

PASSIFLORA TRYPHOSTEMMATOIDES AND ITS ALLIES

by

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ABSTRACT

The status of *Passiflora* subgenus *Tryphostemmatoides* (Harms) Killip is discussed and a key to the species of this group is provided.

INTRODUCTION

Killip (1938) separated the Subgenus *Tryphostemmatoides* (Harms) Killip from the closely related Subgenera *Deidamioides* (Harms) Killip and *Plectostemma* Mast. by a combination of tendril bearing inflorescences, non plicate operculum, and bracts crowded at base of the pedicel (for terminology see Killip 1938 and Jørgensen et al. 1984). In our opinion all species of Subg. *Tryphostemmatoides* have at apex a slightly plicate or at the least rough operculum, just as seen in *Passiflora filipes* or *P. tenella*, both recognized members of Subg. *Plectostemma*. The floral morphology of Subg. *Tryphostemmatoides* does not deviate from the general arrangement in *Plectostemma*. *Tryphostemmatoides* is accordingly reduced to a Section of Subg. *Plectostemma*.

Subg. Deidamioides and Apodogyne Killip are in our opinion very likely to be included in Plectostemma as well, but no material has been studied and no decision is made.

The species P. gracillima and P. tryphostemmatoides were, as indicated by Knapp & Mallet (1984), wrongly equated in Woodson & Schery (1958). On the basis of this and the insufficient key characters in Killip's monograph (1938), plus the description of P. arbelaezii L.Uribe, we have felt that a key, short description and a distribution map for the Section were needed.

Passiflora Subg. Plectostemma Mast.emend P.M. Jørgensen & Holm-Nielsen Sect. Tryphostemmatoides Harms.

Passiflora Sect. Tryphostemmatoides Harms, in Engl. & Prantl, Nat. Pflanzenfam., ed. 2. 21: 500. (1925).

Passiflora Subg. Tryphostemmatoides (Harms) Killip, P. Field. Mus. Nat. Hist., Bot. Ser. 19(1):24-25. (1938).

Type species: Passiflora tryphostemmatoides Harms.

Delicate lianas, glabrous throughout. Stem terete or angular, striate. Stipules 1 mm, setaceous, often deciduous. Petioles with 2-4 sessile or stipitate glands borne at the junction to blade. Inflorescences axillary, with 2 pedicellate flowers, terminating in an often deciduous, minute tendril. Bracteoles setaceous, often deciduous. Calyx patelliform. Corona 1- to 3-seriate. Operculum plicate to slightly plicate, or rough. Nectar ring annular. Limen cupuliform. Ovary glabrous. Seeds reticulate.

Key to Passiflora Subg. Plectostemma Sect. Tryphostemmatoides

- 1a. Limen less than 1.5 mm high. Corona uniseriate. Flower less than 1.7 cm wide. Fruit subglobose 1.8-2.7 x 1.5-2.5 cm. Fig. 1.1. P. tryphostemmatoides
- 1b. Limen more than 1.5 mm high. Corona 1- to triseriate. Flowers more than 1.7 cm wide. Fruit ovoid or fusiform 2.5-6.4 x 1.5-2.4 cm.
 - 2a. Limen closely apressed the androgynophore, margin entire. Corona 1- or biseriate. Peduncle less than 3.5 cm long. Fig. 1.....2. P. gracillima
 - 2b. Limen free, margin denticulate. Corona 2- or triseriate. Peduncle longer than 3.5 cm1. P. arbelaezii

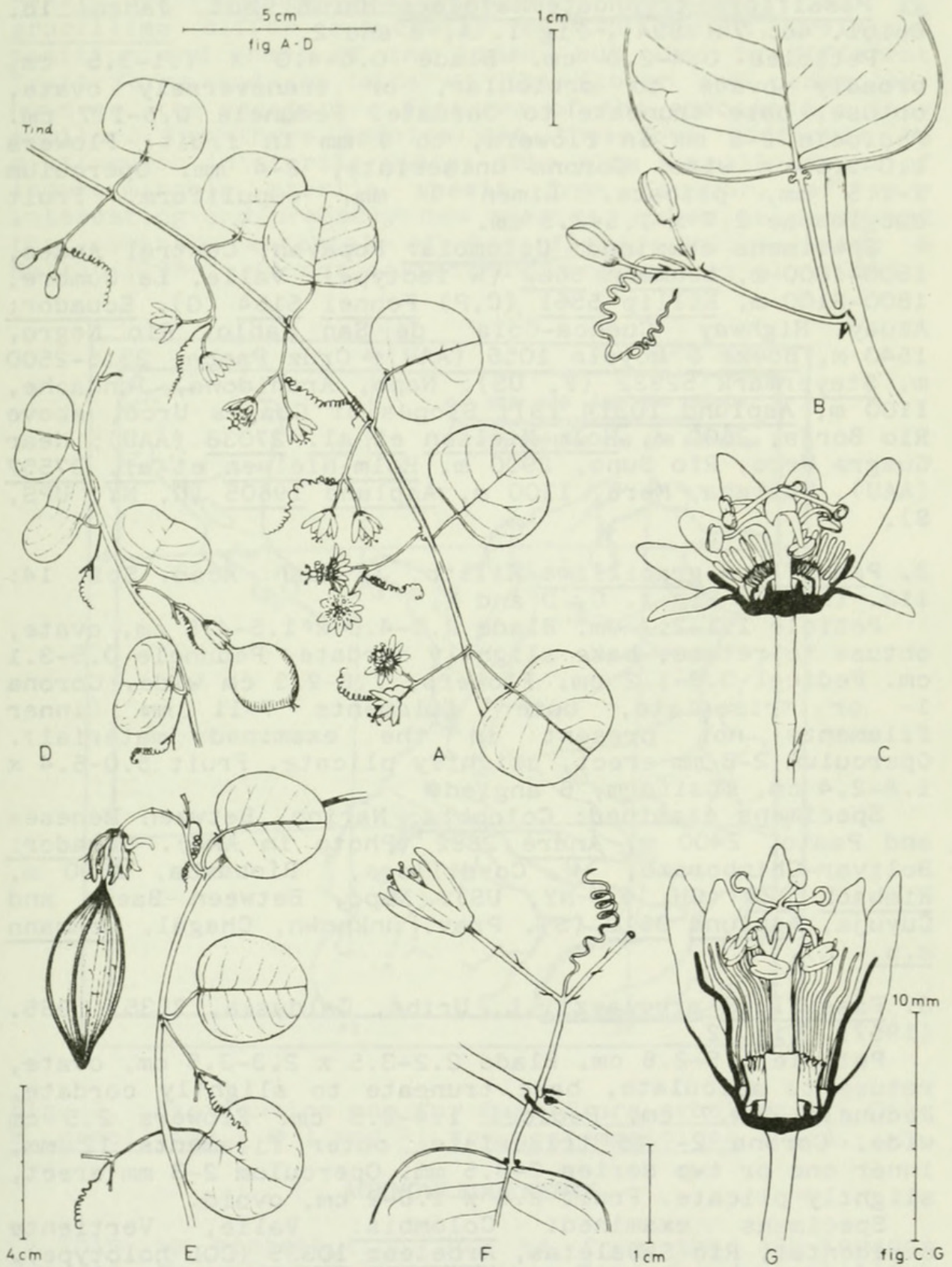


Fig. 1. *Passiflora tryphostemmatoides* A. fruit (Lehmann 5662), B. cross section of flower (Asplund 19605). *P. gracilima* (Rimbach 222) C. fruit, D. cross section of flower.

1. Passiflora tryphostemmatoides Harms, Bot. Jahrb. 18, Beibl. 46: 7 (1894). Fig 1. A, B and 2.

Petioles 0.4-2.0 cm. Blade 0.6-4.0 x 1.1-3.5 cm, broadly ovate to orbicular, or transversely ovate, obtuse, base truncate to cordate. Peduncle 0.5-1.7 cm. Pedicels 2-6 mm in flowers, to 9 mm in fruit. Flowers 1.0-1.6 cm wide. Corona uniseriate, 2-4 mm. Operculum 1-1.5 mm, plicate. Limen 1 mm, cupuliform. Fruit subglobose 2.7 x 1.5-2.5 cm.

Specimens examined: Colombia: Popayan, Central Andes, 1500-1800 m, Lehmann 5662 (K isotype). Valle, La Cumbre, 1800-2100 m, Killip 5561 (C,P) Pennel 5154 (G). Ecuador: Azuay, Highway Cuenca-Cola de San Pablo, Río Negro, 1540 m, Boeke & Loyola 1056 (AAU); Cruz Pamba, 2315-2500 m, Steyermark 52932 (F, US). Napo, Archidona, Jundache, 1100 m, Asplund 10314 (S); Slopes of Guagra Urco, above Río Borja, 2600 m, Holm-Nielsen et al. 27038 (AAU); Near Guagra Urco, Río Suno, 2900 m, Holm-Nielsen et al. 27557 (AAU). Pastaza, Mera, 1100 m, Asplund 19605 (G, NY, UPS, S).

2. Passiflora gracillima Killip, J. Wash. Acad. Sci. 14: 112. (1924). Fig 1. C, D and 2.

Petiole 1.1-2.7 cm. Blade 2.0-4.0 x 1.5-4.5 cm, ovate, obtuse to retuse, base slightly cordate. Peduncle 0.5-3.1 cm. Pedicel 0.8-1.2 cm. Flowers, 1.8-2.3 cm wide. Corona 1- or triseriate, outer filaments 7-11 mm (inner filaments not present in the examined material). Operculum 2-3 mm erect, slightly plicate. Fruit 5.0-6.4 x 1.8-2.4 cm, fusiform, 6 angled.

Specimens examined: Colombia: Narino, Between Meneses and Pasto, 2400 m, André 2882 (Photo in AAU). Ecuador: Bolivar-Chimborazo, W. Cordillera, Ríobamba, 2600 m, Rimbach 222 (GH, F, NY, US). Napo, Between Baeza and Cuyuja, Asplund 9610 (S). Prov. unknown, Chagal, Lehmann s.n. (K).

3. Passiflora arbelaezii L. Uribe, Caldasia, 7(35): 335. (1957). Fig. 2.

Petiole 1.5-2.6 cm. Blade 2.2-3.5 x 2.3-3.5 cm, ovate, retuse to apiculate, base truncate to slightly cordate. Peduncle 4-4.7 cm. Pedicel 1.4-2.5 cm. Flowers 2.5 cm wide. Corona 2- to triseriate, outer filaments 12 mm, inner one or two series 2-3.5 mm. Operculum 2-3 mm erect, slightly plicate. Fruit 2.6 x 1.6-2 cm, ovoid.

Specimens examined: Colombia: Valle, Vertiente occidental, Río Sabaletas, Arbeleaz 10335 (COL holotype). Panama: Chiriqui, Hart 104 (K).

Passiflora tryphostemmatoides, *P. arbelaezii* and *P. gracillima* differ especially in the height, relative position and shape of the limen, but also in different fruit forms and the size of the flower and peduncles, however, the vegetative features of the species are very similar. The three species are therefore difficult to distinguish in sterile state, this plus a small amount of indeterminable sterile sheets from Ecuador, of very interesting and probably new species, makes us recommend that sterile material of *Passiflora*, unlike Knapp & Mallet (1984), is not collected (Jørgensen et al. 1984).

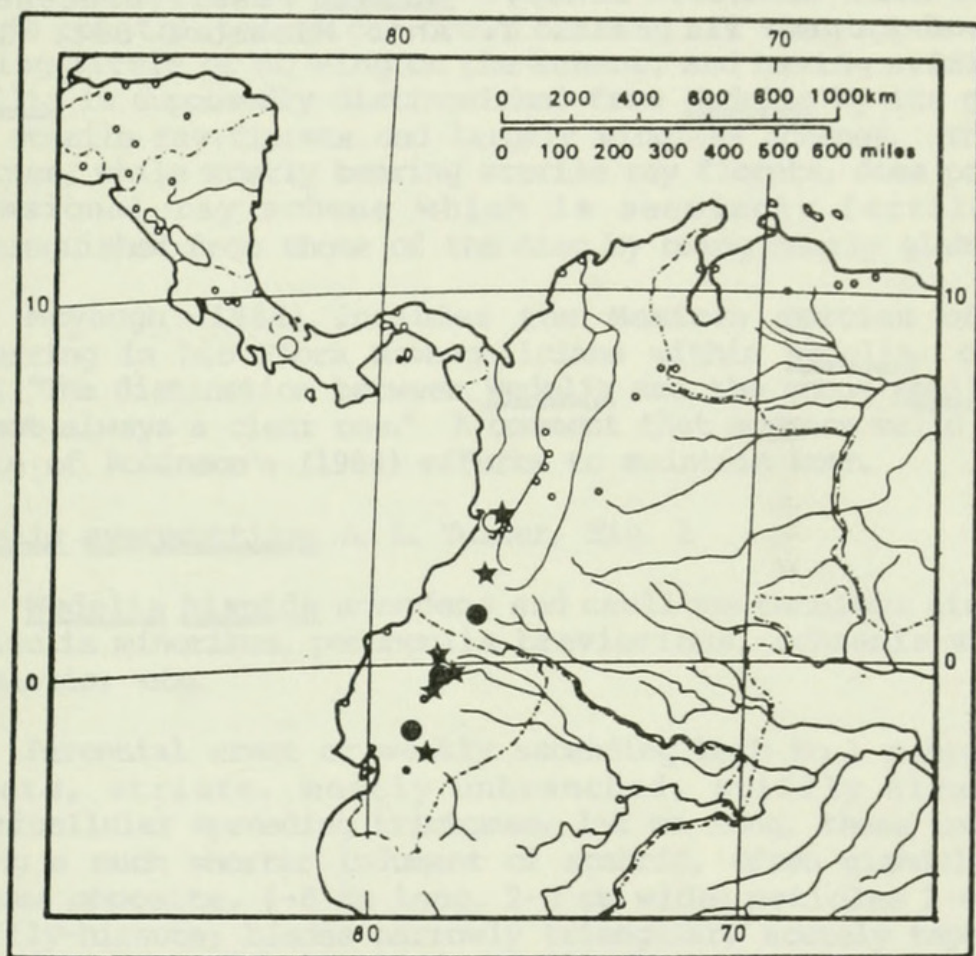


Fig. 2. Distribution map for *Passiflora arbelaezii* (O), *P. gracillima* (●) and *P. tryphostemmatoides* (★).

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