

Theme 7: Lakes, rivers, estuaries: water quality, biotic resources, sustainable management

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AN INTERACTING WEB OF LIFE

Akhila C.M, Archana M.R, Moumita Laha, Nandita Nataraj

M.Sc Integrated, Biological Sciences, Bangalore University, Bangalore 560056.

E-mail: rlahaa@yahoo.com

The Jnanabharathi campus of Bangalore University has a rich diversity of flora and fauna. Of this enormous campus an area of 100 X 100 feet has been converted into a keystone park, a park containing numerous keystone plant species. This area shows various interacting populations within an ecosystem by forming a diverse community. An ecological community consists of all the interacting populations within an ecosystem. Keystone species plays a major role in determining structure- a role that is out of proportion to its abundance in community. Removal of this species dramatically alters the community. This interacting web of life that forms a community tends to maintain balance between resources and the number of individuals consuming them. When populations interact with one another influencing each others ability to survive and reproduce, they serve as agents of natural selection. The most important community interactions that we have studied are competition, predation, parasitism and, mutualism, which affects the participating species. In the park, various nectar producing plants and host plants [*Calotropis gigantea* L. and *C. procera* L. and, *Acacia* sp.] together interact with each other to form a healthy ecological community for various insects [*Poeciloceris pictus*, *Danaus chrysippus* and, *Catopsilia pomona*] and birds. It is important to study the integrative capacity of the ecosystem, as urbanization increasingly infringe on natural ecosystems, it becomes increasingly urgent to understand community interactions and to preserve those species that are crucial to maintaining the natural community which indicates a healthy ecosystem.

Keywords: Keystone species, community interactions, natural selection, ecosystem.