
Aphelandra espirito-santensis (Acanthaceae), a New Species from Espírito Santo, Brazil

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ABSTRACT. A new Brazilian species of the genus *Aphelandra* is described and illustrated. It is related to *Aphelandra ignea* but differs markedly from that taxon by its leaf blades and the ovate to spatulate bracts with 4–5 spines on the margin. *Aphelandra* is represented in Brazil by 28 species. They occur from the Floresta Amazônica to the Floresta Atlântica.

Aphelandra R. Brown is a morphologically diverse genus characterized by a lack of cystoliths, a corolla with a distinct upper lip, four monothealous stamens, and elongated, tricolporate pollen.

The result of a recently completed study of Acanthaceae specimens deposited in the Jardim Botânico do Rio de Janeiro (RB) has led to the discovery of an undescribed species.

Aphelandra espirito-santensis Profice & Wasshausen, sp. nov. TYPE: Brazil. Espírito Santo: Mun. de Linhares, Reserva Florestal da Cia. Vale do Rio Doce, 26 Sep. 1978, *A. M. Carvalho et al.* 80 (holotype, RB). Figure 1.

Herba, caulis reptans, subteres, pilis hirsutis, in apicem versum flavo-pubescentis. Folia hirsuta, lamina ovata, basi apiceque obtusa, 3–6 paribus venis secundariis, 1.5–5 cm longa et 1.5–3 cm lata; petiolo 0.5–4 cm longo; inflorescentia spicata terminalis raro axillaris, 1.2–1.3 cm longa, rhachi flavo-pubescenti; bracteae imbricatae, obovatae vel spatulatae, marginibus 4–5 dentatis, extus pubescentes, membranaceae, 1–1.3 cm longae et 0.4–0.9 cm latae; bracteolae filiformes, apice aristatae, pilosae, striatae, subhyalinae, 5–6 mm longae et ca. 1 mm latae; calyx quinquepartitus, segmentis lanceolatis, subaequalibus, striatis, subhyalinis, aristatis, barbatis, 7–8 mm longis, 1–1.5 mm latis; corolla flava, ca. 1 cm longa, membranacea, pilosa, tubo cylindrico, basi aliquanto angustato 0.1 cm lato, faucis 0.2 cm lati, labio superiore bilobato, 0.3 cm longo et 0.2 cm lato, labio inferiore trilobato, lobis lateralibus obovatis, 0.3 cm longis et 0.2 cm latis, lobo medio orbiculato, 0.4 cm longo et 0.4 cm lato; stamina

exserta, antheris ad apicem pilosis, ca. 2 mm longis; capsula ovata, glabra, 0.9–1 cm longa; semina ovata, brunnea, tuberculata, 2.5–3 mm longa et ca. 2 mm lata.

Herb; stem reptant at base, subcylindrical, with hirsute pubescence, the trichomes yellowish apically. Leaves with petioles 0.5–4 cm long, the pubescence similar to that of the stem, the blades ovate, obtuse apically and basally, with 3–6 pairs of secondary veins, hirsute on both the upper and lower surface, especially the veins and the margins, 1.5–5 cm long and 1.5–3 cm wide. Flowers borne in terminal, rarely axillary spikes 1.2–3 cm long, the rachis yellowish pubescent; bracts imbricate, obovate to spatulate, the margins spinulose-serrate, provided with 4–5 pairs of teeth, pubescent without, membranous, 1–1.3 cm long and 0.4–0.9 cm wide; bracteoles filiform, aristate at apex, pilose, striate-nerved, subhyaline, 5–6 mm long and 1 mm wide; calyx 5-parted, the segments lanceolate, subequal, striate-nerved, subhyaline, aristate, barbate, 7–8 mm long, the posterior segment ca. 1.5 mm wide, the anterior and lateral pair ca. 1 mm wide; corolla yellow, about 1 cm long, membranous, sparingly pilose, the tube cylindrical, 1 mm wide at base, about 2 mm wide apically, the upper lip bilobed, 3 mm long and 2 mm wide, the lower lip 3-lobed, the lateral lobes 3 mm long and 2 mm wide, the middle lobe orbicular, 4 mm long and wide; stamens exserted, anthers ca. 2 mm long, apically pilose; pollen prolate, tricolpate with the colpi extending from the equator nearly to one or both poles, 55–64 μm long and ca. 29 μm wide, the exine sculpturing verruculose (Fig. 2). Capsule ovate, glabrous, 9–10 mm long; seeds ovate, brown, tuberculate, 2.5–3 mm long and ca. 2 mm wide.

Distribution. Occurring in lowland forests in northern Espírito Santo at elevations of about 30 m.

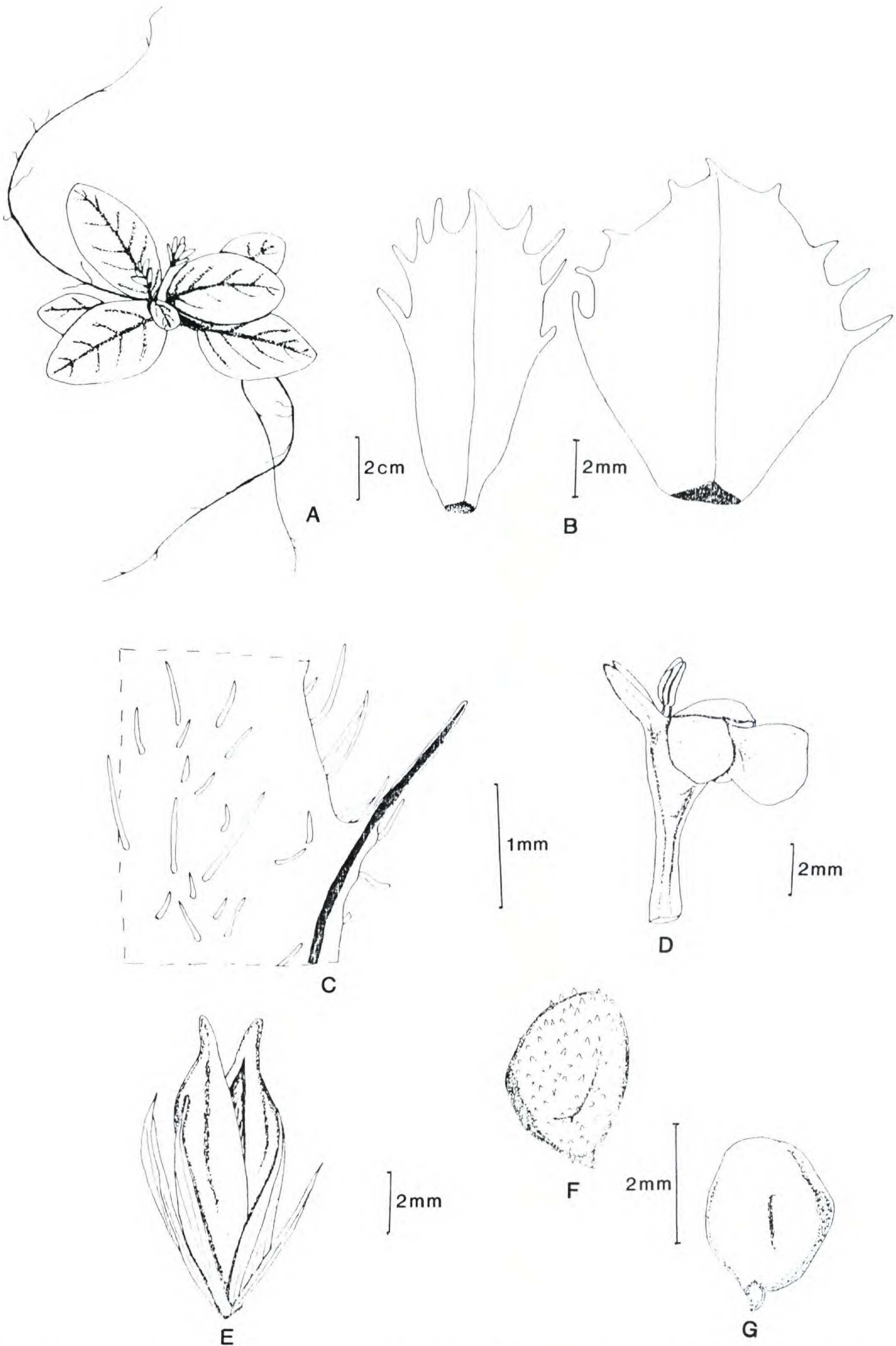


Figure 1. A-G. *Aphelandra espirito-santensis* Profice & Wasshausen (*Carvalho et al.* 80). —A. Habit. —B. Variability of the bracts. —C. Detail of the bract margin. —D. Corolla, stamens. —E. Calyx segments and capsule. —F. Seed. —G. Embryo. (Drawn by S. Profice.)



Figure 2. Scanning electron (SEM) photomicrographs of *Aphelandra espirito-santensis* pollen. —A. Equatorial view, $\times 1500$ (Carvalho et al. 80). —B. Equatorial view, $\times 1400$ (Carvalho et al. 80).

Aphelandra espirito-santensis shares diagnostic characteristics and affinities with two Brazilian species, *A. ignea* (Schrader) Nees ex Steudel and *A. phrynioides* Lindau. It is distinguished from *A. ignea* by its leaf shape and the ovate to spathulate floral bracts with 4–5 pairs of marginal teeth. From *A. phrynioides* the new taxon is distinctive by its much reduced corolla size and shape, leaf shape and size, and the size and shape of its floral bracts.

Using the infrageneric classification provided by Wasshausen (1975), *A. espirito-santensis* is included in the group of Brazilian species that are characterized by having entire or undulate leaf blades and floral bracts without bracteal nectaries and with marginal teeth. The following key may be used to distinguish the species of this group.

- 1. Corollas 7–25 mm long 2
- 1. Corollas 30–65 mm long 6
- 2(1). Corollas 10–13 mm long 3
- 2. Corollas 20–22 mm long 5
- 3(2). Bracts ovate, 17–20 mm long
..... *A. caput-medusae* Lindau
- 3. Bracts obovate to obovate-cuneate to spathulate, 9–13 mm long 4

- 4(3). Corollas red; bracts obovate-cuneate, 9 \times 4 mm; leaf blades oblong-oval 8–10 cm long *A. decorata* (Nees) Wasshausen
- 4. Corollas yellow; bracts obovate to spathulate, 10–13 mm long; leaf blades ovate, 1.5–5 cm long
..... *A. espirito-santensis* Profice & Wasshausen
- 5(2). Leaf blades ovate, 8–12 \times 4–6.5 cm; bracts obovate, 17–19 \times 14 mm, mucronulate at apex; corolla sparingly glandular-pilose
..... *A. neesiana* Wasshausen
- 5. Leaf blades oblong-elliptic to oblong-lanceolate, 8–9 \times 2.5–3.5 cm; bracts elliptic-oblong, 13–15 \times 5–6 mm, obtuse at apex; corolla glabrous
..... *A. bahiensis* (Nees) Wasshausen
- 6(1). Corollas yellow 7
- 6. Corollas red, orange, or scarlet 9
- 7(6). Bracts conduplicate
..... *A. ornata* (Nees) T. Anderson
- 7. Bracts plane, not folded or conduplicate 8
- 8(7). Corollas ca. 40 mm long, the upper lip obovate, 8 \times 7 mm, bilobed
..... *A. phrynioides* Lindau
- 8. Corollas 30 mm long, the upper lip oval, 5 \times 5 mm, entire
..... *A. ignea* (Schrader) Nees ex Steudel
- 9(6). Leaf blades narrowly elliptic, 2–3.2 cm wide, acuminate at apex; bracts oblong to elliptic,

- 18 × 6 mm, green with the upper margins purplish, the margins spirulose-dentate with about 5 pairs of teeth; corolla orange
..... *A. margaritae* E. Morren
9. Leaf blades narrowly ovate, 4–5 cm wide, acute to obtuse at apex; bracts obovate, to 18 × 14 mm, purplish, the margins spinulose-serrate with about 7 pairs of teeth; corolla red
..... *A. obtusifolia* (Nees) Wasshausen

Should one wish to compare the new taxon to some of the smaller terrestrial herbs of *Aphelandra* of Central America, e.g., *A. seibertii* Leonard or *A. tonduzii* Leonard, the following key will demonstrate the major differences.

1. Floral bracts narrowly lanceolate, 1.5 mm wide, with 1 pair of minute, slender marginal teeth; corollas pale pink. Costa Rica
..... *A. tonduzii* Leonard
1. Floral bracts obovate to spatulate, 4–9 mm wide, with 2–5 pairs of conspicuous marginal teeth; corollas yellow 2

2. Corollas 20 mm long; leaf blades oblong-elliptic, thinly pilose; flowers borne in spikes 4–8 cm long; bracts bearing 2 or usually 3 marginal teeth. Costa Rica and Panama
..... *A. seibertii* Leonard
2. Corollas 10 mm long; leaf blades ovate, hirsute; flowers borne in spikes 1.2–3 cm long; bracts bearing 4–5 pairs of marginal teeth. Brazil
..... *A. espirito-santensis* Profice & Wasshausen

Paratypes. BRAZIL. **Espírito Santo:** Mun. de Linhares, Reserva Florestal da Cia. Vale do Rio Doce, *G. Martinelli* 4993 (RB); Reserva de Sooretama, *D. Sucre* 5701 (RB); Reserva de Sooretama, *G. Martinelli* 2285 (RB).

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Literature Cited

Wasshausen, D. C. 1975. The genus *Aphelandra* (Acanthaceae). *Smithsonian Contr. Bot.* 18: 1–157.