

البحث الثالث: (مستمد من رسالة)

Title: Factors Associated with the Distribution of the Invasive Bivalve Clams "*Donax Variabilis* (Say, 1822)" at the Area of the Mediterranean Coast Preferred by Marine Fish Larvae, New Damietta, Egypt.

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Abstract:

New Damietta shore is one of the important areas for collection of the clams as well as mullet, seabass and seabream larvae which are reliable for marine aquaculture in Egypt. *Donax variabilis* was recorded for the first time in Egypt and because of its presence in the area of Damietta Maritime Port, larvae has come stuck with ships from the Atlantic Ocean where they were registered there. The density of *D. variabilis* increased in site I ($718 / m^2$) than in site II ($410 / m^2$). Water salinity (33.43 ± 4.09 mg/ L) in site I was less than the salinity of the sea, while it was almost similar to the salinity of the sea (36.94 ± 3.40 mg/ L) at site II. Nutrients concentration at site II were higher than that at site I, where it averaged 0.02 ± 0.01 , 0.05 ± 0.03 and 0.26 ± 0.16 at site I and 0.05 ± 0.03 , 0.34 ± 0.41 and 0.46 ± 0.36 mg/l at site II for NO_3^- , NO_2^- and PO_4^{3-} respectively. Measured *Chlorophyll a* was high at site II (0.20 ± 0.12 mg/m³) compared to site I (0.20 ± 0.12 mg/m³), revealing the increase in phytoplankton biomass at site II. Crustaceans and molluscs were the most groups associated with clam's beds. *D. variabilis* cohorts appeared during summer months, this indicates that the population consists of only one spawning event. Length frequency of *D. variabilis* was essentially bimodal during the period of study. Three modes were recorded in June, 2008 at size classes of 7, 11 and 20 mm of shell length.

Key words: Mediterranean coast- *Donax variabilis*- A biotic factors- Biotic factors

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