

**CHECK LIST OF THE BONY FISH SPECIES
IN THE MEDITERRANEAN WATERS OF EGYPT**

BY

MOHAMED A. IBRAHIM* AND I. A. SOLIMAN

*** National Institute of Oceanography and Fisheries, (NIOF), Anfoushy,
Alexandria , Egypt.**

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ABSTRACT

Fish samples from the commercial, the artisanal and the game fishing operations were collected on the spot for identification during an extended period of time of more than a decade. Sampling covered the Egyptian Mediterranean waters extending from the west of Matrouh in the West to the east of Port Said in the East. Encountered fish samples were identified according to their external morphometric and meristic characters as based on the standard identification methods.

A total of 64 bony fish families represented by 202 species were encountered during the study. Family SPARIDAE ranked as #1 comprising 21 species, followed by F. LABRIDAE with 15 sp, Family SERRANIDAE 13 sp. then, Family Carangidae follows with 11 sp.. In addition; the rest of families are represented by variable number of species. Only the Latin, Common English and local Arabic names are present for the species encountered. The illustrated photographs and line drawings are being published elsewhere.

INTRODUCTION

The Mediterranean coast of Egypt is about 1100 km. long. It extends from El-Sallum in the West to El-Arish in the East. The wind along the coast is predominantly from the North (60-65% of the time). It is north-western with a speed of 3-5 m/s in Summer and Spring, and between 5-7 m/s in Winter. This north-westerly winds lead to a generally easterly-drift along the Egyptian coast. The north-easterly winds on the other hand, are somewhat stronger and more frequent in the eastern part of the coast.

The surface water temperature in the area varies between 15°C in winter and 28°C in summer. The tidal variation ranges from 0.15 m during neap tides to 0.3 m during spring tides. Extreme astronomical deviations from mean sea level are 0.3 m to 0.4 m. The tide is slightly higher in Alexandria than in Port Said in the East.

The Mediterranean coast of Egypt receives drainage water from 7 outlet systems. These are namely Mex pumping station which receives drainage from Lake Mariut ($2086 \times 10^6 \text{m}^3$); Tabia ($609 \times 10^6 \text{m}^3$), Idku lake opening ($1541 \times 10^6 \text{m}^3$), Burullus lake opening ($2376 \times 10^6 \text{m}^3$), Nashart drain system ($1669 \times 10^6 \text{m}^3$), Drain No.1 system ($1219 \times 10^6 \text{m}^3$) and Manzala Lake opening ($4016 \times 10^6 \text{m}^3$).

The main fishing methods used in the Mediterranean waters of Egypt are bottom trawling, beach seining and purse-seining. The main trawling grounds are: Arab's Bay (West of Alexandria), Abu-Kir Bay, off the Nile Delta, El-Tina Bay and off El-Arish. The annual fish landing from these grounds ranges between 36000 to 40000 tons. The fishing grounds along this coast can be divided into two distinct zones:

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- (1) The Western zone, extends from Alexandria to El-Sallum in the West with a coast length of about 600 km.
- (2) The Eastern zone, extends from Alexandria to El-Arish, with a coast length of about 500 km.

Most of the fishing activities are concentrated in the eastern zone, where the continental shelf (up to the depth of 200 m) is very wide and flat. It reaches a maximum width of about 70 km in front of the Nile Delta. Bottom trawling, as the principal method of fishing, works mostly at a depth range of 15 - 100 meters, while the rest of the continental shelf is not utilized by the Egyptian fishing fleets. On the other hand, the nature of the sea bottom in the western zone is rocky and the continental shelf is very narrow (about 6 km as an average width) hence, no trawling activity is taking place there and the main fishing methods are purse-seining and long lining.

According to the Central Agency for Public Mobilization & Statistics (CAPMAS), about 8000 tons out of 44000 tons/year landed from the Mediterranean fishing grounds of Egypt are pointed to as "others" which means that it consists of either too small-sized fish, trash fish or unidentified fish species. Absence of effective enforcement of fishing laws, together with great demand for fish encourage skippers to make use of the entire catch including trash fish and bye-catch from the fishing trip.

The aim of the present work is to depict the bony fish species encountered in the Mediterranean waters of Egypt during commercial as well as artisanal and game fishing operations and make the list available in Arabic as well as in Latin for the interested people in the country and abroad.

MATERIALS AND METHODS

Fish samples from the commercial as well as the artisanal and the game fishing operations as well as small-sized fish, trash fish or unidentified fish species brought by the skippers and bye-catch from the fishing trip were collected on the spot for identification during an extended period of time of

more than a decade. Sampling area covered the Egyptian Mediterranean waters from west of Matrouh in the West to east of Port Said in the East. Encountered fish samples were identified according to their external morphometric and meristic characters as based on the standard methods. Only the latin, common English and local Arabic names will be presented for the species encountered. The illustrated photographs and line drawings are being published elsewhere.

RESULTS AND CONCLUSION

Only 37 fish species or fish groups are mentioned in the fishery statistics of Egypt. On the other hand Table (1) presents a total of 64 bony fish families represented by 202 species as encountered in the Mediterranean waters of Egypt during this study. The mentioned table shows that Family Sparidae is ranked as #1 comprising 21 species, followed by F. Labridae with 15 sp.. Family SERRANIDAE 13 sp., Then Family Carangidae follows with 11 sp.. In addition; the rest of the families are represented by variable number of species.

It is noticed also from the table that some fish has local Arabic name, others do not. Meanwhile, one local name may be used for several species of fish sharing more or less the same external morphology. The identified fish that have local Arabic names are either more frequently encountered in the catch and/or have commercial value. The nonidentified ones are just the opposite. It is expected to encounter more other species of fish if fishing boats can go into more deeper waters, and/or if other fishing methods can be applied in the waters west of Alexandria.

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Table (1): A Check List Of The Bony Fish Species In The Mediterranean Waters Of Egypt

الاسم اللاتيني <i>Latin Name</i>	الاسم الإنجليزي <i>English Common Name</i>	الاسم العربي <i>Arabic Name</i>
(1) ANGUILLIDAE:		
Anguilla anguilla (L., 1758).	Common eel	حشاش
(2) APOGONIDAE:		
Apogon imberbis (L., 1758).	Cardinal Fish	
Apogon taeniatus (Cuvier, 1828)		
(3) ARGENTINIDAE:		
Argentina sphyraene (L., 1758).	Argentine	بشاريا
Microstoma microstoma (Risso, 1810)	Argentina	بشاريا
(4) ATHERINIDAE:		
Atherina (Hepsetia) boyeri (Risso., 1810)	Boyer's Sand Smelt	بشاريا
Atherina hepsetus (L., 1758).	Sand Smelt	بشاريا
(5) AULOPIDAE:		
Aulopus filamentosus (Cloquet, 1816)	Mediterr. Flagfin	
(6) BALISTIDAE:		
Balistes carolinensis (Gmelin., 1789).	Gray Trigger Fish	خنزير
(7) BELONIDAE:		
Belone belone (L., 1761).	Garfish	خرم
Tylosurus acus (Lacepede, 1803).	Garfish	خرم
Tylosurus choram (Rupell., 1837)	Needlefish	خرم
(8) BLENNIIDAE:		
Aidablennius sphyinx (Valenciennes, 1836)	Blennie sphinx	أبو قراع
Blennius ocellaris (L., 1758).	Butterfly Blennie	أبو قراع
Lipophrys nigriceps portmahonis (Castanos, 1933)	Blennie	أبو قراع
Lipophrys trigloides (Valenciennes, 1836).	Blennie	أبو قراع
Parablennius incognitus (Bath, 1968).	Blennie	أبو قراع

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Parablennius sanguinolentus (Pallas, 1811).	Blennie	أبو قراع
(9) BOTHIDAE:		
Arnoglossus kessleri (Schmidt, 1915).	Scaldfish	سمكة موسى
Arnoglossus laterna (Walbaum, 1792).	Scaldfish	سمكة موسى
Bothus podas (Delaroche, 1809)	Wide-Eyed Flounder	سمكة موسى
(10) CALLIONYMIDAE		
Callionymus (Calliurichthys) filamentosus (Valenciennes, 1837)	Dragon fish	رقاد
Callionymus maculatus (Raf.,1810)	Spotted dragon	رقاد
Callionymus risso (Le Sueur, 1814)	Dragon	رقاد
Colli phaeton (Gunther, 1861)		رقا
(11) CAPROIDAE:		
Capros aper (L., 1758)	Boarfish	عفريت
(12) CARANGIDAE:		
Caranx crysos (Mitchill, 1815)	Blue Runner	باغة
Caranx rhonchus (Geoffroy St. Hilaire, 1817)	False Scad	باغة
Lichia amia (L., 1758).	Leer Fish	باغة
Naucrates ductor (L., 1758).	Pilot Fish	باغة مخططة
Pseudocaranx detex (Block & Schneider, 1801).	Guelly Jack	باغة
Scyris alexandrina (E. Geoffroy St. Hilaire, 1817)	Alexandria Pompano	جمل
Selar djedaba (Forsskal, 1775)	Shrimp Scad	جمل
Seriola dumerili (Riss, 1810)	Greater Amberjack	أنش
Trachinotus ovatus (L., 1758).	Derbio	غلنفيش
Trachurus mediterraneus mediterraneus (Steindachner, 1868)	Blue Scad	شاخورة
Trachurus trachurus (L., 1758).	Atlantic Horse Mackerel	شاخورة
(13) CENTRACANTHIDAE:		
Centracanthus cirrus (Rafinesque, 1810)	Picarel Guetteur	موزة جر
Spicara flexuosa (Rafinesque, 1810)	Picarel	موزة جر
Spicara maena maena (L., 1758)	Blotched Picarel	موزة
Spicara smaris (L., 1758)	Picarel	موزة

(14) CITHARIDAE:		
Citharus linguatula (L., 1758)	Spotted Flounder	سمكة موسى
(15) CLUPEIDAE:		
Sardina pilchardus (Walbaum, 1792)	European Pilchard	سردين بلشارد
Sardinella aurita (Valenciennes, 1847)	Round Sardinella	سردين مبروم
Sardinella maderensis (Lowe, 1841)	Medit. Sardinella	سردين مفطر
Sprattus sprattus (L., 1758)	Sprat	سردين
(16) CONGRIDAE:		
Ariosoma balearicum (Delaroche, 1809).	Balearic Conger	كونجر
Conger conger ([Artidi, 1738] L., 1758)	Conger Eel	كونجر
Gnathophis mystax (Delaroche, 1809).	Blacktailed Conger	كونجر
(17) CORYPHAENIDAE:		
Coryphana hippurus (L., 1758)	Dolphinfish	كورفينا
(18) CYNOGLOSSIDAE:		
Cynoglossus sinusarabici (Chabanaud, 1931)	Red Sea Tonguesole	سيفوليا
Symphurus ligulatus (Cocco, 1844).	Elongate Tonguesole	سيفوليا
Symphurus nigrescens (Rafinesque, 1810).	Tonguesole	سيفوليا
(19) DACTYLOPTERIDAE:		
Dactylopterus volitans (L., 1758).	Flying Gurnard	فرخة
(20) DUSSUMIERIIDAE:		
Dussumieria acuta (Valenciennes, 1847)	Rainbow Sardine	سردينة إنجليزي
(21) ECHENEIDIDAE:		
Echeneis naucrates (L., 1758)	Sharksucker	قملة الدرفيل
Remora remora (L., 1758)	Remora	قملة الدرفيل
(22) ENGRAULIDAE:		
Engraulis encrasicolus(L., 1758)	Anchovy	أنشوجة
(23) EXOCOETIDAE:		
Hirundichthys rondeletii (Valenciennes, 1846)	Blackwing Flying Fish	طيارة
Parexocoetus mento (Valenciennes, 1846)	African Sailfin	طيارة

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	Flying Fish	
Exocoetus volitans (L., 1758)	Flying Fish	طيارة
(24) GOBIIDAE:		
Aphia minuta (Risso, 1810)	Transparent Goby	أبو كرش
Gobius bucchichi (Steindachner, 1870)	Bucchichis Goby	أبو كرش
Gobius cobitis (Pallas, 1811)	Giant Goby	أبو كرش
Gobius niger (L., 1758)	Black Goby	أبو كرش
Gobius paganellus (L., 1758)	Rock Goby	أبو كرش
Lesueurigobius suerii (Risso, 1810)	Lesueur's Goby	أبو كرش
Zebrus zebrus (Risso, 1826)	Zebra Goby	أبو كرش
(25) POMADASYIDAE:		
Pomadasy incisus (Bowdich, 1825)	Bastered Grunt	
Pomadasy stridens (Forsk., 1775)	Striped Piggy	
(26) HEMIRAMPHIDAE:		
Hemiramphus far (Forsk., 1775)	Halfbeak	أبو منقار
Hyporhamphus picarti (Valenciennes, 1846)	African Halfbeak	أبو منقار
(27) HOLOCENTRIDAE:		
Holocentrus rubrum (Forsk., 1775)	Red Soldier fish	جحايا
(28) ISTIOPHORIDAE:		
Tetrapturus belone (Rafinesque, 1810)	Medit. Spearfish	مارلين
(29) LABRIDAE:		
Acantholabrus palloni (Risso, 1810)	Scale-rayed Wrasse	عروسة
Coris julis (L., 1758)	Rainbow Wrasse	عروسة
Ctenolabrus rupestris (L., 1758)	Goldsinny-wrasse	عروسة
Labrus bimaculatus (L., 1758)	Cuckoo wrasse	عروسة
Labrus merula (L., 1758)	Brown wrasse	خضير
Labrus viridis (L., 1758)	Green wrasse	خضير
Symphodus (Crenilabrus) cinereus (Bonnaterre, 1788)	Gray wrasse	خضير
Symphodus doderleini (Jordan, 1891)		
Symphodus (Crenilabrus) mediterraneus (L., 1758)	Axillary wrasse	خضير
Symphodus (Crenilabrus) melanocercus (Risso,		خضير

Scomberomorus (Cybium) commerson (Lacepede, 1980)	Spanish Mackerel	دراك
(47) SCOMBRIDAE:		
Scomber japonicus (Houttuyn, 1780)	Chub Mackerel	سكومير
Scomber scombrus (L., 1758)	Atlantic Mackerel	كاسكومري
(48) SCOPHTHALMIDAE:		
Psetta maxima (L., 1758)	Turbot	سمكة موسى
Scophthalmus rhombus (L., 1758)	Brill	سمكة موسى
(49) SCORPAENIDAE:		
Heliolenus dactylopterus (Delaroche, 1809)	Rockfish	عقرب
Scorpaena notata (Rafinesque, 1810)	Small-scaled Red Scorpionfish	عقرب أحمر
Scorpaena porcus (L., 1758)	Small-scaled Black Scorpionfish	عقرب
Scorpaena scrofa (L., 1758)	Large-scaled Red Scorpionfish	عقرب أحمر
Sebastapistes nuchalis (Gunther, 1874)	Suez Red Scorpionfish	عقرب أحمر
(50) SERRANIDAE:		
Anthias anthias (L., 1758)	Swallowtail Seaperch	جحايا صغيرة
Callanthias ruber (Ranifisque, 1810)	Parrot Sea Perch	جحايا صغيرة
Dicentrarchus labrax (L., 1758)	European seabass	قاروص
Dicentrarchus punctatus (Bloch, 1792)	Spotted seabass	نقط
Epinephelus aeneus (Geoffroy, St. Hilaire, 1817)	White Grouper	قرفصة
Epinephelus alexandrinus (Valenciennes, 1828)	Golden Grouper	يهودية
Epinephelus caninus (Valenciennes, 1843)	Dogtooth Grouper	وقار
Epinephelus guaza (L., 1768)	Dusky Grouper	وقار
Mycteroperca rubra (Bloch, 1793)	Comb Grouper	وقار
Polyprion americanus (Schneider, 1801)	Stone bass	وقار
Serranus cabrilla (L., 1785)	Comber	قرفصة
Serranus hepatus (L., 1785)	Brown Comber	قرفصة
Serranus scriba (L., 1758)	Painted Comber	شيخ

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(51) SIGANIDAE:		
Siganus luridus (Ruppell, 1828)	Dusky Spinefoot	بطاطا
Siganus rivulatus (Forsskal, 1775)	Marbled Spinefoot	بطاطا
(52) SOLEIDAE:		
Buglossidium luteum (Risso, 1810)	Solenette	سمكة موسى
Microchirus ocellatus (L., 1758)	Four-eyed Sole	سمكة موسى
Microchirus variegatus (Donovan, 1802)	Thickback Sole	سمكة موسى
Solea solea aegyptiaca (Chabanaud, 1927)	Egyptian Sole	سمكة موسى
Solea impar (Bonnette, 1831)	Adriatic Sole	سمكة موسى
Solea kleinii (Bonaparte, 1833)	Klein's Sole	سمكة موسى
Solea vulgaris (Quensel, 1806)	Common Sole	سمكة موسى
(53) SPARIDAE:		
Boops boops (L., 1758)	Bogue	موزة
Crenidens crenidens (Forsskal, 1775)	Karenteen Sea Bream	جرجار
Dentex dentex (L., 1758)	Common Bogue	عضاض
Dentex gibbosus (Rafinosque, 1810)	Pink Dentex	عضاض أبو قورة
Dentex macrophthalmus (Bloch, 1791)	Large-eye Dentex	عضاض أبو عين
Dentex maroccanus (Valenciennes, 1830)	Morocco Dentex	عضاض
Diplodus annularis (L., 1758)	Annular Sea Bream	سبارس
Diplodus cervinus (Lowe, 1841)	Zebra Bream	تيس
Diplodus puntazzo (Cetti, 1777)	Sharpsnout Sea Bream	شرغوش أبو بوز
Diplodus sargus (L., 1758)	White Sea Bream	شرغوش
Diplodus vulgaris (E. Geof. St. Hilaire, 1817)	Two-Banded Bream	شرغوش حر
Lithognathus mormyrus (L., 1758)	Striped Sea Bream	مرمار
Oblada melanura (L., 1758)	Saddled Bream	كحلة
Pagellus acarne (Risso, 1826)	Spanish Bream	غزيلة برونزية
Pagellus erythrinus (L., 1758)	Pandora	غزيلة حمراء

Pagrus auriga (Valenciennes, 1843)	Red-banded Sea Bream	مرجان
Pagrus caeruleostictus (Valenciennes, 1830)	Blue-spotted Sea Bream	مرجان
Pagrus pagrus (L., 1758)	Common Sea Bream	مرجان حر
Sarpa salpa (L., 1758)	Salema	سرب
Sparus aurata (L., 1758)	Gilt-head Sea Bream	دنييس
Spondyliosoma cantharus (L., 1758)	Black Sea Bream	دنييس بيوز
(54) SPHYRAENIDAE:		
Sphyraena chrysotaenia (Klunzinger, 1884)	Obtuse Barracuda	مغازل
Sphyraena sphyraena (L., 1758)	European Barracuda	مغازل
Sphyraena viridensis (Cuvier, 1829)	Yellowmouth Barracuda	مغازل
(55) STROMATIDAE:		
Stromateus fiatola (L., 1758)	Butter fish	أبو عدس
(56) SYNODONTIDAE:		
Saurida undosquamis (Richardson, 1848)	Brushtooth Lizard Fish	حارت أو مكرونة
Synodus saurus (L., 1758)	Atlantic Lizard Fish	حارت أو مكرونة
(57) TERAPONIDAE:		
Pelates quadrilineatus (Bloch, 1790)	Four-lined Terapon	جربوع
Terapon puta (Cuvier, 1829)	Small-Scaled Terapon	جربوع
(58) THUNNIDAE:		
Auxis rochei (Risso, 1810)	Frigate mackerel	بلاميطة
Euthynnus alletteratus (Rafinisque, 1810)	Little tuna	كبريت
Euthynnus (Katsumonus) pelamis (L., 1758)	Skipjack tuna	بلاميطة
Thunnus (Germo) alalunga (Bonnaterre, 1788)	Albacore	تونة
Thunnus (Thunnus) thynnus (L., 1758)	Bluefin tuna	تونة

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(59) TRACHINIDAE:		
Echiichthys vipera (Cuvier, 1829)	Lesser Weever	بلامة
Trachinus araneus (Cuvier, 1829)	Spotted Weaver	بلامة
Trachinus draco (L., 1758)	Greater Weever	بلامة
Trachinus radiatus (Cuvier, 1829)	Starry Weever	بلامة
(60) TRICHIURIDAE:		
Lepidopus caudatus (Euphrasen, 1788)	Silver Scabbard Fish	سيف
Trichiurus lepturus (L., 1758)	Large-eyed Hairtail	سيف
(61) TRIGLIDAE:		
Aspitrigla cuculus (L., 1758)	Red Gurnard	فرخة
Aspitrigla obscura (L., 1764)	Longfish Gurnard	فرخة
Eutrigla gurnardus (L., 1758)	Grey Gurnard	فرخة
Lepidotrigla cavillone (Lacepede, 1801)	Large-Scaled Gurnard	فرخة
Trigla lucerna (L., 1758)	Tub Gurnard	فرخة
Trigla lyra (L., 1758)	Piper Gurnard	فرخة
Trigloporus lastoviza (Brunnich, 1789)	Streaked Gurnard	فرخة
(62) URANOSCOPIDAE:		
Uranoscopus scaber (L., 1758)	Stargazer	قط
(63) XIPHIIDAE:		
Xiphias gladius (L., 1758)	Swordfish	أبوسيف
(64) ZEIDAE:		
Zeus faber (L., 1758)	John Dory	عفريت