

RECENT KNOWLEDGE ABOUT OYSTER LARVAE AND
SPAT IN LIMSKI KANAL

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Summary. The study of Ostrea and Crassostrea larvae and their settlement in Limski kanal was conducted to determine the best periods and zones for commercial collection of oyster spat.

Résumé. Les études concernant les larvas et la fixation du naissin des Ostrea et Crassostrea ont été effectuées afin d'établir les périodes et les zones favorables pour la collection du naissin destiné à l'élevage commerciale.

The presence of both commercial oyster species Ostrea edulis and Crassostrea gigas in Limski kanal motivated the studies on the intensity of their recruitment into populations. The observations were focused to determine seasons, fluctuations and distribution of both oyster larvae, especially of the mature ones in connection to the intensity of their settlement. The aim of these observations was the establishment of the best periods and zones for commercial collection of oyster spat.

Plankton samples were collected by vertical tows with a Hensen 160 μ m mesh plankton net from 3 or 7 m depth to the surface, and by 5 l Niskin water samplers at various depths up to 10 m depth. Oyster spat was analysed on experimental glass plates (140 cm²) and on commercial collectors.

It was already established that the earlier initiation of the Ostrea spat spawning season (March, April), and the appearance of the first mature Ostrea larvae (May, June) in the plankton as well as the first Crassostrea larvae, later on (mid July) are the result of the differences in temperature requirements for gonad development of both oyster species (Hrs-Brenko, 1969, 1980, 1981; Peruško, 1970). This finding indicates the possibility of obtain-

ing only Ostrea spat in June, before the appearance of mature Crassostrea larvae in the water. Also, later on, in summer, when a mixture of both kinds of oyster spat on collectors is found, Crassostrea is usually settled from surface to 3 m depth, and Ostrea specimens from 1 to 5 m depth (length of the examined collector). It appears that the observed settlement behavior of both oyster larvae could be the result of differences in larval salinity tolerances of both species.

Most of the observations on horizontal and vertical distribution of larvae in Limski kanal are still preliminary. Crassostrea larvae were observed in various numbers along Limski kanal, while Ostrea larvae mostly in the inner part of the Kanal. At the station near the shellfish park an abundance of Ostrea larvae was registered in deep water layers, but during moonless nights their larvae penetrated to the surface. Crassostrea larvae were usually in the upper water layers, but occasionally they were also found individually in higher depths.

These preliminary observations indicate that oyster larvae are distributed abundantly also in the zones where at present an active collection of spat does not exist and that an extension of oyster spat harvesting is possible in Limski kanal.

References

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