

The Appearance of Pink Coloured Mussels (*Mytilus galloprovincialis* Lamarck) on the Western Coast of the Istrian Peninsula

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The appearance of mussels with pink coloured inner part of the shell (nacreous layer) was registered for the first time at several places on the Western coast of the Istrian peninsula during the phytoplankton bloom in the mid-summer of 1989. At present, the incidence of pink mussels, according to the information of several persons, has never been observed further south along the Yugoslav coast. In February and March 1990, a survey of mussel populations was made to elucidate the problem on the appearance of pink mussels.

Samples (53 to 75 specimens) were collected from natural and commercial mussel populations at various localities of the Istrian peninsula. Mussels were measured by the vernier caliper, and were divided into three length groups.

- smallest mussels with specimens shorter than 20 mm,
- mussels between 20 and 40 mm, and
- mussels longer than 40 mm.

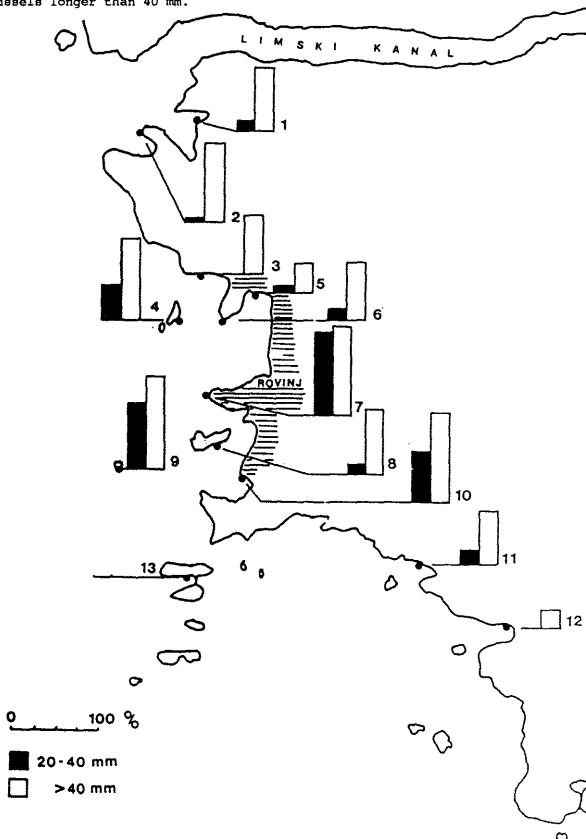


Fig. 1 - Incidence and percentages of pink mussels (*Mytilus galloprovincialis* Lamarck) in the Rovinj area. Sampling stations: Valalta (1), cap Faborsa and Saline (2), Leso (3), Figarola Island (4), Valdbora (5), Muccia (6), Rovinj (7), Katarina Island (8), Banjole Island (9), Lone (10), Polari (11), Vestar (12) and Red Island (13).

At some places investigated mussels larger than 40 mm were scarce, and this group sometimes comprehended less than 25 specimens per analysis.

Preliminary observations indicate the following results:

1. Pink mussels are present in natural populations along the coast of the Istrian peninsula, especially in the Rovinj, Porec and Vrsar areas.
2. In the Rovinj area, pink mussels were abundant in more polluted zones, on the coast close to the town and tourist zones (Fig. 1).
3. Not one pink mussel was observed among the mussels smaller than 20 mm in length.
4. The smallest pink coloured mussel was 22 mm in length.
5. The highest incidence of pink mussels occurred in the group of specimens longer than 40 mm in length.
6. In one mussel a number of pink pearls was found.
7. The pink coloured nacreous shell layer was also observed in other bivalve species.
8. Investigations area in course, and will be continued till autumn months.

According to the results, we suppose that the pink mussel shell indicates some disturbance in the normal shell formation (Wilbur 1961), which appears to be in connection with the increased degradation of the northern Adriatic Sea environment (Degobbi 1989; Zavodnik et al. 1989), due to the intensive inflow of various pollutants, or it could be attributed to same pathogen agents.

REFERENCES

- DEGOBBIS, D., 1989. Increased eutrophication of the northern Adriatic Sea. Second act. *Mar. Pollut. Bull.* 20 (9): 452-457.
- WILBUR, K.M., 1964. Shell formation and regeneration. In: *Physiology of Mollusca* 1. K.M. Wilbur, C.M. Yonge, eds, Academic Press, New York: 243-282.
- ZAVODNIK, D., ZAVODNIK, N., HRS-BRENKO, M., JAKLIN, A., ZAHTILA, E., 1989. Neobicajeni oblik eutroficacije u sjevernom Jadranu u 1988. godini. 5. Posljedice na zivotne zajednice morskog dna zapadne obale Istre. Konferencija o aktuelnim problemima zastite voda "Zastita voda '89", 1, Rovinj 3-5 May 1989: 439-446.