

Vegetative Key to the Passionflowers of Belize

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The Passionflower flora of the meso-american region, of which Belize is a part, has been dealt with in various older publications (Killip, 1936, 1938; Standley & Record, 1936; Standley & Williams, 1961). All of these publications are still excellent identification works but their distributional information is outdated. The most relevant recent publication, Dwyer & Spellman (1981), lists 20 *Passiflora* species for Belize but some of the species are unsubstantiated and other species are listed twice under different synonyms. After "cleaning up" the list retains 15 species, however, as a whole, the list is very confusing.

I started collecting in Belize in 1989 and have been able to expand the Belize list of *Passiflora* species to 23 species, although, the species definition within the subgenus *Dysosmia* is somewhat confusing. Throughout, I have been assisted and encouraged by John MacDougal who confirmed several identifications for me and provided me with additional distributional data.

In my experience, many passionflower species do not flower frequently but with some experience, most if not all species are easily identified on vegetative characters alone. For the benefit of P.S.I. members, I have devised a key to the passionflowers of Belize based on vegetative characters alone. This key is probably also useful in parts of Guatemala (Petén) and Eastern Mexico (Campeche, Yucatan, Quintana Roo).

Key

1. Stipules deeply dentate, often gland tipped: Subgenus *Dysosmia*, a complex group of closely related varieties and/or species. Characterized by the strongly pinnatisect bracts that envelop flowerbud and fruit as a net. This key does not address the numerous varieties occurring in Belize (fig. 1)
 2. Plant essentially glabrous but gland tipped ciliae may be present.
 - Coastal savanna: *P. ciliata* (= *P. foetida* var. *nicaraguensis*).
 2. Plant clearly pubescent in varying degrees.
 3. Leaf blade usually simple or only slightly hastate, stipules minute, petiole usually less than 10 mm. Inland savanna, endemic: *P. urbaniana* (fig. 2).
 3. Leaf blade distinctly hastate, stipules clearly visible with the naked eye, petiole usually greater than 8 mm. Country wide, mostly disturbed areas: *P. foetida* vars. (fig. 3).
1. Stipules variable, never dentate to the base, never gland tipped.
 4. Stipules large and leaf like.
 5. No petiole glands present, stipules dentate. South and Central Belize: *P. guatemalensis* (fig. 4).
 5. Petiole glands present, stipules entire.
 6. Petiole glands 4-6. Leaf base truncate. Entire plant glabrous. Stream valleys of the Maya Mountains: *P. oerstedii* var. *choconiana* (fig. 5).
 6. Petiole glands 2. Leaf base cordate. Leaves covered with hooked trichomes. South and Central Belize. *P. adenopoda* (fig. 6).
 4. Stipules small, linear or deciduous.
 7. Leaf peltate, strongly coriaceous, much wider than long (fig. 7).
 8. Petiole glands near the apex of the petiole. Countrywide on limestone: *P. xiikzodz* ssp. *xiikzodz*
 8. Petiole glands around middle of the petiole. Countrywide: *P. coriacea*
 7. Leaf not peltate, membranous or sub-coriaceous.
 9. Leaf base acute or truncate.
 10. Leaf blade palmately lobed.
 11. Petiole glands 4 (but absent in juvenile plants), leaf edge serrulate. West, South and Central Belize on limestone: *P. mayarum* (fig. 8).

- 11. Petiole glands 2, leaf edge strongly serrate. Cultivated, sometimes escaped:*P. edulis* f. *flavicarpa* (fig. 9).
- 10. Leaf blade unlobed.
 - 12. No petiole glands present but pair of inconspicuous glands at leaf base. Southern Belize:*P. pittieri* (fig. 10).
 - 12. Two petiole glands present.
 - 13. Leaf with 3 major veins at the base. Bracts minute. Southern Belize, Maya Mtns.: *P. obovata* (fig. 11).
 - 13. Leaf pinately veined, glabrous. Bracts relatively large. Southern Belize: *P. ambigua* (fig. 12).
- 9. Leaf base rounded, cordate or sub-cordate.
 - 14. Petiole glands present.
 - 15. Leaf base sub-cordate.
 - 16. Medium sized vine, 4-9 petiole glands, leaf blade finely serrate. Countrywide:*P. serratifolia* (fig. 13).
 - 16. Slender vine, 2 petiole glands, leaf blade entire or three lobed. Coastal and on Cayes: ...*P. suberosa* (fig. 14).
 - 15. Leaf base deeply cordate.
 - 17. Petiole glands 2-4. Leaf blade entire or deeply three lobed, somewhat serrate. Southern Belize: *P. seemannii* (fig. 15).
 - 17. Petiole glands 4-9. Leaf blade entire. Southern and Central Belize:*P. "lancetillensis"* (sp. nov. ined.; J. MacDougal) (fig. 16).
 - 14. No petiole glands present.
 - 18. Leaf blade unlobed, stem triangular. West, South and Central Belize on limestone hills:*P. cobanensis* (syn. *P. brevipes*) (fig. 17).
 - 18. Leaf blade lobed, stem 3 or 5 angled, or subterete.
 - 19. Apex of leaf lobes rounded or sub-acute, plants essentially glabrous.
 - 20. Leaf blade shallowly trilobate, lobes pointed forward, at least as long as wide, membranous. Southern Belize:*P. helleri* (fig. 18).
 - 20. Leaf blade usually bilobate or faintly tri-lobate, lobes widely spreading, wider than long, membranous or sub-coriaceous. Highly variable. Countrywide: *P. biflora* (fig. 19).
 - 19. Apex of lobes acute, plants at least slightly pubescent.
 - 21. Leaf blade wider than long, stem subangular. South-western Belize: *P. sexflora* (fig. 20).
 - 21. Leaf blade longer than wide.
 - 22. Leaf blade densely hirsute, stem distinctly and strongly 3-angled. Southern Belize:*P. costaricensis* (fig. 21)
 - 22. Leaf blade tomentose, stem 3-5 angled. Country wide:*P. rovirosae* (fig. 22).

Literature Cited

Dwyer, D. & D.L. Spellman. 1981. A list of dicotyledoneae of Belize. *Rhodora* 83(834): 161-236.

Killip, E.P. 1936. Passifloraceae of the Mayan region. *Carnegie Inst. Washington Pub.* 461. *Maya Botany: Miscellaneous papers* XIII: 299-328.

Killip, E.P. 1938. The American Species of Passifloraceae. *Publ. Field Mus.Nat.Hist., Bot.Ser.* 19, 613 pp.

Standley, P.C. & S.J. Record. 1936. The Forests and Flora of British Honduras. *Field Museum of Natural History, Publication* 350, *Botanical Series*, vol. 12. 433 pp.

Standley, P.C. & Williams, L.O. 1961. Passiflora L. **in**: Flora of Guatemala. *Fieldiana: Botany*, Vol. 24. pp 115-147.

Note regarding the figures: The scale bar in the figures on the following pages represents 1 cm except in Fig. 1 where it represents 1 mm and in Fig. 16 where it represents 2 cm. All sketches by Jan Meerman unless noted.



Fig. 1: Glandular stipule characteristic of *Dysosmia*

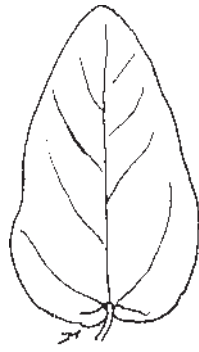


Fig. 2: *P. urbaniana*

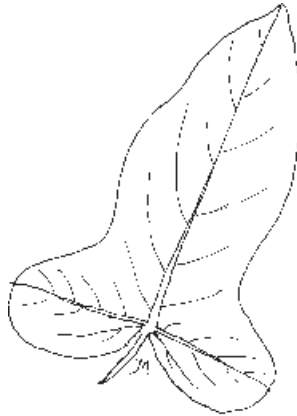


Fig. 3: *P. foetida* var. *lanuginosa*

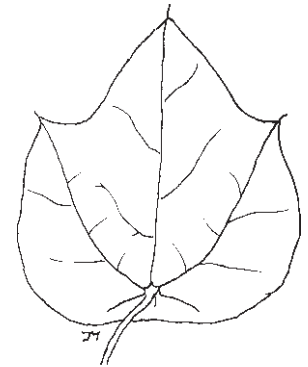


Fig. 4: *P. guatemalensis*

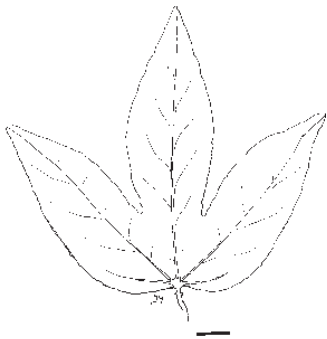


Fig. 5: *P. oerstedii* var. *choconiana*



Fig. 6: *P. adenopoda*

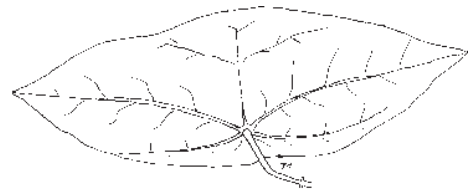


Fig. 7: *P. coriacea*



Fig. 10: *P. pittieri*



Fig. 8: *P. mayarum*

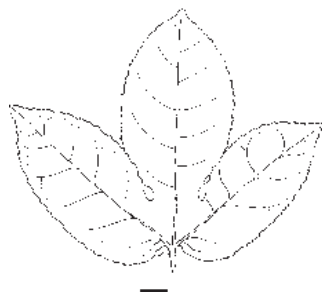


Fig. 9: *P. edulis* var. *flavicarpa*

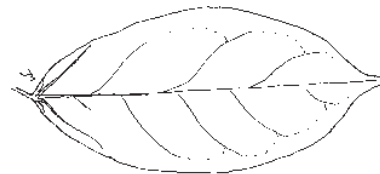


Fig. 11: *P. obovata*

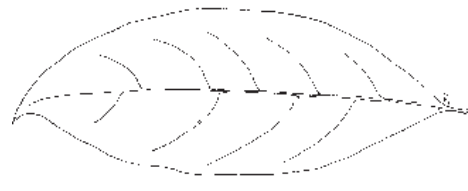


Fig. 12: *P. ambigua*

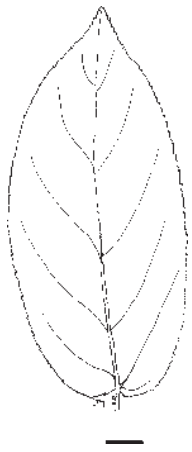


Fig. 13: *P. serratifolia*

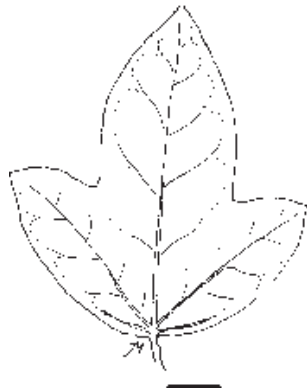


Fig. 14: *P. suberosa*

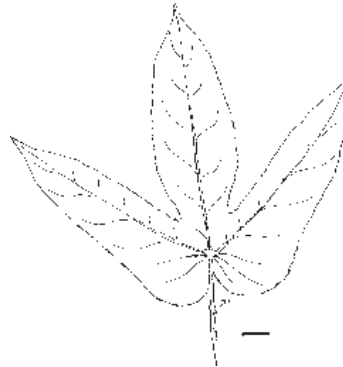


Fig. 15: *P. seemannii*

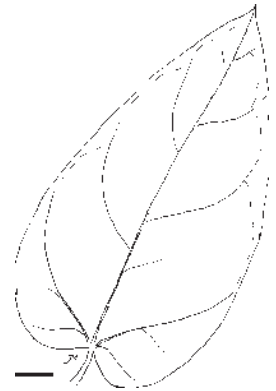


Fig. 17: *P. cobanensis*

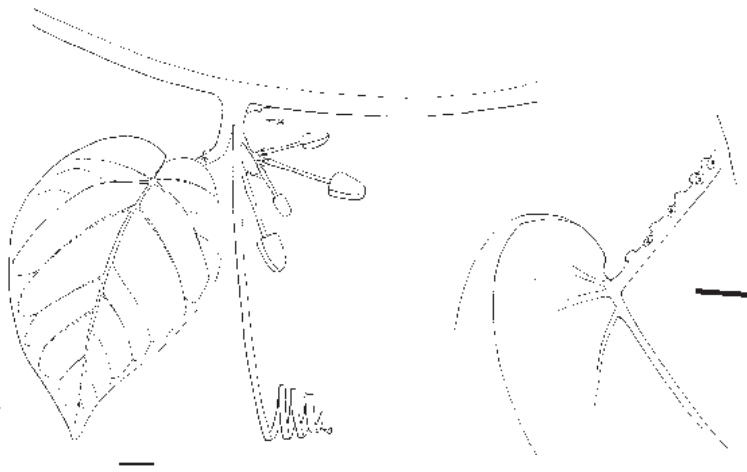


Fig. 16: *P. "lancetillensis"* (sp. nov. ined.)
Left: view of leaf, bud and tendril, Right: detail of petiole glands
(sketches by Tineke Boomsma)



Fig. 18: *P. helleri*

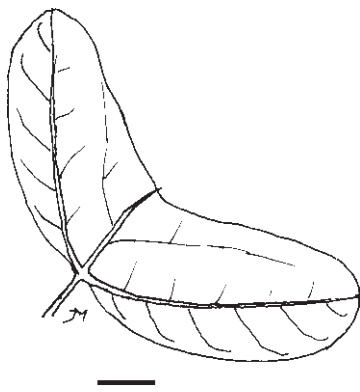


Fig. 19: *P. biflora*

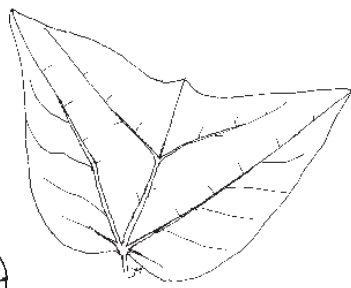


Fig. 20: *P. sexflora*

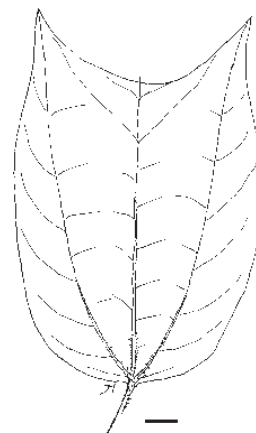


Fig. 21: *P. costaricensis*

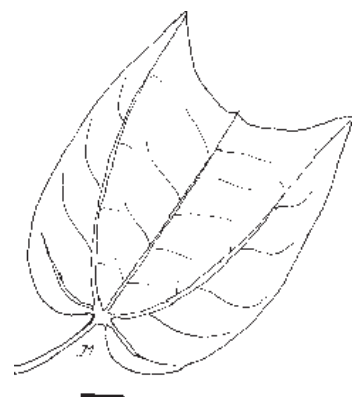


Fig. 22: *P. rovirosae*