

A NEW MEXICAN SPECIES OF *PINGUICULA*  
(LENTIBULARIACEAE)

HANS LUHRS • Krayenhoffstr. 51 • 1018 RJ Amsterdam • Holland  
MILOSLAV STUDNICKA • Botanical Gardens Liberec • Purkynova 1 • 460 01 Liberec • Czech Republic  
OLIVER GLUCH • Franz-Hartard-Str. 38 • 67376 Harthausen • Germany

Keywords: new taxa: *Pinguicula pilosa*, Mexico.

Received: 25 November 2003

Abstract

A new species of *Pinguicula* from the state of Tamaulipas, northeastern México is described and illustrated: *Pinguicula pilosa* (subgen. *Isoloba*). This new species shows affinity with *P. agnata* Casper from the section *Agnata*, and differences in both floral and foliage features are discussed.

Introduction

This new species, discovered by Alfred Lau, has been grown in cultivation and distributed under various names since approximately 1984. Because of lack of a taxonomic description and name, and confusion that may be caused in the near future, it is therefore described here as *Pinguicula pilosa*. The specific epithet refers to the hairy appearance of the flower scape and calyx.

Result and Discussion

*Pinguicula pilosa* Luhrs, Studnicka et Gluch, *spec. nov.* (Figure 1). TYPE: MEXICO. Tamaulipas: distr. Casas, Sierra de Tamaulipas, near El Cabrito, A. Lau s.n.; cultivated in the Botanical Garden of Liberec, Czech Rep., 29/Jan/1996, M. Studnicka (Holotype: TEX!).

*Herba perennis. Rhizoma simplex brevis, radicibus filiformibus adventitiis numerosis. Folia radicalia rosulata, biformia, laete viridia; rosula "hiemis" 12-18, crassa, oblanceolata vel spatulata, 10-20 mm longa, 6-12 mm lata, superne glanduloso-hirsuta dense vestita; rosula "aestatis" 8-12, late obovata vel suborbiculata, apice rotundata, basin versus late cuneatim angustata subpetiolata, margine leviter involuta, superne glandulis sessilibus et glandulis stipitatis dense vestita, 25-40 mm longa, 20-30 mm lata. Hibernacula nulla. Pedicelli 1-3 erecti, pallide purpurei, pilosi, pilis longis subulatis disperse et glanduloso-hirsutis dense obsiti, (35-)70-90 mm alti, uniflori. Flores (16-)22-25 mm longi (calcar incluso). Calyx bilabiatus, extus pilosus, pilis longis subulatis disperse et glanduloso-hirsutis dense obsitus; labium superum trilobum, lobis ovatis vel oblongis, 2.5-3.0 mm longis, 2.0-2.5 mm latis; labium inferum bilobum, lobis anguste ellipticis, 3.0-3.5 mm longis, 1.5-2.0 mm latis. Corolla subisoloba, pallide violacea (RHS violet 85C), in fauce albo-maculata, extus glandulis stipitatis modice dense vestita; lobis subaequalibus, late cuneatis vel obovato-cuneatis vel suborbiculatis, apice obtusis vel rotundatis, 8-12 mm longis, 8-12 mm latis, integris pilosis, pilis longis cylindricis subcapitatis dense vestitis. Tubus subcylindricus, viridi-flavus, basin versus leviter angustatus, 6-7 mm longus, 4 mm latus, extus glandulis stipitatis dense obsitus, intus pilosus, pilis longis cylindricis et pilis longis clavatis subcapitatis, sine palato. Calcar subcylindricum, plus minusve incurvum, obtusum, viridi-flavum, 4-5 mm longum, 1.5-2.0 mm laevum, glandulis stipitatis obsitum, cum tubo angulum obtusum ( $\pm 90^\circ$ ) formans. Stamina 1.5 mm longa. Ovarium subglobosum, glandulis stipitatis parvulis obsitum. Stigma bilabiatum, album, labio infero superiorem superanti, suborbiculato, fimbriato. Capsula subglobosa  $\pm 3$  mm diam. Semina ignota. Florescentia I-III (-IV).*

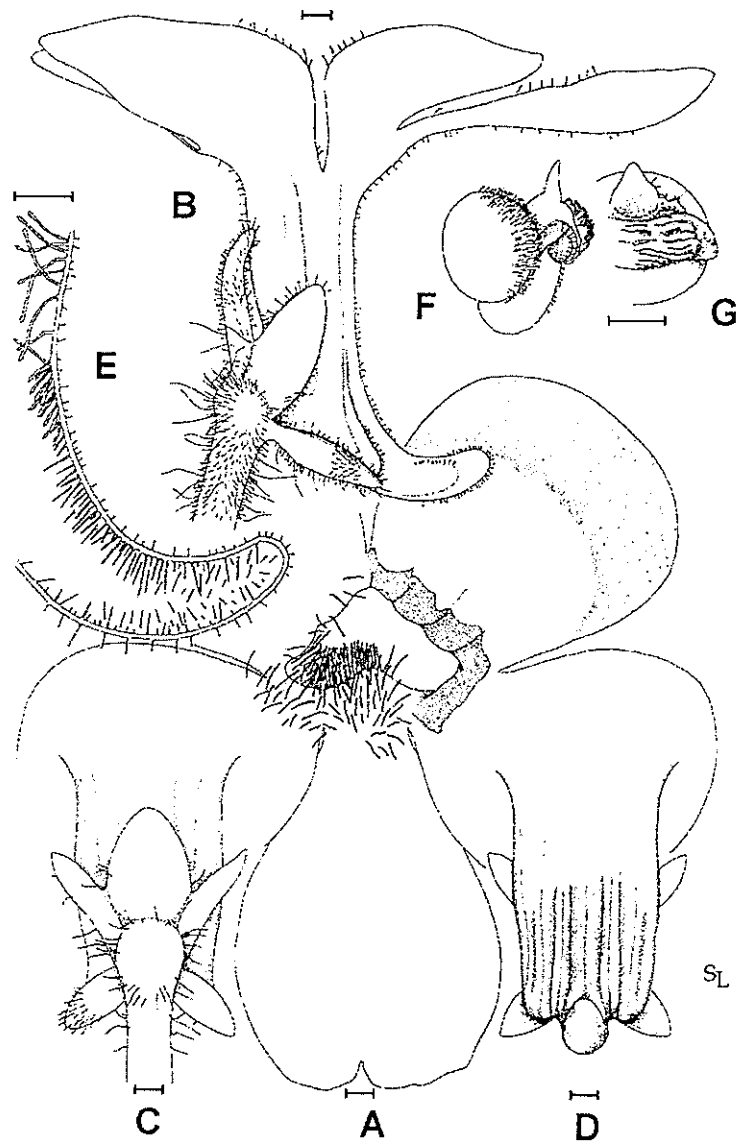


Figure 1: *Pinguicula pilosa* Luhrs, Studnicka & Gluch; A: corolla; B: flower, lateral view; C: calyx; D: corolla tube, lower side; E: corolla tube, inside view showing different hairs; F: ovary, stamen and stigma; G: stigma. Scale bars A-D 1 mm, E-G 0.1 mm. Illustration by Stan Lampard.

Perennial herb. Stem short, with numerous fibrous adventitious roots. Leaves rosulate, dimorphic, bright green; those of the winter rosette 12-18, thick, oblanceolate or spatulate, the surface covered with fairly coarse glandular hairs, 10-20 mm long, 6-12 mm wide; those of the summer rosette 8-12, broadly obovate or suborbiculate, rounded at the apex, broadly cuneate towards the base narrowing into a short petiole, the margin lightly involute, the surface covered with sessile and stalked glands, 25-40 mm long, 20-30 mm wide. Hibernaculum absent. Scapes 1-3, erect, pale purple, covered with long subulate and fine glandular hairs, (35-)70-90 mm tall, 1-flowered. Flowers (16-)22-25 mm long (including the spur). Calyx 2-lipped, covered with long subulate and fine glandular hairs; upper lip 3-lobed, the lobes ovate or oblong, 2.5-3.0 mm long,

2.0-2.5 mm wide; lower lip 2-lobed, the lobes elliptic or narrowly elliptic, 3.0-3.5 mm long, 1.5-2.0 mm wide. Corolla subsisolobate, pale violet (RHS violet 85C), white in the centre, the outer surface covered with stalked glands; the lobes subequal, broadly cuneate, obovate-cuneate or suborbiculate, obtuse or rounded at the apex, 8-12 mm long, 8-12 mm wide, entirely and densely covered with long cylindrical subcapitate hairs. Tube subcylindrical, greenish-yellow, lightly narrowing towards the base, covered with small stalked glands, 6-7 mm long, 4 mm wide, the inside covered with long cylindrical and clavate subcapitate hairs, palate absent. Spur subcylindrical, more or less curved inwards, obtuse, greenish-yellow, covered with small stalked glands, 4-5 mm long, 1.5-2.0 mm wide, forming an obtuse angle ( $\pm 90^\circ$ ) with the tube. Stamen 1.5 mm long. Ovary subglobular, covered with tiny stalked glands. Stigma 2-lipped, whitish, lower lip much larger than the upper lip, suborbiculate, margin fimbriate. Capsule subglobular,  $\pm 3$  mm in diameter. Seed unknown. Flowering January-March(-April).

*Pinguicula pilosa* inhabits a small and remote mountain range in southern Tamaulipas, and although the distribution of this species appears to be restricted within the area, further details of habitat and geographical range remain unknown.

This new species belongs to the subgenus *Isoloba* as defined in Casper's monograph of the genus *Pinguicula* (1966). Despite its dimorphic leaves, *P. pilosa* is best placed in the section *Agnata* which is characterized by a corolla with almost equal lobes, a long cylindrical tube, the absence of a palate, and a cylindrical spur longer than wide that forms a distinct angle with the tube. Although the features of section *Agnata* match with the flower characteristics of *P. pilosa*, those of section *Heterophyllum*, characterized by dimorphic leaves, conform to a lesser degree with the latter's flower characteristics. Within section *Agnata* it shows affinity with *P. agnata* (subsect. *Agnata*) but differs from this species by features which are noted in Table 1, below.

	<i>P. pilosa</i>	<i>P. agnata</i>
Winter leaf	Oblanceolate or spatulate, 10-20 mm long/6-12 mm wide.	Obovate, apex rounded, 18-35 mm long/8-14 mm wide.
Summer leaf	Broadly obovate or suborbicular, apex rounded, margin involute, 25-40 mm long/20-30 mm wide.	Spatulate or obovate-oblong, apex blunt, margin not involute, 35-70 mm long/15-30 mm wide.
Scape	Covered with long subulate and fine glandular hairs, 35-90 mm long.	Covered with glandular hairs, 50-140 mm long.
Calyx	Covered with long subulate and fine glandular hairs, upper lobes up to 1/3 connate, lobes ovate or oblong / elliptic or narrowly elliptic, pressed to the corolla.	Covered with glandular hairs, upper lobes completely separated, lobes broadly ovate acute/ovate-oblong, the apex turned backwards.
Corolla	Pale violet, white in the centre, and a green-yellow throat, entirely and densely covered with long cylindrical subcapitate hairs.	White, with pale blue edges, and purple markings in the throat, almost entirely covered with long cylindrical subcapitate hairs.
Corolla lobes	Broadly cuneate, obovate-cuneate or suborbicular, apex blunt or rounded, 8-12 mm long/8-12 mm wide.	Obovate-oblong or subcuneate, apex blunt or rounded, 7-10 mm long/6-9 mm wide.
Tube	6-7 mm long/4 mm wide.	6-10 mm long/3-5 mm wide.
Spur	forming an angle of $90^\circ$ with the tube, 4-5 mm long/1.5-2.0 mm wide.	Forming an angle distinctly larger than $90^\circ$ with the tube, 3-4 mm long/1.5-2.0 mm wide.
Flowering	Winter rosette only.	Winter and summer rosette

Table 1. Comparison of the characteristic features of *Pinguicula pilosa* and *P. agnata*.

### Acknowledgements

The authors are greatly indebted to Prof. Dr. B.L. Turner (Dept. of Botany, University of Texas, U.S.A.) for reviewing the manuscript, to Dr. B. A. Rice and Dr. J. Schlauer for their useful comments, and to Stan Lampard for providing the drawing.

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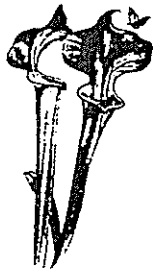


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