

PRELIMINARY REPORT ON THE OCCURRENCE OF Pelagia noctiluca

(SEMAEOSTOMEAE, PELAGIIDAE) IN NORTHERN ADRIATIC

(Sur la présence de Pelagia noctiluca (Semaestomeae, Pelagiidae)
dans l'Adriatique du Nord. Note préliminaire)

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ABSTRACT

Unusual swarming of Pelagia noctiluca has been observed in Northern Adriatic beginning since summer 1977. This phenomenon and its correlations with the meteorological and hydrodynamical conditions in that region are discussed.

RESUME

Nous présentons ici les phénomènes et les corrélations entre la situation météorologique et hydrodynamique de cette région et la présence de Pelagia noctiluca.

Beginning since 1977, many swarms of Pelagia noctiluca have been observed in the northern closed end of the Adriatic Sea, mainly in the Gulf of Trieste. The phenomenon, unusual in this area, continued in 1978, 1979 and 1980, with maximum occurrences in summer.

A correlation is found (ROTTINI-SANDRINI, STRAVISI & PIERI, 1980) between the arrival of these planktonic organisms and a shift in the normal wind distribution at Trieste (table 1). An increase is indeed observed in the frequency of southerly winds, which drive surface currents towards Northern Adriatic. The local westerly sea breezes, which during summer produce a surface circulation towards the NE coast in the Gulf of Trieste, increased their frequency as well. As a consequence, the easterly winds frequency ("bora", the ENE wind, is dominant in this area) diminished in these last years: winds from this quadrant tend to drive the surface layer away from the Gulf of Trieste.

1977-1979 :	ref. to 1951-1975;		ref. to 1967-1976	
	%	days/year	%	days/year
N	+ 0.1	-	-	-
E	- 6.7	- 24	- 4.0	- 15
S	+ 5.2	+ 19	+ 2.9	+ 11
W	+ 1.9	+ 7	+ 2.9	+ 11
calm	- 0.5	- 2	- 1.8	- 7

Table 1 - Difference between the recent wind frequency distribution at Trieste and the preceding period.

The conclusion is that, apart from upstream and local proper biological and idrological conditions, the unusual occurrence and persistence of Pelagia noctiluca could develop in this area owing to a favourable change in the wind distribution and therefore in the surface wind driven currents.

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REFERENCES

ROTTINI-SANDRINI (L.), STRAVISI (F.) & PIERI (G.), 1980.- A recent shift in the wind distribution and the appearance of unusual planktonic organisms in the Gulf of Trieste. Boll. Soc. Adriat. Sc., LXIV.