PRELIMINARY REPORT ON THE EPHYRAE OF PELAGIA NOCTILUCA (FORSKÅL) FROM THE BAY OF TRIEST, NORTH ADRIATIC

Alenka MALEJ
Marine Biological Station, Portorož
Institute of Biology, University E.Kardelj, Ljubljana
Yugoslavia

The ephyrae of Pelagia noctiluca (Forskål) from the Bay of Triest have been studied. Their appearance from May to November in various stages of growth suggests fairly extended spawning period.

***

Jellyfish Pelagia noctiluca appears to be very rare in the north adriatic waters, however during the summers 1977, 1978 and 1979 large swarms of this coelenterate were noticed in the whole Adriatic sea as well as in the Bay of Triest.

Pelagia noctiluca is known as an oceanic species widely distributed in all warm and temperate waters. As the Bay of Triest is characterized not only by low salinity during the spring and early summer but also by great environmental changes, it seemed of interest whether this oceanic species would reproduce under such conditions.

This jellyfish has direct development without sessile scyphostoma stage. After fertilization the egg developes to planula which grows through diffently shaped ephyrae into a single medusa.

On the basis of zooplanktonic material sampled approximately beweekly from May to November and monthly in other periods of the years 1978 and 1979, we could conclude that Pelagia noctiluca successfully bred in the Bay of Triest.

Our first record of Pelagia noctiluca ephyra was on June 28, 1978, two specimens were small, 0.5 mm in diameter, while the other one was 2.3 mm large, suggesting that spawning have started at least half a month before. Thereafter the ephyrae of different sizes were present throughout the summer, the latest finding was on November 8, the specimen being 0.6 mm in diameter. Next year, in 1979, ephyrae reappeared in May, we recorded 0.5 mm ephyra on May 22. The breeding extended over the summer untill October, at the end of this month we found ephyrae from 3.1 mm to 4.5 mm of size. It appears that the reproduction of Pelagia noctiluca in the Bay of Triest continued at intervals from May to November what was confirmed by findings of small ephyrae throughout the summer and early autumn. The smallest specimen found was 0.3 mm large planula with a dark spot at one end and a ring of small knobs at another one. The latter then developed into eight lobed lappets, each one with a sense organe. The largest ephyra 4.5 mm in diameter had the rudiments of four marginal tentacles, four premordial oral lips, well developed rhopalia and conspicious nematocyst clusters. Other examined specimens were in various stages of growth.

Although the factors which may influence the appearance of ephyrae could not be well defined, we measured temperature and salinity paralelly to zooplankton sampling. These environmental factors varied greatly in the time of ephyrae occurence: salinity ranged from 33.66 $^{o}/_{oo}$ to 38.13 $^{o}/_{oo}$ and temperature from 13.21^{o}C to 24.1^{o}C. However, this indirect method of establishing the necessary conditions for spawning of Pelagia noctiluca have to be completed with other data as well as observations from different regions and laboratory experiments.