FoodWeb: AN INTERACTIVE SOFTWARE FOR QUANTIFYING WINEMILLER'S TROPHIC NETWORKS IN FISH COMMUNITIES

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Observed properties of aquatic food webs have important management implications as well as important theoretical implications in the subjects of fisheries science and aquatic ecology. The food web approach is useful to understand pathways of energy and material transfer and the structure of the hierarchy of species trophic interactions in aquatic ecosystems. Winemiller (1990) presented a graphical method to investigate spatial and temporal variation in trophic networks in tropical fish communities. A computer programme was developed to produce graphic illustrations of trophic networks in the fish communities and associated food web parameters namely number of nodes, compartmentalization, connectance, average number of prey per node, average number of predators per node and ratio of consumer nodes to total nodes. The input data for this software are relative importance of food items of constituent species in the fish community and the tropic levels of prey items. The graphic illustrations and associated food web parameters mentioned above can be used for spatial and temporal comparison of trophic relationships in fish communities.

Winemiller, K.O. (1990) Spatial and temporal variation in tropical fish trophic networks. Ecological Monographs 60(3): 331-367.

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