

NOTES ON COLLECTIONS OF TRIPHORA (ORCHIDACEAE) FROM THE AMERICAN TROPICS

MAX E. MEDLEY

Biology Department, University of Louisville
Louisville, Kentucky 40292

ABSTRACT. During herbarium research on the tribe Triphoreae (Orchidaceae) for the Flora de Mexico, Flora Mesoamericana, Flora of the Greater Antilles, and Flora of the Guianas, several new distributional records for species of *Triphora* were found. The new records for these poorly known species are presented.

Herbarium and literature research on the tribe Triphoreae (Orchidaceae) for the Flora de Mexico, Flora Mesoamericana, Flora of the Greater Antilles, and the Flora of the Guianas, has resulted in the discovery of new distributional data for several species of *Triphora* Nutt. These data are presented here in order to make them available for workers in regional floras.

The following herbaria were consulted in this study: AMES, BUS, CAS, DS DUKE, F, FLAS, FSU, FTG, GA, LL, MO, NY, PH, SEL, TENN, TEX, UNC, UNCC, US, and USF. Acronyms for herbaria cited follow Holmgren *et al.* (1981).

Triphora amazonica Schltr., Beih. Bot. Centralbl. 42(2): 75.1925.

Trinidad: St. Joseph, bamboo plantation, terrestrial, fls. pink. *R. E. D. Baker. s.n.* (AMES). The scurfy and furfuraceous scales of the ovary and sepals as described (Schlechter 1925) and illustrated on type drawings (AMES, W) are not present on any of the specimens of this collection. **French Guiana:** Crique Armontabo, 20 km confluent Oyapock. Miniorchidée dressée terrestre, 5-10 cm de haut, feuilles alternes, sessiles, cordiformes, 8-10 mm. 1 fleur terminale a corolle mauve-rose, 8 mm de long. *Y. Veyret s.n.* 8-4-81 (CAY, photograph!). This is the voucher for the brief report by Cremers & Hoff (1992). This species is otherwise known from the state of Amazonas, Brazil (Schlechter 1925, Hoehne 1940) and Guyana (Veyret 1987).

Triphora craigheadii C. A. Luer, Brittonia 18: 243. 1966.

Florida: Citrus Co., Pineola Grottoes, common in and around shaded rock outcrops, Ass[ociated] with *T. rickettii*. *R. & J. Lassiter 111*. 16 Aug. 1967 (AMES); Collier Co., Royal Palm Hammock State Park, deep shade of hammock, in leaf mold with *Habenaria distans*, leaves purple beneath, not in flower. *John Beckner 628a*. 21 July 1964 (FLAS). This spe-

cies was previously known from Hernando and Highland counties, Florida (Luer 1966, 1972).

Triphora foldatsii Carnevali, Ernstia 22: 10. 1984.

Colombia: Santa Marta, damp forest above Chaca, 3500 ft. [1067 m], on root of a tree, flowers white edged with purple and mottled near the base of the petals with green, only two plants found. *H. H. Smith 2528*. 22 Aug. 1898-1899 (NY); Dept. Santander, eastern cordillera, Mesa de Los Santos, alt. 1500 m, terrestrial, leaves purple beneath, fruit green, dense woods. *Killip & Smith 15406*. 11-15 Dec. 1926 (AMES, US). The species is otherwise known from the states of Aragua and Portuguesa in Venezuela (Carnevali 1984).

Triphora gentianoides (Sw.) Ames & Schltr., Orchidaceae 7: 5. 1922. Basionym: *Limodorum gentianoides* Sw., Prodr. Nov. Gen. Sp. 119. 1788.

Florida: Broward Co., Pompano Beach, 0.25 mi. [0.4 km] west of US 1 and 0.25 mi. north of Copans Road, in sandy sterile soil at 1031 NE 23 Place. *C. E. Nauman s. n.* 23 June 1980 (USF); Lee Co., Fort Myers, collected from the wild at 6704 Overlook Drive. *R. T. MacMurtrie s. n.* 8 July 1983 (SEL); Palm Beach Co., Boca Raton, growing in sand in yard at 420 NE 35 St., in shade of coconut trees. *Sauleda et al. 3723*. 2 July 1980 (FLAS, FTG); Pinellas County, St. Petersburg, Valencia Gardens, growing wild in sandy soil. *State Nursery Inspector s. n.* (FLAS). **Guatemala:** Peten, vic[inity] of Lake Yaxha, open woods on Island of Lake Yaxha, plants in cluster on the ground. *B. D. Vanderman 678*. 3 July 1973 (MO). **Honduras:** Cortes, La Lima, yard of house in shade, stems purplish greenish to whitish, not bright. *J. D. Dickson 90*. 21 June 1967 (US). This is the first valid report for Guatemala. See under *T. wagneri*. Previously reported from Collier (McCartney 1986) and Dade (Lakela & Craighead 1965) counties in

Florida, Cuba (Cogniaux 1909), Grand Cayman (Adams 1972), Jamaica (Adams 1972, Fawcett & Rendle 1910), Yucatan in Mexico (Lundell & Lundell 1983), Honduras (Molina 1964, Siegerist 1984), Ecuador (Dunsterville & Garay 1965, Foldats 1969, Liogier 1976, Luer 1972) and Venezuela (Dunsterville & Garay 1965, Foldats 1969). The report from the Dominican Republic (Liogier 1976) is probably referable to *T. miserrima*.

Triphora hassleriana (Cogn.) Schltr., Beih. Bot. Centralbl. 42(2): 76. 1925. Basionym: *Pogonia hassleriana* Cogn., Bull. Soc. Roy. Bot. Belgique 43: 283. 1907.

Mexico: Veracruz, region of San Andreas Tuxtla, near Colonia Popotepec, NW of Santiago Tuxtla, open woods, among roots of *Ficus*. Dressler & Jones 186. 27 Aug. 1953 (AMES). This specimen has only buds and developing capsules but is consistent with the type specimens of *T. hassleriana* and with the type drawings of its synonym *T. lutea* Schlechter. This is the first report from Mexico. It is otherwise known from Ecuador (Dodson & Dodson 1980), Paraguay (Cogniaux 1907, Hoehne 1940, Pabst & Dungs 1975, 1977), and northern Argentina (Correa 1984). The reports of *T. yucatanensis* from Veracruz and Oaxaca (Soto Arenas 1988) in Mexico are based on misidentified specimens and are referable here.

Triphora miserrima (Cogn.) Acuña, Cat. Descript. Orquideas Cubanas 18. 1938. Basionym: *Pogonia miserrima* Cogn., Symb. Ant. Fl. Ind. Occid. 6: 316. 1909.

Dominican Republic: civ. Santo Domingo, Peninsula da Samana, Prov. de Samana, in forest north of Pan de Azucar, ca. 300 m, deep humus, rare and difficult to see, aphylla, planta tota obscure, plumbeo-olivacea. E. L. Ekman s. n. 25 May 1930 (AMES). The specimen can no longer be found but good a photocopy is in my files. The specimen came from S and a duplicate may be located there. The report of *T. gentianoides* from the Dominican Republic (Liogier 1976) is probably referable here. *Triphora miserrima* was previously known only from Cuba (Acuña 1938, Cogniaux 1909, Deitrich 1984a, 1984b, 1985, Leon 1946). See under *T. wagneri*.

Triphora ravenii (L. O. Williams) Garay, Bot. Mus. Leaflet 26: 3. 1978. Basionym: *Pogonia*

ravenii L. O. Williams, Fieldiana Bot. 32: 200. 1970.

Panamá: Cheriquire Province, on trunk of a large tree growing at edge of Rio Escarria, alt. 1500 feet [457 m]. H. P. Butcher 662. 12 Aug. 1966 (F). It is not clear where on the tree trunk the specimen came from but this seems to validate the speculation by Williams (1970) that the species is epiphytic. Previously known only from type collection from Costa Rica (Garay 1978, Williams 1970).

Triphora surinamensis (Lindl.) Britt., Sci. Surv. Porto Rico & Virgin Is. 5: 184. 1924. Basionym: *Pogonia surinamensis* Lindl., London J. Bot. 2: 674. 1843.

Santa Lucia: Morne Ecole District, W of Peten Troumassée, ca. 2000 ft. [610 m], rare in montane rain forest, stem purple, leaves purple beneath, flowers pink. G. R. Proctor 18051. 18 May 1958 (AMES). **Colombia:** Depto. de Valle, near Zabaletas, Cali to Buena Vista, flowers pink-purple. R. L. Dressler s. n., 2 May 1972 (FLAS). According to Dressler (1989 pers. comm.) it was growing in moss on the base of a tree trunk in a dwarf, very wet rain forest in the coastal mountains. The nearest known locality is in the Territory of Amazonas in Venezuela (Foldats 1969). It has previously been reported from Colombia (Garay & Sweet 1974, Liogier 1976) but I am unaware of a supporting voucher. This species has been reported from Jamaica (Adams 1972, Fawcett & Rendle 1910), Puerto Rico (Cogniaux 1909, Britton & Wilson 1924), Guadeloupe (Stehle 1939), Dominica (Hodge 1953), Trinidad (Broadway 1927, Kenny 1988), Guyana (Lindley 1843), Suriname (Pulle 1906), French Guiana (Cremers & Hoff 1992), and the states of Amazonas (Schlechter 1925, as *T. duckei*) and Para (Hoehne 1940) in Brazil. It is also reported from Mexico (Hoehne 1940) but I am unaware of a voucher and I believe the report is in error.

Triphora duckei Schltr., Beih. Bot. Centralbl. 42(2): 75. 1925. syn. nov. The only difference between *T. duckei* and *T. surinamensis* is in the lip. The shape of the lip of *T. surinamensis* is variable and the shape of the lip of *T. duckei* is within the extremes of *T. surinamensis*. I therefore refer *T. duckei* to the synonymy of *T. surinamensis*.

The photograph of *T. surinamensis* (Werkhoven 1986) taken in a Suriname savanna is a leafless, achlorophyllous plant and is not *T. surinamensis* but is *T. wagneri* and her report is referable, in part, to that species. Another

report from a Suriname savanna (Donselaar 1965) is probably also referable to *T. wagneri*.

Triphora trianthophora (Sw.) Rydb. ssp. *trianthophora*, Man. Fl. N. St. Can. 298. 1901. Basionym: *Arethusa trianthophoros* Sw., Kongl. Vetensk. Acad. Nya Handl. 21: 230. 1800.

Mexico: Nuevo Leon and just east of border into Tamaulipas, Sierra Madre Oriental, Dulces Nombres, 25° N, 95.5°–100.5° W, alt. 1690 m. Meyer & Rogers 2825. 20 July 1948 (MO). Other specimens that appear to be this taxon are: **Tamaulipas**, near Frank Harrison's "Rancho del Cielo". Sharp et al. 52162. 28 Aug. 1952 (TENN); **Chihuahua**, in oak-pine woods, Aqua Amarillo, about 5 miles [8 km] northwest of Chintu, 7800 ft. [2377 m] alt. Correll & Gentry 22980. 10 Oct. 1959 (LL, NY); **Baja California Sur**, Campamento de "Palo Estraño" Sierra de la Laguna, Lat. 23° 33' N, Long. 109° 56' W. Alt. 1730 m. Bosque de pino y encino, ladera leve. R. D. C. 301. 9 Sept. 1968 (CAS).

This subspecies was previously known only from eastern North America.

Triphora wagneri Schltr., Repert. Spec. Nov. Regni Veg. 17: 139. 1921.

Mexico: Michoacan, Municipality Tancitaro, in open pine woods in creek bottom, on road from Tancitaro to Apatzingan, without chlorophyll, elev. 5000 ft. [1524 m] W. C. Leavenworth 632. 17 Aug. 1940 (F). **Michoacan**, Sierra de Coalcoman, 32 km SE of Puerto Las Cruces, N of Coalcoman along road to Dos Aguas. Elev. 2195 m, steep slope with *Pinus*, *Quercus*, *Tilia*, and *Arbutus*. Flowers magenta. Breedlove & Anderson 64381. 17 Sept. 1986 (CAS). **Chiapas:** Jitotal Ridge of the northern highlands, ca. 92° 40' W long; 17° 30' N Lat. Municipio of Pueblo Nuevo Solistahuacan, 3 km northwest of Pueblo Nuevo Solistahuacan, on the slopes below Hy. 195 in the vicinity of Clinica Yerba Buena, forest of *Quercus*, *Pinus*, and *Liquidambar*, grassy openings and clearings, common in the forest. Thorne & Lathrop 46108. 7 Oct. 1971 (DS). **Guatemala:** Dept. **Zacapa**, pine covered slopes, Sierra de Las Minas, along trail between Rio Hondo and summit of mountain at Finca Alexandria, alt. 1000–1500 m. J. A. Steyermark 29653. 11 Oct. 1939 (AMES, F). This is the specimen that the report of *T. gentianoides* (Sw.) Lindl. from Guatemala (Ames & Correll 1952) was based on. **El Salvador:** Depto. **La Union**, Volcán Conchagua, en bosque de pinos, terrestre, Winkler

0121, as cited by Hamer (1981). I have not seen the specimen but the illustrations of the plant and the description are clearly referable to *T. wagneri*. The illustrations of the enlarged flowers appear to be adapted from previously published pictures of *T. gentianoides* but they do not represent *T. gentianoides* or *T. wagneri*.

The photograph of *T. surinamensis* from Suriname in Werkhoven (1986) is of an achlorophyllous, leafless plant and is *T. wagneri* rather than *T. surinamensis*. The report of *T. yucatanensis* Ames from Chiapas by Soto Arenas (1988) is based on misidentified specimens and is referable here. *Triphora yucatanensis* is known only from Florida (Medley 1991) and Yucatan (Ames 1922). This species was previously reported from Panama (Schlechter 1921, Williams & Allen 1946) and Ecuador (Dodson & Dodson 1980).

Triphora minima Cogn. was reported from Colombia (Ortiz 1976) based on a specimen: Colombia: Meta, La Marcarina, Sabanas de S. Juan de Arama, 500 m [1640 ft.]. J.M. Idrobo 2569. 14 April, 1957 (COL-not seen). The specimen was annotated by L. A. Garay but *Triphora minima* Cogn. is not a valid name. According to P. Ortiz (1988 pers. comm.) the specimen agrees with the type drawings of *T. miserrima* and the annotation may possibly have been a mistake for that taxon. The drawing (Ortiz 1976) also strongly resembles *T. wagneri*. *T. wagneri* is known from Ecuador and Venezuela while *T. miserrima* is otherwise known only from the Greater Antilles. I believe the specimen may be referable to *T. wagneri*.

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