



"This Artificial Reef was built with the financial support of the European Union"

**AR20
20**
COMMUNITY

This guide was developed through the project “Promoting marine biodiversity and improving fishery potential and marine ecotourism activities through the deployment of Artificial Reefs off the Lebanese coast” implemented by the Marine and Coastal Resources Program (MCR), Institute of the Environment (IOE), University of Balamand (UOB)”



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SESSILE SPECIES, STUCK TO THE REEF

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Family	Name				Page
	Scientific	English	French	Arabic	
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Styelidae	<i>Botrylloides leachii</i>	Encrusting colonial ascidian	N.A.	N.A.	20
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MOTILE SPECIES, ALWAYS ON THE MOVE

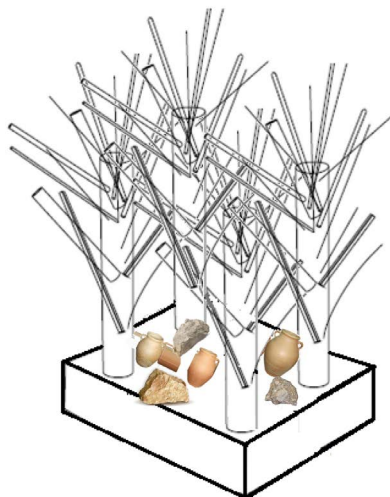
Family	Name				Page
	Scientific	English	French	Arabic	
Carangidae	<i>Seriola dumerilii</i>	Greater Amberjack	Sérieole couronnée	جرو إنتياس	22
Clupeidae	<i>Unidentified</i>	Sardine	Sardine	سردين	22
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Muraenidae	<i>Muraena Helena</i>	Mediterranean moray eel	Murène de Méditerranée	زرمبابة	28
Pomacentridae	<i>Chromis chromis</i>	Damselfish	Castagnole	قرد أسود	28
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Scorpaenidae	<i>Pterois miles</i>	Lion fish	Poisson scorpion	سمكة الأسد	29
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	<i>Torquigener flavimaculosus</i>	Yellowspotted puffer	Tétronon constellé	المنفخ	35

The AR2020 at a glance

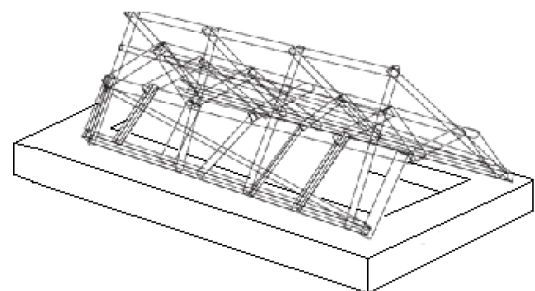
The Marine and Coastal Resources Program at the Institute of the Environment, University of Balamand was awarded the project entitled “Promoting marine biodiversity and improving fishery potential and marine ecotourism activities through the deployment of Artificial Reefs off the Lebanese coast” by the European Union. The main goal was to deploy an Artificial Reef, the AR2020, to restore depleted habitats, mitigate habitat loss and promote biodiversity by providing shelter to young and adult sessile and motile organisms. In addition, this project aimed to strengthen marine fisheries, improve the well-being of fishermen by diversifying their economic basket and introduce blue economic potential through ecotourism activities in the form of scuba diving and recreational fishing.

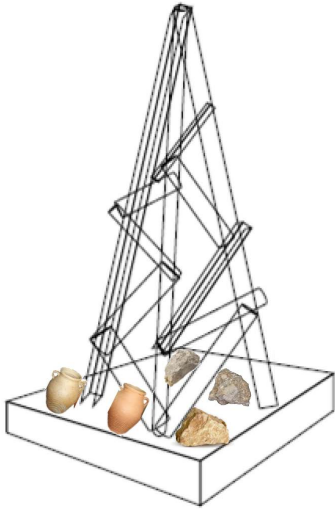
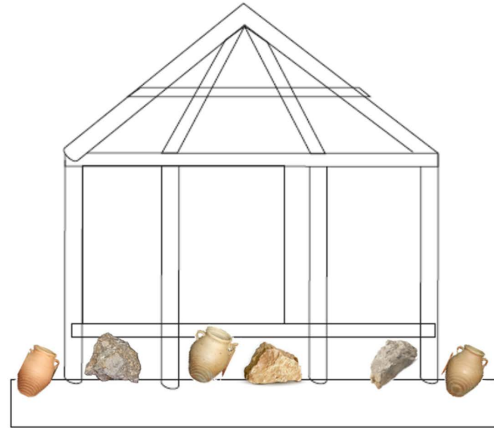
Artificial Reefs are manmade structures built to mimic the role of natural reefs. Based on extensive scientific evaluations, the area one kilometer offshore Berbara Village, Jbeil, Mount Lebanon proved to be the best location for the installation of the AR2020. Deployed in July 2020 at an average depth of 25 m, AR2020 rests on a flat rocky bottom with scattered sand patches extending over an area of 1225 m². It is comprised of 47 units of concrete and metallic structures populated with limestone boulders and pottery jars. Four main structures, house (12), tree (15), tower (15) and tunnel (5) were carefully designed and constructed to provide habitats for all species present in Lebanese marine coastal waters. Monitoring was carried out through 16 dives depending on weather conditions, that resulted in the identification of the species that occupy the Reef.

A. TREE



B. TUNNEL



C. TOWER**D. HOUSE**

The following guide introduces the AR2020 community, including essential information on all identified organisms. It is expected to provide a visual as well as an informational source to all AR2020 users ranging from scientists, to professional fishermen to recreational scuba divers.

Sessile Species Up-Close

English	Common Antlers Sponge	Phylum	Porifera
French	Axinelle Commune	Family	Axinellidae
Arabic	N.A.	Species	<i>Axinella polypoides</i>



- ▶ Yellow orange, tree-like structure. Maximum length of 1 m.
- ▶ Native to the Mediterranean Sea, also found in Atlantic Ocean.
- ▶ Lives on rocky surfaces between 15 and 100 m depth.
- ▶ Filter feeder.
- ▶ Non-edible
- ▶ Not evaluated on the IUCN red list.

English	Common barnacle	Phylum	Arthropoda
French	Balanne commune	Family	Balanidae
Arabic	N.A.	Species	<i>Perforatus perforates</i>



- ▶ Brown, pointed volcanic form, oval hollow opening at the top. Maximum diameter of 30 mm.
- ▶ Native to the Mediterranean Sea, also found in Atlantic Ocean.
- ▶ Attaches to hard surfaces between 0 and 80 m depth.
- ▶ Feeds on planktons.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Bryozoa
French	N.A.	Family	Beaniidae
Arabic	N.A.	Species	<i>Beania hirtissima</i>



- ▶ Brownish, soft flexible posture.
- ▶ Native to the Mediterranean Sea, also found in Atlantic, Arctic and Pacific Oceans.
- ▶ Lives on rocky bottoms between 10 and 50 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Sea Snail	Phylum	Mollusca
French	N.A.	Family	Cerithiidae
Arabic	N.A.	Species	<i>Cerithium scabridum</i>



- ▶ Small elongated, blunt ridges. Maximum length of 25 mm.
- ▶ Non-native to the Mediterranean Sea, originating from the Red Sea and Indian Ocean.
- ▶ Lives on rocky bottoms between 1 and 25 m depth.
- ▶ Herbivore-deposit feeder.
- ▶ Not evaluated on the IUCN red list.

English	Montagu's stellate	Phylum	Arthropoda
French	N.A.	Family	Chthamalidae
Arabic	N.A.	Species	<i>Chthamalus montagui</i>



- ▶ Conic shape. Maximum diameter of 10 mm.
- ▶ Native to the Mediterranean Sea, also found in Atlantic and Arctic Oceans.
- ▶ Attaches to hard surfaces.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Bryozoa
French	N.A.	Family	Cryptosulidae
Arabic	N.A.	Species	<i>Cryptosula pallasiana</i>



- ▶ Grayish, porous appearance.
- ▶ Native to the Mediterranean Sea, also found in Black sea and Atlantic Ocean.
- ▶ Attaches to algae and hard surfaces.
- ▶ Suspension feeder.
- ▶ Not evaluated on the IUCN red list.

English	Dead man's finger	Phylum	Chlorophyta
French	N.A.	Family	Codiaceae
Arabic	N.A.	Species	<i>Codium vermilara</i>



- ▶ Dark green, irregular dichotomous branching. Maximum length of 10 cm.
- ▶ Native to the Mediterranean Sea, also found in Atlantic Ocean.
- ▶ Lives on rocky bottoms between 5 and 25 m depth.
- ▶ Photosynthetic.
- ▶ Edible.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Mollusca
French	N.A.	Family	Conidae
Arabic	N.A.	Species	<i>Conus ventricosus Gmelin</i>



- ▶ Cone shaped, variable coloration, smooth surface. Maximum length of 70 mm.
- ▶ Native to the Mediterranean Sea, also found in Atlantic Ocean.
- ▶ "Least concern" on the IUCN red list.

English	Sweet smelling sea-weed	Phylum	Ochrophyta
French	Parfum d'Antée	Family	Dictyotaceae
Arabic	N.A.	Species	<i>Dictyopteris polypodioides</i>



- ▶ Brown, prominent midrib, rounded tips, slightly split branches. Maximum length of 30 cm.
- ▶ Native to the Mediterranean Sea, also found in the Indian, Atlantic Oceans, Red Sea, and Gulf of Mexico.
- ▶ Attaches to rocky surfaces between 10 and 50 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Forked Ribbons	Phylum	Ochrophyta
French	Rubanier céruléen	Family	Dictyotaceae
Arabic	N.A.	Species	<i>Dictyota dichotoma</i>



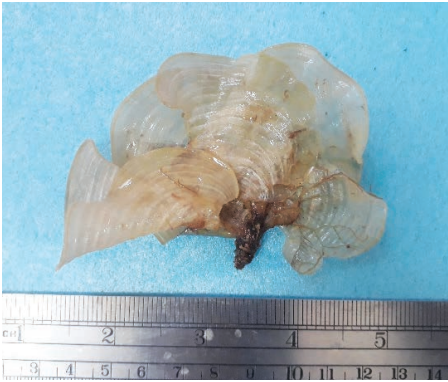
- ▶ Brown, prominent midrib, rounded tips, slightly split branches. Maximum length of 15 cm.
- ▶ Native to the Mediterranean Sea, also found in Atlantic Ocean.
- ▶ Attaches to rocky surfaces between 1 and 25 m depth.
- ▶ Edible.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Ochrophyta
French	N.A.	Family	Dictyotaceae
Arabic	N.A.	Species	<i>Dictyota sp</i>



- ▶ Brown greenish, flat branches
- ▶ Native to the Mediterranean Sea, also found in tropical and temperate climates.
- ▶ Not edible

English	Peacock's tail	Phylum	Ochrophyta
French	N.A.	Family	Dictyotaceae
Arabic	N.A.	Species	<i>Padina pavonica</i>



- ▶ Siphon shape. Maximum length of 15 cm.
- ▶ Native to the Mediterranean Sea, also found in Atlantic and Indian Oceans.
- ▶ Lives on rocky surfaces between 0 and 20 m depth.
- ▶ Non-edible
- ▶ Not evaluated on the IUCN red list.

English	Great tooth hydroid	Phylum	Ochrophyta
French	N.A.	Family	Dictyotaceae
Arabic	N.A.	Species	<i>Styopodium schimperi</i>



- ▶ Flattened fan shape.
- ▶ Non-native to the Mediterranean Sea restricted to southeastern basin.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Ochrophyta
French	N.A.	Family	Dictyotaceae
Arabic	N.A.	Species	<i>Zonaria tournefortii</i>



- ▶ Brown-yellow, striped fan shape.
- ▶ Native to the Mediterranean Sea, also found in Atlantic Ocean.
- ▶ Lives on rocky surfaces between 25 and 50 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Colonial sea squirt	Phylum	Chordata
French	N.A.	Family	Didemnidae
Arabic	N.A.	Species	<i>Polysyncraton lacazei</i>



- ▶ Dark orange to reddish, smooth, inconspicuous siphons.
- ▶ Native to the Mediterranean Sea, also found in Black sea and Atlantic Ocean.
- ▶ Lives on rocky bottoms and sea grass meadows between 5 and 50 m depth.
- ▶ Non-edible
- ▶ Not evaluated on the IUCN red list.

English	Encrusting bryozoan	Phylum	Bryozoa
French	N.A.	Family	Electridae
Arabic	N.A.	Species	<i>Conopeum reticulum</i>



- ▶ Fine layer, calcified pores.
- ▶ Native to the Mediterranean Sea, also found in the Black Sea, Arctic and Atlantic Oceans.
- ▶ Lives on hard substrates between 0 and 168 m.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Rhodophyta
French	N.A.	Family	Endocladaceae
Arabic	N.A.	Species	<i>Endocladia sp.</i>



- ▶ Dense bushy, dark red to brownish, with spines on branches.
- ▶ Lives on hard surfaces.

English	N.A.	Phylum	Cnidaria
French	N.A.	Family	Eudendriidae
Arabic	N.A.	Species	<i>Eudendrium sp.</i>



- ▶ Tree like, solid stem with white beads at edges. Can exceed 100 mm in height
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Lives on hard surfaces between 0 and 100 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Red-lined flabellina	Phylum	Mollusca
French	N.A.	Family	Flabellinidae
Arabic	N.A.	Species	<i>Coryphellina rubrolineata</i> <i>O'Donoghue</i>



- ▶ Purple protruding gills, yellow tips. Maximum length 50 mm.
- ▶ Non-native to the Mediterranean Sea, originating from the Red Sea and Indo-Pacific Oceans
- ▶ Lives on hydrozoans between 0 and 30 m depth.
- ▶ Feeds majorly on hydrozoans.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Rhodophyta
French	N.A.	Family	Liagraceae
Arabic	N.A.	Species	<i>Liagora sp.</i>



- ▶ Pale pink to deep purple,
- ▶ Originated from the Pacific Ocean.
- ▶ Not edible.

English	N.A.	Phylum	Rhodophyta
French	N.A.	Family	Liagoraceae
Arabic	N.A.	Species	<i>Liagora viscida</i>



- ▶ White-reddish, branched, no distinct main stem. Maximum length of 10 cm.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Resides on rocky bottoms between 1 and 10 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Straight Hammer Oyster	Phylum	Mollusca
French	Maillet droit	Family	Malleidae
Arabic	N.A.	Species	<i>Malleus regula</i>



- ▶ Elongated, irregular concentric slats. Maximum length of 12 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Red Sea and Indo-Pacific Oceans.
- ▶ Lives on hard surfaces between 0 and 20 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Rayed Pearl Oyster	Phylum	Mollusca
French	N.A.	Family	Margaritidae
Arabic	N.A.	Species	<i>Pinctada radiata</i>



- ▶ Prominent rays on shell. Maximum length of 9.6 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Red Sea. Also found in the Indian Ocean.
- ▶ Lives on detrital beds between 0 and 150 m depth.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Porifera
French	N.A.	Family	Mycalidae
Arabic	N.A.	Species	<i>Mycale sp.</i>



- ▶ Smooth, porous, red to orange in color.
- ▶ Lives on hard surfaces.

English	N.A.	Phylum	Mollusca
French	N.A.	Family	Mytilidae
Arabic	N.A.	Species	<i>Unidentified</i>



- ▶ Triangular shape.
- ▶ Attaches to hard substrates.

Image source: Naturalis Biodiversity Center/Wikimedia Commons. shorturl.at/knxIZ

English	Polychaeta	Phylum	Annelida
French	N.A.	Family	Nereididae
Arabic	N.A.	Species	<i>Ceratonereis costae</i>



- ▶ Segmented worm, two threadlike appendages on one end. Maximum length of 100 mm.
- ▶ Found in The Mediterranean, Red Sea, and the Indo-Pacific.
- ▶ Lives on littoral rocks and rocky bottoms between 1 and 50 m depth.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Mollusca
French	N.A.	Family	Ostreidae
Arabic	N.A.	Species	<i>Dendostrea senegalensis</i>



- ▶ Saw-tooth opening, box shaped body.
- ▶ Not evaluated on the IUCN red list.

English	Pacific oyster	Phylum	Mollusca
French	Huître creuse du Pacifique	Family	Ostreidae
Arabic	N.A.	Species	<i>Magallana gigas</i>



- ▶ Folds and concentric lamellar straits. Maximum length of 30cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Japan.
- ▶ Lives on sandy and hard substrate between 0 and 80 m depth.
- ▶ Filter feeder.
- ▶ Not evaluated on the IUCN red list.

English	Hooded Oyster	Phylum	Mollusca
French	Huître-capuchon	Family	Ostreidae
Arabic	N.A.	Species	<i>Saccostrea cucullata</i>



- ▶ Can exceed 15 cm in length.
- ▶ Non-native to the Mediterranean Sea, originating from the Red Sea and Indo-Pacific Oceans.
- ▶ Lives on hard surfaces.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Annelida
French	N.A.	Family	Oweniidae
Arabic	N.A.	Species	<i>Owenia fusiformis</i>



- ▶ Yellow greenish, tube encrusted in sand. Maximum length of 10cm.
- ▶ Found in the Mediterranean and Red Seas, in the Arctic, Pacific and Atlantic Oceans.
- ▶ Lives in muddy bottom between 0 and 30 m depth.
- ▶ Feeds on organic detritus and small invertebrates.
- ▶ Not evaluated on the IUCN red list.

English	Hermit Crab	Phylum	Arthropoda
French	Bernard-l'ermite	Family	Paguroidea
Arabic	N.A.	Species	<i>Pagurus sp.</i>



- ▶ Gray greenish. Maximum length of 3 cm.
- ▶ Scavenger.



Image source: Patrick Randall on flickr – 2011 - shorturl.at/gmwBH

English	N.A.	Phylum	Porifera
French	Eponge-pierre	Family	Petrosiidae
Arabic	N.A.	Species	<i>Petrosia ficiformis</i>



- ▶ Irregular form, violet or brown to white color, smooth surface with pores.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Lives on hard surfaces starting at 5 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Gulf weed	Phylum	Ochrophyta
French	N.A.	Family	Sargassaceae
Arabic	N.A.	Species	<i>Sargassum vulgare</i>



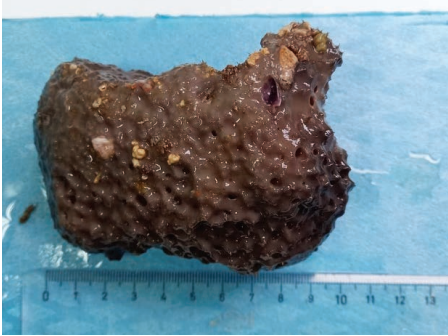
- ▶ Olive brown with hair filled vesicles. Maximum length of 30 to 40 cm.
- ▶ Native to the Mediterranean Sea, also found in the Indian and Atlantic Oceans
- ▶ Lives on rocky or pebbly substrates between 0 and 50 m depth.
- ▶ Used to feed livestock, edible in some countries.
- ▶ Not evaluated on the IUCN red list.

English	Great tooth hydroid	Phylum	Cnidaria
French	N.A.	Family	Sertularellidae
Arabic	N.A.	Species	<i>Sertularella polyzonias</i>



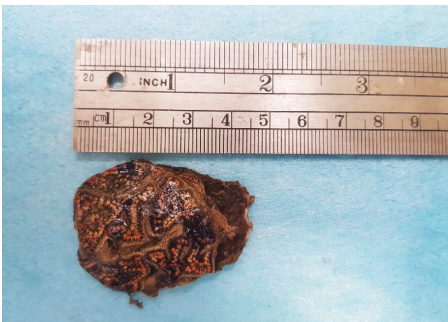
- ▶ Irregular ramifications.
- ▶ Wide range of distribution.
- ▶ Lives on both hard substrates and algae between 0 and 3000 m depth.
- ▶ Non-edible
- ▶ Not evaluated on the IUCN red list.

English	Bath Sponge	Phylum	Porifera
French	Eponge de bain	Family	Spongiidae
Arabic	إسفنج	Species	<i>Spongia officinalis</i>



- ▶ Black, soft, prominent pores. Maximum length of 1 m.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Lives on hard surfaces between 5 and 76 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Encrusting colonial ascidian	Phylum	Chordata
French	N.A.	Family	Styelidae
Arabic	N.A.	Species	<i>Botrylloides leachii</i>



- ▶ Thick flat layers, orange to red pattern.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Lives on rocks, shells, and brown algae between 0 and 100 m depth.
- ▶ Not evaluated on the IUCN red list.

English	Sea squirt	Phylum	Chordata
French	N.A.	Family	Styelidae
Arabic	N.A.	Species	<i>Styela sp.</i>



- ▶ Club shaped wrinkled skin.
- ▶ Found in Mediterranean Sea.

English	N.A.	Phylum	Porifera
French	N.A.	Family	Yconidae
Arabic	N.A.	Species	<i>Sycon raphanus</i>



- ▶ Small whitish, hairy body, open on one end.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Lives on rocky surfaces and red algae between 10 and 50 m depth.
- ▶ Not evaluated on the IUCN red list.

English	N.A.	Phylum	Mollusca
French	Troque-mage	Family	Trochidae
Arabic	N.A.	Species	<i>Gibbula magus</i>



- ▶ Shell with spikes. Maximum length of 3 cm.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic Ocean.
- ▶ Lives on rocky beds between 0 and 20 m depth.
- ▶ Not evaluated on the IUCN red list.

Motile Species Up-Close

English	Greater Amberjack	Phylum	Chordata
French	Sériole couronnée	Family	Carangidae
Arabic	جرو إنتياس	Species	<i>Seriola dumerilii</i>



- ▶ Bluish grey or olivaceous above, silvery white below; amber stripe along midside of body. Maximum length of 190cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic and Indo-Pacific Ocean.
- ▶ Found over rocky bottoms and seagrass meadows. Juveniles found singly or in schools.
- ▶ Between 1 and 360 m depth.
- ▶ Feeds on fishes and invertebrates.
- ▶ Reproduces in summer.
- ▶ Poisonous.
- ▶ “Least concern” in the IUCN Red List.

Image source: Pontes, M. from FishBase - shorturl.at/mEJY6

English	Sardine	Phylum	Chordata
French	Sardine	Family	Clupeidae
Arabic	سردين	Species	<i>Unidentified</i>



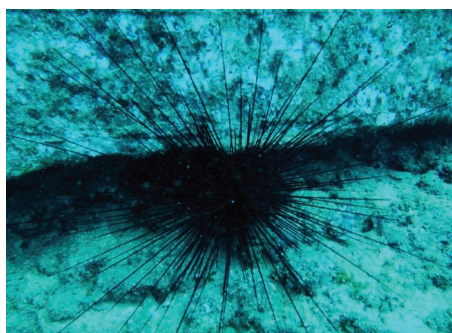
- ▶ Small, silvery, elongated fishes with a single short dorsal fin. Maximum length of 30 cm.
- ▶ Lives in dense schools.
- ▶ Feeds on plankton.
- ▶ Reproduces in spring.
- ▶ Edible.
- ▶ IUCN status depends on species.

English	Common stingray	Phylum	Chordata
French	Denté commun	Family	Dasyatidae
Arabic	بقرة البحر	Species	<i>Dasyatis pastinaca</i>



- ▶ Butterfly shaped body, with a poisonous spine. Maximum length of 230 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Found over sandy and muddy bottoms; maximum depth of 200 m.
- ▶ Feeds on bottom fishes, crustaceans and mollusks.
- ▶ Reproduces in summer months.
- ▶ Wings marketed smoked, dried-salted, and used for fishmeal and oil.
- ▶ “Vulnerable” in the IUCN Red List.

English	Spiny Sea Urchin	Phylum	Echinodermata
French	N.A.	Family	Diadematidae
Arabic	توتيا البحر الاحمر	Species	<i>Diadema setosum</i>



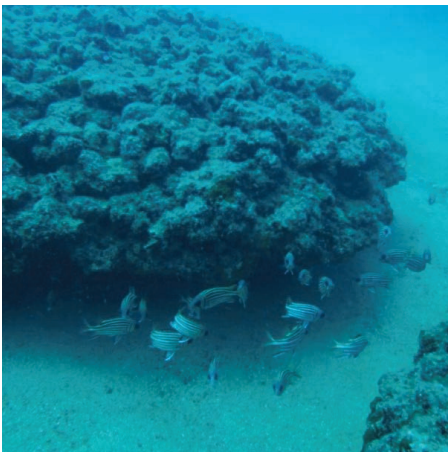
- ▶ Very large venomous spines. Maximum length of 20 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indo-Pacific.
- ▶ Found singly or in large groups, moving across rubble, sand, shingle, and seagrass beds, in bays and lagoons. Between 0-70 m depth.
- ▶ Feeds nocturnally on algae.
- ▶ Reproduces between April and May.
- ▶ Edible.
- ▶ “Not evaluated” in the IUCN Red List.

English	Remora	Phylum	Chordata
French	Rémora	Family	Echeneidae
Arabic	قملة	Species	<i>Remora remora</i>



- ▶ Dark brownish grey in color, with a suction disc on the head. Maximum length of 86.4 cm.
- ▶ Cosmopolitan in warm waters.
- ▶ Found in the water column mostly between 0 and 200 m depth.
- ▶ Feeds on parasitic copepods.
- ▶ Non-edible.
- ▶ “Least concern” in the IUCN Red List.

English	Redcoat	Phylum	Chordata
French	Marignan rouget	Family	Holocentridae
Arabic	نيلون	Species	<i>Sargocentron rubrum</i>



- ▶ Body with subequal stripes of brownish red and silvery white. Maximum length of 32 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indo-Pacific.
- ▶ Rocky habitats between 1 and 84 m depth.
- ▶ Feeds on crustaceans and small fish
- ▶ Reproduces in July and August.
- ▶ Edible, but has sharp long venomous spines along its cheeks.
- ▶ “Least concern” in the IUCN Red List.

Image source: *Hermosa, Jr., Gregorio V. from FishBase - shorturl.at/frJLP*

English	Mediterranean rainbow wrasse	Phylum	Chordata
French	Girelle	Family	Labridae
Arabic	عروسة البحر	Species	<i>Coris julis</i>



- ▶ Color changes from male to female; males have along the flanks, a longitudinal zigzag orange or red stripe while females and juveniles have a longitudinal large whitish stripe along flanks, a mid-longitudinal zigzag, and dark brown stripe. Maximum length of 30 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Occurs in the littoral zone, near rocks and amongst Posidonia beds. Between 1 and 60 m depth, can reach 120 m in winter.
- ▶ Feeds on small gastropods, sea urchins, shrimps, worms, isopods and amphipods.
- ▶ Reproduces between April and August.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

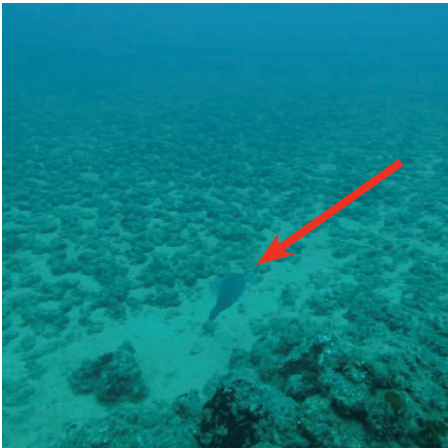
Image source: Patzner, Robert A. from FishBase - shorturl.at/hFGR2

English	Ornate wrasse	Phylum	Chordata
French	Girelle paon	Family	Labridae
Arabic	عرييس	Species	<i>Thalassoma pavo</i>



- ▶ Distinctive body color with five bright blue streaks and green to blue patterns on its head. Maximum length of 25 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Inhabits coastal waters near rocks and seagrass beds. Usually solitary, sometimes in small groups. Between 1 and 50 m depth.
- ▶ Feeds on small mollusks and crustaceans.
- ▶ Reproduces in June-July.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

English	European squid	Phylum	Mollusca
French	Kalamar	Family	Loliginidae
Arabic	كلمار	Species	<i>Loligo vulgaris</i>



- ▶ Body slender and torpedo shaped, with arms relatively short. Maximum length of 90 cm.
- ▶ Native to the Mediterranean Sea also found in the North Atlantic Ocean.
- ▶ Inhabits muddy and rocky bottoms. Maximum depth of 200 m.
- ▶ Feeds on fish, crustaceans, gastropods and bivalves.
- ▶ Edible.
- ▶ “Data deficient” in the IUCN Red List.



Image source: Decler, M. from WoRMS - shorturl.at/fzK2

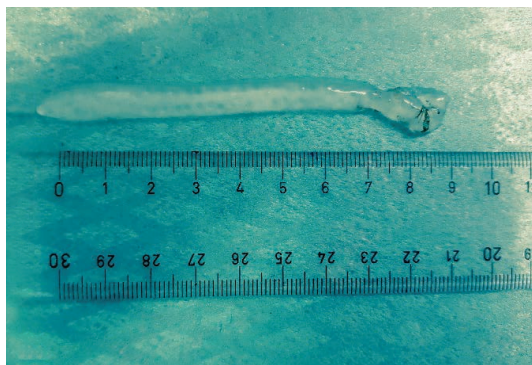


Image showing European squid eggs, condensed in an elongated slimy white mass and attached to anchor lines.



Image showing newly hatched squid under the microscope.

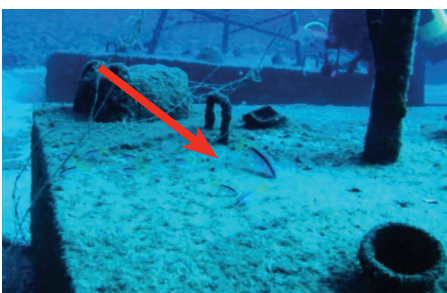
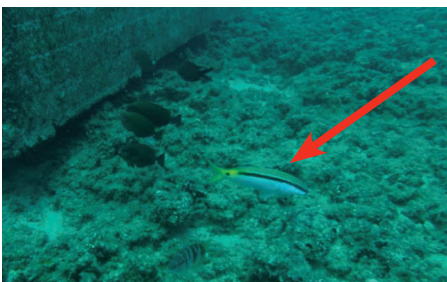
English	Reticulated leatherjacket	Phylum	Chordata
French	Bourse réticulée	Family	Monacanthidae
Arabic	خنزير أبو ريشة	Species	<i>Stephanolepis diaspros</i>



- ▶ Rough skin and a spotted pattern with a distinctive protruding spine on the head. Maximum length of 25 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indian Ocean.
- ▶ Occurs on rocky bottoms with vegetation, sandy and muddy bottoms as well as seagrass meadows between 20 and 50 m depth.
- ▶ Feeds on small invertebrates.
- ▶ Reproduces from May to December with a peak in July.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

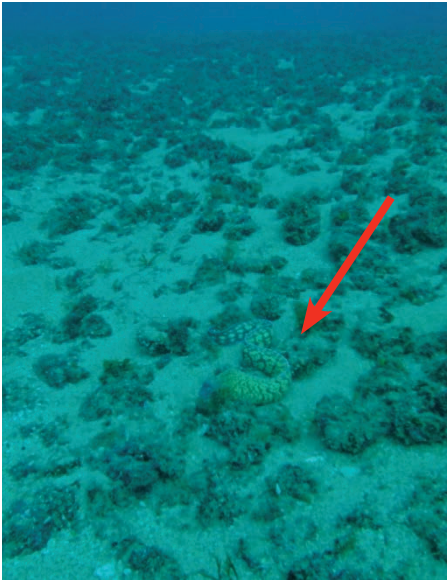
Image source: Alyona from WhatsThatFish

English	Red Sea goatfish	Phylum	Chordata
French	Perche	Family	Mullidae
Arabic	سلطان البحر الأحمر	Species	<i>Parupeneus forsskali</i>



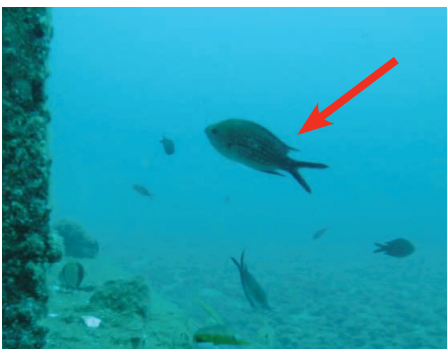
- ▶ Broad black stripe present from side of upper lip through eye along upper side of body ends near a bright yellow tail with a black prominent dot. Maximum length of 28 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indian Ocean.
- ▶ Found in small schools over sandy bottoms between 1 and 45 m depth.
- ▶ Feeds on benthic invertebrates.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.
- ▶ Lower image showing juveniles.

English	Mediterranean moray eel	Phylum	Chordata
French	Murène de Méditerranée	Family	Muraenidae
Arabic	زرمباية	Species	<i>Muraena Helena</i>



- ▶ Elongated, snake-like body, dark grey to dark brown with yellow spots. Slimy skin without scales. Maximum length of 150 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Nocturnal, lurks in holes and crevices, between 5 and 150 m depth.
- ▶ Feeds on fish and cephalopods.
- ▶ Reproduces from July to September.
- ▶ Edible: fresh, broiled, boiled or baked; skin can be used for leather.
- ▶ “Least concern” in the IUCN Red List.

English	Damselfish	Phylum	Chordata
French	Castagnole	Family	Pomacentridae
Arabic	قرد أسود	Species	<i>Chromis chromis</i>



- ▶ Bluish to brown body with a V shaped tail. Maximum length of 15 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Adults form small shoals in midwater above, near rocky reefs, or above seagrass meadows between 2 and 40 m depth.
- ▶ Feeds on small planktonic or benthic animals.
- ▶ Reproduces in summer.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Patzner, R. from FishBase - shorturl.at/gtJLX

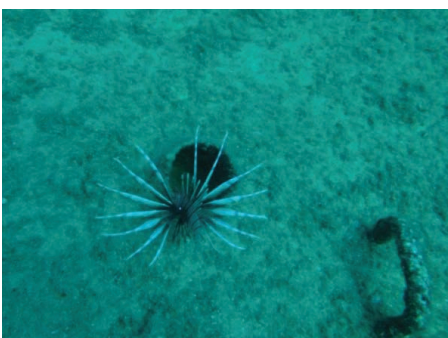
English	Parrotfish	Phylum	Chordata
French	Perroquet vieillard	Family	Scaridae
Arabic	زليق	Species	<i>Sparisoma cretense</i>



- ▶ Color changes between juveniles and adults, teeth fused into powerful beaks. Maximum length of 50 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Found in shallow water along rocky shores between 20 and 50 m depth.
- ▶ Feeds on algae and small invertebrates.
- ▶ Reproduces from July to September.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Minguell, C. from FishBase - shorturl.at/hqwG6

English	Devil firefish or Lion fish	Phylum	Chordata
French	Poisson scorpion	Family	Scorpaenidae
Arabic	سمكة الأسد	Species	<i>Pterois miles</i>



- ▶ Dark red to brownish stripes across the body with protruding highly venomous feather-like spines. Maximum length of 30 cm.
- ▶ Non-native to Mediterranean Sea, originating from the Indian Ocean, also found in the Atlantic Ocean.
- ▶ Found singly or in family groups, over muddy bottoms between 0 and 85 m depth.
- ▶ Feeds on crustaceans and small fish,
- ▶ Reproduces the most in summertime.
- ▶ Edible after safely removing the spines.
- ▶ “Least concern” in the IUCN Red List.
- ▶ Lower image showing juvenile.

English	Painted comber	Phylum	Chordata
French	Perche	Family	Serranidae
Arabic	واوي	Species	<i>Serranus scriba</i>



- ▶ Maximum length of 36 cm, body grey or reddish in color, 5 to 7 dark brown vertical stripes on the sides, and a tail which has a yellow color.
- ▶ Native to the Mediterranean Sea also found in the Black Sea and Eastern Atlantic Ocean.
- ▶ Solitary, over rocky bottoms and in seagrass beds.
- ▶ Depth between 5 to 150 m, feeds on various crustaceans and fishes.
- ▶ Reproduces from April to August.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Patzner, Robert A. from FishBase - shorturl.at/lsPZ0

English	Dusky grouper	Phylum	Chordata
French	Mérou noir	Family	Serranidae
Arabic	لقز رملي	Species	<i>Epinephelus marginatus</i>



- ▶ Robust and large body, reddish or brown in color with white irregular blotches and spots. Maximum length of 15 cm.
- ▶ Native to the Mediterranean Sea, also found in the Atlantic and Indian Ocean.
- ▶ Lives solitary or sedentary on rocky bottom, between 8 and 200 m.
- ▶ Feeds on fishes, cephalopods and invertebrates, mainly crustaceans.
- ▶ Reproduces in summer.
- ▶ Edible.
- ▶ “Endangered” in the IUCN Red List.

Image source: Randall, John E. from FishBase - shorturl.at/quwHU

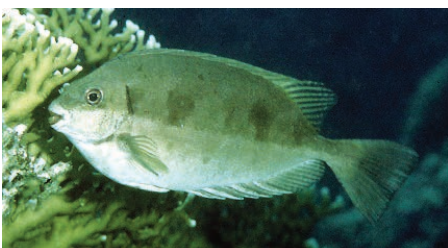
English	Mottled gouper	Phylum	Chordata
French	Badèche rouge	Family	Serranidae
Arabic	ايريديّة	Species	<i>Mycteroperca rubra</i>



- ▶ Usually reddish brown, sometimes mottled with black or pale grey spots with black streak above jaw. Maximum length of 144 cm.
- ▶ Native to the Mediterranean Sea also found in the North Atlantic Ocean.
- ▶ Found over rock and sandy bottoms, in sites with strong currents between 15 and 200 m depth.
- ▶ They feed on small fish and mollusks.
- ▶ Reproduces from February-March to the end of May.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Pillon, R. from FishBase - shorturl.at/osAG1

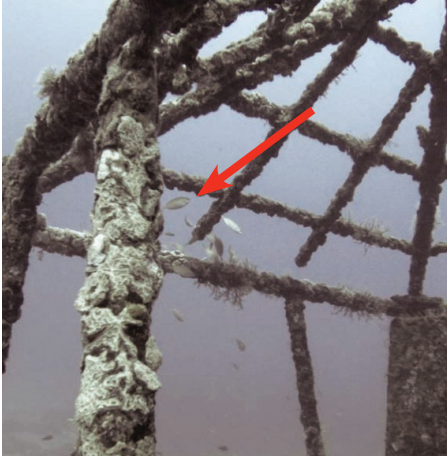
English	Dusky spinefoot	Phylum	Chordata
French	Sigan sombre	Family	Siganidae
Arabic	أبو شوكة أسود	Species	<i>Siganus luridus</i>



- ▶ 13-14 dorsal spines, upper body has darker color. Presence of venomous spines in the anal Fin and at both ends of the ventral fin. Maximum length of 30 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indian Ocean.
- ▶ Prefers hard bottoms of compacted sand with rock or coral, between 2 and 40 m depth.
- ▶ Feeds on benthic algae. Reproduces between April and June to August.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Randall, John E. from FishBase - shorturl.at/gIJN9

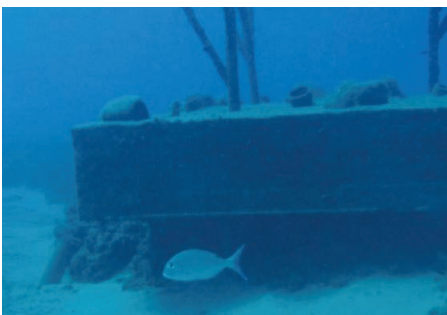
English	Marbled spinefoot	Phylum	Chordata
French	Sigan marbré	Family	Siganidae
Arabic	أبو شوكة أبيض	Species	<i>Siganus rivulatus</i>



- ▶ 13 dorsal spines. Upper body gray, green or brownish, silvery below. Spines slender, pungent and venomous. Maximum length of 27 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indian Ocean.
- ▶ Inhabits shallow waters on sandy bottoms, amongst algae and seagrass beds. Between 1 and 30 m depth.
- ▶ Feeds on algae.
- ▶ Reproduces from late May to mid of July with an annual seasonal variation depending on different environmental factors.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Dammous, S. from FishBase - shorturl.at/tvQRT

English	Common dentex	Phylum	Chordata
French	Denté commun	Family	Sparidae
Arabic	بصاص	Species	<i>Dentex dentex</i>



- ▶ Bluish silvery body, oval and compressed with bluish tail. Maximum length of 100 cm.
- ▶ Native to the Mediterranean Sea also found in the Eastern Atlantic Ocean.
- ▶ Generally found on rocky area mostly between 15 and 200 m depth.
- ▶ Feeds on crustaceans, mollusks and cephalopods.
- ▶ Reproduces in May.
- ▶ Marketed fresh or frozen.
- ▶ “Vulnerable” in the IUCN Red List.

Image source: Patzner, R. from FishBase - shorturl.at/qwyAG

English	White seabream	Phylum	Chordata
French	Sar commun	Family	Sparidae
Arabic	صرغوص	Species	<i>Diplodus sargus</i>



- ▶ Body with five black and four grey vertical bands. Maximum length of 45 cm.
- ▶ Native to the Mediterranean Sea, also found in Eastern Atlantic Ocean and Black Sea.
- ▶ Inhabits coastal rocky reef areas and Posidonia oceanica beds. Between 0 and 50 m depth.
- ▶ Feeds on shellfish and other benthic invertebrates.
- ▶ Reproduces from January to May, with a March-April peak.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Patzner, Robert A. from FishBase - shorturl.at/nqMZ3

English	Common two-banded seabream	Phylum	Chordata
French	Sar à tête noire	Family	Sparidae
Arabic	خرقن	Species	<i>Diplodus vulgaris</i>



- ▶ Silver body with two black stripes at the base of the head and tail. Maximum length of 45 cm.
- ▶ Native to the Mediterranean Sea, also found in the Black Sea, South Africa and Eastern Atlantic Ocean.
- ▶ Inhabits rocky and sometimes sandy bottoms, juveniles found in seagrass beds. Maximum depth of 160 m.
- ▶ Feeds on crustaceans, worms and mollusks.
- ▶ Reproduces from December to March, with peaks in January.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

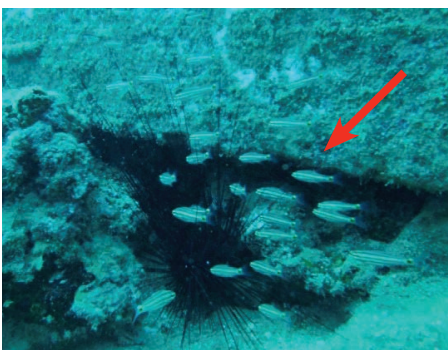
English	Common Pandora	Phylum	Chordata
French	Pageot commun	Family	Sparidae
Arabic	جربيدي	Species	<i>Pagellus erythrinus</i>



- ▶ Long body and laterally compressed, pink or reddish, without stripes or bars. Maximum length of 60 cm.
- ▶ Native to the Mediterranean Sea, also found in the Eastern Atlantic Ocean.
- ▶ Found over shallow, gravel, mud, rock, and sandy bottoms, between 20 and 100 m depth in summer, 300m in winter.
- ▶ Omnivorous, feeds mainly on benthic invertebrates and small fish.
- ▶ Reproduces from spring to autumn.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Dammous, S. from FishBase - shorturl.at/rwB03

English	Fourline trumpeter	Phylum	Chordata
French	Violon crépuscule	Family	Sparidae
Arabic	قريق	Species	<i>Pelates quadrilineatus</i>



- ▶ Silver in color, with 4-6 dark horizontal lines; a black blotch behind head, caudal fin pale or slightly dusky. Maximum length of 30 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indo-Pacific.
- ▶ Found in brackish waters; common in estuaries. Juveniles in seagrass beds and in mangrove bays. Between 0 and 40 m depth.
- ▶ Feeds on small fishes and invertebrates.
- ▶ Edible.
- ▶ “Least concern” in the IUCN Red List.

Image source: Randall, J.E. from FishBase - shorturl.at/adjJP

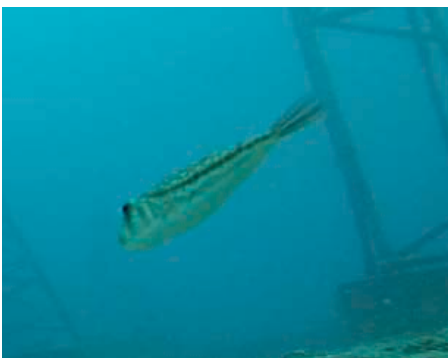
English	Silver-cheeked toadfish	Phylum	Chordata
French	Ballon à bande argentée	Family	Tetraodontidae
Arabic	N.A.	Species	<i>Lagocephalus sceleratus</i>



- ▶ Greenish with brown or black spots from above; silver along the sides, white belly. Maximum length of 110 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indo-Pacific.
- ▶ Inhabits offshore reefs between 18 and 100 m depth.
- ▶ Feeds on benthic invertebrates.
- ▶ Reproduces from late spring to middle summer.
- ▶ Poisonous.
- ▶ “Least concern” in the IUCN Red List.

Image source: Patzner, R. from Fishbase - shorturl.at/kyELP

English	Yellowspotted puffer	Phylum	Chordata
French	Tétron constellé	Family	Tetraodontidae
Arabic	المنفخ	Species	<i>Torquigener flavimaculosus</i>



- ▶ Small white body, with yellowish spots. Maximum length of 16 cm.
- ▶ Non-native to the Mediterranean Sea, originating from the Indian Ocean.
- ▶ Found over rubble, sand, and in seagrass beds, between 3 and 57 m depth.
- ▶ Feeds on invertebrates and algae.
- ▶ Poisonous (the bodies of Pufferfish are covered in a toxic mucus, if the skin or flesh is consumed it can be fatal to humans).
- ▶ “Least concern” in the IUCN Red List.

Image source: Wirtz, P. from FishBase - shorturl.at/iwF57

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