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Notes on *Cnidoscolus* (*Euphorbiaceae*), 25-26

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**Keywords.** Systematics, New species, *Cnidoscolus* (*Euphorbiaceae*), Guatemala (Petén).

**Abstract.** A new species is proposed under *Cnidoscolus* (*Euphorbiaceae*): *C. guatimalensis*, from Guatemala (Petén).

**Zusammenfassung.** Es wird hier eine neue Art der Gattung *Cnidoscolus* (*Euphorbiaceae*) beschrieben: *C. guatimalensis*, aus Guatemala (Petén).

**Resumé.** Une nouvelle espèce est décrite dans le genre *Cnidoscolus* (*Euphorbiaceae*): *C. guatimalensis*, de Guatemala (Petén).

**Resumo.** Descreve-se uma nova espécie no gênero *Cnidoscolus* (*Euphorbiaceae*): *C. guatimalensis*, de Guatemala (Petén).

**Resumen.** Se describe una especie nueva del género *Cnidoscolus* (*Euphorbiaceae*): *C. guatimalensis*, de Guatemala (Petén).

We continue our series of publications about the genus *Cnidoscolus* Pohl (*Euphorbiaceae*, *Crotonoideæ*, *Manihoteæ*), published in this same magazine, cf. the previous paper, F. J. Fernández Casas (2005).

A new species is described in the genus *Cnidoscolus* Pohl. It was discovered during the recent study (2006) of the collections of the herbarium W (Vienna) which were kindly placed at my disposal. These words serve as a recognition of my gratitude.

*Cnidoscolus guatimalensis*, which is the novelty, are classified under the section *Jussieuia* (Houston) Pax for all their morphologic characteristics, save that of their sum-petiolar glands that are very special or which they lack completely, depending on the interpretation of what can be seen there.

Our description is made approximately following along the lines of that which has become classic in the genus, G. J. Breckon (1975); and for the infrageneric ordination we continue along the classic line of F. A. Pax [& K. Hoffmann] (1910).

25 **Regarding the first paragraph** in our description

In our most recent papers and with increasing frequency, we have incorporate to our descriptions an initial paragraph where the extracted information of the labels is transcribed. We have not always done it in this way, however, each time we have found it more necessary to separate that information, which comes from another author and from a different origin; frequently it comes from the observation of live populations and not from the study of dry samples in herbarium. In spite of the fact that it sometimes contains information contradictory with our studies, we find an advantageous practice, as much to keep it in mind, as to have it separated in paragraph.

Habitually, that information only takes into account data based on habit, size, ramification, color of the leaves or flowers, or of this nature; sometimes, however, it specifies other details. With great frequency it deals with characters that are not observable on the herbarium vouchers.

As consequence, the description sometimes seems contradictory. Sometimes it happens that there are data consigned for the fruit, obtained from the labels, at the time that
we write "Regna nobis ignotum est", or something of this nature which aims to convey the same message, in our description. Other contradictions like that of pointing out a maximum size that the samples of the sheets themselves surpass—which is not as uncommon as it might be expected a priori—we give them as not read and they are not taken into account when editing the descriptive paragraph.


– Sectio Jussieua (Houston) Pax, Pflanzenreich IV, 147: 94, nº iii.3 (1910); F. A. Pax & K. Hoffmann, Nat. Pflanzenfam., ed. 2, 19c: 164 (1931)

DISTR. GEOGR. America interistmica: Guatemala (Petén); cf. tabula 1 (pag. 336).

ILLUSTR.: Laminæ nostræ i (pag. 332), ii (pag. 333), iii (pag. 334).

ABBREVIATA DIAGNOSIS vel character essentialis

Species e sectione Jussieua (Houston) Pax, sed glandulis summipetiolaribus longe pedunculatis, aliquo modo similimia congeneribus Cnidoscolus Souzæ McVaugh (1944).

MAIN DIAGNOSTIC FEATURES or diagnostic characters

A typical species of section Jussieua (Houston) Pax, but summipetiolar glands long pedunculate, closely resembling those of Cnidoscolus Souzæ McVaugh (1944).

LATINA DESCRIPTIO

INDUMENTUM. Setæ urticantes magnæ in summo petiolo, longe pedunculatae, saltem bifurcate, rariusque trifurcatæ exhibet.

FOLIA. Stipulæ non observatæ. Petioli usque 12-15 cm, limborum longitudinem subæquantes vel parum superantes; hirti atque ubique stimulosi; foliorum delapsorum vascularia vestigia 5(6-7). Glandulae summipetiolares peculiares si adsunt, inter petiolorum extremitatem et limborum basibus adjacentibus sistentes; glandulae 2-4 cylindraceæ, columna herbacea atque hirtula, extremitate glandulosa, fuscioræ. Limbus trilobus, utrinque pilosus, præcipue secus nervia, parum discolor, abaxialiter latæ virens; lobus medius ambitu. Nervia principalia tria, palmatim disposita (id est, radialia). Margo glandulis raris pedunculatis præeditus.

INFLORESCENTIÆ laxæ, flores distantes. Axes (vel petioli communis) modice hirtuli, præcipue infra nodos, sursum parum dilatati. Bracteæ herbaceæ, virides, infimæ usque 3 × 1 mm, sursum gradatim minores, præcipue adaxialiter parum pilosæ, subobtusæ vel acutæ.


FLORES FŒMINEI nobis ignoti sunt, aliquas partes reliquas cum regmatibus iuvenilibus vidimus. Pedunculi ad 1-2 mm, hirti. Discus (infra regmata vidimus) sessilis, glaberrimus. Stamínodìa decem, saltem minus quam decem, minima, subulata, glaberrima, basi conica dilatata. Petala (dua delapsa et fracta tantum vidimus) sublinearia, ad basim fracta, ergo ad basim connata?; ad mediam longitudinem trinervata.
REGMATA adulta valde rare villosa simulque stimulosa, apice stylopodio persistenti coronata. Calyptra parum evoluta, ad maturitatem subplana, stellata, hirtulo villosa; margin e carthilagineo glaberrimo atque undulato.

REGARDING THE ETYMOLOGY AND ORTHOEPY of the specific name

The specific name is taken from the country where it was found, Guatemala, in the interisth- mian America; guatimalensis, -e, it corresponds to their Latin gentility; is pronounced paroxyto- ne, guatimalénsis.

ENGLISH DESCRIPTION

INDUMENTUM. There are some big stinging bristles with very special features, located on the adaxial face of petiole upper part, near the limb base. Some of these have the longest peduncle that we have ever observed; its peduncle is sometimes forked, or even double forked (divided twice and thus forming three branches in total). It seems that these special stinging bristles make the transition toward the neighboring summipetiolar glands.

LEAVES. Stipules unknown to me. Petioles up to 12-15 cm long, almost equaling the limb length; hirsute and stinging all over; in the cortical scars produced by the fallen leaves, we can see 5(6-7) vascular traces. Very special summipetiolar gland, if they are truly that, are born between the supreme part of the petiole and the lower edges adjacent to the limb; the glands, 2-4 in number, are column is cylindrical herbaceous, minute hirsute, the end is glandular, darker and more viscous. Limb trilobe, pilose on both pages, mainly along the nerves, somewhat discoloured, on the abaxial face their green colour is brighter; divided to almost half of their radius in three main lobes, each one oblong acuminate, and with two other outer lateral lobes that does not quite achieve a clear definition; and which produce a broad sickle shape externally attached to each contiguous lateral lobe; the medium lobe is oblong, slightly narrowed at its base. There are five main radial main nerves: three inner main and two secondary ones which are less marked and more external. The margin is not lacking limb in any part, that is to say, the limbs are not pedate, exactly in the base, it sometimes gives the impression that a narrow border of limb is surrounding the petiolar apex completely, making the limb petiolar and very asymmetrical; the margin have some distant, long and sharp teeth, which are continuation of some tertiary nerves that attack the margin in normal direction at their edges; among these are some which are long and fine, and other shorter ones, ending with a clavate gland, see the figure c on plate i.

INFLORESCENCES lax, with distant flowers. Axis moderately and minute hirsute, especially below the knots, slightly broadened upwards. Bracts herbaceous, green or whitish, the lowest up to 3 × 1 mm, the others gradually smaller as it is ascended; something pilose, more on the upper face, subobtuse or sharp.

MALE FLOWERS 8-11 mm, stalkless or apparently so, white, hardly widened at base; salver-shaped at flowering. Flower buds cylindrical subclaviform, lightly constricted below the apical third. Corolla turbular, constricted in the mouth, connate along 5/8 of their length, outside moderately pilose, inside quite glabrous; tube with ten nerves. Petals (the free parts of corolla) five, oblong, with rounded apex, tri-nerved and spreading at flowering, slightly spoon-like, somewhat unequally with each other, with quincuncial aestivatio. Disc glandular, ring-shaped; its glands are connate, completely surrounding the staminal column at their base. Staminal column quite glabrous except for a scarcely pilose area next to the base that coincides with the outburst of the filaments of the lower whorl; the pilosity also affects the base of the filaments. Stamens ten, with two whorls; the whorls are very remote, the lower whorl is almost basal, the upper...
Plate III. *Cnidoscolus guatimalensis* Fernández Casas, *R. O. Frisch* 316 (W 1992-16949, holotype). Summipetiolar glands. a, b, c) With the same graphic scale.
Anthers whitish, ca. 2 × 1 mm, those of the upper whorl almost excluded, those of the lower whorl enclosed, the all introrse. Staminodes three, long, subulate, 1.5-2 mm, they stand out among the supreme anthers.

Female flowers unknown; our partial description which follows is made from the observation of the fragments which persist in the fruits. Peduncle hirsute, 1-2 mm. Disk (under the regma observed) sessile, quite glabrous. Staminodes ten, sometimes we counted less, subulate, quite glabrous, very small, with its conical and extensive base visible and not concealed by the disk. Petals (we have only seen two, removed and broken) approximately linear, with the broken base that allows to induce that they were connate in their base; trinervate toward the middle of their length; the distal part is oblong and something wider, with more nerves.

Regma adult a little white hairy and provided many stinging bristles, with an apical persistent stylopod. Calyptra was hardly developed, hairy, when well developed hispid, almost plane and stary; with cartilaginous margin, glabrous and wavy.

Other observations:
The best diagnostic characters are the very special summipetiolar glands. As much could be said of them, that are uniques in the section Jussieuia (Houston) Pax, as that they are quite lacking. I will explain it. The exact place where the glands are normally inserted is totally clean and devoid any vestige of these. The leave center, where the radial main nerves converge, has a regular surface, hairy villose, without any type of gland, see see figure b, plate i. But very near, between the edge of the closest lower leaf limb and the distal extremity of the abaxial petiole we see some glands which are quite different from those that are usual in the species of the section Jussieuia. They are cylindrical, scarce in number, and spreading. Superficially examined, these glands are a reminder those of Cnidoscolus Souzae McVaugh (1944) –which belong, however, to the section Calyptrarosolen (Mueller argov. ex Pax) Pax & K. Hoffmann, Natürl. Pflanzenfam., ed. 2, 19c: 165 (1931), em. R. McVaugh, Bull. Torrey Bot. Club 71(5): 465, nº 3 (1944)–. maybe they are something shorter, at times forked; I am not sure whether these glands that we describing are homologous of the ordinary ones, or if they are simply similar and not homologous.

Anyway, the glands of C. guatimalensis –plate i, fig. b– seem to be closest to the leaf’s limb, at the basal part, that to the exact petiole. It agrees with the attributed craspedophyllous origin to such glands in F. Bernhard (1966), as we know through G. J. Breckon (1975: 50).

The large type of stinging bristles located along the petiole experiment, toward the apex, a slight modification in their basal body that it lengthens a lot in some, and it forks with certain frequency. Such lengthened basal bodies, sometimes forked, they seem to establish the transition toward the summipetiolar glands that we have already described above; in them, instead of the body which was narrowly conical, long body and stinging, one finds a small mass of glandular aspect, the rest it is herbaceous.

Examined specimens:
Guatemala. (12) Petén:
16PAC96 15.96°, -089.85°; Flores (atlas), 15°56’N, 089°53’W; «entlang der Straßen von Flores in Richtung: San Miguel, Tikal, Ciudad Melchor de Mencos, San Luis,
Santa Amelia (S San Francisco), laguna Petexbatún (S Sayaxché), Las Cruces und Naranjo (NW La Libertad)», R. O. Frisch & H. Kurz 316, II/III-1990 (W 1992-16949, holo-; type C. guatimalensis).

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Ulpiano Emilio Souto Mandelos has processed the digital photographs of the plates ii (page 333) and iii (page 334); he also made the distributional map of this page (336, up). Juan Castillo Gorroño drew plate i (page 332).

LITERATURE CITED