
Ichthyoplankton characterization in the entrance of Guanabara Bay

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Abstract

The present study was carried out in the entrance of the Guanabara Bay (RJ), at latitudes 22°40' and 22°57'S and longitudes 43°01' and 43°16'W, during June of 1993 to May of 1995. The purpose was to investigate qualitative and quantitatively the composition of the ichthyoplankton, the influence of abiotic factors and their interspecific relationships. Twenty-four samplings were realized, with six stations in the entrance of the bay. The water temperature and salinity, in the surface and near the bottom, were measured. The water transparency was measured with Secchi disc. The ichthyoplankton was collected by oblique hauls with bongo net and by horizontal hauls with neuston net. In both nets, 500 µm mesh were utilized. The nets were hauled at about ten minutes. Calibrated flowmeters were adapted in the both nets. Specific diversity of fish larvae was calculated. Interrelations of biotic and abiotic data were statistically analysed. The number of fish eggs and larvae collected by neuston net was higher, however the bongo net collected higher taxons variety. Total of 3,061,570 eggs.100m⁻³ and 40,492 larvae.100m⁻³ were collected. In the fish eggs collected, 40% were the Engraulidae family. Two species were identified, *Anchoa lyolepis* was more frequent during the two years and more abundant in the winter periods, while *Cetengraulis edentulus* was not frequent all the year and presented high abundances in the summer periods. In relation to fish larvae, a total of 35 families and 42 species were identified. The species: *Harengula jaguana*, *Parablennius pilicornis*, Blenniidae Tipo 1, *Anchoa lyolepis*, *Cetengraulis edentulus*, Haemulidae, *Micropogonias furnieri*, *Trachinotus carolinus*, *Chaetodipterus faber*, *Achirus lineatus*, *Abudefduf saxatilis*, *Dactyloscopus* sp., *Eucinostomus* sp. e *Diapterus* sp. were the more abundant from the beginning of spring to the end of summer. The species *C. edentulus*, *Gobiesox strumosus* A. *lineatus*, *Etropus crossotus*, *Acanthostracion quadricornis* and *Sphoeroides testudineus* pass all their life cycle in the bay while the species *H. jaguana*, *A. lyolepis*, *T. carolinus*, *Chloroscombrus chrysurus*, *Pomatomus saltatrix*, *Stellifer rastrifer*, *Menticirrhus americanus* e *Symphurus plagusia*, utilize this environment as protection and feeding area. Although the high degree of pollution of the Guanabara Bay, it is the environment that presents a surprising capacity of water renovation, evidenced by the maintenance of a high number of fish species. Actually this bay is considered the coastal semi-enclosed system of

Brazilian coast that presents the highest of fish species larvae already identified.

Key-words: ichthyoplankton, Guanabara Bay, ecology of fish eggs and larvae, spatial and temporal variations

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