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## **Short Communication**

# ***Codonoboea kjellbergii* (Gesneriaceae) in Buru Island, Maluku: A New Genus Record for the Island**

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## **Abstract**

*Codonoboea kjellbergii* (B.L.Burtt) Karton., recently discovered in Buru Island, Maluku, is a new genus record for the island. The species was observed from only a single location. It grows on rocky, more or less nutrient poor soil. A description, figure and illustration are provided.

**Keywords:** *Codonoboea kjellbergii*, Gesneriaceae, new record, Maluku, Buru Island

## **Introduction**

*Codonoboea* Ridl. is a genus distributed from Southern Thailand and throughout Malaysia with about 120 species named (Middleton et al., 2013). Its centre of distribution is Peninsular Malaysia in West Malaysia (Kartonagoro & Potter 2014).

*Codonoboea kjellbergii* (B.L.Burtt) Karton. is distributed in Sulawesi, Maluku (Ambon & Seram) and New Guinea (Kartonagoro, 2012; Kartonagoro & Potter, 2014). It was originally described as *Henckelia kjellbergii* B.L. Burtt based on a specimen from southeast Sulawesi (Burtt, 1998). On a recent visit in 2014 to Buru Island, Maluku, this species was discovered and is the first record of this species and also the genus in Buru Island, and the third locality within the Maluku Islands.

## **Material and Methods**

The plant was collected in May 2014 from the road to Lake Rana, Fena Leisela District, Buru Regency, Maluku Province (Figure 1). It was preserved as a dried herbarium specimen and deposited in the Bogoriense Herbarium (BO).



Figure 1. Locality of *Codonoboea kjellbergii* in Buru Island, Maluku (marked by star-shaped polygon).

Identification is based on Burttt (1998), Kartonagoro (2012) and Kartonagoro & Potter (2014).

## Results and Discussion

*Codonoboea* Ridl., Fl. Malay Penins. 2: 533 (1923); Middleton, Weber, Yao, Sontag & Moller, Edinburgh J. Bot. 70, 3: 387 (2013). – Type: *Codonoboea leucocodon* (Ridl.) Ridl.

Perennial herbs, caulescent or rosette forming, sometimes creeping, somewhat woody. Leaves opposite or alternate, or are crowded at the top, petioled or sessile, blades lanceolate, margin dentate to entire; petiole channeled. Inflorescence axillary, one- to few-flowered, pedunculate, flowers 5-merous. Calyx deeply 5-lobed, reaching the base. Corolla tubular, campanulate, lobes short, 2-lipped, lower lip 3-lobed, longer, upper lip 2-lobed, shorter than lower lip. Stamens 2. Nectary a flat-topped or lobed ring, sometimes not a complete ring or lacking. Style with stigma peltate or clavate. Capsule slender, cylindrical. A genus of about 120 species, from Southern Thailand and throughout Malaysia (Middleton et al., 2013).

*Codonoboea kjellbergii* (B.L.Burttt) Karton., Edinburgh J. Bot. 69, 2: 360. 2012; Kartonagoro & Potter, Reinwardtia 14, 1: 4. 2014; Middleton, Weber, Yao, Sontag & Muller, Edinburgh J. Bot. 70, 3: 399. 2013. – Basionym: *Henckelia kjellbergii* B.L.Burttt, Beitr. Biol. Pflanzen 70: 378. 1998. – Type: Indonesia, Celebes (=Sulawesi), Boeloe Watoewila, 1500 m, 24 iii 1929, *Kjellberg* 1092 (holo S n.v.; iso BO n.v.).

Herb to 20 cm tall. Stem unbranched, 2.5–2.75 mm diameter at the base, densely pilose, less dense in very old parts. Leaves spirally arranged, distinctly spaced, 7–16 mm apart, blades elliptic-oblong, slightly obovate, 7.5–11.25 × 2.8–3.45 cm, base cuneate, margin finely serrate, apex acute or acuminate, both sides pilose on lower side chiefly on veins, mixed with shorter hairs, petiole short, pilose, to ca. 2.5 mm long. Peduncle axillary, pilose; flowers solitary or usually paired, one well-developed ca. 5.25 cm long accompanied by a shorter one, a pair of bracteoles inserted at ca. 3/4 of its length, 1.8–2.5 mm long, pilose as the peduncle. Calyx 5-partite, lobes ca. 2 mm long, acute, hairy. Corolla tubular, total length ca. 23 mm, thinly pubescent, glandular hairs also present, tube white, inside around and at the mouth with two yellow bands, limbs rounded with apex rounded, light purple, darker at the margin, upper 2 lobes partially connate. Fertile stamens 2, arising from the basal part of corolla, filaments ca. 7 mm long, glabrous, anthers 2 mm at most. Nectary short cylindric, ca. 0.6 mm long, not lobed. Ovary and style hairy, stigma ca. 1.4 mm wide. Fruit ca. 5.6 cm long, persistent and sparsely pubescent (figure 2).



Figure 2. *Codonoboea kjellbergii*. A) habit; B) flower. Scale bar: A= 2 cm, B= 5 mm. (All from Taofik Hidayat 37 (BO). Prepared by W.A. Mustaqim).

*Specimen examined:* INDONESIA. Maluku, Buru Island, near road from Wamlana to Lake Rana, 950 m (S 3 8' 53.8" E 126 35' 2.8") *Taofik Hidayat* 37 (BO!).

*Distribution:* Sulawesi, Maluku (Ambon, Buru, Seram) and New Guinea.

*Habitat and ecology:* Found once in sandstone-derived soils, at about 950 m elevation. The soil was probably nutrient-poor as indicated by the presence of *Nepenthes maxima* in the surrounding area.

*Notes:* The description above is based on a single plant preserved as a dried herbarium specimen. Kartonagoro & Potter (2012) noted that this species is easily recognized from its flower that has a white tube and purple lobes, its oblong pubescent leaves and long narrow capsule. These characters are easy to recognize even in the field. The discovery of this species on Buru Island fills a gap in its geographical distribution, which was previously thought to be disjunct.

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## References

- Burtt BL. 1998. New species of phytogeographical interest in *Beccarinda* and *Henckelia* (Gesneriaceae). *Beitrage zur Biologie der Pflanzen* 70: 377-382.
- Kartonagoro A, Potter D. 2014. The Gesneriaceae of Sulawesi VI: The species from Mekongga Mts. with a new species of *Cyrtandra* described. *Reinwardtia* 14(1): 1-11.
- Kartonagoro A. 2012. The Gesneriaceae of Sulawesi V: A new species of *Rhynchoglossum* and a new combination in *Codonoboea*. *Edinburgh Journal of Botany* 69(2): 357-361. doi: 10.1017/S0960428612000157
- Middleton DJ, Weber A, Yao TL, Sontag S, Moller M. 2013. The current status of the species hitherto assigned to *Henckelia* (Gesneriaceae). *Edinburgh Journal of Botany* 70(3): 385-404. doi: 10.1017/S0960428613000127
- Ridley HN. 1923. *Flora of the Malay Peninsula* 2. London: L. Reeve.