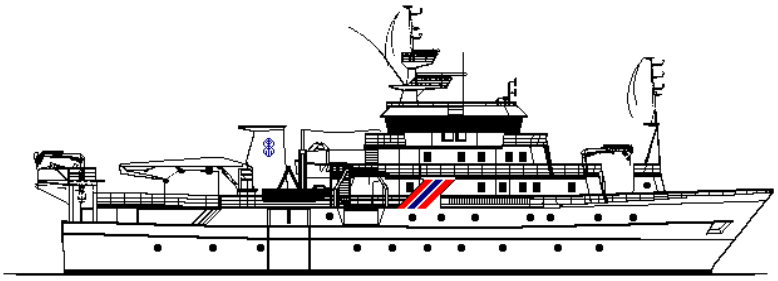

BCLME SURVEY NO. 1 2005

TRANSBOUNDARY SURVEY BETWEEN NAMIBIA AND SOUTH AFRICA WITH FOCUS ON SHARED STOCKS OF HAKE

Cruise report No 2/2005

4 February – 9 March 2005

by

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Bergen May 2005

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1 Introduction

One of the key areas of the BCLME focus is the monitoring/assessment of major transboundary fish resources in the BCLME region to enable sustainable management of these resources. The biological and ecological dynamics of deepwater hake have come under spotlight in stock assessment of these resources. BCLME programme has therefore been involved in supporting appropriate research that could contribute to conservation and management efforts of this transboundary fish resource. During 2004, three surveys were conducted aimaing at the development of ideas/hyptheses of the *Merluccius paradoxus* life cycle in the region as well as the study on spatial and biological patterns in relation to key bathymetric and environmental features of the local shelf and slope system. These transbounday surveys were aimed to provide enough material for terms of reference for future, more focused and specialised surveys directed for example at palnktonic and early stage juveniles, reproducing adults and changing proportions of various size/age classes through space and time.

This cruise (Project LMR/NANSEN/05/01) is a continuation of previous work but more focused based on knowledge gained last year and will also include Cape hake biological and ecological studies- all of which are aim to contribute to sustainable management of transboundary fish resources in the region.

Specific objectives of the cruise (Project LMR/NANSEN/05/01) are:

1. To plan and conduct a transboundary survey from Cape Agulhas to Lüderitz to produce distribution maps and abundance maps by size classes of the two species of hake to be later merged with similar data from a co-occurring Namibian national demersal survey, to enable complete mapping and assessment of shared stocks, thus providing a measure of the degree of sharing of the stocks at the time of the survey.
2. To map in detail the distribution of hake species in border areas assumed to function as critical migration routes between South Africa and Namibia.
3. To collect other relevant data to better understand the environment impact on the distribution of hakes, and the fish community structure in the distribution areas of the hake.

2 Materials and methods

2.1 Registration of weather conditions

The underway weather data aboard Dr. Fridtjof Nansen are logged with the Aanderaa Weather Station unit fitted with the following sensors:

Sensor type	Measurement units
Air temperature	Degrees °C
Wind speed	M/s
Solar radiation	W/m^2
Wind direction	Degrees re. the magnetic N. Pole
Sea surface temperature	Degrees °C

All sensors but Sea surface temperature (SST) are mounted on a mast positioned midships, at about 20 meters above the sea level. The SST sensor is located at the intake of the water for cooling the engine and it readings are representative to a water layer at about 5 meters below the sea level.

The weather station data were logged continuously throughout the survey. The results presented in this report are based on a standard output from the logging system comprising one nautical mile averages along the ship's track.

2.2 Hydrography

The data on temperature salinity and oxygen were collected with a CTD *Seabird 9 plus* probe between the surface and 10 meters off the bottom. CTDs were made at each trawl station and, additionally, in the course of the special study conducted in the shelf break area off Panther Head on 3 March. The CTD probe was fitted with a set of newly factory-calibrated sensors, installed on 17 December 2003. In addition, water bottle samples for oxygen and salinity calibrations were taken at almost all CTD stations.

The salinity samples were analysed with the Guildline Portasal salinometer unit. The laboratory conditions onboard are suitable to detect deviations between the CTD and *in situ* samples at a level of 0.005 of salinity units. Since no deviations reaching or

exceeding this range were detected, the salinity values based on the factory calibration of the conductivity sensor are used throughout this report.

The samples for dissolved oxygen were titrated within 12 hours of sample collection, using the standard Winkler method.

2.3 Current measurements.

Current measurements were carried out with vessel-mounted acoustic Doppler current profiler (ADCP) by RD Instruments, which operated 150 kHz in broad-band mode with 5 m vertical cells. Currents were measured from a depth of 25 m down to about 30 meters above the bottom. Only the bottom-tracked data were used in the data analysis. The ADCP unit used in the measurements had been mounted and calibrated by an RD Instrument specialist prior to the survey.

The quality of the current measurements cannot be fully ascertained. The measurements were carried out in parallel to intensive fishing operations. While the trawl stations were aligned on the shortest paths crossing the shelf gradients, the course tracks travelled between two adjacent trawl stations departed considerably from the straight lines and it often took long time to complete them. This adversely affected the quality of the collected underway data. The two most outstanding problems were: (1) spurious data in the recordings caused by frequent changes in the ship's speed and direction and; (2) uncertainties as to what extent the observations reflected the changes in space (signal) and to what degree fluctuations in time (bias).

The spurious recording sections were eliminated based on the course and speed of the vessel recorded in the so-called short-term current average files (STA) recorded with the ADCP firmware. These data were averaged over five acoustic pings (each 10 seconds ship travel time); a period short enough to assume that it was a point sample. To remove spurious recordings, a custom software module was written during module to remove these STA samples when ship was trawling (low speed), manoeuvring (rapid change in direction) and departing too far from the main sailing direction. Only these data above such thresholds used to obtain the current estimates.

The uncertainty in the large-scale current evaluation is caused by short-term fluctuations (tides, mesoscale eddies, current meanders, upwelling filaments and wind intensification and relaxation phases) could not be fully eliminated. The long crossing

times between stations and diversions from a straight course track increased that uncertainty. The current data presented in this report display a considerable jitter in some cases. Enhancements to both, in the survey design and post processing methodology are necessary to improve the quality of the current data.

2.4 Acoustic measurements

2.4.1 Acoustic equipment

The acoustic recordings were conducted using Simrad EK 500 echosounder coupled to a keel-mounted transducer of 38 kHz. Acoustic raw-data was logged on the Sun-Unix based Bergen Echo Integrator (BEI) version 2000. The technical specifications and operational settings of the echosounders used during the survey are given in Annex 2 together with the results from the last calibration of the system. The acoustic data were scrutinized using the post-processing module of the BEI software.

2.4.2 Classification

Scatterers were displayed at 38 kHz, standardized to 5 nautical miles (NM) echograms with 1,000 pings (horizontal) by 500 bins (vertical). The mean 5 NM area backscattering coefficients s_A (m^2/NM^2) was allocated to a predefined set of species or species groups on the basis established echogram features. When concentrations of juvenile pelagic hake were encountered the s_A-values were stored with a 1 NM resolution.

Acoustic groups used were: a) Juvenile pelagic hake < 17 cm, b) older hake, usually demersal, c) horse mackerel, d) Pelagic group1 (pilchard, anchovies, red eye), e) Pelagic group 2 (pelagic fish not of Pelagic 1), f) demersal fish, not hake, g) mesopelagic fish, h) plankton. The classification was based on the characteristics of the echo traces, experience accumulated from previous similar surveys in Namibia since 1990 and in South Africa since 2000, supported when possible with results from nearby bottom trawl stations. Time constraints did not permit pelagic trawling on targets.

The results from the acoustic system are considered as a pilot study with the main aim of delineating the limits of distribution of juvenile pelagic hake and some information on relative densities. The figures will not be converted to biomass, as the target strength is uncertain and as the classification scheme and methods are too course for such a purpose. Adult hake were very rarely observed in the acoustic channel during daytime, while it showed up frequently above bottom at nighttime.

2.5 Trawl sampling procedures

The standard bottom trawl of Dr. Fridtjof Nansen, a Gisund Super shrimp cum fish trawl, was used in the survey and for the intercalibration. A description of the trawl and gear is given in Annex 2. Dr. Fridtjof Nansen use a 20 m strapping on the warps 105 m in front of the doors to keep the door and wingspread constant at 50 m and 21 m respective, independent of trawl depth.

A standard haul was 30 minutes at 3 knots, sometimes reduced to 20 minutes in areas of expected high densities. The exact time for start and stop of the trawl operation was determined by SCANMAR sensors. The output from the SCANMAR system was also recorded on files to facilitate later analysis of bottom contact and door-spread if necessary.

For conversion of catch rates (kg/hour) to fish densities (t/NM²), the effective fishing area was considered as the product of the wing spread and the haul length, or distance over the bottom, based on GPS readings. In the survey a nominal distance of 18.5 m was applied to facilitate analysis with previous surveys. The area swept for each haul was thus 18.5 m times the distance trawled, converted to NM². The catchability coefficient (q), i.e. the fraction of the fish encountered by the trawl that was actually caught, was conservatively assumed equal to 1, to allow comparison with previous results.

2.5.1 Handling the catch

In most cases, the whole trawl catch was sorted and all species were recorded with their weight and numbers. For especially big catches the abundant species were sub-sampled while the other fish were sorted out. Length measurements (total length) were taken for target species. The length of each fish was recorded to the nearest 1 cm below. The mantle length of squid was measured to the nearest 1 cm below. All samples of small hake was checked for the species identity by vertebrae count (usually 3-5 fish were examined).

An electronic measuring board was used for length measurement, main sample weights were recorded by Scanvaegt electronic balances and a Marel weight was used for single fish and small species measurements.

2.5.2 Biological samples

Biological samples were collected for the two hake species in special areas. The following information were collected: Sex, maturity stage, gonad weight and stomach content. The maturity scale used was the one adopted at Marine and Coastal Management, Cape Town:

1: immature,

2: active,

3: ripe,

4: ripe and running,

5: spent and

6: inactive

3 Narrative

The scientific staff consisted of:

From MCM, South Africa:

Marek R. Lipinski, Clifford Hart, Jonathan Stewart, Phil Wittington and Jenny Underhill

From NatMIRC, Namibia: Margit Wilhelm, Faye Brinkman and Caroline Garus-Oas.

From BENEFIT Secretariat: Neville Sweijd (until 6 February)

From IMR, Norway:

Tore Strømme (cruise leader), Marek Ostrowski, Oddgeir Alvheim, Tore Mørk and Jan Frode Wilhelmsen

The cruise tracks with fishing and hydrographical stations are shown in Figures 3.1 and 3.2.

The vessel departed Walvis Bay in the evening of 4 February, steaming southwards to Luderitz where a section with trawl stations and hydrographical stations were laid out from deep waters towards the shore. This was one of three reference sections linking up to survey work carried out previous year (Strømme et al 2004). The other two reference sections were off Panther Head and South of Orange River. A short call was made off Lüderitz on 6 February to disembark one scientist. Three days were spent on the slope between Panther Head and Orange River also for comparison with the focused studies conducted previous year. The main part of the survey started on 11 February when the continental shelf and slope from Orange River south to Cape Agulhas was covered with bottom trawl samples and hydrographical stations in order to map demersal community and the environment. This forms part of a joint effort with Namibian scientist to cover the whole distribution area of the hakes on the west coast from Cunene River in the North to Cape Agulhas in the south. Transects were laid out with 20nm distance and the bottom depth zone from 100 to 600 meters was covered. In areas with intensive hydrodynamics additional hydrographical transects were carried out during night time, when there was no trawling operations. On the evening of 3 March there was a short call off Cape Town to disembark one scientist where after

work proceeded southwards towards Cape Agulhas. End of survey was in Cape Town on the evening of 9 March. The weather conditions were for long periods somewhat unfavourable, with sample work slowed down, but never interrupted. The sampling work was carried out according to the plan, apart for a few cancelled trawl stations due to rough bottom.

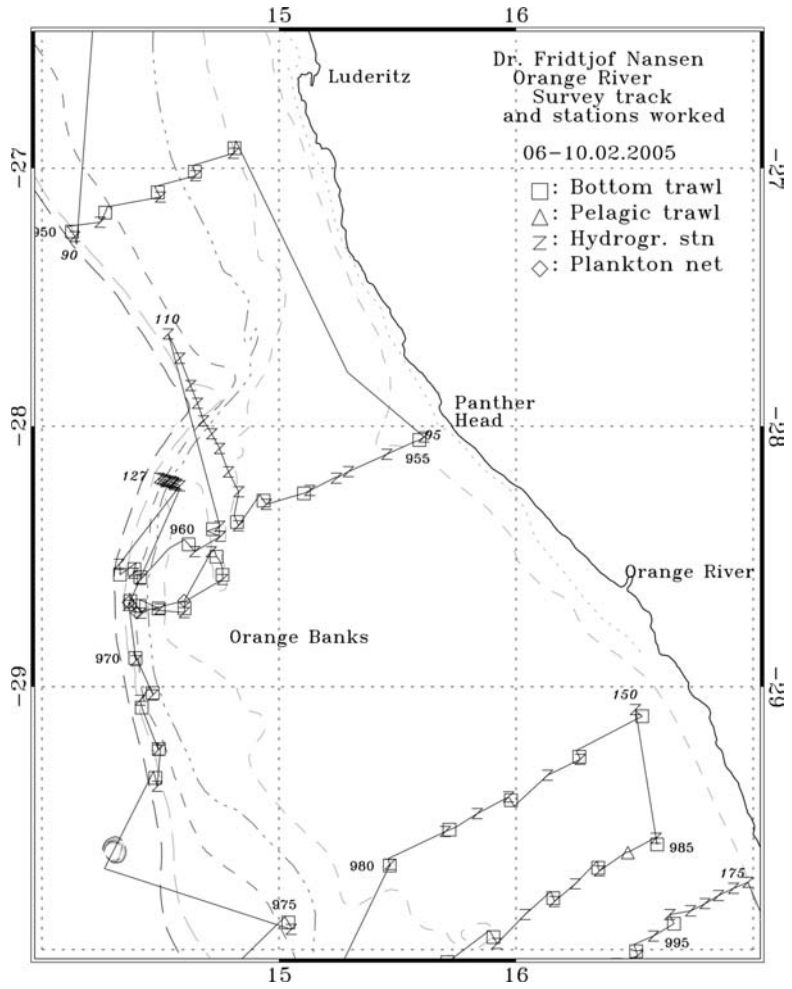

Figure 3.1 Course tracks and fishing and hydrographic stations.

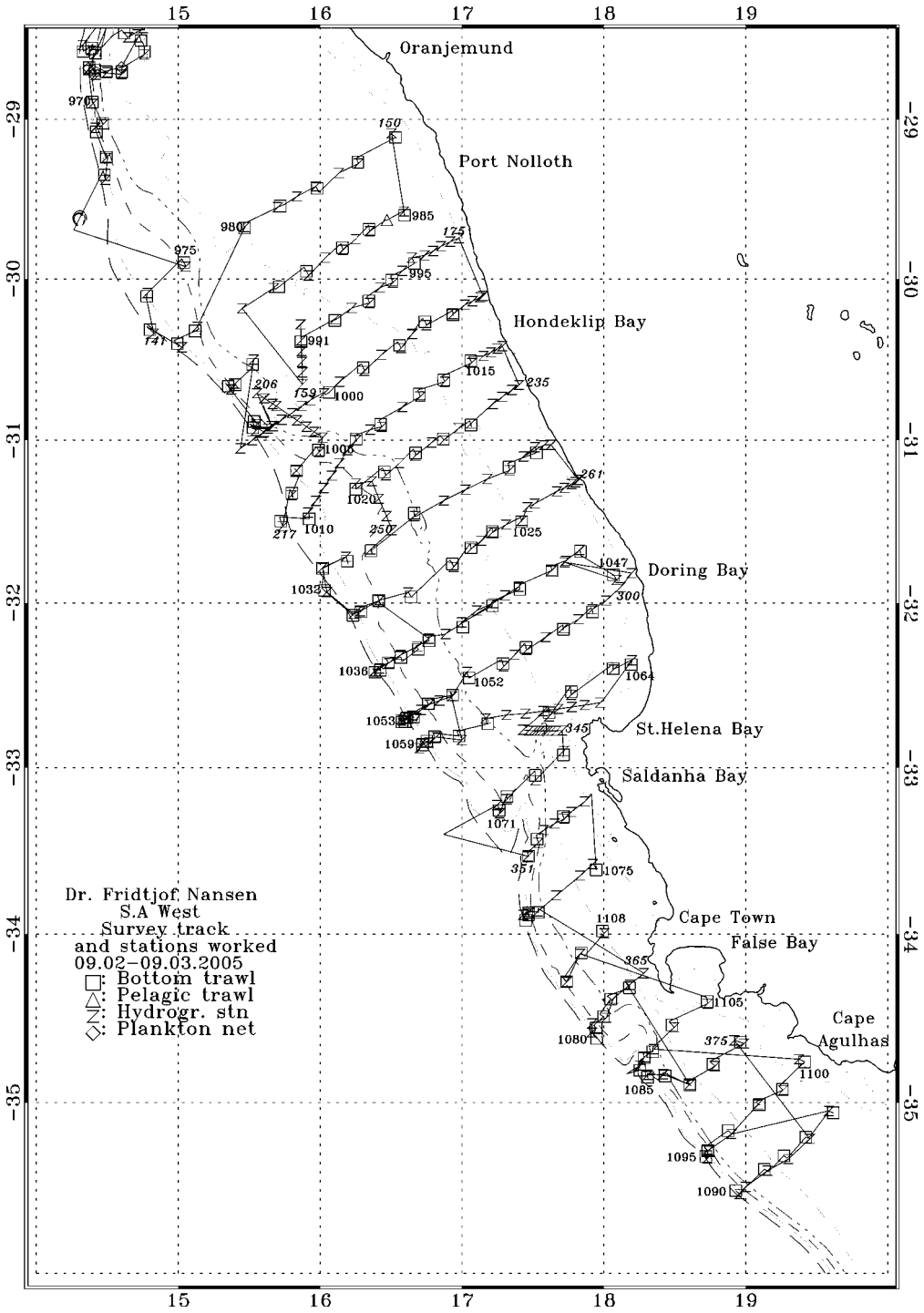

Figure 3.2 Course tracks and fishing and hydrographic stations.

4 Results

4.1 Hydrography

4.1.1 Overview

The oceanographic dataset collected during the survey is comprehensive. It includes three mayor components: underway data on sea surface temperature, sea surface salinity and winds; the CTD collected at 306 stations and ocean currents collected underway using a vessel mounted acoustic Doppler current profiler (ADCP). Table 1 lists the principal hydrographic lines used in the analysis of the collected data. The measurements of ADCP currents during a trawl survey gave rise to additional challenges in the analysis of the current data. Please consult the materials and methods section on the details.

Table 1. List of hydrographic lines included in the oceanographic data analysis. The table contains information on the date when the first CTD station was collected, the first and the last number of the included stations, the total number of stations, the distance measured between the stations along the line, the duration between the first and the last collected station and the figure number in this report, where the location of a given section is shown.

Line number	Start date	Station range*	Station Count	Distance (NMI)	Duration (hrs)	Figure number
A	2005-02-08	117-127	11	6	5	4.1
B	2005-02-07	95-113	9	58	28	4.1
01	2005-02-12	144-150	7	65	13	4.5
02	2005-02-11	142-158	10	98	53	4.5
03	2005-02-14	164-176	13	72	16	4.5
04	2005-02-14	177-204	20	106	43	4.5
05	2005-02-17	218-234	17	96	25	4.5
06	2005-02-18	235-246	13	72	21	4.5
07	2005-02-19	260-280	13	96	50	4.5
08	2005-02-20	261-278	18	97	23	4.5
09	2005-02-20	282-298	16	87	47	4.5
10	2005-02-24	299-316	18	101	26	4.5
11	2005-02-27	323-330	8	42	7	
12	2005-02-28	335-345	11	14	4	
13	2005-02-28	346-350	5	36	19	4.11
14	2005-03-01	351-357	7	29	13	4.11
15	2005-03-02	358-363	6	31	6	4.11
16	2005-03-03	365-370	6	32	4	4.11
17	2005-03-05	377-382	6	43	16	4.11
18	2005-03-06	383-388	6	49	19	4.11
19	2005-03-07	389-393	5	16	33	4.11
20	2005-03-08	394-396	3	22	12	

*) Denotes the first and last station number on a given section

The organization of this report is as follows: Section 4.2.2 describes water mass properties in the northern area of Orange Banks. A comparison is made with the analogous results one year earlier, in summer 2004. Description of hydrography and ocean currents observed from the Orange River to St. Helena Bay is provided in Section 4.2.3. Section 4.2.4 presents conditions observed between Cape Columbine and Cape Agulhas. Finally, the main observations are summarized in Section 4.2.5

4.1.2. Northern Orange Banks

The northern Orange Banks have been visited periodically in March, April and September 2004 (Strømme et al. 2004). This survey occupied two hydrographic lines in this area, which in Table 1 and in Figure 4.1 are denoted as Line A and B, respectively.

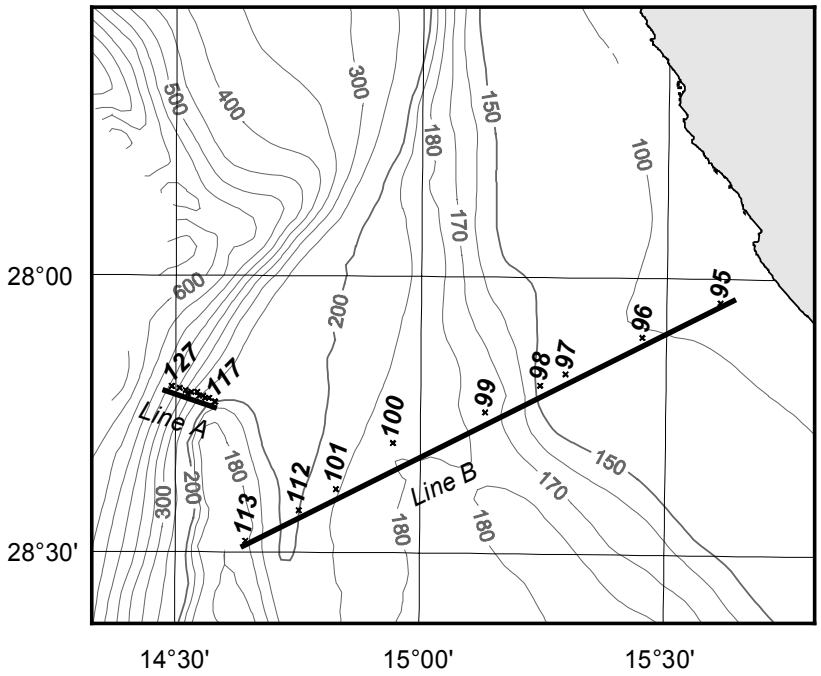

Figure 4.1. CTD stations in the northern section of the Orange Banks occupied with R/V Dr. F. Nansen in February 2005. Bathymetric contours shown in the background.

Line A is located in the region of a step shelf break at the northwestern corner of Orange Banks. Its hydrographic structure is depicted in Figure 4.2. The vertical water column consisted of the top mixed layer extended to a depth of 30 m and the pycnocline positioned between 30 and 80 m. South Atlantic Central Water (SACW) occupied the depth below the pycnocline. The mixed layer displayed constant temperature values of 21.5 ºC. Salinity slowly increased seaward from 35.1 to 35.2. In

the pycnocline region, temperature decreased with depth, whereas salinity displayed a sharp maximum above 35.3 in the top 5 meters. Temperatures and salinities in SACW were slowly decreasing with depth. Their maximum values were observed at the base of the pycnocline: 12ºC and 3.0, respectively. From Figure 4.2 it is clear that density was controlled by temperature. The potential density within the mixed layer was of an order of 25.0 kG/m^3. In the top of the SACW depth range, it increased to about 26.5 kG/m^3.

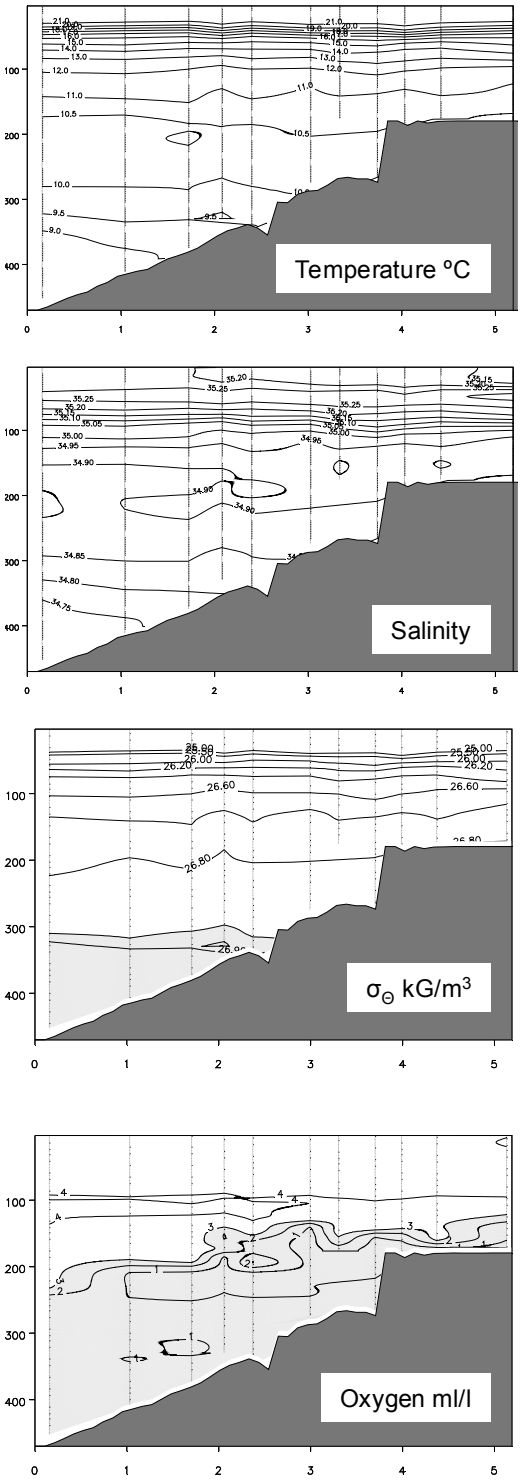

Figure 4.2. Sections from Line A of temperature, salinity, potential density and oxygen.

Unusually low oxygen concentrations were observed below the pycnocline. Oxygen at 200 m was typically less then 2 ml/l; even less then 1 ml/l at some stations. Such low oxygen values are not typical in the offshore water masses to the south of the Lüderitz. Figure 4.3 demonstrates the change between early March 2004 and February 2005 (this survey). Temperature and salinity exhibit similar distribution patterns in both cases, except that the vertical gradients are weaker in 2004. In contrast, the oxygen distribution displays a dramatic change. In 2004, the concentration below a depth 120 m is above 5 ml/l while in 2005 it drops down to about 1 ml/l. This suggests an influx of oxygen-poor water from the north during austral summer 2004/2005. It is a well-known fact that the oxygen-poor water masses observed the eastern boundary current region are originated in the tropics from where they are transported poleward by a slope current. In the Benguela region, the southernmost range of this low-oxygen water is typically observed to the

north of Lüderitz at 26º30'S. Our observation demonstrates an overflow of this water to the shallow area of Orange Banks at the latitude of 28º15'S.

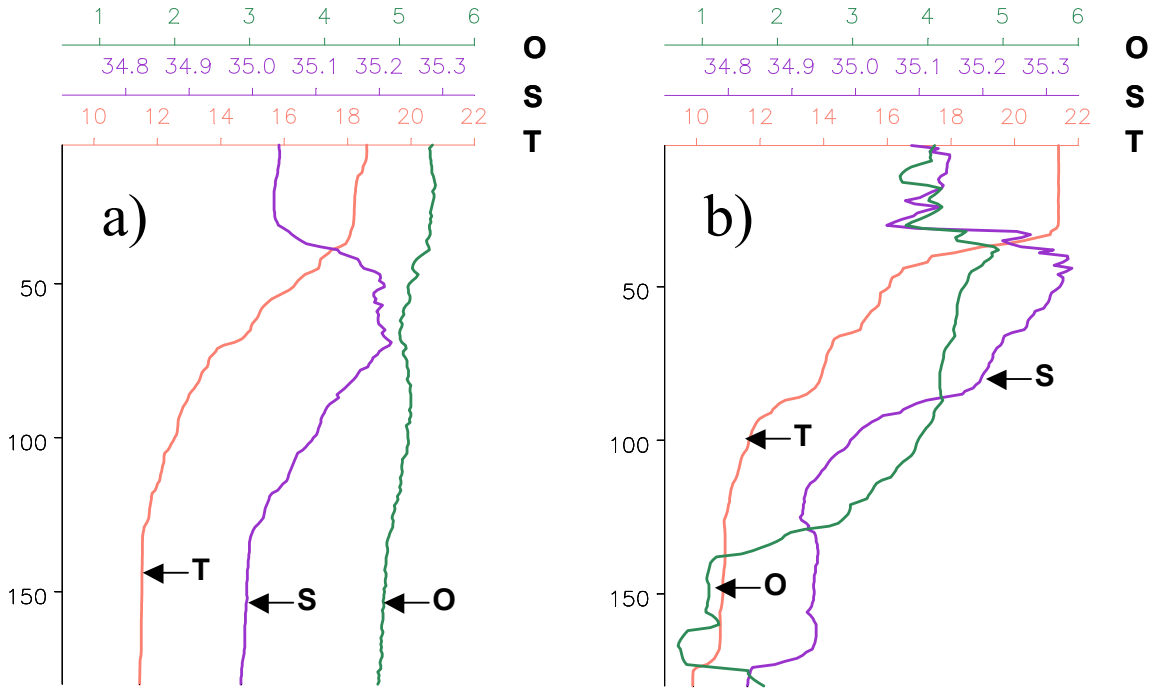

Figure 4.3. Vertical distributions of temperature, salinity and oxygen at the inshore station on Line A during summer 2004 and 2005: (a) Sta. 185, 2004-03-04 17:38, (b) Sta 117, 2005-02-08 20:09.

Line B extends across the northern flank of Orange Banks between depths 100 and 200 m (Figure 4.1). The bottom slopes gently westwards in this area and forms a depression at a 200 m depth in the vicinity of Sta. 112 (Figure 4.1). This depression descends northwards, forming a natural pathway for exchanges of bottom water masses between the bank and the Lüderitz upwelling cell. Line B intersects the second, shallower bottom depression in the vicinity of Sta. 99, which is a termination to a shallow channel in the Orange Banks seabed. Our previous bathymetric study has revealed that this channel connects the northern Orange Banks region with the Hondeklip upwelling area to the south. Data from the surveys during 2004 suggested that through this channel the bottom water mass in this area was fed from the Hondeklip upwelling cell. The CTD data from this survey (Figure 4.4) indicate that the coldest and least saline bottom water was observed near the northward-facing bottom depression near Sta. 112. This suggests that the bottom water in the northern Orange Banks was in February 2005 sourced from the north rather then from the south. This observation is consistent with the observations on Line A, which revealed an unusually

strong signature of the oxygen-poor water mass of the tropical origin at the northern edge of the bank.

The depth of the top mixed layer on Line B was about 20 meters in the offshore region and had tendency to shallow shoreward (Figure 4.4). A sharp thermal front was found between Stas. 97 and 98. The salinity distribution exhibited a subsurface maximum. The maximum salinity layer was associated to the thermocline and diminished shoreward of the thermal front. This coupling between the thermal front was observed on all hydrographic lines occupied during this survey. The following section explains its nature.

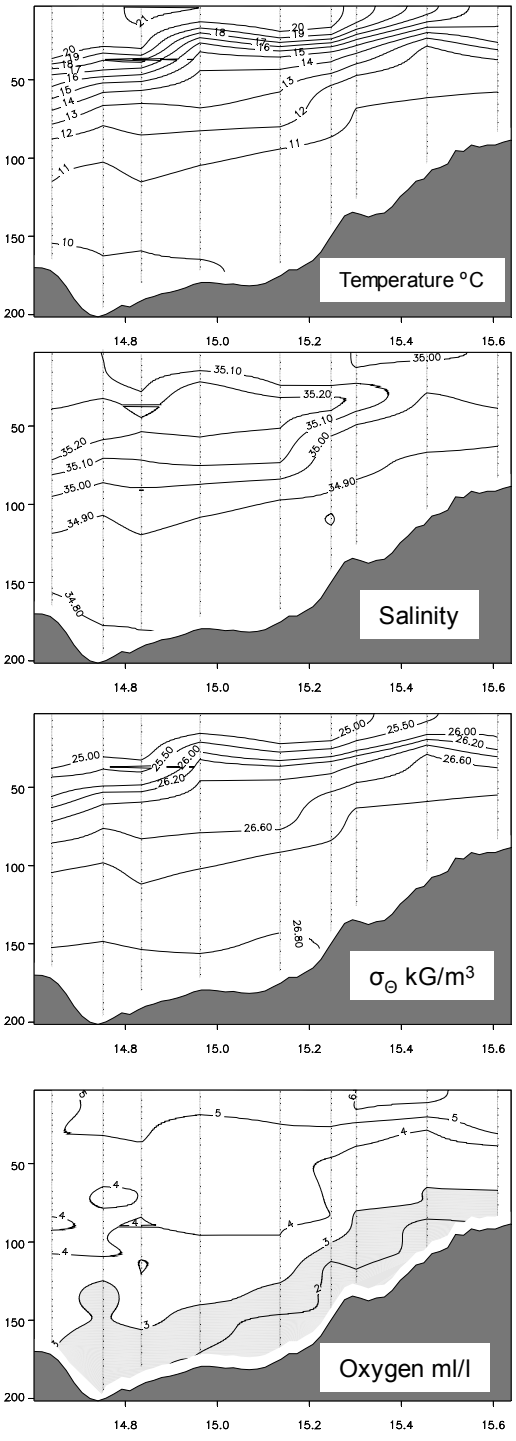

Figure 4.4. Section from Line B of temperature, salinity, potential density and oxygen.

4.1.3 Orange River to St. Helena Bay

The main survey effort was concentrated along the west coast of South Africa, the south of Orange River mouth to St. Helena Bay. The hydrographic lines occupied in this region are numbered from 1 to 10 (Table 1 and Figure 4.5). In this region, winds almost consistently were from southeasterly direction. Their speed generally exceeded 30 knots and exhibited little fluctuations in time and space. A major wind reversal was observed between 23 and 25 February (Figure 4.6a). From the map in Figure 4.6b, it is clear that the reversal occurred when the ship was surveying the inshore area off the St. Helena Bay. As soon as the ship left that area, wind direction returned to southeast and the speed increased to 30 knots. This suggests that the observed pattern was not related to wind relaxation, but represented a cyclonic wind curl on the lee side of Cape

Columbine - the well-known spatial feature of the wind field in this region, generated by effects of topography on strong winds around capes.

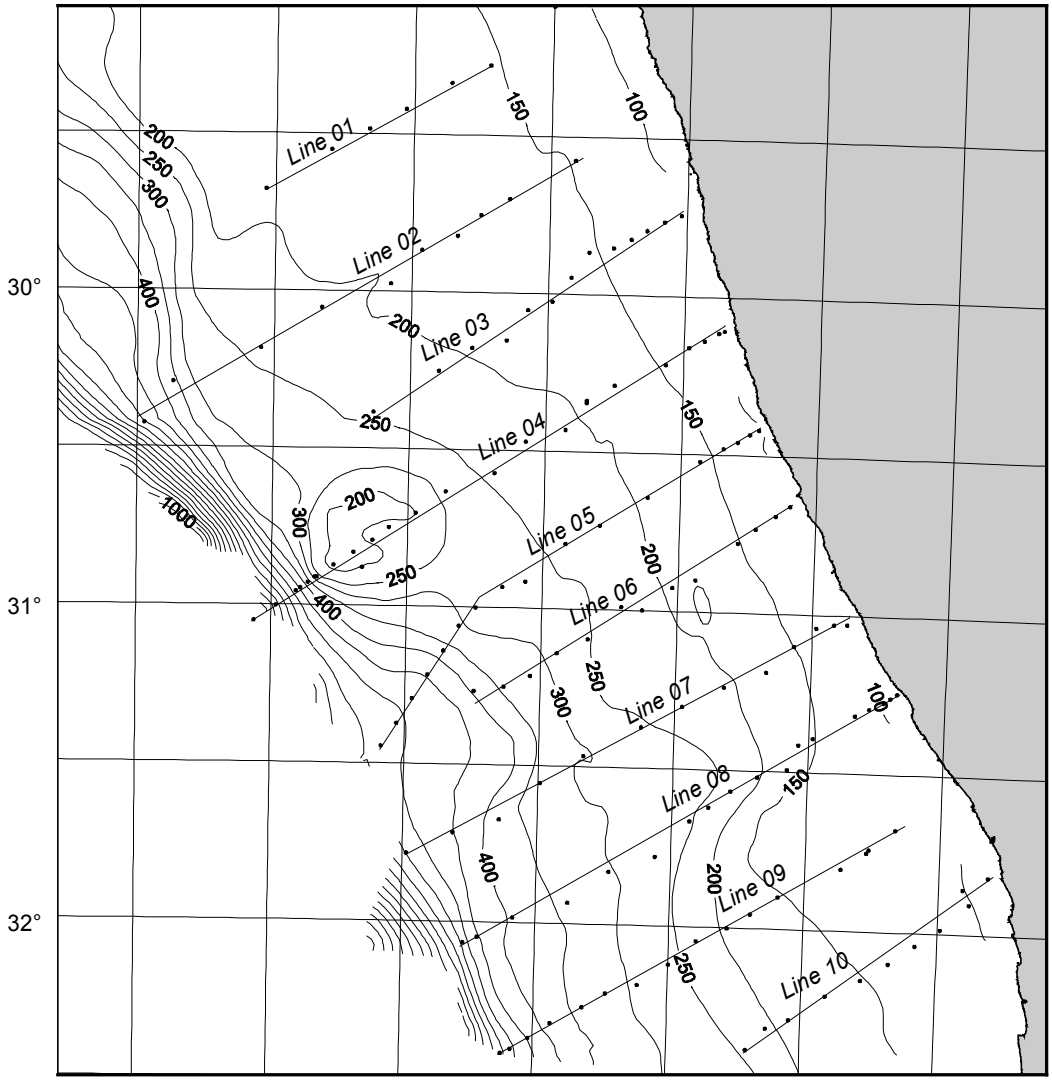

Figure 4.5. The survey grid occupied between the Orange Banks and St. Helena Bay in February 2005. The line numbers listed in Table 1 indicated above the respective lines.

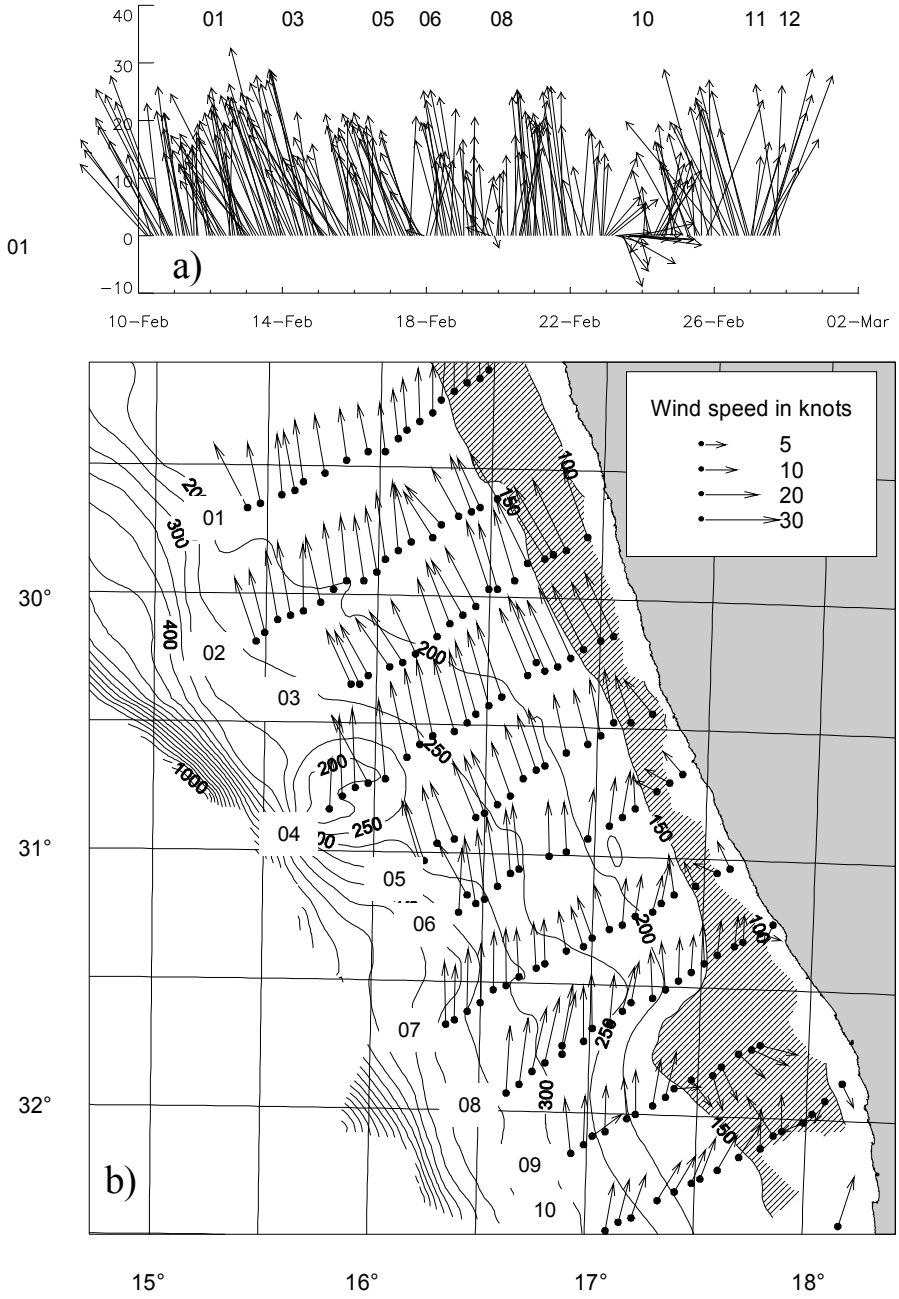

Figure 4.6. Stick plot (a) and map of wind vectors (b) at the ship's position from the Orange Banks to St. Helena Bay in February 2005. Wind speed in knots. The numbers above the stick plot and on the map denote the hydrographic lines from Figure 4.5.

Figures 4.7 to 4.14 depict vertical distributions of seawater properties and ocean currents for all but two lines occupied in this region. (See Figure 4.5 for the geographical locations of these lines). The property distributions and current structure exhibited similarities across the shelf on all lines occupied in this region. In the top surface layer, the conditions were characterized by a sharp temperature and density

front. Seaward of the front water column was stratified, whilst inshore of it was well mixed. Salinity displayed a subsurface maximum, which vanished inshore of the thermal front. Oxygen was coupled to the stratification displaying the lowest concentrations in the well-mixed coastal region, inshore of the thermal front. The subsurface currents exhibited a dramatic increase in velocity offshore of the thermal front. These patterns are expected during a developed upwelling phase. The well-mixed region inshore of the front is an area where deep waters injected by the upwelling reach the sea surface. The net current velocity is relatively low in this region due to proximity of the bottom and an intense vertical mixing. The subsurface salinity maximum is coincidental with the main pycnocline as it is a product of a net onshore flow in this layer, whereas a decrease of salinity near the surface is due to Ekman offshore transport entraining a mixture of low salinity deep water and surface water formed inshore by the upwelling. The increase of the northward current component seaward of the thermal front manifests a geostrophically balanced coastal jet current, a characteristic feature of a well-developed upwelling event.

Figure 4.15 depicts distribution of currents at 25 m overlaid on the sea surface temperature collected underway. Whereby uncertainties in the current determination (see the material and methods) are visible, the main current pattern is clear. The equatorward coastal jet dominated the offshore region where SST is greater than 16ºC. In the nearshore region the current was weaker. To south of Line 4, the inshore flow reversed from the north to south. Between Lines 8 and 10, a portion of the flow appeared to be arrested in a cyclonic motion bounded by the coast jet and the nearshore current. This observation is consistent with the earlier finding of the cyclonic wind curl in the same area. A persistent equatorward wind is expected to produce a cyclonic eddy in the lee of Cape Columbine. Such an eddy has been observed by numerous investigations in this region. It is believed to constitute the main transport mechanism responsible for retention of pelagic fish larvae in St. Helena Bay.

The survey data also appear to indicate an anticyclonic motion around Child's Bank below 100-150 m. The signal is noisy but visually detectable. The centre of the eddy would be located the above the eastern slope of Child's Bank, because of an abrupt change of the current direction that occurred at this location. The opposite flows: the southeastward along the slope and northward on the shelf continued to be detected on Lines 5 and 6, located to the south of Child's Bank (Figure 4.10 and 4.11). Figure 4.12 indicates these opposing flows had faded further south and at above 100 m above the bottom were replaced by a northeasterly recirculation current. To the north of Child's

Bank, the anticyclonic pattern is conjectured from the net northwestward flow near the bottom on Line 3 (Figure 4.8), which further north, on Line 2 turned entirely westwards (Figure 4.7). The anticipated south-turning limb of this eddy is not observed in the data. It is believed that it occurred further offshore, beyond the survey grid.

The suggested anticyclone is further corroborated from the map in Figure 4.16, which shows a horizontal density distribution at a 20 m above the bottom and the current at the 180 m. The densest water plume appears to have its source on the continental slope off the Hondeklip Bay. The path of this plume around the Child's Bank is evident. A at a density of 26.86 kG/m^3 the plume encircled the bank and merged with the slope water mass of the same density.

4.1.4 Cape Columbine to Cape Agulhas

Strong southeasterly winds in the speed range of 30-35 knots persisted until March 3 (Figure 4.17). During this period the ship surveyed region between Cape Columbine and Cape Town.

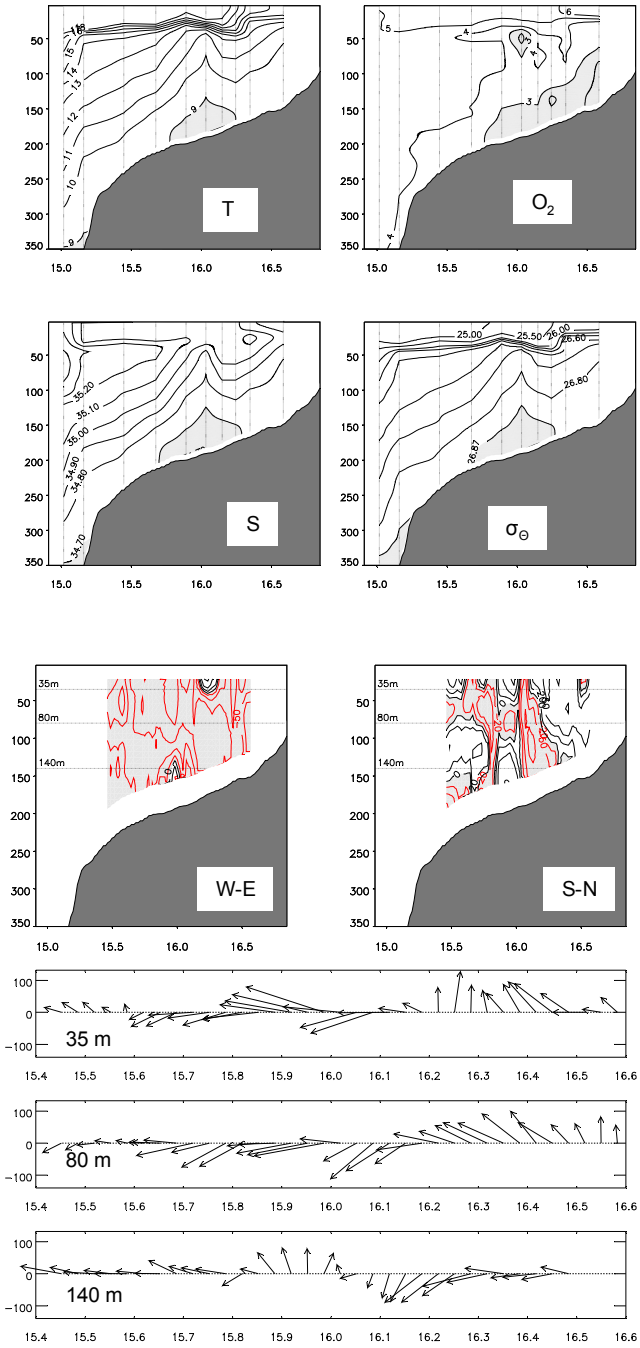

Figure 4.7. Distribution of temperature (T), salinity (S), oxygen (O_2) , potential density (σ_Θ), and eastward (W-E) and northward (S-N) current on Line 02. The shaded areas in the figures denote the negative (westward or southward) flows. The arrow plots for three selected depths: 35, 80 and 140 m, are shown in the bottom of the page. The horizontal and vertical axes denote longitude and depth, respectively. Current speed in mm/s.

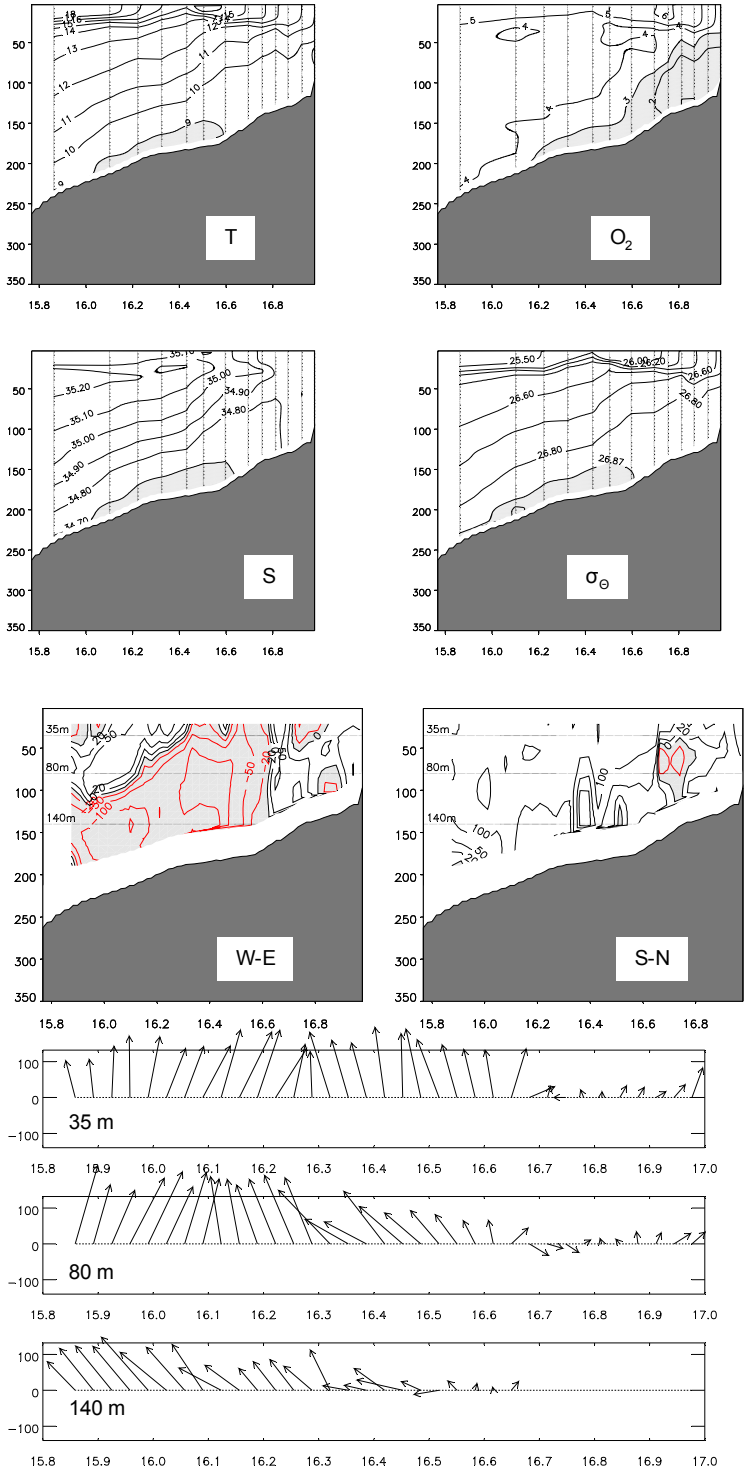

Figure 4.8. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 03. See Figure 4.7 for description.

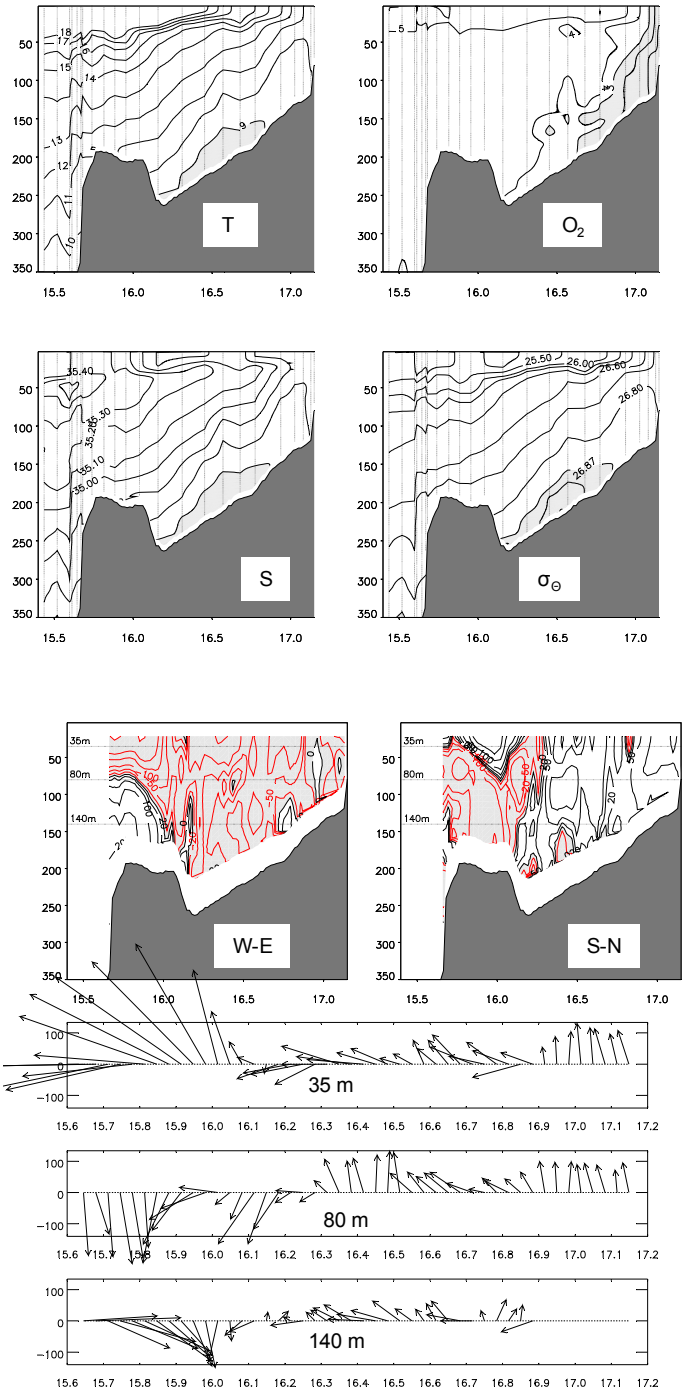

Figure 4.9. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 04. See Figure 4.7 for description.

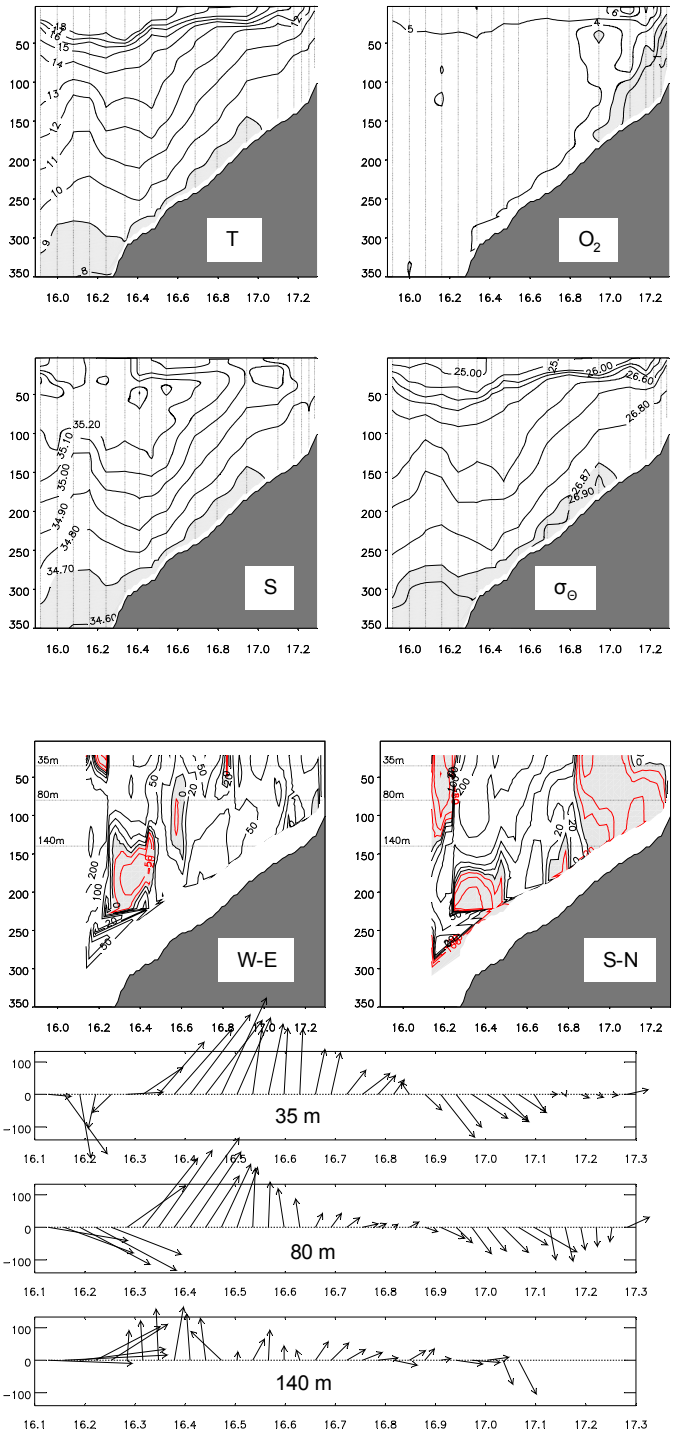

Figure 4.10. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 05. See Figure 4.7 for description.

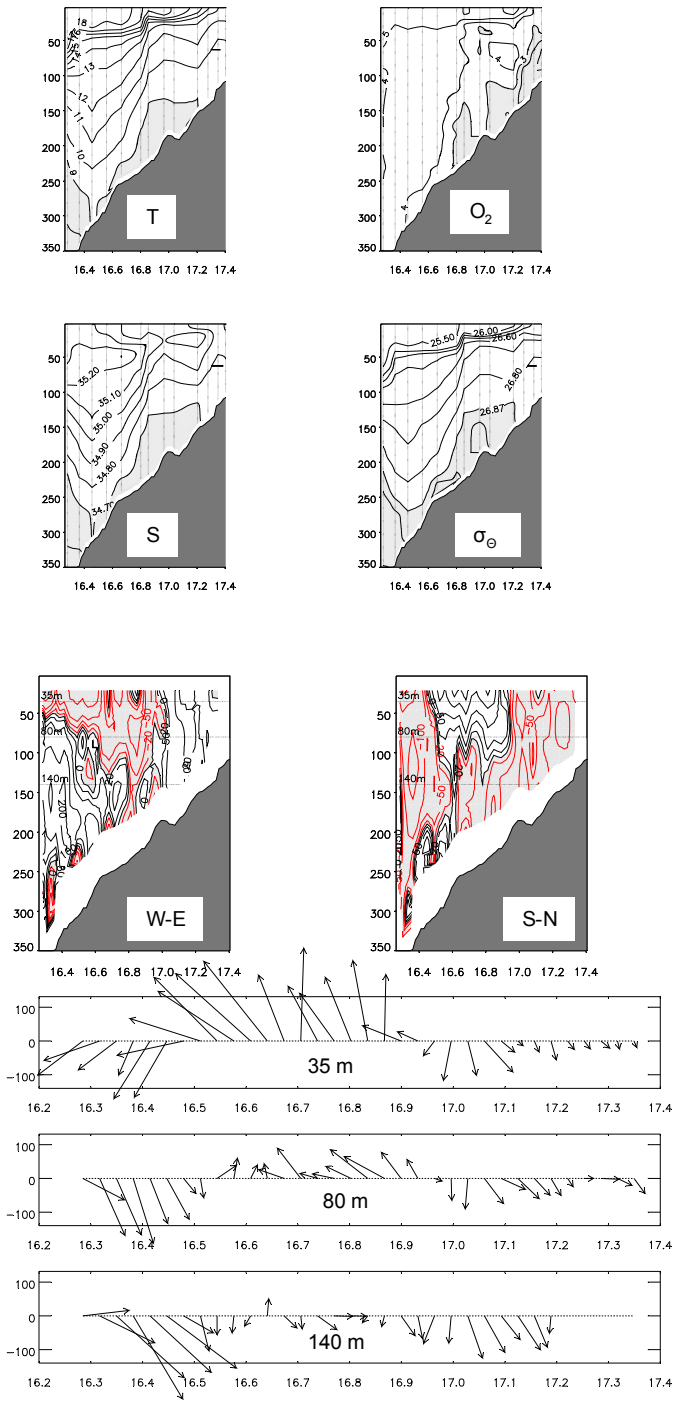

Figure 4.11. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 06. See Figure 4.7 for description.

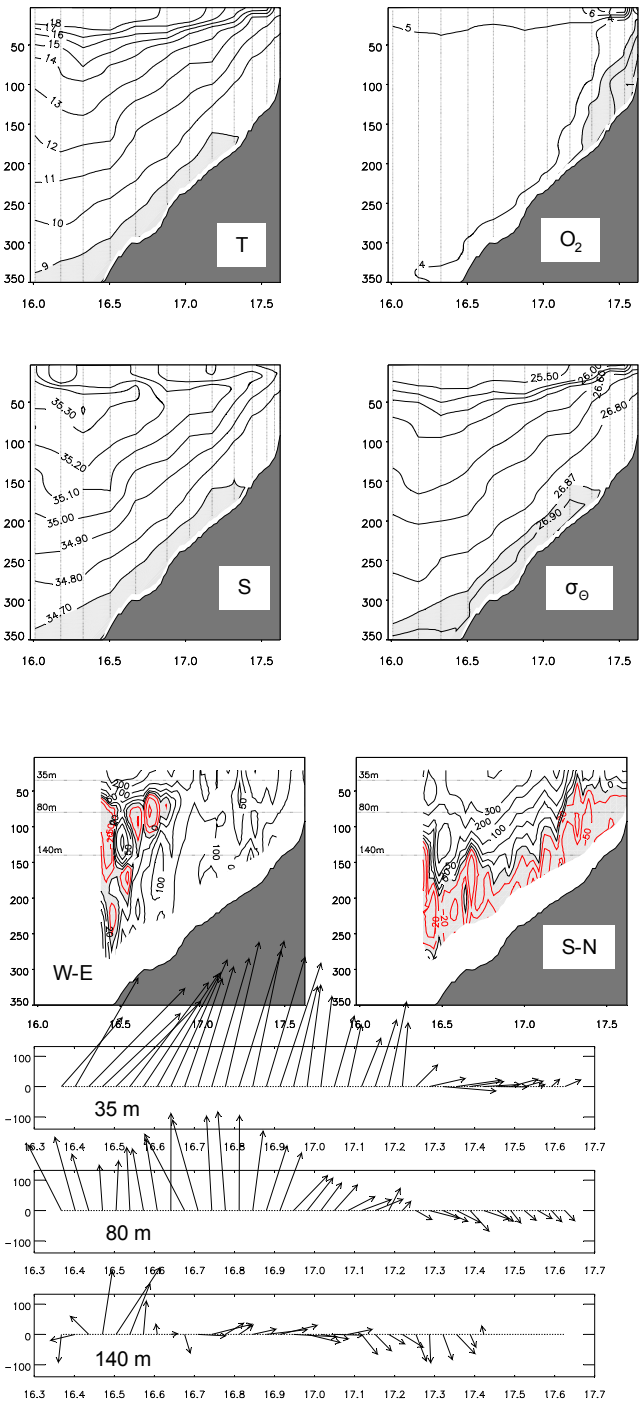

Figure 4.12. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 07. See Figure 4.7 for description.

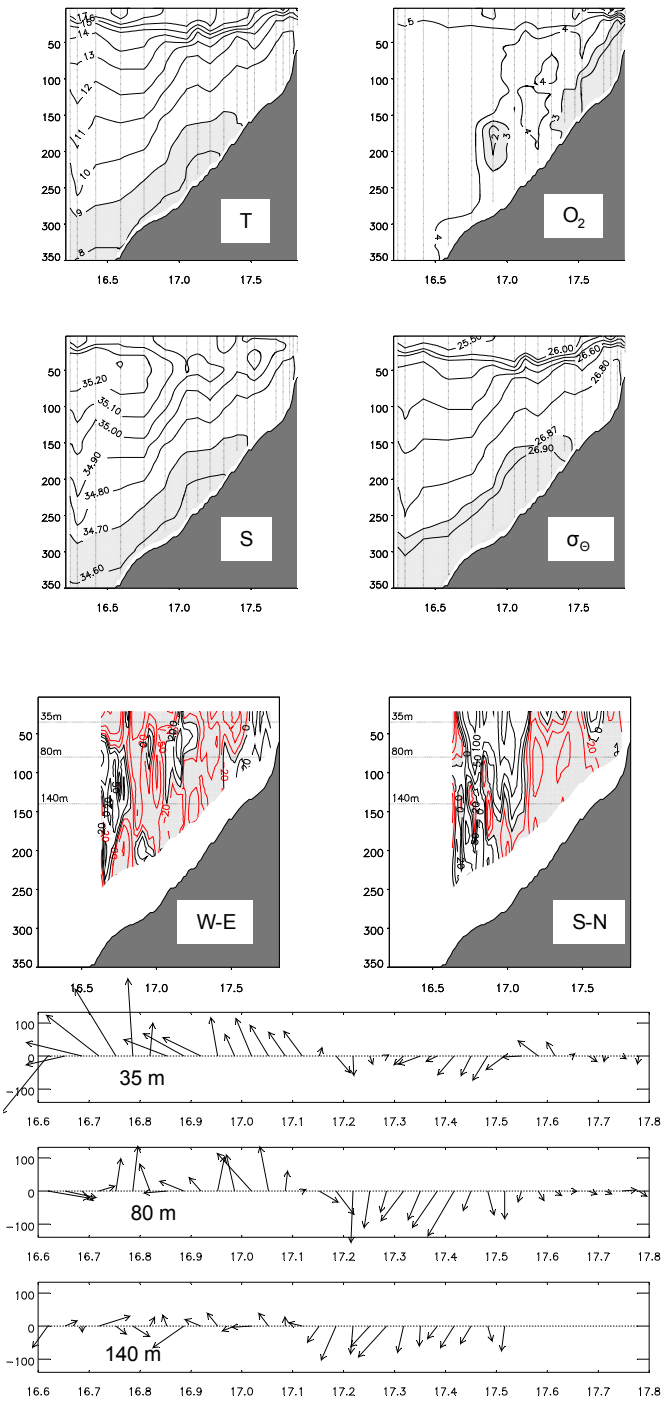

Figure 4.13. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 08. See Figure 4.7 for description.

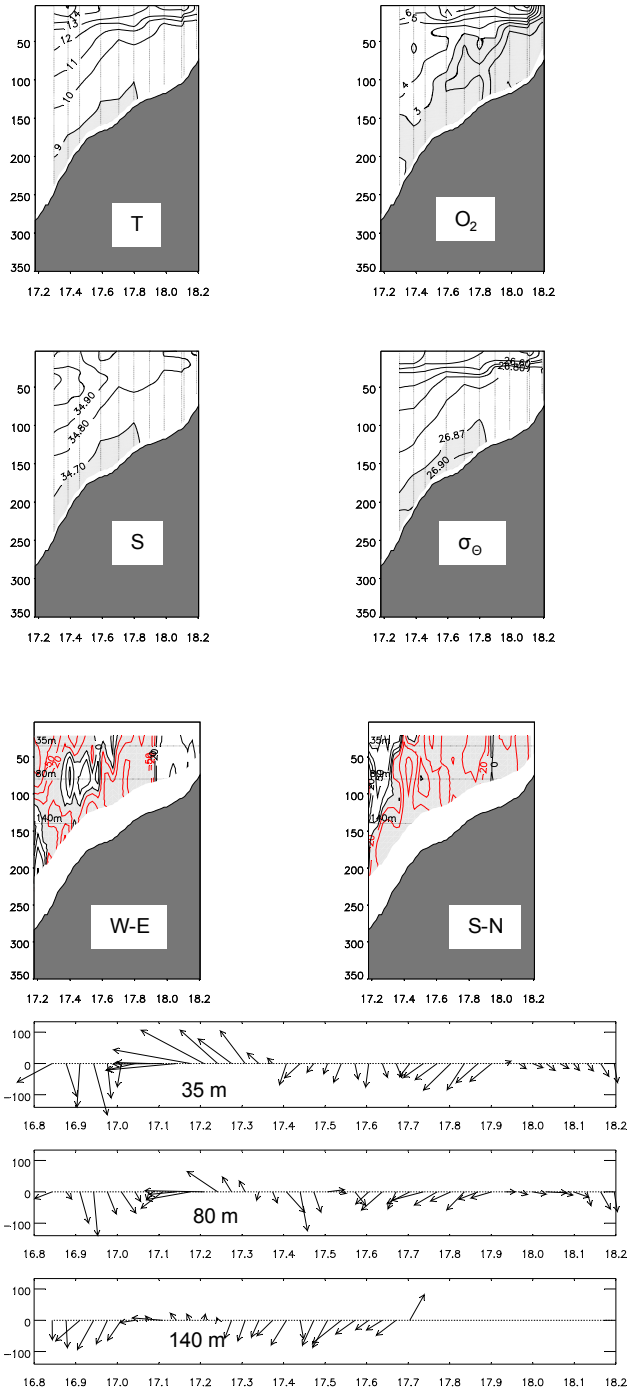

Figure 4.14. Distribution of temperature, salinity, oxygen, potential density and eastward and northward current on Line 10. See Figure 4.7 for description

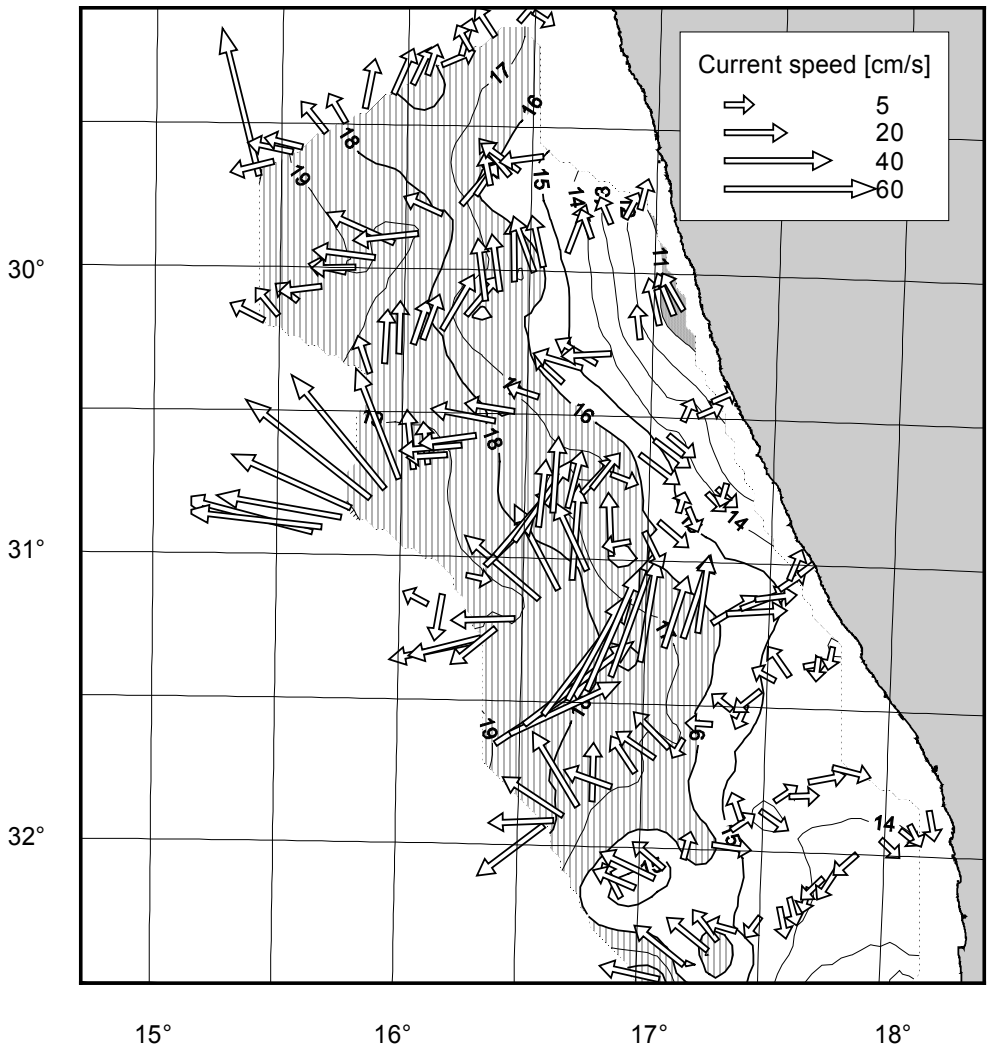

Figure 4.15. Distribution of the ADCP-derived currents at the 25 m depth between the Orange River and St. Helena Bay shown on top of the SST distribution. The isolines of constant SST in degrees Celsius. The area where temperature was greater than 16°C is hatched.

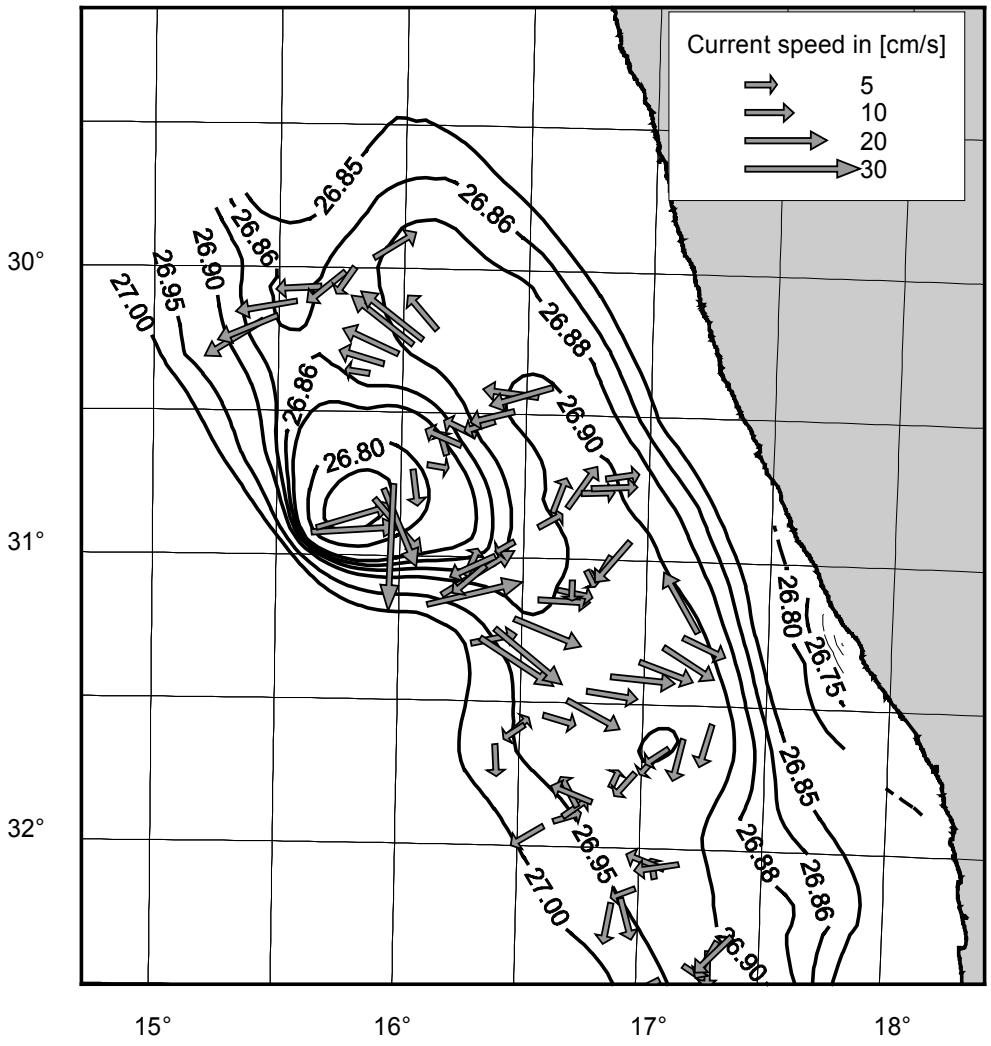

Figure 4.16. Distributions of the ADCP-derived currents at the 180 m depth and the potential density at 20 meters above the bottom.

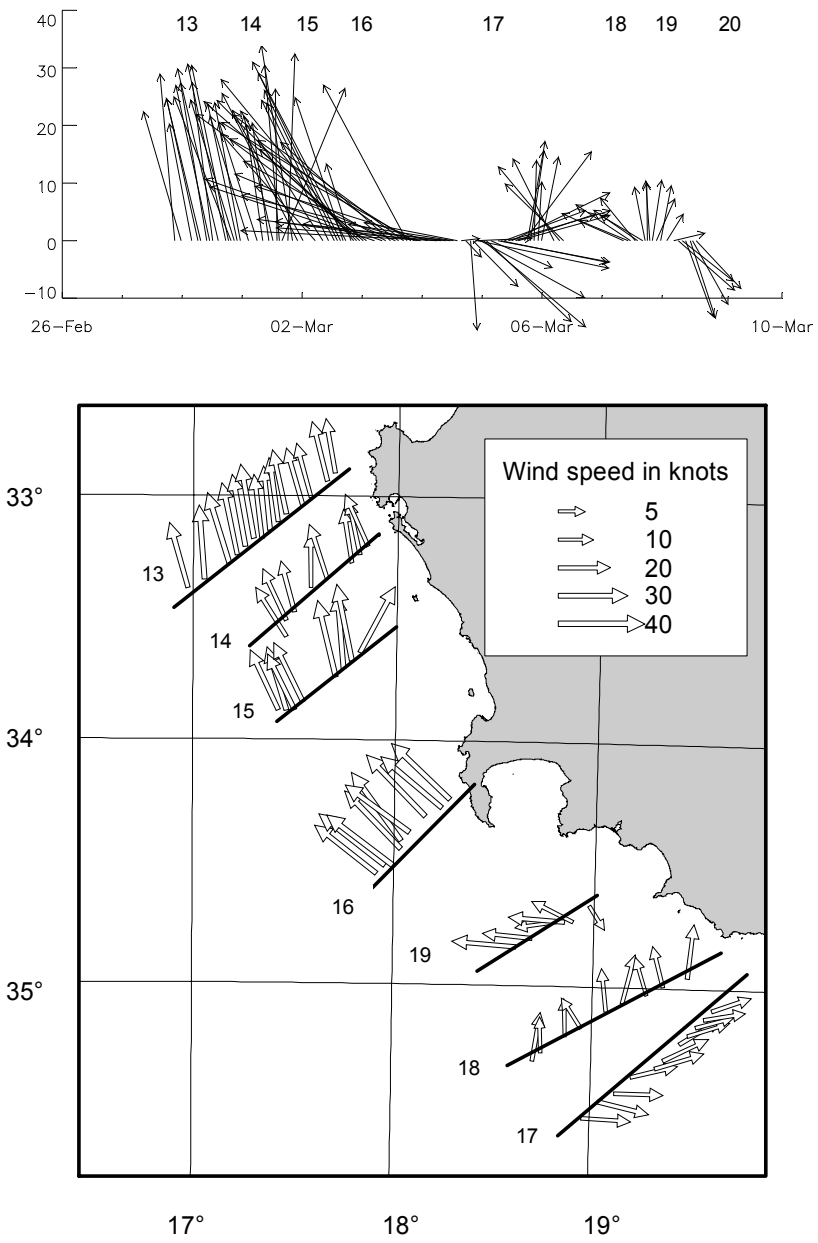

Figure 4.17. Stick plot (a) and map of wind vectors (b) at the ship's position from Cape Columbine to Cape Agulhas in February 2005. Wind speed in knots. The numbers above the stick plot and on the map denote the hydrographic lines from Table 1.

Figure 4.18 presents seawater property distributions from Line 14, located just to the south of Cape Columbine. The salinity distribution displays an offshore subsurface maximum. The lowest oxygen concentration occurs inshore in the region as the salinity stratification vanishes. These patterns characterize the vertical stratification during upwelling. The similar patterns were observed on sections off the northwestern

South African coast (Section 4.2.2). The thermal front, the third expected attribute of the upwelling stratification was conspicuously absent. The temperature was below 15ºC across the entire section. Note, however, that Line 14 was located on an edge of an underwater canyon. The thermal front may have not been parallel to the coast at this location and not resolved by on the lines that run perpendicular to the coast.

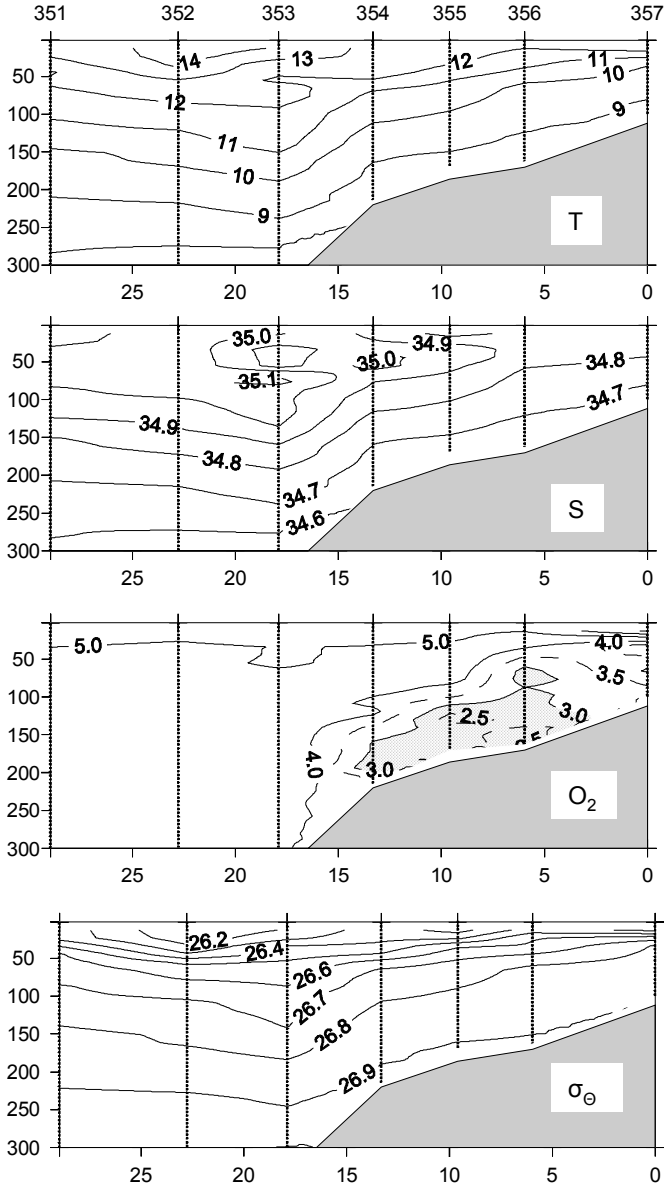

Figure 4.18. Distribution of temperature (T), salinity (S), oxygen (O_2) and potential density (σ_Θ) on Line 14. The horizontal and vertical axes denote distance from the inshore station and depth, respectively. Station numbers described above the topmost figure.

Figure 4.19 depicts results from Line 16, occupied off Cape Town on March 3, when the wind was still strong. The vertical stratification characterized upwelling, but water

mass structure differed noticeably from that observed on Line 14 and off Namaqua. Temperature of the mixed layer offshore of thermal front was above 21ºC, two degrees higher than off Namaqua. On the offshore side, salinity profiles exhibited a second maximum in a depth range 130-170 m. The low oxygen values on the shelf were not observed. The change in the water mass structure indicates influences of the Agulhas retroflexion (Indian subtropical water), which were not observed on any of the previously described sections. Figure 4.20 shows the property distributions on Line 17, occupied off Cape Agulhas two days after the upwelling favourable wind had relaxed, during a moderate wind reversal event (Figure 4.17). The water mass structure was similar to that observed off Cape Town. However, the downsloping toward the coast isotherms and isopycnals clearly indicated a downwelling process.

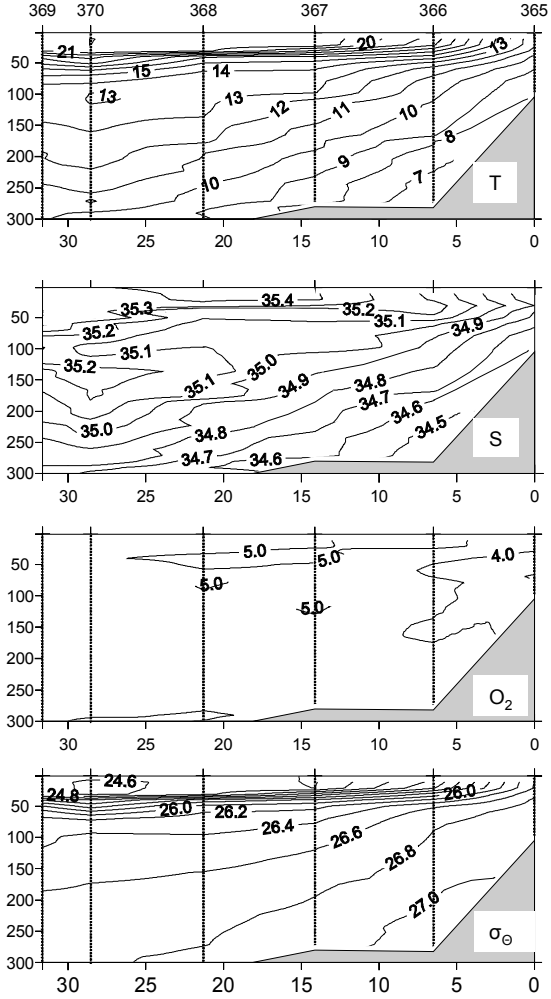

Figure 4.19. Distribution of temperature (T), salinity (S), oxygen (O_2) and potential density (σ_Θ) on Line 16. The horizontal and vertical axes denote distance from the inshore station and depth, respectively. Station numbers described above the topmost figure.

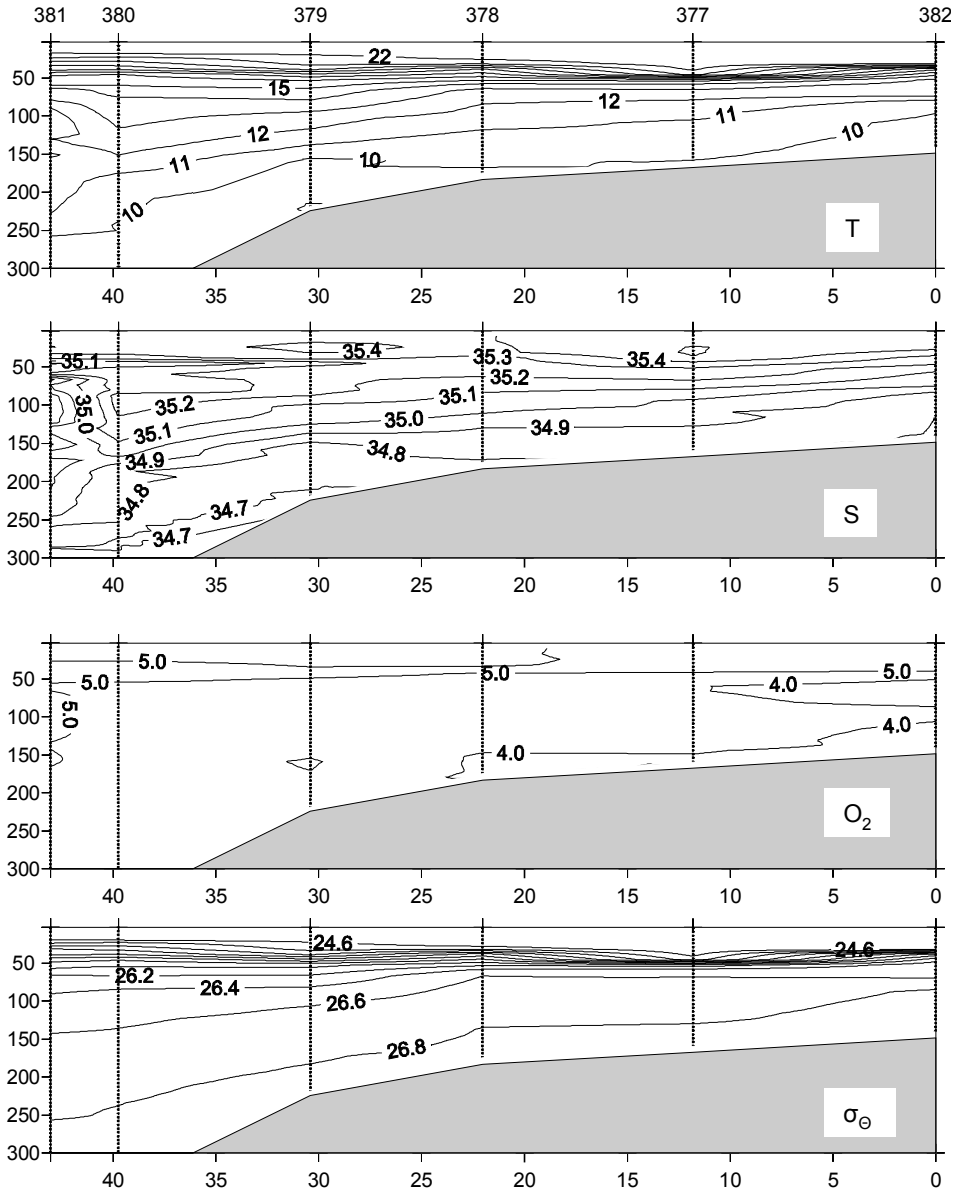

Figure 4.20. Distribution of temperature (T), salinity (S), oxygen (O_2) and potential density (σ_Θ) on Line 17. The horizontal and vertical axes denote distance from the inshore station and depth, respectively. Station numbers described above the topmost figure.

4.1.5 Main observations

These are the main observation in the hydrographic data collected during the survey:

- Influx of the low-oxygen waters of the tropical origin to the north of Orange Banks.
- A strong an prolonged upwelling favourable wind event, persisting over three weeks with wind speed of an order of 30 knots.
- Cyclonic wind curl and cyclonic eddy in St. Helena bay
- Suggested anticyclonic gyre around Child's Bank
- Presence of the Agulhas Current fed water masses in the vicinity of Cape Town.

4.2 Biology

Annex 1 shows the complete record of the fishing stations and Annex 2 shows in table form the catch rates of the two hake species grouped by juveniles (<21 cm) and bigger fish.

Figures 4.21a-p show the distribution of *M. paradoxus* within the special study area between Lüderitz and Orange River. The figures show the distribution by 5-cm classes until 35 cm and in one accumulated group beyond 35 cm For comparison the similar fish distribution from the February 2004 survey are sidelined. In general there is a high similarity with the distribution patterns of previous year. For the small fish, 6-10 and 11-15 cm, that is mainly in a pelagic state, the fish is found at the outer part northwards to the northern part of Orange Banks. The difference between 5-10 and 11-15 cm groups indicate a northern flux in both years.

For the juveniles living closer to the bottom, 16-20 and 21-25 cm there is a further northern spread, but in contrast to previous year the fish in 2005 is also found at the inner part of the shelf, particularly in the area off Orange River. For the bigger size classes there is a progressive move towards the slope. It is also worth noticing that the central parts of Orange Banks is absent of these size classes, indicating a barrier formed in the area.

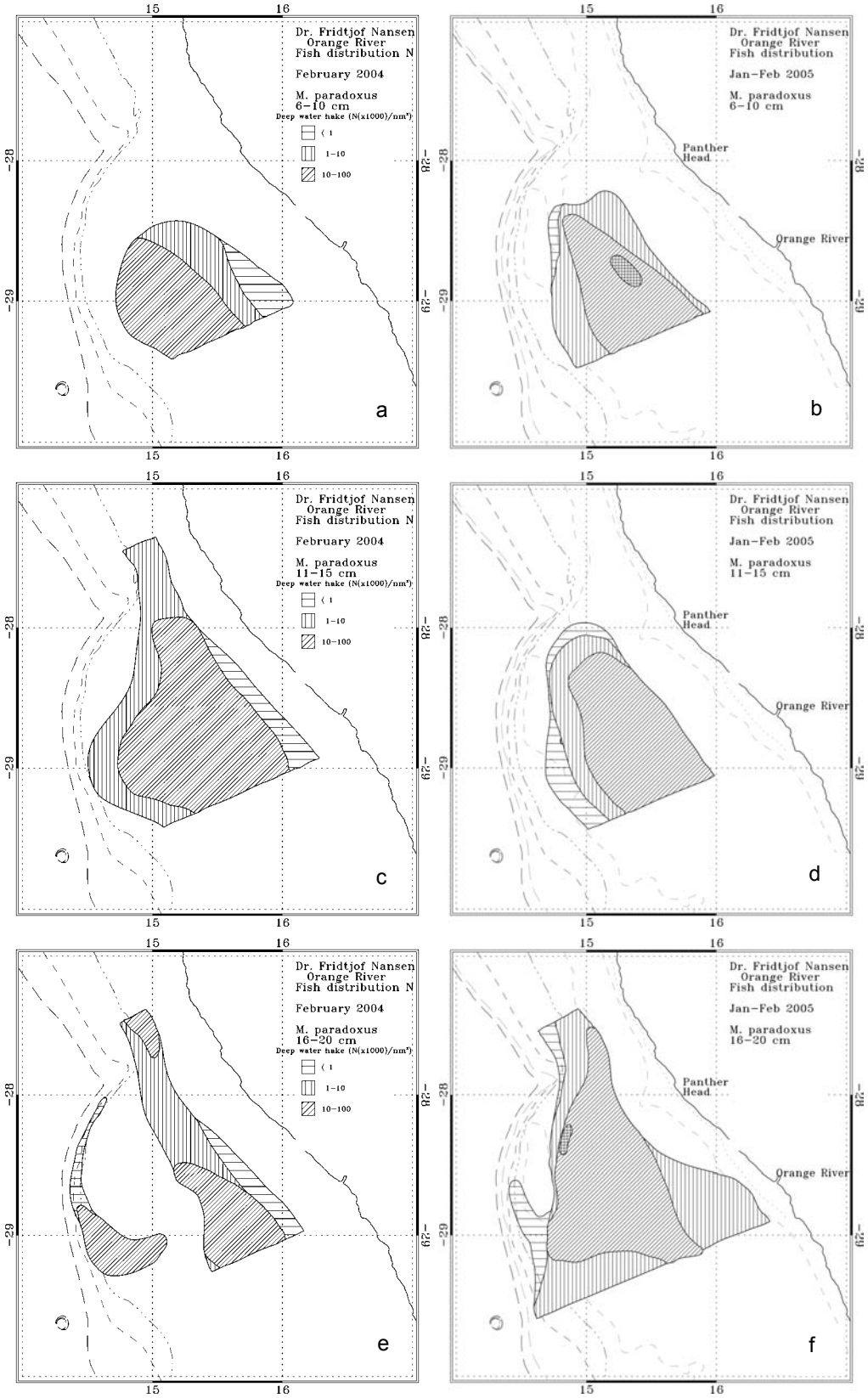

Figure 4.21 Distribuion of *M. paradoxus* by 5 cm classes. Left column: February 2004, right column: January-February 2005.

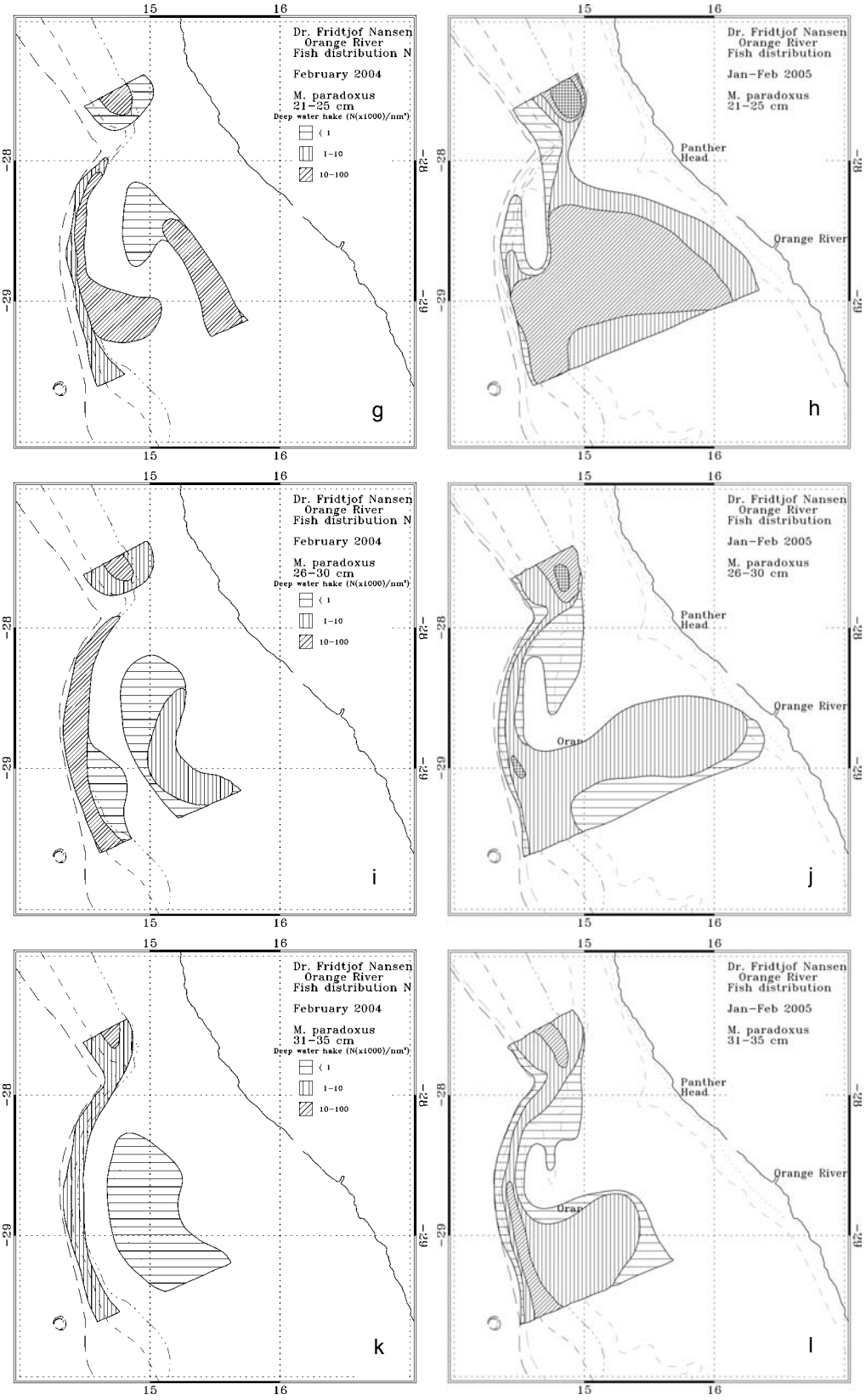

Figure 4.21 continued

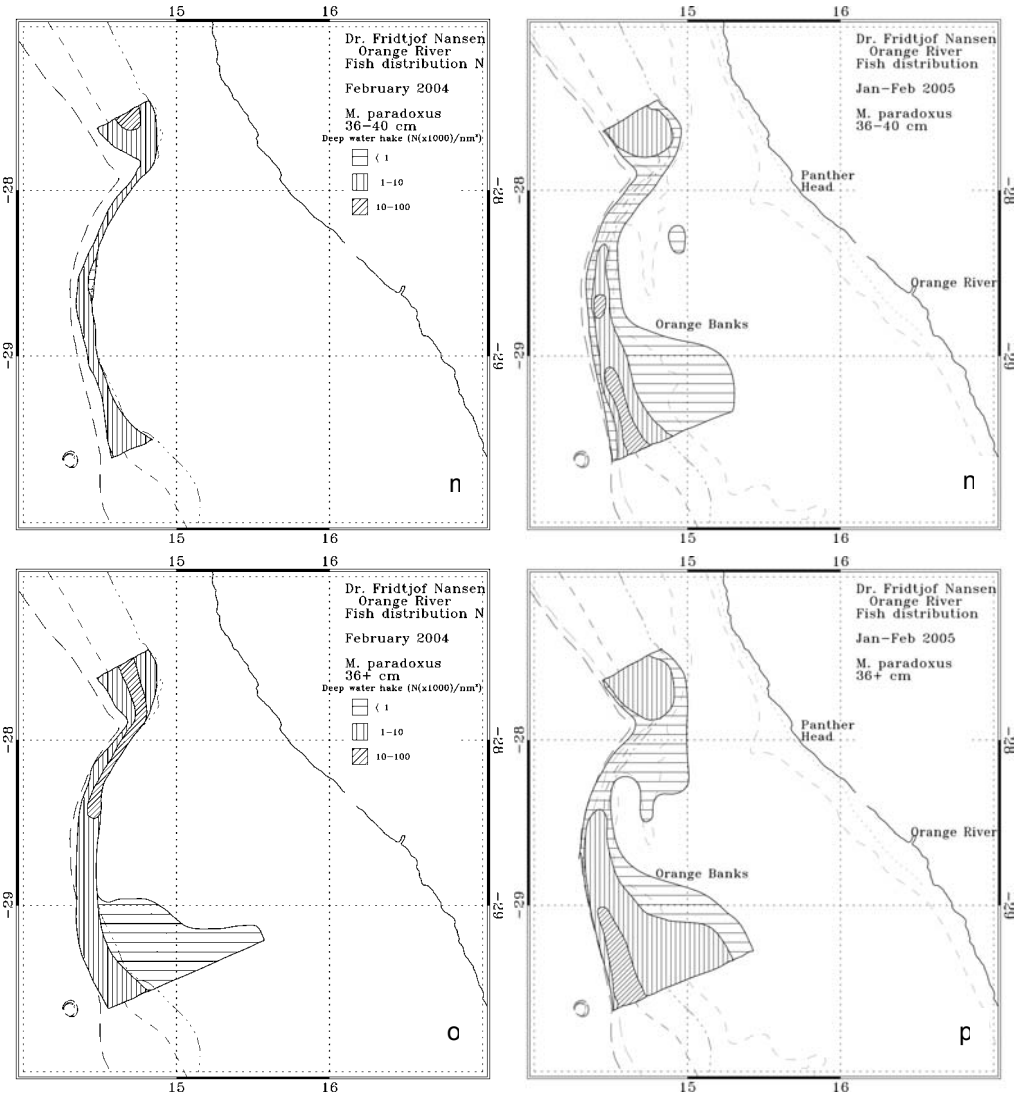

Figure 4.21 continued

Figure 4.22a-b show the distribution of the two hake species on the South-African west coast.

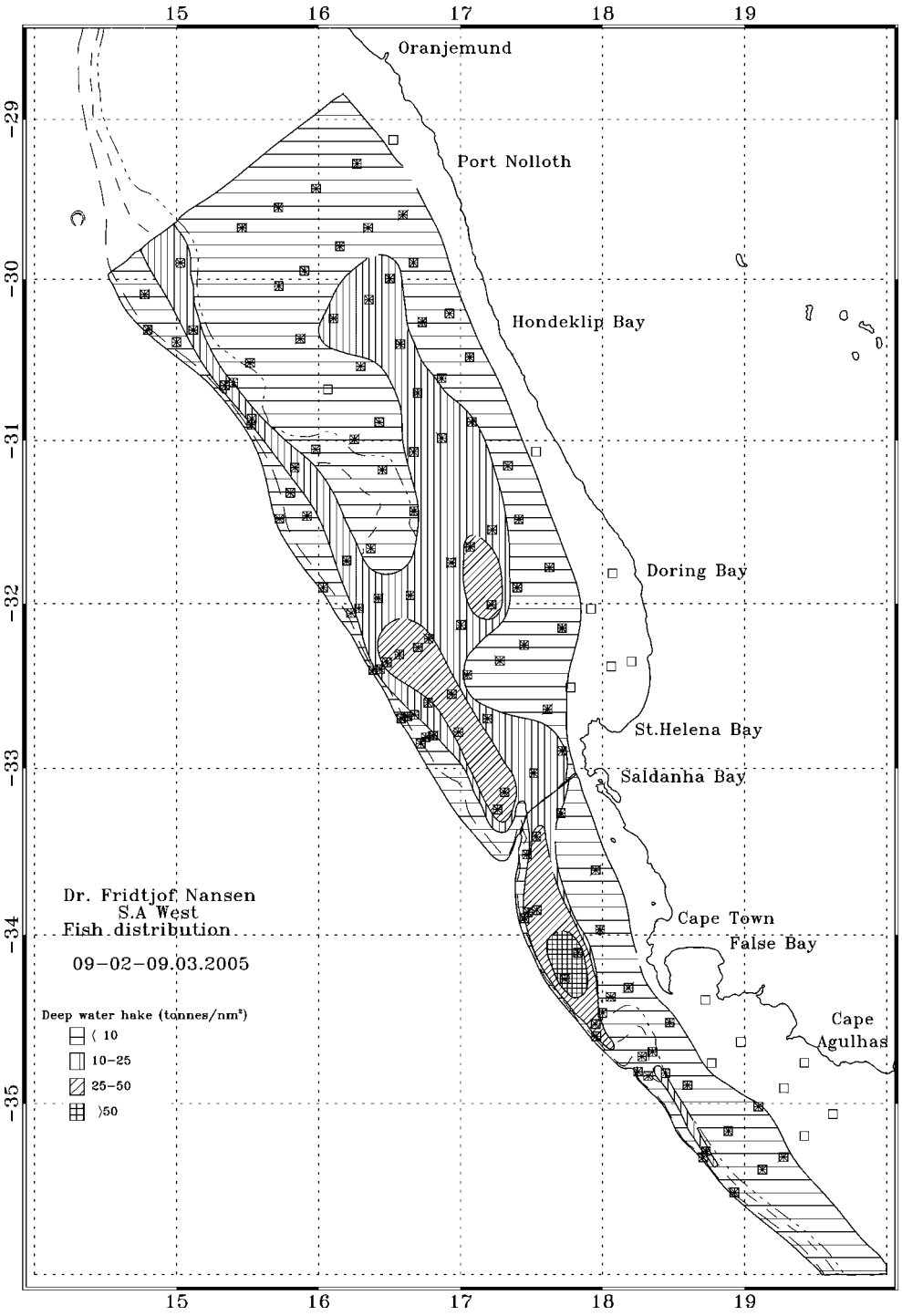

Figure 4.22a Distribution of deep water hake (*Merluccius paradoxus*) in February-March 2005.

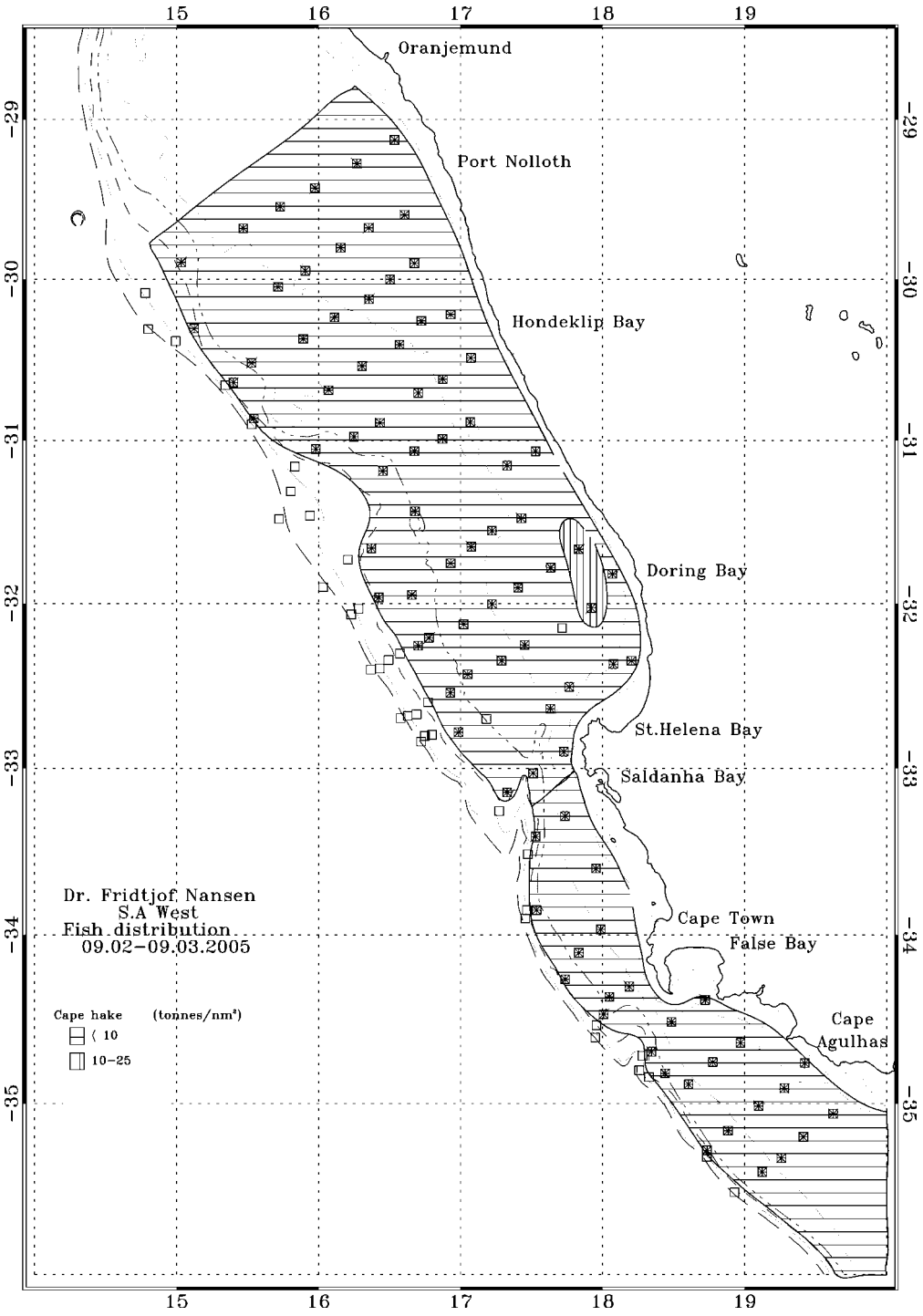

Figure 4.22b Distribution of Cape hake (*Merluccius capensis*) in February-March 2005.

Figure 4.23a-m show the distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas. This is obtained by merging the data with similar data from the Namibian trawl survey conducted with commercial trawlers in the period 4 February-9 March 2005. The 1-4 cm group, Figure 4.22.a, is only found in a small blob at 30° S. The 5-9 cm, Figure 4.22b, group is found north to 28°S and south to 35°S indicating the southern spread is faster than the northern. The main part of the fish is however located at the outer part of Orange Banks. For the 10-14 cm group, Figure 4.22c, there seems to be a southern inshore movement while the northern limit is about the same as for the smaller group. For the 15-19 cm group, Figure 4.22d, there is a southern move in the point of gravity for the fish distribution now mainly occupying the inner shelf between 30 and 32° S. There is also a slight northern spread but this is following the upper part of the slope, between 300 and 400m bottom depth. The northern spread continues in the 20-24 cm group and the fish can now be observed north to the Cunene, Figure 4.22e. The northern spread still follows the upper part of the slope while the southern spread follows the outer part of the shelf. For the juvenile fish, 25-34 cm, Figure 4.22f-g, there is a movement towards the slope in the area south of Panther Head while in the north the fish is still located to the upper slope. For the intermediate sizes 40-59 cm, Figure 4.22i-l, the fish is established on the slope from Cunene to Cape Agulhas. For the fish bigger than 60 cm, Figure 4.22m-o, there is a thinning out in Namibia and the very big fish, bigger than 70 cm, Figure 4.22o, is only found from 30°S and southwards. If the low absence of big fish in Namibia is due to less immigration from south of this fish or due to heavy fishing in the area is not yet established.

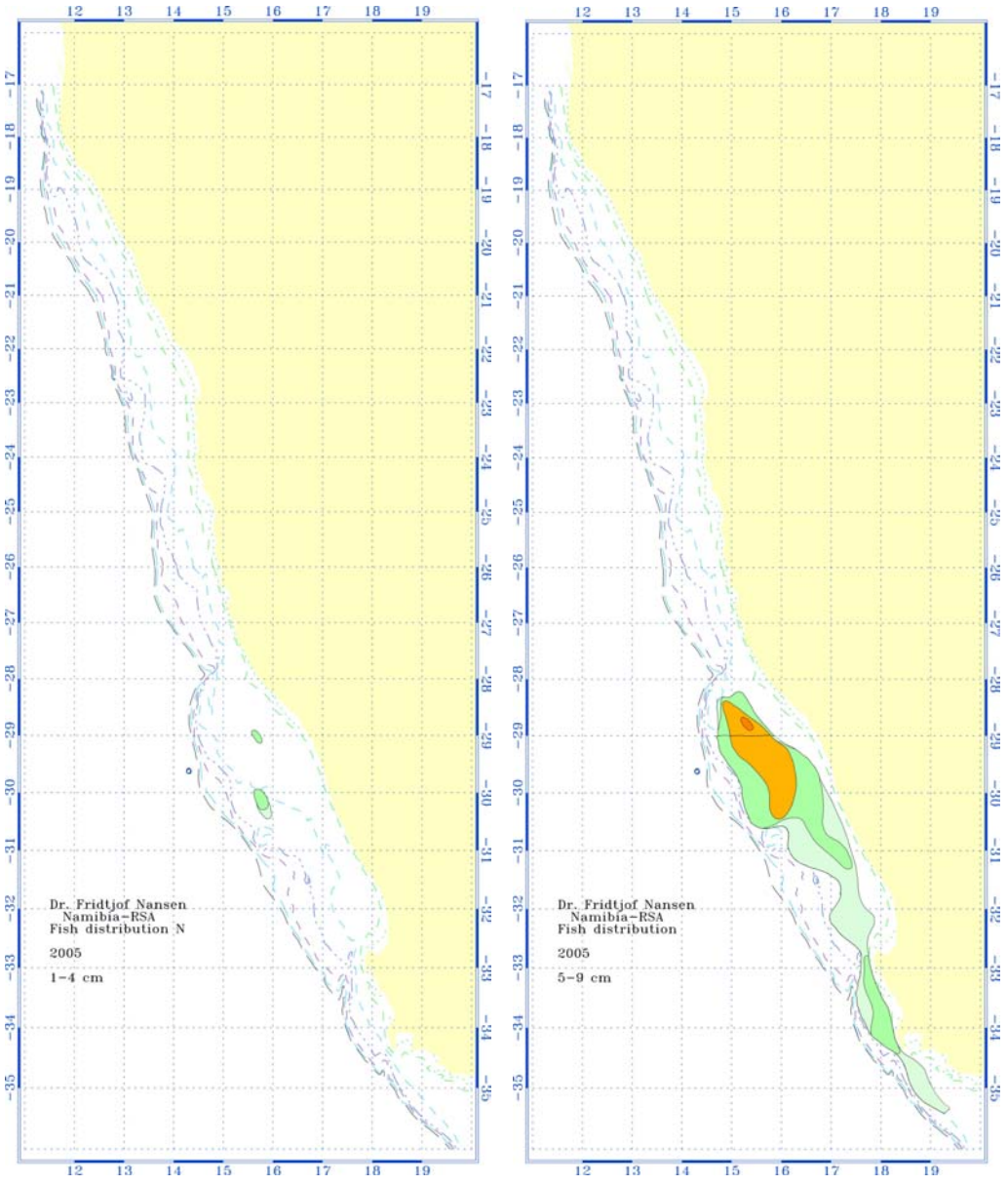

Figure 4.23a-b Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

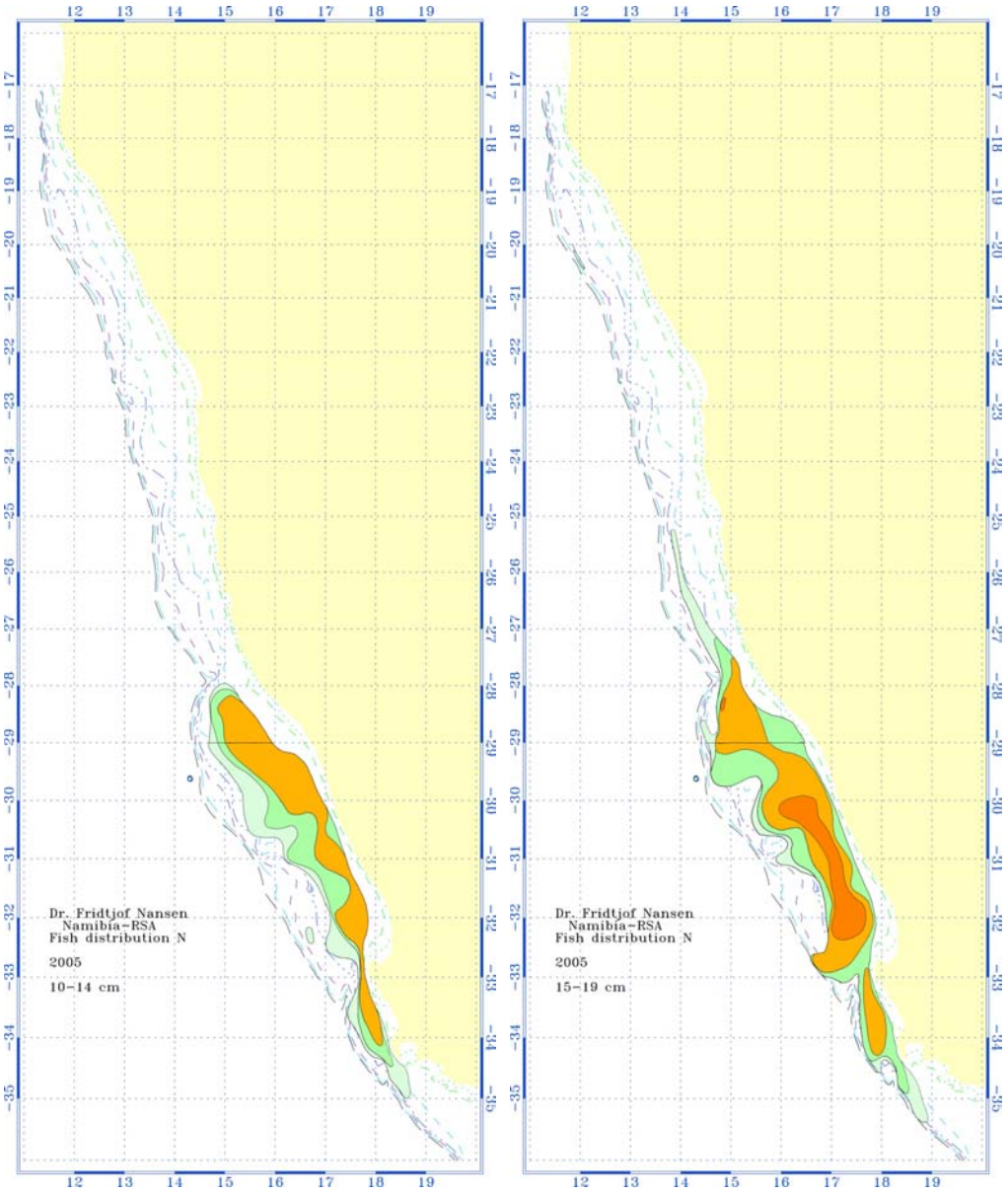

Figure 4.23c-d Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

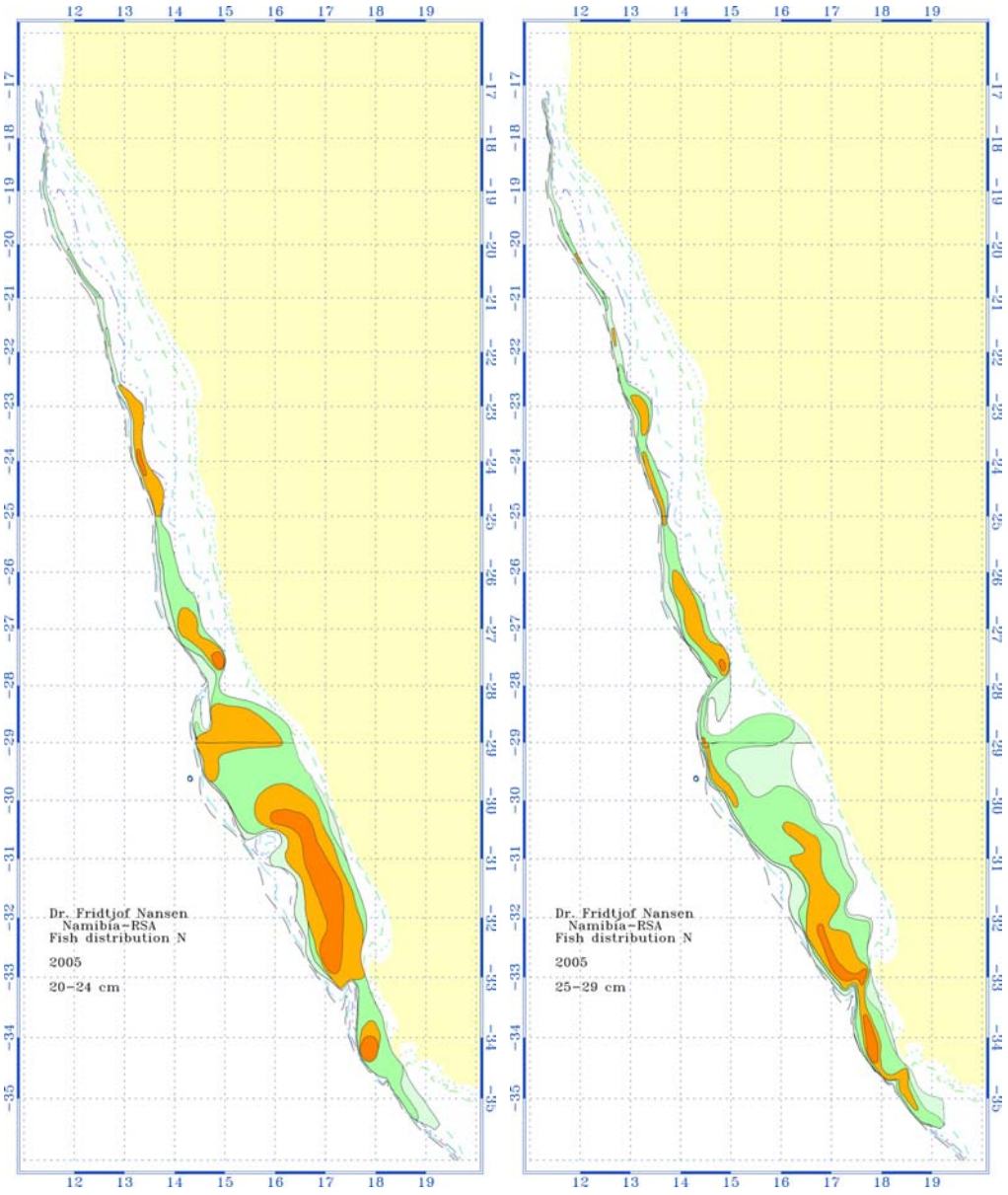

Figure 4.23e-f Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

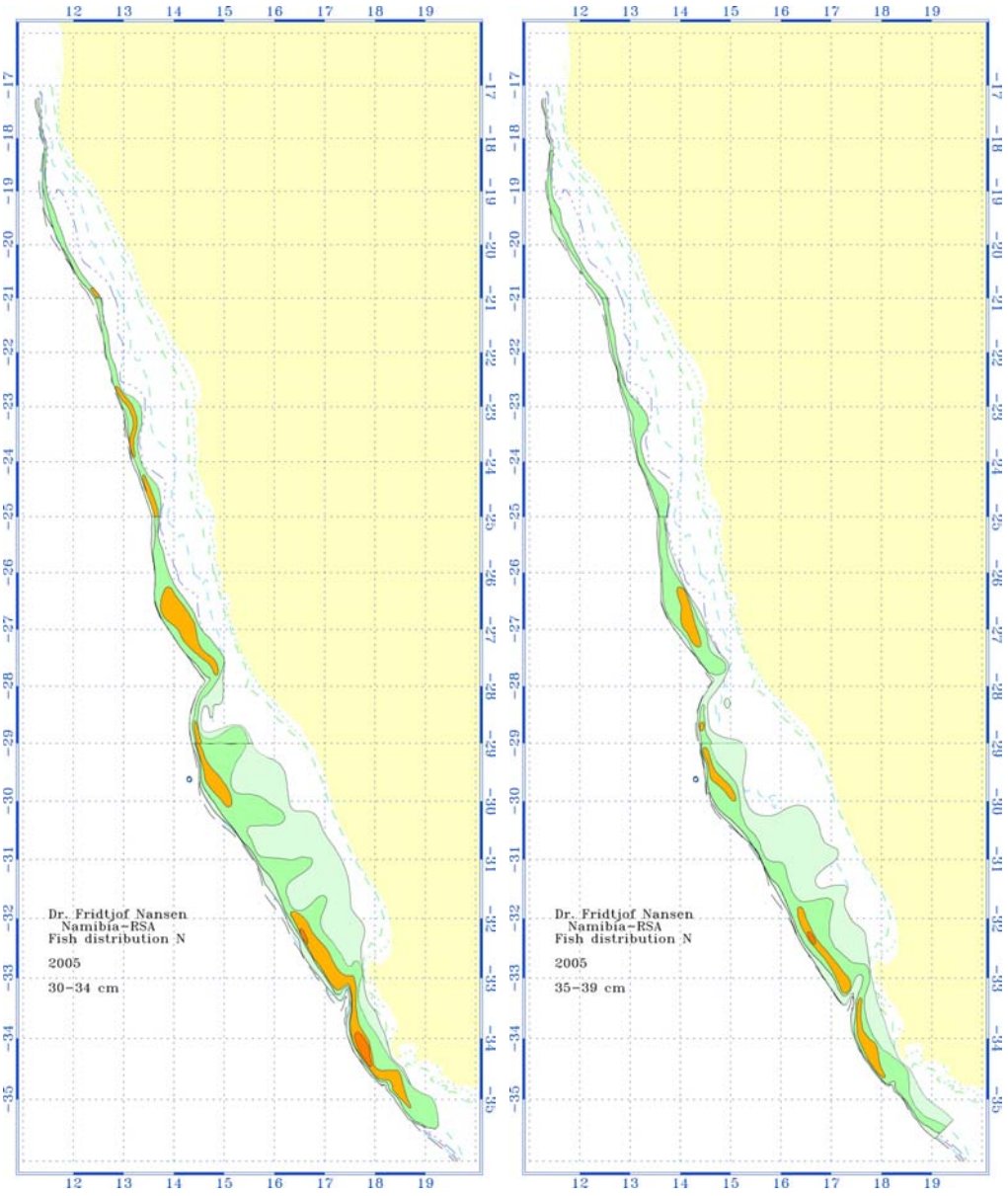

Figure 4.23g-h Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

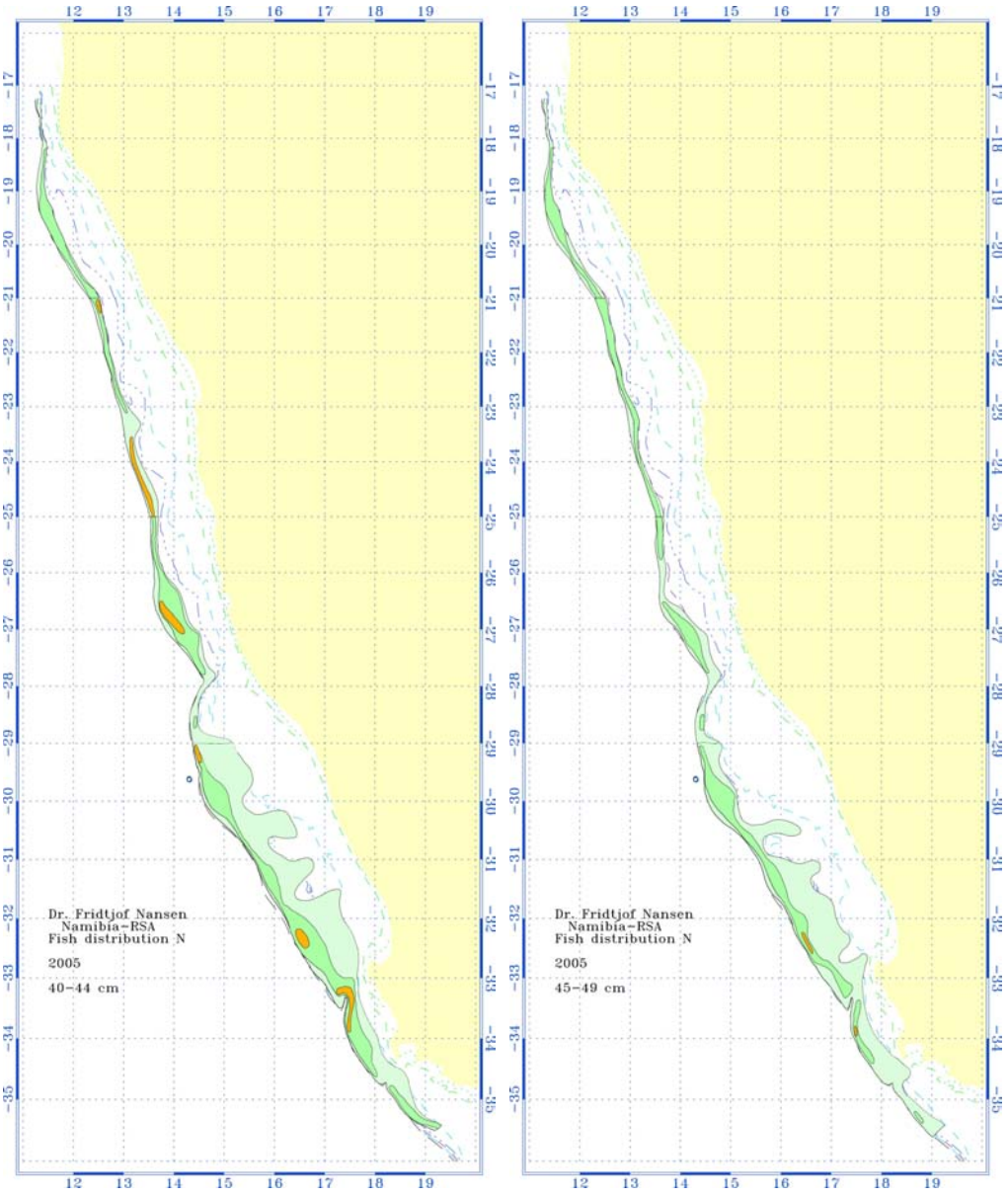

Figure 4.23i-j Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

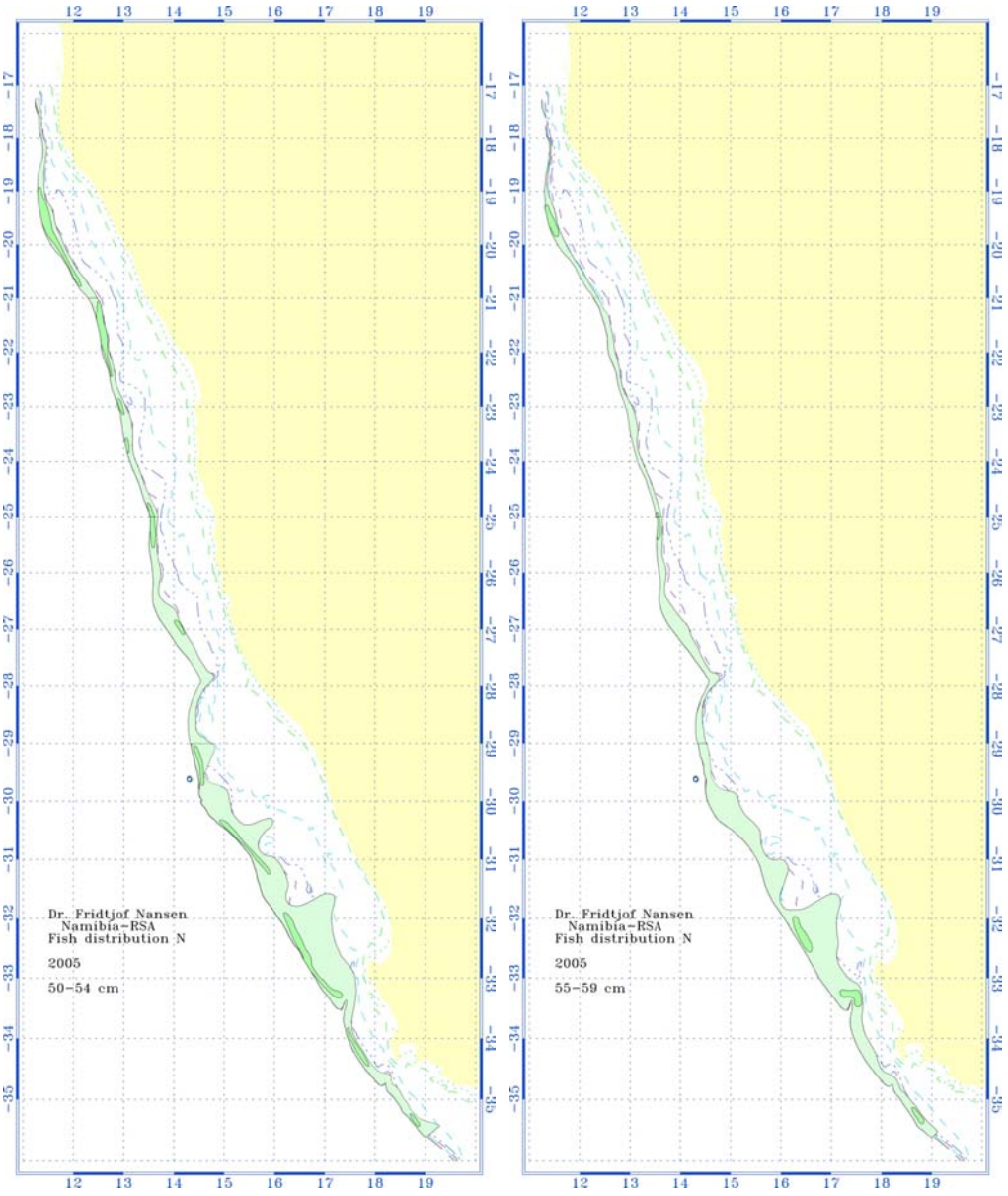

Figure 4.23i-j Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

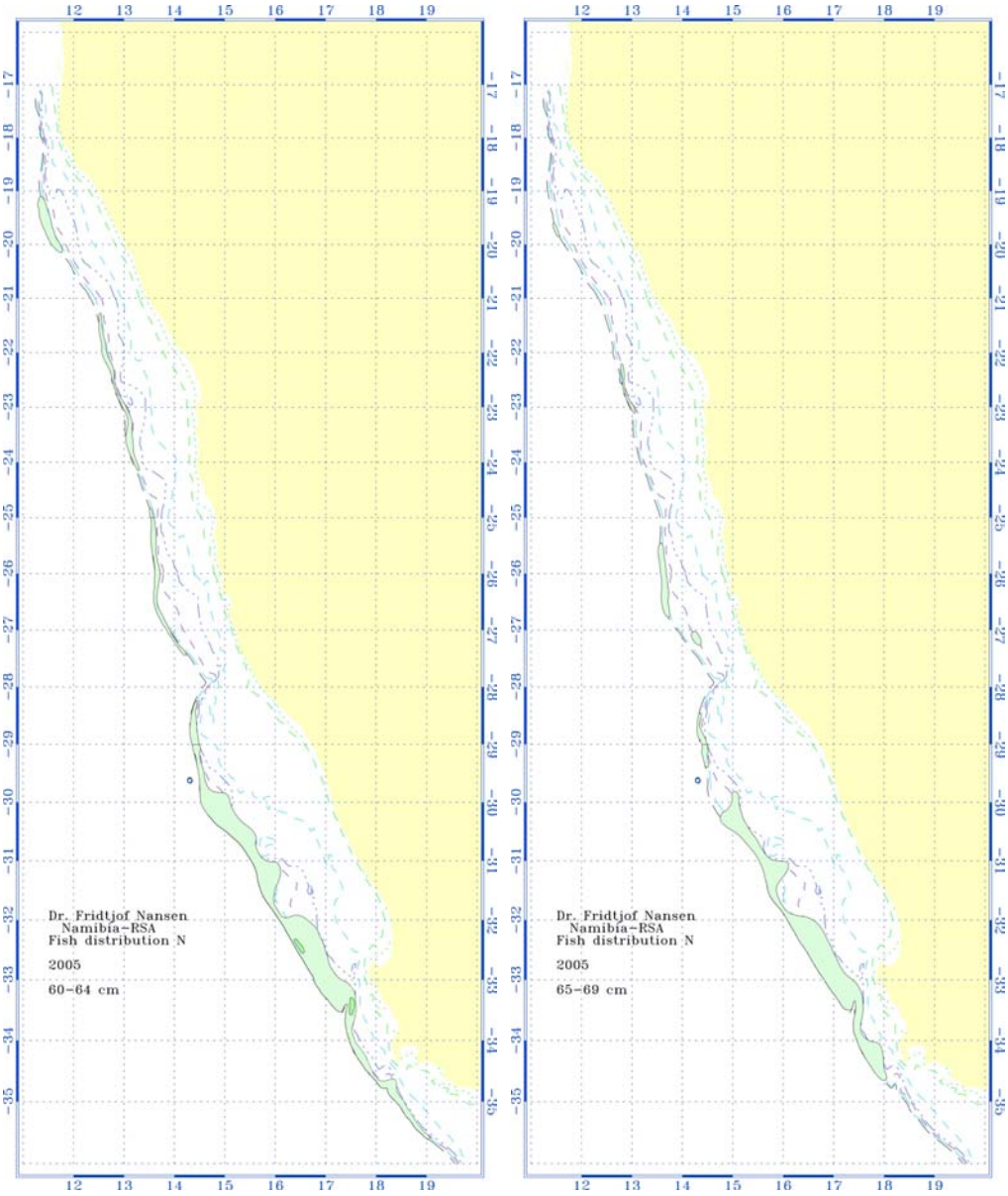

Figure 4.23k-l Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

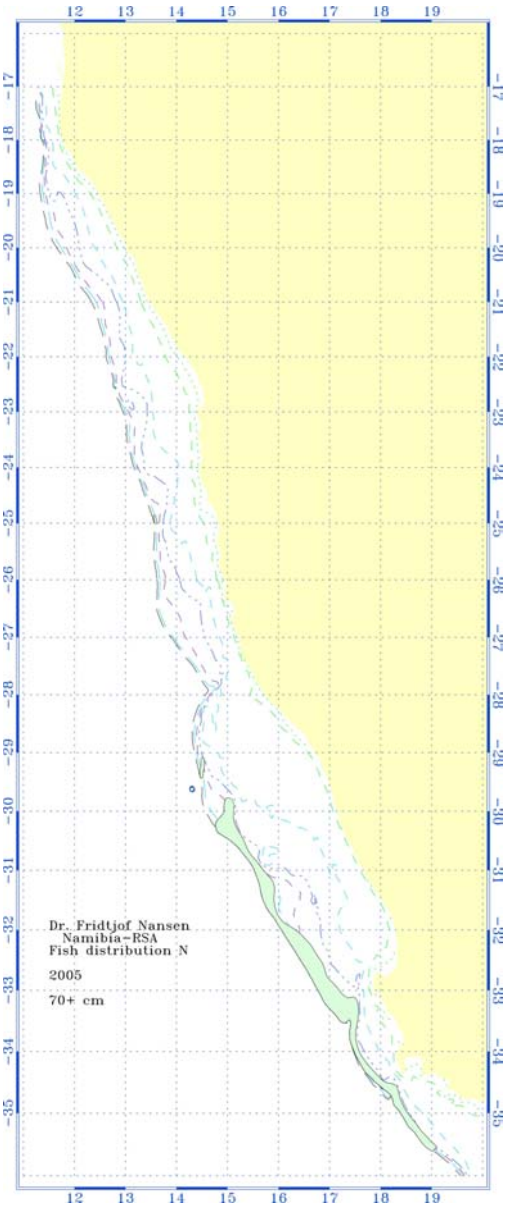

Figure 4.23m Distribution of deep-water hake by 5 cm classes between Cunene River and Cape Agulhas January-March 2005.

Table 2 and Table 3 show the abundance estimates in biomass and numbers by 5 cm classes and in total for *M. paradoxus* and *M. capensis* respectively. Separate figures for Namibia and South Africa are provided. The fishable biomass, defined as fish bigger than 34 cm, is estimated to 47 and 89 thousand tonnes for Namibia and South Africa respectively, while the corresponding numbers for the non-fishable biomass is

68 and 200 thousand tonnes. Figure 4.24a show the abundance estimates in numbers in a graphical form with the Namibian estimates stacked upon the South African and Figure 4.24b show the same data expressed as a % share of the abundance in each length group. Excluding fish lesser than 20 cm, which are manly in a pelagic state and thus not representatively sampled by the bottom trawl, there is a predominance of fish in South Africa for all size classes. In the size-range 20-40 cm the Namibian share is about 20%, increasing between 40 and 60 cm with a peak of 50% at the 50 cm group. The fish bigger than 60 cm is almost exclusively found in South Africa.

Table 2 Abundance estimates of *M. paradoxus*.

Length	Biomass in tonnes			Number in millions		
	Namibia	S. Africa	Total	Namibia	S. Africa	Total
0						
5	790	264	1 054	212.5	73.7	286.2
10	1 068	2 843	3 911	97.0	218.0	315.0
15	5 688	35 785	41 474	168.6	1 019.1	1 187.6
20	18 635	63 753	82 388	269.1	986.1	1 255.2
25	25 330	58 186	83 516	205.7	467.0	672.8
30	16 723	39 246	55 970	78.6	188.3	266.9
35	16 280	30 981	47 261	50.7	97.0	147.7
40	9 591	19 732	29 323	20.4	41.9	62.3
45	9 496	14 406	23 902	14.2	21.8	36.0
50	7 202	7 286	14 489	8.1	8.1	16.2
55	3 522	5 384	8 906	3.0	4.6	7.6
60	627	4 260	4 887	0.4	2.8	3.2
65	227	3 183	3 410	0.1	1.6	1.8
70	17	2 244	2 261	0.0	0.9	0.9
75		1 246	1 246		0.4	0.4
80		127	127		0.0	0.0
85						
90						
95						
100						
Total	115 197	288 927	404 124	1 128.4	3 131.6	4 260.0
Non-fishable	68 235	200 077	268 312	1 031.4	2 952.3	3 983.7
Fishable	46 962	88 850	135 812	97.0	179.3	276.2

Table 3 Abundance estimates of *M. capensis*.

Length	Biomass in tonnes			Number in millions		
	Namibia	S. Africa	Total	Namibia	S. Africa	Total
0						
5	274	106	379	70.0	25.7	95.8
10	2 667	2 396	5 063	232.7	229.2	461.9
15	2 680	647	3 327	78.6	23.3	101.9
20	61 558	1 644	63 202	800.9	22.0	822.9
25	102 961	10 056	113 017	846.0	76.8	922.7
30	45 038	6 420	51 459	221.0	31.3	252.2
35	28 815	5 936	34 751	89.6	18.5	108.0
40	26 058	3 935	29 994	54.7	8.3	63.1
45	20 744	5 010	25 753	31.2	7.4	38.6
50	17 412	6 720	24 132	19.4	7.5	26.9
55	11 722	3 776	15 498	9.9	3.2	13.1
60	7 611	3 007	10 618	5.1	2.0	7.0
65	5 380	3 004	8 384	2.8	1.6	4.4
70	1 707	1 544	3 251	0.7	0.7	1.4
75	288	940	1 229	0.1	0.3	0.4
80		596	596		0.2	0.2
85		233	233		0.1	0.1
90						
95		201	201		0.0	0.0
100						
Total	334 914	56 171	391 085	2 462.7	457.9	2 920.6
Non-fishable	215 177	21 269	236 446	2 249.1	408.2	2 657.4
Fishable	119 737	34 902	154 639	213.5	49.7	263.2

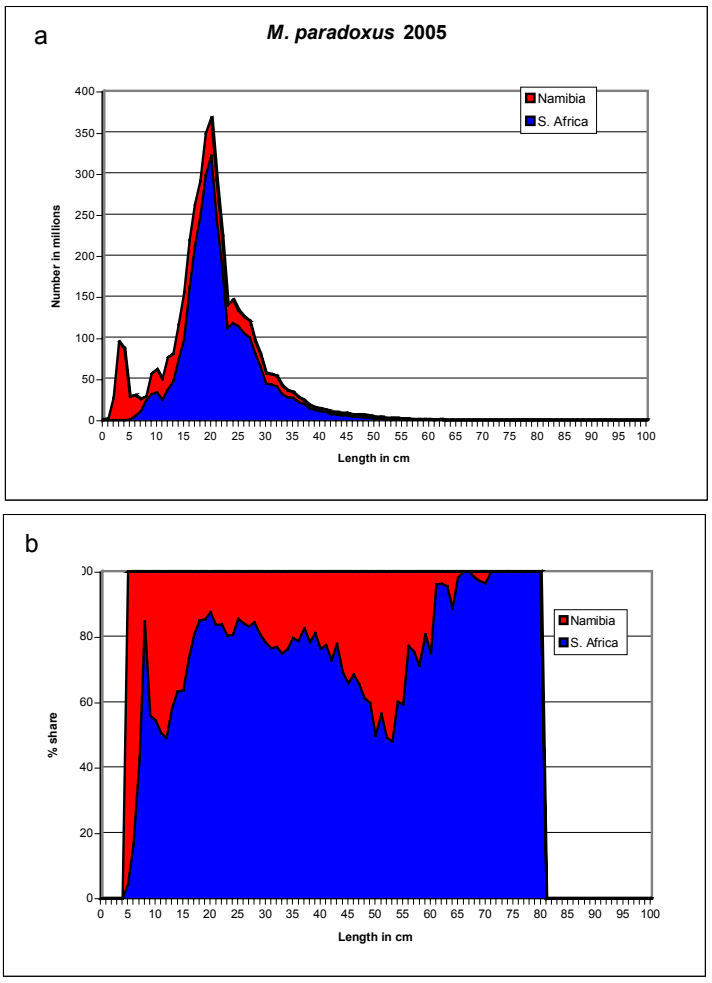

Figure 4.24 a) Estimated abundance in numbers of deep-water hake by 1 cm length classes. Namibia (red) added on top of South-Africa (blue).
b) % share between South-Africa (blue) and Namibia (red) of deep-water hake in numbers by 1 cm length classes in February 2003.

Table 4 show the density estimates of *M. paradoxus* by bottom depth strata and by regions, three regions in Namibia and four in South Africa. Table 5 show the similar data for M. capensis. The areas of these depth strata and regions are listed in Annex 3.

Table 4 Density estimates of *M. paradoxus* by depth strata and regions.

Region	0-99m	100-199m	200-299m	300-399m	400-499m	500-599	600-699
Cunene-21°S	0	0	0	0	4.89	4.62	6.91
21°S-25°S	0	0	0.42	2.22	7.91	4.39	4.54
25°S-Orange River	0.17	1.72	3.68	15.91	11.73	4.61	2.46
Orange River-S. Hondeklip Bay	n.a.	3.87	8.18	6.18	10.45	3.22	1.27
S. Hondeklip Bay-N. Saldanha Bay	0	6.75	12.63	28.39	18.07	5.63	1.43
N. Saldanha Bay- Cape of Good Hope	n.a	2.50	89.03	44.91	29.80	4.31	n.a.
Cape of Good Hope – Cape Agulhas	0	0.83	2.07	12.57	10.01	1.71	n.a.

Table 5 Density estimates of *M. capensis* by depth strata and regions.

Region	0-99m	100-199m	200-299m	300-399m	400-499m	500-599	600-699
Cunene-21°S	0	0	0	0	4.89	4.62	6.91
21°S-25°S	0	4.20	36.01	5.78	0.05	0	0
25°S-Orange River	0	15.37	19.96	6.22	0.74	0	0
Orange River-S. Hondeklip Bay	n.a.	1.93	1.07	1.38	0.04	0	0
S. Hondeklip Bay-N. Saldanha Bay	0.02	3.54	0.90	0.70	0	0	0
N. Saldanha Bay-Cape of Good Hope	n.a.	0.52	3.96	0.75	0.04	0	n.a
Cape of Good Hope – Cape Agulhas	1.22	4.84	4.48	0.40	0.06	0	n.a.

Figure 4.25a shows the relative distribution of maturity stages by latitude for *M. paradoxus* during the present survey. The figure shows an increasing share of active and spent gonads as one moves south. In the north it is mainly inactive gonads. This is even more pronounced when the analysis is restricted only to fish with lengths greater than 39 cm, Figure 4.25b.

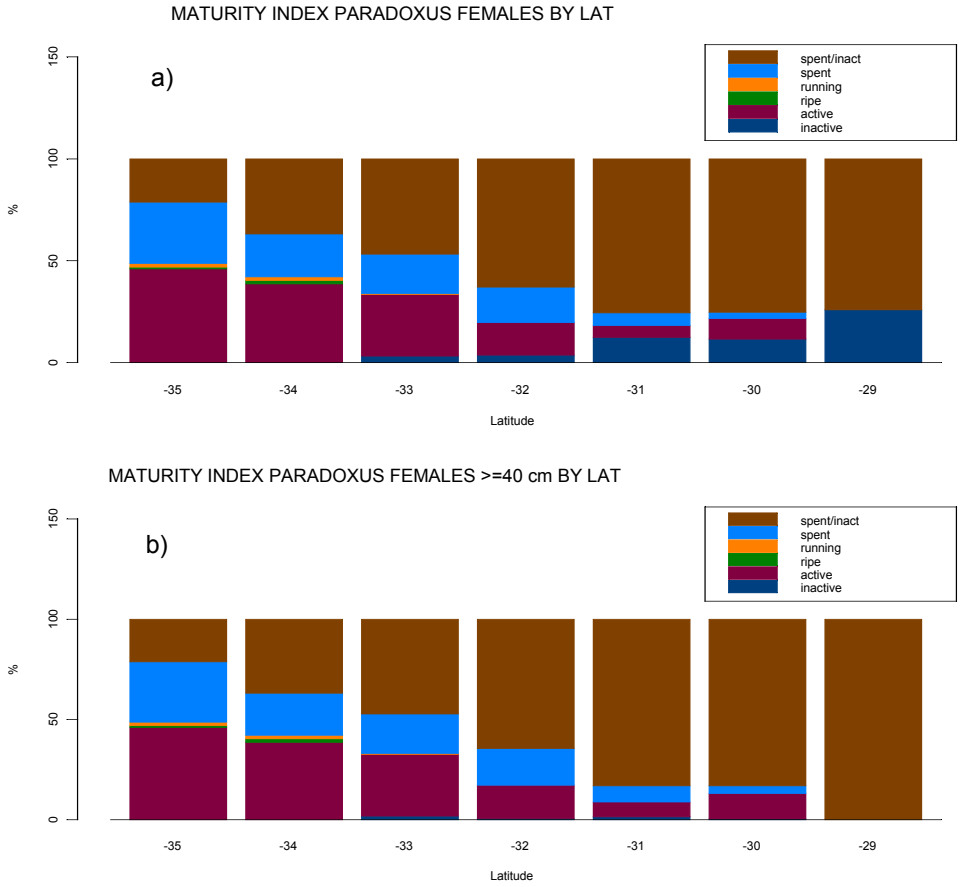

Figure 4.25 Maturity distribution of female deep-water hake by latitude. a) all females measured and b) females ≥ 40 cm.

5 Considerations of the survey results

The findings from the survey 4 February-9 March combined with similar findings from a Namibian survey in the period 12 January-17 February confirms some general features as regards the life cycle of *M. paradoxus*:

- Spawning takes place in South Africa, most probably south of Cape Town. There are no sign of maturing gonads in Namibian waters while this is shown in the southern part of the South African west coast.
- The early pelagic stage is mainly confined to the outer part of the Childs Bank area, but there is an early southern spread following the continental shelf south to Cape of Good Hope.
- Juveniles between 15 and 24cm are mainly concentrated on the shelf between Hondeklip Bay and St. Helena Bay. However there is an important component of this fish spilling over the northern part of Orange Banks and following the upper slope northwards until the Cunene River area.
- The massive migration towards the slope starts in the 29-29cm group and when the fish is bigger than 30cm this movement is mainly completed.
- The adult fish is found from Cunene in the north and southwards beyond Cape Agulhas. The biggest fish, bigger than 70cm is only recorded in the southern part, south of Hondeklip Bay.
- The main part of the stock is at the time of the survey located in South Africa which holds about 65% of the fishable biomass (fish bigger than 34cm) and 75% of the non-fishable biomass. Between 40 and 60cm fish length there is an increased share of the biomass in Namibian waters compared to smaller and bigger fish classes, perhaps indicating a periodic immigration from south.

Reference cited:

Strømme, T., Lipinski, M., Ostrowski, M. and Alvheim, O. 2004. A transboundary study with emphasis on deep water hake in the Lüderitz – Orange River Cone Area. BCLME SURVEY NO. 1 2004. Bergen 2004, 37 pp. Mimeo.

Annex 1 Records of fishing stations

PROJECT STATION: 950

DATE: 6/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2715
start stop duration Long E 1408
TIME :05:25:33 05:54:28 29 (min) Purpose code: 3
LOG :1163.92 1165.53 1.61 Area code : 1
FDEPTH: 509 514 GearCond.code:
BDEPTH: 509 514 Validity code:
Towing dir: 30ø Wire out:1400 m Speed: 35 kn*10

Sorted: 116 Kg Total catch: 116.04 CATCH/HOUR: 240.08

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	91.03	153	37.92	8325
Merluccius paradoxus	47.59	445	19.82	8326
Todarodes angolensis - males	21.72	60	9.05	8329
Selachophidium guentheri	12.41	207	5.17	
Nezumia sp.	11.38	335	4.74	
Caelorinchus simorhynchus	11.38	126	4.74	
Todarodes angolensis - females	5.17	12	2.15	8330
Genypterus capensis	4.14	2	1.72	8327
Chaceon maritae	3.52	23	1.47	
Deania sp.	3.10	4	1.29	
Helicolenus dactylopterus	2.90	10	1.21	8328
Schedophilus pemarco	2.69	2	1.12	
Regalecus glesne	2.07	2	0.86	
Lithodes ferox	2.07	6	0.86	
Hydrolagus africanus	2.07	6	0.86	
Raja confundens	2.01	8	0.84	
Ommastrephes bartrami - male	1.63	2	0.68	8331
Notacanthus sexspinis	1.47	35	0.61	
Octopoteuthis rugosa	1.41	2	0.59	8332
Funchalia woodwardi	1.30	128	0.54	
Photichthys argenteus	1.18	72	0.49	
Gymnoscopelus sp.	1.12	137	0.47	
Coelorinchus braueri	1.10	60	0.46	
Krill	1.03		0.43	
Paralomis africana	0.64	2	0.27	
Shrimps, small, non comm.	0.64		0.27	
Epigonus sp.	0.56	8	0.23	
Raja leopardus	0.48	4	0.20	
Histioteuthis sp.	0.43	14	0.18	
Etmopterus brachyurus	0.29	4	0.12	
Hoplostethus cadenati	0.27	6	0.11	
Bathophilus longipinnis	0.27	17	0.11	
Stomias boa boa	0.25	17	0.10	
Myxine capensis	0.23	2	0.10	
Tripterophycis gilchristi	0.17	8	0.07	
Scopelosaurus meadi	0.08	4	0.03	
Bathypolypus valdiviae	0.06	2	0.02	
Lampadena pontifex	0.04	6	0.02	
Diaphus effulgens	0.04	2	0.02	
Exodromedia sp.	0.04	4	0.02	
Lepidion capensis	0.04	2	0.02	
Diaphus sp.	0.02	6	0.01	
Notoscopelus sp.	0.02	4	0.01	
Hoplostethus mediterraneus	0.02	2	0.01	
Total	240.08		100.01	

PROJECT STATION: 951

DATE: 6/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2710
start stop duration Long E 1416
TIME :08:15:24 08:45:07 30 (min) Purpose code: 3
LOG :1176.99 1178.44 1.42 Area code : 1
FDEPTH: 406 401 GearCond.code:
BDEPTH: 406 401 Validity code:
Towing dir: ø Wire out:1150 m Speed: 30 kn*10

Sorted: 348 Kg Total catch: 348.44 CATCH/HOUR: 696.88

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	504.00	1974	72.32	8333
Caelorinchus simorhynchus	108.00		15.50	
Genypterus capensis	32.00	24	4.59	8335
Lophius vomerinus	17.00	6	2.44	8334
Raja confundens	10.00	10	1.43	
Todarodes angolensis - females	6.00	14	0.86	8337
Helicolenus dactylopterus	5.60	36	0.80	8338
Lithodes ferox	5.20	6	0.75	
Todarodes angolensis - males	3.00	12	0.43	8336
Selachophidium guentheri	1.40	30	0.20	
Bassanago albescens	1.06	2	0.15	
Nezumia sp.	1.00	40	0.14	
Bathynectes piperitus	0.66	30	0.09	
Lucigadus ori	0.50	44	0.07	
Galeus polli	0.40	4	0.06	
Myxine capensis	0.32	2	0.05	
Beryx splendens	0.22	2	0.03	
Bathypolypus valdiviae	0.10	4	0.01	
Epigonus sp.	0.10	18	0.01	
Myctophum sp.	0.08	24	0.01	
Symbolophorus boops	0.06	42	0.01	
Shrimps, small, non comm.	0.04	12	0.01	
Exodromedia sp.	0.04	2	0.01	
Stomias boa boa	0.04	2	0.01	
Lycoteuthis lorigera	0.02	2		
Photichthys argenteus	0.02	2		
Nemichthys curvirostris	0.02	4		
Total	696.88		99.98	

PROJECT STATION: 952

DATE: 6/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2706
start stop duration Long E 1429
TIME :11:14:04 11:44:09 30 (min) Purpose code: 3
LOG :1194.33 1195.86 1.52 Area code : 1
FDEPTH: 343 343 GearCond.code:
BDEPTH: 343 343 Validity code:
Towing dir: 330ø Wire out: 960 m Speed: 30 kn*10

Sorted: 204 Kg Total catch: 203.96 CATCH/HOUR: 407.92

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Caelorinchus simorhynchus	168.00		41.18	
Merluccius paradoxus	126.00	626	30.89	8340
Merluccius capensis	40.80	36	10.00	8339
Genypterus capensis	20.00	32	4.90	8343
Helicolenus dactylopterus	14.00	394	3.43	8341
Galeus polli	11.20	122	2.75	
Bathynectes piperitus	6.00		1.47	
Hexanchus griseus	6.00	2	1.47	
Lophius vomerinus	6.00	6	1.47	8342
Todarodes angolensis - females	4.80	8	1.18	8345
Myctophum sp.	3.00		0.74	
Squilla acuelata calmani	0.46	54	0.11	
Raja confundens	0.44	2	0.11	
Todarodes angolensis - males	0.42	2	0.10	8344
Epigonus sp.	0.34	18	0.08	
Nezumia sp.	0.26	28	0.06	
Ophichthus bennettai	0.12	2	0.03	
Maurolicus muelleri	0.04		0.01	
Krill	0.04		0.01	
Total	407.92		99.99	

PROJECT STATION: 953

DATE: 6/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2701
start stop duration Long E 1439
TIME :13:31:50 14:01:34 30 (min) Purpose code: 3
LOG :1207.86 1209.35 1.48 Area code : 1
FDEPTH: 273 272 GearCond.code:
BDEPTH: 273 272 Validity code:
Towing dir: 340ø Wire out: 800 m Speed: 30 kn*10

Sorted: 62 Kg Total catch: 62.05 CATCH/HOUR: 124.10

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	84.00	590	67.69	8346
Lampanyctodes hectoris	22.00		17.73	
Sufflogobius bibarbatus	9.60	876	7.74	
Bathynectes piperitus	3.60	222	2.90	
G A S T R O P O D S	2.00		1.61	
Squilla acuelata calmani	1.60	188	1.29	
Austroglossus microlepis	0.88	8	0.71	8349
Genypterus capensis	0.28	2	0.23	8348
Exodromedia sp.	0.08	4	0.06	
Maurolicus muelleri	0.04		0.03	
Lophius vomerinus	0.02	4	0.02	8347
Total	124.10		100.01	

PROJECT STATION: 954

DATE: 6/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 2655
start stop duration Long E 1449
TIME :15:35:09 16:05:53 31 (min) Purpose code: 3
LOG :1220.64 1222.20 1.55 Area code : 1
FDEPTH: 197 192 GearCond.code:
BDEPTH: 197 192 Validity code:
Towing dir: 5ø Wire out: 625 m Speed: 30 kn*10

Sorted: 296 Kg Total catch: 296.81 CATCH/HOUR: 574.47

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Sufflogobius bibarbatus	545.81	44739	95.01	
Merluccius capensis	27.10	250	4.72	8350
Merluccius capensis, juveniles	0.79	68	0.14	8351
Macropipus sp.	0.66	41	0.11	
Squilla acuelata calmani	0.12	12	0.02	
Total	574.48		100.00	

PROJECT STATION: 955

DATE: 7/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 2803
start stop duration Long E 1536
TIME :05:11:00 05:40:52 30 (min) Purpose code: 3
LOG :1354.35 1355.88 1.49 Area code : 1
FDEPTH: 91 92 GearCond.code:
BDEPTH: 91 92 Validity code:
Towing dir: 240ø Wire out: 350 m Speed: 31 kn*10

Sorted: 85 Kg Total catch: 85.87 CATCH/HOUR: 171.74

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Chelidonichthys capensis	44.00	244	25.62	8358
Galeorhinus galeus	35.00	2	20.38	
Thyrsites atun	34.00	16	19.80	8355
Merluccius capensis	22.00	178	12.81	8353
Etrumeus whiteheadi	12.00		6.99	
Callorhinchus capensis	8.00	8	4.66	
Sepia australis	5.00	250	2.91	
Merluccius capensis, juveniles	4.40	294	2.56	8352
Macropipus sp.	3.00	80	1.75	
Austroglossus microlepis	2.60	12	1.51	8357
Zeus capensis	1.12	88	0.65	8356
Cynoglossus zanzibarensis	0.50	8	0.29	8354
Sufflogobius bibarbatus	0.10	24	0.06	
Paracallionymus costatus	0.02	2	0.01	
Lolligoncula mercatoris	0.00	6		
Champsodon capensis	0.00	2		
Total	171.74		100.00	

PROJECT STATION: 956

DATE: 7/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 2816
start stop duration Long E 1506
TIME :10:11:31 10:41:16 30 (min) Purpose code: 3
LOG :1385.75 1387.25 1.48 Area code : 1
FDEPTH: 181 183 GearCond.code:
BDEPTH: 181 183 Validity code:
Towing dir: 241ø Wire out: 570 m Speed: 30 kn*10

Sorted: 311 Kg Total catch: 311.55 CATCH/HOUR: 623.10

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	241.00	514	38.68	8359
Callorhinchus capensis	110.00	88	17.65	
Zeus capensis	44.00	900	7.06	8368
Chelidonichthys capensis	40.00	146	6.42	8371
Thyrsites atun	24.00	26	3.85	8366
Squalus megalops	22.00	52	3.53	
Etrumeus whiteheadi	18.00		2.89	
Raja pullopunctata	16.00	2	2.57	
Merluccius capensis	15.00	6	2.41	8370
Sepia australis	10.00		1.60	
Raja straeleni	10.00	6	1.60	
Lophius vomerinus	10.00	12	1.60	8365
Trachurus capensis	10.00	34	1.60	8363
Lepidopus caudatus	9.00	410	1.44	
Merluccius paradoxus, juvenile	9.00	672	1.44	8360
Paracallionymus costatus	6.00	682	0.96	
Mustelus palumbes	4.80	2	0.77	
Zeus capensis	4.00	4	0.64	8369
Cynoglossus zanzibarensis	3.28	42	0.53	8364
Chelidonichthys queketti	3.20	22	0.51	8372
Caelorinchus simorhynchus	3.00	34	0.48	
Genypterus capensis	2.80	38	0.45	8367
Macropipus sp.	2.60	74	0.42	
Helicolenus dactylopterus	2.00	104	0.32	8362
Austroglossus microlepis	1.80	4	0.29	8361
Todaropsis eblanae	1.28	26	0.21	8373
Congiopodus spinifer	0.18	2	0.03	
Sepia hieronis	0.08	4	0.01	
Exodromedia sp.	0.04	2	0.01	
Sufflogobius bibarbatus	0.04	6	0.01	
Total	623.10		99.98	

PROJECT STATION: 957

DATE: 7/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 2817
start stop duration Long E 1456
TIME :12:56:20 13:26:10 30 (min) Purpose code: 3
LOG :1404.50 1406.09 1.58 Area code : 1
FDEPTH: 187 189 GearCond.code:
BDEPTH: 187 189 Validity code:
Towing dir: 328ø Wire out: 575 m Speed: 30 kn*10

Sorted: 505 Kg Total catch: 497.48 CATCH/HOUR: 994.96

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	224.00		22.51	
Merluccius capensis	219.80	568	22.09	8374
Trachurus capensis	122.00	326	12.26	8378
Callorhinchus capensis	78.00	58	7.84	
Etrumeus whiteheadi	63.00		6.33	
Chelidonichthys capensis	44.00	112	4.42	8386
Thyrsites atun	40.00	28	4.02	8382
Lophius vomerinus	30.00	38	3.02	8381
Galeorhinus galeus	28.00		2.81	
Raja straeleni	20.00	12	2.01	
Merluccius paradoxus, juvenile	18.00	642	1.81	8376
Merluccius capensis	16.20	6	1.63	8375
Zeus capensis	16.00	332	1.61	8385
Chelidonichthys queketti	14.00	108	1.41	8387
Squalus megalops	13.00	32	1.31	
Raja wallacei	12.00	8	1.21	
Holohalaelurus regani	12.00	48	1.21	
Trachurus capensis	6.00	4	0.60	8388
Paracallionymus costatus	5.00		0.50	
Mustelus palumbes	3.00	2	0.30	
Macropipus sp.	2.00		0.20	
Merluccius paradoxus	2.00	18	0.20	8377
Cynoglossus zanzibarensis	1.84	22	0.18	8380
Genypterus capensis	1.76	6	0.18	8384
Todarodes angolensis - females	1.68	2	0.17	8390
Todaropsis eblanae	1.20	22	0.12	8389
Helicolenus dactylopterus	0.48	50	0.05	8379
Total	994.96		100.00	

PROJECT STATION: 958

DATE: 7/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 2822
start stop duration Long E 1449
TIME :15:08:27 15:38:48 30 (min) Purpose code: 3
LOG :1417.45 1419.10 1.63 Area code : 1
FDEPTH: 193 197 GearCond.code:
BDEPTH: 193 197 Validity code:
Towing dir: 335ø Wire out: 599 m Speed: 30 kn*10

Sorted: 571 Kg Total catch: 571.89 CATCH/HOUR: 1143.78

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	433.40		37.89	
Merluccius capensis	256.00	548	22.38	8391
Merluccius paradoxus	151.40	6056	13.24	8393
Thyrsites atun	64.00	56	5.60	8396
Lophius vomerinus	34.00	66	2.97	8396
Sepia australis	29.84	2260	2.61	
Etrumeus whiteheadi	25.40		2.22	
Trachurus capensis	20.00	70	1.75	8394
Zeus capensis	19.64	356	1.72	8398
Raja straeleni	18.00	8	1.57	
Holohalaelurus regani	14.00	56	1.22	
Paracallionymus costatus	12.80	1940	1.12	
Chelidonichthys capensis	12.00	20	1.05	8399
Genypterus capensis	11.20	34	0.98	8397
Octopus magnificus	11.00	2	0.96	
Merluccius capensis	10.00	4	0.87	8392
Helicolenus dactylopterus	7.06		0.62	
Squalus megalops	6.00	18	0.52	
Congiopodus spinifer	2.60	16	0.23	
Caelorinchus simorhynchus	2.34	8	0.20	
Chelidonichthys queketti	1.70	8	0.15	8400
Todaropsis eblanae	1.06		0.09	
Cynoglossus zanzibarensis	0.26	8	0.02	8395
Macropipus sp.	0.08	8	0.01	
Total	1143.78		99.99	

PROJECT STATION: 959

DATE: 8/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 2824
start stop duration Long E 1443
TIME :05:31:15 05:58:12 27 (min) Purpose code: 3
LOG :1515.34 1516.79 1.39 Area code : 1
FDEPTH: 199 194 GearCond.code: 8
BDEPTH: 199 194 Validity code: 9
Towing dir: 230ø Wire out: 620 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			

PROJECT STATION: 960

DATE: 8/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2827
start stop duration Long E 1437
TIME :09:03:42 09:32:33 29 (min) Purpose code: 3
LOG :1532.73 1534.17 1.42 Area code : 1
FDEPTH: 169 171 GearCond.code:
BDEPTH: 169 171 Validity code:
Towing dir: 312ø Wire out: 500 m Speed: 31 kn*10

Sorted: 166 Kg Total catch: 166.52 CATCH/HOUR: 344.52

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Emmelichthys nitidus	79.86	3993	23.18	
Merluccius capensis	49.66	72	14.41	8401
Zeus capensis	42.62	416	12.37	8405
Trachurus capensis	40.76	319	11.83	8402
Chelidonichthys queketti	39.31	292	11.41	8407
Chelidonichthys capensis	33.10	74	9.61	8406
Thyrsites atun	14.48	21	4.20	8403
Squalus megalops	11.38	27	3.30	
Scyliorhinus capensis	10.34	89	3.00	
Holohalaelurus regani	9.31	27	2.70	
Congiopodus spinifer	8.07	60	2.34	
Genypterus capensis	2.07	2	0.60	8404
Todaropsis eblanae	1.39	31	0.40	
Gonorhynchus gonorhynchus	0.66	2	0.19	
Lepidopus caudatus	0.41	6	0.12	
Sepia australis	0.39	37	0.11	
Etrumeus whiteheadi	0.39	6	0.11	
Sepia hieronis	0.23	6	0.07	
Arnoglossus capensis	0.08	6	0.02	
Total	344.51		99.97	

PROJECT STATION: 961

DATE: 8/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2835
start stop duration Long E 1425
TIME :12:09:06 12:39:08 30 (min) Purpose code: 3
LOG :1551.65 1553.22 1.57 Area code : 1
FDEPTH: 373 368 GearCond.code:
BDEPTH: 373 368 Validity code:
Towing dir: 360ø Wire out:1051 m Speed: 30 kn*10

Sorted: 562 Kg Total catch: 562.49 CATCH/HOUR: 1124.98

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Krill	438.48		38.98	
Merluccius paradoxus	238.00	734	21.16	8409
Genypterus capensis	120.00	86	10.67	8412
Caelorinchus simorhynchus	70.56		6.27	
Helicolenus dactylopterus	68.00	244	6.04	8410
Scyliorhinus capensis	46.00	68	4.09	
Epigonus sp.	40.32		3.58	
PARAPAGURIDAE *	35.28		3.14	
Octopus magnificus	23.00	6	2.04	
MYCTOPHIDAE	13.76		1.22	
Raja wallacei	10.00	2	0.89	
Todarodes angolensis - males	6.40	18	0.57	8413
Merluccius capensis	5.00	4	0.44	8408
Todarodes angolensis - females	4.00	6	0.36	8414
Rossia enigmatica	1.16	26	0.10	
Gymnoscopelus sp.	0.68	76	0.06	
Galeus polli	0.64	4	0.06	
Photichthys argenteus	0.56	40	0.05	
Lucigadus ori	0.56	80	0.05	
Bathynectes piperitus	0.48	30	0.04	
Holohalaelurus regani	0.40	2	0.04	
Symbolophorus boops	0.38	36	0.03	
Tripterophycis gilchristi	0.26	26	0.02	
Physiculus capensis	0.24	26	0.02	
Todaropsis eblanae	0.24	6	0.02	
Maurolicus muelleri	0.16	116	0.01	
Hoplostethus mediterraneus	0.14	16	0.01	
Rochinia sp.	0.12	6	0.01	
Helicolenus dactylopterus	0.08	6	0.01	8411
Paracallionymus costatus	0.06	10	0.01	
Abraliopsis gilchristi	0.02	6		
Total	1124.98		99.99	

PROJECT STATION: 962

DATE: 8/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2833
start stop duration Long E 1423
TIME :14:01:05 14:31:11 30 (min) Purpose code: 3
LOG :1558.66 1560.17 1.51 Area code : 1
FDEPTH: 453 453 GearCond.code:
BDEPTH: 453 453 Validity code:
Towing dir: 16ø Wire out:1291 m Speed: 30 kn*10

Sorted: 155 Kg Total catch: 155.88 CATCH/HOUR: 311.76

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Krill	87.80		28.16	
Merluccius paradoxus	62.00	124	19.89	8415
Notacanthus sexspinis	33.72	682	10.82	
Caelorinchus simorhynchus	32.34		10.37	
Etmopterus brachyurus	26.00	628	8.34	
Centrophorus squamosus	24.00	2	7.70	
Rochinia sp.	13.86		4.45	
Genypterus capensis	6.00	4	1.92	8417
Bathynectes piperitus	4.62		1.48	
Hydrolagus africanus	4.00	4	1.28	
Psychrolutes macrocephalus	3.92	28	1.26	
Myxine capensis	3.24		1.04	
Lophius vomerinus	2.00	2	0.64	8416
Lucigadus ori	1.98	292	0.64	
Galeus polli	1.66	12	0.53	
Bassanago albescens	1.00	2	0.32	
Photichthys argenteus	0.88	46	0.28	
Tripterophycis gilchristi	0.60	36	0.19	
Physiculus capensis	0.56	50	0.18	
MYCTOPHIDAE	0.48		0.15	
Epigonus sp.	0.24	28	0.08	
Nezumia micronychodon	0.20	14	0.06	
Gymnoscopelus sp.	0.18	24	0.06	
Chlorophthalmus atlanticus	0.10	4	0.03	
Coelorinchus braueri	0.10	36	0.03	
Symbolophorus boops	0.10	10	0.03	
Scopelosaurus meadi	0.08	4	0.03	
Hoplostethus mediterraneus	0.04	10	0.01	
Neoscopelus macrolepidotus	0.04	4	0.01	
Maurolicus muelleri	0.02	10	0.01	
Total	311.76		99.99	

PROJECT STATION: 963

DATE: 8/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2834
start stop duration Long E 1420
TIME :16:04:54 16:37:12 32 (min) Purpose code: 3
LOG :1569.47 1571.14 1.65 Area code : 1
FDEPTH: 554 561 GearCond.code:
BDEPTH: 554 561 Validity code:
Towing dir: ø Wire out:1550 m Speed: 31 kn*10

Sorted: 138 Kg Total catch: 138.27 CATCH/HOUR: 259.26

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	56.25	49	21.70	8418
Nezumia micronychodon	46.88	1065	18.08	
Bathyraja smithii	43.13	9	16.64	
Raja confundens	33.38	68	12.88	
Raja leopardus	12.66	32	4.88	
Chaceon maritae	11.25	111	4.34	
Notacanthus sexspinis	9.38		3.62	
Selachophidium guentheri	8.76	109	3.38	
Hydrolagus africanus	5.44	24	2.10	
Shrimps, small, non comm.	4.43		1.71	
Coloconger cadenati	3.15	15	1.21	
Genypterus capensis	3.00		1.16	
Photichthys argenteus	2.74		1.06	
Todarodes angolensis - females	2.63	8	1.01	8419
Hoplostethus cadenati	2.44	68	0.94	
Etmopterus brachyurus	1.88	23	0.73	
Physiculus capensis	1.88	30	0.73	
Myxine capensis	1.50	26	0.58	
Synaphobranchus kaupii	1.28	13	0.49	
Careproctus griseldea *	1.09	8	0.42	
Bassanago albescens	0.94	4	0.36	
Coelorinchus matamua	0.69	6	0.27	
Yarrella blackfordi	0.68	38	0.26	
Kuronezumia leonis	0.66	9	0.25	
Notoscopelus sp.	0.58	32	0.22	
Lithodes ferox	0.54	2	0.21	
Gymnoscopelus sp.	0.28	28	0.11	
Rossia enigmatica	0.26	8	0.10	
Selachophidium guentheri	0.26	2	0.10	
MYCTOPHIDAE	0.24		0.09	
Helicolenus dactylopterus	0.24	2	0.09	8421
Lophius vomerinus	0.17	2	0.07	8420
Rochinia sp.	0.15	9	0.06	
Epigonus sp.	0.11	4	0.04	
Gymnoscopelus sp.	0.09	13	0.03	
Tripterophycis gilchristi	0.09	4	0.03	
Lucigadus ori	0.08	9	0.03	
Scopelosaurus herwigi	0.06	2	0.02	
Physiculus capensis	0.04	2	0.02	
Maurolicus muelleri	0.00	2		
Total	259.31		100.02	

PROJECT STATION: 964

DATE: 9/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2840
start stop duration Long E 1422
TIME :05:10:00 05:40:50 31 (min) Purpose code: 3
LOG :1647.13 1648.93 1.77 Area code : 1
FDEPTH: 446 450 GearCond.code:
BDEPTH: 446 450 Validity code:
Towing dir: 10ø Wire out:1360 m Speed: 31 kn*10

Sorted: 143 Kg Total catch: 143.40 CATCH/HOUR: 277.55

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	100.65	269	36.26	8422
Krill	98.71		35.56	
Octopus magnificus	15.48	2	5.58	
Genypterus capensis	11.61	8	4.18	8424
Caelorinchus simorhynchus	9.68	277	3.49	
Notacanthus sexspinis	7.74	215	2.79	
Malacocephalus laevis	7.16	45	2.58	
Etmopterus brachyurus	6.39	186	2.30	
Raja confundens	4.84	4	1.74	
Holohalaelurus regani	4.45	14	1.60	
MYCTOPHIDAE	2.30		0.83	
Hydrolagus africanus	1.94	2	0.70	
Epigonus denticulatus	1.68	143	0.61	
Helicolenus dactylopterus	1.43	6	0.52	8423
Todarodes angolensis - males	0.85	2	0.31	8425
Tripterophycis gilchristi	0.81	43	0.29	
Photichthys argenteus	0.46	25	0.17	
Nezumia micronychodon	0.21	10	0.08	
Physiculus capensis	0.19	17	0.07	
Myxine capensis	0.19	4	0.07	
Gymnoscopelus sp.	0.15	19	0.05	
Trachurus capensis	0.14	14	0.05	
Diaphus effulgens	0.12	4	0.04	
Hoplostethus mediterraneus	0.10	33	0.04	
Maurolicus muelleri	0.10	66	0.04	
Hoplostethus cadenati	0.06	2	0.02	
Scopelosaurus meadi	0.06	2	0.02	
Rossia enigmatica	0.06	4	0.02	
Argentina euchus	0.04	2	0.01	
Champsodon capensis	0.04	4	0.01	
Lucigadus ori	0.04	4	0.01	
GEMPYLIDAE	0.02	2	0.01	
Argyropelecus aculeatus	0.02	4	0.01	
Stoloteuthis sp.	0.00	2		
Total	277.72		100.06	

PROJECT STATION: 965

DATE: 9/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2841
start stop duration Long E 1425
TIME :07:30:52 07:59:31 29 (min) Purpose code: 3
LOG :1657.91 1659.36 1.43 Area code : 1
FDEPTH: 354 366 GearCond.code:
BDEPTH: 354 366 Validity code:
Towing dir: ø Wire out: 990 m Speed: 31 kn*10

Sorted: 359 Kg Total catch: 359.60 CATCH/HOUR: 744.00

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	268.97	1194	36.15	8427
Merluccius capensis	124.14	81	16.69	8426
Merluccius paradoxus	111.72	139	15.02	8428
Helicolenus dactylopterus	72.41	279	9.73	8429
Genypterus capensis	60.00	41	8.06	8430
Caelorinchus simorhynchus	37.24		5.01	
MYCTOPHIDAE	17.59		2.36	
Epigonus sp.	16.55	207	2.22	
Scyliorhinus capensis	10.34	12	1.39	
Todarodes angolensis - males	9.10	21	1.22	8431
Todarodes angolensis - females	7.03	12	0.94	8432
Centrolophus niger	4.14	2	0.56	
Malacocephalus laevis	3.89	21	0.52	
Galeus polli	0.50	4	0.07	
Photichthys argenteus	0.19	6	0.03	
Maurolicus muelleri	0.10		0.01	
Symbolophorus boops	0.04	4	0.01	
Lucigadus ori	0.02	2		
Hoplostethus mediterraneus	0.02	2		
Total	743.99		99.99	

PROJECT STATION: 966

DATE: 9/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2842
start stop duration Long E 1430
TIME :09:37:26 10:07:15 30 (min) Purpose code: 3
LOG :1667.11 1668.59 1.46 Area code : 1
FDEPTH: 223 266 GearCond.code:
BDEPTH: 223 266 Validity code:
Towing dir: 260ø Wire out: 700 m Speed: 30 kn*10

Sorted: 250 Kg Total catch: 250.22 CATCH/HOUR: 500.44

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Zeus capensis	202.00	840	40.36	8436
Lepidopus caudatus	188.00		37.57	
Congiopodus torvus	22.00	16	4.40	
Merluccius capensis	18.00	18	3.60	8433
Squalus megalops	13.00	26	2.60	
Helicolenus dactylopterus	12.00	146	2.40	8435
Thyrsites atun	10.00	4	2.00	8437
Squalus acanthias	9.00	16	1.80	
Holohalaelurus regani	8.00	28	1.60	
Merluccius paradoxus	8.00	88	1.60	8434
Callanthias legras	5.06	94	1.01	
Scyliorhinus capensis	2.00	8	0.40	
Chelidonichthys queketti	1.72	8	0.34	
Caelorinchus simorhynchus	0.80	14	0.16	
Todarodes angolensis - females	0.24	2	0.05	8439
Todaropsis eblanae	0.20	4	0.04	8438
Epigonus sp.	0.14	2	0.03	
Malacocephalus laevis	0.14	2	0.03	
Notopogon macrosolen	0.12	6	0.02	
Paracallionymus costatus	0.02	2		
Total	500.44		100.01	

PROJECT STATION: 967

DATE: 9/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2842
start stop duration Long E 1436
TIME :11:58:37 12:28:27 30 (min) Purpose code: 3
LOG :1681.09 1682.68 1.59 Area code : 1
FDEPTH: 178 178 GearCond.code:
BDEPTH: 178 178 Validity code:
Towing dir: 360ø Wire out: 571 m Speed: 31 kn*10

Sorted: 140 Kg Total catch: 140.65 CATCH/HOUR: 281.30

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	136.00	256	48.35	
Zeus capensis	26.00	190	9.24	8444
Callorhinchus capensis	24.00	18	8.53	
Thyrsites atun	21.00	20	7.47	8443
Squalus megalops	20.00	46	7.11	
Emmelichthys nitidus	12.00	316	4.27	
Chelidonichthys queketti	8.00	46	2.84	8446
Merluccius capensis	8.00	6	2.84	8440
Chelidonichthys capensis	6.00	10	2.13	8445
Lophius vomerinus	6.00	6	2.13	8442
Mustelus palumbes	4.00	2	1.42	
Congiopodus spinifer	4.00	24	1.42	
Raja wallacei	2.20	4	0.78	
Trachurus capensis	2.00	14	0.71	8441
Todarodes angolensis	1.30	2	0.46	8448
Scyliorhinus capensis	0.28	2	0.10	
Sepia australis	0.24	4	0.09	
Todaropsis eblanae	0.18	4	0.06	8447
Notopogon macrosolen	0.10	4	0.04	
Abraliopsis gilchristi	0.00	2		
Total	281.30		99.99	

PROJECT STATION: 968

DATE: 9/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2834

start stop duration Long E 1446
TIME :14:22:44 14:53:31 31 (min) Purpose code: 3
LOG :1696.54 1698.14 1.60 Area code : 1
FDEPTH: 203 202 GearCond.code:
BDEPTH: 203 202 Validity code:
Towing dir: 360ø Wire out: 616 m Speed: 30 kn*10

Sorted: 223 Kg Total catch: 223.68 CATCH/HOUR: 432.93

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	176.13		40.68	
Merluccius capensis	73.55	112	16.99	8449
Merluccius paradoxus	46.45	1028	10.73	8450
Lophius vomerinus	27.10	10	6.26	8455
Zeus capensis	21.29	223	4.92	8458
Thyrsites atun	17.42	14	4.02	8456
Squalus megalops	15.48	39	3.58	
Etrumeus whiteheadi	13.55		3.13	
Chelidonichthys queketti	6.00	41	1.39	8460
Holohalaelurus regani	5.81	23	1.34	
Chelidonichthys capensis	4.84	12	1.12	8459
Sepia australis	4.72		1.09	
Callorhinchus capensis	3.87	4	0.89	
Congiopodus torvus	2.71	2	0.63	
Todaropsis eblanae	2.32	54	0.54	8461
Raja straeleni	1.94	2	0.45	
Trachurus capensis	1.94	12	0.45	8452
Arnoglossus capensis	1.55		0.36	
Paracallionymus costatus	1.30	168	0.30	
Emmelichthys nitidus	1.16	10	0.27	
Genypterus capensis	1.16	4	0.27	8457
Helicolenus dactylopterus	0.83	72	0.19	8453
Cynoglossus zanzibarensis	0.77	6	0.18	8454
Raja wallacei	0.68	2	0.16	
Merluccius paradoxus, juvenile	0.21	31	0.05	8451
Congiopodus spinifer	0.15	2	0.03	
Total	432.93		100.02	

PROJECT STATION: 969
DATE: 9/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2830
start stop duration Long E 1444
TIME :15:57:49 16:26:33 29 (min) Purpose code: 3
LOG :1704.44 1705.97 1.52 Area code : 1
FDEPTH: 204 205 GearCond.code:
BDEPTH: 204 205 Validity code:
Towing dir: 345ø Wire out: 625 m Speed: 31 kn*10

Sorted: 164 Kg Total catch: 164.32 CATCH/HOUR: 339.97

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	128.28		37.73	
Merluccius paradoxus	47.59	923	14.00	8463
Merluccius capensis	45.52	52	13.39	8462
Zeus capensis	22.76	230	6.69	8471
Etrumeus whiteheadi	19.66		5.78	
Thyrsites atun	12.41	12	3.65	8469
Squalus megalops	10.34	23	3.04	
Holohalaelurus regani	7.86	33	2.31	
Chelidonichthys capensis	7.45	14	2.19	8472
Caelorinchus simorhynchus	6.21	54	1.83	
Lophius vomerinus	6.21	2	1.83	8468
Chelidonichthys queketti	5.17	39	1.52	8473
Raja straeleni	4.14	2	1.22	
Sepia australis	3.72		1.09	
Merluccius paradoxus	3.10	6	0.91	8464
Todaropsis eblanae	2.07	50	0.61	8474
Genypterus capensis	2.07	8	0.61	8470
Congiopodus spinifer	0.91	4	0.27	
Todarodes angolensis - females	0.83	2	0.24	8475
Helicolenus dactylopterus	0.83	60	0.24	8467
Arnoglossus capensis	0.70	46	0.21	
Trachurus capensis	0.68	4	0.20	8466
Paracallionymus costatus	0.62	116	0.18	
Emmelichthys nitidus	0.52	2	0.15	
Merluccius paradoxus, juvenile	0.27	27	0.08	8465
Macropipus sp.	0.06	2	0.02	
Notopogon macrosolen	0.00	2		
Total	339.98		99.99	

PROJECT STATION: 970
DATE:10/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2853
start stop duration Long E 1424
TIME :04:41:40 05:11:14 30 (min) Purpose code: 3
LOG :1763.73 1765.25 1.48 Area code : 1
FDEPTH: 437 449 GearCond.code:
BDEPTH: 437 449 Validity code:
Towing dir: 350ø Wire out:1300 m Speed: 31 kn*10

Sorted: 147 Kg Total catch: 147.53 CATCH/HOUR: 295.06

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Krill	112.00		37.96	
Merluccius paradoxus	44.00	90	14.91	8476
Helicolenus dactylopterus	42.00	110	14.23	8477
Caelorinchus simorhynchus	36.00	460	12.20	
Genypterus capensis	16.00	8	5.42	8478
Raja confundens	14.00	12	4.74	
Raja wallacei	10.00	2	3.39	
Holohalaelurus regani	6.60	24	2.24	
Raja leopardus	5.00	4	1.69	
Malacocephalus laevis	3.00	12	1.02	
Epigonus sp.	2.04	262	0.69	
Todarodes angolensis - males	1.08	2	0.37	8479
Etmopterus brachyurus	0.80	32	0.27	
Physiculus capensis	0.78	52	0.26	
Photichthys argenteus	0.24	18	0.08	
MYCTOPHIDAE	0.24		0.08	
Lucigadus ori	0.24	22	0.08	
Notacanthus sexspinis	0.22	4	0.07	
Tripterophycis gilchristi	0.22	12	0.07	
Symbolophorus boops	0.20	24	0.07	
Myxine capensis	0.12	2	0.04	
Rossia enigmatica	0.08	2	0.03	
Lycoteuthis lorigera	0.08	10	0.03	
Gymnoscopelus sp.	0.04	6	0.01	
Champsodon capensis	0.04	2	0.01	
Stoloteuthis sp.	0.02	2	0.01	
Paracallionymus costatus	0.02	4	0.01	
Hoplostethus mediterraneus	0.00	4		
Total	295.06		99.98	

PROJECT STATION: 971
DATE:10/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2901
start stop duration Long E 1428
TIME :07:47:18 08:18:11 31 (min) Purpose code: 3
LOG :1779.48 1781.11 1.56 Area code : 1
FDEPTH: 333 345 GearCond.code:
BDEPTH: 333 345 Validity code:
Towing dir: 340ø Wire out: 955 m Speed: 31 kn*10

Sorted: 724 Kg Total catch: 724.35 CATCH/HOUR: 1401.97

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	584.52	4603	41.69	8481
Epigonus sp.	236.13		16.84	
Lepidopus caudatus	85.16	180	6.07	
Helicolenus dactylopterus	75.48	540	5.38	8483
Caelorinchus simorhynchus	63.87		4.56	
Scyliorhinus capensis	58.06	128	4.14	
Merluccius capensis	58.06	52	4.14	8480
Merluccius capensis	58.06	52	4.14	8480
Holohalaelurus regani	56.13	155	4.00	
Zeus capensis	48.39	64	3.45	8487
Merluccius paradoxus	35.81	46	2.55	8482
Genypterus capensis	29.03	25	2.07	8486
Callorhinchus capensis	13.55	6	0.97	
Brama brama	11.61	12	0.83	8488
Thyrsites atun	9.68	6	0.69	8485
Todarodes angolensis - males	8.32	21	0.59	8489
Todarodes angolensis - females	7.74	15	0.55	8490
Malacocephalus laevis	6.77	23	0.48	
Galeus polli	6.39	52	0.46	
Raja confundens	2.32	2	0.17	
Beryx splendens	2.13	23	0.15	
Cruriraja parcomaculata	0.97	2	0.07	
Cynoglossus zanzibarensis	0.97	23	0.07	8484
Cyttus traversi	0.74	8	0.05	
Rossia enigmatica	0.06	2		
Physiculus capensis	0.04	2		
Paracallionymus costatus	0.02	2		
Lucigadus ori	0.02	2		
Total	1460.03		104.11	

PROJECT STATION: 972
DATE:10/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2905
start stop duration Long E 1425
TIME :10:03:44 10:33:36 30 (min) Purpose code: 3
LOG :1788.47 1790.04 1.56 Area code : 1
FDEPTH: 453 447 GearCond.code:
BDEPTH: 453 447 Validity code:
Towing dir: 170ø Wire out:1280 m Speed: 30 kn*10

Sorted: 172 Kg Total catch: 172.05 CATCH/HOUR: 344.10

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	172.00	258	49.99	8491
Genypterus capensis	30.00	16	8.72	8495
Lepidopus caudatus	24.00	26	6.97	
Merluccius paradoxus	24.00	92	6.97	8492
Caelorinchus simorhynchus	18.80		5.46	
Octopus magnificus	12.00	2	3.49	
Krill	12.00		3.49	
Todarodes angolensis - males	10.00	26	2.91	8497
Bassanago albescens	9.00	22	2.62	
Todarodes angolensis - females	8.00	18	2.32	8498
Lophius vomerinus	6.00	4	1.74	8494
Photichthys argenteus	3.28		0.95	
Zeus capensis	3.00	4	0.87	8496
Rossia enigmatica	2.82	90	0.82	
Helicolenus dactylopterus	2.60	14	0.76	8493
Malacocephalus laevis	2.00	10	0.58	
Lucigadus ori	1.24	128	0.36	
Symbolophorus boops	0.76	58	0.22	
Beryx splendens	0.60	6	0.17	
Funchalia woodwardi	0.40		0.12	
Epigonus sp.	0.30	24	0.09	
Physiculus capensis	0.28	32	0.08	
Gymnoscopelus sp.	0.24	34	0.07	
Hoplostethus mediterraneus	0.18	4	0.05	
Bathynectes piperitus	0.14	6	0.04	
Tripterophycis gilchristi	0.12	4	0.03	
Myxine capensis	0.12	2	0.03	
Diaphus effulgens	0.10	6	0.03	
Paracallionymus costatus	0.08	14	0.02	
Psychrolutes macrocephalus	0.02	2	0.01	
Electrona risso	0.02	4	0.01	
Total	344.10		99.99	

PROJECT STATION: 973
DATE:10/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2914
start stop duration Long E 1430
TIME :12:31:07 13:01:09 30 (min) Purpose code: 3
LOG :1801.91 1803.46 1.55 Area code : 1
FDEPTH: 451 447 GearCond.code:
BDEPTH: 451 447 Validity code:
Towing dir: 345ø Wire out:1290 m Speed: 30 kn*10

Sorted: 244 Kg Total catch: 244.13 CATCH/HOUR: 488.26

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	316.00	620	64.72	8500
Merluccius paradoxus	100.00	428	20.48	8499
Photichthys argenteus	16.60		3.40	
Caelorinchus simorhynchus	16.60		3.40	
Genypterus capensis	12.00	6	2.46	8503
Todarodes angolensis - females	6.40	14	1.31	8505
Bassanago albescens	3.40	6	0.70	
Helicolenus dactylopterus	3.20	26	0.66	8501
Todarodes angolensis - males	2.20	6	0.45	8504
Torpedo nobiliana	1.80	2	0.37	
Lucigadus ori	1.80		0.37	
Symbolophorus boops	1.40		0.29	
Hoplostethus mediterraneus	1.04	2	0.21	
Coelorinchus braueri	1.00	66	0.20	
Rossia enigmatica	0.82	32	0.17	
Octopus magnificus	0.80	2	0.16	
Holohalaelurus regani	0.80	2	0.16	
Psychrolutes macrocephalus	0.72	4	0.15	
Beryx splendens	0.56	6	0.11	
Lycoteuthis lorigera	0.26		0.05	
Physiculus capensis	0.20	16	0.04	
Epigonus sp.	0.16	16	0.03	
Cynoglossus zanzibarensis	0.16	2	0.03	8502
Tripterophycis gilchristi	0.14	8	0.03	
Diaphus effulgens	0.14	12	0.03	
Stereomastis sp.	0.02	4		
Lepidion capensis	0.02	2		
Gymnoscopelus sp.	0.02	2		
Paracallionymus costatus	0.00	2		
Total	488.26		99.98	

PROJECT STATION: 974

DATE:10/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 2921
start stop duration Long E 1429
TIME :15:26:03 15:56:05 30 (min) Purpose code: 3
LOG :1818.27 1819.84 1.56 Area code : 1
FDEPTH: 538 540 GearCond.code:
BDEPTH: 538 540 Validity code:
Towing dir: 345ø Wire out:1532 m Speed: 30 kn*10

Sorted: 100 Kg Total catch: 126.17 CATCH/HOUR: 252.34

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	102.70	86	40.70	8506
Funchalia woodwardi	60.72		24.06	
Raja confundens	15.60	16	6.18	
Nezumia micronychodon	12.14	530	4.81	
Selachophidium guentheri	11.04	248	4.38	
Lophius vomerinus	11.00	16	4.36	8507
Todarodes angolensis - males	6.20	14	2.46	8508
Photichthys argenteus	6.08		2.41	
Etmopterus brachyurus	5.52	292	2.19	
Todarodes angolensis - females	4.40	8	1.74	8509
Chaceon maritae	4.20	38	1.66	
Coelorinchus braueri	3.58	226	1.42	
Lithodes ferox	3.36	12	1.33	
Psychrolutes macrocephalus	2.20	6	0.87	
Bassanago albescens	1.40	6	0.55	
Myxine capensis	1.04	12	0.41	
Notacanthus sexspinis	0.56	6	0.22	
Electrona risso	0.20	6	0.08	
Rossia enigmatica	0.16	6	0.06	
Symbolophorus boops	0.14	22	0.06	
Stereomastis sp.	0.06	16	0.02	
Stoloteuthis sp.	0.02	6	0.01	
Lycoteuthis lorigera	0.02	6	0.01	
Total	252.34		99.99	

PROJECT STATION: 975

DATE:11/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2954
start stop duration Long E 1502
TIME :04:47:34 05:17:27 30 (min) Purpose code: 3
LOG :1896.25 1897.80 1.52 Area code : 1
FDEPTH: 374 377 GearCond.code:
BDEPTH: 374 377 Validity code:
Towing dir: 335ø Wire out:1080 m Speed: 31 kn*10

Sorted: 348 Kg Total catch: 348.77 CATCH/HOUR: 697.54

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	360.00	1718	51.61	8511
Merluccius paradoxus	132.00	158	18.92	8512
Helicolenus dactylopterus	68.00	258	9.75	8513
Merluccius capensis	32.00	16	4.59	8510
Holohalaelurus regani	20.00	64	2.87	
Genypterus capensis	17.00	10	2.44	8516
Lophius vomerinus	16.00	6	2.29	8515
Squalus mitsukurii	15.20	10	2.18	
Epigonus telescopus	14.00		2.01	
Ruvettus pretiosus	10.00	2	1.43	
Lepidopus caudatus	3.00	6	0.43	
Todarodes angolensis - males	3.00	8	0.43	8518
Hydrolagus africanus	1.80	2	0.26	
Todarodes angolensis - females	1.80	4	0.26	8519
Hoplostethus cadenati	1.32	42	0.19	
Cynoglossus zanzibarensis	0.62	8	0.09	8514
Photichthys argenteus	0.42		0.06	
Rossia enigmatica	0.40	22	0.06	
Paracallionymus costatus	0.40	52	0.06	
Scyliorhinus capensis	0.32	2	0.05	
Tripterophycis gilchristi	0.08	6	0.01	
Nezumia micronychodon	0.06	2	0.01	
Symbolophorus boops	0.04	4	0.01	
Physiculus capensis	0.02	2		
Lycoteuthis lorigera	0.02	2		
Sepia hieronis	0.02	2		
Lophius vomerinus	0.02	2		8517
Lampanyctodes hectoris	0.00	4		
Total	697.54		100.01	

PROJECT STATION: 976

DATE:11/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3006
start stop duration Long E 1447
TIME :08:15:01 08:46:59 32 (min) Purpose code: 3
LOG :1918.85 1920.48 1.62 Area code : 1
FDEPTH: 499 503 GearCond.code:
BDEPTH: 499 503 Validity code:
Towing dir: 170ø Wire out:1400 m Speed: 31 kn*10

Sorted: 119 Kg Total catch: 119.03 CATCH/HOUR: 223.18

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	108.75	248	48.73	8520
Helicolenus dactylopterus	58.13	324	26.05	8521
Lophius vomerinus	11.25	15	5.04	8522
Coelorinchus braueri	9.38		4.20	
Hydrolagus africanus	5.63	11	2.52	
Malacocephalus laevis	3.75	17	1.68	
Caelorinchus simorhynchus	3.75		1.68	
Notacanthus sexspinis	3.38	53	1.51	
Bassanago albescens	2.91	9	1.30	
Funchalia woodwardi	2.63		1.18	
Raja leopardus	2.44	2	1.09	
Raja confundens	2.44	4	1.09	
Selachophidium guentheri	2.25	51	1.01	
Todarodes angolensis - males	1.88	4	0.84	8523
Coelorinchus matamua	1.61	38	0.72	
Psychrolutes macrocephalus	0.58	4	0.26	
Myxine capensis	0.45	6	0.20	
Rossia enigmatica	0.45	26	0.20	
Scopelosaurus herwigi	0.39	2	0.17	
Lucigadus ori	0.38	32	0.17	
Photichthys argenteus	0.30	15	0.13	
Paracallionymus costatus	0.13	28	0.06	
Lycoteuthis lorigera	0.11	8	0.05	
Kuronezumia leonis	0.09	2	0.04	
Epigonus sp.	0.04	2	0.02	
Tripterophycis gilchristi	0.04	2	0.02	
Gymnoscopelus sp.	0.04	6	0.02	
Hoplostethus mediterraneus	0.02	2	0.01	
Symbolophorus boops	0.02	2	0.01	
Electrona risso	0.00	2		
Total	223.22		100.00	

PROJECT STATION: 977

DATE:11/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3019
start stop duration Long E 1448
TIME :11:44:49 12:14:37 30 (min) Purpose code: 3
LOG :1937.64 1939.22 1.58 Area code : 1
FDEPTH: 630 632 GearCond.code:
BDEPTH: 630 632 Validity code:
Towing dir: 315ø Wire out:1701 m Speed: 30 kn*10

Sorted: 163 Kg Total catch: 264.79 CATCH/HOUR: 529.58

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Coelorinchus braueri	116.00		21.90	
Ruvettus pretiosus	96.00	8	18.13	
Merluccius paradoxus	64.00	54	12.09	8524
Funchalia woodwardi	58.00		10.95	
Chaceon maritae	41.76		7.89	
Lophius vomerinus	21.72	4	4.10	8526
Bathyraja smithii	20.00	4	3.78	
Selachophidium guentheri	19.72	214	3.72	
Malacocephalus laevis	19.14	64	3.61	
Etmopterus brachyurus	17.40	156	3.29	
Trachyscorpia capensis	11.60	174	2.19	
Photichthys argenteus	11.60		2.19	
Raja leopardus	8.04	12	1.52	
Raja confundens	7.42	20	1.40	
Oreosoma atlanticum	5.04	34	0.95	
Nezumia micronychodon	2.90		0.55	
Notacanthus sexspinis	2.90	70	0.55	
Deania profundorum	2.00	2	0.38	
Bassanago albescens	0.92	6	0.17	
GEMPYLIDAE	0.80	6	0.15	
Neoscopelus macrolepidotus	0.40	24	0.08	
Psychrolutes macrocephalus	0.40	12	0.08	
Myxine capensis	0.40	6	0.08	
Lophius vomerinus	0.28	2	0.05	8525
Malacosteus niger	0.24	6	0.05	
Scopelosaurus herwigi	0.24	6	0.05	
Gymnoscopelus sp.	0.18	24	0.03	
Bathophilus longipinnis	0.12	12	0.02	
Nemichthys curvirostris	0.12	6	0.02	
Symbolophorus boops	0.06	6	0.01	
Stereomastis sp.	0.06	6	0.01	
Argyropelecus aculeatus	0.06	6	0.01	
Lucigadus ori	0.06	12	0.01	
Total	529.58		100.01	

PROJECT STATION: 978

DATE:11/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3024
start stop duration Long E 1500
TIME :15:16:53 15:46:55 30 (min) Purpose code: 3
LOG :1958.93 1960.58 1.88 Area code : 1
FDEPTH: 531 533 GearCond.code:
BDEPTH: 531 533 Validity code:
Towing dir: 310ø Wire out:1484 m Speed: 30 kn*10

Sorted: 379 Kg Total catch: 379.40 CATCH/HOUR: 758.80

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Oreosoma atlanticum	442.00	3642	58.25	8528
Merluccius paradoxus	114.00	126	15.02	8527
Helicolenus dactylopterus	84.00	396	11.07	8529
Chaceon maritae	32.00	390	4.22	
Hydrolagus africanus	26.00	68	3.43	
Coelorinchus braueri	12.00		1.58	
Lophius vomerinus	9.00	10	1.19	8532
Etmopterus brachyurus	6.80	48	0.90	
Malacocephalus laevis	6.40	20	0.84	
Selachophidium guentheri	6.00		0.79	
Coelorinchus matamua	6.00		0.79	
Raja confundens	3.70	28	0.49	
Todarodes angolensis - females	3.00	4	0.40	8531
Squalus mitsukurii	3.00	2	0.40	
Raja leopardus	1.20	10	0.16	
Todarodes angolensis - males	1.00	2	0.13	8530
Holohalaelurus regani	0.80	2	0.11	
Bassanago albescens	0.70	4	0.09	
Scopelosaurus herwigi	0.44	6	0.06	
Notacanthus sexspinis	0.40	6	0.05	
Bathypolypus valdiviae	0.12	2	0.02	
Myxine capensis	0.10	2	0.01	
Tripterophycis gilchristi	0.06	2	0.01	
Rossia enigmatica	0.04	2	0.01	
Symbolophorus boops	0.04	4	0.01	
Total	758.80		100.03	

PROJECT STATION: 979

DATE:11/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3019
start stop duration Long E 1507
TIME :17:17:51 17:47:03 29 (min) Purpose code: 3
LOG :1970.07 1971.59 1.50 Area code : 1
FDEPTH: 406 376 GearCond.code:
BDEPTH: 406 376 Validity code:
Towing dir: 90ø Wire out:1190 m Speed: 31 kn*10

Sorted: 139 Kg Total catch: 139.90 CATCH/HOUR: 289.45

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	84.83	387	29.31	8534
Helicolenus dactylopterus	60.00	339	20.73	8536
Merluccius paradoxus	60.00	56	20.73	8535
Squalus mitsukurii	26.90	17	9.29	
Caelorinchus simorhynchus	12.41		4.29	
Merluccius capensis	10.34	4	3.57	8533
Bassanago albescens	8.28	17	2.86	
Epigonus sp.	6.41	124	2.21	
Lophius vomerinus	5.17	4	1.79	8537
Octopus magnificus	4.76	4	1.64	
Todarodes angolensis - females	3.72	4	1.29	8539
Genypterus capensis	3.10	2	1.07	8538
Malacocephalus laevis	1.08	6	0.37	
Beryx splendens	0.58	2	0.20	
Physiculus capensis	0.50	27	0.17	
Tripterophycis gilchristi	0.23	14	0.08	
Hoplostethus mediterraneus	0.23	2	0.08	
Rossia enigmatica	0.19	8	0.07	
Paracallionymus costatus	0.19		0.07	
Lucigadus ori	0.19	27	0.07	
Champsodon capensis	0.10	8	0.03	
Raja leopardus	0.06	2	0.02	
Stereomastis sp.	0.04	8	0.01	
Lycoteuthis lorigera	0.04	2	0.01	
Bathypolypus valdiviae	0.04	2	0.01	
Symbolophorus boops	0.04	2	0.01	
Photichthys argenteus	0.02	2	0.01	
Total	289.45		99.99	

PROJECT STATION: 980

DATE:12/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2941
start stop duration Long E 1528
TIME :04:49:31 05:20:26 31 (min) Purpose code: 3
LOG :2037.94 2039.57 1.59 Area code : 1
FDEPTH: 196 196 GearCond.code:
BDEPTH: 196 196 Validity code:
Towing dir: 358ø Wire out: 600 m Speed: 31 kn*10

Sorted: 456 Kg Total catch: 456.87 CATCH/HOUR: 884.26

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	334.84	4018	37.87	
Chelidonichthys capensis	187.74	443	21.23	8551
Merluccius capensis	147.10	105	16.64	8541
Callorhinchus capensis	50.32	33	5.69	
Lophius vomerinus	29.03	17	3.28	8547
Squalus megalops	23.23	60	2.63	
Thyrsites atun	23.23	15	2.63	8548
Chelidonichthys queketti	14.90	166	1.69	8552
Trachurus capensis	9.68	45	1.09	8544
Sepia australis	8.71	1090	0.99	
Raja straeleni	7.74	8	0.88	
Emmelichthys nitidus	6.58	120	0.74	
Raja wallacei	5.81	2	0.66	
Paracallionymus costatus	5.03	718	0.57	
Zeus capensis	4.45	52	0.50	8550
Helicolenus dactylopterus	4.45	75	0.50	8545
Squalus mitsukurii	3.87	2	0.44	
Congiopodus torvus	3.10	2	0.35	
Cynoglossus zanzibarensis	2.90	39	0.33	8546
Congiopodus spinifer	2.32	19	0.26	
Mustelus palumbes	1.94	2	0.22	
Holohalaelurus regani	1.43	39	0.16	
Arnoglossus capensis	1.35	108	0.15	
Genypterus capensis	0.97	2	0.11	8549
Merluccius capensis	0.97	4	0.11	8540
Merluccius paradoxus	0.77	2	0.09	8542
Merluccius paradoxus, juvenile	0.72	217	0.08	8543
Scyliorhinus capensis	0.29	2	0.03	
Lolligoncula mercatoris	0.21	83	0.02	
Todaropsis eblanae	0.21	6	0.02	8553
Caelorinchus simorhynchus	0.19		0.02	
Champsodon capensis	0.10	8	0.01	
Physiculus capensis	0.08	4	0.01	
Total	884.26		100.00	

PROJECT STATION: 981

DATE:12/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2933
start stop duration Long E 1543
TIME :07:42:16 08:12:10 30 (min) Purpose code: 3
LOG :2056.61 2058.19 1.54 Area code : 1
FDEPTH: 179 179 GearCond.code:
BDEPTH: 179 179 Validity code:
Towing dir: 70ø Wire out: 550 m Speed: 31 kn*10

Sorted: 261 Kg Total catch: 398.71 CATCH/HOUR: 797.42

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Etrumeus whiteheadi	360.18		45.17	
Merluccius capensis	280.00	316	35.11	8554
Sepia australis	31.32	3132	3.93	
Chelidonichthys capensis	16.00	34	2.01	8563
Lophius vomerinus	16.00	48	2.01	8560
Holohalaelurus regani	15.80	58	1.98	
Merluccius paradoxus	15.66	302	1.96	8555
Merluccius paradoxus, juvenile	14.10	2210	1.77	8556
Helicolenus dactylopterus	12.52	690	1.57	8558
Raja straeleni	8.00	8	1.00	
Paracallionymus costatus	4.18	444	0.52	
Callorhinchus capensis	4.00	2	0.50	
Squalus mitsukurii	4.00	4	0.50	
Thyrsites atun	4.00	4	0.50	8561
Congiopodus spinifer	2.78	20	0.35	
Chelidonichthys queketti	2.00	14	0.25	8564
Trachurus capensis	2.00	6	0.25	8557
Todaropsis eblanae - females	1.52	32	0.19	8566
Todaropsis eblanae - males	1.46	32	0.18	8565
Lepidopus caudatus	1.18	20	0.15	
Cynoglossus zanzibarensis	0.52	10	0.07	8559
Zeus capensis	0.18	6	0.02	8562
Arnoglossus capensis	0.02	6		
Total	797.42		99.99	

PROJECT STATION: 982

DATE:12/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2926
start stop duration Long E 1559
TIME :10:28:45 10:58:32 30 (min) Purpose code: 3
LOG :2073.14 2074.70 1.55 Area code : 1
FDEPTH: 177 179 GearCond.code:
BDEPTH: 177 179 Validity code:
Towing dir: 165ø Wire out: 555 m Speed: 30 kn*10

Sorted: 134 Kg Total catch: 172.38 CATCH/HOUR: 344.76

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	66.00	142	19.14	8567
Etrumeus whiteheadi	57.66		16.72	
Sepia australis	44.64		12.95	
Chelidonichthys capensis	38.00	86	11.02	8574
Merluccius paradoxus	27.32	582	7.92	8568
Brama brama	22.00	12	6.38	8575
Lepidopus caudatus	19.80	36	5.74	
Paracallionymus costatus	16.74		4.86	
Helicolenus dactylopterus	15.82	1338	4.59	8571
Lophius vomerinus	15.00	36	4.35	8572
Raja straeleni	8.00	8	2.32	
Merluccius paradoxus, juvenile	6.80	784	1.97	8569
Holohalaelurus regani	3.20	22	0.93	
Congiopodus spinifer	1.16	10	0.34	
Genypterus capensis	0.92	6	0.27	8573
Trachurus capensis	0.80	2	0.23	8570
Todaropsis eblanae - males	0.70	18	0.20	8576
Sardinops ocellatus	0.18	4	0.05	
Lolligoncula mercatoris	0.02	12	0.01	
Total	344.76		99.99	

PROJECT STATION: 983

DATE:12/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2916
start stop duration Long E 1616
TIME :13:40:51 14:10:41 30 (min) Purpose code: 3
LOG :2095.79 2097.35 1.56 Area code : 1
FDEPTH: 158 159 GearCond.code:
BDEPTH: 158 159 Validity code:
Towing dir: 315ø Wire out: 515 m Speed: 30 kn*10

Sorted: 88 Kg Total catch: 88.11 CATCH/HOUR: 176.22

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	80.00	1966	45.40	8578
Sepia australis	36.00	1440	20.43	
Merluccius capensis	30.00	160	17.02	8577
Thyrsites atun	6.00	2	3.40	8584
Helicolenus dactylopterus	6.00	496	3.40	8581
Raja straeleni	4.00	2	2.27	
Chelidonichthys capensis	4.00	12	2.27	8586
Merluccius paradoxus, juvenile	4.00	278	2.27	8579
Lampanyctodes hectoris	2.00		1.13	
Paracallionymus costatus	0.80	112	0.45	
Trachurus capensis	0.80	2	0.45	8580
Lophius vomerinus	0.74	4	0.42	8583
Lolligoncula mercatoris	0.60		0.34	
Cynoglossus zanzibarensis	0.36	10	0.20	8582
Todaropsis eblanae	0.30	12	0.17	8587
Genypterus capensis	0.28	2	0.16	8585
Squilla acuelata calmani	0.16	12	0.09	
Macropipus sp.	0.08	2	0.05	
Lepidopus caudatus	0.08	4	0.05	
Maurolicus muelleri	0.02		0.01	
Total	176.22		99.98	

PROJECT STATION: 984

DATE:12/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2907
start stop duration Long E 1632
TIME :16:29:56 16:59:45 30 (min) Purpose code: 3
LOG :2117.58 2119.26 1.64 Area code : 1
FDEPTH: 127 131 GearCond.code:
BDEPTH: 127 131 Validity code:
Towing dir: 300ø Wire out: 400 m Speed: 31 kn*10

Sorted: 175 Kg Total catch: 175.39 CATCH/HOUR: 350.78

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	218.00	1834	62.15	8588
Merluccius capensis, juveniles	40.00	1612	11.40	8589
Krill	36.00		10.26	
Genypterus capensis	30.00	24	8.55	8592
Chelidonichthys capensis	6.80	18	1.94	8593
Callorhinchus capensis	6.00	2	1.71	
Jasus lalandii - male	2.70	22	0.77	
Austroglossus microlepis	2.60	8	0.74	8594
Lepidopus caudatus	2.00	92	0.57	
Sufflogobius bibarbatus	1.60	388	0.46	
Merluccius capensis	1.60	4	0.46	8590
Jasus lalandii - females	1.22	14	0.35	
Sebastes capensis	1.00	2	0.29	
Sepia australis	0.68	24	0.19	
Macropipus sp.	0.24	8	0.07	
Sepia hieronis	0.14	2	0.04	
Todaropsis eblanae	0.08	4	0.02	8595
Cynoglossus zanzibarensis	0.08	2	0.02	8591
Lolligoncula mercatoris	0.04	20	0.01	
Total	350.78		100.00	

PROJECT STATION: 985

DATE:13/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2936
start stop duration Long E 1636
TIME :04:41:50 05:12:54 31 (min) Purpose code: 3
LOG :2175.33 2177.04 1.67 Area code : 1
FDEPTH: 150 149 GearCond.code:
BDEPTH: 150 149 Validity code:
Towing dir: 350ø Wire out: 450 m Speed: 32 kn*10

Sorted: 78 Kg Total catch: 78.54 CATCH/HOUR: 152.01

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	45.48	1037	29.92	8597
Merluccius capensis	45.48	333	29.92	8596
Sepia australis	23.23	894	15.28	
Merluccius paradoxus, juvenile	19.22	1194	12.64	8598
Maurolicus muelleri	3.87		2.55	
Lepidopus caudatus	3.87	161	2.55	
Genypterus capensis	2.13	56	1.40	8601
Sufflogobius bibarbatus	1.94	277	1.28	
Squilla acuelata calmani	1.74	116	1.14	
Helicolenus dactylopterus	1.10	91	0.72	8599
Solenocera africana	1.03	91	0.68	
Paracallionymus costatus	0.81	135	0.53	
Todaropsis eblanae - females	0.79	17	0.52	8603
Cynoglossus zanzibarensis	0.58	14	0.38	8600
Macropipus sp.	0.39	17	0.26	
Todaropsis eblanae - males	0.25	4	0.16	8602
Caelorinchus simorhynchus	0.08	4	0.05	
Lampanyctodes hectoris	0.02		0.01	
Total	152.01		99.99	

PROJECT STATION: 986

DATE:13/ 2/05 GEAR TYPE: PT No: 2 POSITION:Lat S 2938
start stop duration Long E 1628
TIME :07:06:20 07:13:24 7 (min) Purpose code: 1
LOG :2188.30 2188.64 0.31 Area code : 1
FDEPTH: 65 65 GearCond.code:
BDEPTH: 152 153 Validity code:
Towing dir: 290ø Wire out: 160 m Speed: 40 kn*10

Sorted: 20 Kg Total catch: 20.00 CATCH/HOUR: 171.43

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Maurolicus muelleri	171.43		100.00	
Total	171.43		100.00	

PROJECT STATION: 987

DATE:13/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2941
start stop duration Long E 1621
TIME :08:38:16 09:08:33 30 (min) Purpose code: 3
LOG :2197.07 2198.67 1.58 Area code : 1
FDEPTH: 166 164 GearCond.code:
BDEPTH: 166 164 Validity code:
Towing dir: 230ø Wire out: 490 m Speed: 32 kn*10

Sorted: 83 Kg Total catch: 119.35 CATCH/HOUR: 238.70

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	46.76	1170	19.59	8606
Lophius vomerinus	43.42	230	18.19	8609
Sepia australis	33.40	2088	13.99	
Merluccius capensis	30.00	94	12.57	8604
Merluccius paradoxus, juvenile	27.38	2814	11.47	8605
Helicolenus dactylopterus	20.04	1654	8.40	8607
Galeorhinus galeus	18.00	2	7.54	
Raja straeleni	7.00	8	2.93	
Chelidonichthys capensis	4.00	14	1.68	8611
Paracallionymus costatus	2.14	268	0.90	
Cynoglossus zanzibarensis	2.08	50	0.87	8608
Todaropsis eblanae - females	1.20	30	0.50	8613
Genypterus capensis	0.88	8	0.37	8610
Holohalaelurus regani	0.80	26	0.34	
Caelorinchus simorhynchus	0.54	30	0.23	
Todaropsis eblanae - males	0.38	14	0.16	8612
Lepidopus caudatus	0.28	10	0.12	
Macropipus sp.	0.20	6	0.08	
Congiopodus spinifer	0.18	6	0.08	
Lolligoncula mercatoris	0.02	20	0.01	
Total	238.70		100.02	

PROJECT STATION: 988

DATE:13/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2948
start stop duration Long E 1609
TIME :11:33:45 12:03:32 30 (min) Purpose code: 3
LOG :2215.26 2216.87 1.60 Area code : 1
FDEPTH: 182 181 GearCond.code:
BDEPTH: 182 181 Validity code:
Towing dir: 335ø Wire out: 575 m Speed: 30 kn*10

Sorted: 141 Kg Total catch: 258.33 CATCH/HOUR: 516.66

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	160.64	3808	31.09	8616
Etrumeus whiteheadi	135.54		26.23	
Merluccius capensis	78.00	124	15.10	8614
Helicolenus dactylopterus	28.12	2208	5.44	8618
Sepia australis	27.10	1694	5.25	
Galeorhinus galeus	16.00	2	3.10	
Merluccius paradoxus, juvenile	13.56	1024	2.62	8617
Brama brama	10.00	8	1.94	8625
Raja wallacei	7.00	2	1.35	
Lophius vomerinus	7.00	36	1.35	8620
Paracallionymus costatus	6.62	166	1.28	
Holohalaelurus regani	5.78	56	1.12	
Raja straeleni	4.00	4	0.77	
Cynoglossus zanzibarensis	3.52	126	0.68	8619
Chelidonichthys capensis	3.40	10	0.66	8624
Merluccius paradoxus	2.40	12	0.46	8615
Genypterus capensis	1.60	12	0.31	8622
Lophius vomerinus	1.50	26	0.29	8621
Todaropsis eblanae - males	1.26	26	0.24	8626
Genypterus capensis	1.10	10	0.21	8623
Todaropsis eblanae - females	0.90	10	0.17	8627
Lepidopus caudatus	0.70	10	0.14	
Caelorinchus simorhynchus	0.50	20	0.10	
Congiopodus spinifer	0.42	16	0.08	
Total	516.66		99.98	

PROJECT STATION: 989

DATE:13/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2957
start stop duration Long E 1554
TIME :14:56:57 15:26:38 30 (min) Purpose code: 3
LOG :2238.19 2239.96 1.77 Area code : 1
FDEPTH: 198 201 GearCond.code:
BDEPTH: 198 201 Validity code:
Towing dir: 320ø Wire out: 616 m Speed: 30 kn*10

Sorted: 107 Kg Total catch: 107.17 CATCH/HOUR: 214.34

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	50.00	1126	23.33	8630
Sepia australis	30.00	1876	14.00	
Merluccius capensis	30.00	30	14.00	8628
Etrumeus whiteheadi	28.00	280	13.06	
Holohalaelurus regani	15.00	96	7.00	
Chelidonichthys capensis	14.00	26	6.53	8636
Lophius vomerinus	10.00	18	4.67	8634
Helicolenus dactylopterus	7.40	154	3.45	8632
Caelorinchus simorhynchus	7.20	120	3.36	
Raja straeleni	6.00	4	2.80	
Merluccius paradoxus, juvenile	3.00	602	1.40	8631
Cynoglossus zanzibarensis	2.22	48	1.04	8633
Genypterus capensis	2.00	12	0.93	8635
Emmelichthys nitidus	1.60	6	0.75	
Todarodes angolensis - females	1.50	2	0.70	8639
Todaropsis eblanae	1.48	48	0.69	8637
Paracallionymus costatus	1.44	144	0.67	
Maurolicus muelleri	1.00		0.47	
Merluccius paradoxus	1.00	4	0.47	8629
Todarodes angolensis - males	0.96	2	0.45	8638
Chelidonichthys queketti	0.42	2	0.20	
Congiopodus spinifer	0.10	2	0.05	
Lolligoncula mercatoris	0.02		0.01	
Total	214.34		100.03	

PROJECT STATION: 990

DATE:13/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3003
start stop duration Long E 1543
TIME :17:01:34 17:30:54 29 (min) Purpose code: 3
LOG :2252.74 2254.37 1.62 Area code : 1
FDEPTH: 214 216 GearCond.code:
BDEPTH: 214 216 Validity code:
Towing dir: 230ø Wire out: 616 m Speed: 31 kn*10

Sorted: 104 Kg Total catch: 104.78 CATCH/HOUR: 216.79

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	134.48	2332	62.03	8641
Malacocephalus laevis	16.55	74	7.63	
Helicolenus dactylopterus	9.52	174	4.39	8644
Holohalaelurus regani	9.31	50	4.29	
Lampanyctodes hectoris	6.21		2.86	
Chelidonichthys capensis	5.79	8	2.67	8648
Merluccius capensis	5.17	8	2.38	8640
Lepidopus caudatus	4.76	29	2.20	
Trachurus capensis	4.55	25	2.10	8643
Todarodes angolensis - females	2.90	4	1.34	8650
Genypterus capensis	2.90	4	1.34	8647
Sepia australis	2.69		1.24	
Merluccius paradoxus, juvenile	2.52	360	1.16	8642
Caelorinchus simorhynchus	1.86	27	0.86	
Lophius vomerinus	1.66	2	0.77	8646
Raja wallacei	1.45	2	0.67	
Paracallionymus costatus	1.24		0.57	
Cynoglossus zanzibarensis	1.03	19	0.48	8645
Etrumeus whiteheadi	0.83	8	0.38	
Emmelichthys nitidus	0.62	10	0.29	
Chelidonichthys queketti	0.41	2	0.19	
Todaropsis eblanae	0.21	6	0.10	8649
Champsodon capensis	0.08	8	0.04	
Lolligoncula mercatoris	0.02		0.01	
Maurolicus muelleri	0.02		0.01	
Total	216.78		100.00	

PROJECT STATION: 991

DATE:14/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3023
start stop duration Long E 1552
TIME :04:43:38 05:12:46 29 (min) Purpose code: 3
LOG :2339.71 2341.33 1.57 Area code : 1
FDEPTH: 248 237 GearCond.code:
BDEPTH: 248 237 Validity code:
Towing dir: ø Wire out: 720 m Speed: 32 kn*10

Sorted: 141 Kg Total catch: 249.43 CATCH/HOUR: 516.06

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	295.24	5743	57.21	8653
Helicolenus dactylopterus	45.72	1792	8.86	8656
Merluccius capensis	43.45	50	8.42	8651
Galeorhinus galeus	31.03	2	6.01	
Callorhinchus capensis	22.76	14	4.41	
Merluccius paradoxus	13.45	31	2.61	8652
Holohalaelurus regani	8.28	37	1.60	
Caelorinchus simorhynchus	7.03	265	1.36	
Congiopodus torvus	7.03	4	1.36	
Genypterus capensis	6.21	12	1.20	8659
Lophius vomerinus	5.17	4	1.00	8658
Squalus mitsukurii	4.14	2	0.80	
Merluccius paradoxus, juvenile	3.52	662	0.68	8654
Cynoglossus zanzibarensis	3.17	41	0.61	8657
Todarodes angolensis - males	3.10	6	0.60	8661
Trachurus capensis	3.06	14	0.59	8655
Paracallionymus costatus	2.48		0.48	
Lepidopus caudatus	2.48	21	0.48	
Zeus capensis	2.07	25	0.40	
Mustelus palumbes	1.76	2	0.34	
Rossia enigmatica	1.26	52	0.24	
Malacocephalus laevis	1.12	4	0.22	
Todaropsis eblanae - females	0.97	10	0.19	8660
Emmelichthys nitidus	0.70	10	0.14	
Sepia australis	0.35	4	0.07	
Gonorhynchus gonorhynchus	0.19	4	0.04	
Champsodon capensis	0.14	10	0.03	
Congiopodus spinifer	0.08	4	0.02	
MYCTOPHIDAE	0.04	10	0.01	
Lolligoncula mercatoris	0.02	4		
Physiculus capensis	0.02	4		
Total	516.04		99.98	

PROJECT STATION: 992

DATE:14/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3015
start stop duration Long E 1606
TIME :07:51:48 08:21:46 30 (min) Purpose code: 3
LOG :2358.96 2360.64 1.53 Area code : 1
FDEPTH: 216 212 GearCond.code:
BDEPTH: 216 212 Validity code:
Towing dir: 54ø Wire out: 620 m Speed: 32 kn*10

Sorted: 131 Kg Total catch: 223.04 CATCH/HOUR: 446.08

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	324.20	7060	72.68	8664
Lophius vomerinus	20.00	28	4.48	8668
Etrumeus whiteheadi	15.40	154	3.45	
Merluccius capensis	12.00	14	2.69	8662
Holohalaelurus regani	10.00	52	2.24	
Helicolenus dactylopterus	9.20	470	2.06	8666
Callorhinchus capensis	9.00	4	2.02	
Sepia australis	6.20	364	1.39	
Caelorinchus simorhynchus	5.80		1.30	
Paracallionymus costatus	4.20		0.94	
Chelidonichthys capensis	4.00	10	0.90	8672
Thyrsites atun	4.00	2	0.90	8669
Merluccius paradoxus	3.64	8	0.82	8663
Squalus megalops	2.86	4	0.64	
Merluccius paradoxus, juvenile	2.48	394	0.56	8665
Todarodes angolensis - females	2.40	2	0.54	8674
Cynoglossus zanzibarensis	2.08	46	0.47	8667
Congiopodus spinifer	1.54	24	0.35	
Lolligoncula mercatoris	1.16		0.26	
Lepidopus caudatus	1.08		0.24	
Todaropsis eblanae - females	0.96		0.22	
Rossia enigmatica	0.84	38	0.19	
Todarodes angolensis - males	0.82	2	0.18	8673
Genypterus capensis	0.80	4	0.18	8670
Todaropsis eblanae - males	0.46		0.10	
Zeus capensis	0.38	8	0.09	8671
Ophichthus bennettai	0.32	2	0.07	
Emmelichthys nitidus	0.24	4	0.05	
Squilla acuelata calmani	0.02	4		
Total	446.08		100.01	

PROJECT STATION: 993

DATE:14/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3008
start stop duration Long E 1621
TIME :10:54:50 11:29:13 34 (min) Purpose code: 3
LOG :2377.09 2378.85 1.74 Area code : 1
FDEPTH: 187 187 GearCond.code:
BDEPTH: 187 187 Validity code:
Towing dir: 335ø Wire out: 606 m Speed: 30 kn*10

Sorted: 166 Kg Total catch: 280.49 CATCH/HOUR: 494.98

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	322.94	8638	65.24	8677
Merluccius capensis	26.47	46	5.35	8675
Etrumeus whiteheadi	18.18		3.67	
Sepia australis	17.47	1027	3.53	
Helicolenus dactylopterus	17.47	439	3.53	8679
Lophius vomerinus	15.88	23	3.21	8681
Raja straeleni	12.35	7	2.50	
Brama brama	10.59	5	2.14	8686
Chelidonichthys capensis	8.82	19	1.78	8684
Raja wallacei	7.06	4	1.43	
Callorhinchus capensis	7.06	4	1.43	
Genypterus capensis	5.29	19	1.07	8688
Paracallionymus costatus	4.06		0.82	
Holohalaelurus regani	3.79	18	0.77	
Thyrsites atun	3.53	2	0.71	8682
Merluccius paradoxus, juvenile	3.35	455	0.68	8678
Zeus capensis	2.98	37	0.60	8683
Merluccius paradoxus	2.29	7	0.46	8676
Cynoglossus zanzibarensis	1.76	41	0.36	8680
Todaropsis eblanae	1.06	41	0.21	8687
Caelorinchus simorhynchus	1.06	34	0.21	
Lepidopus caudatus	0.65	21	0.13	
Chelidonichthys queketti	0.53	2	0.11	8685
Congiopodus spinifer	0.14	4	0.03	
Rossia enigmatica	0.11	4	0.02	
Lolligoncula mercatoris	0.07	25	0.01	
Total	494.96		100.00	

PROJECT STATION: 994

DATE:14/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3000
start stop duration Long E 1630
TIME :13:51:34 14:21:21 30 (min) Purpose code: 3
LOG :2393.74 2395.40 1.65 Area code : 1
FDEPTH: 178 178 GearCond.code:
BDEPTH: 178 178 Validity code:
Towing dir: 335ø Wire out: 585 m Speed: 30 kn*10

Sorted: 76 Kg Total catch: 694.04 CATCH/HOUR: 1388.08

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Etrumeus whiteheadi	654.00	54500	47.12	
Merluccius paradoxus	416.00	11694	29.97	8690
Trachurus capensis	146.40	8168	10.55	8692
Sepia australis	43.80	2576	3.16	
Lophius vomerinus	21.80	44	1.57	8695
Helicolenus dactylopterus	21.80	1486	1.57	8693
Merluccius capensis	20.00	70	1.44	8689
Chelidonichthys capensis	13.20	44	0.95	8697
Engraulis capensis	8.80	182	0.63	
Raja straeleni	7.00	2	0.50	
Merluccius paradoxus, juvenile	7.00	634	0.50	8691
Paracallionymus costatus	6.60	634	0.48	
Sardinops ocellatus	5.02	460	0.36	
Lampanyctodes hectoris	4.40		0.32	
Genypterus capensis	3.94	22	0.28	8696
Cynoglossus zanzibarensis	2.20	88	0.16	8694
Squalus megalops	2.00	2	0.14	
Holohalaelurus regani	1.36	44	0.10	
Lepidopus caudatus	1.28	88	0.09	
Caelorinchus simorhynchus	0.74	44	0.05	
Squilla acuelata calmani	0.46	22	0.03	
Todaropsis eblanae	0.28	22	0.02	8698
Total	1388.08		99.99	

PROJECT STATION: 995

DATE:14/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 2954
start stop duration Long E 1640
TIME :16:17:32 16:46:50 29 (min) Purpose code: 3
LOG :2409.16 2410.89 1.73 Area code : 1
FDEPTH: 158 158 GearCond.code:
BDEPTH: 158 158 Validity code:
Towing dir: 335ø Wire out: 585 m Speed: 32 kn*10

Sorted: 72 Kg Total catch: 72.63 CATCH/HOUR: 150.27

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	51.72	1804	34.42	8700
Sepia australis	37.24		24.78	
Galeorhinus galeus	33.10	2	22.03	
Merluccius paradoxus, juvenile	7.03	646	4.68	8701
Callorhinchus capensis	6.21	2	4.13	
Helicolenus dactylopterus	4.76	389	3.17	8702
MYCTOPHIDAE	2.07		1.38	
Todaropsis eblanae - females	1.39	41	0.93	8708
Squilla acuelata calmani	1.24	79	0.83	
Cynoglossus zanzibarensis	1.03	25	0.69	8703
Merluccius capensis	1.03	4	0.69	8699
Chelidonichthys capensis	0.83	2	0.55	8706
Genypterus capensis	0.74	14	0.49	8705
Todaropsis eblanae - males	0.66	19	0.44	8707
Paracallionymus costatus	0.43	56	0.29	
Lepidopus caudatus	0.35	19	0.23	
Lophius vomerinus	0.23	2	0.15	8704
Caelorinchus simorhynchus	0.06	4	0.04	
Rossia enigmatica	0.04	2	0.03	
Sepia hieronis	0.04	2	0.03	
Maurolicus muelleri	0.02		0.01	
Champsodon capensis	0.02	2	0.01	
Total	150.24		100.00	

PROJECT STATION: 996

DATE:15/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3013
start stop duration Long E 1656
TIME :04:37:06 05:06:10 29 (min) Purpose code: 3
LOG :2479.91 2481.49 1.57 Area code : 1
FDEPTH: 151 147 GearCond.code:
BDEPTH: 151 147 Validity code:
Towing dir: 355ø Wire out: 450 m Speed: 32 kn*10

Sorted: 75 Kg Total catch: 114.52 CATCH/HOUR: 236.94

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	115.86	3863	48.90	
Merluccius paradoxus	57.31	1692	24.19	8710
Sepia australis	19.86	993	8.38	
Lampanyctodes hectoris	16.97		7.16	
Chlamydoselachus anguineus	14.48	8	6.11	
Squilla acuelata calmani	3.10	346	1.31	
Chelidonichthys capensis	2.07	6	0.87	8716
Solenocera africana	1.57	166	0.66	
Todaropsis eblanae - females	1.34	41	0.57	8718
Merluccius paradoxus, juvenile	1.34	176	0.57	8711
Todaropsis eblanae - males	0.70	21	0.30	8717
Cynoglossus zanzibarensis	0.43	10	0.18	8713
Lophius vomerinus	0.41	4	0.17	8714
Merluccius capensis	0.41	2	0.17	8709
Paracallionymus costatus	0.37	101	0.16	
Macropipus sp.	0.21	6	0.09	
Exodromedia sp.	0.17	6	0.07	
Helicolenus dactylopterus	0.17	14	0.07	8712
Zeus capensis	0.14	4	0.06	8715
Total	236.91		99.99	

PROJECT STATION: 997

DATE:15/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3016
start stop duration Long E 1644
TIME :07:22:11 07:52:58 31 (min) Purpose code: 3
LOG :2495.03 2496.67 1.63 Area code : 1
FDEPTH: 187 186 GearCond.code:
BDEPTH: 187 186 Validity code:
Towing dir: 225ø Wire out: 520 m Speed: 32 kn*10

Sorted: 88 Kg Total catch: 88.18 CATCH/HOUR: 170.67

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	121.94	3401	71.45	8721
Merluccius capensis	11.61	37	6.80	8719
Sepia australis	9.68	538	5.67	
Helicolenus dactylopterus	9.68	461	5.67	8723
Holohalaelurus regani	4.45	132	2.61	
Lampanyctodes hectoris	3.87		2.27	
Lophius vomerinus	1.94	12	1.14	8725
Cynoglossus zanzibarensis	1.55	31	0.91	8724
Todarodes angolensis - females	1.45	2	0.85	8729
Merluccius paradoxus, juvenile	1.35	201	0.79	8720
Todaropsis eblanae - females	0.95	27	0.56	8728
Paracallionymus costatus	0.77	137	0.45	
Chelidonichthys capensis	0.39	2	0.23	8726
Merluccius paradoxus	0.39	2	0.23	8722
Todaropsis eblanae - males	0.29	6	0.17	8727
Caelorinchus simorhynchus	0.19	19	0.11	
Squilla acuelata calmani	0.08	8	0.05	
Exodromedia sp.	0.04	4	0.02	
Lolligoncula mercatoris	0.02	6	0.01	
Mursia cristimanus	0.02	2	0.01	
Maurolicus muelleri	0.02		0.01	
Total	170.68		100.01	

PROJECT STATION: 998

DATE:15/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3025
start stop duration Long E 1634
TIME :11:00:23 11:26:44 26 (min) Purpose code: 3
LOG :2515.52 2516.98 1.45 Area code : 1
FDEPTH: 212 214 GearCond.code:
BDEPTH: 212 214 Validity code:
Towing dir: 335ø Wire out: 666 m Speed: 30 kn*10

Sorted: 178 Kg Total catch: 331.51 CATCH/HOUR: 765.02

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	553.85	10597	72.40	8731
Merluccius capensis	43.85	65	5.73	8730
Lophius vomerinus	32.31	48	4.22	8736
Lepidopus caudatus	18.46	12	2.41	
Brama brama	18.46	9	2.41	8739
Helicolenus dactylopterus	16.38	665	2.14	8734
Etrumeus whiteheadi	12.00		1.57	
Raja straeleni	11.54	7	1.51	
Paracallionymus costatus	9.92		1.30	
Raja wallacei	8.54	5	1.12	
Holohalaelurus regani	8.08	51	1.06	
Callorhinchus capensis	6.92	5	0.90	
Caelorinchus simorhynchus	6.69		0.87	
Merluccius paradoxus	4.62	14	0.60	8732
Chelidonichthys capensis	1.85	5	0.24	8738
Merluccius paradoxus, juvenile	1.59	148	0.21	8733
Sepia australis	1.55	88	0.20	
Todaropsis eblanae - males	1.43	16	0.19	8741
Lepidopus caudatus	1.38	39	0.18	
Genypterus capensis	1.20	7	0.16	8737
Holohalaelurus regani	1.15	28	0.15	
Rossia enigmatica	0.76	23	0.10	
Cynoglossus zanzibarensis	0.76	16	0.10	8735
Todaropsis eblanae	0.48	44	0.06	8740
Lampanyctodes hectoris	0.48		0.06	
Todaropsis eblanae - females	0.44	12	0.06	8742
Maurolicus muelleri	0.28		0.04	
Lolligoncula mercatoris	0.05	12	0.01	
Total	765.02		100.00	

PROJECT STATION: 999

DATE:15/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3033
start stop duration Long E 1618
TIME :14:17:43 14:47:15 30 (min) Purpose code: 3
LOG :2537.31 2538.85 1.53 Area code : 1
FDEPTH: 244 242 GearCond.code:
BDEPTH: 244 242 Validity code:
Towing dir: 338ø Wire out: 767 m Speed: 31 kn*10

Sorted: 128 Kg Total catch: 228.90 CATCH/HOUR: 457.80

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	188.00	2922	41.07	8744
Helicolenus dactylopterus	73.60	1372	16.08	8747
Malacocephalus laevis	55.20	200	12.06	
Merluccius capensis	20.00	26	4.37	8743
Lepidopus caudatus	16.00	18	3.49	
Caelorinchus simorhynchus	15.20		3.32	
Callorhinchus capensis	12.00	6	2.62	
Holohalaelurus regani	11.00	60	2.40	
Merluccius paradoxus	10.00	30	2.18	8745
Cynoglossus zanzibarensis	8.20	142	1.79	8748
Thyrsites atun	8.00	4	1.75	8750
Lophius vomerinus	8.00	4	1.75	8749
Chelidonichthys queketti	5.52	32	1.21	
Lepidopus caudatus	4.60	14	1.00	
Zeus capensis	3.20	46	0.70	8753
Brama brama	3.00	2	0.66	8756
Todarodes angolensis - females	2.40	2	0.52	8759
Todarodes angolensis - males	2.40	4	0.52	8758
Chelidonichthys capensis	2.40	4	0.52	8754
Congiopodus spinifer	2.30	18	0.50	
Genypterus capensis	2.00	2	0.44	8751
Raja wallacei	1.40	2	0.31	
Paracallionymus costatus	1.10	74	0.24	
Zeus capensis	1.00	2	0.22	8752
Chelidonichthys queketti	0.60	4	0.13	8755
Todaropsis eblanae	0.36	4	0.08	8757
Merluccius paradoxus, juvenile	0.32	32	0.07	8746
Total	457.80		100.00	

PROJECT STATION:1000

DATE:15/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3042
start stop duration Long E 1604
TIME :17:21:14 17:52:07 31 (min) Purpose code: 3
LOG :2557.40 2559.08 1.54 Area code : 1
FDEPTH: 207 199 GearCond.code:
BDEPTH: 207 199 Validity code:
Towing dir: 230ø Wire out: 600 m Speed: 32 kn*10

Sorted: 131 Kg Total catch: 621.24 CATCH/HOUR: 1202.40

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Emmelichthys nitidus	870.97	20255	72.44	
Zeus capensis	81.68	358	6.79	8765
Merluccius capensis	61.94	66	5.15	8760
Chelidonichthys queketti	43.55	242	3.62	8767
Galeorhinus galeus	36.77	2	3.06	
Helicolenus dactylopterus	36.77	561	3.06	8761
Lophius vomerinus	19.35	15	1.61	8763
Squalus megalops	14.32	23	1.19	
Chelidonichthys capensis	7.74	8	0.64	8766
Trachurus capensis	5.23	19	0.43	
Callorhinchus capensis	5.03	2	0.42	
Arnoglossus capensis	5.03	310	0.42	
Thyrsites atun	4.84	4	0.40	8764
Mustelus palumbes	3.87	4	0.32	
Todaropsis eblanae	2.52	39	0.21	8768
Helicolenus dactylopterus	2.52	12	0.21	8762
Sepia australis	0.27	39	0.02	
Total	1202.40		99.99	

PROJECT STATION:1001

DATE:16/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3032
start stop duration Long E 1531
TIME :05:12:53 05:42:53 30 (min) Purpose code: 3
LOG :2635.82 2637.43 1.58 Area code : 1
FDEPTH: 299 302 GearCond.code:
BDEPTH: 299 302 Validity code:
Towing dir: 190ø Wire out: 900 m Speed: 31 kn*10

Sorted: 219 Kg Total catch: 219.91 CATCH/HOUR: 439.82

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Callorhinchus capensis	96.00	40	21.83	
Genypterus capensis	60.00	58	13.64	8777
Merluccius paradoxus	50.00	448	11.37	8772
Zeus capensis	49.00	106	11.14	8778
Merluccius paradoxus	36.00	32	8.19	8770
Holohalaelurus regani	28.60	82	6.50	
Merluccius capensis	24.00	28	5.46	8769
Helicolenus dactylopterus	22.00	176	5.00	8774
Caelorinchus simorhynchus	18.44		4.19	
Epigonus sp.	16.00	232	3.64	
Lophius vomerinus	10.00	4	2.27	8776
Mustelus palumbes	8.00	8	1.82	
Squalus mitsukurii	6.00	4	1.36	
Squalus megalops	6.00	10	1.36	
Scyliorhinus capensis	2.00	2	0.45	
Malacocephalus laevis	1.46	4	0.33	
Squalus acanthias	1.36	4	0.31	
Todarodes angolensis - males	1.02	2	0.23	8780
Rossia enigmatica	0.82	40	0.19	
Cynoglossus zanzibarensis	0.76	20	0.17	8775
Chelidonichthys capensis	0.50	2	0.11	8779
Paracallionymus costatus	0.40	92	0.09	
Emmelichthys nitidus	0.38	2	0.09	
Merluccius paradoxus, juvenile	0.32	66	0.07	8771
Squilla acuelata calmani	0.26	58	0.06	
Trachurus capensis	0.24	2	0.05	8773
Myxine capensis	0.18	2	0.04	
Champsodon capensis	0.06	4	0.01	
Sepia australis	0.02	2		
Total	439.82		99.97	

PROJECT STATION:1002

DATE:16/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3039
start stop duration Long E 1524
TIME :07:34:29 08:05:07 31 (min) Purpose code: 3
LOG :2647.93 2649.55 1.61 Area code : 1
FDEPTH: 343 344 GearCond.code:
BDEPTH: 343 344 Validity code:
Towing dir: 140ø Wire out: 980 m Speed: 32 kn*10

Sorted: 493 Kg Total catch: 493.51 CATCH/HOUR: 955.18

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Zeus capensis	195.48	364	20.47	8787
Squalus mitsukurii	127.74	105	13.37	
Merluccius paradoxus	108.39	139	11.35	8782
Genypterus capensis	85.16	70	8.92	8786
Merluccius capensis	77.42	41	8.11	8781
Merluccius paradoxus	71.61	395	7.50	8783
Caelorinchus simorhynchus	58.06		6.08	
Epigonus sp.	48.39		5.07	
Callorhinchus capensis	44.52	15	4.66	
Genypterus capensis	19.35	4	2.03	8788
Squalus acanthias	19.35	17	2.03	
Scyliorhinus capensis	17.42	31	1.82	
Lepidopus caudatus	14.71	23	1.54	
Helicolenus dactylopterus	13.55	79	1.42	8784
Octopus magnificus	12.58	2	1.32	
Raja wallacei	9.68	2	1.01	
Lophius vomerinus	9.68	6	1.01	8785
Holohalaelurus regani	7.74	19	0.81	
Todarodes angolensis - females	7.35	8	0.77	8790
Malacocephalus laevis	3.87	15	0.41	
Emmelichthys nitidus	1.03	2	0.11	
Todarodes angolensis - males	0.87	2	0.09	8789
Rossia enigmatica	0.54	27	0.06	
Cyttus traversi	0.15	4	0.02	
Notopogon macrosolen	0.14	2	0.01	
PARAPAGURIDAE *	0.10	6	0.01	
Cynoglossus zanzibarensis	0.10	4	0.01	
Sepia hieronis	0.08	2	0.01	
Paracallionymus costatus	0.08	14	0.01	
Champsodon capensis	0.04	2		
Total	955.18		100.03	

PROJECT STATION:1003

DATE:16/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3040
start stop duration Long E 1521
TIME :09:54:12 10:24:16 30 (min) Purpose code: 3
LOG :2657.51 2659.07 1.55 Area code : 1
FDEPTH: 439 443 GearCond.code:
BDEPTH: 439 443 Validity code:
Towing dir: 310ø Wire out:1200 m Speed: 30 kn*10

Sorted: 345 Kg Total catch: 396.17 CATCH/HOUR: 792.34

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	416.00	674	52.50	8791
Notacanthus sexspinis	192.00		24.23	
Helicolenus dactylopterus	58.00	132	7.32	8792
Genypterus capensis	38.00	18	4.80	8794
Caelorinchus simorhynchus	37.20	744	4.69	
Lophius vomerinus	18.00	10	2.27	8793
Raja leopardus	16.00	12	2.02	
Todarodes angolensis - females	3.40	4	0.43	8797
Todarodes angolensis - males	2.00	4	0.25	8796
Raja confundens	2.00	2	0.25	
Malacocephalus laevis	1.98	8	0.25	
Bassanago albescens	1.62	4	0.20	
Zeus capensis	1.60	2	0.20	8795
Beryx splendens	1.56	10	0.20	
Holohalaelurus regani	1.40	2	0.18	
Photichthys argenteus	0.62	28	0.08	
Rossia enigmatica	0.52	22	0.07	
Lucigadus ori	0.42	38	0.05	
Funchalia woodwardi	0.34	42	0.04	
Notopogon macrosolen	0.30	4	0.04	
Tripterophycis gilchristi	0.24	10	0.03	
Epigonus denticulatus	0.18	14	0.02	
Lepidion capensis	0.08	4	0.01	
Symbolophorus boops	0.08	8	0.01	
Physiculus capensis	0.06	8	0.01	
Total	793.60		100.15	

PROJECT STATION:1004

DATE:16/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3053
start stop duration Long E 1532
TIME :13:39:08 14:09:12 30 (min) Purpose code: 3
LOG :2682.01 2683.59 1.57 Area code : 1
FDEPTH: 471 470 GearCond.code:
BDEPTH: 471 470 Validity code:
Towing dir: 310ø Wire out:1313 m Speed: 30 kn*10

Sorted: 219 Kg Total catch: 286.50 CATCH/HOUR: 573.00

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	182.00	280	31.76	8799
Notacanthus sexspinis	154.00	1730	26.88	
Chaceon maritae	54.00	614	9.42	
Genypterus capensis	48.00	20	8.38	8801
Lophius vomerinus	36.00	18	6.28	8803
Raja confundens	26.00	24	4.54	
Etmopterus brachyurus	18.72	456	3.27	
Raja leopardus	14.00	14	2.44	
Centrophorus squamosus	14.00	2	2.44	
Epigonus denticulatus	5.28	754	0.92	
Malacocephalus laevis	4.00	14	0.70	
Merluccius capensis	4.00	2	0.70	8798
Holohalaelurus regani	1.80	4	0.31	
Helicolenus dactylopterus	1.70	4	0.30	8800
Physiculus capensis	1.54	126	0.27	
Ommastrephes bartrami - female	1.10	2	0.19	
Todarodes angolensis - males	1.10	2	0.19	8802
Lycoteuthis lorigera	0.80	64	0.14	
Caelorinchus simorhynchus	0.70	36	0.12	
Bassanago albescens	0.62	4	0.11	
Shrimps, small, non comm.	0.42	50	0.07	
Symbolophorus boops	0.42	32	0.07	
Coelorinchus braueri	0.40	4	0.07	
Psychrolutes macrocephalus	0.36	4	0.06	
Lucigadus ori	0.30	54	0.05	
Tripterophycis gilchristi	0.30	50	0.05	
Rossia enigmatica	0.26	14	0.05	
Lestidiops sp.	0.26	18	0.05	
MYCTOPHIDAE	0.26	76	0.05	
Photichthys argenteus	0.20	10	0.03	

Diaphus sp.	0.20	4	0.03
Rochinia sp.	0.10	4	0.02
Hoplostethus cadenati	0.10	28	0.02
Abraliopsis gilchristi	0.02	4	
Stereomastis sp.	0.02	4	
Scopelosaurus meadi	0.02	4	
Total	573.00		99.98

PROJECT STATION:1005

DATE:16/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3055
start stop duration Long E 1532
TIME :16:01:13 16:31:41 30 (min) Purpose code: 3
LOG :2692.62 2694.32 1.67 Area code : 1
FDEPTH: 553 557 GearCond.code:
BDEPTH: 553 557 Validity code:
Towing dir: 315ø Wire out:1588 m Speed: 32 kn*10

Sorted: 162 Kg Total catch: 181.60 CATCH/HOUR: 363.20

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	88.00	92	24.23	8805
Chaceon maritae	51.00	662	14.04	
Bathyraja smithii	38.00	6	10.46	
Centrophorus granulosus	36.00	14	9.91	
Lophius vomerinus	32.00	14	8.81	8807
Raja confundens	19.20	46	5.29	
Raja leopardus	18.40	54	5.07	
Deania profundorum	16.00	22	4.41	
Coelorinchus braueri	13.60	226	3.74	
Genypterus capensis	8.00	2	2.20	8808
Neolithodes asperrimus	6.80	4	1.87	
Etmopterus lucifer	6.80	128	1.87	
Malacocephalus laevis	5.40	20	1.49	
Psychrolutes macrocephalus	4.80	38	1.32	
Squalus mitsukurii	4.00	2	1.10	
Helicolenus dactylopterus	2.84	6	0.78	8806
Nezumia micronychodon	2.44	58	0.67	
Notacanthus sexspinis	2.40	52	0.66	
Hydrolagus africanus	1.92	4	0.53	
Selachophidium guentheri	1.70	20	0.47	
Myxine capensis	1.02	20	0.28	
Careproctus griseldea	0.64	4	0.18	
Photichthys argenteus	0.52	10	0.14	
Bassanago albescens	0.40	4	0.11	
Melanostomias sp.	0.34	6	0.09	
Raja leopardus	0.28	106	0.08	
Lestidiops sp.	0.18	10	0.05	
Tripterophycis gilchristi	0.18	10	0.05	
Oreosoma atlanticum	0.14	4	0.04	
Epigonus denticulatus	0.10	4	0.03	
Symbolophorus boops	0.06	4	0.02	
Nemichthys scolopaceus	0.04	4	0.01	
Total	363.20		100.00	

PROJECT STATION:1006

DATE:17/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3104
start stop duration Long E 1559
TIME :04:47:21 05:17:00 30 (min) Purpose code: 3
LOG :2765.45 2766.89 1.40 Area code : 1
FDEPTH: 351 338 GearCond.code:
BDEPTH: 351 338 Validity code:
Towing dir: 335ø Wire out:1000 m Speed: 32 kn*10

Sorted: 245 Kg Total catch: 244.99 CATCH/HOUR: 489.98

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Zeus capensis	230.00	460	46.94	8814
Epigonus denticulatus	54.00	886	11.02	
Caelorinchus simorhynchus	46.00	780	9.39	
Merluccius paradoxus	40.00	48	8.16	8810
Merluccius paradoxus	26.00	168	5.31	8811
Helicolenus dactylopterus	24.00	156	4.90	8812
Merluccius capensis	16.00	8	3.27	8809
Squalus mitsukurii	11.00	10	2.24	
Genypterus capensis	10.00	12	2.04	8813
Raja wallacei	8.00	2	1.63	
Holohalaelurus regani	6.40	22	1.31	
Malacocephalus laevis	6.00	12	1.22	
Scyliorhinus capensis	4.00	8	0.82	
Todarodes angolensis - females	2.00	2	0.41	8817
Scomber japonicus	2.00	2	0.41	8815
Cyttus traversi	1.22	10	0.25	
Chlorophthalmus agassizi	1.14	18	0.23	
Todarodes angolensis - males	1.00	2	0.20	8816
Paracallionymus costatus	0.60	96	0.12	
Rossia enigmatica	0.28	12	0.06	
Beryx splendens	0.16	2	0.03	
Lampanyctodes hectoris	0.10		0.02	
Tripterophycis gilchristi	0.04	4	0.01	
Maurolicus muelleri	0.02			
Champsodon capensis	0.02	2		
Hoplostethus mediterraneus	0.00	2		
Total	489.98		99.99	

PROJECT STATION:1007

DATE:17/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3111
start stop duration Long E 1550
TIME :07:48:21 08:19:29 31 (min) Purpose code: 3
LOG :2782.82 2784.48 1.65 Area code : 1
FDEPTH: 486 485 GearCond.code:
BDEPTH: 486 485 Validity code:
Towing dir: 130ø Wire out:1340 m Speed: 32 kn*10

Sorted: 265 Kg Total catch: 265.45 CATCH/HOUR: 513.77

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	387.10	848	75.34	8818
Genypterus capensis	42.58	17	8.29	8821
Lophius vomerinus	34.84	14	6.78	8820
Malacocephalus laevis	12.39	37	2.41	
Helicolenus dactylopterus	7.74	31	1.51	8819
Zeus capensis	5.81	8	1.13	8822
Caelorinchus simorhynchus	4.84		0.94	
Todarodes angolensis - females	4.65	6	0.91	8823
Notacanthus sexspinis	3.29	52	0.64	
Raja confundens	2.71	2	0.53	
Bassanago albescens	1.94	8	0.38	
Holohalaelurus regani	1.55	4	0.30	
Coelorinchus braueri	1.35	56	0.26	
Photichthys argenteus	0.77	52	0.15	
Shrimps, small, non comm.	0.64		0.12	
Lycoteuthis lorigera	0.46	12	0.09	
Physiculus capensis	0.27	8	0.05	
Lucigadus ori	0.21	39	0.04	
Scopelosaurus meadi	0.19	6	0.04	
Stereomastis sp.	0.12	19	0.02	
Scopelosaurus herwigi	0.12	4	0.02	
Tripterophycis gilchristi	0.12	4	0.02	
Centrolophus niger	0.06	2	0.01	
Rossia enigmatica	0.04	2	0.01	
Stoloteuthis sp.	0.00	2		
Hoplostethus mediterraneus	0.00	2		
Total	513.79		99.99	

PROJECT STATION:1008

DATE:17/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3120
start stop duration Long E 1548
TIME :10:37:23 11:07:25 30 (min) Purpose code: 3
LOG :2796.90 2798.42 1.50 Area code : 1
FDEPTH: 555 553 GearCond.code:
BDEPTH: 555 553 Validity code:
Towing dir: 340ø Wire out:1571 m Speed: 30 kn*10

Sorted: 151 Kg Total catch: 170.05 CATCH/HOUR: 340.10

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	134.00	234	39.40	8824
Chaceon maritae	43.60	764	12.82	
Coelorinchus braueri	40.00	606	11.76	
Helicolenus dactylopterus	24.40	126	7.17	8825
Malacocephalus laevis	20.40		6.00	
Lophius vomerinus	18.00	16	5.29	8826
Hydrolagus africanus	15.20	20	4.47	
Selachophidium guentheri	9.80	98	2.88	
Nezumia micronychodon	9.00		2.65	
Raja leopardus	4.00	10	1.18	
Genypterus capensis	4.00	2	1.18	8827
Todarodes angolensis - males	3.70	8	1.09	8828
Shrimps, small, non comm.	2.40		0.71	
Photichthys argenteus	2.14	76	0.63	
Todarodes angolensis - females	2.00	2	0.59	8829
Bassanago albescens	1.74	6	0.51	
Notacanthus sexspinis	1.60	36	0.47	
Lucigadus ori	1.06	96	0.31	
Bathypolypus valdiviae	0.90	8	0.26	
Etmopterus brachyurus	0.90	8	0.26	
Coelorinchus matamua	0.76	8	0.22	
Tripterophycis gilchristi	0.14	6	0.04	
Psychrolutes macrocephalus	0.10	2	0.03	
Hoplostethus cadenati	0.08	2	0.02	
Diaphus effulgens	0.06	2	0.02	
Symbolophorus boops	0.02	2	0.01	
Lepidion capensis	0.02	2	0.01	
Raja confundens	0.02	2	0.01	
Paracallionymus costatus	0.02	2	0.01	
Gymnoscopelus sp.	0.02	2	0.01	
Rossia enigmatica	0.02	10	0.01	
Total	340.10		100.02	

PROJECT STATION:1009

DATE:17/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3130
start stop duration Long E 1543
TIME :14:03:43 14:33:34 30 (min) Purpose code: 3
LOG :2816.73 2818.35 1.60 Area code : 1
FDEPTH: 658 660 GearCond.code:
BDEPTH: 658 660 Validity code:
Towing dir: 340ø Wire out:1701 m Speed: 30 kn*10

Sorted: 86 Kg Total catch: 86.02 CATCH/HOUR: 172.04

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Coelorinchus braueri	62.40	828	36.27	
Chaceon maritae	38.00		22.09	
Merluccius paradoxus	16.00	12	9.30	8830
Centrophorus squamosus	12.00	2	6.98	
Photichthys argenteus	7.20	164	4.19	
Raja leopardus	6.60	10	3.84	
Nezumia micronychodon	5.72	90	3.32	
Lophius vomerinus	4.80	2	2.79	8831
Deania profundorum	4.00	2	2.33	
Etmopterus brachyurus	3.60		2.09	
Coelorinchus matamua	3.00	38	1.74	
Trachyscorpia capensis	2.00	2	1.16	
Todarodes angolensis - females	1.40	2	0.81	8832
Hydrolagus africanus	1.20	14	0.70	
Bathypolypus valdiviae	1.10	14	0.64	
Malacocephalus laevis	0.42	2	0.24	
Myxine capensis	0.40	6	0.23	
Lycodes agulhensis	0.32	2	0.19	
Histioteuthis macrohista	0.32	4	0.19	
Shrimps, small, non comm.	0.28		0.16	
Diretmus argenteus	0.20	4	0.12	
Selachophidium guentheri	0.20	4	0.12	
Gymnoscopelus sp.	0.16	22	0.09	
Neoscopelus macrolepidotus	0.12	4	0.07	
Lycoteuthis lorigera	0.10	4	0.06	
Psychrolutes macrocephalus	0.08	2	0.05	
Notacanthus sexspinis	0.08	6	0.05	
Neocyttus rhomboidalis	0.06	2	0.03	
Melanostomias sp.	0.06	2	0.03	
Chauliodus sloani	0.06	4	0.03	
Argyropelecus aculeatus	0.04	6	0.02	
Hoplostethus cadenati	0.04	2	0.02	
MYCTOPHIDAE	0.04	8	0.02	
Symbolophorus boops	0.04	2	0.02	
Total	172.04		99.99	

PROJECT STATION:1010

DATE:17/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3129
start stop duration Long E 1555
TIME :16:47:49 17:18:29 31 (min) Purpose code: 3
LOG :2833.66 2835.39 1.71 Area code : 1
FDEPTH: 524 526 GearCond.code:
BDEPTH: 524 526 Validity code:
Towing dir: 8ø Wire out:1450 m Speed: 33 kn*10

Sorted: 127 Kg Total catch: 127.81 CATCH/HOUR: 247.37

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	79.35	137	32.08	8833
Helicolenus dactylopterus	56.13	255	22.69	8834
Chaceon maritae	27.10		10.96	
Coelorinchus braueri	25.16		10.17	
Genypterus capensis	15.48	4	6.26	8836
Selachophidium guentheri	8.71		3.52	
Etmopterus brachyurus	6.00		2.43	
Lophius vomerinus	5.81	2	2.35	8835
Bassanago albescens	3.87	14	1.56	
Nezumia micronychodon	3.68		1.49	
Todarodes angolensis - males	2.71	6	1.10	8837
Raja leopardus	2.52	2	1.02	
Psychrolutes macrocephalus	1.94	6	0.78	
Myxine capensis	1.94		0.78	
Photichthys argenteus	1.55		0.63	
Coelorinchus matamua	1.06	17	0.43	
Hydrolagus africanus	0.97	2	0.39	
Notacanthus sexspinis	0.97		0.39	
Lucigadus ori	0.85	70	0.34	
Rossia enigmatica	0.43	23	0.17	
Malacocephalus laevis	0.39	2	0.16	
Bathypolypus valdiviae	0.27	4	0.11	
Shrimps, small, non comm.	0.12	8	0.05	
Physiculus capensis	0.12	6	0.05	
Paracallionymus costatus	0.10	21	0.04	
Trachyrincus scabrus	0.08	4	0.03	
Melanostomias sp.	0.08	8	0.03	
Champsodon capensis	0.02	2	0.01	
Lestidiops sp.	0.00	2		
Total	247.41		100.02	

PROJECT STATION:1011

DATE:18/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3100
start stop duration Long E 1615
TIME :04:43:33 05:13:05 30 (min) Purpose code: 3
LOG :2889.83 2891.34 1.80 Area code : 1
FDEPTH: 282 284 GearCond.code:
BDEPTH: 282 284 Validity code:
Towing dir: 335ø Wire out: 830 m Speed: 32 kn*10

Sorted: 182 Kg Total catch: 251.43 CATCH/HOUR: 502.86

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Helicolenus dactylopterus	98.00	990	19.49	8843
Merluccius paradoxus	98.00	1176	19.49	8839
Zeus capensis	92.00	288	18.30	8848
Caelorinchus simorhynchus	60.00	1080	11.93	
Merluccius capensis	40.00	34	7.95	8838
Cynoglossus zanzibarensis	11.40	152	2.27	8844
Octopus magnificus	11.20	6	2.23	
Holohalaelurus regani	11.20	40	2.23	
Chelidonichthys queketti	10.60	48	2.11	8849
Callorhinchus capensis	10.00	4	1.99	
Squalus megalops	9.60	18	1.91	
Helicolenus dactylopterus	8.54	3856	1.70	8842
Lophius vomerinus	8.00	6	1.59	8845
Mustelus palumbes	6.00	4	1.19	
Thyrsites atun	4.80	2	0.95	8846
Genypterus capensis	4.00	4	0.80	8847
Paracallionymus costatus	3.52	440	0.70	
Emmelichthys nitidus	3.40	42	0.68	
Lepidopus caudatus	3.40	12	0.68	
Merluccius paradoxus, juvenile	2.80	346	0.56	8840
Squalus mitsukurii	2.38	6	0.47	
Trachurus capensis	1.60	12	0.32	8841
Todarodes angolensis - males	1.20	2	0.24	8851
Todaropsis eblanae - females	0.94	10	0.19	8850
Sepia hieronis	0.18	4	0.04	
Physiculus capensis	0.06	4	0.01	
Champsodon capensis	0.04	4	0.01	
Total	502.86		100.03	

PROJECT STATION:1012

DATE:18/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3054
start stop duration Long E 1626
TIME :07:29:15 07:59:03 30 (min) Purpose code: 3
LOG :2904.35 2905.96 1.58 Area code : 1
FDEPTH: 275 274 GearCond.code:
BDEPTH: 275 274 Validity code:
Towing dir: 333ø Wire out: 810 m Speed: 32 kn*10

Sorted: 247 Kg Total catch: 247.47 CATCH/HOUR: 494.94

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Zeus capensis	130.00	566	26.27	8859
Merluccius paradoxus	72.00	1068	14.55	8853
Lepidopus caudatus	70.00	228	14.14	
Helicolenus dactylopterus	64.00	1152	12.93	8855
Merluccius capensis	40.00	32	8.08	8852
Caelorinchus simorhynchus	22.00		4.44	
Chelidonichthys queketti	16.00	112	3.23	8861
Thyrsites atun	12.00	6	2.42	8857
Holohalaelurus regani	10.40	46	2.10	
Callorhinchus capensis	10.00	4	2.02	
Mustelus palumbes	10.00	2	2.02	
Emmelichthys nitidus	9.00	156	1.82	
Malacocephalus laevis	8.00	62	1.62	
Lophius vomerinus	6.00	4	1.21	8856
Genypterus capensis	3.00	2	0.61	8858
Squalus mitsukurii	2.80	6	0.57	
Cynoglossus zanzibarensis	2.80	44	0.57	8860
Brama brama	2.00	2	0.40	8862
Epigonus denticulatus	1.40	18	0.28	
Paracallionymus costatus	1.20		0.24	
Trachurus capensis	0.92	6	0.19	8854
Todaropsis eblanae - females	0.58	6	0.12	8864
Todaropsis eblanae - males	0.38	6	0.08	8863
Sebastes capensis	0.32	2	0.06	
Physiculus capensis	0.08	4	0.02	
Champsodon capensis	0.04	2	0.01	
Chlorophthalmus agassizi	0.02	4		
Total	494.94		100.00	

PROJECT STATION:1013

DATE:18/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3043
start stop duration Long E 1642
TIME :11:14:05 11:44:31 30 (min) Purpose code: 3
LOG :2927.02 2928.63 1.60 Area code : 1
FDEPTH: 229 227 GearCond.code:
BDEPTH: 229 227 Validity code:
Towing dir: 340ø Wire out: 707 m Speed: 30 kn*10

Sorted: 187 Kg Total catch: 329.26 CATCH/HOUR: 658.52

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	488.00	9244	74.11	8867
Merluccius capensis	42.00	64	6.38	8866
Lophius vomerinus	34.00	44	5.16	8872
Chelidonichthys capensis	14.60	28	2.22	8875
Merluccius capensis	12.00	2	1.82	8865
Helicolenus dactylopterus	10.20	330	1.55	8870
Caelorinchus simorhynchus	8.98	272	1.36	
Lepidopus caudatus	6.92	18	1.05	
Raja straeleni	6.80	6	1.03	
Paracallionymus costatus	6.58	388	1.00	
Callorhinchus capensis	5.40	4	0.82	
Raja wallacei	5.00	4	0.76	
Holohalaelurus regani	2.90	16	0.44	
Etrumeus whiteheadi	2.88	42	0.44	
Zeus capensis	2.40	10	0.36	8874
Cynoglossus zanzibarensis	2.20	60	0.33	8871
Genypterus capensis	2.00	10	0.30	8873
Maurolicus muelleri	1.60		0.24	
Merluccius paradoxus	1.60	4	0.24	8868
Todaropsis eblanae	0.84	30	0.13	8876
Merluccius paradoxus, juvenile	0.76	94	0.12	8869
Lampanyctodes hectoris	0.40		0.06	
Chelidonichthys queketti	0.36	2	0.05	
Rossia enigmatica	0.06	4	0.01	
Lolliguncula mercatoris	0.04		0.01	
Total	658.52		99.99	

PROJECT STATION:1014

DATE:18/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3038
start stop duration Long E 1652
TIME :13:40:51 14:10:41 30 (min) Purpose code: 3
LOG :2942.63 2944.18 1.56 Area code : 1
FDEPTH: 193 194 GearCond.code:
BDEPTH: 193 194 Validity code:
Towing dir: 335ø Wire out: 606 m Speed: 30 kn*10

Sorted: 79 Kg Total catch: 125.57 CATCH/HOUR: 251.14

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	184.00	4802	73.27	8878
Thyrsites atun	14.00	4	5.57	8884
Helicolenus dactylopterus	11.08	760	4.41	8881
Sepia australis	8.16	354	3.25	
Merluccius capensis	7.20	16	2.87	8877
Paracallionymus costatus	5.38	490	2.14	
Lophius vomerinus	4.40	16	1.75	8883
Lampanyctodes hectoris	4.00		1.59	
Brama brama	4.00	2	1.59	8887
Chelidonichthys capensis	4.00	4	1.59	8886
Todaropsis eblanae	0.98	28	0.39	8888
Genypterus capensis	0.80	6	0.32	8885
Merluccius paradoxus	0.80	4	0.32	8879
Caelorinchus simorhynchus	0.78	32	0.31	
Merluccius paradoxus, juvenile	0.66	50	0.26	8880
Congiopodus spinifer	0.28	4	0.11	
Parapagurus dimorphus	0.18		0.07	
Cynoglossus zanzibarensis	0.16	4	0.06	8882
Holohalaelurus regani	0.10	2	0.04	
Champsodon capensis	0.10	4	0.04	
Sepia hieronis	0.04	4	0.02	
Lolliguncula mercatoris	0.02	8	0.01	
Maurolicus muelleri	0.02		0.01	
Total	251.14		99.99	

PROJECT STATION:1015

DATE:18/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3030
start stop duration Long E 1704
TIME :16:05:17 16:35:48 31 (min) Purpose code: 3
LOG :2958.72 2960.30 1.70 Area code : 1
FDEPTH: 157 158 GearCond.code:
BDEPTH: 157 158 Validity code:
Towing dir: 340ø Wire out: 500 m Speed: 32 kn*10

Sorted: 53 Kg Total catch: 53.04 CATCH/HOUR: 102.66

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Galeorhinus galeus	29.03	2	28.28	
Sepia australis	15.79	255	15.38	
Callorhinchus capensis	15.48	6	15.08	
Merluccius paradoxus	15.48	401	15.08	8890
Lampanyctodes hectoris	7.74		7.54	
Lophius vomerinus	5.23	39	5.09	8895
Paracallionymus costatus	4.65		4.53	
Chelidonichthys capensis	1.94	4	1.89	8897
Merluccius capensis	1.94	8	1.89	8889
Trachurus capensis	1.34	2	1.31	8892
Genypterus capensis	1.16	17	1.13	8896
Squilla acuelata calmani	0.89	35	0.87	
Holohalaelurus regani	0.81	8	0.79	
Todaropsis eblanae	0.33	17	0.32	8898
Cynoglossus zanzibarensis	0.19	4	0.19	8894
Merluccius paradoxus, juvenile	0.19	27	0.19	8891
Solenocera africana	0.14	19	0.14	
Exodromedia sp.	0.12	14	0.12	
Helicolenus dactylopterus	0.12	15	0.12	8893
Caelorinchus simorhynchus	0.04	4	0.04	
Lolliguncula mercatoris	0.02	10	0.02	
Macropipus sp.	0.02	2	0.02	
Maurolicus muelleri	0.02		0.02	
Total	102.67		100.04	

PROJECT STATION:1016

DATE:19/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3054
start stop duration Long E 1704
TIME :04:40:59 05:11:45 31 (min) Purpose code: 3
LOG :3027.80 3029.43 1.60 Area code : 1
FDEPTH: 200 194 GearCond.code:
BDEPTH: 200 194 Validity code:
Towing dir: 330ø Wire out: 600 m Speed: 32 kn*10

Sorted: 69 Kg Total catch: 261.98 CATCH/HOUR: 507.06

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	371.61	8919	73.29	8900
Lampanyctodes hectoris	54.19		10.69	
Sepia australis	42.58	2129	8.40	
Merluccius paradoxus, juvenile	7.74	735	1.53	8901
Helicolenus dactylopterus	5.42	240	1.07	8903
Paracallionymus costatus	5.36		1.06	
Merluccius capensis	4.84	17	0.95	8899
Holohalaelurus regani	2.48	23	0.49	
Lophius vomerinus	2.42	12	0.48	8905
Squilla acuelata calmani	2.32	209	0.46	
Merluccius paradoxus	1.94	10	0.38	8902
Caelorinchus simorhynchus	1.70	108	0.34	
Genypterus capensis	1.16	14	0.23	8906
Chelidonichthys capensis	0.97	2	0.19	8908
Lepidopus caudatus	0.70	23	0.14	
Congiopodus spinifer	0.54	8	0.11	
Cynoglossus zanzibarensis	0.46	15	0.09	8904
Todaropsis eblanae	0.23	15	0.05	8909
Genypterus capensis	0.15	8	0.03	8907
Lolliguncula mercatoris	0.08	23	0.02	
Physiculus capensis	0.08	8	0.02	
Champsodon capensis	0.08	8	0.02	
Total	507.05		100.04	

PROJECT STATION:1017

DATE:19/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3100
start stop duration Long E 1652
TIME :07:46:18 08:16:33 30 (min) Purpose code: 3
LOG :3044.16 3045.84 1.94 Area code : 1
FDEPTH: 225 227 GearCond.code:
BDEPTH: 225 227 Validity code:
Towing dir: 300ø Wire out: 640 m Speed: 32 kn*10

Sorted: 114 Kg Total catch: 219.85 CATCH/HOUR: 439.70

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	280.00	6300	63.68	8911
Merluccius capensis	40.00	68	9.10	8910
Lampanyctodes hectoris	30.00		6.82	
Helicolenus dactylopterus	23.60	664	5.37	8914
Raja straeleni	16.00	6	3.64	
Paracallionymus costatus	8.80	518	2.00	
Callorhinchus capensis	8.00	4	1.82	
Squalus mitsukurii	7.00	4	1.59	
Sepia australis	5.00	290	1.14	
Holohalaelurus regani	3.40	16	0.77	
Lophius vomerinus	3.00	4	0.68	8916
Chelidonichthys capensis	2.80	6	0.64	8918
Merluccius paradoxus, juvenile	2.40	284	0.55	8913
Todarodes angolensis - females	2.00	2	0.45	8920
Genypterus capensis	2.00	12	0.45	8917
Caelorinchus simorhynchus	1.72	64	0.39	
Cynoglossus zanzibarensis	1.02	14	0.23	8915
Merluccius paradoxus	1.00	4	0.23	8912
Todaropsis eblanae	0.64	20	0.15	8919
Congiopodus spinifer	0.58	10	0.13	
Squilla acuelata calmani	0.40	8	0.09	
Solenocera africana	0.14	14	0.03	
Nectoteuthis vossi	0.10	30	0.02	
Sepia hieronis	0.10	4	0.02	
Total	439.70		99.99	

PROJECT STATION:1018

DATE:19/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3105
start stop duration Long E 1640
TIME :11:35:33 12:05:20 30 (min) Purpose code: 3
LOG :3064.23 3065.84 1.61 Area code : 1
FDEPTH: 252 252 GearCond.code:
BDEPTH: 252 252 Validity code:
Towing dir: 335ø Wire out: 777 m Speed: 30 kn*10

Sorted: 315 Kg Total catch: 440.38 CATCH/HOUR: 880.76

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	462.00	8008	52.45	8923
Emmelichthys nitidus	145.60	890	16.53	
Zeus capensis	90.00	336	10.22	8931
Lepidopus caudatus	50.00	12	5.68	
Lophius vomerinus	28.00	18	3.18	8928
Merluccius capensis	25.00	34	2.84	8921
Helicolenus dactylopterus	21.80	272	2.48	8926
Caelorinchus simorhynchus	9.60		1.09	
Thyrsites atun	9.00	2	1.02	8929
Squalus mitsukurii	6.80	4	0.77	
Merluccius paradoxus	6.60	14	0.75	8924
Chelidonichthys queketti	6.00	36	0.68	8932
Holohalaelurus regani	4.40	20	0.50	
Brama brama	4.00	4	0.45	8933
Genypterus capensis	2.00	6	0.23	8930
Cynoglossus zanzibarensis	2.00	20	0.23	8927
Paracallionymus costatus	1.60	136	0.18	
Trachurus capensis	1.60	12	0.18	8925
Todaropsis eblanae - males	1.56	24	0.18	8934
Todaropsis eblanae - females	1.32	32	0.15	8935
Merluccius paradoxus, juvenile	1.32	96	0.15	8922
Mustelus mustelus	0.56	2	0.06	
Total	880.76		100.00	

PROJECT STATION:1019

DATE:19/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3112
start stop duration Long E 1627
TIME :14:40:36 15:10:22 30 (min) Purpose code: 3
LOG :3083.57 3085.33 1.74 Area code : 1
FDEPTH: 313 311 GearCond.code:
BDEPTH: 313 311 Validity code:
Towing dir: 335ø Wire out: 945 m Speed: 31 kn*10

Sorted: 232 Kg Total catch: 315.78 CATCH/HOUR: 631.56

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	178.00	1720	28.18	8939
Merluccius capensis	108.00	50	17.10	8936
Zeus capensis	86.00	244	13.62	8945
Caelorinchus simorhynchus	78.00	1900	12.35	
Helicolenus dactylopterus	52.00	754	8.23	8940
Callorhinchus capensis	24.00	10	3.80	
Mustelus palumbes	22.00	4	3.48	
Squalus mitsukurii	20.00	18	3.17	
Epigonus denticulatus	11.00	208	1.74	
Lophius vomerinus	10.00	8	1.58	8942
Genypterus capensis	8.00	10	1.27	8944
Thyrsites atun	8.00	2	1.27	8943
Merluccius paradoxus	7.40	18	1.17	8938
Chelidonichthys queketti	6.00	34	0.95	8946
Scomber japonicus	3.00	2	0.48	8947
Cynoglossus zanzibarensis	2.60	40	0.41	8941
Holohalaelurus regani	2.40	6	0.38	
Emmelichthys nitidus	2.20	4	0.35	
Paracallionymus costatus	1.80	210	0.29	
Todaropsis eblanae - females	0.82	4	0.13	8948
Rossia enigmatica	0.26	26	0.04	
Champsodon capensis	0.04	4	0.01	
Merluccius paradoxus, juvenile	0.04	12	0.01	8937
Total	631.56		100.01	

PROJECT STATION:1020

DATE:19/ 2/05 GEAR TYPE: BT No:16 POSITION:Lat S 3118
start stop duration Long E 1615
TIME :17:15:03 17:42:39 28 (min) Purpose code: 3
LOG :3101.47 3102.92 1.33 Area code : 1
FDEPTH: 431 416 GearCond.code: 8
BDEPTH: 431 416 Validity code: 9
Towing dir: 335ø Wire out:1200 m Speed: 32 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION:1021

DATE:20/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3141
start stop duration Long E 1622
TIME :04:46:02 05:05:00 19 (min) Purpose code: 3
LOG :3158.60 3159.50 0.90 Area code : 1
FDEPTH: 370 370 GearCond.code:
BDEPTH: 370 370 Validity code:
Towing dir: 355ø Wire out:1020 m Speed: 32 kn*10

Sorted: 119 Kg Total catch: 119.77 CATCH/HOUR: 378.22

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Merluccius paradoxus	123.16	786	32.56	8951
Caelorinchus simorhynchus	50.53		13.36	
Merluccius capensis	50.53	25	13.36	8949
Helicolenus dactylopterus	31.58	177	8.35	8952
Octopus magnificus	22.11	3	5.85	
Lepidopus caudatus	22.11	54	5.85	
Zeus capensis	22.11	51	5.85	8954
Epigonus denticulatus	14.21	676	3.76	
Squalus mitsukurii	12.63	9	3.34	
Merluccius paradoxus	11.05	13	2.92	8950
Malacocephalus laevis	7.58	13	2.00	
Genypterus capensis	6.32	3	1.67	8953
Cyttus traversi	2.21	6	0.58	
Holohalaelurus regani	0.79	3	0.21	
Lucigadus ori	0.54	44	0.14	
Todaropsis eblanae - females	0.32	3	0.08	8955
Paracallionymus costatus	0.28	60	0.07	
Mursia cristimanus	0.06	6	0.02	
Photichthys argenteus	0.06	3	0.02	
Physiculus capensis	0.03	3	0.01	
Tripterophycis gilchristi	0.03	6	0.01	
Total	378.24		100.01	

PROJECT STATION:1022

DATE:20/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3127
start stop duration Long E 1640
TIME :08:04:22 08:31:08 27 (min) Purpose code: 3
LOG :3183.01 3184.39 1.35 Area code : 1
FDEPTH: 300 298 GearCond.code:
BDEPTH: 300 298 Validity code:
Towing dir: 154ø Wire out: 900 m Speed: 32 kn*10

Sorted: 244 Kg Total catch: 244.63 CATCH/HOUR: 543.62

SPECIES	CATCH/HOUR weight	CATCH/HOUR numbers	% OF TOT. C	SAMP
Caelorinchus simorhynchus	128.89		23.71	
Merluccius paradoxus	106.67	1238	19.62	8957
Helicolenus dactylopterus	100.00	987	18.40	8958
Zeus capensis	53.33	122	9.81	8962
Holohalaelurus regani	49.18	13	9.05	
Malacocephalus laevis	44.44	473	8.17	
Merluccius capensis	17.78	13	3.27	8956
Squalus mitsukurii	13.33	11	2.45	
Lepidopus caudatus	6.67	9	1.23	
Chelidonichthys queketti	6.67	38	1.23	8963
Genypterus capensis	5.56	7	1.02	8961
Lophius vomerinus	3.11	7	0.57	8960
Raja confundens	1.56	2	0.29	
Todaropsis eblanae - females	1.53	16	0.28	8965
Todaropsis eblanae - males	1.51	16	0.28	8964
Paracallionymus costatus	1.20	120	0.22	
Octopus magnificus	0.89	4	0.16	
Epigonus denticulatus	0.36	7	0.07	
Cynoglossus zanzibarensis	0.22	4	0.04	8959
Rossia enigmatica	0.20	7	0.04	
Emmelichthys nitidus	0.13	2	0.02	
Sepia hieronis	0.11	2	0.02	
Chlorophthalmus agassizi	0.11	2	0.02	
Mursia cristimanus	0.09	7	0.02	
Exodromedia sp.	0.07	2	0.01	
Sepia typica	0.02	4		
Total	543.63		100.00	

PROJECT STATION:1023

DATE:20/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3110
start stop duration Long E 1720
TIME :13:56:47 14:26:42 30 (min) Purpose code: 3
LOG :3225.96 3227.48 1.52 Area code : 1
FDEPTH: 184 182 GearCond.code:
BDEPTH: 184 182 Validity code:
Towing dir: 350ø Wire out: 584 m Speed: 30 kn*10

Sorted: 70 Kg Total catch: 189.46 CATCH/HOUR: 378.92

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lampanyctodes hectoris	246.00		64.92	
Merluccius paradoxus	34.00	794	8.97	8967
Sepia australis	24.00	924	6.33	
Lophius vomerinus	12.00	84	3.17	8971
Merluccius capensis	12.00	42	3.17	8966
Todaropsis eblanae - males	9.08	152	2.40	8974
Merluccius paradoxus, juvenile	8.00	528	2.11	8968
Todaropsis eblanae - females	6.04	104	1.59	8975
Cynoglossus zanzibarensis	5.34	72	1.41	8970
Brama brama	4.00	2	1.06	8973
Holohalaelurus regani	3.90	120	1.03	
Helicolenus dactylopterus	3.50	144	0.92	8969
Caelorinchus simorhynchus	3.10	152	0.82	
Paracallionymus costatus	2.70	260	0.71	
Sepia hieronis	2.62	152	0.69	
Engraulis capensis	1.04	206	0.27	
Exodromedia sp.	0.72	24	0.19	
Squilla acuelata calmani	0.32	32	0.08	
Mursia cristimanus	0.16	8	0.04	
Genypterus capensis	0.16	8	0.04	8972
Parapagurus dimorphus	0.08	8	0.02	
Macropipus sp.	0.08	8	0.02	
Physiculus capensis	0.08	8	0.02	
Total	378.92		99.98	

PROJECT STATION:1024

DATE:20/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3105
start stop duration Long E 1732
TIME :16:18:39 16:48:35 30 (min) Purpose code: 3
LOG :3242.47 3244.12 1.63 Area code : 1
FDEPTH: 135 134 GearCond.code:
BDEPTH: 135 134 Validity code:
Towing dir: 350ø Wire out: 450 m Speed: 33 kn*10

Sorted: 72 Kg Total catch: 158.68 CATCH/HOUR: 317.36

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	158.00	1096	49.79	8976
Squilla acuelata calmani	64.00	4000	20.17	
Merluccius capensis, juveniles	26.78	1938	8.44	8977
Callorhinchus capensis	24.00	20	7.56	
Chelidonichthys capensis	20.00	60	6.30	8979
Genypterus capensis	8.00	8	2.52	8978
Lepidopus caudatus	7.80	322	2.46	
Lampanyctodes hectoris	4.00		1.26	
Squalus acanthias	1.26	12	0.40	
Todaropsis eblanae	1.18	36	0.37	8980
Sepia australis	0.80	36	0.25	
Ophichthus bennettai	0.48	6	0.15	
Jasus lalandii	0.46	4	0.14	
Caelorinchus simorhynchus	0.30	12	0.09	
Congiopodus spinifer	0.18	6	0.06	
Holohalaelurus regani	0.08	6	0.03	
Lolligoncula mercatoris	0.02	6	0.01	
Sufflogobius bibarbatus	0.02	6	0.01	
Total	317.36		100.01	

PROJECT STATION:1025

DATE:21/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3130
start stop duration Long E 1725
TIME :04:40:44 05:10:54 30 (min) Purpose code: 3
LOG :3320.22 3321.97 1.73 Area code : 1
FDEPTH: 169 179 GearCond.code:
BDEPTH: 169 179 Validity code:
Towing dir: 350ø Wire out: 510 m Speed: 33 kn*10

Sorted: 147 Kg Total catch: 147.96 CATCH/HOUR: 295.92

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lampanyctodes hectoris	188.00		63.53	
Merluccius paradoxus	60.00	900	20.28	8982
Merluccius capensis	16.00	48	5.41	8981
Callorhinchus capensis	11.00	4	3.72	
Raja straeleni	6.00	2	2.03	
Sepia australis	5.44	202	1.84	
Helicolenus dactylopterus	4.80	248	1.62	8984
Holohalaelurus regani	2.00	32	0.68	
Cynoglossus zanzibarensis	0.46	12	0.16	8985
Exodromedia sp.	0.32	20	0.11	
Sepia hieronis	0.30	8	0.10	
Merluccius paradoxus, juvenile	0.26	14	0.09	8983
Lepidopus caudatus	0.20	12	0.07	
Todaropsis eblanae - males	0.18	4	0.06	8987
Paracallionymus costatus	0.18	22	0.06	
Genypterus capensis	0.18	2	0.06	8986
Caelorinchus simorhynchus	0.16	10	0.05	
Macropipus sp.	0.14	6	0.05	
Myxine capensis	0.14	2	0.05	
Todaropsis eblanae - females	0.10	2	0.03	8988
Squilla acuelata calmani	0.06	10	0.02	
Chaceon sp.	0.00	2		
Rochinia sp.	0.00	2		
Total	295.92		100.02	

PROJECT STATION:1026

DATE:21/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3134
start stop duration Long E 1713
TIME :07:30:10 08:00:43 31 (min) Purpose code: 3
LOG :3336.83 3338.52 1.68 Area code : 1
FDEPTH: 227 237 GearCond.code:
BDEPTH: 227 237 Validity code:
Towing dir: ø Wire out: 650 m Speed: 33 kn*10

Sorted: 151 Kg Total catch: 450.21 CATCH/HOUR: 871.37

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	671.61	13432	77.08	8990
Merluccius capensis	48.39	93	5.55	8989
Caelorinchus simorhynchus	27.29		3.13	
Galeorhinus galeus	21.29	2	2.44	
Paracallionymus costatus	14.90		1.71	
Cynoglossus zanzibarensis	13.74	232	1.58	8995
Merluccius paradoxus	11.61	45	1.33	8991
Callorhinchus capensis	9.68	6	1.11	
Malacocephalus laevis	9.10	58	1.04	
Helicolenus dactylopterus	8.32	149	0.95	8994
Holohalaelurus regani	7.55	50	0.87	
Lophius vomerinus	5.09	12	0.58	8996
Trachurus capensis	2.90	8	0.33	8993
Lepidopus caudatus	2.52	8	0.29	
Chelidonichthys capensis	2.32	6	0.27	8999
Genypterus capensis	2.17	4	0.25	8998
Zeus capensis	2.13	8	0.24	8997
Congiopodus spinifer	2.07	8	0.24	
Raja straeleni	1.94	2	0.22	
Todarodes angolensis - females	1.55	2	0.18	9002
Rossia enigmatica	1.32	8	0.15	
Sepia australis	1.24	58	0.14	
Exodromedia sp.	0.91	25	0.10	
Todaropsis eblanae - females	0.58	8	0.07	9001
Todaropsis eblanae - males	0.58	8	0.07	9000
Merluccius paradoxus, juvenile	0.50	41	0.06	8992
Rochinia sp.	0.08	8	0.01	
Total	871.38		99.99	

PROJECT STATION:1027

DATE:21/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3140
start stop duration Long E 1704
TIME :10:26:39 10:56:21 30 (min) Purpose code: 3
LOG :3352.95 3354.57 1.62 Area code : 1
FDEPTH: 257 258 GearCond.code:
BDEPTH: 257 258 Validity code:
Towing dir: 355ø Wire out: 787 m Speed: 30 kn*10

Sorted: 229 Kg Total catch: 672.92 CATCH/HOUR: 1345.84

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	910.00	16660	67.62	9004
Genypterus capensis	99.00	84	7.36	9012
Caelorinchus simorhynchus	76.00		5.65	
Merluccius capensis	50.00	54	3.72	9003
Parapagurus dimorphus	44.00		3.27	
Lophius vomerinus	38.00	22	2.82	9010
Merluccius paradoxus	19.00	42	1.41	9005
Helicolenus dactylopterus	13.98	162	1.04	9008
Malacocephalus laevis	11.38	66	0.85	
Lampanyctodes hectoris	10.80		0.80	
Thyrsites atun	10.00	4	0.74	9011
Genypterus capensis	9.00	2	0.67	9014
Paracallionymus costatus	8.60	358	0.64	
Zeus capensis	8.00	18	0.59	9013
Trachurus capensis	6.50	22	0.48	9007
Callorhinchus capensis	6.00	4	0.45	
Cynoglossus zanzibarensis	5.42	86	0.40	9009
Raja straeleni	5.20	4	0.39	
Holohalaelurus regani	4.00	18	0.30	
Brama brama	4.00	2	0.30	9015
Raja wallacei	2.60	2	0.19	
Todarodes angolensis - females	2.40	2	0.18	9017
Exodromedia sp.	0.62	10	0.05	
Rossia enigmatica	0.34	22	0.03	
Sepia australis	0.30	32	0.02	
Mursia cristimanus	0.22	10	0.02	
Merluccius paradoxus, juvenile	0.22	22	0.02	9006
Holohalaelurus regani	0.08	10	0.01	
Todaropsis eblanae	0.08	32	0.01	9016
Sepia sp.	0.06	10		
Lolligoncula mercatoris	0.04	10		
Total	1345.84		100.03	

PROJECT STATION:1028

DATE:21/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3146
start stop duration Long E 1656
TIME :12:54:53 13:24:45 30 (min) Purpose code: 3
LOG :3368.18 3369.89 1.70 Area code : 1
FDEPTH: 285 286 GearCond.code:
BDEPTH: 285 286 Validity code:
Towing dir: 330ø Wire out: 861 m Speed: 31 kn*10

Sorted: 181 Kg Total catch: 398.58 CATCH/HOUR: 797.16

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	510.00	5780	63.98	9020
Merluccius paradoxus	98.00	194	12.29	9021
Merluccius capensis	58.00	62	7.28	9018
Helicolenus dactylopterus	42.60	322	5.34	9022
Caelorinchus simorhynchus	32.80		4.11	
Octopus magnificus	18.00	2	2.26	
Zeus capensis	10.00	22	1.25	9025
Squalus mitsukurii	6.00	4	0.75	
Lophius vomerinus	6.00	4	0.75	9023
Malacocephalus laevis	4.30	26	0.54	
Callorhinchus capensis	4.00	2	0.50	
Holohalaelurus regani	2.90	20	0.36	
Genypterus capensis	2.80	10	0.35	9024
Rossia enigmatica	0.44	20	0.06	
Mursia cristimanus	0.40	26	0.05	
Paracallionymus costatus	0.40	40	0.05	
Todaropsis eblanae - males	0.26	6	0.03	9026
Merluccius paradoxus, juvenile	0.20	54	0.03	9019
Lolligoncula mercatoris	0.06	20	0.01	
Total	797.16		99.99	

PROJECT STATION:1029

DATE:21/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3158
start stop duration Long E 1639
TIME :16:24:20 16:54:20 30 (min) Purpose code: 3
LOG :3394.61 3396.18 1.54 Area code : 1
FDEPTH: 340 338 GearCond.code:
BDEPTH: 340 338 Validity code:
Towing dir: 328ø Wire out: 920 m Speed: 32 kn*10

Sorted: 284 Kg Total catch: 283.99 CATCH/HOUR: 567.98

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	350.00	2908	61.62	9028
Caelorinchus simorhynchus	40.00		7.04	
Zeus capensis	40.00	102	7.04	9033
Lepidopus caudatus	30.00	76	5.28	
Genypterus capensis	22.00	16	3.87	9032
Merluccius paradoxus	22.00	62	3.87	9029
Helicolenus dactylopterus	18.00	148	3.17	9030
Merluccius capensis	18.00	14	3.17	9027
Holohalaelurus regani	7.64	32	1.35	
Malacocephalus laevis	7.20	18	1.27	
Epigonus denticulatus	4.20	46	0.74	
Lophius vomerinus	4.00	2	0.70	9031
Squalus mitsukurii	2.00	2	0.35	
Todarodes angolensis - males	1.02	2	0.18	9036
Todaropsis eblanae - females	0.78	8	0.14	9035
Todaropsis eblanae - males	0.34	4	0.06	9034
Rossia enigmatica	0.30	10	0.05	
Notopogon macrosolen	0.22	2	0.04	
Sepia hieronis	0.10	2	0.02	
Mursia cristimanus	0.08	6	0.01	
Lucigadus ori	0.06	8	0.01	
Paracallionymus costatus	0.04	20	0.01	
Total	567.98		99.99	

PROJECT STATION:1030

DATE:22/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3145
start stop duration Long E 1612
TIME :04:53:55 05:24:22 30 (min) Purpose code: 3
LOG :3476.29 3478.06 1.73 Area code : 1
FDEPTH: 451 450 GearCond.code:
BDEPTH: 451 450 Validity code:
Towing dir: 355ø Wire out:1220 m Speed: 32 kn*10

Sorted: 65 Kg Total catch: 65.77 CATCH/HOUR: 131.54

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	52.00	166	39.53	9037
Helicolenus dactylopterus	24.00	132	18.25	9038
Genypterus capensis	22.00	8	16.72	9040
Bassanago albescens	10.00	16	7.60	
Caelorinchus simorhynchus	9.30		7.07	
Malacocephalus laevis	6.50	22	4.94	
Notacanthus sexspinis	4.40	62	3.34	
Lophius vomerinus	1.24	2	0.94	9039
Holohalaelurus regani	0.42	2	0.32	
Paracallionymus costatus	0.42	84	0.32	
Lucigadus ori	0.40	52	0.30	
Rossia enigmatica	0.22	10	0.17	
Parapagurus pilosimanus	0.14	8	0.11	
Lycoteuthis lorigera	0.12	4	0.09	
Epigonus denticulatus	0.10	10	0.08	
Coelorinchus braueri	0.10	20	0.08	
Stereomastis sp.	0.08	12	0.06	
Funchalia woodwardi	0.08	8	0.06	
Shrimps, small, non comm.	0.02	10	0.02	
Total	131.54		100.00	

PROJECT STATION:1031

DATE:22/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3147
start stop duration Long E 1601
TIME :07:23:49 07:53:32 30 (min) Purpose code: 3
LOG :3492.21 3493.84 1.62 Area code : 1
FDEPTH: 563 563 GearCond.code: 7
BDEPTH: 563 563 Validity code: 3
Towing dir: 155ø Wire out:1500 m Speed: 32 kn*10

Sorted: Kg Total catch: 80.00 CATCH/HOUR: 160.00

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	60.00		37.50	
Ruvettus pretiosus	40.00	2	25.00	
Helicolenus dactylopterus	40.00		25.00	
Miscellaneous fishes	10.00		6.25	
Chaceon chuni	10.00		6.25	
Total	160.00		100.00	

PROJECT STATION:1032

DATE:22/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3155
start stop duration Long E 1602
TIME :09:45:23 10:15:25 30 (min) Purpose code: 3
LOG :3502.41 3504.02 1.60 Area code : 1
FDEPTH: 676 668 GearCond.code:
BDEPTH: 676 668 Validity code:
Towing dir: 135ø Wire out:1850 m Speed: 30 kn*10

Sorted: 171 Kg Total catch: 216.45 CATCH/HOUR: 432.90

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Chaceon chuni	174.00	2352	40.19	
Centrophorus squamosus	68.00	8	15.71	
Merluccius paradoxus	46.00	28	10.63	9041
Histioteuthis miranda	40.00		9.24	
Hoplostethus atlanticus	19.00	62	4.39	9042
Trachyscorpia capensis	12.40	28	2.86	
Nezumia micronychodon	10.00	150	2.31	
Photichthys argenteus	10.00	250	2.31	
Raja leopardus	8.20	26	1.89	
Etmopterus brachyurus	6.80	28	1.57	
Bathypolypus valdiviae	6.40	78	1.48	
Coelorinchus matamua	6.20	44	1.43	
Ebinania costaecanarie	3.00	10	0.69	
Ommastrephes bartrami	2.80	2	0.65	9044
Coryphaenoides macrolophus	2.64	4	0.61	
Ebinania costaecanarie	2.60	4	0.60	
Etmopterus sp.	2.50	14	0.58	
Apristurus saldanha	2.00	2	0.46	
Melanostomias sp.	1.44	30	0.33	
Xenodermichthys copei	1.36	64	0.31	
Todarodes angolensis - males	1.20	2	0.28	9043
Selachophidium guentheri	1.06	14	0.24	
Centroscymnus crepidater	0.90	2	0.21	
Notacanthus sexspinis	0.68	14	0.16	
Raja leopardus	0.60	6	0.14	
Histioteuthis macrohista	0.58	6	0.13	
Diretmus argenteus	0.46	14	0.11	
Allocyttus verrucosus	0.46	10	0.11	
Teuthowenia sp.	0.32	10	0.07	
Nemichthys scolopaceus	0.24	4	0.06	
Neocyttus rhomboidalis	0.24	4	0.06	
Hoplostethus cadenati	0.18	6	0.04	
Lycodes agulhensis	0.14	10	0.03	
Myxine capensis	0.14	4	0.03	
Scopelosaurus meadi	0.12	6	0.03	
Neoscopelus macrolepidotus	0.12	4	0.03	
Rossia enigmatica	0.06	4	0.01	
Squilla acuelata calmani	0.02	4		
Howella sherborni	0.02	4		
Gymnoscopelus sp.	0.02	4		
Lucigadus ori	0.00	4		
Total	432.90		99.98	

PROJECT STATION:1033

DATE:22/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3205
start stop duration Long E 1614
TIME :12:30:01 13:00:10 30 (min) Purpose code: 3
LOG :3520.52 3522.07 1.55 Area code : 1
FDEPTH: 556 555 GearCond.code:
BDEPTH: 556 555 Validity code:
Towing dir: 335ø Wire out:1571 m Speed: 30 kn*10

Sorted: 133 Kg Total catch: 133.73 CATCH/HOUR: 267.46

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	96.00	74	35.89	9045
Chaceon chuni	48.00		17.95	
Coelorinchus braueri	28.00		10.47	
Bathyraja smithii	17.00	2	6.36	
Helicolenus dactylopterus	10.40	48	3.89	9046
Malacocephalus laevis	10.00		3.74	
Deania profundorum	9.20	16	3.44	
Selachophidium guentheri	8.00	80	2.99	
Raja leopardus	6.00	36	2.24	
Photichthys argenteus	6.00		2.24	
Etmopterus brachyurus	4.80	44	1.79	
Psychrolutes macrocephalus	4.64	34	1.73	
Notacanthus sexspinis	4.00		1.50	
Lophius vomerinus	4.00	4	1.50	9047
Bathophilus longipinnis	2.60	32	0.97	
Todarodes angolensis - females	2.00	2	0.75	9049
Todarodes angolensis - males	2.00	4	0.75	9048
Nezumia micronychodon	1.16	20	0.43	
Myxine capensis	1.00		0.37	
Hydrolagus africanus	0.64	4	0.24	
Scopelosaurus meadi	0.42	14	0.16	
Bassanago albescens	0.34	2	0.13	
Lucigadus ori	0.22	18	0.08	
Scopelosaurus herwigi	0.20	6	0.07	
Coloconger cadenati	0.18	2	0.07	
Melanostomias sp.	0.16	6	0.06	
Bathophilus longipinnis	0.12	2	0.04	
Coelorinchus matamua	0.10	2	0.04	
Oreosoma atlanticum	0.10	2	0.04	
Rossia enigmatica	0.08	4	0.03	
Hoplostethus cadenati	0.04	2	0.01	
Gonostoma elongatum	0.02	2	0.01	
Physiculus capensis	0.02	2	0.01	
Gymnoscopelus sp.	0.02	4	0.01	
Total	267.46		100.00	

PROJECT STATION:1034

DATE:22/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3203

start stop duration Long E 1617

TIME :14:32:58 15:02:44 30 (min) Purpose code: 3

LOG :3530.74 3532.27 1.53 Area code : 1

FDEPTH: 473 476 GearCond.code:

BDEPTH: 473 476 Validity code:

Towing dir: 335ø Wire out:1331 m Speed: 30 kn*10

Sorted: 214 Kg Total catch: 214.64 CATCH/HOUR: 429.28

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	328.00	508	76.41	9050
Genypterus capensis	26.00	12	6.06	9053
Malacocephalus laevis	12.00		2.80	
Todarodes angolensis - females	11.20	16	2.61	9055
Chaceon chuni	10.36		2.41	
Helicolenus dactylopterus	7.60	32	1.77	9052
Raja leopardus	7.22	12	1.68	
Todarodes angolensis - males	5.00	10	1.16	9054
Caelorinchus simorhynchus	4.88		1.14	
Hydrolagus africanus	2.90	4	0.68	
Bathypolypus valdiviae	2.26	32	0.53	
Coelorinchus brauer	1.92	128	0.45	
Lucigadus ori	1.84		0.43	
Scopelosaurus meadi	1.08		0.25	
Myxine capensis	0.96	16	0.22	
Lycoteuthis lorigera	0.80		0.19	
Etmopterus brachyurus	0.80	8	0.19	
Notacanthus sexspinis	0.80	12	0.19	
Rossia enigmatica	0.66	42	0.15	
Bassanago albescens	0.44	4	0.10	
Funchalia woodwardi	0.40	40	0.09	
Photichthys argenteus	0.36	20	0.08	
Selachophidium guentheri	0.32	4	0.07	
Parapagurus pilosimanus	0.30	16	0.07	
Merluccius paradoxus	0.22	2	0.05	9051
Physiculus capensis	0.20	10	0.05	
Hoplostethus mediterraneus	0.18	2	0.04	
Paracallionymus costatus	0.08	20	0.02	
Melanostomias sp.	0.08	4	0.02	
Mundiopsis sp.	0.06	8	0.01	
Leptocephalus	0.06	4	0.01	
Lestidiops sp.	0.04	2	0.01	
Gymnoscopelus sp.	0.04	6	0.01	
Tripterophycis gilchristi	0.04	2	0.01	
Psychrolutes macrocephalus	0.04	2	0.01	
Stoloteuthis sp.	0.02	4		
Nectoteuthis vossi	0.02	4		
Abraliopsis gilchristi	0.02	2		
Stereomastis sp.	0.02	4		
Myctophum sp.	0.02	4		
Epigonus denticulatus	0.02	2		
IDIACANTHIDAE	0.02	2		
Diaphus sp.	0.00	2		
Total	429.28		99.97	

PROJECT STATION:1036

DATE:23/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3225

start stop duration Long E 1623

TIME :05:06:09 05:34:06 28 (min) Purpose code: 3

LOG :3604.48 3605.98 1.48 Area code : 1

FDEPTH: 650 644 GearCond.code:

BDEPTH: 650 644 Validity code:

Towing dir: 326ø Wire out:1850 m Speed: 32 kn*10

Sorted: 61 Kg Total catch: 61.46 CATCH/HOUR: 131.70

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	38.57	26	29.29	9066
Chaceon chuni	23.14		17.57	
Hoplostethus atlanticus	17.14	66	13.01	9067
Oreosoma atlanticum	13.07	105	9.92	
Coelorinchus brauer	10.71		8.13	
Photichthys argenteus	6.43		4.88	
Sergia sp.	4.29	1071	3.26	
Etmopterus brachyurus	3.39	17	2.57	
Selachophidium guentheri	3.32	19	2.52	
Coelorinchus matamua	2.91	11	2.21	
Nezumia micronychodon	2.14	24	1.62	
Coryphaenoides macrolophus	1.61	2	1.22	
Bathophilus longipinnis	0.90	17	0.68	
Raja leopardus	0.71	11	0.54	
Notacanthus sexspinis	0.66	11	0.50	
Bathypolypus valdiviae	0.62	6	0.47	
Trachyscorpia capensis	0.34	2	0.26	
Funchalia woodwardi	0.32		0.24	
Coloconger cadenati	0.28	2	0.21	
Ebinania costaecanarie	0.24	2	0.18	
Borostomias sp.	0.13	2	0.10	
Myxine capensis	0.11	2	0.08	
Benguelia 'marek'	0.09	2	0.07	
Gymnoscopelus sp.	0.09	13	0.07	
Diaphus sp.	0.09	32	0.07	
Xenodermichthys copei	0.06	6	0.05	
Symbolophorus boops	0.06	4	0.05	
Rossia enigmatica	0.04	2	0.03	
Lestidiops sp.	0.04	4	0.03	
Lycoteuthis lorigera	0.04	4	0.03	
Scopelosaurus meadi	0.04	2	0.03	
Nemichthys scolopaceus	0.04	4	0.03	
Gonostoma elongatum	0.02	2	0.02	
Myctophum sp.	0.02	2	0.02	
Argentina euchus	0.02	2	0.02	
Lampadena sp.	0.00	2		
Total	131.68		99.98	

PROJECT STATION:1035

DATE:22/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3159

start stop duration Long E 1625

TIME :16:36:02 17:05:50 30 (min) Purpose code: 3

LOG :3542.87 3544.49 1.46 Area code : 1

FDEPTH: 398 394 GearCond.code:

BDEPTH: 398 394 Validity code:

Towing dir: 128ø Wire out:1200 m Speed: 32 kn*10

Sorted: 308 Kg Total catch: 308.91 CATCH/HOUR: 617.82

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	264.00	988	42.73	9058
Merluccius paradoxus	102.00	158	16.51	9057
Helicolenus dactylopterus	78.00	358	12.63	9059
Caelorinchus simorhynchus	58.00		9.39	
Malacocephalus laevis	22.00	40	3.56	
Genypterus capensis	16.00	10	2.59	9061
Lophius vomerinus	14.00	10	2.27	9060
Holohalaelurus regani	13.00	34	2.10	
Bassanago albescens	11.00	18	1.78	
Squalus mitsukurii	6.00	2	0.97	
Epigonus denticulatus	5.40	180	0.87	
Raja confundens	5.20	4	0.84	
Merluccius capensis	5.00	2	0.81	9056
Octopus magnificus	4.80	2	0.78	
Scyliorhinus capensis	4.00	6	0.65	
Zeus capensis	2.80	6	0.45	9062
Todarodes angolensis - males	2.40	4	0.39	9065
Lucigadus ori	1.76		0.28	
Todaropsis eblanae - males	0.78	6	0.13	9063
Todaropsis eblanae - females	0.72	6	0.12	9064
Rossia enigmatica	0.36	18	0.06	
Paracallionymus costatus	0.22	78	0.04	
Tripterophycis gilchristi	0.12	6	0.02	
Sepia sp.	0.06	16	0.01	
Bathynectes piperitus	0.04	2	0.01	
Symbolophorus boops	0.04	4	0.01	
Stereomastis sp.	0.02	2		
Hoplostethus mediterraneus	0.02	2		
Rochinia sp.	0.02	2		
Mursia cristimanus	0.02	4		
Psychrolutes macrocephalus	0.02	2		
Champsodon capensis	0.02	2		
Total	617.82		100.00	

PROJECT STATION:1037

DATE:23/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3225

start stop duration Long E 1626

TIME :07:24:29 07:54:57 30 (min) Purpose code: 3

LOG :3615.02 3616.53 1.49 Area code : 1

FDEPTH: 549 549 GearCond.code:

BDEPTH: 549 549 Validity code:

Towing dir: 322ø Wire out:1500 m Speed: 32 kn*10

Sorted: 221 Kg Total catch: 221.83 CATCH/HOUR: 443.66

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	358.00	280	80.69	9068
Coelorinchus brauer	20.00	100	4.51	
Lophius vomerinus	12.00	2	2.70	9070
Helicolenus dactylopterus	11.00	56	2.48	9069
Etmopterus brachyurus	10.00		2.25	
Raja leopardus	4.96	64	1.12	
Genypterus capensis	4.00	2	0.90	9071
Chaceon chuni	3.60		0.81	
Selachophidium guentheri	3.20		0.72	
Todarodes angolensis - females	2.80	4	0.63	9073
Sergia sp.	2.60		0.59	
Notacanthus sexspinis	2.00	32	0.45	
Photichthys argenteus	2.00	72	0.45	
Bassanago albescens	1.52	4	0.34	
Bathypolypus valdiviae	1.24	14	0.28	
Todarodes angolensis - males	1.20	2	0.27	9072
Nezumia micronychodon	0.96	10	0.22	
Psychrolutes macrocephalus	0.92	4	0.21	
Malacocephalus laevis	0.40	4	0.09	
Beryx splendens	0.34	2	0.08	
Funchalia woodwardi	0.24	24	0.05	
Myxine capensis	0.14	2	0.03	
Lycoteuthis lorigera	0.14	6	0.03	
Bathophilus longipinnis	0.12	2	0.03	
Taonius pavo	0.08	2	0.02	
Scopelosaurus herwigi	0.06	2	0.01	
Lucigadus ori	0.04	8	0.01	
Lestidiops sp.	0.04	2	0.01	
Epigonus denticulatus	0.02	2		
Avocettina sp.	0.02	2		
Cranchia scabra	0.02	2		
Total	443.66		99.98	

PROJECT STATION:1038

DATE:23/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3222

start stop duration Long E 1629

TIME :09:18:46 09:49:41 31 (min) Purpose code: 3

LOG :3624.08 3625.86 1.76 Area code : 1

FDEPTH: 453 449 GearCond.code:

BDEPTH: 453 449 Validity code:

Towing dir: 329ø Wire out:1250 m Speed: 32 kn*10

Sorted: 658 Kg Total catch: 658.87 CATCH/HOUR: 1275.23

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1124.52	1775	88.18	9074
Helicolenus dactylopterus	54.19	341	4.25	9075
Caelorinchus simorhynchus	27.10		2.13	
Centrophorus squamosus	19.35	2	1.52	
Bassanago albescens	13.55	29	1.06	
Genypterus capensis	13.55	8	1.06	9076
Funchalia woodwardi	5.81		0.46	
Todarodes angolensis - males	3.48	8	0.27	9077
Lestidiops sp.	2.30	128	0.18	
Malacocephalus laevis	1.26	4	0.10	
Photichthys argenteus	1.16	27	0.09	
Todarodes angolensis - females	1.16	2	0.09	9078
Coelorinchus braueri	1.16		0.09	
Notacanthus sexspinis	1.10	17	0.09	
Symbolophorus boops	1.08	95	0.08	
Holohalaelurus regani	0.85	4	0.07	
Lycoteuthis lorigera	0.79	48	0.06	
Myxine capensis	0.52	8	0.04	
Lucigadus ori	0.48	108	0.04	
Raja leopardus	0.45	14	0.04	
Etmopterus brachyurus	0.43	6	0.03	
Diaphus sp.	0.27	91	0.02	
Chaceon chuni	0.17	2	0.01	
Stereomastis sp.	0.14	19	0.01	
Bathophilus longipinnis	0.10	2	0.01	
Physiculus capensis	0.08	4	0.01	
Raja confundens	0.06	2		
Rossia enigmatica	0.04	2		
Tripterophycis gilchristi	0.04	2		
Paracallionymus costatus	0.04	6		
Total	1275.23		99.99	

PROJECT STATION:1039

DATE:23/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3220

start stop duration Long E 1634

TIME :11:02:02 11:32:18 30 (min) Purpose code: 3

LOG :3632.89 3634.42 1.51 Area code : 1

FDEPTH: 383 387 GearCond.code:

BDEPTH: 383 387 Validity code:

Towing dir: 175ø Wire out:1099 m Speed: 30 kn*10

Sorted: 358 Kg Total catch: 1533.81 CATCH/HOUR: 3067.62

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	2836.00	10210	92.45	9079
Merluccius paradoxus	78.00	50	2.54	9080
Caelorinchus simorhynchus	68.00		2.22	
Helicolenus dactylopterus	49.00	322	1.60	9081
Genypterus capensis	20.00	2	0.65	9083
Genypterus capensis	10.00	12	0.33	9082
Todarodes angolensis - females	2.40	2	0.08	9085
Todarodes angolensis - males	2.12	4	0.07	9084
Parapagurus pilosimanus	0.76	30	0.02	
Photichthys argenteus	0.32	10	0.01	
Mursia cristimanus	0.24	20	0.01	
Epigonus denticulatus	0.20	10	0.01	
Lestidiops sp.	0.18	10	0.01	
Symbolophorus boops	0.16	10	0.01	
Lucigadus ori	0.14	10		
Paracallionymus costatus	0.10	10		
Total	3067.62		100.01	

PROJECT STATION:1040

DATE:23/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3217

start stop duration Long E 1642

TIME :12:58:11 13:28:35 30 (min) Purpose code: 3

LOG :3645.41 3647.03 1.62 Area code : 1

FDEPTH: 340 343 GearCond.code:

BDEPTH: 340 343 Validity code:

Towing dir: 325ø Wire out:1001 m Speed: 30 kn*10

Sorted: 175 Kg Total catch: 315.13 CATCH/HOUR: 630.26

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	334.00	2384	52.99	9088
Caelorinchus simorhynchus	108.00	15070	17.14	
Merluccius paradoxus	60.00	66	9.52	9089
Zeus capensis	42.00	90	6.66	9093
Helicolenus dactylopterus	30.00	210	4.76	9090
Merluccius capensis	13.00	10	2.06	9086
Genypterus capensis	12.00	14	1.90	9092
Malacocephalus laevis	8.54	30	1.35	
Holohalaelurus regani	8.40	24	1.33	
Lophius vomerinus	4.00	2	0.63	9091
Todarodes angolensis - females	2.00	2	0.32	9095
Raja confundens	2.00	2	0.32	
Todaropsis eblanae - females	1.42	8	0.23	9094
Paracallionymus costatus	1.20	206	0.19	
Lucigadus ori	1.18	200	0.19	
Epigonus denticulatus	0.56	62	0.09	
MYCTOPHIDAE	0.48		0.08	
Rossia enigmatica	0.38	20	0.06	
Chlorophthalmus agassizi	0.38	6	0.06	
Exodromedia sp.	0.20	6	0.03	
Merluccius paradoxus, juvenile	0.20	46	0.03	9087
Mursia cristimanus	0.06	6	0.01	
Electrona risso	0.06	6	0.01	
Champsodon capensis	0.06	6	0.01	
Physiculus capensis	0.06	6	0.01	
Sepia sp.	0.02	6		
Stoloteuthis sp.	0.02	6		
Lycoteuthis lorigera	0.02	6		
Hoplostethus mediterraneus	0.02	6		
Total	630.26		99.98	

PROJECT STATION:1041

DATE:23/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3214

start stop duration Long E 1646

TIME :14:54:25 15:24:11 30 (min) Purpose code: 3

LOG :3657.01 3658.52 1.50 Area code : 1

FDEPTH: 319 319 GearCond.code:

BDEPTH: 319 319 Validity code:

Towing dir: 345ø Wire out: 939 m Speed: 30 kn*10

Sorted: 213 Kg Total catch: 583.22 CATCH/HOUR: 1166.44

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	764.00	6940	65.50	9098
Caelorinchus simorhynchus	120.00		10.29	
Zeus capensis	112.00	246	9.60	9102
Merluccius paradoxus	52.00	62	4.46	9097
Merluccius capensis	44.00	36	3.77	9096
Malacocephalus laevis	35.20	90	3.02	
Genypterus capensis	12.00	10	1.03	9101
Helicolenus dactylopterus	8.00	70	0.69	9099
Holohalaelurus regani	7.00	18	0.60	
Squalus mitsukurii	4.00	2	0.34	
Lophius vomerinus	3.00	4	0.26	9100
Parapagurus pilosimanus	2.22	100	0.19	
Mursia cristimanus	1.18	90	0.10	
Paracallionymus costatus	0.76	70	0.07	
Bathynectes piperitus	0.48	10	0.04	
Rossia enigmatica	0.24	10	0.02	
Squilla aculeata calmani	0.20	40	0.02	
Lampanyctodes hectoris	0.10		0.01	
Exodromedia sp.	0.08	10	0.01	
Champsodon capensis	0.08	10	0.01	
Lucigadus ori	0.06	10	0.01	
Chlorophthalmus atlanticus	0.04	10		
Total	1166.64		100.04	

PROJECT STATION:1042

DATE:24/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3209

start stop duration Long E 1700

TIME :04:48:37 05:18:26 30 (min) Purpose code: 3

LOG :3733.74 3735.44 1.63 Area code : 1

FDEPTH: 266 265 GearCond.code:

BDEPTH: 266 265 Validity code:

Towing dir: 345ø Wire out: 760 m Speed: 32 kn*10

Sorted: 125 Kg Total catch: 276.79 CATCH/HOUR: 553.58

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	322.00	6722	58.17	9105
Caelorinchus simorhynchus	66.00		11.92	
Merluccius capensis	38.00	54	6.86	9103
Holohalaelurus regani	27.00	204	4.88	
Paracallionymus costatus	22.90	2862	4.14	
Merluccius paradoxus	22.00	46	3.97	9104
Lophius vomerinus	12.00	12	2.17	9109
Raja straeleni	8.00	8	1.45	
Helicolenus dactylopterus	6.88	144	1.24	9108
Callorhinchus capensis	6.60	4	1.19	
Genypterus capensis	6.60	14	1.19	9110
Trachurus capensis	6.00	12	1.08	9107
Mustelus palumbes	4.00	2	0.72	
Malacocephalus laevis	2.72	18	0.49	
Parapagurus dimorphus	1.54	174	0.28	
Myxine capensis	0.56	6	0.10	
Sepia australis	0.26	24	0.05	
Rossia enigmatica	0.24	6	0.04	
Merluccius paradoxus, juvenile	0.12	30	0.02	9106
Mursia cristimanus	0.08	6	0.01	
Maurolicus muelleri	0.04		0.01	
Lampanyctodes hectoris	0.02			
Engraulis capensis	0.02	6		
Total	553.58		99.98	

PROJECT STATION:1043

DATE:24/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3201

start stop duration Long E 1713

TIME :07:13:01 07:43:07 30 (min) Purpose code: 3

LOG :3750.45 3752.04 1.59 Area code : 1

FDEPTH: 197 195 GearCond.code:

BDEPTH: 197 195 Validity code:

Towing dir: 350ø Wire out: 600 m Speed: 32 kn*10

Sorted: 96 Kg Total catch: 809.39 CATCH/HOUR: 1618.78

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1004.00	26822	62.02	9112
Lampanyctodes hectoris	511.40		31.59	
Sepia australis	54.00	5400	3.34	
Callorhinchus capensis	9.00	4	0.56	
Merluccius capensis	8.60	24	0.53	9111
Paracallionymus costatus	7.80	780	0.48	
Caelorinchus simorhynchus	6.20	290	0.38	
Holohalaelurus regani	5.80	78	0.36	
Merluccius paradoxus	4.40	18	0.27	9113
Lophius vomerinus	3.02	6	0.19	9116
Raja straeleni	2.00	2	0.12	
Merluccius paradoxus, juvenile	1.54	78	0.10	9114
Genypterus capensis	0.80	4	0.05	9117
Cynoglossus zanzibarensis	0.20	20	0.01	9115
Mursia cristimanus	0.02	20		
Total	1618.78		100.00	

PROJECT STATION:1044

DATE:24/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3155

start stop duration Long E 1724

TIME :09:12:27 09:42:14 30 (min) Purpose code: 3

LOG :3764.45 3766.12 1.65 Area code : 1

FDEPTH: 154 152 GearCond.code:

BDEPTH: 154 152 Validity code:

Towing dir: 355ø Wire out: 450 m Speed: 32 kn*10

Sorted: 93 Kg Total catch: 93.76 CATCH/HOUR: 187.52

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	51.00	1676	27.20	9119
Chelidonichthys capensis	34.00	122	18.13	9125
Sepia australis	28.00		14.93	
Paracallionymus costatus	14.60	1622	7.79	
Merluccius capensis	14.00	48	7.47	9118
Maurolicus muelleri	12.00		6.40	
Todaropsis eblanae - males	8.00	156	4.27	9127
Todarodes angolensis	7.40		3.95	
Lophius vomerinus	6.40	28	3.41	9123
Todaropsis eblanae - females	5.40	102	2.88	9128
Helicolenus dactylopterus	2.30	120	1.23	9126
Genypterus capensis	2.00	12	1.07	9124
Merluccius paradoxus, juvenile	0.54	72	0.29	9121
Squilla acuelata calmani	0.50	30	0.27	
Merluccius paradoxus	0.36	2	0.19	9120
Cynoglossus zanzibarensis	0.32	6	0.17	9122
Holohalaelurus regani	0.28	12	0.15	
Lolligoncula mercatoris	0.22	88	0.12	
Zeus capensis	0.12	2	0.06	
Caelorinchus simorhynchus	0.06	4	0.03	
Rossia enigmatica	0.02	2	0.01	
Total	187.52		100.02	

PROJECT STATION:1045

DATE:24/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3148

start stop duration Long E 1738

TIME :11:54:17 12:24:57 31 (min) Purpose code: 3

LOG :3782.57 3784.25 1.69 Area code : 1

FDEPTH: 138 137 GearCond.code:

BDEPTH: 138 137 Validity code:

Towing dir: 340ø Wire out: 444 m Speed: 30 kn*10

Sorted: 57 Kg Total catch: 170.10 CATCH/HOUR: 329.23

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	205.16	6885	62.32	9131
Merluccius capensis, juveniles	34.84	2861	10.58	9130
Merluccius capensis	25.16	116	7.64	9129
Chelidonichthys capensis	19.35	81	5.88	9134
Squilla acuelata calmani	14.42	1202	4.38	
Sepia australis	12.74	1274	3.87	
Exodromedia sp.	8.01	472	2.43	
Callorhinchus capensis	3.00	4	0.91	
Genypterus capensis	1.94	19	0.59	9133
Lophius vomerinus	1.94	8	0.59	9132
Todaropsis eblanae - females	1.06	17	0.32	9136
Todaropsis eblanae - males	0.89	17	0.27	9135
Caelorinchus simorhynchus	0.54	27	0.16	
Solenocera africana	0.14	10	0.04	
Paracallionymus costatus	0.04	10	0.01	
Total	329.23		99.99	

PROJECT STATION:1046

DATE:24/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3141

start stop duration Long E 1750

TIME :14:11:43 14:42:10 30 (min) Purpose code: 3

LOG :3797.62 3799.21 1.57 Area code : 1

FDEPTH: 123 123 GearCond.code:

BDEPTH: 123 123 Validity code:

Towing dir: 170ø Wire out: 444 m Speed: 30 kn*10

Sorted: 103 Kg Total catch: 404.87 CATCH/HOUR: 809.74

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Squilla acuelata calmani	280.00	23334	34.58	
Merluccius capensis	187.20	1540	23.12	9137
Merluccius capensis, juveniles	153.20	14088	18.92	9139
Lampanyctodes hectoris	104.00		12.84	
Merluccius capensis	30.00	130	3.70	9138
Raja alba - female	22.00	2	2.72	
Todaropsis eblanae	17.68	396	2.18	9143
Chelidonichthys capensis	10.36	54	1.28	9142
Lophius vomerinus	1.66	10	0.21	9140
Genypterus capensis	1.40	6	0.17	9141
Sufflogobius bibarbatus	1.38	228	0.17	
Exodromedia sp.	0.56	10	0.07	
Sepia australis	0.30	10	0.04	
Total	809.74		100.00	

PROJECT STATION:1047

DATE:24/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3150

start stop duration Long E 1804

TIME :16:20:46 16:50:20 30 (min) Purpose code: 3

LOG :3813.32 3815.02 1.69 Area code : 1

FDEPTH: 105 104 GearCond.code:

BDEPTH: 105 104 Validity code:

Towing dir: 150ø Wire out: 300 m Speed: 32 kn*10

Sorted: 147 Kg Total catch: 147.28 CATCH/HOUR: 294.56

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	212.00	1658	71.97	9145
Squilla acuelata calmani	28.00	1120	9.51	
Merluccius capensis, juveniles	20.80	3100	7.06	9144
Chelidonichthys capensis	18.00	82	6.11	9148
Callorhinchus capensis	6.00	6	2.04	
Sufflogobius bibarbatus	4.22	468	1.43	
Merluccius capensis	2.00	4	0.68	9146
Todaropsis eblanae	1.68	42	0.57	9150
Austroglossus microlepis	1.38	14	0.47	9149
Lepidopus caudatus	0.34	16	0.12	
Trachurus capensis	0.10	4	0.03	9147
Engraulis capensis	0.04	6	0.01	
Total	294.56		100.00	

PROJECT STATION:1048

DATE:25/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3203

start stop duration Long E 1755

TIME :04:57:54 05:30:05 32 (min) Purpose code: 3

LOG :3895.75 3897.46 1.69 Area code : 1

FDEPTH: 123 123 GearCond.code:

BDEPTH: 123 123 Validity code:

Towing dir: 340ø Wire out: 340 m Speed: 32 kn*10

Sorted: 122 Kg Total catch: 350.24 CATCH/HOUR: 656.70

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	328.13	2839	49.97	9152
Squilla acuelata calmani	161.25	13438	24.55	
Merluccius capensis, juveniles	66.58	6564	10.14	9153
Chelidonichthys capensis	33.75	161	5.14	9155
Genypterus capensis	19.50	79	2.97	9154
Exodromedia sp.	13.58	1044	2.07	
Callorhinchus capensis	13.13	23	2.00	
Austroglossus microlepis	13.13	83	2.00	9156
Merluccius capensis	2.44	4	0.37	9151
Todaropsis eblanae	1.82	51	0.28	9157
Sufflogobius bibarbatus	1.50	263	0.23	
Ophichthus bennettai	0.64	6	0.10	
Sepia australis	0.58	43	0.09	
Squalus acanthias	0.38	2	0.06	
Mursia cristimanus	0.32	15	0.05	
Total	656.73		100.02	

PROJECT STATION:1049

DATE:25/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3210

start stop duration Long E 1743

TIME :07:52:11 08:23:24 31 (min) Purpose code: 3

LOG :3913.33 3914.96 1.62 Area code : 1

FDEPTH: 153 150 GearCond.code:

BDEPTH: 153 150 Validity code:

Towing dir: 355ø Wire out: 450 m Speed: 32 kn*10

Sorted: 69 Kg Total catch: 103.02 CATCH/HOUR: 199.39

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	92.90	2915	46.59	9158
Lampanyctodes hectoris	52.26		26.21	
Merluccius paradoxus	17.42	207	8.74	9159
Sepia australis	12.52	964	6.28	
Squilla acuelata calmani	11.15	1394	5.59	
Callorhinchus capensis	3.87	4	1.94	
Todaropsis eblanae	1.90	75	0.95	9165
Chelidonichthys capensis	1.86	6	0.93	9163
Solenocera africana	1.80	225	0.90	
Lophius vomerinus	1.16	10	0.58	9161
Paracallionymus costatus	0.54		0.27	
Austroglossus microlepis	0.41	4	0.21	9164
Raja straeleni	0.31	2	0.16	
Holohalaelurus regani	0.31	12	0.16	
Caelorinchus simorhynchus	0.25	17	0.13	
Palinurus gilchristi - females	0.23	2	0.12	
Genypterus capensis	0.21	12	0.11	9162
Helicolenus dactylopterus	0.15	6	0.08	9160
Exodromedia sp.	0.08	6	0.04	
Maurolicus muelleri	0.04		0.02	
Lolligoncula mercatoris	0.02	6	0.01	
Total	199.39		100.02	

PROJECT STATION:1050

DATE:25/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3216

start stop duration Long E 1727

TIME :11:09:32 11:39:22 30 (min) Purpose code: 3

LOG :3934.82 3936.46 1.63 Area code : 1

FDEPTH: 187 184 GearCond.code:

BDEPTH: 187 184 Validity code:

Towing dir: 340ø Wire out: 599 m Speed: 30 kn*10

Sorted: 122 Kg Total catch: 345.40 CATCH/HOUR: 690.80

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	300.00	8820	43.43	9167
Lampanyctodes hectoris	196.00		28.37	
Sepia australis	71.20	5086	10.31	
Merluccius capensis	32.00	96	4.63	9166
Raja alba - female	20.00	2	2.90	
Parapagurus dimorphus	16.28		2.36	
Chelidonichthys capensis	12.00	38	1.74	9174
Merluccius paradoxus	10.00	40	1.45	9168
Helicolenus dactylopterus	8.20	608	1.19	9169
Paracallionymus costatus	8.00		1.16	
Callorhinchus capensis	6.00	4	0.87	
Lophius vomerinus	2.40	12	0.35	9171
Todaropsis eblanae	2.02	52	0.29	9176
Lophius vomerinus	2.02	22	0.29	9172
Genypterus capensis	1.20	8	0.17	9173
Caelorinchus simorhynchus	1.08	38	0.16	
Cynoglossus zanzibarensis	0.62	8	0.09	9170
Cynoglossus zanzibarensis	0.60	16	0.09	9175
Congiopodus spinifer	0.42	8	0.06	
Raja straeleni	0.40	2	0.06	
Exodromedia sp.	0.24	8	0.03	
Solenocera africana	0.12	16	0.02	
Total	690.80		100.02	

PROJECT STATION:1051

DATE:25/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3222
start stop duration Long E 1717
TIME :13:52:56 14:22:46 30 (min) Purpose code: 3
LOG :3951.21 3952.78 1.55 Area code : 1
FDEPTH: 242 238 GearCond.code:
BDEPTH: 242 238 Validity code:
Towing dir: 335ø Wire out: 727 m Speed: 30 kn*10

Sorted: 148 Kg Total catch: 245.93 CATCH/HOUR: 491.86

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	262.00	4520	53.27	9178
Lampanyctodes hectoris	174.00		35.38	
Parapagurus dimorphus	12.00		2.44	
Callorhinchus capensis	10.00	6	2.03	
Caelorinchus simorhynchus	7.46	552	1.52	
Merluccius paradoxus	7.00	20	1.42	9179
Merluccius capensis	5.00	12	1.02	9177
Paracallionymus costatus	4.80		0.98	
Raja straeleni	2.00	2	0.41	
Zeus capensis	2.00	6	0.41	9183
Malacocephalus laevis	1.80	12	0.37	
Holohalaelurus regani	0.80	4	0.16	
Squalus megalops	0.62	2	0.13	
Todaropsis eblanae - females	0.48	6	0.10	9185
Helicolenus dactylopterus	0.48	18	0.10	9181
Chelidonichthys capensis	0.42	2	0.09	9184
Rossia enigmatica	0.30	6	0.06	
Jasus lalandii	0.16	2	0.03	
Mursia cristimanus	0.14	12	0.03	
Lepidopus caudatus	0.12	6	0.02	
Lophius vomerinus	0.12	6	0.02	9182
Sepia australis	0.10	24	0.02	
Merluccius paradoxus, juvenile	0.06	6	0.01	9180
Total	491.86		100.02	

PROJECT STATION:1052

DATE:25/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3227
start stop duration Long E 1703
TIME :15:00:14 16:40:36 30 (min) Purpose code: 3
LOG :3970.45 3972.22 1.75 Area code : 1
FDEPTH: 293 293 GearCond.code:
BDEPTH: 293 293 Validity code:
Towing dir: 335ø Wire out: 840 m Speed: 32 kn*10

Sorted: 141 Kg Total catch: 204.10 CATCH/HOUR: 408.20

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	250.00	3884	61.24	9189
Merluccius paradoxus	32.00	78	7.84	9188
Caelorinchus simorhynchus	26.00	482	6.37	
Holohalaelurus regani	16.00	68	3.92	
Lampanyctodes hectoris	16.00		3.92	
Thyrsites atun	14.00	6	3.43	9193
Merluccius capensis	14.00	14	3.43	9186
Helicolenus dactylopterus	8.30	76	2.03	9191
Zeus capensis	8.00	16	1.96	9195
Malacocephalus laevis	6.00	24	1.47	
Parapagurus dimorphus	5.00	384	1.22	
Lophius vomerinus	4.00	6	0.98	9192
Genypterus capensis	2.40	10	0.59	9194
Raja straeleni	2.00	2	0.49	
Todaropsis eblanae - females	1.60	16	0.39	9197
Todaropsis eblanae - males	1.32	16	0.32	9196
Trachurus capensis	1.24	4	0.30	9190
Paracallionymus costatus	0.14	24	0.03	
Rossia enigmatica	0.08	4	0.02	
Rochinia sp.	0.08	4	0.02	
Merluccius paradoxus, juvenile	0.04	4	0.01	9187
Total	408.20		99.98	

PROJECT STATION:1053

DATE:26/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3243
start stop duration Long E 1635
TIME :05:06:46 05:40:24 34 (min) Purpose code: 3
LOG :4021.60 4023.51 1.86 Area code : 1
FDEPTH: 753 753 GearCond.code:
BDEPTH: 753 753 Validity code:
Towing dir: 330ø Wire out:2000 m Speed: 32 kn*10

Sorted: 202 Kg Total catch: 202.74 CATCH/HOUR: 357.78

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Chaceon chuni	88.24	695	24.66	
Allocyttus verrucosus	82.94	208	23.18	
Coelorinchus braueri	51.18	1004	14.30	
Etmopterus gracilispinis	28.24	60	7.89	
Hoplostethus atlanticus	19.41	51	5.43	9200
Merluccius paradoxus	17.65	11	4.93	9198
Histioteuthis miranda	12.35	11	3.45	
Raja straeleni	8.82	5	2.47	
Lepidion capensis	8.29	23	2.32	9199
Apristurus saldanha	7.59	14	2.12	
Notacanthus sexspinis	4.76	48	1.33	
Squalus mitsukurii	3.53	2	0.99	
Photichthys argenteus	3.18		0.89	
Ebinania costaecanarie	3.14	5	0.88	
Nezumia micronychodon	2.95	44	0.82	
Diastobranchus capensis	2.89	12	0.81	
Sergia sp.	2.29		0.64	
Funchalia woodwardi	1.61		0.45	
Trachyscorpia capensis	1.43	5	0.40	
Etmopterus brachyurus	1.24	4	0.35	
Selachophidium guentheri	1.15	12	0.32	
Avocettina acuticeps	0.81	21	0.23	
Bathophilus longipinnis	0.72	9	0.20	
Synaphobranchus kaupii	0.64	7	0.18	
Coelorinchus matamua	0.55	2	0.15	
Megalocranchia sp.	0.46	5	0.13	
Histioteuthis macrohista	0.28	4	0.08	
Bathypolypus valdiviae	0.25	4	0.07	
Nemichthys scolopaceus	0.19	11	0.05	
Chauliodus sloani	0.18	9	0.05	
Symbolophorus boops	0.14	11	0.04	
Xenodermichthys copei	0.14	5	0.04	
Teuthowenia pellua	0.11	2	0.03	
Nessorhamphus ingolfianus	0.11	2	0.03	
Diretmus argenteus	0.09	2	0.03	
Gymnoscopelus bolini	0.07	7	0.02	
Nemichthys curvirostris	0.07	2	0.02	
Lycoteuthis lorigera	0.04	2	0.01	
MYCTOPHIDAE	0.04	2	0.01	
Diplophos taenia	0.02	2	0.01	
Lestidiops sp.	0.02	2	0.01	
Myctophum sp.	0.00	2		
Lepidopus caudatus	0.00	2		
Total	357.81		100.02	

PROJECT STATION:1054

DATE:26/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3243
start stop duration Long E 1636
TIME :07:34:15 08:07:13 33 (min) Purpose code: 3
LOG :4034.46 4036.38 1.67 Area code : 1
FDEPTH: 681 682 GearCond.code:
BDEPTH: 681 682 Validity code:
Towing dir: 330ø Wire out:1850 m Speed: 32 kn*10

Sorted: 233 Kg Total catch: 233.49 CATCH/HOUR: 424.53

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Chaceon chuni	138.18		32.55	
Hoplostethus atlanticus	69.09	180	16.27	9203
Merluccius paradoxus	56.36	36	13.28	9201
Coelorinchus braueri	45.45		10.71	
Coelorinchus matamua	23.64	78	5.57	
Histioteuthis miranda	18.18		4.28	
Lepidion capensis	12.73	45	3.00	
Etmopterus brachyurus	9.09	31	2.14	
Raja straeleni	7.60	11	1.79	
Sergia sp.	7.09		1.67	
Todarodes filippove	4.73	2	1.11	
Photichthys argenteus	4.73	89	1.11	
Apristurus saldanha	4.18	16	0.98	
Notacanthus sexspinis	3.64	33	0.86	
Nezumia micronychodon	3.64		0.86	
Trachyscorpia capensis	2.80	5	0.66	
Etmopterus gracilispinis	2.73	7	0.64	
Bathypolypus valdiviae	2.22	22	0.52	
Eptatretus profundus	1.27	2	0.30	
Bathophilus longipinnis	1.20	25	0.28	
Diastobranchus capensis	1.18	5	0.28	
Funchalia woodwardi	0.91		0.21	
Hydrolagus africanus	0.73	4	0.17	
Synaphobranchus kaupii	0.58	5	0.14	
Nessorhamphus ingolfianus	0.40	42	0.09	
Parapagurus pilosimanus	0.31	4	0.07	
Octopoteuthis rugosa	0.29	4	0.07	
Avocettina acuticeps	0.24	5	0.06	
Chauliodus sloani	0.18	9	0.04	
Selachophidium guentheri	0.18	4	0.04	
Histioteuthis macrohista	0.13	2	0.03	
MELANOSTOMIATIDAE	0.13	2	0.03	
Nemichthys curvirostris	0.11	5	0.03	
Myxine capensis	0.11	2	0.03	
Nemichthys scolopaceus	0.09	7	0.02	
Merluccius paradoxus	0.09	2	0.02	9202
Gymnoscopelus sp.	0.07	2	0.02	
Neoscopelus macrolepidotus	0.07	2	0.02	
ASTRONESTHIDAE	0.05	2	0.01	
Serrivomer beanii	0.05	2	0.01	
Lycoteuthis lorigera	0.04	4	0.01	
Myctophum sp.	0.04	2	0.01	
Total	424.53		99.99	

PROJECT STATION:1055

DATE:26/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3242
start stop duration Long E 1637
TIME :09:37:11 10:07:09 30 (min) Purpose code: 3
LOG :4041.65 4043.28 1.63 Area code : 1
FDEPTH: 583 578 GearCond.code:
BDEPTH: 583 578 Validity code:
Towing dir: 142ø Wire out:1650 m Speed: 30 kn*10

Sorted: 134 Kg Total catch: 134.14 CATCH/HOUR: 268.28

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	90.00	88	33.55	9204
Coelorinchus braueri	38.00		14.16	
Chaceon chuni	38.00		14.16	
Sergia sp.	16.00		5.96	
Raja straeleni	15.14	26	5.64	
Etmopterus brachyurus	12.00		4.47	
Centrophorus squamosus	10.00	2	3.73	
Bathyraja smithii	8.00	2	2.98	
Lophius vomerinus	8.00	4	2.98	9206
Nezumia micronychodon	4.94		1.84	
Notacanthus sexspinis	4.40		1.64	
Photichthys argenteus	3.68		1.37	
Coelorinchus matamua	2.66	8	0.99	
Selachophidium guentheri	2.40	320	0.89	
Malacocephalus laevis	2.00	8	0.75	
Funchalia woodwardi	1.82		0.68	
Hydrolagus africanus	1.78	4	0.66	
Oreosoma atlanticum	1.66	16	0.62	
Helicolenus dactylopterus	1.62	10	0.60	9208
Bathypolypus valdiviae	1.30	18	0.48	
Myxine capensis	1.18	20	0.44	
Bassanago albescens	1.00	2	0.37	
Todarodes angolensis - males	0.88	2	0.33	9207
Ebinania costaecanarie	0.44	2	0.16	
Synaphobranchus kaupii	0.38	4	0.14	
Merluccius paradoxus	0.26	6	0.10	9205
Bathophilus longipinnis	0.24	4	0.09	
Neoscopelus macrolepidotus	0.18	8	0.07	
Ornithoteuthis sp.	0.10	2	0.04	
Rossia enigmatica	0.04	2	0.01	
Lepidion capensis	0.04	4	0.01	
Nemichthys scolopaceus	0.04	2	0.01	
Nemichthys curvirostris	0.04	2	0.01	
Stereomastis sp.	0.02	2	0.01	
MYCTOPHIDAE	0.02	2	0.01	
Lucigadus ori	0.02	2	0.01	
Total	268.28		99.96	

PROJECT STATION:1056

DATE:26/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3242
start stop duration Long E 1640
TIME :11:09:00 11:39:05 30 (min) Purpose code: 3
LOG :4047.53 4049.08 1.55 Area code : 1
FDEPTH: 476 477 GearCond.code:
BDEPTH: 476 477 Validity code:
Towing dir: 335ø Wire out:1378 m Speed: 30 kn*10

Sorted: 273 Kg Total catch: 273.68 CATCH/HOUR: 547.36

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	386.00	490	70.52	9214
Chaceon chuni	50.00		9.13	
Genypterus capensis	36.00	14	6.58	9213
Lophius vomerinus	34.00	20	6.21	9212
Coelorinchus braueri	10.00		1.83	
Etmopterus brachyurus	6.60	44	1.21	
Helicolenus dactylopterus	4.80	26	0.88	9211
Bassanago albescens	4.60	12	0.84	
Merluccius paradoxus	4.00	60	0.73	9209
Caelorinchus simorhynchus	2.60		0.48	
Myxine capensis	2.00		0.37	
Sergia sp.	2.00		0.37	
Raja straeleni	1.54	4	0.28	
Photichthys argenteus	1.26	40	0.23	
Notacanthus sexspinis	1.00		0.18	
Bathypolypus valdiviae	0.30	8	0.05	
Hoplostethus mediterraneus	0.24	2	0.04	
Symbolophorus boops	0.18	14	0.03	
Lucigadus ori	0.12	10	0.02	
Paracallionymus costatus	0.06	10	0.01	
Physiculus capensis	0.02	2		
Argyropelecus aculeatus	0.02	2		
Merluccius paradoxus, juvenile	0.02	4		9210
Total	547.36		99.99	

PROJECT STATION:1057

DATE:26/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3237
start stop duration Long E 1646
TIME :13:15:27 13:45:19 30 (min) Purpose code: 3
LOG :4060.47 4062.00 1.52 Area code : 1
FDEPTH: 392 391 GearCond.code:
BDEPTH: 392 391 Validity code:
Towing dir: 338ø Wire out:1151 m Speed: 30 kn*10

Sorted: 236 Kg Total catch: 236.55 CATCH/HOUR: 473.10

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	322.00	2402	68.06	9215
Merluccius paradoxus	54.00	78	11.41	9221
Genypterus capensis	36.00	14	7.61	9219
Bassanago albescens	14.00	14	2.96	
Caelorinchus simorhynchus	14.00		2.96	
Lophius vomerinus	12.00	2	2.54	9218
Helicolenus dactylopterus	12.00	72	2.54	9217
Todarodes angolensis - males	2.28	4	0.48	9220
Notacanthus sexspinis	2.20	34	0.47	
Chaceon chuni	2.00		0.42	
Coelorinchus braueri	0.60		0.13	
Malacocephalus laevis	0.48	2	0.10	
Photichthys argenteus	0.40	12	0.08	
Lucigadus ori	0.32	40	0.07	
Hoplostethus mediterraneus	0.22	2	0.05	
Physiculus capensis	0.14	8	0.03	
Symbolophorus boops	0.14	12	0.03	
Myxine capensis	0.12	2	0.03	
Lycoteuthis lorigera	0.10	2	0.02	
Paracallionymus costatus	0.04	8	0.01	
MYCTOPHIDAE	0.02	6		
Diaphus sp.	0.02	6		
Merluccius paradoxus, juvenile	0.02	2		9216
Total	473.10		100.00	

PROJECT STATION:1058

DATE:26/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3234
start stop duration Long E 1656
TIME :15:33:49 16:03:05 29 (min) Purpose code: 3
LOG :4076.19 4077.75 1.54 Area code : 1
FDEPTH: 317 319 GearCond.code:
BDEPTH: 317 319 Validity code:
Towing dir: 335ø Wire out: 950 m Speed: 32 kn*10

Sorted: 239 Kg Total catch: 794.35 CATCH/HOUR: 1643.48

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1303.45	15393	79.31	9222
Merluccius paradoxus	134.48	168	8.18	9223
Merluccius capensis	53.79	37	3.27	9227
Caelorinchus simorhynchus	50.07		3.05	
Zeus capensis	20.69	37	1.26	9226
Holohalaelurus regani	18.62	48	1.13	
Parapagurus dimorphus	15.10		0.92	
Helicolenus dactylopterus	13.51	70	0.82	9224
Genypterus capensis	12.41	17	0.76	9225
Raja wallacei	8.28	2	0.50	
Holohalaelurus regani	5.01	12	0.30	
Malacocephalus laevis	4.43	12	0.27	
Lampanyctodes hectoris	1.99		0.12	
Paracallionymus costatus	0.81	81	0.05	
Notacanthus sexspinis	0.35	12	0.02	
Lycoteuthis lorigera	0.23	12	0.01	
Scomberesox saurus	0.12	12	0.01	
Lucigadus ori	0.10	12	0.01	
Mursia cristimanus	0.04	12		
Total	1643.48		99.99	

PROJECT STATION:1059

DATE:27/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3252
start stop duration Long E 1643
TIME :07:23:25 07:53:14 30 (min) Purpose code: 3
LOG :4140.48 4142.18 1.67 Area code : 1
FDEPTH: 619 610 GearCond.code:
BDEPTH: 619 610 Validity code:
Towing dir: 330ø Wire out:1750 m Speed: 32 kn*10
Sorted: 95 Kg Total catch: 95.42 CATCH/HOUR: 190.84

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	40.00	28	20.96	9228
Centrophorus squamosus	24.00	2	12.58	
Coelorinchus matamua	21.60	72	11.32	
Chaceon chuni	20.00		10.48	
Coelorinchus braueri	18.00		9.43	
Lophius vomerinus	14.00	6	7.34	9231
Bathyraja smithii	11.00	2	5.76	
Sergia sp.	9.60		5.03	
Notacanthus sexspinis	7.60		3.98	
Etmopterus brachyurus	6.00	38	3.14	
Raja leopardus	3.74	14	1.96	
Histioteuthis miranda	2.80	2	1.47	
Photichthys argenteus	2.80		1.47	
Nezumia micronychodon	2.00		1.05	
Selachophidium guentheri	1.60	18	0.84	
Hydrolagus africanus	1.08	6	0.57	
Malacocephalus laevis	1.04	4	0.54	
Apristurus saldanha	0.76	6	0.40	
Bathypolypus valdiviae	0.50	6	0.26	
Lepidion capensis	0.50	8	0.26	
Oreosoma atlanticum	0.50	4	0.26	
Notoscopelus sp.	0.36	14	0.19	
Merluccius paradoxus	0.28	6	0.15	9229
Myxine capensis	0.20	4	0.10	
Funchalia woodwardi	0.16	14	0.08	
Ebinania costaecanarie	0.16	4	0.08	
Helicolenus dactylopterus	0.12	2	0.06	9230
Symbolophorus boops	0.10	6	0.05	
Diaphus sp.	0.08	24	0.04	
Rochinia sp.	0.06	9	0.03	
Trachyscorpia capensis	0.06	2	0.03	
Lestidiops sp.	0.04	2	0.02	
Gymnoscopelus sp.	0.04	6	0.02	
Lucigadus ori	0.04	6	0.02	
Raja confundens	0.02	2	0.01	
Xenodermichthys copei	0.00	2		
Total	190.84		99.98	

PROJECT STATION:1060

DATE:27/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3250
start stop duration Long E 1645
TIME :09:16:27 09:48:26 32 (min) Purpose code: 3
LOG :4147.03 4148.68 1.61 Area code : 1
FDEPTH: 523 517 GearCond.code:
BDEPTH: 523 517 Validity code:
Towing dir: 137ø Wire out:1450 m Speed: 32 kn*10
Sorted: 166 Kg Total catch: 166.29 CATCH/HOUR: 311.79

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	136.88	101	43.90	9232
Chaceon chuni	50.63		16.24	
Lophius vomerinus	50.63		16.24	
Coelorinchus braueri	20.63		6.62	
Notacanthus sexspinis	14.44		4.63	
Helicolenus dactylopterus	8.25	53	2.65	9234
Myxine capensis	7.50		2.41	
Bassanago albescens	6.19	23	1.99	
Etmopterus brachyurus	3.73	24	1.20	
Merluccius paradoxus	3.38	36	1.08	9233
Sergia sp.	1.88		0.60	
Malacocephalus laevis	1.39	6	0.45	
Photichthys argenteus	1.13	28	0.36	
Nezumia micronychodon	0.98	49	0.31	
Coelorinchus matamua	0.98	15	0.31	
Ebinania costaecanarie	0.96	9	0.31	
Bathypolypus valdiviae	0.51	9	0.16	
Diastobranchus capensis	0.43	4	0.14	
Selachophidium guentheri	0.38	6	0.12	
Lucigadus ori	0.36	34	0.12	
Diretmoides parini	0.15	2	0.05	
Tripterophycis gilchristi	0.13	6	0.04	
Symbolophorus boops	0.11	8	0.04	
Rossia enigmatica	0.08	4	0.03	
Funchalia woodwardi	0.06	2	0.02	
Paracallionymus costatus	0.04	8	0.01	
Electrona risso	0.02	2	0.01	
Epigonus denticulatus	0.02	2	0.01	
Diaphus sp.	0.00	2		
Total	311.87		100.05	

PROJECT STATION:1061

DATE:27/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3249
start stop duration Long E 1648
TIME :11:15:27 11:45:20 30 (min) Purpose code: 3
LOG :4154.10 4155.60 1.49 Area code : 1
FDEPTH: 443 449 GearCond.code:
BDEPTH: 443 449 Validity code:
Towing dir: 340ø Wire out:1288 m Speed: 30 kn*10
Sorted: 246 Kg Total catch: 357.63 CATCH/HOUR: 715.26

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Parapagurus dimorphus	210.00		29.36	
Merluccius paradoxus	152.00	856	21.25	9236
Notacanthus sexspinis	106.00	786	14.82	
Merluccius paradoxus	78.00	88	10.91	9235
Helicolenus dactylopterus	48.00	238	6.71	9237
Bassanago albescens	40.00	66	5.59	
Lophius vomerinus	26.00	18	3.64	9238
Centrophorus squamosus	24.00	2	3.36	
Caelorinchus simorhynchus	18.80		2.63	
Ebinania costaecanarie	2.72	16	0.38	
Coelorinchus braueri	2.20	66	0.31	
Lucigadus ori	1.90	210	0.27	
Myxine capensis	1.56	22	0.22	
Etmopterus brachyurus	0.96	6	0.13	
Physiculus capensis	0.74	50	0.10	
Chaceon chuni	0.42	12	0.06	
Hoplostethus mediterraneus	0.42	6	0.06	
Tripterophycis gilchristi	0.34	16	0.05	
Stereomastis sp.	0.30	34	0.04	
Paracallionymus costatus	0.24	38	0.03	
Photichthys argenteus	0.20	6	0.03	
Rossia enigmatica	0.16	6	0.02	
Shrimps, small, non comm.	0.12	6	0.02	
Epigonus denticulatus	0.08	12	0.01	
Symbolophorus boops	0.08	6	0.01	
Sepia sp.	0.02	6		
Total	715.26		100.01	

PROJECT STATION:1062

DATE:27/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3248
start stop duration Long E 1659
TIME :14:00:46 14:30:31 30 (min) Purpose code: 3
LOG :4170.23 4172.05 1.82 Area code : 1
FDEPTH: 353 351 GearCond.code:
BDEPTH: 353 351 Validity code:
Towing dir: 340ø Wire out:1021 m Speed: 30 kn*10

Sorted: 237 Kg Total catch: 892.57 CATCH/HOUR: 1785.14

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1276.00	10436	71.48	9241
Caelorinchus simorhynchus	128.00		7.17	
Merluccius paradoxus	102.00	118	5.71	9240
Malacocephalus laevis	74.80	116	4.19	
Zeus capensis	67.00	78	3.75	9245
Helicolenus dactylopterus	58.00	310	3.25	9242
Centrolophus niger	20.00	8	1.12	
Merluccius capensis	15.20	8	0.85	9239
Squalus mitsukurii	8.00	10	0.45	
Parapagurus pilosimanus	6.00		0.34	
Brama brama	6.00	4	0.34	9246
Lophius vomerinus	4.80	2	0.27	9243
Rochinia sp.	4.00		0.22	
Mursia cristimanus	3.80		0.21	
Holohalaelurus regani	2.84	8	0.16	
Todarodes angolensis - males	2.40	4	0.13	9248
Genypterus capensis	2.00	2	0.11	9244
Todaropsis eblanae - females	1.28	4	0.07	9247
Rossia enigmatica	0.88	26	0.05	
Sepia hieronis	0.68	12	0.04	
Scyliorhinus capensis	0.60	2	0.03	
Bathynectes piperitus	0.54	26	0.03	
Sepia sp.	0.20	38	0.01	
Paracallionymus costatus	0.12	12	0.01	
Total	1785.14		99.99	

PROJECT STATION:1063

DATE:27/ 2/05 GEAR TYPE: BT No:14 POSITION:Lat S 3244
start stop duration Long E 1711
TIME :16:34:00 16:53:25 19 (min) Purpose code: 3
LOG :4187.67 4188.78 1.10 Area code : 1
FDEPTH: 303 303 GearCond.code:
BDEPTH: 303 303 Validity code:
Towing dir: 320ø Wire out: 870 m Speed: 33 kn*10

Sorted: 74 Kg Total catch: 252.41 CATCH/HOUR: 797.08

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	631.58	7756	79.24	9249
Caelorinchus simorhynchus	63.16		7.92	
Rochinia sp.	26.84	745	3.37	
Zeus capensis	22.11	44	2.77	9253
Merluccius paradoxus	19.26	32	2.42	9250
Todaropsis eblanae - females	10.71	148	1.34	9255
Holohalaelurus regani	7.71	85	0.97	
Todaropsis eblanae - males	6.09	76	0.76	9254
Genypterus capensis	3.16	9	0.40	9252
Mursia cristimanus	2.78		0.35	
Trachurus capensis	1.89	9	0.24	9251
Malacocephalus laevis	1.17	9	0.15	
Rossia enigmatica	0.47	9	0.06	
Paracallionymus costatus	0.16	22	0.02	
Total	797.09		100.01	

PROJECT STATION:1064

DATE:28/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3222
start stop duration Long E 1812
TIME :04:42:06 05:13:47 32 (min) Purpose code: 3
LOG :4260.21 4261.96 1.73 Area code : 1
FDEPTH: 70 71 GearCond.code:
BDEPTH: 70 71 Validity code:
Towing dir: 15ø Wire out: 230 m Speed: 33 kn*10

Sorted: 20 Kg Total catch: 20.29 CATCH/HOUR: 38.04

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Sufflogobius bibarbatus	18.98	6714	49.89	
Etrumeus whiteheadi	9.34	623	24.55	
Trachurus capensis	6.56	364	17.25	9258
Squilla acuelata calmani	2.21	158	5.81	
Engraulis capensis	0.43	58	1.13	
Merluccius capensis	0.41	4	1.08	9256
Merluccius capensis, juveniles	0.09	9	0.24	9257
Pomatomus saltatrix	0.02	19	0.05	
Total	38.04		100.00	

PROJECT STATION:1065

DATE:28/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3224
start stop duration Long E 1804
TIME :06:43:43 07:13:52 30 (min) Purpose code: 3
LOG :4271.34 4273.02 1.66 Area code : 1
FDEPTH: 95 95 GearCond.code:
BDEPTH: 95 95 Validity code:
Towing dir: 10ø Wire out: 300 m Speed: 33 kn*10

Sorted: 34 Kg Total catch: 104.18 CATCH/HOUR: 208.36

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Squilla acuelata calmani	190.00	20000	91.19	
Sufflogobius bibarbatus	13.28	2392	6.37	
Engraulis capensis	3.98		1.91	
Trachurus capensis	0.80	42	0.38	9260
Merluccius capensis	0.30	4	0.14	9259
Total	208.36		99.99	

PROJECT STATION:1066

DATE:28/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3232
start stop duration Long E 1746
TIME :10:11:42 10:41:39 30 (min) Purpose code: 3
LOG :4294.03 4295.81 1.78 Area code : 1
FDEPTH: 151 162 GearCond.code:
BDEPTH: 151 162 Validity code:
Towing dir: 355ø Wire out: 459 m Speed: 30 kn*10

Sorted: 177 Kg Total catch: 177.90 CATCH/HOUR: 355.80

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	156.00	1068	43.84	9261
Chelidonichthys capensis	128.00	418	35.98	9267
Callorhinchus capensis	20.00	14	5.62	
Squilla acuelata calmani	16.00	1454	4.50	
Genypterus capensis	13.00	42	3.65	9266
Exodromedia sp.	12.00	1264	3.37	
Merluccius capensis, juveniles	2.30	156	0.65	9262
Todaropsis eblanae - females	1.46	26	0.41	9269
Sepia australis	1.18	84	0.33	
Lolliguncula mercatoris	1.00	444	0.28	
Todaropsis eblanae - males	0.88	18	0.25	9268
Trachurus capensis	0.84	6	0.24	9263
Jasus lalandii - females	0.80	6	0.22	
Jasus lalandii - male	0.72	4	0.20	
Caelorinchus simorhynchus	0.56	16	0.16	
Lophius vomerinus	0.36	2	0.10	9265
Sepia hieronis	0.28	6	0.08	
Helicolenus dactylopterus	0.18	18	0.05	9264
Solenocera africana	0.12	16	0.03	
Mursia cristimanus	0.10	4	0.03	
Sufflogobius bibarbatus	0.02	2	0.01	
Total	355.80		100.00	

PROJECT STATION:1067

DATE:28/ 2/05 GEAR TYPE: BT No:15 POSITION:Lat S 3240
start stop duration Long E 1737
TIME :13:54:51 14:24:36 30 (min) Purpose code: 3
LOG :4314.90 4316.63 1.72 Area code : 1
FDEPTH: 229 241 GearCond.code:
BDEPTH: 229 241 Validity code:
Towing dir: 360ø Wire out: 701 m Speed: 30 kn*10

Sorted: 111 Kg Total catch: 196.11 CATCH/HOUR: 392.22

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Caelorinchus simorhynchus	104.00		26.52	
Merluccius paradoxus	84.00	960	21.42	9271
Parapagurus dimorphus	62.00		15.81	
Maurolicus muelleri	38.00		9.69	
Callorhinchus capensis	36.00	16	9.18	
Lampanyctodes hectoris	16.00		4.08	
Paracallionymus costatus	15.60	1356	3.98	
Lophius vomerinus	14.00	2	3.57	9276
Genypterus capensis	7.00	12	1.78	9277
Merluccius paradoxus	4.00	8	1.02	9272
Merluccius capensis	4.00	2	1.02	9270
Chelidonichthys capensis	2.00	6	0.51	9279
Trachurus capensis	1.42	8	0.36	9274
Todaropsis eblanae	1.04	38	0.27	9280
Cynoglossus zanzibarensis	0.66	8	0.17	9275
Holohalaelurus regani	0.58	2	0.15	
Zeus capensis	0.50	8	0.13	9278
Merluccius paradoxus, juvenile	0.46	42	0.12	9273
Ophichthus bennettai	0.40	2	0.10	
Myxine capensis	0.32	4	0.08	
Sepia australis	0.24	4	0.06	
Total	392.22		100.02	

PROJECT STATION:1068

DATE: 1/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3255
start stop duration Long E 1743
TIME :04:41:10 05:10:37 29 (min) Purpose code: 3
LOG :4371.67 4373.35 1.65 Area code : 1
FDEPTH: 154 151 GearCond.code:
BDEPTH: 154 151 Validity code:
Towing dir: 5ø Wire out: 460 m Speed: 33 kn*10

Sorted: 161 Kg Total catch: 626.62 CATCH/HOUR: 1296.46

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1053.10	10953	81.23	9282
Callorhinchus capensis	55.86	33	4.31	
Squilla acuelata calmani	45.52	2677	3.51	
Merluccius paradoxus, juvenile	38.13	2098	2.94	9283
Chelidonichthys capensis	33.10	99	2.55	9286
Sepia australis	22.76	734	1.76	
Genypterus capensis	10.34	39	0.80	9285
Raja straeleni	7.24	2	0.56	
Merluccius capensis	7.03	23	0.54	9281
Solenocera africana	6.46	511	0.50	
Lepidopus caudatus	4.41	182	0.34	
Raja alba	4.14	2	0.32	
Todaropsis eblanae	2.48	46	0.19	9287
Caelorinchus simorhynchus	1.84	101	0.14	
Exodromedia sp.	0.85	46	0.07	
Lophius vomerinus	0.74	2	0.06	9284
Paracallionymus costatus	0.70	68	0.05	
Jasus lalandii - females	0.68	6	0.05	
Jasus lalandii - male	0.37	2	0.03	
Ophichthus bennettai	0.25	2	0.02	
Lampanyctodes hectoris	0.21		0.02	
Congiopodus spinifer	0.12	10	0.01	
Maurolicus muelleri	0.10		0.01	
Total	1296.43		100.01	

PROJECT STATION:1069

DATE: 1/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3303

	start	stop	duration			Long E 1731
TIME	:08:10:15	08:40:56	31 (min)	Purpose code:	3	
LOG	:4392.40	4394.10	1.76	Area code :	1	
FDEPTH:	329	332		GearCond.code:		
BDEPTH:	329	332		Validity code:		

Towing dir: 5ø Wire out: 940 m Speed: 32 kn*10

Sorted: 162 Kg Total catch: 473.49 CATCH/HOUR: 916.43

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	561.29	4117	61.25	9290
Lepidopus caudatus	118.06	1494	12.88	
Caelorinchus simorhynchus	94.84		10.35	
Brama brama	44.52	35	4.86	9294
Merluccius paradoxus	29.03	62	3.17	9289
Parapagurus dimorphus	15.48		1.69	
Zeus capensis	11.61	21	1.27	9293
Octopus magnificus	7.74	6	0.84	
Lophius vomerinus	7.74	4	0.84	9292
Squalus mitsukurii	7.55	6	0.82	
Helicolenus dactylopterus	5.81	39	0.63	9291
Todaropsis eblanae - females	3.72	56	0.41	9296
Merluccius capensis	3.10	2	0.34	9288
Todaropsis eblanae - males	1.35	23	0.15	9295
Scyliorhinus capensis	1.16	2	0.13	
Holohalaelurus regani	1.12	2	0.12	
Malacocephalus laevis	0.74	8	0.08	
Paracallionymus costatus	0.66	72	0.07	
Rossia enigmatica	0.43	15	0.05	
Exodromedia sp.	0.29	15	0.03	
Rochinia sp.	0.12	8	0.01	
Sepia sp.	0.04	8		
Mursia cristimanus	0.04	8		
Total	916.44		99.99	

PROJECT STATION:1072

DATE: 2/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3332

	start	stop	duration			Long E 1728
TIME	:04:57:54	05:27:03	29 (min)	Purpose code:	3	
LOG	:4508.17	4509.67	1.47	Area code :	1	
FDEPTH:	480	481		GearCond.code:		
BDEPTH:	480	481		Validity code:		

Towing dir: 335ø Wire out:1331 m Speed: 32 kn*10

Sorted: 127 Kg Total catch: 127.77 CATCH/HOUR: 264.35

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	91.03	124	34.44	9308
Notacanthus sexspinis	53.79	379	20.35	
Caelorinchus simorhynchus	51.72	1262	19.56	
Bassanago albescens	24.83	70	9.39	
Etmopterus brachyurus	13.24	52	5.01	
Lophius vomerinus	12.41	6	4.69	9311
Coelorinchus braueri	5.86	234	2.22	
Shrimps, small, non comm.	4.57		1.73	
Helicolenus dactylopterus	2.48	19	0.94	9310
Todarodes angolensis - females	1.72	2	0.65	9312
Myxine capensis	0.68	6	0.26	
Photichthys argenteus	0.66	21	0.25	
Hoplostethus mediterraneus	0.29	2	0.11	
Nezumia micronychodon	0.23	66	0.09	
Lucigadus ori	0.21	17	0.08	
Chlorophthalmus agassizi	0.12	2	0.05	
Tripterophycis gilchristi	0.12	4	0.05	
Stereomastis sp.	0.08	10	0.03	
Symbolophorus boops	0.06	4	0.02	
Merluccius paradoxus, juvenile	0.06	8	0.02	9309
Lycoteuthis lorigera	0.04	2	0.02	
Sepia sp.	0.02	2	0.01	
Epigonus telescopus	0.02	2	0.01	
Argyropelecus aculeatus	0.02	2	0.01	
Paraliparis australis	0.02	10	0.01	
Physiculus capensis	0.02	2	0.01	
Paracallionymus costatus	0.02	4	0.01	
Stoloteuthis sp.	0.00	2		
Total	264.32		100.02	

PROJECT STATION:1070

DATE: 1/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3310

	start	stop	duration			Long E 1719
TIME	:12:59:50	13:20:29	21 (min)	Purpose code:	3	
LOG	:4422.91	4423.98	1.05	Area code :	1	
FDEPTH:	377	361		GearCond.code:		
BDEPTH:	377	361		Validity code:	1	

Towing dir: 5ø Wire out:1099 m Speed: 30 kn*10

Sorted: 218 Kg Total catch: 744.11 CATCH/HOUR: 2126.03

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1128.57	5643	53.08	9299
Helicolenus dactylopterus	557.14	3086	26.21	9300
Merluccius paradoxus	194.29	186	9.14	9298
Caelorinchus simorhynchus	91.43		4.30	
Zeus capensis	75.14	151	3.53	9303
Merluccius capensis	54.29	23	2.55	9297
Lophius vomerinus	17.14	9	0.81	9301
Genypterus capensis	4.29	3	0.20	9302
Lucigadus ori	2.51	194	0.12	
Epigonus denticulatus	0.63	91	0.03	
Paracallionymus costatus	0.60	74	0.03	
Total	2126.03		100.00	

PROJECT STATION:1073

DATE: 2/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3326

	start	stop	duration			Long E 1732
TIME	:07:14:52	07:43:24	29 (min)	Purpose code:	3	
LOG	:4517.12	4518.65	1.51	Area code :	1	
FDEPTH:	410	414		GearCond.code:		
BDEPTH:	410	414		Validity code:		

Towing dir: 340ø Wire out:1140 m Speed: 32 kn*10

Sorted: 859 Kg Total catch: 859.04 CATCH/HOUR: 1777.32

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1421.38	3362	79.97	9315
Merluccius paradoxus	246.21	137	13.85	9314
Notacanthus sexspinis	43.45	434	2.44	
Caelorinchus simorhynchus	20.69		1.16	
Genypterus capensis	14.48	6	0.81	9319
Lophius vomerinus	14.48	4	0.81	9318
Bassanago albescens	6.21	6	0.35	
Merluccius capensis	4.76	2	0.27	9313
Squalus mitsukurii	4.14	2	0.23	
Helicolenus dactylopterus	1.03	4	0.06	9317
Paracallionymus costatus	0.10	14	0.01	
Merluccius paradoxus, juvenile	0.10	23	0.01	9316
Tripterophycis gilchristi	0.08	4		
Lampanyctodes hectoris	0.08	29		
Psychrolutes macrocephalus	0.06	4		
Physiculus capensis	0.02	2		
Shrimps, small, non comm.	0.02	2		
Lucigadus ori	0.02	2		
Stereomastis sp.	0.00	2		
Total	1777.31		99.97	

PROJECT STATION:1071

DATE: 1/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3316

	start	stop	duration			Long E 1716
TIME	:15:40:47	16:10:25	30 (min)	Purpose code:	3	
LOG	:4436.69	4438.17	1.47	Area code :	1	
FDEPTH:	462	470		GearCond.code:		
BDEPTH:	462	470		Validity code:		

Towing dir: 345ø Wire out:1330 m Speed: 30 kn*10

Sorted: 723 Kg Total catch: 723.15 CATCH/HOUR: 1446.30

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1260.00	2120	87.12	9304
Bassanago albescens	76.00	76	5.25	
Caelorinchus simorhynchus	42.00		2.90	
Helicolenus dactylopterus	36.00	212	2.49	9305
Lophius vomerinus	24.00	14	1.66	9306
Notacanthus sexspinis	2.80	18	0.19	
Lepidopus caudatus	1.60	2	0.11	
Todarodes angolensis - males	1.10	2	0.08	9307
Myxine capensis	0.82	8	0.06	
Holohalaelurus regani	0.74	2	0.05	
Hoplostethus mediterraneus	0.28	2	0.02	
Photichthys argenteus	0.24	8	0.02	
Lycoteuthis lorigera	0.16	4	0.01	
Lucigadus ori	0.16	18	0.01	
Tripterophycis gilchristi	0.10	8	0.01	
Rossia enigmatica	0.08	2	0.01	
Stereomastis sp.	0.08	12	0.01	
Sepia sp.	0.04	8		
Symbolophorus boops	0.04	2		
Paracallionymus costatus	0.04	8		
Diaphus effulgens	0.02	2		
Total	1446.30		100.00	

PROJECT STATION:1074

DATE: 2/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3318

	start	stop	duration			Long E 1743
TIME	:10:33:23	11:03:41	30 (min)	Purpose code:	3	
LOG	:4532.48	4534.12	1.63	Area code :	1	
FDEPTH:	185	184		GearCond.code:		
BDEPTH:	185	184		Validity code:		

Towing dir: 340ø Wire out: 599 m Speed: 30 kn*10

Sorted: 208 Kg Total catch: 775.49 CATCH/HOUR: 1550.98

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	1210.00	72180	78.02	
Thyrsites atun	200.00	88	12.90	9326
Brama brama	35.00	16	2.26	9328
Merluccius paradoxus	28.00	470	1.81	9322
Paracallionymus costatus	20.28	2704	1.31	
Lampanyctodes hectoris	18.60		1.20	
Callorhinchus capensis	12.00	8	0.77	
Merluccius paradoxus, juvenile	6.52	520	0.42	9323
Merluccius capensis	6.32	18	0.41	9320
Merluccius paradoxus	5.80	18	0.37	9321
Squilla acuelata calmani	2.04	260	0.13	
Todaropsis eblanae	2.04	186	0.13	9329
Lophius vomerinus	1.52	4	0.10	9325
Schedophilus ovalis	1.28	2	0.08	
Genypterus capensis	0.70	2	0.05	9327
Ophichthus bennettai	0.52	2	0.03	
Maurolicus muelleri	0.18		0.01	
Helicolenus dactylopterus	0.18	18	0.01	9324
Total	1550.98		100.01	

PROJECT STATION:1075

DATE: 2/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3337
start stop duration Long E 1757
TIME :16:26:02 16:57:19 31 (min) Purpose code: 3
LOG :4578.46 4580.15 1.68 Area code : 1
FDEPTH: 159 160 GearCond.code:
BDEPTH: 159 160 Validity code:
Towing dir: 345ø Wire out: 470 m Speed: 33 kn*10

Sorted: 66 Kg Total catch: 100.64 CATCH/HOUR: 194.79

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	53.81	2905	27.62	9331
Callorhinchus capensis	38.71	27	19.87	
Merluccius paradoxus	24.58	209	12.62	9332
Merluccius capensis	24.58	294	12.62	9330
Sepia australis	12.77	751	6.56	
Thyrsites atun	9.68	4	4.97	9335
Chelidonichthys capensis	7.74	27	3.97	9338
Todaropsis eblanae	7.47	333	3.83	9339
Lophius vomerinus	3.87	8	1.99	9334
Squilla acuelata calmani	2.90		1.49	
Paracallionymus costatus	2.73	420	1.40	
Lepidopus caudatus	2.52	2	1.29	
Zeus capensis	1.55	23	0.80	9337
Cynoglossus zanzibarensis	1.28	12	0.66	9333
Genypterus capensis	0.43	4	0.22	9336
Caelorinchus simorhynchus	0.10	8	0.05	
Physiculus capensis	0.06	8	0.03	
Champsodon capensis	0.02	4	0.01	
Total	194.80		100.00	

PROJECT STATION:1076

DATE: 3/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3355
start stop duration Long E 1727
TIME :04:57:31 05:27:27 30 (min) Purpose code: 3
LOG :4628.13 4629.66 1.49 Area code : 1
FDEPTH: 564 582 GearCond.code:
BDEPTH: 564 582 Validity code:
Towing dir: 338ø Wire out:1530 m Speed: 31 kn*10

Sorted: 136 Kg Total catch: 207.26 CATCH/HOUR: 414.52

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	176.00	234	42.46	9340
Coelorinchus braueri	132.00	3666	31.84	
Notacanthus sexspinis	26.00	196	6.27	
Histioteuthis miranda	18.00	14	4.34	
Sergia sp.	13.20		3.18	
Centrophorus squamosus	13.20	2	3.18	
Etmopterus brachyurus	10.00	76	2.41	
Nezumia micronychodon	5.56	926	1.34	
Helicolenus dactylopterus	4.60	26	1.11	9341
Photichthys argenteus	3.98	86	0.96	
Apristurus saldanha	1.82	2	0.44	
Centroscymnus crepidater	1.58	4	0.38	
Diastobranchus capensis	1.54	10	0.37	
Psychrolutes macrocephalus	1.44	20	0.35	
Chaceon chuni	1.22	6	0.29	
Kuronezumia leonis	0.92	10	0.22	
Oreosoma atlanticum	0.92	6	0.22	
Funchalia woodwardi	0.42	30	0.10	
Symbolophorus boops	0.40	30	0.10	
Lepidion capensis	0.38	10	0.09	
Raja leopardus	0.30	10	0.07	
Neoscopelus macrolepidotus	0.20	10	0.05	
Shrimps, small, non comm.	0.16	10	0.04	
Chauliodus sloani	0.16	6	0.04	
Lycoteuthis lorigera	0.14	6	0.03	
Lucigadus ori	0.10	6	0.02	
Diaphus effulgens	0.08	6	0.02	
Xenodermichthys copei	0.06	6	0.01	
Gymnoscopelus sp.	0.06	6	0.01	
Stereomastis sp.	0.04	6	0.01	
Myctophum sp.	0.04	6	0.01	
Total	414.52		99.96	

PROJECT STATION:1077

DATE: 3/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3352
start stop duration Long E 1728
TIME :07:07:40 07:37:52 30 (min) Purpose code: 3
LOG :4636.71 4638.20 1.47 Area code : 1
FDEPTH: 457 463 GearCond.code: 7
BDEPTH: 457 463 Validity code: 4
Towing dir: 170ø Wire out:1270 m Speed: 31 kn*10

Sorted: Kg Total catch: CATCH/HOUR:

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Funchalia woodwardi	0.00			
Notacanthus sexspinis	0.00			
Bassanago albescens	0.00			
Pseudopentaceros richardsoni	0.00	2		
Merluccius paradoxus	0.00			
Total				

PROJECT STATION:1078

DATE: 3/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3353
start stop duration Long E 1728
TIME :08:44:12 09:18:38 30 (min) Purpose code: 3
LOG :4641.84 4643.50 1.50 Area code : 1
FDEPTH: 466 459 GearCond.code:
BDEPTH: 466 459 Validity code:
Towing dir: 358ø Wire out:1320 m Speed: 32 kn*10

Sorted: 433 Kg Total catch: 433.72 CATCH/HOUR: 867.44

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	590.00	926	68.02	9342
Merluccius paradoxus	174.00	86	20.06	9343
Bassanago albescens	30.00	38	3.46	
Notacanthus sexspinis	22.00	276	2.54	
Caelorinchus simorhynchus	16.00		1.84	
Helicolenus dactylopterus	8.60	40	0.99	9344
Coelorinchus braueri	8.00		0.92	
Funchalia woodwardi	7.20		0.83	
Photichthys argenteus	3.60		0.42	
Octopus magnificus	2.60	2	0.30	
Todarodes angolensis - females	1.94	2	0.22	9345
Todarodes angolensis - males	1.14	2	0.13	9346
Symbolophorus boops	0.66	48	0.08	
Paracallionymus costatus	0.48	66	0.06	
Lycoteuthis lorigera	0.26	10	0.03	
Stereomastis sp.	0.22	48	0.03	
Thelidioteuthis sp.	0.20	2	0.02	
Stoloteuthis sp.	0.14	32	0.02	
Oreosoma atlanticum	0.10	2	0.01	
Diaphus effulgens	0.10	2	0.01	
Lucigadus ori	0.10	6	0.01	
Gymnoscopelus sp.	0.08	14	0.01	
Diaphus sp.	0.02	4		
Hoplostethus mediterraneus	0.00	2		
Total	867.44		100.01	

PROJECT STATION:1079

DATE: 3/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3352
start stop duration Long E 1732
TIME :11:03:37 11:33:37 30 (min) Purpose code: 3
LOG :4652.04 4653.51 1.47 Area code : 1
FDEPTH: 321 319 GearCond.code:
BDEPTH: 321 319 Validity code:
Towing dir: 358ø Wire out: 961 m Speed: 30 kn*10

Sorted: 196 Kg Total catch: 627.15 CATCH/HOUR: 1254.30

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	936.00	3314	74.62	9348
Caelorinchus simorhynchus	120.00		9.57	
Parapagurus dimorphus	64.00		5.10	
Helicolenus dactylopterus	54.38	696	4.34	9350
Brama brama	17.00	8	1.36	9353
Paracallionymus costatus	12.00	1334	0.96	
Zeus capensis	11.00	14	0.88	9352
Lophius vomerinus	11.00	10	0.88	9351
Merluccius paradoxus	11.00	10	0.88	9349
Merluccius capensis	9.00	4	0.72	9347
Todaropsis eblanae - females	8.80	48	0.70	9354
Octopus magnificus	1.80	2	0.14	
Physiculus capensis	0.14	8	0.01	
Funchalia woodwardi	0.12	8	0.01	
Epigonus denticulatus	0.06	8		
Total	1256.30		100.17	

PROJECT STATION:1080

DATE: 4/ 3/05 GEAR TYPE: BT No:15 POSITION:Lat S 3437
start stop duration Long E 1757
TIME :04:55:41 05:25:53 30 (min) Purpose code: 3
LOG :4775.89 4777.51 1.59 Area code : 1
FDEPTH: 575 575 GearCond.code:
BDEPTH: 575 575 Validity code:
Towing dir: 324ø Wire out:1600 m Speed: 33 kn*10

Sorted: 106 Kg Total catch: 106.75 CATCH/HOUR: 213.50

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Coelorinchus braueri	92.00	2422	43.09	
Merluccius paradoxus	62.00	42	29.04	9355
Helicolenus dactylopterus	24.00	220	11.24	9357
Merluccius paradoxus	24.00	66	11.24	9356
Malacocephalus laevis	4.56	16	2.14	
Bassanago albescens	2.44	4	1.14	
Caelorinchus simorhynchus	1.20	22	0.56	
Selachophidium guentheri	0.66	6	0.31	
Lucigadus ori	0.64	50	0.30	
Myxine capensis	0.36	4	0.17	
Hoplostethus mediterraneus	0.36	4	0.17	
Physiculus capensis	0.24	12	0.11	
Tripterophycis gilchristi	0.18	8	0.08	
Lampanyctodes hectoris	0.16	2	0.07	
Photichthys argenteus	0.14	6	0.07	
Shrimps, small, non comm.	0.12		0.06	
Diaphus effulgens	0.12	6	0.06	
Megalocranchia sp.	0.08	2	0.04	
Lycoteuthis lorigera	0.08	2	0.04	
Lepidion capensis	0.06	4	0.03	
Stoloteuthis sp.	0.02	6	0.01	
Stereomastis sp.	0.02	2	0.01	
Funchalia woodwardi	0.02	2	0.01	
Paraliparis australis	0.02	2	0.01	
Paracallionymus costatus	0.02	2	0.01	
Gymnoscopelus sp.	0.00	2		
Diaphus sp.	0.00	2		
Total	213.50		100.01	

Annex 2 Instruments and fishing gear

The Simrad EK-500, 38 kHz scientific echosounder was used for abundance estimation during the survey, in addition data from the 18 kHz, 120 kHz and 200 kHz transducers where logged for possible future multi frequency target estimation. The Bergen Echo Integrator system (BEI) were logging the echogram raw data from the sounder and used to scrutinize the acoustic records, and to allocate integrator data to fish species. All raw data were stored to tape, and a backup of the database of scrutinized data, stored. The details of the settings of the echosounders were as follows:

Transceiver 1 menu	
Transducer depth	5.5 m
Absorption coeff.	10 dB/km
Pulse length	medium (1ms)
Bandwidth	wide
Max power	2000 Watt
2-way beam angle	-21.0 dB
SV transducer gain	27.17dB
TS transducer gain	29.96
Angle sensitivity	21.9
3 dB beamwidth along.	7.3
3 dB beamwidth athw.	7.0
Alongship offset	0.05
Athwardship offset	0.04

Transceiver 2 menu	
Transducer depth	5.5 m
Absorption coeff.	38 dB/km
Pulse length	long (1ms)
Bandwidth	narrow
Max power	1000 Watt
2-way beam angle	-20.6 dB
SV transducer gain	25.96B
TS transducer gain	25.95dB
Angle sensitivity	21.0
3 dB beamwidth along.	7.4
3 dB beamwidth athw.	7.2
Alongship offset	0.24
Athwardship offset	0.04

Transceiver 3 menu

Transducer depth	5.5 m
Absorption coeff.	3 dB/km
Pulse length	short (0.7ms)
Bandwidth	wide
Max power	2000 Watt
2-way beam angle	-17.2 dB
SV transducer gain	23.75dB
TS transducer gain	23.36B
Angle sensitivity	13.9
3 dB beamwidth along.	10.8
3 dB beamwidth athw.	10.8
Alongship offset	0.06
Athwardship offset	-004

Transceiver 4 menu

Transducer depth	5.5 m
Absorption coeff.	53 dB/km
Pulse length	long (0.6ms)
Bandwidth	narrow
Max power	1000 Watt
2-way beam angle	-20.5 dB
SV transducer gain	24.18dB
TS transducer gain	24.80B
Angle sensitivity	0.0
3 dB beamwidth along.	0.0°
3 dB beamwidth athw.	0.0°
Alongship offset -	0.00°
Athwardship offset	0.00°

Display menu

Echogram	1
Bottom range	10 m
Bottom range start	10 m
TVG	20 log R
Sv colour min -	65 dB
TS Colour minimum	-65 dB

Printer- menu

Range	0-50, 0-100, 0-150, 0-250 or 0-500 m
TVG	20 log R
Sv colour min	-67 dB

Bottom detection menu

Minimum level	-40 dB

Calibration

A calibration was conducted during the survey in Angola during August 2004.

Fishing gear

The vessel has two different sized "Åkrahamn" pelagic trawls and one "Gisund super" bottom trawl. For all trawls, the Tyborøn, 7.8m² (1670 kg) trawl doors were used.

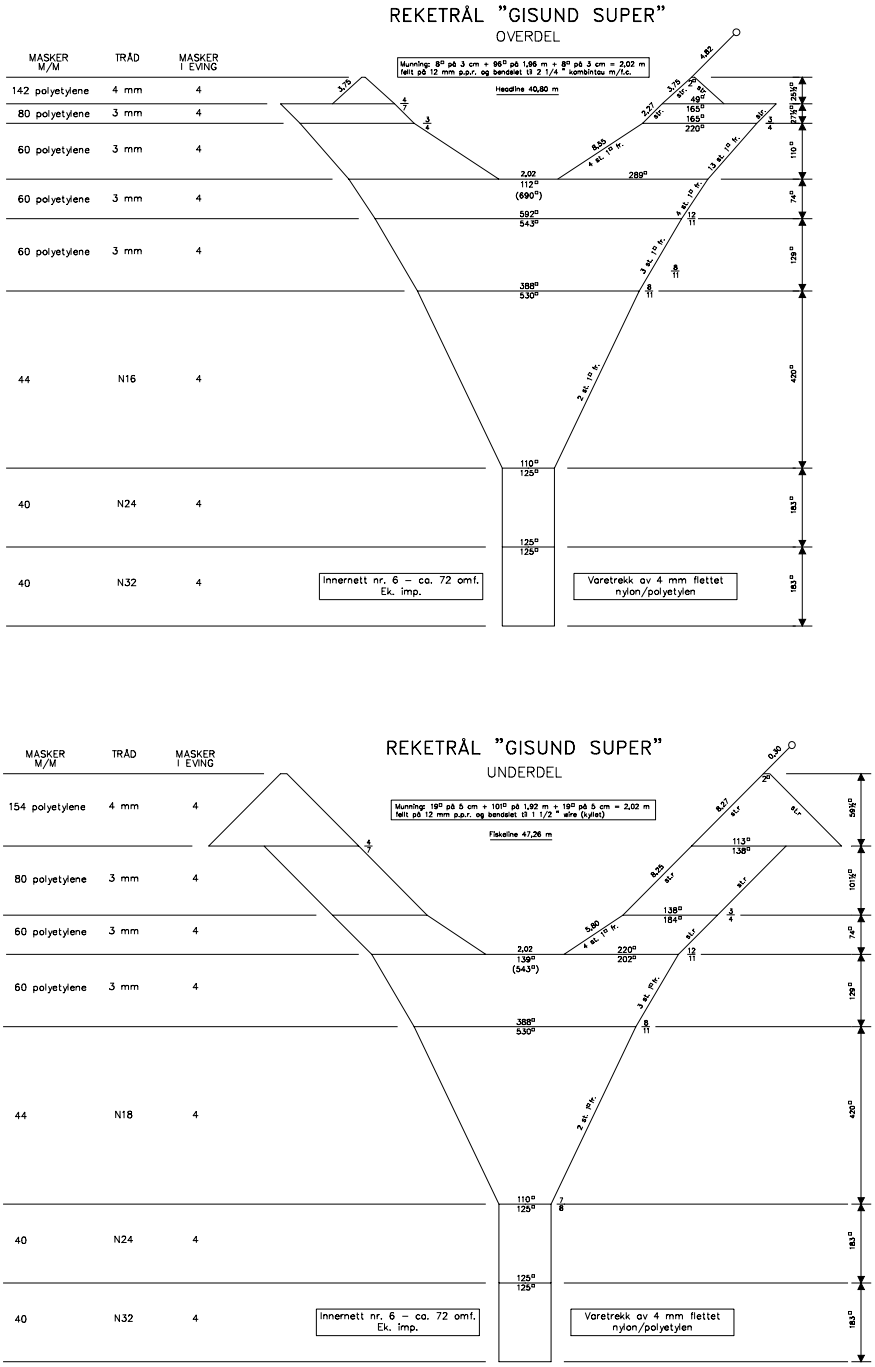

Figure 1 Design of the trawl used.

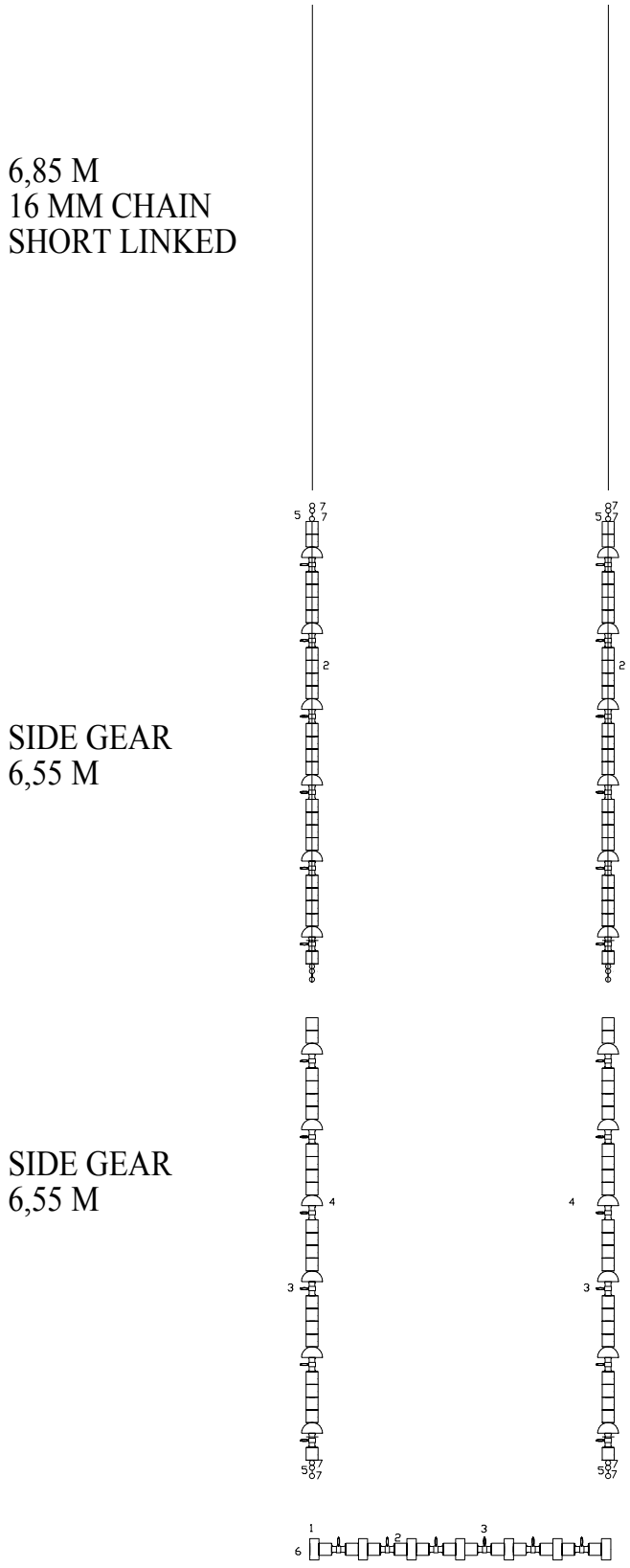

Figure 2 Schematic drawing of the ground gear used in the experiment.

Annex 3 Depth strata in MN^2 by latitude in Namibia and South Africa.

NAMIBIA. Depth strata by 1° latitude in NM^2

(Based on echo soundings from Nansen surveys 1996-2003. Depths from surface to bottom). 02.02.2003 OBA

	0-50 m	50-100 m	100-200m	200-300m	300-400m	400-500m	500-600m	600-700m	700-800m	800-900m	900-1000m	Total	0-600m
17°15'-18°	47	162	490	243	95	63	65	46	46	54	47	1360	1165
18-19°	287	324	783	822	154	128	119	101	100	87	128	3033	2618
19-20°	186	435	1259	810	1090	328	287	266	*192*	*241*	*220*	5314	4396
20-21°	229	401	1378	883	987	286	265	258	*272*	*281*	*280*	5519	4429
21-22°	372	547	1644	563	893	257	201	200	*199*	*184*	*179*	5238	4477
22-23°	479	709	2196	1086	929	154	126	127	108	97	*142*	6153	5678
23-24°	244	376	2006	1074	670	238	153	175	139	*136*	*130*	5340	4760
24-25°	394	433	1343	822	753	238	149	161	162	166	144	4764	4131
25-26°	204	415	1580	1102	529	227	166	155	161	153	*125*	4817	4223
26-27°	216	184	894	986	1408	744	140	*133*	*139*	*131*	*119*	5095	4573
27-28°	119	244	1269	527	858	480	205	170				3872	3702
28-29°	211	390	4207	*391*	153	123	164					5639	5639
29-30°	0	0	1042	533	327	276	162	167	107	121	121	2859	2341
30°-S	0	0	0	0	0	0	0	0	0	3	5	8	0
North	750	1322	3911	2759	2326	806	736	670	610	663	675	15226	12608
Central	1489	2064	7189	3544	3245	887	627	664	608	582	595	21494	19046
South	750	1234	8992	3540	3276	1850	837	625	408	407	371	22290	20478
Total	2988	4620	20091	9842	8848	3543	2200	1960	1625	1652	1642	59003	52132

Areas in *Italics*: few soundings, interpolated

Open areas: no or very few soundings

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South Africa. Depth strata by 1° latitude in NM²

(Based on echo soundings from Nansen surveys 1996-2004. Depths from surface to bottom). *10.03.2004 OBA*

	0-100 m	100-200m	200-300m	300-400m	400-500m	500-600m	600-700m	700-800m	800-900m	900-1000m	Total	0-500 m	0-600m
28°40'-29°	186	303	0	0	0	0	0	0	0	0	489	489	489
29-30°	359	4348	451	195	202	23	7	2	0	0	5588	5556	5579
30-31°	200	2481	3443	460	465	262	177	135	193	149	7965	7049	7311
31-32°	288	2187	1794	1209	894	493	211	173	180	149	7577	6371	6864
32-33°	839	1308	1318	1303	432	156	122	111	109	116	5815	5201	5357
33-34°	654	833	546	375	381	247	243	117	120	102	3617	2789	3036
34-35°	1280	1376	662	496	259	134	80	69	53	66	4475	4074	4208
35-36°	25	1901	778	168	143	131	89	86	59	84	3464	3015	3146
36-37°													
Total	3830	14737	8992	4207	2777	1446	929	692	714	666	38989	34543	35989

South Africa. Depth strata by regions in NM² *26.08.2005 OBA*

	0-100 m	100-200m	200-300m	300-400m	400-500m	500-600m	600-700m	700-800m	800-900m	900-1000m	Total	0-500 m	0-600m
Oranjemund-S. Hondeklip Bay	742	6835	4262	1062	1152	634	314	262	282	230	15776	14054	14688
S. Hondeklip Bay-n Saldanha	1169	3593	2685	2257	1088	454	392	224	242	230	12333	10792	11245
n Saldanha-C. of Good Hope	746	982	935	598	325	154	89	83	59	77	4047	3586	3740
C. of Good Hope-C. Agulhas	1131	3098	998	473	202	167	104	81	58	87	6397	5901	6068
Total	3787	14508	8881	4390	2767	1409	898	650	641	624	38554	34333	35741

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