

NOTES ON THE FISHES COLLECTED BY THE R.V. "TRIDENS" ON THE NORTH WEST AFRICAN SHELF, 19-25 JANUARY 1969

by

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ABSTRACT

On the North West African shelf 98 species of fishes were collected of which a classification is given. Three species have hitherto been recorded only farther South. The status of *Platophrys podas africanus* (Nielsen, 1961) is discussed.

INTRODUCTION

During a voyage of the Dutch fishery research vessel "Tridens", of the Ministry of Agriculture and Fisheries, fishes were collected in the waters of the North West African shelf from Cape Bojador to Cape Blanc in the period 19-25 January 1969. Initially the voyage was intended to study the use of different types of pelagic fishing gear in deep waters, deprived of any fish if possible, as they would disturb the technical measurements. However, at the time our ship was due to sail, Dutch trawler owners asked the Ministry for information about the fishery possibilities of Dutch vessels in North West African waters for the months January and February, when in European waters fishery possibilities are rather poor. The area in which the technical experiments would be carried out being the waters around the Canary Islands, it was decided to extend the voyage by a week to obtain an impression of the fauna of this area at that time. We thought it justifiable to report here upon the results of our short survey, because data on the fish and fisheries in waters of northwestern Africa are rather scarce. In addition to data on the composition of the trawl catches at the different stations (fig. 1), the classification of the 98 species collected (specimens of which are deposited at the Institute of Taxonomic Zoology, Zoölogisch Museum, Amsterdam) is provided. Station numbers 5 to 9 refer to the Arguin Bank. At stations 1 and 11 a pelagic trawl, at

stations 2 to 10 a herring trawl was used. The time given is local time.

LIST OF STATIONS (fig. 1)

Station 1: 20-I-1969; time 14.20—16.15 h.; pelagic trawl; depth 94—100 fms.; 25°43'—26°34'N, 15°21'—15°22'W.

Remarks. — Two specimens of the Scabbard Fish (*Lepidopus caudatus*) and one John Dory (*Zeus faber*) and about 30 kg of the pelagic ascidian *Pyrosoma atlanticum* were caught.

Station 2: 20-I-1969; time 20.20—21.00 h.; herring trawl; depth 34—35 fms.; 25°01'—24°59'N, 16°25'—16°28'W.

Remarks. — We fished in the centre of a small fleet of Spanish cutters to investigate the species they were fishing for; these proved to be mainly cephalopods. Total catch about 100 kg of which 30 kg *Loligo* species, 30 kg *Sepia* species, 10 kg *Octopus* species, 15 kg Weevers (*Trachinus*), 10 kg flatfish, mainly Soles (*Dicologlossa azevia* and *D. cuneata*), 5 kg sea perches (*Dentex*, *Spondyliosoma*).

Station 3: 21-I-1969; time 09.30—10.30 h.; herring trawl; depth 46—49 fms.; 23°09'—23°06'N, 17°03'—17°02'W.

Remarks. — Total catch about 300 kg of which 160 kg Horse Mackerel (*Trachurus trachurus*), 35 kg small Gurnards (*Aspitrigla obscura*), 30 kg sea perches, 20 kg Spanish Mackerel (*Scomber japonicus*), 15 kg sharks and rays, 15 kg Star-gazers (*Uranoscopus*), 5 kg flatfish, 15 kg others.

Station 4: 21-I-1969; time 14.10—15.30 h.; herring trawl; depth 47—50 fms.; 22°23'—22°15'N, 17°15'—17°14'W.

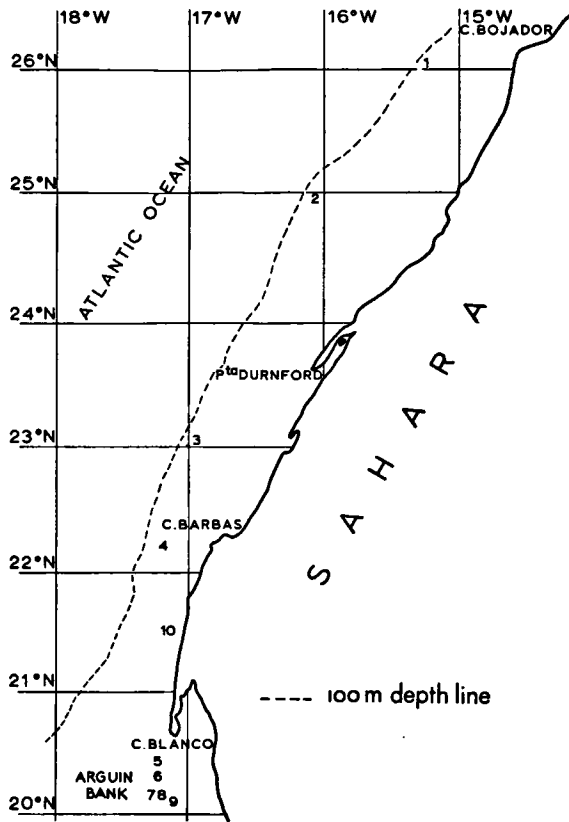


Fig. 1. Map of North West African shelf with position of stations 1 to 10.

Remarks. — We fished along trawling Russian and Bulgarian vessels which were mainly fishing for Horse Mackerel as our trawlcatch showed. Total catch about 1000 kg of which 800 kg Horse Mackerel, 100 kg sea perches, 20 kg Gurnards, 20 kg Stargazers, 20 kg *Octopus*, 5 kg *Loligo*, 15 kg flatfish of which 10 kg large Soles, 10 kg Spanish Mackerel.

Station 5: 21-I-1969; time 07.15—08.15 h.; herring trawl; depth 22—24 fms.; 20°35'—20°37'N, 17°24'—17°22'W.

Remarks. — Total catch about 1100 kg of which 900 kg sea perches (700 kg *Plectorhynchus mediterraneus*, 200 kg *Epinephelus aeneus*), 80 kg large carangids (*Caesiomorus vadigo*, *Decapterus punctatus*), 90 kg sciaenids (60 kg *Atractoscion aequidens*, 30 kg *Umbrina*), 50 kg rays, 40 kg Gurnards, 30 kg Congereels, 10 kg flatfish, 40 kg others.

Station 6: 22-I-1969; time 08.45—11.15 h.; herring trawl; depth 24—25 fms.; 20°36'—20°18' N, 17°22'—17°27' W.

Remarks. — Total catch about 1600 kg, of which 1200 kg sea perches, 150 kg Anchovy, 100 kg carangids (*Decapterus*), 40 kg sciaenids, 40 kg cephalopods, 30 kg Hairtail (*Trichiurus*), 5 kg flatfish (Soles), 40 kg others.

Station 7: 22-I-1969; time 15.00—15.45 h.; herring trawl; depth 9—11 fms.; 20°12'—20°07' N, 17°15'—17°18' W.

Remarks. — Total catch about 750 kg of which 450 kg sea perches (*Dentex*) 100 kg Anchovy, 50 kg sea Catfish (*Arius*), 40 kg sciaenids, 30 kg cephalopods, 30 kg sharks, 30 kg rays, 30 kg Hairtail, 30 kg others.

Station 8: 22-I-1969; time 20.00—21.15 h.; herring trawl; depth 10 fms.; 20°10'—20°14' N, 17°12'—17°10' W.

Remarks. — We fished along a fleet of thirteen large Japanese trawlers, who were presumably fishing for shrimp (*Penaeus*) and sea perches. Total catch about 200 kg of which 100 kg sea perches, 50 kg sciaenids, 50 kg others. Among the crustaceans we found three forms of Penaeidae, *Penaeus kurathurus* (Forskål), *Penaeus duorarum* Perez Farfante, and *Metapenaeopsis miersi* (Holt-huis).

Station 9: 22-I-1969; time 22.30—23.15 h.; herring trawl; depth 10 fms.; 20°11'—20°05' N, 17°13'—17°15' W.

Remarks. — Net was damaged, but still we caught Horse Mackerel, sea perches, and *Stromateus*.

Station 10: 23-I-1969; time 09.30—11.00 h.; herring trawl; 40—58 fms.; 21°35'—21°58' N, 17°22'—17°19' W.

Remarks. — Total catch about 700 kg of which 400 kg Horse Mackerel, 150 kg sea perches (*Dentex*, *Spondyliosoma*), 50 kg Spanish Mackerel, 80 kg other fishes (Stargazer, Angler fish).

Station 11: 25-I-1969; time 14.20—14.35 h.; pelagic trawl; depth 350 fms.; 27°48' N, 15°12' W.

Remarks. — About 20 species of salmonid fishes (myctophids, Hatched Fishes and others).

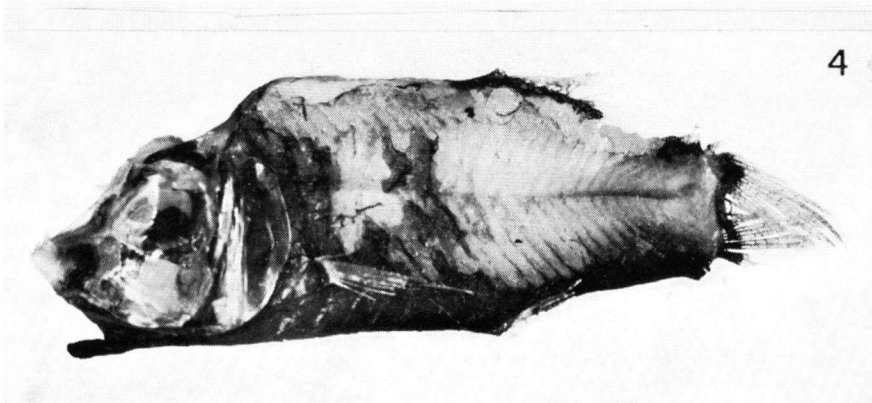
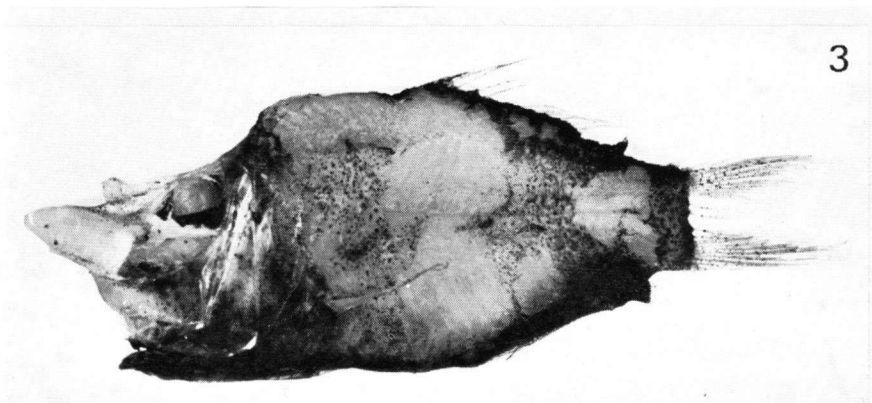
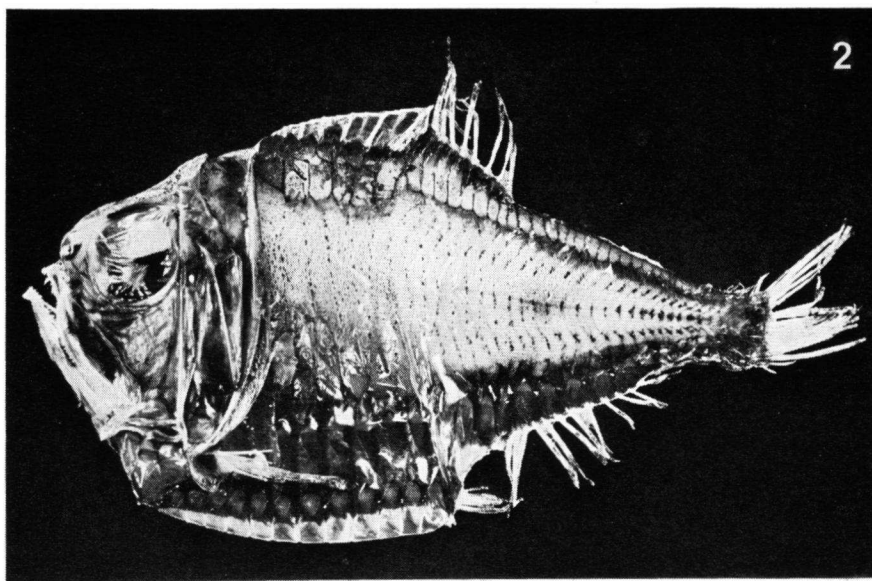


Fig. 2. *Argyropelecus gigas* Norman, 1930, 87.3 mm sl, from station 11 (ZMA 109.920).

Fig. 3. *Opisthoproctus grimaldii* Zugmayer, 1911, 50.1 mm sl, from station 11 (ZMA 109.935).

Fig. 4. *Opisthoproctus soleatus* Vaillant, 1888, 50.6 mm sl, from station 11 (ZMA 109.936).

CLASSIFICATION OF THE FISHES COLLECTED

Lamniformes	
Triakidae	
<i>Mustelus mustelus</i> (Linnaeus)	— Arguin Bank
Scyliorhinidae	
<i>Scyliorhinus canicula</i> (Linnaeus)	— St. 4
<i>Scyliorhinus stellaris</i> (Linnaeus)	— St. 4
Rajiformes	
Rhinobatidae	
<i>Rhinobatos rhinobatos</i> (Linnaeus)	— Arguin Bank
<i>Zanobatus schoenleinii</i> (Müller & Henle)	— Arguin Bank
Rajidae	
<i>Raja naevus</i> Müller & Henle	— Arguin Bank
<i>Raja cf. radula</i> Delaroche	— Arguin Bank
<i>Raja picta</i> Lacépède	— Arguin Bank
Dasyatidae	
<i>Dasyatis pastinaca</i> (Linnaeus)	— Arguin Bank
Torpediniformes	
Torpedinidae	
<i>Torpedo torpedo</i> (Linnaeus)	— Arguin Bank
Anguilliformes	
Congridae	
<i>Bathycongrus mystax</i> (Delaroche)	— St. 2
<i>Conger conger</i> (Linnaeus)	— Arguin Bank
Clupeiformes	
Clupeidae	
<i>Sardina pilchardus</i> (Walbaum)	— St. 10
Engraulidae	
<i>Engraulis encrasicolus</i> (Linnaeus)	— Arguin Bank
Salmoniformes	
Opisthoproctidae	
<i>Opisthoproctus soleatus</i> Vaillant	— St. 11
<i>Opisthoproctus grimaldii</i> Zugmayer	— St. 11
Gonostomidae	
<i>Gonostoma denudatum</i> Rafinesque	— St. 11
<i>Margrethia obtusirostra</i> Jespersen & Tåning	— St. 11
Sternoptychidae	
<i>Sternoptyx diaphana</i> Hermann	— St. 11
<i>Argyropelecus aculeatus</i> Valenciennes	— St. 11
<i>Argyropelecus intermedius</i> Clarke	— St. 11
<i>Argyropelecus gigas</i> Norman	— St. 11
Astronesthidae	
<i>Astronesthes niger</i> Richardson	— St. 11
Melanostomiidae	
<i>Melanostomias pilorhynchus</i> Regan & Trewavas	— St. 11
Chauliodontidae	
<i>Chauliodus schmidti</i> Ege	— St. 11
Stomiidae	
<i>Stomias boa</i> (Risso)	— St. 11
Alepocephalidae	
<i>Maulisia maui</i> Parr	— St. 11
Paralepididae	
<i>Lestidium</i> spec.	— St. 11
Myctophidae	
<i>Diaphus</i> spec. 1.	— St. 11
<i>Diaphus</i> spec. 2	— St. 11
<i>Hygophum</i> spec.	— St. 11
<i>Lampanyctus</i> spec.	— St. 11
<i>Ceratoscopelus</i> cf. <i>townsendi</i> Eigenmann & Eigenmann	— St. 11
<i>Myctophum selenops</i> Tåning	— St. 11
<i>Lampadena</i> spec.	— St. 11
<i>Lobanchia</i> cf. <i>gemellari</i> (Cocco)	— St. 11

Siluriformes	
Bagridae	
<i>Arius heudeloti</i> Valenciennes	— Arguin bank
Batrachoidiformes	
Batrachoididae	
<i>Batrachoides didactylus</i> (Bloch & Schneider)	— Arguin bank
Lophiidae	
<i>Lophius piscatorius</i> Linnaeus	— St. 10
Atheriniformes	
Belonidae	
<i>Belone belone</i> (Linnaeus)	— St. 3
Beryciformes	
Anoplogasteridae	
<i>Anoplogaster cornutus</i> Valenciennes	— St. 11
Melamphaeidae	
<i>Melamphaes spec.</i>	— St. 11
Zeiformes	
Zeidae	
<i>Zeus faber</i> Linnaeus	— St. 1, 3
Caproidae	
<i>Capros aper</i> (Linnaeus)	— Arguin Bank
Gasterosteiformes	
Macrorhamphosidae	
<i>Macrorhamphosus scolopax</i> (Linnaeus)	— St. 10
<i>Macrorhamphosus gracilis</i> (Lowe)	— St. 11
Scorpaeniformes	
Scorpaenidae	
<i>Scorpaena elongata</i> Cadenat	— Arguin Bank
<i>Scorpaena notata</i> Rafinesque	— St. 2
Triglidae	
<i>Trigloporus lastoviza</i> (Bonnaterre)	— St. 2
<i>Chelidonichthys lucernus</i> (Linnaeus)	— Arguin Bank
<i>Aspitrigla obscura</i> (Bloch & Schneider)	— St. 3, 4, Arguin Bank
<i>Peristedion cataphractum</i> (Linnaeus)	— St. 4
Platycephalidae	
<i>Thysanophrys gruveli</i> (Pellegrin)	— Arguin Bank
Perciformes	
Serranidae	
<i>Epinephelus aeneus</i> (Geoffroy St. Hilaire)	— Arguin Bank
<i>Epinephelus gigas</i> (Günther)	— Arguin Bank
<i>Serranus cabrilla</i> (Linnaeus)	— St. 3
Apogonidae	
<i>Apogon imberbis</i> (Linnaeus)	— Arguin Bank
Pomatomidae	
<i>Pomatomus saltatrix</i> (Linnaeus)	— Arguin Bank
Carangidae	
<i>Caesiomorus vadigo</i> (Risso)	— Arguin Bank
<i>Decapterus punctatus</i> (Agassiz)	— Arguin Bank
<i>Trachurus trachurus</i> (Linnaeus)	— St. 3, 4, Arguin Bank, 10
Pomadasyidae	
<i>Plectorhynchus mediterraneus</i> (Guichenot)	— Arguin Bank
<i>Pomadasy incisus</i> (Bowdich)	— Arguin Bank
Sparidae	
<i>Boops boops</i> (Linnaeus)	— Arguin Bank
<i>Dentex filusus</i> Valenciennes	— Arguin Bank
<i>Dentex canariensis</i> Steindachner	— St. 2, 3, 4, Arguin Bank
<i>Diplodus rondeleti</i> (Cuvier & Valenciennes)	— Arguin Bank
<i>Pagrus pagrus</i> (Linnaeus)	— St. 3
<i>Pagrus ehrenbergi</i> Valenciennes	— St. 3
<i>Pagrus auriga</i> Valenciennes	— Arguin Bank
<i>Spondylisoma cantharus</i> (Linnaeus)	— St. 2, 3, Arguin Bank, 10
<i>Pagellus coupei</i> Dieuz	— St. 3, Arguin Bank
<i>Pagellus bogaraveo</i> (Brünnich)	— St. 3

Sciaenidae	
<i>Atractoscion aequidens</i> (Cuvier & Valenciennes)	— Arguin Bank
<i>Umbrina valida</i> (Jordan & Gunn)	— Arguin Bank
<i>Umbrina spec.</i>	— Arguin Bank
Mullidae	
<i>Pseudupeneus prayensis</i> (Cuvier)	— Arguin Bank
Trachinidae	
<i>Trachinus draco</i> Linnaeus	— St. 2, 3, 4, Arguin Bank, 10
<i>Trachinus radiatus</i> Cuvier	— Arguin Bank
<i>Trachinus collignoni</i> Roux	— St. 2
Uranoscopidae	
<i>Uranoscopus polli</i> Cadenat	— St. 2, 3, Arguin Bank
Gobiidae	
<i>Bahygobius paganellus</i> (Linnaeus)	— Arguin Bank
Trichiuridae	
<i>Lepidopus caudatus</i> (Euphrasen)	— St. 1, 11
<i>Trichiurus lepturus</i> Linnaeus	— Arguin Bank
Scombridae	
<i>Sarda sarda</i> (Bloch)	— Arguin Bank
<i>Orcynopsis unicolor</i> (Geoffroy St. Hilaire)	— Arguin Bank
<i>Scomber japonicus</i> (Houttuyn)	— St. 3, 4, 10
Stromateidae	
<i>Stromateus fiatola</i> Linnaeus	— Arguin Bank
Pleuronectiformes	
Bothidae	
<i>Arnoglossus imperialis</i> (Rafinesque)	— St. 2, 3, 4, Arguin Bank, 10
<i>Euclitharus linguatula</i> (Linnaeus)	— St. 2, 3, 4, Arguin Bank, 10
<i>Platophrys podas</i> (Delaroche)	— St. 3
<i>Syacium micrurum</i> (Ranzani)	— St. 2, 3, 4, Arguin Bank, 10
Soleidae	
<i>Dicologlossa azevia</i> (Capello)	— St. 2, 3, 4, Arguin Bank, 10
<i>Dicologlossa cuneata</i> (Moreau)	— St. 2, 3, 4, Arguin Bank, 10
<i>Monochirus hispidus</i> (Rafinesque)	— Arguin Bank, St. 10
Cynoglossidae	
<i>Cynoglossus canariensis</i> (Steindachner)	— Arguin Bank
<i>Cynoglossus goreensis</i> Steindachner	— Arguin Bank
Tetraodontiformes	
Diodontidae	
<i>Chilomycterus spinosus</i> (Linnaeus)	— Arguin Bank

DISCUSSION

Although there was only little time to spend on this preliminary survey, and though most species listed here are well known from this area, we should like to mention some species which, as far as we know, have hitherto been recorded only farther South.

Atractoscion aequidens (Cuvier & Valenciennes). Station 5: 2 specimens (ZMA 109.495/496); station 7: 3 specimens (ZMA 109.524); station 8: 4 specimens (ZMA 109.491/494). Northernmost record from 12°54' S, 11°52' E (Poll, 1954: 218).

Uranoscopus polli Cadenat. Station 2: 1 specimen (ZMA 109.527); station 10: 1 specimen (ZMA 109.526). Northernmost record from 06° 07' S, 12°12' E (Poll, 1959: 47).

Platophrys podas (Delaroche). Syn.: *Bothus podas*. Station 3: 8 specimens (ZMA 109.553).

Although this species is recorded from „Mediterranean and adjacent parts of Atlantic, westwards to the Azores and southwards to Angola” (Norman, 1934: 225), the material from station 3 seems to contradict the existence of the subspecies *P.p. africanus* (Nielsen, 1961). Apart from the subspecies *P.p. maderiensis* (Lowe, 1834), which is a well distinguishable population off Madeira and the Canary Islands — with 88-91 lateral line scales, and 20—21 scales in the lateral line curve — Nielsen separated his subspecies *africanus* from the nominate subspecies as follows: *P. p. podas* (Delaroche, 1809), Mediterranean, with 80-84 lateral line scales and 17—20 scales in the lateral line curve. *P. p. africanus* along the West African coast from Cape Blanc to Angola, with 75—82 lateral line scales and 13—17 scales in the lateral line curve. Nielsen obviously did not see Dollfus' paper (1955: 130), because he states “Going

thoroughly through the literature, I never saw any record of *B. podas* from the coast between Gibraltar and Cape Blanc”.

Our eight specimens from 23°09' N, 17°03' W were collected just between Gibraltar (36° N, 06° W) and the type locality of Nielsen's subspecies *africanus* (09°27' N, 14°48' W). Our specimens have 76—86 lateral line scales (mean = 79.25), and 16—19 scales in the lateral line curve (mean = 18.25). It seems likely that the number of scales along the lateral line shows gradual (clinal) changes from North to South along the West-African coast, and that *P. p. africanus* should not be regarded a subspecies.

Chilomycterus spinosus (Linnaeus). Station 6: 1 specimen (ZMA 109.850). The northernmost record from the literature seems to be 00°33' S, 08°50' E (Poll, 1959: 350). Another specimen of this species was caught during the “Guinean Trawling Survey” off Liberia in 1964 (ZMA 108.501).

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