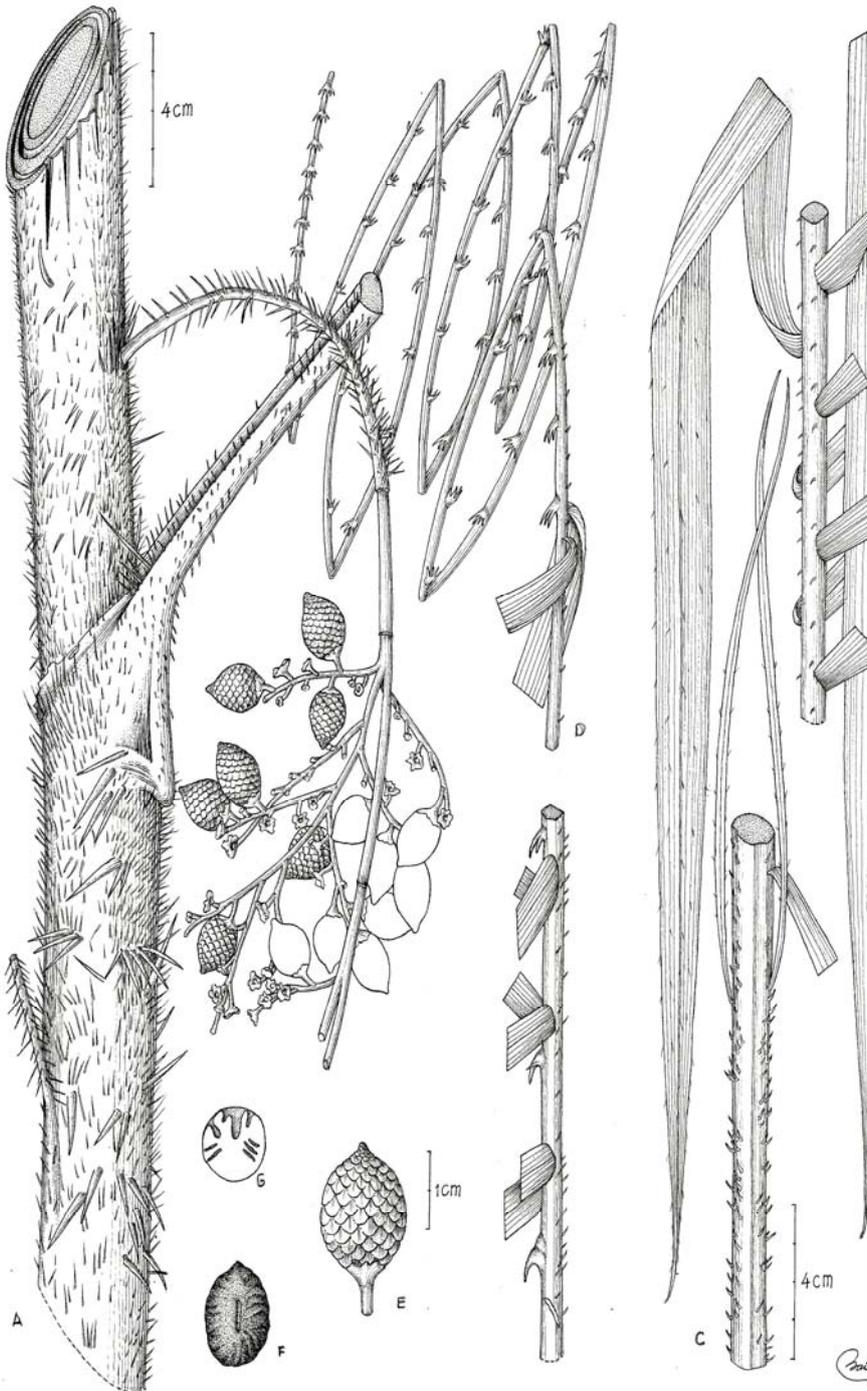




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NEW SPECIES OF PANDANUS (PANDANACEAE) FROM KABAENA ISLAND, SOUTH EAST SULAWESI, INDONESIA

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ABSTRACT

KEIM, A. P. 2009. New species of *Pandanus* (*Pandanaceae*) from Kabaena Island, South East Sulawesi, Indonesia. *Reinwardtia* 13(1): 13–14. — *Pandanus kabaenaensis* A.P. Keim is described as a new species from Kabaena Island in the Province of South East Sulawesi, Indonesia.

Keywords: *Austrokeura*, Kabaena, *Pandanus*, *Pandanaceae*, Sulawesi.

ABSTRAK

KEIM, A. P. 2009. Jenis baru *Pandanus* (*Pandanaceae*) dari P. Kabaena, Sulawesi Tenggara, Indonesia. *Reinwardtia* 13(1): 13–14. — *Pandanus kabaenaensis* A.P. Keim dari Pulau Kabaena, Sulawesi Tenggara, Indonesia dipertelakan sebagai jenis baru.

Kata kunci: *Austrokeura*, Kabaena, *Pandanus*, *Pandanaceae*, Sulawesi.

INTRODUCTION

Kabaena Island (5.25° S, 121.94° E) is in the Bone Bay of South East Sulawesi Province, Indonesia. The island has an area of 873 km² and rises to 1560 m at its highest point. Despite previous botanical explorations made in Kabaena by Beccari in 1874, Weber van Bosse in 1899, Elbert in 1909, de Boer in ca. 1922 (van Steenis, 1950), Herbarium Bogoriense (BO) and Harvard University Herbaria in 1993 (Ismail, 2005 *pers. comm.*), and BO in 2006 (Rugayah, 2006), the pandan flora of the island remains largely unknown. This paper describes a new species, *Pandanus kabaenaensis*, from herbarium specimens collected by the most recent expeditions to the island.

Pandanus kabaenaensis A.P. Keim *spec. nov.* — Figs. 1.

Pandan mediocris; *infructescentia terminalis, solitaria*; *cephalium globosum*; *phalanges a profundus sulcus separatus*; *phalange 4 – 6 drupa constans*; *stigmata aspicientia extrinsecus*. — Typus: Indonesia, South East Sulawesi, Kabaena Island, Gunung Katopi, 18 km north-west of Tangkeno, 05° 12' S 121° 25' E, 7 Aug. 1993, *Mc Donald & Ismail 4183* (Holotypus–BO; Isotypus–A).

Medium size tree pandan, 5 m tall. *Stem* hard, slender, 2.5–3 cm diameter, leaf scars crowded, dis-

tance between leaf scars *ca.* 0.5 cm. *Leaves* in a rosette, spirally arranged in three ranks (tristichous); leaf-blade lanceolate–elongate, *ca.* 90 cm long, *ca.* 2 cm wide; leafsheath short, clasping, *ca.* 1.5 cm long; margin spinose, spines hard, sharp; lamina surfaces bifacially glabrous; adaxial surface green, adaxial ventral pleats absent; abaxial surface pale green, main nerve more apparent, with spines, recurved spines obvious; acuminate apex, acumen *ca.* 30 cm long. *Infructescence* terminal, solitary, *ca.* 20 cm long; peduncle *ca.* 5 × 2 cm. *Cephalium* globose, *ca.* 8 × 5.5–7.0 cm. *Phalanges ca.* 30, separated by deep furrows, each 3.0 × 1.7 cm. *Drapes* 4–6, oblong to slightly oblanceolate, *ca.* 3.0 × 1.4–1.5 cm, crowded; style short, 0.1–0.3 cm long, weakly ascending; stigmata facing outwards (extrorse).

Field characters. Common short tree, 5 m tall, branching sparingly above and below, stems more than 4 cm diameter; inflorescence 20 cm long, secondary staminate branches cylindrical, 5 cm long, 2 cm diameter; branches elliptical of equal size; fruit immature, subrotundate, *ca.* 7 cm diameter.

Distribution. Known only from type locality.

Habitat & ecology. Occurring in open savannah on serpentine soil, at 250 to 500 m altitude.

Etymology. Named after the type locality.

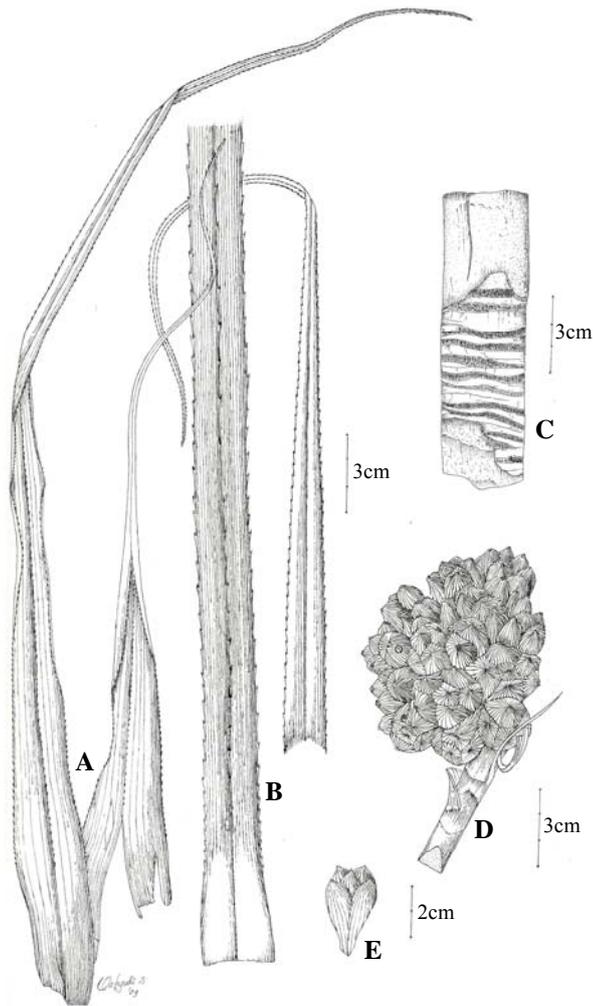


Fig. 1. *Pandanus kabaenaensis* A.P. Keim (A. Lanceolate-longate leaf, B. Leaf margin with obvious spines, C. Medium-sized habit and slender stem, D. Solitary cephalium, half part of cephalium consists of phalanges separated each other by deep furrows, E. A phalange with 5 drupes with outwardly-facing stigmas, which is a distinctive character for the section *Astrokeura*). Drawn from the holotype (*Mc Donald & Ismail 4183*, BO!) by Wahyudi Santoso.

Conservation status. Although the species is common on Kabaena Island, it has not been reported elsewhere and can thus be regarded as vulnerable (VU).

Notes. Based on the structure of the cephalium, this species is undoubtedly a member of subgenus *Pandanus* (see infrageneric classification in Stone, 1974). In overall appearance, *P. kabaenaensis* re-

sembles an immature form of *P. odoratissimus* L. f. However, unlike the latter species, most of the phalanges in *P. kabaenaensis* are separated by deep furrows, such that each phalange can be easily separated in the manner characteristic of section *Astrokeura* Stone (1974). The outwardly-facing stigmas of the new species are also opposite to the intransely-turned stigmas of *P. odoratissimus*. Within section *Astrokeura*, *Pandanus kabaenaensis* is most similar to *P. brassii* Martelli of New Guinea. The phalanges in the latter species are also separated by deep furrows, but the cephalia are much larger (40×35 cm; see Martelli, 1929). The number of drupes (6–10) in a phalange are also more numerous than for *P. kabaenaensis*. The section *Astrokeura* was previously known only from the savannahs of New Guinea and northern Australia. The discovery of a new representative from Sulawesi supports the possibility of a strong floristic link between Sulawesi and the eastern parts of Malesia (see Lam, 1945a; b).

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REFERENCES

- LAM, H.J. 1945a. Contributions to our knowledge of the flora of Celebes (collections of C. Monod de Froidville) and of some other Malaysian islands. *Blumea* 5 (3): 554–599.
- LAM, H.J. 1945b. Notes on the historical phytogeography of Celebes. *Blumea* 5 (3): 600–640.
- MARTELLI, U. 1929. The *Pandanaceae* collected for the Arnold Arboretum by L.J. Brass in New Guinea. *J. Arnold Arb.* 10: 137–142.
- RUGAYAH, T. 2006. Keanekaragaman & pengungkapan potensi flora pulau Kabaena Sulawesi Tenggara. Herbarium Bogoriense, Cibinong. [Mimeograph].
- STONE, B.C. 1974. Towards an improved infrageneric classification in *Pandanus* (*Pandanaceae*). *Bot. Jahrb. Syst.* 94: 459–540.
- VAN STEENIS, C.G.G.J. 1950. *Flora Malesiana. Vol. 1. Ser. 1: Spermatophyta*. Noordhoff-Kolff, Jakarta.