



***Pinguicula cubensis*
(Lentibulariaceae) — a new
insectivorous species from
western Cuba (Cuba Occidental)**

Authors: S. Jost Casper, and Armando
Urquiola Cruz

Source: *Willdenowia*, 33(1) : 167-172

Published By: Botanic Garden and
Botanical Museum Berlin (BGBM)

URL:

<https://doi.org/10.3372/wi.33.33116>

BioOne Complete (complete.BioOne.org) is a
full-text database of 200 subscribed and open-
access titles in the biological, ecological, and
environmental sciences published by nonprofit
societies, associations, museums, institutions,
and presses.

S. JOST CASPER & ARMANDO J. URQUIOLA CRUZ

***Pinguicula cubensis* (Lentibulariaceae) – a new insectivorous species from western Cuba (Cuba occidental)**

Abstract

Casper, S. J. & Urquiola Cruz, A. J.: *Pinguicula cubensis* (Lentibulariaceae) – a new insectivorous species from western Cuba (Cuba occidental). – Willdenowia 33: 167-172. 2003. – ISSN 0511-9618; © 2003 BGBM Berlin-Dahlem.

Recently, an endemic insectivorous species new to science, belonging to *Pinguicula* sect. *Agnata*, has been detected in the Cajálbana region not far from La Palma, Pinar del Río Province, Cuba occidental, in the immediate neighbourhood of *P. albida*. The new species is named *P. cubensis*, described and illustrated.

In the western part of the Caribbean island Cuba two species of the insectivorous genus *Pinguicula* are known to science, *P. filifolia* Wright ex Griseb. and *P. albida* Wright ex Griseb. (Grisebach 1866, Alain 1957, Ernst 1961, Casper 1966, Bisse & al. 1975, Temple & Panfet-Valdes 1998).

This contribution results from the revision of the *Lentibulariaceae* for the “Flora de la República de Cuba” in the scope of the “Proyecto de la Flora Cuba” (PFC). One of us, S. J. Casper, studying recent vouchers of Cuban *Pinguicula* in the collections of H. Stenzel (Berlin) and W. Greuter (Berlin), at once made out its specific characteristics. He learned from W. Greuter that the other, A. J. Urquiola Cruz, who had seen the living plant in the natural habitat, likewise had identified the butterwort in question as a new species. The yearly expeditions across Pinar del Río between 1968 and 1989 usually closed on the northern slopes of the Sierra de Cajálbana and did not extend the exploration to the southern faces. This may be the reason why the striking new species that we name *P. cubensis* has not been detected earlier.

Possible relatives seem to be the widely distributed *P. albida*, growing in the immediate neighbourhood on the northern shadowed and dryer faces of the Sierra Cajálbana, and the thread-shaped *P. filifolia*, known from the “sabanas arenosas” of western Cuba and from the northern and central part of the municipio especial Isla de la Juventud (formerly known as Isla de Pinos). *P. cubensis* is characterized by its rosulate, suberect, oblong-lanceolate leaves with lengthwise strongly involuted margins. In *P. albida* the leaves are appressed to the substratum.

Herbarium Haussknecht

Holotypus*Pinguicula cubensis* URQUIOLA et CASPER

CUBA: PR; La Palma, Sierra de Cajalbana,
 ladera sur, salto de agua cerca de la cima.
 leg. 09.06.01, H. Stenzel & Luis Polo Már-
 quez no. 1129
 det.: 25.10.2001, S. Jost Casper

Fig. 1. *Pinguicula cubensis* – holotypus at JE. – Photo by Rosemarie Stimper, Jena.

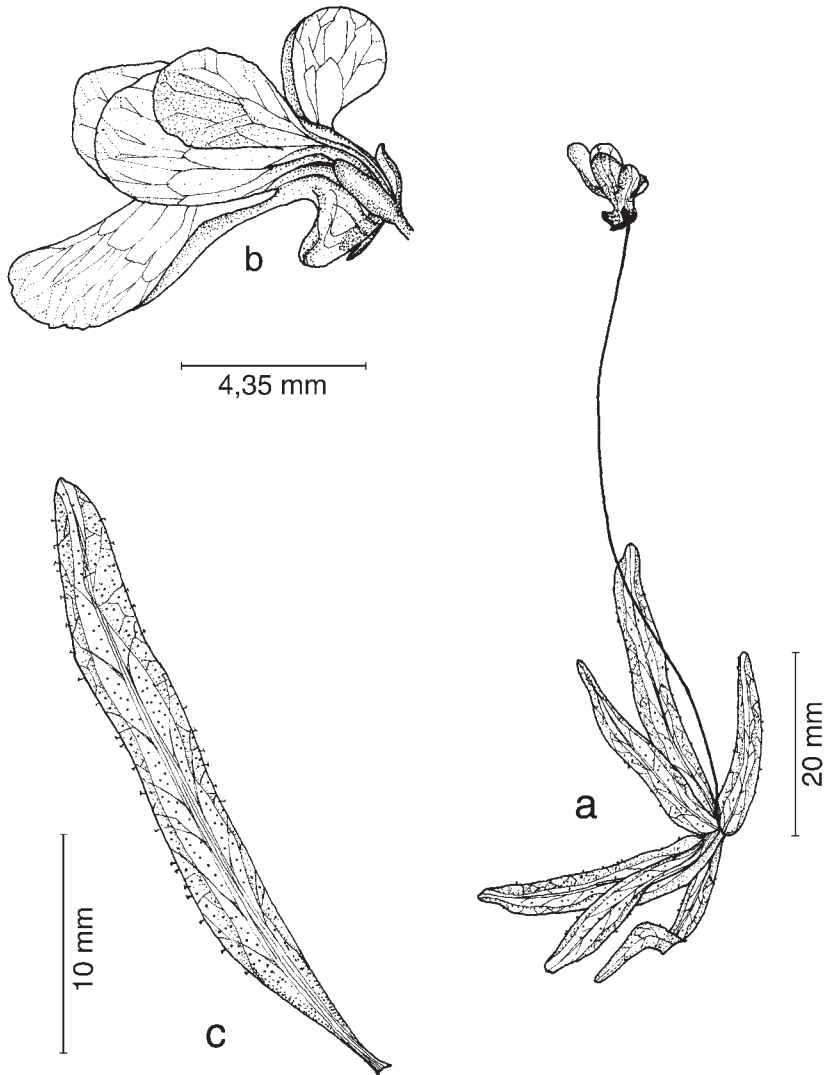


Fig. 2. *Pinguicula cubensis* – a: habit, without roots; b: flower; c: leaf. – Drawings by Ilona Doms, Jena, from the holotype.

Its membranous blades are broadly obovate to orbiculate in outline. In *P. filifolia* the erect leaf blades are thread-shaped arising from very short broadened leaf bases. The corolla of all three species is subisolate (*P. albida*) to subbilabiate (*P. cubensis* comes nearer to the typical two-lipped type by its somewhat longer lower lip) with the spur oriented more or less at a right angle to the tube.

P. cubensis dwells on permanently wet rocks at the cataract of the Río de las Vueltas at an altitude of 220 m. Hitherto it is only known from the southern hillside of Sierra Cajálbana near La Palma in the province Pinar del Río in western Cuba.

The new species belongs to *P.* sect. *Agnata* subsect. *Agnata* (Casper 1966).

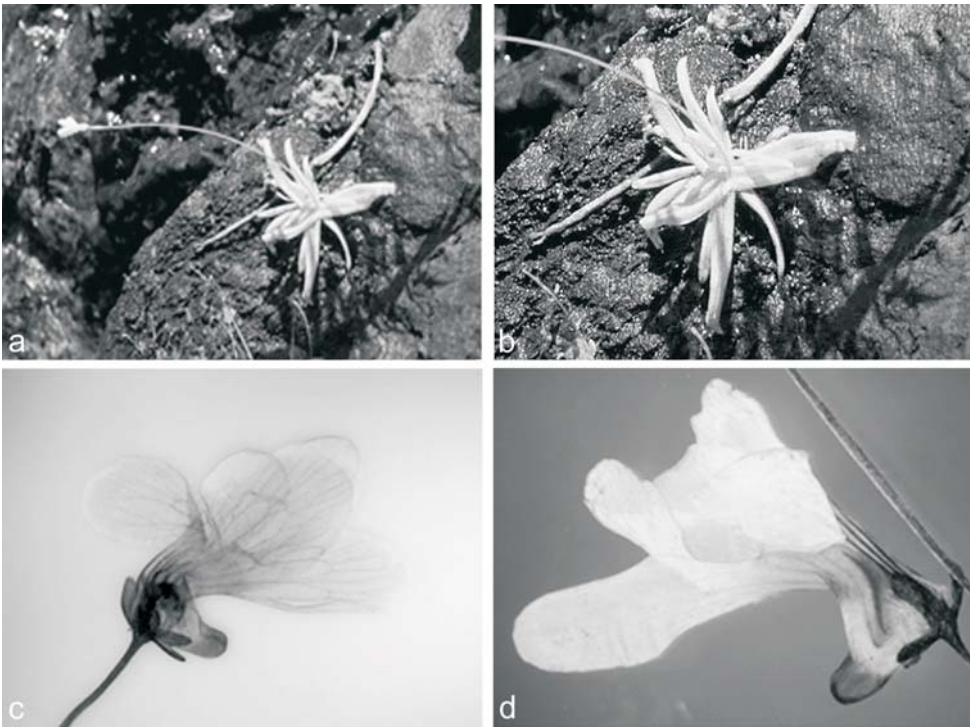


Fig. 3. *Pinguicula cubensis* – a-b: living plant at the type locality; a: habit; b: detail (leaf rosette); c-d: flowers of the type specimen (JE) in profile. – a-b: reproduction of colour photographs no. 15-012 and 2001-06-23 by H. Stenzel (Berlin); c-d: preparation and photos by Rosemarie Stimper & S. J. Casper (Jena).

***Pinguicula cubensis* Urquiola & Casper, sp. nova** – Fig. 1-3

Holotype: Cuba, Pinar del Río, La Palma, Sierra de Cajálbana, ladera sur, salto de agua cerca de la cima, 23.6.2001, H. Stenzel & L. P. Márquez 1129 (JE; isotypes: HAJB, HPPR).

Differt a *Pinguicula albida* laminis foliorum circuitu longe lanceolatis maturite margine valde involutis juventute planis suberectis solum non adpressis (Fig. 2c, 3b), corolla bilabiata.

Herba annua-biennis(?). *Rhizoma* simplex breve radicibus adventitiis numerosis. *Folia* numerosa (4-)6-8(-11), radicalia rosulata suberecta integerrima luteo-viridia; lamina membranacea laete virentia 38-75 × 2-11 mm circuitu longe lanceolata (maturitate) margine valde involuta (Fig. 1, 2c, 3b; juventute plana), basin versus in petiolum breve angustata superne pilis glanduliferis stipitatis sparse et sessilis multum vestita basin versus pilis subulatis longis. *Hibernacula* nulla. *Scapi* 1-2(-4) erecti, 9-15(-20) cm alti, teretes, filiformes, virides, glandulis stipitatis disperse obsiti, uniflori (Fig. 1, 2a). *Flores* parvi vel mediocres, (9-)11-13(-15) mm longi (calcar incluso; Fig. 2b, 3c-d). *Calyx* bilabiatus viridis vel fuscus extus glandulis stipitatis singularibus obsitus; labium superum usque ad basin longitudinis fere trilobum lobis oblongis-obtusis vel acutiusculis; labium inferum usque ad 1/4 longitudinis bilobum lobis acutiusculis divergentibus vel fere indivisum. *Corolla* (sub)bilabiata (Fig. 2b, 3c-d) lobis albidis oblongis apice rotundatis vel truncatis, basi pilis longis multicellulatis labii inferi lobis 4.5-6 mm longis c. 3 mm latis lobis labii superi usque ad c. 2/3 longitudinis lobis labii inferi subaequantibus; *tubus* subcylindricus luteus purpureo striatus (superne) c. 3 × 2.5 mm, fauce geniculiformiter



Fig. 4. *Pinguicula cubensis* – distribution.

incurvatus (Fig. 2b, 3c-d) sine palato intus pilosus infra corollae labii inferi lobus intermedius pilis multicellulatis clavatis albidis vel luteis dense vestitus basin tubus versus pilis longis disperse obsitus; *calcar* breve c. 2-2.5 × 1.5-2 mm, crassum apice obtusum (saccatum; Fig. 2b, 3c-d) cum tubo angulum subrectum formans fusco-viride. *Stamina* 2. *Capsula* et *Semina* non vidimus.

Distributio. – Cuba occidentalis, provincia Pinar del Río, La Palma, Sierra Cajalbana, ad cataractam fluvii Río de las Vueltas dicta; endemica (Fig. 4).

Habitatio. – In scopulis ophiolithicis (serpentinis) permanente humidis ad cataractam, 220 m alt.

Annual to biennial(?) *herb* flowering to c. 20 cm tall. *Rhizome* short, with many relatively strong roots. *Leaves* 6-8(-11), simple, suberect, yellowish green, planar to involute, in outline oblong-lanceolate, 38-75 × (2-)3-6(-11) mm, base attenuate, hairy, apex attenuate to obtuse, margin entire, mostly strongly involute (young leaves oblong-lanceolate, stalked, not involute), upper surface densely covered with sessile and stalked glandular hairs. *Scapes* 1-2(-4), 9-15(-20) cm tall, c. 1 mm in diameter, one-flowered, sparsely covered with sessile and stalked glandular hairs. *Flower* two-lipped, (9-)11-13(-15) mm long (spur included), corolla lobes white, tube yellow and striate purple, spur greenish. *Calyx* two-lipped, purple, covered with glandular hairs; the three sepals of the upper lip divided to their bases, oblong or elliptical, apex somewhat acute, c. 2 × 1.2 mm, the two sepals of the lower lip divided to the quarter of its length or the lower lip nearly undivided. *Corolla* two-lipped, the two lobes of the upper lip much shorter than the three lower ones (c. 3 : 5); the middle lobe of the lower lip c. 4.5-6.0 mm long, c. 3 × as long as the tube; upper surface with few many-celled uniseriate hairs; *tube* cylindrical, c. 3 × 2.5 mm, yellow and striate dark purple, without palate but in this region with short many-celled multiseriate hairs, at the throat with white to pale yellow long-stalked hairs with small many-celled “heads”; *spur* c. 2-2.5 × 1.5-2 mm, forming an angle of 35°-80° with the tube, apex obtuse-rounded (saccate), greenish, dark coloured (in sicco). *Fruits* and *seeds* not seen.

Other specimens seen. – Cuba: Prov. Pinar del Río: Municipio La Palma, vertiente sur de la Sierra Cajálbana, cascadas del Río de las Vueltas, 220 m, 22°47'15"N, 83°26'35"W (UTM 2533138 N, 17249245 E), 19.11.2001, W. Greuter, R. Rankin & A. Urquiola 25835 (B, JE) [obs. colectores “Rocas de serpentinas regadas en permanencio. Flores blancas, tubo amarillo estriado de purpura, espolón verduzco”].

Acknowledgements

For critical review I thank Dr Jan Schlauer, Tübingen, and Dr Hermann Manitz, Jena. The drawings were made by Ilona Doms, Jena, the photographs were taken by H. Stenzel, Berlin, and Rosemarie Stimper, Jena, who also prepared the map for printing.

References

- Alain, hno. 1957: Flora de Cuba, 4. Dicotiledóneas: *Melastomataceae* a *Plantaginaceae*. – Contr. Ocas. Mus. Hist. Nat. Colegio “De La Salle” **16**.
- Bisse, J., Lippold, H. & Casper, S. J. 1975: Beiträge zur Kenntnis der westindischen *Pinguicula*-Arten. – Wiss. Z. Friedrich-Schiller-Univ. Jena, Math.-Naturwiss. Reihe **24**: 377-385.
- Casper, S. J. 1966: Monographie der Gattung *Pinguicula* L. – Biblioth. Bot. **127/128**.
- Ernst, A. 1961: Revision der Gattung *Pinguicula*. – Bot. Jahrb. Syst. **80**: 145-194.
- Grisebach, A. [H. R.] 1866: Catalogus plantarum cubensium exhibens collectionem Wrightianam aliasque minores ex insula Cuba missas. – Lipsiae.
- Temple, P. & Panfet-Valdes, C. 1998: The *Pinguicula* of the Caribbean. – Pp. 9-10 in: Schlauer, J. & Meyers-Rice, B. (ed.), Proc. Second Conf. ICPS, Bonn, Germany, 1998, ed. 2. – Bonn.

Addresses of the authors:

S. Jost Casper, Institut für Spezielle Botanik und Herbarium Haussknecht, Friedrich-Schiller-Universität Jena, Philosophenweg 16, D-07749 Jena, Germany; e-mail: jost.casper@t-online.de

Armando J. Urquiola Cruz, Jardín Botánico de Pinar del Río, Delegación Territorial del CITMA, Colón No. 106, Pinar del Río, Cuba; e-mail: urquiola@bpr.vega.inf.cu