

## ***Boeica ornithocephalantha* (Gesneriaceae), a new species from northern Vietnam**

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**ABSTRACT.** A new species, *Boeica ornithocephalantha* F.Wen, Y.G.Wei & T.V.Do (Gesneriaceae), is described from the northern part of Vietnam. This new species is most similar to *Boeica ferruginea* Drake, but clearly differs from the latter by the unusual corolla. A provisional IUCN conservation assessment is provided.

**Keywords.** *Boeica*, Gesneriaceae, IUCN conservation assessments, Vietnam

### **Introduction**

The genus *Boeica* Clarke (Gesneriaceae) was first published by Clarke (1874). It is a small genus in subfamily Didymocarpoideae, tribe Trichosporeae, subtribe Leptoboeinae of the Gesneriaceae (Weber et al., 2013). Currently, there are about twelve species of *Boeica* from China, Myanmar, Bhutan, northern India and the northern part of Vietnam (Wang et al., 1990, 1998; Li & Wang, 2004; Weber, 2004), the species described most recently being *B. glandulosa* B.L.Burt (Burt, 2001). *Boeica* species usually grow in shaded and damp locations with the different species having variable flowering and fruiting seasons, thereby often making it a challenge to collect specimens for identification. Except for *Boeica guileana* Burt (Burt, 1977), which is

a rosette plant without distinct stems, the remaining species of *Boeica* are caulescent, including the newly described species below.

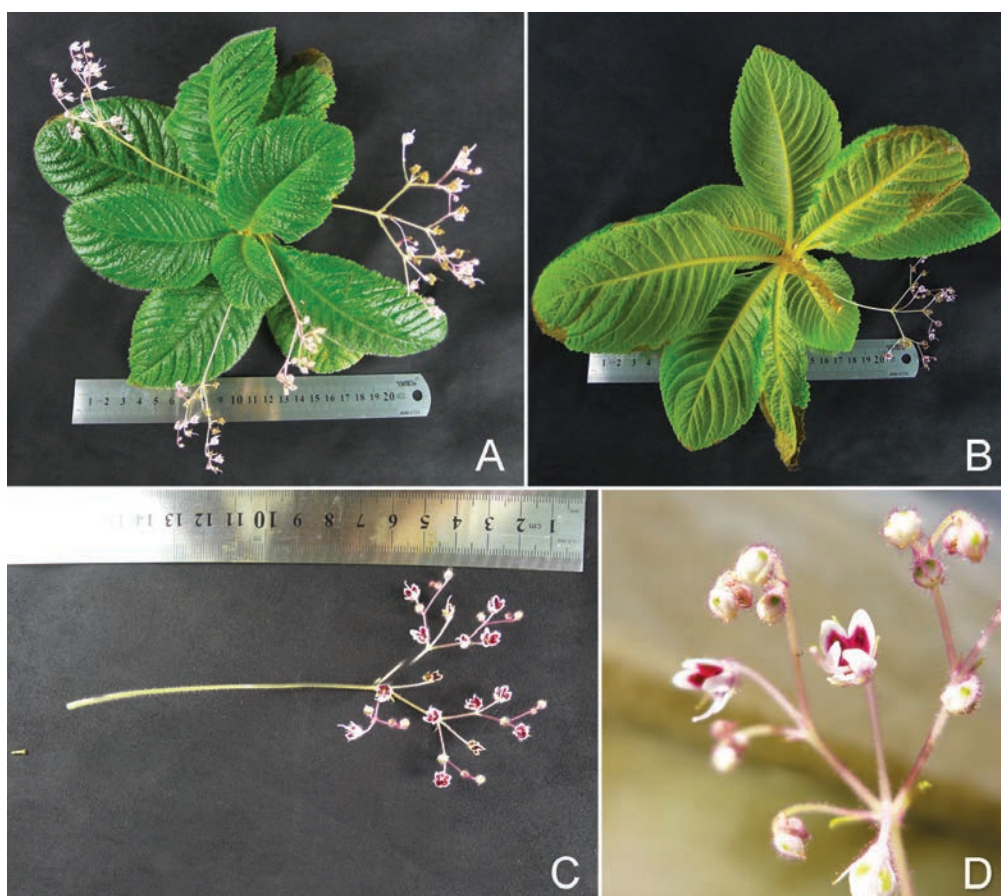
During a field investigation of the flora of northern Vietnam we collected an unknown species of *Boeica* which required further investigation. Plants were grown at the nursery of Guilin Botanical Garden and the Gesneriad Conservation Center of China (GCCC) from seeds collected in the Pu Hu Nature Reserve, Quan Húa district, Thanh Húa province, northern Vietnam. When the plants flowered, the floral morphology provided further confirmation that the collection was a new species of *Boeica*. Michael Möller, a Gesneriaceae researcher at the Royal Botanic Garden Edinburgh, also supported this conclusion. We describe and illustrate the proposed new species here and provide a provisional IUCN conservation assessment following the guidelines in IUCN (2012).

### Taxonomy

***Boeica ornithocephalantha*** F.Wen, T.V.Do & Y.G.Wei, **sp. nov.**

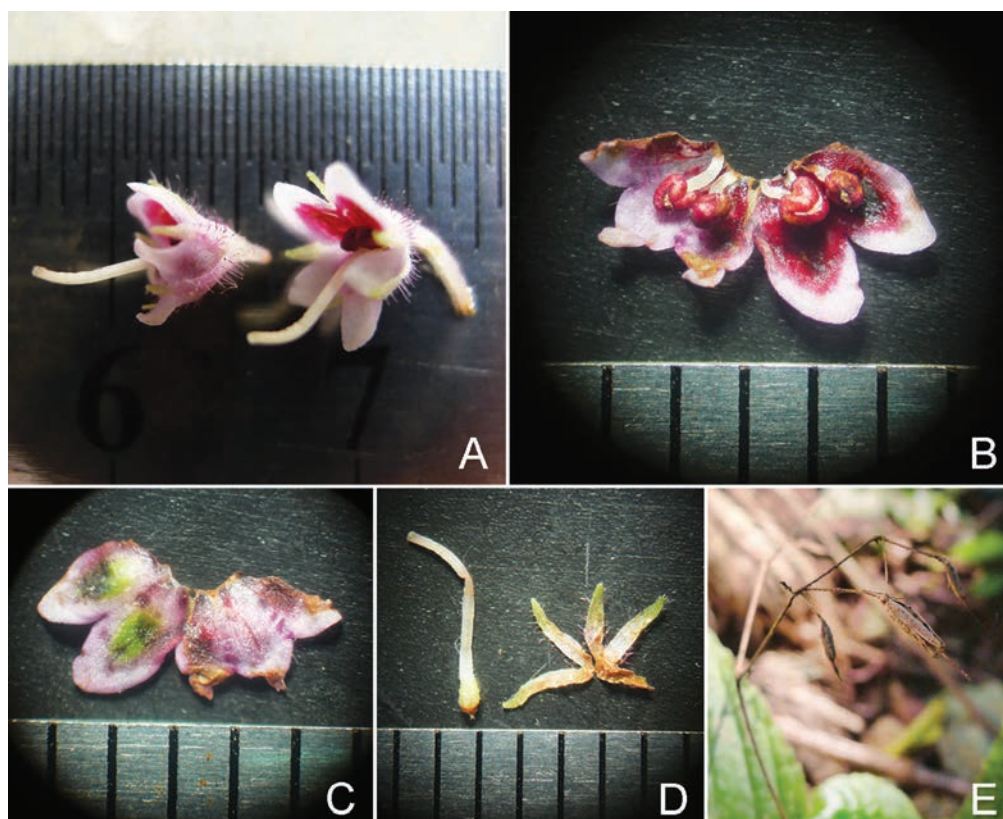
Most similar to *Boeica ferruginea* Drake but *B. ornithocephalantha* is characterised by a shorter petiole (1–1.5 cm long vs 3–5 cm long in *Boeica ferruginea*), adaxial leaf blade densely glandular and non-glandular pubescent (adaxially appressed puberulent, abaxially sparsely woolly to glabrescent, woolly to villous along veins in *Boeica ferruginea*), peduncle 12–20 cm long and sparsely glandular pubescent (5–8 cm and villous in *Boeica ferruginea*), bracts 3 (2 in *Boeica ferruginea*), corolla in lateral view reminiscent of the head of a bird and outside glabrous (not reminiscent of a bird and outside sparsely pubescent in *Boeica ferruginea*), corolla tube 1–1.2 mm long (c. 2 mm long in *Boeica ferruginea*), and disc inconspicuous or nearly none (circular, c. 0.2 mm high in *Boeica ferruginea*). – TYPE: Vietnam, Thanh Húa province, Quan Húa district, Quan Húa town, Pu Hu Nature Reserve, alt. 900 m, 18 July 2014, flowering, Wen Fang WF140718-01 (holotype VNMN; isotype IBK). (Figs. 1 & 2)

Herbs, stoloniferous. **Stems** 8–18 cm long, unbranched or rarely branched, densely yellowish-brown woolly to villous or pilose when young, mostly glabrescent when mature, rarely glabrous; rhizomes short, 2–4 cm long, c. 2 mm in diameter. **Leaves** alternate, internodes c. 1 cm long, usually 6–8 leaves clustered at the top of stem; petiole 1–1.5 cm long, densely brown villous; blades ovate-elliptic to oblong, 10–18 × 7–10 cm, mature leaf blades usually ascending, apex obtuse to rounded, base attenuate, margin irregularly serrate, densely glandular and non-glandular pubescent on the upper surface, upper surface distinctly bullate, lateral veins 10–13 on each side, impressed adaxially and prominent abaxially, densely yellowish-brown woolly on the veins of the lower surface, the rest yellowish-brown villous. **Inflorescence** axillary, a dichasium, 12- to 35-flowered or more; peduncle 12–20 cm long, c. 1.2 mm in diameter, sparsely purplish brown and white erect glandular pubescent, the hairs varying in length; bracts 3, the larger two narrowly lanceolate, c. 5 mm long, c. 1 mm in diameter at base, apex acute, margin entire, the remaining one linear, c. 1.5 mm



**Fig. 1.** *Boeica ornithocephalantha* F.Wen, Y.G.Wei & T.V.Do. **A.** Top view of plant. **B.** Upward view of plant. **C.** Cyme with open flowers. **D.** Front view of cyme. (Photos: Fang Wen)

long, 0.2–0.3 mm in diameter at base, apex acuminate, margin entire, outer surface sparsely purplish brown glandular puberulent, inside nearly glabrous; pedicels 1.5–4.5 cm long, 1–1.2 mm in diameter, sparsely purplish brown and white erect glandular pubescent. **Calyx** divided to the base, 5-lobed, apex green, the rest pinkish purple, lobes linear lanceolate, 4–5 mm long, c. 0.9 mm in diameter at base, margin entire, outside reddish purple glandular puberulent, inside nearly glabrous; **Flowers** slightly fragrant. **Corolla** small, 4–6 mm long, c. 5 mm in diameter, outside glabrous, initially shallowly campanulate, limb inconspicuously 2-lipped, two larger lobes of abaxial lip inflexed from the middle and covering the anthers; corolla tube extremely short, 1–1.2 mm long; adaxial lip 2-lobed at least to middle of lip, lobes nearly equal, 3–4.5 mm long, c. 2 mm in diameter at base, wider but mostly shorter than abaxial lip lobes, external margin of lobes white, the centre of lobes green, internal margin of lobes white to pale pink, the centre dark purplish red; abaxial lip 3-lobed, all white, lateral lobes larger, broadly lanceolate to oblong, apex obtuse, c. 3.5 mm long, c. 1.5 mm in



**Fig. 2.** *Boeica ornithocephalantha* F. Wen, Y.G.Wei & T.V.Do. **A.** Obliquely view of corollas. **B.** Inside of corolla. **C.** Outside of corolla. **D.** Pistil and calyx. **E.** Capsule. (Photos: A, E: Fang Wen; B–D: Hua-Fei Cen)

diameter at base, the central lobe lanceolate, apex acuminate and inflexed, 3.5–4 mm long, 1.2–1.5 mm in diameter at base. **Stamens** 4, free; filaments white, 0.5–0.8 mm long, glabrous, adnate to the base of corolla; anthers dark purplish red, cordate, c. 0.5 mm long, 0.4–0.6 mm in diameter at base, dehiscing poricidally; staminode 1, c. 0.1 mm long, dark purple to black, adnate to the base of corolla. **Disc** inconspicuous or nearly absent. **Ovary** ovoid, 1.5–2 mm long, c. 1 mm in diameter, glandular puberulent; style 5–7 mm long, mostly glabrous but glandular puberulent at the base. **Stigma** 1, apex truncate, pale green. **Capsule** linear, nearly glabrous, 1.5–2 cm long.

**Distribution.** Only known from Pu Hu Nature Reserve, near En Village, Quan Húa town, Quan Húa district, Thanh Húa province, Vietnam.

**Habitat.** Primarily growing on shaded slopes in valleys above streams, often locally common, at low altitude. It occurs on rocks covered with humus under evergreen forest, not prone to human disturbance.

*Etymology.* The scientific name is due to the perception by the authors that the lateral view of the mature corolla looks like the head of a bird. The epithet, “*ornithocephalantha*”, is composed of the Greek elements ‘ornitho-’ for bird, ‘cephal-’ for head and ‘-antha’ for flower.

*Provisional IUCN Conservation Assessment.* Vulnerable VU B2ab(ii,iii). This species is only known from very few collections and details on the size of the population in Pu Hu Nature Reserve are unknown. We acknowledge that the type locality is protected from exploitation and development by being in a Nature Reserve, thereby guaranteeing the plants protected status. Based on our observations during the field work currently the plants appear to be locally abundant. However, the known habitat is also disturbed by intentional and unintentional human activity such as for path building. According to the IUCN red list categories and criteria, the species should be considered Vulnerable (IUCN, 2012).

*Notes.* *Boeica* species are characterised by an indumentum of shiny bristly brown hairs, a corolla with a short tube and flat limb, four free stamens, and poricidal or transverse anthers that are coherent at the tips (Pellegrin, 1926; Burtt, 1977; Li & Wang, 2004). Among the 12 known species, some have a distinctly zygomorphic corolla, a very short corolla tube, a spreading corolla limb, and four obvious stamens (here connivent), traits that Burtt (1977) considered to be ‘primitive’. The new species possesses some of the above-mentioned morphological traits.

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