SPECIES DIVERSITY AND COMMUNITY STRUCTURE OF MANGROVE FISHES OF PAGBILAO (PHILIPPINES)

Leonard Pinto
Dept. of Zoology, University of Colombo.

The number of fish species recorded in the Pagbilao mangroves was higher than those of Central America and Australia but lower than Papua New Guinea. The family ambassidae dominated the number of individuals but gobbiidae dominated the number of species.

The Shannon-Weaver index (H') for this fish community varied from 1.05 - 2.9 throughout the study period of 18 months. Hence the ichthyofaunal diversity in the mangroves was higher than salt marshes (Subrahamanyan & Drake, 1975). but lower than coral reefs (Gladfelter et al, 1980). For most parts of the year, the diversity was influenced by evenness (J).

The overall species-abundance relationship in the taxocene fitted into the log-normal distribution model compared to the broken stick model to which saltmarsh fish community fitted (Subrahmanyan & Coultas, 1980). However after a typhoon the taxocene fitted into the niche pre- emption model showing the reduction in the number of rare species. There was some evidence on the resilience and persistence of the community.

References

Gladfelter, W.B., J.C. Ogden & E.H. Gladfelter, (1980) Similarity and diversity among coral reef fish communities. A comparison between tropical Western Atlantic (Virgin Islands) and tropical Central Pacific (Marshall Islands) patch reefs. Ecology 61 (5): 1156-1168

Subrahmanyam, C.B. & C.L. Coultas (1980) Studies on the animal communities in two North Florida Saltmarshes. Part III.
Seasonal fluctuations of fish and macroinvertebrates.
Bull. Mar. Sci. 30 (4): 790-818

Subrahmanyam, C.B. & S.H. Drake (1975) Studies on the animal communities in two North Florida Saltmarshes. Part I. Fish Communities.
Bull. Mar. Sci. 25 (4): 445-465

11th Dec. 1987 (Friday) 08.15 a.m. - 08.30 a.m.