

seaward seagrass beds. In each station, the analyses highlighted the existence of diel activities of fishes. This activity is more important in the seagrass beds located near coral reefs than in those near mangroves.

A comparison of climatic effects on fish stocks on the decadal and interannual time scales with some applications to fisheries management

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Symposium: Communities Type: Oral

We consider the differences in climatic effects on fish stocks in the North Pacific and North Atlantic between the decadal and interannual time scales. Both combined and separate principal component analysis was applied to the 95 physical and biological time series for the 1970-2000 period. The results show a similarity between the first three biologic and climatic PCs and PC scores for the full data set. However, the biologic PCs exhibit a clear year-to-year persistence (regimes), while the climatic PCs reveal a rather strong interannual variability superimposed on decadal regimes.

Liver histopathology of feral freshwater fish populations collected along a contaminated stream

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Symposium: Behaviour Type: Poster

This study examined liver histology of two freshwater fish species *Astyanax altiparanae* (Characidae) and *Hypostomus*

ancistroides (Loricariidae), collected over one year in five sites along an urban stream which receives contaminants from different sources. Histopathological alterations were classified semi-quantitatively according to two criteria: 1) by ranking the severity of tissue lesions. On the basis of these data mean assessment value (MAV) of lesions was calculated for each site; 2) based on the scope for repair of the lesions. With this method it was possible to compare the degree of tissue change (DTC) in fishes from different sites and to correlate the intensity of pollution with the intensity of changes found.

Sexual and geographical variation of morphometrics in the blue shark *Prionace glauca*

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Symposium: Advances Type: Poster

Specimens of *Prionace glauca* were collected from November 1996 to April 1998 between lat. 27°S and 35°S. Forty body measurements were taken from of 35 females with total length (TL) from 148.5 to 294.5 cm, and 78 males from 135 to 292 cm TL. Females had a broader pectoral fin, a greater pectoral-pelvic space and a shorter tail than the males. These differences may be a secondary sexual characteristics related to reproduction and to the hydrodynamics of swimming. Thirty-four body proportions were compared with data from northeastern Brazil: 8 differed in both sexes, 5 in males only, and 5 in females only.

O2 chemoreceptors involved on the control of cardiorespiratory function of pacu, *Piaractus mesopotamicus* in response to graded hypoxia