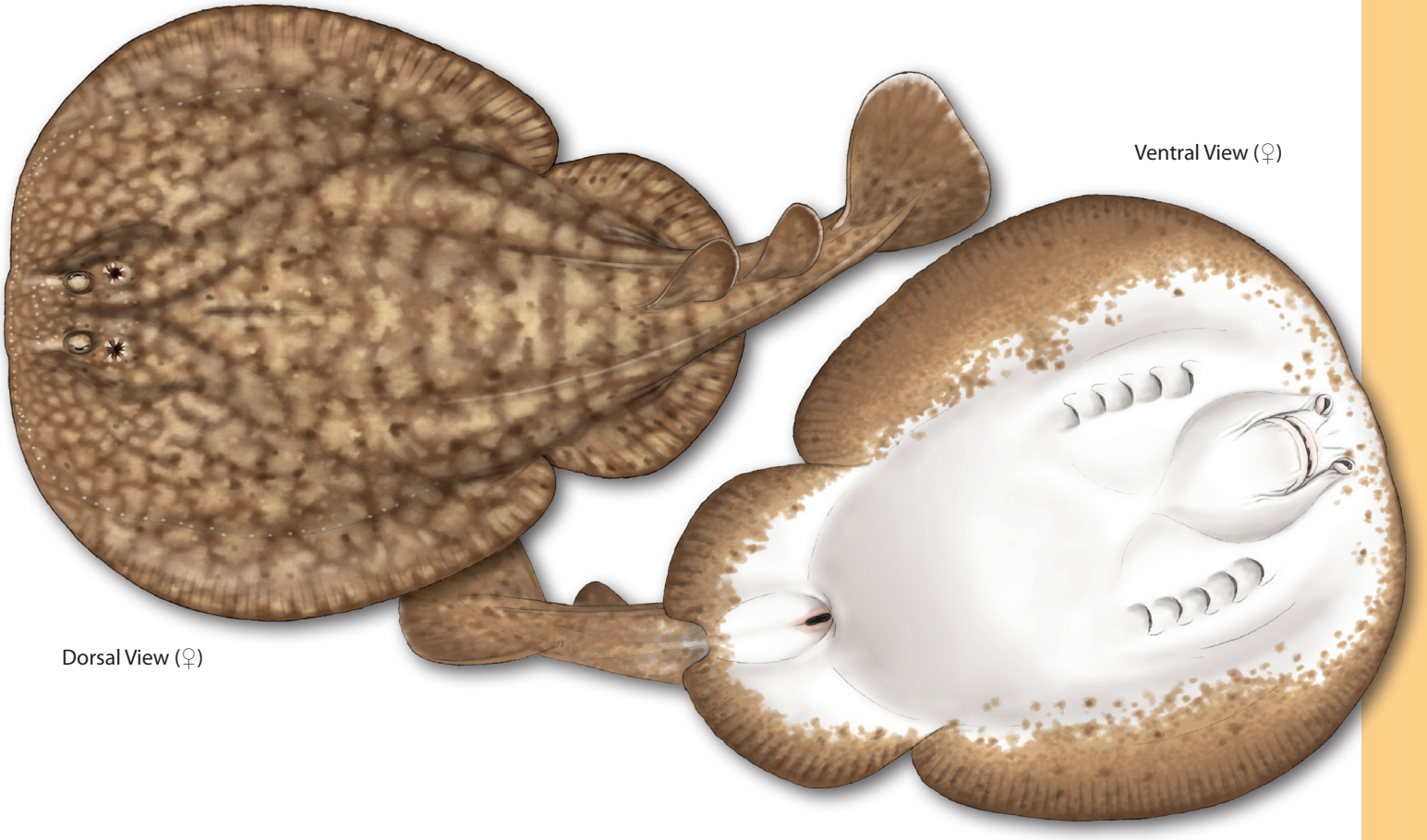
Marbled Torpedo Ray *Torpedo marmorata*



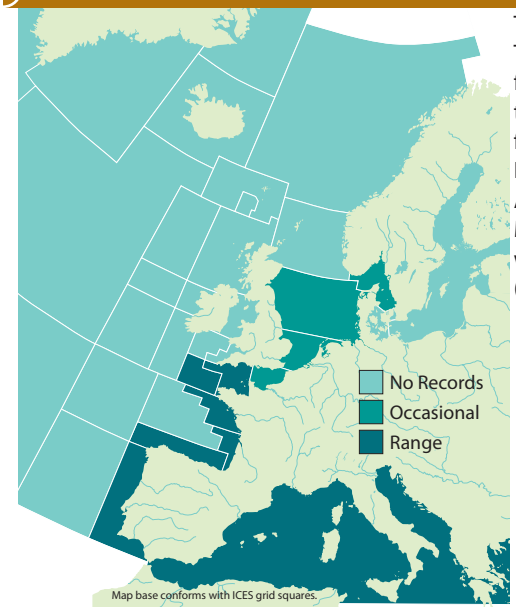
COMMON NAMES

Marbled Torpedo Ray, Marbled Electric Ray, Spotted Torpedo Ray, Common Crampfish, Numbfish, Torpille Marbrée (Fr), Tremolina Marmol (Es), Gemarmerde Sidderrog (Ne), Torpedine Marezzata (It).

SYNONYMS

Narcacion marmoratus (Risso, 1810), *Narcobatus marmoratus* (Risso, 1810), *Torpedo diversicolor* (Davy, 1834), *Torpedo galvani* (Risso, 1810), *Torpedo immaculata* (Rafinesque, 1810), *Torpedo picta* (Lowe, 1843), *Torpedo punctata* (Rafinesque, 1810), *Torpedo trepidans* (Valenciennes, 1843), *Torpedo vulgaris* (Fleming, 1828), *Raja torpedo* (Linnaeus, 1758), *Torpedo torpedo* (Fowler, 1936).

DISTRIBUTION



The Marbled Torpedo Ray is found throughout the east Atlantic from the southern British Isles to South Africa, including the Mediterranean and western Baltic Seas (Bester, Unknown).

APPEARANCE

- Rounded disc with almost straight leading edge.
- Short, thick tail with large caudal fin.
- Two dorsal fins positioned close together on tail.
- Marbled pale and dark brown colouration on dorsal surface.
- Creamy white ventral surface with dark margin.

The Marbled Torpedo Ray is a distinctive ray similar only to the Atlantic Torpedo Ray, *Torpedo nobiliana*, in UK waters. The two species can normally be distinguished by colouration and size however. Failing this, the spiracles of the Marbled Torpedo Ray, *Torpedo marmorata*, have papillae around the inner edge which are lacking in the Atlantic Torpedo Ray, *Torpedo nobiliana*.

It is a small ray which reaches a maximum of 100cm total length, but is rarely found over 80cm (Bester, Unknown). The disc is thick, flabby and rounded with the leading edge being almost straight, although median indentation is seen. The tail is short and thick with a large caudal fin and two close-set dorsal fins. The skin is soft to touch and seems almost loose fitting. There are seven papillae-like protuberances around each spiracle which are absent on the Atlantic Torpedo Ray, *Torpedo nobiliana* (Barnes, 2008).

The Marbled Torpedo Ray gets its common name from the light and dark brown marbled colouration on the dorsal surface of the disc. The ventral surface is creamy white (Barnes, 2008). The small mouth contains single cusped teeth arranged in bands on both jaws (Bester, Unknown).

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Supported by:

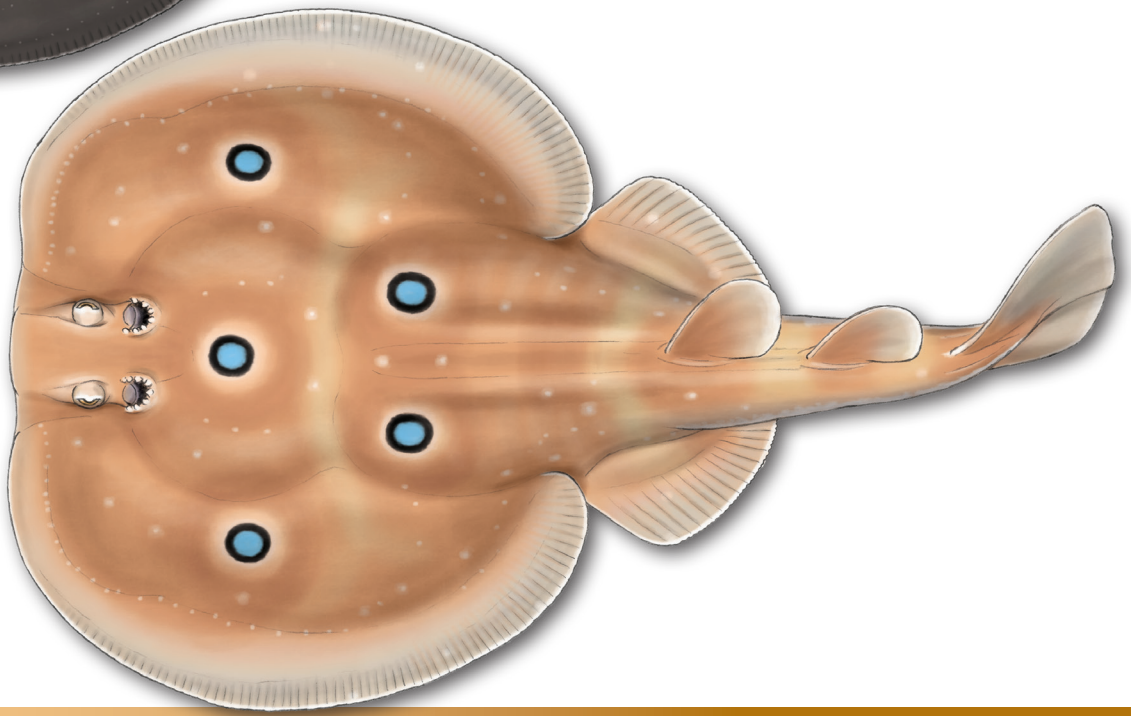
Marbled Torpedo Ray

SIMILAR SPECIES

Torpedo nobiliana, Atlantic Torpedo Ray
Torpedo sinuspersici, Gulf Torpedo Ray
(not illustrated)
Torpedo torpedo, Common Torpedo Ray

Torpedo marmorata,
Marbled Torpedo Ray

Torpedo nobiliana,
Atlantic Torpedo Ray



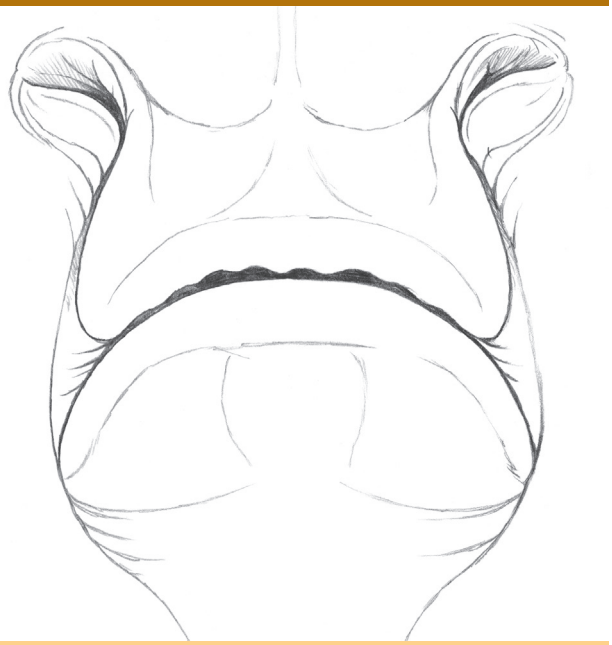
Torpedo torpedo,
Common Torpedo Ray

(Not to scale)

Marbled Torpedo Ray *Torpedo marmorata*

TEETH

Small, single cusped teeth arranged in bands (Bester, Unknown).



ECOLOGY & BIOLOGY

HABITAT

Although it has been reported as deep as 100m (330ft) in the Mediterranean, the Marbled Torpedo Ray is generally found between 10 and 30m (32–98ft) in waters temperatures of less than 20°C (68°F). It is encountered in a variety of habitats such as sand and mud bottoms, rocky reefs and sea grass beds. It is active nocturnally, burying itself during the day with only its eyes and spiracles visible (Bester, Unknown).

DIET

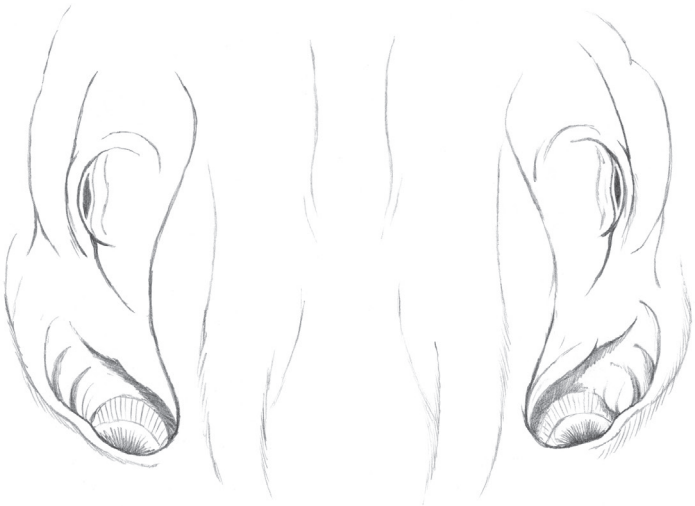
The Marbled Torpedo Ray is an ambush predator, 'jumping' on intended prey whilst emitting a series of electrical shocks to stun it (Belbenoit, 1986). These shocks are generated by highly specialised electrogenic organs which are composed of stacks of striated muscle (Barnes, 2008). When contracted, these produce an electrical current up to 200 Volts and 600 Hz. It can distend its jaws allowing it to catch and consume all sizes of prey including gobies, mullet, mackerel, bogue, pandora, damselfish and crustaceans (Bester, Unknown).

REPRODUCTION

Males mature at around 25cm in length, females larger at around 31cm in length. The gestation period is between 9 and 10 months (Consalvo *et al*., 2007). Like other Torpediniformes, it is ovoviviparous. Ovoviviparity, or leicithotrophic viviparity, is a means of reproduction whereby the embryos develop entirely within the mother. They are encased in a thin membrane which is retained in the uterus (Martin, Unknown). The means of nourishment varies considerably amongst elasmobranchs. In Torpediniformes, the embryo feeds initially on an external yolk sac. When this is depleted, they receive additional nourishment from the mother through the indirect absorption of 'uterine milk', a fat and protein rich histotroph (Bester, Unknown).

The females give birth in November and December and litter sizes can vary between 5 and 32. These young rays measure 10-14cm in length and have fully functioning electrical organs which they can use for defence and hunting (Bester, Unknown). The inter-birth interval is at least 2 years and has been reported as 3 (AnAge, Unknown).

SPIRACLES



Torpedo nobiliana, Atlantic Torpedo Ray

Torpedo marmorata, Marbled Torpedo Ray

Marbled Torpedo Ray

Supported by: SEAFISH, Cyngor Cefn Gwlad Cymru Countryside Council for Wales, defra Department for Environment Food and Rural Affairs, marine and fisheries agency

COMMERCIAL IMPORTANCE

The Marbled Torpedo Ray is currently of no commercial interest, although it is taken as bycatch in trawl fisheries throughout its range. These individuals are usually discarded (Bester, Unknown).

IUCN RED LIST ASSESSMENT

Data Deficient (2008).

THREATS, CONSERVATION, LEGISLATION

Very little is known of the population status of the Marbled Torpedo Ray, although it appears to be more common than other Torpediniformes in the northern Mediterranean and may even be increasing around Italy. As the majority of caught individuals are discarded at sea, catch rates and populations trends are extremely difficult to assess across the majority of its range (Gibson *et al*., 2006).

HANDLING AND THORN ARRANGEMENT

- Handle with care.
- Can produce electrical current up to 200v.

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