

Corbula gibba (OLIVI) POPULATIONS IN THE NORTHERN
ADRIATIC SEA

Mirjana HRS-BRENKO
Center for Marine Research, "Rudjer Bošković" Institute
Rovinj, Yugoslavia

SUMMARY

Corbula gibba (Olivi) populations' characteristics and their distribution in the Northern Adriatic Sea are discussed.

RÉSUMÉ

Les caractéristiques et la distribution des Corbula gibba (Olivi) populations dans l'Adriatique septentrional sont discutés.

Numerous specimens of the common basket-shell, Corbula gibba (Olivi, 1792) are often sampled from bottom communities in the Northern Adriatic Sea. Biocenological investigations through several years allowed the study of Corbula population characteristics and their distribution.

Corbula is widely distributed along the European coasts and along the west coast of Africa to Angola from the intertidal to bathial zones. It prefers silty sand mixed with larger pieces of gravel and pebbles with the animals need for attachment by byssus threads.

The bottom samples were taken by various dredges (Charcot, "mušular", Riedl, triangular biological dredge) and grabs (Petersen, Van Veen). Samples were sieved through a sieve with the mesh size of 2 mm. Biometrical analysis of the main body dimensions of Corbula ranged from 4.8 to 13.4 mm (mean value 9.14 ± 1.36 mm) in length, from 3.2 to 10.0 mm (mean: 7.49 ± 1.19 mm) in height and from 2.4 to 8.0 mm (mean: 5.08 ± 0.88 mm) in depth. The correlation between length and height as well as between length and depth of shell was linear and positive with correlation coefficients 0.9174 and 0.8481 respectively. Size frequency distribution of Corbula, larger than 3 mm in length, in the bottom samples per month, indicated that population structure was not changed much during 1968/69. Mean length values varied from 6.57 to 8.88 mm. According to Graeffe (1903) Corbula spawns in September but we could not establish the exact time of the recruitment of young specimens. Several small specimens (less than 2 mm) were found in January,

which could belong to an autumn spawning stock.

In the Bay of Venice, Corbula was frequent on the coastal detritic bottom distributed 12-15 miles offshore in Tellina zoocenosis established by Vatoва (Vatova, 1949; Zavodnik, 1971). Specimens were abundant especially in mixed biocenoses in the areas with more silt content (Péres i Gamulin-Brida, 1973). On the south part of Istrian peninsula, on clean sand and under the influence of bottom currents, Corbula was not found. The specimens were present in the biocenoses of coastal terrigenous mud (Turritella facies) near river Po, but was not found in the Gamulin-Brida's community Nephtys norvegicus - Nucula profunda in Kvarner region. Since Corbula is found in polluted zones (Rijeka harbour, near mouth of the river Rječina, in Bakar Bay and especially in Pula Bay), it seems that Corbula populations are not essentially influenced by increased pressure of pollutants.

R e f e r e n c e s

- GRAEFFE, E., 1903. - Übersicht der Meeresfauna des Golfes von Triest; VI. Mollusca, Arbeiten zool. Institut Wien u. zool. Station Triest, vol. XIV, pp. 39-136.
- PÉRES, J.M. i GAMULIN-BRIDA, H., 1973. - Biološka oceanografija, Zagreb, pp. 1-493.
- VATOVA, A., 1949. - La fauna bentonica dell'Alto e Medio Adriatico, Nova Thalassia, 1(3), pp. 1-110.
- ZAVODNIK, D., 1971. - Contribution to the dynamics of benthic communities in the region of Rovinj (Northern Adriatic), Thalassia Jugosl., 7(2), pp. 447-514.