Cynometra cebuensis, a new species of Leguminosae (Caesalpinioideae) from the Philippines

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Abstract A new species of Cynometra from the Tabunan forest on Cebu island in the Philippines is described.

INTRODUCTION

Cebu is an island which has lost most of its forest cover early on. Rampant deforestation in the 19th century caused the Spanish authorities to act. To protect the forests of the island, all special licenses to cut trees on Cebu were cancelled in the early 1870s. In 1873, the Spanish government appointed 12 officials to prevent country-wide deforestation and to guard the remaining forests in the Philippines (Fenner 1985: 131).

However, loss of forests and biodiversity could not be stopped. Around 1950, natural forest covered only about 10% of the islands land area, and large forest areas only remained in the higher and less accessible mountains in Central and Southern Cebu (Seidenschwarz 1987: 94).

By now, the island of Cebu has only 0.2% of its natural forests left. These last remaining forest patches are unusually rich in endemic plant and animal species. The largest remnant of these original forests is the 145 ha large Tabunan forest in Central Cebu, which is renowned for its tremendous richness in rare and endangered species. The two endemic tree species so far known on the island Arthrophyllum cernabrei Merr. (holo L0820723; iso L0820722, Knaap-Van Meeuwen 1970: 13) states that all Indo-Pacific flats “along the river.

The habitat of the new species differs as well. It grows in dry forests on limestone without any flowing water, whereas C. copelandii is recorded as growing in “moist fertile wooded flats” along the river.

Knaap-Van Meeuwen (1970: 13) states that all Indo-Pacific species of Cynometra grow under everwet climatic conditions, but Cebu has a distinct dry season of about 3 months from the middle of March to early June.

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Growth rate & Morphology — A study was conducted on 17 trees, raised as seedlings from the seeds of one mother tree in the Tabunan forest and planted in 1999. The first tree flowered in March 2008, i.e. nine years after planting. The new species is a slow growing tree. Average height after 10 years is only 8 meters, and the average stem diameter 8.6 cm.

New tassels are formed several times a year – mostly as single branches only. The tassels of seedlings and young trees are bright pink, in older trees, they are bright creamy greenish yellow.
The newly opened tassels are visited by a number of insects. Observed were several species of Hymenoptera and Lepidoptera (in particular Ariadne merione luzonia).

Conservation status — Due to its restricted extent of occurrence and deteriorating habitat conditions, the new species can be classified as Critically Endangered (CR) according to the IUCN Red List Categories (IUCN 2001). The species meets the criteria B1a and B1b (as well as B2a and B2b) for Critically Endangered.

The author is monitoring the forest since 1994. The Tabunan forest covers an area of approximately 1.45 km² and its circumference line amounts to 21 km. The forest is surrounded by agricultural land. Habitat deterioration is caused by timber harvesting and fires during the dry season. The nearby Cantipla forest, a previous habitat of the new species, has virtually vanished. It is hoped that people will adopt the species and plant it in settlements because of its ornamental properties.

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