

Role of Reproductive Biology in Conservation of Mangroves

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Abstract—Mangroves are evergreen forest wetlands confined to intertidal zone of tropical and sub tropical region of the world. These are salt tolerant plant species growing in the interface between terrestrial, estuarine and marine ecosystems. In India, mangroves are distributed in east and west coast, West Bengal in east coast is rich in mangrove forest cover followed by Gujarat in the west coast. Due to extensive exploitation of mangrove forests for food, fodder, timber and various developmental interactions, these forests have lost its large area of natural habitats and disappearing at the rate of 1 to 2% per year from the world. Out of 70 true mangrove species, about 11 (16%) of mangroves are included in red list of IUCN and these species may extinct from world. Thus, there is an urgent need to develop effective conservation strategies in order to save these mangrove forests. For developing conservation methods, it is necessary to understand the reproductive success of mangrove species by natural regeneration. Important aspects viz. pollen viability, pollen dispersal mechanism, time and duration of stigma receptivity, nature of pollinators and their efficiency in pollination, ovule abortion, rate of normal fruit formation, propagules dispersal and seedling establishment are the main features on which reproductive success of species is depends. The information on reproductive biology becomes more essential as it helps in strategizing effective in-situ conservation practices because mangrove forests lack asexual mode of reproduction.

Keywords: Mangroves, pollen viability, ovule abortion, asexual reproduction, In-situ conservation.