

A MONOGRAPH OF *ALLOPECTUS* (GESNERIACEAE)

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ABSTRACT. *Alloplectus* (Gesneriaceae-Episcieae), whose range extends from Costa Rica to the Andes of Colombia, Ecuador, and Peru, comprises five species. The plants are obligate epiphytes with tubular non-resupinate flowers. The generic circumscription of *Alloplectus* is based on phylogenetic analyses of morphological and molecular data from the ribosomal (nrDNA) internal transcribed spacer region (ITS) and the intergenic (*trnH-psbA*) chloroplast spacer region (details of the analyses are published separately). *Alloplectus* has a confusing taxonomic history with more than 150 names attributed to this poorly defined group that until recently had not been phylogenetically evaluated with material representing the generic type species, *Alloplectus hispidus* (Kunth) Mart. Many of the species traditionally recognized as *Alloplectus* are here transferred to *Columnnea*, *Nematanthus*, *Drymonia*, *Glossoloma*, and *Crantzia*, of which the latter two are resurrected generic names to accommodate well-supported clades. Replacing the traditional polyphyletic concept of *Alloplectus* with a monophyletic *Alloplectus* presented here requires 29 new combinations, two lectotypifications, and six neotypifications. A nomenclator of all excluded or uncertain species names attributed to *Alloplectus* is included with currently accepted names.

Key words: Gesneriaceae, taxonomy, *Alloplectus*, *Glossoloma*, *Crantzia*, *Columnnea*, *Drymonia*

INTRODUCTION

The genus *Alloplectus* Mart. has been a catch-all group for taxa that do not fit into other genera in the tribe Episcieae. The traditionally recognized species of *Alloplectus* constitute a polyphyletic group of 40 species that requires the transfer of 29 names from *Alloplectus* into *Nematanthus* (1 sp.) and *Drymonia* (4 spp.) and recognition of *Glossoloma* (21 spp.) and *Crantzia* (3 spp.) for two well-supported clades. Thus, the revised *Alloplectus* is here treated as a genus of five species. This paper provides a taxonomic revision of *Alloplectus* based on recent phylogenetic analyses of molecular and morphological data (Clark et al. in press).

Most characters traditionally used to define *Alloplectus*, such as a fleshy bivalved dehiscent capsule, a pendent inflorescence of a reduced pair-flowered cyme, and a haploid chromosome number of $N = 9$, are symplesiomorphic characters shared with other genera such as *Drymonia* and *Paradrymonia*. Other characters previously used to define *Alloplectus*, such as a tubular or pouched corolla tube, are convergent with *Nematanthus*. To a certain extent, *Alloplectus* was “defined” by what it lacked. For example, species with poricidal anther dehiscence were treated as *Drymonia*, species with translucent berries were treated as *Corytopectus*, species with non-translucent berries were treated as *Columnnea*, and species with stolons were treated as *Alsobia* or *Episcia*. Thus *Alloplectus* had be-

come a collection of species that lacked unifying synapomorphies.

The taxonomic treatment here recognizes the genus *Alloplectus* as a well-supported clade (bs = 100% in Clark et al. in press) united by the following unambiguous morphological synapomorphies: indistinguishable dry secondary leaf venation, glabrous internal corolla surface, and corollas constricted apically. Other characters of *Alloplectus* that are useful in distinguishing it from *Glossoloma* are the subwoody perennial epiphytic habit, non-resupinate flowers, and profusely branched stems. Characters that are helpful for differentiating *Alloplectus* from other closely related genera of Episcieae are listed in TABLE 1.

The five accepted species of *Alloplectus* range from Costa Rica to Peru and are most abundant in the northern Andes in Colombia. Many of the former species of *Alloplectus*, which form a well-supported clade now recognized as the genus *Glossoloma*, are easily differentiated in the field by the presence of resupinate flowers. The majority of species traditionally recognized in *Alloplectus* will be treated in a revision of *Glossoloma* (Clark unpubl. data).

PHYLOGENY

The neotropical Gesneriaceae comprise members of two subfamilies, Gesnerioideae and part of Coronantheroideae (Burt & Wiehler 1995). The subfamily Coronantheroideae contains nine genera and 20 species and extends from Chile

TABLE 1. Comparison of *Alloplectus*, *Glossoloma*, *Columnnea*, *Drymonia*, and *Crantzia*.

Characteristic	<i>Alloplectus</i>	<i>Glossoloma</i>	<i>Columnnea</i>	<i>Drymonia</i>	<i>Crantzia</i>
Leaves	Isophyllous	Isophyllous	Anisophyllous (rarely isophyllous)	Isophyllous	Isophyllous
Flower orientation	Non-resupinate	Resupinate	Non-resupinate	Non-resupinate	Resupinate or non-resupinate
Habit	Obligate epiphyte	Terrestrial (rarely epiphytic)	Facultative epiphyte or terrestrial	Epiphytic or terrestrial	Epiphytic or terrestrial
Fruit	Fleshy capsule	Fleshy capsule	Berry (rarely fleshy capsule)	Fleshy capsule (rarely fleshy berry)	Fleshy capsule
Anther dehiscence	Longitudinal	Longitudinal	Longitudinal	Poricidal and longitudinal	Longitudinal
Corolla pouch	Terminal when present	Terminal when present	Medial when present	Medial when present	Terminal when present

to the South Pacific Islands and Australia (Wiehler 1983). The Gesnerioideae contains five tribes, 56 genera, and more than 1800 species and represents nearly half the worldwide diversity of the plant family Gesneriaceae (Wiehler 1983, Burt & Wiehler 1995). The Episcieae is a member of the Gesnerioideae and ranks as the most diverse tribe in the family with 22 genera and an estimated 784 species, or roughly 21% of all Gesneriaceae. Episcieae is also the least studied, and generic concepts remain poorly defined, partly because of a simplistic use of fruit structure by earlier workers in delimiting genera. A special need exists for more generic level phylogenetic analyses with greater sampling of species diversity.

Of the 22 genera in Episcieae, *Columnnea* L. is the only genus that has been consistently shown to be monophyletic (with the inclusion here of *Columnnea dielsii* Mansf.) using morphological and molecular data (Smith 1994, Smith & Sytsma 1994a, 1994b, 1994c). The lack of monophyly for large genera (i.e., >20 spp.) in Episcieae has been suggested for *Drymonia* Mart. (Smith 2000, Clark & Zimmer 2003), *Episcia* Mart. (Smith et al. 1997), *Alloplectus* Mart. (Clark & Zimmer 2003), *Paradrymonia* Hanst. (Smith & Carroll 1997, Smith 2000, Clark & Zimmer 2003), *Codonanthe* (Mart.) Hanst. (Clark & Zimmer 2003), and *Nematanthus* Schrad. (Clark & Zimmer 2003). *Nautilocalyx* Hanst. has 70–80 species (Burt & Wiehler 1995) and is one of the few large (i.e., >20 spp.) episcoid genera that has not been tested adequately.

The recognition of *Alloplectus* is based on a total evidence analysis of two molecular datasets for 155 species and a morphological matrix of 120 species and 99 characters. *Alloplectus* is

well supported (bs = 100% in Clark et al. in press) by both molecular and morphological data. The molecular data are from the ribosomal (nrDNA) internal transcribed spacer region (ITS), a noncoding region between 18S and 26S of the nrDNA and the intergenic spacer, *trnH-psbA* of the cpDNA. Details of the ITS analysis are described by Clark and Zimmer (2003) and by Clark et al. (in press).

The phylogenetic analysis (Clark et al. in press) samples 21 of the 22 traditionally recognized genera with 155 species and 16 generic type species. To date, it is the most extensive taxon sampling within Episcieae. Although still greater taxon and character sampling is needed, the analysis is adequate to provide a framework for the revision of *Alloplectus*. The most recent taxonomic treatment of *Alloplectus* is well over 100 years old (Hanstein 1865). Hanstein's publication focused on the Gesneriaceae at the botanical garden in Berlin and provided an overview of the family. *Alloplectus* was only a part of Hanstein's (1865) entire monograph of the Gesneriaceae known at that time, but he recognized 30 species of *Alloplectus* in his treatment. More recent estimates range from 60 (Skog 1978 [1979]) to 75 species (Burt & Wiehler 1995).

Various sister taxa relationships for *Alloplectus* have been proposed in the literature (Smith & Sytsma 1994a, 1994b, 1994c; Smith & Carroll 1997; Smith 2000; Zimmer et al. 2002). Only one publication, however, included the type species, *Alloplectus hispidus* (Clark & Zimmer 2003). Previous analyses were focused on resolving tribal-level phylogeny of the family (FIGURE 1). The plastid markers such as *ndhF*, *trnL-F*, and *trnE-T* used in previous analyses were appropriate for addressing tribal level phy-

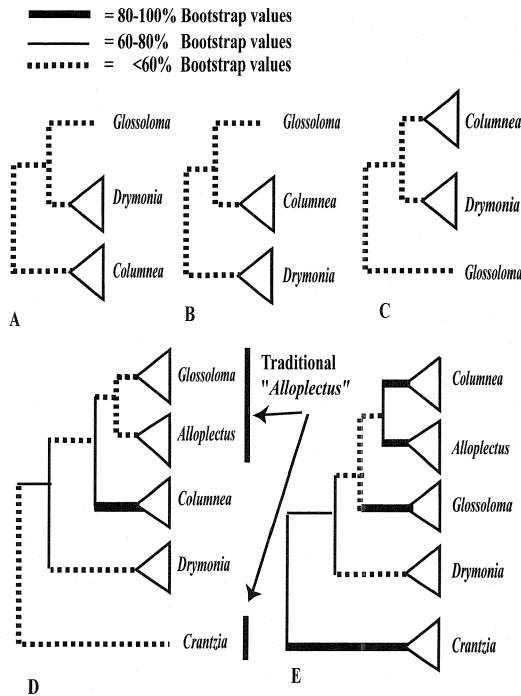


FIGURE 1. Diagrammatic representation of phylogenetic hypotheses for the placement of *Alloplectus*. **A.** Based on molecular sequence data from *ndhF* (Smith & Carroll 1997, Smith et al. 1997) and combined analyses of the nrITS region (Smith 2000). **B.** Based on cpDNA restriction site variation (Smith & Sytma 1994a, 1994b, 1994c). **C.** Based on a combined analysis using cpDNA of the *trnL-F/trnE-T* regions and the ITS region (Zimmer et al. 2002). **D.** Based on the nrDNA ITS region (Clark & Zimmer 2003). **E.** Based on the ITS region, intergenic chloroplast spacer region *trnH-psbA*, and morphology (Clark et al. in press). Other species traditionally recognized as *Alloplectus* are transferred to *Crantzia* (4 spp.), *Nematanthus* (1 sp.), and *Drymonia* (4 spp.). Triangles representing terminal taxa indicate a sample size of two or more species.

logeny, but because of low interspecific variation in these markers, most generic level and species-level clades lacked resolution or were poorly supported (e.g., FIGURE 1A–E). *Glossoloma* and *Alloplectus* could be treated as congeners following traditional classification, as ITS data support them as sister groups (Clark & Zimmer 2003: fig. 1). I argue, however, that they should be treated as distinct genera because their recognition is practical, as they are morphologically distinct with well-defined morphological synapomorphies.

Many of the previously hypothesized sister group relationships were based on species that are here recognized as belonging to the genera *Glossoloma*, *Columnea*, and *Drymonia*. Thus,

only one previous analysis (Clark & Zimmer 2003) included a species that represents the current clade-based concept of *Alloplectus*. Previous studies (FIGURE 1A–E) can be summarized as follows.

FIGURE 1A. *Drymonia* and *Glossoloma* (as “*Alloplectus*”) form a clade that is sister to *Columnea*. Sequence data from the chloroplast gene *ndhF* (Smith & Carroll 1997, Smith et al. 1997) and a combined analyses of the nr-ITS region and the chloroplast gene *ndhF* (Smith 2000) support this hypothesis.

FIGURE 1B. *Glossoloma* (as “*Alloplectus*”) and *Columnea* form a clade that is sister to *Drymonia* based on chloroplast DNA restriction site variation supported this hypothesis (Smith & Sytma 1994a, 1994b, 1994c).

FIGURE 1C. *Columnea* and *Drymonia* form a clade that is sister to *Glossoloma* (as “*Alloplectus*”) based on a combined analysis using cpDNA of the *trnL-F/trnE-T* regions and the nrDNA ITS region, as proposed by Zimmer et al. (2002).

FIGURE 1D. *Glossoloma* (as “*Alloplectus*”) and *Alloplectus* s.s. form a clade that is sister to *Columnea* based on the ITS region, as proposed by Clark and Zimmer (2003). The branch supporting the clade of *Glossoloma* and *Alloplectus* was weakly supported. This hypothesis, the first to include the type species, *Alloplectus hispidus*, shows that traditionally recognized “*Alloplectus*” is polyphyletic. Other traditionally recognized species of *Alloplectus* were shown to nest in *Drymonia*. A third species (*Crantzia* in FIGURE 1D and “*Alloplectus cristatus*” in Clark & Zimmer 2003) was shown to be unrelated to other traditionally recognized genera.

FIGURE 1E. *Alloplectus* and *Columnea* form a clade that is sister to *Glossoloma* based on the ITS region, intergenic chloroplast spacer region *trnH-psbA*, and morphology (Clark et al. in press). Other species traditionally recognized as *Alloplectus* are transferred into *Crantzia*, *Nematanthus*, and *Drymonia*. The major clades that comprise the generic concepts proposed in this paper are strongly supported, but their sister group relationships are not.

TAXONOMIC AND NOMENCLATORIAL BACKGROUND

Alloplectus (Gesneriaceae) was described by Martius (1829), in which seven species were mentioned, but only two species were illustrated and validly published at that time (*A. sparsiflorus* and *A. circinatus*). Two names were referred to in the text by Martius (1829), *Besleria bicolor* Schott and *Dalbergaria phoenicea* Tussac (or *Besleria sanguinea* Pers.), but these species

names were never formally transferred to *Alloplectus*.

Three names were subsequently transferred from other genera (*Besleria cristata* L., *B. hispidus* Kunth, and *B. coccinea* Aubl.) and given new combinations (*Alloplectus cristatus*, *A. hispidus*, and *A. coccineus*) in the Index (Martius 1832). Thus, the 1832 Index validated three names making *Alloplectus* a genus of five species.

The 1905 International Code of Botanical Nomenclature (ICBN) conserved the name *Alloplectus* Mart. (Martius 1829) over *Crantzia* Scop. (Scopoli 1777) and *Vireya* Raf. (Rafinesque 1814). Green (1929) selected *Alloplectus sparsiflorus* Mart. as the type species for *Alloplectus* because it was a widely distributed species. Green's typification was accepted and cited in subsequent Codes. Notes pertaining to the selection of *A. sparsiflorus* and typification are not included in the published proposal (Green 1929), but an explanation of Green's notes can be found in a mimeographed foolscap-size circular (Staffleu 1956). Wiehler (1971 [1972]) noted that *A. sparsiflorus* was a synonym of *Nematanthus hirtellus* (Schott) Wiehler, leaving *Alloplectus* without a type and only two remaining species from Martius's generic description. The proposal by Feuillet and Skog (1990) to conserve *A. hispidus* (Kunth) Mart. as the type species for the genus was accepted. Their proposal considered the remaining two species originally attributed to *Alloplectus* by Martius. Feuillet and Skog (1990) chose *A. hispidus* over *A. cristatus*, because the fruit of the latter had been reported to be a berry. *Alloplectus hispidus* was known to have fleshy capsules, thus making it more representative of the generic description given by Martius. It should be noted, however, that recent field observations by the author on the islands of Martinique and Dominica have shown that the fruit of *A. cristatus* is not a berry, but instead a bivalved capsule, typical of *Alloplectus*.

Two botanists, Oersted (1816–1872) and Hanstein (1822–1880), who were developing a classification of Gesneriaceae during the same time period, based their classifications on extensive studies of herbarium and living material. Oersted traveled throughout Central America (1845–1848), and Hanstein had access to an extensive living collection at the botanical garden in Berlin. Oersted (1858, 1861) recognized *Alloplectus* Mart., but restricted it to species with plane (non-cucullate) sepals, such as *Alloplectus semicordatus* Poepp., which is now *Drymonia semicordata* (Poepp.) Wiehler; *Alloplectus coccineus* (Aubl.) Mart., which is now *Drymonia coccinea* (Aubl.) Wiehler; and *Alloplectus sparsiflorus* Mart., which is now *Nematanthus hirtellus*

(Schott) Wiehler. Oersted created the new genus *Prionoplectus*, including, for example, *Crantzia cristata* (L.) Scop., for species with ovate sepals with cordate bases. Initially, Hanstein (1854) also recognized *Alloplectus* Mart., but restricted his generic circumscription to species with pouched corollas (e.g., *Alloplectus circinatus* Mart., which is now *Drymonia coccinea* (Aubl.) Wiehler; *Alloplectus speciosus* Poepp., which is now *Corytoplectus speciosus* (Poepp.) Wiehler; and *Alloplectus concolor* Hook., which is now *Nematanthus lanceolatus* (Poir.) Chautems. Hanstein published a new genus, *Glossoloma*, for species with tubular and ventricose corollas (e.g., *Glossoloma tetragonum* Hanst.). Approximately a decade later, Hanstein (1865) significantly modified his initial classification from 1854 and decided to combine many of the Oersted genera and five of his own genera into *Alloplectus*. Hanstein further divided *Alloplectus* into the following five subgenera: *Calanthus*, *Erythranthus*, *Heintzia*, *Glossoloma*, and *Eualloplectus*. He also recognized three sections of the typical subgenus *Eualloplectus* and included a section of dubious species that he could not assign to any of the subgenera in his classification. In total, Hanstein treated 29 species of *Alloplectus* and until the present study, his was the most comprehensive monographic revision undertaken for *Alloplectus*.

Kuntze (1891) transferred all of the species of *Alloplectus* into *Columnnea*. Because these two genera had traditionally been kept apart, there was an extensive section in the Kuntze paper listing new names to avoid homonyms as a result of all of the new combinations. Kuntze also recognized *Crantzia* as the older and valid name for *Alloplectus*, but it was not pertinent because he combined all the species into *Columnnea*.

Fritsch (1893–1894) maintained *Columnnea* separate from *Alloplectus*, but he used the older name *Crantzia*. Fritsch recognized six sections as part of *Crantzia*: *Calanthus* Oerst. ex Hanst., *Macrochlamys* Decne., *Heintzia* Karst., *Glossoloma* Hanst., *Alloplectus* Mart., and *Trichanthodes* Kuntze. The Fritsch classification was similar to that of Hanstein and he frequently referred to Hanstein's subgeneric classification.

More recently, *Alloplectus* and *Columnnea* have been treated as separate genera by recognizing the presence of berries in the latter as an important defining generic character (Morton 1963, Wiehler 1973, Skog 1978 [1979], Wiehler 1983, Kvist & Skog 1993, Smith 1994). The documentation of poricidal anthers shedding powdery pollen grains by Moore (1955) and further elaborated by Wiehler (1983) as a generic character in *Drymonia* has helped differentiate many of the fleshy capsuled species of *Drymon-*

ia from *Alloplectus*. Although poricidal anthers are a synapomorphy for *Drymonia*, they have been lost in several clades within the genus (Clark et al. in press). The lack of poricidal anthers in *Drymonia* is probably correlated with a switch in pollination syndromes from Euglossine bees to birds.

TAXONOMIC TREATMENT

Alloplectus Mart., Nov. Gen. Sp. Pl. 3: 53. 1829.

CONSERVED TYPE: *Besleria hispida* Kunth [= *Alloplectus hispidus* (Kunth) Mart.] (see Feuillet & Skog 1990).

Subshrubs always epiphytic; stems terete to quadrangular, horizontal, usually scandent. **Leaves** opposite, nearly equal in a pair, petiolate, elliptic to ovate or oblanceolate, entire to serrate, secondary venation inconspicuous when dry. **Flowers** axillary, solitary to fascicles of 2 to 3, bracteate, peduncles rarely evident; calyx usually colored or green, the 5 lobes nearly free, broadly ovate, subequal, entire to strongly serrate, pubescent to pilose; corolla tubular and usually ampliate, rarely hypocyrtoid, yellow or red, oblique to horizontal in the calyx, constricted in the throat, gibbous at the base, often ventricose below the mouth, the 5 lobes of the limb usually small; stamens 4, not exerted, the filaments adnate to the base of the corolla tube, and forming an open sheath, the anthers transversely oblong, coherent or becoming free, dehiscing by longitudinal slits; nectary disc a bilobed gland, rarely single-lobed; ovary superior, pilose, the style included. **Fruit** a fleshy bivalved capsule surrounded by the persistent calyx; seeds numerous, longitudinally striate.

KEY TO THE SPECIES OF ALLOPLECTUS

1. Calyx lobe margin fimbriate . . . *Alloplectus weirii*
- 1'. Calyx lobe margins serrate to entire.
 2. Corolla red
 3. Corolla tubular with medial pouch. Pedicels 0.5–1 cm long *Alloplectus tessmannii*
 - 3'. Corolla tubular with terminal pouch (i.e., hypocyrtoid). Pedicels 2–7 cm long *Alloplectus inflatus*
 - 2'. Corolla yellow
 4. Calyx lobe margins valvate to spreading; stems sparingly branched *Alloplectus aquatilis*
 - 4'. Calyx lobe margins connivent to overlapping; stems prolifically branched *Alloplectus hispidus*

ALLOPLECTUS COLLECTIONS EXAMINED

The *Alloplectus* collections examined are listed in TABLE 2. The table comprises an index of

TABLE 2. Index to *Alloplectus* collections examined, listed alphabetically by collector name(s). Collection numbers are included along with species determination.

Collector(s)	Collection #	Species
Alvarez, A. & M. Tirado	1529	<i>A. hispidus</i>
André, E.	1514	<i>A. hispidus</i>
	2045	<i>A. hispidus</i>
Araya, F., et al.	264	<i>A. weirii</i>
Ariste-Joseph, Bro.	s.n.	<i>A. hispidus</i>
Asplund, E.	8072	<i>A. hispidus</i>
Barclay, A., et al.	3395	<i>A. hispidus</i>
Benavides, O., et al.	4365	<i>A. hispidus</i>
Besse, L., et al.	1155	<i>A. weirii</i>
	1161	<i>A. weirii</i>
Betancur, J., et al.	7022	<i>A. aquatilis</i>
Bohlin, J.E., et al.	1032	<i>A. hispidus</i>
Bonpland, A.	1776	<i>A. hispidus</i>
	2104	<i>A. hispidus</i>
Bøgh, A.	86568	<i>A. hispidus</i>
Camargo, G., L.A.	7437	<i>A. hispidus</i>
Campos, J. & S. Corrales	3441	<i>A. weirii</i>
Carvajal, A.	166	<i>A. weirii</i>
	368	<i>A. weirii</i>
	38680	<i>A. weirii</i>
Cerón M., C.E. & T. Dávila		
Cerón M., C.E. & C. Montalvo A.	32721	<i>A. weirii</i>
Clark, J.L.	2307	<i>A. weirii</i>
Clark, J.L. & H.F. Greeney	5788	<i>A. weirii</i>
	5792	<i>A. weirii</i>
Clark, J.L. & J. Rea	8016	<i>A. weirii</i>
Clark, J.L. & S. Yustiz	6871	<i>A. aquatilis</i>
	6875	<i>A. aquatilis</i>
Clark, J.L., et al.	5625	<i>A. hispidus</i>
	5701	<i>A. weirii</i>
	7720	<i>A. hispidus</i>
	7726	<i>A. hispidus</i>
	7744	<i>A. hispidus</i>
	8210	<i>A. tessmannii</i>
	8914	<i>A. weirii</i>
Croat, T.B.	78842	<i>A. weirii</i>
Cuatrecasas, J.	8752	<i>A. weirii</i>
	19304	<i>A. hispidus</i>
	23333	<i>A. inflatus</i>
	23465	<i>A. hispidus</i>
	23484	<i>A. inflatus</i>
Daniel, Bro.	3444	<i>A. hispidus</i>
	3445	<i>A. hispidus</i>
	4471	<i>A. weirii</i>
Díaz, C. & H. Beltrán	3341	<i>A. weirii</i>
Díaz, P., S.	2677	<i>A. inflatus</i>
Díaz, P., S., et al.	2826	<i>A. hispidus</i>
Duque-Jaramillo, J.M.	3454	<i>A. hispidus</i>
Dwyer, J.D. & B. Macbryde	9581	<i>A. weirii</i>
Escobar, L.A. & B.A. Stein	6216	<i>A. hispidus</i>
Escobar, L.A. & A. Uribe	3621	<i>A. weirii</i>
Fernández A., J.L., et al.	14870	<i>A. hispidus</i>
	14881	<i>A. hispidus</i>
Fonnegra, R., et al.	3479	<i>A. hispidus</i>
Fosberg, F.R.	20121	<i>A. hispidus</i>
	20862	<i>A. inflatus</i>

TABLE 2. Continued.

Collector(s)	Collection #	Species
García, D.	189	<i>A. weirii</i>
García Barriga, H.	17203	<i>A. hispidus</i>
García Barriga, H. & R. Jaramillo Mejia	20261 20545	<i>A. inflatus</i> <i>A. weirii</i>
Gentry, A., et al.	61191	<i>A. weirii</i>
Gómez, L.D., et al.	20789	<i>A. weirii</i>
Goudot, J.	s.n. 3	<i>A. hispidus</i> <i>A. hispidus</i>
Grant, M.L.	9184 9522 9596	<i>A. weirii</i> <i>A. inflatus</i> <i>A. inflatus</i>
Grubb, P.J., et al.	1271	<i>A. weirii</i>
Haber, W.A.	852 996 1007 11298 21900	<i>A. weirii</i> <i>A. weirii</i> <i>A. weirii</i> <i>A. weirii</i> <i>A. hispidus</i>
Harling, G. & L. Andersson		
Harling, G., et al.	8204	<i>A. hispidus</i>
Hawkes, J.G. & H. Garcia Barriga	23	<i>A. inflatus</i>
Herrera, G.	4924	<i>A. weirii</i>
Holm-Nielsen, L., et al.	6969	<i>A. weirii</i>
Huertas, G. & L.A. Comargo	5007	<i>A. inflatus</i>
Humboldt, A. & A. Bonpland	1878	<i>A. hispidus</i>
Idrobo, J.M., et al.	3376 3837	<i>A. hispidus</i> <i>A. hispidus</i>
Jaramillo M., R., et al.	6026	<i>A. hispidus</i>
Jaramillo, J.	5314	<i>A. hispidus</i>
Jørgensen, P.M., et al.	1374	<i>A. hispidus</i>
Killip, E.P.	5578 5926	<i>A. weirii</i> <i>A. weirii</i>
Killip, E.P. & H. Garcia	33806	<i>A. hispidus</i>
Killip, E.P. & G. Varela	34612	<i>A. inflatus</i>
Kirkbride, J.H. & H. Chandra R.	4009	<i>A. weirii</i>
Kvist, L.P., et al.	60393	<i>A. weirii</i>
Lawrance, A.E.	357	<i>A. weirii</i>
Leiva G., S., et al.	1574	<i>A. weirii</i>
Lellinger, D.B. & J.J. White	1253	<i>A. hispidus</i>
Leo, M.	309	<i>A. tessmannii</i>
Liesner, R.L. & E. Judziewicz	14694	<i>A. weirii</i>
Londoño, X. & L.P. Kvist	90 809	<i>A. hispidus</i> <i>A. weirii</i>
Lozano, C., G.	2172 3492 4063	<i>A. hispidus</i> <i>A. hispidus</i> <i>A. inflatus</i>
Luer, C., et al.	7566	<i>A. weirii</i>
Lugo S., H.	1124 1140	<i>A. weirii</i> <i>A. weirii</i>
Marin, F.	2116	<i>A. weirii</i>
Meier, W., et al.	4197 8471	<i>A. hispidus</i> <i>A. hispidus</i>
Murcia, C.	12	<i>A. inflatus</i>
Mutis, J.C.	2249	<i>A. weirii</i>
Øllgaard, B. & B. Eriksen	90304	<i>A. hispidus</i>

TABLE 2. Continued.

Collector(s)	Collection #	Species
Øllgaard, B., et al.	35762	<i>A. weirii</i>
	58010	<i>A. hispidus</i>
Obando, N., et al.	167	<i>A. weirii</i>
Palacios, W.	2573 5936 6351	<i>A. hispidus</i> <i>A. weirii</i> <i>A. weirii</i>
Palacios, W. & H. van der Werff	3678	<i>A. hispidus</i>
Pearce, R.	s.n.	<i>A. hispidus</i>
Pedersen, H.B. & P. Lozano	104349	<i>A. hispidus</i>
Pederson, H.B., et al.	104445	<i>A. hispidus</i>
Pennell, F.W.	2496 2647 9081 9383	<i>A. hispidus</i> <i>A. hispidus</i> <i>A. weirii</i> <i>A. inflatus</i>
Pennell, F.W. & E.P. Killip	5782	<i>A. weirii</i>
Peñuela, L. & J. Clavijo	16	<i>A. inflatus</i>
Poortmann, H.	143	<i>A. hispidus</i>
Prieto, F.	212	<i>A. hispidus</i>
Ramírez P., B.R.	5365	<i>A. hispidus</i>
Ramírez P., B.R. & J.A. Cuayal M.	3954 4892	<i>A. hispidus</i> <i>A. hispidus</i>
Ramos, J.E., et al.	2574	<i>A. weirii</i>
Romero-Castañeda, R.	937	<i>A. hispidus</i>
Ruíz Teran, L. & M. Lopez F.	8912	<i>A. hispidus</i>
Rusby, H.H.	2424	<i>A. weirii</i>
Rusby, H.H. & F.W. Pennell	786 893	<i>A. hispidus</i> <i>A. hispidus</i>
Rusby, H.H., et al.	15335	<i>A. hispidus</i>
Sagástegui, A., et al.	16774	<i>A. hispidus</i>
Sánchez Vega, I. & M.O. Dillon	8477 8653	<i>A. tessmannii</i> <i>A. tessmannii</i>
Schlim, L.	1089	<i>A. weirii</i>
Schneider, M.	686 784 1196	<i>A. hispidus</i> <i>A. hispidus</i> <i>A. inflatus</i>
Schunke V., J.	9143	<i>A. weirii</i>
Scolnik, R., et al.	247	<i>A. hispidus</i>
Silva, H.	272	<i>A. hispidus</i>
Silverstone Sopkin, F.A., et al.	1527	<i>A. hispidus</i>
Smith, D.N. & S. Vasquez S.	4723	<i>A. weirii</i>
Smith, J.F. & C. Díaz	1655	<i>A. weirii</i>
Sodiolo, L.	s.n.	<i>A. hispidus</i>
Spruce, R.	5179	<i>A. hispidus</i>
Stevens, W.D.	13913	<i>A. weirii</i>
Steyermark, J.A.	54699 54882 56528 57247 91523 98948 98977	<i>A. weirii</i> <i>A. weirii</i> <i>A. aquatilis</i> <i>A. hispidus</i> <i>A. hispidus</i> <i>A. hispidus</i> <i>A. hispidus</i>
Steyermark, J.A. & G. Bunting	97648	<i>A. hispidus</i>
Steyermark, J.A. & V. C. Espinosa	111158	<i>A. hispidus</i>

TABLE 2. Continued.

Collector(s)	Collection #	Species	
Steyermark, J.A., et al.	98427	<i>A. hispidus</i>	
	100658	<i>A. aquatilis</i>	
	114307	<i>A. hispidus</i>	
Suin, L., et al.	1805	<i>A. weirii</i>	
Tessmann, G.	1800	<i>A. tessmannii</i>	
Tracey, J.A.	329	<i>A. hispidus</i>	
Triana, J.J.	s.n.	<i>A. hispidus</i>	
	607	<i>A. hispidus</i>	
	2454	<i>A. weirii</i>	
	2484	<i>A. weirii</i>	
	2499	<i>A. hispidus</i>	
	4163	<i>A. hispidus</i>	
	4163	<i>A. weirii</i>	
	Uribe U., L.	1016	<i>A. hispidus</i>
		1758	<i>A. weirii</i>
		2594	<i>A. inflatus</i>
2961		<i>A. hispidus</i>	
3195		<i>A. hispidus</i>	
3535		<i>A. inflatus</i>	
4915		<i>A. hispidus</i>	
5568		<i>A. hispidus</i>	
Vargas, W. G.	6387	<i>A. inflatus</i>	
	3224	<i>A. weirii</i>	
	3980	<i>A. hispidus</i>	
Vivar C., F. & O. Proaño	3733	<i>A. hispidus</i>	
Weaver, R.E. & H. Kennedy	1567	<i>A. inflatus</i>	
Weir, J.	217	<i>A. weirii</i>	
Werff, H. van der & W. Palacios	9620	<i>A. hispidus</i>	
Yáñez, A.P. & M. Gavilanes	91	<i>A. hispidus</i>	

collector name(s) listed alphabetically along with collection numbers and species names.

Alloplectus aquatilis C.V.Morton, Gesneriaceae, in J.A. Steyermark, Fieldiana, Bot. 28: 521. 1953. TYPE: Venezuela—Mérida, near waterfall between El Molino and ridge above San Isidro Alto, 2430–2895 m, 14 May 1944, J.A. Steyermark 56528 (holotype: US!; isotypes: F! NY!).

Lianas epiphytic, stems scandent, frequently branched; 2–3 m long, 1–5 mm in diam., woody, internodes 3–8 cm long, terete, glabrescent below, hirsute with yellowish hairs above, leaf scars flush with stem surface. **Leaves** opposite, equal or subequal in a pair; petioles 1–2 cm long, densely hirsute; blades membranous when dry, ovate, 6–7 cm long, 2.5–4.0 cm wide, base obtuse to rounded, apex acuminate, margin bluntly serrate to crenate, adaxially light green, uniformly hirsute, abaxially pale green, hirsute on veins, lateral veins 4–5 per side. **Flowers** solitary, bracteoles not observed; pedicels equal to or slightly longer than petiole, 2–3 cm long,

densely hirsute, pedicel glands absent, flower posture horizontal at anthesis. **Calyx** lobes 5, nearly free, plane, margins valvate to completely separate, erect, equal, broadly ovate to lanceolate, 20–25 mm long, 5–10 mm wide, base truncate, apex attenuate, margin serrate, pale green, outside densely hirsute, inside densely hirsute. **Corolla** 2.5–3.5 cm long, tubular, tube to 3.5 cm long, gibbous basally on upper surface, spur absent, long axis of corolla oblique relative to calyx; base 3–5 mm in diam., middle ampliate, becoming apically ventricose on lower surface, throat constricted, not appearing laterally compressed, to 3 mm (at mouth), outside sparsely hirsute becoming densely hirsute distally, inside glabrous, interior spotting absent, limb reflexed, subregular, 3 mm wide, yellow, lobes nearly equal, rotund, ca. 1 mm long, 1.5 mm wide, rounded, entire. **Nectary** gland bilobed, on dorsal surface of ovary, glabrous. **Filaments** coiling after anthesis, to 1.4 cm long (free portion), adnate to base of corolla tube for 3 mm, connate for 1 mm, forming an open sheath, glabrous; anthers broader than long, ca. 2 mm long, ca. 3 mm wide, dehiscent by longitudinal slits; staminode absent. **Ovary** ovoid, ca. 6 mm long, ca. 5 mm wide, pilose, style 1.1 cm long, glabrous, stigma stomatomorphic. **Fruit** a fleshy capsule, pendent when ripe, ovoid when immature, then becoming bivalved when mature, 1.4 cm long, 1.0 cm wide, pilose. **Seeds** numerous, ellipsoid, 1.2 mm long, 0.2 mm wide, longitudinally striate, light red.

PHENOLOGY: Collected in flower during January, February, and May; in fruit in October.

DISTRIBUTION: Colombia (Cundinamarca) and Venezuela (Mérida and Táchira); eastern Andean slopes in wet montane forest; 2400–2900 m (FIGURE 2).

REPRESENTATIVE SPECIMENS: Colombia—Cundinamarca: Región del Sumapaz, Carretera Santa Rosa-Santo Domingo, *Betancur et al.* 7022 (COL, US). Venezuela—Mérida: Dirt road between Torondoy and Pico Aguila, entrance to Parque Nacional Culata. *Clark & Yustiz* 6871 (MER, NY, PORT, SEL, US, VEN); *Clark & Yustiz* 6875 (MER, NY, PORT, SEL, US, VEN).—Táchira: Quebrada las Copas, *Steyermark et al.* 100658 (NY, US, VEN).

Alloplectus aquatilis is distinguished from other members of the genus by calyx lobes that are broadly ovate and spreading. It is similar to *A. hispidus*, but differs in having calyx lobes that are completely separate compared to the connivent to valvate margins of *A. hispidus* (FIGURE 3B). It is also differentiated by membranous leaves that are sparingly pilose in contrast to the

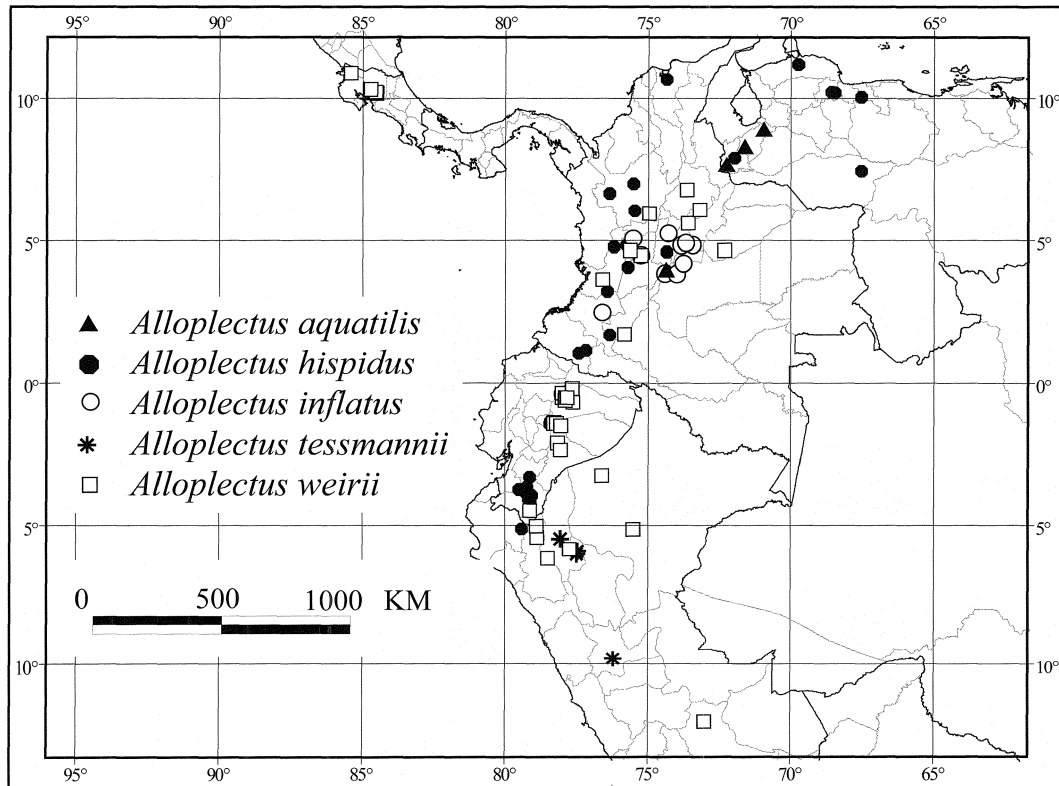


FIGURE 2. Distribution of *Alloplectus aquatilis* C.V.Morton, *A. hispidus* (Kunth) Mart., *A. inflatus* J.L.Clark & L.E.Skog, *A. tessmannii* Mansf., and *A. weirii* (Kuntze) Wiehler. This map was generated using ArcView GIS 3.2a (ESRI 2000).

coriaceous leaves with densely pilose trichomes of *A. hispidus*.

Alloplectus hispidus (Kunth) Mart., Nov. Gen. Sp. Pl. 3: 57. 1829. *Besleria hispida* Kunth in H.B.K., Nov. Gen. Sp. Pl. 2: 320 (folio), 399 (quarto). 1817 [1824]. *Columnnea humboldtiana* Kuntze, Revis. Gen. Pl. 2: 471. 1891, non *Columnnea hispida* Swartz. TYPE: Colombia—Nariño, between city of Pasto and Mamendoy, valley of Río Mayo, 1900 m, Nov 1801, *A. Bonpland 2104* (holotype: P!; isotypes: B-W (photo: US!), P-2 sheets!; fragment: F!).

FIGURE 3.

Vines epiphytic, stems branched, climbing or sprawling, adhering to other plants by adventitious roots; growing 2–5 m above ground, 5–8 mm in diam., woody, internodes 2–6 cm long, terete, glabrescent below, densely pilose above, leaf scars flush with stem surface, nectary glands at base of petiole present. **Leaves** opposite, equal or subequal in a pair; petioles 1.3–1.8 cm long, densely pilose; blades coriaceous when dry, ovate-elliptic, 3.0–6.5 cm long, 2.0–3.0 cm

wide, base acute to obtuse, apex acute, margin serrate-crenate, adaxially dark green, densely pilose-hispid, abaxially light green, densely pilose-hispid, lateral veins 3–5 per side. **Flowers** solitary, bracteoles not observed; pedicels longer than the petiole, 1.5–3.0 cm long, densely pilose-hispid, pedicel glands absent, flower posture horizontal to erect at anthesis. **Calyx** lobes 5, nearly free, plane, erect, 4 subequal, broadly ovate, 10–15 mm long, 4–6 mm wide, base truncate, apex acute, margin lacinate to serrate, light green, outside densely pilose, inside sparingly pilose; fifth (ventral) lobe smaller and narrower, broadly oblong, ca. 1.5 cm long, ca. 0.5 cm wide. **Corolla** 2.5–3.5 cm long, tubular, tube 2.2–3.3 cm long, gibbous basally on upper surface, spur absent, long axis of corolla oblique relative to calyx; base 4–5 mm in diam., middle ampliate, becoming apically ventricose on lower surface, throat constricted, not appearing laterally compressed, ca. 0.5 cm wide (at mouth), outside densely pilose-hirsute, inside glabrous, interior spotting absent, limb reflexed, zygomorphic, ca. 0.6 cm wide, yellow, lobes nearly

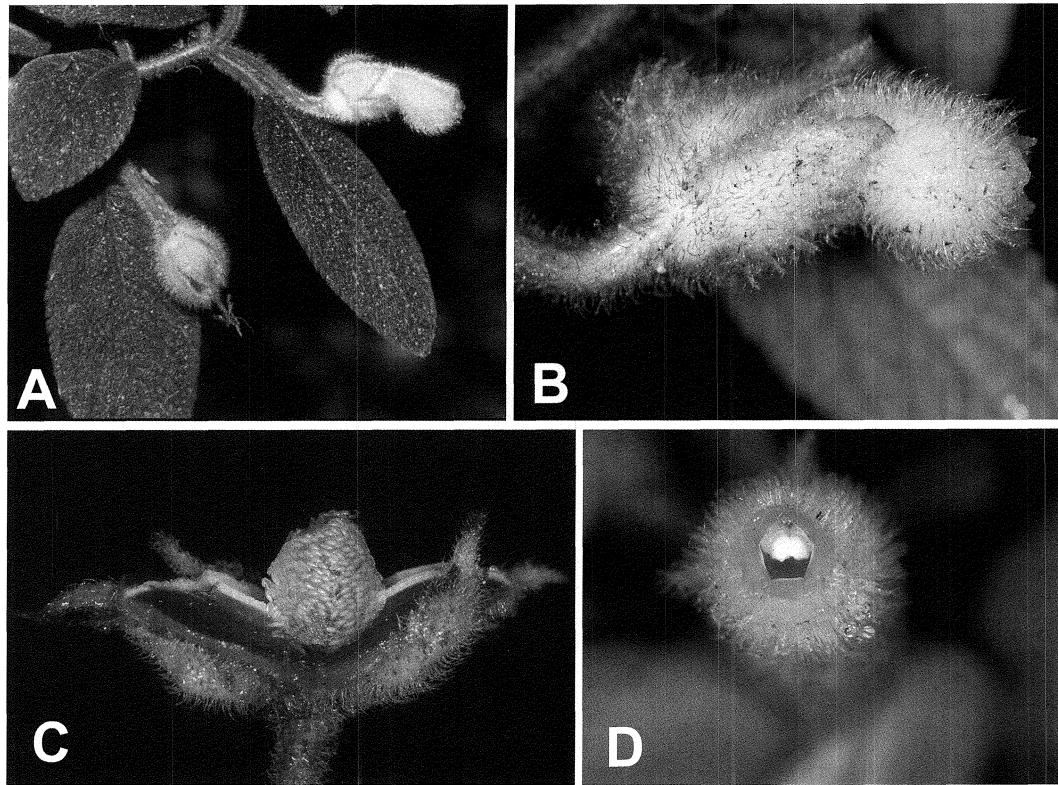


FIGURE 3. *Alloplectes hispidus* (Kunth) Mart. **A.** Habit. **B.** Lateral view of flower. **C.** Lateral view of mature fruit with persistent calyx. **D.** Front view of flower. Photographic images of field collection J.L. Clark, L. Jost & M. Mailloux 7720 (US).

equal, rotund, reflexed, ca. 2 mm long, ca. 3 mm wide, rounded, entire. **Nectary** gland bilobed, on ventral surface of ovary, glabrous. **Filaments** curved or twisted after anthesis, ca. 1–2 cm (free portion) long, adnate to base of corolla tube for ca. 2 mm, connate for 1 mm, forming an open sheath, glabrous; anthers broader than long, ca. 1.5 long, ca. 2 mm wide, dehiscing by longitudinal slits; staminode absent. **Ovary** ovoid, ca. 7 mm long, ca. 4 mm wide, densely pilose, style ca. 2 cm long, stigma stomatomorphic. **Fruit** a fleshy capsule, pendent when ripe, ovoid when immature, loculicidally dehiscent, becoming bivalved, valves reflexed, reaching a 180° angle when mature, ca. 2 cm long, ca. 1.5 cm wide, pilose. **Seeds** numerous, fusiform, ca. 1 mm long, ca. 0.3 mm wide, longitudinally striate, dark purple.

PHENOLOGY: Collected in flower throughout the year; in fruit in January, April, July, October, and December.

DISTRIBUTION: Colombia, Ecuador, Venezuela, and northern Peru; Andean slopes in wet montane forests; 800–3500 m (FIGURE 2).

REPRESENTATIVE SPECIMENS: Colombia—Antioquia: 10 km E of Sonson, *Scolnik et al.* 247 (US); Mpio. Frontino, Correg. Nutibara, Alto de Cuevas, Quebrada del Oso, *Fonnegra et al.* 3479 (US); Mpio. de Caldas, Vereda La Corrala, road between Finca “La Zarza” and Alto del Gallinazo, *Escobar & Stein* 6216 (COL, NY); Mpio. de Yarumal, Vereda El Colgadero, *Lozano C.* 2172 (COL); Paramo de Sonson, *Daniel* 3444 (US); *Daniel* 3445 (US).—Cauca: Cordillera Central, eastern slope, Moscopan, valley of Río San José, Aguabonita, *Cuatrecasas* 23465 (F, US); Cordillera Central, western slope, city of Río Palo, Quebrada Santo Domingo, *Cuatrecasas* 19304 (A, F, NY, US); Páramo de Las Pampas, between El Boquerón and La Hoyola, *Idrobo et al.* 3837 (COL); Paramo de Las Pampas, between Letreros and Santo Domingo, *Idrobo et al.* 3376 (COL, P); Mpio. de Coconuco, Valle de Paletará, Parque Nacional de Puracé, *Lozano C.* 3492 (COL); road Popayan-San Agustín, km 70, Parque Nacional Puracé, *Londoño & Kvist* 90 (AAU, COL, QCA, US).—Cundinamarca: below Salto de Tequendama, SE of Santandercito, *Uribe U.* 1016 (COL, US);

- Cordillera Oriental, San Miguel, S of Sibate on road to Fusagasuga, km 35–36, *Barclay et al.* 3395 (NA, US); paramos E of Guasca, toward Gacheta, 50 km NW of Bogota, *Ariste-Joseph s.n.* (US); forest above Fusagasuga, *Tracey* 329 (K); forest SE of Santandercito, near El Ermitaño, *Uribe U.* 4915 (COL); forest S of Santandercito, *Uribe U.* 2961 (COL); mountain range S of Santandercito, Lagoon of Catarnica, *Uribe U.* 3195 (US); mountains below Tequendama, between Cerro El Ermitaño and La Vencedora, *Uribe U.* 5568 (COL); Fusagasuga, *Triana* 607 (US); Páramo de San Miguel, western Andean slopes, *Duque J.* 3454 (COL, COL); San Miguel, *Schneider* 686 (S); Santandercito, La Rambla, *Silva* 272 (COL); Santandercito, La Rambla, *Schneider* 784 (COL); Sibate, *Pennell* 2496 (NY); Tequendama, *Pennell* 2647 (GH, NY); Tequendama, Fusagasuga, San Fortunato, *Triana* 4163 (BM); Villeta to Utica highway, *García Barriga* 17203 (US); *Triana* 2499 (P).—Huila: Río Balsillas, *Rusby & Pennell* 786 (GH, NY); Cordillera oriental, E of Neiva, *Rusby & Pennell* 893 (NY); Cordillera Oriental, ridge NW of Quebrada la Candela, Río Naranjo, 20 km SW of San Agustín, *Fosberg* 20121 (US); Mpio. de Gigante, between Vereda Ventanas and Páramo de Miraflores, *Fernández A. et al.* 14870 (COL); *Fernández A. et al.* 14881 (COL).—Magdalena: San Sabastián de Rábago, *Romero C.* 937 (F, US).—Meta: Sumapáz, western Andean slopes, Quebrada el Buque, *Díaz P. et al.* 2826 (MO).—Nariño: Mpio. Pasto, 3 km E of Dolores, *Ramírez P. & Cuayal M.* 3954 (NY); Mpio. Pasto, Correg. El Encano, km 28–33 via Sibundoy, *Ramírez P.* 5365 (US); Mpio. Pasto, Correg. Santa Bárbara, headwaters of Río Bobo, *Ramírez P. & Cuayal M.* 4892 (US).—Quindío: El Roble, *Triana* 4163 (BM); San Juan-Quindío, *André* 2045 (K, NY).—Risaralda: Cordillera Central, Mpio. de Santa Rosa, western Andean slopes, between Hacienda La Sierra and Termales de Santa Rosa, *Jaramillo M. et al.* 6026 (COL).—Tolima: Cordillera Central, Mpio. de Ronces Valles, Páramo de Yerbabuena, *Camargo G.* 7437 (COL).—Valle del Cauca: El Silencio, Yanacónas, *García* 33806 (COL, US); Mpio. de Riofrio, Correg. de Fenicia, El Roblal, Páramo del Duende, *Vargas* 3980 (COL). Ecuador—Azuay: Eastern Cordillera, between Oña and Río Yacuambi, *Prieto* 212 (AAU, NY, S, US); road Sigsig-Gualaquiza, *Harling et al.* 8204 (GB, QCA, SEL).—Loja: *Poortmann* 143 (P-2 sheets); road to antennas from Loma del Oro, between San Lucas and Saraguro, *Pedersen & Lozano* 104349 (LOJA); Saraguro-Loja, km 40.2, *Jørgensen et al.* 1374 (LOJA, SEL, US); Parque Nacional Podocarpus, Cajanuma, path towards Lagunas del Compadre, *Tirado* 1529 (QCNE, US); Parque Nacional Podocarpus, E of Nudo de Cajanuma, *Bøgh* 86568 (AAU); Parque Nacional Podocarpus, S of Loja, E of Nudo de Cajanuma, *Øllgaard et al.* 58010 (AAU, MO, NY); Parque Nacional Podocarpus; Nudo de Cajanuma, *Yáñez* 91 (QCA, QCNE); Podocarpus National Park, area around Lagunas Compadres, *Pedersen et al.* 104445 (LOJA); Saraguro, Huashapamba, *Proaño* 3733 (LOJA).—Napo: Cantón Quijos, Parroq. Cuyuja, between the town of Cuyuja and the confluence of Río Tablon and Río Quijos, northern border of Reserva Ecológica Antisana, *Clark et al.* 5625 (QCA, QCNE, US); road Papallacta-Baeza, between Cuyuja and Papallacta, *Palacios* 2573 (MO, QCNE); *Jaramillo* 5314 (GB, MO, QCA); *van der Werff & Palacios* 9620 (AAU, MO, QCNE, US); *Øllgaard & Eriksen* 90304 (AAU, QCA, QCNE); *Palacios & van der Werff* 3678 (AAU, MO, QCNE, US).—Tungurahua: *Spruce* 5179 (BM, C, E, G, GH, GOET, K, NY, OXF, P, W-2 sheets); Comunidad Viscaya; 7–11 km SW of Baños, *Clark et al.* 7744 (AAU, CAS, E, F, K, MO, NY, QCA, QCNE, SEL, US, W); Río Vascun Valley; northern slopes of Volcán Tungurahua, *Clark et al.* 7720 (AAU, BM, E, F, MO, NY, QCA, QCNE, SEL, US, WU); *Clark et al.* 7726 (QCNE, US); vicinity of Patate, Hacienda Leito, *Asplund* 8072 (S).—Zamora-Chinchipe: road Loja-Zamora, km 12–14, *Dodson & Thien* 1382 (US, WIS). Peru—Piura: Prov. Huancabamba, Los Llanos-Chorro Blanco (Sapalache-Chiguélas), *Sagástegui et al.* 16774 (US). Venezuela—Aragua: Parque Nacional Pittier, Fila de Paraiso, above Portuchuelo, *Steyermark* 91523 (US, VEN).—Falcon: Sierra de San Luis, near the Parador Hotel, S of La Tabla, *Steyermark* 98977 (G, VEN); *Steyermark* 98948 (K, NY, P, VEN).—Táchira: Dist. Junin, between El Mirador and Potrero Buena Vista, *Ruiz T. & Lopez F.* 8912 (MERF, US); Quebrada de Palmar, base of Paramo de Tama, 2 km above Betania and 7 km above Villapaez, *Steyermark* 57247 (F, US); slopes below paramo from Tama, near Colombian-Venezuelan border, *Steyermark et al.* 98427 (MO, NY, US, VEN).—Yaracuy: Quebrada Amparo, El Amparo, near Candelaria, 7–9 km N of Salom, *Steyermark & Espinosa* 111158 (SEL, VEN); Cerro La Chapa, N of Nirgua, *Meier* 4197 (US); *Steyermark & Bunting* 97648 (COL, US, VEN).
- Alloplectus hispidus* is distinguished from other congeners by a prolifically branched climbing habit. Some populations have been observed to cover the entire base of a tree trunk to 5 m (*J.L. Clark et al.* 7720). The yellow flowers are similar in shape to the red flowers of *A. inflatus*, but the pouched region is not as pronounced (FIGURE 3B). The valvate to connivent calyx lobes of *A. hispidus* are useful in distin-

guishing it from the spreading calyx lobes of *A. aquatilis*. These two species are allopatric with the latter being restricted to the eastern flanks of the Venezuelan Andes.

Alloplectus inflatus J.L.Clark & L.E.Skog, Novon 15(1): 72. 2005. TYPE: Colombia—Cundinamarca: Muchindote Valley, east side of Quebrada Negra, 13 km NE of Gachetá, 2800 m, 4 Jul 1944, *Grant 9596* (holotype: COL!; isotypes: MO! NA-2 sheets! NY! US! WIS).

FIGURE 4.

Shrubs terrestrial or epiphytic, stems scandent, sparingly branched; to 2 m tall, to 0.8 cm in diameter, woody, internodes 1–5 cm long, terete, densely hirsute, leaf scars slightly raised from the stem surface, nectary glands at base of petiole present. *Leaves* opposite, usually equal in a pair; petioles 0.5–2 cm long, densely hirsute; blades coriaceous when dry, broadly elliptic, 3–10 cm long, 1–5 cm wide, base somewhat rounded to acute, apex obtuse to acute, margin serrate, adaxially dark green, tomentose, abaxially light green to red, sparsely to densely hispid especially on the veins, lateral veins 3–5 per side. *Flowers* solitary, non-resupinate, bracteoles absent; pedicels longer than the petiole, 2–7 cm long, pilose, pedicel glands absent, flower posture pendent at anthesis. *Calyx* lobes 5, nearly free, basally appressed to adjacent lobe, erect, subequal, broadly ovate, 15–20 mm long, 5–10 mm wide, base truncate, apex attenuate, margin lacinate-serrate, red, outside densely pilose, inside sparsely pilose. *Corolla* 4.0–5.5 cm long, tubular, tube ca. 4 cm long, gibbous basally on upper surface, spur absent, long axis of corolla oblique relative to calyx; base ca. 1 cm in diam., middle ampliate, becoming apically ventricose on lower surface, throat constricted, not appearing laterally compressed, ca. 1 cm wide at mouth, outside densely pilose, inside mostly glabrous, with glandular trichomes at throat, interior spotting absent, limb reflexed, subregular, ca. 1 cm wide, red, lobes nearly equal, rotund, spreading, ca. 2 mm long, ca. 3.5 mm wide, rounded, entire. *Nectary* gland bilobed, on ventral surface of ovary, glabrous. *Filaments* coiling after anthesis, ca. 1.5 cm long (free portion), adnate to base of corolla tube for ca. 2 mm, connate for 1 mm, forming an open sheath, glabrous; anthers broader than long, 1 mm long, 2 mm wide, dehiscing by longitudinal slits; staminode absent. *Ovary* ovoid, ca. 7 mm long, ca. 4 mm wide, densely pilose, style 1.4 cm long, glabrous, stigma shallowly bilobed. *Fruit* a fleshy capsule, pendent when ripe, ovoid when immature, loculicidally dehiscent, becoming bivalved, valves reflexed, reaching a 180° angle when mature, 1.5 cm long, 1.5 cm wide, pilose.

Seeds numerous, fusiform, 1 mm long, 0.3 mm wide, longitudinally striate, dark brown.

PHENOLOGY: Flowering from February through December; fruiting from August through November.

DISTRIBUTION: *Alloplectus inflatus* is known from the Andes of Colombia. It has been collected in the Cordillera Central (Depts. Caldas, Cauca, and Tolima) and the Cordillera Oriental (Depts. Boyacá, Cundinamarca, and Meta) at 2000–3500 m (FIGURE 2).

REPRESENTATIVE SPECIMENS: Colombia—Boyacá: Cordillera Oriental, NE of Arcabuco, dividing line between Boyaca and Santander del Sur, *García Barriga & Jaramillo M. 20261* (F, GH, US).—Caldas: Cordillera Central, Alaska, above Salento, *Pennell 9383* (GH, PH); western slopes of the Cordillera Central, valley of Río Otun, Peña Bonita, *Cuatrecasas 23333* (F, US).—Cauca: Eastern slopes of the Cordillera Central, region of Moscopan, valley of Río San Jose, Aguabonita, *Cuatrecasas 23484* (F, US); road Popayán-La Plata, km 100, Researva Forestal de Fauna y Flora Merenberg, *Murcia 12* (COL).—Cundinamarca: San Miguel, near Sibaté, *Hawkes & Garcia Barriga 23* (K, US); between Puebloviejo and Hoerías, near Boca de Monte, *Uribe U. 6387* (COL); Cerros de San Miguel, SW of La Sabana de Bogota, *Uribe U. 2594* (COL, US); Cordillera Oriental, Moquentiva valley, 14 km NW of Gachetá, *Grant 9522* (NA, US); Mpio. Sibate, El Peñón, *Hertas & Camargo 5007* (COL); Páramo de Guasca, *Schneider 1196* (COL); vicinity of San Miguel, *Weaver & Kennedy 1567* (GH).—Meta: eastern slopes of the Cordillera Central, Sunapás, quebrada El Buque, *Díaz P. 2677* (MO); main tributary of Río Grande, S of Cordillera de Las Cruces, southern slopes of Paramo de Sumapaz, *Fosberg 20862* (US); Mpio. Quetame, Guayabetal police inspection station, road to Calvario, *Lozano C. 4063* (COL), *Peñuela & Clavijo 16* (COL).—Tolima: near Quindío highway, along divide, *Killip & Varela 34612* (COL, US).

Alloplectus inflatus resembles *A. hispidus*, but differs by the more inflated pouched region near the apex of the corolla. Both *A. hispidus* and *A. inflatus* are scandent epiphytes, but *A. hispidus* can cover an entire tree trunk for 3–5 m with its prolifically branched stems in contrast to the sparingly branched stems of *A. inflatus*. Other characters that are useful for distinguishing *A. inflatus* are the dark red flowers and nearly valvate calyx lobes with basally appressed margins.

Alloplectus tessmannii Mansf., Repert. Spec. Nov. Regni Veg. 41: 149. 1936. TYPE: Peru—Loreto: upper Río Maraño, Puerto

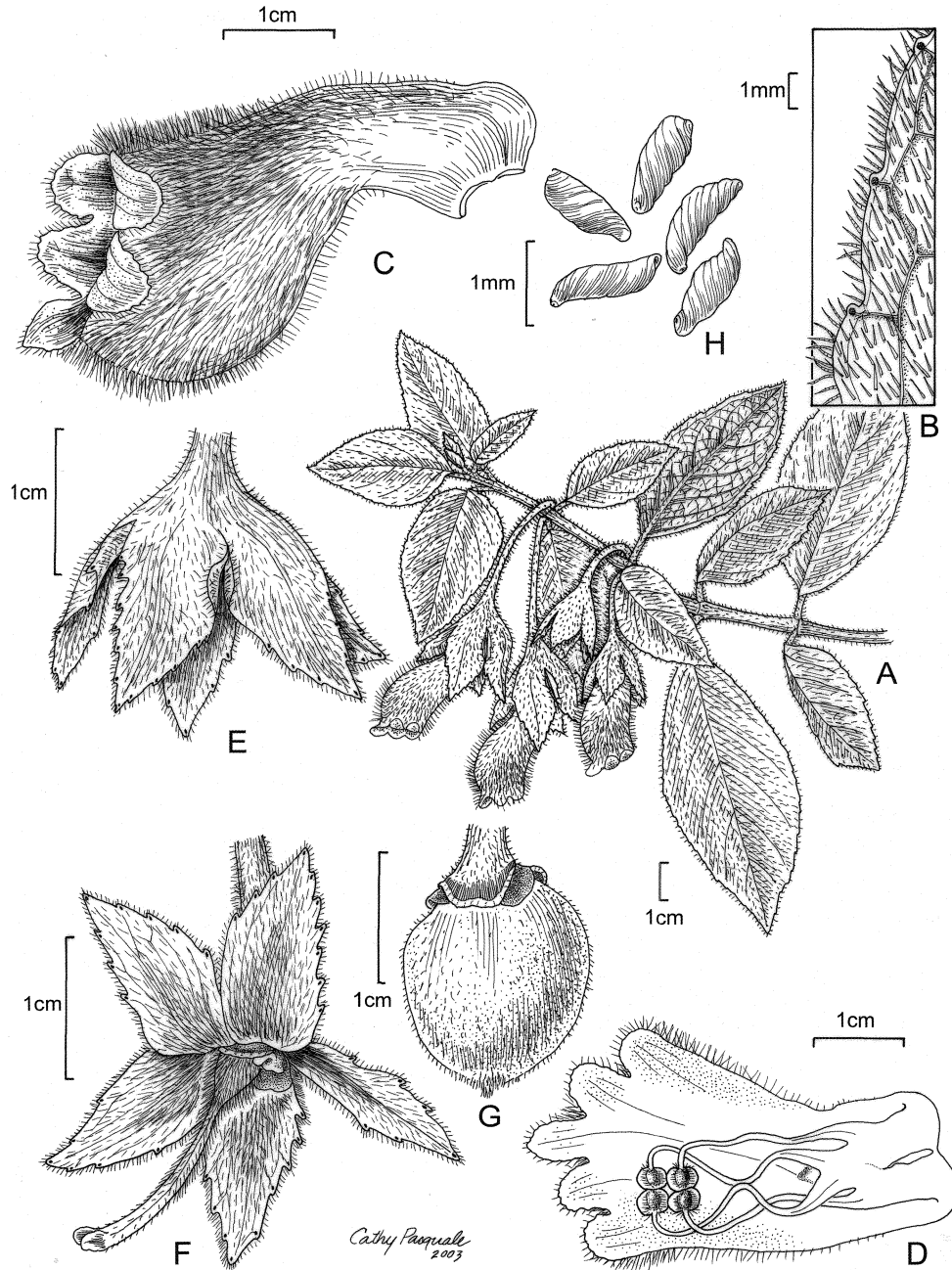


FIGURE 4. *Alloplectus inflatus* J.L.Clark & L.E.Skog. **A.** Habit. **B.** Adaxial leaf pubescence. **C.** Corolla. **D.** Corolla opened to show stamens. **E.** Calyx. **F.** Calyx opened and corolla removed to show bilobed nectary gland. **G.** Immature fruit. **H.** Seeds. (A, B from Uribe 2594 (US); C-F from Huertas & Camargo 5007 (COL); G, H from Pennell 9383 (PH)). Illustration from Clark et al. (2005: fig. 2) reprinted with permission.

Melendez, below Pongo de Manseriche, 155 m, 18 Dec 1924, *G. Tessmann 1800* (holotype: B, destroyed). TYPE: Peru—Amazonas: Prov. Bongara, "Shillac," embankment of Río Utcubamba and Quebrada Alba, ca. 10 km from the Korontachaca bridge along the old road to Herradura de Chachapoyas and Bagua, 2270–2490 m, 12–13 Sep 1983, *M. Leo L. 309* (neotype: MO!; isoneotype: FLAS!).

Subshrubs epiphytic, stems scandent, rarely branched; to 1 m long, 4–6 mm in diam., subwoody, internodes 2–5 cm long, terete, with dense villous pubescence, leaf scars slightly raised from the stem surface, nectary glands at base of petiole present. **Leaves** opposite, nearly equal in a pair; petioles 1.5–5.0 cm long, villous; blades coriaceous when dry, ovate to oblong, 10–12 cm long, 4–5 cm wide, base acute, apex acute, margin serrate, adaxially dark green, pilose, becoming more pilose on venation, abaxially pale green, uniformly pilose, lateral veins 6–8 per side. **Flowers** solitary, bracteoles absent; pedicels shorter than the petiole, to 1 cm long, densely pilose, pedicel glands absent, flower posture horizontal at anthesis. **Calyx** lobes 5, nearly free, base of each lobe appressed to adjacent lobe, with the margin curved inward, erect, nearly equal, broadly oblong, to 2.5 cm long, to 1 cm wide, base truncate, apex acute, margin lacinate, green, outside densely villous, inside villous. **Corolla** to 3 cm long, tubular, tube 2.6 cm long, gibbous basally on upper surface, spur absent, long axis of corolla oblique relative to calyx; base ca. 6 mm in diam., middle ampliate and curved, becoming ventricose on lower surface, throat slightly constricted, not appearing laterally compressed, outside glabrous at base, becoming densely pilose distally, inside glabrous, interior spotting absent, limb erect, zygomorphic, to 4 mm wide, uniformly red, lobes nearly equal, rotund, 1 mm long, 1.5 mm wide, rounded, entire. **Nectary** gland bilobed, on ventral surface of ovary, glabrous. **Filaments** coiling after anthesis, 1 cm long (free portion), adnate to base of corolla tube for ca. 4 mm, connate for 1 mm, forming an open sheath, glabrous; anthers broader than long, 2 mm long, 2.5 mm wide, dehiscent by longitudinal slits; staminode absent. **Ovary** ovoid, ca. 8 mm long, ca. 5 mm wide, densely pilose, style 2 cm long, pubescent, stigma stomatomorphic. **Fruit** and seeds not observed.

PHENOLOGY: Flowering in November.

DISTRIBUTION: *Alloplectus tessmannii* is known from montane rain forests in Peru (Huánuco, Amazonas, San Martín, and Loreto) 1200–2400 m (FIGURE 2).

REPRESENTATIVE SPECIMENS: Peru—Huánuco: Dist. Chinchao, San Pedro de Carpish, near Carpish tunnel, ca. 47 km N of Huanuco on the road to Tingo María, trail towards Hacienda Patti, *Clark et al. 8210* (SEL, US, USM).—San Martín: Prov. Rioja, Dist. Naranjillo, sector San Agustín, *Sánchez V. & Dillon 8653* (F, US); Prov. Rioja, Dist. Nuevo Cajamarca, *Sánchez V. & Dillon 8477* (F, US).

Alloplectus tessmannii is infrequently collected and specimens of this species in flower are rare. The pouched region of the corolla is medial in contrast to the nearly terminal pouch of other congeners. The stems of *A. tessmannii* are sparsely branched and erect in contrast to the scandent stems of other congeners. It is sympatric with *A. hispidus*, from which it is easily differentiated by the red flowers and sparsely branched erect stems.

Alloplectus weirii (Kuntze) Wiehler, *Phytologia* 27: 327. 1973. *Crantzia weirii* (Kuntze) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. *Columnnea weirii* Kuntze, *Revis. Gen. Pl.* 2: 471. 1891. TYPE: Colombia—Cundinamarca: woods near Pacho, 1888, *Weir 217* (holotype: K!).

FIGURE 5.

Alloplectus lindenii (Kuntze) Wiehler, *Phytologia* 27: 327. 1973. *Columnnea lindenii* Kuntze, nom. illeg. [non *Columnnea lindenii* Brong. ex Lem.], *Revis. Gen. Pl.* 2: 471. 1891. *Crantzia lindenii* (Kuntze) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. TYPE: Colombia—Provincia de Soto [Dept. Santander], 1800–2100 m, Dec 1853, *L. Schlim 1089* (lectotype, here designated: K!; isolectotypes: G! P!).

Columnnea schlimii Kuntze, *Revis. Gen. Pl.* 2: 471. 1891, nom. nud. pro syn., non *Columnnea schlimii* (Planch. & Linden) Kuntze (see discussion below).

Vines epiphytic, stems climbing or sprawling, adhering to other plants by adventitious roots, frequently branched; growing 2–5 m above ground, stems 3–7 mm in diam., subwoody, internodes 2–5 cm long, terete, glabrescent below, dense yellowish-green pilose pubescence above, leaf scars flush with stem surface, nectary glands at base of petiole present. **Leaves** opposite, equal or subequal in a pair; petioles 1–4 cm long, densely pilose; blades subcoriaceous when dry, usually elliptic, sometimes slightly ovate, 5–11 cm long, 2–4.5 cm wide, base acute to obtuse, apex acute, margin serrate-crenate, adaxially dark green, sparingly strigose, abaxially pale green, sometimes red, densely pilose, lateral veins 6–8 per side. **Inflorescence** not peduncu-

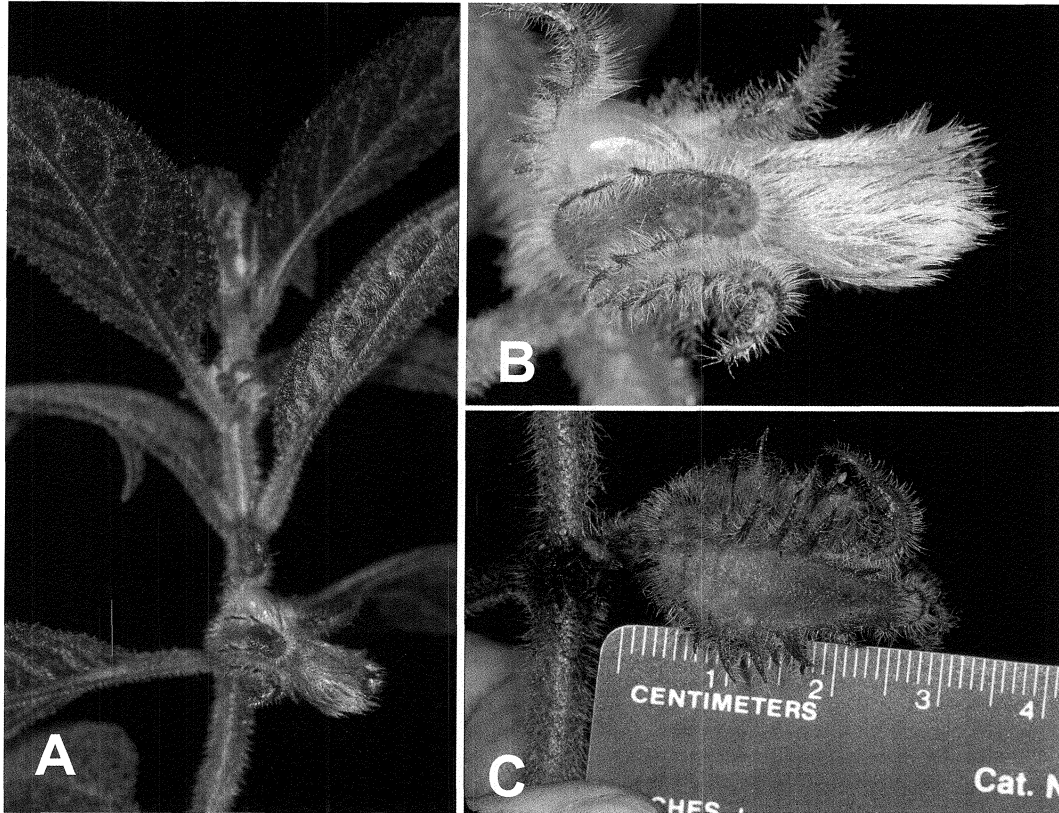


FIGURE 5. *Allopectus weirii* (Kuntze) Wiehler. A. Habit. B. Lateral view of flower. C. Lateral view of immature fruit with persistent calyx. Photographic images of field collection J.L. Clark & L. Bohs 8914 (US).

late, flowers usually solitary, rarely 2 flowers per node, bracteoles lanceolate, 6 mm long, 0.2 mm wide; pedicels shorter than the petiole, 0.5–1 cm long, densely pilose, pedicel glands absent, flower posture pendent at anthesis. **Calyx** lobes 5, connate briefly at base, each appressed to adjacent lobe, folded lengthwise with the margin curved inward, erect, 4 equal, broadly ovate, to 2.0 cm long, to 1.5 cm wide, base truncate, apex obtuse to acute, margin fimbriate, the teeth to 1.0 cm long and ca. 0.2 cm wide, all green to all red, outside densely pilose, inside densely pilose; fifth (ventral) lobe smaller and narrower, broadly ovate, to 2 cm long, to 0.5 cm wide. **Corolla** to 2.5 cm long, tubular, tube to 2 cm long, gibbous basally on upper surface, spur absent, long axis of corolla oblique relative to calyx; base ca. 5 mm in diam., middle ampliate and ventricose on the lower surface, throat constricted, not appearing laterally compressed, 6–8 mm wide (at mouth), outside densely villous, inside glabrous, interior spotting absent, limb spreading, zygomorphic, to 9 mm wide, pinkish-yellow to orangish-red, lobes nearly equal, ro-

tund, 2 mm long, 2.5 mm wide, rounded, entire. **Nectary** gland on dorsal surface, usually single-lobed, rarely bilobed, glabrous. **Filaments** coiling after anthesis, 1 cm long (free portion), adnate to base of corolla tube for 6 mm, connate for 1 mm, forming an open sheath, glabrous; anthers broader than long, 2 mm long, 3 mm wide, dehiscent by longitudinal slits; staminode absent. **Ovary** ovoid, ca. 7 mm long, ca. 6 mm wide, pilose, style 1.5 cm long, sparingly pilose, stigma stomatomorphic. **Fruit** a fleshy capsule, pendent, ovoid when immature, loculicidally dehiscent, becoming bivalved when mature, 2 cm long, 1.5 cm wide, pilose. **Seeds** numerous, ellipsoid, 1 mm long, 0.3 mm wide, longitudinally striate, light red.

PHENOLOGY: Collected in flower year round except for the months of October and December; collected in fruit during the months of January, March, April, June, July, October, November, and December.

DISTRIBUTION: *Allopectus weirii* is known from the Andes of NW South America (Bolivia,

Peru, Ecuador, and Colombia) and Costa Rica at 500–2500 m (FIGURE 2).

REPRESENTATIVE SPECIMENS: Costa Rica—Alajuela: 17–20 km NNW of San Ramón on road towards San Lorenzo, 4–7 km N of Balsa, *Liesner 14694* (CR, US); Alajuela-San Ramón, Río Cataratas y Cataratitas, *Gómez et al. 20789* (CR, US); road San Ramón-Bajo Rodríguez, km 19.5 from San Ramón, *Croat 78842* (MO); road San Ramón-Balsa, 16.7 km N of bridge over Quebrada Volio, 7.5 km N of bridge over Río Balsa, *Stevens 13913* (MO, US); N of San Ramón, ca. 4 km N of Balsa along road to Colonia Palmareña, *Lellinger & White 1253* (SEL, US); Cantón San Ramón, Dist. Angeles, Los Angeles, Colonia Palmarena, Cuenca media de Río San Lorenzo, camino a la mina de yeso, *Herrera 4924* (CR, INB, US); Río Peñas Blancas, near Refugio Aleman, *Haber 11298* (ING, MO); trail to Volcan Muerto, *Araya et al. 264* (ING, MO); Monteverde Reserve, Atlantic slope, Río Peñas Blancas valley, *Haber 1007* (US); *Haber 852* (US); *Haber 996* (US); *Obando et al. 167* (INB, US); Reserva Forestal, San Lorenzo, San Ramón, *Carvajal 166* (US); *Carvajal 368* (US).—Guanacaste: Cantón de Liberia, Parque Nacional Guanacaste, Cordillera de Guanacaste, Nueva Zelandia, Estación San Ramón, Sendero la Tepescuintle, *García 189* (CR, INB, US). Bolivia—La Paz: Yungas, *Rusby 2424* (NY). Colombia—Dept. unknown: *Mutis 2249* (MA).—Antioquia: *Kalbreyer 1456* (K); Mpio. de Caldas; finca La Oculta, *Escobar & Uribe 3621* (US); Río Calderas, *Daniel 4471* (US).—Boyacá: region of Mt. Chapon, extreme western part of Dept. Boyaca, NW Bogota, *Lawrance 357* (K, U).—Caldas: Cordillera Central, Salento, *Pennell 9081* (NY, PH, US).—Caquetá: western slopes of the Cordillera Oriental, Quebrada del Río Hacha, Cajon de Pulido, *Cuatrecasas 8752* (COL, US).—Cundinamarca: Cordillera Oriental, Carauca Range, E of Ibama, 13 km E of Yacopi, near the Boyaca border, *Grant 9184* (COL, NA, WIS); Tena, Laguna de Pedro Palo, *Uribe U. 1758* (GH).—Quindío: Mpio. de Filandia, Brehmen, *Vargas W. 3224* (COL).—Santander: road to Pamplona, km 12, Alto de los Padres, *García Barriga & Jaramillo M. 20545* (COL, SEL, U, US); Correg. Virolín, road Cañaverales-Olival, Río Ruicito, *Londoño & Kvist 809* (US).—Tolima: Mariquita, La Palmilla, Mariquita, Palmilla, *Triana 4163* (BM); Alto de la Palmilla, *Triana 2484* (BM, P, W).—Valle del Cauca: Mpio. Restrepo, vereda de Román, road Pavas-Restrepo, *Ramos et al. 2574* (US); La Cumbre, Cordillera Occidental, *Killip 5926* (NY); *Pennell & Killip 5782* (NY, PH, US). Ecuador—Morona-Santiago: Cantón Macas, trail

to Las Lagunas de Sardina Yacu, between Ríos Sardina and Volcan, *Cerón M. & Montalvo 32721* (QAP); Cantón Morona, Cordillera del Cutucú, Asociación Shuar Sevilla, Comunidad Angel Ruby, behind Cerro Iñiak naint, *Suin et al. 1805* (MO, QCNE).—Napo: 1 km E of oil pump station on road Papallacta-Baeza, along Río Papallacta, *Holm-Nielson et al. 6969* (AAU, NY, S); environs of Baeza, *Besse et al. 1155* (SEL); *Besse et al. 1161* (SEL); Cantón Archidona, Sumaco Napo-Galeras National Park, base of Volcan Sumaco, between Pacto Sumaco and main road to Loreto, *Clark 2307* (QCNE, US); Baeza, *Kvist et al. 60393* (AAU, US); Cantón Quijos, at the Río Cosanga near Cosanga, *Kirkbride & Chambra R. 4009* (AAU, Q, US); Cantón Quijos, Parroq. Cosanga, Yanayacu Biological Station and Center for Creative Studies, 5 km W of Cosanga, *Clark & Greeney 5788* (COL, MO, QCNE, US); *Clark & Greeney 5792* (AAU, MO, NY, QCA, QCNE, US); Cerro Antisana, 1 mile NE of Borja, *Grubb 1271* (K-2 sheets, NY); Cantón El Chaco, Proyecto Hidroeléctrico Coca, Punto ST3, Río Quijos, 10 km S of Reventador, *Palacios 5936* (MO); Cantón Quijos, western slopes of the Cordillera de Guacamayos, edge of Río Cosanga, *Palacios 6351* (MO); Vicinity of Baeza, *Dwyer & Macbryde 9581* (MO, US).—Pastaza: along Río Pastaza, between Río Topo and Río Mera, *Steyermark 54882* (F, US); *Lugo S. 1140* (GB, SEL); Mera, along Río Pastaza, *Lugo S. 1124* (GB, SEL).—Tungurahua: Baños, hotel “El Otro Lado,” Río Verde (tributary of Río Pastaza), near El Pailon del Diablo, *Clark & Rea 8016* (QCNE, US); Cantón Baños; Parroquia Río Negro; Sector las Palmeras, between Río Estancia and Río Pastaza, *Cerón M. & Dávila 38680* (QAP); Cantón Baños, Parroq. Río Verde, Sector Machay, forested trail from Baños-Puyo road towards Cascada de San Miguel via San Agustín, *Clark et al. 5701* (AAU, COL, MO, NY, QCA, QCNE, SRP, US).—Zamora-Chinchipe: W of Río Valladolid, above Valladolid, *Steyermark 54699* (F, US); Parroquia Zumba, Finca de Sandy León, Forest near Río Tarrangami, *J.L. Clark et al., 8914* (QCNE, US). Peru—Cajamarca: Cutervo, Parque Nacional de Cutervo, San Andres de Cutervo, *Smith & Diaz 1655* (US); La Palma, 10 km NW of Chirinos, *Gentry et al. 61191* (MO).—Cutervo: San Andrés de Cutervo, road San Andrés-Santo Tomás, *Díaz & Beltran 3341* (US, USM); San Ignacio, Ruta San Ignacio-El Chaupe, *Leiva et al. 1574* (F, NY, US); San Ignacio, San José de Lourdes, Santo Tomás, *Campes & Corrales 3441* (US).—Cuzco: Conventcion, Choquellohuanca, *Marin 2116* (F, US).—Loreto: Prov. Coronel Portillo, Dtto. Padre Abad, Río Chino, W of restaurant Acapulco,

Schunke V. 9143 (GH, MO, MO, NY, US).—San Martín: Prov. Rioja, road Pedro Ruiz-Moyobamba, km 390, Venceremos, *Smith & Vasquez S. 4723* (K, US).

While many other taxonomists working in Gesneriaceae did not avoid homonyms (e.g., Linden), Kuntze (1891) recognized the potential problems and attempted to avoid them. The name "*Columnnea schlimii* Kuntze" appeared in the text (Kuntze 1891) of his description of *Columnnea lindenii* Kuntze. Thus, these two names are of the same species. It is likely that Kuntze mentioned the name *Columnnea schlimii* in the text, because he had already annotated collections with this name (e.g., *L. Schlim 1089* from K!). It is presumed therefore that he cited the name to avoid any confusion. Realizing that this would be an undesirable homonym, Kuntze included "*Columnnea schlimii* Kuntze" in the text of his description and proposed the name *Columnnea lindenii* Kuntze.

Alloplectus weirii is distinguished from other members of the genus by deeply fimbriate calyx margins (FIGURE 5C). In the absence of mature flowers, *A. weirii* is easily confused with many of the *Columnnea* species from section *Ortholoma* (e.g., *Columnnea minor*) because of the fimbriate calyx margins and isophyllous opposite leaves. The corolla is anomalous in the genus because of its nearly urceolate shape and lack of a well-defined pouched region (FIGURE 5B).

AN ALLOPLECTUS NOMENCLATOR

Excluded or Uncertain Species

The following is a list of published names of *Alloplectus* and their present taxonomic placement. An equal sign (=) precedes the currently accepted name (bold type). Combinations made by previous authors are noted with place of publication. Also noted (e.g., "fide") are heterotypic synonyms recognized by previous authors.

- Alloplectus affinis* (C.V.Morton) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5): 189. 1969. *Columnnea affinis* C.V.Morton, Fieldiana, Bot. 28: 529. 1953. TYPE: Venezuela—Aragua: El Portachuelo, between Ocumare de la Costa and Maracay, *H. Pittier 10130* (US!), nom. illeg., later homonym of *Alloplectus affinis* Mansf. = ***Columnnea sanguinea* (Pers.) Hanst.**, Linnaea 34: 384. 1865.
- Alloplectus affinis* Mansf., Repert. Spec. Nov. Regni Veg. 41: 147. 1936. = ***Drymonia affinis* (Mansf.) Wiehler**, Phytologia 27: 324. 1973.
- Alloplectus altescandens* Mansf., Repert. Spec. Nov. Regni Veg. 41: 148. 1936. TYPE:

Peru—Loreto, upper Río Marañón, delta of Río Santiago, tierra firma forest, 1 Oct 1924, *G. Tessmann 4182* (B, no longer extant). TYPE: Ecuador—Morona-Santiago, Cordillera Morire, San Miguel de los Cuyes, 2400–3400 m, 7 Jan 2001, *J.L. Clark & C. Morocho 5847* (neotype, here designated: US!; isoneotypes: HA! QCNE!). = ***Glossoloma altescandens* (Mansf.) J.L. Clark, comb. nov.**

Alloplectus ambiguus Urb., Symb. Antill. 1: 408. 1899. = ***Columnnea ambigua* (Urb.) B.D. Morley**, Proc. Roy. Irish Acad. 74B: 412, 423. 1974.

Alloplectus ambiguus var. *chlorosepalus* Urb., Symb. Antill. 1: 408. 1899. = ***Columnnea ambigua* (Urb.) B.D. Morley**, Proc. Roy. Irish Acad. 74B: 412, 423. 1974.

Alloplectus ambiguus var. *erythrosepalus* Urb., Symb. Antill. 1: 408. 1899. = ***Columnnea ambigua* (Urb.) B.D. Morley**, Proc. Roy. Irish Acad. 74B: 412, 423. 1974.

Alloplectus ambonensis L.E.Skog, Ann. Missouri Bot. Gard. 65: 795. 1978 [1979]. TYPE: Panama—Border of Chiriquí and Bocas del Toro, road along Cerro Colorado ridge, *J.P. Folsom, G. Small, and R. Robbins 4774* (holotype: US!; isotypes: MO-2 sheets! US!). = ***Drymonia ambonensis* (L.E.Skog) J.L. Clark, comb. nov.**

Alloplectus angustifolius DC., Prodr. 7: 546, 1839. *Columnnea angustifolia* (DC.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. = ***Nematanthus lanceolatus* (Poir.) Chautems**, Diss. Bot. 112: 189. 1988.

Alloplectus aureonitens (Hook.) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5): 189. 1969. *Columnnea aureo-nitens* Hook., Bot. Mag. 73: pl. 4294. 1847. *Collandra aureonitens* (Hook.) Hanst., Linnaea 26: 209. 1854. *Dalbergaria aureonitens* (Hook.) Wiehler, Phytologia 27: 316. 1973. TYPE: Plate 4294 in J.W. Hooker, Bot. Mag. 73. The "native specimens are in our Herbarium from Columbia" as mentioned by Hooker in the text were not seen by Leeuwenberg (1958), nor was I able to locate a specimen during a 2002 visit to the Royal Botanic Gardens, Kew. The colored lithograph and text in Hooker's description allow this name to be attributed as a synonym of *Columnnea sanguinea* (Pers.) Hanst. This is a common species throughout Colombia where the plant in cultivation at Kew was originally collected. = ***Columnnea sanguinea* (Pers.) Hanst.**, Linnaea 34: 384. 1865.

Alloplectus baguensis L.E.Skog, Opera Bot. 92: 225. 1987. TYPE: Peru—Amazonas: Bagua, ca. 25 km (by trail) E of La Peca, along

- stream, 1894 m, 13 Aug 1978, *P. Barbour* 2973 (holotype: US!; isotypes: C! MO!). =*Glossoloma baguense* (L.E.Skog) J.L. Clark, **comb. nov.**
- Alloplectus bicolor* (Kunth) G. Don in Loudon, Encycl. Pl. new ed.: 1402. 1855. This name was published as a new combination for *Besleria bicolor* Kunth, but it has been cited as *Alloplectus bicolor* G. Donf. by Mabberley (1981). =*Glossoloma bicolor* (Kunth) J.L. Clark.
- Alloplectus bicolor* (Kunth) Klotzsch ex Hanst., Linnaea 34: 377. 1865. *Besleria bicolor* Kunth in H.B.K., Nov. Gen. Sp. Pl. 2: 398 (folio), 319 (quarto). 1817 [1824]. *Alloplectus kunthii* G. Don, Gen. Hist. 4: 655. 1837 [1838]. *Columnnea bicolor* (Kunth) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia bicolor* (Kunth) Fritsch, Bot. Jahrb. Syst. 29 (Beibl. 65): 9. 1900. TYPE: Colombia—Cauca/Nariño: Villa La Erre, plains of Sacandony between town of Almaguer and Pasto, 1829–2195 m, Oct 1801, A. Bonpland 2118 (holotype: P! holotype fragment: F!). =*Glossoloma bicolor* (Kunth) J.L. Clark, **comb. nov.**
- Alloplectus bicolor* Linden, Suppl. Extrait Cat. Génér. No. 83 et 24. 1869 (see Stafleu & Cowan 1981: Vol. 3, entry 4626). There are no cited specimens in the seed catalog where this name was published, and I was not able to locate annotated herbarium specimens with this name during a 2002 visit to the National Botanic Garden of Belgium (BR). A vague description cites the similarities of Linden's *A. bicolor* with two species that are currently recognized as members of the genus *Corytoplectus* (*Alloplectus schlimii* Planch. & Linden and *Alloplectus speciosus* Poepp.). Linden's generic concept of *Alloplectus* included what currently is recognized as *Corytoplectus*, and, in the absence of a detailed description and lack of locality information, it is difficult to assign this name to a species. This name is most likely a member of the congeners mentioned in Linden's vague 1869 description. =*Corytoplectus* sp.
- Alloplectus bicolor* Poepp. in sched. in Hanstein, Linnaea 34: 370. 1865, nom. nud. pro syn. Hanstein cited Poeppig's name in reference to it being seen on an herbarium collection. Hanstein included this name as a synonym of *Alloplectus speciosus* Poepp. =*Corytoplectus speciosus* (Poepp.) Wiehler, Phytologia 27: 313. 1973.
- Alloplectus bolivianus* (Britton ex Rusby) Wiehler, Phytologia 27: 327. 1973. *Columnnea boliviana* Britton ex Rusby, Mem. Torrey Bot. Club 4: 238. 1895. TYPE: Bolivia—La Paz: Yungas, Oct 1890, *Bang* 515 (holotype: NY!; isotypes: BM! E! F! GH-2 sheets! K! MANCH (photo: US!), MO! NY! PH! US-2 sheets! W (photo: US!), WU (photo: US!); fragment: F!). =*Glossoloma bolivianum* (Britton ex Rusby) J.L. Clark, **comb. nov.**
- Alloplectus bracteatus* Linden, Etabl. Linden, Prix-courant no. 5: 2. 1850 (see Stafleu & Cowan 1981: Vol. 3, entry 4620a). I was not able to locate herbarium specimens with this name attributed to Linden during a 2002 visit to the National Botanic Garden of Belgium (BR), and the publication where this name appears is not known to exist (Stafleu & Cowan 1981). The names *Alloplectus bracteatus* Linden and *Centrosolenia bracteatus* Planch. are probably the same species. It is assumed here that these names are of the same species advertised in Linden's seed catalogs. =*Nautilocalyx bracteatus* (Planch.) Sprague, Bull. Misc. Inform. 1912: 88. 1912.
- Alloplectus calcaratus* (Kunth) G. Don, Gen. Hist. 4: 655, 1837 [1838]. *Besleria calcarata* Kunth in H.B.K., Nov. Gen. Sp. Pl. 2: 320 (folio), 399 (quarto). 1817 [1824]. =*Gasteranthus calcaratus* (Kunth) Wiehler **subsp. calcaratus**, Selbyana 1(2): 154. 1975.
- Alloplectus calochlamys* Donn.Sm., Bot. Gaz. 27: 437. 1899. *Columnnea calochlamys* (Donn.Sm.) C.V. Morton, Bol. Soc. Venez. Cienc. Nat. 23: 78: 1962. TYPE: Guatemala—Alta Verapaz: Sacoyojú, often on limestone in open places or thickets, 1090 m, May 1879, *H. von Tuerckheim* 456 (lectotype: US! designated by Gibson 1974). Smith (1899) cited collections from two different localities with the same number (*H. von Tuerckheim* 456). The collections from Pansamalá were syntypes (GH! K! NY! P! W! US!), until Gibson (1974) chose the collection from Sacoyojú as the lectotype. *Cobananthus* Wiehler is in a clade that is well supported and separate from *Alloplectus*. It is more closely related to the primarily Central American genera *Alsobia* Hanst. and *Episcia* Mart. than to either *Columnnea* or *Alloplectus* (Clark & Zimmer 2003; Clark et al. in press). The fruits of *Cobananthus* are bivalved capsules with thick non-reflexing carpel walls, whereas the fruits of most other Episcieae genera (e.g., *Drymonia* and *Alloplectus*) are fleshy capsules with spreading reflexed carpel walls. Other characters that distinguish this genus are the actinomorphic, star-shaped, bright

- orange calyx, and the narrow tubular corolla (cf., Wiehler 1977). = *Cobananthus calochlamys* (Donn.Sm.) Wiehler, Selbyana 2: 94, pl. 28B. 1977.
- Allopectus calotrichus* (Donn.Sm.) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5): 189. 1969. *Ortholoma calotrichum* (Donn.Sm.) Wiehler, Phytologia 27: 321. 1973. *Trichantha calotricha* (Donn.Sm.) Wiehler, Selbyana 1(1): 34. = *Columnea calotricha* Donn.Sm., Bot. Gaz. 40: 9. 1905.
- Allopectus capitatus* Hook., Bot. Mag. 75: pl. 4452. 1849. *Columnea capitata* (Hook.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia capitata* (Hook.) Fritsch in Engler & Prantl. Nat. Pflanzenfam. 4(3b): 168. 1894. = *Corytoplectus capitatus* (Hook.) Wiehler, Phytologia 27: 313. 1973.
- Allopectus carpishensis* J.L.Clark & I.Salinas, Novon 15: 70. 2005. TYPE: Peru—Huanuco: Chinchao, San Pedro de Carpish, above Carpish tunnel, ca. 47 km N of Huanuco on the road to Tingo María, 09°43'14"S, 76°06'53"W, 2770–2900 m, 1 Nov 2001, I. Salinas 224 (holotype: USM; isotype: US!). = *Glossoloma carpishense* (J.L.Clark & I.Salinas) J.L.Clark, comb. nov.
- Allopectus chrysanthus* Planch. & Linden, Fl. Serres Jard. Eur. 8: 211. 1853. *Columnea chrysantha* (Planch. & Linden) Kuntze, Revis. Gen. Pl. 2: 472. 1891. No locality or type specimen designated. TYPE: Venezuela—Mérida: dirt road towards Paramo de Mucumbis, between Torondoy and Pico Aguila, near entrance to Parque Nacional Culata, 2800–2900 m, 16 Oct 2002, J.L. Clark & S. Yustiz 6872 (neotype, here designated: US!; isoneotypes: MER! NY! PORT! SEL! VEN!). = *Glossoloma chrysanthum* (Planch. & Linden) J.L.Clark, comb. nov.
- Allopectus circinatus* Mart., Nov. Gen. Sp. Pl. 3: 56, pl. 223, Fig. 2. 1829. *Columnea circinata* (Mart.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia circinata* (Mart.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. = *Drymonia coccinea* (Mart.) Wiehler, Phytologia 27: 324. 1973.
- Allopectus coccineus* (Aubl.) Mart., Nov. Gen. Sp. Pl. 3: 57 [text]. 1829. 3: 189 [index]. 1832. *Besleria coccinea* Aubl., Hist. Pl. Guiane 2: 632, pl. 255. 1775. *Lophalix coccinea* (Aubl.) Raf., Sylva Tellur.: 70. 1838. *Columnea coccinea* (Aubl.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. = *Drymonia coccinea* (Aubl.) Wiehler, Phytologia 27: 324. 1973.
- Allopectus coccineus* (Aubl.) Mart. var. *fusco-maculatus* Leeuwenb., Acta Bot. Neerl. 7: 300. 1958. = *Drymonia coccinea* (Aubl.) Wiehler, Phytologia 27: 324. 1973.
- Allopectus concolor* Hook., Bot. Mag. 74: pl. 4371. 1848. TYPE. Plate 4371 in W.J. Hooker, Bot. Mag. 74. 1948. Hooker wrote, “we presume, an inhabitant of Brazil, having been sent to Kew by Mr. Galeotti in 1846 . . . without any indication of its locality.” It is not clear why Hooker thought that this species is from Brazil, because Henri G. Galeotti (1841–1858) only collected in Cuba and Mexico. Perhaps, Hooker meant George Gardner (1812–1849), who had collected in Brazil during Hooker’s tenure at Kew. Nevertheless, I was not able to locate a Galeotti or a Gardner herbarium specimen of this species during a 2002 visit to the Royal Botanic Gardens, Kew. = *Nematanthus lanceolatus* (Poir.) Chautems, Diss. Bot. 112: 189. 1988.
- Allopectus congestiflorus* (Donn.Sm.) C.V. Morton, Field Mus. Nat. Hist., Bot. Ser. 18: 1143. 1938. *Besleria congestiflora* Donn.Sm., Bot. Gaz. 61: 379. 1916. = *Rufodorsia congestiflora* (Donn.Sm.) Wiehler, Selbyana 1(2): 146. 1975.
- Allopectus congestus* Decne. ex Linden, Établ. Linden, Prix-courant no. 4. 1849 (see Stafleu & Cowan 1981: Vol. 3, entry 4620a). There are no cited specimens in the seed catalog where this name was published, and I was not able to locate annotated herbarium specimens with this name attributed to Decaisne during a 2002 visit to the National Botanic Garden of Belgium (BR). A vague description mentions that the corolla is pink and that the wild origin of this species is Colombia. The corolla color and locality agree with *Corytoplectus congestus* (Linden ex Hanst.) Wiehler. Furthermore, it is not clear if Hanstein differentiated Linden’s species from Decaisne’s *Allopectus congestus*. It is assumed here that these names are of the same species advertised in Linden’s seed catalogs. = *Corytoplectus congestus* (Linden ex Hanst.) Wiehler, Phytologia 27: 313. 1973.
- Allopectus congestus* Linden ex Hanst., Linnaea 34: 371. 1865. *Columnea congesta* (Linden ex Hanst.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia congesta* (Linden ex Hanst.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. = *Corytoplectus congestus* (Linden ex Hanst.) Wiehler, Phytologia 27: 313. 1973.
- Allopectus coriaceus* (Oerst. ex Hanst.) Hanst., Linnaea 34: 363. 1865. *Erythranthus coriaceus* Oerst. ex Hanst., Linnaea 26: 183,

- 209, 215, 1854, *Columnnea coriacea* (Oerst. ex Hanst.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia coriacea* (Oerst. ex Hanst.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. A detailed description of this species name can be found in Oersted (Centralamer. Gesner. 47, pl. 3, 1858 [preprint]; 121, pl. 3, 1861 [reprint]). Oersted's species name and a copy of his illustration were published by Hanstein. Although Hanstein attributed this name to Oersted, it had not been published and is therefore treated as validated by Hanstein. =*Drymonia coriacea* (Oerst. ex Hanst.) **Wiehler**, Phytologia 27: 325. 1973.
- Alloplectus corymbosus* Klotzsch ex Hanst., Linnaea 34: 371. 1865. *Columnnea corymbosa* (Klotzsch ex Hanst.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia corymbosa* (Klotzsch ex Hanst.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. =*Corytoplectus speciosus* (Poepp.) **Wiehler**, Phytologia 27: 313. 1973.
- Alloplectus crenatilobus* Mansf., Notizbl. Bot. Gart. Berlin 14(121): 38. 1938. TYPE: Ecuador—Pastaza: Puyo, near the Río Pastaza, 850 m, 12 May 1935, *H. Schultze-Rhnhof 1850* (holotype: B, destroyed). TYPE: Ecuador—Napó: Archidona, forest along the Baeza-Loreto road, 3–5 km E of the Tena-Baeza junction, 27 Feb 2003, *J.L. Clark & N. Harris 7284* (neotype, here designated: QCNE!; isoneotypes: AAU! COL! E! GB! MO! NY! SEL! US!). =*Drymonia crenatiloba* (Mansf.) **Wiehler**, Selbyana 5(3,4): 382. 1981.
- Alloplectus cristatus* (Griseb.) Fawc., Prov. List. Pl. Jam.: 28. 1893. *Pterygoloma cristatum* Griseb., Fl. Britt. W. I.: 464: 1862. *Trichantha cristata* (Griseb.) **Wiehler**, Selbyana 1(1): 34. 1975. *Ortholoma cristatum* (Griseb.) **Wiehler**, Phytologia 27: 321. 1973. =*Columnnea grisebachiana* **Kuntze**, Revis. Gen. Pl. 2: 472. 1891.
- Alloplectus cristatus* (L.) Mart., Nov. Gen. Sp. Pl. 3: 57. 1829 [text]. 3: 189. 1832 [index]. *Besleria cristata* L., Sp. Pl.: 619. 1753. *Prionoplectus cristatus* (L.) Oerst., Centralamer. Gesner.: 78, pl. 9, 1858 [preprint]; 152, pl. 9, 1861 [reprint]. *Columnnea cristata* (L.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Alloplectus cristatus* (L.) Mart. var. *typicus* Fournet, Fl. Ill. Phan. Guad. Mart.: 1326. 1978. =*Crantzia cristata* (L.) **Scop.**, Intr. Hist. Nat.: 173. 1777.
- Alloplectus cristatus* (L.) Mart. var. *typicus* Fournet, Fl. Ill. Phan. Guad. Mart.: 1326. 1978. =*Crantzia cristata* (L.) **Scop.**, Intr. Hist. Nat.: 173. 1777.
- Alloplectus cristatus* (L.) Mart. var. *brevicalyx* C.V.Morton, Contr. U.S. Natl. Herb. 29: 17. 1944. =*Crantzia cristata* (L.) **Scop.**, Intr. Hist. Nat.: 173. 1777.
- Alloplectus cristatus* (L.) Mart. var. *crenatus* C.V.Morton, Contr. U.S. Natl. Herb. 29: 17. 1944. =*Crantzia cristata* (L.) **Scop.**, Intr. Hist. Nat.: 173. 1777.
- Alloplectus cristatus* (L.) Mart. var. *epirotus* Leewenb., Acta Bot. Neerl. 7: 298. 1958. TYPE: Guyana—Cuyuni-Mazaruni: Mt. Ayanganna, Pakaraima Mountains, 1000–1500 m, 5–6 Feb 1955, *B. Maguire, W.M.C. Bagshaw & C.K. Maguire 40594* (holotype: NY!; isotypes: NY! U! US!). =*Crantzia epirotus* (Leeuwenb.) **J.L.Clark, stat. & comb. nov.**
- Alloplectus cubensis* (Urb.) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5): 189. 1969. *Columnnea sanguinea* (Pers.) Hanst. var. *cubensis* Urb., Symb. Antill. 2: 359. 1901. *Columnnea cubensis* (Urb.) Britton, Torreya 5: 215. 1906. =*Columnnea sanguinea* (Pers.) **Hanst.**, Linnaea 34: 384. 1865.
- Alloplectus cucullatus* C.V.Morton, Contr. U.S. Natl. Herb. 29: 36. 1944. TYPE: Guatemala—Quiché: Zona Reyna, 750–900 m, *A.F. Skutch 1812* (holotype: US!; isotypes: A, F!). =*Glossoloma cucullatum* (C.V.Morton) **J.L.Clark, comb. nov.**
- Alloplectus cucullatus* C.V.Morton var. *substri-gosus* C.V.Morton, Contr. U.S. Natl. Herb. 29: 37. 1944. TYPE: Guatemala—Alta Verapaz: Pansamalá, 1150 m, Jun 1885, *H. von Tüerckheim 733* (holotype: US!; isotypes: GH! NY! PH! US!). =*Glossoloma cucullatum* (C.V.Morton) **J.L.Clark**.
- Alloplectus darienensis* Seem., Bot. Voy. Herald: 187. 1854. *Episcia darienensis* (Seem.) Leeuwenb., Acta Bot. Neerl. 8: 52. 1959. =*Paradrymonia darienensis* (Seem.) **Wiehler**, Selbyana 5(1): 50. 1978.
- Alloplectus deltoideus* C.V.Morton, Fieldiana, Bot. 28: 521. 1953. =*Corytoplectus deltoideus* (C.V.Morton) **Wiehler**, Phytologia 27: 313. 1973.
- Alloplectus dichrous* (Spreng.) DC. Prodr. 7: 546. 1839. *Besleria dichrus* Spreng. Syst. Veg., ed. 16, 2: 840. 1825. *Columnnea dichroa* (Spreng.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia dichrus* (Spreng.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. *Nematanthus dichrus* (Spreng.) **Wiehler**, Phytologia 27: 326. 1973. =*Nematanthus lanceolatus* (Poir.) **Chautems**, Diss. Bot. 112: 189. 1988.
- Alloplectus dichrous* sensu Hook., Bot. Mag. 72: pl. 4216. 1846. =*Nematanthus hirtellus*

- (Schott) **Wiehler**, *Baileya* 18: 137. 1971 [1972].
- Allopectus dielsii* (Mansf.) **Wiehler**, *Selbyana* 5(3,4): 381. *Ortholoma dielsii* (Mansf.) **Wiehler**, *Phytologia* 27: 321. 1973. *Trichantha dielsii* (Mansf.) **Wiehler**, *Selbyana* 1(1): 35. 1975. TYPE: Ecuador—Chimborazo: Región interandina. Tipococha, margen del bosque de montaña superior, 3200 m, 19 Aug 1933, *Diels 657* (holotype: B, destroyed). TYPE: Ecuador—Carchi: cloud forest towards Maldonado, on road from Tulcan, 1800 m, 21 Feb 1978, *C. Luer, J. Luer & A. Hirtz 2663* (neotype: SEL! designated by **Wiehler**, *Selbyana* 5(3,4): 381–382. 1981). There is strong support for the inclusion of *Columnnea dielsii* in the genus *Columnnea* from molecular and morphological data presented by Clark & Zimmer (2003) and Clark et al. (in press). Its placement in *Columnnea* is also congruent with results obtained by Smith and Sytsma (1994b) based on cpDNA restriction site variation, where *Columnnea dielsii* (voucher specimen determined as “*Allopectus peruvianus* (Zahlbr.) L.P.Kvist & LE.Skog”) was placed as a basal member of the genus *Columnnea*. This species was transferred from *Columnnea* to *Allopectus* by **Wiehler** (1981). *Columnnea dielsii* also was recognized as a heterotypic synonym of *Allopectus peruvianus* by **Kvist & Skog** (1993). **Wiehler** (1981) recognized this species as a member of *Allopectus* because of the presence of a capsular fruit. The inclusion of this taxon in *Columnnea* is an anomaly, because it is one of only two known species in the genus with a capsular fruit instead of a berry. The position of *Columnnea dielsii*, however, is not surprising, because it shares many features with other members of *Columnnea* such as a 5-lobed nectary, non-re-supinate flowers, a scandent habit, and flowers that are weakly bilobed (e.g., members of *Columnnea* sect. *Pentadenia*). It is not clear why **Wiehler** (1973) initially treated this species as a member of *Ortholoma* and then transferred it to *Trichantha* (**Wiehler** 1975) instead of *Pentadenia*, where a 5-lobed nectary is a defining feature. Nevertheless, the presence of a 5-lobed nectary is not known to exist in any species of *Allopectus* sensu stricto. The only other genus of Episcieae besides *Columnnea* with a 5-lobed nectary gland is *Corytoplectus* Oerst., and most genera in the tribe Episcieae have a bilobed gland or two large dorsal connate glands. =*Columnnea dielsii* **Mansf.**, *Biblioth. Bot.* 116: 145. 1937.
- Allopectus dimidiatus* **Benth.**, *Pl. Hartw.*: 235. 1846. *Dalbergaria dimidiata* (**Benth.**) **Wiehler**, *Phytologia* 27: 317. 1973. =*Columnnea dimidiata* (**Benth.**) **Kuntze**, *Revis. Gen. Pl.* 2: 472. 1891.
- Allopectus dimorphobracteatus* **Hoehne**, *Sellowia* 9: 46. 1958. TYPE: Brazil—Amazonas: Benjamin Constant, 18 Oct 1945, *Murça Pires & Black 922* (holotype: IAN, not located). It was not possible to verify the existence of the type specimen for this species, and it was not located by a previous visit to the IAN herbarium (A. Chautems pers. comm.). Its placement in *Allopectus* is dubious, because the species description is based on a single collection that lacked flowers and was suspected as being new by **Hoehne**, as it was unlike anything known from the region where it was collected. Furthermore, it is described as a “cipó pequeno” (small vine) with two types of bracts. There are no known small vines with two types of bracts in the current concept of *Allopectus*, *Crantzia*, and *Glossoloma*. Furthermore, the vague description of *A. dimorphobracteatus* does not allow it to be placed in a known taxon.
- Allopectus discolor* **Hook.f.**, *Bot. Mag.* 118, index. 1892, nom. nud. This name appears in the index incorrectly as plate 7271 *Allopectus discolor*. Plate 7271 corresponds to *Allopectus lynchei* **Hook.f.** =*Nautilocalyx lynchii* (**Hook.f.**) **Sprague**, *Bull. Misc. Inform.* 1912: 89. 1912.
- Allopectus dodsonii* **Wiehler**, *Selbyana* 2(1): 67, pl. 19A. 1977. TYPE: Ecuador—Los Rios, Río Palenque Science Center, km 56, between Quevedo and Santo Domingo, 200 m, 19 Jul 1971, *H. Wiehler & C.H. Dodson 7105* (holotype: SEL!). =*Drymonia dodsonii* (**Wiehler**) **J.L.Clark**, *comb. nov.*
- Allopectus domingensis* **Urb.** *Symb. Antill.* 2: 357. 1901. *Ortholoma domingense* (**Urb.**) **Wiehler**, *Phytologia* 27: 321. 1972. *Trichantha domingensis* (**Urb.**) **Wiehler**, *Selbyana* 1(1): 34. 1975. =*Columnnea domingensis* (**Urb.**) **B.D.Morley**, *Proc. Roy. Irish Acad.* 74B: 412, 424. 1974.
- Allopectus domingensis* **Urb.** var. *microphyllus* **C.V.Morton**, *Contr. U.S. Natl. Herb.* 28(1): 19. 1944. =*Columnnea domingensis* (**Urb.**) **B.D.Morley**, *Proc. Roy. Irish Acad.* 74B: 412, 424. 1974.
- Allopectus doratostylus* **Leeuwenb.**, *Acta Bot. Neerl.* 8: 44. 1959. =*Drymonia doratostyla* (**Leeuwenb.**) **Wiehler**, *Phytologia* 27: 325. 1973.
- Allopectus eriocalyx* **Galeotti** in **J.D. Hooker**, *Bot. Mag.* 74: pl. 4371. 1848, nom. nud.

- This name was attributed to the specimen sent to Hooker by Galeotti in 1846, which was grown at Kew and used for making the plate of *Alloplectus concolor* Hook.f. Thus, this name was mentioned in the text, but not used as the specific epithet for the plate of *A. concolor* Hook.f. = *Nematanthus lanceolatus* (Poir.) Chautems, Diss. Bot. 112: 189. 1988.
- Alloplectus erythroloma* Leeuwenb., Acta Bot. Neerl. 8: 45. 1959. = *Drymonia erythroloma* (Leeuwenb.) Wiehler, Selbyana 2(1): 74, pl. 22A. 1977.
- Alloplectus forgetii* Sprague, Bull. Misc. Inform. Kew 1910: 383. 1910. = *Nautilocalyx forgetii* (Sprague) Sprague, Bull. Misc. Inform. Kew 1912: 89. 1912.
- Alloplectus forseithii* (Oerst.) Hanst., Linnaea 34: 375. 1865. *Prionoplectus forseithii* Oerst., Centralamer. Gesner.: 45, pl. 9 (figs. 30–35), 1858 [preprint]; 119, pl. 9 (figs. 30–35), 1861 [reprint]. = *Crantzia cristata* (L.) Scop., Intr. Hist. Nat.: 173. 1777.
- Alloplectus fraternus* C.V.Morton, Proc. Biol. Soc. Wash. 69: 193. 1956. TYPE: Panama—Chiriquí: flat areas on the slopes of Volcán de Chiriquí Viejo and along Río Chiriquí Viejo, 1200 m, 20 Apr 1935, *Allen 1000* (holotype: MO! fragment: US!; isotypes: BM! BR! F! G! U!). = *Glossoloma tetragonum* Hanst., Linnaea 26: 208–209. 1854.
- Alloplectus glaber* (Hook.f.) Decne., Rev. Hort. 21: 243. 1849. *Hypocyrtia glabra* Hook.f., Bot. Mag. 74: pl. 4346. 1848. = *Nematanthus strigillosus* (Mart.) H.E.Moore, Bailleya 19: 38. 1973, fide Chautems (1988).
- Alloplectus glaber* DC. Prodr. 7: 546. 1839. LECTOTYPE: Sessé and Mociño plate, number 6331.633 in the Torner Collection of Sessé and Mociño Biological Illustrations at the Hunt Institute for Botanical Documentation. McVaugh (2000) lectotypified this name with the following notes linking this plate to the de Candolle description, “cited in synonymy by DC., l.c., as the basis for *Alloplectus* ? *glaber*. *Besleria* [“*Besteria*”] *cristata* [L.] sensu Sessé & Mociño Pl. Nov. Hisp. 103. 1889; ed. 2. 97. 1893.” Locality notes from de Candolle include: Mountains of Mazatlán, Guerrero.” = *Drymonia serulata* (Jacquin) Mart., Nov. Gen. Sp. Pl. 3: 59 [text]. 1829. 3: 189 [index]. 1832.
- Alloplectus glabrescens* C.V.Morton, Gesneriaceae in J.A. Steyermark, Fieldiana, Bot. 28: 522. 1953. TYPE: Venezuela—Mérida: north of Torondoy, along Quebrada Molino, in woods above Las Cuadras, 1820–2255 m, 27 Mar 1944, J.A. Steyermark 55818 (holotype: US!; isotype: F!). = *Glossoloma pycnosuzygium* (Donn.Sm.) J.L.Clark.
- Alloplectus grandicalyx* J.L.Clark & L.E.Skog, Novon 12: 173–178. 2002 (Clark & Skog 2002). TYPE: Ecuador—Napo: Cantón Archidona, Reserva Ecológica Antisana, Sector Guacamayos, Sendero Jumandy-La Virgen (km 30), path that follows potential oil pipeline, 00°38'S, 77°49'W, 1700–1800 m, 1 May 1998, J.L. Clark, E. Narvaez, & T. Pauchi 5449 (holotype: QCNE!; isotypes: AAU! COL! E! MO! QCA! SRP! US!). = *Glossoloma grandicalyx* (J.L.Clark & L.E.Skog) J.L.Clark, comb. nov.
- Alloplectus grandifolius* Britton ex Rusby, Bull. Torrey Bot. Club 27: 30. 1900. = *Coryto-plectus riceanus* (Rusby) Wiehler, Phytologia 27: 313. 1973.
- Alloplectus grisebachianus* (Kuntze) Urb. Symb. Antill. 2: 357. 1901. = *Columnnea grisebachiana* Kuntze, Revis. Gen. Pl. 2: 472. 1891.
- Alloplectus grisebachianus* (Kuntze) Urb. var. *ochrotrichus* Urb. Symb. Antill. 5: 497. 1908. = *Columnnea grisebachiana* Kuntze, Revis. Gen. Pl. 2: 472. 1891.
- Alloplectus guatemalensis* C.V.Morton, Contr. U.S. Natl. Herb. 29: 37. 1944. = *Drymonia guatemalensis* (C.V.Morton) D.N.Gibson, Phytologia 23: 336. (Gibson 1972).
- Alloplectus guianensis* (C.V.Morton) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4: 189. 1969. *Dalbergaria guianensis* (C.V.Morton) Wiehler, Phytologia 27: 317. 1973. = *Columnnea guianensis* C.V.Morton, Bull. Torrey Bot. Club 75: 564. 1948.
- Alloplectus herthae* Mansf., Notizbl. Bot. Gart. Berlin-Dahlem 14: 38. 1938. TYPE: Ecuador—“San Carlos” [=San Carlos de los Colorados], 120 m, 8 Sept 1935, H. Schultze-Rhönhof 1903 (holotype: B, destroyed).—Pichincha: along old road between Santo Domingo-Quito (via Chiriboga), 1400–1600 m, 28 Oct 1995, P. Mendoza-T. et al. 618 (neotype, here designated: QCNE!; isoneotypes: AAU! CAS! COL! E! F! GB! MO! NY! QCA! SRP! US!). = *Glossoloma herthae* (Mansf.) J.L.Clark, comb. nov.
- Alloplectus hirsutus* Sprague, Bull. Misc. Inform. Kew 1911: 346. 1911. = *Nautilocalyx hirsutus* (Sprague) Sprague, Bull. Misc. Inform. 1912: 89. 1912.
- Alloplectus hirtellus* (Schott) Preston ex Hoehne, Sellowia 9: 45. 1958. = *Nematanthus hirtellus* (Schott) Wiehler, Baileya 18: 137: 1971 [1972].
- Alloplectus hirtellus* (Schott) Preston ex Hoehne forma *crassifolius* Hoehne, Sellowia 9: 45.

1958. =*Nematanthus hirtellus* (Schott) **Wiehler**, *Baileya* 18: 137: 1971 [1972].
- Alloplectus hirtellus* (Schott) Preston ex Hoehne forma *umbrophilus* Hoehne, *Sellowia* 9: 45. 1958. =*Nematanthus hirtellus* (Schott) **Wiehler**, *Baileya* 18: 137: 1971 [1972].
- Alloplectus hoppii* Mansf., *Repert. Spec. Nov. Regni Veg.* 41: 148. 1936. TYPE: Ecuador—Napo: Archidona, Jan 1931, *W. Hopp 1032* (syntype: B, destroyed); Tena: hacienda dos Ríos, 8 Apr 1933, *E. Heinrichs 319* (syntype: B, destroyed); Pastaza: near the Río Pastaza, 12 May 1935, *H. Schultze-Rhonhof 1838* (syntype: B, destroyed). TYPE: Ecuador—Napo: Cantón Tena, Parroquia Talag, Comunidad Cando, N or Río Jatunyacu, 540 m, 1°4'45"S, 77°56'29"W, 21 Dec 2000, *J.L. Clark, E. Narvaez & V. Grefa 5669* (neotype, here designated: QCNE!; isoneotypes: AAU! COL! NY! QCA! US!). =*Drymonia hoppii* (Mansf.) **Wiehler**, *Phytologia* 27: 325. 1973.
- Alloplectus ichthyoderma* Hanst., *Linnaea* 34: 372. 1865. *Columnnea ichthyoderma* (Hanst.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. *Crantzia ichthyoderma* (Hanst.) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. TYPE: Costa Rica: *H. Wendland 833* (holotype: GOET!). =*Glossoloma ichthyoderma* (Hanst.) **J.L.Clark, comb. nov.**
- Alloplectus ichthyoderma* Hanst. var. *hirsutululus* C.V.Morton, *Publ. Field Mus. Nat. Hist., Bot. Ser.* 18: 1145. 1938 (Morton 1938). TYPE: Costa Rica—Cartago: Atirro, 600 m, Apr 1896, *J. Donnell Smith 6715* (holotype: US!; isotypes: BM! GH! K! US!). =*Glossoloma tetragonum* Hanst., *Linnaea* 26: 208–209. 1854.
- Alloplectus ichthyoderma* var. *pallidus* C.V. Morton, *Publ. Field Mus. Nat. Hist., Bot. Ser.* 18: 1145. 1938. TYPE: Costa Rica—San José: Las Nubes, 1500–1900 m, 20–22 Mar 1924, *P.C. Standley 38793* (holotype: US!). =*Glossoloma ichthyoderma* (Hanst.) **J.L.Clark.**
- Alloplectus ichthyoderma* forma *rubescens* C.V.Morton, *Publ. Field Mus. Nat. Hist., Bot. Ser.* 18: 1145. 1938. TYPE: Costa Rica—Cartago: Santa Clara, 1950 m, 20 Jul 1923, *W.R. Maxon & A.D. Harvey 8195* (holotype: US!). =*Glossoloma ichthyoderma* (Hanst.) **J.L.Clark.**
- Alloplectus kunthii* G.Don, *Gen. Hist.* 4: 655. 1837 [1838]. Don created this superfluous name instead of using *Alloplectus bicolor* (Kunth) Klotzsch ex Hanst. =*Glossoloma bicolor* (Kunth) **J.L.Clark.**
- Alloplectus lanatus* Seem., *Bot. Voy. Herald.* 186. 1854. *Dalbergaria lanata* (Seem.) **Wiehler.** =*Columnnea lanata* (Seem.) **Kuntze**, *Revis. Gen. Pl.* 2: 472. 1891.
- Alloplectus lindenii* (Kuntze) **Wiehler**, *Phytologia* 27: 327. 1973. *Crantzia lindenii* (Kuntze) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. *Columnnea lindenii* Kuntze, *Revis. Gen. Pl.* 2: 471. 1891. =*Alloplectus weirii* (Kuntze) **Wiehler**, *Phytologia* 27: 327. 1973.
- Alloplectus lynchei* Hook.f., *Bot. Mag.* 118: pl. 7271. 1892. *Episcia lynchei* (Hook.f.) Kunth, *Repert. Spec. Nov. Regni Veg. Beih.* 43: 643. 1928. =*Nautilocalyx lynchii* (Hook.f.) **Sprague**, *Bull. Misc. Inform.* 1912: 89. 1912.
- Alloplectus macranthus* Donn.Sm., *Bot. Gaz.* 31: 117. 1901. =*Drymonia macrantha* (Donn.Sm.) **D.N.Gibson**, *Phytologia* 23: 336. 1972.
- Alloplectus macrophyllus* (Oerst.) Hemsl. in Godman & Salvin, *Biol. Cent.-Amer., Bot.* 2: 484. 1882. *Caloplectus macrophyllus* Oerst. *Centralamer. Gesner.*: 45, pl. 9 (figs. 44–46), 1858 [preprint]; 119, pl. 9 (figs. 44–46), 1861 [reprint]. *Columnnea macrophylla* (Oerst.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. =*Drymonia macrophylla* (Oerst.) **H.E.Moore**, *Baileya* 3: 112. 1955.
- Alloplectus martinianus* J.F.Smith, *Novon* 9: 419. 1999. TYPE: Ecuador—Napo: road from Baeza to Tena, 5 km S of Baeza, 26 Jun 1983, *J. Bohlin & M. Bohlin 698* (holotype: US!; isotype: GB). =*Glossoloma martinianum* (J.F.Smith) **J.L.Clark, comb. nov.**
- Alloplectus medusaeus* L.E.Skog, *Ann. Missouri Bot. Gard.* 65: 797. 1979. TYPE: Panama—Chiriquí: on slope of La Popa above Boquete, 1600 m, 5 Aug 1972, *W.G. D'Arcy & J.J. D'Arcy 6398* (holotype: US!; isotypes: MO-2 sheets! SEL!). =*Glossoloma medusaeum* (L.E.Skog) **J.L.Clark, comb. nov.**
- Alloplectus melittifolius* Mart. ex Loudon, *Encycl. Pl. new ed.*: 1402. 1855, nom. nud. pro syn. =*Nautilocalyx melittifolius* (L.) **Wiehler**, *Phytologia* 27: 307. 1973.
- Alloplectus meridensis* Klotzsch ex Hanst., *Linnaea* 34: 372. 1865. *Columnnea meridensis* (Klotzsch ex Hanst.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. TYPE: Venezuela—Mérida. *J. Moritz 1132* (holotype: B, destroyed; lectotype: here designated, G!; isolectotypes: BM, BR! L, P!). Recent authors (Smith & Sytsma 1994a) have used this name on voucher specimens for molecular systematic studies. =*Glossoloma ichthyoderma* (Hanst.) **J.L.Clark.**

- Alloplectus metamorphophyllus* Donn.Sm., Bot. Gaz. 52: 52. 1911. TYPE: Costa Rica—San José: La Palma, 1600 m, A. Tonduz 10884 (lectotype, designated by Wiehler, Selbyana 5: 57. 1978: US!). =*Paradrymonia metamorphophylla* (Donn.Sm.) Wiehler, Phytologia 27: 327. 1973.
- Alloplectus microsepalus* C.V.Morton, Fieldiana, Bot. 28: 523. 1953. *Columnnea microsepala* (C.V.Morton) L.P.Kvist & L.E.Skog, Allertonia 6: 391. 1993. *Pentadenia microsepala* (C.V.Morton) Wiehler, Phytologia 27: 315. 1973. TYPE: Venezuela—Monagas. Cerro de la Cueva de Doña Anita, S of Caripe, 1100–1200 m, 7 Apr 1945, J.A. Steyermark 61905 (holotype: F; isotypes: NY, US!). =*Columnnea spathulata* Mansf., Notizbl. Bot. Gart. Berlin. 14: 37. 1838, fide Smith (1994).
- Alloplectus multiflorus* (Oerst. ex Hanst.) Hanst., Linnaea 34: 361. 1865. *Calanthus multiflorus* Oerst. ex Hanst., Linnaea 26: 208–209. 1854. *Columnnea multiflora* (Oerst. ex Hanst.) Kuntze, Revis. Gen. Pl. 2: 472. 1891. *Crantzia multiflora* (Oerst. ex Hanst.) Fritsch, Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. A detailed description of this species can be found in Oersted (Centralamer. Gesner.: 47, pl. 3, 1858 [preprint]; 121, pl. 3, 1861 [reprint]). Oersted's combination and a section of his illustration were published by Hanstein. Although Hanstein attributed this name to Oersted, it had not been priorly published and therefore is treated as validated by Hanstein. =*Drymonia multiflora* (Oerst. ex Hanst.) Wiehler, Phytologia 27: 325. 1973.
- Alloplectus nummularia* (Hanst.) Wiehler, Baileya 18: 136. 1971 [1972]. *Hypocyrtia nummularia* Hanst., Linnaea 34: 381. 1865. *Columnnea nummularia* (Hanst.) Kuntze. =*Neomortonia nummularia* (Hanst.) Wiehler, Selbyana 5(1): 63. 1978.
- Alloplectus oblongicalyx* J.L.Clark & L.E.Skog, Novon 15: 74. 2005. TYPE: Ecuador—Pichincha: Cantón Quito, trail betw. Lloa & Mindo, 30 km W of Lloa, 00°11'S, 78°41'W, 1800 m, 12 Feb 1997, J.L. Clark & S.C. Clark 3903 (Holotype: QCNE!; isotypes: AAU! MO! NY! US!). =*Glossoloma oblongicalyx* (J.L.Clark & L.E.Skog) J.L.Clark, comb. nov.
- Alloplectus oinochrophyllus* Donn.Sm., Bot. Gaz. 54: 239. 1912. =*Drymonia oinochrophylla* (Donn.Sm.) D.N.Gibson, Phytologia 23: 336. 1972.
- Alloplectus ornatus* C.V.Morton, Fieldiana, Bot. 28: 523. 1953. TYPE: Venezuela—Trujillo: La Quebrada Cortijo, in dense woods below paramo and ridge top, by boundary line Lara-Trujillo, above Humocaro Bajo, 2600–2800 m, 6 Feb 1944, J.A. Steyermark 55355 (holotype: US!; isotypes: F! NY! VEN!). =*Glossoloma chrysanthum* (Planch. & Linden) J.L.Clark.
- Alloplectus pallidus* Sprague, Bull. Misc. Inform. 1911: 346. 1911. =*Nautilocalyx pallidus* (Sprague) Sprague, Bull. Misc. Inform. 1912: 89. 1912.
- Alloplectus panamensis* C.V.Morton, Ann. Missouri Bot. Gard. 29: 36. 1942. TYPE: Panama—Coclé: Hills north of El Valle de Anton, 1000 m, 14 Jul 1940, P.H. Allen 2189 (holotype: US!; isotypes: MO! S!). =*Glossoloma panamense* (C.V.Morton) J.L.Clark, comb. nov.
- Alloplectus parviflorus* (Hanst.) Hemsl. in Godman & Salvin, Biol. Cent.-Amer., Bot. 2: 484. 1882. *Polythysania parviflora* Hanst., Linnaea 26: 209, pl. 55. 1854. =*Drymonia hansteiniana* Wiehler, Phytologia 27: 325. 1973.
- Alloplectus parviflorus* Hanst., Linnaea 34: 377, 1865. *Crantzia parviflora* (Hanst.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. Hanstein published this name and referenced the Mart. 1829 species description of *Alloplectus sparsiflorus* Mart. The basionym for this name that appears in Hanstein (1865) is therefore an error for *Alloplectus sparsiflorus* Mart. =*Nematanthus hirtellus* (Schott) Wiehler, Baileya 18: 137. 1971 [1972].
- Alloplectus patrisii* DC. Prodr. 7: 545. 1839. *Macrochlamys patrisii* (DC.) Decne., Rev. Hort. 21: 243. 1849. *Columnnea patrisii* (DC.) Kuntze, Revis. Gen. Pl.: 2. 1891. *Crantzia patrisii* (DC.) Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b): 168. 1894. =*Drymonia coccinea* (Aubl.) Wiehler, Phytologia 27: 324. 1973.
- Alloplectus patrisii* Miquel ex Decne. in Rev. Hort. 21: 243. 1849, nom. nud. pro syn. *Macrochlamys miquelii* Decne., Rev. Hort. 21: 243. 1849, nom. nud. Decaisne differentiated de Candolle's homonym of Miquel's name by, "Macrochlamys miquelii Decne. =*Alloplectus patrisii* Miquel, non DC." Decaisne's generic description of *Macrochlamys* was too vague for assigning this name with certainty to genus, and there are no known annotated herbarium collections with either of these names. In the absence of information, it is not possible to assign this name with certainty.
- Alloplectus peltatus* Oliver, Bot. Mag. 103: pl. 6333. 1877. *Columnnea peltata* (Oliver) Kuntze, Revis. Gen. Pl. 2: 472. 1891.

- =*Drymonia peltata* (Oliver) H.E.Moore, *Baileya* 3: 112. 1955.
- Alloplectus penduliflorus* M.Freiberg, *Phyton* 37: 133. 1997. TYPE: Ecuador—Imbabura: Cantón Sigchos, Los Cedros Biological Reserve, 1200–1500 m, 27 Jun 1996, M. Freiberg 96210 (holotype: QCA; isotypes: ULM-3 sheets!). =*Glossoloma penduliflorum* (M.Freiberg) J.L.Clark, **comb. nov.**
- Alloplectus pendulus* Poepp. in Poeppig & Endlicher, *Nov. Gen. Sp. Pl.* 3: 6, pl. 205. 1840. *Crantzia pendula* (Poepp.) Fritsch in Engler & Prantl, *Pflanzenfam.* 4(3b): 168. 1894. =*Drymonia pendula* (Poepp.) Wiehler, *Phytologia* 27: 325. 1973.
- Alloplectus peruvianus* (Zahlbr.) L.P.Kvist & L.E.Skog, *Allertonia* 6(5): 295. 1993. *Ortholoma peruvianum* (Zahlbr.) Wiehler, *Phytologia* 27: 322. 1973. *Trichantha peruviana* (Zahlbr.) Wiehler, *Selbyana* 1(1): 35. 1975. This name has been incorrectly attributed in the literature to plants from Ecuador (Kvist & Skog 1993, Smith & Sytsma 1994b, Skog & Kvist 1997) as well as on herbarium specimens. The correct name for the material from Ecuador is *Columnnea dielsii* Mansf. (see above under *A. dielsii*). Based on fieldwork and studies of type material of these two taxa, it is apparent that they represent different species. The type collection from Peru (treated here as *Columnnea peruviana* Zahlbr.) represents a species with a baccate fruit, and the type collection from Ecuador (treated here as *Columnnea dielsii* Mansf.) represents a species with a capsular fruit. TYPE: Peru—Tambillo, C. Jelski 72 (holotype: W!). =*Columnnea peruviana* Zahlbr., *Ann. K. K. Naturhist. Hofmus.* 7: 8. 1892.
- Alloplectus pinelianus* Lem., *Fl. Serres Jard. Eur.* 2(8): pl. 5. 1846. =*Nematanthus lanceolatus* (Poir.) Chautems, *Diss. Bot.* 112: 189. 1988 (Chautems 1988).
- Alloplectus pinelianus* Lem. var. *bicolor* Lem., *Fl. Serres Jard. Eur.* 2(8): sub pl. 5. 1846. =*Nematanthus lanceolatus* (Poir.) Chautems, *Diss. Bot.* 112: 189. 1988.
- Alloplectus pubescens* (Griseb.) Fawc., *Prov. List Pl. Jam.*: 28. 1893. *Pterygoloma pubescens* Griseb., *Fl. Brit. W. I.*: 464: 1862. *Ortholoma pubescens* (Griseb.) Wiehler, *Phytologia* 27: 323. 1973. *Trichantha pubescens* (Griseb.) Wiehler, *Selbyana* 1(1): 35. 1975. =*Columnnea pubescens* (Griseb.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891.
- Alloplectus purpureus* L.P.Kvist & L.E.Skog, *Brittonia*, 44: 475. 1992. TYPE: Ecuador—Pichincha: Cantón Quito, road El Paraiso-Saguangal, km 11, 0°12'N, 78°46'W, 1200 m, 2 May 1982, B. Øllgaard et al. 37673 (holotype: AAU!). =*Glossoloma purpureum* (L.P.Kvist & L.E.Skog) J.L.Clark, **comb. nov.**
- Alloplectus pycnosuzygius* (Donn.Sm.) C.V. Morton, *Fieldiana, Bot.* 28: 522. 1953. *Besleria pycnosuzygia* Donn.Sm., *Bot. Gaz.* 52: 53. 1911. TYPE: Costa Rica—San José, forests at La Palma, 1459 m, 8 Sep 1898, A. Tonduz 12545 (lectotype, here designated, US!; isolectotypes: CR! F! K! SEL! US!). =*Glossoloma pycnosuzygium* (Donn.Sm.) J.L.Clark, **comb. nov.**
- Alloplectus repens* Hook., *Bot. Mag.* 72: pl. 4250. 1846. *Pterygoloma repens* (Hook.) Hanst., *Linnaea* 26: 211. 1854. *Ortholoma repens* (Hook.) Wiehler, *Phytologia* 27: 323. 1973. =*Columnnea repens* (Hook.) Hanst., *Linnaea* 34: 396. 1865.
- Alloplectus ruacophilus* Donn.Sm., *Bot. Gaz.* 54: 238. 1912. TYPE: Costa Rica—Heredia: Volcán de Barba, 2500–2700 m, Feb 1890, A. Tonduz 1997 (lectotype designated by C.V. Morton (1938): US!; isolectotypes: BR! U! W!). =*Glossoloma ichthyoderma* (Hanst.) J.L.Clark.
- Alloplectus rubidus* C.V.Morton, *Ann. Missouri Bot. Gard.* 24: 204. 1937. *Pentadenia rubida* (C.V.Morton) Wiehler, *Selbyana* 2(1): 122. 1977. =*Columnnea rubida* (C.V. Morton) C.V.Morton, *Baileya* 7: 58. 1959.
- Alloplectus sanguineus* (Pers.) G. Don, *Gen. Hist.* 4: 655. 1837 [1838]. *Besleria sanguinea* Pers., *Syn Pl.* 2: 165. 1807. *Collandra sanguinea* (Pers.) Griseb., *Mem. Amer. Acad. Arts* 8: 526. 1861 [1862]. *Dalbergaria sanguinea* (Pers.) Steudel, *Nomencl. Bot.* Ed. 2, 1: 479. 1849. =*Columnnea sanguinea* (Pers.) Hanst., *Linnaea* 34: 384. 1865.
- Alloplectus savannarum* C.V.Morton, *Bull. Torrey Bot. Club* 75: 563. 1948. TYPE: Guyana—Kaieteur Plateau: savanna, wallaba forest [*Eperua* spp.], 1 May 1944, B. Maguire & D.B. Fanshawe 23127 (holotype: NY!; isotypes: A (photo: US!), BR! F! G! K! MO (photo: US!), P, U! UC! US! VEN! W!). =*Nematanthus savannarum* (C.V.Morton) J.L.Clark, **comb. nov.**
- Alloplectus scabridus* Lem., *Jard. Fleur.* 1: Misc. 51. *Hypocyrtia scabrida* Lem., *Fl. Serres Jard. Eur.* 3: 238, pl. 6. 1847. 1851. *Columnnea scabrida* (Lem.) Kuntze, *Rev. Gen. Pl.* 2: 472. 1891. =*Nematanthus strigillosus* (Mart.) H.E.Moore, *Baileya* 19: 38. 1973, fide Chautems (1988).
- Alloplectus schlimii* Planch. & Linden, *Fl. Serres Jard. Eur.* 8: 211, pl. 827. 1853. *Columnnea schlimii* (Planch. & Linden) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. =*Corytoplectus*

- schlimii* (Planch. & Linden) Wiehler, *Phytologia* 27: 313. 1973.
- Alloplectus schottii* G. Don, *Gen. Hist.* 4: 655. 1837 [1838]. Don published *Alloplectus schottii* as a new name and cited *Besleria dichrus* Spreng. and *Besleria bicolor* Schott as belonging to this species. = *Nematanthus lanceolatus* (Poir.) Chautems, *Diss. Bot.* 112: 189. 1988.
- Alloplectus schultzei* Mansf., *Repert. Spec. Nov. Regni Veg.* 36: 124. 1934. TYPE: Colombia—Cundinamarca: mountain jungle near Aguadita [5 km NE of Fusagasugá], 12 Apr 1925, A. Schultze 212 (holotype: B, destroyed). TYPE: Colombia—Cundinamarca: mountains W of Salto de Tequendama, Laguna de Catarnica, S of Santandercito, 2000 m, 31 Oct 1959, L. Uribe U. 3414 (neotype, here designated: US!). = *Glossoloma schultzei* (Mansf.) J.L. Clark, *comb. nov.*
- Alloplectus semicordatus* Poepp. in Poeppig & Endlicher, *Nov. Gen. Sp. Pl.* 3: 5. 1840. *Columnnea semicordata* (Poepp.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. *Crantzia semicordata* (Poepp.) Fritsch in Engler & Prantl, *Pflanzenfam.* 4(3b): 168. 1894. = *Drymonia semicordata* (Poepp.) Wiehler, *Phytologia* 27: 326. 1973.
- Alloplectus serpens* J.L. Clark & L.E. Skog, *Novon* 15: 76. 2005. TYPE: Ecuador—Morona-Santiago: Cantón Limón-Indanza, main road betw. Gualaceo & Plan de Milagro, “Tinajillas,” cow pasture & patches of montane forest, 03°00'19"N, 78°36'36"W, 2800 m, 10 Jan. 2001, J.L. Clark, F. Sanchez, & L. Jost 5904 (holotype: QCNE!; isotypes: AUU! HA! K! MO! NY! QCA! US!). = *Glossoloma serpens* (J.L. Clark & L.E. Skog) J.L. Clark, *comb. nov.*
- Alloplectus simulatus* C.V. Morton, *Ann. Missouri Bot. Gard.* 29: 37. 1942. TYPE: Panama—Chiriquí: vicinity of Bajo Mona and Quebrada Chiquero, 1500 m, 18 Jul 1940, R.E. Woodson & R.W. Schery 537 (holotype: US!; isotypes: GH [photo: US!], MO!). = *Glossoloma tetragonum* Hanst., *Linnaea* 26: 208–209. 1854.
- Alloplectus sparsiflorus* Mart., *Nov. Gen. Sp. Pl.* 3: 55, pl. 223, fig. 1. 1829. *Columnnea sparsiflora* (Mart.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. *Crantzia sparsiflora* (Mart.) Reisinger, *Oersterr. Bot. Zeit.* 49: 181. 1899. = *Nematanthus hirtellus* (Schott) Wiehler, *Baileya* 18: 137. 1971 [1972].
- Alloplectus solitarius* Rusby, *Mem. Torrey Bot. Club* 4: 238. 1895. = *Drymonia solitaria* (Rusby) Wiehler, *Phytologia* 27(5): 326. 1973.
- Alloplectus speciosus* Hort. ex Hook., *Bot. Mag.* 75: pl. 4452. 1849, nom. nud. pro syn. Hooker cited this name as a plant in cultivation in the protologue of *Alloplectus capitatus*, and therefore it is presumed that this name appears in Hooker's publication as a synonym of *Alloplectus capitatus* Hook. = *Corytoplectus capitatus* (Hook.) Wiehler, *Phytologia* 27: 313. 1973.
- Alloplectus speciosus* Poepp. in Poeppig & Endlicher, *Nov. Gen. Sp. Pl.* 3: 6. 1840. *Crantzia speciosa* (Poepp.) Fritsch in Engler & Prantl, *Pflanzenfam.* 4(3b): 168. 1894. = *Corytoplectus speciosus* (Poepp.) Wiehler, *Phytologia* 27: 313. 1973.
- Alloplectus spectabilis* Wiehler ex L.E. Skog & Steyerl., *Opera Bot.* 92: 228. 1987. TYPE: Venezuela—Sucre: Peninsula de Paria, Cerro Patao, N of Puerto de Hierro, NE of Güiría, cloud forest on flat mountain summit, 1020 m, 19 Jul 1962, J.A. Steyerl & G. Agostini 91094 (holotype: US!; isotypes: F! NY! VEN!). = *Crantzia spectabilis* (Wiehler ex L.E. Skog & Steyerl.) J.L. Clark, *comb. nov.*
- Alloplectus splendens* G. Don in Loudon, *Encycl. Pl. new ed.*: 1402. 1855, nom. nud. There are no known annotated specimens with this name, and it does not appear in Don (1838). It is cited in Loudon as belonging to the same genus as *Hypocyrtia discolor* Lindley (= *Nematanthus hirtellus* (Schott) Wiehler). In the absence of a detailed description and lack of locality information, it is not possible to assign this name to a species.
- Alloplectus sprucei* (Kuntze) Wiehler, *Phytologia* 27: 327. 1973. *Columnnea sprucei* Kuntze, *Revis. Gen. Pl.* 2: 471. 1891. *Crantzia sprucei* (Kuntze) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. TYPE: Ecuador—Bolívar: El Limón, at the base of the mountain Chimborazo, ca. 900 m, Jun 1860, R. Spruce 6216 (holotype: K!; isotypes: BM! W [photo: US!]). = *Glossoloma sprucei* (Kuntze) J.L. Clark, *comb. nov.*
- Alloplectus stenophyllus* Donn.Sm., *Bot. Gaz.* 25: 153. 1898. = *Drymonia stenophylla* (Donn.Sm.) H.E. Moore, *Baileya* 3: 112. 1955.
- Alloplectus strigosus* (Oerst.) Hanst., *Linnaea* 34: 374. 1865. *Saccoplectus strigosus* Oerst., *Centralamer. Gesner.*: 44, 1858 [preprint]; 118, 1861 [reprint]. *Crantzia strigosa* (Oerst.) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. = *Drymonia strigosa* (Oerst.) Wiehler, *Baileya* 18: 137. 1971 [1972].
- Alloplectus sylvarum* S. Moore, *Trans. Linn. Soc. London, Bot. Ser.* 2 4: 411. 1895. = *Dry-*

- monia semicordata* (Poepp.) Wiehler, *Phytologia* 27: 326. 1973.
- Allopectus tenuis* Benth., *Pl. Hartw.*: 235. 1846. *Columnnea benthamiana* Kuntze, *Revis. Gen. Pl.* 2: 471. 1891, non *Columnnea tenuis* Klotzsch ex Oerst. TYPE: Ecuador: *K. Hartweg s.n.* (holotype: K!). = *Drymonia tenuis* (Benth.) J.L.Clark, **comb. nov.**
- Allopectus tetragonoides* Mansf., *Biblioth. Bot.* 116: 144–145. 1937. TYPE: Ecuador—Tungurahua: area of Río Pastaza and Río Topo, 1200 m, 12 Sept 1933, *L. Diels 1002* (B, no longer extant). TYPE: Ecuador—Tungurahua: Cantón Baños, Parroquia Río Negro, near Río Topo, 1400 m, 17 Jan 2001, *J.L. Clark & V. Duran 6000* (neotype, designated by J.L. Clark & L.E. Skog (2002): QCNE!; isoneotypes: AAU! COL! F! K! MO! NY! QCA! S! US!). = *Glossoloma tetragonoides* (Mansf.) J.L.Clark, **comb. nov.**
- Allopectus tetragonus* (Hanst.) Hanst., *Linnaea* 34: 368. 1865. *Columnnea tetragona* (Hanst.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. *Crantzia tetragona* (Hanst.) Fritsch, *Nat. Pflanzenfam.* 4(3b): 168. 1894. TYPE: Fig. 49 in Hanstein, *Linnaea* 26: 208, 215, pl. 2. 1854. = *Glossoloma tetragonum* Hanst., *Linnaea* 26: 208–209. 1854.
- Allopectus tetragonus* (Oerst.) Hanst. The basionym of this name has been incorrectly attributed to Oersted in the literature (Wiehler 1973, Skog 1999) and on herbarium specimens, e.g., *Allopectus tetragonus* (Oerst.) Hanst.; *Glossoloma tetragonum* Oerst.; or *Nematanthus tetragonus* Oerst. The figure and description are attributed by Hanstein (1854) to Oersted as “*Nematanthus tetragonus* Oerst.” Hanstein included a cited illustration from the yet unpublished manuscript of Oersted in the species description. Nevertheless, the basionym was first validated by Hanstein. = *Glossoloma tetragonum* Hanst., *Linnaea* 26: 208–209. 1854.
- Allopectus teuscheri* (Raymond) Wiehler, *Bailleya* 18: 136. 1971 [1972]. *Hypocyrtia teuscheri* Raymond, *Bot. Not.* 113: 260. 1960. TYPE: Cultivated collection grown from cuttings at the Montreal Botanical Garden. Wild Origin: Ecuador: halfway between Guayaquil and Cuenca, near I.N.C.A. camp, 1060 m, *M. Raymond s.n.* (holotype: MTJB!). = *Drymonia teuscheri* (Raymond) J.L.Clark, **comb. nov.**
- Allopectus tigrinus* (Karst.) Hanst., *Linnaea* 34: 366. 1865. *Heintzia tigrina* Karst., *Ausw. Gew. Venez.* 34–36, pl. 11. 1848. *Columnnea tigrina* (Karst.) Kuntze, *Revis. Gen. Pl.* 2: 472. 1891. *Crantzia tigrina* (Karst.) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. TYPE: Pl. 11 in Karsten, *Ausw. Gew. Venez.* 34–36, pl. 11. 1848. No authentic Karsten collections of this species have been located or cited in the publication. Karsten cites the type locality as near Caracas (Venezuela). Most collections of this species are from Colonia Tovar, in the Estado Aragua of Venezuela. = *Crantzia tigrina* (Karst.) J.L.Clark, **comb. nov.**
- Allopectus tomentosus* Glaz., *Bull. Soc. Bot. France*, *Mém.* 3: 515. 1909 [1911], nom. nud. = *Vanhouttea lanata* Fritsch, *Bot. Jahrb. Syst.* 29 (Beibl. 65): 16. 1900, fide Wiehler (1973).
- Allopectus tucurriquensis* Donn.Sm., *Bot. Gaz.* 54: 238. 1912. TYPE: Costa Rica—Cartago: Las Vueltas, Tucurrique, 635–700 m, 9°51'N, 83°43'W, Mar 1899, *A. Tonduz 13042* (holotype: US!). = *Drymonia macrantha* (Donn.Sm.) D.N.Gibson, *Phytologia* 23: 336. 1972.
- Allopectus varelanus* (Cuatrec.) Cuatrec., *Trab. Mus. Nac. Ci. Nat., Ser. Bot.* 33: 120. *Crantzia varelana* Cuatrec., *Trab. Mus. Nac. Ci. Nat., Ser. Bot.* 29: 13. 1935. TYPE: Colombia—Tolima, Ibagué, 2600 m, 12 May 1932, *J. Cuatrecasas 2047* (holotype: MA, photo: US!). = *Glossoloma ichthyoderma* (Hanst.) J.L.Clark.
- Allopectus ventricosus* Donn.Sm., *Bot. Gaz.* 25: 154. 1898. = *Drymonia coriacea* (Oerst. ex Hanst.) Wiehler, *Phytologia* 27: 325. 1973.
- Allopectus villosus* Hanst. in Martius, *Fl. Brasil.* 8: 407, pl. 66, fig. 2. 1864. *Hypocyrtia villosa* Klotzsch in Martius, *Fl. Brasil.* 8: 407. 1864, nom. nud. pro syn. *Crantzia villosa* (Hanst.) Fritsch in Engler & Prantl, *Nat. Pflanzenfam.* 4(3b): 168. 1894. = *Nematanthus villosus* (Hanst.) Wiehler, *Phytologia* 27: 326. 1973.
- Allopectus vinaceus* (C.V.Morton) D.N.Gibson, *Phytologia* 23: 334. 1972. *Pentadenia vinacea* (C.V.Morton) Wiehler, *Phytologia* 27: 315. 1973. = *Columnnea vinacea* C.V. Morton, *Contr. U.S. Natl. Herb.* 29: 38. 1944.
- Allopectus viridis* (C.V.Morton) D.N. Gibson, *Phytologia* 23: 335. 1972. *Columnnea viridis* C.V.Morton, *Contr. U.S. Natl. Herb.* 29: 38. 1944. = *Columnnea purpurata* Hanst., *Linnaea* 34: 386. 1865.
- Allopectus vittatus* Linden & André, *Ill. Hort.* 17: 72, pl. 13. 1870. *Crantzia vittata* (Linden & André) Rechinger, *Oersterr. Bot. Zeit.* 49: 182. 1899. = *Cryptoptectus speciosus* (Poepp.) Wiehler, *Phytologia* 27: 313. 1973.

Alloplectus zamorensis Linden & André, III. Hort. 19: 352, pl. 110. 1872. TYPE: Plate 110. There are no cited specimens, but the locality is described as being near Zamora of New Grenada (Panama, Ecuador, Colombia, and Venezuela). There is a Zamora in Ecuador where I have done extensive fieldwork since 1994, but there are no documented herbarium collections of this species from this region of Ecuador. The plate and description accurately describe a species more commonly collected from Venezuela and Colombia. =*Corytopectus congestus* (Linden ex Hanst.) Wiehler, *Phytologia* 27: 313. 1973.

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