

**I.O.S.**

SYNOPSIS OF CATCH AND ANALYSIS DATA  
OF DEEP-SEA BOTTOM-LIVING FISHES  
COLLECTED OFF THE MOROCCAN SLOPE,  
EASTERN NORTH ATLANTIC (27° -34°N)  
ON DISCOVERY CRUISE 77

BY  
N.R. MERRETT AND P.A. DOMANSKI

REPORT NO. 208  
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NATURAL ENVIRONMENT  
INSTITUTE OF OCEANOGRAPHIC SCIENCES  
RESEARCH COUNCIL

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INSTITUTE OF OCEANOGRAPHIC SCIENCES

WORMLEY

Synopsis of catch and analysis data  
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## ABSTRACT

Detailed data are given to supplement Merrett, N.R. & P.A. Domanski (1985), Observations on the ecology of deep-sea bottom-living fishes collected off northwest Africa. II. The Moroccan Slope (27<sup>o</sup>-34<sup>o</sup>N), with special reference to Synaphobranchus kaupi Johnson, 1862. Biol. Oceanogr., 3, (4). It includes a detailed species list with specimen size and sounding ranges of capture.

## INTRODUCTION

A survey of deep-sea bottom-living fishes sampled by semi-balloon otter trawl (OTSB14) was carried out on Discovery cruise 77 (August, 1976) off the Moroccan slope ( $27^{\circ}$ - $34^{\circ}$ N - Fig. 1 and see Table I for station details). This enlarged the latitudinal range of earlier IOS work off northwest Africa (Merrett & Marshall, 1981). The results of the Moroccan survey have been published (Merrett & Domanski, 1985) and are based upon the data given in Table II, which lists the species caught together with capture stations and observed specimen size and sounding ranges of capture. This data report, therefore, is supplementary to that paper. It provides a listing of component species and stations used in the inter-sample analyses (Tables III & IV) as well as normalised depth distributions of the more abundant species sampled (Fig. 2), with the exclusion of Synaphobranchus kaupi which is considered in detail by Merrett & Domanski.

## REFERENCES

- Merrett, N.R. & N.B. Marshall, 1981. Observations on the ecology of deep-sea bottom-living fishes off northwest Africa ( $08^{\circ}$ - $27^{\circ}$ N). Progress in Oceanography 9, 185-244.
- Merrett, N.R. & P.A. Domanski, 1985. Observations on the ecology of deep-sea bottom-living fishes off northwest Africa. II. The Moroccan Slope ( $27^{\circ}$ - $34^{\circ}$ N), with special reference to Synaphobranchus kaupi Johnson, 1862. Biological Oceanography, 3(4), 349-399.



TABLE I. Station list and catch details

CHART REF NO	STATION	DATE		POSITION		GEAR	SOUNDING (M)		FISHING DURATION (mins)	SHIP SPEED m sec <sup>-1</sup>	CATCH		WEIGHT (kg)
		AUGUST	1976	°N	°W		RANGE	MID-PT			SPP	NOS	
1	8966#0	2	31°21.0'	10°41.5'	OTSB14	686-742	718	63	1.03	19	306	63.5	
2	8967#0	2	31°25.9	10°53.7'	OTSB14	1140-1222	1181	65	0.98	21	231	10.2	
3	8968#0	3	31°35.0'	11°02.0'	OTSB14	1767-1846	1807	61	0.93	18	125	12.2	
4	8969#0	3	31°23.2'	10°56.1'	BN2.4	1184-1230	1207	30	0.72	11	52	1.5	
5	8970#0	3	31°30.4'	11°04.4'	BN2.4	1910-1932	1921	30	0.77	2	4	-	
6	8971#0	4	31°47.5'	11°10.2'	OTSB14	2432-2538	2485	60	0.98	9	30	2.7	
7	8972#0	4	31°48.2'	11°07.5'	BN2.4	2355-2386	2370	30	0.77	3	4	-	
8	8973#0	4	32°02.0'	11°19.7'	BN2.4	3003-3008	3005	47	0.77	-	-	-	
9	8974#0	4	32°03.5'	11°19.4'	OTSB14	3029-3035	3032	62	1.03	4	6	2.1	
10	8976#0	5	32°54.6'	11°40.4'	BN2.4	3610-3646	3628	81	0.77	1	1	-	
11	8977#0	6	31°26.1'	10°47.8'	OTSB14	974-1032	1003	69	1.08	13	296	29.7	
12	8979#0	6	31°23.4'	10°46.2'	OTSB14	865-918	891	65	1.03	11	102	9.8	
13	9007#0	16	27°53.6'	13°54.8'	OTSB14	1654-1699	1676	111	1.03	16	59	11.6	
14	9008#0	16	28°15.8'	13°31.4'	OTSB14	1251-1259	1255	62	1.13	17	99	9.9	
15	9009#0	17	28°18.5'	13°29.2'	BN2.4	1238-1244	1241	44	0.90	9	46	1.9	
16	9010#0	17	28°18.6'	13°16.0'	BN2.4	1027-1029	1028	45	0.98	11	106	2.1	
17	9011#0	17	28°40.1'	13°09.0'	OTSB14	906-936	921	123	1.23	12	236	24.5	

Area I

Area II

18	9012#0	17	28°49.3'	13°02.2'	OTSB14 1045-1061	1053	60	1.13	9	27	2.6
19	9015#0	18	28°46.8'	12°47.4'	BN2.4 610-637	623	39	0.77	5	22	-
20	9016#0	18	28°55.7'	12°37.1'	BN2.4 873-895	884	45	0.77	14	147	5.5
21	9017#0	18	29°07.1'	12°41.2'	OTSB14 1341-1394	1367	90	1.13	19	144	6.3
22	9018#0	18	29°20.3'	12°35.1'	OTSB14 1635-1658	1646	95	1.13	29	448	28.0
23	9019#0	18	29°24.4'	12°24.7'	BN2.4 1682-1686	1684	67	0.77	7	15	-
24	9020#0	19	29°53.7'	11°58.4'	BN2.4 2017-2028	2022	50	0.93	5	7	-
25	9021#0	19	30°04.2'	11°51.7'	OTSB14 2122-2173	2147	91	1.13	18	130	14.0
26	9028#0	20	31°26.1'	10°52.8'	OTSB14 1166-1229	1179	101	1.13	20	186	24.8
27	9029#0	21	31°33.4'	11°04.8'	BN2.4 1835-1886	1860	75	0.77	5	5	-
28	9030#0	21	31°44.2'	11°12.5'	OTSB14 2516-2543	2532	90	1.03	14	66	6.0
29	9035#0	23	34°06.0'	11°55.5'	BN2.4 4453-4457	4455	62	0.26	3	5	-

Area H

Area H

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## TABLE II

Species list and capture stations, including observed size and sounding rangesSCYLIORHINIDAE:

1. Apristurus sp. 8967 (1), 9008 (1), 9016 (1).

Total: 3 TL range: 179-560mm. Sounding range: 873-1259m.

SQUALIDAE:

2. Etmopterus princeps COLLETT, 1904. 8968 (1).

Total: 1 TL: 525mm. Soundings: 1767-1846m.

3. E. spinax (LINNAEUS, 1758). 8966 (1).

Total: 1 TL: 340mm. Soundings: 686-742m.

4. Centroscymnus coelolepis (BOCAGE and CAPELLO, 1864). 9018 (1), 9028 (1).

Total: 2 TL range: 730-1020mm. Sounding range: 1166-1658m.

5. C. crepidater (BOCAGE and CAPELLO, 1864). 9028 (1).

Total: 1 TL: 610mm. Soundings: 1166-1229m.

CHIMAERIDAE:

6. Hydrolagus mirabilis (COLLETT, 1904). 9009 (1), 9028 (1).

Total: 2 L' range: 240-320mm. Sounding range: 1166-1244m.

RHINOCHIMAERIDAE:

7. Rhinochimaera atlantica HOLT and BYRNE, 1909. 9008 (1).

Total: 1 L': 1145mm. Soundings: 1251-1259m.

8. Harriotta raleighana GOODE and BEAN, 1895. 9017 (1).

Total: 1 L': 105mm. Soundings: 1341-1394m.

NETTASTOMATIDAE:

9. Nettastoma melanurum RAFINESQUE, 1810. 8966 (2), 8977 (2), 9010 (1), 9015 (1), 9016 (1).

Total: 7 SL range: 196-665mm. Sounding range: 610-1032m.

10. Venefica proboscidea (VAILLANT, 1888). 9007 (1), 9021 (1).

Total: 2 SL range: 600+ - 740+mm. Sounding range: 1654-2173m.

CONGRIDAE:

11. Pseudophichthys spendens (LEA, 1913). 8966 (3), 8977 (20), 8979 (12), 9016 (2).

Total: 37 SL range: 135-320mm. Sounding range: 686-1032m.

NESSORHAMPHIDAE:

12. Nessorhamphus ingolfianus (SCHMIDT, 1912). 9012 (1), 9018 (1), 9021 (1).

Total: 3 SL range: 184-321mm. Sounding range: 1045-2173m.

SYNAPHOBRANCHIDAE:

13. Synaphobranchus kaupi JOHNSON, 1862. 8966 (22), 8967 (32), 8968 (70), 8969 (15)

8970 (3), 8971 (4), 8977 (85), 8979 (52), 9007 (6), 9008 (23), 9009 (18),

9010 (51), 9011 (145), 9012 (15), 9015 (5), 9016 (56), 9017 (26),

9018 (254), 9019 (3), 9020 (1), 9021 (83), 9028 (18), 9030 (3).

Total: 990 SL range: 80-660mm. Sounding range: 610-2543m.

14. Histiobranchus bathybius (GÜNTHER, 1877). 8971 (2), 9030 (12).

Total: 14 SL range: 185-625mm. Sounding range: 2432-2543m.

15. Ilyophis brunneus GILBERT, 1892. 8968 (1), 9009 (1), 9018 (7), 9020 (2),

9021 (1), 9030 (1).

Total: 13 SL range: 212-415mm. Sounding range: 1238-2453m.

16. Simenchelys parasitica GOODE and BEAN, 1879. 9018 (3), 9021 (1).

Total: 4 SL range: 210-300mm. Sounding range: 1635-2173m.

HALOSAURIDAE:

17. Halosaurus (Halosaurus) ovenii JOHNSON, 1863. 8966 (2), 8979 (1), 9011 (2),

9015 (1), 9016 (1), 9018 (2).

Total: 9 Gn L range: 70-250mm. Sounding range: 610-1658m.

18. H. (Halosaurichthys) johnsonianus VAILLANT, 1888. 8967 (21), 8969 (3),

8977 (1), 8979 (1), 9016 (14), 9018 (1).

Total: 41 Gn L range: 69-140mm. Sounding range: 865-1658m.

19. H. (H.) guentheri GOODE and BEAN, 1896. 9010 (1).  
Total: 1 Gn L: 145mm. Soundings: 1027-1029m.
20. Halosauropsis macrochir (GÜNTHER, 1878). 8968 (4), 8971 (15), 8972 (2),  
9007 (2), 9018 (3), 9021 (6), 9030 (30).  
Total: 62 Gn L range: 50-245mm. Sounding range: 1635-2543m.
21. Aldrovandia affinis (GÜNTHER, 1878) 8969 (1), 9019 (3), 9029 (1).  
Total: 5 Gn L range: 95-145mm. Sounding range: 1184-1886m.
22. A. oleosa SULAK, 1977. 8968 (2), 9007 (1), 9017 (3), 9018 (1), 9021 (2),  
9029 (1).  
Total: 10. Gn L range: 70-125mm. Sounding range: 1341-2173m.
23. Aldrovandia phalacra (VAILLANT, 1888). 8967 (2), 8968 (7), 8969 (1),  
9018 (5), 9021 (3), 9028 (4).  
Total: 22 Gn L range: 55-140mm. Sounding range: 1140-2173m.

NOTACANTHIDAE:

24. Polyacanthonotus (Gnathonotacanthus) challengerii (VAILLANT, 1888)  
8971 (1), 8972 (1).  
Total: 2 Gn L range 46-160mm. Sounding range: 2355-2538m.
25. Polyacanthonotus merretti SULAK, CRABTREE & HUREAU, 1984.  
9017 (1), 9018 (1).  
Total: 2 Gn L range: 82-99mm. Sounding range: 1341-1658m.
26. Notacanthus bonapartei Risso, 1840. 9018 (1).  
Total: 1 Gn L: 120mm Soundings: 1635-1658m.
27. N. chemnitzii BLOCH, 1788. 8966 (1).  
Total: 1 Gn L: 73mm Soundings: 686-742m.

ALEPOCEPHALIDAE:

28. Alepocephalus australis BARNARD, 1923. 9007 (2), 9018 (1), 9028 (1).  
Total: 4 SL range: 195-335mm. Sounding range: 1166-1699m.
29. A. bairdii GOODE and BEAN, 1879. 8967 (4), 8977 (3), 9008 (1), 9017 (1),  
9018 (1), 9028 (4), 9029 (1).  
Total: 15 SL range: 45-590mm. Sounding range: 974-1886m.

30. A. productus GILL, 1883. 8968 (2), 9030 (1).  
 Total: 3 SL range: 150-200mm. Sounding range: 1767-2543m.
31. A. rostratus RISSO, 1820. 8967 (1), 9008 (1), 9011 (8), 9021 (1), 9028 (4).  
 Total: 15 SL range: 136-697mm. Sounding range: 906-2173m.
32. Bathytroctes microlepis GÜNTHER, 1878. 9021 (2), 9030 (1).  
 Total: 3 SL range: 165-205mm. Sounding range: 2122-2543m.
33. Conocara macroptera (VAILLANT, 1888). 8968 (5), 9007 (9), 9018 (74),  
 9019 (3), 9020 (2), 9021 (9), 9029 (1).  
 Total: 103 SL range: 38-260mm. Sounding range: 1635-2173m.
34. C. microlepis (LLOYD, 1909). 9021 (2).  
 Total: 2 SL range: 110-200mm. Soundings: 2122-2173m.
35. C. murrayi (KOEFOED, 1927). 9021 (4), 9030 (2).  
 Total: 6 SL range: 80-290mm. Sounding range: 2122-2543m.
36. Leptoderma macrops VAILLANT, 1886. 8967 (4), 9008 (9), 9009 (6), 9010 (3),  
 9017 (22), 9028 (1).  
 Total: 45 SL range: 65-160mm. Sounding range: 1027-1394m.
37. Narctes stomias (GILBERT, 1890). 8971 (4), 8974 (1), 9021 (1), 9030 (5).  
 Total: 11 SL range: 87-420mm. Sounding range: 2122-3035m.
38. Rouleina attrita (VAILLANT, 1888). 8967 (7), 8968 (4), 8969 (1), 9007 (6),  
 9008 (2), 9017 (14), 9018 (8), 9021 (10), 9028 (1).  
 Total: 53 SL range: 55-380mm. Sounding range: 1140-2173m.
39. R. maderensis MAUL, 1948. 9007 (1), 9018 (1).  
 Total: 2 SL range: 110-185mm. Sounding range: 1635-1699m.
40. Talismania antillarum GOODE and BEAN, 1895. 8967 (1).  
 Total: 1 SL: 105mm. Soundings: 1140-1222m.
41. T. homoptera (VAILLANT, 1888). 9028 (1).  
 Total: 1 SL: 199mm. Soundings: 1166-1229m.
42. T. mekistonema SULAK, 1975. 9007 (1), 9008 (1), 9017 (1), 9018 (5).  
 Total: 8 SL range: 119-200mm. Sounding range: 1251-1699m.

43. Xenodermichthys copei (GILL, 1884). 9012 (1).

Total: 1                      SL. 50mm.                      Soundings: 1045-1061m.

CHLOROPHTHALMIDAE:

44. Bathypterois (Bathypterois) dubius VAILLANT, 1888. 8967 (8), 8968 (1),  
8969 (3), 9007 (1), 9008 (10), 9009 (5), 9011 (1), 9012 (1), 9017 (14),  
9028 (3).

Total: 47                      SL range: 54-165mm.                      Sounding range: 906-1846m.

45. B. (Bathycygnus) longipes GÜNTHER, 1878. 8974 (1), 9035 (1).

Total: 2.                      SL range: 95-140mm.                      Sounding range: 3029-4457m.

46. B. (Benthosaurus) grallator (GOODE and BEAN, 1886). 9030 (2).

Total: 2.                      SL range: 83-295mm.                      Soundings: 2516-2543m.

SYNODONTIDAE:

47. Bathysaurus ferox GÜNTHER, 1878. 8968 (2), 8971 (1), 9007 (2), 9021 (1),  
9030 (5).

Total: 11.                      SL range: 160-455mm.                      Sounding range: 1654-2543m.

RONDELETIIDAE:

48. Rondeletia loricata ABE and HOTTA, 1963. 9017 (1), 9018 (1).

Total: 2.                      SL range: 55-62mm.                      Sounding range: 1341-1658m.

CHAUNACIDAE:

49. Chaunax pictus LOWE, 1846. 8966 (1).

Total: 1.                      SL: 180mm.                      Soundings: 686-742m.

MORIDAE:

50. Mora moro (RISSO, 1810). 8966 (7), 8967 (1), 8977 (13), 8979 (4), 9016 (1),  
9028 (2).

Total: 28.                      SL range: 260-505mm.                      Sounding range: 686-1229m.

51. Physiculus dalwigki KAUP, 1858. 8966 (2).

Total: 2.                      SL range: 153-255mm.                      Soundings: 686-742m.

GADIDAE:

52. Phycis blennoides (BRÜNNICH, 1768). 8966 (2).

Total: 2                    SL range: 355-435mm.    Soundings: 686-742m.

53. Gaidropsarus sp. 8966 (2).

Total: 2.                    SL range: 75-125mm.    Soundings: 686-742m.

OPHIDIIDAE:

54. Holomycteronus sp. 9030 (1).

Total: 1.                    SL: 267mm.                    Soundings: 2516-2543m.

55. Lamprogrammus sp. 8967 (1).

Total: 1.                    SL: 365mm.                    Soundings: 1140-1222m.

56. Penopus microphthalmus (VAILLANT, 1888) 9007 (1).

Total: 1.                    SL: 236mm.                    Soundings: 1654-1699m.

BYTHITIDAE:

57. Cataetyx sp. 9030 (1).

Total: 1.                    SL: 315mm.                    Soundings: 2516-2543m.

APHYONIDAE:

58. Aphyonus sp. nov.\* 9035 (2)

Total: 2.                    SL range: 87-125mm.    Soundings: 4453-4457m.

59. Barathronus multidentis NIELSEN, 1984. 8976 (1).

Total: 1.                    SL: 74mm.                    Soundings: 3610-3646m.

ZOARCIDAE:

60. Melanostigma atlanticum KOEFOED, 1952. 9010 (1), 9012 (1), 9016 (1).

Total: 3.                    SL range: 60-67mm.    Sounding range: 873-1244m.

MACROURIDAE

61. Trachyrincus trachyrincus (RISSO, 1810). 8966 (5), 8979 (2), 9011 (3).

Total: 10.                    HL range: 90-155mm.    Sounding range: 686-936.



62. Gadomus arcuatus (GOODE and BEAN, 1886). 8967 (6), 8977 (3), 9008 (1),  
9010 (1), 9011 (1), 9028 (4).  
Total: 16. HL range: 25-64mm. Sounding range: 906-1259m.
63. G. longifilis (GOODE and BEAN, 1886). 8967 (50), 8968 (4), 8969 (6),  
8977 (3), 9008 (15), 9009 (8) 9010 (1), 9011 (3), 9016 (4), 9017 (21),  
9018 (19), 9019 (2), 9028 (39).  
Total: 175. HL range: 10-41mm. Sounding range: 873-1846m.
64. Bathygadus favosus GOODE and BEAN, 1886. 8968 (9), 9007 (14), 9008 (3),  
9017 (8), 9018 (21), 9019 (2).  
Total: 57. HL range: 25-80mm. Sounding range: 1251-1846m.
65. B. melanobranchus VAILLANT, 1888. 8967 (54), 8969 (10), 8977 (114),  
8979 (16), 9008 (6), 9009 (5), 9010 (23), 9011 (46), 9012 (1) 9016 (20),  
9017 (7), 9018 (3), 9028 (60).  
Total 365. HL range: 14-116mm. Sounding range: 865-1658m.
66. Coelorinchus occa (GOODE and BEAN, 1885). 8967 (2), 8968 (1), 8969 (2),  
8971 (1), 9007 (8), 9008 (7), 9009 (1), 9011 (1), 9017 (3), 9018 (4), 9021 (1),  
9028 (1), 9029 (1).  
Total: 33. HL range; 30-113mm. Sounding range: 906-2538m.
67. Coryphaenoides (Coryphaenoides) guentheri VAILLANT, 1888). 9019 (1),  
9020 (1), 9021 (2).  
Total: 4. HL range: 23-70mm. Sounding range: 1682-2173m.
68. C. (C.) thelestomus MAUL, 1951. 9017 (1).  
Total: 1. HL: 114mm. Soundings: 1341-1394m.
69. C. (C.) zaniophorus (VAILLANT, 1888). 8966 (1), 8967 (3), 8977 (1),  
8979 (3), 9009 (1), 9010 (1), 9011 (4), 9016 (2), 9018 (2).  
Total: 18. HL range: 7-89mm. Sounding range: 686-1658m.
70. C. (Chalinura) brevibaris GOODE and BEAN, 1896. 9035 (2).  
Total: 2. HL range: 63-64mm. Soundings: 4453-4457m.

71. C. (C.) mediterranea (GIGLIOLI, 1893). 8968 (1), 9018 (2), 9021 (1),  
9030 (1).  
Total: 5. HL range: 26-81mm. Sounding range: 1635-2543m.
72. C. (Lionurus) carapinus GOODE and BEAN, 1883. 8971 (1), 8972 (1).  
Total: 2. HL range: 38-43mm. Sounding range: 2355-2538m.
73. C. (Nematonurus) armatus (HECTOR, 1875). 8974 (2).  
Total: 2. HL range: 101-118mm. Soundings: 3029-3035m.
- Unid. Coryphaenoides sp. 9010 (1).  
Total 1. HL: 11mm. Soundings: 1027-1029m.
74. Hymenocephalus italicus GIGLIOLI, 1884. 8966 (5).  
Total: 5. HL: 28mm. Soundings: 686-742m.
75. Cetonurus globiceps (VAILLANT, 1888). 8971 (1), 9008 (3), 9017 (6),  
9018 (1).  
Total: 11. HL range: 23-49mm. Sounding range: 1251-2538m.
76. Macrosmia phalacra MERRETT, SAZONOV and SHCHERBACHEV, 1983. 9007 (1).  
Total: 1. HL: 28mm. Soundings: 1654-1699m.
77. Trachonurus villosus (GÜNTHER, 1877). 8967 (5), 8968 (1), 8977 (3),  
9007 (3), 9008 (5), 9017 (2), 9018 (3), 9028 (2).  
Total: 24. HL range: 21-75mm. Sounding range: 974-1846m.
78. Sphagemacrurus hirundo (COLLETT, 1896). 8968 (5), 8969 (5), 9008 (9),  
9016 (1), 9017 (12), 9018 (21), 9019 (1).  
Total: 54. HL range: 10-34mm. Sounding range: 873-1846m.
79. Nezumia aequalis (GÜNTHER, 1878). 8966 (35), 8967 (25), 8968 (4),  
8969 (5), 8977 (44), 8979 (8), 9010 (2), 9011 (20), 9012 (1), 9016 (12),  
9028 (37).  
Total: 193. HL range: 14-42mm. Sounding range: 686-1846m.
80. N. longebarbatus (ROULE and ANGEL, 1933). 8967 (1).  
Total: 1. HL: 20mm. Soundings: 1140-1222m.

81. N. sclerorhynchus (VALENCIENNES, 1838). 8966 (7), 8977 (4), 8979 (1),  
9015 (1).

Total: 13. HL range: 21-44mm. Soundings: 610-1032m.

Unid. Nezumia sp. 8967 (1), 9011 (1), 9012 (2), 9016 (1).

Total: 5 HL range: 10-17mm. Sounding range: 873-1222m.

Unid. macrourid sp. 8968 (1), 8970 (1), 9008 (1).

Total: 3 HL range: 11-12mm. Sounding range: 1251-1932m.

STEPHANOBERYCIDAE:

82. Acanthochaenus lütkeni GILL, 1884. 8974 (2) 9020 (1), 9021 (2),

9030 (1).

Total: 6. SL range: 88-114mm. Sounding range: 2017-3035m.

TRACHICHTHYIDAE:

83. Hoplostethus mediterraneus CUVIER, 1829. 8966 (203), 9010 (20), 9012 (3),

9015 (14), 9016 (30).

Total: 270. SL range 15-230mm. Sounding range: 610-1061m.

SCORPAENIDAE:

84. Helicolenus dactylopterus (DELAROCHE, 1809). 8966 (2).

Total: 2 SL range: 145-250mm. Sounding range: 686-742m.

85. Trachyscorpaea cristulata echinata (KOEHLER, 1896). 8967 (1), 8979 (2),

9012 (1).

Total: 4. SL range: 202-380mm. Sounding range: 865-1222m.

COTTUNCULIDAE:

86. Cottunculoides spinosus (GILCHRIST, 1906). 9018 (1).

Total: 1. SL: 82mm. Soundings: 1635-1658m.

APOGONIDAE:

87. Epigonus telescopus (RISSO, 1810). 8966 (3).

Total: 3. SL range: 190-380mm. Soundings: 686-742m.

TRICHIURIDAE:

88. Aphanopus carbo LOWE, 1839. 9011 (1), 9028 (1).

Total: 2. SL range: 915-1000mm. Sounding range: 906-1229m.

TL - Total length      SL - Standard length      L' - Length from snout  
to caudal origin      GnL - Gnathoproctal length      HL - Head length.

\* This species has been determined by J.G. Nielsen (Zoological Museum, Copenhagen) as hitherto undescribed. He will be describing it in due course.

TABLE III

Hauls and species used in the inter-sample analyses.

Hauls. OTSB14:- 8966, 8967, 8968, 8971, 8974, 8977, 8979, 9007,  
9008, 9011, 9012, 9017, 9018, 9021, 9028, 9030.

BN2.4:- 8969, 8970, 8972, 9009, 9010, 9015, 9016, 9019,  
9020, 9029.

Species; see species list for key to species.

2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16,  
17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30,  
31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42,  
43, 45, 46, 47, 48, 49, 50, 51, 52, 60, 61, 62,  
63, 64, 65, 66, 67, 68, 69, 71, 72, 73, 74, 75,  
76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87,  
88.

TABLE IV

The comparison between faunas of the N.W. African and Moroccan slopes has been done by amalgamating samples of similar area and depth. Composite hauls have been used in the analysis.

Area	Sounding range (m)	Samples included	Net	Mean depth (m)
Morocco	500-1000m	8966	OTSB14	807m
		8979	OTSB14	
		9011	OTSB14	
		9015	BN2.4	
		9016	BN2.4	
N.W. Africa 18-22°30'N	500-1000m	7811#1	BN2.4	696m
		7838#1	BN2.4	
		7839#1	BN2.4	
		8003	BN2.4	
		8014	BN2.4	
N.W. Africa 24-26°N	500-1000m	7851#1	BN2.4	803m
		7852#1	BN2.4	
		7975	BN2.4	
		7984	BN2.4	
		7993	BN2.4	
Morocco	1000-1500m	8967	OTSB14	1190m
		8969	BN2.4	
		9008	OTSB14	
		9009	BN2.4	
		9010	BN2.4	
		9012	OTSB14	
		9017	OTSB14	

Area	Sounding range (m)	Samples included	Net	Mean depth (m)
N.W. Africa	1000-1500	7822#7	BN2.4	1180m
		7840#1	BN2.4	
		7991	BN2.4	
		8001	BN2.4	
		8012	BN2.4	
Morocco	1500-2000	8968	OTSB14	1760m
		8970	BN2.4	
		9007	OTSB14	
		9018	OTSB14	
		9019	BN2.4	
		9029	BN2.4	
Morocco	2000-2500	8971	OTSB14	2257m
		8972	BN2.4	
		9020	BN2.4	
		9021	OTSB14	
N.W. Africa	2000-2500m	8932#2	OTSB14	2160m
		9133#5	BN1.5	
		9133#7	OTSB14	
		9134	BN1.5	
		9540	BN1.5	
N.W. Africa	2500-3000m	7091#1	BN2.4	2849m
		7112#1	BN2.4	
		8933#3	OTSB14	
		8933#4	OTSB14	
N.W. Africa	3000-3500	7092#1	BN2.4	3204m
		8528#1	BN1.5	
		9132#5	OTSB14	

Area	Sounding range (m)	Samples included	Net	Mean depth (m)
N.W. Africa	3500-4000m	8540#1	BN1.5	3938m
		9131#2	OTSB14	
		9131#4	OTSB14	
		9131#10	BN1.5	
		9541#5	OTSB14	
N.W. Africa	4000+	8524#1	BN1.5	4210m
		8524#6	BN1.5	
		9131#1	OTSB14	
		9131#9	BN1.5	



FIGURES

Figure 1. Chart of sampling area, with insets showing details of station positions  
(Dots OTSB 14, asterisks BN2.4 samples. Reference numbers correspond with those  
in Table 1).

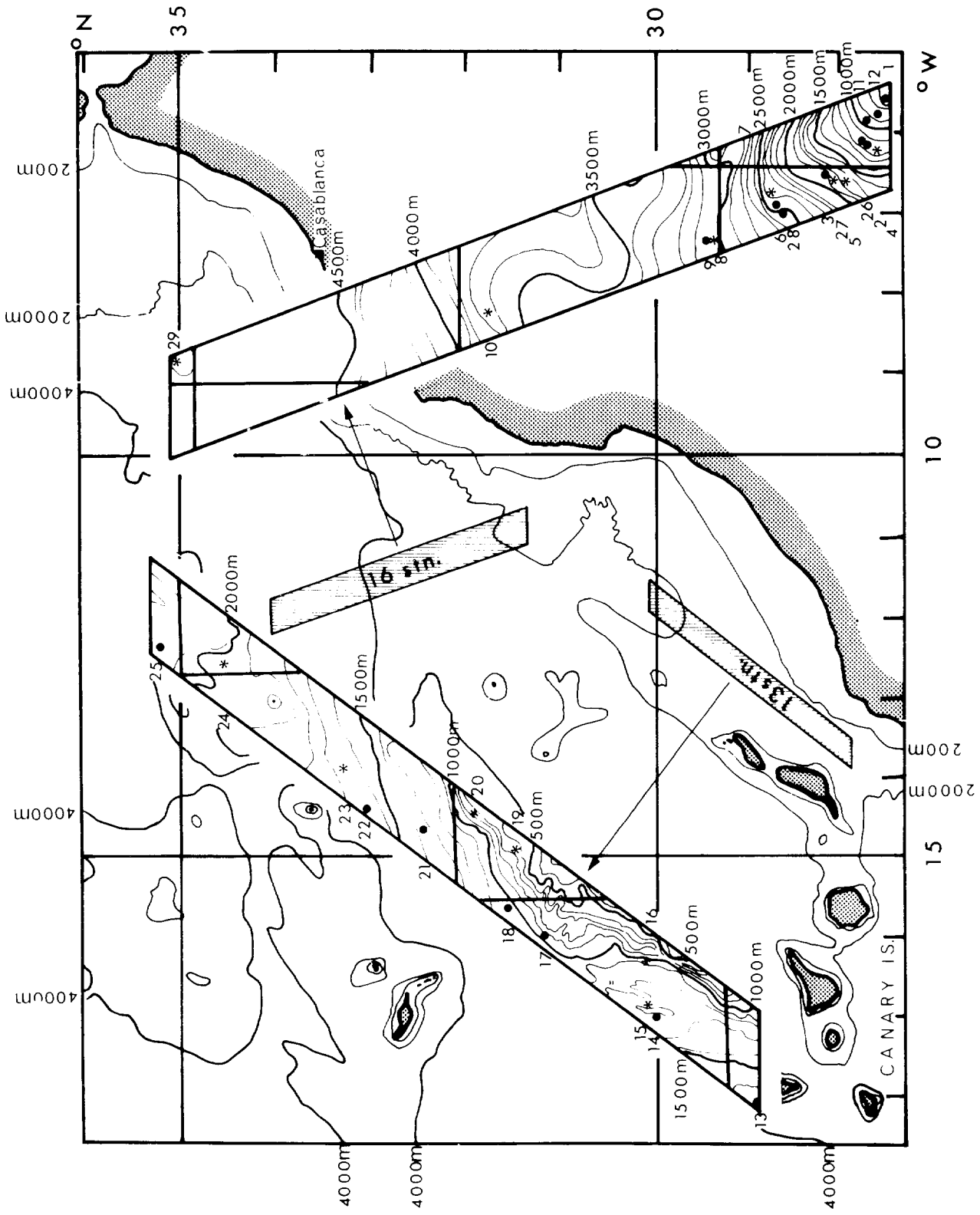


Figure 2. Sounding distributions (shaded) of some of the more abundant species sampled. Relative density is indicated by horizontal lines (solid = OTSB 14, pecked = BN 2.4) located at the midpoint of the sounding range sampled. (a and b).

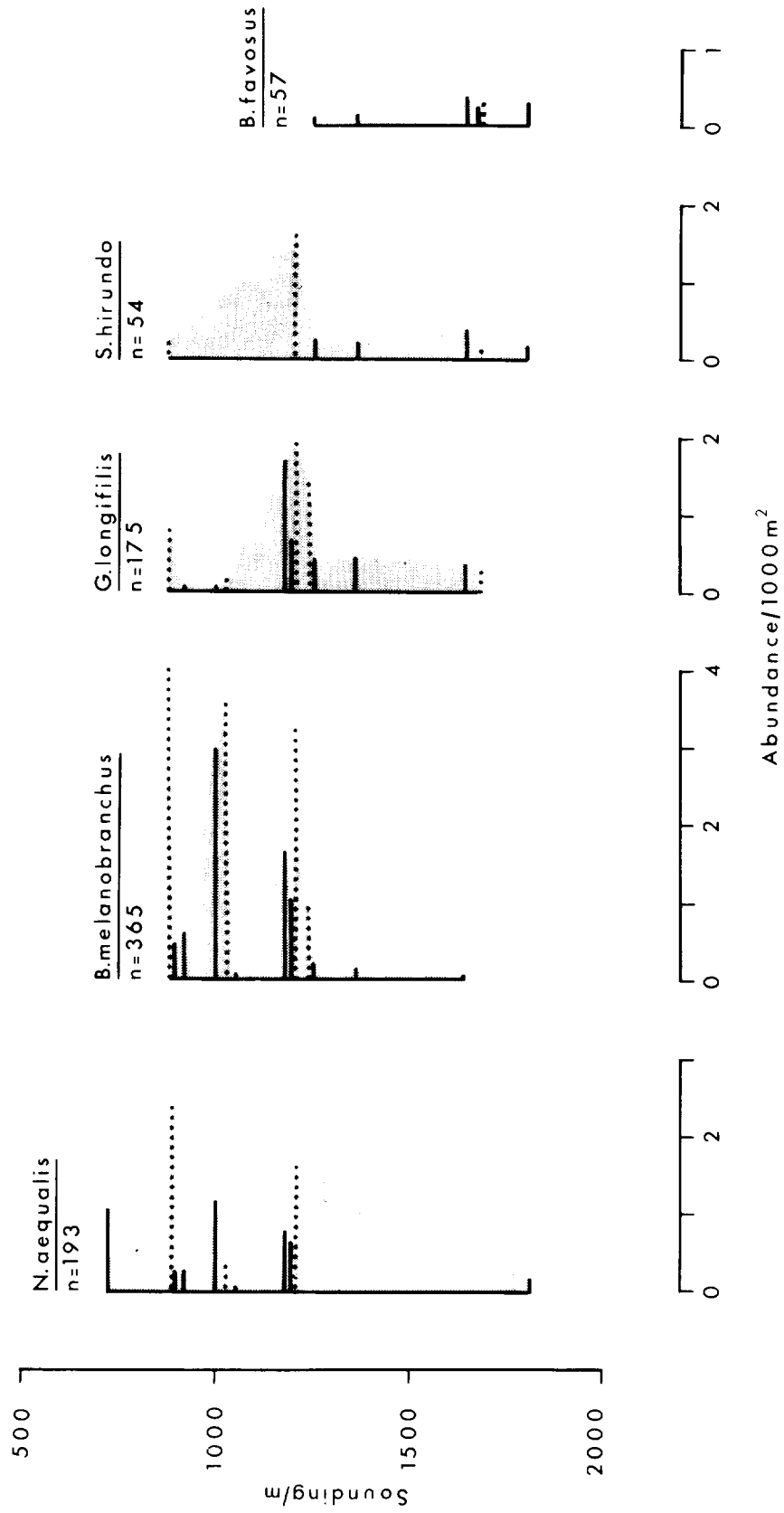


Figure 2 (a)



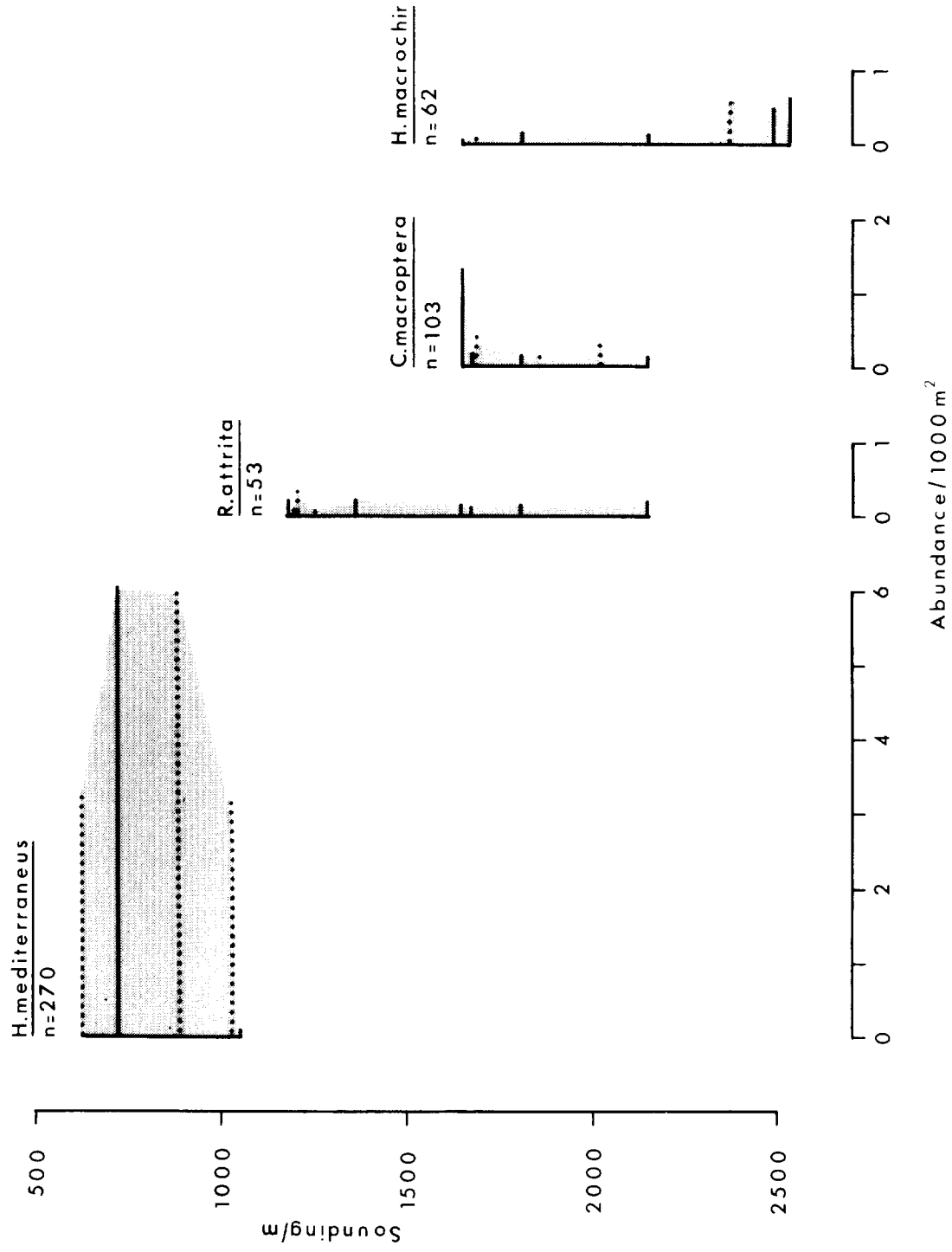


Figure 2(b)