

البحث السادس: (منفرد)

Title: Population analysis of *Tapes decussata* (Bivalvia: Veneridae) in Lake Timsah, Suez Canal, Egypt.

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Abstract:

The population of *Tapes decussata* was abundant in the southern region of Lake Timsah. It was investigated between August ٢٠٠٤ and September ٢٠٠٥. Mean abundance and biomass were $٧٦.٩ \text{ ind.m}^{-٢}$ and $٥.٣٣ \text{ g.m}^{-٢}$ (flesh dry weight), respectively over the study period ($n=١٤$). Population parameters (growth, mortality and recruitment) were studied by analyzing monthly length frequency data using FiSAT II software to evaluate the status of the stock. Asymptotic length (L_{∞}) was found to be ٥٠.٤٠ mm and growth co-efficient (K) was $٠.٨١٠ \text{ yr}^{-١}$. The growth performance index (ϕ') was ٣.٣١ . Total mortality (Z) was estimated by length-converted catch curve at $٢.٥٢ \text{ yr}^{-١}$, fishing mortality (F) at $١.٢٤ \text{ yr}^{-١}$, and natural mortality (M) at $١.٢٨ \text{ yr}^{-١}$. The exploitation rate ($E=٠.٤٩ \text{ yr}^{-١}$) indicated that the fishing pressure on *Tapes decussata* was relatively high. Recruitment pattern was continuous with four pulses per year. These pulses were found to be correlated with the spawning pattern of the species in Lake Timsah.

KEYWORDS: Lake Timsah; *Tapes decussata*; Veneridae; von Bertalanffy; Recruitment; Mortality

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