

BOTANY—*The genus Oxyrhynchus Brandegee.* CHARLES V. PIPER,
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In December, 1920, there were received from Miss Mary E. Woodbridge, State Department of Agriculture, Austin, Texas, seeds of a bean taken from plants grown near Austin by H. H. Parker, who reports that his original seeds were found in a lot of castor beans which the label on the bag indicated were imported from India. The seeds could not be identified, and so some of them were sent to Sir David Prain, at Kew, who forwarded a few to Colonel A. T. Gage, in Calcutta. Neither could identify the bean. Later, fairly complete botanical material was received from Miss Woodbridge. It proves to represent an undescribed species of the genus *Oxyrhynchus* Brandegee, which was based on a single species, *O. volubilis* Brandeg., collected by Purpus near Rascón, San Luis Potosí, Mexico. The specimens are in young flower.

The plant from Abaco and Cuba, described as *Dolichos insularis* Britton, also belongs to *Oxyrhynchus*.

On the basis of the more complete material the genus may be re-described as follows:

OXYRHYNCHUS Brandegee

(*Leguminosae—Papilionaceae—Phaseoleae—Phaseolinae*)

Twining herbs, perennial; leaves trifoliolate; stipules striate; flowers in axillary narrow raceme-like thyrses; bracts subulate, striate; bracteoles ovate; calyx bilabiate, campanulate, the rounded lobes subequal; standard reniform, broader than long, deeply emarginate, with two reflexed auricles at base; wings free, as long as the keel; keel broadly falcate, with narrowed acute beak, the two petals partly united, minutely ciliate; stamens diadelphous, the filaments glabrous, slightly enlarged at base; ovary linear, pubescent; style glabrous except near the apex, where bearded on each side with long hairs, and at tip, bearing similar hairs which partly surround the stigma; stigma ellipsoid-obovoid, attached on the dorsal side just below the middle; pods short-pedicelled, straight, cylindrical, beaked, terete or compressed, thin-walled, 2 or 3-seeded; seeds globose, each with a linear hilum extending over half the circumference of the seed, the hilum covered with a white caruncle; germination hypogeous.

Harms placed¹ *Oxyrhynchus* next to *Rhynchosia*, but it clearly belongs close to *Dolichos*, *Vigna*, and *Dysolobium*, as Dr. Harms points out in a recent letter.

¹ *Die Nat. Pflanzenf. Ergänzungsheft* 3: 149.

Apparently there are three species involved, certainly two, as the Austin plant is quite distinct from the others in its swollen pods. These species may be distinguished by the following key:

- Pods turgid, circular in cross section; leaflets thin; inner layer of pod felt-like. 1. *O. alienus*.
- Pods compressed and 2-edged.
 - Leaflets thin, tending to coriaceous, 4-6 cm. long, truncate at base; flowers 8 mm. long; inner layer of pod thin. 2. *O. volubilis*.
 - Leaflets thickish, membranous, 4-7 cm. long, the middle one often subcordate; flowers 10 mm. long; inner layer of pod felt-like. 3. *O. insularis*.

1. *Oxyrhynchus alienus* Piper, sp. nov.

Perennial; stems herbaceous, twining, slender, terete, sparsely strigillose, tall, growing 15 to 20 meters in a season; petioles about as long as the leaflets, very slender, sulcate above, strigillose especially at the enlarged base; stipules triangular-lanceolate, acute, striate, persistent, 2.5 mm. long; stipels subulate, 1 mm. long; petiolules somewhat fleshy, puberulent; leaflets membranous, ovate-triangular, the lateral ones oblique, nearly truncate at base, obtuse and apiculate at apex, 3-nerved at base, sparsely strigillose on both faces especially beneath, 6 to 8 cm. long, 4 cm. broad; peduncles terete, axillary, strigillose, the inflorescences exceeding the leaves; flowers about 6 in each of 10 to 20 lateral clusters in a narrow, rather dense, raceme-like thyse, the pedicellar glands oblong and prominent; bracts subulate, striate, fugacious, 3 mm. long; bracteoles ovate, thin, ciliate, 1 mm. long; pedicels short, puberulent; calyx purple, open campanulate, 5 mm. long, 2-lipped, the subequal lobes as long as the teeth; upper lip 2-lobed, the lobes semicircular, minutely ciliate; lower lip 3-lobed, the broadly oblong lobes rounded at apex, minutely ciliate, the median one two-thirds as long as the others; corolla green, more or less tinged with dull purple; standard green, butterfly-shape, deeply notched, 10 mm. long, 15 mm. broad, slightly pubescent on the back especially near the base, bearing a deep depression below the middle, broadly cordate at base, the stipe only as long as the sinus, each basal lobe with a blunt inflexed auricle; wing dull violet, as long as the standard, oblong, obtuse, sparsely ciliate, a broad triangular tooth near the base on the upper edge, the stipe one-third as long as the blade, the edges somewhat inflexed; keel green with the beak violet, lunate, semicircular, rather broad, the two petals attached to below the middle, the beak rather acute; stamens included, diadelphous; filaments filiform, glabrous; anthers innate; pollen yellow; ovary linear, pubescent; style curved, glabrous to near the tip, bearing long lateral hairs on each side just below the stigma; stigma terminal, dark green, obovoid, attached on the dorsal side below the middle, surrounded by long stiff hairs arising from the sides of the style tip a short distance below the stigma; pods inflated, oblong-cylindric, thin-walled, acutely short-beaked, densely covered with short somewhat ferruginous hairs, the two sutures prominent, a faint ridge on each valve very close to the ventral suture, 5 cm. long, 2 cm. broad, 2 or 3-seeded; pods lined inside with a thick soft felt-like layer

of white tissue; seeds spherical, dark brown, shiny, 10 to 12 mm. in diameter, the hilum linear, extending over half the circumference of the seed and covered with a dense white caruncle.

Originally sent by Miss Mary E. Woodbridge, from plants grown by H. H. Parker, Austin, Texas, from seeds found in castor beans supposed to be from India. Type in the United States National Herbarium, nos. 1,111,336 and 1,111,337.

In October, 1923, when seen by the writer, the plant was just beginning to bloom. The roots are thickish, about the size of a lead pencil, but no nodules were found on the original plant nor on several seedlings examined. The herbage is not ill-tasting and probably would be palatable to cattle. The vine is quite attractive and when in bloom showy. It is well worthy of culture as an ornamental vine.

2. *OXYRHYNCHUS VOLUBILIS* Brandeg. Univ. Cal. Publ. Bot. 4:271. 1912.

In addition to the type specimens collected by Purpus and represented in several herbaria, the plant was collected in mature fruit at Victoria, Tamaulipas, Mexico, November, 1830, by Berlandier (no. 3129), the specimen being in the Gray Herbarium. Another specimen from the same place was collected by Dr. E. Palmer (no. 265), February 1 to April 2, 1907, also in mature fruit. Dr. Palmer notes that it is called "frijol monilla," and that the seeds are used as food and also by children in lieu of marbles. Both the Berlandier and Palmer specimens seem identical with the Purpus plant, and the two localities are not far apart. The mature pods are compressed, 6.5 cm. long, 3 cm. broad, and 1 cm. thick, each containing three nearly globose seeds, 10 mm. long. Pringle's 11333, collected near Monterey, Nuevo Leon, is in young flower.

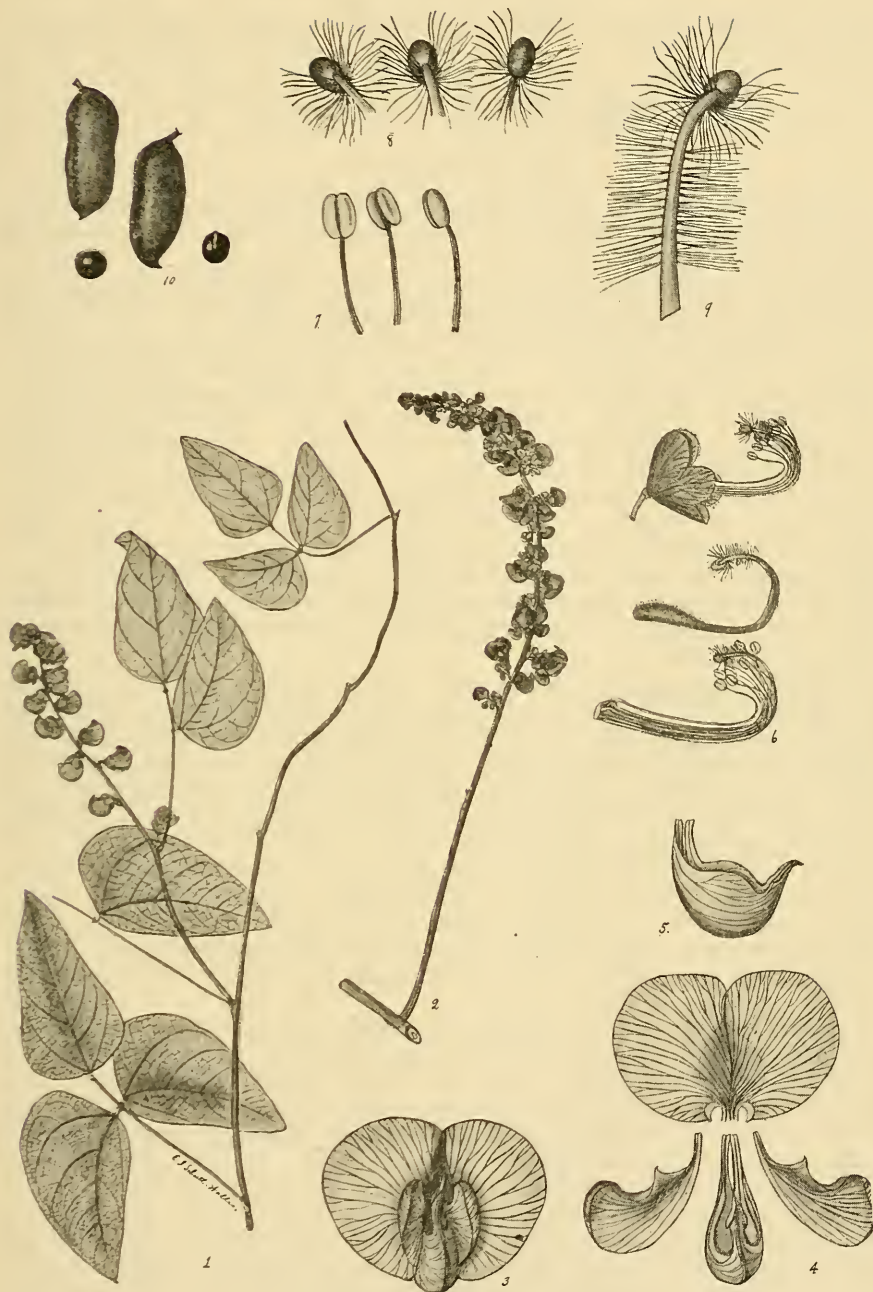
3. *OXYRHYNCHUS INSULARIS* (Britton) Piper.

Dolichos insularis Britton in Brit. & Millspaugh, Bahama Flora 195. 1920.

This plant is known from the following specimens:

CUBA: Cayo Ballenato Grande, Camaguey, *Shafer* 1026, March 22, 1909 (type); La Gloria, Camaguey, *Shafer* 255, February 3, 1909.

ABACO: Old fields, Great Cistern, *Brace* 1757, Dec. 19, 1904.



OXYRHYNCHUS ALIENUS PIPER

1. Branch of plant, $\times \frac{1}{2}$; 2. Inflorescence, $\times \frac{1}{2}$; 3. Front view of flower, $\times 3$; 4. Separate petals of flower, $\times 3$; 5. Keel, lateral view, $\times 3$; 6. Calyx, stamens, and pistil, $\times 3$; 7. Anthers, much enlarged; 8 and 9. Tip of style and stigma, much enlarged; 10. Pods and seeds, $\times \frac{1}{2}$.