

## ABSTRACT

Investigations into the status of Palm Swamp Forest habitat in relation to conservation of Psittacidae in Trinidad

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There was no existing quantitative data on Palm Swamp Forest habitat in the Nariva Swamp, the only Ramsar wetland site in Trinidad. This study was undertaken to fill a deficiency of knowledge about the reportedly threatened and deteriorating Swamp Forest and the relationship of Psittacidae to this forest in order to create suitable conservation guidelines.

Palm Swamp Forest distribution, ecology and threats were studied using selected study plots, and greenhouse experiments. The populations, feeding, nesting and roosting of the Red-bellied Macaw (Ara manilata) and the Orange-winged Parrot (Amazona amazonica) were also studied using field observations.

The Mauritia setigera Palm Swamp Forest occupied 397.6 ha. and had a density of 344 individuals per ha for trees  $\geq 10$  cm dbh. Dominant trees were M. setigera and Pterocarpus officinalis. The forest had 34 species with

most being understorey species. The palm bore ripe fruits from September to May. Seedling regeneration was low, and greenhouse germination of seeds failed.

Roystonea oleracea Palm Swamp Forest occupied 103.1 ha. and had a density of 380 individuals per ha. for trees  $\geq 10$  cm dbh. 74 species were found with most being understorey species. Peak ripe fruit availability was from August to November and was correlated with rainfall. Seedling germination occurred during the wet season but had an 86.4 % mortality rate. Greenhouse germination of seeds ranged from 65 to 95 days. Population estimates were made for A. manilata and A. amazonica which had 136 and 224 birds respectively. The diet of the birds consisted of seven plant species, but 94 % of the feeding observations were on palm fruit and was correlated with palm fruit availability. Periods of fruit unavailability were found for both palm species however.

Psittacidae were dependent on the forest for roosting and nesting sites and most of their diet. Without the forest psittacine populations would fall. Palm Swamp Forest is in a deteriorated state and should be protected through creation of a nature reserve.

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