Myristica swamps: an ecosystem of conservation importance

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Myristica swamps are rare tropical freshwater swamp forests occurring in the Western Ghats' low-lying valleys and represent one of the most primitive and threatened wetland ecosystems in India. These forests are dominated by Myristicaceae members such as Myristica magnifica and Gymnacranthera farquhariana, characterised by knee roots, pneumatophores and stilt roots adapted to waterlogged conditions. Restricted to fragmented patches in Kulathupuzha, Anchal and adjoining areas, these swamps provide critical ecosystem services, including flood regulation, groundwater recharge and maintenance of perennial stream flow. They support diverse faunal communities, including endemic fishes, amphibians and freshwater crabs, contributing significantly to nutrient cycling and seed dispersal. However, logging, drainage, plantation expansion and habitat fragmentation have drastically reduced their extent. Conservation of Myristica swamps requires urgent habitat protection, biodiversity documentation and molecular tools such as DNA barcoding for accurate species identification and long-term ecosystem management.

Keywords: DNA barcoding, freshwater swamp forests, *Myristica* swamps, Western Ghats biodiversity, wetland conservation.