

Biodiversity of fishes in the Mediterranean

-Sparidae

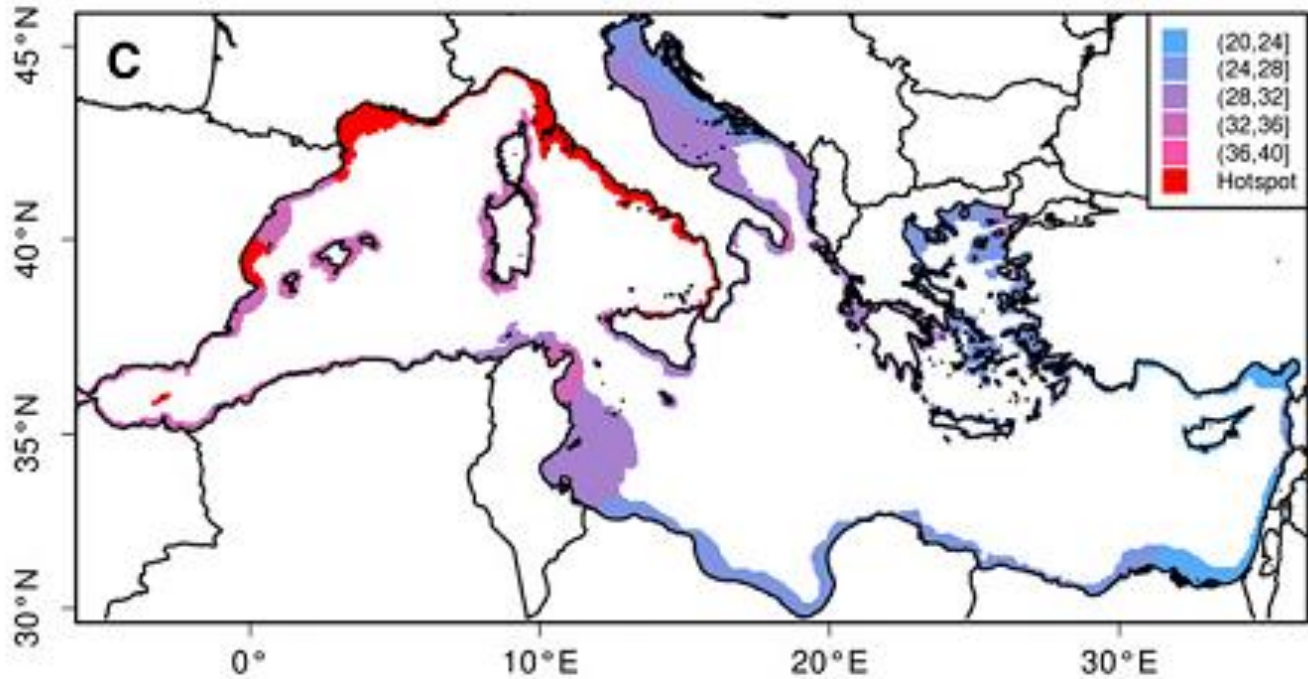
-Labridae

Anna Johanson, Satu Pakarinen

Mediterranean biodiversity

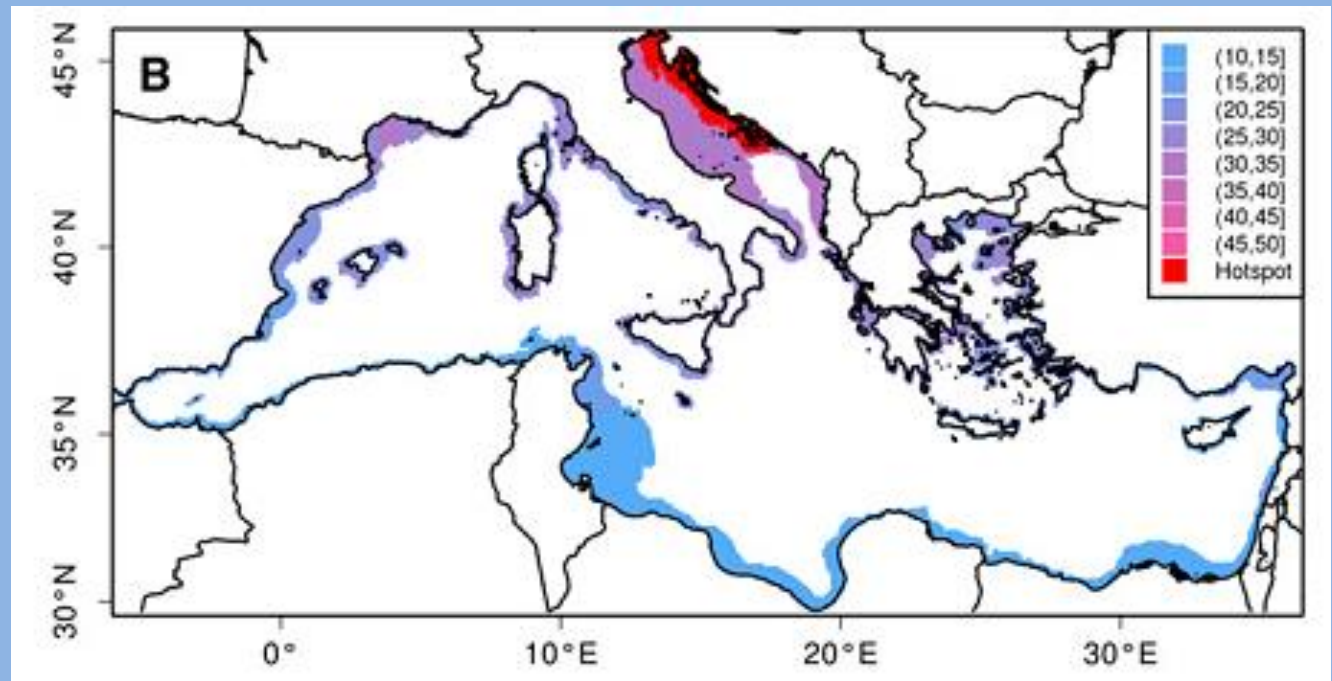
- A lot of endemic species, 18% of all fish species. More endemics overall in the western basin (78%) than in the eastern (23%)
- reasons: compartmentalization of the sea, gene flow from Gibraltar cyclically interrupted, and the geological history.





**IUCN species richness
(fishes)**

**Endemic
species
richness
(fishes)**



Wrasses (*Labridae*)

- Labridae= Labium= "lip"
- 600 species
- Wrasses can be found in a wide variety of habitats, such as tidal pools, grass beds, rocky or coral reefs, or open sand bottoms
- Many species of the group are recognisable by thick lips, which can be curiously folded (Lippfische)
- Wrasses appear in a diverse range of colors, shapes, and sizes.

Rainbow-wrasse

Coris julis

- Usually in littoral, near rocks and eel-grass beds
- Usually 1-60 m deep
- Sometimes solitary, among the rocks, but often other individuals closeby
- Buries itself in sand at night or when frightened. Acts sometimes as cleaner.
- Common length 20 cm



Goldsinny-wrasse

Ctenolabrus rupestris

- Reef-associated, on rocky, weed-covered shores
- Usually 1 - 20 m deep
- Common length 11.0 cm
- Dark spot on caudal peduncle and front end of dorsal fin



Cuckoo wrasse

Labrus bimaculatus

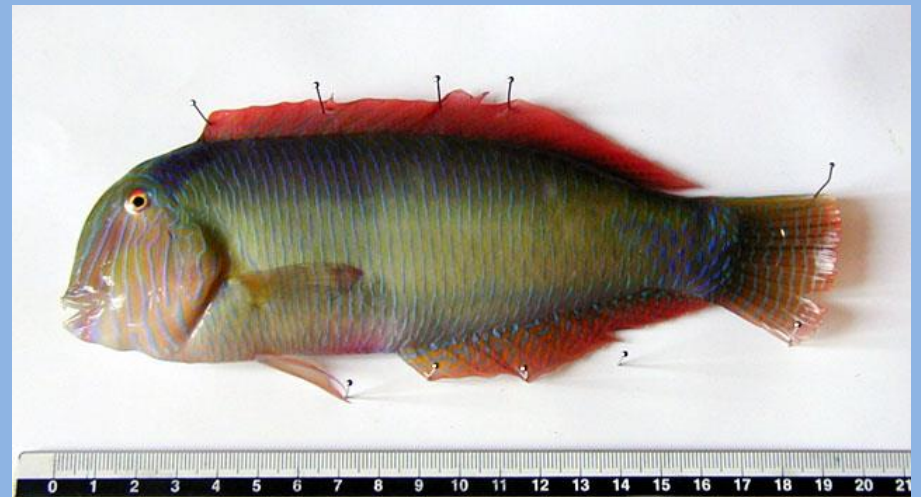
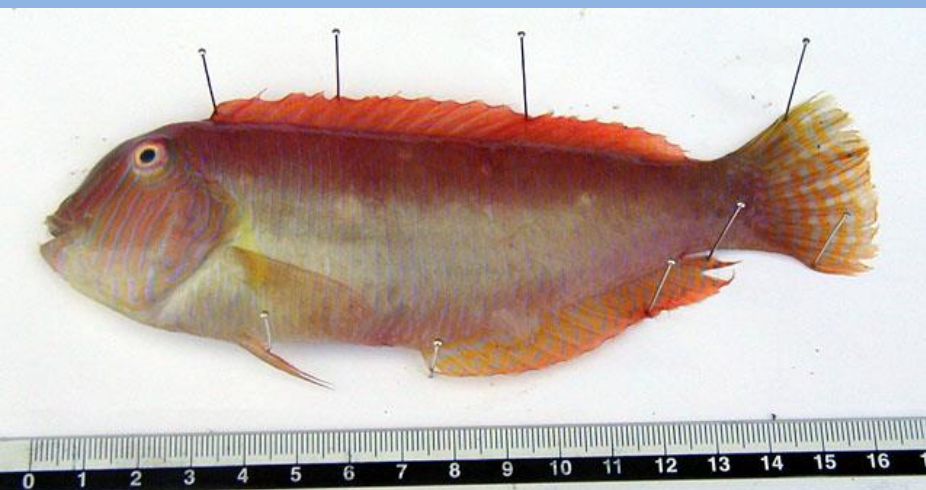
- Littoral
- Usually 40-80 m deep.
- Usually solitary or in pairs with young.
- Common length 25-30 cm.
- Colour: remarkably different for male and female



Cleaver wrasse

Xyrichthys novacula

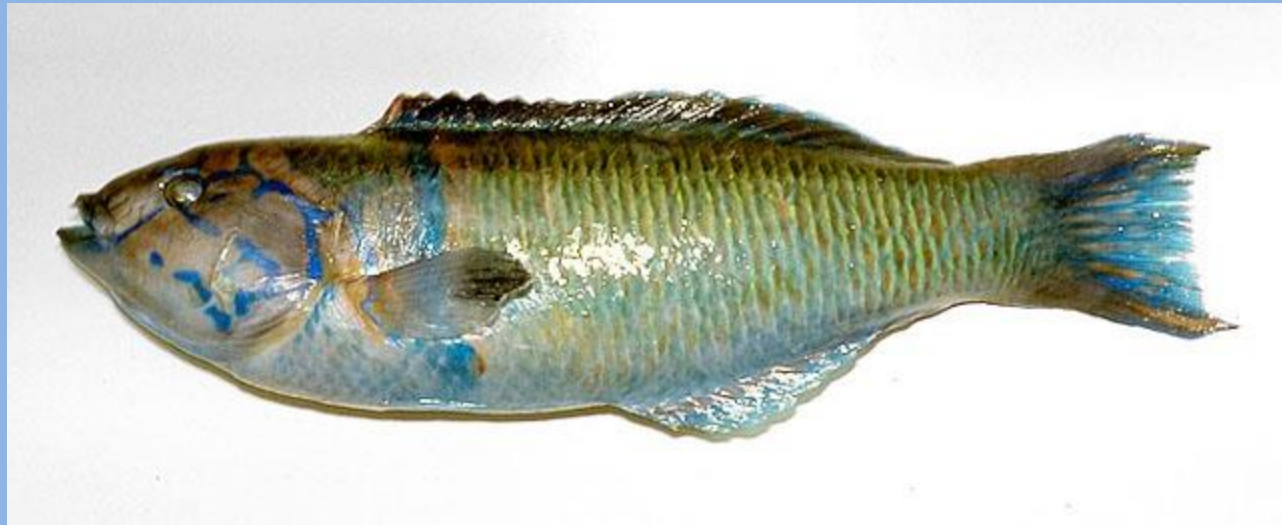
- Littoral, on sandy or muddy bottoms, sometimes in eel-grass beds
- Usually 150 m deep
- Common length 30 cm
- Head profile almost vertical.
- Colour: Males: vivid red or greenish
- Colour: Females pink-reddish or pale brownish.
- Many vertical stripes on body and head.



Ornate wrasse

Thalassoma pavo

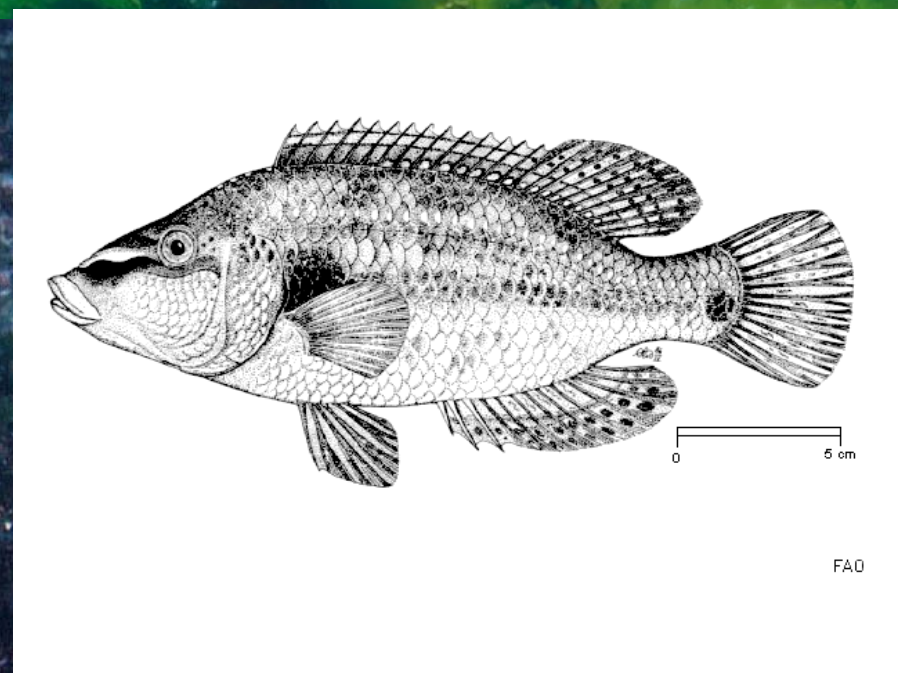
- Littoral, near rocks and eel-grass beds
- Usually 1-50m deep
- Solitary, sometimes in small groups.
- Common length 15-20 cm.
- Colour: body green brownish, with numerous darker vertical lines.



Peacock wrasse

Symphodus tinca

- Littoral, near rocks, mainly in eel-grass beds. Sometimes in salty lagoons.
- Usually 1-50 m deep.
- Common length 20-25 cm.
- *Colour*: female and male have a small dark spot at base of caudal fin and a dark blotch just above pectoral fin.



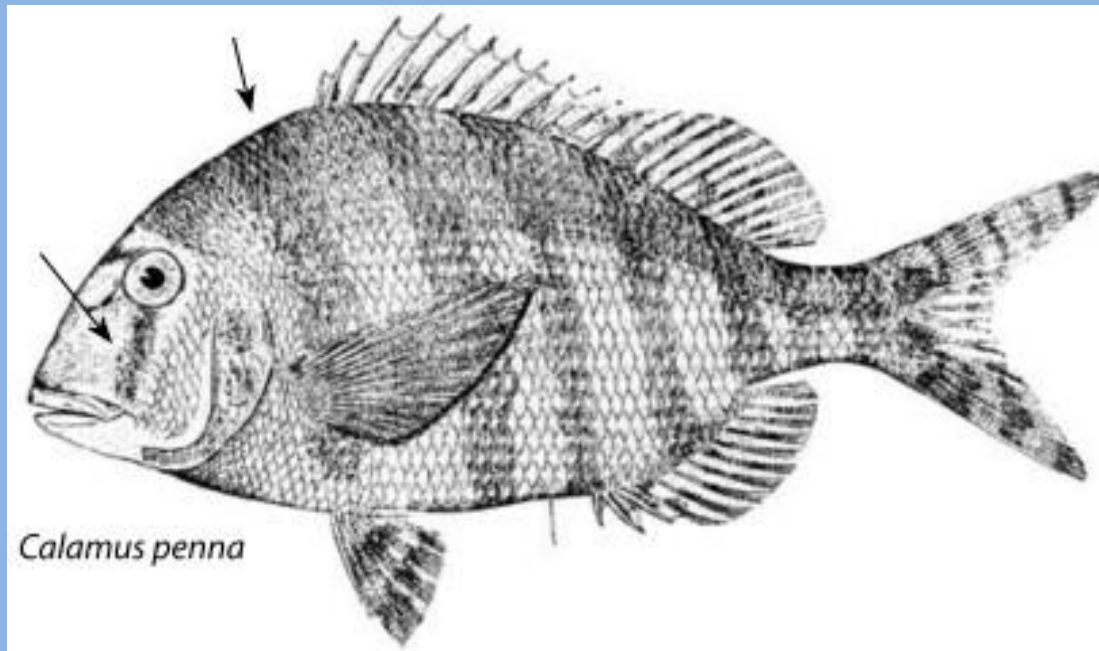
Sparidae - Porgies

- greek: "golden head"
- Also called sea-breams
- Most species have grinding molar-like teeth
- Some are overfished in the Mediterranean (very good fishmeat for eating..)
- In the family both herbivores, carnivores and generalist species.



Sparidae - Porgies

- 24 species in the Mediterranean
- Bodystructure: High backs, flattened, silvery, black vertical stripes.



Picarel – *Spicara smaris*



- Length 14cm
- In the entire Mediterranean
- In *Posidonia* beds and rocky bottoms
- Occurs in schools of fish



Curled picarel

Centracanthus cirrus

- Found over rocks or gravelly bottoms.
- Long single dorsal fin, large eyes.
- Red from the above, white underside.
- Also a schooling species.



Common dentex (Bream)

Dentex dentex



- Length 50cm – up to 1m!
- Rock or rubble bottoms, shallow waters.
- Body oval and compressed.
- Thick lips, silvery color.

Large-eye dentex

Dentex macrophthalmus



- Length 30-65cm.
- Body and fins reddish.
- Eye very large.
- Rocky and sandy bottoms.

Annular seabream

Diplodus annularis



- length: 13cm
- Seagrass beds and sandy bottoms.
- Dark band just behind dorsal and anal fins.
- Juveniles have black stripes.

White seabream

Diplodus sargus sargus



- Length: 22-45cm
- Black and gray vertical bands
- Rocky reef areas
- Dorsal and anal fin dusky and distally darker.
- Black spot

Zebra seabream

Diplodus cervinus



- Reef associated
- Length 35-55cm
- Schools of 4-5 ind.
- Omnivorous

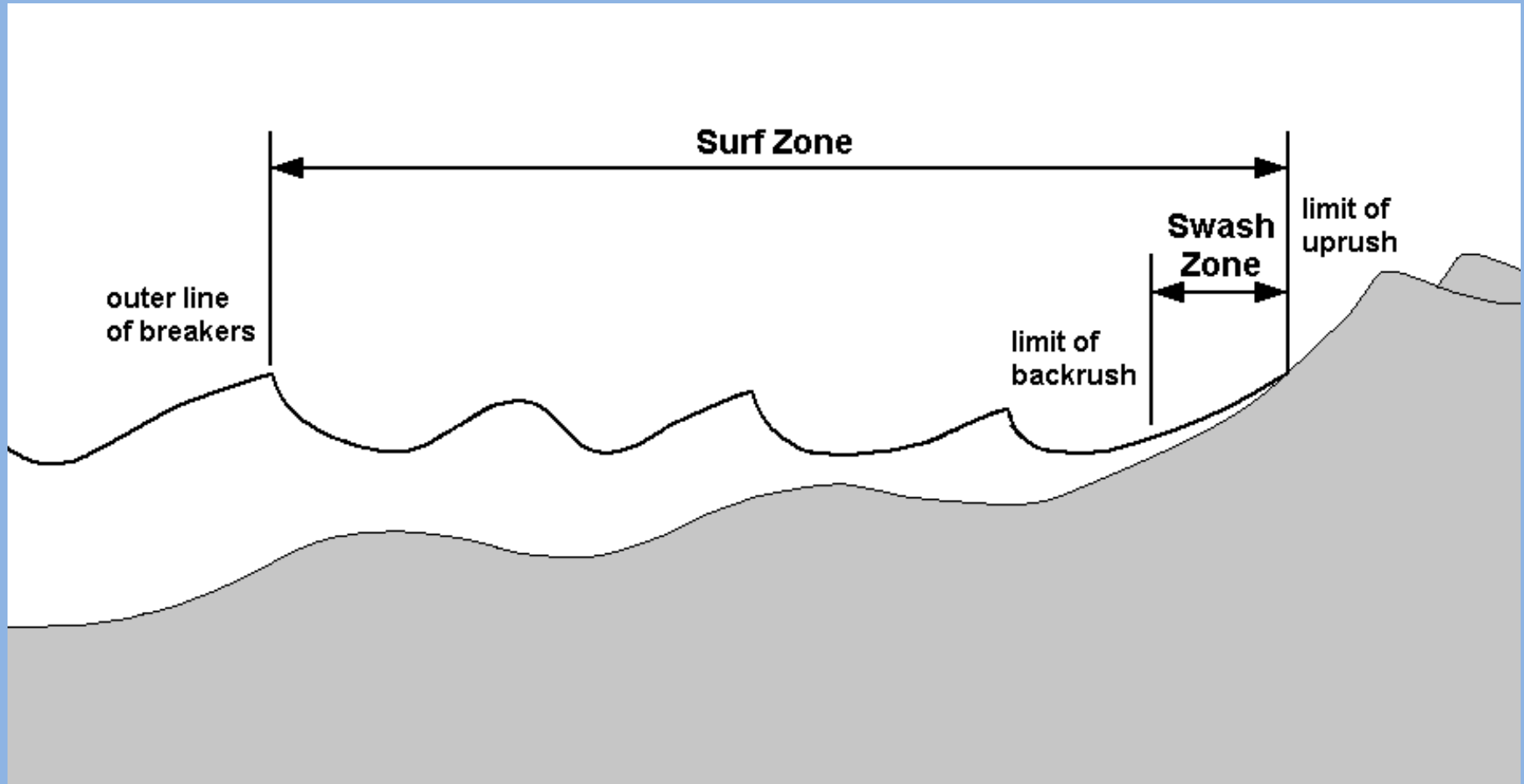
Sharpsnout seabream

Diplodus puntazzo



- Length 30-60cm
- Depth 0—150m, mostly in the littoral zone.
- Adults occur also in surf zone.
- Pointed snout – the name!

Surf zone :



Common two-banded seabream

Diplodus vulgaris



- Length 22-40cm
- Rocky and sandy bottoms
- Two broad black bands, and black caudal fin.
- Can form very big schools.

Saddled seabream

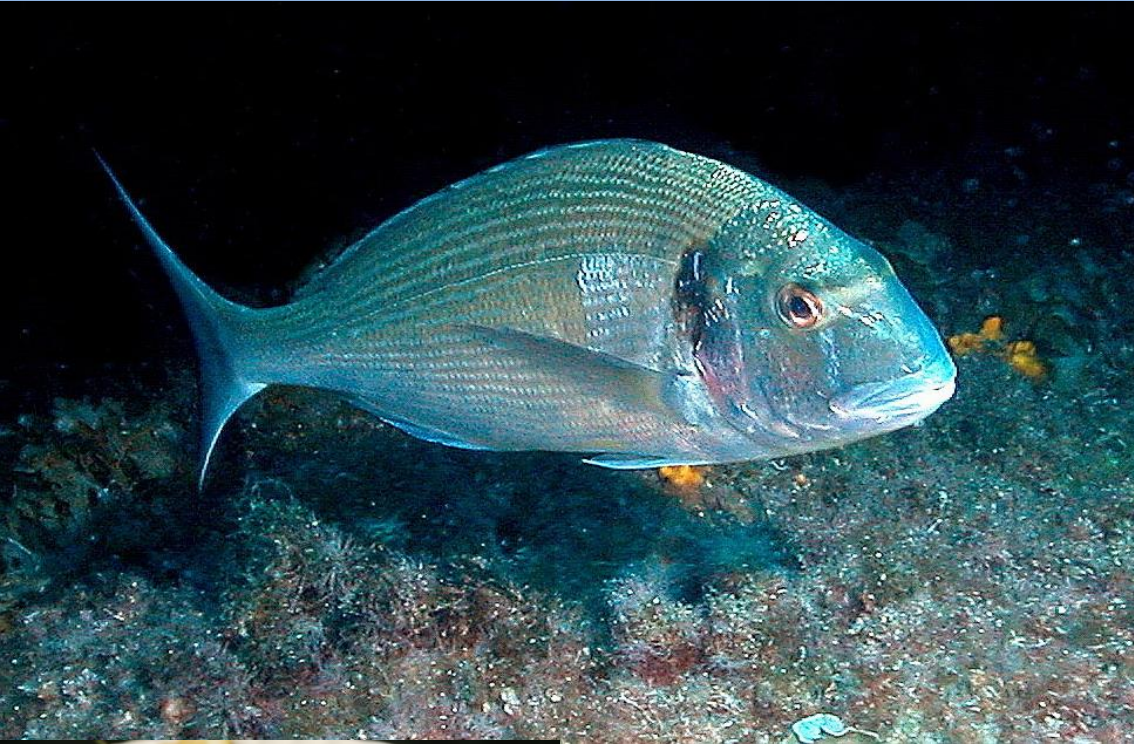
Oblada melanura



- Length 20-30cm
- Rocky bottoms and seagrass beds
- Elongated oval body , short snout, black spot with white markings.
- Schoolforming

Gilthead seabream

Sparus aurata



- 35-70 cm
- long snout
- Golden forehead
- Very important food fish
- Seagrass bed and sandy bottoms
- Single or in small groups

<http://www.shutterstock.com/video/clip-3088990-stock-footage-finding-food-description-school-of-sparidae-and-gilt-head-brems-eating-fish-heads.html?language=fi>

References:

- <http://wildlife-archipelago.gr>
- Mouillot et al. 2011. "Protected and threatened components of fish biodiversity in the mediterranean sea". *Current Biology* nr. 21, p. 1044-1050.
- Fishbase.org
- Biodiversity_Mediterranean (2004)
- Species-identification.org
- <http://www.seawater.no/fauna/chordata/palloni.html>
- <http://animaldiversity.ummz.umich.edu/accounts/Labridae/>

A wide-angle photograph of a tropical beach. The foreground shows clear, shallow turquoise water with visible sand and coral reefs. The middle ground features a white sandy beach and the ocean extending to the horizon. The sky is a vibrant blue with a long, horizontal line of fluffy white clouds. In the distance, a small island is visible on the left side of the horizon.

Danke Schön!