

Discovery of a new tree species, *Icuria dunensis*, in coastal Mozambique

Hymenaea verrucosa Gaertn

Common names: Gum copal or Zanzibar copal or East African copal or Amber tree



A nut bowl made from a piece of wood taken from this site.



Photos: Roy Lubke, Pilvili Coast, Moma District, Mozambique, December 2016.



Hymenaea fruits collected at Moebase in August 1995: Lubke & Avis 3029.

The tree on the left is known as *Hymenaea verrucosa* Gaertn. The tree is commercially important as resin is collected in the wild and the trees are harvested for timber. It is also grown as a street tree, and is a common species within the dry coastal forest and tall damp miombo woodlands of southern Africa.

The tree on the right was a previously undescribed large tree the size of a common bluegum. This tree was discovered by Roy Lubke, Ted Avis and Tony Dold in 1995/96 in Moebase, Mozambique when doing an EIA for a mining company. It is relatively common in the coastal areas of Mozambique, known to the locals as icurri of Ncurri. It is found in low lying, wet depressions where it often forms monospecific stands of large forests. At Moebase we classified these pure stands as Coastal Evergreen Forests, but could not agree on the identification of the dominant tree species. It had presumably been identified and mapped by the early botanists, Hiram Wild and Grandvaux Barbosa for the Flora Zambesiaca region as *Hymenaea verrucosa*. In August 1995 we assumed this to be the dominant tree of these forests as we found one specimen on the edge of the Coastal Evergreen Forest at Moebase (Collector no: Lubke & Avis 3092). Later Tony Dold determined that this identification was incorrect as the pods on the ground around the icurri trees (Dold 3362) were oblong and flat and unlike the globose pods of *Hymenaea verrucosa*.

Specimens we collected were not in flower or fruit and could not be identified at the Selmar Schonland herbarium in Grahamstown, although Estelle Brink (of that herbarium) dissected flower buds and identified the tree as an apetalous (no petals) member of the subfamily: Caesalpinioideae of the Fabaceae.



Specimens of *Icuria dunensis*

Specimen on left: Dold 3312. Immature flower buds of *I. dunensis* which revealed that the flowers were apetalous.

Type specimen on right: Johnson 694. Flowers of *I. dunensis* without petals.

Dissections by Estelle Brink of the Selmar Schonland Herbarium



Specimens (Dold 3312 and 3362, Lubke & Avis 3090) were sent to the herbarium at the Royal Botanical Gardens in Kew, UK. The tree was also unknown to them but they sent it to Jan Wieringa, a PhD student at Wageningen University in the Netherlands, who was researching this group of Fabaceae (legumes), to which the specimen was believed to belong. Related species are mainly found in West Africa but also in Malawi. He had other sterile material from the Mozambique coast and final descriptions on the new species could only be achieved when a flowering specimen was collected from the Kenmare Mine site, Moma District, by Kate Johnson and Ted Avis in September 1998. It was then that Jan Wieringa determined that this was not only a new species, but because it was so different to related genera, he created a new genus, *Icuria* from the common name Icurri. Because of the dune habitat where it grows he called the species *dunensis*, hence *Icuria dunensis*. All plants are described from the type specimens, which in this case was collected by CES staff, Ted Avis and Kate Johnson. (Johnson & Avis 694).

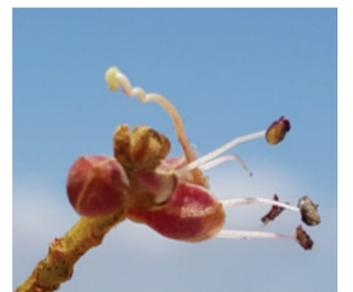
Coastal & Environmental Services (CES) was established in 1989 by Roy Lubke, Ted Avis (lecturers in Botany) and Peter Jackson (a retired Ichthyologist) in the Rhodes University Botany Department using the three colleagues' expertise in dune management and coastal ecosystems. It became a company in Grahamstown later in the 1990s when Ted Avis moved to an office in African Street.

Icuria dunensis Wieringa

Common name: Icurri or Ncurri



Ted Avis beneath a tall *Icuria dunensis* tree in the Coastal Evergreen Forest, Moebase, August 1995. (Photo: Roy Lubke).



Photos: Roy Lubke, Pilvili Coast, Moma District, Mozambique, December 2016.