

Alloneuron PILG. (Melastomataceae): some additions

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Abstract

Alloneuron ronliesneri sp.n. (Melastomataceae) is described from Peru. It belongs to section *Alloneuron* and is characterized by its small, markedly peltate leaves. A determination key and a distribution map for all four known species of *Alloneuron* are presented.

Key words: Melastomataceae, *Alloneuron*, Flora of South America, Peru, growth form, Chamberlain's and Leeuwenberg's architectural tree model.

Zusammenfassung

Alloneuron ronliesneri sp.n. (Melastomataceae) aus Peru wird hier beschrieben. Diese Art gehört zur Sektion *Alloneuron* und zeichnet sich durch die kleinen, auffällig peltaten Blätter aus. Ein Bestimmungsschlüssel, sowie eine Verbreitungskarte für alle 4 nunmehr bekannten Arten dieser Gattung werden präsentiert.

Introduction

The genus *Alloneuron* has recently been revised by WALLNÖFER (1996).

Additions to the chapter on indumentum

Concerning the hairs in this genus, and discussed in the paper cited above, the following observations are new:

- "type b":** These stellate hairs are normally very similar in *A. ulei* and *A. ronliesneri*. In the latter species, however, these hairs are slightly elongated and their main axis is recurved. Branches are often reduced in number, being only present on the exposed side of the curved main axis, or are sometimes missing altogether, the hairs then being more or less papilliform.
- "type e":** This hair type occurs only in *A. ulei*. New observations indicated, that these hairs at first possess apices like "type c.3", which, however, soon break off.

Key to the species

For hair types compare (WALLNÖFER 1996: 449).

- 1 Leaves 1 - 20 cm long, 0.4 - 6 cm wide, loosely arranged along the distal part of shoots; distal internodes normally clearly visible; mostly much more than 4 leaf pairs present at a time; flowers and fruits usually much more than 2 mm apart on long, filiform inflorescence- and infructescence-branches (sect. *Alloneuron*) 2

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- 1* Leaves mostly much larger, up to ca. 33 cm long, 11 cm wide, tufted on shoot apices; distal internodes usually hidden between leaves; only 2 - 3 leaf pairs present at a time; flowers and fruits crowded on short inflorescence- and infructescence-branches (sect. *Meiandra*) 3
- 2 Shoots 1 - 2 mm thick, soon glabrescent; lamina of leaves (0.5 -) 2 - 6 cm long, (0.4 -) 1 - 2.2 cm wide, conspicuously peltate at base (insertion of petioles 3 - 5 mm distant from leaf margin); petioles 0.2 - 0.5 mm thick, loosely pilose (surface of petioles always well visible) *A. ronliesneri*
- 2* Shoots 3 - 4 mm thick, persistently covered with a dense indumentum; lamina of leaves (5.5 -) 10 - 18 (- 22.5) cm long, 1.8 - 6 cm wide, mostly auriculate, only rarely slightly and inconspicuously peltate at base; petioles 1.5 mm thick, covered with a very dense indumentum (surface of petioles never visible) *A. ulei*
- 3 Inflorescences (infructescences) mostly composed at base, of several, long stalked partial-inflorescences (-infructescences); stalks densely covered with small, stellate hairs of "type b" and long, patent hairs of "type c.3"; petals ovate, gradually narrowing into a tip, 4 - 4.5 mm long, 1.5 - 1.8 mm wide; secondary and smaller (higher order) veins on abaxial leaf surfaces covered with small, stellate hairs of "type b" and long, patent hairs of "type c.2", rarely of "type c.3" *A. liron*
- 3* Inflorescences (infructescences) with only a single, long stalk (peduncle), which is densely covered with only small, stellate hairs of "type b"; petals broadly lanceolate to slightly obovate, apically truncate, 4.3 - 5 mm long, 2.6 - 3.2 mm wide; secondary and smaller (higher order) veins on abaxial leaf surfaces covered with only stellate hairs of "type b" *A. majus*

Alloneuron ronliesneri B.WALLN., sp.n. (fig. 1 - 3)

Diagnosis: Ab *Alloneuron ulei* recedit: Caules 1 - 2 mm in diam. crassi, mox glabrescentes; lamina foliorum (0.5 -) 2 - 6 cm longa et (0.4 -) 1 - 2.2 cm lata, ad basin manifeste peltata; petioli 0.2 - 0.53 mm crassi, sparse pilosi (superficies petioli semper visibilis).

Type: Perú, Departamento Amazonas, Bagua Province, Distrito Imaza, Tayu Mujaji, Comunidad de Wawas, bosque primario, 800 m, 5°15'25" S, 78°21'41" W, (fl, fr), 23 Oct. 1997, **R. Rojas, A. Peña, J. Anag & E. Yagkuag 454** [holotype: MO, nr. 4942995; isotype: W nr. 1999-06670; - in total 4 duplicates have been collected, according to MO-database], annotations on the label: "hierba adherida a la roca caliza; flores amarillas".

Small shrub or suffruticose herb; pattern of growth as in *A. ulei* (in shoots, successions of several growth-modules conforming to "Chamberlain's model" are from time to time alternating with single modules following "Leeuwenberg's model"; for details, see under *A. ulei* in WALLNÖFER 1996: 454); **shoots** terete, 1 - 2 mm thick, on distal parts loosely covered with brown, sessile or slightly stipitate-elongate, stellate hairs of "type b", 0.08 - 0.16 mm long (see chapter on indumentum in WALLNÖFER 1996: 449), soon glabrescent; internodes 1 - 3 cm long; shoot primordia in leaf axils densely covered with a dark brown indumentum, composed of 0.16 - 0.24 (- 0.47) mm long, stellate hairs of "type b", and curled hairs of "type c.3 - d"; **leaves**: opposite; **petioles**: (0.5 -) 1.5 - 2.5 cm long, 0.2 - 0.53 mm thick; surfaces always well visible, loosely covered with 0.16 - 0.47 mm long hairs of "type b" and (0.6 -) 1.25 - 3.2 (- 4.4) mm long hairs of "type c.3" (the latter 0.03 - 0.08 mm thick at base, and some 0.04 - 0.4 mm apart); **lamina** pandurate (fig. 2i), ovate or obovate (fig. 1), often somewhat oblique, chartaceous, pinnately veined (semicraspedo-

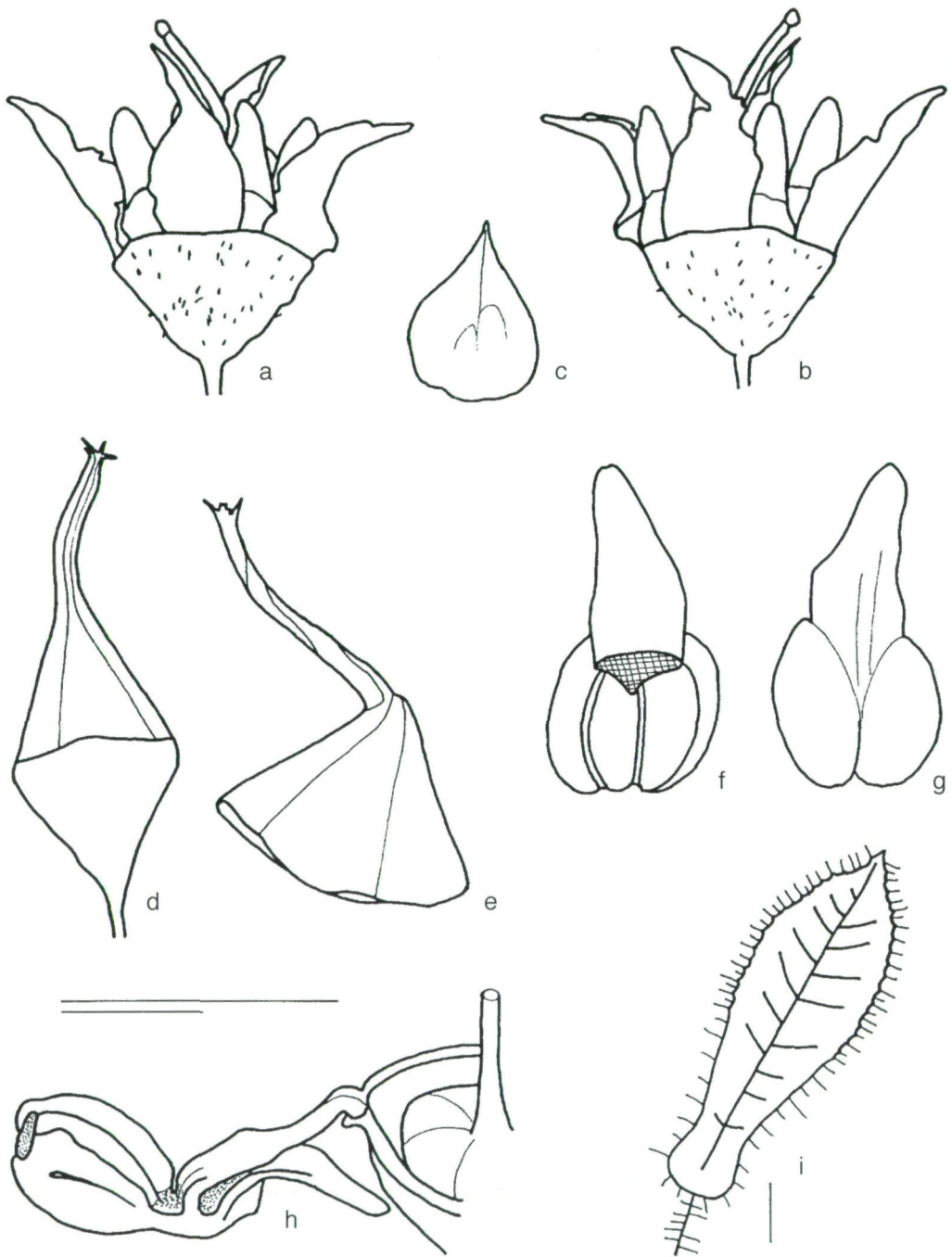


Fig. 2: **a - b**, the only dry, compressed flower available, seen from both sides; **c**, rehydrated petal; **d**, dry flower bud; **e**, dry, compressed, shed calyx; **f - g**, one rehydrated stamen seen from both sides; **h**, dry stamen after anthesis; **i**, pandurate leaf; (**a - d**, **f - h**: **Rojas et al. 454**; **e** and **i**: **Díaz et al. 8028**; **a - e**: short bar = 1 mm; **f - h**: long bar = 1 mm; **i**: bar = 1 cm).

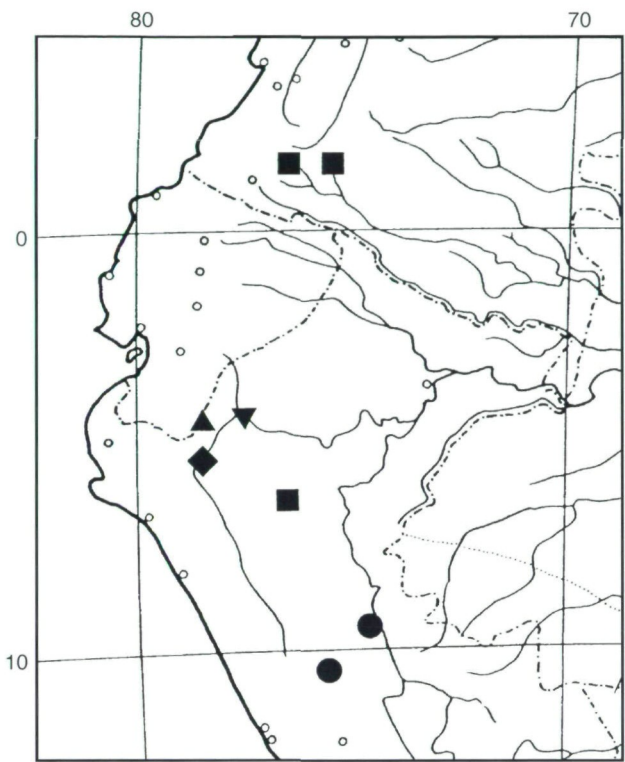


Fig. 3: Distribution of: *Alloneuron majus* (●), *A. ronliesneri* (◆), *A. ulei* (■), co-occurrence of *A. liron* and *A. majus* (▲), co-occurrence of *A. majus* and *A. ulei* (▼).

dromous), (0.5 -) 2 - 6 cm long, (0.4 -) 1 - 2.2 cm wide, glabrous on both sides, except for veins on abaxial surface (see below); apices acuminate, obtuse or rounded; bases in most cases markedly enlarged, truncate or rounded, conspicuously peltate (insertion of petioles 3 - 5 mm distant from leaf margin); margins more or less entire proximally, sinuate-denticulate distally, with patent hairs of "type c.2" (but with their apices mostly broken and therefore resembling "type c.1"), 1.3 - 3.7 mm long and (0.4 -) 0.5 - 1 mm apart, the longer ones on teeth or convex protrusions; primary vein flat or slightly prominent and glabrous adaxially, markedly prominent abaxially, with a similar indumentum as on petioles (but with hairs of "type c.3" sometimes entirely missing), glabrescent distally; secondary veins straight proximally, curved distally, 2 - 9 mm apart, flat or slightly prominent and glabrous adaxially, slightly prominent and pilose abaxially; tertiary veins more or less flat on both surfaces; hairs on secondary and tertiary veins of "type c.2" (0.16 - 1 mm long) and "type b", the latter only 0.08 mm long, often with reduced numbers of branches and therefore more or less papilliform; **inflorescences** terminal (!), 2.5 cm long; peduncle 0.16 - 0.24 mm thick; inflorescence axes and peduncle with scattered hairs of "type b", soon glabrescent; inflorescences apparently only with 2 pairs of opposite, branched, filiform, partial-inflorescences, but often more or less irregular, due to abortion of one or the other part; **flowers** (fig. 2a - h) 4-merous; only one open flower seen, ca. 2.5 mm long (fig. 2a - b); pedicels (0.4 -) 0.9 - 1.5 mm long, covered with some remote papillae; buds ca. 3 mm long (without pedicel); calyx on buds, ca. 2.5 mm long, undivided, conical proximally, distally tapering into a 0.6 - 1.2 mm long, hollow tube, with apically 4 very small, spreading, ca. 0.1 mm long calyx-teeth; calyx shed as a whole

(like a calyptra) at the beginning of anthesis (fig. 2e); inferior ovary and hypanthium ca. 1 mm long, with small, scattered hairs of "type a"; petals (fig. 2c) broadly ovate, narrowing into a tip, ca. 1.3 mm long and 0.9 mm wide, glabrous, with finely papillate margins; stamens 4, glabrous (fig. 2f - h); filaments ca. 0.7 mm long, ca. 0.3 mm wide, flattened; anthers round to slightly oblong, ca. 0.6 mm long (exclusive of connective-appendage) and ca. 0.6 mm wide, opening with one apical pore (fig. 2h); basal connective-appendages triangular to nearly cone-shaped, ca. 0.6 mm long, pointing upwards before anthesis (because of the inflexed anthers as shown in fig. 2a - b), at anthesis pointing downwards to the ovary (fig. 2h); style 1.3 - 1.6 mm long, glabrous; stigma only very slightly enlarged; **infructescences** pseudolateral (!), elongating up to 6.5 - 11 cm; peduncle 4.5 - 7 cm long, and up to 0.36 mm thick; modality of aperture of **fruits** unknown; all open (old) fruits on the herbarium specimens are heavily damaged, but seem to be similar to those of *A. ulei*; still closed fruits 0.9 - 1 mm long, 1.2 - 1.4 mm wide, covered with some sparse, oblong papillae, distally with a small limb (remnant of hypanthium), 2-locular (only 1 flower bud opened for study!); diaspores very similar to those of *A. ulei*, nearly triangular or somewhat rounded, flattened on the two broader faces, light brown, in sicco ca. 0.3 - 0.5 mm long, 0.2 - 0.3 mm wide, and ca. 0.25 mm thick.

Based on examination of only four available herbarium specimens, it appears that this species does not flower or fruit profusely. More flowers at anthesis and more mature fruits are needed to better evaluate their variability.

Epithet: The species is dedicated to Ron Liesner (MO), who focused my attention on collections of this species.

Paratype: Perú, Amazonas, Bagua Province, Distrito Imaza, Comunidad Aguaruna de Wanás (km 92 Carretera Bagua - Imacita), Cerros Chinim, bordes quebrada rocosa, ambas márgenes, 650 - 750 m, 28 Aug. 1996 (fl, fr), **C. Díaz, A. Peña, L. Tsamajain & M. Roca 8028** [MO, W; in total 3 duplicates have been collected, according to MO-database], annotations on the label: "arbusto semi-rastrero; flores blancas".

Alloneuron majus (MARKGR.) MARKGR. ex J.F.MACBR.

The following additional collection has now been studied:

Perú: Dept. Amazonas, Condorcanqui Province, Distrito El Cenepa, comunidad Aguaruna Pakgi-Suwa, Río Cenepa, bosque ribereño de la quebrada Tayo, 04°31'35" S, 78°10'34" W, 289 m, (fr), 22 Jan. 1997, **R. Vásquez, R. Rojas, A. Peña, E. Chávez & E. Quiaco 22172** [MO]; annotations on the label: "hierba 0,3 m; frutos verdes".

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Reference

WALLNÖFER, B., 1996: A revision of the genus *Alloneuron* PILG. and segregation of *Wurdistom* gen.n. (Melastomataceae). – Ann.Naturhist.Mus.Wien 98B Suppl.: 447-462.