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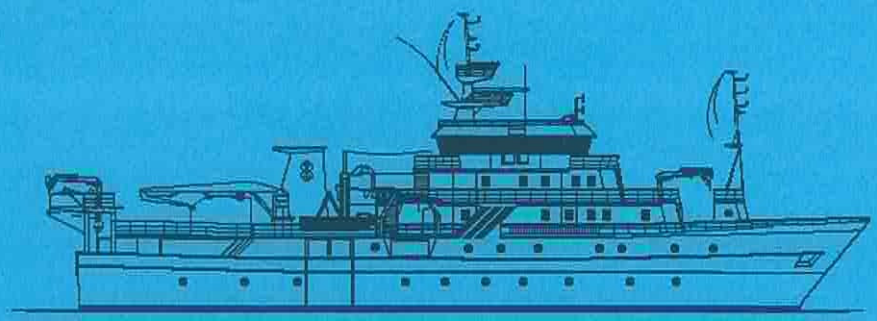
CRUISE REPORTS "DR. FRIDTJOF NANSEN"



# SURVEYS OF THE FISH RESOURCES OF NAMIBIA

## Cruise Report No 3/94

### Part I
### Surveys of the hake stocks
### 19 October - 24 November 1994

### Part II
### Surveys of the pelagic stocks
### 26 November - 15 December 1994

Ministry of Fisheries & Marine Resources
Swakopmund
Republic of Namibia

Institute of Marine Research
Bergen
Norway

The DR FRIDTJOF NANSEN RESEARCH PROGRAMME is sponsored by the Norwegian Agency for Development Cooperation (NORAD), the Food and Agriculture Organization of the United Nations (FAO), and the United Nations Development Programme (UNDP). The programme in Namibia is organized and planned under agreements between NORAD, Namibian authorities and the Institute of Marine Research, Norway. Its execution is the responsibility of the Institute of Marine Research, Bergen in cooperation with the Ministry of Fisheries & Marine Resources of Namibia.

The programme has comprised the following surveys:

| | | |
|---|---|---|
| Survey | 1/90 | 25 January to 19 March 1990 |
| " | 2/90 | 27 May to 20 June 1990 |
| " | 3/90 | 11 September to 6 October 1990 |
| " | 1/91 | 25 January to 23 March 1991 |
| " | 2/91 | 23 October to 16 December 1991 |
| " | 1/92 | 23 April to 21 June 1992 |
| " | 2/92 | 20 October to 16 December 1992 |
| " | 1/93 | 20 January to 19 March 1993 |
| " | 2/93 | 21 April to 25 May 1993 |
| " | 1/94 | 19 January to 21 February 1994* |
| " | 2/94 | 26 April to 24 June 1994 |
| " | 3/94 | 19 October to 15 December 1994 |

* First survey with the new R/V 'Dr. Fridtjof Nansen'.

# PART I

## SURVEYS OF THE HAKE STOCKS
## 19 October - 24 November 1994

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# CHAPTER 1 INTRODUCTION

## 1.1 GENERAL OBJECTIVES

Following an offer from NORAD extended through FAO and UNDP, an agreement was reached in Windhoek in January 1990 between the UNDP Resident Representative and Namibian authorities for the execution of a programme of surveys of the fish resources of the Namibian shelf with the RV 'Dr. Fridtjof Nansen'.

The main objectives were agreed as follows:

> To describe the distribution, composition and abundance of the most important fish resources. Small pelagic fish, including horse mackerel, pilchard and anchovy would be investigated by the acoustic integration method combined with sampling with mid-water and bottom trawls. A swept area trawl survey programme would be used for the demersal stocks. All catches would be sampled by species, weight and numbers, including biological sampling of the commercially important stocks.
>
> To carry out environmental studies including recording of surface temperature on a continuous basis and hydrographic sampling on a series of fixed profiles.

## 1.2 OBJECTIVES OF SURVEY 3/1994

The main objective was to continue to monitor the abundance, geographic distribution and size composition of the hake stocks within the Namibian EEZ and to describe the trends in development of the hake stocks within the programme perspective of support to rebuilding of the hake stocks since independence, in line with the national objectives set in the Government White paper of 1990. As secondary objectives, the lesser abundant, but commercial important species as monk sole and kingklip would be studied in detail as these species form a natural bycatch of a hake survey in Namibia. As part of the hake research, environment parameters where continuously recorded in order to improve knowledge on the influence of the environment on the distribution and natural mortality of the hake stocks.

The acoustic system was used to observe possible mid-water occurrence of the hakes. The survey design for the swept-area trawl programme was based on a semi-random distribution of hauls along regular transects perpendicular to the coast. The transect distance was normally around 20 nm, except in the very southern part where the distance was 30 nm due to a persistent lower density of fish observed during the previous period of the survey programme. On the slope the

stations were laid out to cover the depth ranges of the two hake species. The on-shelf stations where laid out 10 to 15 nm apart until the zero line of hake distribution were found. Biomass estimates of hake were based on post stratification by depth and density aggregations. An automatic interpolation method was also applied on the data set as a first attempt to establish alternative objective estimation methods for control of the main procedures.

## 1.3 PARTICIPATION

The scientific staff consisted of:

From Namibia:

Lima Maartens (19/10-7/11), Hashali Hamukuaya ( 8-24 /11), Filimon Dausab (8-24/11), Heidrun Plarre (19/10-7/11), Hilma Asino (19/10-7/11), Malakia Shimanda and Jamy Traut (19/10-7/11), Michael Evenson (19/10-7/11), Johnny Gamathan, Siegfred Gowaseb (8-24/11), Justina Shifidi (8-24/11).

From Norway:

Oddgeir Alvheim, Tore Strømme (7-24/11), Guillermo Burgos, Terje Haugland, Tore Mørk and Veslemøy Eriksen (University of Bergen).

## 1.4 NARRATIVE

The course tracks with the positions of the fishing and hydrographic stations are shown in Figures 1 a-c.

The vessel left Cape Town on the afternoon of 19 October and steamed north for about 36 hours to the Orange River to commence the work. Trawling was mainly carried out during daylight hours except for the deeper stations on the slope that sometimes could be carried out during dark. In the Central Region CTD-stations were taken on every trawl station on the shelf in order to map the environment conditions in relation to fish distribution. Bottom sediment samples were collected with a grab to study the benthos community in the oxygen deficient waters in the central area and in a set of control stations more offshore. On 7 November the vessel called on Walvis Bay for crew change. The northern point of the survey area (off the Cunene River) was reached on 21 November, and a previously skipped transect south of Cape Frio was completed the next day. The vessel arrived in Walvis Bay on 23 November. The weather conditions were not favourable, but not bad to the extent that work had to be interrupted. The programme was completed according to the plan with what must be considered as the optimal number of days set off for the task, that is 36 days. This did however not allow any time for experimental studies. 226 bottom trawl and 116 CTD-stations were sampled.

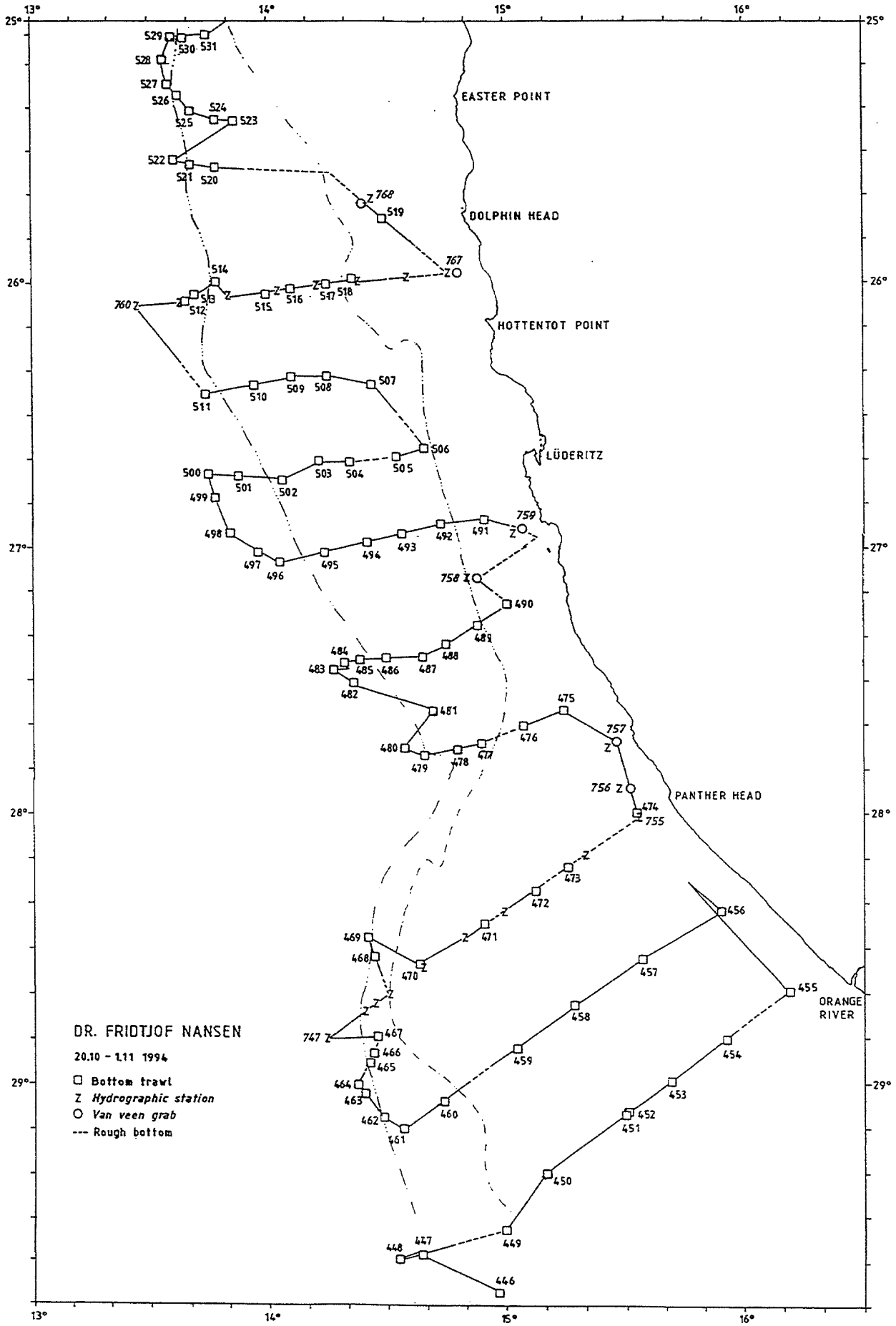



Figure 1a Southern Region (Orange River to St. Francis Bay). Course tracks, fishing stations and hydrographic stations.

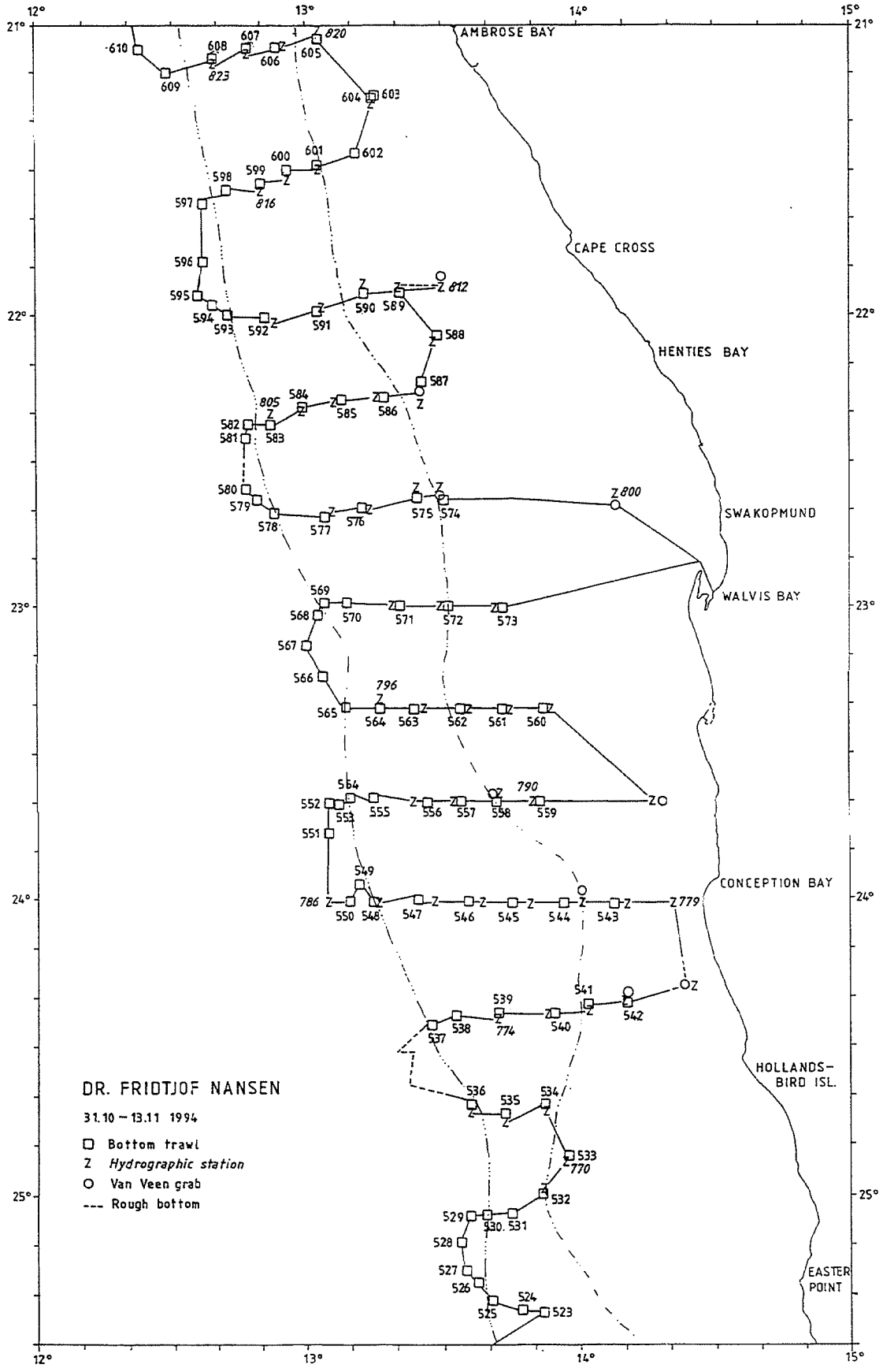



Figure 1b Central Region (St. Francis Bay to Ambrose Bay). Course tracks, fishing stations and hydrographic stations.

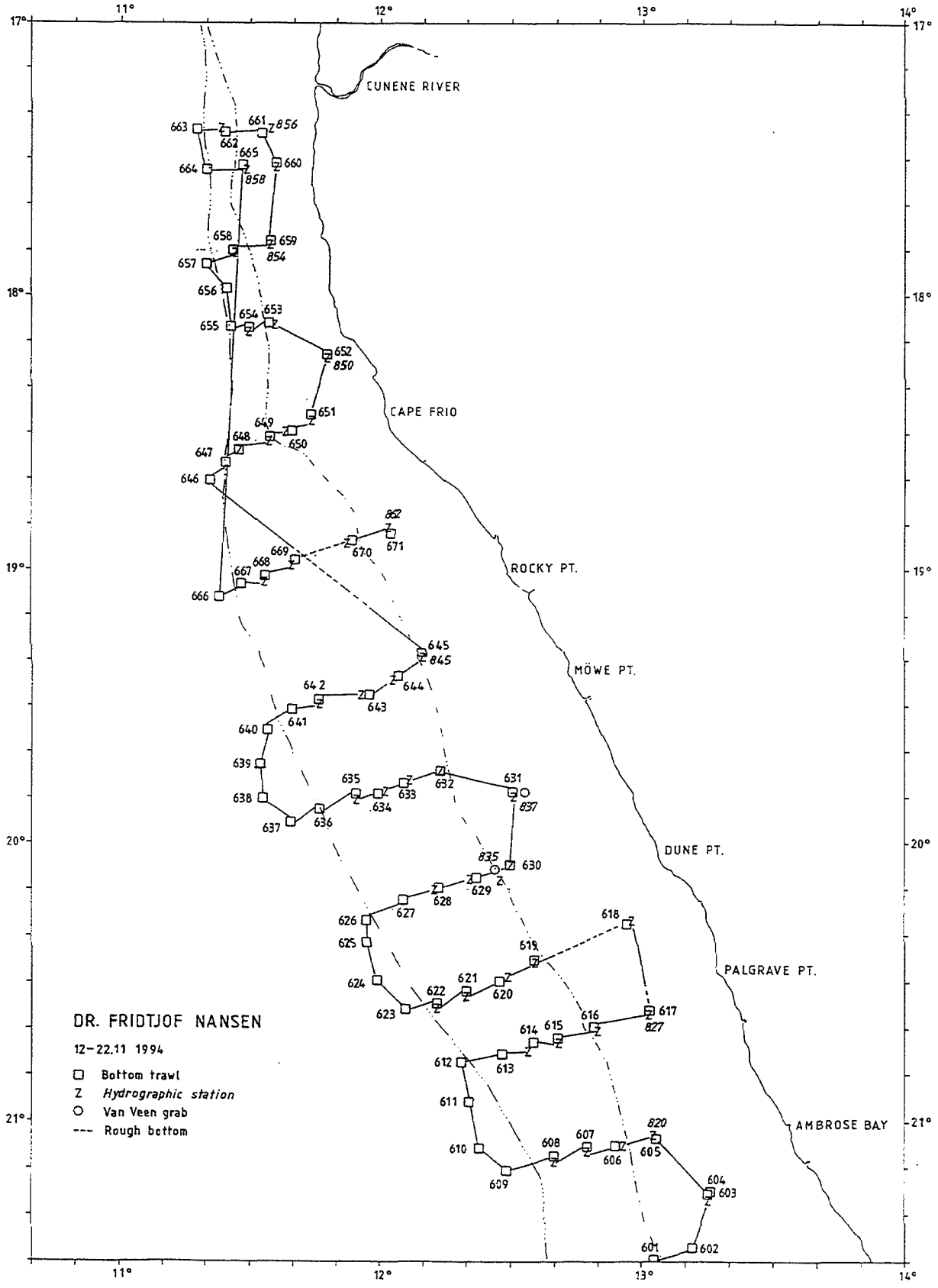



Figure 1c Northern Region (Ambrose Bay to Cunene River). Course tracks, fishing stations and hydrographic stations.

# CHAPTER 2 HYDROGRAPHY

Sea temperature at 5 m depth was continuously recorded along the cruise track and is shown in Figures 2a-c. Strong southern winds prevailed during most of the survey and signs of intensive upwelling are shown with one centre off Lüderitz. A second, less pronounced, upwelling cell is located with its centre off Dune Point.

Temperature, salinity and oxygen from the three standard hydrographical transects are shown in Figures 3a-c.

Bottom oxygen was recorded at all fishing stations on the shelf from Holland Bird Island and northwards (Figures 4a-b). This was done in order to investigate the effect of these parameters on the hake distribution. Low oxygen conditions defined as $O_2$<0.5ml/l characterize the shelf environment until 200 m bottom depth between Conception Bay and Cape Cross. In the previous survey (May 1994) pockets of low oxygen water covered the slope down to almost 500 m at several locations indicating a partial replacement of oxygen depleted water in the interim period.

The same oxygen maps were overlaid with the distribution maps of the Cape hake (Figures 5a-b). They show that hake commonly can sustain oxygen levels down to 0.25 ml/l.

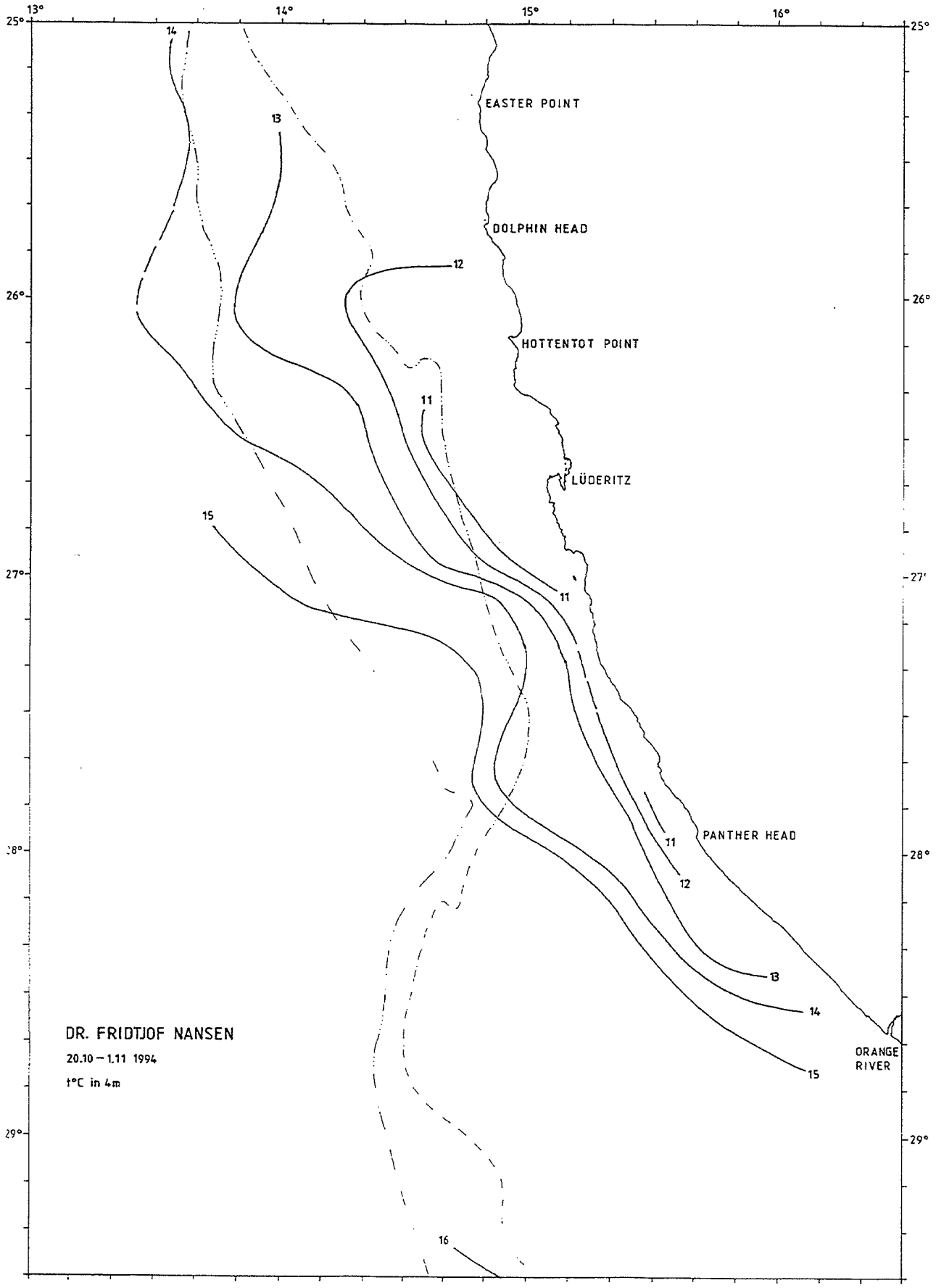



Figure 2a Orange River to St. Francis Bay. Distribution of sea temperature at 5 m depth.

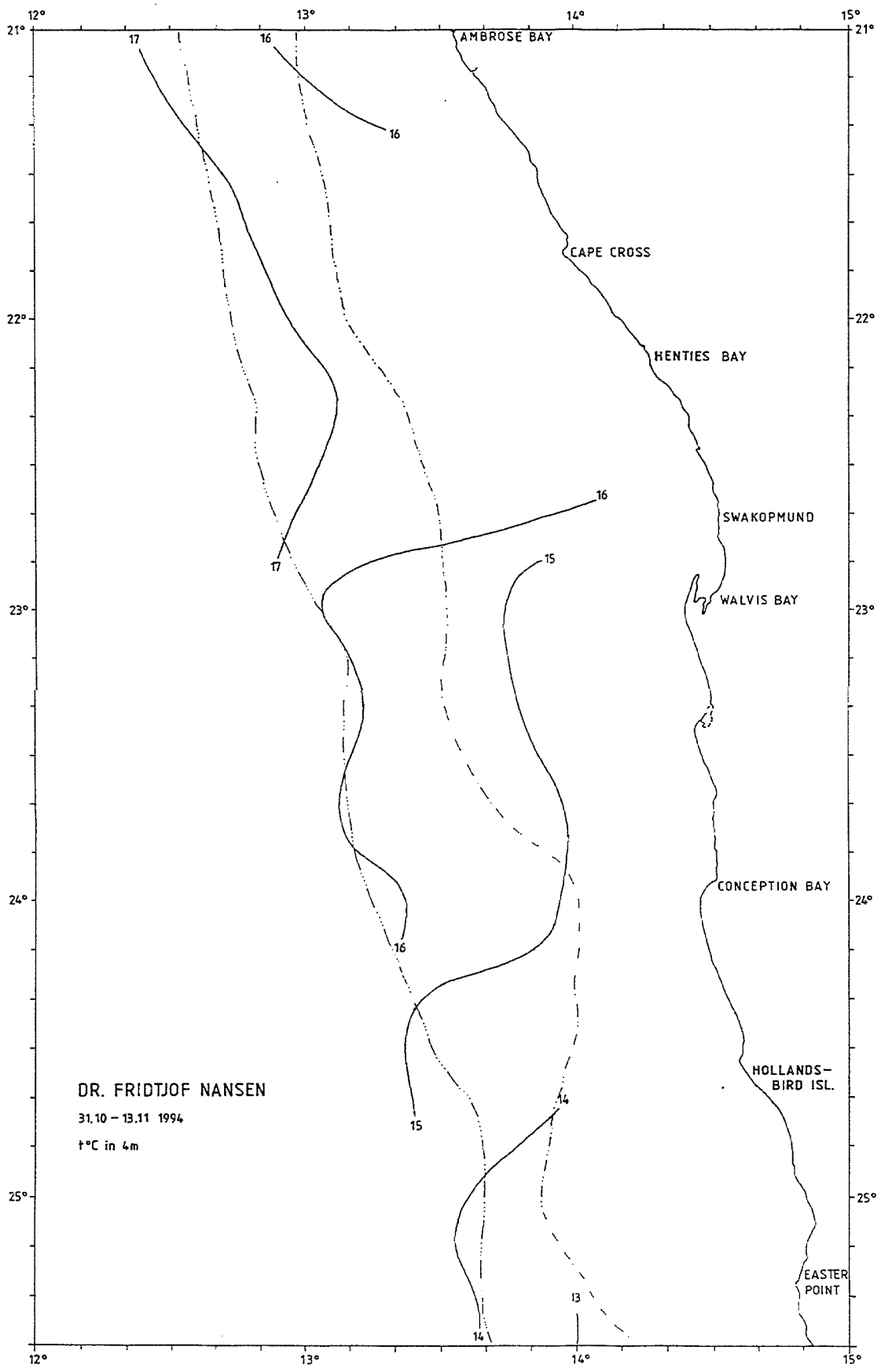



Figure 2b St. Francis Bay to Ambrose Bay. Distribution of sea temperature at 5 m depth.

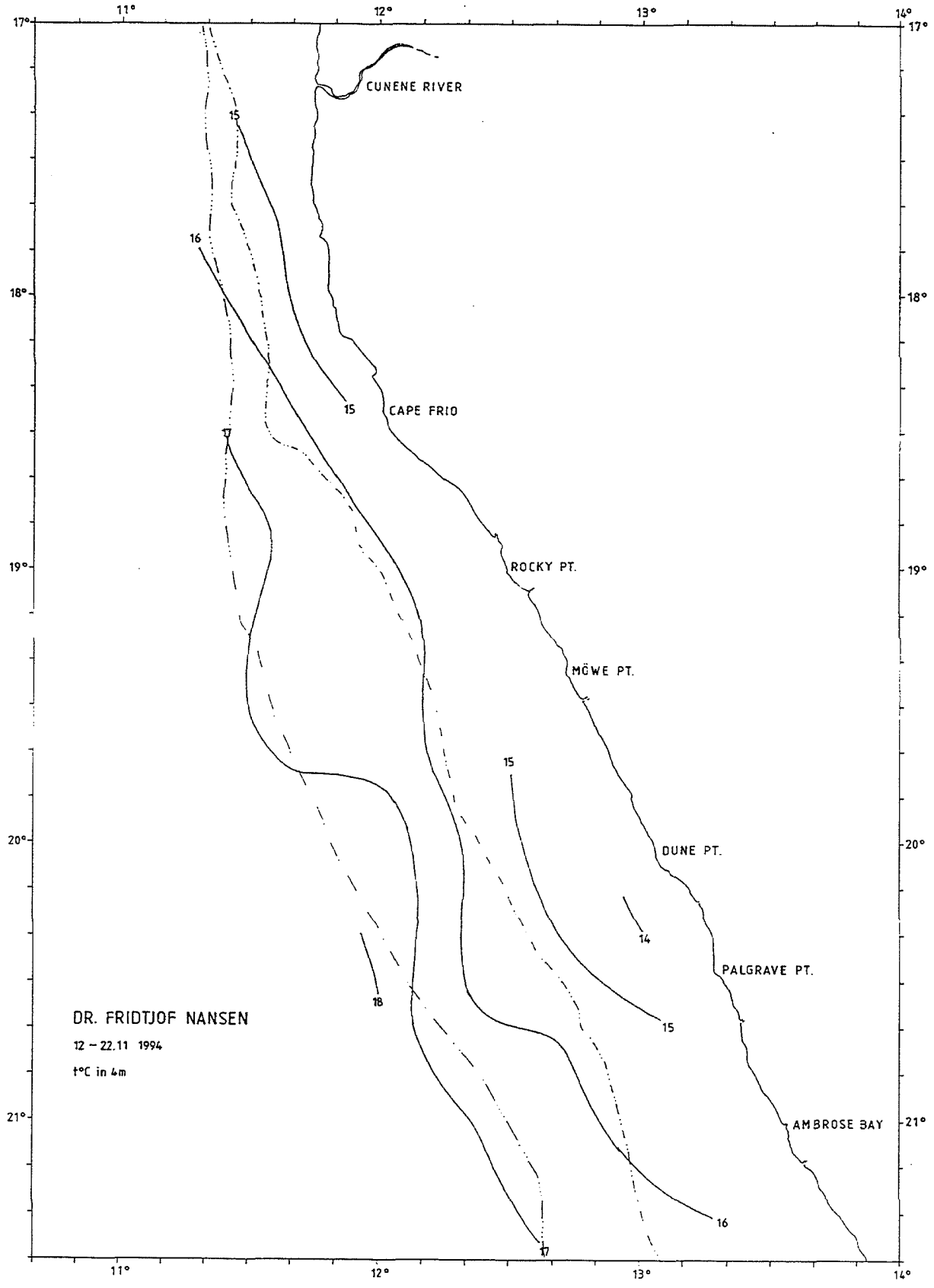
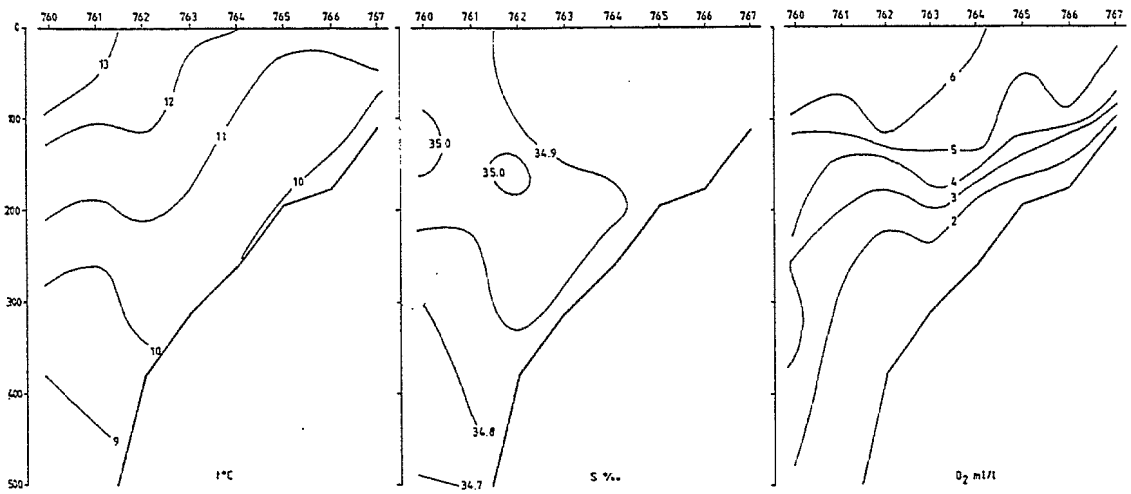
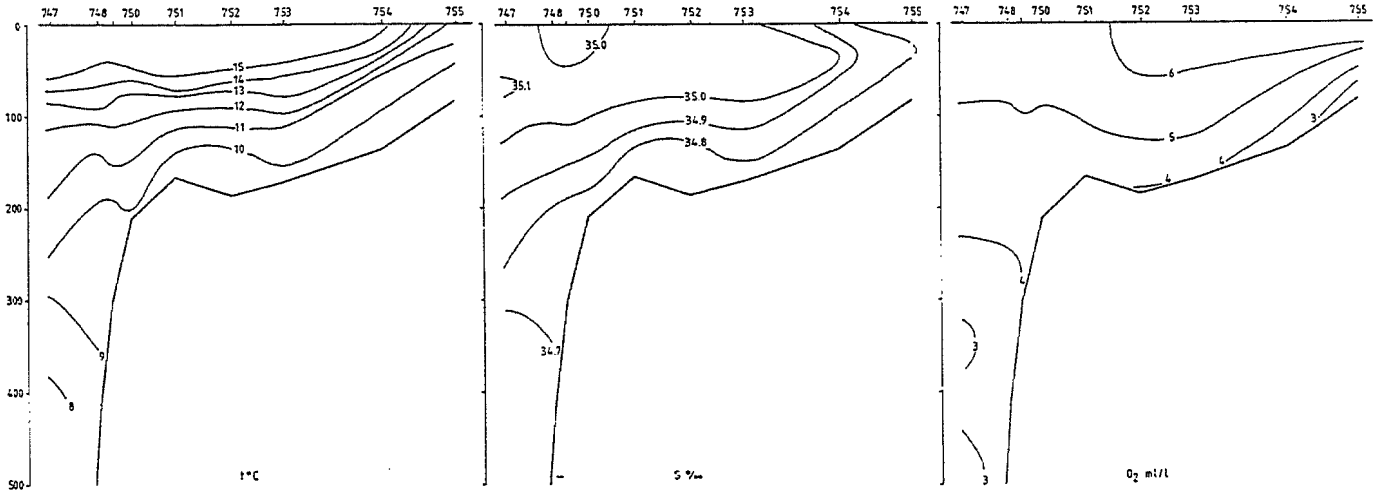



Figure 2c Ambrose Bay to Cunene River. Distribution of sea temperature at 5 m depth.

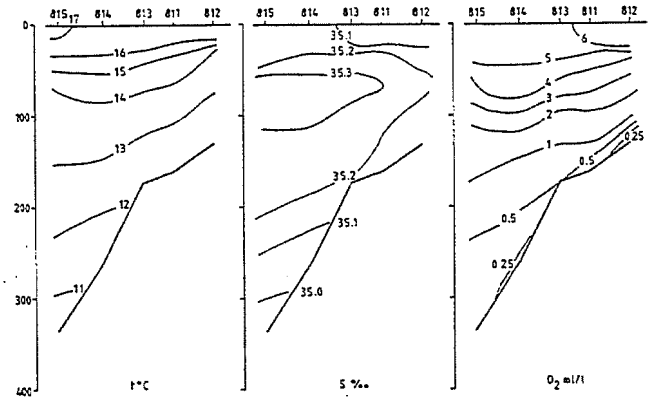



HOTTENTOT POINT 30.10 1994

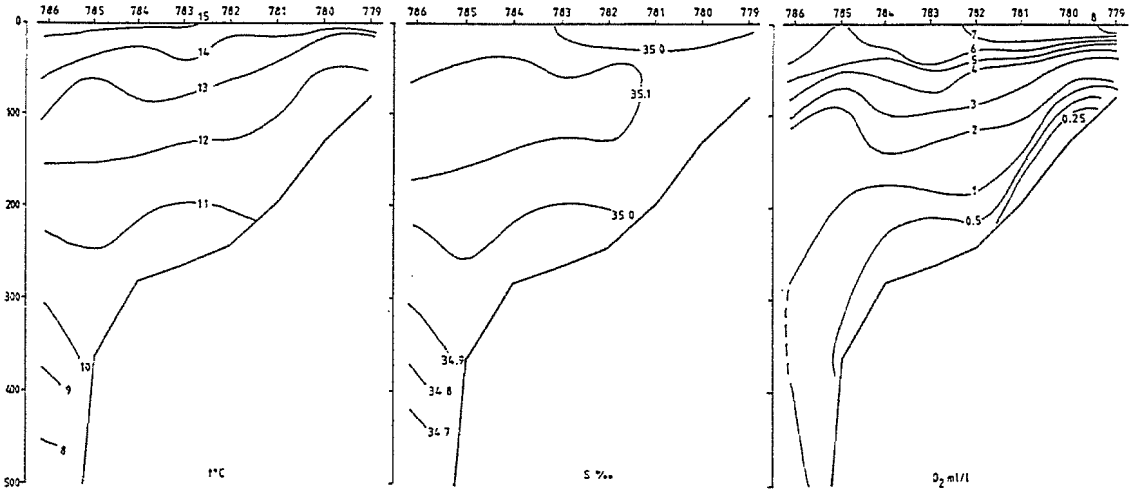



PANTHER HEAD 23-24.10 1994

Figure 3a Temperature, salinity and oxygen in the standard profiles worked.

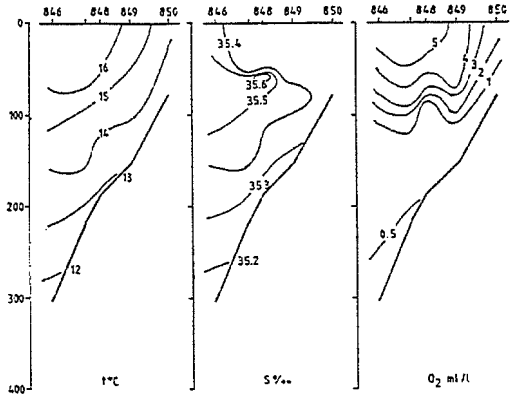



CAPE CROSS 10-11.11 1994

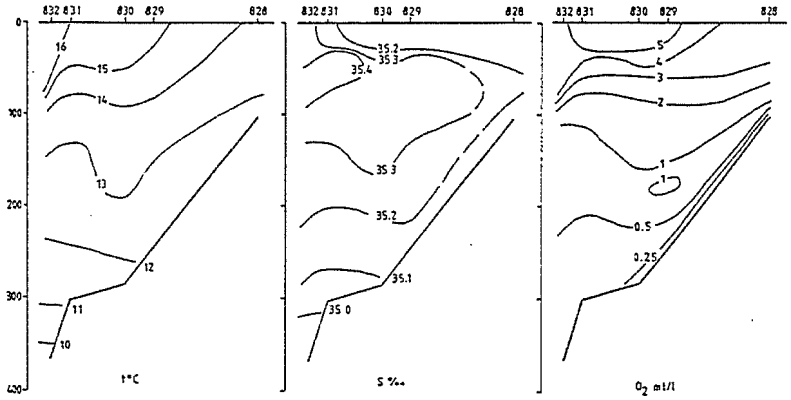



CONCEPTION BAY 3.11 1994

Figure 3b Temperature, salinity and oxygen in the standard profiles worked.




CAPE FRIO 19.11 1994




DUNE POINT 15.11 1994

Figure 3c Temperature, salinity and oxygen in the standard profiles worked.

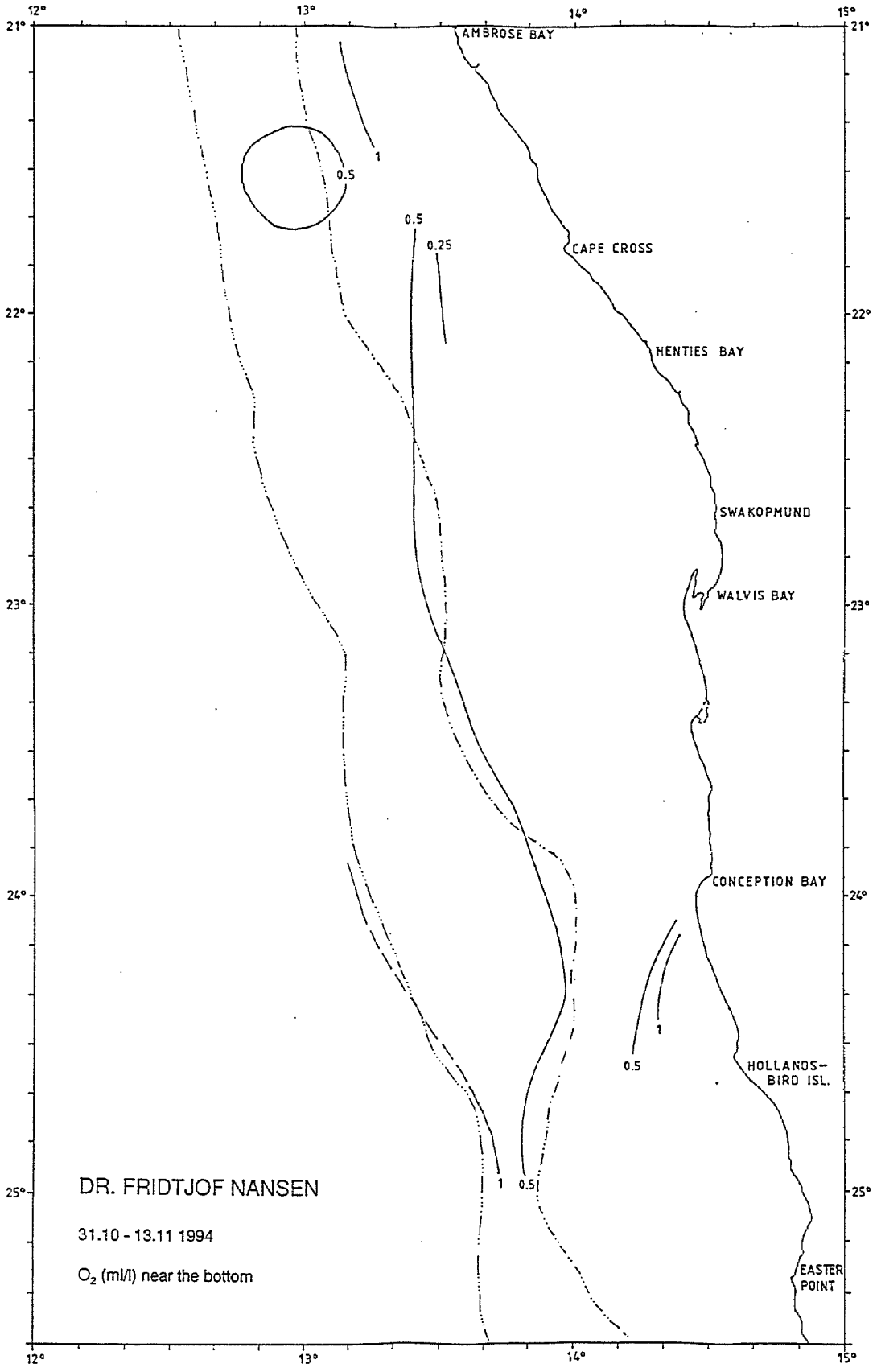



Figure 4a St. Francis Bay to Ambrose Bay. Distribution of oxygen (ml/l) near the bottom

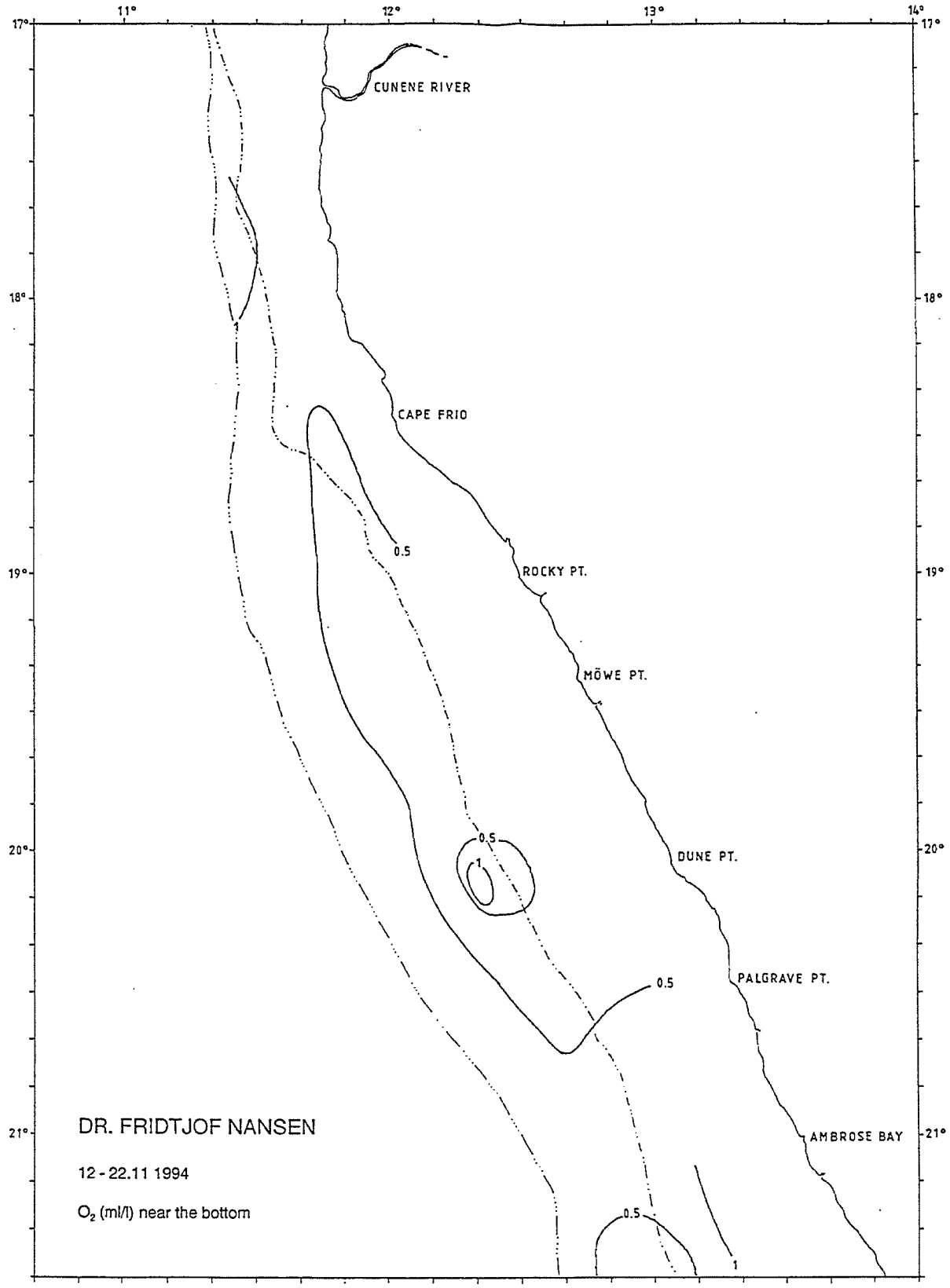



Figure 4b Ambrose Bay to Cunene River. Distribution of oxygen (ml/l) near the bottom

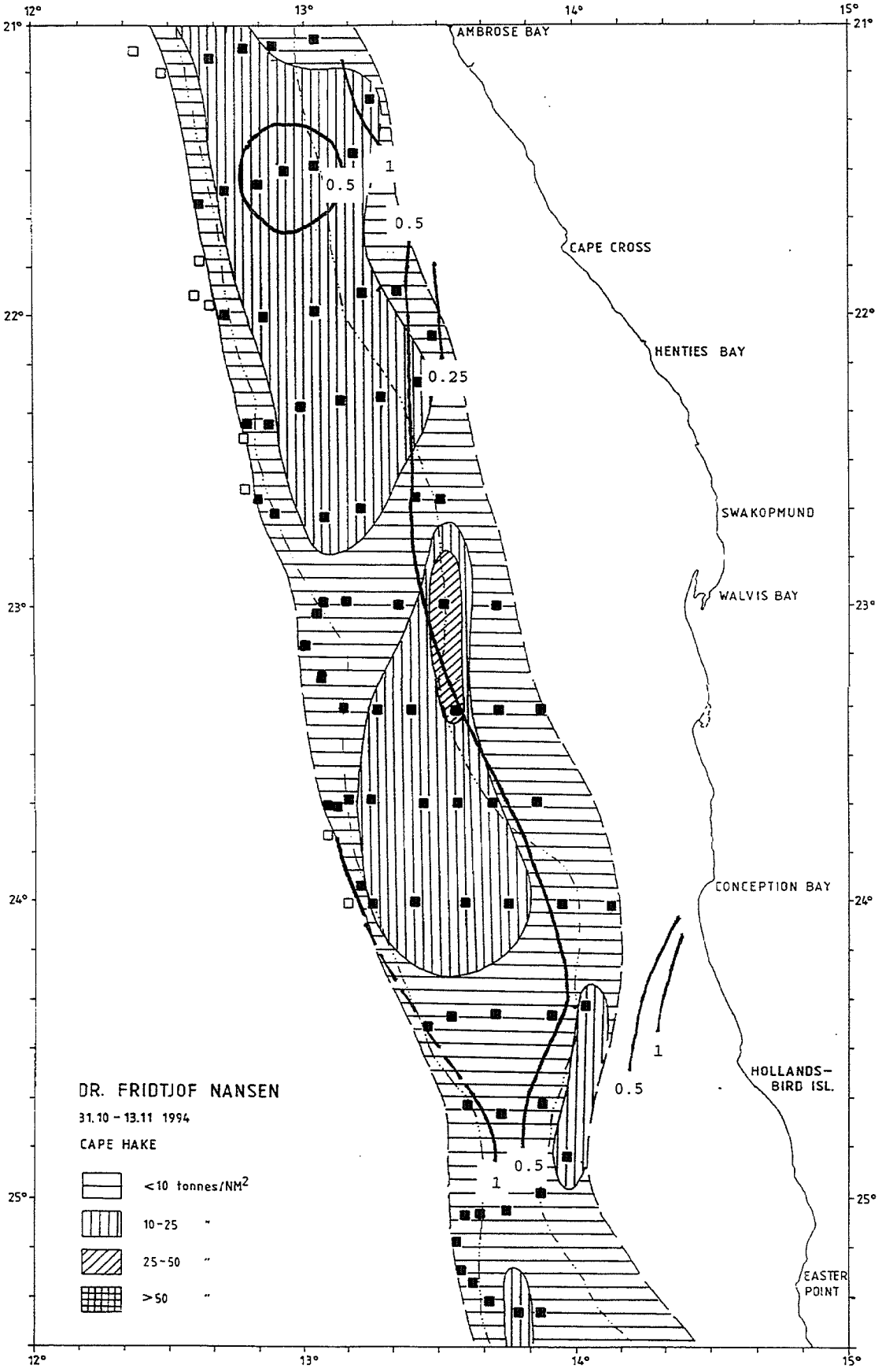



Figure 5a St. Francis Bay to Ambrose Bay. Distribution of Cape hake and oxygen (ml/l) near the bottom.

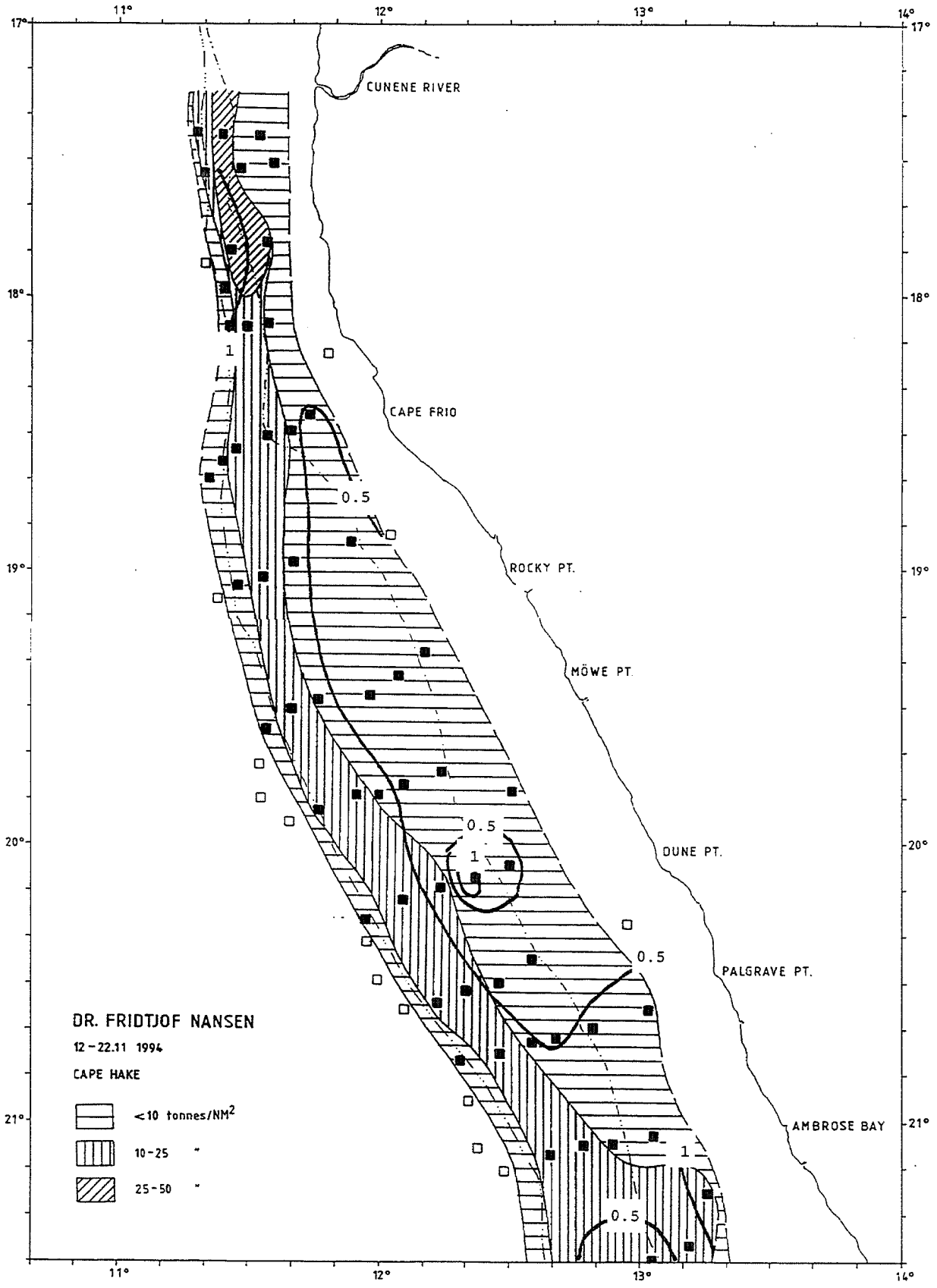



Figure 5b Ambrose Bay to Cunene River. Distribution of Cape hake and oxygen (ml/l) near the bottom.

# CHAPTER 3 RESULTS OF THE ACOUSTIC AND TRAWL SURVEY

## 3.1 DISCUSSION OF METHODS

In the trawl survey programme all catches were sampled for composition in weight and numbers by species. The bottom trawl has a headline of 31 m (float line), a footrope of 47 m, headline height of 5-6 m and a distance between the wings during towing of about 18 m. All trawl hauls were monitored by SCANMAR trawl sensors (bottom contact, headline height and distance between the doors). This technology allows to determine with improved accuracy the actual time the trawl is on the bottom. For conversion of catch rates to fish densities the area between the wings is assumed to be equal to the effective fishing area and the retention factor q is equal to 1. With the new vessel, starting from January 1994, a new trawl gear was introduced with smaller bobbins. This gear gives better bottom contact and higher catch rates for bottom dwelling species as monk and sole. For the hake species the new gear is assumed to have no difference in performance. The trawl doors, net, warp and wire dimensions are as with the former vessel (see Annex IV). The length of a haul over bottom, recorded as distance trawled, was measured by Doppler log tracking the bottom.

Table 1 Hakes. Frequency of observations of hake in mid-water during trawling. No. of trawl stations with swept area densities and no. of stations with observations of hake above 5 m from bottom with acoustic density estimate (tonnes/nm$^2$).

| | DAY | NIGHT |
|---|---|---|
| ORANGE RIVER - ST. FRANCIS BAY | | |
| Trawl | | |
| No. stations | 65 | 18 |
| Mean density | 18.0 | 12.7 |
| Acoustic obs. | | |
| No. stations | 25 | 8 |
| Mean density | 2.9 | 3.4 |
| Average acou. corr. | 6% | 12% |
| ST. FRANCIS BAY - AMBROSE BAY | | |
| Trawl | | |
| No. stations | 70 | 7 |
| Mean density | 10.7 | 7.9 |
| Acoustic obs. | | |
| No. stations | 21 | 0 |
| Mean density | 1.9 | |
| Average acou. corr. | 5% | 0% |
| AMBROSE BAY - CUNENE RIVER | | |
| Trawl | | |
| No. stations | 51 | 8 |
| Mean density | 9.8 | 7.4 |
| Acoustic obs. | | |
| No. stations | 10 | 2 |
| Mean density | 6.0 | 2.6 |
| Average acou. corr. | 12% | 9% |

The problem of mid-water occurrence of hake and its effect on the swept area assessments has been discussed in earlier cruise reports. As in previous investigations off-bottom hake in mid-water constituted only a minor problem in the south and in the central area. In

the north it made up an average 10% addition to the demersal biomass in the day hauls and in a more limited number of night hauls the average correction was 9% (Table 1). These corrections are much lower than those applied for the same area in survey 1/94 and are believed to be more representative (Table 1).

## 3.2 SOUTHERN REGION, ORANGE RIVER TO ST. FRANCIS BAY

The complete record of the fishing stations is shown in Annex III. Table 2 shows the catch rates of the main commercial species standardized to kg/hour for the shelf and the slope separately. Compared with the April-May survey the mean catch rates for the hakes are about 20% lower on the shelf and almost 70% lower on the slope. Part of the decline on the slope can be associated by seasonal migration northwards for the Cape hake and southwards for the deep water hake. The mean monk catch rates have increased by almost 300% on the shelf and almost 90% on the slope and are back to the record level recorded during the survey in January. The catch rate of kingklip increased slightly on the shelf and remained at the same level as during April-May survey along the slope. The catch rates of the soles have not increased and are low as compared with the other commercial species.

Table 2 Southern Region. Catch rates in kg/hour by main groups by swept area bottom trawl for the shelf and the slope.

SHELF 50-259 m

| ST.NO. | DEP. | Hake | Monk | Kingklip | Soles | Squid | Other |
|---|---|---|---|---|---|---|---|
| 449 | 253 | 68.7 | 23.6 | 49.1 | | 3.8 | 454.3 |
| 450 | 163 | 158.6 | 4.0 | | | 2.2 | 198.1 |
| 452 | 178 | 51.8 | 5.6 | 0.9 | | 9.1 | 84.5 |
| 453 | 177 | 282.8 | 3.3 | 2.6 | | 22.3 | 285.5 |
| 454 | 150 | 585.7 | 16.6 | 0.9 | | 8.4 | 77.2 |
| 455 | 93 | 2708.1 | | 24.8 | 2.0 | | 146.4 |
| 456 | 100 | 2006.4 | | | | | 171.6 |
| 457 | 159 | 44.6 | 0.5 | 1.7 | | 0.4 | 56.2 |
| 458 | 163 | 157.8 | | | | 9.2 | 285.8 |
| 459 | 168 | 136.5 | 8.9 | | | 6.2 | 132.0 |
| 460 | 222 | 367.7 | 35.6 | 14.7 | | 6.7 | 548.2 |
| 470 | 163 | 61.9 | | | | 1.9 | 1677.9 |
| 471 | 177 | 100.8 | | | | 8.2 | 118.0 |
| 472 | 173 | 96.8 | 0.8 | | | 3.5 | 478.6 |
| 474 | 83 | 204.0 | | | | 10.5 | 35.6 |
| 475 | 126 | 414.8 | | 45.8 | | 7.7 | 9.6 |
| 476 | 163 | 263.0 | | | | 2.9 | 13.1 |
| 489 | 216 | 767.0 | 4.5 | 3.5 | 2.8 | 8.8 | 136.1 |
| 490 | 159 | 324.0 | | 9.8 | | | 6.6 |
| 491 | 159 | 3187.4 | | | | | 2.1 |
| 492 | 222 | 107.0 | 6.5 | 1.8 | 0.5 | 1.5 | 51.6 |
| 506 | 217 | 161.9 | 4.7 | 31.3 | 8.1 | 3.2 | 200.8 |
| 517 | 245 | 140.2 | 142.6 | | 20.6 | | 326.9 |
| 518 | 197 | 1171.0 | 5.8 | | 0.8 | | 34.0 |
| 519 | 163 | 85.8 | | | 1.2 | | 28.6 |
| MEAN | | 546.2 | 10.5 | 7.5 | 1.4 | 4.7 | 222.4 |

SLOPE 260-700 m

| ST.NO. | DEP. | Hake | Monk | Kingklip | Soles | Squid | Other |
|---|---|---|---|---|---|---|---|
| 446 | 378 | 434.5 | 12.3 | 3.2 | | 5.1 | 174.6 |
| 447 | 420 | 66.1 | 27.3 | 5.9 | | 1.4 | 44.2 |
| 448 | 522 | 96.9 | 34.1 | | | 1.3 | 142.6 |
| 461 | 308 | 1448.9 | 9.4 | | | 78.4 | 1407.5 |
| 462 | 390 | 1828.2 | | 27.5 | | 8.2 | 1174.6 |
| 463 | 472 | 385.5 | 45.0 | 79.0 | | 40.6 | 139.9 |
| 464 | 560 | 28.1 | | 5.3 | | 3.2 | 160.3 |
| 465 | 441 | 843.6 | 109.8 | 48.6 | | 1.8 | 358.4 |
| 466 | 351 | 332.5 | 2.1 | | | 9.1 | 156.0 |
| 467 | 294 | 275.6 | 7.3 | | | 0.9 | 694.6 |
| 468 | 368 | 121.9 | 19.1 | 78.6 | | 6.0 | 609.6 |
| 469 | 453 | 301.8 | | 8.2 | | 28.0 | 59.9 |
| 477 | 293 | 129.6 | | 38.7 | | 2.3 | 44.0 |
| 478 | 367 | 962.9 | | 190.7 | | 16.2 | 35.3 |
| 479 | 419 | 633.5 | 8.7 | 30.3 | | 13.0 | 97.4 |
| 480 | 500 | 782.7 | | 9.1 | | 40.8 | 107.1 |
| 482 | 553 | 279.2 | | | | | 119.8 |
| 483 | 631 | 246.2 | | | | 17.6 | 392.9 |
| 484 | 504 | 137.7 | 13.2 | 5.8 | | 21.6 | 70.4 |
| 485 | 422 | 1176.8 | 10.9 | 58.0 | | 18.0 | 217.6 |
| 486 | 380 | 1558.4 | | 9.2 | | 5.7 | 126.2 |
| 487 | 334 | 1502.8 | | 14.2 | | 3.1 | 339.5 |
| 488 | 292 | 737.4 | | | | 47.3 | 4585.1 |
| 493 | 286 | 280.7 | 19.7 | 14.0 | 5.4 | 2.9 | 89.6 |
| 494 | 339 | 345.9 | 18.3 | 34.3 | | | 212.9 |
| 495 | 386 | 1034.7 | 18.4 | 15.7 | | 30.1 | 238.6 |
| 496 | 447 | 489.9 | 7.5 | 1.9 | | 65.0 | 126.4 |
| 497 | 497 | 1616.0 | 48.7 | 4.8 | | | 157.6 |
| 498 | 580 | 240.9 | | 3.5 | | 4.0 | 273.7 |
| 499 | 525 | 911.3 | | | | 7.9 | 231.8 |
| 500 | 477 | 1057.9 | 17.0 | | | 3.5 | 260.3 |
| 501 | 422 | 487.4 | 73.5 | 6.8 | | 27.0 | 185.6 |
| 502 | 398 | 1272.9 | 16.2 | 37.7 | | 39.4 | 233.5 |
| 503 | 367 | 871.8 | 13.4 | 119.7 | | 16.4 | 184.6 |
| 504 | 336 | 68.8 | 102.0 | 85.6 | | | 230.6 |
| 507 | 296 | 281.5 | 80.0 | 27.7 | 4.2 | | 84.1 |
| 508 | 318 | 872.6 | 81.1 | 126.5 | | 9.5 | 141.4 |
| 509 | 346 | 158.6 | 54.7 | 46.6 | | | 168.4 |
| 510 | 383 | 63.0 | 38.8 | 31.7 | | 8.7 | 142.2 |
| 511 | 419 | 66.5 | 21.1 | 25.2 | | | 193.5 |
| 513 | 480 | 818.4 | 63.4 | 4.5 | | 0.8 | 396.3 |
| 514 | 394 | 40.9 | 31.7 | 35.1 | | 23.6 | 363.7 |
| 515 | 323 | 106.8 | 38.7 | 13.9 | 1.3 | | 314.5 |
| 516 | 284 | 244.3 | 150.7 | 2.2 | 31.4 | 0.8 | 94.8 |
| 520 | 316 | 350.0 | 54.9 | 14.8 | | 0.6 | 320.2 |
| 521 | 394 | 95.6 | 493.5 | 58.5 | | | 1185.0 |
| 523 | 262 | 322.1 | 5.6 | | | 2.4 | 503.9 |
| 524 | 298 | 284.5 | 40.0 | 1.2 | | | 185.8 |
| 525 | 357 | 140.5 | 45.9 | 1.9 | | 6.5 | 161.6 |
| 526 | 458 | 199.1 | 86.6 | 6.8 | | | 340.1 |
| 527 | 558 | 240.5 | 23.1 | 4.8 | | | 377.6 |
| 528 | 606 | 293.6 | | | | | 696.0 |
| 529 | 502 | 845.5 | 15.6 | | | 5.3 | 461.6 |
| 530 | 411 | 82.9 | 152.7 | 18.5 | | 2.2 | 567.7 |
| 531 | 274 | 36.6 | 7.9 | | | | 23.8 |
| MEAN | | 518.8 | 38.5 | 24.7 | 0.8 | 11.4 | 371.0 |

The depth distribution of the two hake species based on the catch rates converted to densities are shown in Table 3. Except for the young Cape hake in the 75-250 m zone, all densities are lower than in the previous survey for both species. The reduction is most drastic in the 250-350 zone, where the estimated density of Cape hake is down to 4.8 tonnes/nm$^2$ from 60 tonnes/nm$^2$ in April-May.

Table 3 Southern Region. Depth distribution of the two hake spacies. Mean densities in tonnes/nm² and mean catch rates kg/hour.

| | 75-250 m | 250-350 m | 350-450 m | 450-550 m | 550-650 m |
|---|---|---|---|---|---|
| Cape hake | | | | | |
| Density | 14.4 | 4.8 | 1.1 | 0.5 | 0.1 |
| Catch rate | 430 | 150 | 30 | 15 | 2 |
| Deep w. hake | | | | | |
| Density | 0.2 | 7.5 | 18.9 | 20.2 | 6.8 |
| Catch rate | 5 | 230 | 560 | 610 | 200 |
| No. of hauls | 24 | 19 | 21 | 11 | 6 |

The distribution of the two hake species based on plots of densities by fishing stations is shown in Figures 6 and 7. These include the acoustic estimates of fish present above the 5 m bottom channel during trawling as discussed above. The distribution pattern has changed drastically since the previous survey. The in the past regularly observed high density areas off Lüderitz have now been replaced by a almost uniform low density picture, with some denser patches of young hake close to the shore.

Biomass estimates based on a post-stratification of the densities as shown in Figure 6 and 7, give 150 000 tonnes for the Cape and 120 000 tonnes for the deep water hake (Table 4), a decline of 185 000 for the two species combined since the previous survey. As already mentioned at least part of this decline can be explained by seasonal migration. The 95% confidence limits give a range of ±48% on the estimate of the Cape hake and ±15% of the deep water hake.

Table 4 Southern Region. Estimates of total biomass by surveys, 1 000 tonnes.

| Year/Survey | Cape hake | Deep water hake |
|---|---|---|
| 90/1 | 130 | 22 |
| 90/3 | 130 | 25 |
| 91/1 | 113 | 31 |
| 91/2 | 80 | 82 |
| 92/1 | 200 | 145 |
| 92/2 | 160 | 125 |
| 93/1 | 210 | 150 |
| 93/2 | 180 | 115 |
| 94/1 | 200 | 160 |
| 94/2 | 240 | 215 |
| 94/4 | 150 | 121 |

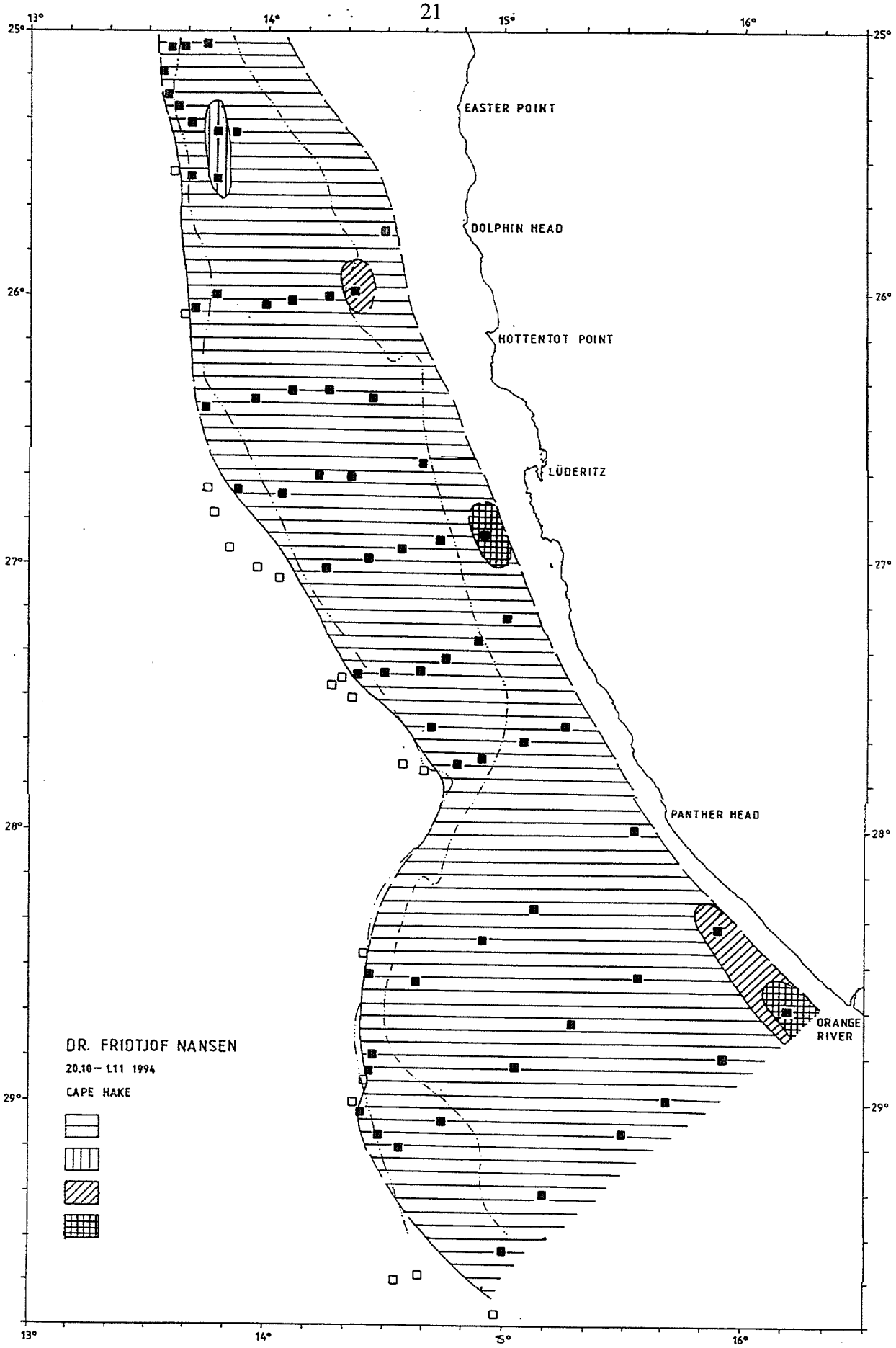



Figure 6 Orange River to Francis Bay. Distribution of Cape hake. Empty squares indicate stations where Cape hake was not caught.

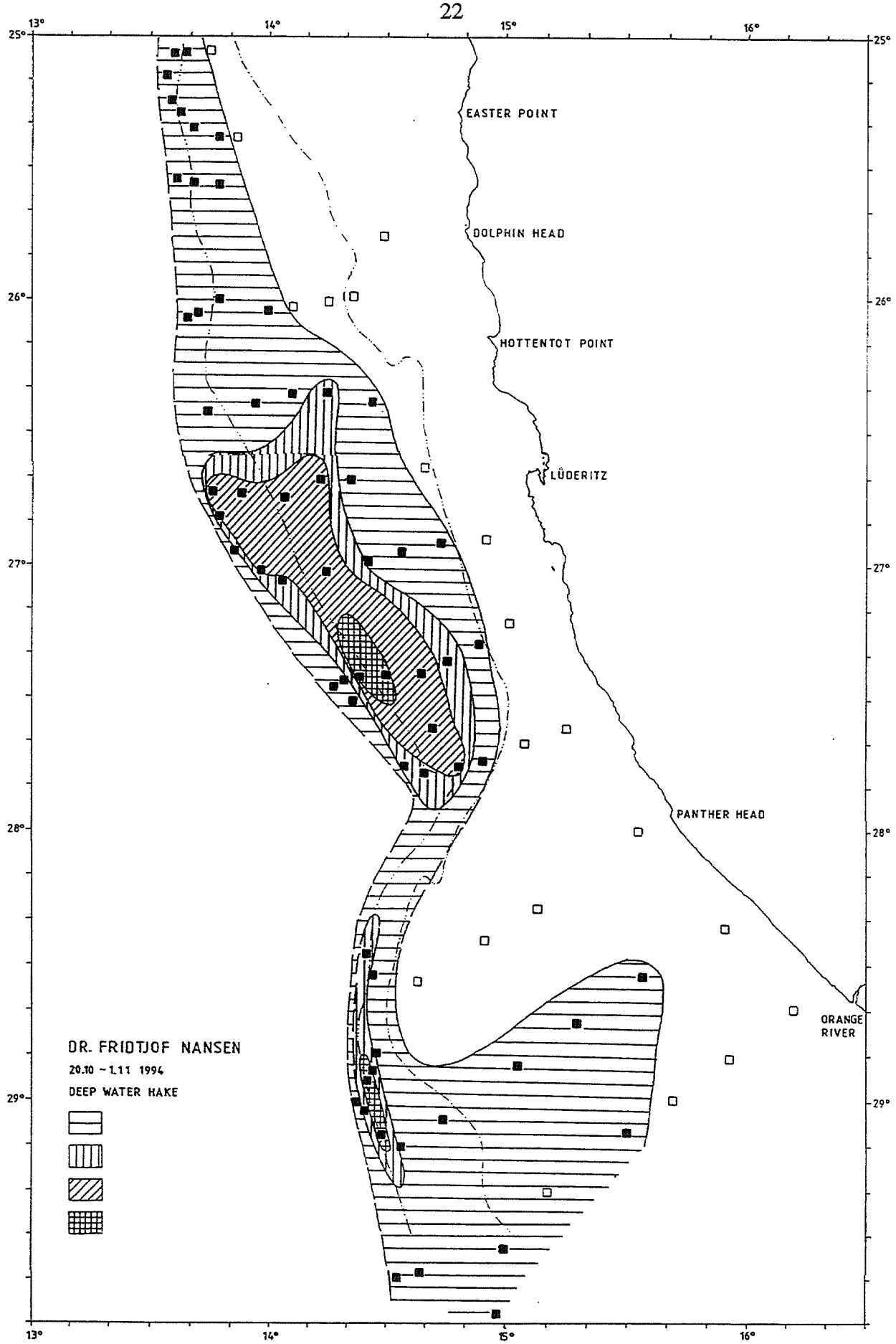



Figure 7 Orange River to St. Francis Bay. Distribution of deep water hake. Empty squares indicate stations where deep water hake was not caught.

The size compositions of the Cape hake from pooled samples weighted by catch rates are shown for each region by depth ranges in Annex I. There is as usual an increase of size with depth. A length frequency analysis to identify cohorts in the stock, was performed in the same way as during the three previous surveys. The results are shown in Table 5.

Table 5 Southern Region. Cape hake. Estimated age-cohorts from optimized length distributions.

| Year class | Mean length | Sigma | Fraction of all fish | Population million N | Biomass 1 000 t |
|---|---|---|---|---|---|
| 1993 | 21.1l | 2.5 | 0.925 | 1727 | 95 |
| 1992 | 30.0 | 3.2 | 0.057 | 115 | 25 |
| older | | | 0.018 | 18 | 27 |

The dominating cohort is the 1993 year-class which is estimated to 93% of the total number of fish. The fishable part of the Cape hake in the region constitutes 37 mill. fish with a biomass of 35 000 tonnes. Since the previous survey the fishable biomass in the Southern Region has decreased with 103 mill. fish and about 95 000 tonnes.

The size composition of the deep water hake is shown in Annex I. Results from a length frequency analysis on the deep water hake is shown in Table 6. The fishable part of the stock in the region is estimated to about 120 mill. fish with a biomass of 60 000 tonnes, a reduction of 150 mill. fish with a biomass of about 100 000 tonnes.

Table 6 Southern Region. Deep water hake. Estimated age-cohorts from optimized length distributions.

| Year class | Mean length | Sigma | Fraction of all fish | Population million N | Biomass 1 000 t |
|---|---|---|---|---|---|
| 1993 | 19.2 | 2.2 | 0.42 | 303 | 14 |
| 1992 | 28.3 | 4.2 | 0.43 | 310 | 49 |
| 1991 | 41.5 | 3.2 | 0.13 | 96 | 45 |
| older | | | 0.02 | 13 | 12 |

## 3.3 CENTRAL REGION, ST. FRANCIS BAY TO AMBROSE BAY

Table 7 shows the catch composition for the shelf and the slope by main groups. The mean catch rates for hakes on the shelf have decreased by 33% since April-May survey this year, while the catch rates on the slope have decreased by about 60%. The on-shelf catches is mainly represented by young fish, so called 'non-fishable' biomass. For monk, the catch rates in the more shallow depth range have increased slightly but are still at a low level (2.6 kg/hour), while the rates in the deeper waters are down by 14% compared to April-May survey and are now 32 kg/hour.

Table 7 Central Region. Catch rates by main groups in swept area bottom trawl hauls, kg/hour.

SHELF 100-259 m

| ST.NO. | DEP. | Hakes | Monk | Kingklip | Soles | Squid | Other |
|---|---|---|---|---|---|---|---|
| 532 | 197 | 125.1 | | | 1.0 | | 37.2 |
| 533 | 164 | 1039.6 | | | | | 146.7 |
| 534 | 230 | 71.4 | | | | 2.0 | 332.4 |
| 540 | 251 | 181.4 | 12.3 | | 12.3 | | 1367.0 |
| 541 | 156 | 814.8 | | | | | 23.5 |
| 543 | 145 | 8.6 | | | | | |
| 544 | 221 | 102.2 | | | | | 26.0 |
| 545 | 249 | 590.4 | 12.4 | | 21.4 | 1.7 | 44.3 |
| 556 | 254 | 311.4 | 5.2 | | | 4.8 | 1416.6 |
| 557 | 225 | 526.8 | 4.0 | | | 5.0 | 621.6 |
| 558 | 196 | 518.0 | | | | | 628.3 |
| 559 | 175 | 20.0 | | | | | |
| 560 | 156 | 1.3 | | | | | 0.1 |
| 561 | 153 | 3.8 | | | | 0.1 | 3.4 |
| 562 | 181 | 1078.4 | | | 2.6 | | 71.7 |
| 572 | 213 | 1353.9 | | | | | 61.2 |
| 573 | 144 | 54.9 | | | | | 14.0 |
| 574 | 188 | 282.0 | | | | | 10.0 |
| 575 | 253 | 193.3 | | | | 1.7 | 137.4 |
| 585 | 243 | 231.8 | 15.0 | | 2.1 | | 7008.0 |
| 587 | 169 | 764.0 | | | | | 21.6 |
| 588 | 154 | 60.9 | | | | | 31.5 |
| 589 | 159 | 205.3 | | | | | 36.0 |
| 590 | 174 | 494.1 | | | 0.3 | 0.6 | 104.1 |
| 601 | 220 | 464.5 | | | | | 3043.2 |
| 602 | 139 | 769.6 | 25.0 | | 1.6 | 83.8 | 1936.4 |
| 603 | 120 | 401.2 | | | | | 1914.3 |
| 605 | 129 | 85.6 | | | | | 759.7 |
| MEAN | | 384.1 | 2.6 | | 1.5 | 3.6 | 707.0 |

SLOPE 260-700 m

| ST.NO. | DEP. | Hakes | Monk | Kingklip | Soles | Squid | Other |
|---|---|---|---|---|---|---|---|
| 535 | 352 | 52.5 | 241.0 | | 44.6 | | 543.4 |
| 536 | 411 | 111.0 | 34.6 | 19.8 | | 7.4 | 283.5 |
| 537 | 365 | 116.1 | 77.9 | 9.6 | | | 392.0 |
| 538 | 337 | 36.8 | 80.6 | 10.8 | | | 365.8 |
| 539 | 324 | 93.0 | 12.8 | | | | 102.6 |
| 546 | 268 | 437.8 | 22.9 | | | 0.6 | 86.3 |
| 547 | 285 | 345.5 | 26.5 | | | 9.9 | 293.7 |
| 548 | 365 | 836.1 | 7.8 | 3.2 | | 1.7 | 601.2 |
| 549 | 471 | 109.9 | 36.9 | 9.9 | | 15.6 | 788.3 |
| 550 | 593 | 309.8 | | | | 23.9 | 365.0 |
| 551 | 650 | 227.3 | 2.6 | | | 14.4 | 610.8 |
| 552 | 551 | 448.7 | 1.7 | | | 11.8 | 536.2 |
| 553 | 480 | 149.8 | 11.9 | | | 0.8 | 444.0 |
| 554 | 402 | 190.8 | 67.5 | | | 3.0 | 479.5 |
| 555 | 327 | 757.4 | 33.6 | | | 11.9 | 451.8 |
| 563 | 272 | 564.2 | 7.2 | | 1.8 | | 65.8 |
| 564 | 350 | 347.2 | 32.2 | 22.4 | | 7.3 | 453.6 |
| 565 | 408 | 230.6 | 60.9 | 10.9 | | | 736.1 |
| 566 | 500 | 167.2 | | | | 12.2 | 237.0 |
| 567 | 590 | 300.6 | 5.8 | | | 6.7 | 140.5 |
| 568 | 447 | 163.6 | 14.0 | | | | 400.3 |
| 569 | 380 | 144.3 | 21.0 | | | 18.5 | 608.2 |
| 570 | 312 | 68.7 | 24.8 | 1.00 | | 7.2 | 319.4 |
| 571 | 338 | 117.3 | 22.2 | | | 8.5 | 126.9 |
| 576 | 297 | 356.0 | 14.1 | | 1.7 | 0.8 | 263.4 |
| 577 | 311 | 1319.9 | 49.8 | | | | 78.8 |
| 578 | 397 | 505.7 | 43.5 | 25.6 | | | 361.0 |
| 579 | 508 | 170.0 | | | | 19.1 | 964.2 |
| 580 | 608 | 170.2 | 18.1 | | | 31.3 | 1049.8 |
| 581 | 529 | 73.6 | 22.2 | | | | 477.9 |
| 582 | 444 | 107.5 | 6.4 | | | 16.2 | 1978.6 |
| 583 | 362 | 377.3 | 56.1 | 3.2 | | 15.4 | 301.3 |
| 584 | 280 | 670.5 | 10.6 | | | | 3583.8 |
| 591 | 280 | 506.6 | | | | 2.0 | 3034.0 |
| 592 | 334 | 522.5 | 64.4 | 0.8 | 21.4 | 10.4 | 244.9 |
| 593 | 428 | 155.1 | 47.6 | | | | 1750.6 |
| 594 | 525 | 266.8 | 10.0 | | | 34.6 | 1019.4 |
| 595 | 628 | 145.4 | 24.6 | | | 30.4 | 1120.1 |
| 596 | 574 | 132.4 | 2.3 | | | | 541.6 |
| 597 | 474 | 338.2 | 72.0 | | | | 778.4 |
| 598 | 359 | 345.6 | 35.6 | | | 3.5 | 179.4 |
| 599 | 306 | 181.6 | 22.1 | | 1.6 | | 110.0 |
| 600 | 281 | 197.2 | 2.7 | | | | 507.2 |
| 606 | 273 | 67.8 | 0.3 | | 1.9 | | 216.9 |
| 607 | 325 | 282.9 | 31.8 | | 2.2 | 2.4 | 273.3 |
| 608 | 368 | 283.0 | 50.2 | | | | 78.6 |
| 609 | 497 | 365.5 | 91.4 | | | | 638.5 |
| 610 | 589 | 145.8 | 15.2 | | | 5.3 | 746.4 |
| MEAN | | 291.9 | 32.0 | 2.4 | 1.6 | 6.9 | 619.4 |

The density index by depth ranges of the two hake species is shown in Table 8. The density for two hake stocks are considerably lower at all depth ranges compared to those found in the previous survey. The decline is most striking in the 250-350 m zone which usually is the main zone for the adult hake. Based on the season one should expect an increase in this area as fish migrate in from the Southern Region, while instead the density has decreased from 26.2 tonnes/nm$^2$ to 10.6 tonnes/nm$^2$.

Table 8 Central Region. Depth distribution of the two hake species. Mean densities in tonnes/nm² and mean catch rates kg/hour.

| | 100-250 m | 250-350 m | 350-450 m | 450-550 m | 550-650 m |
|---|---|---|---|---|---|
| Cape hake | | | | | |
| Density | 10.6 | 10.6 | 5.6 | 0.6 | 0.3 |
| Catch rate | 320 | 320 | 170 | 15 | 10 |
| Deep w. hake | | | | | |
| Density | | 0.4 | 2.6 | 6.2 | 7.5 |
| Catch rate | | 1 | 75 | 185 | 220 |
| No. of hauls | 25 | 21 | 14 | 8 | 8 |

The biomass estimate of Cape hake for the Central Region based on post stratification is 112 000 tonnes (Table 9). This represents a further reduction following a pattern through all surveys since early 1993. The standing stock in the Central Region is now estimated to 112 000 tonnes, the lowest figure recorded in the time series obtained from the "Dr. Fridtjof Nansen" surveys. The estimate on the deep water hake is 30 thousand tonnes, an almost 50% reduction, but not so critical in absolute terms. The 95% confidence limits on the estimates are ±13% on the Cape hake and ±32% on the deep water hake.

Table 9 Central Region. Estimates of total biomass by surveys, 1 000 tonnes.

| Year/Survey | Cape hake | Deep water hake |
|---|---|---|
| 90/1 | 180 | 4 |
| 90/3 | 219 | 6 |
| 91/1 | 150 | 6 |
| 91/2 | 302 | 13 |
| 92/1 | 261 | 15 |
| 92/2 | 542 | 15 |
| 93/1 | 280 | 12 |
| 93/2 | 280 | 20 |
| 94/1 | 225 | 30 |
| 94/2 | 160 | 30 |
| 94/4 | 112 | 16 |

Figure 8 shows the distribution of Cape hake over this region. Compared with previous surveys one will note that the high density aggregations defined as clusters of more than 25 tonnes/nm² has been reduced from the traditional thick and longitudinal bands between 200 and 500 m to now a small cluster of young fish off Walvis Bay. The change is very dramatic.

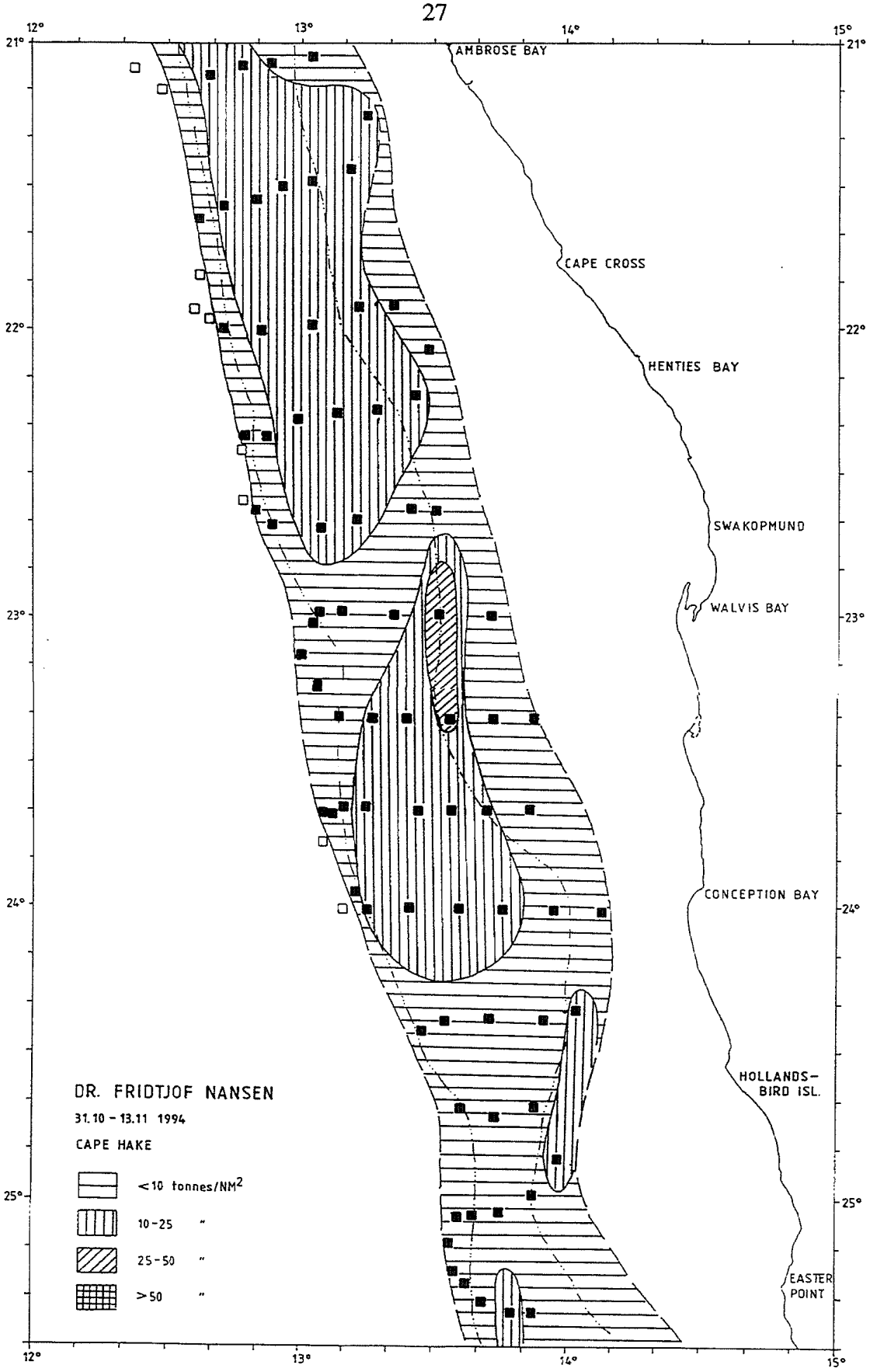



Figure 8 St. Francis Bay to Ambrose Bay. Distribution of Cape hake. Empty squares indicate stations where Cape hake was not caught.

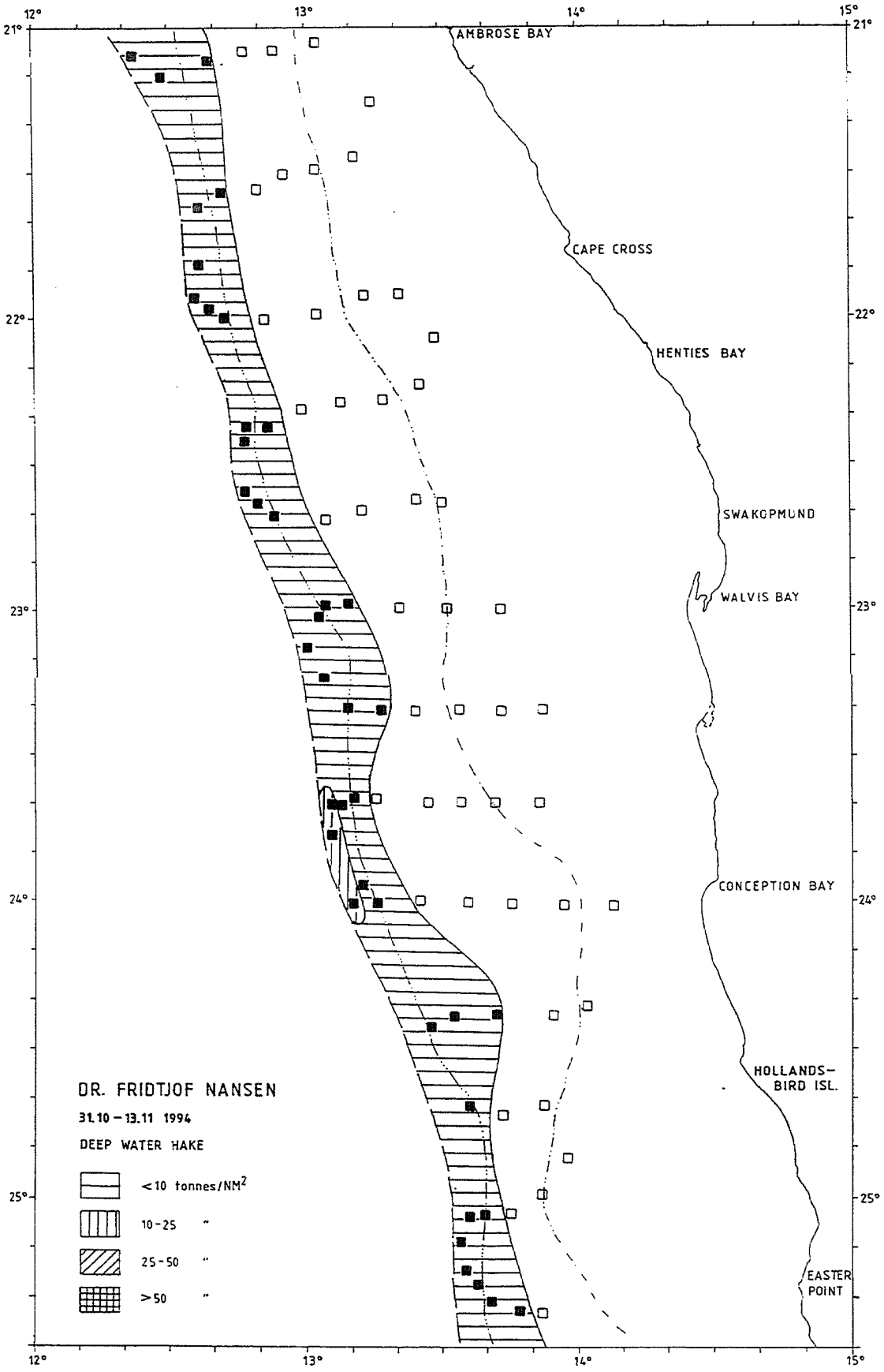



Figure 9 St. Francis Bay to Ambrose Bay. Distribution of deep water hake. Empty squares indicate stations where Cape hake was not caught.

The results from a cohort analysis on the regional length distribution are shown in Table 10.

Table 10 Central Region. Cape hake. Estimated age-cohorts from optimized length distributions.

| Year class | Mean length | Sigma | Fraction of all fish | Population million N | Biomass 1 000 t |
|---|---|---|---|---|---|
| 1993 | 19.3 | 2.5 | 0.61 | 490 | 24 |
| 1992? | 24.6 | 3.2 | 0.23 | 192 | 19 |
| 1991 | 32.0 | 3.5 | 0.08 | 65 | 14 |
| older | | | 0.08 | 64 | 55 |

The newly demersally settled 1993 year-class dominates the fish population with 83% of the number of fish, followed by a more poorly identified 1992 year-class with 23%. The fishable part of the population is 73 mill. fish and 58 000 tonnes, an increase in number (+6 mill.) but decrease in biomass (-8 000 tonnes) to the previous survey. The non-fishable biomass is estimated to 738 mill. fish with a biomass of 54 000 tonnes, which is only about one third of what was estimated in January this year and brings the recruitment potential to the fishable biomass down considerably below the normal situation in the later years.

The more narrow distribution of deep water hake is presented in Figure 9. Results from the length frequency analysis for the deep water hake is shown in Table 11. In this population the non-fishable biomass makes up 70% of the number of fish while the remaining 30% are fish of size bigger than 35 cm and are estimated to 16 mill. fish and 10 000 tonnes, 16 000 tonnes less than in the previous survey.

Table 11 Central Region. Deep water hake. Estimated age-cohorts from optimized length distributions.

| Year class | Mean length | Sigma | Fraction of all fish | Population million N | Biomass 1 000 t |
|---|---|---|---|---|---|
| 1993 | 28.8 | 3.2 | 0.7 | 38 | 6 |
| 1992 | 42.0 | 4.5 | 0.23 | 13 | 6 |
| older | | | 0.07 | 4 | 4 |

## 3.4 NORTHERN REGION, AMBROSE BAY TO CUNENE RIVER

Table 12 shows the catch rates by main groups for the shelf and slope separately. The mean rate for hakes has decreased by approximately 43% in the shallower zone and in the deeper zone the rate has dropped 64% compared to survey in May. The catch rates for monk in the slope is about 22% lower than in previous survey, but the difference is not significant in absolute terms.

Table 12 Northern Region. Catch rates by main groups in swept area bottom trawl hauls, kg/hour.

SHELF 50-259 m

| ST.NO. | DEP. | Hakes | Monk | Dentex | Horse mck. | Squid | Other |
|---|---|---|---|---|---|---|---|
| 616 | 168 | 161.4 | 7.9 | 6.2 | 3309.4 | | 145.1 |
| 617 | 119 | 26.3 | | | 7.8 | | 3.1 |
| 618 | 109 | | | | | | |
| 619 | 250 | 46.8 | | | 84.3 | | 12.5 |
| 629 | 233 | 196.7 | 3.4 | 9.0 | 465.2 | 2.7 | 78.4 |
| 630 | 156 | 191.1 | 10.5 | | 47.1 | | 5.5 |
| 631 | 130 | 9.0 | | | 2.4 | | 8.0 |
| 632 | 221 | 34.8 | | | 3.3 | | 20.1 |
| 644 | 257 | 168.4 | | 1.5 | 7.8 | | 3.7 |
| 645 | 201 | 88.4 | | | 454.9 | | 21.2 |
| 649 | 215 | 575.8 | 5.0 | 220.2 | 215.0 | 3.1 | 266.8 |
| 650 | 181 | 295.4 | 4.9 | 135.0 | 1002.5 | 36.0 | 281.1 |
| 651 | 139 | 120.1 | | 3621.7 | 1325.0 | | 62.0 |
| 652 | 68 | | | 7.4 | 3316.0 | | 218.0 |
| 653 | 206 | 110.2 | 9.4 | 306.0 | 153.7 | 2.0 | 1516.4 |
| 658 | 237 | 1210.8 | 4.6 | 285.4 | 415.3 | | 1895.4 |
| 659 | 162 | 1071.2 | | 1821.6 | 1801.8 | | 447.5 |
| 660 | 114 | 67.6 | | 679.2 | 681.6 | 5.8 | 11.5 |
| 661 | 143 | 211.5 | | 1047.2 | 519.5 | | 139.3 |
| 662 | 257 | 1128.3 | | 224.4 | 7.7 | | 1246.6 |
| 665 | 176 | 241.4 | | 856.0 | 2800.0 | 18.0 | 842.0 |
| 670 | 225 | 90.6 | | | 3838.7 | | |
| 671 | 126 | | | | 4805.6 | | 72.4 |
| MEAN | | 262.9 | 2.0 | 400.9 | 1098.5 | 2.9 | 317.3 |

SLOPE 260-650 m

| ST.NO. | DEP. | Hakes | Monk | Dentex | Horse mck. | Squid | Other |
|---|---|---|---|---|---|---|---|
| 611 | 539 | 160.6 | 55.4 | | | | 632.2 |
| 612 | 437 | 89.6 | 45.4 | | | | 782.1 |
| 613 | 325 | 698.2 | 32.2 | | | 5.2 | 224.1 |
| 614 | 318 | 134.6 | 2.6 | | | | 52.0 |
| 615 | 296 | 36.3 | 0.7 | | 81.1 | | 19.2 |
| 620 | 290 | 220.1 | | 152.1 | 916.5 | | 26.1 |
| 621 | 301 | 644.3 | 21.6 | 147.2 | 88.9 | 2.2 | 728.4 |
| 622 | 367 | 439.2 | 9.2 | | | 15.6 | 346.2 |
| 623 | 501 | 143.1 | 16.7 | | | 1.2 | 870.2 |
| 624 | 601 | 134.6 | 24.2 | | | 10.4 | 253.7 |
| 625 | 495 | 68.6 | 25.6 | | | | 622.2 |
| 626 | 450 | 121.0 | 45.2 | | | | 754.5 |
| 627 | 312 | 721.8 | 43.0 | 144.0 | 74.0 | | 321.2 |
| 628 | 267 | 361.2 | 17.2 | 56.3 | 4945.6 | | 284.3 |
| 633 | 284 | 64.3 | | 1.6 | 2.8 | | 5.2 |
| 634 | 323 | 203.6 | 2.3 | 104.0 | 52.7 | | 48.1 |
| 635 | 352 | 511.0 | 35.7 | 332.4 | 39.2 | | 419.4 |
| 636 | 406 | 761.7 | 24.9 | | | 43.7 | 800.8 |
| 637 | 547 | 87.1 | 13.1 | | | 17.6 | 1176.2 |
| 638 | 609 | 356.4 | 17.5 | | | 24.4 | 484.9 |
| 639 | 545 | 162.9 | 62.1 | | | 23.7 | 603.2 |
| 640 | 473 | 73.7 | 30.4 | | | 33.6 | 940.0 |
| 641 | 369 | 419.2 | 113.0 | 20.8 | | 5.6 | 1179.2 |
| 642 | 334 | 204.3 | 10.5 | 151.5 | 15.6 | 7.2 | 519.2 |
| 643 | 296 | 153.9 | | 43.0 | 12.4 | | 6.3 |
| 646 | 559 | 373.1 | 47.3 | | | 19.0 | 1016.3 |
| 647 | 449 | 253.7 | 64.2 | | | | 1078.3 |
| 648 | 315 | 1518.1 | 27.4 | 5.2 | 0.5 | | 306.8 |
| 654 | 295 | 264.2 | 20.2 | 25.7 | | | 471.2 |
| 655 | 473 | 138.3 | 115.9 | | | | 1611.0 |
| 656 | 321 | 204.0 | 56.9 | | | | 492.8 |
| 657 | 580 | 180.0 | 115.6 | | 22.4 | | 2981.4 |
| 663 | 432 | 518.7 | 44.6 | | | | 1162.7 |
| 664 | 443 | 387.2 | 80.9 | | | | 2630.7 |
| 666 | 550 | 435.6 | 64.9 | | 17.1 | | 879.2 |
| 667 | 352 | 34.5 | 23.5 | 3.4 | | 6.3 | 247.6 |
| 668 | 272 | 429.9 | 27.6 | 197.9 | 105.6 | 18.2 | 451.6 |
| 669 | 291 | 247.7 | 4.2 | 104.4 | 261.0 | 8.6 | 199.5 |
| MEAN | | 314.6 | 35.3 | 39.2 | 174.6 | 6.4 | 674.4 |

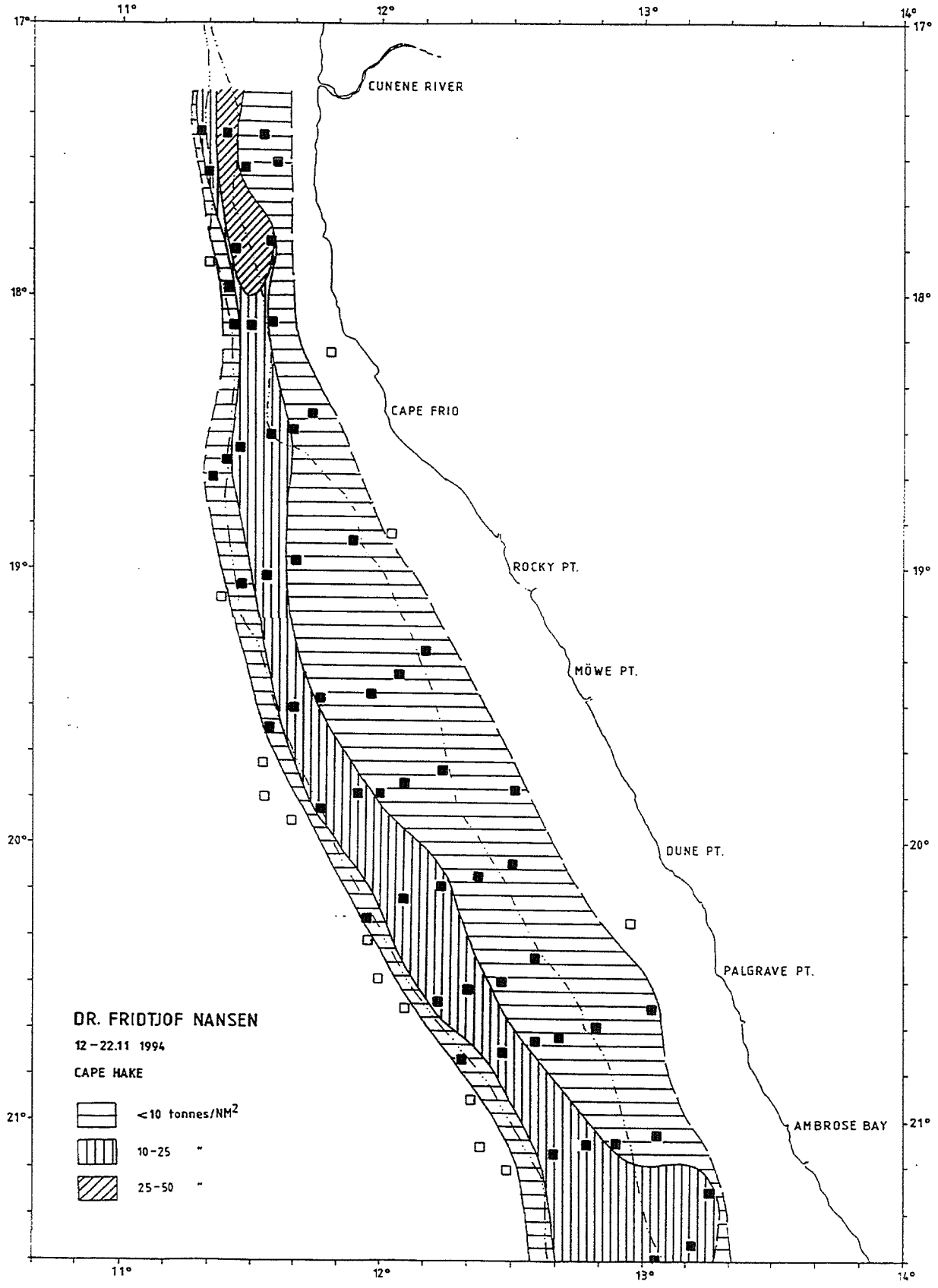



Figure 10 Ambrose Bay to Cunene River. Distribution of Cape hake. Empty squares indicate stations where Cape hake was not caught.

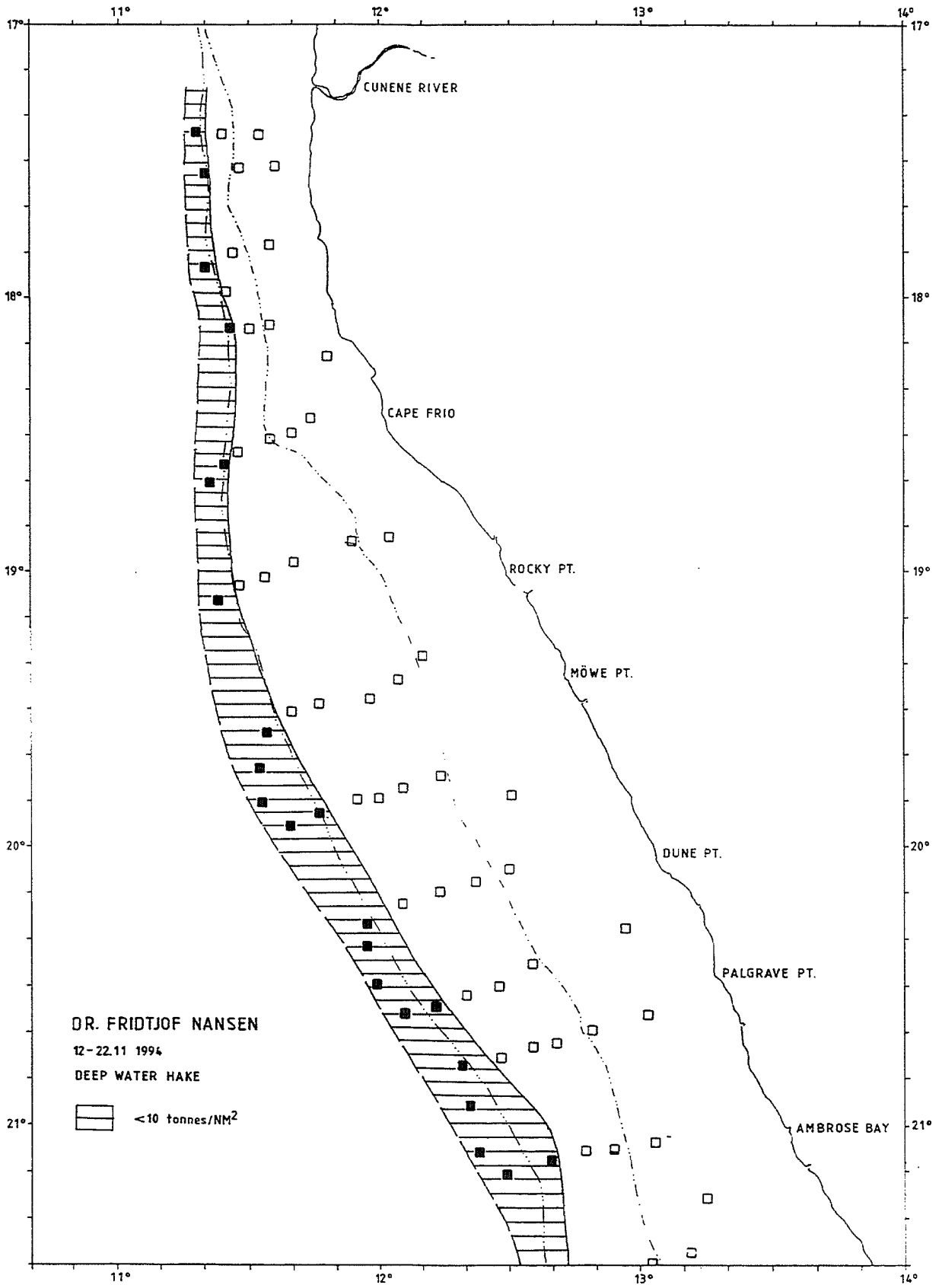



Figure 11 Ambrose Bay to Cunene River. Distribution of deep water hake. Empty squares indicate stations where deep water hake was not caught.

Figure 10 shows the distribution of Cape hake in the Northern Region by levels of density calculated from the catch rates and with correction for fish in mid-water. As for the Central Region the pattern of distribution has drastically changed compared to that found during the two previous surveys. Density aggregations beyond 25 tonnes/nm$^2$ is now only found north of Cape Frio while such aggregation previously was the common characteristic all along the slope between 250 and 500 m bottom depth.

The depth distribution of the two hake species based on catch rates converted to densities are shown in Table 13. For Cape hake there was a decrease in densities beyond 50% in all depth ranges compared to survey 94/2, except for the narrow zone 550-650 m which however does not contain significant abundance of Cape hake. The densities of deep water hake decreased in all depth zones but not as significant as for the Cape hake.

Table 13 Northern Region. Depth distribution of the two hake species. Mean densities in tonnes/nm$^2$ and mean catch rates kg/hour.

| | 100-250 m | 250-350 m | 350-450 m | 450-550 m | 550-650 m |
|---|---|---|---|---|---|
| Cape hake | | | | | |
| Density | 7.1 | 13.2 | 9.1 | 0.5 | 3.1 |
| Catch rate | 210 | 400 | 270 | 16 | 90 |
| Deep w. hake | | | | | |
| Density | | | 0.8 | 4.3 | 4.9 |
| Catch rate | | | 23 | 130 | 145 |
| No. of hauls | 20 | 18 | 10 | 8 | 4 |

Biomass estimates give a total of 87 000 tonnes of Cape hake and 9 000 tonnes of deep water hake (Table 14). For the Cape hake this represents a decrease of 43 000 tonnes since the last survey in May 1994. However, the most recent estimate is close to that found last February. The deep water hake shows a decline from 14 to 9 thousand tonnes. The 95% confidence limits on the estimates are ±26% on the Cape hake and ±53% on the deep water hake.

Table 14 Northern Region. Estimates of total biomass by surveys, 1 000 tonnes.

| Year/Survey | Cape hake | Deep water hake |
|---|---|---|
| 90/1 | 180 | |
| 90/3 | 105 * | |
| 91/1 | 200 | |
| 91/2 | 140 | 2 |
| 92/1 | 185 | 4 |
| 92/2 | 190 | 8 |
| 93/1 | 150 | 4 |
| 93/2 | 110 | 6 |
| 94/1 | 90 | 20 |
| 94/2 | 130 | 14 |
| 94/4 | 87 | 9 |

* + hake in the mid-water

The size compositions of the two hake species are shown in Annex I. A cohort analysis was attempted on the pooled length distributions but it was not possible to define consistent cohorts for the Cape hake. The explanation is probably that the migration of young fish towards the outskirts of the distribution area is a size selective process and the fish at these locations therefore do not form complete cohorts. Cohort analysis on the complete stock should form a more consistent picture as shown in Table 15. The so called 'fishable biomass' in the Northern Region, representing fish of 36 cm and larger, constitutes 98 mill. fish with a biomass of 63 000 tonnes. This is a reduction of 39 000 tonnes (38%) since the previous survey.

Table 15 All Namibia. Cape hake. Estimated age-cohorts. Estimated age-cohorts from optimized length distributions.

| Year class | Mean length | Sigma | Fraction of all fish | Population million N | Biomass 1 000 t |
|---|---|---|---|---|---|
| 1993 | 20.0 | 2.5 | 0.78 | 2 410 | 130 |
| 1992 | 28.0 | 3.0 | 0.10 | 310 | 46 |
| older | | | 0.12 | 280 | 174 |

A similar analysis on the bigger sized deep water hake in the region is shown in Table 16. The estimated fishable biomass of deep water hake is 8 000 tonnes.

Table 16 Northern Region. Deep water hake. Estimated age-cohorts. Estimated age-cohorts from optimized length distributions.

| Year class | Mean length | Sigma | Fraction of all fish | Population million N | Biomass 1 000 t |
|---|---|---|---|---|---|
| 1992 | 31.3 | 3.3 | 0.43 | 9 | 2 |
| 1991 | 43.2 | 3.5 | 0.41 | 8 | 4 |
| 1990+ | | | 0.16 | 3 | 3 |

## 3.5 PILOT SURVEY ON HORSE MACKEREL

In the course of the work with the acoustic records to assess the amount of pelagic hake in the survey area, look-like recordings of horse mackerel were also mapped. Mesopelagic fish can sometimes, when judged from the echo-traces, be confused with horse mackerel and proper identification by trawling is sometimes necessary to properly distinguish the two species. As identification of acoustic targets did not take place during the survey, the maps are only indicative and is not an attempt to assess the abundance of the species. The maps, Figure 12 and 13, are only to serve as a pilot survey input for the following pelagic survey in order to optimize the survey effort according to expected densities of horse mackerel.

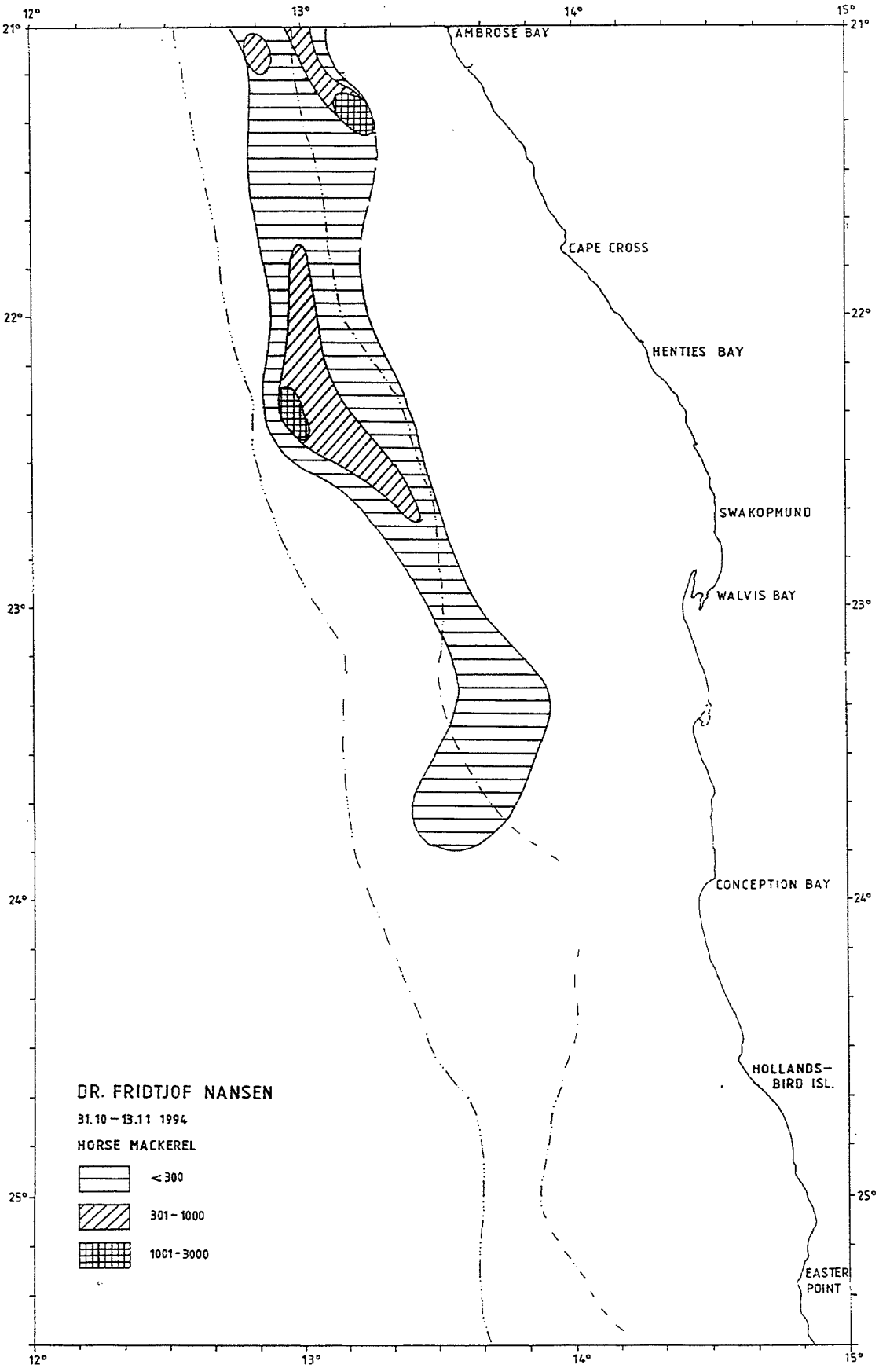



Figure 12 Distribution of horse mackerel, Easter Point to Ambrose Bay.

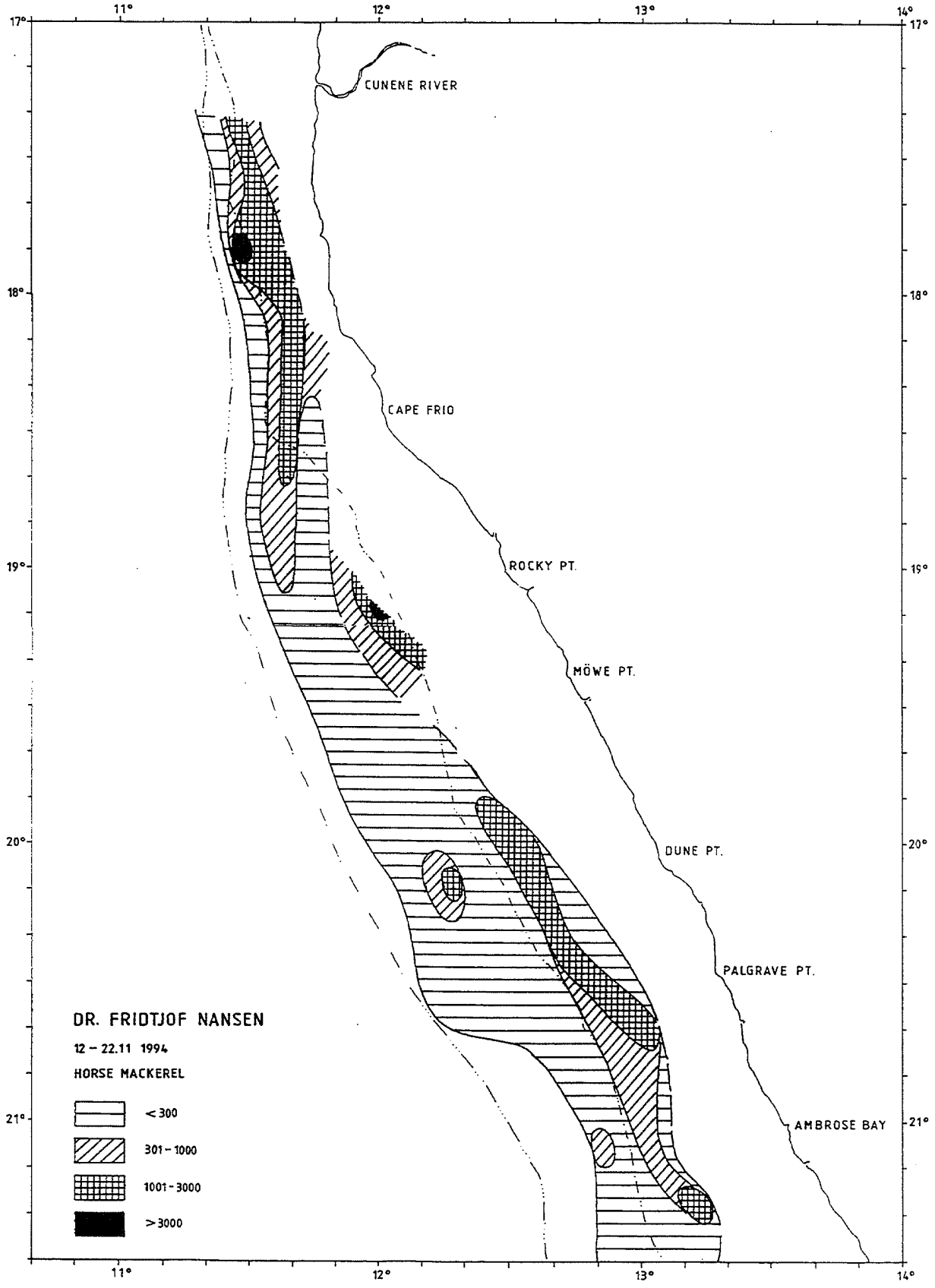



Figure 13 Distribution of horse mackerel, Ambrose Bay to Cunene River.

# CHAPTER 4 CONSIDERATIONS ON THE SURVEY RESULTS

## Survey effort

The present survey is the 11th in a series started in early 1990, covering the distribution of the hake stocks over the whole Namibian shelf. Figure 14 shows the effort spent in these investigations. The effort of the present survey is the highest both in number of trawl stations and of fish length samples, and is considered to represent a full and optimal coverage of the Cape hake. The time required for this sampling scheme is 36 days with no days lost due to bad weather, and one day spent for call to port.

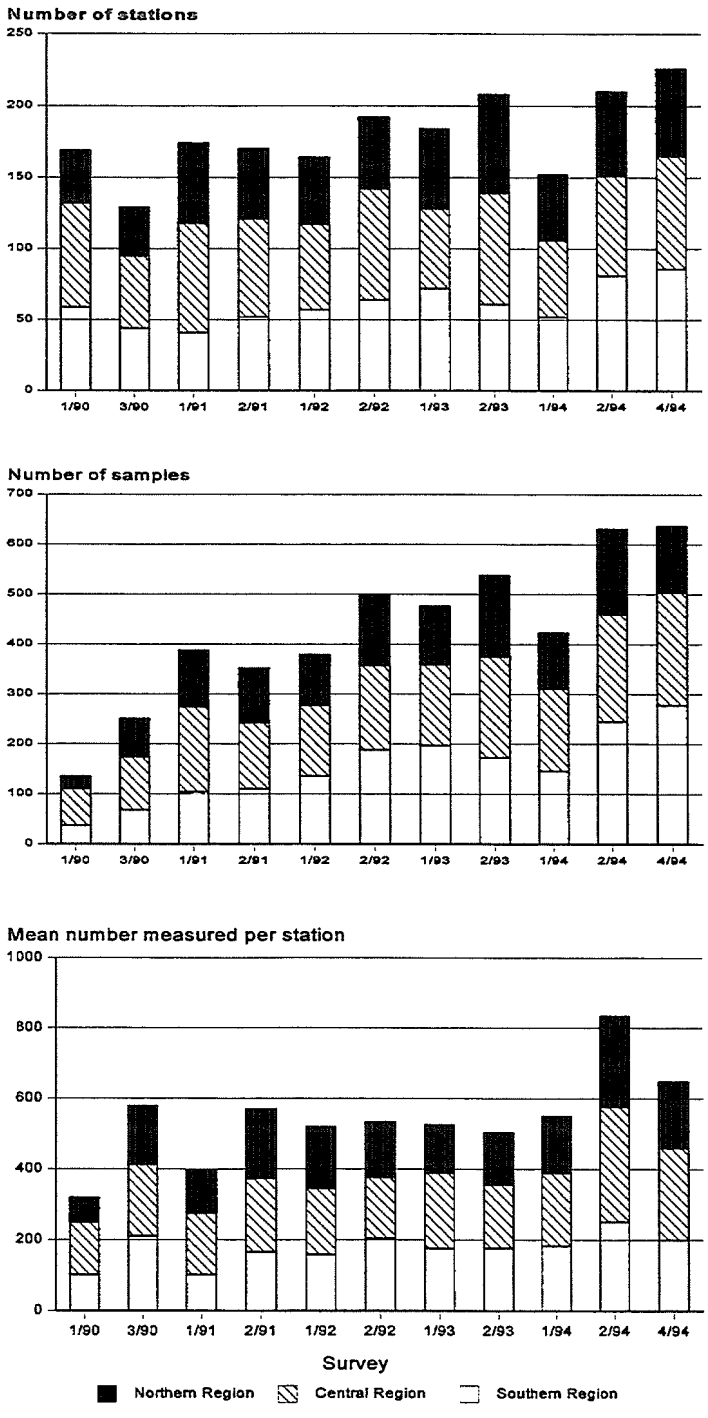



Fig. 14 Hake survey effort 1990-1994.

Mid-water behaviour of the hake can cause problems for the trawl survey methodology. However, improved acoustic technology has made it possible to establish a technique that can reduce the effect of this behaviour on the estimates. In previous surveys (1993 to Jan. 1994) the pelagic behaviour may have caused some underestimate in the biomass, especially in the Northern Region. During the previous survey in May and during the recent survey the pelagic behaviour was less pronounced, adding less than 10% to the total estimate.

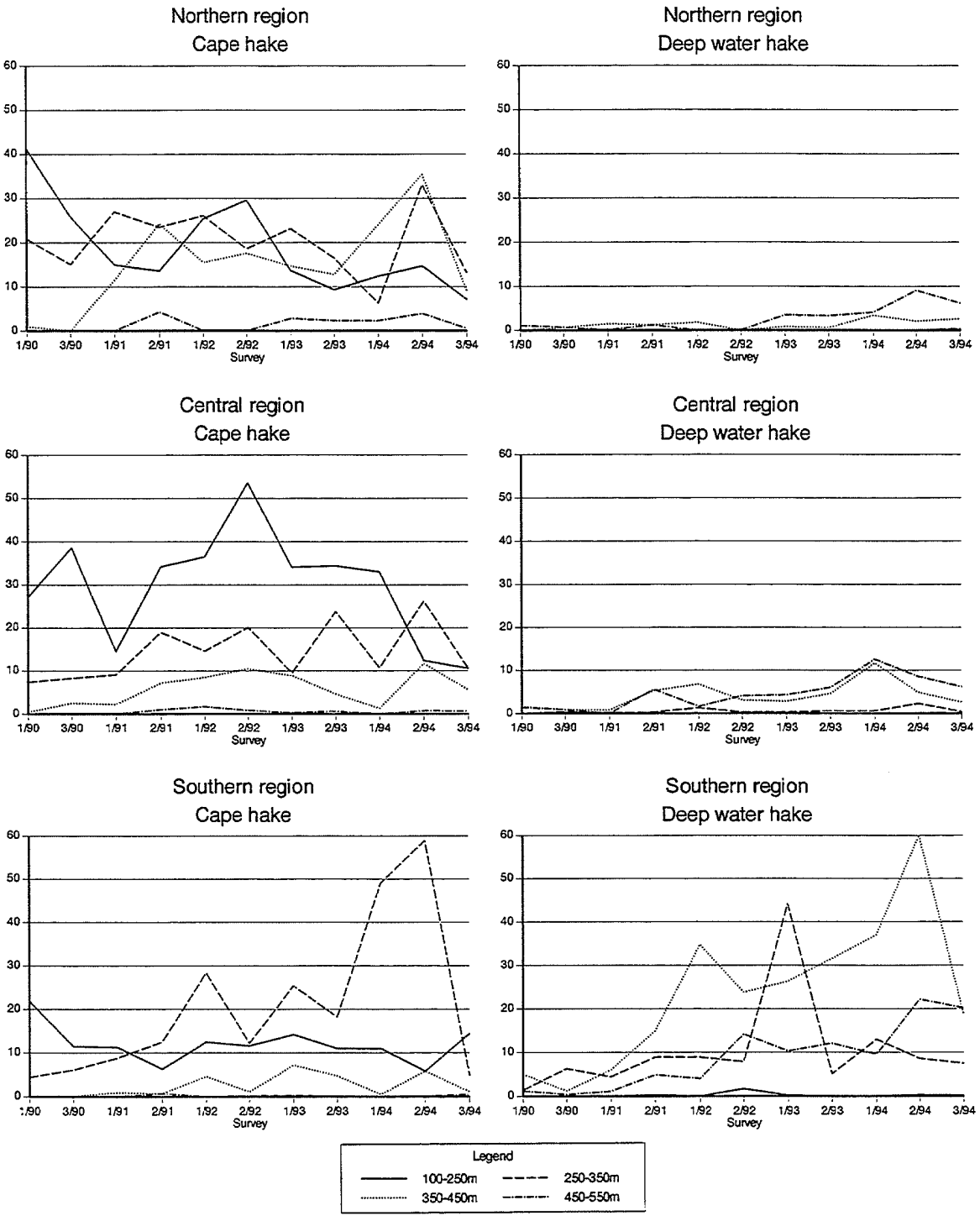



Figure 15 Estimated mean densities in depth strata by surveys. Mean densities in tonnes/nm$^2$.

## Catch per unit effort

A summary of the estimates of the mean density of the hakes by depth strata is shown in Figure 15. Since the previous survey in May the mean densities of Cape hake have dropped in

all depth zones and in all regions except for the southern shelf area 100-250 m. The densities in the shallow range 100-250 m mainly reflect the abundance of the young fish, 2-3 years of age, that inhabit this zone. A decline in the 'shallow' central area was reported in the previous survey and is confirmed by the last results. The densities in the deeper zones mainly reflect the state of the fishable part of the hake stock, and Figure 15 shows a recent strong decline that perhaps could seriously restrict the reproduction capacity of the Cape hake. For the deep water hake there is observed a strong decline in the depth zone 350-450 m in the southern area which has held a major part of the stock in Namibian waters. For the other depth zones and regions the decline is less pronounced. It is unclear if the decline in the deep water hake should be explained by stock decline or seasonal migration out of the survey area.

**Biomass estimates**

Table 19 shows a summary of the biomass estimates for the two hake stocks by regions and surveys. Since May 1994, the estimated total biomass of hakes has dropped sharply from 790 to 490 000 tonnes. For the Cape hake the reduction is highest in the Southern Region (-38%), followed by the Northern Region (-33%) and least in the Central Region (-30%). Part of the relative differences can be explained by seasonal migration of adult fish towards the Central Region, but the overall picture of decline is serious. Split by fishable/non-fishable categories the fishable stock has declined 48% and the non-fishable 16%, the last has dropped further from a below normal level in May. Both size groups are now at a lower level than previously recorded in the course of the "Dr. Fridtjof Nansen" surveys in Namibian waters, Table 19. The total estimates on fishable biomass and recruits have also been summarized graphically in Figure 16. The dominant feature is the low present level of the fishable biomass of the Cape hake and its continuing declining trend that started in early 1993. This is a picture that in most cases would suggest persistent overfishing. We do not have information to support such an explanation.

Table 19 Summary of total, fishable and non-fishable biomass estimates for the two hake species by surveys and areas. 1 000 tonnes. (* Unadjusted due to fish off the bottom).

| | Feb-Mar 1990 | Sep-Oct 1990 | Jan-Feb 1991 | Oct-Nov 1991 | Apr-May 1992 | Oct-Nov 1992 | Jan-Feb 1993 | Apr-May 1993 | Jan-Feb 1994 | Apr-May 1994 | Oct-Nov 1994 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TOTAL BIOMASS** | | | | | | | | | | | |
| SOUTHERN REGION | | | | | | | | | | | |
| Cape Hake | 130 | 130 | 126 | 80 | 200 | 160 | 210 | 180 | 200 | 240 | 150 |
| Deep water hake | 22 | 25 | 31 | 83 | 145 | 125 | 150 | 115 | 160 | 215 | 120 |
| CENTRAL REGION | | | | | | | | | | | |
| Cape Hake | 180 | 219 | 150 | 302 | 261 | 542 | 280 | 280 | 225 | 160 | 113 |
| Deep water hake | 4 | 6 | 6 | 13 | 15 | 15 | 12 | 20 | 30 | 30 | 16 |
| NORTHERN REGION | | | | | | | | | | | |
| Cape Hake | 180 | *105 | 200 | 140 | 185 | 190 | 150 | 110 | 92 | 130 | 87 |
| Deep water hake | | | | 2 | 4 | 8 | 4 | 6 | 20 | 15 | 9 |
| TOTAL NAMIBIA | | | | | | | | | | | |
| Cape hake | 490 | 450 | 480 | 520 | 650 | 890 | 640 | 570 | 520 | 530 | 350 |
| Deep water hake | 25 | 35 | 40 | 100 | 160 | 150 | 170 | 140 | 210 | 260 | 145 |
| Both | 515 | *485 | 513 | 620 | 810 | 1040 | 810 | 710 | 737 | 790 | 495 |
| **FISHABLE BIOMASS** | | | | | | | | | | | |
| SOUTHERN REGION | | | | | | | | | | | |
| Cape Hake | | | | 42 | 145 | 75 | 115 | 94 | 112 | 130 | 35 |
| Deep water hake | | | | 42 | 113 | 80 | 123 | 95 | 114 | 164 | 61 |
| CENTRAL REGION | | | | | | | | | | | |
| Cape Hake | | | | 140 | 85 | 170 | 150 | 118 | 50 | 65 | 58 |
| Deep water hake | | | | (13) | 15 | 15 | 9 | 16 | 26 | 22 | 10 |
| NORTHERN REGION | | | | | | | | | | | |
| Cape Hake | | | | 135 | 143 | 143 | 113 | 88 | 74 | 102 | 63 |
| Deep water hake | | | | - | - | - | - | - | 19 | 13 | 8 |
| Cape Hake | 200 | *270 | 280 | 320 | 370 | 390 | 380 | 300 | 240 | 300 | 156 |
| Deep water hake | 20 | *20 | 20 | 50 | 130 | 100 | 140 | 120 | 160 | 200 | 79 |
| TOTAL FISHABLE | 220 | *290 | 300 | 370 | 503 | 490 | 520 | 420 | 400 | 500 | 235 |
| **NON-FISHABLE BIOMASS** | | | | | | | | | | | |
| Cape Hake | 290 | 180 | 200 | 200 | 280 | 500 | 260 | 270 | 280 | 230 | 193 |
| Deep water hake | 5 | 15 | 20 | 50 | 130 | 50 | 30 | 20 | 50 | 60 | 66 |
| TOTAL NON-FISHABLE | 295 | 195 | 220 | 250 | 410 | 550 | 290 | 290 | 330 | 290 | 259 |

* Unadjusted underestimate due to fish off the bottom.

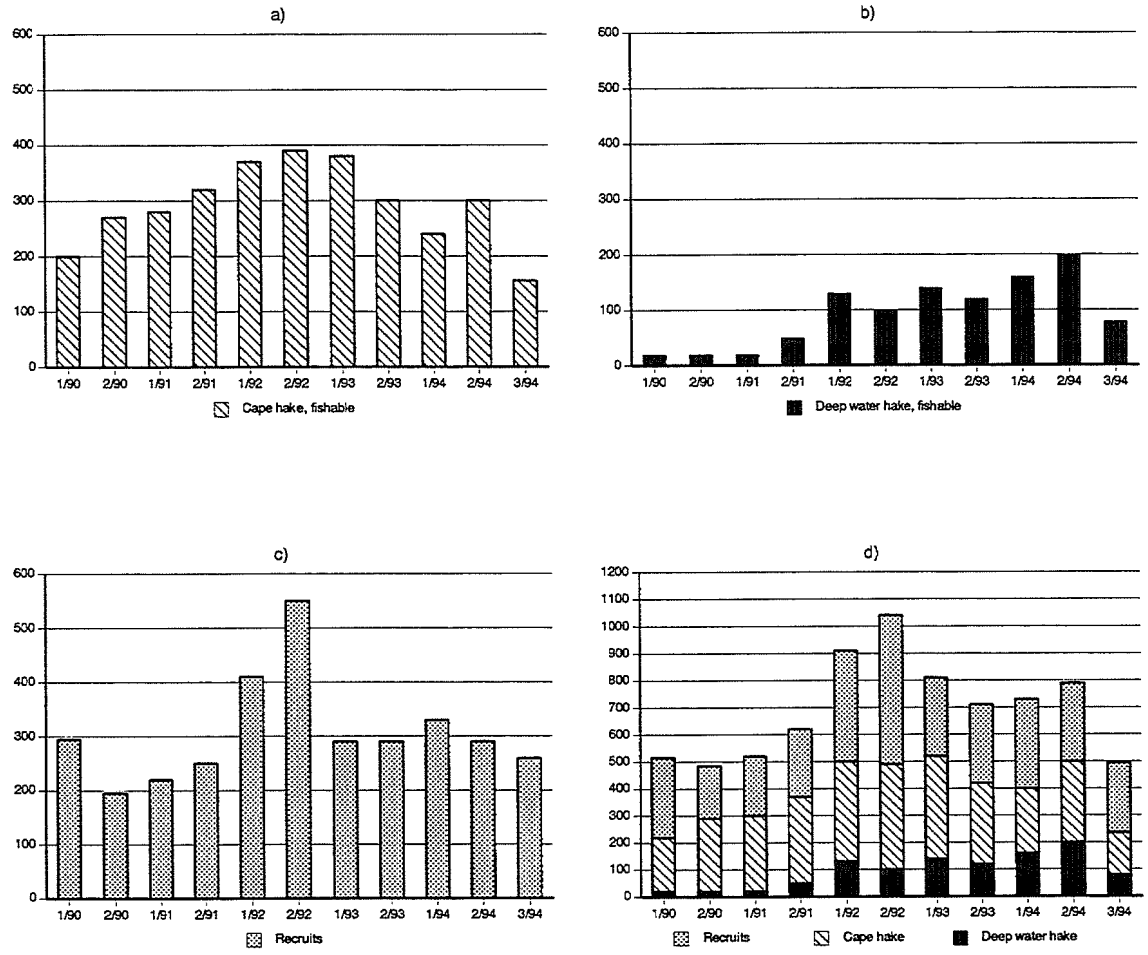



Figure 16 Trends in biomass estimates: a) Cape hake, 'fishable stock', b) deep water hake, 'fishable stock', c) recruits ('non-fishable' biomass) and d) total hake in Namibia. Thousand tonnes.

## Geographic shift in the fishable biomass

Figure 17 shows the development of the relative share of the fishable biomass of Cape hake in the regions during the last three years. The figure demonstrates that the Southern Region, which in May 1994 held a 44% share of the biomass, in the last survey had decreased to 23% while

in the Central Region in the same period the fraction of the biomass increased from 22 to 37%.

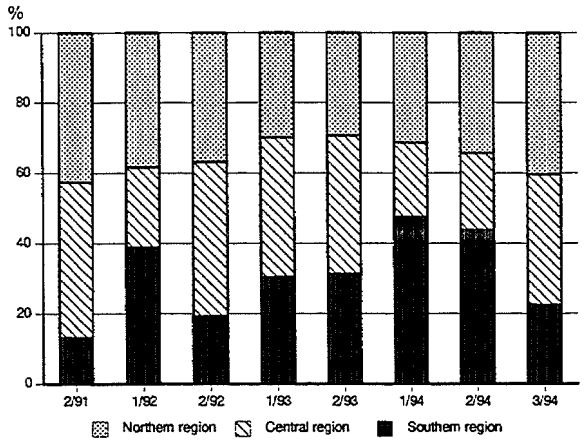



Fig. 17 Relative regional share of fishable biomass of Cape hake 1991-94.

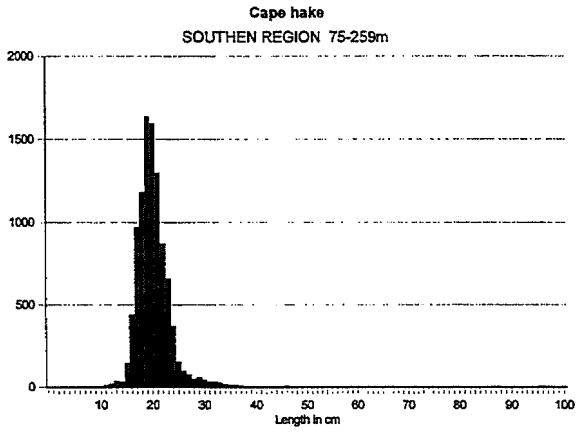
## Recruitment potential

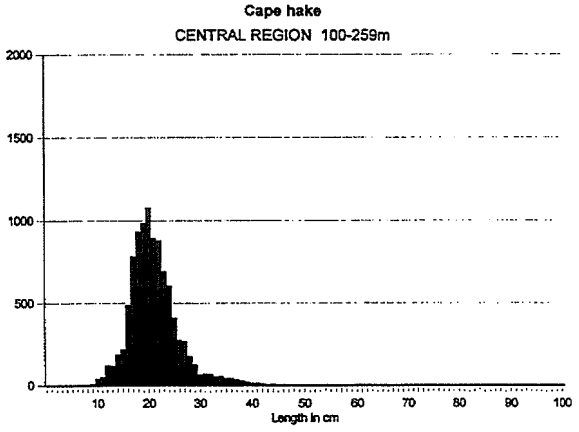
The recruitment to the stock of Cape hake can be estimated from the numerical abundance of the 1.5-2 year old fish. November is usually the month when one first time through trawl surveys can estimate the strength of the year-class born the previous year, as it has then settled on bottom during the previous months. The estimates for the 1993 year-class, based on the current survey data, are shown in Table 20 together with previous observations. A 'normal' recruitment level after two years seems to be around 2 billion fish ±200 million (Table 20). The 1993 year-class is at present slightly above this level but will likely in May 1995, after have been subject to half a year of natural mortality, be of the same level as the 1992 year-class, which is a 'below normal' year-class. Our data thus indicate two consecutive year-classes with year-class strength below normal. This could have serious consequences as regards the recruitment to the fishery in the next years. Another striking feature in the table is that the Southern Region stands out as the main habitat for the young fish. In all previous surveys the Central Region has contained the main part of the youngest cohort. This shift is probably caused by a change in the environmental regime.

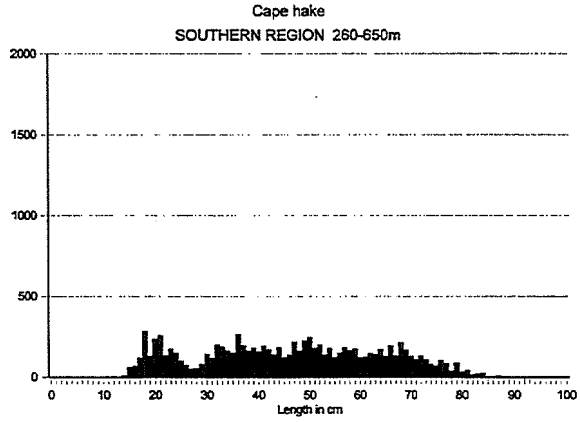
Table 20 Estimates of strength of recent year-classes of Cape hake. Cohort population numbers at about two years of age for the groups assumed to have been spawned in 1988, 1989, 1990, 1991, 1992 and 1993. Millions of fish.

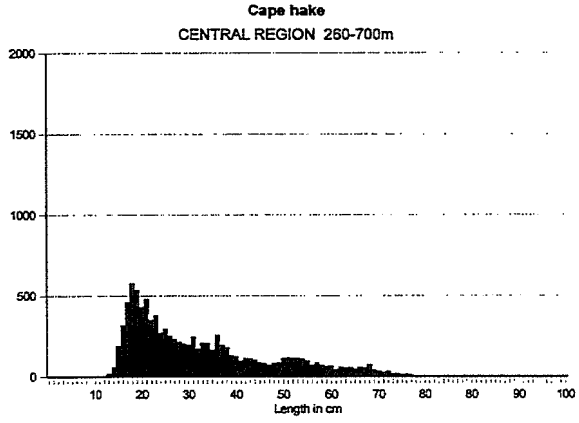
| Year-class | 1988 | 1989 | 1990 | 1990 | 1991 | 1991 | 1991 | 1992 | 1992 | 1993 |
|---|---|---|---|---|---|---|---|---|---|---|
| Southern region | 980 | 100 | 160 | 300 | 990 | 670 | 390 | 250 | 230 | 1 730 |
| Central region | 1 320 | 170 | 1 710 | 1 620 | 3 500 | 1 230 | 1 370 | 1 880 | 830 | 490 |
| Northern region | 10 | 10 | 20 | 240 | 440 | 270 | 130 | 70 | 175 | 190 |
| Total | 2 310 | 280 | 1 890 | 2 160 | 4 930 | 2 170 | 1 890 | 2 200 | 1 235 | 2 410 |
| Survey/Year | 1/90 | 1/91 | 2/91 | 1/92 | 2/92 | 1/93 | 2/93 | 1/94 | 2/94 | 3/94 |

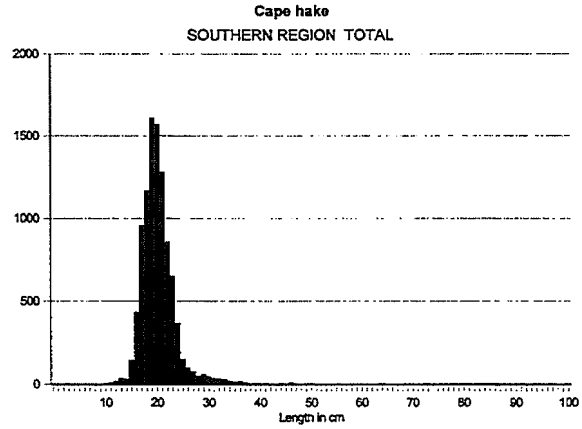
# Annex I Size composition of main stocks

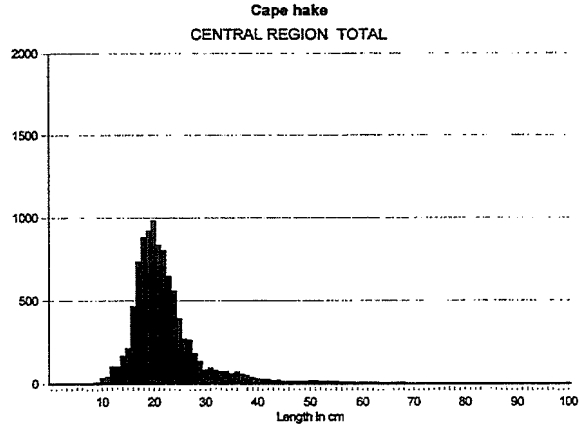


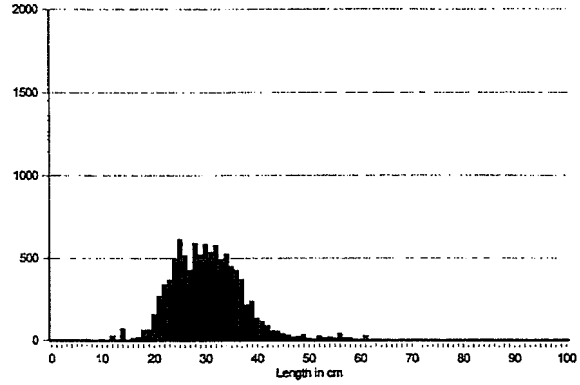



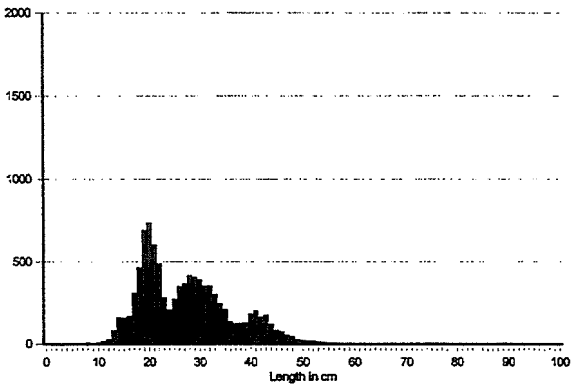
**Cape hake**

NORTHERN REGION 60-259m



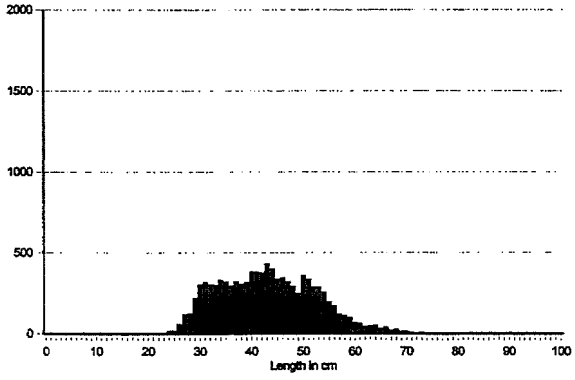

**Deep water hake**

SOUTHERN REGION TOTAL



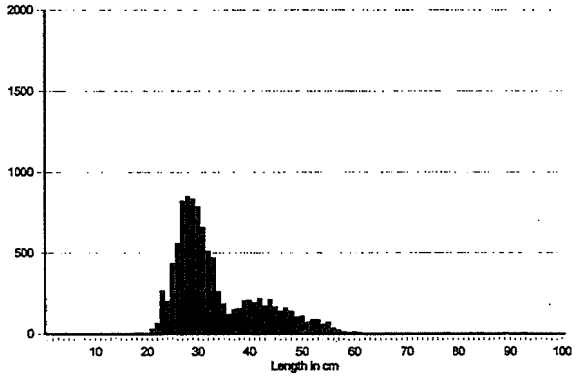

**Cape hake**

NORTHERN REGION 260-650m



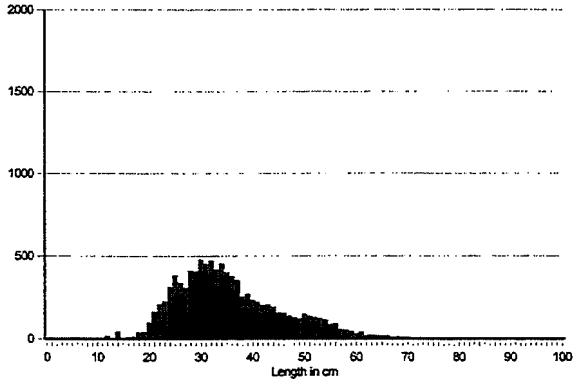

**Deep water hake**

CENTRAL REGION



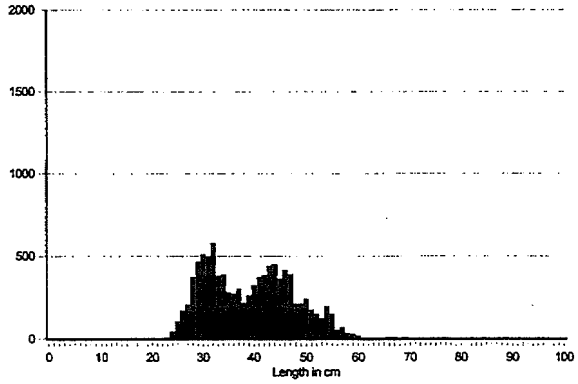

**Cape hake**

NORTHERN REGION TOTAL




**Deep water hake**

NORTHERN REGION

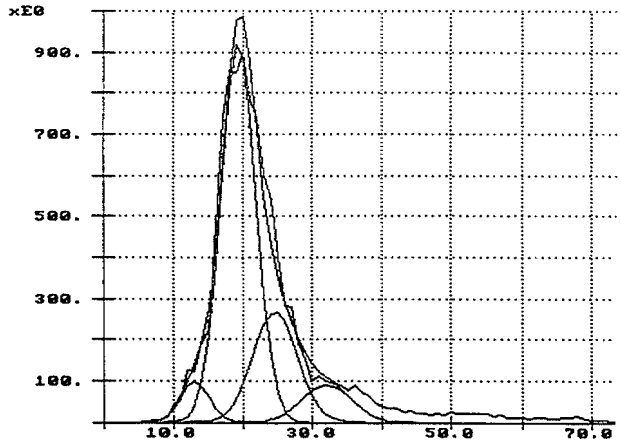


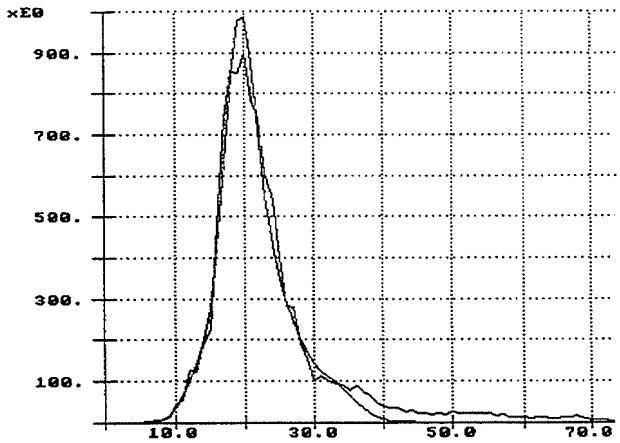
Annex II The size composition of the hake stocks split into length cohorts though optimizing techniques

CAPE HAKE

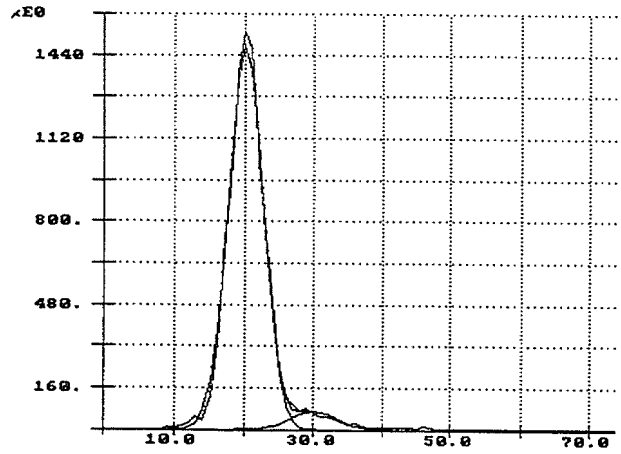
NORTHERN REGION

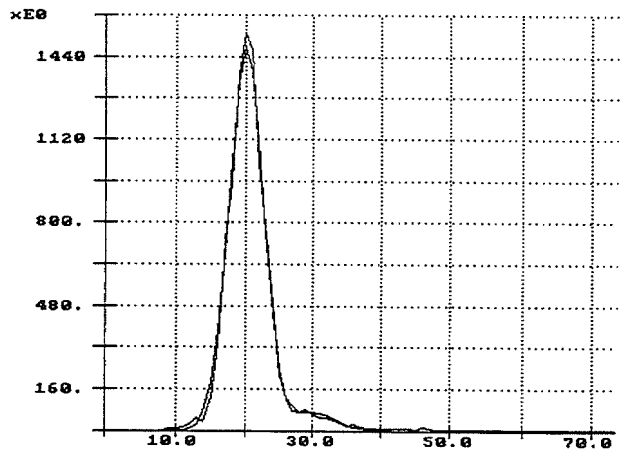
CENTRAL REGION




SOUTHERN REGION



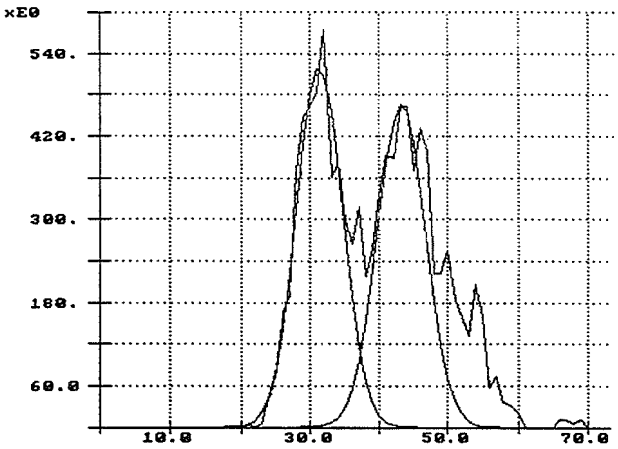



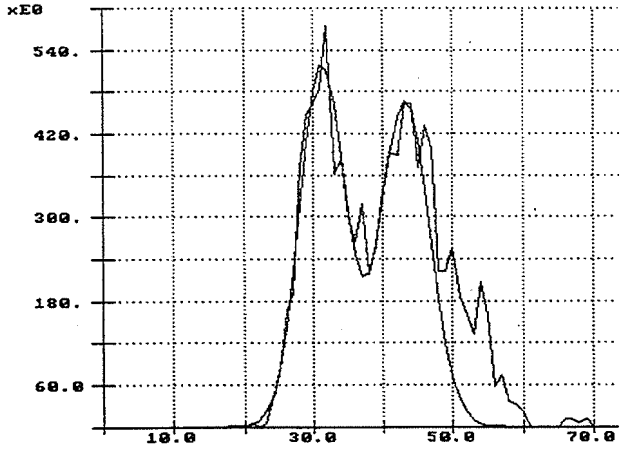

The length distribution with the estimated cohorts.

The length frequency distribution with the resultant distribution explained by the estimated cohorts.

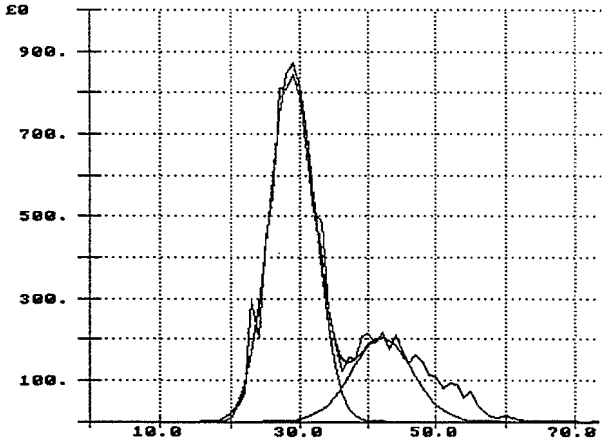
DEEP WATER HAKE

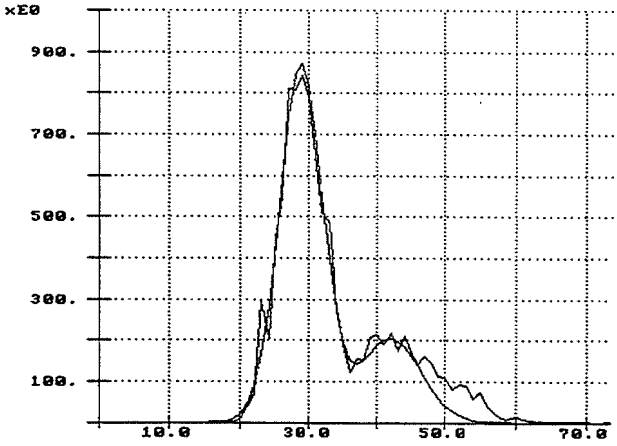
NORTHERN REGION



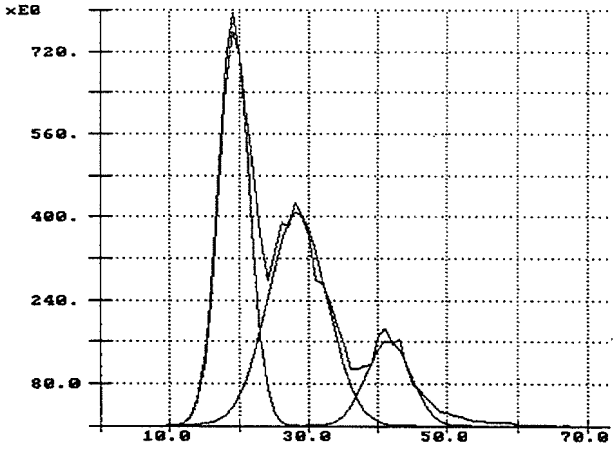



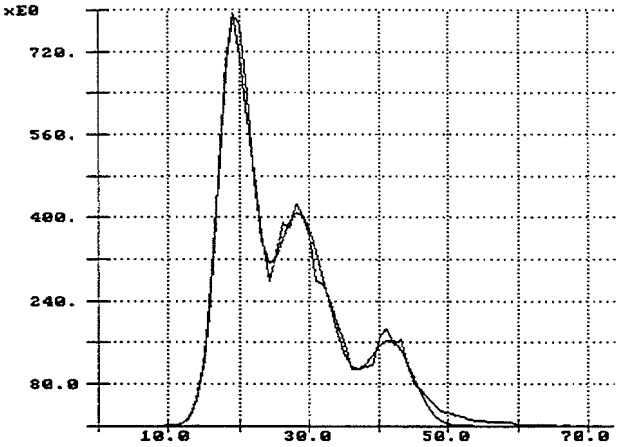

CENTRAL REGION




SOUTHERN REGION




The length distribution with the estimated cohorts.

The length frequency distribution with the resultant distribution explained by the estimated cohorts.

# Annex III Records of fishing stations

PROJECT STATION: 446

DATE:20/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2946
start stop duration Long E 1457
TIME :19:23:00 19:54:00 31 (min) Purpose code: 3
LOG : 421.00 422.60 1.60 Area code : 1
FDEPTH: 380 376 GearCond.code:
BDEPTH: 380 376 Validity code:
Towing dir: 160° Wire out:1050 m Speed: 31 kn*10

Sorted: 71 Kg Total catch: 323.65 CATCH/HOUR: 626.42

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, male | 220.65 | 1974 | 35.22 | 1248 |
| Merluccius paradoxus, female | 213.87 | 1723 | 34.14 | 1249 |
| Helicolenus dactylopterus | 29.81 | 174 | 4.76 | |
| Zeus faber | 26.32 | 29 | 4.20 | |
| Coelorinchus fasciatus | 25.84 | 590 | 4.13 | |
| Squalus blainvillei | 25.26 | 29 | 4.03 | |
| Epigonus denticulatus | 20.42 | 377 | 3.26 | |
| Malacocephalus laevis | 13.65 | 58 | 2.18 | |
| Lophius vomerinus | 12.29 | 15 | 1.96 | 1250 |
| Galeus polli | 10.26 | 135 | 1.64 | |
| Raja leopardus | 7.16 | 10 | 1.14 | |
| Holohalaelurus regani | 5.90 | 19 | 0.94 | |
| Rossia enigmatica | 4.16 | 194 | 0.66 | |
| Hoplostethus mediterraneus | 3.29 | 68 | 0.53 | |
| Hoplostethus mediterraneus | 3.29 | 68 | 0.53 | |
| Genypterus capensis | 3.19 | 4 | 0.51 | 1251 |
| Paracallionymus costatus | 1.45 | 194 | 0.23 | |
| Todaropsis eblanae | 0.97 | 10 | 0.15 | |
| Tripterophycis gilchristi | 0.77 | 48 | 0.12 | |
| Myxine capensis | 0.68 | 10 | 0.11 | |
| Nezumia sp. | 0.48 | 58 | 0.08 | |
| Total | 629.71 | | 100.52 | |

PROJECT STATION: 447

DATE:20/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2939
start stop duration Long E 1439
TIME :22:27:00 22:57:00 30 (min) Purpose code: 3
LOG : 442.40 443.90 1.50 Area code : 1
FDEPTH: 420 420 GearCond.code:
BDEPTH: 420 420 Validity code:
Towing dir: 330° Wire out:1150 m Speed: 26 kn*10

Sorted: 72 Kg Total catch: 72.42 CATCH/HOUR: 144.84

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 57.60 | 124 | 39.77 | 1253 |
| Lophius vomerinus | 27.30 | 12 | 18.85 | 1255 |
| Coelorinchus fasciatus | 14.40 | 202 | 9.94 | |
| Epigonus denticulatus | 10.04 | 134 | 6.93 | |
| Merluccius paradoxus, male | 8.50 | 34 | 5.87 | 1252 |
| Genypterus capensis | 5.90 | 4 | 4.07 | 1254 |
| Malacocephalus laevis | 5.74 | 12 | 3.96 | |
| Bassanago albescens | 4.74 | 12 | 3.27 | |
| Helicolenus dactylopterus | 4.56 | 22 | 3.15 | |
| Squalus megalops | 3.04 | 2 | 2.10 | |
| Rossia enigmatica | 0.92 | 32 | 0.64 | |
| Myxine capensis | 0.68 | 12 | 0.47 | |
| Todaropsis eblanae | 0.44 | 4 | 0.30 | |
| Holohalaelurus regani | 0.38 | 4 | 0.26 | |
| Galeus polli | 0.28 | 4 | 0.19 | |
| Paracallionymus costatus | 0.14 | 22 | 0.10 | |
| Nezumia sp. | 0.10 | 10 | 0.07 | |
| Tripterophycis gilchristi | 0.08 | 4 | 0.06 | |
| Maurolicus muelleri | 0.00 | 2 | | |
| Stereomastis sp. | 0.00 | 8 | | |
| Total | 144.84 | | 100.00 | |

PROJECT STATION: 448

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2939
start stop duration Long E 1432
TIME :00:28:00 00:58:00 30 (min) Purpose code: 3
LOG : 452.30 453.80 1.50 Area code : 1
FDEPTH: 525 518 GearCond.code:
BDEPTH: 525 518 Validity code:
Towing dir: 170° Wire out:1500 m Speed: 30 kn*10

Sorted: 89 Kg Total catch: 137.44 CATCH/HOUR: 274.88

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 76.70 | 94 | 27.90 | 1257 |
| Coelorinchus braueri | 36.60 | 798 | 13.31 | |
| Lophius vomerinus | 34.10 | 8 | 12.41 | 1258 |
| Malacocephalus laevis | 26.82 | 84 | 9.76 | |
| Torpedo nobiliana | 25.08 | 6 | 9.12 | |
| Merluccius paradoxus, male | 20.20 | 30 | 7.35 | 1256 |
| Raja confundens | 18.24 | 24 | 6.64 | |
| Selachophidium guentheri | 9.78 | 150 | 3.56 | |
| Helicolenus dactylopterus | 8.64 | 30 | 3.14 | |
| Nezumia sp. | 7.14 | 246 | 2.60 | |
| Etmopterus lucifer | 2.34 | 60 | 0.85 | |
| Chaceon maritae | 1.86 | 18 | 0.68 | |
| Photichthys sp. | 1.50 | 90 | 0.55 | |
| Shrimps, small, non comm. | 1.44 | 186 | 0.52 | |
| Todaropsis eblanae | 1.26 | 6 | 0.46 | |
| Galeus polli | 0.84 | 12 | 0.31 | |
| Myxine capensis | 0.72 | 12 | 0.26 | |
| Tripterophycis gilchristi | 0.54 | 24 | 0.20 | |
| Notacanthus sexspinis | 0.54 | 18 | 0.20 | |
| MYCTOPHIDAE | 0.36 | 48 | 0.13 | |
| Bassanago albescens | 0.06 | 6 | 0.02 | |
| Epigonus denticulatus | 0.06 | 24 | 0.02 | |
| Malacocephalus occidentalis | 0.06 | 6 | 0.02 | |
| Total | 274.88 | | 100.01 | |

PROJECT STATION: 449

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2933
start stop duration Long E 1500
TIME :06:30:00 06:50:00 20 (min) Purpose code: 3
LOG : 486.40 487.40 1.00 Area code : 1
FDEPTH: 255 250 GearCond.code:
BDEPTH: 255 250 Validity code:
Towing dir: 350° Wire out: 730 m Speed: 27 kn*10

Sorted: 94 Kg Total catch: 200.21 CATCH/HOUR: 600.63

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 103.53 | 1062 | 17.24 | |
| Callorhinchus capensis | 93.03 | 42 | 15.49 | |
| Zeus faber | 72.99 | 285 | 12.15 | |
| Thyrsites atun | 51.60 | 27 | 8.59 | 1261 |
| Genypterus capensis | 49.05 | 39 | 8.17 | 1263 |
| Coelorinchus fasciatus | 37.50 | 348 | 6.24 | |
| Merluccius paradoxus, juvenile | 25.83 | 1272 | 4.30 | 1258 |
| Merluccius capensis, female | 25.05 | 12 | 4.17 | 1278 |
| Lophius vomerinus | 23.55 | 6 | 3.92 | 1262 |
| Squalus megalops | 20.79 | 33 | 3.46 | |
| Brama brama | 16.71 | 12 | 2.78 | |
| Chelidonichthys capensis | 13.56 | 63 | 2.26 | |
| Holohalaelurus regani | 12.51 | 33 | 2.08 | |
| Merluccius paradoxus, female | 9.00 | 63 | 1.50 | 1268 |
| Cynoglossus capensis | 6.69 | 87 | 1.11 | |
| Merluccius paradoxus, male | 6.60 | 63 | 1.10 | 1260 |
| Sphoeroides pachgaster | 6.09 | 12 | 1.01 | |
| RAJIDAE | 5.67 | 12 | 0.94 | |
| Todaropsis eblanae | 3.78 | 54 | 0.63 | |
| Trachurus capensis | 3.48 | 21 | 0.58 | |
| Congiopodus spinifer | 2.85 | 12 | 0.47 | |
| Callanthias legras | 2.64 | 12 | 0.44 | |
| Lepidopus caudatus | 2.52 | 42 | 0.42 | |
| Merluccius capensis, male | 2.22 | 3 | 0.37 | 1259 |
| Etrumeus whiteheadi | 1.47 | 12 | 0.24 | |
| Notopogon macrosolen | 0.63 | 12 | 0.10 | |
| Total | 599.34 | | 99.76 | |

PROJECT STATION: 450

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2920
start stop duration Long E 1509
TIME :08:40:00 09:10:00 30 (min) Purpose code: 3
LOG : 502.10 503.60 1.50 Area code : 1
FDEPTH: 160 166 GearCond.code:
BDEPTH: 160 166 Validity code:
Towing dir: 40° Wire out: 450 m Speed: 26 kn*10

Sorted: 110 Kg Total catch: 181.47 CATCH/HOUR: 362.94

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 98.54 | 82 | 27.15 | 1269 |
| Merluccius capensis, male | 60.06 | 76 | 16.55 | 1264 |
| Squalus megalops | 54.60 | 190 | 15.04 | |
| Emmelichthys nitidus | 46.00 | 7360 | 12.67 | |
| Chelidonichthys capensis | 35.00 | 200 | 9.64 | |
| Thyrsites atun | 24.00 | 14 | 6.61 | 1267 |
| Trachurus capensis | 17.80 | 90 | 4.90 | 1266 |
| Holohalaelurus regani | 12.10 | 50 | 3.33 | |
| Zeus faber | 5.00 | 90 | 1.38 | |
| Lophius vomerinus | 4.04 | 8 | 1.11 | 1265 |
| RAJIDAE | 2.30 | 10 | 0.63 | |
| Sepia australis | 1.20 | 130 | 0.33 | |
| Cynoglossus capensis | 1.20 | 10 | 0.33 | |
| Todaropsis eblanae | 1.00 | 20 | 0.28 | |
| Congiopodus spinifer | 0.10 | 10 | 0.03 | |
| Total | 362.94 | | 99.98 | |

PROJECT STATION: 451

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2907
start stop duration Long E 1529
TIME :11:30:00 12:00:00 30 (min) Purpose code: 3
LOG : 523.90 525.50 1.60 Area code : 1
FDEPTH: 177 178 GearCond.code:
BDEPTH: 177 178 Validity code: 9
Towing dir: 50° Wire out: 490 m Speed: 31 kn*10

Sorted: 15 Kg Total catch: 15.49 CATCH/HOUR: 30.98

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Mustelus mustelus | 6.20 | 2 | 20.01 | |
| Callorhinchus capensis | 5.64 | 2 | 18.21 | |
| Brama brama | 4.30 | 2 | 13.88 | |
| Merluccius paradoxus, juvenile | 2.32 | 66 | 7.49 | |
| Helicolenus dactylopterus | 2.30 | 70 | 7.42 | |
| Sepia australis | 2.22 | 212 | 7.17 | |
| Holohalaelurus regani | 1.72 | 4 | 5.55 | |
| Cynoglossus capensis | 1.62 | 40 | 5.23 | |
| Paracallionymus costatus | 1.12 | 104 | 3.62 | |
| Chelidonichthys capensis | 0.74 | 2 | 2.39 | |
| Merluccius capensis | 0.68 | 2 | 2.19 | |
| Genypterus capensis | 0.64 | 6 | 2.07 | |
| Trachurus capensis | 0.42 | 2 | 1.36 | |
| Emmelichthys nitidus | 0.38 | 26 | 1.23 | |
| Chelidonichthys queketti | 0.28 | 6 | 0.90 | |
| Lolliguncula mercatoris | 0.18 | 76 | 0.58 | |
| Maurolicus muelleri | 0.14 | 118 | 0.45 | |
| Lepidopus caudatus | 0.08 | 2 | 0.26 | |
| Total | 30.98 | | 100.01 | |

PROJECT STATION: 452

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2906
start stop duration Long E 1530
TIME :12:50:00 13:20:00 30 (min) Purpose code: 3
LOG : 529.10 530.80 1.70 Area code : 1
FDEPTH: 177 179 GearCond.code:
BDEPTH: 177 179 Validity code:

Towing dir: 225° Wire out: 600 m Speed: 34 kn*10
Sorted: 12 Kg Total catch: 75.92 CATCH/HOUR: 151.84

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Paracallionymus costatus | 24.30 | 2556 | 16.00 | |
| Merluccius paradoxus, juvenile | 24.20 | 680 | 15.94 | 1274 |
| Helicolenus dactylopterus | 23.40 | 594 | 15.41 | |
| Trachurus capensis | 17.40 | 64 | 11.46 | 1277 |
| Merluccius capensis, female | 17.10 | 24 | 11.26 | 1270 |
| Cynoglossus capensis | 16.68 | 222 | 10.99 | |
| Merluccius paradoxus, female | 7.30 | 72 | 4.81 | 1273 |
| Sepia australis | 6.00 | 504 | 3.95 | |
| Lophius vomerinus | 5.60 | 4 | 3.69 | 1276 |
| Lolligoncula mercatoris | 2.88 | 942 | 1.90 | |
| Merluccius paradoxus, male | 1.70 | 22 | 1.12 | 1272 |
| Merluccius capensis, male | 1.46 | 2 | 0.96 | 1271 |
| Mustelus mustelus | 1.14 | 6 | 0.75 | |
| Holohalaelurus regani | 1.14 | 6 | 0.75 | |
| Genypterus capensis | 0.88 | 10 | 0.58 | 1275 |
| Lepidopus caudatus | 0.36 | 18 | 0.24 | |
| Todaropsis eblanae | 0.18 | 132 | 0.12 | |
| CALAPPIDAE | 0.12 | 6 | 0.08 | |
| Total | 151.84 | | 100.01 | |

PROJECT STATION: 453

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2900
start stop duration Long E 1540
TIME :14:54:00 15:24:00 30 (min) Purpose code: 3
LOG : 543.30 544.90 1.60 Area code : 1
FDEPTH: 176 177 GearCond.code:
BDEPTH: 176 177 Validity code:
Towing dir: 60° Wire out: 600 m Speed: 32 kn*10

Sorted: 74 Kg Total catch: 298.25 CATCH/HOUR: 596.50

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, juvenile | 235.76 | 7422 | 39.52 | 1283 |
| Trachurus capensis | 172.68 | 470 | 28.95 | 1284 |
| Paracallionymus costatus | 37.98 | 2528 | 6.37 | |
| Galeorhinus galeus | 29.00 | 2 | 4.86 | |
| Merluccius capensis, female | 18.70 | 190 | 3.13 | 1282 |
| Merluccius capensis, male | 17.96 | 212 | 3.01 | 1281 |
| Helicolenus dactylopterus | 17.08 | 910 | 2.86 | |
| Sepia australis | 13.84 | 1320 | 2.32 | |
| Holohalaelurus regani | 11.06 | 146 | 1.85 | |
| Cynoglossus capensis | 10.18 | 388 | 1.71 | |
| Merluccius capensis, female | 7.60 | 20 | 1.27 | 1279 |
| Todaropsis eblanae | 5.36 | 96 | 0.90 | |
| Brama brama | 4.80 | 2 | 0.80 | |
| Lophius vomerinus | 3.26 | 26 | 0.55 | 1286 |
| Lolligoncula mercatoris | 3.06 | 1230 | 0.51 | |
| Merluccius capensis, male | 2.80 | 8 | 0.47 | 1280 |
| Genypterus capensis | 2.64 | 34 | 0.44 | 1285 |
| Thyrsites atun | 2.52 | 2 | 0.42 | |
| Lepidopus caudatus | 0.22 | 14 | 0.04 | |
| Total | 596.50 | | 99.98 | |

PROJECT STATION: 454

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2851
start stop duration Long E 1554
TIME :17:06:00 17:36:00 30 (min) Purpose code: 3
LOG : 559.50 561.00 1.50 Area code : 1
FDEPTH: 152 147 GearCond.code:
BDEPTH: 152 147 Validity code:
Towing dir: 50° Wire out: 550 m Speed: 30 kn*10

Sorted: 49 Kg Total catch: 344.38 CATCH/HOUR: 688.76

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 226.82 | 6852 | 32.93 | 1290 |
| Merluccius capensis, female | 174.90 | 2486 | 25.39 | 1293 |
| Merluccius capensis, male | 160.60 | 2090 | 23.32 | 1292 |
| Trachurus capensis | 26.84 | 176 | 3.90 | 1289 |
| Merluccius capensis, female | 18.00 | 28 | 2.61 | 1295 |
| Thyrsites atun | 16.94 | 88 | 2.46 | 1287 |
| Lophius vomerinus | 16.60 | 92 | 2.41 | 1291 |
| Chelidonichthys capensis | 12.76 | 44 | 1.85 | |
| Merluccius capensis, male | 5.40 | 14 | 0.78 | 1294 |
| Sepia australis | 5.06 | 198 | 0.73 | |
| Paracallionymus costatus | 4.62 | 154 | 0.67 | |
| Helicolenus dactylopterus | 4.18 | 88 | 0.61 | |
| Holohalaelurus regani | 3.96 | 88 | 0.57 | |
| Rossia enigmatica | 3.30 | 44 | 0.48 | |
| Sufflogobius bibarbatus | 3.08 | 88 | 0.45 | |
| Etrumeus whiteheadi | 2.86 | 22 | 0.42 | |
| Cynoglossus capensis | 1.76 | 88 | 0.26 | |
| Genypterus capensis | 0.86 | 10 | 0.12 | 1288 |
| Lepidopus caudatus | 0.22 | 22 | 0.03 | |
| Total | 688.76 | | 99.99 | |

PROJECT STATION: 455

DATE:21/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2840
start stop duration Long E 1612
TIME :19:43:00 20:13:00 30 (min) Purpose code: 3
LOG : 579.30 581.00 1.70 Area code : 1
FDEPTH: 95 91 GearCond.code:
BDEPTH: 95 91 Validity code:
Towing dir: 335° Wire out: 360 m Speed: 34 kn*10

Sorted: 42 Kg Total catch: 1440.62 CATCH/HOUR: 2881.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis | 2708.10 | 63546 | 93.99 | 1296 |
| Chelidonichthys capensis | 75.48 | 102 | 2.62 | 1300 |
| Callorhinchus capensis | 68.34 | 102 | 2.37 | 1299 |
| Genypterus capensis | 24.80 | 10 | 0.86 | 1298 |
| Jasus lalandii | 2.56 | 22 | 0.09 | 1301 |
| Austroglossus microlepis | 1.96 | 8 | 0.07 | 1297 |
| Total | 2881.24 | | 100.00 | |

PROJECT STATION: 456

DATE:22/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2822
start stop duration Long E 1554
TIME :06:33:00 07:03:00 30 (min) Purpose code: 3
LOG : 627.40 628.80 1.40 Area code : 1
FDEPTH: 100 100 GearCond.code:
BDEPTH: 100 100 Validity code:
Towing dir: 325° Wire out: 340 m Speed: 29 kn*10

Sorted: 33 Kg Total catch: 1089.00 CATCH/HOUR: 2178.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 1181.40 | 30228 | 54.24 | 1302 |
| Merluccius capensis, male | 419.10 | 6600 | 19.24 | 1303 |
| Merluccius capensis, female | 405.90 | 5874 | 18.64 | 1304 |
| Chelidonichthys capensis | 150.48 | 1122 | 6.91 | 1307 |
| Trachurus capensis | 16.50 | 56 | 0.76 | 1305 |
| Photichthys argenteus | 4.62 | 1320 | 0.21 | 1306 |
| Total | 2178.00 | | 100.00 | |

PROJECT STATION: 457

DATE:22/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2833
start stop duration Long E 1534
TIME :09:52:00 10:22:00 30 (min) Purpose code: 3
LOG : 649.90 651.40 1.50 Area code : 1
FDEPTH: 157 160 GearCond.code:
BDEPTH: 157 160 Validity code:
Towing dir: 270° Wire out: 470 m Speed: 30 kn*10

Sorted: 51 Kg Total catch: 51.72 CATCH/HOUR: 103.44

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Callorhinchus capensis | 17.90 | 12 | 17.30 | |
| Merluccius paradoxus, juvenile | 16.10 | 526 | 15.56 | 1312 |
| Merluccius capensis, female | 14.70 | 26 | 14.21 | 1309 |
| Mustelus mustelus | 11.00 | 4 | 10.63 | |
| Merluccius capensis, male | 10.40 | 30 | 10.05 | 1308 |
| Etrumeus whiteheadi | 5.18 | 64 | 5.01 | |
| Thyrsites atun | 5.04 | 2 | 4.87 | 1316 |
| Trachurus capensis | 3.58 | 16 | 3.46 | 1314 |
| Chelidonichthys capensis | 3.56 | 6 | 3.44 | |
| Lepidopus caudatus | 3.32 | 10 | 3.21 | |
| Merluccius paradoxus, female | 2.80 | 20 | 2.71 | 1311 |
| Squalus megalops | 2.22 | 6 | 2.15 | |
| Holohalaelurus regani | 2.12 | 10 | 2.05 | |
| Genypterus capensis | 1.70 | 8 | 1.64 | 1315 |
| Helicolenus dactylopterus | 0.90 | 44 | 0.87 | |
| Paracallionymus costatus | 0.74 | 46 | 0.72 | |
| Merluccius paradoxus, male | 0.60 | 12 | 0.58 | 1310 |
| Lophius vomerinus | 0.54 | 6 | 0.52 | 1313 |
| Sepia australis | 0.28 | 16 | 0.27 | |
| Zeus faber | 0.18 | 6 | 0.17 | |
| Sufflogobius bibarbatus | 0.18 | 18 | 0.17 | |
| Todaropsis eblanae | 0.16 | 4 | 0.15 | |
| Coelorinchus fasciatus | 0.12 | 4 | 0.12 | |
| MYCTOPHIDAE | 0.12 | 168 | 0.12 | |
| Total | 103.44 | | 99.98 | |

PROJECT STATION: 458

DATE:22/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2843
start stop duration Long E 1517
TIME :13:08:00 13:38:00 30 (min) Purpose code: 3
LOG : 671.10 672.50 1.40 Area code : 1
FDEPTH: 160 165 GearCond.code:
BDEPTH: 160 165 Validity code:
Towing dir: 335° Wire out: 580 m Speed: 28 kn*10

Sorted: 129 Kg Total catch: 226.13 CATCH/HOUR: 452.26

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Chelidonichthys capensis | 117.00 | 230 | 25.87 | |
| Merluccius capensis, female | 102.80 | 78 | 22.73 | 1333 |
| Trachurus capensis | 60.10 | 170 | 13.29 | 1335 |
| Merluccius capensis, male | 43.30 | 64 | 9.57 | 1332 |
| Paracallionymus costatus | 26.50 | 2370 | 5.86 | |
| Squalus megalops | 24.60 | 60 | 5.44 | |
| Mustelus mustelus | 14.60 | 10 | 3.23 | |
| Helicolenus dactylopterus | 11.70 | 250 | 2.59 | |
| Cynoglossus capensis | 6.50 | 70 | 1.44 | |
| Merluccius capensis, juveniles | 5.80 | 240 | 1.28 | 1334 |
| Chelidonichthys queketti | 5.80 | 60 | 1.28 | |
| Brama brama | 5.00 | 2 | 1.11 | |
| Callorhinchus capensis | 4.90 | 10 | 1.08 | |
| Lolligoncula mercatoris | 4.00 | 1248 | 0.88 | |
| Holohalaelurus regani | 3.80 | 20 | 0.84 | |
| Merluccius paradoxus, male | 3.60 | 10 | 0.80 | 1344 |
| Sepia australis | 3.20 | 480 | 0.71 | |
| Zeus capensis | 3.10 | 90 | 0.69 | |
| Merluccius paradoxus, female | 2.30 | 10 | 0.51 | 1343 |
| Todaropsis eblanae | 2.00 | 20 | 0.44 | |
| Etrumeus whiteheadi | 1.60 | 20 | 0.35 | |
| Emmelichthys nitidus | 0.50 | 50 | 0.11 | |
| Lepidopus caudatus | 0.10 | 10 | 0.02 | |
| Total | 452.80 | | 100.12 | |

PROJECT STATION: 459

DATE:22/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2853

| | start | stop | duration | | | Long E 1503 |
|---|---|---|---|---|---|---|
| TIME | :16:21:00 | 16:51:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 691.50 | 693.00 | 1.50 | Area code | : 1 | |
| FDEPTH: | 169 | 167 | | GearCond.code: | | |
| BDEPTH: | 169 | 167 | | Validity code: | | |

Towing dir: 330° Wire out: 600 m Speed: 30 kn*10

Sorted: 87 Kg Total catch: 141.80 CATCH/HOUR: 283.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 58.14 | 1488 | 20.50 | 1341 |
| Merluccius capensis, female | 54.50 | 56 | 19.22 | 1339 |
| Squalus megalops | 43.08 | 138 | 15.19 | |
| Chelidonichthys capensis | 24.30 | 60 | 8.57 | |
| Merluccius capensis, male | 21.10 | 20 | 7.44 | 1338 |
| Thyrsites atun | 18.20 | 8 | 6.42 | 1336 |
| Helicolenus dactylopterus | 16.62 | 372 | 5.86 | |
| Lophius vomerinus | 8.90 | 10 | 3.14 | 1337 |
| Brama brama | 8.20 | 4 | 2.89 | |
| Trachurus capensis | 6.70 | 18 | 2.36 | 1340 |
| Holohalaelurus regani | 4.80 | 18 | 1.69 | |
| Sepia australis | 3.30 | 426 | 1.16 | |
| Todaropsis eblanae | 2.88 | 54 | 1.02 | |
| Cynoglossus capensis | 2.82 | 30 | 0.99 | |
| Merluccius paradoxus, female | 2.80 | 10 | 0.99 | 1342 |
| Paracallionymus costatus | 2.70 | 234 | 0.95 | |
| Congiopodus spinifer | 2.28 | 24 | 0.80 | |
| Zeus faber | 1.74 | 36 | 0.61 | |
| Emmelichthys nitidus | 0.30 | 36 | 0.11 | |
| Lepidopus caudatus | 0.24 | 6 | 0.08 | |
| Total | 283.60 | | 99.99 | |

PROJECT STATION: 460

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2904

| | start | stop | duration | | | Long E 1445 |
|---|---|---|---|---|---|---|
| TIME | :06:29:00 | 06:59:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 740.20 | 741.70 | 1.50 | Area code | : 1 | |
| FDEPTH: | 220 | 223 | | GearCond.code: | | |
| BDEPTH: | 220 | 223 | | Validity code: | | |

Towing dir: 250° Wire out: 660 m Speed: 34 kn*10

Sorted: 99 Kg Total catch: 486.46 CATCH/HOUR: 972.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 389.20 | 980 | 40.00 | 1351 |
| Merluccius paradoxus, juvenile | 247.24 | 6496 | 25.41 | 1349 |
| Merluccius capensis, female | 60.90 | 40 | 6.26 | 1346 |
| Lepidopus caudatus | 60.20 | 1148 | 6.19 | |
| Lophius vomerinus | 35.60 | 32 | 3.66 | 1352 |
| Merluccius paradoxus, female | 35.56 | 364 | 3.65 | 1348 |
| Helicolenus dactylopterus | 28.56 | 336 | 2.94 | |
| Cynoglossus capensis | 24.64 | 308 | 2.53 | |
| Thyrsites atun | 24.30 | 20 | 2.50 | 1350 |
| Merluccius paradoxus, male | 19.32 | 336 | 1.99 | 1347 |
| Genypterus capensis | 14.70 | 8 | 1.51 | 1353 |
| Squalus megalops | 9.24 | 28 | 0.95 | |
| Sepia australis | 4.76 | 336 | 0.49 | |
| Merluccius capensis, male | 4.70 | 8 | 0.48 | 1345 |
| Paracallionymus costatus | 3.36 | 532 | 0.35 | |
| MURAENIDAE | 2.52 | 112 | 0.26 | |
| Zeus faber | 2.24 | 28 | 0.23 | |
| Chelidonichthys capensis | 1.96 | 28 | 0.20 | |
| Todaropsis eblanae | 1.96 | 28 | 0.20 | |
| Malacocephalus laevis | 1.68 | 28 | 0.17 | |
| Photichthys argenteus | 0.28 | 364 | 0.03 | |
| Total | 972.92 | | 100.00 | |

PROJECT STATION: 461

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2910

| | start | stop | duration | | | Long E 1434 |
|---|---|---|---|---|---|---|
| TIME | :08:35:00 | 09:05:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 752.50 | 754.00 | 1.50 | Area code | : 1 | |
| FDEPTH: | 295 | 320 | | GearCond.code: | | |
| BDEPTH: | 295 | 320 | | Validity code: | | |

Towing dir: 270° Wire out: 900 m Speed: 30 kn*10

Sorted: 158 Kg Total catch: 1472.10 CATCH/HOUR: 2944.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Zeus faber | 932.00 | 2800 | 31.66 | |
| Merluccius paradoxus, juvenile | 926.40 | 14160 | 31.47 | 1358 |
| Merluccius capensis, female | 195.80 | 114 | 6.65 | 1355 |
| Merluccius paradoxus, male | 173.60 | 2000 | 5.90 | 1356 |
| Lepidopus caudatus | 159.20 | 2000 | 5.41 | |
| Trachurus capensis | 147.20 | 400 | 5.00 | 1361 |
| Merluccius paradoxus, female | 116.00 | 1120 | 3.94 | 1357 |
| Todaropsis eblanae | 78.40 | 160 | 2.66 | |
| Coelorinchus fasciatus | 63.20 | 1920 | 2.15 | |
| Helicolenus dactylopterus | 43.20 | 240 | 1.47 | |
| Merluccius capensis, male | 37.10 | 26 | 1.26 | 1354 |
| Holohalaelurus regani | 26.40 | 160 | 0.90 | |
| Malacocephalus laevis | 15.20 | 160 | 0.52 | |
| Lophius vomerinus | 9.40 | 8 | 0.32 | 1360 |
| Thyrsites atun | 8.30 | 6 | 0.28 | 1359 |
| Squalus megalops | 8.00 | 80 | 0.27 | |
| Photichthys argenteus | 2.40 | 1360 | 0.08 | |
| Paracallionymus costatus | 1.60 | 320 | 0.05 | |
| Squilla sp. | 0.80 | 80 | 0.03 | |
| Total | 2944.20 | | 100.02 | |

PROJECT STATION: 462

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2908

| | start | stop | duration | | | Long E 1428 |
|---|---|---|---|---|---|---|
| TIME | :10:08:00 | 10:38:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 757.90 | 759.40 | 1.50 | Area code | : 1 | |
| FDEPTH: | 390 | 390 | | GearCond.code: | | |
| BDEPTH: | 390 | 390 | | Validity code: | | |

Towing dir: 330° Wire out:1180 m Speed: 30 kn*10

Sorted: 85 Kg Total catch: 1517.05 CATCH/HOUR: 3034.10

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 1048.80 | 3600 | 34.57 | 1365 |
| Epigonus denticulatus | 1042.08 | 14928 | 34.35 | |
| Merluccius paradoxus, male | 760.80 | 2976 | 25.07 | 1364 |
| Brama brama | 60.00 | 48 | 1.98 | |
| Coelorinchus fasciatus | 40.80 | 768 | 1.34 | |
| Genypterus capensis | 27.50 | 12 | 0.91 | 1362 |
| Merluccius capensis, female | 18.60 | 12 | 0.61 | 1363 |
| MYCTOPHIDAE | 15.36 | 144 | 0.51 | |
| Malacocephalus laevis | 15.36 | 144 | 0.51 | |
| Todaropsis eblanae | 8.16 | 240 | 0.27 | |
| Paracallionymus costatus | 0.96 | 96 | 0.03 | |
| Total | 3038.42 | | 100.15 | |

PROJECT STATION: 463

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2902

| | start | stop | duration | | | Long E 1423 |
|---|---|---|---|---|---|---|
| TIME | :11:52:00 | 12:22:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 765.10 | 766.60 | 1.50 | Area code | : 1 | |
| FDEPTH: | 468 | 476 | | GearCond.code: | | |
| BDEPTH: | 468 | 476 | | Validity code: | | |

Towing dir: 340° Wire out:1400 m Speed: 35 kn*10

Sorted: 21 Kg Total catch: 346.68 CATCH/HOUR: 693.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 362.10 | 282 | 52.22 | 1367 |
| Genypterus capensis | 79.00 | 22 | 11.39 | 1370 |
| Lophius vomerinus | 45.00 | 10 | 6.49 | 1369 |
| Todarodes sagittatus | 40.56 | 102 | 5.85 | |
| Ruvettus pretiosus | 32.00 | 4 | 4.62 | |
| Torpedo nobiliana | 20.00 | 2 | 2.88 | |
| Helicolenus dactylopterus | 19.56 | 48 | 2.82 | |
| CHAMPSODONTIDAE | 18.42 | 18 | 2.66 | |
| Scyliorhinus capensis | 16.02 | 12 | 2.31 | |
| Coelorinchus fasciatus | 12.42 | 144 | 1.79 | |
| Merluccius capensis, female | 12.00 | 4 | 1.73 | 1368 |
| Merluccius paradoxus, male | 11.40 | 16 | 1.64 | 1366 |
| Raja confundens | 6.66 | 6 | 0.96 | |
| Myxine capensis | 5.04 | 120 | 0.73 | |
| Holohalaelurus regani | 3.00 | 12 | 0.43 | |
| Ebinania costaecanarie | 3.00 | 12 | 0.43 | |
| PARAPAGURIDAE | 1.32 | 72 | 0.19 | |
| Yarrella blackfordi | 1.14 | 90 | 0.16 | |
| Notacanthus sexspinis | 0.90 | 18 | 0.13 | |
| MYCTOPHIDAE | 0.42 | 216 | 0.06 | |
| Total | 689.96 | | 99.49 | |

PROJECT STATION: 464

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2900

| | start | stop | duration | | | Long E 1422 |
|---|---|---|---|---|---|---|
| TIME | :13:38:00 | 14:08:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 771.50 | 772.90 | 1.40 | Area code | : 1 | |
| FDEPTH: | 557 | 563 | | GearCond.code: | | |
| BDEPTH: | 557 | 563 | | Validity code: | | |

Towing dir: 350° Wire out:1550 m Speed: 30 kn*10

Sorted: 79 Kg Total catch: 95.90 CATCH/HOUR: 191.80

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Centrophorus squamosus | 39.00 | 6 | 20.33 | |
| Etmopterus sp. | 34.20 | 510 | 17.83 | |
| Merluccius paradoxus, female | 21.40 | 14 | 11.16 | 1371 |
| Deania profundorum | 14.46 | 18 | 7.54 | |
| Raja confundens | 13.08 | 18 | 6.82 | |
| CHIMAERIDAE | 12.78 | 18 | 6.66 | |
| Trachyrincus scabrus | 8.34 | 108 | 4.35 | |
| Nezumia sp. | 7.20 | 132 | 3.75 | |
| Merluccius paradoxus, male | 6.70 | 4 | 3.49 | 1372 |
| Coelorinchus braueri | 6.60 | 138 | 3.44 | |
| Genypterus capensis | 5.30 | 2 | 2.76 | 1373 |
| Coloconger cadenati | 5.16 | 6 | 2.69 | |
| Todarodes sagittatus | 3.24 | 30 | 1.69 | |
| Selachophidium guentheri | 3.18 | 72 | 1.66 | |
| Parapenaeus longirostris | 3.12 | 444 | 1.63 | |
| Myxine capensis | 2.70 | 78 | 1.41 | |
| Helicolenus dactylopterus | 2.22 | 6 | 1.16 | |
| Chaceon maritae | 1.50 | 12 | 0.78 | |
| Yarrella blackfordi | 1.44 | 156 | 0.75 | |
| Holohalaelurus regani | 1.32 | 6 | 0.69 | |
| Plesiopenaeus edwardsianus | 1.08 | 390 | 0.56 | |
| Malacocephalus occidentalis | 0.90 | 24 | 0.47 | |
| Hoplostethus cadenati | 0.84 | 48 | 0.44 | |
| Bassanago albescens | 0.60 | 6 | 0.31 | |
| Notacanthus sexspinis | 0.48 | 18 | 0.25 | |
| Coelorinchus fasciatus | 0.12 | 6 | 0.06 | |
| Total | 196.96 | | 102.68 | |

PROJECT STATION: 465

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2856

| | start | stop | duration | | | Long E 1424 |
|---|---|---|---|---|---|---|
| TIME | :15:33:00 | 15:43:00 | 10 (min) | Purpose code: | 3 | |
| LOG | : 777.90 | 778.40 | 0.50 | Area code | : 1 | |
| FDEPTH: | 450 | 431 | | GearCond.code: | | |
| BDEPTH: | 450 | 431 | | Validity code: | | |

Towing dir: 360° Wire out:1350 m Speed: 30 kn*10

Sorted: 27 Kg Total catch: 227.04 CATCH/HOUR: 1362.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 669.30 | 1044 | 49.13 | 1374 |
| Merluccius paradoxus, male | 174.30 | 366 | 12.80 | 1375 |
| Lophius vomerinus | 109.80 | 18 | 8.05 | 1377 |
| Shrimps, small, non comm. | 84.00 | | 6.17 | |
| Helicolenus dactylopterus | 51.24 | 132 | 3.76 | |
| Genypterus capensis | 48.60 | 24 | 3.57 | 1376 |
| Coelorinchus fasciatus | 41.64 | 624 | 3.06 | |
| Deania profundorum | 30.12 | 24 | 2.21 | |
| Raja confundens | 28.32 | 36 | 2.08 | |
| Scyliorhinus capensis | 27.36 | 36 | 2.01 | |
| Holohalaelurus regani | 27.24 | 60 | 2.00 | |
| Torpedo nobiliana | 25.08 | 6 | 1.84 | |
| CHIMAERIDAE | 11.16 | 12 | 0.82 | |
| Maurolicus muelleri | 10.56 | 6720 | 0.78 | |
| Malacocephalus laevis | 8.40 | 36 | 0.62 | |
| Hoplostethus cadenati | 4.68 | 108 | 0.34 | |
| Rossia sp. | 1.80 | 48 | 0.13 | |
| Etmopterus lucifer | 1.32 | 24 | 0.10 | |
| Myxine capensis | 1.32 | 24 | 0.10 | |
| MYCTOPHIDAE | 1.20 | 120 | 0.09 | |
| Epigonus denticulatus | 1.20 | 168 | 0.09 | |
| Notacanthus sexspinis | 0.84 | 12 | 0.06 | |
| Tripterophycis gilchristi | 0.48 | 12 | 0.04 | |
| Bathynectes piperitus | 0.48 | 12 | 0.04 | |
| Malacocephalus occidentalis | 0.48 | 12 | 0.04 | |
| Photichthys argenteus | 0.36 | 24 | 0.03 | |
| Nezumia sp. | 0.36 | 12 | 0.03 | |
| Coelorinchus braueri | 0.36 | 12 | 0.03 | |
| Physiculus capensis | 0.24 | 12 | 0.02 | |
| Total | 1362.24 | | 100.05 | |

PROJECT STATION: 466

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2854

| | start | stop | duration | | | Long E 1426 |
|---|---|---|---|---|---|---|
| TIME | :16:49:00 | 17:19:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 799.80 | 801.20 | 1.40 | Area code | : 1 | |
| FDEPTH: | 349 | 352 | | GearCond.code: | | |
| BDEPTH: | 349 | 352 | | Validity code: | | |

Towing dir: 350° Wire out:1050 m Speed: 30 kn*10

Sorted: 52 Kg Total catch: 249.86 CATCH/HOUR: 499.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, male | 181.50 | 1090 | 36.32 | 1378 |
| Merluccius paradoxus, female | 148.00 | 1200 | 29.62 | 1379 |
| Raja clavata | 42.50 | 10 | 8.50 | |
| Coelorinchus fasciatus | 29.70 | 370 | 5.94 | |
| Helicolenus dactylopterus | 25.80 | 110 | 5.16 | |
| Holohalaelurus regani | 14.50 | 40 | 2.90 | |
| Malacocephalus laevis | 9.80 | 20 | 1.96 | |
| Todarodes sagittatus | 8.00 | 20 | 1.60 | |
| Epigonus denticulatus | 7.80 | 2600 | 1.56 | |
| Squalus megalops | 7.10 | 10 | 1.42 | |
| Epigonus denticulatus | 6.10 | 100 | 1.22 | |
| Photichthys argenteus | 5.30 | 4710 | 1.06 | |
| Galeus polli | 4.10 | 40 | 0.82 | |
| Merluccius capensis, female | 3.00 | 2 | 0.60 | 1380 |
| Lophius vomerinus | 2.12 | 2 | 0.42 | 1381 |
| Beryx splendens | 1.50 | 10 | 0.30 | |
| C R A B S | 1.20 | 160 | 0.24 | |
| Todaropsis eblanae | 1.10 | 40 | 0.22 | |
| MYCTOPHIDAE | 0.60 | 30 | 0.12 | |
| Total | 499.72 | | 99.98 | |

PROJECT STATION: 467

DATE:23/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2849

| | start | stop | duration | | | Long E 1427 |
|---|---|---|---|---|---|---|
| TIME | :18:20:00 | 18:29:00 | 9 (min) | Purpose code: | 3 | |
| LOG | : 805.90 | 806.40 | 0.50 | Area code | : 1 | |
| FDEPTH: | 292 | 295 | | GearCond.code: | | |
| BDEPTH: | 292 | 295 | | Validity code: | | |

Towing dir: 270° Wire out: 870 m Speed: 30 kn*10

Sorted: 38 Kg Total catch: 146.76 CATCH/HOUR: 978.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Epigonus denticulatus | 474.00 | 9840 | 48.45 | |
| Brama brama | 148.20 | 93 | 15.15 | |
| Merluccius paradoxus, female | 120.60 | 1240 | 12.33 | 1383 |
| Merluccius paradoxus, male | 111.33 | 1213 | 11.38 | 1382 |
| Merluccius capensis, female | 43.67 | 33 | 4.46 | 1384 |
| Lepidopus caudatus | 22.20 | 300 | 2.27 | |
| Coelorinchus fasciatus | 18.60 | 453 | 1.90 | |
| Holohalaelurus regani | 13.53 | 60 | 1.38 | |
| Helicolenus dactylopterus | 8.13 | 93 | 0.83 | |
| Lophius vomerinus | 7.27 | 7 | 0.74 | 1385 |
| Malacocephalus laevis | 6.93 | 93 | 0.71 | |
| Photichthys argenteus | 3.00 | 2400 | 0.31 | |
| Todaropsis eblanae | 0.93 | 33 | 0.10 | |
| Total | 978.39 | | 100.01 | |

PROJECT STATION: 468

DATE:24/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2832

| | start | stop | duration | | | Long E 1426 |
|---|---|---|---|---|---|---|
| TIME | :00:16:00 | 00:46:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 846.50 | 848.00 | 1.50 | Area code | : 1 | |
| FDEPTH: | 365 | 371 | | GearCond.code: | | |
| BDEPTH: | 365 | 371 | | Validity code: | | |

Towing dir: 25° Wire out:1050 m Speed: 30 kn*10

Sorted: 38 Kg Total catch: 417.60 CATCH/HOUR: 835.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Epigonus denticulatus | 267.00 | 5600 | 31.97 | |
| Malacocephalus laevis | 109.60 | 880 | 13.12 | |
| Helicolenus dactylopterus | 97.60 | 420 | 11.69 | |
| Genypterus capensis | 78.60 | 40 | 9.41 | 1390 |
| Merluccius paradoxus, female | 56.50 | 270 | 6.76 | 1387 |
| Coelorinchus fasciatus | 47.00 | 460 | 5.63 | |
| Merluccius capensis, female | 42.20 | 22 | 5.05 | 1388 |
| Holohalaelurus regani | 30.60 | 80 | 3.66 | |
| Galeus polli | 28.60 | 22 | 3.42 | |
| Scyliorhinus capensis | 26.40 | 20 | 3.16 | |
| Lophius vomerinus | 19.10 | 6 | 2.29 | 1391 |
| Merluccius paradoxus, male | 19.00 | 140 | 2.27 | 1386 |
| OCTOPODIDAE | 6.00 | 2 | 0.72 | |
| Merluccius capensis, male | 4.20 | 4 | 0.50 | 1389 |
| Lepidopus caudatus | 2.00 | 20 | 0.24 | |
| MYCTOPHIDAE | 0.80 | 180 | 0.10 | |
| Total | 835.20 | | 99.99 | |

PROJECT STATION: 469

DATE:24/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2828

| | start | stop | duration | | | Long E 1424 |
|---|---|---|---|---|---|---|
| TIME | :01:47:00 | 02:17:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 852.40 | 854.00 | 1.60 | Area code | : 1 | |
| FDEPTH: | 450 | 456 | | GearCond.code: | | |
| BDEPTH: | 450 | 456 | | Validity code: | | |

Towing dir: 350° Wire out:1300 m Speed: 30 kn*10

Sorted: 21 Kg Total catch: 198.94 CATCH/HOUR: 397.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 235.90 | 666 | 59.29 | 1393 |
| Merluccius paradoxus, male | 65.90 | 234 | 16.56 | 1392 |
| Todarodes sagittatus | 28.00 | 76 | 7.04 | |
| Coelorinchus fasciatus | 16.88 | 380 | 4.24 | |
| Raja confundens | 13.72 | 12 | 3.45 | |
| Etmopterus lucifer | 11.76 | 528 | 2.96 | |
| Genypterus capensis | 8.20 | 6 | 2.06 | 1394 |
| Holohalaelurus regani | 4.96 | 12 | 1.25 | |
| Tripterophycis gilchristi | 4.56 | 24 | 1.15 | |
| Helicolenus dactylopterus | 2.20 | 8 | 0.55 | |
| Myxine capensis | 2.20 | 8 | 0.55 | |
| Nezumia sp. | 1.00 | 100 | 0.25 | |
| Galeus polli | 0.88 | 12 | 0.22 | |
| Notacanthus sexspinis | 0.88 | 28 | 0.22 | |
| Photichthys argenteus | 0.48 | 32 | 0.12 | |
| Bassanago albescens | 0.28 | 4 | 0.07 | |
| MYCTOPHIDAE | 0.08 | 48 | 0.02 | |
| Total | 397.88 | | 100.00 | |

PROJECT STATION: 470

DATE:24/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2834

| | start | stop | duration | | | Long E 1438 |
|---|---|---|---|---|---|---|
| TIME | :06:26:00 | 06:56:00 | 30 (min) | Purpose code: | 3 | |
| LOG | : 875.80 | 877.30 | 1.50 | Area code | : 1 | |
| FDEPTH: | 163 | 163 | | GearCond.code: | | |
| BDEPTH: | 163 | 163 | | Validity code: | | |

Towing dir: 330° Wire out: 480 m Speed: 29 kn*10

Sorted: 102 Kg Total catch: 870.81 CATCH/HOUR: 1741.62

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 1186.98 | 1492 | 68.15 | 1397 |
| Holohalaelurus regani | 117.76 | 1072 | 6.76 | |
| Chelidonichthys capensis | 105.40 | 256 | 6.05 | |
| Zeus faber | 104.70 | 1166 | 6.01 | |
| Callorhinchus capensis | 47.80 | 24 | 2.74 | |
| Merluccius capensis, male | 35.80 | 34 | 2.06 | 1395 |
| Trachurus capensis | 28.92 | 116 | 1.66 | 1398 |
| Lepidopus caudatus | 26.36 | 24 | 1.51 | |
| Merluccius capensis, female | 26.10 | 16 | 1.50 | 1396 |
| Emmelichthys nitidus | 20.52 | 3648 | 1.18 | |
| Chelidonichthys queketti | 18.88 | 186 | 1.08 | |
| Congiopodus spinifer | 8.86 | 70 | 0.51 | |
| Raja leopardus | 8.40 | 24 | 0.48 | |
| Cynoglossus capensis | 3.04 | 46 | 0.17 | |
| Todaropsis eblanae | 1.86 | 24 | 0.11 | |
| Nezumia sp. | 0.24 | 46 | 0.01 | |
| Total | 1741.62 | | 99.98 | |

PROJECT STATION: 471

DATE:24/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2825
start stop duration Long E 1454
TIME :09:34:00 10:04:00 30 (min) Purpose code: 3
LOG : 896.60 898.10 1.50 Area code : 1
FDEPTH: 177 177 GearCond.code:
BDEPTH: 177 177 Validity code:
Towing dir: 30° Wire out: 510 m Speed: 34 kn*10

Sorted: 113 Kg Total catch: 113.49 CATCH/HOUR: 226.98

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 75.00 | 92 | 33.04 | 1400 |
| Chelidonichthys capensis | 34.00 | 94 | 14.98 | |
| Merluccius capensis, male | 25.80 | 34 | 11.37 | 1399 |
| Thyrsites atun | 23.50 | 22 | 10.35 | 1401 |
| Squalus megalops | 14.30 | 36 | 6.30 | |
| Etrumeus whiteheadi | 10.70 | 132 | 4.71 | |
| Raja leopardus | 8.60 | 2 | 3.79 | |
| Todaropsis eblanae | 6.82 | 152 | 3.00 | |
| Raja wallacei | 6.80 | 2 | 3.00 | |
| Holohalaelurus regani | 5.88 | 26 | 2.59 | |
| Zeus faber | 3.44 | 82 | 1.52 | |
| Lepidopus caudatus | 2.86 | 14 | 1.26 | |
| Paracallionymus costatus | 2.36 | 246 | 1.04 | |
| Raja straeleni | 1.80 | 2 | 0.79 | |
| Chelidonichthys queketti | 1.64 | 16 | 0.72 | |
| Lolliguncula mercatoris | 1.00 | 334 | 0.44 | |
| Cynoglossus capensis | 0.60 | 8 | 0.26 | |
| Helicolenus dactylopterus | 0.48 | 16 | 0.21 | |
| Congiopodus spinifer | 0.44 | 4 | 0.19 | |
| Emmelichthys nitidus | 0.42 | 92 | 0.19 | |
| Sepia australis | 0.36 | 26 | 0.16 | |
| Trachurus capensis | 0.18 | 2 | 0.08 | |
| Total | 226.98 | | 99.99 | |

PROJECT STATION: 472

DATE:24/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2818
start stop duration Long E 1507
TIME :12:39:00 13:09:00 30 (min) Purpose code: 3
LOG : 915.50 917.10 1.70 Area code : 1
FDEPTH: 173 173 GearCond.code:
BDEPTH: 173 173 Validity code:
Towing dir: 330° Wire out: 580 m Speed: 33 kn*10

Sorted: 26 Kg Total catch: 289.83 CATCH/HOUR: 579.66

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 372.10 | 256 | 64.19 | 1405 |
| Merluccius capensis, female | 74.80 | 106 | 12.90 | 1403 |
| Chelidonichthys capensis | 23.00 | 96 | 3.97 | |
| Merluccius capensis, male | 21.70 | 46 | 3.74 | 1402 |
| RAJIDAE | 17.52 | 16 | 3.02 | |
| Etrumeus whiteheadi | 15.40 | 200 | 2.66 | |
| Squalus megalops | 14.00 | 32 | 2.42 | |
| Lepidopus caudatus | 7.96 | 4 | 1.37 | |
| Callorhinchus capensis | 5.88 | 4 | 1.01 | |
| Holohalaelurus regani | 5.76 | 20 | 0.99 | |
| Mustelus mustelus | 5.70 | 2 | 0.98 | |
| Todaropsis eblanae | 2.36 | 56 | 0.41 | |
| Chelidonichthys queketti | 2.36 | 20 | 0.41 | |
| Helicolenus dactylopterus | 2.24 | 236 | 0.39 | |
| Paracallionymus costatus | 2.16 | 200 | 0.37 | |
| Zeus capensis | 1.88 | 52 | 0.32 | |
| Congiopodus spinifer | 1.48 | 8 | 0.26 | |
| Lophius vomerinus | 0.78 | 2 | 0.13 | 1406 |
| Emmelichthys nitidus | 0.68 | 132 | 0.12 | |
| Sepia australis | 0.64 | 24 | 0.11 | |
| Lolliguncula mercatoris | 0.52 | 132 | 0.09 | |
| Coelorinchus fasciatus | 0.40 | 4 | 0.07 | |
| Merluccius capensis, juveniles | 0.30 | 12 | 0.05 | 1404 |
| Bathynectes piperitus | 0.04 | 4 | 0.01 | |
| Total | 579.66 | | 99.99 | |

PROJECT STATION: 473

DATE:24/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2812
start stop duration Long E 1515
TIME :14:40:00 15:00:00 20 (min) Purpose code: 3
LOG : 928.30 929.50 1.20 Area code : 1
FDEPTH: 135 143 GearCond.code: 8
BDEPTH: 135 143 Validity code: 4
Towing dir: 340° Wire out: 500 m Speed: 35 kn*10

Sorted: 34 Kg Total catch: 478.48 CATCH/HOUR: 1435.44

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Etrumeus whiteheadi | 1066.50 | 18642 | 74.30 | 1407 |
| Merluccius capensis | 156.00 | | 10.87 | |
| Callorhinchus capensis | 67.08 | 39 | 4.67 | |
| Todaropsis eblanae | 47.19 | 156 | 3.29 | |
| Galeorhinus galeus | 45.00 | 3 | 3.13 | |
| Thyrsites atun | 33.00 | 30 | 2.30 | |
| Genypterus capensis | 15.99 | 78 | 1.11 | |
| Lophius vomerinus | 2.73 | 39 | 0.19 | |
| Lolliguncula mercatoris | 1.95 | 507 | 0.14 | |
| Total | 1435.44 | | 100.00 | |

PROJECT STATION: 474

DATE:24/10/94 GEAR TYPE: BT No: POSITION:Lat S 2801
start stop duration Long E 1533
TIME :19:06:00 19:36:00 30 (min) Purpose code: 3
LOG : 953.60 955.20 1.60 Area code : 1
FDEPTH: 83 83 GearCond.code:
BDEPTH: 83 83 Validity code:
Towing dir: 330° Wire out: 260 m Speed: 32 kn*10

Sorted: 17 Kg Total catch: 125.02 CATCH/HOUR: 250.04

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 170.80 | 4928 | 68.31 | 1410 |
| MYCTOPHIDAE | 24.36 | 10444 | 9.74 | |
| Merluccius capensis, female | 21.84 | 350 | 8.73 | 1409 |
| Merluccius capensis, male | 11.34 | 154 | 4.54 | 1408 |
| Lolliguncula mercatoris | 5.88 | 2212 | 2.35 | |
| Squilla sp. | 5.46 | 406 | 2.18 | |
| Sepia australis | 4.62 | 210 | 1.85 | |
| Thyrsites atun | 3.36 | 14 | 1.34 | |
| Chelidonichthys capensis | 2.38 | 14 | 0.95 | |
| Total | 250.04 | | 99.99 | |

PROJECT STATION: 475

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2737
start stop duration Long E 1514
TIME :06:29:00 06:59:00 30 (min) Purpose code: 3
LOG : 998.40 1000.10 1.70 Area code : 1
FDEPTH: 125 126 GearCond.code:
BDEPTH: 125 126 Validity code:
Towing dir: 340° Wire out: 370 m Speed: 32 kn*10

Sorted: 31 Kg Total catch: 237.91 CATCH/HOUR: 475.82

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 147.00 | 3330 | 30.89 | 1414 |
| Merluccius capensis, female | 147.00 | 1666 | 30.89 | 1412 |
| Merluccius capensis, male | 120.76 | 1800 | 25.38 | 1411 |
| Genypterus capensis | 45.78 | 210 | 9.62 | 1413 |
| Todarodes sagittatus | 7.50 | 16 | 1.58 | |
| Trachurus capensis | 3.30 | 16 | 0.69 | |
| Chelidonichthys capensis | 3.16 | 16 | 0.66 | |
| MYCTOPHIDAE | 3.00 | 1890 | 0.63 | |
| Sepia australis | 0.16 | 16 | 0.03 | |
| Sufflogobius bibarbatus | 0.16 | 16 | 0.03 | |
| Total | 477.82 | | 100.40 | |

PROJECT STATION: 476

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2740
start stop duration Long E 1505
TIME :08:18:00 08:48:00 30 (min) Purpose code: 3
LOG :1008.90 1010.60 1.70 Area code : 1
FDEPTH: 159 167 GearCond.code:
BDEPTH: 159 167 Validity code:
Towing dir: 250° Wire out: 480 m Speed: 33 kn*10

Sorted: 27 Kg Total catch: 139.50 CATCH/HOUR: 279.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, male | 106.50 | 1240 | 38.17 | 1415 |
| Merluccius capensis, female | 98.50 | 990 | 35.30 | 1416 |
| Merluccius capensis, juveniles | 58.00 | 1360 | 20.79 | 1417 |
| MYCTOPHIDAE | 5.30 | 2940 | 1.90 | |
| Chelidonichthys capensis | 3.20 | 10 | 1.15 | |
| Trachurus capensis | 3.10 | 20 | 1.11 | |
| Sepia australis | 2.10 | 100 | 0.75 | |
| Thyrsites atun | 1.40 | 10 | 0.50 | |
| Lolliguncula mercatoris | 0.80 | 240 | 0.29 | |
| Sufflogobius bibarbatus | 0.10 | 50 | 0.04 | |
| Total | 279.00 | | 100.00 | |

PROJECT STATION: 477

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2744
start stop duration Long E 1453
TIME :10:28:00 10:45:00 17 (min) Purpose code: 3
LOG :1021.40 1022.40 1.00 Area code : 1
FDEPTH: 285 300 GearCond.code:
BDEPTH: 285 300 Validity code:
Towing dir: 240° Wire out: 850 m Speed: 32 kn*10

Sorted: 51 Kg Total catch: 61.22 CATCH/HOUR: 216.07

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 49.24 | 109 | 22.79 | 1421 |
| Merluccius capensis, female | 45.53 | 42 | 21.07 | 1419 |
| Genypterus capensis | 38.65 | 18 | 17.89 | 1422 |
| Merluccius capensis, male | 25.06 | 21 | 11.60 | 1418 |
| Deepwater fish mixture | 13.13 | | 6.08 | |
| Merluccius paradoxus, male | 9.53 | 32 | 4.41 | 1420 |
| Selachophidium guentheri | 8.22 | 85 | 3.80 | |
| Squilla sp. | 7.80 | 679 | 3.61 | |
| Callorhinchus capensis | 7.69 | 4 | 3.56 | |
| Coelorinchus fasciatus | 4.16 | 25 | 1.93 | |
| Todarodes sagittatus | 2.05 | 11 | 0.95 | |
| Epigonus denticulatus | 1.38 | 388 | 0.64 | |
| Beryx splendens | 0.46 | 4 | 0.21 | |
| Galeus polli | 0.42 | 7 | 0.19 | |
| Bathynectes piperitus | 0.35 | 32 | 0.16 | |
| Ebinania costaecanarie | 0.35 | 4 | 0.16 | |
| Merluccius paradoxus, juvenile | 0.28 | 7 | 0.13 | |
| Sepia australis | 0.21 | 7 | 0.10 | |
| Total | 214.51 | | 99.28 | |

PROJECT STATION: 478

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2746
start stop duration Long E 1448
TIME :12:07:00 12:37:00 30 (min) Purpose code: 3
LOG :1030.00 1031.40 1.40 Area code : 1
FDEPTH: 370 363 GearCond.code:
BDEPTH: 370 363 Validity code:
Towing dir: 350° Wire out:1100 m Speed: 28 kn*10

Sorted: 158 Kg Total catch: 602.54 CATCH/HOUR: 1205.08

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 735.04 | 1216 | 61.00 | 1424 |
| Genypterus capensis | 190.70 | 94 | 15.82 | 1427 |
| Merluccius paradoxus, male | 188.80 | 538 | 15.67 | 1423 |
| Coelorinchus fasciatus | 29.56 | 544 | 2.45 | |
| Merluccius capensis, female | 24.78 | 12 | 2.06 | 1426 |
| Todarodes sagittatus | 16.18 | 52 | 1.34 | |
| Merluccius capensis, male | 14.28 | 6 | 1.18 | 1425 |
| PORTUNIDAE | 2.44 | 32 | 0.20 | |
| Nezumia sp. | 1.60 | 122 | 0.13 | |
| Hoplostethus cadenati | 0.52 | 18 | 0.04 | |
| Notacanthus sexspinis | 0.52 | 18 | 0.04 | |
| Galeus polli | 0.38 | 6 | 0.03 | |
| MYCTOPHIDAE | 0.12 | 84 | 0.01 | |
| Ebinania costaecanarie | 0.06 | 6 | | |
| Epigonus denticulatus | 0.06 | 58 | | |
| Physiculus capensis | 0.06 | 6 | | |
| Total | 1205.10 | | 99.97 | |

PROJECT STATION: 479

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2747
start stop duration Long E 1440
TIME :14:18:00 14:48:00 30 (min) Purpose code: 3
LOG :1042.20 1043.80 1.60 Area code : 1
FDEPTH: 424 414 GearCond.code:
BDEPTH: 424 414 Validity code:
Towing dir: 335° Wire out:1200 m Speed: 30 kn*10

Sorted: 82 Kg Total catch: 391.46 CATCH/HOUR: 782.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 408.20 | 1256 | 52.14 | 1429 |
| Merluccius paradoxus, male | 225.34 | 840 | 28.78 | 1428 |
| Coelorinchus fasciatus | 52.40 | 1160 | 6.69 | |
| Genypterus capensis | 30.30 | 16 | 3.87 | 1430 |
| Hexanchus griseus | 30.00 | 2 | 3.83 | |
| Todarodes sagittatus | 12.98 | 44 | 1.66 | |
| Lophius vomerinus | 8.72 | 2 | 1.11 | 1431 |
| Raja confundens | 6.06 | 8 | 0.77 | |
| Helicolenus dactylopterus | 4.24 | 34 | 0.54 | |
| Galeus polli | 1.74 | 18 | 0.22 | |
| Nezumia sp. | 1.48 | 148 | 0.19 | |
| Photichthys argenteus | 0.50 | 78 | 0.06 | |
| Trachyrincus scabrus | 0.44 | 34 | 0.06 | |
| Parapenaeus longirostris | 0.26 | 148 | 0.03 | |
| Malacocephalus laevis | 0.18 | 8 | 0.02 | |
| Hoplostethus cadenati | 0.08 | 8 | 0.01 | |
| Total | 782.92 | | 99.98 | |

PROJECT STATION: 480

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2746
start stop duration Long E 1434
TIME :16:11:00 16:41:00 30 (min) Purpose code: 3
LOG :1051.20 1052.80 1.60 Area code : 1
FDEPTH: 500 500 GearCond.code:
BDEPTH: 500 500 Validity code:
Towing dir: 340° Wire out:1400 m Speed: 32 kn*10

Sorted: 136 Kg Total catch: 469.84 CATCH/HOUR: 939.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 561.34 | 1190 | 59.74 | 1433 |
| Merluccius paradoxus, male | 221.34 | 558 | 23.55 | 1432 |
| Todarodes sagittatus | 40.80 | 96 | 4.34 | |
| Coelorinchus braueri | 30.06 | 394 | 3.20 | |
| CHIMAERIDAE | 18.84 | 20 | 2.00 | |
| Deania profundorum | 13.26 | 14 | 1.41 | |
| Nezumia sp. | 12.10 | 496 | 1.29 | |
| Malacocephalus laevis | 9.52 | 48 | 1.01 | |
| Genypterus capensis | 9.10 | 2 | 0.97 | 1434 |
| Coelorinchus fasciatus | 7.48 | 96 | 0.80 | |
| Helicolenus dactylopterus | 3.20 | 34 | 0.34 | |
| Ebinania costaecanarie | 3.06 | 20 | 0.33 | |
| Selachophidium guentheri | 2.18 | 34 | 0.23 | |
| MACROURIDAE | 1.50 | 150 | 0.16 | |
| Galeus polli | 1.36 | 14 | 0.14 | |
| Notacanthus sexspinis | 1.22 | 116 | 0.13 | |
| MYCTOPHIDAE | 1.16 | 258 | 0.12 | |
| Photichthys argenteus | 0.88 | 74 | 0.09 | |
| Myxine capensis | 0.88 | 6 | 0.09 | |
| Physiculus capensis | 0.40 | 20 | 0.04 | |
| Total | 939.68 | | 99.98 | |

PROJECT STATION: 481

DATE:25/10/94 GEAR TYPE: BY No:7 POSITION:Lat S 2737
start stop duration Long E 1442
TIME :18:33:00 19:03:00 30 (min) Purpose code: 3
LOG :1065.10 1066.60 1.50 Area code : 1
FDEPTH: 350 346 GearCond.code:
BDEPTH: 350 346 Validity code:
Towing dir: 340° Wire out:1050 m Speed: 31 kn*10

Sorted: 100 Kg Total catch: 549.64 CATCH/HOUR: 1099.28

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 475.96 | 4010 | 43.30 | 1440 |
| Merluccius paradoxus, male | 293.56 | 2432 | 26.70 | 1439 |
| Coelorinchus fasciatus | 115.90 | 2148 | 10.54 | |
| Merluccius paradoxus, juvenile | 70.30 | 1710 | 6.40 | 1438 |
| Merluccius paradoxus, female | 42.50 | 64 | 3.87 | 1436 |
| Merluccius capensis, female | 37.06 | 38 | 3.37 | 1437 |
| Genypterus capensis | 24.60 | 28 | 2.24 | 1441 |
| Todarodes sagittatus | 19.80 | 42 | 1.80 | |
| Merluccius paradoxus, male | 7.60 | 20 | 0.69 | 1435 |
| Bathynectes piperitus | 6.46 | 228 | 0.59 | |
| Cynoglossus capensis | 2.10 | 20 | 0.19 | |
| Galeus polli | 2.10 | 38 | 0.19 | |
| Helicolenus dactylopterus | 1.34 | 20 | 0.12 | |
| Total | 1099.28 | | 100.00 | |

PROJECT STATION: 482

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2731
start stop duration Long E 1422
TIME :21:42:00 22:12:00 30 (min) Purpose code: 3
LOG :1085.90 1087.50 1.60 Area code : 1
FDEPTH: 561 545 GearCond.code:
BDEPTH: 561 545 Validity code:
Towing dir: 330° Wire out:1550 m Speed: 30 kn*10

Sorted: 50 Kg Total catch: 201.36 CATCH/HOUR: 402.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 244.40 | 472 | 60.69 | 1443 |
| Trachyrincus scabrus | 37.76 | 1200 | 9.38 | |
| Nezumia sp. | 36.32 | 1408 | 9.02 | |
| Merluccius paradoxus, male | 34.80 | 96 | 8.64 | 1442 |
| Galeus polli | 18.48 | 200 | 4.59 | |
| Malacocephalus laevis | 9.92 | 80 | 2.46 | |
| Deania profundorum | 7.52 | 16 | 1.87 | |
| Selachophidium guentheri | 3.28 | 192 | 0.81 | |
| Hoplostethus cadenati | 3.28 | 192 | 0.81 | |
| Ebinania costaecanarie | 0.96 | 24 | 0.24 | |
| Lamprogrammus exutus | 0.64 | 16 | 0.16 | |
| Photichthys argenteus | 0.56 | 72 | 0.14 | |
| Raja confundens | 0.48 | 8 | 0.12 | |
| Yarrella blackfordi | 0.24 | 32 | 0.06 | |
| Notacanthus sexspinis | 0.16 | 8 | 0.04 | |
| Raja leopardus | 0.16 | 8 | 0.04 | |
| Total | 398.96 | | 99.07 | |

PROJECT STATION: 483

DATE:25/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2728
start stop duration Long E 1417
TIME :23:15:00 23:45:00 30 (min) Purpose code: 3
LOG :1091.90 1093.50 1.60 Area code : 1
FDEPTH: 630 631 GearCond.code:
BDEPTH: 630 631 Validity code:
Towing dir: 330° Wire out:1650 m Speed: 31 kn*10

Sorted: 20 Kg Total catch: 328.36 CATCH/HOUR: 656.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Coelorinchus braueri | 257.40 | 3834 | 39.19 | |
| Merluccius paradoxus, female | 215.70 | 334 | 32.85 | 1445 |
| Centrophorus squamosus | 35.00 | 4 | 5.33 | |
| Merluccius paradoxus, male | 30.50 | 66 | 4.64 | 1444 |
| Nezumia sp. | 25.92 | 828 | 3.95 | |
| Todarodes sagittatus | 17.64 | 36 | 2.69 | |
| Deania profundorum | 15.20 | 6 | 2.31 | |
| Etmopterus lucifer | 14.76 | 144 | 2.25 | |
| CHIMAERIDAE | 12.06 | 18 | 1.84 | |
| Galeus polli | 6.84 | 72 | 1.04 | |
| Trachurus capensis | 5.04 | 18 | 0.77 | |
| Trachyscorpia capensis | 4.14 | 36 | 0.63 | |
| Notacanthus sexspinis | 3.60 | 18 | 0.55 | |
| Ebinania costaecanarie | 3.42 | 18 | 0.52 | |
| Bassanago albescens | 3.24 | 18 | 0.49 | |
| Cruriraja parcomaculata | 3.20 | 2 | 0.49 | |
| Selachophidium guentheri | 1.80 | 18 | 0.27 | |
| MYCTOPHIDAE | 0.72 | 486 | 0.11 | |
| ARISTEIDAE | 0.36 | 144 | 0.05 | |
| PENAEIDAE | 0.18 | 90 | 0.03 | |
| Total | 656.72 | | 100.00 | |

PROJECT STATION: 484

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2727
start stop duration Long E 1419
TIME :06:31:00 07:01:00 30 (min) Purpose code: 3
LOG :1111.60 1113.10 1.50 Area code : 1
FDEPTH: 503 504 GearCond.code:
BDEPTH: 503 504 Validity code:
Towing dir: 330° Wire out:1400 m Speed: 30 kn*10

Sorted: 60 Kg Total catch: 124.35 CATCH/HOUR: 248.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 101.70 | 248 | 40.89 | 1447 |
| Merluccius paradoxus, male | 36.00 | 90 | 14.48 | 1446 |
| Galeus polli | 23.86 | 270 | 9.59 | |
| Trachyrincus scabrus | 21.78 | 658 | 8.76 | |
| Todarodes sagittatus | 21.64 | 58 | 8.70 | |
| Lophius vomerinus | 13.20 | 2 | 5.31 | 1449 |
| Genypterus capensis | 5.80 | 2 | 2.33 | 1448 |
| Nezumia sp. | 3.92 | 234 | 1.58 | |
| Malacocephalus laevis | 3.70 | 28 | 1.49 | |
| Epigonus denticulatus | 3.46 | 40 | 1.39 | |
| Selachophidium guentheri | 2.92 | 40 | 1.17 | |
| Coelorinchus fasciatus | 2.62 | 22 | 1.05 | |
| Deepwater fish mixture | 2.08 | | 0.84 | |
| MYCTOPHIDAE | 1.36 | 676 | 0.55 | |
| Raja leopardus | 1.08 | 4 | 0.43 | |
| SCYLIORHINIDAE | 1.04 | 4 | 0.42 | |
| Etmopterus lucifer | 0.94 | 4 | 0.38 | |
| Ebinania costaecanarie | 0.86 | 14 | 0.35 | |
| Dicrolene intronigra | 0.28 | 10 | 0.11 | |
| Photichthys argenteus | 0.22 | 18 | 0.09 | |
| SQUALIDAE | 0.14 | 10 | 0.06 | |
| Aristeus varidens | 0.10 | 14 | 0.04 | |
| Total | 248.70 | | 100.01 | |

PROJECT STATION: 485

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2726
start stop duration Long E 1424
TIME :08:32:00 09:02:00 30 (min) Purpose code: 3
LOG :1120.90 1122.50 1.60 Area code : 1
FDEPTH: 420 423 GearCond.code:
BDEPTH: 420 423 Validity code:
Towing dir: 330° Wire out:1200 m Speed: 30 kn*10

Sorted: 130 Kg Total catch: 740.94 CATCH/HOUR: 1481.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 767.46 | 3240 | 51.79 | 1451 |
| Merluccius paradoxus, male | 375.30 | 1656 | 25.33 | 1450 |
| Coelorinchus fasciatus | 167.12 | 2538 | 11.28 | |
| Genypterus capensis | 58.00 | 22 | 3.91 | 1453 |
| Merluccius capensis, female | 34.02 | 14 | 2.30 | 1452 |
| Helicolenus dactylopterus | 23.02 | 118 | 1.55 | |
| Todarodes sagittatus | 18.04 | 44 | 1.22 | |
| Galeus polli | 14.52 | 162 | 0.98 | |
| Lophius vomerinus | 10.90 | 4 | 0.74 | 1454 |
| Nezumia sp. | 3.22 | 278 | 0.22 | |
| Raja confundens | 3.08 | 14 | 0.21 | |
| MYCTOPHIDAE | 2.64 | 1818 | 0.18 | |
| Hoplostethus atlanticus | 1.62 | 30 | 0.11 | |
| Aristeus varidens | 1.02 | 718 | 0.07 | |
| Trachyrincus scabrus | 0.74 | 14 | 0.05 | |
| Epigonus denticulatus | 0.58 | 118 | 0.04 | |
| Total | 1481.28 | | 99.98 | |

PROJECT STATION: 486

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2726
start stop duration Long E 1430
TIME :10:40:00 11:10:00 30 (min) Purpose code: 3
LOG :1132.40 1133.90 1.50 Area code : 1
FDEPTH: 380 380 GearCond.code:
BDEPTH: 380 380 Validity code:
Towing dir: 330° Wire out:1100 m Speed: 32 kn*10

Sorted: 161 Kg Total catch: 849.78 CATCH/HOUR: 1699.56

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 1098.16 | 3628 | 64.61 | 1456 |
| Merluccius paradoxus, male | 445.20 | 1748 | 26.20 | 1455 |
| Coelorinchus braueri | 118.16 | 1042 | 6.95 | |
| Merluccius capensis, female | 11.68 | 8 | 0.69 | 1458 |
| Genypterus capensis | 9.20 | 6 | 0.54 | 1459 |
| Todarodes sagittatus | 5.72 | 22 | 0.34 | |
| Merluccius capensis, male | 3.38 | 2 | 0.20 | 1457 |
| Helicolenus dactylopterus | 3.14 | 22 | 0.18 | |
| MYCTOPHIDAE | 1.90 | 516 | 0.11 | |
| Bathynectes piperitus | 1.46 | 56 | 0.09 | |
| Galeus polli | 1.00 | 22 | 0.06 | |
| PENAEIDAE | 0.34 | 156 | 0.02 | |
| Epigonus denticulatus | 0.22 | 112 | 0.01 | |
| Total | 1699.56 | | 100.00 | |

PROJECT STATION: 487

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2725
start stop duration Long E 1439
TIME :12:55:00 13:25:00 30 (min) Purpose code: 3
LOG :1145.80 1147.40 1.60 Area code : 1
FDEPTH: 335 333 GearCond.code:
BDEPTH: 335 333 Validity code:
Towing dir: 360° Wire out:1050 m Speed: 32 kn*10

Sorted: 91 Kg Total catch: 929.76 CATCH/HOUR: 1859.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 948.66 | 5108 | 51.02 | 1463 |
| Merluccius paradoxus, male | 486.52 | 2750 | 26.16 | 1462 |
| Trachurus capensis | 213.52 | 682 | 11.48 | 1464 |
| Merluccius capensis, female | 64.20 | 54 | 3.45 | 1461 |
| Galeus polli | 35.30 | 488 | 1.90 | |
| Coelorinchus fasciatus | 28.46 | 566 | 1.53 | |
| Bathynectes piperitus | 23.78 | 506 | 1.28 | |
| Helicolenus dactylopterus | 21.24 | 254 | 1.14 | |
| Genypterus capensis | 14.16 | 8 | 0.76 | 1465 |
| MYCTOPHIDAE | 11.30 | 4524 | 0.61 | |
| Malacocephalus laevis | 4.88 | 20 | 0.26 | |
| Merluccius capensis, male | 3.40 | 4 | 0.18 | 1460 |
| LOLIGINIDAE | 3.12 | 38 | 0.17 | |
| PENAEIDAE | 0.98 | 390 | 0.05 | |
| Total | 1859.52 | | 99.99 | |

PROJECT STATION: 488

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2722
start stop duration Long E 1446
TIME :14:47:00 15:17:00 30 (min) Purpose code: 3
LOG :1156.40 1158.10 1.70 Area code : 1
FDEPTH: 291 292 GearCond.code:
BDEPTH: 291 292 Validity code:
Towing dir: 340° Wire out: 950 m Speed: 32 kn*10

Sorted: 185 Kg Total catch: 2684.93 CATCH/HOUR: 5369.86

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 4373.30 | 14602 | 81.44 | 1468 |
| Merluccius paradoxus, female | 593.02 | 4126 | 11.04 | 1467 |
| Merluccius paradoxus, male | 118.32 | 1154 | 2.20 | 1466 |
| Brama brama | 70.12 | 58 | 1.31 | |
| Galeus polli | 63.20 | 722 | 1.18 | |
| Todarodes sagittatus | 47.32 | 116 | 0.88 | |
| Coelorinchus fasciatus | 31.74 | 1184 | 0.59 | |
| Merluccius capensis, female | 19.40 | 30 | 0.36 | 1470 |
| Helicolenus dactylopterus | 15.58 | 144 | 0.29 | |
| PORTUNIDAE | 11.54 | 548 | 0.21 | |
| MYCTOPHIDAE | 10.68 | 7012 | 0.20 | |
| Malacocephalus laevis | 8.94 | 28 | 0.17 | |
| Merluccius capensis, male | 6.70 | 14 | 0.12 | 1469 |
| Total | 5369.86 | | 99.99 | |

PROJECT STATION: 489

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2718
start stop duration Long E 1453
TIME :16:50:00 17:20:00 30 (min) Purpose code: 3
LOG :1168.50 1170.00 1.50 Area code : 1
FDEPTH: 214 218 GearCond.code:
BDEPTH: 214 218 Validity code:
Towing dir: 345° Wire out: m Speed:700 kn*10

Sorted: 74 Kg Total catch: 461.38 CATCH/HOUR: 922.76

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 306.00 | 2108 | 33.16 | 1478 |
| Merluccius capensis, male | 289.00 | 2398 | 31.32 | 1477 |
| Merluccius paradoxus, juvenile | 131.76 | 2976 | 14.28 | 1471 |
| Merluccius paradoxus, female | 40.24 | 680 | 4.36 | 1472 |
| Callorhinchus capensis | 35.30 | 22 | 3.83 | |
| Squalus megalops | 30.60 | 52 | 3.32 | |
| Raja leopardus | 27.38 | 34 | 2.97 | |
| Trachurus capensis | 26.70 | 102 | 2.89 | 1476 |
| Chelidonichthys capensis | 9.18 | 18 | 0.99 | |
| Todarodes sagittatus | 8.84 | 18 | 0.96 | |
| Lophius vomerinus | 4.54 | 4 | 0.49 | 1474 |
| Coelorinchus fasciatus | 4.08 | 340 | 0.44 | |
| Genypterus capensis | 3.48 | 14 | 0.38 | 1473 |
| Sufflogobius bibarbatus | 2.90 | 34 | 0.31 | |
| Austroglossus microlepis | 2.76 | 6 | 0.30 | 1475 |
| Total | 922.76 | | 100.00 | |

PROJECT STATION: 490

DATE:26/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2713
start stop duration Long E 1501
TIME :18:38:00 19:08:00 30 (min) Purpose code: 3
LOG :1179.50 1181.20 1.70 Area code : 1
FDEPTH: 159 159 GearCond.code:
BDEPTH: 159 159 Validity code:
Towing dir: 330° Wire out: 480 m Speed: 32 kn*10

Sorted: 28 Kg Total catch: 170.22 CATCH/HOUR: 340.44

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 156.60 | 1884 | 46.00 | 1480 |
| Merluccius capensis, male | 100.80 | 1632 | 29.61 | 1479 |
| Merluccius capensis, juveniles | 66.60 | 1476 | 19.56 | 1481 |
| Genypterus capensis | 9.84 | 36 | 2.89 | 1482 |
| Trachurus capensis | 5.28 | 24 | 1.55 | |
| MYCTOPHIDAE | 0.72 | 420 | 0.21 | |
| Sufflogobius bibarbatus | 0.60 | 72 | 0.18 | |
| Total | 340.44 | | 100.00 | |

PROJECT STATION: 491

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2654
start stop duration Long E 1455
TIME :06:33:00 07:03:00 30 (min) Purpose code: 3
LOG :1220.40 1222.00 1.60 Area code : 1
FDEPTH: 159 158 GearCond.code:
BDEPTH: 159 158 Validity code:
Towing dir: 350° Wire out: 480 m Speed: 33 kn*10

Sorted: 30 Kg Total catch: 1594.77 CATCH/HOUR: 3189.54

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, male | 1574.10 | 23002 | 49.35 | 1483 |
| Merluccius capensis, female | 1537.00 | 18656 | 48.19 | 1484 |
| Merluccius capensis, juveniles | 76.32 | 1696 | 2.39 | 1485 |
| Sufflogobius bibarbatus | 2.12 | 106 | 0.07 | |
| Total | 3189.54 | | 100.00 | |

PROJECT STATION: 492

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2655
start stop duration Long E 1444
TIME :08:30:00 09:00:00 30 (min) Purpose code: 3
LOG :1232.30 1234.00 1.70 Area code : 1
FDEPTH: 217 227 GearCond.code:
BDEPTH: 217 227 Validity code:
Towing dir: 280° Wire out: 640 m Speed: 32 kn*10

Sorted: 84 Kg Total catch: 84.45 CATCH/HOUR: 168.90

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 68.80 | 250 | 40.73 | 1487 |
| Merluccius capensis, male | 32.70 | 196 | 19.36 | 1486 |
| Callorhinchus capensis | 12.20 | 6 | 7.22 | |
| Sufflogobius bibarbatus | 11.48 | 1688 | 6.80 | |
| Raja straeleni | 9.40 | 4 | 5.57 | |
| Lophius vomerinus | 6.50 | 6 | 3.85 | 1488 |
| Squalus megalops | 4.56 | 8 | 2.70 | |
| Merluccius paradoxus, female | 4.20 | 30 | 2.49 | 1492 |
| RAJIDAE | 4.00 | 2 | 2.37 | |
| MYCTOPHIDAE | 3.98 | 2736 | 2.36 | |
| Coelorinchus fasciatus | 2.42 | 152 | 1.43 | |
| Trachurus capensis | 1.96 | 8 | 1.16 | 1491 |
| Genypterus capensis | 1.80 | 10 | 1.07 | 1489 |
| Galeus polli | 1.58 | 34 | 0.94 | |
| Todarodes sagittatus | 1.54 | 12 | 0.91 | |
| Merluccius paradoxus, juvenile | 1.28 | 32 | 0.76 | 1493 |
| Austroglossus microlepis | 0.50 | 2 | 0.30 | 1490 |
| Total | 168.90 | | 100.02 | |

PROJECT STATION: 493

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2657
start stop duration Long E 1434
TIME :10:29:00 10:59:00 30 (min) Purpose code: 3
LOG :1242.50 122.10 1.60 Area code : 1
FDEPTH: 283 289 GearCond.code:
BDEPTH: 283 289 Validity code:
Towing dir: 280° Wire out: 820 m Speed: 30 kn*10

Sorted: 100 Kg Total catch: 205.15 CATCH/HOUR: 410.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 95.70 | 82 | 23.32 | 1495 |
| Merluccius paradoxus, female | 78.50 | 930 | 19.13 | 1497 |
| Merluccius paradoxus, juvenile | 74.60 | 2000 | 18.18 | 1498 |
| MYCTOPHIDAE | 32.10 | 16900 | 7.82 | |
| Galeus polli | 26.70 | 370 | 6.51 | |
| Coelorinchus fasciatus | 25.90 | 820 | 6.31 | |
| Lophius vomerinus | 19.70 | 6 | 4.80 | 1501 |
| Merluccius paradoxus, male | 19.50 | 220 | 4.75 | 1496 |
| Genypterus capensis | 14.00 | 12 | 3.41 | 1499 |
| Merluccius capensis, male | 12.40 | 16 | 3.02 | 1494 |
| Austroglossus microlepis | 5.40 | 4 | 1.32 | 1500 |
| Todarodes sagittatus | 2.90 | 10 | 0.71 | |
| Trachurus capensis | 2.10 | 10 | 0.51 | |
| Squilla sp. | 2.00 | 180 | 0.49 | |
| Sufflogobius bibarbatus | 0.50 | 120 | 0.12 | |
| Bathynectes piperitus | 0.30 | 10 | 0.07 | |
| Total | 412.30 | | 100.47 | |

PROJECT STATION: 494

DATE:27/10/94 R TYPE: BT No:7 POSITION:Lat S 2659
start stop duration Long E 1426
TIME :12:19:00 12:49:00 30 (min) Purpose code: 3
LOG :1252.40 1254.00 1.60 Area code : 1
FDEPTH: 335 342 GearCond.code:
BDEPTH: 335 342 Validity code:
Towing dir: 280° Wire out:1000 m Speed: 32 kn*10

Sorted: 210 Kg Total catch: 305.70 CATCH/HOUR: 611.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 180.12 | 350 | 29.46 | 1504 |
| Coelorinchus fasciatus | 119.00 | 3178 | 19.46 | |
| Merluccius capensis, female | 115.80 | 58 | 18.94 | 1503 |
| Bathynectes piperitus | 53.06 | 8 | 8.68 | |
| Genypterus capensis | 34.30 | 22 | 5.61 | 1506 |
| Merluccius paradoxus, male | 26.12 | 54 | 4.27 | 1505 |
| Helicolenus dactylopterus | 21.00 | 182 | 3.43 | |
| Galeus polli | 18.48 | 252 | 3.02 | |
| Lophius vomerinus | 18.30 | 6 | 2.99 | 1507 |
| Merluccius capensis, male | 14.30 | 8 | 2.34 | 1502 |
| Merluccius paradoxus, juvenile | 9.52 | 210 | 1.56 | 1508 |
| ARISTEIDAE | 0.84 | 560 | 0.14 | |
| Nezumia sp. | 0.56 | 42 | 0.09 | |
| Total | 611.40 | | 99.99 | |

PROJECT STATION: 495

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2702
start stop duration Long E 1415
TIME :14:24:00 14:54:00 30 (min) Purpose code: 3
LOG :1265.10 1266.60 1.50 Area code : 1
FDEPTH: 387 385 GearCond.code:
BDEPTH: 387 385 Validity code:
Towing dir: 340° Wire out:1150 m Speed: 30 kn*10

Sorted: 105 Kg Total catch: 668.76 CATCH/HOUR: 1337.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 712.06 | 3168 | 53.24 | 1510 |
| Merluccius paradoxus, male | 250.06 | 1554 | 18.70 | 1509 |
| Coelorinchus fasciatus | 160.60 | 1584 | 12.01 | |
| Merluccius capensis, female | 72.60 | 30 | 5.43 | 1511 |
| Galeus polli | 36.38 | 308 | 2.72 | |
| Todarodes sagittatus | 30.06 | 308 | 2.25 | |
| Helicolenus dactylopterus | 26.40 | 146 | 1.97 | |
| Lophius vomerinus | 18.40 | 4 | 1.38 | 1513 |
| Genypterus capensis | 15.70 | 6 | 1.17 | 1512 |
| Bathynectes piperitus | 10.42 | 190 | 0.78 | |
| MYCTOPHIDAE | 3.38 | 1438 | 0.25 | |
| PENAEIDAE | 0.88 | 454 | 0.07 | |
| Selachophidium guentheri | 0.44 | 14 | 0.03 | |
| Nezumia sp. | 0.14 | 44 | 0.01 | |
| Total | 1337.52 | | 100.01 | |

PROJECT STATION: 496

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2704
start stop duration Long E 1403
TIME :16:49:00 17:19:00 30 (min) Purpose code: 3
LOG :1279.80 1281.30 1.50 Area code : 1
FDEPTH: 447 446 GearCond.code:
BDEPTH: 447 446 Validity code:
Towing dir: 350° Wire out:1250 m Speed: 30 kn*10

Sorted: 83 Kg Total catch: 345.37 CATCH/HOUR: 690.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 367.18 | 788 | 53.16 | 1515 |
| Merluccius paradoxus, male | 122.72 | 294 | 17.77 | 1514 |
| Coelorinchus fasciatus | 84.00 | 1230 | 12.16 | |
| Todarodes sagittatus | 65.04 | 226 | 9.42 | |
| Galeus polli | 23.56 | 216 | 3.41 | |
| Lophius vomerinus | 7.52 | 2 | 1.09 | 1516 |
| Helicolenus dactylopterus | 6.66 | 44 | 0.96 | |
| Nezumia sp. | 5.36 | 494 | 0.78 | |
| Selachophidium guentheri | 3.38 | 60 | 0.49 | |
| Bathynectes piperitus | 2.34 | 44 | 0.34 | |
| Genypterus capensis | 1.86 | 2 | 0.27 | 1517 |
| Ebinania costaecanarie | 0.60 | 8 | 0.09 | |
| Myxine capensis | 0.52 | 8 | 0.08 | |
| Total | 690.74 | | 100.02 | |

PROJECT STATION: 497

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2702
start stop duration Long E 1358
TIME :18:25:00 18:55:00 30 (min) Purpose code: 3
LOG :1286.30 1287.90 1.60 Area code : 1
FDEPTH: 500 493 GearCond.code:
BDEPTH: 500 493 Validity code:
Towing dir: 330° Wire out:1400 m Speed: 31 kn*10

Sorted: 115 Kg Total catch: 913.57 CATCH/HOUR: 1827.14

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 1332.00 | 2600 | 72.90 | 1519 |
| Merluccius paradoxus, male | 284.00 | 560 | 15.54 | 1518 |
| Lophius vomerinus | 48.70 | 10 | 2.67 | 1520 |
| Coelorinchus fasciatus | 41.40 | 580 | 2.27 | |
| Nezumia sp. | 40.60 | 2940 | 2.22 | |
| Selachophidium guentheri | 31.00 | 440 | 1.70 | |
| Ebinania costaecanarie | 19.20 | 40 | 1.05 | |
| Galeus polli | 14.40 | 120 | 0.79 | |
| Epigonus denticulatus | 5.00 | 60 | 0.27 | |
| Genypterus capensis | 4.84 | 2 | 0.26 | 1521 |
| Trachyrincus scabrus | 3.20 | 220 | 0.18 | |
| Notacanthus sexspinis | 1.60 | 80 | 0.09 | |
| Myxine capensis | 1.20 | 20 | 0.07 | |
| Total | 1827.14 | | 100.01 | |

PROJECT STATION: 498

DATE:27/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2657
start stop duration Long E 1351
TIME :20:09:00 20:39:00 30 (min) Purpose code: 3
LOG :1294.30 1296.00 1.70 Area code : 1
FDEPTH: 585 574 GearCond.code:
BDEPTH: 585 574 Validity code:
Towing dir: 330° Wire out:1670 m Speed: 34 kn*10

Sorted: 145 Kg Total catch: 261.06 CATCH/HOUR: 522.12

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 223.30 | 294 | 42.77 | 1523 |
| Deania calcea | 162.60 | 108 | 31.14 | |
| Trachyrincus scabrus | 28.08 | 372 | 5.38 | |
| Nezumia sp. | 25.92 | 312 | 4.96 | |
| Merluccius paradoxus, male | 17.60 | 28 | 3.37 | 1522 |
| Etmopterus lucifer | 16.44 | 84 | 3.15 | |
| Selachophidium guentheri | 16.20 | 180 | 3.10 | |
| CHIMAERIDAE | 6.84 | 12 | 1.31 | |
| Hoplostethus cadenati | 4.08 | 240 | 0.78 | |
| Todarodes sagittatus | 3.96 | 24 | 0.76 | |
| Genypterus capensis | 3.54 | 2 | 0.68 | 1524 |
| Raja leopardus | 3.48 | 24 | 0.67 | |
| Hoplostethus atlanticus | 2.88 | 12 | 0.55 | |
| Malacocephalus laevis | 2.64 | 12 | 0.51 | |
| Yarrella blackfordi | 2.52 | 420 | 0.48 | |
| Notacanthus sexspinis | 0.84 | 12 | 0.16 | |
| Aristeus varidens | 0.84 | 228 | 0.16 | |
| Photichthys argenteus | 0.36 | 36 | 0.07 | |
| Total | 522.12 | | 100.00 | |

PROJECT STATION: 499

DATE:27/ 1/94 GEAR TYPE: BT No:7 POSITION:Lat S 2649
start stop duration Long E 1347
TIME :22:04:00 22:34:00 30 (min) Purpose code: 3
LOG :1303.70 1305.50 1.80 Area code : 1
FDEPTH: 522 527 GearCond.code:
BDEPTH: 522 526 Validity code:
Towing dir: 330° Wire out:1480 m Speed: 36 kn*10

Sorted: 86 Kg Total catch: 575.53 CATCH/HOUR: 1151.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 781.98 | 1306 | 67.94 | 1526 |
| Merluccius paradoxus, male | 129.34 | 240 | 11.24 | 1525 |
| Lithodes ferox | 76.66 | 174 | 6.66 | |
| Nezumia sp. | 58.66 | 158 | 5.10 | |
| Trachyrincus scabrus | 24.14 | 626 | 2.10 | |
| Etmopterus lucifer | 19.18 | 186 | 1.67 | |
| Selachophidium guentheri | 14.54 | 254 | 1.26 | |
| Coelorinchus fasciatus | 12.26 | 160 | 1.07 | |
| Todarodes sagittatus | 7.86 | 26 | 0.68 | |
| Raja leopardus | 7.58 | 14 | 0.66 | |
| Hoplostethus cadenati | 7.34 | 586 | 0.64 | |
| Allocyttus verrucosus | 5.98 | 106 | 0.52 | |
| Hoplostethus atlanticus | 1.46 | 14 | 0.13 | |
| Yarrella blackfordi | 1.20 | 134 | 0.10 | |
| Notacanthus sexspinis | 1.18 | 54 | 0.10 | |
| Galeus polli | 0.94 | 14 | 0.08 | |
| Aristeus varidens | 0.66 | 66 | 0.06 | |
| Total | 1150.96 | | 100.01 | |

PROJECT STATION: 500

DATE:28/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2644
start stop duration Long E 1345
TIME :06:34:00 07:04:00 30 (min) Purpose code: 3
LOG :1323.40 1324.90 1.50 Area code : 1
FDEPTH: 475 478 GearCond.code:
BDEPTH: 475 478 Validity code:
Towing dir: 330° Wire out:1380 m Speed: 32 kn*10

Sorted: 94 Kg Total catch: 669.34 CATCH/HOUR: 1338.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 923.04 | 1486 | 68.95 | 1528 |
| Coelorinchus fasciatus | 150.90 | 2620 | 11.27 | |
| Merluccius paradoxus, male | 134.82 | 276 | 10.07 | 1527 |
| Nezumia sp. | 41.22 | 1960 | 3.08 | |
| Helicolenus dactylopterus | 18.54 | 46 | 1.38 | |
| Lophius vomerinus | 17.00 | 2 | 1.27 | 1529 |
| Raja confundens | 15.02 | 16 | 1.12 | |
| Selachophidium guentheri | 13.48 | 214 | 1.01 | |
| Etmopterus lucifer | 10.26 | 30 | 0.77 | |
| Hoplostethus cadenati | 4.28 | 352 | 0.32 | |
| Epigonus denticulatus | 3.84 | 46 | 0.29 | |
| Todarodes sagittatus | 3.52 | 16 | 0.26 | |
| Photichthys argenteus | 2.76 | 352 | 0.21 | |
| Total | 1338.68 | | 100.00 | |

PROJECT STATION: 501

DATE:28/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2644
start stop duration Long E 1352
TIME :08:55:00 09:25:00 30 (min) Purpose code: 3
LOG :1332.60 1334.20 1.60 Area code : 1
FDEPTH: 423 420 GearCond.code:
BDEPTH: 423 420 Validity code:
Towing dir: 60° Wire out:1250 m Speed: 29 kn*10

Sorted: 104 Kg Total catch: 390.16 CATCH/HOUR: 780.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 355.56 | 1184 | 45.57 | 1531 |
| Merluccius paradoxus, male | 105.96 | 378 | 13.58 | 1530 |
| Coelorinchus fasciatus | 104.26 | 1300 | 13.36 | |
| Lophius vomerinus | 73.50 | 12 | 9.42 | 1533 |
| Raja confundens | 47.06 | 66 | 6.03 | |
| Todarodes sagittatus | 27.04 | 66 | 3.47 | |
| Merluccius capensis, female | 25.90 | 10 | 3.32 | 1532 |
| Schedophilus huttoni | 15.86 | 14 | 2.03 | |
| Helicolenus dactylopterus | 6.90 | 40 | 0.88 | |
| Genypterus capensis | 6.80 | 4 | 0.87 | 1534 |
| Selachophidium guentheri | 4.04 | 78 | 0.52 | |
| Galeus polli | 3.26 | 40 | 0.42 | |
| Nezumia sp. | 1.96 | 156 | 0.25 | |
| Bassanago albescens | 1.04 | 14 | 0.13 | |
| MYCTOPHIDAE | 0.92 | 260 | 0.12 | |
| Epigonus denticulatus | 0.26 | 26 | 0.03 | |
| Total | 780.32 | | 100.00 | |

PROJECT STATION: 502

DATE:28/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2645
start stop duration Long E 1403
TIME :11:31:00 12:01:00 30 (min) Purpose code: 3
LOG :1345.60 1347.10 1.50 Area code : 1
FDEPTH: 400 396 GearCond.code:
BDEPTH: 400 396 Validity code:
Towing dir: 60° Wire out:1150 m Speed: 28 kn*10

Sorted: 122 Kg Total catch: 817.86 CATCH/HOUR: 1635.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 936.14 | 3958 | 57.23 | 1536 |
| Merluccius paradoxus, male | 308.00 | 1530 | 18.83 | 1535 |
| Coelorinchus fasciatus | 195.94 | 2184 | 12.04 | |
| Todarodes sagittatus | 39.38 | 112 | 2.41 | |
| Genypterus capensis | 37.70 | 24 | 2.30 | 1537 |
| Merluccius capensis, female | 28.80 | 12 | 1.76 | 1539 |
| Lophius vomerinus | 16.20 | 2 | 0.99 | 1538 |
| Nezumia sp. | 12.50 | 56 | 0.76 | |
| Galeus polli | 8.58 | 94 | 0.52 | |
| Selachophidium guentheri | 4.66 | 56 | 0.28 | |
| Myxine capensis | 4.10 | 38 | 0.25 | |
| Helicolenus dactylopterus | 3.74 | 38 | 0.23 | |
| Bathynectes piperitus | 1.86 | 38 | 0.11 | |
| Bassanago albescens | 1.12 | 18 | 0.07 | |
| Total | 1599.72 | | 97.78 | |

PROJECT STATION: 503

DATE:28/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2641
start stop duration Long E 1412
TIME :13:46:00 14:16:00 30 (min) Purpose code: 3
LOG :1356.10 1357.50 1.40 Area code : 1
FDEPTH: 367 366 GearCond.code:
BDEPTH: 367 366 Validity code:
Towing dir: 50° Wire out:1100 m Speed: 28 kn*10

Sorted: 174 Kg Total catch: 602.94 CATCH/HOUR: 1205.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 568.86 | 2100 | 47.17 | 1541 |
| Merluccius paradoxus, male | 216.20 | 950 | 17.93 | 1540 |
| Genypterus capensis | 119.70 | 54 | 9.93 | 1543 |
| Coelorinchus fasciatus | 108.86 | 1350 | 9.03 | |
| Merluccius capensis, female | 82.70 | 42 | 6.86 | 1545 |
| Helicolenus dactylopterus | 38.64 | 384 | 3.20 | |
| Todarodes sagittatus | 16.40 | 46 | 1.36 | |
| Bathynectes piperitus | 15.64 | 306 | 1.30 | |
| Lophius vomerinus | 13.40 | 8 | 1.11 | 1542 |
| Nezumia sp. | 11.66 | 246 | 0.97 | |
| Galeus polli | 4.30 | 46 | 0.36 | |
| Merluccius capensis, male | 4.00 | 2 | 0.33 | 1544 |
| Selachophidium guentheri | 3.22 | 62 | 0.27 | |
| MYCTOPHIDAE | 1.84 | 674 | 0.15 | |
| Squilla sp. | 0.30 | 30 | 0.02 | |
| PENAEIDAE | 0.16 | 62 | 0.01 | |
| Total | 1205.88 | | 100.00 | |

PROJECT STATION: 504

DATE:28/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2641
start stop duration Long E 1421
TIME :16:13:00 16:43:00 30 (min) Purpose code: 3
LOG :1368.50 1370.00 1.50 Area code : 1
FDEPTH: 336 336 GearCond.code:
BDEPTH: 336 336 Validity code:
Towing dir: 330° Wire out:1100 m Speed: 30 kn*10

Sorted: 137 Kg Total catch: 243.51 CATCH/HOUR: 487.02

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Lophius vomerinus | 102.00 | 22 | 20.94 | 1551 |
| Coelorinchus fasciatus | 86.58 | 2262 | 17.78 | |
| Genypterus capensis | 85.60 | 44 | 17.58 | 1550 |
| Bathynectes piperitus | 83.20 | 2158 | 17.08 | |
| Merluccius paradoxus, female | 45.00 | 102 | 9.24 | 1547 |
| Helicolenus dactylopterus | 29.38 | 286 | 6.03 | |
| Merluccius capensis, female | 22.20 | 16 | 4.56 | 1548 |
| Galeus polli | 19.50 | 286 | 4.00 | |
| Nezumia sp. | 8.84 | 234 | 1.82 | |
| PENAEIDAE | 1.82 | 858 | 0.37 | |
| Squilla sp. | 1.30 | 156 | 0.27 | |
| Merluccius paradoxus, male | 1.24 | 4 | 0.25 | 1546 |
| Merluccius paradoxus, juvenile | 0.36 | 8 | 0.07 | 1549 |
| Total | 487.02 | | 99.99 | |

PROJECT STATION: 505

DATE:28/10/94 GEAR TYPE: BT No:7 POSITION:Lat S 2640
start stop duration Long E 1432
TIME :18:44:00 19:14:00 30 (min) Purpose code: 3
LOG :1381.50 1381.00 1.50 Area code : 1
FDEPTH: 272 267 GearCond.code: 8
BDEPTH: 272 267 Validity code: 9
Towing dir: 40° Wire out: 800 m Speed: 30 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 506

DATE:28/10/94 GEAR TYPE: BT No: POSITION:Lat S 2638
start stop duration Long E 1439
TIME :20:35:00 21:05:00 30 (min) Purpose code: 3
LOG :1390.10 1391.50 1.40 Area code : 1
FDEPTH: 218 215 GearCond.code:
BDEPTH: 218 215 Validity code:
Towing dir: 40° Wire out: 660 m Speed: 30 kn*10

Sorted: 118 Kg Total catch: 204.98 CATCH/HOUR: 409.96

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 126.00 | 448 | 30.73 | 1554 |
| Merluccius capensis, female | 94.90 | 706 | 23.15 | 1553 |
| Merluccius capensis, male | 66.80 | 476 | 16.29 | 1552 |
| Genypterus capensis | 31.30 | 24 | 7.63 | 1555 |
| Raja leopardus | 26.18 | 14 | 6.39 | |
| Callorhinchus capensis | 19.60 | 14 | 4.78 | |
| MYCTOPHIDAE | 15.96 | 4690 | 3.89 | |
| Austroglossus microlepis | 8.06 | 12 | 1.97 | 1557 |
| Lophius vomerinus | 4.68 | 4 | 1.14 | 1556 |
| Squalus megalops | 3.78 | 14 | 0.92 | |
| Sufflogobius bibarbatus | 3.64 | 770 | 0.89 | |
| Galeus polli | 3.50 | 56 | 0.85 | |
| Todarodes sagittatus | 3.22 | 28 | 0.79 | |
| Coelorinchus fasciatus | 2.10 | 238 | 0.51 | |
| Merluccius capensis, juveniles | 0.24 | 6 | 0.06 | 1558 |
| Total | 409.96 | | 99.99 | |

PROJECT STATION: 507

DATE:29/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2623
start stop duration Long E 1427
TIME :10:34:00 11:04:00 30 (min) Purpose code: 3
LOG :1441.60 1443.10 1.50 Area code : 1
FDEPTH: 298 293 GearCond.code:
BDEPTH: 298 293 Validity code:
Towing dir: 350° Wire out: 890 m Speed: 34 kn*10

Sorted: 176 Kg Total catch: 238.74 CATCH/HOUR: 477.48

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 167.80 | 138 | 35.14 | 1568 |
| Lophius vomerinus | 80.00 | 36 | 16.75 | 1566 |
| Merluccius paradoxus, female | 47.50 | 540 | 9.95 | 1561 |
| Coelorinchus fasciatus | 45.60 | 870 | 9.55 | |
| Genypterus capensis | 27.70 | 16 | 5.80 | 1565 |
| Merluccius capensis, male | 22.30 | 24 | 4.67 | 1567 |
| Merluccius paradoxus, juvenile | 20.70 | 380 | 4.34 | 1559 |
| Merluccius paradoxus, female | 16.20 | 60 | 3.39 | 1562 |
| MYCTOPHIDAE | 8.70 | 1690 | 1.82 | |
| Galeus polli | 8.10 | 80 | 1.70 | |
| Helicolenus dactylopterus | 6.80 | 20 | 1.42 | |
| Squilla sp. | 5.80 | 110 | 1.21 | |
| Sufflogobius bibarbatus | 4.70 | 60 | 0.98 | |
| Lepidopus caudatus | 4.40 | 10 | 0.92 | |
| Austroglossus microlepis | 4.18 | 4 | 0.88 | 1564 |
| Merluccius paradoxus, male | 3.70 | 60 | 0.77 | 1560 |
| Merluccius paradoxus, male | 3.30 | 18 | 0.69 | 1563 |
| Total | 477.48 | | 99.98 | |

PROJECT STATION: 508

DATE:29/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2622
start stop duration Long E 1415
TIME :13:26:00 13:56:00 30 (min) Purpose code: 3
LOG :1454.70 1456.20 1.50 Area code : 1
FDEPTH: 319 316 GearCond.code:
BDEPTH: 319 316 Validity code:
Towing dir: 350° Wire out:1050 m Speed: 30 kn*10

Sorted: 408 Kg Total catch: 615.60 CATCH/HOUR: 1231.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 423.70 | 242 | 34.41 | 1570 |
| Merluccius paradoxus, female | 315.20 | 1800 | 25.60 | 1572 |
| Genypterus capensis | 126.50 | 86 | 10.27 | 1574 |
| Merluccius paradoxus, male | 86.00 | 448 | 6.99 | 1571 |
| Lophius vomerinus | 81.10 | 32 | 6.59 | 1575 |
| Bathynectes piperitus | 80.00 | 224 | 6.50 | |
| Merluccius capensis, male | 35.50 | 30 | 2.88 | 1569 |
| Helicolenus dactylopterus | 15.12 | 144 | 1.23 | |
| Schedophilus huttoni | 13.20 | 6 | 1.07 | |
| Coelorinchus fasciatus | 12.96 | 1568 | 1.05 | |
| Merluccius paradoxus, juvenile | 12.24 | 256 | 0.99 | 1573 |
| Nezumia sp. | 10.24 | 456 | 0.83 | |
| Todarodes sagittatus | 9.52 | 16 | 0.77 | |
| Galeus polli | 8.00 | 144 | 0.65 | |
| Squilla sp. | 1.20 | 112 | 0.10 | |
| Myxine capensis | 0.72 | 8 | 0.06 | |
| Total | 1231.20 | | 99.99 | |

PROJECT STATION: 509

DATE:29/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2622
start stop duration Long E 1407
TIME :15:58:00 16:28:00 30 (min) Purpose code: 3
LOG :1466.20 1467.70 1.50 Area code : 1
FDEPTH: 348 344 GearCond.code:
BDEPTH: 348 344 Validity code:
Towing dir: 350° Wire out:1100 m Speed: 30 kn*10

Sorted: 170 Kg Total catch: 214.15 CATCH/HOUR: 428.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Coelorinchus fasciatus | 87.00 | 1326 | 20.31 | |
| Merluccius capensis, female | 73.50 | 40 | 17.16 | 1577 |
| Merluccius paradoxus, female | 69.90 | 476 | 16.32 | 1579 |
| Lophius vomerinus | 54.70 | 20 | 12.77 | 1593 |
| Genypterus capensis | 46.60 | 38 | 10.88 | 1581 |
| Helicolenus dactylopterus | 37.20 | 440 | 8.69 | |
| Centrolophus niger | 14.00 | 4 | 3.27 | |
| Galeus polli | 13.40 | 204 | 3.13 | |
| Merluccius paradoxus, male | 13.34 | 108 | 3.11 | 1578 |
| Nezumia sp. | 8.84 | 392 | 2.06 | |
| Bathynectes piperitus | 5.28 | 170 | 1.23 | |
| Selachophidium guentheri | 1.10 | 42 | 0.26 | |
| Merluccius capensis, male | 1.04 | 2 | 0.24 | 1576 |
| Squalus megalops | 0.88 | 4 | 0.21 | |
| Merluccius paradoxus, juvenile | 0.84 | 18 | 0.20 | 1580 |
| PENAEIDAE | 0.60 | 308 | 0.14 | |
| Squilla sp. | 0.06 | 14 | 0.01 | |
| Epigonus denticulatus | 0.02 | 10 | | |
| Total | 428.30 | | 99.99 | |

PROJECT STATION: 510

DATE:29/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2624
start stop duration Long E 1357
TIME :18:32:00 19:02:00 30 (min) Purpose code: 3
LOG :1478.20 1479.70 1.50 Area code : 1
FDEPTH: 382 383 GearCond.code:
BDEPTH: 382 383 Validity code:
Towing dir: 340° Wire out:1120 m Speed: 31 kn*10

Sorted: 81 Kg Total catch: 142.20 CATCH/HOUR: 284.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Coelorinchus fasciatus | 59.90 | 1120 | 21.06 | |
| Helicolenus dactylopterus | 55.10 | 540 | 19.37 | |
| Lophius vomerinus | 38.80 | 16 | 13.64 | 1586 |
| Merluccius capensis, female | 35.00 | 24 | 12.31 | 1585 |
| Genypterus capensis | 31.70 | 24 | 11.15 | 1587 |
| Merluccius paradoxus, female | 24.10 | 100 | 8.47 | 1583 |
| Todarodes sagittatus | 8.70 | 40 | 3.06 | |
| Nezumia sp. | 8.00 | 310 | 2.81 | |
| Galeus polli | 7.50 | 110 | 2.64 | |
| Bathynectes piperitus | 6.10 | 190 | 2.14 | |
| Selachophidium guentheri | 2.30 | 60 | 0.81 | |
| Merluccius paradoxus, male | 2.20 | 14 | 0.77 | 1582 |
| MYCTOPHIDAE | 1.90 | 1400 | 0.67 | |
| Merluccius capensis, male | 1.70 | 2 | 0.60 | 1584 |
| Aristeus varidens | 0.80 | 450 | 0.28 | |
| Epigonus denticulatus | 0.40 | 20 | 0.14 | |
| Squilla sp. | 0.20 | 20 | 0.07 | |
| Total | 284.40 | | 99.99 | |

PROJECT STATION: 511

DATE:29/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2626
start stop duration Long E 1344
TIME :21:13:00 21:49:00 36 (min) Purpose code: 3
LOG :1492.10 1493.90 1.80 Area code : 1
FDEPTH: 417 420 GearCond.code:
BDEPTH: 417 420 Validity code:
Towing dir: 340° Wire out:1250 m Speed: 32 kn*10

Sorted: 86 Kg Total catch: 183.74 CATCH/HOUR: 306.23

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Raja confundens | 57.95 | 32 | 18.92 | |
| Coelorinchus fasciatus | 43.70 | 4750 | 14.27 | |
| Merluccius capensis, female | 32.75 | 15 | 10.69 | 1592 |
| Helicolenus dactylopterus | 30.40 | 317 | 9.93 | |
| Selachophidium guentheri | 26.92 | 475 | 8.79 | |
| Nezumia sp. | 25.33 | 982 | 8.27 | |
| Genypterus capensis | 25.17 | 13 | 8.22 | 1591 |
| Merluccius paradoxus, female | 24.58 | 48 | 8.03 | 1589 |
| Lophius vomerinus | 21.08 | 7 | 6.88 | 1590 |
| Merluccius paradoxus, male | 9.17 | 20 | 2.99 | 1588 |
| Epigonus denticulatus | 7.28 | 507 | 2.38 | |
| MYCTOPHIDAE | 0.95 | 602 | 0.31 | |
| Aristeus varidens | 0.63 | 348 | 0.21 | |
| Galeus polli | 0.32 | 63 | 0.10 | |
| Total | 306.23 | | 99.99 | |

PROJECT STATION: 512

DATE:30/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2605
start stop duration Long E 1339
TIME :04:16:00 04:46:00 30 (min) Purpose code: 3
LOG :1534.70 1536.30 1.60 Area code : 1
FDEPTH: 519 523 GearCond.code: 8
BDEPTH: 519 523 Validity code: 9
Towing dir: 360° Wire out:1400 m Speed: 32 kn*10

Sorted: 113 Kg Total catch: 157.68 CATCH/HOUR: 325.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 143.30 | 188 | 45.44 | 1595 |
| Lophius vomerinus | 25.90 | 6 | 8.21 | 1597 |
| Nezumia sp. | 21.66 | 642 | 6.87 | |
| Notacanthus sexspinis | 21.30 | 408 | 6.75 | |
| Coelorinchus fasciatus | 19.80 | 174 | 6.28 | |
| Epigonus denticulatus | 17.76 | 168 | 5.63 | |
| Deania profundorum | 12.36 | 12 | 3.92 | |
| Todarodes sagittatus | 11.70 | 30 | 3.71 | |
| Merluccius paradoxus, male | 10.60 | 18 | 3.36 | 1594 |
| Etmopterus brachyurus | 8.34 | 30 | 2.64 | |
| Selachophidium guentheri | 6.48 | 78 | 2.05 | |
| Genypterus capensis | 4.18 | 2 | 1.33 | 1596 |
| Ebinania costaecanarie | 3.48 | 6 | 1.10 | |
| Hoplostethus cadenati | 3.24 | 138 | 1.03 | |
| Trachyrincus scabrus | 2.76 | 18 | 0.88 | |
| Helicolenus dactylopterus | 1.26 | 12 | 0.40 | |
| Myxine capensis | 0.66 | 6 | 0.21 | |
| Bathynectes piperitus | 0.42 | 2 | 0.13 | |
| MORIDAE | 0.16 | 2 | 0.05 | |
| Total | 315.36 | | 99.99 | |

PROJECT STATION: 513

DATE:30/10/94 GEAR TYPE: BT No: POSITION:Lat S 2603
start stop duration Long E 1341
TIME :06:35:00 07:05:00 30 (min) Purpose code: 3
LOG :1542.70 1544.20 1.50 Area code : 1
FDEPTH: 477 482 GearCond.code:
BDEPTH: 477 482 Validity code:
Towing dir: 3° Wire out:1400 m Speed: 30 kn*10

Sorted: 133 Kg Total catch: 641.74 CATCH/HOUR: 1283.48

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 700.70 | 1372 | 54.59 | 1599 |
| Coelorinchus fasciatus | 158.90 | 2842 | 12.38 | |
| Merluccius paradoxus, male | 87.50 | 210 | 6.82 | 1600 |
| Selachophidium guentheri | 83.30 | 1260 | 6.49 | |
| Notacanthus sexspinis | 73.78 | 2548 | 5.75 | |
| Lophius vomerinus | 63.40 | 26 | 4.94 | 1601 |
| Nezumia sp. | 40.32 | 1344 | 3.14 | |
| Merluccius capensis, female | 30.20 | 8 | 2.35 | 1598 |
| Hoplostethus cadenati | 17.36 | 868 | 1.35 | |
| Raja confundens | 7.84 | 28 | 0.61 | |
| Etmopterus lucifer | 6.44 | 28 | 0.50 | |
| Genypterus capensis | 4.50 | 2 | 0.35 | 1602 |
| Squalus megalops | 3.92 | 14 | 0.31 | |
| Galeus polli | 2.10 | 28 | 0.16 | |
| Epigonus denticulatus | 1.12 | 56 | 0.09 | |
| Todarodes sagittatus | 0.84 | 28 | 0.07 | |
| Ebinania costaecanarie | 0.70 | 14 | 0.05 | |
| Trachyrincus scabrus | 0.56 | 14 | 0.04 | |
| Total | 1283.48 | | 99.99 | |

PROJECT STATION: 514

DATE:30/10/94 GEAR TYPE: BT No: POSITION:Lat S 2601
start stop duration Long E 1347
TIME :08:57:00 09:27:00 30 (min) Purpose code: 3
LOG :1553.30 1554.80 1.50 Area code : 1
FDEPTH: 392 395 GearCond.code:
BDEPTH: 392 395 Validity code:
Towing dir: 5° Wire out:1160 m Speed: 31 kn*10

Sorted: 64 Kg Total catch: 247.46 CATCH/HOUR: 494.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 139.46 | 570 | 28.18 | |
| Raja confundens | 87.78 | 38 | 17.74 | |
| Nezumia sp. | 47.50 | 1064 | 9.60 | |
| Coelorinchus fasciatus | 41.42 | 760 | 8.37 | |
| Genypterus capensis | 35.10 | 22 | 7.09 | 1607 |
| Lophius vomerinus | 31.70 | 22 | 6.41 | 1606 |
| Bathynectes piperitus | 30.78 | 570 | 6.22 | |
| Merluccius paradoxus, female | 24.30 | 146 | 4.91 | 1604 |
| Todarodes sagittatus | 23.56 | 38 | 4.76 | |
| Merluccius capensis, female | 13.60 | 8 | 2.75 | 1605 |
| Galeus polli | 8.74 | 114 | 1.77 | |
| Myxine capensis | 4.18 | 38 | 0.84 | |
| Merluccius paradoxus, male | 3.00 | 22 | 0.61 | 1603 |
| Ebinania costaecanarie | 1.52 | 38 | 0.31 | |
| Aristeus varidens | 1.14 | 152 | 0.23 | |
| Notacanthus sexspinis | 0.76 | 38 | 0.15 | |
| Epigonus denticulatus | 0.38 | 38 | 0.08 | |
| Total | 494.92 | | 100.02 | |

PROJECT STATION: 515

DATE:30/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2603
start stop duration Long E 1359
TIME :12:14:00 12:44:00 30 (min) Purpose code: 3
LOG :1569.50 1571.10 1.60 Area code : 1
FDEPTH: 325 320 GearCond.code:
BDEPTH: 325 320 Validity code:
Towing dir: 50° Wire out:1000 m Speed: 31 kn*10

Sorted: 97 Kg Total catch: 237.57 CATCH/HOUR: 475.14

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Galeus polli | 201.50 | 3640 | 42.41 | |
| Merluccius capensis, female | 77.60 | 82 | 16.33 | 1615 |
| Bathynectes piperitus | 69.16 | 3198 | 14.56 | |
| Lophius vomerinus | 38.70 | 36 | 8.14 | 1613 |
| Genypterus capensis | 13.90 | 10 | 2.93 | 1612 |
| Merluccius capensis, male | 13.70 | 12 | 2.88 | 1614 |
| Merluccius paradoxus, female | 12.20 | 142 | 2.57 | 1608 |
| Helicolenus dactylopterus | 8.84 | 182 | 1.86 | |
| Squilla sp. | 8.58 | 988 | 1.81 | |
| Nezumia sp. | 7.28 | 390 | 1.53 | |
| Trachurus capensis | 5.04 | 18 | 1.06 | 1695 |
| Coelorinchus fasciatus | 4.68 | 338 | 0.98 | |
| Guentherus altivela | 4.00 | 2 | 0.84 | |
| MYCTOPHIDAE | 2.60 | 2080 | 0.55 | |
| Merluccius paradoxus, juvenile | 2.44 | 60 | 0.51 | 1609 |
| Neoharriotta pinnata | 2.00 | 2 | 0.42 | |
| Austroglossus microlepis | 1.26 | 2 | 0.27 | 1610 |
| Merluccius paradoxus, male | 0.88 | 16 | 0.19 | 1611 |
| Shrimps, small, non comm. | 0.52 | 286 | 0.11 | |
| Chlorophthalmus punctatus | 0.26 | 52 | 0.05 | |
| Total | 475.14 | | 100.00 | |

PROJECT STATION: 516

DATE:30/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2602
start stop duration Long E 1406
TIME :14:29:00 14:52:00 23 (min) Purpose code: 3
LOG :1580.60 1581.80 1.20 Area code : 1
FDEPTH: 282 286 GearCond.code:
BDEPTH: 282 286 Validity code:
Towing dir: 350° Wire out: 900 m Speed: 31 kn*10

Sorted: 170 Kg Total catch: 200.96 CATCH/HOUR: 524.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 206.61 | 117 | 39.41 | 1616 |
| Lophius vomerinus | 150.65 | 125 | 28.74 | 1620 |
| Coelorinchus fasciatus | 73.04 | 613 | 13.93 | |
| Merluccius capensis, male | 33.91 | 94 | 6.47 | 1617 |
| Austroglossus microlepis | 31.43 | 37 | 6.00 | 1619 |
| Squilla sp. | 16.30 | 704 | 3.11 | |
| Merluccius capensis, juveniles | 3.78 | 104 | 0.72 | 1618 |
| Etmopterus lucifer | 3.65 | 91 | 0.70 | |
| Genypterus capensis | 2.24 | 5 | 0.43 | 1621 |
| Sufflogobius bibarbatus | 1.04 | 170 | 0.20 | |
| Todaropsis eblanae | 0.78 | 13 | 0.15 | |
| Trachurus capensis | 0.78 | 13 | 0.15 | |
| Total | 524.21 | | 100.01 | |

PROJECT STATION: 517

DATE:30/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2602
start stop duration Long E 1414
TIME :16:40:00 16:55:00 15 (min) Purpose code: 3
LOG :1591.00 1591.70 0.70 Area code : 1
FDEPTH: 249 240 GearCond.code:
BDEPTH: 249 240 Validity code:
Towing dir: 91° Wire out: 800 m Speed: 28 kn*10

Sorted: 93 Kg Total catch: 157.58 CATCH/HOUR: 630.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Lophius vomerinus | 142.60 | 164 | 22.62 | 1624 |
| Callorhinchus capensis | 129.60 | 108 | 20.56 | |
| Sufflogobius bibarbatus | 111.96 | 13680 | 17.76 | |
| Merluccius capensis, female | 98.80 | 320 | 15.67 | 1623 |
| Merluccius capensis, male | 41.40 | 320 | 6.57 | 1622 |
| Galeorhinus galeus | 40.00 | 4 | 6.35 | |
| Squilla sp. | 24.12 | 1260 | 3.83 | |
| Austroglossus microlepis | 20.60 | 40 | 3.27 | 1625 |
| Trachurus capensis | 20.16 | 108 | 3.20 | |
| Galeus polli | 0.72 | 180 | 0.11 | |
| MYCTOPHIDAE | 0.36 | 3924 | 0.06 | |
| Total | 630.32 | | 100.00 | |

PROJECT STATION: 518

DATE:30/10/94 GEAR TYPE: BT No: POSITION:Lat S 2600
start stop duration Long E 1421
TIME :18:04:00 18:34:00 30 (min) Purpose code: 3
LOG :1598.40 1599.80 1.40 Area code : 1
FDEPTH: 197 196 GearCond.code:
BDEPTH: 197 196 Validity code:
Towing dir: 70° Wire out: 600 m Speed: 28 kn*10

Sorted: 37 Kg Total catch: 605.80 CATCH/HOUR: 1211.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, male | 581.70 | 4116 | 48.01 | 1626 |
| Merluccius capensis, female | 577.50 | 3696 | 47.66 | 1627 |
| Sufflogobius bibarbatus | 21.84 | 2100 | 1.80 | |
| Trachurus capensis | 9.24 | 42 | 0.76 | |
| Merluccius capensis, female | 6.00 | 4 | 0.50 | 1629 |
| Merluccius capensis, male | 5.80 | 4 | 0.48 | 1628 |
| Lophius vomerinus | 5.78 | 8 | 0.48 | 1631 |
| MYCTOPHIDAE | 2.94 | 546 | 0.24 | |
| Austroglossus microlepis | 0.80 | 8 | 0.07 | 1630 |
| Total | 1211.60 | | 100.00 | |

PROJECT STATION: 519

DATE:31/10/94 GEAR TYPE: BT No:6 POSITION:Lat S 2546
start stop duration Long E 1429
TIME :03:05:00 03:23:00 18 (min) Purpose code: 3
LOG :1644.70 1645.60 0.90 Area code : 1
FDEPTH: 163 152 GearCond.code:
BDEPTH: 163 152 Validity code:
Towing dir: 315° Wire out: 550 m Speed: 30 kn*10

Sorted: 26 Kg Total catch: 34.74 CATCH/HOUR: 115.80

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 55.17 | 513 | 47.64 | 1633 |
| Sufflogobius bibarbatus | 27.30 | 4667 | 23.58 | |
| Merluccius capensis, male | 24.00 | 313 | 20.73 | 1632 |
| Merluccius capensis, juveniles | 6.70 | 150 | 5.79 | 1634 |
| Trachurus capensis | 1.30 | 7 | 1.12 | |
| Austroglossus microlepis | 1.20 | 3 | 1.04 | 1635 |
| Total | 115.67 | | 99.90 | |

PROJECT STATION: 520

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2534
start stop duration Long E 1347
TIME :09:45:00 10:15:00 30 (min) Purpose code: 3
LOG :1692.60 1694.10 1.50 Area code : 1
FDEPTH: 314 317 GearCond.code:
BDEPTH: 314 317 Validity code:
Towing dir: 350° Wire out: 950 m Speed: 29 kn*10

Sorted: 218 Kg Total catch: 370.25 CATCH/HOUR: 740.50

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 289.10 | 252 | 39.04 | 1637 |
| Helicolenus dactylopterus | 250.00 | 2340 | 33.76 | |
| Lophius vomerinus | 54.90 | 34 | 7.41 | 1640 |
| Coelorinchus fasciatus | 50.80 | 840 | 6.86 | |
| Merluccius capensis, male | 44.50 | 40 | 6.01 | 1636 |
| Genypterus capensis | 14.80 | 8 | 2.00 | 1641 |
| Merluccius paradoxus, female | 13.60 | 180 | 1.84 | 1638 |
| Galeus polli | 13.00 | 300 | 1.76 | |
| Bathynectes piperitus | 4.20 | 120 | 0.57 | |
| Merluccius paradoxus, juvenile | 2.80 | 100 | 0.38 | 1639 |
| Aristeus varidens | 1.40 | 380 | 0.19 | |
| Chlorophthalmus atlanticus | 0.80 | 100 | 0.11 | |
| Todaropsis eblanae | 0.60 | 40 | 0.08 | |
| Total | 740.50 | | 100.01 | |

PROJECT STATION: 521

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2533
start stop duration Long E 1341
TIME :11:30:00 11:38:00 8 (min) Purpose code: 3
LOG :1702.20 1702.60 0.40 Area code : 1
FDEPTH: 394 394 GearCond.code:
BDEPTH: 394 394 Validity code:
Towing dir: 350° Wire out:1160 m Speed: 30 kn*10

Sorted: 96 Kg Total catch: 244.74 CATCH/HOUR: 1835.55

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 408.75 | 1463 | 22.27 | |
| Lophius vomerinus | 300.08 | 188 | 16.35 | 1647 |
| Lophius vaillanti | 193.43 | 83 | 10.54 | 1648 |
| Hoplostethus cadenati | 176.63 | 9113 | 9.62 | |
| Nezumia sp. | 168.75 | 4838 | 9.19 | |
| Galeus polli | 150.75 | 8663 | 8.21 | |
| Coelorinchus fasciatus | 114.75 | 2588 | 6.25 | |
| Bathynectes piperitus | 95.63 | 7650 | 5.21 | |
| Genypterus capensis | 58.50 | 45 | 3.19 | 1646 |
| Merluccius capensis, female | 54.75 | 23 | 2.98 | 1644 |
| Merluccius paradoxus, female | 31.80 | 128 | 1.73 | 1642 |
| Epigonus denticulatus | 24.75 | 1463 | 1.35 | |
| Ebinania costaecanarie | 22.50 | 338 | 1.23 | |
| Myxine capensis | 10.13 | 113 | 0.55 | |
| Selachophidium guentheri | 10.13 | 225 | 0.55 | |
| Merluccius paradoxus, male | 6.15 | 38 | 0.34 | 1643 |
| Merluccius paradoxus, juvenile | 2.85 | 60 | 0.16 | 1645 |
| Squilla sp. | 2.25 | 450 | 0.12 | |
| Total | 1832.58 | | 99.84 | |

PROJECT STATION: 522

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2532
start stop duration Long E 1337
TIME :12:53:00 13:03:00 10 (min) Purpose code: 1
LOG :1708.90 1709.40 0.50 Area code : 3
FDEPTH: 472 474 GearCond.code:
BDEPTH: 472 474 Validity code:
Towing dir: 360° Wire out:1350 m Speed: 30 kn*10

Sorted: 78 Kg Total catch: 164.53 CATCH/HOUR: 987.18

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Lophius vomerinus | 361.20 | 102 | 36.59 | 1650 |
| Selachophidium guentheri | 166.80 | 3360 | 16.90 | |
| Nezumia sp. | 142.80 | 5160 | 14.47 | |
| Hoplostethus cadenati | 82.80 | 3960 | 8.39 | |
| R A Y S | 80.40 | 120 | 8.14 | |
| Merluccius paradoxus, female | 74.70 | 174 | 7.57 | 1651 |
| Coelorinchus fasciatus | 40.80 | 840 | 4.13 | |
| Galeus polli | 13.20 | 1080 | 1.34 | |
| Bathynectes piperitus | 8.40 | 120 | 0.85 | |
| Schedophilus huttoni | 6.54 | 6 | 0.66 | |
| Epigonus denticulatus | 4.80 | 120 | 0.49 | |
| Merluccius paradoxus, male | 2.34 | 24 | 0.24 | 1649 |
| Trachyrincus scabrus | 1.20 | 120 | 0.12 | |
| Bassanago albescens | 1.20 | 120 | 0.12 | |
| Total | 987.18 | | 100.01 | |

PROJECT STATION: 523

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2522
start stop duration Long E 1352
TIME :15:39:00 16:09:00 30 (min) Purpose code: 3
LOG :1729.40 1731.00 1.60 Area code : 1
FDEPTH: 255 268 GearCond.code:
BDEPTH: 255 268 Validity code:
Towing dir: 240° Wire out: 800 m Speed: 32 kn*10

Sorted: 125 Kg Total catch: 416.99 CATCH/HOUR: 833.98

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 340.00 | 1120 | 40.77 | 1656 |
| Merluccius capensis, female | 222.36 | 624 | 26.66 | 1653 |
| Merluccius capensis, male | 96.70 | 340 | 11.60 | 1652 |
| Coelorinchus fasciatus | 70.00 | 1280 | 8.39 | |
| MYCTOPHIDAE | 43.20 | 14800 | 5.18 | |
| Sufflogobius bibarbatus | 23.60 | 2600 | 2.83 | |
| Helicolenus dactylopterus | 17.20 | 160 | 2.06 | |
| Lophius vomerinus | 5.60 | 8 | 0.67 | 1655 |
| Squalus megalops | 5.60 | 40 | 0.67 | |
| R A Y S | 3.12 | 2 | 0.37 | |
| Merluccius capensis, juveniles | 3.00 | 78 | 0.36 | 1654 |
| Todarodes sagittatus | 2.40 | 40 | 0.29 | |
| Squilla sp. | 1.20 | 40 | 0.14 | |
| Total | 833.98 | | 99.99 | |

PROJECT STATION: 524

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2523
start stop duration Long E 1348
TIME :17:38:00 17:53:00 15 (min) Purpose code: 3
LOG :1738.50 1739.20 0.70 Area code : 1
FDEPTH: 298 298 GearCond.code:
BDEPTH: 298 298 Validity code:
Towing dir: 358° Wire out: 925 m Speed: 28 kn*10

Sorted: 96 Kg Total catch: 126.88 CATCH/HOUR: 507.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 245.00 | 320 | 48.27 | 1658 |
| Trachurus capensis | 105.60 | 300 | 20.81 | 1659 |
| Lophius vomerinus | 40.00 | 40 | 7.88 | 1662 |
| Merluccius capensis, male | 36.00 | 112 | 7.09 | 1657 |
| Helicolenus dactylopterus | 34.20 | 444 | 6.74 | |
| Coelorinchus fasciatus | 28.44 | 432 | 5.60 | |
| Chlorophthalmus atlanticus | 9.48 | 84 | 1.87 | |
| Galeus polli | 7.68 | 216 | 1.51 | |
| Merluccius capensis, juveniles | 2.16 | 64 | 0.43 | 1661 |
| Merluccius paradoxus, female | 1.36 | 16 | 0.27 | 1660 |
| Genypterus capensis | 1.24 | 4 | 0.24 | 1663 |
| Squilla sp. | 0.24 | 36 | 0.05 | |
| Bathynectes piperitus | 0.12 | 12 | 0.02 | |
| Total | 511.52 | | 100.78 | |

PROJECT STATION: 525

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2521
start stop duration Long E 1341
TIME :18:57:00 19:17:00 20 (min) Purpose code: 3
LOG :1746.40 1747.40 1.00 Area code : 1
FDEPTH: 357 357 GearCond.code:
BDEPTH: 357 357 Validity code:
Towing dir: * Wire out:1060 m Speed: 30 kn*10

Sorted: 75 Kg Total catch: 118.81 CATCH/HOUR: 356.43

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 135.45 | 87 | 38.00 | 1665 |
| Galeus polli | 74.76 | 2136 | 20.97 | |
| Helicolenus dactylopterus | 73.20 | 1008 | 20.54 | |
| Lophius vomerinus | 45.90 | 24 | 12.88 | 1668 |
| Squilla sp. | 9.64 | 624 | 2.76 | |
| Todarodes sagittatus | 6.48 | 12 | 1.82 | |
| Genypterus capensis | 1.89 | 3 | 0.53 | 1669 |
| Merluccius paradoxus, female | 1.86 | 15 | 0.52 | 1667 |
| Coelorinchus fasciatus | 1.80 | 72 | 0.51 | |
| Merluccius paradoxus, male | 1.68 | 9 | 0.47 | 1666 |
| Merluccius capensis, male | 1.53 | 3 | 0.43 | 1664 |
| Nezumia sp. | 0.84 | 60 | 0.24 | |
| Bathynectes piperitus | 0.84 | 36 | 0.24 | |
| Aristeus varidens | 0.12 | 96 | 0.03 | |
| Hoplostethus cadenati | 0.12 | 12 | 0.03 | |
| Chlorophthalmus atlanticus | 0.12 | 12 | 0.03 | |
| Total | 356.43 | | 100.00 | |

PROJECT STATION: 526

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2518
start stop duration Long E 1338
TIME :20:13:00 20:43:00 30 (min) Purpose code: 3
LOG :1752.30 1753.80 1.50 Area code : 1
FDEPTH: 452 464 GearCond.code:
BDEPTH: 452 464 Validity code:
Towing dir: 355° Wire out:1300 m Speed: 33 kn*10

Sorted: 159 Kg Total catch: 316.29 CATCH/HOUR: 632.58

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 149.10 | 396 | 23.57 | 1671 |
| Selachophidium guentheri | 105.56 | 1352 | 16.69 | |
| Lophius vomerinus | 86.60 | 34 | 13.69 | 1673 |
| Galeus polli | 58.50 | 806 | 9.25 | |
| Merluccius capensis, female | 43.20 | 20 | 6.83 | 1672 |
| Trachyrincus scabrus | 42.64 | 260 | 6.74 | |
| Raja confundens | 27.82 | 26 | 4.40 | |
| Nezumia sp. | 23.14 | 546 | 3.66 | |
| Hoplostethus cadenati | 22.88 | 884 | 3.62 | |
| Ebinania costaecanarie | 20.54 | 26 | 3.25 | |
| Helicolenus dactylopterus | 17.94 | 26 | 2.84 | |
| Notacanthus sexspinis | 7.02 | 260 | 1.11 | |
| Genypterus capensis | 6.80 | 4 | 1.07 | 1674 |
| Merluccius paradoxus, male | 6.80 | 30 | 1.07 | 1670 |
| Coelorinchus fasciatus | 6.76 | 104 | 1.07 | |
| Bassanago albescens | 2.86 | 52 | 0.45 | |
| Epigonus denticulatus | 2.34 | 130 | 0.37 | |
| S H R I M P S | 2.08 | 806 | 0.33 | |
| Total | 632.58 | | 100.01 | |

PROJECT STATION: 527

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2515
start stop duration Long E 1335
TIME :21:35:00 22:05:00 30 (min) Purpose code: 3
LOG :1757.30 1758.90 1.60 Area code : 1
FDEPTH: 553 562 GearCond.code:
BDEPTH: 553 562 Validity code:
Towing dir: 300° Wire out:1500 m Speed: 33 kn*10

Sorted: 153 Kg Total catch: 323.01 CATCH/HOUR: 646.02

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 214.90 | 278 | 33.27 | 1676 |
| Selachophidium guentheri | 115.50 | 2134 | 17.88 | |
| Nezumia sp. | 105.82 | 1386 | 16.38 | |
| Raja confundens | 66.66 | 154 | 10.32 | |
| Galeus polli | 33.88 | 330 | 5.24 | |
| Coelorinchus fasciatus | 25.52 | 154 | 3.95 | |
| Lophius vomerinus | 23.10 | 4 | 3.58 | 1679 |
| Lithodes ferox | 12.20 | 18 | 1.89 | |
| Merluccius paradoxus, male | 12.20 | 20 | 1.89 | 1675 |
| Merluccius paradoxus, female | 8.14 | 44 | 1.26 | 1677 |
| Photichthys argenteus | 7.48 | 572 | 1.16 | |
| Merluccius capensis, female | 5.30 | 2 | 0.82 | 1678 |
| Trachyrincus scabrus | 4.84 | 22 | 0.75 | |
| Genypterus capensis | 4.76 | 2 | 0.74 | 1680 |
| Notacanthus sexspinis | 4.40 | 198 | 0.68 | |
| Hoplostethus cadenati | 0.88 | 66 | 0.14 | |
| Trachurus capensis | 0.22 | 22 | 0.03 | |
| Melanocetus johnsoni | 0.22 | 22 | 0.03 | |
| Total | 646.02 | | 100.01 | |

PROJECT STATION: 528

DATE:31/10/94 GEAR TYPE: BT No:8 POSITION:Lat S 2510
start stop duration Long E 1334
TIME :22:58:00 23:28:00 30 (min) Purpose code: 3
LOG :1762.60 1764.20 1.60 Area code : 1
FDEPTH: 602 609 GearCond.code:
BDEPTH: 602 609 Validity code:
Towing dir: 355° Wire out:1650 m Speed: 29 kn*10

Sorted: 164 Kg Total catch: 494.81 CATCH/HOUR: 989.62

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 279.20 | 354 | 28.21 | 1681 |
| Nezumia sp. | 194.12 | 2898 | 19.62 | |
| Selachophidium guentheri | 181.70 | 2668 | 18.36 | |
| RAJIDAE | 108.10 | 230 | 10.92 | |
| Deania profundorum | 84.18 | 46 | 8.51 | |
| Allocyttus verrucosus | 40.02 | 506 | 4.04 | |
| Notacanthus sexspinis | 28.52 | 598 | 2.88 | |
| Photichthys argenteus | 23.00 | 1012 | 2.32 | |
| Galeus polli | 17.48 | 184 | 1.77 | |
| Merluccius paradoxus, male | 8.80 | 14 | 0.89 | 1682 |
| OPHIDIIDAE | 8.28 | 230 | 0.84 | |
| Lithodes ferox | 6.00 | 10 | 0.61 | |
| Merluccius capensis, female | 5.62 | 2 | 0.57 | 1683 |
| Hoplostethus cadenati | 2.76 | 92 | 0.28 | |
| Ebinania costaecanarie | 1.84 | 46 | 0.19 | |
| Total | 989.62 | | 100.01 | |

PROJECT STATION: 529

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2504
start stop duration Long E 1336
TIME :00:58:00 01:28:00 30 (min) Purpose code: 3
LOG :1771.50 1773.00 1.50 Area code : 1
FDEPTH: 500 504 GearCond.code:
BDEPTH: 500 504 Validity code:
Towing dir: 360° Wire out:1400 m Speed: 30 kn*10

Sorted: 168 Kg Total catch: 663.96 CATCH/HOUR: 1327.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 742.26 | 1184 | 55.90 | 1685 |
| Selachophidium guentheri | 130.46 | 2346 | 9.82 | |
| Nezumia sp. | 109.94 | 1920 | 8.28 | |
| Lithodes ferox | 92.36 | 264 | 6.96 | |
| Merluccius capensis, female | 65.40 | 24 | 4.92 | 1687 |
| RAJIDAE | 50.72 | 88 | 3.82 | |
| Galeus polli | 42.22 | 542 | 3.18 | |
| Merluccius paradoxus, male | 32.10 | 66 | 2.42 | 1684 |
| Lophius vomerinus | 15.60 | 8 | 1.17 | 1688 |
| Coelorinchus fasciatus | 8.94 | 44 | 0.67 | |
| Hoplostethus atlanticus | 6.60 | 338 | 0.50 | |
| Merluccius capensis, male | 5.70 | 4 | 0.43 | 1686 |
| Photichthys argenteus | 5.56 | 294 | 0.42 | |
| Deania profundorum | 5.42 | 14 | 0.41 | |
| Todarodes sagittatus | 5.28 | 14 | 0.40 | |
| Notacanthus sexspinis | 3.66 | 132 | 0.28 | |
| Epigonus denticulatus | 2.64 | 132 | 0.20 | |
| Helicolenus dactylopterus | 1.90 | 14 | 0.14 | |
| Trachyrincus scabrus | 0.58 | 14 | 0.04 | |
| Stomias boa boa | 0.44 | 58 | 0.03 | |
| Allocyttus verrucosus | 0.14 | 30 | 0.01 | |
| Total | 1327.92 | | 100.00 | |

PROJECT STATION: 530

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2504
start stop duration Long E 1339
TIME :06:36:00 07:06:00 30 (min) Purpose code: 3
LOG :1785.50 1787.00 1.50 Area code : 1
FDEPTH: 410 412 GearCond.code:
BDEPTH: 410 412 Validity code:
Towing dir: 90° Wire out:1200 m Speed: 30 kn*10

Sorted: 158 Kg Total catch: 412.01 CATCH/HOUR: 824.02

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 229.50 | 3798 | 27.85 | |
| Lophius vomerinus | 152.70 | 118 | 18.53 | 1693 |
| Nezumia sp. | 95.40 | 3906 | 11.58 | |
| Galeus polli | 93.24 | 1872 | 11.32 | |
| Hoplostethus cadenati | 66.78 | 3348 | 8.10 | |
| Merluccius capensis, female | 43.20 | 18 | 5.24 | 1692 |
| Merluccius paradoxus, female | 28.50 | 48 | 3.46 | 1690 |
| Selachophidium guentheri | 25.20 | 1152 | 3.06 | |
| Raja confundens | 23.76 | 18 | 2.88 | |
| Genypterus capensis | 18.54 | 16 | 2.25 | 1694 |
| Ebinania costaecanarie | 16.38 | 180 | 1.99 | |
| Merluccius capensis, male | 9.90 | 6 | 1.20 | 1691 |
| S H R I M P S | 6.12 | 2178 | 0.74 | |
| Squilla sp. | 5.04 | 396 | 0.61 | |
| Coelorinchus fasciatus | 4.50 | 270 | 0.55 | |
| Todaropsis eblanae | 2.16 | 18 | 0.26 | |
| Merluccius paradoxus, male | 1.30 | 6 | 0.16 | 1689 |
| Bathynectes piperitus | 1.08 | 144 | 0.13 | |
| Chlorophthalmus atlanticus | 0.72 | 36 | 0.09 | |
| Total | 824.02 | | 100.00 | |

PROJECT STATION: 531

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2503
start stop duration Long E 1346
TIME :08:34:00 09:04:00 30 (min) Purpose code: 3
LOG :1795.70 1797.10 1.40 Area code : 1
FDEPTH: 272 276 GearCond.code:
BDEPTH: 272 276 Validity code:
Towing dir: 5° Wire out: 800 m Speed: 30 kn*10

Sorted: 26 Kg Total catch: 34.10 CATCH/HOUR: 68.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 34.30 | 46 | 50.29 | 1697 |
| Pterothrissus belloci | 8.04 | 96 | 11.79 | |
| Sufflogobius bibarbatus | 7.86 | 1068 | 11.52 | |
| Lophius vomerinus | 7.86 | 16 | 11.52 | 1699 |
| Squilla sp. | 5.70 | 336 | 8.36 | |
| Trachurus capensis | 2.16 | 24 | 3.17 | |
| Merluccius capensis, male | 1.92 | 4 | 2.82 | 1696 |
| Merluccius capensis, juveniles | 0.36 | 12 | 0.53 | 1698 |
| Total | 68.20 | | 100.00 | |

PROJECT STATION: 532

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2500
start stop duration Long E 1352
TIME :10:16:00 10:46:00 30 (min) Purpose code: 3
LOG :1804.80 1806.20 1.40 Area code : 1
FDEPTH: 195 198 GearCond.code:
BDEPTH: 195 198 Validity code:
Towing dir: 5° Wire out: 600 m Speed: 30 kn*10

Sorted: 76 Kg Total catch: 81.66 CATCH/HOUR: 163.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 70.90 | 246 | 43.41 | 1701 |
| Merluccius capensis, male | 54.00 | 152 | 33.06 | 1700 |
| Trachurus capensis | 14.70 | 38 | 9.00 | 1702 |
| Pterothrissus belloci | 12.80 | 132 | 7.84 | |
| Sufflogobius bibarbatus | 9.56 | 948 | 5.85 | |
| Austroglossus microlepis | 1.00 | 2 | 0.61 | 1703 |
| Merluccius capensis, juveniles | 0.24 | 6 | 0.15 | 1704 |
| Squilla sp. | 0.12 | 8 | 0.07 | |
| Total | 163.32 | | 99.99 | |

PROJECT STATION: 533

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2452
start stop duration Long E 1357
TIME :12:30:00 12:45:00 15 (min) Purpose code: 3
LOG :1815.80 1816.60 0.80 Area code : 2
FDEPTH: 164 163 GearCond.code:
BDEPTH: 164 163 Validity code:
Towing dir: 50° Wire out: 550 m Speed: 31 kn*10

Sorted: 63 Kg Total catch: 296.57 CATCH/HOUR: 1186.28

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, male | 519.88 | 6216 | 43.82 | 1705 |
| Merluccius capensis, female | 515.20 | 5116 | 43.43 | 1706 |
| Trachurus capensis | 91.48 | 560 | 7.71 | 1708 |
| Chelidonichthys capensis | 36.20 | 76 | 3.05 | |
| Sufflogobius bibarbatus | 14.76 | 1456 | 1.24 | |
| Merluccius capensis, juveniles | 4.48 | 112 | 0.38 | 1707 |
| Coelorinchus fasciatus | 3.16 | 76 | 0.27 | |
| Pterothrissus belloci | 1.12 | 20 | 0.09 | |
| Total | 1186.28 | | 99.99 | |

PROJECT STATION: 534

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2442
start stop duration Long E 1353
TIME :14:28:00 14:43:00 15 (min) Purpose code: 3
LOG :1827.20 1828.00 0.80 Area code : 2
FDEPTH: 229 231 GearCond.code:
BDEPTH: 229 231 Validity code:
Towing dir: 336° Wire out: 750 m Speed: 31 kn*10

Sorted: 29 Kg Total catch: 101.47 CATCH/HOUR: 405.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sufflogobius bibarbatus | 314.00 | 35680 | 77.36 | |
| Merluccius capensis, female | 63.40 | 76 | 15.62 | 1709 |
| Trachurus capensis | 15.24 | 88 | 3.75 | 1712 |
| Merluccius capensis, juveniles | 6.12 | 212 | 1.51 | 1711 |
| Squilla sp. | 3.20 | 160 | 0.79 | |
| Todarodes sagittatus | 2.00 | 40 | 0.49 | |
| Merluccius capensis, male | 1.92 | 28 | 0.47 | 1710 |
| Total | 405.88 | | 99.99 | |

PROJECT STATION: 535

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2442
start stop duration Long E 1344
TIME :16:31:00 16:46:00 15 (min) Purpose code: 3
LOG :1840.00 1841.00 1.00 Area code : 2
FDEPTH: 353 351 GearCond.code:
BDEPTH: 353 351 Validity code:
Towing dir: 360° Wire out:1050 m Speed: 40 kn*10

Sorted: 85 Kg Total catch: 220.39 CATCH/HOUR: 881.56

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Lophius vomerinus | 241.04 | 216 | 27.34 | 1716 |
| Coelorinchus fasciatus | 204.48 | 4608 | 23.20 | |
| Galeus polli | 144.48 | 3648 | 16.39 | |
| Helicolenus dactylopterus | 124.32 | 2208 | 14.10 | |
| Austroglossus microlepis | 44.64 | 48 | 5.06 | |
| Merluccius capensis, female | 41.40 | 68 | 4.70 | 1714 |
| Squilla sp. | 33.12 | 1920 | 3.76 | |
| Trachurus capensis | 23.04 | 48 | 2.61 | |
| Bathynectes piperitus | 6.72 | 192 | 0.76 | |
| Merluccius capensis, male | 6.64 | 36 | 0.75 | 1713 |
| Nezumia sp. | 6.24 | 432 | 0.71 | |
| Merluccius capensis, juveniles | 4.48 | 120 | 0.51 | 1715 |
| Chlorophthalmus punctatus | 0.96 | 96 | 0.11 | |
| Total | 881.56 | | 100.00 | |

PROJECT STATION: 536

DATE: 1/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2443
start stop duration Long E 1336
TIME :18:42:00 19:12:00 30 (min) Purpose code: 3
LOG :1851.40 1852.90 1.50 Area code : 2
FDEPTH: 414 408 GearCond.code:
BDEPTH: 414 408 Validity code:
Towing dir: 355° Wire out:1220 m Speed: 32 kn*10

Sorted: 108 Kg Total catch: 228.18 CATCH/HOUR: 456.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 67.20 | 264 | 14.73 | 1718 |
| Helicolenus dactylopterus | 49.14 | 434 | 10.77 | |
| Notacanthus sexspinis | 44.94 | 1204 | 9.85 | |
| Nezumia sp. | 43.26 | 798 | 9.48 | |
| Merluccius capensis, female | 35.70 | 16 | 7.82 | 1719 |
| Lophius vomerinus | 34.60 | 24 | 7.58 | 1720 |
| Epigonus denticulatus | 33.46 | 1176 | 7.33 | |
| Selachophidium guentheri | 31.22 | 336 | 6.84 | |
| Genypterus capensis | 19.80 | 10 | 4.34 | 1721 |
| Deania profundorum | 17.36 | 14 | 3.80 | |
| Shrimps, small, non comm. | 13.44 | 6104 | 2.95 | |
| Centroscymnus crepidater | 13.30 | 14 | 2.91 | |
| Trachyrincus scabrus | 9.80 | 84 | 2.15 | |
| Chaceon maritae | 8.50 | 6 | 1.86 | |
| Merluccius paradoxus, male | 8.10 | 50 | 1.77 | 1717 |
| Todarodes sagittatus | 7.42 | 14 | 1.63 | |
| Hoplostethus cadenati | 6.58 | 154 | 1.44 | |
| Galeus polli | 3.78 | 56 | 0.83 | |
| Coelorinchus fasciatus | 3.22 | 98 | 0.71 | |
| Lithodes ferox | 2.60 | 2 | 0.57 | |
| Photichthys argenteus | 1.40 | 126 | 0.31 | |
| Bathynectes piperitus | 0.84 | 28 | 0.18 | |
| Ebinania costaecanarie | 0.70 | 14 | 0.15 | |
| Total | 456.36 | | 100.00 | |

PROJECT STATION: 537

DATE: 2/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2426
start stop duration Long E 1328
TIME :06:36:00 07:06:00 30 (min) Purpose code: 3
LOG :1899.80 1901.40 1.50 Area code : 2
FDEPTH: 370 360 GearCond.code:
BDEPTH: 370 360 Validity code:
Towing dir: 340° Wire out:1100 m Speed: 32 kn*10

Sorted: 129 Kg Total catch: 297.80 CATCH/HOUR: 595.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 170.10 | 1876 | 28.56 | |
| Lophius vomerinus | 77.90 | 28 | 13.08 | 1725 |
| Galeus polli | 64.26 | 714 | 10.79 | |
| Merluccius capensis, female | 61.90 | 26 | 10.39 | 1724 |
| Merluccius paradoxus, female | 52.30 | 204 | 8.78 | 1723 |
| Epigonus denticulatus | 41.30 | 1162 | 6.93 | |
| Coelorinchus fasciatus | 26.32 | 910 | 4.42 | |
| Shrimps, small, non comm. | 20.86 | 6594 | 3.50 | |
| Chlorophthalmus atlanticus | 14.56 | 28 | 2.44 | |
| Raja confundens | 14.42 | 56 | 2.42 | |
| Nezumia sp. | 13.02 | 826 | 2.19 | |
| Bassanago albescens | 11.90 | 14 | 2.00 | |
| Genypterus capensis | 9.60 | 4 | 1.61 | 1726 |
| Selachophidium guentheri | 6.86 | 98 | 1.15 | |
| Bathynectes piperitus | 3.08 | 168 | 0.52 | |
| Notacanthus sexspinis | 2.10 | 84 | 0.35 | |
| Merluccius paradoxus, male | 1.90 | 12 | 0.32 | 1722 |
| MYCTOPHIDAE | 1.12 | 518 | 0.19 | |
| Hoplostethus cadenati | 0.84 | 28 | 0.14 | |
| GALATHEIDAE | 0.70 | 588 | 0.12 | |
| Ebinania costaecanarie | 0.56 | 14 | 0.09 | |
| Total | 595.60 | | 99.99 | |

PROJECT STATION: 538

DATE: 2/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2424
start stop duration Long E 1333
TIME :08:22:00 08:52:00 30 (min) Purpose code: 3
LOG :1908.00 1909.40 1.40 Area code : 2
FDEPTH: 339 335 GearCond.code:
BDEPTH: 339 335 Validity code:
Towing dir: 350° Wire out:1000 m Speed: 28 kn*10

Sorted: 88 Kg Total catch: 246.98 CATCH/HOUR: 493.96

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 235.50 | 3886 | 47.68 | |
| Lophius vomerinus | 80.60 | 60 | 16.32 | 1730 |
| Nezumia sp. | 52.96 | 2190 | 10.72 | |
| Coelorinchus fasciatus | 43.20 | 1170 | 8.75 | |
| Merluccius capensis, female | 19.60 | 10 | 3.97 | 1729 |
| Merluccius paradoxus, female | 16.00 | 116 | 3.24 | 1728 |
| Shrimps, small, non comm. | 15.46 | 3360 | 3.13 | |
| Genypterus capensis | 10.80 | 6 | 2.19 | 1731 |
| Galeus polli | 8.56 | 90 | 1.73 | |
| Ebinania costaecanarie | 6.00 | 30 | 1.21 | |
| Bathynectes piperitus | 1.80 | 106 | 0.36 | |
| Chlorophthalmus atlanticus | 1.36 | 90 | 0.28 | |
| Merluccius paradoxus, male | 1.20 | 8 | 0.24 | 1727 |
| Hoplostethus cadenati | 0.46 | 46 | 0.09 | |
| GALATHEIDAE | 0.30 | 256 | 0.06 | |
| L O B S T E R S | 0.16 | 16 | 0.03 | |
| Total | 493.96 | | 100.00 | |

PROJECT STATION: 539

DATE: 2/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2423
start stop duration Long E 1342
TIME :10:27:00 10:37:00 10 (min) Purpose code: 3
LOG :1918.70 1919.30 0.60 Area code : 2
FDEPTH: 325 322 GearCond.code:
BDEPTH: 325 322 Validity code:
Towing dir: 90° Wire out:1020 m Speed: 30 kn*10

Sorted: 34 Kg Total catch: 34.73 CATCH/HOUR: 208.38

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 89.70 | 36 | 43.05 | 1732 |
| Helicolenus dactylopterus | 63.30 | 1440 | 30.38 | |
| Galeus polli | 18.48 | 306 | 8.87 | |
| Lophius vomerinus | 12.78 | 30 | 6.13 | 1733 |
| Coelorinchus fasciatus | 11.58 | 402 | 5.56 | |
| Bathynectes piperitus | 3.42 | 108 | 1.64 | |
| Merluccius paradoxus, female | 2.88 | 24 | 1.38 | 1735 |
| Squilla sp. | 1.80 | 84 | 0.86 | |
| Nezumia sp. | 1.56 | 84 | 0.75 | |
| Shrimps, small, non comm. | 1.08 | 336 | 0.52 | |
| Chlorophthalmus atlanticus | 0.66 | 84 | 0.32 | |
| MYCTOPHIDAE | 0.48 | 330 | 0.23 | |
| Merluccius paradoxus, male | 0.42 | 6 | 0.20 | 1734 |
| Notacanthus sexspinis | 0.12 | | 0.06 | |
| Hoplostethus cadenati | 0.06 | 6 | 0.03 | |
| Epigonus denticulatus | 0.06 | 6 | 0.03 | |
| Total | 208.38 | | 100.01 | |

PROJECT STATION: 540

DATE: 2/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2433
start stop duration Long E 1354
TIME :12:23:00 12:47:00 24 (min) Purpose code: 3
LOG :1930.80 1932.10 1.30 Area code : 2
FDEPTH: 259 243 GearCond.code:
BDEPTH: 259 243 Validity code:
Towing dir: 90° Wire out: 850 m Speed: 32 kn*10

Sorted: 109 Kg Total catch: 629.15 CATCH/HOUR: 1572.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sufflogobius bibarbatus | 1272.50 | 361100 | 80.90 | |
| Merluccius capensis, female | 73.75 | 95 | 4.69 | 1739 |
| Squilla sp. | 51.50 | 3250 | 3.27 | |
| Merluccius capensis, female | 47.13 | 440 | 3.00 | 1736 |
| Merluccius capensis, juveniles | 32.00 | 843 | 2.03 | 1738 |
| Merluccius capensis, male | 28.50 | 343 | 1.81 | 1737 |
| Trachurus capensis | 28.00 | 250 | 1.78 | 1742 |
| Pterothrissus belloci | 13.00 | 400 | 0.83 | |
| Lophius vomerinus | 12.25 | 88 | 0.78 | 1741 |
| Austroglossus microlepis | 12.25 | 55 | 0.78 | 1740 |
| Coelorinchus fasciatus | 1.50 | 150 | 0.10 | |
| Galeus polli | 0.50 | 100 | 0.03 | |
| Total | 1572.88 | | 100.00 | |

PROJECT STATION: 541

DATE: 2/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2422
start stop duration Long E 1402
TIME :14:07:00 14:37:00 30 (min) Purpose code: 3
LOG :1940.00 1941.90 1.90 Area code : 2
FDEPTH: 155 157 GearCond.code:
BDEPTH: 155 157 Validity code:
Towing dir: 360° Wire out: 550 m Speed: 34 kn*10

Sorted: 34 Kg Total catch: 419.16 CATCH/HOUR: 838.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 465.60 | 11616 | 55.54 | 1745 |
| Merluccius capensis, female | 220.80 | 2904 | 26.34 | 1744 |
| Merluccius capensis, male | 128.40 | 1800 | 15.32 | 1743 |
| Sufflogobius bibarbatus | 23.04 | 6528 | 2.75 | |
| Squilla sp. | 0.24 | 48 | 0.03 | |
| Trachurus capensis | 0.24 | 24 | 0.03 | |
| Total | 838.32 | | 100.01 | |

PROJECT STATION: 542

DATE: 2/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2422
start stop duration Long E 1412
TIME :16:07:00 16:11:00 4 (min) Purpose code: 3
LOG :1951.40 1951.60 0.20 Area code : 2
FDEPTH: 129 129 GearCond.code: 8
BDEPTH: 129 129 Validity code: 9
Towing dir: 90° Wire out: 450 m Speed: 30 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 543

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2402
start stop duration Long E 1408
TIME :06:30:00 07:00:00 30 (min) Purpose code: 3
LOG :2001.40 2003.00 1.60 Area code : 2
FDEPTH: 143 146 GearCond.code:
BDEPTH: 143 146 Validity code:
Towing dir: 360° Wire out: 430 m Speed: 32 kn*10

Sorted: 4 Kg Total catch: 4.30 CATCH/HOUR: 8.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 4.30 | 190 | 50.00 | 1748 |
| Merluccius capensis, female | 2.82 | 32 | 32.79 | 1747 |
| Merluccius capensis, male | 1.48 | 22 | 17.21 | 1746 |
| Total | 8.60 | | 100.00 | |

PROJECT STATION: 544

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2401
start stop duration Long E 1357
TIME :09:20:00 09:50:00 30 (min) Purpose code: 3
LOG :2013.70 2015.20 1.50 Area code : 2
FDEPTH: 218 224 GearCond.code:
BDEPTH: 218 224 Validity code:
Towing dir: 255° Wire out: 650 m Speed: 27 kn*10

Sorted: 33 Kg Total catch: 64.11 CATCH/HOUR: 128.22

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 53.70 | 1308 | 41.88 | 1751 |
| Merluccius capensis, female | 29.10 | 440 | 22.70 | 1750 |
| Sufflogobius bibarbatus | 25.20 | 5040 | 19.65 | |
| Merluccius capensis, male | 19.40 | 308 | 15.13 | 1749 |
| Squilla sp. | 0.60 | 30 | 0.47 | |
| Trachurus capensis | 0.22 | 2 | 0.17 | |
| Total | 128.22 | | 100.00 | |

PROJECT STATION: 545

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2401
start stop duration Long E 1346
TIME :11:24:00 11:39:00 15 (min) Purpose code: 3
LOG :2024.30 2025.10 0.80 Area code : 2
FDEPTH: 246 251 GearCond.code:
BDEPTH: 246 251 Validity code:
Towing dir: 270° Wire out: 750 m Speed: 27 kn*10

Sorted: 69 Kg Total catch: 167.54 CATCH/HOUR: 670.16

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, male | 345.80 | 1852 | 51.60 | 1753 |
| Merluccius capensis, female | 230.88 | 852 | 34.45 | 1752 |
| Coelorinchus fasciatus | 25.68 | 1164 | 3.83 | |
| Austroglossus microlepis | 21.40 | 92 | 3.19 | 1755 |
| Merluccius capensis, juveniles | 13.72 | 384 | 2.05 | 1754 |
| Lophius vomerinus | 12.40 | 36 | 1.85 | 1756 |
| Sufflogobius bibarbatus | 11.84 | 1404 | 1.77 | |
| Trachurus capensis | 2.60 | 12 | 0.39 | |
| Pterothrissus belloci | 2.60 | 84 | 0.39 | |
| Todaropsis eblanae | 1.68 | 32 | 0.25 | |
| Bathynectes piperitus | 0.84 | 32 | 0.13 | |
| Squilla sp. | 0.72 | 52 | 0.11 | |
| Total | 670.16 | | 100.01 | |

PROJECT STATION: 546

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2401
start stop duration Long E 1336
TIME :13:22:00 13:47:00 25 (min) Purpose code: 3
LOG :2036.90 2038.30 1.40 Area code : 2
FDEPTH: 269 266 GearCond.code:
BDEPTH: 269 266 Validity code:
Towing dir: 360° Wire out: 850 m Speed: 33 kn*10

Sorted: 206 Kg Total catch: 228.15 CATCH/HOUR: 547.56

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 210.00 | 494 | 38.35 | 1758 |
| Merluccius capensis, male | 198.24 | 737 | 36.20 | 1757 |
| Coelorinchus fasciatus | 41.64 | 1476 | 7.60 | |
| Merluccius capensis, juveniles | 29.52 | 1243 | 5.39 | 1759 |
| Lophius vomerinus | 22.92 | 31 | 4.19 | 1761 |
| Trachurus capensis | 20.52 | 41 | 3.75 | 1760 |
| Helicolenus dactylopterus | 9.00 | 408 | 1.64 | |
| Sufflogobius bibarbatus | 6.36 | 660 | 1.16 | |
| MYCTOPHIDAE | 3.96 | 2076 | 0.72 | |
| Squilla sp. | 2.04 | 96 | 0.37 | |
| Chlorophthalmus punctatus | 1.20 | 120 | 0.22 | |
| Galeus polli | 0.96 | 48 | 0.18 | |
| Todaropsis eblanae | 0.60 | 12 | 0.11 | |
| Pterothrissus belloci | 0.60 | 24 | 0.11 | |
| Total | 547.56 | | 99.99 | |

PROJECT STATION: 548

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2401
start stop duration Long E 1316
TIME :17:49:00 18:19:00 30 (min) Purpose code: 3
LOG :2064.10 2065.30 1.40 Area code : 2
FDEPTH: 365 364 GearCond.code:
BDEPTH: 365 364 Validity code:
Towing dir: 350° Wire out:1050 m Speed: 28 kn*10

Sorted: 322 Kg Total catch: 724.96 CATCH/HOUR: 1449.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 533.20 | 414 | 36.77 | 1768 |
| Helicolenus dactylopterus | 320.60 | 4368 | 22.11 | |
| Merluccius paradoxus, female | 218.40 | 1540 | 15.06 | 1770 |
| Krill | 127.68 | | 8.81 | |
| Galeus polli | 52.92 | 504 | 3.65 | |
| Merluccius paradoxus, male | 45.92 | 308 | 3.17 | 1769 |
| Merluccius capensis, male | 38.60 | 36 | 2.66 | 1767 |
| Selachophidium guentheri | 37.24 | 1316 | 2.57 | |
| Coelorinchus fasciatus | 22.96 | 532 | 1.58 | |
| Nezumia sp. | 19.88 | 1176 | 1.37 | |
| Shrimps, small, non comm. | 16.80 | 5264 | 1.16 | |
| Lophius vomerinus | 7.80 | 10 | 0.54 | 1771 |
| Genypterus capensis | 3.16 | 2 | 0.22 | 1772 |
| Chlorophthalmus atlanticus | 2.24 | 168 | 0.15 | |
| Todaropsis eblanae | 1.68 | 28 | 0.12 | |
| MYCTOPHIDAE | 0.84 | 56 | 0.06 | |
| Total | 1449.92 | | 100.00 | |

PROJECT STATION: 549

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2358
start stop duration Long E 1312
TIME :19:15:00 19:47:00 32 (min) Purpose code: 3
LOG :2070.10 2071.90 1.80 Area code : 2
FDEPTH: 477 464 GearCond.code:
BDEPTH: 477 464 Validity code:
Towing dir: 350° Wire out:1400 m Speed: 33 kn*10

Sorted: 108 Kg Total catch: 512.31 CATCH/HOUR: 960.58

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Epigonus denticulatus | 262.97 | 2104 | 27.38 | |
| Trachyrincus scabrus | 191.25 | 1116 | 19.91 | |
| Nezumia sp. | 105.51 | 4016 | 10.98 | |
| Merluccius paradoxus, female | 86.16 | 163 | 8.97 | 1774 |
| Deania profundorum | 66.30 | 96 | 6.90 | |
| Helicolenus dactylopterus | 39.84 | 287 | 4.15 | |
| Shrimps, small, non comm. | 39.53 | 15810 | 4.12 | |
| Lophius vomerinus | 36.94 | 13 | 3.85 | 1776 |
| Selachophidium guentheri | 25.50 | 574 | 2.65 | |
| Yarrella blackfordi | 25.18 | 2327 | 2.62 | |
| Merluccius capensis, female | 21.19 | 9 | 2.21 | 1775 |
| Todarodes sagittatus | 15.62 | 32 | 1.63 | |
| Hoplostethus cadenati | 14.66 | 669 | 1.53 | |
| Notacanthus sexspinis | 10.52 | 351 | 1.10 | |
| Genypterus capensis | 9.88 | 6 | 1.03 | 1777 |
| Galeus polli | 4.46 | 64 | 0.46 | |
| Bassanago albescens | 2.55 | 64 | 0.27 | |
| Merluccius paradoxus, male | 2.53 | 8 | 0.26 | 1773 |
| Total | 960.59 | | 100.02 | |

PROJECT STATION: 550

DATE: 3/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2400
start stop duration Long E 1310
TIME :21:10:00 21:40:00 30 (min) Purpose code: 3
LOG :2077.70 2079.10 1.40 Area code : 2
FDEPTH: 590 595 GearCond.code:
BDEPTH: 590 595 Validity code:
Towing dir: 170° Wire out:1650 m Speed: 33 kn*10

Sorted: 182 Kg Total catch: 349.36 CATCH/HOUR: 698.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 302.50 | 408 | 43.29 | 1779 |
| Deania calcea | 276.50 | 126 | 39.57 | |
| Nezumia sp. | 43.96 | 1890 | 6.29 | |
| Todarodes sagittatus | 23.94 | 42 | 3.43 | |
| Selachophidium guentheri | 21.28 | 434 | 3.05 | |
| Yarrella blackfordi | 12.74 | 658 | 1.82 | |
| Merluccius paradoxus, male | 7.30 | 14 | 1.04 | 1778 |
| Shrimps, small, non comm. | 4.06 | 1904 | 0.58 | |
| Hoplostethus cadenati | 2.10 | 182 | 0.30 | |
| Allocyttus verrucosus | 1.82 | 28 | 0.26 | |
| Galeus polli | 1.12 | 14 | 0.16 | |
| Notacanthus sexspinis | 0.56 | 14 | 0.08 | |
| Raja confundens | 0.56 | 28 | 0.08 | |
| Ebinania costaecanaria | 0.28 | 14 | 0.04 | |
| Total | 698.72 | | 99.99 | |

PROJECT STATION: 551

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2347

| | start | stop | duration | | | Long E 1305 |
|---|---|---|---|---|---|---|
| TIME | :00:46:00 | 01:16:00 | 30 | (min) | Purpose code: | 3 |
| LOG | :2099.40 | 2100.80 | 1.40 | | Area code : | 2 |
| FDEPTH: | 651 | 648 | | | GearCond.code: | |
| BDEPTH: | 651 | 648 | | | Validity code: | |

Towing dir: 350° Wire out:1700 m Speed: 28 kn*10

Sorted: 145 Kg Total catch: 426.65 CATCH/HOUR: 853.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 227.30 | 238 | 26.64 | 1780 |
| Deania calcea | 221.00 | 80 | 25.90 | |
| Nezumia sp. | 146.00 | 3600 | 17.11 | |
| Selachophidium guentheri | 99.80 | 1300 | 11.70 | |
| RAJIDAE | 41.60 | 60 | 4.88 | |
| Lithodes ferox | 26.00 | 60 | 3.05 | |
| Deania quadrispinosum | 22.20 | 20 | 2.60 | |
| Ebinania costaecanarie | 17.80 | 40 | 2.09 | |
| Todarodes sagittatus | 14.40 | 20 | 1.69 | |
| Yarrella blackfordi | 11.80 | 400 | 1.38 | |
| Hoplostethus atlanticus | 9.00 | 580 | 1.05 | |
| Bathyuroconger vicinus | 3.50 | 20 | 0.42 | |
| Dicrolene intronigra | 2.80 | 80 | 0.33 | |
| Allocyttus verrucosus | 2.60 | 40 | 0.30 | |
| Lophius vomerinus | 2.60 | 2 | 0.30 | 1781 |
| Notacanthus sexspinis | 2.40 | 20 | 0.28 | |
| Galeus polli | 1.80 | 20 | 0.21 | |
| Shrimps, small, non comm. | 1.00 | 260 | 0.12 | |
| POLYCHAELIDAE | 0.80 | 60 | 0.09 | |
| Stomias boa boa | 0.60 | 20 | 0.07 | |
| Total | 855.10 | | 100.21 | |

PROJECT STATION: 552

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2341

| | start | stop | duration | | | Long E 1306 |
|---|---|---|---|---|---|---|
| TIME | :02:33:00 | 03:03:00 | 30 | (min) | Purpose code: | 3 |
| LOG | :2107.10 | 2108.60 | 1.50 | | Area code : | 2 |
| FDEPTH: | 551 | 551 | | | GearCond.code: | |
| BDEPTH: | 551 | 551 | | | Validity code: | |

Towing dir: 350° Wire out:1500 m Speed: 30 kn*10

Sorted: 252 Kg Total catch: 499.20 CATCH/HOUR: 998.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 361.40 | 966 | 36.20 | 1783 |
| Deania calcea | 290.00 | 260 | 29.05 | |
| Selachophidium guentheri | 70.40 | 1680 | 7.05 | |
| Merluccius capensis, female | 60.40 | 32 | 6.05 | 1785 |
| Nezumia sp. | 55.40 | 3220 | 5.55 | |
| RAJIDAE | 30.40 | 20 | 3.04 | |
| Hoplostethus atlanticus | 30.40 | 1240 | 3.04 | |
| Merluccius paradoxus, male | 22.70 | 78 | 2.27 | 1782 |
| Trachyrincus scabrus | 18.80 | 100 | 1.88 | |
| Todarodes sagittatus | 11.80 | 40 | 1.18 | |
| Centroscyllium fabricii | 8.80 | 20 | 0.88 | |
| Yarrella blackfordi | 7.00 | 40 | 0.70 | |
| Trachurus capensis | 6.60 | 20 | 0.66 | |
| Lithodes ferox | 4.40 | 40 | 0.44 | |
| Merluccius capensis, male | 4.20 | 2 | 0.42 | 1784 |
| Epigonus denticulatus | 3.20 | 120 | 0.32 | |
| Shrimps, small, non comm. | 2.40 | 960 | 0.24 | |
| MYCTOPHIDAE | 2.20 | 160 | 0.22 | |
| Galeus polli | 2.00 | 20 | 0.20 | |
| Notacanthus sexspinis | 2.00 | 40 | 0.20 | |
| Lophius vomerinus | 1.70 | 2 | 0.17 | 1786 |
| ARISTEIDAE | 1.40 | 40 | 0.14 | |
| Bathyuroconger vicinus | 0.80 | 20 | 0.08 | |
| Total | 998.40 | | 99.98 | |

PROJECT STATION: 553

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2342

| | start | stop | duration | | | Long E 1307 |
|---|---|---|---|---|---|---|
| TIME | :06:40:00 | 07:10:00 | 30 | (min) | Purpose code: | 3 |
| LOG | :2118.90 | 2120.30 | 1.40 | | Area code : | 2 |
| FDEPTH: | 478 | 482 | | | GearCond.code: | |
| BDEPTH: | 478 | 482 | | | Validity code: | |

Towing dir: 350° Wire out:1350 m Speed: 29 kn*10

Sorted: 103 Kg Total catch: 303.23 CATCH/HOUR: 606.46

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 192.00 | 900 | 31.65 | |
| Merluccius paradoxus, female | 100.80 | 210 | 16.62 | 1788 |
| Epigonus denticulatus | 50.20 | 1000 | 8.28 | |
| Nezumia sp. | 50.00 | 2600 | 8.24 | |
| Merluccius capensis, female | 47.90 | 20 | 7.90 | 1789 |
| Hoplostethus cadenati | 41.60 | 1860 | 6.86 | |
| Deania profundorum | 38.00 | 60 | 6.27 | |
| Selachophidium guentheri | 19.80 | 280 | 3.26 | |
| Helicolenus dactylopterus | 18.80 | 80 | 3.10 | |
| Raja confundens | 12.60 | 40 | 2.08 | |
| Shrimps, small, non comm. | 12.20 | 4700 | 2.01 | |
| Lophius vomerinus | 11.90 | 10 | 1.96 | 1790 |
| Galeus polli | 4.60 | 60 | 0.76 | |
| Yarrella blackfordi | 2.40 | 320 | 0.40 | |
| Bassanago albescens | 1.20 | 40 | 0.20 | |
| Merluccius paradoxus, male | 1.06 | 6 | 0.17 | 1787 |
| Todaropsis eblanae | 0.80 | 20 | 0.13 | |
| Notacanthus sexspinis | 0.60 | 40 | 0.10 | |
| Total | 606.46 | | 100.00 | |

PROJECT STATION: 554

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2340

| | start | stop | duration | | | Long E 1310 |
|---|---|---|---|---|---|---|
| TIME | :08:25:00 | 08:55:00 | 30 | (min) | Purpose code: | 3 |
| LOG | :2125.60 | 2127.20 | 1.60 | | Area code : | 2 |
| FDEPTH: | 400 | 404 | | | GearCond.code: | |
| BDEPTH: | 400 | 404 | | | Validity code: | |

Towing dir: 350° Wire out:1150 m Speed: 31 kn*10

Sorted: 160 Kg Total catch: 370.44 CATCH/HOUR: 740.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 199.20 | 2000 | 26.89 | |
| Merluccius capensis, female | 135.90 | 72 | 18.34 | 1794 |
| Shrimps, small, non comm. | 97.12 | 35968 | 13.11 | |
| Lophius vomerinus | 59.90 | 44 | 8.08 | 1795 |
| Nezumia sp. | 52.80 | 1968 | 7.13 | |
| Merluccius paradoxus, female | 39.60 | 204 | 5.34 | 1792 |
| Galeus polli | 33.28 | 528 | 4.49 | |
| Epigonus denticulatus | 21.44 | 1072 | 2.89 | |
| Selachophidium guentheri | 17.28 | 528 | 2.33 | |
| Hoplostethus cadenati | 16.16 | 1328 | 2.18 | |
| Merluccius capensis, male | 13.00 | 10 | 1.75 | 1793 |
| Yarrella blackfordi | 9.60 | 1200 | 1.30 | |
| Coelorinchus fasciatus | 8.96 | 448 | 1.21 | |
| Lophius vaillanti | 7.62 | 2 | 1.03 | 1796 |
| Aristeus varidens | 7.36 | 1872 | 0.99 | |
| Raja confundens | 6.72 | 32 | 0.91 | |
| Ebinania costaecanarie | 3.36 | 48 | 0.45 | |
| Todarodes sagittatus | 3.04 | 32 | 0.41 | |
| Chlorophthalmus atlanticus | 2.72 | 176 | 0.37 | |
| Merluccius paradoxus, male | 2.34 | 14 | 0.32 | 1791 |
| Trachurus capensis | 1.72 | 4 | 0.23 | |
| Notacanthus sexspinis | 1.28 | 64 | 0.17 | |
| Trachyrincus scabrus | 0.32 | 16 | 0.04 | |
| L O B S T E R S | 0.16 | 16 | 0.02 | |
| Total | 740.88 | | 99.98 | |

PROJECT STATION: 555

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2340

| | start | stop | duration | | | Long E 1315 |
|---|---|---|---|---|---|---|
| TIME | :10:07:00 | 10:37:00 | 30 | (min) | Purpose code: | 3 |
| LOG | :2134.30 | 2135.80 | 1.50 | | Area code : | 2 |
| FDEPTH: | 324 | 330 | | | GearCond.code: | |
| BDEPTH: | 324 | 330 | | | Validity code: | |

Towing dir: 350° Wire out: 950 m Speed: 29 kn*10

Sorted: 358 Kg Total catch: 627.35 CATCH/HOUR: 1254.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 490.10 | 312 | 39.06 | 1800 |
| Helicolenus dactylopterus | 253.80 | 3042 | 20.23 | |
| Merluccius capensis, male | 126.00 | 100 | 10.04 | 1799 |
| Merluccius capensis, female | 111.42 | 432 | 8.88 | 1798 |
| Deepwater fish mixture | 78.30 | | 6.24 | |
| Galeus polli | 51.66 | 1710 | 4.12 | |
| Lophius vomerinus | 33.60 | 26 | 2.68 | 1801 |
| Chlorophthalmus atlanticus | 30.60 | 2538 | 2.44 | |
| Merluccius capensis, male | 29.90 | 126 | 2.38 | 1797 |
| Coelorinchus fasciatus | 26.46 | 918 | 2.11 | |
| Todarodes sagittatus | 10.80 | 36 | 0.86 | |
| Nezumia sp. | 10.80 | 72 | 0.86 | |
| Todaropsis eblanae | 1.08 | 36 | 0.09 | |
| Hoplostethus cadenati | 0.18 | 36 | 0.01 | |
| Total | 1254.70 | | 100.00 | |

PROJECT STATION: 556

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2340

| | start | stop | duration | | | Long E 1327 |
|---|---|---|---|---|---|---|
| TIME | :12:25:00 | 12:40:00 | 15 | (min) | Purpose code: | 3 |
| LOG | :2147.10 | 2148.00 | 0.90 | | Area code : | 2 |
| FDEPTH: | 256 | 252 | | | GearCond.code: | |
| BDEPTH: | 256 | 252 | | | Validity code: | |

Towing dir: 90° Wire out: 750 m Speed: 34 kn*10

Sorted: 78 Kg Total catch: 434.51 CATCH/HOUR: 1738.04

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1359.00 | 7260 | 78.19 | 1806 |
| Merluccius capensis, male | 131.00 | 1048 | 7.54 | 1802 |
| Merluccius capensis, juveniles | 93.28 | 2500 | 5.37 | 1804 |
| Merluccius capensis, female | 87.12 | 700 | 5.01 | 1803 |
| Coelorinchus fasciatus | 31.80 | 900 | 1.83 | |
| Sufflogobius bibarbatus | 19.80 | 2100 | 1.14 | |
| Lophius vomerinus | 5.24 | 8 | 0.30 | 1805 |
| Todaropsis eblanae | 4.80 | 180 | 0.28 | |
| Lepidopus caudatus | 3.00 | 60 | 0.17 | |
| Chlorophthalmus atlanticus | 1.80 | 180 | 0.10 | |
| Helicolenus dactylopterus | 1.20 | 60 | 0.07 | |
| Total | 1738.04 | | 100.00 | |

PROJECT STATION: 557

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2340

| | start | stop | duration | | | Long E 1335 |
|---|---|---|---|---|---|---|
| TIME | :13:51:00 | 14:21:00 | 30 | (min) | Purpose code: | 3 |
| LOG | :2154.20 | 2155.60 | 1.40 | | Area code : | 2 |
| FDEPTH: | 227 | 222 | | | GearCond.code: | |
| BDEPTH: | 227 | 222 | | | Validity code: | |

Towing dir: 90° Wire out: 700 m Speed: 28 kn*10

Sorted: 170 Kg Total catch: 578.73 CATCH/HOUR: 1157.46

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 581.68 | 3184 | 50.25 | 1812 |
| Merluccius capensis, female | 215.16 | 1196 | 18.59 | 1811 |
| Merluccius capensis, male | 182.16 | 1416 | 15.74 | 1810 |
| Merluccius capensis, female | 66.70 | 72 | 5.76 | 1808 |
| Merluccius capensis, juveniles | 33.00 | 818 | 2.85 | 1809 |
| Merluccius capensis, male | 29.80 | 52 | 2.57 | 1807 |
| Sufflogobius bibarbatus | 15.04 | 2270 | 1.30 | |
| Chelidonichthys capensis | 12.14 | 18 | 1.05 | |
| Coelorinchus fasciatus | 9.16 | 194 | 0.79 | |
| Todaropsis eblanae | 5.02 | 150 | 0.43 | |
| Lophius vomerinus | 4.00 | 6 | 0.35 | 1813 |
| Galeus polli | 2.02 | 80 | 0.17 | |
| Lepidopus caudatus | 1.58 | 36 | 0.14 | |
| Total | 1157.46 | | 99.99 | |

PROJECT STATION: 558

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2340
start stop duration Long E 1343
TIME :16:28:00 16:58:00 30 (min) Purpose code: 3
LOG :2163.60 2165.20 1.60 Area code : 2
FDEPTH: 199 193 GearCond.code:
BDEPTH: 199 193 Validity code:
Towing dir: 90° Wire out: m Speed:650 kn*10

Sorted: 88 Kg Total catch: 573.15 CATCH/HOUR: 1146.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 607.74 | 5368 | 53.02 | 1814 |
| Merluccius capensis, female | 279.50 | 2898 | 24.38 | 1816 |
| Merluccius capensis, juveniles | 175.50 | 5446 | 15.31 | 1817 |
| Merluccius capensis, male | 63.04 | 92: | 5.50 | 1815 |
| Sufflogobius bibarbatus | 11.30 | 1222 | 0.99 | |
| Chelidonichthys capensis | 9.22 | 26 | 0.80 | |
| Total | 1146.30 | | 100.00 | |

PROJECT STATION: 559

DATE: 4/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2340
start stop duration Long E 1351
TIME :18:14:00 18:44:00 30 (min) Purpose code: 3
LOG :2172.60 2174.10 1.50 Area code : 2
FDEPTH: 177 172 GearCond.code:
BDEPTH: 177 172 Validity code:
Towing dir: 80° Wire out: 540 m Speed: 31 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 20.00 | | 2000.00 | |
| Total | 20.00 | | 2000.00 | |

PROJECT STATION: 560

DATE: 5/11/94 GEAR TYPE: BT No: POSITION:Lat S 2321
start stop duration Long E 1354
TIME :06:32:00 07:02:00 30 (min) Purpose code: 3
LOG :2235.20 2236.70 1.50 Area code : 2
FDEPTH: 154 157 GearCond.code:
BDEPTH: 154 157 Validity code:
Towing dir: 260° Wire out: 440 m Speed: 30 kn*10

Sorted: Kg Total catch: 0.69 CATCH/HOUR: 1.38

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 1.32 | 78 | 95.65 | 1818 |
| Sufflogobius bibarbatus | 0.06 | 24 | 4.35 | |
| Total | 1.38 | | 100.00 | |

PROJECT STATION: 561

DATE: 4/11/94 GEAR TYPE: BT No: POSITION:Lat S 2321
start stop duration Long E 1344
TIME :08:28:00 08:58:00 30 (min) Purpose code: 3
LOG :2245.00 2246.60 1.60 Area code : 2
FDEPTH: 152 154 GearCond.code:
BDEPTH: 152 154 Validity code:
Towing dir: 270° Wire out: 450 m Speed: 30 kn*10

Sorted: 3 Kg Total catch: 3.65 CATCH/HOUR: 7.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 3.78 | 162 | 51.78 | 1819 |
| Sufflogobius bibarbatus | 3.44 | 1720 | 47.12 | |
| Todaropsis eblanae | 0.08 | 2 | 1.10 | |
| Total | 7.30 | | 100.00 | |

PROJECT STATION: 562

DATE: 5/11/94 GEAR TYPE: BT No: POSITION:Lat S 2321
start stop duration Long E 1335
TIME :10:09:00 10:39:00 30 (min) Purpose code: 3
LOG :2253.60 2255.10 1.50 Area code : 2
FDEPTH: 175 186 GearCond.code:
BDEPTH: 175 186 Validity code:
Towing dir: 270° Wire out: 500 m Speed: 28 kn*10

Sorted: 26 Kg Total catch: 576.40 CATCH/HOUR: 1152.80

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 499.40 | 6864 | 43.32 | 1821 |
| Merluccius capensis, juveniles | 304.04 | 8800 | 26.37 | 1822 |
| Merluccius capensis, male | 275.00 | 4224 | 23.85 | 1820 |
| Chelidonichthys capensis | 58.52 | 220 | 5.08 | |
| Trachurus capensis | 11.00 | 132 | 0.95 | |
| Austroglossus microlepis | 2.64 | 44 | 0.23 | |
| Sufflogobius bibarbatus | 2.20 | 220 | 0.19 | |
| Total | 1152.80 | | 99.99 | |

PROJECT STATION: 563

DATE: 5/11/94 GEAR TYPE: BT No: POSITION:Lat S 2321
start stop duration Long E 1325
TIME :12:06:00 12:36:00 30 (min) Purpose code: 3
LOG :2263.70 2265.40 1.70 Area code : 2
FDEPTH: 262 281 GearCond.code:
BDEPTH: 262 281 Validity code:
Towing dir: 270° Wire out: 800 m Speed: 33 kn*10

Sorted: 54 Kg Total catch: 319.51 CATCH/HOUR: 639.02

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 292.60 | 2786 | 45.79 | 1824 |
| Merluccius capensis, male | 237.50 | 2268 | 37.17 | 1823 |
| Merluccius capensis, juveniles | 34.08 | 900 | 5.33 | 1825 |
| Trachurus capensis | 32.30 | 368 | 5.05 | 1826 |
| Pterothrissus belloci | 18.36 | 292 | 2.87 | |
| PORTUNIDAE | 10.38 | 392 | 1.62 | |
| Lophius vomerinus | 7.20 | 26 | 1.13 | 1828 |
| Sufflogobius bibarbatus | 3.80 | 50 | 0.59 | |
| Austroglossus microlepis | 1.80 | 8 | 0.28 | 1827 |
| Squilla sp. | 0.88 | 50 | 0.14 | |
| Chlorophthalmus punctatus | 0.12 | 12 | 0.02 | |
| Total | 639.02 | | 99.99 | |

PROJECT STATION: 564

DATE: 5/11/94 GEAR TYPE: BT No: POSITION:Lat S 2321
start stop duration Long E 1317
TIME :14:09:00 14:39:00 30 (min) Purpose code: 3
LOG :2274.60 2276.30 1.70 Area code : 2
FDEPTH: 347 352 GearCond.code:
BDEPTH: 347 352 Validity code:
Towing dir: 360° Wire out:1050 m Speed: 33 kn*10

Sorted: 211 Kg Total catch: 431.37 CATCH/HOUR: 862.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 209.50 | 256 | 24.28 | 1832 |
| Helicolenus dactylopterus | 185.90 | 4246 | 21.55 | |
| Galeus polli | 171.60 | 2838 | 19.89 | |
| Merluccius capensis, male | 135.40 | 166 | 15.69 | 1831 |
| Coelorinchus fasciatus | 38.28 | 990 | 4.44 | |
| Lophius vomerinus | 32.20 | 44 | 3.73 | 1835 |
| Chlorophthalmus punctatus | 22.88 | 1606 | 2.65 | |
| Genypterus capensis | 22.44 | 66 | 2.60 | 1833 |
| Trachurus capensis | 16.50 | 44 | 1.91 | 1834 |
| Shrimps, small, non comm. | 10.34 | 2508 | 1.20 | |
| Nezumia sp. | 7.70 | 880 | 0.89 | |
| Todarodes sagittatus | 5.50 | 44 | 0.64 | |
| Merluccius paradoxus, female | 1.92 | 14 | 0.22 | 1829 |
| Todaropsis eblanae | 1.76 | 44 | 0.20 | |
| Bathynectes piperitus | 0.44 | 22 | 0.05 | |
| Merluccius paradoxus, male | 0.38 | 2 | 0.04 | 1830 |
| Total | 862.74 | | 99.98 | |

PROJECT STATION: 565

DATE: 5/11/94 GEAR TYPE: BT No: POSITION:Lat S 2321
start stop duration Long E 1309
TIME :16:07:00 16:37:00 30 (min) Purpose code: 3
LOG :2286.60 2288.20 1.60 Area code : 2
FDEPTH: 406 409 GearCond.code:
BDEPTH: 406 409 Validity code:
Towing dir: 5° Wire out:1150 m Speed: 32 kn*10

Sorted: 190 Kg Total catch: 520.33 CATCH/HOUR: 1040.66

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 259.20 | 3576 | 24.91 | |
| Merluccius capensis, female | 186.90 | 94 | 17.96 | 1839 |
| Shrimps, small, non comm. | 112.56 | 61608 | 10.82 | |
| Hoplostethus cadenati | 91.68 | 7968 | 8.81 | |
| Lophius vomerinus | 60.90 | 46 | 5.85 | 1840 |
| Nezumia sp. | 58.32 | 2544 | 5.60 | |
| Coelorinchus fasciatus | 51.12 | 912 | 4.91 | |
| RAJIDAE | 38.88 | 48 | 3.74 | |
| Selachophidium guentheri | 38.88 | 1536 | 3.74 | |
| Etmopterus lucifer | 32.40 | 96 | 3.11 | |
| Merluccius paradoxus, female | 28.80 | 86 | 2.77 | 1837 |
| Notacanthus sexspinis | 18.72 | 1008 | 1.80 | |
| Schedophilus huttoni | 18.72 | 6 | 1.80 | |
| Merluccius capensis, male | 14.00 | 10 | 1.35 | 1838 |
| Genypterus capensis | 10.90 | 6 | 1.05 | 1841 |
| Galeus polli | 7.20 | 120 | 0.69 | |
| Photichthys argenteus | 2.16 | 216 | 0.21 | |
| GALATHEIDAE | 1.20 | 1056 | 0.12 | |
| Trachyrincus scabrus | 1.20 | 72 | 0.12 | |
| Chlorophthalmus punctatus | 1.20 | 72 | 0.12 | |
| MORIDAE | 0.96 | 96 | 0.09 | |
| Epigonus denticulatus | 0.96 | 96 | 0.09 | |
| Merluccius paradoxus, male | 0.92 | 6 | 0.09 | 1836 |
| Coelorinchus braueri | 0.72 | 24 | 0.07 | |
| Total | 1038.50 | | 99.82 | |

PROJECT STATION: 566

DATE: 5/11/94 GEAR TYPE: BT No: POSITION:Lat S 2315
start stop duration Long E 1304
TIME :18:01:00 18:31:00 30 (min) Purpose code: 3
LOG :2295.80 2297.30 1.50 Area code : 2
FDEPTH: 500 500 GearCond.code:
BDEPTH: 500 500 Validity code:
Towing dir: 350° Wire out:1400 m Speed: 30 kn*10

Sorted: 104 Kg Total catch: 208.20 CATCH/HOUR: 416.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 149.50 | 280 | 35.90 | 1843 |
| Trachyrincus scabrus | 93.60 | 372 | 22.48 | |
| Selachophidium guentheri | 43.44 | 912 | 10.43 | |
| Nezumia sp. | 37.56 | 1392 | 9.02 | |
| SQUALIDAE | 34.20 | 84 | 8.21 | |
| Todarodes sagittatus | 12.24 | 24 | 2.94 | |
| Hoplostethus cadenati | 11.64 | 432 | 2.80 | |
| Merluccius capensis, female | 10.06 | 6 | 2.42 | 1844 |
| Merluccius paradoxus, male | 7.60 | 22 | 1.83 | 1842 |
| Galeus polli | 4.68 | 60 | 1.12 | |
| Schedophilus huttoni | 3.48 | 12 | 0.84 | |
| Trachurus capensis | 2.88 | 24 | 0.69 | |
| Helicolenus dactylopterus | 2.52 | 12 | 0.61 | |
| Shrimps, small, non comm. | 1.80 | 744 | 0.43 | |
| Lamprogrammus exutus | 0.96 | 24 | 0.23 | |
| Epigonus denticulatus | 0.24 | 12 | 0.06 | |
| Total | 416.40 | | 100.01 | |

PROJECT STATION: 567

DATE: 5/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2309
start stop duration Long E 1300
TIME :19:42:00 20:12:00 30 (min) Purpose code: 3
LOG :2303.80 2305.40 1.60 Area code : 2
FDEPTH: 590 590 GearCond.code:
BDEPTH: 590 590 Validity code:
Towing dir: 340° Wire out:1650 m Speed: 32 kn*10

Sorted: 174 Kg Total catch: 226.79 CATCH/HOUR: 453.58

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 277.50 | 476 | 61.18 | 1846 |
| Nezumia sp. | 38.30 | 1190 | 8.44 | |
| Deania calcea | 31.50 | 36 | 6.94 | |
| Raja confundens | 28.64 | 50 | 6.31 | |
| Selachophidium guentheri | 18.98 | 364 | 4.18 | |
| Merluccius capensis, female | 12.16 | 6 | 2.68 | 1847 |
| Merluccius paradoxus, male | 10.90 | 20 | 2.40 | 1845 |
| Allocyttus verrucosus | 8.20 | 42 | 1.81 | |
| Todarodes sagittatus | 6.72 | 8 | 1.48 | |
| Lophius vomerinus | 5.80 | 4 | 1.28 | 1848 |
| Galeus polli | 5.60 | 50 | 1.23 | |
| Trachyrincus scabrus | 3.72 | 22 | 0.82 | |
| Shrimps, small, non comm. | 2.10 | 756 | 0.46 | |
| Lamprogrammus exutus | 1.26 | 28 | 0.28 | |
| Hoplostethus cadenati | 1.12 | 36 | 0.25 | |
| Heterocarpus grimaldii | 0.42 | 28 | 0.09 | |
| Notacanthus sexspinis | 0.22 | 8 | 0.05 | |
| Ebinania costaecanarie | 0.22 | 8 | 0.05 | |
| Melanocetus johnsoni | 0.14 | 8 | 0.03 | |
| Nephropsis atlantica | 0.08 | 8 | 0.02 | |
| Total | 453.58 | | 99.98 | |

PROJECT STATION: 568

DATE: 5/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2302
start stop duration Long E 1302
TIME :21:26:00 21:56:00 30 (min) Purpose code: 3
LOG :2312.30 2313.90 1.60 Area code : 2
FDEPTH: 450 443 GearCond.code:
BDEPTH: 450 443 Validity code:
Towing dir: 340° Wire out:1300 m Speed: 33 kn*10

Sorted: 113 Kg Total catch: 288.96 CATCH/HOUR: 577.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 187.20 | 1424 | 32.39 | |
| Helicolenus dactylopterus | 97.76 | 784 | 16.92 | |
| Merluccius capensis, female | 86.40 | 44 | 14.95 | 1850 |
| Merluccius paradoxus, female | 62.90 | 286 | 10.88 | 1852 |
| Epigonus denticulatus | 37.44 | 368 | 6.48 | |
| Nezumia sp. | 28.64 | 1472 | 4.96 | |
| Selachophidium guentheri | 22.24 | 432 | 3.85 | |
| Hoplostethus cadenati | 14.40 | 736 | 2.49 | |
| Lophius vomerinus | 14.00 | 10 | 2.42 | 1853 |
| Merluccius capensis, male | 8.20 | 8 | 1.42 | 1849 |
| Deania profundorum | 7.04 | 16 | 1.22 | |
| Merluccius paradoxus, male | 6.10 | 32 | 1.06 | 1851 |
| Bassanago albescens | 2.56 | 64 | 0.44 | |
| Shrimps, small, non comm. | 1.76 | 640 | 0.30 | |
| Dicrolene intronigra | 1.12 | 16 | 0.19 | |
| Raja confundens | 0.16 | 16 | 0.03 | |
| Total | 577.92 | | 100.00 | |

PROJECT STATION: 569

DATE: 6/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2300
start stop duration Long E 1304
TIME :06:34:00 07:04:00 30 (min) Purpose code: 3
LOG :2332.30 2333.90 1.70 Area code : 2
FDEPTH: 385 375 GearCond.code:
BDEPTH: 385 375 Validity code:
Towing dir: 345° Wire out:1150 m Speed: 34 kn*10

Sorted: 117 Kg Total catch: 396.03 CATCH/HOUR: 792.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 194.40 | 2340 | 24.54 | |
| Merluccius capensis, female | 82.70 | 48 | 10.44 | 1857 |
| SQUALIDAE | 57.42 | 54 | 7.25 | |
| Merluccius paradoxus, female | 53.80 | 336 | 6.79 | 1855 |
| Shrimps, small, non comm. | 53.64 | 7146 | 6.77 | |
| Schedophilus huttoni | 48.78 | 18 | 6.16 | |
| Selachophidium guentheri | 48.06 | 882 | 6.07 | |
| Yarrella blackfordi | 45.72 | 360 | 5.77 | |
| Nezumia sp. | 39.06 | 1152 | 4.93 | |
| Coelorinchus fasciatus | 38.88 | 738 | 4.91 | |
| Epigonus denticulatus | 26.46 | 702 | 3.34 | |
| Lophius vomerinus | 21.00 | 14 | 2.65 | 1858 |
| Todarodes sagittatus | 18.54 | 18 | 2.34 | |
| Hoplostethus cadenati | 18.36 | 2178 | 2.32 | |
| Galeus polli | 11.16 | 90 | 1.41 | |
| Aristeus varidens | 9.90 | 756 | 1.25 | |
| Notacanthus sexspinis | 8.64 | 90 | 1.09 | |
| Chlorophthalmus atlanticus | 7.74 | 36 | 0.98 | |
| Merluccius capensis, male | 5.20 | 4 | 0.66 | 1856 |
| Merluccius paradoxus, male | 2.60 | 22 | 0.33 | 1854 |
| Total | 792.06 | | 100.00 | |

PROJECT STATION: 570

DATE: 6/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2259
start stop duration Long E 1309
TIME :08:02:00 08:32:00 30 (min) Purpose code: 3
LOG :2340.50 2342.10 1.60 Area code : 2
FDEPTH: 308 315 GearCond.code:
BDEPTH: 308 315 Validity code:
Towing dir: 90° Wire out: 920 m Speed: 30 kn*10

Sorted: 63 Kg Total catch: 210.53 CATCH/HOUR: 421.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 175.00 | 4020 | 41.56 | |
| Merluccius capensis, female | 65.90 | 86 | 15.65 | 1860 |
| Coelorinchus fasciatus | 59.40 | 1420 | 14.11 | |
| Trachurus capensis | 53.60 | 180 | 12.73 | |
| Lophius vomerinus | 24.80 | 18 | 5.89 | 1862 |
| Galeus polli | 21.80 | 600 | 5.18 | |
| Chlorophthalmus atlanticus | 9.20 | 640 | 2.18 | |
| Todarodes sagittatus | 7.20 | 40 | 1.71 | |
| Merluccius capensis, male | 1.80 | 4 | 0.43 | 1859 |
| Genypterus capensis | 1.00 | 40 | 0.24 | 1863 |
| Merluccius paradoxus, female | 0.96 | 8 | 0.23 | 1861 |
| Aristeus varidens | 0.40 | 40 | 0.09 | |
| Total | 421.06 | | 100.00 | |

PROJECT STATION: 571

DATE: 6/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2300
start stop duration Long E 1320
TIME :10:02:00 10:32:00 30 (min) Purpose code: 3
LOG :2351.90 2353.50 1.60 Area code : 2
FDEPTH: 343 332 GearCond.code:
BDEPTH: 343 332 Validity code:
Towing dir: 90° Wire out:1000 m Speed: 27 kn*10

Sorted: 83 Kg Total catch: 137.44 CATCH/HOUR: 274.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 87.30 | 218 | 31.76 | 1865 |
| Coelorinchus fasciatus | 56.20 | 1070 | 20.45 | |
| Helicolenus dactylopterus | 35.80 | 1330 | 13.02 | |
| Merluccius capensis, male | 27.80 | 110 | 10.11 | 1864 |
| Lophius vomerinus | 22.20 | 24 | 8.08 | 1867 |
| Galeus polli | 17.60 | 400 | 6.40 | |
| Trachurus capensis | 11.60 | 70 | 4.22 | |
| Todarodes sagittatus | 8.50 | 50 | 3.09 | |
| Chlorophthalmus atlanticus | 3.60 | 390 | 1.31 | |
| Merluccius capensis, juveniles | 2.18 | 76 | 0.79 | 1866 |
| MYCTOPHIDAE | 2.00 | 910 | 0.73 | |
| Nezumia sp. | 0.10 | 30 | 0.04 | |
| Total | 274.88 | | 100.00 | |

PROJECT STATION: 572

DATE: 6/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2259
start stop duration Long E 1332
TIME :11:58:00 12:13:00 15 (min) Purpose code: 3
LOG :2362.40 2363.20 0.80 Area code : 2
FDEPTH: 217 209 GearCond.code:
BDEPTH: 217 209 Validity code:
Towing dir: 75° Wire out: 660 m Speed: 32 kn*10

Sorted: 37 Kg Total catch: 353.76 CATCH/HOUR: 1415.04

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, male | 583.28 | 7144 | 41.22 | 1868 |
| Merluccius capensis, female | 579.48 | 6232 | 40.95 | 1869 |
| Merluccius capensis, juveniles | 191.12 | 4484 | 13.51 | 1870 |
| Trachurus capensis | 61.16 | 456 | 4.32 | 1871 |
| Total | 1415.04 | | 100.00 | |

PROJECT STATION: 573

DATE: 6/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2300
start stop duration Long E 1342
TIME :13:34:00 13:49:00 15 (min) Purpose code: 3
LOG :2373.30 2374.20 0.90 Area code : 2
FDEPTH: 145 143 GearCond.code:
BDEPTH: 145 143 Validity code:
Towing dir: 90° Wire out: 500 m Speed: 30 kn*10

Sorted: 17 Kg Total catch: 17.23 CATCH/HOUR: 68.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 34.20 | 1152 | 49.62 | 1874 |
| Thyrsites atun | 14.00 | 4 | 20.31 | |
| Merluccius capensis, female | 11.56 | 164 | 16.77 | 1873 |
| Merluccius capensis, male | 9.16 | 120 | 13.29 | 1872 |
| Total | 68.92 | | 99.99 | |

PROJECT STATION: 574

DATE: 8/11/94 GEAR TYPE: BT No: POSITION:Lat S 2238
start stop duration Long E 1331
TIME :18:42:00 18:57:00 15 (min) Purpose code: 3
LOG :2495.80 2496.60 0.80 Area code : 2
FDEPTH: 179 196 GearCond.code:
BDEPTH: 179 196 Validity code:
Towing dir: 265° Wire out: 540 m Speed: 32 kn*10

Sorted: 14 Kg Total catch: 73.00 CATCH/HOUR: 292.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 166.20 | 2820 | 56.92 | 1876 |
| Merluccius capensis, male | 109.20 | 1940 | 37.40 | 1875 |
| Trachurus capensis | 7.80 | 100 | 2.67 | 1878 |
| Merluccius capensis, juveniles | 6.60 | 360 | 2.26 | 1877 |
| Sufflogobius bibarbatus | 2.20 | 840 | 0.75 | |
| Total | 292.00 | | 100.00 | |

PROJECT STATION: 575

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2238
start stop duration Long E 1324
TIME :06:33:00 06:53:00 20 (min) Purpose code: 3
LOG :2518.10 2519.10 1.00 Area code : 2
FDEPTH: 253 253 GearCond.code:
BDEPTH: 253 253 Validity code:
Towing dir: 350° Wire out: 750 m Speed: 29 kn*10

Sorted: 48 Kg Total catch: 110.80 CATCH/HOUR: 332.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 131.85 | 1116 | 39.67 | 1884 |
| Merluccius capensis, female | 91.80 | 531 | 27.62 | 1882 |
| Merluccius capensis, male | 46.80 | 369 | 14.08 | 1881 |
| Merluccius capensis, female | 33.90 | 39 | 10.20 | 1880 |
| Merluccius capensis, male | 16.35 | 21 | 4.92 | 1879 |
| Merluccius capensis, juveniles | 4.41 | 288 | 1.33 | 1883 |
| Sufflogobius bibarbatus | 2.34 | 594 | 0.70 | |
| Pterothrissus belloci | 1.98 | 9 | 0.60 | |
| Todaropsis eblanae | 1.71 | 45 | 0.51 | |
| Trigla lyra | 1.08 | 9 | 0.32 | |
| Trachurus capensis, juvenile | 0.18 | 45 | 0.05 | |
| Total | 332.40 | | 100.00 | |

PROJECT STATION: 576

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2240
start stop duration Long E 1313
TIME :08:38:00 08:58:00 20 (min) Purpose code: 3
LOG :2530.40 2531.50 1.10 Area code : 2
FDEPTH: 298 296 GearCond.code:
BDEPTH: 298 296 Validity code:
Towing dir: 300° Wire out: 900 m Speed: 29 kn*10

Sorted: 106 Kg Total catch: 212.02 CATCH/HOUR: 636.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Coelorinchus fasciatus | 214.80 | | 33.77 | |
| Merluccius capensis, female | 144.00 | 147 | 22.64 | 1886 |
| Merluccius capensis, female | 84.60 | 1068 | 13.30 | 1888 |
| Merluccius capensis, male | 63.60 | 1020 | 10.00 | 1887 |
| Merluccius capensis, male | 53.85 | 72 | 8.47 | 1885 |
| Trachurus capensis | 28.80 | 348 | 4.53 | 1892 |
| Lophius vomerinus | 14.10 | 18 | 2.22 | 1890 |
| Merluccius capensis, juveniles | 9.96 | 360 | 1.57 | 1889 |
| Galeus polli | 9.60 | 288 | 1.51 | |
| Chlorophthalmus atlanticus | 5.76 | 384 | 0.91 | |
| Coelorinchus coelorhinc. polli | 1.92 | 96 | 0.30 | |
| Austroglossus microlepis | 1.71 | 6 | 0.27 | 1891 |
| Synagrops microlepis | 1.44 | 180 | 0.23 | |
| Todaropsis eblanae | 0.84 | 36 | 0.13 | |
| PORTUNIDAE | 0.84 | 48 | 0.13 | |
| Sufflogobius bibarbatus | 0.24 | 36 | 0.04 | |
| MYCTOPHIDAE | 0.00 | 36 | | |
| Total | 636.06 | | 100.02 | |

PROJECT STATION: 577

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2242
start stop duration Long E 1305
TIME :10:26:00 10:46:00 20 (min) Purpose code: 3
LOG :2540.00 2541.30 1.30 Area code : 2
FDEPTH: 312 309 GearCond.code:
BDEPTH: 312 309 Validity code:
Towing dir: 250° Wire out: 950 m Speed: 32 kn*10

Sorted: 249 Kg Total catch: 482.84 CATCH/HOUR: 1448.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 984.90 | 852 | 67.99 | 1895 |
| Merluccius capensis, male | 314.10 | 312 | 21.68 | 1894 |
| Lophius vomerinus | 49.80 | 57 | 3.44 | 1893 |
| Trachurus capensis | 28.02 | 264 | 1.93 | 1898 |
| Coelorinchus coelorhinc. polli | 21.30 | 1080 | 1.47 | |
| Coelorinchus fasciatus | 17.16 | 519 | 1.18 | |
| Merluccius capensis, female | 11.46 | 210 | 0.79 | 1897 |
| Merluccius capensis, male | 9.48 | 168 | 0.65 | 1896 |
| Chlorophthalmus atlanticus | 5.76 | 360 | 0.40 | |
| Helicolenus dactylopterus | 4.44 | 234 | 0.31 | |
| Galeus polli | 1.56 | 66 | 0.11 | |
| Shrimps, small, non comm. | 0.30 | 36 | 0.02 | |
| PORTUNIDAE | 0.24 | 6 | 0.02 | |
| Total | 1448.52 | | 99.99 | |

PROJECT STATION: 578

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2241
start stop duration Long E 1253
TIME :12:25:00 12:55:00 30 (min) Purpose code: 3
LOG :2553.30 2555.10 1.80 Area code : 2
FDEPTH: 395 399 GearCond.code:
BDEPTH: 395 399 Validity code:
Towing dir: 340° Wire out:1150 m Speed: 35 kn*10

Sorted: 195 Kg Total catch: 467.86 CATCH/HOUR: 935.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 240.00 | 1408 | 25.65 | 1902 |
| Merluccius capensis, female | 232.70 | 98 | 24.87 | 1900 |
| Helicolenus dactylopterus | 84.00 | 496 | 8.98 | |
| Nezumia sp. | 68.96 | 2418 | 7.37 | |
| Shrimps, small, non comm. | 51.52 | 51520 | 5.51 | |
| Lophius vomerinus | 43.50 | 16 | 4.65 | 1904 |
| Schedophilus huttoni | 42.72 | 16 | 4.57 | |
| Selachophidium guentheri | 33.76 | 512 | 3.61 | |
| Genypterus capensis | 25.60 | 14 | 2.74 | 1903 |
| Coelorinchus fasciatus | 24.96 | 400 | 2.67 | |
| RAJIDAE | 24.00 | 16 | 2.56 | |
| Merluccius paradoxus, male | 22.56 | 176 | 2.41 | 1901 |
| Merluccius capensis, male | 10.40 | 6 | 1.11 | 1899 |
| Epigonus denticulatus | 10.24 | 256 | 1.09 | |
| Notacanthus sexspinis | 4.64 | 352 | 0.50 | |
| Etmopterus lucifer | 4.48 | 16 | 0.48 | |
| Galeus polli | 4.16 | 64 | 0.44 | |
| Hoplostethus atlanticus | 3.52 | 128 | 0.38 | |
| Aristeus varidens | 1.92 | 464 | 0.21 | |
| Ebinania costaecanarie | 0.96 | 32 | 0.10 | |
| Yarrella blackfordi | 0.48 | 32 | 0.05 | |
| Trachyrincus scabrus | 0.32 | 16 | 0.03 | |
| Chlorophthalmus atlanticus | 0.32 | 16 | 0.03 | |
| Total | 935.72 | | 100.01 | |

PROJECT STATION: 579

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2239
start stop duration Long E 1250
TIME :13:56:00 14:26:00 30 (min) Purpose code: 3
LOG :2560.20 2561.30 1.10 Area code : 2
FDEPTH: 495 521 GearCond.code:
BDEPTH: 495 521 Validity code:
Towing dir: 330° Wire out:1400 m Speed: 23 kn*10

Sorted: 112 Kg Total catch: 576.64 CATCH/HOUR: 1153.28

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 408.60 | 1440 | 35.43 | |
| Deania calcea | 183.36 | 72 | 15.90 | |
| Merluccius paradoxus, female | 150.10 | 564 | 13.02 | 1906 |
| Nezumia sp. | 98.64 | 6356 | 8.55 | |
| Centrophorus squamosus | 75.96 | 36 | 6.59 | |
| Allocyttus verrucosus | 61.56 | 972 | 5.34 | |
| Selachophidium guentheri | 27.72 | 792 | 2.40 | |
| Helicolenus dactylopterus | 24.48 | 144 | 2.12 | |
| Deania profundorum | 19.44 | 36 | 1.69 | |
| Thysanoteuthis rhombus | 19.08 | 36 | 1.65 | |
| Hoplostethus cadenati | 12.60 | 864 | 1.09 | |
| Coelorinchus matamua | 11.52 | 36 | 1.00 | |
| Merluccius capensis, female | 10.90 | 4 | 0.95 | 1907 |
| Merluccius paradoxus, male | 9.00 | 38 | 0.78 | 1905 |
| Galeus polli | 8.64 | 144 | 0.75 | |
| Bathyuroconger vicinus | 7.56 | 180 | 0.66 | |
| Etmopterus lucifer | 6.48 | 36 | 0.56 | |
| Bassanago albescens | 5.40 | 36 | 0.47 | |
| Epigonus denticulatus | 3.60 | 180 | 0.31 | |
| Laemonema laureysi | 2.52 | 36 | 0.22 | |
| Notacanthus sexspinis | 2.52 | 540 | 0.22 | |
| Aristeus varidens | 1.44 | 144 | 0.12 | |
| Ebinania costaecanarie | 1.08 | 36 | 0.09 | |
| MYCTOPHIDAE | 1.08 | 252 | 0.09 | |
| Total | 1153.28 | | 100.00 | |

PROJECT STATION: 580

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2237
start stop duration Long E 1247
TIME :15:29:00 15:59:00 30 (min) Purpose code: 3
LOG :2565.10 2567.00 1.90 Area code : 2
FDEPTH: 611 604 GearCond.code:
BDEPTH: 611 604 Validity code:
Towing dir: 350° Wire out:1600 m Speed: 37 kn*10

Sorted: 136 Kg Total catch: 634.73 CATCH/HOUR: 1269.46

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Centroscyllium fabricii | 504.00 | 468 | 39.70 | |
| Deania profundorum | 309.80 | 144 | 24.40 | |
| Merluccius paradoxus, female | 163.90 | 172 | 12.91 | 1907 |
| Selachophidium guentheri | 59.40 | 1080 | 4.68 | |
| Nezumia sp. | 54.00 | 2088 | 4.25 | |
| Allocyttus verrucosus | 45.36 | 468 | 3.57 | |
| Todarodes sagittatus | 31.32 | 36 | 2.47 | |
| Lophius vomerinus | 14.70 | 2 | 1.16 | 1910 |
| Lithodes ferox | 13.50 | 16 | 1.06 | |
| Notacanthus sexspinis | 11.52 | 72 | 0.91 | |
| RAJIDAE | 10.80 | 36 | 0.85 | |
| Etmopterus lucifer | 10.08 | 36 | 0.79 | |
| Hoplostethus atlanticus | 10.00 | 24 | 0.79 | 1909 |
| Aristeus varidens | 6.84 | 684 | 0.54 | |
| Merluccius paradoxus, male | 6.32 | 6 | 0.50 | 1908 |
| Coelorinchus matamua | 6.12 | 82 | 0.48 | |
| Hoplostethus cadenati | 5.40 | 216 | 0.43 | |
| Lophius vaillanti | 3.38 | 2 | 0.27 | 1911 |
| Chaceon maritae | 2.30 | 2 | 0.18 | |
| Nephropsis atlantica | 0.72 | 36 | 0.06 | |
| Total | 1269.46 | | 100.00 | |

PROJECT STATION: 581

DATE: 9/11/94 GEAR TYPE: BT No: POSITION:Lat S 2226
start stop duration Long E 1247
TIME :18:12:00 18:42:00 30 (min) Purpose code: 3
LOG :2580.60 2582.20 1.60 Area code : 2
FDEPTH: 540 517 GearCond.code:
BDEPTH: 540 517 Validity code:
Towing dir: 5° Wire out:1450 m Speed: 29 kn*10

Sorted: 77 Kg Total catch: 286.86 CATCH/HOUR: 573.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Deania calcea | 153.60 | 80 | 26.77 | |
| Trachyrincus scabrus | 92.80 | 416 | 16.18 | |
| Merluccius paradoxus, female | 72.20 | 136 | 12.58 | 1915 |
| Nezumia sp. | 71.20 | 2918 | 12.41 | |
| Selachophidium guentheri | 36.16 | 304 | 6.30 | |
| Deania profundorum | 29.60 | 32 | 5.16 | |
| Coelorinchus braueri | 22.40 | 64 | 3.90 | |
| Allocyttus verrucosus | 16.96 | 272 | 2.96 | |
| Hoplostethus cadenati | 15.04 | 672 | 2.62 | |
| Lophius vaillanti | 11.60 | 2 | 2.02 | 1913 |
| Lophius vomerinus | 10.60 | 4 | 1.85 | 1912 |
| Lamprogrammus exutus | 9.60 | 176 | 1.67 | |
| Raja confundens | 7.84 | 16 | 1.37 | |
| Etmopterus pusillus | 6.72 | 32 | 1.17 | |
| Notacanthus sexspinis | 6.08 | 144 | 1.06 | |
| ALEPOCEPHALIDAE | 3.20 | 416 | 0.56 | |
| Helicolenus dactylopterus | 2.08 | 16 | 0.36 | |
| S H R I M P S | 1.44 | 560 | 0.25 | |
| Yarrella blackfordi | 1.44 | 112 | 0.25 | |
| Merluccius paradoxus, male | 1.40 | 8 | 0.24 | 1914 |
| Myxine capensis | 1.28 | 16 | 0.22 | |
| Raja leopardus | 0.48 | 16 | 0.08 | |
| Total | 573.72 | | 99.98 | |

PROJECT STATION: 582

DATE:10/11/94 GEAR TYPE: BT No: POSITION:Lat S 2223
start stop duration Long E 1248
TIME :19:31:00 20:01:00 30 (min) Purpose code: 3
LOG :2584.60 2586.10 1.50 Area code : 2
FDEPTH: 445 443 GearCond.code:
BDEPTH: 445 443 Validity code:
Towing dir: 340° Wire out:1250 m Speed: 30 kn*10

Sorted: 148 Kg Total catch: 1042.36 CATCH/HOUR: 2084.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Epigonus telescopus | 777.00 | | 37.27 | |
| Deania calcea | 519.00 | 300 | 24.90 | |
| Helicolenus dactylopterus | 361.00 | | 17.32 | |
| Deania profundorum | 161.00 | 20 | 7.72 | |
| Merluccius paradoxus, female | 96.50 | 340 | 4.63 | 1919 |
| Galeus polli | 52.40 | 1040 | 2.51 | |
| Centroscymnus crepidater | 21.00 | 20 | 1.01 | |
| Nezumia sp. | 21.00 | 480 | 1.01 | |
| Aristeus varidens | 17.60 | 220 | 0.84 | |
| Todarodes sagittatus | 16.20 | 60 | 0.78 | |
| Coelorinchus fasciatus | 12.00 | 260 | 0.58 | |
| Epigonus denticulatus | 9.00 | 220 | 0.43 | |
| Merluccius capensis, female | 8.80 | 4 | 0.42 | 1917 |
| Centrophorus sp. | 8.40 | 20 | 0.40 | |
| Trachyrincus scabrus | 6.80 | 100 | 0.33 | |
| Lophius vomerinus | 6.44 | 4 | 0.31 | 1916 |
| Hoplostethus cadenati | 5.40 | 160 | 0.26 | |
| Etmopterus lucifer | 3.80 | 20 | 0.18 | |
| Merluccius paradoxus, male | 2.18 | 10 | 0.10 | 1918 |
| Notacanthus sexspinis | 1.80 | 40 | 0.09 | |
| Ebinania costaecanarie | 1.40 | 20 | 0.07 | |
| Total | 2108.72 | | 101.16 | |

PROJECT STATION: 583

DATE:10/11/94 GEAR TYPE: BT No: POSITION:Lat S 2223
start stop duration Long E 1251
TIME :06:36:00 07:06:00 30 (min) Purpose code: 3
LOG :2608.20 2609.90 1.70 Area code : 2
FDEPTH: 360 363 GearCond.code:
BDEPTH: 360 363 Validity code:
Towing dir: 10° Wire out:1000 m Speed: 34 kn*10

Sorted: 198 Kg Total catch: 376.59 CATCH/HOUR: 753.18

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 256.20 | 214 | 34.02 | 1923 |
| Merluccius paradoxus, female | 86.56 | 560 | 11.49 | 1926 |
| Nezumia sp. | 76.00 | 3624 | 10.09 | |
| Helicolenus dactylopterus | 58.56 | 1334 | 7.78 | |
| Lophius vomerinus | 53.80 | 50 | 7.14 | 1920 |
| Coelorinchus coelorhinc. polli | 39.68 | 922 | 5.27 | |
| Coelorinchus fasciatus | 38.56 | 1174 | 5.12 | |
| Chlorophthalmus atlanticus | 35.20 | 1560 | 4.67 | |
| Merluccius capensis, male | 30.20 | 24 | 4.01 | 1922 |
| Galeus polli | 22.40 | 610 | 2.97 | |
| Todarodes sagittatus | 15.36 | 16 | 2.04 | |
| Selachophidium guentheri | 14.08 | 576 | 1.87 | |
| Shrimps, small, non comm. | 6.72 | 2352 | 0.89 | |
| Merluccius paradoxus, male | 4.32 | 32 | 0.57 | 1925 |
| Bathynectes piperitus | 3.84 | 144 | 0.51 | |
| Genypterus capensis | 3.16 | 6 | 0.42 | 1924 |
| Trachurus capensis | 2.56 | 16 | 0.34 | |
| Lophius vaillanti | 2.30 | 2 | 0.31 | 1921 |
| Ebinania costaecanarie | 1.92 | 48 | 0.25 | |
| Malacocephalus laevis | 1.28 | 16 | 0.17 | |
| Epigonus denticulatus | 0.48 | 16 | 0.06 | |
| Total | 753.18 | | 99.99 | |

PROJECT STATION: 584

DATE:10/11/94 GEAR TYPE: BT No: POSITION:Lat S 2219
start stop duration Long E 1259
TIME :08:44:00 08:54:00 10 (min) Purpose code: 3
LOG :2618.90 2619.40 0.50 Area code : 2
FDEPTH: 280 279 GearCond.code:
BDEPTH: 280 279 Validity code:
Towing dir: 5° Wire out: 850 m Speed: 3 kn*10

Sorted: 138 Kg Total catch: 710.81 CATCH/HOUR: 4264.86

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 3366.00 | 25872 | 78.92 | 1929 |
| Merluccius capensis, male | 423.00 | 1122 | 9.92 | 1927 |
| Merluccius capensis, female | 247.50 | 690 | 5.80 | 1928 |
| Synagrops microlepis | 116.16 | 21210 | 2.72 | |
| Chlorophthalmus atlanticus | 34.32 | 4488 | 0.80 | |
| Coelorinchus fasciatus | 29.04 | 2508 | 0.68 | |
| Galeus polli | 19.80 | 1452 | 0.46 | |
| Lophius vomerinus | 10.56 | 132 | 0.25 | |
| PORTUNIDAE | 7.92 | 528 | 0.19 | |
| OPHICHTHIDAE | 6.60 | 132 | 0.15 | |
| Bathynectes piperitus | 3.96 | 132 | 0.09 | |
| Total | 4264.86 | | 99.98 | |

PROJECT STATION: 585

DATE:10/11/94 GEAR TYPE: BT No: POSITION:Lat S 2218
start stop duration Long E 1308
TIME :10:32:00 10:47:00 15 (min) Purpose code: 3
LOG :2628.60 2629.40 0.80 Area code : 2
FDEPTH: 245 241 GearCond.code:
BDEPTH: 245 241 Validity code:
Towing dir: 80° Wire out: 720 m Speed: 3 kn*10

Sorted: 91 Kg Total catch: 1814.22 CATCH/HOUR: 7256.88

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 6876.00 | 88800 | 94.75 | 1934 |
| Merluccius capensis, male | 117.00 | 596 | 1.61 | 1932 |
| Merluccius capensis, female | 114.80 | 436 | 1.58 | 1933 |
| Sufflogobius bibarbatus | 67.20 | 16800 | 0.93 | |
| Pterothrissus belloci | 64.80 | 1440 | 0.89 | |
| Lophius vomerinus | 15.00 | 32 | 0.21 | 1930 |
| Austroglossus microlepis | 2.08 | 12 | 0.03 | 1931 |
| Total | 7256.88 | | 100.00 | |

PROJECT STATION: 586

DATE:10/11/94 GEAR TYPE: BT No: POSITION:Lat S 2217
start stop duration Long E 1318
TIME :12:15:00 12:35:00 20 (min) Purpose code: 2
LOG :2637.50 2638.50 1.00 Area code : 2
FDEPTH: 219 215 GearCond.code:
BDEPTH: 219 215 Validity code:
Towing dir: 83° Wire out: 700 m Speed: 3 kn*10

Sorted: 76 Kg Total catch: 641.80 CATCH/HOUR: 1925.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1097.79 | 9051 | 57.02 | 1936 |
| Merluccius capensis, female | 442.41 | 3135 | 22.98 | 1940 |
| Merluccius capensis, male | 332.76 | 3135 | 17.28 | 1938 |
| Merluccius capensis, juveniles | 23.19 | 1554 | 1.20 | 1939 |
| Sufflogobius bibarbatus | 21.93 | 6048 | 1.14 | |
| Pterothrissus belloci | 2.79 | 24 | 0.14 | |
| Lophius vomerinus | 2.76 | 9 | 0.14 | 1937 |
| Todaropsis eblanae | 1.26 | 24 | 0.07 | |
| Trachurus capensis, juvenile | 0.51 | 255 | 0.03 | 1935 |
| Total | 1925.40 | | 100.00 | |

PROJECT STATION: 587

DATE:10/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2215
start stop duration Long E 1325
TIME :14:35:00 15:17:00 42 (min) Purpose code: 3
LOG :2647.30 2649.50 2.20 Area code : 2
FDEPTH: 171 166 GearCond.code:
BDEPTH: 171 166 Validity code:
Towing dir: 83° Wire out: 600 m Speed: 3 kn*10

Sorted: 39 Kg Total catch: 549.92 CATCH/HOUR: 785.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 342.00 | 4180 | 43.53 | 1944 |
| Merluccius capensis, juveniles | 240.00 | 5880 | 30.55 | 1942 |
| Merluccius capensis, male | 182.00 | 1720 | 23.17 | 1943 |
| Trachurus capensis | 12.00 | 160 | 1.53 | 1941 |
| Sufflogobius bibarbatus | 9.60 | 2800 | 1.22 | |
| Total | 785.60 | | 100.00 | |

PROJECT STATION: 588

DATE:10/11/94 GEAR TYPE: BT No: POSITION:Lat S 2205
start stop duration Long E 1329
TIME :16:37:00 17:07:00 30 (min) Purpose code: 3
LOG :2658.30 2659.90 1.60 Area code : 2
FDEPTH: 164 144 GearCond.code:
BDEPTH: 164 144 Validity code:
Towing dir: 20° Wire out: 500 m Speed: 32 kn*10

Sorted: 31 Kg Total catch: 46.20 CATCH/HOUR: 92.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 32.80 | 1224 | 35.50 | 1945 |
| Sufflogobius bibarbatus | 31.50 | 11520 | 34.09 | |
| Merluccius capensis, female | 14.30 | 182 | 15.48 | 1947 |
| Merluccius capensis, male | 13.80 | 200 | 14.94 | 1946 |
| Total | 92.40 | | 100.01 | |

PROJECT STATION: 589

DATE:10/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2156
start stop duration Long E 1321
TIME :18:25:00 18:55:00 30 (min) Purpose code: 3
LOG :2670.30 2671.90 1.60 Area code : 2
FDEPTH: 159 158 GearCond.code:
BDEPTH: 159 158 Validity code:
Towing dir: 320° Wire out: 490 m Speed: 32 kn*10

Sorted: 55 Kg Total catch: 120.66 CATCH/HOUR: 241.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 68.00 | 1120 | 28.18 | 1951 |
| Merluccius capensis, female | 63.00 | 228 | 26.11 | 1949 |
| Merluccius capensis, male | 48.80 | 816 | 20.22 | 1950 |
| Trachurus capensis | 27.52 | 496 | 11.40 | 1953 |
| Merluccius capensis, juveniles | 16.72 | 776 | 6.93 | 1952 |
| Merluccius capensis, male | 8.80 | 32 | 3.65 | 1948 |
| Chelidonichthys capensis | 8.00 | 24 | 3.32 | |
| Sufflogobius bibarbatus | 0.48 | 88 | 0.20 | |
| Total | 241.32 | | 100.01 | |

PROJECT STATION: 590

DATE:11/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2156
start stop duration Long E 1313
TIME :06:35:00 06:55:00 20 (min) Purpose code: 3
LOG :2712.90 2713.90 1.00 Area code : 2
FDEPTH: 174 174 GearCond.code:
BDEPTH: 174 174 Validity code:
Towing dir: 350° Wire out: 530 m Speed: 2 kn*10

Sorted: 46 Kg Total catch: 199.69 CATCH/HOUR: 599.07

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 353.70 | 1302 | 59.04 | 1955 |
| Merluccius capensis, male | 133.80 | 1170 | 22.33 | 1954 |
| Trachurus capensis | 94.80 | 1470 | 15.82 | 1957 |
| Merluccius capensis, juveniles | 6.60 | 417 | 1.10 | 1956 |
| Chelidonichthys capensis | 4.80 | 12 | 0.80 | |
| Pterothrissus belloci | 2.40 | 66 | 0.40 | |
| Sufflogobius bibarbatus | 2.10 | 480 | 0.35 | |
| Todaropsis eblanae | 0.60 | 24 | 0.10 | |
| Austroglossus microlepis | 0.27 | 3 | 0.05 | |
| Total | 599.07 | | 99.99 | |

PROJECT STATION: 591

DATE:11/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2159
start stop duration Long E 1302
TIME :08:52:00 09:22:00 30 (min) Purpose code: 3
LOG :2725.40 2726.80 1.40 Area code : 2
FDEPTH: 275 285 GearCond.code:
BDEPTH: 275 285 Validity code:
Towing dir: 260° Wire out: 810 m Speed: 3 kn*10

Sorted: 314 Kg Total catch: 1771.30 CATCH/HOUR: 3542.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 2985.00 | 25472 | 84.26 | 1960 |
| Merluccius capensis, male | 358.80 | 984 | 10.13 | 1958 |
| Merluccius capensis, female | 147.80 | 260 | 4.17 | 1959 |
| Pterothrissus belloci | 31.00 | 950 | 0.88 | |
| Sufflogobius bibarbatus | 17.00 | 3200 | 0.48 | |
| Todaropsis eblanae | 2.00 | 100 | 0.06 | |
| Solenocera africana | 1.00 | 300 | 0.03 | |
| Total | 3542.60 | | 100.01 | |

PROJECT STATION: 592

DATE:11/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2201
start stop duration Long E 1251
TIME :11:10:00 11:40:00 30 (min) Purpose code: 3
LOG :2736.90 2738.60 1.70 Area code : 2
FDEPTH: 334 334 GearCond.code:
BDEPTH: 334 334 Validity code:
Towing dir: 340° Wire out:1000 m Speed: 32 kn*10

Sorted: 322 Kg Total catch: 432.23 CATCH/HOUR: 864.46

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 479.80 | 410 | 55.50 | 1962 |
| Helicolenus dactylopterus | 123.00 | 5380 | 14.23 | |
| Lophius vomerinus | 64.40 | 48 | 7.45 | 1963 |
| Coelorinchus fasciatus | 45.20 | 1520 | 5.23 | |
| Merluccius capensis, male | 42.70 | 48 | 4.94 | 1961 |
| Galeus polli | 30.80 | 1040 | 3.56 | |
| Austroglossus microlepis | 21.40 | 46 | 2.48 | 1964 |
| Chlorophthalmus punctatus | 19.20 | 680 | 2.22 | |
| Schedophilus huttoni | 11.70 | 6 | 1.35 | |
| Nezumia sp. | 11.60 | 800 | 1.34 | |
| Todarodes sagittatus | 10.40 | 60 | 1.20 | |
| PENAEIDAE | 1.20 | 400 | 0.14 | |
| OPHICHTHIDAE | 1.20 | 20 | 0.14 | |
| Solenocera africana | 1.00 | 220 | 0.12 | |
| Genypterus capensis | 0.84 | 2 | 0.10 | |
| ALEPOCEPHALIDAE | 0.02 | 2 | | |
| Total | 864.46 | | 100.00 | |

PROJECT STATION: 593

DATE:11/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2201
start stop duration Long E 1243
TIME :13:08:00 13:42:00 34 (min) Purpose code: 3
LOG :2747.80 2749.80 2.00 Area code : 2
FDEPTH: 428 428 GearCond.code:
BDEPTH: 428 428 Validity code:
Towing dir: 350° Wire out:1200 m Speed: 35 kn*10

Sorted: 144 Kg Total catch: 1106.83 CATCH/HOUR: 1953.23

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 826.94 | 5499 | 42.34 | |
| Helicolenus dactylopterus | 308.65 | 2504 | 15.80 | |
| Shrimps, small, non comm. | 218.96 | 306551 | 11.21 | |
| Hoplostethus cadenati | 142.09 | 26642 | 7.27 | |
| Galeus polli | 125.79 | 2213 | 6.44 | |
| Merluccius paradoxus, female | 85.59 | 399 | 4.38 | 1967 |
| Merluccius capensis, female | 59.65 | 42 | 3.05 | 1965 |
| Nezumia sp. | 51.25 | 1281 | 2.62 | |
| Lophius vomerinus | 42.97 | 16 | 2.20 | 1969 |
| Chlorophthalmus atlanticus | 21.55 | 757 | 1.10 | |
| Epigonus denticulatus | 17.47 | 1572 | 0.89 | |
| Coelorinchus fasciatus | 16.89 | 524 | 0.86 | |
| Merluccius paradoxus, male | 7.59 | 42 | 0.39 | 1968 |
| STOMIIDAE | 7.57 | 58 | 0.39 | |
| Aristeus varidens | 5.82 | 1689 | 0.30 | |
| MORIDAE | 4.66 | 58 | 0.24 | |
| Lophius vaillanti | 4.59 | 2 | 0.23 | 1970 |
| Notacanthus sexspinis | 2.91 | 116 | 0.15 | |
| Merluccius capensis, male | 2.29 | 2 | 0.12 | 1966 |
| Total | 1953.23 | | 99.98 | |

PROJECT STATION: 594

DATE:11/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2159
start stop duration Long E 1239
TIME :14:54:00 15:24:00 30 (min) Purpose code: 3
LOG :2755.10 2756.70 1.60 Area code : 2
FDEPTH: 525 525 GearCond.code:
BDEPTH: 525 525 Validity code:
Towing dir: 350° Wire out:1400 m Speed: 32 kn*10

Sorted: 173 Kg Total catch: 665.40 CATCH/HOUR: 1330.80

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 467.20 | 2082 | 35.11 | |
| Merluccius paradoxus, female | 261.00 | 700 | 19.61 | 1972 |
| Nezumia sp. | 149.12 | 5838 | 11.21 | |
| Hoplostethus cadenati | 144.32 | 16822 | 10.84 | |
| Shrimps, small, non comm. | 139.20 | 51702 | 10.46 | |
| Galeus polli | 45.12 | 960 | 3.39 | |
| Todarodes sagittatus | 34.56 | 32 | 2.60 | |
| Centrophorus sp. | 20.00 | 2 | 1.50 | |
| Bathyuroconger vicinus | 14.40 | 32 | 1.08 | |
| Helicolenus dactylopterus | 10.88 | 96 | 0.82 | |
| Lophius vomerinus | 10.00 | 6 | 0.75 | 1971 |
| Notacanthus sexspinis | 9.92 | 192 | 0.75 | |
| Epigonus denticulatus | 7.68 | 192 | 0.58 | |
| Merluccius paradoxus, male | 5.80 | 26 | 0.44 | 1973 |
| STOMIIDAE | 3.52 | 256 | 0.26 | |
| Ebinania costaecanarie | 2.88 | 32 | 0.22 | |
| Selachophidium guentheri | 2.88 | 96 | 0.22 | |
| Aristeus varidens | 0.96 | 128 | 0.07 | |
| Nephropsis atlantica | 0.96 | 64 | 0.07 | |
| Lithodes ferox | 0.40 | 2 | 0.03 | |
| Total | 1330.80 | | 100.01 | |

PROJECT STATION: 595

DATE:11/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2157
start stop duration Long E 1236
TIME :16:37:00 17:07:00 30 (min) Purpose code: 3
LOG :2762.00 2763.50 1.50 Area code : 2
FDEPTH: 627 629 GearCond.code:
BDEPTH: 627 629 Validity code:
Towing dir: 350° Wire out:1600 m Speed: 30 kn*10

Sorted: 119 Kg Total catch: 660.23 CATCH/HOUR: 1320.46

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Hoplostethus cadenati | 590.00 | 27830 | 44.68 | |
| Nezumia sp. | 186.00 | 5714 | 14.09 | |
| Merluccius paradoxus, female | 145.40 | 148 | 11.01 | 1974 |
| Trachyrincus scabrus | 144.80 | 280 | 10.97 | |
| Lamprogrammus exutus | 52.80 | 320 | 4.00 | |
| Deania calcea | 48.00 | 40 | 3.64 | |
| Lophius vomerinus | 24.60 | 6 | 1.86 | 1975 |
| Todarodes sagittatus | 19.60 | 40 | 1.48 | |
| Neocyttus rhomboidalis | 15.20 | 40 | 1.15 | |
| Selachophidium guentheri | 14.80 | 240 | 1.12 | |
| Yarrella blackfordi | 13.60 | 920 | 1.03 | |
| Bathyuroconger vicinus | 12.80 | 160 | 0.97 | |
| ALEPOCEPHALIDAE | 10.00 | 200 | 0.76 | |
| Moroteuthis robsoni | 9.20 | 2 | 0.70 | |
| Etmopterus lucifer | 8.00 | 40 | 0.61 | |
| Shrimps, small, non comm. | 6.00 | 2480 | 0.45 | |
| Notacanthus sexspinis | 4.40 | 80 | 0.33 | |
| Coelorinchus braueri | 4.00 | 40 | 0.30 | |
| Galeus polli | 3.20 | 40 | 0.24 | |
| Ebinania costaecanarie | 2.80 | 40 | 0.21 | |
| Heterocarpus grimaldii | 2.60 | 138 | 0.20 | |
| Thysanoteuthis rhombus | 1.60 | 40 | 0.12 | |
| Lithodes ferox | 0.60 | 2 | 0.05 | |
| Nephropsis atlantica | 0.28 | 16 | 0.02 | |
| Stereomastis sp. | 0.18 | 6 | 0.01 | |
| Total | 1320.46 | | 100.00 | |

PROJECT STATION: 596

DATE:11/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2150
start stop duration Long E 1237
TIME :18:45:00 19:15:00 30 (min) Purpose code: 3
LOG :2771.30 2772.80 1.50 Area code : 2
FDEPTH: 575 573 GearCond.code:
BDEPTH: 575 573 Validity code:
Towing dir: 360° Wire out:1550 m Speed: 32 kn*10

Sorted: 107 Kg Total catch: 338.16 CATCH/HOUR: 676.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Hoplostethus cadenati | 254.00 | 20098 | 39.03 | |
| Trachyrincus scabrus | 184.00 | 486 | 27.21 | |
| Merluccius paradoxus, female | 131.40 | 384 | 19.43 | 1977 |
| Nezumia sp. | 35.60 | 1300 | 5.26 | |
| Centrophorus squamosus | 28.20 | 2 | 4.17 | |
| Raja confundens | 9.50 | 40 | 1.42 | |
| Yarrella blackfordi | 9.20 | 800 | 1.36 | |
| Bathyuroconger vicinus | 2.80 | 60 | 0.41 | |
| Shrimps, small, non comm. | 2.60 | 1300 | 0.38 | |
| Galeus polli | 2.60 | 40 | 0.38 | |
| Lophius vomerinus | 2.30 | 2 | 0.34 | 1978 |
| Selachophidium guentheri | 1.60 | 60 | 0.24 | |
| Merluccius paradoxus, male | 1.02 | 2 | 0.15 | 1976 |
| Nephropsis atlantica | 0.60 | 60 | 0.09 | |
| Stereomastis sp. | 0.40 | 20 | 0.06 | |
| Aristeus varidens | 0.20 | 40 | 0.03 | |
| Ebinania costaecanarie | 0.20 | 20 | 0.03 | |
| Total | 676.32 | | 99.99 | |

PROJECT STATION: 597

DATE:11/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2138
start stop duration Long E 1237
TIME :06:39:00 07:09:00 30 (min) Purpose code: 3
LOG :2795.60 2797.30 1.70 Area code : 2
FDEPTH: 473 474 GearCond.code:
BDEPTH: 473 474 Validity code:
Towing dir: 350° Wire out:1350 m Speed: 32 kn*10

Sorted: 262 Kg Total catch: 594.28 CATCH/HOUR: 1188.56

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 457.20 | 792 | 38.47 | |
| Merluccius paradoxus, female | 271.40 | 882 | 22.83 | 1981 |
| Centrophorus squamosus | 76.00 | 8 | 6.39 | |
| Shrimps, small, non comm. | 72.00 | | 6.06 | |
| Lophius vomerinus | 72.00 | 48 | 6.06 | 1982 |
| Helicolenus dactylopterus | 61.92 | 612 | 5.21 | |
| Merluccius capensis, female | 49.40 | 30 | 4.16 | 1979 |
| Hoplostethus cadenati | 34.56 | 5400 | 2.91 | |
| Nezumia sp. | 27.72 | 1188 | 2.33 | |
| Centrophorus granulosus | 24.84 | 36 | 2.09 | |
| Merluccius paradoxus, male | 17.40 | 66 | 1.46 | 1980 |
| Galeus polli | 7.20 | 108 | 0.61 | |
| Notacanthus sexspinis | 6.12 | 8 | 0.51 | |
| Aristeus varidens | 4.68 | 432 | 0.39 | |
| Yarrella blackfordi | 2.88 | 468 | 0.24 | |
| Bathynectes piperitus | 2.16 | 72 | 0.18 | |
| Ebinania costaecanarie | 1.08 | 36 | 0.09 | |
| Total | 1188.56 | | 99.99 | |

PROJECT STATION: 598

DATE:12/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2135
start stop duration Long E 1242
TIME :08:44:00 09:14:00 30 (min) Purpose code: 3
LOG :2804.50 2806.10 1.60 Area code : 2
FDEPTH: 358 360 GearCond.code:
BDEPTH: 358 360 Validity code:
Towing dir: 345° Wire out:1050 m Speed: 32 kn*10

Sorted: 208 Kg Total catch: 282.04 CATCH/HOUR: 564.08

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 297.20 | 242 | 52.69 | 1984 |
| Helicolenus dactylopterus | 144.00 | 3146 | 25.53 | |
| Merluccius capensis, male | 47.00 | 46 | 8.33 | 1983 |
| Lophius vomerinus | 29.40 | 30 | 5.21 | 1985 |
| Galeus polli | 10.40 | 160 | 1.84 | |
| Chlorophthalmus atlanticus | 9.10 | 290 | 1.61 | |
| Lophius vaillanti | 6.20 | 2 | 1.10 | 1999 |
| Coelorinchus fasciatus | 6.10 | 220 | 1.08 | |
| Squalus megalops | 5.70 | 10 | 1.01 | |
| Todarodes sagittatus | 3.50 | 20 | 0.62 | |
| Nezumia sp. | 1.70 | 110 | 0.30 | |
| Merluccius paradoxus, female | 1.12 | 6 | 0.20 | 1986 |
| Laemonema laureysi | 0.80 | 10 | 0.14 | |
| MYCTOPHIDAE | 0.70 | 40 | 0.12 | |
| OPHIDIIDAE | 0.70 | 10 | 0.12 | |
| Merluccius paradoxus, male | 0.26 | 2 | 0.05 | 1987 |
| Shrimps, small, non comm. | 0.20 | 100 | 0.04 | |
| Total | 564.08 | | 99.99 | |

PROJECT STATION: 599

DATE:12/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2133
start stop duration Long E 1250
TIME :10:57:00 11:27:00 30 (min) Purpose code: 3
LOG :2816.10 2817.80 1.70 Area code : 2
FDEPTH: 305 306 GearCond.code:
BDEPTH: 305 306 Validity code:
Towing dir: 10° Wire out: 900 m Speed: 32 kn*10

Sorted: 113 Kg Total catch: 157.63 CATCH/HOUR: 315.26

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 103.72 | 148 | 32.90 | 1990 |
| Merluccius capensis, male | 77.58 | 140 | 24.61 | 1989 |
| Trachurus capensis | 38.60 | 220 | 12.24 | 1994 |
| Pterothrissus belloci | 31.50 | 250 | 9.99 | |
| Galeus polli | 25.30 | 630 | 8.03 | |
| Lophius vomerinus | 22.10 | 18 | 7.01 | 1991 |
| Coelorinchus fasciatus | 4.70 | 140 | 1.49 | |
| Synagrops microlepis | 4.00 | 660 | 1.27 | |
| Chlorophthalmus punctatus | 3.00 | 230 | 0.95 | |
| Solenocera africana | 2.70 | 740 | 0.86 | |
| Austroglossus microlepis | 1.62 | 4 | 0.51 | 1992 |
| Merluccius capensis, juveniles | 0.28 | 6 | 0.09 | 1993 |
| Schedophilus pemarco | 0.16 | 2 | 0.05 | |
| Total | 315.26 | | 100.00 | |

PROJECT STATION: 600

DATE:12/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2131
start stop duration Long E 1256
TIME :12:57:00 13:36:00 39 (min) Purpose code: 3
LOG :2825.70 2827.90 2.20 Area code : 2
FDEPTH: 281 281 GearCond.code:
BDEPTH: 281 281 Validity code:
Towing dir: 350° Wire out: 850 m Speed: 33 kn*10

Sorted: 143 Kg Total catch: 459.63 CATCH/HOUR: 707.12

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 504.00 | 3618 | 71.28 | 1998 |
| Merluccius capensis, female | 140.38 | 371 | 19.85 | 1995 |
| Merluccius capensis, male | 56.62 | 258 | 8.01 | 1996 |
| Sufflogobius bibarbatus | 3.23 | 711 | 0.46 | |
| Lophius vomerinus | 2.68 | 2 | 0.38 | 1997 |
| Merluccius capensis, juveniles | 0.22 | 5 | 0.03 | |
| Total | 707.13 | | 100.01 | |

PROJECT STATION: 601

DATE:12/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 2130
start stop duration Long E 1303
TIME :15:10:00 15:30:00 20 (min) Purpose code: 3
LOG :2837.30 2838.40 1.10 Area code : 2
FDEPTH: 219 220 GearCond.code:
BDEPTH: 219 220 Validity code:
Towing dir: 355° Wire out: 700 m Speed: 33 kn*10

Sorted: 145 Kg Total catch: 1169.23 CATCH/HOUR: 3507.69

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 2820.00 | 15840 | 80.39 | 2003 |
| Merluccius capensis, female | 310.50 | 1464 | 8.85 | 2001 |
| Dentex macrophthalmus | 210.00 | 960 | 5.99 | 2004 |
| Merluccius capensis, male | 150.90 | 936 | 4.30 | 2000 |
| Sufflogobius bibarbatus | 13.20 | 2520 | 0.38 | |
| Merluccius capensis, juveniles | 3.09 | 105 | 0.09 | 2002 |
| Total | 3507.69 | | 100.00 | |

PROJECT STATION: 602

DATE:12/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2127
start stop duration Long E 1311
TIME :17:06:00 17:36:00 30 (min) Purpose code: 3
LOG :2847.80 2849.70 1.90 Area code : 2
FDEPTH: 140 137 GearCond.code:
BDEPTH: 140 137 Validity code:
Towing dir: 20° Wire out: 500 m Speed: 36 kn*10

Sorted: 223 Kg Total catch: 1408.19 CATCH/HOUR: 2816.38

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1873.80 | 33112 | 66.53 | 2007 |
| Merluccius capensis, male | 387.40 | 4118 | 13.76 | 2008 |
| Merluccius capensis, female | 376.60 | 2242 | 13.37 | 2009 |
| Todaropsis eblanae | 83.80 | 2168 | 2.98 | |
| Chelidonichthys capensis | 35.60 | 122 | 1.26 | |
| Lophius vomerinus | 25.00 | 34 | 0.89 | 2005 |
| Sufflogobius bibarbatus | 14.60 | 2674 | 0.52 | |
| Thyrsites atun | 7.20 | 2 | 0.26 | |
| Merluccius capensis, juveniles | 5.60 | 378 | 0.20 | 2010 |
| Pterothrissus belloci | 5.20 | 68 | 0.18 | |
| Austroglossus microlepis | 1.58 | 10 | 0.06 | 2006 |
| Total | 2816.38 | | 100.01 | |

PROJECT STATION: 603

DATE:12/11/94 GEAR TYPE: BT No:8 POSITION:Lat S 2116
start stop duration Long E 1314
TIME :18:55:00 19:18:00 23 (min) Purpose code: 3
LOG :2858.50 2859.50 1.00 Area code : 2
FDEPTH: 120 120 GearCond.code:
BDEPTH: 120 120 Validity code:
Towing dir: ° Wire out: 400 m Speed: 30 kn*10

Sorted: 147 Kg Total catch: 887.58 CATCH/HOUR: 2315.43

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1912.70 | 35755 | 82.61 | 2014 |
| Merluccius capensis, female | 239.48 | 2061 | 10.34 | 2011 |
| Merluccius capensis, male | 148.70 | 2254 | 6.42 | 2012 |
| Merluccius capensis, juveniles | 12.99 | 563 | 0.56 | 2013 |
| Sufflogobius bibarbatus | 1.25 | 65 | 0.05 | |
| Helicolenus dactylopterus | 0.31 | 16 | 0.01 | |
| Total | 2315.43 | | 99.99 | |

PROJECT STATION: 604

DATE:13/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2115
start stop duration Long E 1313
TIME :06:47:00 06:57:00 10 (min) Purpose code: 3
LOG :2887.50 2889.00 0.50 Area code : 2
FDEPTH: 121 121 GearCond.code: 8
BDEPTH: 121 121 Validity code: 9
Towing dir: ° Wire out: 400 m Speed: 30 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 605

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2103
start stop duration Long E 1304
TIME :08:45:00 09:00:00 15 (min) Purpose code: 3
LOG :2902.80 2903.60 0.80 Area code : 2
FDEPTH: 130 128 GearCond.code:
BDEPTH: 130 128 Validity code:
Towing dir: 330° Wire out: 400 m Speed: 33 kn*10

Sorted: 40 Kg Total catch: 211.34 CATCH/HOUR: 845.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 754.00 | 15296 | 89.19 | 2018 |
| Merluccius capensis, male | 44.60 | 484 | 5.28 | 2015 |
| Merluccius capensis, female | 40.40 | 300 | 4.78 | 2016 |
| Sufflogobius bibarbatus | 4.80 | 760 | 0.57 | |
| Chelidonichthys capensis | 0.92 | 4 | 0.11 | |
| Merluccius capensis, juveniles | 0.64 | 40 | 0.08 | 2017 |
| Total | 845.36 | | 100.01 | |

PROJECT STATION: 606

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2104
start stop duration Long E 1253
TIME :10:51:00 11:11:00 20 (min) Purpose code: 3
LOG :2913.80 2914.80 1.00 Area code : 2
FDEPTH: 270 276 GearCond.code:
BDEPTH: 270 276 Validity code:
Towing dir: 300° Wire out: 800 m Speed: 30 kn*10

Sorted: 38 Kg Total catch: 95.64 CATCH/HOUR: 286.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 180.00 | 1560 | 62.74 | 2021 |
| Merluccius capensis, female | 40.50 | 207 | 14.12 | 2020 |
| Merluccius capensis, male | 27.30 | 144 | 9.51 | 2019 |
| Sufflogobius bibarbatus | 25.20 | 7125 | 8.78 | |
| Pterothrissus belloci | 5.85 | 240 | 2.04 | |
| Dentex macrophthalmus | 3.60 | 15 | 1.25 | |
| Synagrops microlepis | 2.10 | 435 | 0.73 | |
| Austroglossus microlepis | 1.92 | 6 | 0.67 | 2022 |
| Lophius vomerinus | 0.30 | 30 | 0.10 | |
| Galeus polli | 0.15 | 15 | 0.05 | |
| MYCTOPHIDAE | 0.00 | 45 | | |
| Chlorophthalmus atlanticus | 0.00 | 15 | | |
| Total | 286.92 | | 99.99 | |

PROJECT STATION: 607

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2107
start stop duration Long E 1247
TIME :12:41:00 13:11:00 30 (min) Purpose code: 3
LOG :2923.30 2929.90 1.60 Area code : 2
FDEPTH: 324 326 GearCond.code:
BDEPTH: 324 326 Validity code:
Towing dir: 345° Wire out: 950 m Speed: 32 kn*10

Sorted: 190 Kg Total catch: 296.27 CATCH/HOUR: 592.54

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 234.42 | 156 | 39.56 | 2023 |
| Chlorophthalmus punctatus | 160.50 | 8430 | 27.09 | |
| Merluccius capensis, male | 48.48 | 32 | 8.18 | 2024 |
| Galeus polli | 43.80 | 1130 | 7.39 | |
| Coelorinchus fasciatus | 38.60 | 1960 | 6.51 | |
| Lophius vomerinus | 31.80 | 34 | 5.37 | 2027 |
| Trachurus capensis | 11.30 | 60 | 1.91 | 2025 |
| Synagrops microlepis | 8.80 | 1000 | 1.49 | |
| Hexanchus griseus | 6.26 | 2 | 1.06 | |
| Austroglossus microlepis | 2.16 | 4 | 0.36 | 2026 |
| Todarodes sagittatus | 2.10 | 20 | 0.35 | |
| Neoharriotta pinnata | 1.80 | 2 | 0.30 | |
| Nezumia sp. | 1.20 | 120 | 0.20 | |
| Chelidonichthys queketti | 0.62 | 2 | 0.10 | |
| Solenocera africana | 0.40 | 110 | 0.07 | |
| Todaropsis eblanae | 0.30 | 10 | 0.05 | |
| Total | 592.54 | | 99.99 | |

PROJECT STATION: 608

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2109
start stop duration Long E 1239
TIME :14:56:00 15:26:00 30 (min) Purpose code: 3
LOG :2935.50 2937.10 1.60 Area code : 2
FDEPTH: 366 369 GearCond.code:
BDEPTH: 366 369 Validity code:
Towing dir: 350° Wire out:1000 m Speed: 32 kn*10

Sorted: 173 Kg Total catch: 205.92 CATCH/HOUR: 411.84

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 258.30 | 172 | 62.72 | 2029 |
| Lophius vomerinus | 50.20 | 60 | 12.19 | 2031 |
| Helicolenus dactylopterus | 36.18 | 702 | 8.78 | |
| Merluccius capensis, male | 24.00 | 20 | 5.83 | 2028 |
| Coelorinchus fasciatus | 8.82 | 288 | 2.14 | |
| Nezumia sp. | 8.46 | 522 | 2.05 | |
| Galeus polli | 7.92 | 144 | 1.92 | |
| Schedophilus huttoni | 4.82 | 2 | 1.17 | |
| Hoplostethus cadenati | 3.78 | 216 | 0.92 | |
| Chlorophthalmus atlanticus | 3.24 | 126 | 0.79 | |
| C R A B S | 2.88 | 54 | 0.70 | |
| MYCTOPHIDAE | 1.80 | 36 | 0.44 | |
| Merluccius paradoxus, female | 0.72 | 4 | 0.17 | 2030 |
| Shrimps, small, non comm. | 0.54 | 396 | 0.13 | |
| Aristeus varidens | 0.18 | 54 | 0.04 | |
| Total | 411.84 | | 99.99 | |

PROJECT STATION: 609

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2111
start stop duration Long E 1229
TIME :17:13:00 17:43:00 30 (min) Purpose code: 3
LOG :2949.40 2951.00 1.60 Area code : 2
FDEPTH: 498 496 GearCond.code:
BDEPTH: 498 496 Validity code:
Towing dir: 350° Wire out:1400 m Speed: 32 kn*10

Sorted: 276 Kg Total catch: 547.71 CATCH/HOUR: 1095.42

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 400.80 | 2100 | 36.59 | |
| Merluccius paradoxus, female | 355.60 | 814 | 32.46 | 2033 |
| Lophius vomerinus | 80.80 | 52 | 7.38 | 2034 |
| Nezumia sp. | 73.20 | 1336 | 6.68 | |
| Hoplostethus cadenati | 67.68 | 3506 | 6.18 | |
| Centrophorus squamosus | 40.00 | 4 | 3.65 | |
| Helicolenus dactylopterus | 28.32 | 168 | 2.59 | |
| Lophius vaillanti | 10.60 | 2 | 0.97 | 2035 |
| Merluccius paradoxus, male | 9.88 | 32 | 0.90 | 2032 |
| Lithodes ferox | 5.32 | 8 | 0.49 | |
| Galeus polli | 4.80 | 48 | 0.44 | |
| Etmopterus pusillus | 4.56 | 24 | 0.42 | |
| Yarrella blackfordi | 3.60 | 480 | 0.33 | |
| Selachophidium guentheri | 3.12 | 120 | 0.28 | |
| Raja confundens | 2.40 | 72 | 0.22 | |
| Chaceon maritae | 2.10 | 2 | 0.19 | |
| Bathyuroconger vicinus | 0.96 | 24 | 0.09 | |
| Notacanthus sexspinis | 0.72 | 24 | 0.07 | |
| Aristeus varidens | 0.48 | 72 | 0.04 | |
| ALEPOCEPHALIDAE | 0.24 | 24 | 0.02 | |
| Ebinania costaecanarie | 0.24 | 24 | 0.02 | |
| Total | 1095.42 | | 100.01 | |

PROJECT STATION: 610

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2106
start stop duration Long E 1223
TIME :19:04:00 19:34:00 30 (min) Purpose code: 3
LOG :2958.30 2959.60 1.50 Area code : 2
FDEPTH: 590 588 GearCond.code:
BDEPTH: 590 588 Validity code:
Towing dir: 330° Wire out:1650 m Speed: 30 kn*10

Sorted: 163 Kg Total catch: 456.34 CATCH/HOUR: 912.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 355.60 | 1148 | 38.96 | |
| Nezumia sp. | 147.00 | 5152 | 16.11 | |
| Merluccius paradoxus, female | 145.80 | 192 | 15.97 | 2036 |
| Centrophorus squamosus | 120.00 | 8 | 13.15 | |
| Lamprogrammus exutus | 57.40 | 668 | 6.29 | |
| Yarrella blackfordi | 31.64 | 1616 | 3.47 | |
| Lophius vomerinus | 15.20 | 6 | 1.67 | 2037 |
| Hoplostethus cadenati | 8.12 | 168 | 0.89 | |
| Bathyuroconger vicinus | 5.72 | 84 | 0.74 | |
| Galeus polli | 5.16 | 84 | 0.67 | |
| Tetragonurus cuvieri | 6.16 | 28 | 0.67 | |
| OPISTHOTEUTHIDAE | 5.32 | 28 | 0.58 | |
| ALEPOCEPHALIDAE | 5.04 | 56 | 0.55 | |
| Notacanthus sexspinis | 1.40 | 28 | 0.15 | |
| Phrynichthys wedli | 0.56 | 28 | 0.06 | |
| Shrimps, small, non comm. | 0.28 | 84 | 0.03 | |
| Nephropsis atlantica | 0.28 | 28 | 0.03 | |
| Total | 912.68 | | 99.99 | |

PROJECT STATION: 611

DATE:13/11/94 GEAR TYPE: BT No: POSITION:Lat S 2056
start stop duration Long E 1221
TIME :21:01:00 21:31:00 30 (min) Purpose code: 3
LOG :2968.30 2969.90 1.60 Area code : 3
FDEPTH: 545 532 GearCond.code:
BDEPTH: 545 532 Validity code:
Towing dir: 340° Wire out:1500 m Speed: 31 kn*10

Sorted: 143 Kg Total catch: 424.10 CATCH/HOUR: 848.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 393.00 | 1520 | 46.33 | |
| Merluccius paradoxus, female | 159.60 | 210 | 18.82 | 2039 |
| Lophius vomerinus | 55.40 | 26 | 6.53 | 2040 |
| Nezumia sp. | 42.90 | 2040 | 5.06 | |
| Yarrella blackfordi | 42.60 | 2100 | 5.02 | |
| Lamprogrammus exutus | 33.90 | 540 | 4.00 | |
| Hoplostethus cadenati | 28.20 | 600 | 3.32 | |
| Deania quadrispinosum | 28.00 | 4 | 3.30 | |
| Helicolenus dactylopterus | 17.70 | 90 | 2.09 | |
| ALEPOCEPHALIDAE | 14.40 | 480 | 1.70 | |
| Raja sp. | 12.90 | 240 | 1.52 | |
| Bathyuroconger vicinus | 6.30 | 90 | 0.74 | |
| Selachophidium guentheri | 6.30 | 150 | 0.74 | |
| Galeus polli | 2.40 | 30 | 0.28 | |
| Chaceon maritae | 2.06 | 2 | 0.24 | |
| Merluccius paradoxus, male | 1.04 | 2 | 0.12 | 2038 |
| Notacanthus sexspinis | 0.90 | 30 | 0.11 | |
| Dicrolene intronigra | 0.60 | 30 | 0.07 | |
| Total | 848.20 | | 99.99 | |

PROJECT STATION: 612

DATE:14/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2047
start stop duration Long E 1219
TIME :06:40:00 07:10:00 30 (min) Purpose code: 3
LOG :2988.30 2990.00 1.70 Area code : 3
FDEPTH: 442 432 GearCond.code:
BDEPTH: 442 432 Validity code:
Towing dir: 335° Wire out:1250 m Speed: 32 kn*10

Sorted: 93 Kg Total catch: 458.56 CATCH/HOUR: 917.12

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Hoplostethus cadenati | 360.00 | 16876 | 39.25 | |
| Trachyrincus scabrus | 160.20 | 1290 | 17.47 | |
| Helicolenus dactylopterus | 100.20 | 720 | 10.93 | |
| Shrimps, small, non comm. | 78.90 | 55694 | 8.60 | |
| Merluccius paradoxus, female | 43.10 | 114 | 4.70 | 2043 |
| Lophius vomerinus | 42.60 | 26 | 4.64 | 2044 |
| Galeus polli | 40.80 | 540 | 4.45 | |
| Merluccius capensis, female | 39.30 | 28 | 4.29 | 2042 |
| Aristeus varidens | 15.00 | 1890 | 1.64 | |
| Yarrella blackfordi | 15.00 | 1680 | 1.64 | |
| Epigonus denticulatus | 7.50 | 420 | 0.82 | |
| Merluccius capensis, male | 7.22 | 6 | 0.79 | 2041 |
| Nezumia sp. | 3.50 | 420 | 0.39 | |
| Lophius vaillanti | 2.80 | 2 | 0.31 | 2045 |
| Notacanthus sexspinis | 0.90 | 60 | 0.10 | |
| Total | 917.12 | | 100.02 | |

PROJECT STATION: 613

DATE:14/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2046
start stop duration Long E 1228
TIME :08:50:00 09:20:00 30 (min) Purpose code: 3
LOG :3000.20 3001.90 1.70 Area code : 3
FDEPTH: 325 325 GearCond.code:
BDEPTH: 325 325 Validity code:
Towing dir: 20° Wire out:1000 m Speed: 34 kn*10

Sorted: 397 Kg Total catch: 479.85 CATCH/HOUR: 959.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 589.00 | 416 | 61.37 | 2047 |
| Merluccius capensis, male | 109.20 | 140 | 11.38 | 2046 |
| Helicolenus dactylopterus | 89.60 | 2698 | 9.34 | |
| Galeus polli | 84.00 | 1262 | 8.75 | |
| Lophius vomerinus | 32.20 | 18 | 3.36 | 2048 |
| Chlorophthalmus atlanticus | 20.32 | 736 | 2.12 | |
| Schedophilus huttoni | 9.40 | 6 | 0.98 | |
| Coelorinchus fasciatus | 7.28 | 224 | 0.76 | |
| Nezumia sp. | 7.28 | 576 | 0.76 | |
| Todarodes sagittatus | 5.20 | 40 | 0.54 | |
| Squalus megalops | 3.28 | 16 | 0.34 | |
| Hoplostethus cadenati | 1.04 | 56 | 0.11 | |
| Synagrops microlepis | 0.88 | 96 | 0.09 | |
| Genypterus capensis | 0.78 | 2 | 0.08 | 2049 |
| Bathyuroconger vicinus | 0.24 | 8 | 0.03 | |
| Total | 959.70 | | 100.01 | |

PROJECT STATION: 614

DATE:14/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2042
start stop duration Long E 1235
TIME :11:05:00 11:25:00 20 (min) Purpose code: 3
LOG :3010.80 3011.90 1.10 Area code : 3
FDEPTH: 319 317 GearCond.code:
BDEPTH: 319 317 Validity code:
Towing dir: 30° Wire out: 950 m Speed: 32 kn*10

Sorted: 63 Kg Total catch: 63.10 CATCH/HOUR: 189.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 102.54 | 138 | 54.17 | 2051 |
| Merluccius capensis, male | 32.10 | 60 | 16.95 | 2050 |
| Chlorophthalmus atlanticus | 24.75 | 1236 | 13.07 | |
| Synagrops microlepis | 8.88 | 1236 | 4.69 | |
| Pterothrissus belloci | 8.88 | 681 | 4.69 | |
| Coelorinchus fasciatus | 3.00 | 120 | 1.58 | |
| Austroglossus microlepis | 2.88 | 9 | 1.52 | 2052 |
| Lophius vomerinus | 2.64 | 3 | 1.39 | 2053 |
| OPHICHTHIDAE | 1.08 | 30 | 0.57 | |
| Galeus polli | 1.08 | 39 | 0.57 | |
| Trigla lyra | 0.63 | 6 | 0.33 | |
| Helicolenus dactylopterus | 0.42 | 9 | 0.22 | |
| Coelorinchus coelorhinc. polli | 0.18 | 18 | 0.10 | |
| MYCTOPHIDAE | 0.15 | 117 | 0.08 | |
| Shrimps, small, non comm. | 0.06 | 87 | 0.03 | |
| Solenocera africana | 0.03 | 27 | 0.02 | |
| Total | 189.30 | | 99.99 | |

PROJECT STATION: 615

DATE:14/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2042
start stop duration Long E 1240
TIME :12:59:00 13:29:00 30 (min) Purpose code: 3
LOG :3020.20 3022.00 1.80 Area code : 3
FDEPTH: 298 293 GearCond.code:
BDEPTH: 298 293 Validity code:
Towing dir: 345° Wire out: 900 m Speed: 35 kn*10

Sorted: 25 Kg Total catch: 68.62 CATCH/HOUR: 137.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 81.12 | 648 | 59.11 | 2056 |
| Merluccius capensis, male | 20.50 | 66 | 14.94 | 2054 |
| Merluccius capensis, female | 15.80 | 34 | 11.51 | 2055 |
| Sufflogobius bibarbatus | 12.96 | 2328 | 9.44 | |
| Taractes sp. | 5.72 | 2 | 4.17 | |
| Lophius vomerinus | 0.66 | 2 | 0.48 | 2057 |
| PORTUNIDAE | 0.48 | 24 | 0.35 | |
| Total | 137.24 | | 100.00 | |

PROJECT STATION: 616

DATE:14/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2040
start stop duration Long E 1249
TIME :15:25:00 15:55:00 30 (min) Purpose code: 3
LOG :3033.90 3035.80 1.90 Area code : 3
FDEPTH: 159 177 GearCond.code:
BDEPTH: 159 177 Validity code:
Towing dir: 340° Wire out: 550 m Speed: 38 kn*10

Sorted: 77 Kg Total catch: 1815.03 CATCH/HOUR: 3630.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 3309.40 | 46804 | 91.17 | 2060 |
| Merluccius capensis, female | 109.76 | 930 | 3.02 | 2059 |
| Chelidonichthys capensis | 88.96 | 226 | 2.45 | |
| Chatrabus melanurus | 56.10 | 114 | 1.55 | |
| Merluccius capensis, male | 51.66 | 490 | 1.42 | 2058 |
| Lophius vomerinus | 7.94 | 114 | 0.22 | 2061 |
| Dentex macrophthalmus | 6.24 | 56 | 0.17 | |
| Total | 3630.06 | | 100.00 | |

PROJECT STATION: 617

DATE:14/11/94 GEAR TYPE: BT No: POSITION:Lat S 2036
start stop duration Long E 1302
TIME :18:23:00 18:30:00 7 (min) Purpose code: 3
LOG :3050.60 3051.00 0.40 Area code : 3
FDEPTH: 120 117 GearCond.code:
BDEPTH: 120 117 Validity code:
Towing dir: 350° Wire out: 345 m Speed: 30 kn*10

Sorted: 4 Kg Total catch: 4.34 CATCH/HOUR: 37.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 16.63 | 231 | 44.70 | 2064 |
| Merluccius capensis, male | 9.69 | 146 | 26.05 | 2063 |
| Trachurus capensis | 7.80 | 146 | 20.97 | 2062 |
| RAJIDAE | 2.74 | 34 | 7.37 | |
| Sufflogobius bibarbatus | 0.17 | 26 | 0.46 | |
| Chelidonichthys capensis | 0.17 | 17 | 0.46 | |
| Total | 37.20 | | 100.01 | |

PROJECT STATION: 618

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2018
start stop duration Long E 1257
TIME :06:46:00 06:54:00 8 (min) Purpose code: 3
LOG :3085.00 3085.40 0.40 Area code : 3
FDEPTH: 109 109 GearCond.code:
BDEPTH: 109 109 Validity code:
Towing dir: 358° Wire out: 340 m Speed: 30 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 619

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2026
start stop duration Long E 2235
TIME :10:13:00 10:23:00 10 (min) Purpose code: 3
LOG :3110.10 3110.60 0.50 Area code : 3
FDEPTH: 250 250 GearCond.code:
BDEPTH: 250 250 Validity code:
Towing dir: 250° Wire out: 750 m Speed: 30 kn*10

Sorted: 23 Kg Total catch: 23.93 CATCH/HOUR: 143.58

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 84.30 | 738 | 58.71 | 2067 |
| Merluccius capensis, male | 24.96 | 174 | 17.38 | 2065 |
| Merluccius capensis, female | 21.84 | 138 | 15.21 | 2066 |
| ECHINORHINIDAE | 12.48 | 6 | 8.69 | |
| Total | 143.58 | | 99.99 | |

PROJECT STATION: 620

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2030
start stop duration Long E 1228
TIME :11:56:00 12:16:00 20 (min) Purpose code: 3
LOG :3118.80 3120.00 1.20 Area code : 3
FDEPTH: 289 291 GearCond.code:
BDEPTH: 289 291 Validity code:
Towing dir: 250° Wire out: 880 m Speed: 32 kn*10

Sorted: 101 Kg Total catch: 438.26 CATCH/HOUR: 1314.78

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 916.50 | 5655 | 69.71 | 2069 |
| Dentex macrophthalmus | 152.10 | 653 | 11.57 | 2068 |
| Merluccius capensis, male | 120.75 | 438 | 9.18 | 2070 |
| Merluccius capensis, female | 99.30 | 261 | 7.55 | 2071 |
| Sufflogobius bibarbatus | 26.13 | 3900 | 1.99 | |
| Total | 1314.78 | | 100.00 | |

PROJECT STATION: 621

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2032
start stop duration Long E 1220
TIME :14:10:00 14:35:00 25 (min) Purpose code: 3
LOG :3130.50 3131.80 1.30 Area code : 3
FDEPTH: 300 301 GearCond.code:
BDEPTH: 300 301 Validity code:
Towing dir: 357° Wire out:9509 m Speed: 31 kn*10

Sorted: 304 Kg Total catch: 680.23 CATCH/HOUR: 1632.55

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Chlorophthalmus atlanticus | 536.40 | 23472 | 32.86 | |
| Merluccius capensis, female | 475.80 | 802 | 29.14 | 2073 |
| Merluccius capensis, male | 168.48 | 350 | 10.32 | 2072 |
| Dentex macrophthalmus | 147.24 | 540 | 9.02 | 2076 |
| Galeus polli | 93.24 | 2736 | 5.71 | |
| Trachurus capensis | 88.92 | 468 | 5.45 | 2075 |
| Synagrops microlepis | 52.20 | 6768 | 3.20 | |
| Pterothrissus belloci | 29.88 | 252 | 1.83 | |
| Lophius vomerinus | 21.60 | 36 | 1.32 | 2077 |
| Coelorinchus fasciatus | 11.88 | 288 | 0.73 | |
| Todaropsis eblanae | 2.16 | 72 | 0.13 | |
| Solenocera africana | 1.80 | 468 | 0.11 | |
| Austroglossus microlepis | 1.51 | 5 | 0.09 | 2074 |
| PORTUNIDAE | 1.44 | 72 | 0.09 | |
| Total | 1632.55 | | 100.00 | |

PROJECT STATION: 622

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2035
start stop duration Long E 1213
TIME :16:39:00 17:09:00 30 (min) Purpose code: 3
LOG :3143.00 3144.80 1.80 Area code : 3
FDEPTH: 360 373 GearCond.code:
BDEPTH: 360 373 Validity code:
Towing dir: 360° Wire out:1050 m Speed: 32 kn*10

Sorted: 254 Kg Total catch: 405.06 CATCH/HOUR: 810.12

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 379.00 | 304 | 46.78 | 2079 |
| Helicolenus dactylopterus | 265.20 | 5530 | 32.74 | |
| Merluccius capensis, male | 59.60 | 64 | 7.36 | 2078 |
| Nezumia sp. | 22.32 | 1272 | 2.76 | |
| Galeus polli | 19.32 | 264 | 2.38 | |
| Todarodes sagittatus | 15.60 | 24 | 1.93 | |
| Coelorinchus fasciatus | 13.32 | 492 | 1.64 | |
| Chlorophthalmus atlanticus | 12.72 | 360 | 1.57 | |
| Lophius vomerinus | 9.20 | 14 | 1.14 | 2080 |
| Coelorinchus coelorhinc. polli | 5.16 | 168 | 0.64 | |
| Laemonema laureysi | 3.00 | 48 | 0.37 | |
| Ebinania costaecanarie | 1.92 | 24 | 0.24 | |
| Genypterus capensis | 1.40 | 2 | 0.17 | 2082 |
| Hoplostethus cadenati | 0.84 | 24 | 0.10 | |
| Bathyuroconger vicinus | 0.72 | 24 | 0.09 | |
| Merluccius paradoxus, female | 0.56 | 4 | 0.07 | 2081 |
| PORTUNIDAE | 0.24 | 12 | 0.03 | |
| Total | 810.12 | | 100.01 | |

PROJECT STATION: 623

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2036
start stop duration Long E 1206
TIME :19:17:00 19:47:00 30 (min) Purpose code: 3
LOG :3153.50 3155.10 1.60 Area code : 2
FDEPTH: 501 501 GearCond.code:
BDEPTH: 501 501 Validity code:
Towing dir: 330° Wire out:1400 m Speed: 30 kn*10

Sorted: 278 Kg Total catch: 515.59 CATCH/HOUR: 1031.18

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Centrophorus squamosus | 240.00 | 20 | 23.27 | |
| Trachyrincus scabrus | 224.40 | 1320 | 21.76 | |
| Merluccius paradoxus, female | 138.40 | 322 | 13.42 | 2084 |
| Nezumia sp. | 128.40 | 4152 | 12.45 | |
| Hoplostethus cadenati | 122.64 | 4160 | 11.89 | |
| Deania calcea | 114.00 | 24 | 11.06 | |
| Lophius vomerinus | 16.70 | 10 | 1.62 | 2085 |
| Helicolenus dactylopterus | 11.28 | 48 | 1.09 | |
| Epigonus telescopus | 5.46 | 48 | 0.53 | |
| Merluccius paradoxus, male | 4.70 | 18 | 0.46 | 2083 |
| Shrimps, small, non comm. | 4.56 | 2256 | 0.44 | |
| Yarrella blackfordi | 4.56 | 384 | 0.44 | |
| Aristeus varidens | 4.32 | 432 | 0.42 | |
| Notacanthus sexspinis | 4.08 | 72 | 0.40 | |
| Bathyuroconger vicinus | 2.64 | 48 | 0.26 | |
| Selachophidium guentheri | 1.92 | 48 | 0.19 | |
| Todarodes sagittatus | 1.20 | 24 | 0.12 | |
| Epigonus denticulatus | 1.20 | 48 | 0.12 | |
| Ebinania costaecanarie | 0.72 | 24 | 0.07 | |
| Total | 1031.18 | | 100.01 | |

PROJECT STATION: 624

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2030
start stop duration Long E 1159
TIME :21:20:00 21:50:00 30 (min) Purpose code: 3
LOG :3164.50 3166.10 1.60 Area code : 2
FDEPTH: 600 602 GearCond.code:
BDEPTH: 600 602 Validity code:
Towing dir: 340° Wire out:1600 m Speed: 32 kn*10

Sorted: 114 Kg Total catch: 211.46 CATCH/HOUR: 422.92

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 137.40 | 448 | 32.49 | |
| Merluccius paradoxus, female | 134.60 | 178 | 31.83 | 2086 |
| Deania calcea | 32.40 | 6 | 7.66 | |
| Nezumia sp. | 22.92 | 1008 | 5.42 | |
| Yarrella blackfordi | 19.68 | 1200 | 4.65 | |
| Lophius vomerinus | 14.80 | 4 | 3.50 | 2087 |
| ALEPOCEPHALIDAE | 11.76 | 84 | 2.78 | |
| Hoplostethus cadenati | 11.28 | 276 | 2.67 | |
| Todarodes sagittatus | 10.08 | 24 | 2.38 | |
| Lophius vaillanti | 9.40 | 2 | 2.22 | 2088 |
| Galeus polli | 5.28 | 48 | 1.25 | |
| Bathyuroconger vicinus | 5.16 | 60 | 1.22 | |
| Raja confundens | 3.84 | 12 | 0.91 | |
| Selachophidium guentheri | 1.92 | 36 | 0.45 | |
| Paradiplospinus gracilis | 0.96 | 12 | 0.23 | |
| Shrimps, small, non comm. | 0.48 | 108 | 0.11 | |
| Thysanoteuthis rhombus | 0.36 | 12 | 0.09 | |
| Coelorinchus braueri | 0.36 | 12 | 0.09 | |
| Aristeus varidens | 0.12 | 12 | 0.03 | |
| Notacanthus sexspinis | 0.12 | 12 | 0.03 | |
| Total | 422.92 | | 100.01 | |

PROJECT STATION: 625

DATE:15/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2022
start stop duration Long E 1157
TIME :23:02:00 23:32:00 30 (min) Purpose code: 3
LOG :3172.30 3173.80 1.50 Area code : 2
FDEPTH: 448 542 GearCond.code:
BDEPTH: 448 542 Validity code:
Towing dir: 340° Wire out:1500 m Speed: 32 kn*10

Sorted: 73 Kg Total catch: 358.20 CATCH/HOUR: 716.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 360.00 | 1560 | 50.25 | |
| Deania calcea | 108.60 | 120 | 15.16 | |
| Nezumia sp. | 70.20 | 4170 | 9.80 | |
| Merluccius paradoxus, female | 68.60 | 88 | 9.58 | 2089 |
| RAJIDAE | 26.10 | 120 | 3.64 | |
| Lophius vomerinus | 25.60 | 8 | 3.57 | 2090 |
| ALEPOCEPHALIDAE | 18.00 | 360 | 2.51 | |
| Yarrella blackfordi | 10.50 | 570 | 1.47 | |
| Galeus polli | 8.10 | 90 | 1.13 | |
| Lamprogrammus exutus | 7.50 | 120 | 1.05 | |
| Hoplostethus melanopus | 5.40 | 180 | 0.75 | |
| Selachophidium guentheri | 4.20 | 120 | 0.59 | |
| MYCTOPHIDAE | 1.50 | 120 | 0.21 | |
| Bathylagus gracilis | 0.90 | 120 | 0.13 | |
| Stomias boa boa | 0.90 | 120 | 0.13 | |
| Shrimps, small, non comm. | 0.30 | 420 | 0.04 | |
| Total | 716.40 | | 100.01 | |

PROJECT STATION: 626

DATE:16/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2017
start stop duration Long E 1157
TIME :06:35:00 07:05:00 30 (min) Purpose code: 3
LOG :3187.70 3189.40 1.70 Area code : 2
FDEPTH: 450 449 GearCond.code:
BDEPTH: 450 449 Validity code:
Towing dir: 335° Wire out:1250 m Speed: 32 kn*10

Sorted: 132 Kg Total catch: 460.35 CATCH/HOUR: 920.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 297.00 | 2876 | 32.26 | |
| Nezumia sp. | 194.40 | 7026 | 21.11 | |
| Hoplostethus cadenati | 105.00 | 3132 | 11.40 | |
| Merluccius capensis, female | 55.80 | 34 | 6.06 | 2092 |
| Merluccius paradoxus, female | 48.40 | 166 | 5.26 | 2094 |
| Lophius vomerinus | 45.20 | 30 | 4.91 | 2095 |
| Deania profundorum | 30.90 | 30 | 3.36 | |
| Aristeus varidens | 26.70 | 3060 | 2.90 | |
| Deania calcea | 26.00 | 6 | 2.82 | |
| Centrophorus squamosus | 25.00 | 2 | 2.72 | |
| Helicolenus dactylopterus | 23.70 | 270 | 2.57 | |
| Galeus polli | 15.30 | 150 | 1.66 | |
| Merluccius capensis, male | 13.00 | 10 | 1.41 | 2091 |
| Epigonus denticulatus | 4.20 | 150 | 0.46 | |
| Notacanthus sexspinis | 3.90 | 120 | 0.42 | |
| Merluccius paradoxus, male | 3.80 | 12 | 0.41 | 2093 |
| Laemonema laureysi | 2.40 | 30 | 0.26 | |
| Total | 920.70 | | 99.99 | |

PROJECT STATION: 627

DATE:16/11/94 GEAR TYPE: BT No: POSITION:Lat S 2013
start stop duration Long E 1205
TIME :08:37:00 09:07:00 30 (min) Purpose code: 3
LOG :3198.20 3199.80 1.60 Area code : 2
FDEPTH: 314 309 GearCond.code:
BDEPTH: 314 309 Validity code:
Towing dir: 60° Wire out: 960 m Speed: 32 kn*10

Sorted: 244 Kg Total catch: 651.99 CATCH/HOUR: 1303.98

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 631.60 | 792 | 48.44 | 2097 |
| Chlorophthalmus atlanticus | 168.20 | 6710 | 12.90 | |
| Dentex macrophthalmus | 144.00 | 432 | 11.04 | 2098 |
| Helicolenus dactylopterus | 99.80 | 4658 | 7.65 | |
| Merluccius capensis, male | 90.20 | 148 | 6.92 | 2096 |
| Trachurus capensis | 74.00 | 184 | 5.67 | 2099 |
| Lophius vomerinus | 43.00 | 44 | 3.30 | 2100 |
| Galeus polli | 18.00 | 294 | 1.38 | |
| Bathynectes piperitus | 11.80 | 294 | 0.90 | |
| Synagrops microlepis | 10.00 | 828 | 0.77 | |
| Coelorinchus coelorhinc. polli | 8.80 | 404 | 0.67 | |
| Austroglossus microlepis | 2.38 | 4 | 0.18 | 2101 |
| Guentherus altivela | 1.20 | 18 | 0.09 | |
| C R A B S | 0.60 | 36 | 0.05 | |
| Coelorinchus fasciatus | 0.40 | 18 | 0.03 | |
| Total | 1303.98 | | 99.99 | |

PROJECT STATION: 628

DATE:16/11/94 GEAR TYPE: BT No: POSITION:Lat S 2010
start stop duration Long E 1214
TIME :10:53:00 11:08:00 15 (min) Purpose code: 3
LOG :3209.10 3209.90 0.80 Area code : 2
FDEPTH: 270 264 GearCond.code:
BDEPTH: 270 264 Validity code:
Towing dir: 55° Wire out: 810 m Speed: 32 kn*10

Sorted: 125 Kg Total catch: 1416.15 CATCH/HOUR: 5664.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 4945.60 | 54912 | 87.31 | 2104 |
| Pterothrissus belloci | 227.04 | 4400 | 4.01 | |
| Merluccius capensis, female | 185.60 | 404 | 3.28 | 2103 |
| Merluccius capensis, male | 175.60 | 528 | 3.10 | 2102 |
| Dentex macrophthalmus | 56.32 | 352 | 0.99 | 2106 |
| Sufflogobius bibarbatus | 28.16 | 3168 | 0.50 | |
| Lophius vomerinus | 17.20 | 16 | 0.30 | 2107 |
| Galeus polli | 15.84 | 176 | 0.28 | |
| Synagrops microlepis | 8.80 | 176 | 0.16 | |
| Austroglossus microlepis | 4.44 | 12 | 0.08 | 2105 |
| Total | 5664.60 | | 100.01 | |

PROJECT STATION: 629

DATE:16/11/94 GEAR TYPE: BT No: POSITION:Lat S 2007
start stop duration Long E 1222
TIME :12:38:00 12:58:00 20 (min) Purpose code: 3
LOG :3217.60 3218.70 1.10 Area code : 3
FDEPTH: 233 233 GearCond.code:
BDEPTH: 233 233 Validity code:
Towing dir: 70° Wire out: 750 m Speed: 33 kn*10

Sorted: 90 Kg Total catch: 251.79 CATCH/HOUR: 755.37

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 465.15 | 9786 | 61.58 | 2110 |
| Merluccius capensis, female | 130.44 | 441 | 17.27 | 2109 |
| Merluccius capensis, male | 65.58 | 315 | 8.68 | 2108 |
| Pterothrissus belloci | 30.87 | 840 | 4.09 | |
| Sufflogobius bibarbatus | 19.95 | 3045 | 2.64 | |
| Synagrops microlepis | 13.44 | 3255 | 1.78 | |
| Dentex macrophthalmus | 9.00 | 42 | 1.19 | 2113 |
| Squalus megalops | 7.98 | 21 | 1.06 | |
| Austroglossus microlepis | 6.15 | 21 | 0.81 | 2111 |
| Lophius vomerinus | 3.42 | 9 | 0.45 | 2112 |
| Todaropsis eblanae | 2.73 | 84 | 0.36 | |
| Merluccius capensis, juveniles | 0.63 | 63 | 0.08 | 2114 |
| Total | 755.34 | | 99.99 | |

PROJECT STATION: 630

DATE:16/11/94 GEAR TYPE: BT No: POSITION:Lat S 2004
start stop duration Long E 1230
TIME :15:51:00 16:04:00 13 (min) Purpose code: 3
LOG :3228.70 3229.40 0.70 Area code : 3
FDEPTH: 156 156 GearCond.code:
BDEPTH: 156 156 Validity code:
Towing dir: 360° Wire out: 550 m Speed: 31 kn*10

Sorted: 44 Kg Total catch: 55.08 CATCH/HOUR: 254.22

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 126.92 | 872 | 49.93 | 2116 |
| Merluccius capensis, male | 59.31 | 535 | 23.33 | 2115 |
| Trachurus capensis | 47.08 | 572 | 18.52 | 2118 |
| Lophius vomerinus | 10.52 | 18 | 4.14 | 2120 |
| Austroglossus microlepis | 5.54 | 18 | 2.18 | 2119 |
| Merluccius capensis, juveniles | 4.85 | 125 | 1.91 | 2117 |
| Total | 254.22 | | 100.01 | |

PROJECT STATION: 631

DATE:16/11/94 GEAR TYPE: BT No: POSITION:Lat S 1949
start stop duration Long E 1230
TIME :18:08:00 18:23:00 15 (min) Purpose code: 3
LOG :3243.90 3244.70 0.80 Area code : 3
FDEPTH: 130 130 GearCond.code:
BDEPTH: 130 130 Validity code:
Towing dir: 285° Wire out: 400 m Speed: 32 kn*10

Sorted: 4 Kg Total catch: 4.84 CATCH/HOUR: 19.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sufflogobius bibarbatus | 8.00 | | 41.32 | |
| Merluccius capensis, female | 6.36 | 88 | 32.85 | 2122 |
| Merluccius capensis, male | 2.60 | 36 | 13.43 | 2121 |
| Trachurus capensis | 2.40 | 20 | 12.40 | |
| Total | 19.36 | | 100.00 | |

PROJECT STATION: 632

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1944
start stop duration Long E 1214
TIME :06:39:00 06:59:00 20 (min) Purpose code: 3
LOG :3271.30 3272.30 1.00 Area code : 3
FDEPTH: 220 222 GearCond.code:
BDEPTH: 220 222 Validity code:
Towing dir: 340° Wire out: 650 m Speed: 30 kn*10

Sorted: 19 Kg Total catch: 19.40 CATCH/HOUR: 58.20

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 20.85 | 66 | 35.82 | 2124 |
| Sufflogobius bibarbatus | 19.23 | 3699 | 33.04 | |
| Merluccius capensis, male | 13.95 | 42 | 23.97 | 2123 |
| Trachurus capensis | 3.27 | 27 | 5.62 | 2125 |
| Austroglossus microlepis | 0.84 | 3 | 1.44 | 2126 |
| Chatrabus melanurus | 0.03 | 3 | 0.05 | |
| Synagrops microlepis | 0.03 | 3 | 0.05 | |
| Total | 58.20 | | 99.99 | |

PROJECT STATION: 633

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1947
start stop duration Long E 1206
TIME :08:43:00 09:13:00 30 (min) Purpose code: 3
LOG :3281.10 3282.60 1.50 Area code : 3
FDEPTH: 280 288 GearCond.code:
BDEPTH: 280 288 Validity code:
Towing dir: 250° Wire out: 840 m Speed: 30 kn*10

Sorted: 36 Kg Total catch: 36.95 CATCH/HOUR: 73.90

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 55.20 | 92 | 74.70 | 2127 |
| Merluccius capensis, male | 9.10 | 24 | 12.31 | 2128 |
| Sufflogobius bibarbatus | 5.18 | 684 | 7.01 | |
| Trachurus capensis | 2.80 | 18 | 3.79 | 2130 |
| Dentex macrophthalmus | 1.62 | 8 | 2.19 | 2129 |
| Total | 73.90 | | 100.00 | |

PROJECT STATION: 634

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1949
start stop duration Long E 1200
TIME :10:42:00 11:12:00 30 (min) Purpose code: 3
LOG :3288.90 3290.60 1.70 Area code : 3
FDEPTH: 319 326 GearCond.code:
BDEPTH: 319 326 Validity code:
Towing dir: 240° Wire out: 960 m Speed: 30 kn*10

Sorted: 200 Kg Total catch: 205.37 CATCH/HOUR: 410.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 169.60 | 248 | 41.29 | 2135 |
| Dentex macrophthalmus | 104.00 | 424 | 25.32 | 2132 |
| Trachurus capensis | 52.70 | 254 | 12.83 | 2131 |
| Merluccius capensis, male | 34.00 | 78 | 8.28 | 2134 |
| PORTUNIDAE | 11.50 | 456 | 2.80 | |
| Pterothrissus belloci | 9.88 | 412 | 2.41 | |
| Austroglossus microlepis | 8.10 | 34 | 1.97 | 2133 |
| Neoharriotta pinnata | 7.44 | 6 | 1.81 | |
| Sufflogobius bibarbatus | 6.72 | 756 | 1.64 | |
| Lophius vomerinus | 2.30 | 2 | 0.56 | 2136 |
| Solenocera africana | 1.76 | 554 | 0.43 | |
| Synagrops microlepis | 1.40 | 232 | 0.34 | |
| Chlorophthalmus atlanticus | 0.64 | 28 | 0.16 | |
| Trigla lyra | 0.48 | 4 | 0.12 | |
| Bassanago albescens | 0.12 | 4 | 0.03 | |
| C R A B S | 0.10 | 16 | 0.02 | |
| Total | 410.74 | | 100.01 | |

PROJECT STATION: 635

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1950
start stop duration Long E 1154
TIME :12:41:00 13:11:00 30 (min) Purpose code: 3
LOG :3298.00 3299.70 1.70 Area code : 3
FDEPTH: 351 352 GearCond.code:
BDEPTH: 351 352 Validity code:
Towing dir: 350° Wire out:1050 m Speed: 32 kn*10

Sorted: 294 Kg Total catch: 668.84 CATCH/HOUR: 1337.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 448.00 | 592 | 33.49 | 2138 |
| Helicolenus dactylopterus | 334.00 | 12280 | 24.97 | |
| Dentex macrophthalmus | 332.40 | 1080 | 24.85 | 2140 |
| Merluccius capensis, male | 63.00 | 112 | 4.71 | 2137 |
| Pterothrissus belloci | 40.00 | 200 | 2.99 | |
| Trachurus capensis | 39.20 | 120 | 2.93 | 2139 |
| Lophius vomerinus | 35.70 | 42 | 2.67 | 2142 |
| Coelorinchus fasciatus | 30.00 | 1160 | 2.24 | |
| Shrimps, small, non comm. | 6.40 | 2160 | 0.48 | |
| Galeus polli | 4.80 | 120 | 0.36 | |
| Austroglossus microlepis | 2.18 | 2 | 0.16 | 2141 |
| PORTUNIDAE | 2.00 | 80 | 0.15 | |
| Total | 1337.68 | | 100.00 | |

PROJECT STATION: 636

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1953
start stop duration Long E 1146
TIME :15:04:00 15:34:00 30 (min) Purpose code: 3
LOG :3311.60 3313.50 1.90 Area code : 3
FDEPTH: 406 406 GearCond.code:
BDEPTH: 406 406 Validity code:
Towing dir: 340° Wire out:1150 m Speed: 33 kn*10

Sorted: 456 Kg Total catch: 815.52 CATCH/HOUR: 1631.04

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 659.40 | 476 | 40.43 | 2144 |
| Helicolenus dactylopterus | 550.20 | 8708 | 33.73 | |
| Merluccius capensis, male | 102.10 | 174 | 6.26 | 2143 |
| Nezumia sp. | 71.12 | 2940 | 4.36 | |
| Trachyrincus scabrus | 49.28 | 364 | 3.02 | |
| Todarodes sagittatus | 43.68 | 140 | 2.68 | |
| Schedophilus huttoni | 36.32 | 14 | 2.23 | |
| Selachophidium guentheri | 31.92 | 756 | 1.96 | |
| Lophius vomerinus | 21.60 | 14 | 1.32 | 2145 |
| Ruvettus pretiosus | 15.30 | 4 | 0.94 | |
| Heptranchias perlo | 9.42 | 2 | 0.58 | |
| Ebinania costaecanarie | 9.24 | 84 | 0.57 | |
| Hexanchus griseus | 7.72 | 2 | 0.47 | |
| Galeus polli | 5.88 | 56 | 0.36 | |
| Coelorinchus fasciatus | 5.04 | 252 | 0.31 | |
| Lophius vaillanti | 3.30 | 2 | 0.20 | 2146 |
| Laemonema laureysi | 2.52 | 84 | 0.15 | |
| Coelorinchus coelorhinc. polli | 2.24 | 112 | 0.14 | |
| RAJIDAE | 2.04 | 2 | 0.13 | |
| Malacocephalus laevis | 1.96 | 28 | 0.12 | |
| Aristeus varidens | 0.28 | 364 | 0.02 | |
| Plesionika sp. | 0.28 | 28 | 0.02 | |
| Merluccius paradoxus, female | 0.20 | 2 | 0.01 | |
| Total | 1631.04 | | 100.01 | |

PROJECT STATION: 637

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1956
start stop duration Long E 1139
TIME :17:28:00 17:58:00 30 (min) Purpose code: 3
LOG :3324.20 3325.90 1.70 Area code : 3
FDEPTH: 548 546 GearCond.code:
BDEPTH: 548 546 Validity code:
Towing dir: 335° Wire out:1400 m Speed: 32 kn*10

Sorted: 105 Kg Total catch: 646.98 CATCH/HOUR: 1293.96

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 354.90 | 1764 | 27.43 | |
| Hoplostethus cadenati | 310.80 | 9090 | 24.02 | |
| SQUALIDAE | 158.40 | 76 | 12.24 | |
| Nezumia sp. | 146.58 | 9162 | 11.33 | |
| Yarrella blackfordi | 94.92 | 10734 | 7.34 | |
| Merluccius paradoxus, female | 85.60 | 90 | 6.62 | 2147 |
| Centrophorus squamosus | 30.00 | 2 | 2.32 | |
| Notacanthus sexspinis | 20.58 | 210 | 1.59 | |
| Todarodes sagittatus | 17.60 | 32 | 1.36 | |
| Lophius vaillanti | 13.10 | 6 | 1.01 | 2149 |
| Ebinania costaecanarie | 11.76 | 336 | 0.91 | |
| RAJIDAE | 11.34 | 126 | 0.88 | |
| Helicolenus dactylopterus | 10.92 | 168 | 0.84 | |
| Galeus polli | 10.50 | 84 | 0.81 | |
| Laemonema laureysi | 10.08 | 210 | 0.78 | |
| Lithodes ferox | 2.30 | 8 | 0.18 | |
| Merluccius paradoxus, male | 1.46 | 2 | 0.11 | 2148 |
| Aristeus varidens | 1.26 | 168 | 0.10 | |
| Epigonus denticulatus | 1.26 | 84 | 0.10 | |
| Chaceon maritae | 0.60 | 2 | 0.05 | |
| Total | 1293.96 | | 100.02 | |

PROJECT STATION: 638

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1951
start stop duration Long E 1133
TIME :19:13:00 19:43:00 30 (min) Purpose code: 3
LOG :3332.60 3334.40 1.80 Area code : 3
FDEPTH: 604 613 GearCond.code:
BDEPTH: 604 613 Validity code:
Towing dir: 335° Wire out:1600 m Speed: 32 kn*10

Sorted: 217 Kg Total catch: 441.63 CATCH/HOUR: 883.26

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius paradoxus, female | 350.90 | 400 | 39.73 | 2150 |
| Trachyrincus scabrus | 270.60 | 880 | 30.64 | |
| Nezumia sp. | 93.94 | 6908 | 10.64 | |
| Yarrella blackfordi | 27.72 | 2574 | 3.14 | |
| Todarodes sagittatus | 19.58 | 66 | 2.22 | |
| ALEPOCEPHALIDAE | 18.70 | 242 | 2.12 | |
| Lamprogrammus exutus | 17.82 | 264 | 2.02 | |
| Lophius vomerinus | 17.50 | 10 | 1.98 | 2152 |
| RAJIDAE | 14.74 | 44 | 1.67 | |
| Galeus polli | 11.00 | 132 | 1.25 | |
| Schedophilus huttoni | 10.56 | 22 | 1.20 | |
| Hoplostethus cadenati | 6.82 | 132 | 0.77 | |
| Merluccius paradoxus, male | 5.50 | 10 | 0.62 | 2151 |
| Todaropsis eblanae | 4.84 | 88 | 0.55 | |
| Notacanthus sexspinis | 4.84 | 88 | 0.55 | |
| Chaceon maritae | 3.14 | 8 | 0.36 | |
| Ebinania costaecanarie | 3.08 | 44 | 0.35 | |
| NEMICHTHYIDAE | 1.98 | 44 | 0.22 | |
| Total | 883.26 | | 100.03 | |

PROJECT STATION: 639

DATE:17/11/94 GEAR TYPE: BT No: POSITION:Lat S 1943
start stop duration Long E 1132
TIME :21:09:00 21:39:00 30 (min) Purpose code: 3
LOG :3341.70 3343.30 1.60 Area code : 3
FDEPTH: 547 543 GearCond.code:
BDEPTH: 547 543 Validity code:
Towing dir: 10° Wire out:1450 m Speed: 33 kn*10

Sorted: 153 Kg Total catch: 424.36 CATCH/HOUR: 848.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 277.20 | 1224 | 32.66 | |
| Merluccius paradoxus, female | 152.40 | 338 | 17.96 | 2153 |
| Hoplostethus cadenati | 126.72 | 2816 | 14.93 | |
| Galeus polli | 62.40 | 576 | 7.35 | |
| Lophius vomerinus | 58.70 | 24 | 6.92 | 2155 |
| Ebinania costaecanarie | 32.88 | 624 | 3.87 | |
| Todarodes sagittatus | 23.70 | 46 | 2.79 | |
| Helicolenus dactylopterus | 21.60 | 144 | 2.55 | |
| Nezumia sp. | 21.12 | 960 | 2.49 | |
| Yarrella blackfordi | 20.64 | 2160 | 2.43 | |
| RAJIDAE | 14.16 | 192 | 1.67 | |
| Deania calcea | 11.28 | 24 | 1.33 | |
| Merluccius paradoxus, male | 10.50 | 30 | 1.24 | 2154 |
| Lithodes ferox | 8.42 | 16 | 0.99 | |
| Lophius vaillanti | 3.40 | 2 | 0.40 | 2156 |
| Epigonus denticulatus | 3.36 | 72 | 0.40 | |
| Chaceon maritae | 3.14 | 8 | 0.37 | |
| Selachophidium guentheri | 0.24 | 24 | 0.03 | |
| Total | 851.86 | | 100.38 | |

PROJECT STATION: 640

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1935
start stop duration Long E 1133
TIME :06:36:00 07:06:00 30 (min) Purpose code: 3
LOG :3364.90 3366.40 1.50 Area code : 3
FDEPTH: 470 475 GearCond.code:
BDEPTH: 470 475 Validity code:
Towing dir: 340° Wire out:1300 m Speed: 30 kn*10

Sorted: 85 Kg Total catch: 538.85 CATCH/HOUR: 1077.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 459.00 | 3206 | 42.59 | |
| Nezumia sp. | 135.00 | 4772 | 12.53 | |
| Schedophilus huttoni | 117.40 | 46 | 10.89 | |
| Helicolenus dactylopterus | 113.10 | 3274 | 10.49 | |
| Merluccius capensis, female | 49.30 | 34 | 4.57 | 2158 |
| Helicolenus dactylopterus | 45.30 | 300 | 4.20 | |
| Raja confundens | 34.80 | 30 | 3.23 | |
| Todarodes sagittatus | 33.60 | 120 | 3.12 | |
| Lophius vomerinus | 30.40 | 24 | 2.82 | 2161 |
| Galeus polli | 24.30 | 300 | 2.25 | |
| Merluccius paradoxus, female | 19.90 | 104 | 1.85 | 2160 |
| Ebinania costaecanarie | 5.40 | 150 | 0.50 | |
| Merluccius capensis, male | 4.30 | 4 | 0.40 | 2157 |
| Shrimps, small, non comm. | 3.60 | 1380 | 0.33 | |
| Epigonus denticulatus | 2.10 | 180 | 0.19 | |
| Merluccius paradoxus, male | 0.20 | 2 | 0.02 | 2159 |
| Total | 1077.70 | | 99.98 | |

PROJECT STATION: 641

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1931
start stop duration Long E 1139
TIME :08:33:00 09:03:00 30 (min) Purpose code: 3
LOG :3374.80 3376.40 1.60 Area code : 3
FDEPTH: 370 367 GearCond.code:
BDEPTH: 370 367 Validity code:
Towing dir: 10° Wire out:1050 m Speed: 30 kn*10

Sorted: 281 Kg Total catch: 868.90 CATCH/HOUR: 1737.80

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 688.00 | 14448 | 39.59 | |
| Merluccius capensis, female | 349.60 | 378 | 20.12 | 2163 |
| Chlorophthalmus atlanticus | 328.80 | 11674 | 18.92 | |
| Coelorinchus fasciatus | 140.80 | 6560 | 8.10 | |
| Lophius vomerinus | 102.80 | 108 | 5.92 | 2164 |
| Merluccius capensis, male | 69.60 | 94 | 4.01 | 2162 |
| Dentex macrophthalmus | 20.80 | 80 | 1.20 | |
| Galeus polli | 15.20 | 400 | 0.87 | |
| Lophius vaillanti | 10.20 | 6 | 0.59 | 2165 |
| Todarodes sagittatus | 5.60 | 80 | 0.32 | |
| Laemonema laureysi | 3.20 | 80 | 0.18 | |
| PORTUNIDAE | 1.60 | 80 | 0.09 | |
| Synagrops microlepis | 1.60 | 240 | 0.09 | |
| Total | 1737.80 | | 100.00 | |

PROJECT STATION: 642

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1929
start stop duration Long E 1146
TIME :10:37:00 11:07:00 30 (min) Purpose code: 3
LOG :3383.80 3385.40 1.60 Area code : 3
FDEPTH: 335 333 GearCond.code:
BDEPTH: 335 333 Validity code:
Towing dir: 10° Wire out: 970 m Speed: 30 kn*10

Sorted: 134 Kg Total catch: 454.17 CATCH/HOUR: 908.34

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Pterothrissus belloci | 402.00 | 2730 | 44.26 | |
| Merluccius capensis, female | 159.40 | 250 | 17.55 | 2167 |
| Dentex macrophthalmus | 151.50 | 720 | 16.68 | 2170 |
| Synagrops microlepis | 88.50 | 11610 | 9.74 | |
| Merluccius capensis, male | 42.80 | 80 | 4.71 | 2166 |
| Trachurus capensis | 15.60 | 60 | 1.72 | |
| Lophius vomerinus | 10.50 | 28 | 1.16 | 2169 |
| Chlorophthalmus atlanticus | 9.60 | 60 | 1.06 | |
| Trigla lyra | 9.60 | 60 | 1.06 | |
| Austroglossus microlepis | 9.54 | 22 | 1.05 | 2168 |
| Todarodes sagittatus | 7.20 | 30 | 0.79 | |
| Merluccius capensis, juveniles | 2.10 | 60 | 0.23 | |
| Total | 908.34 | | 100.01 | |

PROJECT STATION: 643

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1927
start stop duration Long E 1156
TIME :12:54:00 13:24:00 30 (min) Purpose code: 3
LOG :3395.60 3397.30 1.70 Area code : 3
FDEPTH: 298 294 GearCond.code:
BDEPTH: 298 294 Validity code:
Towing dir: 80° Wire out: 900 m Speed: 33 kn*10

Sorted: 100 Kg Total catch: 107.84 CATCH/HOUR: 215.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 116.20 | 274 | 53.88 | 2172 |
| Dentex macrophthalmus | 43.04 | 206 | 19.96 | 2176 |
| Merluccius capensis, male | 37.70 | 106 | 17.48 | 2171 |
| Trachurus capensis | 12.40 | 68 | 5.75 | 2175 |
| Sufflogobius bibarbatus | 4.02 | 636 | 1.86 | |
| Pterothrissus belloci | 1.22 | 44 | 0.57 | |
| PORTUNIDAE | 0.48 | 14 | 0.22 | |
| Austroglossus microlepis | 0.44 | 2 | 0.20 | 2173 |
| OPHICHTHIDAE | 0.14 | 6 | 0.06 | |
| Merluccius capensis, juveniles | 0.04 | 4 | 0.02 | 2174 |
| Solenocera africana | 0.00 | 8 | | |
| Total | 215.68 | | 100.00 | |

PROJECT STATION: 644

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1923
start stop duration Long E 1203
TIME :14:42:00 15:12:00 30 (min) Purpose code: 3
LOG :3403.30 3404.90 1.60 Area code : 3
FDEPTH: 261 253 GearCond.code:
BDEPTH: 261 253 Validity code:
Towing dir: 62° Wire out: 850 m Speed: 32 kn*10

Sorted: 90 Kg Total catch: 90.69 CATCH/HOUR: 181.38

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 112.30 | 334 | 61.91 | 2178 |
| Merluccius capensis, male | 56.00 | 198 | 30.87 | 2177 |
| Trachurus capensis | 7.80 | 48 | 4.30 | 2181 |
| Sufflogobius bibarbatus | 3.70 | 6890 | 2.04 | |
| Dentex macrophthalmus | 1.52 | 8 | 0.84 | 2180 |
| Merluccius capensis, juveniles | 0.06 | 4 | 0.03 | 2179 |
| Total | 181.38 | | 99.99 | |

PROJECT STATION: 645

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1919
start stop duration Long E 1210
TIME :16:28:00 16:58:00 30 (min) Purpose code: 3
LOG :3412.20 3413.90 1.70 Area code : 3
FDEPTH: 203 198 GearCond.code:
BDEPTH: 203 198 Validity code:
Towing dir: 350° Wire out: 650 m Speed: 32 kn*10

Sorted: 60 Kg Total catch: 282.57 CATCH/HOUR: 565.14

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 454.86 | 6640 | 80.49 | 2184 |
| Merluccius capensis, female | 68.28 | 532 | 12.08 | 2183 |
| Merluccius capensis, male | 20.08 | 158 | 3.55 | 2182 |
| Chatrabus melanurus | 11.86 | 102 | 2.10 | |
| Sufflogobius bibarbatus | 9.34 | 2046 | 1.65 | |
| Total | 564.42 | | 99.87 | |

PROJECT STATION: 646

DATE:18/11/94 GEAR TYPE: BT No: POSITION:Lat S 1841
start stop duration Long E 1121
TIME :23:30:00 24:00:00 30 (min) Purpose code: 3
LOG :3472.20 3473.60 1.40 Area code : 3
FDEPTH: 550 568 GearCond.code:
BDEPTH: 550 568 Validity code:
Towing dir: 10° Wire out:1460 m Speed: 31 kn*10

Sorted: 246 Kg Total catch: 727.83 CATCH/HOUR: 1455.66

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 412.10 | 2132 | 28.31 | |
| Merluccius capensis, female | 335.40 | 890 | 23.04 | 2186 |
| Scyliorhinus capensis | 327.60 | 84 | 22.51 | |
| Nezumia sp. | 95.68 | 3666 | 6.57 | |
| Helicolenus dactylopterus | 43.16 | 182 | 2.96 | |
| R A Y S | 38.48 | 104 | 2.64 | |
| Ebinania costaecanarie | 37.44 | 52 | 2.57 | |
| Merluccius paradoxus, female | 32.40 | 22 | 2.23 | 2187 |
| Galeus polli | 32.24 | 78 | 2.21 | |
| Lophius vomerinus | 27.10 | 8 | 1.86 | 2189 |
| Lophius vaillanti | 20.20 | 6 | 1.39 | 2188 |
| Todarodes sagittatus | 18.98 | 26 | 1.30 | |
| ALEPOCEPHALIDAE | 10.40 | 26 | 0.71 | |
| Deania quadrispinosum | 7.10 | 2 | 0.49 | |
| Merluccius capensis, male | 5.30 | 22 | 0.36 | 2185 |
| Chaceon maritae | 4.80 | 12 | 0.33 | |
| Yarrella blackfordi | 4.42 | 468 | 0.30 | |
| Hoplostethus cadenati | 2.08 | 182 | 0.14 | |
| Selachophidium guentheri | 0.78 | 26 | 0.05 | |
| Total | 1455.66 | | 99.97 | |

PROJECT STATION: 647

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1836
start stop duration Long E 1124
TIME :06:38:00 07:08:00 30 (min) Purpose code: 3
LOG :3492.30 3493.90 1.60 Area code : 3
FDEPTH: 440 458 GearCond.code:
BDEPTH: 440 458 Validity code:
Towing dir: 10° Wire out:1200 m Speed: 32 kn*10

Sorted: 226 Kg Total catch: 698.12 CATCH/HOUR: 1396.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Galeus polli | 734.40 | 720 | 52.60 | |
| Merluccius capensis, female | 170.40 | 118 | 12.20 | 2190 |
| Helicolenus dactylopterus | 115.84 | 1024 | 8.30 | |
| Nezumia sp. | 81.92 | 4652 | 5.87 | |
| Merluccius paradoxus, female | 77.00 | 264 | 5.51 | 2192 |
| Trachyrincus scabrus | 63.36 | 640 | 4.54 | |
| Lophius vomerinus | 57.10 | 38 | 4.09 | 2194 |
| Hoplostethus cadenati | 20.16 | 1312 | 1.44 | |
| Shrimps, small, non comm. | 16.00 | 4992 | 1.15 | |
| RAJIDAE | 8.64 | 16 | 0.62 | |
| Epigonus denticulatus | 8.16 | 1312 | 0.58 | |
| Chlorophthalmus atlanticus | 7.36 | 32 | 0.53 | |
| Lophius vaillanti | 7.10 | 4 | 0.51 | 2195 |
| Coelorinchus coelorhinc. polli | 6.40 | 32 | 0.46 | |
| Yarrella blackfordi | 5.92 | 336 | 0.42 | |
| Merluccius capensis, male | 5.00 | 6 | 0.36 | 2191 |
| Etmopterus lucifer | 3.68 | 16 | 0.26 | |
| Ebinania costaecanarie | 3.68 | 80 | 0.26 | |
| Laemonema laureysi | 1.60 | 144 | 0.11 | |
| Merluccius paradoxus, male | 1.30 | 8 | 0.09 | 2193 |
| Selachophidium guentheri | 0.64 | 16 | 0.05 | |
| Chaceon maritae | 0.58 | 8 | 0.04 | |
| Total | 1396.24 | | 99.99 | |

PROJECT STATION: 648

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1833
start stop duration Long E 1127
TIME :08:36:00 09:06:00 30 (min) Purpose code: 3
LOG :3500.20 3501.70 1.50 Area code : 3
FDEPTH: 308 322 GearCond.code:
BDEPTH: 308 322 Validity code:
Towing dir: 360° Wire out: 930 m Speed: 33 kn*10

Sorted: 271 Kg Total catch: 929.01 CATCH/HOUR: 1858.02

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 1320.80 | 1634 | 71.09 | 2196 |
| Helicolenus dactylopterus | 210.40 | 3950 | 11.32 | |
| Merluccius capensis, male | 197.32 | 280 | 10.62 | 2197 |
| Galeus polli | 27.02 | 578 | 1.45 | |
| Lophius vaillanti | 19.60 | 8 | 1.05 | 2199 |
| Pterothrissus belloci | 18.26 | 96 | 0.98 | |
| Coelorinchus coelorhinc. polli | 15.80 | 810 | 0.85 | |
| Squalus megalops | 12.58 | 34 | 0.68 | |
| Lophius vomerinus | 7.78 | 10 | 0.42 | 2198 |
| Chlorophthalmus atlanticus | 7.30 | 206 | 0.39 | |
| PORTUNIDAE | 5.74 | 124 | 0.31 | |
| Dentex macrophthalmus | 5.18 | 20 | 0.28 | 2200 |
| Synagrops microlepis | 5.06 | 438 | 0.27 | |
| Trigla lyra | 3.28 | 14 | 0.18 | |
| Aristeus varidens | 0.82 | 478 | 0.04 | |
| Trachurus capensis | 0.54 | 6 | 0.03 | |
| Coelorinchus matamua | 0.40 | 20 | 0.02 | |
| Laemonema laureysi | 0.14 | 28 | 0.01 | |
| Total | 1858.02 | | 99.99 | |

PROJECT STATION: 649

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1831

| | start | stop | duration | | | Long E 1134 |
|---|---|---|---|---|---|---|
| TIME | :10:47:00 | 11:02:00 | 15 (min) | Purpose code: | 3 | |
| LOG | :3510.10 | 3511.00 | 0.90 | Area code : | 3 | |
| FDEPTH: | 220 | 210 | | GearCond.code: | | |
| BDEPTH: | 220 | 210 | | Validity code: | | |

Towing dir: 85° Wire out: 650 m Speed: 36 kn*10

Sorted: 299 Kg Total catch: 321.46 CATCH/HOUR: 1285.84

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 466.40 | 1252 | 36.27 | 2201 |
| Dentex macrophthalmus | 220.20 | 1164 | 17.12 | 2204 |
| Trachurus capensis | 215.00 | 1280 | 16.72 | 2203 |
| Merluccius capensis, male | 109.40 | 488 | 8.51 | 2202 |
| Pterothrissus belloci | 103.80 | 812 | 8.07 | |
| Synagrops microlepis | 67.20 | 5536 | 5.23 | |
| Chlorophthalmus atlanticus | 32.96 | 1504 | 2.56 | |
| Squalus megalops | 32.60 | 112 | 2.54 | |
| Trigla lyra | 10.28 | 48 | 0.80 | |
| Helicolenus dactylopterus | 9.12 | 96 | 0.71 | |
| Raja miraletus | 8.60 | 12 | 0.67 | |
| Lophius vomerinus | 4.96 | 4 | 0.39 | 2205 |
| Todarodes sagittatus | 3.12 | 8 | 0.24 | |
| PORTUNIDAE | 2.16 | 56 | 0.17 | |
| Austroglossus microlepis | 0.04 | 4 | | |
| Total | 1285.84 | | 100.00 | |

PROJECT STATION: 650

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1830

| | start | stop | duration | | | Long E 1139 |
|---|---|---|---|---|---|---|
| TIME | :12:16:00 | 12:40:00 | 24 (min) | Purpose code: | 3 | |
| LOG | :3516.80 | 3518.00 | 1.20 | Area code : | 3 | |
| FDEPTH: | 182 | 179 | | GearCond.code: | | |
| BDEPTH: | 182 | 179 | | Validity code: | | |

Towing dir: 80° Wire out: 600 m Speed: 30 kn*10

Sorted: 150 Kg Total catch: 701.98 CATCH/HOUR: 1754.95

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1002.50 | 14750 | 57.12 | 2209 |
| Merluccius capensis, female | 232.93 | 1040 | 13.27 | 2206 |
| Synagrops microlepis | 165.00 | 21800 | 9.40 | |
| Dentex macrophthalmus | 135.00 | 950 | 7.69 | 2210 |
| Merluccius capensis, male | 62.50 | 395 | 3.56 | 2205 |
| Todarodes sagittatus | 36.00 | 50 | 2.05 | |
| Chlorophthalmus punctatus | 34.50 | 2500 | 1.97 | |
| Pterothrissus belloci | 28.50 | 150 | 1.62 | |
| Sufflogobius bibarbatus | 28.00 | 800 | 1.60 | |
| PORTUNIDAE | 22.50 | 100 | 1.28 | |
| Lophius vomerinus | 4.90 | 8 | 0.28 | |
| Austroglossus microlepis | 2.63 | 5 | 0.15 | 2207 |
| Total | 1754.96 | | 99.99 | |

PROJECT STATION: 651

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1827

| | start | stop | duration | | | Long E 1144 |
|---|---|---|---|---|---|---|
| TIME | :13:43:00 | 14:16:00 | 33 (min) | Purpose code: | 3 | |
| LOG | :3523.80 | 3525.60 | 1.80 | Area code : | 3 | |
| FDEPTH: | 138 | 139 | | GearCond.code: | | |
| BDEPTH: | 138 | 139 | | Validity code: | | |

Towing dir: 360° Wire out: 500 m Speed: 33 kn*10

Sorted: 159 Kg Total catch: 2820.85 CATCH/HOUR: 5128.82

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Dentex macrophthalmus | 3621.67 | 36811 | 70.61 | 2214 |
| Trachurus capensis | 1325.00 | 25407 | 25.83 | 2213 |
| Merluccius capensis, female | 84.16 | 675 | 1.64 | 2212 |
| Merluccius capensis, male | 35.98 | 256 | 0.70 | 2211 |
| Chelidonichthys capensis | 33.40 | 64 | 0.65 | |
| Sufflogobius bibarbatus | 21.53 | 707 | 0.42 | |
| Trigla lyra | 5.78 | 33 | 0.11 | |
| PORTUNIDAE | 1.29 | 129 | 0.03 | |
| Total | 5128.81 | | 99.99 | |

PROJECT STATION: 652

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1813

| | start | stop | duration | | | Long E 1148 |
|---|---|---|---|---|---|---|
| TIME | :16:00:00 | 16:30:00 | 30 (min) | Purpose code: | 3 | |
| LOG | :3539.10 | 3540.60 | 1.50 | Area code : | 3 | |
| FDEPTH: | 72 | 63 | | GearCond.code: | | |
| BDEPTH: | 72 | 63 | | Validity code: | | |

Towing dir: 360° Wire out: 300 m Speed: 30 kn*10

Sorted: 72 Kg Total catch: 1770.71 CATCH/HOUR: 3541.42

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 3316.00 | 137048 | 93.63 | 2215 |
| Chelidonichthys capensis | 102.12 | 346 | 2.88 | |
| Etrumeus whiteheadi | 44.40 | 1430 | 1.25 | 2217 |
| Spondyliosoma cantharus | 43.40 | 50 | 1.23 | |
| Chelidonichthys queketti | 15.78 | 50 | 0.45 | |
| Zeus faber | 8.38 | 50 | 0.24 | |
| Dentex macrophthalmus | 7.40 | 98 | 0.21 | 2216 |
| Engraulis capensis | 3.94 | 198 | 0.11 | 2218 |
| Total | 3541.42 | | 100.00 | |

PROJECT STATION: 653

DATE:19/11/94 GEAR TYPE: BT No: POSITION:Lat S 1807

| | start | stop | duration | | | Long E 1135 |
|---|---|---|---|---|---|---|
| TIME | :18:10:00 | 18:40:00 | 30 (min) | Purpose code: | 3 | |
| LOG | :3554.20 | 3555.80 | 1.60 | Area code : | 3 | |
| FDEPTH: | 199 | 213 | | GearCond.code: | | |
| BDEPTH: | 199 | 213 | | Validity code: | | |

Towing dir: 270° Wire out: 600 m Speed: 31 kn*10

Sorted: 93 Kg Total catch: 1048.86 CATCH/HOUR: 2097.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Chlorophthalmus atlanticus | 523.60 | 1712 | 24.96 | |
| Dentex macrophthalmus | 306.00 | 2652 | 14.59 | 2222 |
| Helicolenus dactylopterus | 217.60 | 2788 | 10.37 | |
| Synagrops microlepis | 187.68 | 25024 | 8.95 | |
| Pterothrissus belloci | 172.72 | 1836 | 8.23 | |
| Raja leopardus | 170.00 | 68 | 8.10 | |
| Trachurus capensis | 153.68 | 1708 | 7.33 | 2223 |
| RAJIDAE | 122.40 | 136 | 5.83 | |
| Merluccius capensis, female | 85.00 | 266 | 4.05 | 2219 |
| Trigla lyra | 75.48 | 476 | 3.60 | |
| Merluccius capensis, male | 25.20 | 94 | 1.20 | 2220 |
| Squalus megalops | 22.44 | 68 | 1.07 | |
| Lophius vomerinus | 9.40 | 10 | 0.45 | 2221 |
| PORTUNIDAE | 8.84 | 680 | 0.42 | |
| Chatrabus melanurus | 7.48 | 68 | 0.36 | |
| Lepidopus caudatus | 6.12 | 68 | 0.29 | |
| Sepia australis | 2.04 | 204 | 0.10 | |
| Austroglossus microlepis | 1.36 | 136 | 0.06 | |
| Engraulis capensis | 0.68 | 68 | 0.03 | |
| Total | 2097.72 | | 99.99 | |

PROJECT STATION: 654

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1807

| | start | stop | duration | | | Long E 1130 |
|---|---|---|---|---|---|---|
| TIME | :06:31:00 | 07:01:00 | 30 (min) | Purpose code: | 3 | |
| LOG | :3581.50 | 3583.00 | 1.50 | Area code : | 3 | |
| FDEPTH: | 302 | 287 | | GearCond.code: | | |
| BDEPTH: | 302 | 287 | | Validity code: | | |

Towing dir: 360° Wire out: 930 m Speed: 32 kn*10

Sorted: 156 Kg Total catch: 390.70 CATCH/HOUR: 781.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 312.30 | 5542 | 39.97 | |
| Merluccius capensis, female | 248.00 | 330 | 31.74 | 2224 |
| Coelorinchus coelorhinc. polli | 67.32 | 3186 | 8.62 | |
| Dentex macrophthalmus | 25.74 | 108 | 3.29 | |
| Lophius vomerinus | 19.60 | 24 | 2.51 | 2226 |
| Chlorophthalmus atlanticus | 17.64 | 468 | 2.26 | |
| Galeus polli | 17.46 | 306 | 2.23 | |
| Squalus megalops | 16.38 | 36 | 2.10 | |
| Merluccius capensis, male | 16.20 | 28 | 2.07 | 2225 |
| Trigla lyra | 9.54 | 54 | 1.22 | |
| Pterothrissus belloci | 9.36 | 36 | 1.20 | |
| Synagrops microlepis | 6.66 | 558 | 0.85 | |
| PORTUNIDAE | 6.48 | 234 | 0.83 | |
| Laemonema laureysi | 5.76 | 126 | 0.74 | |
| Aristeus varidens | 2.34 | 936 | 0.30 | |
| Lophius vaillanti | 0.58 | 2 | 0.07 | 2227 |
| Total | 781.36 | | 100.00 | |

PROJECT STATION: 655

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1807

| | start | stop | duration | | | Long E 1126 |
|---|---|---|---|---|---|---|
| TIME | :08:14:00 | 08:44:00 | 30 (min) | Purpose code: | 3 | |
| LOG | :3588.50 | 3590.10 | 1.60 | Area code : | 3 | |
| FDEPTH: | 470 | 475 | | GearCond.code: | | |
| BDEPTH: | 470 | 475 | | Validity code: | | |

Towing dir: 360° Wire out:1250 m Speed: 30 kn*10

Sorted: 152 Kg Total catch: 932.57 CATCH/HOUR: 1865.14

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 824.60 | 6634 | 44.21 | |
| SQUALIDAE | 266.60 | 62 | 14.29 | |
| Hoplostethus cadenati | 173.60 | 7750 | 9.31 | |
| Nezumia sp. | 93.00 | 4030 | 4.99 | |
| Lophius vaillanti | 90.86 | 25 | 4.87 | 2232 |
| Helicolenus dactylopterus | 89.90 | 744 | 4.82 | |
| Merluccius capensis, female | 71.50 | 76 | 3.83 | 2228 |
| Chaceon maritae | 43.00 | 186 | 2.31 | |
| Merluccius paradoxus, female | 37.00 | 64 | 1.98 | 2233 |
| Squalus megalops | 34.10 | 62 | 1.83 | |
| Aristeus varidens | 27.28 | 268 | 1.46 | |
| Lophius vomerinus | 25.00 | 12 | 1.34 | 2231 |
| Merluccius polli, female | 24.60 | 30 | 1.32 | 2230 |
| RAJIDAE | 24.18 | 62 | 1.30 | |
| Yarella blackfordi * | 23.56 | 1240 | 1.26 | |
| Epigonus denticulatus | 8.68 | 434 | 0.47 | |
| Merluccius capensis, male | 5.20 | 4 | 0.28 | 2229 |
| Ebinania costaecanariæ | 1.86 | 62 | 0.10 | |
| NEMICHTHYIDAE | 0.62 | 62 | 0.03 | |
| Total | 1865.14 | | 100.00 | |

PROJECT STATION: 656

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1759
start stop duration Long E 1124
TIME :09:58:00 10:28:00 30 (min) Purpose code: 3
LOG :3597.10 3598.60 1.50 Area code : 3
FDEPTH: 320 322 GearCond.code:
BDEPTH: 320 322 Validity code:
Towing dir: 340° Wire out: 960 m Speed: 30 kn*10

Sorted: 155 Kg Total catch: 376.86 CATCH/HOUR: 753.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 312.00 | 4786 | 41.39 | |
| Merluccius capensis, female | 169.30 | 190 | 22.46 | 2234 |
| Galeus polli | 53.00 | 660 | 7.03 | |
| Lophius vomerinus | 46.10 | 38 | 6.12 | 2236 |
| Coelorinchus coelorhinc. polli | 40.20 | 1620 | 5.33 | |
| Merluccius capensis, male | 34.70 | 38 | 4.60 | 2235 |
| Laemonema laureysi | 27.40 | 440 | 3.64 | |
| Squalus megalops | 15.00 | 20 | 1.99 | |
| Hoplostethus cadenati | 12.60 | 2800 | 1.67 | |
| Lophius vaillanti | 10.80 | 4 | 1.43 | 2237 |
| Shrimps, small, non comm. | 9.40 | 5640 | 1.25 | |
| Synagrops microlepis | 8.40 | 520 | 1.11 | |
| Zeus faber | 8.00 | 20 | 1.06 | |
| PORTUNIDAE | 3.40 | 100 | 0.45 | |
| Chlorophthalmus atlanticus | 2.40 | 60 | 0.32 | |
| Nezumia sp. | 0.60 | 40 | 0.08 | |
| Chaceon maritae | 0.42 | 2 | 0.06 | |
| Total | 753.72 | | 99.99 | |

PROJECT STATION: 657

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1753
start stop duration Long E 1120
TIME :11:29:00 11:44:00 15 (min) Purpose code: 3
LOG :3604.20 3605.00 0.80 Area code : 3
FDEPTH: 555 605 GearCond.code:
BDEPTH: 555 605 Validity code:
Towing dir: 360° Wire out:1500 m Speed: 26 kn*10

Sorted: 100 Kg Total catch: 824.84 CATCH/HOUR: 3299.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 1316.00 | 6832 | 39.89 | |
| Deania profundorum | 800.80 | 224 | 24.27 | |
| Nezumia sp. | 370.72 | 13776 | 11.24 | |
| Notacanthus sexspinis | 159.04 | 1120 | 4.82 | |
| Merluccius paradoxus, female | 145.20 | 132 | 4.40 | 2239 |
| Helicolenus dactylopterus | 82.80 | 448 | 2.51 | |
| Scymnodon squamulosus | 63.84 | 112 | 1.93 | |
| Lophius vomerinus | 60.40 | 16 | 1.83 | 2240 |
| Lophius vaillanti | 55.20 | 16 | 1.67 | 2241 |
| Hoplostethus cadenati | 53.76 | 1792 | 1.63 | |
| Bathyuroconger vicinus | 36.96 | 1120 | 1.12 | |
| Merluccius polli, female | 34.80 | 40 | 1.05 | 2238 |
| Chaceon maritae | 25.76 | 112 | 0.78 | |
| Trachurus capensis | 22.40 | 336 | 0.68 | 2242 |
| Lamprogrammus exutus | 20.16 | 448 | 0.61 | |
| Alepocephalus sp. | 19.04 | 1232 | 0.58 | |
| Deepwater fish mixture | 16.80 | 560 | 0.51 | |
| Ebinania costaecanarie | 13.44 | 224 | 0.41 | |
| NEMICHTHYIDAE | 2.24 | 112 | 0.07 | |
| Total | 3299.36 | | 100.00 | |

PROJECT STATION: 658

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1750
start stop duration Long E 1126
TIME :13:25:00 13:55:00 30 (min) Purpose code: 3
LOG :3614.50 3616.10 1.60 Area code : 3
FDEPTH: 236 238 GearCond.code:
BDEPTH: 236 238 Validity code:
Towing dir: 330° Wire out: 750 m Speed: 32 kn*10

Sorted: 193 Kg Total catch: 1905.78 CATCH/HOUR: 3811.56

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 729.26 | 1454 | 19.13 | 2244 |
| Helicolenus dactylopterus | 624.08 | 9508 | 16.37 | |
| Chlorophthalmus atlanticus | 513.88 | 11832 | 13.48 | |
| Merluccius capensis, male | 481.58 | 1160 | 12.63 | 2243 |
| Trachurus capensis | 415.28 | 1972 | 10.90 | 2246 |
| Dentex macrophthalmus | 285.36 | 1740 | 7.49 | 2247 |
| Squalus megalops | 255.20 | 696 | 6.70 | |
| Pterothrissus belloci | 111.36 | 464 | 2.92 | |
| Trigla lyra | 111.36 | 580 | 2.92 | |
| Synagrops microlepis | 107.88 | 7308 | 2.83 | |
| Hyperoglyphe moselii | 78.88 | 116 | 2.07 | |
| Coelorinchus coelorhinc. polli | 75.40 | 2088 | 1.98 | |
| Mystriophis rostellatus | 17.40 | 116 | 0.46 | |
| Lophius vomerinus | 4.64 | 6 | 0.12 | 2245 |
| Total | 3811.56 | | 100.00 | |

PROJECT STATION: 659

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1749
start stop duration Long E 1134
TIME :15:26:00 15:56:00 30 (min) Purpose code: 3
LOG :3626.20 3628.10 1.90 Area code : 3
FDEPTH: 157 167 GearCond.code:
BDEPTH: 157 167 Validity code:
Towing dir: 360° Wire out: 600 m Speed: 33 kn*10

Sorted: 74 Kg Total catch: 2571.03 CATCH/HOUR: 5142.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Dentex macrophthalmus | 1821.60 | 18216 | 35.43 | 2250 |
| Trachurus capensis | 1801.80 | 40590 | 35.04 | 2251 |
| Merluccius capensis, female | 853.38 | 3326 | 16.60 | 2249 |
| Merluccius capensis, male | 217.80 | 1070 | 4.24 | 2248 |
| Pterothrissus belloci | 158.40 | 2772 | 3.08 | |
| Trigla lyra | 136.62 | 792 | 2.66 | |
| Synagrops microlepis | 102.96 | 14652 | 2.00 | |
| Chlorophthalmus punctatus | 27.72 | 4356 | 0.54 | |
| Chatrabus melanurus | 13.86 | 198 | 0.27 | |
| PORTUNIDAE | 7.92 | 594 | 0.15 | |
| Total | 5142.06 | | 100.01 | |

PROJECT STATION: 660

DATE:20/11/94 GEAR TYPE: BT No: POSITION:Lat S 1732
start stop duration Long E 1136
TIME :17:55:00 18:25:00 30 (min) Purpose code: 3
LOG :3643.50 3645.00 1.50 Area code : 3
FDEPTH: 115 112 GearCond.code:
BDEPTH: 115 112 Validity code:
Towing dir: 360° Wire out: 450 m Speed: kn*10

Sorted: 62 Kg Total catch: 722.84 CATCH/HOUR: 1445.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 681.60 | 27974 | 47.15 | 2255 |
| Dentex macrophthalmus | 679.20 | 9120 | 46.98 | 2254 |
| Merluccius capensis, female | 50.40 | 228 | 3.49 | 2252 |
| Merluccius capensis, male | 17.20 | 96 | 1.19 | 2253 |
| Trigla lyra | 5.76 | 48 | 0.40 | |
| Sepia australis | 3.84 | 96 | 0.27 | |
| Helicolenus dactylopterus | 2.40 | 48 | 0.17 | |
| Etrumeus whiteheadi | 2.40 | 48 | 0.17 | 2256 |
| Todaropsis eblanae | 1.92 | 48 | 0.13 | |
| Austroglossus microlepis | 0.96 | 48 | 0.07 | 2257 |
| Total | 1445.68 | | 100.02 | |

PROJECT STATION: 661

DATE:21/11/94 GEAR TYPE: BT No: POSITION:Lat S 1725
start stop duration Long E 1137
TIME :06:34:00 07:04:00 30 (min) Purpose code: 3
LOG :3672.30 3673.80 1.50 Area code : 3
FDEPTH: 141 145 GearCond.code:
BDEPTH: 141 145 Validity code:
Towing dir: 340° Wire out: 430 m Speed: 30 kn*10

Sorted: 97 Kg Total catch: 958.74 CATCH/HOUR: 1917.48

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Dentex macrophthalmus | 1047.20 | 13754 | 54.61 | 2263 |
| Trachurus capensis | 519.52 | 7072 | 27.09 | 2262 |
| Trigla lyra | 106.76 | 884 | 5.57 | |
| Merluccius capensis, female | 104.30 | 442 | 5.44 | 2259 |
| Merluccius capensis, male | 38.50 | 216 | 2.01 | 2258 |
| Merluccius capensis, male | 35.36 | 476 | 1.84 | 2260 |
| Merluccius capensis, female | 32.64 | 340 | 1.70 | 2261 |
| Pterothrissus belloci | 24.48 | 612 | 1.28 | |
| Synagrops microlepis | 7.48 | 1292 | 0.39 | |
| Merluccius capensis, juveniles | 0.68 | 68 | 0.04 | 2264 |
| Galeichthys feliceps | 0.56 | 2 | 0.03 | |
| Total | 1917.48 | | 100.00 | |

PROJECT STATION: 662

DATE:21/11/94 GEAR TYPE: BT No: POSITION:Lat S 1724
start stop duration Long E 1125
TIME :08:17:00 08:47:00 30 (min) Purpose code: 3
LOG :3680.70 3682.20 1.50 Area code : 3
FDEPTH: 245 268 GearCond.code:
BDEPTH: 245 268 Validity code:
Towing dir: 290° Wire out: 750 m Speed: 32 kn*10

Sorted: 303 Kg Total catch: 1303.54 CATCH/HOUR: 2607.08

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, female | 928.36 | 1788 | 35.61 | 2265 |
| Helicolenus dactylopterus | 377.12 | 2744 | 14.47 | |
| Chlorophthalmus atlanticus | 275.20 | 6802 | 10.56 | |
| Dentex macrophthalmus | 224.40 | 1006 | 8.61 | 2268 |
| Squalus megalops | 215.80 | 726 | 8.28 | |
| Merluccius capensis, male | 199.94 | 550 | 7.67 | 2266 |
| Synagrops microlepis | 155.20 | 12314 | 5.95 | |
| Pterothrissus belloci | 141.90 | 852 | 5.44 | |
| Trigla lyra | 21.68 | 120 | 0.83 | |
| Hyperoglyphe moselii | 11.86 | 18 | 0.45 | |
| Galeus polli | 10.58 | 104 | 0.41 | |
| Aristeus varidens | 10.40 | 1738 | 0.40 | |
| Mustelus palumbes | 9.54 | 16 | 0.37 | |
| Coelorinchus coelorhinc. polli | 9.02 | 248 | 0.35 | |
| Trachurus capensis | 7.74 | 94 | 0.30 | 2267 |
| Raja miraletus | 5.24 | 8 | 0.20 | |
| Austroglossus microlepis | 1.98 | 34 | 0.08 | 2269 |
| Malacocephalus laevis | 1.12 | 34 | 0.04 | |
| Total | 2607.08 | | 100.02 | |

PROJECT STATION: 663

DATE:21/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 1124
start stop duration Long E 1118
TIME :10:29:00 10:59:00 30 (min) Purpose code: 3
LOG :3690.00 3691.60 1.60 Area code : 3
FDEPTH: 430 433 GearCond.code:
BDEPTH: 430 433 Validity code:
Towing dir: 360° Wire out:1250 m Speed: 30 kn*10

Sorted: 304 Kg Total catch: 863.01 CATCH/HOUR: 1726.02

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Hoplostethus cadenati | 344.24 | 17472 | 19.94 | |
| Helicolenus dactylopterus | 324.48 | 1820 | 18.80 | |
| Merluccius capensis, female | 320.80 | 318 | 18.59 | 2271 |
| Trachyrincus scabrus | 284.96 | 2236 | 16.51 | |
| Nezumia sp. | 122.20 | 4472 | 7.08 | |
| Merluccius polli, female | 116.40 | 142 | 6.74 | 2273 |
| Merluccius paradoxus, female | 68.50 | 142 | 3.97 | 2272 |
| Chaceon maritae | 66.56 | 312 | 3.86 | |
| Lophius vaillanti | 44.60 | 12 | 2.58 | 2274 |
| Merluccius capensis, male | 13.00 | 12 | 0.75 | 2270 |
| Ebinania costaecanarie | 9.36 | 104 | 0.54 | |
| Chlorophthalmus atlanticus | 3.64 | 52 | 0.21 | |
| Laemonema laureysi | 3.64 | 104 | 0.21 | |
| Deepwater fish mixture | 2.08 | 104 | 0.12 | |
| Lepidopus caudatus | 0.52 | 52 | 0.03 | |
| Epigonus denticulatus | 0.52 | 52 | 0.03 | |
| ALEPOCEPHALIDAE | 0.52 | 208 | 0.03 | |
| Total | 1726.02 | | 99.99 | |

PROJECT STATION: 664

DATE:21/11/94 GEAR TYPE: BT No: POSITION:Lat S 1733
start stop duration Long E 1120
TIME :13:31:00 14:01:00 30 (min) Purpose code: 3
LOG :3707.00 3708.70 1.70 Area code : 3
FDEPTH: 412 474 GearCond.code:
BDEPTH: 412 474 Validity code:
Towing dir: 345° Wire out:1250 m Speed: 34 kn*10

Sorted: 264 Kg Total catch: 1549.42 CATCH/HOUR: 3098.84

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Hoplostethus cadenati | 1380.30 | 55986 | 44.54 | |
| Helicolenus dactylopterus | 530.62 | 2580 | 17.12 | |
| Trachyrincus scabrus | 417.10 | 2580 | 13.46 | |
| Merluccius capensis, female | 321.20 | 316 | 10.37 | 2276 |
| Nezumia sp. | 132.44 | 4300 | 4.27 | |
| Coelorinchus braueri | 64.50 | 516 | 2.08 | |
| Laemonema laureysi | 59.34 | 344 | 1.91 | |
| Lophius vomerinus | 49.80 | 20 | 1.61 | 2280 |
| Epigonus denticulatus | 46.44 | 602 | 1.50 | |
| Lophius vaillanti | 31.10 | 16 | 1.00 | 2279 |
| Merluccius polli, female | 29.80 | 40 | 0.96 | 2278 |
| Merluccius capensis, male | 21.80 | 26 | 0.70 | 2275 |
| Merluccius paradoxus, female | 14.40 | 26 | 0.46 | 2277 |
| Total | 3098.84 | | 99.98 | |

PROJECT STATION: 665

DATE:21/11/94 GEAR TYPE: BT No: POSITION:Lat S 1731
start stop duration Long E 1128
TIME :15:58:00 16:04:00 6 (min) Purpose code: 3
LOG :3720.50 3720.80 0.30 Area code : 3
FDEPTH: 176 176 GearCond.code:
BDEPTH: 176 176 Validity code:
Towing dir: 345° Wire out: 600 m Speed: 3 kn*10

Sorted: 40 Kg Total catch: 475.74 CATCH/HOUR: 4757.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 2800.00 | 51860 | 58.86 | 2284 |
| Dentex macrophthalmus | 856.00 | 7200 | 17.99 | 2282 |
| Chlorophthalmus atlanticus | 362.00 | 33800 | 7.61 | |
| Merluccius capensis, female | 202.90 | 790 | 4.26 | 2280 |
| Synagrops microlepis | 188.00 | 27000 | 3.95 | |
| Helicolenus dactylopterus | 144.00 | 3600 | 3.03 | |
| Mustelus palumbes | 68.00 | 200 | 1.43 | |
| Merluccius capensis, male | 38.50 | 180 | 0.81 | 2281 |
| SCORPAENIDAE | 36.00 | 400 | 0.76 | |
| Trigla lyra | 28.00 | 600 | 0.59 | |
| Sepia australis | 18.00 | 400 | 0.38 | |
| Pterothrissus belloci | 16.00 | 200 | 0.34 | |
| Total | 4757.40 | | 100.01 | |

PROJECT STATION: 666

DATE:22/11/94 GEAR TYPE: BT No: POSITION:Lat S 1907
start stop duration Long E 1123
TIME :04:21:00 04:51:00 30 (min) Purpose code: 3
LOG :3810.80 3812.00 1.50 Area code : 3
FDEPTH: 549 550 GearCond.code:
BDEPTH: 549 550 Validity code:
Towing dir: 350° Wire out:1450 m Speed: 31 kn*10

Sorted: 295 Kg Total catch: 698.42 CATCH/HOUR: 1396.84

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachyrincus scabrus | 537.70 | 2316 | 38.49 | |
| Merluccius paradoxus, female | 416.90 | 1098 | 29.85 | 2285 |
| Nezumia sp. | 162.26 | 4124 | 11.62 | |
| Raja confundens | 76.00 | 76 | 5.44 | |
| Lophius vomerinus | 60.80 | 22 | 4.35 | 2289 |
| SQUALIDAE | 42.32 | 16 | 3.03 | |
| Helicolenus dactylopterus | 31.16 | 342 | 2.23 | |
| Trachurus capensis | 17.10 | 228 | 1.22 | 2290 |
| Merluccius paradoxus, male | 16.70 | 86 | 1.20 | 2283 |
| Yarrella blackfordi | 11.40 | 1938 | 0.82 | |
| Epigonus telescopus | 5.70 | 38 | 0.41 | |
| Lophius vaillanti | 4.14 | 2 | 0.30 | 2287 |
| Trachipterus jacksonensis | 3.54 | 2 | 0.25 | |
| Laemonema laureysi | 2.28 | 38 | 0.16 | |
| Ebinania costaecanarie | 2.28 | 76 | 0.16 | |
| Raja caudaspinosa | 2.28 | 38 | 0.16 | |
| Hoplostethus cadenati | 2.28 | 380 | 0.16 | |
| Merluccius polli, female | 2.00 | 2 | 0.14 | 2286 |
| Total | 1396.84 | | 99.99 | |

PROJECT STATION: 667

DATE:22/11/94 GEAR TYPE: BT No: POSITION:Lat S 1904
start stop duration Long E 1128
TIME :06:34:00 07:04:00 30 (min) Purpose code: 3
LOG :3822.10 3823.10 1.50 Area code : 3
FDEPTH: 350 354 GearCond.code:
BDEPTH: 350 354 Validity code:
Towing dir: 340° Wire out:1000 m Speed: 32 kn*10

Sorted: 61 Kg Total catch: 157.64 CATCH/HOUR: 315.28

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Helicolenus dactylopterus | 100.80 | 448 | 31.97 | |
| Pterothrissus belloci | 84.00 | 372 | 26.64 | |
| Merluccius capensis, female | 32.80 | 36 | 10.40 | 2291 |
| Chlorophthalmus atlanticus | 19.20 | 512 | 6.09 | |
| Lophius vomerinus | 16.70 | 18 | 5.30 | 2293 |
| Laemonema laureysi | 12.16 | 256 | 3.86 | |
| Coelorinchus coelorhinc. polli | 8.80 | 416 | 2.79 | |
| Coelorinchus fasciatus | 6.88 | 200 | 2.18 | |
| Lophius vaillanti | 6.78 | 2 | 2.15 | 2294 |
| Todarodes sagittatus | 6.32 | 40 | 2.00 | |
| Schedophilus huttoni | 6.00 | 16 | 1.90 | |
| Dentex macrophthalmus | 3.36 | 16 | 1.07 | 2295 |
| Nezumia sp. | 2.96 | 104 | 0.94 | |
| Trachyrincus scabrus | 2.88 | 16 | 0.91 | |
| Merluccius capensis, male | 1.72 | 2 | 0.55 | 2292 |
| Synagrops microlepis | 1.68 | 112 | 0.53 | |
| Raja confundens | 0.88 | 8 | 0.28 | |
| Galeus polli | 0.48 | 8 | 0.15 | |
| Hoplostethus cadenati | 0.40 | 16 | 0.13 | |
| C R A B S | 0.24 | 8 | 0.08 | |
| Notacanthus sexspinis | 0.16 | 8 | 0.05 | |
| Argyropelecus affinis | 0.08 | 8 | 0.03 | |
| Total | 315.28 | | 100.00 | |

PROJECT STATION: 668

DATE:22/11/94 GEAR TYPE: BT No: POSITION:Lat S 1902
start stop duration Long E 1133
TIME :08:21:00 08:51:00 30 (min) Purpose code: 3
LOG :3827.90 3829.40 1.50 Area code : 3
FDEPTH: 273 270 GearCond.code:
BDEPTH: 273 270 Validity code:
Towing dir: 30° Wire out: 770 m Speed: 30 kn*10

Sorted: 258 Kg Total catch: 615.37 CATCH/HOUR: 1230.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Chlorophthalmus atlanticus | 320.84 | 11882 | 26.07 | |
| Merluccius capensis, female | 300.70 | 752 | 24.43 | 2296 |
| Dentex macrophthalmus | 197.86 | 1534 | 16.08 | 2300 |
| Merluccius capensis, male | 129.20 | 416 | 10.50 | 2297 |
| Trachurus capensis | 105.56 | 936 | 8.58 | 2299 |
| Synagrops microlepis | 66.30 | 5754 | 5.39 | |
| Helicolenus dactylopterus | 45.76 | 962 | 3.72 | |
| Lophius vomerinus | 27.60 | 30 | 2.24 | 2298 |
| Todarodes sagittatus | 18.20 | 182 | 1.48 | |
| Pterothrissus belloci | 16.38 | 130 | 1.33 | |
| Coelorinchus coelorhinc. polli | 2.08 | 104 | 0.17 | |
| Coelorinchus fasciatus | 0.26 | 26 | 0.02 | |
| Total | 1230.74 | | 100.01 | |

PROJECT STATION: 669

DATE:22/11/94 GEAR TYPE: BT No: POSITION:Lat S 1859
start stop duration Long E 1140
TIME :10:13:00 10:43:00 30 (min) Purpose code: 3
LOG :3836.60 3838.10 1.50 Area code : 3
FDEPTH: 291 290 GearCond.code:
BDEPTH: 291 290 Validity code:
Towing dir: 50° Wire out: 830 m Speed: 30 kn*10

Sorted: 158 Kg Total catch: 412.73 CATCH/HOUR: 825.46

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 261.00 | 3402 | 31.62 | 2306 |
| Merluccius capensis, female | 169.90 | 640 | 20.58 | 2302 |
| Dentex macrophthalmus | 104.40 | 558 | 12.65 | 2305 |
| Synagrops microlepis | 88.56 | 13014 | 10.73 | |
| Merluccius capensis, male | 77.80 | 370 | 9.43 | 2301 |
| MYCTOPHIDAE | 52.74 | 25370 | 6.39 | |
| Pterothrissus belloci | 24.12 | 468 | 2.92 | |
| Trigla lyra | 21.60 | 90 | 2.62 | |
| Todarodes sagittatus | 8.64 | 72 | 1.05 | |
| Chlorophthalmus atlanticus | 8.28 | 684 | 1.00 | |
| Lophius vomerinus | 4.22 | 10 | 0.51 | 2304 |
| Austroglossus microlepis | 2.58 | 6 | 0.31 | 2303 |
| Helicolenus dactylopterus | 0.72 | 198 | 0.09 | |
| Coelorinchus fasciatus | 0.72 | 36 | 0.09 | |
| Coelorinchus coelorhinc. polli | 0.18 | 54 | 0.02 | |
| Total | 825.46 | | 100.01 | |

PROJECT STATION: 670

DATE:22/11/94 GEAR TYPE: BT No: POSITION:Lat S 1854
start stop duration Long E 1153
TIME :12:38:00 13:08:00 30 (min) Purpose code: 3
LOG :3852.10 3853.80 1.70 Area code : 3
FDEPTH: 225 225 GearCond.code:
BDEPTH: 225 225 Validity code:
Towing dir: 73° Wire out: 750 m Speed: 31 kn*10

Sorted: 85 Kg Total catch: 1964.66 CATCH/HOUR: 3929.32

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 3838.70 | 70012 | 97.69 | 2309 |
| Merluccius capensis, female | 61.64 | 690 | 1.57 | 2308 |
| Merluccius capensis, male | 28.98 | 184 | 0.74 | 2307 |
| Total | 3929.32 | | 100.00 | |

PROJECT STATION: 671

DATE:22/11/94 GEAR TYPE: BT No: POSITION:Lat S 1852
start stop duration Long E 1202
TIME :14:29:00 14:59:00 30 (min) Purpose code: 3
LOG :3863.10 3864.90 1.80 Area code : 3
FDEPTH: 127 125 GearCond.code:
BDEPTH: 127 125 Validity code:
Towing dir: 151° Wire out: 500 m Speed: 33 kn*10

Sorted: 133 Kg Total catch: 2439.02 CATCH/HOUR: 4878.04

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 4805.60 | 152834 | 98.51 | 2310 |
| Sufflogobius bibarbatus | 71.68 | 7314 | 1.47 | |
| Austroglossus microlepis | 0.72 | 36 | 0.01 | 2311 |
| Total | 4878.00 | | 99.99 | |

# Annex IV Instruments and fishing gear used

## Acoustic instruments

The SIMRAD EK500/38 KHZ scientific sounder was used during the survey for estimation of fish density. The EK500 has a built- in digital echo integrator, but the Bergen Echo Integrator system (BEI) was used throughout the survey. The details of the instrument settings are as follows:

Transceiver settings:

| | |
|---|---|
| Bandwidth | Wide (3.8 KHz) |
| Pulse length | Medium (1 ms) |
| Max Power | 2000 Watt |
| Sv Transducer gain | 27.8 dB |
| Ts Transducer gain | 28.1 dB |

Printer settings:

| | |
|---|---|
| Range | 0 - 100 or 0 - 250 m |
| TVG | 20 log R |
| TS Colour min | - 50 dB |
| Sv Colour min | - 64 dB |

An ES38B with a 6.8° -3dB beamwith transducer was used for integration.

A calibration experiment using a standard copper sphere, performed in Baia dos Tigres 23/2 1994 gave the following results: Sv Transducer gain 27.8 dB, Ts Transducer gain 28.1 dB.

Glossary:

Sv Transducer gain: Peak transducer gain assumed during computation of volume backscattering strength.

Ts Transducer gain: Peak transducer gain assumed during computation of target strength.

Ts Colour min: Lower limit of colour scale relative to target strength.

Sv Colour min: Lower limit of colour scale relative to volume back scattering.

## Hydrography

Conductivity, temperature, density and oxygen were sampled regularly at CTD stations with a Seabird CTD-sonde. The salinity was calculated by a computer.

## Fishing gear

The vessel has two different sized 'Åkrahamn' pelagic trawls and one Gisund super bottom trawl. Only the bottom trawl was used during the survey.

The bottom trawl has a headline of 31m, footrope 47m and 20mm meshsize in the codend with an innernet of 10mm meshsize. The estimated headline height is 5m and distance between the wings during towing about 18m. The trawl is equipped with a 12" rubber bobbins gear and $6m^2$, 1500kg 'Egersund' combi-doors. The sweeps are 40m long.

The following drawings show the size of these trawls.

# F/F Dr. Fridtjof Nansen

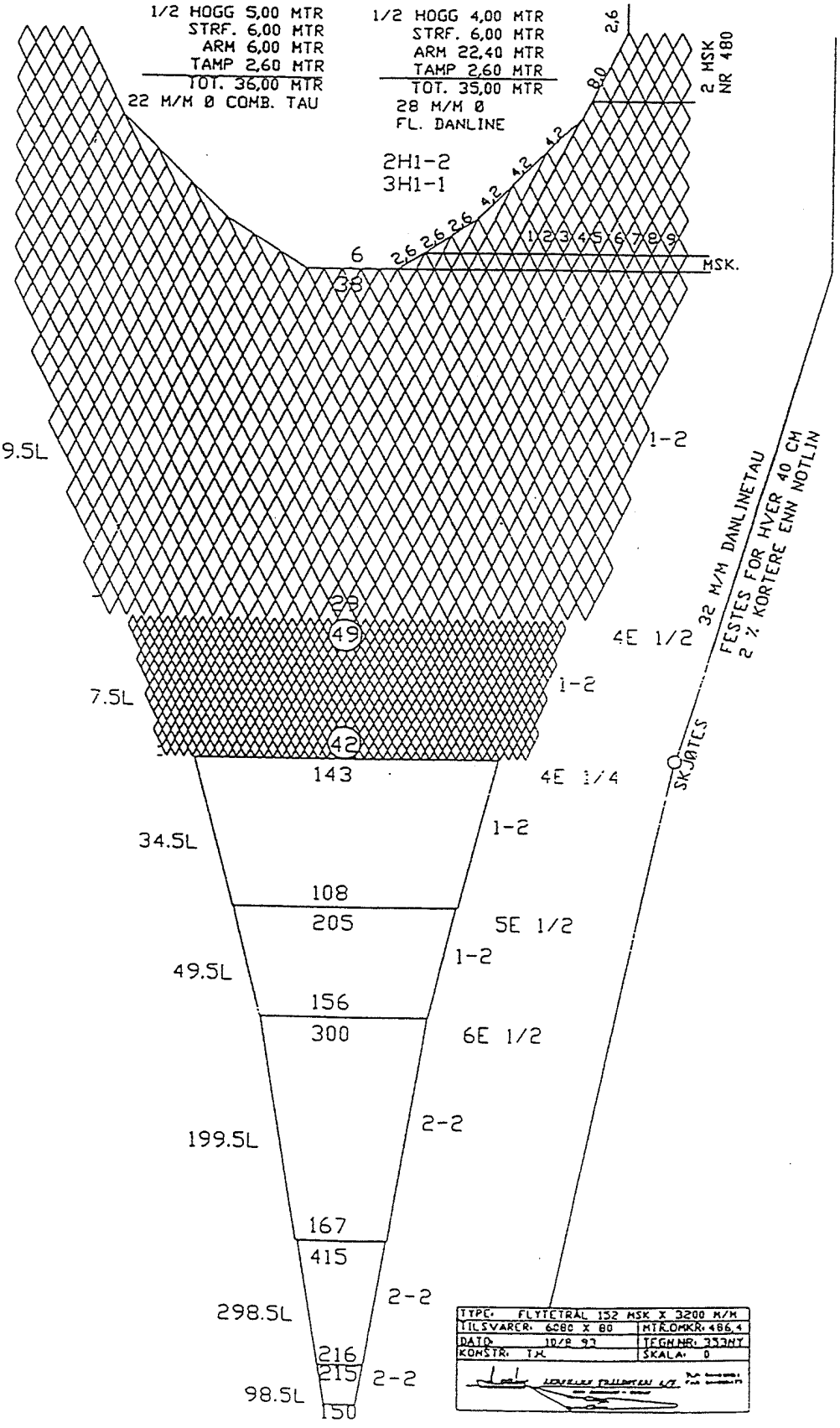
OVER/UNDER/SIDER

OVERDEL:
50 STK 11" PLASTKULER
UNDERDEL
14 M/M WIRE OMSP. MED
14 M/M BLYTAU
+ KJETTING.
TOTAL VEKT UNDER 400 KG.

1/2 HOGG 5,00 MTR
STRF. 6,00 MTR
ARM 6,00 MTR
TAMP 2,60 MTR
TOT. 36,00 MTR
22 M/M Ø COMB. TAU

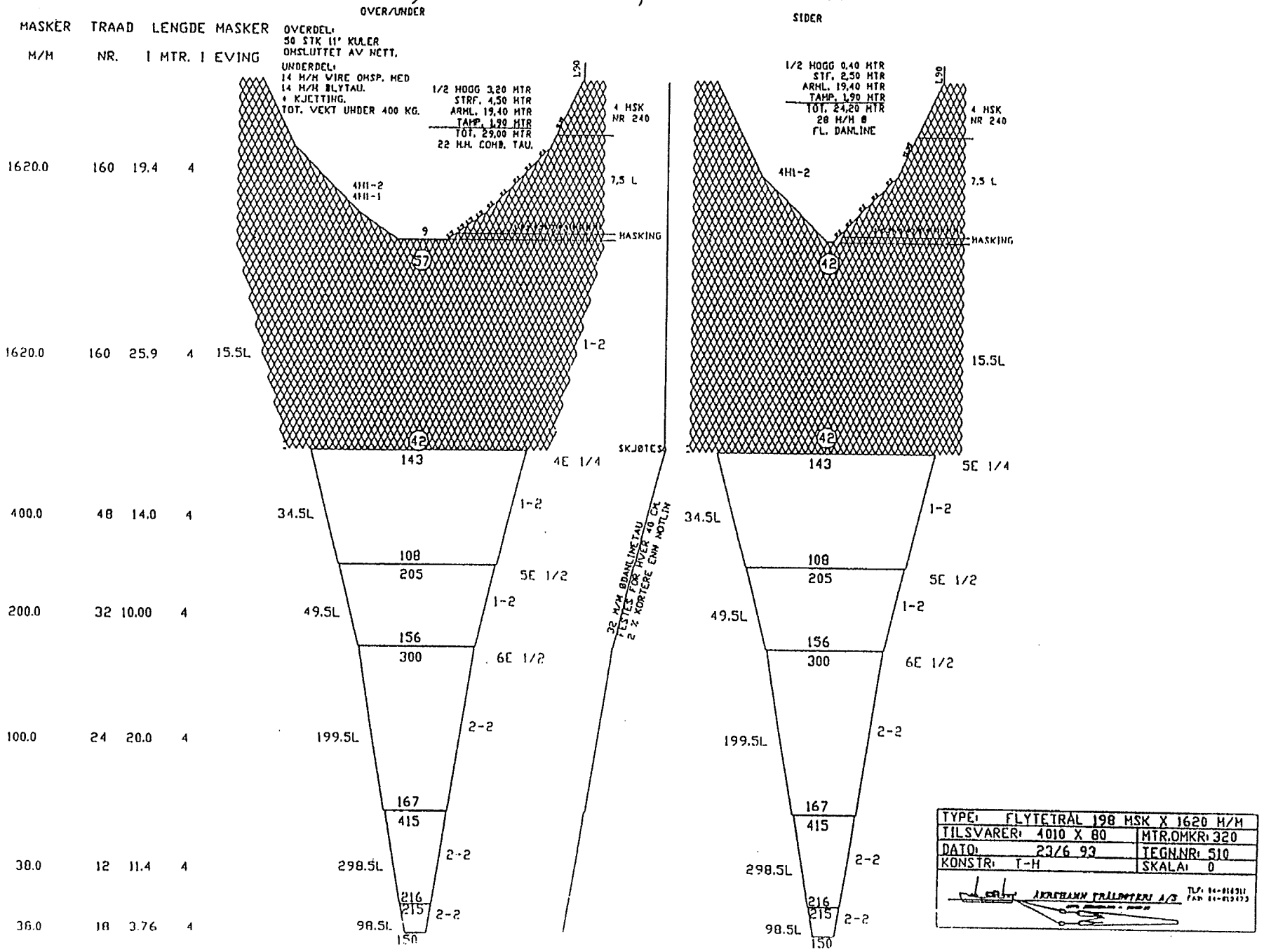
SIDER.
1/2 HOGG 4,00 MTR
STRF. 6,00 MTR
ARM 22,40 MTR
TAMP 2,60 MTR
TOT. 35,00 MTR
28 M/M Ø
FL. DANLINE

| MASKER M/M | TRAAD NR. | LENGDE I MTR. | MASKER I EVING | |
|---|---|---|---|---|
| 3200.0 | 240 | 22.4 | 4 | |
| 3200.0 | 240 | 32.0 | 4 | 9.5L |
| 1620.0 | 160 | 13.0 | 4 | 7.5L |
| 400.0 | 48 | 14.0 | 4 | 34.5L |
| 200.0 | 32 | 10.00 | 4 | 49.5L |
| 100.0 | 24 | 20.0 | 4 | 199.5L |
| 38.0 | 12 | 11.4 | 4 | 298.5L |
| 38.0 | 18 | 3.76 | 4 | 98.5L |

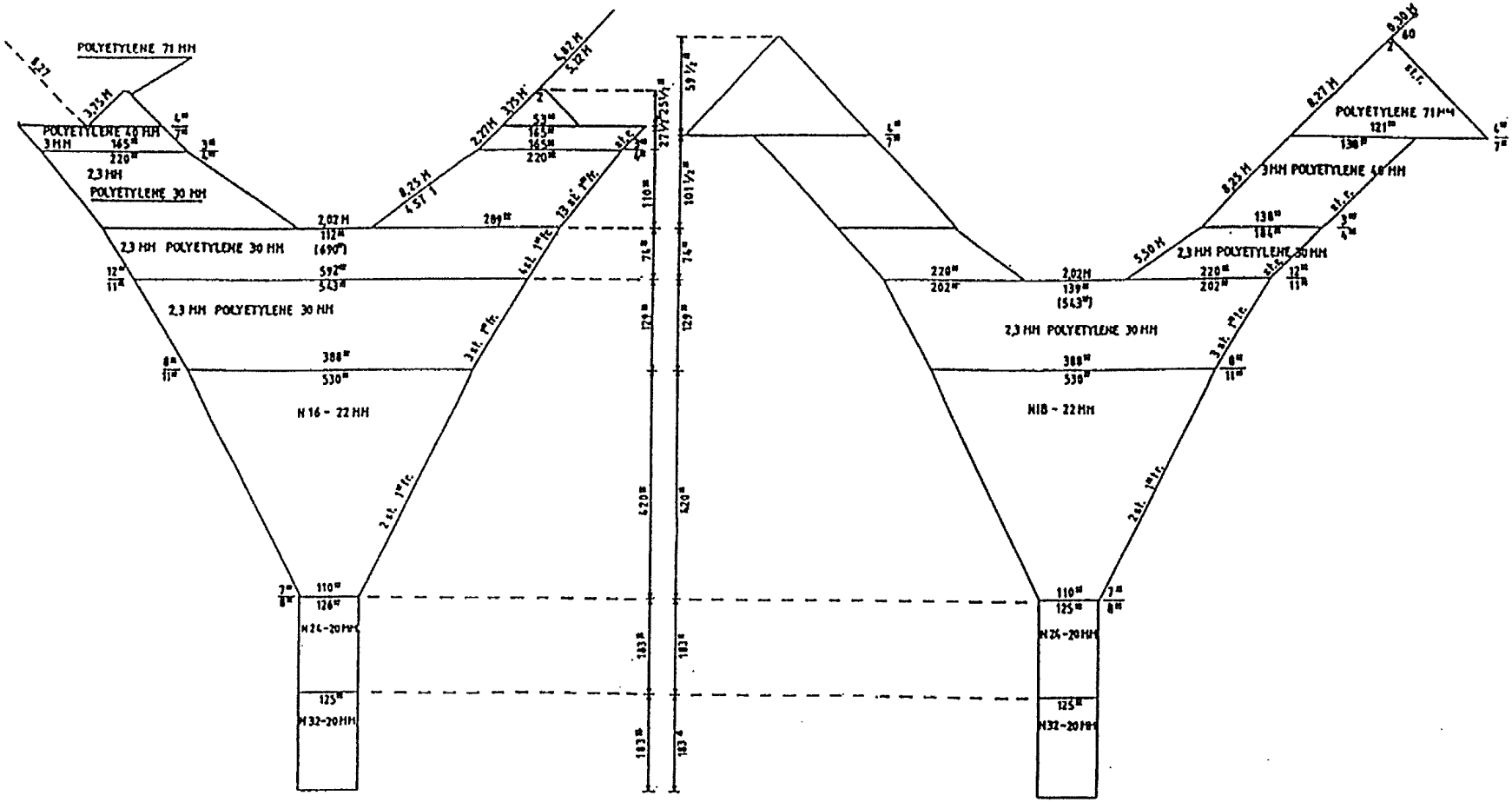



| | | |
|---|---|---|
| TYPE: FLYTETRÅL 152 MSK X 3200 M/M | | |
| TILSVARER: 6080 X 80 | MTR.OMKR: 486,4 | |
| DATO: 10/2 97 | TEGN.NR: 233NY | |
| KONSTR: TK | SKALA: 0 | |

# F/F Dr. Fridtjof Nansen



Bottom trawl: High opening shrimp and fish trawl with net headline 31m ( floatline),foot-rope 47m, gear with 12 cm diameter roller disks, 40 m sweeps, estimated headline hight 6m and distance between wings during towing 18-20m.



# PART II

## SURVEY OF THE PELAGIC STOCKS
## 26 November - 15 December 1994

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# CHAPTER 1 INTRODUCTION

## 1.1 OBJECTIVES

1. To obtain biomass estimates of pilchard, anchovy, round herring and pelagic horse mackerel.

2. To collect data on the biological state of pilchard, anchovy, round herring and pelagic horse mackerel during the survey period.

3. To collect basic oceanographic parameters, eg. temperature, salinity and $O_2$.

4. To conduct behavioural experiments on pilchard using the SA950 sonar.

5. To produce a report on the state of the stocks, with fish distribution and abundance estimates.

## 1.2 PARTICIPATION

The scientific staff from Namibia on the RV 'Dr. Fridtjof Nansen' were:

25 November - 16 December: M. Evenson, R. Cloete, S. Nakambunda, H. Asino

07 - 16 December: D. Boyer, C. Kirchner-Frankle

From Angola the following scientists participated:

07 - 16 December: N. Luyeye, A. Duarte

The scientific staff from the Institute of Marine Research were:

R. Toresen, V. Anthonypillai, B. Kvinge, T. Mørk.

## 1.3 SCHEDULE

From the general knowledge of pelagic fish distribution gained from previous surveys and from reports of commercial fishing vessels, the potential survey area is in general limited to the area

from Dolphin Head (26°00'S) to Tombua (16°00'S) and from the shore to the 200 m bathymetric line. The southern limit is formed by the cold and oxygen deficient upwelling region centred around Lüderitz and the northern boundary at the front of the warm Angolan current. Permission was obtained from Angolan authorities to extend the survey northward to Tombua, hence the expected entire pilchard distribution was covered.

The area south of Walvis Bay was surveyed by a fishing vessel ('Ruwekus') during the period 19-23 November and this vessel also assisted with the survey in the northern part of Namibia between the 7th and 12th of December. As only a very small amount of pelagic fish, probably anchovy was recorded in the area south of Walvis Bay, it was decided to concentrate on the regions to the north during the main part of the survey.

The 'Dr. Fridtjof Nansen' left Walvis Bay at 08h00 on 26th November and covered the Northern Region, including Angolan waters to Tombua during, the first 10 days of the survey. The 'Dr. Fridtjof Nansen' then sailed southwards to meet the fishing vessel carrying additional scientific staff from Angola and Namibia and to survey a small region of pilchard detected in Möwe Bay during the northwards coverage. En route the RV 'Dr. Fridtjof Nansen' was required to assist a drifting crab long-liner with a rope fouling her propeller. One day of survey time was lost in this operation and it was decided to survey the fish at Möwe Bay later in the survey. 'Ruwekus' assisted 'Dr. Fridtjof Nansen' during the following 3 days, resurveying the area from Rocky Point to Cunene River. 'Ruwekus' then returned to Walvis Bay, en route surveying the region between 200 and 600 m water depths, while 'Dr. Fridtjof Nansen' continued northwards into Angola waters to resurvey the previously detected concentrations of pilchard.

The vessel arrived in Walvis Bay on 15th December, at 18h00. The weather was favourable for an acoustic survey throughout the cruise. The number of days allocated for the survey (20) was sufficient for a thorough coverage of the inner shelf area north of Walvis Bay.

To allow comparison with previous 'Dr. Fridtjof Nansen' surveys, the map work was divided by three areas:

| | | |
|---|---|---|
| 1 | 23°00'S to 21°00'S | Walvis Bay to Ambrose Bay |
| 2 | 21°00'S to 17°15'S | Ambrose Bay to Cunene River |
| 3 | 17°15'S to 16°00'S | Cunene River to Tombua |

For a higher analytical resolution precision and to facilitate comparison between surveys and other stock assessment methods, biomass and biological data are reported per degree latitude.

## 1.4 SURVEY EFFORT

The course tracks with the fishing stations from Walvis Bay to Ambrose Bay, from Ambrose Bay to Cunene River and from Cunene River to Tombua are shown in Figures 1a-c.

A total of 4 020 nautical miles were steamed and 86 trawl hauls were worked out, of which 6 were bottom trawls.

The total number of CTD stations was 105.

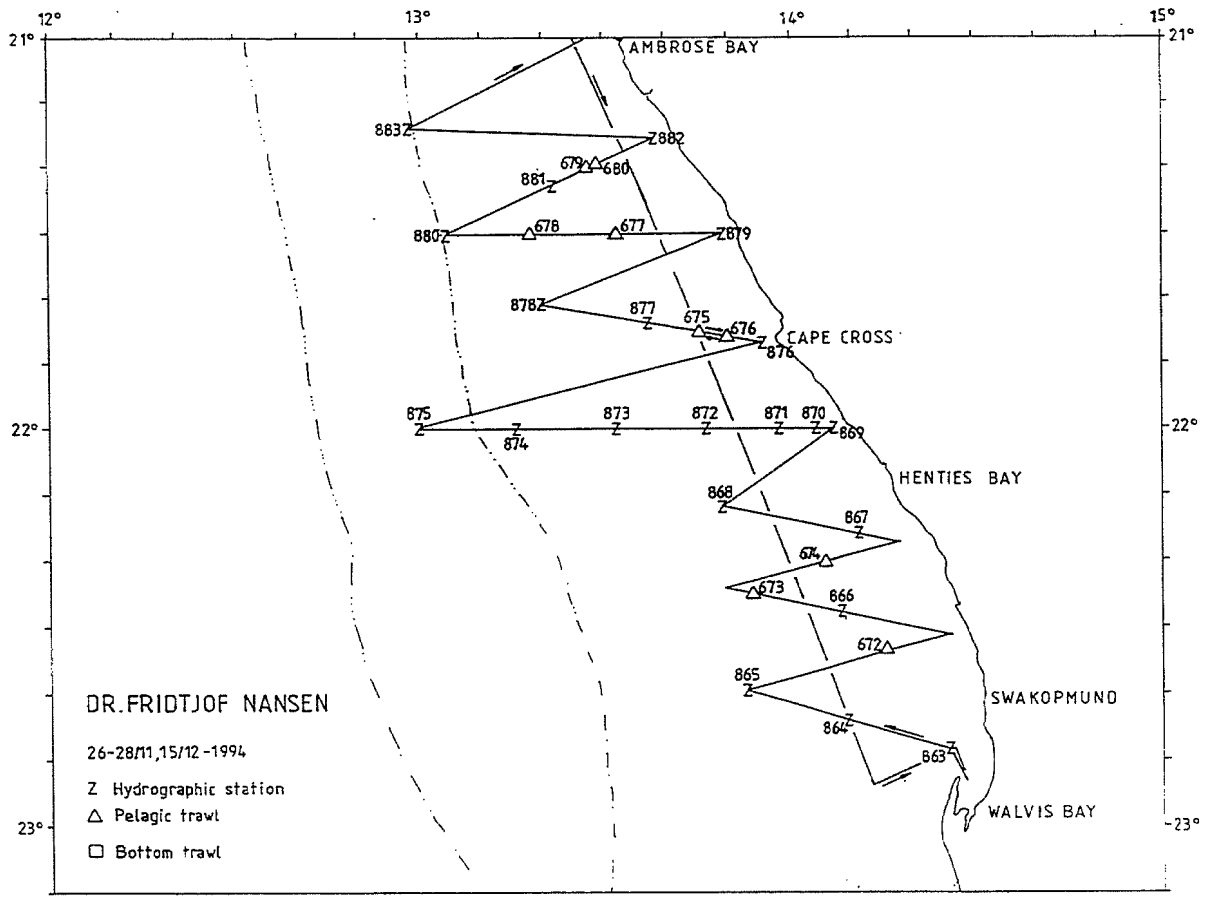



Figure 1a Course tracks with fishing stations and CTD-stations, Walvis Bay - Ambrose Bay.

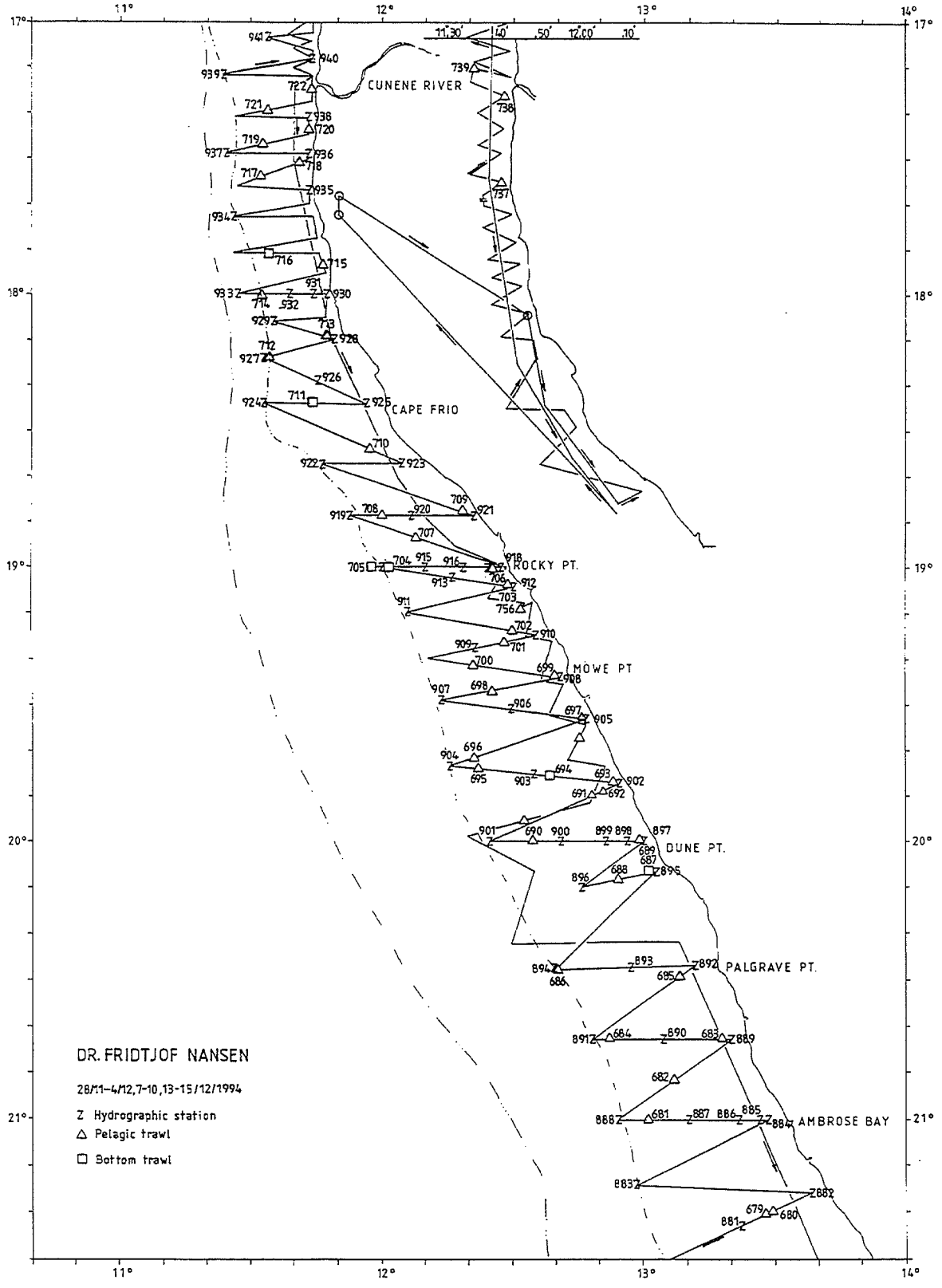



Figure 1b Course tracks with fishing stations and CTD-stations, Ambrose Bay - Cunene.

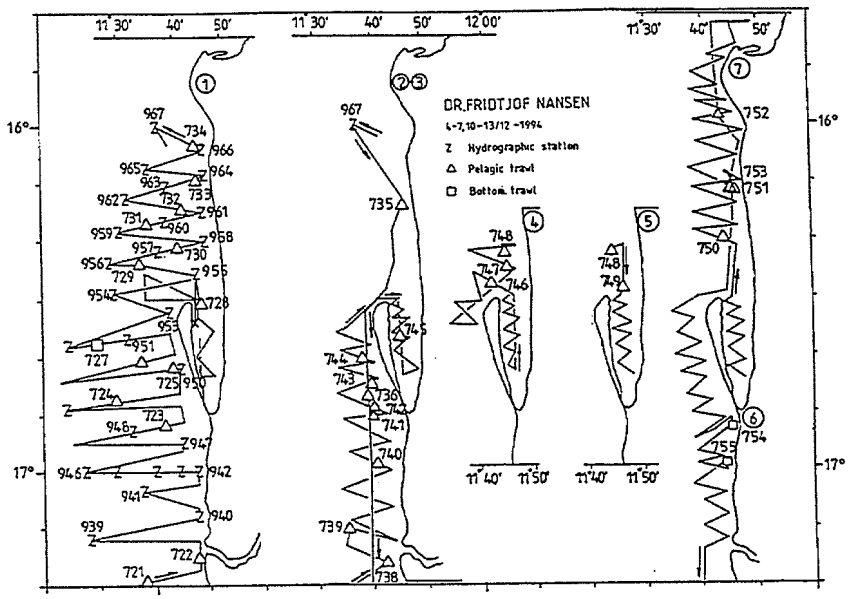



Figure 1c Course tracks with fishing stations and CTD-stations, Cunene - Tombua.

# CHAPTER 2 METHODS

## 2.1 HYDROGRAPHIC SAMPLING

Continuous vertical profiles of temperature, salinity and oxygen were obtained with a Seabird 911 CTD Plus system. The data were logged in real time on a PC on board, using the Seabird SEASAVE software. As a routine the profiles were taken down to a few meters above the bottom. In addition to the CTD stations distributed to obtain a general view of the hydrographical regime in the area, standard hydrographical sections at every full degree latitude were also collected.

## 2.2 FISH DISTRIBUTION AND BIOMASS DETERMINATION

The survey strategy used was essential similar to the one used in previous surveys:

1. All available information on fish density and distribution was assessed and used to estimate the probable distribution and density of each region surveyed.

2. The planned effort was increased in areas with high fish densities.

3. When possible, areas were covered more than once, preferably both by day and by night.

4. In regions of expected low densities a survey grid of systematic triangular transects were surveyed from inshore of the distribution, where possible, to the offshore edge of the distribution. In areas of high expected densities, the same grid system was applied but with smaller distance between the endpoints of the transects. The offshore region was covered in a pilot survey by the 'Dr. Fridtjof Nansen' during the hake survey in the month preceding the present survey and searched again by the assisting fishing vessel.

### 2.2.1 Sampling by trawl

Trawl sampling of fish was generally successful, although some hauls were disrupted by high concentrations of jellyfish, as experienced in some previous surveys. This was particularly serious in the mid-water hauls targeted on horse mackerel.

All catches were sampled for composition by weight and numbers of each species. The size distribution of the commercially important species, using total length, was determined by 0.5 cm length classes. Unlike previous surveys, these length frequencies were taken as representative only when more than 50 fish were caught. The relative frequencies of these trawls were pooled into regional length distributions with equal weightings. The length frequencies per geographical area are given in Annex I. A summary of catches and a complete record of all fishing stations are shown in Annexes II and III.

### 2.2.2 Acoustic sampling

The acoustic integration system provide observations of echo densities averaged, usually over 5 NM distances. The unit of acoustic reflection ($S_A$) is $m^2/NM^2$ reflecting surface. The integrator values were allocated to the following groups on the basis of trawl sampling and characteristic behaviour recognised from the echo recordings:

Pilchard (*Sardinops ocellatus*)
Anchovy (*Engraulis capensis*)
Round herring (*Etrumeus whiteheadi*)
Horse mackerel (*Trachurus* spp.)
Other pelagic fish
Hake (*Merluccius* spp.)
Other demersal fish
Mesopelagic fish
Plankton

Annex IV gives a description of the instruments and the fishing gear used.

### 2.2.3 Calculations

The following target strength (TS) function was applied to convert $S_A$-values to numbers of fish (pilchard, anchovy, round herring and horse mackerel):

$$TS = 20 \log L - 72 \text{ dB} \qquad (1)$$

or on the form $$C_F = 1.26 \cdot 10^6 \cdot L^{-2} \quad (2)$$

where L is total length.

The following formula was applied in spreadsheets (Excel) to estimate the number of fish in each length frequency group (cm) in an eggregation:

$$N_i = A \cdot S_A \cdot \frac{p_i}{\sum_{i=1}^{n} \frac{p_i}{C_{Fi}}} \quad (3)$$

where
- $N_i$ = number of fish in length group I
- A = area in $NM^2$
- $S_A$ = mean integrator value in the area
- $p_i$ = number of fish in length group I in samples from the area
- $C_{Fi}$ = fish conversion factor (formula 2) applied on length group i

The main criteria for delineating aggregations was the area where the distribution of a species was continuous. If such a distribution spanned more than one degree latitude, it was divided into separate areas.

The observed relative number of fish per length group was used in the calculations of fish abundance in an area. Before allocation of length samples, the length frequencies were compared and the occurrence of 'dissimilar' frequencies was also used to split continuous distributions into different aggregations or sub-areas.

The estimated number per length group were then summed and the total number of fish obtained. The biomass of fish per length group was calculated applying a condition factor on the number estimates. This factor was obtained for pilchard and anchovy during the survey from the regression between the observed weight and length. The mean length-weight regression coefficients measured during the June 1994 survey was used for round herring and horse mackerel. The applied regressions were:

| | |
|---|---|
| Pilchard | - $w = 0.0062 \cdot l^{3.0900}$ |
| Anchovy | - $w = 0.0020 \cdot l^{3.4382}$ |
| Round herring | - $w = 0.0051 \cdot l^{3.0618}$ |
| Horse mackerel | - $w = 0.0114 \cdot l^{2.8553}$ |

## 2.3 BIOLOGICAL SAMPLING

Total length (Lt.), body weight, and gonad weights were recorded for pilchard and anchovy to the nearest 1 mm or 1 g below, respectively. Sex and reproductive stage were described by macroscopic examination, scoring each individually sampled fish according to the following categories:

1 Juvenile
2 Inactive
3 Active
4 Ripe
5 Spent

Otoliths were removed for ageing at a future date.

Sampling was standardized across 1° latitudinal intervals according to the following rules:

1 The minimum size of anchovy sampled was 10.0 cm Lt. and for pilchard 14.0 cm Lt.
2 Up to 10 individuals were sampled per 0.5 cm length class in each 1° latitude interval.
3 Not more than 4 individuals were sampled per 0.5 cm length class per trawl.

Reproductive status, and mean weight/length-class is only reported where more than 10 fish/length-class were sampled.

Length-weight relationships were determined by fitting power curves to the regressions of weight on length. These relationships were determined for the whole region, as well as for each latitude interval where there was sufficient spread of lengths among the samples.

The length-weight data were also used to calculate the fish condition factor (weight · $100/\text{length}^3$) of pilchard and anchovy. The condition factors of individual fish were pooled and averaged for each 1° latitude interval in which suitably sized fish were found. For pilchard this included areas 16° - 17°S, 17° - 18°S and 19° - 20°S. For anchovy: 16° - 17°S, 17° - 18°S and 18° - 19°S and 19° - 20°S.

# CHAPTER 3 HYDROGRAPHY

The sea surface temperatures (SST) on the course track from Walvis Bay to Ambrose varied from 15° to 16°C. From Ambrose to the Cunene River the SST of the inshore area was also between 15° and 16°C. However from around Dune Point to the Cunene the SST of the offshore area was slightly higher at 17° to 18°C. As was expected SST also increased at the Cunene section with offshore temperatures reaching up to 19°C (Figures 2a-b).

The surface oxygen concentration varied from 5 to 7 ml/l from Walvis Bay to north of Cape Frio. At the Cunene section the near surface oxygen concentration was as low as 4 ml/l. The near surface salinity was also higher at the Cunene than at any of the other stations (Figures 3a-b).

Figures 3a-b show sections of temperature, salinity and oxygen obtained during the cruise.

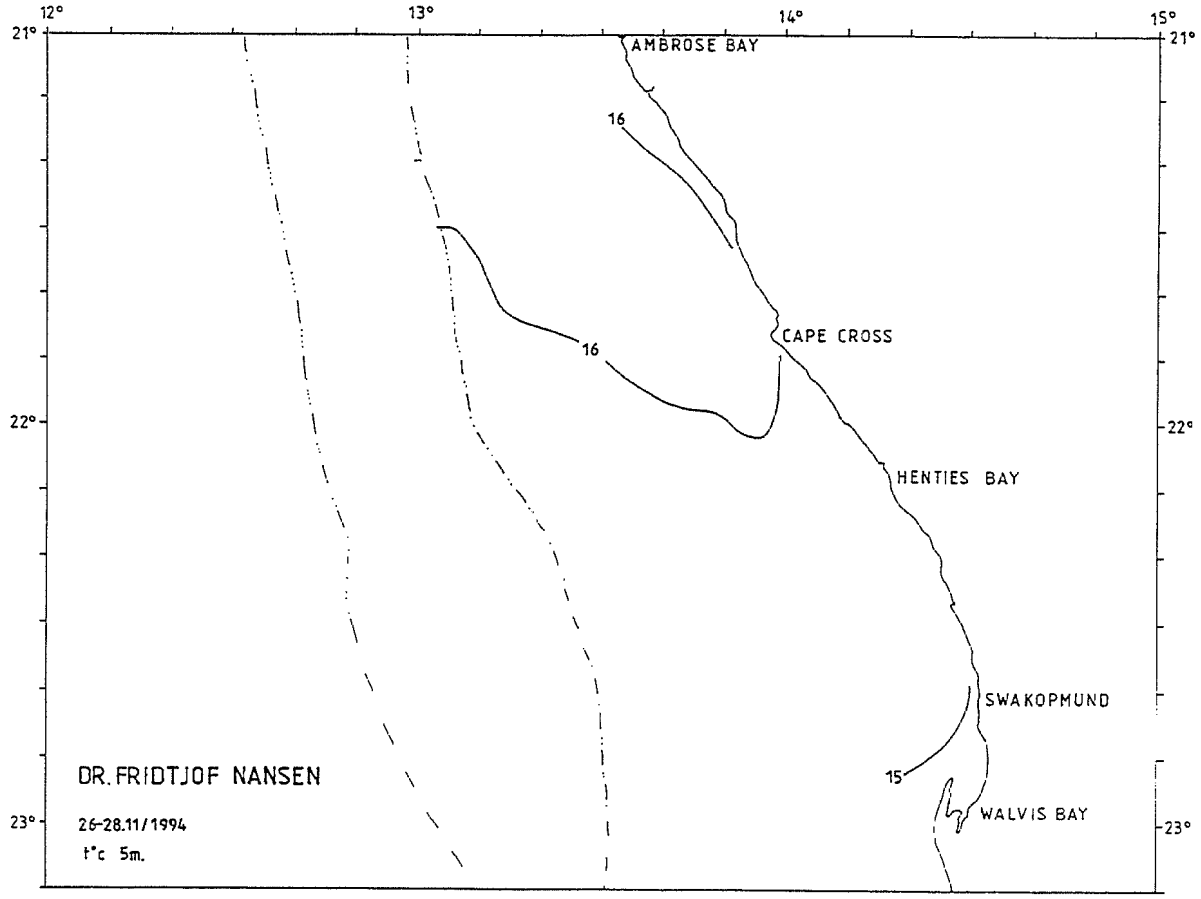



Figure 2a Sea surface temperature, Walvis Bay - Ambrose Bay.

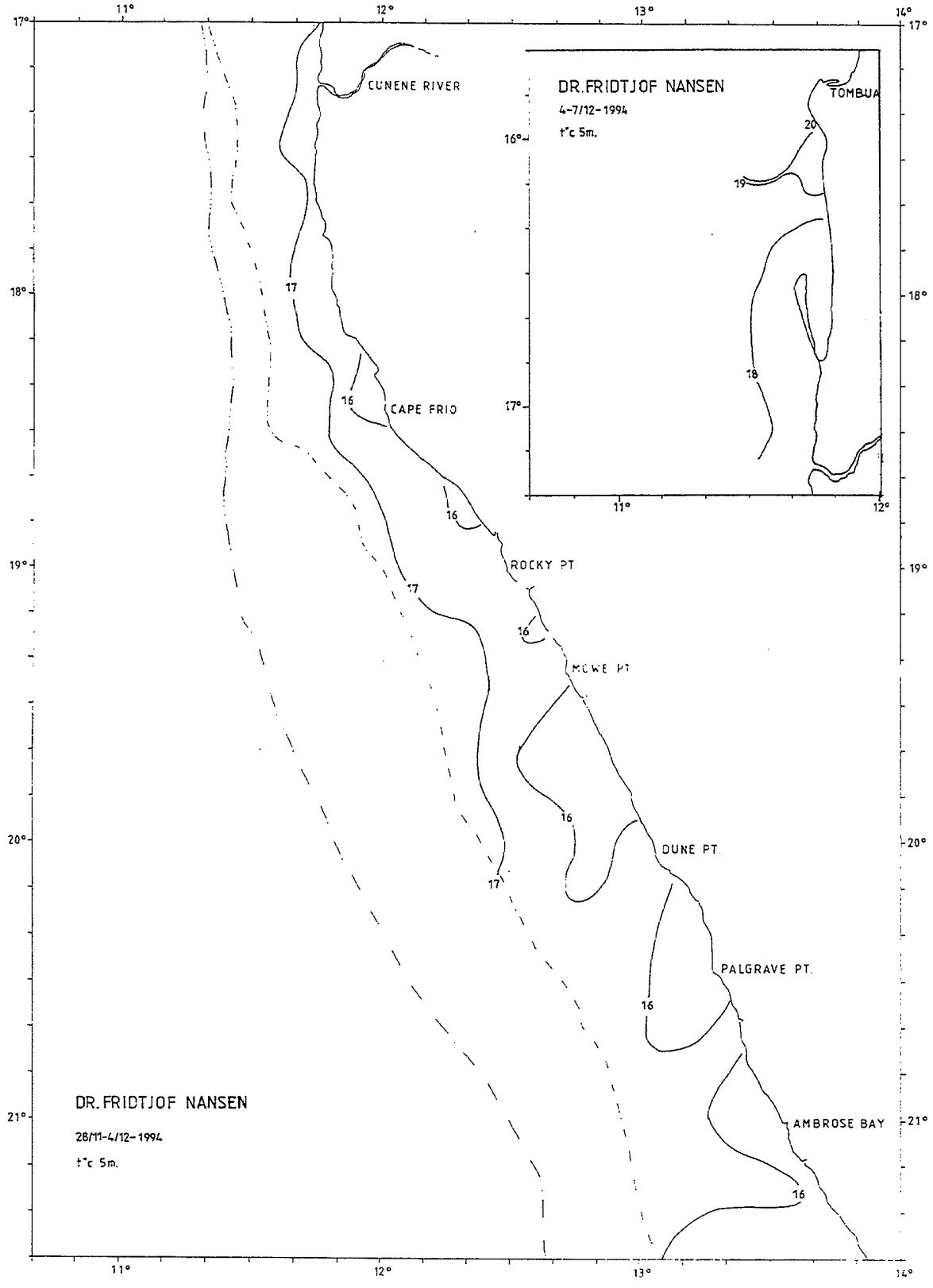



Figure 2b Sea surface temperature, Ambrose Bay - Cunene and Cunene - Tombua.

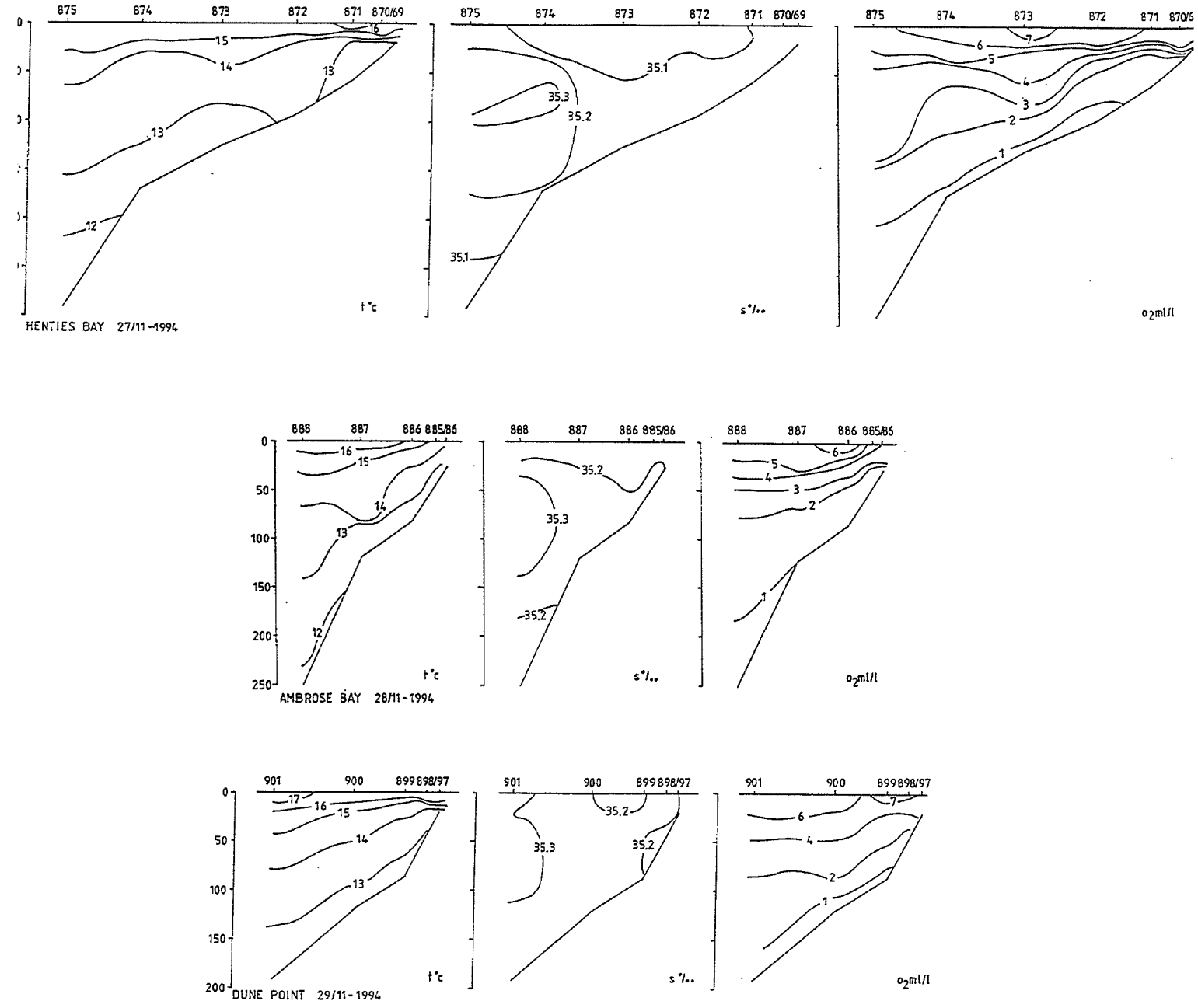



Figure 3a Temperature, salinity and oxygen in the stanard profiles worked.

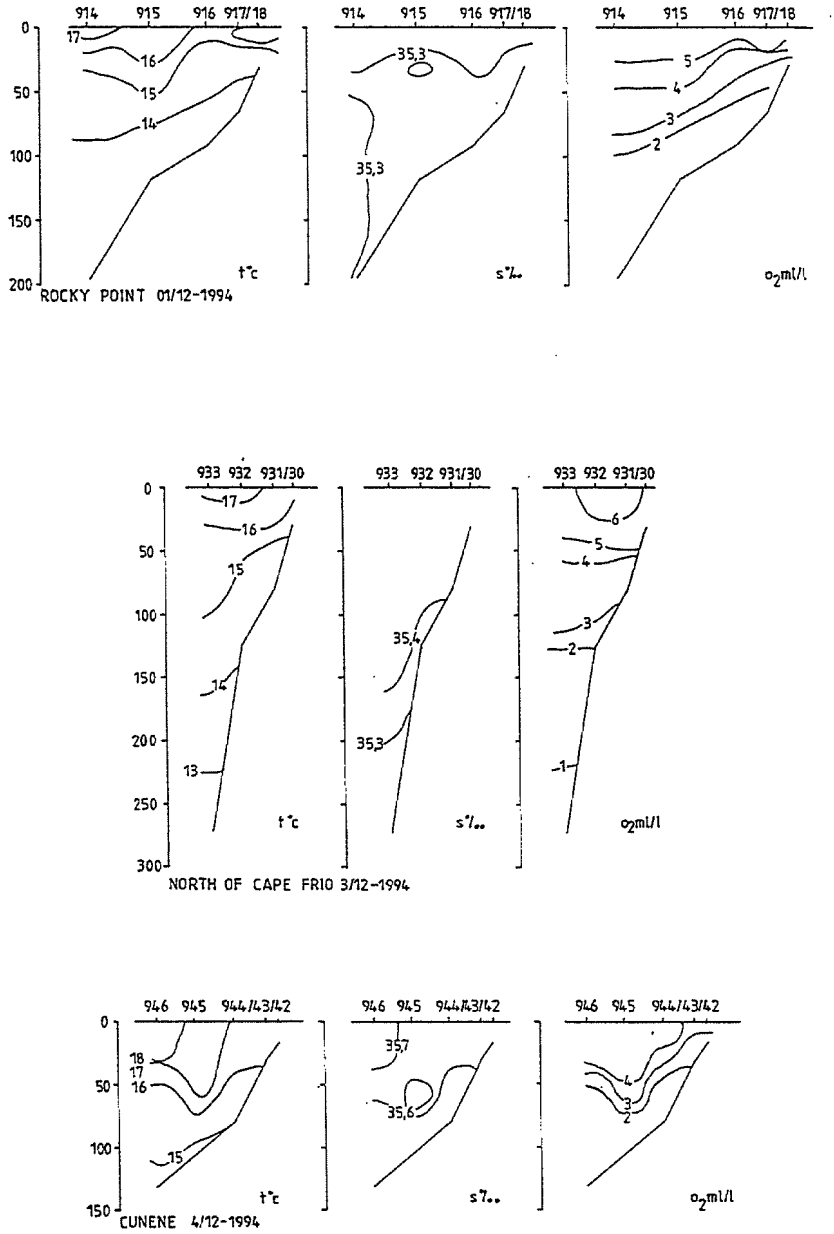



Figure 3b Temperature, salinity and oxygen in the stanard profiles worked.

# CHAPTER 4 DISTRIBUTION, ABUNDANCE AND BIOLOGICAL ANALYSIS OF PELAGIC FISH

## 4.1 DISTRIBUTION

In summary, large sized pilchard (>23 cm) were only recorded in the northernmost region surveyed, north of Cunene. Smaller aggregations of younger pilchard (~12 and 17 cm) were found in two areas along the Namibian coast, off Möwe Pt. and north of Cape Frio. Anchovy and round herring generally occurred in the same areas as pilchard. Occasionally it was difficult to separate these species on the basis of echo traces alone and in such cases the species composition of the nearest trawl catches were used. Horse mackerel were recorded throughout most of the surveyed area. Scattered layers, consisting mainly of jellyfish, planktonic organisms and occasionally gobies and lanternfish, also occurred throughout most of the area.

The distributions of pilchard, anchovy, round herring and horse mackerel are shown in Figures 4-7. An arbitrary scale was used in the distribution charts to illustrate different levels of density.

### 4.1.1 Walvis Bay to Ambrose Bay

No pilchard, anchovy or round herring were detected in this area.

Horse mackerel were recorded at low densities throughout the area and often together with dense concentrations of plankton and jellyfish, especially at night. The horse mackerel usually aggregated into shoals of various sizes and densities during daytime. The zero-line of the distribution offshore was usually reached, especially towards the south.

### 4.1.2 Ambrose Bay to Cunene River

Aggregations of pilchard were recorded on 28 November between Dune Pt. and Rocky Pt. A few small scattered shoals were also found north of Cape Frio. The pilchard in both of these areas consisted of young fish with modal lengths of 13 and 16 cm. The concentrations were dispersed and the pilchard was mixed with anchovy and round herring in the southernmost area and with round herring in the north. The region from Rocky Pt. to 19°50'S was surveyed again some 15 days later, but little pelagic fish was found.

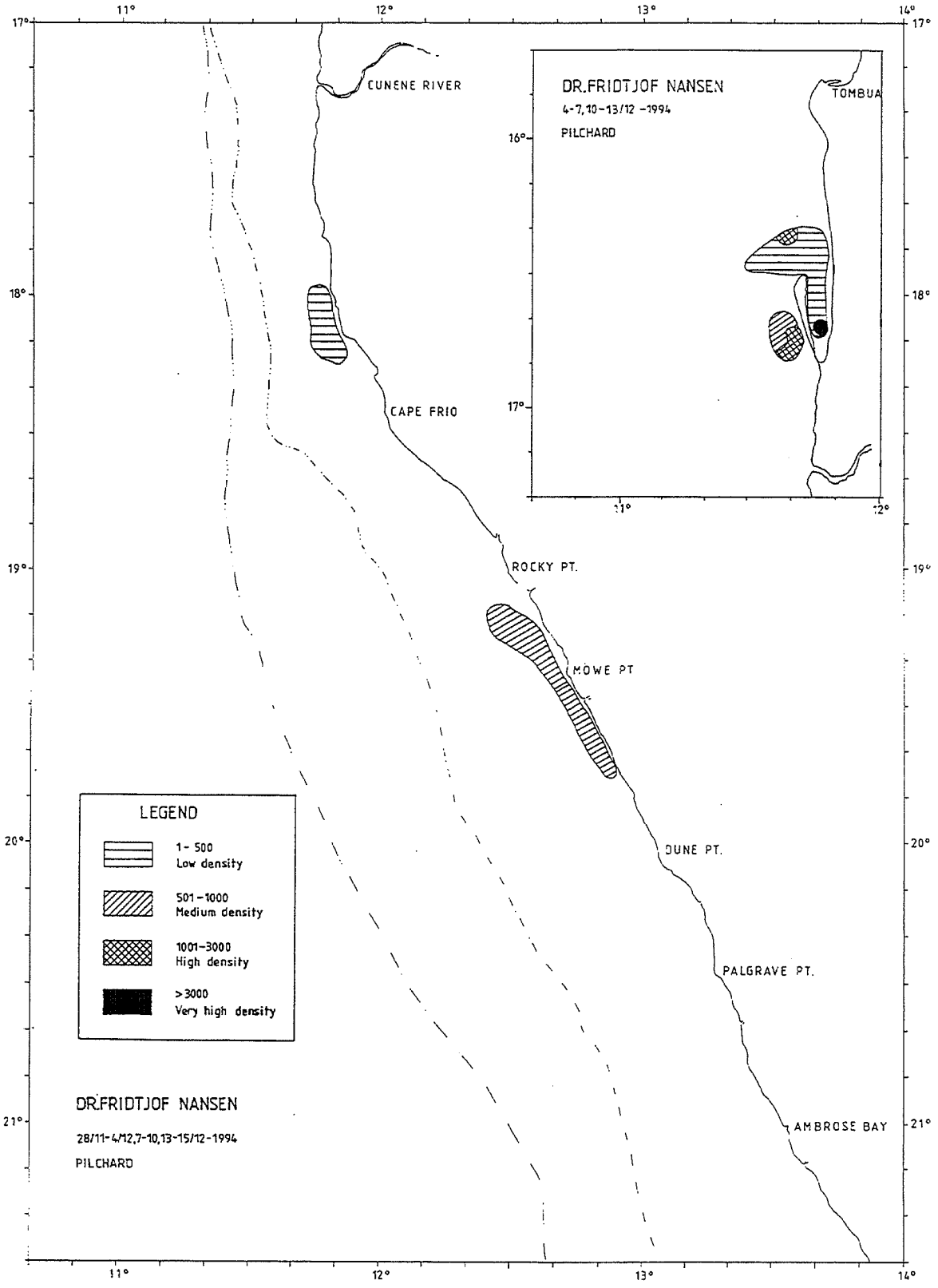



Figure 4 Distribution of pilchard, Ambrose Bay - Cunene and Cunene - Tombua.

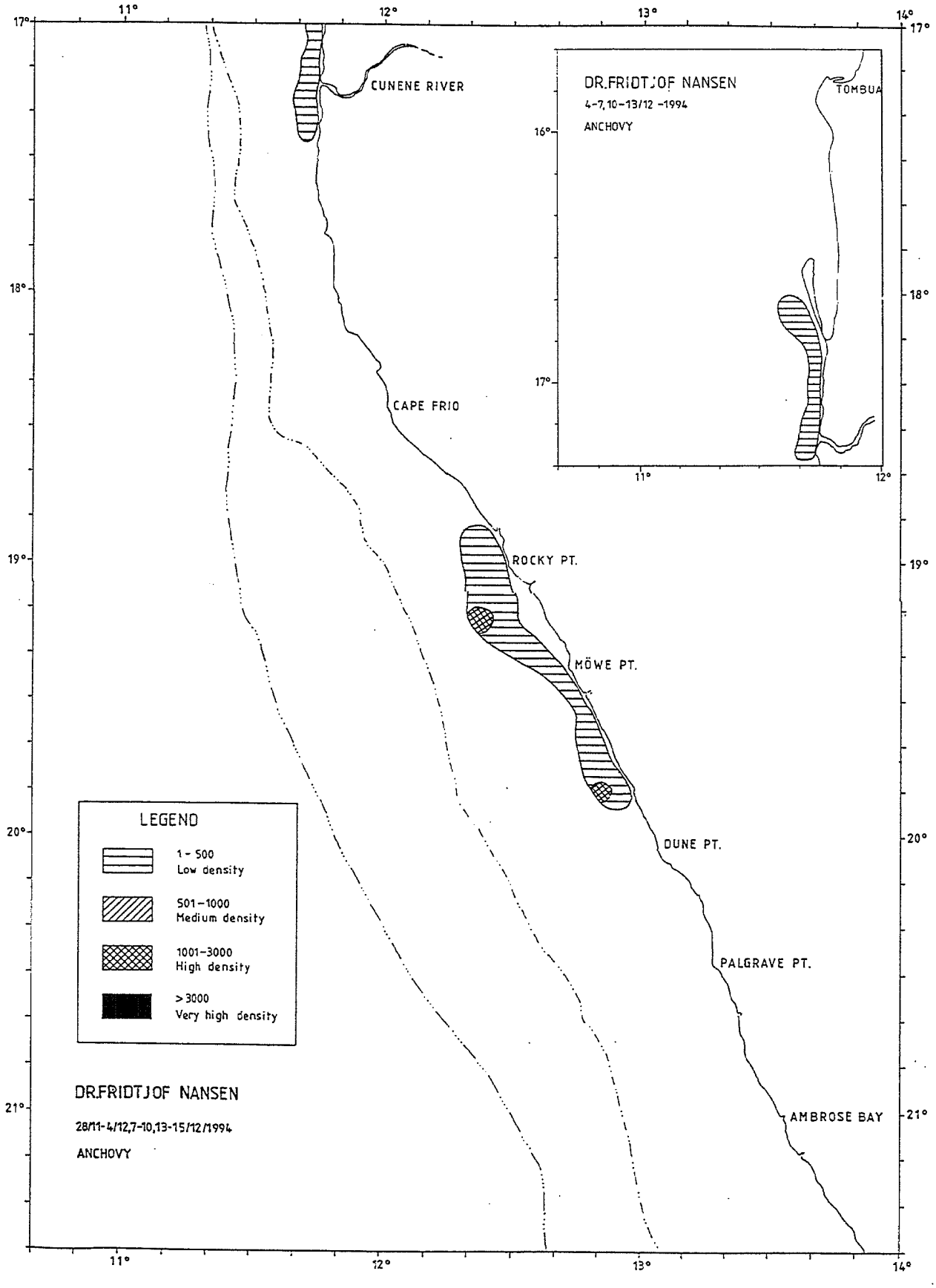



Figure 5 Distribution of anchovy, Ambrose Bay - Cunene and Cunene - Tombua.

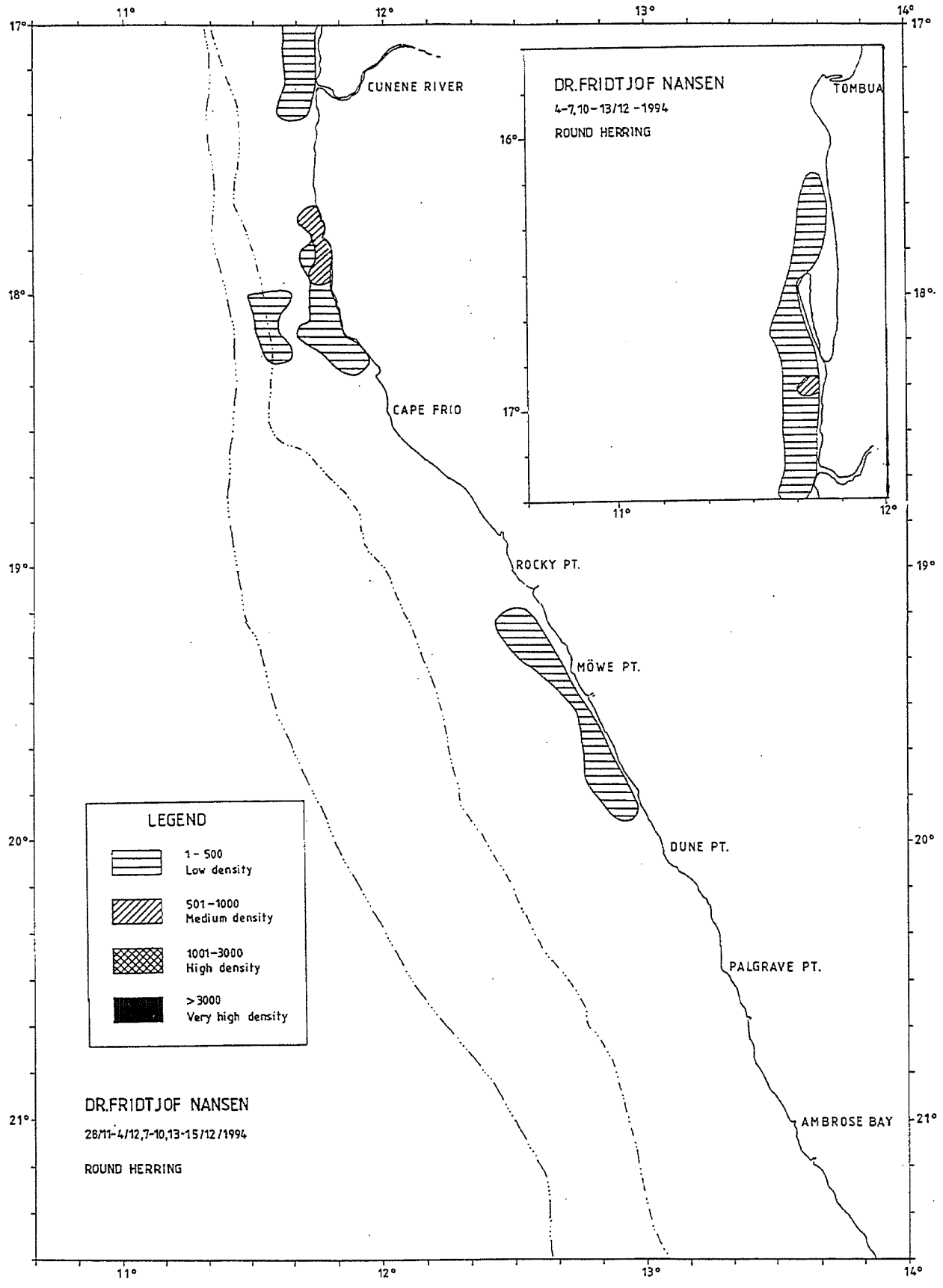



Figure 6 Distribution of round herring, Ambrose Bay - Cunene and Cunene - Tombua.

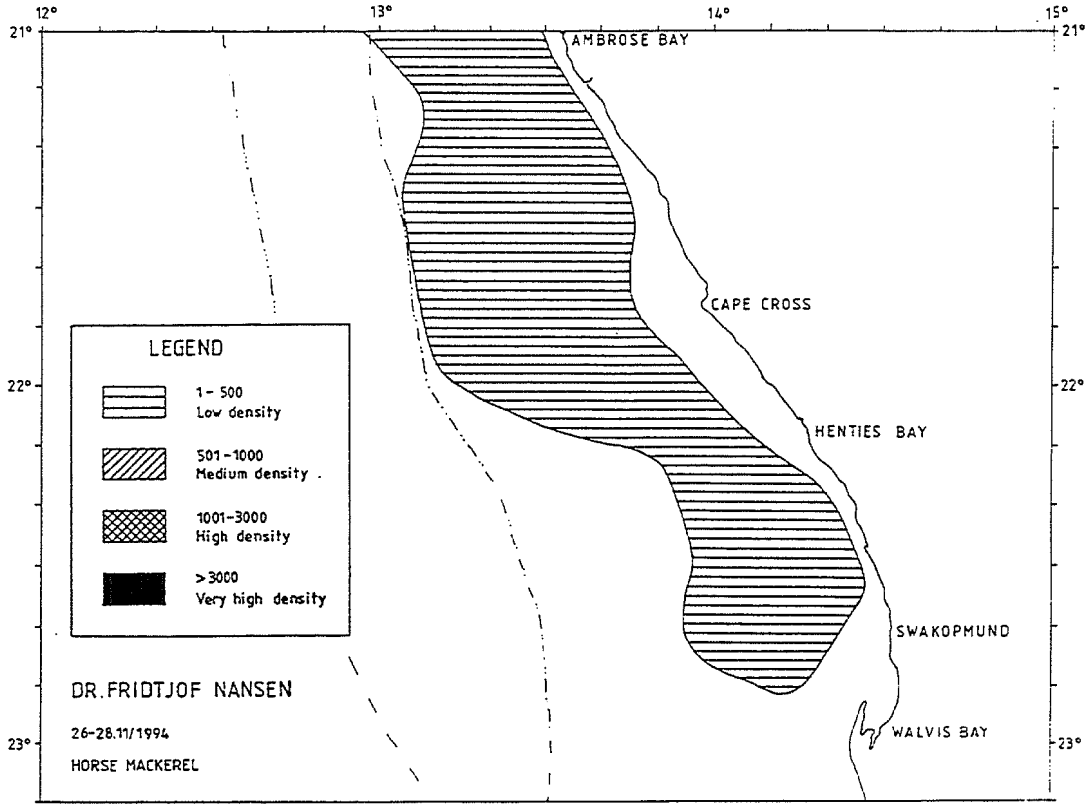



Figure 7a Distribution of horse mackerel, Walvis Bay - Ambrose Bay.

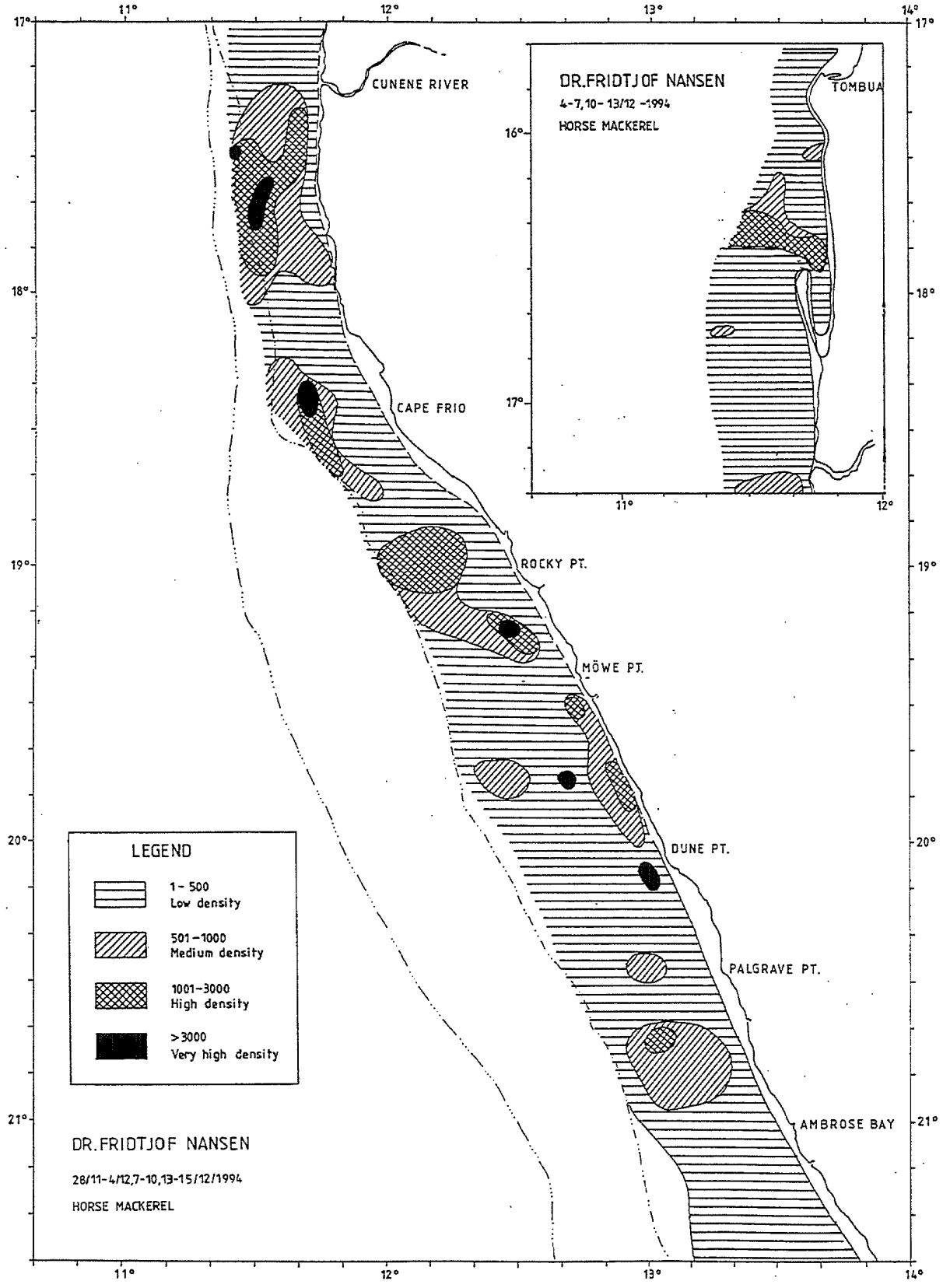



Figure 7b Distribution of horse mackerel, Ambrose Bay - Cunene and Cunene - Tombua.

Horse mackerel were also recorded in this region from inshore waters to the 200 m depth contour. Much of the horse mackerel caught in the inshore trawl catches were small individuals, but offshore and in deeper waters larger sized fish predominated. The offshore zero line was not reached, indicating that there was no separation between the inshore pelagic and offshore mid-water stocks.

### 4.1.3 Cunene River to Tombua

Dense shoals of large-sized pilchard (modal length 24 cm) were recorded in and around Baía dos Tigres. On 5 December a few dense shoals of pilchard were found north of the bay. A few days later little fish was found in this area, but pilchard schools were recorded some 15 NM to the south. When this region was surveyed for a final time on 13 December, pelagic fish were only found in very shallow waters some 20 NM further to the south. There were thus indications of pilchard moving south from the Peninsula dos Tigres towards the Cunene during the survey period.

Several dense pilchard-like schools were recorded between 15°55'S and 16°25'S, but these schools were not caught in targeted trawl hauls and they could not therefore be identified. Random trawl samples taken in the same area at night yielded round and flat sardinella (*Sardinella aurita* and *Sardinella maderensis)* and therefore the identity of these shoals was assumed to be sardinella.

Anchovy and round herring were recorded in dispersed concentrations to the west of the Peninsula dos Tigres. The distribution of round herring extended somewhat further north than anchovy.

Horse mackerel were widely dispersed throughout the whole area although not as abundantly as in the previous region. From around 16°30'S and northwards *Trachurus trecae* replaced *Trachurus capensis*, although some few samples in the area between 16°15'S and 16°50'S contained both species.

## 4.2 ABUNDANCE OF PELAGIC FISH

The biomass estimates per latitude for pilchard, anchovy, round herring and horse mackerel are shown in Table 1. The number and biomass per length group for the four species per area is

shown in Annex V and the total number of fish per length group of each species is shown in Annex VI.

Table 1 Estimated biomass of pilchard, anchovy, round herring and horse mackerel per degree.

| Area | Pilchard | Anchovy | Round herring | Total | Horse mackerel |
|---|---|---|---|---|---|
| 16°-17° | 72 000 | 2 000 | 4 000 | 78 000 | 20 000 |
| 17°-18° | 2 000 | - | 5 000 | 7 000 | 174 000 |
| 18°-19° | - | - | - | - | 89 000 |
| 19°-20° | 31 000 | 19 000 | 3 000 | 53 000 | 197 000 |
| 20°-21° | - | - | - | - | 141 000 |
| 21°-22° | - | - | - | - | 35 000 |
| 22°-23° | - | - | - | - | 5 000 |
| TOTAL | 105 000 | 21 000 | 12 000 | 138 000 | 661 000 |

### 4.2.1 Pilchard

The total biomass estimate of pilchard was just over 100 000 tonnes. About 70 % of this occurred in Angola. Some 80% by number were in the length groups less than 22 cm and occurred in Namibia.

This estimate is based on several coverages of the densest areas in which pilchard were recorded. For example, a total of 5 coverages of the Baía dos Tigres were done; 3 at night and 2 during daytime. The day $S_A$ values ranged from 900 to 1 900 $m^2/NM^2$, while those made at night were on average twice as large.

| Survey | Mean $S_A$ value |
|---|---|
| Day 1 | 1 916 $m^2/NM^2$ |
| Day 2 | 894 $m^2/NM^2$ |
| Night 1 | 3 224 $m^2/NM^2$ |
| Night 2 | 4 473 $m^2/NM^2$ |
| Night 3 | 3 857 $m^2/NM^2$ |
| Value used | 3 851 $m^2/NM^2$ |

A brief comparison of the echo-sounder and sonar records in this area showed that similar numbers of shoals were present during each coverage, but few were observed on the echo-sounder during the day. These records need to be more systematically analysed, but indicate avoidance reactions of the fish to the surveying vessel in these very shallow waters. It was therefore decided to use the average of the night values to calculate the pilchard biomass in this area.

In other regions pilchard and other pelagic species usually occurred in deeper waters and avoidance reactions were probably less severe. In each area where more than one coverage was

made, the most thorough coverage was used, or if the survey effort was similar the mean $S_A$ value of the coverages was used to determine the biomass.

The shoals of pilchard in the Möwe Bay area were widely distributed but the biomass was estimated to be in the order of 30 000 tonnes. A second attempt to survey this region more intensively was not possible.

There has been a considerable decline in the estimated biomass of this stock since 1991/1992 (Table 2). The level of abundance is now very low and the stock must be considered as nearly depleted. It is even more alarming considering that recruitment also seems to be negligible.

### 4.2.2 Anchovy and round herring

Almost the entire anchovy biomass was recorded between 19° 00' and 20° 00'S and was estimated at only about 20 000 tonnes. This stock is also at a critically low level. The total biomass estimate for round herring was 12 000 tonnes.

### 4.2.3 Horse mackerel

The biomass estimate for *Trachurus capensis* was 660 000 tonnes. As the horse mackerel was found to the outer limits of the survey area, and no separation between the distributions of inshore juvenile and offshore adult horse mackerel occurred, this estimate probably includes some mid-water horse mackerel.

## 4.3 BIOLOGICAL ANALYSIS

### 4.3.1 Length-weight and condition factor

Length-weight curves and regression equations for pilchard and anchovy are reported in Annex VII while the mean condition factors for these two species are in Annex VIII.

The mean condition factor for pilchard in the north tended to be higher than that from fish sampled in the south, although the significance of this has not been tested. The condition factor is higher than recorded during June 1994, but this may be due to the increased gonad weight of the fish sampled during the present survey.

The condition factor of anchovy was similar in all regions.

The condition factor of gonad-free and gutted fish of both species has also been calculated, but no previous data on this factor are available for comparison. These data also indicate that the fish in the north were in a better condition than those further south.

### 4.3.2 Reproductive status

Results for both pilchard and anchovy were tabulated in Annex IX.

The sex ratio of pilchard showed a considerable correlation with size, few males of larger than 26 cm being found. There was some indication of breeding activity in both species, both from the gonad stage and gonad weights.

# CHAPTER 5 SUMMARY

This was the fifteenth pelagic survey conducted since 1990. The area from Lüderitz to Tombua and from the coast to shelf edge was investigated, either by the 'Dr. Fridtjof Nansen' or the purse seiner 'Ruwekus'. In some areas both vessels worked together. Due to the restricted distribution of the stocks and our improved understanding and knowledge of this distribution, considerably more time was spent in the areas of the fish aggregations than usual. This, together with the assistance of a fishing vessel, ensured that the survey was probably the most thorough coverage conducted to date.

The dense concentrations of jellyfish caused some problems during trawling and, especially, in determining the proportion of the acoustic values to allocate to fish. In general this problem was more severe in regions of dispersed fish concentrations, such as that formed by horse mackerel, than in regions where shoaling species such as pilchard were found.

The distributions of pilchard, anchovy and round herring were largely within Angolan waters and therefore showed little change from the previous two surveys; in February and June 1994. The distribution of Cape horse mackerel was considerably more widespread, being found throughout the region from Walvis Bay to approximately 16°30'S in Angola. At this latitude Cunene horse mackerel became the dominant *Trachurus* species.

The estimated biomass of all three small pelagic species continues to show signs of a severe decline (Tables 2 and 3). The pilchard stock is now some 15% of the size in 1991/92 and must be considered to be close to depletion. The anchovy and round herring stock are also now at a critically low level.

Table 2 Biomass estimates of pilchard *Sardinops ocellatus* between 1990 to 1994

| Survey | Vessel | Namibian waters | Angolan waters | Total |
|---|---|---|---|---|
| March 1990 | *Nansen* | 160 000 | n.s. | - |
| June 1990 | *Nansen* | 515 000 | n.s. | - |
| March 1991 | *Nansen* | 495 000 | n.s. | - |
| August 1991 | *Benguela* | 565 000 | n.s. | - |
| November 1991 | *Nansen/Benguela* | 625 000 | 155 000 | 780 000 |
| June 1992 | *Nansen/Benguela* | 610 000 | 45 000 | 655 000 |
| August 1992 | *Benguela* | 410 000 | n.s. | - |
| November 1992 | *Benguela* | 515 000 | n.s. | - |
| March 1993 | *Nansen* | 385 000 | 50 000 | 435 000 |
| June 1993 | *Nansen* | 300 000 | 105 000 | 405 000 |
| August 1993 | *Benguela* | 445 000 | n.s. | - |
| November 1993 | *Benguela* | 320 000 | n.s. | - |
| February 1994 | *Nansen/Benguela* | 0 | 250 000 | 250 000 |
| June 1994 | *Nansen* | 20 000 | 240 000 | 260 000 |
| November 1994 | *Nansen* | 35 000 | 70 000 | 105 000 |

n.s. = not surveyed

Few signs of any recruitment of these three species were found. Some few young pilchard were sampled south of Rocky Point, but these will have little impact when they recruit to the fishable part of the stock.

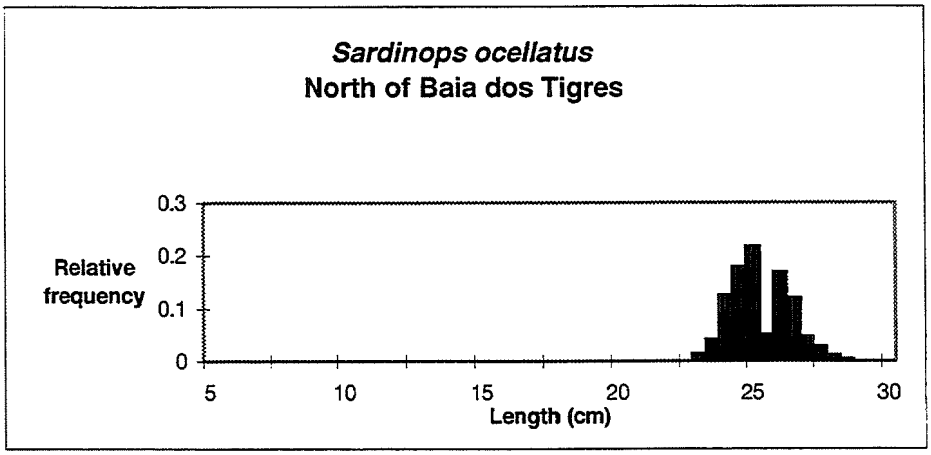
Table 3 Biomass estimates of anchovy *Engraulis capensis* and round herring *Etrumeus whiteheadi* between 1990 and 1994.

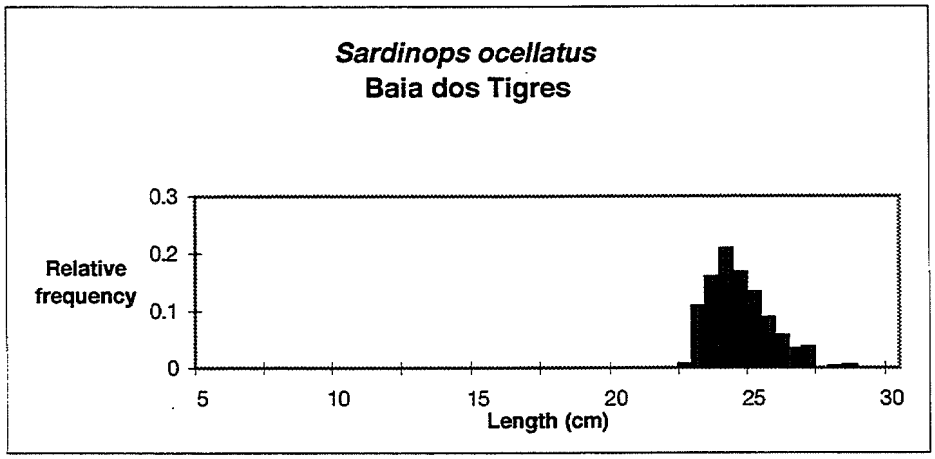
| Survey | Vessel | Anchovy/ Round herring |
|---|---|---|
| March 1990 | *Nansen* | 170 000 |
| June 1990 | *Nansen* | 140 000 |
| March 1991 | *Nansen* | 180 000 |
| August 1991 | *Benguela* | 345 000 |
| November 1991 | *Nansen/Benguela* | 325 000 |
| June 1992 | *Nansen/Benguela* | 175 000 |
| August 1992 | *Benguela* | 250 000 |
| November 1992 | *Benguela* | 17 000 |
| March 1993 | *Nansen* | 335 000 |
| June 1993 | *Nansen* | 230 000 |
| August 1993 | *Benguela* | 220 000 |
| November 1993 | *Benguela* | 250 000 |
| June 1994 | *Nansen* | 120 000 |
| November 1994 | *Nansen* | 30 000 |

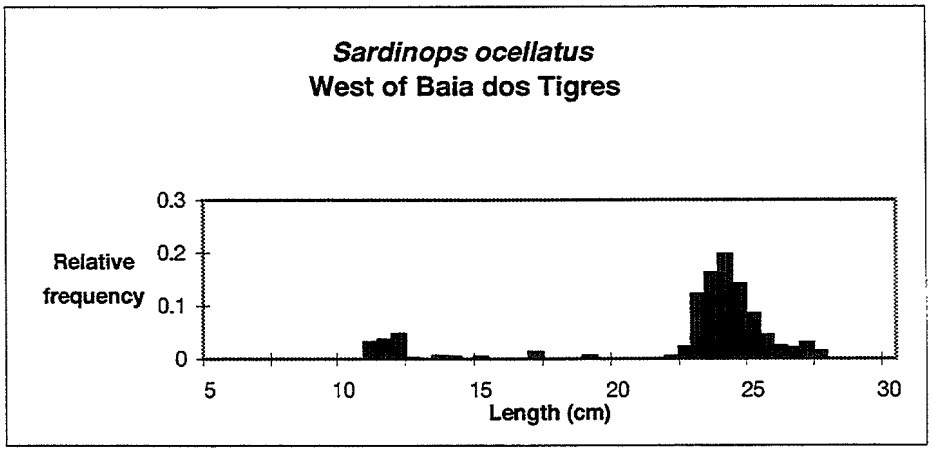
The pelagic Cape horse mackerel stock seems to be in a fairly robust state, at least compared to the other commercially important pelagic species.

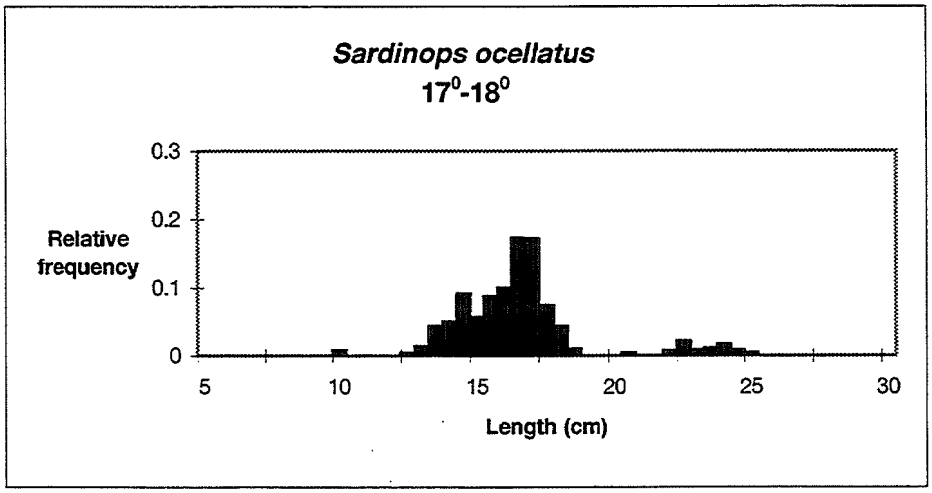
In summary, the results of this survey support the previous surveys of 1994, but show that the decline in the small pelagic stocks seems to be continuing. The stocks are now so small that the chances of good recruitment are probably very small. The lack of recruitment in 1994 means that any recovery of the stock is unlikely in 1995.

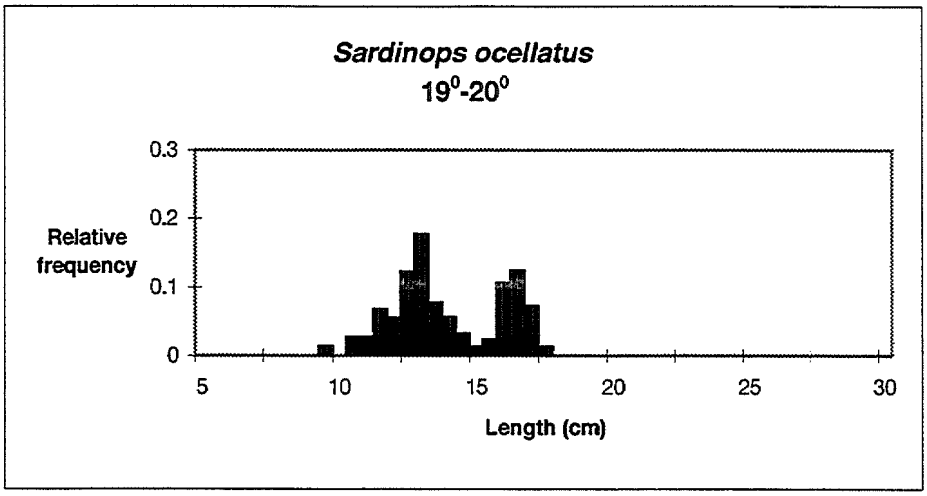
# Annex I Length frequency distributions by area

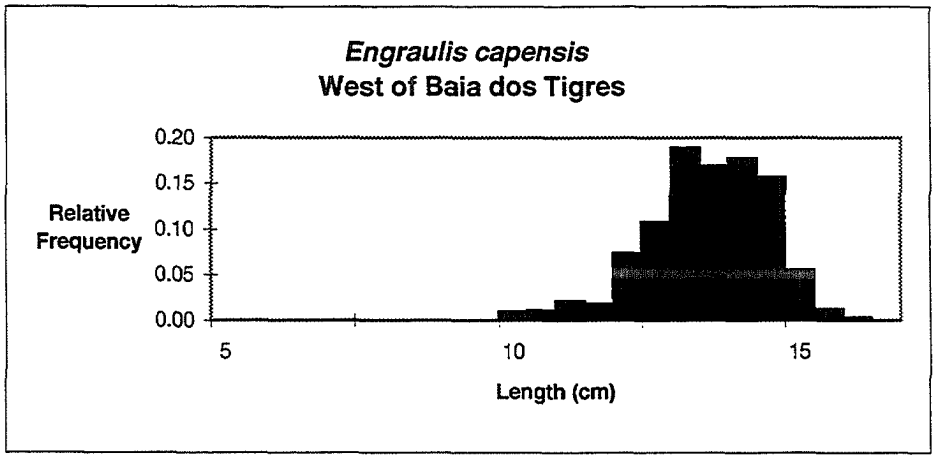


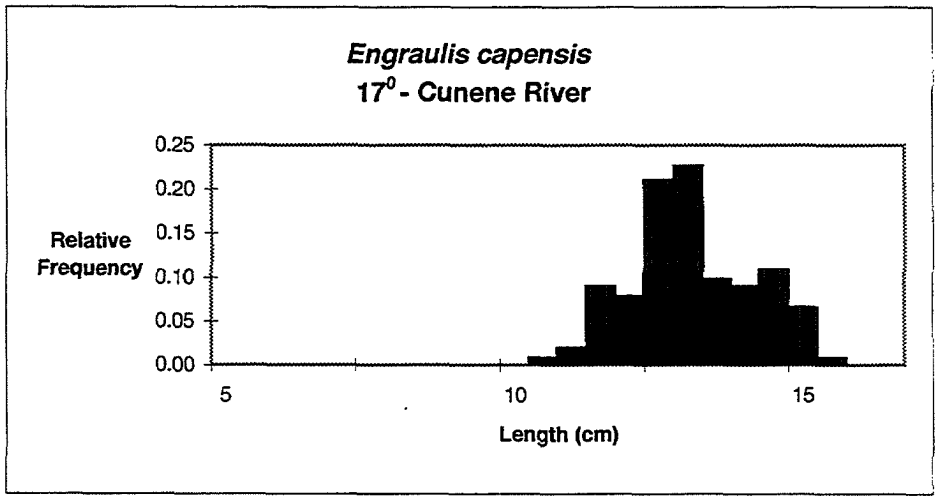




Sardinops ocellatus
19⁰-20⁰
Relative frequency
0.3
0.2
0.1
0
5
10
15
20
25
30
Length (cm)


*Engraulis capensis*
West of Baia dos Tigres
Relative Frequency
0.20
0.15
0.10
0.05
0.00
5
10
15
Length (cm)


*Engraulis capensis*
17⁰ - Cunene River
Relative Frequency
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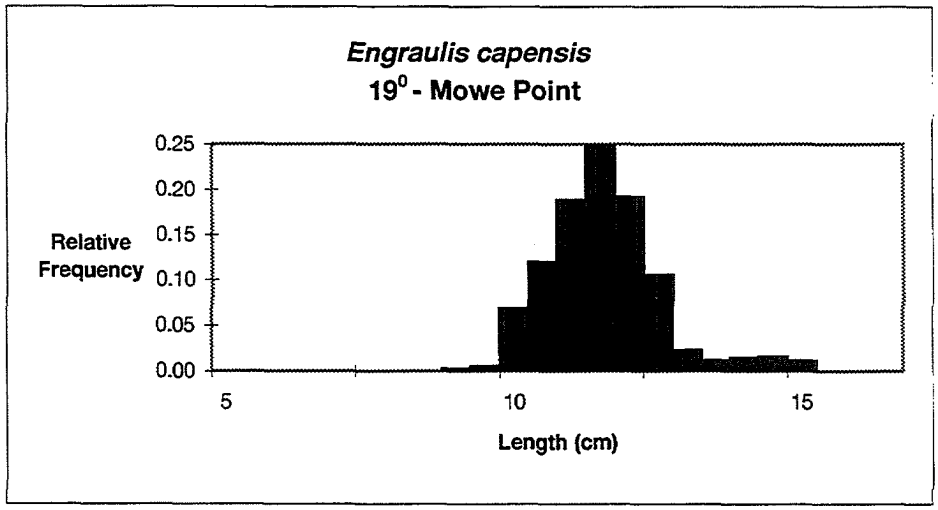
0.20
0.15
0.10
0.05
0.00
5
10
15
Length (cm)


*Engraulis capensis*
19⁰ - Mowe Point
Relative Frequency
0.25
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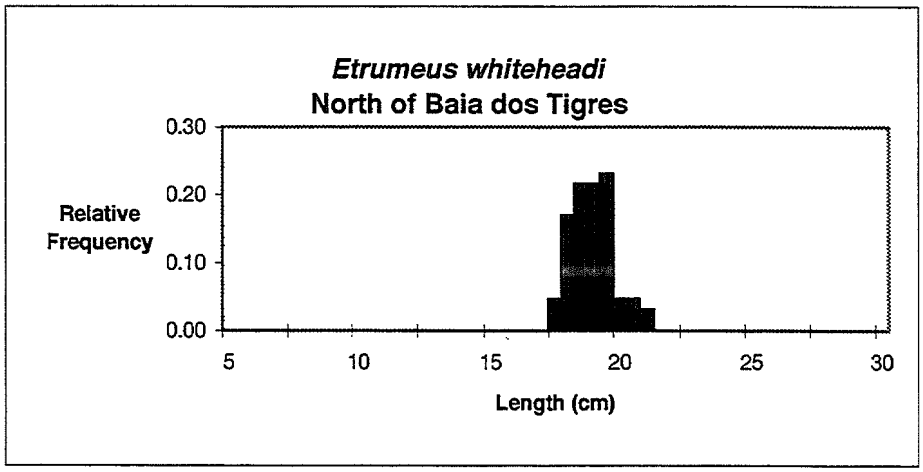
0.15
0.10
0.05
0.00
5
10
15
Length (cm)


*Etrumeus whiteheadi*
North of Baia dos Tigres
Relative Frequency
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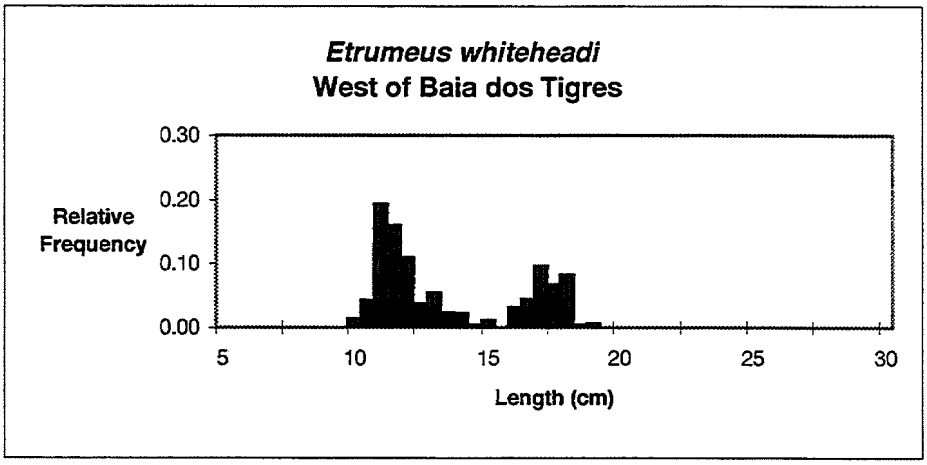
0.10
0.00
5
10
15
20
25
30
Length (cm)


*Etrumeus whiteheadi*
West of Baia dos Tigres
Relative Frequency
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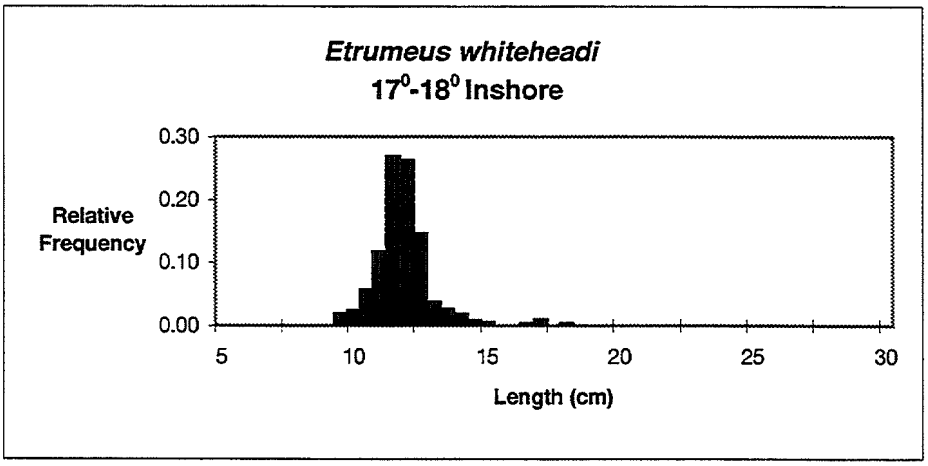
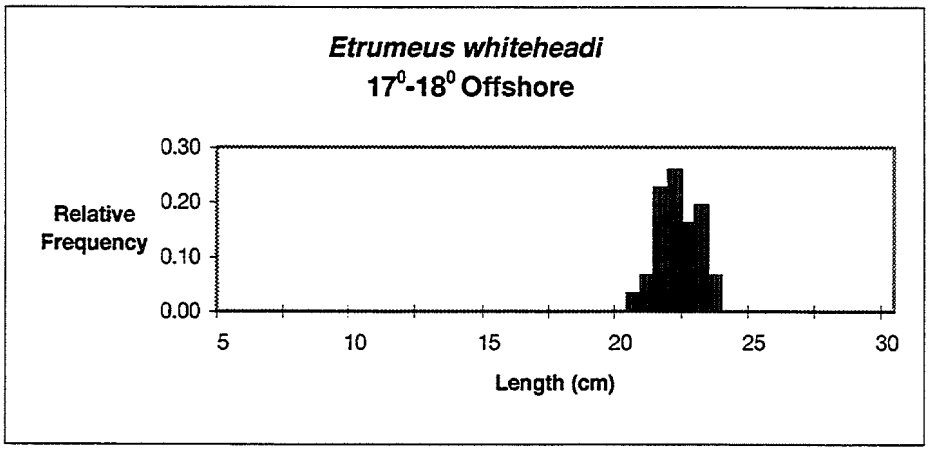
0.20
0.10
0.00
5
10
15
20
25
30
Length (cm)


*Etrumeus whiteheadi*
17⁰-18⁰ Inshore
Relative Frequency
0.30
0.20
0.10
0.00
5
10
15
20
25
30
Length (cm)


*Etrumeus whiteheadi*
17⁰-18⁰ Offshore
Relative Frequency
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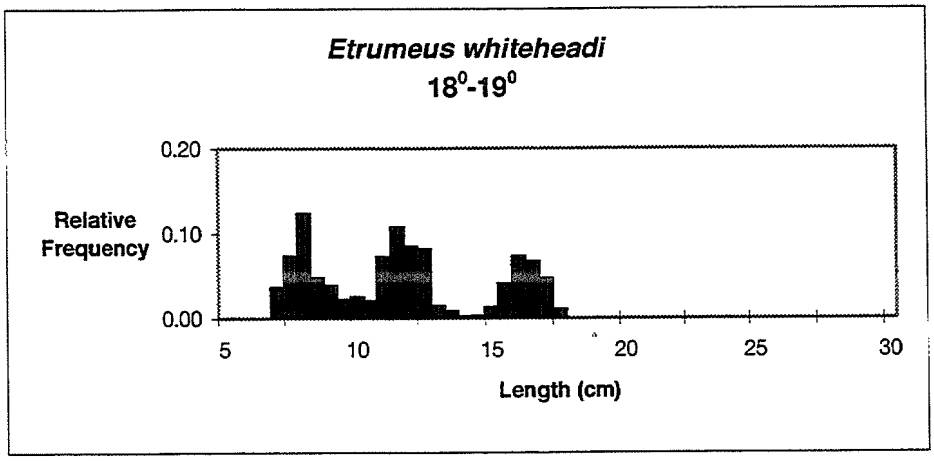
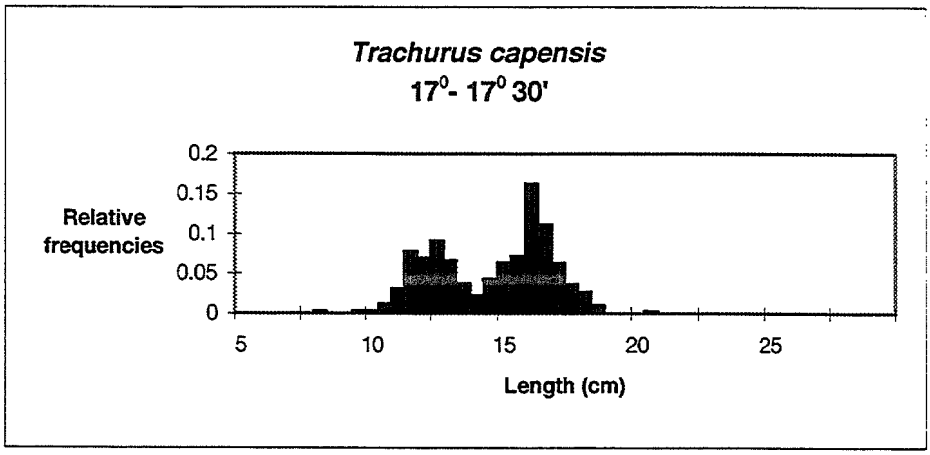
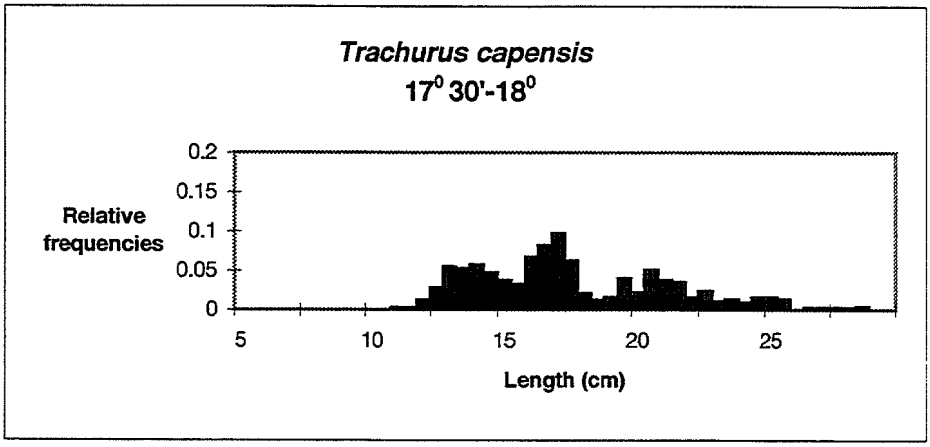
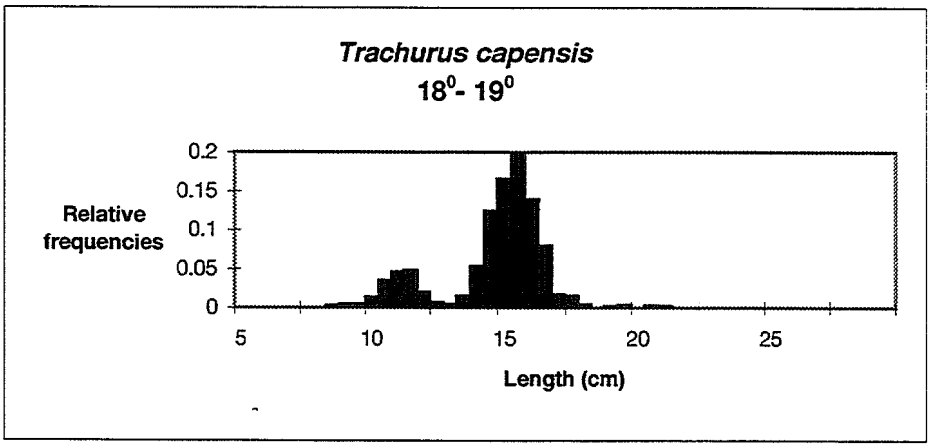
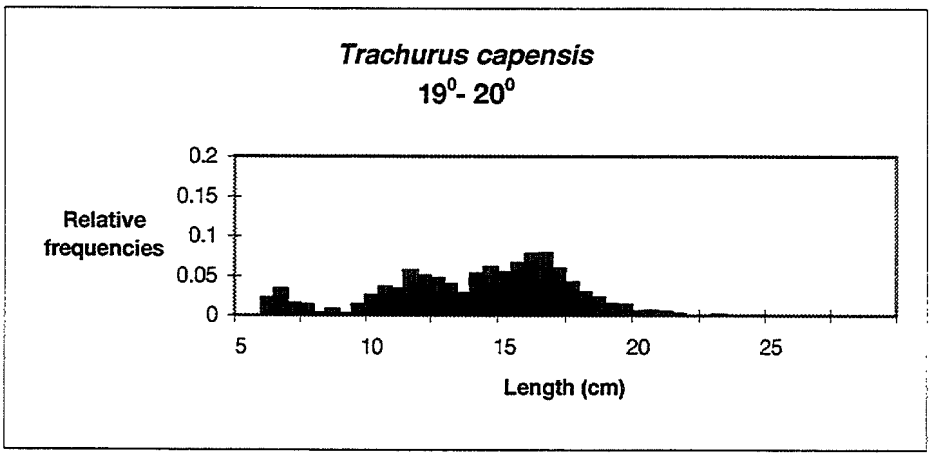
0.20
0.10
0.00
5
10
15
20
25
30
Length (cm)

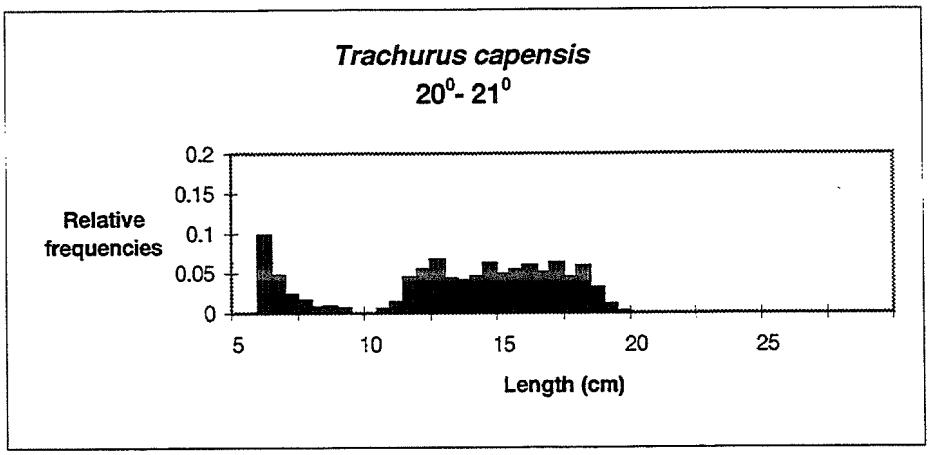

*Etrumeus whiteheadi*
$18^0$-$19^0$
Relative Frequency
0.20
0.10
0.00
5
10
15
20
25
30
Length (cm)

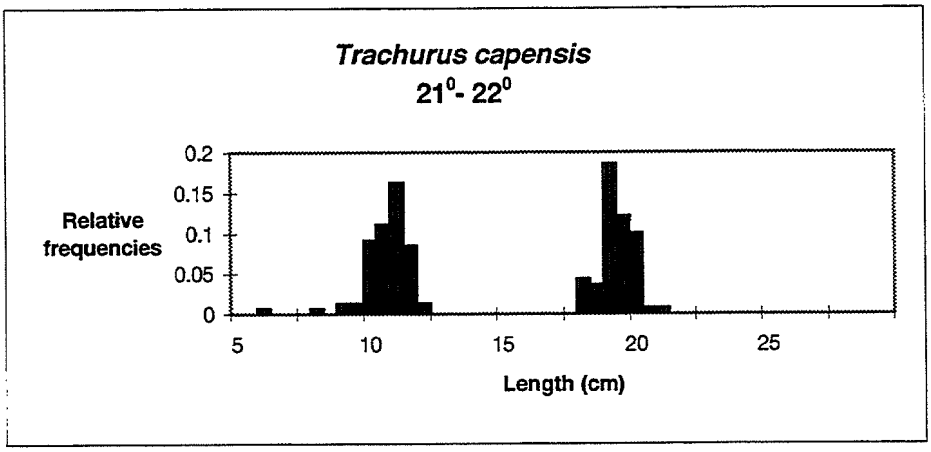

Trachurus capensis
17⁰- 17⁰ 30'
Relative frequencies
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)

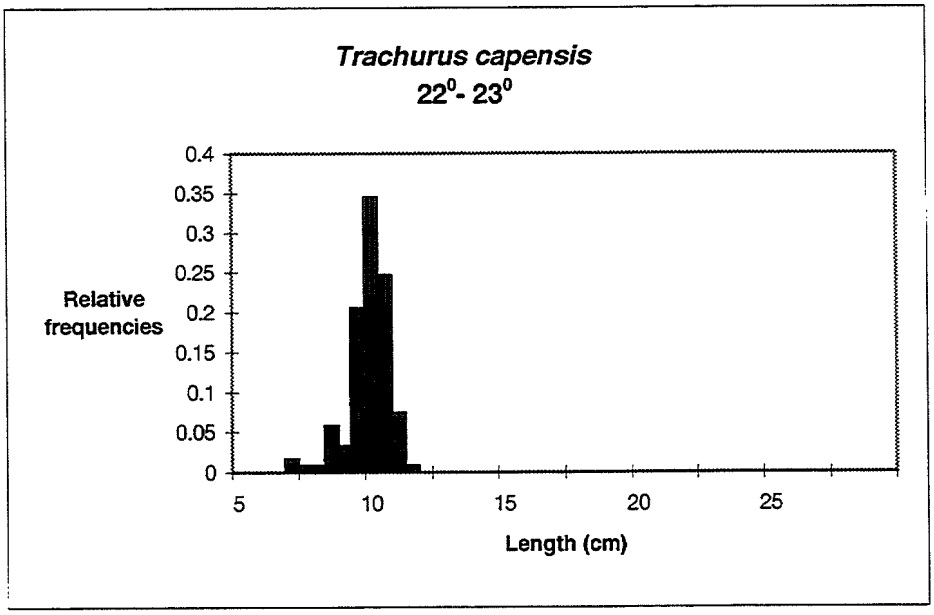

Trachurus capensis
17⁰ 30'-18⁰
Relative frequencies
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)


Trachurus capensis
18⁰- 19⁰
Relative frequencies
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)


Trachurus capensis
19⁰- 20⁰
Relative frequencies
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)


*Trachurus capensis*
$20^0$- $21^0$
Relative frequencies
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)


*Trachurus capensis*
$21^0$- $22^0$
Relative frequencies
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)


*Trachurus capensis*
$22^0$- $23^0$
Relative frequencies
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
5
10
15
20
25
Length (cm)

# Annex II Summary of trawl stations

| SUMMARY OF TRAWL INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Trawls not containing the target species are ommitted from this table | | | | | | | | |
| Trawl no. | Latitude | Bottom | Headrope | Catch by species (% of total catch) | | | | Total |
| | | depth | depth | **Trachurus** | **Sardinops** | **Engraulis** | **Etrumeus** | catch |
| | (°S) | (m) | (m) | **capensis** | **ocellatus** | **capensis** | **whiteheadi** | (kg) |
| 677 | 21°30 | 100 | 5 | 36.4 | 0.0 | 2.4 | 0.0 | 7 |
| 678 | 21°30 | 127 | 5 | 0.0 | 0.0 | 0.0 | 14.9 | 5 |
| 681 | 21°00 | 146 | 10 | 66.0 | 0.0 | 0.0 | 0.0 | 20 |
| 682 | 20°50 | 116 | 10 | 90.8 | 0.0 | 0.0 | 0.0 | 92 |
| 683 | 20°43 | 43 | 10 | 79.3 | 0.0 | 0.5 | 0.0 | 759 |
| 685 | 20°29 | 90 | 50 | 0.2 | 0.0 | 0.0 | 0.0 | 42 |
| 687 | 20°06 | 28 | 28 | 96.5 | 0.0 | 0.0 | 0.0 | 3108 |
| 689 | 20°00 | 28 | 10 | 50.7 | 0.0 | 0.4 | 0.2 | 88 |
| 690 | 20°00 | 131 | 10 | 67.1 | 0.0 | 0.0 | 0.0 | 7 |
| 692 | 19°40 | 56 | 10 | 0.2 | 0.0 | 69.6 | 20.5 | 101 |
| 693 | 19°45 | 28 | 12 | 5.0 | 0.0 | 0.0 | 0.0 | 2402 |
| 694 | 19°45 | 107 | 107 | 72.7 | 0.0 | 0.0 | 0.0 | 1886 |
| 697 | 19°34 | 34 | 17 | 2.2 | 34.4 | 47.6 | 15.1 | 2015 |
| 698 | 19°26 | 126 | 10 | 100.0 | 0.0 | 0.0 | 0.0 | 1 |
| 699 | 19°23 | 40 | 10 | 94.9 | 0.0 | 1.2 | 0.6 | 63 |
| 701 | 19°17 | 94 | 10 | 99.3 | 0.0 | 0.0 | 0.0 | 1201 |
| 702 | 19°13 | 74 | 45 | 73.8 | 2.0 | 21.5 | 1.9 | 8073 |
| 703 | 19°04 | 34 | 10 | 56.1 | 0.2 | 0.0 | 0.0 | 27 |
| 705 | 18°58 | 188 | 188 | 95.9 | 0.0 | 0.0 | 0.0 | 1868 |
| 706 | 19°00 | 54 | 10 | 0.4 | 0.3 | 98.4 | 0.3 | 1471 |
| 710 | 18°34 | 94 | 10 | 100.0 | 0.0 | 0.0 | 0.0 | 0 |
| 711 | 18°24 | 143 | 143 | 94.6 | 0.0 | 0.0 | 0.0 | 4017 |
| 712 | 18°13 | 208 | 0 | 66.1 | 0.0 | 0.0 | 5.6 | 102 |
| 713 | 18°08 | 27 | 10 | 31.1 | 42.4 | 1.5 | 18.7 | 1115 |
| 714 | 18°00 | 211 | 10 | 50.0 | 0.0 | 0.0 | 10.6 | 1 |
| 715 | 17°53 | 34 | 10 | 0.3 | 0.0 | 0.6 | 27.9 | 6 |
| 716 | 17°51 | 90 | 90 | 35.5 | 0.0 | 0.0 | 0.0 | 749 |
| 717 | 17°33 | 150 | 120 | 100.0 | 0.0 | 0.0 | 0.0 | 5000 |
| 718 | 17°31 | 64 | 15 | 100.0 | 0.0 | 0.0 | 0.0 | 269 |
| 719 | 17°27 | 146 | 10 | 100.0 | 0.0 | 0.0 | 0.0 | 390 |
| 720 | 17°24 | 30 | 10 | 31.0 | 0.0 | 65.8 | 0.6 | 83 |
| 721 | 17°18 | 121 | 10 | 100.0 | 0.0 | 0.0 | 0.0 | 13 |
| 724 | 16°47 | 107 | 10 | 99.8 | 0.0 | 0.0 | 0.0 | 24 |
| 725 | 16°42 | 37 | 5 | 98.8 | 0.0 | 0.0 | 0.0 | 341 |
| 727 | 16°37 | 117 | 117 | 64.2 | 0.0 | 0.0 | 0.0 | 988 |
| 728 | 16°29 | 16 | 0 | 0.0 | 99.0 | 0.0 | 0.0 | 5214 |
| 730 | 16°21 | 55 | 10 | 10.3 | 52.8 | 0.0 | 0.0 | 139 |
| 732 | 16°14 | 51 | 10 | 55.5 | 0.0 | 0.0 | 0.0 | 1 |
| 735 | 16°14 | 28 | 10 | 0.0 | 0.2 | 0.0 | 2.4 | 100 |
| 736 | 16°47 | 32 | 0 | 97.3 | 1.9 | 0.0 | 0.8 | 4354 |
| 737 | 17°36 | 38 | 10 | 0.1 | 98.7 | 0.3 | 0.7 | 1379 |
| 738 | 17°16 | 28 | 10 | 9.6 | 1.0 | 30.0 | 55.1 | 248 |
| 741 | 16°50 | 28 | 10 | 0.0 | 0.0 | 0.0 | 1.1 | 359 |
| 742 | 16°48 | 25 | 10 | 0.0 | 91.1 | 3.9 | 4.3 | 1052 |
| 743 | 16°45 | 18 | 0 | 0.0 | 41.9 | 8.8 | 7.7 | 12 |
| 744 | 16°40 | 57 | 0 | 0.0 | 75.2 | 3.3 | 1.1 | 455 |
| 745 | 16°38 | 15 | 10 | 0.0 | 97.5 | 0.0 | 0.0 | 8874 |
| 749 | 16°29 | 10 | 0 | 0.0 | 97.0 | 0.0 | 0.0 | 2988 |
| 750 | 16°21 | 33 | 10 | 0.0 | 4.7 | 0.4 | 0.7 | 54 |
| 753 | 16°11 | 33 | 0 | 0.0 | 4.31 | 0.29 | 0.62 | 69 |
| 754 | 16°51 | 11 | 11 | 0.0 | 0.36 | 33.88 | 19.56 | 2607 |
| 755 | 16°59 | 14 | 10 | 0.0 | 99.44 | 0.0 | 0.0 | 101 |
| 756 | 19°09 | 35 | 20 | 0.0 | 60.4 | 0.0 | 30.3 | 100 |
| 758 | 19°55 | 130 | 70 | 100.0 | 0.0 | 0.0 | 0.0 | 10000 |

# Annex III Records of fishing stations

PROJECT STATION: 672

DATE:26/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2235
start stop duration Long E 1416
TIME :14:55:00 15:15:00 20 (min) Purpose code: 1
LOG :4211.40 4212.30 0.90 Area code : 2
FDEPTH: 0 0 GearCond.code:
BDEPTH: 66 63 Validity code:
Towing dir: 75° Wire out: 120 m Speed: 27 kn*10

Sorted: 8 Kg Total catch: 39.75 CATCH/HOUR: 119.25

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 119.25 | 12525 | 100.00 | 2312 |
| Total | 119.25 | | 100.00 | |

PROJECT STATION: 673

DATE:26/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2225
start stop duration Long E 1354
TIME :19:43:00 20:08:00 24 (min) Purpose code: 1
LOG :4251.60 4252.80 1.20 Area code : 2
FDEPTH: 0 0 GearCond.code:
BDEPTH: 113 115 Validity code:
Towing dir: 281° Wire out: 150 m Speed: 30 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 674

DATE:26/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2220
start stop duration Long E 1406
TIME :22:18:00 22:38:00 20 (min) Purpose code: 1
LOG :4271.00 4272.00 1.00 Area code : 2
FDEPTH: 0 0 GearCond.code:
BDEPTH: 81 78 Validity code:
Towing dir: 73° Wire out: 100 m Speed: 30 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 675

DATE:27/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 2144
start stop duration Long E 1346
TIME :17:40:00 17:50:00 10 (min) Purpose code: 1
LOG :4459.70 4460.20 0.50 Area code : 2
FDEPTH: 40 40 GearCond.code:
BDEPTH: 68 72 Validity code:
Towing dir: 320° Wire out: 100 m Speed: 30 kn*10

Sorted: 202 Kg Total catch: 202.35 CATCH/HOUR: 1214.10

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 1214.10 | 354 | 100.00 | 2313 |
| Total | 1214.10 | | 100.00 | |

PROJECT STATION: 676

DATE:27/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 2145
start stop duration Long E 1350
TIME :18:46:00 19:08:00 22 (min) Purpose code: 1
LOG :4466.20 4467.20 1.00 Area code : 2
FDEPTH: 25 35 GearCond.code:
BDEPTH: 58 61 Validity code:
Towing dir: 285° Wire out: 100 m Speed: 29 kn*10

Sorted: 3 Kg Total catch: 58.20 CATCH/HOUR: 158.73

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 158.73 | 63491 | 100.00 | 2314 |
| Total | 158.73 | | 100.00 | |

PROJECT STATION: 677

DATE:28/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2130
start stop duration Long E 1333
TIME :02:45:00 03:00:00 15 (min) Purpose code: 1
LOG :4540.40 4541.30 0.70 Area code : 2
FDEPTH: 5 5 GearCond.code:
BDEPTH: 100 99 Validity code:
Towing dir: 93° Wire out: 100 m Speed: 30 kn*10

Sorted: 5 Kg Total catch: 7.42 CATCH/HOUR: 29.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 16.56 | 100 | 55.80 | 2316 |
| Trachurus, Juveniles | 10.80 | 924 | 36.39 | 2317 |
| Trachipterus trachypterus | 1.60 | 8 | 5.39 | |
| Engraulis capensis | 0.72 | 48 | 2.43 | 2315 |
| Total | 29.68 | | 100.01 | |

PROJECT STATION: 678

DATE:28/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2130
start stop duration Long E 1319
TIME :04:40:00 05:00:00 20 (min) Purpose code: 1
LOG :4555.10 4556.20 1.10 Area code : 2
FDEPTH: 5 5 GearCond.code:
BDEPTH: 127 129 Validity code:
Towing dir: 273° Wire out: 100 m Speed: 31 kn*10

Sorted: 1 Kg Total catch: 5.36 CATCH/HOUR: 16.08

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 13.20 | 144 | 82.09 | 2318 |
| Etrumeus whiteheadi | 2.40 | 24 | 14.93 | 2319 |
| Merluccius capensis, juveniles | 0.48 | 504 | 2.99 | 2320 |
| Total | 16.08 | | 100.01 | |

PROJECT STATION: 679

DATE:28/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 2120
start stop duration Long E 1328
TIME :09:22:00 09:38:00 16 (min) Purpose code: 1
LOG :4594.20 4595.10 0.90 Area code : 2
FDEPTH: 70 70 GearCond.code:
BDEPTH: 102 102 Validity code:
Towing dir: 270° Wire out: 300 m Speed: 32 kn*10

Sorted: Kg Total catch: 0.13 CATCH/HOUR: 0.49

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Merluccius capensis, juveniles | 0.49 | 128 | 100.00 | 2321 |
| Merluccius capensis, juveniles | 0.00 | | | |
| Total | 0.49 | | 100.00 | |

PROJECT STATION: 680

DATE:28/11/94 GEAR TYPE: PT No:6 POSITION:Lat S 2119
start stop duration Long E 1329
TIME :10:51:00 11:08:00 17 (min) Purpose code: 1
LOG :4601.20 4602.00 0.80 Area code : 2
FDEPTH: 0 0 GearCond.code:
BDEPTH: 94 97 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 30 kn*10

Sorted: 18 Kg Total catch: 18.69 CATCH/HOUR: 65.96

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 65.82 | 39 | 99.79 | 2323 |
| Trachurus, Juveniles | 0.15 | 45 | 0.23 | 2322 |
| Thyrsites atun | 0.00 | | | |
| Trachurus, Juveniles | 0.00 | | | |
| Total | 65.97 | | 100.02 | |

PROJECT STATION: 681

DATE:28/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2100
start stop duration Long E 1301
TIME :22:21:00 22:33:00 12 (min) Purpose code: 1
LOG :4708.30 4709.00 0.70 Area code : 2
FDEPTH: 10 10 GearCond.code:
BDEPTH: 146 142 Validity code:
Towing dir: 86° Wire out: 100 m Speed: 28 kn*10

Sorted: 20 Kg Total catch: 20.45 CATCH/HOUR: 102.25

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 67.50 | 1235 | 66.01 | 2324 |
| Thyrsites atun | 34.75 | 10 | 33.99 | 2325 |
| Total | 102.25 | | 100.00 | |

PROJECT STATION: 682

DATE:29/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2050
start stop duration Long E 1307
TIME :01:17:00 01:27:00 10 (min) Purpose code: 1
LOG :4732.00 4732.70 0.70 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 116 116 Validity code:
Towing dir: 60° Wire out: 100 m Speed: 32 kn*10

Sorted: 28 Kg Total catch: 92.45 CATCH/HOUR: 554.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 503.52 | 10998 | 90.77 | 2326 |
| Thyrsites atun | 50.70 | 30 | 9.14 | 2328 |
| Merluccius capensis, juveniles | 0.48 | 18 | 0.09 | 2327 |
| Total | 554.70 | | 100.00 | |

PROJECT STATION: 683

DATE:29/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2043
start stop duration Long E 1318
TIME :03:29:00 03:29:00 10 (min) Purpose code: 1
LOG :4747.30 4747.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 43 49 Validity code:
Towing dir: 27° Wire out: 100 m Speed: 33 kn*10

Sorted: 31 Kg Total catch: 759.01 CATCH/HOUR: 4554.06

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 3612.00 | 119280 | 79.31 | 2332 |
| Argyrosomus hololepidotus | 496.50 | 138 | 10.90 | 2329 |
| Thyrsites atun | 331.20 | 126 | 7.27 | 2330 |
| Galeichthys feliceps | 58.80 | 240 | 1.29 | |
| Merluccius capensis, juveniles | 24.60 | 600 | 0.54 | 2333 |
| Engraulis capensis | 23.52 | 1560 | 0.52 | 2331 |
| Krill | 6.00 | | 0.13 | |
| Todaropsis eblanae | 0.60 | 120 | 0.01 | |
| Etrumeus whiteheadi | 0.48 | 120 | 0.01 | |
| Sufflogobius bibarbatus | 0.36 | 120 | 0.01 | |
| Total | 4554.06 | | 99.99 | |

PROJECT STATION: 684

DATE:29/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2043
start stop duration Long E 1552
TIME :06:11:00 06:21:00 10 (min) Purpose code: 1
LOG :4772.30 4772.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 179 201 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 35 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 685

DATE:29/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 2029
start stop duration Long E 1308
TIME :09:36:00 09:43:00 7 (min) Purpose code: 1
LOG :4801.50 4801.80 0.30 Area code : 3
FDEPTH: 50 50 GearCond.code:
BDEPTH: 90 91 Validity code:
Towing dir: 236° Wire out: 250 m Speed: 30 kn*10

Sorted: 42 Kg Total catch: 41.57 CATCH/HOUR: 356.31

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 354.43 | 120 | 99.47 | 2335 |
| Small squids | 1.29 | 51 | 0.36 | |
| Trachurus capensis | 0.60 | 17 | 0.17 | 2334 |
| Total | 356.32 | | 100.00 | |

PROJECT STATION: 686

DATE:29/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 2028
start stop duration Long E 1240
TIME :15:46:00 15:51:00 5 (min) Purpose code: 1
LOG :4838.10 4838.40 0.30 Area code : 3
FDEPTH: 50 55 GearCond.code:
BDEPTH: 215 215 Validity code:
Towing dir: 270° Wire out: 200 m Speed: 30 kn*10

Sorted: 1 Kg Total catch: 2.00 CATCH/HOUR: 24.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 8.40 | 3696 | 35.00 | 2336 |
| Schedophilus huttoni | 7.92 | 24 | 33.00 | |
| Todaropsis eblanae | 7.68 | 552 | 32.00 | |
| Total | 24.00 | | 100.00 | |

PROJECT STATION: 687

DATE:29/11/94 GEAR TYPE: BT No:6 POSITION:Lat S 2006
start stop duration Long E 1303
TIME :17:33:00 17:38:00 5 (min) Purpose code: 1
LOG :4870.30 4870.60 0.30 Area code : 3
FDEPTH: 28 31 GearCond.code:
BDEPTH: 28 31 Validity code:
Towing dir: 283° Wire out: 100 m Speed: 32 kn*10

Sorted: 142 Kg Total catch: 3108.45 CATCH/HOUR: 37301.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 36000.00 | 1907832 | 96.51 | 2337 |
| Argyrosomus hololepidotus | 1266.00 | 444 | 3.39 | 2338 |
| Thyrsites atun | 35.40 | 12 | 0.09 | |
| Total | 37301.40 | | 99.99 | |

PROJECT STATION: 688

DATE:29/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 2008
start stop duration Long E 1254
TIME :18:55:00 19:02:00 7 (min) Purpose code: 1
LOG :4881.20 4881.70 0.50 Area code : 3
FDEPTH: 40 40 GearCond.code:
BDEPTH: 95 94 Validity code:
Towing dir: 254° Wire out: 200 m Speed: 30 kn*10

Sorted: 7 Kg Total catch: 7.30 CATCH/HOUR: 62.57

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 57.00 | 17 | 91.10 | |
| Zu elongatus | 5.57 | 9 | 8.90 | |
| Total | 62.57 | | 100.00 | |

PROJECT STATION: 689

DATE:29/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2000
start stop duration Long E 1300
TIME :22:23:00 22:33:00 10 (min) Purpose code: 1
LOG :4909.50 4910.20 0.70 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 28 31 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 34 kn*10

Sorted: 47 Kg Total catch: 87.92 CATCH/HOUR: 527.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 267.30 | 13956 | 50.67 | 2341 |
| Callorhinchus capensis | 161.70 | 114 | 30.65 | |
| Thyrsites atun | 43.20 | 24 | 8.19 | |
| Argyrosomus hololepidotus | 16.80 | 6 | 3.18 | |
| Myliobatis aquila | 15.30 | 6 | 2.90 | |
| Galeichthys feliceps | 14.58 | 60 | 2.76 | |
| Chelidonichthys capensis | 3.48 | 90 | 0.66 | |
| Engraulis capensis | 2.22 | 150 | 0.42 | 2339 |
| Etrumeus whiteheadi | 1.26 | 318 | 0.24 | 2340 |
| Merluccius capensis, juveniles | 1.02 | 102 | 0.19 | 2342 |
| Small squids | 0.66 | 60 | 0.13 | |
| Total | 527.52 | | 99.99 | |

PROJECT STATION: 690

DATE:30/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 2000
start stop duration Long E 1235
TIME :01:19:00 01:29:00 10 (min) Purpose code: 1
LOG :4933.50 4934.10 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 131 133 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 33 kn*10

Sorted: 3 Kg Total catch: 7.24 CATCH/HOUR: 43.44

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 29.16 | 1248 | 67.13 | 2343 |
| Thyrsites atun | 11.40 | 12 | 26.24 | 2344 |
| Todaropsis eblanae | 2.88 | 72 | 6.63 | |
| Total | 43.44 | | 100.00 | |

PROJECT STATION: 691

DATE:30/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 1949
start stop duration Long E 1247
TIME :05:14:00 05:24:00 10 (min) Purpose code: 1
LOG :4967.20 4968.70 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 86 84 Validity code:
Towing dir: 65° Wire out: 100 m Speed: 33 kn*10

Sorted: 6 Kg Total catch: 5.55 CATCH/HOUR: 33.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 33.30 | 18 | 100.00 | 2345 |
| Total | 33.30 | | 100.00 | |

PROJECT STATION: 692

DATE:30/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 1940
start stop duration Long E 1251
TIME :06:11:00 06:31:00 20 (min) Purpose code: 1
LOG :4972.90 4974.20 1.30 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 56 65 Validity code:
Towing dir: 250° Wire out: 100 m Speed: 30 kn*10

Sorted: 23 Kg Total catch: 101.46 CATCH/HOUR: 304.38

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Engraulis capensis | 211.89 | 20214 | 69.61 | 2346 |
| Etrumeus whiteheadi | 62.37 | 5553 | 20.49 | 2347 |
| Thyrsites atun | 29.40 | 9 | 9.66 | |
| Trachurus capensis | 0.72 | 84 | 0.24 | |
| Total | 304.38 | | 100.00 | |

PROJECT STATION: 693

DATE:30/11/94 GEAR TYPE: PT No:3 POSITION:Lat S 1945
start stop duration Long E 1253
TIME :07:47:00 08:01:00 14 (min) Purpose code: 1
LOG :4981.50 4982.50 1.00 Area code : 3
FDEPTH: 12 12 GearCond.code:
BDEPTH: 28 29 Validity code:
Towing dir: 327° Wire out: 100 m Speed: 33 kn*10

Sorted: 393 Kg Total catch: 2402.35 CATCH/HOUR: 10295.79

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 8755.71 | 365910 | 85.04 | 2348 |
| Thyrsites atun | 1518.00 | 441 | 14.74 | 2349 |
| Argyrosomus hololepidotus | 12.86 | 4 | 0.12 | |
| Callorhinchus capensis | 9.21 | 4 | 0.09 | |
| Total | 10295.78 | | 99.99 | |

PROJECT STATION: 694

DATE:30/11/94 GEAR TYPE: BT No:1 POSITION:Lat S 1945
start stop duration Long E 1239
TIME :09:59:00 10:07:00 8 (min) Purpose code: 1
LOG :5000.00 5000.50 0.50 Area code : 3
FDEPTH: 107 105 GearCond.code:
BDEPTH: 107 105 Validity code:
Towing dir: 90° Wire out: 400 m Speed: 31 kn*10

Sorted: 34 Kg Total catch: 1886.40 CATCH/HOUR: 14148.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 10290.00 | 234165 | 72.73 | 2350 |
| Merluccius capensis, juveniles | 3858.00 | 462000 | 27.27 | 2351 |
| Total | 14148.00 | | 100.00 | |

PROJECT STATION: 695

DATE:30/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 1944
start stop duration Long E 1222
TIME :12:05:00 12:15:00 10 (min) Purpose code: 1
LOG :5017.20 5017.70 0.50 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 152 152 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 30 kn*10

Sorted: Kg Total catch: 0.24 CATCH/HOUR: 1.44

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 1.44 | 504 | 100.00 | 2352 |
| Total | 1.44 | | 100.00 | |

PROJECT STATION: 696

DATE:30/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 1941
start stop duration Long E 1221
TIME :14:13:00 14:23:00 10 (min) Purpose code: 1
LOG :5031.70 5032.30 0.60 Area code : 3
FDEPTH: 50 50 GearCond.code:
BDEPTH: 149 146 Validity code:
Towing dir: 70° Wire out: 200 m Speed: 33 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 697

DATE:30/11/94 GEAR TYPE: PT No:1 POSITION:Lat S 1934
start stop duration Long E 1246
TIME :17:18:00 17:33:00 15 (min) Purpose code: 1
LOG :5058.90 5059.80 0.90 Area code : 3
FDEPTH: 17 17 GearCond.code:
BDEPTH: 34 40 Validity code:
Towing dir: 240° Wire out: 100 m Speed: 35 kn*10

Sorted: 19 Kg Total catch: 2015.10 CATCH/HOUR: 8060.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Engraulis capensis | 3837.20 | 555032 | 47.61 | 2354 |
| Sardinops ocellatus | 2770.80 | 177732 | 34.38 | 2353 |
| Etrumeus whiteheadi | 1216.40 | 219700 | 15.09 | 2356 |
| Trachurus capensis | 175.60 | 20128 | 2.18 | 2355 |
| Thyrsites atun | 48.00 | 12 | 0.60 | |
| Argyrosomus hololepidotus | 12.40 | 4 | 0.15 | |
| Total | 8060.40 | | 100.01 | |

PROJECT STATION: 698

DATE:30/11/94 GEAR TYPE: PT No:2 POSITION:Lat S 1926
start stop duration Long E 1225
TIME :22:06:00 22:17:00 11 (min) Purpose code: 1
LOG :5102.60 5103.20 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 126 124 Validity code:
Towing dir: 85° Wire out: 100 m Speed: 31 kn*10

Sorted: 1 Kg Total catch: 0.90 CATCH/HOUR: 4.91

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 4.91 | 153 | 100.00 | 2357 |
| Total | 4.91 | | 100.00 | |

PROJECT STATION: 699

DATE: 1/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1923
start stop duration Long E 1240
TIME :00:14:00 00:24:00 10 (min) Purpose code: 1
LOG :5118.80 5119.40 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 40 45 Validity code:
Towing dir: 280° Wire out: 100 m Speed: 32 kn*10

Sorted: 8 Kg Total catch: 62.92 CATCH/HOUR: 377.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 358.08 | 23760 | 94.85 | 2358 |
| Thyrsites atun | 7.50 | 144 | 1.99 | 2359 |
| Engraulis capensis | 4.50 | 336 | 1.19 | 2361 |
| Todaropsis eblanae | 3.96 | 432 | 1.05 | |
| Etrumeus whiteheadi | 2.10 | 144 | 0.56 | 2360 |
| Galeichthys feliceps | 1.20 | 6 | 0.32 | |
| Trigla lyra | 0.18 | 48 | 0.05 | |
| Total | 377.52 | | 100.01 | |

PROJECT STATION: 700

DATE: 1/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1921
start stop duration Long E 1221
TIME :02:25:00 02:35:00 10 (min) Purpose code: 1
LOG :5137.30 5137.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 128 129 Validity code:
Towing dir: 280° Wire out: 100 m Speed: 33 kn*10

Sorted: Kg Total catch: 0.03 CATCH/HOUR: 0.18

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 0.18 | 54 | 100.00 | 2362 |
| Total | 0.18 | | 100.00 | |

PROJECT STATION: 701

DATE: 1/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1917
start stop duration Long E 1228
TIME :05:27:00 05:37:00 10 (min) Purpose code: 1
LOG :5164.30 5164.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 94 97 Validity code:
Towing dir: 75° Wire out: 100 m Speed: 33 kn*10

Sorted: 38 Kg Total catch: 1200.60 CATCH/HOUR: 7203.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 7152.00 | 302664 | 99.28 | 2363 |
| Thyrsites atun | 51.60 | 12 | 0.72 | |
| Total | 7203.60 | | 100.00 | |

PROJECT STATION: 702

DATE: 1/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1913
start stop duration Long E 121
TIME :07:26:00 07:37:00 11 (min) Purpose code: 1
LOG :5179.80 5180.60 0.80 Area code : 3
FDEPTH: 45 45 GearCond.code:
BDEPTH: 74 70 Validity code:
Towing dir: 100° Wire out: 200 m Speed: 30 kn*10

Sorted: 17 Kg Total catch: 8072.85 CATCH/HOUR: 44033.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 32478.92 | 3024174 | 73.76 | 2364 |
| Engraulis capensis | 9450.71 | 1417091 | 21.46 | 2365 |
| Sardinops ocellatus | 866.13 | 63365 | 1.97 | 2366 |
| Etrumeus whiteheadi | 840.65 | 265996 | 1.91 | 2367 |
| Thyrsites atun | 397.36 | 131 | 0.90 | |
| Total | 44033.77 | | 100.00 | |

PROJECT STATION: 703

DATE: 1/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1904
start stop duration Long E 1229
TIME :13:30:00 13:40:00 10 (min) Purpose code: 1
LOG :5230.70 5231.30 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 34 38 Validity code:
Towing dir: 275° Wire out: 100 m Speed: 32 kn*10

Sorted: 10 Kg Total catch: 27.47 CATCH/HOUR: 164.82

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 92.52 | 4362 | 56.13 | 2368 |
| Thyrsites atun | 68.70 | 18 | 41.68 | 2369 |
| Todaropsis eblanae | 2.40 | 288 | 1.46 | |
| Pomatomus saltatrix | 0.84 | 12 | 0.51 | |
| Sardinops ocellatus | 0.36 | 12 | 0.22 | |
| CYNOGLOSSIDAE | 0.00 | 42 | | |
| Total | 164.82 | | 100.00 | |

PROJECT STATION: 704

DATE: 1/12/94 GEAR TYPE: BT No:6 POSITION:Lat S 1859
start stop duration Long E 1201
TIME :17:15:00 17:45:00 30 (min) Purpose code: 1
LOG :5262.20 5264.10 1.80 Area code : 3
FDEPTH: 189 200 GearCond.code: 7
BDEPTH: 189 200 Validity code:
Towing dir: 280° Wire out: 550 m Speed: 32 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 0.00 | 2 | | |
| Total | | | | |

PROJECT STATION: 705

DATE: 1/12/94 GEAR TYPE: BT No:6 POSITION:Lat S 1858
start stop duration Long E 1200
TIME :18:25:00 18:37:00 12 (min) Purpose code: 1
LOG :5266.70 5267.40 0.70 Area code : 3
FDEPTH: 188 183 GearCond.code:
BDEPTH: 188 183 Validity code:
Towing dir: 100° Wire out: 600 m Speed: 31 kn*10

Sorted: 31 Kg Total catch: 1868.00 CATCH/HOUR: 9340.00

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 8960.00 | 254690 | 95.93 | 2370 |
| Merluccius capensis, juveniles | 220.00 | 2000 | 2.36 | |
| Dentex macrophthalmus | 160.00 | 1200 | 1.71 | |
| Total | 9340.00 | | 100.00 | |

PROJECT STATION: 706

DATE: 1/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1900
start stop duration Long E 1225
TIME :21:42:00 21:54:00 12 (min) Purpose code: 1
LOG :5293.00 5293.70 0.70 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 54 62 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 31 kn*10

Sorted: 39 Kg Total catch: 1471.10 CATCH/HOUR: 7355.50

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Engraulis capensis | 7235.00 | 836545 | 98.36 | 2371 |
| Trachurus capensis | 30.00 | 2500 | 0.41 | 2373 |
| Sardinops ocellatus | 25.00 | 1750 | 0.34 | 2374 |
| Thyrsites atun | 23.00 | 15 | 0.31 | |
| Etrumeus whiteheadi | 22.50 | 5750 | 0.31 | 2372 |
| Small squids | 20.00 | 1500 | 0.27 | |
| Total | 7355.50 | | 100.00 | |

PROJECT STATION: 707

DATE: 2/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1854
start stop duration Long E 1208
TIME :00:30:00 00:40:00 10 (min) Purpose code: 1
LOG :5316.00 5316.60 0.60 Area code : 3
FDEPTH: 10 100 GearCond.code:
BDEPTH: 110 113 Validity code:
Towing dir: 285° Wire out: 100 m Speed: 33 kn*10

Sorted: 15 Kg Total catch: 228.40 CATCH/HOUR: 1370.40

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 1309.50 | 50760 | 95.56 | 2375 |
| Thyrsites atun | 60.90 | 18 | 4.44 | 2376 |
| Total | 1370.40 | | 100.00 | |

PROJECT STATION: 708

DATE: 2/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1849
start stop duration Long E 1200
TIME :03:11:00 03:21:00 10 (min) Purpose code: 1
LOG :5338.80 5339.40 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 133 127 Validity code:
Towing dir: 90° Wire out: 100 m Speed: 32 kn*10

Sorted: Kg Total catch: 0.31 CATCH/HOUR: 1.86

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trichiurus sp. | 0.96 | 48 | 51.61 | |
| Todarodes sagittatus | 0.90 | 18 | 48.39 | |
| Total | 1.86 | | 100.00 | |

PROJECT STATION: 709

DATE: 2/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1848
start stop duration Long E 1219
TIME :06:01:00 06:12:00 11 (min) Purpose code: 1
LOG :5361.40 5362.00 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 34 36 Validity code:
Towing dir: 290° Wire out: 100 m Speed: 26 kn*10

Sorted: 3 Kg Total catch: 3.01 CATCH/HOUR: 16.42

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 15.98 | 267 | 97.32 | 2377 |
| Trachurus, Juveniles | 0.44 | 38 | 2.68 | 2378 |
| Total | 16.42 | | 100.00 | |

PROJECT STATION: 710

DATE: 2/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1834
start stop duration Long E 1157
TIME :12:05:00 12:15:00 10 (min) Purpose code: 1
LOG :5419.20 5419.80 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 94 97 Validity code:
Towing dir: 290° Wire out: 100 m Speed: 32 kn*10

Sorted: Kg Total catch: 0.35 CATCH/HOUR: 2.10

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 2.10 | 6 | 100.00 | |
| Total | 2.10 | | 100.00 | |

PROJECT STATION: 711

DATE: 2/12/94 GEAR TYPE: BT No:6 POSITION:Lat S 1824
start stop duration Long E 1144
TIME :16:15:00 16:30:00 15 (min) Purpose code: 1
LOG :5456.90 5457.70 0.80 Area code : 3
FDEPTH: 143 141 GearCond.code:
BDEPTH: 143 141 Validity code:
Towing dir: 270° Wire out: 500 m Speed: 30 kn*10

Sorted: 73 Kg Total catch: 4016.90 CATCH/HOUR: 16067.60

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 15357.56 | 555404 | 95.58 | 2379 |
| Merluccius capensis | 495.20 | 3272 | 3.08 | 2380 |
| Dentex macrophthalmus | 91.64 | 1092 | 0.57 | 2381 |
| Synagrops microlepis | 54.52 | 9164 | 0.34 | |
| Trigla lyra | 32.80 | 20 | 0.20 | |
| Callorhinchus capensis | 26.00 | 12 | 0.16 | |
| Raja miraletus | 8.80 | 12 | 0.05 | |
| Sufflogobius bibarbatus | 1.08 | 220 | 0.01 | |
| Total | 16067.60 | | 99.99 | |

PROJECT STATION: 712

DATE: 2/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1813
start stop duration Long E 1134
TIME :21:11:00 21:22:00 11 (min) Purpose code: 1
LOG :5499.60 5500.20 0.60 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 208 218 Validity code:
Towing dir: 250° Wire out: 100 m Speed: 28 kn*10

Sorted: 34 Kg Total catch: 101.52 CATCH/HOUR: 553.75

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 365.73 | 12507 | 66.05 | 2381 |
| MYCTOPHIDAE | 153.93 | 92045 | 27.80 | |
| Etrumeus whiteheadi | 31.09 | 507 | 5.61 | 2382 |
| C E P H A L O P O D A | 2.95 | 33 | 0.53 | |
| Total | 553.70 | | 99.99 | |

PROJECT STATION: 713

DATE: 2/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1808
start stop duration Long E 1149
TIME :23:29:00 23:39:00 10 (min) Purpose code: 1
LOG :5517.90 5518.50 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 27 27 Validity code:
Towing dir: 330° Wire out: 100 m Speed: 30 kn*10

Sorted: 7 Kg Total catch: 1114.50 CATCH/HOUR: 6687.00

| SPECIES | CATCH/HOUR weight | CATCH/HOUR numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 2835.00 | 70200 | 42.40 | 2383 |
| Trachurus, Juveniles | 2079.00 | 135900 | 31.09 | 2387 |
| Etrumeus whiteheadi | 1251.00 | 134100 | 18.71 | 2386 |
| Thyrsites atun | 324.00 | 4500 | 4.85 | 2385 |
| Engraulis capensis | 99.00 | 9900 | 1.48 | 2384 |
| Todarodes sagittatus | 45.00 | 1800 | 0.67 | |
| MYCTOPHIDAE | 36.00 | 19800 | 0.54 | |
| Pterothrissus belloci | 18.00 | 900 | 0.27 | |
| Total | 6687.00 | | 100.01 | |

PROJECT STATION: 714

DATE: 3/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1800
start stop duration Long E 1132
TIME :04:48:00 04:58:00 10 (min) Purpose code: 1
LOG :5562.60 5563.20 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 211 214 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 32 kn*10

Sorted: 1 Kg Total catch: 0.66 CATCH/HOUR: 3.96

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1.98 | 66 | 50.00 | 2389 |
| Schedophilus huttoni | 1.20 | 6 | 30.30 | |
| Etrumeus whiteheadi | 0.42 | 6 | 10.61 | 2390 |
| MYCTOPHIDAE | 0.36 | 132 | 9.09 | |
| Total | 3.96 | | 100.00 | |

PROJECT STATION: 715

DATE: 3/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1753
start stop duration Long E 1146
TIME :08:02:00 08:13:00 11 (min) Purpose code: 1
LOG :5590.20 5591.00 0.80 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 34 36 Validity code:
Towing dir: 330° Wire out: 100 m Speed: 33 kn*10

Sorted: 6 Kg Total catch: 6.46 CATCH/HOUR: 35.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 25.09 | 5 | 71.20 | |
| Etrumeus whiteheadi | 9.82 | 895 | 27.87 | 2391 |
| Engraulis capensis | 0.22 | 16 | 0.62 | |
| Trachurus capensis, juvenile | 0.11 | 60 | 0.31 | 2392 |
| Total | 35.24 | | 100.00 | |

PROJECT STATION: 716

DATE: 3/12/94 GEAR TYPE: BT No:1 POSITION:Lat S 1751
start stop duration Long E 1134
TIME :10:01:00 10:12:00 11 (min) Purpose code: 1
LOG :5605.10 5605.90 0.80 Area code : 3
FDEPTH: 90 85 GearCond.code:
BDEPTH: 90 85 Validity code:
Towing dir: 90° Wire out: 60 m Speed: 32 kn*10

Sorted: 35 Kg Total catch: 749.25 CATCH/HOUR: 4086.82

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1452.27 | 20864 | 35.54 | 2393 |
| Merluccius capensis, juveniles | 770.45 | 5591 | 18.85 | |
| MYCTOPHIDAE | 756.82 | | 18.52 | |
| Synagrops microlepis | 538.64 | 88227 | 13.18 | |
| Dentex macrophthalmus | 330.00 | 3545 | 8.07 | |
| Chelidonichthys capensis | 162.27 | 1091 | 3.97 | |
| Chlorophthalmus atlanticus | 40.91 | 4227 | 1.00 | |
| Zu elongatus | 35.45 | 818 | 0.87 | |
| Total | 4086.81 | | 100.00 | |

PROJECT STATION: 717

DATE: 3/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1733
start stop duration Long E 1132
TIME :19:01:00 19:10:00 9 (min) Purpose code: 1
LOG :5692.80 5693.30 0.50 Area code : 3
FDEPTH: 120 120 GearCond.code:
BDEPTH: 150 151 Validity code:
Towing dir: 360° Wire out: 450 m Speed: 31 kn*10

Sorted: 32 Kg Total catch: 5000.00 CATCH/HOUR: 33333.34

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 33333.34 | 972220 | 100.00 | 2394 |
| Alopias vulpinus | 13.33 | | 0.04 | |
| Total | 33346.67 | | 100.04 | |

PROJECT STATION: 718

DATE: 3/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1731
start stop duration Long E 1141
TIME :20:39:00 20:52:00 13 (min) Purpose code: 1
LOG :5705.20 5706.10 0.90 Area code : 3
FDEPTH: 15 20 GearCond.code:
BDEPTH: 64 76 Validity code:
Towing dir: 270° Wire out: 100 m Speed: 30 kn*10

Sorted: 27 Kg Total catch: 268.50 CATCH/HOUR: 1239.23

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 1239.23 | 68386 | 100.00 | 2395 |
| Total | 1239.23 | | 100.00 | |

PROJECT STATION: 719

DATE: 4/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1727
start stop duration Long E 1132
TIME :00:15:00 00:25:00 10 (min) Purpose code: 1
LOG :5735.80 5736.40 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 146 143 Validity code:
Towing dir: 90° Wire out: 100 m Speed: 32 kn*10

Sorted: 30 Kg Total catch: 390 00 CATCH/HOUR: 2340.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 2340.00 | 64884 | 100.00 | 2396 |
| Total | 2340 00 | | 100.00 | |

PROJECT STATION: 720

DATE: 4/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1724
start stop duration Long E 1143
TIME :02:00:00 02:05:00 5 (min) Purpose code: 1
LOG :5751.00 5751.30 0.30 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 30 30 Validity code:
Towing dir: 360° Wire out: 100 m Speed: 32 kn*10

Sorted: 23 Kg Total catch: 83.26 CATCH/HOUR: 999.12

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Engraulis capensis | 657.00 | 39420 | 65.76 | 2397 |
| Trachurus, Juveniles | 309.60 | 26028 | 30.99 | 2399 |
| Thyrsites atun | 15.72 | 12 | 1.57 | 2400 |
| Etrumeus whiteheadi | 5.76 | 144 | 0.58 | 2398 |
| Galeichthys feliceps | 3.72 | 36 | 0.37 | |
| Trigla lyra | 3.36 | 24 | 0.34 | |
| Loligo vulgaris | 3.24 | 72 | 0.32 | |
| Sepia orbignyana | 0.72 | 36 | 0.07 | |
| Total | 999.12 | | 100.00 | |

PROJECT STATION: 721

DATE: 4/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1718
start stop duration Long E 1133
TIME :05:14:00 05:24:00 10 (min) Purpose code: 1
LOG :5776.30 5776.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 121 118 Validity code:
Towing dir: 83° Wire out: 100 m Speed: 32 kn*10

Sorted: 13 Kg Total catch: 13.10 CATCH/HOUR: 78.60

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 78.60 | 3750 | 100.00 | 2401 |
| Total | 78.60 | | 100.00 | |

PROJECT STATION: 722

DATE: 4/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1715
start stop duration Long E 1144
TIME :06:55:00 07:10:00 15 (min) Purpose code: 1
LOG :5789.20 5790.10 0.90 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 25 25 Validity code:
Towing dir: 350° Wire out: 100 m Speed: 29 kn*10

Sorted: 2 Kg Total catch: 1.60 CATCH/HOUR: 6.40

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Chelidonichthys capensis | 6.20 | 28 | 96.88 | |
| Trachurus capensis, juvenile | 0.20 | 48 | 3.13 | 2402 |
| Total | 6.40 | | 100.01 | |

PROJECT STATION: 723

DATE: 4/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1652
start stop duration Long E 1138
TIME :21:31:00 21:45:00 14 (min) Purpose code: 1
LOG :5931.60 5932.60 1.00 Area code : 3
FDEPTH: 32 32 GearCond.code:
BDEPTH: 72 77 Validity code:
Towing dir: 257° Wire out: 150 m Speed: 30 kn*10

Sorted: 2 Kg Total catch: 2.35 CATCH/HOUR: 10.07

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| SEPIIDAE | 4.24 | 90 | 42.11 | |
| Sufflogobius bibarbatus | 1.93 | 1427 | 19.17 | |
| Merluccius capensis, juveniles | 1.59 | 656 | 15.79 | |
| Trachurus capensis, juvenile | 1.33 | 69 | 13.21 | 2403 |
| Small squids | 0.90 | 81 | 8.94 | |
| Austroglossus microlepis | 0.09 | 21 | 0.89 | |
| Total | 10.08 | | 100.11 | |

PROJECT STATION: 724

DATE: 5/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1647
start stop duration Long E 1129
TIME :01:47:00 01:57:00 10 (min) Purpose code: 1
LOG :5971.30 5971.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 107 106 Validity code:
Towing dir: 80° Wire out: 100 m Speed: 32 kn*10

Sorted: 24 Kg Total catch: 23.79 CATCH/HOUR: 142.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 142.50 | 3222 | 99.83 | 2404 |
| Merluccius capensis, juveniles | 0.18 | 228 | 0.13 | 2405 |
| Synagrops microlepis | 0.06 | 54 | 0.04 | |
| Laemonema laureysi | 0.00 | 12 | | |
| Trichiurus lepturus | 0.00 | 24 | | |
| Zenopsis conchifer | 0.00 | 6 | | |
| Total | 142.74 | | 100.00 | |

PROJECT STATION: 725

DATE: 5/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1642
start stop duration Long E 1140
TIME :03:55:00 04:05:00 10 (min) Purpose code: 1
LOG :5987.40 5988.00 0.60 Area code : 3
FDEPTH: 5 5 GearCond.code:
BDEPTH: 37 46 Validity code:
Towing dir: 265° Wire out: 100 m Speed: 32 kn*10

Sorted: 27 Kg Total catch: 341.23 CATCH/HOUR: 2047.38

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus, Juveniles | 1944.00 | 129942 | 94.95 | 2407 |
| Trachurus capensis | 78.60 | 408 | 3.84 | 2406 |
| MYLIOBATIDAE | 19.20 | 6 | 0.94 | |
| Todarodes sagittatus | 2.46 | 36 | 0.12 | |
| Galeichthys feliceps | 1.86 | 12 | 0.09 | |
| Sepia orbignyana | 1.26 | 18 | 0.06 | |
| Total | 2047.38 | | 100.00 | |

PROJECT STATION: 726

DATE: 5/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1641
start stop duration Long E 1135
TIME :07:35:00 07:48:00 13 (min) Purpose code: 1
LOG :6023.00 6023.80 0.80 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 91 88 Validity code:
Towing dir: 83° Wire out: 100 m Speed: 31 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 0.00 | 5 | | |
| Alopias vulpinus | 0.00 | 5 | | |
| Total | | | | |

PROJECT STATION: 727

DATE: 5/12/94 GEAR TYPE: BT No:1 POSITION:Lat S 1637
start stop duration Long E 1124
TIME :10:32:00 10:46:00 14 (min) Purpose code: 1
LOG :6049.00 6050.10 1.10 Area code : 3
FDEPTH: 117 116 GearCond.code:
BDEPTH: 117 116 Validity code:
Towing dir: 90° Wire out: 450 m Speed: 30 kn*10

Sorted: 89 Kg Total catch: 987.66 CATCH/HOUR: 4232.83

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 2719.29 | 41241 | 64.24 | 2408 |
| Dentex macrophthalmus | 925.71 | 7393 | 21.87 | |
| Spondyliosoma cantharus | 331.07 | 514 | 7.82 | |
| Argyrosomus hololepidotus | 104.57 | 77 | 2.47 | |
| Umbrina canariensis | 61.71 | 129 | 1.46 | |
| Merluccius capensis, juveniles | 47.57 | 129 | 1.12 | |
| Synagrops microlepis | 25.07 | 193 | 0.59 | |
| Small squids | 15.43 | 193 | 0.36 | |
| Chelidonichthys capensis | 2.40 | 129 | 0.06 | |
| Total | 4232.82 | | 99.99 | |

PROJECT STATION: 728

DATE: 6/12/94 GEAR TYPE: PT No:7 POSITION:Lat S 1629
start stop duration Long E 1145
TIME :20:23:00 20:57:00 34 (min) Purpose code: 1
LOG :6178.40 6180.10 1.70 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 16 17 Validity code:
Towing dir: 7° Wire out: 100 m Speed: 33 kn*10

Sorted: 35 Kg Total catch: 5214.00 CATCH/HOUR: 9201.18

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 9105.88 | 81840 | 98.96 | 2409 |
| Trachurus trecae | 95.29 | 2647 | 1.04 | 2410 |
| Total | 9201.17 | | 100.00 | |

PROJECT STATION: 729

DATE: 6/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1624
start stop duration Long E 1134
TIME :23:09:00 23:21:00 12 (min) Purpose code: 1
LOG :6196.70 6197.30 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 83 80 Validity code:
Towing dir: 90° Wire out: 100 m Speed: 32 kn*10

Sorted: 4 Kg Total catch: 70.00 CATCH/HOUR: 350.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 310.50 | 9360 | 88.71 | 2411 |
| Scomber japonicus | 36.30 | 100 | 10.37 | 2412 |
| Todarodes sagittatus | 1.00 | 5 | 0.29 | |
| Merluccius capensis, juveniles | 1.00 | 760 | 0.29 | |
| Sepia sp. | 0.80 | 30 | 0.23 | |
| Synagrops microlepis | 0.40 | 360 | 0.11 | |
| Total | 350.00 | | 100.00 | |

PROJECT STATION: 730

DATE: 6/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1621
start stop duration Long E 1141
TIME :01:54:00 02:10:00 16 (min) Purpose code: 1
LOG :6218.20 6219.00 0.80 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 55 51 Validity code:
Towing dir: 78° Wire out: 100 m Speed: 31 kn*10

Sorted: 83 Kg Total catch: 138.81 CATCH/HOUR: 520.54

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 274.69 | 1959 | 52.77 | 2415 |
| Trachurus trecae | 167.81 | 1538 | 32.24 | 2414 |
| Trachurus, Juveniles | 53.74 | 6008 | 10.32 | 2413 |
| Sepia orbignyana | 16.61 | 308 | 3.19 | |
| Todarodes sagittatus | 4.20 | 45 | 0.81 | |
| Atractoscion aequidens | 2.29 | 4 | 0.44 | |
| Hyperoglyphe moselii | 0.94 | 4 | 0.18 | |
| Beryx splendens | 0.26 | 19 | 0.05 | |
| Total | 520.54 | | 100.00 | |

PROJECT STATION: 731

DATE: 7/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1617
start stop duration Long E 1136
TIME :04:58:00 05:08:00 10 (min) Purpose code: 1
LOG :6242.20 6242.80 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 74 72 Validity code:
Towing dir: 80° Wire out: 100 m Speed: 32 kn*10

Sorted: 52 Kg Total catch: 51.65 CATCH/HOUR: 309.90

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 241.50 | 1278 | 77.93 | 2416 |
| Trachurus trecae, juvenile | 68.40 | 1824 | 22.07 | 2417 |
| Total | 309.90 | | 100.00 | |

PROJECT STATION: 732

DATE: 7/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1614
start stop duration Long E 1142
TIME :07:04:00 07:14:00 10 (min) Purpose code: 1
LOG :6257.50 6258.10 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 51 53 Validity code:
Towing dir: 28° Wire out: 100 m Speed: 31 kn*10

Sorted: 1 Kg Total catch: 1.37 CATCH/HOUR: 8.22

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 4.56 | 24 | 55.47 | 2419 |
| Trachurus trecae | 3.66 | 24 | 44.53 | 2418 |
| Total | 8.22 | | 100.00 | |

PROJECT STATION: 733

DATE: 7/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1609
start stop duration Long E 1144
TIME :09:59:00 10:09:00 10 (min) Purpose code: 1
LOG :6279.30 6279.90 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 40 36 Validity code:
Towing dir: 77° Wire out: 100 m Speed: 31 kn*10

Sorted: 20 Kg Total catch: 19.63 CATCH/HOUR: 117.78

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 49.20 | 282 | 41.77 | 2420 |
| Sardinella maderensis | 24.90 | 54 | 21.14 | 2421 |
| Stromateus fiatola | 16.62 | 18 | 14.11 | |
| Sarda sarda | 15.72 | 24 | 13.35 | |
| Small squids | 7.14 | 42 | 6.06 | |
| CARANGIDAE | 4.20 | 18 | 3.57 | |
| Total | 117.78 | | 100.00 | |

PROJECT STATION: 734

DATE: 7/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1603
start stop duration Long E 1146
TIME :13:17:00 13:32:00 15 (min) Purpose code: 1
LOG :6035.70 6036.30 0.70 Area code : 3
FDEPTH: 5 5 GearCond.code:
BDEPTH: 24 29 Validity code:
Towing dir: 295° Wire out: 100 m Speed: 32 kn*10

Sorted: 77 Kg Total catch: 76.88 CATCH/HOUR: 307.52

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 164.00 | 3080 | 53.33 | 2422 |
| Pomatomus saltatrix | 45.20 | 84 | 14.70 | 2426 |
| Diplodus sargus capensis | 37.60 | 248 | 12.23 | 2423 |
| Sepia sp. | 17.20 | 8 | 5.59 | |
| Sardinella maderensis | 12.72 | 32 | 4.14 | 2425 |
| Mustelus mustelus | 8.80 | 8 | 2.86 | |
| Argyrosomus hololepidotus | 7.40 | 20 | 2.41 | 2427 |
| Sarda sarda | 6.72 | 8 | 2.19 | 2424 |
| Todarodes sagittatus | 3.76 | 8 | 1.22 | |
| Trachinotus ovatus | 3.00 | 12 | 0.98 | |
| Decapterus rhonchus | 1.08 | 4 | 0.35 | |
| Dentex macrophthalmus | 0.04 | 4 | 0.01 | |
| Lagocephalus laevigatus | 0.00 | 12 | | |
| Total | 307.52 | | 100.01 | |

PROJECT STATION: 735

DATE: 7/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1614
start stop duration Long E 1146
TIME :16:17:00 16:32:00 15 (min) Purpose code: 1
LOG :6331.30 6332.20 0.90 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 28 28 Validity code:
Towing dir: 195° Wire out: 100 m Speed: 33 kn*10

Sorted: 31 Kg Total catch: 99.87 CATCH/HOUR: 399.48

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 320.60 | 2932 | 80.25 | 2428 |
| POMADASYIDAE (HAEMULIDAE) | 34.24 | 40 | 8.57 | 2430 |
| Hyperoglyphe moselii | 18.28 | 28 | 4.58 | 2432 |
| Etrumeus whiteheadi | 9.76 | 248 | 2.44 | 2429 |
| CARANGIDAE | 5.56 | 12 | 1.39 | 2431 |
| SPARIDAE | 3.72 | 8 | 0.93 | |
| Pomatomus saltatrix | 3.00 | 8 | 0.75 | |
| SCOMBRIDAE | 2.28 | 8 | 0.57 | |
| Trichiurus sp. | 0.68 | 8 | 0.17 | |
| Sardinops ocellatus | 0.60 | 4 | 0.15 | |
| Small squids | 0.48 | 36 | 0.12 | |
| Sepia sp. | 0.28 | 12 | 0.07 | |
| Total | 399.48 | | 99.99 | |

PROJECT STATION: 736

DATE: 7/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1647
start stop duration Long E 1140
TIME :20:07:00 20:21:00 14 (min) Purpose code: 1
LOG :6368.20 6369.00 0.80 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 32 33 Validity code:
Towing dir: 2° Wire out: 100 m Speed: 33 kn*10

Sorted: 28 Kg Total catch: 4353.96 CATCH/HOUR: 18659.83

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis, juvenile | 18151.71 | 1230510 | 97.28 | 2433 |
| Sardinops ocellatus | 361.03 | 2674 | 1.93 | |
| Etrumeus whiteheadi | 147.09 | 4011 | 0.79 | |
| Mola mola | 0.00 | 4 | | |
| Total | 18659.83 | | 100.00 | |

PROJECT STATION: 737

DATE:10/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1736
start stop duration Long E 1143
TIME :01:29:00 01:44:00 15 (min) Purpose code: 1
LOG :6862.90 6863.50 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 38 37 Validity code:
Towing dir: 180° Wire out: 100 m Speed: 25 kn*10

Sorted: 50 Kg Total catch: 1379.34 CATCH/HOUR: 5517.36

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 5445.00 | 140160 | 98.69 | 2434 |
| Etrumeus whiteheadi | 39.60 | 8800 | 0.72 | 2437 |
| Engraulis capensis | 15.40 | 1868 | 0.28 | 2435 |
| Argyrosomus hololepidotus | 12.96 | 4 | 0.23 | |
| Trachurus, Juveniles | 4.40 | 2100 | 0.08 | 2436 |
| Total | 5517.36 | | 100.00 | |

PROJECT STATION: 738

DATE:10/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1716
start stop duration Long E 1143
TIME :06:35:00 06:45:00 10 (min) Purpose code: 1
LOG :6908.60 6909.20 0.60 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 28 28 Validity code:
Towing dir: 360° Wire out: 100 m Speed: 31 kn*10

Sorted: 30 Kg Total catch: 248.12 CATCH/HOUR: 1488.72

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Etrumeus whiteheadi | 820.80 | 77922 | 55.13 | 2439 |
| Engraulis capensis | 446.40 | 33030 | 29.99 | 2438 |
| Trachurus capensis | 143.28 | 2160 | 9.62 | 2441 |
| Thyrsites atun | 57.30 | 36 | 3.85 | |
| Sardinops ocellatus | 14.40 | 432 | 0.97 | 2440 |
| Sepia sp. | 4.32 | 72 | 0.29 | |
| Small squids | 2.22 | 6 | 0.15 | |
| Total | 1488.72 | | 100.00 | |

PROJECT STATION: 739

DATE:10/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1710
start stop duration Long E 1136
TIME :08:34:00 08:45:00 11 (min) Purpose code: 1
LOG :6921.70 6922.50 0.80 Area code : 3
FDEPTH: 16 18 GearCond.code:
BDEPTH: 87 87 Validity code:
Towing dir: 360° Wire out: 150 m Speed: 30 kn*10

Sorted: 2 Kg Total catch: 1.70 CATCH/HOUR: 9.27

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Thyrsites atun | 8.56 | 5 | 92.34 | |
| Sepia sp. | 0.71 | 44 | 7.66 | |
| Total | 9.27 | | 100.00 | |

PROJECT STATION: 740

DATE:10/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1659
start stop duration Long E 1141
TIME :13:41:00 14:01:00 20 (min) Purpose code: 1
LOG :6970.30 6971.30 1.00 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 25 34 Validity code:
Towing dir: 287° Wire out: 100 m Speed: 30 kn*10

Sorted: Kg Total catch: 0.25 CATCH/HOUR: 0.75

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis, juvenile | 0.60 | 306 | 80.00 | 2442 |
| Sepia orbignyana | 0.15 | 30 | 20.00 | |
| Total | 0.75 | | 100.00 | |

PROJECT STATION: 741

DATE:10/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1650
start stop duration Long E 1140
TIME :17:05:00 17:20:00 15 (min) Purpose code: 1
LOG :6999.00 6999.80 0.80 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 28 41 Validity code:
Towing dir: 262° Wire out: 100 m Speed: 32 kn*10

Sorted: 30 Kg Total catch: 358.56 CATCH/HOUR: 1434.24

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 1418.40 | 26544 | 98.90 | 2443 |
| Etrumeus whiteheadi | 15.84 | 432 | 1.10 | 2444 |
| Total | 1434.24 | | 100.00 | |

PROJECT STATION: 742

DATE:10/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1648
start stop duration Long E 1141
TIME :18:48:00 19:00:00 12 (min) Purpose code: 1
LOG :7010.60 7011.30 0.70 Area code : 3
FDEPTH: 10 15 GearCond.code:
BDEPTH: 25 24 Validity code:
Towing dir: 350° Wire out: 100 m Speed: 31 kn*10

Sorted: 42 Kg Total catch: 1051.75 CATCH/HOUR: 5258.75

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 4792.50 | 50220 | 91.13 | 2445 |
| Etrumeus whiteheadi | 223.50 | 18990 | 4.25 | 2446 |
| Engraulis capensis | 205.50 | 13670 | 3.91 | 2447 |
| Pomatomus saltatrix | 37.25 | 25 | 0.71 | |
| Total | 5258.75 | | 100.00 | |

PROJECT STATION: 743

DATE:10/12/94 GEAR TYPE: PT No:7 POSITION:Lat S 1645
start stop duration Long E 1141
TIME :20:44:00 20:54:00 10 (min) Purpose code: 1
LOG :7024.50 7025.10 0.60 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 18 18 Validity code:
Towing dir: 360° Wire out: 100 m Speed: 30 kn*10

Sorted: 12 Kg Total catch: 12.45 CATCH/HOUR: 74.70

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 31.32 | 390 | 41.93 | 2448 |
| Galeorhinus galeus | 16.80 | 6 | 22.49 | |
| Trachurus trecae | 12.90 | 240 | 17.27 | 2449 |
| Engraulis capensis | 6.60 | 492 | 8.84 | 2450 |
| Etrumeus whiteheadi | 5.76 | 336 | 7.71 | 2451 |
| Pomatomus saltatrix | 1.32 | 6 | 1.77 | |
| Total | 74.70 | | 100.01 | |

PROJECT STATION: 744

DATE:10/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1640
start stop duration Long E 1139
TIME :22:42:00 22:53:00 11 (min) Purpose code: 1
LOG :7041.00 7041.60 0.60 Area code : 3
FDEPTH: 0 0 GearCond.code:
BDEPTH: 57 42 Validity code:
Towing dir: 280° Wire out: 100 m Speed: 32 kn*10

Sorted: 75 Kg Total catch: 454.65 CATCH/HOUR: 2479.91

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 1865.45 | 19964 | 75.22 | 2452 |
| Trachurus trecae | 505.64 | 13009 | 20.39 | 2453 |
| Engraulis capensis | 81.00 | 4745 | 3.27 | 2454 |
| Etrumeus whiteheadi | 27.82 | 1064 | 1.12 | 2455 |
| Total | 2479.91 | | 100.00 | |

PROJECT STATION: 745

DATE:11/12/94 GEAR TYPE: PT No:7 POSITION:Lat S 1638
start stop duration Long E 1146
TIME :05:28:00 05:43:00 15 (min) Purpose code: 1
LOG :7104.50 7105.40 0.90 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 15 15 Validity code:
Towing dir: 350° Wire out: 100 m Speed: 35 kn*10

Sorted: 59 Kg Total catch: 8874.00 CATCH/HOUR: 35496.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 34590.00 | 295800 | 97.45 | 2456 |
| Trachurus trecae | 906.00 | 16200 | 2.55 | 2457 |
| Total | 35496.00 | | 100.00 | |

PROJECT STATION: 746

DATE:11/12/94 GEAR TYPE: PT No:6 POSITION:Lat S 1628

| | start | stop | duration | | | Long E 1143 |
|---|---|---|---|---|---|---|
| TIME | :11:17:00 | 11:38:00 | 21 (min) | Purpose code: | 1 | |
| LOG | :7158.40 | 7159.50 | 1.10 | Area code | : 3 | |
| FDEPTH: | 0 | 0 | | GearCond.code: | | |
| BDEPTH: | 56 | 48 | | Validity code: | | |

Towing dir: 118° Wire out: 125 m Speed: 31 kn*10

Sorted: 3 Kg Total catch: 2.68 CATCH/HOUR: 7.66

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sarda sarda | 7.66 | 6 | 100.00 | 2458 |
| Total | 7.66 | | 100.00 | |

PROJECT STATION: 747

DATE:11/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1625

| | start | stop | duration | | | Long E 1145 |
|---|---|---|---|---|---|---|
| TIME | :13:24:00 | 13:44:00 | 20 (min) | Purpose code: | 1 | |
| LOG | :7204.40 | 7205.40 | 1.00 | Area code | : 3 | |
| FDEPTH: | 10 | 10 | | GearCond.code: | | |
| BDEPTH: | 22 | 42 | | Validity code: | | |

Towing dir: 294° Wire out: 100 m Speed: 31 kn*10

Sorted: 102 Kg Total catch: 101.58 CATCH/HOUR: 304.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinella aurita | 147.75 | 324 | 48.48 | 2459 |
| Sphyrna lewini | 120.00 | 6 | 39.38 | |
| Sarda sarda | 9.78 | 6 | 3.21 | 2462 |
| Myliobatis aquila | 9.00 | 12 | 2.95 | |
| Sardinella maderensis | 8.61 | 21 | 2.83 | 2460 |
| Alectis alexandrinus | 2.52 | 3 | 0.83 | |
| Todarodes sagittatus | 2.52 | 6 | 0.83 | |
| Decapterus rhonchus | 2.07 | 9 | 0.68 | 2461 |
| Pomatomus saltatrix | 1.41 | 3 | 0.46 | |
| Lithognathus mormyrus | 1.08 | 6 | 0.35 | |
| Total | 304.74 | | 100.00 | |

PROJECT STATION: 748

DATE:11/12/94 GEAR TYPE: PT No:6 POSITION:Lat S 1622

| | start | stop | duration | | | Long E 1144 |
|---|---|---|---|---|---|---|
| TIME | :19:10:00 | 19:38:00 | 28 (min) | Purpose code: | 1 | |
| LOG | :7226.00 | 7227.80 | 1.80 | Area code | : 3 | |
| FDEPTH: | 15 | 15 | | GearCond.code: | | |
| BDEPTH: | 41 | 40 | | Validity code: | | |

Towing dir: 360° Wire out: 130 m Speed: 23 kn*10

Sorted: 67 Kg Total catch: 96.18 CATCH/HOUR: 206.10

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinella maderensis | 103.67 | 315 | 50.30 | 2463 |
| Sardinella aurita | 75.72 | 197 | 36.73 | 2464 |
| Sarda sarda | 15.73 | 11 | 7.63 | |
| Trachurus trecae | 8.91 | 39 | 4.32 | 2465 |
| Trachinotus ovatus | 2.08 | 9 | 1.01 | |
| Isurus oxyrinchus | 0.00 | 2 | | |
| Total | 206.10 | | 99.99 | |

PROJECT STATION: 749

DATE:11/12/94 GEAR TYPE: PT No:7 POSITION:Lat S 1629

| | start | stop | duration | | | Long E 1146 |
|---|---|---|---|---|---|---|
| TIME | :21:07:00 | 21:18:00 | 11 (min) | Purpose code: | 1 | |
| LOG | :7239.70 | 7240.30 | 0.60 | Area code | : 3 | |
| FDEPTH: | 0 | 0 | | GearCond.code: | | |
| BDEPTH: | 10 | 10 | | Validity code: | | |

Towing dir: 360° Wire out: 100 m Speed: 31 kn*10

Sorted: 65 Kg Total catch: 2987.92 CATCH/HOUR: 16297.74

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 15809.18 | 113024 | 97.00 | 2467 |
| Trachurus trecae | 211.15 | 2405 | 1.30 | 2468 |
| Pomatomus saltatrix | 122.95 | 267 | 0.75 | |
| Sarda sarda | 72.16 | 267 | 0.44 | |
| Sardinella maderensis | 58.80 | 267 | 0.36 | |
| MYLIOBATIDAE | 18.22 | 16 | 0.11 | |
| Thyrsites atun | 2.84 | 5 | 0.02 | |
| Stromateus fiatola | 2.45 | 5 | 0.02 | |
| Total | 16297.75 | | 100.00 | |

PROJECT STATION: 750

DATE:12/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1621

| | start | stop | duration | | | Long E 1145 |
|---|---|---|---|---|---|---|
| TIME | :03:53:00 | 04:03:00 | 10 (min) | Purpose code: | 1 | |
| LOG | :7305.50 | 7306.10 | 0.60 | Area code | : 3 | |
| FDEPTH: | 10 | 10 | | GearCond.code: | | |
| BDEPTH: | 33 | 39 | | Validity code: | | |

Towing dir: 288° Wire out: 100 m Speed: 32 kn*10

Sorted: 54 Kg Total catch: 54.43 CATCH/HOUR: 326.58

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 131.10 | 1458 | 40.14 | 2469 |
| Trachurus, Juveniles | 57.90 | 12486 | 17.73 | 2470 |
| Spondyliosoma cantharus | 26.34 | 36 | 8.07 | |
| Lithognathus mormyrus | 22.44 | 114 | 6.87 | 2474 |
| Pagellus bellottii | 17.28 | 258 | 5.29 | 2475 |
| Sardinops ocellatus | 15.30 | 48 | 4.68 | 2471 |
| Mustelus mustelus | 13.80 | 6 | 4.23 | |
| Dasyatis marmorata | 13.20 | 6 | 4.04 | |
| Pomatomus saltatrix | 6.30 | 12 | 1.93 | |
| Sepia sp. | 4.74 | 18 | 1.45 | |
| Galeichthys feliceps | 3.06 | 6 | 0.94 | |
| Atractoscion aequidens | 2.58 | 6 | 0.79 | |
| Etrumeus whiteheadi | 2.34 | 60 | 0.72 | 2473 |
| Decapterus rhonchus | 2.16 | 6 | 0.66 | |
| Sphyraena guachancho | 1.98 | 6 | 0.61 | |
| Myliobatis aquila | 1.80 | 6 | 0.55 | |
| Todarodes sagittatus | 1.50 | 162 | 0.46 | |
| Engraulis capensis | 1.20 | 168 | 0.37 | 2472 |
| Rhabdosargus globiceps | 1.08 | 6 | 0.33 | |
| Trigla lyra | 0.48 | 18 | 0.15 | |
| Total | 326.58 | | 100.01 | |

PROJECT STATION: 751

DATE:12/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1609

| | start | stop | duration | | | Long E 1145 |
|---|---|---|---|---|---|---|
| TIME | :09:31:00 | 09:51:00 | 20 (min) | Purpose code: | 1 | |
| LOG | :7360.70 | 7361.70 | 1.00 | Area code | : 3 | |
| FDEPTH: | 10 | 10 | | GearCond.code: | | |
| BDEPTH: | 35 | 36 | | Validity code: | | |

Towing dir: 360° Wire out: 100 m Speed: 30 kn*10

Sorted: 19 Kg Total catch: 19.29 CATCH/HOUR: 57.87

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinella aurita | 21.39 | 51 | 36.96 | 2477 |
| Trachurus trecae | 18.45 | 210 | 31.88 | 2476 |
| MYLIOBATIDAE | 11.13 | 6 | 19.23 | |
| Stromateus fiatola | 3.66 | 6 | 6.32 | |
| Pomatomus saltatrix | 2.67 | 6 | 4.61 | |
| Lithognathus mormyrus | 0.54 | 3 | 0.93 | |
| Dentex macrophthalmus | 0.03 | 3 | 0.05 | |
| Total | 57.87 | | 99.98 | |

PROJECT STATION: 752

DATE:12/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1559

| | start | stop | duration | | | Long E 1143 |
|---|---|---|---|---|---|---|
| TIME | :22:02:00 | 22:18:00 | 16 (min) | Purpose code: | 1 | |
| LOG | :7490.20 | 7490.90 | 0.70 | Area code | : 3 | |
| FDEPTH: | 0 | 0 | | GearCond.code: | | |
| BDEPTH: | 25 | 27 | | Validity code: | | |

Towing dir: 174° Wire out: 100 m Speed: 31 kn*10

Sorted: 13 Kg Total catch: 13.03 CATCH/HOUR: 48.86

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 35.44 | 405 | 72.53 | 2478 |
| Trachinotus ovatus | 8.93 | 38 | 18.28 | |
| Sardinella aurita | 4.50 | 15 | 9.21 | 2479 |
| Total | 48.87 | | 100.02 | |

PROJECT STATION: 753

DATE:12/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1611

| | start | stop | duration | | | Long E 1145 |
|---|---|---|---|---|---|---|
| TIME | :23:40:00 | 24:00:00 | 20 (min) | Purpose code: | 1 | |
| LOG | :7502.90 | 7504.30 | 1.40 | Area code | : 3 | |
| FDEPTH: | 0 | 0 | | GearCond.code: | | |
| BDEPTH: | 33 | 32 | | Validity code: | | |

Towing dir: 180° Wire out: 100 m Speed: 32 kn*10

Sorted: 11 Kg Total catch: 69.10 CATCH/HOUR: 207.30

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus trecae | 171.15 | 2421 | 82.56 | 2481 |
| Trachurus, Juveniles | 10.92 | 528 | 5.27 | 2480 |
| Sardinops ocellatus | 8.94 | 27 | 4.31 | |
| Sepia sp. | 5.01 | 36 | 2.42 | |
| Scomberomorus tritor | 2.28 | 3 | 1.10 | |
| Trachinotus ovatus | 1.95 | 9 | 0.94 | |
| Sepiella ornata | 1.83 | 450 | 0.88 | |
| Etrumeus whiteheadi | 1.29 | 27 | 0.62 | 2482 |
| Pomatomus saltatrix | 1.20 | 6 | 0.58 | |
| Sarda sarda | 0.96 | 3 | 0.46 | |
| Atractoscion aequidens | 0.90 | 3 | 0.43 | |
| Engraulis capensis | 0.60 | 217 | 0.29 | 2483 |
| Trichiurus lepturus | 0.09 | 33 | 0.04 | |
| Total | 207.12 | | 99.90 | |

PROJECT STATION: 754

DATE:13/12/94 GEAR TYPE: BT No:2 POSITION:Lat S 1651
start stop duration Long E 1145
TIME :11:18:00 11:38:00 20 (min) Purpose code: 1
LOG :7619.30 7620.30 1.00 Area code : 3
FDEPTH: 11 9 GearCond.code:
BDEPTH: 11 9 Validity code:
Towing dir: 26° Wire out: 150 m Speed: 30 kn*10

Sorted: 37 Kg Total catch: 2606.87 CATCH/HOUR: 7820.61

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Engraulis capensis | 2649.63 | 143379 | 33.88 | 2487 |
| Trachurus trecae | 1899.75 | 40194 | 24.29 | 2485 |
| Etrumeus whiteheadi | 1529.79 | 58392 | 19.56 | 2486 |
| Diplodus sargus capensis | 769.89 | 8400 | 9.84 | 2484 |
| Galeichthys feliceps | 329.97 | 1797 | 4.22 | |
| HEXANCHIDAE | 205.35 | 9 | 2.63 | |
| Stromateus fiatola | 113.97 | 201 | 1.46 | |
| Squalus megalops | 89.25 | 30 | 1.14 | |
| Argyrosomus hololepidotus | 77.91 | 3 | 1.00 | |
| Pomatomus saltatrix | 73.98 | 600 | 0.95 | |
| Trichiurus lepturus | 36.00 | 2199 | 0.46 | |
| Sardinops ocellatus | 27.99 | 399 | 0.36 | |
| Dasyatis marmorata | 10.50 | 9 | 0.13 | |
| Myliobatis aquila | 6.60 | 24 | 0.08 | |
| Total | 7820.58 | | 100.00 | |

PROJECT STATION: 755

DATE:13/12/94 GEAR TYPE: PT No:7 POSITION:Lat S 1659
start stop duration Long E 1145
TIME :14:43:00 15:03:00 20 (min) Purpose code: 1
LOG :7648.70 7649.80 1.10 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 14 16 Validity code:
Towing dir: 360° Wire out: 100 m Speed: 33 kn*10

Sorted: 31 Kg Total catch: 100.56 CATCH/HOUR: 301.68

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 300.00 | 1476 | 99.44 | 2488 |
| Diplodus sargus capensis | 1.68 | 6 | 0.56 | |
| Total | 301.68 | | 100.00 | |

PROJECT STATION: 756

DATE:14/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1909
start stop duration Long E 1232
TIME :09:44:00 09:55:00 11 (min) Purpose code: 1
LOG :7827.30 7827.90 0.60 Area code : 3
FDEPTH: 20 20 GearCond.code:
BDEPTH: 35 35 Validity code:
Towing dir: 9° Wire out: 100 m Speed: 32 kn*10

Sorted: 40 Kg Total catch: 99.90 CATCH/HOUR: 544.91

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Sardinops ocellatus | 328.91 | 10325 | 60.36 | 2489 |
| Etrumeus whiteheadi | 165.27 | 660 | 30.33 | 2490 |
| Thyrsites atun | 50.73 | 11 | 9.31 | |
| Total | 544.91 | | 100.00 | |

PROJECT STATION: 757

DATE:14/12/94 GEAR TYPE: PT No:2 POSITION:Lat S 1938
start stop duration Long E 1245
TIME :14:54:00 15:09:00 15 (min) Purpose code: 1
LOG :7880.40 7881.20 0.80 Area code : 3
FDEPTH: 10 10 GearCond.code:
BDEPTH: 62 65 Validity code:
Towing dir: 30° Wire out: 100 m Speed: 32 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 758

DATE:14/12/94 GEAR TYPE: PT No:1 POSITION:Lat S 1955
start stop duration Long E 1233
TIME :19:06:00 19:12:00 6 (min) Purpose code: 1
LOG :7922.00 7922.30 0.30 Area code : 3
FDEPTH: 70 70 GearCond.code:
BDEPTH: 130 132 Validity code:
Towing dir: 86° Wire out: 250 m Speed: 31 kn*10

Sorted: 32 Kg Total catch: 10000.00 CATCH/HOUR: 100000.00

| SPECIES | CATCH/HOUR weight | numbers | % OF TOT. C | SAMP |
|---|---|---|---|---|
| Trachurus capensis | 100000.00 | 2452550 | 100.00 | 2491 |
| Total | 100000.00 | | 100.00 | |

# Annex IV Instruments and fishing gear used

## Acoustic instruments

The Simrad EK-500/38kHz scientific sounder was used during the survey for fish abundance estimation. The Bergen Echo Integrator system (BEI) was used to scrutinize the acoustic records from the 38kHz echo sounder, and to allocate integrator data to fish species. The details of the settings of the 38kHz echo sounder where as follows:

Tranceiver-1 menu (38 kHz sliding keel):

| | |
|---|---|
| Transducer depth | 0.00 m |
| Absorbtion coeff. | 10 dB/km |
| Pulse length | medium |
| Bandwidth | wide |
| Max. power | 2 000 Watt |
| 2-way beam angle | -21.0 dB |
| Sv transducer gain | 28.0 dB |
| TS transducer gain | 27.9 dB |
| Angle sensitivity | 21.9 |
| 3 dB beamwidth | 6.8 dg |
| Alongship offset | 0.00 dg |
| Athwardship offset | 0.04 dg |

Display menu:

| | |
|---|---|
| Echogram | 1 (38 kHz) |
| Bottom range | 15 m |
| Bottom range start | 10 m |
| Sv colour min | -72 dB |

Printer- menu:

| | |
|---|---|
| Echogram | 1 (38 kHz) |
| Range | 50, 100 and 250 m |
| Range start | 0 |
| Bottom range | 12 m |
| Bottom range start | 10 m |
| Sv colour min | -72 dB |
| TVG | 20 log R |

Bottom detection menu:

| | |
|---|---|
| Minimum level | -50 dB |

A calibration experiment using a standard copper sphere, performed in Baía dos Tigres 6/12 1994 gave the following results:

Sv Transducer gain 28.0 (old value 28.1)
Ts Transducer gain 27.9 (old value 28.1)

**Hydrography**

Temperature, salinity,oxygen and density were sampled regularly at CTD stations with a Sea-Bird CTD-sonde. The salinity was calculated by a computer.

**Fishing gear**

The vessel has two different sized "Åkrahamn" pelagic trawls and one "Gisund super bottom trawl". All three trawls where used during the survey.

# Annex V Number and biomass

**PILCHARD**

AREA: **North of Baia dos Tigres**

Total Biomass = **14196 tonnes**

Number of fish = **102 X $10^6$**

| **Trawls used:** | 749 | 730 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 120 | **a =** | 0.0062 |
| **SA:** | 441 | **b =** | 3.09 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **22.5** | 0.00 | 0 | 0 |
| **23** | 0.03 | 1 | 148 |
| **23.5** | 0.08 | 4 | 463 |
| **24** | 0.25 | 13 | 1496 |
| **24.5** | 0.36 | 18 | 2291 |
| **25** | 0.43 | 22 | 2955 |
| **25.5** | 0.10 | 5 | 720 |
| **26** | 0.34 | 17 | 2583 |
| **26.5** | 0.24 | 12 | 1952 |
| **27** | 0.09 | 5 | 803 |
| **27.5** | 0.06 | 3 | 511 |
| **28** | 0.02 | 1 | 209 |
| **28.5** | 0.01 | 0 | 64 |
| **29** | 0.00 | 0 | 0 |
| **Total** | 2.00 | 102.25 | 14196 |

**PILCHARD**

AREA: **Baia dos Tigres**

Total Biomass = **35368 tonnes**

Number of fish = **280 X $10^6$**

| **Trawls used:** | 728 | 745 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 35.4 | **a =** | 0.0062 |
| **SA:** | 3851 | **b =** | 3.09 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **22** | 0.00 | 0 | 0 |
| **22.5** | 0.01 | 2 | 149 |
| **23** | 0.21 | 30 | 3104 |
| **23.5** | 0.32 | 45 | 4931 |
| **24** | 0.42 | 58 | 6876 |
| **24.5** | 0.33 | 47 | 5871 |
| **25** | 0.26 | 37 | 4952 |
| **25.5** | 0.17 | 24 | 3457 |
| **26** | 0.11 | 16 | 2358 |
| **26.5** | 0.07 | 9 | 1462 |
| **27** | 0.07 | 10 | 1678 |
| **27.5** | 0.00 | 0 | 0 |
| **28** | 0.00 | 1 | 125 |
| **28.5** | 0.01 | 1 | 265 |
| **29** | 0.00 | 1 | 140 |
| **29.5** | 0.00 | 0 | 0 |
| **Total** | 2.00 | 280.26 | 35368 |

**PILCHARD**

AREA: **West of Baia dos Tigres**

Total Biomass = **22854 tonnes**

Number of fish = **213 X $10^6$**

**Trawls used:** 744 743 742 0

0 0 0 0

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 61 | a = | 0.0062 |
| SA: | 1492 | b = | 3.09 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 11 | 0.09 | 7 | 72 |
| 11.5 | 0.11 | 8 | 96 |
| 12 | 0.14 | 10 | 140 |
| 12.5 | 0.01 | 0 | 6 |
| 13 | 0.00 | 0 | 0 |
| 13.5 | 0.02 | 1 | 22 |
| 14 | 0.01 | 1 | 17 |
| 14.5 | 0.00 | 0 | 0 |
| 15 | 0.01 | 1 | 21 |
| 15.5 | 0.00 | 0 | 0 |
| 16 | 0.00 | 0 | 0 |
| 16.5 | 0.00 | 0 | 0 |
| 17 | 0.04 | 3 | 106 |
| 17.5 | 0.00 | 0 | 0 |
| 18 | 0.00 | 0 | 0 |
| 18.5 | 0.00 | 0 | 0 |
| 19 | 0.02 | 1 | 63 |
| 19.5 | 0.00 | 0 | 0 |
| 20 | 0.00 | 0 | 0 |
| 20.5 | 0.00 | 0 | 0 |
| 21 | 0.00 | 0 | 0 |
| 21.5 | 0.00 | 0 | 0 |
| 22 | 0.01 | 1 | 69 |
| 22.5 | 0.06 | 5 | 435 |
| 23 | 0.36 | 26 | 2655 |
| 23.5 | 0.48 | 34 | 3791 |
| 24 | 0.59 | 42 | 4918 |
| 24.5 | 0.42 | 30 | 3755 |
| 25 | 0.25 | 18 | 2397 |
| 25.5 | 0.13 | 9 | 1344 |
| 26 | 0.07 | 5 | 727 |
| 26.5 | 0.06 | 4 | 649 |
| 27 | 0.09 | 6 | 1036 |
| 27.5 | 0.04 | 3 | 532 |
| 28 | 0.00 | 0 | 0 |
| Total | 3.00 | 213.09 | 22854 |

# PILCHARD

AREA: **17° to 18°**

Total Biomass = **2496 tonnes**

Number of fish = **62 X $10^6$**

| **Trawls used:** | 737 | 713 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 107 | **a =** | 0.0062 |
| **SA:** | 132 | **b =** | 3.09 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **9.5** | 0.00 | 0 | 0 |
| **10** | 0.01 | 0 | 4 |
| **10.5** | 0.00 | 0 | 0 |
| **11** | 0.00 | 0 | 0 |
| **11.5** | 0.00 | 0 | 0 |
| **12** | 0.00 | 0 | 0 |
| **12.5** | 0.01 | 0 | 4 |
| **13** | 0.03 | 1 | 15 |
| **13.5** | 0.09 | 3 | 55 |
| **14** | 0.10 | 3 | 70 |
| **14.5** | 0.18 | 6 | 144 |
| **15** | 0.11 | 4 | 99 |
| **15.5** | 0.18 | 5 | 170 |
| **16** | 0.20 | 6 | 213 |
| **16.5** | 0.35 | 11 | 405 |
| **17** | 0.34 | 11 | 440 |
| **17.5** | 0.15 | 5 | 208 |
| **18** | 0.09 | 3 | 131 |
| **18.5** | 0.02 | 1 | 33 |
| **19** | 0.00 | 0 | 0 |
| **19.5** | 0.00 | 0 | 0 |
| **20** | 0.00 | 0 | 0 |
| **20.5** | 0.01 | 0 | 16 |
| **21** | 0.00 | 0 | 0 |
| **21.5** | 0.00 | 0 | 0 |
| **22** | 0.01 | 0 | 36 |
| **22.5** | 0.04 | 1 | 125 |
| **23** | 0.01 | 0 | 46 |
| **23.5** | 0.02 | 1 | 74 |
| **24** | 0.03 | 1 | 121 |
| **24.5** | 0.01 | 0 | 56 |
| **25** | 0.01 | 0 | 30 |
| **25.5** | 0.00 | 0 | 0 |
| **Total** | 2.00 | 62.37 | 2496 |

**PILCHARD**

AREA: **19° to 20°**

Total Biomass = **30969 tonnes**

Number of fish = **1295 X $10^6$**

**Trawls used:** 697 702 756 0
0 0 0 0

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 157 | a = | 0.0062 |
| SA: | 1342 | b = | 3.09 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 9 | 0.00 | 0 | 0 |
| 9.5 | 0.04 | 17 | 122 |
| 10 | 0.00 | 0 | 0 |
| 10.5 | 0.08 | 35 | 329 |
| 11 | 0.08 | 35 | 379 |
| 11.5 | 0.20 | 86 | 1084 |
| 12 | 0.16 | 71 | 1016 |
| 12.5 | 0.37 | 158 | 2547 |
| 13 | 0.53 | 229 | 4164 |
| 13.5 | 0.23 | 100 | 2033 |
| 14 | 0.17 | 73 | 1655 |
| 14.5 | 0.10 | 42 | 1052 |
| 15 | 0.04 | 17 | 464 |
| 15.5 | 0.07 | 29 | 913 |
| 16 | 0.32 | 136 | 4651 |
| 16.5 | 0.37 | 160 | 6004 |
| 17 | 0.22 | 93 | 3836 |
| 17.5 | 0.04 | 16 | 718 |
| 18 | 0.00 | 0 | 0 |
| Total | 3.00 | 1295.22 | 30969 |

## ANCHOVY

AREA: **West of Baia dos Tigres**

Total Biomass = **1744 tonnes**

Number of fish = **107 X $10^6$**

| Trawls used: | 742 | 743 | 744 | 754 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 174 | a = | 0.002 |
| SA: | 91 | b = | 3.44 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 9.5 | 0.00 | 0 | 0 |
| 10 | 0.04 | 1 | 6 |
| 10.5 | 0.04 | 1 | 8 |
| 11 | 0.08 | 2 | 18 |
| 11.5 | 0.07 | 2 | 18 |
| 12 | 0.29 | 8 | 86 |
| 12.5 | 0.43 | 11 | 145 |
| 13 | 0.76 | 20 | 291 |
| 13.5 | 0.67 | 18 | 295 |
| 14 | 0.71 | 19 | 350 |
| 14.5 | 0.63 | 17 | 348 |
| 15 | 0.22 | 6 | 137 |
| 15.5 | 0.05 | 1 | 33 |
| 16 | 0.01 | 0 | 9 |
| 16.5 | 0.00 | 0 | 0 |
| Total | 4.00 | 106.63 | 1744 |

## ANCHOVY

AREA: **17° - Cunene River**

Total Biomass = **966 tonnes**

| Trawls used: | 720 | 738 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| Survey estimates | | T.S.function | | Length/weight | |
|---|---|---|---|---|---|
| Area: | 20 | L-fc.: | -2 | a = | 0.005 |
| SA: | 337 | Cf: | 1261218 | b = | 3.20 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 6 | 0.00 | 0 | 0 |
| 6.5 | 0.00 | 0 | 0 |
| 7 | 0.00 | 0 | 0 |
| 7.5 | 0.00 | 0 | 0 |
| 8 | 0.00 | 0 | 0 |
| 8.5 | 0.00 | 0 | 0 |
| 9 | 0.00 | 0 | 0 |
| 9.5 | 0.00 | 0 | 0 |
| 10 | 0.00 | 0 | 0 |
| 10.5 | 0.02 | 0 | 4 |
| 11 | 0.04 | 1 | 11 |
| 11.5 | 0.18 | 4 | 57 |
| 12 | 0.16 | 4 | 56 |
| 12.5 | 0.42 | 10 | 172 |
| 13 | 0.45 | 11 | 210 |
| 13.5 | 0.19 | 5 | 102 |
| 14 | 0.18 | 4 | 105 |
| 14.5 | 0.22 | 5 | 142 |
| 15 | 0.13 | 3 | 96 |
| 15.5 | 0.02 | 0 | 13 |
| 16 | 0.00 | 0 | 0 |
| 16.5 | 0.00 | 0 | 0 |
| Total | 2.00 | 48 | 966 |

**ANCHOVY**

AREA: **19° to 20°**

Total Biomass = **19151 tonnes**

Number of fish = **1388 X $10^6$**

| **Trawls used:** | 692 | 697 | 702 | 706 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 469 | **a =** | 0.005 |
| **SA:** | 329 | **b =** | 3.20 |

| **Length** | **Relative frequency** | **No. millions** | **Biomass tonnes** |
|---|---|---|---|
| **8.5** | 0.00 | 0 | 0 |
| **9** | 0.01 | 3 | 17 |
| **9.5** | 0.02 | 6 | 47 |
| **10** | 0.27 | 95 | 812 |
| **10.5** | 0.48 | 165 | 1650 |
| **11** | 0.75 | 260 | 3006 |
| **11.5** | 0.99 | 343 | 4558 |
| **12** | 0.76 | 265 | 4023 |
| **12.5** | 0.42 | 146 | 2514 |
| **13** | 0.09 | 31 | 612 |
| **13.5** | 0.04 | 15 | 340 |
| **14** | 0.06 | 20 | 494 |
| **14.5** | 0.06 | 22 | 603 |
| **15** | 0.04 | 16 | 475 |
| **15.5** | 0.00 | 0 | 0 |
| **16** | 0.00 | 0 | 0 |
| **16.5** | 0.00 | 0 | 0 |
| **Total** | 4.00 | 1387.95 | 19151 |

## ROUND HERRING

AREA: **North of Baia dos Tigres**

Total Biomass = **220 tonnes**

Number of fish = **5 X $10^6$**

| **Trawls used:** | 735 | 0 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 123 | **a =** | 0.0051 |
| **SA:** | 12 | **b =** | 3.06 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **17** | 0.00 | 0 | 0 |
| **17.5** | 0.05 | 0 | 8 |
| **18** | 0.17 | 1 | 32 |
| **18.5** | 0.22 | 1 | 44 |
| **19** | 0.22 | 1 | 47 |
| **19.5** | 0.23 | 1 | 55 |
| **20** | 0.05 | 0 | 12 |
| **20.5** | 0.05 | 0 | 13 |
| **21** | 0.03 | 0 | 9 |
| **21.5** | 0.00 | 0 | 0 |
| **Total** | 1.00 | 5.04 | 220 |

## ROUND HERRING

AREA: **West of Baia dos Tigres**

Total Biomass = **4194 tonnes**

Number of fish = **235 X $10^6$**

| **Trawls used:** | 743 | 742 | 754 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 324 | **a =** | 0.0051 |
| **SA:** | 114 | **b =** | 3.06 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **9.5** | 0.00 | 0 | 0 |
| **10** | 0.04 | 3 | 19 |
| **10.5** | 0.13 | 10 | 73 |
| **11** | 0.58 | 45 | 381 |
| **11.5** | 0.48 | 38 | 362 |
| **12** | 0.33 | 26 | 281 |
| **12.5** | 0.11 | 9 | 108 |
| **13** | 0.16 | 13 | 176 |
| **13.5** | 0.07 | 5 | 83 |
| **14** | 0.07 | 5 | 89 |
| **14.5** | 0.01 | 1 | 17 |
| **15** | 0.03 | 3 | 58 |
| **15.5** | 0.00 | 0 | 0 |
| **16** | 0.09 | 7 | 192 |
| **16.5** | 0.13 | 10 | 296 |
| **17** | 0.29 | 23 | 708 |
| **17.5** | 0.20 | 16 | 538 |
| **18** | 0.25 | 19 | 714 |
| **18.5** | 0.01 | 1 | 36 |
| **19** | 0.02 | 1 | 61 |
| **19.5** | 0.00 | 0 | 0 |
| **Total** | 3.00 | 234.71 | 4194 |

## ROUND HERRING

AREA: **17°-18° Inshore**

Total Biomass = **4948 tonnes**

Number of fish = **455 X $10^6$**

| **Trawls used:** | 715 | 713 | 715 | 713 |
|---|---|---|---|---|
| | 715 | 713 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 169 | **a =** | 0.0051 |
| **SA:** | 316 | **b =** | 3.06 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **9** | 0.00 | 0 | 0 |
| **9.5** | 0.11 | 9 | 46 |
| **10** | 0.14 | 11 | 67 |
| **10.5** | 0.34 | 26 | 187 |
| **11** | 0.70 | 53 | 447 |
| **11.5** | 1.61 | 122 | 1177 |
| **12** | 1.58 | 119 | 1307 |
| **12.5** | 0.87 | 66 | 818 |
| **13** | 0.22 | 17 | 233 |
| **13.5** | 0.16 | 12 | 184 |
| **14** | 0.11 | 8 | 146 |
| **14.5** | 0.05 | 4 | 68 |
| **15** | 0.03 | 2 | 46 |
| **15.5** | 0.00 | 0 | 0 |
| **16** | 0.00 | 0 | 0 |
| **16.5** | 0.02 | 1 | 40 |
| **17** | 0.05 | 4 | 130 |
| **17.5** | 0.00 | 0 | 0 |
| **18** | 0.02 | 1 | 51 |
| **18.5** | 0.00 | 0 | 0 |
| **Total** | 6.00 | 454.94 | 4948 |

## ROUND HERRING

AREA: **17°-18° Offshore**

Total Biomass = **402 tonnes**

Number of fish = **6 X $10^6$**

| **Trawls used:** | 712 | 0 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 100 | **a =** | 0.0051 |
| **SA:** | 23 | **b =** | 3.06 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **20** | 0.00 | 0 | 0 |
| **20.5** | 0.03 | 0 | 10 |
| **21** | 0.06 | 0 | 22 |
| **21.5** | 0.23 | 1 | 83 |
| **22** | 0.26 | 1 | 101 |
| **22.5** | 0.16 | 1 | 68 |
| **23** | 0.19 | 1 | 87 |
| **23.5** | 0.06 | 0 | 31 |
| **24** | 0.00 | 0 | 0 |
| **Total** | 1.00 | 5.78 | 402 |

## ROUND HERRING

AREA: **19° to 20°**

Total Biomass = **3342 tonnes**

Number of fish = **274 X $10^6$**

| **Trawls used:** | 692 | 697 | 702 | 756 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 292 | **a =** | 0.0051 |
| **SA:** | 112 | **b =** | 3.06 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **6.5** | 0.00 | 0 | 0 |
| **7** | 0.14 | 10 | 22 |
| **7.5** | 0.29 | 20 | 54 |
| **8** | 0.49 | 34 | 110 |
| **8.5** | 0.19 | 13 | 51 |
| **9** | 0.15 | 10 | 48 |
| **9.5** | 0.09 | 6 | 32 |
| **10** | 0.10 | 7 | 43 |
| **10.5** | 0.08 | 6 | 41 |
| **11** | 0.29 | 20 | 166 |
| **11.5** | 0.43 | 29 | 282 |
| **12** | 0.34 | 23 | 252 |
| **12.5** | 0.32 | 22 | 275 |
| **13** | 0.06 | 4 | 54 |
| **13.5** | 0.03 | 2 | 33 |
| **14** | 0.01 | 0 | 6 |
| **14.5** | 0.01 | 1 | 11 |
| **15** | 0.05 | 3 | 71 |
| **15.5** | 0.16 | 11 | 261 |
| **16** | 0.29 | 20 | 518 |
| **16.5** | 0.27 | 18 | 521 |
| **17** | 0.19 | 13 | 397 |
| **17.5** | 0.04 | 3 | 94 |
| **18** | 0.00 | 0 | 0 |
| **Total** | 4.00 | 274.38 | 3342 |

# HORSE MACKEREL

AREA: **17°00' - 17°30'**

Total Biomass = **33302 tonnes**

Number of fish = **1259 X $10^6$**

| **Trawls used:** | 721 | 720 | 719 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 556 | **a =** | 0.0114 |
| **SA:** | 402 | **b =** | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **7.5** | 0.00 | 0 | 0 |
| **8** | 0.01 | 3 | 14 |
| **8.5** | 0.00 | 0 | 0 |
| **9** | 0.00 | 0 | 0 |
| **9.5** | 0.01 | 3 | 22 |
| **10** | 0.01 | 3 | 26 |
| **10.5** | 0.04 | 15 | 148 |
| **11** | 0.09 | 39 | 442 |
| **11.5** | 0.23 | 98 | 1266 |
| **12** | 0.21 | 87 | 1266 |
| **12.5** | 0.27 | 114 | 1865 |
| **13** | 0.20 | 82 | 1505 |
| **13.5** | 0.11 | 46 | 935 |
| **14** | 0.07 | 28 | 635 |
| **14.5** | 0.13 | 54 | 1337 |
| **15** | 0.19 | 79 | 2161 |
| **15.5** | 0.21 | 90 | 2688 |
| **16** | 0.49 | 204 | 6679 |
| **16.5** | 0.33 | 140 | 4997 |
| **17** | 0.19 | 79 | 3046 |
| **17.5** | 0.11 | 46 | 1925 |
| **18** | 0.08 | 33 | 1493 |
| **18.5** | 0.03 | 13 | 633 |
| **19** | 0.00 | 0 | 0 |
| **19.5** | 0.00 | 0 | 0 |
| **20** | 0.00 | 0 | 0 |
| **20.5** | 0.01 | 3 | 217 |
| **21** | 0.00 | 0 | 0 |
| **Total** | 3.00 | 1259.01 | 33302 |

# HORSE MACKEREL

AREA: **17°30 to 18°00**

Total Biomass = **140941 tonnes**

Number of fish = **3006 X $10^6$**

**Trawls used:** 718 717 716 0

0 0 0 0

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 614 | a = | 0.0114 |
| SA: | 1276 | b = | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 10.5 | 0.00 | 0 | 0 |
| 11 | 0.01 | 8 | 86 |
| 11.5 | 0.01 | 8 | 98 |
| 12 | 0.04 | 38 | 549 |
| 12.5 | 0.08 | 83 | 1355 |
| 13 | 0.17 | 166 | 3024 |
| 13.5 | 0.16 | 158 | 3209 |
| 14 | 0.17 | 172 | 3863 |
| 14.5 | 0.14 | 142 | 3526 |
| 15 | 0.11 | 113 | 3081 |
| 15.5 | 0.10 | 98 | 2918 |
| 16 | 0.20 | 201 | 6573 |
| 16.5 | 0.25 | 247 | 8804 |
| 17 | 0.29 | 293 | 11353 |
| 17.5 | 0.19 | 187 | 7851 |
| 18 | 0.06 | 62 | 2833 |
| 18.5 | 0.04 | 38 | 1857 |
| 19 | 0.05 | 46 | 2462 |
| 19.5 | 0.12 | 120 | 6864 |
| 20 | 0.07 | 66 | 4065 |
| 20.5 | 0.15 | 153 | 10024 |
| 21 | 0.11 | 112 | 7901 |
| 21.5 | 0.11 | 106 | 7976 |
| 22 | 0.05 | 46 | 3691 |
| 22.5 | 0.07 | 73 | 6199 |
| 23 | 0.03 | 33 | 3015 |
| 23.5 | 0.04 | 40 | 3845 |
| 24 | 0.03 | 27 | 2721 |
| 24.5 | 0.05 | 46 | 4957 |
| 25 | 0.05 | 46 | 5343 |
| 25.5 | 0.04 | 40 | 4844 |
| 26 | 0.00 | 0 | 0 |
| 26.5 | 0.01 | 7 | 900 |
| 27 | 0.01 | 6 | 890 |
| 27.5 | 0.01 | 7 | 999 |
| 28 | 0.01 | 7 | 1052 |
| 28.5 | 0.01 | 13 | 2212 |
| 29 | 0.00 | 0 | 0 |
| 29.5 | 0.00 | 0 | 0 |
| Total | 3.00 | 3006.26 | 140941 |

# HORSE MACKEREL

AREA: **18° to 19°**

Total Biomass = **89413 tonnes**

Number of fish = **3379 X $10^6$**

| Trawls used: | 713 | 712 | 711 | 707 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 1348 | a = | 0.0114 |
| SA: | 447 | b = | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 6 | 0.00 | 0 | 0 |
| 6.5 | 0.00 | 0 | 0 |
| 7 | 0.00 | 0 | 0 |
| 7.5 | 0.00 | 0 | 0 |
| 8 | 0.00 | 0 | 0 |
| 8.5 | 0.01 | 7 | 41 |
| 9 | 0.02 | 15 | 96 |
| 9.5 | 0.02 | 15 | 112 |
| 10 | 0.05 | 44 | 386 |
| 10.5 | 0.14 | 118 | 1181 |
| 11 | 0.18 | 154 | 1764 |
| 11.5 | 0.19 | 162 | 2093 |
| 12 | 0.08 | 66 | 964 |
| 12.5 | 0.03 | 22 | 360 |
| 13 | 0.02 | 15 | 270 |
| 13.5 | 0.06 | 51 | 1041 |
| 14 | 0.21 | 179 | 4010 |
| 14.5 | 0.50 | 419 | 10389 |
| 15 | 0.66 | 559 | 15224 |
| 15.5 | 0.79 | 669 | 19992 |
| 16 | 0.56 | 470 | 15374 |
| 16.5 | 0.32 | 267 | 9525 |
| 17 | 0.07 | 57 | 2199 |
| 17.5 | 0.06 | 49 | 2077 |
| 18 | 0.02 | 15 | 675 |
| 18.5 | 0.00 | 0 | 0 |
| 19 | 0.01 | 5 | 262 |
| 19.5 | 0.01 | 10 | 564 |
| 20 | 0.00 | 0 | 0 |
| 20.5 | 0.01 | 7 | 466 |
| 21 | 0.01 | 5 | 347 |
| 21.5 | 0.00 | 0 | 0 |
| 22 | 0.00 | 0 | 0 |
| 22.5 | 0.00 | 0 | 0 |
| 23 | 0.00 | 0 | 0 |
| 23.5 | 0.00 | 0 | 0 |
| 24 | 0.00 | 0 | 0 |
| 24.5 | 0.00 | 0 | 0 |
| 25 | 0.00 | 0 | 0 |
| 25.5 | 0.00 | 0 | 0 |
| 26 | 0.00 | 0 | 0 |
| 26.5 | 0.00 | 0 | 0 |
| 27 | 0.00 | 0 | 0 |
| 27.5 | 0.00 | 0 | 0 |
| 28 | 0.00 | 0 | 0 |
| 28.5 | 0.00 | 0 | 0 |
| 29 | 0.00 | 0 | 0 |
| 29.5 | 0.00 | 0 | 0 |
| Total | 4.00 | 3379.34 | 89413 |

# HORSE MACKEREL

AREA: **19° to 20°**

Total Biomass = **197309 tonnes**

Number of fish = **7827 X $10^6$**

**Trawls used:** 705 703 702 701 699 698 697 695

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 1871 | a = | 0.0114 |
| SA: | 702 | b = | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 6 | 0.24 | 169 | 362 |
| 6.5 | 0.36 | 260 | 691 |
| 7 | 0.17 | 119 | 387 |
| 7.5 | 0.14 | 102 | 401 |
| 8 | 0.02 | 17 | 80 |
| 8.5 | 0.08 | 56 | 315 |
| 9 | 0.02 | 16 | 103 |
| 9.5 | 0.14 | 101 | 770 |
| 10 | 0.28 | 196 | 1721 |
| 10.5 | 0.39 | 277 | 2781 |
| 11 | 0.36 | 256 | 2925 |
| 11.5 | 0.62 | 440 | 5693 |
| 12 | 0.55 | 391 | 5701 |
| 12.5 | 0.51 | 362 | 5911 |
| 13 | 0.43 | 303 | 5536 |
| 13.5 | 0.30 | 215 | 4369 |
| 14 | 0.58 | 410 | 9218 |
| 14.5 | 0.66 | 472 | 11697 |
| 15 | 0.59 | 419 | 11413 |
| 15.5 | 0.72 | 511 | 15274 |
| 16 | 0.85 | 605 | 19759 |
| 16.5 | 0.85 | 605 | 21556 |
| 17 | 0.64 | 456 | 17686 |
| 17.5 | 0.46 | 324 | 13617 |
| 18 | 0.32 | 229 | 10432 |
| 18.5 | 0.25 | 175 | 8590 |
| 19 | 0.16 | 111 | 5899 |
| 19.5 | 0.15 | 103 | 5886 |
| 20 | 0.05 | 36 | 2188 |
| 20.5 | 0.06 | 45 | 2983 |
| 21 | 0.04 | 30 | 2129 |
| 21.5 | 0.01 | 10 | 769 |
| 22 | 0.00 | 0 | 0 |
| 22.5 | 0.00 | 0 | 0 |
| 23 | 0.01 | 5 | 465 |
| 23.5 | 0.00 | 0 | 0 |
| Total | 11.00 | 7827.04 | 197309 |

# HORSE MACKEREL

AREA: **20° to 21°**

Total Biomass = **140538 tonnes**

Number of fish = **6051 X $10^6$**

**Trawls used:** 690 689 687 686 683 682 0 0

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 1942 | a = | 0.0114 |
| SA: | 487 | b = | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 6 | 0.58 | 587 | 1253 |
| 6.5 | 0.28 | 286 | 760 |
| 7 | 0.14 | 137 | 448 |
| 7.5 | 0.09 | 94 | 372 |
| 8 | 0.05 | 47 | 221 |
| 8.5 | 0.05 | 52 | 288 |
| 9 | 0.04 | 37 | 239 |
| 9.5 | 0.00 | 0 | 0 |
| 10 | 0.00 | 0 | 0 |
| 10.5 | 0.03 | 30 | 303 |
| 11 | 0.08 | 80 | 909 |
| 11.5 | 0.26 | 267 | 3452 |
| 12 | 0.33 | 331 | 4824 |
| 12.5 | 0.40 | 405 | 6627 |
| 13 | 0.26 | 258 | 4711 |
| 13.5 | 0.24 | 243 | 4923 |
| 14 | 0.27 | 274 | 6152 |
| 14.5 | 0.37 | 375 | 9305 |
| 15 | 0.29 | 296 | 8066 |
| 15.5 | 0.32 | 326 | 9729 |
| 16 | 0.36 | 359 | 11721 |
| 16.5 | 0.30 | 302 | 10768 |
| 17 | 0.38 | 379 | 14696 |
| 17.5 | 0.27 | 270 | 11370 |
| 18 | 0.35 | 352 | 16028 |
| 18.5 | 0.19 | 190 | 9359 |
| 19 | 0.07 | 67 | 3558 |
| 19.5 | 0.01 | 8 | 457 |
| 20 | 0.00 | 0 | 0 |
| 20.5 | 0.00 | 0 | 0 |
| 21 | 0.00 | 0 | 0 |
| 21.5 | 0.00 | 0 | 0 |
| 22 | 0.00 | 0 | 0 |
| 22.5 | 0.00 | 0 | 0 |
| 23 | 0.00 | 0 | 0 |
| 23.5 | 0.00 | 0 | 0 |
| 24 | 0.00 | 0 | 0 |
| 24.5 | 0.00 | 0 | 0 |
| 25 | 0.00 | 0 | 0 |
| 25.5 | 0.00 | 0 | 0 |
| 26 | 0.00 | 0 | 0 |
| 26.5 | 0.00 | 0 | 0 |
| 27 | 0.00 | 0 | 0 |
| 27.5 | 0.00 | 0 | 0 |
| 28 | 0.00 | 0 | 0 |
| 28.5 | 0.00 | 0 | 0 |
| 29 | 0.00 | 0 | 0 |
| 29.5 | 0.00 | 0 | 0 |
| Total | 6.00 | 6051.34 | 140538 |

# HORSE MACKEREL

AREA: **21° to 22°**

Total Biomass = **35012 tonnes**

Number of fish = **1066 X $10^6$**

**Trawls used:** 681 677 0 0

0 0 0 0

| Survey estimates | | Length/weight | |
|---|---|---|---|
| Area: | 2070 | a = | 0.0114 |
| SA: | 102 | b = | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| 6 | 0.01 | 7 | 15 |
| 6.5 | 0.00 | 0 | 0 |
| 7 | 0.00 | 0 | 0 |
| 7.5 | 0.00 | 0 | 0 |
| 8 | 0.01 | 7 | 33 |
| 8.5 | 0.00 | 0 | 0 |
| 9 | 0.03 | 14 | 91 |
| 9.5 | 0.03 | 14 | 105 |
| 10 | 0.18 | 97 | 850 |
| 10.5 | 0.22 | 118 | 1182 |
| 11 | 0.32 | 173 | 1979 |
| 11.5 | 0.17 | 90 | 1165 |
| 12 | 0.03 | 14 | 202 |
| 12.5 | 0.00 | 0 | 0 |
| 13 | 0.00 | 0 | 0 |
| 13.5 | 0.00 | 0 | 0 |
| 14 | 0.00 | 0 | 0 |
| 14.5 | 0.00 | 0 | 0 |
| 15 | 0.00 | 0 | 0 |
| 15.5 | 0.00 | 0 | 0 |
| 16 | 0.00 | 0 | 0 |
| 16.5 | 0.00 | 0 | 0 |
| 17 | 0.00 | 0 | 0 |
| 17.5 | 0.00 | 0 | 0 |
| 18 | 0.09 | 46 | 2079 |
| 18.5 | 0.07 | 38 | 1872 |
| 19 | 0.37 | 198 | 10493 |
| 19.5 | 0.24 | 129 | 7382 |
| 20 | 0.20 | 107 | 6529 |
| 20.5 | 0.01 | 8 | 500 |
| 21 | 0.01 | 8 | 535 |
| 21.5 | 0.00 | 0 | 0 |
| Total | 2.00 | 1065.94 | 35012 |

## HORSE MACKEREL

AREA: **22° to 23°**

Total Biomass = **4866 tonnes**

Number of fish = **562 X $10^6$**

| **Trawls used:** | 672 | 0 | 0 | 0 |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |

| **Survey estimates** | | **Length/weight** | |
|---|---|---|---|
| **Area:** | 1359 | **a =** | 0.0114 |
| **SA:** | 34 | **b =** | 2.86 |

| Length | Relative frequency | No. millions | Biomass tonnes |
|---|---|---|---|
| **6.5** | 0.00 | 0 | 0 |
| **7** | 0.02 | 9 | 30 |
| **7.5** | 0.01 | 5 | 18 |
| **8** | 0.01 | 5 | 22 |
| **8.5** | 0.06 | 32 | 180 |
| **9** | 0.03 | 18 | 121 |
| **9.5** | 0.20 | 115 | 876 |
| **10** | 0.34 | 194 | 1697 |
| **10.5** | 0.25 | 138 | 1389 |
| **11** | 0.07 | 41 | 474 |
| **11.5** | 0.01 | 5 | 60 |
| **12** | 0.00 | 0 | 0 |
| **Total** | 1.00 | 562.27 | 4866 |

# Annex VI The total number of fish per length group

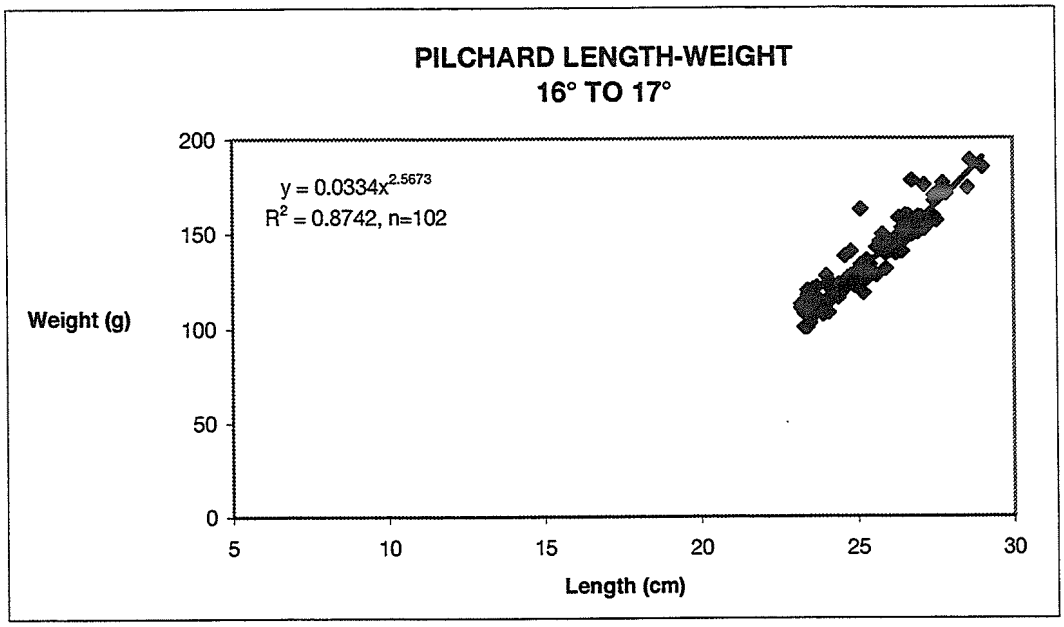
| NUMBER OF PILCHARD | | | | |
|---|---|---|---|---|
| Area | 16°-17° | 17°-18° | 19°-20° | TOTAL |
| No. x $10^6$ | 595 | 60 | 1295 | 1950 |
| Length (cm) | | | | |
| 6.5 | | | | |
| 7 | 7 | | | 7 |
| 7.5 | 8 | | | 8 |
| 8 | 10 | | | 10 |
| 8.5 | | | | |
| 9 | | | | |
| 9.5 | 1 | | 17 | 18 |
| 10 | 1 | | | 1 |
| 10.5 | | | 35 | 35 |
| 11 | 1 | | 35 | 35 |
| 11.5 | | | 86 | 86 |
| 12 | | | 71 | 71 |
| 12.5 | | | 158 | 158 |
| 13 | 3 | 1 | 229 | 232 |
| 13.5 | | 3 | 100 | 102 |
| 14 | | 3 | 73 | 76 |
| 14.5 | | 6 | 42 | 47 |
| 15 | 1 | 4 | 17 | 21 |
| 15.5 | | 5 | 29 | 35 |
| 16 | | 6 | 136 | 142 |
| 16.5 | | 11 | 160 | 171 |
| 17 | | 11 | 93 | 104 |
| 17.5 | | 5 | 16 | 21 |
| 18 | 1 | 3 | | 3 |
| 18.5 | 5 | 1 | | 5 |
| 19 | 26 | | | 26 |
| 19.5 | 34 | | | 34 |
| 20 | 42 | | | 42 |
| 20.5 | 30 | | | 30 |
| 21 | 18 | | | 18 |
| 21.5 | 9 | | | 9 |
| 22 | 5 | | | 5 |
| 22.5 | 6 | 1 | | 7 |
| 23 | 38 | | | 38 |
| 23.5 | 52 | 1 | | 52 |
| 24 | 71 | 1 | | 72 |
| 24.5 | 65 | | | 65 |
| 25 | 59 | | | 59 |
| 25.5 | 29 | | | 29 |
| 26 | 33 | | | 33 |
| 26.5 | 21 | | | 21 |
| 27 | 15 | | | 15 |
| 27.5 | 3 | | | 3 |
| 28 | 2 | | | 2 |
| 28.5 | 2 | | | 2 |
| 29 | 1 | | | 1 |
| 29.5 | | | | 0 |

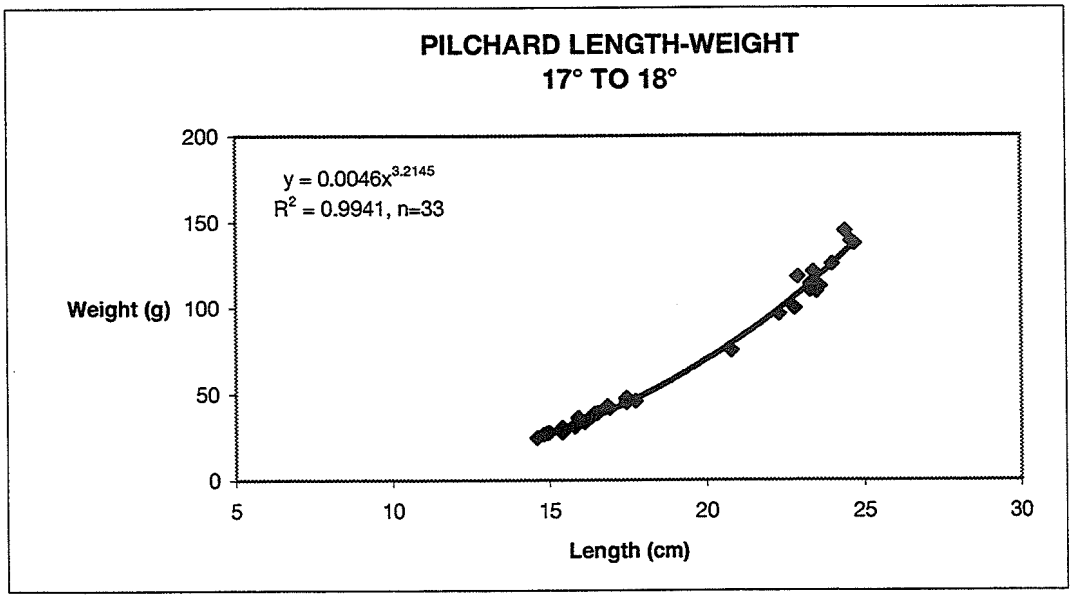
| NUMBER OF ANCHOVY | | | |
|---|---|---|---|
| Area | 16°-17° | 19°-20° | TOTAL |
| No. x $10^6$ | 106 | 1388 | 1494 |
| Length (cm) | | | |
| 8.5 | | | |
| 9 | | 3 | 3 |
| 9.5 | | 6 | 6 |
| 10 | 1 | 95 | 96 |
| 10.5 | 1 | 165 | 166 |
| 11 | 2 | 260 | 262 |
| 11.5 | 2 | 343 | 345 |
| 12 | 8 | 265 | 273 |
| 12.5 | 11 | 146 | 157 |
| 13 | 20 | 31 | 52 |
| 13.5 | 18 | 15 | 33 |
| 14 | 19 | 20 | 39 |
| 14.5 | 17 | 22 | 39 |
| 15 | 6 | 16 | 21 |
| 15.5 | 1 | | 1 |
| 16 | | | |

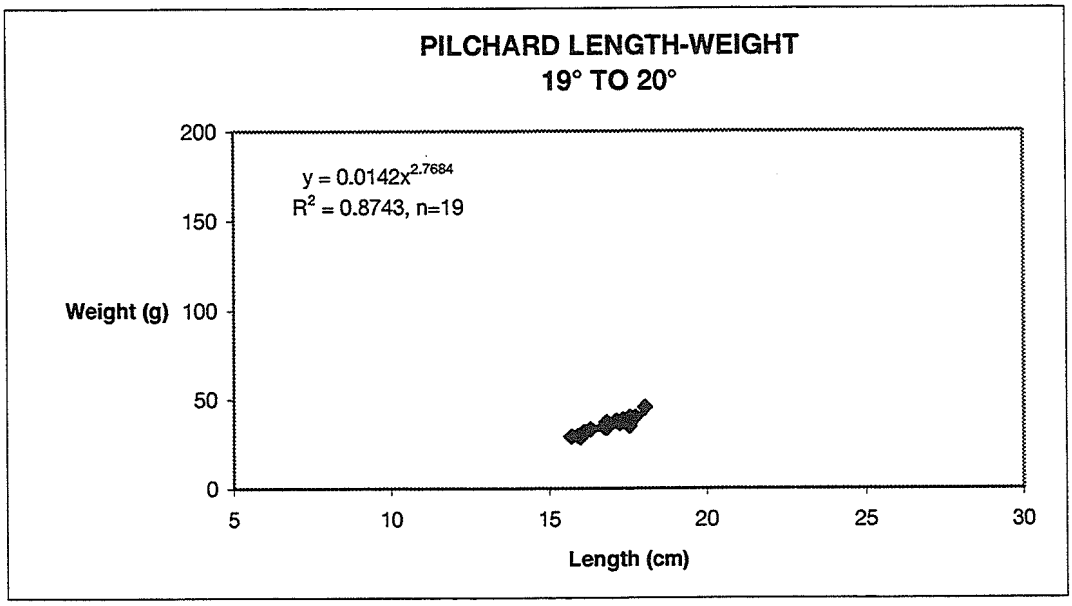
| NUMBER OF ROUND HERRING | | | | |
|---|---|---|---|---|
| Area | 16°-17° | 17°-18° | 19°-20° | TOTAL |
| No. x $10^6$ | 239 | 460 | 274 | 973 |
| Length (cm) | | | | |
| 7 | | | 10 | 10 |
| 7.5 | | | 20 | 20 |
| 8 | | | 34 | 34 |
| 8.5 | | | 13 | 13 |
| 9 | | | 10 | 10 |
| 9.5 | | 9 | 6 | 14 |
| 10 | 3 | 11 | 7 | 20 |
| 10.5 | 10 | 26 | 6 | 41 |
| 11 | 45 | 53 | 20 | 118 |
| 11.5 | 38 | 122 | 29 | 189 |
| 12 | 26 | 119 | 23 | 168 |
| 12.5 | 9 | 66 | 22 | 97 |
| 13 | 13 | 17 | 4 | 33 |
| 13.5 | 5 | 12 | 2 | 19 |
| 14 | 5 | 8 | | 14 |
| 14.5 | 1 | 4 | 1 | 5 |
| 15 | 3 | 2 | 3 | 8 |
| 15.5 | | | 11 | 11 |
| 16 | 7 | | 20 | 27 |
| 16.5 | 10 | 1 | 18 | 30 |
| 17 | 23 | 4 | 13 | 40 |
| 17.5 | 16 | | 3 | 19 |
| 18 | 20 | 1 | | 21 |
| 18.5 | 2 | | | 2 |
| 19 | 2 | | | 2 |
| 19.5 | 1 | | | 1 |
| 20 | | | | |
| 20.5 | | | | |
| 21 | | | | |
| 21.5 | | 1 | | 1 |
| 22 | | 1 | | 1 |
| 22.5 | | 1 | | 1 |
| 23 | | | | |
| 23.5 | | | | |
| 24 | | 1 | | 1 |
| 24.5 | | | | |

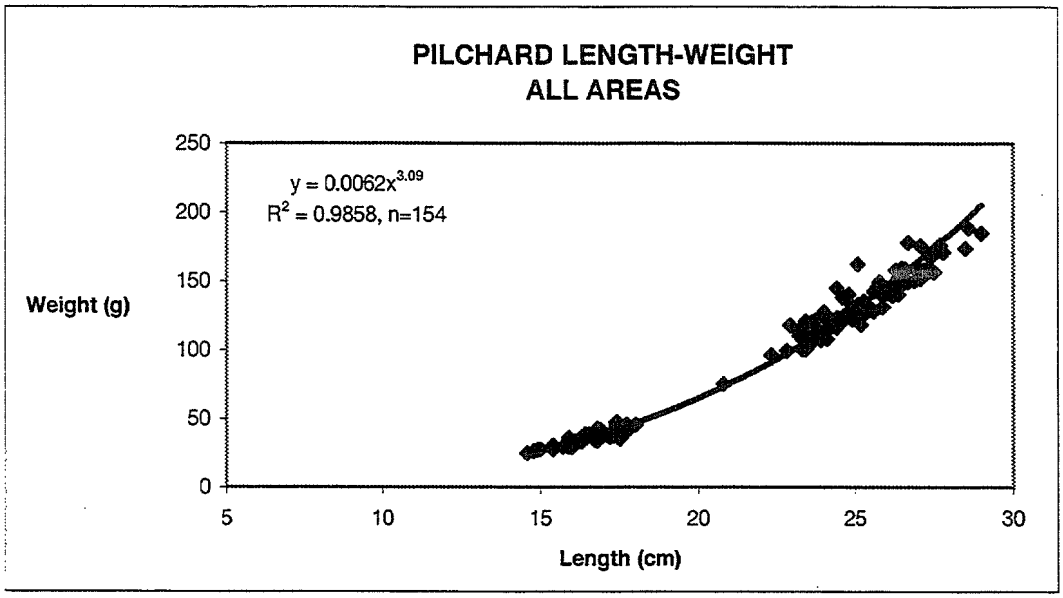
| NUMBER OF HORSE MACKEREL (*Trachurus capensis*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Area | 16°-17° | 17°-18° | 18°-19° | 19°-20° | 20°-21° | 21°-22° | 22°-23° | TOTAL |
| No. x $10^6$ | 491 | 4265 | 3372 | 7827 | 6051 | 1066 | 562 | 22775 |
| Length (cm) | | | | | | | | |
| 5 | 40 | | | | | | | 40 |
| 5.5 | 28 | | | | | | | 28 |
| 6 | 28 | | | 169 | 587 | 7 | | 791 |
| 6.5 | 18 | | | 260 | 286 | | | 563 |
| 7 | 5 | | | 119 | 137 | | 9 | 271 |
| 7.5 | 3 | | | 102 | 94 | | 5 | 203 |
| 8 | 2 | 3 | | 17 | 47 | 7 | 5 | 81 |
| 8.5 | | | | 56 | 52 | 0 | 32 | 140 |
| 9 | 1 | | 15 | 16 | 37 | 14 | 18 | 100 |
| 9.5 | 2 | 3 | 15 | 101 | | 14 | 115 | 250 |
| 10 | 4 | 3 | 44 | 196 | | 97 | 194 | 538 |
| 10.5 | 7 | 15 | 118 | 277 | 30 | 118 | 138 | 702 |
| 11 | 11 | 46 | 154 | 256 | 80 | 173 | 41 | 761 |
| 11.5 | 7 | 105 | 162 | 440 | 267 | 90 | 5 | 1075 |
| 12 | 5 | 124 | 66 | 391 | 331 | 14 | | 932 |
| 12.5 | 15 | 197 | 22 | 362 | 405 | | | 1001 |
| 13 | 19 | 248 | 15 | 303 | 258 | | | 843 |
| 13.5 | 16 | 204 | 51 | 215 | 243 | | | 730 |
| 14 | 23 | 200 | 179 | 410 | 274 | | | 1086 |
| 14.5 | 16 | 196 | 419 | 472 | 375 | | | 1478 |
| 15 | 25 | 192 | 559 | 419 | 296 | | | 1491 |
| 15.5 | 33 | 188 | 669 | 511 | 326 | | | 1726 |
| 16 | 38 | 406 | 470 | 605 | 359 | | | 1877 |
| 16.5 | 16 | 387 | 267 | 605 | 302 | | | 1577 |
| 17 | 3 | 372 | 57 | 456 | 379 | | | 1267 |
| 17.5 | 1 | 233 | 49 | 324 | 270 | | | 877 |
| 18 | 1 | 95 | 15 | 229 | 352 | 46 | | 738 |
| 18.5 | | 51 | | 175 | 190 | 38 | | 454 |
| 19 | | 46 | 5 | 111 | 67 | 198 | | 428 |
| 19.5 | 5 | 120 | 10 | 103 | 8 | 129 | | 376 |
| 20 | 5 | 66 | | 36 | | 107 | | 213 |
| 20.5 | 2 | 156 | 7 | 45 | | 8 | | 218 |
| 21 | 9 | 112 | 5 | 30 | | 8 | | 165 |
| 21.5 | 5 | 106 | | 10 | | | | 121 |
| 22 | 2 | 46 | | | | | | 48 |
| 22.5 | 5 | 73 | | | | | | 77 |
| 23 | 5 | 33 | | 5 | | | | 43 |
| 23.5 | 12 | 40 | | | | | | 52 |
| 24 | 9 | 27 | | | | | | 36 |
| 24.5 | 7 | 46 | | | | | | 53 |
| 25 | 7 | 46 | | | | | | 54 |
| 25.5 | 9 | 40 | | | | | | 49 |
| 26 | 9 | | | | | | | 9 |
| 26.5 | 5 | 7 | | | | | | 11 |
| 27 | 5 | 6 | | | | | | 11 |
| 27.5 | 14 | 7 | | | | | | 21 |
| 28 | 7 | 7 | | | | | | 14 |
| 28.5 | | 13 | | | | | | 13 |
| 29 | 1 | | | | | | | 1 |
| 29.5 | | | | | | | | |

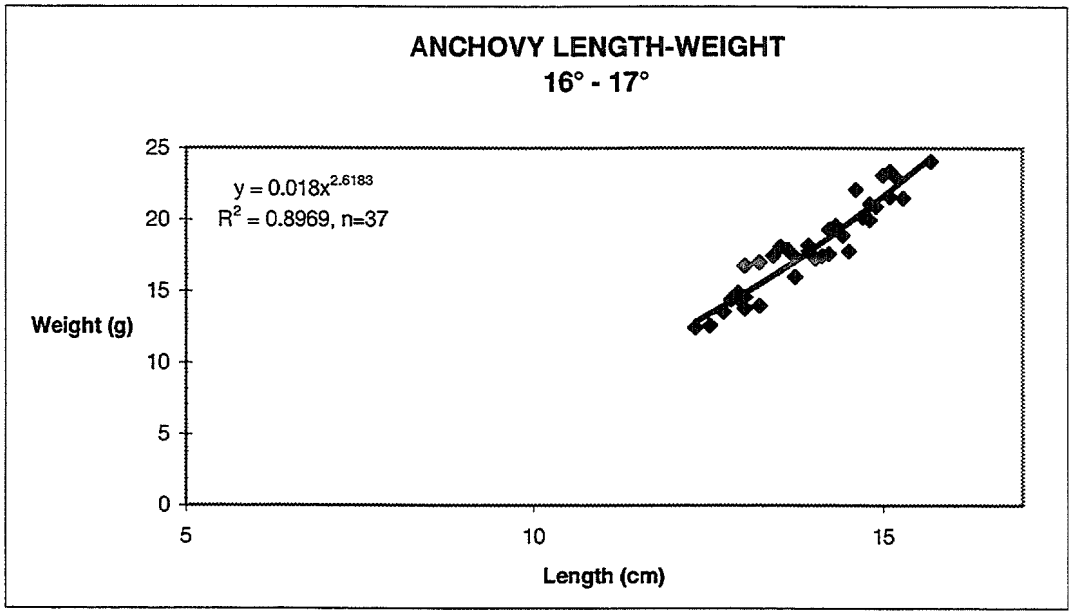
# Annex VII Length-weight relations

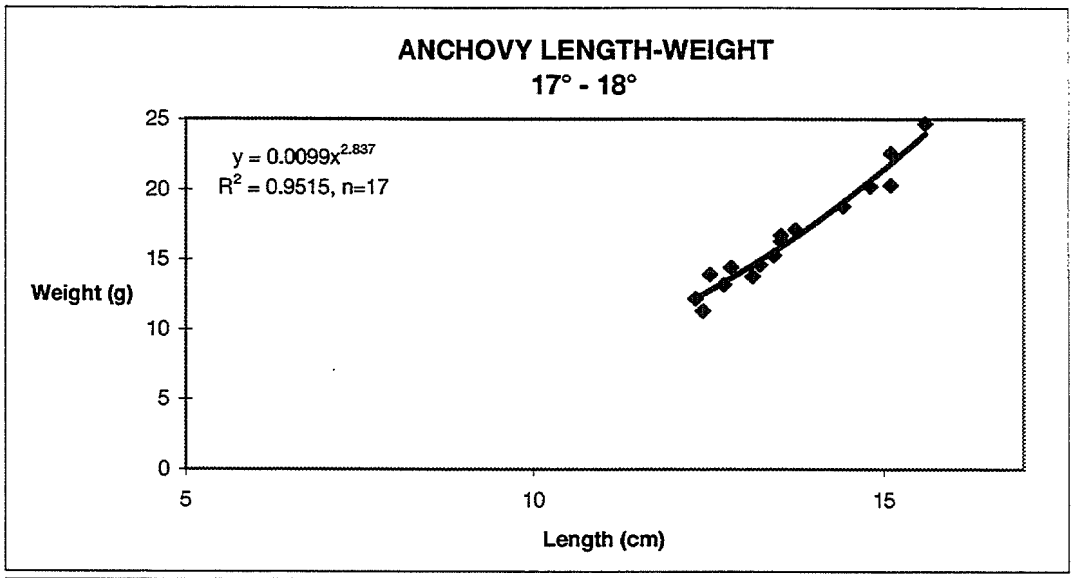


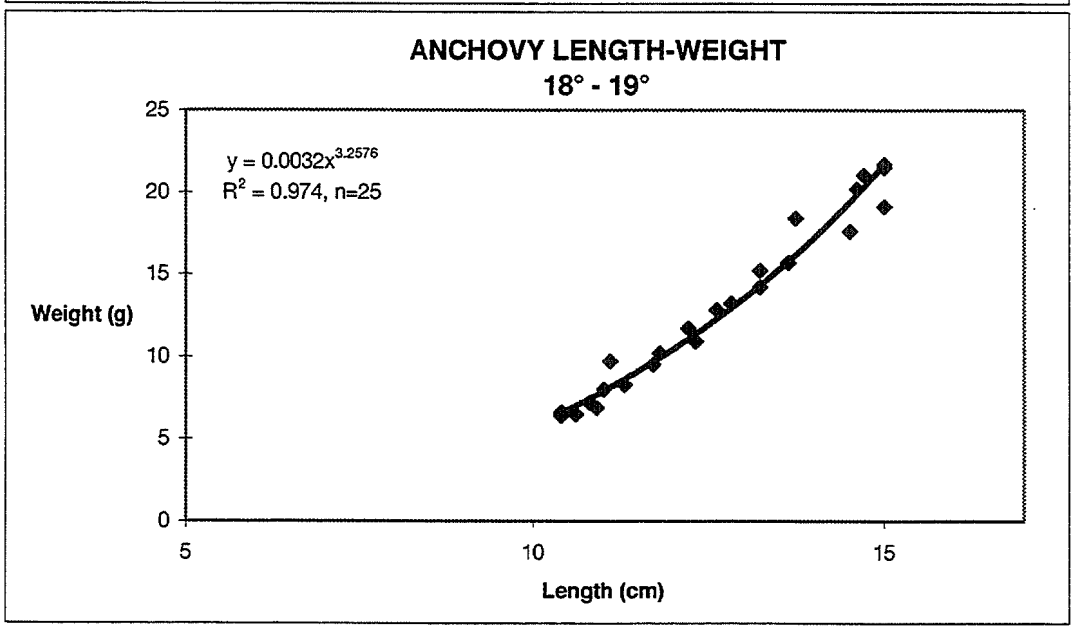



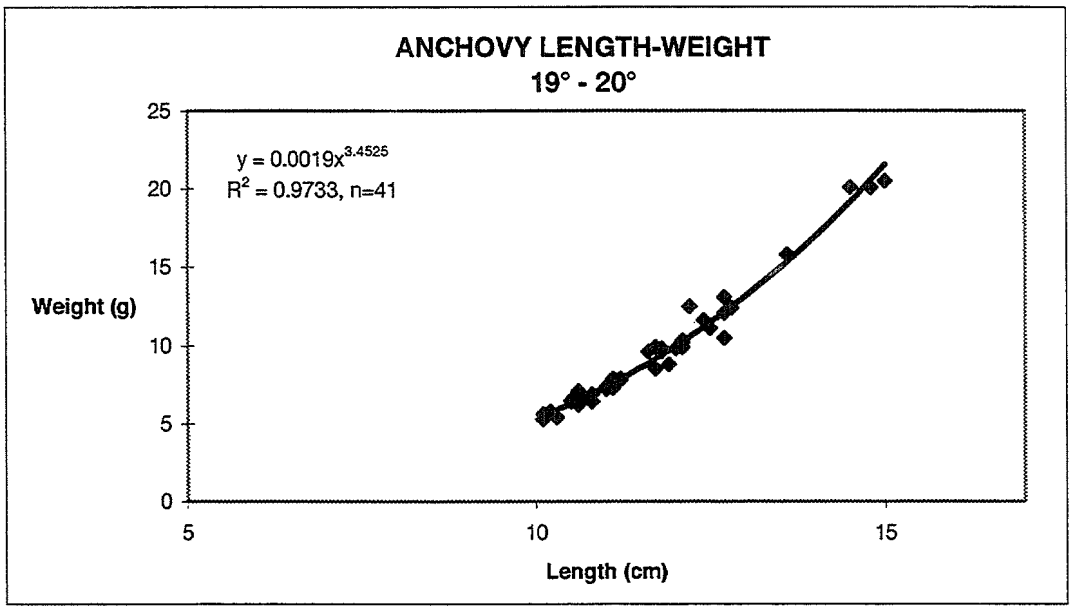



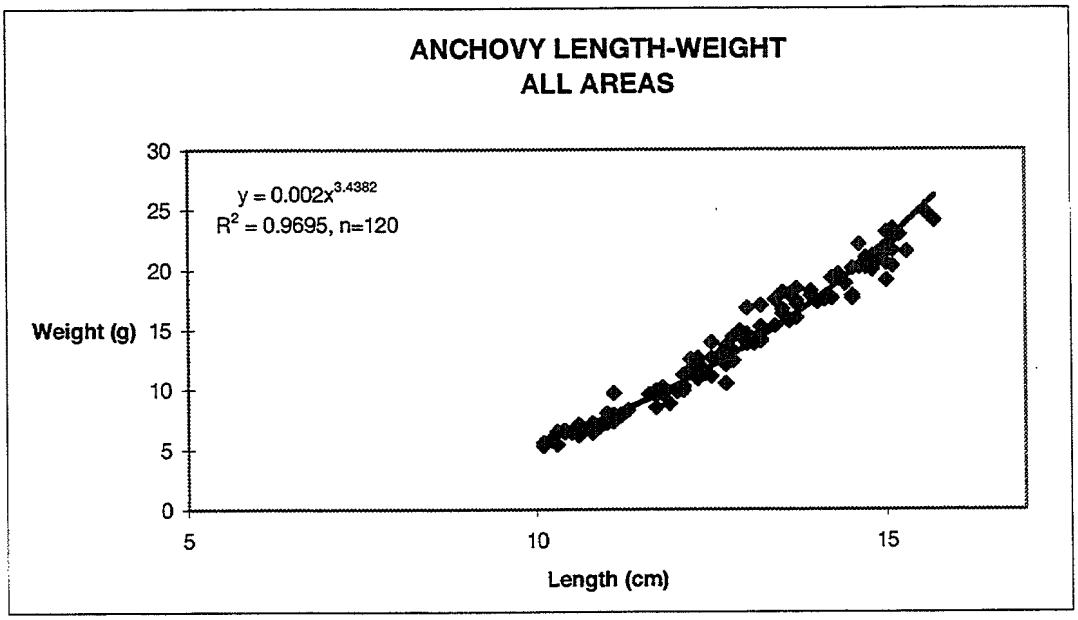

PILCHARD LENGTH-WEIGHT
ALL AREAS
y = 0.0062x^3.09
R^2 = 0.9858, n=154
Weight (g)
250
200
150
100
50
0
5
10
15
20
25
30
Length (cm)


ANCHOVY LENGTH-WEIGHT
16° - 17°
y = 0.018x^2.6183
R^2 = 0.8969, n=37
Weight (g)
Length (cm)
0
5
10
15
20
25
5
10
15


ANCHOVY LENGTH-WEIGHT
17° - 18°
y = 0.0099x^2.837
R^2 = 0.9515, n=17
Weight (g)
Length (cm)
0
5
10
15
20
25
5
10
15


ANCHOVY LENGTH-WEIGHT
18° - 19°
y = 0.0032x^3.2576
R^2 = 0.974, n=25
Weight (g)
Length (cm)
0
5
10
15
20
25
5
10
15


ANCHOVY LENGTH-WEIGHT
19° - 20°
y = 0.0019x^3.4525
R2 = 0.9733, n=41
Weight (g)
Length (cm)
0
5
10
15
20
25
5
10
15


ANCHOVY LENGTH-WEIGHT
ALL AREAS
y = 0.002x^3.4382
R2 = 0.9695, n=120
Weight (g)
Length (cm)
0
5
10
15
20
25
30
5
10
15

# Annex VIII Fish condition factor

Pilchard condition per area: number of samples (n), mean, variance ($s^2$), and standard deviation (s)

a) Gutted weight condition factor

| *Area* | *n* | *Mean c.f.* | $s^2$ | *s* |
|---|---|---|---|---|
| All areas | 154 | 0.714 | 0.0007 | 0.0264 |
| 16°-17° | 102 | 0.712 | 0.0031 | 0.0558 |
| 17°-18° | 33 | 0.750 | 0.0049 | 0.0703 |
| 19°-20° | 19 | 0.666 | 0.0010 | 0.0311 |

b) Full weight condition factor

| *Area* | *n* | *Mean c.f.* | $s^2$ | *s* |
|---|---|---|---|---|
| All areas | 154 | 0.828 | 0.0052 | 0.0723 |
| 16°-17° | 102 | 0.834 | 0.0081 | 0.0900 |
| 17°-18° | 33 | 0.862 | 0.0068 | 0.0826 |
| 19°-20° | 19 | 0.739 | 0.0010 | 0.0322 |

Anchovy condition per area: number of samples (n), mean, variance ($s^2$), and standard deviation (s)

a) Gutted weight condition factor

| *Area* | *n* | *Mean c.f.* | $s^2$ | *s* |
|---|---|---|---|---|
| All areas | 120 | 0.532 | 0.0012 | 0.0341 |
| 16°-17° | 37 | 0.560 | 0.0004 | 0.0202 |
| 17°-18° | 17 | 0.548 | 0.0149 | 0.1220 |
| 18°-19° | 25 | 0.519 | 0.0010 | 0.0317 |
| 19°-20° | 41 | 0.508 | 0.0009 | 0.0299 |

b) Full weight condition factor

| *Area* | *n* | *Mean c.f.* | $s^2$ | *s* |
|---|---|---|---|---|
| All areas | 120 | 0.618 | 0.0066 | 0.0811 |
| 16°-17° | 37 | 0.660 | 0.0000 | 0.0067 |
| 17°-18° | 17 | 0.648 | 0.0004 | 0.0187 |
| 18°-19° | 25 | 0.614 | 0.0004 | 0.0204 |
| 19°-20° | 41 | 0.571 | 0.0049 | 0.0703 |

# Annex IX Reproductive status

## PILCHARD BIOLOGICAL DATA

16° - 17°S

| Length Class | n | Mean Weight | Mean Gutted Weight | Sex Ratio | % per Maturity Stage 1 | 2 | 3 | 4 | 5 | Mean Gonad Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 23.0 - 23.9 | 21 | 114.57 | 95.34 | 0.71 | | | 76 | 24 | | 5.93 |
| 24.0 - 24.9 | 29 | 122.58 | 105.73 | 0.31 | | | 79.3 | 17.2 | 3.5 | 6.42 |
| 25.0 - 25.9 | 20 | 135.18 | 116.46 | 0.5 | | | 80 | 20 | | 8.09 |
| 26.0 - 26.9 | 17 | 151.35 | 129.89 | 0.12 | | | 88.2 | 11.8 | | 7.27 |
| 27.0 - 27.9 | 12 | 164.58 | 141.15 | 0 | | | 83.4 | 16.6 | | 7.65 |

## ANCHOVY BIOLOGICAL DATA

a) 16° - 17°S

| Length Class | n | Mean Weight | Mean Gutted Weight | Sex Ratio | % per Maturity Stage 1 | 2 | 3 | 4 | 5 | Mean Gonad Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 13.0 - 13.9 | 12 | 16.59 | 14.11 | 0.3 | | | 66.7 | 33.3 | | 1.09 |
| 14.0 - 14.9 | 12 | 19.36 | 16.54 | 0.7 | | | 66.7 | 33.3 | | 1.55 |

b) 19° - 20°S

| Length Class | n | Mean Weight | Mean Gutted Weight | Sex Ratio | % per Maturity Stage 1 | 2 | 3 | 4 | 5 | Mean Gonad Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 10.0 - 10.9 | 11 | 6.23 | 5.72 | 0.3 | 27.3 | 36.4 | 18.2 | 9.1 | | 0 |
| 11.0 - 11.9 | 15 | 8.27 | 7.33 | 0.5 | | | 73.3 | 26.7 | | 0.17 |
| 12.0 - 12.9 | 11 | 11.23 | 9.94 | 0.27 | | | 36.7 | 63.3 | | 0.45 |