POINTS FOR FURTHER RESEARCH

It is absolutely necessary to monitor the flora of the biosphere reserve periodically, at least once in two decades, for changes in species composition, number of individuals in extremely rare cases, shrinkage/expansion of area inhabited particularly by mangroves etc. Sundararaj and Nagarajan (1964) who began exploring Van (Church) Island off Tuticorin from 1940s reported 54 species. Of these 23 have not been collected now. Some of them may be due to mistaken identity. And their identity cannot be confirmed because of absence of voucher specimens. But then, tree species like *Acacia planifrons*, *A. horrida* (=*A. latrorum*), *Dichrostachys cinerea*, *Ziziphus mauritiana* etc. and herbs like *Cassia auriculata*, *Corchorus aescuans*, *Crotalaria verrucosa*, *Ruppia maritima*, *Salicornia brachiata*, *Striga asiatica* etc. are unlikely to be misidentified. The trees might have been felled for firewood. Herbs and shrubs might have disappeared due to prolonged drought or other ecological factors. However, we have now collected 22 species which include *Prosopis chilensis* not collected by them may certainly indicate the changes over the years.

Kurusadai is the only island which has been collected intensively. Species such as *Morinda citrifolia*, *Polycarpaea spicata*, *Tarenna asiatica* and *Tournefortia argentea* earlier reported by Sundararaj and Nagarajan (1966), *Acanthus ilicifolius*, *Excoecaria agallocha* and *Ziziphus xylopyrus* by Chacko & al. (1955) and *Acanthus ilicifolius*, *Carissa carandas* and *Polycarpaea spicata* by Rao & al. (1963b) have not been collected recently. But *Canavalia rosea* and *Typha angustata*, two interesting species, have now been collected here. All these may justify the demand for periodical monitoring of the flora with particular reference to endemic and threatened species.

Similarly, a number of species earlier collected on the mainland coast have not been collected recently may indicate that they have either become rare or disappeared. For instance, *Polycarpaea diffusa* and *P. spicata* were collected at Tuticorin (type locality) by Wight in the 1830s but have never been re-collected here, so also *Derris trifoliata*. Hence, the mainland coastal flora also needs future monitoring.

The distribution pattern of certain species deserves further studies. For instance, *Suriana maritima* occurs on Shingle, Kurusadai, Pumarichan and Pullivasal Islands of the Mandapam group only. *Scaevola taccada* occurs only on Shingle and Kurusadai Islands in limited numbers.
whereas *S. plumieri* occurs in large numbers on almost all islands. *Cordia subcordata* occurs on all islands of the Mandapam group except Manoli and Manoliputti Islands. Even on Muyal and Shingle Islands it is represented by very few individuals only. On Kurusadai, Pumarichan and Pullivasal Islands, on the other hand, it is frequent. The factors that govern the distribution of such species need investigation. *Lablab purpureus*, which is sometimes cultivated on the mainland coast, grows luxuriantly and flowers and fruits prolifically on most islands. Though no plant anywhere on the mainland coast was seen as an escape, it has adapted to salinity and other insular factors so successfully.

Hill species such as *Atalantia racemosa* and *Erythroxylum monogynum* have managed to establish on Upputhanni, Nallathanni and Pumarichan Islands respectively. How best they adapt to the new ecological situation and spread further need monitoring.

A number of species that have not been collected on the mainland coast are common on islands. *Ipomoea violacea, Manilkara hexandra, Pleurostylia opposita* etc. have not been collected on the coast. The dispersal of these plants to islands and between islands need further studies.

Many plants of the interior mainland with known medicinal uses occur on islands. They may be studied for differences in the chemical composition and efficacy.

There are rabbits and peafowls on Nallathanni and Muyal Islands. They seem to have been introduced at the turn of this century. The bulbs of *Cyperus bulbosus* are reportedly a staple food of the peafowls. The interaction of these animals with the plant species needs to be investigated.