



Informationen zur Umwelt und für Naturreisende auf Kreta:
Information about the Environment and for travellers in Crete:

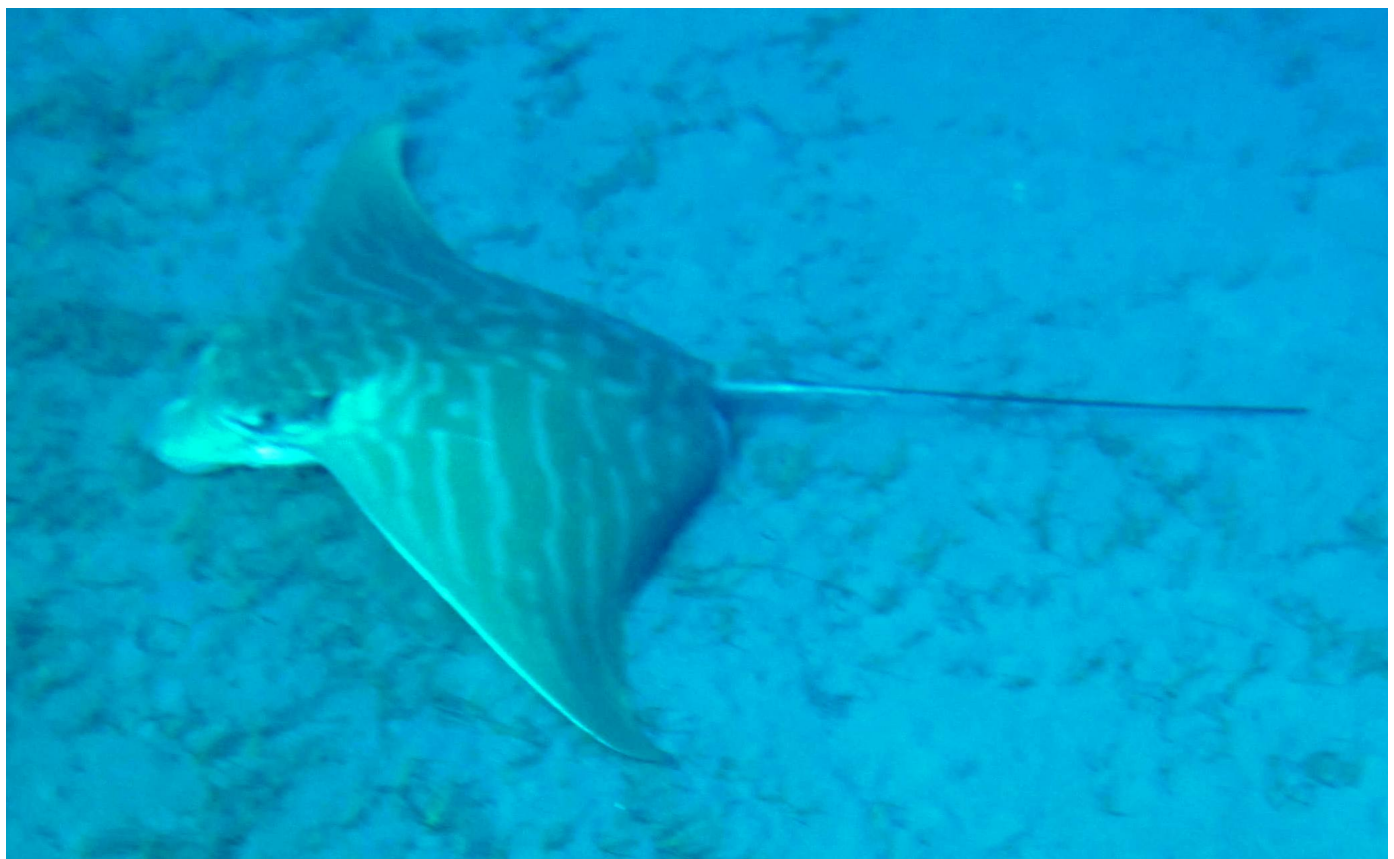
***Pteromylaeus bovinus* (Geoffroy Saint-Hilaire, 1817)**
Bull ray / duckbill ray on Crete's South-West coast



Primary note: We already reported about the fauna of the Mediterranean Sea around Crete with some of our information leaflets; therefore see for example at our web side at navigation rubric **Animals:** [http://www.kreta-umweltforum.de/en/tiere_en.htm]. We also published leaflets about the fossil fish fauna of Crete; those can be found at navigation rubric **Fossils / Place of finding:** [http://www.kreta-umweltforum.de/en/fossilien_en.htm]. But also the other navigator headings of our website contain interesting articles with information about the fauna of the sea around Crete.

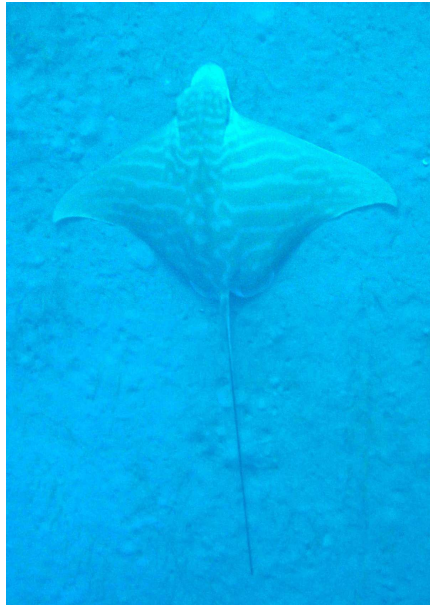
In January 2011 we received pictures from a stingray sighting on the South-West coast of Crete (with a request to determine the type) by Mr. *Gerhard Stelzhammer* who lives and works in Crete as a sculptor since 2009, owns a Studio and also organises workshops; his homepage can be reached via the link: <http://www.gerhard-stelzhammer.at>.

According to the good picture quality, our partners at the Senckenberg Museum (Frankfurt) could quickly make a determination and identified the stingray as a **Bull Ray**, *Pteromylaeus bovinus*; the NLUK here thanks Mr. *Dr. Friedhelm Krupp* (Head of Department Ichthyology, SMF) for determining.



The **pictures** on page 1 and 2 show the about 2 m large bull ray in situ within the Grameno bay / Paleo-chora, South-West Crete. **Pictures:** G. Stelzhammer

The Ray was sighted in 2010 by G. Stelzhammer at least 5 times in the Grameno bay, around 2 miles west from Paleochora / South-West Crete, usually in the evening hours and always in the same places at a depth between 8 and 12 metres above the ground. Already 2009 he noticed round slots there on the seabed that although indicate to potential ray activities.



The **bull ray**, *Pteromylaeus bovinus*, or **duckbill ray** is a large **stingray** of the **eagle ray** (*Myliobatidae*) family, of which are worldwide 42 species in 7 genera und 3 subspecies. This family includes very large rays, which not how their relatives live at the ground of the sea but often live pelagic. Head, torso and the wing-like pectoral fins result in a lozenge-like shape. The whip-like tail is long and has mostly a poison sting near the base.

Eagle rays move forward by wavy up-and-down motion of the pectoral fins. They eat snails, cuttlefish, worms, mussels and crustaceans and crush the shells with their extremely hard teeth; many also eat carrion (fish offal), that's why they often encountered in harbour basin. Eagle rays live on sandy sea bed and are viviparous (ovovivipar). The young are born ahead the tail.

Although its global range is still unclear, it seems to be frequently in the Mediterranean, here often between the surf zones to depths of 150 meters. He can found also at the mouth of rivers and in lagoons; its habitat is just to say benthonic pelagic (brackish water, sea water, deep sea). Its size ranges between 180-250 centimetres and it reach's weight of up to 100 kg, while the females are often heavier than the males. Also the tail thorns of females are considerably with 61 mm longer than of the male bull rays (with 32 mm length).

Further information's about this species can be found at FishBase at (ITIS TSN 160989): [<http://www.fishbase.org/Summary/speciesSummary.php?ID=5011&genusname=Pteromylaeus&speciesname=bovinus&AT=Pteromylaeus+bovinus&lang=English>].



Finally some notes on the phylogeny of the rays: Rays from the as primal amended family of guitarfish (*Rhinobatidae*) appeared first in the Upper/Late Jurassic (154 to 135 million years before today) in the fossil tradition. The genera *Aellopos* and *Asterodermus* are known from the Solnhofen limestone. A further Ray is demonstrated from the Upper-Cretaceous of Lebanon; therefore see also the picture *Libanopristsis hiram*. The recent guitarfish genera, *Rhinobatos*, *Trygonorrhina* and *Zapteryx* are traditional since the Lower-Cretaceous respectively the Middle Eocene.