

SURVEYS OF THE FISH RESOURCES OF ANGOLA

Cruise Report No. 2, 6 August-18 September 1991

The "DR. FRIDTJOF NANSEN" research programme is sponsored by the Norwegian Agency for Development Assistance, NORAD, the Food and Agriculture Organization of the United Nations, FAO and the United Nations Development Programme, UNDP. The programme in Angola which has comprised nine previous surveys in the period 1985-1989 is being conducted and planned under agreements between NORAD, Angolan authorities, Centro de Investigacao Pesqueira, CIP, Luanda and the Institute of Marine Research, Bergen.

The programme in 1991 will comprise two surveys the timing of which is foreseen as follows:

Survey 1, 4 May-19 June

" 2, 3 August-20 September

This cruise report describes the work and some of the results of the second survey of 1991.

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	OBJECTIVES	1
1.2	PARTICIPATION	1
1.3	NARRATIVE	2
1.4	SURVEY EFFORT	2
2	HYDROGRAPHY	3
3	DISTRIBUTION AND ABUNDANCE OF PELAGIC FISH FROM THE ACOUSTIC SYSTEM	3
3.1	CABINDA - LUANDA	3
3.2	LUANDA - BENGUELA	4
3.3	BENGUELA - CUNENE	5
4	RESULTS FROM THE TRAWL SURVEY, CATCH COMPOSITIONS AND SWEEPED AREA ESTIMATES OF DEMERSAL FISH	6
4.1	CABINDA - LUANDA	6
4.2	LUANDA - BENGUELA	7
4.3	TOMBUA - CUNENE	8
5	RESULTS OF THE FISHING EXPERIMENTS ON THE SLOPE, CABINDA TO BENGUELA	8
5.1	BENGUELA HAKE	8

ANNEX I Swept area estimates

ANNEX II Size compositions of main species

ANNEX III Instruments and fishing gear used

ANNEX IV Records of fishing stations

1 INTRODUCTION

1.1 OBJECTIVES

The main purpose of the survey was the same as that of the previous survey; to provide as much information as possible about the composition, distribution and abundance of the components of resources covered by the survey methodology. The main emphasis was on providing the best possible estimates of the biomass of the small pelagic fish in the various regions by individual stocks. The second priority was a swept area trawl survey for demersal species conducted by depth strata. In addition some test hauls for hake down to about 400 m of depth was carried out. The hydrographic programme comprising surface temperature distribution and profiles in standard positions was likewise carried out as before.

The second survey follows the same procedure as the foregoing survey and was done in order to support the analysis of the results from the first survey and allow for evaluation of seasonal effects.

1.2 PARTICIPATION

The scientific staff from CIP, Luanda was:

Until 28 August: Filomena Vaz-Velho, Maria de Sardinha,
Geraldina Salvador, Gizela Ramos, Francisco Almeida,
Tomatima M'Bengui.

From 28 August: Jose Constanca Lourenco, Antonio Vunge,
N'Kossi Luyeye, Kumbi Kilongo N'Singui, Antonio Bucu, Pina Fernandes.

The scientific staff from IMR was:

Else Torstensen (until 28 August), Tore Strømme (from 28 August),
Helge Ullebust, Åge Høyne, Martin Dahl and Magnar Mjanger.

1.3 NARRATIVE

The vessel called on Luanda 5 August for embarking scientific crew and left in the afternoon 6 August, heading for the northern border of Angola. The sampling programme consisted of acoustic transects approximately 10 nm apart, and with semi-random swept area hauls carried out during daylight hours. Between Cabinda and Luanda four hydrographic sections were sampled; off Pta de Moita Seca, Cabinda, Ambriz and Luanda. The three latter sections are standard CIP transects.

The work progressed ahead of schedule, and the shelf down to Pta de Morro was surveyed before the vessel called on Luanda on 28 August for change of crew and refuelling. On 29 August the survey proceeded covering again the shallow waters between Pta das Palmeirinhas and Pta do Morro, where sardinellas had been observed during the previous coverage. The work continued southwards with the standard grid pattern.

During the transfer of the vessel from Walvis Bay to Luanda before the start of the survey, the crew observed surfacing schools in oceanic waters about 60 nm north-west of Cabo de Santa Marta. During the southward survey about 24 hours were spent in this area without tracing any pelagic fish.

Between Namibe and Tombua horse-mackerel were observed close to the bottom, and a detailed survey net were laid out. The vessel passed Tombua on 8 September. The area between Tombua and Cunene was surveyed more intensively with transects 5 nm apart, and when major concentrations were found, these were resurveyed.

Baia dos Tigres held, as during the previous survey, dense concentrations of pilchard. These were covered both day and night in a detailed survey net with 1m-readings from the integrator. The acoustic equipment was calibrated in Baia dos Tigres on 11 September. Three hydrographical profiles were worked out south of Pta das Palmeirinhas; off Lobito, Namibe, and Baia dos Tigres. The section off Nabibe is not a standard section, but were done on basis of verbal reports of environmental anomalies in the area. The vessel arrived in Walvis Bay on 18 September.

1.4 SURVEY EFFORT

The cruise track with fishing stations and hydrographic sections are shown in Figure 1a-c. The survey effort can be summarized as follows:

	Swept-area hauls		Other hauls	Distance surveyed
	0-200 m	200-600 m		
Cabinda-Luanda	64	25	12	2 300 nm
Luanda-Benguela	44	13	12	2 600 nm
Benguela-Cunene	48	2	5	2 000 nm

2 HYDROGRAPHY

Six hydrographic sections were worked during the cruise. Their position are shown in Figure 1a-c. In addition, surface temperature was recorded by the vessel's thermograph at 4 m depth (Figure 2a-c).

The surface temperatures in coastal waters has declined considerably since the previous cruise in May-June, and was around 19°C between Pta. da Moita Seca and Benguela. This is 2-3° lower compared to August 1985, the only other Nansen-survey from the same season in Angola. Southwards from Benguela the coastal temperature decreased gradually to 14°. The Benguela front reached halfway between Tombua and Namibe.

The oxygen values in the surface and sub-surface coastal waters have declined considerably since the last survey, though in most cases the values are not likely to limit the distribution of fish. The hydrographic profile off Lobito, however, shows the 2 ml/l oxycline raising almost to the surface, and that the shelf area from about 30 m bottom depth and downwards are covered with waters with less than 1 ml/l oxygen content. The total absence of sardinella between Cabeça da Baleia and Benguela should be interpreted in this context. Also during the August survey in 1985 the same oceanographic features were registered and there was likewise no sardinella registered in the area.

3 DISTRIBUTION AND ABUNDANCE OF PELAGIC FISH FROM THE ACOUSTIC SYSTEM

The unit of acoustic reflection used by the echo integrator is m^2/nm^2 reflecting surface. In the maps (Figure 4-6) the integrator units have been divided by 10 to allow comparison with the maps from the 1985, 1986 and 1989 surveys. An arbitrary scale has been used to illustrate different levels of density. The integrator values were allocated to the standard groups Pelagic fish type 1 (clupeids and anchovies) and Pelagic fish type 2 (carangids, scombrids, barracudas and hairtails).

3.1 CABINDA - LUANDA

Figure 4 shows the distribution of the Pelagic fish type 1 in this region. There were no sardinellas detected north of the Congo River. South of the Congo sardinella were registered in most of the coastal waters, especially between N'Zeto and Luanda. These occurrences were heavily mixed with large-eye grunt *Brachydeuterus auritus*, making the separation of the integrator values complex. Close to the shelf edge scattered occurrences of sardinella were registered at several locations (Figure 4). During the August survey in 1985 similar offshore registrations of sardinella were located off Pta da Moita Seca. It is unclear whether the sardinella close to the shelf edge are in a feeding area or in a migratory phase.

The size compositions of the pooled samples of the two sardinella species from the area of main distribution, Ambriz to Luanda, show exclusively adult fish bigger than 20 cm, see Annex II.

Biomass estimates based on judged integrator readings and assuming a target strength similar to that of North Sea herring ($TS = 20 \log 1-72$) gives the following results:

Coastal registrations	105 000 tonnes
Offshore registrations	49 000 "
Total	154 000 tonnes

This is close to 30 000 tonnes or 30% higher than the estimate from the previous survey. In addition, considerable registrations of surface schooling sardinella were visually observed north of Luanda. These were not detected by the acoustic system and the above estimate is thus an underestimate.

Pelagic fish type 2, mostly Cunene horse mackerel, were found in bands close to the shore and close to the shelf edge, see Figure 4. Most registrations were scattered, but off Pta das Palmeirinhas a dense concentration was found. The single and very dense schools in the map located off N'Zeto and Ambrize, are probably not the only ones in the area. Due to their very limited area distribution, these schools are not all detected, but are only represented statistically in the total estimate.

Biomass estimates from the integrator readings gives a total of 35 000 tonnes of which about 5 000 tonnes is from hairtail and the remaining 30 000 is mainly horse mackerel. The offshore registrations make up 45% of the total estimate with the remaining 55% in the coastal zone. The dense to very dense areas make up 57% of the total.

The pooled size samples of the horse mackerel, see Annex II, show a predominance of young fish. Two, maybe three cohorts of modal lengths 6, (15) and 18 cm make up the main part of the catch, while bigger fish are sparsely represented. This is the same picture as during the previous survey, except that a new cohort has now entered into the catches. The youngest cohort from 4 to 9 cm makes up 50% of the biomass estimate in numbers, but only 2.6% in weight, and has a considerable growth potential. Due to the selectivity of the trawl gear the youngest cohort's share of the total biomass is probably significantly underestimated.

3.2 LUANDA - BENGUELA

Figure 5 shows the distribution of pelagic fish type 1, nearly all sardinella, from Luanda to Benguela. Most of the sardinella was found in the coastal waters between Pta das Palmerinhas and Pta do Morro. Sampling indicated a predominance of flat sardinella in most of the region as it made up 75% of the sardinella catch.

A striking feature is the absence of sardinella in the southern part, between Cabeça da Baleia and Benguela. This is probably related to the oceanographic conditions with large part of the shelf and the coastal subsurface holding waters with low oxygen content. It is unclear whether this low oxygen is due to penetration of water from the deep, or if it is due to

intensive production in the area. The same feature occurred in August 1985 which is the only survey of this season we can compare. At that time the sardinella were also absent from the area.

The size sampling, see Annex II, shows for both species mostly large sized fish between 25 and 35 cm of length, as during the previous survey. In the samples from the flat sardinella some younger fish were found, but generally there is no indication of younger cohorts recruiting for the sardinellas.

The biomass estimates give 65 000 tonnes between Pta das Palmeirinhas and Ponta do Morro and only 3 000 tonnes further south.

Figure 5 shows the distribution of the Pelagic type 2 fish. The registrations were from very scattered to scattered, and no major aggregations were located.

The size composition of the horse mackerels is shown in Annex II. Compared to the size distribution north of Luanda the Luanda-Benguela region shows absence of the strong young cohort 4 to 7 cm but has stronger components of fish beyond 25 cm.

Biomass estimates of horse mackerel give 70 000 tonnes for the region.

3.3 BENGUELA - CUNENE

Figure 6 shows that the distribution of pelagic fish type 1 in this region was restricted to the southern part. A major concentration was found in Baia dos Tigres, as during the previous survey. The concentration was covered with a special detailed survey grid. Conditions were very good for acoustic assessment and sampling. The biomass in the bay was estimated to 34 000 tonnes, which is 8 000 tonnes higher than the estimate from the May-June survey. North of the bay another concentration was found which is estimated to 31 000 tonnes. Between Baia dos Tigres and Cunene dense registrations of pilchard was found in the shallow waters. This aggregation was estimated to 66 000 tonnes. The total estimate on pilchard thus sums to 131 000 tonnes, signifying a major migration in the order of 100 000 tonnes in from Namibia since the May-June survey. The June estimate on pilchard in Angola was 26 000 tonnes, all from Baia dos Tigres. Sardine has been found in six of the nine previous surveys with estimates from 5 000 to 120 000 tonnes. The previous maximum estimate was from August 1985. The third quarter of the year, which corresponds to the northmost position of the Benguela front, also shows the peak presence of pilchard in Angola. The size composition with a modal length around 25 cm, see Annex II, indicates the presence of only one yearclass.

Due to rough weather conditions it was not possible to trawl-sample properly the southern concentrations south of Baia dos Tigres and north of Cunene, but they are assumed to belong to the same yearclass as the pilchard found more north.

The pelagic fish type 2 species are, as shown in Figure 6, widely distributed over the shelf to about 200 m of depth. The main species are the Cape and Cunene horse mackerels.

The size composition of pooled samples of the two horse mackerel species are shown in Annex II. The Cape horse mackerel consisted of medium sized and larger fish while there was also a component of juvenile fish of the Cunene species present. The size distributions are very similar to the ones recorded in the previous survey.

Biomass estimates from the acoustic observations gave a total of 195 000 tonnes, 95 000 for the Cape, and 100 000 tonnes for the Cunene species. The estimate on the Cape species is thus drastically reduced from 310 000 tonnes from the previous survey, while the Cunene species is estimated to the same stock size as previous. The sudden decline in the estimate of the Cape horse mackerel is probably due to an early return migration into Namibia. The Cape horse mackerel in Angola is just a fraction of the large stock in Namibia. Table 1 shows the time series of these estimates by surveys since 1985. The Cape horse mackerel is part of the Benguela Current ecosystem and migrates with the movement of the front. The abundance of Cape horse mackerel in Namibia was known to be high in 1990-1991.

Survey		Cape h.m.	Cunene h.m.	Total
1/85		170	30	200
"	2/85	75	55	130
"	3/85	220	50	270
"	4/85	270	70	340
"	1/86	40	130	170
"	2/86	10	30	40
"	1/89	125	35	160
"	2/89	135	25	160
"	3/89	240	170	410
"	1/91	310	100	410
"	2/91	95	100	195

4 RESULTS FROM THE TRAWL SURVEY, CATCH COMPOSITIONS AND SWEEPED AREA BIOMASS ESTIMATES OF DEMERSAL FISH

4.1 CABINDA - LUANDA

71 swept area stations were successfully carried out. These were distributed as follows: 0-50 m 30 hauls, 50-100 m 25 hauls and 100-200 m 16 hauls.

The swept area estimates are shown in Annex I. Table 2 shows the mean densities by main groups. Red pandora and Angola dentex were most common among the seabreams and African weakfish and Cassava croaker among the croakers. One should note the high abundance of the big-eye grunt.

The total biomass of the demersal species with highest economic value is estimated to 36 000 tonnes. During the previous survey the corresponding estimate was 16 000 tonnes, which constitutes a drastic decline in the time series from 1985. With the recent estimate the commercial groundfish is back to the normal level of the period 1985-1989. The survey in May could have picked up an irregularity in the distribution pattern, with considerable parts of the stocks outside the surveyed area, perhaps in the very shallow waters or into Congo.

Table 2. Cabinda-Luanda. Mean densities and biomass estimates of main groups.

	Density t/nm ²	Biomass 1 000 tonnes
Seabreams	2.11	16 500
Grunts*	0.37	2 900
Croakers	2.00	15 600
Groupers	0.12	940
Sum demersal val.	4.60	35 940
Big eye grunt	2.52	19 700
Horse mackerel	1.53	12 000
Other carangids	0.11	860
Barracudas		
Hairtail	1.06	8 300

* excluding big-eye grunt

4.2 LUANDA - BENGUELA

The shelf down to 200 m was covered with a total of 41 swept area hauls: 18 in 10-50 m, 13 in 50-100 m and 9 in 100-200 m. The swept area calculations are shown in Annex I and gives the density estimates by species. Table 3 shows the densities and biomass estimates by main groups. The main seabream species were large eye dentex, red pandora, and Barnard dentex. The main croakers were Canary drum and African weakfish.

Table 3. Luanda-Benguela. Mean densities of main groups and biomass estimates over the shelf to 200 m.

	Density t/nm ²	Biomass 1 000 tonnes
Seabreams	4.96	24 580
Grunts*	1.14	5 500
Croakers	3.94	19 000
Groupers	0.21	1 000
Snappers	0.00	0
Sum demersal val.	10.25	50 080
Big eye grunt	3.82	18 500
Horse mackerel	9.93	48 500
Other carangids		290
Barracudas		
Hairtail	0.85	4 100

* excluding big-eye grunt

4.3 TOMBUA - CUNENE

The coverage down to 200 m depth, was made with 47 swept area hauls, distributed as follows: 0-50 m 10 hauls, 50-100 m 18 hauls and 100-200 m 19 hauls. In addition 2 hauls were made on the slope down to 250 m in the south where it is possible to trawl. The swept area estimates for all species are shown in Annex I. Table 4 shows the mean densities and biomasses of the main groups. The seabreams are mainly large eye dentex with some red pandora and Angola and Barnard dentex. The croakers are mainly African weakfish and some Canary drum.

	Density t/nm ²	Biomass 1 000 tonnes
Seabreams	15.72	26 600
Croakers	0.97	1 600
Hakes	4.86	8 200
Sum demersal val.	21.55	36 400
Cape horse mck	15.77	26 700
Cunene hrs.mck.	7.32	12.700

5 RESULTS OF THE FISHING EXPERIMENTS ON THE SLOPE, CABINDA TO BENGUELA

The swept area hauls on the slope were distributed by depth as follows:

	Cabinda-Benguela	Benguela-Cunene
100-200 m	25	19
200-300 m	25	2
300-400 m	10	
400-500 m	5	

The swept area estimates of all the main species caught at these depth ranges are shown in Annex I.

5.1 BENGUELA HAKE

Table 5 shows the mean catch rates of hake by depth ranges. Compared with the results of the previous survey the hake has a more shallow distribution with the maximum catch rates in the 300-400m depth range (previously in the 400-500m depth range).

Table 5. Mean catch rates of hake by regions and depth ranges. Kg/hour.

	Cabinda-Benguela	Tombua-Cunene
100-200 m	3	97
200-300 m	165	2250
300-400 m	520	-
400-500 m	245	-

The biomass of hake is estimated to 32 700 tonnes, only slightly higher than the estimate from the May 1991 survey (29 000 tonnes).

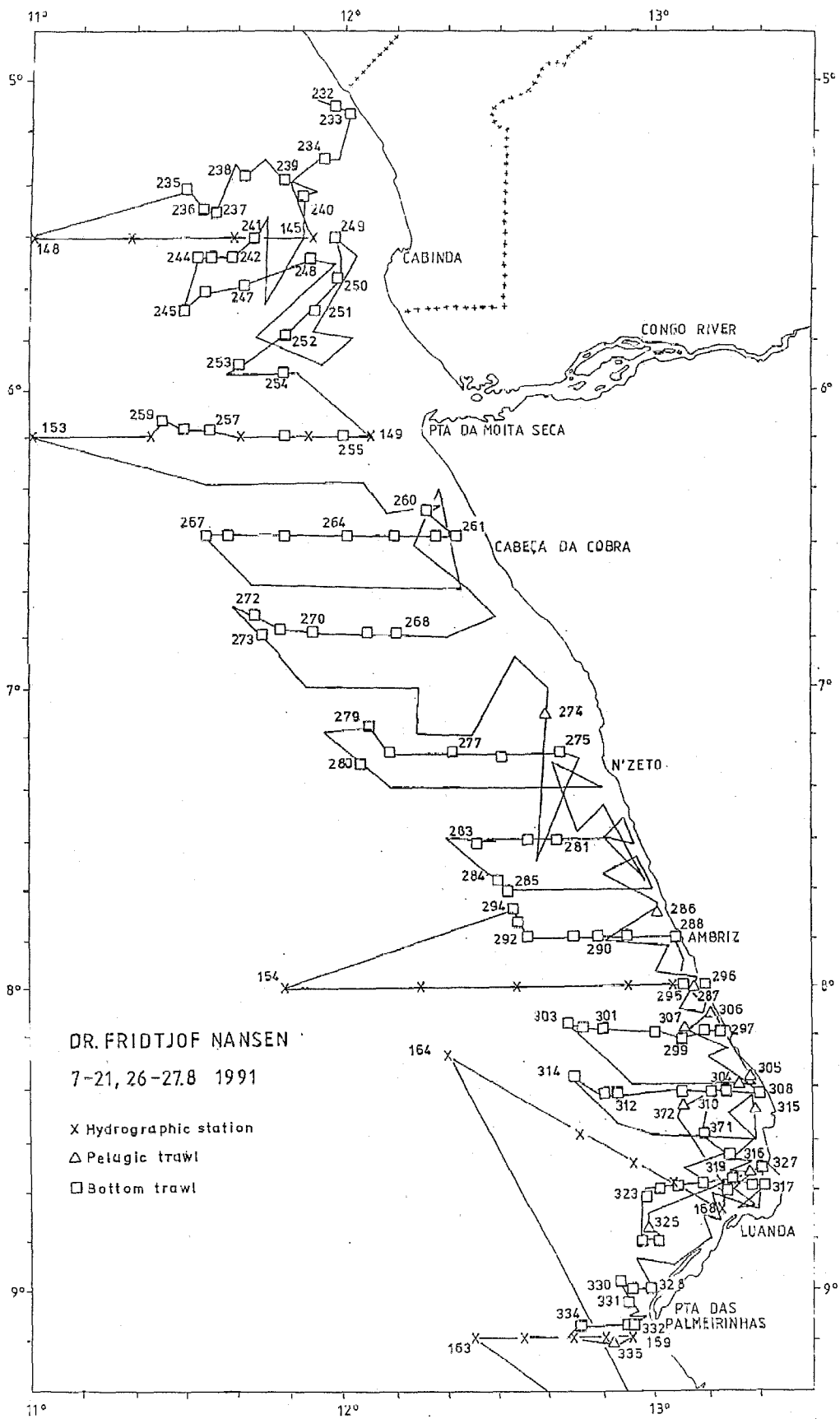


Figure 1a Course tracks with fishing stations and hydrographic profiles, Cabinda - Luanda.

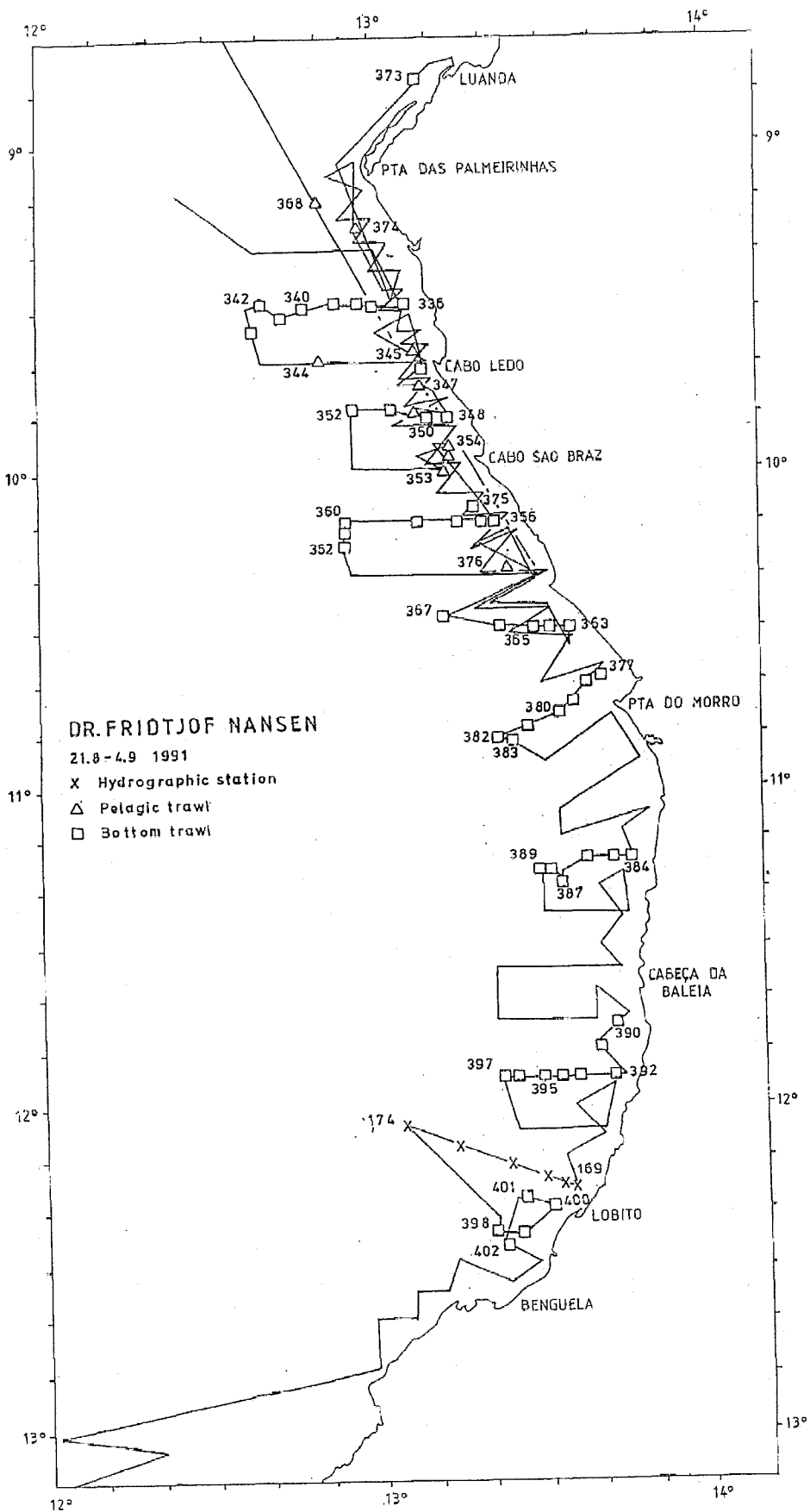


Figure 1b Course tracks with fishing stations and hydrographic profiles, Luanda - Benguela.

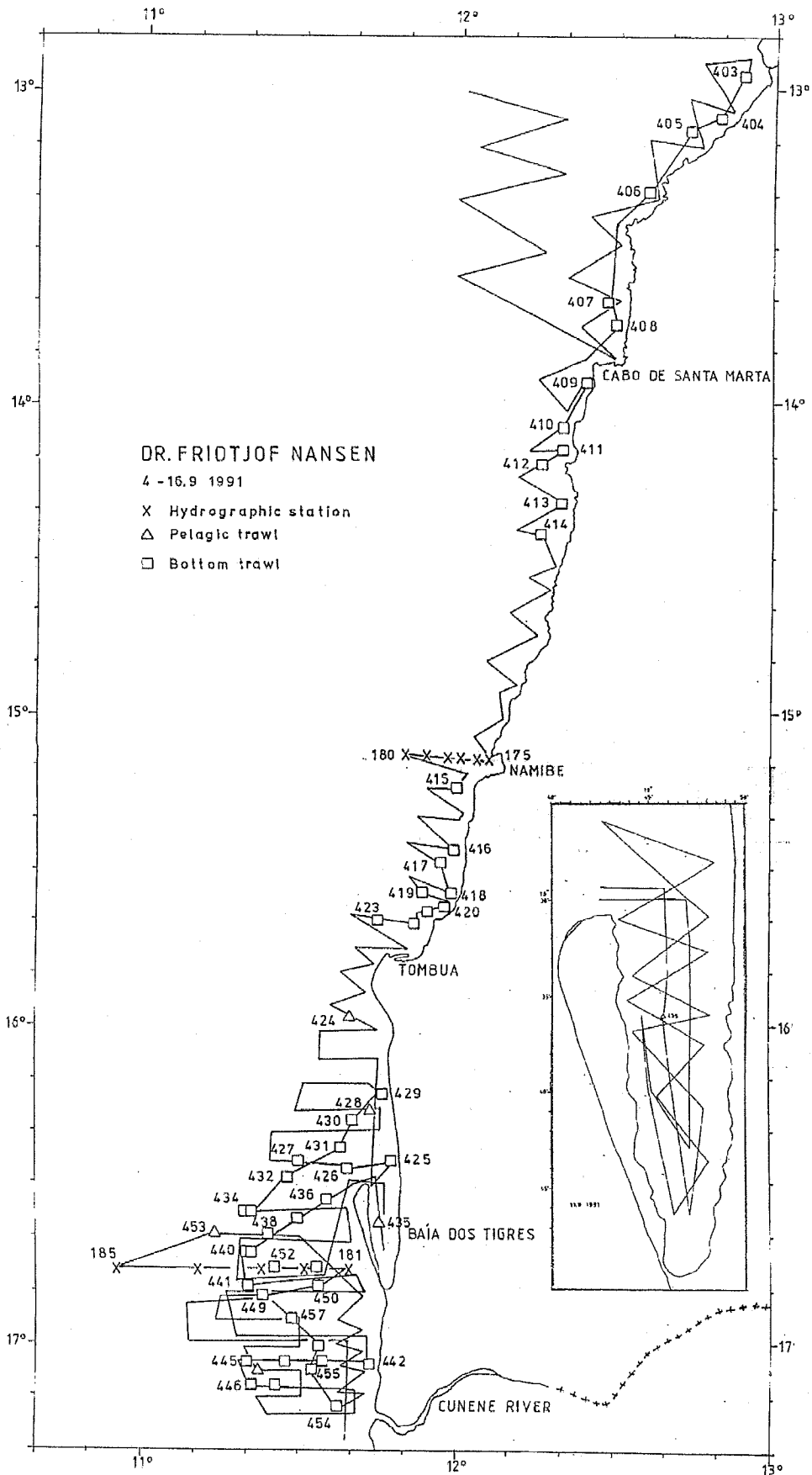


Figure 1c Course tracks with fishing stations and hydrographic profiles, Benguela - Cunene river.

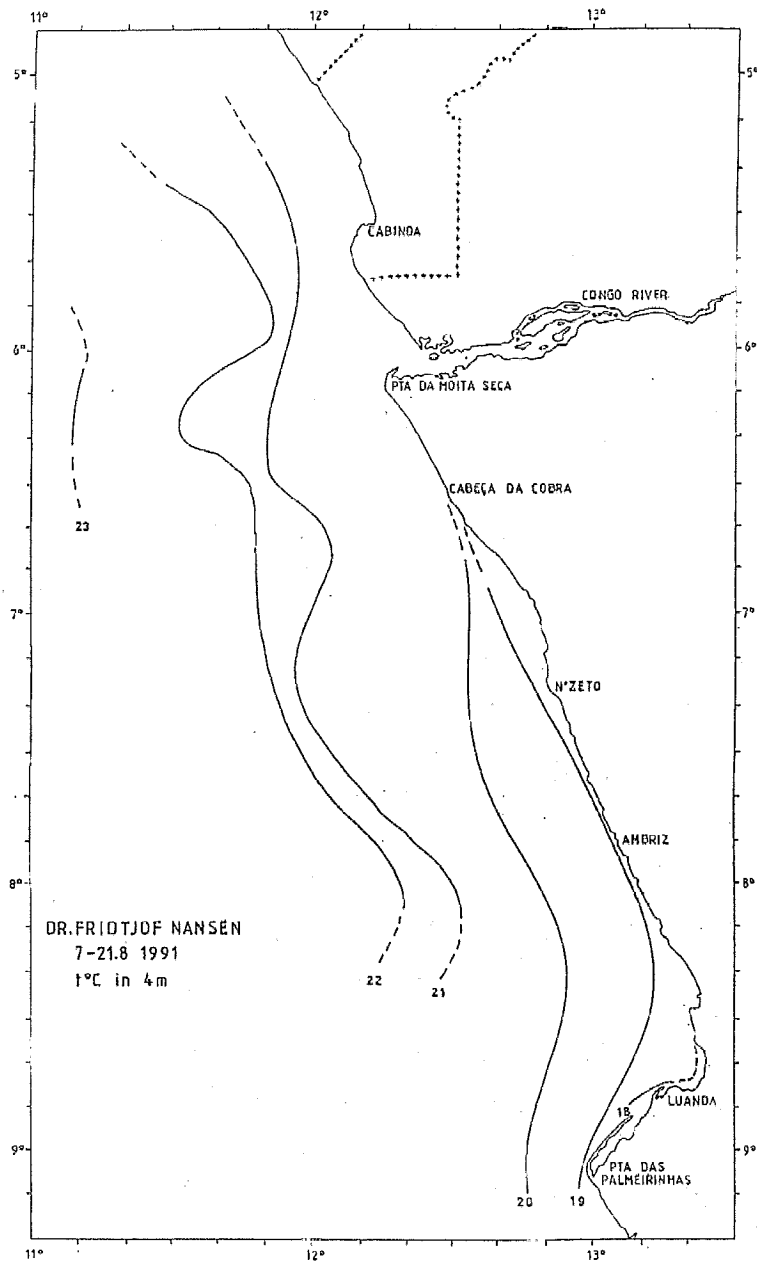


Figure 2a Temperature at sea surface, Cabinda- Luanda.

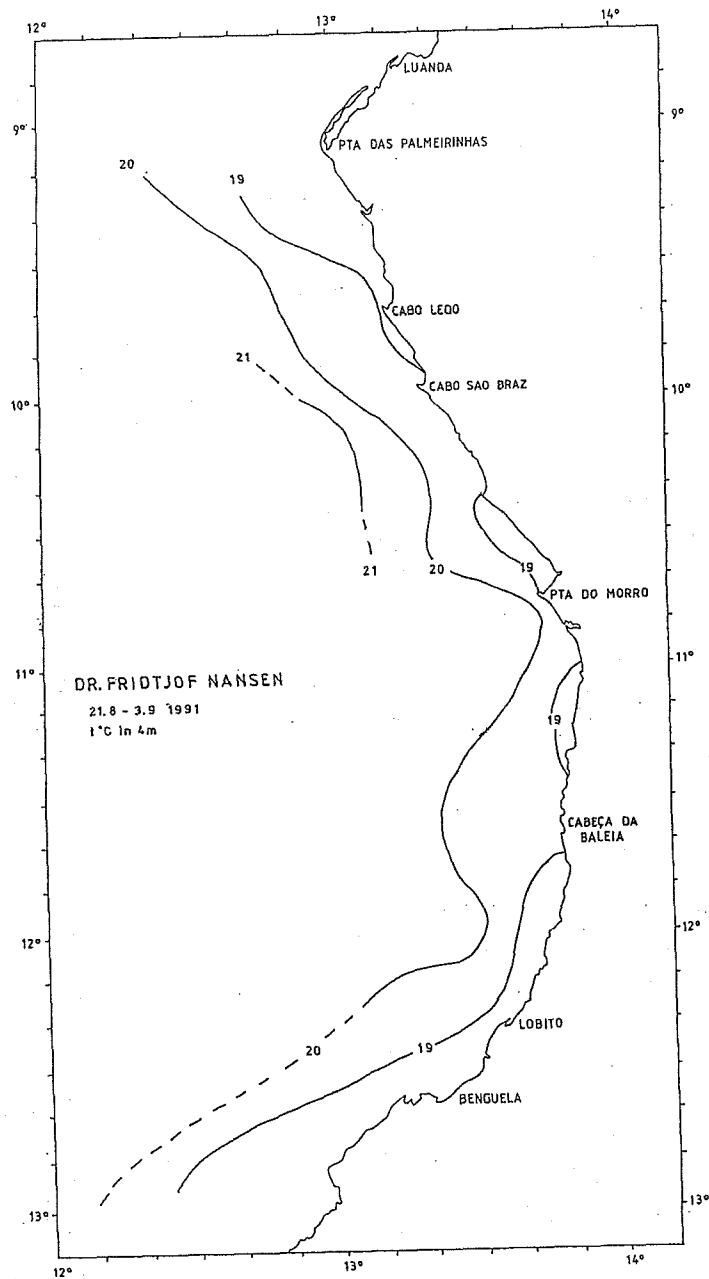


Figure 2b Temperature at sea surface, Luanda - Benguela.

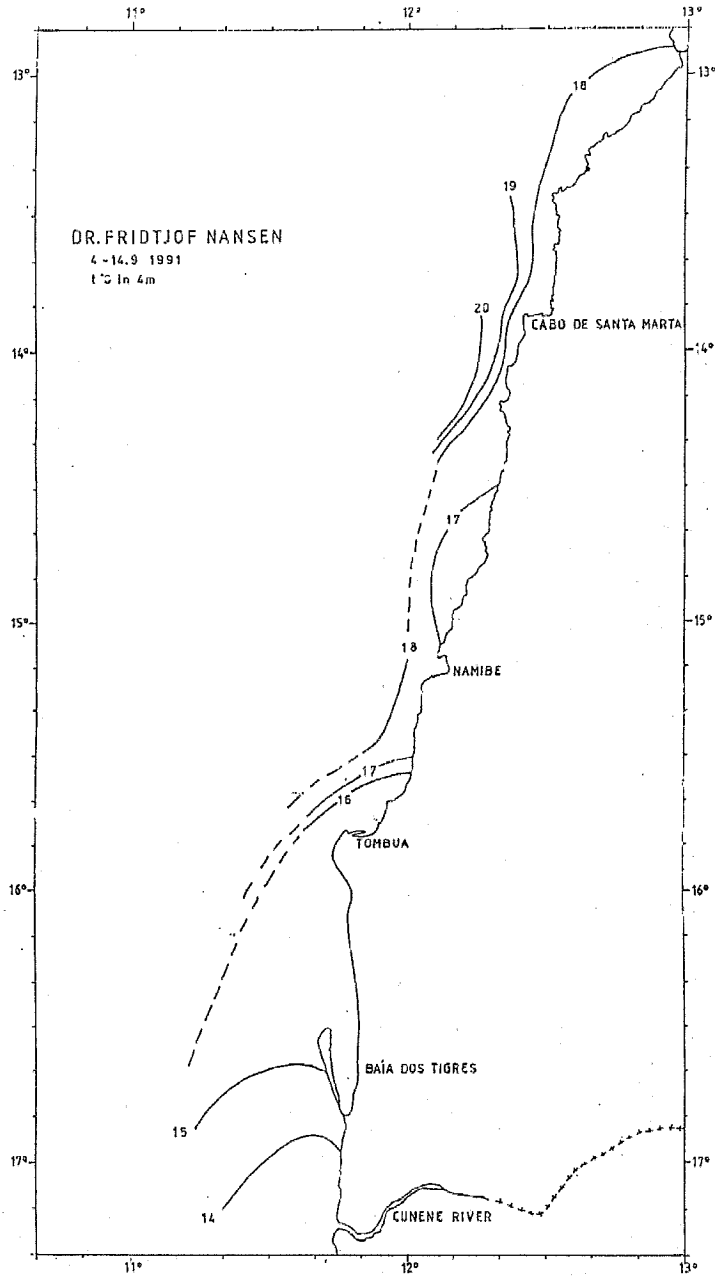
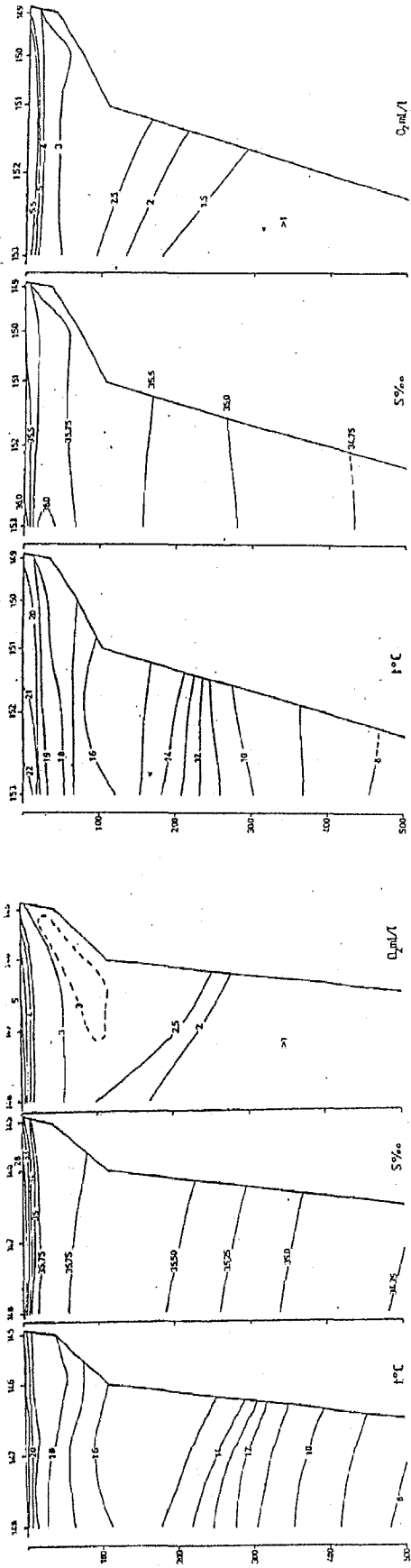
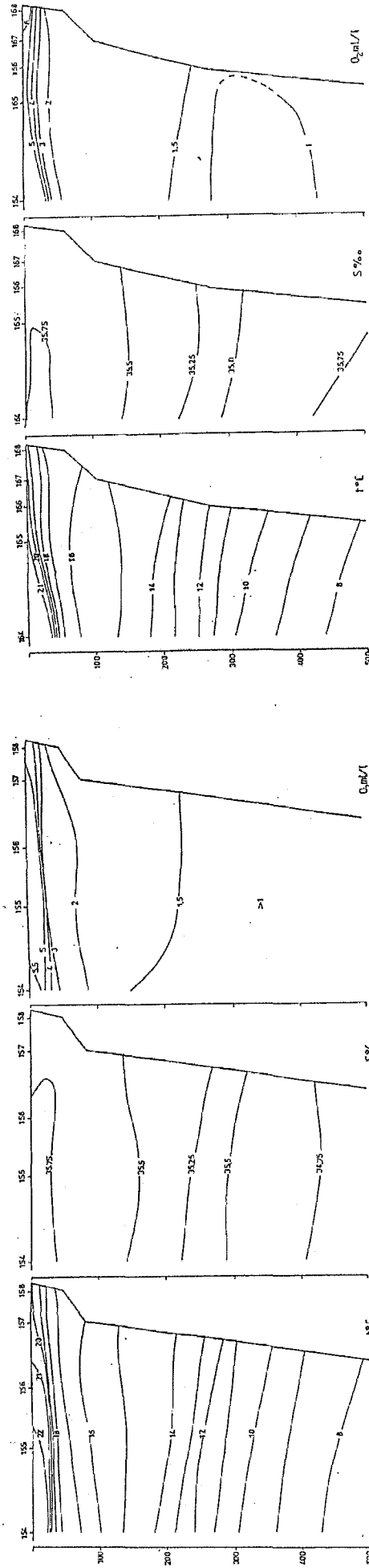


Figure 2ç Temperature at sea surface, Benguela - Cunene river.

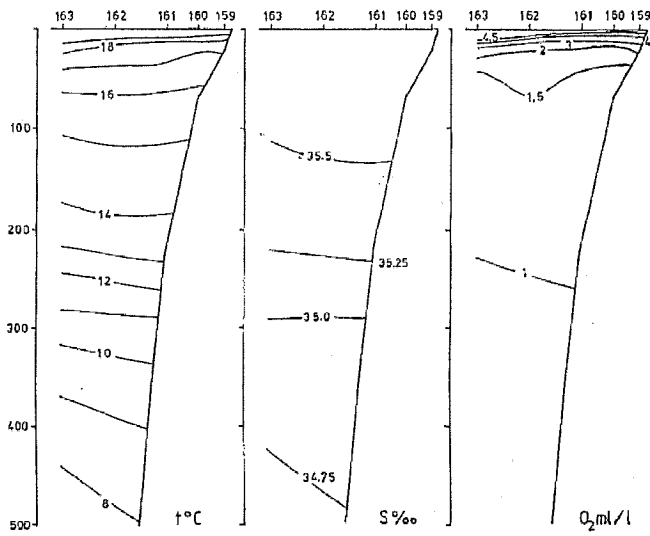


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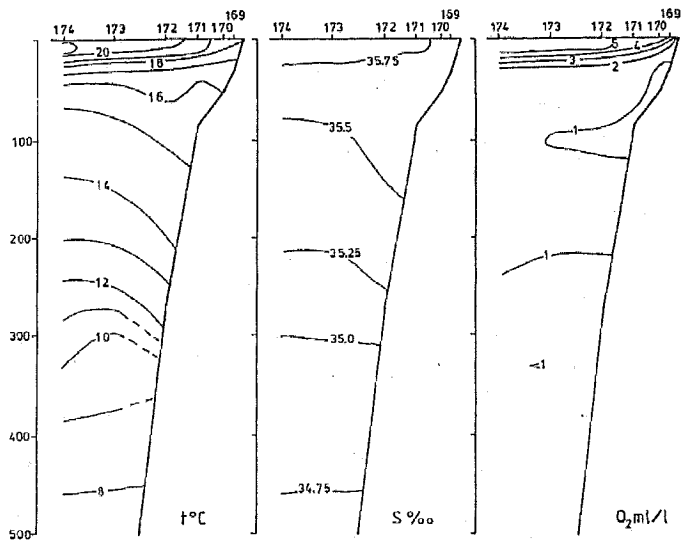


LUANDA 26.8 1991

Figure 3a Hydrographic profiles, Cabinda - Luanda.

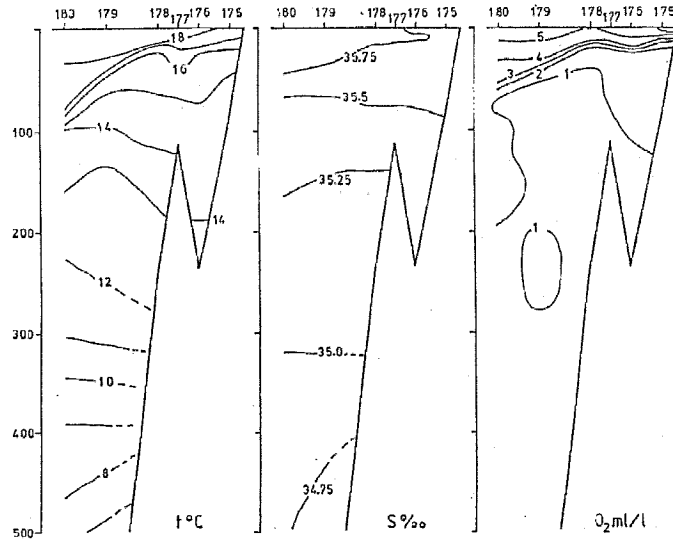


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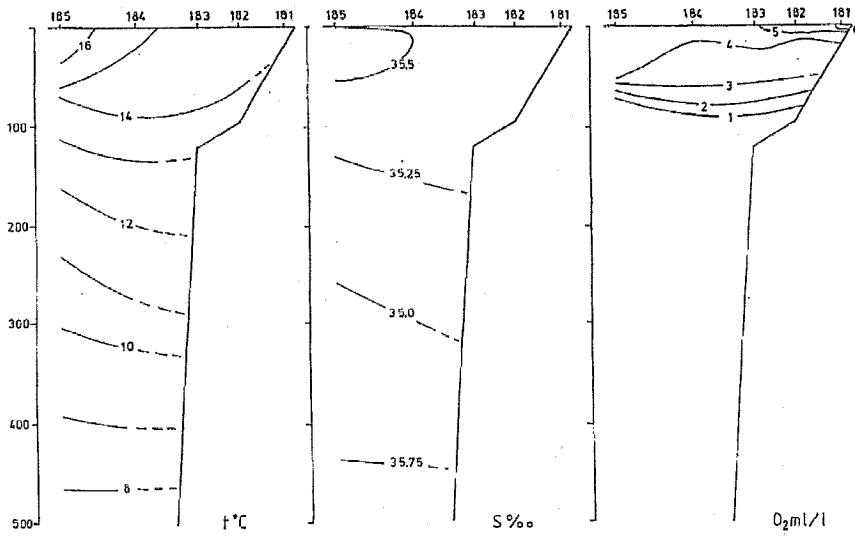


LOBITO 3.9 1991

Figure 3b. Hydrographic profiles, Luanda - Benguela.



NAMIBE 3.9 1991



BAIÁ DOS TIGRES 14.9 1991

Figure 3c. Hydrographic profiles, Benguela - Cunene river.

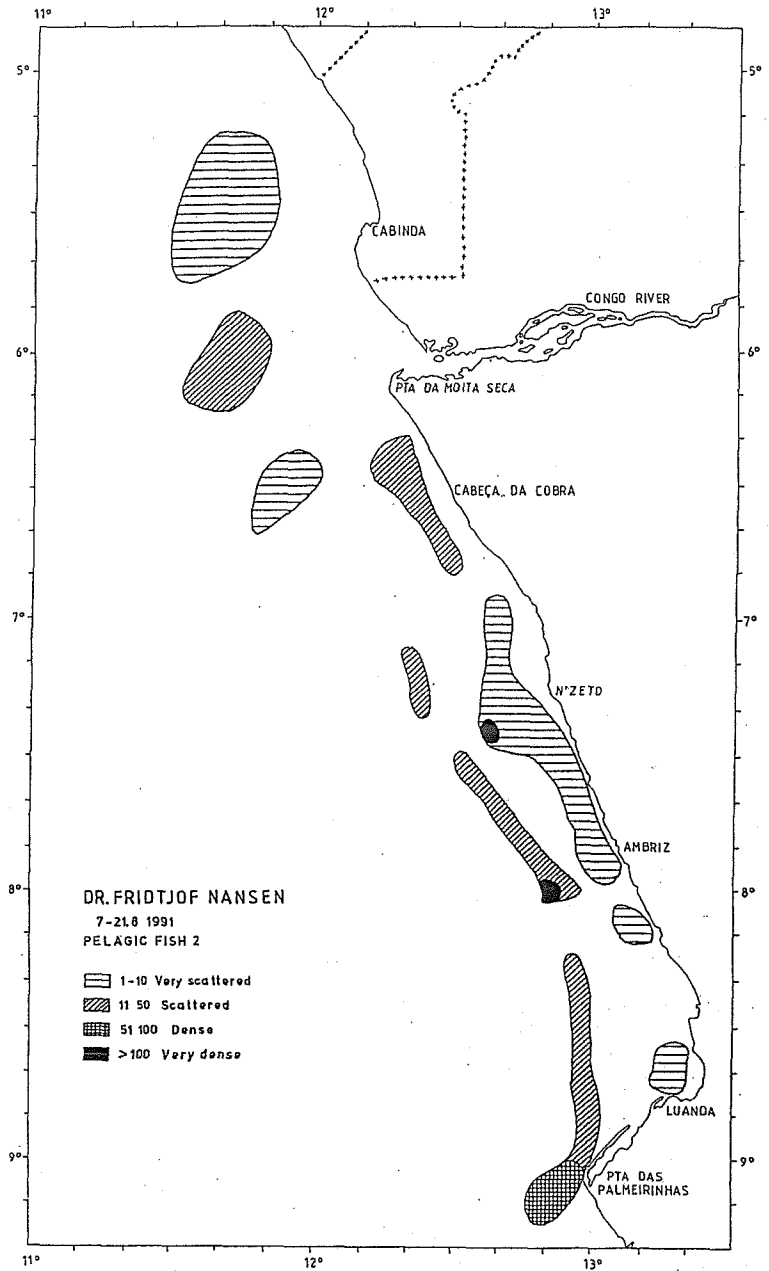
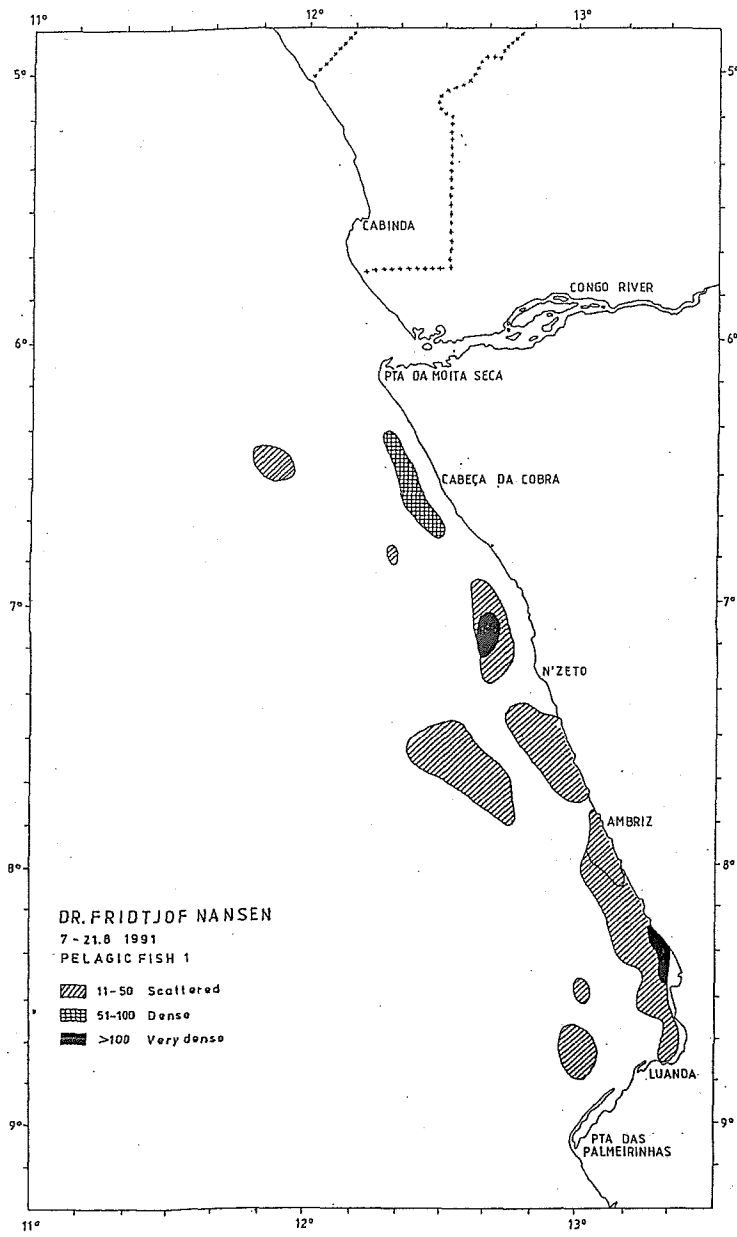


Figure 4 Cabinda - Luanda. Distribution of Pelagic fish type 1 and pelagic fish type 2.

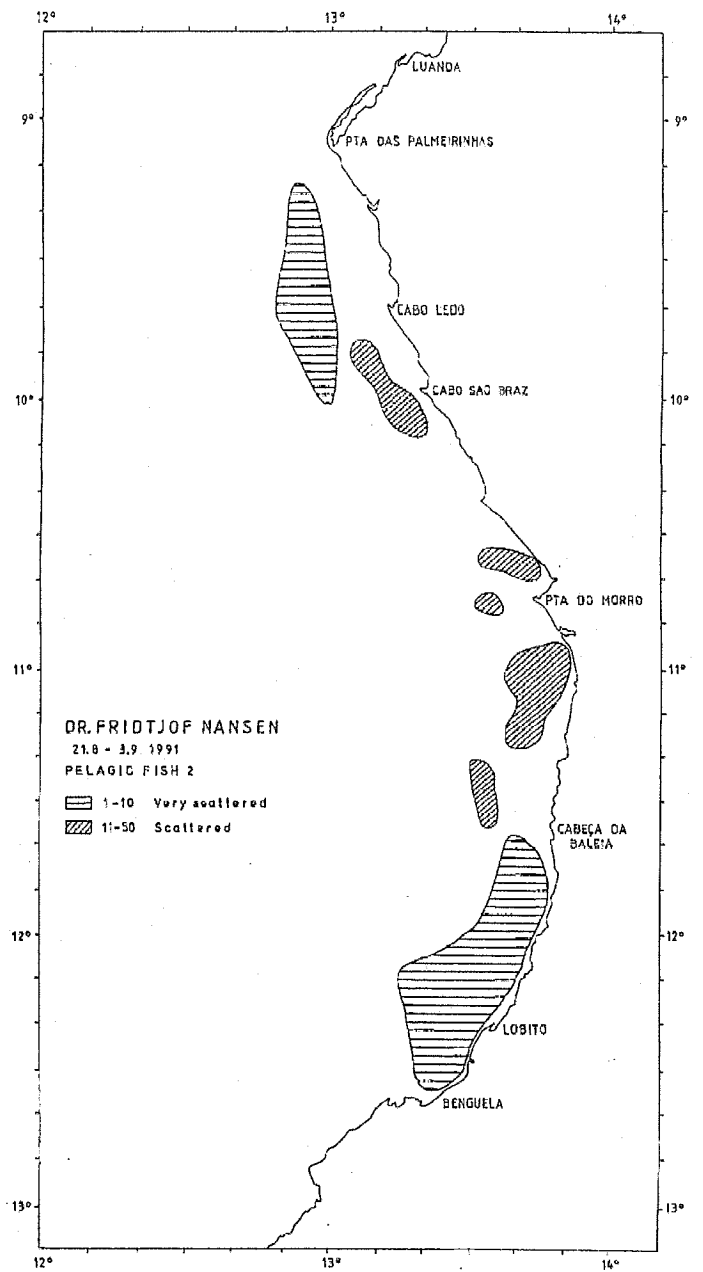
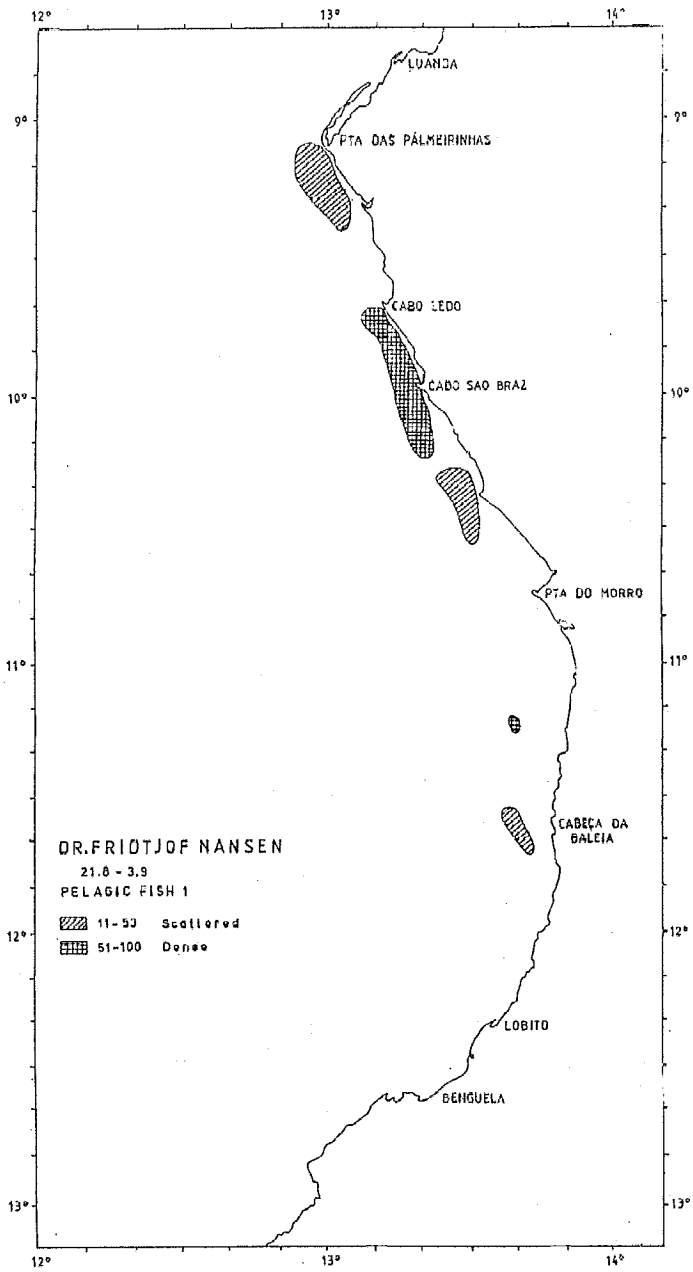


Figure 5 Luanda - Benguela. Distribution of Pelagic fish type 1 and pelagic fish type 2.

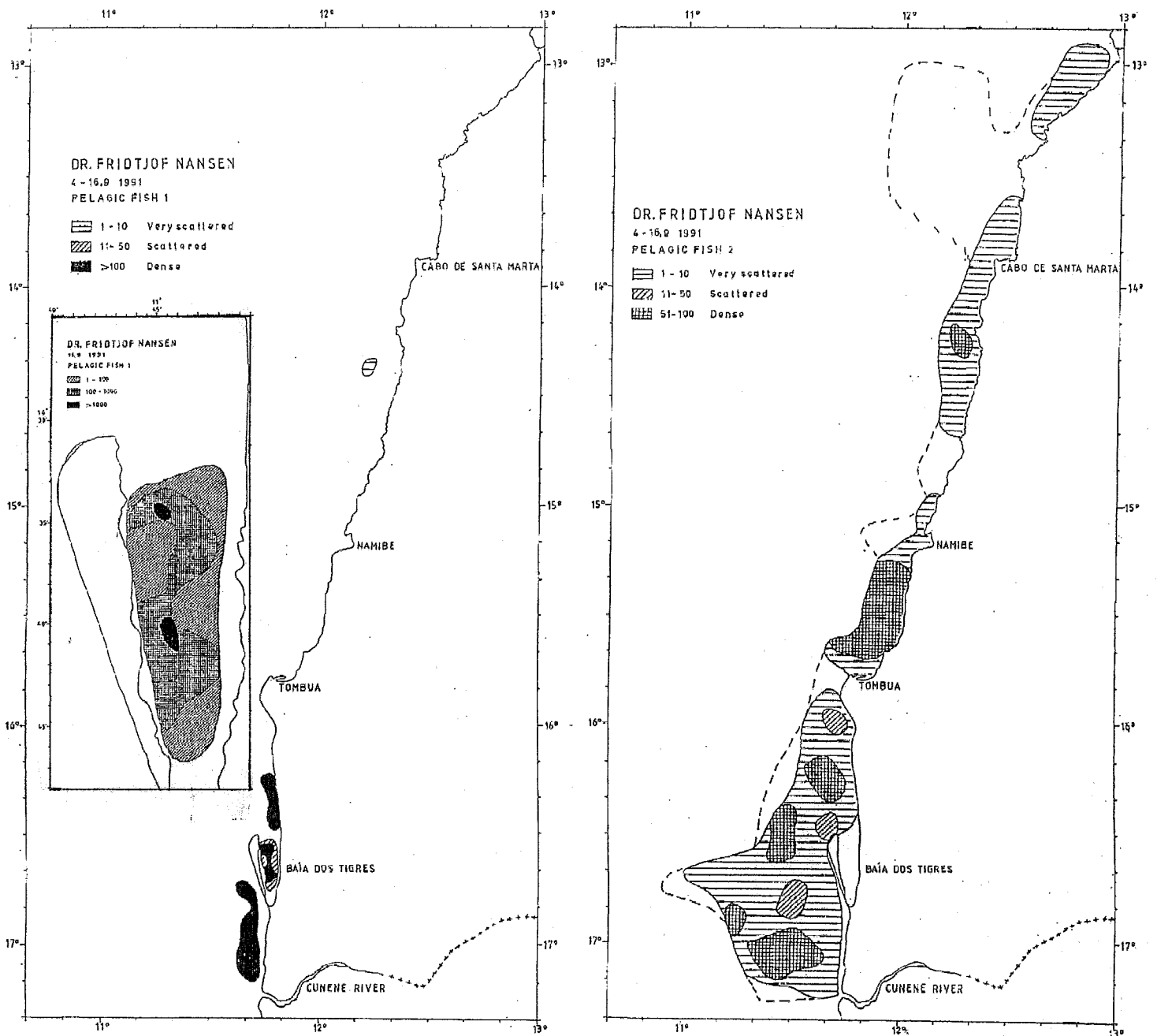


Figure 6 Benguela - Cunene river. Distribution of Pelagic fish type 1 and pelagic fish type 2.

ANNEX I Swept area estimates

SWEPT AREA ANALYSIS FROM STATION 232 TO STATION 372

Cabinda-Luanda 2 1991

ONLY STATIONS IN SECTOR 4 ARE INCLUDED

SPECIES NAME	CATCH DISTRIBUTION BY KG/NM GROUPS					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	<10	10-30	30-100	100-300	300-1000			>1000	- 50m	50-100m	100-200m
Trachurus trecae	35	8	7	1	1	73	1.53	0.38	0.71	5.01	
Trichiurus lepturus	26	15	5			69	1.01	1.30	0.96	0.54	
Brachydeuterus auritus	16	4	4	2		39	1.01	2.38	0.04		
Pseudolithus typus	3	3			1	10	0.72	1.73			
Synagrops microlepis		5	4	1		15	0.69		1.21	1.13	
Pagellus bellottii	24	2	2	1		43	0.63	0.18	1.54	0.02	
Umbrina canariensis	15	3	1	1		30	0.52	0.07	0.36	1.63	
Dentex congoensis	8	3	4			22	0.48		0.48	1.37	
Pentheroscion mbizi	8		1	1		15	0.44	0.06	0.24	1.44	
Dentex angolensis	19	8	1			42	0.42		0.36	1.29	
Ilisha africana	6	1	2			13	0.23	0.55			
Parapenaeopsis atlantica	6			1		10	0.21	0.51			
Illex coindetii	12		1			19	0.14		0.05	0.56	
Dentex barnardi	18	3				31	0.14	0.20	0.14	0.03	
Boops boops	14	1	1			24	0.13	0.02	0.14	0.30	
Pseudolithus senegalensis	8	3				15	0.11	0.25	0.01		
Miracorvina angolensis	8	3				16	0.11	0.25			
Selene corsalis	9		1			15	0.11	0.25			
Chloroscombrus chrysurus		2	1			4	0.11	0.25			
Pterothrissus belloci	12	3				22	0.11	0.01	0.10	0.31	
Plectorhinchus mediterraneus	1	1	1			4	0.10	0.23			
Brotula barbata	4	1	1			9	0.10		0.15	0.21	
Ommastrephes pteropus			1			1	0.09		0.24		
Atractoscion aequidens	16	1				25	0.09	0.08	0.08	0.12	
Pomadasys peroteti	9	1				15	0.09	0.21			
Dentex gibbosus	11	2				19	0.08	0.05	0.09	0.11	
Dentex macrophthalmus	4	1				7	0.07	0.04	0.02	0.20	
Galeoides decadactylus	4		1			7	0.07	0.18			
Todarodes sp.			1			1	0.06			0.26	
Sparus caeruleostictus	8	1				13	0.06	0.08	0.01	0.09	
Todarodes sagittatus	15	1				24	0.05	0.01	0.03	0.17	
Illex sp.	6	1				10	0.05		0.04	0.14	
Shrimps, small, non comm.		1				1	0.03	0.08			
Parapenaeus longirostris, fem.	2					3	0.01			0.05	
Parapenaeus longirostris, male	2					3	0.01			0.06	
Parapenaeus longirostris	9					13	0.01		0.01	0.02	
Penaeus notialis, female	1								0.01		
Penaeus notialis, male	1					1			0.01		
Penaeus notialis	6					9		0.01			
Other fish							0.96	0.89	0.64	1.39	
Sum all species							10.78	10.25	7.67	16.45	
Sum Snappers											
Sum Groupers							0.12	0.08	0.11	0.20	
Sum Grunts							1.25	2.92	0.05		
Sum Croakers							2.00	2.44	0.69	3.22	
Sum Seabreams							2.05	0.59	2.78	3.51	
Sum Sharks							0.04	0.03	0.05	0.03	
Sum Rays							0.03	0.08	0.02		
Sum Squids							0.49	0.10	0.48	1.19	
Sum											
Sum shrimps (excl. SHRAA07)							0.24	0.52	0.03	0.13	
Number of stations included in analysis, total and by depth strata							67	28	24	15	

SWEPT AREA ANALYSIS FROM STATION 336 TO STATION 402

Luanda-Benguela 2 1991

ONLY STATIONS IN SECTOR 3 ARE INCLUDED

SPECIES NAME	CATCH DISTRIBUTION BY KG/NM GROUPS						% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	<10	10-30	30-100	100-300	300-1000	>1000			- 50m	50-100m	100-200m	200-200
Trachurus trecae	15	1	5	6	1	1	73	9.93	2.24	25.44	5.18	
Brachydeuterus auritus	4	2	3	4	1		35	3.92	8.70	0.01		
Umbrina canariensis	7	3	1			1	30	3.71	0.16	11.96	0.22	
Dentex macrophthalmus	4	2	5	4			38	3.15		4.20	7.57	
Diaphus dumerili					1		3	1.81			7.25	
Synagrops microlepis	3		1		1		13	1.05			4.19	
Pageilus bellottii	13	6	3				55	0.78	1.02	1.06	0.02	
Trichiurus lepturus	16	5	2				58	0.69	0.67	0.77	0.65	
Dentex barnardi	12	4	3				48	0.63	0.53	1.31		
Ilisha africana	2	1	1				10	0.27	0.59			
Pomadasy incisus	9	1	1				28	0.22	0.45	0.06		
Atractoscion aequidens	6	3					23	0.19	0.14	0.27	0.16	
Arius parkii	1	1	1				8	0.19	0.42			
Dentex angolensis	10	1					28	0.17		0.18	0.46	
Alloteuthis africana	5	2					18	0.13	0.16	0.18		
Plectorhinchus mediterraneus	3		1				10	0.13	0.28	0.02		
Boops boops	10	1					28	0.12		0.30	0.11	
Decapterus rhonchus	1		1				5	0.11	0.03	0.32		
Zeus faber	12	1					33	0.10	0.03	0.22	0.09	
Sepia officinalis hierredda	12						30	0.10	0.17	0.10		
Zenopsis conchifer	2		1				8	0.09			0.36	
Dentex gibbosus	4	2					15	0.09		0.24	0.09	
Pomadasy peroteti	5	1					15	0.09	0.21			
Galeoides decadactylus	3	1					10	0.09	0.21			
Todarodes sagittatus	4	1					13	0.08			0.30	
Epinephelus goreensis		2					5	0.08		0.09	0.21	
Miracorvina angolensis	4	1					13	0.08	0.16	0.01		
Chlorophthalmus atlanticus			1				3	0.08			0.31	
Pterothrissus belloci	5	1					15	0.08			0.31	
Rhinobatos albomaculatus		1					3	0.07			0.29	
Epinephelus aeneus	2	1					8	0.06	0.02	0.15		
Selene dorsalis	4	1					13	0.06	0.14			
Chloroscombrus chrysurus	3	1					10	0.06	0.13			
Sparus pagrus africanus	1	1					5	0.05			0.19	
Parapenaeus longirostris	3						8	0.01			0.04	
Parapenaeus longirostris, fem.	1										0.02	
Parapenaeus longirostris, male	1						3				0.01	
Penaeus notialis	1						3					
Parapenaeopsis atlantica	1						3					
Other fish								0.73	0.65	0.77	0.90	
Sum all species								29.20	17.11	47.66	28.93	
Sum Snappers								0.21	0.05	0.44	0.21	
Sum Groupers								4.37	9.65	0.13		
Sum Grunts								4.02	0.52	12.24	0.41	
Sum Croakers								5.05	1.64	7.34	8.47	
Sum Seabreams								0.03	0.09			
Sum Sharks								0.11	0.04	0.03	0.31	
Sum Rays								0.42	0.34	0.38	0.58	
Sum Squids												
Sum												
Sum shrimps (excl. SHRAA01)								0.01			0.07	
Number of stations included in analysis, total and by depth strata								40	18	12	10	

SWEPT AREA ANALYSIS FROM STATION 403 TO STATION 457

Benguela-Cunene 2 1991,

SPECIES NAME	CATCH DISTRIBUTION BY KG/NM GROUPS						% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	<10	10-30	30-100	100-300	300-1000	>1000			- 50m	50-100m	100-200m	200-200
Trachurus capensis	7	5	7	4	2	2	55	16.36	0.01	18.00	23.42	
Dentex macrophthalmus	6	3	8	17	3	1	81	12.36	0.10	23.45	8.30	
Trachurus trecae	9	7	9	4	4		68	7.32	9.66	12.71	0.98	
Merluccius capensis, female		2	1	2			11	1.30		0.07	3.14	
Lithognathus mormyrus	1	4	2	1			17	0.95	3.90	0.31		
Pagellus bellottii	10	5	2	1			38	0.70	1.08	1.06	0.17	
Synagrops microlepis	7	3	4				30	0.61		0.98	0.57	
Dentex barnardi	8	2	4				30	0.59	2.32	0.20	0.04	
Atractoscion aequidens	9	4	1	1			32	0.56	1.70	0.42	0.10	
Merluccius capensis	7	5	3				32	0.54		0.53	0.83	
Pontinus sp.	4	2		1			15	0.51			1.25	
Anthias anthias	6	2					19	0.50		0.12	1.12	
Chlorophthalmus atlanticus	3	1		1			11	0.44			1.08	
Pomadasys peroteti		1		1			4	0.43	1.79	0.13		
Decapterus rhonchus	1			1			4	0.42	1.98			
Umbrina canariensis	6	4	2				26	0.39	0.03	0.30	0.67	
Dentex angolensis	5	3	2				21	0.34		0.27	0.59	
Zenopsis conchifer	4		1	1			13	0.33			0.82	
Boops boops	10	2	1				28	0.33	0.98	0.11	0.20	
Pterothrissus belloci	10	5					32	0.33		0.16	0.66	
Spondylisoma cantharus	8	2	2				26	0.32	0.83	0.32	0.04	
Loligo vulgaris	7	2	1				21	0.24	0.95	0.09	0.01	
Myliobatis aquila	1	2	2				11	0.22	0.11	0.52		
Squalus megalops	7	2	1				21	0.21		0.36	0.17	
Trigla lyra	10	4					30	0.20		0.07	0.44	
Sphyrna lewini			1				2	0.20	0.96			
Sardinops ocellata	2		1				6	0.19	0.01	0.50		
Diplodus sargus capensis	1	2	1				9	0.16	0.73			
Diplodus cervinus cervinus	1	1	1				6	0.15	0.69			
Zeus faber	12	1					28	0.14		0.15	0.20	
Pomatomus saltatrix	3	2					11	0.12	0.53	0.03		
Galeichthys feliceps	1	1	1				6	0.12		0.31		
Trichiurus lepturus	18	1					40	0.11	0.05	0.22	0.03	
Oxynotus centrina			1				2	0.10			0.24	
Sepia officinalis hierredda	10		1				23	0.09	0.34	0.03	0.01	
Erythrocles monodi	1		1				4	0.08		0.04	0.16	
Mustelus mustelus	2	1					6	0.07			0.18	
Pomadasys incisus	3	1					9	0.06	0.29			
Plectorhinchus mediterraneus		1					2	0.06		0.16		
Brachydeuterus auritus		1					2	0.06	0.30			
Galeoides decadactylus		1					2	0.06	0.26			
Squatina squatina		1					2	0.05			0.12	
Argyrosomus hololepidotus	4						9	0.05	0.04	0.11		
MYCTOPHIDAE	1	1					4	0.05			0.13	
Merluccius capensis, male	2	1					6	0.05			0.12	
Parapandalus narva	2						4					
Other fish								0.61	0.95	0.60	0.53	
Sum all species								49.08	30.59	62.33	46.32	
Sum Snappers												0.01
Sum Groupers								0.01		0.02		
Sum Grunts								0.67	2.63	0.30		
Sum Croakers								1.00	1.77	0.84	0.77	
Sum Seabreams								15.96	10.63	25.83	9.40	
Sum Sharks								0.78	1.02	0.60	0.84	
Sum Rays								0.29	0.25	0.56	0.02	
Sum Squids								0.35	1.36	0.13	0.05	
Sum												
Sum shrimps (excl. SHRAA01)												
Number of stations included in analysis, total and by depth strata								47	10	18	19	

SWEPT AREA ANALYSIS FROM STATION 232 TO STATION 402

Cabinda-Benguela 2 1991, slope hauls

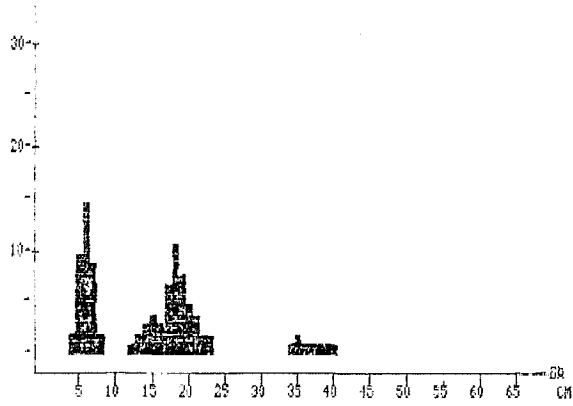
SPECIES NAME	CATCH DISTRIBUTION BY KG/NM GROUPS					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²				
	<10	10-30	30-100	100-300	300-1000			>1000	100-200m	200-300m	300-400m	400-500
<i>Synagrops microlepis</i>	7	4	11	2	3	42	3.82	2.46	7.69			
<i>Merluccius polli</i> , male	5	9	9	6	1	46	2.88	0.05	3.32	9.03	3.12	
<i>Merluccius polli</i> , female	3	11	12	4		46	2.57	0.06	2.41	8.25	5.04	
<i>Trachurus trecae</i>	12	4	5	1	2	34	2.00	4.90	0.12			
<i>Chlorophthalmus atlanticus</i>	10	6	7		1	37	1.49	0.15	3.47	0.95	0.02	
<i>Dentex macrophthalmus</i>	9	3	1	3		25	1.28	3.04	0.17			
<i>Diaphus dumerili</i>					1	2	1.12	2.79				
MURAENIDAE	1				1	3	0.80	0.01	2.15			
<i>Pterothrissus belloci</i>	27	9	3			58	0.69	0.30	1.26	0.63	0.09	
<i>Denlex angolensis</i>	22	12	1			54	0.64	0.93	0.71			
<i>Nematocarcinus africanus</i>	4	2	7			20	0.59		0.05	2.50	2.36	
<i>Brotula barbata</i>	6	4	1	1		18	0.54	0.34	1.10			
<i>Trichurus lepturus</i>	25	10	1			55	0.50	0.59	0.53	0.34		
<i>Umbriina canariensis</i>	5	3		1		14	0.44	1.04	0.05			
MYCTOPHIDAE	11	10	2			35	0.44	0.31	0.69	0.35	0.01	
<i>Centrophorus uyato</i>	3	4	4			17	0.43	0.03	0.82	0.67	0.17	
<i>Pentheroscion mbizi</i>	6			1		11	0.34	0.83	0.03			
<i>Dentex congoensis</i>	5	1	3			14	0.32	0.80				
<i>Illex coindetii</i>	23		2			38	0.30	0.37	0.35	0.10	0.02	
<i>Zenopsis conchifer</i>	17	5	1			35	0.26	0.23	0.41	0.12	0.02	
<i>Scorpaena normani</i>	9			1		15	0.23		0.51	0.26		
<i>Etmopterus spinax</i>	10	3				18	0.18		0.01	0.81	0.63	
<i>Merluccius polli</i>	6	4				15	0.14	0.14	0.15	0.16		
<i>Todarodes sagittatus</i>	17	3				31	0.13	0.22	0.12	0.03		
<i>Chlorophthalmus agassizi</i>	4		1			8	0.12		0.30	0.09		
<i>Merluccius merluccius</i>	3		1			6	0.11	0.02	0.28			
<i>Malacocephalus occidentalis</i>	9		1			15	0.11		0.02	0.58	0.20	
<i>Boops boops</i>	11		1			18	0.09	0.22				
<i>Parapenaeus longirostris</i> , fem.	8	2				15	0.09	0.04	0.19			
<i>Parapenaeus longirostris</i>	21	1				34	0.08	0.05	0.15	0.01		
<i>Laemonema laureysi</i>	16	1				26	0.08		0.03	0.12	0.62	
<i>Brosmiculus imberbis</i> *	11	1				18	0.08		0.05	0.24	0.31	
<i>Zeus faber</i>	4	1				8	0.07	0.03	0.14			
<i>Illex</i> sp.	4	2				9	0.07	0.10	0.01		0.31	
<i>Todarodes</i> sp.	1		1			3	0.06	0.15	0.01			
<i>Centroscymnus crepidater</i>	1		1			3	0.06		0.01		0.74	
<i>Centrophorus granulosus</i>			1			2	0.06			0.42		
<i>Epinephelus goreensis</i>		2				3	0.06	0.15				
<i>Hoplostethus mediterraneus</i>	3	1				6	0.05		0.12	0.03	0.01	
<i>Todaropsis eblanae</i>	14					22	0.05	0.06	0.05	0.02		
<i>Sparus pagrus africanus</i>	4	1				8	0.05	0.13				
<i>Parapenaeus longirostris</i> , male	10					15	0.05	0.04	0.09			
<i>Atractoscion aequidens</i>	5	1				9	0.05	0.13				
<i>Rhinobatos albomaculatus</i>		1				2	0.05	0.11				
Shrimps, small, non comm.	2					3	0.02		0.07			
<i>Parapenacopsis atlantica</i>	1					2	0.01		0.03			
<i>Aristeus varidens</i> , female	2					2	0.01				0.11	
<i>Aristeus varidens</i> , male	2					2	0.01				0.08	
<i>Aristeus varidens</i>	5					8	0.01			0.01	0.05	
<i>Solenocera africana</i>	4					6			0.01			
<i>Plesionika</i> sp.	1					2						
<i>Plesionika</i> sp.	2					3						
<i>Plesionika</i> sp.						3						
Other fish							0.58	0.60	0.63	0.75	0.81	
Sum all species							24.21	21.42	28.40	26.47	14.76	
Sum Snappers												
Sum Groupers							0.08	0.20				
Sum Grunts												
Sum Croakers							0.86	2.03	0.14			
Sum Seabreams							2.46	5.30	0.88			
Sum Sharks							0.75	0.05	0.88	1.90	1.54	
Sum Rays							0.05	0.12				
Sum Squids							0.61	0.90	0.56	0.15	0.33	
Sum												
Sum shrimps (excl. SHRAA01)							0.85	0.13	0.54	2.52	2.64	
Number of stations included in analysis, total and by depth strata							65	26	24	10	5	

SWEPT AREA ANALYSIS FROM STATION 403 TO STATION 457

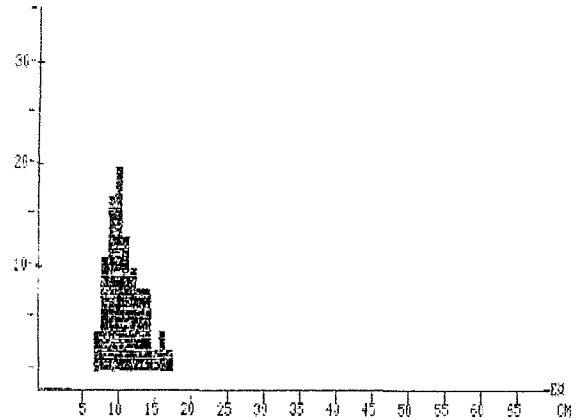
Benguela-Cunene 2 1991, slope hauls

SPECIES NAME	CATCH DISTRIBUTION BY KG/NM GROUPS						% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	<10	10-30	30-100	100-300	300-1000	>1000			100-200m	200-300m	300-400m	400-500
Trachurus capensis	4	3	6	2		1	76	21.37	23.42		1.87	
Merluccius capensis, female		1	1	3	1		29	8.75	3.14		61.96	
Dentex macrophthalmus	2	2	8	9			100	8.47	8.30		10.10	
Pontinus sp.	4	2		3			43	2.45	1.25		13.88	
Chlorophthalmus atlanticus	3	1	2	1			33	1.57	1.08		6.28	
Merluccius capensis, male	2	1	1	1			24	1.34	0.12		12.96	
Zenopsis conchifer	4		3	1			38	1.28	0.82		5.68	
Anthias anthias	4	1		1			29	1.01	1.12			
Trachurus trecae	5	2	3				48	0.91	0.98		0.22	
Merluccius capensis	3	2	2				33	0.75	0.83			
Pterothrissus belloci	8	5					62	0.68	0.66		0.82	
Umbrina canariensis	4	3	1				38	0.61	0.67			
Dentex angolensis	3	3	1				33	0.53	0.59			
Synagrops microlepis	4	2	1				33	0.52	0.57			
Trigla lyra	7	4					52	0.43	0.44		0.31	
Epigonus telescopus		1	1				10	0.41			4.32	
Oxynotus centrina			1				5	0.21	0.24			
Zeus faber	7						33	0.18	0.20			
Boops boops	5	1					29	0.18	0.20			
Pagellus bellottii	1	2					14	0.16	0.17			
Mustelus mustelus	2	1					14	0.16	0.18			
Squalus megalops	6	1					33	0.16	0.17			
Galeus polii			1				5	0.15			1.61	
Erythrocles monodi			1				5	0.15	0.16			
Lepidopus caudatus	3	1					19	0.12	0.08		0.52	
MYCTOPHIDAE	1	1					10	0.12	0.13			
Squatina squatina			1				5	0.11	0.12			
Atractoscion aequidens	4						19	0.09	0.10			
Coelorinchus fasciatus			1				5	0.06	0.07			
Spicara alta	3						14	0.06	0.07			
Sparus pagrus pagrus	2						10	0.05	0.06			
Squatina aculeata	2						10	0.05	0.02		0.31	
Parapandalus narval	2						10					
Other fish								0.31	0.36		0.05	
Sum all species								53.40	46.32		120.89	
Sum Snappers									0.01			
Sum Groupers												
Sum Grunts												
Sum Croakers								0.70	0.77			
Sum Seabreams								9.47	9.40		10.10	
Sum Sharks								0.92	0.84		1.92	
Sum Rays								0.02	0.02			
Sum Squids								0.04	0.05			
Sum												
Sum shrimps (excl. SHRAA01)												
Number of stations included in analysis, total and by depth strata								21	19		2	

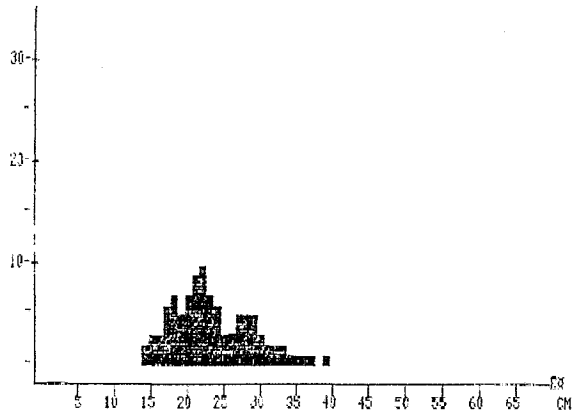
ANNEX II Size compositions of main species



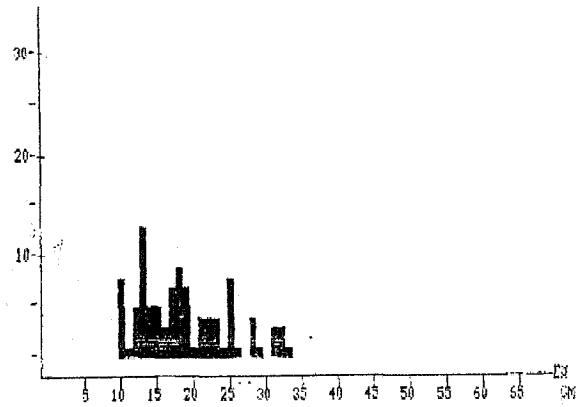
Trachurus trachea
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 15,62cm N= 2032
NUMBER OF SUBSAMPLES : 34
SAMPLES FOUND BETWEEN ST. NO. 239 AND 369.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



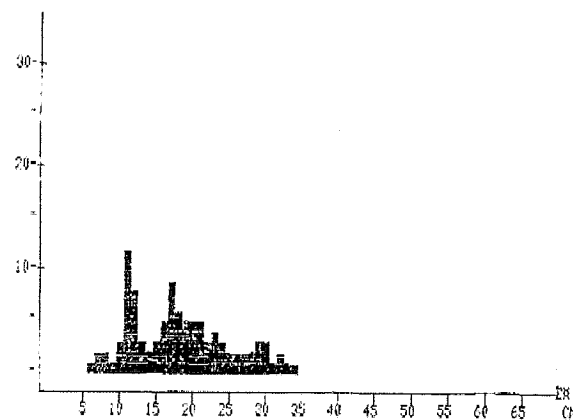
Illex coindatii
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 10,39cm N= 132
NUMBER OF SUBSAMPLES : 4
SAMPLES FOUND BETWEEN ST. NO. 265 AND 367.
SAMPLES SEARCHED BETWEEN ST. NO. 332 AND 373 .



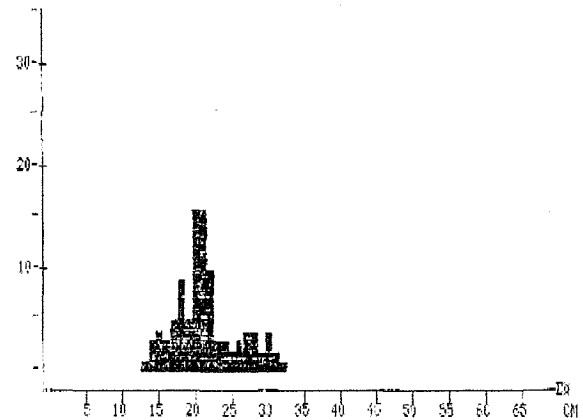
Trachurus trachea
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 23,26cm N= 1352
NUMBER OF SUBSAMPLES : 19
SAMPLES FOUND BETWEEN ST. NO. 340 AND 402.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



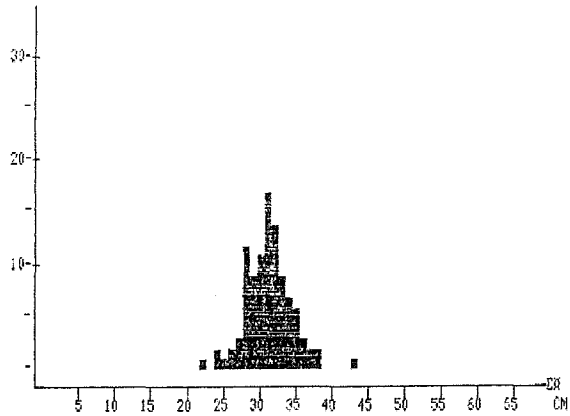
Loligo vulgaris
Benguela - Curvane River
Pooled sample (simple adding).
MEAN LENGTH = 18,77cm N= 75
NUMBER OF SUBSAMPLES : 1
SAMPLES FOUND BETWEEN ST. NO. 425 AND 426.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 437 .



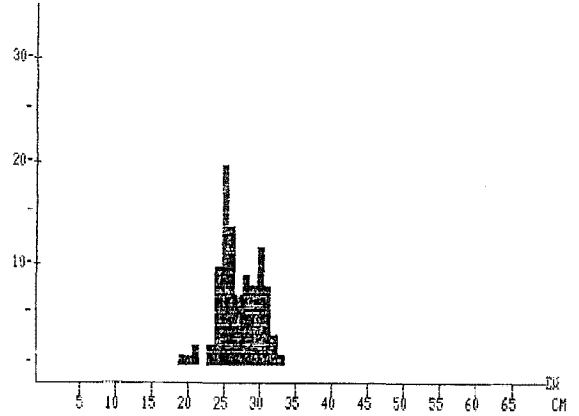
Trachurus trachea
Benguela - Curvane River
Pooled sample (simple adding).
MEAN LENGTH = 16,42cm N= 2257
NUMBER OF SUBSAMPLES : 27
SAMPLES FOUND BETWEEN ST. NO. 434 AND 454.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



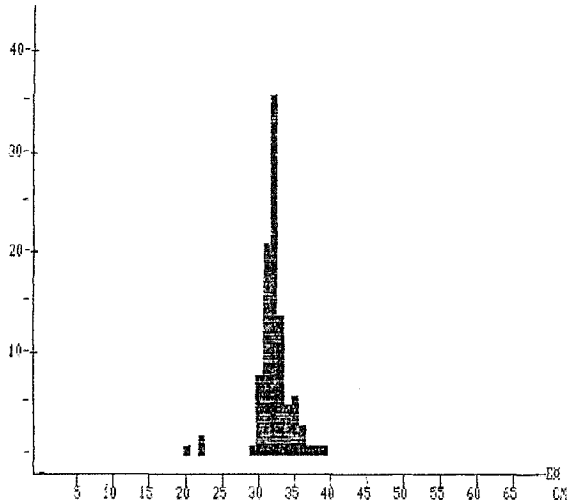
Trachurus capensis
Benguela - Curvane River
Pooled sample (simple adding).
MEAN LENGTH = 21,84cm N= 1021
NUMBER OF SUBSAMPLES : 20
SAMPLES FOUND BETWEEN ST. NO. 417 AND 457.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



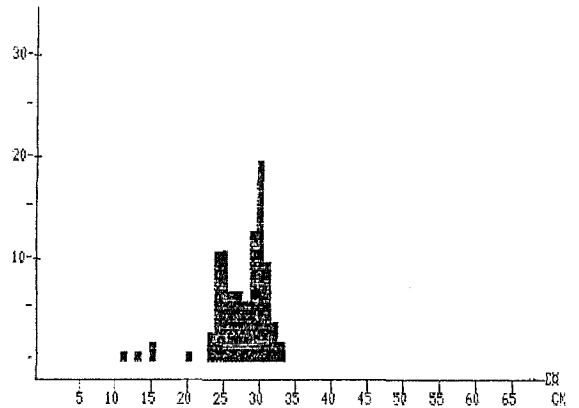
Sardinella aurita
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 31.14cm N= 102
NUMBER OF SUBSAMPLES : 5
SAMPLES FOUND BETWEEN ST. NO. 274 AND 372.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



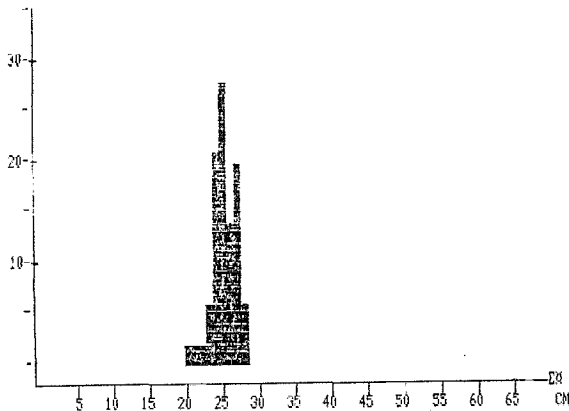
Sardinella maderensis
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 27.15cm N= 499
NUMBER OF SUBSAMPLES : 8
SAMPLES FOUND BETWEEN ST. NO. 274 AND 372.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



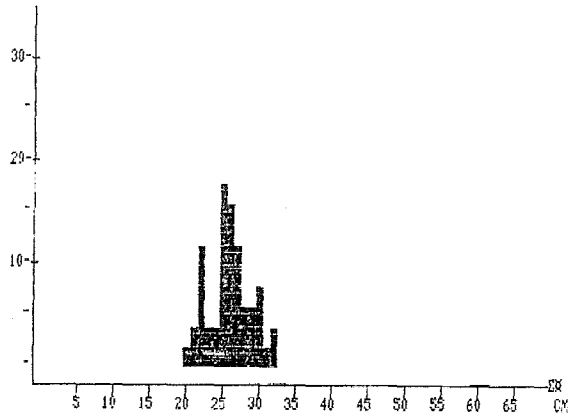
Sardinella aurita
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 31.98cm N= 87
NUMBER OF SUBSAMPLES : 3
SAMPLES FOUND BETWEEN ST. NO. 344 AND 376.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



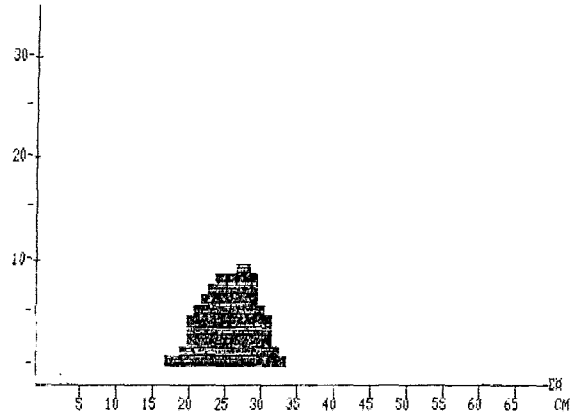
Sardinella maderensis
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 27.33cm N= 270
NUMBER OF SUBSAMPLES : 5
SAMPLES FOUND BETWEEN ST. NO. 344 AND 376.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



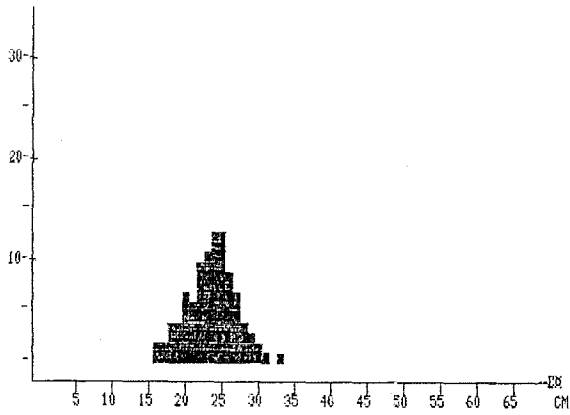
Sardinops ocellata
Benguela - Cunene River
Pooled sample (simple adding).
MEAN LENGTH = 25.18cm N= 326
NUMBER OF SUBSAMPLES : 3
SAMPLES FOUND BETWEEN ST. NO. 428 AND 455.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



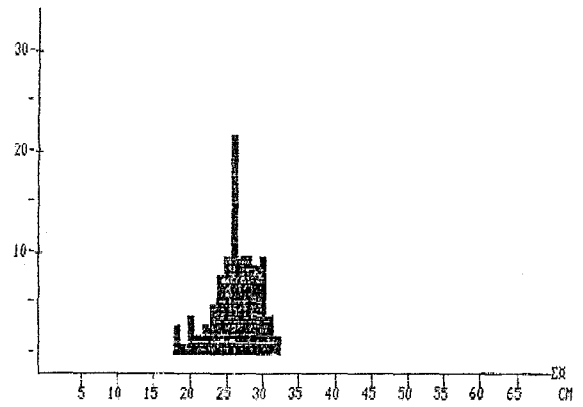
Dentex macrophthalmus
Cabinda - Luanda
Pooled sample (simple adding),
MEAN LENGTH = 25,90cm N= 49
NUMBER OF SUBSAMPLES : 2
SAMPLES FOUND BETWEEN ST. NO. 300 AND 321,
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



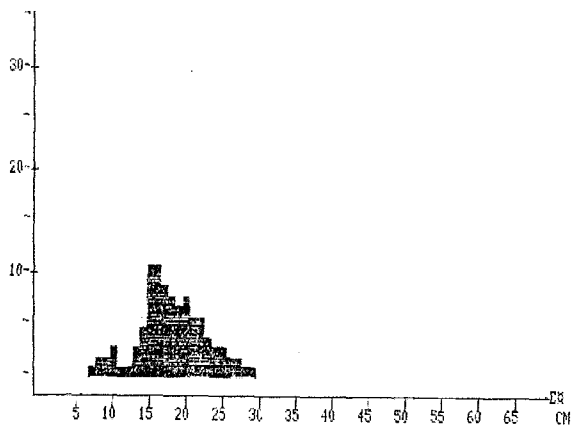
Dentex angolensis
Cabinda - Luanda
Pooled sample (simple adding),
MEAN LENGTH = 25,52cm N= 1464
NUMBER OF SUBSAMPLES : 27
SAMPLES FOUND BETWEEN ST. NO. 208 AND 334,
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



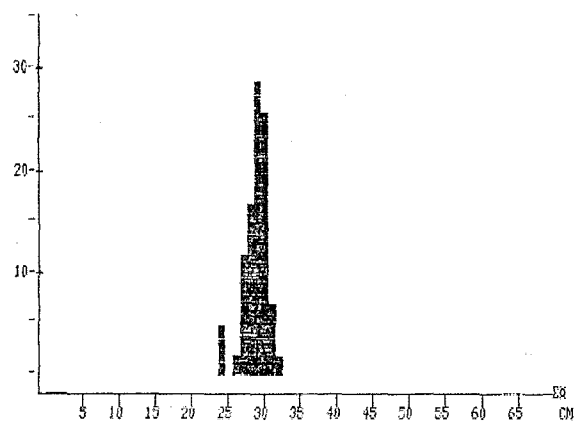
Dentex macrophthalmus
Luanda - Benguela
Pooled sample (simple adding),
MEAN LENGTH = 23,75cm N= 923
NUMBER OF SUBSAMPLES : 13
SAMPLES FOUND BETWEEN ST. NO. 339 AND 402,
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



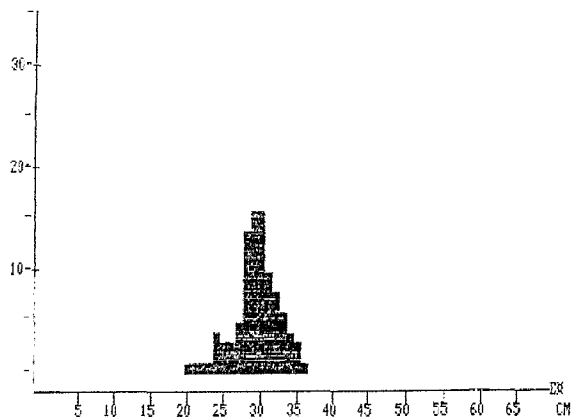
Dentex angolensis
Luanda - Benguela
Pooled sample (simple adding),
MEAN LENGTH = 26,11cm N= 105
NUMBER OF SUBSAMPLES : 4
SAMPLES FOUND BETWEEN ST. NO. 340 AND 331,
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



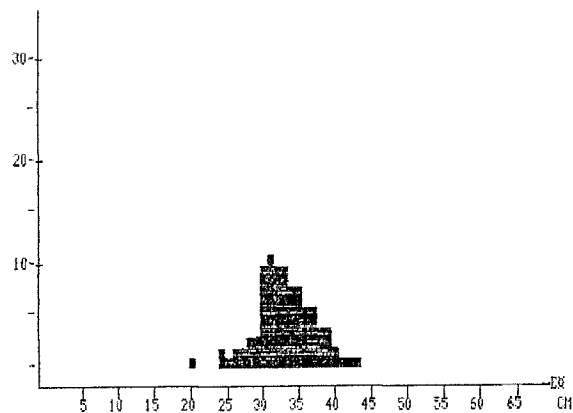
Dentex macrophthalmus
Benguela - Cuanene River
Pooled sample (simple adding),
MEAN LENGTH = 18,07cm N= 2124
NUMBER OF SUBSAMPLES : 20
SAMPLES FOUND BETWEEN ST. NO. 404 AND 457,
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



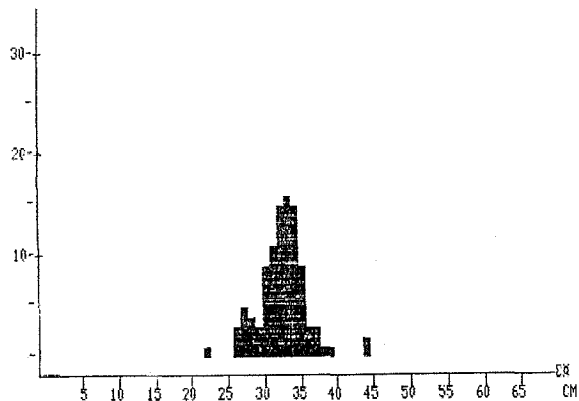
Dentex angolensis
Benguela - Cuanene River
Pooled sample (simple adding),
MEAN LENGTH = 23,76cm N= 42
NUMBER OF SUBSAMPLES : 2
SAMPLES FOUND BETWEEN ST. NO. 408 AND 419,
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



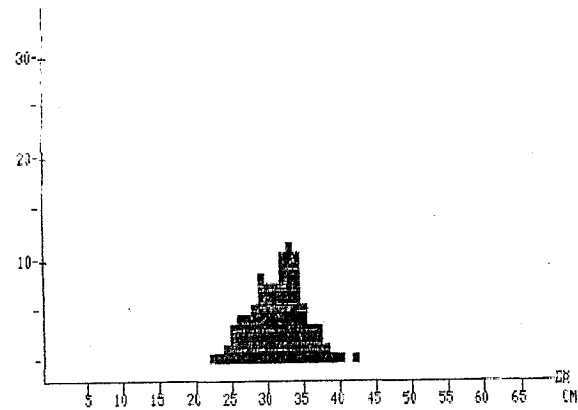
Merluccius polli, male
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 29.33cm N= 82;
NUMBER OF SUBSAMPLES : 23
SAMPLES FOUND BETWEEN ST. NO. 236 AND 334.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



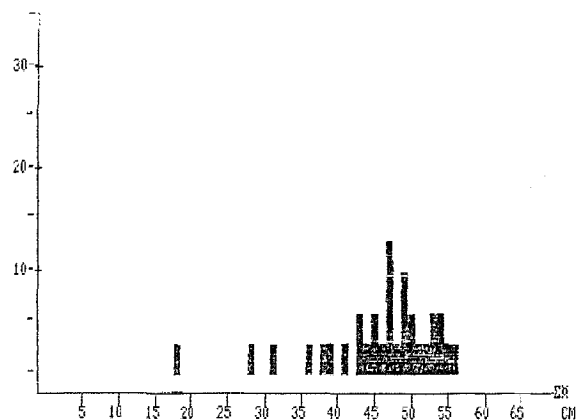
Merluccius polli, female
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 32.97cm N= 486
NUMBER OF SUBSAMPLES : 22
SAMPLES FOUND BETWEEN ST. NO. 236 AND 334.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



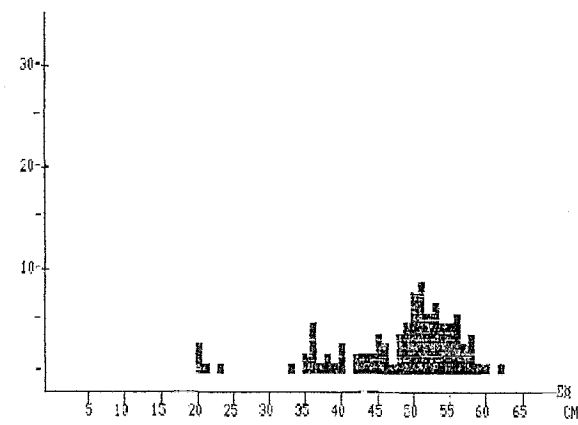
Merluccius polli, male
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 32.22cm N= 116
NUMBER OF SUBSAMPLES : 7
SAMPLES FOUND BETWEEN ST. NO. 342 AND 396.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



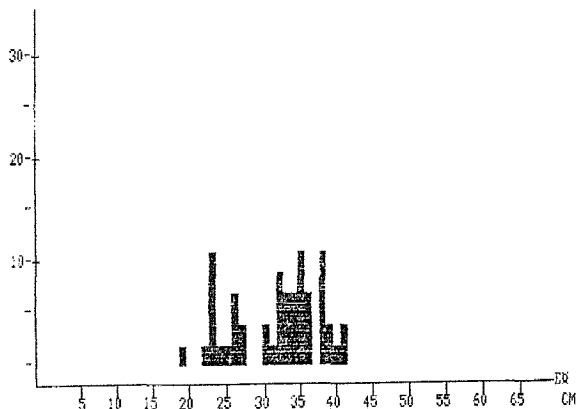
Merluccius polli, female
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 31.41cm N= 367
NUMBER OF SUBSAMPLES : 7
SAMPLES FOUND BETWEEN ST. NO. 342 AND 396.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



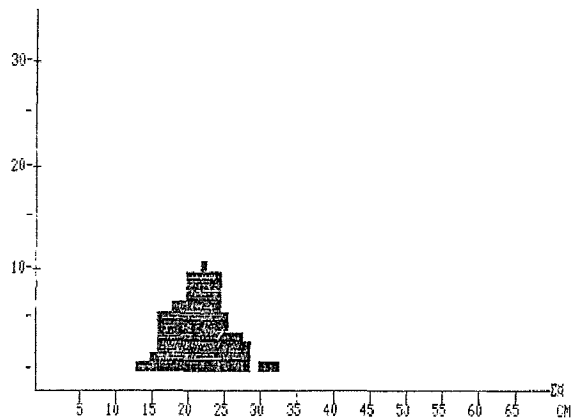
Merluccius capensis, male
Benguela - Cunene River
Pooled sample (simple adding).
MEAN LENGTH = 45.42cm N= 31
NUMBER OF SUBSAMPLES : 5
SAMPLES FOUND BETWEEN ST. NO. 433 AND 449.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



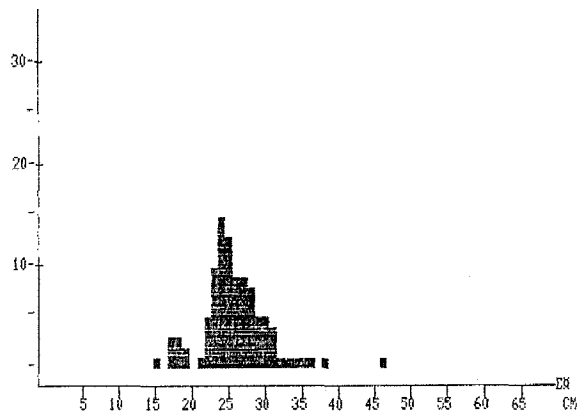
Merluccius capensis, female
Benguela - Cunene River
Pooled sample (simple adding).
MEAN LENGTH = 47.49cm N= 270
NUMBER OF SUBSAMPLES : 6
SAMPLES FOUND BETWEEN ST. NO. 433 AND 449.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



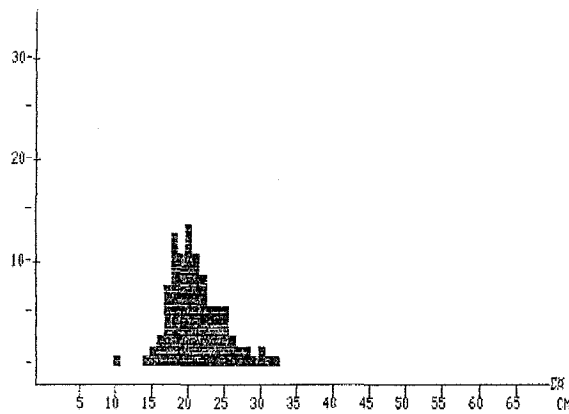
Dentex barnardi
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 31.78cm N= 45
NUMBER OF SUBSAMPLES : 2
SAMPLES FOUND BETWEEN ST. NO. 275 AND 320.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



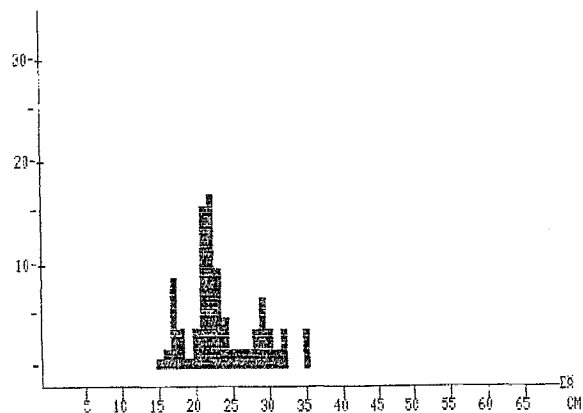
Pagellus bellottii
Cabinda - Luanda
Pooled sample (simple adding).
MEAN LENGTH = 21.55cm N= 486
NUMBER OF SUBSAMPLES : 10
SAMPLES FOUND BETWEEN ST. NO. 240 AND 303.
SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



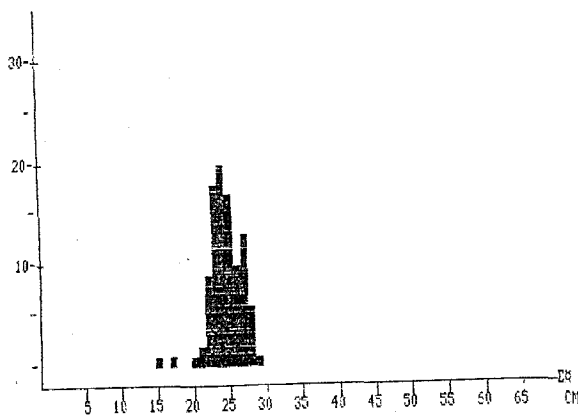
Dentex barnardi
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 26.00cm N= 239
NUMBER OF SUBSAMPLES : 5
SAMPLES FOUND BETWEEN ST. NO. 339 AND 379.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



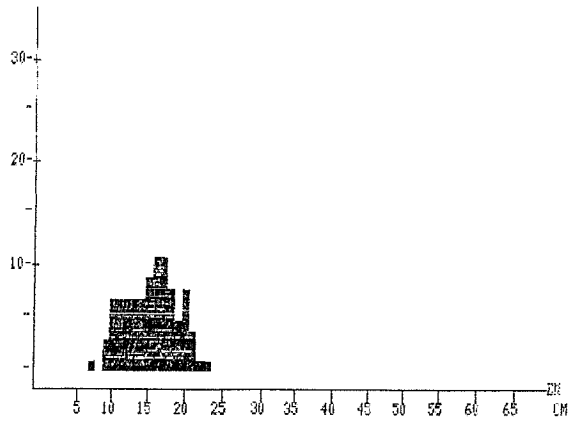
Pagellus bellottii
Luanda - Benguela
Pooled sample (simple adding).
MEAN LENGTH = 20.83cm N= 372
NUMBER OF SUBSAMPLES : 7
SAMPLES FOUND BETWEEN ST. NO. 337 AND 400.
SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



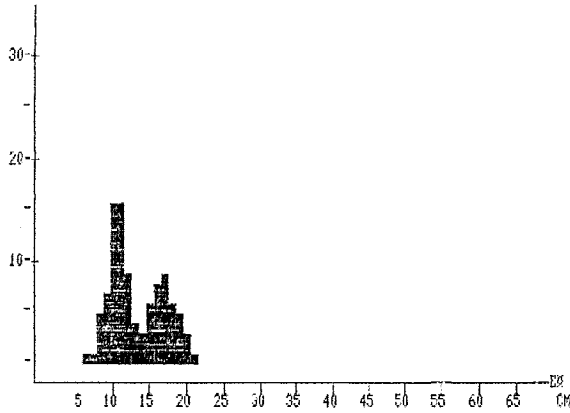
Dentex barnardi
Benguela - Curene River
Pooled sample (simple adding).
MEAN LENGTH = 23.50cm N= 82
NUMBER OF SUBSAMPLES : 2
SAMPLES FOUND BETWEEN ST. NO. 416 AND 418.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



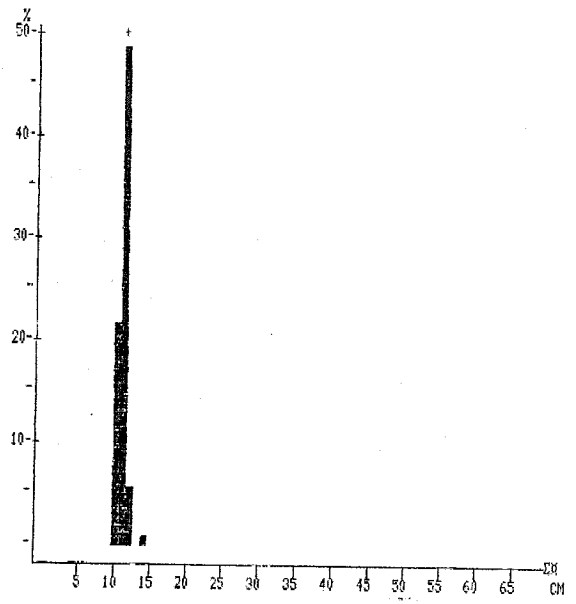
Pagellus bellottii
Benguela - Curene River
Pooled sample (simple adding).
MEAN LENGTH = 24.43cm N= 33
NUMBER OF SUBSAMPLES : 1
SAMPLES FOUND BETWEEN ST. NO. 422 AND 422.
SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .



Brachydeuterus auritus
 Cabinda - Luanda
 Pooled sample (simple adding).
 MEAN LENGTH = 15,25cm N= 507
 NUMBER OF SUBSAMPLES : 8
 SAMPLES FOUND BETWEEN ST. NO. 261 AND 306.
 SAMPLES SEARCHED BETWEEN ST. NO. 369 AND 372 .



Brachydeuterus auritus
 Luanda - Benguela
 Pooled sample (simple adding).
 MEAN LENGTH = 13,24cm N= 658
 NUMBER OF SUBSAMPLES : 11
 SAMPLES FOUND BETWEEN ST. NO. 345 AND 394.
 SAMPLES SEARCHED BETWEEN ST. NO. 373 AND 402 .



Brachydeuterus auritus
 Benguela - Omene River
 Pooled sample (simple adding).
 MEAN LENGTH = 10,87cm N= 94
 NUMBER OF SUBSAMPLES : 1
 SAMPLES FOUND BETWEEN ST. NO. 403 AND 403.
 SAMPLES SEARCHED BETWEEN ST. NO. 403 AND 457 .

AINEX III Instruments and fishing gear used

Acoustic instruments

The SIMRAD EK500/38 KHz scientific sounder, was used during survey for estimation of fish density. The EK500 has a built-in digital echo integrator. The details of the instrument settings are as follows:

Transceiver settings:

Bandwith	Wide (3.8 KHz)
Pulse length	Medium (1 ms)
Max Power	2000 Watt
Sv Transducer gain	28.0 dB
Ts Transducer gain	28.0 dB

Integrator settings:

6 Surface referred layers covering the area from 4 to 500 meter depth. Sv Threshold -80 dB.

1 Bottom referred layer covering from 0.5 to 10 meter above bottom. Sv Treshold -80 dB.

1 Surface layer covering the total area from 4 to 200 meters. Sv Treshold -57 dB.

1 Surface layer covering the total area from 4 to 200 meters. Sv Treshold -54 dB.

Printer settings:

Range	0 - 100 or 0 - 250 meter
TVG	20 log R
TS Color min	-50 dB
Sv Color min	-57 dB

A ES38B with a 6.9° -3dB beamwidth transducer was used for integration.

A calibration experiment using a standard copper sphere, performed in Baia Dos Tigres 11/9 1991 gave the following results: Sv Transducer gain 28.0 dB, TS Transducer gain 28.0 dB, which is the same performance as that obtained in the previous calibration (28/4 - 91).

Glossary:

Sv Transducer gain: Peak transducer gain assumed during

computation of volume backscattering strength.

Ts Transducer gain: Peak transducer gain assumed during computation of target strength.

Ts Color min : Lower limit of color scale relative to target strength.

Sv Color min : Lower limit of color scale relative to Volume back scattering.

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. Surface temperature was recorded at 4 m depth with a thermograph.

Fishing gear

Bottom trawl: High opening shrimp and fish trawl with net headline 31 m (floatline), footrope 47 m, 40 m sweeps, estimated headline height 6 m and distance between wings during towing 18 m.

Pelagic trawl: Type "Harstad-trawl", width about 30 m and vertical opening 10-15 m.

Cod ends of trawls with fine inner lining.

ANNEX IV Records of fishing stations

PROJECT STATION: 232
 DATE: 7/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 506 Long E 1158
 start stop duration Purpose code: 3
 TIME :15:04:00 15:34:00 30 (min) Area code : 2
 LOG :1409.59 1470.90 dist.:1.40km GearCond.code:
 FDEPTH: 20 18 Validity code:
 BDEPTH: 20 18
 Towing dir: 150° Wire out: 100 m Speed: 28 kn*10
 Sorted: 22 Kg Total catch: 917.70 CATCH/HOUR: 1935.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pseudotolithus typus	1215.20	1026	66.21	4
Selene dorsalis	182.00	659	9.52	3
Plectorhynchus mediterraneus	154.00	154	8.39	
Ilisha africana	70.00	1806	3.91	1
Chloroscombrus chrysurus	63.60	1260	3.74	2
Brachydeuterus auritus	30.80	1106	1.68	
Panulirus regius	71.00	42	1.14	
Umbrina canariensis	21.00	56	1.14	
Drepane africana	18.20	56	0.99	
Trichurus lepturus	14.00	532	0.75	
Galeoides decadactylus	12.60	42	0.69	
Pomadasy peroteti	12.60	14	0.69	
Arius parkii	11.20	84	0.61	
Pentanemus quinquarius	4.20	42	0.23	
Trachurus trecae	0.00	28		
Total	1835.40		100.00	

PROJECT STATION: 233
 DATE: 7/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 513 Long E 1263
 start stop duration Purpose code: 3
 TIME :16:27:30 18:57:00 30 (min) Area code : 2
 LOG :1477.79 1479.20 1.43 GearCond.code:
 FDEPTH: 12 12 Validity code:
 BDEPTH: 12 12
 Towing dir: 150° Wire out: 100 m Speed: 29 kn*10
 Sorted: 30 Kg Total catch: 239.60 CATCH/HOUR: 479.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	150.00	3360	33.39	
Ilisha africana	96.00	2954	20.03	6
Brachydeuterus auritus	48.00	1968	10.02	
Chloroscombrus chrysurus	32.00	1398	6.68	7
Carcharinus sp.	24.00	16	5.01	
Pomadasy peroteti	24.00	64	5.01	
Pentheroscion abizi	22.40	368	4.67	
Pseudotolithus typus	16.00	32	3.34	
Stromateus fiatola	16.00	16	3.34	
Sepiella ornata	8.00	128	1.67	
Galeoides decadactylus	8.00	64	1.67	
Parapenaeus atlantica	8.00	448	1.67	5
Pentanemus quinquarius	6.40	192	1.34	
Sardinella aurita	5.60	192	1.17	
Pegusa tascaris	1.60	48	0.33	
Trachurus trecae	1.60	360	0.33	
Schedophilus pamarco	0.80	16	0.17	
Arius parkii	0.80	16	0.17	
Total	479.20		100.01	

PROJECT STATION: 234
 DATE: 7/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 516 Long E 1157
 start stop duration Purpose code: 3
 TIME :17:56:00 18:26:00 30 (min) Area code : 2
 LOG :1497.00 1488.40 1.70 GearCond.code:
 FDEPTH: 31 34 Validity code:
 BDEPTH: 31 34
 Towing dir: 321° Wire out: 150 m Speed: 32 kn*10
 Sorted: 25 Kg Total catch: 28.85 CATCH/HOUR: 57.70

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	13.80	275	23.92	
Brachydeuterus auritus	13.80	254	23.92	
Ilisha africana	10.40	200	18.02	
Carcharinus sp.	4.00	4	6.93	
Panulirus sp.	3.60	2	5.20	
Pterothrissus belloci	3.00	50	5.47	
Pomadasy peroteti	2.00	2	3.47	
Dentex gibbosus	1.50	2	2.60	
Pomadasy incisus	1.40	6	2.43	
Penaeus notialis	1.00	36	1.73	
Umbrina canariensis	0.80	2	1.39	
Pseudupeneus prayensis	0.80	2	1.39	
Dentex barnardi	0.80	2	1.39	
Pagellus bellottii	0.60	2	1.04	
Cynoglossus senegalensis	0.40	2	0.69	
Sardinella aurita	0.40	10	0.69	
Total	57.70		100.01	

PROJECT STATION: 235
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 521 Long E 1132
 start stop duration Purpose code: 3
 TIME :07:19:00 07:48:00 30 (min) Area code : 2
 LOG :1594.80 1596.00 1.30 GearCond.code:
 FDEPTH: 371 361 Validity code:
 BDEPTH: 371 361
 Towing dir: 12° Wire out: 1200 m Speed: 26 kn*10
 Sorted: 59 Kg Total catch: 119.60 CATCH/HOUR: 239.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Centrophorus granulosus	108.00	24	45.15	
Merluccius polli	40.40	99	16.89	8
Scorpaena normani	16.20	522	6.77	
Menalocarcinus africanus	13.40	1206	5.60	
Etmopterus spinax	13.20	336	5.52	
Laemonema laureysi	12.60	54	5.27	
Malacocephalus laevis	11.40	654	4.77	
Hoplostethus mediterraneus	7.20	174	3.01	
Oibranchus atlanticus	4.20	30	1.76	
Photomectes sp	3.00	30	1.25	
Stereomastis sculpta	2.40	90	1.60	
Halosaurus ovenii	1.80	72	0.75	
Channex pictus	1.20	24	0.50	
Xenodermichthys socialis	1.20	18	0.50	
Parapenaeus longirostris	1.20	168	0.50	
Melanostigma sp	0.60	6	0.25	
MACROURIDAE	0.60	6	0.25	
Nemichthys scolopacea	0.60	6	0.25	
Total	239.20		99.59	

PROJECT STATION: 236
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 524 Long E 1134
 start stop duration Purpose code: 3
 TIME :08:45:00 09:15:00 30 (min) Area code : 2
 LOG :1601.20 1602.60 1.40 GearCond.code:
 FDEPTH: 288 214 Validity code:
 BDEPTH: 288 214
 Towing dir: 170° Wire out: 900 m Speed: 27 kn*10
 Sorted: 22 Kg Total catch: 309.20 CATCH/HOUR: 618.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Scorpaena normani	336.00	1028	54.33	
Merluccius polli, female	114.40	278	18.50	9
Pterothrissus belloci	66.00	480	10.67	
Merluccius polli, male	56.00	134	9.05	31
Trichurus lepturus	12.00	60	1.94	
Chlorophthalmus atlanticus	10.00	100	1.62	
Nemichthys scolopacea	8.00	60	1.29	
Triplophos hemingi	6.00	1280	0.97	
Laemonema laureysi	4.00	20	0.65	
Etmopterus spinax	4.00	40	0.65	
MACROURIDAE	2.00	20	0.32	
Total	618.40		100.00	

PROJECT STATION: 237
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 524 Long E 1136
 start stop duration Purpose code: 3
 TIME :10:08:00 10:36:00 30 (min) Area code : 2
 LOG :1506.70 1608.00 1.30 GearCond.code:
 FDEPTH: 214 216 Validity code:
 BDEPTH: 214 216
 Towing dir: 350° Wire out: 700 m Speed: 28 kn*10
 Sorted: 37 Kg Total catch: 107.40 CATCH/HOUR: 214.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pterothrissus belloci	113.40	810	52.79	
Parapenaeus longirostris, fem.	48.60	2058	22.63	10
Trichurus lepturus	15.60	144	7.26	
Parapenaeus longirostris, male	11.40	1196	5.31	11
Stomias affinis	9.00	594	4.19	
Synagrops microlepis	3.00	18	1.40	
Merluccius polli	3.00	24	1.40	
Scorpaena normani	3.00	78	1.40	
Chlorophthalmus atlanticus	3.00	108	1.40	
Chlorophthalmus sp.	1.80	12	0.84	
Seiia elegans	1.20	72	0.58	
Raja straeleni	0.80	6	0.37	
Lepophtidium pheromystax	0.60	6	0.28	
Peristodion cataphractum	0.40	6	0.19	
Oibranchus atlanticus	0.06	6	0.03	
Total	214.80		100.05	

PROJECT STATION: 238
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 518 Long E 1142
 start stop duration Purpose code: 3
 TIME :11:58:00 12:28:00 30 (min) Area code : 2
 LOG :1618.70 1620.30 1.50 GearCond.code:
 FDEPTH: 95 94 Validity code:
 BDEPTH: 95 94
 Towing dir: 145° Wire out: 430 m Speed: 30 kn*10
 Sorted: 22 Kg Total catch: 52.64 CATCH/HOUR: 105.28

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	48.60	448	46.35	
Dentex angolensis	26.00	116	24.70	12
Squatina aculeata	16.20	10	15.39	
Umbrina canariensis	11.20	32	10.64	
Pagellus bellottii	1.20	8	1.14	
Todarodes sagittatus	0.80	36	0.76	
Uranoscopus albesca	0.80	8	0.76	
Parapenaeus longirostris	0.28	36	0.27	
Total	105.28		100.01	

PROJECT STATION: 239
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 518. Long E 1149
 start stop duration
 TIME :16:21:00 16:51:00 30 (min) Purpose code: 3
 LOG :1531.40 1633.10 1.70 Area code : 2
 FDEPTH: 54 51 GearCond.code:
 BDEPTH: 54 51 Validity code:
 Towing dir: 130° Wire out: 200 m Speed: 20 kn*10

Sorted: 22 Kg Total catch: 43.00 CATCH/HOUR: 86.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	23.20	156	26.98	
Dentex angolensis	16.00	80	18.60	10
Dentex barnardi	12.00	32	13.95	
Trichiurus lepturus	8.00	20	9.30	
Fistularia petimba	8.00	20	9.30	
Trachurus trecae	4.00	1392	4.65	14
Epinephelus aeneus	4.00	4	4.65	
Umbrina canariensis	2.40	8	2.79	
Loligo sp.	2.00	756	2.33	
Chaetodon hoefleri	2.00	8	2.33	
Pagellus bellottii	1.60	12	1.86	
Todarodes sagittatus	1.20	16	1.40	
Decapterus rhonchus	0.80	4	0.93	
Selene dorsalis	0.80	4	0.93	
Total	66.00		100.00	

PROJECT STATION: 240
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 522 Long E 1154
 start stop duration
 TIME :17:44:00 18:14:00 30 (min) Purpose code: 3
 LOG :1640.30 1641.50 1.60 Area code : 2
 FDEPTH: 43 46 GearCond.code:
 BDEPTH: 43 46 Validity code:
 Towing dir: 237° Wire out: 200 m Speed: 30 kn*10

Sorted: 53 Kg Total catch: 152.20 CATCH/HOUR: 304.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	131.20	1072	43.10	
Dentex gibbosus	39.20	56	12.88	
Umbrina canariensis	31.20	80	10.25	
Trichiurus lepturus	20.80	80	6.83	
Pagellus bellottii	16.00	64	5.26	15
Gymnura sp.	13.60	2	4.47	
Trachurus trecae	10.40	2720	3.42	16
Pomadourus incisus	8.80	84	2.89	
Dentex barnardi	8.40	20	2.76	
Pseudotolithus tynus	7.20	2	2.37	
Epinephelus aeneus	4.80	4	1.56	
Panulirus regius	4.00	2	1.31	
Seriola lalandi	3.20	8	1.05	
Trigla lyra	2.40	8	0.79	
Atractoscion acciuidens	2.00	2	0.66	
Sepia sp.	0.80	96	0.26	
Peneus notialis	0.40	16	0.13	
Total	304.40		100.01	

PROJECT STATION: 241
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 530 Long E 1143
 start stop duration
 TIME :06:30:00 07:00:00 30 (min) Purpose code: 3
 LOG :1690.80 1692.00 1.50 Area code : 2
 FDEPTH: 90 82 GearCond.code:
 BDEPTH: 90 82 Validity code:
 Towing dir: 120° Wire out: 350 m Speed: 28 kn*10

Sorted: 61 Kg Total catch: 50.90 CATCH/HOUR: 121.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Umbrina canariensis	25.20	62	20.69	
Dentex angolensis	21.60	162	17.73	17
Trichiurus lepturus	15.60	38	12.81	
Pterothrissus belloci	11.60	90	9.52	
Squatina oculata	9.40	2	7.72	
Citharus linguatula	9.00	14	7.35	
Epinephelus aeneus	7.20	2	5.91	
Atractoscion acciuidens	6.80	20	5.58	
Trachurus trecae	2.80	42	2.30	18
Brotula barbata	2.80	6	2.30	
Torpedo torpedo	2.60	4	2.13	
Uranoscopus albesca	1.60	28	1.31	
Boops boops	1.60	6	1.31	
Trigla lyra	1.40	14	1.15	
Saurida brasiliensis	0.80	114	0.66	
Thorogobius angolensis	0.40	10	0.39	
Loligo sp.	0.40	24	0.33	
Parapenaeus longirostris	0.40	60	0.32	
Scorpaena normani	0.40	4	0.33	
Todaropsis eblanae	0.20	50	0.16	
Total	121.80		99.99	

PROJECT STATION: 242
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 533 Long E 1139
 start stop duration
 TIME :08:03:00 08:33:00 30 (min) Purpose code: 3
 LOG :1701.00 1702.90 1.40 Area code : 2
 FDEPTH: 130 113 GearCond.code:
 BDEPTH: 130 113 Validity code:
 Towing dir: 120° Wire out: 550 m Speed: 28 kn*10

Sorted: 29 Kg Total catch: 98.60 CATCH/HOUR: 197.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	84.00	1058	43.00	
Trichiurus lepturus	84.00	498	42.60	
Dentex angolensis	16.00	74	8.52	19
Pterothrissus belloci	3.60	42	1.63	
Loligo vulgaris	2.20	50	1.12	
Miracorvina angolensis	1.40	8	0.71	
Heptanchias perlo	1.40	2	0.71	
Boops boops	1.40	14	0.71	
Parapenaeus longirostris	0.80	56	0.41	
Trachurus trecae	0.70	14	0.35	
Total	197.10		99.96	

PROJECT STATION: 243
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 534 Long E 1136
 start stop duration
 TIME :09:28:00 09:58:00 30 (min) Purpose code: 3
 LOG :1709.00 1710.10 1.40 Area code : 2
 FDEPTH: 205 224 GearCond.code:
 BDEPTH: 205 224 Validity code:
 Towing dir: 20° Wire out: 700 m Speed: 28 kn*10

Sorted: 32 Kg Total catch: 99.70 CATCH/HOUR: 187.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pterothrissus belloci	55.00	552	29.35	
Stomias affinis	35.00	4470	13.68	
Trichiurus lepturus	17.60	400	9.39	
Miracorvina angolensis	16.00	30	8.54	
Parapenaeus longirostris, fem.	14.60	1606	7.79	21
Dentex angolensis	13.40	44	7.15	20
Brotula barbata	11.60	14	6.19	
Parapenaeus longirostris, male	9.50	2064	5.12	22
Solenocera africana	5.30	350	2.67	
Zenopsis conchifer	2.00	10	1.07	
Loligo vulgaris	2.00	50	1.07	
Synagrops microlepis	1.60	76	0.85	
Uranoscopus albesca	1.00	6	0.53	
Leptolepis intermedia	0.60	26	0.32	
Sepia elegans	0.60	30	0.32	
Citharus linguatula	0.60	6	0.32	
Chlorophthalmus agassizi	0.60	6	0.32	
Merluccius merluccius	0.60	5	0.32	
Total	187.40		100.00	

PROJECT STATION: 244
 DATE: 8/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 534 Long E 1133
 start stop duration
 TIME :10:40:00 11:10:00 30 (min) Purpose code: 3
 LOG :1713.50 1715.00 1.50 Area code : 2
 FDEPTH: 274 265 GearCond.code:
 BDEPTH: 274 265 Validity code:
 Towing dir: 160° Wire out: 900 m Speed: 28 kn*10

Sorted: 37 Kg Total catch: 220.90 CATCH/HOUR: 441.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pterothrissus belloci	246.00	1644	55.68	
Merluccius polli, female	55.20	288	12.49	23
Rematocarcinus africanus	42.00	2736	9.51	
Miracorvina angolensis	26.40	144	5.93	
Trichiurus lepturus	21.60	600	4.89	
Grosmitulus imberbis *	15.60	432	3.53	
Epigonus sp.	6.00	60	1.36	
Chlorophthalmus atlanticus	4.80	60	1.03	
Promethichthys prometheus	3.60	12	0.81	
Stomias affinis	3.60	12	0.81	
Parapenaeus longirostris	3.60	216	0.81	
MYCTOPHIDAE	3.60	408	0.81	
Sepia sp.	2.40	36	0.54	
Scorpaena normani	2.40	24	0.54	
PARLPOD	1.20	36	0.27	
Merluccius polli, male	1.20	24	0.27	24
Halacapphalus laevis	1.20	12	0.27	
Laemonema laureys	1.20	12	0.27	
Solenocera africana	0.12	12	0.09	
Total	441.72		99.96	

PROJECT STATION: 245
 DATE: 9/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 545 Long E 1131
 start stop duration
 TIME :12:31:00 13:01:00 30 (min) Purpose code: 3
 LOG :1724.60 1725.70 1.55 Area code : 2
 FDEPTH: 207 216 GearCond.code:
 BDEPTH: 207 216 Validity code:
 Towing dir: 180° Wire out: 900 m Speed: 30 kn*10

Sorted: 32 Kg Total catch: 212.80 CATCH/HOUR: 425.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	206.80	3808	67.39	25
Dentex angolensis	39.00	134	8.93	26
Trichurus lepturus	28.80	168	6.77	
MYCTOPHIDAE	18.00	2100	4.23	
Zenopsis conchifer	16.80	72	3.95	
Pentheroscion mbizi	14.40	120	3.39	
Pterothrissus belloci	14.40	96	3.39	
Todarodes sagittatus	6.00	96	1.41	
Merluccius merluccius	2.40	24	0.55	
Parapenaeus longirostris	0.00	96		
Chlorophthalmus agassizii	0.00	24		
Total	425.60		100.00	

PROJECT STATION: 246
 DATE: 9/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 542 Long E 1135
 start stop duration
 TIME :14:33:40 16:20:20 30 (min) Purpose code: 3
 LOG :1732.70 1734.10 1.40 Area code : 2
 FDEPTH: 194 191 GearCond.code:
 BDEPTH: 194 191 Validity code:
 Towing dir: 30° Wire out: 750 m Speed: 30 kn*10

Sorted: 33 Kg Total catch: 413.10 CATCH/HOUR: 026.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pentheroscion mbizi	585.80	4680	70.88	28
Pterothrissus belloci	40.00	528	5.81	
Dentex angolensis	46.20	100	5.59	27
MYCTOPHIDAE	36.00	25560	4.36	
Synagrops microlepis	28.80	696	3.49	
Trichurus lepturus	21.60	216	2.61	
Parapenaeus longirostris, male	19.20	1472	2.32	29
Parapenaeus longirostris, fem.	16.80	1612	2.03	30
Todarodes sagittatus	12.00	144	1.45	
Zenopsis conchifer	12.00	24	1.45	
Total	026.20		99.99	

PROJECT STATION: 247
 DATE: 9/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 539 Long E 1142
 start stop duration
 TIME :15:44:00 16:14:00 30 (min) Purpose code: 3
 LOG :1743.10 1745.20 1.20 Area code : 2
 FDEPTH: 96 89 GearCond.code:
 BDEPTH: 96 89 Validity code:
 Towing dir: 95° Wire out: 500 m Speed: 29 kn*10

Sorted: 24 Kg Total catch: 24.10 CATCH/HOUR: 48.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Umbriina canariensis	16.00	94	33.20	32
Dentex angolensis	14.00	70	29.05	33
Trichurus lepturus	5.80	28	12.03	
Pentheroscion mbizi	4.60	18	9.54	
Todaropsis eblanae	3.00	50	6.22	
Todarodes sagittatus	1.80	20	3.73	
Scomber japonicus	1.20	50	2.49	
Schedophilus pinnaroco	1.00	2	2.07	
Trachurus trecae	0.80	10	1.66	
Saurida brasiliensis	0.00	4		
Total	48.20		99.99	

PROJECT STATION: 248
 DATE: 9/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 539 Long E 1153
 start stop duration
 TIME :17:29:00 17:59:00 30 (min) Purpose code: 3
 LOG :1756.60 1757.70 1.70 Area code : 2
 FDEPTH: 52 45 GearCond.code:
 BDEPTH: 52 45 Validity code:
 Towing dir: 95° Wire out: 250 m Speed: 30 kn*10

Sorted: 24 Kg Total catch: 70.10 CATCH/HOUR: 140.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Cynopenticus ferox	34.00	4	24.25	
Brachydeuterus auritus	32.80	216	23.40	
Trichurus lepturus	21.60	324	15.41	
Pseudotolithus typus	9.20	44	6.56	
Desyatis marmorata	6.00	2	4.28	
Pterothrissus belloci	6.00	36	4.28	
Pseudotolithus senegalensis	4.30	4	3.42	
Arius parkii	4.80	4	3.42	
Stromateus fiatola	4.00	4	2.95	
Umbriina canariensis	4.00	16	2.95	
Penaeus notialis	3.50	100	2.57	
Pagellus bellottii	3.00	24	2.14	34
Selene dorsalis	2.00	3	1.43	
Pomadasys incisus	1.20	4	0.86	
Trigla lyra	0.80	4	0.57	
Auxis thazard	0.40	4	0.29	
Decapterus rhonchus	0.40	4	0.29	
Pentheroscion mbizi	0.40	4	0.29	
Miracorvina angolensis	0.40	12	0.29	
Todarodes sagittatus	0.40	4	0.29	
Trachurus trecae	0.40	72	0.29	
Total	140.20		100.03	

PROJECT STATION: 249
 DATE: 10/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 531 Long E 1158
 start stop duration
 TIME :06:25:00 06:35:00 10 (min) Purpose code: 3
 LOG :1866.70 1861.50 0.60 Area code : 2
 FDEPTH: 36 34 GearCond.code:
 BDEPTH: 36 34 Validity code:
 Towing dir: 120° Wire out: 200 m Speed: 29 kn*10

Sorted: 28 Kg Total catch: 28.40 CATCH/HOUR: 170.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pseudotolithus typus	75.60	216	44.37	35
Arius parkii	45.60	42	26.78	
Trichurus lepturus	11.40	606	6.69	
Miracorvina angolensis	7.80	150	4.58	
Pentanemus quinquarius	7.80	108	4.58	
Pseudotolithus senegalensis	7.20	24	4.23	
Brachydeuterus auritus	3.60	24	2.11	
Ilisha africana	3.00	30	1.76	
Parapenaeopsis atlantica	2.40	180	1.41	
Pomadasys incisus	1.80	18	1.06	
Dicologlossa cuneata	1.20	12	0.70	
Dentex gibbosus	1.20	6	0.70	
Sepiella ornata	0.60	6	0.35	
Raja miraletus	0.60	6	0.35	
Trachurus trecae	0.60	12	0.35	
Total	170.40		100.00	

PROJECT STATION: 250
 DATE: 10/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 538 Long E 1200
 start stop duration
 TIME :07:59:00 08:29:00 30 (min) Purpose code: 3
 LOG :1872.50 1873.80 1.60 Area code : 2
 FDEPTH: 28 31 GearCond.code:
 BDEPTH: 28 31 Validity code:
 Towing dir: 330° Wire out: 150 m Speed: 33 kn*10

Sorted: 30 Kg Total catch: 313.60 CATCH/HOUR: 627.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	344.00	8000	54.85	
Miracorvina angolensis	102.00	2280	16.26	
Sepia orbignyana	42.00	80	6.70	
Brachydeuterus auritus	38.00	280	6.06	
Pseudotolithus senegalensis	32.00	260	5.10	
Arius parkii	22.40	18	3.57	
Ilisha africana	18.00	240	2.87	
Pentheroscion mbizi	12.00	580	1.91	
Pentanemus quinquarius	12.00	120	1.91	
Callinectes marginatus	2.80	4	0.45	
Pseudotolithus senegalensis	2.00	28	0.32	
Total	627.20		100.00	

PROJECT STATION: 251
 DATE: 10/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 544 Long E 1154
 start stop duration
 TIME :09:38:00 10:08:00 30 (min) Purpose code: 3
 LOG :1893.50 1894.70 1.65 Area code : 2
 FDEPTH: 47 51 GearCond.code:
 BDEPTH: 47 51 Validity code:
 Towing dir: 300° Wire out: 250 m Speed: 33 kn*10

Sorted: 23 Kg Total catch: 133.80 CATCH/HOUR: 267.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Shrimps, small, non comm.	69.40	26566	25.91	
Trichurus lepturus	68.60	708	25.62	
Pseudotolithus typus	33.60	66	12.55	37
Pseudotolithus senegalensis	30.80	88	11.50	36
Cynopenticus ferox	24.00	2	8.86	
Stromateus fiatola	19.60	28	7.32	
Pentheroscion mbizi	19.60	182	7.32	
Selene dorsalis	1.40	14	0.52	
Miracorvina angolensis	0.80	8	0.30	
Trachurus trecae	0.00	14		
Total	267.80		100.00	

PROJECT STATION: 252
 DATE: 10/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 549 Long E 1148
 start stop duration
 TIME :11:20:00 11:50:00 30 (min) Purpose code: 3
 LOG :1894.20 1895.30 1.80 Area code : 2
 FDEPTH: 65 73 GearCond.code:
 BDEPTH: 65 73 Validity code:
 Towing dir: 300° Wire out: 250 m Speed: 32 kn*10

Sorted: Kg Total catch: 63.00 CATCH/HOUR: 126.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	126.00	406	100.00	38
Total	126.00		100.00	

PROJECT STATION: 253
 DATE:10/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 555 Long E 1141
 start stop duration
 TIME :13:31:00 14:01:00 30 (min) Purpose code: 3
 LOG :1905.70 1906.60 1.50 Area code : 2
 FDEPTH: 103 109 GearCond.code:
 BDEPTH: 103 109 Validity code:
 Towing dir: 300° Wire out: 500 m Speed: 31 kn*10
 Sorted: 31 Kg Total catch: 30.80 CATCH/HOUR: 61.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex angolensis	30.00	114	40.70	39
Trichurus lepturus	9.40	32	15.26	
Trachurus trecae	7.40	100	12.01	40
Dentex gibbosus	5.00	2	0.12	
Todarodes sagittatus	3.40	60	5.52	
Todaropsis eblanae	3.00	10	4.97	41
Pagellus bellottii	2.40	18	3.90	
Spicara alta	1.00	4	1.62	
Total	61.60		100.00	

PROJECT STATION: 257
 DATE:11/ 8/91 GEAR TYPE: ET No:1 POSITION:Lat S 609 Long E 1136
 start stop duration
 TIME :13:22:00 13:52:00 30 (min) Purpose code: 3
 LOG :1983.40 1984.50 1.57 Area code : 2
 FDEPTH: 125 139 GearCond.code:
 BDEPTH: 125 139 Validity code:
 Towing dir: 328° Wire out: 550 m Speed: 31 kn*10
 Sorted: 30 Kg Total catch: 109.50 CATCH/HOUR: 219.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	108.60	2052	49.59	48
Dentex angolensis	16.20	160	16.53	47
Todarodes sagittatus	33.00	990	15.07	49
Saurida brasiliensis	18.00		6.22	
Dentex congoensis	8.40	522	3.84	
Todaropsis eblanae	5.40	8	2.47	
Arionna bondi	5.40	60	2.47	
Trichiurus lepturus	3.40	2	1.55	
Boops boops	0.60	6	0.27	
Total	219.00		100.01	

PROJECT STATION: 254
 DATE:10/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 557 Long E 1148
 start stop duration
 TIME :15:51:00 16:21:00 30 (min) Purpose code: 3
 LOG :1922.00 1923.10 1.54 Area code : 2
 FDEPTH: 80 85 GearCond.code:
 BDEPTH: 80 85 Validity code:
 Towing dir: 320° Wire out: 400 m Speed: 30 kn*10
 Sorted: 24 Kg Total catch: 173.30 CATCH/HOUR: 346.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pentheroscion mbizi	274.00	2870	50.20	42
Umbriina canariensis	95.00	266	27.41	43
Trichiurus lepturus	50.00	1080	14.43	
Epinephelus aeneus	11.60	2	3.35	
Dentex angolensis	9.00	50	2.60	
Boops boops	2.00	10	0.58	
Trachurus trecae	2.00	30	0.58	
Torpedo torpedo	1.40	2	0.40	
Epinephelus goreensis	1.00	2	0.29	
Parapanaeus longirostris	0.50	50	0.24	
Total	346.50		99.98	

PROJECT STATION: 258
 DATE:11/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 609 Long E 1130
 start stop duration
 TIME :14:42:00 15:12:00 30 (min) Purpose code: 3
 LOG :1989.90 1990.80 1.54 Area code : 2
 FDEPTH: 204 224 GearCond.code:
 BDEPTH: 204 224 Validity code:
 Towing dir: 321° Wire out: 800 m Speed: 30 kn*10
 Sorted: 33 Kg Total catch: 219.20 CATCH/HOUR: 438.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	276.00	13332	62.96	51
Todarodes sagittatus	48.00	912	10.95	
Dentex angolensis	28.00	96	6.39	50
MYCTOPHIDAE	12.00	4224	2.74	
Citharus linguatula	12.00		2.74	
Oicologlossa cuneata	12.00		2.74	
Trichiurus lepturus	12.00	84	2.74	
Pterothrissus belloci	12.00	108	2.74	
Todarodes sp.	8.40	72	1.52	
Zenopsis conchifer	8.40	36	1.52	
Pentheroscion mbizi	6.00	24	1.37	
Parapanaeus longirostris	1.20	216	0.27	
Sepia elegans	1.20	12	0.27	
Trigla lyra	1.20	12	0.27	
C R A B S	0.00	12		
Saurida brasiliensis	0.00	36		
Total	438.40		100.02	

PROJECT STATION: 255
 DATE:11/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 610 Long E 1201
 start stop duration
 TIME :09:16:00 09:46:00 30 (min) Purpose code: 3
 LOG :1960.40 1961.60 1.60 Area code : 2
 FDEPTH: 43 49 GearCond.code:
 BDEPTH: 43 49 Validity code:
 Towing dir: 270° Wire out: 200 m Speed: 32 kn*10
 Sorted: 23 Kg Total catch: 23.10 CATCH/HOUR: 46.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Epinephelus alexandrinus	30.00	4	64.94	
Sparus pagrus africanus	5.40	4	11.69	
Alloteuthis africana	3.40	230	7.36	
Dentex barnardi	3.40	6	7.36	
Sphyraena guachancho	2.60	2	5.63	
Sparus caeruleostictus	1.40	2	3.03	
Trachurus capensis	0.60	2		
Uranoscopus albesca	0.60	2		
Total	46.20		100.01	

PROJECT STATION: 259
 DATE:11/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 607 Long E 1126
 start stop duration
 TIME :15:58:00 16:28:00 30 (min) Purpose code: 3
 LOG :1994.90 1995.90 1.58 Area code : 2
 FDEPTH: 317 347 GearCond.code:
 BDEPTH: 317 347 Validity code:
 Towing dir: 340° Wire out: 1000 m Speed: 31 kn*10
 Sorted: 30 Kg Total catch: 414.40 CATCH/HOUR: 828.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, male	621.60	2588	75.00	53
Pterothrissus belloci	50.40	140	6.08	
Merluccius polli, female	50.40	224	6.08	52
Scorpaena notata	25.20	392	3.04	
Nematocarcinus africanus	19.60	3415	2.36	
Trichiurus lepturus	19.60	280	2.36	
Brosimicus imberbis *	14.00	252	1.59	
Malacocephalus occidentalis	14.00	84	1.69	
Chlorophthalmus agassizii	8.40	56	1.01	
Laemonema laureysi	5.60	56	0.60	
Total	828.80		99.99	

PROJECT STATION: 256
 DATE:11/ 8/91 GEAR TYPE: ET No:1 POSITION:Lat S 610 Long E 1149
 start stop duration
 TIME :11:17:00 11:47:00 30 (min) Purpose code: 3
 LOG :1974.80 1972.80 1.40 Area code : 2
 FDEPTH: 84 88 GearCond.code:
 BDEPTH: 84 88 Validity code:
 Towing dir: 270° Wire out: 350 m Speed: 30 kn*10
 Sorted: 38 Kg Total catch: 37.50 CATCH/HOUR: 75.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex gibbosus	23.20	4	30.93	
Dentex angolensis	23.20	116	30.93	45
Todarodes sagittatus	10.80	1026	14.40	46
Dentex congoensis	10.80	116	14.40	44
Todaropsis eblanae	4.00	174	5.33	
Dentex barnardi	3.00	14	4.00	
Total	75.00		99.99	

PROJECT STATION: 260
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 624 Long E 1217
 start stop duration
 TIME :06:33:00 06:58:00 25 (min) Purpose code: 3
 LOG :2110.20 2111.40 1.30 Area code : 2
 FDEPTH: 14 22 GearCond.code:
 BDEPTH: 14 22 Validity code:
 Towing dir: 180° Wire out: 100 m Speed: 30 kn*10
 Sorted: 26 Kg Total catch: 51.00 CATCH/HOUR: 122.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pomadasys perotetii	58.56	77	47.84	55
Sphyraena sphyraena	19.20	53	15.69	
Sparus caeruleostictus	15.60	19	12.94	
Trachurus trecae	10.08	2185	8.24	56
Pagellus bellottii	5.76	34	4.71	
Sparus pagrus africanus	5.28	5	4.31	
Brachydeuterus auritus	3.36	43	2.75	
Dentex barnardi	3.36	5	2.75	
Feristedion cataphractum	0.48	5	0.39	
Selene dorsalis	0.48	5	0.39	
Chaetodon hoefleri	0.00	5		
Total	122.40		100.01	

PROJECT STATION: 261
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 629
 start stop duration Long E 1222
 TIME :08:06:00 08:36:00 30 (min) Purpose code: 3
 LOG :2119.00 2120.50 1.40 Area code : 2
 FDEPTH: 12 11 GearCond.code:
 BDEPTH: 12 11 Validity code:
 Towing dir: 150° Wire out: 100 m Speed: 29 km*10
 Sorted: 26 Kg Total catch: 344.30 CATCH/HOUR: 688.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Ilisha africana</i>	228.00	14544	33.11	58
<i>Galeoides decadactylus</i>	117.60	984	17.08	
<i>Brachydeuterus auritus</i>	117.60	6000	17.08	59
<i>Chloroscombrus chrysurus</i>	100.80	10368	14.64	60
<i>Pseudotolithus senegalensis</i>	41.60	62	5.04	57
<i>Trichurus lepturus</i>	20.80	1512	4.18	
<i>Sardinella aurita</i>	16.00	1152	2.44	
<i>Selene dorsalis</i>	16.80	192	2.44	
<i>Sardinella maderensis</i>	7.20	480	1.05	
<i>Pomadasys peroteti</i>	5.00	9	0.73	
<i>Pomadasys jubelini</i>	3.40	4	0.49	
<i>Stromateus fiatola</i>	1.80	2	0.26	
<i>Pagellus bellottii</i>	1.60	4	0.23	
<i>Pomadasys incisus</i>	0.90	2	0.12	
<i>Sparus caeruleostictus</i>	0.80	2	0.12	
Total	688.60		100.01	

PROJECT STATION: 262
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 629
 start stop duration Long E 1218
 TIME :09:15:00 09:45:00 30 (min) Purpose code: 3
 LOG :2124.90 2126.30 1.70 Area code : 2
 FDEPTH: 22 25 GearCond.code:
 BDEPTH: 22 25 Validity code:
 Towing dir: 260° Wire out: 150 m Speed: 32 km*10
 Sorted: 28 Kg Total catch: 129.70 CATCH/HOUR: 259.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Trachurus trecae</i>	108.60	28392	41.87	62
<i>Pagellus bellottii</i>	56.20	336	21.67	63
<i>Sparus caeruleostictus</i>	27.00	42	10.41	61
<i>Leptocottus armatus</i>	25.20	78	9.71	
<i>Pomadasys peroteti</i>	18.60	24	7.17	
<i>Dentex barnardi</i>	16.60	12	4.09	
<i>Sphyraena sphyraena</i>	6.00	12	2.31	
<i>Sphyraena guachancho</i>	4.20	6	1.62	
<i>Selene dorsalis</i>	1.80	18	0.69	
<i>Galeoides decadactylus</i>	0.60	6	0.23	
<i>Scomber japonicus</i>	0.60	24	0.23	
Total	259.40		100.00	

PROJECT STATION: 263
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 628
 start stop duration Long E 1210
 TIME :10:32:00 11:02:00 30 (min) Purpose code: 3
 LOG :2132.00 2133.30 1.60 Area code : 2
 FDEPTH: 38 41 GearCond.code:
 BDEPTH: 38 41 Validity code:
 Towing dir: 260° Wire out: 200 m Speed: 30 km*10
 Sorted: 63 Kg Total catch: 60.10 CATCH/HOUR: 120.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Pagellus bellottii</i>	56.60	406	47.09	64
<i>Sparus caeruleostictus</i>	24.00	38	20.63	
<i>Allotautis africana</i>	7.00	2028	6.49	
<i>Todarodes sagittatus</i>	7.00	1820	5.82	
<i>Dentex gibbosus</i>	6.40	12	5.32	
<i>Fistularia petimba</i>	5.00	14	4.16	
<i>Epinephelus alexandrinus</i>	3.20	2	2.66	
<i>Caranx crysos</i>	2.60	2	2.16	
<i>Zeus faber</i>	2.60	2	2.16	
<i>Sphyraena guachancho</i>	2.40	2	2.00	
<i>Sepia officinalis hierredda</i>	1.60	2	1.33	
<i>Octopus vulgaris</i>	0.20	2	0.17	
Total	120.20		99.99	

PROJECT STATION: 264
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 629
 start stop duration Long E 1202
 TIME :11:53:00 12:23:00 30 (min) Purpose code: 3
 LOG :2139.70 2141.60 1.50 Area code : 2
 FDEPTH: 78 85 GearCond.code:
 BDEPTH: 78 85 Validity code:
 Towing dir: 260° Wire out: 350 m Speed: 30 km*10
 Sorted: Kg Total catch: 63.25 CATCH/HOUR: 126.50

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Dentex congoensis</i>	58.00	722	45.65	66
<i>Dentex angolensis</i>	37.00	180	29.25	65
<i>Dentex gibbosus</i>	10.00	4	7.91	
<i>Illex sp.</i>	5.00	260	3.95	
<i>Trichurus lepturus</i>	4.00	2	3.16	
<i>Epinephelus aeneus</i>	4.00	2	3.16	
<i>Pagellus bellottii</i>	3.00	4	2.37	
<i>Dentex barnardi</i>	3.00	12	2.37	
<i>Trachurus trecae</i>	2.00	52	1.58	
<i>Boops boops</i>	0.40	12	0.32	
<i>Scomber japonicus</i>	0.10	2	0.08	
Total	126.50		100.00	

PROJECT STATION: 265
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 629
 start stop duration Long E 1149
 TIME :13:40:00 14:10:00 30 (min) Purpose code: 3
 LOG :2151.70 2153.10 1.50 Area code : 2
 FDEPTH: 113 115 GearCond.code:
 BDEPTH: 113 115 Validity code:
 Towing dir: 260° Wire out: 550 m Speed: 29 km*10
 Sorted: 36 Kg Total catch: 215.40 CATCH/HOUR: 430.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Illex coindetii</i>	240.00	6600	95.71	69
<i>Dentex congoensis</i>	84.00	1008	19.50	68
<i>Dentex angolensis</i>	78.00	396	18.11	67
<i>Trachurus trecae</i>	18.00	420	4.18	70
<i>Todarodes sagittatus</i>	10.80	60	2.51	
Total	430.80		100.01	

PROJECT STATION: 266
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 628
 start stop duration Long E 1136
 TIME :15:22:00 15:52:00 30 (min) Purpose code: 3
 LOG :2162.60 2164.20 1.74 Area code : 2
 FDEPTH: 199 211 GearCond.code:
 BDEPTH: 199 211 Validity code:
 Towing dir: 325° Wire out: 800 m Speed: 33 km*10
 Sorted: 37 Kg Total catch: 336.40 CATCH/HOUR: 672.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Synagrops microlepis</i>	342.00	20862	50.83	
<i>Illex coindetii</i>	234.00	3672	34.78	71
<i>Zenopsis conchifer</i>	27.00	90	4.01	
<i>Merluccius polli</i>	18.00	90	2.68	
<i>Chlorophthalmus atlanticus</i>	14.40	468	2.14	
<i>Todarodes sagittatus</i>	10.80	144	1.61	
<i>Dentex angolensis</i>	9.20	24	1.37	
<i>Trichurus lepturus</i>	8.40	36	1.25	
MYCTOPHIDAE	3.60	1746	0.54	
<i>Pentheroscion mbizi</i>	3.60	18	0.54	
<i>Uranoscopus cadenati</i>	1.80	18	0.27	
<i>Parapanaeus longirostris</i>	0.00	108		
Total	672.80		100.02	

PROJECT STATION: 267
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 628
 start stop duration Long E 1135
 TIME :16:51:00 17:21:00 30 (min) Purpose code: 3
 LOG :2170.20 2171.60 1.60 Area code : 2
 FDEPTH: 299 298 GearCond.code:
 BDEPTH: 299 298 Validity code:
 Towing dir: 325° Wire out: 1000 m Speed: 31 km*10
 Sorted: 34 Kg Total catch: 511.50 CATCH/HOUR: 1023.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Synagrops microlepis</i>	420.00	12810	41.06	72
<i>Merluccius polli, male</i>	261.00	1560	25.51	74
<i>Chlorophthalmus atlanticus</i>	117.00	2190	11.44	
<i>Ariomma bondi</i>	72.00	1170	7.04	
<i>Merluccius polli, female</i>	54.00	480	5.28	73
MYCTOPHIDAE	39.00	12270	3.81	
<i>Parapanaeus longirostris</i>	24.00	180	2.35	
<i>Todarodes sagittatus</i>	9.00	60	0.88	
<i>Pterothrissus deltoideus</i>	9.00	60	0.88	
<i>Brosimolus imberbis</i>	9.00	150	0.88	
<i>Illex coindetii</i>	6.00	60	0.59	
<i>Sepia officinalis hierredda</i>	3.00	60	0.29	
Total	1023.00		100.01	

PROJECT STATION: 268
 DATE:12/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 649
 start stop duration Long E 1211
 TIME :08:17:00 08:47:00 30 (min) Purpose code: 3
 LOG :2325.60 2327.10 1.50 Area code : 2
 FDEPTH: 66 70 GearCond.code:
 BDEPTH: 66 70 Validity code:
 Towing dir: 270° Wire out: 300 m Speed: 30 km*10
 Sorted: 29 Kg Total catch: 164.10 CATCH/HOUR: 328.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
<i>Dentex congoensis</i>	200.00	2720	60.94	75
<i>Dentex gibbosus</i>	25.00	30	7.62	
<i>Allotautis africana</i>	22.00	5090	6.70	
<i>Trachurus trecae</i>	22.00	380	6.70	76
<i>Pagellus bellottii</i>	18.00	250	5.48	
<i>Epinephelus aeneus</i>	16.00	2	4.68	
<i>Galeorhinus galeus</i>	9.00	4	2.99	
<i>Fistularia petimba</i>	9.00	30	2.66	
<i>Scomber japonicus</i>	3.00	70	0.91	
<i>Sardinella aurita</i>	1.00	10	0.30	
<i>Illex coindetii</i>	1.00	10	0.30	
<i>Boops boops</i>	1.00	20	0.30	
Total	328.20		99.58	

PROJECT STATION: 269
 DATE: 13/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 649 Long E 1206
 start stop duration
 TIME :09:23:00 09:53:00 30 (min) Purpose code: 3
 LOG :2330.80 2332.50 1.70 Area code : 2
 FDEPTH: 78 80 GearCond.code:
 BDEPTH: 78 80 Validity code:
 Towing dir: 270° Wire out: 300 m Speed: 32 km*10

Sorted: Kg Total catch: 23.10 CATCH/HOUR: 40.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Atractoscion aequidens	12.40	2	30.85	
Illex coindetii	12.00	440	29.85	
Fistularia petimba	9.80	22	24.38	
Pagellus bellottii	2.40	10	5.97	
Trachurus trecae	1.80	34	4.40	
Raja miraletus	1.20	2	2.99	
Dentex congoensis	0.40	8	1.00	
Scomber japonicus	0.20	4	0.50	
Total	40.20		100.02	

PROJECT STATION: 273
 DATE: 13/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 650 Long E 1146
 start stop duration
 TIME :16:41:00 17:11:00 30 (min) Purpose code: 3
 LOG :2372.00 2373.60 1.60 Area code : 2
 FDEPTH: 343 351 GearCond.code:
 BDEPTH: 343 351 Validity code:
 Towing dir: 330° Wire out: 1050 m Speed: 31 km*10

Sorted: 32 Kg Total catch: 226.57 CATCH/HOUR: 453.14

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, male	190.40	794	42.02	85
Chlorophthalmus atlanticus	70.00	980	15.45	
Merluccius polli, female	57.40	322	12.67	84
MYCTOPHIDAE	35.00	13650	7.72	
Etmopterus spinax	21.00	196	4.63	
Benthodesmus tenuis	19.60	588	4.23	
Pterothrissus belloci	16.80	94	3.71	
Illex coindetii	11.20	126	2.47	
Trichiurus lepturus	11.20	14	2.47	
Scorpaena normani	7.00	126	1.54	
Hymenocephalus italicus	2.80	196	0.62	
Epigonus sp.	2.80	28	0.62	
Brosimiculus imberbis *	2.80	70	0.62	
Malacocephalus occidentalis	1.40	14	0.31	
Stereomastis sculpta	1.40	154	0.31	
Nematocarcinus africanus	1.40	658	0.31	
Laemonema laureysi	0.80	14	0.18	
Chaunax sp.	0.14	14	0.03	
Halieutaea spicata	0.00	14		
Total	453.14		100.01	

PROJECT STATION: 270
 DATE: 13/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 649 Long E 1154
 start stop duration
 TIME :11:04:00 11:30:00 26 (min) Purpose code: 3
 LOG :2341.70 2342.90 1.30 Area code : 2
 FDEPTH: 112 131 GearCond.code:
 BDEPTH: 112 131 Validity code:
 Towing dir: 270° Wire out: 400 m Speed: 29 km*10

Sorted: Kg Total catch: 34.30 CATCH/HOUR: 79.15

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Epinephelus goreensis	55.38	2	69.97	
Sparus caeruleostictus	8.08	7	10.21	
Cubiceps sp.	4.38	288	5.53	
Illex coindetii	3.46	388	4.37	
Todaropsis eblanae	2.31	106	2.92	77
Dentex angolensis	2.31	7	2.92	
Trachurus trecae	2.08	42	2.63	
Dentex congoensis	1.15	12	1.45	
Total	79.15		100.00	

PROJECT STATION: 274
 DATE: 14/ 0/91 GEAR TYPE: PT No: POSITION: Lat S 705 Long E 1240
 start stop duration
 TIME :02:24:00 02:54:00 30 (min) Purpose code: 1
 LOG :2468.40 2469.70 1.66 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 23 20 Validity code:
 Towing dir: 5° Wire out: 50 m Speed: 33 km*10

Sorted: 29 Kg Total catch: 176.70 CATCH/HOUR: 353.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sardinella maderensis	94.80	432	26.89	86
Brachydeuterus auritus	92.40	858	25.15	
Sardinella aurita	92.40	288	25.15	87
Trachurus trecae	70.80	756	23.03	88
Decapterus punctatus	2.40	36	0.68	
Scomber japonicus	0.60	24	0.17	
Total	353.40		100.01	

PROJECT STATION: 271
 DATE: 13/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 648 Long E 1148
 start stop duration
 TIME :12:21:00 12:51:00 30 (min) Purpose code: 3
 LOG :2348.30 2349.90 1.59 Area code : 2
 FDEPTH: 247 249 GearCond.code:
 BDEPTH: 247 249 Validity code:
 Towing dir: 320° Wire out: 900 m Speed: 31 km*10

Sorted: 34 Kg Total catch: 432.16 CATCH/HOUR: 964.32

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	288.00	102072	33.32	78
Chlorophthalmus atlanticus	208.80	4296	24.16	79
Merluccius polli, male	156.00	384	18.05	81
MYCTOPHIDAE	81.60	49920	9.44	
Dentex angolensis	56.00	122	6.40	
Zenopsis conchifer	45.60	72	5.28	
Illex coindetii	12.00	192	1.39	
Todaropsis eblanae	8.40	72	0.97	
Merluccius polli, female	7.20	24	0.83	80
Parapenaeus longirostris	0.72	72	0.08	
Total	864.32		100.00	

PROJECT STATION: 275
 DATE: 14/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 713 Long E 1243
 start stop duration
 TIME :08:15:00 08:45:00 30 (min) Purpose code: 3
 LOG :2526.50 2527.90 1.60 Area code : 2
 FDEPTH: 27 30 GearCond.code:
 BDEPTH: 27 30 Validity code:
 Towing dir: 270° Wire out: 150 m Speed: 31 km*10

Sorted: 13 Kg Total catch: 66.90 CATCH/HOUR: 133.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex bairdii	36.80	60	27.67	90
Dentex macrophthalmus	31.80	18	23.91	
Boops boops	21.40	1444	16.09	89
Alloteuthis africana	15.90	2148	11.95	
Caranx crysos	5.00	4	3.75	
Pagellus bellottii	4.80	12	3.61	
Sparus caeruleostictus	4.00	12	3.01	
Atractoscion aequidens	3.40	2	2.56	
Epinephelus aeneus	3.40	2	2.56	
Plectorhynchus mediterraneus	2.40	2	1.80	
Echaneis naucrates	2.00	2	1.52	
Umbrina ronchus	1.80	2	1.35	
Decapterus punctatus	0.30	12	0.23	
Total	133.00		100.00	

PROJECT STATION: 272
 DATE: 13/ 0/91 GEAR TYPE: ET No:1 POSITION: Lat S 645 Long E 1143
 start stop duration
 TIME :13:44:00 14:14:00 30 (min) Purpose code: 3
 LOG :2354.50 2355.90 1.62 Area code : 2
 FDEPTH: 349 347 GearCond.code:
 BDEPTH: 349 347 Validity code:
 Towing dir: 320° Wire out: 1100 m Speed: 30 km*10

Sorted: 39 Kg Total catch: 352.40 CATCH/HOUR: 704.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, male	203.40	960	28.86	83
Merluccius polli, female	165.60	612	23.50	82
MYCTOPHIDAE	72.00		10.22	
Chlorophthalmus atlanticus	45.00	666	6.38	
Etmopterus spinax	32.40	126	4.60	
Benthodesmus tenuis	30.60	216	4.34	
Brosimiculus imberbis *	30.60	54	4.34	
Malacocephalus occidentalis	30.60	54	4.34	
Scorpaena normani	25.20	504	3.58	
Pterothrissus belloci	18.00	90	2.55	
Epigonus sp.	18.00	126	2.55	
Hymenocephalus italicus	12.60	234	1.79	
Illex coindetii	10.80	108	1.53	
Zenopsis conchifer	3.60	18	0.51	
Todaropsis eblanae	1.80	18	0.26	
Arionna bondi	1.80	18	0.26	
Boops sp.	1.80	18	0.26	
Nezumia sulilla	1.20		0.17	
Total	705.00		100.04	

PROJECT STATION: 276
 DATE: 14/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 714 Long E 1232
 start stop duration
 TIME :09:55:00 10:25:00 30 (min) Purpose code: 3
 LOG :2537.50 2538.00 1.60 Area code : 2
 FDEPTH: 56 67 GearCond.code:
 BDEPTH: 56 67 Validity code:
 Towing dir: 270° Wire out: 250 m Speed: 32 km*10

Sorted: 37 Kg Total catch: 136.90 CATCH/HOUR: 273.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pagellus bellottii	247.20	2744	90.28	91
Sarda sarda	5.20	2	1.90	
Squatina oculata	5.00	2	1.83	
Sparus caeruleostictus	4.20	8	1.53	
Fistularia petimba	4.00	10	1.46	
Illex sp.	3.60	798	1.31	
Zeus feber	1.80	2	0.66	
Sepia officinalis hispidella	1.40	2	0.51	
Alloteuthis africana	0.70	204	0.26	
Scomber japonicus	0.70	36	0.26	
Total	273.80		100.00	

PROJECT STATION: 277
 GATE:14/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 713
 start stop duration Long E 1240
 TIME :11:23:00 11:53:00 30 (min) Purpose code: 3
 LOG :2546.00 2547.30 1.30 Area code : 2
 FDEPTH: 102 107 GearCond.code:
 BDEPTH: 102 107 Validity code:
 Towing dir: 270° Wire out: 400 m Speed: 31 kn*10
 Sorted: 64 Kg Total catch: 926.40 CATCH/HOUR: 1852.30

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	812.00	15792	43.83	96
Umbrina canariensis	564.40	2044	30.46	92
Trachurus trecae	224.00	532	12.09	95
Dentex congcoensis	126.00	924	6.80	94
Dentex angolensis	50.00	202	2.70	93
Sparus caeruleostictus	28.00	28	1.51	
Priacanthus cruentatus	14.00	28	0.76	
Centex barnardi	9.60	28	0.52	
Pagellus bellottii	5.60	20	0.30	
Boops boops	5.60	224	0.30	
Dentex gibbosus	5.00	2	0.27	
Sarda sarda	3.00	2	0.16	
Sardinella aurita	2.60	28	0.15	
Scomber japonicus	2.60	140	0.15	
Total	1852.80		100.00	

PROJECT STATION: 278
 DATE:14/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 713
 start stop duration Long E 1209
 TIME :13:13:00 13:43:00 30 (min) Purpose code: 3
 LOG :2558.50 2559.70 1.55 Area code : 2
 FDEPTH: 183 185 GearCond.code:
 BDEPTH: 183 185 Validity code:
 Towing dir: 320° Wire out: 300 m Speed: 30 kn*10
 Sorted: 37 Kg Total catch: 125.55 CATCH/HOUR: 251.10

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Todarodes sp.	120.00	1416	47.79	99
Dentex congcoensis	30.40	88	12.11	97
Trichurus lepturus	27.20	120	10.83	
Todarodes sagittatus	19.80	318	7.89	98
Trachurus trecae	18.00	324	7.17	
Zenopsis conchifer	15.00	120	5.97	
Squatina aculeata	6.00	6	2.39	
Pentheroscion mbizi	6.00	18	2.39	
Arlonma bondi	3.00	42	1.19	
Merluccius polli	2.40	12	0.96	
Pterichthys belloci	2.40	12	0.96	
Spicara alta	0.90	6	0.36	
Total	251.10		100.01	

PROJECT STATION: 279
 DATE:14/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 708
 start stop duration Long E 1206
 TIME :14:30:00 15:00:00 30 (min) Purpose code: 3
 LOG :2563.90 2565.30 1.55 Area code : 2
 FDEPTH: 128 122 GearCond.code:
 BDEPTH: 128 122 Validity code:
 Towing dir: 320° Wire out: 500 m Speed: 30 kn*10
 Sorted: 29 Kg Total catch: 184.60 CATCH/HOUR: 369.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex congcoensis	192.00	2760	52.00	100
Dentex angolensis	60.00	300	16.25	101
Trachurus trecae	51.60	924	13.98	102
Sparus pagrus africanus	18.00	14	4.88	
Sarda sarda	18.00	12	4.88	
Arlonma bondi	6.00	96	1.63	
Boops boops	6.00	84	1.63	
Heptranchias serlo	5.20	2	1.41	
Zenopsis conchifer	4.80	12	1.30	
Spicara alta	4.80	60	1.30	
Dentex gibbosus	2.80	2	0.76	
Total	369.20		100.02	

PROJECT STATION: 280
 DATE:14/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 716
 start stop duration Long E 1204
 TIME :17:06:00 17:36:00 30 (min) Purpose code: 3
 LOG :2584.20 2585.70 1.53 Area code : 2
 FDEPTH: 344 337 GearCond.code:
 BDEPTH: 344 337 Validity code:
 Towing dir: 137° Wire out:1100 m Speed: 30 kn*10
 Sorted: 33 Kg Total catch: 331.20 CATCH/HOUR: 662.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, male	326.40	740	49.28	105
Nematocarcinus africanus	126.00	23160	19.02	
Merluccius polli, female	74.00	220	11.17	104
Chlorophthalmus atlanticus	40.00	840	6.64	106
Chlorophthalmus sp.	22.00	300	3.32	
Scorpaena normani	22.00	620	3.32	103
Malacocephalus laevis	10.00	40	1.51	
Todarodes sagittatus	10.00	40	1.51	
Illex coindetii	10.00	40	1.51	
Brosmiculus imberbis *	8.00	100	1.21	
Zenopsis conchifer	4.00	20	3.60	
Etmopterus spinax	2.00	40	0.30	
Hymenocephalus italicus	2.00	80	0.30	
Laemonema laureysi	2.00	20	0.30	
MYCTOPHIDAE	2.00	860	0.30	
Benthodesmus tenuis	2.00	60	0.30	
Psenes sp.	0.00	20		
Total	662.40		99.99	

PROJECT STATION: 281
 DATE:15/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 730
 start stop duration Long E 1242
 TIME :06:40:00 07:10:00 30 (min) Purpose code: 3
 LOG :2713.90 2715.40 1.60 Area code : 2
 FDEPTH: 71 77 GearCond.code:
 BDEPTH: 71 77 Validity code:
 Towing dir: 270° Wire out: 300 m Speed: 31 kn*10
 Sorted: 20 Kg Total catch: 46.70 CATCH/HOUR: 93.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	32.00	524	34.26	109
Dentex congcoensis	12.80	196	13.70	107
Umbrina canariensis	9.60	8	10.28	
Zeus faber	6.80	12	7.28	
Pagellus bellottii	5.60	40	6.00	
Atractoscion aequidens	5.40	2	5.78	
Sepia officinalis hierredda	5.00	4	5.35	
Dentex barnardi	3.60	12	3.85	
Trichurus lepturus	3.20	8	3.43	
Fistularia petimba	3.00	4	3.21	
Illex coindetii	2.80	40	3.00	
Zenopsis conchifer	1.60	4	1.71	
Illex sp.	0.80	44	0.86	
Scomber japonicus	0.40	4	0.43	
Dentex angolensis	0.40	4	0.43	
Ailoteuthis africana	0.40	8	0.43	
Total	93.40		100.00	

PROJECT STATION: 282
 DATE:15/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 730
 start stop duration Long E 1237
 TIME :08:12:00 08:42:00 30 (min) Purpose code: 3
 LOG :2720.90 2722.50 1.50 Area code : 2
 FDEPTH: 92 83 GearCond.code:
 BDEPTH: 92 83 Validity code:
 Towing dir: 50° Wire out: 350 m Speed: 29 kn*10
 Sorted: 33 Kg Total catch: 186.90 CATCH/HOUR: 373.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	147.00	2850	39.33	109
Boops boops	89.00	4150	23.81	110
Spicara alta	51.00	6050	13.64	111
Epinephelus goreensis	24.00	6	6.42	
Dentex barnardi	15.00	60	4.01	
Illex sp.	7.00	740	1.87	
Dentex angolensis	7.00	30	1.87	
Pagellus bellottii	7.00	40	1.87	
Umbrina canariensis	6.20	8	1.66	
Epinephelus aeneus	5.80	4	1.55	
Atractoscion aequidens	4.80	2	1.28	
Chaetodon hoefleri	4.00	20	1.07	
Todarodes sagittatus	1.00	10	0.27	
Ailoteuthis africana	1.00	70	0.27	
Illex coindetii	1.00	110	0.27	
Saurida brasiliensis	1.00	90	0.27	
Zeus faber	1.00	2	0.27	
Dentex congcoensis	1.00	20	0.27	
Total	373.80		100.00	

PROJECT STATION: 283
 DATE: 15/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 730 Long E 1227
 start stop duration
 TIME :11:38:00 12:08:00 30 (min) Purpose code: 3
 LOG :2745.20 2746.60 1.60 Area code : 2
 FDEPTH: 254 214 GearCond.code:
 BDEPTH: 254 214 Validity code:
 Towing dir: 340° Wire out: 900 m Speed: 31 kn*10
 Sorted: 28 Kg Total catch: 403.40 CATCH/HOUR: 905.80

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Merluccius polli, male	393.20	1848	41.30
Synagrops microlepis	190.40	7096	23.60
Chlorophthalmus atlanticus	187.60	560	23.25
Squatina aculeata	28.00	2	3.47
Zenopsis conchifer	28.00	56	3.47
Merluccius polli, female	11.20	56	1.39
Parapenaeus longirostris, fem.	5.60	336	0.69
Trichurus lepturus	5.60	28	0.69
Parapenaeus longirostris, male	4.20	224	0.52
Pterothrissus belloci	4.20	28	0.52
Dentex angolensis	3.60	8	0.45
Colelinchus coelorhincus	2.80	56	0.35
Sepia officinalis hierredda	1.40	28	0.17
Spicara alta	1.00	4	0.12
Munida sp.	0.00	84	
Solenocera africana	0.00	28	
Chlorophthalmus sp.	0.00	28	
Total	305.80		99.99

PROJECT STATION: 284
 DATE: 15/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 730 Long E 1231
 start stop duration
 TIME :14:36:00 15:06:00 30 (min) Purpose code: 3
 LOG :2767.20 2768.70 1.49 Area code : 2
 FDEPTH: 312 308 GearCond.code:
 BDEPTH: 312 308 Validity code:
 Towing dir: 340° Wire out: 1000 m Speed: 28 kn*10
 Sorted: 29 Kg Total catch: 197.80 CATCH/HOUR: 395.60

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Centrophorus uyato	102.00	24	25.78
Merluccius polli, male	84.00	540	21.23
Merluccius polli, female	78.00	280	19.72
Nematocarcinus africanus	35.00	15400	8.85
Chlorophthalmus atlanticus	25.00	420	6.32
Trichurus lepturus	20.00	230	5.06
Brosmiculus imberbis *	18.00	180	4.55
Pterothrissus belloci	17.00	90	4.30
Gephyroberyx darwini	5.00	10	1.26
Trigla sp.	2.00	10	0.51
MYCTOPHIDAE	2.00	570	0.51
Neomerinthe polygori	2.00	50	0.51
Ma'acocephalus occidentalis	2.00	10	0.51
Epigonus sp.	2.00	20	0.51
Munida sp.	0.50	60	0.12
Conger conger	0.50	10	0.13
Scorpanna normani	0.50	10	0.13
Laemoneira lauraysi	0.10	20	0.03
Solenocera africana	0.00	10	
Total	395.60		100.04

PROJECT STATION: 285
 DATE: 15/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 739 Long E 1232
 start stop duration
 TIME :16:15:00 16:45:00 30 (min) Purpose code: 3
 LOG :2775.40 2776.90 1.61 Area code : 2
 FDEPTH: 154 155 GearCond.code:
 BDEPTH: 154 155 Validity code:
 Towing dir: 330° Wire out: 650 m Speed: 32 kn*10
 Sorted: 38 Kg Total catch: 231.00 CATCH/HOUR: 462.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Synagrops microlepis	69.40	3564	14.81
Pterothrissus belloci	60.00	360	12.99
MYCTOPHIDAE	54.00	32940	11.69
Umbra canariensis	48.00	56	10.39
Zenopsis conchifer	42.00	516	9.05
Epinephelus caninus	40.00	2	8.66
Dentex angolensis	30.00	62	6.49
Illex sp.	22.80	408	4.94
Chlorophthalmus atlanticus	22.80	1452	4.94
Trachurus trecae	21.00	78	4.55
Merluccius merluccius	14.40	48	3.22
Parapenaeus longirostris	10.80	5184	2.34
Pentheroscion mbizi	8.40	36	2.02
Todaropsis eblanae	6.00	60	1.30
Uramoscopus albesca	4.80	48	1.04
Sargimelia aurita	3.00	6	0.65
Atractoscion aequidens	2.80	2	0.61
Srotula barbata	2.80	2	0.61
Total	462.00		100.04

PROJECT STATION: 286
 DATE: 15/ 0/91 GEAR TYPE: PT No:4 POSITION: Lat S 745 Long E 1931
 start stop duration
 TIME :22:55:00 23:25:00 30 (min) Purpose code: 1
 LOG :2837.00 2838.80 1.80 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 27 28 Validity code:
 Towing dir: 150° Wire out: 100 m Speed: 30 kn*10
 Sorted: 32 Kg Total catch: 645.00 CATCH/HOUR: 1290.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Brachydeuterus auritus	760.00	5760	58.91
Sardinella maderensis	308.00	1120	23.88
Sardinella aurita	128.00	360	9.92
Trachurus trecae	36.00	280	2.79
Selene dorsalis	28.00	200	2.17
Pteroscion peli	16.00	200	1.24
Trichurus lepturus	8.00	240	0.62
Ilisha africana	6.00	40	0.47
Total	1290.00		100.00

PROJECT STATION: 287
 DATE: 16/ 0/91 GEAR TYPE: PT No: POSITION: Lat S 800 Long E 1307
 start stop duration
 TIME :03:16:00 03:46:00 30 (min) Purpose code: 1
 LOG :2874.10 2875.50 1.63 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 29 22 Validity code:
 Towing dir: 30° Wire out: 50 m Speed: 31 kn*10
 Sorted: 58 Kg Total catch: 803.20 CATCH/HOUR: 1618.40

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Brachydeuterus auritus	784.00	9856	48.44
Sardinella maderensis	700.00	2744	43.25
Trachurus trecae	56.00	592	3.46
Sardinella aurita	56.00	168	3.46
Selene dorsalis	22.40	84	1.38
Total	1618.40		99.99

PROJECT STATION: 288
 DATE: 16/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 750 Long E 1303
 start stop duration
 TIME :07:10:00 07:40:00 30 (min) Purpose code: 3
 LOG :2908.80 2910.20 1.80 Area code : 2
 FDEPTH: 10 17 GearCond.code:
 BDEPTH: 10 17 Validity code:
 Towing dir: 336° Wire out: 100 m Speed: 35 kn*10
 Sorted: 28 Kg Total catch: 308.00 CATCH/HOUR: 616.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Brachydeuterus auritus	409.20	15444	66.43
Hiracovina angolensis	85.00	1440	13.93
Pseudolithus senegalensis	41.80	72	6.79
Trachurus trecae	19.80	286	3.21
Ilisha africana	15.40	176	2.50
Trichurus lepturus	15.40	330	2.50
Atractoscion aequidens	13.20	22	2.14
Pomadasys peroteti	11.00	22	1.79
Galeoides decedactylus	2.20	22	0.36
Pentanemus quinquarius	2.20	22	0.36
Sepia officinalis hierredda	0.00	22	
NDMEIDAE	0.00	22	
Parapenaeopsis atlantica	0.00	110	
Total	616.00		100.01

PROJECT STATION: 289
 DATE: 16/ 0/91 GEAR TYPE: BT No:1 POSITION: Lat S 749 Long E 1254
 start stop duration
 TIME :09:30:00 09:30:00 30 (min) Purpose code: 3
 LOG :2920.80 2922.30 1.50 Area code : 2
 FDEPTH: 67 58 GearCond.code:
 BDEPTH: 67 58 Validity code:
 Towing dir: 90° Wire out: 250 m Speed: 30 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Trichurus lepturus	0.00	6	
Ilisha africana	0.00	4	
Selene dorsalis	0.00	4	
Total			

PROJECT STATION: 290
 DATE:16/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 749 Long E 1250
 start stop duration
 TIME :10:35:00 11:03:00 30 (min) Purpose code: 3
 LOG :2929.96 2931.60 1.60 Area code : 2
 FDEPTH: 87 79 GearCond.code:
 BDEPTH: 87 79 Validity code:
 Towing dir: 90° Wire out: 350 m Speed: 31 km*10

Sorted: 36 Kg Total catch: 574.43 CATCH/HOUR: 1140.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pagellus bellottii	784.00	4576	58.25	132
Ommastrephes pteropus	185.60	20096	16.15	
Dentex congoensis	67.20	736	5.85	133
Dentex angolensis	41.60	224	3.62	
Trachurus trecae	38.40	672	3.34	
Dentex barnardi	32.00	128	2.79	
Total	1140.80		100.01	

PROJECT STATION: 291
 DATE:16/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 750 Long E 1246
 start stop duration
 TIME :11:50:00 12:20:00 30 (min) Purpose code: 3
 LOG :2936.90 2938.20 1.47 Area code : 2
 FDEPTH: 101 105 GearCond.code:
 BDEPTH: 101 105 Validity code:
 Towing dir: 230° Wire out: 400 m Speed: 31 km*10

Sorted: 30 Kg Total catch: 224.70 CATCH/HOUR: 449.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	215.00	3240	46.06	134
Boops boops	95.00	2689	21.36	
Illex sp.	42.00	3144	9.35	
Dentex glibbusus	34.40	12	7.65	
Atractoscion aequidens	24.40	14	5.43	
Argyrosomus hololepidotus	14.00	2	3.12	
Dentex angolensis	10.00	32	2.23	135
Anthias anthias	7.40	36	1.65	
Sarda sarda	2.00	2	0.45	
Dentex congoensis	2.00	20	0.45	
Scomber japonicus	1.20	24	0.27	
Total	449.40		100.02	

PROJECT STATION: 292
 DATE:16/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 749 Long E 1237
 start stop duration
 TIME :13:44:00 14:14:00 30 (min) Purpose code: 3
 LOG :2945.70 2947.10 1.65 Area code : 2
 FDEPTH: 208 215 GearCond.code:
 BDEPTH: 208 215 Validity code:
 Towing dir: 330° Wire out: 800 m Speed: 31 km*10

Sorted: 33 Kg Total catch: 664.00 CATCH/HOUR: 1328.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	1000.00	42200	75.30	136
Merluccius pollii, male	176.00	1000	13.25	138
Zenopsis conchifer	60.00	80	4.52	
Chlorophthalmus atlanticus	40.00	1160	3.01	
Merluccius pollii, female	15.00	80	1.20	137
Pterothrissus bellotti	16.00	80	1.20	
Trichurus lepturus	12.00	40	0.90	
Dentex macrophthalmus	6.00	20	0.45	
Chlorophthalmus sp.	2.00	120	0.15	
MYCTOPHIDAE	3.00	200		
Total	1328.00		99.98	

PROJECT STATION: 293
 DATE:16/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 747 Long E 1235
 start stop duration
 TIME :14:52:00 15:22:00 30 (min) Purpose code: 3
 LOG :2949.30 2950.00 1.74 Area code : 2
 FDEPTH: 238 292 GearCond.code:
 BDEPTH: 238 292 Validity code:
 Towing dir: 330° Wire out:1000 m Speed: 32 km*10

Sorted: 35 Kg Total catch: 279.70 CATCH/HOUR: 559.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius pollii, female	118.40	432	21.17	139
Merluccius pollii, male	107.20	624	19.16	140
Chlorophthalmus atlanticus	104.00	1504	18.59	141
MYCTOPHIDAE	66.24	3200	11.84	
Trichurus lepturus	57.60	160	10.30	
Shrimps, small, non comm.	29.44	78392	5.26	
Brmsmiculus imberbis *	16.00	352	2.86	
Pterothrissus bellotti	16.00	80	2.86	
Zenopsis conchifer	9.60	32	1.72	
Neomerinthe folgarli	8.00	48	1.43	
Centroscymnus crepidater	5.00	2	0.89	
Todarodes sagittatus	3.20	32	0.57	
Illex coindetii	3.20	32	0.57	
Hymenocephalus italicus	3.20	48	0.57	
Triplophos sp.	3.20	200	0.57	
Gephyroberyx darwini	3.20	16	0.57	
Malacocephalus occidentalis	3.20	16	0.57	
Laemonema laureysi	1.60	16	0.29	
Parapenaeus longirostris	0.60	48	0.14	
Stomias affinis	0.16	16	0.03	
Hoplostethus occidentalis	0.16	16	0.03	
Total	559.40		99.99	

PROJECT STATION: 294
 DATE:16/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 746 Long E 1234
 start stop duration
 TIME :16:06:00 16:36:00 30 (min) Purpose code: 3
 LOG :2952.90 2954.60 1.55 Area code : 2
 FDEPTH: 493 405 GearCond.code:
 BDEPTH: 403 405 Validity code:
 Towing dir: 141° Wire out:1200 m Speed: 29 km*10

Sorted: 29 Kg Total catch: 263.25 CATCH/HOUR: 526.50

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Menacanthus africanus	126.00	32550	23.93	
Centroscymnus crepidater	114.00	34	21.65	
Merluccius pollii, male	56.60	978	18.36	143
Merluccius pollii, female	47.60	154	9.04	142
Illex sp.	44.80	42	8.51	
Hoplostethus sp.	28.00	770	5.32	
Halleutichthys sp.	18.20	140	3.46	
Brmsmiculus imberbis *	14.00	350	2.66	
Laemonema laureysi	12.60	158	2.39	
Melanostomias sp.	7.00	84	1.33	
Lamprogrammus sp.	7.00	84	1.33	
Aristeus varians	2.10	126	0.40	
Triplophos hemingi	2.10	98	0.40	
Malacocephalus occidentalis	2.10	28	0.40	
Chaunax pictus	1.40	46	0.27	
Xenodermichthys socialis	1.40	98	0.27	
Peristedion sp.	0.80	14	0.15	
Coelorincus coelorhincus	0.80	28	0.15	
Total	526.50		100.01	

PROJECT STATION: 295
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 800 Long E 1304
 start stop duration
 TIME :06:48:00 07:18:00 30 (min) Purpose code: 3
 LOG :3077.50 3079.20 1.60 Area code : 2
 FDEPTH: 48 37 GearCond.code:
 BDEPTH: 48 37 Validity code:
 Towing dir: 90° Wire out: 200 m Speed: 33 km*10

Sorted: 29 Kg Total catch: 314.40 CATCH/HOUR: 628.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	278.20	13248	44.24	
Trichurus lepturus	86.40	6174	13.74	
Dentex barnardi	82.00	126	13.17	
Pseudotolithus senegalensis	62.40	50	9.32	145
Pomadasy incisus	37.00	162	6.01	
Trachurus trecae	36.00	324	5.73	
Pagellus bellottii	22.60	116	3.39	144
Miracorvina angolensis	10.80	1008	1.72	
Atractoscion aequidens	6.40	4	1.02	
Engraulis encrasicolus	1.80	126	0.29	
Penaeus notialis	1.80	252	0.29	
Halleutaea spicata	1.80	180	0.29	
Selene dorsalis	0.00	18		
Total	628.80		100.01	

PROJECT STATION: 296
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 800 Long E 1309
 start stop duration
 TIME :07:56:00 08:12:00 16 (min) Purpose code: 3
 LOG :3082.80 3083.70 0.70 Area code : 2
 FDEPTH: 23 23 GearCond.code:
 BDEPTH: 23 23 Validity code:
 Towing dir: 150° Wire out: 150 m Speed: 30 km*10

Sorted: 63 Kg Total catch: 192.60 CATCH/HOUR: 722.25

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Parapenaeopsis atlantica	356.25	22200	49.33	147
Pseudotolithus typus	69.38	53	9.61	148
Atractoscion aequidens	34.50	4	4.78	
Miracorvina angolensis	31.98	525	4.41	146
Trichurus lepturus	31.13	1155	4.31	
Dentex barnardi	28.13	86	3.89	
Plectorhynchus mediterraneus	28.13	30	3.89	
Pomadasy rogeri	27.30	56	3.79	
Pomadasy peroteti	23.63	30	3.27	
Centrarchops chapini	22.50	56	3.12	
Dasyatis centroura	20.63	4	2.86	
Brachydeuterus auritus	16.88	656	2.34	
Lithognathus mormyrus	9.38	11	1.30	
Torpedo sp.	4.88	11	0.58	
Hyperoglyphe meselli	4.88	56	0.58	
Pentamemus quinquevittatus	3.75	56	0.52	
Pomadasy incisus	1.88	11	0.26	
Pseudotolithus senegalensis	1.50	4	0.21	
Uclogoglossa cuneata	1.13	36	0.16	
Ilisha africana	1.13	11	0.16	
Sepia officinalis hierredda	1.13	36	0.16	
Trachurus trecae	1.13	150	0.16	
Chaetodon hoefleri	1.13	11	0.16	
Halleutaea spicata	0.00	11		
Total	722.25		100.05	

PROJECT STATION: 297
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 809 Long E 1313
 start stop duration
 TIME :09:28:00 09:58:00 30 (min) Purpose code: 3
 LOG :3094.20 3095.60 1.70 Area code : 2
 FDEPTH: 20 19 GearCond.code:
 BDEPTH: 20 19 Validity code:
 Towing dir: 331° Wire out: 100 m Speed: 33 kn*10
 Sorted: 16 Kg Total catch: 28.90 CATCH/HOUR: 57.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichiurus lenturus	13.60	336	23.53	
Brachydeuterus auritus	13.00	420	22.49	149
Pteromylaeus bovinus	10.00	2	17.30	
Trachurus trecae	8.40	162	14.53	150
Sepia officinalis hierreda	4.00	192	6.92	
Pseudotolithus senegalensis	2.40	4	4.15	
Atractoscion aequidens	1.80	4	3.11	
Stromateus fiatola	1.80	4	3.11	
Dentex barnardi	1.20	4	2.08	
Scorpaena angolensis	0.40	4	0.69	
Chaetodon hoefleri	0.40	6	0.69	
Hyperoglyphe meselii	0.40	38	0.69	
Octopus vulgaris	0.40	4	0.69	
Total	57.60		99.98	

PROJECT STATION: 301
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 809 Long E 1251
 start stop duration
 TIME :14:09:00 14:39:00 30 (min) Purpose code: 3
 LOG :3120.60 3121.90 1.45 Area code : 2
 FDEPTH: 112 112 GearCond.code:
 BDEPTH: 112 112 Validity code:
 Towing dir: 340° Wire out: 550 m Speed: 28 kn*10
 Sorted: 49 Kg Total catch: 346.05 CATCH/HOUR: 692.10

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	308.00	8062	44.50	159
Dentex congolensis	154.00	1306	22.25	161
Dentex angolensis	140.00	616	20.23	160
Boops boops	21.00	210	3.03	
Trichiurus lepturus	21.00	28	3.03	
Scomber japonicus	21.00	1120	3.03	162
Anthias anthias	14.00	168	2.02	
Erythrocles monodi	7.00	14	1.01	
Sparus pagrus africanus	4.00	2	0.58	
Lepidotrigla cadmani	1.40	14	0.20	
Pagellus bellottii	0.70	14	0.10	
Total	692.10		99.98	

PROJECT STATION: 298
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 810 Long E 1309
 start stop duration
 TIME :10:37:00 10:47:00 10 (min) Purpose code: 3
 LOG :3100.00 3100.50 0.50 Area code : 2
 FDEPTH: 43 45 GearCond.code: 5
 BDEPTH: 43 45 Validity code: 9
 Towing dir: 90° Wire out: 200 m Speed: 31 kn*10
 Sorted: 31 Kg Total catch: 3653.90 CATCH/HOUR: 21923.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	20028.00	157440	91.35	151
Trachurus trecae	772.40	7014	3.56	
Atractoscion aequidens	389.40	258	1.78	
Stromateus fiatola	181.80	258	0.83	
Sparus caeruleostictus	181.80	258	0.83	
Dentex barnardi	130.20	258	0.59	
Alloteuthis africana	78.00	6234	0.36	
Pomadasys incisus	77.40	258	0.35	
Pagellus bellottii	77.40	258	0.35	
Total	21923.40		100.00	

PROJECT STATION: 302
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 809 Long E 1247
 start stop duration
 TIME :15:36:00 16:06:00 30 (min) Purpose code: 3
 LOG :3128.00 3129.20 1.59 Area code : 2
 FDEPTH: 201 200 GearCond.code:
 BDEPTH: 201 200 Validity code:
 Towing dir: 334° Wire out: 800 m Speed: 31 kn*10
 Sorted: 35 Kg Total catch: 1488.90 CATCH/HOUR: 2977.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	2100.00	4620	70.52	169
Merluccius polli, male	512.40	2688	17.21	165
Chlorophthalmus atlanticus	92.40	756	3.10	
Merluccius polli, female	84.00	420	2.82	164
Pterothrissus belloci	84.00	336	2.82	
Zeus faber	84.00	420	2.82	
Todaropsis eblanae	12.50	168	0.42	
Illex sp.	8.40	168	0.28	
Parapenaeus longirostris	0.00	168		
Total	2977.80		99.99	

PROJECT STATION: 299
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 811 Long E 1307
 start stop duration
 TIME :11:31:00 11:40:00 9 (min) Purpose code: 3
 LOG :3104.30 3104.80 0.50 Area code : 2
 FDEPTH: 54 54 GearCond.code:
 BDEPTH: 54 54 Validity code:
 Towing dir: 330° Wire out: 200 m Speed: 29 kn*10
 Sorted: 27 Kg Total catch: 26.70 CATCH/HOUR: 178.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pagellus bellottii	11.33	320	62.54	127
Ubrina canariensis	42.67	120	23.97	152
Dentex barnardi	17.33	40	9.74	
Argyrosomus hololepidotus	3.33	7	1.07	
Pomadasys incisus	3.33	7	1.07	
Total	177.99		99.99	

PROJECT STATION: 303
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 808 Long E 1244
 start stop duration
 TIME :16:54:00 17:24:00 30 (min) Purpose code: 3
 LOG :3132.50 3134.30 1.59 Area code : 2
 FDEPTH: 306 314 GearCond.code:
 BDEPTH: 306 314 Validity code:
 Towing dir: 165° Wire out: 1000 m Speed: 30 kn*10
 Sorted: 32 Kg Total catch: 1278.00 CATCH/HOUR: 2556.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, male	1272.00	7040	49.77	167
Merluccius polli, female	872.00	3120	34.12	166
Malacocephalus occidentalis	136.00	80	5.32	
Chlorophthalmus atlanticus	120.00	1620	4.69	
Pterothrissus belloci	80.00	480	3.13	
Etomopterus spinax	72.00	1040	2.82	
Scorpaena normani	4.00	80	0.16	
Total	2556.00		100.01	

PROJECT STATION: 300
 DATE:17/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 809 Long E 1306
 start stop duration
 TIME :12:36:00 13:06:00 30 (min) Purpose code: 3
 LOG :3111.80 3113.20 1.60 Area code : 2
 FDEPTH: 90 96 GearCond.code:
 BDEPTH: 90 96 Validity code:
 Towing dir: 295° Wire out: 450 m Speed: 31 kn*10
 Sorted: Kg Total catch: 122.40 CATCH/HOUR: 244.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	72.00	142	29.41	154
Trichiurus lepturus	71.00	136	29.03	158
Ubrina canariensis	36.00	86	14.71	156
Dentex angolensis	17.20	72	7.03	153
Dentex macrophthalmus	12.70	36	5.19	157
Illex sp.	12.00	4440	4.90	
Trachurus trecae	9.00	228	3.66	155
Boops boops	3.00	26	1.23	
Sarda sarda	3.00	2	1.23	
Dentex barnardi	2.00	4	0.82	
Torpedo torpedo	2.00	2	0.82	
Miracorvina angolensis	1.40	2	0.57	
Zeus faber	1.20	4	0.49	
Dentex gibbusus	1.20	2	0.49	
Illex coindetii	1.00	12	0.41	
Scomber japonicus	0.10	4	0.04	
Total	244.80		100.02	

PROJECT STATION: 304
 DATE:17/ 8/91 GEAR TYPE: PT No:4 POSITION:Lat S 821 Long E 1312
 start stop duration
 TIME :21:44:00 22:14:00 30 (min) Purpose code: 3
 LOG :3172.40 3174.00 1.60 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 30 28 Validity code:
 Towing dir: 180° Wire out: 100 m Speed: 32 kn*10
 Sorted: 32 Kg Total catch: 190.20 CATCH/HOUR: 380.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sardinella maderensis	309.60	1836	79.81	168
Sardinella aurita	30.00	144	7.89	169
Trichiurus lepturus	27.60	72	7.25	
Stromateus fiatola	14.40	24	3.79	
Sepia officinalis hierreda	3.60	72	0.95	
Leurocephalus	1.20	452	0.32	
Selene dorsalis	0.00	12		
Total	380.40		100.02	

PROJECT STATION: 305
 DATE: 17/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 818 Long E 1818
 start stop duration
 TIME : 23:27:00 23:57:00 30 (min) Purpose code: 3
 LOG : 3180.60 3182.20 1.60 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 21 20 Validity code:
 Towing dir: 150° Wire out: 100 m Speed: 32 kn*10
 Sorted: 39 Kg Total catch: 198.60 CATCH/HOUR: 397.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Sardinella maderensis	204.00	1284	51.36	171
Brachydeuterus auritus	96.00	1344	24.17	172
Sardinella aurita	78.00	336	19.64	170
Trachurus trecae	12.00	144	3.02	173
Stromateus fiatola	7.20	12	1.01	
Total	397.20		100.00	

PROJECT STATION: 306
 DATE: 18/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 806 Long E 1310
 start stop duration
 TIME : 02:16:00 02:46:00 30 (min) Purpose code: 3
 LOG : 3200.40 3201.90 1.59 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 29 38 Validity code:
 Towing dir: 232° Wire out: 50 m Speed: 31 kn*10
 Sorted: 29 Kg Total catch: 377.00 CATCH/HOUR: 754.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Brachydeuterus auritus	669.00	5408	87.93	174
Trichiurus lepturus	52.00	52	6.90	
Sphyraena guachancho	26.00	26	3.45	
Sardinella aurita	13.00	52	1.72	
Total	754.00		100.00	

PROJECT STATION: 307
 DATE: 18/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 810 Long E 1306
 start stop duration
 TIME : 03:53:00 04:23:00 30 (min) Purpose code: 3
 LOG : 3207.90 3209.60 1.62 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 60 52 Validity code:
 Towing dir: 104° Wire out: 50 m Speed: 31 kn*10
 Sorted: 29 Kg Total catch: 145.00 CATCH/HOUR: 286.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Brachydeuterus auritus	240.00	3660	83.52	
Trachurus trecae	20.00	140	6.99	
Trichiurus lepturus	20.00	50	6.99	
Sardinella aurita	3.00	6	1.05	
Trachinotus ovatus	3.00	5	1.05	
Total	286.00		100.00	

PROJECT STATION: 308
 DATE: 18/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 821 Long E 1319
 start stop duration
 TIME : 07:16:00 07:40:00 30 (min) Purpose code: 3
 LOG : 3235.80 3237.50 1.60 Area code : 2
 FDEPTH: 20 18 GearCond.code:
 BDEPTH: 20 18 Validity code:
 Towing dir: 150° Wire out: 100 m Speed: 32 kn*10
 Sorted: Kg Total catch: 0.90 CATCH/HOUR: 1.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trichiurus lepturus	0.40	2	22.22	
Serranus cabrilla *	0.40	32	22.22	
Brachydeuterus auritus	0.40	2	22.22	
Parapenaeopsis atlantica	0.20	4	11.11	
Dicologlossa cuneata	0.20	2	11.11	
Hyperoglyphe meselii	0.10	6	5.56	
Thorogobius angolensis	0.10	4	5.56	
Total	1.80		100.00	

PROJECT STATION: 309
 DATE: 18/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 820 Long E 1315
 start stop duration
 TIME : 08:21:00 08:53:00 32 (min) Purpose code: 3
 LOG : 3242.50 3244.10 1.70 Area code : 2
 FDEPTH: 34 41 GearCond.code:
 BDEPTH: 34 41 Validity code:
 Towing dir: 270° Wire out: 200 m Speed: 31 kn*10
 Sorted: 39 Kg Total catch: 137.90 CATCH/HOUR: 259.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trichiurus lepturus	221.81	6418	85.79	
Mystriophis rostellatus	6.56	8	2.54	
Torpedo sp.	5.81	26	2.25	
Parapenaeopsis atlantica	5.81	1661	2.25	
Brachydeuterus auritus	3.94	59	1.52	
Stromateus fiatola	3.94	8	1.52	
Pterothrissus belloci	3.38	531	1.31	
Dicologlossa cuneata	3.38	47	1.31	
Miracorvina angolensis	2.06	420	0.80	
Epinephelus aeneus	0.75	8	0.29	
Loligo nautilus	0.56	368	0.22	
Sepia orbignyana	0.56	13	0.22	
Merluccius polli	0.00	21		
Trachurus trecae	0.00	21		
Serranus cabrilla *	0.00	8		
Total	259.56		100.00	

PROJECT STATION: 310
 DATE: 18/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 820 Long E 1310
 start stop duration
 TIME : 09:30:00 10:00:00 30 (min) Purpose code: 3
 LOG : 3248.10 3249.40 1.40 Area code : 2
 FDEPTH: 61 69 GearCond.code:
 BDEPTH: 61 69 Validity code:
 Towing dir: 270° Wire out: 250 m Speed: 24 kn*10
 Sorted: 33 Kg Total catch: 104.30 CATCH/HOUR: 208.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Synagrops microlepis	174.00	100480	83.41	175
Sepia officinalis hierreda	12.00	12	5.75	
Trachurus trecae	10.80	162	5.18	176
Trichiurus lepturus	6.00	30	2.88	
Atractoscion aequidens	2.80	2	1.25	
Pagellus bellottii	1.60	6	6.77	
Brachydeuterus auritus	0.60	6	6.29	
Boops boops	0.60	12	6.29	
Dentex barnardi	0.40	2	6.19	
Total	208.60		100.01	

PROJECT STATION: 311
 DATE: 18/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 820 Long E 1305
 start stop duration
 TIME : 10:30:00 11:00:00 30 (min) Purpose code: 3
 LOG : 3251.90 3253.10 1.40 Area code : 2
 FDEPTH: 83 89 GearCond.code:
 BDEPTH: 83 89 Validity code:
 Towing dir: 270° Wire out: 350 m Speed: 29 kn*10
 Sorted: Kg Total catch: 39.40 CATCH/HOUR: 78.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus trecae	26.00	90	32.99	178
Trichiurus lepturus	19.20	58	24.37	
Umbrina canariensis	10.60	28	13.45	
Dentex angolensis	7.00	24	8.88	177
Raja miraletus	4.20	4	5.33	
Zeus faber	4.00	8	5.08	
Sarda sarda	2.80	2	3.54	
Branchiostegus semifasciatus	2.00	2	2.55	
Torpedo torpedo	1.20	4	1.52	
Illex coindetii	1.00	22	1.27	
Alloteuthis africana	0.40	32	0.51	
Uranoscopus albesca	0.20	2	0.25	
Pterothrissus belloci	0.20	2	0.25	
Total	78.80		99.99	

PROJECT STATION: 312
 DATE: 18/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 822 Long E 1253
 start stop duration
 TIME :12:30:00 13:00:00 30 (min) Purpose code: 3
 LOG :3266.20 3267.80 1.60 Area code : 2
 FDEPTH: 212 215 GearCond.code:
 BDEPTH: 212 215 Validity code:
 Towing dir: 150° Wire out: 800 m Speed: 31 kn*10
 Sorted: 37 Kg Total catch: 1204.50 CATCH/HOUR: 2409.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
MURAENIDAE	1650.00	767250	68.49	
Merluccius polli, male	363.00	1458	15.07	180
Synagrops microlepis	231.00	7854	9.59	
Trichurus lepturus	99.00	4620	4.11	
Zeus faber	26.40	66	1.10	
Dentex angolensis	26.40	66	1.10	
Illex coindetii	13.20	66	0.55	
Plasionka sp.	0.00	132		
Parapanaeus longirostris	0.00	66		
Total	2409.00		100.01	

PROJECT STATION: 313
 DATE: 16/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 822 Long E 1251
 start stop duration
 TIME :13:52:00 14:22:00 30 (min) Purpose code: 3
 LOG :3272.10 3273.60 1.56 Area code : 2
 FDEPTH: 296 293 GearCond.code:
 BDEPTH: 296 293 Validity code:
 Towing dir: 320° Wire cut: 1000 m Speed: 30 kn*10
 Sorted: 28 Kg Total catch: 336.60 CATCH/HOUR: 673.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Chlorophthalmus atlanticus	312.00	5070	46.35	181
Merluccius polli, male	177.60	888	26.39	183
Merluccius polli, female	156.00	672	23.17	182
Illex coindetii	7.20	48	1.07	
Pterothrissus belloci	7.20	24	1.07	
Todarodes sagittatus	4.80	48	0.71	
Parapanaeus longirostris	2.40	288	0.36	
Necmerinthe folgori	2.40	24	0.36	
Laemonema laureysi	2.40	24	0.36	
Nezumia aequalis	1.20	24	0.18	
Total	673.20		100.01	

PROJECT STATION: 314
 DATE: 18/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 818 Long E 1246
 start stop duration
 TIME :15:37:00 16:07:00 30 (min) Purpose code: 3
 LOG :3279.70 3280.80 1.56 Area code : 2
 FDEPTH: 400 404 GearCond.code:
 BDEPTH: 400 404 Validity code:
 Towing dir: 335° Wire out: 1200 m Speed: 30 kn*10
 Sorted: 31 Kg Total catch: 292.45 CATCH/HOUR: 584.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, female	270.00	792	46.16	184
Nematocarcinus africanus	144.00	29268	24.62	
Merluccius polli, male	63.00	252	10.77	185
Brosmiculus imberbis *	32.40	396	5.54	
Malacocephalus occidentalis	28.80	36	4.92	
Centroprorus lyoto	26.00	4	4.45	
Benthodesmus teruis	7.20	54	1.23	
Illex sp.	3.60	36	0.62	
Triplophos hemingi	3.60	216	0.62	
Etmopterus spinax	2.70	126	0.46	
Hymenocephalus italicus	1.80	72	0.31	
Chauliarchus pictus	1.80	18	0.31	
Stomias affinis	0.00	18		
Total	584.90		100.01	

PROJECT STATION: 315
 DATE: 19/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 824 Long E 1319
 start stop duration
 TIME :22:23:00 22:53:00 30 (min) Purpose code: 3
 LOG :3339.50 3340.40 1.90 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 22 23 Validity code:
 Towing dir: 130° Wire out: 100 m Speed: 38 kn*10
 Sorted: 34 Kg Total catch: 168.00 CATCH/HOUR: 336.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sardinella maderensis	156.00	930	46.43	186
Trachurus trcae	137.00	1630	40.77	187
Trichurus lepturus	13.00	30	3.87	
Brachydeuterus auritus	12.00	150	3.57	
Arius latiscutatus	9.00	10	2.68	
Stromateus fiatola	6.00	10	1.79	
Sardinella aurita	3.00	10	0.89	
Total	336.00		100.00	

PROJECT STATION: 316
 DATE: 19/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 830 Long E 1320
 start stop duration
 TIME :02:26:00 02:56:00 30 (min) Purpose code: 3
 LOG :3370.90 3372.50 1.60 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 24 31 Validity code:
 Towing dir: 251° Wire out: 50 m Speed: 31 kn*10
 Sorted: 6 Kg Total catch: 6.00 CATCH/HOUR: 12.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	6.00	34	50.00	
Trichurus lepturus	3.20	8	26.67	
Pomadasy peroteti	1.90	2	15.00	
Sardinella aurita	1.00	2	8.33	
Total	12.00		100.00	

PROJECT STATION: 317
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 840 Long E 1321
 start stop duration
 TIME :06:30:00 07:00:00 30 (min) Purpose code: 3
 LOG :3393.50 3395.00 1.50 Area code : 2
 FDEPTH: 18 20 GearCond.code:
 BDEPTH: 18 20 Validity code:
 Towing dir: ° Wire out: 100 m Speed: 30 kn*10
 Sorted: Kg Total catch: 8.60 CATCH/HOUR: 16.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pomadasy peroteti	16.00	26	100.00	
Total	16.00		100.00	

PROJECT STATION: 318
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 839 Long E 1318
 start stop duration
 TIME :07:40:00 08:10:00 30 (min) Purpose code: 3
 LOG :3399.20 3400.80 1.60 Area code : 2
 FDEPTH: 34 32 GearCond.code:
 BDEPTH: 34 32 Validity code:
 Towing dir: ° Wire out: 200 m Speed: 32 kn*10
 Sorted: Kg Total catch: 11.01 CATCH/HOUR: 22.02

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	13.20	58	59.95	
Thorogobius angolensis	5.88	2940	26.70	
Parapanaeopsis atlantica	1.16	348	5.27	
Dicologlossa cuneata	0.60	18	2.72	
Lolligoncula mercatoris	0.58	370	2.63	
Brachydeuterus auritus	0.48	12	1.82	
Serranus cabrilla *	0.20	4	0.91	
Hiracorvina angolensis	0.00	8		
Pterothrissus belloci	0.00	16		
Trachurus trcae	0.00	24		
Total	22.02		100.00	

PROJECT STATION: 319
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 839 Long E 1315
 start stop duration
 TIME :08:55:00 09:25:00 30 (min) Purpose code: 3
 LOG :3405.80 3407.10 1.70 Area code : 2
 FDEPTH: 51 50 GearCond.code:
 BDEPTH: 51 50 Validity code:
 Towing dir: ° Wire out: 250 m Speed: 31 kn*10
 Sorted: 26 Kg Total catch: 131.00 CATCH/HOUR: 262.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	185.00	7400	70.61	
Trachurus trcae	64.00	640	24.43	188
Septia officinalis hierredda	6.40	10	2.44	
Pomadasy incisus	2.00	10	0.76	
Pagellus bellottii	2.00	20	0.76	
Merluccius polli	1.00	40	0.38	
Brachydeuterus auritus	1.00	170	0.38	
Sardinella maderensis	0.60	2	0.23	
Zeus faber	0.60	40		
Penaeus notialis	0.60	10		
Total	262.00		99.98	

PROJECT STATION: 320
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 840
 start stop duration Long E 1309
 TIME :10:34:00 11:04:00 30 (min) Purpose code: 3
 LOG :3414.60 3416.10 1.50 Area code : 2
 FDEPTH: 80 89 GearCond.code:
 BDEPTH: 90 89 Validity code:
 Towing dir: 252° Wire out: 350 m Speed: 30 kn*10

Sorted: 18 Kg Total catch: 69.20 CATCH/HOUR: 138.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Synagrops microlepis	50.40	1116	36.42	189
Trichiurus lepturus	37.80	160	27.31	
Zeus faber	13.80	12	9.97	
Trachurus trecae	7.20	32	5.20	
Dentex barnardi	7.00	30	5.06	190
Ubrina canariensis	5.60	10	4.05	
Illex coindetii	5.40	288	3.90	
Atractoscion aequidens	5.00	2	3.61	
Pageillus bellottii	2.00	12	1.45	
Todarodes sagittatus	1.00	102	1.30	
Dentex gibbosus	1.20	2	0.87	
Dentex angolensis	1.20	4	0.87	
Total	138.40		100.01	

PROJECT STATION: 321
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 840
 start stop duration Long E 1305
 TIME :11:35:00 11:55:00 20 (min) Purpose code: 3
 LOG :3418.70 3419.70 1.00 Area code : 2
 FDEPTH: 99 104 GearCond.code:
 BDEPTH: 99 104 Validity code:
 Towing dir: 250° Wire out: 400 m Speed: 26 kn*10

Sorted: 50 Kg Total catch: 50.35 CATCH/HOUR: 151.05

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus trecae	60.00	960	39.72	193
Dentex macrophthalmus	30.00	93	19.86	192
Dentex angolensis	21.00	84	13.90	191
Ubrina canariensis	13.50	36	8.94	
Uranoscopus albesca	10.50	9	6.95	
Branchiostegus semifasciatus	7.50	6	4.97	
Illex coindetii	3.60	180	2.38	
Boops boops	3.00	84	1.99	
Pageillus bellottii	0.90	3	0.60	
Pterothrissus belloci	0.60	3	0.40	
Citharus linguatula	0.30	3	0.20	
Todarodes sagittatus	0.15	12	0.10	
Total	151.05		100.01	

PROJECT STATION: 322
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 840
 start stop duration Long E 1301
 TIME :12:45:00 13:15:00 30 (min) Purpose code: 3
 LOG :3424.70 3426.20 1.61 Area code : 2
 FDEPTH: 156 124 GearCond.code:
 BDEPTH: 156 124 Validity code:
 Towing dir: 90° Wire out: 700 m Speed: 31 kn*10

Sorted: 62 Kg Total catch: 383.60 CATCH/HOUR: 767.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Synagrops microlepis	288.00	14736	37.54	
Trachurus trecae	144.00	1860	18.77	194
Trachurus trecae	87.60	154	11.42	195
Dentex macrophthalmus	62.40	156	8.13	
Merluccius polli	40.80	192	5.32	
Trichiurus lepturus	36.00	395	4.69	
Sparus pagrus africanus	26.40	24	3.44	
Dentex angolensis	26.40	84	3.44	
Brotula barbata	16.00	3	2.09	
Ubrina canariensis	12.00	24	1.56	
Illex coindetii	7.20	120	0.94	
Uranoscopus albesca	7.20	24	0.94	
Pentheroscion mbizi	6.00	12	0.78	
Atractoscion aequidens	5.00	2	0.78	
Todarodes sagittatus	0.60	12	0.08	
Citharus linguatula	0.60	24	0.08	
Parapenaeus longirostris	0.00	24		
Total	767.20		100.00	

PROJECT STATION: 323
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 842
 start stop duration Long E 1250
 TIME :14:22:00 14:52:00 30 (min) Purpose code: 3
 LOG :3433.90 3435.50 1.56 Area code : 2
 FDEPTH: 238 225 GearCond.code:
 BDEPTH: 238 225 Validity code:
 Towing dir: 180° Wire out: 900 m Speed: 30 kn*10

Sorted: 24 Kg Total catch: 294.10 CATCH/HOUR: 588.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius polli, female	195.20	735	33.19	197
Centrophorus uyato	93.40	29	15.88	
Merluccius polli, male	86.40	256	14.69	198
Dentex angolensis	60.00	134	10.20	196
Brotula barbata	52.00	50	8.84	
Shrimps, small, non comm.	22.40	10369	3.81	
MYCTOPHIDAE	17.50	763	2.99	
Trichiurus lepturus	16.20	15	2.72	
Synagrops microlepis	14.40	603	2.45	
Parapenaeus longirostris, fem.	8.00	1024	1.36	199
Conger conger	3.00	15	1.36	
Parapenaeus longirostris, male	8.00	895	1.02	200
Chlorophthalmus atlanticus	2.40	16	0.41	
Peristedion cataphractum	1.60	18	0.27	
Benthodasemus tenuis	1.60	192	0.27	
Coelorinchus coelorhincus	1.60	2	0.27	
Bembris heterurus	1.60	16	0.27	
Total	588.20		100.00	

PROJECT STATION: 324
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 851
 start stop duration Long E 1258
 TIME :15:57:00 16:27:00 30 (min) Purpose code: 3
 LOG :3442.50 3444.00 1.59 Area code : 2
 FDEPTH: 218 217 GearCond.code:
 BDEPTH: 218 217 Validity code:
 Towing dir: 180° Wire out: 850 m Speed: 31 kn*10

Sorted: 26 Kg Total catch: 412.50 CATCH/HOUR: 825.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius polli, female	313.60	1568	38.01	201
MYCTOPHIDAE	126.00	8316	15.27	
Centrophorus uyato	90.00	20	10.91	
Synagrops microlepis	70.00	4256	8.48	
Dentex angolensis	67.20	196	8.15	
Trichiurus lepturus	50.40	140	6.11	
Parapenaeus longirostris	42.00	3948	5.09	
Merluccius polli, male	42.00	112	5.09	202
Illex coindetii	5.60	23	0.68	
Todarodes sagittatus	5.60	23	0.68	
Bembris heterurus	5.60	56	0.68	
Saurida brasiliensis	4.20	784	0.51	
Peristedion cataphractum	2.80	28	0.34	
Citharus linguatula	0.20	28	0.02	
Total	825.20		100.02	

PROJECT STATION: 325
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 851
 start stop duration Long E 1301
 TIME :17:22:00 17:52:00 30 (min) Purpose code: 3
 LOG :3449.70 3451.20 1.61 Area code : 2
 FDEPTH: 164 164 GearCond.code:
 BDEPTH: 164 164 Validity code:
 Towing dir: 180° Wire out: 700 m Speed: 31 kn*10

Sorted: 20 Kg Total catch: 173.70 CATCH/HOUR: 347.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Brotula barbata	83.80	64	24.12	204
Synagrops microlepis	56.40	3106	16.23	
Trichiurus lepturus	36.40	168	11.05	
Trachurus trecae	28.60	60	8.29	
Dentex angolensis	27.00	182	7.77	203
Pterothrissus belloci	25.20	132	7.25	
Atractoscion aequidens	22.80	48	6.56	
Merluccius polli	16.00	72	5.18	
Ubrina canariensis	14.40	24	4.15	
Trigla lyra	8.40	36	2.42	
Todaropsis eblanae	6.00	12	1.73	
Parapenaeus longirostris, fem.	6.00	768	1.73	205
Parapenaeus longirostris, male	4.60	900	1.32	206
Saurida brasiliensis	2.40	240	0.69	
Zenopsis conchifer	2.40	12	0.69	
Coelorinchus coelorhincus	1.20	12	0.35	
Peristedion sp.	1.20	12	0.35	
Dentex macrophthalmus	0.40	2	0.12	
Total	347.40		100.00	

PROJECT STATION: 326
 DATE: 19/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 849
 start stop duration Long E 1255
 TIME :18:50:00 19:20:00 30 (min) Purpose code: 1
 LOG :3455.70 3457.30 1.60 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 200 206 Validity code:
 Towing dir: 333° Wire out: 100 m Speed: 32 kn*10

Sorted: 29 Kg Total catch: 103.00 CATCH/HOUR: 206.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trichiurus lepturus	174.60	1686	84.76	
Trachurus trecae	21.00	40	10.19	208
Sarcinella macerensis	10.40	30	5.05	207
Total	206.00		100.00	

PROJECT STATION: 327
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 837
 start stop duration Long E 1320
 TIME :22:15:00 23:30:00 75 (min) Purpose code: 2
 LOG :3483.90 3486.50 2.70 Area code : 2
 FDEPTH: 19 17 GearCond.code:
 BDEPTH: 19 17 Validity code: 9
 Towing dir: 160° Wire out: 100 m Speed: 20 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 NO CATCH 0.00
 Total

PROJECT STATION: 328
 DATE: 19/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 901
 start stop duration Long E 1300
 TIME :06:38:00 08:50:00 12 (min) Purpose code: 3
 LOG :2541.00 3541.70 0.70 Area code : 2
 FDEPTH: 45 58 GearCond.code:
 BDEPTH: 45 58 Validity code:
 Towing dir: 22° Wire out: 250 m Speed: 30 kn*10
 Sorted: 31 Kg Total catch: 153.00 CATCH/HOUR: 765.00

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Pomadasys incisus 252.50 650 33.01 209
 Pagellus bellottii 175.00 650 22.88 210
 Trichiurus lepturus 122.50 275 16.01
 Umbrina canariensis 85.00 475 11.11
 Argyrosomus hololepidotus 52.50 50 6.86
 Dentex barnardi 27.50 100 3.59
 Sepia officinalis hierredda 25.00 25 3.27
 Trachurus trecae 25.00 25 3.27
 Total 765.00 100.00

PROJECT STATION: 329
 DATE: 20/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 900
 start stop duration Long E 1255
 TIME :07:46:00 08:16:00 30 (min) Purpose code: 3
 LOG :3548.90 3549.60 1.50 Area code : 2
 FDEPTH: 215 218 GearCond.code:
 BDEPTH: 215 218 Validity code:
 Towing dir: 10° Wire out: 700 m Speed: 29 kn*10
 Sorted: 45 Kg Total catch: 670.70 CATCH/HOUR: 1341.40

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Brotula barbata 615.00 300 45.85
 Merluccius merluccius 195.00 660 14.54 211
 Centrophorus uyato 186.00 60 13.87
 Pterothrissus belloci 87.00 330 6.49
 Dentex angolensis 75.00 180 5.59
 Umbrina canariensis 36.00 30 2.68
 Parapanaeus longirostris, fem. 34.20 2910 2.55 213
 Pontinus acraensis 18.00 90 1.34
 Hoplostethus mediterraneus 18.00 90 1.34
 Coelorhynchus coelorhynchus 17.20 1190 1.28 214
 Parapanaeus longirostris, male 12.00 390 0.89
 Synagrops microlepis 6.00 30 0.45
 Dentex macrophthalmus 6.00 30 0.45
 Bembrrops heterurus 6.00 60 0.45
 Malacocephalus laevis 6.00 60 0.45
 Oicologlossa sp. 3.00 30 0.22
 Epigonus pandionis 3.00 60 0.22
 Trigla lyra 3.00 30 0.22
 MYCTOPHIDAE 3.00 2910 0.22
 Total 1341.40 99.99

PROJECT STATION: 330
 DATE: 20/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 859
 start stop duration Long E 1253
 TIME :09:12:00 09:42:00 30 (min) Purpose code: 3
 LOG :3553.60 3555.00 1.60 Area code : 2
 FDEPTH: 240 260 GearCond.code:
 BDEPTH: 240 260 Validity code:
 Towing dir: 10° Wire out: 600 m Speed: 30 kn*10
 Sorted: 23 Kg Total catch: 348.90 CATCH/HOUR: 697.80

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Merluccius polli, male 144.00 582 20.64 217
 Centrophorus uyato 102.80 24 14.45
 Brotula barbata 92.00 72 13.18
 Trachurus trecae 88.00 192 12.61
 Hoplostethus mediterraneus 74.00 6 10.80
 Merluccius polli, female 60.00 168 8.60 216
 Dentex angolensis 47.00 132 6.74 215
 MYCTOPHIDAE 44.00 8496 6.31
 Synagrops sp. 26.00 1320 3.72 218
 Pontinus acraensis 6.00 48 0.86
 Malacocephalus sp. 4.00 24 0.57
 Pterothrissus belloci 4.00 24 0.57
 Coelorhynchus coelorhynchus 2.00 24 0.29
 Parapanaeus longirostris 2.00 240 0.29
 Trichiurus lepturus 2.00 72 0.29
 Boops boops 2.00 24 0.29
 Hymenocephalus italicus 0.00 48
 Total 697.80 100.02

PROJECT STATION: 331
 DATE: 20/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 902
 start stop duration Long E 1255
 TIME :11:33:00 11:40:00 27 (min) Purpose code: 3
 LOG :3566.00 3567.40 1.50 Area code : 2
 FDEPTH: 196 202 GearCond.code:
 BDEPTH: 196 202 Validity code:
 Towing dir: 40° Wire out: 600 m Speed: 30 kn*10
 Sorted: 42 Kg Total catch: 316.20 CATCH/HOUR: 702.67

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Synagrops microlepis 173.33 307 24.67
 MYCTOPHIDAE 173.33 121333 24.67
 Brotula barbata 140.00 96 19.92 219
 Merluccius polli, female 53.33 60 7.59 220
 Merluccius polli, male 42.67 107 6.07 221
 Centrophorus uyato 26.67 13 3.80
 Trichiurus lepturus 24.00 13 3.42
 Parapanaeus longirostris 13.33 822 1.90
 Umbrina canariensis 13.33 13 1.90
 Trachurus trecae 10.67 13 1.52
 Dentex macrophthalmus 9.33 13 1.33
 Dentex angolensis 8.00 27 1.14
 Epigonus sp. 6.67 40 0.95
 Pterothrissus belloci 4.00 13 0.57
 Spicara alta 2.67 13 0.38
 Bembrrops heterurus 1.33 13 0.19
 Total 702.66 100.02

PROJECT STATION: 332
 DATE: 20/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 905
 start stop duration Long E 1258
 TIME :13:12:00 13:42:00 30 (min) Purpose code: 3
 LOG :3580.00 3581.50 1.54 Area code : 2
 FDEPTH: 26 28 GearCond.code:
 BDEPTH: 26 28 Validity code:
 Towing dir: 230° Wire out: 150 m Speed: 31 kn*10
 Sorted: 32 Kg Total catch: 550.10 CATCH/HOUR: 1100.20

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Brachydeuterus auritus 272.00 12852 24.72
 Pagellus bellottii 136.00 544 12.36
 Trichiurus lepturus 102.00 3298 9.27
 Sepia officinalis hierredda 102.00 136 9.27
 Pseudotolithus typus 102.00 68 9.27
 Galeoides decedactylus 85.00 136 7.73
 Pomadasys incisus 85.00 340 7.73
 Zeus faber 51.00 68 4.64
 Lithognathus mormyrus 50.40 136 4.58
 Trachurus trecae 34.00 14 3.09
 Pteroscia palli 34.00 306 3.09
 Pomadasys perctati 23.60 34 2.16
 Pseudotolithus senegalensis 10.20 34 0.93
 Epinophelus aeneus 6.00 2 0.55
 Raja miraletus 3.40 14 0.31
 Trachurus trecae 3.40 272 0.31
 Total 1100.20 100.01

PROJECT STATION: 333
 DATE: 20/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 906
 start stop duration Long E 1255
 TIME :14:18:00 14:48:00 30 (min) Purpose code: 3
 LOG :3584.70 3586.30 1.45 Area code : 2
 FDEPTH: 47 38 GearCond.code:
 BDEPTH: 47 38 Validity code:
 Towing dir: 214° Wire out: 250 m Speed: 29 kn*10
 Sorted: 23 Kg Total catch: 87.40 CATCH/HOUR: 174.80

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Selene dorsalis 81.30 220 46.34 224
 Trachurus trecae 37.20 54 21.28 223
 Pagellus bellottii 31.20 204 17.85 222
 Alloteuthis africana 15.00 300 8.50
 Sepia officinalis hierredda 8.00 12 4.58
 Dentex barnardi 2.40 18 1.37
 Total 174.80 100.00

PROJECT STATION: 334
 DATE: 20/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 987
 start stop duration Long E 1246
 TIME :16:00:00 16:30:00 30 (min) Purpose code: 3
 LOG :3596.10 3597.80 1.58 Area code : 2
 FDEPTH: 251 217 GearCond.code:
 BDEPTH: 251 217 Validity code:
 Towing dir: 180° Wire out: 900 m Speed: 30 kn*10
 Sorted: 44 Kg Total catch: 571.40 CATCH/HOUR: 1142.80

SPECIES CATCH/HOUR % OF TOT. C SAMP.NO.
 weight numbers
 Merluccius polli, female 308.28 1032 33.98 226
 Synagrops microlepis 284.00 1320 23.10
 Chlorophthalmus atlanticus 144.00 3312 12.60
 Dentex angolensis 94.00 244 3.23 225
 Merluccius polli, male 88.00 360 7.77 227
 MYCTOPHIDAE 72.00 3312 5.30
 Trichiurus lepturus 48.00 120 4.20
 Zenopsis conchife 12.00 48 1.05
 Coelorhynchus coelorhynchus 12.00 336 1.05
 Parapanaeus longirostris, male 9.60 1128 0.34
 Parapanaeus longirostris, fem. 7.20 504 0.33 228
 Bembrrops heterurus 2.40 24 0.21
 Total 1142.80 99.96

PROJECT STATION: 335
 DATE: 20/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 910 Long E 1252
 start stop duration
 TIME :19:00:00 19:30:00 30 (min) Purpose code: 1
 LOG :3514.40 3616.20 1.80 Area code : 2
 FDEPTH: 14 10 GearCond.code:
 BDEPTH: 62 57 Validity code:
 Towing dir: 345° Wire out: 200 m Speed: 36 km*10
 Sorted: 32 Kg Total catch: 460.00 CATCH/HOUR: 920.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Selene dorsalis	618.00	2492	67.17	231
Trachurus trecae	294.00	672	31.96	250
Serda sarda	6.40	2	0.91	
Total	920.40	100.94		

PROJECT STATION: 336
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 930 Long E 1307
 start stop duration
 TIME :06:25:00 06:55:00 30 (min) Purpose code: 3
 LOG :3704.80 3706.40 1.60 Area code : 2
 FDEPTH: 17 15 GearCond.code:
 BDEPTH: 17 15 Validity code:
 Towing dir: 150° Wire out: 100 m Speed: 31 km*10
 Sorted: 26 Kg Total catch: 141.50 CATCH/HOUR: 293.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Plectorhynchus mediterraneus	135.00	140	47.70	232
Bodianus speciosus	32.00	10	11.31	
Pomadasyus incisus	27.00	180	9.54	233
Dentex barnardi	25.00	70	8.83	
Septia officinalis hierreda	19.00	6	5.71	
Pagellus bellottii	13.00	30	4.59	
Acanthurus monroviae	13.00	10	4.59	
Sparus caeruleostictus	10.00	10	3.53	
Epinephelus alexandrinus	9.00	10	3.10	
Total	283.00	99.98		

PROJECT STATION: 337
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 930 Long E 1302
 start stop duration
 TIME :07:55:00 08:12:00 17 (min) Purpose code: 3
 LOG :3714.10 3715.00 0.90 Area code : 2
 FDEPTH: 40 36 GearCond.code:
 BDEPTH: 40 36 Validity code:
 Towing dir: 90° Wire out: 250 m Speed: 30 km*10
 Sorted: 48 Kg Total catch: 47.50 CATCH/HOUR: 167.65

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pagellus bellottii	81.53	575	48.63	234
Alloteuthis africana	38.12	3053	22.74	
Pomadasyus peroteti	12.00	11	7.16	
Trichurus lepturus	10.59	18	6.32	
Dentex barnardi	8.47	28	5.05	
Plectorhynchus mediterraneus	4.24	4	2.83	
Ubrina canariensis	3.88	4	2.31	
Sphyraena sphyraena	2.82	4	1.68	
Zeus faber	2.12	4	1.26	
Trachurus trecae	2.12	21	1.28	
Fistularia petimba	1.76	4	1.05	
Scorpaen japonicus	0.00	4		
Total	167.65	99.99		

PROJECT STATION: 338
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 928 Long E 1259
 start stop duration
 TIME :09:09:00 09:33:00 30 (min) Purpose code: 3
 LOG :3720.80 3722.30 1.60 Area code : 2
 FDEPTH: 48 42 GearCond.code:
 BDEPTH: 48 42 Validity code:
 Towing dir: 90° Wire out: 250 m Speed: 32 km*10
 Sorted: 33 Kg Total catch: 133.50 CATCH/HOUR: 267.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pagellus bellottii	159.20	1186	58.63	
Alloteuthis africana	28.00	6304	10.49	
Trachurus trecae	16.00	152	5.99	
Decapterus rhonchus	16.00	24	5.99	
Dentex barnardi	15.20	64	5.69	
Epinephelus aeneus	13.60	8	5.09	
Septia officinalis hierreda	7.00	2	2.62	
Sphyraena sphyraena	5.60	8	2.10	
Trichurus lepturus	5.60	8	2.10	
Chaetodon haecleri	0.80	8	0.30	
Boops boops	0.00	8		
Total	267.00	100.63		

PROJECT STATION: 339
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 929 Long E 1254
 start stop duration
 TIME :10:37:00 11:07:00 30 (min) Purpose code: 3
 LOG :3736.90 3732.70 1.60 Area code : 2
 FDEPTH: 30 91 GearCond.code:
 BDEPTH: 30 91 Validity code:
 Towing dir: 172° Wire out: 400 m Speed: 30 km*10
 Sorted: 58 Kg Total catch: 212.90 CATCH/HOUR: 425.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Ubrina canariensis	117.60	378	27.62	237
Dentex macrocephthalmus	94.40	302	22.17	235
Dentex barnardi	60.20	252	14.14	235
Dentex gibbosus	45.40	36	10.66	
Zeus faber	37.80	58	8.88	
Branchiostegus semifasciatus	29.40	22	6.90	
Trachurus trecae	14.60	32	3.43	
Fistularia petimba	10.00	10	2.35	
Septia officinalis hierreda	7.20	4	1.69	
Scorpaena angolensis	3.60	8	0.85	
Sphyraena sphyraena	3.60	8	0.85	
Synagrops microlepis	0.80	224	0.19	
Alloteuthis africana	0.80	122	0.19	
Illex sp.	0.40	50	0.09	
Illex coindetii	0.00	8		
Merluccius polli	0.00	8		
Total	425.80	100.01		

PROJECT STATION: 340
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 930 Long E 1249
 start stop duration
 TIME :12:12:00 12:42:00 30 (min) Purpose code: 3
 LOG :3740.40 3742.00 1.55 Area code : 2
 FDEPTH: 122 124 GearCond.code:
 BDEPTH: 122 124 Validity code:
 Towing dir: 170° Wire out: 550 m Speed: 31 km*10
 Sorted: 57 Kg Total catch: 57.40 CATCH/HOUR: 114.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex angolensis	33.00	88	26.13	238
Dentex macrocephthalmus	16.50	70	13.94	239
Trichurus lepturus	15.60	28	13.76	
Brotula barbata	14.00	10	12.20	
Branchiostegus semifasciatus	9.40	13	8.19	
Illex coindetii	9.00	310	6.97	241
Pterothrissus bellotti	5.40	32	4.70	
Todarodes sagittatus	4.40	90	3.89	242
Spicara alta	3.80	14	3.31	
Trachurus trecae	3.40	42	2.96	240
Ubrina canariensis	3.00	10	2.61	
Uranoscopus polli	0.50	4	0.52	
Citharus linguatula	0.40	4	0.35	
Parapenaeus longirostris	0.30	74	0.26	
Boops boops	0.20	4	0.17	
Saurida brasiliensis	0.10	10	0.09	
Total	114.80	99.99		

PROJECT STATION: 341
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 931 Long E 1243
 start stop duration
 TIME :14:36:00 15:06:00 30 (min) Purpose code: 3
 LOG :3752.10 3753.30 1.20 Area code : 2
 FDEPTH: 221 189 GearCond.code:
 BDEPTH: 221 189 Validity code:
 Towing dir: 356° Wire out: 800 m Speed: 30 km*10
 Sorted: 25 Kg Total catch: 217.00 CATCH/HOUR: 434.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Synagrops microlepis	304.00	18240	70.05	
Zenopsis cornifer	48.00	176	11.06	
Dentex macrocephthalmus	17.00	42	3.92	243
Dentex angolensis	13.00	42	3.00	244
Chlorophthalmus atlanticus	11.20	256	2.59	
Parapenaeus longirostris, fem.	9.60	928	2.21	245
Coeloclinus coeloclinus	8.00	32	1.84	
Parapenaeus longirostris, male	4.80	460	1.11	246
Merluccius polli	4.80	32	1.11	
Trichurus lepturus	4.80	32	1.11	
Illex coindetii	3.20	80	0.74	
Hoplostethus occidentalis	3.20	32	0.74	
Halacapphalus laevis	1.60	16	0.37	
Citharus linguatula	0.80	32	0.18	
Total	434.00	100.02		

PROJECT STATION: 342
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 979
 start stop duration Long E 1240
 TIME :16:29:00 16:59:00 30 (min) Purpose code: 3
 LOG :3763.20 3765.00 1.60 Area code : 2
 FDEPTH: 400 404 GearCond.code:
 BDEPTH: 400 404 Validity code:
 Towing dir: 175° Wire out:1150 m Speed: 31 km*10
 Sorted: 28 Kg Total catch: 253.80 CATCH/HOUR: 507.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, male	327.80	1260	64.54	248
Merluccius polli, female	198.60	729	26.95	247
Laemonema laureysi	9.00	72	1.77	
Etmopterus spinax	9.00	216	1.77	
Pterothrissus bellotti	5.40	18	1.06	
Illex coindetii	3.60	36	0.71	
Plesionaeus edwardsianus	3.60	36	0.71	
Zenopsis conchifer	3.60	18	0.71	
Stereonastis sculpta	2.70	54	0.53	
Aristeus varidens	1.80	126	0.35	
Triplophos hemingi	1.80	108	0.35	
Coelorinchus coelorhincus	1.80	18	0.35	
Chlorophthalmus atlanticus	0.90	18	0.18	
Nematocarcinus africanus	0.00	54		
Total	507.60		99.98	

PROJECT STATION: 343
 DATE: 21/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 933
 start stop duration Long E 1239
 TIME :18:00:00 18:20:00 20 (min) Purpose code: 3
 LOG :3770.70 3771.60 1.00 Area code : 2
 FDEPTH: 499 472 GearCond.code:
 BDEPTH: 499 472 Validity code:
 Towing dir: 170° Wire out:1450 m Speed: 27 km*10
 Sorted: 33 Kg Total catch: 64.60 CATCH/HOUR: 253.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Etmopterus spinax	75.00	75	29.55	
Merluccius polli, female	66.00	189	26.00	249
Laemonema laureysi	52.50	350	20.69	250
Aristeus varidens, female	11.40	714	4.49	251
Aristeus varidens, male	9.90	540	3.90	252
Aristeus varidens, female	4.50	249	1.77	
Haliotea spicata	4.50	129	1.77	
Pterothrissus bellotti	3.90	15	1.54	
Pterothrissus bellotti	3.90	15	1.54	
POLYCHAELIDAE	3.00	159	1.18	
Plesionaeus edwardsianus	2.70	39	1.06	
Nattastoma sp.	2.40	69	0.95	
Brosmiculus imberbis *	2.40	39	0.95	
Malacocephalus laevis	2.40	75	0.95	
Aristeus varidens, male	2.40	144	0.95	
Photonectis sp	1.50	15	0.59	
Coelorinchus coelorhincus	0.90	9	0.35	
Stomias affinis	0.90	30	0.35	
OPHIURIDAE	0.90	9	0.35	
Lamprogrammus sp.	0.90	24	0.35	
LIPARIDAE	0.90	30	0.35	
Huplostethus mediterraneus	0.90	90	0.35	
Otiologlossa sp.	0.00	9		
Hymenocephalus italicus	0.00	39		
Total	253.80		99.98	

PROJECT STATION: 344
 DATE: 21/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 940
 start stop duration Long E 1251
 TIME :21:00:00 21:30:00 30 (min) Purpose code: 1
 LOG :3790.00 3792.00 1.20 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 115 137 Validity code:
 Towing dir: 270° Wire out: 100 m Speed: 24 km*10
 Sorted: 3 Kg Total catch: 42.70 CATCH/HOUR: 85.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	37.00	108	44.28	
Sardinella maderensis	23.80	86	27.87	253
Trachurus trcae	9.80	64	11.46	255
MYCTOPHIDAE	7.20	25056	8.43	
Shrimps, small, non comm.	3.60	4770	4.22	
Sardinella aurita	3.20	14	3.75	254
Total	35.40		100.01	

PROJECT STATION: 345
 DATE: 22/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 958
 start stop duration Long E 1308
 TIME :00:24:00 01:54:00 30 (min) Purpose code: 1
 LOG :3815.70 3817.10 1.40 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 24 27 Validity code:
 Towing dir: 300° Wire out: 50 m Speed: 29 km*10
 Sorted: 32 Kg Total catch: 31.70 CATCH/HOUR: 62.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	48.00	460	75.71	256
Trichurus lepturus	8.00	16	12.62	
Engraulis encrasicolus	3.40	714	5.36	257
Ilisha africana	2.00	20	3.15	
Conger conger	2.00	2	3.15	
Total	63.40		99.99	

PROJECT STATION: 346
 DATE: 22/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 941
 start stop duration Long E 1309
 TIME :03:39:00 04:09:00 30 (min) Purpose code: 1
 LOG :3840.30 3841.80 1.50 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 25 30 Validity code:
 Towing dir: ° Wire out: 50 m Speed: 30 km*10
 Sorted: 58 Kg Total catch: 56.10 CATCH/HOUR: 116.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	34.00	290	29.26	
Sardinella maderensis	28.00	104	22.36	258
Sardinella aurita	24.00	55	20.65	259
Trachurus trcae	18.00	133	15.49	260
Trichurus lepturus	6.90	12	5.05	
Atractoscion aequidens	3.00	2	2.50	
Sphyræna guanchancho	2.00	2	1.72	
Decapterus rhonchus	1.80	2	1.55	
Ilisha africana	0.60	4	0.52	
Total	116.20		100.00	

PROJECT STATION: 347
 DATE: 22/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 915
 start stop duration Long E 1310
 TIME :05:36:00 06:06:00 24 (min) Purpose code: 1
 LOG :3852.50 3853.80 1.30 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 27 32 Validity code:
 Towing dir: 290° Wire out: 50 m Speed: 34 km*10
 Sorted: 8 Kg Total catch: 7.90 CATCH/HOUR: 19.75

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	8.25	90	41.77	261
Lagocephalus laevigatus	2.75	3	13.92	
Trichurus lepturus	1.75	5	9.86	
Trachurus trcae	1.75	15	9.86	
Sardinella aurita	1.75	5	9.86	
Sardinella maderensis	1.75	8	8.88	
Selene dorsalis	1.00	15	5.06	
Chloroscombrus chrysurus	0.75	5	3.80	
Total	19.75		99.99	

PROJECT STATION: 348
 DATE: 22/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 951
 start stop duration Long E 1314
 TIME :07:18:00 07:48:00 30 (min) Purpose code: 3
 LOG :3863.35 3865.00 1.85 Area code : 2
 FDEPTH: 15 15 GearCond.code:
 BDEPTH: 15 15 Validity code:
 Towing dir: 160° Wire out: 100 m Speed: 33 km*10
 Sorted: 28 Kg Total catch: 430.20 CATCH/HOUR: 860.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	572.80	19264	66.57	262
Trichurus lepturus	118.40	664	13.76	
Selene dorsalis	57.60	1792	6.69	263
Sepia officinalis hierredda	20.80	32	3.35	
Ilisha africana	25.60	96	2.98	
Pomadasy peroteti	16.00	64	1.86	
Pegeillus bellottii	9.60	32	1.12	
Galeoides decadactylus	9.60	64	1.12	
Miracorvina angolensis	6.40	192	0.74	
Pomadasy incisus	6.40	32	0.74	
Carcharhinus sp.	6.00	4	0.70	
Arius parkii	3.20	32	0.37	
Total	860.40		100.00	

PROJECT STATION: 349
 DATE: 22/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 951
 start stop duration Long E 1314
 TIME :08:45:00 09:15:00 30 (min) Purpose code: 3
 LOG :3866.60 3868.20 1.60 Area code : 2
 FDEPTH: 10 10 GearCond.code:
 BDEPTH: 15 15 Validity code:
 Towing dir: 340° Wire out: 200 m Speed: 32 km*10
 Sorted: 34 Kg Total catch: 185.00 CATCH/HOUR: 370.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	295.80	11056	79.95	
Trichurus lepturus	19.80	110	5.35	
Pomadasy peroteti	18.00	44	5.08	
Galeoides decadactylus	16.60	78	4.49	
Selene dorsalis	5.60	144	1.51	
Pegeillus bellottii	3.40	12	0.92	
Ilisha africana	3.40	34	0.92	
Etmalosa flmbrata	2.20	12	0.59	
Pomadasy incisus	2.20	12	0.59	
Chloroscombrus chrysurus	2.20	34	0.59	
Total	370.00		99.99	

PROJECT STATION: 350
 DATE:22/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 951 Long E 1310
 start stop duration
 TIME :13:36:00 14:06:00 30 (min) Purpose code: 3
 LOG :3882.30 3883.70 1.53 Area code : 2
 FDEPTH: 35 37 GearCond.code:
 BDEPTH: 35 37 Validity code:
 Towing dir: 110° Wire out: 200 m Speed: 31 km*10
 Sorted: 30 Kg Total catch: 122.10 CATCH/HOUR: 244.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pagellus bellottii	153.60	1964	62.90	264
Trachurus trecae	24.00	160	9.83	265
Brachydeuterus auritus	16.00	168	6.55	
Alloteuthis africana	14.43	3312	5.90	
Dentex barnardi	12.80	16	5.24	
Lagocephalus laevisgatus	12.00	16	4.91	
Fistularia petimba	4.80	8	1.97	
Sepia officinalis hierredda	4.20	16	1.72	
Pseudupeneus prayensis	1.60	16	0.65	
Boops boops	0.80	8	0.33	
Total	244.20		100.01	

PROJECT STATION: 354
 DATE:23/ 8/91 GEAR TYPE: PT No: POSITION:Lat S 955 Long E 1314
 start stop duration
 TIME :01:20:00 01:50:00 30 (min) Purpose code: 1
 LOG :3956.30 3957.80 1.50 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 20 26 Validity code:
 Towing dir: 250° Wire out: 50 m Speed: 30 km*10
 Sorted: 29 Kg Total catch: 729.95 CATCH/HOUR: 1459.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	1350.00	31300	92.47	271
Chloroscombrus chrysurus	40.00	350	2.74	
Trichurus lepturus	15.00	50	1.03	
Trachurus trecae	15.00	100	1.03	
Ilisha africana	15.00	100	1.03	
Selene dorsalis	10.00	150	0.68	
Trachinotus ovatus	7.50	50	0.51	
Sardinella maderensis	6.00	28	0.41	
Sardinella aurita	1.40	4	0.10	
Total	1459.90		100.00	

PROJECT STATION: 351
 DATE:22/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 949 Long E 1305
 start stop duration
 TIME :15:00:00 15:30:00 30 (min) Purpose code: 3
 LOG :3889.20 3890.80 1.57 Area code : 2
 FDEPTH: 67 63 GearCond.code:
 BDEPTH: 67 63 Validity code:
 Towing dir: 6° Wire out: 350 m Speed: 31 km*10
 Sorted: 60 Kg Total catch: 374.80 CATCH/HOUR: 749.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	312.00	1775	41.62	266
Decapterus rhonchus	120.00	156	16.01	267
Dentex barnardi	114.30	372	15.21	268
Alloteuthis africana	66.00	28380	9.80	
Pagellus bellottii	60.00	444	3.30	269
Epinephelus goreensis	35.00	4	4.67	
Sepia officinalis hierredda	24.00	48	3.20	
Dentex gibbosus	8.40	24	1.12	
Fistularia petimba	7.20	12	0.96	
Boops boops	1.80	36	0.24	
Illex coindetii	1.20	12	0.16	
Total	749.60		99.99	

PROJECT STATION: 355
 DATE:23/ 8/91 GEAR TYPE: PT No: POSITION:Lat S 958 Long E 1314
 start stop duration
 TIME :04:10:00 04:40:00 30 (min) Purpose code: 1
 LOG :3976.50 3977.90 1.40 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 23 23 Validity code:
 Towing dir: 350° Wire out: 50 m Speed: 31 km*10
 Sorted: 31 Kg Total catch: 708.40 CATCH/HOUR: 1416.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	1158.00	14950	61.17	
Chloroscombrus chrysurus	73.60	2300	5.19	272
Sardinella maderensis	69.00	368	4.87	
Sardinella aurita	69.00	230	4.87	
Trachurus trecae	46.00	322	3.25	
Selene dorsalis	9.20	184	0.63	
Total	1416.80		100.00	

PROJECT STATION: 352
 DATE:22/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 949 Long E 1257
 start stop duration
 TIME :16:44:00 17:14:00 30 (min) Purpose code: 3
 LOG :3900.20 3901.80 1.51 Area code : 2
 FDEPTH: 105 103 GearCond.code:
 BDEPTH: 105 103 Validity code:
 Towing dir: 360° Wire out: 500 m Speed: 29 km*10
 Sorted: 22 Kg Total catch: 115.00 CATCH/HOUR: 230.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichurus lepturus	68.00	380	29.57	270
Sparus pagrus africanus	48.00	40	20.87	
Dentex macrophthalmus	30.00	110	13.04	
Trachurus trecae	20.00	60	8.70	
Dentex gibbosus	14.00	2	6.09	
Illex coindetii	13.00	750	5.65	
Spicara alta	10.00	160	4.35	
Dentex angolensis	10.00	26	4.35	
Boops boops	10.00	710	4.35	
Todarodes sagittatus	6.00	180	2.61	
Saurida brasiliensis	1.00	140	0.43	
Total	230.00		100.01	

PROJECT STATION: 355
 DATE:23/ 8/91 GEAR TYPE: PT No:4 POSITION:Lat S 955 Long E 1314
 start stop duration
 TIME :01:20:00 01:50:00 30 (min) Purpose code: 1
 LOG :3956.30 3957.80 1.50 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 20 26 Validity code:
 Towing dir: 250° Wire out: 50 m Speed: 30 km*10
 Sorted: 29 Kg Total catch: 729.45 CATCH/HOUR: 1458.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	1150.00	14950	78.63	
Chloroscombrus chrysurus	73.60	2300	5.04	272
Sardinella maderensis	69.00	368	4.73	
Sardinella aurita	69.00	230	4.73	
Trachurus trecae	46.00	322	3.15	
Selene dorsalis	9.20	184	0.63	
Total	1416.80		97.11	

PROJECT STATION: 353
 DATE:23/ 8/91 GEAR TYPE: PT No:4 POSITION:Lat S 1001 Long E 1314
 start stop duration
 TIME :21:00:00 21:30:00 30 (min) Purpose code: 1
 LOG :3933.70 3935.60 1.90 Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 24 26 Validity code:
 Towing dir: 170° Wire out: 100 m Speed: 30 km*10
 Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 356
 DATE:23/ 8/91 GEAR TYPE: BT No:1 POSITION:Lat S 1010 Long E 1323
 start stop duration
 TIME :07:00:00 07:20:00 20 (min) Purpose code: 3
 LOG :3998.10 3999.20 1.03 Area code : 2
 FDEPTH: 18 15 GearCond.code:
 BDEPTH: 18 16 Validity code:
 Towing dir: 9° Wire out: 100 m Speed: 29 km*10
 Sorted: 35 Kg Total catch: 382.80 CATCH/HOUR: 1148.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	590.70	19305	51.44	273
Ilisha africana	227.70	6270	19.89	274
Arius parkii	155.10	33	13.51	
Argyrosomus hololepidotus	29.70	66	2.59	
Pomadourus inciscus	26.40	185	2.30	
Trichurus lepturus	23.10	66	2.01	
Dentex barnardi	23.10	33	2.01	
Trachurus trecae	15.50	330	1.44	
Selene dorsalis	16.50	429	1.44	
Galeoides decadactylus	16.50	59	1.44	
Microrhina angolensis	16.50	330	1.44	
Chloroscombrus chrysurus	3.30	33	0.29	
Sepia orbignyana	3.30	33	0.29	
Hyperoglyphe meselii	0.00	33		
Total	1148.40		100.03	

PROJECT STATION: 357
 DATE: 23/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1010
 start stop duration Long E 1321
 TIME :08:28:00 08:58:00 30 (min) Purpose code: 3
 LOG :4004.90 4006.40 1.60 Area code : 2
 FDEPTH: 22 17 GearCond.code:
 BDEPTH: 22 17 Validity code:
 Towing dir: 90° Wire out: 100 m Speed: 31 kn*10
 Sorted: 28 Kg Total catch: 624.80 CATCH/HOUR: 1249.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Brachydeuterus auritus	748.00	14976	59.86	
Sardinella maderensis	198.00	1364	15.05	276
Ilisha africana	79.20	1012	6.34	275
Arius parkii	79.20	132	6.34	
Leptocharias smithii	44.00	44	3.52	
Trichiurus lepturus	30.80	132	2.46	
Trachurus trecae	26.40	352	2.11	
Sepia officinalis hierredda	22.00	44	1.76	
Sardinella aurita	17.60	88	1.41	
Selene dorsalis	4.40	88	0.35	
Total	1249.60		100.00	

PROJECT STATION: 358
 DATE: 23/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1010
 start stop duration Long E 1317
 TIME :09:54:00 10:24:00 30 (min) Purpose code: 3
 LOG :4013.00 4014.80 1.50 Area code : 2
 FDEPTH: 44 44 GearCond.code:
 BDEPTH: 44 44 Validity code:
 Towing dir: 160° Wire out: 200 m Speed: 30 kn*10
 Sorted: 42 Kg Total catch: 42.20 CATCH/HOUR: 84.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trichiurus lepturus	29.40	228	34.83	
Trachurus trecae	22.60	358	26.78	278
Pagellus bellottii	13.60	114	16.11	277
Umbrina canariensis	5.20	38	6.16	
Selene dorsalis	4.00	16	4.74	
Dentex barnardi	3.20	18	3.79	
Brachydeuterus auritus	2.60	200	3.08	
Zeus faber	1.80	2	2.13	
Chaetodon hoefleri	1.20	8	1.42	
Alloteuthis africana	0.60	140	0.71	
Pomadasys incisus	0.20	2	0.24	
Total	84.40		99.99	

PROJECT STATION: 359
 DATE: 23/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1009
 start stop duration Long E 1308
 TIME :13:03:00 13:33:00 30 (min) Purpose code: 3
 LOG :4025.30 4026.50 1.43 Area code : 2
 FDEPTH: 86 85 GearCond.code:
 BDEPTH: 86 85 Validity code:
 Towing dir: 340° Wire out: 450 m Speed: 30 kn*10
 Sorted: 63 Kg Total catch: 2000.00 CATCH/HOUR: 4000.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Umbrina canariensis	3923.20	7360	98.08	279
Dentex angolensis	32.00	128	0.80	
Pagellus bellottii	32.00	64	0.80	
Spicara alta	12.80	640	0.32	
Total	4000.00		100.00	

PROJECT STATION: 360
 DATE: 23/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1009
 start stop duration Long E 1256
 TIME :15:25:00 15:55:00 30 (min) Purpose code: 3
 LOG :4037.90 4039.80 1.54 Area code : 2
 FDEPTH: 155 147 GearCond.code:
 BDEPTH: 155 147 Validity code:
 Towing dir: 150° Wire out: 270 m Speed: 30 kn*10
 Sorted: 31 Kg Total catch: 673.20 CATCH/HOUR: 1346.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Synagrops microlepis	1166.00	67628	86.60	280
Zenopsis conchifer	96.80	1364	7.19	
Todarodes sagittatus	66.00	1188	4.90	281
Illex sp.	17.60	264	1.31	
Total	1346.40		100.00	

PROJECT STATION: 362
 DATE: 23/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1014
 start stop duration Long E 1256
 TIME :17:43:00 18:13:00 30 (min) Purpose code: 3
 LOG :4045.90 4047.40 1.30 Area code : 2
 FDEPTH: 295 280 GearCond.code: 8
 BDEPTH: 295 280 Validity code: 9
 Towing dir: 170° Wire out: 1000 m Speed: 25 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 363
 DATE: 24/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1031
 start stop duration Long E 1337
 TIME :06:38:00 07:08:00 dur.: 30min Purpose code: 3
 LOG :4143.90 4145.60 dist.:1.60nm Area code : 2
 FDEPTH: 18 21 GearCond.code:
 BDEPTH: 18 21 Validity code:
 Towing dir: 160° Wire out: 100 m Speed: 31 kn*10
 Sorted: 32 Kg Total catch: 1231.50 CATCH/HOUR: 2463.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Brachydeuterus auritus	1988.80	8078	80.75	285
Trachurus trecae	114.20	1066	4.64	
Trichiurus lepturus	83.80	228	3.40	
Galeoides decadactylus	76.20	76	3.09	
Pomadasys peroteti	60.80	76	2.47	
Pomadasys incisus	38.00	382	1.54	
Dentex barnardi	31.80	92	1.29	286
Pagellus natalensis	31.40	126	1.27	287
Torpedo sp.	22.80	76	0.93	
Chloroscombrus chrysurus	15.20	76	0.62	
Sepia orbignyana	0.00	76		
Hyperoglyphe moselii	0.00	152		
Miracorvina angolensis	0.00	76		
Total	2463.00		100.00	

PROJECT STATION: 364
 DATE: 24/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1030
 start stop duration Long E 1338
 TIME :08:17:00 08:47:00 dur.: 30min Purpose code: 3
 LOG :4150.70 4152.30 dist.:1.70nm Area code : 2
 FDEPTH: 24 23 GearCond.code:
 BDEPTH: 24 23 Validity code:
 Towing dir: 330° Wire out: 150 m Speed: 32 kn*10
 Sorted: 30 Kg Total catch: 118.00 CATCH/HOUR: 236.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Brachydeuterus auritus	97.60	1408	41.36	
Miracorvina angolensis	74.40	2872	31.53	288
Trichiurus lepturus	27.20	64	11.53	
Trachurus trecae	12.00	96	5.08	
Maja squinado	8.00	872	3.39	
Pomadasys peroteti	8.00	8	3.39	
Dicologlossa cuneata	4.00	80	1.69	
Calappa rubroguttata	0.80	8	0.34	
PORTUNIDAE	0.80	16	0.34	
Squilla cadenati	0.80	8	0.34	
Pseudotolithus senegalensis	0.80	8	0.34	
Parapenaeopsis atlantica	0.80	272	0.34	
Cynoglossus canariensis	0.80	8	0.34	
Sepia officinalis hierredda	0.00	8		
Total	236.00		100.01	

PROJECT STATION: 365
 DATE: 24/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1029
 start stop duration Long E 1329
 TIME :09:29:00 09:59:00 dur.: 30min Purpose code: 3
 LOG :4156.40 4157.60 dist.:1.50nm Area code : 2
 FDEPTH: 43 43 GearCond.code:
 BDEPTH: 43 43 Validity code:
 Towing dir: 320° Wire out: 250 m Speed: 30 kn*10
 Sorted: 31 Kg Total catch: 562.60 CATCH/HOUR: 1125.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus trecae	482.40	6156	42.87	289
Pomadasys incisus	133.20	684	11.84	290
Dentex barnardi	100.80	396	8.96	
Brachydeuterus auritus	93.60	720	8.32	
Pagellus bellottii	72.00	684	6.40	
Umbrina canariensis	64.80	180	5.76	
Atractoscion aequidens	54.00	36	4.80	
Chloroscombrus chrysurus	50.40	360	4.48	
Balistes capricus	25.20	72	2.24	
Cynoglossus canariensis	14.40	36	1.28	
Zeus faber	10.80	36	0.96	
Alloteuthis africana	10.80	2124	0.96	
Chaetodon hoefleri	7.20	36	0.64	
Sepia officinalis hierredda	3.60	36	0.32	
Raja miraletus	2.00	2	0.18	
Total	1125.20		100.01	

PROJECT STATION: 356
 DATE: 24/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1029
 start stop Long E 1322
 TIME :11:06:00 11:36:00 dur.: 30min Purpose code: 3
 LOG :4165.10 4166.40 dist.:1.50nm Area code : 2
 FDEPTH: 83 77 GearCond.code:
 BDEPTH: 80 77 Validity code:
 Towing dir: 265° Wire out: 350 m Speed: 30 kn*10

Sorted: 25 Kg Total catch: 232.50 CATCH/HOUR: 405.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Trachurus trecae	220.00 2700	54.32	
Pagellus bellottii	66.00 290	16.30	293
Atractoscion aequidens	32.00 18	7.90	
Dentex macrophthalmus	30.00 84	7.41	291
Zeus faber	10.00 20	2.47	
Trichiurus lepturus	10.00 10	2.47	
Dentex angolensis	10.00 50	2.47	292
Dentex barnardi	6.00 28	1.49	
Raja miraletus	4.00 10	0.99	
Ubrina canariensis	4.00 30	0.99	
Epinephelus aeneus	4.00 2	0.99	
Miracorvina angolensis	3.00 2	0.74	
Sepia officinalis hierredda	2.00 10	0.49	
Torpedo torpedo	2.00 2	0.49	
Pterothrissus belloci	1.00 2	0.25	
Citharus linguatula	1.00 10	0.25	
Total	405.00	100.01	

PROJECT STATION: 367
 DATE: 24/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1028
 start stop Long E 1313
 TIME :12:50:00 13:20:00 dur.: 30min Purpose code: 3
 LOG :4176.20 4177.60 dist.:1.54nm Area code : 2
 FDEPTH: 107 107 GearCond.code:
 BDEPTH: 107 107 Validity code:
 Towing dir: 340° Wire out: 550 m Speed: 31 kn*10

Sorted: 71 Kg Total catch: 71.45 CATCH/HOUR: 142.90

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Rhinobatos albomeculatus	90.00 10	62.98	
Todarodes sagittatus	7.80 168	5.46	282
Torpedo torpedo	6.00 12	4.20	
Zeus faber	6.00 16	4.20	
Sarda sarda	6.00 4	4.20	
Dentex congoensis	6.00 60	4.20	294
Dentex gibbosus	3.80 4	2.66	
Zenopsis conchifer	3.00 6	2.10	
Sparus pagrus pagrus	2.40 4	1.68	
Illex coindetii	2.00 84	1.40	295
Trachurus trecae	2.00 30	1.40	
Arionna bondi	2.00 30	1.40	
Pagellus bellottii	1.60 18	1.12	
Saurida brasiliensis	1.20 142	0.84	
Lepidotrigla cadmani	1.00 6	0.70	
Citharus linguatula	1.00 16	0.70	
Dentex macrophthalmus	0.80 4	0.56	
Spicara alba	0.30 12	0.21	
Total	142.90	100.01	

PROJECT STATION: 368
 DATE: 25/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 912
 start stop Long E 1251
 TIME :20:30:00 21:00:00 dur.: 30min Purpose code: 1
 LOG :4273.60 4275.00 dist.:1.40nm Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 60 60 Validity code:
 Towing dir: 150° Wire out: 100 m Speed: 28 kn*10

Sorted: 7 Kg Total catch: 7.10 CATCH/HOUR: 14.20

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Trichiurus lepturus	9.60 26	67.61	
Trachurus trecae	1.40 2	9.86	
Sardinella maderensis	1.20 2	8.45	
Trachinotus ovatus	1.30 2	7.04	
Selene dorsalis	0.80 2	5.63	
Sepia orbignyana	0.20 2	1.41	
Total	14.20	100.00	

PROJECT STATION: 369
 DATE: 26/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 942
 start stop Long E 1313
 TIME :12:52:00 13:22:00 dur.: 30min Purpose code: 3
 LOG :4401.90 4403.40 dist.:1.65nm Area code : 2
 FDEPTH: 61 62 GearCond.code:
 BDEPTH: 61 62 Validity code:
 Towing dir: 180° Wire out: 300 m Speed: 33 kn*10

Sorted: 34 Kg Total catch: 168.50 CATCH/HOUR: 337.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Synagrops microlepis	80.00 21600	23.74	296
Trichiurus lepturus	75.00 1410	22.26	
Trachurus trecae	65.00 910	19.28	297
Pterothrissus belloci	50.00 550	14.84	298
Pegusa tascaris	15.00 30	4.45	
Dentex barnardi	10.00 30	2.97	
Brotula barbata	10.00 10	2.97	
Branchiostegus semifasciatus	10.00 20	2.97	
Trachinotus ovatus	7.00 10	2.08	
Chaetodon hoefleri	5.00 30	1.48	
Parapenaeus longirostris	4.00 660	1.19	
Pagellus bellottii	2.00 10	0.59	
C R A B S	1.30 300	0.38	
Penaeus notialis	1.20 34	0.36	
Torpedo torpedo	1.00 10	0.30	
Brachydeuterus auritus	0.50 20	0.15	
Merluccius pollii	0.00 10		
Chaetodon marcellae	0.00 10		
Total	337.00	100.03	

PROJECT STATION: 370
 DATE: 26/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 834
 start stop Long E 1314
 TIME :16:19:00 16:49:00 dur.: 30min Purpose code: 3
 LOG :4427.20 4428.60 dist.:1.56nm Area code : 2
 FDEPTH: 55 54 GearCond.code:
 BDEPTH: 55 54 Validity code:
 Towing dir: 355° Wire out: 250 m Speed: 31 kn*10

Sorted: 35 Kg Total catch: 223.00 CATCH/HOUR: 446.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Synagrops microlepis	336.00 59808	75.34	
Trichiurus lepturus	36.00 720	8.07	
Sepia officinalis hierredda	28.00 94	6.28	
Pagellus bellottii	15.60 72	3.50	
Penaeus notialis, male	6.00 204	1.35	303
Brachydeuterus auritus	6.00 36	1.35	
Trachurus trecae	3.60 36	0.81	
Pterothrissus belloci	3.60 36	0.81	
Pseudotolithus senegalensis	3.60 12	0.81	
Penaeus notialis, female	3.40 30	0.76	299
Citharus linguatula	1.80 24	0.40	
Illex coindetii	1.20 12	0.27	
C R A B S	0.60 120	0.13	
Parapenaeus longirostris	0.60 126	0.13	
Total	446.00	100.01	

PROJECT STATION: 371
 DATE: 26/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 830
 start stop Long E 1309
 TIME :17:43:00 18:13:00 dur.: 30min Purpose code: 3
 LOG :4434.80 4436.30 dist.:1.60nm Area code : 2
 FDEPTH: 76 72 GearCond.code:
 BDEPTH: 76 72 Validity code:
 Towing dir: 6° Wire out: 350 m Speed: 30 kn*10

Sorted: 37 Kg Total catch: 298.00 CATCH/HOUR: 597.60

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP.NO.
	weight numbers		
Synagrops microlepis	252.80 55104	42.30	301
Brotula barbata	100.80 80	16.87	
Trichiurus lepturus	59.20 160	9.91	
Dentex angolensis	38.40 128	6.43	
Branchiostegus semifasciatus	36.80 48	6.16	
Zeus faber	20.80 48	3.48	
Trachurus trecae	20.80 368	3.48	
Atractoscion aequidens	20.80 16	3.40	
Pterothrissus belloci	12.80 112	2.14	
Illex coindetii	9.60 192	1.61	
Pagellus bellottii	9.60 96	1.61	
Citharus linguatula	6.40 96	1.07	
Sepia officinalis hierredda	3.20 16	0.54	
Parapenaeus longirostris	1.60 240	0.27	
Saurida brasiliensis	1.60 80	0.27	
Todarodes sagittatus	1.60 96	0.27	
Boops boops	0.80 16	0.13	
Merluccius pollii	0.00 16		
Total	597.60	100.02	

PROJECT STATION: 372
 DATE: 26/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 824
 start stop Long E 1307
 TIME :19:48:00 20:18:00 dur.: 30min Purpose code: 1
 LOG :4448.10 4449.50 dist.:1.40nm Area code : 2
 FDEPTH: 0 0 GearCond.code:
 BDEPTH: 81 72 Validity code:
 Towing dir: 50° Wire out: 100 m Speed: 28 kn*10
 Sorted: 40 Kg Total catch: 40.00 CATCH/HOUR: 80.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichiurus lepturus	57.80	262	72.25	
Sardinella maderensis	15.20	52	19.00	309
Sardinella aurita	6.40	22	8.00	302
Sepia orbignyana	0.40	18	0.50	
Trachurus trecae	0.20	2	0.25	
Total	80.00		100.00	

PROJECT STATION: 373
 DATE: 29/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 848
 start stop Long E 1309
 TIME :13:26:00 13:56:00 dur.: 30min Purpose code: 3
 LOG :4494.90 4496.10 dist.:1.66nm Area code : 2
 FDEPTH: 80 75 GearCond.code:
 BDEPTH: 60 75 Validity code:
 Towing dir: 30° Wire out: 350 m Speed: 31 kn*10
 Sorted: 61 Kg Total catch: 211.80 CATCH/HOUR: 423.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trichiurus lepturus	245.00	7512	57.84	305
Trachurus trecae	38.40	670	9.07	304
Dentex barnardi	28.00	118	6.61	306
Pterothrissus belloci	24.40	126	5.76	
Umrina canariensis	17.50	20	4.13	
Todaropsis obliquata	15.40	1050	3.64	
Atractoscion aequidens	8.40	6	1.99	
Branchiostegus semifasciatus	8.40	20	1.99	
Brotula barbata	7.00	20	1.65	
Sepia officinalis hierredda	7.00	6	1.65	
Illex coindetii	5.60	250	1.32	
Torpedo torpedo	5.60	42	1.32	
Pagellus bellottii	4.90	28	1.16	
Pentheroscion mblzi	3.40	14	0.80	
Chaetodon hoefleri	2.00	6	0.47	
C R A B S	0.60	118	0.14	
Parapenaeus longirostris	0.60	154	0.14	
Citharus linguatula	0.60	6	0.14	
Chelidontichthys gabonensis	0.60	6	0.14	
Merluccius polli	0.20	64	0.05	
Total	423.60		99.99	

PROJECT STATION: 374
 DATE: 30/ 8/91 GEAR TYPE: PT No: POSITION: Lat S 917
 start stop Long E 1259
 TIME :02:21:00 02:51:00 dur.: 30min Purpose code: 1
 LOG :4612.90 4614.30 dist.:1.40nm Area code : 2
 FDEPTH: 10 10 GearCond.code:
 BDEPTH: 19 19 Validity code:
 Towing dir: 337° Wire out: 100 m Speed: 32 kn*10
 Sorted: 24 Kg Total catch: 120.00 CATCH/HOUR: 240.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	170.00	2550	70.83	307
Trichiurus lepturus	20.00	720	8.33	
Ilisha africana	15.00	188	6.25	308
Pagellus bellottii	10.00	10	4.17	
Galeoides decacactylus	10.00	60	4.17	
Sardinella maderensis	10.00	170	4.17	309
Pteroscion peli	2.00	10	0.83	
Pomadasy incisus	2.00	10	0.83	
Trachurus trecae	1.00	30	0.42	
Parapenaeus longirostris	0.00	80		
Selene dorsalis	0.00	20		
Total	240.00		100.00	

PROJECT STATION: 375
 DATE: 30/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1007
 start stop Long E 1310
 TIME :16:33:00 17:03:00 dur.: 30min Purpose code: 1
 LOG :4746.40 4748.10 dist.:1.59nm Area code : 2
 FDEPTH: 26 18 GearCond.code:
 BDEPTH: 26 18 Validity code:
 Towing dir: 50° Wire out: 150 m Speed: 31 kn*10
 Sorted: 26 Kg Total catch: 137.80 CATCH/HOUR: 275.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	170.00	9350	61.68	310
Pteroscion peli	75.00	2620	27.21	311
Trichiurus lepturus	8.00	230	2.90	
Arius latiscutatus	6.00	2	2.13	
Sphyræna guachancho	5.00	8	1.81	
Stromateus fiatola	4.60	6	1.67	
Ephippion guttifer	3.00	2	1.09	
Cynoglossus canariensis	2.00	10	0.73	
Pomadasy incisus	2.00	10	0.73	
Total	275.60		100.00	

PROJECT STATION: 376
 DATE: 30/ 8/91 GEAR TYPE: PT No:4 POSITION: Lat S 1019
 start stop Long E 1325
 TIME :22:25:00 22:55:00 dur.: 30min Purpose code: 1
 LOG :4797.40 4798.60 dist.:1.20nm Area code : 2
 FDEPTH: 11 11 GearCond.code:
 BDEPTH: 40 46 Validity code:
 Towing dir: 270° Wire out: 150 m Speed: 24 kn*10
 Sorted: 25 Kg Total catch: 261.30 CATCH/HOUR: 522.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	351.30	4104	67.16	313
Trachurus trecae	59.40	306	11.37	
Sardinella aurita	52.90	174	9.95	312
Sardinella maderensis	41.80	1008	8.00	314
Sepia officinalis hierredda	7.20	36	1.38	
Pomadasy incisus	7.20	18	1.39	
Trichiurus lepturus	4.00	54	0.77	
Total	522.60		100.01	

PROJECT STATION: 377
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1038
 start stop Long E 1341
 TIME :06:43:00 07:13:00 dur.: 30min Purpose code: 3
 LOG :4873.10 4874.60 dist.:1.60nm Area code : 2
 FDEPTH: 22 31 GearCond.code:
 BDEPTH: 22 31 Validity code:
 Towing dir: 220° Wire out: 100 m Speed: 31 kn*10
 Sorted: 28 Kg Total catch: 110.40 CATCH/HOUR: 220.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	180.90	16016	61.86	315
Trichiurus lepturus	17.80	80	7.97	
Sphyræna guachancho	10.40	8	4.71	
Pomadasy peroteti	5.40	8	2.90	
Pagellus bellottii	5.50	32	2.64	
Total	220.80		100.00	

PROJECT STATION: 378
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1040
 start stop Long E 1338
 TIME :07:40:00 08:05:00 dur.: 25min Purpose code: 3
 LOG :4877.00 4878.36 dist.:1.20nm Area code : 2
 FDEPTH: 43 50 GearCond.code:
 BDEPTH: 43 50 Validity code:
 Towing dir: 220° Wire out: 250 m Speed: 27 kn*10
 Sorted: 51 Kg Total catch: 99.75 CATCH/HOUR: 239.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex barnardi	70.08	252	29.27	317
Brachydeuterus auritus	37.44	542	15.64	
Atractoscion aequidens	21.60	14	9.02	
Pagellus bellottii	19.44	168	8.12	316
Trachurus trecae	17.52	173	7.32	
Plectorhinchus mediterraneus	17.28	12	7.22	
Pomadasy incisus	13.92	142	5.81	318
Trichiurus lepturus	13.92	50	5.81	
Umrina canariensis	6.72	28	2.81	
Stromateus fiatola	5.52	12	2.31	
Argyrosomus hololepidotus	4.80	2	2.01	
Centrarchops chapini	2.52	24	1.05	
Parapristipoma humile	2.40	5	1.00	
Penaeus notialis	2.16	10	0.96	
Lolliguncula mercatoris	2.16	1490	0.90	
Citharus linguatula	0.96	12	0.46	
Grammolites gruevii	0.48	5	0.20	
Scorpaena angolensis	0.48	5	0.20	
Total	239.40		99.98	

PROJECT STATION: 379
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1043
 start stop Long E 1336
 TIME :10:03:00 10:20:00 dur.: 17min Purpose code: 3
 LOG :4884.40 4885.10 dist.:0.70nm Area code : 2
 FDEPTH: 57 55 GearCond.code: 8
 BDEPTH: 57 55 Validity code: 1
 Towing dir: 330° Wire out: 250 m Speed: 30 kn*10
 Sorted: 24 Kg Total catch: 114.40 CATCH/HOUR: 403.76

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex barnardi	135.68	607	33.65	319
Umrina canariensis	45.94	99	11.63	
Epinephelus aeneus	42.00	11	10.40	
Trachurus trecae	40.94	459	10.14	320
Epinephelus guaza	33.18	4	8.22	
Lolliguncula mercatoris	27.18	10590	6.73	
Epinephelus alexandrinus	15.00	14	3.93	
Pomadasy incisus	14.62	74	3.67	
Pagellus bellottii	13.76	88	3.41	
Centrarchops chapini	8.22	60	2.10	
Plectorhinchus mediterraneus	6.35	4	1.57	
Citharus linguatula	6.35	49	1.57	
Zeus faber	6.35	14	1.57	
Atractoscion aequidens	5.29	4	1.31	
Total	403.74		99.98	

PROJECT STATION: 380
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1045 Long E 1333
 start stop
 TIME :13:06:00 13:15:00 dur. : 9min Purpose code: 3
 LOG :4892.50 4892.90 dist.:0.49nm Area code : 2
 FDEPTH: 84 81 GearCond.code: 5
 BDEPTH: 84 81 Validity code: 1
 Towing dir: 40° Wire out: 400 m Speed: 30 km*10

Sorted: 25 Kg Total catch: 24.80 CATCH/HOUR: 164.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	120.00	380	73.17	321
Dentex angolensis	13.33	40	8.13	
Pagellus bellottii	10.67	47	6.51	
Trichurus lepturus	6.67	19	4.07	
Trachurus trecae	5.33	53	3.25	
Torpedo torpedo	3.33	7	2.03	
Dentex barnardi	3.33	20	2.03	
Zeus faber	1.33	13	0.81	
Total	163.99		100.00	

PROJECT STATION: 384
 DATE: 1/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1114 Long E 1346
 start stop
 TIME :06:19:00 06:49:00 dur. : 30min Purpose code: 3
 LOG :5007.50 5008.90 dist.:1.40nm Area code : 2
 FDEPTH: 19 14 GearCond.code: 5
 BDEPTH: 19 14 Validity code: 1
 Towing dir: 80° Wire out: 100 m Speed: 29 km*10

Sorted: 32 Kg Total catch: 233.60 CATCH/HOUR: 467.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Brachydeuterus auritus	379.40	1559R	81.21	330
Pageillus bellottii	26.60	112	5.69	
Trachurus trecae	21.00	350	4.49	
Stromateus fiatola	16.80	14	3.60	
Sepia officinalis hierredda	13.60	6	2.91	
Umbriina canariensis	4.20	14	0.90	
Pomadasy inciscus	2.80	14	0.60	
Spondylosoma cantharus	2.80	14	0.60	
Hyperoglyphe mosellii	0.00	14		
Total	467.20		100.00	

PROJECT STATION: 381
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1048 Long E 1328
 start stop
 TIME :14:34:00 15:04:00 dur. : 30min Purpose code: 3
 LOG :4901.80 4903.20 dist.:1.49nm Area code : 2
 FDEPTH: 121 115 GearCond.code: 5
 BDEPTH: 121 115 Validity code: 1
 Towing dir: 360° Wire out: 500 m Speed: 29 km*10

Sorted: 32 Kg Total catch: 97.20 CATCH/HOUR: 194.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	108.00	768	55.56	322
Brotula barbata	30.00	24	15.43	
Dentex angolensis	24.00	90	12.35	323
Todaropsis eblanae	19.20	594	9.88	324
Branchiostegus semifasciatus	4.80	6	2.47	
Pageillus bellottii	3.00	12	1.54	
Illex coincettii	2.40	65	1.23	
Uranoscopus albesca	2.40	18	1.23	
Pterothrissus belloci	0.60	6	0.31	
Total	194.40		100.00	

PROJECT STATION: 385
 DATE: 1/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1113 Long E 1343
 start stop
 TIME :07:38:00 08:08:00 dur. : 30min Purpose code: 3
 LOG :5014.00 5015.60 dist.:1.60nm Area code : 2
 FDEPTH: 39 37 GearCond.code: 5
 BDEPTH: 39 37 Validity code: 1
 Towing dir: 80° Wire out: 200 m Speed: 30 km*10

Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 382
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1052 Long E 1323
 start stop
 TIME :16:43:00 17:13:00 dur. : 30min Purpose code: 3
 LOG :4916.10 4917.40 dist.:1.54nm Area code : 2
 FDEPTH: 347 347 GearCond.code: 5
 BDEPTH: 347 347 Validity code: 1
 Towing dir: 320° Wire out: 1000 m Speed: 27 km*10

Sorted: 33 Kg Total catch: 379.90 CATCH/HOUR: 757.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Nematocarcinus africanus	289.50	105920	30.08	
Merluccius pollii, female	275.90	1508	36.37	326
Centrophorus uyato	64.00	10	8.45	
Merluccius pollii, male	44.20	260	5.83	325
Etmopterus spinax	28.60	1466	3.77	
Zenopsis conchifer	28.20	26	3.72	
Trichurus lepturus	5.20	104	6.69	
Laemonema laureysi	5.20	52	0.69	
CPHIDIIDAE	2.60	52	0.34	
Hymenocephalus italicus	2.60	312	0.34	
Epigonus sp.	2.60	26	0.34	
Scorpaena normani	2.60	26	0.34	
MYCTOPHIDAE	2.60	390	0.34	
Aristeus varidens	2.60	182	0.34	
Brosmiculus imberbis *	2.60	26	0.34	
Total	757.80		99.98	

PROJECT STATION: 386
 DATE: 1/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1115 Long E 1338
 start stop
 TIME :09:19:00 09:40:00 dur. : 21min Purpose code: 3
 LOG :5024.70 5025.80 dist.:1.00nm Area code : 2
 FDEPTH: 104 105 GearCond.code: 5
 BDEPTH: 104 105 Validity code: 1
 Towing dir: 35° Wire out: 500 m Speed: 28 km*10

Sorted: 60 Kg Total catch: 856.70 CATCH/HOUR: 2447.71

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	1284.00	4760	52.46	331
Dentex macrophthalmus	848.00	4800	34.64	332
Pterothrissus belloci	64.00	960	2.61	
Trichurus lepturus	60.00	440	2.45	
Umbriina canariensis	60.00	200	2.45	
Epinephelus goreensis	59.71	9	2.44	
Dentex angolensis	28.00	200	1.14	
Atractoscion aequidens	16.00	40	0.65	
Zeus faber	16.00	60	0.65	
Pteroscion peli	8.00	400	0.33	
Sphyræna guanchancho	4.00	40	0.16	
Parapenaeus longirostris	0.00	40		
Todaropsis eblanae	0.00	80		
Total	2447.71		99.98	

PROJECT STATION: 383
 DATE: 31/ 8/91 GEAR TYPE: BT No:1 POSITION: Lat S 1052 Long E 1325
 start stop
 TIME :18:20:00 18:50:00 dur. : 30min Purpose code: 3
 LOG :4923.60 4925.10 dist.:1.60nm Area code : 2
 FDEPTH: 256 241 GearCond.code: 5
 BDEPTH: 256 241 Validity code: 1
 Towing dir: 325° Wire out: 900 m Speed: 30 km*10

Sorted: 25 Kg Total catch: 864.70 CATCH/HOUR: 1729.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Chlorophthalmus atlanticus	1407.60	4204	91.39	327
Pterothrissus belloci	156.40	748	9.04	
Merluccius pollii	95.20	816	5.50	329
Parapenaeus longirostris	20.40	3196	1.18	329
Laemonema laureysi	13.60	408	0.79	
Centrophorus uyato	9.00	2	0.52	
Scorpaena angolensis	6.80	136	0.39	
Malacocephalus occidentalis	6.80	136	0.39	
Todaropsis eblanae	6.80	68	0.39	
Synagrops microlepis	6.80	136	0.39	
Total	1729.40		99.99	

PROJECT STATION: 387
 DATE: 1/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1119 Long E 1333
 start stop
 TIME :13:31:00 14:01:00 dur. : 30min Purpose code: 3
 LOG :5035.10 5037.80 dist.:1.49nm Area code : 2
 FDEPTH: 159 169 GearCond.code: 5
 BDEPTH: 159 169 Validity code: 1
 Towing dir: 30° Wire out: 600 m Speed: 29 km*10

Sorted: 38 Kg Total catch: 1179.00 CATCH/HOUR: 2358.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Diaphus dumerilii	2160.00	2126760	91.60	
Dentex macrophthalmus	50.00	182	2.12	334
Trichurus lepturus	48.00	360	2.04	
Merluccius pollii	42.00	240	1.78	
Pterothrissus belloci	18.00	120	0.76	
Parapenaeus longirostris	12.00	2920	0.51	
Synagrops microlepis	5.00	420	0.39	
Todaropsis eblanae	6.00	180	0.25	
Illex coincettii	6.00	180	0.25	
Dentex angolensis	4.00	16	0.17	
Hoplostethus occidentalis	3.00	60	0.13	
Total	2358.00		99.99	

PROJECT STATION: 388
 DATE: 1/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1117
 start stop Long E 1332
 TIME :14:50:00 15:20:00 dur. : 30min Purpose code: 3
 LOG :5042.00 5043.60 dist.:1.45nm Area code : 2
 FDEPTH: 254 240 GearCond.code:
 BDEPTH: 254 240 Validity code:
 Towing dir: 30° Wire out: 800 m Speed: 28 kn*10
 Sorted: 22 Kg Total catch: 158.00 CATCH/HOUR: 316.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Centrophorus uyato	122.00	46	38.61	335
Merluccius polli, female	98.00	392	31.01	336
Parapenaeus longirostris	22.40	4526	7.09	
Brotula barbata	19.80	18	6.27	
Merluccius polli, male	19.00	62	6.01	337
Trichiurus lepturus	9.00	36	2.85	
Todaropsis eblanae	7.20	144	2.28	
Illex coindetii	6.20	206	1.96	
Pterothrissus belloci	5.40	26	1.71	
Hoplostethus occidentalis	4.40	44	1.39	
Coelorhynchus coelorhynchus	2.60	98	0.82	
Total	316.00		100.00	

PROJECT STATION: 389
 DATE: 1/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1116
 start stop Long E 1331
 TIME :16:22:00 16:52:00 dur. : 30min Purpose code: 3
 LOG :5048.90 5050.30 dist.:1.36nm Area code : 2
 FDEPTH: 350 349 GearCond.code:
 BDEPTH: 350 349 Validity code:
 Towing dir: 10° Wire out:1000 m Speed: 26 kn*10
 Sorted: 30 Kg Total catch: 228.20 CATCH/HOUR: 456.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, female	294.00	1080	64.42	333
Nematocarcinus africanus	120.00	35198	26.29	
Merluccius polli, male	21.00	150	4.60	338
Pterothrissus belloci	4.60	16	1.01	
Todaropsis eblanae	4.60	74	1.01	
Hymenocephalus italicus	3.00	316	0.66	
Laemonema laureysi	3.00	30	0.66	
Etmopterus spinax	3.00	166	0.66	
Halosaurus sp.	1.60	46	0.35	
Chlorophthalmus sp.	1.60	16	0.35	
Total	456.40		100.01	

PROJECT STATION: 390
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1146
 start stop Long E 1344
 TIME :06:19:00 06:46:00 dur. : 27min Purpose code: 3
 LOG :5174.50 5175.90 dist.:1.50nm Area code : 2
 FDEPTH: 26 33 GearCond.code:
 BDEPTH: 26 33 Validity code:
 Towing dir: 230° Wire out: 150 m Speed: 30 kn*10
 Sorted: 33 Kg Total catch: 250.70 CATCH/HOUR: 557.11

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	513.33	10398	92.14	339
Trichiurus lepturus	16.67	51	2.99	
Pagellus bellottii	15.11	151	2.71	
Brachydeuterus auritus	5.11	118	0.92	
Pseudupeneus prayensis	1.78	18	0.32	
Illex coindetii	1.78	33	0.32	
Boops boops	1.78	18	0.32	
Fistularia petimba	1.56	2	0.28	
Total	557.12		100.00	

PROJECT STATION: 391
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1151
 start stop Long E 1341
 TIME :07:45:00 08:15:00 dur. : 30min Purpose code: 3
 LOG :5183.20 5184.60 dist.:1.50nm Area code : 2
 FDEPTH: 53 61 GearCond.code:
 BDEPTH: 53 61 Validity code:
 Towing dir: 315° Wire out: 250 m Speed: 30 kn*10
 Sorted: 49 Kg Total catch: 494.00 CATCH/HOUR: 988.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	826.00	5900	83.60	340
Dentex barnardi	50.00	220	5.06	
Pagellus bellottii	26.00	120	2.63	
Atractoscion aequidens	24.00	20	2.43	
Sarda sarda	24.00	20	2.43	
Trichiurus lepturus	20.00	60	2.02	
Boops boops	18.00	60	1.82	
Total	988.00		99.99	

PROJECT STATION: 392
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1155
 start stop Long E 1343
 TIME :09:26:00 09:56:00 dur. : 30min Purpose code: 3
 LOG :5194.10 5195.70 dist.:1.70nm Area code : 2
 FDEPTH: 33 51 GearCond.code:
 BDEPTH: 33 51 Validity code:
 Towing dir: 270° Wire out: 150 m Speed: 32 kn*10
 Sorted: Kg Total catch: CATCH/HOUR:

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

PROJECT STATION: 393
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1156
 start stop Long E 1337
 TIME :10:47:00 11:17:00 dur. : 30min Purpose code: 3
 LOG :5201.60 5202.90 dist.:1.50nm Area code : 2
 FDEPTH: 75 75 GearCond.code:
 BDEPTH: 75 75 Validity code:
 Towing dir: 20° Wire out: 350 m Speed: 31 kn*10
 Sorted: 52 Kg Total catch: 599.80 CATCH/HOUR: 1199.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	731.40	4830	60.97	341
Dentex macrophthalmus	292.00	1150	24.34	342
Dentex gibbosus	36.80	46	3.07	
Pagellus bellottii	36.80	184	3.07	
Dentex barnardi	25.20	92	2.10	
Sparus caeruleostictus	18.40	22	1.53	
Trichiurus lepturus	16.00	22	1.33	
Zeus faber	16.00	22	1.33	
Parapristipoma humile	13.80	22	1.15	
Dentex angolensis	4.60	22	0.38	
Epinephelus alexandrinus	3.80	2	0.32	
Sepia officinalis hierredda	2.60	2	0.22	
Brachydeuterus auritus	2.20	22	0.18	
Total	1199.60		99.99	

PROJECT STATION: 394
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1155
 start stop Long E 1333
 TIME :12:23:00 12:53:00 dur. : 30min Purpose code: 3
 LOG :5210.80 5212.10 dist.:1.50nm Area code : 2
 FDEPTH: 99 103 GearCond.code:
 BDEPTH: 99 103 Validity code:
 Towing dir: 360° Wire out: 450 m Speed: 30 kn*10
 Sorted: 50 Kg Total catch: 322.80 CATCH/HOUR: 645.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	577.20	2886	89.41	343
Trachurus trecae	26.00	298	4.03	344
Dentex angolensis	22.00	78	3.41	
Sparus pagrus africanus	9.00	12	1.39	
Dentex gibbosus	7.80	26	1.21	
Illex coindetii	1.80	168	0.28	
Boops boops	1.80	26	0.28	
Total	645.60		100.01	

PROJECT STATION: 395
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1155
 start stop Long E 1330
 TIME :13:49:00 14:19:00 dur. : 30min Purpose code: 3
 LOG :5218.30 5219.60 dist.:1.52nm Area code : 2
 FDEPTH: 250 237 GearCond.code:
 BDEPTH: 250 237 Validity code:
 Towing dir: 350° Wire out: 800 m Speed: 30 kn*10
 Sorted: 35 Kg Total catch: 313.20 CATCH/HOUR: 626.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Chlorophthalmus agassizi	216.00	5964	34.48	
Merluccius polli, female	136.80	378	21.84	346
Dentex macrophthalmus	90.00	342	14.37	
HYCTOPHIDAE	41.40	19458	6.61	
Zenopsis conchifer	39.60	288	6.32	
Merluccius polli, male	19.80	36	3.16	345
Trichiurus lepturus	18.00	36	2.87	
Parapenaeopsis atlantica	18.00	2124	2.87	
Trachurus capensis	18.00	18	2.87	
Synagrops microlepis	10.80	918	1.72	
Brotula barbata	9.00	18	1.44	
Pterothrissus belloci	5.40	18	0.86	
Malacocephalus occidentalis	1.80	18	0.29	
Coelorhynchus coelorhynchus	1.80	36	0.29	
Citharus linguatula	0.00	18		
Total	626.40		99.99	

PROJECT STATION: 396
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1199 Long E 1926
 start stop
 TIME :15:25:00 15:55:00 dur. : 30min Purpose code: 3
 LOG :5226.40 5227.70 dist.:1.49nm Area code : 2
 FDEPTH: 350 347 GearCond.code:
 BDEPTH: 350 347 Validity code:
 Towing dir: 350° Wire out:1000 m Speed: 28 kn*10
 Sorted: 29 Kg Total catch: 534.60 CATCH/HOUR: 1069.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, female	644.40	9204	60.27	347
Nematocarcinus africanus	140.40	112320	13.13	
Merluccius polli, male	79.20	396	7.41	348
Etmopterus spinax	75.60	2800	7.07	
Trichiurus lepturus	46.80	180	4.38	
Centropristis striata	36.00	6	3.37	
Chlorophthalmus agassizi	18.00	360	1.68	
Pterothrissus belloni	10.80	36	1.01	
Hymenocephalus italicus	7.20	468	0.67	
Epigonus telescopus	5.40	72	0.51	
Laemonema laureysi	5.40	36	0.51	
Aristeus varidens	0.00	612		
Total	1069.20		100.31	

PROJECT STATION: 397
 DATE: 2/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1155 Long E 1923
 start stop
 TIME :15:54:00 17:24:00 dur. : 30min Purpose code: 3
 LOG :5233.30 5234.80 dist.:1.49nm Area code : 2
 FDEPTH: 450 445 GearCond.code:
 BDEPTH: 450 445 Validity code:
 Towing dir: 350° Wire out:1200 m Speed: 28 kn*10
 Sorted: 23 Kg Total catch: 202.20 CATCH/HOUR: 404.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius polli, female	253.80	954	52.76	350
Nematocarcinus africanus	93.60	61776	23.15	349
Laemonema laureysi	19.80	684	4.90	
Etmopterus spinax	9.00	406	2.23	
Merluccius polli, male	7.20	18	1.78	351
Hoplostethus cademalli	3.60	198	0.89	
Aristeus varidens	3.60	1260	0.89	
Halosaurus ovenii	1.80	126	0.45	
Stomias affinis	1.80	954	0.45	
Malacocephalus laevis	1.80	18	0.45	
Coelorhynchus coelorhynchus	1.80	36	0.45	
Hymenocephalus italicus	1.80	156	0.45	
Chlorophthalmus atlanticus	1.80	18	0.45	
POLYCHAELIDAE	1.00	18	0.25	
Halieutza spicata	1.00	18	0.25	
MYCTOPHIDAE	1.00	810	0.25	
Total	404.40		100.05	

PROJECT STATION: 398
 DATE: 3/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1224 Long E 1922
 start stop
 TIME :08:52:00 09:22:00 dur. : 30min Purpose code: 3
 LOG :5362.00 5363.60 dist.:1.57nm Area code : 2
 FDEPTH: 102 100 GearCond.code:
 BDEPTH: 102 100 Validity code:
 Towing dir: 30° Wire out: 500 m Speed: 25 kn*10
 Sorted: 54 Kg Total catch: 433.80 CATCH/HOUR: 867.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	625.60	2048	72.14	351
Trachurus trecae	161.60	580	18.63	352
Atractoscion aequidens	32.60	16	3.87	
Boops boops	20.80	224	2.40	
Dentex angolensis	20.60	80	2.40	
Zeus faber	3.20	16	0.37	
Illex coincettii	1.60	32	0.18	
Total	867.20		99.99	

PROJECT STATION: 399
 DATE: 3/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1225 Long E 1926
 start stop
 TIME :10:38:00 11:08:00 dur. : 30min Purpose code: 3
 LOG :5370.50 5371.80 dist.:1.20nm Area code : 2
 FDEPTH: 73 75 GearCond.code:
 BDEPTH: 73 75 Validity code:
 Towing dir: 30° Wire out: 350 m Speed: 27 kn*10
 Sorted: 90 Kg Total catch: 2648.60 CATCH/HOUR: 5297.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	4922.40	23204	92.92	353
Dentex macrophthalmus	228.40	1230	4.31	
Trichiurus lepturus	117.20	13478	2.21	
Dentex barnardi	29.20	58	0.55	
Total	5297.20		99.99	

PROJECT STATION: 400
 DATE: 3/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1220 Long E 1931
 start stop
 TIME :14:08:00 14:38:00 dur. : 30min Purpose code: 3
 LOG :5380.70 5382.00 dist.:1.43nm Area code : 2
 FDEPTH: 54 51 GearCond.code:
 BDEPTH: 54 51 Validity code:
 Towing dir: 210° Wire out: 300 m Speed: 28 kn*10
 Sorted: 29 Kg Total catch: 244.70 CATCH/HOUR: 489.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	289.00	2396	59.05	354
Pagellus bellottii	127.40	730	26.03	355
Urophycis canariensis	10.60	34	3.80	
Atractoscion aequidens	17.00	16	3.47	
Dentex barnardi	13.60	102	2.76	
Sardinella aurita	8.40	34	1.72	
Pomatomus saltatrix	9.00	2	1.63	
Chaetodon hoefleri	5.00	34	1.02	
Pomadasys incisus	2.40	16	0.49	
Total	489.40		99.99	

PROJECT STATION: 401
 DATE: 3/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1218 Long E 1927
 start stop
 TIME :15:32:00 16:02:00 dur. : 30min Purpose code: 3
 LOG :5388.20 5389.70 dist.:1.67nm Area code : 2
 FDEPTH: 88 88 GearCond.code:
 BDEPTH: 88 88 Validity code:
 Towing dir: 210° Wire out: 400 m Speed: 30 kn*10
 Sorted: 56 Kg Total catch: 420.60 CATCH/HOUR: 841.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	490.00	2054	57.06	356
Dentex macrophthalmus	225.00	1050	26.75	357
Boops boops	90.00	720	10.70	358
Atractoscion aequidens	18.00	14	2.14	
Ephippium guttifer	10.40	14	1.24	
Dentex barnardi	7.40	30	0.88	
Trichiurus lepturus	6.00	14	0.71	
Zeus faber	4.40	14	0.52	
Total	841.20		100.00	

PROJECT STATION: 402
 DATE: 3/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1220 Long E 1922
 start stop
 TIME :17:37:00 18:07:00 dur. : 30min Purpose code: 3
 LOG :5402.90 5404.20 dist.:1.60nm Area code : 2
 FDEPTH: 86 78 GearCond.code:
 BDEPTH: 86 78 Validity code:
 Towing dir: 195° Wire out: 400 m Speed: 30 kn*10
 Sorted: 57 Kg Total catch: 368.50 CATCH/HOUR: 737.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	510.80	3346	69.31	360
Trachurus trecae	135.20	824	18.34	359
Trichiurus lepturus	75.40	92	10.23	
Boops boops	7.60	80	1.06	
Zeus faber	6.80	26	0.90	
Illex coincettii	0.60	18	0.08	
Synagrops microlepis	0.60	182	0.08	
Thorogobius angolensis	0.00	52		
Merluccius polli	0.00	26		
Total	737.00		100.00	

PROJECT STATION: 403
 DATE: 5/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1257 Long E 1255
 start stop
 TIME :07:45:00 08:15:00 dur. : 30min Purpose code: 3
 LOG :5774.30 5775.60 dist.:1.60nm Area code : 2
 FDEPTH: 32 44 GearCond.code:
 BDEPTH: 32 44 Validity code:
 Towing dir: 195° Wire out: 200 m Speed: 32 kn*10
 Sorted: 34 Kg Total catch: 186.10 CATCH/HOUR: 332.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Atractoscion aequidens	111.00	126	33.41	362
Brachydeuterus auritus	94.60	6350	28.48	363
Pomatomus saltatrix	69.60	50	20.95	361
Trachurus trecae	22.00	582	6.62	
Stromateus fiatola	7.90	10	2.36	
Sepia orbignyana	5.80	32	1.69	
Selene dorsalis	5.80	32	1.69	
Trichiurus lepturus	3.40	22	1.02	
Sepia officinalis hierredda	3.00	2	0.90	
Serranus accraensis	1.20	32	0.36	
Grammolites gruevii	1.20	32	0.36	
Citharus linguatula	1.20	60	0.36	
Dentex macrophthalmus	1.20	44	0.36	
Alteuthis africana	1.20	440	0.36	
Chaetodipterus gorenensis	1.20	10	0.36	
Loligo vulgaris	0.60	274	0.18	
Loligo vulgaris	0.60	10	0.18	
Thorogobius angolensis	0.60	22	0.18	
Engraulis encrasicolus	0.60	22	0.18	
Microchirus freschopi	0.00	10		
Brotula barbata	0.00	10		
Total	332.20		99.99	

PROJECT STATION: 404
 DATE: 5/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1303
 start stop Long E 1249
 TIME :09:19:00 09:39:00 dur. : 19min Purpose code: 3
 LOG :5784.00 5784.80 dist.:0.80nm Area code : 2
 FDEPTH: 93 90 GearCond.code:
 BDEPTH: 93 90 Validity code:
 Towing dir: 50° Wire out: 450 m Speed: 27 kn*10

Sorted: 63 Kg Total catch: 537.20 CATCH/HOUR: 1696.42

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	1140.95	4569	67.26	364
Dentex macrophthalms	536.84	1342	31.65	365
Squatina oculata	12.63	3	0.74	
Branchiostegus semifasciatus	4.74	3	0.28	
Anthias anthias	1.26	25	0.07	
Grammolites gruvelli	0.00	25		
Total	1696.42		100.00	

PROJECT STATION: 405
 DATE: 5/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1307
 start stop Long E 1245
 TIME :10:40:00 11:10:00 dur. : 30min Purpose code: 3
 LOG :5792.60 5794.30 dist.:1.40nm Area code : 2
 FDEPTH: 106 102 GearCond.code:
 BDEPTH: 106 102 Validity code:
 Towing dir: 55° Wire out: 200 m Speed: 25 kn*10

Sorted: 25 Kg Total catch: 169.10 CATCH/HOUR: 338.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalms	178.00	922	52.63	366
Trachurus trecae	87.20	1220	25.78	367
Umbrina canariensis	53.20	194	15.73	
Dentex angolensis	8.60	26	1.95	
Anthias anthias	5.20	96	1.54	
Boops boops	4.00	52	1.18	
Dentex barnardi	4.00	12	1.18	
Illex coindetii	0.00	12		
Todaropsis eblanae	0.00	12		
Total	338.20		99.99	

PROJECT STATION: 406
 DATE: 5/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1310
 start stop Long E 1236
 TIME :13:12:00 13:16:00 dur. : 4min Purpose code: 3
 LOG :5911.80 5911.80 dist.:0.21nm Area code : 2
 FDEPTH: 111 108 GearCond.code: 5
 BDEPTH: 111 108 Validity code: 9
 Towing dir: 40° Wire out: 500 m Speed: 12 kn*10

Sorted: 11 Kg Total catch: 10.90 CATCH/HOUR: 163.50

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalms	90.00	435	55.05	
Dentex angolensis	54.00	135	33.03	
Branchiostegus semifasciatus	18.00	15	11.01	
Anthias anthias	1.50	15	3.92	
Total	163.50		100.01	

PROJECT STATION: 407
 DATE: 5/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1339
 start stop Long E 1229
 TIME :16:04:00 16:34:00 dur. : 30min Purpose code: 3
 LOG :5837.50 5838.80 dist.:1.48nm Area code : 2
 FDEPTH: 113 174 GearCond.code:
 BDEPTH: 113 174 Validity code:
 Towing dir: 360° Wire out: 500 m Speed: 28 kn*10

Sorted: 34 Kg Total catch: 203.40 CATCH/HOUR: 406.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalms	240.00	4440	59.00	368
Trachurus trecae	67.20	372	16.52	369
Dentex angolensis	30.00	84	7.37	
Spicara alta	24.00	192	5.90	
Zeus faber	18.00	12	4.42	
Boops boops	18.00	138	4.42	
Sparus nagrus pagrus	9.60	24	2.35	
Total	406.80		99.99	

PROJECT STATION: 408
 DATE: 5/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1344
 start stop Long E 1230
 TIME :17:38:00 18:08:00 dur. : 30min Purpose code: 3
 LOG :5847.10 5848.60 dist.:1.50nm Area code : 2
 FDEPTH: 100 103 GearCond.code:
 BDEPTH: 100 103 Validity code:
 Towing dir: 360° Wire out: 450 m Speed: 28 kn*10

Sorted: 42 Kg Total catch: 249.00 CATCH/HOUR: 498.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalms	364.80	760	73.25	370
Dentex angolensis	72.00	240	14.46	371
Umbrina canariensis	26.40	108	5.30	
Sparus nagrus pagrus	24.00	12	4.32	
Trachurus trecae	7.20	24	1.45	
Boops boops	1.20	24	0.24	
Anthias anthias	1.20	24	0.24	
Parapandalus narval	0.60	240	0.12	
Saurida brasiliensis	0.60	72	0.12	
Total	498.00		100.00	

PROJECT STATION: 409
 DATE: 6/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1356
 start stop Long E 1224
 TIME :06:20:00 06:50:00 dur. : 30min Purpose code: 3
 LOG :5887.50 5888.90 dist.:1.40nm Area code : 2
 FDEPTH: 23 32 GearCond.code:
 BDEPTH: 23 32 Validity code:
 Towing dir: 200° Wire out: 150 m Speed: 29 kn*10

Sorted: 58 Kg Total catch: 57.60 CATCH/HOUR: 115.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Pomatomus saltatrix	75.60	58	65.63	387
Cecapeterus rhonchus	26.20	36	22.74	388
Sphyrna zygaena	3.00	2	2.60	
Spionciliosoma cantharus	3.00	2	2.60	
Sphyrna sphyraena	2.80	8	2.43	
Fistularia petimma	2.40	8	2.08	
Dentex barnardi	1.80	4	1.56	
Todarodes sagittatus	0.20	2	0.17	
Pagellus bellottii	0.20	2	0.17	
Total	115.20		89.99	

PROJECT STATION: 410
 DATE: 6/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1404
 start stop Long E 1219
 TIME :08:09:00 08:39:00 dur. : 30min Purpose code: 3
 LOG :5899.60 5900.90 dist.:1.50nm Area code : 2
 FDEPTH: 102 96 GearCond.code:
 BDEPTH: 102 96 Validity code:
 Towing dir: 15° Wire out: 500 m Speed: 29 kn*10

Sorted: 59 Kg Total catch: 259.30 CATCH/HOUR: 518.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	375.40	2896	72.39	372
Atractoscion aequidens	37.80	54	7.29	
Squatina oculata	26.40	6	5.09	
Dentex barnardi	19.00	36	3.66	
Zeus faber	13.60	18	2.62	
Sarda sarda	12.60	8	2.43	
Dentex gibbosus	11.80	18	2.28	
Dentex macrophthalms	10.80	54	2.08	
Dentex angolensis	7.20	36	1.39	
Pagellus bellottii	1.80	8	0.35	
Boops boops	1.80	8	0.35	
Illex coindetii	0.40	18	0.09	
Todaropsis eblanae	0.00	8		
Total	518.60		100.01	

PROJECT STATION: 411
 DATE: 6/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1409
 start stop Long E 1221
 TIME :10:50:00 11:20:00 dur. : 30min Purpose code: 3
 LOG :5920.00 5921.30 dist.:1.40nm Area code : 2
 FDEPTH: 19 14 GearCond.code:
 BDEPTH: 19 14 Validity code:
 Towing dir: 340° Wire out: 100 m Speed: 31 kn*10

Sorted: 86 Kg Total catch: 1041.95 CATCH/HOUR: 2083.70

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Lithognathus mormyrus	794.40	2832	38.12	373
Cecapeterus rhonchus	528.00	1680	25.34	374
Trachurus trecae	295.20	7296	14.17	375
Dentex barnardi	154.80	288	7.43	
Sepia officinalis hierredda	91.20	24	4.38	
Calceides decadactylus	72.00	192	3.46	
Palistes capricus	45.60	120	2.19	
Diplodus cervinus cervinus	40.80	48	1.96	
Salene dorsalis	24.00	120	1.15	
Pomacanthus jubelinii	14.40	24	0.69	
Pagellus bellottii	12.00	72	0.58	
Lichia mta	11.00	2	0.53	
Boops boops	0.20	2	0.01	
Sardinella aurita	0.10	2		
Total	2083.70		100.01	

PROJECT STATION: 412
 DATE: 6/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1411 Long E 1217
 start stop
 TIME :12:25:00 12:55:00 dur. : 30min Purpose code: 3
 LOG :5929.40 5930.80 dist.:1.40nm Area code : 2
 FDEPTH: 72 70 GearCond.code:
 BDEPTH: 72 70 Validity code:
 Towing dir: 120° Wire out: 200 m Speed: 11 km*10

Sorted: 30 Kg Total catch: 220.00 CATCH/HOUR: 440.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	264.60	952	60.14	376
Boops boops	44.80	504	10.18	377
Spondyllosoma cantharus	42.00	42	9.55	
Dentex barnardi	30.80	143	7.00	
Erythrocles monodi	22.40	26	5.09	
Hyperglyphe moselii	18.60	4	4.23	
Pagellus bellottii	9.90	42	2.23	
Parapristigoma octolineatum	7.00	28	1.59	
Total	440.00		100.01	

PROJECT STATION: 413
 DATE: 6/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1419 Long E 1219
 start stop
 TIME :14:46:00 15:22:00 dur. : 36min Purpose code: 3
 LOG :5946.40 5948.10 dist.:1.40nm Area code : 2
 FDEPTH: 47 39 GearCond.code:
 BDEPTH: 47 39 Validity code:
 Towing dir: 350° Wire out: 250 m Speed: 29 km*10

Sorted: 53 Kg Total catch: 236.30 CATCH/HOUR: 393.83

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Atractoscion aequidens	303.67	330	77.11	378
Trachurus trecae	35.17	285	8.93	379
Lithognathus mormyrus	11.17	37	2.64	
Argyrosomus hololepidotus	9.00	7	2.29	
Trichurus lepturus	7.50	7	1.90	
Pomatomus saltatrix	7.50	7	1.90	
Alloteuthis africana	5.17	3786	1.31	
Dentex barnardi	4.50	7	1.14	
Pagellus bellottii	3.67	37	0.93	
Trachurus trecae	2.17	660	0.55	380
Pomadasy incisus	2.17	30	0.55	
Boops boops	1.90	7	0.38	
Septia officinalis hierreda	0.67	7	0.17	
Total	393.86		100.00	

PROJECT STATION: 414
 DATE: 6/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1426 Long E 1216
 start stop
 TIME :17:34:00 18:04:00 dur. : 30min Purpose code: 3
 LOG :5968.10 5969.50 dist.:1.40nm Area code : 2
 FDEPTH: 108 99 GearCond.code:
 BDEPTH: 108 99 Validity code:
 Towing dir: 5° Wire out: 500 m Speed: 20 km*10

Sorted: 24 Kg Total catch: 292.80 CATCH/HOUR: 585.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	189.60	1366	32.38	381
Trachurus trecae	165.60	3672	29.28	382
Umrina canariensis	79.20	215	13.52	383
Boops boops	79.20	864	13.52	
Dentex angolensis	21.60	72	3.69	
Dentex barnardi	14.40	24	2.46	
Zeus faber	12.00	24	2.05	
Atractoscion aequidens	9.60	8	1.64	
Trigla lyra	7.20	96	1.23	
Lutjanus sp.	2.40	24	0.41	
Pagellus bellottii	2.40	144	0.41	
Parapandalus narval	1.20	360	0.20	
Citharus linguatula	1.20	72	0.20	
Merluccius polli	0.00	48		
Total	585.60		99.99	

PROJECT STATION: 415
 DATE: 7/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1514 Long E 1201
 start stop
 TIME :07:27:00 07:50:00 dur. : 23min Purpose code: 3
 LOG :6076.30 6077.30 dist.:1.20nm Area code : 2
 FDEPTH: 95 150 GearCond.code:
 BDEPTH: 95 150 Validity code:
 Towing dir: 25° Wire out: 500 m Speed: 30 km*10

Sorted: 20 Kg Total catch: 61.20 CATCH/HOUR: 159.65

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Erythrocles monodi	95.48	650	59.81	385
Anthias anthias	46.17	430	28.92	384
Trachurus trecae	5.48	243	3.43	
Dentex macrophthalmus	4.70	23	2.94	
Dentex barnardi	3.13	3	1.96	
Raja miraletus	2.61	3	1.63	
Boops boops	1.57	16	0.98	
Todaropsis eblanae	0.52	8	0.39	
Total	159.66		100.00	

PROJECT STATION: 416
 DATE: 7/ 9/91 GEAR TYPE: BT No:2 POSITION:Lat S 1527 Long E 1122
 start stop
 TIME :12:28:00 12:58:00 dur. : 30min Purpose code: 3
 LOG :6118.50 6119.60 dist.:1.62nm Area code : 2
 FDEPTH: 33 31 GearCond.code:
 BDEPTH: 33 31 Validity code:
 Towing dir: 2° Wire out: 200 m Speed: 11 km*10

Sorted: 53 Kg Total catch: 345.50 CATCH/HOUR: 691.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex barnardi	143.00	306	20.69	389
Trachurus trecae	115.60	743	16.73	388
Diplodus sargus capensis	106.60	442	15.43	390
Pagellus bellottii	94.80	910	13.72	
Spondyllosoma cantharus	65.00	429	9.41	392
Lithognathus mormyrus	41.60	246	6.02	391
Myliobatis aquila	35.00	26	5.07	
Boops boops	22.00	298	3.18	
Pomadasy incisus	19.40	182	2.81	
Squalus blainvillie	15.60	26	2.26	
Diplodus cervinus cervinus	13.00	52	1.88	
Dentex macrophthalmus	10.40	26	1.51	
Umrina canariensis	9.00	38	1.30	
Total	691.00		100.01	

PROJECT STATION: 417
 DATE: 7/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1528 Long E 1157
 start stop
 TIME :14:48:00 15:18:00 dur. : 30min Purpose code: 3
 LOG :6136.40 6137.80 dist.:0.99nm Area code : 2
 FDEPTH: 85 80 GearCond.code:
 BDEPTH: 85 80 Validity code:
 Towing dir: 30° Wire out: 400 m Speed: 18 km*10

Sorted: 33 Kg Total catch: 517.90 CATCH/HOUR: 1035.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	546.00	3328	52.71	393
Trachurus capensis	104.00	468	10.04	394
Dentex angolensis	85.60	339	8.28	
Spondyllosoma cantharus	59.60	104	5.77	
Plectorhinchus mediterraneus	57.20	26	5.52	
Pagellus bellottii	57.20	393	5.52	
Trachurus trecae	33.60	203	3.26	
Dentex gibbosus	31.20	26	3.01	
Carcharhinus sp.	30.00	6	2.90	
Atractoscion aequidens	23.00	10	2.22	
Boops boops	5.20	26	3.50	
Spicara alta	2.60	26	0.25	
Total	1035.80		99.98	

PROJECT STATION: 418
 DATE: 8/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1535 Long E 1159
 start stop
 TIME :08:32:00 08:42:00 dur. : 10min Purpose code: 3
 LOG :6149.70 6150.20 dist.:0.50nm Area code : 2
 FDEPTH: 40 38 GearCond.code: 5
 BDEPTH: 40 38 Validity code:
 Towing dir: 20° Wire out: 200 m Speed: 30 km*10

Sorted: 24 Kg Total catch: 260.40 CATCH/HOUR: 1562.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex barnardi	277.20	1108	17.74	396
Boops boops	270.60	4092	17.32	395
Trachurus trecae	244.20	2112	15.63	397
Spondyllosoma cantharus	171.60	529	10.98	
Diplodus cervinus cervinus	151.80	396	9.72	
Pagellus bellottii	138.60	996	8.87	
Lithognathus mormyrus	72.60	330	4.55	
Diplodus sargus capensis	72.60	336	4.65	
Pomadasy incisus	66.00	660	4.22	
Plectorhinchus macrolepis	59.40	132	3.60	
Dentex macrophthalmus	19.80	66	1.27	
Chromis sp.	13.20	132	0.84	
Atractoscion aequidens	4.80	6	0.31	
Total	1562.40		100.00	

PROJECT STATION: 419
 DATE: 8/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1534
 start stop Long E 1154
 TIME :10:16:00 10:46:00 dur. : 30min Purpose code: 3
 LOG :6163.20 6164.60 dist.:1.50nm Area code : 2
 FDEPTH: 104 115 GearCond.code:
 BDEPTH: 104 115 Validity code:
 Towing dir: 5° Wire out: 500 m Speed: 28 kn*10
 Sorted: 47 Kg Total catch: 461.90 CATCH/HOUR: 923.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	358.20	2184	38.77	398
Dentex angolensis	140.40	378	15.20	400
Umbrina canariensis	138.60	556	15.00	399
Squatina squatina	66.00	22	7.14	
Pagellus bellottii	41.40	306	4.40	
Trachurus capensis	39.60	198	4.29	
Trachurus trecae	30.60	270	3.31	
Harriotta raleighana	27.00	36	2.92	
Spondyliosoma cantharus	23.40	36	2.53	
Atractoscion aequidens	21.60	12	2.34	
Zenopsis conchifer	14.40	18	1.56	
Squalus sp.	9.00	18	0.97	
Trigla capensis	3.60	36	0.39	
Anthias anthias	3.60	36	0.39	
Pomadasy incisus	1.80	18	0.19	
Spicara alta	1.80	18	0.19	
Boops boops	1.80	36	0.19	
Citharus linguatula	1.00	72	0.11	
Total		923.80	99.97	

PROJECT STATION: 420
 DATE: 8/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1538
 start stop Long E 1158
 TIME :12:00:00 12:15:00 dur. : 15min Purpose code: 3
 LOG :6174.20 6175.00 dist.:0.82nm Area code : 2
 FDEPTH: 26 23 GearCond.code: 5
 BDEPTH: 26 23 Validity code: 1
 Towing dir: 30° Wire out: 150 m Speed: 30 kn*10
 Sorted: 29 Kg Total catch: 116.80 CATCH/HOUR: 467.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Lithognathus mormyrus	124.80	864	26.71	402
Dentex barnardi	121.60	1344	26.03	
Pagellus bellottii	80.00	720	17.12	
Gymnura altavela	40.00	16	8.56	
Diplodus sargus capensis	35.20	176	7.53	
Trachurus trecae	33.60	672	7.19	401
Spondyliosoma cantharus	16.00	128	3.42	
Dasyatis sp.	8.00	16	1.71	
Todaropsis eblanae	4.80	96	1.03	
Trachurus capensis	3.20	16	0.68	
Total		467.20	99.98	

PROJECT STATION: 421
 DATE: 8/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1538
 start stop Long E 1155
 TIME :12:59:00 13:29:00 dur. : 30min Purpose code: 3
 LOG :6180.70 6182.50 dist.:1.69nm Area code : 2
 FDEPTH: 88 91 GearCond.code:
 BDEPTH: 88 91 Validity code:
 Towing dir: 5° Wire out: 400 m Speed: 31 kn*10
 Sorted: 42 Kg Total catch: 581.00 CATCH/HOUR: 1162.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	672.00	5040	57.83	403
Umbrina canariensis	140.00	476	12.05	
Trachurus trecae	120.40	924	10.36	404
Pagellus bellottii	120.40	644	10.36	
Trachurus capensis	50.40	252	4.34	
Spondyliosoma cantharus	19.60	28	1.69	
Anthias anthias	16.80	112	1.45	
Zeus faber	8.40	28	0.72	
Dentex angolensis	8.40	56	0.72	
Trichiurus lepturus	5.60	28	0.48	
Total		1162.00	100.00	

PROJECT STATION: 422
 DATE: 8/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1542
 start stop Long E 1153
 TIME :14:49:00 15:19:00 dur. : 30min Purpose code: 3
 LOG :6193.10 6194.50 dist.:1.58nm Area code : 2
 FDEPTH: 67 74 GearCond.code:
 BDEPTH: 67 74 Validity code:
 Towing dir: 15° Wire out: 350 m Speed: 30 kn*10
 Sorted: 60 Kg Total catch: 599.00 CATCH/HOUR: 1198.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	380.00	3120	31.72	405
Pagellus bellottii	340.00	1840	28.38	406
Lithognathus mormyrus	176.00	400	14.69	407
Trachurus trecae	86.00	660	7.18	408
Pomadasy peroteti	74.00	140	6.18	
Trichiurus lepturus	40.00	540	3.34	
Argyrosomus hololepidotus	20.00	20	1.67	
Zeus faber	20.00	40	1.67	
Chelidonichthys lucerna	16.00	20	1.34	
Pterothrissus belloci	12.00	200	1.00	
Dasyatis margarita	10.00	20	0.83	
Epinephelus goreensis	10.00	20	0.83	
Umbrina canariensis	6.00	40	0.50	
Raja miraletus	4.00	20	0.33	
Spondyliosoma cantharus	4.00	20	0.33	
Total		1198.00	99.99	

PROJECT STATION: 423
 DATE: 8/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1540
 start stop Long E 1146
 TIME :16:38:00 17:08:00 dur. : 30min Purpose code: 3
 LOG :6205.20 6206.70 dist.:1.47nm Area code : 2
 FDEPTH: 104 104 GearCond.code:
 BDEPTH: 104 104 Validity code:
 Towing dir: 10° Wire out: 450 m Speed: 28 kn*10
 Sorted: 30 Kg Total catch: 363.60 CATCH/HOUR: 727.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	225.60	1678	31.02	409
Trachurus capensis	156.00	742	21.45	410
Trachurus trecae	144.00	1246	19.80	411
Dentex angolensis	55.20	192	7.59	
Pagellus bellottii	52.80	312	7.26	
Umbrina canariensis	43.20	240	5.94	
Mustelus mustelus	24.00	24	3.30	
Spicara alta	12.00	144	1.65	
Zeus faber	7.20	24	0.99	
Perulibatrachus rossignoli	4.80	24	0.66	
Sepia officinalis hierreda	2.40	24	0.33	
Total		727.20	99.99	

PROJECT STATION: 424
 DATE: 9/ 9/91 GEAR TYPE: PT No:4 POSITION:Lat S 1559
 start stop Long E 1140
 TIME :00:31:00 01:31:00 dur. : 60min Purpose code: 1
 LOG :6271.60 6274.00 dist.:2.40nm Area code : 2
 FDEPTH: 50 50 GearCond.code:
 BDEPTH: 81 127 Validity code:
 Towing dir: 290° Wire out: 150 m Speed: 27 kn*10
 Sorted: 29 Kg Total catch: 57.20 CATCH/HOUR: 57.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	44.00	446	76.92	412
Trachurus capensis	12.00	72	20.98	413
Loligo vulgaris	1.20	2	2.10	
Total		57.20	100.00	

PROJECT STATION: 425
 DATE: 9/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1628
 start stop Long E 1148
 TIME :12:28:00 12:58:00 dur. : 30min Purpose code: 3
 LOG :6344.50 6346.10 dist.:1.67nm Area code : 2
 FDEPTH: 9 10 GearCond.code:
 BDEPTH: 9 10 Validity code:
 Towing dir: 190° Wire out: 100 m Speed: 32 kn*10
 Sorted: 33 Kg Total catch: 225.80 CATCH/HOUR: 451.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Sphyrna lewini	320.00	16	70.86	
Lithognathus mormyrus	48.00	536	10.63	
Loligo vulgaris	48.00	292	10.63	414
Diplodus sargus capensis	18.40	116	4.07	
Trachurus trecae	6.40	232	1.42	415
Sardinops ocellata	4.80	40	1.06	
Pomatomus saltatrix	2.40	4	0.53	
Sarda sarda	2.00	4	0.44	
Pagellus bellottii	1.20	52	0.27	
Spondyliosoma cantharus	0.40	4	0.09	
Total		451.60	100.00	

PROJECT STATION: 426
 DATE: 9/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1628
 start stop Long E 1140
 TIME :14:09:00 14:39:00 dur. : 30min Purpose code: 3
 LOG :6356.20 6357.60 dist.:1.66nm Area code : 2
 FDEPTH: 70 69 GearCond.code:
 BDEPTH: 70 69 Validity code:
 Towing dir: 5° Wire out: 350 m Speed: 31 kn*10
 Sorted: 32 Kg Total catch: 1798.10 CATCH/HOUR: 3596.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	1910.80	74296	53.13	416
Dentex macrophthalmus	1348.80	14498	37.51	417
Merluccius capensis	78.60	112	2.19	
Atractoscion aequidens	67.40	112	1.87	
Galeichthys feliceps	67.40	336	1.87	
Loligo vulgaris	33.60	112	0.93	
Umbrina canariensis	33.60	448	0.93	
Dentex barnardi	33.60	112	0.93	
Synagrops microlepis	22.40	1798	0.62	
Total		3596.20	99.98	

PROJECT STATION: 427
 DATE: 9/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1627
 start stop
 TIME :16:06:00 16:36:00 dur. : 30min Purpose code: 3
 LOG :6368.20 6369.70 dist.:1.68nm Area code : 2
 FDEPTH: 90 89 GearCond.code:
 BDEPTH: 90 89 Validity code:
 Towing dir: 360° Wire out: 450 m Speed: 32 km*10
 Sorted: 49 Kg Total catch: 419.70 CATCH/HOUR: 839.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	629.00	5116	74.93	419
Squalus megalops	119.00	322	14.18	419
Atractoscion aequidens	22.00	16	2.62	
Pageillus bellottii	17.00	68	2.03	
Trachurus trecae	17.00	220	2.03	
Spondyliosoma cantharus	15.60	16	1.62	
Dentex barnardi	6.40	16	1.00	
Trachurus capensis	6.40	68	1.00	
Loligo vulgaris	6.00	34	0.60	
Total	839.40		100.01	

PROJECT STATION: 431
 DATE:10/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1624
 start stop
 TIME :10:00:00 10:30:00 dur. : 30min Purpose code: 3
 LOG :6477.00 6478.50 dist.:1.40nm Area code : 2
 FDEPTH: 76 74 GearCond.code:
 BDEPTH: 76 74 Validity code:
 Towing dir: 10° Wire out: 350 m Speed: 28 km*10
 Sorted: 31 Kg Total catch: 612.00 CATCH/HOUR: 1224.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	700.00	35776	57.19	427
Dentex macrophthalmus	486.00	9336	39.87	428
Atractoscion aequidens	16.00	40	1.31	
Galeichthys feliceps	6.00	40	0.55	
Merluccius polli	4.00	40	0.33	
Pteroscion peli	4.00	40	0.33	
Loligo vulgaris	2.00	80	0.16	
Trichurus lepturus	2.00	40	0.16	
Illex coindetii	0.00	40		
Total	1224.00		100.00	

PROJECT STATION: 428
 DATE: 9/ 9/91 GEAR TYPE: PT No:4 POSITION:Lat S 1617
 start stop
 TIME :22:02:00 22:42:00 dur. : 40min Purpose code: 1
 LOG :6414.80 6418.30 dist.:1.90nm Area code : 2
 FDEPTH: 11 11 GearCond.code:
 BDEPTH: 41 40 Validity code:
 Towing dir: 360° Wire out: 150 m Speed: 25 km*10
 Sorted: 54 Kg Total catch: 95.10 CATCH/HOUR: 142.65

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	64.05	1487	44.90	421
Sardinops ocellata	60.60	358	42.48	420
Trachurus capensis	11.10	107	7.78	422
Sepia officinalis hierredda	2.70	18	1.89	
Cartharhinus sp.	1.65	11	1.16	
Loligo vulgaris	1.35	5	0.95	
Trigla lyra	1.05	5	0.74	
Dentex barnardi	0.14	2	0.10	
Pageillus bellottii	0.00	5		
Total	142.64		100.00	

PROJECT STATION: 432
 DATE:10/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1623
 start stop
 TIME :12:05:00 12:35:00 dur. : 30min Purpose code: 3
 LOG :6490.90 6492.40 dist.:1.42nm Area code : 2
 FDEPTH: 95 89 GearCond.code:
 BDEPTH: 96 89 Validity code:
 Towing dir: 30° Wire out: 450 m Speed: 27 km*10
 Sorted: 54 Kg Total catch: 895.40 CATCH/HOUR: 1990.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Dentex macrophthalmus	792.00	7776	39.78	429
Trachurus capensis	756.00	4536	37.97	430
Trachurus trecae	162.00	1764	8.14	431
Squalus megalops	72.00	216	3.62	
Atractoscion aequidens	54.00	72	2.71	
Anthias anthias	46.80	360	2.35	
Merluccius capensis, female	36.00	50	1.81	
Zeus faber	28.80	72	1.45	
Pageillus bellottii	25.20	108	1.27	
Dentex barnardi	18.00	36	0.90	
Total	1990.80		100.00	

PROJECT STATION: 429
 DATE:10/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1613
 start stop
 TIME :06:29:00 06:59:00 dur. : 30min Purpose code: 3
 LOG :6454.00 6455.40 dist.:1.40nm Area code : 2
 FDEPTH: 30 31 GearCond.code:
 BDEPTH: 30 31 Validity code:
 Towing dir: 360° Wire out: 200 m Speed: 28 km*10
 Sorted: 21 Kg Total catch: 563.60 CATCH/HOUR: 1127.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	572.00	6618	50.75	423
Fonadasyd perolati	506.00	2968	44.36	424
Lithognathus mormyrus	33.00	164	2.93	
Dicologlossa cuneata	11.00	220	0.98	
Atractoscion aequidens	5.60	54	0.50	
Pageillus bellottii	5.60	54	0.50	
Total	1127.20		100.02	

PROJECT STATION: 433
 DATE:10/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1637
 start stop
 TIME :14:41:00 15:11:00 dur. : 30min Purpose code: 3
 LOG :6510.10 6511.50 dist.:1.42nm Area code : 2
 FDEPTH: 193 174 GearCond.code:
 BDEPTH: 193 174 Validity code:
 Towing dir: 10° Wire out: 650 m Speed: 27 km*10
 Sorted: 148 Kg Total catch: 1477.20 CATCH/HOUR: 2954.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	820.00	770	27.76	433
Pontinus sp.	564.40	4780	19.10	432
Chlorophthalmus atlanticus	498.00	17928	16.86	
Dentex macrophthalmus	365.20	1660	12.36	
Zenopsis conchifer	332.00	498	11.24	
Trachurus capensis	199.20	1092	6.74	
Pterothrissus bullocki	58.60	332	2.62	
Synagrops microlepis	33.20	2058	1.12	
Merluccius capensis, male	30.00	40	1.02	434
Trachurus trecae	26.40	232	0.89	
Squatina aculeata	13.20	32	0.45	
Trigla lyra	13.20	86	0.45	
Total	2954.40		100.01	

PROJECT STATION: 430
 DATE:10/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1618
 start stop
 TIME :08:16:00 08:46:00 dur. : 30min Purpose code: 3
 LOG :6465.30 6466.80 dist.:1.50nm Area code : 2
 FDEPTH: 51 50 GearCond.code:
 BDEPTH: 51 50 Validity code:
 Towing dir: 360° Wire out: 250 m Speed: 30 km*10
 Sorted: 25 Kg Total catch: 87.00 CATCH/HOUR: 174.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Trachurus trecae	80.60	4700	46.32	425
Dentex macrophthalmus	68.00	3514	39.38	426
Sepia officinalis hierredda	10.60	34	6.59	
Trichurus lepturus	8.40	154	4.89	
Loligo vulgaris	3.50	182	2.07	
Spondyliosoma cantharus	1.40	6	0.60	
Trigla lyra	1.40	6	0.60	
Dicologlossa cuneata	0.00	6		
Total	174.00		95.99	

PROJECT STATION: 434
 DATE:10/ 9/91 GEAR TYPE: BT No:1 POSITION:Lat S 1637
 start stop
 TIME :16:23:00 16:53:00 dur. : 30min Purpose code: 3
 LOG :6518.30 6518.40 dist.:1.40nm Area code : 2
 FDEPTH: 220 274 GearCond.code:
 BDEPTH: 220 274 Validity code:
 Towing dir: 360° Wire out: 800 m Speed: 26 km*10
 Sorted: 44 Kg Total catch: 1057.50 CATCH/HOUR: 2115.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP.NO.
	weight	numbers		
Merluccius capensis, female	700.80	816	33.13	436
Pontinus sp.	489.00	4436	23.12	
Dentex macrophthalmus	306.60	1018	14.47	435
Zenopsis conchifer	174.00	150	8.23	
Chlorophthalmus atlanticus	150.00	4666	7.09	
Merluccius capensis, male	91.20	128	4.31	437
Galeus polli	90.00	630	4.26	
Epigonus telescopus	69.00	780	3.26	
Trachurus capensis	18.00	120	0.65	
Lepidopus caudatus	12.00	30	0.57	
Trachurus trecae	12.00	30	0.57	
Plicacanthus arenatus	3.00	30	0.14	
Total	2115.00		100.00	

PROJECT STATION: 435
 DATE: 12/9/91 GEAR TYPE: PT No: POSITION: Lat S 1634 Long E 1146
 TIME : 22:00:00 22:23:00 dur. : 23min Purpose code: 1
 LOG : 6732.10 6733.00 dist.: 1.00nm Area code : 2
 FDEPTH: 10 10 GearCond.code:
 BDEPTH: 16 15 Validity code:
 Towing dir: 163° Wire out: 100 m Speed: 30 km*10

Sorted: 58 Kg Total catch: 233.60 CATCH/HOUR: 700.20

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Trachurus trecae	354.80 20421	47.01	439
Sardinops ocellata	289.20 1965	41.50	438
Pagellus bellottii	70.00 2856	10.11	
Diplodus sargus capensis	3.60 36	0.51	
Loligo vulgaris	1.20 12	0.17	
Engraulis encrasicolus	0.60 24	0.09	
Sepia officinalis hierreda	0.30 12		
Total	700.20	99.99	

PROJECT STATION: 439
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1643 Long E 1121
 TIME : 13:16:00 13:46:00 dur. : 30min Purpose code: 3
 LOG : 6785.40 6787.90 dist.: 1.53nm Area code : 2
 FDEPTH: 130 130 GearCond.code:
 BDEPTH: 130 130 Validity code:
 Towing dir: 360° Wire out: 550 m Speed: 29 km*10

Sorted: 95 Kg Total catch: 498.50 CATCH/HOUR: 997.20

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Trachurus capensis	792.00 3960	79.42	446
Merluccius capensis	158.40 198	15.89	
Pterothrissus belloci	23.40 216	2.35	
Dentex macropthalmus	14.40 126	1.44	
Squalus megalops	3.60 18	0.36	
Trigla lyra	3.60 36	0.36	
Zenopsis conchifer	1.80 126	0.18	
Total	997.20	99.99	

PROJECT STATION: 436
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1633 Long E 1137
 TIME : 07:21:00 07:51:00 dur. : 30min Purpose code: 3
 LOG : 6752.00 6754.20 dist.: 1.60nm Area code : 2
 FDEPTH: 84 80 GearCond.code:
 BDEPTH: 84 80 Validity code:
 Towing dir: 20° Wire out: 400 m Speed: 31 km*10

Sorted: 25 Kg Total catch: 372.00 CATCH/HOUR: 744.00

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Dentex macropthalmus	477.00 8586	64.11	460
Synagrops microlepis	102.00 20792	25.81	
Trachurus trecae	18.00 930	2.42	
Merluccius capensis	18.00 270	2.42	
Trachurus capensis	15.00 270	2.02	
Squalus megalops	12.00 120	1.61	
Loligo vulgaris	6.00 90	0.81	
Trichiurus lepturus	3.00 72	0.40	
Sepia officinalis hierreda	3.00 60	0.40	
Todaropsis eblanae	0.00 30		
Total	744.00	100.00	

PROJECT STATION: 440
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1629 Long E 1120
 TIME : 14:36:00 15:06:00 dur. : 30min Purpose code: 3
 LOG : 6792.10 6793.60 dist.: 1.50nm Area code : 2
 FDEPTH: 193 204 GearCond.code:
 BDEPTH: 193 204 Validity code:
 Towing dir: 10° Wire out: 750 m Speed: 28 km*10

Sorted: 81 Kg Total catch: 2493.10 CATCH/HOUR: 4986.20

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Merluccius capensis, female	2965.40 3212	59.49	447
Merluccius capensis, male	679.80 740	13.63	448
Pontinus sp.	309.00 2904	6.20	
Dentex macropthalmus	279.00 1482	5.53	
Chlorophthalmus atlanticus	215.20 6876	4.34	
Epigonus telescopus	185.40 1358	3.72	
Zenopsis conchifer	154.40 370	3.10	
Trachurus capensis	92.60 370	1.86	
Pterothrissus belloci	49.40 240	0.99	
Squatina oculata	18.40 60	0.37	
Lepidopus caudatus	18.40 60	0.37	
Trigla lyra	18.40 122	0.37	
Total	4986.40	100.02	

PROJECT STATION: 437
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1637 Long E 1131
 TIME : 09:22:00 09:52:00 dur. : 30min Purpose code: 3
 LOG : 6765.40 6765.80 dist.: 1.50nm Area code : 2
 FDEPTH: 102 100 GearCond.code:
 BDEPTH: 102 100 Validity code:
 Towing dir: 15° Wire out: 500 m Speed: 31 km*10

Sorted: 56 Kg Total catch: 449.20 CATCH/HOUR: 898.40

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Dentex macropthalmus	486.40 10974	54.14	442
Trachurus capensis	273.60 2296	30.45	441
Merluccius capensis	51.20 992	5.70	443
Trigla lyra	36.80 224	4.20	
Synagrops microlepis	12.80 1184	1.42	
Zeus faber	8.00 32	0.89	
Pterothrissus belloci	6.40 80	0.71	
Loligo vulgaris	6.40 80	0.71	
Squalus megalops	6.40 32	0.71	
Citharus linguatula	4.80 240	0.53	
Pontinus sp.	1.60 48	0.18	
Sepia officinalis hierreda	1.60 48	0.18	
Trichiurus lepturus	1.60 48	0.18	
Todaropsis eblanae	0.80 16	0.09	
Total	898.40	99.99	

PROJECT STATION: 441
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1643 Long E 1120
 TIME : 17:06:00 17:36:00 dur. : 30min Purpose code: 3
 LOG : 6805.50 6808.10 dist.: 1.60nm Area code : 2
 FDEPTH: 151 158 GearCond.code:
 BDEPTH: 151 158 Validity code:
 Towing dir: 10° Wire out: 600 m Speed: 30 km*10

Sorted: 75 Kg Total catch: 243.90 CATCH/HOUR: 487.80

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Merluccius capensis, female	145.20 190	29.77	450
Dentex macropthalmus	99.00 620	26.30	
Zenopsis conchifer	99.00 376	26.30	449
Pterothrissus belloci	59.40 356	12.10	
Pontinus sp.	38.80 362	7.95	
Heptranchias peric	23.00 26	4.72	
Lepidopus caudatus	6.40 46	1.72	
Trigla lyra	3.80 72	0.78	
Todarodes sagittatus	3.20 6	0.66	
Umbria canariensis	3.20 6	0.66	
Squalus megalops	1.20 6	0.25	
Trachurus capensis	1.20 38	0.25	
Hoplostethus sp.	0.60 6	0.12	
Citharus linguatula	0.60 32	0.12	
Trachurus trecae	0.60 18	0.12	
Hymenocephalus italicus	0.20 6	0.04	
Chlorophthalmus atlanticus	0.20 6	0.04	
Sepia officinalis hierreda	0.20 12	0.04	
MYCTOPHIDAE	0.00 32		
Total	487.80	100.02	

PROJECT STATION: 438
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1641 Long E 1126
 TIME : 11:25:00 11:55:00 dur. : 30min Purpose code: 3
 LOG : 6775.90 6778.40 dist.: 1.60nm Area code : 2
 FDEPTH: 117 115 GearCond.code:
 BDEPTH: 117 115 Validity code:
 Towing dir: 15° Wire out: 550 m Speed: 30 km*10

Sorted: 29 Kg Total catch: 343.20 CATCH/HOUR: 686.40

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Dentex macropthalmus	472.80 4896	68.88	444
Trachurus capensis	79.20 672	11.54	445
Umbria canariensis	28.80 96	4.20	
Mustelus mustelus	24.00 24	3.50	
Merluccius capensis	24.00 24	3.50	
Zeus faber	24.00 24	3.50	
Pterothrissus belloci	24.00 264	3.50	
Squalus megalops	4.80 24	0.70	
Trigla lyra	4.80 24	0.70	
Total	686.40	100.02	

PROJECT STATION: 442
 DATE: 12/9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1705 Long E 1143
 TIME : 06:31:00 07:01:00 dur. : 30min Purpose code: 3
 LOG : 6900.30 6901.70 dist.: 1.60nm Area code : 2
 FDEPTH: 23 22 GearCond.code:
 BDEPTH: 23 22 Validity code:
 Towing dir: 360° Wire out: 150 m Speed: 39 km*10

Sorted: 30 Kg Total catch: 940.10 CATCH/HOUR: 1880.20

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP. NO.
	weight numbers		
Trachurus trecae	1612.90 58866	85.78	451
Loligo vulgaris	298.20 1322	13.73	
Atractoscion aequidens	6.20 62	0.33	
Trichiurus lepturus	3.00 252	0.16	
Total	1880.20	100.00	

PROJECT STATION: 443
 DATE: 13/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1703
 start stop Long E 1136
 TIME : 08:22:00 09:52:00 dur.: 30min Purpose code: 3
 LOG : 6911.70 6913.20 dist.: 1.60nm Area code : 2
 FDEPTH: 84 63 GearCond.code:
 BDEPTH: 84 63 Validity code:
 Towing dir: 360° Wire out: 400 m Speed: 32 km*10
 Sorted: 55 Kg Total catch: 317.70 CATCH/HOUR: 635.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus capensis	304.60	6732	47.94	452
Dentex macrophthalms	234.20	4098	36.86	453
Myliobatis aquila	22.00	22	3.46	
Argyrosomus hololepidotus	17.00	10	2.60	
Trichurus lepturus	15.40	236	2.42	
Trigla lyra	15.40	22	2.42	
Merluccius capensis	9.80	120	1.54	
Raja miraletus	9.00	6	1.42	
Zeus faber	4.40	22	0.69	
Synagrops microlepis	3.20	440	0.50	
Elops lacerta	0.40	10	0.06	
Todaropsis eblanae	0.00	10		
Total	635.40		99.99	

PROJECT STATION: 447
 DATE: 13/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1708
 start stop Long E 1127
 TIME : 18:00:00 18:30:00 dur.: 30min Purpose code: 3
 LOG : 6960.40 6961.70 dist.: 1.60nm Area code : 2
 FDEPTH: 135 131 GearCond.code:
 BDEPTH: 135 131 Validity code:
 Towing dir: 350° Wire out: 550 m Speed: 31 km*10
 Sorted: 28 Kg Total catch: 227.60 CATCH/HOUR: 455.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius capensis	152.00	3130	33.39	458
Dentex macrophthalms	102.40	1120	22.50	459
Synagrops microlepis	70.40	744	15.47	
Trigla lyra	36.80	305	8.09	
Pterothrissus bellioi	30.40	352	6.63	
Trachurus capensis	30.40	224	6.68	
Chlorophthalmus atlanticus	14.40	313	3.16	
Squalus megalops	11.20	32	2.46	
Pontinus sp.	3.20	80	0.70	
Septa officinalis hierredda	1.60	49	0.35	
Trichurus lepturus	1.60	32	0.35	
Chtharus linguatula	1.60	16	0.18	
Lyodonitis sp.	3.00			
Total	455.20		100.00	

PROJECT STATION: 444
 DATE: 13/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1703
 start stop Long E 1126
 TIME : 10:34:00 11:04:00 dur.: 30min Purpose code: 3
 LOG : 6924.00 6925.20 dist.: 1.50nm Area code : 2
 FDEPTH: 114 108 GearCond.code:
 BDEPTH: 114 108 Validity code:
 Towing dir: 350° Wire out: 1050 m Speed: 30 km*10
 Sorted: 89 Kg Total catch: 6005.10 CATCH/HOUR: 12010.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus capensis	11053.60	142482	92.04	454
Anihlias anthias	579.60	5795	4.83	
Dentex macrophthalms	215.60	1806	1.80	
Oxyntus cantrina	134.80	134	1.12	
Pterothrissus bellioi	134.40	134	0.11	
Todaropsis eblanae	8.60	134	0.05	
Trichurus lepturus	8.60	134	0.05	
Total	12010.20		100.00	

PROJECT STATION: 448
 DATE: 14/ 9/91 GEAR TYPE: PT No:2 POSITION: Lat S 1705
 start stop Long E 1123
 TIME : 03:28:00 04:28:00 dur.: 60min Purpose code: 1
 LOG : 7034.20 7036.80 dist.: 2.60nm Area code : 2
 FDEPTH: 80 90 GearCond.code:
 BDEPTH: 138 147 Validity code:
 Towing dir: 290° Wire out: 250 m Speed: 22 km*10
 Sorted: 21 Kg Total catch: 106.50 CATCH/HOUR: 106.50

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus capensis	105.00	1025	98.59	460
Trichurus lepturus	1.50	20	1.41	
Total	106.50		100.00	

PROJECT STATION: 445
 DATE: 13/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1702
 start stop Long E 1121
 TIME : 13:16:00 13:46:00 dur.: 30min Purpose code: 3
 LOG : 6937.20 6938.60 dist.: 1.54nm Area code : 2
 FDEPTH: 147 150 GearCond.code:
 BDEPTH: 147 150 Validity code:
 Towing dir: 340° Wire out: 650 m Speed: 29 km*10
 Sorted: 27 Kg Total catch: 390.40 CATCH/HOUR: 390.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus capensis	123.80	1059	31.99	455
Merluccius capensis	86.80	99	22.79	
Squalus megalops	49.00	126	12.87	
Lepidopus caucatus	37.80	136	9.93	
Dentex macrophthalms	35.00	266	9.19	
Zeus faber	18.80	42	4.41	
Pontinus sp.	9.80	84	2.57	
Trichurus lepturus	7.00	98	1.84	
Synagrops microlepis	5.60	462	1.47	
Zenopsis conchifer	4.20	56	1.10	
Pterothrissus bellioi	4.20	28	1.10	
Anthias anthias	2.80	14	0.74	
Total	390.80		100.00	

PROJECT STATION: 449
 DATE: 14/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1651
 start stop Long E 1124
 TIME : 10:11:00 10:41:00 dur.: 30min Purpose code: 3
 LOG : 7089.80 7091.30 dist.: 1.40nm Area code : 2
 FDEPTH: 121 120 GearCond.code:
 BDEPTH: 121 120 Validity code:
 Towing dir: 360° Wire out: 550 m Speed: 27 km*10
 Sorted: 51 Kg Total catch: 336.70 CATCH/HOUR: 473.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Dentex macrophthalms	268.80	3234	61.01	461
Pterothrissus bellioi	80.40	536	12.76	
Merluccius capensis, female	34.40	44	7.27	462
Zeus faber	26.00	125	5.49	
Squalus megalops	24.20	59	5.11	
Merluccius capensis, male	11.20	19	2.37	463
Trachurus capensis	8.40	134	1.77	
Atractoscion aequidens	5.80	8	1.23	
Dentex anglorensis	4.20	8	0.89	
Pontinus sp.	3.20	24	0.69	
Umbra canariensis	2.40	24	0.51	
Leligo vulgaris	1.60	8	0.34	
Chlorophthalmus atlanticus	0.80	16	0.17	
Trichurus lepturus	0.40	8	0.09	
Septa officinalis hierredda	0.40	8	0.09	
Todaropsis eblanae	0.40	8	0.09	
Total	473.40		100.01	

PROJECT STATION: 445
 DATE: 13/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1708
 start stop Long E 1122
 TIME : 16:00:00 16:30:00 dur.: 30min Purpose code: 3
 LOG : 6950.30 6951.80 dist.: 1.63nm Area code : 2
 FDEPTH: 201 186 GearCond.code:
 BDEPTH: 201 186 Validity code:
 Towing dir: 350° Wire out: 750 m Speed: 31 km*10
 Sorted: 56 Kg Total catch: 748.90 CATCH/HOUR: 1497.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Merluccius capensis, female	928.00	2230	55.28	466
Synagrops microlepis	217.60	17842	14.53	
Trachurus capensis	31.60	516	5.45	
Chlorophthalmus atlanticus	31.60	2366	5.45	
MYCTOPHIDAE	31.60	26112	5.45	
Pterothrissus bellioi	58.00	516	4.54	
Pontinus sp.	68.00	760	4.54	
Dentex macrophthalms	40.80	244	2.72	
Merluccius capensis, male	24.00	126	1.60	457
Halargycephalus occidentalis	4.00	54	0.27	
Zenopsis conchifer	2.60	26	0.17	
Total	1497.80		100.00	

PROJECT STATION: 450
 DATE: 14/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1649
 start stop Long E 1135
 TIME : 12:18:00 12:48:00 dur.: 30min Purpose code: 3
 LOG : 7105.00 7106.40 dist.: 1.35nm Area code : 2
 FDEPTH: 80 80 GearCond.code:
 BDEPTH: 80 80 Validity code:
 Towing dir: 5° Wire out: 400 m Speed: 28 km*10
 Sorted: 29 Kg Total catch: 491.30 CATCH/HOUR: 982.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Dentex macrophthalms	496.40	9656	50.52	465
Trachurus capensis	360.40	1204	36.86	464
Synagrops microlepis	102.00	9384	10.38	466
Merluccius capensis	10.20	68	1.04	
Pterothrissus bellioi	10.20	68	1.04	
Trichurus lepturus	3.40	58	0.35	
Total	982.60		100.01	

PROJECT STATION: 451
 DATE: 14/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1837 Long E 1135
 start stop
 TIME :14:34:00 15:04:00 dur. : 30min Purpose code: 3
 LOG :7119.50 7121.00 dist.:1.40nm Area code : 2
 FDEPTH: 85 85 GearCond.code:
 SDEPTH: 85 85 Validity code:
 Towing dir: 360° Wire out: 400 m Speed: 26 km*10
 Sorted: 20 Kg Total catch: 2198.40 CATCH/HOUR: 4396.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus trcae	1601.60	15492	36.43	489
Trachurus capensis	1601.60	46735	36.43	467
Dentex macrophthalmus	546.40	15432	21.52	466
Synagrops microlepis	101.00	9608	2.32	
Merluccius capensis	87.20	290	1.98	
Pterothrissus bellotti	59.20	436	1.92	
Total	4596.80		100.00	

PROJECT STATION: 452
 DATE: 14/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1847 Long E 1127
 start stop
 TIME :16:56:00 17:25:00 dur. : 30min Purpose code: 3
 LOG :7230.30 7134.60 dist.:1.37nm Area code : 2
 FDEPTH: 117 113 GearCond.code:
 SDEPTH: 117 113 Validity code:
 Towing dir: 57° Wire out: 500 m Speed: 27 km*10
 Sorted: 27 Kg Total catch: 384.30 CATCH/HOUR: 768.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Dentex macrophthalmus	476.00	6426	61.99	470
Trachurus capensis	156.80	2022	20.40	471
Trigla lyra	70.00	580	9.11	
Coelorhynchus fasciatus	32.60	28	4.37	
Pterothrissus bellotti	19.60	140	2.95	
Citharus linguatula	6.60	116	0.73	
Merluccius capensis	4.20	56	0.85	
Synagrops microlepis	2.00	168	0.36	
Total	768.60		100.00	

PROJECT STATION: 453
 DATE: 15/ 9/91 GEAR TYPE: BT No:4 POSITION: Lat S 1840 Long E 1118
 start stop
 TIME :00:59:00 01:39:00 dur. : 40min Purpose code: 1
 LOG :7188.50 7100.10 dist.:1.53nm Area code : 2
 FDEPTH: 2 2 GearCond.code:
 SDEPTH: 681 369 Validity code:
 Towing dir: 270° Wire out: 100 m Speed: 24 km*10
 Sorted: 20 Kg Total catch: 120.00 CATCH/HOUR: 180.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus capensis	180.00	2727	100.00	472
Total	180.00		100.00	

PROJECT STATION: 454
 DATE: 15/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1712 Long E 1139
 start stop
 TIME :11:29:00 11:40:00 dur. : 10min Purpose code: 3
 LOG :7278.50 7289.10 dist.:1.53nm Area code : 2
 FDEPTH: 73 68 GearCond.code:
 SDEPTH: 73 68 Validity code:
 Towing dir: 5° Wire out: 350 m Speed: 20 km*10
 Sorted: 28 Kg Total catch: 193.10 CATCH/HOUR: 386.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus trcae	132.00	2020	34.18	473
Trachurus capensis	66.00	2544	17.09	474
Myliobatis aquila	50.40	24	13.05	
Argyrosomus hololepidotus	22.00	10	5.70	
Leptocharias smithii	20.40	12	5.20	
Coelorhynchus capensis	19.20	12	4.97	
Merluccius salitatrix	16.00	14	4.14	
Chelidonichthys capensis	12.00	36	3.11	
Sardinops ocellata	12.00	216	3.11	
Trachurus capensis	11.00	16	2.85	
Stromateus fiatula	8.40	12	2.10	
Trigla lyra	6.00	36	1.55	
Merluccius capensis	4.80	108	1.24	
Zeus faber	3.60	12	0.93	
Trichurus lepturus	2.40	60	0.62	
Total	585.20		100.00	

PROJECT STATION: 455
 DATE: 15/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1705 Long E 1124
 start stop
 TIME :14:01:00 14:31:00 dur. : 30min Purpose code: 3
 LOG :7256.60 7297.90 dist.:1.99nm Area code : 2
 FDEPTH: 100 97 GearCond.code:
 SDEPTH: 100 97 Validity code:
 Towing dir: 15° Wire out: 450 m Speed: 27 km*10
 Sorted: 59 Kg Total catch: 2499.00 CATCH/HOUR: 4998.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Dentex macrophthalmus	3416.00	54142	68.99	476
Trachurus capensis	1119.20	19300	23.21	475
Sardinops ocellata	239.00	2732	4.78	477
Myliobatis aquila	102.40	84	2.09	
Synagrops microlepis	68.20	373	1.39	
Merluccius capensis	34.00	426	0.68	
Trichurus lepturus	22.80	170	0.26	
Trigla lyra	22.80	84	0.26	
Tonarovopsis ebiense	4.20	84	0.09	
Total	4999.60		100.01	

PROJECT STATION: 456
 DATE: 15/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1701 Long E 1135
 start stop
 TIME :15:26:00 15:56:00 dur. : 30min Purpose code: 3
 LOG :7303.40 7304.80 dist.:1.40nm Area code : 2
 FDEPTH: 98 86 GearCond.code:
 SDEPTH: 98 86 Validity code:
 Towing dir: 15° Wire out: 400 m Speed: 29 km*10
 Sorted: 32 Kg Total catch: 2958.10 CATCH/HOUR: 5916.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Trachurus capensis	4685.00	126494	78.13	478
Dentex macrophthalmus	1030.60	16115	17.19	479
Galeichthys teliceps	99.60	106	1.56	
Myliobatis aquila	99.00	106	1.56	
Merluccius capensis	37.40	186	0.62	
Trichurus lepturus	39.00	186	0.47	
Synagrops microlepis	20.00	1492	0.47	
Total	5996.20		100.00	

PROJECT STATION: 457
 DATE: 15/ 9/91 GEAR TYPE: BT No:1 POSITION: Lat S 1655 Long E 1130
 start stop
 TIME :17:28:00 17:58:00 dur. : 30min Purpose code: 3
 LOG :7313.70 7315.20 dist.:1.59nm Area code : 2
 FDEPTH: 107 107 GearCond.code:
 SDEPTH: 107 107 Validity code:
 Towing dir: 257° Wire out: 500 m Speed: 30 km*10
 Sorted: 55 Kg Total catch: 565.80 CATCH/HOUR: 1131.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP. NO.
	weight	numbers		
Dentex macrophthalmus	562.80	3908	49.04	480
Trachurus capensis	401.20	6502	34.24	481
Trigla lyra	75.70	378	5.44	
Mastellus mastellus	68.80	42	5.02	
Atractosteon aequidens	39.60	6	1.67	
Merluccius capensis	26.80	370	1.43	
Pterothrissus bellotti	12.60	48	1.05	
Torpedo torpedo	10.60	20	0.90	
Synagrops microlepis	6.40	1334	0.72	
Elops acerola	4.20	52	0.88	
Sepia officinalis heteropoda	2.20	52	0.39	
Trichurus lepturus	1.00	20	0.09	
Total	1171.30		100.01	

