

## WORLD HERITAGE NOMINATION

IUCN TECHNICAL REVIEW

1. IDENTIFICATION NUMBER AND NAME 261 THE VALLEE DE MAI NATURE RESERVE
2. LOCATION: Situated between latitude 4° 19' 45"S and longitude 55° 44' 15"E, in the heart of the Praslin National Park
3. NOMINATED BY: Minister for Planning and External Relations, Government of Seychelles

4. DOCUMENTATION:

- (i) Nomination form
- (ii) Supplementary documentation (IUCN)
  - a) Consultants: Rodney Salm; Adrian Phillips; Jeff Watson; Roger Wilson.
  - b) Fayvel, A.A. 1915. Le cocotier de mer des iles Seychelles. Annis Mus. Col. Marseille, ser. 3, 3:169-307.
  - c) Lionnet, G. 1974. The romance of a palm: coco-de-mer. 3rd edition, Victoria.
  - d) Procter, J. 1975. The Vallee de Mai, information leaflet.

5. BACKGROUND AND SUMMARY

The Vallee de Mai is an 18 ha valley in the heart of Praslin National Park, an area which was untouched until the 1930s and still retains primeval palm forest in a near-natural state. This palm forest includes the endemic species "coco de mer", a species of outstanding universal value as the bearer of the largest nut in the world. There has also been a rich body of legend which has developed around the species; the nut has religious significance in India and in the 19th Century the British General Gordon produced a detailed "proof" that the Vallee de Mai was the Garden of Eden and that coco de mer was the tree of knowledge. In addition, the other five species of endemic palms are also found in the Vallee de Mai, the only place in the Seychelles where they are all found together. In addition there is the endemic black parrot, which is totally dependent on the existence of the Vallee de Mai and the surrounding palm forest. (See attached data sheet for additional details).

6. INTEGRITY

In a densely populated island, the survival of the Vallee de Mai in itself is a remarkable achievement; of course, it is far too small to survive on its own in any natural way, and its present status is due to some replanting of coco de mer. While the site is therefore not self-sustaining, it is still the only place which contains the ecosystem components required for the continuity of the species being conserved (integrity criteria iii). Management seems quite sound; a draft management plan has been prepared for the Praslin National Park, of which the Vallee de Mai is one part. The Vallee de Mai occupies the lower parts of a valley toward the head of a stream, but does not include the whole water catchment (though this lies within the Praslin National Park); this does not affect the visual impact of the site, but activities on the slopes above the valley could adversely affect the site itself.

## 7. COMPARISON WITH OTHER AREAS

As a granitic island, the Seychelles is a "microcontinent" that has had quite a different history from the other volcanic or coralline islands in the Indian Ocean; therefore, it has a large number of endemics and no comparison can be made with other islands in the Indian Ocean. Within the Seychelles, the only really comparable area to the Vallee de Mai is Fond Ferdinand, but this area is smaller than Vallee de Mai and lacks at least one of the other endemic palms, has fewer other endemic plant species, and has many more exotics. There are several other areas of palm-dominated forest on the granitic islands, particularly on Mahe and Silovete, that are valuable for conservation; they do not have coco de mer but may be less altered from their natural state. No single area, however, possesses the combination of features displayed by the Vallee de Mai.

## 8. EVALUATION

The Vallee de Mai is a kind of living museum, as many tropical areas would once have held palm forests such as that of the Vallee de Mai before the evolution of more advanced plant families; the area is therefore an outstanding example of an earlier stage in the evolution of the world's flora (criteria i). The site represents an outstanding example of biological evolution and man's interaction with his natural environment, containing a number of endemic species and being maintained through human activities (criteria ii). It contains a scenically superlative forest, which is remarkable in its formations and of outstanding interest even to those visitors who are not fully aware of the biological significance of the forest; the natural beauty is exceptional (criteria iii). It also contains the most important habitat where the threatened and outstanding coco de mer is found; a number of other endangered species also occur within the site (criteria iv).

The criteria of integrity give some cause for concern, as the site, being on a small island, cannot be assured of survival on its own; therefore, management activities are particularly important for this site and will require constant monitoring by the responsible authorities. Protection from fire is particularly important. Therefore, it is strongly recommended that the World Heritage site be expanded to include the entire Praslin National Park, as this would expand the site to include all of the remaining palm forest on the island, thus providing an appropriate buffer to the Vallee de Mai; it is particularly important to include the forest across the road from the Vallee de Mai, which has a high quality forest and a large population of coco de mer. It should be understood that recognition as a World Heritage property would not necessarily involve additional restrictions, but would encourage the implementation of the existing management plan for Praslin National Park.

## 9. RECOMMENDATION

The site meets all four criteria for World Heritage recognition, but the criteria for integrity give some cause for concern. It is recommended that the Committee inscribe the Vallee de Mai on the World Heritage List, with a recommendation to the Seychelles Government to include the rest of Praslin National Park in the property.

NAME Vallée de Mai Nature Reserve

MANAGEMENT CATEGORY IV (Managed Nature Reserve)

Proposed World Heritage Site (Criteria: i, ii, iii, iv)

BIOGEOGRAPHICAL PROVINCE 4.16.12 (Seychelles and Amirantes Islands)

LEGAL PROTECTION No information

DATE ESTABLISHED 18 April 1966 as a Nature Reserve under the Wild Birds Protection (Nature Reserves) Regulation S.I. 27/1696. Further protection under the National Parks and Nature Conservancy Act (Cap. 159) S.I. No. 57 of 1979, Praslin National Park (Designation) Order of 1979, and the Coco-de-mer Management Decree 1978.

GEOGRAPHICAL LOCATION Within Praslin National Park on Praslin Island, 50km northeast of Mahé in the Seychelles. 4°19'45"S, 55°44'15"E.

ALTITUDE Near sea level

AREA 18ha

LAND TENURE Government ownership

PHYSICAL FEATURES A valley in the heart of Praslin National Park on the granitic island of Praslin. Untouched until the 1930s and still retaining palm forest in a near natural state.

VEGETATION There are 4 main vegetation types on the island of Praslin, 3 occurring in the Vallée de Mai area: lowland forest (30-180m) once dominated by large timber trees such as Mimusops sp. and Eugenia spp. but, following human settlement, now comprising well developed secondary forest with the endemic palm Phoenicophorium borsigiana, cinnamon Cinnamomum zeylanicum, Dodonaea viscosa, mango Mangifera indica, Sideroxylon ferrugineum and Randia lancifolia; intermediate palm forest (30-500m), unique to the Vallée de Mai, with the endemic palms Deckenia nobilis, P. borsigiana, coco-de-mer Lodoicea maldivica (V) (bearer of the largest seed in the Plant Kingdom), Verschaffeltia splendida, Nephrosperma vanhoutteana, and Pandanus spp., Dillenia sp. and Adenantha pavonina; eroded land (100-500m), following burning as well as soil erosion, previously of intermediate and lowland forest, has been recolonised by, or planted with Randia lancifolia, Chrysobalanus icaco, P. borsigiana, Dodonaea sp. and Dillenia ferruginea. This is the only area in the Seychelles where all 6 endemic palm species occur together. A further 28 endemic species of plants have been recorded, including the vine Toxocarpus schimperianus (E), once thought extinct and then believed to exist only on Curieuse island. Takamaka Callophyllum inophyllum and calice du pape Tabebuia pallida have been planted.

NOTEWORTHY FAUNA The most noteworthy species is the endemic black parrot Coracopsis nigra barklyi (R), restricted to Praslin Island and totally dependent on the Vallée de Mai and surrounding palm forest. Other birds include Seychelles kestrel Falco araea (R), the bulbul Hypsipetes crassirostris, blue pigeon Alectroenas pulcherrima, sunbird Nectarinia dussumieri and cave-nesting swiftlet Collocalia francica. Reptiles include the endemic chameleon Chamaeleo tigris, Seychelles house snake Boaedon

geometricus, green geckos Phelsuma sundbergi and P. astriata, bronze gecko-Ailuronyx sechellensis, skinks Mabuya sechellensis, M. wrightii, Scelotes gardineri and S. braueri, Seychelles wolf snake Lycognathophis sechellensis and blind snake Ramphotyphlops braminus.

6 species of caecilians (related to frogs but looking more like large worms) occur in the deep beds of moist humus, but these are rarely found even by scientists. The stream contains freshwater crab Dekenia allaudi, the big freshwater prawn Macrobrachium lar, shrimp Caridina sp. and the only endemic species of freshwater fish, the gurgeon Pachypanchax playfairi. 2 endemic snails occur: the brown snail Stylodonta studeriana and the blackfish snail Pachnodus arnatus.

ZONING No information

CONSERVATION MANAGEMENT The Nature Reserve is completely surrounded by the Praslin National Park (about 300ha) which is a multiple use management area mainly devoted to timber production and rehabilitation of eroded land. Access within the Reserve is restricted to a carefully designed system of paths. Policies are decided by the Seychelles National Environment Commission and a draft management plan which includes the Reserve has been prepared for the Praslin National Park. Under present conditions the palm forest must be maintained by direct human manipulation with the collection and planting of the coco-de-Mer seeds before they are stolen and sold.

DISTURBANCES OR DEFICIENCIES There has been exploitation of timber and planting of exotics such as coffee, patchouli Pogostemon cablin, Albizia falcataria, Cinnamomum zeylanicum, Psidium cattleianum and Philodendron sp. but much of the Vallée has been replanted with endemic palms. Attempts to remove dead vegetation have led to erosion and remaining litter constitutes a fire hazard. Collection of coco-de-mer nuts needs to be controlled so that a certain proportion are allowed to germinate, and the registration system now implemented for selling nuts seems to facilitate this. A potential problem is that the area does not include the whole water catchment and the human population of Praslin is growing rapidly.

SCIENTIFIC RESEARCH Some work has been done by individuals on the black parrots and on palm geckos. The palm forests are of great botanical interest.

SPECIAL SCIENTIFIC FACILITIES None

PRINCIPAL REFERENCE MATERIAL

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