Adonidia merrillii – a New Wild Population in the Philippines

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A new population of a familiar palm has been discovered in the wild on Danjugan Island, off the southwestern coast of Negros Island, Philippines.
Adonidia (Arecoideae: Areceae: Ptychospermatinae) currently has only a single species, Adonidia merrillii (Becc.) Becc. It was previously included in the genus Veitchia (Moore 1957), but cladistic analyses showed that it is a distinct taxon in an isolated lineage within the subtribe Ptychospermatinae (Zona 1999, Zona & Fuller 1999).

Adonidia merrillii is commonly known as “Manila palm” or “Christmas palm.” It is probably the most familiar, most popular and most widely cultivated palm in the world that is native of the Philippines. It was, in fact, in cultivation in Manila since about 1875 (Merrill 1922), and its origin was still unknown when it was first described (as Normanbya merrillii Becc.) in 1909 as new to science (Beccari 1909). The species was then locally known as “Bunga de Jolo” and “Bunga de China” as the fruits were also a good substitute for those of Areca catechu. The name “Bunga de Jolo” was thought to indicate the true origin of the cultivated palm (Beccari 1909, Brown & Merrill 1920), but this species has, thus far, not been recorded from Jolo Island, nor is there an extant specimen collected in the wild from there.

By 1919, Adonidia merrillii was known in the wild from at least two localities, both on Palawan Island: Brooke’s Point, in sandy soil of beach forest (Elmer 12708, February 1911, Fl, K) and Apulit Island, in Taytay Bay, on limestone slopes, on the north-eastern part of Palawan (Merrill 9415, May 1913, Fl) (Beccari 1919a, b). In 1984, during the Palawan Botanical Expedition, the species was also discovered on Malapakan (= Langen) Island in Bacuit Bay on karst limestone cliffs (Podzorski 832, April 1984, K), on the north-western side of Palawan (Podzorski 1985, 1986). It is also known on Inabuyatan and other similar small islands near the El Nido area in Bacuit Bay and also on nearby Coron Island. The El Nido area is part of the El Nido Managed Resource Protected Area (that includes a large marine sanctuary) in northern Palawan.

Adonidia merrillii is no longer restricted to the Philippines, as it is now also known from the large island of Borneo. It has been collected in the wild on a hill slope by the sea in the Lema’as Forest Reserve, Tuaran District, in Sabah, Malaysia (Divol Sundaling et al. 140875, January 2005, K, SAN).

In this paper I report on a new locality for a wild population of Adonidia merrillii outside of Palawan in the Philippines. This new locality, Danjugan Island, off the south-western coast of Negros Island, is about 330 km eastward from Apulit Island across the northern part of the vast Sulu Sea.

Danjugan is a relatively small, uninhabited, coral-fringed island, approximately 0.48 km² in area, 1.65 km long, and with maximum

2. A group of at least eight individuals Adonidia merrillii on a ridge.
width of 0.5 km, with a highest elevation of only 80 m (Beger et al. 2005). The island is mainly of limestone substrate with several cave formations and six lagoons, most of which are surrounded by mangrove forests (see also King et al. 2002, O’Malley et al. 2006).

The island has been privately owned and managed by the Philippine Reef and Rainforest Conservation Foundation Incorporated since 1995. In 2000, it was formally designated as the Danjugan Island Marine Reserve and Sanctuaries (DIMRS) by the municipal
government of Cauayan and provincial government of Negros Occidental (Beger et al. 2005). Access to the island is restricted. This island marine reserve was featured in the book on The National Parks and Other Wild Places in the Philippines by Hicks (2002).

The flora of Danjugan Island was briefly described by O’Malley et al. (2006) with the following: “With respect to the island’s flora, approximately 75% is forested and 50% of this area is secondary forest where some palms (Areca catechu [sic] and Cocos nucifera) and figs (Ficus spp.) dominate.” The Areca catechu referred to in this statement is clearly Adonidia merrillii, as the former has not been observed, nor is it anywhere dominant, on the island. The coconut palms (Cocos nucifera) have obviously been planted.

The discovery of Adonidia merrillii on Danjugan Island (Fernando 2230, May 2010, LBC) is rather surprising as wild populations of this species in the Philippines have, for a long time, been known only from the Palawan area. The collection from Sabah, Malaysia cited above is relatively recent. The presence of Adonidia merrillii in Palawan, however, has also been regarded as odd and a rare disjunction, as its relatives in the subtribe Ptychospermatinae are found only farther east of Wallace’s Line in Maluku, New Guinea, Australia, and Melanesia (Dransfield 1981, Baker et al. 1998, Zona 1999). Although the new locality reported here brings the species just a little closer in physical distance to its relatives, its absence on Mindanao and the adjacent small islands remains a mystery.

Adonidia merrillii is included in the Endangered (EN) category of the National List of Threatened Philippine Plants issued as Department of Environment and Natural Resources (DENR) Administrative Order No. 2007-01 pursuant to Philippine Republic Act No. 9147, the Wildlife Resources Conservation and Protection Act (Fernando et al. 2008). In the recent IUCN Red List the species is given a Lower Risk/Near threatened (LR/nt) status (IUCN 2010). Under Philippine law there are stiff fines and penalties for the illicit collection and trade of any plant species of wild origin included in the National List of Threatened Philippine Plants (Fernando et al. 2008).

On Danjugan Island, Adonidia merrillii is a prominent component of the vegetation reaching 10–15 m tall. It occurs singly (Fig. 1) or in small or large dense groups (up to 25 individuals) on the ridges and steep slopes (Figs. 2–4), with some individuals occasionally reaching the lower rocky slopes near the sandy beach. It tends to be more common on the western side of the island. Many individuals are often in fruit (Fig. 1 and Front Cover), and seedling recruitment is evident (Fig. 5). I estimate no more than a few hundred mature individuals of this species on the small island.

The wild population of Adonidia merrillii on Danjugan Island is nationally and globally significant in genetic resource conservation terms. It is hoped that the protected status of Adonidia merrillii and that of Danjugan Island and the El Nido area in northern Palawan will help ensure the continued survival of this palm species in the wild.

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5. Seedlings of Adonidia merrillii in various stages of development indicating recruitment into the population.
LITERATURE CITED


