
A Distinctive New Species of *Ovidia* (Thymelaeaceae) from Bolivia

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ABSTRACT. A new species from central Andean Bolivia, *Ovidia sericea* Antezana & Z. S. Rogers (Thymelaeaceae, Thymelaeoideae), is described and illustrated. This distinctive species differs from the other South American species in the genus, *O. andina* (Poeppig & Endlicher) Meisner and *O. pillopolillo* (Gay) Meisner, by a number of vegetative and floral features, the most obvious being the dense sericeous indument on both surfaces of the leaf blades and the abaxial surface of the hypanthia. The description of *O. sericea* substantially extends the range of *Ovidia* Meisner, which was formerly thought to be endemic to central Chile and the adjacent Andean slopes of Argentina. A key to the species of *Ovidia* as circumscribed by Nevling is also provided.

RESUMEN. Se presenta la descripción e ilustración de una nueva especie de los Andes centrales de Bolivia, *Ovidia sericea* Antezana & Z. S. Rogers (Thymelaeaceae: Thymelaeoideae). Esta especie se diferencia de las otras dos especies *O. andina* (Poeppig & Endlicher) Meisner and *O. pillopolillo* (Gay) Meisner, por varias características vegetativas y florales, entre estas la más obvia es el indumento seríceo en ambas caras de las hojas y en cara abaxial del hipantio. Con la descripción de *O. sericea* se extiende ampliamente la distribución de *Ovidia* Meisner, la cual se pensaba que era endémica de Chile central y la región adyacente en los andes argentinos. Se presenta también una clave de las especies de *Ovidia*, en el sentido del género como lo definió Nevling.

Key words: Bolivia, Daphneae, *Ovidia*, Thymelaeaceae, Thymelaeoideae.

Meissner (1857) based the genus *Ovidia* on four species, two of which were transferred from *Daphne* L. (*D. andina* Poeppig & Endlicher and *D. pillopolillo* Gay), while the other two were new species (*O. parviflora* Meisner and *O. humboldtii* Meisner [= *Daphne anomala* Kunth]). Later, Gilg (1894) transferred *Daphne anomala* to *Ovidia* in his revision of the Thymelaeaceae, but Domke (1934) disagreed with the addition and subsequently transferred the species to *Daphnopsis* Martius.

In a generic revision of *Ovidia*, Nevling (1964) accepted two species, *O. andina* and *O. pillopolillo*, and reduced the other names to synonymy. Some authors (Hernández, 1964, 1988; Zuloaga & Morrone, 1999) have not considered *O. andina* and *O. pillopolillo* to be distinct species, but others (Schick, 1980; Hoffmann, 1994) have recognized both species. Regardless of the disagreement, both taxa can be distinguished by a few morphological differences and their non-overlapping geographic distributions.

The persistent leaves of *Ovidia andina* are crowded near branch tips and the blades are covered with a sparse uniform strigose indument; the leaves of *Ovidia pillopolillo* are spaced evenly along stems and the blades are glabrous or strigose apically. In *Ovidia andina* the inflorescences are not subtended by leaves and are borne on 6–21 mm long peduncles, whereas the inflorescences of *Ovidia pillopolillo* are subtended by 2 to 5 leaves and

are borne on 1–7 mm long peduncles. *Ovidia andina* occurs from 700 to 2300 m elevation in central Chile and along the adjacent Andean slopes of Argentina; *O. pillopollo* is confined to central Chile from 50 to 700 m elevation (Nevling, 1964).

The description of *Ovidia sericea* Antezana & Z. S. Rogers, a species collected for the first time in 1957 and apparently endemic to central Andean Bolivia, marks the first occurrence of the genus outside of Chile and Argentina, effectively extending the distribution of the genus by perhaps as much as 2000 km to the north of known populations of *O. andina* and *O. pillopollo*.

The new species has a distinctive morphology, with the most obvious character being the dense sericeous indument on both leaf surfaces. All other species of Thymelaeaceae occurring in the Americas do not have persistent indument on the adaxial surface of the leaf. Furthermore, the indument on the abaxial leaf surface of most species of Thymelaeaceae is rarely persistent. In the Old World, some species with leaves that remain adaxially adpressed to the stems often have a dense sericeous indument on the adaxial leaf surface (e.g., *Thymelaea hirsuta* (L.) Endlicher [= *Passerina hirsuta* L.], Mediterranean Region), while others without adpressed leaves rarely have a dense persistent indument on both the adaxial and abaxial leaf surfaces (cf. *Gnidia anomala* Meisner, Africa).

Full exsiccatae citation and images of type material of *Ovidia sericea* are available through the Missouri Botanical Garden's TROPICOS website at the following address: (<http://mobot.mobot.org/W3T/Search/vast.html/>).

KEY TO THE SPECIES OF *OVIDIA* IN SOUTH AMERICA

- 1a. Leaf surfaces densely sericeous on both sides; venation inconspicuous; hypanthia cylindrical, 8–12 mm long, strigose adaxially, densely sericeous abaxially; plants of Bolivia *O. sericea*
- 1b. Leaf surfaces glabrescent, or sparsely strigose abaxially; venation conspicuous; hypanthia urceolate-campanulate, 2–5 mm long, glabrous adaxially, glabrous or strigose abaxially; plants of Chile and Argentina.
 - 2a. Persistent leaves crowded near branch tips; abaxial leaf surfaces covered with a sparse uniform strigose indument; inflorescences not subtended by leaves; peduncles 6–21 mm long; 700–2300 m elevation; plants of Chile and Argentina *O. andina*
 - 2b. Persistent leaves evenly distributed along stems; abaxial leaf surfaces glabrous, or strigose only at apex; inflorescences subtended by 2 to 5 leaves; peduncles 1–7 mm long; 50–700 m elevation; plants of Chile
. *O. pillopollo*

Ovidia sericea Antezana & Z. S. Rogers, sp. nov.

TYPE: Bolivia. Chuquisaca: Oropeza, Cerro Chataquila, by track along ridge heading N from El Santuario, 3730 m, 18°58'S, 65°24'W, 7 Oct. 2003 (fl), J. R. I. Wood, A. Carretero & J. Gutierrez 19716 (holotype, MO; isotypes, BOLV, HSB, K, LPB, MO, NY, USZ). Figure 1.

In inflorescentia umbelliforme *Ovidia andinam* et *O. pillopollo* simulans, sed in plantis indumento dense sericeo praeditis, foliis subverticillatis (haud dissitis qua in speciebus aliis) laminis venatione haud conspicua (conspicua), et hypanthiis cylindricis 8–12 mm longis (2–5 mm longis) intus strigosis (haud glabris), differt.

Multi-stemmed evergreen gynodioecious shrubs, 1–5 m tall, branching pseudo-dichotomous, bark dark gray externally, leaf scars semicircular, bark light yellow internally, young stems densely sericeous. Leaves spirally arranged, subverticillate, sessile or subsessile, with articulated petioles, caducous on older stems; blades obovate to elliptic, 1.1–4.5 × 0.4–1.1 cm, length/width ratio 1.6–4.1:1, gray-green, caducous, covered with dense sericeous indument on both surfaces, trichomes sometimes shorter and less dense on adaxial surface, trichomes 0.7–1.6 mm long, unicellular, unbranched, silver; midrib nearly inconspicuous adaxially, slightly raised and conspicuous abaxially, venation inconspicuous on both surfaces, apex acute or apiculate, margin slightly revolute, base cuneate or decurrent. Inflorescences terminal, sometimes false axillary, umbellate, 9 to 17 flowers per inflorescence; peduncles 8–20 mm long, densely sericeous; inflorescence bract 1, borne on inflorescence axis just below flowers, identical to the leaves but caducous, 4.5–16 × 1.8–3.3 mm. Flowers bisexual or pistillate (with 8 inconspicuous staminodes), 4-merous; pedicels 2–8 mm long, densely sericeous; hypanthia cylindrical, 8–12 × 1.5–2.5 mm, covered with dense sericeous indument abaxially, denser near base, moderately strigose and yellow adaxially, articulation absent; calyx lobes 4, spreading, one pair slightly longer, ovate, 2–4 × 1–2 mm, sparsely sericeous adaxially, densely sericeous abaxially, apex acuminate; petals reduced to 8 fleshy scales, scales alternisepalous, adnate just below tube opening, rectangular, 0.4–1.1 × 0.6–1.1 mm, bifid, notched or nearly divided to base, apex rounded, densely to moderately sericeous; stamens 8, diplostemonous, introrse, filaments fused to the inner wall of tube, upper whorl at height of scales, adnate just below mouth, lower whorl adnate 0.5–1 mm below mouth, anthers oblong to slightly obcordate, 0.7–1.3 × 0.4–0.8 mm, ± basifixed, subsessile; extragynoecial disk absent or inconspicuous, composed of ca. 8 thin membra-

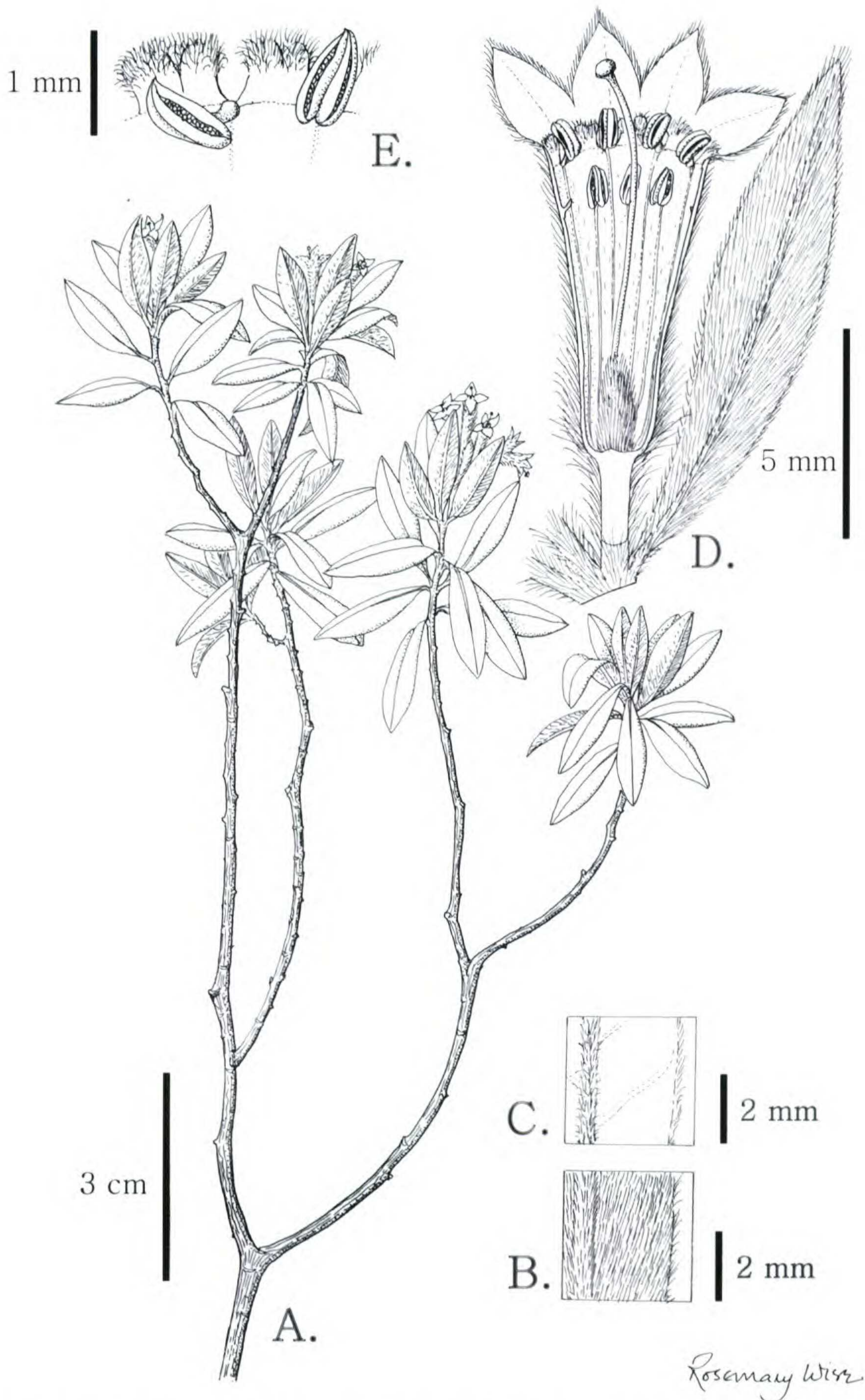


Figure 1. *Ovidia sericea* Antezana & Z. S. Rogers. —A. Habit. —B. Abaxial leaf surface. —C. Abaxial leaf surface (trichomes removed from blade surface). —D. Flower, longitudinal section, with a single foliaceous inflorescence bract subtending the flowering portion of the peduncle. —E. Detail of hypanthium scales and anthers. All parts drawn from *J. R. I. Wood* 9047 (K).

nous segments, segments rectangular, 0.1–0.2 × 0.3–0.4 mm, glabrous; gynoecium sessile or subsessile, ovary superior, unilocular, ovoid to oblong, 1.5–5.0 × 0.9–2.5 mm, sericeous, trichomes longer near apex, with 2 conspicuous longitudinal sutures, one suture continuous with the style, style lateral, filiform, 4.1–11 mm long, glabrous, stigma capitate, exerted. Fruits not seen.

Distribution and phenology. *Ovidia sericea* grows in central Andean Bolivia in the Chuquisaca, Cochabamba, and Potosí departments from 2900 to 3730 m elevation. It is locally abundant on exposed, scrubby ridges and hill slopes, where it sometimes forms open communities, although it more frequently occurs sporadically. It is apparently restricted to sandstone outcrops in areas of transition to “puno” type vegetation. *Ovidia sericea* is usually not accompanied by other shrubs or trees, although various cacti, such as *Sulcorebutia steinbachii* (Werdermann) Backeberg and *Lobivia pentlandii* (Hooker) Britton & Rose, or other ground flora, such as *Puya* spp. or *Plazia daphnoides* Weddell, may be associated. *Ovidia sericea* is unusual among woody plants from the drier central regions of Bolivia in being evergreen. It flowers principally from August to December, but individuals can be found flowering sporadically at any season.

Local names reported for *Ovidia sericea* include *Roble* (Chataquilla area), *Sila Sila* (Ravelo area), and *Toma* (Toro-Toro area). As is the case with many other Thymelaeaceae, the species is reputed to be poisonous and is shunned by grazing animals.

Ovidia sericea most obviously differs from *O. andina* and *O. pillopollo* by its dense sericeous indument covering its leaves and other vegetative parts. There is, however, some variation in the density of the leaf indument in some populations; in the majority of collections, the indument on the adaxial leaf surface is less persistent, which allows the green color of the leaf and midrib to show through, whereas in other collections (*O. Murgia 151*, *J. R. I. Wood 7623*, *J. R. I. Wood & M. Serrano 14393*, *ZONISIG 355*) the indument is so dense and persistent that both leaf surfaces are grayish green, and the venation and blade surface are inconspicuous.

This new species also differs from the two other species of *Ovidia* by its longer, cylindrical hypanthia (8–12 mm long) that are covered with a dense sericeous indument abaxially and strigose indument adaxially, by its shorter stem internodes, and by its foliaceous bract that is adnate to the peduncle just below the flowers. In contrast, *Ovidia andina* and *O. pillopollo* are glabrous or have a sparse-

ly strigose indument on the abaxial surface of their leaves, urceolate-campanulate hypanthia (2–5 mm long) that are glabrescent or sparsely strigose abaxially and glabrous adaxially, and longer stem internodes than those found in *O. sericea*.

Meissner (1857) described the inflorescences of *Ovidia* as ebracteate, and Nevling (1964) did not mention bracts throughout his revision. In fact, we have been unable to find any mention of inflorescence bracts in *Ovidia* in the literature, nor have we seen any bracts on the specimens of *O. andina* or *O. pillopollo* that we have examined. Based on the primary author's observations, *Ovidia andina* lacks bracts on the inflorescence axis altogether, *O. pillopollo* has 2 to 5 leaves adnate just below the inflorescence axis that subtend very short peduncles. In *O. sericea*, however, a distinct leafy bract is present on the peduncle immediately below flowers.

A curious feature of *Ovidia sericea* in all 22 collections enumerated below is the absence of mature fruit. It is not known under what conditions fruit is successfully produced, but no seedlings or young plants have been observed in the field.

Paratypes. BOLIVIA. **Chuquisaca:** Oropeza, ca. 30 km toward Ravelo, zona de Cajamarca, *S. Beck 8830* (BAB, LPB); Chataquilla, *O. Muñoz 151* (HSB), *O. Murgia 151* (LPB), *O. Murgia 381* (LPB); Oropeza, Chataquilla betw. Punilla and Chaunaca, *J. R. I. Wood 7623* (K, LPB); Oropeza, Cerro Obispo, betw. Sucre and Quila Quila, *J. R. I. Wood & M. Serrano 14393* (K, LPB, MO). **Chuquisaca/Potosí:** Oropeza/Chayanta, Milluni, *G. Muehlbauer 35* (BAB, LPB). **Cochabamba:** Mizque, camino de Rakaypampa hacia Lagunas, *E. Saravia & A. Lopez 858* (BOLV); Desvio de Kuri Khasa a Molinero, *C. Antezana 958* (BOLV); Camino hacia Lagunas, ladera de exposición O, *C. Antezana 704* (BOLV). **Potosí:** Charcas, Toro-Toro a 4 hrs. de caminata del pueblo hacia el W, *G. Torrico & C. Peca 525* (BAB, BOLV, LPB); 12.5 km SE of Toro-Toro, *Proyecto ZONISIG 355* (LPB); Toro-Toro, quebrada Mula Wacana en el Cerro Manka Paki, *J. R. I. Wood, M. Atahuachi & M. Mercado 19249* (BOLV, K, LPB); Chayanta, Ravelo, *Cañigueral 912* (LPB); Safiri, camino Sucre–Ravelo, *G. Muehlbauer s.n.* (LPB); 12 km from Ravelo towards Oruro, *S. Beck & M. Liberman 9340* (BAB, LPB); 7 km from Ravelo on road from Sucre, *S. Beck 21181* (BAB, LPB); 5 km W of Ravelo, *M. Kessler 3272* (GOET, LPB); 96 km S of Moroto, *Proyecto ZONISIG 366* (LPB); 1–2 km E of Safiri along road from Ravelo to Sucre, *J. R. I. Wood 18898* (HSB, K, LPB); Cornelio Saavedra, Chorillos near Betanzos, *R. Lopez, V. Markgraf & R. C. Paz 431* (LPB); in the valley NW of Ticoya, Betanzos area, *J. R. I. Wood 9047* (K, LPB).

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