.2),	207(	.5),	209(	3.0),				
Dentex sp	198(	1.0),										

Dentex angolensis	8(	3.4),	10(	1.2),	11(	9.6),	29(	13.6),	30(	17.5),	34(	3.8),
	36(	5.4),	42(	12.0),	59(	6.8),	60(	7.0),	64(	24.8),	65(	.6),
	69(	.6),	77(	9.6),	97(	25.2),	102(	2.0),	105(	34.8),	112(	1.2),
	114(	2.4),	128(	134.4),	137(	7.0),	147(	10.0),	152(	27.0),	160(	7.2),
	163(	2.6),	164(	.6),	168(	1.0),	169(	5.0),	172(	7.4),	178(	45.5),
	186(	14.1),	205(	9.1),	207(	1.2),	209(	7.0),				
Dentex canariensis	8(	1.6),	9(	3.2),	9(	51.2),	15(	14.1),	16(	1.7),	17(	176.0),
	19(	207.6),	25(	28.2),	26(	2.6),	32(	.3),	36(	42.0),	39(	31.0),
	41(	1.4),	60(	1.0),	69(	12.8),	71(	5.0),	78(	34.2),	82(	10.4),
	88(	3.6),	90(	59.4),	104(	10.0),	112(	9.6),	131(	31.0),	142(	65.5),
	144(	24.6),	148(	110.4),	151(	17.2),	152(	15.0),	154(	.6),	159(	51.4),
	164(	17.0),	168(	1.8),	171(	5.0),	172(	4.6),	178(	10.5),	182(	495.0),
	186(	42.2),	188(	8.6),	198(	14.0),	200(	3.0),	207(	12.0),	208(	.6),
	104(	8.0),										
Dentex macrophthalmus	18(	56.0),	23(	32.8),	26(	3.4),	30(	5.0),	34(	18.0),	35(	240.0),
Dentex congoensis	36(	117.6),	42(	2.4),	70(	.6),	77(	10.0),	78(	.3),	85(	4.4),
	95(	27.2),	97(	2.8),	102(	3.2),	104(	170.0),	105(	48.0),	113(	253.5),
	114(	28.8),	135(	43.2),	137(	16.4),	141(	21.0),	147(	75.0),	152(	62.0),
	157(	1.2),	159(	21.6),	160(	59.4),	163(	3.6),	164(	100.0),	165(	2.0),
	166(	.4),	168(	8.2),	169(	280.0),	171(	.2),	184(	35.0),	186(	3.2),
	187(	10.0),	190(	7.0),	195(	12.5),	198(	42.0),	199(	9.0),	204(	5.0),
	205(	15.1),	207(	110.0),	208(	2.2),	209(	12.4),	210(	33.6),		
Dentex gibbosus	17(	188.6),	19(	5.2),	68(	6.8),	69(	13.8),	70(	5.4),	77(	12.6),
	78(	21.0),	78(	57.6),	85(	16.8),	89(	53.4),	90(	93.4),	137(	60.0),
	146(	104.8),	147(	13.0),	152(	13.0),	159(	7.4),	178(	40.0),	178(	6.3),
	182(	38.0),	186(	4.2),	188(	3.4),	198(	96.0),				
Dentex barnardi	182(	120.0),										
Pagellus natalensis	184(	200.2),										
Pagellus bellottii	10(	3.2),	14(	4.2),	16(	30.4),	17(	44.6),	19(	3.6),	20(	7.4),
	22(	10.2),	24(	1.0),	26(	1.6),	28(	21.2),	34(	13.4),	35(	4.0),
	36(	5.4),	39(	1.5),	41(	2.2),	42(	4.8),	59(	24.6),	63(	5.3),
	64(	165.8),	65(	68.0),	67(	4.4),	68(	30.4),	70(	1.4),	75(	7.4),
	76(	2.4),	78(	1.2),	83(	1.5),	85(	.6),	91(	1.0),	95(	2.0),
	96(	146.4),	97(	1.2),	102(	157.6),	104(	4.5),	107(	2.7),	110(	3.1),
	112(	31.2),	113(	12.0),	114(	1.8),	128(	30.4),	129(	531.8),	131(	27.2),
	133(	114.0),	135(	460.8),	141(	336.0),	142(	4.3),	148(	13.4),	151(	.6),
	152(	3.0),	153(	4.4),	154(	13.0),	157(	1.4),	159(	97.4),	160(	3.6),
	164(	6.0),	165(	2.4),	166(	50.8),	168(	10.8),	171(	.2),	172(	.3),
	179(	2.2),	180(	72.0),	183(	206.0),	186(	1.4),	187(	14.0),	188(	78.0),
	189(	10.1),	190(	50.0),	192(	50.8),	193(	51.0),	194(	15.6),	195(	4.0),
	197(	8.2),	200(	4.0),	203(	.8),	207(	4.8),	208(	5.6),	210(	14.0),

<i>Sparus caeruleostictus</i>	9(73.8), 10(1.5), 15(9.9), 17(68.4), 19(197.6), 26(2.3), 27(2.7), 28(1.3), 32(4.3), 34(4.8), 36(7.8), 39(89.6), 40(11.2), 41(64.2), 58(90.0), 63(12.1), 67(18.0), 68(2.4), 71(45.0), 75(7.2), 78(43.4), 82(8.3), 83(2.0), 87(.7), 88(2.7), 90(58.8), 96(2.6), 100(3.0), 101(6.8), 102(10.8), 104(11.2), 107(8.0), 112(5.3), 114(1.2), 130(1.2), 131(80.0), 133(18.0), 142(74.9), 143(5.0), 144(28.5), 146(16.6), 148(24.5), 149(48.2), 151(46.8), 152(33.0), 154(8.4), 155(7.0), 159(17.0), 164(20.0), 165(14.4), 168(6.8), 170(.4), 171(19.4), 172(13.6), 180(72.0), 182(630.0), 183(.6), 188(8.8), 189(14.2), 190(130.0), 192(13.0), 198(24.0), 200(12.0), 203(9.0), 207(6.0), 208(11.0), 209(4.6),
<i>Sparus pagrus africanus</i>	17(18.8), 69(5.7), 77(6.4), 78(57.6), 89(21.9), 90(5.2), 137(98.6), 146(57.2), 178(5.6),
<i>Sparus auriga</i>	19(40.0), 90(10.5), 159(3.6),
<i>Sparus pagrus pagrus</i>	198(6.0),
SPHYRAENIDAE	
<i>Sphyraena sphyraena</i>	10(15.6), 26(5.2), 32(.6), 37(.3), 41(.9), 181(6.7),
<i>Sphyraena viridensis</i>	131(2.4), 148(.7), 154(.7), 154(2.0), 171(.4),
<i>Sphyraena quachancho</i>	10(7.6), 13(132.0), 32(2.4), 33(.5), 34(1.4), 40(10.4), 59(6.6), 62(86.4), 63(15.2), 66(68.8), 67(10.0), 71(135.0), 72(43.2), 75(5.4), 80(4.7), 86(69.6), 87(1.0), 92(22.0), 99(16.1), 100(.8), 102(3.2), 110(.6), 111(1.0), 130(30.0), 131(1.0), 134(6.0), 139(2.8), 142(18.7), 149(13.8), 154(240.0), 155(35.0), 157(.6), 165(12.6), 166(.6), 167(2.4), 179(5.4), 184(.4), 193(1.8), 200(3.0), 201(.8),
CEPHALOPODA	
LOLIGINIDAE	
<i>Alloteuthis africana</i>	24(.3), 37(.6), 85(1.1), 90(1.8), 159(1.1), 167(.3),
<i>Loligo sp</i>	10(.6), 14(.1), 20(.2), 27(.2), 33(.3), 43(.4),
<i>Octopus vulgaris</i>	195(7.0), 128(3.0), 137(3.2),
OMASTREPHIDAE	
<i>Illex coindetii</i>	8(1.6), 128(11.2), 172(21.2), 10(.6), 11(3.2), 14(.6), 17(.2), 23(.8), 25(3.0), 26(3.4), 29(2.4), 30(9.5), 32(.1), 41(.2), 42(.6), 59(.2), 65(.6), 70(.4), 78(2.1), 91(.4), 97(5.6), 114(1.8), 137(16.6), 146(4.0), 153(.4), 157(20.8), 163(14.4), 166(.2), 168(1.4), 169(28.0), 197(.4), 199(2.0), 203(.3), 204(.7), 205(3.1), 207(.2),
SEPIIDAE	
<i>Sepia sp</i>	11(6.4), 70(5.2), 111(14.0), 128(21.6), 133(26.4), 135(7.2), 137(.2), 148(3.4), 153(3.2), 154(1.0), 14(1.2), 16(.8), 146(6.0), 188(4.4), 192(44.8), 193(318.0), 195(3.0), 196(1.2), 197(72.0), 200(4.4), 202(.1), 203(3.2), 204(21.4),
<i>Sepia officinalis hierredda</i>	12(1.8), 42(2.0), 131(3.6), 141(51.0), 142(5.0), 151(5.2), 157(.3), 158(.6), 184(12.6), 199(124.0), 207(.2),
STROMATEIDAE	
<i>Stromateus fiatola</i>	59(5.0), 62(32.4), 63(3.9), 66(2.8), 80(2.0), 130(12.0), 143(6.6),
SYNODONTIDAE	
<i>Saurida brasiliensis</i>	8(.2), 26(1.3), 37(6.0), 73(.8), 74(.9), 78(.3), 80(.3), 81(1.3), 85(1.0), 86(4.7), 99(14.5), 129(8.8), 132(5.4), 133(1.2), 140(2.1), 145(3.6), 150(87.2), 156(16.4), 157(.8), 166(.2), 167(.0), 172(.2), 178(112.0), 181(5.0), 184(.2), 186(78.5), 191(.6), 195(40.0), 196(3.6), 201(2.0),
<i>Synodus saurus</i>	166(.4),
<i>Trachinocephalus myops</i>	67(.2), 91(.5),
TETRAODONTIDAE	
TETRAODONTIDAE	
<i>Ephippion guttifer</i>	157(.2), 189(.2), 192(1.0), 202(4.0), 203(.2), 206(90.0), 208(.0), 20(5.2), 40(13.2), 43(3.4), 63(5.0), 67(7.4), 100(5.0), 111(15.0), 171(5.0),
<i>Lagocephalus sp</i>	150(.1), 189(.0), 199(.1), 201(.0), 204(.6),
<i>Lagocephalus laevisgatus</i>	10(.1), 14(.5), 16(.6), 20(.4), 28(.4), 34(1.7), 43(.4), 74(.6), 79(.3), 91(1.2), 96(1.8), 100(.8), 104(3.4), 105(15.0), 111(1.2), 113(3.0), 131(3.5), 133(12.6), 151(.6), 158(.4), 170(1.0), 183(1.6), 187(1.0), 192(2.4), 197(.6), 198(.8),
<i>Sphaeroides sp.</i>	165(.1),
<i>Sphaeroides spengleri</i>	32(.0),
TRACHINIDAE	
<i>Trachinus armatus</i>	91(.4), 131(.5), 133(6.6), 151(1.0),
<i>Trachinus draco</i>	67(.1),
<i>Trachinus lineolatus</i>	157(.2),
<i>Trachinus radiatus</i>	76(1.8), 85(.2), 91(.8), 133(4.8), 153(.4),
TRIGLIDAE	
<i>Chelidonichthys gabonensis</i>	11(12.8), 24(.3), 59(.8), 65(1.2), 67(.4), 68(.8), 129(26.6), 131(3.2), 133(18.0), 141(21.0), 154(.4), 157(.2), 184(.8), 188(.4), 207(.2), 209(.0), 210(2.8),
<i>Chelidonichthys lastoviza</i>	166(.0),
<i>Lepidotrigla carolae</i>	11(7.2), 70(.2), 85(.3), 97(.8), 105(3.0), 113(6.0), 114(.6), 135(1.2), 141(1.5), 142(.2), 193(1.2),
<i>Lepidotrigla cadmani</i>	141(3.0), 166(.2),
<i>Trigla capensis</i>	81(.6),
TRICHIURIDAE	
<i>Trichiurus lepturus</i>	128(6.0), 13(1.6), 59(14.2), 62(3.6), 63(5.3), 72(1.2), 90(3.6), 97(5.8), 132(32.0), 140(3.0), 143(66.4), 150(1.5), 160(2.6),
URANOSCOPIDAE	
<i>Uranoscopus sp</i>	133(.2),
<i>Uranoscopus polli</i>	131(1.2),
ZEIDAE	
<i>Zeus faber</i>	18(5.0), 22(.3), 68(1.6), 70(.4), 89(.6), 128(.4),

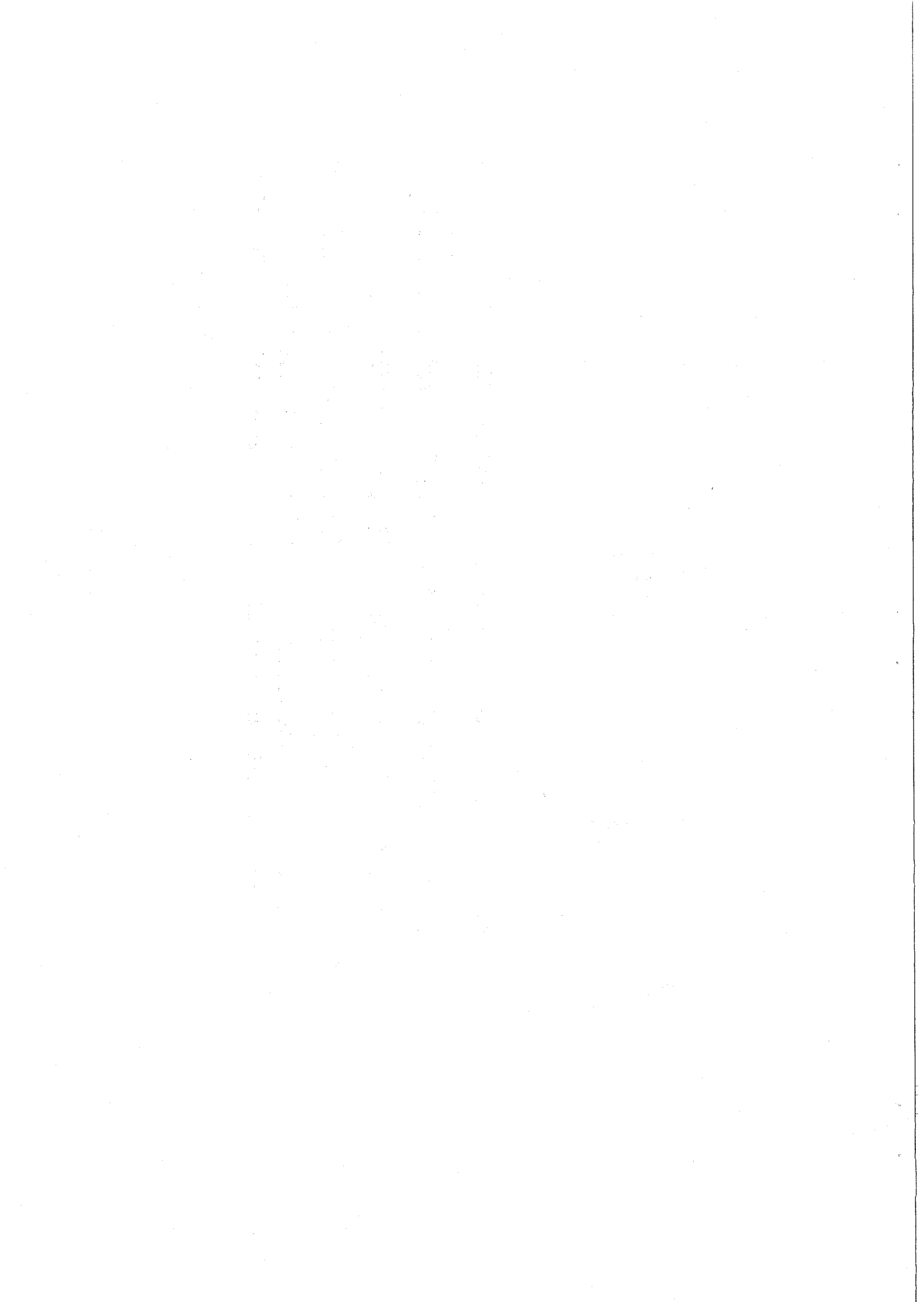
Annex 4. Processed length data by species and samples.

FAMILY/SPECIES	STATION	LENGTHS IN SAMPLE				N
		LOWEST	HIGHEST	MEAN	ST. DEV.	
ARIOMMIDAE						
<i>Aricomma tongi</i>						
	18	10.0	17.0	12.6	1.4	125
	23	11.0	17.0	12.4	1.3	89
	97	11.0	18.0	14.3	1.5	99
	146	12.0	19.0	14.1	1.3	50
	147	13.0	18.0	15.3	1.2	100
	152	14.0	18.0	16.0	.9	65
	160	10.0	18.0	15.9	1.2	92
	164	6.0	18.0	10.6	1.6	79
	168	7.0	19.0	15.5	2.5	123
	205	12.0	18.0	16.3	1.2	106
	207	10.0	18.0	13.9	1.8	160
BALISTIDAE						
<i>Balistes capriscus</i>						
	30	8.0	9.0	8.3	.5	26
	31	7.0	11.0	8.6	.7	99
	93	10.0	14.0	12.0	.8	71
	106	10.0	13.0	11.2	.5	92
CLARANGIDAE						
<i>Chloroscombrus chrysurus</i>						
	62	15.0	24.0	19.0	1.2	100
	130	3.0	31.0	19.4	7.0	59
	134	3.0	12.0	7.8	2.8	158
	143	9.0	20.0	10.3	1.9	101
	149	7.0	24.0	16.7	5.4	71
	155	3.0	24.0	18.1	4.5	96
	165	15.0	22.0	18.1	1.7	65
<i>Decapterus sp.</i>						
	65	12.0	17.0	14.0	1.1	94
	68	12.0	17.0	14.3	1.1	100
	74	12.0	16.0	14.0	.9	100
<i>Decapterus punctatus</i>						
	9	6.0	13.0	8.1	1.2	61
	12	8.0	16.0	10.4	1.5	28
	14	8.0	17.0	12.9	1.7	105
	17	11.0	17.0	13.9	1.2	75
	22	16.0	21.0	18.9	1.1	40
	34	8.0	16.0	10.7	1.7	115
	42	11.0	19.0	14.5	1.8	107
	142	8.0	11.0	9.6	.9	30
	146	11.0	19.0	16.5	2.0	22
	151	10.0	19.0	13.3	1.8	132
	153	10.0	18.0	12.4	1.5	100
	156	9.0	16.0	12.1	1.4	100
	158	10.0	23.0	13.2	2.1	127
	159	8.0	15.0	10.7	1.1	70
	168	7.0	19.0	13.9	3.8	198
	169	16.0	20.0	17.2	.8	81
	185	16.0	22.0	19.0	1.2	101
	208	8.0	19.0	11.8	3.4	112
	210	16.0	20.0	17.9	.7	100
<i>Decapterus rhonchus</i>						
	73	40.0	49.0	42.8	1.9	62
	142	9.0	11.0	10.6	.8	7
	180	14.0	23.0	18.7	2.1	54
<i>Seriola rivoliana</i>						
	149	4.0	30.0	14.6	7.6	37
<i>Selene dorsalis</i>						
	59	17.0	23.0	18.9	1.0	100
	67	12.0	29.0	24.6	3.6	77
<i>Trachurus trcaae</i>						
	8	9.0	19.0	12.0	1.8	122
	11	10.0	15.0	13.0	1.4	115
	18	14.0	18.0	16.0	1.0	103
	23	12.0	17.0	15.9	.7	64
	26	14.0	19.0	15.5	.9	129
	35	13.0	17.0	15.7	.7	85
	64	14.0	18.0	15.8	.9	75
	95	14.0	18.0	15.1	1.0	100
	129	5.0	9.0	7.5	.8	91
	132	7.0	12.5	8.6	.9	178
	134	5.0	12.0	9.4	1.4	117
	140	6.0	11.0	9.2	1.0	89
	141	6.0	11.0	8.3	1.0	117
	142	6.0	10.0	8.0	1.1	94
	145	9.0	12.0	10.8	.7	103
	146	7.0	14.0	9.7	1.1	116
	149	10.0	12.0	11.1	.7	60
	150	10.0	14.0	11.2	.9	98
	153	16.0	19.0	16.9	.9	27
	159	8.0	11.0	9.4	.7	63
	160	16.0	18.0	16.6	.7	35
	169	16.0	18.0	16.8	.5	89
	178	10.0	13.0	10.7	.7	100
	179	8.0	23.0	10.6	2.2	101
	181	9.0	13.0	10.4	.7	100
	184	11.0	22.0	15.7	1.9	100
	187	10.0	17.0	11.1	1.5	101
	191	8.0	14.0	10.3	1.1	100
	195	9.0	12.0	10.4	.5	100
	196	10.0	14.0	11.7	.7	100
	207	13.0	18.0	16.6	.9	30
	210	14.0	18.0	16.5	.6	83

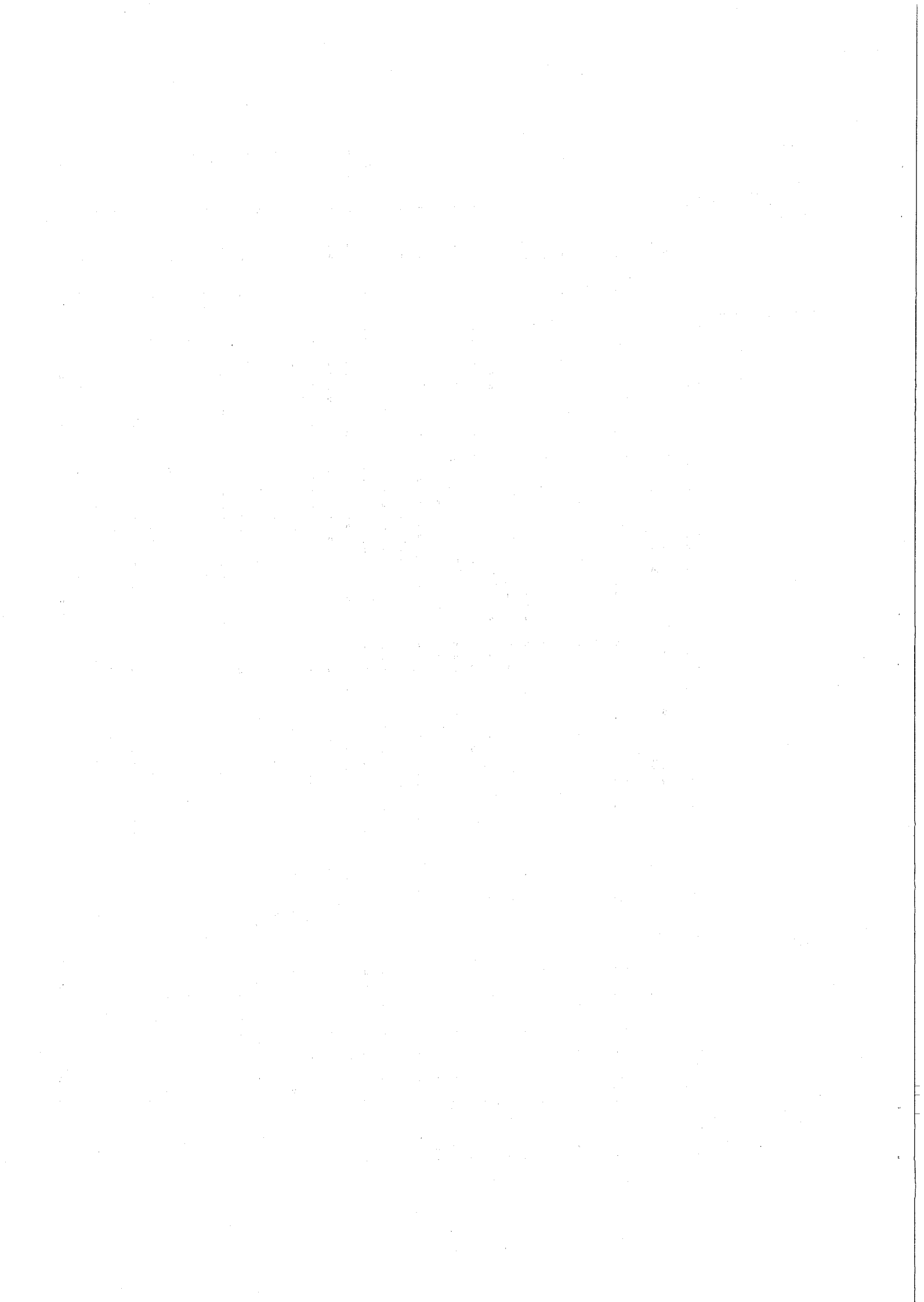
CENTRACANTHIDAE						
<i>Spicara aita</i>						
	18	11.0	18.0	13.3	1.5	126
	147	10.0	16.0	13.2	1.2	100
	152	10.0	17.0	13.0	2.3	26
	160	11.0	22.0	15.3	2.2	102
CLUPEIDAE						
<i>Ilisha africana</i>						
	13	6.0	21.0	12.4	3.3	220
	72	8.0	20.0	12.8	2.4	102
	143	9.0	22.0	15.8	2.8	99
	149	12.0	20.0	15.4	1.8	39
	167	9.0	14.0	11.9	1.0	99
<i>Sardinella aurita</i>						
	14	11.0	20.0	18.7	2.2	26
	129	7.0	14.0	11.8	1.1	89
	134	9.0	18.0	11.4	1.3	123
	140	10.0	12.0	11.2	.8	12
	141	14.0	22.0	18.9	1.1	90
	146	10.0	10.0	10.0	.0	154
	150	10.0	17.0	13.2	1.4	101
	151	11.0	19.0	16.8	1.7	62
	153	14.0	18.0	16.1	1.2	105
	156	12.0	17.0	14.7	1.1	100
	158	11.0	21.0	16.7	3.0	118
	159	10.0	15.0	12.4	1.1	100
	179	10.0	17.0	12.4	1.6	32
	181	12.0	18.0	14.2	1.6	103
	185	14.0	22.0	19.0	1.6	101
	187	10.0	15.0	12.7	.9	100
	191	12.0	16.0	13.2	.9	105
	194	14.0	23.0	17.4	2.0	100
	195	12.0	17.0	13.4	1.1	100
	199	13.0	16.0	14.3	.8	90
<i>Sardinella maderensis</i>						
	127	8.0	15.0	9.5	1.8	76
	134	9.0	21.0	10.5	2.1	31
	190	12.0	18.0	15.9	1.5	100
ENGRAULIDAE						
<i>Engraulis encrasicolus</i>						
	129	7.0	11.0	9.3	.9	100
	145	8.0	12.0	10.7	.9	22
	146	9.0	12.0	10.8	.8	118
	150	10.0	13.0	11.2	.6	99
	159	10.0	12.0	11.1	.6	99
	178	8.0	12.0	10.6	.7	97
	187	10.0	12.0	11.1	.6	98
	195	9.0	13.0	11.4	.7	102
LUTJANIDAE						
<i>Lutjanus fuscus</i>						
	144	34.0	44.0	41.0	2.3	23
<i>Lutjanus agennes</i>						
	39	67.0	96.0	84.7	7.0	17
<i>Lutjanus fulgens</i>						
	19	29.0	42.0	35.0	2.9	86
	39	21.0	40.0	34.0	4.2	96
	144	29.0	40.0	35.4	2.7	83
	148	32.0	41.0	36.8	1.7	102
	159	31.0	41.0	36.1	2.4	109
MULLIDAE						
<i>Pseudupeneus prayensis</i>						
	166	7.0	20.0	15.3	4.0	19
MYCTOPHIDAE						
<i>Myctophum sp</i>						
	84	3.5	5.0	4.3	.3	53
POLYNEMIDAE						
<i>Galocides decadactylus</i>						
	142	12.0	26.0	20.8	2.8	18
	149	12.0	28.0	17.7	4.3	27
POMADASYIDAE						
<i>Brachydeuterus auritus</i>						
	8	11.0	20.0	14.8	2.0	100
	59	9.0	23.0	15.1	3.7	98
	62	5.5	15.0	10.2	2.1	98
	64	11.0	22.0	15.6	1.8	99
	75	15.0	22.0	17.5	1.7	98
	129	11.0	21.0	15.0	2.1	109
	134	5.0	15.0	7.6	1.7	175
	142	6.0	19.0	10.7	3.9	133
	149	6.0	19.0	9.0	3.3	67
	154	7.0	19.0	11.2	2.5	83
	155	5.0	14.0	9.0	2.4	52
	159	11.0	21.0	14.6	2.0	31
	165	11.0	18.0	14.3	1.6	100
	179	12.0	19.0	15.5	1.4	100
<i>Pomadasyx jubelini</i>						
	9	27.0	44.0	37.3	3.1	66
<i>Pomadasyx rogeri</i>						
	9	30.0	38.0	33.3	2.0	23
PRIACANTHIDAE						
<i>Priacanthus arenatus</i>						
	42	5.0	16.0	9.7	2.2	99
	64	14.0	20.0	16.0	1.0	96
SCIAENIDAE						
<i>Argyrosomus regius</i>						
	146	65.0	130.0	86.2	21.0	13
SCOMBRIDAE						
<i>Scomberomorus tritor</i>						
	9	42.0	50.0	45.3	1.9	19
SERRANIDAE						
<i>Epinophelus aeneus</i>						
	17	61.0	89.0	61.5	8.3	10
	19	47.0	83.0	64.3	13.4	18

SPARIDAE

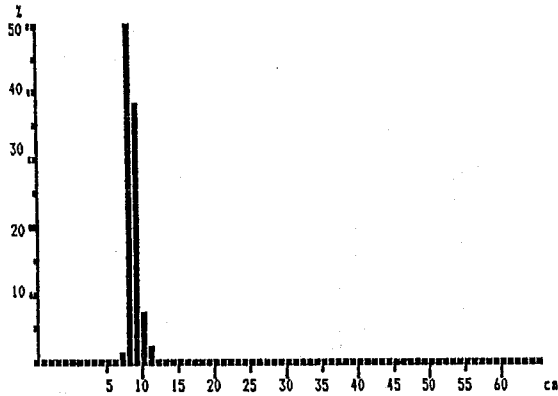
<i>Boops boops</i>	18	11.0	19.0	15.1	1.6	68
	168	10.0	17.0	11.2	.9	162
<i>Dentex angolensis</i>	128	9.0	28.0	18.2	5.2	140
	137	17.0	29.0	23.4	3.6	16
<i>Dentex canariensis</i>	9	25.0	47.0	32.7	4.8	49
	9	13.0	21.0	16.8	2.0	22
	17	23.0	46.0	34.4	4.4	101
	19	29.0	51.0	37.6	4.5	98
	142	10.0	50.0	28.2	10.4	20
	144	28.0	46.0	33.5	5.1	15
	148	28.0	55.0	41.3	6.2	24
<i>Dentex congoensis</i>	18	10.0	18.0	14.0	1.9	65
	34	7.0	17.0	12.6	1.7	140
	95	7.0	13.0	9.8	1.2	100
	104	10.0	18.0	12.8	2.0	95
	135	11.0	23.0	15.7	2.4	30
	137	10.0	22.0	14.4	2.4	161
	141	10.0	17.0	13.0	2.4	18
	152	12.0	21.0	15.7	2.5	97
	160	10.0	20.0	14.3	1.8	73
	164	8.0	18.0	12.4	2.5	99
	168	9.0	18.0	13.1	1.9	120
	169	10.0	18.0	14.0	1.7	107
	207	9.0	18.0	13.0	2.3	99
	208	10.0	17.0	12.5	2.0	33
	210	10.0	16.0	12.8	1.5	33
<i>Dentex gibbosus</i>	17	27.0	81.0	40.1	10.6	96
	137	41.0	70.0	52.2	8.1	17
	146	40.0	80.0	54.1	12.0	22
<i>Pagellus natalensis</i>	142	10.0	40.0	25.9	11.3	22
<i>Pagellus bellottii</i>	14	10.0	21.0	14.8	2.8	36
	16	12.0	25.0	17.6	2.3	182
	28	10.0	19.0	14.6	1.7	92
	34	11.0	24.0	15.9	2.0	117
	59	14.0	28.0	21.0	2.9	87
	65	13.0	29.0	18.2	3.4	99
	128	9.0	28.0	17.5	5.1	37
	129	6.0	24.0	12.5	3.2	171
	131	12.0	32.0	18.7	5.6	108
	133	13.0	27.0	19.0	3.0	90
	135	10.0	21.0	14.0	2.5	62
	166	7.0	21.0	16.7	2.4	84
	168	10.0	18.0	14.8	1.5	116
	183	14.0	28.0	20.1	3.3	101
	184	12.0	24.0	16.1	1.8	105
	188	12.0	24.0	15.8	2.7	100
	192	16.0	29.0	19.6	2.4	99
	193	13.0	29.0	15.8	2.5	96
	197	13.0	18.0	14.8	1.2	87
	208	14.0	20.0	17.1	1.7	39
<i>Sparus caeruleostictus</i>	9	21.0	43.0	31.6	5.7	71
	17	30.0	46.0	34.9	3.5	67
	19	28.0	49.0	34.3	4.6	67
	39	16.0	54.0	35.1	10.6	44
	41	20.0	43.0	30.8	6.1	56
	131	30.0	51.0	37.7	4.3	48
	144	32.0	52.0	41.1	6.2	8
	149	15.0	50.0	35.5	6.7	41
	164	20.0	36.0	27.8	4.3	30
<i>Sparus pagrus africanus</i>	17	19.0	40.0	30.3	5.4	18
	137	25.0	44.0	32.5	5.1	81
	146	32.0	61.0	43.2	6.7	19
SPHYRAENIDAE						
<i>Sphyraena guachancho</i>	13	25.0	49.0	34.6	5.0	40
	66	24.0	60.0	43.9	8.7	38
	130	38.0	53.0	43.2	3.5	36



FAMILY/SPECIES	STATION	lowest step		FREQUENCY IN LENGTH GROUP																																		
		length	length	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
SCOMBRIDAE																																						
<i>Scomberomorus tritor</i>	9	42.0	1.0	1	1	4	7	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
SERRANIDAE																																						
<i>Epinephelus aeneus</i>	17	61.0	1.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	1	1	0	0	2	1	1	0			
	19	47.0	2.0	2	0	3	1	1	0	1	1	1	0	1	1	0	0	0	0	0	0	3	1	2	0	0	0	0	0	0	0	0	0	0	0			
SFARIDAE																																						
<i>Scops loops</i>	18	11.0	1.0	1	1	4	20	17	13	7	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	168	10.0	1.0	26	99	29	5	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<i>Dentex angolensis</i>	128	9.0	1.0	1	0	6	20	9	8	9	7	6	5	10	14	4	6	6	9	4	4	9	3	0	0	0	0	0	0	0	0	0	0	0	0			
	137	17.0	1.0	1	0	2	1	1	3	0	0	0	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<i>Dentex canariensis</i>	9	25.0	1.0	3	3	1	2	2	4	4	5	6	7	2	3	2	0	1	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0			
	9	13.0	1.0	2	1	2	4	4	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	17	23.0	1.0	1	0	1	1	1	2	3	9	7	11	8	11	8	10	11	2	2	4	3	1	0	2	0	3	0	0	0	0	0	0	0	0	0		
	19	29.0	1.0	1	0	4	4	5	8	13	14	11	5	5	6	7	3	2	2	1	2	1	0	1	2	1	0	0	0	0	0	0	0	0	0	0		
	142	10.0	5.0	4	0	0	0	10	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	144	28.0	1.0	1	0	3	4	0	3	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0		
	148	28.0	1.0	1	0	0	0	0	1	0	2	0	4	1	1	2	1	1	1	0	4	1	0	1	0	2	0	0	0	0	0	1	0	0	0	0		
<i>Dentex congoensis</i>	18	10.0	1.0	1	4	8	17	10	9	9	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	34	7.0	1.0	1	0	4	10	23	23	41	18	15	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	95	7.0	1.0	1	8	40	29	8	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	104	10.0	1.0	15	9	20	25	9	4	9	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	135	11.0	1.0	1	0	2	6	8	4	5	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	137	10.0	1.0	10	3	17	31	30	19	23	13	6	2	4	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	141	10.0	1.0	4	1	3	3	2	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	152	12.0	1.0	7	17	13	13	11	13	7	8	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	160	10.0	1.0	2	5	4	8	18	23	9	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	164	8.0	1.0	4	7	16	14	11	16	11	6	9	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	168	9.0	1.0	2	12	9	23	24	20	17	10	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	169	10.0	1.0	1	7	9	24	34	15	8	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	207	9.0	1.0	1	14	16	11	18	15	7	7	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	208	10.0	1.0	7	5	6	3	6	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	210	10.0	1.0	1	6	9	7	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dentex gibbosus</i>	17	27.0	2.0	5	13	3	5	10	8	18	8	4	2	3	2	3	2	1	1	2	0	2	2	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	137	41.0	1.0	1	1	1	1	0	0	1	0	2	1	1	0	2	1	0	0	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
	146	40.0	5.0	2	5	8	1	1	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Pagellus natalensis</i>	142	10.0	5.0	4	2	3	3	3	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Pagellus bellottii</i>	14	10.0	1.0	2	1	4	8	4	1	3	9	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	16	12.0	1.0	1	7	12	3	31	41	28	18	22	9	7	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	28	10.0	1.0	2	0	5	16	19	26	13	5	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	34	11.0	1.0	2	2	8	12	29	23	20	13	4	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	59	14.0	1.0	1	1	6	2	6	5	12	22	9	10	0	5	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	65	13.0	1.0	2	3	17	12	17	14	7	10	6	0	2	2	0	1	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	128	9.0	1.0	1	1	3	3	2	1	5	3	0	0	1	5	4	4	0	1	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	129	6.0	1.0	1	2	6	5	17	42	45	18	5	4	2	8	3	2	5	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	131	12.0	1.0	8	13	11	7	5	11	8	8	5	2	2	2	0	1	3	4	1	4	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	133	13.0	1.0	5	3	3	2	12	17	10	8	14	9	2	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	10.0	1.0	5	4	8	13	8	4	9	8	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	166	7.0	1.0	1	0	0	1	3	1	2	0	11	13	21	15	9	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	168	10.0	1.0	1	1	6	11	28	32	23	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	183	14.0	1.0	2	7	11	9	6	9	5	16	10	11	6	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	184	12.0	1.0	1	7	8	20	25	30	8	3	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	188	12.0	1.0	2</																																		

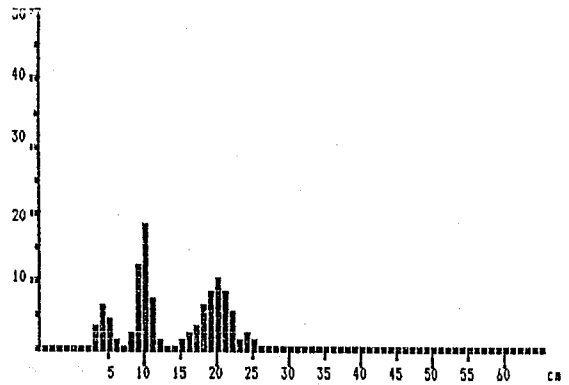


Annex 6. Pooled length frequency diagrams by species and surveys.



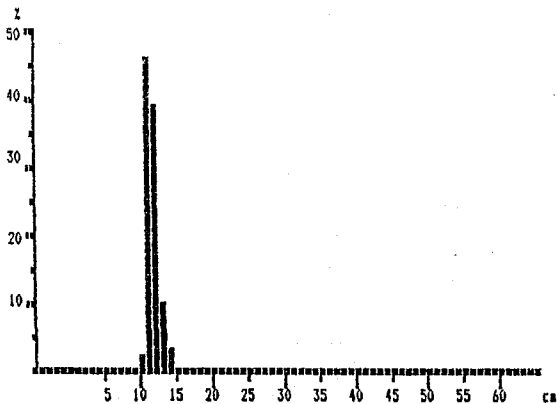
Balistes capriscus (pooled data)

Survey I
 MEAN LENGTH = 8,5ca N= 125
 Modes : , 8ca
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



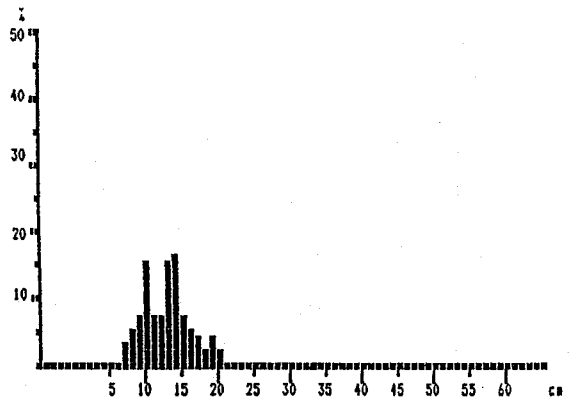
Chloroscombrus chrysurus (pooled data)

Survey I I I
 MEAN LENGTH = 13,6ca N= 550
 Modes : , 4ca, 10ca, 20ca, 24ca
 NUMBER OF SUBSAMPLES : 6
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



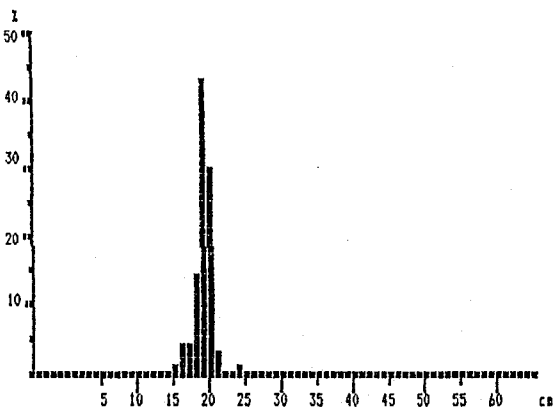
Balistes capriscus (pooled data)

Survey I I
 MEAN LENGTH = 11,6ca N= 163
 Modes : , 11ca
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



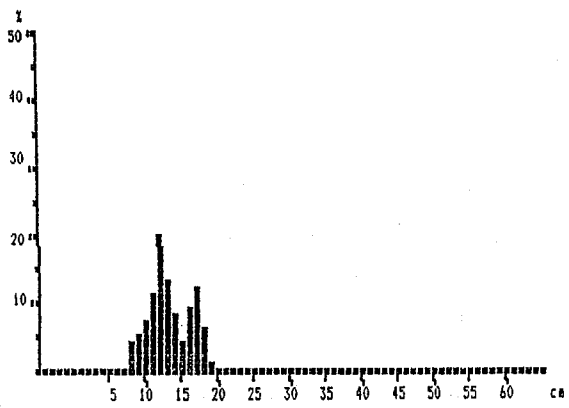
Decapterus punctatus (pooled data)

Survey I
 MEAN LENGTH = 12,6ca N= 531
 Modes : , 10ca, 14ca, 19ca
 NUMBER OF SUBSAMPLES : 7
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



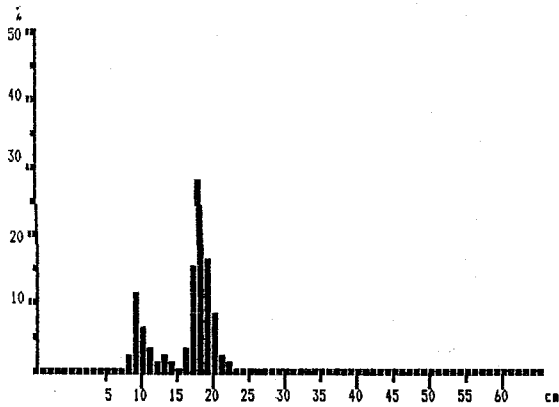
Chloroscombrus chrysurus (pooled data)

Survey I I I
 MEAN LENGTH = 19,0ca N= 100
 Modes : , 19ca, 24ca
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



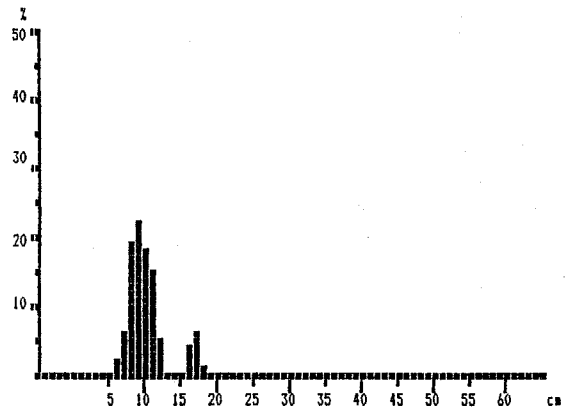
Decapterus punctatus (pooled data)

Survey I I I
 MEAN LENGTH = 13,2ca N= 860
 Modes : , 12ca, 17ca
 NUMBER OF SUBSAMPLES : 9
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



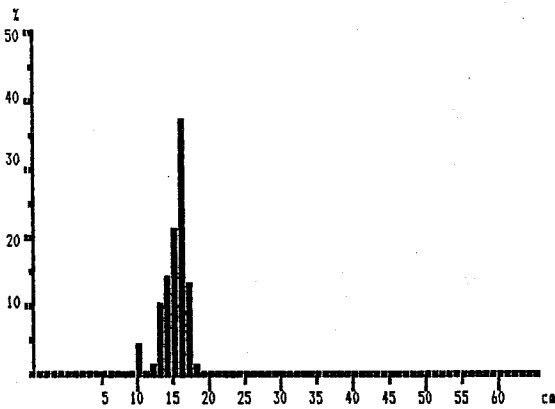
Decapterus punctatus (pooled data)

Survey IV
 MEAN LENGTH = 16,0cm N= 313
 Modes : , 9cm, 13cm, 18cm
 NUMBER OF SUBSAMPLES : 3
 SAMPLES FROM ST.NO.: 178 UNTIL ST.NO.: 210



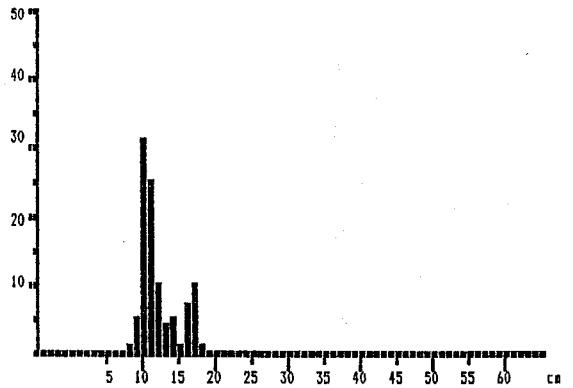
Trachurus trecae (pooled data)

Survey III
 MEAN LENGTH = 10,1cm N= 1277
 Modes : , 9cm, 17cm
 NUMBER OF SUBSAMPLES : 14
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



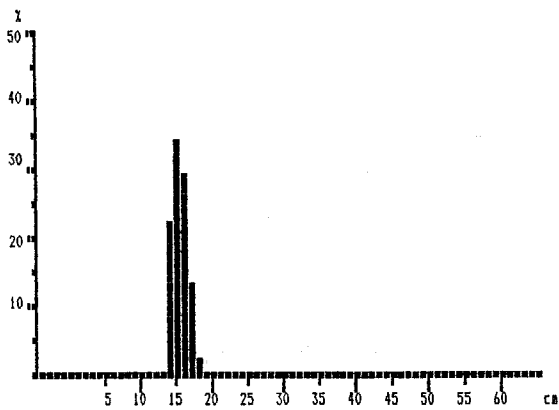
Trachurus trecae (pooled data)

Survey I
 MEAN LENGTH = 15,1cm N= 496
 Modes : , 10cm, 16cm
 NUMBER OF SUBSAMPLES : 5
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



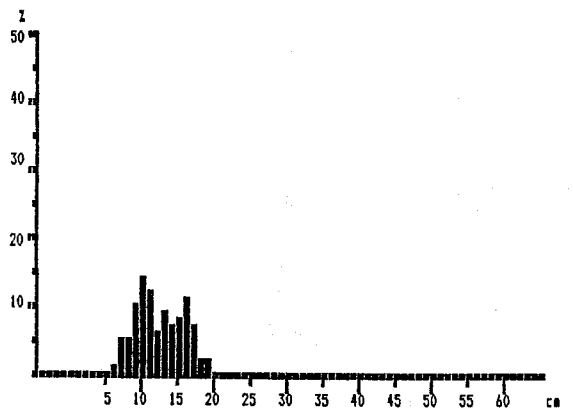
Trachurus trecae (pooled data)

Survey IV
 MEAN LENGTH = 12,0cm N= 915
 Modes : , 10cm, 14cm, 17cm
 NUMBER OF SUBSAMPLES : 10
 SAMPLES FROM ST.NO.: 178 UNTIL ST.NO.: 210



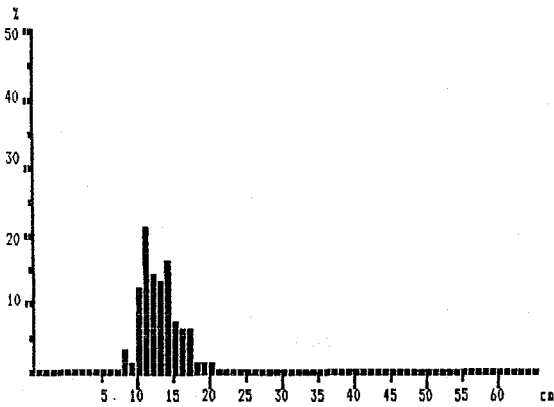
Trachurus trecae (pooled data)

Survey II
 MEAN LENGTH = 15,3cm N= 175
 Modes : , 15cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



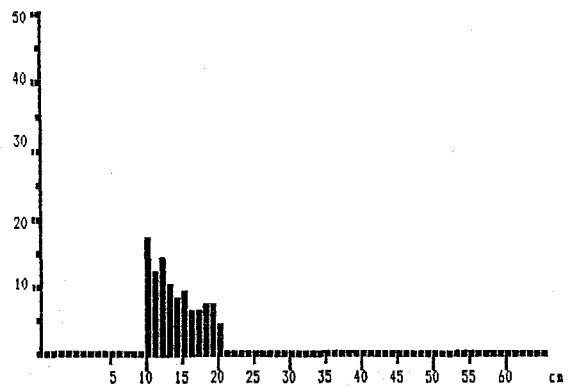
Ilisha africana (pooled data)

Survey I
 MEAN LENGTH = 12,4cm N= 220
 Modes : , 10cm, 13cm, 16cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



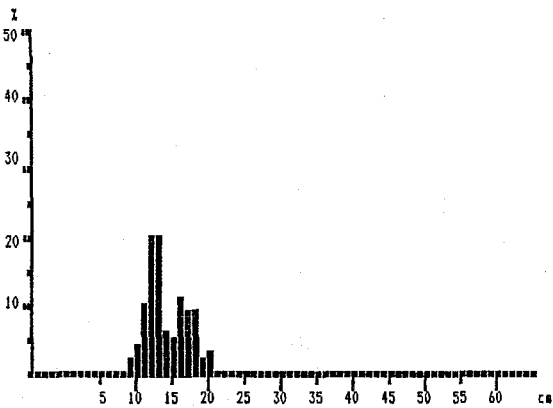
Ilisha africana (pooled data)

Survey II
 MEAN LENGTH = 12,7cm N= 102
 Modes : , 8cm, 11cm, 14cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



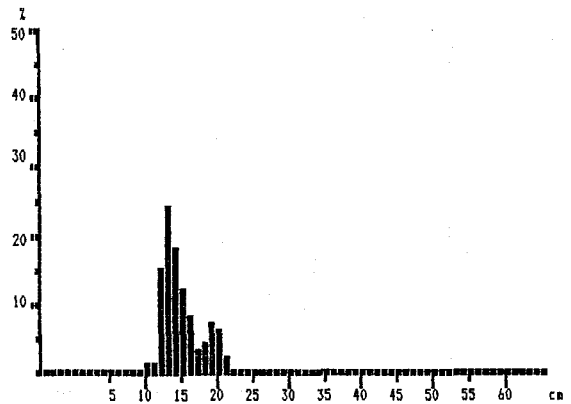
Sardinella aurita (pooled data)

Survey III
 MEAN LENGTH = 13,8cm N= 1054
 Modes : , 10cm, 12cm, 15cm, 19cm
 NUMBER OF SUBSAMPLES : 11
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



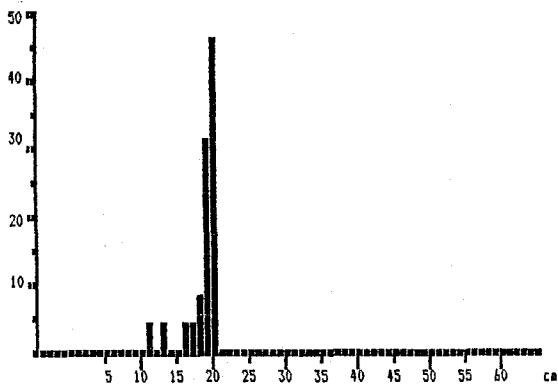
Ilisha africana (pooled data)

Survey III
 MEAN LENGTH = 14,1cm N= 237
 Modes : , 13cm, 16cm, 20cm
 NUMBER OF SUBSAMPLES : 3
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



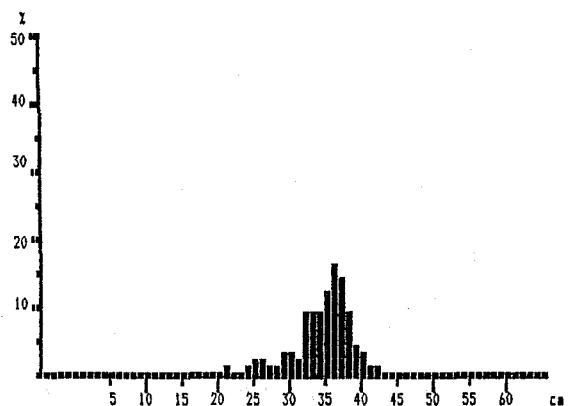
Sardinella aurita (pooled data)

Survey IV
 MEAN LENGTH = 14,7cm N= 731
 Modes : , 13cm, 19cm
 NUMBER OF SUBSAMPLES : 8
 SAMPLES FROM ST.NO.: 178 UNTIL ST.NO.: 210



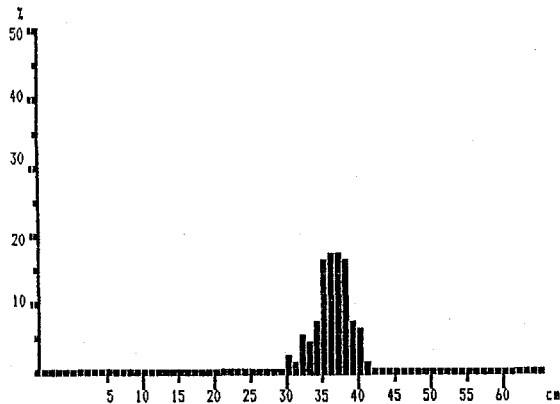
Sardinella aurita (pooled data)

Survey I
 MEAN LENGTH = 18,6cm N= 26
 Modes : , 11cm, 13cm, 20cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



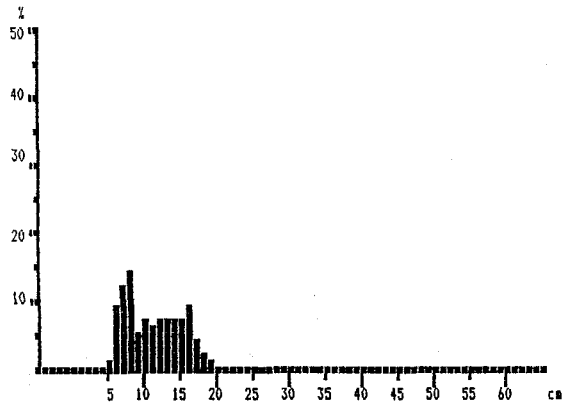
Lutjanus fulgens (pooled data)

Survey I
 MEAN LENGTH = 34,4cm N= 182
 Modes : , 21cm, 26cm, 30cm, 36cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



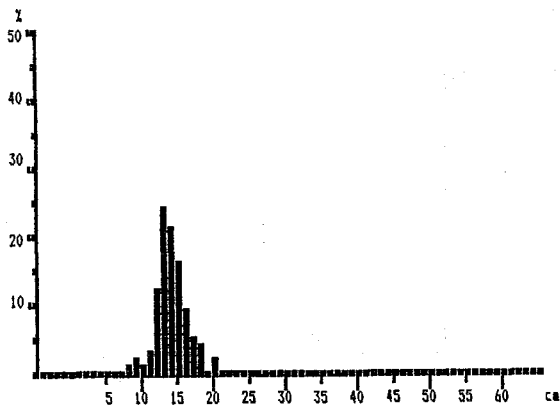
Lutjanus fulgens (pooled data)

Survey III
 MEAN LENGTH = 36,1cm N= 294
 Modes : , 30cm, 32cm, 37cm
 NUMBER OF SUBSAMPLES : 3
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



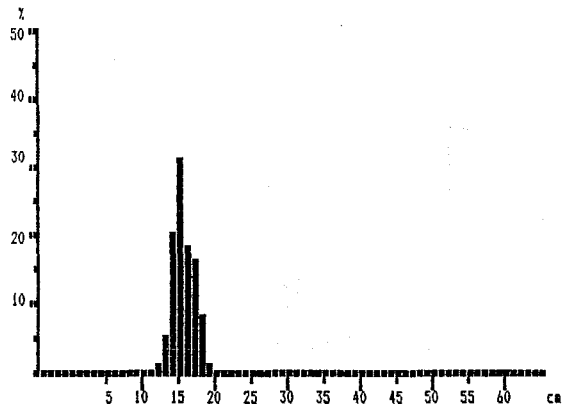
Brachydeuterus auritus (pooled data)

Survey III
 MEAN LENGTH = 11,0cm N= 750
 Modes : , 8cm, 10cm, 16cm
 NUMBER OF SUBSAMPLES : 8
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



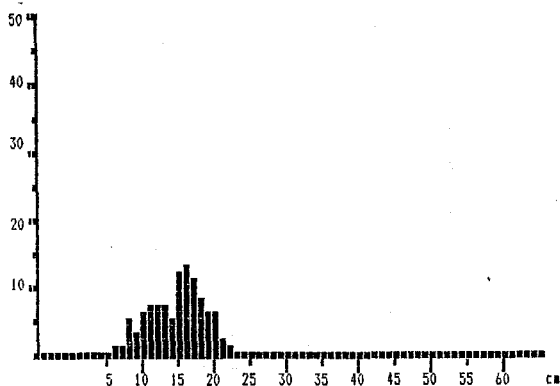
Brachydeuterus auritus (pooled data)

Survey I
 MEAN LENGTH = 14,0cm N= 182
 Modes : , 9cm, 13cm, 20cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



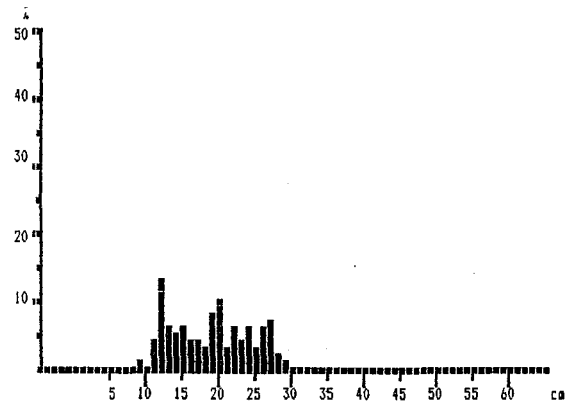
Brachydeuterus auritus (pooled data)

Survey IV
 MEAN LENGTH = 15,4cm N= 100
 Modes : , 15cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 178 UNTIL ST.NO.: 210



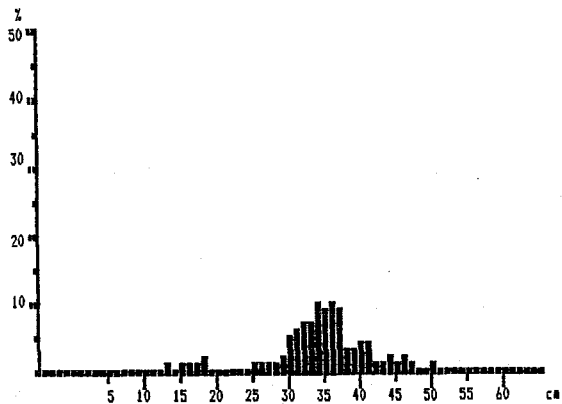
Brachydeuterus auritus (pooled data)

Survey II
 MEAN LENGTH = 14,6cm N= 393
 Modes : , 8cm, 12cm, 16cm
 NUMBER OF SUBSAMPLES : 4
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



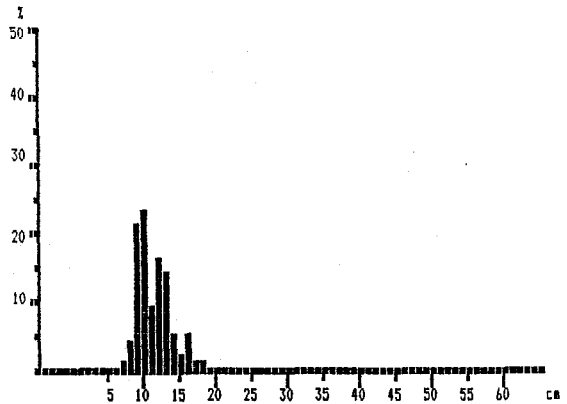
Dentex angolensis (pooled data)

Survey III
 MEAN LENGTH = 18,7cm N= 156
 Modes : , 27cm, 12cm, 15cm, 20cm, 22cm, 24cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



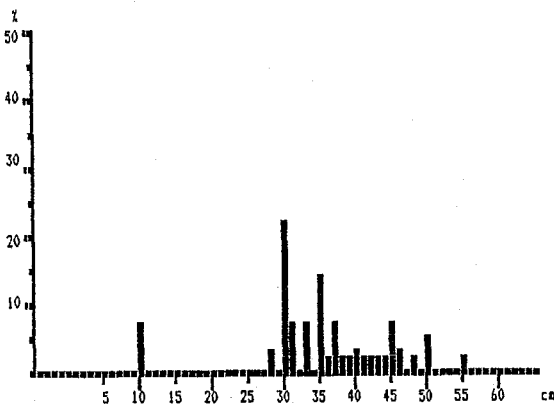
Dentex canariensis (pooled data)

Survey I
 MEAN LENGTH = 33,7cm N= 270
 Modes : , 46cm, 50cm, 34cm, 36cm, 41cm, 44cm
 NUMBER OF SUBSAMPLES : 4
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



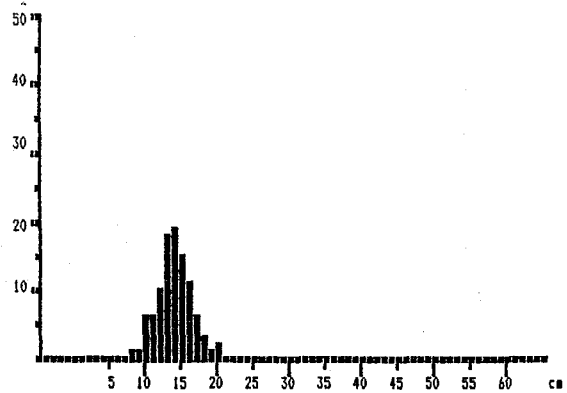
Dentex congoensis (pooled data)

Survey II
 MEAN LENGTH = 11,2cm N= 195
 Modes : , 10cm, 12cm, 16cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



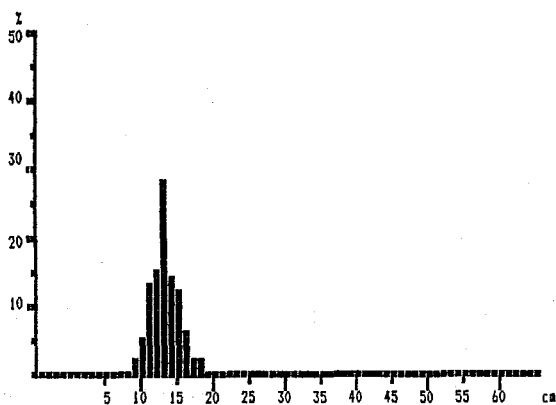
Dentex canariensis (pooled data)

Survey III
 MEAN LENGTH = 34,8cm N= 59
 Modes : , 40cm, 45cm, 48cm, 50cm, 55cm, 37cm
 NUMBER OF SUBSAMPLES : 3
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



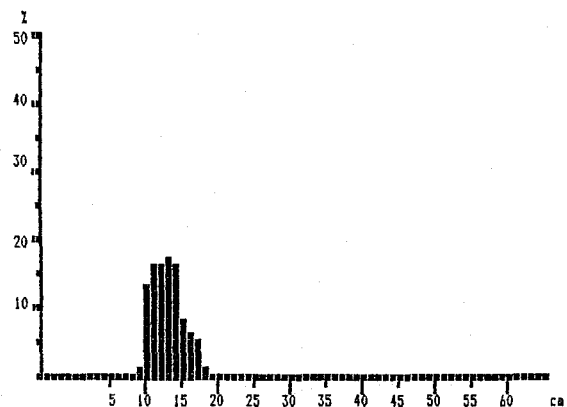
Dentex congoensis (pooled data)

Survey III
 MEAN LENGTH = 14,0cm N= 705
 Modes : , 14cm, 20cm
 NUMBER OF SUBSAMPLES : 8
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



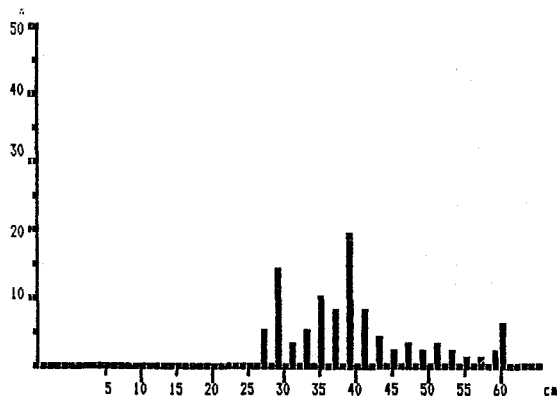
Dentex congoensis (pooled data)

Survey I
 MEAN LENGTH = 13,0cm N= 205
 Modes : , 13cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



Dentex congoensis (pooled data)

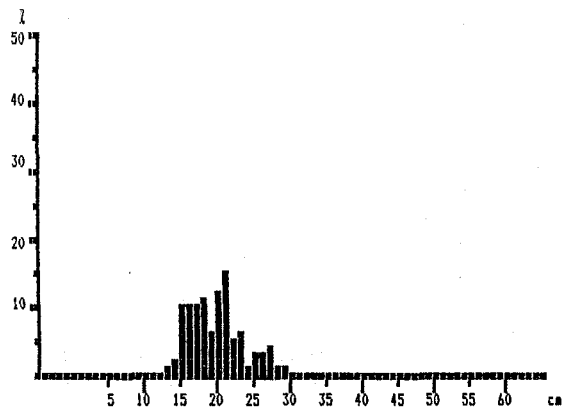
Survey IV
 MEAN LENGTH = 12,8cm N= 165
 Modes : , 13cm
 NUMBER OF SUBSAMPLES : 3
 SAMPLES FROM ST.NO.: 178 UNTIL ST.NO.: 210



Dentex gibbosus (pooled data)

Survey I

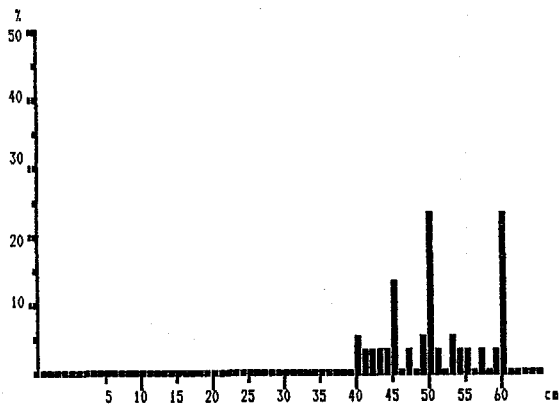
MEAN LENGTH = 39,5cm N= 96
 Modes : , 51cm, 53cm, 55cm, 57cm, 60cm, 49cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



Pagellus bellottii (pooled data)

Survey II

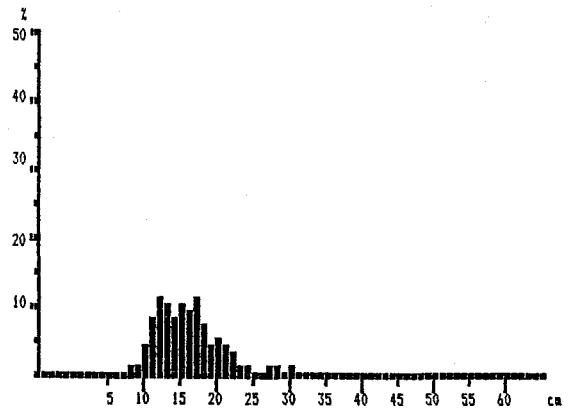
MEAN LENGTH = 19,5cm N= 186
 Modes : , 18cm, 21cm, 23cm, 27cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



Dentex gibbosus (pooled data)

Survey III

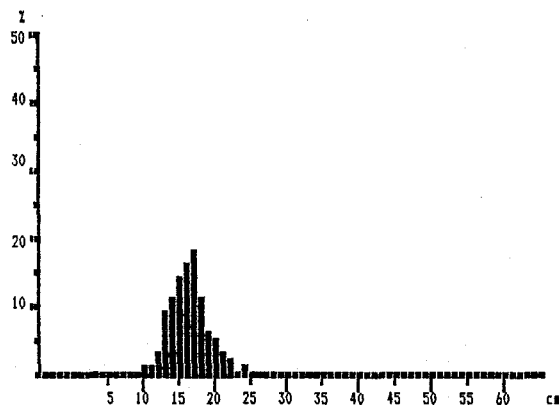
MEAN LENGTH = 51,0cm N= 39
 Modes : , 60cm, 45cm, 47cm, 50cm, 53cm, 57cm
 NUMBER OF SUBSAMPLES : 2
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



Pagellus bellottii (pooled data)

Survey III

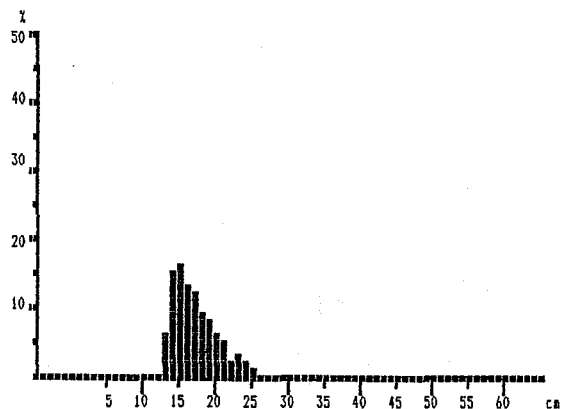
MEAN LENGTH = 15,7cm N= 668
 Modes : , 12cm, 15cm, 17cm, 20cm, 28cm, 30cm
 NUMBER OF SUBSAMPLES : 7
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



Pagellus bellottii (pooled data)

Survey I

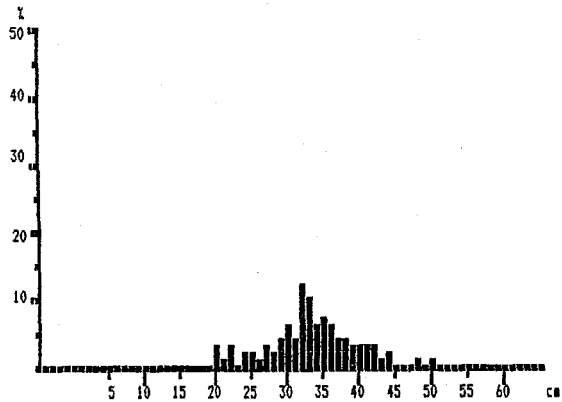
MEAN LENGTH = 16,2cm N= 427
 Modes : , 17cm, 24cm
 NUMBER OF SUBSAMPLES : 4
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



Pagellus bellottii (pooled data)

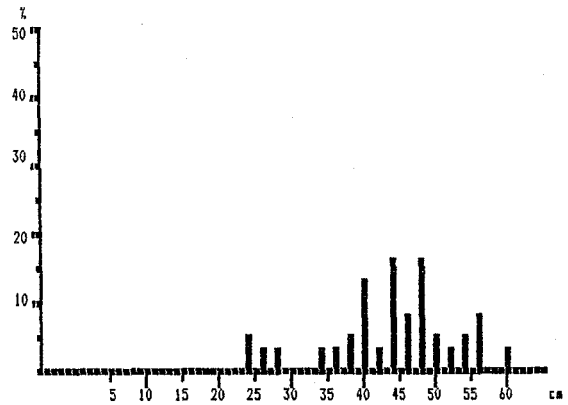
Survey IV

MEAN LENGTH = 17,0cm N= 627
 Modes : , 15cm, 23cm
 NUMBER OF SUBSAMPLES : 7
 SAMPLES FROM ST.NO.: 178 UNTIL ST.NO.: 210



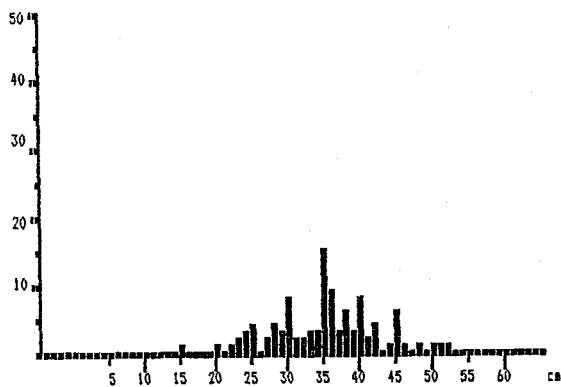
Sparus caeruleostictus (pooled data)

Survey I
 MEAN LENGTH = 33,2cm N= 305
 Modes : , 35cm, 44cm, 48cm, 50cm, 30cm, 32cm
 NUMBER OF SUBSAMPLES : 5
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



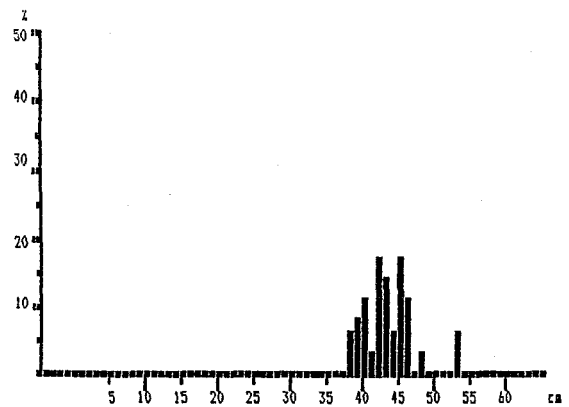
Sphyaena guachancho (pooled data)

Survey I I
 MEAN LENGTH = 43,8cm N= 38
 Modes : , 52cm, 54cm, 56cm, 60cm, 48cm, 50cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 58 UNTIL ST.NO.: 114



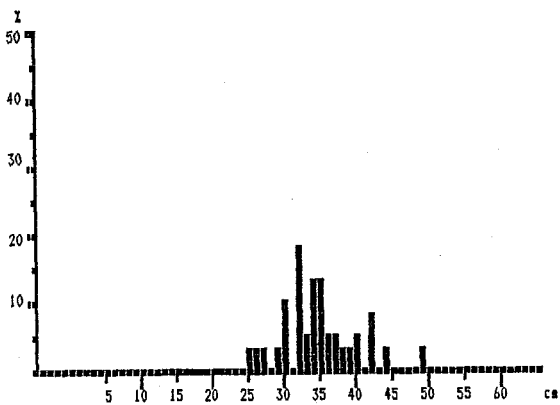
Sparus caeruleostictus (pooled data)

Survey III
 MEAN LENGTH = 34,8cm N= 127
 Modes : , 38cm, 40cm, 42cm, 45cm, 48cm, 51cm
 NUMBER OF SUBSAMPLES : 4
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



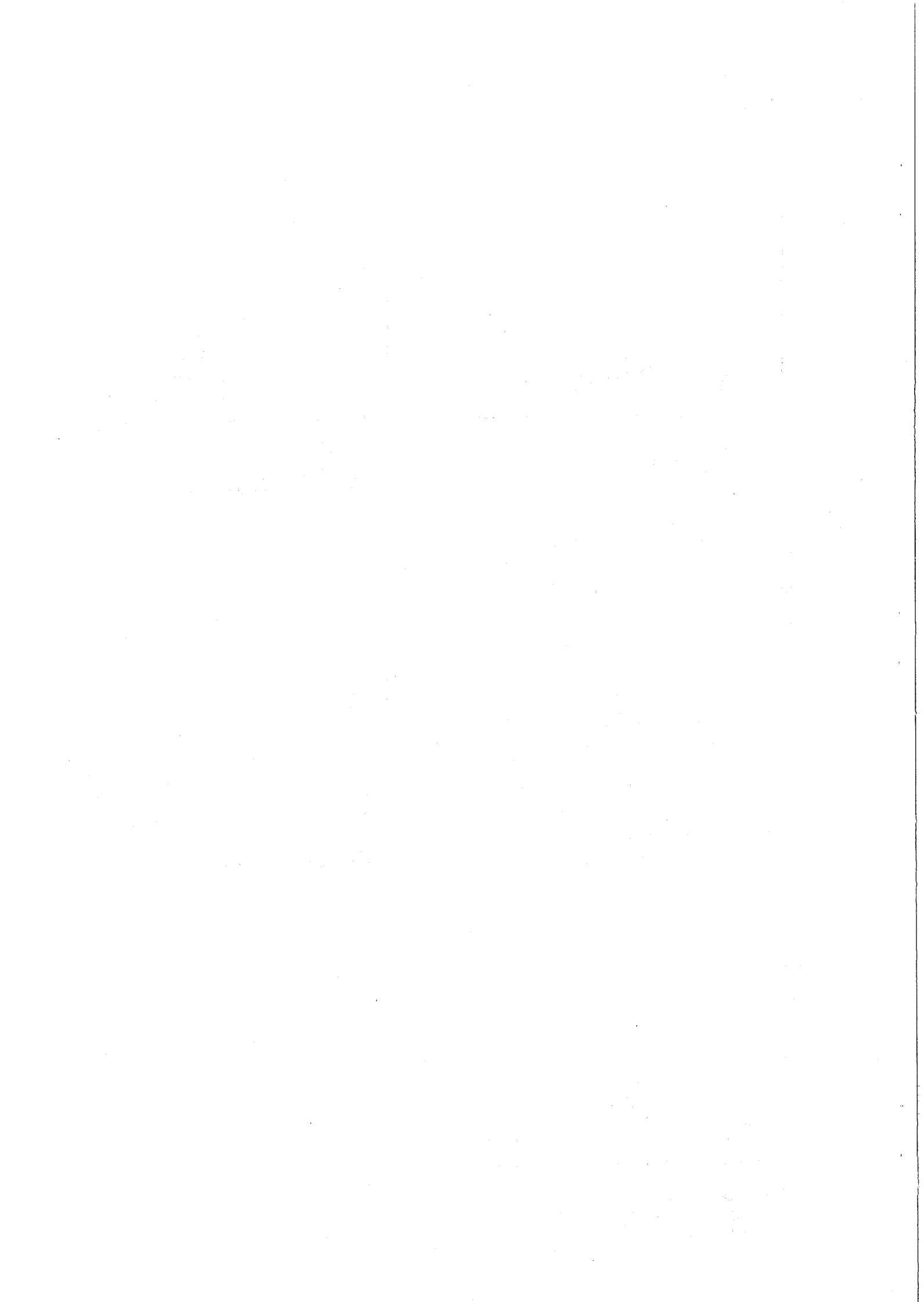
Sphyaena guachancho (pooled data)

Survey III
 MEAN LENGTH = 43,2cm N= 36
 Modes : , 40cm, 42cm, 45cm, 48cm, 53cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 128 UNTIL ST.NO.: 172



Sphyaena guachancho (pooled data)

Survey I
 MEAN LENGTH = 34,6cm N= 40
 Modes : , 44cm, 49cm, 32cm, 35cm, 40cm, 42cm
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FROM ST.NO.: 8 UNTIL ST.NO.: 43



Annex 7. Summary tables of catch compositions by species, surveys, regions and totals for pelagic and bottom hauls separately.

SUMMARY ON CATCHES FROM GABON FIRST SURVEY, SOUTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST. 8 TO ST. 24

Only stations between 10 and 300m bottom depth included

GEAR:DEMERSAL NO OF HAULS: 16 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/m.GROUPS					% incidence in tot. no. of hauls	Mean c.% of c. total >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29 no of hauls in each group	30-99	100-299	300-999	>1000			5 10-30m	5 30-50m	4 50-100m	2 100-300m	
Spicara alta	0	1	0	1	0	13	315.8	15	.0	.0	.0	315.8
Lutjanus fulgens	0	0	1	0	0	6	164.8	4	.0	33.0	.0	.0
Trachurus trecae	3	1	0	1	0	31	112.2	13	.0	.0	111.8	57.0
Aricomma bondi	0	1	2	0	0	19	101.7	7	.0	.0	9.9	132.8
Dentex gibbosus	1	0	1	0	0	13	96.9	4	.0	1.0	47.2	.0
Pomadasy jubelini	0	1	0	0	0	6	96.8	2	19.4	.0	.0	.0
Acanthurus monroviae	0	1	0	0	0	6	96.0	2	.0	19.2	.0	.0
Bcops bcops	2	0	1	0	0	19	84.8	6	.0	.0	1.0	125.2
Dentex canariensis	3	1	2	0	0	38	75.9	10	13.7	41.9	44.4	.0
Sparus caeruleostictus	2	2	1	0	0	31	74.2	9	16.7	39.8	22.1	.0
Lutjanus agennes	0	1	0	0	0	6	65.6	2	.0	13.1	.0	.0
Epinephelus aeneus	4	1	2	0	0	44	52.0	8	6.4	32.5	38.2	8.3
Dentex congoensis	0	2	0	0	0	13	44.4	2	.0	.0	.0	44.4
Sparus auriga	0	1	0	0	0	6	40.0	1	.0	8.0	.0	.0
Pseudupeneus prayensis	0	1	0	0	0	6	30.6	1	6.1	.0	.0	.0
Pomadasy rogeri	1	0	0	0	0	6	24.0	1	4.8	.0	.0	.0
Lutjanus goreensis	1	0	0	0	0	6	23.6	1	4.7	.0	.0	.0
Mustelus mustelus	1	1	0	0	0	13	21.0	1	.0	2.2	.0	15.4
Brachydeuterus auritus	3	0	0	0	0	19	16.7	1	.0	2.8	9.0	.0
Alectis alexandrinus	3	1	0	0	0	25	16.2	2	12.9	.0	.0	.0
Pagellus bellottii	6	2	0	0	0	50	13.1	2	1.5	9.7	12.2	.0
Scomberomorus tritor	2	0	0	0	0	13	12.0	1	4.8	.0	.0	.0
Drepane africana	3	0	0	0	0	19	9.7	1	5.8	.0	.0	.0
Decapterus punctatus	6	0	0	0	0	38	7.6	1	.9	2.0	7.8	.0
Other fish							15.1	5				
MEAN OF TOTAL CATCHES							273.1		109.7	218.8	326.0	707.3

SUMMARY ON CATCHES FROM GABON FIRST SURVEY, NORTH OF C. LOPEZ

PELAGIC TRAWL FROM ST. 25 TO ST. 43

Only stations between 10 and 300m bottom depth included

GEAR:PELAGIC NO OF HAULS: 2 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					no of hauls in each group	% incidence in tot. of of hauls	Mean c.% of of c. total >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				10- 30m	30- 50m	50-100m	100-300m
Balistes capriscus	0	1	1	0	0	100	101.8	87	.0	.0	101.8	.0
Lutjanus agennes	1	0	0	0	0	50	18.8	8	.0	.0	9.4	.0
Saurida brasiliensis	1	0	0	0	0	50	6.0	3	.0	.0	3.0	.0
Arionna bondi	1	0	0	0	0	50	1.6	1	.0	.0	.8	.0
Other fish							2.4	2				
MEAN OF TOTAL CATCHES							117.4		.0	.0	117.4	.0

SUMMARY ON CATCHES FROM GABON FIRST SURVEY, NORTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST. 25 TO ST. 43

Only stations between 10 and 300m bottom depth included

GEAR:DEMERSAL NO OF HAULS: 17 TOTAL FAMILY	% incidence in tot. of hauls					Mean c.% of total catch		MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000			6	3	6	2	
	CATCH DISTRIBUTION BY KG/nm.GROUPS no of hauls in each group							10-30m	30-50m	50-100m	100-300m	
Lutjanus fulgens	1	0	0	1	0	12	317.2	20	.0	209.3	1.1	.0
Lutjanus agennes	1	0	1	0	0	12	132.7	9	.0	88.5	.0	.0
Priacanthus arenatus	1	2	2	0	0	29	79.8	13	.0	12.3	39.5	62.5
Dentex congoensis	4	0	2	0	0	35	64.4	12	.0	6.0	60.6	2.5
Ariomma bondi	2	2	1	0	0	29	53.6	9	.0	.0	9.8	104.7
Spicara alta	1	1	0	0	0	12	44.3	3	.0	.0	.0	44.3
Balistes capriscus	3	0	1	0	0	24	37.2	5	.7	.0	23.4	2.0
Lutjanus goreensis	1	0	0	0	0	6	26.0	1	.0	8.7	.0	.0
Trachurus trecae	3	1	0	0	0	24	24.9	3	.0	.0	15.3	4.0
Dentex canariensis	3	2	0	0	0	29	21.0	3	.0	10.8	12.1	.0
Sparus caeruleostictus	7	2	0	0	0	53	20.9	6	3.3	52.9	1.7	.0
Epinephelus aeneus	7	1	0	0	0	47	18.2	5	1.3	16.6	14.6	.0
Alectis alexandrinus	4	1	0	0	0	29	16.2	3	13.5	.0	.0	.0
Dentex angolensis	5	0	0	0	0	29	10.5	2	.0	1.3	2.9	15.5
Ephippion guttifer	2	0	0	0	0	12	8.3	1	2.8	.0	.0	.0
Pagellus bellottii	8	0	0	0	0	47	6.8	2	3.5	5.7	2.6	.0
Decapterus punctatus	3	0	0	0	0	18	6.6	1	.2	.9	2.7	.0
Selene dorsalis	3	0	0	0	0	18	5.3	1	1.2	3.0	.0	.0
Sphyræna guachancho	3	0	0	0	0	18	4.7	1	2.1	.5	.0	.0
Illex coindetii	4	0	0	0	0	24	4.6	1	.0	.0	1.1	5.9
Other fish							5.4	2				
MEAN OF TOTAL CATCHES							183.5		33.8	421.9	192.6	248.1

SUMMARY ON CATCHES FROM GABON SECOND SURVEY, SOUTH OF C. LOPEZ

PELAGIC TRAWL FROM ST. 58 TO ST. 95

Only stations between 10 and 300m bottom depth included

FAMILY	CATCH DISTRIBUTION BY KG/m.GROUPS					no of hauls	Mean c.% of total catch	% incidence in tot. no. of hauls	MEAN CATCH IN BOTTOM DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				5-10m	20-30m	40-50m	2
Balistes capriscus	0	0	0	0	1	8	2400.0	59	.0	.0	.0	1200.0
Chloroscombrus chrysurus	0	0	0	1	0	8	352.8	9	70.6	.0	.0	.0
Mobula sp	0	0	1	0	0	8	120.0	3	24.0	.0	.0	.0
Decapterus rhonchus	1	0	1	0	0	15	101.0	5	2.0	.0	48.0	.0
Sphyraena quachancho	2	4	0	0	0	46	49.1	7	58.0	2.3	.0	.0
Ilisha africana	2	1	0	0	0	23	38.0	3	22.8	.0	.0	.0
Myctophum sp	0	1	0	0	0	8	36.0	1	.0	.0	.0	18.0
Brachygeuterus auritus	2	3	0	0	0	39	36.0	5	35.4	1.5	.0	.0
Decapterus sp	3	1	0	0	0	31	27.4	3	2.2	2.7	23.3	.0
Sardinella aurita	1	2	0	0	0	23	25.5	2	15.3	.0	.0	.0
Lutjanus agennes	1	0	0	0	0	8	24.6	1	4.9	.0	.0	.0
Scomberomorus tritor	2	0	0	0	0	15	16.1	1	5.6	2.1	.0	.0
Stromateus fiatola	2	1	0	0	0	23	12.4	1	7.0	1.0	.0	.0
Other fish							4.9	1				
MEAN OF TOTAL CATCHES							311.0		255.5	11.1	76.5	1218.7

SUMMARY ON CATCHES FROM GABON SECOND SURVEY, SOUTH OF C. LOPEZ
 DEMERSAL TRAWL FROM ST. 58 TO ST. 95

Only stations between 10 and 300m bottom depth included

% incidence Mean c.% of
 in tot. no. of c. total
 of hauls >1kg catch

MEAN CATCH IN BOTTOM DEPTH STRATA
 10- 30m 30- 50m 50-100m 100-300m

GEAR:DEMERSAL
 NO OF HAULS: 25 TOTAL
 FAMILY

CATCH DISTRIBUTION BY KG/mm.GROUPS
 0-29 30-99 100-299 300-999 >1000
 no. of hauls in each group

FAMILY	CATCH DISTRIBUTION BY KG/mm.GROUPS					no. of hauls in each group	10- 30m	30- 50m	50-100m	100-300m	%		
	0-29	30-99	100-299	300-999	>1000								
Priacanthus arenatus	2	0	0	0	0	1	12	1009.7	23	.0	.0	252.4	.0
Brachydeuterus auritus	7	1	0	0	0	1	36	656.2	46	2.5	7.9	488.5	.0
Boops boops	1	0	1	0	0	0	8	141.9	2	.0	.0	23.6	.0
Mobula diabolus	0	0	1	0	0	0	4	140.0	1	28.0	.0	.0	.0
Trachurus trecae	4	1	0	1	0	0	24	105.3	5	.0	.0	52.7	.0
Gymnura sp	0	1	0	0	0	0	4	80.0	1	.0	.0	6.7	.0
Pseudotolithus typus	0	1	0	0	0	0	4	73.8	1	14.8	.0	.0	.0
Seriola carpenteri	1	1	0	0	0	0	8	46.0	1	.0	.0	7.7	.0
Dentex gibbosus	5	3	0	0	0	0	32	35.1	2	.0	.0	19.8	10.8
Epinephelus aeneus	4	3	0	0	0	0	26	34.1	2	.0	.6	17.8	5.5
Spicara alta	1	1	0	0	0	0	8	33.2	1	.0	.0	.0	16.6
Sphyraena guachancho	5	0	1	0	0	0	24	28.9	1	29.2	5.2	.6	.0
Sparus caeruleostictus	7	4	0	0	0	0	44	26.4	2	32.3	5.5	8.9	.0
Selene dorsalis	5	2	0	0	0	0	28	25.6	1	12.0	2.8	9.0	.0
Lutjanus fulgens	2	1	0	0	0	0	12	25.6	1	10.2	.0	2.1	.0
Pagellus bellottii	10	2	1	0	0	0	52	24.3	2	.9	3.4	24.8	.0
Sparus pagrus africanus	4	1	0	0	0	0	20	19.4	1	.0	.0	7.1	3.0
Dentex canariensis	5	2	0	0	0	0	28	18.1	1	3.1	.9	7.8	3.4
Decapterus rhonchus	5	1	0	0	0	0	24	17.3	1	10.1	.0	4.4	.0
Decapterus sp	7	1	0	0	0	0	32	11.3	1	.0	.7	7.2	.3
Other fish								28.5	5				
MEAN OF TOTAL CATCHES								519.4		195.0	61.5	959.3	63.2

SUMMARY ON CATCHES FROM GABON SECOND SURVEY, NORTH OF C. LOPEZ

PELAGIC TRAWL FROM ST. 96 TO ST.114

Only stations between 10 and 300m bottom depth included

GEAR:PELAGIC NO OF HAULS: 5 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/m.GROUPS					no of hauls in each group	% incidence in tot. no. of hauls	Mean c.% of c. total >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				10- 30m	30- 50m	50-100m	100-300m
Balistes caprisus	0	0	0	1	0	20	493.4	72	.0	.0	164.5	.0
Dactylopterus volitans	0	1	0	0	0	20	62.0	9	.0	.0	20.7	.0
Decapterus sp	1	0	0	0	0	20	26.6	4	.0	.0	8.9	.0
Arionma bondi	1	0	0	0	0	20	17.8	3	.0	.0	5.9	.0
Brachydeuterus auritus	1	0	0	0	0	20	17.7	3	17.7	.0	.0	.0
Rachycentron canadus	1	0	0	0	0	20	17.0	3	17.0	.0	.0	.0
Sphyraena guachancho	1	0	0	0	0	20	16.1	2	16.1	.0	.0	.0
Saurida brasiliensis	1	0	0	0	0	20	14.5	2	14.5	.0	.0	.0
MISCELLANEOUS	1	0	0	0	0	20	9.3	1	.0	.0	3.1	.0
Sardinella maderensis	1	0	0	0	0	20	5.8	1	6.6	.0	.0	.0
Decapterus punctatus	1	0	0	0	0	20	4.8	1	4.8	.0	.0	.0
Other fish							.6	0				
MEAN OF TOTAL CATCHES							137.8		78.2	.0	203.5	.3

SUMMARY ON CATCHES FROM GABON SECOND SURVEY, NORTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST. 96 TO ST.114

Only stations between 10 and 300m bottom depth included

GEAR:DEMERSAL NO OF HAULS: 14 TOTAL FAMILY	CATCH DISTRIEUTION BY KG/mm.GROUPS					% incidence in tot. no. of of hauls	Mean c.% of >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000			6	2	5	1	
	no of hauls in each group							10- 30m	30- 50m	50-100m	100-300m	
Arionma bondi	1	1	2	0	0	29	117.6	21	.0	3.0	84.9	40.0
Dentex congoensis	3	1	2	0	0	43	84.4	22	.0	1.6	100.1	2.8
Priacanthus arenatus	5	0	2	0	0	50	65.6	20	.2	11.0	82.8	22.0
Pagellus bellottii	6	1	2	0	0	64	40.1	16	24.9	80.4	9.9	1.2
Torpedo marmorata	0	1	0	0	0	7	30.0	1	.0	.0	6.0	.0
Alectis alexandrinus	4	0	0	0	0	29	14.4	3	9.6	.0	.0	.0
SEPIIDAE	1	0	0	0	0	7	14.0	1	2.3	.0	.0	.0
Dentex angolensis	4	1	0	0	0	36	13.1	3	.0	1.0	7.7	25.2
Epinephelus aereus	4	1	0	0	0	36	12.0	3	3.0	.7	8.2	.0
Spicara alta	1	0	0	0	0	7	10.6	1	.0	.0	.0	10.6
Ephippion guttifer	2	0	0	0	0	14	10.0	1	3.3	.0	.0	.0
Dentex canariensis	2	0	0	0	0	14	9.8	1	.0	.0	3.9	.0
Trachurus trecae	4	0	0	0	0	29	7.6	1	.0	.6	5.9	.0
Sparus caeruleostictus	8	0	0	0	0	57	6.1	2	3.4	5.4	3.5	.0
Lagocephalus laevigatus	5	0	0	0	0	36	4.9	1	.5	.0	4.3	.0
Balistes caprisicus	5	0	0	0	0	36	2.3	1	1.2	1.4	.0	1.2
Other fish							7.6	4				
MEAN OF TOTAL CATCHES							164.0		52.6	115.9	325.5	121.0

SUMMARY ON CATCHES FROM GABON THIRD SURVEY, SOUTH OF C. LOPEZ

PELAGIC TRAWL FROM ST.128 TO ST.160

Only stations between 10 and 300m bottom depth included

GEAR:PELAGIC NO OF HAULS: 9 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/dm.GROUPS					% incidence in tot. no. of hauls	Mean c.% of c. total >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000			2	0	5	2	
	no of hauls in each group							10-30m	30-50m	50-100m	100-300m	
Brachydeuterus auritus	0	0	1	0	0	11	230.0	21	115.0	.0	.0	.0
Trachurus trecae	2	2	2	0	0	67	88.4	49	7.2	.0	103.2	.0
Saurida brasiliensis	4	1	0	0	0	56	22.9	11	.0	.0	22.9	.0
Sardinella aurita	3	1	0	0	0	44	19.9	7	7.8	.0	12.8	.0
Ariomma bondi	1	0	0	0	0	11	16.4	2	.0	.0	3.3	.0
Engraulis encrasicolus	2	1	0	0	0	33	16.4	5	3.6	.0	8.4	.0
Trichiurus lepturus	2	1	0	0	0	33	12.2	3	.0	.0	7.3	.0
Chloroscombrus chrysurus	1	0	0	0	0	11	10.0	1	5.0	.0	.0	.0
Decapterus punctatus	1	0	0	0	0	11	9.4	1	.0	.0	1.9	.0
Sphyræna guachancho	2	0	0	0	0	22	4.4	1	4.4	.0	.0	.0
Sardinella maderensis	2	0	0	0	0	22	2.6	1	2.6	.0	.0	.0
Other fish							.4	0				
MEAN OF TOTAL CATCHES							121.5		149.7	.0	158.8	.0

SUMMARY ON CATCHES FROM GABON THIRD SURVEY, SOUTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST.128 TO ST.160

Only stations between 10 and 300m bottom depth included

FAMILY	CATCH DISTRIBUTION BY KG/m.GROUPS					no of hauls in each group	%	Mean c.% of in tot. no. of c. total of hauls >1kg catch	MEAN CATCH IN BOTTL. DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				5	6	8	5
	10-30m	30-50m	50-100m	100-300m								
Sardinella aurita	2	1	3	0	1	29	504.2	20	.0	2.9	439.0	.0
Engraulis encrasicolus	0	1	1	1	0	13	292.9	5	.0	.0	109.9	.0
Spicara alta	1	0	1	1	0	13	251.7	4	.0	.0	.0	151.0
Chloroscombrus chrysurus	2	1	0	2	0	21	225.5	7	224.7	.7	.0	.0
Ariomma bondi	1	3	0	2	0	25	189.9	7	.0	.0	12.1	208.5
Brachydeuterus auritus	3	0	3	1	0	29	185.7	8	64.6	3.2	119.8	.0
Argyrosomus regius	0	0	1	0	0	4	163.6	1	.0	.0	20.5	.0
Pagellus bellottii	8	2	1	3	0	58	117.2	9	.9	27.9	182.6	1.6
Ilisha africana	1	0	1	0	0	8	112.4	1	45.0	.0	.0	.0
Plectorhynchus mediterraneus	0	0	1	0	0	4	110.4	1	.0	18.4	.0	.0
Lutjanus fulgens	2	0	3	0	0	21	108.9	3	4.4	61.9	18.9	.0
Trachurus trecae	8	2	2	1	0	54	84.7	6	4.0	.6	129.6	8.2
Pomadasys jubelini	1	1	1	0	0	13	78.5	1	47.1	.0	.0	.0
R A Y S	0	1	1	0	0	6	78.0	1	7.2	.0	15.0	.0
Sparus pagrus africanus	0	2	0	0	0	8	77.9	1	.0	.0	7.1	19.7
Sphyræna guachancho	3	2	1	0	0	25	56.4	2	19.5	40.2	.0	.0
Priacanthus arenatus	3	3	1	0	0	29	55.5	2	.0	.0	43.9	7.6
Dentex canariensis	3	3	1	0	0	29	45.0	2	13.1	27.7	8.6	3.0
Alectis alexandrinus	4	0	1	0	0	21	41.9	1	5.6	3.7	20.0	.0
Dentex gibbosus	3	1	1	0	0	21	39.6	1	.0	.0	14.0	17.2
Dentex congoensis	4	4	0	0	0	33	37.5	2	.0	.0	10.7	42.8
Dentex angolensis	4	0	1	0	0	21	37.1	1	.0	.0	16.8	10.2
Galeoides decadactylus	2	2	0	0	0	17	35.1	1	28.0	.0	.0	.0
Sparus caeruleostictus	9	5	0	0	0	58	29.2	2	27.3	26.6	10.0	6.6
Scomberomorus tritor	2	1	0	0	0	13	28.8	1	17.3	.0	.0	.0
Epinephelus aeneus	4	1	0	0	0	21	25.8	1	2.2	14.8	3.7	.0
Apsilus fuscus	3	1	0	0	0	17	25.2	1	.0	13.0	2.8	.0
Decapterus punctatus	7	1	0	0	0	33	20.3	1	.4	2.6	18.0	.0
Decapterus rhonchus	4	1	0	0	0	21	18.3	1	.4	.6	10.7	.0
Other fish							54.8	7				
MEAN OF TOTAL CATCHES							726.4		604.7	298.7	1266.8	496.5

SUMMARY ON CATCHES FROM GABON THIRD SURVEY, NORTH OF C. LOPEZ

PELAGIC TRAWL FROM ST.161 TO ST.172

Only stations between 10 and 300m bottom depth included

GEAR:PELAGIC NO OF HAULS: 2 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					%	Mean c.% of in tot. no. of c. total of hauls >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000			10-30m	30-50m	50-100m	100-300m	
	no of hauls in each group											
Rachycentron canadus	1	0	0	0	0	50	10.0	34	5.0	.0	.0	.0
Carcharhinus sp.	1	0	0	0	0	50	4.8	16	2.4	.0	.0	.0
Scomberomorus tritor	1	0	0	0	0	50	4.2	14	2.1	.0	.0	.0
Ilisha africana	1	0	0	0	0	50	3.4	12	1.7	.0	.0	.0
Sphyræna guachancho	1	0	0	0	0	50	2.4	8	1.2	.0	.0	.0
Sardinella maderensis	1	0	0	0	0	50	1.6	5	.8	.0	.0	.0
Selene dorsalis	1	0	0	0	0	50	1.4	5	.7	.0	.0	.0
Other fish							.9	6				
MEAN OF TOTAL CATCHES							14.8		14.8	.0	.0	.0

SUMMARY ON CATCHES FROM GABON THIRD SURVEY, NORTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST.161 TO ST.172

Only stations between 10 and 300m bottom depth included

GEAR:DEMERSAL NO OF HAULS: 10 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					no of hauls	Mean c.% of >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000				2	1	4	3
									10- 30m	30- 50m	50-100m	100-300m
Dentex congoensis	3	0	2	0	0	50	78.8	22	1.0	.0	27.0	94.5
Arionna bondi	2	1	1	0	0	40	66.1	14	.0	.0	53.8	16.3
Trachurus trecae	2	0	1	0	0	30	57.9	10	.0	1.8	.5	56.7
Decapterus punctatus	1	1	1	0	0	30	54.1	9	.0	1.4	9.8	40.7
Lutjanus agennes	0	1	0	0	0	10	53.0	3	26.5	.0	.0	.0
Lethrimus atlanticus	0	1	0	0	0	10	50.0	3	25.0	.0	.0	.0
Lutjanus fulgens	1	1	0	0	0	20	35.1	4	34.0	.0	.5	.0
Galeoïces decadactylus	0	1	0	0	0	10	30.4	2	15.2	.0	.0	.0
Chaetodipterus goreensis	1	1	0	0	0	20	27.6	3	27.6	.0	.0	.0
Brachydeuterus auritus	1	0	0	0	0	10	26.0	1	13.0	.0	.0	.0
GMMASTREPHIDAE	1	0	0	0	0	10	21.2	1	.0	.0	5.3	.0
Pagellus bellottii	3	1	0	0	0	40	17.5	4	1.2	.0	16.9	.0
Umbrina steindachneri	1	0	0	0	0	10	17.0	1	8.5	.0	.0	.0
Epinephelus aeneus	4	1	0	0	0	50	15.5	4	4.1	.0	17.3	.0
Caranx latus	1	0	0	0	0	10	14.8	1	7.4	.0	.0	.0
Chloroscombrus chrysurus	1	0	0	0	0	10	14.8	1	7.4	.0	.0	.0
Sparus caeruleostictus	5	0	0	0	0	50	14.8	4	16.9	.0	10.1	.0
Illex coindetii	3	0	0	0	0	30	14.6	2	.0	.0	.4	14.1
Sphyraena guachancho	1	0	0	0	0	10	12.6	1	6.3	.0	.0	.0
Caranx crysos	2	0	0	0	0	20	11.0	1	9.0	4.0	.0	.0
Acanthurus monroviae	1	0	0	0	0	10	10.6	1	5.3	.0	.0	.0
Dentex canariensis	4	0	0	0	0	40	7.1	2	2.5	.0	5.9	.0
Alectis alexandrimus	3	0	0	0	0	30	4.1	1	1.6	5.8	.0	1.1
Dentex angolensis	4	0	0	0	0	40	4.0	1	.0	.0	2.1	2.5
Priacanthus arenatus	7	0	0	0	0	70	3.3	1	1.2	.0	4.1	1.4
Other fish							9.6	5				
MEAN OF TOTAL CATCHES							183.3		236.3	15.6	163.9	229.8

SUMMARY ON CATCHES FROM GABON FOURTH SURVEY, SOUTH OF C. LOPEZ

PELAGIC TRAWL FROM ST.178 TO ST.201

Only stations between 10 and 300m bottom depth included

GEAR:PELAGIC NO OF HAULS: 4 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					no of hauls in each group	%	Mean c.% of in tot. no. of c. total of hauls >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				0	0	4	0
									10- 30m	30- 50m	50-100m	100-300m
Trachurus trecae	0	1	1	0	0	50	109.8	39	.0	.0	54.9	.0
Sardinella aurita	2	1	1	0	0	100	55.9	40	.0	.0	55.9	.0
Decapterus punctatus	2	1	0	0	0	75	28.7	15	.0	.0	21.5	.0
Echeneis naucrates	1	0	0	0	0	25	18.0	3	.0	.0	4.5	.0
Ariomma bondi	1	0	0	0	0	25	4.8	1	.0	.0	1.2	.0
Engraulis encrasicolus	2	0	0	0	0	50	3.0	1	.0	.0	1.5	.0
Saurida brasiliensis	2	0	0	0	0	50	2.8	1	.0	.0	1.4	.0
Other fish							.7	0				
MEAN OF TOTAL CATCHES							141.6		.0	.0	141.6	.0

SUMMARY ON CATCHES FROM GABON FOURTH SURVEY, SOUTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST.178 TO ST.201

Only stations between 10 and 300m bottom depth included

GEAR:DEMERSAL NO OF HAULS: 20 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					%	Mean c.% of in tot. no. of c. total of hauls >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA					
	0-29	30-99	100-299	300-999	>1000			4	7	7	2		
	no of hauls in each group							10- 30m	30- 50m	50-100m	100-300m		
Acanthurus monroviae	0	0	0	1	0	5	720.0	6	.0	102.9	.0	.0	
Apsilus fuscus	0	0	0	1	0	5	510.0	4	.0	72.9	.0	.0	
Lutjanus fulgens	0	1	0	1	0	10	466.5	8	.0	128.6	4.7	.0	
Engraulis encrasicolus	1	0	1	1	0	15	341.7	9	.0	.0	145.1	4.5	
Sardinella aurita	5	0	0	2	1	40	340.6	23	.4	46.3	338.8	13.7	
Plectorhynchus mediterraneus	1	0	0	1	0	10	212.4	4	.0	60.0	.7	.0	
Pagellus natalensis	0	0	1	0	0	5	200.2	2	.0	.0	28.6	.0	
Umbrina canariensis	1	0	1	0	0	10	127.1	2	.0	.0	36.3	.0	
Dentex barnardi	0	0	1	0	0	5	120.0	1	.0	17.1	.0	.0	
Sparus caeruleostictus	5	1	1	1	0	40	113.0	8	24.5	93.1	22.0	.0	
Dentex canariensis	4	1	0	1	0	30	95.6	5	.7	71.9	3.5	21.1	
Trachurus trecae	1	3	3	0	0	35	83.0	5	.0	16.8	59.0	25.0	
Sepia sp	3	2	0	1	0	30	74.4	4	1.1	62.7	.0	1.5	
Sepia officinalis hierreda	1	0	1	0	0	10	68.3	1	.0	17.7	1.8	.0	
Brachydeuterus auritus	2	0	1	0	0	15	65.9	2	.3	.1	27.9	.0	
Seriola dumerilii	0	1	0	0	0	5	64.0	1	.0	9.1	.0	.0	
Saurida brasiliensis	1	2	1	0	0	20	58.9	2	.0	.7	16.0	59.2	
Lutjanus agennes	1	2	0	0	0	15	50.0	1	3.0	6.9	12.9	.0	
Epinephelus aeneus	5	4	1	0	0	50	42.3	4	4.0	19.1	35.7	11.8	
Pagellus bellottii	8	5	1	0	0	70	40.5	5	73.0	26.9	11.7	2.7	
Dentex gilbosus	2	3	0	0	0	25	37.6	2	.0	5.9	20.3	2.1	
Dentex angolensis	1	1	0	0	0	10	29.8	1	.0	.0	6.5	7.0	
Dentex congoensis	5	2	0	0	0	35	17.0	1	.0	1.3	13.4	7.8	
Decapterus punctatus	5	1	0	0	0	30	13.7	1	.0	1.9	9.9	.0	
Other fish							21.4	3					
MEAN OF TOTAL CATCHES							603.4			133.9	780.0	820.3	164.9

SUMMARY ON CATCHES FROM GABON FOURTH SURVEY, NORTH OF C. LOPEZ

DEMERSAL TRAWL FROM ST.202 TO ST.210

Only stations between 10 and 300m bottom depth included

GEAR:DEMERSAL NO OF HAULS: 7 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					%	Mean c.% of in tot. no. of c. total of hauls >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000			0	3	4	0	
	no of hauls in each group							10- 30m	30- 50m	50-100m	100-300m	
Decapterus punctatus	2	0	0	1	0	43	231.5	53	.0	1.5	172.5	.0
Ariomma bondi	2	0	1	0	0	43	52.5	12	.0	.0	39.4	.0
Trachurus trecae	2	0	1	0	0	43	38.7	9	.0	.0	29.1	.0
Dentex congoensis	4	1	1	0	0	86	29.7	14	.0	2.4	42.8	.0
Epinephelus aeneus	1	0	0	0	0	14	29.2	2	.0	.0	7.3	.0
Sepia sp	2	0	0	0	0	29	12.3	2	.0	8.2	.0	.0
Dentex canariensis	1	0	0	0	0	14	12.0	1	.0	.0	3.0	.0
Pagellus bellottii	3	0	0	0	0	43	8.1	2	.0	1.9	4.7	.0
Sparus caeruleostictus	4	0	0	0	0	57	7.6	2	.0	6.7	2.7	.0
Dentex angolensis	3	0	0	0	0	43	5.8	1	.0	.0	4.3	.0
Priacanthus arenatus	3	0	0	0	0	43	2.8	1	.0	.0	2.1	.0
Other fish							3.8	1				
MEAN OF TOTAL CATCHES							188.5		.0	23.3	312.3	.0

SUMMARY ON CATCHES FROM GABON SOUTH OF C. LOPEZ, ALL SURVEYS

PELAGIC TRAWL FROM ST. 1 TO ST.210

Only stations between 10 and 300m bottom depth included
 THE ANALYSIS IS RESTRICTED TO THE FOLLOWING GEOGRAPHICAL LIMITS:
 LATITUDES:(+=NORTH, -=SOUTH) NORTHERN: -40 SCUTHERN: -405
 LONGITUDES:(+=EAST, -=WEST) WESTERN: 800 EASTERN: 1200

FAMILY	CATCH DISTRIBUTION BY KG/nm.GROUPS					no of hauls in each group	%	c. % of total	MEAN CATCH IN BOTTOM DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				7	2	13	4
									10- 30m	30- 50m	50-100m	100-300m
Balistes capriscus	0	0	0	0	1	4	2400.0	42	.0	.0	.0	600.0
Chloroscombrus chrysurus	1	0	0	1	0	8	181.4	6	51.8	.0	.0	.0
Mokula sp	0	0	1	0	0	4	120.0	2	17.1	.0	.0	.0
Decapterus rhonchus	1	0	1	0	0	8	101.0	4	1.4	.0	14.8	.0
Trachurus trecae	3	3	3	0	0	35	83.5	13	2.1	.0	56.7	.0
Brachydeuterus auritus	2	3	1	0	0	23	68.3	7	58.1	1.5	.0	.0
Ilisha africana	2	1	0	0	0	12	38.0	2	16.3	.0	.0	.0
Sphyaena guachancho	4	4	0	0	0	31	37.9	5	42.7	2.3	.0	.0
Myctophum sp	0	1	0	0	0	4	36.0	1	.0	.0	.0	9.0
Sardinella aurita	6	4	1	0	0	42	34.5	7	13.1	.0	22.1	.0
Decapterus sp	3	1	0	0	0	15	27.4	2	1.6	2.7	7.2	.0
Decapterus punctatus	3	1	0	0	0	15	23.8	2	.0	.0	7.3	.0
Saurida brasiliensis	8	1	0	0	0	35	14.0	2	.7	.0	9.4	.0
Stromateus fiatola	2	1	0	0	0	12	12.4	1	5.0	1.0	.0	.0
Scomberomorus tritor	3	0	0	0	0	12	12.3	1	4.7	2.1	.0	.0
Engraulis encrasicolus	5	1	0	0	0	23	9.7	1	1.5	.0	3.7	.0
Trichiurus lepturus	4	1	0	0	0	19	8.3	1	.7	.0	2.8	.0
Other fish							4.6	2				
MEAN OF TOTAL CATCHES							219.3		225.3	11.1	128.2	609.3

SUMMARY ON CATCHES FROM GABON SOUTH OF C. LOPEZ, ALL SURVEYS

DEMERSAL TRAWL FROM ST. 1 TO ST.210

Only stations between 10 and 300m bottom depth included
 THE ANALYSIS IS RESTRICTED TO THE FOLLOWING GEOGRAPHICAL LIMITS:
 LATITUDES:(+=NORTH, -=SOUTH) NORTHERN: -40 SOUTHERN: -405
 LONGITUDES:(+=EAST, -=WEST) WESTERN: 800 EASTERN: 1200

GEAR:DEMERSAL NO OF HAULS: 85 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/m.GROUPS					no of hauls in each group	MEAN CATCH IN BOTTOM DEPTH STRATA	% incidence in tot. of hauls	Mean c.% of c. total >1kg catch	19	22	31	13
	0-29	30-99	100-299	300-999	>1000					10-30m	30-50m	50-100m	100-300m
	<i>Sardinella aurita</i>	10	1	3	2					2	21	348.6	13	.1	15.5	190.5	2.1
<i>Brachydeuterus auritus</i>	15	1	4	1	1	26	338.8	16	17.7	3.0	227.5	.0	
<i>Engraulis encrasicolus</i>	1	1	2	2	0	7	317.3	4	.0	.0	61.1	.7	
<i>Acanthurus monroviae</i>	1	1	0	1	0	4	272.9	2	.0	37.2	.0	.0	
<i>Priacanthus arenatus</i>	8	4	1	0	1	17	247.6	7	.0	.2	110.1	3.8	
<i>Spicara alta</i>	4	2	1	2	0	11	162.9	3	.0	.0	.1	112.6	
<i>Lutjanus fulgens</i>	4	2	4	1	0	13	156.3	4	3.8	65.3	6.8	.0	
<i>Chloroscombrus chrysurus</i>	5	1	0	2	0	9	142.7	2	59.4	.6	.0	.0	
<i>Plectorhynchus mediterraneus</i>	3	0	1	1	0	6	111.1	1	.5	24.6	.2	.0	
<i>Apsilus fuscus</i>	4	1	0	1	0	7	103.0	1	.0	26.7	1.0	.0	
<i>Ariomma bondi</i>	7	4	2	2	0	18	98.2	3	.0	.0	5.1	101.1	
<i>Trachurus trecae</i>	16	7	5	3	0	37	92.7	6	1.1	5.5	81.6	15.8	
<i>Ilisha africana</i>	2	0	1	0	0	4	78.7	1	12.4	.0	.0	.0	
<i>Sepia sp</i>	5	2	0	1	0	9	56.7	1	.2	20.0	.2	.2	
<i>Dentex canariensis</i>	15	7	3	1	0	31	56.5	3	8.0	40.1	11.8	5.5	
<i>Pagellus bellottii</i>	32	11	3	3	0	58	53.6	6	16.2	19.0	60.9	1.0	
<i>Lutjanus aegenes</i>	1	4	0	0	0	6	53.2	1	.6	7.5	2.9	.0	
<i>Boops boops</i>	8	2	2	0	0	14	52.2	1	.0	.4	11.6	19.8	
<i>Sparus caeruleostictus</i>	23	12	2	1	0	45	52.0	4	25.2	46.9	13.9	2.5	
<i>Pomadasys jubelini</i>	5	2	1	0	0	9	46.7	1	18.1	1.4	.0	.0	
<i>Umbrina canariensis</i>	5	0	1	0	0	7	45.3	1	.3	.0	8.5	.1	
<i>Dentex gibbosus</i>	11	7	2	0	0	24	43.0	2	.0	2.1	22.0	10.3	
<i>Epinephelus aeneus</i>	17	9	3	0	0	34	39.8	3	3.1	17.6	20.8	4.8	
<i>Saurida brasiliensis</i>	4	2	1	0	0	8	35.2	1	.0	.3	3.9	9.2	
<i>Sphyræna guachancho</i>	12	2	2	0	0	19	33.1	1	13.0	12.3	.4	.0	
<i>Sparus pagrus africanus</i>	6	3	0	0	0	11	30.8	1	.0	.0	5.4	8.5	
<i>Dentex congoensis</i>	12	8	0	0	0	24	27.4	1	.0	.4	6.7	25.6	
<i>Alectis alexandrinus</i>	11	1	1	0	0	15	23.9	1	6.4	1.3	5.1	.0	
<i>Dentex angolensis</i>	12	1	1	0	0	17	22.0	1	.0	.1	7.2	6.3	
<i>Selene dorsalis</i>	9	3	0	0	0	14	21.3	1	7.2	.5	3.5	.0	
<i>Decapterus rhonchus</i>	13	2	0	0	0	18	15.1	1	3.4	1.0	4.5	.0	
<i>Decapterus punctatus</i>	19	2	0	0	0	25	14.0	1	.3	1.7	8.1	.0	
Other fish							44.4	8					
MEAN OF TOTAL CATCHES							551.2			267.5	390.5	925.8	344.6

SUMMARY ON CATCHES FROM GABON NORTH OF C. LOPEZ, ALL SURVEYS

PELAGIC TRAWL FROM ST. 1 TO ST.210

Only stations between 10 and 300m bottom depth included
 THE ANALYSIS IS RESTRICTED TO THE FOLLOWING GEOGRAPHICAL LIMITS:
 LATITUDES:(+=NORTH, -=SOUTH) NORTHERN: 100 SOUTHERN: -40
 LONGITUDES:(+=EAST, -=WEST) WESTERN: 800 EASTERN: 1200

GEAR:PELAGIC NO OF HAULS: 11 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/mm.GROUPS					% incidence in tot. no. of hauls	Mean c.% of c. total >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA				
	0-29	30-99	100-299	300-999	>1000			3	0	6	2	
	no of hauls in each group							10- 30m	30- 50m	50-100m	100-300m	
Balistes capricus	0	1	1	1	0	27	232.3	67	.0	.0	116.2	.0
Dactylopterus volitans	0	1	0	0	0	9	62.0	6	.0	.0	10.3	.0
Canthigaster sp.	1	1	0	0	0	18	47.0	9	.0	.0	.7	45.0
Decapterus sp	1	0	0	0	0	9	26.6	3	.0	.0	4.4	.0
Lutjanus agennes	1	0	0	0	0	9	18.8	2	.0	.0	3.1	.0
Brachydeuterus auritus	1	0	0	0	0	9	17.7	2	5.9	.0	.0	.0
Rachycentron canadus	2	0	0	0	0	18	13.5	3	9.0	.0	.0	.0
Saurida brasiliensis	2	0	0	0	0	18	10.3	2	4.8	.0	1.0	.0
Arionna bondi	2	0	0	0	0	18	9.7	2	.0	.0	3.2	.0
MISCELLANEOUS	1	0	0	0	0	9	9.3	1	.0	.0	1.5	.0
Sphyræna guachancho	2	0	0	0	0	18	9.3	2	6.2	.0	.0	.0
Decapterus punctatus	1	0	0	0	0	9	4.8	1	1.6	.0	.0	.0
Carcharhinus sp.	1	0	0	0	0	9	4.8	1	1.6	.0	.0	.0
Sardinella maderensis	2	0	0	0	0	18	4.2	1	2.8	.0	.0	.0
Scomberomorus tritor	2	0	0	0	0	18	2.8	1	1.9	.0	.0	.0
Other fish							1.2	1				
MEAN OF TOTAL CATCHES							95.2		35.9	.0	141.6	45.2

SUMMARY ON CATCHES FROM GABON NORTH OF C. LOPEZ, ALL SURVEYS

DEMERSAL TRAWL FROM ST. 1 TO ST.210

Only stations between 10 and 300m bottom depth included
 THE ANALYSIS IS RESTRICTED TO THE FOLLOWING GEOGRAPHICAL LIMITS:
 LATITUDES:(+=NORTH,-=SOUTH) NORTHERN: 100 SOUTHERN: -40
 LONGITUDES:(+=EAST,-=WEST) WESTERN: 800 EASTERN: 1200

GEAR:DEMERSAL NO OF HAULS: 48 TOTAL FAMILY	CATCH DISTRIBUTION BY KG/m.GROUPS					no of hauls in each group	% incidence in tot. of hauls	Mean c.% of c. total >1kg catch	MEAN CATCH IN BOTTOM DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				14	9	19	6
	10-30m	30-50m	50-100m	100-300m								
Lutjanus fulgens	2	1	0	1	0	8	176.1	8	4.9	69.8	.5	.0
Lutjanus agennes	1	1	1	0	0	6	106.1	4	3.8	29.5	.0	.0
Decapterus punctatus	8	1	1	1	0	23	80.4	10	.2	1.7	39.2	20.3
Ariomma bondi	7	4	5	0	0	33	72.5	14	.0	.7	45.1	49.7
Dentex congoensis	14	2	7	0	0	48	63.7	17	.1	3.2	60.2	48.6
Priacanthus arenatus	16	2	4	0	0	46	40.4	10	.2	6.6	35.6	25.2
Trachurus trecae	11	1	2	0	0	29	30.0	5	.0	.3	12.6	29.7
Chaetodipterus goreensis	1	1	0	0	0	4	27.6	1	3.9	.0	.0	.0
Spicara alta	3	1	0	0	0	8	25.6	1	.0	.0	.2	16.5
Lethrinus atlanticus	1	1	0	0	0	4	25.5	1	3.6	.0	.0	.0
Pagellus bellottii	20	2	2	0	0	50	21.2	6	12.3	20.4	8.0	.2
Epinephelus aeneus	16	3	0	0	0	40	16.4	4	2.4	5.7	12.0	.0
Balistes capriscus	10	0	1	0	0	23	15.1	2	1.1	.3	7.5	.9
Dentex canariensis	10	2	0	0	0	25	13.8	2	.4	3.6	6.7	.0
Sparus caeruleostictus	24	2	0	0	0	54	13.1	4	5.3	21.0	4.1	.0
Alectis alexandrinus	11	1	0	0	0	25	12.6	2	10.1	.6	.0	.5
Dentex angolensis	16	1	0	0	0	35	8.9	2	.0	.6	4.3	10.6
Ephippion guttifer	5	0	0	0	0	10	8.3	1	3.0	.0	.0	.0
Illex coindetii	10	0	0	0	0	21	7.3	1	.0	.0	.7	10.0
Other fish							12.6	7				
MEAN OF TOTAL CATCHES							178.5		70.8	175.9	246.7	217.8

Annex 8. Summary tables of swept area trawl data showing catch distributions and mean densities by species, surveys, regions and totals.

SWEET AREA ANALYSIS FROM ST. 8 TO ST. 24.

GABON FIRST SURVEY, SOUTH OF C. LOPEZ

NO OF HAULS: 15 TOTAL

SPECIES	CATCH DISTRIBUTION BY KG/mm.GROUPS					% incidence in total of hauls	Mean dens. t/mm2 catch	% of total catch	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				tonnes/mm2			
	no of hauls in each group								10- 30m	30- 50m	50-100m	100-300m
Spicara alta	1	0	1	0	0	13	1.90	18	.00	.00	.00	14.22
Dentex canariensis	3	2	0	0	0	33	1.29	12	.43	1.91	2.02	.00
Epirephelus aeneus	5	2	0	0	0	47	1.08	10	.25	1.50	1.74	.32
Sparus caeruleostictus	2	2	0	0	0	27	1.03	10	.58	1.81	1.01	.00
Ariomma bondi	1	2	0	0	0	20	.86	8	.00	.00	.45	5.55
Boops boops	3	0	1	0	0	27	.77	7	.00	.00	.05	5.66
Dentex gibbosus	1	1	0	0	0	13	.59	6	.00	.05	2.15	.00
Lutjanus fulgens	0	1	0	0	0	7	.50	5	.00	1.50	.00	.00
Pagellus bellottii	8	0	0	0	0	53	.33	3	.10	.46	.56	.00
Acanthurus monroviae	0	1	0	0	0	7	.29	3	.00	.87	.00	.00
Dentex congorsis	2	0	0	0	0	13	.25	2	.00	.00	.00	1.91
Lutjanus agennes	1	0	0	0	0	7	.20	2	.00	.60	.00	.00
Pomadourus jubelini	0	1	0	0	0	7	.20	2	.76	.00	.00	.00
Brachydeuterus auritus	3	0	0	0	0	20	.16	2	.00	.14	.41	.00
Alectis alexandrinus	4	0	0	0	0	27	.15	1	.55	.00	.00	.00
Mustelus mustelus	2	0	0	0	0	13	.13	1	.00	.10	.00	.70
Sparus auriga	1	0	0	0	0	7	.12	1	.00	.36	.00	.00
Pseudupeneus prayensis	2	0	0	0	0	13	.07	1	.24	.00	.00	.00
Sparus pagrus africanus	1	0	0	0	0	7	.06	1	.00	.00	.21	.00
Drepane africana	2	0	0	0	0	13	.05	1	.18	.00	.00	.00
Lutjanus coreensis	1	0	0	0	0	7	.05	1	.18	.00	.00	.00
Pomadourus rogeri	1	0	0	0	0	7	.05	1	.19	.00	.00	.00
Scorpaenomus tritor	2	0	0	0	0	13	.05	1	.18	.00	.00	.00
Sphyræna sphyraena	1	0	0	0	0	7	.05	1	.00	.16	.00	.00
Other demersal fish							.56	5	.49	.47	.83	.38
MEAN DENSITIES OF DEMERSAL FISH							10.76		4.14	9.95	9.42	28.74

SWEPT AREA ANALYSIS FROM ST. 25 TO ST. 43.

GABON NORTH OF C. LOPEZ

NO OF HAULS: 12 TOTAL

5 1 4 2

SPECIES	CATCH DISTRIBUTION BY KG/nm.GROUPS					% incidence in tot. no. of hauls	Mean dens. total t/nm2 catch	% of total catch	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				10-30m	30-50m	50-100m	100-300m
	no of hauls in each group								tonnes/nm2			
Dentex congoensis	2	2	0	0	0	33	1.01	22	.00	.00	3.00	.08
Priacanthus arenatus	1	2	0	0	0	25	.95	21	.00	.00	1.81	2.09
Ariomma bondi	4	1	0	0	0	42	.84	18	.00	.00	.68	3.66
Epinephelus aeneus	5	0	0	0	0	42	.30	7	.05	.69	.65	.00
Spicara alta	2	0	0	0	0	17	.26	6	.00	.00	.00	1.55
Dentex cabarlensis	4	0	0	0	0	33	.25	6	.00	.04	.74	.00
Sparus caeruleostictus	5	0	0	0	0	42	.24	5	.11	2.01	.07	.00
Alectis alexandrinus	5	0	0	0	0	42	.21	5	.51	.00	.00	.00
Dentex angolensis	4	0	0	0	0	33	.13	3	.00	.00	.13	.54
Illex coindetii	6	0	0	0	0	50	.05	1	.00	.01	.05	.20
Selene dorsalis	5	0	0	0	0	42	.04	1	.05	.28	.00	.00
Pagellus bellottii	4	0	0	0	0	33	.04	1	.00	.07	.11	.00
Ephippion guttifer	2	0	0	0	0	17	.04	1	.10	.00	.00	.00
Scomberomorus tritor	2	0	0	0	0	17	.03	1	.07	.00	.00	.00
Mustelus sp	1	0	0	0	0	8	.03	1	.00	.00	.00	.20
Sphyrnaea guachancho	3	0	0	0	0	25	.03	1	.08	.00	.00	.00
Other demersal fish							.13	2	.08	.43	.17	.02
MEAN DENSITIES OF DEMERSAL FISH							4.59		1.05	3.52	7.40	8.34

SWEPT AREA ANALYSIS FROM ST. 58 TO ST. 95.

GABON SECOND SURVEY, SOUTH OF C. LOPEZ

NO OF HAULS: 21 TOTAL

5 4 10 2

SPECIES	CATCH DISTRIBUTION BY KG/nm.GROUPS					no of hauls	Mean dens. t/nm2	% of total catch	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999	>10.00				10- 30m	30- 50m	50-100m	100-300m
	no of hauls in each group								tonnes/nm2			
Brachydeuterus auritus	10	0	0	0	1	52	7.43	46	.07	.28	15.46	.00
Priacanthus arenatus	7	0	0	1	0	38	3.81	24	.00	.00	8.00	.01
Sparus caeruleostictus	12	0	0	0	0	57	.46	3	1.02	.22	.37	.00
Pagellus bellottii	12	1	0	0	0	62	.45	3	.02	.13	.87	.01
Dentex gibbosus	6	1	0	0	0	33	.43	3	.00	.00	.79	.54
Epinephelus aereus	7	0	0	0	0	33	.37	2	.00	.02	.69	.42
Boops boops	4	1	0	0	0	24	.36	2	.00	.00	.75	.01
Sphyræna guachancho	5	1	0	0	0	29	.28	2	.96	.22	.02	.00
Selene dorsalis	7	0	0	0	0	33	.25	2	.36	.13	.30	.00
Mobula diabolus	0	1	0	0	0	5	.21	1	.88	.00	.00	.00
Dentex canariensis	5	0	0	0	0	24	.18	1	.11	.03	.32	.00
Decapterus sp	9	0	0	0	0	43	.15	1	.00	.02	.29	.02
Sparus pagrus africanus	4	0	0	0	0	19	.15	1	.00	.00	.28	.12
Seriola carpenteri	1	0	0	0	0	5	.13	1	.00	.00	.26	.00
Spicara alta	2	0	0	0	0	10	.12	1	.00	.00	.00	1.25
Lutjanus fulgens	3	0	0	0	0	14	.12	1	.32	.00	.09	.00
Gymmura sp	1	0	0	0	0	5	.12	1	.00	.00	.25	.00
Pseudotolithus typus	1	0	0	0	0	5	.11	1	.46	.00	.00	.00
Drepane africana	4	0	0	0	0	19	.08	1	.07	.31	.00	.00
Lutjanus coreensis	2	0	0	0	0	10	.08	1	.34	.00	.00	.00
Other demersal fish							.75	4	1.14	.87	.43	1.20
MEAN DENSITIES OF DEMERSAL FISH							16.03		5.76	2.22	29.17	3.58

SWEPT AREA ANALYSIS FROM ST. 96 TO ST. 114.
GABON SECOND SURVEY NORTH OF CAPE LOPEZ

NO OF HAULS: 13 TOTAL

6 2 4 1

SPECIES	CATCH DISTRIBUTION BY KG/mm.GROUPS					% incidence in tot.no. of hauls	Mean dens. total t/mm2 catch	% of total catch	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				tonnes/nm2			
	no of hauls in each group								10- 30m	30- 50m	50-100m	100-300m
Aricomma bondi	2	1	1	0	0	31	1.50	27	.00	.09	4.45	1.54
Dentex congoensis	3	2	0	0	0	39	1.31	24	.00	.05	4.22	.11
Pagellus bellottii	7	2	0	0	0	69	.97	17	.89	2.52	.55	.05
Priacanthus arenatus	6	1	0	0	0	54	.76	14	.01	.34	2.09	.85
Alectis alexandrinus	4	0	0	0	0	31	.17	3	.38	.00	.00	.00
Epinephelus aeneus	5	0	0	0	0	39	.17	3	.11	.02	.37	.00
Sparus caeruleostictus	8	0	0	0	0	62	.14	2	.12	.17	.17	.00
Dentex angolensis	4	0	0	0	0	31	.09	2	.00	.03	.04	.97
Dentex canariensis	2	0	0	0	0	15	.06	1	.00	.00	.20	.00
Ehippion guttifer	2	0	0	0	0	15	.05	1	.10	.00	.00	.00
Spicara alta	1	0	0	0	0	8	.03	1	.00	.00	.00	.41
SEPIIDAE	1	0	0	0	0	8	.03	1	.07	.00	.00	.00
Lagocephalus laevigatus	5	0	0	0	0	39	.03	1	.02	.00	.06	.00
Other demersal fish							.24	4	.13	.24	.36	.47
MEAN DENSITIES OF DEMERSAL FISH						5.56			1.83	3.47	12.50	4.39

SWEPT AREA ANALYSIS FROM ST. 128 TO ST. 160.

GABON THIRD SURVEY, SOUTH OF C. LOPEZ

NO OF HAULS: 23 TOTAL

5 5 8 5

SPECIES	CATCH DISTRIBUTION BY KG/nm.GROUPS					% incidence in tot.no. of hauls	Mean dens. t/nm2	% of total catch	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				tonnes/nm2			
	no of hauls in each group								10- 30m	30- 50m	50-100m	100-300m
<i>Pagellus bellottii</i>	11	0	3	0	0	61	2.18	16	.03	.35	6.00	.05
<i>Brachydeuterus auritus</i>	4	3	1	0	0	35	1.94	14	2.15	.11	4.16	.00
<i>Ariomma bondi</i>	4	0	2	0	0	26	1.55	11	.00	.00	.38	6.54
<i>Spicara alta</i>	2	1	1	0	0	17	1.03	7	.00	.00	.00	4.73
<i>Lutjanus fulgens</i>	2	3	0	0	0	22	.73	5	.14	2.35	.56	.00
<i>Sparus caeruleostictus</i>	13	0	0	0	0	57	.57	4	.92	.96	.32	.21
<i>Priacanthus arenatus</i>	6	1	0	0	0	30	.52	4	.00	.00	1.36	.24
<i>Sphyræna guachancho</i>	6	1	0	0	0	30	.45	3	.65	1.42	.00	.00
<i>Dentex canariensis</i>	7	1	0	0	0	35	.44	3	.47	1.06	.26	.09
<i>Dentex congolensis</i>	8	0	0	0	0	35	.41	3	.00	.00	.33	1.33
<i>Alectis alexandrinus</i>	4	1	0	0	0	22	.32	2	.19	.13	.71	.00
<i>Pcmadasys jubelini</i>	3	1	0	0	0	17	.32	2	1.48	.00	.00	.00
<i>Dentex angolensis</i>	4	1	0	0	0	22	.26	2	.00	.00	.56	.32
<i>Dentex gibbosus</i>	4	1	0	0	0	22	.26	2	.00	.00	.44	.52
R A Y S	1	1	0	0	0	9	.22	2	.26	.00	.47	.00
<i>Argyrosomus regius</i>	0	1	0	0	0	4	.22	2	.00	.00	.64	.00
<i>Sparus pagrus africanus</i>	2	0	0	0	0	9	.20	2	.00	.00	.22	.58
<i>Galeoides decadactylus</i>	4	0	0	0	0	17	.19	1	.89	.00	.00	.00
<i>Epinephelus aeneus</i>	5	0	0	0	0	22	.19	1	.08	.62	.12	.00
<i>Plectorhynchus mediterraneus</i>	0	1	0	0	0	4	.15	1	.00	.67	.00	.00
<i>Apsilus fuscus</i>	5	0	0	0	0	22	.14	1	.00	.51	.08	.00
<i>Scomberomorus tritor</i>	3	0	0	0	0	13	.12	1	.54	.00	.00	.00
<i>Selene dorsalis</i>	5	0	0	0	0	22	.10	1	.46	.00	.00	.00
<i>Pseudupeneus prayensis</i>	5	0	0	0	0	22	.09	1	.03	.05	.20	.00
<i>Pseudotolithus senegalensis</i>	2	0	0	0	0	9	.09	1	.43	.00	.00	.00
<i>Sepia officinalis hierredda</i>	6	0	0	0	0	26	.09	1	.04	.03	.22	.00
<i>Cynoglossus sp</i>	1	0	0	0	0	4	.08	1	.00	.00	.24	.00
<i>Chelidonichthys gabonensis</i>	5	0	0	0	0	22	.08	1	.00	.03	.20	.00
<i>Lutjanus agennes</i>	1	0	0	0	0	4	.07	1	.00	.31	.00	.00
<i>Illex coindetii</i>	4	0	0	0	0	17	.06	1	.00	.00	.02	.26
Other demersal fish							.78	5	1.51	.60	.70	.37
MEAN DENSITIES OF DEMERSAL FISH						13.87			10.26	9.20	18.20	15.24

SWEPT AREA ANALYSIS FROM ST. 161 TO ST. 172.
 GABON THIRD SURVEY NORTH OF CAPE LOPEZ

NO OF HAULS: 7 TOTAL

2 0 3 2

SPECIES	CATCH DISTRIBUTION BY KG/mm.GROUPS					% incidence in tot. no. of hauls	Mean dens. t/nm2	% of total catch	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999	>1000				tonnes/nm2			
	no of hauls in each group								10-30m	30-50m	50-100m	100-300m
Dentex congoensis	4	2	0	0	0	86	1.85	28	.04	.00	1.14	4.74
Aricomma bondi	4	1	0	0	0	71	1.22	19	.00	.00	2.27	.87
Epinephelus aeneus	4	0	0	0	0	57	.38	6	.13	.00	.79	.00
Lutjanus fulgens	2	0	0	0	0	29	.36	6	1.22	.00	.02	.00
Sparus caeruleostictus	5	0	0	0	0	71	.35	5	.57	.00	.44	.00
Chaetodipterus goreensis	2	0	0	0	0	29	.28	4	.98	.00	.00	.00
Lutjanus agennes	1	0	0	0	0	14	.27	4	.95	.00	.00	.00
Lethrinus atlanticus	1	0	0	0	0	14	.26	4	.89	.00	.00	.00
Illex coindetii	3	0	0	0	0	43	.21	3	.00	.00	.02	.72
Galeoides decadactylus	1	0	0	0	0	14	.14	2	.48	.00	.00	.00
Dentex canariensis	4	0	0	0	0	57	.13	2	.09	.00	.25	.00
Brachydeuterus auritus	1	0	0	0	0	14	.12	2	.41	.00	.00	.00
Pagellus bellottii	5	0	0	0	0	71	.10	2	.04	.00	.19	.00
OMNASTREPHIDAE	1	0	0	0	0	14	.10	2	.00	.00	.24	.00
Priacanthus arenatus	6	0	0	0	0	86	.09	1	.04	.00	.14	.07
Umbrina steindachneri	1	0	0	0	0	14	.09	1	.30	.00	.00	.00
Caranx crysos	1	0	0	0	0	14	.08	1	.28	.00	.00	.00
Dentex angoleensis	5	0	0	0	0	71	.08	1	.00	.00	.10	.13
Caranx latus	1	0	0	0	0	14	.07	1	.23	.00	.00	.00
Sphyræna guachancho	1	0	0	0	0	14	.06	1	.20	.00	.00	.00
Acanthurus monroviae	1	0	0	0	0	14	.05	1	.19	.00	.00	.00
Alectis alexandrinus	2	0	0	0	0	29	.03	1	.06	.00	.00	.05
Boops boops	2	0	0	0	0	29	.03	1	.00	.00	.06	.02
Other demersal fish							.21	3	.61	.00	.09	.00
MEAN DENSITIES OF DEMERSAL FISH							6.55		7.70	.00	5.75	6.60

SWEPT AREA ANALYSIS FROM ST. 178 TO ST. 201.

GABON FOURTH SURVEY, SOUTH OF C. LOPEZ

NO OF HAULS: 18 TOTAL

3 7 6 2

% incidence Mean % of
in tot.no. dens. total
of hauls t/mm2 catch

MEAN DENSITY BY DEPTH STRATA
tonnes/mm2

10- 30m 30- 50m 50-100m 100-300m

CATCH DISTRIBUTION BY KG/MM-GROUPS
0-29 30-99 100-299 300-999 >1000
no. of hauls in each group

SPECIES

SPECIES	CATCH DISTRIBUTION BY KG/MM-GROUPS				no. of hauls in each group	%	incidence in tot.no. of hauls	Mean dens. t/mm2	MEAN DENSITY BY DEPTH STRATA			
	0-29	30-99	100-299	300-999 >1000					10- 30m	30- 50m	50-100m	100-300m
Lutjanus fulgens	1	0	0	1	0	11	1.73	13	.00	4.29	.18	.00
Sparus caeruleostictus	6	1	1	0	0	44	1.64	12	.98	3.10	.81	.00
Acanthurus monroviae	0	0	1	0	0	6	1.33	10	.00	3.43	.00	.00
Dentex canariensis	5	0	1	0	0	33	1.07	8	.03	2.40	.13	.76
Pagellus beliothii	11	1	0	0	0	67	.98	7	3.05	.90	.35	.10
Apsilus fuscus	0	0	1	0	0	6	.95	7	.00	2.43	.00	.00
Sepia sp.	5	0	1	0	0	33	.86	6	.04	2.17	.00	.05
Plectorhynchus mediterraneus	1	0	1	0	0	11	.79	6	.00	2.00	.03	.00
Epinephelus aeneus	8	1	0	0	0	50	.75	5	.04	.64	1.33	.42
Umbra canariensis	1	1	0	0	0	11	.44	3	.00	.00	1.32	.00
Pagellus natalensis	0	1	0	0	0	6	.43	3	.00	.00	1.28	.00
Saurida brasiliensis	4	1	0	0	0	28	.43	3	.00	.03	.55	2.12
Dentex gibbosus	4	1	0	0	0	28	.34	3	.00	.20	.76	.08
Brachydeuterus auritus	4	1	0	0	0	28	.33	2	.01	.00	.97	.00
Lutjanus agennes	3	0	1	0	0	17	.27	2	.14	.23	.47	.00
Dentex barnardi	0	1	0	0	0	6	.22	2	.00	.57	.00	.00
Sepia officinalis hierredda	1	1	0	0	0	11	.22	2	.00	.49	.08	.00
Dentex congoensis	6	0	0	0	0	33	.21	2	.00	.04	.49	.28
Seriola dumerilii	1	0	0	0	0	6	.12	1	.00	.31	.00	.00
Dentex angolensis	2	0	0	0	0	11	.10	1	.00	.00	.22	.25
Boops boops	3	0	0	0	0	17	.07	1	.00	.00	.21	.00
Alectis alexandrinus	3	0	0	0	0	17	.06	1	.32	.03	.00	.00
Other demersal fish	3	0	0	0	0	17	.52	3	.69	.49	.51	.34

MEAN DENSITIES OF DEMERSAL FISH

13.84 5.31 23.75 9.71 4.39

SWEET AREA ANALYSIS FROM ST. 202 TO ST. 210.
GABON FOURTH SURVEY NORTH OF CAPE LOPEZ

NO OF HAULS: 7 TOTAL

0 3 4 0

% incidence Mean % of
in tot.no. dens. total
of hauls t/mm2 catch

MEAN DENSITY BY DEPTH STRATA

SPECIES CATCH DISTRIBUTION BY KG/MM.GROUPS
0-29 30-99 100-299 300-999 >1000
no. of hauls in each group

tonnes/mm2

10- 30m 30- 50m 50-100m 100-300m

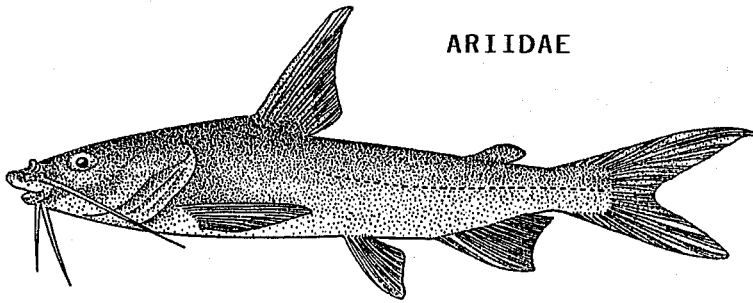
<i>Dentex congoensis</i>	5	1	0	0	0	86	.78	35	.00	.07	1.31	.00
<i>Ariomma bondi</i>	4	1	0	0	0	71	.71	32	.00	.01	1.23	.00
<i>Sparus caeruleostictus</i>	4	0	0	0	0	57	.14	6	.00	.22	.08	.00
<i>Epinephelus aeneus</i>	1	0	0	0	0	14	.12	6	.00	.00	.21	.00
<i>Pagellus bellottii</i>	4	0	0	0	0	57	.12	5	.00	.08	.15	.00
<i>Sepia sp</i>	2	0	0	0	0	29	.10	4	.00	.23	.00	.00
<i>Dentex angolensis</i>	3	0	0	0	0	43	.08	4	.00	.00	.14	.00
<i>Dentex cataractensis</i>	2	0	0	0	0	29	.05	2	.00	.01	.09	.00
<i>Priacanthus arenatus</i>	4	0	0	0	0	57	.04	2	.00	.01	.07	.00
<i>Boops boops</i>	2	0	0	0	0	29	.02	1	.00	.00	.03	.00
<i>Illex coindetii</i>	4	0	0	0	0	57	.02	1	.00	.01	.03	.00
<i>Spicara alta</i>	2	0	0	0	0	29	.01	1	.00	.00	.03	.00
<i>Dactylopterus volitans</i>	2	0	0	0	0	29	.01	1	.00	.00	.02	.00
<i>Chelidonichthys gabonensis</i>	3	0	0	0	0	43	.01	1	.00	.00	.03	.00
Other demersal fish							.02	0	.00	.03	.01	.00

MEAN DENSITIES OF DEMERSAL FISH

2.25 .00 .67 3.43 .00

Annex 9. Illustrated list of main fish species.

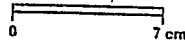
ARIIDAE



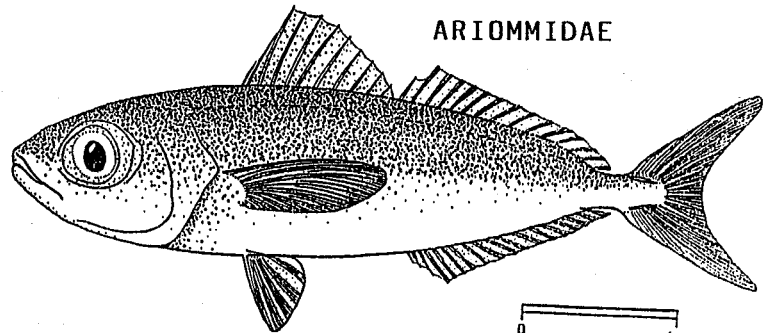
Arius parkii

En: Guinean sea catfish

Fr: Mâchoiron de Guinée



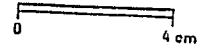
ARIOMMIDAE



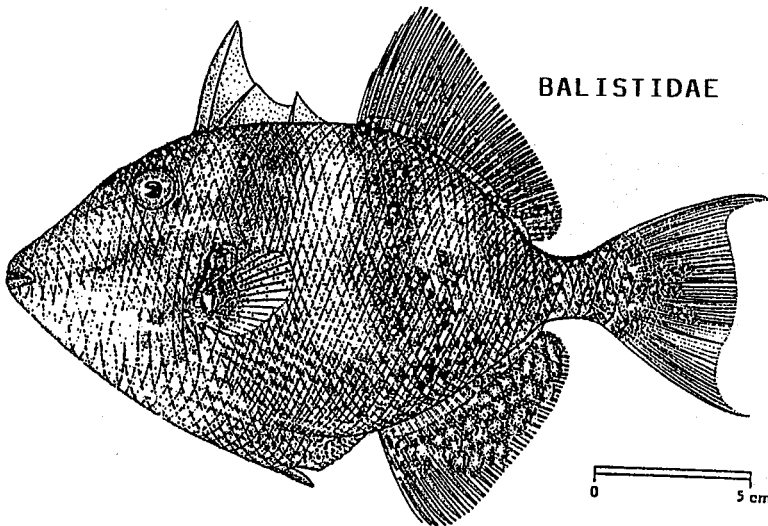
Ariomma bondi

En: Silver-rag driftfish

Fr: Ariomme grise, Sardineau



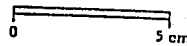
BALISTIDAE



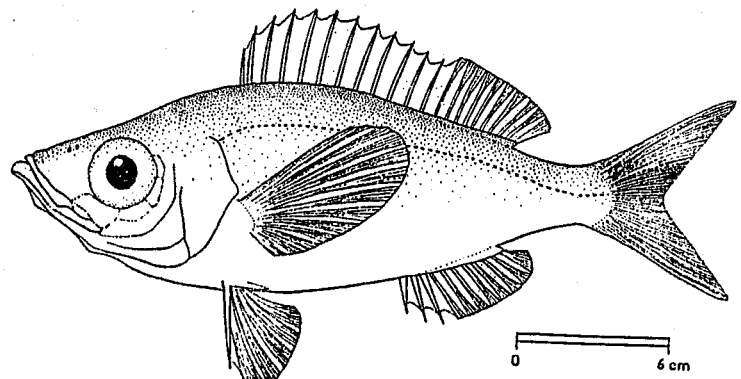
Balistes capriscus

En: Grey triggerfish

Fr: Baliste



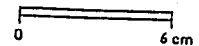
CENTRACANTHIDAE



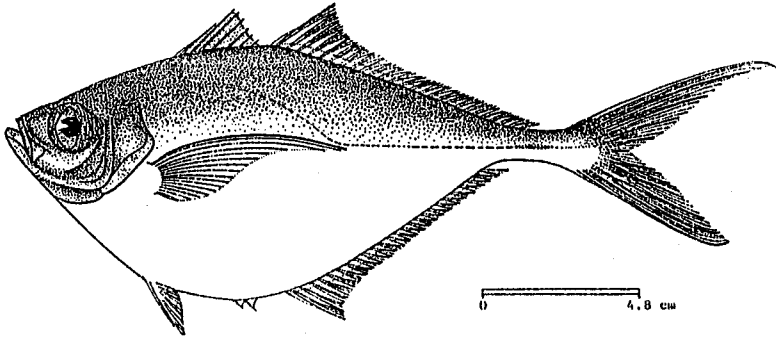
Spicara alta

En: Bigeye picarel

Fr: Picarel à gros yeux



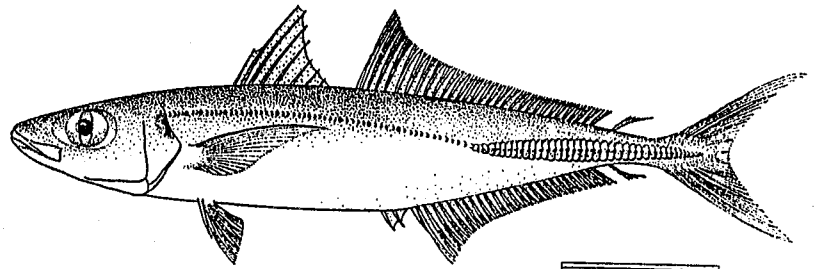
CARANGIDAE



Chloroscombrus chrysurus

En: Atlantic bumper

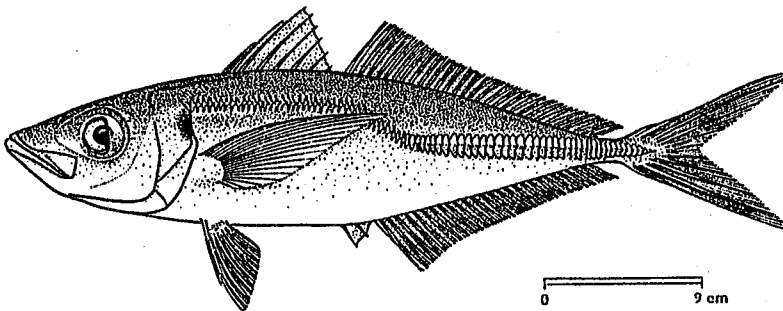
Fr: Sapater, Plat-plat



Decapterus punctatus

En: Round scad

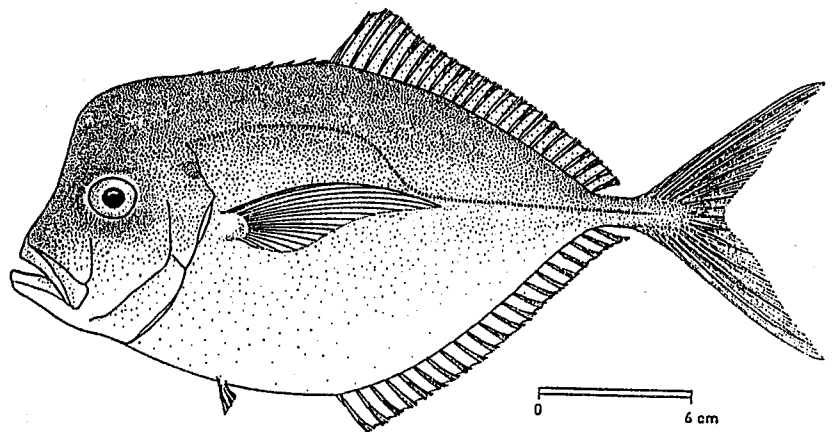
Fr: Comète quiaquia, Chinchard jaune



Trachurus trecae

En: Cunene horse mackerel

Fr: Jurel cunene, Chinchard noire

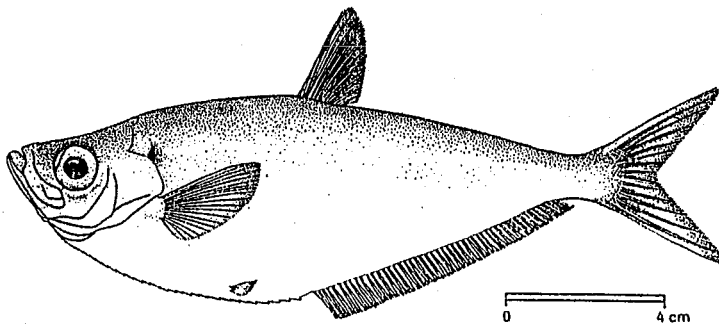


Selene dorsalis

En: African lookdown

Fr: Musso africain

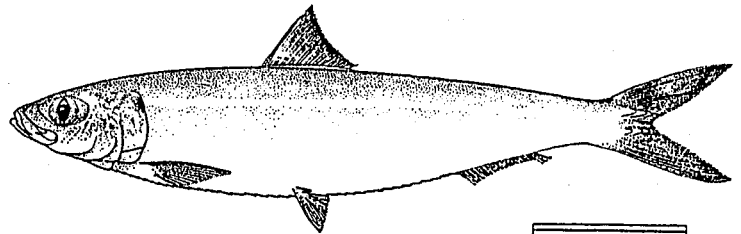
CLUPEIDAE



Ilisha africana

En: West African Ilisha

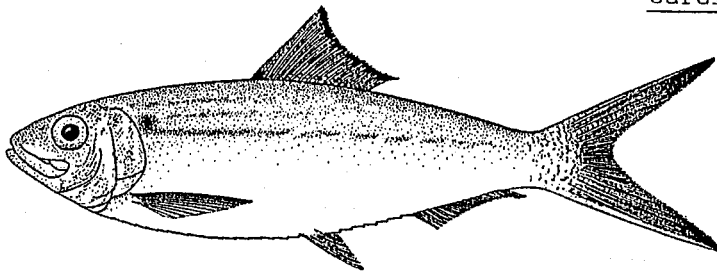
Fr: Alose rasoir



Sardinella aurita

En: Round sardinella

Fr: Allache, Sardinelle
ronde

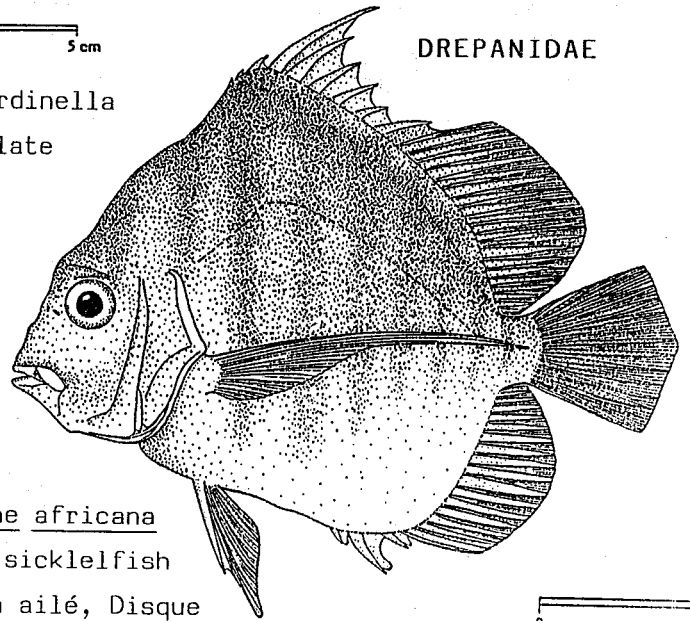


Sardinella maderensis

En: Madeiran sardinella, Flat sardinella

Fr: Grande allache, Sardinelle plate

DREPANIDAE

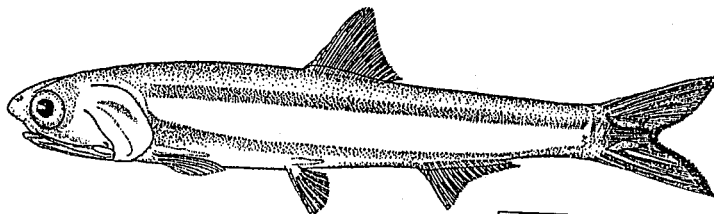


Drepane africana

En: African sicklefish

Fr: Forgeron ailé, Disque

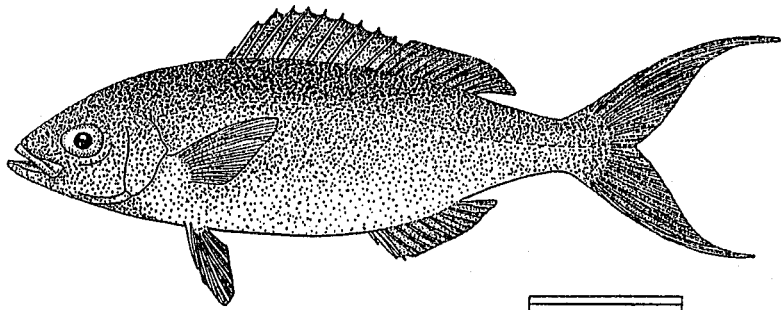
ENGRAULIDAE



Engraulis encrasicolus

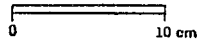
En: European anchovy

Fr: Anchois commun



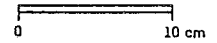
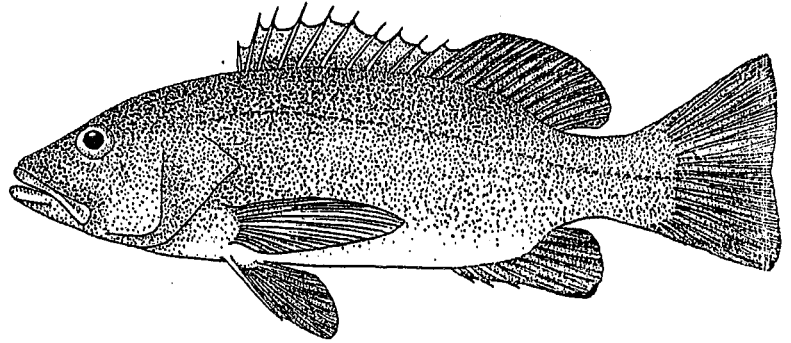
LUTJANIDAE

Apsilus fuscus



En: African forktail snapper

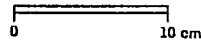
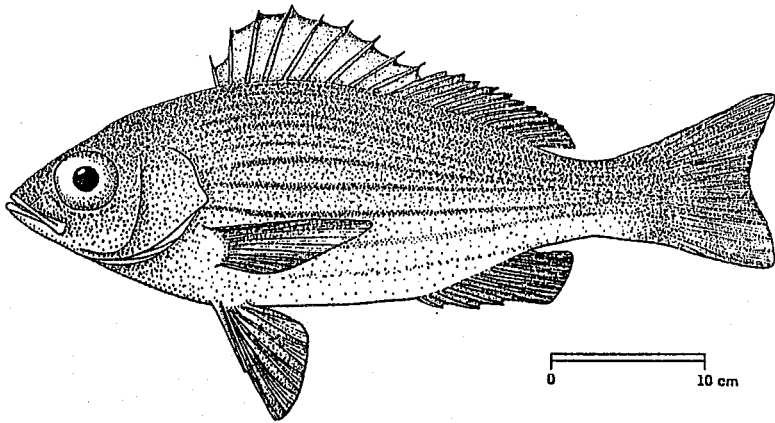
Fr: Vivaneau fourche



Lutjanus agennes

En: African red snapper

Fr: Vivaneau africain rouge

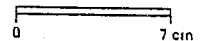
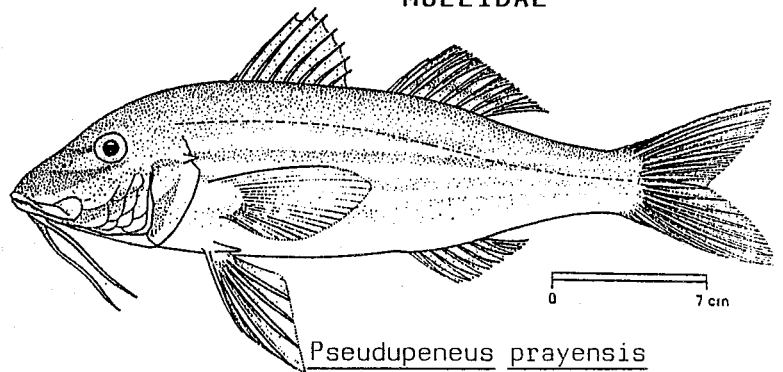


Lutjanus fulgens

En: Golden African snapper

Fr: Vivaneau doré

MULLIDAE

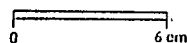
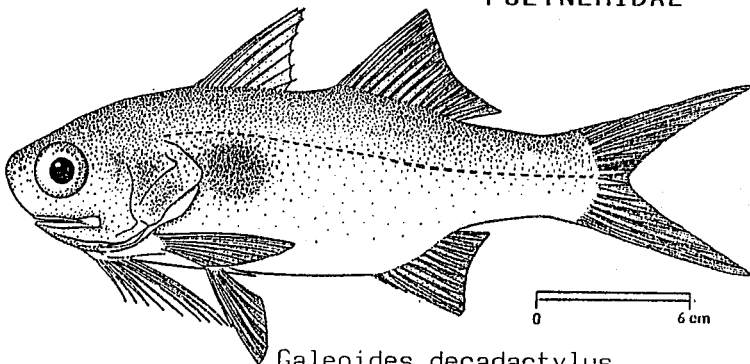


Pseudupeneus prayensis

En: West African goatfish

Fr: Rouget-barbet

POLYNEMIDAE

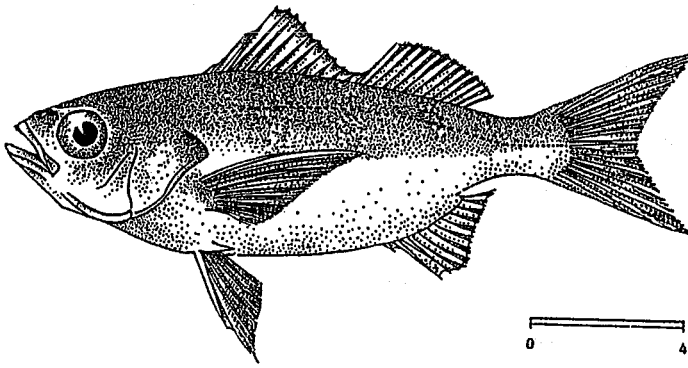


Galeoides decadactylus

En: Lesser African threadfin

Fr: Petit capitaine

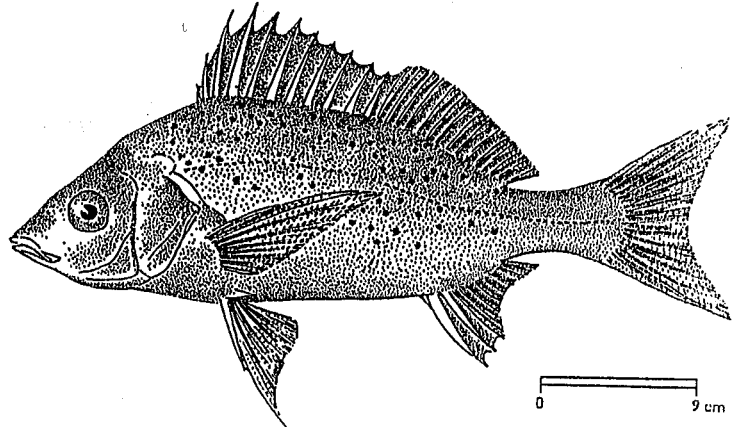
POMADASYIDAE



Brachydeuterus auritus

En: Bigeye grunt

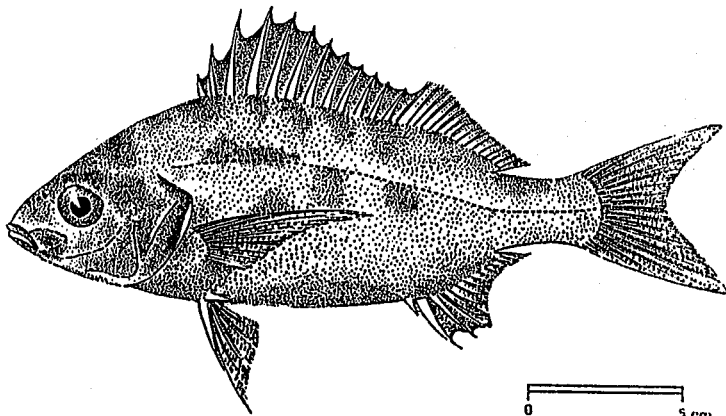
Fr: Lippu pelon, Pelon



Pomadasys jubelini

En: Sompat grunt

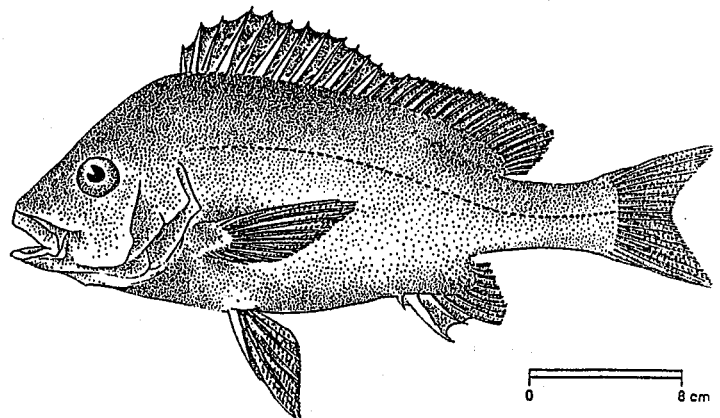
Fr: Grondeur sompat



Pomadasys incisus

En: Bastard grunt

Fr: Grondeur métis

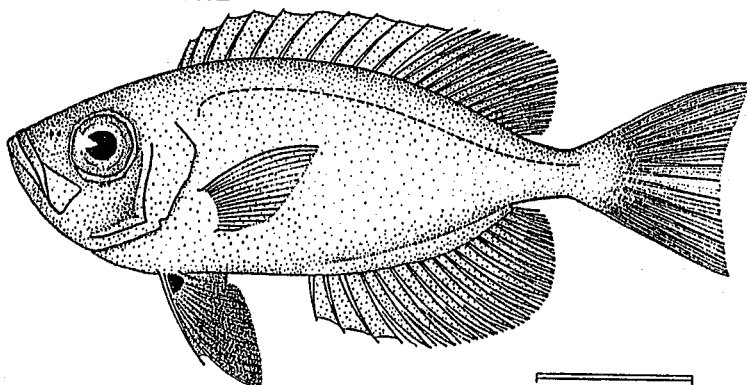


Plectorhynchus mediterraneus

En: Rubberlip grunt

Fr: Diagramme grise

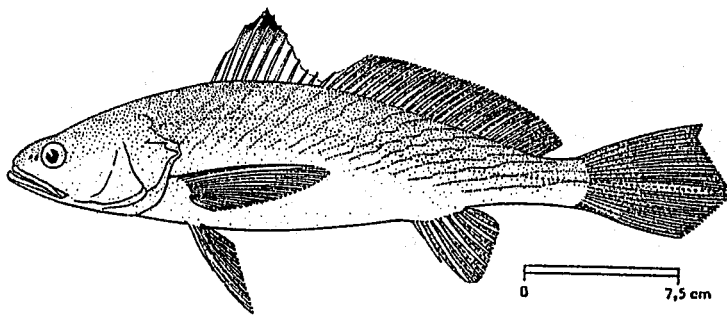
PRIACANTHIDAE



Priacanthus arenatus

En: Atlantic bigeye

Fr: Beauclaire soleil

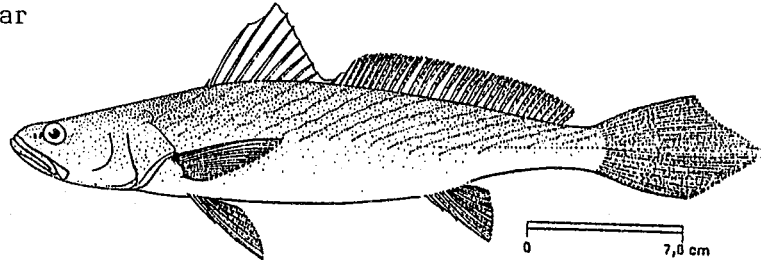


SCIAENIDAE

Pseudotolithus senegalensis

En: Cassava croaker

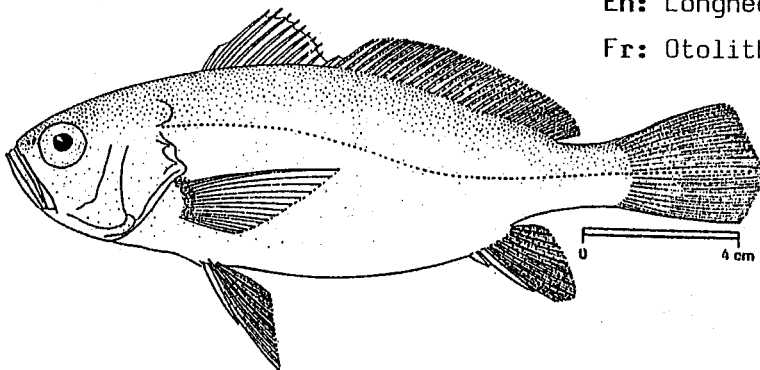
Fr: Otolithe sénégalais, Bar



Pseudotolithus typus

En: Longneck croaker

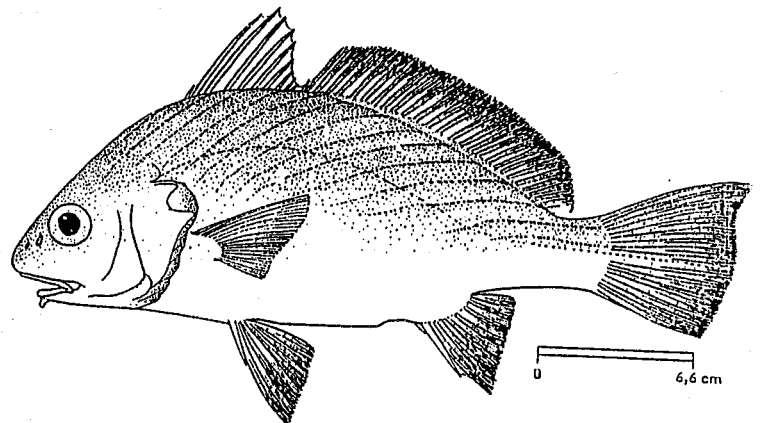
Fr: Otolithe nanka, Bar



Pteroscion peli

En: Boe drum

Fr: Courbine pélin

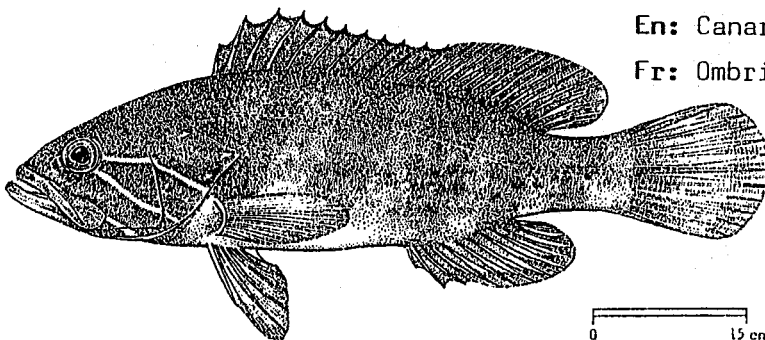


Umbrina canariensis

En: Canary drum

Fr: Ombrine bronze

SERRANIDAE

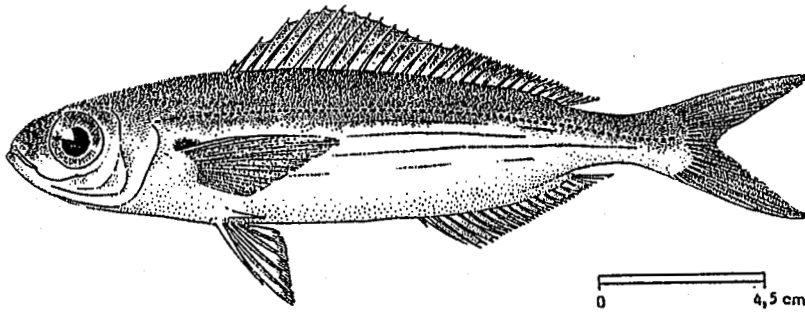


Epinephelus aeneus

En: White grouper

Fr: Mérou blanc

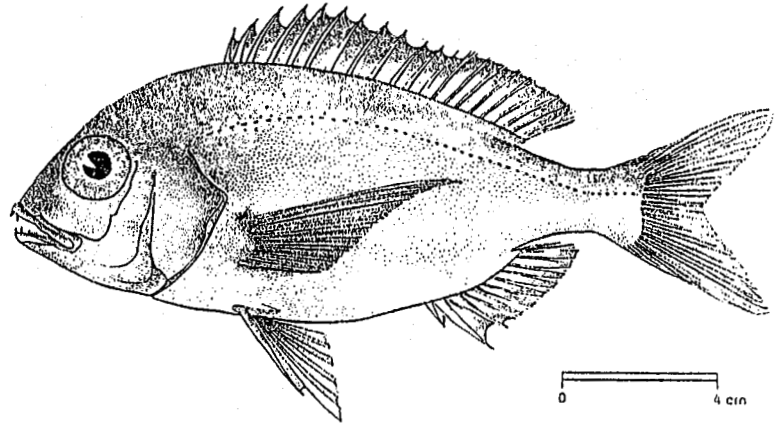
SPARIDAE



Boops boops

En: Bogue

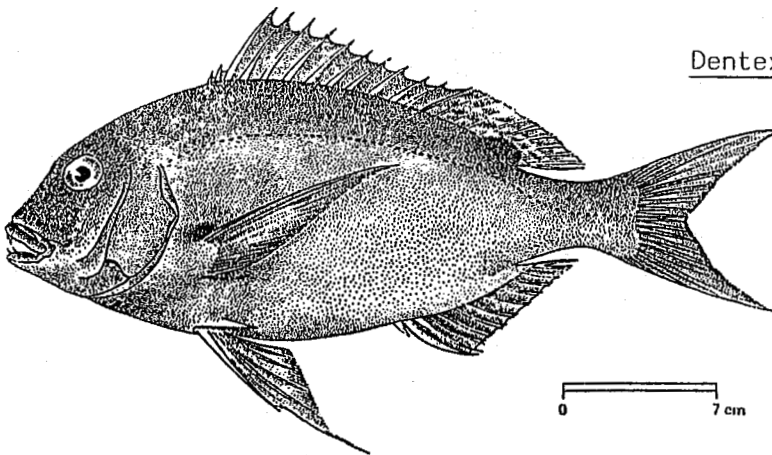
Fr: Bogue



Dentex angolensis

En: Angola dentex

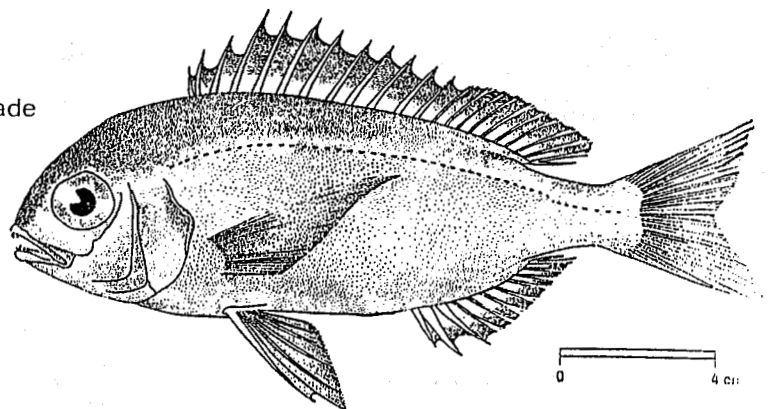
Fr: Denté angolais, Dorade
rose



Dentex canariensis

En: Canary dentex

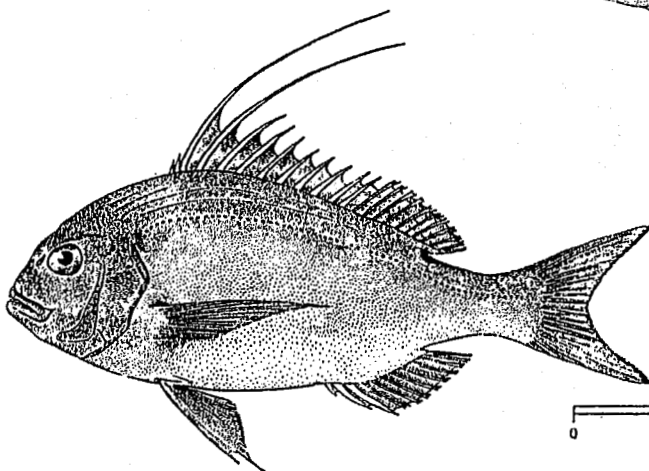
Fr: Denté à tache rouge, dorade
rose



Dentex congoensis

En: Congo dentex

Fr: Denté congolais, Dorade rose

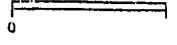
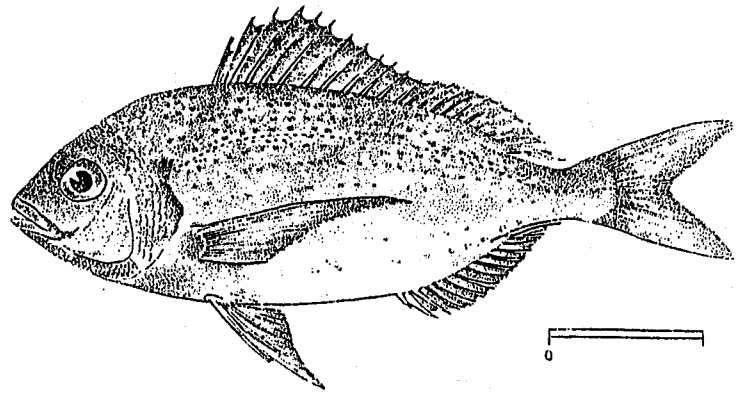


Dentex gibbosus

En: Pink dentex

Fr: Gros denté rose

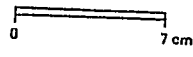
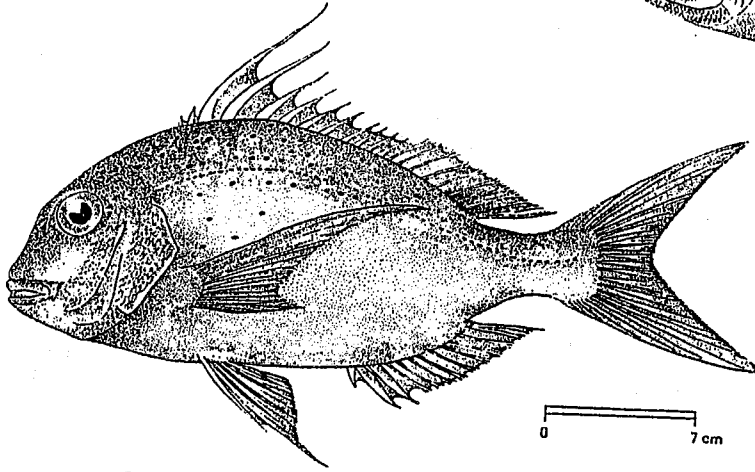
SPARIDAE



Pagellus bellottii

En: Red pandora

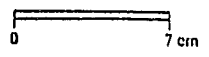
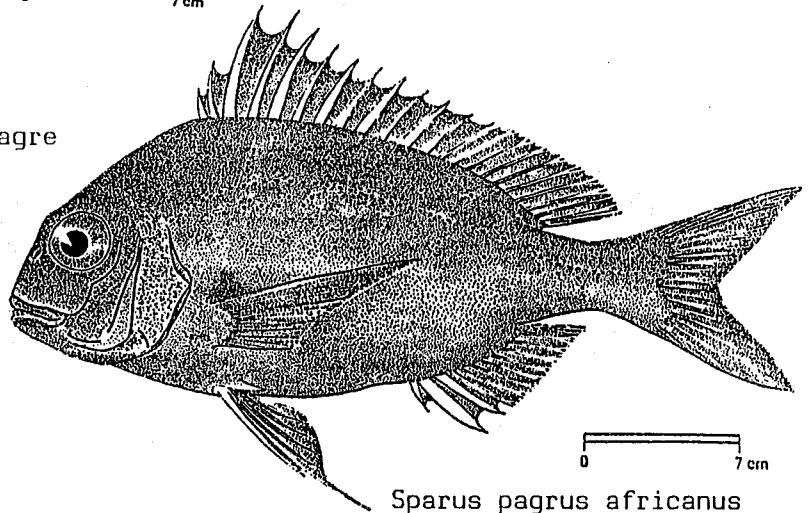
Fr: Pageot à tache rouge



Sparus caeruleostictus

En: Bluespotted seabream

Fr: Pagre à points bleus, Pagre

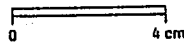
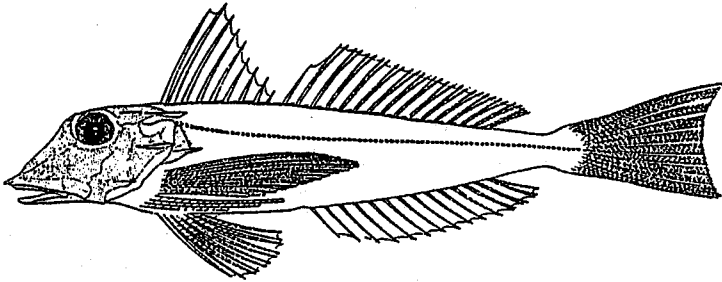


Sparus pagrus africanus

En: Southern common seabream

Fr: Pagre des tropiques, Pagre

TRIGLIDAE

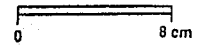
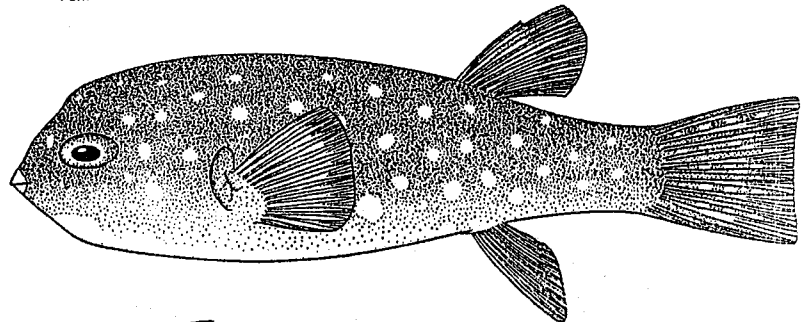


Chelidonichthys gabonensis

En: Gabon gurnard

Fr: Grondin du Gabon

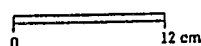
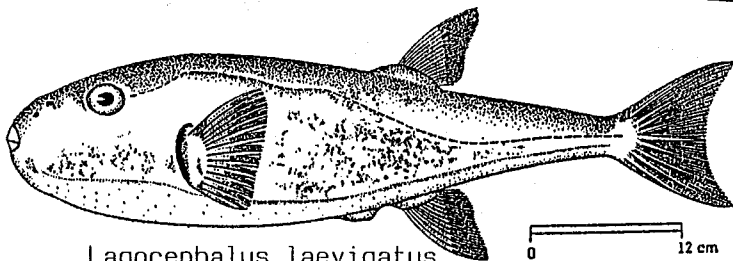
TETRAODONTIDAE



Ehippion guttifer

En: Prickly puffer

Fr: Compère à points blancs

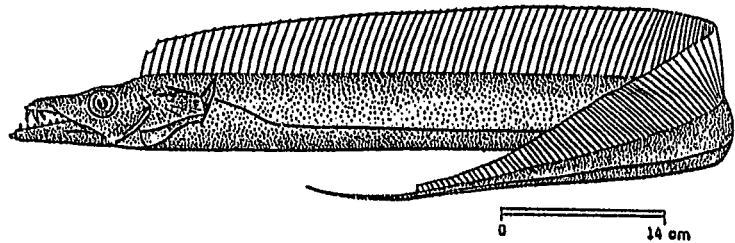


Lagocephalus laevigatus

En: Smooth puffer

Fr: Compère lisse

TRICHIURIDAE

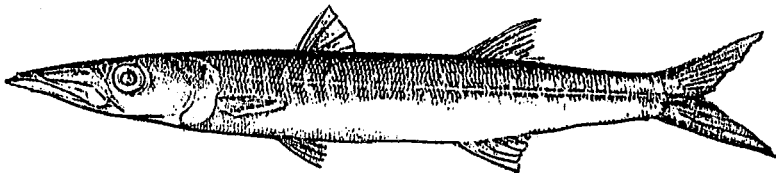


Trichiurus lepturus

En: Largehead hairtail

Fr: Poisson-sabre commun, Ceinture

SPHYRAENIDAE



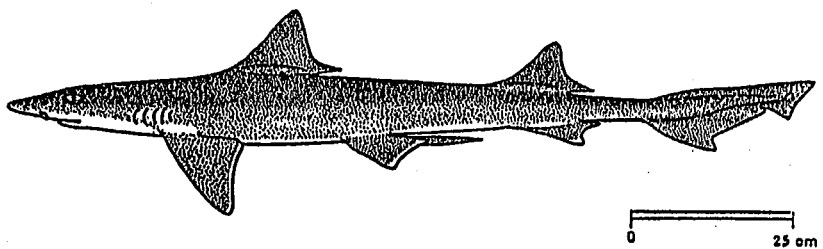
Sphyræna guachancho

En: Guachanche barracuda

Fr: Bécune guachanche, Barracuda

SHARKS AND RAYS

TRIAKIDAE

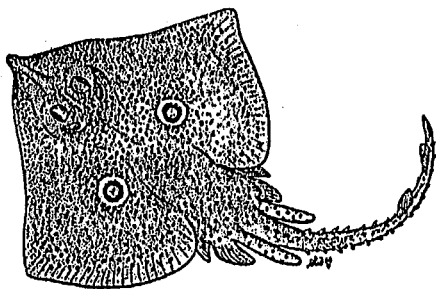


Mustelus mustelus

En: Smoothhound

Fr: Emissole lisse

RAJIDAE

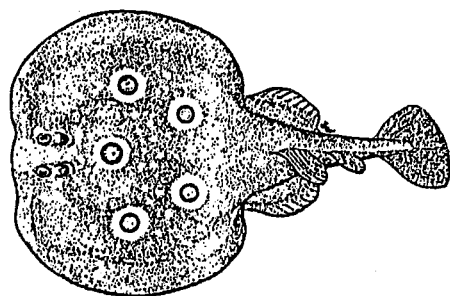


Raja miraletus

En: Brown ray

Fr: Raie- miroir

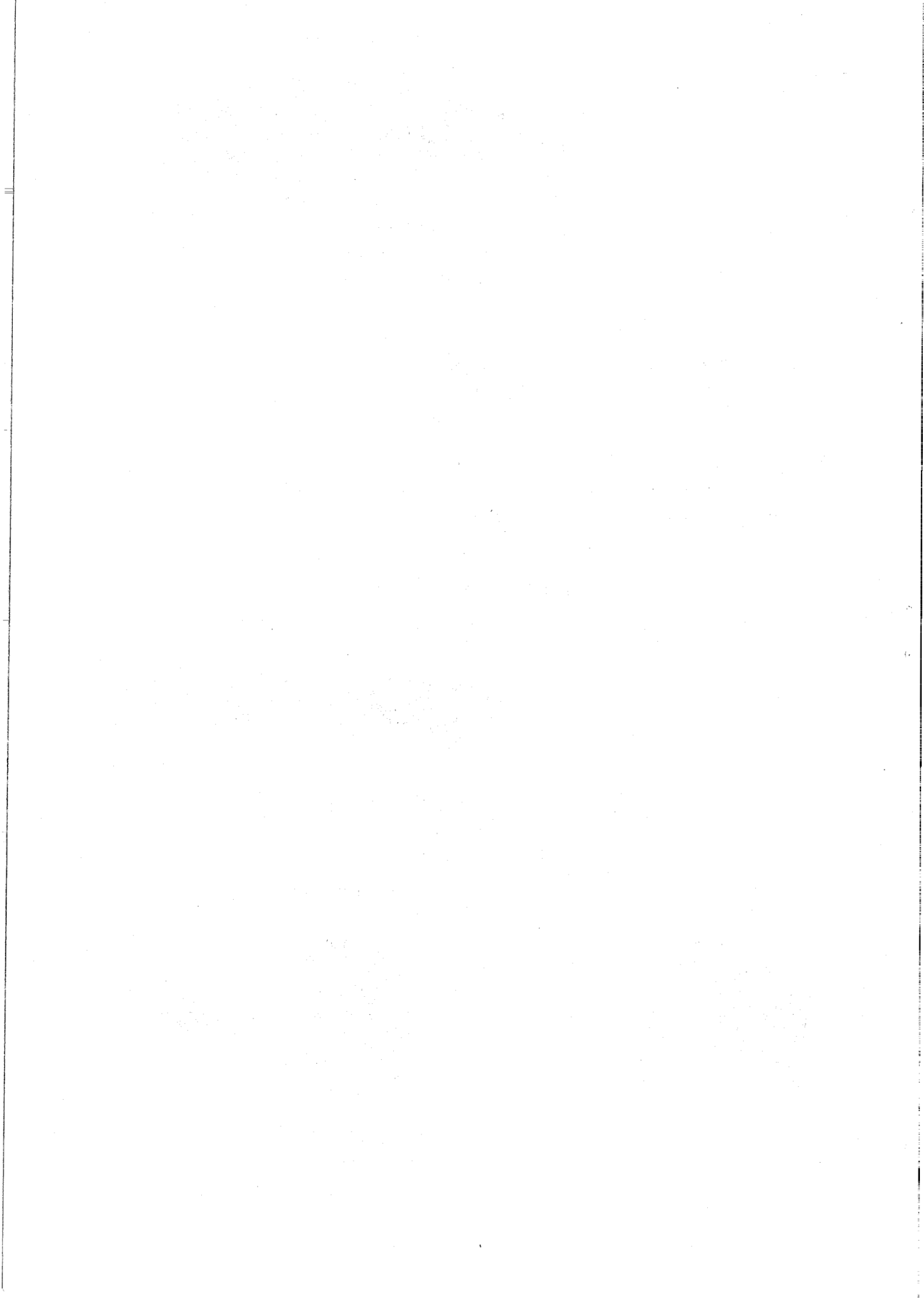
TORPEDINIDAE



Torpedo torpedo

En: Common torpedo

Fr: Torpille ocellée



Annex 10. Acoustic instruments and fishing gear.

ACOUSTIC INSTRUMENTS

Two SIMRAD scientific echo sounders, 38 and 120 kHz, were used during the survey for estimation of fish density. In addition an ES 400 split beam sounder was used.

INSTRUMENT SETTINGS

	EK 400/38	EK 400/120	ES 400
Range	0-100. or 0-250	0-100	0-25 to 0-250
Transm.	High (5000 W NOM)	High (1250 W NOM)	EK/ES adapter
Bandwidth	3.3 kHz	3.3 kHz	3.5 kHz
Pulselength	1 ms	1 ms	1 ms
TVG	20 log R	20 log R	40 log R
Attenuator	20 dB	0	Fixed
Rec. gain	7	5	
Transducer	8° x 8° ceramic or split beam	Ceramic 10 cm circular	Split beam 10°

Presentation mode: Compensated

EK 400/38 was coupled to the digital integrator QD and to one analog integrator QM.

QD settings: Gain 30 dB, Threshold 10 to 26 mv.

QM settings: Gain 20 dB x 10. Threshold 10.

EK 400/120 was coupled to the other QM integrator. Gain 10 dB x 10. Threshold 0.

ES 400 was connected to an Epson printer for hardcopy of the size distribution diagram (histogram).

Calibration on standard copper sphere.

EK 400/38: SL + VR = 140.8 dB (Transd. 8° x 8°)

EK 400/38-ES: SL + VR = 137.3 dB (Split beam transm.)

Sonar

An ST sonar was used to detect fish schools close to the surface. Recorder range 0-250 m.

Survey assignment DR. FRIDTJOF NANSEN
February 1975 to December 1987

Period	Assignment	Period	Assignment
FEB 1975– NOV 1976	NW ARABIAN SEA	APR–DEC 1981	WEST-AFRICA
JAN–JUN 1977	PAKISTAN	DEC 1981– APR 1982	WEST-AFRICA
AUG 1977– JUN 1978	MOZAMBIQUE	JUN 1982	TANZANIA
JUL 1978	SEYCHELLES	AUG 1982	KENYA
AUG–SEP 1978	SRI LANKA	SEP–OCT 1982	MOCAMBIQUE
APR–JUN 1979	SRI LANKA	NOV–DEC 1982	TANZANIA
JUL–AUG 1979	OMAN AND ADEN GULFS	FEB–MAR 1983	GULF OF OMAN/ PAKISTAN
SEP–NOV 1979	BURMA	MAY–JUN 1983	KENYA/TANZANIA/ MOCAMBIQUE/ MADAGASCAR
NOV–DEC 1979	BANGLADESH	AUG–SEP 1983	MALDIVES/PAKISTAN/ IRAN
JAN–FEB 1980	SRI LANKA	NOV–DEC 1983	GULF OF OMAN/ OMAN EEZ
MAR–APR 1980	BURMA	JAN–MAR 1984	PAKISTAN/S.YEMEN/ SOMALIA/ETHIOPIA
MAY 1980	BANGLADESH	APR–JUN 1984	OMAN/IRAN/PAKISTAN
JUN–AUG 1980	MALAYSIA/THAILAND/ INDONESIA	AUG–SEP 1984	S.YEMEN/SOMALIA/OMAN
SEP–NOV 1980	MOZAMBIQUE	MAR–DEC 1985	CONGO/GABON
DEC 1980	KENYA	JAN 1985– JUN 1986	ANGOLA
JAN–FEB 1981	OMAN AND ADEN GULFS	AUG–DEC 1986	WEST-AFRICA
MAR 1981	EGYPT	FEB–DEC 1987	CENTRAL-AMERICA
MAR 1981	TUNIS		
APR 1981	ALGIER		