

AA (ORCHIDACEAE) IN COSTA RICA

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Abstract: Aa paleacea (H.B.K.) Reichb. f. (Orchidaceae) is reported from Central America for the first time.

The genus Aa Reichb. f. is an Andean genus of terrestrial orchids. It has never been reported north of Colombia. It was discovered in the high paramo of Costa Rica in 1962 and has remained unidentified in herbaria since.

AA Reichb. f., Xenia Orchid. 1: 18, 1854. TYPE: Orphys paleacea H.B.K., Nova Gen. Sp. Pl. 1: 334. 1817. fide Baillon, Dict. Bot. 309. 1892.

Erect, terrestrial plants. Roots fleshy. Stems erect. Leaves basal, spiral, conduplicate, petiolate, nonarticulate, the flowering stems usually leafless, enclosed in loose, thin, papery sheaths. Flowers in dense terminal spikes, the bracts thin, papery, usually longer than the flowers, ovary as large as the flower, the flower small, without hairs, the sepals similar, the two uppermost erect and spreading the lowermost pendent; lip uppermost, hooded, the mouth often fringed, the base with a pair of calli the column short, the anther dorsal, the pollinia 4, soft, without caudicles oblong, sessile, the viscidium terminal, the stigma entire.

There are about 30 species of Aa native to the high Andes of South America. Some authors consider this genus to be only a slight variant of the genus Altensteinia H.B.K. The two genera are closely related but Aa can be distinguished by its hooded, fringed lip, glabrous column, and large stigmas.

The name Aa has no meaning, unless it is a shortening of Altensteinia. Schultes and Pease (1963) speculate that it was used to ensure the placement of a Reichenbach name at the head of any list of genera.

Classification (Dressler 1983): subfamily Spiranthoideae, tribe Cranichideae, subtribe Cranichidineae.

Aa paleacea (H.B.K.) Reichb. f., *Xenia Orchid.* 1: 18. 1854.
(fig. 1).

Orphys paleacea H.B.K., *Nova Gen. Sp. Pl.* 1: 334. 1816. Type:
Ecuador, Pichincha, Lloa Chiquito, Rucupichinchae, 1662
hex., March, Humboldt & Bonpland 46. (Lectotype: W fide
Garay 1978).

Altensteinia paleacea (H.B.K.) Kunth, *Syn. Pl. Aeq.* 1: 325. 1822.

Erect, terrestrial herb, 20-50 cm tall. Leaves rosulate, ovate-lanceolate to lanceolate, up to 15 cm long, 3 cm wide, reduced above to thin, papery, acute or acuminate sheaths. Flowers in dense, erect, terminal spikes; bracts narrowly triangulate, 15-20 mm long, 5 mm wide, long-acuminate, hyaline, more than twice as long as the flowers. Flowers white; ovary ovoid, 5-7 mm long, glabrous; dorsal sepal oblong-ovate, 3-4 mm long, 1-1.5 mm wide, obtuse, pendent; lateral sepals, concave, lanceolate, 4-4.5 mm long, 2 mm wide, acute to subacute, erect to slightly deflexed; petals white, narrowly ovate to narrowly obovate, 2-3 mm long, 1 mm wide, the base narrowed, the margin slightly erose toward the apex, the apex obtuse; lip white with darker veins, 3-3.5 mm long, the base slightly cordate, the margin fimbriate above, the disk with a pair of small calli at its base; column 1-1.5 mm long, the clinandrium a low ridge, the anther pedicellate.

Specimen studied: COSTA RICA. Prov. Cartago, paramo scrub on the crest of Cerro Buenavista, Cerro de La Muerte. 3.5 mi. W of Villa Mills, 10,500 ft, 16 July 1962, G.L. Webster, K. Miller, and L. Miller 12376 F(2)!

Aa paleacea is found in high mountain paramos from Bolivia to Colombia and Costa Rica. Paramo vegetation occurs above 3500m in South America and above 3000 m in Costa Rica (Weber 1958). Paramos are wet, cold, and windy for most of the year and are often shrouded in clouds. The soils of the Costa Rican Paramos are poor and rocky. In wet depressions, Sphagnum bogs are common and on the rocky slopes shrubby bamboos often form nearly impenetrable thickets.

It is in these thickets that Aa paleacea was found. When not in bloom, all that is visible is a rosette of green leaves. In bloom, the small, white flowers are densely clustered in the spike, with long, thin, light brown bracts on leafless stems. A recent trip to relocate the species on the paramo at Cerro de La Muerte was unsuccessful.

The occurrence of *Aa paleacea* in Costa Rica points out the links between the orchid flora of the northern, high Andes and the Costa Rican paramo (Cuatrecassas 1957, Weber 1958). Seeds blown north may find suitable substrates and become established. This has also occurred with *Pterichis* Lindl., which has two species in the Costa Rican paramo (Glictenstein 1983), *Gomphichis*, and *Epidendrum criniferum* Lindl.

Acknowledgements

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Literature Cited

- Cuatrecassas, J. 1957. A sketch of the vegetation of the northern Andean province. *Proc. Pacific Sci. Cong.* 4:167-173.
- Dressler, R. 1981. *The Orchids. Natural History and Classification.* Cambridge, Mass.: Harvard University Press.
- Garay, L. A. 1978. Orchidaceae, part 1. *in* G. Harling and B. Sparre, eds. *Flora of Ecuador.* no. 9. Goteborg and Stockholm: University of Goteborg and Rijksmuseum.
- Glictenstein, L. 1983. A new *Pterichis* species for Costa Rica. *Bull. Amer. Orchid Soc.* 53:278-283.
- Schultes, R. E. and A. S. Pease. 1963. *Generic Names of Orchids. Their Origin and Meaning.* New York: Academic Press.
- Weber, H. 1958. *Die Paramos von Costa Rica und ihre pflanzengeographische Verkettung mit den Hochanden Sudamerikas.* Wiesbaden: Akademie der Wissenschaft und der Literatur, Mainz.

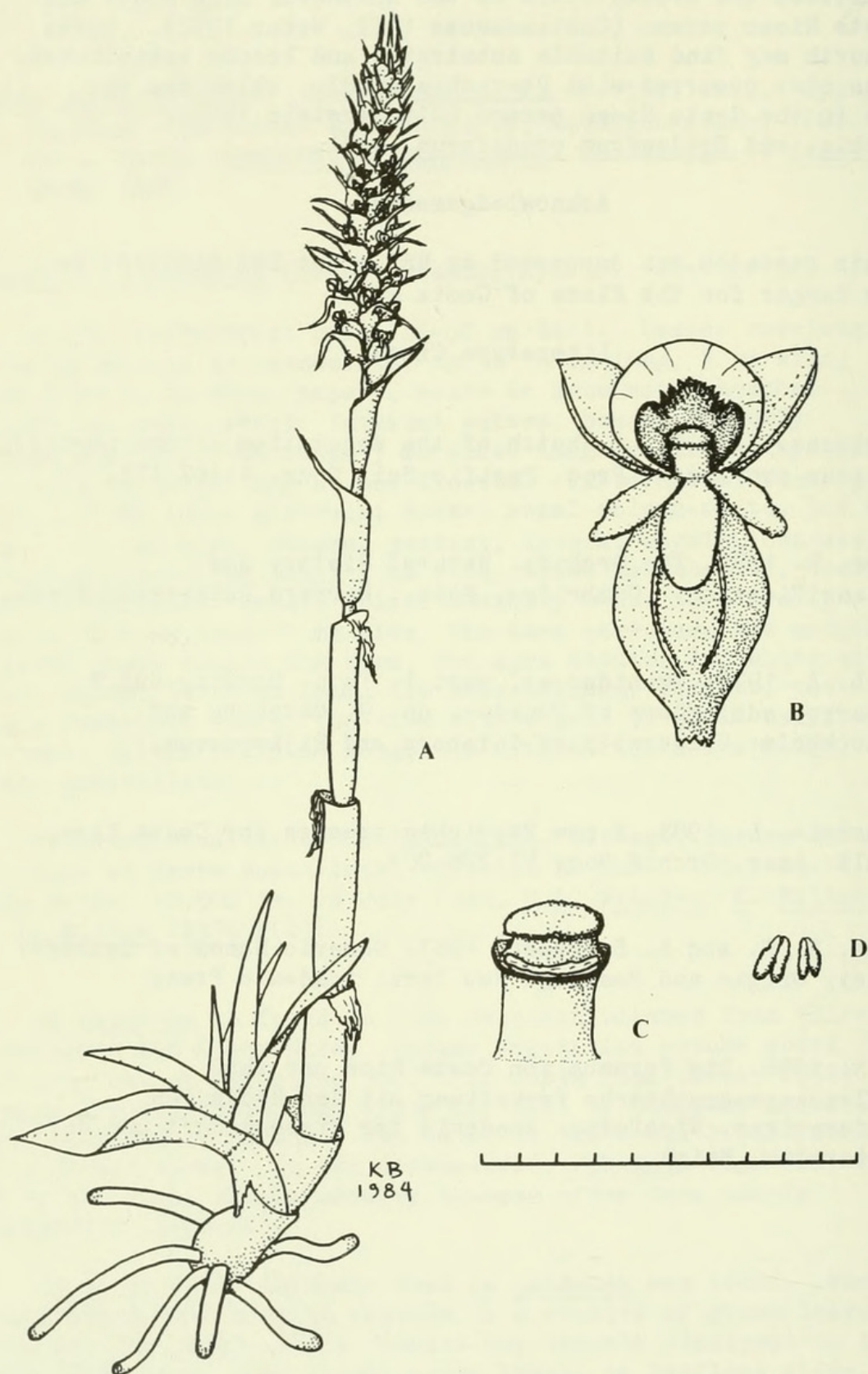


fig. 1. *Aa paleacea* Reichb.f. A. Habit. B. Flower. C. Column. D. Pollinia.



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