

Strange marine creatures abound



The By-the-Wind Sailor made an early appearance this year.

A number of fishermen, divers and members of the public have over the past few weeks contacted the Spot the Jellyfish team to report the presence of strange creatures in the seas, besides the current, well-documented mauve stinger (*Pelagia noctiluca*) jellyfish bloom.

These unfamiliar marine creatures are actually not jellyfish but comb jellies (or ctenophores) and pelagic sea squirts (such as salps and pyrosomes). The latter are more complex than jellyfish as they even have a nerve cord.

Comb jellies and sea squirts are not dangerous to humans since, contrary to jellyfish, they lack stinging tentacles. Instead they have sticky tentacles to capture their prey, or they filter plankton out of water through a siphon.

Comb jellies owe their name to the numerous rows, or combs, of small hairs known as cilia, by which they propel themselves. Normally, they bloom during the summer season, and their unseasonal blooming this year may be another symptom of the increasing warming of the Mediterranean Sea.

Satellite ocean colour data refers to surface chlorophyll, which is a measure of the concentration of microscopic plants and hence of the productivity of the sea.

Monitoring carried out by the International Ocean Institute - Malta Operational Centre (IOI-MOC) at the University reveals that there are high presence of surface chlorophyll at this time of year, and this too might explain the increase in comb jellies as these feed on small crustaceans which in turn feed on small planktonic plants.

Under favourable conditions, in a single day, comb jellies can even eat 10 times their own weight, making them formidable competitors to fish larvae. In fact, a particular species of comb jelly – the Sea Walnut (*Mnemiopsis leidyi*) – which was inadvertently introduced in the Black Sea from North America via ballast water, has wreaked havoc with some fish populations in the same sea, notably anchovies and mackerel.

Luckily, this species, despite having also colonised the Mediterranean Sea, has so far not bloomed to the same extent in this area as in the Black Sea.

Comb jellies are normally highly transparent and are capable to generate their own light, a phenomenon known as bioluminescence. Members of a diving club – Atlam – even posted an

online video about a comb jelly species they observed during one of their dives (see www.youtube.com/watch?v=pisP7AY0EJc).

Some fish species, including shoals of picarel and of damselfish, may be observed taking advantage of the bonanza by feeding on some of the salp individuals. The bluish By-the-Wind Sailor (*Velella velella*), normally first encountered in spring, has also been recorded on some beaches over the past few days.

A more user-friendly and informative version of the Spot the Jellyfish poster is being launched this year. As with last year the campaign is financially supported by the Malta Tourism Authority.

The main aim of the campaign is not to scare people off beaches but to provide correct information about different jellyfish species and to generate awareness about the phenomenon of jellyfish blooms in our waters with a view to providing recommendations for their management.

Other entities supporting the initiative this year include Nature Trust (Malta), Friends of the Earth, Ekoskola, the Blue Flag programme and Shark Lab.

Contrary to other jellyfish spotting initiatives, the Spot the Jellyfish campaign will this year be using the common names for jellyfish species rather than their scientific names in order to make the exercise more accessible to the public.

Those wishing to receive copies of the poster or of the leaflets should contact me on alan.deidun@um.edu.mt.

Spot the Jellyfish is a citizen-science IOI-Kids initiative, operated by IOI-MOC at the University under the guidance of Prof. Aldo Drago and myself.

Jellyfish sightings can be reported at www.ioikids.net/jellyfish, by SMS on 7922 2278 or 7960 4109, or via e-mail ioimoc@um.edu.mt.

Where possible, submitted reports should be accompanied by a photo. All reports can be viewed online on <http://193.188.45.233/jellyfish/stats.html>, which shows the occurrence and distribution of jellyfish. Since last June, over 400 reports of jellyfish sightings have been submitted by the public in general.