

**SETTLEMENT OF BALANUS SPP (CRUSTACEA CIRRIPIEDIA)
IN A LAGOON IN THE PO RIVER DELTA, ITALY. ***

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SUMMARY - In the "Sacca del Canarin", a brackish lagoon in the Po river delta, where oligohaline and polyhaline zones occur, three species of barnacles were recorded: Balanus improvisus Darw., B. eburneus Gould and B. amphitrite Darw.; the latter is very rare and found only in polyhaline zones. B. improvisus settles throughout the year but mainly in summer and autumn, while B. eburneus, the largest species, settles only in summer and in meso-polyhaline zones.

RESUME - Installation des Balanes (Crustacés Cirripedia) dans une lagune du Delta du fleuve Pô.

Dans la lagune dite "Sacca del Canarin" (Delta du fleuve Pô), où se mélangent des eaux oligohalines et polyhalines, on a récolté trois espèces de Balanes: B. improvisus Darw., B. eburneus Gould et B. amphitrite Darw.: la dernière est rare et limitée aux zones polyhalines. B. improvisus s'installe durant toute l'année avec des maximums en été et en automne, tandis que B. eburneus, espèce ayant les plus grandes dimensions, s'installe durant l'été et dans les zones méso-polyhalines.

During an investigation of the macrobenthos on asbestos test panels and various other hard substrata in the lagoon "Sacca del Canarin" (S.C.) Po river delta, barnacle settlement was studied over a period of three years. The purpose of the investigations was to determine possible future changes in the biology of the lagoon as a result of the operation of a large power station, presently under construction. It is proposed that the cooling water from the power station will be drawn from either the adjacent Pila branch of the river Po or from this brackish lagoon. The lagoon is very shallow (less than 1.5 m deep; 1 m tidal range), and variable in salinity although generally it is low, and sometimes, in the northern part, does not exceed 1 - 5 per thousand; nutrient and temperature levels can also vary considerably (for further information see ENEL - CRTN 1980, RELINI et al. 1980).

The asbestos panels were exposed for 1, 3, 6, 9, and 12 month periods at four stations (A, B, C, D,) on the western side of the lagoon from January to December 1977 and at seven stations (three additional stations H, L, S, the latter being sited in the neighbouring lagoon (S.S.) "Sacca di Scardovari") from January 1978 to December 1979.

* Research supported by a contract from the University of Genoa and ENEL-CRTN Milano.

Among the three species of barnacles found, Balanus improvisus Darw., B. eburneus Gould and B. amphitrite Darw., the latter was very rare in the S.C. and only collected in polyhaline waters. B. improvisus was the more resistant to low salinity and was common in oligohaline waters, while B. eburneus was found in meso-polyhaline zones. In some zones and particularly at Station D the latter species reached a basal diameter (maximum recorded, 29 mm, rostro-carina) more than twice the maximum diameter recorded for B. improvisus (13 mm). It is well known that in B. eburneus, shells are much larger in brackish lagoons compared to those in the sea. In the S.C. the heaviest settlement of barnacles occurred in summer and the lightest settlement occurred between January and March, while in the S.S. the summer settlement was poor, probably because of a dystrophic period. B. improvisus settled throughout the year in densities of up to 3200 individuals/dm² on monthly panels in the summer; B. eburneus only occurred in the S.C. in the summer in densities of up to 115 individuals/dm² on monthly panels and 123 individuals/dm² on panels immersed for longer periods; in the S.S. B. eburneus occurred in the spring. B. amphitrite was more common in the S.S. where the salinity was higher and a Mytilus galloprovincialis Lam. community was dominant.

ENEL - CRTN, 1980 - Ricerche naturalistiche nell'area del Delta Padano interessata dalla costruenda centrale di Porto Tolle. Relazione riassuntiva annuale ottobre 1977 - ottobre 1978. pp. 1-43, ed. CRTN-ENEL, Milano.

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