MINISTRY OF FINANCE, EGYPT

Coastguards and Fisheries Service

FISHERIES RESEARCH DIRECTORATE

NOTES AND MEMOIRS No. 9

THE FISHERY GROUNDS NEAR ALEXANDRIA

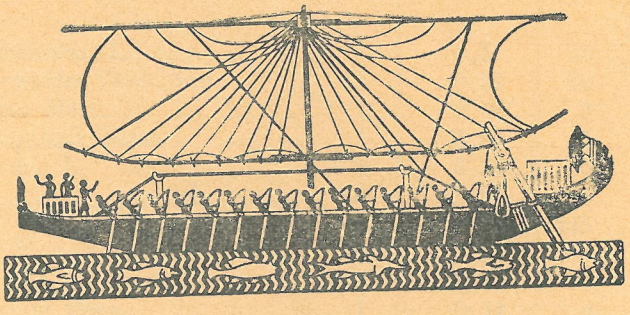
II.—A BOTTOM SAMPLE TAKEN AT ALEXANDRIA

(with One Figure)

BY

ARISTOCLE VATOVA

Rovigno d'Istria, Italia



CAIRO

GOVERNMENT PRESS, BULÂQ

1935

MINISTRY OF FINANCE, EGYPT

The Fishery Grounds near Alexandria

II.—A Bottom Sample taken at Alexandria

BY

ARISTOCLE VATOVA

Prof. A. STEUER had the courtesy to put at my disposal a sample taken by him with a PETERSEN GRAB of 0·2 square metre surface. It was taken on September 2, 1933 in the Eastern Harbour, Alexandria, near the swimming bath at the anchoring place of the El Hoot. The bottom at 3 metres depth was sandy and covered with Caulerpa on which tubules of Serpulids and small Hydroids were found. This sample is important in a way, as it is the first one taken in the Eastern Mediterranean.

ALEXANDRIA (EGYPT) SANDY BOTTOM, 3 METRES DEPTH

Tp.	Station I		Average per square metre	
	Nr.	Weight	Nr.	Weight
Gibbula umbilicaris (L.) juv.	3	0,3	15	2,55
Gibbula turbinoides Desh. juv. ...	2	0,32	10	1,60
Natica hebraea Mart.	1	0,08	5	0,40
Neverita Josephinia Risso	1	0,07	5	0,35
Murex trunculus L.	1	6,35	5	31,75
Tapes aureus Gm. var. *catenifera* Lam. ad.	8	18,90	40	94,50
Tapes aureus Gm. var. *catenifera* Lam. med. ...	89	79,50	445	397,50
Tapes aureus Gm. var. *catenifera* Lam. juv.	10	3,60	50	18,00
Phyline sp.	1	0,45	5	2,25
Asterina gibbosa Penn.	1	0,14	5	0,70
Pirimela denticulata Mont.	1	0,23	5	1,15
Cumacea	1	0,001	5	0,005
		110,151		550,755

The larger part consists of *Tapes aureus* Gm. var. *catenifera* Lam. (107 specimens with a total weight of 102 grammes), to which are added *Murex trunculus* L., *Gibbula umbilicaris* (L.), *Gibbula turbinoides* Desh., *Natica hebraea* Mart., *Neverita josephinia* Risso, *Phyline* sp. (one specimen of each). Of Echinoderms *Asterina gibbosa* Penn. (one specimen) and of Crustaceans *Pirimela denticulata* Mont. (one specimen) and one Cumacea were taken. Remarkable is the lack of Polychaets.

The total weight of organic substance is 110,151 grammes per 0·2 square metre or 550·76 grammes per square metre; but as we are dealing only with one sample the average per square metre is very arbitrary.

The sample belongs to the biocenosis Tapes (Tp.). In the Adriatic an analogous biocenosis occurs, which extends on sandy bottoms in the canals of the lagunes of Venice. The predominating species are *Tapes aureus* Gmel. (24·1 specimens), *Nassa mammillata* Risso (8 sp.), *Cyclonassa neritoea* L. (2·5 sp.); *Nucula nucleus* L. (7 sp.). Among Polychaets we meet *Nephthys Hombergii* Milne-Edw. (2, 3 sp.). *Euclymene lumbricoides* Quatr. (4·3 sp.) *Sternaspis scutata* Malmg. (3 sp.) *Owenia fusiformis* D. Ch. (1·8 sp.). Of Echinoderms are found *Amphiura Chiajei* Forb. and *Ophiothrix quinquemaculata* D. Ch., of Crustacea *Diogenes pugilator* Roux (4, 8 sp.), *Carcinides maenas* L. (1. 3 sp.), various Cumacea and Gammarids. The epifauna consists of numerous Actinia (11 sp.) and some Sponges. The weight of organic substance is 131,65 grammes per square metre as average of 40 samples of 0·1 square metre each (=4·0 square metre). The richest sample weighed 47·87 grammes; the poorest 0·23 grammes.

Spärck (1931) gives for the Bay of Algiers an average weight of 18·7 grammes per square metre as average of 9 samples of 0·2 square metre, taken mostly on mud bottoms between 13 and 400 metres depth. (*).

It is interesting to compare the percentage share of different animal groups at the three localities of the Mediterranean (Fig. 1). Venice and Alexandria resemble each other very closely as they are taken at analogous biocenosis. Lamellibranchia dominate; Gastropods are rare; Echinoderms very rare; Polychaets rare at Venice, lack completely at Alexandria; Crustaceans, rare at Venice, are very rare at Alexandria. In this respect, Algiers differs completely,

(*) Spärck, R.—Some quantitative investigations on the bottom fauna at the West coast of Italy, in the Bay of Algiers and at the coast of Portugal; Rep. Danish Oceanogr. Expedition 1908–1910 to the Mediterranean and adjacent Seas. Vol. III, 1931.

as there predominate Echinoderms, Crustaceans and Polychaets, while Lamellibranchs are scarce and Gastropods lack. This can be seen in the following table:

WEIGHT PERCENTAGE PER SQUARE METRE

	Alexandria	Algiers	Venice
Lamellibranchia	93,0	6,2	78,2
Gasteropoda	6,7	0,0	8,7
Polychaeta	0,0	23,6	4,4
Crustacea	0,2	28,6	8,2
Echinodermata	0,1	41,6	0,5

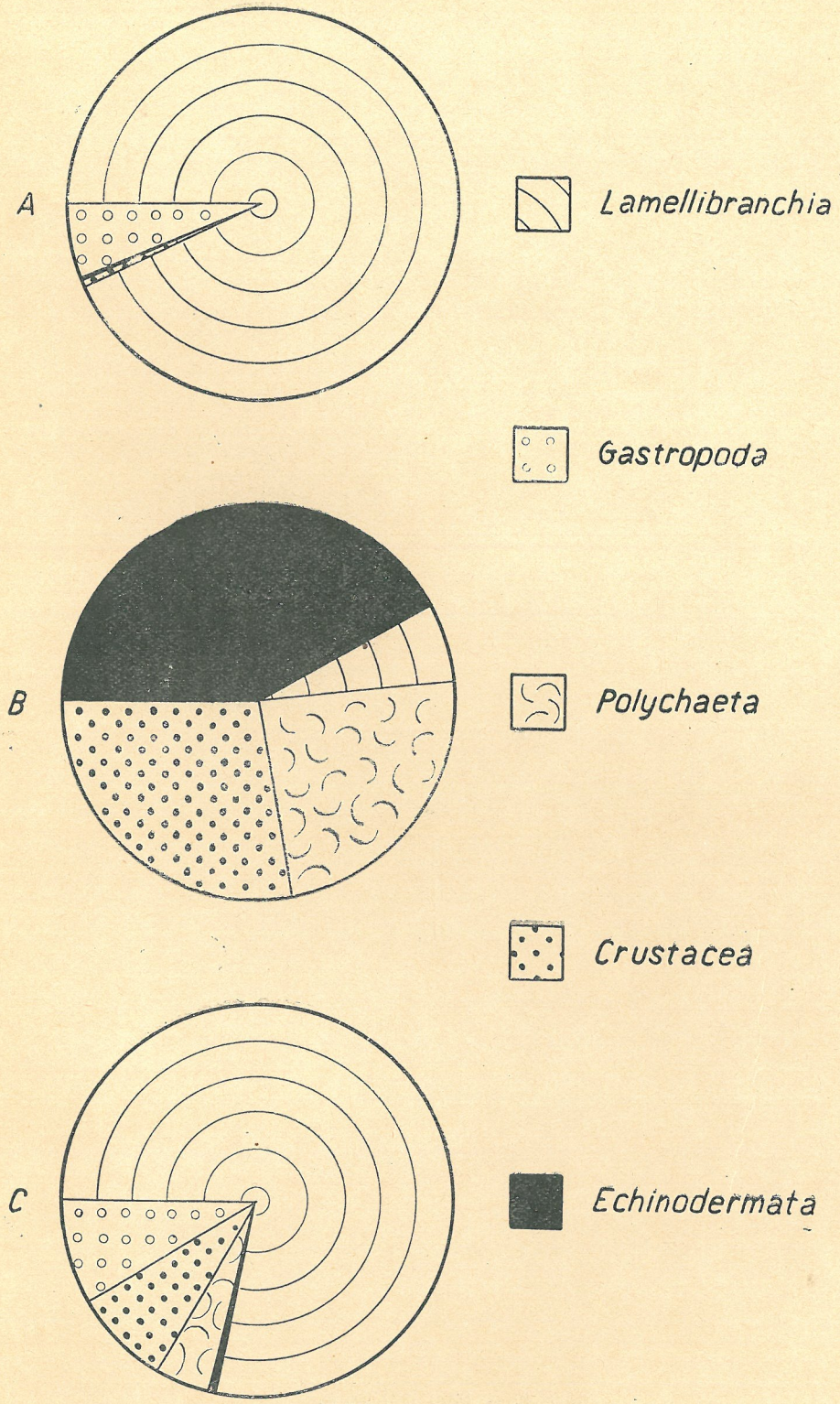


FIG. 1.—Quantity of Lamellibranchia, Gastropoda, Polychaeta, Crustacea and Echinodermata at Alexandria (A) Algier (B) Venice (C) in percentage of total weight per square metre.