Pleurothallis asteria K.W. Holcomb, sp. nov.

<u>Plant</u> small in size, epiphytic, caespitose, roots very slender.

<u>Ramicauls</u> up to 9.5 cm long, very slender, subcreect, enclosed by a thin tubular sheath below the middle and another at the base.

Leaf 5.5 cm long, 3.25 cm wide, thinly coriaceous, cordate, spreading, acute.

<u>Inflorescence</u> a single, successive, resupinate flower, 26 mm long, pedicel 17 mm long, borne from a reclining, spathaceous bract at the base of the leaf.

<u>Labellum (Lip)</u> 3 mm long, 2 mm wide, yellow mottled with brown from the base, pale yellow to white at the lower ¼ to the apex, minutely vertucose, held flat against the synsepal, triangular-sagittate with a well-developed orbicular glenion at the base, trilobed, basal lobes rounded, apex acute.

Dorsal Sepal 13 mm long, 2.5 mm wide, 3-veined, yellow, membranous, glabrous, convex, acutely reflexed, attenuate, acute.

Synsepal 13 mm long, 3 mm wide, 4-veined, yellow, membranous, glabrous, convex, attenuate, acute.

Petals 11 mm long, 1.5 mm wide, 3-veined, yellow, narrowly ovate, attenuate, acute.

Column 1 mm long, 1.5 mm wide, the anther and bilobed stigma apical.

Eponomy: Named for Asteria, the Titan goddess of falling stars. This is a reference to the flowers which resemble a shooting star.

COLOMBIA: Without collection data. K.W. Holcomb 18312 (Holotype: GEO),

Pleurothallis asteria has circulated in the orchid trade for decades erroneously identified as a form of *P. index*. This misidentification is due to an incorrect illustration for *P. index* which was published in Luer's *Icones Pleurothallidinarium* Vol. XXVII.

Morphological and Taxonomic Comparisons:

Pleurothallis index was published in *Phytologia* in 1980 based on SEL4582 without a corresponding illustration (Figs 4 & 5). According to the description, *P. index* is identified by a large, suberect spathaceous bract at the base of the leaf. A large, suberect spathaceous bract is, in fact, present on the preserved specimen.

In 2005, Luer published an illustration of *P. index* based on SEL6721 (Figs. 6 & 7). However, a large, spathaceous bract is absent in both the preserved specimen and the corresponding illustration. The absence of the suberect, spathaceous bract confirms SEL6721 and SEL4582 are different species.

Unfortunately, flowers of neither SEL 4582 nor SEL6721 were preserved in spirits. Therefore, it cannot be confirmed with complete certainty that SEL6721 is, in fact, *P. asteria*. Therefore, SEL6721 was not used as the holotype for *P. asteria*.

Diagnosis:

Pleurothallis asteria is similar to *Pleurothallis index*, which is distinguished by flowers that are produced from a large, suberect spathaceous bract at the base of the leaf. However, this characteristic is entirely absent in *P. asteria*. The flowers of *P. asteria* are instead produced on a very long pedicel from a short, reclining spathaceous bract. (Fig. 2)

There are also significant differences in the lip morphology of the two species. *Pleurothallis asteria* has a flat, vertucose lip, whereas *P. index* has a suberect, papillose lip. (Fig. 3)

Vegetatively, the two species are superficially similar. However, *P. asteria* is significantly smaller than *P. index*, 9.5 cm tall vs. 16 cm tall. In addition, the leaves of *P.index* are deeply cordate with basal lobes that overlap each other. The basal lobes of the leaves of *P. asteria* do not overlap each other.

Pleurothallis index clearly belongs in Section *Macrophyllae-Fasciculatae*. However, based on the attenuate sepals, triangular lip, and long pedicel, *P. asteria* is more similar to species in Series *Amphygiae*.

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Fig. 1. *Pleurothallis asteria* Photos of the plant used to prepare the holotype material.



Fig. 2

Pleurothallis asteria, top; Pleurothallis index, bottom



Fig. 3

Pleurothallis asteria, left; Pleurothallis index, right

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Pleurothallis hirtzii Luer, sp. nov.

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Species hace <u>P. praegrandis</u> Ames affinis sed statura majore, floribus triplo majoribus et labello peltato acuto lobis basalibus conduplicatis columnam amplectentibus distinguitur.

Plant gigantic, terrestrial, caespitose; roots coarse, flexuous. Secondary stems stout, to over 1 meter tall, unifoliate, with a loose, tubular sheath near the middle and 1-2 other sheaths near the base. Leaf subseredt to spreading, coriaceous, broadly ovate, 36-40 cm long, 25-29 cm wide, the apex acuminate, acute, tridenticulate, the base deeply coriate, sessile. Inflorescence racemose, up to 10 subdensely many-flowered racemes 30-38 cm long including a 6-7 cm long peduncle, from a foliaceous pathe 5-4.5 cm long in the axi of the leaf; floral bract 3-4 mm long; podicel 4-7 mm long; ovary 2.5 mm long; flowers medium in size, glabrous, dull white, spotted with purple, not widespreading; dorsal sepal elliptical, acute, 8 mm long, 4 mm wide, 3-weined; lateral sepals connate into an ovate, concave, subacute synemepal 8 mm long, 1.5 mm wide, the apex markedly thickened with rounded margins; lip cream-colored, peltate, ovate-trilobed, 3 mm long, 2.25 mm wide, the apex tradily acuminate, acute, the basal lobes conluplicate, acute, embracing the column, reflexed from a pair of obtuse, conical calli near the base, the base deflexed, hingd to the base of the column; column stout, terete, 1.5 mm long, fotless.

ETYMOLOGY: Named in honor of Alexander C. Hirtz of Quito, Ecuador, who discovered this species.

TYPE: <u>COLOMBIA</u>: NARINO: terrestrial in shaded humus of cloud forest north of Ricaurte, alt. ca. 1600 m, 3 Nov. 1979, <u>C. Luer</u>, <u>J. Luer</u>, <u>A. Hirtz & K. Walter 4618</u> (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This immense species, vegetatively the largest pleurothallid known at this time, is closely allied to the small-flowered \underline{P}_{\cdot} pracegrandis. Some of the plants of \underline{P}_{\cdot} intraji stand one and a half meters tall. The thrice larger flowers also differ from those of \underline{P}_{\cdot} pracegrandis in the shape of the lip which is shield-shaped in \underline{P}_{\cdot} hirtsi instead of transversely elliptical.

Pleurothallis index Luer, sp. nov.

Planta mediocris caespitosa, caulibus secundariis gracilibus folio profunde cordato multilongioribus, spatha magna uberecta, flore solitario longipedicellato atropurpureo, sepalo dorsali synsepaloque anguste ovatis acutis, petalis attenuatis serrulatis, labello triangulari acuto minute papilloso. Luer, Miscellaneous new species

1980

That medium in size, epiphytic, caespitose; roots numerous, slender, fasciculate. Secondary stems slender, suberect, unifoliate, 8-16 cm long, with a close, tubular sheath below the middle and another 1-2 sheaths at the base. Leaf suberect to spreading, coriaceous, ovate, 5,5-7.5 cm long, 3-5.8 cm wide, the apex acuminate, acute, tridenticulate, the base seesile, deeply cordate, the basal lobes overlapping, ca. 1 cm beyond the junction with the secondary stem. Inflorescence a dense fascicle of single, successive, long-pedicellate, dark purple, widespread, flat flowers, from a suberect spathe 12-18 mm long, 5 mm wide, at the base of the leaf; peducles 5-8 mm long, and floral bracts 4-5 mm long, enclosed within the spathe; pedicel 20 mm long; ovary 4 mm long; dorsal sepal narrowly ovate, acuminate, acute, 16 mm long, 4 mm wide; lateral sepals connate into a narrowly ovate, outle symsepal 16 mm long, 5.5 mm wide; petals narrowly ovate, outley, attenuate, acute, 15 mm long, 2.2 mm wide, the margins minutely serrulate; lip ovatetriangular, acute, 4.5 mm long, 2 mm wide, the genein owell-developed, the surface cellular-papillose, the margins serrulate; column stout, 1 mm long, 2 the the series are acuted and the series and the series and the series acute acute acute.

ETYMOLOGY: From the Latin index, "a pointer, a sign," in allusion to the appearance of the flower.

TYPE: <u>COLOMBIA</u>: NARINO: epiphytic in cloud forest, La Planada above Ricaurte, alt. 1950 m, 2 Nov. 1979, <u>C. Luer</u>, <u>J. Luer</u>, <u>A. Hirtz & K. Walter 4582</u> (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This species may be distinguished from its numerous cordateleaved relatives by the medium-sized, broadly acuminate leaves, the large, suberect spathe, and the widely spread, dark purple, longpedicellate flowers with narrow floral parts.

Pleurothallis membracidoides Luer, sp. nov.

Planta mediocris caespitosa, caulibus secundariis ancipitiis foliis ovatis longioribus, flore solitario successivo fasciculato flavescenti, sepalo dorsali synsepaloque ovatis anguste obtusis ringentibus, petalis subfalcatis crassis subscabris, labello parvo subquafrato angulsos apice truncato deflexo extus bidentato, lobis lateralibus anguste rotundatis erectis.

Plant medium in size, epiphytic, caespitose; roots numerous, fine, flexuous. Secondary stems slender, terete below, sharply laterally compressed above, unifoliate, 6-12 cm long, with a losse tubular sheath above the base, subtended by a shorter one. Leaf erect, coriaceous, ovate, 4.5-6.5 cm long, 2-3 cm wide, the apex acuminate, acute, tridenticulate, the base cuneate to rounded, shortly decurrent on the secondary stem. Inflorescence a succession of solitary, long-stemmed, gaping, glabrous flowers, yellow,



Fig 5. Courtesy Marie Selby Botanical Gardens Herbarium

Acronia index (Luer) Luer, comb. nov.

Ety.: From the Latin index, "a pointer," in allusion to the dorsal sepal. Bas.: Pleurothallis index Luer, Phytologia 47: 76, 1980.

Plant medium in size, epiphytic, caespitose; roots slender, densely fasciculate. Ramicauls slender, erect, round in cross-section, 5-15 cm long, with close, tubular sheaths above the base. Leaf thinly coriaceous, spreading, sessile, broadly ovate, 3.5-6.5 cm long, 2.5-4.75 cm wide, the apex subacute, shortly acuminate, the base deeply cordate, the basal lobes up to 1.5 cm long. Inflorescence a fascicle of solitary, successive flowers borne from a suberect, foliaceous spathe 10-18 mm long, 3-5 mm broad, at Solitaty, successful forwards how the form a subcreat, how the same root is more than the base of the leaf; peduncles abbreviated, 3-4 mm long; confined within the spathe with the floral bract 5-6 mm long; pedicel 9-11 mm long; ovary 4-5 mm long; sepals yellow, membranous, glabrous, the dorsal sepal very narrowly ovate, acute, acutely reflexed, 15-19 mm long, 4 mm wide, 3-veined, the lateral sepals connate completely into a similar synspeal, 15-19 mm long, 1.5-2 mm wide expanded, 4-veined; petals yellow, very narrowly ovate, acute, acute, acute, acute, acute, and the synspeal, 15-19 mm long, 1.5-2 mm wide at the second secon base, 3-veined, minutely ciliate; Ilip yellow, triangular, acute, 4-4.5 mm long, 2 mm wide, minutely pubescent, the basal angles obtuse, the disc shallowly concave, with a well-defined glenion at the base, the base subtruncate, firmly hinged to the column-foot; column stout, 0.5-1 mm long, 2 mm broad, the anther and bilobed stigma apical, the foot obsolescent.

COLOMBIA: Nariño: La Planada above Ricaurte, alt. 1600 m, 3 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4582 (Holotype: SEL). Chocó: San José Palmar, cultivated at Colomborquídeas, 20 Nov. 1981, C. Luer 6721A (SEL).

ECUADOR: Esmeraldas: epiphytic in wet forest west of Lita, alt. 750 m, 18 Jan. 1987, C. Luer, J. Luer, A. Hirtz, C.H. Dodson, D. Benzing & D. Bernudes 12361 (MO).

This species is characterized an erect, long-pedicellate, spindly flower arising from a semi-erect spathe at the base of a deeply cordate leaf. The dorsal sepal, synsepal and petals are narrowly elongated, with the dorsal sepal acutely reflexed and the petals outstretched and lightly incurved, resembling the stance of a crab spider awaiting its prey. The lip is triangular and minutely pubescent.



Fig. 105. Acronia index

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Fig. 6 Courtesy Missouri Botanical Garden Press



Fig. 7 Courtesy Marie Selby Botanical Gardens Herbarium