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CRUISE REPORTS "DR. FRIDTJOF NANSEN"



SURVEYS OF THE FISH RESOURCES OF NAMIBIA

Preliminary Report Cruise No 2/92

Part I

Surveys of the hake stocks
20 October - 1 December 1992

Ministry of Fisheries & Marine Resources
Swakopmund
Republic of Namibia

Institute of Marine Research
Bergen
Norway

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

The programme has comprised the following previous surveys:

Survey	1/90	25 January to 19 March 1990
"	2/90	27 May to 20 June 1990
"	3/90	11 September to 6 October 1990
"	1/91	25 January to 23 March 1991
"	2/91	23 October to 22 November 1991
"	1/92	23 April to 21 June 1992

Reports were submitted after the completion of each survey. This cruise report describes the work and some of the findings of Survey 2 1992.

PART I

SURVEYS OF THE HAKE STOCKS

20 October - 1 December 1992

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CHAPTER 1 INTRODUCTION

1.1 GENERAL OBJECTIVES

Following an offer from NORAD extended through FAO and UNDP, an agreement was reached in Windhoek in January 1990 between the UNDP Resident Representative and Namibian authorities for the execution of a programme of surveys of the fish resources of the Namibian shelf with the R/V "DR. FRIDTJOF NANSEN". The Ministry of Fisheries and Marine Resources, Windhoek has since agreed with NORAD on an extension of this programme.

The purpose of the programme was defined as follows:

The main objectives are descriptions of the distribution, composition and abundance of the most important resources of fish. The small pelagic fish (horse mackerel, pilchard and anchovy) will be investigated by the acoustic integration method combined with sampling with mid-water and bottom trawls. A swept area trawl survey programme will be used for the demersal stocks. All catches will be sampled to species by weight and numbers, and biological sampling will be made of the commercially important stocks.

Environmental studies will include recording of surface temperature on a continuous basis and occupation of hydrographic stations along fixed tracks.

Possible taxonomic problems will be studied by sampling and examination by experts in cooperation with FAO's Fisheries Department.

1.2 SPECIFIC OBJECTIVES OF SURVEY 2/92, PART I

During the first part, 20 October to 22 November, the main objective is investigations of hakes and associated species and covering the whole shelf. The acoustic system will be used to observe off-shore horse mackerel and mid-water occurrence of the hakes. The survey design for the swept area trawl programme will be based on a distribution of hauls intended to cover the depth ranges of the two hake species. Biomass estimates of Cape hake will be based on post-stratification by density areas. Observations of surface temperatures will be made on a continuous basis for a study of comparison with satellite images. During the period 23-30 November daily samples of phytoplankton will be taken from the surface waters at selected sites to ground-truth a study on plankton distribution using satellite images, a pilot study in cooperation with the Natural Resources Institute in UK and the Weather Bureau of Namibia.

1.3 PARTICIPATION

The scientific staff from Namibia were:

Helen Boyer (29 Oct - 7 Nov), Filamon Dausab (20 Oct - 7 Nov), Victor Hashoonga, Willem Nauiseb (20 Oct - 14 Nov), Bennie Ushona, Rudolf Cloete (8 Nov - 1 Dec), Richardt Charuchab (22 Nov - 1 Dec), Wolf Serrer (22 Nov - 1 Dec), Nick Poole (22 Nov - 1 Dec).

From Natural Resources Institute, England:

Richard Brown (22 Nov - 1 Dec).

The scientific staff from the Institute of Marine Research were:

Tore Strømme (from 7 Nov), Oddgeir Alvheim, Knut Korsbrekke (until 14 Nov), Valentine Anthonypillai (from 15 Nov), Martin Dahl and Tore Mørk.

1.4 NARRATIVE

Figures 1a-c show the course tracks with the positions of the fishing and hydrographic stations. After departure from Walvis Bay on 20 October, work started near Orange River on 22 October following largely the course tracks and station grids used in the previous surveys. The hydrographic section off Panther Head was worked on 24 October. A short call was made at Lüderitz on 29 October to pick up one scientist. Coverage of the shelf up to St. Francis Bay, including the hydrographic profile off Hottentot Point, was completed by 30 October with a total of 64 successful swept area hauls. Weather conditions in this southern area were not favourable, but workable.

The profile off Conception Bay was worked on 2 November and the swept area trawling programme continued northwards with lines of stations about every 20 nm, taking care to locate both the inner and the outer limits of the distribution of the hakes. During previous surveys, aggregations of jellyfish in the shallow waters south of Walvis Bay constituted frequently a problem when trawling. The problem was not serious during the last survey.

A call on Walvis Bay was made on 7-8 November for change of scientific crew. A hydrographic profile was worked off Cape Cross on 9 November. Weather and sea conditions improved in the central area, and did not limit the work.

When working on a bottom trawl sampling profile off Ambrose Bay, one of the ships auxiliary engines broke down and it was necessary to return to Walvis Bay on 14 November for repair. A full engine overhaul with shipment of new parts was necessary and the vessel could not depart Walvis Bay before 22 November. To be able to complete the hake survey it was decided to reduce Fridtjof Nansen's participation in the following pilchard survey. The first week of the pilchard survey, which was a joint survey with R/V Benguela south of Walvis Bay, was therefore done without R/V "Dr. Fridtjof Nansen".

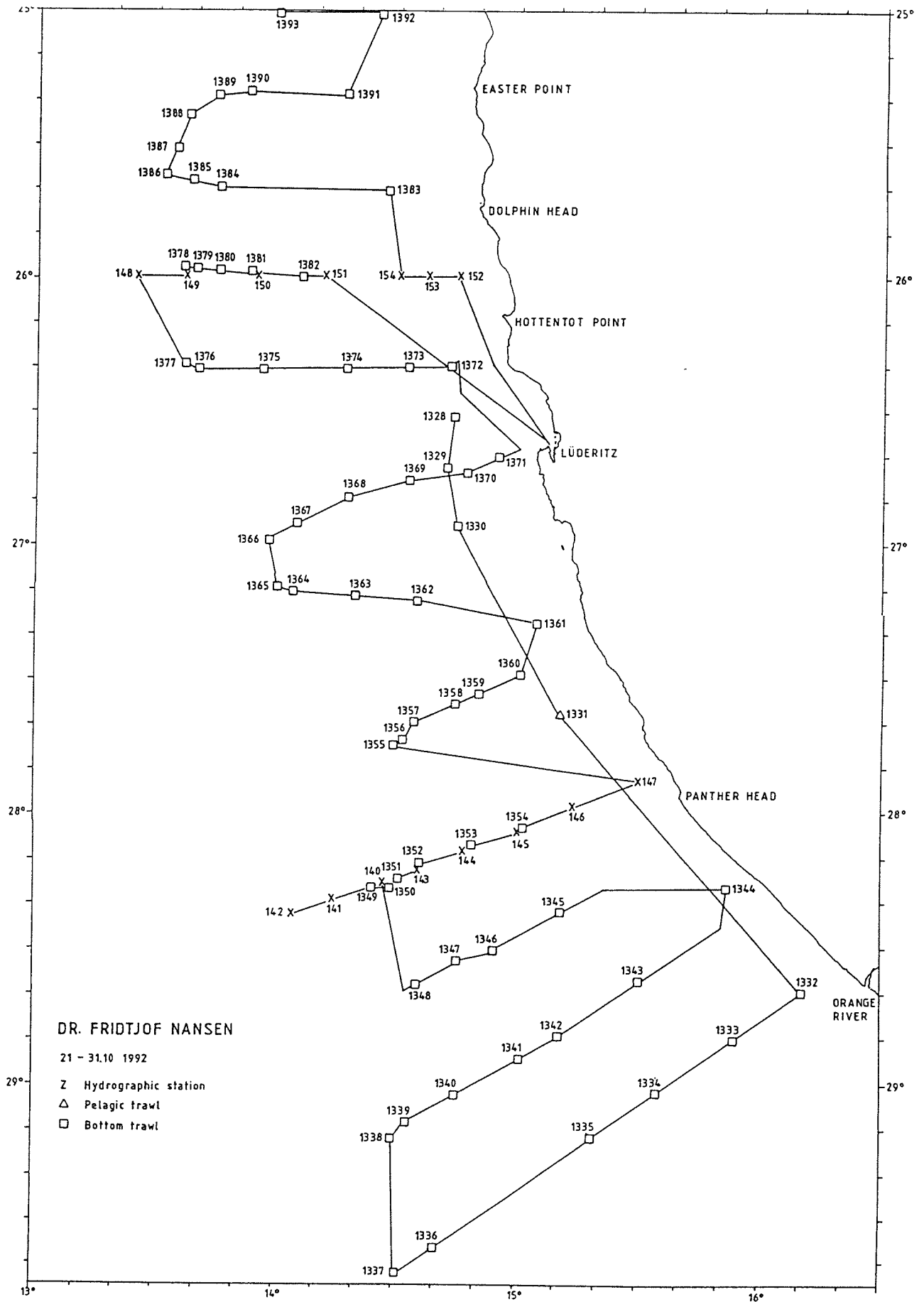


Figure 1a. Southern Region, Orange River to St. Francis Bay. Course tracks, fishing stations and hydrographic profiles.

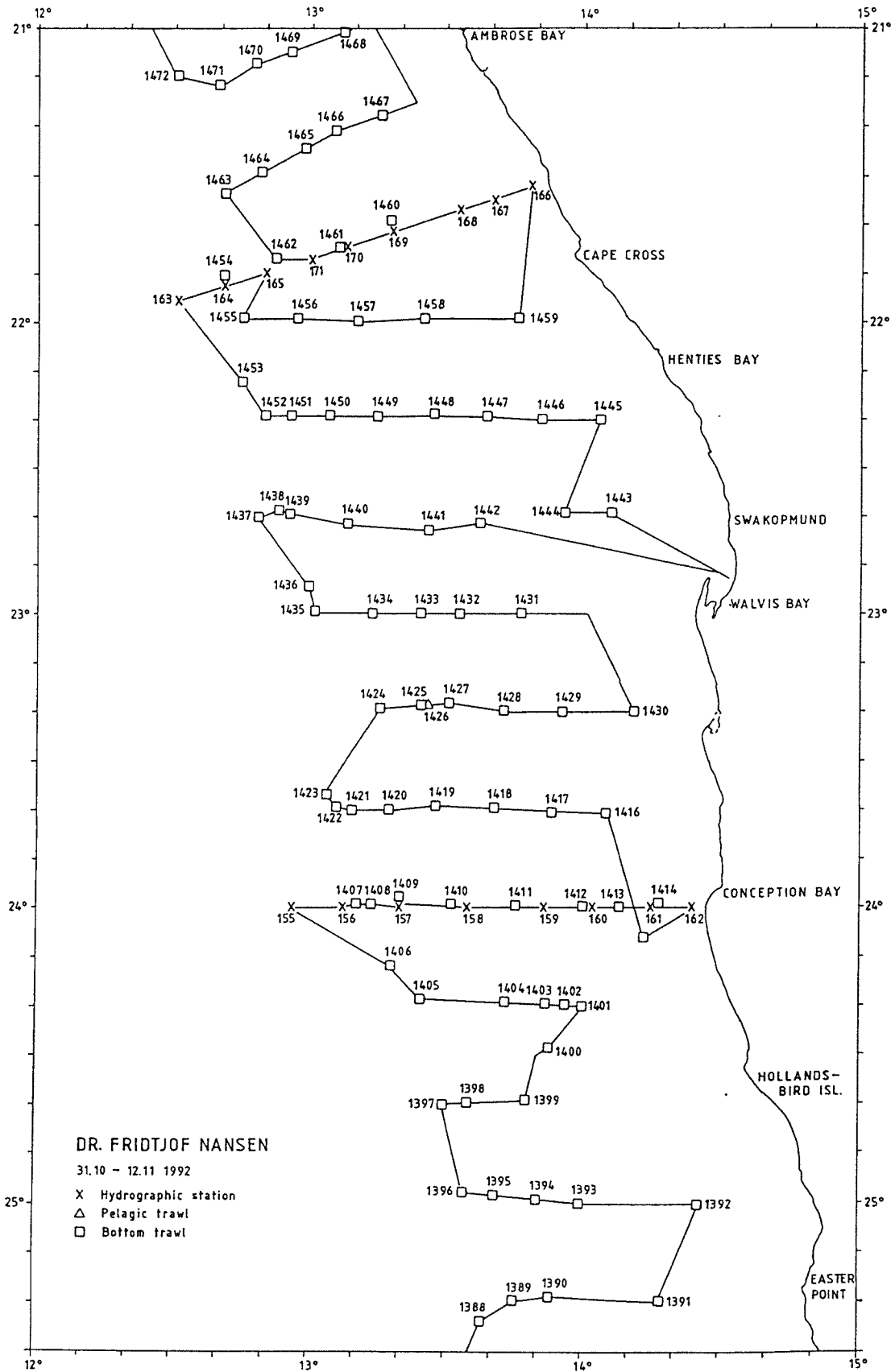


Figure 1b. Central Region, St. Francis Bay to Ambrose Bay. Course tracks, fishing stations and hydrographic profiles.

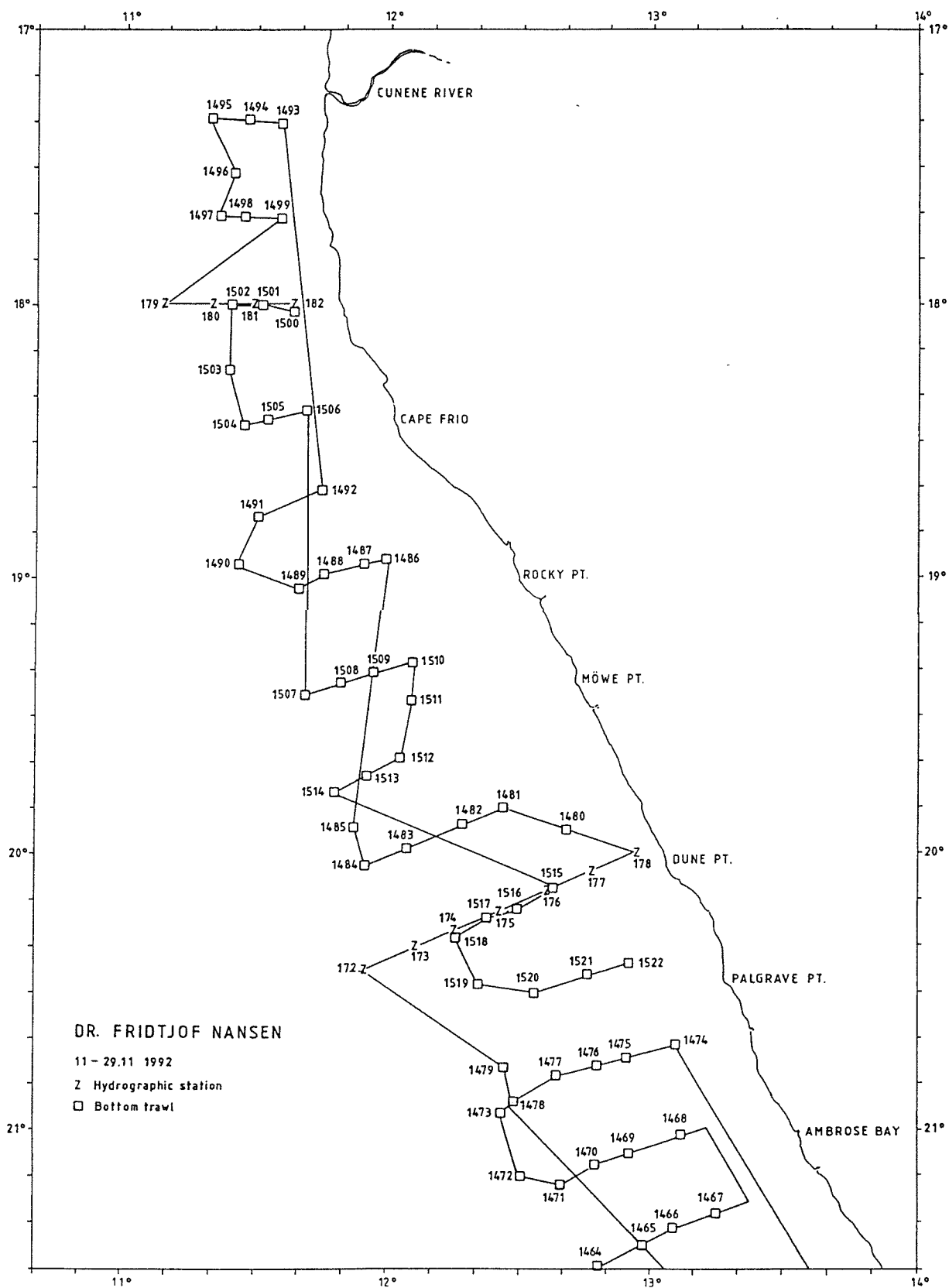


Figure 1c. Northern Region, Ambrose Bay to Cunene River. Course tracks, fishing stations and hydrographic profiles.

The work on the hake was retained off Ambrose Bay on the 23 November. In order to optimize daytime trawling and nighttime steaming, the survey net was modified leaving gaps during the northward coverage, to be completed when returning southwards. The vessel reached Walvis Bay on 30 November. The hydrographic profile off Dune Point was completed during the night of 24 November. The turning point off Cunene river was reached on 26 November. The standard hydrographic section at 18°S was completed during the night of 27 November. The weather conditions during the northern coverage were favourable.

2 HYDROGRAPHY

Figures 2a-c show the sea temperature at 4 m of depth as observed with the ships thermograph and Figures 3a-c show the distribution of temperature and salinity in the five hydrographic transects worked.

The chart of surface temperature distribution and the profiles show evidence of intensive upwelling all along the coast up to Cape Frio. Conditions are similar to those found November 1991 and in May 1992. The intensity of the upwelling is near correlated to the force of the southerly winds.

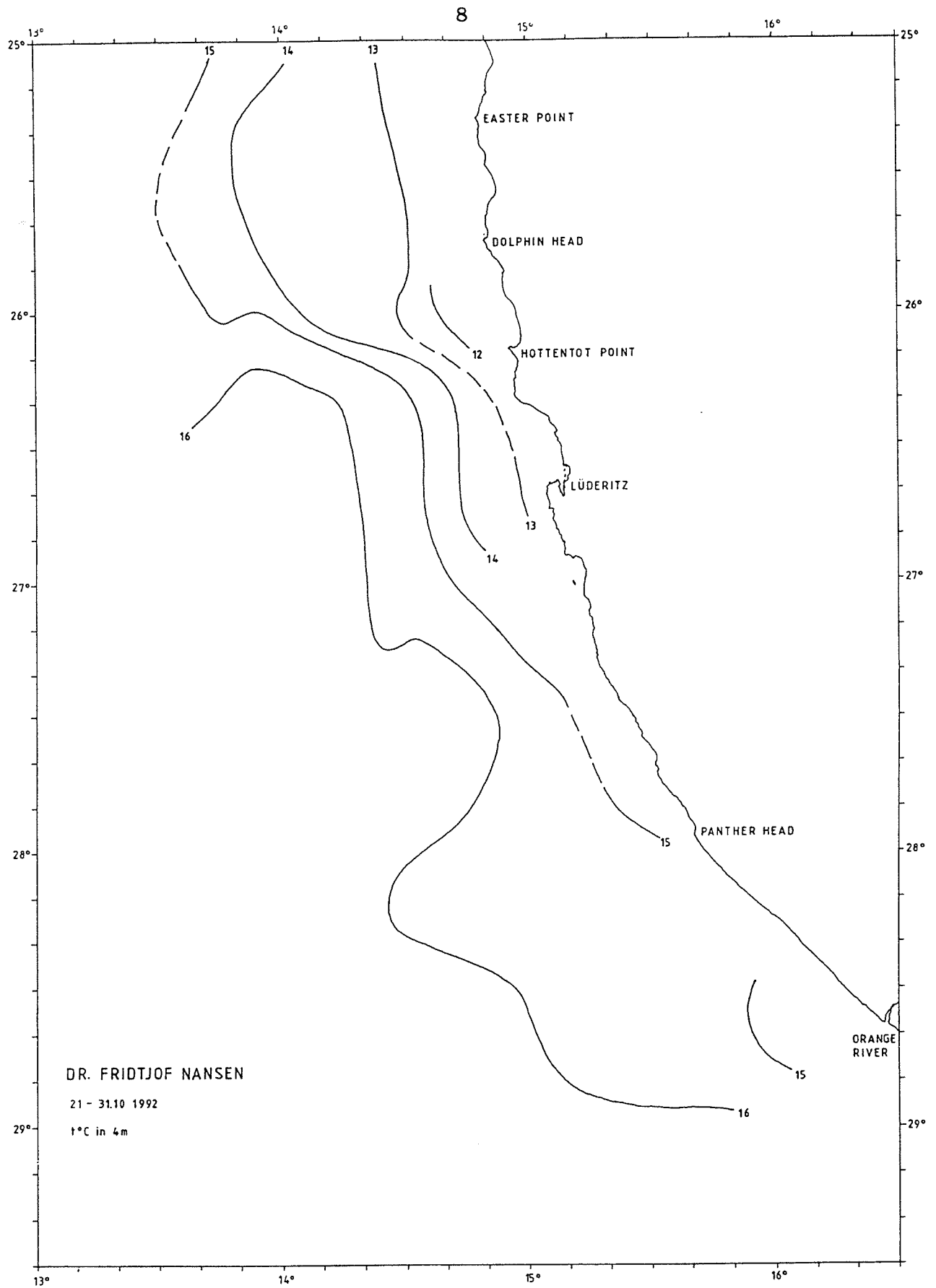


Figure 2a. Southern region. Distribution of sea temperature at 4 m of depth based on observations of the ships thermograph.

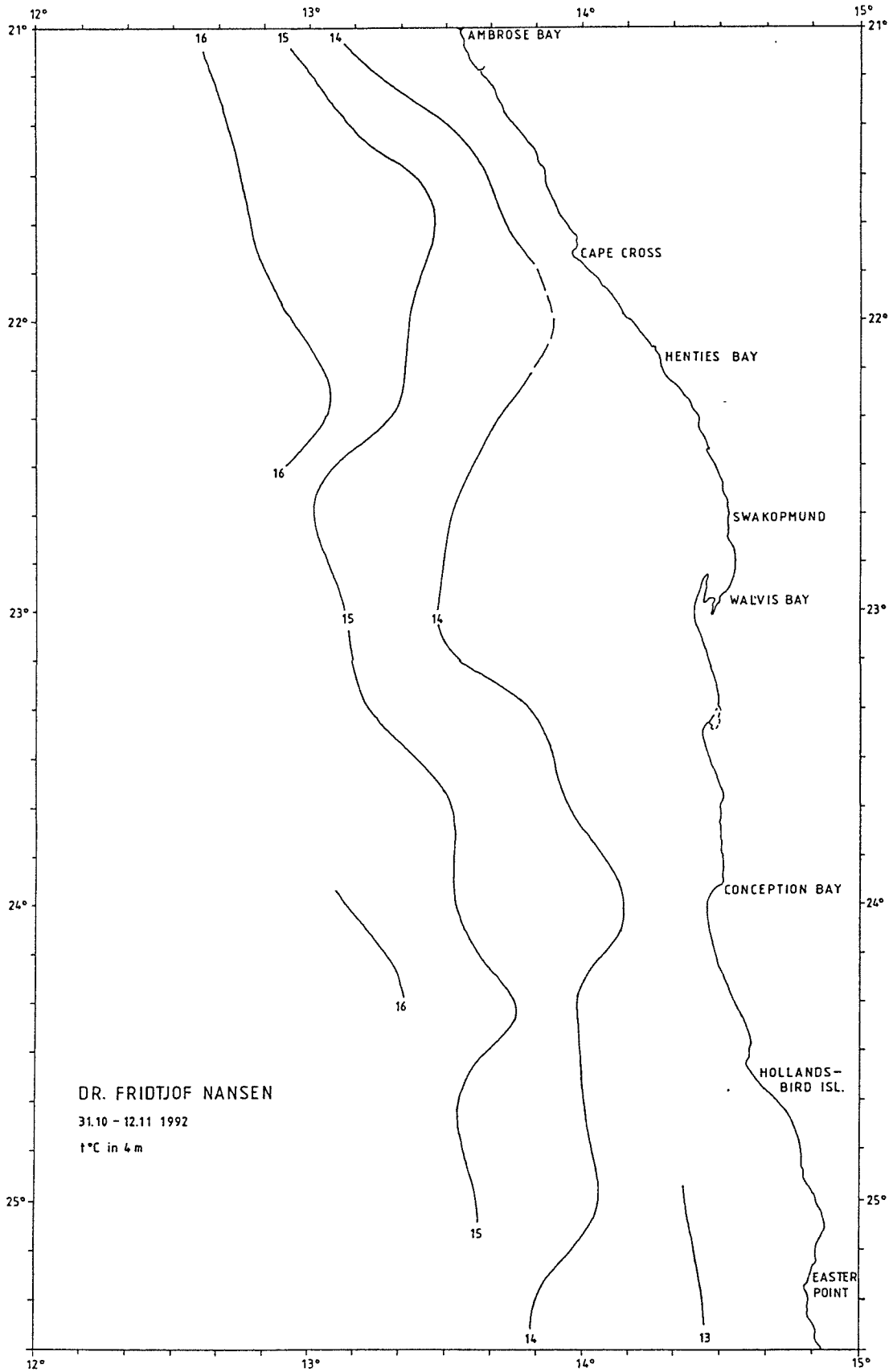


Figure 2b. Central region. Distribution of sea temperature at 4 m of depth based on observations of the ships thermograph.

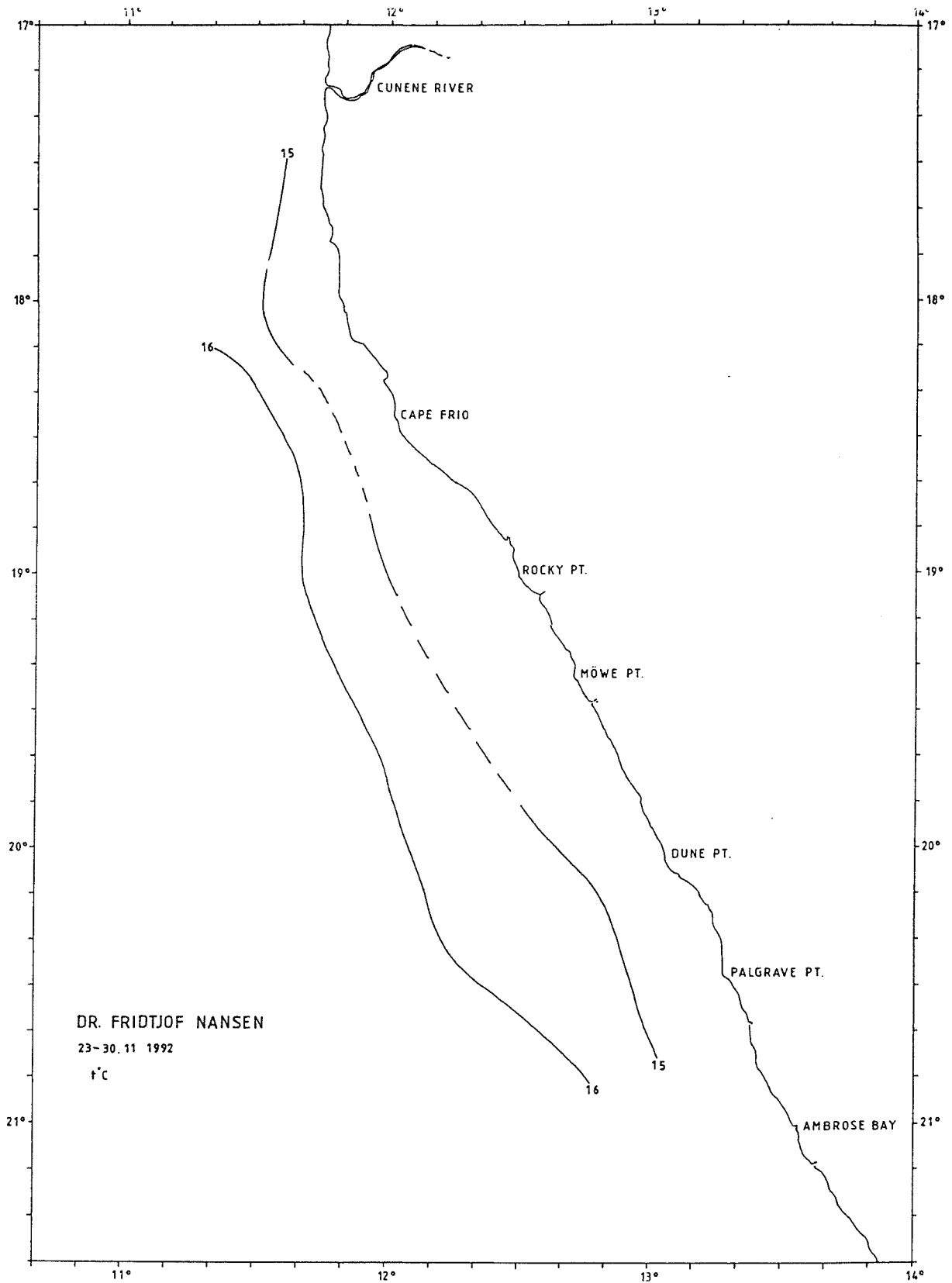


Figure 2c. Northern region. Distribution of sea temperature at 4 m of depth based on observations of the ships thermograph.

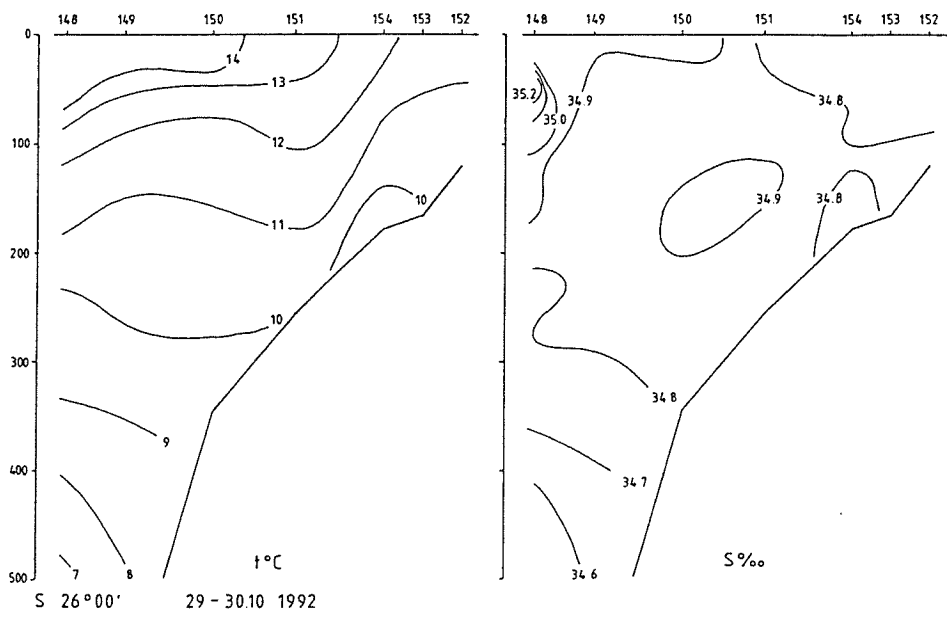
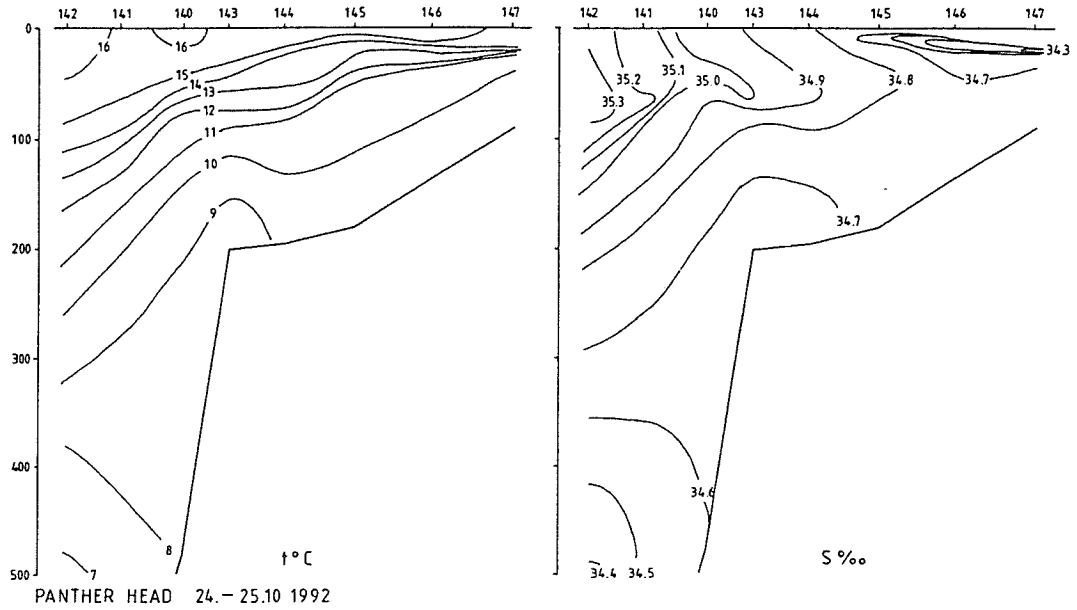


Figure 3a. Southern Region. Temperature and salinity in the standard profiles worked.

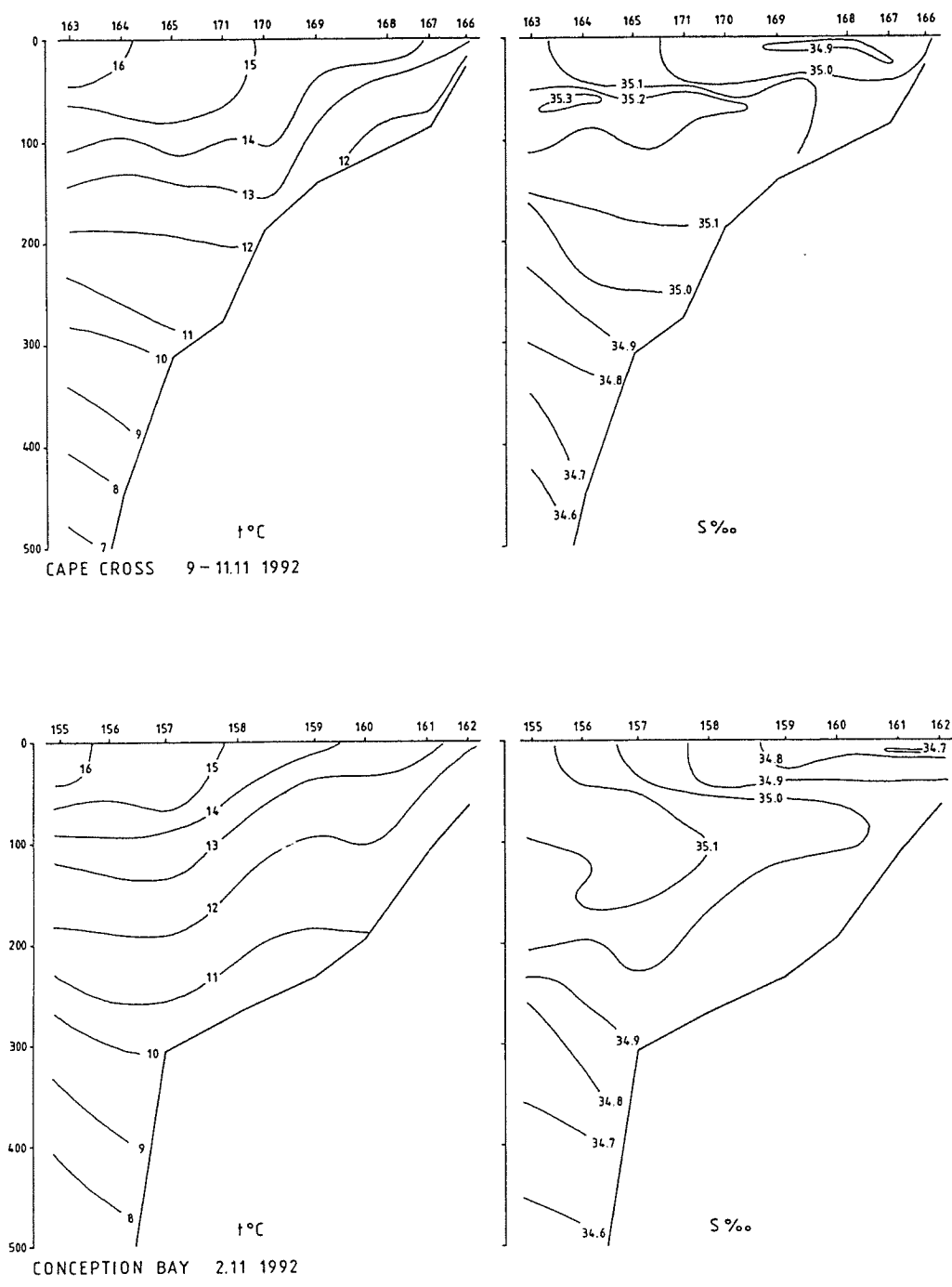


Figure 3b. Central Region. Temperature and salinity in the standard profiles worked.

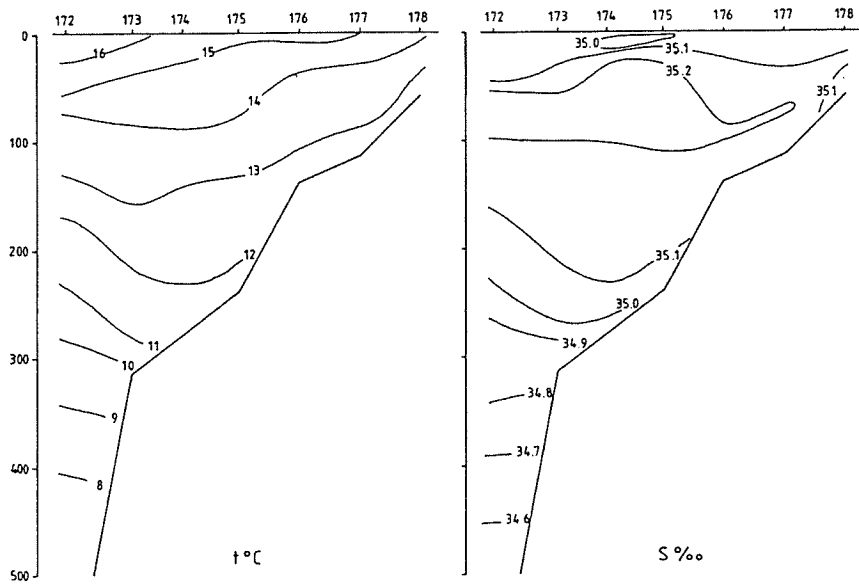
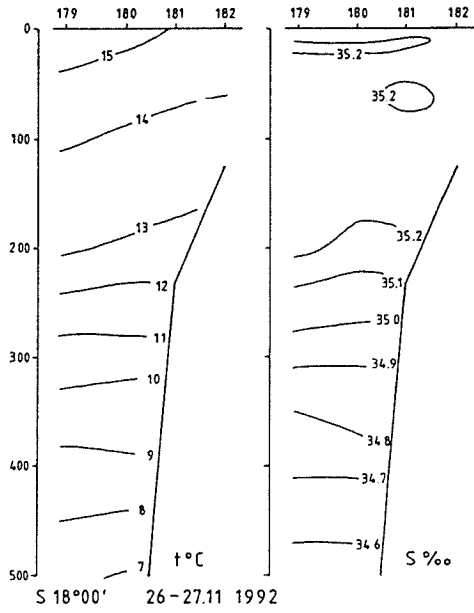


Figure 3c. Northern Region. Temperature and salinity in the standard profiles worked.

CHAPTER 3 RESULTS OF THE TRAWL SURVEY

3.1 DISCUSSION OF METHODS

A description of the fishing gear and the acoustic instruments and their state is shown in Annex III.

In the trawl survey programme all catches were sampled for composition in weight and numbers by species. The bottom trawl has a headline of 31 m (float line), footrope 47 m, estimated headline height 5 m and distance between wings during towing about 18 m. Observations on the geometry of this type of trawl were made during Survey 2/90 and are described in the corresponding report. For conversion of catch rates to fish densities the area between the wings is assumed to be the effective fishing area i.e. q is equal to 1.

The problem of mid-water occurrence of hake and the effect on the swept area assessments were discussed in previous reports. Fish occurring above the headline of the trawl, more than 5 m from the bottom, must be assumed to cause an underestimate. The extent of this behaviour have varied between the surveys. Mid-water occurrence during the night has previously been observed but with varying frequency, and therefore fishing has been restricted to day-time as much as possible. Mid-water day-time occurrence has previously been found as a problem for the assessment, mostly in the northern region. A correction for the bias in the swept area estimates has since January 1991 been applied, using the acoustic estimates of fish found more than 5 m from the bottom. In this procedure a target strength used for cod was applied: $TS = 20 \log l - 68$.

Table 1 shows the observations and measurements of density of fish in mid-water during trawling in this survey. The extent of mid-water occurrence during daytime is seen to be low in all three regions, and the average acoustic correction is about 9%, 5% and 10% in the southern, central and northern regions respectively.

3.2 SOUTHERN REGION, ORANGE RIVER TO ST. FRANCIS BAY

The complete record of the fishing stations is shown in Annex II.

The catch compositions are shown in Table 2 which lists the catch rates standardized to kg/hour by main groups for the shelf and the slope separately. The mean catch rate for hake on the shelf is on the same level as during the previous survey in May 1992. The hake mean catch rate on the slope hauls has a high statistical variance in both surveys and part of this

difference can be associated low statistical precision. Kingklip catch rates are higher than in November 1991, but below the promising rates of May 1992. Monk rates are back to the level of November 1991, after a sudden increase in May 1991. It should be noted that both kingklip and monk show a patchy distribution, giving very high variance in the regional mean catch rates.

Table 1. Hakes. Frequency of observations of hake in mid-water during trawling. No of trawl stations with swept area densities and no. of stations with observations of hake above 5 m from bottom with acoustic density estimate. Density tonnes/nm ² .		
ORANGE RIVER - ST. FRANCIS BAY	DAY	NIGHT
Trawl		
No. stations	49	15
Mean density	18.0	13.2
Acoustic obs.		
No. stations	11	4
Mean density	6.8	3.1
Average acou. corr.	9%	6%
ST. FRANCIS BAY - AMBROSE BAY	DAY	NIGHT
Trawl		
No. stations	64	13
Mean density	35.0	12.7
Acoustic obs.		
No. stations	23	6
Mean density	5.0	7.8
Average acou. corr.	5%	28%
AMBROSE BAY - CUNENE RIVER	DAY	NIGHT
Trawl		
No. stations	50	0
Mean density	23.5	
Acoustic obs.		
No. stations	21	0
Mean density	5.8	
Average acou. corr.	10%	

The depth distribution of the two hake species, expressed by catch rates converted to densities, are shown in Table 3. The mean density of cape hake on the shelf (100-250m) is about the same as in May, while at the slope the density is reduced. Contrary to findings of previous surveys the mean density is about the same in the 100-250m and in the 250-350m depth zones, but this is associated with different cohorts in the two habitats with younger fish on the shelf. The deep water hake has it highest density in the 350-450m bottom depth zone as previous, but the density is reduced compared to May 1992.

Table 2. Southern Region. Catch rates by main groups by bottom trawl for the shelf and slope.

SHELF 50-259 m

ST.NO.	DEP.	Hakes	Monk	Kingklip	Soles etc.	Squid	Other
1328	165	382.4					110.6
1329	205	423.3					9.3
1330	210	168.4		6.0		3.2	27.4
1332	98	84.0		70.0	33.0	4.9	515.8
1333	151	64.2	1.9			16.3	66.9
1334	175	256.9	0.7	1.0	0.9	31.6	70.4
1335	176	162.4		67.7	6.5	0.5	77.0
1340	212	121.1	6.5		0.5	0.9	87.9
1341	173	133.7	15.2	0.3	1.4	27.0	55.9
1342	159	159.4	3.5		4.0	24.0	75.2
1343	176	112.0	0.9	1.4	1.6	1.0	19.3
1344	89	144.8		150.0	0.5	1.0	54.8
1345	171	297.1	1.4		1.5	11.2	136.7
1346	177	180.2	6.2		2.8	26.9	66.4
1347	193	458.9				16.7	256.7
1348	168	49.3				0.7	105.0
1352	211	231.2					83.4
1353	193	379.0				15.2	324.8
1354	176	339.3				7.3	22.5
1360	200	419.9				7.3	633.6
1361	148	322.6				3.2	104.5
1370	175	648.0					112.8
1371	127	485.5		13.9			10.9
1372	170	547.2				2.2	121.8
1383	159	1461.5					46.8
1390	242	1414.8					162.0
1391	165	568.6					112.6
1392	119	352.9					721.6
1393	175	1789.8					101.4
MEAN		419.3	1.3	10.7	1.8	6.9	148.1

SLOPE 260-650 m

ST.NO.	DEP.	Hakes	Monk	Kingklip	Soles etc.	Squid	Other
1336	383	226.0	1.9	7.0		7.4	29.7
1337	544	28.6				2.5	45.6
1338	412	236.7	9.9	7.5	0.4	8.7	12.8
1339	292	1053.4		7.6		2.6	1086.4
1349	584	473.9		3.9		12.2	113.6
1350	435	1321.1		71.8		25.5	78.8
1351	325	902.4		77.8		12.5	32.0
1355	601	349.6				4.9	202.6
1356	491	529.6				15.0	112.3
1357	395	728.7		14.3		31.3	131.7
1358	330	692.8				17.2	126.4
1359	298	75.0		8.9			764.4
1362	316	581.1	2.5	15.0			36.8
1363	385	1157.0					166.8
1364	496	294.0				6.3	69.4
1365	599	130.2				28.6	238.9
1366	445	431.0		2.0		4.3	72.7
1367	397	979.2	36.0	6.4		14.0	98.3
1368	351	887.7				17.1	115.6
1369	280	268.4		133.8		4.3	26.3
1373	264	371.3	13.1		1.0	3.3	66.4
1374	307	765.6	12.2	1.7		0.4	89.1
1375	372	1231.9				20.9	136.9
1376	437	685.0				17.7	134.4
1377	560	785.4	21.2			22.1	665.2
1378	599	1539.6				303.0	776.7
1379	501	406.6	42.4			26.0	228.7
1380	401	509.2				5.9	128.6
1381	349	321.8	7.2	1.7		4.4	106.1
1382	277						
1384	341	605.8	3.0	20.4		1.6	101.2
1385	435	809.0	6.5			20.1	106.8
1386	643	63.5				81.3	255.2
1387	542	164.8				107.9	344.5
1388	450	487.8				14.0	253.3
1389	307	1264.8					79.4
MEAN		593.3	4.3	10.6	0.1	23.4	195.4

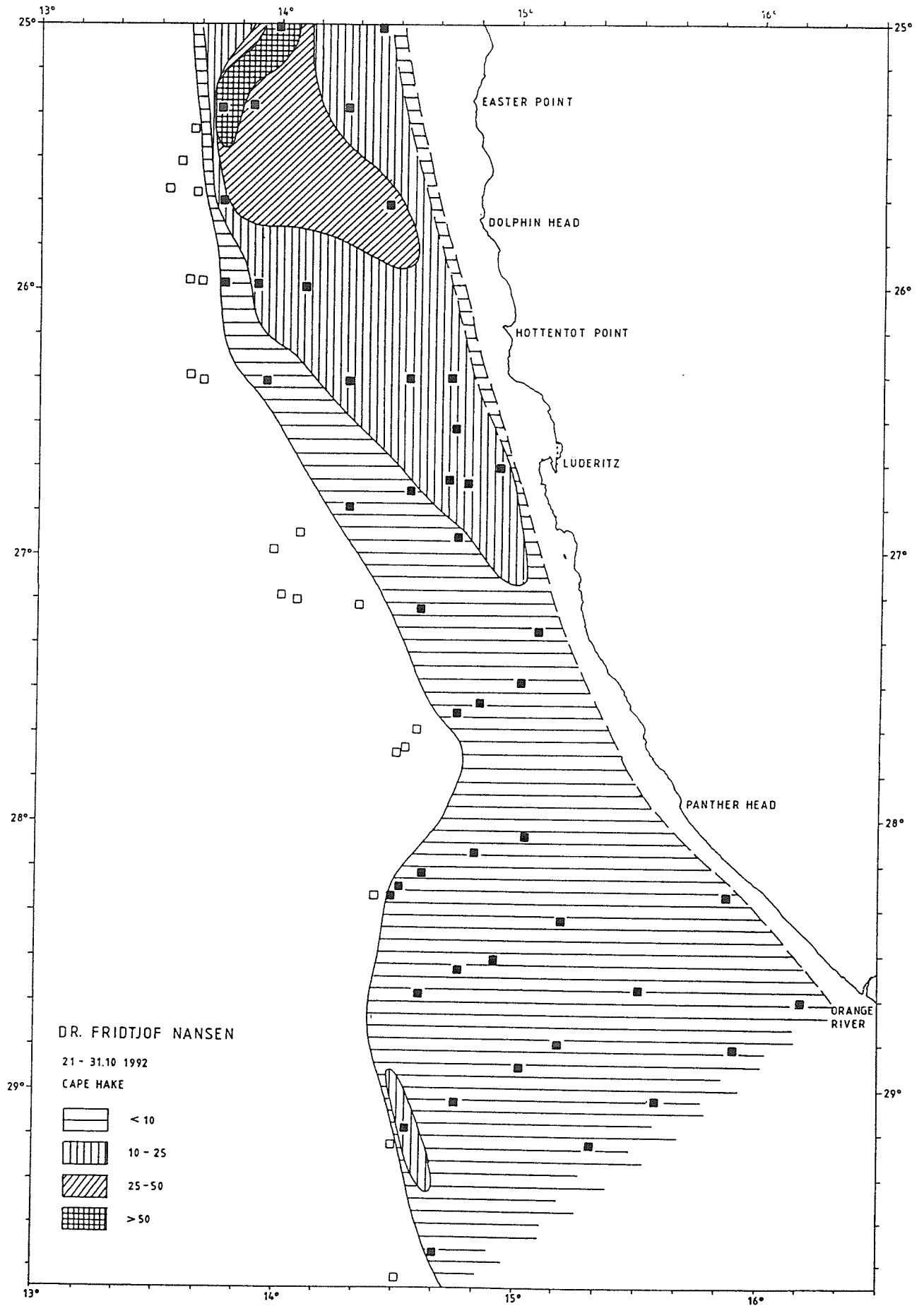


Figure 4. Southern Region. Distribution of Cape hake.

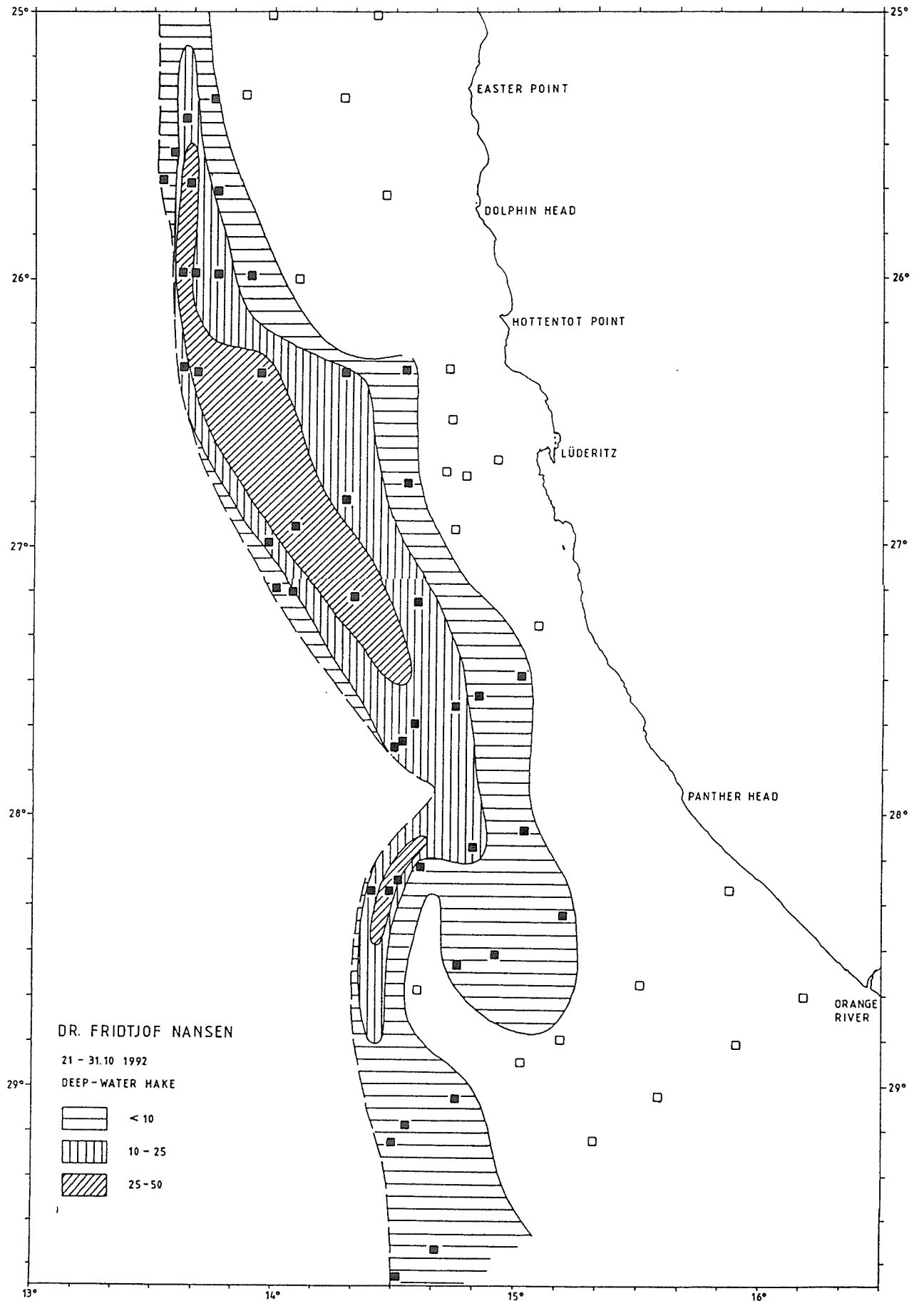


Figure 5. Southern region. Distribution of deep water hake.

	100-250 m	250-350 m	350-450 m	450-550 m	550-650 m
Cape hake					
Density	11.6	12.2	1.1	0.2	
Catch rate	350	370	30	5	
Deep w. hake					
Density	1.7	7.9	23.8	10.1	18.2
Catch rate	50	240	710	300	550
No. of hauls	29	11	12	6	6

The distribution of the two hake species based on plots of densities by fishing stations is shown in Figure 4 and 5. The densities include the acoustic estimates of fish present above the 5 m bottom channel during trawling as discussed above. The Cape hake was only found in low densities south of Lüderitz, a picture consistent with the findings of the three previous surveys. In 1990 however, aggregations of cape hake was found also in the south during two surveys. The distribution of deep water hake follows the same pattern as found during the two previous surveys, with an aggregation between 26° and 28°S.

Biomass estimates based on a post-stratification of the estimated densities, as shown in the figures of fish distribution, give 160 000 tonnes for the Cape hake and 125 000 tonnes for the deep water hake, Table 4. This is a reduction of 40 000 and 20 000 tonnes for the respective two species compared to the previous survey in May. The 95% confidence limit gives a range of $\pm 14\%$ on the Cape hake estimate.

	Cape hake	Deep water hake
1/90	130	22
3/90	130	25
1/91	113	31
2/91	80	82
1/92	200	145
2/92	160	125

The size compositions of the Cape hake are shown in Annex I. On the shelf (50-260m) the dominating cohort has a modal size of 21 cm, while at the slope bigger fish is dominating. Figure 6 show the cumulative relative size distribution in number and biomass of the cape hake. The figure shows that on the shelf 92% in numbers and 70% of the biomass is below 30 cm length, while at the slope the corresponding figures are 30% and 5% in numbers and biomass respectively. For the whole bottom depth zone 50-650m the "fishable" biomass beyond 35 cm length is 9% in numbers and 47% in weight. This corresponds to about 100 million fish and 75 000 tonnes, estimated.

In lack of length-at-age data a first attempt has been made to split the young fish into age cohorts by optimizing normal distributions on the empirical length distributions. A close fit to the lower part of the distribution was found with two cohorts with mean length on 22.5 and 27.6 cm respectively. The result from the analysis and the derived estimates on abundance are shown in Table 5.

Table 5. Southern Region, Orange River to St. Francis Bay. Cape hake. Estimated age-cohorts from optimized normal distributions.				
Mean length	Sigma	Fraction of young fish	Fraction of all fish	Biomass million N
22.5	2.5	0.71	0.62	680
27.6	2.8	0.29	0.25	275

The size composition of the deep water hake, see Annex I, shows a dominance of fish with the 30 cm modal length, probably the 1989 year-class, but bigger fish are also well represented. The cumulative size distributions, Figure 7, show that about 66% of the biomass or roughly estimated 80 000 tonnes is of more than 35cm length. This corresponds to 27% of the number of fish.

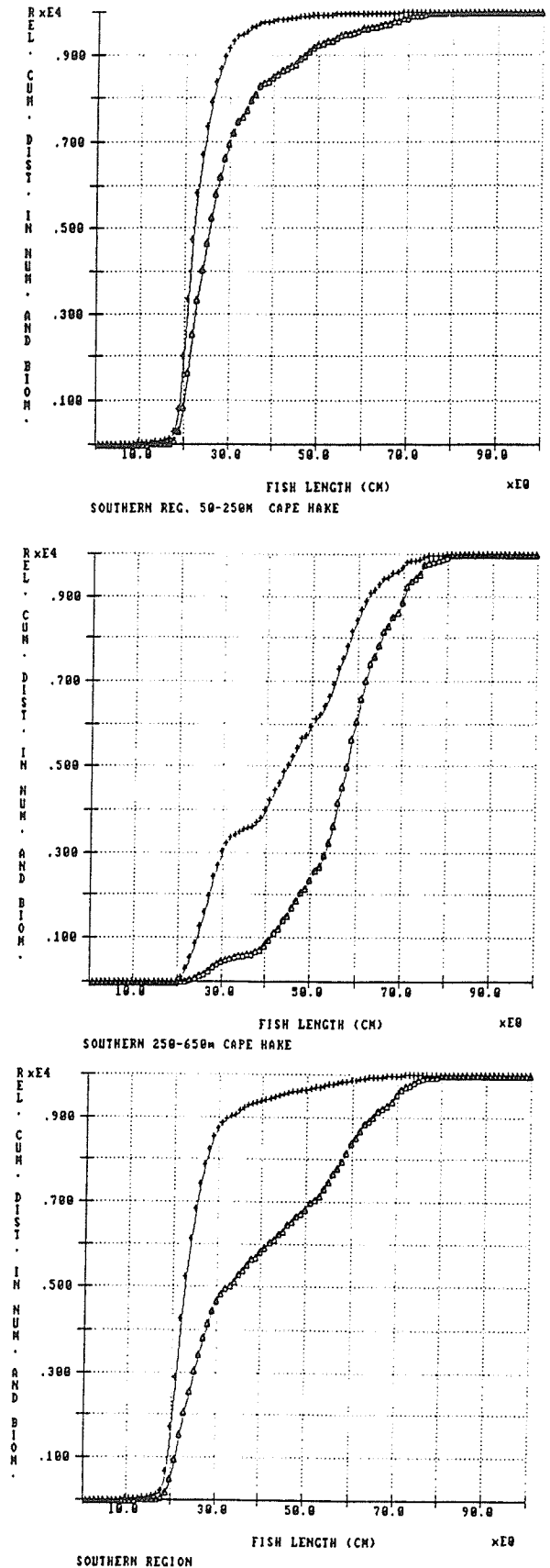


Figure 6. Southern Region. Cumulative relative size distribution of Cape hake at the shelf (50-250m), at the slope (250-650m), and combined.
 Legend: + + +: Numbers Δ Δ Δ: Biomass

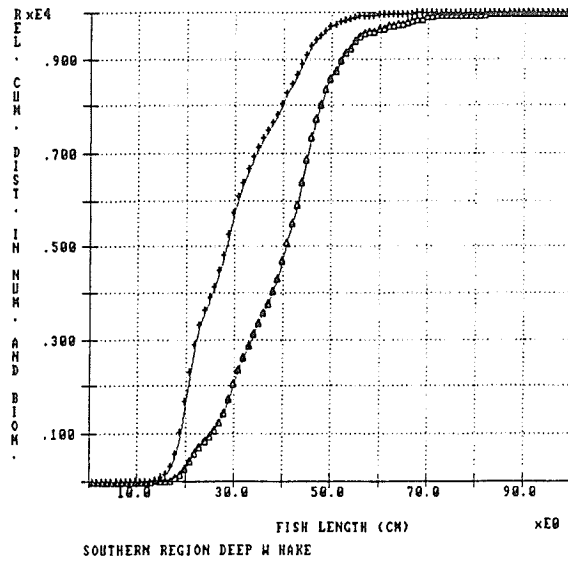


Figure 7. Southern Region. Cumulative relative size distribution of deep water hake at the slope (250-650m).
 Legend: + + +: Numbers Δ Δ Δ: Biomass

3.3 CENTRAL REGION, ST. FRANCIS BAY TO AMBROSE BAY

The catch compositions for the shelf and the slope are shown in Table 6 by main groups. For the hakes the mean catch rate on the shelf is about 60% higher than in the two previous surveys, while on the slope the rates are about as during the two previous surveys. The catch rates for horse mackerel have increased to four times the level of November 1981 and twice the level of May 1992, and have reached the same level as during the February survey 1991. The catchrates of monk and squid was low and in line with the findings from the previous surveys.

The depth distribution of the two hake species is shown in Table 7. In the shallow range, 100-250 m the catch rates and the derived density estimates have increased about 50% since the last survey. This is due to heavy immigration of young fish around 23cm modal length settling into the demersal community. In the deeper depth ranges the densities are very consistent with the findings of the two previous surveys.

Table 6. Central Region. Catch rates by main groups in bottom trawl hauls standardized to kg/hour for the shelf and slope.

SHELF 50-259 m

ST.NO.	DEP.	Hakes	Monk	Kingklip	Horse mck.	Squid	Other
1394	217	405.6			8.8	4.0	34.6
1401	198	440.0					11.3
1402	228	183.4	4.1			8.8	226.1
1411	240	545.0	4.0		27.4	2.3	105.4
1412	202	843.3			17.4		6.2
1413	143	2823.5					
1414	103	236.8					63.2
1415	120	2727.3					
1416	153	3000.0					
1417	173	3665.8			682.0		3.9
1418	200	1260.0	3.6		532.9	0.5	114.5
1419	243	1497.6	85.9		3679.2	13.9	191.5
1427	214	1191.5			970.5	1.3	249.4
1428	155	1748.0			540.0		85.0
1429	152	4628.6			55.8		
1430	116						1200.0
1431	140	4842.0			169.2		156.6
1432	183	1544.4	1.8		336.6		45.6
1441	257	466.4	4.0		69.2	5.4	122.0
1442	133	2917.2			4474.8		44.2
1443	108	0.2					100.0
1444	121	4102.0				14.0	35.1
1445	88						4.1
1446	114	30.0					300.0
1447	125	3132.0			113.7	8.1	169.9
1448	163	3376.8	2.7				59.4
1449	228	476.6	2.9		422.6	11.5	75.4
1450	254	1024.8	1.7		1801.8	7.8	179.6
1457	244	3404.7	1.5		443.2		19.3
1458	154	1266.2			120.0	0.5	107.8
1459	98	7.6					264.0
1460	143	1880.5					8.1
1461	213	900.2	5.8		58.0	0.8	253.2
1465	250	720.3	4.2		70.0	0.6	219.8
1466	151	2185.1			672.0	2.2	65.0
1467	122	1231.6			5.7		4.9
1468	118	2226.0	0.3		11.1		60.3
1469	247	632.6	5.5		205.1		217.7
MEAN		1620.1	3.4		407.6	2.2	126.4

Table 6 (continued)
SLOPE 260-600 m

ST.NO.	DEP.	Hakes	Monk	Kingklip	Horse mck.	Squid	Other
1395	360	256.0	12.7	1.4	14.1	8.7	51.7
1396	548	172.0				13.9	491.1
1397	500	197.1				21.0	240.2
1398	400	586.3	8.9			5.9	96.1
1399	296	1065.9	14.0			6.1	101.5
1400	260	681.5				10.6	125.6
1403	273	224.6	6.3		0.5	1.3	152.1
1404	301	300.8	17.2			4.8	125.2
1405	359	512.2				9.8	71.8
1406	460	171.0	2.7			4.7	68.7
1407	551	134.3	4.9			19.3	187.8
1408	399	315.4	2.9			28.6	175.5
1409	304	433.1			22.1	2.8	172.2
1410	269	1831.7	5.7		415.6		179.4
1420	300	475.7			28.9	9.4	156.5
1421	377	167.5			21.1	21.0	175.3
1422	474	169.4	2.7		0.9	71.4	182.7
1423	580	24.8				21.2	192.2
1424	358	668.6				55.9	80.9
1425	285	143.4	3.1		148.1	5.5	207.1
1433	310	235.0	10.7		13.0		50.4
1434	348	296.8			2.7	7.4	79.3
1435	446	475.5	32.7			17.9	218.3
1436	399	288.5				17.5	155.3
1437	543	48.1				13.8	38.2
1438	376	265.7	1.3		0.3	8.4	68.3
1439	331	516.7		4.6		2.8	62.0
1440	306	569.8			35.3		86.1
1451	301	895.5			207.2		79.8
1452	377	349.8	0.4			7.9	250.0
1453	476	180.4				6.3	297.1
1454	437	191.8				9.0	150.3
1455	353	1173.9	3.7			0.5	157.8
1456	305	480.6			111.6	9.8	157.4
1462	303	573.8			88.3		101.7
1463	370	394.6		2.4		13.7	197.7
1464	309	518.3	1.9		9.3		148.4
1470	318	1779.4				20.6	201.9
1471	360	437.0	1.6			2.0	105.6
1472	460	209.5				7.3	85.9
MEAN		460.3	3.3	0.2	28.0	11.7	148.1

Table 7. Depth distribution of the two hake species, St. Francis Bay Ambrose Bay. Mean densities tonnes/nm² and mean catch rates. Kg/hour.

	100-250 m	250-350 m	350-450 m	450-550 m	550-600 m
Cape hake					
Density	53.6	20.1	10.5	0.8	0.1
Catch rate	1610	600	320	25	2
Deep w. hake					
Density		0.3	3.1	4.5	2.7
Catch rate		10	95	130	80
No. of hauls	33	20	14	7	2

Figure 8 and 9 show the distribution of the two hake species over the central area. The high density belt of Cape hake inshore from off Conception Bay to off Cape Cross is remarkably similar to the distribution pattern in November 1991, and represents mainly a new recruit class with a modal length of 22 cm, assumed to be the 1991 year-class. Similar high density areas of juvenile fish inshore was found in the 1990 and 1991 surveys when the 1989 and

1990 year-classes were recruited to the stock. In deeper waters spots of high densities of large size fish were located. The length frequency distributions (Annex I) show that the dominating part of the population on the shelf is between 20 and 30 cm. The relative slack upper tail of the distribution probably indicates two cohorts in the size assembly: the above mentioned 1990 year-class and at the upper tail, the shelf-remnants of the previous year-class.

In Figure 10 and 11 the relative size distribution by number and biomass are shown as cumulative distributions for the two hake species. The relative part of the adult stock that is fish of 35 cm and larger, is 5% by numbers and 33% by weight of the population in the central region. The corresponding figures for the deep-water hake are 65% by numbers and 85% by weight.

In a cohort analysis on the length frequency distributions two normal distributions with means 22.5 and 27.6 cm gave the closest fit as in the southern region. The result from the analysis is shown in Table 8.

Mean length	Sigma	Fraction of young fish	Fraction of all fish	Biomass million N
22.5	2.04	0.7	0.72	3 500
27.6	3.01	0.2	0.18	880

Table 9 shows the regional biomass estimates by surveys. The 540 000 tonnes on the Cape hake from the last survey represents a doubling of the estimated biomass from May 1992 and is also about 80% higher than the previous year, in November 1991. The recruits below 35 cm makes up 370 000 tonnes while in November 1991 this group represented 160 000 tonnes. The "fishable" biomass is estimated to 170 000 tonnes while in November 1991 it was 140 000 tonnes. The main increase is therefore due to very strong recruitment from the 1991 year-class, partially mixed with the shelf remaining part of the 1990 year-class. The 95% confidence limit on the Cape hake estimate is $\pm 9\%$.

	Cape hake	Deep water hake
1/90	180	4
3/90	219	6
1/91	150	6
2/91	302	13
1/92	261	15
2/92	542	15

For the deep water hake the estimate is 15 000 tonnes, a figure very consistent with the results from the two previous surveys.

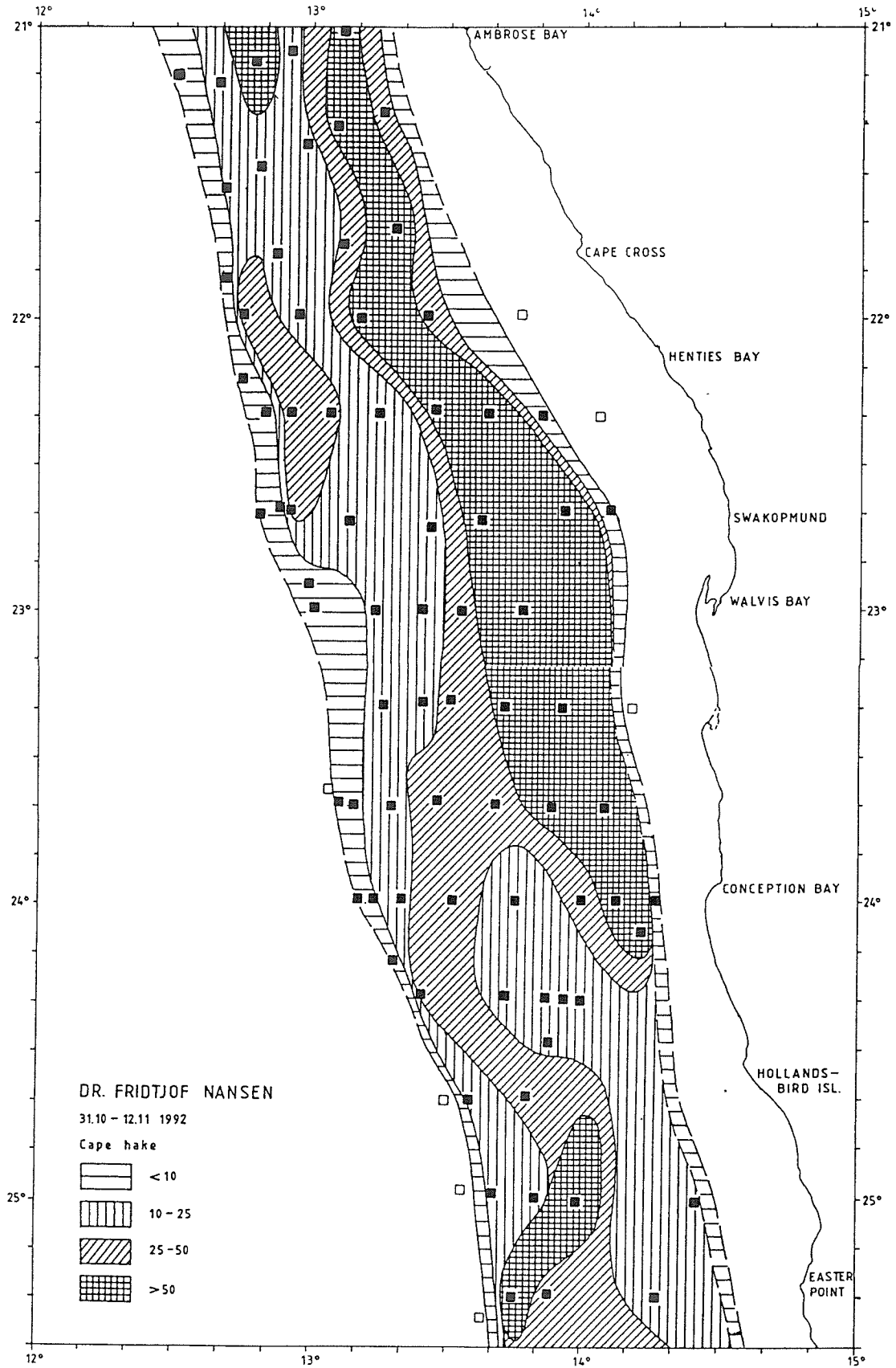


Figure 8. Central Region. Distribution of Cape hake.

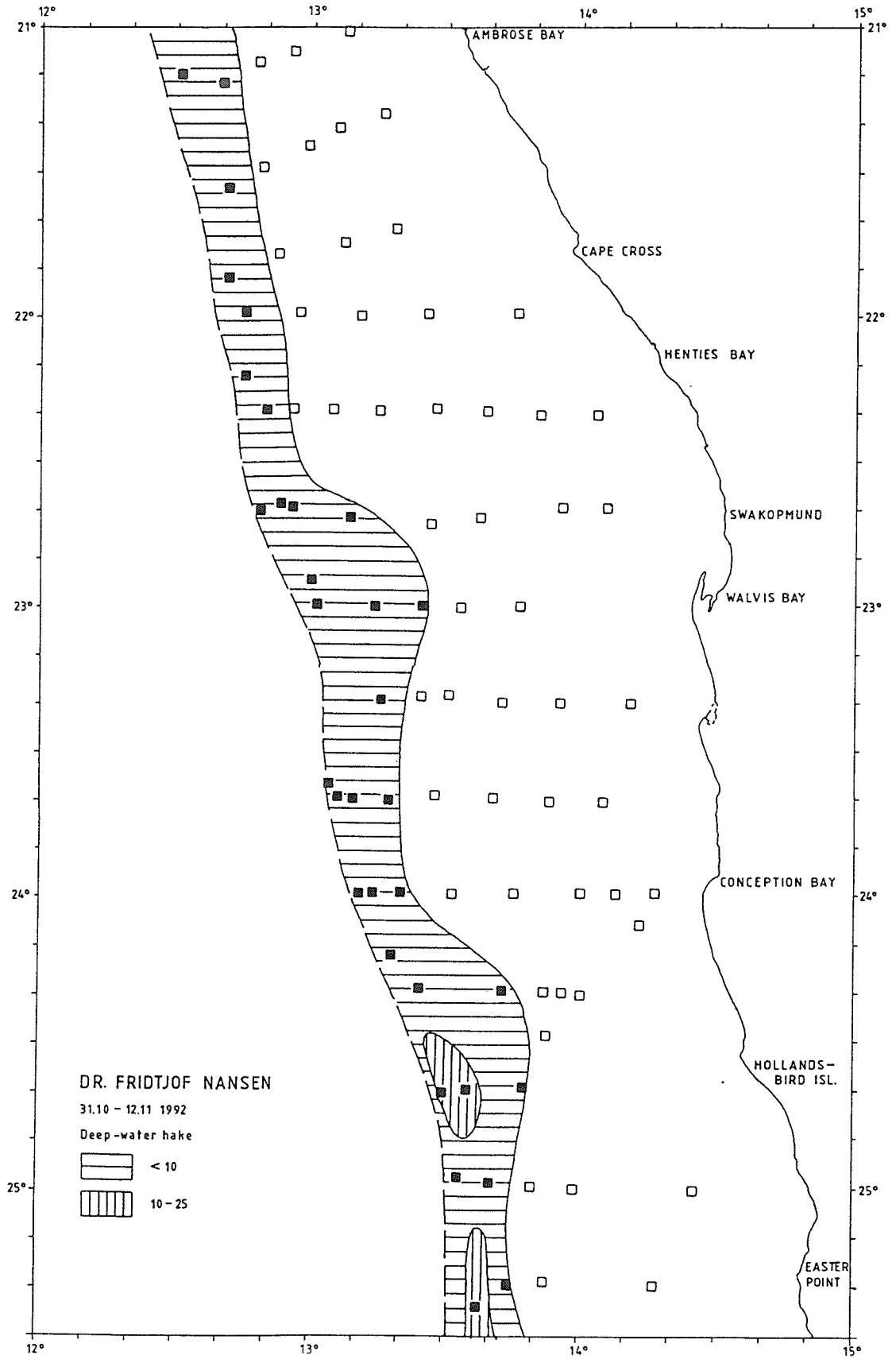


Figure 9. Central Region. Distribution of deep water hake.

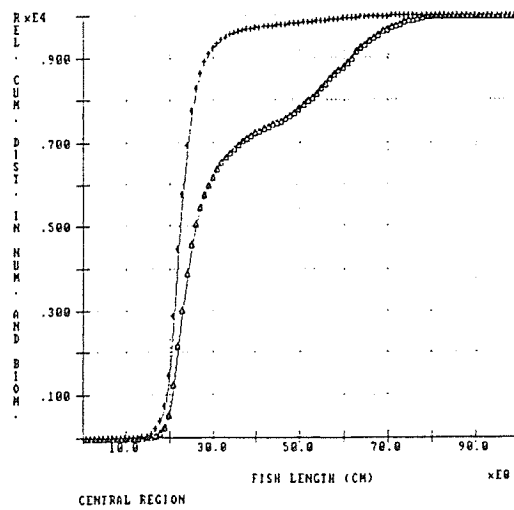
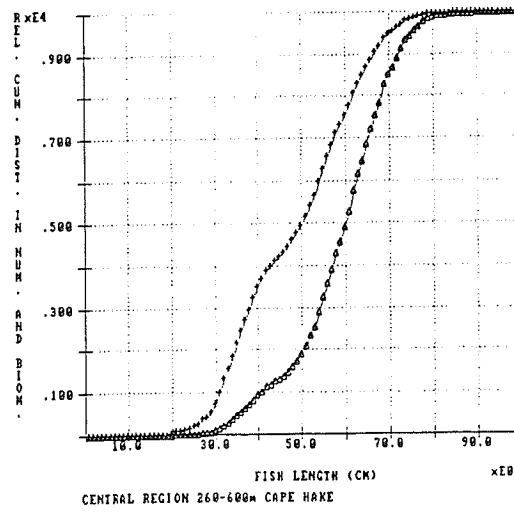
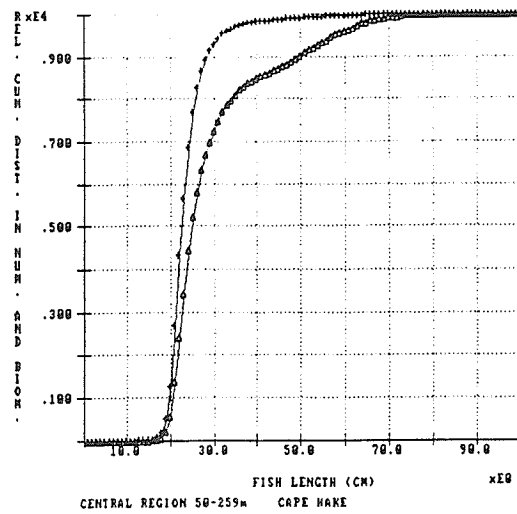


Figure 10. Central Region. Cumulative relative size distribution of Cape hake at the shelf (50-259m), at the slope (260-650m), and combined.
 Legend: + + +: Numbers Δ Δ Δ: Biomass

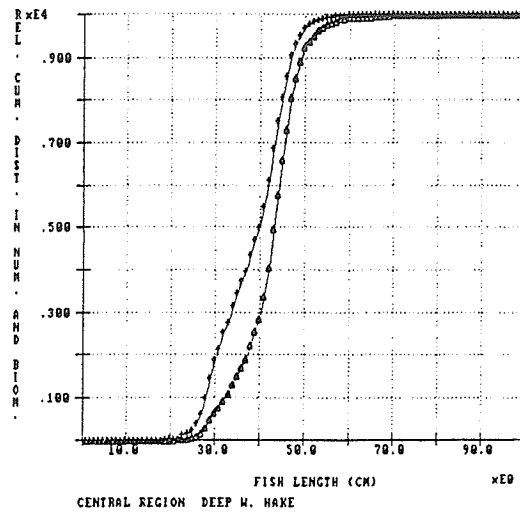


Figure 11. Central Region. Cumulative relative size distribution of deep water hake at the slope (250-650m).
 Legend: + + +: Numbers Δ Δ Δ: Biomass

3.4 NORTHERN REGION, AMBROSE BAY TO CUNENE RIVER

Table 10 shows the catch rates by main groups for the shelf and the slope separately. The mean rates for the hakes have increased on the shelf and is slightly reduced on the slope since the previous survey in May 1992. The mean rate on large-eye dentex has declined since the last survey, but are considerable higher than in November 1991. The mean by-catch of horse mackerel was about 700 kg/hour and follows an increasing trend since the sudden decline in November 1991.

Table 11 shows the depth distribution of the hakes. The Cape hake is found in highest densities on the shelf due to dominance of strong year-classes of young fish. In the 250-350 depth range the mean rates have declined slightly since the previous survey, from 780 to 560 kg/hour.

Table 11 Depth distribution of the hake species, Ambrose Bay to Cunene River. Mean densities tonnes/nm ² and mean catch rates. Kg/hour.			
	100-250 m	250-350 m	350-450 m
Cape hake			
Density	29.6	18.6	17.6
Catch rate	890	560	530
Deep w. hake			
Density		0.1	2.9
Catch rate		1.8	85
Benguela hake			
Density	0.3		
Catch rate	8		
No. of hauls	23	16	10

Figure 12 shows the distribution of Cape hake in the region, calculated from the catch rates and with adjustments for fish in mid-water.

The size compositions are shown in Annex I. The size of the Cape hake has been consistently highest in the northern region in all surveys. Figure 13 show the relative cumulative size distribution of the Cape hake on the shelf and the slope. The young fish below 35 cm length makes up 75% of the number and 37% of the biomass of fish on the shelf, while at the slope the respective figures are 6% and 2%. For the northern region in total the young fish constitutes 73% in number and 25% by weight of the biomass.

The modal analysis gave close fit to 4 normal distributions, with means on 17.5, 23.5, 27.0 and 33.5 cm, Table 12.

Table 10. Northern Region. Catch by main groups in bottom trawl hauls standardized to kg/hour for the shelf and slope.

SHELF 50-259 m

ST. NO.	DEP.	Hakes	Monk	Dentex	Horse mck.	Squid	Other
1474	112	522.6			125.4		3.5
1475	163	2005.9		8.2	267.8	1.3	8.6
1476	254	588.0	1.6		60.0	7.4	323.5
1480	115	962.3			449.8	7.0	19.0
1481	148	78.7		734.1	817.0	0.8	42.8
1482	215	151.9			106.2	0.1	93.2
1486	177	256.0		292.0	43.0		169.2
1487	235	590.3	0.7	289.8	6.1	0.7	200.9
1491	255	670.2			11.4	11.4	686.0
1492	223	328.1		337.0	364.0		175.8
1493	117	231.2			210.4	8.1	268.9
1494	183	898.0		97.6	1934.0	3.0	537.8
1496	247	3962.4		186.7	9.1		79.4
1498	193	1736.4		76.2	165.6		861.3
1499	127	464.6		1195.4	1771.6		546.1
1500	122	218.1		181.2	57.1	0.4	90.6
1501	220	405.3		58.2	23.2		66.0
1505	232	2143.0		176.0	91.2	0.8	677.3
1506	141	2825.2		729.3	1821.6	0.7	154.4
1510	232	420.8		23.8	1320.0	2.6	4.0
1511	253	36.0		0.9	51.0		11.6
1515	134	365.0	9.1	48.8	117.6	0.6	95.3
1516	207	129.0			6537.7		
1517	248	138.6		29.7	62.4		20.0
1521	148	301.5	0.8	9.0	8.1	1.2	11.8
1522	115	1794.0			1704.0	4.8	45.0
MEAN		854.7	0.5	172.1	697.5	2.0	199.7

SLOPE 260-700 m

ST. NO.	DEP.	Hakes	Monk	Dentex	Horse mck.	Squid	Other
1473	447	271.8				1.70	258.6
1477	326	651.1	18.0		4.1	3.36	48.4
1478	379	405.6				5.36	117.1
1479	334	504.4	2.9		16.8	4.26	132.1
1483	300	1097.1	5.0		74.7	20.00	279.4
1484	371	178.4	1.0			4.30	137.8
1485	366	249.0				6.08	96.0
1488	295	910.0	3.3	273.4	20.3	5.34	131.7
1489	277	886.3	1.4	17.1	88.2	3.74	267.3
1490	403	893.9				13.20	345.3
1495	360	369.4		7.2		13.40	165.1
1497	404	1740.4	17.2			5.60	333.8
1502	407	1703.4	1.3			7.96	384.6
1503	602	31.0				1.76	300.9
1504	363	477.2				20.60	222.6
1507	335	1110.6	6.3			6.81	181.5
1508	313	303.2		9.9	3.1	5.46	117.2
1509	283	81.0	2.1	21.6	31.7		208.3
1512	295	369.3	2.2	10.6	30.0	1.28	69.6
1513	334	794.4	2.8			4.32	219.1
1514	375	288.9				5.19	156.9
1518	283	165.0	0.3	2.9	117.9		44.4
1519	294	1427.4	2.6		67.5	2.98	92.3
1520	265	257.6		3.6	132.0		139.5
MEAN		631.9	2.8	14.4	24.4	5.95	185.4

Table 12. Northern Region, Ambrose Bay to Cunene River. Cape hake. Estimated age-cohorts from optimized normal distributions.

Mean length	Sigma	Fraction of young fish	Fraction of all fish	Biomass million N
17.5	1.5	0.15	0.09	65
23.5	1.8	0.7	0.41	310
27.0	2.5	0.15	0.09	65
33.5	3.5	-	-	-

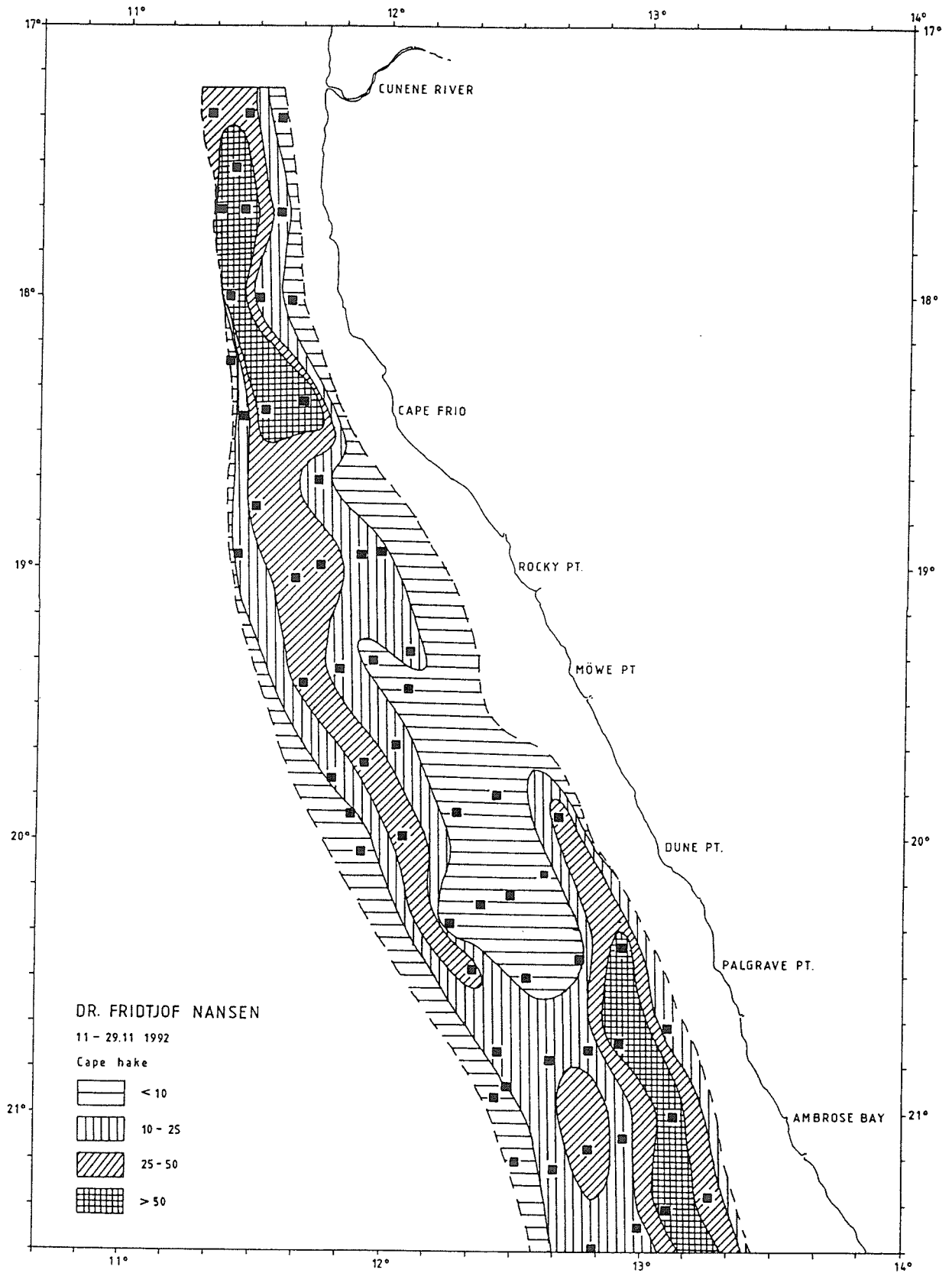


Figure 12. Northern Region. Distribution of Cape hake.

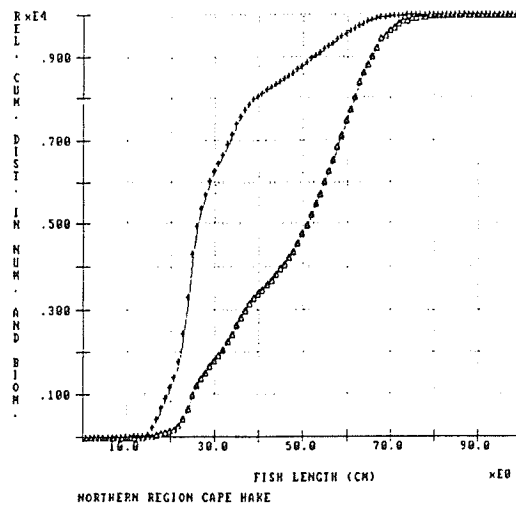
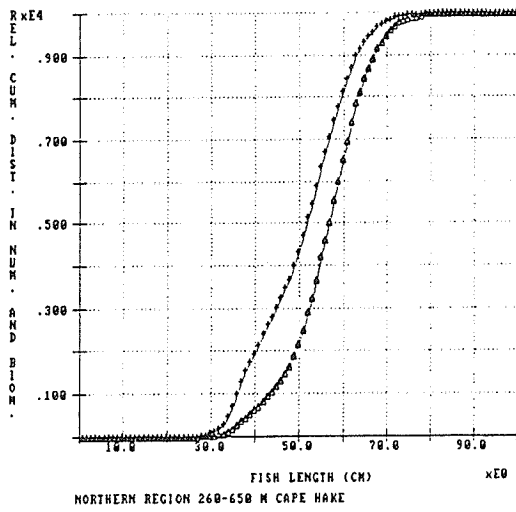
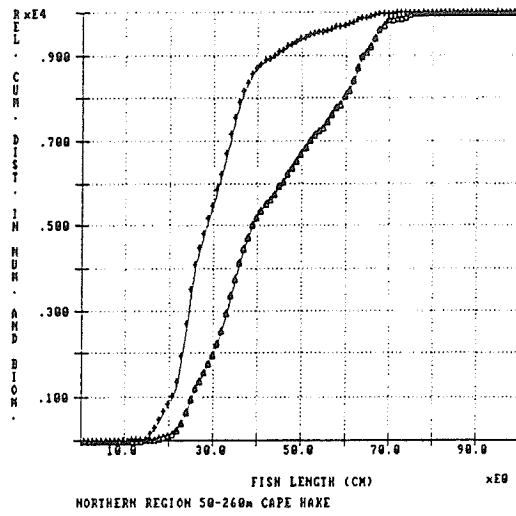


Figure 13. Northern Region. Cumulative relative size distribution of Cape hake at the shelf (50-260m), at the slope (250-650m), and combined.
 Legend: + + +: Numbers Δ Δ Δ: Biomass

The total biomass of Cape hake in this region is 190 000 tonnes, of which 143 000 tonnes are of fishable size (36 cm and larger). This is identical to the estimated fishable biomass from the previous survey in May. The time series of the estimates, Table 13, shows a not significant increase in the biomass of Cape hake in the northern region. The confidence limits of the estimate is $\pm 13\%$.

	Cape hake	Deep water hake
1/90	180	
3/90	105+midw.	
1/91	200	
2/91	140	2
1/92	185	4
2/92	190	8

4 CONSIDERATIONS OF THE SURVEY RESULTS

The present survey is the 6th in a series started in early 1990 and in each of which the distribution of the hake stocks over the whole Namibian shelf has been covered. Table 14 shows the effort spent in these hake investigations.

Table 14. Effort in Namibian hake surveys 1990-1992. Number of swept area fishing stations, number of samples (mostly by sex) and number of length measurements in thousands.					
Survey		Orange R.- St. Francis	St. Francis- Ambrose Bay	Ambrose- Cunene	Total
1/1990					
25.1-10.3	No. stations	59	73	37	169
	" samples	37	73	25	114
	" measured	6.0	10.7	2.6	18.6
3/1990					
11.9-6.10	No. stations	44	51	34	129
	" samples	68	106	77	251
	" measured	9.3	10.3	5.6	25.2
1/1991					
25.1-28.2	No. stations	41	77	56	174
	" samples	104	170	114	388
	" measured	6.8	13.3	6.9	27.0
2/1991					
23.10-21.11	No. stations	52	69	49	170
	" samples	110	132	110	352
	" measured	7.1	14.3	9.6	21.0
1/1992					
23.4-21.5	No. stations	57	60	47	164
	" samples	136	141	102	379
	" measured	9.0	11.2	8.2	28.4
2/1992					
21.10-29.11	No. stations	64	78	50	192
	" samples	188	194	155	537
	" measured	13.9	13.3	9.1	36.3

A summary of the estimates of the mean density of the hakes by depth strata is shown in Table 15. The mean density of the deep-water hake has declined only slightly from its sudden rise registered during the previous survey. This difference is probably within the precision range of the estimates. The Cape hake shows increase in the shelf waters down to 250m, especially in the central area. The increase is mainly from a new cohort, the 1991 year-class, settling on the bottom. In the deeper waters there is a decline in the densities in the south and in the north, while in the central region there is an increase. The differences can be explained mainly by migration between the regions, as on average for the whole slope the density level is practically the same as during the previous survey in May.

Table 15. Depth distribution of the hake species. Mean densities in tonnes/nm ² .					
	100-250 m	250-350 m	350-450 m	450-550 m	550-650 m
SOUTHERN REGION					
Cape hake					
1/90	21.9	4.4			
3/90	11.5	6.1	0.1		
1/91	11.3	8.8	0.9		
2/91	6.3	12.5	0.7	0.7	
1/92	12.6	28.4	4.6		
2/92	11.6	12.2	1.1	0.2	
Deep water hake					
1/90		1.4	5.0	1.2	
3/90	0.1	6.3	1.2	0.4	
1/91		4.4	6.0	1.1	
2/91	0.3	8.9	14.9	4.9	
1/92		8.9	34.8	4.0	
2/92	1.7	7.9	23.8	10.1	18.2
CENTRAL REGION					
Cape hake					
1/90	27.1	7.4	0.4		
3/90	38.6	8.3	2.5		
1/91	14.5	9.1	2.2		
2/91	34.2	19.0	7.2	1.0	
1/92	36.5	14.6	8.5	1.7	
2/92	53.6	20.1	10.5	0.8	0.1
Deep water hake					
1/90			1.6	1.4	
3/90	0.2	0.4	0.9	0.9	
1/91	0.2	0.1	0.8		
2/91		0.3	5.3	5.6	
1/92		1.3	6.8	1.6	
2/92		0.3	3.1	4.5	2.7
NORTHERN REGION					
Cape hake					
1/90	41.3	20.9	1.0		
3/90	25.9	15.1			
1/91	15.0	27.0	11.5		
2/91	13.6	23.5	24.3	4.3	
1/92	25.4	26.1	15.5		
2/92	29.6	18.6	17.6		

Table 16 shows the biomass estimates for the two stocks by regions and the corresponding data for the five previous surveys. For the Cape hake there is a remarkable increase of 200 000 tonnes in the biomass due to entrance of the new cohort into the demersal community. This cohort is especially abundant on the shelf between 100 and 250 m in the central region. Beyond 250m the larger fish dominates. The total fishable biomass, defined as fish beyond 35 cm length, is 490 000 tonnes, an insignificant decline from the 500 000 tonnes estimated in May. The effect of the fishing thus seems to have been compensated by growth in the remaining population and through migration by new recruits from the shelf into the fishing zone.

Table 16. Summary of estimates of biomass of the two hake species by surveys and areas. Tonnes.						
	TOTAL BIOMASS					
	Feb-Mar 1990	Sep-Oct 1990	Jan-Feb 1991	Oct-Nov 1991	Apr-May 1992	Oct-Nov 1992
SOUTHERN REGION						
Cape hake	130 000	130 000	126 000	80 000	200 000	160 000
Deep w. hake	22 000	25 000	31 000	83 000	145 000	125 000
CENTRAL REGION						
Cape hake	180 000	219 000	150 000	302 000	261 000	542 000
Deep w. hake	4 000	6 000	6 000	13 000	15 000	15 000
NORTHERN REGION						
Cape hake	180 000	105 000*	200 000	140 000	185 000	190 000
Deep w. hake				2 000	4 000	8 000
TOTAL	516 000		513 000	620 000	810 000	1 040 000
TOTAL FISHABLE	220 000		300 000	370 000	503 000	490 000

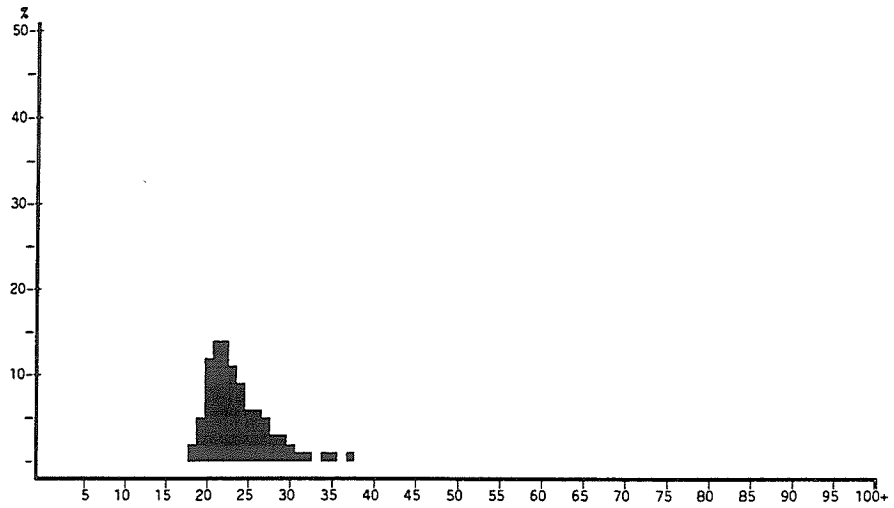
* + hake in mid-water.

Attempt has been made in the report to estimate the strength of the new year-class, the 1991 year-class, which now has settled into the demersal community. The estimates on recruits based on the current survey data are shown in Table 17 together with previous observations. The recent estimate is 2.4 times higher than the successful recruitment of 1990, and represent a new maximum in the time-series. The new recruitment is considered very favourable for the fisheries in the years to come. However, the very high densities of young fish at the shelf can be the subject of density dependent growth and mortality, as for example reduced growth and increased predator pressure due to increased food competition in the fish community. Cannibalism from the older hake could also increase. To follow the "health" condition of the recruits it is advisable to monitor them by monthly samples from the high density areas and by this acquire information on the individual growth and changes in community structure.

Table 17 Estimates of strength of recent year-classes of Cape hake. Cohort population numbers at about two years of age for the groups assumed to have been spawned in 1988, 1989, 1990 and 1991. Millions of fish.				
Year	1988	1989	1990	1991
Region south	980	100	160	680
" centre	1 320	170	1 710	3 500
" north	10	10	20	310
Total	2 310	280	1 890	4 490
Survey/Year	3/90	2/91	2/91	2/92

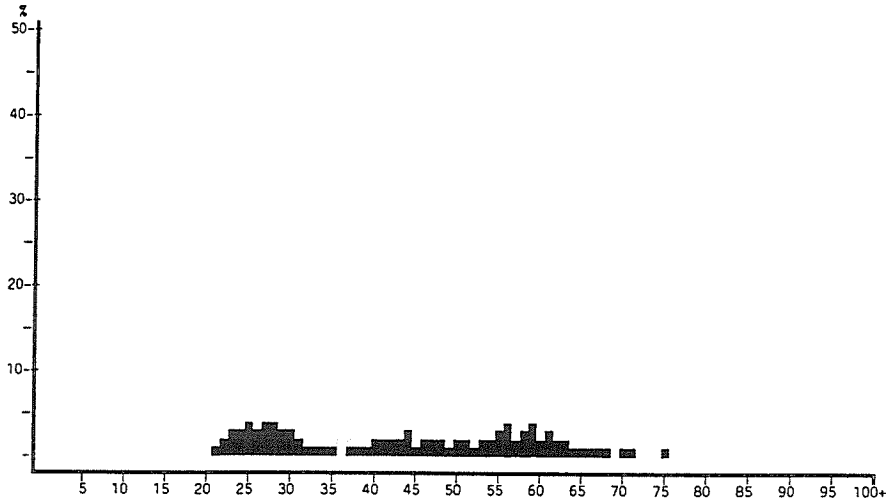
During the survey about 3 000 otoliths were collected from the whole size range of the two hake species. In order to be able to decompose the size distributions into age cohorts, the reading of these otoliths should have high priority. The established survey methods are well suited to assess the strength of the two-year and three-year classes about two and one year before they enter the fishery, and with an age/size key for the population available, better predictions on expected future yields from these recruits can be made.

Annex I Size composition of main stocks



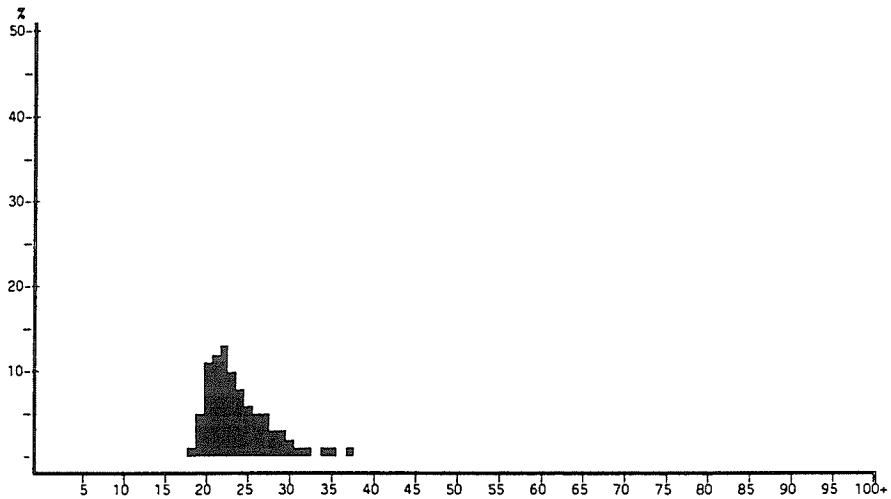
Merluccius capensis
SOUTH 2/92 50-259m
Pooled sample (weighted by catch).

MEAN LENGTH = 24.09cm N= 5448
NUMBER OF SUBSAMPLES : 65



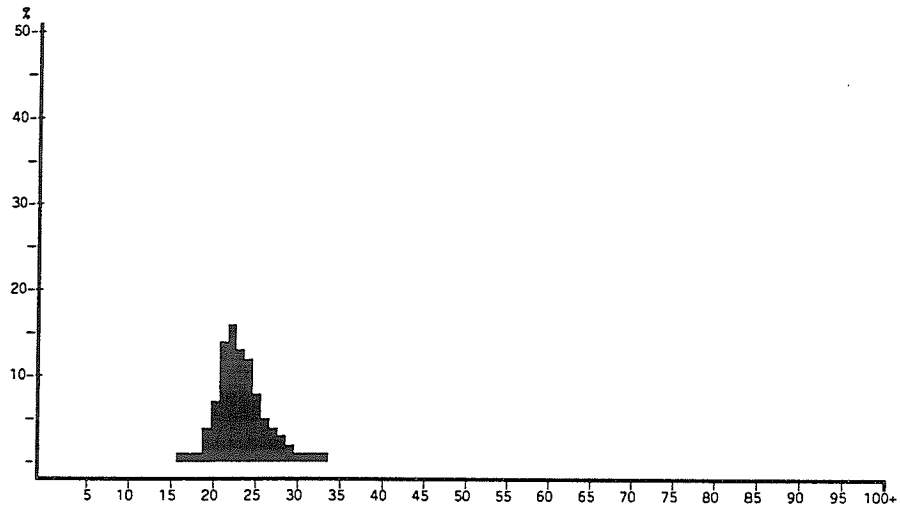
Merluccius capensis
SOUTH 2/92 260-650m
Pooled sample (weighted by catch).

MEAN LENGTH = 44.48cm N= 1101
NUMBER OF SUBSAMPLES : 30

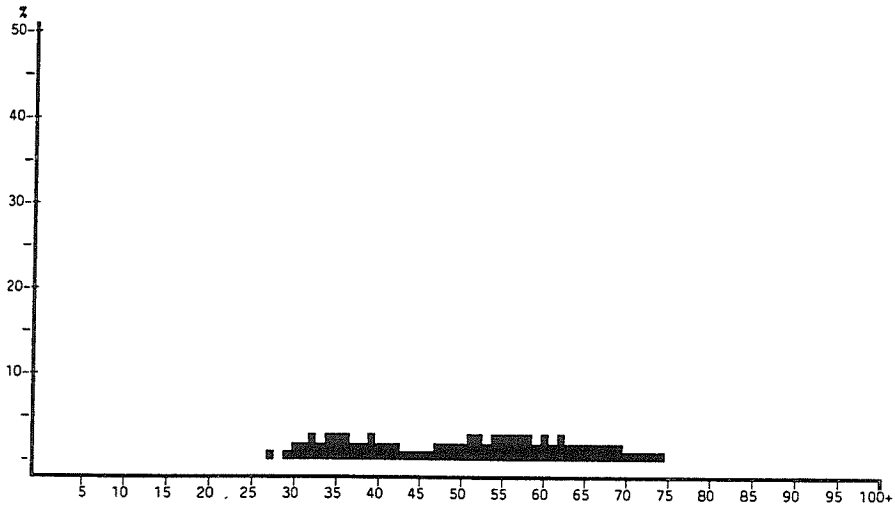


Merluccius capensis
SOUTH 2/92 TOTAL
Pooled sample (weighted by catch).

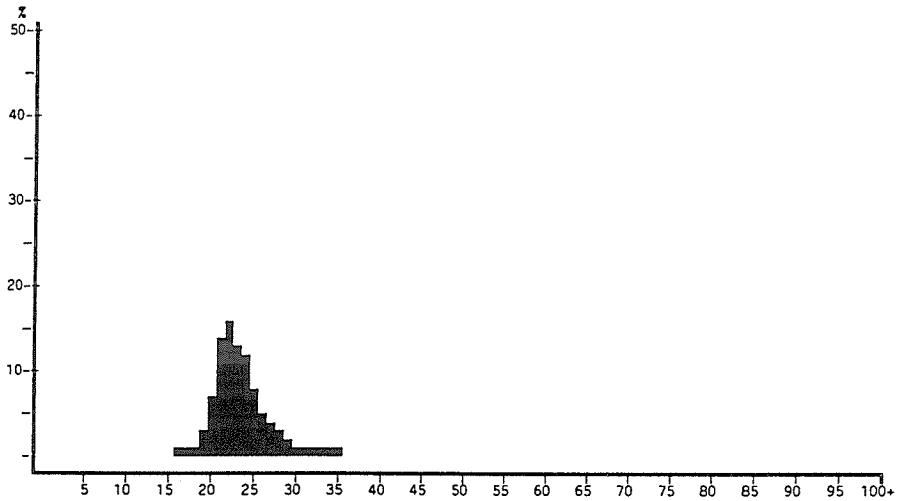
MEAN LENGTH = 25.91cm N= 6549
NUMBER OF SUBSAMPLES : 95



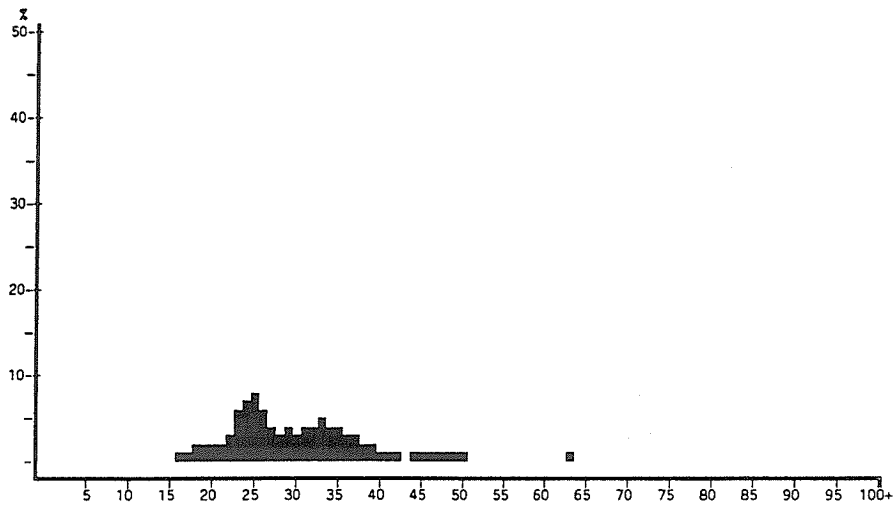
Merluccius capensis
 CENTRAL 2/92 50-259m
 Pooled sample (weighted by catch).
 MEAN LENGTH = 23.95cm N= 8678
 NUMBER OF SUBSAMPLES : 70



Merluccius capensis
 CENTRAL 2/92 260-600m
 Pooled sample (weighted by catch).
 MEAN LENGTH = 49.65cm N= 3059
 NUMBER OF SUBSAMPLES : 67

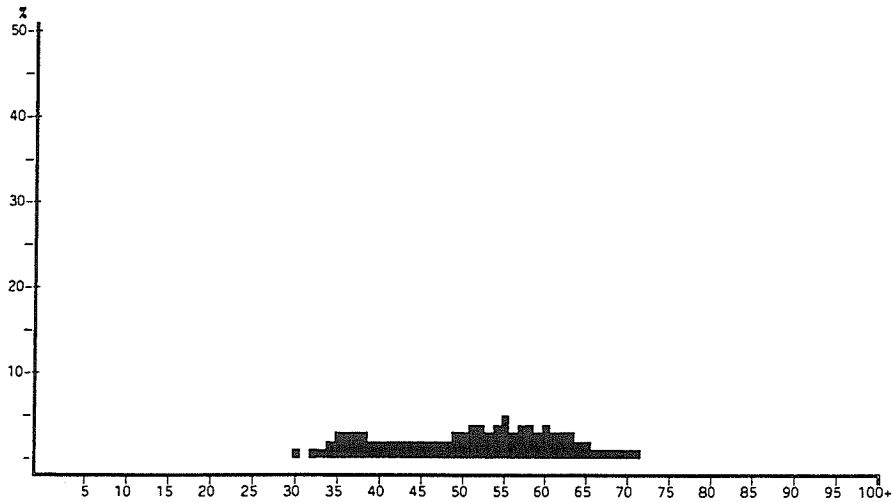


Merluccius capensis
 CENTRAL 2/92 TOTAL
 Pooled sample (weighted by catch).
 MEAN LENGTH = 24.82cm N=11737
 NUMBER OF SUBSAMPLES :137



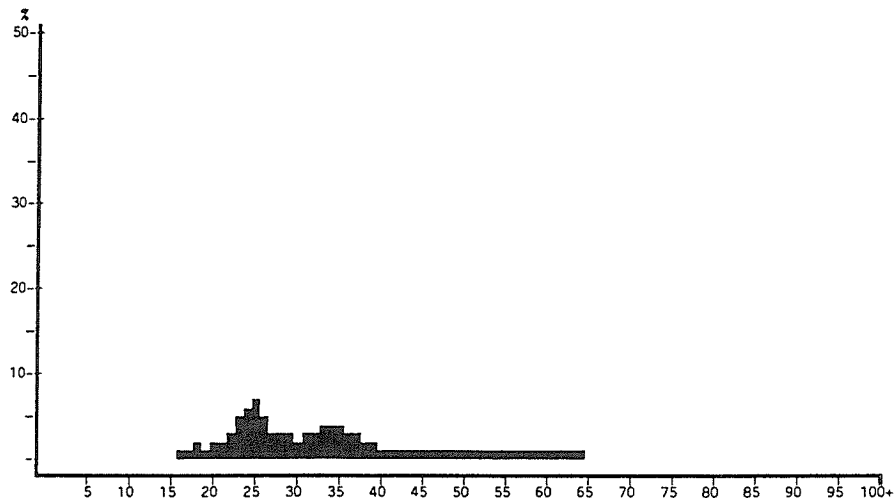
Merluccius capensis
 NORTH 2/92 50-259m
 Pooled sample (weighted by catch).

MEAN LENGTH = 31.21cm N= 4458
 NUMBER OF SUBSAMPLES : 68



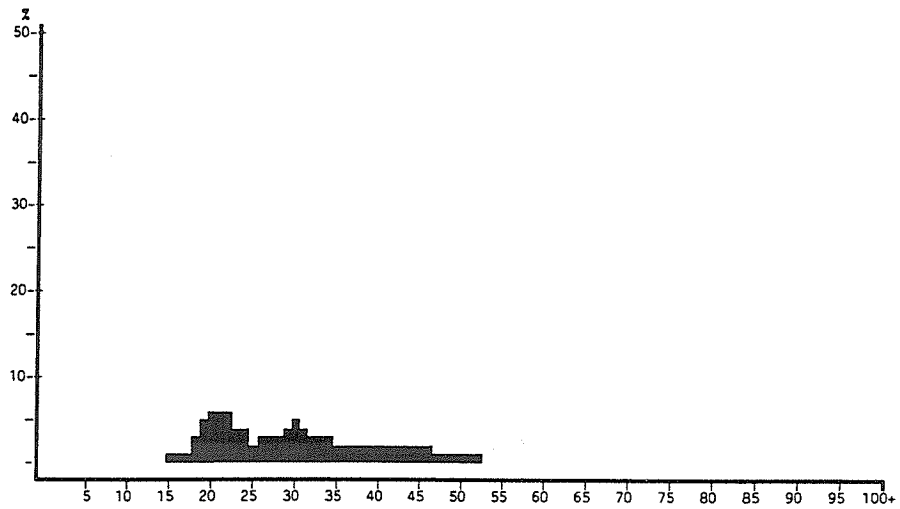
Merluccius capensis
 NORTH 2/92 260-650m
 Pooled sample (weighted by catch).

MEAN LENGTH = 51.19cm N= 2578
 NUMBER OF SUBSAMPLES : 49

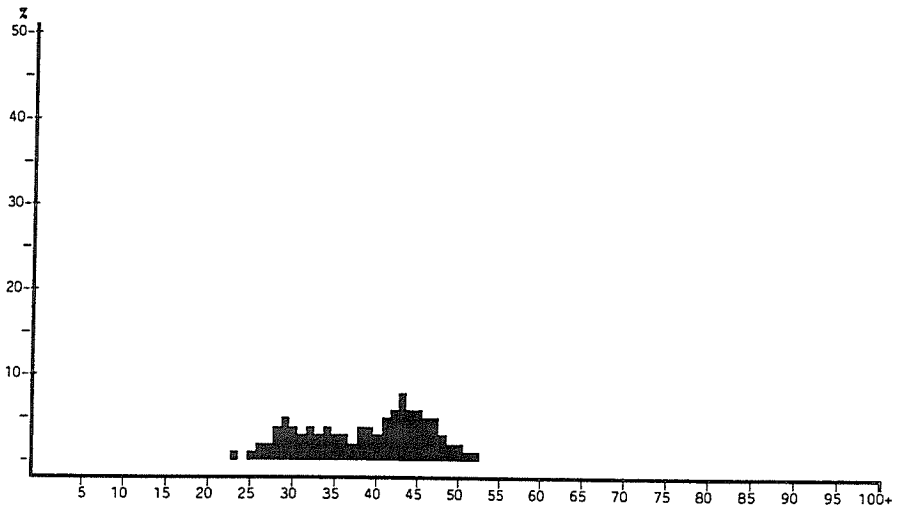


Merluccius capensis
 NORTH 2/92 TOTAL
 Pooled sample (weighted by catch).

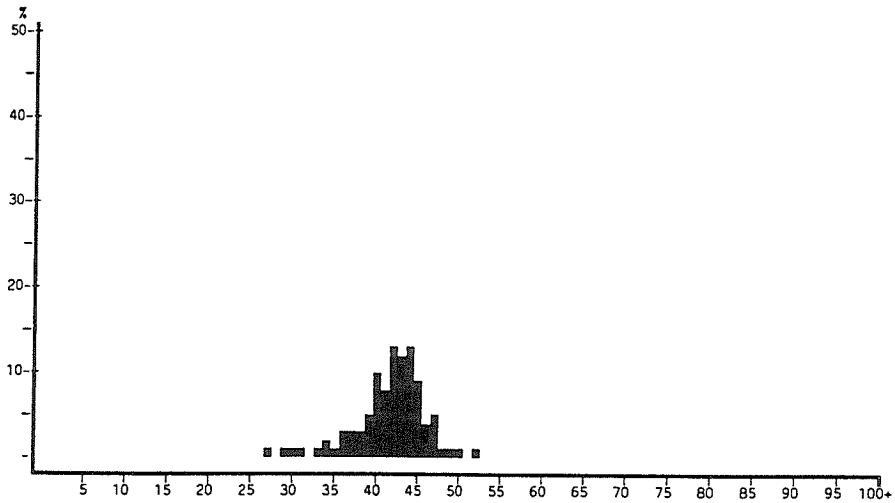
MEAN LENGTH = 34.87cm N= 7036
 NUMBER OF SUBSAMPLES : 117



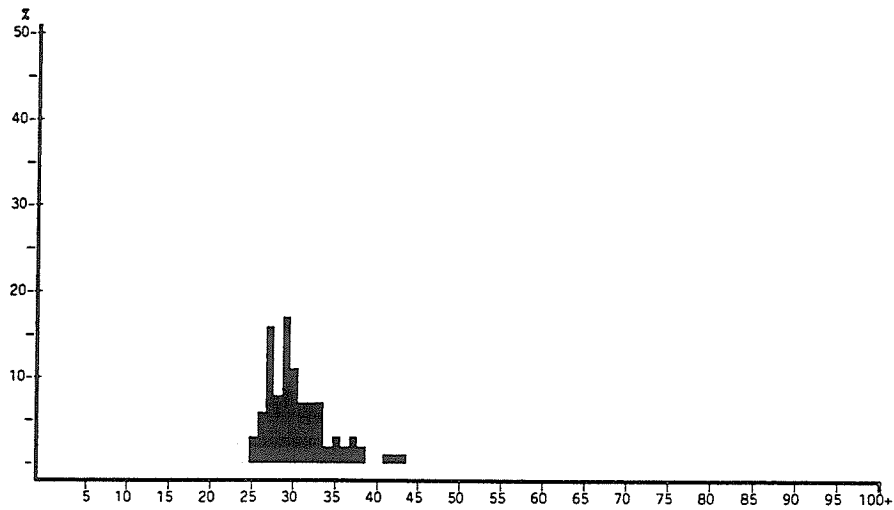
Merluccius paradoxus
 SOUTH 2/92 TOTAL
 Pooled sample (weighted by catch).
 MEAN LENGTH = 30.52cm N= 6440
 NUMBER OF SUBSAMPLES : 85



Merluccius paradoxus
 CENTRAL 2/92 TOTAL
 Pooled sample (weighted by catch).
 MEAN LENGTH = 38.90cm N= 1582
 NUMBER OF SUBSAMPLES : 52

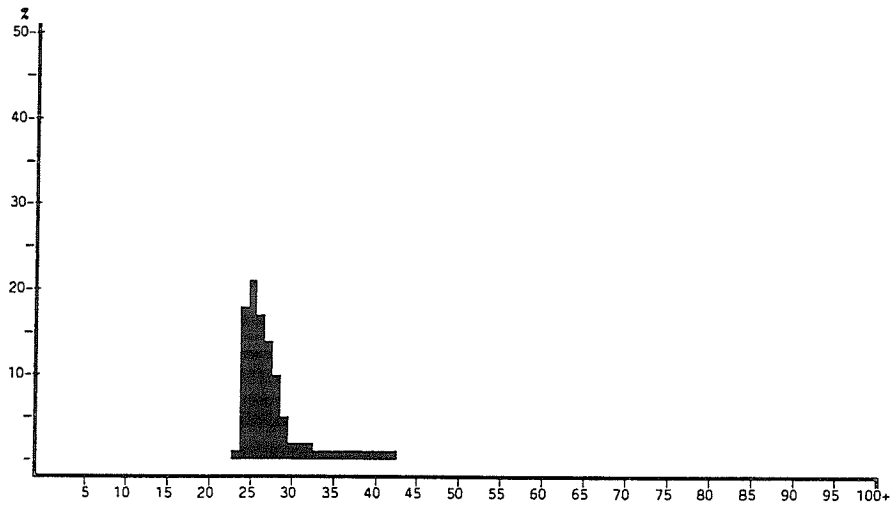


Merluccius paradoxus
 NORTH 2/92 TOTAL
 Pooled sample (weighted by catch).
 MEAN LENGTH = 41.96cm N= 458
 NUMBER OF SUBSAMPLES : 16



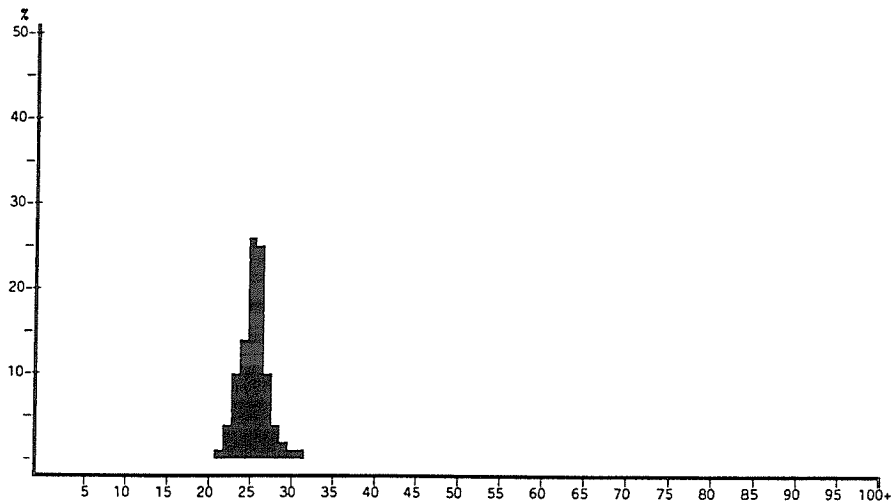
Trachurus capensis
SOUTH 2/92 TOTAL
 Pooled sample (weighted by catch).

MEAN LENGTH = 30.33cm N= 317
 NUMBER OF SUBSAMPLES : 11



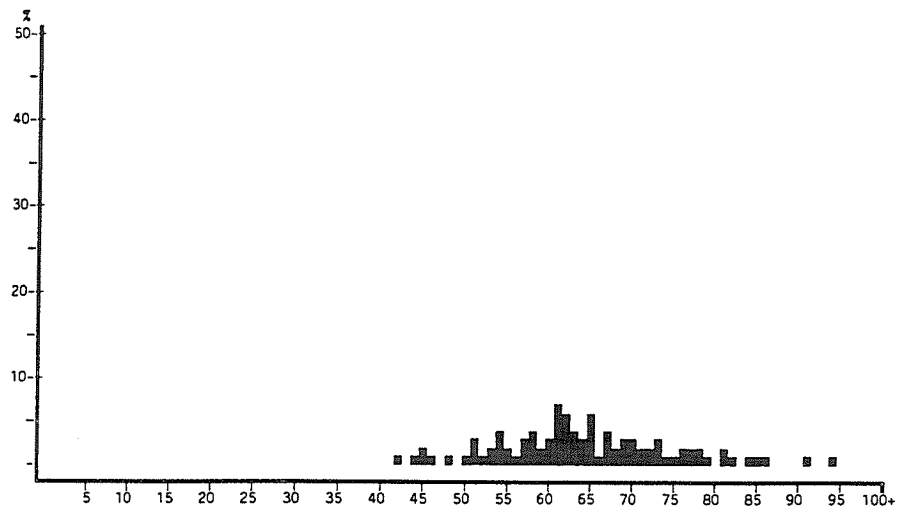
Trachurus capensis
CENTRAL 2/92 TOTAL
 Pooled sample (weighted by catch).

MEAN LENGTH = 27.18cm N= 2179
 NUMBER OF SUBSAMPLES : 30



Trachurus capensis
NORTH 2/92 TOTAL
 Pooled sample (weighted by catch).

MEAN LENGTH = 25.37cm N= 2363
 NUMBER OF SUBSAMPLES : 31



Genypterus capensis
SOUTH 2/92 TOTAL
Pooled sample (weighted by catch).

MEAN LENGTH = 63.92cm N= 218
 NUMBER OF SUBSAMPLES : 13

Annex II Records of fishing stations

PROJECT STATION:1328					PROJECT STATION:1333					
DATE:21/10/92					DATE:22/10/92					
GEAR TYPE: BT No:1					GEAR TYPE: BT No:1					
POSITION:Lat S 2632					POSITION:Lat S 2851					
Long E 1444					Long E 1554					
start	stop	duration	Purpose code:	Area code:	start	stop	duration	Purpose code:	Area code:	
TIME :11:31:00	12:01:00	30 (min)	3	1	TIME :13:15:00	13:45:00	30 (min)	3	1	
LOG :1224.60	1226.20	1.70	Area code :	1	LOG :1439.90	1441.20	1.43	Area code :	1	
FDEPTH: 165	165		GearCond.code:		FDEPTH: 153	148		GearCond.code:		
BDEPTH: 165	165		Validity code:		BDEPTH: 153	148		Validity code:		
Towing dir: 335 Wire out: 700 m Speed: 34 kn*10					Towing dir: 20 Wire out: 600 m Speed: 28 kn*10					
Sorted: 84 Kg Total catch: 246.52 CATCH/HOUR: 493.04					Sorted: 38 Kg Total catch: 74.69 CATCH/HOUR: 149.38					
SPECIES					SPECIES					
		CATCH/HOUR	% OF TOT. C	SAMP.NO.			CATCH/HOUR	% OF TOT. C	SAMP.NO.	
		weight numbers					weight numbers			
Merluccius capensis, female		155.20	1872	31.48	3	Galeorhinus galeus		40.00	2	26.78
Merluccius capensis		115.20	1520	23.37	1	Merluccius capensis, juveniles		36.60	972	24.50
Merluccius capensis, male		112.00	1160	22.72	2	Merluccius capensis, female		24.60	198	16.47
Raja straeleni		60.00	2	12.17		Etrumeus whiteheadi		19.92	216	13.34
MYCTOPHIDAE		40.00	32	8.11		Sepia australis		11.58	618	7.75
Chelidonichthys capensis		8.32	2	1.69		Todaropsis eblanae		4.74	96	3.17
Lepidopus caudatus		1.20	24	0.24		Paracallionymus costatus		3.12	282	2.09
Trachurus capensis		1.12	8	0.23		Merluccius capensis, male		3.00	30	2.01
						Lophius upsicephalus		1.92	6	1.29
Total		493.04		100.01		MYCTOPHIDAE		1.80	1	1.29
						Chelidonichthys capensis		1.26	6	0.40
						Maurollicus muelleri		0.60	0	0.40
						Sufflogobius bibarbatu		0.24	30	0.16
						Total		149.38		100.00
PROJECT STATION:1329					PROJECT STATION:1334					
DATE:21/10/92					DATE:22/10/92					
GEAR TYPE: BT No:1					GEAR TYPE: BT No:1					
POSITION:Lat S 2644					POSITION:Lat S 2903					
Long E 1442					Long E 1535					
start	stop	duration	Purpose code:	Area code:	start	stop	duration	Purpose code:	Area code:	
TIME :14:18:00	14:48:00	30 (min)	3	1	TIME :16:38:00	16:55:00	17 (min)	3	1	
LOG :1245.20	1246.80	1.57	Area code :	1	LOG :1467.30	1468.10	0.90	Area code :	1	
FDEPTH: 205	204		GearCond.code:		FDEPTH: 174	176		GearCond.code:	5	
BDEPTH: 205	204		Validity code:		BDEPTH: 174	176		Validity code:		
Towing dir: 5 Wire out: 750 m Speed: 28 kn*10					Towing dir: 10 Wire out: 700 m Speed: 28 kn*10					
Sorted: 51 Kg Total catch: 216.29 CATCH/HOUR: 432.58					Sorted: 102 Kg Total catch: 102.44 CATCH/HOUR: 361.55					
SPECIES					SPECIES					
		CATCH/HOUR	% OF TOT. C	SAMP.NO.			CATCH/HOUR	% OF TOT. C	SAMP.NO.	
		weight numbers					weight numbers			
Merluccius capensis		221.00	3026	51.09	6	Merluccius capensis		162.35	2682	44.90
Merluccius capensis, female		122.40	596	28.30	5	Merluccius capensis, female		78.00	106	21.57
Merluccius capensis, male		79.90	570	18.47	4	Sepia australis		29.82	1754	8.25
Chelidonichthys capensis		4.34	8	1.00		Etrumeus whiteheadi		25.84	392	7.15
MYCTOPHIDAE		4.26		0.98		Merluccius capensis, male		16.59	28	4.59
Zeus capensis		0.68	8	0.16		Callorhynchus capensis		15.53	14	4.30
Total		432.58		100.00		Maurollicus muelleri		13.06		3.61
						Raja straeleni		10.59	4	2.93
						Paracallionymus costatus		2.93	339	0.81
						Todaropsis eblanae		1.80	42	0.50
						Trachurus capensis		1.13	7	0.31
						Genypterus capensis		0.99	7	0.27
						Austroglossus microlepis		0.88	18	0.24
						Helicolenus dactylopterus		0.88	64	0.24
						Lophius upsicephalus		0.74	4	0.20
						Holohalaelurus regani		0.32	7	0.09
						Lepidopus caudatus		0.11	4	0.03
						Total		361.56		99.99
PROJECT STATION:1330					PROJECT STATION:1335					
DATE:21/10/92					DATE:22/10/92					
GEAR TYPE: BT No:1					GEAR TYPE: BT No:1					
POSITION:Lat S 2657					POSITION:Lat S 2911					
Long E 1445					Long E 1519					
start	stop	duration	Purpose code:	Area code:	start	stop	duration	Purpose code:	Area code:	
TIME :16:56:00	17:26:00	30 (min)	3	1	TIME :20:40:00	21:08:00	28 (min)	3	1	
LOG :1264.80	1266.40	1.50	Area code :	1	LOG :1494.30	1495.40	1.60	Area code :	1	
FDEPTH: 212	208		GearCond.code:		FDEPTH: 177	174		GearCond.code:		
BDEPTH: 212	208		Validity code:		BDEPTH: 177	174		Validity code:		
Towing dir: 350 Wire out: 800 m Speed: 30 kn*10					Towing dir: 40 Wire out: 700 m Speed: 34 kn*10					
Sorted: 103 Kg Total catch: 102.50 CATCH/HOUR: 205.00					Sorted: 56 Kg Total catch: 146.60 CATCH/HOUR: 314.14					
SPECIES					SPECIES					
		CATCH/HOUR	% OF TOT. C	SAMP.NO.			CATCH/HOUR	% OF TOT. C	SAMP.NO.	
		weight numbers					weight numbers			
Merluccius capensis, female		94.20	734	45.95	8	Merluccius capensis		120.43	1704	38.34
Merluccius capensis, male		74.20	712	36.20	7	Genypterus capensis		67.71	79	21.55
MYCTOPHIDAE		23.80		11.61		Merluccius capensis, female		32.57	30	10.37
Genypterus capensis		6.00	6	2.93	9	Trachurus capensis		31.07	180	9.89
Todarodes sagittatus		3.10	14	1.51		Helicolenus dactylopterus		24.73	493	7.87
Callorhynchus capensis		1.50	2	0.73		Merluccius capensis, male		9.43	13	2.00
Sufflogobius bibarbatu		1.20		0.59		Holohalaelurus regani		7.80	43	2.48
Lepidopus caudatus		0.50	10	0.24		Squalus megalops		6.86	4	2.18
Zeus capensis		0.20	2	0.10		Cynoglossus capensis		6.51	137	2.07
Maurollicus muelleri		0.20	2	0.10		Zeus capensis		1.71	34	0.54
Todaropsis eblanae		0.10	2	0.05		Coelorinchus fasciatus		1.50	17	0.48
Total		205.00		100.01		Emmelichthys nitidus		1.07	2	0.34
						Solenocera africana		0.90	171	0.29
						Congiopodus spinifer		0.73	13	0.23
						Todaropsis eblanae		0.51	9	0.16
						Paracallionymus costatus		0.34	69	0.11
						Physiculus capensis		0.21	13	0.07
						Notopogon macrosolen		0.04	9	0.01
						Total		314.12		99.98
PROJECT STATION:1331					PROJECT STATION:1336					
DATE:22/10/92					DATE:23/10/92					
GEAR TYPE: PT No:1					GEAR TYPE: BT No:1					
POSITION:Lat S 2739					POSITION:Lat S 2937					
Long E 1511					Long E 1441					
start	stop	duration	Purpose code:	Area code:	start	stop	duration	Purpose code:	Area code:	
TIME :00:26:00	00:56:00	30 (min)	1	1	TIME :02:44:00	03:14:00	30 (min)	3	1	
LOG :1324.60	1326.20	1.60	Area code :	1	LOG :1544.80	1546.10	1.47	Area code :	1	
FDEPTH: 17	17		GearCond.code:		FDEPTH: 387	378		GearCond.code:		
BDEPTH: 131	135		Validity code:		BDEPTH: 387	378		Validity code:		
Towing dir: 330 Wire out: 100 m Speed: 32 kn*10					Towing dir: 10 Wire out: 1200 m Speed: 27 kn*10					
Sorted: 40 Kg Total catch: 71.82 CATCH/HOUR: 143.64					Sorted: 136 Kg Total catch: 136.00 CATCH/HOUR: 272.00					
SPECIES					SPECIES					
		CATCH/HOUR	% OF TOT. C	SAMP.NO.			CATCH/HOUR	% OF TOT. C	SAMP.NO.	
		weight numbers					weight numbers			
Callorhynchus capensis		274.00	220	38.72		Merluccius paradoxus, female		95.00	254	34.93
Krill		174.00		24.59		Merluccius paradoxus, male		47.20	134	17.35
Genypterus capensis		70.00	32	9.89	10	Merluccius capensis, female		46.60	148	17.13
Merluccius capensis, female		53.00	510	7.49	14	Merluccius capensis, male		37.20	116	13.68
Austroglossus microlepis		33.00	92	4.66	12	Genypterus capensis		7.02	4	2.58
Merluccius capensis, male		31.00	360	4.38	13	Helicolenus dactylopterus		6.90	70	2.54
Raja straeleni		26.50	20	3.74		Malacocephalus laevis		6.40	4	2.35
Chelidonichthys capensis		21.50	100	3.04		Octopus vulgaris		5.76	28	2.12
Jasus lalandii		19.00	136	2.68	11	Trachurus capensis		4.30	76	1.58
Sepia australis		2.70	110	0.38		Coelorinchus fasciatus		3.68		1.35
Lolliguncula mercatoris		2.00	580	0.28		Deepwater fish mixture		1.96	4	0.72
Squilla acuelata calmani		0.60	60	0.08		Holohalaelurus regani		1.88	2	0.69
Todaropsis eblanae		0.20	10	0.03		Lophius upsicephalus		1.04	32	0.38
CHAMPSODONTIDAE		0.10	10	0.01		Sepia australis		0.26	2	0.10
Sufflogobius bibarbatu		0.10	10	0.01		Scomberesox saurus		0.26	2	0.10
Total		707.70		99.98		Total		272.04		100.01

PROJECT STATION:1337
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2943 Long E 1431
 start stop duration
 TIME :05:21:00 05:51:00 30 (min) Purpose code: 3
 LOG :1560.90 1562.10 1.53 Area code : 1
 FDEPTH: 554 533 GearCond.code:
 BDEPTH: 554 533 Validity code:
 Towing dir: 10 Wire out:1500 m Speed: 27 kn*10

Sorted: 38 Kg Total catch: 38.34 CATCH/HOUR: 76.68

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius paradoxus, female	23.20 26	30.26	33
Coelorinchus sp.	17.20 280	22.43	
Plesionika martia	5.58 1024	7.28	
Merluccius paradoxus, male	5.40 10	7.04	32
Helicolenus dactylopterus	4.00 10	5.22	
Photichthys argenteus	3.32 228	4.33	
Shrimps, small, non comm.	2.82	3.68	
Raja confundens	2.80 4	3.65	
Etmopterus lucifer	2.50 114	3.26	
Photonectes braueri	2.32 44	3.03	
Nezumia milleri	1.56 50	2.03	
Selachophidium guentheri	1.56 28	2.03	
OPISTHOPRUTHIDAE	1.50 2	1.96	
Todaropsis sagittatus	0.96 4	1.25	
Notoacanthus sexspinis	0.92 18	1.20	
MYCTOPHIDAE	0.58 34	0.76	
Myxine capensis	0.28 2	0.37	
Tripterygion gilchristi	0.10 4	0.13	
C R A B S	0.08 2	0.10	
Paracallionymus costatus	0.00 2		
Total	76.68	100.01	

PROJECT STATION:1341
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2856 Long E 1501
 start stop duration
 TIME :17:25:00 17:57:00 32 (min) Purpose code: 3
 LOG :1631.20 1632.50 1.60 Area code : 1
 FDEPTH: 174 172 GearCond.code:
 BDEPTH: 174 172 Validity code:
 Towing dir: 20 Wire out: 700 m Speed: 30 kn*10

Sorted: 125 Kg Total catch: 124.52 CATCH/HOUR: 233.48

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	78.00 101	33.41	48
Merluccius capensis	36.75 563	15.74	49
Sepia australis	21.56 2676	9.23	
Merluccius capensis, male	15.56 45	6.66	47
Lophius upsicephalus	15.19 11	6.51	
Trachurus capensis	12.38 45	5.30	51
Mustelus mustelus	11.63 15	4.98	
Lepidopus caudatus	9.38 53	4.02	
Thyrssites atun	6.56 2	2.81	
Chelidonichthys capensis	6.24 15	2.67	
Todaropsis eblanae	5.44 79	2.33	
Holohalaelurus regani	3.43 11	1.47	
Merluccius paradoxus, juvenile	3.38 161	1.45	50
Zeus faber	2.23 28	0.96	
Helicolenus dactylopterus	2.01 51	0.86	
Cynoglossus capensis	1.37 15	0.59	
Raja straeleni	1.31 2	0.56	
Muraenichthys muelleri	0.56 2	0.24	
Gerypteris capensis	0.32 4	0.14	
Paracallionymus costatus	0.19 23	0.08	
CHAMPSODONTIDAE	0.00 2		
Total	233.49	100.01	

PROJECT STATION:1338
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2913 Long E 1430
 start stop duration
 TIME :09:57:00 10:28:00 31 (min) Purpose code: 3
 LOG :1591.80 1593.20 1.50 Area code : 1
 FDEPTH: 421 402 GearCond.code:
 BDEPTH: 421 402 Validity code:
 Towing dir: 350 Wire out:1150 m Speed: 28 kn*10

Sorted: 143 Kg Total catch: 142.63 CATCH/HOUR: 276.06

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius paradoxus, female	138.00 310	49.99	35
Merluccius paradoxus, male	98.71 225	35.76	34
Lophius upsicephalus	9.87 4	3.58	
Gerypteris capensis	7.51 8	2.72	36
Todaropsis sagittatus	6.97 8	2.52	
Deepwater fish mixture	5.03	1.82	
Raja confundens	2.42 2	0.88	
Helicolenus dactylopterus	1.94 12	0.70	
Lycoteuthis diadema	1.26 50	0.46	
Malacocephalus laevis	1.10 6	0.40	
Holohalaelurus regani	0.75 4	0.27	
MYCTOPHIDAE	0.64 35	0.23	
Rossia sp.	0.50 17	0.18	
Cynoglossus capensis	0.41 6	0.15	
Coelorinchus sp.	0.35 6	0.13	
Photonectes braueri	0.29 6	0.11	
Etmopterus pusillus	0.19 10	0.07	
Photichthys argenteus	0.12 4	0.04	
Total	276.06	100.01	

PROJECT STATION:1342
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2850 Long E 1510
 start stop duration
 TIME :19:08:00 19:39:00 31 (min) Purpose code: 3
 LOG :1640.40 1641.90 1.70 Area code : 1
 FDEPTH: 158 159 GearCond.code:
 BDEPTH: 158 159 Validity code:
 Towing dir: 50 Wire out: 650 m Speed: 32 kn*10

Sorted: 138 Kg Total catch: 137.53 CATCH/HOUR: 266.19

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	89.42 116	33.59	53
Merluccius capensis, male	41.42 81	15.56	52
Galeorhinus galeus	28.84 2	10.83	
Sepia australis	23.42 1366	8.80	
Merluccius capensis	22.06 455	8.29	54
Chelidonichthys capensis	17.23 37	6.47	
Trachurus capensis	8.23 43	3.09	56
Squalus megalops	8.13 17	3.05	
Merluccius paradoxus, juvenile	6.50 705	2.44	55
Cynoglossus capensis	4.01 50	1.51	
Helicolenus dactylopterus	3.93 348	1.48	
Lophius upsicephalus	3.54 10	1.33	
Zeus capensis	3.41 83	1.28	
Emmelichthys nitidus	2.28 4	0.86	
Paracallionymus costatus	1.41 1	0.53	
CONGRIDAE	0.97 50	0.36	
Todaropsis eblanae	0.60 8	0.23	
Lepidopus caudatus	0.48 14	0.18	
Solenocera africana	0.15 27	0.06	
Congiopodus spinifer	0.15 2	0.06	
Total	266.18	100.00	

PROJECT STATION:1339
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2909 Long E 1433
 start stop duration
 TIME :11:36:00 12:06:00 30 (min) Purpose code: 3
 LOG :1597.90 1599.50 1.65 Area code : 1
 FDEPTH: 300 284 GearCond.code:
 BDEPTH: 300 284 Validity code:
 Towing dir: 350 Wire out: 950 m Speed: 32 kn*10

Sorted: 161 Kg Total catch: 1075.00 CATCH/HOUR: 2150.00

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	629.40 1106	29.27	38
Trachurus capensis	426.60 1522	19.84	41
Zeus capensis	346.60 982	16.12	
Lepidopus caudatus	237.40 1104	11.04	
Merluccius capensis, male	200.00 894	9.30	37
Merluccius paradoxus, female	153.40 520	7.13	40
Merluccius paradoxus, male	70.60 334	3.28	39
Thyrssites atun	33.80 14	1.57	
Nezumia milleri	12.80 294	0.60	
Helicolenus dactylopterus	11.60 54	0.54	
Emmelichthys nitidus	8.60 14	0.40	
Gerypteris capensis	7.60 14	0.35	
Coelorinchus fasciatus	5.40 66	0.25	
Holohalaelurus regani	3.40 26	0.17	
Todaropsis eblanae	2.60 26	0.12	
Total	2150.00	99.98	

PROJECT STATION:1343
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2838 Long E 1530
 start stop duration
 TIME :22:14:00 22:44:00 30 (min) Purpose code: 3
 LOG :1660.40 1661.80 1.70 Area code : 1
 FDEPTH: 177 174 GearCond.code:
 BDEPTH: 177 174 Validity code:
 Towing dir: 55 Wire out: 700 m Speed: 30 kn*10

Sorted: 33 Kg Total catch: 68.10 CATCH/HOUR: 136.20

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis	112.00 1700	82.23	57
Holohalaelurus regani	6.88 84	5.05	
Paracallionymus costatus	5.28 2	3.88	
Raja straeleni	3.28 2	2.41	
Helicolenus dactylopterus	3.28 116	2.41	
Cynoglossus capensis	1.60 52	1.17	
Gerypteris capensis	1.44 8	1.06	
Sepia australis	0.96 52	0.70	
Lophius upsicephalus	0.88 4	0.65	
Myxine capensis	0.36 4	0.26	
Etrumeus whiteheadi	0.16 4	0.12	
Congiopodus spinifer	0.08 4	0.06	
Total	136.20	100.00	

PROJECT STATION:1340
 DATE:23/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2903 Long E 1446
 start stop duration
 TIME :14:14:00 14:44:00 30 (min) Purpose code: 3
 LOG :1614.20 1615.50 1.55 Area code : 1
 FDEPTH: 217 207 GearCond.code:
 BDEPTH: 217 207 Validity code:
 Towing dir: 40 Wire out: 800 m Speed: 30 kn*10

Sorted: 108 Kg Total catch: 108.43 CATCH/HOUR: 216.86

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	84.40 160	38.92	43
Merluccius capensis, male	34.60 102	15.95	42
Trachurus capensis	25.60 92	11.80	46
Brama brama	21.20 10	9.78	
Lepidopus caudatus	13.40 6	6.18	
Lophius upsicephalus	6.50 6	3.00	
Zeus capensis	6.38 30	2.94	
Helicolenus dactylopterus	5.88 44	2.71	
Thyrssites atun	4.00 2	1.84	
Congiopodus torvus	3.56 2	1.64	
Holohalaelurus regani	3.54 14	1.63	
Merluccius paradoxus, female	1.54 6	0.71	44
Etrumeus whiteheadi	1.48 20	0.68	
Raja straeleni	1.42 2	0.65	
Chelidonichthys capensis	1.14 6	0.53	
Todaropsis eblanae	0.94 6	0.25	
Merluccius paradoxus, juvenile	0.54 54	0.25	45
Austroglossus microlepis	0.50 6	0.23	
Sepia australis	0.36 24	0.17	
Coelorinchus fasciatus	0.20 2	0.09	
Paracallionymus costatus	0.08 10	0.04	
Total	216.86	99.99	

PROJECT STATION:1344
 DATE:24/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2817 Long E 1552
 start stop duration
 TIME :02:23:00 02:53:00 30 (min) Purpose code: 3
 LOG :1691.70 1693.10 1.60 Area code : 1
 FDEPTH: 88 89 GearCond.code: 8
 BDEPTH: 88 89 Validity code:
 Towing dir: 310 Wire out: 450 m Speed: 32 kn*10

Sorted: 100 Kg Total catch: 175.56 CATCH/HOUR: 351.12

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Gerypteris capensis	150.00 104	42.72	58
Merluccius capensis, female	77.60 768	22.10	60
Merluccius capensis, male	67.20 760	19.14	59
Callorhynchus capensis	22.72 40	6.47	
Raja straeleni	21.76 8	6.20	
Chelidonichthys capensis	7.52 56	2.14	
Helicolenus dactylopterus	1.84 8	0.52	
Sepia sp.	1.04 24	0.30	
Holohalaelurus regani	0.56 8	0.16	
Austroglossus microlepis	0.48 16	0.14	
Paracallionymus costatus	0.40 64	0.11	
Total	351.12	100.00	

PROJECT STATION:1345
 DATE:24/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2822 Long E 1511
 start stop duration Purpose code: 3
 TIME :09:20:00 09:50:00 30 (min) Area code : 1
 LOG :1728.20 1730.00 1.50 GearCond.code: 1
 FDEPTH: 172 169 Validity code:
 BDEPTH: 172 169
 Towing dir: 50 Wire out: 700 m Speed: 30 kn*10

Sorted: 89 Kg Total catch: 223.99 CATCH/HOUR: 447.98

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
weight numbers			
Merluccius paradoxus	233.40	52.10	63
MYCTOPHIDAE	81.60	18.22	
Merluccius capensis, female	40.60	9.06	62
Galeorhinus galeus	32.40	7.23	
Merluccius capensis, male	22.40	5.00	61
Chelidonichthys capensis	12.70	2.83	
Sepia australis	7.28	1.63	
Helicolenus dactylopterus	6.62	1.48	
Todarodes eblanæ	3.92	0.88	
Lophius upsicephalus	1.40	0.31	
Zeus faber	0.98	0.22	
Cynoglossus capensis	0.80	0.18	
Merluccius paradoxus, juvenile	0.74	0.17	64
Austroglossus microlepis	0.74	0.17	
Congiolepis spinifer	0.72	0.16	
Paracallionymus costatus	0.70	0.16	
Lepidopus caudatus	0.60	0.13	
Etrumeus whiteheadi	0.28	0.06	
Squilla acuelata calmani	0.10	0.02	
Total	447.98	100.01	

PROJECT STATION:1349
 DATE:25/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2817 Long E 1424
 start stop duration Purpose code: 3
 TIME :06:18:00 06:48:00 30 (min) Area code : 1
 LOG :1855.90 1857.40 1.50 GearCond.code: 1
 FDEPTH: 570 597 Validity code:
 BDEPTH: 570 597
 Towing dir: 15 Wire out:1500 m Speed: 29 kn*10

Sorted: 138 Kg Total catch: 301.79 CATCH/HOUR: 603.58

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Merluccius paradoxus, female	400.40	532	66.34	81
Merluccius paradoxus, male	73.48	172	12.17	80
Coelorinchus fasciatus	32.60		5.40	
Deania profundorum	22.66		2.75	
Nezumia milleri	19.84	440	3.29	
Etmopterus lucifer	12.20	140	2.02	
Todarodes sagittatus	12.20	30	2.02	
Oreosoma atlanticum	11.20	48	1.86	
Notacanthus sexspinis	7.20	114	1.19	
Genypterus capensis	3.88	2	0.64	
Etmopterus pusillus	3.60	8	0.60	
Selachophidium guentheri	2.24	22	0.37	
Zenopsis conchifer	1.24	8	0.21	
Aristeus varidens	0.52	88	0.09	
Helicolenus dactylopterus	0.32	4	0.05	
Total	603.58	100.00		

PROJECT STATION:1346
 DATE:24/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2831 Long E 1454
 start stop duration Purpose code: 3
 TIME :13:08:00 13:38:00 30 (min) Area code : 1
 LOG :1750.70 1752.40 1.50 GearCond.code: 1
 FDEPTH: 178 176 Validity code:
 BDEPTH: 178 176
 Towing dir: 30 Wire out: 750 m Speed: 30 kn*10

Sorted: 47 Kg Total catch: 141.21 CATCH/HOUR: 282.42

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Merluccius paradoxus, female	133.20	2826	47.16	67
MYCTOPHIDAE	51.00		18.06	
Sepia australis	25.74	1398	9.11	
Merluccius paradoxus, juvenile	18.30	1356	6.48	65
Merluccius paradoxus, male	12.42	252	4.40	66
Merluccius capensis, female	10.26	18	3.63	69
Lophius upsicephalus	6.18	18	2.19	
Merluccius capensis, male	6.06	24	2.15	68
Squalus megalops	5.28	12	1.87	
Deepwater fish mixture	3.60		1.27	
Austroglossus microlepis	2.76	66	0.98	
Helicolenus dactylopterus	1.86	174	0.66	
Trachurus capensis	1.44	6	0.51	
Todarodes sagittatus	1.14	12	0.40	
Holohalaelurus regani	1.14	6	0.40	
Paracallionymus costatus	0.84	102	0.30	
Lepidopus caudatus	0.78	36	0.28	
Zeus capensis	0.24	6	0.08	
Congiolepis spinifer	0.18	6	0.06	
Total	282.42	99.99		

PROJECT STATION:1350
 DATE:25/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2817 Long E 1428
 start stop duration Purpose code: 3
 TIME :08:19:00 08:49:00 30 (min) Area code : 1
 LOG :1864.00 1865.60 1.50 GearCond.code: 1
 FDEPTH: 419 450 Validity code:
 BDEPTH: 419 450
 Towing dir: 10 Wire out:1200 m Speed: 27 kn*10

Sorted: 191 Kg Total catch: 748.62 CATCH/HOUR: 1497.24

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Merluccius paradoxus, female	1060.76	2264	70.85	84
Merluccius paradoxus, male	233.68	1030	15.61	83
Genypterus capensis	71.80	22	4.80	82
Merluccius capensis	26.68	28	1.78	
Coelorinchus fasciatus	25.58	174	1.71	
Todarodes sagittatus	25.48	36	1.70	
Deania profundorum	18.12	10	1.21	
Squalus mitukurii	13.98	10	0.93	
Notacanthus sexspinis	10.02	64	0.67	
Holohalaelurus regani	5.34	10	0.36	
CONGRIDAE	2.66	10	0.18	
Raja confundens	2.40	10	0.16	
Malacocephalus laevis	0.56	18	0.04	
Hoplostethus cadenati	0.18	10	0.01	
Total	1497.24	100.01		

PROJECT STATION:1347
 DATE:24/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2833 Long E 1445
 start stop duration Purpose code: 3
 TIME :15:20:00 15:50:00 30 (min) Area code : 1
 LOG :1764.20 1765.70 1.47 GearCond.code: 1
 FDEPTH: 194 192 Validity code:
 BDEPTH: 194 192
 Towing dir: 20 Wire out: 801 m Speed: 29 kn*10

Sorted: 97 Kg Total catch: 366.16 CATCH/HOUR: 732.32

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Merluccius paradoxus, male	169.02	2052	23.08	75
Merluccius capensis, female	94.00	98	12.84	71
Merluccius paradoxus, female	90.18	1350	12.31	76
Brama brama	74.16	36	10.13	
Lepidopus caudatus	63.36	1314	8.65	
Merluccius capensis, female	54.72	162	7.47	73
MYCTOPHIDAE	50.58		6.91	
Squalus megalops	42.48	54	5.80	
Merluccius capensis, male	23.80	16	3.25	70
Thyrssites atun	18.00	8	2.46	
Merluccius capensis, male	15.12	36	2.06	72
Merluccius paradoxus, juvenile	12.06	900	1.65	74
Sepia australis	10.98	990	1.50	
Todarodes sagittatus	5.76	18	0.79	
Etrumeus whiteheadi	3.78	54	0.52	
Paracallionymus costatus	1.44	162	0.20	
Zeus capensis	1.44	18	0.20	
Congiolepis spinifer	0.90	18	0.12	
Helicolenus dactylopterus	0.54	36	0.07	
Total	732.32	100.01		

PROJECT STATION:1351
 DATE:25/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2815 Long E 1431
 start stop duration Purpose code: 3
 TIME :09:47:00 10:17:00 30 (min) Area code : 1
 LOG :1869.90 1871.60 1.40 GearCond.code: 1
 FDEPTH: 315 335 Validity code:
 BDEPTH: 315 335
 Towing dir: 15 Wire out:1000 m Speed: 26 kn*10

Sorted: 128 Kg Total catch: 512.33 CATCH/HOUR: 1024.66

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Merluccius paradoxus, female	562.14	2464	54.86	89
Merluccius paradoxus, male	154.66	1162	15.09	88
Merluccius capensis, female	146.14	138	14.26	87
Genypterus capensis	77.80	30	7.59	85
Merluccius capensis, male	39.46	54	3.85	86
Todarodes sagittatus	12.26	10	1.20	
Holohalaelurus regani	10.98	22	1.07	
Malacocephalus laevis	9.38	96	0.92	
Coelorinchus fasciatus	8.74	96	0.85	
MYCTOPHIDAE	1.28		0.12	
Galeus polli	1.18	10	0.12	
C R A B S	0.42	10	0.04	
Sepia australis	0.22	22	0.02	
Squilla acuelata calmani	0.00	10		
Total	1024.66	99.99		

PROJECT STATION:1348
 DATE:24/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2839 Long E 1437
 start stop duration Purpose code: 3
 TIME :18:38:00 19:06:00 28 (min) Area code : 1
 LOG :1779.10 1780.50 1.50 GearCond.code: 1
 FDEPTH: 169 166 Validity code:
 BDEPTH: 169 166
 Towing dir: 130 Wire out: 701 m Speed: 31 kn*10

Sorted: 72 Kg Total catch: 72.33 CATCH/HOUR: 154.99

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Thyrssites atun	57.21	28	36.91	79
Merluccius capensis, female	41.68	17	26.89	78
Zeus capensis	28.29	334	18.25	
Merluccius capensis, male	7.61	4	4.91	77
Mustelus palumbus	5.76	4	3.72	
Emmelichthys nitidus	4.76	238	3.07	
Chelidonichthys capensis	4.03	15	2.60	
Lepidopus caudatus	2.29	15	1.48	
Squalus megalops	1.26	2	0.81	
Sepia australis	0.73	56	0.47	
Arnoglossus capensis	0.47	49	0.30	
Congiolepis spinifer	0.45	2	0.29	
Helicolenus dactylopterus	0.24	4	0.15	
Scyllorhinus capensis	0.15	4	0.10	
Paracallionymus costatus	0.06	9	0.04	
Total	154.99	99.99		

PROJECT STATION:1352
 DATE:25/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2812 Long E 1437
 start stop duration Purpose code: 3
 TIME :11:43:00 12:13:00 30 (min) Area code : 1
 LOG :1879.00 1880.60 1.33 GearCond.code: 1
 FDEPTH: 206 215 Validity code:
 BDEPTH: 206 215
 Towing dir: 30 Wire out: 800 m Speed: 27 kn*10

Sorted: 39 Kg Total catch: 157.28 CATCH/HOUR: 314.56

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
weight numbers				
Merluccius paradoxus, female	155.00	1980	49.28	91
Merluccius paradoxus, male	38.20	480	12.14	90
Merluccius capensis, female	33.80	60	10.75	93
Nezumia milleri	33.40	550	10.62	
Chelidonichthys capensis	18.40	30	5.85	
Galeorhinus galeus	13.80	2	4.39	
Thyrssites atun	10.40		3.31	
Merluccius capensis, male	5.06	2	1.61	
Trachurus capensis	4.20	30	1.34	92
Helicolenus dactylopterus	1.80	10	0.57	
Physiculus capensis	0.30	70	0.10	
Physiculus capensis	0.20	10	0.06	
Total	314.56	100.02		

PROJECT STATION:1353
 DATE:25/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2808 Long E 1449
 start stop duration
 TIME :15:09:00 15:39:00 30 (min) Purpose code: 3
 LOG :1897.40 1899.10 1.63 Area code : 1
 FDEPTH: 192 194 GearCond.code: 1
 BDEPTH: 192 194 Validity code:
 Towing dir: 77 Wire out: 750 m Speed: 30 kn*10
 Sorted: 47 Kg Total catch: 359.50 CATCH/HOUR: 719.00

PROJECT STATION:1357
 DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2740 Long E 1436
 start stop duration
 TIME :09:16:00 09:49:00 33 (min) Purpose code: 3
 LOG :2008.30 2009.80 1.70 Area code : 1
 FDEPTH: 395 395 GearCond.code: 1
 BDEPTH: 395 395 Validity code:
 Towing dir: 340 Wire out:1100 m Speed: 30 kn*10
 Sorted: 130 Kg Total catch: 498.30 CATCH/HOUR: 906.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
MYCTOPHIDAE	270.00		37.55	
Merluccius paradoxus, female	262.00	2320	36.44	96
Merluccius paradoxus, male	91.60	760	12.74	95
Merluccius capensis	25.40	100	3.53	94
Galeorhinus galeus	25.20	2	3.50	
Chelidonichthys capensis	16.20	40	2.25	
Sepia australis	15.20	960	2.11	
Trachurus capensis	6.60	40	0.92	
Etrumeus whiteheadi	5.80	100	0.81	
Helicolenus dactylopterus	1.00	60	0.14	
Total	719.00		99.99	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius paradoxus, female	480.00	1513	52.98	107
Merluccius paradoxus, male	248.73	778	27.45	106
Coelorinchus fasciatus	58.18	845	6.42	
MYCTOPHIDAE	48.36		5.34	
Todarodes sagittatus	31.27	109	3.45	
Gerypterius capensis	14.27	5	1.58	105
Malacocephalus laevis	9.82	167	1.08	
Helicolenus dactylopterus	6.55	44	0.72	
scyliorhinus capensis	3.27	7	0.36	
Holohalaelurus regani	2.04	7	0.23	
Shrimps, small, non comm.	1.16	451	0.13	
Nezumia milleri	0.80	95	0.09	
Coelorinchus braueri	0.65	29	0.07	
PORTUNIDAE	0.51	15	0.06	
Hoplostethus mediterraneus	0.22	15	0.02	
Epigonus denticulatus	0.15	36	0.02	
Rossia sp.	0.07	7	0.01	
Total	906.05		100.01	

PROJECT STATION:1354
 DATE:25/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2803 Long E 1501
 start stop duration
 TIME :18:35:00 19:04:00 29 (min) Purpose code: 3
 LOG :1916.20 1917.70 1.70 Area code : 1
 FDEPTH: 177 175 GearCond.code: 1
 BDEPTH: 177 175 Validity code:
 Towing dir: 30 Wire out: 700 m Speed: 32 kn*10
 Sorted: 22 Kg Total catch: 178.40 CATCH/HOUR: 369.10

PROJECT STATION:1358
 DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2737 Long E 1446
 start stop duration
 TIME :11:47:00 12:20:00 33 (min) Purpose code: 3
 LOG :2022.00 2023.60 1.80 Area code : 1
 FDEPTH: 330 329 GearCond.code: 1
 BDEPTH: 330 329 Validity code:
 Towing dir: 340 Wire out:1000 m Speed: 32 kn*10
 Sorted: 73 Kg Total catch: 459.96 CATCH/HOUR: 836.29

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius paradoxus, female	129.10	1903	34.98	100
Merluccius capensis, female	110.90	811	30.05	98
Merluccius capensis, male	74.48	877	20.18	97
Merluccius paradoxus, male	24.83	331	6.73	99
MYCTOPHIDAE	19.03		5.16	
Sepia australis	6.12	298	1.66	
Trachurus capensis	3.14	17	0.85	
Todarodes sagittatus	1.16	50	0.31	
Helicolenus dactylopterus	0.33	66	0.09	
Sufflogobius bibarbatus	0.00	17		
Paracallionymus costatus	0.00	17		
Total	369.09		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius paradoxus, female	380.18	2478	45.46	113
Merluccius paradoxus, male	249.64	1845	29.85	112
Trachurus capensis	79.09	291	9.46	114
Merluccius capensis, female	34.36	22	4.11	109
Merluccius paradoxus, female	20.18	25	2.41	111
Todarodes sagittatus	17.15	53	2.05	
Centrolophus niger	16.91	2	2.82	
Coelorinchus fasciatus	13.45	211	1.61	
Nezumia milleri	7.65	105	0.91	
Merluccius capensis, male	7.18	5	0.86	108
Holohalaelurus regani	6.07	27	0.73	
C R A B S	1.85	80	0.22	
Helicolenus dactylopterus	1.33	27	0.16	
Merluccius paradoxus, male	1.24	2	0.15	110
Total	836.28		100.00	

PROJECT STATION:1355
 DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2745 Long E 1430
 start stop duration
 TIME :05:48:00 06:19:00 31 (min) Purpose code: 3
 LOG :1994.20 1995.60 1.40 Area code : 1
 FDEPTH: 602 599 GearCond.code: 1
 BDEPTH: 602 599 Validity code:
 Towing dir: 345 Wire out:1600 m Speed: 29 kn*10
 Sorted: 131 Kg Total catch: 287.80 CATCH/HOUR: 557.03

PROJECT STATION:1359
 DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2734 Long E 1451
 start stop duration
 TIME :13:48:00 14:18:00 30 (min) Purpose code: 3
 LOG :2032.80 2034.30 1.50 Area code : 1
 FDEPTH: 294 301 GearCond.code: 1
 BDEPTH: 294 301 Validity code:
 Towing dir: 360 Wire out: 950 m Speed: 30 kn*10
 Sorted: 84 Kg Total catch: 424.19 CATCH/HOUR: 848.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius paradoxus, female	310.41	405	55.73	102
Coelorinchus braueri	128.17	1694	23.01	
Merluccius paradoxus, male	39.17	72	7.03	101
Nezumia milleri	21.87		3.93	
Geryon maritae	10.94	106	1.96	
Helicolenus dactylopterus	9.58	60	1.72	
Deania calcea	9.12	17	1.64	
Hoplostethus atlanticus	6.00	17	1.08	
Todarodes sagittatus	4.86	14	0.87	
Etmopterus lucifer	3.83	29	0.69	
Selachophidium guentheri	2.77	68	0.50	
Deania profundorum	2.48	4	0.45	
Allocyttus verrucosus	1.74	17	0.31	
Photichthys argenteus	1.63	114	0.29	
Raja sp.	1.43	4	0.26	
Notacanthus sexspinis	1.20	35	0.22	
Shrimps, small, non comm.	1.03		0.18	
Raja leopardus	0.46	21	0.08	
Ebinania costaecanarie	0.35	4	0.06	
Total	557.04		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
MYCTOPHIDAE	692.00		81.57	
Merluccius paradoxus, female	32.60	288	3.84	116
Merluccius capensis, female	21.40	26	2.52	118
Brama brama	20.20	14	2.38	
Merluccius capensis, male	15.40	24	1.82	117
Thyrssites atun	15.00	8	1.77	
Trachurus capensis	14.40	80	1.70	
Centrolophus niger	12.42	2	1.46	
Gerypterius capensis	8.94	6	1.05	
Merluccius paradoxus, male	5.62	60	0.66	115
Coelorinchus fasciatus	4.00	40	0.47	
Helicolenus dactylopterus	3.20	120	0.38	
C R A B S	2.80	80	0.33	
Squilla acuelata calmani	0.40	80	0.05	
Total	848.38		100.00	

PROJECT STATION:1356
 DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2744 Long E 1433
 start stop duration
 TIME :07:33:00 08:03:00 30 (min) Purpose code: 3
 LOG :2000.80 2002.30 1.60 Area code : 1
 FDEPTH: 490 491 GearCond.code: 1
 BDEPTH: 490 491 Validity code:
 Towing dir: 340 Wire out:1350 m Speed: 31 kn*10
 Sorted: 82 Kg Total catch: 328.44 CATCH/HOUR: 656.88

PROJECT STATION:1360
 DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2730 Long E 1501
 start stop duration
 TIME :16:06:00 16:36:00 30 (min) Purpose code: 3
 LOG :2046.90 2048.40 1.70 Area code : 1
 FDEPTH: 196 204 GearCond.code: 1
 BDEPTH: 196 204 Validity code:
 Towing dir: 345 Wire out: 750 m Speed: 32 kn*10
 Sorted: 78 Kg Total catch: 530.39 CATCH/HOUR: 1060.78

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius paradoxus, female	386.40	1008	58.82	104
Merluccius paradoxus, male	143.20	592	21.80	103
Coelorinchus braueri	54.40	690	8.28	
Todarodes sagittatus	14.96	24	2.28	
Hydrolagus sp.	12.00	24	1.83	
Deania profundorum	10.88	16	1.66	
Malacocephalus laevis	10.32	128	1.57	
Ebinania costaecanarie	6.96	24	1.06	
Etmopterus lucifer	6.64	144	1.01	
Selachophidium guentheri	5.28	88	0.80	
Nezumia milleri	1.60	56	0.24	
Notacanthus sexspinis	1.28	16	0.19	
Epigonus denticulatus	1.20	64	0.18	
MYCTOPHIDAE	0.96	320	0.15	
Photichthys argenteus	0.80	56	0.12	
Total	656.88		99.99	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
MYCTOPHIDAE	418.20		39.42	
Merluccius capensis, female	147.90	1598	13.94	120
Merluccius capensis, male	144.50	1582	13.62	119
Trachurus capensis	142.80	782	13.46	123
Merluccius paradoxus, female	83.30	1190	7.85	122
Merluccius paradoxus, male	44.20	544	4.17	121
Chelidonichthys capensis	34.80	86	3.28	
Galeorhinus galeus	32.80	2	3.09	
Todarodes sagittatus	6.98	34	0.66	
Thyrssites atun	3.26	2	0.31	
Etrumeus whiteheadi	1.70	34	0.16	
Sepia australis	0.34	18	0.03	
Total	1060.78		99.99	

PROJECT STATION:1361
DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2718 Long E 1505
start stop duration
TIME :17:57:00 18:27:00 30 (min) Purpose code: 3
LOG :2059.30 2060.70 1.70 Area code : 1
FDEPTH: 149 147 GearCond.code:
BDEPTH: 149 147 Validity code:
Towing dir: 360 Wire out: 600 m Speed: 33 kn*10

Sorted: 27 Kg Total catch: 215.12 CATCH/HOUR: 430.24

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius capensis	250.40	3808	58.20	124
MYCTOPHIDAE	96.00	22.31		
Merluccius paradoxus, male	36.32	656	8.44	125
Merluccius capensis, female	35.84	544	8.33	126
Chelidonichthys capensis	6.88	32	1.60	
Sepia australis	3.20	144	0.74	
Lepidopus caudatus	1.60	48	0.37	
Total	430.24	99.99		

PROJECT STATION:1362
DATE:26/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2713 Long E 1436
start stop duration
TIME :21:40:00 22:12:00 32 (min) Purpose code: 3
LOG :2088.70 2090.20 1.40 Area code : 1
FDEPTH: 318 314 GearCond.code:
BDEPTH: 318 314 Validity code:
Towing dir: 340 Wire out:1000 m Speed: 27 kn*10

Sorted: 119 Kg Total catch: 338.87 CATCH/HOUR: 635.38

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	345.94	1307	54.45	131
Merluccius capensis, female	143.44	124	22.58	129
Merluccius paradoxus, male	61.31	231	9.65	130
Merluccius capensis, male	30.38	28	4.78	128
Coelorinchus fasciatus	27.17	225	4.28	
Genypterus capensis	15.00	8	2.36	127
Trachurus capensis	7.43	17	1.17	
Lophius upsicephalus	2.53	2	0.40	
Helicolenus dactylopterus	2.19	34	0.34	
Total	635.39	100.01		

PROJECT STATION:1363
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2712 Long E 1420
start stop duration
TIME :00:39:00 01:09:00 30 (min) Purpose code: 3
LOG :2108.60 2109.90 1.58 Area code : 1
FDEPTH: 386 383 GearCond.code:
BDEPTH: 386 383 Validity code:
Towing dir: 5 Wire out:1150 m Speed: 31 kn*10

Sorted: 58 Kg Total catch: 661.88 CATCH/HOUR: 1323.76

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	950.00	3474	71.77	133
Merluccius paradoxus, male	207.00	828	15.64	132
Coelorinchus fasciatus	86.48	920	6.53	
Trachurus capensis	69.70	184	5.27	
Helicolenus dactylopterus	7.36	162	0.56	
S H R I M P S	2.30	12	0.17	
Selachophidium guentheri	0.92	24	0.07	
Total	1323.76	100.01		

PROJECT STATION:1364
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2711 Long E 1405
start stop duration
TIME :03:37:00 04:07:00 30 (min) Purpose code: 3
LOG :2127.70 2129.00 1.57 Area code : 1
FDEPTH: 496 495 GearCond.code:
BDEPTH: 496 495 Validity code:
Towing dir: 345 Wire out:1350 m Speed: 31 kn*10

Sorted: 79 Kg Total catch: 184.83 CATCH/HOUR: 369.66

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	242.60	392	65.63	135
Merluccius paradoxus, male	51.40	88	13.90	134
Deania calcea	17.96	24	4.86	
Coelorinchus fasciatus	14.56	346	3.94	
Trachyrhinus scabrus	11.24	318	3.04	
Selachophidium guentheri	7.88	116	2.13	
Etmopterus lucifer	7.10	80	1.92	
Malacocephalus laevis	6.82	24	1.84	
Todarodes sagittatus	6.30	14	1.70	
Deepwater fish mixture	1.40		0.38	
Notacanthus sexspinis	0.70	18	0.19	
Hoplostethus mediterraneus	0.52	18	0.14	
S H R I M P S	0.46		0.12	
Epigonus pandionis	0.38	14	0.10	
Maulisia microlepis	0.24	10	0.06	
C R A B S	0.10		0.03	
Total	369.66	99.98		

PROJECT STATION:1365
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2710 Long E 1401
start stop duration
TIME :05:19:00 05:49:00 30 (min) Purpose code: 3
LOG :2134.20 2135.60 1.50 Area code : 1
FDEPTH: 602 595 GearCond.code:
BDEPTH: 602 595 Validity code:
Towing dir: 345 Wire out:1600 m Speed: 30 kn*10

Sorted: 114 Kg Total catch: 198.86 CATCH/HOUR: 397.72

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	125.80	88	31.63	137
Coelorinchus braueri	72.00	1318	18.10	
Deania calcea	53.00	40	13.33	
Raja leopardenus	32.00	70	8.05	
Todarodes sagittatus	28.60	50	7.19	
Nezumia milleri	28.00	630	7.04	
Shrimps, small, non comm.	12.50	1820	3.14	
Coelorinchus matamua	8.80	40	2.46	
Selachophidium guentheri	6.00	80	1.51	
Etmopterus pusillus	5.80	100	1.46	
Etmopterus lucifer	4.70	30	1.18	
Merluccius paradoxus, male	4.40	4	1.11	136
Alloctytus verrucosus	2.90	20	0.73	
Ebinania costaeacanarie	2.80	10	0.70	
Holohalaelurus regani	2.20	10	0.55	
Helicolenus dactylopterus	1.70	10	0.43	
Geryon maritae	1.52	6	0.38	
Neoscopelus macrolepidotus	1.40	40	0.35	
Raja confundens	1.30	10	0.33	
Lycodes aegleus	1.10	10	0.28	
Photichthys argenteus	0.20	10	0.05	
Total	397.72	100.00		

PROJECT STATION:1366
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2700 Long E 1359
start stop duration
TIME :07:26:00 07:56:00 30 (min) Purpose code: 3
LOG :2145.00 2146.40 1.50 Area code : 1
FDEPTH: 445 445 GearCond.code:
BDEPTH: 445 445 Validity code:
Towing dir: 320 Wire out:1200 m Speed: 28 kn*10

Sorted: 103 Kg Total catch: 255.02 CATCH/HOUR: 510.04

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	352.00	730	69.01	139
Merluccius paradoxus, male	79.00	160	15.49	138
Coelorinchus fasciatus	34.00	448	6.67	
Nezumia milleri	8.00	200	1.57	
Lithodes fax	6.36	10	1.25	
Deania profundorum	4.40	20	0.86	
Etmopterus pusillus	4.30	6	0.84	
Todarodes sagittatus	3.66	6	0.72	
Hydrolagus sp.	3.60	6	0.71	
Deania calcea	3.60	6	0.71	
Selachophidium guentheri	3.60	66	0.71	
Helicolenus dactylopterus	2.00	16	0.39	
Genypterus capensis	2.00	2	0.39	
Coelorinchus braueri	1.50	26	0.29	
Nezumia leonis	1.06	30	0.21	
Epigonus pandionis	1.04	50	0.20	
Lithodes fax	0.90	2	0.18	
Ebinania costaeacanarie	0.76	20	0.15	
Notacanthus sexspinis	0.76	20	0.15	
Etmopterus lucifer	0.50	10	0.10	
Hoplostethus mediterraneus	0.40	16	0.08	
PORTUNIDAE	0.20	10	0.04	
Total	510.04	100.01		

PROJECT STATION:1367
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2656 Long E 1405
start stop duration
TIME :09:34:00 10:04:00 30 (min) Purpose code: 3
LOG :2153.50 2153.50 1.40 Area code : 1
FDEPTH: 397 396 GearCond.code:
BDEPTH: 397 396 Validity code:
Towing dir: 350 Wire out:1100 m Speed: 27 kn*10

Sorted: 142 Kg Total catch: 566.99 CATCH/HOUR: 1133.98

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	709.20	1890	62.54	143
Merluccius paradoxus, male	270.00	712	23.81	142
Coelorinchus fasciatus	76.50	652	6.75	
Lophius upsicephalus	36.00	4	3.17	140
Todarodes sagittatus	14.04	18	1.24	
Helicolenus dactylopterus	8.10	36	0.71	
MYCTOPHIDAE	6.48		0.57	
Genypterus capensis	6.40	4	0.56	141
Selachophidium guentheri	2.16	46	0.19	
Galeus polli	2.16	18	0.19	
Shrimps, small, non comm.	1.80	540	0.16	
Notacanthus sexspinis	0.54	18	0.05	
Photichthys argenteus	0.20	10	0.02	
Epigonus pandionis	0.20	46	0.02	
Nezumia milleri	0.20	10	0.02	
Total	1133.98	100.00		

PROJECT STATION:1368
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2650 Long E 1418
start stop duration
TIME :12:18:00 12:48:00 30 (min) Purpose code: 3
LOG :2169.40 2170.80 1.58 Area code : 1
FDEPTH: 351 351 GearCond.code:
BDEPTH: 351 351 Validity code:
Towing dir: 340 Wire out:1050 m Speed: 31 kn*10

Sorted: 146 Kg Total catch: 510.18 CATCH/HOUR: 1020.36

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius paradoxus, female	579.60	1148	56.80	147
Merluccius paradoxus, female	181.30	112	17.77	145
Merluccius paradoxus, male	100.10	274	9.81	146
Krill	67.20		6.59	
Merluccius capensis, male	26.68	22	2.61	144
Helicolenus dactylopterus	19.96	302	1.96	
Todarodes sagittatus	17.08	22	1.67	
MYCTOPHIDAE	12.60		1.23	
Coelorinchus fasciatus	8.06	120	0.79	
S H R I M P S	4.20		0.41	
C R A B S	1.82	42	0.18	
Nezumia milleri	1.76	28	0.17	
Total	1020.36	99.99		

PROJECT STATION:1369
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2647 Long E 1433
start stop duration
TIME :15:03:00 15:33:00 30 (min) Purpose code: 3
LOG :2189.40 2190.80 1.64 Area code : 1
FDEPTH: 280 280 GearCond.code:
BDEPTH: 280 280 Validity code:
Towing dir: 340 Wire out: 900 m Speed: 31 kn*10

Sorted: 216 Kg Total catch: 216.40 CATCH/HOUR: 432.80

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.	
	weight numbers			
Merluccius capensis, female	191.80	160	44.32	149
Genypterus capensis	133.80	112	30.91	152
Merluccius capensis, male	64.00	64	14.79	148
Merluccius paradoxus, female	18.60	64	4.30	153
Todarodes sagittatus	10.14	78	2.34	151
MYCTOPHIDAE	4.26	10	0.98	
Merluccius paradoxus, male	3.80	28	0.88	150
Krill	1.60		0.37	
Coelorinchus fasciatus	0.90	10	0.21	
Sufflogobius bibarbatatus	0.64	160	0.15	
Helicolenus dactylopterus	0.50	4	0.12	
Galeus polli	0.14	2	0.03	
Nezumia milleri	0.08	2	0.02	
Squilla acuelata calmani	0.08	6	0.02	
Total	432.84	100.02		

PROJECT STATION:1370
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2645
Long E 1448
start stop duration
TIME :17:37:00 18:07:00 30 (min) Purpose code: 3
LOG :2207.90 2209.30 1.60 Area code : 1
FDEPTH: 176 174 GearCond.code:
BDEPTH: 176 174 Validity code:
Towing dir: 360 Wire out: 750 m Speed: 32 kn*10
Sorted: 38 Kg Total catch: 380.40 CATCH/HOUR: 760.80

PROJECT STATION:1375
DATE:28/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2622
Long E 1357
start stop duration
TIME :13:29:00 13:59:00 30 (min) Purpose code: 3
LOG :2995.10 2996.50 1.70 Area code : 1
FDEPTH: 373 371 GearCond.code:
BDEPTH: 373 371 Validity code:
Towing dir: 350 Wire out:1100 m Speed: 31 kn*10
Sorted: 118 Kg Total catch: 694.86 CATCH/HOUR: 1389.72

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	428.00	4400	56.26	155
Merluccius capensis, male	220.00	3120	28.92	154
Trachurus capensis	76.00	440	9.99	156
Chelidonichthys capensis	25.20	60	3.31	
MYCTOPHIDAE	10.40	1.37	0.16	
Lepidopus caudatus	1.20	20		
Total	760.80		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	1049.00	2976	75.48	170
Merluccius paradoxus, male	116.90	364	8.41	169
Merluccius capensis, female	60.68	48	4.37	172
Helicolenus dactylopterus	48.80	552	3.51	
Galeus polli	25.76	258	1.85	
MYCTOPHIDAE	23.40		1.68	
Todarodes sagittatus	20.94	58	1.51	
Coelorinchus fasciatus	20.58	176	1.48	
Merluccius capensis, male	5.30	12	0.38	171
Krill	4.36		0.31	
Trachurus capensis	4.36	12	0.31	
Nezumia milleri	3.88	58	0.28	
Selachophidium guentheri	2.82	48	0.20	
PORTUNIDAE	1.52	24	0.11	
S H R I M P S	1.42		0.10	
Total	1389.72		99.98	

PROJECT STATION:1371
DATE:27/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2641
Long E 1456
start stop duration
TIME :19:26:00 19:51:00 25 (min) Purpose code: 3
LOG :2218.80 2219.80 1.30 Area code : 1
FDEPTH: 127 127 GearCond.code:
BDEPTH: 127 127 Validity code:
Towing dir: 340 Wire out: 550 m Speed: 30 kn*10
Sorted: 34 Kg Total catch: 212.66 CATCH/HOUR: 510.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis	478.08	7034	93.67	157
Genypterus capensis	13.92	10	2.73	158
Chelidonichthys capensis	8.64	38	1.69	
Merluccius capensis	7.44	2	1.46	
Trachurus capensis	2.30	19	0.45	
Total	510.38		100.00	

PROJECT STATION:1376
DATE:28/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2622
Long E 1341
start stop duration
TIME :15:58:00 16:28:00 30 (min) Purpose code: 3
LOG :2311.80 2313.40 1.55 Area code : 1
FDEPTH: 436 438 GearCond.code:
BDEPTH: 436 438 Validity code:
Towing dir: 5 Wire out:1250 m Speed: 30 kn*10
Sorted: 84 Kg Total catch: 418.55 CATCH/HOUR: 837.10

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	586.00	960	70.00	174
Merluccius paradoxus, male	99.00	170	11.83	173
Coelorinchus fasciatus	71.00	1160	8.48	
Nezumia milleri	40.50	680	4.84	
Todarodes sagittatus	17.70	80	2.11	
Selachophidium guentheri	15.80	310	1.89	
Helicolenus dactylopterus	5.20	30	0.62	
Galeus polli	0.80	20	0.10	
Epigonus denticulatus	0.60	30	0.07	
Trachyrhinus scabriss	0.30	10	0.04	
Maulisia microlepis	0.20	10	0.02	
Total	837.10		100.00	

PROJECT STATION:1372
DATE:28/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2621
Long E 1443
start stop duration
TIME :06:26:00 06:56:00 30 (min) Purpose code: 3
LOG :2248.80 2250.30 1.50 Area code : 1
FDEPTH: 170 170 GearCond.code:
BDEPTH: 170 170 Validity code:
Towing dir: 350 Wire out: 700 m Speed: 30 kn*10
Sorted: 29 Kg Total catch: 335.60 CATCH/HOUR: 671.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	288.00	3288	42.91	160
Merluccius capensis, male	259.20	3456	38.62	159
Callorinchus capensis	88.80	48	13.23	
Trachurus capensis	18.00	24	2.68	
Chelidonichthys capensis	13.12	120	1.95	
Todaropsis eblanae	2.16	24	0.32	
MYCTOPHIDAE	1.68		0.25	
Sufflogobius bibarbatiss	0.24	144	0.04	
Total	671.20		100.00	

PROJECT STATION:1377
DATE:28/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2621
Long E 1433
start stop duration
TIME :08:19:00 08:47:00 28 (min) Purpose code: 3
LOG :2259.80 2261.00 1.50 Area code : 1
FDEPTH: 264 264 GearCond.code:
BDEPTH: 264 264 Validity code:
Towing dir: 310 Wire out: 900 m Speed: 30 kn*10
Sorted: 124 Kg Total catch: 212.36 CATCH/HOUR: 455.06

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	225.39	499	49.53	163
Merluccius capensis, male	95.64	399	21.02	162
Merluccius paradoxus	50.25	516	11.04	164
Krill	30.00		6.59	
Coelorinchus fasciatus	19.14	189	4.21	
MYCTOPHIDAE	15.00		3.30	
Lophius upsicephalus	13.07	9	2.87	161
Todarodes sagittatus	3.30	9	0.73	
Lepidopus caudatus	1.24	26	0.27	
Austroglossus microlepis	0.99	2	0.22	
Sufflogobius bibarbatiss	0.64	90	0.14	
Squilla acuelata calmani	0.41	30	0.09	
Total	455.07		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	766.07	782	51.28	176
Centroscymnus crepidater	294.64	600	19.72	
Coelorinchus sp.	125.36	557	8.39	
Nezumia milleri	120.00	1618	8.03	
Deania calcea	32.14	21	2.15	
Selachophidium guentheri	31.39	364	2.10	
Todarodes sagittatus	22.18	43	1.48	
Lophius upsicephalus	21.21	2	1.42	177
Merluccius paradoxus, male	19.29	21	1.29	175
Trachyrhinus scabriss	16.61	107	1.11	
Etmopterus pusillus	15.00	21	1.00	
CONGRIDAE	9.21	21	0.62	
Raja confundens	8.04	11	0.54	
Hydrolagus sp.	6.11	11	0.41	
Hoplostethus atlanticus	4.82	21	0.32	
Lithodes ixox	0.79	2	0.05	
Hoplostethus melanopus	0.64	64	0.04	
Notacanthus sexspinis	0.43	21	0.03	
Total	1493.93		99.98	

PROJECT STATION:1374
DATE:28/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2622
Long E 1418
start stop duration
TIME :10:39:00 11:07:00 28 (min) Purpose code: 3
LOG :2275.10 2276.40 1.50 Area code : 1
FDEPTH: 305 308 GearCond.code:
BDEPTH: 305 308 Validity code:
Towing dir: 275 Wire out: 700 m Speed: 31 kn*10
Sorted: 149 Kg Total catch: 405.57 CATCH/HOUR: 869.08

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	349.71	426	40.24	166
Merluccius paradoxus, female	295.71	1446	34.03	168
Merluccius capensis, male	90.00	120	10.36	165
Krill	45.60		5.25	
Merluccius paradoxus, male	30.21	193	3.48	167
MYCTOPHIDAE	17.40		2.00	
Lophius upsicephalus	12.21	4	1.40	
Coelorinchus fasciatus	8.27	197	0.95	
Galeus polli	7.44	103	0.86	
Helicolenus dactylopterus	5.57	54	0.64	
Trachurus capensis	1.86	6	0.21	
Sufflogobius bibarbatiss	1.80		0.21	
Genypterus capensis	1.71	2	0.20	
PORTUNIDAE	0.96	24	0.11	
Todaropsis eblanae	0.36	17	0.04	
Squilla acuelata calmani	0.24	30	0.03	
Total	869.05		100.01	

PROJECT STATION:1378
DATE:28/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2559
Long E 1337
start stop duration
TIME :23:30:00 00:00:00 30 (min) Purpose code: 3
LOG :2355.00 2356.40 1.50 Area code : 1
FDEPTH: 591 607 GearCond.code:
BDEPTH: 591 607 Validity code:
Towing dir: 90 Wire out:1600 m Speed: 30 kn*10
Sorted: 87 Kg Total catch: 1309.65 CATCH/HOUR: 2619.30

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	1494.00	1650	57.04	179
Todarodes sagittatus	303.00	750	11.57	
SQUALIDAE	225.00		8.59	
Hoplostethus atlanticus	198.60	270	7.58	
Deania calcea	110.70	60	4.23	
Nezumia milleri	82.20	2100	3.14	
Merluccius paradoxus, male	45.60	60	1.74	178
Coelorinchus matamua	42.30	210	1.61	
Allocyttus verrucosus	36.00	450	1.37	
RAJIDAE	17.70	30	0.68	
Selachophidium guentheri	16.80	180	0.64	
C R A B S	13.20	30	0.50	
CONGRIDAE	9.30	30	0.36	
Etmopterus pusillus	8.10	60	0.31	
Ebinania costaecanarie	6.00	30	0.23	
Hoplostethus melanopus	5.40	270	0.21	
S H R I M P S	3.00		0.11	
Hoplostethus mediterraneus	2.40	30	0.09	
Total	2619.30		100.00	

PROJECT STATION:1379
DATE:29/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2559 Long E 1340
start stop duration Purpose code: 3
TIME :01:58:00 02:28:00 30 (min) Area code : 1
LOG :2364.10 2365.50 1.46 GearCond.code: 1
FDEPTH: 502 500 Validity code:
BDEPTH: 502 500
Towing dir: 360 Wire out:1400 m Speed: 29 kn*10
Sorted: 104 Kg Total catch: 351.88 CATCH/HOUR: 703.76
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius paradoxus, female 389.60 600 55.36 182
Trachyrhinus scabrus 112.80 456 16.03
Lophius upsicephalus 42.40 4 6.02 180
Todarodes sagittatus 26.00 8 3.69
Deepwater fish mixture 21.20 3.01
Nezumia milleri 20.72 1048 2.94
Hopllostethus melanopus 17.20 1568 2.44
Merluccius paradoxus, male 17.04 24 2.42 181
Coelorinchus fasciatus 14.40 160 2.05
Etmopterus pusillus 14.16 88 2.01
CONGRIDAE 11.04 16 1.57
Selachophidium guentheri 9.20 160 1.31
Helicolenus dactylopterus 6.72 24 0.95
S H R I M P S 0.80 0.11
Maulisia microlepis 0.32 16 0.05
Notacanthus sexspinis 0.16 16 0.02
Total 703.76 99.98

PROJECT STATION:1384
DATE:30/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2541 Long E 1346
start stop duration Purpose code: 3
TIME :17:30:00 18:00:00 30 (min) Area code : 1
LOG :2601.30 2602.80 1.60 GearCond.code: 1
FDEPTH: 342 340 Validity code:
BDEPTH: 342 340
Towing dir: 355 Wire out:1050 m Speed: 29 kn*10
Sorted: 177 Kg Total catch: 366.00 CATCH/HOUR: 732.00
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius capensis, female 425.60 252 58.14 197
Merluccius capensis, male 104.00 108 14.21 196
Merluccius paradoxus, female 69.40 316 9.48 199
Helicolenus dactylopterus 62.40 170 8.52 200
Krill 24.20 3.31
Gonypterus capensis 20.40 10 2.79 194
Merluccius paradoxus, male 6.80 30 0.93 198
Schedophilus huttoni 6.40 2 0.87
Coelorinchus fasciatus 3.20 30 0.44
Lophius upsicephalus 3.00 2 0.41 195
Galeus pollii 2.20 34 0.30
PORTUNIDAE 2.00 44 0.27
Todarodes sagittatus 1.60 8 0.22
Nezumia milleri 0.80 26 0.11
Total 732.00 100.00

PROJECT STATION:1380
DATE:29/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2559 Long E 1346
start stop duration Purpose code: 3
TIME :04:19:00 04:49:00 30 (min) Area code : 1
LOG :2374.80 2376.30 1.50 GearCond.code: 1
FDEPTH: 401 401 Validity code:
BDEPTH: 401 401
Towing dir: 5 Wire out:1150 m Speed: 30 kn*10
Sorted: 59 Kg Total catch: 321.85 CATCH/HOUR: 643.70
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius paradoxus, female 448.80 1200 69.72 185
Helicolenus dactylopterus 50.94 242 7.91
Deepwater fish mixture 38.18 5.93
Merluccius paradoxus, male 36.64 88 5.69 184
Merluccius capensis, female 23.76 22 3.69 183
Coelorinchus fasciatus 22.78 210 3.54
Nezumia milleri 7.92 144 1.23
Todarodes sagittatus 5.94 22 0.92
Galeus pollii 4.84 66 0.75
Etmopterus pusillus 1.66 12 0.26
PORTUNIDAE 1.00 22 0.16
Epigonus denticulatus 0.78 44 0.12
Maulisia microlepis 0.34 12 0.05
RAJIDAE 0.12 12 0.02
Total 643.70 99.99

PROJECT STATION:1385
DATE:30/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2539 Long E 1339
start stop duration Purpose code: 3
TIME :19:15:00 19:46:00 31 (min) Area code : 1
LOG :2610.90 2612.60 1.60 GearCond.code: 1
FDEPTH: 433 437 Validity code:
BDEPTH: 433 437
Towing dir: 360 Wire out:1200 m Speed: 31 kn*10
Sorted: 124 Kg Total catch: 486.89 CATCH/HOUR: 942.37
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius paradoxus, female 763.35 1401 81.00 203
Merluccius paradoxus, male 45.68 77 4.85 202
Raja confundens 34.84 23 3.70
Todarodes sagittatus 20.05 54 2.13
Galeus pollii 17.81 310 1.89
Helicolenus dactylopterus 16.41 186 1.74
Selachophidium guentheri 14.32 217 1.52
Nezumia milleri 8.75 194 0.93
Lophius upsicephalus 6.52 2 0.69 201
Coelorinchus fasciatus 4.34 62 0.46
Hopllostethus cadonati 3.87 201 0.41
Etmopterus pusillus 3.64 8 0.39
Photichthys argenteus 1.32 101 0.14
MYCTOPHIDAE 0.54 70 0.06
Epigonus denticulatus 0.46 39 0.05
Notacanthus sexspinis 0.46 23 0.05
Total 942.36 100.01

PROJECT STATION:1381
DATE:29/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2600 Long E 1354
start stop duration Purpose code: 3
TIME :06:47:00 07:17:00 30 (min) Area code : 1
LOG :2387.50 2388.90 1.40 GearCond.code: 1
FDEPTH: 347 350 Validity code:
BDEPTH: 347 350
Towing dir: 340 Wire out:1050 m Speed: 28 kn*10
Sorted: 111 Kg Total catch: 220.61 CATCH/HOUR: 441.22
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius capensis, female 204.00 200 46.24 187
Merluccius paradoxus, female 78.00 256 17.68 189
Galeus pollii 42.00 1248 9.52
Helicolenus dactylopterus 33.60 308 7.62
Merluccius capensis, male 30.00 48 6.80 186
Nezumia milleri 13.00 312 2.95
Merluccius paradoxus, male 9.80 44 2.22 188
Coelorinchus fasciatus 9.68 128 2.19
Lophius upsicephalus 7.24 8 1.64
Schedophilus huttoni 4.56 4 1.03
Todarodes sagittatus 4.40 12 1.00
PORTUNIDAE 1.76 32 0.40
Gonypterus capensis 1.66 32 0.38
Selachophidium guentheri 0.84 16 0.19
Notacanthus sexspinis 0.44 32 0.10
Epigonus denticulatus 0.16 16 0.04
Squilla aculeata calmani 0.08 8 0.02
Total 441.22 100.02

PROJECT STATION:1386
DATE:30/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2538 Long E 1332
start stop duration Purpose code: 3
TIME :21:09:00 21:40:00 31 (min) Area code : 1
LOG :2621.10 2622.70 1.60 GearCond.code: 1
FDEPTH: 644 641 Validity code:
BDEPTH: 644 641
Towing dir: 350 Wire out:1650 m Speed: 29 kn*10
Sorted: 152 Kg Total catch: 206.65 CATCH/HOUR: 399.97
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Deania calcea 113.23 50 28.31
Todarodes sagittatus 81.29 188 20.32
Nezumia milleri 75.87 542 18.97
Merluccius paradoxus, female 62.32 48 15.58 205
Ebinania costaeannarlie 20.90 31 5.23
Raja confundens 14.71 15 3.68
MYCTOPHIDAE 10.84 77 2.71
Selachophidium guentheri 5.42 77 1.36
Deepwater fish mixture 4.65 201 1.16
Alloctytus verrucosus 3.10 46 0.78
Hopllostethus mediterraneus 2.32 93 0.58
Coelorinchus braueri 1.55 8 0.39
Merluccius paradoxus, male 1.14 2 0.29 204
Melanocetus johnsoni 0.77 15 0.19
Hopllostethus cadonati 0.77 15 0.19
Ceratius holboelli 0.23 8 0.06
Dicrolene sp. 0.23 15 0.06
Coelorinchus matamua 0.23 8 0.06
Shrimps, small, non comm. 0.23 77 0.06
Nemichthys scolopacea 0.15 8 0.04
Total 399.95 100.02

PROJECT STATION:1382
DATE:29/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2600 Long E 1407
start stop duration Purpose code: 3
TIME :09:20:00 09:34:00 14 (min) Area code : 1
LOG :2403.40 2404.00 0.80 GearCond.code: 1
FDEPTH: 277 276 Validity code:
BDEPTH: 277 276
Towing dir: 360 Wire out: 950 m Speed: 28 kn*10
Sorted: Kg Total catch: CATCH/HOUR:
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
MUD/SHELL 0.00
Total

PROJECT STATION:1387
DATE:30/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2533 Long E 1335
start stop duration Purpose code: 3
TIME :22:55:00 23:25:00 30 (min) Area code : 1
LOG :2628.20 2629.70 1.60 GearCond.code: 1
FDEPTH: 542 541 Validity code:
BDEPTH: 542 541
Towing dir: 350 Wire out:1450 m Speed: 30 kn*10
Sorted: 100 Kg Total catch: 308.60 CATCH/HOUR: 617.20
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Nezumia milleri 172.12 5184 27.89
Merluccius paradoxus, female 162.40 176 26.31 207
Todarodes sagittatus 107.90 390 17.48
Notacanthus sexspinis 56.68 2080 9.18
Deepwater fish mixture 48.36 2340 7.84
Raja confundens 36.40 26 5.90
Alloctytus verrucosus 6.76 104 1.39
Selachophidium guentheri 5.98 104 0.97
Galeus pollii 3.38 26 0.55
Etmopterus lucifer 3.12 26 0.51
Coelorinchus braueri 3.12 52 0.51
Merluccius paradoxus, male 2.40 4 0.39 206
Total 617.20 100.02

PROJECT STATION:1383
DATE:30/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2542 Long E 1427
start stop duration Purpose code: 3
TIME :11:41:00 12:11:00 30 (min) Area code : 1
LOG :2558.50 2559.90 1.56 GearCond.code: 1
FDEPTH: 160 158 Validity code:
BDEPTH: 160 158
Towing dir: 360 Wire out: 700 m Speed: 31 kn*10
Sorted: 69 Kg Total catch: 754.16 CATCH/HOUR: 1508.32
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius capensis, female 690.00 7620 45.75 193
Merluccius capensis, male 690.00 8280 45.75 192
Merluccius capensis, female 66.04 76 4.38 191
MYCTOPHIDAE 33.00 2.19
Merluccius capensis, male 15.48 16 1.03 190
Thyrssites atun 9.00 2 0.60
Sufflogobius bibarbatatus 4.80 660 0.32
Total 1508.32 100.02

PROJECT STATION:1388
DATE:30/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2542 Long E 1427
start stop duration Purpose code: 3
TIME :11:41:00 12:11:00 30 (min) Area code : 1
LOG :2558.50 2559.90 1.56 GearCond.code: 1
FDEPTH: 160 158 Validity code:
BDEPTH: 160 158
Towing dir: 360 Wire out: 700 m Speed: 31 kn*10
Sorted: 69 Kg Total catch: 754.16 CATCH/HOUR: 1508.32
SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
weight numbers
Merluccius capensis, female 690.00 7620 45.75 193
Merluccius capensis, male 690.00 8280 45.75 192
Merluccius capensis, female 66.04 76 4.38 191
MYCTOPHIDAE 33.00 2.19
Merluccius capensis, male 15.48 16 1.03 190
Thyrssites atun 9.00 2 0.60
Sufflogobius bibarbatatus 4.80 660 0.32
Total 1508.32 100.02

PROJECT STATION:1388
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2527 Long E 1338
 start stop duration
 TIME :00:52:00 01:22:00 30 (min) Purpose code: 3
 LOG :2635.20 2636.50 1.57 Area code : 1
 FDEPTH: 453 447 GearCond.code:
 BDEPTH: 453 447 Validity code:
 Towing dir: 20 Wire out:1200 m Speed:30 kn*10
 Sorted: 82 Kg Total catch: 377.56 CATCH/HOUR: 755.12

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	418.80	1140	55.46	209
Hoplostethus melanopus	58.92	3068	7.80	
Nezumia milleri	48.96	1036	6.48	
Centrophorus squamosus	44.60	4	5.91	
Deepwater fish mixture	39.12	24	5.18	
Merluccius capensis, female	36.72	24	4.86	210
Merluccius paradoxus, male	32.28	72	4.27	208
Galeus polli	26.76	300	3.54	
Selachophidium guentheri	21.48	420	2.84	
Todarodes sagittatus	14.04	24	1.86	
Helicolenus dactylopterus	9.00	96	1.19	
Notacanthus sexspinis	3.36	144	0.44	
Trachyrhinus scabrus	1.08	12	0.14	
Total	755.12		99.97	

PROJECT STATION:1389
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2521 Long E 1345
 start stop duration
 TIME :06:21:00 06:51:00 30 (min) Purpose code: 3
 LOG :2648.10 2649.50 1.70 Area code : 1
 FDEPTH: 310 303 GearCond.code:
 BDEPTH: 310 303 Validity code:
 Towing dir: 15 Wire out:1000 m Speed:34 kn*10
 Sorted: 168 Kg Total catch: 672.08 CATCH/HOUR: 1344.16

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	991.20	688	73.74	212
Merluccius capensis, male	262.40	208	19.52	211
Galeus polli	41.60	708	3.09	
Helicolenus dactylopterus	18.40	312	1.37	
Merluccius paradoxus, female	11.20	88	0.83	213
Coelorinchus fasciatus	7.20	224	0.54	
Trachurus capensis	7.20	16	0.54	214
Nezumia milleri	4.00	136	0.30	
Selachophidium guentheri	0.40	16	0.03	
Coelorinchus fasciatus	0.32	8	0.02	
Hoplostethus melanopus	0.24	8	0.02	
Total	1344.16		100.00	

PROJECT STATION:1390
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2519 Long E 1353
 start stop duration
 TIME :08:11:00 08:41:00 30 (min) Purpose code: 3
 LOG :2658.60 2659.80 1.60 Area code : 1
 FDEPTH: 244 240 GearCond.code:
 BDEPTH: 244 240 Validity code:
 Towing dir: 360 Wire out: 850 m Speed:31 kn*10
 Sorted: 88 Kg Total catch: 788.40 CATCH/HOUR: 1576.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	1074.60	5004	68.15	216
Merluccius capensis, male	340.20	2718	21.58	215
Trachurus capensis	108.00	342	6.85	217
MYCTOPHIDAE	23.40		1.48	
Sufflogobius bibarbatatus	14.40	2106	0.91	
Coelorinchus fasciatus	7.20	180	0.46	
Galeus polli	5.40	54	0.34	
Lepidopus caudatus	1.80	18	0.11	
Helicolenus dactylopterus	1.80	18	0.11	
Total	1576.80		99.99	

PROJECT STATION:1391
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2520 Long E 1418
 start stop duration
 TIME :11:44:00 12:05:00 21 (min) Purpose code: 3
 LOG :2687.00 2687.80 1.00 Area code : 1
 FDEPTH: 164 165 GearCond.code:
 BDEPTH: 164 165 Validity code:
 Towing dir: 360 Wire out: 700 m Speed:30 kn*10
 Sorted: 24 Kg Total catch: 238.40 CATCH/HOUR: 681.14

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	360.00	2771	52.85	219
Merluccius capensis, male	208.57	2200	30.62	218
Neoharriotta pinnata	80.29	57	11.79	
Chelidonichthys capensis	24.29	57	3.57	
Sufflogobius bibarbatatus	4.86	1114	0.71	
MYCTOPHIDAE	3.14		0.46	
Total	681.15		100.00	

PROJECT STATION:1392
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2501 Long E 1426
 start stop duration
 TIME :14:36:00 14:51:00 15 (min) Purpose code: 3
 LOG :2709.00 2709.80 0.80 Area code : 1
 FDEPTH: 119 119 GearCond.code:
 BDEPTH: 119 119 Validity code:
 Towing dir: 355 Wire out: 500 m Speed:30 kn*10
 Sorted: 24 Kg Total catch: 268.62 CATCH/HOUR: 1074.48

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatatus	721.60	133628	67.16	
Merluccius capensis, female	217.36	2904	20.23	221
Merluccius capensis, male	135.52	2244	12.61	220
Total	1074.48		100.00	

PROJECT STATION:1393
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2501 Long E 1359
 start stop duration
 TIME :17:41:00 17:54:00 13 (min) Purpose code: 3
 LOG :2737.30 2737.90 0.67 Area code : 1
 FDEPTH: 175 174 GearCond.code:
 BDEPTH: 175 174 Validity code:
 Towing dir: 350 Wire out: 700 m Speed:31 kn*10
 Sorted: 31 Kg Total catch: 409.78 CATCH/HOUR: 1891.29

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	1350.46	10274	71.40	222
Merluccius capensis, female	439.38	2391	23.23	223
Chelidonichthys capensis	64.62	194	3.42	
Sufflogobius bibarbatatus	19.38	3360	1.02	
Callorhynchus capensis	6.46	5	0.34	
Trachurus capensis	6.46	65	0.34	
MYCTOPHIDAE	4.52	2585	0.24	
Total	1891.28		99.99	

PROJECT STATION:1394
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2459 Long E 1351
 start stop duration
 TIME :19:05:00 19:35:00 30 (min) Purpose code: 3
 LOG :2746.20 2747.70 1.70 Area code : 2
 FDEPTH: 211 223 GearCond.code:
 BDEPTH: 211 223 Validity code:
 Towing dir: 350 Wire out: 800 m Speed:32 kn*10
 Sorted: 57 Kg Total catch: 226.48 CATCH/HOUR: 452.96

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	260.00	944	57.40	225
Merluccius capensis, male	145.60	944	32.14	224
Sufflogobius bibarbatatus	16.80	303	3.71	
Coelorinchus fasciatus	13.60	344	3.00	
Trachurus capensis	8.80	32	1.94	
Krill	4.00		0.88	
Todarodes sagittatus	4.00	8	0.88	
Galeus polli	0.16	16	0.04	
Total	452.96		99.99	

PROJECT STATION:1395
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2459 Long E 1341
 start stop duration
 TIME :20:59:00 21:28:00 29 (min) Purpose code: 3
 LOG :2757.20 2758.80 1.50 Area code : 2
 FDEPTH: 354 365 GearCond.code:
 BDEPTH: 354 365 Validity code:
 Towing dir: 350 Wire out:1050 m Speed:29 kn*10
 Sorted: 98 Kg Total catch: 166.56 CATCH/HOUR: 344.61

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	192.27	141	55.79	227
Merluccius paradoxus, female	36.93	91	10.72	229
Merluccius capensis, male	24.99	19	7.25	226
Helicolenus dactylopterus	22.45	329	6.51	
Nezumia milleri	14.86	294	4.31	
Trachurus capensis	14.13	50	4.10	232
Lophius upsicephalus	12.72	8	3.69	230
Todarodes sagittatus	8.69	29	2.52	
Coelorinchus fasciatus	7.24	112	2.10	
Deania profundorum	2.17	4	0.63	
Squilla aculeata calmani	2.17	139	0.63	
Etmopterus pusillus	1.82	8	0.53	
Merluccius paradoxus, male	1.82	8	0.53	228
Gonypterus capensis	1.39	2	0.40	231
Selachophidium guentheri	0.72	25	0.21	
Notacanthus sexspinis	0.19	8	0.06	
Ebinania costaecanarie	0.04	14	0.01	
Total	344.60		99.99	

PROJECT STATION:1396
 DATE:31/10/92 GEAR TYPE: BT No:1 POSITION:Lat S 2458 Long E 1334
 start stop duration
 TIME :22:50:00 23:19:00 29 (min) Purpose code: 3
 LOG :2767.10 2768.50 1.50 Area code : 2
 FDEPTH: 550 546 GearCond.code:
 BDEPTH: 550 546 Validity code:
 Towing dir: 340 Wire out:1450 m Speed:29 kn*10
 Sorted: 106 Kg Total catch: 327.20 CATCH/HOUR: 676.97

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Hoplostethus cadenati	373.24	8009	55.13	
Merluccius paradoxus, female	169.86	230	25.09	234
Nezumia milleri	66.46	2537	9.82	
Trachyrhinus scabrus	25.72	68	3.80	
Todarodes sagittatus	13.88	46	2.05	
Deania profundorum	12.97	23	1.92	
Galeus polli	5.92	68	0.87	
Notacanthus sexspinis	5.01	205	0.74	
Merluccius paradoxus, male	2.11	4	0.31	233
Lithodes ferox	1.80	2	0.27	
Total	676.97		100.00	

PROJECT STATION:1397
 DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2441 Long E 1330
 start stop duration
 TIME :01:42:00 02:12:00 30 (min) Purpose code: 3
 LOG :2785.60 2787.00 1.55 Area code : 2
 FDEPTH: 500 500 GearCond.code:
 BDEPTH: 500 500 Validity code:
 Towing dir: 335 Wire out:1400 m Speed:31 kn*10
 Sorted: 57 Kg Total catch: 229.16 CATCH/HOUR: 458.32

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	170.40	288	37.18	236
Tetragonurus atlanticus	120.16	384	26.22	
Trachyrhinus scabrus	58.40	184	12.74	
Merluccius paradoxus, male	26.72	48	5.83	235
Todarodes sagittatus	20.96	64	4.57	
Nezumia milleri	19.76	640	4.31	
Etmopterus pusillus	11.68	16	2.55	
Deepwater fish mixture	11.04		2.41	
Selachophidium guentheri	9.20	144	2.01	
Coelorinchus braueri	6.56	56	1.43	
Epigonus denticulatus	2.40	96	0.52	
Hoplostethus cadenati	1.04	48	0.23	
Total	458.32		100.00	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2440 Long E 1336
start stop duration
TIME :06:21:00 06:52:00 31 (min) Purpose code: 3
LOG :2798.40 2799.80 1.40 Area code : 2
FDEPTH: 402 397 GearCond.code:
BDEPTH: 402 397 Validity code:
Towing dir: 340 Wire out:1150 m Speed: 28 kn*10

Sorted: 141 Kg Total catch: 360.22 CATCH/HOUR: 697.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	279.29	679	40.06	241
Merluccius capensis, female	258.15	151	37.03	239
Helicolenus dactylopterus	39.35	368	5.64	
Merluccius paradoxus, male	36.74	116	5.27	240
Merluccius capensis, male	12.08	10	1.73	238
Epigonus denticulatus	11.42	408	1.64	
Galeus polli	11.38	141	1.63	
Lophius upsicephalus	8.90	8	1.28	237
Selachophidium guentheri	7.65	170	1.10	
Nezumia milleri	6.19	85	0.89	
Todarodes sagittatus	5.94	19	0.85	
Krill	4.47	0.64		
Coelorinchus fasciatus	3.83	56	0.55	
Etmopterus pusillus	3.46	10	0.50	
Deania profundorum	3.02	6	0.43	
Raja confundens	2.01	6	0.29	
Trachyrhinus scabrus	1.61	6	0.23	
Notacanthus sexspinis	1.51	25	0.22	
Coelorinchus braueri	0.19	10	0.03	
Total	697.19		100.01	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2420 Long E 1352
start stop duration
TIME :15:43:00 16:13:00 30 (min) Purpose code: 3
LOG :2855.70 2856.90 1.78 Area code : 2
FDEPTH: 274 272 GearCond.code:
BDEPTH: 274 272 Validity code:
Towing dir: 355 Wire out: 900 m Speed: 35 kn*10

Sorted: 192 Kg Total catch: 192.39 CATCH/HOUR: 384.78

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	181.40	304	47.14	258
Sufflogobius bibarbatatus	76.80	5190	19.96	
Helicolenus dactylopterus	45.80	924	11.90	
Merluccius capensis, male	43.20	82	11.23	257
Centrolophus niger	23.00	8	5.98	260
Lophius upsicephalus	6.30	4	1.64	259
Coelorinchus fasciatus	5.32	72	1.38	
Todarodes sagittatus	1.34	2	0.35	
Galeus polli	0.84	22	0.22	
Trachurus capensis	0.46	2	0.12	
Lepidopus caudatus	0.16	8	0.04	
Epigonus denticulatus	0.10	2	0.03	
Squilla acuelata calmani	0.06	2	0.02	
Total	384.78		100.01	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2440 Long E 1348
start stop duration
TIME :08:46:00 09:19:00 33 (min) Purpose code: 3
LOG :2814.30 2815.70 1.70 Area code : 2
FDEPTH: 303 289 GearCond.code:
BDEPTH: 303 289 Validity code:
Towing dir: 350 Wire out: 950 m Speed: 29 kn*10

Sorted: 169 Kg Total catch: 653.09 CATCH/HOUR: 1187.44

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	810.18	1018	68.23	243
Merluccius capensis, male	253.82	364	21.38	242
Coelorinchus fasciatus	47.20	1222	3.97	
Helicolenus dactylopterus	31.64	371	2.66	
MYCTOPHIDAE	15.27		1.29	
Lophius upsicephalus	13.98	11	1.18	245
Todarodes sagittatus	6.11	22	0.51	
Galeus polli	4.36	138	0.37	
Merluccius paradoxus, female	1.89	15	0.16	244
Sufflogobius bibarbatatus	1.38		0.12	
Nezumia milleri	1.24	22	0.10	
Squilla acuelata calmani	0.29	22	0.02	
Epigonus denticulatus	0.07	7	0.01	
Total	1187.43		100.00	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2419 Long E 1343
start stop duration
TIME :17:32:00 17:52:00 20 (min) Purpose code: 3
LOG :2867.20 2868.00 1.10 Area code : 2
FDEPTH: 303 299 GearCond.code:
BDEPTH: 303 299 Validity code:
Towing dir: 355 Wire out: 950 m Speed: 32 kn*10

Sorted: 149 Kg Total catch: 149.32 CATCH/HOUR: 447.96

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	224.10	237	50.03	262
Helicolenus dactylopterus	78.90	2073	17.61	
Merluccius capensis, male	45.00	51	10.05	261
Schedophilus huttoni	38.40	15	8.57	
Merluccius paradoxus, female	27.60	144	6.16	264
Lophius upsicephalus	17.16	9	3.83	265
Todarodes sagittatus	4.80	9	1.07	
Coelorinchus fasciatus	4.38	51	0.98	
Merluccius paradoxus, male	4.11	21	0.92	263
Krill	2.94		0.66	
Galeus polli	0.42	9	0.09	
Epigonus denticulatus	0.15	12	0.03	
Total	447.96		100.00	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2429 Long E 1353
start stop duration
TIME :10:49:00 11:20:00 31 (min) Purpose code: 3
LOG :2827.80 2829.20 1.60 Area code : 2
FDEPTH: 256 263 GearCond.code:
BDEPTH: 256 263 Validity code:
Towing dir: 360 Wire out: 900 m Speed: 28 kn*10

Sorted: 113 Kg Total catch: 422.50 CATCH/HOUR: 817.74

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	577.74	1227	70.65	247
Merluccius capensis, male	103.80	319	12.69	246
Sufflogobius bibarbatatus	97.41	10711	11.91	
Helicolenus dactylopterus	13.65	290	1.67	
Coelorinchus fasciatus	12.99	240	1.59	
Todarodes sagittatus	10.61	29	1.30	
Galeus polli	1.24	29	0.15	
Lepidopus caudatus	0.21	15	0.03	
Squilla acuelata calmani	0.08	8	0.01	
Total	817.73		100.00	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2419 Long E 1324
start stop duration
TIME :20:12:00 20:43:00 31 (min) Purpose code: 3
LOG :2887.20 2888.60 1.70 Area code : 2
FDEPTH: 360 358 GearCond.code:
BDEPTH: 360 358 Validity code:
Towing dir: 335 Wire out:1050 m Speed: 30 kn*10

Sorted: 127 Kg Total catch: 306.79 CATCH/HOUR: 593.79

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	422.25	329	71.11	267
Merluccius capensis, male	72.93	66	12.28	266
Helicolenus dactylopterus	27.27	507	4.59	
Merluccius paradoxus, female	16.99	46	2.86	268
Krill	16.63		2.80	
Coelorinchus fasciatus	14.50	172	2.44	
Todarodes sagittatus	9.79	23	1.65	
Epigonus denticulatus	7.57	252	1.27	
Galeus polli	2.92	43	0.49	
MYCTOPHIDAE	1.12	112	0.19	
Nezumia milleri	1.12	56	0.19	
Selachophidium guentheri	0.50	19	0.08	
Ebinania costaecanarie	0.19	10	0.03	
Total	593.78		99.98	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2421 Long E 1400
start stop duration
TIME :12:45:00 13:15:00 30 (min) Purpose code: 3
LOG :2839.40 2840.80 1.64 Area code : 2
FDEPTH: 196 200 GearCond.code:
BDEPTH: 196 200 Validity code:
Towing dir: 350 Wire out: 750 m Speed: 31 kn*10

Sorted: 74 Kg Total catch: 225.63 CATCH/HOUR: 451.26

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	210.00	1498	46.54	252
Merluccius capensis, male	140.00	1246	31.02	251
Merluccius capensis, female	65.40	64	14.49	249
Merluccius capensis, male	24.60	26	5.45	248
Austroglossus microlepis	7.48	16	1.66	250
Chelidonichthys capensis	2.66	14	0.59	
Galeus polli	0.70	14	0.16	
Sufflogobius bibarbatatus	0.42	56	0.09	
Total	451.26		100.00	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2412 Long E 1319
start stop duration
TIME :21:57:00 22:27:00 30 (min) Purpose code: 3
LOG :2896.00 2897.40 1.70 Area code : 2
FDEPTH: 460 460 GearCond.code:
BDEPTH: 460 460 Validity code:
Towing dir: 335 Wire out:1250 m Speed: 32 kn*10

Sorted: 50 Kg Total catch: 123.52 CATCH/HOUR: 247.04

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	154.00	340	62.34	270
Trachyrhinus scabrus	64.50	176	26.11	
Merluccius capensis, female	12.00	6	4.86	271
Merluccius paradoxus, male	5.00	10	2.02	269
Todarodes sagittatus	4.66	10	1.89	
Lophius upsicephalus	2.66	2	1.08	272
Helicolenus dactylopterus	1.40	6	0.57	
MYCTOPHIDAE	0.86	130	0.35	
Beryx splendens	0.68	2	0.28	
Epigonus denticulatus	0.56	10	0.23	
Nezumia milleri	0.26	20	0.11	
Notacanthus sexspinis	0.20	6	0.08	
Selachophidium guentheri	0.16	6	0.06	
Hoplostethus cadonati	0.10	10	0.04	
Total	247.04		100.02	

DATE: 1/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2420 Long E 1357
start stop duration
TIME :14:06:00 14:36:00 30 (min) Purpose code: 3
LOG :2846.10 2847.50 1.60 Area code : 2
FDEPTH: 228 228 GearCond.code:
BDEPTH: 228 228 Validity code:
Towing dir: 350 Wire out: 800 m Speed: 30 kn*10

Sorted: 109 Kg Total catch: 211.20 CATCH/HOUR: 422.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatatus	212.80	12090	50.38	
Merluccius capensis, female	134.40	530	31.82	254
Merluccius capensis, male	49.00	338	11.60	253
Coelorinchus fasciatus	9.12	112	2.16	
Todarodes sagittatus	8.80	32	2.08	
Lophius upsicephalus	4.06	8	0.96	255
Galeus polli	2.88	112	0.68	
Austroglossus microlepis	0.86	2	0.20	256
Lepidopus caudatus	0.32	16	0.08	
Squilla acuelata calmani	0.16	16	0.04	
Total	422.40		100.00	

PROJECT STATION:1407
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1311
 start stop duration
 TIME :04:31:00 05:01:00 30 (min) Purpose code: 3
 LOG :2941.00 2942.30 1.44 Area code : 2
 FDEPTH: 549 552 GearCond.code:
 BDEPTH: 549 552 Validity code:
 Towing dir: 345 Wire out:1500 m Speed: 29 kn*10
 Sorted: 87 Kg Total catch: 173.17 CATCH/HOUR: 346.34

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius paradoxus, female	129.40	122	274
Hoplostethus cadenati	69.24	2928	
Deepwater fish mixture	52.20	15.07	
Deania calcea	27.00	12	
Nezumia milleri	25.44	708	
Todarodes sagittatus	19.32	48	
Trachyrhinus scabrus	5.04	12	
Lophius upsicephalus	4.88	2	276
Merluccius capensis, female	3.88	2	275
Etmopterus pusillus	3.84	12	
Selachophidium guentheri	2.76	36	
Galeus polli	1.68	12	
Merluccius paradoxus, male	1.06	2	273
Notacanthus sepsipinis	0.60	24	
Total	346.34	100.02	

PROJECT STATION:1408
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1314
 start stop duration
 TIME :06:33:00 07:04:00 31 (min) Purpose code: 3
 LOG :2950.50 2952.10 1.60 Area code : 2
 FDEPTH: 400 398 GearCond.code:
 BDEPTH: 400 398 Validity code:
 Towing dir: 340 Wire out:1150 m Speed: 31 kn*10
 Sorted: 162 Kg Total catch: 269.86 CATCH/HOUR: 522.31

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	250.26	145	278
Helicolenus dactylopterus	112.90	948	277
Merluccius capensis, male	45.81	33	275
Todarodes sagittatus	28.59	64	
Merluccius paradoxus, female	18.72	39	280
Deepwater fish mixture	18.33	62	
Galeus polli	17.13	62	
Aristeus varidens	5.71	755	
Nezumia milleri	3.58	101	
Etmopterus pusillus	3.45	14	
Lophius upsicephalus	2.86	4	281
Epigonus denticulatus	2.67	110	
Raja confundens	2.65	6	
Selachophidium guentheri	2.38	48	
Hoplostethus cadenati	2.17	132	
Deania calcea	1.45	4	
Coelorinchus fasciatus	1.45	15	
Notacanthus sepsipinis	0.62	25	
Merluccius paradoxus, male	0.62	4	279
Coelorinchus braueri	0.58	25	
Ebinania costaecanarie	0.19	4	
PORTUNIDAE	0.19	6	
Total	522.31	100.02	

PROJECT STATION:1409
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1320
 start stop duration
 TIME :08:47:00 09:20:00 33 (min) Purpose code: 3
 LOG :2959.60 2961.10 1.60 Area code : 2
 FDEPTH: 304 303 GearCond.code:
 BDEPTH: 304 303 Validity code:
 Towing dir: 350 Wire out: 950 m Speed: 28 kn*10
 Sorted: 144 Kg Total catch: 346.58 CATCH/HOUR: 630.15

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	321.16	265	283
Helicolenus dactylopterus	150.98	5449	
Merluccius capensis, male	69.82	62	282
Merluccius paradoxus, female	41.02	222	285
Trachurus capensis	22.07	44	286
Schedophilus huttoni	9.78	4	
Galeus polli	3.67	78	
MYCTOPHIDAE	3.02	4	
Todarodes sagittatus	2.75	4	
Coelorinchus fasciatus	1.93	44	
Epigonus denticulatus	1.87	105	
Merluccius paradoxus, male	1.13	4	284
Beryx splendens	0.35	4	
Chlorophthalmus punctatus	0.31	9	
Aristeus varidens	0.13	44	
Selachophidium guentheri	0.13	4	
Coelorinchus braueri	0.04	4	
Total	630.16	100.02	

PROJECT STATION:1410
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1332
 start stop duration
 TIME :11:06:00 11:35:00 29 (min) Purpose code: 3
 LOG :2974.80 2976.40 1.60 Area code : 2
 FDEPTH: 270 267 GearCond.code:
 BDEPTH: 270 267 Validity code:
 Towing dir: 360 Wire out: 900 m Speed: 31 kn*10
 Sorted: 180 Kg Total catch: 1175.60 CATCH/HOUR: 2432.28

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	1680.37	2522	292
Trachurus capensis	415.55	828	293
Merluccius capensis, male	151.30	364	291
Centrolophus niger	67.03	19	289
Brama brama	50.48	31	288
Helicolenus dactylopterus	39.74	1150	
Thyrssites atun	6.52	2	290
Trachipterus trachipterus	6.35	4	
Lophius upsicephalus	5.65	4	287
Coelorinchus fasciatus	5.05	141	
Galeus polli	4.24	101	
Total	2432.28	100.00	

PROJECT STATION:1411
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1346
 start stop duration
 TIME :13:51:00 14:22:00 31 (min) Purpose code: 3
 LOG :2993.00 2994.50 1.61 Area code : 2
 FDEPTH: 242 237 GearCond.code:
 BDEPTH: 242 237 Validity code:
 Towing dir: 5 Wire out: 850 m Speed: 31 kn*10
 Sorted: 137 Kg Total catch: 353.45 CATCH/HOUR: 684.10

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	399.06	1051	296
Merluccius capensis, male	145.94	333	295
Helicolenus dactylopterus	75.48	2063	
Trachurus capensis	27.43	170	297
Sufflogobius bibarbatatus	19.47	1570	
Coelorinchus fasciatus	6.39	116	
Lophius upsicephalus	3.99	10	294
Todarodes sagittatus	2.32	6	
Galeus polli	2.32	95	
MYCTOPHIDAE	1.51	10	
Squilla acuelata calmani	0.19	10	
Total	684.10	99.99	

PROJECT STATION:1412
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1400
 start stop duration
 TIME :16:26:00 16:41:00 15 (min) Purpose code: 3
 LOG :3010.70 3011.40 0.78 Area code : 2
 FDEPTH: 202 201 GearCond.code:
 BDEPTH: 202 201 Validity code:
 Towing dir: 340 Wire out: 750 m Speed: 31 kn*10
 Sorted: 75 Kg Total catch: 216.74 CATCH/HOUR: 866.96

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, male	457.04	2216	298
Merluccius capensis, female	386.28	1452	299
Trachurus capensis	17.40	116	300
Sufflogobius bibarbatatus	3.48	232	
Coelorinchus fasciatus	1.96	48	
PORTUNIDAE	0.68	12	
Squilla acuelata calmani	0.12	12	
Total	866.96	100.01	

PROJECT STATION:1413
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1408
 start stop duration
 TIME :18:11:00 18:28:00 17 (min) Purpose code: 3
 LOG :3022.60 3023.40 0.90 Area code : 2
 FDEPTH: 143 143 GearCond.code:
 BDEPTH: 143 143 Validity code:
 Towing dir: 360 Wire out: 650 m Speed: 31 kn*10
 Sorted: 13 Kg Total catch: 800.00 CATCH/HOUR: 2823.53

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	1588.38	20022	302
Merluccius capensis, male	1235.15	18000	301
Total	2823.53	100.00	

PROJECT STATION:1414
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2400 Long E 1417
 start stop duration
 TIME :20:04:00 20:16:00 12 (min) Purpose code: 3
 LOG :3034.00 3034.50 0.60 Area code : 2
 FDEPTH: 103 102 GearCond.code:
 BDEPTH: 103 102 Validity code:
 Towing dir: 360 Wire out: 450 m Speed: 23 kn*10
 Sorted: 82 Kg Total catch: 60.00 CATCH/HOUR: 300.00

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	128.80	2040	303
Merluccius capensis, male	108.00	2040	304
Sufflogobius bibarbatatus	63.20	28320	
Total	300.00	100.00	

PROJECT STATION:1415
 DATE: 2/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2406 Long E 1413
 start stop duration
 TIME :22:53:00 23:04:00 11 (min) Purpose code: 3
 LOG :3056.30 3056.70 0.60 Area code : 2
 FDEPTH: 120 120 GearCond.code:
 BDEPTH: 120 120 Validity code:
 Towing dir: 360 Wire out: 500 m Speed: 31 kn*10
 Sorted: 12 Kg Total catch: 500.00 CATCH/HOUR: 2727.27

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis	2727.27	39420	305
Total	2727.27	100.00	

PROJECT STATION:1416
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2341 Long E 1406
 start stop duration
 TIME :06:25:00 06:31:00 6 (min) Purpose code: 3
 LOG :3091.70 3092.00 0.35 Area code : 2
 FDEPTH: 153 153 GearCond.code:
 BDEPTH: 153 153 Validity code:
 Towing dir: 330 Wire out: 650 m Speed: 31 kn*10
 Sorted: 25 Kg Total catch: 300.00 CATCH/HOUR: 3000.00

SPECIES	CATCH/HOUR weight	% OF TOT. C numbers	SAMP.NO.
Merluccius capensis, female	2372.20	16040	307
Merluccius capensis, male	627.80	6870	306
Total	3000.00	100.00	

PROJECT STATION:1417
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2341 Long E 1353
 TIME :08:06:00 08:18:00 12 (min) Purpose code: 3
 LOG :3104.70 3105.20 0.70 Area code : 2
 FDEPTH: 173 173 GearCond.code:
 BDEPTH: 173 173 Validity code:
 Towing dir: 330 Wire out: 700 m Speed: 32 kn*10
 Sorted: 56 Kg Total catch: 870.33 CATCH/HOUR: 4351.65

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	2278.50	19065	52.36	309
Merluccius capensis, female	1387.25	7520	31.88	310
Trachurus capensis	681.98	4418	15.67	311
PORTUNIDAE	3.90	80	0.09	
Total	4351.63		100.00	

PROJECT STATION:1418
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2340 Long E 1341
 TIME :09:42:00 10:13:00 31 (min) Purpose code: 3
 LOG :3116.40 3117.90 1.70 Area code : 2
 FDEPTH: 200 199 GearCond.code:
 BDEPTH: 200 199 Validity code:
 Towing dir: 330 Wire out: 800 m Speed: 32 kn*10
 Sorted: 85 Kg Total catch: 987.58 CATCH/HOUR: 1911.45

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	1022.90	6188	53.51	312
Trachurus capensis	532.90	3478	27.88	314
Merluccius capensis, female	237.10	768	12.40	313
Helicolenus dactylopterus	77.90	2868	4.08	
Sufflogobius bibarbatatus	21.00	1829	1.10	
Lepidopus caudatus	8.81	112	0.46	
Coelorinchus fasciatus	4.30	68	0.22	
Lophius upsicephalus	3.62	23	0.19	
PORTUNIDAE	2.48	45	0.13	
Todarodes sagittatus	0.45	23	0.02	
Total	1911.46		99.99	

PROJECT STATION:1419
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2340 Long E 1324
 TIME :11:50:00 12:20:00 30 (min) Purpose code: 3
 LOG :3130.20 3131.80 1.66 Area code : 2
 FDEPTH: 243 243 GearCond.code:
 BDEPTH: 243 243 Validity code:
 Towing dir: 330 Wire out: 850 m Speed: 31 kn*10
 Sorted: 228 Kg Total catch: 2734.08 CATCH/HOUR: 5468.16

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	3679.20	18288	67.28	315
Merluccius capensis, female	1178.40	1776	21.55	317
Merluccius capensis, male	319.20	576	5.84	316
Helicolenus dactylopterus	96.96	3730	1.77	
Lophius upsicephalus	85.92	72	1.57	318
Coelorinchus fasciatus	51.84	816	0.95	
Galeus polli	29.52	1200	0.54	
Todarodes sagittatus	13.92	24	0.25	
Chlorophthalmus atlanticus	7.92	528	0.14	
Lepidopus caudatus	3.60	24	0.07	
Sufflogobius bibarbatatus	1.68	96	0.03	
Total	5468.16		99.99	

PROJECT STATION:1420
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2341 Long E 1318
 TIME :13:56:00 14:29:00 33 (min) Purpose code: 3
 LOG :3143.80 3145.60 1.70 Area code : 2
 FDEPTH: 300 300 GearCond.code:
 BDEPTH: 300 300 Validity code:
 Towing dir: 360 Wire out: 950 m Speed: 30 kn*10
 Sorted: 145 Kg Total catch: 368.77 CATCH/HOUR: 670.49

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	343.64	371	51.25	320
Merluccius capensis, male	106.91	104	15.95	319
Helicolenus dactylopterus	62.67	1769	9.35	
Centrolophus niger	44.18	18	6.59	323
Trachurus capensis	28.91	49	4.31	325
Merluccius paradoxus, female	24.00	131	3.58	322
Deepwater fish mixture	21.44	2	3.20	
Trachipterus trachipterus	9.38	16	1.63	
Todarodes sagittatus	6.33	98	0.94	
Galeus polli	4.71	4	0.70	324
Brama brama	2.89	82	0.43	
Chlorophthalmus atlanticus	1.75	76	0.26	
Epigonus denticulatus	1.36	22	0.20	
Coelorinchus fasciatus	1.15	5	0.17	321
Merluccius paradoxus, male	0.27	5	0.04	
Malacocephalus occidentalis				
Total	670.50		100.00	

PROJECT STATION:1421
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2341 Long E 1311
 TIME :15:45:00 16:15:00 30 (min) Purpose code: 3
 LOG :3154.60 3156.30 1.40 Area code : 2
 FDEPTH: 380 373 GearCond.code:
 BDEPTH: 380 373 Validity code:
 Towing dir: 355 Wire out:1100 m Speed: 26 kn*10
 Sorted: 101 Kg Total catch: 192.48 CATCH/HOUR: 384.96

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	123.80	82	32.16	327
Helicolenus dactylopterus	110.18	1208	28.62	
Merluccius paradoxus, female	24.00	52	6.23	329
Hoplostethus cadenati	23.38	1806	6.07	
Trachurus capensis	21.14	42	5.49	
Todarodes sagittatus	21.00	70	4.57	
Merluccius capensis, male	17.60	14	2.62	326
Coelorinchus fasciatus	10.08	112	2.18	
Galeus polli	8.40	112	1.42	
Aristeus varidens	5.46	42	1.09	
Deepwater fish mixture	4.20	2	0.91	
Selachophidium guentheri	3.50	98	0.84	
Centrolophus niger	3.22	2	0.65	
Nezumia milleri	2.52	168	0.56	
Merluccius paradoxus, male	2.14	4	0.66	328
Epigonus denticulatus	1.68	42	0.44	
Trachurus capensis	1.40	4	0.36	
Notacanthus sexspinis	0.98	56	0.25	
Chlorophthalmus atlanticus	0.28	14	0.07	
Total	384.96		99.99	

PROJECT STATION:1422
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2340 Long E 1307
 TIME :17:22:00 17:52:00 30 (min) Purpose code: 3
 LOG :3163.10 3164.80 1.50 Area code : 2
 FDEPTH: 472 475 GearCond.code:
 BDEPTH: 472 475 Validity code:
 Towing dir: 350 Wire out:1300 m Speed: 29 kn*10
 Sorted: 142 Kg Total catch: 213.61 CATCH/HOUR: 427.22

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	125.70	232	29.42	332
Trachyrinus scabrus	86.10	286	20.15	
Todarodes sagittatus	71.40	126	16.71	
Hoplostethus cadenati	43.56	3478	10.20	
Merluccius capensis, female	42.30	24	9.90	330
Deania calcea	14.70	12	3.44	
Deepwater fish mixture	10.08	12	2.36	
Nezumia milleri	6.46	402	1.51	
Schedophilus huttoni	6.00	4	1.40	
S H R I M P S	3.76		0.88	
Helicolenus dactylopterus	3.30	22	0.77	
Lophius upsicephalus	2.70	4	0.63	333
Galeus polli	2.50	36	0.59	
Etmopterus pusillus	1.92	6	0.45	
Merluccius paradoxus, male	1.44	4	0.34	331
Centrophorus squamosus	1.24	4	0.29	
Epigonus denticulatus	1.12	54	0.26	
Trachurus capensis	0.94	6	0.22	
Tetragonus cuvieri	0.82	4	0.19	
Selachophidium guentheri	0.40	10	0.09	
Aristeus varidens	0.34		0.08	
Paradiplodius gracilis	0.22	4	0.05	
Notacanthus sexspinis	0.22	10	0.05	
Total	427.22		99.98	

PROJECT STATION:1423
 DATE: 3/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2337 Long E 1304
 TIME :18:56:00 19:26:00 30 (min) Purpose code: 3
 LOG :3169.30 3170.80 1.40 Area code : 2
 FDEPTH: 582 578 GearCond.code:
 BDEPTH: 582 578 Validity code:
 Towing dir: 350 Wire out:1550 m Speed: 29 kn*10
 Sorted: 39 Kg Total catch: 119.08 CATCH/HOUR: 238.16

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Deania calcea	84.80	40	35.61	
Hoplostethus cadenati	58.96	1792	24.76	
Nezumia milleri	27.20	1064	11.42	
Merluccius paradoxus, female	24.80	20	10.41	334
Todarodes sagittatus	21.20	24	8.90	
Deepwater fish mixture	6.64	24	2.79	
Galeus polli	5.92	56	2.49	
Selachophidium guentheri	3.28	40	1.38	
S H R I M P S	1.92		0.81	
Aristeus varidens	1.60	120	0.67	
ALEPOCEPHALIDAE	1.04	56	0.44	
Allocyttus verrucosus	0.32	8	0.13	
Stereomastis sculpata	0.16	8	0.07	
Heterocarpus grimaldii	0.16	8	0.07	
Notacanthus sexspinis	0.16	8	0.07	
Total	238.16		100.02	

PROJECT STATION:1424
 DATE: 4/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2320 Long E 1316
 TIME :06:25:00 06:56:00 31 (min) Purpose code: 3
 LOG :3208.30 3209.80 1.60 Area code : 2
 FDEPTH: 355 360 GearCond.code:
 BDEPTH: 355 360 Validity code:
 Towing dir: 350 Wire out:1050 m Speed: 29 kn*10
 Sorted: 166 Kg Total catch: 416.14 CATCH/HOUR: 805.43

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	569.03	383	70.65	336
Merluccius capensis, male	84.68	68	10.51	335
Todarodes sagittatus	55.94	122	6.95	
Galeus polli	21.29	271	2.64	
Helicolenus dactylopterus	20.38	364	2.53	
Krill	15.35		1.91	
Merluccius paradoxus, female	14.90	48	1.85	337
Neoharriotta pinnata	12.29	10	1.53	
Epigonus denticulatus	5.96	300	0.74	
Hoplostethus cadenati	2.48	58	0.31	
Chlorophthalmus punctatus	1.16	35	0.14	
Coelorinchus fasciatus	0.93	15	0.12	
Nezumia milleri	0.74	29	0.09	
Selachophidium guentheri	0.25	10	0.03	
Notacanthus sexspinis	0.06	6	0.01	
Total	805.44		100.01	

PROJECT STATION:1425
 DATE: 4/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2320
 start stop duration Long E 1324
 TIME :08:13:00 08:44:00 31 (min) Purpose code: 3
 LOG :3218.70 3220.20 1.50 Area code : 2
 FDEPTH: 285 285 GearCond.code:
 BDEPTH: 285 285 Validity code:
 Towing dir: 10 Wire out: 950 m Speed: 30 kn*10
 Sorted: 105 Kg Total catch: 262.05 CATCH/HOUR: 507.19

PROJECT STATION:1430
 DATE: 4/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2320
 start stop duration Long E 1411
 TIME :17:31:00 17:36:00 5 (min) Purpose code: 3
 LOG :3278.70 3278.90 0.24 Area code : 2
 FDEPTH: 116 116 GearCond.code:
 BDEPTH: 116 116 Validity code:
 Towing dir: 360 Wire out: 500 m Speed: 25 kn*10
 Sorted: 1 Kg Total catch: 100.00 CATCH/HOUR: 1200.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	148.12	397	29.20	340
MYCTOPHIDAE	107.40		21.18	
Merluccius capensis, male	100.65	81	19.84	338
Merluccius capensis, female	42.74	257	8.43	339
Helicolenus dactylopterus	36.17	1463	7.13	
Schedophilus huttoni	28.90	10	5.70	
Brama brama	12.19	8	2.40	341
Chlorophthalmus punctatus	6.25	165	1.23	
Todarodes sagittatus	5.52	10	1.09	
Thyrsites atun	5.17	2	1.02	343
Coelorinchus fasciatus	4.39	56	0.87	
Lophius upsicephalus	3.10	2	0.61	342
Galeus polli	3.00	68	0.59	
Hyperoglyphe moselii	1.90	2	0.37	
Beryx splendens	1.49	21	0.29	
Malacocephalus occidentalis	0.15	6	0.03	
Nemichthys scolopacea	0.06	6	0.01	
Total	507.20		99.99	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatu	1200.00	541176	100.00	
Total	1200.00		100.00	

PROJECT STATION:1431
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2300
 start stop duration Long E 1347
 TIME :06:06:00 06:21:00 15 (min) Purpose code: 3
 LOG :3321.20 3322.00 0.90 Area code : 2
 FDEPTH: 140 139 GearCond.code:
 BDEPTH: 140 139 Validity code:
 Towing dir: 320 Wire out: 600 m Speed: 26 kn*10
 Sorted: 29 Kg Total catch: 1291.95 CATCH/HOUR: 5167.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	2790.00	30960	53.99	356
Merluccius capensis, male	2052.00	28260	39.71	355
Trachurus capensis	169.20	1260	3.27	357
Chelidonichthys capensis	151.20	180	2.93	
Sufflogobius bibarbatu	5.40	900	0.10	
Total	5167.80		100.00	

PROJECT STATION:1426
 DATE: 4/11/92 GEAR TYPE: PT No:1 POSITION:Lat S 2318
 start stop duration Long E 1326
 TIME :09:43:00 09:56:00 13 (min) Purpose code: 3
 LOG :3223.30 3224.10 0.80 Area code : 2
 FDEPTH: 120 120 GearCond.code:
 BDEPTH: 250 245 Validity code:
 Towing dir: 250 Wire out: 300 m Speed: 35 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

PROJECT STATION:1432
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2301
 start stop duration Long E 1333
 TIME :10:14:00 10:44:00 30 (min) Purpose code: 3
 LOG :3337.10 3338.50 1.70 Area code : 2
 FDEPTH: 182 184 GearCond.code:
 BDEPTH: 182 184 Validity code:
 Towing dir: 350 Wire out: 700 m Speed: 33 kn*10
 Sorted: 59 Kg Total catch: 964.17 CATCH/HOUR: 1928.34

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
N O C A T C H	0.00			
Total				

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	871.20	9010	45.18	359
Merluccius capensis, female	673.20	5610	34.91	360
Trachurus capensis	336.60	2014	17.46	361
Helicolenus dactylopterus	28.38	1122	1.47	
Lepidopus caudatus	7.92	66	0.41	
Coelorinchus fasciatus	5.62	232	0.29	
Sufflogobius bibarbatu	3.64	760	0.19	
Lophius upsicephalus	1.78	2	0.09	358
Total	1928.34		100.00	

PROJECT STATION:1427
 DATE: 4/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2318
 start stop duration Long E 1331
 TIME :10:49:00 11:20:00 31 (min) Purpose code: 3
 LOG :3228.50 3229.90 1.60 Area code : 2
 FDEPTH: 211 217 GearCond.code:
 BDEPTH: 211 217 Validity code:
 Towing dir: 350 Wire out: 800 m Speed: 31 kn*10
 Sorted: 192 Kg Total catch: 1246.52 CATCH/HOUR: 2412.62

PROJECT STATION:1433
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2300
 start stop duration Long E 1324
 TIME :11:54:00 12:25:00 31 (min) Purpose code: 3
 LOG :3347.00 3348.40 1.63 Area code : 2
 FDEPTH: 305 315 GearCond.code:
 BDEPTH: 305 315 Validity code:
 Towing dir: 310 Wire out: 950 m Speed: 32 kn*10
 Sorted: 147 Kg Total catch: 159.70 CATCH/HOUR: 309.10

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	970.45	4953	40.22	345
Merluccius capensis, female	599.42	1514	24.85	347
Merluccius capensis, male	592.06	1409	24.54	346
Lepidopus caudatus	133.55	1053	5.54	
Thyrsites atun	65.94	21	2.73	344
Helicolenus dactylopterus	39.62	1485	1.64	
Sufflogobius bibarbatu	4.74	445	0.20	
Galeus polli	1.78	29	0.07	
Chlorophthalmus atlanticus	1.63	118	0.06	
Beryx splendens	1.49	15	0.06	
Todarodes sagittatus	1.34	15	0.06	
Coelorinchus fasciatus	0.60	29	0.02	
Total	2412.62		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	157.35	103	50.91	364
Merluccius capensis, male	76.26	68	24.67	363
Helicolenus dactylopterus	24.08	666	7.79	
Galeus polli	22.61	422	7.31	
Trachurus capensis	12.97	41	4.20	366
Lophius upsicephalus	10.72	10	3.47	365
Chlorophthalmus atlanticus	1.82	46	0.59	
Merluccius paradoxus, female	1.37	4	0.44	362
Torpedo nobiliana	1.14	2	0.37	
Coelorinchus fasciatus	0.70	23	0.23	
Ebinania costaeanae	0.08	4	0.03	
Total	309.10		100.01	

PROJECT STATION:1428
 DATE: 4/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2320
 start stop duration Long E 1343
 TIME :13:09:00 13:39:00 30 (min) Purpose code: 3
 LOG :3245.00 3246.40 1.58 Area code : 2
 FDEPTH: 152 157 GearCond.code:
 BDEPTH: 152 157 Validity code:
 Towing dir: 350 Wire out: 650 m Speed: 31 kn*10
 Sorted: 143 Kg Total catch: 1186.50 CATCH/HOUR: 2373.00

PROJECT STATION:1434
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2301
 start stop duration Long E 1313
 TIME :14:05:00 14:35:00 30 (min) Purpose code: 3
 LOG :3362.00 3363.30 1.55 Area code : 2
 FDEPTH: 352 343 GearCond.code:
 BDEPTH: 352 343 Validity code:
 Towing dir: 360 Wire out: 1050 m Speed: 31 kn*10
 Sorted: 181 Kg Total catch: 193.14 CATCH/HOUR: 386.28

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	964.00	7892	40.62	349
Merluccius capensis, male	784.00	9106	33.04	348
Trachurus capensis	540.00	3400	22.76	350
Galeorhinus galeus	54.00	2	2.28	
Chelidonichthys capensis	18.00	40	0.76	
Coelorinchus fasciatus	8.80	140	0.37	
Pterothrissus belloci	2.60	20	0.11	
Sufflogobius bibarbatu	1.60	220	0.07	
Total	2373.00		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	211.80	148	54.83	370
Merluccius capensis, male	60.40	62	15.64	369
Schedophilus huttoni	25.80	10	6.68	372
Merluccius paradoxus, female	23.60	102	6.11	368
Helicolenus dactylopterus	19.76	364	5.12	
Torpedo nobiliana	7.80	2	2.02	
Todarodes sagittatus	7.44	20	1.93	
Krill	7.28		1.88	
Deepwater fish mixture	6.52		1.69	
Epigonus denticulatus	4.96	208	1.28	
Galeus polli	3.44	88	0.89	
Trachurus capensis	2.74	10	0.71	371
Zenopsis conchifer	2.62	2	0.68	
Merluccius paradoxus, male	1.04	8	0.27	367
S H R I M P S	0.72		0.19	
Coelorinchus fasciatus	0.20	4	0.05	
Nezumia milleri	0.16	8	0.04	
Total	386.28		100.01	

PROJECT STATION:1429
 DATE: 4/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2320
 start stop duration Long E 1356
 TIME :15:26:00 15:36:00 10 (min) Purpose code: 3
 LOG :3261.40 3262.00 0.56 Area code : 2
 FDEPTH: 152 152 GearCond.code:
 BDEPTH: 152 152 Validity code:
 Towing dir: 360 Wire out: 650 m Speed: 30 kn*10
 Sorted: 99 Kg Total catch: 780.73 CATCH/HOUR: 4684.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	2556.00	32940	54.56	354
Merluccius capensis, male	1620.00	23400	34.58	353
Merluccius capensis, female	444.00	636	9.48	352
Trachurus capensis	55.80	360	1.19	
Merluccius capensis, male	8.58	12	0.18	351
Total	4684.38		99.99	

PROJECT STATION:1435
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2300 Long E 1301
 start stop duration
 TIME :16:17:00 16:50:00 33 (min) Purpose code: 3
 LOG :3376.90 3378.30 1.59 Area code : 2
 FDEPTH: 450 441 GearCond.code:
 BDEPTH: 450 441 Validity code:
 Towing dir: 351 Wire out:1250 m Speed: 30 kn*10
 Sorted: 157 Kg Total catch: 409.39 CATCH/HOUR: 744.35

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	336.82	685	45.25	375
Merluccius capensis, female	122.91	71	16.51	373
Trachyrinus scabrus	80.96	307	10.88	
Lophius upsicephalus	32.73	11	4.40	
Centrophorus squamosus	22.36	2	3.00	
Helicolenus dactylopterus	22.04	89	2.96	
Schedophilus huttoni	20.55	16	2.76	376
Todarodes sagittatus	17.91	42	2.41	
Merluccius paradoxus, male	15.73	35	2.11	374
Nezumia milleri	13.13	698	1.76	
Neoharriotta pinnata	9.27	5	1.25	
Etmopterus pusillus	8.93	24	1.20	
Centrophorus squamosus	7.56	5	1.02	
Hoplostethus cadenati	7.27	236	0.98	
S H R I M P S	7.15		0.96	
Centrophorus granulosus	6.49	2	0.87	
Deepwater fish mixture	4.78		0.64	
Deania calcea	3.20	5	0.43	
Galeus polli	2.25	36	0.30	
Epigonus denticulatus	2.02	53	0.27	
Selachophidium guentheri	0.29	5	0.04	
Total	744.35		100.00	

PROJECT STATION:1438
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2239 Long E 1253
 start stop duration
 TIME :22:46:00 23:16:00 30 (min) Purpose code: 3
 LOG :3407.60 3408.90 1.60 Area code : 2
 FDEPTH: 369 383 GearCond.code:
 BDEPTH: 369 383 Validity code:
 Towing dir: 350 Wire out:1100 m Speed: 27 kn*10
 Sorted: 172 Kg Total catch: 172.02 CATCH/HOUR: 344.04

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	196.00	124	56.97	389
Merluccius capensis, male	44.80	34	13.02	388
Helicolenus dactylopterus	36.00	200	10.46	
Merluccius paradoxus, female	24.60	72	7.15	386
Epigonus denticulatus	11.90	332	3.46	
Todarodes sagittatus	7.90	16	2.30	
Deepwater fish mixture	4.16		1.21	
Coelorinchus fasciatus	3.36	40	0.98	
Etmopterus pusillus	2.72	10	0.79	
Deania calcea	2.40	2	0.70	
Galeus polli	2.38	38	0.69	
Aristeus varidens	1.64		0.48	
Lophius upsicephalus	1.26	2	0.37	387
Hoplostethus cadenati	1.08	22	0.31	
Selachophidium guentheri	0.78	22	0.23	
Nezumia milleri	0.64	22	0.19	
Chlorophthalmus atlanticus	0.60	18	0.17	
OMMASTREPHIDAE	0.50	14	0.15	
Coelorinchus coelorinch. polli	0.50	10	0.15	
Merluccius paradoxus, male	0.34	2	0.10	385
Trachurus capensis	0.32	2	0.09	
Notacanthus sexspinis	0.16	4	0.05	
Total	344.04		100.02	

PROJECT STATION:1436
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2255 Long E 1300
 start stop duration
 TIME :17:41:00 18:10:00 29 (min) Purpose code: 3
 LOG :3382.30 3383.70 1.70 Area code : 2
 FDEPTH: 400 397 GearCond.code:
 BDEPTH: 400 397 Validity code:
 Towing dir: 345 Wire out:1150 m Speed: 32 kn*10
 Sorted: 190 Kg Total catch: 222.95 CATCH/HOUR: 461.28

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	147.10	79	31.89	379
Merluccius paradoxus, female	115.86	283	25.12	381
Helicolenus dactylopterus	61.66	170	13.37	
Centrophorus squamosus	30.41	4	6.59	
Merluccius capensis, male	23.38	17	5.07	378
Hoplostethus cadenati	20.11	455	4.36	
Todarodes sagittatus	17.54	66	3.80	
S H R I M P S	12.70		2.75	
Schedophilus huttoni	7.03	4	1.52	
Nezumia milleri	5.26	445	1.14	
Epigonus denticulatus	3.68	116	0.80	
Deania calcea	3.23	8	0.70	
Galeus polli	2.69	33	0.58	
Deepwater fish mixture	2.40		0.52	
Merluccius paradoxus, male	2.13	10	0.46	380
Aristeus varidens	1.70	178	0.37	
Selachophidium guentheri	1.53	25	0.33	
Etmopterus pusillus	1.37	8	0.30	
Coelorinchus coelorinch. polli	1.24	12	0.27	
Notacanthus sexspinis	0.25	17	0.05	
Total	461.27		99.99	

PROJECT STATION:1439
 DATE: 6/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2240 Long E 1255
 start stop duration
 TIME :06:26:00 06:56:00 30 (min) Purpose code: 3
 LOG :3423.90 3425.60 1.60 Area code : 2
 FDEPTH: 331 330 GearCond.code:
 BDEPTH: 331 330 Validity code:
 Towing dir: 350 Wire out:1000 m Speed: 30 kn*10
 Sorted: 161 Kg Total catch: 293.04 CATCH/HOUR: 586.08

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	416.54	252	71.07	391
Merluccius capensis, male	82.14	74	14.02	390
Helicolenus dactylopterus	33.84	594	5.77	
Merluccius paradoxus, female	18.04	80	3.08	392
Epigonus denticulatus	7.96	362	1.36	
Deepwater fish mixture	5.98		1.02	
Genypterus capensis	4.58	4	0.78	393
Schedophilus huttoni	3.92	4	0.67	
Coelorinchus fasciatus	2.94	44	0.50	
Todarodes sagittatus	2.78	8	0.47	
Coelorinchus coelorinch. polli	2.08	66	0.35	
Chlorophthalmus punctatus	1.36	44	0.23	
Nezumia milleri	1.10	36	0.19	
Etmopterus pusillus	1.02	4	0.17	
Galeus polli	0.66	10	0.11	
Selachophidium guentheri	0.62	8	0.11	
Hoplostethus cadenati	0.52	14	0.09	
Total	586.08		99.99	

PROJECT STATION:1437
 DATE: 5/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2241 Long E 1249
 start stop duration
 TIME :20:30:00 21:00:00 30 (min) Purpose code: 3
 LOG :3399.90 3401.10 1.40 Area code : 2
 FDEPTH: 543 543 GearCond.code:
 BDEPTH: 543 543 Validity code:
 Towing dir: 340 Wire out:1450 m Speed: 29 kn*10
 Sorted: 50 Kg Total catch: 50.07 CATCH/HOUR: 100.14

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	40.80	76	40.74	384
Todarodes sagittatus	13.80	28	13.78	
Deania calcea	7.20	6	7.19	
Merluccius capensis, female	6.70	4	6.69	382
Hoplostethus cadenati	5.68	130	5.67	
Centrophorus squamosus	4.30	4	4.29	
Deepwater fish mixture	4.28		4.27	
Allocyttus verrucosus	3.44	68	3.44	
Trachyrinus scabrus	3.20	18	3.20	
Helicolenus dactylopterus	2.18	14	2.18	
Nezumia milleri	2.14	76	2.14	
Coelorinchus matamua	2.10	4	2.10	
Raja confundens	1.32	2	1.32	
Epigonus denticulatus	1.24	26	1.24	
Merluccius paradoxus, male	0.64	4	0.64	383
Notacanthus sexspinis	0.42	20	0.42	
Selachophidium guentheri	0.30	6	0.30	
Aristeus varidens	0.22	26	0.22	
Galeus polli	0.18	10	0.18	
Total	100.14		100.01	

PROJECT STATION:1440
 DATE: 6/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2242 Long E 1308
 start stop duration
 TIME :08:52:00 09:13:00 21 (min) Purpose code: 3
 LOG :3441.30 3442.50 1.00 Area code : 2
 FDEPTH: 307 305 GearCond.code:
 BDEPTH: 307 305 Validity code:
 Towing dir: 360 Wire out: 950 m Speed: 29 kn*10
 Sorted: 125 Kg Total catch: 241.90 CATCH/HOUR: 691.14

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	378.86	326	54.82	395
Merluccius capensis, male	176.57	183	25.55	394
Trachurus capensis	35.31	114	5.11	397
Schedophilus huttoni	34.80	14	5.04	
Helicolenus dactylopterus	29.14	1209	4.22	
MYCTOPHIDAE	18.06		2.61	
Merluccius paradoxus, female	14.34	69	2.07	396
Chlorophthalmus punctatus	1.83	57	0.26	
Galeus polli	1.20	34	0.17	
Coelorinchus fasciatus	0.80	6	0.12	
Coelorinchus coelorinch. polli	0.11	6	0.02	
Nezumia milleri	0.06	6	0.01	
Epigonus denticulatus	0.06	11	0.01	
Total	691.14		100.01	

PROJECT STATION:1441
 DATE: 6/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2244 Long E 1325
 start stop duration
 TIME :11:17:00 11:36:00 19 (min) Purpose code: 3
 LOG :3460.30 3461.30 1.00 Area code : 2
 FDEPTH: 260 253 GearCond.code:
 BDEPTH: 260 253 Validity code:
 Towing dir: 90 Wire out: 900 m Speed: 30 kn*10
 Sorted: 132 Kg Total catch: 211.21 CATCH/HOUR: 666.98

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	255.66	278	38.33	401
Merluccius capensis, male	210.69	262	31.59	400
Trachurus capensis	69.22	196	10.38	399
Deepwater fish mixture	57.60		8.64	
Chlorophthalmus atlanticus	26.34	985	3.95	
Helicolenus dactylopterus	22.48	707	3.37	
Coelorinchus fasciatus	9.51	136	1.43	
Todarodes sagittatus	5.40	19	0.81	
Galeus polli	4.89	167	0.73	
Lophius upsicephalus	4.01	6	0.60	398
Beryx splendens	1.17	9	0.18	
Total	666.97		100.01	

PROJECT STATION:1442
 DATE: 6/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2242 Long E 1337
 start stop duration
 TIME :13:12:00 13:22:00 10 (min) Purpose code: 3
 LOG :3474.10 3474.60 0.61 Area code : 2
 FDEPTH: 133 133 GearCond.code:
 BDEPTH: 133 133 Validity code:
 Towing dir: 102 Wire out: 550 m Speed: 33 kn*10
 Sorted: 113 Kg Total catch: 1239.37 CATCH/HOUR: 7436.22

PROJECT STATION:1448
 DATE: 9/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2219 Long E 1328
 start stop duration
 TIME :09:59:00 10:29:00 30 (min) Purpose code: 3
 LOG :3646.80 3648.20 1.70 Area code : 2
 FDEPTH: 162 164 GearCond.code:
 BDEPTH: 162 164 Validity code:
 Towing dir: 300 Wire out: 650 m Speed: 33 kn*10
 Sorted: 62 Kg Total catch: 1719.47 CATCH/HOUR: 3438.94

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	4474.80	33396	60.18	404
Merluccius capensis, female	1788.60	18006	24.05	403
Merluccius capensis, male	1128.60	17106	15.18	402
Chelidonichthys capensis	23.10	66	0.31	
Lepidopus caudatus	13.86	264	0.19	
Pterothrissus bellioi	7.26	66	0.10	
Total	7436.22		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	1827.00	13630	53.13	413
Merluccius capensis, female	1548.60	6902	45.03	414
Lepidopus caudatus	45.24	580	1.32	
Coelorinchus fasciatus	11.60	174	0.34	
Lophius upsicephalus	2.74	4	0.08	412
Callorhynchus capensis	2.60	2	0.08	
Merluccius capensis, juveniles	1.16	58	0.03	
Total	3438.94		100.01	

PROJECT STATION:1443
 DATE: 8/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2240 Long E 1406
 start stop duration
 TIME :13:52:00 14:22:00 30 (min) Purpose code: 3
 LOG :3564.00 3565.30 1.72 Area code : 2
 FDEPTH: 106 109 GearCond.code:
 BDEPTH: 106 109 Validity code:
 Towing dir: 345 Wire out: 450 m Speed: 34 kn*10
 Sorted: 50 Kg Total catch: 50.08 CATCH/HOUR: 100.16

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatatus	100.00		99.84	
Merluccius capensis	0.16	2	0.16	
Total	100.16		100.00	

PROJECT STATION:1449
 DATE: 9/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2220 Long E 1315
 start stop duration
 TIME :12:13:00 12:43:00 30 (min) Purpose code: 3
 LOG :3662.00 3663.40 1.73 Area code : 2
 FDEPTH: 228 227 GearCond.code:
 BDEPTH: 228 227 Validity code:
 Towing dir: 340 Wire out: 800 m Speed: 33 kn*10
 Sorted: 138 Kg Total catch: 494.47 CATCH/HOUR: 988.94

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	422.60	1604	42.73	415
Merluccius capensis, male	322.60	792	32.62	417
Merluccius capensis, female	154.00	316	15.57	418
Chlorophthalmus atlanticus	44.20	3674	4.47	
Coelorinchus fasciatus	13.18	202	1.33	
Todarodes sagittatus	10.36	14	1.05	
Helicolenus dactylopterus	9.22	368	0.93	
Lepidopus caudatus	5.32	44	0.54	
Lophius upsicephalus	2.86	4	0.29	416
Galeus polli	2.44	86	0.25	
Todaropsis eblanae	1.16	58	0.12	
Sufflogobius bibarbatatus	1.00	158	0.10	
Total	988.94		100.00	

PROJECT STATION:1444
 DATE: 8/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2240 Long E 1355
 start stop duration
 TIME :15:46:00 16:16:00 30 (min) Purpose code: 3
 LOG :3577.30 3578.80 1.62 Area code : 2
 FDEPTH: 122 120 GearCond.code:
 BDEPTH: 122 120 Validity code:
 Towing dir: 10 Wire out: 500 m Speed: 32 kn*10
 Sorted: 47 Kg Total catch: 2075.57 CATCH/HOUR: 4151.14

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	2352.00	24640	56.66	406
Merluccius capensis, male	1750.00	21280	42.16	405
Chelidonichthys capensis	34.40	112	0.83	
Todaropsis eblanae	14.00	420	0.34	
Austroglossus microlepis	0.74	2	0.02	407
Total	4151.14		100.01	

PROJECT STATION:1450
 DATE: 9/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2220 Long E 1304
 start stop duration
 TIME :14:18:00 14:48:00 30 (min) Purpose code: 3
 LOG :3675.80 3677.10 1.75 Area code : 2
 FDEPTH: 254 254 GearCond.code:
 BDEPTH: 254 254 Validity code:
 Towing dir: 355 Wire out: 900 m Speed: 33 kn*10
 Sorted: 216 Kg Total catch: 1507.90 CATCH/HOUR: 3015.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	1801.80	4376	59.75	419
Merluccius capensis, female	926.80	840	30.73	422
Merluccius capensis, male	98.00	112	3.25	421
Chlorophthalmus atlanticus	97.16	3766	3.22	
Helicolenus dactylopterus	39.06	1568	1.30	
Coelorinchus fasciatus	21.84	392	0.72	
Galeus polli	19.46	504	0.65	
Todarodes sagittatus	6.86	14	0.23	
Coelorinchus coelorinch. polli	2.10	84	0.07	
Lophius upsicephalus	1.74	4	0.06	420
Todaropsis eblanae	0.98	14	0.03	
Total	3015.80		100.01	

PROJECT STATION:1445
 DATE: 8/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2221 Long E 1403
 start stop duration
 TIME :18:22:00 18:51:00 29 (min) Purpose code: 3
 LOG :3598.30 3599.80 1.70 Area code : 2
 FDEPTH: 89 87 GearCond.code:
 BDEPTH: 89 87 Validity code:
 Towing dir: 15 Wire out: 400 m Speed: 35 kn*10
 Sorted: 2 Kg Total catch: 2.00 CATCH/HOUR: 4.14

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatatus	4.14		100.00	
Total	4.14		100.00	

PROJECT STATION:1446
 DATE: 9/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2220 Long E 1350
 start stop duration
 TIME :06:24:00 06:28:00 4 (min) Purpose code: 3
 LOG :3622.10 3622.30 0.20 Area code : 2
 FDEPTH: 114 114 GearCond.code: 9
 BDEPTH: 114 114 Validity code: 1
 Towing dir: 350 Wire out: 500 m Speed: 27 kn*10
 Sorted: 22 Kg Total catch: 22.00 CATCH/HOUR: 330.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatatus	300.00		90.91	
Merluccius capensis	30.00	300	9.09	
Total	330.00		100.00	

PROJECT STATION:1451
 DATE: 9/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2220 Long E 1256
 start stop duration
 TIME :16:06:00 16:37:00 31 (min) Purpose code: 3
 LOG :3686.50 3687.80 1.74 Area code : 2
 FDEPTH: 295 306 GearCond.code:
 BDEPTH: 295 306 Validity code:
 Towing dir: 350 Wire out: 950 m Speed: 33 kn*10
 Sorted: 142 Kg Total catch: 610.99 CATCH/HOUR: 1182.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	664.14	1125	56.16	424
Merluccius capensis, male	231.37	408	19.57	423
Trachurus capensis	207.23	966	17.52	425
Chlorophthalmus atlanticus	33.21	1065	2.81	
Helicolenus dactylopterus	27.97	1306	2.27	
MYCTOPHIDAE	15.31		1.39	
Galeus polli	2.17	66	0.18	
Coelorinchus fasciatus	0.58	25	0.05	
Aristeus varidens	0.58		0.05	
Total	1182.56		100.00	

PROJECT STATION:1447
 DATE: 9/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2220 Long E 1338
 start stop duration
 TIME :08:05:00 08:35:00 30 (min) Purpose code: 3
 LOG :3634.60 3636.00 1.60 Area code : 2
 FDEPTH: 125 125 GearCond.code:
 BDEPTH: 125 125 Validity code:
 Towing dir: 350 Wire out: 500 m Speed: 32 kn*10
 Sorted: 39 Kg Total catch: 1711.87 CATCH/HOUR: 3423.74

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	1856.00	18212	54.21	409
Merluccius capensis, male	1252.80	14384	36.59	408
Trachurus capensis	113.68	812	3.32	
Chelidonichthys capensis	85.84	232	2.51	
Sufflogobius bibarbatatus	63.80		1.86	
Merluccius capensis, juveniles	23.20	928	0.68	410
Thyrxites atun	12.00	4	0.35	407
Todaropsis eblanae	8.12	232	0.24	
Callorhynchus capensis	5.36	4	0.16	
Austroglossus microlepis	2.94	30	0.09	411
Total	3423.74		100.01	

DATE: 9/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1452
start stop duration POSITION:Lat S 2200 Long E 1250
TIME :17:46:00 18:15:00 29 (min) Purpose code: 3
LOG :3695.90 3697.40 1.70 Area code : 2
FDEPTH: 377 376 GearCond.code:
BDEPTH: 377 376 Validity code:
Towing dir: 350 Wire out:1100 m Speed: 33 kn*10

Sorted: 294 Kg Total catch: 293.89 CATCH/HOUR: 608.05

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	235.86	143	38.79	428
Helicolenus dactylopterus	97.66	573	16.06	431
Squalus megalops	92.69	35	15.24	
Merluccius paradoxus, female	73.45	132	12.08	430
Merluccius capensis, male	37.24	27	6.12	427
Centrolophus niger	15.93	4	2.62	426
Emmopterus lucifer	14.40	52	2.37	
Todarodes sagittatus	7.86	106	1.29	
Centroprichthys granulosa	7.59	10	1.25	
Galeus polli	7.45	66	1.23	
Deania profundorum	4.59	8	0.75	
Merluccius paradoxus, male	3.21	10	0.53	429
Coelorrhinus coelorinch. polli	2.52	68	0.41	
Raja confundens	2.30	2	0.38	
Coelorrhinus fasciatus	2.19	19	0.36	
Nezumia milleri	0.81	41	0.13	
Epigonus denticulatus	0.77	23	0.13	
Chlorophthalmus atlanticus	0.70	23	0.12	
Lophius upsicephalus	0.41	2	0.07	432
Selachophidium guentheri	0.23	10	0.04	
Aristeus variidens	0.08	14	0.01	
Notacanthus sexspinis	0.06	4	0.01	
Trachyrhinus scabrus	0.04	2	0.01	
Total	608.04		100.00	

DATE: 9/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1453
start stop duration POSITION:Lat S 2213 Long E 1245
TIME :19:30:00 20:00:00 30 (min) Purpose code: 3
LOG :3705.00 3706.50 1.60 Area code : 2
FDEPTH: 474 477 GearCond.code:
BDEPTH: 474 477 Validity code:
Towing dir: 340 Wire out:1250 m Speed: 31 kn*10

Sorted: 190 Kg Total catch: 241.91 CATCH/HOUR: 483.82

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Deania calcea	201.40	96	41.63	
Merluccius paradoxus, female	162.60	294	33.61	435
Trachyrhinus scabrus	45.34	180	9.37	
Merluccius capensis, female	15.00	10	3.10	433
Centroprichthys squamosus	14.60	6	3.02	
Centroscymnus cirripedater	8.40	8	1.74	
Aristeus variidens	7.54	620	1.56	
Todarodes sagittatus	6.30	16	1.30	
Nezumia milleri	4.96	126	1.03	
Raja confundens	4.04	10	0.84	
Epigonus denticulatus	3.34	100	0.69	
Merluccius paradoxus, male	2.84	10	0.59	434
Hoplostethus cadonati	1.56	104	0.32	
Helicolenus dactylopterus	1.46	10	0.30	
Deania profundorum	1.16	2	0.24	
Yareella blackfordi	1.00	110	0.21	
Galeus polli	0.84	6	0.17	
Shrimps, small, non comm.	0.60	6	0.12	
Notacanthus sexspinis	0.50	16	0.10	
MYCTOPHIDAE	0.26	34	0.05	
Selachophidium guentheri	0.08	4	0.02	
Total	483.82		100.01	

DATE: 10/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1454
start stop duration POSITION:Lat S 2153 Long E 1241
TIME :00:44:00 01:14:00 30 (min) Purpose code: 3
LOG :3739.20 3740.70 1.60 Area code : 2
FDEPTH: 437 436 GearCond.code:
BDEPTH: 437 436 Validity code:
Towing dir: 350 Wire out:1200 m Speed: 32 kn*10

Sorted: 70 Kg Total catch: 175.53 CATCH/HOUR: 351.06

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	159.00	270	45.29	438
Trachyrhinus scabrus	124.00	1066	35.32	
Merluccius capensis, female	30.50	16	8.69	436
Helicolenus dactylopterus	11.96	36	3.41	
Todarodes sagittatus	9.00	26	2.56	
Nezumia milleri	4.16	156	1.18	
Deania calcea	3.86	6	1.10	
Merluccius paradoxus, male	2.26	6	0.64	437
Deepwater fish mixture	2.00	6	0.57	
Galeus polli	1.80	20	0.51	
Aristeus variidens	1.06	6	0.30	
Selachophidium guentheri	1.00	46	0.28	
Chlorophthalmus atlanticus	0.30	10	0.09	
Notacanthus sexspinis	0.16	6	0.05	
Total	351.06		99.99	

DATE: 10/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1455
start stop duration POSITION:Lat S 2201 Long E 1246
TIME :06:26:00 06:55:00 29 (min) Purpose code: 3
LOG :3766.20 3767.70 1.70 Area code : 2
FDEPTH: 351 355 GearCond.code:
BDEPTH: 351 355 Validity code:
Towing dir: 350 Wire out:1050 m Speed: 34 kn*10

Sorted: 157 Kg Total catch: 645.69 CATCH/HOUR: 1335.91

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	869.79	689	65.11	441
Merluccius capensis, male	295.66	286	22.13	440
Helicolenus dactylopterus	100.97	1320	7.56	443
Schedophilus huttoni	19.37	8	1.45	
Raja confundens	11.67	8	0.87	
Squalus megalops	9.27	8	0.69	
Merluccius paradoxus, female	8.48	35	0.63	442
Epigonus denticulatus	5.09	190	0.38	
Krill	4.34		0.32	
Chlorophthalmus atlanticus	4.14	130	0.31	
Lophius upsicephalus	3.74	2	0.28	439
MYCTOPHIDAE	0.83		0.06	
Galeus polli	0.83	8	0.06	
Todaropsis eblanae	0.50	17	0.04	
Laemonema laureysi	0.50	8	0.04	
Coelorrhinus coelorinch. polli	0.41	17	0.03	
Nezumia milleri	0.33	17	0.02	
Total	1335.92		99.98	

DATE: 10/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1456
start stop duration POSITION:Lat S 2201 Long E 1258
TIME :08:42:00 09:11:00 29 (min) Purpose code: 3
LOG :3781.30 3782.90 1.50 Area code : 2
FDEPTH: 310 300 GearCond.code:
BDEPTH: 310 300 Validity code:
Towing dir: 50 Wire out:1000 m Speed: 30 kn*10

Sorted: 170 Kg Total catch: 367.02 CATCH/HOUR: 759.35

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	414.66	422	54.61	445
Trachurus capensis	111.62	395	14.70	446
MYCTOPHIDAE	82.03	18685	10.80	
Merluccius capensis, male	65.90	112	8.68	444
Chlorophthalmus atlanticus	27.89	906	3.67	
Helicolenus dactylopterus	23.36	1022	3.08	447
Schedophilus huttoni	13.18	4	1.74	
Todarodes sagittatus	9.83	19	1.29	
Galeus polli	4.49	108	0.59	
Hyperoglyphe moselii	1.97	2	0.26	448
Coelorrhinus fasciatus	1.70	14	0.22	
Solenocera africana	1.12	323	0.15	
Coelorrhinus coelorinch. polli	1.03	19	0.14	
Austroglossus microlepis	0.58	2	0.08	449
Total	759.36		100.01	

DATE: 10/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1457
start stop duration POSITION:Lat S 2201 Long E 1311
TIME :10:45:00 11:14:00 29 (min) Purpose code: 3
LOG :3794.80 3796.10 1.60 Area code : 2
FDEPTH: 301 187 GearCond.code:
BDEPTH: 301 187 Validity code:
Towing dir: 80 Wire out: 750 m Speed: 32 kn*10

Sorted: 35 Kg Total catch: 1869.87 CATCH/HOUR: 3868.70

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	2546.48	22862	65.82	450
Merluccius capensis, female	858.21	5135	22.18	451
Trachurus capensis	443.17	2321	11.46	452
Thyrxites atun	19.34	6	0.50	454
Lophius upsicephalus	1.49	2	0.04	453
Total	3868.69		100.00	

DATE: 10/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1458
start stop duration POSITION:Lat S 2200 Long E 1324
TIME :12:52:00 13:22:00 30 (min) Purpose code: 3
LOG :3808.00 3809.70 1.52 Area code : 2
FDEPTH: 157 150 GearCond.code:
BDEPTH: 157 150 Validity code:
Towing dir: 85 Wire out: 650 m Speed: 31 kn*10

Sorted: 105 Kg Total catch: 747.22 CATCH/HOUR: 1494.44

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	801.60	5664	53.64	458
Merluccius capensis, male	372.00	3888	24.89	457
Trachurus capensis	120.00	912	8.03	459
Merluccius capensis, female	91.40	106	6.12	456
Neoharriotta pinnata	52.08	24	3.48	
Chelidionichthys capensis	29.76	120	1.99	
Sufflogobius bibarbatatus	16.56	4104	1.11	
Coelorrhinus fasciatus	5.52	48	0.37	
Pterothrissus belloci	3.84	24	0.26	
Merluccius capensis, male	1.20	2	0.08	455
OMMASTREPHIDAE	0.48	24	0.03	
Total	1494.44		100.00	

DATE: 10/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1459
start stop duration POSITION:Lat S 2159 Long E 1345
TIME :15:56:00 16:06:00 10 (min) Purpose code: 3
LOG :3830.90 3831.30 0.50 Area code : 2
FDEPTH: 98 98 GearCond.code:
BDEPTH: 98 98 Validity code:
Towing dir: 5 Wire out: 450 m Speed: 31 kn*10

Sorted: 8 Kg Total catch: 45.26 CATCH/HOUR: 271.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sufflogobius bibarbatatus	264.00	165150	97.22	
Merluccius capensis, juveniles	7.56	2196	2.78	460
Total	271.56		100.00	

PROJECT STATION:1460
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2142 Long E 1317
 start stop duration
 TIME :06:21:00 06:52:00 31 (min) Purpose code: 3
 LOG :3902.10 3903.50 1.80 Area code : 2
 FDEPTH: 144 142 GearCond.code:
 BDEPTH: 144 142 Validity code:
 Towing dir: 5 Wire out: 600 m Speed: 34 kn*10
 Sorted: 28 Kg Total catch: 975.80 CATCH/HOUR: 1888.65

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, male	948.39 10635	50.22	461
Merluccius capensis, female	928.06 8671	49.14	462
Sufflogobius bibarbatatus	8.13 2777	0.43	
Merluccius capensis, juveniles	4.06 135	0.21	
Total	1888.64	100.00	

PROJECT STATION:1464
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2130 Long E 1249
 start stop duration
 TIME :15:31:00 16:01:00 30 (min) Purpose code: 3
 LOG :3958.30 3959.80 1.68 Area code : 2
 FDEPTH: 307 310 GearCond.code:
 BDEPTH: 307 310 Validity code:
 Towing dir: 350 Wire out: 950 m Speed: 32 kn*10
 Sorted: 157 Kg Total catch: 338.96 CATCH/HOUR: 677.92

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	411.24 368	60.66	479
Merluccius capensis, male	107.04 156	15.79	478
Chlorophthalmus atlanticus	71.06 2054	10.48	
MYCTOPHIDAE	36.80	5.43	
Helicolenus dactylopterus	16.78 780	2.48	
Galeus polli	11.00 182	1.62	
Trachurus capensis	9.32 34	1.37	475
Krill	6.50	0.96	
Aristeus varidens	4.76	0.70	
Lophius upsicephalus	1.88	0.28	476
Hoplostethus cadenati	0.60	0.09	
Coelorinchus fasciatus	0.60 26	0.09	
Nezumia milleri	0.26 22	0.04	
PORTUNIDAE	0.08 4	0.01	
Total	677.92	100.00	

PROJECT STATION:1461
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2144 Long E 1307
 start stop duration
 TIME :08:22:00 08:51:00 29 (min) Purpose code: 3
 LOG :3914.10 3915.30 1.70 Area code : 2
 FDEPTH: 203 223 GearCond.code:
 BDEPTH: 203 223 Validity code:
 Towing dir: 270 Wire out: 750 m Speed: 33 kn*10
 Sorted: 69 Kg Total catch: 588.68 CATCH/HOUR: 1217.96

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, male	477.62 2398	39.21	464
Merluccius capensis, female	422.59 1357	34.70	465
Chlorophthalmus atlanticus	212.28 13001	17.43	
Trachurus capensis	57.99 257	4.76	
Helicolenus dactylopterus	23.19 571	1.90	
Thyrites atun	10.66 2	0.88	
Lophius upsicephalus	5.75 2	0.47	463
Lepidopsetta caudatus	3.54 39	0.29	
Coelorinchus fasciatus	1.66 21	0.14	
Galeus polli	1.03 21	0.08	
Todaropsis eblanae	0.83 21	0.07	
PORTUNIDAE	0.41 21	0.03	
Maurollicus muelleri	0.21 197	0.02	
Sufflogobius bibarbatatus	0.21 79	0.02	
Total	1217.97	100.00	

PROJECT STATION:1465
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2126 Long E 1259
 start stop duration
 TIME :17:36:00 18:12:00 36 (min) Purpose code: 3
 LOG :3972.10 3973.70 1.90 Area code : 2
 FDEPTH: 250 250 GearCond.code:
 BDEPTH: 250 250 Validity code:
 Towing dir: 350 Wire out: 900 m Speed: 30 kn*10
 Sorted: 147 Kg Total catch: 608.97 CATCH/HOUR: 1014.95

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	385.00 637	37.93	482
Merluccius capensis, male	335.30 1247	33.04	481
Chlorophthalmus atlanticus	174.30 8118	17.17	
Trachurus capensis	70.00 357	6.90	483
Helicolenus dactylopterus	25.07 1075	2.47	
MYCTOPHIDAE	17.50	1.72	
Lophius upsicephalus	3.65 3	0.36	480
Galeus polli	1.12 35	0.11	
Sufflogobius bibarbatatus	0.83 175	0.08	
Todaropsis eblanae	0.63 13	0.06	
Solenocera africana	0.63 98	0.06	
Lophius upsicephalus	0.57 13	0.06	
Synagrops microlepis	0.35 13	0.03	
Total	1014.95	99.99	

PROJECT STATION:1462
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2148 Long E 1252
 start stop duration
 TIME :10:55:00 11:24:00 29 (min) Purpose code: 3
 LOG :3929.40 3930.70 1.60 Area code : 2
 FDEPTH: 303 302 GearCond.code:
 BDEPTH: 303 302 Validity code:
 Towing dir: 330 Wire out: 950 m Speed: 33 kn*10
 Sorted: 172 Kg Total catch: 369.15 CATCH/HOUR: 763.76

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	455.44 449	59.63	467
Merluccius capensis, male	118.34 122	15.49	466
Trachurus capensis	88.30 399	11.56	468
Chlorophthalmus atlanticus	39.46 1217	5.17	
MYCTOPHIDAE	35.05	4.59	
Helicolenus dactylopterus	16.90 852	2.21	
Trachipterus trachipterus	4.97 2	0.65	
Galeus polli	4.22 95	0.55	
Nezumia milleri	0.72 31	0.09	
Aristeus varidens	0.35 95	0.05	
Total	763.75	99.99	

PROJECT STATION:1466
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2122 Long E 1309
 start stop duration
 TIME :19:29:00 19:59:00 30 (min) Purpose code: 3
 LOG :3982.50 3984.00 1.70 Area code : 2
 FDEPTH: 151 150 GearCond.code:
 BDEPTH: 151 150 Validity code:
 Towing dir: 355 Wire out: 650 m Speed: 33 kn*10
 Sorted: 26 Kg Total catch: 1462.16 CATCH/HOUR: 2924.32

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	1232.00 9968	42.13	485
Merluccius capensis, male	952.00 9072	32.55	484
Trachurus capensis	672.00 4816	22.98	486
Chelidonichthys capensis	45.92 112	1.57	
Pterothrissus belloci	19.04 336	0.65	
Todaropsis eblanae	2.24 112	0.08	
Merluccius capensis, juveniles	1.12 336	0.04	
Total	2924.32	100.00	

PROJECT STATION:1463
 DATE:11/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2134 Long E 1241
 start stop duration
 TIME :13:28:00 13:58:00 30 (min) Purpose code: 3
 LOG :3946.20 3947.60 1.54 Area code : 2
 FDEPTH: 368 371 GearCond.code:
 BDEPTH: 368 371 Validity code:
 Towing dir: 345 Wire out: 1100 m Speed: 31 kn*10
 Sorted: 168 Kg Total catch: 304.18 CATCH/HOUR: 608.36

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	264.74 168	43.52	472
Helicolenus dactylopterus	135.66 1484	22.30	
Merluccius paradoxus, female	103.40 184	17.00	474
Merluccius capensis, male	20.54 14	3.38	471
Deepwater fish mixture	18.74	3.08	
Galeus polli	15.98 188	2.63	
Todarodes sagittatus	13.72 34	2.26	
Raja confundens	8.36 8	1.37	
Deania calcea	6.96 8	1.14	
Merluccius paradoxus, male	5.90 18	0.97	473
Schedophilus huttoni	4.92 2	0.81	469
Genypterus capensis	2.40 2	0.39	470
Emmopterus pusillus	1.84 8	0.30	
Nezumia milleri	1.72 36	0.28	
S H R I M P S	1.10 18	0.18	
Epigonus denticulatus	0.74 18	0.12	
Selachophidium guentheri	0.56 18	0.09	
Coelorinchus fasciatus	0.36 8	0.06	
Chlorophthalmus atlanticus	0.36 12	0.06	
Notacanthus sexspinis	0.18 4	0.03	
Hoplostethus cadenati	0.18 8	0.03	
Total	608.36	100.00	

PROJECT STATION:1467
 DATE:12/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2119 Long E 1315
 start stop duration
 TIME :06:26:00 06:55:00 29 (min) Purpose code: 3
 LOG :4005.10 4006.30 1.60 Area code : 2
 FDEPTH: 122 122 GearCond.code:
 BDEPTH: 122 122 Validity code:
 Towing dir: 350 Wire out: 500 m Speed: 33 kn*10
 Sorted: 26 Kg Total catch: 600.36 CATCH/HOUR: 1242.12

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, male	615.52 6879	49.55	487
Merluccius capensis, female	610.34 5948	49.14	488
Trachurus capensis	5.69 52	0.46	
Merluccius capensis, juveniles	5.69 207	0.46	
Callorhynchus capensis	4.88 2	0.39	
Total	1242.12	100.00	

PROJECT STATION:1468
 DATE:12/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2101 Long E 1308
 start stop duration
 TIME :10:44:00 11:05:00 21 (min) Purpose code: 3
 LOG :4040.90 4041.80 1.20 Area code : 2
 FDEPTH: 119 117 GearCond.code:
 BDEPTH: 119 117 Validity code:
 Towing dir: 355 Wire out: 450 m Speed: 32 kn*10
 Sorted: 36 Kg Total catch: 804.21 CATCH/HOUR: 2297.74

SPECIES	CATCH/HOUR weight numbers	% OF TOT. C	SAMP.NO.
Merluccius capensis, female	1268.57 16371	55.21	490
Merluccius capensis, male	942.86 12686	41.03	489
Chelidonichthys capensis	31.71 86	1.38	
Callorhynchus capensis	27.71 20	1.21	
Merluccius capensis, juveniles	14.57 771	0.63	
Trachurus capensis	11.14 86	0.48	
Sufflogobius bibarbatatus	0.86 86	0.04	
Lophius upsicephalus	0.31 3	0.01	
Total	2297.73	99.99	

DATE:12/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1469
 POSITION:Lat S 2105 Long E 1356
 start stop duration
 TIME :13:14:00 13:44:00 30 (min) Purpose code: 3
 LOG :4057.50 4058.70 1.66 Area code : 2
 FDEPTH: 248 245 GearCond.code:
 BDEPTH: 248 245 Validity code:
 Towing dir: 350 Wire out: 850 m Speed: 34 kn*10
 Sorted: 138 Kg Total catch: 530.45 CATCH/HOUR: 1060.90

DATE:13/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1473
 POSITION:Lat S 2057 Long E 1226
 start stop duration
 TIME :06:24:00 06:54:00 30 (min) Purpose code: 3
 LOG :4121.30 4122.90 1.60 Area code : 8
 FDEPTH: 450 443 GearCond.code:
 BDEPTH: 450 443 Validity code:
 Towing dir: 340 Wire out:1200 m Speed: 32 kn*10
 Sorted: 163 Kg Total catch: 266.03 CATCH/HOUR: 532.06

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	335.40	990	31.61	494
Merluccius capensis, male	297.18	1334	28.01	493
Trachurus capensis	205.14	1058	19.34	492
Chlorophthalmus atlanticus	163.02	6368	15.37	
Galeus polli	31.66	734	2.98	
Helicolenus dactylopterus	16.00	444	1.51	
Lophius upsicephalus	5.46	10	0.51	491
Pterothrissus bellocci	3.52	24	0.33	
Sufflogobius bibarbatatus	2.58	570	0.24	
Coelorinchus fasciatus	0.94	16	0.09	
Total	1060.90		99.99	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	197.80	356	37.18	510
Hoplostethus cadenati	120.00		22.55	
Trachyrhinus scabrus	79.00		14.85	
Merluccius capensis, female	50.00	36	9.40	508
Merluccius capensis, male	18.00	16	3.38	507
Raja confundens	13.10	20	2.46	
Yarelia blackfordi	10.20		1.92	
Shrimps, small, non comm.	8.70		1.64	
Nezumia milleri	7.50	380	1.41	
Merluccius paradoxus, male	5.96	4	1.12	509
Helicolenus dactylopterus	5.80	30	1.09	
Deania profundorum	5.70	10	1.07	
Aristeus varidens	4.70	470	0.88	
Zenopsis conchifer	2.60	2	0.49	
Notacanthus sexspinis	0.90	30	0.17	
Todarodes sagittatus	0.70	10	0.13	
Thysanoteuthis rhombus	0.50	10	0.09	
Lycoteuthis diadema	0.50	10	0.09	
Argyropeucus affinis	0.20	30	0.04	
Galeus polli	0.20	30	0.04	
Total	532.06		100.00	

DATE:12/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1470
 POSITION:Lat S 2109 Long E 1248
 start stop duration
 TIME :15:37:00 16:07:00 30 (min) Purpose code: 3
 LOG :4071.50 4072.90 1.75 Area code : 2
 FDEPTH: 318 317 GearCond.code:
 BDEPTH: 318 317 Validity code:
 Towing dir: 340 Wire out:1000 m Speed: 31 kn*10
 Sorted: 216 Kg Total catch: 1000.95 CATCH/HOUR: 2001.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	1407.08	1254	70.29	498
Merluccius capensis, male	372.34	474	18.60	497
MYCTOPHIDAE	136.80		6.83	
Trachipterus trachipterus	34.00	10	1.70	
Todarodes sagittatus	20.58	62	1.03	
Schedophilus huttoni	10.14	4	0.51	496
Raja leopardus	5.76	2	0.29	
Chlorophthalmus atlanticus	5.56	154	0.28	
Helicolenus dactylopterus	4.32	278	0.22	
Brama brama	2.14	2	0.11	495
Galeus polli	2.06	42	0.10	
Nezumia milleri	0.92	30	0.05	
Aristeus varidens	0.20	62	0.01	
Total	2001.90		100.02	

DATE:23/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1474
 POSITION:Lat S 2042 Long E 1307
 start stop duration
 TIME :08:43:00 09:14:00 31 (min) Purpose code: 3
 LOG :4465.20 4466.60 1.60 Area code : 3
 FDEPTH: 112 112 GearCond.code:
 BDEPTH: 112 112 Validity code:
 Towing dir: 335 Wire out: 450 m Speed: 31 kn*10
 Sorted: 28 Kg Total catch: 336.60 CATCH/HOUR: 651.48

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	276.39	3763	42.42	511
Merluccius capensis, female	246.19	3321	37.79	512
Trachurus capensis	125.42	906	19.25	513
Sufflogobius bibarbatatus	3.48	813	0.53	
Total	651.48		99.99	

DATE:12/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1471
 POSITION:Lat S 2112 Long E 1240
 start stop duration
 TIME :18:06:00 18:36:00 30 (min) Purpose code: 3
 LOG :4085.90 4087.20 1.70 Area code : 2
 FDEPTH: 356 364 GearCond.code:
 BDEPTH: 356 364 Validity code:
 Towing dir: 335 Wire out:1050 m Speed: 33 kn*10
 Sorted: 165 Kg Total catch: 273.12 CATCH/HOUR: 546.24

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	267.00	254	48.88	501
Merluccius capensis, male	130.00	130	23.80	500
Helicolenus dactylopterus	63.40	770	11.61	
Merluccius paradoxus, female	40.00	76	7.32	502
Chlorophthalmus atlanticus	18.40	554	3.37	
Krill	9.00		1.65	
Galeus polli	7.10	100	1.30	
Epigonus denticulatus	4.00	176	0.73	
Raja confundens	2.38	2	0.44	
Todarodes sagittatus	2.00	10	0.37	
Lophius upsicephalus	1.62	2	0.30	
Nezumia milleri	0.60	22	0.11	499
Coelorinchus coelorinch. polli	0.40	10	0.07	
Hoplostethus cadenati	0.16	4	0.03	
Solenocera africana	0.10	20	0.02	
Nansenia tenera	0.08	4	0.01	
Total	546.24		100.01	

DATE:23/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1475
 POSITION:Lat S 2045 Long E 1254
 start stop duration
 TIME :11:05:00 11:30:00 25 (min) Purpose code: 3
 LOG :4483.00 4484.30 1.30 Area code : 1
 FDEPTH: 163 163 GearCond.code:
 BDEPTH: 163 163 Validity code:
 Towing dir: 345 Wire out: 650 m Speed: 31 kn*10
 Sorted: 52 Kg Total catch: 954.96 CATCH/HOUR: 2291.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	1080.00	10666	47.12	516
Merluccius capensis, female	889.92	7430	38.83	517
Trachurus capensis	267.84	1858	11.69	518
Merluccius capensis, female	24.00	26	1.05	515
Merluccius capensis, male	12.00	10	0.52	514
Dentex macrophthalmus	8.21	43	0.36	
Pterothrissus bellocci	6.91	43	0.30	
Todaropsis eblanae	1.30	43	0.06	
Chlorophthalmus atlanticus	1.30	86	0.06	
Sufflogobius bibarbatatus	0.43	86	0.02	
Total	2291.91		100.01	

DATE:12/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1472
 POSITION:Lat S 2110 Long E 1231
 start stop duration
 TIME :20:05:00 20:33:00 28 (min) Purpose code: 3
 LOG :4095.50 4096.80 1.50 Area code : 2
 FDEPTH: 455 464 GearCond.code:
 BDEPTH: 455 464 Validity code:
 Towing dir: 355 Wire out:1200 m Speed: 32 kn*10
 Sorted: 141 Kg Total catch: 141.25 CATCH/HOUR: 302.68

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	114.86	208	37.95	506
Merluccius capensis, female	88.93	62	29.38	504
Trachyrhinus scabrus	56.36	311	18.62	
Helicolenus dactylopterus	14.36	92	4.74	
Todarodes sagittatus	7.33	30	2.42	
MYCTOPHIDAE	4.29		1.42	
Hoplostethus cadenati	3.62	264	1.20	
Merluccius paradoxus, male	3.34	6	1.10	505
Merluccius capensis, male	2.36	2	0.78	503
Deepwater fish mixture	1.93		0.64	
Aristeus varidens	1.91	193	0.63	
Galeus polli	0.84	13	0.28	
Centrophorus squamosus	0.77	2	0.25	
Epigonus telescopus	0.64	4	0.21	
Nezumia milleri	0.51	47	0.17	
Epigonus denticulatus	0.28	30	0.09	
Chlorophthalmus atlanticus	0.24	6	0.08	
Raja confundens	0.13	2	0.04	
Total	302.70		100.00	

DATE:23/11/92 GEAR TYPE: BT No:1 PROJECT STATION:1476
 POSITION:Lat S 2047 Long E 1248
 start stop duration
 TIME :12:45:00 13:15:00 30 (min) Purpose code: 3
 LOG :4493.10 4494.60 1.58 Area code : 7
 FDEPTH: 255 252 GearCond.code:
 BDEPTH: 255 252 Validity code:
 Towing dir: 320 Wire out: 850 m Speed: 30 kn*10
 Sorted: 161 Kg Total catch: 490.22 CATCH/HOUR: 980.44

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	393.00	558	40.08	520
Merluccius capensis, male	195.00	414	19.99	519
MYCTOPHIDAE	150.00		15.30	
Chlorophthalmus punctatus	88.20	4114	9.00	
Trachurus capensis	60.00	258	6.12	521
Galeus polli	26.82	708	2.74	
Helicolenus dactylopterus	22.80	666	2.33	
Pterothrissus bellocci	13.38	66	1.36	
Lepidopus caudatus	12.00	4	1.22	
Solenocera africana	7.62		0.78	
Todarodes sagittatus	7.38	42	0.75	
Sufflogobius bibarbatatus	1.98	258	0.20	
Lophius upsicephalus	1.60	4	0.16	
PORTUNIDAE	0.60	12	0.06	
Coelorinchus fasciatus	0.06	6	0.01	
Total	980.44		100.00	

PROJECT STATION:1477
 DATE:23/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2049 Long E 1339
 start stop duration
 TIME :14:42:00 15:12:00 30 (min) Purpose code: 3
 LOG :4506.10 4507.60 1.72 Area code : 7
 FDEPTH: 327 324 GearCond.code:
 BDEPTH: 327 324 Validity code:
 Towing dir: 340 Wire out:1000 m Speed: 33 kn*10
 Sorted: 150 Kg Total catch: 362.51 CATCH/HOUR: 725.02

PROJECT STATION:1481
 DATE:24/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1951 Long E 1227
 start stop duration
 TIME :10:33:00 11:05:00 32 (min) Purpose code: 3
 LOG :4670.50 4671.90 1.70 Area code : 4
 FDEPTH: 145 150 GearCond.code:
 BDEPTH: 145 150 Validity code:
 Towing dir: 280 Wire out: 600 m Speed: 33 kn*10
 Sorted: 117 Kg Total catch: 892.46 CATCH/HOUR: 1673.36

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	490.00	434	67.58	523
Merluccius capensis, male	144.66	182	19.95	522
Helicolenus dactylopterus	21.70	1162	2.99	
Lophius upsicephalus	18.00	12	2.48	
Merluccius paradoxus, female	16.48	60	2.27	524
MYCTOPHIDAE	8.92	2	1.23	
Schedophilus huttoni	5.54	94	0.62	
Galeus polli	4.52	94	0.62	
Trachurus capensis	4.10	14	0.57	
Chlorophthalmus punctatus	3.64	102	0.50	
Todarodes sagittatus	3.36	4	0.46	
Nezumia milleri	1.36	80	0.19	
Coelorinchus fasciatus	1.12	14	0.15	
Solenocera africana	0.60	4	0.08	
Epigonus denticulatus	0.56	46	0.08	
Hoplostethus cadenati	0.28	4	0.04	
PORTUNIDAE	0.18	4	0.02	
Total	725.02		99.97	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	817.03	5978	48.83	543
Dentex macrophthalmus	734.06	3656	43.87	542
Merluccius capensis, female	46.97	281	2.81	539
Merluccius capensis, female	21.56	32	1.29	540
Pterothrissus bellioi	16.03	253	0.96	
Synagrops microlepis	12.66	1519	0.76	
Merluccius capensis, male	10.13	84	0.61	538
Thyrzites atun	9.38	4	0.56	541
Sufflogobius bibarbatus	2.40	409	0.14	
Chlorophthalmus atlanticus	1.97	56	0.12	
Todaropsis eblanae	0.84	56	0.05	
Austroglossus microlepis	0.34	2	0.02	
Total	1673.37		100.02	

PROJECT STATION:1478
 DATE:23/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2054 Long E 1229
 start stop duration
 TIME :16:58:00 17:28:00 30 (min) Purpose code: 3
 LOG :4522.30 4523.70 1.70 Area code : 7
 FDEPTH: 382 376 GearCond.code:
 BDEPTH: 382 376 Validity code:
 Towing dir: 340 Wire out:1100 m Speed: 32 kn*10
 Sorted: 235 Kg Total catch: 264.04 CATCH/HOUR: 528.08

PROJECT STATION:1482
 DATE:24/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1954 Long E 1217
 start stop duration
 TIME :12:30:00 13:00:00 30 (min) Purpose code: 3
 LOG :4682.80 4684.20 1.66 Area code : 4
 FDEPTH: 214 215 GearCond.code:
 BDEPTH: 214 215 Validity code:
 Towing dir: 325 Wire out: 800 m Speed: 33 kn*10
 Sorted: 48 Kg Total catch: 175.73 CATCH/HOUR: 351.46

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	300.80	216	56.96	526
Helicolenus dactylopterus	77.60	620	14.69	
Merluccius paradoxus, female	58.20	80	11.02	927
Merluccius capensis, male	46.60	42	8.82	525
Deania profundorum	18.92	16	3.58	
Krill	6.00		1.14	
Todarodes sagittatus	5.36	8	1.01	
Schedophilus huttoni	4.58	2	0.87	
Neoharriotta pinnata	2.32	4	0.44	
Trachyrhinus scabrus	1.64	20	0.31	
Raja confundens	1.62	2	0.31	
Nezumia milleri	1.32	44	0.25	
Galeus polli	1.28	16	0.24	
Chlorophthalmus atlanticus	0.76	24	0.14	
Epigonus denticulatus	0.56	36	0.11	
MYCTOPHIDAE	0.28	72	0.05	
Laemonema laureysi	0.12	4	0.02	
Ophidurus serpens	0.08	4	0.02	
PORTUNIDAE	0.04	4	0.01	
Total	528.08		99.99	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	106.20	624	30.22	548
Merluccius capensis, female	51.00	44	14.51	547
Merluccius capensis, female	51.00	168	14.51	545
Pterothrissus bellioi	50.40	300	14.34	
Sufflogobius bibarbatus	39.78	3618	11.32	
Merluccius capensis, male	39.00	186	11.10	544
Merluccius capensis, male	10.90	10	3.10	546
Krill	2.40		0.68	
Galeus polli	0.54	12	0.15	
Todaropsis eblanae	0.12	6	0.03	
Chlorophthalmus punctatus	0.12	6	0.03	
Total	351.46		99.99	

PROJECT STATION:1479
 DATE:23/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2047 Long E 1227
 start stop duration
 TIME :18:25:00 18:56:00 31 (min) Purpose code: 3
 LOG :4528.90 4530.50 1.80 Area code : 7
 FDEPTH: 337 330 GearCond.code:
 BDEPTH: 337 330 Validity code:
 Towing dir: 330 Wire out:1000 m Speed: 33 kn*10
 Sorted: 165 Kg Total catch: 341.26 CATCH/HOUR: 660.50

PROJECT STATION:1483
 DATE:24/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2000 Long E 1205
 start stop duration
 TIME :14:58:00 15:28:00 30 (min) Purpose code: 3
 LOG :4699.80 4701.30 1.66 Area code : 6
 FDEPTH: 298 302 GearCond.code:
 BDEPTH: 298 302 Validity code:
 Towing dir: 335 Wire out: 950 m Speed: 32 kn*10
 Sorted: 160 Kg Total catch: 738.10 CATCH/HOUR: 1476.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	346.84	277	52.51	531
Merluccius capensis, male	141.87	149	21.48	530
Helicolenus dactylopterus	92.32	1912	13.98	
MYCTOPHIDAE	26.13		3.96	
Trachurus capensis	16.84	56	2.55	533
Merluccius paradoxus, female	15.68	37	2.37	532
Todarodes sagittatus	4.26	15	0.64	
Chlorophthalmus atlanticus	3.15	81	0.48	
Lophius upsicephalus	2.90	2	0.44	529
Epigonus denticulatus	2.46	137	0.37	
Coelorinchus fasciatus	2.32	29	0.35	
Galeus polli	1.97	19	0.30	
Genypterus capensis	1.68	2	0.25	528
Nezumia milleri	1.16	74	0.18	
Laemonema laureysi	0.66	15	0.10	
Shrimps, small, non comm.	0.17	45	0.03	
Solenocera africana	0.08	19	0.01	
Total	660.49		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	895.50	1054	60.66	550
Merluccius capensis, male	201.60	342	13.66	549
Pterothrissus bellioi	122.40	568	8.29	
Helicolenus dactylopterus	83.52	5572	5.66	
Trachurus capensis	74.70	74	5.06	551
Chlorophthalmus punctatus	44.46	1666	3.01	
Todarodes sagittatus	20.00	38	1.35	
Galeus polli	8.46	90	0.57	
Solenocera africana	7.20		0.49	
Lophius upsicephalus	4.96	4	0.34	
MYCTOPHIDAE	3.96		0.27	
Schedophilus huttoni	3.82	2	0.26	
Nemichthys scolopacea	3.70	2	0.25	
Krill	0.90		0.06	
Nezumia milleri	0.46	18	0.03	
Hoplostethus cadenati	0.28	10	0.02	
Coelorinchus fasciatus	0.18	10	0.01	
Sufflogobius bibarbatus	0.10	10	0.01	
Total	1476.20		100.00	

PROJECT STATION:1480
 DATE:24/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1955 Long E 1241
 start stop duration
 TIME :08:39:00 09:09:00 30 (min) Purpose code: 3
 LOG :4656.60 4657.90 1.80 Area code : 2
 FDEPTH: 113 116 GearCond.code:
 BDEPTH: 113 116 Validity code:
 Towing dir: 280 Wire out: 400 m Speed: 34 kn*10
 Sorted: 58 Kg Total catch: 719.03 CATCH/HOUR: 1438.06

PROJECT STATION:1484
 DATE:24/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2003 Long E 1155
 start stop duration
 TIME :17:00:00 17:30:00 30 (min) Purpose code: 3
 LOG :4713.00 4714.30 1.57 Area code : 8
 FDEPTH: 370 372 GearCond.code:
 BDEPTH: 370 372 Validity code:
 Towing dir: 335 Wire out:1100 m Speed: 32 kn*10
 Sorted: 28 Kg Total catch: 160.72 CATCH/HOUR: 321.44

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	657.80	5330	45.74	535
Trachurus capensis	449.80	3796	31.28	536
Merluccius capensis, male	304.20	2938	21.15	534
Callorhynchus capensis	11.00	8	0.76	
Todaropsis eblanae	7.02	208	0.49	
Pterothrissus bellioi	3.38	156	0.24	
Chelidonichthys capensis	2.78	2	0.19	
Sufflogobius bibarbatus	1.82	338	0.13	
Merluccius capensis, juveniles	0.26	26	0.02	537
Total	1438.06		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	111.20	80	34.59	553
Helicolenus dactylopterus	80.50	1990	25.04	
Merluccius paradoxus, female	39.80	58	12.38	554
Merluccius capensis, male	27.40	26	8.52	552
Lophius upsicephalus	11.50	110	3.58	
Neoharriotta pinnata	8.60	10	2.68	
Hoplostethus cadenati	7.80	356	2.43	
Raja confundens	7.80	16	2.43	
Yarella blackfordi	5.00	700	1.56	
Epigonus denticulatus	5.00	376	1.56	
Todarodes sagittatus	4.30	36	1.34	
Nezumia milleri	2.36	140	0.73	
Aristeus varidens	2.20	310	0.68	
Deania profundorum	2.10	6	0.65	
Chlorophthalmus atlanticus	1.76	50	0.55	
Trachyrhinus scabrus	1.16	6	0.36	
Lophius upsicephalus	1.04	2	0.32	
Coelorinchus coelorinch. polli	0.80	10	0.25	
Laemonema laureysi	0.56	6	0.17	
CONGRIDAE	0.26	6	0.08	
Solenocera africana	0.26	56	0.08	
Lampadena sp.	0.10	36	0.03	
Total	321.50		100.01	

PROJECT STATION:1485
 DATE:24/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1955 Long E 1152
 start stop duration
 TIME :18:34:00 19:03:00 29 (min) Purpose code: 3
 LOG :4721.00 4722.60 1.60 Area code : 8
 FDEPTH: 366 366 GearCond.code:
 BDEPTH: 366 366 Validity code:
 Towing dir: 345 Wire out:1050 m Speed: 31 kn*10
 Sorted: 144 Kg Total catch: 169.68 CATCH/HOUR: 351.06

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	140.28	95	39.96	556
Merluccius paradoxus, female	84.00	137	23.93	558
Helicolenus dactylopterus	52.14	1521	14.85	
Merluccius capensis, male	23.59	23	6.72	555
Neoharriotta pinnata	13.03	6	3.71	
Yarella blackfordi	11.17	6	3.18	
Galeus polli	8.44	81	2.40	
Todarodes sagittatus	6.08	14	1.73	
Hoplostethus cadenati	3.54	230	1.01	
Raja confundens	2.17	2	0.62	
Aristeus varidens	1.86	323	0.53	
Nezumia milleri	1.37	68	0.39	
Deepwater fish mixture	1.24		0.35	
Merluccius paradoxus, male	1.10	2	0.31	557
Coelorinchus coelorinch. polli	0.43	12	0.12	
Chlorophthalmus atlanticus	0.37	12	0.11	
Epigonus denticulatus	0.25	12	0.07	
Total	351.06		99.99	

PROJECT STATION:1489
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1903 Long E 1139
 start stop duration
 TIME :11:52:00 12:22:00 30 (min) Purpose code: 3
 LOG :4818.00 4819.70 1.77 Area code : 6
 FDEPTH: 278 276 GearCond.code:
 BDEPTH: 278 276 Validity code:
 Towing dir: 325 Wire out: 800 m Speed: 33 kn*10
 Sorted: 164 Kg Total catch: 632.02 CATCH/HOUR: 1264.04

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	682.34	836	53.98	574
Merluccius capensis, male	203.94	338	16.13	573
Chlorophthalmus atlanticus	138.00	712	10.92	
Helicolenus dactylopterus	115.00	4898	9.10	
Trachurus capensis	88.16	292	6.97	575
Dentex macrophthalmus	17.10	46	1.35	
Hoplostethus cadenati	4.52	108	0.36	
Pterothrissus belloci	2.60	8	0.21	
Synagrops microlepis	2.60	122	0.21	
Coelorinchus coelorinch. polli	2.14	76	0.17	
Todarodes sagittatus	1.90	6	0.15	
Illex coindetii	1.84	68	0.15	
Lophius upsicephalus	1.44	2	0.11	576
Galeus polli	1.14	22	0.09	
MYCTOPHIDAE	0.92		0.07	
Sufflogobius bibarbatu	0.16	8	0.01	
Solenocera africana	0.16	38	0.01	
Yarella blackfordi	0.08	22	0.01	
Total	1264.04		100.00	

PROJECT STATION:1486
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1858 Long E 1159
 start stop duration
 TIME :06:27:00 06:57:00 30 (min) Purpose code: 3
 LOG :4789.50 4791.00 1.60 Area code : 7
 FDEPTH: 164 190 GearCond.code:
 BDEPTH: 164 190 Validity code:
 Towing dir: 350 Wire out: 700 m Speed: 31 kn*10
 Sorted: 76 Kg Total catch: 380.10 CATCH/HOUR: 760.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	292.00	1400	38.41	561
Merluccius capensis, female	162.00	590	21.31	560
Pterothrissus belloci	138.00	18	18.15	
Merluccius capensis, male	94.00	360	12.37	559
Trachurus capensis	43.00	300	5.66	562
Trigla lyra	24.00	100	3.16	
Chlorophthalmus atlanticus	3.50	160	0.46	
Perulibatrachus rossignoli	2.60	10	0.34	
Sufflogobius bibarbatu	1.10	310	0.14	
Solenocera africana	0.00	10		
Total	760.20		100.00	

PROJECT STATION:1490
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1858 Long E 1126
 start stop duration
 TIME :14:03:00 14:33:00 30 (min) Purpose code: 3
 LOG :4833.40 4834.70 1.63 Area code : 7
 FDEPTH: 400 405 GearCond.code:
 BDEPTH: 400 405 Validity code:
 Towing dir: 350 Wire out:1200 m Speed: 31 kn*10
 Sorted: 153 Kg Total catch: 626.23 CATCH/HOUR: 1252.46

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius paradoxus, female	440.74	630	35.19	579
Merluccius capensis, female	421.66	286	33.67	578
Shrimps, small, non comm.	95.70		7.64	
Hoplostethus cadenati	81.18	2794	6.48	
Epigonus denticulatus	68.20	3212	5.45	
Helicolenus dactylopterus	56.66	616	4.52	
Merluccius capensis, male	31.54	22	2.52	577
Neoharriotta pinnata	13.20	6	1.05	
Todarodes sagittatus	12.54	34	1.00	
Aristeus varidens	8.04	968	0.64	
Nezumia milleri	5.94	462	0.47	
Ebinania costaeanarie	3.30	44	0.26	
Laemonema laureysi	3.30	56	0.26	
Galeus polli	3.08	34	0.25	
Yarella blackfordi	2.76	506	0.22	
Coelorinchus coelorinch. polli	1.98	22	0.16	
Chlorophthalmus atlanticus	0.98	34	0.07	
Lampadena sp.	0.78	78	0.06	
Histioteuthis reversa	0.66	22	0.05	
Gadella imberbis	0.32	12	0.03	
Total	1252.46		99.99	

PROJECT STATION:1487
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1858 Long E 1154
 start stop duration
 TIME :08:01:00 08:31:00 30 (min) Purpose code: 3
 LOG :4797.00 4798.30 1.60 Area code : 7
 FDEPTH: 235 235 GearCond.code:
 BDEPTH: 235 235 Validity code:
 Towing dir: 300 Wire out: 800 m Speed: 30 kn*10
 Sorted: 145 Kg Total catch: 544.28 CATCH/HOUR: 1088.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	312.30	1350	28.69	566
Dentex macrophthalmus	289.80	1252	26.62	567
Merluccius capensis, male	217.80	910	20.01	565
Pterothrissus belloci	138.60	780	12.73	
Merluccius capensis, female	60.20	48	5.53	564
Helicolenus dactylopterus	45.00	2644	4.13	
Sufflogobius bibarbatu	7.02	1528	0.64	
Trachurus capensis	6.12	36	0.56	
Synagrops microlepis	5.04	378	0.46	
Chlorophthalmus atlanticus	3.42	180	0.31	
Trigla lyra	1.62	10	0.15	
Lophius upsicephalus	0.74	2	0.07	563
Todaropsis eblanae	0.72	64	0.07	
Krill	0.18		0.02	
Solenocera africana	0.00	10		
Total	1088.56		99.99	

PROJECT STATION:1491
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1847 Long E 1130
 start stop duration
 TIME :15:56:00 16:26:00 30 (min) Purpose code: 3
 LOG :4844.90 4846.30 1.60 Area code : 6
 FDEPTH: 256 254 GearCond.code:
 BDEPTH: 256 254 Validity code:
 Towing dir: 360 Wire out: 900 m Speed: 33 kn*10
 Sorted: 108 Kg Total catch: 689.50 CATCH/HOUR: 1379.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Chlorophthalmus atlanticus	521.00	1796	37.78	
Merluccius capensis, female	507.40	784	36.79	581
Merluccius capensis, male	162.80	300	11.81	580
Helicolenus dactylopterus	126.80	3196	9.20	
Krill	22.00		1.60	
Trachurus capensis	11.40	44	0.83	
Todarodes sagittatus	11.40	44	0.83	
Pterothrissus belloci	9.60	44	0.70	
Galeus polli	4.80	44	0.35	
Coelorinchus coelorinch. polli	1.80	88	0.13	
Total	1379.00		100.02	

PROJECT STATION:1488
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1902 Long E 1146
 start stop duration
 TIME :10:06:00 10:36:00 30 (min) Purpose code: 3
 LOG :4808.90 4810.50 1.60 Area code : 6
 FDEPTH: 296 294 GearCond.code:
 BDEPTH: 296 294 Validity code:
 Towing dir: 350 Wire out: 900 m Speed: 31 kn*10
 Sorted: 164 Kg Total catch: 672.01 CATCH/HOUR: 1344.02

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	654.20	858	48.67	570
Dentex macrophthalmus	273.40	892	20.34	571
Merluccius capensis, male	255.80	508	19.03	569
Helicolenus dactylopterus	61.92	3100	4.61	
Chlorophthalmus atlanticus	25.84		1.92	
Galeus polli	23.08		1.57	
Trachurus capensis	20.34	66	1.51	572
Krill	12.50		0.93	
Pterothrissus belloci	4.08	16	0.30	
Coelorinchus coelorinch. polli	3.58	116	0.27	
Lophius upsicephalus	3.28	4	0.24	568
Todarodes sagittatus	3.10	10	0.23	
Lycoteuthis diadema	2.24	100	0.17	
Synagrops microlepis	1.84	84	0.14	
MYCTOPHIDAE	0.58	134	0.04	
Solenocera africana	0.24	84	0.02	
Total	1344.02		99.99	

PROJECT STATION:1492
 DATE:25/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1841 Long E 1144
 start stop duration
 TIME :18:32:00 19:02:00 30 (min) Purpose code: 3
 LOG :4864.50 4865.80 1.60 Area code : 7
 FDEPTH: 225 221 GearCond.code:
 BDEPTH: 225 221 Validity code:
 Towing dir: 345 Wire out: 750 m Speed: 31 kn*10
 Sorted: 139 Kg Total catch: 602.46 CATCH/HOUR: 1204.92

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	364.00	1690	30.21	587
Dentex macrophthalmus	337.00	1470	27.97	586
Merluccius capensis, female	156.00	580	12.95	585
Pterothrissus belloci	148.00	846	12.28	
Merluccius capensis, male	127.00	510	10.54	584
Merluccius capensis, female	43.80	34	3.64	583
Trigla lyra	7.80	20	0.65	
Helicolenus dactylopterus	5.50	240	0.46	
Synagrops microlepis	4.70	320	0.39	
Sufflogobius bibarbatu	4.20	820	0.35	
Thyrsites atun	2.00	2	0.17	
Chlorophthalmus atlanticus	1.90	80	0.16	
OPHIDIIDAE	1.50	10	0.12	
Merluccius capensis, male	1.32	2	0.11	582
PORTUNIDAE	0.20	10	0.02	
Total	1204.92		100.02	

PROJECT STATION:1493
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1721 Long E 1135
 start stop duration
 TIME :06:28:00 06:58:00 30 (min) Purpose code: 3
 LOG :4949.70 4951.20 1.50 Area code : 4
 FDEPTH: 117 117 GearCond.code:
 BDEPTH: 117 117 Validity code:
 Towing dir: 360 Wire out: 500 m Speed: 31 kn*10

Sorted: 87 Kg Total catch: 359.30 CATCH/HOUR: 718.60

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Trachurus capensis	210.40	2202	591
Merluccius capensis, female	142.40	600	589
Trigla lyra	75.84	534	
Merluccius capensis, male	69.60	312	588
Synagrops microlepis	62.72	16308	
Raja miraletus	60.12	48	
Zeus faber	24.00	48	
Cheilodichthys capensis	21.44	64	
Merluccius polli	19.20	1546	590
Pterothrissus belloci	12.16	96	
Sepia orbignyana	5.04	88	
Galeichthys feliceps	4.96	8	
Perulibatrachus rossignoli	4.32	8	
Todaropsis eblanae	3.04	144	
Chlorophthalmus atlanticus	1.68	624	
Sufflogobius hibarbatu	1.52	248	
Parapenaeus longirostris	0.16	80	
Total	718.60	99.99	

PROJECT STATION:1494
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1721 Long E 1128
 start stop duration
 TIME :08:15:00 08:45:00 30 (min) Purpose code: 3
 LOG :4959.30 4960.70 1.70 Area code : 6
 FDEPTH: 177 189 GearCond.code:
 BDEPTH: 177 189 Validity code:
 Towing dir: 340 Wire out: 650 m Speed: 29 kn*10

Sorted: 174 Kg Total catch: 1735.20 CATCH/HOUR: 3470.40

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Trachurus capensis	1934.00	14884	595
Merluccius capensis, female	714.00	1460	593
Chlorophthalmus atlanticus	288.00	10260	
Merluccius capensis, male	122.00	340	592
Pterothrissus belloci	104.20	500	
Dentex macrocephthalmus	97.60	500	596
Merluccius polli	62.00	1160	594
Helicolenus dactylopterus	45.80	660	
Trigla lyra	44.80	240	
Synagrops microlepis	29.60	2840	
Raja miraletus	17.00	20	
MYCTOPHIDAE	3.80	720	
Coelorinchus coelorinch. polli	2.00	40	
Sepia orbignyana	1.60	20	
Todaropsis eblanae	1.40	20	
Malacocephalus occidentalis	1.20	20	
Ophidion sp.	0.80	20	
Lepidopus caudatus	0.40	20	
PORTUNIDAE	0.20	20	
Total	3470.40	100.00	

PROJECT STATION:1495
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1720 Long E 1120
 start stop duration
 TIME :09:58:00 10:28:00 30 (min) Purpose code: 3
 LOG :4968.30 4969.80 1.50 Area code : 6
 FDEPTH: 345 374 GearCond.code:
 BDEPTH: 345 374 Validity code:
 Towing dir: 340 Wire out:1000 m Speed: 31 kn*10

Sorted: 134 Kg Total catch: 277.56 CATCH/HOUR: 555.12

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Merluccius capensis, female	275.60	294	598
Helicolenus dactylopterus	67.40	606	
Merluccius capensis, male	59.40	76	597
Hoplostethus cadenati	29.40	2578	
Merluccius polli, female	25.10	40	602
Laemonema laureysi	20.70	400	
Shrimps, small, non comm.	18.00		
Todaropsis sagittatus	13.00	34	
Zenopsis conchifer	7.20	8	
Dentex macrocephthalmus	7.20	20	
Aristeus varidens	6.50	818	
Yarella blackfordi	5.00		
Merluccius paradoxus, female	4.92	8	600
Chlorophthalmus atlanticus	4.80	110	
Merluccius paradoxus, male	2.52	4	599
Merluccius polli, male	1.88	4	601
Coelorinchus coelorinch. polli	1.70	40	
Lepidopus caudatus	1.50	10	
Malacocephalus occidentalis	0.80	10	
Epigonus denticulatus	0.50	20	
Nezumia milleri	0.40	60	
Galeus polli	0.40	10	
Lycoteuthis diadema	0.40	20	
PORTUNIDAE	0.20	10	
MYCTOPHIDAE	0.20	30	
Total	555.12	100.00	

PROJECT STATION:1496
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1732 Long E 1124
 start stop duration
 TIME :12:43:00 13:13:00 30 (min) Purpose code: 3
 LOG :4985.90 4987.60 1.50 Area code : 5
 FDEPTH: 248 246 GearCond.code:
 BDEPTH: 248 246 Validity code:
 Towing dir: 5 Wire out: 850 m Speed:177 kn*10

Sorted: Kg Total catch: 2118.80 CATCH/HOUR: 4237.60

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Merluccius capensis, female	3304.80	2808	604
Merluccius capensis, male	657.60	936	603
Dentex macrocephthalmus	186.72	600	605
Helicolenus dactylopterus	34.56	408	
Chlorophthalmus atlanticus	32.40	888	
Squalus megalops	9.36	24	
Trachurus capensis	9.12	24	
Ophisurus serpens	1.60	12	
Coelorinchus coelorinch. polli	1.44	48	
Total	4237.60	100.01	

PROJECT STATION:1497
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1741 Long E 1121
 start stop duration
 TIME :15:00:00 15:30:00 30 (min) Purpose code: 3
 LOG :5001.70 5003.20 1.60 Area code : 5
 FDEPTH: 414 393 GearCond.code:
 BDEPTH: 414 393 Validity code:
 Towing dir: 5 Wire out:1200 m Speed: 32 kn*10

Sorted: 187 Kg Total catch: 1048.51 CATCH/HOUR: 2097.02

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Merluccius capensis, female	1252.80	1064	607
Merluccius capensis, male	487.60	468	606
Trachyrinus scabrus	131.80	1006	
Helicolenus dactylopterus	66.80	392	
Epigonus denticulatus	39.00	1356	
Hoplostethus cadenati	30.80	1156	
Lophius upsicephalus	17.20	6	608
Raja doureii	12.40	6	0.59
Schedophilus huttoni	11.64	4	0.56
Neoharriotta pinnata	7.36	2	0.35
Deania profundorum	7.20	12	0.34
Todarodes sagittatus	5.60	26	0.27
Nezumia milleri	5.00	342	0.24
Laemonema laureysi	4.94	76	0.24
Coelorinchus coelorinch. polli	4.40	102	0.21
Synagrops microlepis	4.00	266	0.19
Aristeus varidens	3.00	710	0.14
Shrimps, small, non comm.	2.60		0.12
Raja confundens	1.04	2	0.05
Yarella blackfordi	0.88		0.04
Geryon maritae	0.56	2	0.03
Ebinania costaeacanarie	0.40	26	0.02
Total	2097.02	100.01	

PROJECT STATION:1498
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1741 Long E 1127
 start stop duration
 TIME :16:40:00 17:10:00 30 (min) Purpose code: 3
 LOG :5011.40 5012.90 1.50 Area code : 5
 FDEPTH: 191 194 GearCond.code:
 BDEPTH: 191 194 Validity code:
 Towing dir: 350 Wire out: 750 m Speed: 28 kn*10

Sorted: 171 Kg Total catch: 1419.76 CATCH/HOUR: 2839.52

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Merluccius capensis, female	1412.80	3342	610
Chlorophthalmus atlanticus	477.30	16364	
Merluccius capensis, male	290.00	774	609
Helicolenus dactylopterus	197.80	1806	
Trachurus capensis	165.60	1634	613
Dentex macrocephthalmus	76.20	356	612
Squalus megalops	63.20	216	
Trigla lyra	55.04	344	
Merluccius polli	33.60	604	611
Synagrops microlepis	33.12	2710	
Pterothrissus belloci	21.08	86	0.74
Lepidopus caudatus	12.48	86	0.44
Epigonus denticulatus	0.86	44	0.03
Munida sp.	0.44	44	0.02
Total	2839.52	100.00	

PROJECT STATION:1499
 DATE:26/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1742 Long E 1136
 start stop duration
 TIME :18:39:00 19:09:00 30 (min) Purpose code: 3
 LOG :5025.40 5026.80 1.60 Area code : 7
 FDEPTH: 126 127 GearCond.code:
 BDEPTH: 126 127 Validity code:
 Towing dir: 350 Wire out: 500 m Speed: 32 kn*10

Sorted: 154 Kg Total catch: 1988.87 CATCH/HOUR: 3977.74

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Trachurus capensis	1771.60	4300	618
Dentex macrocephthalmus	1195.40	4328	617
Merluccius capensis, female	358.40	1090	615
Synagrops microlepis	184.80	29712	
Pterothrissus belloci	122.40	1558	
MYCTOPHIDAE	100.60		
Merluccius capensis, male	91.80	372	614
Trigla lyra	67.00	430	
Callorhynchus capensis	37.80	28	0.95
Mustelus mustelus	30.00	6	0.75
Merluccius polli	14.40	688	0.36
Squalus megalops	3.40	4	0.09
Ophisurus serpens	0.14	2	
Total	3977.74	100.00	

PROJECT STATION:1500
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1802 Long E 1138
 start stop duration
 TIME :06:37:00 07:06:00 29 (min) Purpose code: 3
 LOG :5094.10 5095.40 1.30 Area code : 4
 FDEPTH: 123 121 GearCond.code: 8
 BDEPTH: 123 121 Validity code: 1
 Towing dir: 360 Wire out: 450 m Speed: 26 kn*10

Sorted: 69 Kg Total catch: 264.56 CATCH/HOUR: 547.37

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Dentex macrocephthalmus	181.24	1279	625
Merluccius capensis, female	131.59	459	624
Trachurus capensis	57.10	385	627
Merluccius capensis, male	43.45	29	622
Merluccius capensis, male	40.22	186	623
Cheilodichthys capensis	20.61	25	3.77
Zeus faber	15.39	25	2.81
Squalus megalops	13.41	25	2.45
Thyrssites atun	11.67	6	2.13
Trigla lyra	10.30	50	1.88
MYCTOPHIDAE	7.70		1.41
Atractoscion aequidens	7.12	2	1.30
Merluccius polli	2.86	62	0.52
Helicolenus dactylopterus	1.37	25	0.25
Pterothrissus belloci	1.12	12	0.20
Synagrops microlepis	1.12	137	0.24
Lepidopus caudatus	0.74	12	0.14
Todaropsis eblanae	0.37	12	0.07
Total	547.38	100.00	

PROJECT STATION:1501
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1800 Long E 1131
 start stop duration
 TIME :08:56:00 09:09:00 13 (min) Purpose code: 3
 LOG :5102.20 5102.70 0.50 Area code : 7
 FDEPTH: 219 221 GearCond.code: 8
 BDEPTH: 219 221 Validity code: 1
 Towing dir: 340 Wire out: 800 m Speed: 30 kn*10

Sorted: 116 Kg Total catch: 119.73 CATCH/HOUR: 552.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	318.00	383	57.55	628
Merluccius capensis, male	86.31	157	15.62	621
Dentex macrophthalmus	58.15	254	10.52	629
Helicolenus dactylopterus	23.45	185	4.24	
Trachurus capensis	23.17	106	4.19	630
Pterothrissus belloci	22.25	115	4.03	
Chlorophthalmus atlanticus	9.23	277	1.67	
Synagrops microlepis	4.15	323	0.75	
Squalus megalops	3.69	5	0.67	
Coelorinchus coelorinch. polli	3.23	92	0.58	
Merluccius polli	0.97	14	0.18	
Total	552.60		100.00	

PROJECT STATION:1502
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1801 Long E 1124
 start stop duration
 TIME :10:53:00 11:22:00 29 (min) Purpose code: 3
 LOG :5113.10 5114.60 1.50 Area code : 5
 FDEPTH: 408 405 GearCond.code: 5
 BDEPTH: 408 405 Validity code: 5
 Towing dir: 330 Wire out:1100 m Speed: 29 kn*10

Sorted: 174 Kg Total catch: 1013.66 CATCH/HOUR: 2097.23

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	1258.78	1074	60.02	632
Merluccius capensis, male	392.23	422	18.70	631
Helicolenus dactylopterus	99.52	759	4.75	
Hoplostethus cadenati	62.28	2969	2.97	
Laemonema laureysi	56.96	869	2.72	
Deania profundorum	53.21	97	2.54	
Merluccius paradoxus, female	47.42	97	2.26	634
Epigonus denticulatus	34.39	966	1.64	
Nezumia milleri	26.32	1219	1.25	
Shrimps, small, non comm.	19.68		0.94	
Coelorinchus coelorinch. polli	6.87	132	0.33	
Chlorophthalmus atlanticus	5.92	145	0.28	
Aristeus varidens	5.67	677	0.27	
Todarodes sagittatus	5.54	12	0.26	
Galeus polli	4.94	25	0.24	
Merluccius paradoxus, male	4.94	12	0.24	633
Etmopterus pusillus	3.37	12	0.16	
Ebinania costaeacanarie	3.02	97	0.14	
Histioteuthis reversa	2.42	35	0.12	
Schedophilus huttoni	1.45	2	0.07	
Lophius upsicephalus	1.32	2	0.06	
Ophisurus serpens	0.97	35	0.05	
Total	2097.22		100.01	

PROJECT STATION:1503
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1813 Long E 1123
 start stop duration
 TIME :13:10:00 13:40:00 30 (min) Purpose code: 3
 LOG :5128.30 5129.60 1.50 Area code : 8
 FDEPTH: 600 603 GearCond.code: 8
 BDEPTH: 600 603 Validity code: 8
 Towing dir: 180 Wire out:1650 m Speed: 29 kn*10

Sorted: 25 Kg Total catch: 166.82 CATCH/HOUR: 333.64

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachyrinus scabrus	124.80	540	37.41	
Nezumia milleri	38.40	1056	11.51	
Hoplostethus cadenati	28.80	408	8.63	
Merluccius capensis, female	26.80	8	8.03	635
Alepocephalus sp.	25.32	84	7.59	
Etmopterus pusillus	20.04	36	6.01	
Aristeus varidens	19.92	1104	5.97	
Deania profundorum	18.12	24	5.43	
Glyphis marsupialis	9.36		2.81	
Raja confundens	7.56	36	2.27	
Merluccius paradoxus, female	4.20	6	1.26	636
Ophisurus serpens	1.92	24	0.58	
Yarella blackfordi	1.80	60	0.54	
Todarodes sagittatus	1.76	4	0.53	
Schedophilus huttoni	1.20	2	0.36	
Schedophilus huttoni	1.20	2	0.36	
Selachophilium guentheri	0.96	12	0.29	
MYCTOPHIDAE	0.96	60	0.29	
Notacanthus sexspinis	0.48	84	0.14	
Heterocarpus grimaldii	0.04	2	0.01	
Total	333.64		100.02	

PROJECT STATION:1504
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1826 Long E 1127
 start stop duration
 TIME :15:27:00 15:57:00 30 (min) Purpose code: 3
 LOG :5142.00 5143.50 1.66 Area code : 7
 FDEPTH: 362 363 GearCond.code: 7
 BDEPTH: 362 363 Validity code: 7
 Towing dir: 170 Wire out:1100 m Speed: 32 kn*10

Sorted: 129 Kg Total catch: 360.19 CATCH/HOUR: 720.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	408.60	304	56.72	638
Centroprorus granulatus	92.60	26	12.85	
Merluccius capensis, male	52.00	44	7.22	637
Helicolenus dactylopterus	42.90	740	5.96	
Epigonus denticulatus	42.60	1468	5.91	
Hoplostethus cadenati	21.00	1106	2.92	
Todarodes sagittatus	20.60	52	2.96	
Merluccius paradoxus, female	16.60	26	2.30	639
Nezumia milleri	6.20	300	0.86	
Galeus polli	5.40	40	0.75	
Laemonema laureysi	4.20	66	0.58	
Aristeus varidens	2.60		0.36	
Shrimps, small, non comm.	2.60		0.36	
Coelorinchus coelorinch. polli	1.40	40	0.19	
Synagrops microlepis	0.40	40	0.06	
Ebinania costaeacanarie	0.40	40	0.06	
MYCTOPHIDAE	0.14	40	0.02	
Yarella blackfordi	0.14	40	0.02	
Total	720.38		100.00	

PROJECT STATION:1505
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1826 Long E 1132
 start stop duration
 TIME :16:59:00 17:29:00 30 (min) Purpose code: 3
 LOG :5150.30 5151.80 1.52 Area code : 5
 FDEPTH: 229 234 GearCond.code: 5
 BDEPTH: 229 234 Validity code: 5
 Towing dir: 360 Wire out: 800 m Speed: 30 kn*10

Sorted: 195 Kg Total catch: 1544.16 CATCH/HOUR: 3088.32

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	1564.80	2592	50.67	641
Merluccius capensis, male	558.40	1152	18.08	640
Helicolenus dactylopterus	312.00	780	10.10	
Chlorophthalmus atlanticus	304.00	11302	9.84	
Dentex macrophthalmus	176.00	592	5.70	643
Trachurus capensis	91.20	320	2.95	644
Krill	29.60		0.96	
Merluccius polli	19.84	336	0.64	
Pterothrissus belloci	11.20	48	0.36	642
Synagrops microlepis	10.56	720	0.34	
Raja straeleni	2.76	4	0.09	
Hyperoglyphe mosellii	2.52	2	0.08	
Parapenaeus longirostris	1.92	240	0.06	
Todaropsis eblanae	0.80	96	0.03	
Coelorinchus coelorinch. polli	0.64	16	0.02	
Munida sp.	0.64	96	0.02	
Sufflogobius bibarbatatus	0.48	160	0.02	
MYCTOPHIDAE	0.32	128	0.01	
Solenocera africana	0.32	32	0.01	
PORTUNIDAE	0.16	16	0.01	
Nezumia milleri	0.16	16	0.01	
Total	3088.32		100.00	

PROJECT STATION:1506
 DATE:27/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1823 Long E 1141
 start stop duration
 TIME :18:52:00 19:22:00 30 (min) Purpose code: 3
 LOG :5163.70 5165.30 1.50 Area code : 5
 FDEPTH: 141 141 GearCond.code: 5
 BDEPTH: 141 141 Validity code: 5
 Towing dir: 340 Wire out: 600 m Speed: 31 kn*10

Sorted: 170 Kg Total catch: 2765.56 CATCH/HOUR: 5531.12

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	2062.50	6402	37.29	647
Trachurus capensis	1821.60	2904	32.93	650
Merluccius capensis, male	735.90	3168	13.30	646
Dentex macrophthalmus	729.30	4752	13.19	649
Pterothrissus belloci	62.40	562	1.13	
Helicolenus dactylopterus	54.80	1420	0.99	
Merluccius polli	26.80	396	0.48	648
Synagrops microlepis	18.80	1222	0.34	
Lepidopus caudatus	7.92	66	0.14	
Thyrssites atun	5.50	2	0.10	645
MYCTOPHIDAE	4.60		0.08	
Todaropsis eblanae	0.66	34	0.01	
Sufflogobius bibarbatatus	0.34	66	0.01	
Total	5531.12		99.99	

PROJECT STATION:1507
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1926 Long E 1141
 start stop duration
 TIME :06:25:00 06:53:00 28 (min) Purpose code: 3
 LOG :5236.40 5238.00 1.50 Area code : 6
 FDEPTH: 351 319 GearCond.code: 6
 BDEPTH: 351 319 Validity code: 6
 Towing dir: 360 Wire out:1000 m Speed: 31 kn*10

Sorted: 165 Kg Total catch: 609.12 CATCH/HOUR: 1305.26

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	927.43	707	71.05	653
Merluccius capensis, male	183.21	180	14.04	652
Helicolenus dactylopterus	136.29	3152	10.44	
Galeus polli	20.79	180	1.59	
Coelorinchus coelorinch. polli	6.86	174	0.53	
Todarodes sagittatus	6.64	11	0.51	
Nezumia milleri	6.43	272	0.49	
Lophius upsicephalus	6.32	6	0.48	651
Schedophilus huttoni	4.29	2	0.33	
Ebinania costaeacanarie	2.64	26	0.20	
Epigonus denticulatus	2.25	58	0.17	
Laemonema laureysi	0.94	17	0.07	
Chlorophthalmus atlanticus	0.75	17	0.06	
MYCTOPHIDAE	0.17	32	0.01	
Lycoteuthis diadema	0.17	9	0.01	
Solenocera africana	0.09	17	0.01	
Total	1305.27		99.99	

PROJECT STATION:1508
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1923 Long E 1149
 start stop duration
 TIME :08:19:00 08:48:00 29 (min) Purpose code: 3
 LOG :5249.00 5250.60 1.40 Area code : 7
 FDEPTH: 313 312 GearCond.code: 7
 BDEPTH: 313 312 Validity code: 7
 Towing dir: 360 Wire out: 950 m Speed: 29 kn*10

Sorted: 142 Kg Total catch: 212.14 CATCH/HOUR: 438.91

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	234.93	242	53.53	655
Merluccius capensis, male	68.28	106	15.56	654
Helicolenus dactylopterus	46.24	2557	10.54	
Galeus polli	43.14	927	9.83	
Chlorophthalmus atlanticus	17.75	832	4.04	
Dentex macrophthalmus	9.93	35	2.26	
Todarodes sagittatus	4.74	14	1.08	
Coelorinchus coelorinch. polli	4.20	143	0.96	
Trachurus capensis	3.10	10	0.71	
Solenocera africana	2.67	470	0.61	
Hyperoglyphe mosellii	1.84	2	0.42	
Lycoteuthis diadema	0.72	37	0.16	
Krill	0.62		0.14	
Hoplostethus cadenati	0.43	10	0.10	
MYCTOPHIDAE	0.19		0.04	
Munida sp.	0.08	4	0.02	
Nezumia milleri	0.04	4	0.01	
Total	438.90		100.01	

PROJECT STATION:1509
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1921 Long E 1157
 start stop duration
 TIME :10:12:00 10:40:00 28 (min) Purpose code: 3
 LOG :5261.50 5263.00 1.30 Area code : 4
 FDEPTH: 283 282 GearCond.code:
 BDEPTH: 283 282 Validity code:
 Towing dir: 350 Wire out: 900 m Speed: 27 kn*10
 Sorted: 81 Kg Total catch: 160.88 CATCH/HOUR: 344.74

PROJECT STATION:1513
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1942 Long E 1155
 start stop duration
 TIME :16:58:00 17:28:00 30 (min) Purpose code: 3
 LOG :5303.90 5305.20 1.70 Area code : 6
 FDEPTH: 333 335 GearCond.code:
 BDEPTH: 333 335 Validity code:
 Towing dir: 170 Wire out:1050 m Speed: 33 kn*10
 Sorted: 176 Kg Total catch: 510.32 CATCH/HOUR: 1020.64

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pterothrissus belloci	135.00	694	39.16	
Helicolenus dactylopterus	59.40	2409	17.23	
Merluccius capensis, female	41.57	94	12.06	657
Merluccius capensis, male	39.43	111	11.44	656
Trachurus capensis	31.71	124	9.20	658
Dentex macrocephalus	21.64	94	6.28	659
Solenocera africana	3.21	4	0.93	
Neoharriotta pinnata	2.57	1	0.75	
Krill	2.57	1	0.75	
Lophus upsicephalus	2.10	13	0.61	660
Galeus polli	1.67	51	0.48	
Chlorophthalmus atlanticus	1.29	116	0.37	
PORTUNIDAE	1.29	26	0.37	
Coelorinchus coelorinch. polli	0.26	26	0.08	
Sufflogobius bibarbatus	0.13	13	0.04	
Total	344.74		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	547.20	462	53.61	675
Merluccius capensis, male	247.20	216	24.22	674
Helicolenus dactylopterus	148.80	5484	14.58	
Galeus polli	47.40	698	4.64	
Schedophilus huttoni	14.20	6	1.39	
Todarodes sagittatus	4.32	12	0.42	
Lophus upsicephalus	2.82	4	0.28	673
Solenocera africana	2.70	624	0.26	
Chlorophthalmus atlanticus	2.22	66	0.22	
Hoplostethus cadenati	1.26	36	0.11	
Nezumia milleri	1.08	42	0.12	
Coelorinchus coelorinch. polli	1.02	24	0.10	
Laemonema laureysi	0.24	6	0.02	
Synagrops microlepis	0.18	2	0.02	
PORTUNIDAE	0.00	6		
Total	1020.64		99.99	

PROJECT STATION:1510
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1818 Long E 1206
 start stop duration
 TIME :12:03:00 12:33:00 30 (min) Purpose code: 3
 LOG :5274.20 5275.50 1.75 Area code : 7
 FDEPTH: 230 233 GearCond.code:
 BDEPTH: 230 233 Validity code:
 Towing dir: 175 Wire out: 800 m Speed: 35 kn*10
 Sorted: 83 Kg Total catch: 885.59 CATCH/HOUR: 1771.18

PROJECT STATION:1514
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1946 Long E 1147
 start stop duration
 TIME :18:50:00 19:22:00 32 (min) Purpose code: 3
 LOG :5315.80 5317.40 1.80 Area code : 7
 FDEPTH: 378 372 GearCond.code:
 BDEPTH: 378 372 Validity code:
 Towing dir: 160 Wire out:1050 m Speed: 33 kn*10
 Sorted: 183 Kg Total catch: 240.49 CATCH/HOUR: 450.92

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	1320.00	9878	74.53	664
Merluccius capensis, female	220.00	1056	12.42	663
Merluccius capensis, male	198.00	1078	11.18	662
Dentex macrocephalus	23.76	110	1.34	
Krill	4.00	2	0.23	
Merluccius capensis, female	2.80	2	0.16	661
Todarodes sagittatus	2.62	2	0.15	
Total	1771.18		100.01	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	249.00	203	55.22	677
Helicolenus dactylopterus	120.00	1266	26.61	
Merluccius capensis, male	23.81	23	5.28	676
Neoharriotta pinnata	16.33	13	3.62	
Merluccius paradoxus, female	16.05	32	3.56	678
Galeus polli	6.24	62	1.38	
Todarodes sagittatus	5.08	11	1.13	
Coelorinchus coelorinch. polli	3.84	96	0.85	
Nezumia milleri	2.46	135	0.55	
Epigonus denticulatus	1.93	75	0.43	
Raja confundens	1.28	2	0.28	
Laemonema laureysi	1.22	15	0.27	
MYCTOPHIDAE	1.11	1	0.25	
Yarella blackfordi	0.77	1	0.17	
Trachyrinus scabrus	0.58	6	0.13	
Hoplostethus cadenati	0.28	8	0.06	
Chlorophthalmus atlanticus	0.24	8	0.05	
Aristeus varidens	0.23	21	0.05	
Ophisurus serpens	0.21	2	0.05	
Solenocera africana	0.15	24	0.03	
Lycoteuthis diadema	0.11	2	0.02	
Total	450.92		99.99	

PROJECT STATION:1511
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1926 Long E 1205
 start stop duration
 TIME :13:28:00 13:58:00 30 (min) Purpose code: 3
 LOG :5281.90 5283.20 1.61 Area code : 4
 FDEPTH: 254 251 GearCond.code:
 BDEPTH: 254 251 Validity code:
 Towing dir: 160 Wire out: 850 m Speed: 32 kn*10
 Sorted: 50 Kg Total catch: 49.77 CATCH/HOUR: 99.54

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	51.00	304	51.24	668
Merluccius capensis, male	16.60	70	16.68	666
Merluccius capensis, female	16.00	50	16.07	667
Pterothrissus belloci	7.24	46	7.27	
Merluccius capensis, female	3.38	2	3.40	665
Sufflogobius bibarbatus	2.48	276	2.49	
PORTUNIDAE	1.06	56	1.06	
Dentex macrocephalus	0.92	4	0.92	
Austroglossus microlepis	0.86	6	0.86	
Total	99.54		99.99	

PROJECT STATION:1515
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2008 Long E 1238
 start stop duration
 TIME :06:22:00 06:42:00 20 (min) Purpose code: 3
 LOG :5371.00 5372.00 1.10 Area code : 4
 FDEPTH: 132 136 GearCond.code:
 BDEPTH: 132 136 Validity code:
 Towing dir: 270 Wire out: 500 m Speed: 33 kn*10
 Sorted: 63 Kg Total catch: 212.13 CATCH/HOUR: 636.39

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	232.80	1692	36.58	683
Trachurus capensis	117.60	828	18.48	684
Merluccius capensis, male	112.80	864	17.72	682
Chelidonichthys capensis	49.92	108	7.84	
Dentex macrocephalus	48.84	264	7.67	685
Merluccius capensis, female	17.43	15	2.74	681
Sufflogobius bibarbatus	12.48	1956	1.96	
Pterothrissus belloci	11.04	204	1.73	
Lophus upsicephalus	9.09	33	1.43	679
Austroglossus microlepis	6.06	24	0.95	
Synagrops microlepis	5.52	960	0.87	
Chatrabus melanus	4.92	12	0.77	
Raja miraletus	2.52	3	0.40	
Merluccius capensis, male	1.98	3	0.31	680
Lepidopus caudatus	1.56	36	0.25	
Raja confundens	1.23	3	0.19	
Todaropsis eblanae	0.60	12	0.09	
Total	636.39		99.98	

PROJECT STATION:1512
 DATE:28/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 1938 Long E 1202
 start stop duration
 TIME :15:24:00 15:54:00 30 (min) Purpose code: 3
 LOG :5294.70 5296.00 1.70 Area code : 7
 FDEPTH: 293 296 GearCond.code:
 BDEPTH: 293 296 Validity code:
 Towing dir: 175 Wire out: 950 m Speed: 34 kn*10
 Sorted: 159 Kg Total catch: 241.51 CATCH/HOUR: 483.02

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	285.30	276	59.07	670
Merluccius capensis, male	84.00	118	17.39	669
Trachurus capensis	30.00	142	6.21	671
Helicolenus dactylopterus	21.90	282	4.53	
Pterothrissus belloci	16.66	76	3.45	
Neoharriotta pinnata	16.48	16	3.41	
Dentex macrocephalus	10.62	36	2.20	
Solenocera africana	3.66	6	0.76	
Chlorophthalmus atlanticus	3.58	160	0.74	
Coelorinchus coelorinch. polli	2.56	150	0.53	
Austroglossus microlepis	2.46	6	0.51	
Lophus upsicephalus	2.24	10	0.46	672
Hyperoglyphe moselii	1.44	2	0.30	
Todarodes sagittatus	1.28	4	0.26	
Sufflogobius bibarbatus	0.66	142	0.14	
Galeus polli	0.18	16	0.04	
Total	483.02		100.00	

PROJECT STATION:1516
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2012 Long E 1230
 start stop duration
 TIME :07:58:00 08:16:00 18 (min) Purpose code: 3
 LOG :5382.20 5383.10 1.00 Area code : 4
 FDEPTH: 208 205 GearCond.code:
 BDEPTH: 208 205 Validity code:
 Towing dir: 330 Wire out: 800 m Speed: 32 kn*10
 Sorted: 60 Kg Total catch: 2000.00 CATCH/HOUR: 6666.67

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	6537.67	42887	98.07	687
Merluccius capensis	129.00	780	1.93	686
Total	6666.67		100.00	

PROJECT STATION:1517
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2014 Long E 1223
 start stop duration
 TIME :09:26:00 09:56:00 30 (min) Purpose code: 3
 LOG :5391.40 5392.80 1.60 Area code : 4
 FDEPTH: 248 247 GearCond.code:
 BDEPTH: 248 247 Validity code:
 Towing dir: 330 Wire out: 850 m Speed: 32 kn*10
 Sorted: 94 Kg Total catch: 125.36 CATCH/HOUR: 250.72

PROJECT STATION:1521
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2026 Long E 1246
 start stop duration
 TIME :17:01:00 17:31:00 30 (min) Purpose code: 3
 LOG :5440.50 5442.10 1.60 Area code : 4
 FDEPTH: 148 148 GearCond.code:
 BDEPTH: 148 148 Validity code:
 Towing dir: 340 Wire out: 600 m Speed: 32 kn*10
 Sorted: 38 Kg Total catch: 166.26 CATCH/HOUR: 332.52

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	73.64	264	29.37	690
Trachurus capensis	62.44	386	24.90	692
Merluccius capensis, female	23.60	126	13.40	691
Dentex macrophthalmus	29.68	124	11.84	693
Merluccius capensis, female	23.00	16	9.17	689
Sufflogobius bibarbatu	19.24	2830	7.67	
Merluccius capensis, male	8.40	8	3.35	688
Pterothrissus belloci	0.42	2	0.17	
Chlorophthalmus atlanticus	0.30	12	0.12	
Total	250.72		99.99	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, male	178.00	1590	53.53	712
Merluccius capensis, female	114.00	840	34.28	713
Dentex macrophthalmus	9.00	40	2.71	
Merluccius capensis, female	8.52	14	2.56	709
Trachurus capensis	8.10	60	2.44	
Chelidonichthys capensis	6.80	20	2.04	
Lepidopsis caudatus	1.50	20	0.45	
Todaropsis eblanae	1.20	40	0.36	
Raja straeleni	1.12	2	0.34	
Merluccius capensis, male	1.02	2	0.31	708
Sufflogobius bibarbatu	1.00	480	0.30	
Lophius upsicephalus	0.84	4	0.25	711
Squalus megalops	0.76	2	0.23	
Synagrops microlepis	0.40	70	0.12	
Austroglossus microlepis	0.26	2	0.08	710
Total	332.52		100.00	

PROJECT STATION:1518
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2018 Long E 1215
 start stop duration
 TIME :11:10:00 11:38:00 28 (min) Purpose code: 3
 LOG :5402.10 5403.60 1.50 Area code : 4
 FDEPTH: 282 283 GearCond.code:
 BDEPTH: 282 283 Validity code:
 Towing dir: 170 Wire out: 900 m Speed: 34 kn*10
 Sorted: 154 Kg Total catch: 154.17 CATCH/HOUR: 330.36

PROJECT STATION:1522
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2025 Long E 1253
 start stop duration
 TIME :18:57:00 19:27:00 30 (min) Purpose code: 3
 LOG :5454.60 5456.00 1.70 Area code : 1
 FDEPTH: 116 114 GearCond.code:
 BDEPTH: 116 114 Validity code:
 Towing dir: 350 Wire out: 450 m Speed: 33 kn*10
 Sorted: 59 Kg Total catch: 1773.90 CATCH/HOUR: 3547.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	117.86	396	35.68	696
Merluccius capensis, female	111.43	165	33.73	695
Merluccius capensis, male	53.57	126	16.22	694
Pterothrissus belloci	22.29	111	6.75	
Nemichthys scolopacea	7.71	4	2.33	
Chlorophthalmus punctatus	7.03	246	2.13	
Solenocera africana	5.04	945	1.53	
Dentex macrophthalmus	2.89	13	0.87	
Sufflogobius bibarbatu	2.14	604	0.65	
Lophius upsicephalus	0.26	2	0.08	697
Galeus polli	0.15	9	0.05	
Total	330.37		100.02	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	1704.00	12610	48.03	716
Merluccius capensis, male	1104.00	10440	31.12	714
Merluccius capensis, female	690.00	5460	19.45	715
Chelidonichthys capensis	22.80	60	0.64	
Pterothrissus belloci	18.00	120	0.51	
Todaropsis eblanae	4.80	180	0.14	
Sufflogobius bibarbatu	4.20	1320	0.12	
Total	3547.80		100.01	

PROJECT STATION:1519
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2028 Long E 1220
 start stop duration
 TIME :12:51:00 13:21:00 30 (min) Purpose code: 3
 LOG :5412.70 5414.20 1.66 Area code : 6
 FDEPTH: 294 294 GearCond.code:
 BDEPTH: 294 294 Validity code:
 Towing dir: 140 Wire out: 950 m Speed: 33 kn*10
 Sorted: 177 Kg Total catch: 796.37 CATCH/HOUR: 1592.74

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	1112.40	1072	69.84	699
Merluccius capensis, male	315.00	414	19.78	698
Trachurus capensis	67.50	172	4.24	700
Trachipterus trachypterus	50.82	14	3.19	
Pterothrissus belloci	12.34	64	0.77	
Galeus polli	9.18	216	0.58	
Chlorophthalmus atlanticus	7.84	306	0.49	
Squalus megalops	3.78	10	0.24	
Helicolenus dactylopterus	3.16	136	0.20	
Todarodes sagittatus	2.98	6	0.19	
MYCTOPHIDAE	2.70		0.17	
Lophius upsicephalus	2.60	2	0.16	701
Solenocera africana	1.80		0.11	
Coelorinchus coelorinch. polli	0.64	18	0.04	
Total	1592.74		100.00	

PROJECT STATION:1520
 DATE:29/11/92 GEAR TYPE: BT No:1 POSITION:Lat S 2030 Long E 1234
 start stop duration
 TIME :14:48:00 15:18:00 30 (min) Purpose code: 3
 LOG :5426.40 5428.10 1.70 Area code : 4
 FDEPTH: 269 261 GearCond.code:
 BDEPTH: 269 261 Validity code:
 Towing dir: 90 Wire out: 850 m Speed: 30 kn*10
 Sorted: 166 Kg Total catch: 266.36 CATCH/HOUR: 532.72

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus capensis	132.00	684	24.78	707
Pterothrissus belloci	114.00	660	21.40	
Merluccius capensis, female	103.40	76	19.41	703
Merluccius capensis, male	72.40	252	13.59	705
Merluccius capensis, female	54.40	196	10.21	706
Merluccius capensis, male	27.40	30	5.14	702
Sufflogobius bibarbatu	8.00	1186	1.50	
Chlorophthalmus atlanticus	6.80	280	1.28	
Krill	6.00		1.13	
Dentex macrophthalmus	3.60	12	0.68	
Solenocera africana	2.04	408	0.38	
Austroglossus microlepis	1.56	4	0.29	704
Galeus polli	0.80	44	0.15	
Coelorinchus coelorinch. polli	0.28	4	0.05	
Synagrops microlepis	0.04	4	0.01	
Total	532.72		100.00	

Annex III Instruments and fishing gear used

ACOUSTIC INSTRUMENTS

A SIMRAD scientific echo sounder, EK 500/38kHz, was used during the survey for estimation of fish density.

Based on a calibration experiment using a standard copper sphere in Baia dos Tigres on 26th November 1991, the following settings were used:

Absorption Coeff.	10 dB/km
Pulse length	Medium
Bandwidth	Wide
Max. Power	2 000 W
Angle sensitivity	21.9
2-way Beam Angle	-21.0 dB
Sv Transd. Gain	28.0 dB
Ts Transd. Gain	28.0 dB
3 dB Beamwidth	6.9°
Along-ship Offset	0°
Athwart-ship	0°

HYDROGRAPHY

Temperature, salinity and oxygen were sampled at standard depths with Nansen bottles. Oxygen was measured with the Winkler method and salinity determined with an inductive salinometer.

FISHING GEAR

Bottom trawl: High opening shrimp and fish trawl with net headline 31m (floatline), foot-rope 47m, gear with 12 cm diameter roller disks, 40 m sweeps, estimated headline height 6m and distance between wings during towing 18-20m.

Pelagic trawl: Swedish type mid-water trawl with a vertical opening of 20-25m.

Cod-ends of trawls with fine meshed inner lining.

