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NEUOBIČAJENA POJAVA MEDUZE *PELAGIA NOCTILUCA* U JADRANU

UNUSUAL OCCURENCE OF *PELAGIA NOCTILUCA* IN THE ADRIATIC

II — The occurence of *Pelagia noctiluca* in the Gulf of Trieste and its correlation with the wind distribution

II — Pojava meduze *Pelagia noctiluca* u Tršćanskom zaljevu u odnosu na raspored vjetrova

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Unusual swarming of *Pelagia noctiluca* has been observed in Northern Adriatic since 1977. This phenomenon and its correlations with the characteristic currents and winds in the region are discussed.

The results [1, 2] of some recent observations on the occurrence of *Pelagia noctiluca* in the Gulf of Trieste were presented, together with some statistical data on the wind distribution in this area and a discussion on the relations between wind, surface currents and coastal swarming of planktonic organisms.

The following points were stressed.

i) Surface currents are responsible as regards transport and gathering of floating planktonic organisms like *Pelagia noctiluca.*

ii) Wind driven currents play an important role in the diurnal, seasonal and long period surface transport and gathering of such organisms along the coast.

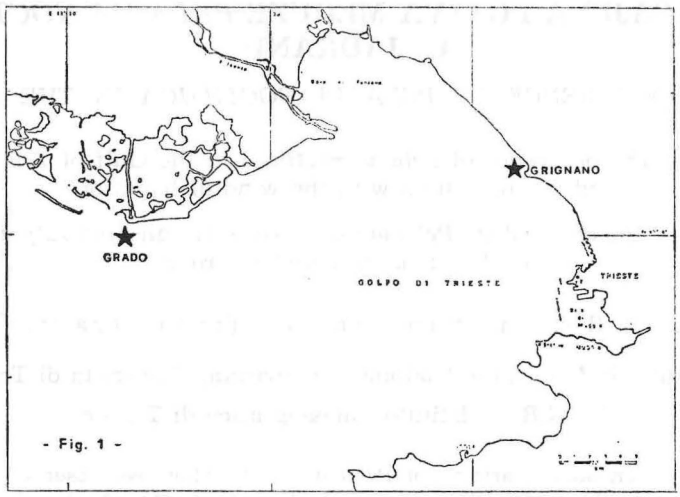
iii) *Pelagia noctiluca* have been observed in the northern closed end of the Adriatic sea, mainly in the gulf of Trieste, beginning since 1977 each year, with maximum occurrencies in summer.

iv) The seasonal cycle of occurrence of *Pelagia noctiluca* in the surface layer founds favourable conditions to the coastal gathering and swarming in the wind regimen; westerly sea breezes have their maximum frequency in summer, when the dominant ENE wind in the gulf (»bora«) has its minimum frequency.

v) These last years (1977—1980), characterized by the presence of *Pelagia noctiluca* in the Gulf of Trieste, have been also characterized by a marked reduction (15 days/year) of easterly winds, driving surface currents away from the gulf, and by an increase (11 days/year) of both westerly and southerly winds.

vi) Since at least 1951, 1977 was the year with a minimum frequency of easterly winds and a maximum frequency of southerly winds. This must

have significantly increased the northwards component in the surface circulation of the Adriatic in that period; it is in that year that *Pelagia noctiluca* made its first appearance in the Gulf of Trieste.



- Fig. 1 -

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KRATAK SADRŽAJ

Geografske karakteristike i normalni hidrografski režim u Sjevernom Jadranu omogućavaju da se protumači zaustavljanje meduze *Pelagia noctiluca* u ovom području.

Pojava i zadržavanje ove meduze u Tršćanskom zaljevu, ovih posljednjih godina, u većem broju, dovelo se u vezu sa neuobičajenim klimatskim prilikama. Raspored vjetrova od 1977—1980. uspoređen sa normalnim ranijim rasporedom, pokazuje da je ovih zadnjih godina nastupio karakterističan pad istočnih vjetrova, a porast južnih i zapadnih vjetrova, koji tjeraju površinske struje prema Sjevernom Jadranu.