

Mniodes mandonii (Gnaphaliinae, Gnaphalieae, Asteraceae), a new species from Bolivia

Mniodes mandonii (Gnaphaliinae, Gnaphalieae, Asteraceae), una nueva especie de Bolivia

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Abstract: After reviewing herbarium material in conjunction with a monograph for *Mniodes* (A.Gray) Benth., we have recognized a new species from Bolivia, ***M. mandonii* Quip. & M.O.Dillon, sp. nov.** Our new species represents a collection originally cited as *Lucilia facelioides* Sch.Bip., a *nomen nudum* published in the enumeration of G. Mandon's Bolivian collections. Since the name has no formal taxonomic standing, we have based our new species on *Mandon 178*, with no fewer than seven duplicates found in herbaria. The distribution of this new species extends from northern Bolivia into extreme northwestern Argentina. Previously Bolivian and northern Argentine collections have been identified as disjunct populations of *Mniodes lopezmirandae* (Cabrera) Freire, Chemisquy, Anderb. & Urtubey, a northern Peru endemic. The distribution of *Mniodes mandonii* interfaces with that of *M. catamarcensis* in southern Bolivia and northern Argentina. The placement of *Gnaphalium americanum* Mill. var. *discolor* Griseb. as a synonym will require more detailed collecting in northern Argentina; however, preliminary data points to *M. mandonii*. The new species is described, illustrated with photographs, and its relationships discussed.

Key Words: *Mniodes*, Argentina, Bolivia, Andean flora, *sp. nov.*, species, allopatric species complex.

Resumen: Después de revisar el material de herbario junto con material para una monografía de *Mniodes* (A.Gray) Benth., se ha reconocido una nueva especie de Bolivia, ***M. mandonii* Quip. & M.O.Dillon, sp. nov.** La nueva especie representa una colección citada originalmente como *Lucilia facelioides* Sch.Bip., un *nomen nudum* publicado en la enumeración de las colecciones bolivianas de G. Mandon. Dado que el nombre no tiene una posición taxonómica formal, la nueva especie está basada en *Mandon 178*, con no menos de siete duplicados encontrados en herbarios. La distribución de esta nueva especie se extiende desde el norte de Bolivia hasta el extremo noroeste de Argentina. Anteriormente, las colecciones de Bolivia y del norte de Argentina se han identificado como poblaciones disjuntas de *Mniodes lopezmirandae* (Cabrera) Freire, Chemisquy, Anderb. & Urtubey, especie endémica del norte de Perú. La distribución de *Mniodes mandonii* coincide con la de *M. catamarcensis* en el sur de Bolivia y el norte de Argentina. La ubicación de *Gnaphalium americanum* Mill. var. *discolor* Griseb. como sinónimo de esta nueva especie requerirá de una recolección más detallada en el norte de Argentina; sin embargo, los datos preliminares sugieren que se trata de *M. mandonii*. Se describe la nueva especie, se ilustra con fotografías y se discuten sus relaciones.

Palabras claves: *Mniodes*, Argentina, Bolivia, flora andina, *sp. nov.*, complejo de especies alopatricas.



INTRODUCTION

During the years 1857-1861, Gilbert Gustave Mandon, a French mining engineer and botanist collected some 1,800 Bolivian plant specimens (Cadenas, 1953). Of these, nearly 300 were gathered from the Asteraceae (Compositae) and these were turned over to C. H. Schultz-Bipontinus. In 1866, Schultz published an enumeration of ca. 300 Asteraceae specimens collected by Mandon. In his listing of determinations, he provided over 100 new species names, the majority lacked descriptions and considered *nomen nudum* (*nom. nud.*). Amongst them, *G. Mandon 178* was listed as *Lucilia facelioides* Sch.Bip. (1865, p. 532) as a *nomen nudum*. Since that time, the name has been forgotten and its taxon cannot be assigned to any species thus far described in *Mniodes*.

With this addition, *Mniodes* consists of 19 species confined to high-elevation habitats of the Andean Cordillera from Venezuela, Colombia, Ecuador, Peru to Bolivia, Argentina, and extreme northern Chile. Most species at higher elevations tend to have more widespread distributions, but there are six Peruvian endemics and two Bolivian endemic. Peru is center of species diversity for the genus with no fewer than 14 species recorded, followed by Bolivia with eight species, Argentina with five species, Chile and Ecuador with four species each, and Colombia with three species, and Venezuela with two species. *Mniodes* sensu Cuatrecasas (1954) contained strictly dioecious species. The generic concept therefore combines *Mniodes* with *Luciliocline* Anderb. & S.E.Freire species into a strongly supported, monophyletic clade circumscribed by both morphological and molecular markers (Freire et al., 2015; Luebert et al., 2017). While some members of the currently circumscribed *Mniodes* were originally described as *Belloa* J.Remy, that genus has been restricted to three Chilean species (Dillon, 2018).

In the preparation of a monograph for *Mniodes*, we have examined a large suite of collections and explored the distribution area from northern to southern Peru and the holdings in La Paz, Bolivia (LPB) were examined. These studies confirmed that the collections from Bolivia and extreme northern Argentina represent a new species. This reflects a classification that includes morphological, biogeographic, and ecological variation to suggest this species previously classified as a single species due to the paucity of morphological differences (Dillon & Quipuscoa, 2014). We address the position of this new species within an allopatric species complex also containing *Mniodes catamarcensis* (Cabrera) S.E.Freire, Chemisquy, Anderb. & Urtubey, *M. lopezmirandae* (Cabrera) S.E.Freire, Chemisquy, Anderb. & Urtubey, and *M. montesinosii* Quip. & M.O.Dillon.

MATERIALS AND METHODS

Herbarium material was investigated from the following herbaria: COL, CUZ, F, GH, HSP, HUT, K, LPB, NY, P, and US. Dried herbarium material was used after rehydration for measurements and descriptions of achene surface structures. Herbarium acronyms follow Thiers (2023).

TAXONOMY

Mniodes mandonii Quip. & M.O.Dillon, *sp. nov.* (Figs. 1, 2).

TYPE: BOLIVIA. Larecaja: vicinias Sorata, indeclivibus collis Ulloutiji, 2700 m, April 1861, *G. Mandon 178* (holotype: K [K000500438]; isotypes: NY[NY00214766], P [P02533731], P [P02533732], P [P02533735], P [P02533736], P [P02533737]).

Lucilia facelioides Sch.Bip., Linnaea 34: 532. 1866, *nom. nud.* Listed as *G. Mandon 178*.

Gnaphalium americanum Mill. var. *discolor* Griseb., Abhandl. Königl. Gessels. Wiessens, Göttingen, 24: 185. 1879. TYPE: ARGENTINA. Salta: Cladera, alrededores de Los Portreros, al pie del Nevado del Castillo [Gral. Güemes], [26°03'S, 64°37'W], 24 March 1873, P. G. Lorentz & G. Hieronymus 150 (Lectotype, here designated: CORD00006461; Isolectotype, GOET001082).

DIAGNOSIS

Mniodes mandonii resembles *M. lopezmirandae*, distributed 1400 kms to the north, with shorter, wider lanceolate to elliptic leaves, to 2.5-5 mm wide; however, *M. lopezmirandae* has involucres ca. 7.5 mm tall, ca. 1 mm wide, and pappus bristles to 7.5 mm long. To a lesser extent, it resembles *M. catamarcensis*, its nearest geographic neighbor to the south, but the former species has more narrow, linear leaves, 1-2.5 mm wide and smaller involucres to 6 mm tall, ca. 1.5 mm wide, and pappus bristles ca. 5 mm long.

DESCRIPTION

Perennial *herbs*, the stems 15–20 cm tall, basally-branched, ascending, leafy to the apices. Basal leaves oblanceolate, ca. 30 mm long, 5 mm wide, caducous; cauline leaves alternate to subopposite, internodes 5–10 mm, the blades lanceolate, 14–38 mm long, 2.5–5 mm wide, discolorous, apically acute, basally attenuate, the margins entire, adaxial surfaces lanuginous, abaxial surfaces lanate-tomentose. *Capitulescences* pseudo-racemose spikes with groups of 2–3 axillary heads along the length of the leafy stems. *Capitula* discoid, heterogamous, sessile; involucres cylindrical, 6–8 mm, ca. 2 mm wide; phyllaries multiseriate, imbricate, subequal, scarious, stramineous, phyllaries 12–15, multiseriate, subequal, scarious, the outer ovate, 3–4 mm long, ca. 1.5 mm wide, the inner linear-lanceolate, ca. 6 mm long, ca. 0.5 mm wide, the apices cream; pistillate florets ca. 27, the corollas, the tube capillary, 2-3-lobed, 4.5–5 mm long, 0.1–0.15 mm wide; styles 4–4.5 mm long, the branches 0.5–0.6 mm long, attenuate; hermaphroditic florets ca. 3, the tube dilated distally, 4-lobed, ca. 6 mm long; styles ca. 5 mm long, the branches to ca. 1 mm long, attenuate. *Achenes* (pistillate) oblong, 0.8–1 mm long, ca. 0.3 mm wide, densely pubescent with capitate-glandular trichomes, (hermaphroditic) oblong, 0.8–1 mm long, ca. 0.3 mm wide, sterile, densely pubescent with capitate-glandular trichomes; pappus ca. 5 mm long.

Distribution and ecology (Fig. 3): *Mniodes mandonii* is a species distributed from localities from northern to southern Bolivia and adjacent northwestern Argentina. It is found in pre-puna grasslands and habitats at the edges of forests, 2200–3000 (–3400) m.

Etymology: The specific epithet commemorates Gilbert Gustave Mandon (15 May 1799 – 31 December 1866), a French mining engineer and botanist who collected nearly 2,000

Bolivian plant specimens. Many of Mandon's collections have proven to be new species and he has been commemorated with no fewer than 200 species epithets from a wide variety of families (Mandon, 1865).

In 1958, Angel Cabrera published a synopsis for *Belloa* where he treated eleven species, transferring taxa from *Lucilia*, *Gnaphalium*, *Merope*, and describing two new species, *Belloa catamarcensis* and *B. lopezmirandae*. Twenty years later, Cabrera (1978) treated the species from extreme northern Argentina under the epithet *B. lopezmirandae*; including collections from Jujuy and Salta but made no mention of Bolivian material. In 1994, a collection from Bolivia, *Solomon* 7231 (US-3063922), was determined by MOD as "aff. *Belloa catamarcensis* (wide-leaved form)" suggesting that it was putatively related to the species from Argentina that possess narrower leaves. When MOD examined *Mandon* 178 in 1998, the specimen at Kew Gardens (Fig. 1) was annotated as "*Belloa catamarcensis* (vel *affinis*)", i.e., potentially a new and undescribed species that has an affinity, but not identical to *Mniodes* (*Belloa*) *catamarcensis*.

Freire (1986) followed Cabrera (1978) and placed *Gnaphalium americanum* Mill. var. *discolor* Griseb. (Grisebach, 1879) under the synonymy of *Luciliocline lopezmirandae* rather than the geographically closer *Mniodes catamarcensis*. One leafy stem on the GOET-001082 sheet of *P. G. Lorentz* & *G. Hieronymus* 149 possesses two stems, one with linear leaves (left) and the other (right) with broader, elliptic-lanceolate leaf blades. Differences in the size of capitula and floral parts, including pappus and achene, serve to separate *M. lopezmirandae* from Bolivian or Argentine collections (Table 1). *Mniodes mandonii* has long stems and narrowly cylindrical capitula in leafy pseudo-spicate capitulescences. Our hypotheses of relationships will ultimately be tested with modern molecular methods, and until then, we adopt a species concept that follows the basic tenants of the biological species concept (de Queiroz, 2007).

Additional Specimens Examined: ARGENTINA. Jujuy: Dept. Tumbaya, Volcán, Chilcayo, 2200 m, 4-6 March 1965, A. L. Cabrera, O. T. Solbrig, M. A. Torres & B. Vuillemier 16909 (GH); Tumbaya, Volcán, 2700 m, Feb 1929, S. Venturi 9291 (GH). Salta: Cladera, alrededores de Los Porteros, al pie del Nevado del Castillo, 24 March 1873, P. G. Lorentz & G. Hieronymus 149 (CORD, GOET-001082 p.p.). BOLIVIA. Chuquisaca: Sucre, 2800 m, 17 April 1994, J. R. I. Wood 8315 (K); Cerro Chataquila near Punilla, Sucre-Ravelo, 3300 m, 9 April 1995, J. R. I. Wood 9662 (K, 2 sheets). La Paz: Prov. Murillo, La Paz a Calacoto, 18 Km hacia Collana, S. G. Beck 13803 (LPB); NW of the city of La Paz, 16°27'48"S, 68°08'44"W, 4000 m, A. F. Fuentes Claros & F. Velarde 21577 (LPB); ca. 1 km NW of Ovejuyo, 3700-3800 m, 16°32'W, 68°03'W, 21 March 1982, J. C. Solomon 7231 (US-3248560); Alto Irpavi, 10 March 1986, 16°32'S, 68°05'W, J. C. Solomon 15097 (US-3063922). Prov. Larecaja, Sorata, G. Mandon 178 (types: K, NY, P). Sucre: Prov. Zudañez, pasando el poblado de Icla, Th. Borsch, T. Ortuño, & R. P. López 3763 (K).

ALLOPATRIC SPECIES COMPLEX

While the internal classification of *Mniodes* has yet to be examined using modern molecular techniques, a synoptic review of *Mniodes* species recorded from throughout its range will allow for hypothesis building to be tested. *Mniodes*

displays a range of habits; however, the great majority are open to dense cushions, often rosulate, and capitulescences of terminal glomerules or pseudospicate. Of the 19 species currently recognized in *Mniodes*, five were originally described by G. Weddell (1855). Amongst these are four dioecious species and mark the original members of *Mniodes* as circumscribed by Cuatrecasas (1954): *Mniodes andina* (A.Gray) Cuatrec., *M. aretioides* (Wedd.) Cuatrec., *M. coarctata* Cuatrec., and *M. pulvinulata* Cuatrec. The remainder of the cushionform species are monocious, including *M. argentea* (Wedd.) M.O.Dillon, *M. beckii* Quip. & M.O.Dillon, *M. caespititia* (Wedd.) Quip. & M.O.Dillon, *M. longifolia* (Cuatrec. & Aristeg.) S.E.Freire, Chemisquy, Anderb. & Urtubey, *M. piptolepis* (Wedd.) S.E.Freire, Chemisquy, Anderb. & Urtubey, *M. radians* (Benth.) S.E.Freire, Chemisquy, Anderb. & Urtubey, *M. santanica* (Cabrera) S.E.Freire, Chemisquy, Anderb. & Urtubey, *M. spathulifolia* (Sagást. & M.O.Dillon) M.O.Dillon, *M. turneri* (Sagást. & M.O.Dillon) M.O.Dillon, and *M. zapatae* Quip. & M.O.Dillon. *Mniodes subspicata* (Wedd.) S.E.Freire, Chemisquy, Anderb. & Urtubey, is not included in the discussion of the allopatric complex, given that it is fundamentally different in both morphology and ecological preferences. *Mniodes subspicata* are prostrate, cespitose-pulvinulate, perennial herbs forming loose cushions with pseudospicate terminal capitulescences with axillary capitula subtended by the upper leaves.

Only five species of *Mniodes* elaborate erect leafy stems with capitula in leaf axils and includes *M. plicatifolia* (Sagást. & M.O.Dillon) S.E.Freire, Chemisquy, Anderb. & Urtubey, *M. lopezmirandae*, *M. montesinosii*, *M. mandonii*, and *M. catamarcensis* and occupying environments at 2600-3600 m. Of these, *Mniodes plicatifolia* is withdrawn from the discussion here due to its morphologically distinct habit with erect lanate branches with folded, distichous leaves with orbicular to suborbicular blades, marcescent, folded, both surfaces densely lanate and flattened stems. The capitula are borne singly in the upper leaf axils.

The remaining species, *M. lopezmirandae*, *M. montesinosii*, *M. mandonii*, and *M. catamarcensis* all occur in humid environments at elevations below its congeners. These are arrayed from north to south reflecting their distributions and here considered an allopatric species complex. This complex reflects geographic speciation or vicariant speciation where populations are geographically isolated preventing gene flow.

The nomenclature for each of these species, a discussion of distributions, and specimens examined are provided along with an array of morphological characters for each of these taxa in Table 1.

1. *Mniodes lopezmirandae* (Cabrera) S.E.Freire, Chemisquy, Anderb. & Urtubey, Pl. Syst. Evol. 301: 1246. 2014. *Belloa lopezmirandae* Cabrera, Bol. Soc. Argent. Bot. 7: 83. 1958. Type. PERU. La Libertad: Otuzco, Agallpampa, 3100 m, 22 May 1952, A. López M. 858 (holotype: LP561100, img000030; isotypes: HUT, US 2059276, img00170077). *Belloa lopezmirandae*, Bol. Soc. Argent. Bot. 7(2): 83. 1958. *Lucilia lopezmirandae* (Cabrera) S.E.Freire, Darwiniana, 28: 409. 1987. *Luciliocline lopezmirandae* (Cabrera) Anderb. & S.E.Freire, Bot. J. Soc. 106: 188. 1991.

Mniodes lopezmirandae is the most northern extension of the complex; geographically and ecologically distinct

with a distribution ca. 1400 kms distant from Bolivia. It has been recorded from only two populations from the western versant of the Andean Cordillera at 3300 m. A recent visit to the recorded localities for *M. lopezmirandae* in Dept. La Libertad finds them to be highly disturbed due to agriculture expansion. Efforts to find this species continue, but for present, it can be considered extirpated or locally extinct. Lacking suitable phylogenetic data, we can only conjecture as to what forces have led to this vicariant pattern, but the contact between northern Peruvian western versant species and eastern versant Bolivian species is rare. No intervening populations have been encountered.

This species most closely resembles *M. montesinosii* distinctive among Peruvian species with erect habit, its cylindrical involucre in glomerulate capitulescences. Cabrera (1978) placed collections from Provinces of Jujuy and Salta under *M. lopezmirandae*; these collections are here classified as *M. mandonii*, and members of an allopatric complex that includes *M. mandonii* and *M. montesinosii*.

Due to an exaggerated interpretation of what is *Mniodes lopezmirandae*, the Kew, *Plants of the World* website has a distribution map for *M. lopezmirandae*, extending from Ecuador, through Peru, Bolivia, to southwestern Argentina. (<https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:77147044-1>). With the revised classification presented here, this map should be corrected to reflect the reality of biological species distributions.

Freire (1987) placed *Luciliocline turneri* (Sagást. & M.O.Dillon) M.O.Dillon & Sagást. as a synonym of *L. lopezmirandae*, choosing to dismiss the numerous qualitative and quantitative characteristics that clearly separate these two entities.

Additional Specimens Examined - Peru. CAJAMARCA: Prov. Contumaza, Totorillas-Marín, 1 May 1982, 3300 m, A. Sagástegui A., E. Alvitez, S. López & J. Mostacero L. 10358 (F frag., HUT-17238). LA LIBERTAD: Prov. Otuzco, Agallpampa, [7.9821°S, 78.5470°W], A. López M. 1864 (F-1746409, HUT).

2) *Mniodes montesinosii* Quip. & M.O.Dillon, Arnelaldea 27(2): 380. 2020.

TYPE. PERU. Dept. Moquegua: Prov. General Sánchez Cerro, Dist. Lloque; Qellan, Lucco, Matorral arbustivo, xerófilo, 16°16'36"S, 70°44'58"W, 3600 m, 25 Mar 2013, D. Montesinos T. 4036 (holotype: HSP-003730).

Mniodes montesinosii is endemic to southern Peruvian Andean Cordillera, specifically on the western versant in Dept. Moquegua at 3600 m and over 1200 kms disjunct from *M. lopezmirandae* and ca. 250 kms from the nearest *M. mandonii* populations (Quipuscoa and Dillon, 2020). It is comparable to *M. lopezmirandae* but has longer, narrower leaves, not strongly discoloured; 3-5 hermaphroditic florets (vs 1-2 in *M. lopezmirandae*); 7-14 pistillate flores (vs 17-20 in *M. lopezmirandae*).

Additional Specimens Examined - Peru. Dept. Moquegua: Prov. General Sánchez Cerro, Dist. Ichuña, Tolapampa, 16°09'50"S, 70°27'10"W, D. Montesinos T. 3824 (HSP-001275).

3) *Mniodes mandonii* Quip. & M.O.Dillon (see above for nomenclature and specimen citation).

Mniodes mandonii resembles *M. lopezmirandae*, distributed 1400 kms to the north, with shorter, wider lanceolate to elliptic leaves, to 2.5-5 mm wide; however, *M. lopezmirandae*

has involucre ca. 7.5 mm tall, ca. 1 mm wide, and pappus bristles to 7.5 mm long. To a lesser extent, it resembles *M. catamarcensis*, its nearest geographic neighbor to the south, but the former species has more narrow, linear leaves, 1-2.5 mm wide and smaller involucre to 6 mm tall, ca. 1.5 mm wide, and pappus bristles ca. 5 mm long.

4) *Mniodes catamarcensis* (Cabrera) S.E.Freire, Chemisquy, Anderb. & Urtubey, Pl. Syst. Evol. 301: 1245. 2014. *Belloa catamarcensis* Cabrera, Bol. Soc. Argent. Bot. 7(2): 81. 1958. Type. ARGENTINA. Catamarca, Andalgalá, El Cándido, 2 Mar 1917, P. Jörgensen 1878 (holotype: LP65568, n.v.; isotypes: GH, LP66647, n.v., SI000832, n.v., US-922120). *Lucilia catamarcensis* (Cabrera) S.E.Freire, Darwiniana 27(1-4): 465. 1986. *Luciliocline catamarcensis* (Cabrera) Anderb. & S.E.Freire, Bot. J. Soc. 106: 188. 1991.

Mniodes catamarcensis was described by Cabrera (1958) as a *Belloa* from Catamarca and Salta, Argentina. The isotypes from GH and US (US-922120) were examined and diagnosed by narrow, linear leaves. Subsequently, collections from further north have been recorded with records from Jujuy, Argentina (e.g., S. Venturi 9291, GH) to southern Bolivia, Dept. Tarija (e.g., M. Mendoza 1452, K). The interface with the distribution of *M. mandonii* is not well understood at present. The most distinguishing character used by Cabrera to diagnose *M. catamarcensis* was its narrower leaves and more southern distribution (Cabrera, 1958). For that reason, further investigations are necessary to understand current geographic distributions. The hypothesis presented here will be tested using modern molecular techniques as opportunities present themselves.

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CONTRIBUTION OF THE AUTHORS

V.Q.S.: Fieldwork, taxonomic determination of the species, review and approval of the final text. M.O.D.: Fieldwork, construction and redaction of the text, evaluation methodology.

CONFLICTS OF INTEREST

The authors declare not to have conflicts of interest.

Table 1. Comparative morphological characteristics for the *Mniodes* allopatric species complex.

Characters / Species	<i>M. lopezmirandae</i>	<i>M. montesinosii</i>	<i>M. mandonii</i>	<i>M. catamarcensis</i>
Habit	decumbent	ascending	ascending to erect	erect
Stem length	15-30 cm	10-13 cm	15-20 cm	15-20 cm
Internodes	1-5 mm	5-10 mm	5-10 mm	2-8 mm
Leaf shape	elliptic	linear	lanceolate	linear
Leaf width x length	ca. 3 mm x 15-30 mm	ca. 2 mm x 17-18 mm	2.5-5 mm x 14-38 mm	1-2.5 mm wide, 20-35 mm long
Capitulescences	pseudo-spicate	pseudo-spicate	pseudo-racemose	pseudo-racemose
Involucre width x length	ca. 1 mm wide x ca. 7.5 mm long	ca. 2 mm wide x 6-7 mm	ca. 2 mm wide x 6-8 mm long	a. 1.5 mm wide x ca. 6 mm long
Phyllaries #	12-15	12-15	12-15	12-15
Pistillate florets	ca. 20	7-14	ca. 27	ca. 18
Hermaphroditic florets	ca. 1	3-5	ca. 3	ca. 2
Achenes (pistillate)	ca. 1 mm	1-1.4 mm	0.8-1 mm	0.6-0.8 mm
Trichomes	capitate-glandular	capitate-glandular	capitate-glandular	capitate-glandular
Geographic distribution	N. Peru	S. Peru	Bolivia & adj. Argentina	NW. Argentina

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Fig. 1. *Mniodes mandonii*. Holotype of Mandon 178 (K000500438).

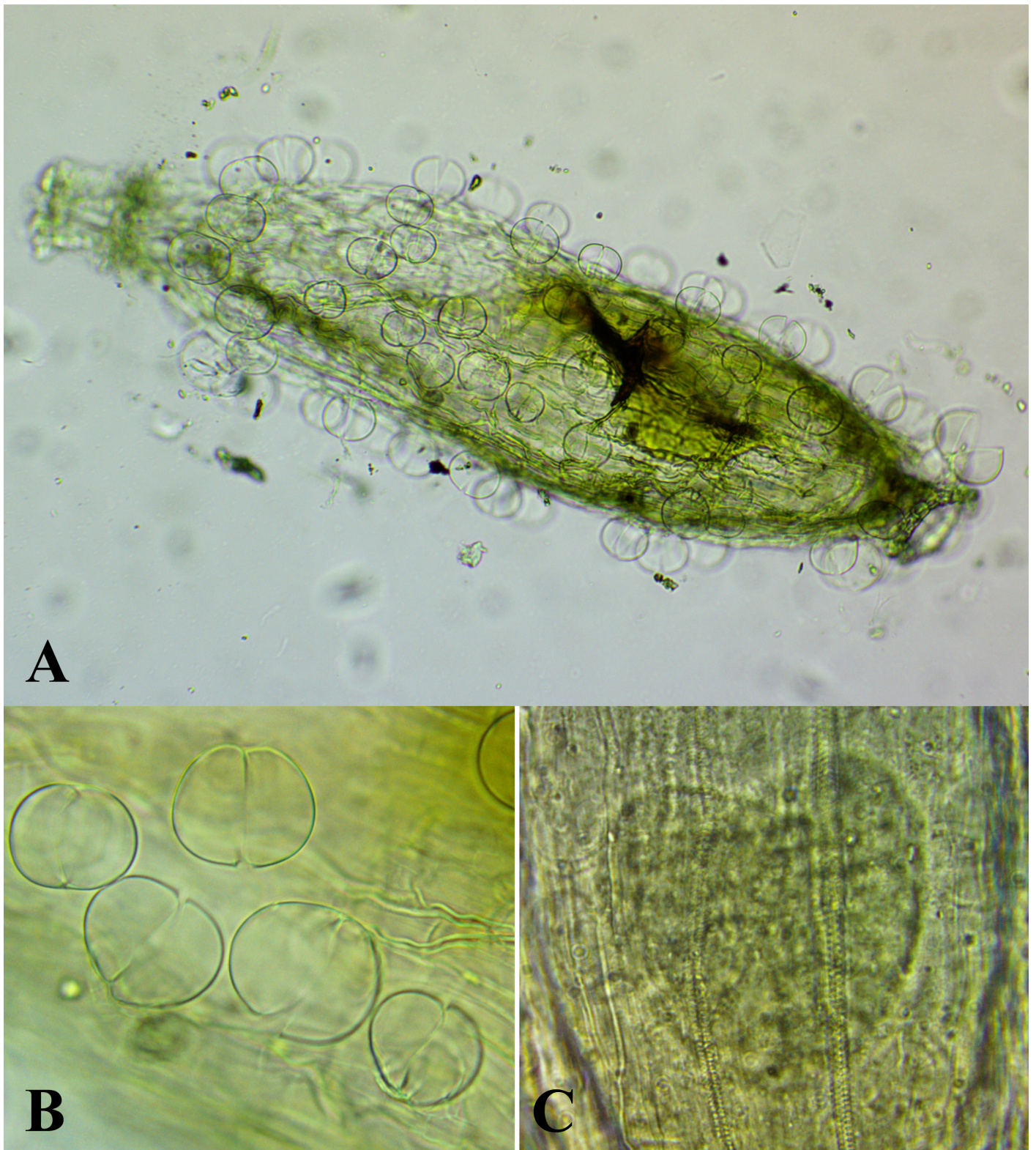


Fig. 2. *Mniodes mandonii*. A. Achene, B. Bicellular glandular trichomes, C. Embryo. Source: A. F. Fuentes Claros & F. Velarde 21577 (LPB).

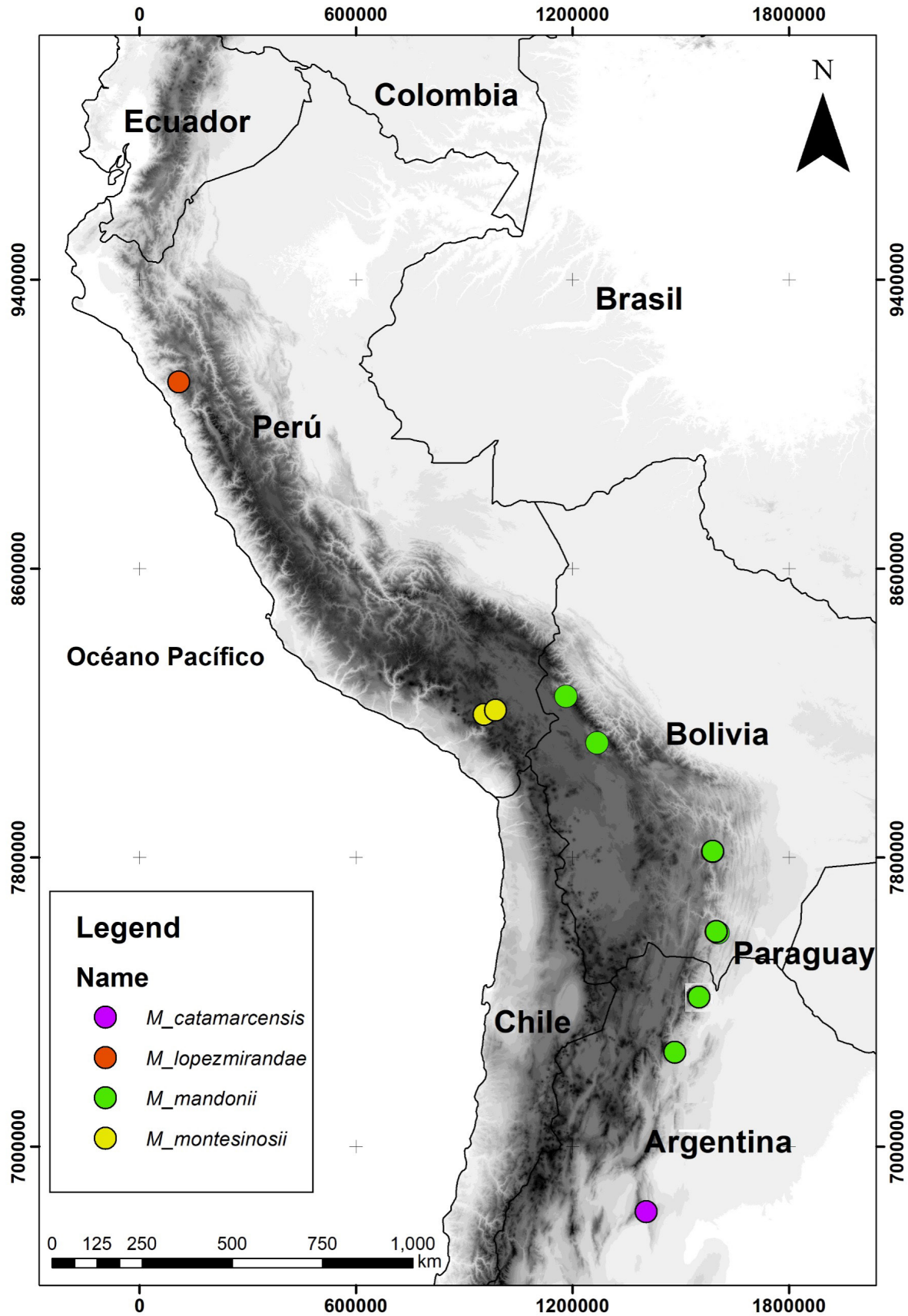


Fig. 3. Distribution of *Mniodes* species in the allopatric species complex.



Fig. 4. *Mniodes catamarcensis*, isotype collection P. Jörgensen 1878 (US-922120).



Fig. 5. *Mniodes lopezmirandae*, non-type collection, Sagástegui et al. 10358 (HUT-17238).