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## The marine ichthyofauna of Lebanon: an annotated checklist, history, biogeography, and conservation status

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MICHEL BARICHE & RONALD FRICKE

**THE MARINE ICHTHYOFAUNA OF LEBANON: AN ANNOTATED CHECKLIST, HISTORY,  
BIOGEOGRAPHY, AND CONSERVATION STATUS**

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## Abstract

This is an annotated checklist of the marine fish species of Lebanon (Levant coast, eastern Mediterranean). It comprises a total of 367 fish species distributed in 159 families and 27 orders, out of which 70 species are non-indigenous and 28 are recorded for the first time from Lebanon. The checklist includes all names and citations of species found in the literature, as well as references to specimens available in museum collections. It also includes an updated zoogeographic distribution and conservation status for each species. Threats were estimated based on surveys and observations made over the last two decades; broadly categorized conservation actions were also suggested.

**Key words:** fishes, new records, non-indigenous species, taxonomy, distribution, Levant, Mediterranean Sea

## Introduction

Lebanon is a small country situated in the easternmost part of the Mediterranean Sea, along the coast of the Levant. It is a sovereign state since 1943 and is mainly constituted of two mountain ranges stretching parallel to the Mediterranean coast, running along most of the country's length. They are separated by a fertile plain, known as the Beqaa valley. The coast of Lebanon consists of an irregular coastal plain of about 220 km in length, with a complex topography made of limestone cliffs, river deltas, alluvial plains, vermetid terraces, and gravel or sandy beaches (Emery

& George 1963). The coastal area is highly urbanized and holds major cities of the country. It also contains scores of perennial and seasonal rivers and streams that run through steep valleys into the Mediterranean Sea. The continental shelf is relatively narrow and steep, with a generally rugged bottom. Surface waters are relatively well-mixed during the cold season and more stratified throughout the rest of the year.

Many regions of present Lebanon have been inhabited by humans since prehistoric times and environmental degradation, including deforestation and overgrazing, has certainly started thousands of years ago, since Phoenician times. However, various conflict and post-conflict periods occurring after the start of the Lebanese civil war (1975) limited scientific research, thus resulting in a significant lack of scientific knowledge and environmental awareness. Pollution, unregulated and destructive fishing practices, as well as habitat loss are amongst the most critical anthropogenic threats to the Lebanese marine environment and its resources. Some habitats are particularly more vulnerable than others, such as vermetid terraces, estuaries, and seagrass meadows.

The Lebanese marine environment is also affected by the presence of non-indigenous species (NIS), particularly invasive ones that thrive in its coastal marine waters. Their presence in large numbers may have been facilitated by the disturbed marine habitats, which may have also accelerated these degradations, as invasives are known to have significant impacts on the marine ecology, as well as economy and human health (Katsanevakis *et al.* 2014). Biological invasions, are also affecting the Mediterranean Sea biodiversity and ecosystem (e.g. Streftaris & Zenetos 2006; Galil 2007; Katsanevakis *et al.* 2014). The main source of NIS is considered to be the Suez Canal; this pathway, linking the Mediterranean to the Red Sea since 1869, resulted in the introduction and establishment of thousands of NIS in the eastern Mediterranean. Organisms of Indo-Pacific origin are commonly named Lessepsian migrants, after Ferdinand de Lesseps who built the canal 150 years ago (Por 1978; Golani 2005; Golani & Appelbaum-Golani 2010; Galil 2012; Zenetos *et al.* 2010; 2012; 2017). The proximity to the Suez Canal makes Lebanon highly prone to bioinvasions, and some NIS have become very important components of local communities and fisheries (Bariche 2012; Bariche *et al.* 2004; 2006; 2007; Carpentieri *et al.* 2009).

Besides Lessepsian migration, several other introduction pathways to the Mediterranean Sea include shipping (fouling or ballast), aquaculture, ornamental pet trade or range expansion from the tropical Atlantic *via* the Strait of Gibraltar (e.g. Galil 2012; Zenetos *et al.* 2012; Pajuelo *et al.* 2016). The introduction rate seems to also have recently increased in the Mediterranean at an alarming degree (Golani 2010; Edelist *et al.* 2013; Samaha *et al.* 2016). The ecological and economic consequences of Lessepsian invasion are enormous (Sala *et al.* 2011) and scientists are trying to understand the mechanisms allowing NIS to be successful in their new environment (Belmaker *et al.* 2013; Samaha *et al.* 2016). The impacts of NIS on the Lebanese environment and market have yet to be assessed.

Marine science along the Levant coast is considered to have started when European naturalists, such as Luksch & Wolf (1892–1894) and Nielsen (1912), visited the region. Among the oldest records of marine organisms from Lebanon, is the description of 15 fish species from Beirut (Fowler 1923). Others, such as Steinitz (1929), Moazzo (1931) and Pallary (1938), described marine crustaceans and molluscs from the region, some of which were non-indigenous. After the end of WWI, Gruvel (1928, 1931) explored the marine and freshwater resources of the Lebanese-Syrian region and reported many aquatic organisms, ranging from crustaceans to marine mammals. Several other significant works appeared during that period, such as Spicer (1931), Liebman (1934), Ballard (1934), Hornell (1935), Bodenheimer (1935, 1937), Russel (1936) and Steinitz (1952). Since then, work related to fishes of the Levantine region became relatively more frequent (e.g. Ben-Tuvia 1953a, b; Demetropoulos & Neocleous 1969). Noticeable works on fish and fisheries from Lebanon exist, such as Guadillière (1958), Boulos (1961), Toda (1961), and Philibert (1964).

The presence of institutions of higher learning in Lebanon, such as the Syrian Protestant College founded in 1866, now the American University of Beirut (AUB), as well as Saint Joseph University (USJ) founded in 1875, helped establish a suitable environment for sciences in the region. More recently, the founding of the National Council for Scientific Research (CNRS-L) in 1962 and the National Center for Marine Sciences in 1977, constituted also a major step towards various scientific disciplines, including marine sciences in Lebanon. AUB hosts scientific collections that date back to the establishment of the university. The Natural History Museum (AUBNHM) is constituted of animal and plant material that represent the biological diversity of Lebanon and the Middle East, among which historic collections of bony (AUBM-OS) and cartilaginous (AUBM-CH) fishes are present.

Despite Gruvel's work, the most significant and reliable effort related to fish identification in Lebanon started with George & Athanassiou (1964; 1965; 1966a, b; 1971) who provided checklists and first records. This was followed by the work of Mouneimné (1977; 1978; 1979) who also compiled a list of marine fishes from Lebanon and

studied the biology of some species, which were grouped in a single document (Mouneimné 2002). Afterwards, Lakkis & Zeidane published studies on ichthyoplankton from the coast of Lebanon (Lakkis & Zeidane 1989). More recently, many species of various origins were detected from Lebanon (e.g. Bariche 2010a; b; 2011; 2012; Bariche & Saad 2005; 2008; Bariche & Azzurro 2012; Bariche & Heemstra 2012; Bariche & Fricke 2018; Bariche *et al.* 2007; 2013a; b; 2014; 2015; Colloca & Lelli 2012; Harmelin-Vivien *et al.* 2005; Lelli *et al.* 2008; Carpentieri *et al.* 2009; Crocetta & Bariche in Crocetta *et al.* 2015; Fanelli *et al.* 2015; Crocetta & Bariche in Dailianis *et al.* 2016; Crocetta & Bariche in Gerovasileiou *et al.* 2017; Aguillar *et al.* 2018; Badreddine & Bitar 2019).

The present paper intends to provide an updated list of all marine fish species recorded from Lebanon since Gruvel. It provides a chronology of previous records, their distribution and conservation statuses, and adds taxonomic comments when needed or available. Records of specimens found in scientific collections, reported in the literature or even based on photographs are taken into consideration. This work will serve as a baseline for future work on fish diversity and conservation in Lebanon and the area.

## Materials and Methods

All species recorded in Lebanese marine waters are listed here. The information was compiled from the scientific literature, which constitutes the basis of the current checklist. Available specimens in museum collections, more specifically AMNH, ANSP, AUBM, BMNH, CAS, FMNH, KAUM, MCZ, MNHN, ROM, SMF, SMNS, UF, USNM, and YPM were also included (Table 1). Collection abbreviations follow Fricke & Eschmeyer (2019). New specimens were also collected by the first author (MB) in the last two decades; they were preserved and stored in the marine collection of AUBNHM. Additional information was selected from unconventional sources such as grey literature, images published in newspapers or on local websites and social media. This information was carefully checked for accuracy prior to being used, and questionable records were excluded.

**TABLE 1. Natural History Museum collections in which fish from Lebanon are preserved worldwide. Museum abbreviations follow Fricke & Eschmeyer (2019).**

AMNH	American Museum of Natural History, New York, USA	MNHN	Muséum National d'Histoire Naturelle, Paris, France
ANSP	Academy of Natural Sciences of Drexel University, Philadelphia, Pennsylvania, USA	ROM	Royal Ontario Museum, Department of Natural History, Toronto, Ontario, Canada
AUBM	American University of Beirut, Natural History Museum, Beirut, Lebanon	SMF	Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt am Main, Germany
BMNH	The Natural History Museum, London, UK	SMNS	Staatliches Museum für Naturkunde in Stuttgart, Stuttgart, Germany
CAS	California Academy of Sciences, San Francisco, California, USA	UF	University of Florida, Florida Museum of Natural History, Gainesville, Florida, USA
FMNH	Division of Fishes, Department of Zoology, Field Museum of Natural History, Illinois, USA	USNM	Smithsonian Institution National Museum of Natural History, Washington D.C., USA
KAUM	Kagoshima University Museum, Ichthyology, Kagoshima, Japan	YPM	Yale University, Peabody Museum of Natural History, Connecticut, USA
MCZ	Museum of Comparative Zoology, Harvard University, Ichthyology Department, Massachusetts, USA		

For each species, the valid scientific binomial name and authority (Current status) are updated following the Eschmeyer's Catalog of Fishes Online Database (Fricke *et al.* 2019). Common names in English follow Froese and Pauly (2019). The section "Taxonomy" chronologically lists previous records from the literature, using the same species names and authorities of the original publication. New records of species for Lebanon are also listed here, stating the source of information and material in collection. In "Distribution", the updated biogeography of each

species is retrieved from the Eschmeyer’s Catalog of Fishes Online Database (Fricke *et al.* 2019). In “Conservation”, the status for each species is also extracted from the IUCN Red List of Threatened species, for both Global and Mediterranean levels, whenever available (IUCN 2019); global assessment is exclusively used for NIS. They include several categories of species statuses: Critically Endangered (CR); Endangered (EN); Vulnerable (VU); Near Threatened (NT); Least Concern (LC); Data Deficient: (DD); and Not Evaluated (NE). When a species is not found on the IUCN website, it is labelled as NE. This section also highlights whether the species is included in any of the appendices of the Checklist of CITES species for species trade (CITES 2017). “Threats” have been assessed based on field surveys and underwater observation undertaken by the authors in Lebanon since 1999. They are defined in broad categories in Table 2. The “Occurrence” of species in Lebanese waters or in fish landings are also grouped in broad categories (very common, common, rare, very rare, unknown) for the same time range (1999–2019). Significant decline or increase are mentioned whenever proper and conservation actions are suggested following three categories (low, medium, high). Photographs are taken by author MB, unless stated otherwise.

**TABLE 2. Most significant threats for marine species in Lebanese waters, ordered by importance of criteria modified from Fricke *et al.* (2007).**

Threat abbreviation	Description	Definition
FIT	Fishery (target species)	A species that is commercially exploited as a target species
FIB	Fishery (bycatch)	A species that is not regularly commercially exploited, but is frequently caught as bycatch in fisheries
HAB	Habitat degradation	A species that is threatened by the degradation or loss of its habitat (loss of freshwater in estuaries, silted sand bottoms, disappearing seagrass beds, construction, etc.)
NIS	Invasive species	A species that is threatened by competition with non-indigenous species occurring in the Mediterranean (Lessepsian migration, aquaculture, ballast water...)

## Carcharhiniformes

### Carcharhinidae

*Carcharhinus altimus* (Springer 1950)—Bignose shark

**Taxonomy.** New record from Lebanon, based on photos of an individual landed in Jounieh by a fisherman (11 January 2017).

**Distribution.** Circumglobal in tropical and warm temperate seas (including Caribbean Sea, Mediterranean Sea, Red Sea).



**FIGURE 1.** *Carcharhinus altimus* (Springer 1950), Jounieh, 11 January 2017, photograph: Ziad Samaha.



**Conservation.** IUCN: Global (DD: 1 December 2008); Med. (DD: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. High priority for conservation action. Listed as exotic to the Mediterranean Sea (Golani *et al.* 2002).

*Carcharhinus falciformis* (Müller & Henle 1839)—Silky shark

**Taxonomy.** New record from Lebanon, based on photos of two specimens landed in Sarafand (9 May 2017) and in Saida (15 September 2017).

**Distribution.** Circumglobal in tropical seas (including Caribbean Sea, Red Sea, Persian Gulf).

**Conservation.** IUCN: Global (VU: A2bd, 26 September 2017); Med. (NE); CITES: Appendix II. Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. High priority for conservation action. Listed as exotic to the Mediterranean Sea (Golani *et al.* 2002).



**FIGURE 2.** *Carcharhinus falciformis* (Müller & Henle 1839), Saida, 15 September 2017, photograph: unknown (posted on local social media).

*Carcharhinus limbatus* (Valenciennes 1839)—Blacktip shark

**Taxonomy.** First record from Lebanon as *Carcharhinus limbatus* (Müller & Henle 1841) by George *et al.* (1964: 9); subsequently recorded as *Carcharhinus limbatus* (Valenciennes) by Mouneimné (1977: 60); as *Carcharhinus limbatus* (Valenciennes 1841) by Mouneimné (2002: 51). Recent unpublished records from Naqoura (21 October 2011) and Tripoli (18 July 2013).

**Distribution.** Circumglobal in tropical and warm temperate seas (including Caribbean Sea, Red Sea, Persian Gulf, South China Sea).

**Conservation.** IUCN: Global (NT: 1 October 2005); Med. (DD: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. High priority for conservation action.

*Carcharhinus obscurus* (Lesueur 1818)—Dusky shark

**Taxonomy.** First record from Lebanon as *Carcharhinus obscurus* by Lteif (2015: 61).

**Distribution.** Nearly circumglobal in tropical and subtropical seas (including Caribbean Sea, Red Sea).

**Conservation.** IUCN: Global (VU: A2bd, 14 February 2007); Med. (DD: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. High priority for conservation action.



**FIGURE 3.** *Carcharhinus limbatus* (Valenciennes 1839), Naqoura, October 2011, photograph: Ziad Samaha.

*Carcharhinus plumbeus* (Nardo 1827)—Sandbar shark

**Taxonomy.** New record from Lebanon, based on photos of one individual landed in Tripoli (20 August 2013); another from an unknown location in North Lebanon (19 November 2013), and a third one photographed underwater in Ghazieh (14 May 2018). Recent unpublished records from Sarafand (19 November 2013), Tripoli (20 August 2013) and Saida (13 May 2018). Material in collection: AUBM (CH0009).

**Distribution.** Circumglobal in tropical through warm temperate seas (including Caribbean Sea, Red Sea, Persian Gulf), possibly absent from eastern Pacific.

**Conservation.** IUCN: Global (VU: A2bd+4bd, 20 February 2007); Med. (EN: A4d, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. High priority for conservation action.

*Prionace glauca* (Linnaeus 1758)—Blue shark

**Taxonomy.** First record from Lebanon as *Prionace glauca* (Linnaeus 1758) by George *et al.* (1964: 9); subsequently recorded as *Prionace glauca* (Linnaeus) by Mouneimné (1977: 60); as *Prionace glauca* (Linnaeus 1758) by Mouneimné (2002: 52).

**Distribution.** Circumglobal in tropical through temperate seas (including Caribbean Sea, western Baltic Sea, North Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (NT: 1 October 2005); Med. (CR: A2bd, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. High priority for conservation action.



FIGURE 4. *Carcharhinus plumbeus* (Nardo 1827), Ghazieh, 6 May 2018, photograph: Youssef Jundi.

### Scyliorhinidae

*Galeus melastomus* Rafinesque 1810—Blackmouth catshark

**Taxonomy.** First record from Lebanon as *Galeus melastomus* Rafinesque 1810 by George & Athanassiou (1966a: 6–7); subsequently recorded as *Galeus melastomus* Rafinesque by Mouneimné (1977: 60); as *Galeus melastomus* Rafinesque 1810 by Mouneimné (2002: 49); recently recorded as *Galeus melastomus* by Lteif (2015: 61). Recent unpublished records from Beirut (24 April 2010) and Sarafand (8 February 2018). Material in collection: AUBM.



FIGURE 5. *Galeus melastomus* Rafinesque 1810, Beirut, 20 April 2010, AUBM (CH0026).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, eastern North Atlantic: Faroe Islands and Norway to Senegal.

**Conservation.** IUCN: Global (LC: 1 October 2003); Med. (LC: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Medium priority for conservation action.

*Scyliorhinus canicula* (Linnaeus 1758)—Small-spotted catshark

**Taxonomy.** First record from Lebanon as *Scyllium caninula*, Cuv. by Gruvel (1931: 73). The species was never recorded afterwards.

**Distribution.** Western Baltic Sea, North Sea, western Mediterranean Sea, northeastern Atlantic: Shetland Islands and southern Norway south to Senegal.

**Conservation.** IUCN: Global (LC: 1 December 2008); Med. (LC: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Unknown.

**Remarks.** Gruvel (1931: 74) mentioned that the species, along with *Scyliorhinus stellaris* (Linnaeus 1758), were abundant and hated by fishermen.

*Scyliorhinus stellaris* (Linnaeus 1758)—Nursehound

**Taxonomy.** First record from Lebanon as *Scyllium catulus*, Cuv. by Gruvel (1931: 73). The species was never recorded afterwards.

**Distribution.** North Sea, Mediterranean Sea, eastern North Atlantic: Shetland Islands and southern Norway to Morocco.

**Conservation.** IUCN: Global (NT: 14 February 2006); Med. (NT: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Unknown.

**Remarks.** Gruvel (1931: 74) mentioned that the species, along with *Scyliorhinus canicula* (Linnaeus 1758) were abundant and hated by fishermen.

## Sphyrnidae

*Sphyrna zygaena* (Linnaeus 1758)—Smooth hammerhead

**Taxonomy.** First record from Lebanon as *Zygaena malleus*, Val. by Gruvel (1931: 75); subsequently recorded as *Sphyrna zygaena* (Linnaeus 1758) by George *et al.* (1964: 9); as *Sphyrna zygaena* (Linnaeus) by Mouneimné (1977: 60); as *Sphyrna zygaena* (Linnaeus 1758) by Mouneimné (2002: 52–53). Material in collection: AUBM.

**Distribution.** Circumglobal in warm temperate seas, occasionally in tropical seas (including Caribbean Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (VU: A2bd+3bd+4bd, 1 October 2005); Med. (CR: A2bd, 25 March 2016); CITES Appendix II. The capture, transportation, storage or commercialization of this species is forbidden in Lebanon. Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. Significant decline in the last two decades. High priority for conservation action.

## Triakidae

*Mustelus asterias* Cloquet 1819—Starry smooth-hound

**Taxonomy.** First record from Lebanon as *Mustellus loevis*, Risso by Gruvel (1931: 74). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, eastern Atlantic: North Sea to Mauritania including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 11 February 2006); Med. (VU: A2bd, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. Medium priority for conservation action.



**FIGURE 6.** *Hepttranchias perlo* (Bonnaterre 1788), Tyre, 4 October 2017, photograph: Ziad Samaha.

*Mustelus mustelus* (Linnaeus 1758)—Smooth-hound

**Taxonomy.** First record from Lebanon as *Mustellus vulgaris*, Mull. et Henl. by Gruvel (1931: 74); subsequently recorded as *Mustelus mustelus* (Linnaeus 1758) by George *et al.* (1964: 9); as *Mustelus mustelus* (Linnaeus) by Mouneimné (1977: 60), as *Mustelus mustelus* (Linnaeus 1758) by Mouneimné (2002: 50); recently recorded as *Mustelus mustelus* by Lteif (2015: 61).

**Distribution.** Mediterranean Sea, eastern Atlantic: British Isles and North Sea to South Africa including Madeira; southwestern Indian Ocean: South Africa north to Durban.

**Conservation.** IUCN: Global (VU: A2bd+3bd+4bd, 3 March 2004); Med. (VU: A2bd, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Medium priority for conservation action.

## Hexanchiformes

### Hexanchidae

*Heptranchias perlo* (Bonnaterre 1788)—Sharpnose sevengill shark

**Taxonomy.** First record from Lebanon as *Heptranchias perlo* by Lteif (2015: 61). Recent unpublished record from Tyre (10 August 2019).

**Distribution.** Circumglobal in tropical through warm temperate sea (including Caribbean Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (NT: 30 April 2003); Med. (DD: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. High priority for conservation action.

*Hexanchus griseus* (Bonnaterre 1788)—Bluntnose sixgill shark

**Taxonomy.** First record from Lebanon as *Hexanchus griseus* (Bonnaterre 1788) by George *et al.* (1964: 8); subsequently recorded as *Hexanchus griseus* (Bonnaterre) by Mouneimné (1977: 60); as *Hexanchus griseus* (Bonnaterre 1788) by Mouneimné (2002: 46); recently recorded as *Hexanchus griseus* by Lteif (2015: 61). Recent unpublished records from Beirut, Tripoli, Batroun, Saïda, Sarafand and Tyre (1999–2018).

**Distribution.** Circumglobal in tropical and temperate seas (including Caribbean Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (NT: 1 October 2005); Med. (LC: 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Significant decline in the last two decades. High priority for conservation action.



FIGURE 7. *Hexanchus griseus* (Bonnaterre 1788), Beirut, September 1973, photograph: Ibrahim Najm.

## Lamniformes

### Alopiidae

*Alopias vulpinus* (Bonnaterre 1788)—Thintail thresher

**Taxonomy.** New record from Lebanon, based on photos of an individual landed in Nakoura (2 June 2018). Recent unpublished record from Naqoura (2 July 2018).

**Distribution.** Circumglobal in tropical through temperate seas (including Caribbean Sea, Mediterranean Sea, Black Sea, western Baltic Sea, North Sea).

**Conservation.** IUCN: Global (VU: A2bd+3bd+4bd, 20 February 2007); Med. (EN: A2bd, 25 March 2016); CITES Appendix II. Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. Medium priority for conservation action.



**FIGURE 8.** *Alopias vulpinus* (Bonnaterre 1788), Naqoura, 2 June 2018, photograph: unknown (posted on local social media).

## Cetorhinidae

*Cetorhinus maximus* (Gunnerus 1765)—Basking shark

**Taxonomy.** New record from Lebanon, based on photos of one individual landed in Tyre (1 February 2006) and another in Tripoli (1 March 2015).

**Distribution.** Cosmopolitan but antitropical (including Mediterranean Sea, Baltic Sea, North Sea).



**FIGURE 9.** *Cetorhinus maximus* (Gunnerus 1765), Tyre, 7 February 2006, photograph: unknown (posted on local social media).

**Conservation.** IUCN: Global (VU: A2ad+3d, 1 October 2005); Med. (EN: A2bd, 25 March 2016); CITES Appendix II. Capture and threats: FIB, unknown. Occurrence: Very rare. High priority for conservation action.

## Lamnidae

*Isurus oxyrinchus* Rafinesque 1810—Shortfin mako



**FIGURE 10.** *Isurus oxyrinchus* Rafinesque 1810, Tripoli, 24 October 2004, photograph: Nini Wahib

**Taxonomy.** First record from Lebanon as *Isurus oxyrhynchus* Rafinesque 1810 by George *et al.* (1964: 9); subsequently recorded as *Isurus oxyrinchus* Rafinesque by Mouneimné (1977: 60); as *Isurus oxyrinchus* Rafinesque 1810 by Mouneimné (2002: 48). Recent unpublished records from Tripoli (24 October 2004 and 18 January 2014) and Tabarja (13 November 2013).

**Distribution.** Circumglobal in tropical through temperate seas (including Caribbean Sea, North Sea, Mediterranean Sea, Red Sea).

**Conservation.** IUCN: Global (EN: A2bd, 5 November 2018); Med. (CR: A2bd, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Common. High priority for conservation action. The capture, transportation, storage or commercialization of this species is forbidden in Lebanon.

## Odontaspidae

*Odontaspis ferox* (Risso 1810)—Smalltooth sand tiger

**Taxonomy.** First record from Lebanon as *Odontaspis ferox* (Risso 1810) by George *et al.* (1964: 9); subsequently recorded as *Odontaspis ferox* (Risso) by Mouneimné (1977: 60); as *Odontaspis ferox* (Risso 1810) by Mouneimné (2002: 47). Recent unpublished records from Batroun (October 1995), Tripoli (10 June 2014) and Beirut (6 July 2015).

**Distribution.** Nearly circumglobal in tropical and temperate waters (including Mediterranean Sea).

**Conservation.** IUCN: Global (VU: A2bd, 14 February 2015); Med. (CR: A2bcd, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. High priority for conservation action.





FIGURE 11. *Odontaspis ferox* (Risso 1810), Tripoli, 10 June 2014, photograph: unknown (posted on local social media).

## Squaliformes

### Centrophoridae

*Centrophorus granulosus* (Bloch & Schneider 1801)—Gulper shark

**Taxonomy.** First record from Lebanon as *Centrophorus granulosus*, Müller et Henle by Gruvel (1931: 75); recently recorded as *Centrophorus granulosus* by Colloca & Lelli (2012: 13); as *Centrophorus granulosus* by Lteif (2015: 61), and as *Centrophorus uyato* (Rafinesque 1810) by Lteif *et al.* (2017). Recent unpublished records from Tripoli (26 September 2005) and Sarafand (13 September 2017). It is unclear which species of gulper shark (*C. granulosus*, *C. uyato*) is present in Lebanese waters and whether one or both exist.

**Distribution.** Circumglobal in tropical and temperate seas (including Caribbean Sea, Mediterranean Sea), except not eastern Pacific.

**Conservation.** IUCN: Global (DD: 31 January 2006); Med. (CR: A4b, 25 March 2016). Capture and threats: FIT, FIB. Occurrence: Common. Significant decline in the last two decades. Medium priority for conservation action.



**FIGURE 12.** *Centrophorus granulosus* (Bloch & Schneider 1801), Batroun, 13 September 2017, photograph: Fatfat Samer.

## Dalatiidae

*Dalatias licha* (Bonnaterre 1788)—Kitefin shark

**Taxonomy.** First record from Lebanon as *Dalatias licha* by Lteif (2015: 61). Recent unpublished record from Batroun (14 October 2014).

**Distribution.** Circumglobal in tropical and temperate seas (including Caribbean Sea, North Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (VU: A2bd+3d, 3 July 2017); Med. (VU: A3d+4d, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Medium priority for conservation action.



**FIGURE 13.** *Dalatias licha* (Bonnaterre 1788), Bouar, 12 December 2015, photograph: Massoud Jean-Paul.

## Etmopteridae

*Etmopterus spinax* (Linnaeus 1758)—Velvet belly lantern shark

**Taxonomy.** First record from Lebanon as *Etmopterus spinax* by Aguillar *et al.* (2018: 81).

**Distribution.** Western Baltic Sea, northern North Sea, Mediterranean Sea, eastern Atlantic: Iceland and Norway to Senegal.

**Conservation.** IUCN: Global (LC: 1 December 2008); Med. (LC: 25 March 2016). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Oxynotidae

*Oxynotus centrina* (Linnaeus 1758)—Angular roughshark

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Tripoli (December 2017). Material in collection: AUBM (CH0028).

**Distribution.** Mediterranean Sea, eastern Atlantic: northwestern North Sea and English Channel to Senegal; Madagascar.

**Conservation.** IUCN: Global (VU: A2bcd+4bd, 1 March 2007); Med. (CR: A2bd, 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Very rare. Medium priority for conservation action.



**FIGURE 14.** *Oxynotus centrina* (Linnaeus 1758), Tripoli, 22 December 2017, AUBM (CH0028).

## Squalidae

*Squalus acanthias* Linnaeus 1758—Piked dogfish

**Taxonomy.** First record from Lebanon as *Squalus acanthias*, Rond. by Gruvel (1931: 74); subsequently recorded as *Squalus acanthias* Linnaeus 1758 and *Squalus fernandinus* Molina 1782 by George *et al.* (1964: 9); as *Squalus acanthias* Linnaeus by Mouneimné (1977: 60); as *Squalus acanthias* Linnaeus 1758 by Mouneimné (2002: 54). Material in collection: AUBM.

**Distribution.** Widespread (including Caribbean Sea, Mediterranean Sea), but absent from the North Pacific.

**Conservation.** IUCN: Global (VU: A2bd+3bd, 13 March 2016); Med. (EN: A2bd, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Very rare. High priority for conservation action.

*Squalus blainville* (Risso 1827)—Longnose spurdog

**Taxonomy.** First record from Lebanon as *Squalus blainvillei* by Lelli (2006: 23); also recorded as *Squalus blainville* by Lteif (2015: 61).

**Distribution.** Mediterranean Sea, Black Sea, eastern Atlantic.

**Conservation.** IUCN: Global (DD: 1 December 2008); Med. (DD: 25 March 2016). Capture and threats: FIT, FIB. Occurrence: Very rare. High priority for conservation action.

## Rajiformes

### Dasyatidae

*Dasyatis marmorata* (Steindachner 1892)—Marbled stingray

**Taxonomy.** First record from Lebanon as *Dasyatis marmorata* by Lteif (2015: 61).

**Distribution.** Eastern Atlantic.

**Conservation.** IUCN: Global (DD: 1 October 2003); Med. (DD: 25 March 2016). Capture and threats: FIB, HAB, unknown. Occurrence: Very rare. Medium priority for conservation action.

*Dasyatis tortonesei* Capapé 1975—Tortonese's stingray

**Taxonomy.** First record from Lebanon as *Dasyatis tortonesei* by Lteif (2015: 61).

**Distribution.** Mediterranean Sea and eastern Atlantic.

**Conservation.** IUCN: Global (NE); Med. (NE). Capture and threats: FIB, HAB, unknown. Occurrence: Very rare. Medium priority for conservation action.

*Dasyatis pastinaca* (Linnaeus 1758)—Common stingray

**Taxonomy.** First record from Lebanon as *Trygon (Dasybatus) pastinaca*, Risso by Gruvel (1931: 78); subsequently recorded as *Dasyatis pastinaca* Linnaeus 1758 by George *et al.* (1964: 10); as *Dasyatis pastinaca* (Linnaeus) by Mouneimné (1977: 60); as *Dasyatis pastinaca* (Linnaeus 1758) by Mouneimné (2002: 62); recently recorded as *Dasyatis pastinaca* by Harmelin-Vivien *et al.* (2005: 628) and Lteif (2015: 61). Recent unpublished records from Beirut, Tripoli, Batroun, and Sarafand (1999–2017). Material in collection: AUBM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Atlantic, including Madeira.

**Conservation.** IUCN: Global (DD: 20 December 2003); Med. (VU: A2d, 25 March 2016). Capture and threats: FIB, HAB, unknown. Occurrence: Common. Medium priority for conservation action.

*Pteroplatytrygon violacea* (Bonaparte 1832)—Pelagic stingray



FIGURE 15. *Pteroplatytrygon violacea* (Bonaparte 1832), Tripoli, 27 October 2007, AUBM (CH0017).

**Taxonomy.** First record from Lebanon as *Pteroplatytrygon violacea* by Lteif (2015: 61). Recent unpublished record from Tripoli (27 October 2007). Material in collection: AUBM (CH0017).

**Distribution.** Cosmopolitan in tropical and warm temperate seas (including Caribbean Sea).

**Conservation.** IUCN: Global (LC: 9 November 2018); Med. (LC: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Rare. Medium priority for conservation action.

*Taeniurops grabatus* (Geoffroy St. Hilaire 1817)—Round stingray

**Taxonomy.** First record from Lebanon as *Taeniura grabata* by Lteif (2015: 61). Recent unpublished records from Tripoli (4 June 2014 and 3 April 2018).

**Distribution.** Mediterranean Sea, eastern Atlantic: Madeira and Canary Islands south to Angola.

**Conservation.** IUCN: Global (DD: 30 September 2003); Med. (DD: 25 March 2016). Capture and threats: FIB, HAB, unknown. Occurrence: Very rare. Medium priority for conservation action.



**FIGURE 16.** *Taeniurops grabatus* (Geoffroy St. Hilaire 1817), Tripoli, 4 April 2018, photograph: unknown (posted on local social media).

## Gymnuridae

*Gymnura altavela* (Linnaeus 1758)—Spiny butterfly ray

**Taxonomy.** First record from Lebanon as *Gymnura altavela* (Linnaeus) by Mouneimné (1977: 60); subsequently recorded as *Gymnura altavela* (Linnaeus 1758) by Mouneimné (2002: 61); recently recorded as *Gymnura altavela* by Bariche *et al.* (2007; 111) and as *Gymnura altavela* by Lteif (2015; 61). Recent unpublished records from Beirut (1998–2019). Material in collection: AUBM.

**Distribution.** Tropical and temperate western and eastern Atlantic (including Caribbean Sea, Mediterranean Sea, Black Sea).

**Conservation.** IUCN: Global (VU: A2bd+4bd, 1 March 2007); Med. (CR: A2bd, 25 March 2016). Capture and threats: FIB, HAB, unknown. Occurrence: Rare. High priority for conservation action.

## Mobulidae

*Mobula mobular* (Bonnaterre 1788)—Devil fish

**Taxonomy.** New record from Lebanon, based on photos and videos of an individual spotted off Batroun (10 March 2015); landed in Tyre (16 March 2015); spotted off Damour (4 March 2017) and off Jounieh (28 March 2017).



FIGURE 17. *Gymnura altavela* (Linnaeus 1758), Beirut, 17 March 2000.



FIGURE 18. *Mobula mobular* (Bonnaterre 1788), Tyre, 16 March 2015, photograph: Ziad Samaha.

**Distribution.** Probably circumglobal in tropical and warm temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (EN: A2d, 22 October 2014); Med. (EN: A2d, 25 March 2016); CITES Appendix II. Capture and threats: FIB, unknown. Occurrence: Rare. High priority for conservation action.

## Myliobatidae

*Myliobatis aquila* (Linnaeus 1758)—Common eagle ray

**Taxonomy.** First record from Lebanon as *Myliobatis aquila*, C. Dumer. by Gruvel (1931: 78). No recent records of this species.

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal to South Africa, straying to southern North Sea; southwestern Indian Ocean: South Africa to Kenya and western Mascarenes.

**Conservation.** IUCN: Global (DD: 20 July 2005); Med. (VU: A2b, 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Unknown. Medium priority for conservation action.

*Aetomylaeus bovinus* (Geoffroy St. Hilaire 1817)—Bull ray



**FIGURE 19.** *Aetomylaeus bovinus* (Geoffroy St. Hilaire 1817), Beirut, 17 April 2000.

**Taxonomy.** First record from Lebanon as *Pteromylaeus bovinus* (Geoffroy St. Hilaire 1809) by George *et al.* (1964: 11); subsequently recorded as *Pteromylaeus bovinus* (Geoffroy St Hil.) by Mouneimné (1977: 61); as *Pteromylaeus bovinus* (Geoffroy Saint-Hilaire 1817) by Mouneimné (2002: 64–65); as *Pteromylaeus bovinus* by Lteif (2015: 61). Recent unpublished records from Beirut (17 April 2000), Tripoli (28 October 2013), Adloun (3 April 2014) and Naqoura (13 June 2013). Material in collection: AUBM.



**Distribution.** Mediterranean Sea, eastern Atlantic: Spain south to South Africa; southwestern Indian Ocean: South Africa north to Mozambique.

**Conservation.** IUCN: Global (DD: 2 February 2006); Med. (CR: A2c, 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Rare. Significant decline in the last two decades. Medium priority for conservation action.

## Pristidae

*Pristis pectinata* Latham 1794—Smalltooth sawfish



**FIGURE 20.** *Pristis pectinata* Latham 1794, Beirut, AUBM (uncat.).

**Taxonomy.** First record from Lebanon as *Pristis pectinatus*, Latr. by Gruvel (1931: 77); subsequently recorded as *Pristis pectinatus* Latham 1744 by George *et al.* (1964: 10); as *Pristis pectinatus* Latham by Mouneimné (1977: 60); as *Pristis pectinatus* Latham 1794 by Mouneimné (2002: 57). No recent unpublished records from Lebanon. Material in collection: AUBM uncat. (rostrums without labels).

**Distribution.** Mediterranean Sea, Atlantic and southwestern Indian Ocean.

**Conservation.** IUCN: Global (CR: A2cd, 5 June 2012); Med. (CR: (Possibly Extinct) A2b; D, 25 March 2016); CITES Appendix I. Capture and threats: FIB, unknown. Occurrence: (Absent). Significant decline since Gruvel (1931: 77). Medium priority for conservation action.

## Rajidae

*Dipturus oxyrinchus* (Linnaeus 1758)—Longnose skate

**Taxonomy.** First record from Lebanon as *Raja oxyrinchus* Linnaeus by Mouneimné (1977: 60); subsequently recorded as *Raja oxyrinchus* Linnaeus 1758 by Mouneimné (2002: 58); recently recorded as *Dipturus oxyrinchus* by Lteif (2015: 61); as *Dipturus oxyrinchus* by Aguillar *et al.* (2018: 81). Recent unpublished record from Batroun, (10 October 1998).

**Distribution.** Mediterranean Sea, eastern Atlantic: Norway and North Sea south to Senegal, including Madeira Rare and Canary Islands.

**Conservation.** IUCN: Global (NT: 21 November 2014); Med. (NT: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Rare. Medium priority for conservation action.

*Raja clavata* Linnaeus 1758—Thornback ray

**Taxonomy.** First record from Lebanon as *Raia clavata*, L. by Gruvel (1931: 78); recently recorded as *Raja clavata* by Lteif (2015: 61).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, Black Sea, eastern Atlantic and southwestern Indian Ocean: Iceland and central Norway to South Africa, Madagascar and Mauritius (Mascarenes).

**Conservation.** IUCN: Global (NT: 3 October 2005); Med. (NT: 27 March 2016). Capture and threats: FIB, unknown. Occurrence: Very rare. Medium priority for conservation action.

*Raja miraletus* Linnaeus 1758—Brown ray



**FIGURE 21.** *Raja miraletus* Linnaeus 1758, Batroun, 10 February 1999, AUBM (CH0002).

**Taxonomy.** First record from Lebanon as *Raia miraletus*, Rond. by Gruvel (1931: 77–78); subsequently recorded as *Raja miraletus* Linnaeus 1758 by George *et al.* (1964: 10); as *Raja miraletus* Linnaeus by Mouneimné (1977: 60);

as *Raja miraletus* Linnaeus 1758 by Mouneimné (2002: 58–59); recently recorded as *Raja miraletus* by Lteif (2015: 61). Recent unpublished record from Batroun (10 February 1999). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Morocco, including Madeira.

**Conservation.** IUCN: Global (LC: 5 September 2003); Med. (LC: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Rare. Medium priority for conservation action.

*Raja montagui* Fowler 1910—Spotted ray

**Taxonomy.** First record from Lebanon as *Raja montagui* Fowler 1910 by George *et al.* (1964: 10).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, eastern Atlantic: Shetland Islands south to Morocco.

**Conservation.** IUCN: Global (LC: 1 March 2007); Med. (LC: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Unknown. Medium priority for conservation action.

## Rhinobatidae

*Glaucostegus cemiculus* (Geoffroy St. Hilaire 1817)—Blackchin guitarfish

**Taxonomy.** First record from Lebanon as *Rhinobatos cemiculus* Geoffroy St. Hilaire 1827 by George *et al.* (1964: 10); subsequently recorded as *Rhinobatos cemiculus* Geoffroy St Hil. by Mouneimné (1977: 60); as *Rhinobatos cemiculus* Geoffroy Saint-Hilaire 1817 by Mouneimné (2002: 56); recently recorded as *Rhinobatos cemiculus* by Lteif (2015: 61). Recent unpublished records from Beirut, Tripoli, Batroun, Saida, Sarafand and Tyre (1998–2019). Material in collection: AUBM, BMNH and USNM (as *Rhinobatos cemiculus*).

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Angola, including Cape Verde Islands.

**Conservation.** IUCN: Global (CR: A2d, 3 December 2018); Med. (NE). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Significant decline in the last two decades. High priority for conservation action. The capture, transportation, storage or commercialization of this species is forbidden in Lebanon.



**FIGURE 22** *Glaucostegus cemiculus* (Geoffroy St. Hilaire 1817), Beirut, 17 October 2007, AUBM (CH0032).

*Rhinobatos rhinobatos* (Linnaeus 1758)—Common guitarfish

**Taxonomy.** First record from Lebanon as *Rhinobatos rhinobatus* (Linnaeus 1758) by George *et al.* (1964: 10); subsequently recorded as *Rhinobatos rhinobatos* (Linnaeus) by Mouneimné (1977: 60); as *Rhinobatos rhinobatos* (Linnaeus 1758) by Mouneimné (2002: 56); recently recorded as *Rhinobatos rhinobatos* by Lteif (2015: 61). Recent unpublished records from Beirut, Tripoli, Batroun, Saida, Sarafand and Tyre (1998–2019). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Bay of Biscay south to Angola.

**Conservation.** IUCN: Global (EN: A4cd, 1 March 2007); Med. (EN: A2b, 25 March 2016). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Significant decline in the last two decades. High priority for conservation action. The capture, transportation, storage or commercialization of this species is forbidden in Lebanon.

## Torpedinidae

*Tetronarce nobiliana* (Bonaparte 1835)—Atlantic torpedo

**Taxonomy.** First record from Lebanon as *Torpedo nobiliana* by Lteif (2015: 61).

**Distribution.** Mediterranean Sea, eastern Atlantic: North Sea to South Africa including Madeira and Canary Islands; ?western Atlantic: Nova Scotia (Canada) to Brazil (including Caribbean Sea).

**Conservation.** IUCN: Global (DD: 7 September 2004); Med. (LC: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Rare. High priority for conservation action.

*Torpedo marmorata* Risso 1810—Spotted torpedo



**FIGURE 23.** *Torpedo marmorata* Risso 1810, Batroun, 10 December 2008.

**Taxonomy.** First record from Lebanon as *Torpedo marmorata*, Risso by Gruvel (1931: 77); subsequently recorded as *Torpedo marmorata* (Risso 1810) by George *et al.* (1964: 10); as *Torpedo marmorata* Risso by Mouneimné (1977: 60); as *Torpedo marmorata* Risso 1810 by Mouneimné (2002: 66–67); recently recorded as *Torpedo mar-*

*morata* by Harmelin-Vivien *et al.* (2005: 629) and as *Torpedo marmorata* by Lteif (2015: 61). Recent unpublished record from Batroun, (10 December 2008). Material in collection: AUBM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, eastern Atlantic: British Isles south to South Africa, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (DD: 30 September 2003); Med. (LC: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Rare. Significant decline in the last two decades. High priority for conservation action.

*Torpedo torpedo* (Linnaeus 1758)—Common torpedo

**Taxonomy.** First record from Lebanon as *Torpedo oculata*, Bel. by Gruvel (1931: 77); subsequently recorded as *Torpedo torpedo* (Linnaeus 1758) by George *et al.* (1964: 10); as *Torpedo torpedo* (Linnaeus) by Mouneimné (1977: 60); as *Torpedo torpedo* (Linnaeus 1758) by Mouneimné (2002: 66). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Bay of Biscay south to Angola.

**Conservation.** IUCN: Global (DD: 30 September 2003); Med. (LC: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Very rare. Significant decline in the last two decades. High priority for conservation action.

## Squatiniformes

### Squatinidae

*Squatina aculeata* Cuvier 1829—Sawback angelshark



**FIGURE 24.** *Squatina aculeata* Cuvier 1829, Batroun, 10 February 1999.

**Taxonomy.** First record from Lebanon as *Squatina aculeata* by Lteif (2015: 61). Recent unpublished record from Batroun (10 February 1999).

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco to Angola and Namibia.

**Conservation.** IUCN: Global (CR: A2bcd+3cd, 19 June 2017); Med. (CR: A2bcd, 25 March 2016). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Rare. Significant decline in the last two decades. High priority for conservation action.

*Squatina oculata* Bonaparte 1840—Smoothback angelshark



**FIGURE 25.** *Squatina oculata* Bonaparte 1840, Tyre, 10 April 2019, photograph: Samaha Ziad.

**Taxonomy.** First record from Lebanon as *Squatina oculata* by Lteif (2015: 61). Recent unpublished record from Tyre (10 April 2019).

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco south to Namibia.

**Conservation.** IUCN: Global (CR: A2bcd+3cd, 19 June 2017); Med. (CR: A2bcd+3cd, 25 March 2016). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Rare. Significant decline in the last two decades. High priority for conservation action.

*Squatina squatina* (Linnaeus 1758)—Angelshark

**Taxonomy.** First record from Lebanon as *Squatina squatina*, L. = *Squatina angelus*, Risso by Gruvel (1931: 75); subsequently recorded as *Squatina squatina* (Linnaeus 1758) by George *et al.* (1964: 10); as *Squatina squatina* (Linnaeus) by Mouneimné (1977: 60); as *Squatina squatina* (Linnaeus 1758) by Mouneimné (2002: 54–55).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Black Sea, eastern Atlantic: Norway south to Canary Islands and western Sahara.

**Conservation.** IUCN: Global (CR: A2bcd, 12 July 2017); Med. (CR: A2bcd+3d, 25 March 2016). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Very rare. High priority for conservation action.

## Chimaeriformes

### Chimaeridae

*Chimaera monstrosa* Linnaeus 1758—Rabbit fish

**Taxonomy.** First record from Lebanon as *Chimera monstrosa* and *Chimoera monstrosa*, L. by Gruvel (1931: 73, 77); subsequently recorded as *Chimaera monstrosa* Linnaeus 1758 by George *et al.* (1964: 11); as *Chimaera monstrosa* Linnaeus by Mouneimné (1977: 61); as *Chimaera monstrosa* Linnaeus 1758 by Mouneimné (2002: 67); recently recorded as *Chimaera monstrosa* by Aguillar *et al.* (2018: 80).

**Distribution.** Greenland, western Baltic Sea, northern North Sea, Mediterranean Sea; eastern Atlantic: Norway to Morocco, Madeira and Azores.

**Conservation.** IUCN: Global (NT: 1 March 2007); Med. (NT: 25 March 2016). Capture and threats: FIB, unknown. Occurrence: Very rare. Low priority for conservation action.

## Anguilliformes

### Anguillidae

*Anguilla anguilla* (Linnaeus 1758)—European eel

**Taxonomy.** First record from Lebanon as *Anguilla anguilla* (Linnaeus 1758) by George *et al.* (1964: 13); subsequently recorded as *Anguilla anguilla* (Linnaeus) by Mouneimné (1977: 61); as *Anguilla anguilla* (Linnaeus 1758) by Mouneimné (2002: 74–75). Recent unpublished records from Tripoli, Nahr Ibrahim, Beirut and Damour (1998–2012). Material in collection: AUBM, FMNH, MNHN, SMF, and USNM.

**Distribution.** Western and eastern Atlantic, Baltic Sea, North Sea, White Sea, Mediterranean Sea, Sea of Marmara, Black Sea: European seas and adjacent watersheds, spawning and larval migration routes to and from the western Atlantic. Introduced in the Caspian Sea basin.

**Conservation.** IUCN: Global (CR: A2bd+4bd, 28 May 2013); Med. (North Africa) (EN: A4bd, 16 October 2007); CITES Appendix II. Capture and threats: HAB, unknown. Occurrence: Rare. High priority for conservation action.

## Congridae

*Ariosoma balearicum* (Delaroche 1809)—Bandtooth conger

**Taxonomy.** First record from Lebanon as *Ariosoma balearica* (De La Roche 1809) by George *et al.* (1964: 13); subsequently recorded as *Ariosoma balearicum* (Delaroche) by Mouneimné (1977: 61); as *Ariosoma balearicum* (Delaroche 1809) by Mouneimné (2002: 77–78); recently recorded as *Ariosoma balearicum* by Bariche *et al.* (2009: 3). Material in collection: AUBM and USNM.

**Distribution.** Western Atlantic: North Carolina (U.S.A.) south to Uruguay, including Gulf of Mexico and Caribbean Sea; Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal south to Angola, including Madeira, Canary Islands and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 21 October 2014); Med. (LC: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Conger conger* (Linnaeus 1758)—European conger

**Taxonomy.** First record from Lebanon as *Conger vulgaris*, Cuv. = *Conger conger*, L. by Gruvel (1931: 79); subsequently recorded as *Conger conger* (Linnaeus 1758) by George *et al.* (1964: 13); as *Conger conger* (Linnaeus) by Mouneimné (1977: 61); as *Conger conger* (Linnaeus 1758) by Mouneimné (2002: 77); recently recorded as *Conger conger* by Aguillar *et al.* (2018: 81). Material in collection: AUBM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Iceland and Norway south to Senegal, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 20 October 2011); Med. (NE). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Gnathopis mystax* (Delaroche 1809)—Thinlip conger

**Taxonomy.** First record from Lebanon as *Gnathopis mystax* by Colloca & Lelli (2012: 13).

**Distribution.** Southwestern Atlantic; Mediterranean Sea, eastern Atlantic: southern Portugal south to Morocco.

**Conservation.** IUCN: Global (LC: 7 November 2011); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Heterenchelyidae

*Panturichthys fowleri* (Ben-Tuvia 1953)—no name



**FIGURE 26.** *Panturichthys fowleri* (Ben-Tuvia 1953), Batroun, 6 May 2008, AUBM (OS3794).

**Taxonomy.** First record from Lebanon as *Panturichthys fowleri* (Ben-Tuvia 1953) by George *et al.* (1964: 13); subsequently recorded as *Panturichthys fowleri* (Ben-Tuvia) by Mouneimné (1977: 61); as *Panturichthys fowleri* (Ben-Tuvia 1953) by Mouneimné (2002: 81). Recent unpublished record from Batroun (6 May 2008). Material in collection: AUBM (OS3794), BMNH, MNHN and USNM.



**Distribution.** Eastern Mediterranean Sea endemic.

**Conservation.** IUCN: Global (DD: 9 May 2014); Med. (DD: 9 May 2014). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Muraenidae

*Enchelycore anatina* (Lowe 1838)—Fangtooth moray

**Taxonomy.** New record from Lebanon based on personal underwater observations and several photos available.

**Distribution.** Southern Mediterranean Sea, eastern Atlantic: Azores, Madeira, Canary, Cape Verde and St. Helena islands.

**Conservation.** IUCN: Global (LC: 16 August 2011). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.

*Gymnothorax unicolor* (Delaroche 1809)—Brown moray

**Taxonomy.** First record from Lebanon as *Gymnothorax unicolor* (De la Roche 1809) by George *et al.* (1964: 13); subsequently recorded as *Lycodontis unicolor* (Delaroche) by Mouneimné (1977: 61); as *Gymnothorax unicolor* (Delaroche 1809) by Mouneimné (2002: 76). Material in collection: AUBM, FMNH (as *Muraena unicolor*) and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal to Azores, Madeira, Canary Islands; southern central Atlantic: Saint Helena.

**Conservation.** IUCN: Global (LC: 20 October 2011); Med. (DD: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.



**FIGURE 27.** *Gymnothorax unicolor* (Delaroche 1809), Beirut, 12 February 2006, AUBM (OS1215).

*Muraena helena* Linnaeus 1758—Mediterranean moray

**Taxonomy.** First record from Lebanon as *Muraena helena*, L. by Gruvel (1931: 80); subsequently recorded as *Muraena helena* (Linnaeus 1758) by George *et al.* (1964: 13); as *Muraena helena* (Linnaeus) by Mouneimné (1977: 61); as *Muraena helena* Linnaeus 1758 by Mouneimné (2002: 75–76); recently recorded as *Muraena helena* by Harmelin-Vivien *et al.* (2005: 629) and Aguillar *et al.* (2018: 81). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: British Isles to Cape Verde Islands; recorded as NIS from the Red Sea.

**Conservation.** IUCN: Global (LC: 18 August 2011); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.



**FIGURE 28.** *Muraena helena* (Linnaeus 1758), Beirut, 40 m depth, 24 July 2005.

## Nemichthyidae

*Nemichthys scolopaceus* Richardson 1848—Slender snipe eel

**Taxonomy.** First record from Lebanon as *Nemichthys scolopaceus* by Aguillar *et al.* (2018: 82).

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Nettastomatidae

*Facciolella oxyrhynchus* (Bellotti 1883)—Facciola's sorcerer

**Taxonomy.** First record from Lebanon as *Facciolella oxyrhyncha* by Aguillar *et al.* (2018: 81).

**Distribution.** Western Atlantic; Mediterranean Sea, eastern Atlantic: southern Portugal south to Angola, including Madeira.

**Conservation.** IUCN: Global (NE); Med. (DD: 16 November 2007). Capture and threats: unknown. Occurrence: Very rare. Low priority for conservation action.

*Nettastoma melanura* Rafinesque 1810—Blackfin sorcerer

**Taxonomy.** First record from Lebanon as *Nettastoma melanurum* by Aguillar *et al.* (2018: 82). Recent unpublished record from Sarafand (5 June 2018).

**Distribution.** Western and eastern Atlantic (including Mediterranean Sea), ? western Pacific.

**Conservation.** IUCN: Global (LC: 20 October 2011); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 29.** *Nettastoma melanura* Rafinesque 1810, Sarafand, 5 June 2018.

## Ophichthidae

*Dalophis imberbis* (Delaroche 1809)—Armless snake eel

**Taxonomy.** First record from Lebanon as *Caecula imberbis* (De la Roche 1809) by George *et al.* (1964: 13); subsequently recorded as *Dalophis imberbis* (Delaroche) by Mouneimné (1977: 61); as *Dalophis imberbis* (Delaroche 1809) by Mouneimné (2002: 79–80). Recent unpublished record from Batroun (11 May 2000). Material in collection: AUBM (OS3936) and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Spain south to Mauritania.

**Conservation.** IUCN: Global (NE); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Echelus myrus* (Linnaeus 1758)—Painted eel

**Taxonomy.** First record from Lebanon as *Echelus myrus* (Linnaeus 1758) by Mouneimné (1979: 108); subsequently recorded as *Echelus myrus* (Linnaeus 1758) by Mouneimné (2002: 80). Recent unpublished records from Tripoli (3 September 2013 and 15 September 2017). Material in collection: AUBM (OS3973).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Bay of Biscay south to Congo.

**Conservation.** IUCN: Global (LC: 20 October 2011); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 30.** *Echelus myrus* (Linnaeus 1758), Tripoli, 15 September 2017, AUBM (OS3973).

*Ophisurus serpens* (Linnaeus 1758)—Serpent eel

**Taxonomy.** First record from Lebanon as *Ophisurus serpens* by Crocetta & Bariche in Dailianis *et al.* (2016: 620); subsequently recorded as *Ophisurus serpens* by Aguillar *et al.* (2018: 82).

**Distribution.** Widespread (but not eastern Pacific or western Atlantic), in eastern Atlantic from Spain south to South Africa, including Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 20 October 2011); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Pisodonophis semicinctus* (Richardson 1848)—Saddled snake eel

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Tripoli (11 October 2017). Material in collection: AUBM (OS3972).

**Distribution.** Mediterranean Sea and eastern Atlantic.

**Conservation.** IUCN: Global (LC: 14 March 2011); Med. (NE). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



FIGURE 31. *Ophisurus serpens* (Linnaeus 1758), Beirut, February 2007, Crocetta & Bariche in Dailianis *et al.* (2016).



FIGURE 32. *Pisodonophis semicinctus* (Richardson 1848), Tripoli, 11 October 2017, AUBM (OS3972).

## Atheriniformes

### Atherinidae

*Atherina boyeri* Risso 1810—Big-scale sand smelt

**Taxonomy.** First record from Lebanon as *Atherina mochon* Cuvier 1829 by George *et al.* (1964: 16); subsequently recorded as *Atherina boyeri* Risso by Mouneimné (1977: 65); as *Atherina boyeri* Risso 1810 by Mouneimné (2002:

106); recently recorded as *Atherina boyeri* by Bariche *et al.* (2009: 3). Material in collection: AMNH, AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Sea of Azov, eastern Atlantic: southern North Sea to Mauritania including Canary Islands; introduced into lakes in Turkey.

**Conservation.** IUCN: Global (LC: 1 January 2008); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

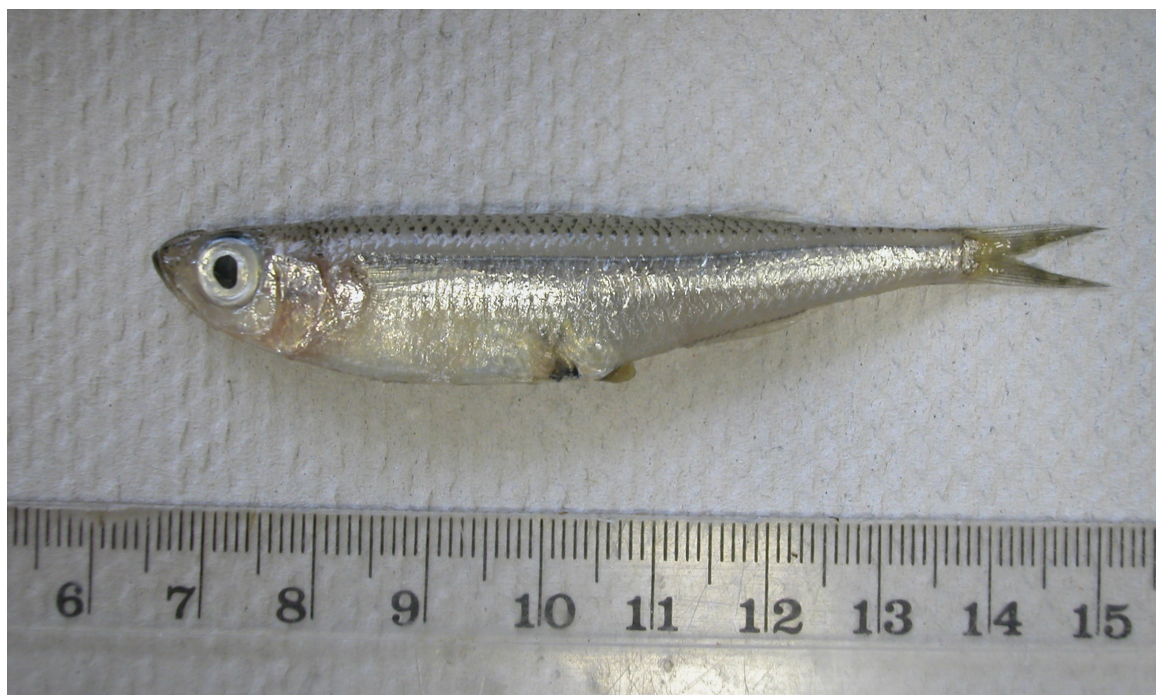


FIGURE 33. *Atherina boyeri* Risso 1810, Okaibeh, 14 March 2007.

## Aulopiformes

### Aulopidae

*Aulopus filamentosus* (Bloch 1792)—Royal flagfin

**Taxonomy.** First record from Lebanon as *Aulopus filamentosus* Cloquet by Mouneimné (1977: 39–40); subsequently recorded as *Aulopus filamentosus* Cloquet 1816 by Mouneimné (2002: 85–86); recently recorded as *Aulopus filamentosus* by Aguillar *et al.* (2018: 80). Recent unpublished records from Batroun (11 November 2005). Material in collection: AUBM.

**Distribution.** Western Atlantic: Gulf of Mexico and Caribbean Sea south to Brazil; Mediterranean Sea; eastern Atlantic: Canary Islands and Cape Verde Islands south to Gulf of Guinea.

**Conservation.** IUCN: Global (LC: 20 October 2013); Med. (LC: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

### Chlorophthalmidae

*Chlorophthalmus agassizi* Bonaparte 1840—Shortnose greeneye

**Taxonomy.** First record from Lebanon as *Chlorophthalmus agassizi* by Aguillar *et al.* (2018: 81). Recent unpublished records from Beirut (7 December 2010). Material in collection: AUBM (OS3840).

**Distribution.** Mediterranean Sea, Atlantic and Indo-West Pacific.

**Conservation.** IUCN: Global (LC: 13 April 2015); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 34.** *Aulopus filamentosus* (Bloch 1792), Batroun, 5 November 2005, AUBM (OS3689).



**FIGURE 35.** *Chlorophthalmus agassizi* Bonaparte 1840, Beirut, 7 December 2010, AUBM (OS3840).

### Evermannellidae

*Evermannella balbo* (Risso 1820)—Balbo sabretooth

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Beirut (6 March 2003) and another from off Batroun (5 June 2010). Material in collection: AUBM (OS3837; OS3848).

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 12 May 2013); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 36.** *Evermannella balbo* (Risso 1820), Batroun, 5 June 2010, AUBM (OS3848).

## **Ipnopidae**

*Bathypterois dubius* Vaillant 1888—Spiderfish

**Taxonomy.** First record from Lebanon as *Bathypterois dubius* by Aguillar *et al.* (2018: 80).

**Distribution.** Mediterranean Sea, eastern Atlantic: British Isles south to Sierra Leone, including Azores; one record from the northwestern Atlantic.

**Conservation.** IUCN: Global (LC: 15 May 2013); Med. (NE). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## **Paralepididae**

*Lestidiops sphyrenoides* (Risso 1820)—Barracuda barracudina

**Taxonomy.** First record from Lebanon as *Lestidium sphyraenoides* (Risso 1832) by George *et al.* (1964: 13); subsequently recorded as *Lestidiops sphyrenoides* (Risso) by Mouneimné (1977: 61); as *Lestidiops sphyraenoides* (Risso 1820) by Mouneimné (2002: 89). Recent unpublished records from Beirut (3 March 2006). Material in collection: AUBM (OS1243; OS1244; OS3693).



**Distribution.** Mediterranean Sea, eastern Atlantic.

**Conservation.** IUCN: Global (LC: 23 January 2013); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 37.** *Lestidiops sphyrenoides* (Risso 1820), Beirut, 17 February 1965, AUBM (OS1244).

*Sudis hyalina* Rafinesque 1810—Transparent barracudina

**Taxonomy.** First record from Lebanon as *Sudis hyalina* Raf. (1966) by George *et al.* (1966: 7); subsequently recorded as *Sudis hyalina* Rafinesque by Mouneimné (1977: 61); as *Sudis hyalina* Rafinesque 1810 by Mouneimné (2002: 89). Recent unpublished records from Tyre, Sarafand, Beirut, Tripoli (1998–2017). Material in collection: AUBM.

**Distribution.** Circumglobal, including Mediterranean Sea.

**Conservation.** IUCN: Global (DD: 16 January 2013); Med. (DD: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

## Synodontidae

*Synodus saurus* (Linnaeus 1758)—Atlantic lizardfish

**Taxonomy.** First record from Lebanon as *Saurus fasciatus*, Risso = *S. griseus*, Lowe by Gruvel (1931: 86); subsequently recorded as *Synodus saurus* (Linnaeus 1758) by George *et al.* (1931: 12); as *Synodus saurus* (Linnaeus) by Mouneimné (1977: 61); recently recorded as *Synodus saurus* (Linnaeus 1758) by Mouneimné (2002: 87–88); recently recorded as *Synodus saurus* by Bariche *et al.* (2009:3); as *Synodus saurus* by Aguillar *et al.* (2018: 83). Material in collection: AUBM and FMNH.

**Distribution.** Western Atlantic from Bermuda and Bahamas to Lesser Antilles; eastern Atlantic from Morocco, Madeira and Azores to Cape Verde Islands; Mediterranean Sea, Sea of Marmara.

**Conservation.** IUCN: Global (LC: 4 February 2009); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Rare. Low priority for conservation action.

## Beloniformes

### Belonidae

*Belone acus* Risso 1827—Mediterranean garfish

**Taxonomy.** First record from Lebanon as *Belone vulgaris*, Flem. = *Belone acus*, Risso by Gruvel (1931: 85); subsequently recorded as *Belone belone* (Linnaeus 1766) by George *et al.* (1964: 14); as *Belone belone* (Linnaeus) by Mouneimné (1977: 61); as *Belone belone* (Linnaeus 1758) by Mouneimné (2002: 98); recently recorded as *Belone belone* by Bariche *et al.* (2007: 111). Material in collection: AUBM and USNM (as *B. belone*).

**Distribution.** Mediterranean Sea and adjacent eastern Atlantic (Portugal).

**Conservation.** IUCN: Global (NE); Med. (NE). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

*Tylosurus imperialis* (Rafinesque 1810)—Agujon needlefish

**Taxonomy.** First record from Lebanon as *Tylosurus acus* (Lacépède 1803) by George *et al.* (1964: 14); subsequently recorded as *Tylosurus acus* (Lacépède) by Mouneimné (1977: 61); as *Tylosurus acus imperialis* (Rafinesque 1810) by Mouneimné (2002: 99–100). Material in collection: AUBM, FMNH and USNM (as *T. acus imperialis*).

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco south to Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 18 March 2014); Med. (NE). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Very rare. Low priority for conservation action.

### Exocoetidae

*Cheilopogon heterurus* (Rafinesque 1810)—Mediterranean flyingfish

**Taxonomy.** First record from Lebanon as by *Cheilopogon heterurus* (Rafinesque) Mouneimné (1977: 62); subsequently recorded as *Cheilopogon heterurus* (Rafinesque 1810) by Mouneimné (2002: 102). Material in collection: SMNS.

**Distribution.** Atlantic, including Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 28 January 2013); Med. (DD: 14 November 2007). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Very rare. Low priority for conservation action.

*Exocoetus volitans* Linnaeus 1758—Tropical two-wing flyingfish

**Taxonomy.** First record from Lebanon as *Exocetus volitans*, L. by Gruvel (1931: 86).

**Distribution.** Circumglobal in tropical through temperate seas (including Caribbean Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 28 January 2013); Med. (DD: 14 November 2007). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

**Remarks.** This record from Gruvel is doubtful as the species has not been recorded from neighboring countries (Golani 2005; Ali 2018; Froese and Pauly 2019).

### Hemiramphidae

*Hyporhamphus picarti* (Valenciennes 1847)—African halfbeak

**Taxonomy.** First record from Lebanon as *Hyporhamphus picarti* (Valenciennes 1846) by George *et al.* (1964:

14); subsequently recorded as *Hyporhamphus picarti* (Valenciennes) by Mouneimné (1977: 62); as *Hyporhamphus picarti* (Valenciennes 1846) by Mouneimné (2002: 105). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco to Angola.

**Conservation.** IUCN: Global (LC: 10 July 2012); Med. (LC: 14 November 2007). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Rare. Low priority for conservation action.

## Beryciformes

### Trachichthyidae

*Hoplostethus mediterraneus* Cuvier 1829—Mediterranean slimehead

**Taxonomy.** First record from Lebanon as *Hoplostethus mediterraneus* by Colloca & Lelli (2012: 13); as *Hoplostethus mediterraneus* by Aguillar *et al.* (2018: 81). Recent unpublished records from Batroun (5 March 2005 and 1 July 2013). Material in collection: AUBM (OS3965; OS3968).

**Distribution.** Atlantic; western Mediterranean Sea; western Indian Ocean: South Africa to Madagascar Ridge; southeastern Indian Ocean and southwestern Pacific: southern Australia and New Zealand [including intermedius in Southern Hemisphere].

**Conservation.** IUCN: Global (LC: 22 May 2013); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.



FIGURE 38. *Hoplostethus mediterraneus* Cuvier 1829, Batroun, 1 July 2013, AUBM (OS3968).

## Clupeiformes

### Clupeidae

*Sardina pilchardus* (Walbaum 1792)—European pilchard

**Taxonomy.** First record from Lebanon as *Clupea pilchardus*, Walb. by Gruvel (1931: 84); subsequently recorded as *Sardina pilchardus* (Risso 1826) by George *et al.* (1964: 11); as *Sardina pilchardus* (Walbaum) by Mouneimné (1977: 61); as *Sardina pilchardus* (Walbaum 1792) by Mouneimné (2002: 69); recently recorded as *Sardina pilchardus* by Bariche *et al.* (2007: 112). Material in collection: AMNH, ANSP, AUBM, BMNH, FMNH, MCZ, UF and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic.

**Conservation.** IUCN: Global (LC: 20 May 2013); Med. (LC: 14 November 2007). Capture and threats: FIT, HAB, NIS, unknown. Occurrence: Very common. Low priority for conservation action.

*Sardinella aurita* Valenciennes 1847—Round sardinella

**Taxonomy.** First record from Lebanon as *Clupea (Sardinella) aurita* C.V. by Gruvel (1931: 83); subsequently recorded as *Sardinella aurita* Valenciennes 1847 by George *et al.* (1964: 11); as *Sardinella aurita* Valenciennes by Mouneimné (1977: 61); as *Sardinella aurita* Valenciennes 1847 by Mouneimné (2002: 70); recently recorded as *Sardinella aurita* by Bariche *et al.* (2007: 112). Material in collection: ANSP, AUBM, BMNH, MCZ, UF, USNM and YPM.

**Distribution.** Western Atlantic: Cape Cod (Massachusetts, U.S.A.) south to Uruguay, including Gulf of Mexico and Caribbean Sea; Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Portugal south to Namibia.

**Conservation.** IUCN: Global (LC: 23 August 2012); Med. (LC: 14 November 2007). Capture and threats: FIT, HAB, NIS, unknown. Occurrence: Very common. Low priority for conservation action.



**FIGURE 39.** *Sardinella aurita* Valenciennes 1847, Beirut, 20 Janvier 2011.

*Sardinella maderensis* (Lowe 1838)—Madeiran sardinella

**Taxonomy.** First record from Lebanon as *Sardinella maderensis* (Lowe 1836) by George *et al.* (1964: 11); sub-

sequently recorded as *Sardinella maderensis* (Lowe) by Mouneimné (1977: 61); as *Sardinella maderensis* (Lowe 1838) by Mouneimné (2002: 70–71). Material in collection: ANSP, AUBM, BMNH, FMNH, MCZ, UF, USNM and YPM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Gibraltar south to Angola, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (VU: A2d, 23 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, HAB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

## Engraulidae

*Engraulis encrasicolus* (Linnaeus 1758)—European anchovy

**Taxonomy.** First record from Lebanon as *Engraulis enchrasicholus*, L. by Gruvel (1931: 85); subsequently recorded as *Engraulis encrasicolus* (Linnaeus 1758) by George *et al.* (1964: 11); as *Engraulis encrasicolus* (Linnaeus) by Mouneimné (1977: 61); as *Engraulis encrasicolus* (Linnaeus 1758) by Mouneimné (2002: 73–74). Recently recorded as *Engraulis encrasicolus* by Bariche *et al.* (2007: 112). Material in collection: AMNH, ANSP, AUBM, BMNH, MCZ and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, Sea of Azov, eastern Atlantic: Norway south to South Africa, including Madeira and Canary Islands; recorded as NIS from the Red Sea and the southwestern Indian Ocean.

**Conservation.** IUCN: Global (LC: 23 May 2013); Med. (LC: 15 November 2007). Capture and threats: FIT, NIS, unknown. Occurrence: Very common. Low priority for conservation action.

## Gadiformes

### Gadidae

*Micromesistius poutassou* (Risso 1827)—Blue whiting



FIGURE 40. *Micromesistius poutassou* (Risso 1827), Sarafand, 9 August 2019, AUBM (OS3971).

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Sarafand (9 August 2019). Material in collection: AUBM (OS3971).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, northeastern Atlantic: Greenland, Iceland, Svalbard and Barents Sea south to Morocco; northwestern Atlantic.

**Conservation.** IUCN: Global (NE); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Trisopterus minutus* (Linnaeus 1758)—Poor cod

**Taxonomy.** First record from Lebanon as *Gadus capelanus*, L. by Gruvel (1931: 80).

**Distribution.** Southwestern Mediterranean Sea, northeastern Atlantic: Norway and Faroes south to Portugal and Morocco.

**Conservation.** IUCN: Global (LC: 12 July 2014); Med. (LC: 12 July 2014). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

## Macrouridae

*Coelorinchus caelorhincus* (Risso 1810)—Hollowsnout grenadier

**Taxonomy.** First record from Lebanon as *Coelorhynchus coelorhynchus* (Risso 1810) by Mouneimné (1979: 110); subsequently recorded as *Coelorhynchus coerhynchus* (Risso 1810) by Mouneimné (2002: 94); recently recorded as *Coelorhynchus coelorhynchus* by Colloca & Lelli (2012: 13); as *Coelorinchus caelorhincus* by Aguillar *et al.* (2018: 81). Recent unpublished records from Tripoli (April 2015) and Batroun (3 May 2010). Material in collection: AUBM (OS3858; OS3859).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Greenland, Iceland and Faroes south to Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 14 May 2013); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.



**FIGURE 41.** *Coelorinchus caelorhincus* (Risso 1810), Tripoli, April 2015, AUBM (OS3859).

*Coryphaenoides mediterraneus* (Giglioli 1893)—Mediterranean grenadier

**Taxonomy.** First record from Lebanon as *Coryphaenoides cf. mediterraneus* by Aguillar *et al.* (2018: 81).

**Distribution.** North Atlantic and Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 14 May 2013); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

*Hymenocephalus italicus* Giglioli 1884—Glashead grenadier

**Taxonomy.** First record from Lebanon as *Hymenocephalus italicus* by Aguillar *et al.* (2018: 81).

**Distribution.** Mediterranean Sea, Atlantic; western Indian Ocean.

**Conservation.** IUCN: Global (LC: 11 July 2012); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Nezumia aequalis* (Günther 1878)—Common Atlantic grenadier

**Taxonomy.** First record from Lebanon as *Nezumia aequalis* by Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Iceland to Angola, including Madeira and Azores; western Atlantic: Greenland to northern Brazil.

**Conservation.** IUCN: Global (LC: 21 May 2013); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low Medium High priority for conservation action.

*Nezumia sclerorhynchus* (Valenciennes 1838)—Roughtip grenadier

**Taxonomy.** First record from Lebanon as *Nezumia sclerorhynchus* by Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, Sea of Marmara, Atlantic.

**Conservation.** IUCN: Global (LC: 19 May 2013); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Merlucciidae

*Merluccius merluccius* (Linnaeus 1758)—European hake

**Taxonomy.** First record from Lebanon as *Merluccius merluccius*, L. by Gruvel (1931: 80); subsequently recorded as *Merluccius merluccius* (Linnaeus 1758) by George *et al.* (1964: 14); as *Merluccius merluccius* (Linnaeus 1758) by Mouneimné (1977: 62); as *Merluccius merluccius* (Linnaeus 1758) by Mouneimné (2002: 92–93); recently by Aguillar *et al.* (2018: 81). Material in collection: AUBM and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway and Iceland south to Mauritania.

**Conservation.** IUCN: Global (LC: 1 October 2015); Med. (VU: A2bd, 13 November 2007). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Rare. Low priority for conservation action.

## Moridae

*Gadella maraldi* (Risso 1810)—Gadella

**Taxonomy.** First record from Lebanon as *Gadella maraldi* (Risso) by Mouneimné (1977: 62); subsequently recorded as *Gadella maraldi* (Risso 1810) by Mouneimné (2002: 93).

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal and Madeira to Azores.

**Conservation.** IUCN: Global (LC: 28 May 2015); Med. (LC: 14 November 2007). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

## Phycidae

*Phycis blennoides* (Brünnich 1768)—Greater forkbeak

**Taxonomy.** First record from Lebanon as *Phycis blennoides* by Colloca & Lelli (2012: 13); subsequently recorded as *Phycis blennoides* by Aguillar *et al.* (2018: 82).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, northeastern Atlantic: Norway and Iceland south to Mauritania.

**Conservation.** IUCN: Global (NE); Med. (LC: 14 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Phycis phycis* (Linnaeus 1766)—Forkbeak

**Taxonomy.** First record from Lebanon as *Phycis phycis* (Linnaeus 1766) by George *et al.* (1964: 14); subsequently recorded as *Phycis physis* by Mouneimné (1977: 62); as *Phycis phycis* (Linnaeus 1766) by Mouneimné (2002: 91–92); recently recorded as *Phycis phycis* by Aguillar *et al.* (2018: 82). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Bay of Biscay, Madeira and Azores south to Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 2 February 2015); Med. (LC: 14 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Rare. Low priority for conservation action.

## Gobiesociformes

### Gobiesocidae

*Gouania willdenowi* (Risso 1810)—Blunt-snouted clingfish

**Taxonomy.** New record from Lebanon, based on a specimen in FMNH material (FMNH 88877).

**Distribution.** Mediterranean Sea endemic.

**Conservation.** IUCN: Global (LC: 13 March 2014); Med. (LC: 13 March 2014). Capture and threats: HAB, unknown. Occurrence: Unknown. Medium priority for conservation action.

*Lepadogaster candolii* Risso 1810—Connemarra clingfish

**Taxonomy.** First record from Lebanon as *Lepadogaster candollei* Risso 1810 by George *et al.* (1964: 25); subsequently recorded as *Lepadogaster candollei* Risso by Mouneimné (1977: 66); as *Lepadogaster candollei* Risso 1811 by Mouneimné (2002: 96). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles to Madeira and Canary Islands.

**Conservation.** IUCN: Global (NE); Med. (LC: 14 November 2007). Capture and threats: HAB, unknown. Occurrence: Rare. Medium priority for conservation action.



*Lepadogaster lepadogaster* (Bonnaterre 1788)—Shore clingfish

**Taxonomy.** First record from Lebanon as *Lepadogaster lepadogaster* Bonnaterre 1788 by George *et al.* (1964: 25); subsequently recorded as *Lepadogaster lepadogaster lepadogaster* (Bonnaterre) by Mouneimné (1977: 66); as *Lepadogaster lepadogaster* (Bonnaterre 1788) by Mouneimné (2002: 97). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, unknown. Occurrence: Rare. Medium priority for conservation action.

## Lophiiformes

### Lophiidae

*Lophius budegassa* Spinola 1807—Black-bellied anglerfish

**Taxonomy.** First record from Lebanon as *Lophius budegassa* by Aguillar *et al.* (2018: 81). Recent unpublished records from Tyre (2016–2018) and Tripoli (26 June 2008). Material in collection: AUBM (OS3650).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: western Baltic Sea, North Sea and British Isles south to Senegal.

**Conservation.** IUCN: Global (DD: 11 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Medium priority for conservation action.



**FIGURE 42.** *Lophius budegassa* Spinola 1807, Aabdeh, 26 June 2008, AUBM (OS3650).

*Lophius piscatorius* Linnaeus 1758—Angler

**Taxonomy.** First record from Lebanon as *Lophius piscatorius* Linnaeus 1758 by George *et al.* (1964: 25); subsequently recorded as *Lophius piscatorius* Linnaeus by Mouneimné (1977: 66); as *Lophius piscatorius* Linnaeus 1758 by Mouneimné (2002: 90).

**Distribution.** Greenland, Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Barents Sea and Iceland south to Mauritania.

**Conservation.** IUCN: Global (LC: 9 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Medium priority for conservation action.

## Mugiliformes

### Mugilidae

*Chelon labrosus* (Risso 1827)—Thicklip grey mullet

**Taxonomy.** First record from Lebanon as *Mugil chelo*, Cuv. by Gruvel (1931: 88); subsequently recorded as *Mugil chelo* Cuvier 1829 by George *et al.* (1964: 16); as *Chelon labrosus* Risso by Mouneimné (1977: 65); as *Chelon labrosus* (Risso 1826) by Mouneimné (2002: 185–186); recently recorded as *Chelon labrosus* by Bariche *et al.* (2009: 3). Material in collection: AUBM.

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway and Iceland south to Senegal, including Azores, Madeira, Canary Islands and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 1 January 2008); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Liza aurata* (Risso 1810)—Golden grey mullet

**Taxonomy.** First record from Lebanon as *Mugil auratus*, Risso by Gruvel (1931: 88); subsequently recorded as *Mugil auratus* Risso 1810 by George *et al.* (1964: 16); as *Liza aurata* (Risso) by Mouneimné (1977: 65); as *Liza aurata* (Risso 1810) by Mouneimné (2002: 186). Material in collection: AUBM and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, Sea of Azov, eastern Atlantic: Scotland to Senegal including Azores, Madeira, Canary Islands and Cape Verde Islands (introduced elsewhere).

**Conservation.** IUCN: Global (LC: 1 January 2008); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Chelon ramada* (Risso 1827)—Thinlip mullet

**Taxonomy.** First record from Lebanon as *Mugil capito*, C.V. by Gruvel (1931: 88); subsequently recorded as *Mugil capito* Cuvier 1829 by George *et al.* (1964: 16); as *Liza ramada* (Risso) by Mouneimné (1977: 65); as *Liza ramada* (Risso 1826) by Mouneimné (2002: 187). Material in collection: AUBM and USNM (as *Liza ramada*).

**Distribution.** Western Baltic Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: southern Norway south to Senegal, including Azores, Madeira, Canary Islands and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 1 January 2008); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Chelon saliens* (Risso 1810)—Leaping mullet

**Taxonomy.** First record from Lebanon as *Mugil saliens*, Risso by Gruvel (1931: 88); subsequently recorded as *Mugil saliens* Risso 1810 by George *et al.* (1964: 16); as *Liza saliens* (Risso) by Mouneimné (1977: 65); as *Liza saliens* (Risso 1810) by Mouneimné (2002: 187–188). Material in collection: AUBM and USNM (as *Liza saliens*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Sea of Azov, eastern Atlantic: Bay of Biscay to Morocco; introduced in Caspian Sea area.

**Conservation.** IUCN: Global (LC: 1 January 2008); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Mugil cephalus* Linnaeus 1758—Flathead mullet

**Taxonomy.** First record from Lebanon as *Mugil cephalus*, Risso by Gruvel (1931: 88); subsequently recorded as *Mugil cephalus* Linnaeus 1758 by George *et al.* (1964: 16); as *Mugil cephalus cephalus* Linnaeus by Mouneimné (1977: 65); as *Mugil cephalus* Linnaeus 1758 by Mouneimné (2002: 185). Material in collection: AUBM and USNM.

**Distribution.** Nearly circumglobal in temperate and tropical seas and estuaries (including Mediterranean Sea, Sea of Marmara, Black Sea, Red Sea, Persian Gulf); introduced elsewhere.

**Conservation.** IUCN: Global (LC: 21 December 2018); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Oedalechilus labeo* (Cuvier 1829)—Boxlip mullet

**Taxonomy.** First record from Lebanon as *Mugil labeo* Cuvier 1829 by George *et al.* (1964: 16); subsequently recorded as *Oedalechilus labeo* (Cuvier) by Mouneimné (1977: 65); as *Oedalechilus labeo* (Cuvier 1829) by Mouneimné (2002: 188); recently recorded as *Oedalechilus labeo* by Harmelin-Vivien *et al.* (2005: 628); as *Oedalechilus labeo* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: northern Morocco; introduced elsewhere.

**Conservation.** IUCN: Global (NE); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

## Myctophiformes

### Myctophidae

*Electrona risso* (Cocco 1829)—Risso's lanternfish

**Taxonomy.** First record from Lebanon as *Electrona risso* by Aguillar *et al.* (2018: 81).

**Distribution.** Circumtropical in tropical and temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 10 July 2012); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Hygophum benoiti* (Cocco 1838)—Benoit's lanternfish

**Taxonomy.** First record from Lebanon as *Hygophum benoiti* by Bariche *et al.* (2007: 112). Material in collection: AUBM (OS1236).

**Distribution.** North Atlantic, Mediterranean Sea, Sea of Marmara.

**Conservation.** IUCN: Global (LC: 10 July 2012); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Lampanyctus crocodilus* (Risso 1810)—Jewel lanternfish

**Taxonomy.** First record from Lebanon as *Lampanyctus crocodilus* by Aguillar *et al.* (2018: 81).

**Distribution.** North Atlantic, including Mediterranean Sea, Sea of Marmara.

**Conservation.** IUCN: Global (LC: 10 July 2012); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Myctophum punctatum* Rafinesque 1810—Spotted lanternfish

**Taxonomy.** First record from Lebanon as *Myctophum punctatum* Rafinesque 1810 = \**Myctophum humboldti humboldti* (Raffaele 1889) by George *et al.* (1964: 12); subsequently recorded as *Myctophum punctatum* Rafinesque by Mouneimné (1977: 61); as *Myctophum punctatum* Rafinesque 1810 by Mouneimné (2002: 84–85); recently recorded as *Myctophum punctatum* by Bariche *et al.* (2007: 112); as *Myctophum punctatum* by Bariche *et al.* (2009: 3). Material in collection: AUBM.

**Distribution.** North Atlantic to the Arctic region; Mediterranean Sea, Sea of Marmara.

**Conservation.** IUCN: Global (LC: 11 July 2012); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Common. Low priority for conservation action.

## Ophidiiformes

### Ophidiidae

*Benthocometes robustus* (Goode & Bean 1886)—Deep-water cusk-eel

**Taxonomy.** First record from Lebanon as *Benthocometes robustus* by Aguillar *et al.* (2018: 80).

**Distribution.** Mediterranean Sea, Atlantic.

**Conservation.** IUCN: Global (LC: 4 February 2009); Med. (DD: 29 February 2008). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Ophidion barbatum* Linnaeus 1758—Snake blenny

**Taxonomy.** First record from Lebanon as *Ophidion barbatum* Linnaeus 1758 by George *et al.* (1964: 22); subsequently recorded as *Ophidium barbatum* Linnaeus by Mouneimné (1977: 65); as *Ophidion barbatum* Linnaeus 1758 by Mouneimné (2002: 95). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: southern England south to Senegal.

**Conservation.** IUCN: Global (LC: 12 October 2018); Med. (LC: 29 February 2008). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Ophidion rochei* Müller 1845—no name

**Taxonomy.** New record from Lebanon, based on two specimens collected from off Daoura (25 April 2013). Material in collection: AUBM (OS3911).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea

**Conservation.** IUCN: Global (DD: 29 February 2008); Med. (DD: 29 February 2008). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 43.** *Ophidion rochei* Müller 1845, Beirut, 25 April 2013, AUBM (OS3911).

*Parophidion vassali* (Risso 1810)—Vassal's snake blenny

**Taxonomy.** First record from Lebanon as *Parophidion vassali* (Risso) by Mouneimné (1977: 65); as *Parophidion vassali* (Risso 1810) by Mouneimné (2002: 95–96).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: southern Spain and northern Morocco to Madeira.

**Conservation.** IUCN: Global (DD: 29 February 2008); Med. (DD: 29 February 2008). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Osmeriformes

### Argentinidae

*Argentina sphyraena* Linnaeus 1758—Argentine

**Taxonomy.** First record from Lebanon as *Argentina sphyraena* Linnaeus 1758 by George *et al.* (1964: 11); recently recorded as *Argentina sphyraena* by Aguillar *et al.* (2018: 80). Material in collection: YPM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Iceland and Norway south to Western Sahara.

**Conservation.** IUCN: Global (NE); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

## Perciformes

### Apogonidae

*Apogon imberbis* (Linnaeus 1758)—Cardinal fish

**Taxonomy.** First record from Lebanon as *Apogon imberbis* (Linnaeus 1758) by George *et al.* (1964: 16); subsequently recorded as *Apogon imberbis* (Linnaeus) by Mouneimné (1977: 62); as *Apogon imberbis* (Linnaeus 1758) by Mouneimné (2002: 137); recently recorded as *Apogon imberbis* by Harmelin-Vivien *et al.* (2005: 629); as *Apogon imberbis* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Angola, including islands of Gulf of Guinea, Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (DD: 13 July 2012); Med. (LC: 15 November 2007). Capture and threats: FIB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

### Blenniidae

*Aidablennius sphynx* (Valenciennes 1836)—Sphinx blenny

**Taxonomy.** First record from Lebanon as *Aidablennius sphynx* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: AUBM, FMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: northern Morocco.

**Conservation.** IUCN: Global (LC: 22 March 2011); Med. (LC: 13 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

*Coryphoblennius galerita* (Linnaeus 1758)—Montagu's blenny

**Taxonomy.** First record from Lebanon as *Blennius galerita* Linnaeus 1758 by George *et al.* (1964: 22); subsequently recorded as *Coryphoblennius galerita* (Linnaeus) by Mouneimné (1977: 65); as *Coryphoblennius galerita* (Linnaeus 1758) by Mouneimné (2002: 209–210); recently recorded as *Coryphoblennius galerita* by Bariche *et al.* (2009: 3). Material in collection: AUBM and FMNH (as *Blennius galerita*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: English Channel south to Guinea, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 13 November 2007); Med. (LC: 13 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

*Lipophrys trigloides* (Valenciennes 1836)—Bullhead blenny

**Taxonomy.** First record from Lebanon as *Blennius trigloides* Valenciennes 1836 by George *et al.* (1964: 22); subsequently recorded as *Blennius trigloides* Valenciennes by Mouneimné (1977: 65); as *Lipophrys trigloides* Valenciennes 1836 by Mouneimné (2002: 208–209). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Bay of Biscay south to Senegal, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

*Microlipophrys nigriceps* (Vinciguerra 1883)—Black-headed blenny

**Taxonomy.** First record from Lebanon as *Blennius nigriceps* by Harmelin-Vivien *et al.* (2005: 628).

**Distribution.** Mediterranean Sea and Sea of Marmara endemic.

**Conservation.** IUCN: Global (LC: 10 March 2014); Med. (LC: 10 March 2014). Capture and threats: HAB, Unknown. Occurrence: Very rare. Low priority for conservation action.

*Parablennius gattorugine* (Linnaeus 1758)—Tompot blenny

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Beirut (7 April 2006). Material in collection: AUBM (OS0633).

**Distribution.** North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern North Atlantic: English Channel south to Morocco.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 44.** *Parablennius gattorugine* (Linnaeus 1758), Beirut, 7 April 2006, AUBM (OS0633).

*Parablennius incognitus* (Bath 1968)—Pygmy blenny

**Taxonomy.** First record from Lebanon as *Blennius incognitus* Bath by Mouneimné (1977: 65); subsequently recorded as *Blennius incognitus* (Bath 1968) by Mouneimné (2002: 206). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Portugal to Morocco, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

*Parablennius pilicornis* (Cuvier 1829)—Ringneck blenny

**Taxonomy.** First record from Lebanon as *Parablennius pilicornis* by Aguillar *et al.* (2018: 82).

**Distribution.** Southwestern Mediterranean Sea, eastern Atlantic: southern Bay of Biscay to South Africa; western Indian Ocean (South Africa, Iran); southwestern Atlantic: Brazil south to Argentina.

**Conservation.** IUCN: Global (LC: 27 March 2009); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Very rare. Low priority for conservation action.

*Parablennius rouxi* (Cocco 1833)—Striped blenny

**Taxonomy.** First record from Lebanon as *Parablennius rouxi* by Aguillar *et al.* (2018: 82). An earlier record from a specimen photographed by author MB from Dbayeh at 40 m depth (24 July 2005).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: southern Portugal.

**Conservation.** IUCN: Global (LC: 10 March 2014); Med. (LC: 10 March 2014). Capture and threats: HAB, Unknown. Occurrence: Rare. Low priority for conservation action.



**FIGURE 45.** *Parablennius rouxi* (Cocco 1833), Beirut, 24 July 2005, 40 m depth.

*Parablennius sanguinolentus* (Pallas 1814)—Rusty blenny

**Taxonomy.** First record from Lebanon as *Blennius sanguinolentus* Pallas 1814 by George *et al.* (1964: 22); subsequently recorded as *Blennius sanguinolentus* Pallas by Mouneimné (1977: 65); as *Blennius sanguinolentus* Pallas 1811 by Mouneimné (2002: 207–208); recently recorded as *Parablennius sanguinolentus* by Harmelin-Vivien *et al.* (2005: 628); as *Parablennius sanguinolentus* by Bariche *et al.* (2009: 3). Material in collection: ANSP, AUBM, BMNH, FMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: France south to Morocco.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

*Parablennius tentacularis* (Brünnich 1768)—Tentacled blenny

**Taxonomy.** First record from Lebanon as *Blennius inaequalis* Valenciennes by Mouneimné (1977: 65) and then as *Blennius tentacularis* Brünnich by Mouneimné (1979: 110); subsequently recorded as *Blennius tentacularis* Brünnich 1768 by Mouneimné (2002: 208).



**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Senegal, including Canary Islands.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

*Parablennius zvonimiri* (Kolombatović 1892)—Red blenny

**Taxonomy.** First record from Lebanon as *Parablennius zvonimiri* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: USNM.

**Distribution.** Mediterranean Sea, Black Sea and Sea of Azov.

**Conservation.** IUCN: Global (LC: 11 March 2014); Med. (NE). Capture and threats: HAB, Unknown. Occurrence: Rare. Low priority for conservation action.

*Salaria pavo* (Risso 1810)—Peacock blenny

**Taxonomy.** First record from Lebanon as *Blennius pavo* Risso 1810 by George *et al.* (1964: 22); subsequently recorded as *Blennius pavo* Risso by Mouneimné (1977: 65); as *Blennius pavo* Risso 1810 by Mouneimné (2002: 206–207); recently recorded as *Lypophrys pavo* by Bariche *et al.* (2009: 3). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Morocco.

**Conservation.** IUCN: Global (LC: 14 November 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Rare. Low priority for conservation action.

*Salaria fluviatilis* (Asso y del Rio 1801)—Freshwater blenny

**Taxonomy.** First record from Lebanon as *Blennius inaequalis* Valenciennes 1758 and *Blennius fluviatilis*, Asso 1801 by George *et al.* (1964: 22); subsequently recorded as *Blennius fluviatilis* Asso by Mouneimné (1977: 65); as *Blennius fluviatilis* Asso 1801 by Mouneimné (2002: 205). Material in collection: AUBM, SMF and USNM.

**Distribution.** Mediterranean Sea watersheds.

**Conservation.** IUCN: Global (LC: 31 January 2006); Med. (NE). Capture and threats: HAB, Unknown. Occurrence: Very rare. Significant decline in the last two decades. High priority for conservation action.

*Scartella cristata* (Linnaeus 1758)—Molly miller

**Taxonomy.** First record from Lebanon as *Blennius cristatus* Linnaeus 1758 by George *et al.* (1964: 22); subsequently recorded as *Blennius cristatus* Linnaeus by Mouneimné (1977: 65); as *Blennius cristatus* Linnaeus 1758 by Mouneimné (2002: 204–205). recently recorded as *Scartella cristata* by Bariche *et al.* (2009: 3). Material in collection: AUBM, SMF and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Bay of Biscay south to Namibia, including Canary Islands; southern central Atlantic: Ascension Island; western Atlantic: Bermuda and Florida (U.S.A.) south to Brazil.

**Conservation.** IUCN: Global (LC: 18 October 2007); Med. (LC: 14 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Low priority for conservation action.

## Bramidae

*Brama brama* (Bonnaterre 1788)—Atlantic pomfret



**FIGURE 46.** *Brama brama* (Bonnaterre 1788), Beirut, 22 May 2012, AUBM (OS3684).

**Taxonomy.** First record from Lebanon as *Brama brama* (Bonnaterre) by Mouneimné (1977: 63); subsequently recorded as *Brama brama* (Bonnaterre 1788) by Mouneimné (2002: 150–151). Recent unpublished records from Beirut (May 2012), Batroun (8 November 2016) and Tripoli (12 October 2008). Material in collection: AUBM.

**Distribution.** Circumglobal in temperate seas (including western Baltic Sea, North Sea, Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 22 May 2013); Med. (DD: 14 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Callanthiidae

*Callanthias ruber* (Rafinesque 1810)—Parrot seaperch

**Taxonomy.** First record from Lebanon as *Callanthias ruber* (Rafinesque) by Mouneimné (1977: 62); subsequently recorded as *Callanthias ruber* (Rafinesque 1810) by Mouneimné (2002: 129–130); recently recorded as *Callanthias ruber* by Aguillar *et al.* (2018: 80).

**Distribution.** Mediterranean Sea, eastern Atlantic: English Channel and Azores to Mauritania, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 6 May 2013); Med. (LC: 14 November 2007). Capture and threats: Unknown. Occurrence: Common. Low priority for conservation action.

## Callionymidae

*Synchiropus phaeton* (Günther 1861)—Phaeton dragonet

**Taxonomy.** First record from Lebanon as *Synchiropus phaeton* by Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Gambia, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 6 May 2013); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Carangidae

*Alectis alexandrina* (Geoffroy St. Hilaire 1817)—African threadfish



**FIGURE 47.** *Alectis alexandrina* (Geoffroy St. Hilaire 1817), Beirut, 7 October 2009, AUBM (OS3683).

**Taxonomy.** First record from Lebanon as *Scyris alexandrinus* (Geoffroy St. Hilaire 1809) by George *et al.* (1964: 19); subsequently recorded as *Scyris alexandrina* (Geoffroy St Hil.) by Mouneimné (1977: 63); as *Scyris alexandrina* (Geoffroy Saint-Hilaire 1817) by Mouneimné (2002: 145). Recent unpublished records from Tyre, Beirut and Tripoli (1998–2019). Material in collection: ANSP, AUBM, MCZ, UF and USNM.

**Distribution.** Southern Mediterranean Sea, Sea of Marmara, eastern Atlantic: Morocco south to Angola.

**Conservation.** IUCN: Global (LC: 9 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, HAB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

*Caranx crysos* (Mitchill 1815)—Blue runner

**Taxonomy.** First record from Lebanon as *Caranx fusus* Geoffroy St. Hilaire 1809 by George *et al.* (1964: 19); subsequently recorded as *Caranx crysos* (Mitchill) by Mouneimné (1977: 63); as *Caranx crysos* (Mitchell 1815) by Mouneimné (2002: 141–142); recently recorded as *Caranx crysos* by Harmelin-Vivien *et al.* (2005: 628) and by Fanelli *et al.* (2014: 116); Material in collection: ANSP, AUBM, BMNH, CAS and USNM (as *C. crysos* and *C. fusus*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Atlantic.

**Conservation.** IUCN: Global (LC: 4 February 2009); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, HAB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

*Caranx rhonchus* Geoffroy St. Hilaire 1817—False scad

**Taxonomy.** First record from Lebanon as *Caranx rhonchus* Geoffroy St. Hilaire 1809 by George *et al.* (1964: 19);

subsequently recorded as *Caranx rhonchus* Geoffroy St Hil. by Mouneimné (1977: 63); as *Caranx rhonchus* Geoffroy Saint-Hilaire 1817 by Mouneimné (2002: 143). Recent unpublished records from Okaibeh (5 October 2006). Material in collection: ANSP, AUBM, BMNH, CAS, MCZ and USNM (as *Decapterus rhonchus*).



FIGURE 48. *Caranx rhonchus* Geoffroy St. Hilaire 1817, Okaibeh, 5 October 2006, AUBM (OS3830).

**Distribution.** Southern and eastern Mediterranean Sea, eastern Atlantic: Morocco south to Namibia.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, HAB, NIS, unknown. Occurrence: Rare. Low priority for conservation action.



FIGURE 49. *Lichia amia* (Linnaeus 1758), Tripoli, 3 September 2005.

*Lichia amia* (Linnaeus 1758)—Leerfish

**Taxonomy.** First record from Lebanon as *Lichia amia*, L. by Gruvel (1931: 109); subsequently recorded as *Lichia amia* Linnaeus 1758 by George *et al.* (1964: 19); as *Lichia amia* (Linnaeus) by Mouneimné (1977: 63); as *Lichia amia* (Linnaeus 1758) by Mouneimné (2002: 143–144). Recent unpublished records from Tyre, Saida, Sarafand, Beirut, Batroun and Tripoli (1998–2019). Material in collection: ANSP, AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Bay of Biscay south to South Africa; Western Indian Ocean: South Africa north to Mozambique.

**Conservation.** IUCN: Global (LC: 19 May 2014); Med. (DD: 16 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

*Naucrates ductor* (Linnaeus 1758)—Pilotfish

**Taxonomy.** First record from Lebanon as *Naucrates ductor* (Linnaeus) by Mouneimné (1977: 63); subsequently recorded as *Naucrates ductor* (Linnaeus 1758) by Mouneimné (2002: 144). Recent unpublished records from Beirut (10 February 2012) and Tripoli (28 July 2012). Material in collection: AUBM.

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea, Sea of Marmara, Black Sea, Red Sea, Persian Gulf).

**Conservation.** IUCN: Global (LC: 7 November 2013); Med. (LC: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Pseudocaranx dentex* (Bloch & Schneider 1801)—White trevally

**Taxonomy.** First record from Lebanon as *Caranx dentex* (Schneider) by Mouneimné (1977: 63); subsequently recorded as *Caranx dentex* (Schneider 1801) by Mouneimné (2002: 142–143). Recent unpublished records from Beirut (9 December 2009, 5 June 2011 and 5 September 2012). Material in collection: AUBM.

**Distribution.** Nearly circumglobal in warm temperate seas (including Mediterranean Sea), but not in eastern Pacific.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (NE). Capture and threats: FIT, FIB, HAB, NIS, unknown. Occurrence: Rare. Low priority for conservation action.



**FIGURE 50.** *Pseudocaranx dentex* (Bloch & Schneider 1801), Beirut, 8 December 2009, AUBM (OS3679).

*Seriola dumerili* (Risso 1810)—Greater amberjack

**Taxonomy.** First record from Lebanon as *Seriola dumerili* Risso 1810 by George *et al.* (1964: 19); subsequently recorded as *Seriola dumerili* (Risso) by Mouneimné (1977: 63); as *Seriola dumerili* (Risso 1810) by Mouneimné (2002: 146–147); recently recorded as *Seriola dumerili* by Bariche *et al.* (2007: 112) and Aguillar *et al.* (2018: 82). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: ANSP, AUBM, BMNH and USNM.

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea, Sea of Marmara, Red Sea), except not in eastern Pacific.

**Conservation.** IUCN: Global (LC: 7 November 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, NIS, unknown. Occurrence: Common. Low priority for conservation action.

*Seriola fasciata* (Bloch 1793)—Lesser amberjack

**Taxonomy.** First record from Lebanon as *Seriola fasciata* by Crocetta & Bariche in Crocetta *et al.* (2015: 697). Material in collection: AUBM.

**Distribution.** Western Atlantic; southern central Atlantic: Saint Helena; eastern Atlantic; Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 21 August 2012). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.



**FIGURE 51.** *Trachinotus ovatus* (Linnaeus 1758), Beirut, 13 October 2009.

*Trachinotus ovatus* (Linnaeus 1758)—Pompano

**Taxonomy.** First record from Lebanon as *Lichia glauca*, L. by Gruvel (1931: 109); subsequently recorded as *Trachynotus glaucus* (Linnaeus 1758) by George *et al.* (1964: 19); as *Trachynotus ovatus* (Linnaeus) by Mouneimné (1977: 63); as *Trachynotus ovatus* (Linnaeus 1758) by Mouneimné (2002: 149). Recent unpublished records from

Beirut (13 October 2009). Material in collection: ANSP, AUBM, BMNH, CAS, MCZ, USNM and YPM (as *T. glaucus* and *T. ovatus*).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, eastern Atlantic: Norway south to Angola, including offshore islands; southern central Atlantic: Saint Helena

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, HAB, NIS, unknown. Occurrence: Rare. Significant decline in the last two decades. Low priority for conservation action.

*Trachurus trachurus* (Linnaeus 1758)—Atlantic horse mackerel

**Taxonomy.** First record from Lebanon as *Trachurus trachurus*, L. by Gruvel (1931: 109); subsequently recorded as *Trachurus trachurus* (Linnaeus 1758) by George *et al.* (1964: 19); as *Trachurus trachurus* (Linnaeus) by Mouneimné (1977: 63); as *Trachurus trachurus* (Linnaeus 1758) by Mouneimné (2002: 148–149); recently recorded as *Trachurus trachurus* by Bariche *et al.* (2007: 112) and by Fanelli *et al.* (2014: 116). Material in collection: ANSP, AUBM, BMNH, CAS and USNM.

**Distribution.** Cosmopolitan (including western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea), but excluding eastern Pacific.

**Conservation.** IUCN: Global (VU: A2bd, 9 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Trachurus picturatus* (Bowdich 1825)—Blue jack mackerel

**Taxonomy.** First record from Lebanon as *Trachurus picturatus* (Bowdich) by Mouneimné (1977: 63); subsequently recorded as *Trachurus picturatus* (Bowdich 1825) by Mouneimné (2002: 147–148). Material in collection: CAS.

**Distribution.** Mediterranean Sea, eastern Atlantic.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Trachurus mediterraneus* (Steindachner 1868)—Mediterranean horse mackerel

**Taxonomy.** First record from Lebanon as *Trachurus mediterraneus* Steindachner 1868 by George *et al.* (1964: 19); subsequently recorded as *Trachurus mediterraneus mediterraneus* (Steindachner) by Mouneimné (1977: 63); as *Trachurus mediterraneus mediterraneus* (Steindachner 1868) by Mouneimné (2002: 147); recently recorded as *Trachurus mediterraneus* by Bariche *et al.* (2007: 112). Material in collection: ANSP, AUBM, BMNH, CAS, MCZ, UF, USNM and YPM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Senegal.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 17 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

## Centracanthidae

*Centracanthus cirrus* Rafinesque 1810—Curled picarel

**Taxonomy.** First record from Lebanon as *Centracanthus cirrus* Rafinesque by Mouneimné (1977: 64); subsequently recorded as *Centracanthus cirrus* Rafinesque 1810 by Mouneimné (2002: 178).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal south to Mauritania, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 22 August 2009); Med. (LC: 14 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Spicara maena* (Linnaeus 1758)—Blotched picarel

**Taxonomy.** First record from Lebanon as *Smaris vulgaris*, C.V. by Gruvel (1931: 90); subsequently recorded as *Spicara maena* (Linnaeus 1758) by George *et al.* (1964: 18) and as *Maena chryselis* Valenciennes 1830 by George & Athanassiou (1966a: 7); as *Spicara chryselis* by George & Athanassiou (1967: 268); as *Spicara maena maena* (Linnaeus) by Mouneimné (1977: 64); as *Spicara maena flexuosa* Rafinesque Mouneimné (1977: 64); as *Spicara maena maena* (Linnaeus 1758) by Mouneimné (2002: 179); as *Spicara maena flexuosa* Rafinesque 1810 by Mouneimné (2002: 178–179). Material in collection: AUBM, BMNH (as *S. chryselis*) and USNM (as *Maena maena*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Portugal south to Morocco and Canary Islands.

**Conservation.** IUCN: Global (LC: 22 August 2009); Med. (LC: 14 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Spicara smaris* (Linnaeus 1758)—Picarel

**Taxonomy.** First record from Lebanon as *Smaris alcedo*, C.V. by Gruvel (1931: 90); subsequently recorded as *Spicara smaris* (Linnaeus 1758) by George *et al.* (1964: 18); as *Spicara smaris* (Linnaeus) by Mouneimné (1977: 64); as *Spicara smaris* (Linnaeus 1758) by Mouneimné (2002: 179–180); recently recorded as *Spicara smaris* by Harmelin-Vivien *et al.* (2005: 628) and as *Spicara smaris* by Bariche *et al.* (2009: 3). Material in collection: ANSP, AUBM, BMNH, MCZ, YPM and USNM (as *Maena smaris* and *Spicara smaris*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Portugal south to Canary Islands.

**Conservation.** IUCN: Global (LC: 22 August 2009); Med. (LC: 14 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

## Trachipteridae

*Trachipterus trachipterus* (Gmelin 1789)—Mediterranean dealfish

**Taxonomy.** New record from Lebanon, based on a photo of one individual landed from off Sarafand and posted on the internet (7 May 2018).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic, southern central Atlantic: Saint Helena; Indo-Pacific Ocean.

**Conservation.** IUCN: Global (LC: 7 May 2013); Med. (DD: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Centrolophidae

*Schedophilus ovalis* (Cuvier 1833)—Imperial blackfish

**Taxonomy.** New record from Lebanon, based on a specimen landed from off Beirut (8 May 2008) and another one landed in Batroun (1 July 2013). Material in collection: AUBM (OS3513; OS3967).

**Distribution.** Mediterranean Sea, eastern Atlantic: Galicia (Spain) south to South Africa, including Azores and Canary Islands; straying to Bermuda (western Atlantic).





**FIGURE 52.** *Trachipterus trachipterus* (Gmelin 1789), Sarafand, 7 May 2018, photograph: unknown (posted on local social media).



**FIGURE 53.** *Schedophilus ovalis* (Cuvier 1833), Beirut, 8 May 2008, AUBM (OS3513).

**Conservation.** IUCN: Global (NE); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Cepolidae

*Cepola macrophthalmia* (Linnaeus 1758)—Red bandfish

**Taxonomy.** First record from Lebanon as *Cepola rubescens*, L. by Gruvel (1931: 96).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: British Isles to Senegal.

**Conservation.** IUCN: Global (LC: 7 May 2013); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

## Clinidae

*Clinitrachus argentatus* (Risso 1810)—Cline



**FIGURE 54.** *Clinitrachus argentatus* (Risso 1810), Beirut, 23 October 2003, AUBM (OS0618).

**Taxonomy.** First record from Lebanon as *Cristiceps argentatus* Risso 1810 by George *et al.* (1964: 22); subsequently recorded as *Clinitrachus argenteus* (Risso) by Mouneimné (1977: 65); as *Clinitrachus argentatus* (Risso 1810) by Mouneimné (2002: 210). Recent unpublished records from Beirut (23 October 2003). Material in collection: AUBM, FMNH and USNM (as *C. variabilis*).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal and southern Spain south to northern Morocco.

**Conservation.** IUCN: Global (LC: 15 November 2007); Med. (LC: 15 November 2007). Capture and threats: HAB, unknown. Occurrence: Rare. Significant decline in the last two decades. Low priority for conservation action.

## Coryphaenidae

*Coryphaena hippurus* Linnaeus 1758—Common dolphinfish

**Taxonomy.** First record from Lebanon as *Coryphaena hippurus* Linnaeus 1758 by George *et al.* (1964: 19); subse-

quently recorded as *Coryphaena hippurus* Linnaeus by Mouneimné (1977: 63); as *Coryphaena hippurus* Linnaeus 1758 by Mouneimné (2002: 150). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019).

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea, Sea of Marmara, Red Sea).

**Conservation.** IUCN: Global (LC: 17 September 2010); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

## Echeneidae

*Echeneis naucrates* Linnaeus 1758—Live sharksucker

**Taxonomy.** First record from Lebanon as *Echeneis naucrates*, L. by Gruvel (1931: 110); subsequently recorded as *Echeneis naucrates* Linnaeus 1758 by George *et al.* (1964: 24); as *Echeneis naucrates* Linnaeus by Mouneimné (1977: 66); as *Echeneis naucrates* Linnaeus 1758 by Mouneimné (2002: 139). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: BMNH, FMNH and USNM.

**Distribution.** Circumglobal in tropical and subtropical seas (including Gulf of Mexico, Caribbean Sea, Mediterranean Sea, Sea of Marmara, Black Sea, Red Sea, Persian Gulf, Gulf of California).

**Conservation.** IUCN: Global (LC: 23 August 2012); Med. (NE). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Remora remora* (Linnaeus 1758)—Shark sucker



FIGURE 55. *Remora remora* (Linnaeus 1758), Beirut, 26 May 2012.

**Taxonomy.** New record from Lebanon, based on photos of a specimen landed from off Beirut, observed on the market (18 May 2012).

**Distribution.** Circumglobal in tropical through temperate seas (including western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Red Sea).

**Conservation.** IUCN: Global (LC: 23 August 2012); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

## Epigonidae

*Epigonus constanciae* (Giglioli 1880)—no name

**Taxonomy.** First record from Lebanon as *Epigonus constanciae* by Aguillar *et al.* (2018: 81). Recent unpublished records from Beirut (26 June 2009) and Batroun (4 April 2012). Material in collection: AUBM (OS3864; OS3852).

**Distribution.** Mediterranean Sea, eastern Atlantic: Madeira south to Gulf of Guinea and Angola and Namibia.

**Conservation.** IUCN: Global (LC: 11 July 2012); Med. (DD: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.



FIGURE 56. *Epigonus constanciae* (Giglioli 1880), Batroun, 3 April 2012, AUBM (OS3852).

*Epigonus denticulatus* Dieuzeide 1950—Pencil cardinal

**Taxonomy.** First record from Lebanon as *Epigonus denticulatus* Dieuzeide by Mouneimné (1977: 62); subsequently recorded as *Epigonus denticulatus* Dieuzeide 1950 by Mouneimné (2002: 138).

**Distribution.** Circumglobal in warm seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 11 July 2012); Med. (LC: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Very rare. Low priority for conservation action.

## Gempylidae

*Ruvettus pretiosus* Cocco 1833—Oilfish

**Taxonomy.** First record from Lebanon as *Ruvettus pretiosus* Cocco 1829 by George *et al.* (1964: 20); subsequently recorded as *Ruvettus pretiosus* Cocco by Mouneimné (1977: 64); as *Ruvettus pretiosus* Cocco 1829 by Mouneimné (2002: 229). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM (OS3509).

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 22 August 2012); Med. (LC: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Common. Low priority for conservation action.

## Gobiidae

*Aphia minuta* (Risso 1810)—Transparent goby



**FIGURE 57.** *Ruvettus pretiosus* Cocco 1833, Batroun, 16 February 2008, AUBM (OS3509).

**Taxonomy.** First record from Lebanon as *Aphia minuta* (Risso) by Mouneimné (1977: 65); subsequently recorded as *Aphia minuta* (Risso 1810) by Mouneimné (2002: 218). Recent unpublished records from Tripoli (16 October 2010). Material in collection: AUBM (OS3797).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Morocco.

**Conservation.** IUCN: Global (LC: 11 March 2014); Med. (NE). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Chromogobius quadrivittatus* (Steindachner 1863)—Chestnut goby

**Taxonomy.** First record from Lebanon as *Gobius quadrivittatus* Steindachner 1863 by George *et al.* (1964: 23); subsequently recorded as *Chromogobius quadrivittatus* (Steindachner) by Mouneimné (1977: 65); as *Chromogobius quadrivittatus* (Steindachner 1863) by Mouneimné (2002: 218–219).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea.

**Conservation.** IUCN: Global (LC: 11 March 2014); Med. (NE). Capture and threats: HAB, unknown. Occurrence: Very rare. Low priority for conservation action.

*Deltentosteus quadrimaculatus* (Valenciennes 1837)—Four-spotted goby

**Taxonomy.** First record from Lebanon as *Gobius quadrimaculatus* Valenciennes 1837 by George *et al.* (1964: 23); subsequently recorded as *Deltentosteus quadrimaculatus* (Valenciennes) by Mouneimné (1977: 65); as *Deltentosteus quadrimaculatus* (Valenciennes 1837) by Mouneimné (2002: 219). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Bay of Biscay south to Mauritania.

**Conservation.** IUCN: Global (LC : 11 March 2014); Med. (LC: 15 November 2007). Capture and threats: HAB, unknown. Occurrence: Very rare. Low priority for conservation action.

*Gobius niger* Linnaeus 1758—Black goby

**Taxonomy.** First record from Lebanon as *Gobius niger* Linnaeus 1758 by George *et al.* (1964: 23); as *Gobius niger jozo* in George & Athanassiou, (1967: 279); subsequently recorded as *Gobius niger* Linnaeus by Mouneimné (1977: 65); as *Gobius niger* Linnaeus 1758 by Mouneimné (2002: 216–217); recently recorded as *Gobius niger* by Bariche *et al.* (2007: 111); as *Gobius niger* by Bariche *et al.* (2009: 3) and Aguillar *et al.* (2018: 81). Material in collection: AUBM, BMNH, ANSP and USNM (as *G. jozo* and *G. niger*).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Mauritania, including eastern Canary Islands.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

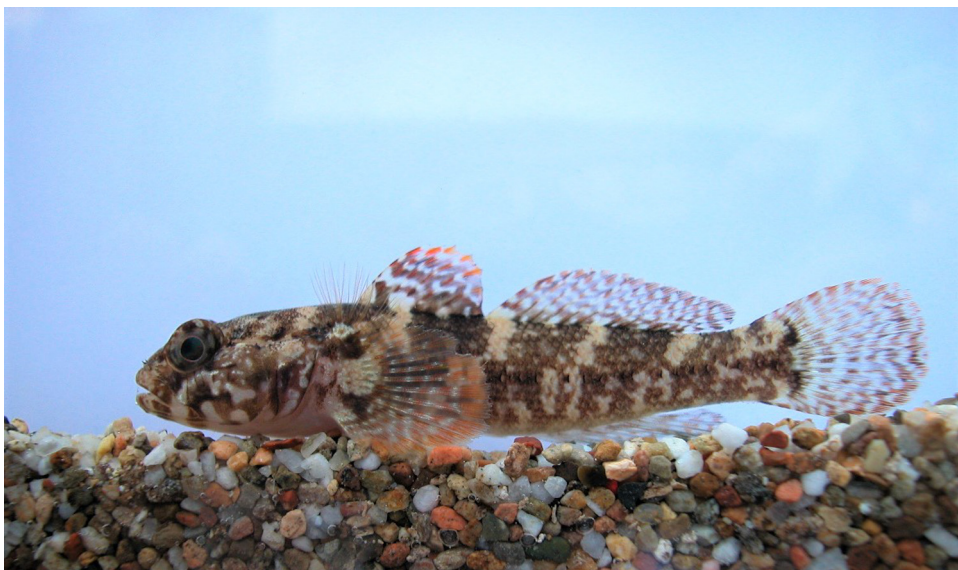
*Gobius geniporus* Valenciennes 1837—Slender goby

**Taxonomy.** First record from Lebanon as *Gobius geniporus* by Aguillar *et al.* (2018: 81).

**Distribution.** Mediterranean Sea and Sea of Marmara endemic.

**Conservation.** IUCN: Global (LC: 12 March 2014); Med. (LC: 12 March 2014). Capture and threats: HAB, Unknown. Occurrence: Very rare. Low priority for conservation action.

*Gobius paganellus* Linnaeus 1758—Rock goby



**FIGURE 58.** *Gobius paganellus* Linnaeus 1758, Beirut, 10 April 2006, AUBM (OS0977).

**Taxonomy.** First record from Lebanon as *Gobius paganellus* Linnaeus 1758 by George *et al.* (1964: 23); subse-

quently recorded as *Gobius paganellus* Linnaeus by Mouneimné (1977: 65); as *Gobius paganellus* Linnaeus 1758 by Mouneimné (2002: 217); recently recorded as *Gobius paganellus* by Bariche *et al.* (2007: 111); as *Gobius paganellus* by Bariche *et al.* (2009: 3). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Scotland south to Senegal, including Azores, Madeira and Canary Islands; recorded as NIS from the Red Sea.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

#### *Gobius bucchichi* Steindachner 1870—Bucchich's goby

**Taxonomy.** First record from Lebanon as *Gobius bucchichi* by Harmelin-Vivien *et al.* (2005: 628); as *Gobius bucchichi* by Bariche *et al.* (2009: 3). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Black Sea, eastern Atlantic: adjacent coast of southern Portugal and Morocco.

**Conservation.** IUCN: Global (LC: 15 November 2007); Med. (LC: 15 November 2007). Capture and threats: FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

#### *Gobius cruentatus* Gmelin 1789—Red-mouthed goby

**Taxonomy.** First record from Lebanon as *Gobius cruentatus* Gmelin 1788 by George *et al.* (1964: 23); subsequently recorded as *Gobius cruentatus* Gmelin by Mouneimné (1977: 65); as *Gobius cruentatus* Gmelin 1789 by Mouneimné (2002: 216). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Ireland south to Senegal.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

#### *Gobius vittatus* Vinciguerra 1883—Striped goby

**Taxonomy.** First record from Lebanon as *Gobius vittatus* by Aguillar *et al.* (2018: 81).

**Distribution.** Mediterranean Sea and Sea of Marmara endemic.

**Conservation.** IUCN: Global (LC: 12 March 2014); Med. (LC: 12 March 2014). Capture and threats: HAB, Unknown. Occurrence: Very rare. Low priority for conservation action.

#### *Gobius cobitis* Pallas 1814—Giant goby

**Taxonomy.** First record from Lebanon as *Gobius cobitis* Pallas 1811 by George *et al.* (1964: 23); subsequently recorded as *Gobius cobitis* Pallas by Mouneimné (1977: 65); as *Gobius cobitis* Pallas 1811 by Mouneimné (2002: 215–216); recently recorded as *Gobius cobitis* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: southern Ireland and southern England south to Morocco; Red Sea: recorded as NIS from the Gulf of Suez.

**Conservation.** IUCN: Global (LC: 11 March 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, Unknown. Occurrence: Common. Low priority for conservation action.

#### *Gobius gasteveni* Miller 1974—Steven's goby

**Taxonomy.** First record from Lebanon as *Gobius gasteveni* by Aguillar *et al.* (2018: 81).

**Distribution.** Western Mediterranean Sea, northeastern Atlantic: English Channel south to Madeira.

**Conservation.** IUCN: Global (LC: 12 March 2014); Med. (NE). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Lesueurigobius friesii* (Malm 1874)—Fries's goby

**Taxonomy.** First record from Lebanon as *Lesueurigobius friesii* by Aguillar *et al.* (2018: 81).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, eastern Atlantic: southern Norway and British Isles south to Mauritania.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Lesueurigobius suerii* (Risso 1810)—LeSueur's goby

**Taxonomy.** First record from Lebanon as *Lesueurigobius suerii* by Aguillar *et al.* (2018: 81).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Morocco, Canary Islands.

**Conservation.** IUCN: Global (NE); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Pomatoschistus marmoratus* (Risso 1810)—Marbled sand goby

**Taxonomy.** New record from Lebanon, based on USNM material (USNM 244155, 10 specimens; USNM 298791, 2 specimens).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Sea of Azov, eastern Atlantic: southern Spain and Portugal.

**Conservation.** IUCN: Global (LC: 12 March 2014); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

*Thorogobius ephippiatus* (Lowe 1839)—Leopard goby



**FIGURE 59.** *Thorogobius ephippiatus* (Lowe 1839), Tripoli, 2012, picture extracted from an underwater video.



**Taxonomy.** First record from Lebanon as *Thorogobius ephippiatus* by Aguillar *et al.* (2018: 83). An earlier record from a specimen filmed by scuba divers in 2012 off Tripoli at 123 m depth.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Norway south to Morocco, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 13 March 2014); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Zebrus zebrus* (Risso 1827)—Zebra goby

**Taxonomy.** First record from Lebanon as *Gobius zebrus* Risso 1826 by George *et al.* (1964: 23); subsequently recorded as *Zebrus zebrus* (Risso) by Mouneimné (1977: 65); as *Zebrus zebrus* (Risso 1826) by Mouneimné (2002: 221).

**Distribution.** Mediterranean Sea, Sea of Marmara and Black Sea.

**Conservation.** IUCN: Global (LC: 13 March 2014); Med. (NE). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Haemulidae

*Pomadasys incisus* (Bowdich 1825)—Bastard grunt

**Taxonomy.** First record from Lebanon as *Pomadasys incisus* (Bowdich 1825) by George *et al.* (1964: 17); subsequently recorded as *Pomadasys bennetti* (Lowe) by Mouneimné (1977: 63); as *Pomadasys bennetti* (Lowe 1841) by Mouneimné (2002: 158–159). Material in collection: ANSP, BMNH, USNM and YPM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Northwestern Spain to Angola; offshore islands including Madeira.

**Conservation.** IUCN: Global (LC: 4 February 2009); Med. (LC: 14 November 2007). Capture and threats: FIT, FIB, HAB, NIS, Unknown. Occurrence: Common. Low priority for conservation action.

## Istiophoridae

*Tetrapturus belone* Rafinesque 1810—Mediterranean spearfish

**Taxonomy.** New record from Lebanon, based on several photos of adult individuals landed from various parts offshore Lebanon (4 May 2014; 2 December 2014, 3 September 2017, 6 November 2017, 10 November 2017, 7 November 2018), including juveniles (1 m TL, 3 September 2017).

**Distribution.** Mediterranean Sea endemic.

**Conservation.** IUCN: Global (LC: 26 January 2015); Med. (LC: 17 September 2010). Capture and threats: FIB, Unknown. Occurrence: Rare. Low priority for conservation action.

## Labridae

*Acantholabrus palloni* (Risso 1810)—Scale-rayed wrasse

**Taxonomy.** First record from Lebanon as *Acantholabrus palloni* (Risso) by Mouneimné (1977: 64); subsequently recorded as *Acantholabrus palloni* (Risso 1810) by Mouneimné (2002: 191–192).

**Distribution.** Mediterranean Sea, eastern Atlantic: Norway south to Gabon, including offshore islands.

**Conservation.** IUCN: Global (LC: 12 March 2008); Med. (LC: 12 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Medium priority for conservation action.



**FIGURE 60.** *Tetrapturus belone* Rafinesque, Tripoli, 10 November 2017, photograph: Dia Captan.

*Coris julis* (Linnaeus 1758)—Mediterranean rainbow wrasse

**Taxonomy.** First record from Lebanon as *Julis vulgaris*, C.V. by Gruvel (1931: 90); subsequently recorded as *Coris julis* (Linnaeus 1758) by George *et al.* (1964: 20); as *Coris julis* (Linnaeus) by Mouneimné (1977: 64); as *Coris julis* (Linnaeus 1758) by Mouneimné (2002: 192); recently recorded as *Coris julis* by Bariche *et al.* (2009: 3); as *Coris julis* by Harmelin-Vivien *et al.* (2005: 628); and as *Coris julis* by Aguillar *et al.* (2018: 81). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Gabon, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 11 February 2009); Med. (LC: 13 November 2007). Capture and threats: Unknown. Occurrence: Common. Low priority for conservation action.

*Labrus viridis* Linnaeus 1758—European green wrasse

**Taxonomy.** First record from Lebanon as *Labrus viridis*, L. by Gruvel (1931: 89).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Portugal and southern Spain south to Morocco.

**Conservation.** IUCN: Global (VU: A4ad, 12 June 2008); Med. (VU: A4acd, 12 June 2008). Capture and threats: Unknown. Occurrence: Unknown. Medium priority for conservation action.

*Lappanella fasciata* (Cocco 1833)—no name

**Taxonomy.** First record from Lebanon as *Lappanella fasciata* by Aguillar *et al.* (2018: 81).

**Distribution.** Western Mediterranean Sea, Adriatic Sea, eastern Atlantic: Madeira.

**Conservation.** IUCN: Global (LC: 25 February 2014); Med. (NE). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

*Symphodus ocellatus* (Linnaeus 1758)—Mediterranean ocellated wrasse

**Taxonomy.** First record from Lebanon as *Crenilabrus ocellatus*, Forsk. By Gruvel (1931: 89) ; recently recorded as *Symphodus ocellatus* by Harmelin-Vivien *et al.* (2005: 628).

**Distribution.** Mediterranean Sea, Sea of Marmara and Black Sea.

**Conservation.** IUCN: Global (LC: 27 February 2014); Med. (LC: 27 February 2014). Capture and threats: HAB, Unknown. Occurrence: Rare. Medium priority for conservation action.

*Symphodus doderleini* Jordan 1890—Doederlein's wrasse

**Taxonomy.** First record from Lebanon as *Symphodus doderleini* by Harmelin-Vivien *et al.* (2005: 628).

**Distribution.** Mediterranean Sea and Sea of Marmara endemic.

**Conservation.** IUCN: Global (LC: 26 February 2014); Med. (LC: 26 February 2014). Capture and threats: HAB, Unknown. Occurrence: Very rare. Medium priority for conservation action.

*Symphodus tinca* (Linnaeus 1758)—East Atlantic peacock wrasse

**Taxonomy.** First record from Lebanon as *Crenilabrus tinca* (Linnaeus 1758) by George *et al.* (1964:20) ; subsequently recorded as *Symphodus tinca* (Linnaeus) by Mouneimné (1977: 64); as *Symphodus tinca* (Linnaeus 1758) by Mouneimné (2002: 195–196); recently recorded as *Symphodus tinca* by Harmelin-Vivien *et al.* (2005: 628); as *Symphodus tinca* by Fanelli *et al.* (2015: 2170). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Spain south to Morocco.

**Conservation.** IUCN: Global (LC: 12 July 2008); Med. (LC: 13 November 2007). Capture and threats: FIT, FIB, HAB, Unknown. Occurrence: Common. Medium priority for conservation action.

*Symphodus cinereus* (Bonnaterre 1788)—Grey wrasse

**Taxonomy.** First record from Lebanon as *Crenilabrus cinereus* (Bonnaterre 1788) by George *et al.* (1964: 20); subsequently recorded as *Symphodus cinereus* (Bonnaterre) by Mouneimné (1977: 64); as *Symphodus cinereus* (Bonnaterre 1788) by Mouneimné (2002: 193).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Gibraltar.

**Conservation.** IUCN: Global (LC: 25 September 2013); Med. (LC: 13 November 2007). Capture and threats: HAB, Unknown. Occurrence: Very rare. Medium priority for conservation action.

*Symphodus roissali* (Risso 1810)—Five-spotted wrasse

**Taxonomy.** First record from Lebanon as *Crenilabrus roissali*, Risso = *Crenilabrus quinque maculatus*, Risso by Gruvel (1931: 91); subsequently recorded as *Crenilabrus quinque maculatus* (Bleeker and Schneider 1801) by George *et al.* (1964: 20); as *Symphodus roissali* (Risso) by Mouneimné (1977: 64); as *Symphodus roissali* (Risso 1810) by Mouneimné (2002: 194–195) ; recently recorded as *Symphodus roissali* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: AUBM, BMNH (as *Crenilabrus quinque maculatus*) and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern North Atlantic: Bay of Biscay south to Gibraltar.

**Conservation.** IUCN: Global (LC: 12 July 2008); Med. (LC: 13 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Medium priority for conservation action.

*Symphodus mediterraneus* (Linnaeus 1758)—Axillary wrasse

**Taxonomy.** First record from Lebanon as *Crenilabrus mediterraneus* (Linnaeus 1758) by George *et al.* (1964: 19);

subsequently recorded as *Symphodus mediterraneus* (Linnaeus) by Mouneimné (1977: 64); as *Symphodus mediterraneus* (Linnaeus 1758) by Mouneimné (2002: 193–194); recently recorded as *Symphodus mediterraneus* by Harmelin-Vivien *et al.* (2005: 628); as *Symphodus mediterraneus* by Bariche *et al.* (2009: 3). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal to northern Morocco, including Azores and Madeira.

**Conservation.** IUCN: Global (LC: 12 July 2008); Med. (LC: 13 November 2007). Capture and threats: HAB, Unknown. Occurrence: Rare. Medium priority for conservation action.

*Thalassoma pavo* (Linnaeus 1758)—Ornate wrasse

**Taxonomy.** First record from Lebanon as *Julis pavo*, Hasselq. by Gruvel (1931: 90); subsequently recorded as *Thalassoma pavo* (Linnaeus 1758) by George *et al.* (1964: 20); as *Thalassoma pavo* (Linnaeus) by Mouneimné (1977: 64); as *Thalassoma pavo* (Linnaeus 1758) by Mouneimné (2002: 196); recently recorded as *Thalassoma pavo* by Harmelin-Vivien *et al.* (2005: 628); as *Thalassoma pavo* by Bariche *et al.* (2009: 3); as *Thalassoma pavo* by Fanelli *et al.* (2015: 2170). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal south to Gabon, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 12 July 2008); Med. (LC: 13 November 2007). Capture and threats: HAB, Unknown. Occurrence: Common. Medium priority for conservation action.

*Xyrichtys novacula* (Linnaeus 1758)—Pearly razorfish

**Taxonomy.** First record from Lebanon as *Xyrichtys novacula* (Linnaeus 1758) by George *et al.* (1961: 20); subsequently recorded as *Xyrichtys novacula* (Linnaeus) by Mouneimné (1977: 64); as *Xyrichtys novacula* (Linnaeus 1758) by Mouneimné (2002: 196–197); ); recently recorded as *Xyrichtys novacula* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: AUBM, BMNH, USNM and FMNH (as *X. cultratus*).



FIGURE 61. *Lobotes surinamensis* (Bloch 1790), Tripoli, 22 February 2017.

**Distribution.** Western Atlantic: southern Florida (U.S.A.) south to Brazil, including Gulf of Mexico and Caribbean Sea; Mediterranean Sea, Sea of Marmara, eastern Atlantic: Spain south to Gabon, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 12 April 2008); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, Unknown. Occurrence: Common. Low priority for conservation action.

## Lobotidae

*Lobotes surinamensis* (Bloch 1790)—Atlantic tripletail

**Taxonomy.** First record from Lebanon as *Lobotes surinamensis* (Bloch 1790) by George *et al.* (1964: 17); subsequently recorded as *Lobotes surinamensis* (Bloch) by Mouneimné (1977: 63); as *Lobotes surinamensis* (Bloch 1790) by Mouneimné (2002: 153–154); recently recorded as *Lobotes surinamensis* by Aguillar *et al.* (2018: 81). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM and USNM.

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea, Sea of Marmara, Red Sea, Persian Gulf, South China Sea), except for eastern Pacific.

**Conservation.** IUCN: Global (LC: 23 August 2012); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

## Moronidae

*Dicentrarchus labrax* (Linnaeus 1758)—European seabass



**FIGURE 62.** *Dicentrarchus labrax* (Linnaeus 1758), Nahr el Kabeer, 31 December 2005.

**Taxonomy.** First record from Lebanon as *Labrax lupus*, Cuv. by Gruvel (1931: 99); subsequently recorded as *Dicentrarchus labrax* (Linnaeus 1758) by George *et al.* (1964: 17); as *Dicentrarchus labrax* (Linnaeus) by Mouneimné (1977: 62); as *Dicentrarchus labrax* (Linnaeus 1758) by Mouneimné (2002: 130). Material in collection: AUBM and BMNH.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway and Iceland south to Senegal; recorded as NIS from the Red Sea and the Gulf of Suez.

**Conservation.** IUCN: Global (LC: 1 January 2008); Med. (NT: 16 November 2007). Capture and threats: FIT, HAB, Unknown. Occurrence: Common. Medium priority for conservation action.

*Dicentrarchus punctatus* (Bloch 1792)—Spotted seabass

**Taxonomy.** First record from Lebanon as *Labrax punctatus*, Brito-Capel. = *Morone punctata* Bloch. by Gruvel (1931: 99); subsequently recorded as *Dicentrarchus punctatus* (Bloch 1792) by George *et al.* (1964: 17); as *Dicentrarchus punctatus* (Bloch) by Mouneimné (1977: 62); as *Dicentrarchus punctatus* (Bloch 1792) by Mouneimné (2002: 131). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: English Channel south to Senegal; recorded as NIS from the Red Sea.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Mullidae

*Mullus barbatus* Linnaeus 1758—Red mullet

**Taxonomy.** First record from Lebanon as *Mullus barbatus*, L. by Gruvel (1931: 95); subsequently recorded as *Mullus barbatus* Linnaeus 1758 by George *et al.* (1964: 18); as *Mullus barbatus* Linnaeus by Mouneimné (1977: 63); as *Mullus barbatus* Linnaeus 1758 by Mouneimné (2002: 155–156); recently recorded as *Mullus barbatus* by Bariche *et al.* (2009: 3); as *Mullus barbatus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, BMNH, ROM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Senegal, including Azores.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, HAB, NIS, Unknown. Occurrence: Rare. Medium priority for conservation action.

*Mullus surmuletus* Linnaeus 1758—Striped red mullet

**Taxonomy.** First record from Lebanon as *Mullus surmuletus*, L. by Gruvel (1931: 95); subsequently recorded as *Mullus surmuletus* Linnaeus 1758 by George *et al.* (1964: 18); as *Mullus surmuletus* Linnaeus by Mouneimné (1977: 63); as *Mullus surmuletus* Linnaeus 1758 by Mouneimné (2002: 156); recently recorded as *Mullus surmuletus* by Harmelin-Vivien *et al.* (2005: 628); recently as *Mullus surmuletus* by Fanelli *et al.* (2015: 2169); by Aguillar *et al.* (2018: 81). Fanelli *et al.* 2015. Material in collection: AUBM, BMNH and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Senegal, including Azores and Madeira.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, HAB, NIS, Unknown. Occurrence: Common. Significant decline in the last two decades. Medium priority for conservation action.



FIGURE 63. *Mullus surmuletus* Linnaeus 1758, Tripoli, 15 July 2011.

### Polyprionidae

*Polyprion americanus* (Bloch & Schneider 1801)—Wreckfish

**Taxonomy.** New record from Lebanon, based on photos of several of individuals landed from various parts offshore Lebanon since 2014.

**Distribution.** Nearly circumglobal, including Mediterranean Sea; not recorded from Pacific coast of South America or in the North Pacific.

**Conservation.** IUCN: Global (DD: 30 April 2003); Med. (DD: 14 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Rare. Medium priority for conservation action.



FIGURE 64. *Polyprion americanus* (Bloch & Schneider 1801), Beirut, 24 April 2010.

## Pomacentridae

*Chromis chromis* (Linnaeus 1758)—Damsel fish

**Taxonomy.** First record from Lebanon as *Chromis chromis* (Linnaeus 1758) by George *et al.* (1964: 19); subsequently recorded as *Chromis chromis* (Linnaeus) by Mouneimné (1977: 64); as *Chromis chromis* (Linnaeus 1758) by Mouneimné (2002: 183); recently recorded as by Harmelin-Vivien *et al.* (2005: 629); as *Chromis chromis* by Bariche *et al.* (2009: 3); as *Chromis chromis* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, FMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Spain and Portugal to Gulf of Guinea and possibly Angola, including offshore islands.

**Conservation.** IUCN: Global (LC: 15 November 2010); Med. (LC: 16 November 2007). Capture and threats: FIB, Unknown. Occurrence: Very common. Low priority for conservation action.

## Pomatomidae

*Pomatomus saltatrix* (Linnaeus 1766)—Bluefish

**Taxonomy.** First record from Lebanon as *Pomatomus saltatrix*, L. = *Temnodon saltator*, Bl. Schn. by Gruvel (1931: 109); subsequently recorded as *Pomatomus saltator* (Linnaeus 1758) by George *et al.* (1964: 18); as *Pomatomus saltator* (Linnaeus) by Mouneimné (1977: 63); as *Pomatomus saltator* (Linnaeus 1766) by Mouneimné (2002: 140). Material in collection: AUBM, MCZ, BMNH and USNM (as *P. saltator*).

**Distribution.** Circumglobal in tropical through temperate seas (including Mediterranean Sea, Sea of Marmara, Black Sea) but excluding eastern and northwestern Pacific.

**Conservation.** IUCN: Global (VU: A2bd, 7 July 2014); Med. (NE). Capture and threats: Unknown. Occurrence: Rare. Significant increase in the last two decades. Low priority for conservation action.

## Scaridae

*Sparisoma cretense* (Linnaeus 1758)—Parrotfish

**Taxonomy.** First record from Lebanon as *Scarus cretensis*, L. by Gruvel (1931: 90); subsequently recorded as *Sparisoma cretense* (Linnaeus 1766) by George *et al.* (1964: 20); as *Sparisoma cretense* (Linnaeus) by Mouneimné (1977: 64); as *Sparisoma cretense* (Linnaeus 1758) by Mouneimné (2002: 197); recently recorded as *Sparisoma cretense* by Harmelin-Vivien *et al.* (2005: 628); as *Sparisoma cretense* by Bariche *et al.* (2009: 3); as *Sparisoma cretense* by Fanelli *et al.* (2015: 2170).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal south to Senegal, including offshore islands. Material in collection: AUBM, FMNH, MNHN and USNM (as *Euscarus cretense* and *Sparisoma cretense*).

**Conservation.** IUCN: Global (LC: 15 September 2009); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, NIS, Unknown. Occurrence: Common. Significant decline in the last two decades. Medium priority for conservation action.

## Sciaenidae

*Argyrosomus regius* (Asso y del Rio 1801)—Meagre

**Taxonomy.** First record from Lebanon as *Sciaena aquila*, Lacép. by Gruvel (1931: 103); subsequently recorded as *Argyrosomus regius* (Asso 1801) by George *et al.* (1964: 18); as *Argyrosomus regius* (Asso) by Mouneimné (1977: 63); as *Argyrosomus regius* (Asso 1801) by Mouneimné (2002: 181–182). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM, BMNH and USNM.



**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Congo; recorded as NIS from the Red Sea.

**Conservation.** IUCN: Global (LC: 15 November 2007); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, Unknown. Occurrence: Rare. Significant decline in the last two decades. Medium priority for conservation action.

*Sciaena umbra* Linnaeus 1758—Brown meagre

**Taxonomy.** First record from Lebanon as *Corvina nigra*, Bloch by Gruvel (1931: 105); subsequently recorded as *Sciaena umbra* Linnaeus 1758 by George *et al.* (1964: 18); as *Sciaena umbra* Linnaeus by Mouneimné (1977: 63); as *Sciaena umbra* Linnaeus 1758 by Mouneimné (2002: 180–181); recently recorded as *Sciaena umbra* by Harmelin-Vivien *et al.* (2005: 629); as *Sciaena umbra* by Fanelli *et al.* (2015: 2169). Recent unpublished records from Tyre, Sarafand and Tripoli (1998–2019). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: English Channel to Senegal and possibly Gabon, including Canary and Cape Verde islands.

**Conservation.** IUCN: Global (NT: 19 February 2014); Med. (VU: A2acd, 15 November 2007). Capture and threats: FIT, Unknown. Occurrence: Rare. Significant decline in the last two decades. High priority for conservation action.

*Umbrina cirrosa* (Linnaeus 1758)—Shy drum



**FIGURE 65.** *Umbrina cirrosa* (Linnaeus 1758), Beirut, 21 July 2008, AUBM (OS3715).

**Taxonomy.** First record from Lebanon as *Umbrina cirrhosa*, L. by Gruvel (1931: 104); subsequently recorded as *Umbrina cirrosa* (Linnaeus 1758) by George *et al.* (1964: 18); as *Umbrina cirrosa* (Linnaeus) by Mouneimné (1977: 63); as *Umbrina cirrosa* (Linnaeus 1758) by Mouneimné (2002: 182). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM, ANSP, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Gulf of Guinea.

**Conservation.** IUCN: Global (NE); Med. (VU: A2cd, 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Common. Medium priority for conservation action.

## Scombridae

*Auxis thazard* (Lacepède 1800)—Frigate tuna

**Taxonomy.** First record from Lebanon as *Auxis thazard* (Lacépède 1802) by George *et al.* (1964: 21).

**Distribution.** Circumglobal in tropical through temperate seas (including Mediterranean Sea, Red Sea, Persian Gulf, South China Sea), but not in eastern Pacific. Material in collection: AUBM and BMNH.

**Conservation.** IUCN: Global (LC: 14 September 2010); Med. (LC: 15 November 2008). Capture and threats: FIT, FIB, Unknown. Occurrence: Common. Low priority for conservation action.

*Auxis rochei* (Risso 1810)—Bullet tuna

**Taxonomy.** First record from Lebanon as *Auxis rochei* (Risso) by Mouneimné (1977: 64); subsequently recorded as *Auxis rochei* (Risso 1810) by Mouneimné (2002: 223–224); recently recorded as *Auxis rochei* by Bariche *et al.* (2007: 112). Material in collection: USNM.

**Distribution.** Circumglobal in tropical through temperate seas (including western Baltic Sea, North Sea, Mediterranean Sea, Black Sea, Persian Gulf, South China Sea), but not eastern Pacific.

**Conservation.** IUCN: Global (LC: 17 September 2010); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Common. Low priority for conservation action.

*Euthynnus alletteratus* (Rafinesque 1810)—Little tunny

**Taxonomy.** First record from Lebanon as *Euthynnus alletteratus* (Rafinesque 1810) by George *et al.* (1964: 21); subsequently recorded as *Euthynnus quadripunctatus* (Geoffroy St Hil.) by Mouneimné (1977: 64); as *Euthynnus quadripunctatus* (Geoffroy Saint-Hilaire 1817) by Mouneimné (2002: 224–225). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, tropical and subtropical Atlantic.

**Conservation.** IUCN: Global (LC: 17 September 2010); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Very common. Low priority for conservation action.

*Katsuwonus pelamis* (Linnaeus 1758)—Skipjack tuna

**Taxonomy.** First record from Lebanon as *Euthynnus pelamys*, L. by Gruvel (1931: 107). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019).

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 15 September 2010); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Common. Low priority for conservation action. The species is relatively common in Lebanon.

*Orcynopsis unicolor* (Geoffroy St. Hilaire 1817)—Plain bonito

**Taxonomy.** First record from Lebanon as *Orcynopsis unicolor* (Geoffroy St. Hilaire 1809) by George *et al.* (1964:

21); subsequently recorded as *Orcynopsis unicolor* (Geoffroy St Hil.) by Mouneimné (1977: 64); as *Orcynopsis unicolor* (Geoffroy Saint-Hilaire 1817) by Mouneimné (2002: 225). Material in collection: AUBM, ANSP and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, eastern Atlantic: southern Norway south to Senegal.

**Conservation.** IUCN: Global (LC: 15 September 2010); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Rare. Low priority for conservation action.

*Sarda sarda* (Bloch 1793)—Atlantic bonito

**Taxonomy.** First record from Lebanon as *Pelamys sarda*, Risso = *Sarda mediterranea*, Bl. Schn. by Gruvel (1931: 107); subsequently recorded as *Sarda sarda* (Bloch 1793) by George *et al.* (1964: 21); as *Sarda sarda* (Bloch) by Mouneimné (1977: 64); as *Sarda sarda* (Bloch 1793) by Mouneimné (2002: 226). Recent unpublished records from Tyre, Beirut, Tripoli (1998–2019). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Atlantic and southwestern Indian Ocean.

**Conservation.** IUCN: Global (LC: 14 September 2010); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Rare. Low priority for conservation action.

*Scomber scombrus* Linnaeus 1758

**Taxonomy.** First record from Lebanon as *Scomber scomber*, L. by Gruvel (1931: 107).

**Distribution.** Arctic, Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, temperate waters of the North Atlantic.

**Conservation.** IUCN: Global (LC: 10 September 2010); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Rare. Low priority for conservation action.

**Remarks.** This record from Gruvel could be considered doubtful since the species has never been recorded afterwards.

*Scomber colias* Gmelin 1789—Mediterranean chub mackerel



FIGURE 66. *Scomber colias* Gmelin 1789, Beirut, 14 December 2011, AUBM (OS3866).

**Taxonomy.** First record from Lebanon as *Scomber colias*, Gmelin by Gruvel (1931: 107); subsequently recorded as *Scomber japonicus colias* Gmelin 1788 by George *et al.* (1964: 21); as *Scomber japonicus* Houttuyn by Mouneimné (1977: 64); as *Scomber japonicus* Houttuyn 1792 by Mouneimné (2002: 223); recently recorded as *Scomber japonicus* by Bariche *et al.* (2007: 112); as *Scomber colias* by Bariche *et al.* (2009: 3). Material in collection: AUBM, BMNH and USNM (as *S. japonicus* and *S. japonicus colias*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Atlantic; southwestern Indian Ocean: South Africa to southern Madagascar.

**Conservation.** IUCN: Global (LC: 15 September 2010); Med. (NT: 15 November 2007). Capture and threats: FIT, FIB, Unknown. Occurrence: Very common. Low priority for conservation action.

*Thunnus thynnus* (Linnaeus 1758)—Northern bluefin tuna

**Taxonomy.** First record from Lebanon as *Orcynus thynnus*, L. by Gruvel (1931: 106); recently recorded as *Thunnus thynnus* by Bariche & Di Natale (2019).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, temperate waters of the North Atlantic; southeastern Atlantic: South Africa.

**Conservation.** IUCN: Global (EN: A2bd, 18 February 2011); Med. (EN: A2bd, 12 May 2009). Capture and threats: FIT, Unknown. Occurrence: Common. Low priority for conservation action.



FIGURE 67. *Thunnus thynnus* (Linnaeus 1758), Beirut, 15 November 2005.

*Thunnus alalunga* (Bonnaterre 1788)—Albacore

**Taxonomy.** First record from Lebanon as *Thunnus alalunga* Bonnaterre by Mouneimné (1977: 64); subsequently recorded as *Thunnus alalunga* Bonnaterre 1788 by Mouneimné (2002: 227).

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea, Red Sea).

**Conservation.** IUCN: Global (NT: 18 February 2011); Med. (LC: 15 November 2007). Capture and threats: FIT, Unknown. Occurrence: Common. Low priority for conservation action.

## Serranidae

*Anthias anthias* (Linnaeus 1758)—Swallowtail seaperch

**Taxonomy.** First record from Lebanon as *Anthias anthias* (Linnaeus 1758) by George *et al.* (1964: 17); subsequently recorded as *Anthias anthias* (Linnaeus) by Mouneimné (1977: 62); as *Anthias anthias* (Linnaeus 1758) by

Mouneimné (2002: 129); recently recorded as *Anthias anthias* by Aguillar *et al.* (2018: 80). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal to Namibia including Madeira and Azores, Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 14 November 2007). Capture and threats: Unknown. Occurrence: Common. Low priority for conservation action.

*Epinephelus marginatus* (Lowe 1834)—Dusky grouper

**Taxonomy.** First record from Lebanon as *Epinephelus gigas*, L. by Gruvel (1931:101 ); subsequently recorded as *Epinephelus guaza* (Linnaeus 1758) by George *et al.* (1964: 17); as *Epinephelus guaza* (Linnaeus) by Mouneimné (1977: 62); as *Epinephelus guaza* (Linnaeus 1758) by Mouneimné (2002: 133); recently recorded as *Epinephelus marginatus* by Harmelin-Vivien *et al.* (2005: 629); as *Epinephelus marginatus* by Fanelli *et al.* (2015: 2169); as *Epinephelus marginatus* by Aguillar *et al.* (2018: 81). Material in collection: AUBM, BMNH (as *E. guaza*) and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: British Isles south to Angola, including offshore islands; western Atlantic: Brazil south to Argentina; Western Indian Ocean: South Africa to southern Mozambique; Réunion; Oman.

**Conservation.** IUCN: Global (VU: A2bd+4bd, 20 November 2016); Med. (EN: A2d, 30 April 2004). Capture and threats: FIT, NIS, Unknown. Occurrence: Common. Significant decline in the last two decades. High priority for conservation action.



**FIGURE 68.** *Anthias anthias* (Linnaeus 1758), Madfoun, 26 April 2006, AUBM (OS3703).

*Hyporthodus haifensis* (Ben-Tuvia 1953)—Haifa grouper

**Taxonomy.** First record from Lebanon as *Epinephelus haifensis* Ben-Tuvia 1953 by Geor. & Ath. (1966a: 7); subsequently recorded as *Epinephelus haifensis* Ben-Tuvia by Mouneimné (1977: 62); as *Epinephelus haifensis* Ben-Tuvia 1953 by Mouneimné (2002: 133–134). Material in collection: AUBM.

**Distribution.** Distribution: Mediterranean Sea, eastern Atlantic: Portugal south to Angola.

**Conservation.** IUCN: Global (LC: 17 November 2016); Med. (DD: 1 January 2008). Capture and threats: FIT, Unknown. Occurrence: Rare. Low priority for conservation action.

*Epinephelus caninus* (Valenciennes 1843)—Dogtooth grouper

**Taxonomy.** New record from Lebanon, based on photos of several individuals landed from various parts of Lebanon between 2015 and 2018.



**FIGURE 69.** *Epinephelus caninus* (Valenciennes 1843), Beirut, 2 March 2018.

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco south to Angola, including Canary Islands.

**Conservation.** IUCN: Global (DD: 17 November 2016); Med. (DD: 1 January 2008). Capture and threats: FIT, Unknown. Occurrence: Rare. Medium priority for conservation action.

*Epinephelus costae* (Steindachner 1878)—Goldblotch grouper

**Taxonomy.** First record from Lebanon as *Epinephelus alexandrinus*, C.V. by Gruvel (1931: 100); subsequently recorded as *Epinephelus alexandrinus* (Valenciennes 1828) by George *et al.* (1964: 17); as *Epinephelus alexandrinus* (Valenciennes) by Mouneimné (1977: 62); as *Epinephelus alexandrinus* (Valenciennes 1828) by Mouneimné (2002: 132); recently recorded as *Epinephelus costae* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM, BMNH and USNM (as *E. alexandrinus*).

**Distribution.** Mediterranean Sea, eastern Atlantic: Galicia (Spain) south to Angola, including Canary and Cape Verde Islands.

**Conservation.** IUCN: Global (DD: 17 November 2016); Med. (DD: 1 January 2008). Capture and threats: FIT, Unknown. Occurrence: Common. Significant decline in the last two decades. High priority for conservation action.



**FIGURE 70.** *Epinephelus costae* (Steindachner 1878), Jounieh, 8 April 2016.

*Epinephelus aeneus* (Geoffroy St. Hilaire 1817)—White grouper

**Taxonomy.** First record from Lebanon as *Epinephelus aeneus*, C.V. by Gruvel (1931: 100); subsequently recorded as *Epinephelus aeneus* (Geoffroy St. Hilaire 1809) by George *et al.* (1964: 17); as *Epinephelus aeneus* (Geoffroy St Hil.) by Mouneimné (1977: 62); as *Epinephelus aeneus* (Geoffroy Saint-Hilaire 1817) by Mouneimné (2002: 131–132); recently recorded as *Epinephelus aeneus* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM, AMNH, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal and Morocco south to Angola, including Cape Verde Islands and islands of the Gulf of Guinea.

**Conservation.** IUCN: Global (NT: A2bd, 18 November 2016); Med. (NT: 1 January 2008). Capture and threats: FIT, Unknown. Occurrence: Rare. Significant decline in the last two decades. High priority for conservation action.

*Mycteroperca rubra* (Bloch 1793)—Mottled grouper

**Taxonomy.** First record from Lebanon as *Mycteroperca rubra* (Bloch 1793) by George *et al.* (1964: 17); subsequently recorded as *Mycteroperca rubra* (Bloch) by Mouneimné (1977: 62); as *Mycteroperca rubra* (Bloch 1793) by Mouneimné (2002: 134–135); recently recorded as *Mycteroperca rubra* by Harmelin-Vivien *et al.* (2005: 629); as *Mycteroperca rubra* by Fanelli *et al.* (2015: 2169); and Aguillar *et al.* (2018: 82). Material in collection: ANSP, AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal to southern Angola.

**Conservation.** IUCN: Global (LC: 22 November 2016); Med. (LC: 1 January 2008). Capture and threats: FIT, Unknown. Occurrence: Common. Significant decline in the last two decades. Medium priority for conservation action.



**FIGURE 71.** *Mycteroperca rubra* (Bloch 1793), Jounieh, 13 August 2005.

*Serranus cabrilla* (Linnaeus 1758)—Comber

**Taxonomy.** First record from Lebanon as *Serranus cabrilla* (Linnaeus 1758) by George *et al.* (1964: 17); subsequently recorded as *Serranus cabrilla* (Linnaeus) by Mouneimné (1977: 62); as *Serranus cabrilla* (Linnaeus 1758) by Mouneimné (2002: 127); recently recorded as *Serranus cabrilla* by Harmelin-Vivien *et al.* (2005: 629); as *Serranus cabrilla* by Fanelli *et al.* (2015: 2169); and Aguillar *et al.* (2018: 82). Material in collection: AMNH, AUBM, BMNH, FMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: English Channel south to Angola, including Madeira and Cape Verde Islands; recorded as NIS from the Red Sea.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 14 November 2007). Capture and threats: FIT, Unknown. Occurrence: Common. Low priority for conservation action.

*Serranus hepatus* (Linnaeus 1758)—Brown comber

**Taxonomy.** First record from Lebanon as *Serranus hepatus*, L. by Gruvel (1931: 102); subsequently recorded as



*Serranus hepatus* (Linnaeus 1758) by George *et al.* (1964: 17); as *Serranus hepatus* (Linnaeus) by Mouneimné (1977: 62); as *Serranus hepatus* (Linnaeus, 1758) by Mouneimné (2002: 127–128); recently recorded as *Serranus hepatus* by Bariche *et al.* (2007: 111) and Aguillar *et al.* (2018: 82). Recent unpublished records from Beirut (24 April 2004) and Tripoli (22 March 2016). Material in collection: ANSP and USNM material.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Portugal and Canary Islands south to Senegal.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 14 November 2007). Capture and threats: FIB, Unknown. Occurrence: Rare. Low priority for conservation action.

*Serranus scriba* (Linnaeus 1758)—Painted comber

**Taxonomy.** First record from Lebanon as *Serranus scriba*, L. by Gruvel (1931: 101); subsequently recorded as *Serranus scriba* (Linnaeus 1758) by George *et al.* (1964: 17); as *Serranus scriba* (Linnaeus) by Mouneimné (1977: 62); as *Serranus scriba* (Linnaeus 1758) by Mouneimné (2002: 128); recently recorded as *Serranus scriba* by Harmelin-Vivien *et al.* (2005: 629); as *Serranus scriba* by Fanelli *et al.* (2015: 2170); and Aguillar *et al.* (2018: 82). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: English Channel south to Senegal; southwestern Indian Ocean: South Africa north to KwaZulu-Natal Rare.

**Conservation.** IUCN: Global (LC: 10 May 2013); Med. (LC: 14 November 2007). Capture and threats: FIT, Unknown. Occurrence: Common. Significant decline in the last two decades. High priority for conservation action.

## Sparidae

*Boops boops* (Linnaeus 1758)—Bogue

**Taxonomy.** First record from Lebanon as *Box vulgaris*, C.V. = *Box boops*, L. by Gruvel (1931: 92); subsequently recorded as *Boops boops* (Linnaeus 1758) by George *et al.* (1964: 18); as *Boops boops* (Linnaeus) by Mouneimné (1977: 63); as *Boops boops* (Linnaeus 1758) by Mouneimné (2002: 165–166); recently recorded as *Boops boops* by Harmelin-Vivien *et al.* (2005: 629); as *Boops boops* by Bariche *et al.* (2007: 112); as *Boops boops* by Fanelli *et al.* (2015: 2169). Material in collection: ANSP, AUBM, BMNH, MCZ, UF, USNM and YPM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Angola, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 14 August 2009); Med. (LC: 11 December 2007). Capture and threats: FIT, Unknown. Occurrence: Very common. Low priority for conservation action.

*Dentex macrophthalmus* (Bloch 1791)—Large-eye dentex

**Taxonomy.** First record from Lebanon as *Dentex macrophthalmus* (Bloch 1791) by George *et al.* (1964: 17); subsequently recorded as *Dentex macrophthalmus* (Bloch) by Mouneimné (1977: 63); as *Dentex macrophthalmus* (Bloch 1791) by Mouneimné (2002: 168); recently recorded as *Dentex macrophthalmus* by Aguillar *et al.* (2018: 81). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal south to Namibia

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (DD: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Very common. Low priority for conservation action.

*Dentex dentex* (Linnaeus 1758)—Common dentex

**Taxonomy.** First record from Lebanon as *Dentex vulgaris*, Cuv. by Gruvel (1931: 93); subsequently recorded as

*Dentex dentex* (Linnaeus 1758) by George *et al.* (1964: 17); as *Dentex dentex* (Linnaeus) by Mouneimné (1977: 63); as *Dentex dentex* (Linnaeus 1758) by Mouneimné (2002: 166–167); recently recorded as *Dentex dentex* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: ANSP, AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Mauritania, including Madeira.

**Conservation.** IUCN: Global (VU: A2bd, 17 August 2009); Med. (VU: A2bd, 11 December 2007). Capture and threats: FIT, HAB, unknown. Occurrence: Common. Significant decline in the last two decades. Medium priority for conservation action.

*Dentex gibbosus* (Rafinesque 1810)—Pink dentex

**Taxonomy.** First record from Lebanon as *Dentex vulgaris*, Cuv. by Gruvel (1931: 93); subsequently recorded as *Dentex gibbosus* Rafinesque 1810 by George *et al.* (1964: 17); as *Dentex gibbosus* (Rafinesque) by Mouneimné (1977: 63); as *Dentex gibbosus* (Rafinesque 1810) by Mouneimné (2002: 167). Material in collection: AUBM, BMNH, USNM and ANSP (as *D. filusus*).

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Angola, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (DD: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Common. Low priority for conservation action.

*Dentex maroccanus* Valenciennes 1830—Morocco dentex

**Taxonomy.** First record from Lebanon as *Dentex maroccanus* Valenciennes by Mouneimné (1977: 63); subsequently recorded as *Dentex maroccanus* Valenciennes 1830 by Mouneimné (2002: 168–169). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Bay of Biscay (strays to North Sea) to Gulf of Guinea.

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (DD: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Common. Low priority for conservation action.

*Diplodus puntazzo* (Walbaum 1792)—Sharpsnout seabream

**Taxonomy.** First record from Lebanon as *Puntazzo puntazzo* (Cetti 1784) by George *et al.* (1964: 18); subsequently recorded as *Puntazzo puntazzo* (Gmelin) by Mouneimné (1977: 64); as *Diplodus puntazzo* (Gmelin 1789) by Mouneimné (2002: 170–171); recently recorded as *Diplodus puntazzo* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to South Africa, including Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, Unknown. Occurrence: Rare. Medium priority for conservation action.

*Diplodus annularis* (Linnaeus 1758)—Annular seabream

**Taxonomy.** First record from Lebanon as *Diplodus annularis* (Linnaeus 1758) by George *et al.* (1964: 18); subsequently recorded as *Diplodus annularis* (Linnaeus) by Mouneimné (1977: 63); as *Diplodus annularis* (Linnaeus 1758) by Mouneimné (2002: 169); recently recorded as *Diplodus annularis* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM, ANSP, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Sea of Azov, eastern Atlantic: Bay of Biscay south to Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, unknown. Occurrence: Very rare. High priority for conservation action.

*Diplodus levantinus* Fricke, Golani & Appelbaum-Golani 2016—Levantine seabream

**Taxonomy.** New record from Lebanon, based on BMNH 1967.2.1.215-218 (4); previously reported as *Sargus rondeletti*, C.V. by Gruvel (1931: 91); subsequently recorded as *Diplodus sargus* (Linnaeus 1758) by George *et al.* (1964: 18); as *Diplodus sargus* (Linnaeus) by Mouneimné (1977: 63); as *Diplodus sargus* (Linnaeus 1758) by Mouneimné (2002: 171–172); recently recorded as *Diplodus sargus* by Harmelin-Vivien *et al.* (2005: 629); *Diplodus sargus* by Bariche *et al.* (2009: 3); as *Diplodus sargus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, ANSP, BMNH and USNM. The BMNH specimens (BMNH 1967.2.1.215-218, 4 specimens, Saint Georges Bay, Lebanon) were reexamined, and reidentified as *D. levantinus*.

**Distribution.** Southeastern Mediterranean Sea: Lebanon, Israel.

**Conservation.** IUCN: Global (NE); Med. (NE). Capture and threats: FIT, Unknown. Occurrence: Very common. Low priority for conservation action.



**FIGURE 72.** *Diplodus levantinus* Fricke, Golani & Appelbaum-Golani 2016, Beirut, 6 July 2003.

*Diplodus vulgaris* (Geoffroy St. Hilaire 1817)—Common two-banded seabream

**Taxonomy.** First record from Lebanon as *Diplodus vulgaris* (Geoffroy St. Hilaire 1809) by George *et al.* (1964: 18); subsequently recorded as *Diplodus vulgaris* (Geoffroy St Hil.) by Mouneimné (1977: 63); as *Diplodus vulgaris* (Geoffroy Saint-Hilaire 1817) by Mouneimné (2002: 172–173); recently recorded as *Diplodus vulgaris* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: ANSP, AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to South Africa, including Madeira, Canary and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Very common. Low priority for conservation action.

**Remarks.** It is unclear whether this species exists in Lebanon.

*Diplodus cervinus* (Lowe 1838)—Zebra seabream

**Taxonomy.** First record from Lebanon as *Diplodus trifasciatus* (Rafinesque 1810) by George *et al.* (1964: 18); subsequently recorded as *Diplodus cervinus* (Lowwe) by Mouneimné (1977: 63); as *Diplodus cervinus* (Lowe 1841)

by Mouneimné (2002: 170); recently recorded as *Diplodus cervinus* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Bay of Biscay south to South Africa, including Madeira, Canary Islands and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 28 January 2009); Med. (DD: 13 November 2007). Capture and threats: FIT, unknown. Occurrence: Common. Medium priority for conservation action.

*Lithognathus mormyrus* (Linnaeus 1758)—Striped seabream

**Taxonomy.** First record from Lebanon as *Pagellus mormyrus*, L. by Gruvel (1931: 93); subsequently recorded as *Lithognathus mormyrus* (Linnaeus 1758) by George *et al.* (1964: 18); as *Lithognathus mormyrus* (Linnaeus) by Mouneimné (1977: 63); as *Lithognathus mormyrus* (Linnaeus 1758) by Mouneimné (2002: 173); recently recorded as *Lithognathus mormyrus* by Harmelin-Vivien *et al.* (2005: 629); as *Lithognathus mormyrus* by Bariche *et al.* (2009: 3). Material in collection: AUBM, BMNH, USNM, YPM, ANSP and MCZ (as *Pagellus mormyrus*).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to South Africa, including Madeira and Canary Islands; Western Indian Ocean: South Africa north to Mozambique.

**Conservation.** IUCN: Global (LC: 16 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, unknown. Occurrence: Very common. Medium priority for conservation action.

*Oblada melanura* (Linnaeus 1758)—Saddled seabream

**Taxonomy.** First record from Lebanon as *Oblada melanura* (Linnaeus 1758) by George *et al.* (1964: 18); subsequently recorded as *Oblada melanura* (Linnaeus) by Mouneimné (1977: 63); as *Oblada melanura* (Linnaeus 1758) by Mouneimné (2002: 173–174); recently recorded as *Oblada melanura* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Angola, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 16 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Very common. Low priority for conservation action.

*Pagellus erythrinus* (Linnaeus 1758)—Common pandora

**Taxonomy.** First record from Lebanon as *Pagellus erythrinus*, L. by Gruvel (1931: 92); subsequently recorded as *Pagellus erythrinus* Linnaeus 1758 by George *et al.* (1964: 17); as *Pagellus erythrinus* (Linnaeus) by Mouneimné (1977: 64); as *Pagellus erythrinus* (Linnaeus 1758) by Mouneimné (2002: 175); recently recorded as *Pagellus erythrinus* by Harmelin-Vivien *et al.* (2005: 629) and Aguillar *et al.* (2018: 82). Material in collection: ANSP, AUBM, BMNH, MCZ, USNM and YPM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Guinea-Bissau, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 17 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, unknown. Occurrence: Very common. Medium priority for conservation action.

*Pagellus acarne* (Risso 1827)—Axillary seabream

**Taxonomy.** First record from Lebanon as *Pagellus acarne* Risso 1826 by George *et al.* (1964: 17); subsequently recorded as *Pagellus acarne* (Risso) by Mouneimné (1977: 64); as *Pagellus acarne* (Risso 1826) by Mouneimné (2002: 174–175); recently recorded as *Pagellus acarne* by Bariche *et al.* (2009: 3). Material in collection: AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: North Sea south to Senegal, including Madeira and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 17 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Very common. Medium priority for conservation action.

*Pagellus bogaraveo* (Brünnich 1768)—Blackspot seabream

**Taxonomy.** First record from Lebanon as *Pagellus centrodonatus*, Delar. by Gruvel (1931: 92); recently recorded as *Pagellus bogaraveo* by Aguillar *et al.* (2018: 82).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, eastern Atlantic: Norway and Iceland south to Mauritania, including Madeira.

**Conservation.** IUCN: Global (NT: 17 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Common. Low priority for conservation action.

*Pagrus auriga* Valenciennes 1843—Red-banded seabream

**Taxonomy.** First record from Lebanon as *Pagrus auriga* Valenciennes 1844 by George *et al.* (1964: 17); subsequently recorded as *Sparus auriga* (Valenciennes 1843) by Mouneimné (2002: 163). Material in collection: AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Spain south to Angola, including Madeira and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 17 August 2009); Med. (DD: 13 November 2007). Capture and threats: FIT, Unknown. Occurrence: Rare. Low priority for conservation action.

*Pagrus pagrus* (Linnaeus 1758)—Common seabream

**Taxonomy.** First record from Lebanon as *Pagrus vulgaris*, Cuv. by Gruvel (1931: 93); subsequently recorded as *Pagrus pagrus* Linnaeus 1758 by George *et al.* (1964: 17); as *Sparus pagrus* Linnaeus by Mouneimné (1977: 63); as *Sparus pagrus* Linnaeus 1758 by Mouneimné (2002: 164–165); recently recorded as *Pagrus pagrus* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Atlantic.

**Conservation.** IUCN: Global (LC: 17 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, unknown. Occurrence: Common. Medium priority for conservation action.

*Pagrus caeruleostictus* (Valenciennes 1830)—Bluespotted seabream

**Taxonomy.** First record from Lebanon as *Pagrus ehrenbergi* Valenciennes 1830 by George *et al.* (1964: 17); subsequently recorded as *Sparus coeruleostictus* (Valenciennes)=*Sparus ehrenbergi* (Valenciennes) by Mouneimné (1977: 63); as *Sparus coeruleostictus* (Valenciennes)=*Sparus ehrenbergi* (Valenciennes 1830) by Mouneimné (2002: 163–164); recently recorded as *Pagrus caeruleostictus* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: ANSP, AUBM, BMNH, MCZ (as *P. ehrenbergi*), USNM and YPM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Angola.

**Conservation.** IUCN: Global (LC: 17 August 2009); Med. (DD: 13 November 2007). Capture and threats: FIT, HAB, unknown. Occurrence: Very common. Medium priority for conservation action.

*Sarpa salpa* (Linnaeus 1758)—Salema

**Taxonomy.** First record from Lebanon as *Box salpa*, Cuv. by Gruvel (1931: 91); subsequently recorded as *Boops*

*salpa* (Linnaeus 1758) by George *et al.* (1964: 18); as *Sarpa salpa* (Linnaeus) by Mouneimné (1977: 64); as *Sarpa salpa* (Linnaeus 1758) by Mouneimné (2002: 175–176); recently as *Sarpa salpa* by Fanelli *et al.* (2015: 2169). Material in collection: AMNH, ANSP, AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to South Africa, including Madeira and Canary Islands; southwestern Indian Ocean: South Africa.

**Conservation.** IUCN: Global (LC: 17 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, NIS, unknown. Occurrence: Very rare. Significant decline since Gruvel (1931: 91; Bariche *et al.* 2004). Low priority for conservation action.



**FIGURE 73.** *Sarpa salpa* (Linnaeus 1758), Batroun, 5 Augst 2000, AUBM (OS1547).

#### *Sparus aurata* Linnaeus 1758—Gilthead seabream

**Taxonomy.** First record from Lebanon as *Chrysophris aurata*, C.V. by Gruvel (1931: 93); subsequently recorded as *Sparus auratus* Linnaeus 1858 by George *et al.* (1964: 17); as *Sparus aurata* Linnaeus by Mouneimné (1977: 63); as *Sparus aurata* Linnaeus 1758 by Mouneimné (2002: 162–163). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Senegal, including Cape Verde Islands; introduced in Madeira; recorded as NIS from the Red Sea.

**Conservation.** IUCN: Global (LC: 19 August 2009); Med. (LC: 13 November 2007). Capture and threats: FIT, HAB, unknown. Occurrence: Rare. Medium priority for conservation action.

#### *Spondyliosoma cantharus* (Linnaeus 1758)—Black seabream

**Taxonomy.** First record from Lebanon as *Cantharus griseus*, C.V. by Gruvel (1931: 93); subsequently recorded as *Spondyliosoma cantharus* (Linnaeus 1758) by George *et al.* (1964: 18); as *Spondyliosoma cantharus* (Linnaeus) by Mouneimné (1977: 64); as *Spondyliosoma cantharus* (Linnaeus 1758) by Mouneimné (2002: 176–177); recently recorded as *Spondyliosoma cantharus* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Namibia, including Madeira, Canary and Cape Verde Islands.

**Conservation.** IUCN: Global (LC: 18 August 2009); Med. (LC: 15 November 2007). Capture and threats: FIT, unknown. Occurrence: Rare. Significant decline in the last two decades. Medium priority for conservation action.

## Sphyraenidae

*Sphyraena sphyraena* (Linnaeus 1758)—European barracuda

**Taxonomy.** First record from Lebanon as *Sphyroena spet* Lacép. = *Sphyroena vulgaris*, C.V. by Gruvel (1931: 89); subsequently recorded as *Sphyraena sphyraena* (Linnaeus 1758) by George *et al.* (1964: 16); as *Sphyraena sphyraena* (Linnaeus) by Mouneimné (1977: 65); as *Sphyraena sphyraena* (Linnaeus 1758) by Mouneimné (2002: 189–190). Material in collection: ANSP, AUBM, BMNH, MCZ, SMNS and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Angola, including Azores, Madeira and Saint Paul's Rocks; western Atlantic: Bermuda and Brazil.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, NIS, unknown. Occurrence: Common. Low priority for conservation action.

*Sphyraena viridensis* Cuvier 1829—Yellowmouth barracuda

**Taxonomy.** First record from Lebanon as *Sphyroena spet* Lacép. = *Sphyroena vulgaris*, C.V. by Gruvel (1931: 89); subsequently recorded as *Sphyraena viridensis* Cuvier by Mouneimné (1977: 65); as *Sphyraena viridensis* Cuvier 1829 by Mouneimné (2002: 190). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Azores, Madeira, Canary Islands, possibly more widespread.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, NIS, unknown. Occurrence: Common. Low priority for conservation action.



FIGURE 74. *Sphyraena viridensis* Cuvier 1829, Beirut, 4 March 2007, AUBM (OS3709).

## Stromateidae

*Stromateus fiatola* Linnaeus 1758—Blue butterflyfish

**Taxonomy.** First record from Lebanon as *Stromateus fiatola* Linnaeus 1758 by George *et al.* (1964: 21); subsequently recorded as *Stromateus fiatola* Linnaeus by Mouneimné (1977: 65); as *Stromateus fiatola* Linnaeus 1758 by Mouneimné (2002: 231–232). Last unpublished records from Antelias (18–20 December 1964). Material in collection: AUBM (OS3811; OS3813) and MCZ.

**Distribution.** Mediterranean Sea, eastern Atlantic: Bay of Biscay south to South Africa.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (DD: 16 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.



FIGURE 75. *Stromateus fiatola* Linnaeus 1758, Antelias, 20 December 1964, AUBM (OS3811).

## Trachinidae

*Echiichthys vipera* (Cuvier 1829)—Lesser weever

**Taxonomy.** First record from Lebanon as *Trachinus vipera*, Cuv. by Gruvel (1931: 112); subsequently recorded as *Trachinus vipera* Cuvier 1829 by George *et al.* (1964: 20); as *Trachinus vipera* Cuvier by Mouneimné (1977: 64); as *Echiichthys vipera* (Cuvier 1829) by Mouneimné (2002: 201). Material in collection: AUBM, BMNH and USNM (as *Trachinus vipera*).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, eastern Atlantic: British Isles south to Morocco, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (NE); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Trachinus araneus* Cuvier 1829—Spotted weever

**Taxonomy.** First record from Lebanon as *Trachinus araneus* Cuvier 1829 by George *et al.* (1964: 20); subsequently recorded as *Trachinus araneus* Cuvier by Mouneimné (1977: 64); as *Trachinus araneus* Cuvier 1829 by Mouneimné (2002: 199). Material in collection: USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic.

**Conservation.** IUCN: Global (LC: 9 February 2015); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Trachinus draco* Linnaeus 1758—Greater weever

**Taxonomy.** First record from Lebanon as *Trachinus draco*, L. by Gruvel (1931: 112); subsequently recorded as



*Trachinus draco* Linnaeus 1758 by George *et al.* (1964: 20); as *Trachinus draco* (Linnaeus) by Mouneimné (1977: 64); as *Trachinus draco* Linnaeus 1758 by Mouneimné (2002: 199–200). Material in collection: AUBM, BMNH and USNM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Morocco, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Trachinus radiatus* Cuvier 1829—Starry weever

**Taxonomy.** First record from Lebanon as *Trachinus radiatus*, Cuv. by Gruvel (1931: 112); subsequently recorded as *Trachinus radiatus* Cuvier 1829 by George *et al.* (1964: 20); as *Trachinus radiatus* Cuvier by Mouneimné (1977: 64); as *Trachinus radiatus* Cuvier 1829 by Mouneimné (2002: 200). Material in collection: AUBM, SMNS and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Gibraltar south to Angola.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

## Trichiuridae

*Lepidopus caudatus* (Euphrasen 1788)—Silver scabbardfish

**Taxonomy.** First record from Lebanon as *Lepidopus argenteus*, Roussat = *L. argyreus*, C.V. by Gruvel (1931: 113); subsequently recorded as *Lepidopus caudatus* (Euphrasen 1788) by George *et al.* (1964: 21); as *Lepidopus caudatus* (Euphrasen) by Mouneimné (1977: 64); as *Lepidopus caudatus* (Euphrasen 1788) by Mouneimné (2002: 230–231); recently recorded as *Lepidopus caudatus* by Aguillar *et al.* (2018: 82). Material in collection: AUBM.

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (DD: 19 May 2013); Med. (LC: 16 November 2007). Capture and threats: FIB, unknown. Occurrence: Very rare. Low priority for conservation action.

*Trichiurus lepturus* Linnaeus 1758—Largehead hairtail

**Taxonomy.** First record from Lebanon as *Trichiurus lepturus* Linnaeus 1758 by George *et al.* (1964: 21); subsequently recorded as *Trichiurus lepturus* Linnaeus by Mouneimné (1977: 64); as *Trichiurus lepturus* Linnaeus 1758 by Mouneimné (2002: 229–230); recently recorded as *Trichiurus lepturus* by Bariche *et al.* (2007: 112). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM, ANSP, BMNH and USNM.

**Distribution.** Circumglobal in tropical and warm temperate seas (including Gulf of Mexico, Caribbean Sea, Mediterranean Sea, Sea of Marmara, Red Sea, Persian Gulf).

**Conservation.** IUCN: Global (LC: 29 January 2013); Med. (LC: 16 November 2007). Capture and threats: FIT, unknown. Occurrence: Common. Low priority for conservation action.

## Tripterygiidae

*Tripterygion delaisi* Cadenat & Blache 1970—Black-faced blenny

**Taxonomy.** First record from Lebanon as *Tripterygion xanthosoma* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Eastern Atlantic: English Channel south to Senegal, including Azores, Madeira and Canary Islands

**Conservation.** IUCN: Global (LC: 16 November 2007); Med. (LC: 16 November 2007). Capture and threats: HAB, unknown. Occurrence: Common. Medium priority for conservation action.

*Tripterygion melanurum* Guichenot 1850—Small black-spotted cave triplefin

**Taxonomy.** First record from Lebanon as *Tripterygion melanurum* by Aguillar *et al.* (2018: 83). Material in collection: FMNH.

**Distribution.** Mediterranean Sea endemic.

**Conservation.** IUCN: Global (LC: 18 June 2014); Med. (LC: 18 June 2014). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Tripterygion tripteronotum* (Risso 1810)—Red-black triplefin

**Taxonomy.** First record from Lebanon as *Tripterygion tripteronotus* Risso 1810 by George *et al.* (1964: 22); subsequently recorded as *Tripterygion tripteronotus* (Risso) by Mouneimné (1977: 65); as *Tripterygion tripteronotus* (Risso 1810) by Mouneimné (2002: 211). First record from Lebanon as *Tripterygion tripteronotus* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM, FMNH (as *T. nasus*) and SMNS.

**Distribution.** Black Sea and Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 18 June 2014); Med. (NE). Capture and threats: HAB, unknown. Occurrence: Rare. Medium priority for conservation action.

## Uranoscopidae

*Uranoscopus scaber* Linnaeus 1758—Atlantic stargazer

**Taxonomy.** First record from Lebanon as *Uranoscopus scaber*, L. by Gruvel (1931: 112); subsequently recorded as *Uranoscopus scaber* Linnaeus 1758 by George *et al.* (1964: 20); as *Uranoscopus scaber* Linnaeus by Mouneimné (1977: 64); as *Uranoscopus scaber* Linnaeus 1758 by Mouneimné (2002: 198). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM, FMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Morocco (rarely to Senegal), including Madeira; Red Sea.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

## Xiphiidae

*Xiphias gladius* Linnaeus 1758—Swordfish

**Taxonomy.** First record from Lebanon as *Xiphias gladius*, L. by Gruvel (1931: 111); subsequently recorded as *Xiphias gladius* Linnaeus 1758 by George & Athanassiou (1966a: 7); as *Xiphias gladius* Linnaeus by Mouneimné (1977: 64); as *Xiphias gladius* Linnaeus 1758 by Mouneimné (2002: 228). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM.

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea, Sea of Marmara, Red Sea).

**Conservation.** IUCN: Global (LC: 16 February 2011); Med. (NT: 16 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

## Pleuronectiformes

### Bothidae

#### *Arnoglossus kessleri* Schmidt 1915—Scaldback

**Taxonomy.** First record from Lebanon as *Arnoglossus kessleri* Schmidt by Mouneimné (1977: 66); recently recorded as *Arnoglossus kessleri* by Bariche *et al.* (2009: 3). Material in collection: AUBM.

**Distribution.** Black Sea and Mediterranean Sea [if valid].

**Conservation.** IUCN: Global (DD: 18 October 2014); Med. (NE). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

#### *Arnoglossus laterna* (Walbaum 1792)—Scaldfish

**Taxonomy.** First record from Lebanon as *Arnoglossus laterna* (Walbaum 1792) by George *et al.* (1964: 24); subsequently recorded as *Arnoglossus laterna* (Walbaum) by Mouneimné (1977: 66); as *Arnoglossus laterna* (Walbaum 1792) by Mouneimné (2002: 236); recently recorded as *Arnoglossus laterna* by Bariche *et al.* (2007: 112); as *Arnoglossus laterna* by Aguillar *et al.* (2018: 80). Material in collection: AUBM and USNM (as *A. conspersus* and *A. laterna*).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Trondheim (Norway) south to Angola.

**Conservation.** IUCN: Global (LC: 16 March 2014); Med. (LC: 27 February 2008). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

#### *Arnoglossus rueppelii* (Cocco 1844)—Rüppell's scaldback

**Taxonomy.** First record from Lebanon as *Arnoglossus rueppelii* by Aguillar *et al.* (2018: 80).

**Distribution.** Mediterranean Sea, eastern Atlantic: Gibraltar south to Western Sahara, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 4 February 2009); Med. (LC: 27 February 2008). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

#### *Arnoglossus thori* Kyle 1913—Thor's scaldfish

**Taxonomy.** First record from Lebanon as *Arnoglossus thori* Kyle 1913 by Mouneimné (2002: 236–237).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Ireland south to Sierra Leone, including Cape Verde Islands.

**Conservation.** IUCN: Global (DD: 21 May 2013); Med. (LC: 27 February 2008). Capture and threats: FIB, unknown. Occurrence: Very rare. Low priority for conservation action.

#### *Arnoglossus grohmanni* (Bonaparte 1837)—Grohmann's scaldfish

**Taxonomy.** First record from Lebanon as *Arnoglossus grohmanni* Bonaparte 1837 by George *et al.* (1964: 24).

**Distribution.** Mediterranean Sea and Sea of Marmara endemic.

**Conservation.** IUCN: Global (DD: 18 October 2014); Med. (DD: 18 October 2014). Capture and threats: FIB, unknown. Occurrence: Very rare. Low priority for conservation action.

*Bothus podas* (Delaroche 1809)—Wide-eyed flounder

**Taxonomy.** First record from Lebanon as *Bothus podas* Delar. = *Rhomboidichthys podas*, Günth. by Gruvel (1931: 82); subsequently recorded as *Bothus podas* (De la Roche 1809) by George *et al.* (1964: 24); as *Bothus podas podas* (Delaroche) by Mouneimné (1977: 66); as *Bothus podas podas* (Delaroche 1809) by Mouneimné (2002: 235); recently recorded as *Bothus podas* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: ANSP, AUBM, BMNH, FMNH, SMNS and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Gibraltar south to Angola, including offshore islands.

**Conservation.** IUCN: Global (LC: 13 May 2013); Med. (LC: 27 February 2008). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

## Citharidae

*Citharus linguatula* (Linnaeus 1758)—Atlantic spotted flounder



FIGURE 76. *Citharus linguatula* (Linnaeus 1758), Beirut, 12 May 2000, AUBM (OS0825).

**Taxonomy.** First record from Lebanon as *Cytharus linguatula*, Delar. = *Rhomboidichthys podas*, Günth. by Gruvel (1931: 82); subsequently recorded as *Citharus macrolepidotus* (Bloch) by Mouneimné (1977: 66); as *Citharus macrolepidotus* (Bloch 1787) by Mouneimné (2002: 233); recently recorded as *Citharus linguatula* by Aguillar *et al.* (2018: 81). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Gibraltar south to Angola.

**Conservation.** IUCN: Global (LC: 20 May 2014); Med. (LC: 27 February 2008). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Common. Low priority for conservation action.

## Cynoglossidae

*Symphurus ligulatus* (Cocco 1844)—Elongate tonguesole

**Taxonomy.** First record from Lebanon as *Symphurus ligulatus* by Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco south to Angola.

**Conservation.** IUCN: Global (LC: 23 May 2013); Med. (LC: 28 February 2008). Capture and threats: FIB, HAB, unknown. Occurrence: Rare. Low priority for conservation action.

*Symphurus nigrescens* Rafinesque 1810—Tongue sole

**Taxonomy.** First record from Lebanon as *Symphurus nigrescens* Rafinesque by Mouneimné (1977: 66); subsequently recorded as *Symphurus nigrescens* Rafinesque 1810 by Mouneimné (2002: 241–242); recently recorded as *Symphurus nigrescens* by Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Namibia, including Azores; southern central Atlantic: Saint Helena.

**Conservation.** IUCN: Global (LC: 21 May 2013); Med. (LC: 28 February 2008). Capture and threats: FIB, HAB, unknown. Occurrence: Rare. Low priority for conservation action.

## Scophthalmidae

*Lepidorhombus boscii* (Risso 1810)—Four-spotted megrim

**Taxonomy.** First record from Lebanon as *Lepidorhombus boscii* by Aguillar *et al.* (2018: 81).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: British Isles south to Western Sahara.

**Conservation.** IUCN: Global (NE); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Lepidorhombus whiffiagonis* (Walbaum 1792)—Megrim

**Taxonomy.** First record from Lebanon as *Symphurus whiffiagonis* by Colloca & Lelli (2012: 38); subsequently recorded as *Lepidorhombus whiffiagonis* by Aguillar *et al.* (2018: 81).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, eastern Atlantic: Iceland and Norway south to Western Sahara.

**Conservation.** IUCN: Global (NE); Med. (LC: 28 February 2008). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Scophthalmus maximus* (Linnaeus 1758)—Turbot

**Taxonomy.** First record from Lebanon as *Rhombus maximus*, L. by Gruvel (1931: 83).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, northeastern Atlantic: Norway south to Western Sahara.

**Conservation.** IUCN: Global (NE); Med. (NT: 28 February 2008). Capture and threats: Unknown. Occurrence: Unknown. Low priority for conservation action.

**Remarks.** This record from Gruvel could be considered as doubtful.

## Soleidae

*Buglossidium luteum* (Risso 1810)—Solenette

**Taxonomy.** First record from Lebanon as *Solea lutea* Risso 1810 by George *et al.* (1964: 24); subsequently recorded as *Buglossidium luteum* (Risso) by Mouneimné (1977: 66); as *Buglossidium luteum* (Risso 1810) by Mouneimné (2002: 239).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Iceland, Scotland and southern Norway south to Morocco.

**Conservation.** IUCN: Global (LC: 4 February 2009); Med. (LC: 28 February 2008). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

*Microchirus ocellatus* (Linnaeus 1758)—Four-eyed sole



**FIGURE 77.** *Microchirus ocellatus* (Linnaeus 1758), Batroun, February 2012, AUBM (OS3876).

**Taxonomy.** First record from Lebanon as *Microchirus ocellatus* (Linnaeus) by Mouneimné (1977: 66); subsequently recorded as *Microchirus ocellatus* (Linnaeus 1758) by Mouneimné (2002: 239–240). Material in collection: AUBM (OS3876).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Spain south to Sierra Leone; southwestern Indian Ocean: South Africa to Madagascar.

**Conservation.** IUCN: Global (DD: 20 May 2013); Med. (LC: 28 February 2008). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Monochirus hispidus* Rafinesque 1814—Whiskered sole

**Taxonomy.** First record from Lebanon as *Monochirus hispidus* Rafinesque by Mouneimné (1977: 66); subsequently recorded as *Monochirus hispidus* Rafinesque 1814 by Mouneimné (2002: 240). Material in collection: AUBM (OS3907).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Portugal south to Ghana.

**Conservation.** IUCN: Global (LC: 8 July 2014); Med. (DD: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.



**FIGURE 78.** *Monochirus hispidus* Rafinesque 1814, Batroun, October 2012, AUBM (OS3907).

*Pegusa impar* (Bennett 1831)—Adriatic sole

**Taxonomy.** First record from Lebanon as *Solea lascaris* (Risso) by Mouneimné (1977: 66), subsequently recorded as *Solea impar* (Bennett) by Mouneimné (1979: 110) and by Mouneimné (2002: 237–238). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Gibraltar south to Senegal.

**Conservation.** IUCN: Global (NE); Med. (DD: 28 February 2008). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Pegusa lascaris* (Risso 1810)—Sand sole

**Taxonomy.** First record from Lebanon as *Pegusa lascaris*, Risso = *Solea lascaris*, Risso by Gruvel (1931: 82); subsequently recorded as *Solea lascaris* Bonaparte 1832 by George *et al.* (1964: 24). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to South Africa.

**Conservation.** IUCN: Global (LC: 20 May 2013); Med. (DD: 29 February 2008). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Solea aegyptiaca* Chabanaud 1927—Egyptian sole

**Taxonomy.** First record from Lebanon as *Solea vulgaris* Queensel var. *aegyptiaca*, Chab. by Gruvel (1931: 82). Material in collection: AUBM.

**Distribution.** Mediterranean Sea endemic; recorded as NIS from the Gulf of Suez and the Red Sea.

**Conservation.** IUCN: Global (LC: 12 July 2014); Med. (LC: 12 July 2014). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Solea solea* (Linnaeus 1758)—Common sole

**Taxonomy.** First record from Lebanon as *Solea vulgaris aegyptiaca* Chabanaud by Mouneimné (1977: 66); subsequently recorded as *Solea vulgaris aegyptiaca* Chabanaud 1927 by Mouneimné (2002: 238). Material in collection: SMNS and USNM (as *S. vulgaris*).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway to Senegal including Madeira, Canary and ? Cape Verde Islands.

**Conservation.** IUCN: Global (DD: 15 July 2014); Med. (LC: 29 February 2008). Capture and threats: Unknown. Occurrence: Very rare. Low priority for conservation action.

## Scorpaeniformes

### Dactylopteridae

*Dactylopterus volitans* (Linnaeus 1758)—Flying gurnard



**FIGURE 79.** *Dactylopterus volitans* (Linnaeus 1758), Beirut, 15 December 2009, AUBM (OS3681).

**Taxonomy.** First record from Lebanon as *Cephalacanthus volitans* (Linnaeus) by Mouneimné (1977: 66); subsequently recorded as *Cephalacanthus volitans* (Linnaeus 1758) by Mouneimné (2002: 125). Material in collection: ANSP, AUBM, BMNH and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea; both sides of the Atlantic; also well offshore.



**Conservation.** IUCN: Global (LC: 29 January 2013); Med. (LC: 15 November 2007). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

## Peristediidae

*Peristedion cataphractum* (Linnaeus 1758)—African armoured searobin

**Taxonomy.** First record from Lebanon as *Peristedion cataphractum* by Aguillar *et al.* (2018: 82). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: English Channel south to Angola.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIB, unknown. Occurrence: Very rare. Low priority for conservation action.



**FIGURE 80.** *Peristedion cataphractum* (Linnaeus 1758), Beirut, August 2008, AUBM (OS3705).

## Scorpaenidae

*Scorpaena elongata* Cadenat 1943—Slender rockfish

**Taxonomy.** First record from Lebanon as *Scorpaena elongata* Cadenat 1943 by Mouneimné (2002: 116); recently recorded as *Scorpaena elongata* by Colloca & Lelli (2012: 13) and Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, eastern Atlantic: Portugal south to Namibia.

**Conservation.** IUCN: Global (LC: 19 May 2013); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Low priority for conservation action.

*Scorpaena maderensis* Valenciennes 1833—Madeira rockfish

**Taxonomy.** First record from Lebanon as *Scorpaena maderensis* Valenciennes 1833 by George *et al.* (1964: 23); subsequently recorded as *Scorpaena maderensis* Valenciennes by Mouneimné (1977: 65); as *Scorpaena maderensis* Valenciennes 1833 by Mouneimné (2002: 116–117); recently recorded as *Scorpaena maderensis* by Harmelin-Vivien *et al.* (2005: 629). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019). Material in collection: AUBM, SMF and USNM.

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco south to Senegal, including Azores, Madeira, Canary and Cape Verde islands.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.



**FIGURE 81.** *Scorpaena maderensis* Valenciennes 1833, Selaata, 19 June 2006, AUBM (OS1336).

*Scorpaena notata* Rafinesque 1810—Small red rockfish

**Taxonomy.** First record from Lebanon as *Scorpaena ustulata*, Lowe by Gruvel (1931: 98); subsequently recorded as *Scorpaena notata* Rafinesque 1810 by George *et al.* (1964: 23); as *Scorpaena notata* Rafinesque by Mouneimné (1977: 65); as *Scorpaena notata* Rafinesque 1810 by Mouneimné (2002: 117–118) and Aguillar *et al.* (2018: 82).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Senegal, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

*Scorpaena porcus* Linnaeus 1758—Black scorpionfish

**Taxonomy.** First record from Lebanon as *Scorpaena porcus* Linnaeus 1758 by George *et al.* (1964: 23); subsequently recorded as *Scorpaena porcus* Linnaeus by Mouneimné (1977: 65); as *Scorpaena porcus* Linnaeus 1758 by Mouneimné (2002: 118); recently recorded as *Scorpaena porcus* by Harmelin-Vivien *et al.* (2005: 629); as *Scorpaena porcus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, FMNH, SMF, SMNS and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Morocco, including Azores and Canary Islands.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.



**FIGURE 82.** *Scorpaena porcus* Linnaeus 1758, Batroun, 24 January 2000.

*Scorpaena scrofa* Linnaeus 1758—Large-scale scorpionfish

**Taxonomy.** First record from Lebanon as *Scorpaena scrofa* Linnaeus 1758 by George *et al.* (1964: 23); subsequently recorded as *Scorpaena scrofa* Linnaeus by Mouneimné (1977: 65); as *Scorpaena scrofa* Linnaeus 1758 by Mouneimné (2002: 118–119); recently recorded as *Scorpaena scrofa* by Aguillar *et al.* (2018: 82). Material in collection: AUBM, FMNH and SMF.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: British Isles south to Cape Verde Islands including Madeira; western Indian Ocean; South Africa to Somalia including Madagascar, Saya de Malha Bank.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Common. Low priority for conservation action.

**Sebastidae**

*Helicolenus dactylopterus* (Delaroche 1809)—Blackbelly rosefish

**Taxonomy.** First record from Lebanon as *Helicolenus dactylopterus* (De la Roche 1809) by George *et al.* (1964:

23); subsequently recorded as *Helicolenus dactylopterus* (Delaroche) by Mouneimné (1977: 66); as *Helicolenus dactylopterus dactylopterus* (Delaroche 1809) by Mouneimné (2002: 119); recently recorded as *D. dactylopterus* by Aguillar *et al.* (2018: 81). Recent unpublished records from Tyre, Sarafand, Saida, Beirut, Batroun, Tripoli (1998–2019).

**Distribution.** Mediterranean Sea, Sea of Marmara; eastern Atlantic: Norway south to South Africa; southwest-ern Indian Ocean: South Africa; Greenland; Western Atlantic.

**Conservation.** IUCN: Global (LC: 6 May 2013); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Very common. Low priority for conservation action.

## Triglidae

*Chelidonichthys cuculus* (Linnaeus 1758)—East Atlantic red gurnard

**Taxonomy.** First record from Lebanon as *Chelidonichthys cuculus* by Aguillar *et al.* (2018: 80).

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Mauritania, including Azores, Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 20 May 2013); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Rare. Low priority for conservation action.

*Chelidonichthys lucerna* (Linnaeus 1758)—Tub gurnard

**Taxonomy.** First record from Lebanon as *Trigla hirundo*, L. by Gruvel (1931: 98); subsequently recorded as *Trigla lucerna* Linnaeus by Mouneimné (1977: 66); as *Trigla lucerna* Linnaeus 1758 by Mouneimné (2002: 120–121). Material in collection: AMNH, ANSP, AUBM, BMNH, USNM (as *Trigla hirundo* and *C. lucernus*).

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway south to Mauritania, including Madeira and Canary Islands.

**Conservation.** IUCN: Global (LC: 25 May 2012); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Rare. Low priority for conservation action.

*Eutrigla gurnardus* (Linnaeus 1758)—Grey gurnard

**Taxonomy.** First record from Lebanon as *Trigla gurnardus*, L. by Gruvel (1931: 98). Not recorded afterwards.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Norway and Iceland south to Morocco, including Madeira.

**Conservation.** IUCN: Global (NE); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Very rare. Low priority for conservation action.

*Lepidotrigla cavillone* (Lacepède 1801)—Large-scaled gurnard

**Taxonomy.** First record from Lebanon as *Lepidotrigla cavillone* (Lacepède) by Mouneimné (1977: 66); subsequently recorded as *Lepidotrigla cavillone* (Lacepède 1801) by Mouneimné (2002: 121–122); recently recorded as *Lepidotrigla cavillone* by Aguillar *et al.* (2018: 81).

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic.

**Conservation.** IUCN: Global (NE); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Rare. Low priority for conservation action.

*Trigla lyra* Linnaeus 1758—Piper gurnard

**Taxonomy.** First record from Lebanon as *Trigla lira*, L. by Gruvel (1931: 98). Not recorded afterwards.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Gibraltar south to Namibia, including Madeira. Not Canary Islands [ref. 34617].

**Conservation.** IUCN: Global (LC: 20 May 2013); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Very rare. Low priority for conservation action.

*Chelidonichthys lastoviza* (Bonnaterre 1788)—Streaked gurnard

**Taxonomy.** First record from Lebanon as *Trigloporus lastovitzza* (Brünnich 1768) by George *et al.* (1964: 23); subsequently recorded as *Trigloporus lastoviza* (Brunnich) by Mouneimné (1977: 66); as *Trigloporus lastoviza* (Brünnich 1768) by Mouneimné (2002: 122); recently recorded as *Chelidonichthys lastoviza* by Aguillar *et al.* (2018: 80). Material in collection: AUBM and FMNH.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Norway to South Africa including Azores, Madeira and Canary Islands; southwestern Indian Ocean: South Africa to Mozambique.

**Conservation.** IUCN: Global (LC: 14 July 2014); Med. (LC: 15 November 2007). Capture and threats: FIT, FIB, HAB, unknown. Occurrence: Rare. Low priority for conservation action.

## Stomiiformes

### Gonostomatidae

*Gonostoma denudatum* Rafinesque 1810—no name



**FIGURE 83.** *Gonostoma denudatum* Rafinesque 1810, Batroun, 21 April 2006, AUBM (OS3694).

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Batroun (21 April 2006). Material in collection: AUBM (OS3694).

**Distribution.** Atlantic, including Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 17 May 2013); Med. (DD: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

### Phosichthyidae

*Vinciguerria attenuata* (Cocco 1838)—Cocco's deepwater bristlemouth-fish

**Taxonomy.** First record from Lebanon as *Vinciguerria attenuata* (Cocco 1838) by George *et al.* (1964: 12); subsequently recorded as *Vinciguerra attenuata* (Cocco) by Mouneimné (1977: 61); as *Vinciguerria attenuata* (Cocco 1838) by Mouneimné (2002: 83).

**Distribution.** Atlantic (including Mediterranean Sea), straying into southeastern Indian Ocean, western and central Pacific (Hawaiian Ridge).

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

### Stomiidae

*Chauliodus sloani* Bloch & Schneider 1801—Sloane's viperfish



**FIGURE 84.** *Chauliodus sloani* Bloch & Schneider 1801, Aabdeh, 16 May 2008, AUBM (OS3808).

**Taxonomy.** First record from Lebanon as *Chauliodus sloanei* Schneider 1801 by George *et al.* (1964: 12); subsequently recorded as *Chauliodus sloani* Schneider by Mouneimné (1977: 61); as *Chauliodus sloani* Schneider 1801 by Mouneimné (2002: 83); recently recorded as *Chauliodus sloani* by Aguillar *et al.* (2018: 80). Recent unpublished records from Beirut (13 May 2003 and 8 December 2004) and Tripoli (May 2008). Material in collection: AUBM (OS2355; OS3808).

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea, Red Sea).

**Conservation.** IUCN: Global (LC: 2 May 2013); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

*Stomias boa* (Risso 1810)—Scaly dragonfish

**Taxonomy.** First record from Lebanon as by Aguillar *et al.*, (2018: 82). Recent unpublished records from Batroun (November 2005) and Tripoli (4 October 2009). Material in collection: AUBM

**Distribution.** Southern circumglobal in all oceans; western Atlantic: Greenland southward; eastern Atlantic: Portugal south to South Africa, including Mediterranean Sea and Sea of Marmara. Material in collection: AUBM.

**Conservation.** IUCN: Global (LC: 22 May 2013); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.



**FIGURE 85.** *Stomias boa* (Risso 1810), Beirut, 14 November 2005, AUBM (OS1764).

## Syngnathiformes

### Centriscidae

*Macroramphosus scolopax* (Linnaeus 1758)—Longspine snipefish

**Taxonomy.** First record from Lebanon as *Macroramphosus scolopax* (Linnaeus) by Mouneimné (1977: 62); subsequently recorded as *Macroramphosus scolopax* (Linnaeus 1758) by Mouneimné (2002: 111); recently recorded as *Macroramphosus scolopax* by Aguillar *et al.* (2018: 81). Recent unpublished records from Tyre (5 September 2012) and Beirut (12 May 2000). Material in collection: AUBM.

**Distribution.** Circumglobal in tropical and temperate seas (including Mediterranean Sea).

**Conservation.** IUCN: Global (LC: 29 January 2009); Med. (LC: 8 March 2016). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

### Syngnathidae

*Hippocampus guttulatus* Cuvier 1829—Longsnouted seahorse

**Taxonomy.** First record from Lebanon as *Hippocampus guttulatus guttulatus* Cuvier 1829 by George *et al.* (1964: 15); subsequently recorded as *Hippocampus ramulosus* Leach by Mouneimné (1977: 62); as *Hippocampus ramulosus* Leach 1814 by Mouneimné (2002: 114–115). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Portugal.

**Conservation.** IUCN: Global (DD: 5 December 2016); Med. (NT: 8 March 2016). Capture and threats: HAB, Unknown. Occurrence: Rare. Significant decline in the last two decades. Medium priority for conservation action.

*Hippocampus hippocampus* (Linnaeus 1758)—Shortsnouted seahorse

**Taxonomy.** First record from Lebanon as *Hippocampus hippocampus* (Linnaeus 1758) by George *et al.* (1964: 15); subsequently recorded as *Hippocampus hippocampus* (Linnaeus) by Mouneimné (1977: 62); as *Hippocampus hippocampus* (Linnaeus 1758) by Mouneimné (2002: 113–114). Material in collection: AUBM and USNM (as *H. europaeus* and *H. hippocampus*).

**Distribution.** North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: British Isles south to Senegal.

**Conservation.** IUCN: Global (DD: 15 March 2017); Med. (NT: 8 March 2016). Capture and threats: HAB, Unknown. Occurrence: Rare. Significant decline in the last two decades. Medium priority for conservation action.

*Syngnathus abaster* Risso 1827—Blackstripe pipefish



**FIGURE 86.** *Syngnathus abaster* Risso 1827, Beirut, 28 April 2009 (female below) and 21 May 2011 (male above), AUBM (OS3836, OS3969).

**Taxonomy.** First record from Lebanon as *Syngnathus abaster* Risso by Mouneimné (1977: 62); subsequently recorded as *Syngnathus abaster* Risso 1826 by Mouneimné (2002: 112). Material in collection: AUBM (OS1782; OS3816; OS3836; OS3969) and USNM.



**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic: Bay of Biscay south to Portugal.

**Conservation.** IUCN: Global (LC: 20 May 2016); Med. (LC: 9 March 2016). Capture and threats: HAB, Unknown. Occurrence: Rare. Significant decline in the last two decades. Medium priority for conservation action.

*Syngnathus acus* Linnaeus 1758—Greater pipefish

**Taxonomy.** First record from Lebanon as *Syngnathus acus* Linnaeus 1758 by George *et al.* (1964: 15); subsequently recorded as *Syngnathus acus* Linnaeus by Mouneimné (1977: 62); as *Syngnathus acus* Linnaeus 1758 by Mouneimné (2002: 113); recently recorded as *Syngnathus acus* by Aguillar *et al.* (2018: 83). Material in collection: AUBM.

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic.

**Conservation.** IUCN: Global (LC: 7 May 2013); Med. (LC: 9 March 2016). Capture and threats: HAB, Unknown. Occurrence: Rare. Medium priority for conservation action.

*Nerophis ophidion* (Linnaeus 1758)—Straightnose pipefish

**Taxonomy.** New record from Lebanon, based on a specimen collected from off Saida (5 June 2010). Material in collection: AUBM (OS3953).

**Distribution.** Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, Azov Sea, northeastern Atlantic: Norway south to Morocco, including Madeira.

**Conservation.** IUCN: Global (LC: 27 July 2014); Med. (LC: 9 March 2016). Capture and threats: HAB, Unknown. Occurrence: Rare. Medium priority for conservation action.

## Tetraodontiformes

### Balistidae

*Balistes capriscus* Gmelin 1789—Grey triggerfish

**Taxonomy.** First record from Lebanon as *Balistes capriscus* Linnaeus 1758 by George *et al.* (1964: 24); subsequently recorded as *Balistes carolinensis* Gmelin by Mouneimné (1977: 66); as *Balistes carolinensis* Gmelin 1789 by Mouneimné (2002: 242–243); recently recorded as *Balistes carolinensis* by Harmelin-Vivien *et al.* (2005: 629). Material in collection: AUBM and USNM.

**Distribution.** Mediterranean Sea, Sea of Marmara, Black Sea, Atlantic Ocean.

**Conservation.** IUCN: Global (VU: A2bd, 6 June 2011); Med. (NE). Capture and threats: FIT, unknown. Occurrence: Common. Low priority for conservation action.

### Molidae

*Mola mola* (Linnaeus 1758)—Ocean sunfish

**Taxonomy.** New record from Lebanon, based on photos and videos of several specimens landed from various parts of Lebanon.

**Distribution.** Circumglobal in tropical through temperate seas (including Mediterranean Sea, Sea of Marmara, Red Sea).

**Conservation.** IUCN: Global (VU: A4bd, 7 June 2011); Med. (DD: 15 November 2007). Capture and threats: FIT, FIB, unknown. Occurrence: Rare. Medium priority for conservation action.



FIGURE 87. *Mola mola* (Linnaeus 1758), Tripoli, 5 February 2017.

## Tetraodontidae

*Lagocephalus lagocephalus* (Linnaeus 1758)—Oceanic puffer

**Taxonomy.** New record from Lebanon based on a specimen landed from off Beirut (29 June 2010). Material in collection: AUBM (OS2385).

**Distribution.** Circumglobal in tropical and temperate seas.

**Conservation.** IUCN: Global (LC: 8 June 2011); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.

## Zeiformes

### Caproidae

*Capros aper* (Linnaeus 1758)—Boarfish



FIGURE 88. *Lagocephalus lagocephalus* (Linnaeus 1758), Beirut, 29 June 2010, AUBM (OS2385).



FIGURE 89. *Capros aper* (Linnaeus 1758), Beirut, 3 May 2008, AUBM (OS3821).

**Taxonomy.** First record from Lebanon as *Capros aper* by Aguillar *et al.* (2018: 80). Material in collection: AUBM.

**Distribution.** Mediterranean Sea, Sea of Marmara, eastern Atlantic: Norway south to Senegal, including Madeira.

**Conservation.** IUCN: Global (LC: 15 July 2014); Med. (LC: 15 November 2007). Capture and threats: Unknown. Occurrence: Rare. Low priority for conservation action.



FIGURE 90. *Enchelycore anatina* (Lowe 1838), Beirut, 12 June 2014.

## Zeidae

*Zeus faber* Linnaeus 1758—John dory

**Taxonomy.** First record from Lebanon as *Zeus faber*, L. by Gruvel (1931: 109); subsequently recorded as *Zeus faber* Linnaeus 1758 by George *et al.* (1964: 16); as *Zeus faber* Linnaeus by Mouneimné (1977: 62); as *Zeus faber* Linnaeus 1758 by Mouneimné (2002: 109). Material in collection: AUBM.

**Distribution.** Western Baltic Sea, North Sea, Mediterranean Sea, Sea of Marmara, Black Sea, eastern Atlantic; Indo-West Pacific.

**Conservation.** IUCN: Global (DD: 20 May 2013); Med. (LC: 15 November 2007). Capture and threats: FIB, unknown. Occurrence: Rare. Low priority for conservation action.

## Non-indigenous species

### Dasyatidae

*Himantura uarnak* (Gmelin 1789)—Honeycomb stingray;

**Taxonomy.** First record from Lebanon as *Himantura uarnak* (Forsskål) by George *et al.* (1966a: 6); as *Himantura uarnak* (Forsskål 1775) by George & Athanassiou (1966a: 6); *Himantura uarnak* (Forsskål 1775) by Mouneimné (1978: 408; 2002: 61–62). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa and Eastern Cape Province (South Africa), Persian Gulf, Seychelles, Madagascar and Mauritius (Mascarenes) east to Philippines; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (VU: A2bd, 20 February 2015). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

### Atherinidae

*Atherinomorus forskalii* (Rüppell 1838)—Red Sea hardyhead silverside

**Taxonomy.** First record from Lebanon as *Atherina pinguis* Linnaeus 1803 by George *et al.* (1964: 16); subsequently recorded as *Pranesus pinguis* (Lacepède) by Mouneimné (1977: 65); as *Pranesus pinguis* (Lacepède 1803) by Mouneimné (2002: 107); recently recorded as *Atherinomorus lacunosus* by Harmelin-Vivien *et al.* (2005: 628); as

*Atherinomorus lacunosus* by Bariche *et al.* (2007: 112); as *Atherinomorus lacunosus* by Bariche *et al.* (2009: 3); as *Atherinomorus forskalii* by Bariche *et al.* (2015: 2366). Material in collection: AUBM and USNM (as *Atherina hepsetia pinguis*). Material in collection: AUBM

**Distribution.** Red Sea endemic; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



FIGURE 91. *Atherinomorus forskalii* (Rüppell 1838), Tyre, 12 September 2018.

## Synodontidae

*Saurida lessepsianus* Russell, Golani & Tikochinski 2015—no name

**Taxonomy.** First record from Lebanon as *Saurida undosquamis* Richardson 1848 by George *et al.* (1964: 12); subsequently recorded as *Saurida undosquamis* (Richardson) by Mouneimné (1977: 61); as *Saurida undosquamis* (Richardson 1848) by Mouneimné (2002: 86–87); recently recorded as *Saurida undosquamis* by Carpentieri *et al.* (2009: 3); as *Saurida undosquamis* by Bariche *et al.* (2015: 2366); as *Saurida macrolepis* by Fanelli *et al.* (2015: 2169). Material in collection: ANSP, AUBM, BMNH, MCZ, USNM and YPM (as *S. undosquamis*).

**Distribution.** Red Sea endemic; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 28 June 2018). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

## Belonidae

*Tylosurus choram* (Rüppell 1837)—Red Sea houndfish

**Taxonomy.** First record from Lebanon as *Tylosurus crocodilus* (Le Sueur 1821) by George *et al.* (1964: 14); subsequently recorded as *Tylosurus choram* (Rüppell) by Mouneimné (1977: 61); as *Tylosurus choram* (Rüppell 1837) by Mouneimné (2002: 100–101). Material in collection: USNM.

**Distribution.** Red Sea, western Indian Ocean: East Africa and Socotra east to western India; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

## Exocoetidae

*Parexocoetus mento* (Valenciennes 1847)—African sailfin flyingfish

**Taxonomy.** First record from Lebanon as *Parexocoetus brachypterus* (Richardson 1846) by George *et al.* (1964: 14); as *Parexocoetus mento* in George & Athanassiou (1967: 281); subsequently recorded as *Parexocoetus mento* (Valenciennes) by Mouneimné (1977: 62); as *Parexocoetus mento* (Valenciennes 1846) by Mouneimné (2002: 102–103); recently recorded as *Parexocoetus mento* by Bariche *et al.* (2007: 111). Material in collection: BMNH and USNM (as *P. brachypterus*).

**Distribution.** Red Sea, Indo-West Pacific: East Africa east to Marshall Islands and Fiji, north to southern Japan, south to northern Australia; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

## Hemiramphidae

*Hemiramphus far* (Forsskål 1775)—Black-barred halfbeak

**Taxonomy.** First record from Lebanon as *Hemiramphus unifasciatus*, Ranz. and *Hemiramphus marginatus*, Bleek by Gruvel (1931: 86); subsequently recorded as *Hemiramphus far* (Forsskål 1775) by George *et al.* (1964: 14); as *Hemiramphus far* (Forsskål) by Mouneimné (1977: 62); as *Hemiramphus far* (Forsskål 1775) by Mouneimné (2002: 104); recently recorded as *Hemiramphus far* by Carpentieri *et al.* (2009: 3); as *Hemiramphus far* by Bariche *et al.* (2015: 2366). Material in collection: FMNH, ROM and USNM.

**Distribution.** Red Sea, Indo-West Pacific: East and South Africa, Seychelles, to Madagascar and Mascarenes east to Philippines, Samoa and Tonga, north to southern Japan, south to Western Australia and New South Wales (Australia); Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

*Hyporhamphus affinis* (Günther 1866)—Tropical halfbeak

**Taxonomy.** First record from Lebanon as *Hyporhamphus cf. dussumieri* (Valenciennes 1846) by George & Athanassiou (1967: 279); subsequently recorded as *Hyporhamphus dussumieri* (Valenciennes) by Mouneimné (1977: 62); as *Hyporhamphus dussumieri* (Valenciennes 1846) by Mouneimné (2002: 104). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Seychelles and Madagascar east to Tuamotu Archipelago, north to Philippines, south to northwestern Australia and New Caledonia; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

## Holocentridae

*Sargocentron rubrum* (Forsskål 1775)—Redcoat

**Taxonomy.** First record from Lebanon as *Holocentrum rubrum* Forskål 1775 by George *et al.* (1964: 16); subsequently recorded as *Holocentrus ruber* (Forsskål) by Mouneimné (1977: 62); as *Holocentrus ruber* (Forsskål 1775) by Mouneimné (2002: 107–108); recently recorded as *Sargocentron rubrum* by Harmelin-Vivien *et al.* (2005: 629); as *Sargocentron rubrum* by Carpentieri *et al.* (2009: 3); as *Sargocentron rubrum* by Bariche *et al.* (2015: 2366); as *Sargocentron rubrum* by Fanelli *et al.* (2015: 2169); and *Sargocentron rubrum* by Aguillar *et al.* (2018: 82). Material in collection: AUBM, FMNH and USNM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa and Madagascar east to Tonga, north to southern Japan, south to Western Australia, New South Wales (Australia) and Lord Howe Island; southeastern Atlantic; Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 4 March 2015). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



FIGURE 92. *Sargocentron rubrum* (Forsskål 1775), Beirut, 1 December 2009, AUBM (OS3668).

## Clupeidae

*Dussumieria elopsoides* Bleeker 1849—Slender rainbow sardine

**Taxonomy.** First record from Lebanon as *Dussumieria acuta* Valenciennes 1847 by George *et al.* (1964: 11); subsequently recorded as *Dussumieria acuta* Valenciennes by Mouneimné (1977: 61); as *Dussumieria acuta* Valenciennes 1847 by Mouneimné (2002: 72–73); recently recorded as *Dussumieria elopsoides* by Bariche *et al.* (2015: 2366). Material in collection: AUBM, BMNH (as *D. acuta*) and USNM (as *D. acuta* and *D. productissima*).

**Distribution.** Red Sea, Indo-West Pacific: Somalia and Persian Gulf east to Solomon Islands, north to Taiwan, south to northern Australia; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 1 March 2017). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

*Etrumeus golanii* DiBattista, Randall & Bowen 2012—no name

**Taxonomy.** First record from Lebanon as *Clupea kowal*, Günth. by Gruvel (1931: 85); recently recorded as *Etrumeus teres* by Bariche *et al.* (2006: 248); *Etrumeus teres* by Bariche *et al.* (2007: 112); as as *Etrumeus teres* by Carpentieri *et al.* (2009: 3); as *Etrumeus golanii* by Bariche *et al.* (2015: 2366).

**Distribution.** Northern Red Sea endemic; Mediterranean Sea (west to Morocco) immigrant.

**Conservation.** IUCN: Global (DD: 12 July 2017). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

*Herklotsichthys punctatus* (Rüppell 1837)—Spotback herring



**FIGURE 93.** *Herklotsichthys punctatus* (Rüppell 1837), Beirut, 31 October 2003.

**Taxonomy.** First record from Lebanon as *Herklotsichthys punctatus* (Rüppell) by Mouneimné (1977: 61); subsequently recorded as *Herklotsichthys punctatus* (Rüppell 1837) by Mouneimné (2002: 71–72); recently recorded as *Herklotsichthys punctatus* by Carpentieri *et al.* (2009: 3); as *Herklotsichthys punctatus* by Bariche *et al.* (2015: 2366); as *Herklosichthys punctatus* by Bariche *et al.* (2017: 112). Material in collection: AUBM.

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Aden; eastern Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 2 March 2017). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

## Mugilidae

*Planiliza carinata* (Valenciennes 1836)—Keeled mullet



**Taxonomy.** First record from Lebanon as *Liza carinata* (Ehrenberg 1836) by Mouneimné (2002: 186–187); recently recorded as *Liza carinata* by Bariche *et al.* (2015: 2366); as *Liza carinata* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, western Indian Ocean: East Africa, Seychelles, Madagascar and Persian Gulf east to India; immigrated into eastern Mediterranean Sea through Suez Canal (Red Sea immigrant).

**Conservation.** IUCN: Global (DD: 23 February 2014). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.



**FIGURE 94.** *Planiliza carinata* (Valenciennes 1836), Tripoli, 10 October 2007, AUBM (OS3512).

## Apogonidae

*Apogonichthyoides pharaonis* (Bellotti 1874)—no name

**Taxonomy.** First record from Lebanon as *Apogon nigripinnis* Cuvier by Mouneimné (1977: 62); subsequently recorded as *Apogon nigripinnis* Cuvier 1828 by Mouneimné (2002: 137–138); recently recorded as *Apogon nigripinnis* by Harmelin-Vivien *et al.* (2005: 628); as *Apogon pharaonis* by Carpentieri *et al.* (2009: 3). Material in collection: AUBM and USNM (as *A. taeniatus*).

**Distribution.** Red Sea, western Indian Ocean: East Africa east to India; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

*Jaydia smithi* Kotthaus 1970—Smith's cardinalfish

**Taxonomy.** First record from Lebanon as *Jaydia smithi* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: Gulf of Oman east to Philippines and Marshall Islands, north to Taiwan; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



**FIGURE 95.** *Apogonichthyoides pharaonis* (Bellotti 1874), Beirut, 12 February 2013, AUBM (OS3894).



**FIGURE 96.** *Jaydia smithi* Kotthaus 1970, Beirut, 31 August 2011, AUBM (OS3857).

*Jaydia queketti* (Gilchrist 1903)—Spotfin cardinal

**Taxonomy.** First record from Lebanon as *Jaydia queketti* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Red Sea, western Indian Ocean: East Africa, South Africa, Socotra and Persian Gulf to western India; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.

*Ostorhinchus fasciatus* (Shaw 1790)—Broadbanded cardinalfish

**Taxonomy.** First record from Lebanon as *Ostorhinchus fasciatus* by Bariche *et al.* (2015: 2366); as *Ostorhinchus fasciatus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM (OS3854).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Seychelles, Madagascar and Réunion (Mascarenes) south to Mozambique, east to Philippines and New Guinea, north to southern Japan, south to northern Australia; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



**FIGURE 97.** *Ostorhinchus fasciatus* (Shaw 1790), Beirut, 12 December 2011, AUBM (OS3856).

*Cheilodipterus novemstriatus* (Rüppell 1838)—Indian Ocean twospot cardinalfish

**Taxonomy.** First record from Lebanon as *Cheilodipterus novemstriatus* (Rüppell 1838) by Bariche & Azzurro (2012); as *Cheilodipterus novemstriatus* by Aguillar *et al.* (2018: 80). Material in collection: AUBM (OS3916).

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Aden and Socotra east to Persian Gulf; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.

## Callionymidae

*Callionymus filamentosus* Valenciennes 1837—Blotchfin dragonet

**Taxonomy.** First record from Lebanon as *Callionymus filamentosus* Valenciennes 1837 by George *et al.* (1964: 21); subsequently recorded as *Callionymus filamentosus* Linnaeus by Mouneimné (1977: 65); as *Callionymus filamentosus* Linnaeus 1758 by Mouneimné (2002: 212); recently recorded as *Callionymus filamentosus* by Bariche *et al.*

(2007: 112); as *Callionymus filamentosus* as Bariche *et al.* (2009: 3); as *Callionymus filamentosus* Bariche *et al.* (2015: 2366). Material in collection: AUBM, BMNH, SMNS, USNM and ANSP (as *Repomucenus filamentosus*).



**FIGURE 98.** *Cheilodipterus novemstriatus* (Rüppell 1838), Tripoli, 2 April 2016, AUBM (OS3916).



**FIGURE 99.** *Callionymus filamentosus* Valenciennes 1837, female, Beirut, 8 April 2006.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Socotra, Seychelles and Persian Gulf east to Philippines and New Guinea, north to southern Taiwan, south to Western Australia and Vanuatu; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

## Carangidae

*Alepes djedaba* (Forsskål 1775)—Shrimp scad



**FIGURE 100.** *Alepes djedaba* (Forsskål 1775), Beirut, 21 July 2008, AUBM (OS3718).

**Taxonomy.** First record from Lebanon as *Caranx djeddaba* Forsskål 1775 by George *et al.* (1964: 19); subsequently recorded as *Atule djeddaba* in George & Athanassiou (1976: 269); as *Selar djeddaba* (Forsskål) by Mouneimné (1977: 63); as *Selar djeddaba* (Forsskål 1775) by Mouneimné (2002: 145–146); recently recorded as *Alepes djedaba* by Bariche *et al.* (2007: 112); as *Alepes djedaba* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Socotra, Madagascar and Persian Gulf east to Hawaiian Islands, north to southern Japan, south to northern Australia; eastern Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 6 March 2015). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

*Decapterus russelli* (Rüppell 1830)—Indian scad

**Taxonomy.** First record from Lebanon as *Decapterus russelli* by Bariche *et al.* (2015: 2366); as *Decapterus russelli* by Fanelli *et al.* (2014: 116). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Socotra and Persian Gulf east to Philippines and Fiji, north to southern Japan, south to Ningaloo Reef (Western Australia) and New South Wales (Australia) at 29°23'S and New Caledonia; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 4 February 2009). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.



FIGURE 101. *Seriola fasciata* (Bloch 1793), Batroun, 19 November 2005, AUBM (OS3690).

## Caesionidae

*Dipterygonotus balteatus* (Valenciennes 1830)—Mottled fusilier

**Taxonomy.** First record from Lebanon and the Mediterranean Sea as *Dipterygonotus balteatus* by Bariche & Fricke (2018). Material in collection: AUBM.

**Distribution.** [Red Sea], Indo-West Pacific: South and East Africa and Gulf of Aden east to Philippines and Solomon Islands, north to Taiwan, south to northern Australia; eastern Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 6 March 2015). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

## Chaetodontidae

*Heniochus intermedius* Steindachner 1893—Red Sea bannerfish

**Taxonomy.** First record from Lebanon as *Heniochus intermedius* by Bariche (2012). Material in collection: AUBM.

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Aden; Mediterranean Sea (Red Sea immigrant).



**FIGURE 102.** *Dipterygnotus balteatus* (Valenciennes 1830), Al Abdeh, 11 August 2017, AUBM (OS3931), Bariche & Fricke (2018).



**FIGURE 103.** *Heniochus intermedius* Steindachner 1893, Palm Islands, 16 July 2011, AUBM (OS3779), Bariche (2012).

**Conservation.** IUCN: Global (LC: 9 October 2009). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

## Champsodontidae

*Champsodon vorax* Günther 1867—no name

**Taxonomy.** First record from Lebanon as *Champsodon vorax* by Bariche (2010a; 2011); as *Champsodon vorax* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Indo-West Pacific Maldives, South China Sea, northern Western Australia.

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



FIGURE 104. *Champsodon vorax* Günther 1867, Kaslik, 30 May 2010, AUBM (OS3673), Bariche (2010a).

## Gobiidae

*Oxyurichthys petersii* (Klunzinger 1871)—Peters's goby

**Taxonomy.** First record from Lebanon as *Oxyurichthys papuensis* (Valenciennes 1837) by Mouneimné (2002: 220–221); recently recorded as *Oxyurichthys petersii* by Bariche *et al.* (2007: 111); as *Oxyurichthys petersii* by Bariche *et al.* (2015: 2366); as *Oxyurichthys petersii* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Aden; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 20 June 2017). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

## Haemulidae

*Pomadasys stridens* (Forsskål 1775)—Striped piggy

**Taxonomy.** First record from Lebanon as *Pomadasys stridens* (Forsskål) by Mouneimné (1977: 63); subsequently recorded as *Pomadasys stridens* (Forsskål 1775) by Mouneimné (2002: 159); recently recorded as *Pomadasys stridens* by Bariche *et al.* (2015: 2366); as *Pomadasys stridens* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

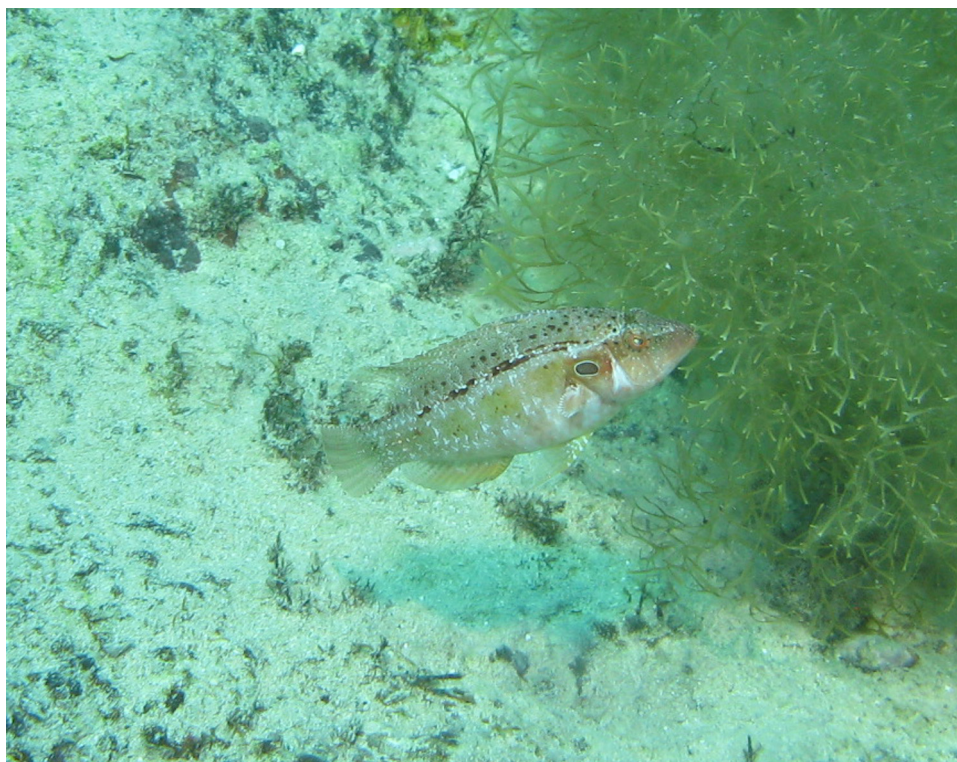




**FIGURE 105.** *Pomadasys stridens* (Forsskål 1775), Beirut, 23 November 2007, AUBM (OS3815).

**Distribution.** Red Sea, western Indian Ocean: East Africa, South Africa, Socotra, Madagascar and Persian Gulf east to western India; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 28 June 2018). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



**FIGURE 106.** *Pteragogus trispilus* Randall 2013, Palm Islands, 10 m depth, 11 September 2008.

## Labridae

*Pteragogus trispilus* Randall 2013—Threespot wrasse

**Taxonomy.** First record from Lebanon as *Pteragogus pelycus* by Harmelin-Vivien *et al.* (2005: 628). Material in collection: AUBM

**Distribution.** Red Sea endemic; eastern Mediterranean Sea (Red Sea migrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

## Leiognathidae

*Equulites klunzingeri* (Steindachner 1898)—Klunzinger's ponyfish

**Taxonomy.** First record from Lebanon as *Equula klunzingeri*, Steindachner by Gruvel (1931: 110); subsequently recorded as *Leiognathus klunzingeri* (Steindachner 1898) by George *et al.* (1964: 19); as *Leiognathus klunzingeri* (Steindachner) by Mouneimné (1977: 63); as *Leiognathus klunzingeri* (Steindachner 1898) by Mouneimné (2002: 152–153); recently recorded as *Equulites klunzingeri* by Bariche *et al.* (2015: 2366); as *Equulites klunzingeri* by Aguillar *et al.* (2018: 81). Material in collection: ANSP, AUBM, BMNH (as *Leiognathus klunzingeri*) and USNM.

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Oman; Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



**FIGURE 107.** *Equulites popei* (Whitley 1932), Tripoli, March 2016, AUBM (OS3920), Crocetta & Bariche in Gerovasileiou *et al.* (2017).

*Equulites popei* (Whitley 1932)—Slender ponyfish

**Taxonomy.** First record from Lebanon as *Equulites popei* (Whitley 1932) by Crocetta & Bariche in Gerovasileiou *et al.* (2017: 377–378). Material in collection: AUBM (OS3920).

**Distribution.** Red Sea, Indo-West Pacific: East Africa east to southern Japan and Philippines; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

## Lutjanidae

*Lutjanus argentimaculatus* (Forsskål 1775)—Mangrove red snapper

**Taxonomy.** First record from Lebanon as *Lutjanus argentimaculatus* (Forsskål 1775) by Mouneimné (1979: 107–108); subsequently recorded as *Lutjanus argentimaculatus* (Forsskål 1775) by Mouneimné (2002: 160); recently recorded as *Lutjanus argentimaculatus* by Bariche *et al.* (2015: 2366) and as *Lutjanus argentimaculatus* by Crocetta & Bariche in Dailianis *et al.* (2016: 621).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Socotra, Seychelles, Comoros, Madagascar, western Mascarenes and Persian Gulf east to Kiribati (Line Islands) and Society Islands, north to southern Japan, south to Greenough River (Western Australia), New South Wales (Australia), and Tonga; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 4 March 2015). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

## Mullidae

*Parupeneus forsskali* (Fourmanoir & Guézé 1976)—Red Sea goatfish



**FIGURE 108.** *Parupeneus forsskali* (Fourmanoir & Guézé 1976), Beirut, 28 December 2012, AUBM (OS3889), Bariche *et al.* (2013b).

**Taxonomy.** First record in Lebanon as *Parupeneus forsskali* (Fourmanoir & Guézé 1976) by Bariche *et al.* (2013b); as *Parupeneus forsskali* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Aden to Socotra; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

*Pseudupeneus prayensis* (Cuvier 1829)—West African goatfish

**Taxonomy.** First record from Lebanon as *Pseudupeneus prayensis* (Cuvier 1829) by Crocetta & Bariche in Gerovasileiou *et al.* (2017: 377–378). Material in collection: AUBM (OS3925).

**Distribution.** Western Mediterranean Sea, eastern Atlantic: Morocco to Angola, including offshore islands.

**Conservation.** IUCN: Global (VU: A2ad, 13 May 2013). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.



**FIGURE 109.** *Pseudupeneus prayensis* (Cuvier 1829), Palm islands, December 2016, AUBM (OS3925), Crocetta & Bariche in Gerovasileiou *et al.* (2017).



**FIGURE 110.** *Upeneus pori* Ben-Tuvia & Golani 1989, Tripoli, 21 July 2008.

*Upeneus pori* Ben-Tuvia & Golani 1989—Por's goatfish

**Taxonomy.** First record from Lebanon as *Upeneus* sp. by George *et al.* (1964: 18); *U. asymmetricus* Lachner 1954 by George & Athanassiou (1966b: 68–74; 1967: 285); subsequently recorded as *Upeneus asymmetricus* Lachner by Mouneimné (1977: 63); as *Upeneus asymmetricus* Lachner 1954 by Mouneimné (2002: 157); recently recorded as *Upeneus pori* by Carpentieri *et al.* (2009: 3); as *Upeneus pori* Bariche *et al.* (2015: 2366); as *Upeneus pori* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, KAUM and USNM (as *U. asymmetricus*).

**Distribution.** Northern Red Sea endemic; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

*Upeneus moluccensis* (Bleeker 1855)—Goldband goatfish

**Taxonomy.** First record from Lebanon as *Upeneus moluccensis* (Bleeker 1855) by George *et al.* (1964: 18); subsequently recorded as *Upeneus moluccensis* (Bleeker) by Mouneimné (1977: 63); as *Upeneus moluccensis* (Bleeker 1855) by Mouneimné (2002: 157–158); recently recorded as *Upeneus moluccensis* by Bariche *et al.* (2007: 112); as *Upeneus moluccensis* by Carpentieri *et al.* (2009: 3); as *Upeneus moluccensis* by Bariche *et al.* (2015: 2366); as *Upeneus moluccensis* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, BMNH, ROM and USNM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Madagascar and Réunion east to Caroline Islands and New Guinea, north to southern Japan, south to Western Australia and Queensland (Australia); eastern Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 11 March 2015). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



FIGURE 111. *Upeneus moluccensis* (Bleeker 1855), Tripoli, 21 July 2008.

## Nemipteridae

*Nemipterus randalli* Russell 1986—Randall's threadfin bream

**Taxonomy.** First record from Lebanon as *Nemipterus randalli* Russell 1986 by Lelli *et al.* (2008); subsequently recorded as *Upeneus moluccensis* by Carpentieri *et al.* (2009: 3); as *Nemipterus randalli* by Colloca & Lelli (2012: 13); as *Nemipterus randalli* by Bariche *et al.* (2015: 2366), as *Nemipterus randalli* by Fanelli *et al.* (2015: 2169) and as *Nemipterus randalli* by Aguillar *et al.* (2018: 82). Material in collection: AUBM.

**Distribution.** Red Sea, western Indian Ocean: East Africa, Madagascar and Persian Gulf east to India.

**Conservation.** IUCN: Global (LC: 28 June 2018). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



FIGURE 112. *Nemipterus randalli* Russell 1986, Beirut, 4 October 2008.

### Pempheridae

*Pempheris rhomboidea* Kossmann & Rüber 1877—Rhomboidal sweeper



FIGURE 113. *Pempheris rhomboidea* Kossmann & Rüber 1877, Beirut, 15 July 2009.

**Taxonomy.** First record from Lebanon as *Pempheris moluca* Cuvier 1831 by Mouneimné (1979: 105–106); subsequently recorded as *Pempheris oualensis* or *P. otaitensis* Cuvier 1831 by Mouneimné (2002: 151–152); recently recorded as *Pempheris vanicolensis* by Harmelin-Vivien *et al.* (2005: 629); as *Pempheris vanicolensis* by Carpentieri *et al.* (2009: 3); as *Pempheris rhomboidea* by Bariche *et al.* (2015: 2366); as *Pempheris rhomboidea* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, northwestern Indian Ocean: Socotra; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

## Priacanthidae

*Heteropriacanthus cruentatus* (Lacepède 1801)—Glasseye

**Taxonomy.** First record from Lebanon as *Heteropriacanthus cruentatus* (Lacepède 1801) by Badreddine & Bitar (2019). Material in collection: AUBM.

**Distribution.** Circumglobal in temperate and tropical seas, including Hawaiian Islands. On ref. 35348: western and south-central Atlantic. Western Atlantic to Indo Pacific.

**Conservation.** IUCN: Global (LC: 29 January 2013). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

## Pomacanthidae

*Pomacanthus maculosus* (Forsskål 1775)—Yellowbar angelfish



**FIGURE 114.** *Pomacanthus maculosus* (Forsskål 1775), Beirut, 8 September 2009, Bariche (2010b).

**Taxonomy.** First record from Lebanon as *Pomacanthus maculosus* (Forsskål 1775) by Bariche (2010b).

**Distribution.** Red Sea, western Indian Ocean: East Africa, Socotra and Persian Gulf east to Pakistan; eastern Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 8 October 2009). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

## Pomacentridae

*Abudefduf vaigiensis* (Quoy & Gaimard 1825)—Indo-Pacific sergeant

**Taxonomy.** First record from Lebanon as *Abudefduf vaigiensis* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa, Socotra, Madagascar and Réunion (Mascarenes) east to Samoa and Tonga, north to southern Japan, south to Rottnest Island (Western Australia), Mallacoota (Victoria, Australia), and northern New Zealand; Mediterranean Sea (Red Sea immigrant); Hawaiian Islands introduction.

**Conservation.** IUCN: Global (LC: 4 November 2013). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

## Rachycentridae

*Rachycentron canadum* (Linnaeus 1766)—Cobia

**Taxonomy.** First record from Lebanon as *Rachycentron canadum* by *fasciata* by Crocetta & Bariche in Crocetta *et al.* (2015: 697).

**Distribution.** Circumglobal in tropical and subtropical seas (including Red Sea, Persian Gulf), strays to Mediterranean Sea.

**Conservation.** IUCN: Global (LC: 21 August 2012). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.



**FIGURE 115.** *Scarus ghobban* Forsskål 1775, Bouar, 5 July 2007, AUBM (OS3501).



## Scaridae

*Scarus ghobban* Forsskål 1775—Blue-barred parrotfish

**Taxonomy.** First records from Lebanon as *Scarus ghobban* Forsskål 1775 by Bariche & Saad 2008; subsequently as recorded as *Scarus ghobban* by Bariche & Bernardi (2009); as *Upeneus ghobban* by Carpentieri *et al.* (2009: 3); as *Scarus ghobban* by Bariche *et al.* (2015: 2366). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-Pacific: East Africa, South Africa, Socotra, Seychelles, Comoros, Madagascar, Mascarenes and Persian Gulf east to Panama (eastern Pacific), north to southern Japan and Ogasawara Islands, south to Rottneest Island (Western Australia), New South Wales (Australia), Lord Howe Island, northern New Zealand, Kermadec Islands and Rapa; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 18 September 2009). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.

## Scombridae

*Scomberomorus commerson* (Lacepède 1800)—Narrow-barred Spanish mackerel

**Taxonomy.** First record from Lebanon as *Scomberomorus commerson* (Lacepède) by George & Athanassiou (1965: 1–4); subsequently recorded as *Scomberomorus commerson* (Lacepède) by Mouneimné (1977: 64); as *Scomberomorus commerson* (Lacepède 1800) by Mouneimné (2002: 226–227); recently recorded as *Scomberomorus commerson* by Carpentieri *et al.* (2009: 3); as *Scomberomorus commerson* by Bariche *et al.* (2015: 2366); Fanelli *et al.* 2014.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa, Socotra, Seychelles, Comoros, Madagascar, western Mascarenes and Persian Gulf, east to Palau and Fiji, north to Korea and southern Japan, south to Rottneest Island (Western Australia), New South Wales (Australia), New Caledonia and Lord Howe Island; southern central Atlantic: Saint Helena Island; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NT: 5 December 2009). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

## Serranidae

*Epinephelus fasciatus* (Forsskål 1775)—Blacktip grouper

**Taxonomy.** First record from Lebanon as *Epinephelus fasciatus* (Forsskål 1775) by Bariche & Heemstra (2012).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa and Socotra east to Wake Atoll, Marshall Islands and Pitcairn Group, north to southern Japan and Ogasawara Islands, south to Western Australia, Lord Howe Island, Norfolk Island, New Caledonia, Tonga and Rapa.

**Conservation.** IUCN: Global (LC: 21 November 2016). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

*Paranthias furcifer* (Valenciennes 1828)—Creole-fish

**Taxonomy.** First record from Lebanon as *Paranthias furcifer* by *fasciata* by Crocetta & Bariche in Crocetta *et al.* (2015: 697).

**Distribution.** Western Atlantic: Bermuda and Gulf of Mexico, eastern and southeastern Caribbean Sea and south to Brazil; central and eastern Atlantic: Ascension Island and islands of the Gulf of Guinea. Invasive at Canary Islands.

**Conservation.** IUCN: Global (LC: 02 November 2017). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.



**FIGURE 116.** *Epinephelus fasciatus* (Forsskål 1775), Tripoli, 1 February 2011.

*Pseudanthias squamipinnis* (Peters 1855)—Sea goldie



**FIGURE 117.** *Pseudanthias squamipinnis* (Peters 1855), Beirut, June 2000, Bitar (2013).

**Taxonomy.** Single record from Lebanon as *Pseudanthias squamipinnis* (Peters 1855) by Bitar (2013: 592). This record is based on two pictures taken underwater in Beirut (June 2000). The species has never been observed or collected in the Mediterranean afterwards.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa, Persian Gulf, Socotra, Madagascar, Al-

dabra and western Mascarenes east to Society Islands, north to southern Japan, south to Western Australia, New Caledonia, Lord Howe Island and Tonga.

**Conservation.** IUCN: Global (LC: 12 March 2015). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

*Cephalopholis taeniops* (Valenciennes 1828)—Bluespotted seabass

**Taxonomy.** First record from Lebanon as *Cephalopholis taeniops* (Valenciennes 1828) by Crocetta & Bariche in Gerovasileiou *et al.* (2017: 377–378). Material in collection: AUBM (OS3914).

**Distribution.** Mediterranean Sea, eastern Atlantic: Morocco south to Angola, including Canary Islands, Cape Verde Islands, and islands in the Gulf of Guinea; introduced in Brazil (southwestern Atlantic).

**Conservation.** IUCN: Global (LC: 17 November 2016). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.



**FIGURE 118.** *Cephalopholis taeniops* (Valenciennes 1828), Tripoli, 14 June 2016, AUBM (OS3914), Crocetta & Bariche in Gerovasileiou *et al.* (2017).

## Siganidae

*Siganus luridus* (Rüppell 1829)—Dusky spinefoot

**Taxonomy.** First record from Lebanon as *Siganus luridus* Rüppell 1828 by George *et al.* (1964: 20); subsequently recorded as *Siganus luridus* (Rüppell) by Mouneimné (1977: 64); as *Siganus luridus* (Rüppell 1828) by Mouneimné (2002: 201–202); recently recorded as *Siganus luridus* (Rüppell 1829) by Bariche *et al.* (2003; 2004; 2005); as *Siganus luridus* by Carpentieri *et al.* (2009: 3); as *Siganus luridus* by Bariche *et al.* (2015: 2366); as *Siganus luridus* by Fanelli *et al.* (2015: 2169); and Aguillar *et al.* (2018: 82). Material in collection: AUBM, BMNH, SMF and USNM.

**Distribution.** Red Sea, western Indian Ocean: East Africa to Comores and Madagascar, Réunion and Mauritius (western Mascarenes); Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 19 July 2017). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

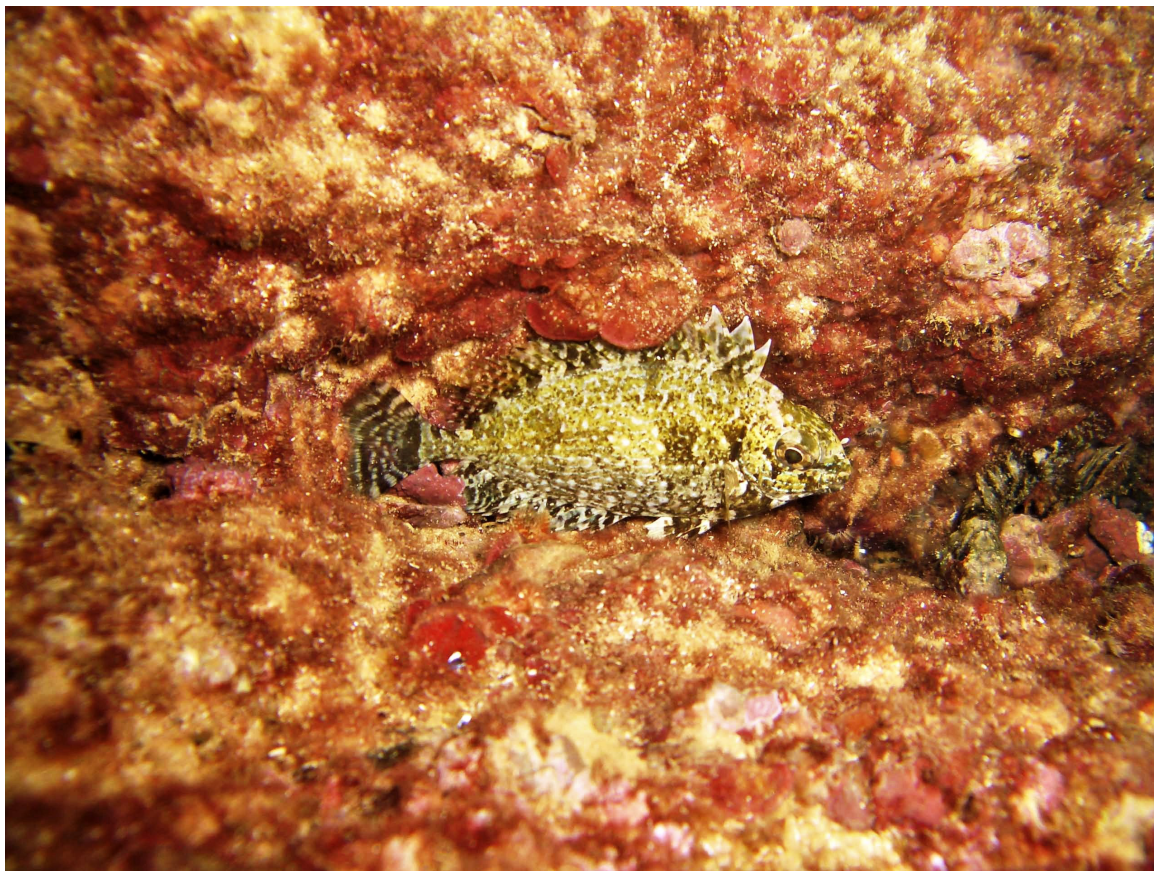


FIGURE 119. *Siganus luridus* (Rüppell 1829), Jounieh, 17 November 2006.

#### *Siganus rivulatus* Forsskål & Niebuhr 1775—Marbled spinefoot

**Taxonomy.** First record from Lebanon as *Amphacanthus siganus*, Rüpp. by Gruvel (1931: 98); subsequently recorded as *Siganus rivulatus* (Forsskål 1775) by George *et al.* (1964: 20); as *Siganus rivulatus* Forsskål by Mouneimné (1977: 64); as *Siganus rivulatus* Forsskål 1775 by Mouneimné (2002: 202–203); recently recorded as *Siganus rivulatus* by Bariche *et al.* (2003; 2004; 2005); as *Siganus rivulatus* by Carpentieri *et al.* (2009: 3); as *Siganus rivulatus* by Bariche *et al.* (2015: 2366) and Fanelli *et al.* (2015: 2169); Material in collection: ANSP, AUBM, BMNH, MCZ, USNM and YPM.

**Distribution.** Red Sea, western Indian Ocean: East Africa, Socotra; Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 4 February 2009). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

#### Sillaginidae

##### *Sillago suezensis* Golani, Fricke & Tikochinski 2013—Suez sillago

**Taxonomy.** First record from Lebanon as *Sillago sihama* (Forsskål) by Mouneimné (1977: 62); subsequently recorded as *Sillago sihama* Forsskål 1775 by Mouneimné (2002: 154); recently recorded as *Sillago suezensis* by Bariche *et al.* (2015: 2366); as *Sillago suezensis* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Northern Red Sea endemic: Gulf of Suez; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



FIGURE 120. *Sillago suzeensis* (Golani, Fricke & Tikochinski 2013), Beirut, 28 April 2009, AUBM (OS3832).

## Sparidae

*Crenidens crenidens* (Forsskål 1775)—Karanteen seabream



FIGURE 121. *Crenidens crenidens* (Forsskål 1775), Beirut, 30 January 2012, AUBM (OS3861).

**Taxonomy.** First record from Lebanon as *Crenidens crenidens* by Bariche *et al.* (2015: 2366). Material in collection: AUBM (OS3861).

**Distribution.** Red Sea, western Indian Ocean: East Africa, South Africa and Gulf of Aden east to Socotra and Madagascar; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 1 December 2009). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

## Sphyraenidae

*Sphyraena chrysotaenia* Klunzinger 1884—Yellowstripe barracuda

**Taxonomy.** First record from Lebanon as *Sphyraena chrysotaenia* Klunzinger 1884 by George *et al.* (1964: 16); subsequently recorded as *Sphyraena chrysotaenia* Klunzinger by Mouneimné (1977: 65); as *Sphyraena chrysotaenia* Klunzinger 1884 by Mouneimné (2002: 189); recently recorded as *Sphyraena chrysotaenia* by Bariche *et al.* (2007: 112; 2009: 3); as *Sphyraena chrysotaenia* by Carpentieri *et al.* (2009: 3); as *Sphyraena chrysotaenia* Bariche *et al.* (2015: 2366); as *Sphyraena chrysotaenia* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, BMNH and YPM.

**Distribution.** Red Sea, western Indian Ocean: East Africa, South Africa and Madagascar east to western India; Mediterranean Sea (Red Sea immigrant, if valid).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



FIGURE 122. *Sphyraena chrysotaenia* Klunzinger 1884, Okaibeh, 5 October 2006, AUBM (OS3828).

## Terapontidae

*Pelates quadrilineatus* (Bloch 1790)—Fourlined terapon

**Taxonomy.** First record from Lebanon as *Pelates quadrilineatus* (Bloch) by Mouneimné (1977: 44); subsequently recorded as *Pelates quadrilineatus* (Bloch 1790) by Mouneimné (2002: 135–136).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Madagascar, Mauritius (Mascarenes) and Persian Gulf east to Philippines, New Guinea and Vanuatu, north to southern Japan, south to Western Australia and southeastern Queensland (Australia); Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

*Terapon puta* Cuvier 1829—Small-scaled terapon

**Taxonomy.** First record from Lebanon as *Terapon puta* by Bariche *et al.* (2015: 2366); as *Terapon puta* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Madagascar and Persian Gulf east to Philippines, south to Western Australia and Queensland (Australia); Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

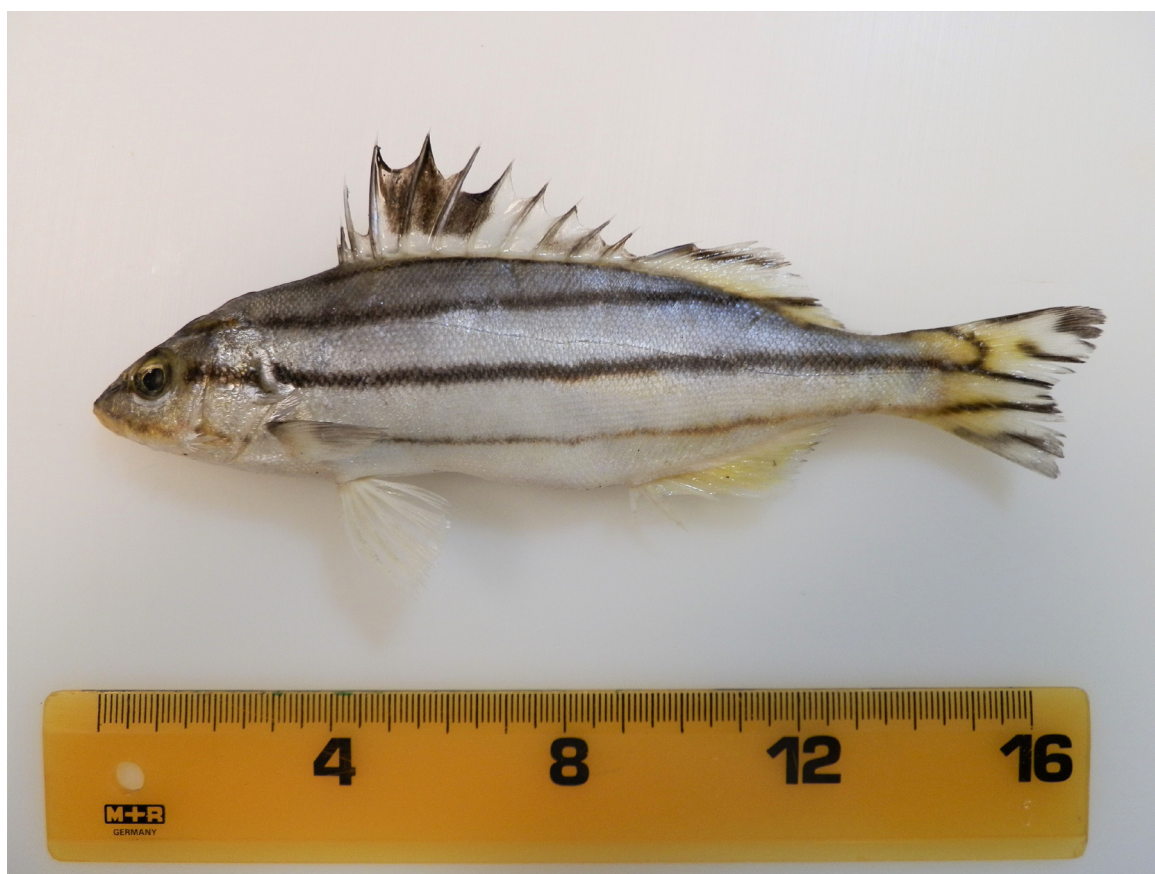


FIGURE 123. *Terapon puta* Cuvier 1829, Beirut, 6 March 2012, AUBM (OS3871).

## Cynoglossidae

*Cynoglossus sinusarabici* (Chabanaud 1931)—no name

**Taxonomy.** First record from Lebanon as *Dollfusichthys sinus-arabici* Chabanaud 1931 by George *et al.* (1964: 24); subsequently recorded as *Cynoblossus sinusarabici* (Chabanaud) by Mouneimné (1977: 66); as *Cynoglossus sinusarabici* (Chabanaud 1931) by Mouneimné (2002: 241). Material in collection: AUBM.

**Distribution.** Red Sea endemic; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.



**FIGURE 124.** *Cynoglossus sinusarabici* (Chabanaud 1931), Beirut, 24 May 2004, AUBM (OS3707).

### **Platycephalidae**

*Platycephalus indicus* (Linnaeus 1758)—Bartail flathead



**FIGURE 125.** *Platycephalus indicus* (Linnaeus 1758), Beirut, 12 December 2011, AUBM (OS3780).



**Taxonomy.** First record from Lebanon as *Platycephalus indicus* (Linnaeus) by Mouneimné (1977: 52); subsequently recorded as *Platycephalus indicus* (Linnaeus 1758) by Mouneimné (2002: 123–124); recently recorded as *Platycephalus indicus* by Bariche (2012); as *Platycephalus indicus* by Bariche *et al.* (2015: 2366); as *Platycephalus indicus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East and South Africa and Persian Gulf east to Philippines and New Guinea, north to Korea and southern Japan, south to northwestern Australia and New South Wales (Australia); Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (DD: 4 February 2009). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

## Scorpaenidae

*Pterois miles* (Bennett 1828)—Devil firefish

**Taxonomy.** First record from Lebanon as *Pterois miles* (Bennett 1828) by Bariche *et al.* (2013a); as *Pterois miles* by Bariche *et al.* (2015: 2366); as *Pterois miles* by Crocetta & Bariche in Dailianis *et al.* (2016: 621–623); and Bariche *et al.* (2017) and Aguillar *et al.* (2018: 82). Material in collection: AUBM.

**Distribution.** Red Sea, Indian Ocean: East and South Africa, Sokotra, Madagascar, Mascarenes and Persian Gulf east to Indonesia; Mediterranean Sea (Red Sea immigrant); invasive in the Western Atlantic.

**Conservation.** IUCN: Global (LC: 20 June 2017). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.

## Synanceiidae

*Synanceia verrucosa* Bloch & Schneider 1801—Stonefish

**Taxonomy.** First record from Lebanon as *Synanceia verrucosa* by Crocetta & Bariche in Crocetta *et al.* (2015: 697).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Sokotra, Seychelles, Madagascar and Mascarenes east to Marshall, Tuamotu and Gambier islands, north to southern Japan, south to Western Australia, Queensland (Australia), Middleton Reef, New Caledonia, Tonga and Austral Islands.

**Conservation.** IUCN: Global (LC: 20 June 2017). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.



FIGURE 126. *Synanceia verrucosa* Bloch & Schneider 1801, Tyre, 29 January 2012.

## Plotosidae

*Plotosus lineatus* (Thunberg 1787)—Striped eel catfish

**Taxonomy.** First record from Lebanon as *Plotosus lineatus* by Bariche *et al.* (2015: 2366); as *Plotosus lineatus* in Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa, Socotra, Seychelles, Madagascar, Mascarenes and Persian Gulf east to Samoa and Tonga, north to southern Korea, southern Japan and Ogasawara Islands, south to Rottneest Island (Western Australia), Lord Howe Island and New Caledonia; eastern Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



FIGURE 127. *Plotosus lineatus* (Thunberg 1787), Beirut, 12 February 2010, AUBM (OS3726).



FIGURE 128. *Fistularia commersonii* Rüppell 1838, Tripoli, 18 January 2004.

## Fistulariidae

*Fistularia commersonii* Rüppell 1838—Bluespotted cornetfish

**Taxonomy.** First record from Lebanon as *Fistularia commersonii* in Bariche *et al.* (2014); as *Fistularia commersonii* in Bariche *et al.* (2009); as *Fistularia commersonii* by Carpentieri *et al.* (2009: 3); as *Fistularia commersonii* in Bariche *et al.* (2015: 2169) and Aguillar *et al.* (2018: 81). Material in collection: AUBM.

**Distribution.** Southeastern Atlantic: Ascension Island; Red Sea, Indo-Pacific: East Africa, South Africa, So-kotra, Madagascar, Mascarenes and Persian Gulf east to Mexico and Panama, north to southern Japan, Ogasawara Islands and Hawaiian Islands, south to Rottneest Island (Western Australia), New Caledonia, New Zealand and Rapa; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 21 January 2016). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.

## Syngnathidae

*Hippocampus fuscus* Rüppell 1838—Sea pony

**Taxonomy.** New record from Lebanon, based on several specimens captured in Lebanon. Material in collection: AUBM.

**Distribution.** Red Sea endemic; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE); CITES Appendix II: International trade monitored. Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.



**FIGURE 129.** *Hippocampus fuscus* Rüppell 1838, Beirut, 3 March 2006, AUBM (OS3692).

## Diodontidae

*Cylichthys spilostylus* (Leis & Randall 1982)—Spotbase burrfish

**Taxonomy.** New record from Lebanon, based on an underwater observation by first author (MB) of a specimen in Tyre (05 September 2011). The species is conspicuous, easy to identify and has been recorded earlier in the area (Golani 1993).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa, Socotra and Réunion (Mascarenes) east to Philippines, north to southern Japan, south to Australia and New Caledonia; eastern Pacific (Galápagos Islands); Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Very rare. Non-indigenous species, no conservation action needed.

## Monacanthidae

*Stephanolepis diaspros* Fraser-Brunner 1940—Reticulated leatherjacket

**Taxonomy.** First record from Lebanon as *Stephanolepis diaspros* Fraser and Brünner 1940 by George *et al.* (1964: 25); subsequently recorded as *Stephanolepis diaspros* Fraser-Brunner by Mouneimné (1977: 66); as *Stephanolepis diaspros* Fraser-Brunner 1940 by Mouneimné (2002: 243–244); recently recorded as *Stephanolepis diaspros* by Harmelin-Vivien *et al.* (2005: 628); as *Stephanolepis diaspros* in Bariche *et al.* (2007: 112); as *Stephanolepis diaspros* by Carpentieri *et al.* (2009: 3); as *Stephanolepis diaspros* in Bariche *et al.* (2015 : 2366); ); as *Stephanolepis diaspros* by Fanelli *et al.* (2015: 2169); and Aguillar *et al.* (2018: 82). Material in collection: USNM.

**Distribution.** Red Sea, northwestern Indian Ocean: Gulf of Aden, Gulf of Oman and Persian Gulf east to northwestern India; Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 18 July 2017). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.



FIGURE 130. *Stephanolepis diaspros* Fraser-Brunner 1940, Beirut, 15 December 2009.

## Ostraciidae

*Ostracion cubicus* Linnaeus 1758—Yellow boxfish

**Taxonomy.** First record from Lebanon as *Ostracion cubicus* by Bariche (2011); subsequently recorded by Crocetta & Bariche in Dailianis *et al.* (2016: 621–622). Material in collection: AUBM (OS3913; OS3917).

**Distribution.** Red Sea, Indo-West Pacific: East Africa, South Africa, Socotra, Seychelles, Comoros, Madagascar, Mascarenes and Persian Gulf east to Tuamotu Archipelago, north to southern Japan and Ryukyu Islands and Ogasawara Islands, south to Lord Howe Island, northern New Zealand, Kermadec Islands and Rapa; straying to Hawaiian Islands.

**Conservation.** IUCN: Global (NE). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.



**FIGURE 131.** *Ostracion cubicus* Linnaeus 1758, Beirut, 2 November 2015, AUBM (OS3913), Crocetta & Bariche in Dailianis *et al.* (2016).

## Tetraodontidae

*Lagocephalus suezensis* Clark & Gohar 1953—Suez pufferfish

**Taxonomy.** First record from Lebanon as *Lagocephalus scleratus* (Forster) by Mouneimné (1977: 66); subsequently recorded as *Lagocephalus scleratus* (Forster 1774) by Mouneimné (2002: 244–245); recently recorded as *Lagocephalus suezensis* by Carpentieri *et al.* (2009: 3); as *Lagocephalus suezensis* by Bariche *et al.* (2015: 2366); as *Lagocephalus suezensis* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea endemic: Gulf of Suez; Mediterranean Sea (Red Sea immigrant). Red Sea to northern Australia, northward to southern Japan.

**Conservation.** IUCN: Global (LC: 8 June 2011). Capture and threats: Unknown. Occurrence: Common. Non-indigenous species, no conservation action needed.

*Lagocephalus scleratus* (Gmelin 1789)—Silver-cheeked toadfish

**Taxonomy.** First record from Lebanon as *Lagocephalus scleratus* by Carpentieri *et al.* (2009: 3); subsequently recorded as *Lagocephalus scleratus* by Nader *et al.* (2012); subsequently recorded as *Lagocephalus scleratus* by Bariche *et al.* (2015: 2366) and by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, Indo-West Pacific: East Africa, Socotra, Seychelles, Madagascar and western Mascarenes east to Philippines, north to southern Japan, south to northern Australia and New Caledonia; Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 8 June 2011). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



**FIGURE 132.** *Lagocephalus scleratus* (Gmelin 1789), Batroun, 24 October 2009.

*Lagocephalus guentheri* Miranda Ribeiro 1915—Diamondback puffer



**FIGURE 133.** *Lagocephalus guentheri* Miranda Ribeiro 1915, Beirut, 28 April 2009, AUBM (OS3834).

**Taxonomy.** First record from Lebanon as *Lagocephalus spadiceus* (Richardson 1844) by George *et al.* (1964: 25); subsequently recorded as by Mouneimné (1977: 66); as *Lagocephalus spadiceus* (Richardson 1844) by Mouneimné (2002: 245–246); recently recorded as *Lagocephalus spadiceus* by Carpentieri *et al.* (2009: 3); as *Lagocephalus spadiceus* by Bariche *et al.* (2015: 2366); as *Lagocephalus spadiceus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM, BMNH and USNM (as *L. spadiceus*).

**Distribution.** Red Sea, Indo-West Pacific: South Africa, Madagascar and Persian Gulf east to Indonesia, north to southern Japan, south to northern Australia; Mediterranean Sea and Sea of Marmara (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 8 June 2011). Capture and threats: Unknown. Occurrence: Very common. Non-indigenous species, no conservation action needed.

*Sphoeroides pachygaster* (Müller & Troschel 1848)—Blunthead puffer

**Taxonomy.** First record from Lebanon as *Sphoeroides pachygaster* (Müller & Troschel 1848) by Crocetta & Bariche in Gerovasileiou *et al.* (2017: 377–378). Material in collection: AUBM.

**Distribution.** Circumglobal in tropical and warm temperate seas (including Mediterranean Sea)

**Conservation.** IUCN: Global (LC: 7 June 2011). Capture and threats: Unknown. Occurrence: Common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



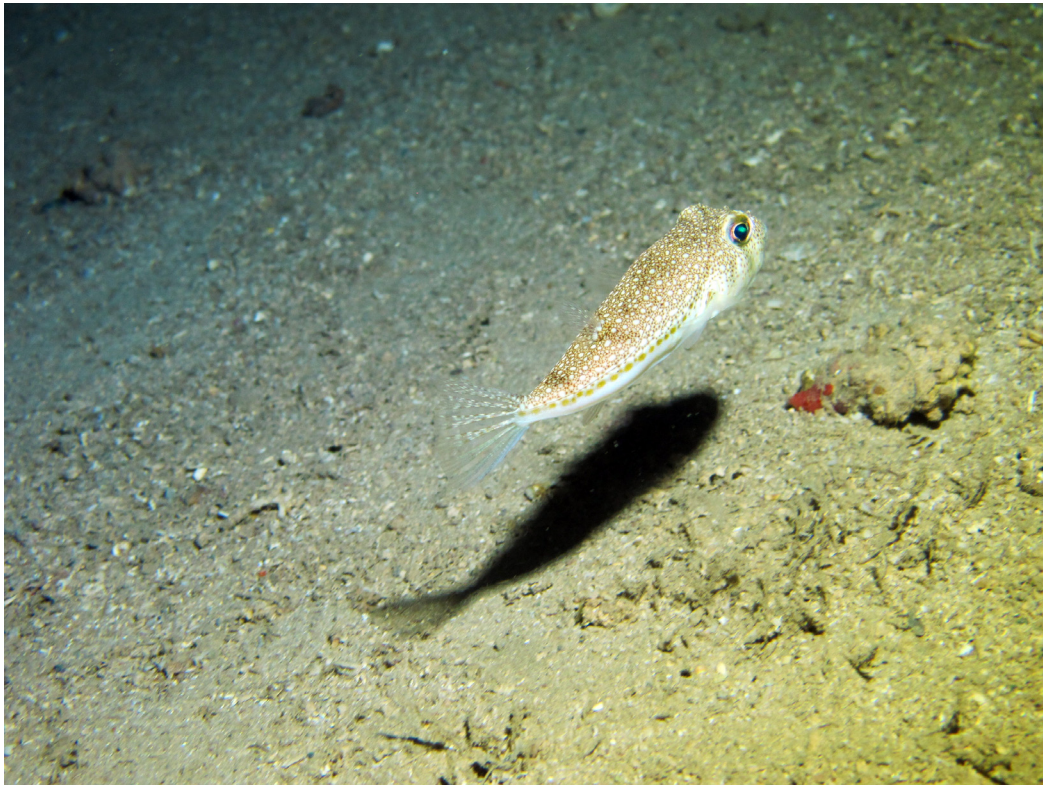
**FIGURE 134.** *Sphoeroides pachygaster* (Müller & Troschel 1848), Aabdeh, April 2017, AUBM (OS3927-29), Crocetta & Bariche in Gerovasileiou *et al.* (2017).

*Torquigener flavimaculosus* Hardy & Randall 1983—Yellowspotted puffer

**Taxonomy.** First record from Lebanon as *Torquigener flavimaculosus* by Bariche *et al.* (2015: 2366); as *Torquigener flavimaculatus* by Aguillar *et al.* (2018: 83); as *Torquigener flavimaculosus* by Fanelli *et al.* (2015: 2169). Material in collection: AUBM.

**Distribution.** Red Sea, western Indian Ocean: East Africa, Seychelles and Madagascar to Persian Gulf; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 8 June 2011). Capture and threats: Unknown. Occurrence: Very common. Significant increase in the last two decades. Non-indigenous species, no conservation action needed.



**FIGURE 135.** *Torquigener flavimaculosus* Hardy & Randall 1983, Antelias, 20 August 2012.

*Tylerius spinosissimus* (Regan 1908)—Spiny blaasop



**FIGURE 136.** *Tylerius spinosissimus* (Regan 1908), Okaibeh, 8 December 2006, AUBM (OS3803), Crocetta & Bariche in Dailianis *et al.* (2016).



**Taxonomy.** First record from Lebanon as *Tylerius spinosissimus* by Crocetta & Bariche in Dailianis *et al.* (2016: 621). Material in collection: AUBM (OS3803).

**Distribution.** Red Sea, Indo-West Pacific: South Africa, Madagascar and Réunion (Mascarenes) east to Indonesia, north to Ryukyu Islands, south to northwestern Australia, Queensland (Australia) and New Caledonia; Mediterranean Sea (Red Sea immigrant).

**Conservation.** IUCN: Global (LC: 8 June 2011). Capture and threats: Unknown. Occurrence: Rare. Non-indigenous species, no conservation action needed.

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