A NEW SPECIES OF STRYCHNOS FROM RIO OIAPOQUE

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STRYCHNOS EUGENIAEFOLIA Monachino, sp. nov.

Arbuscula scandens, partis vegetatis omnino glabris, ramis cinereis, petiolis ca. 2-3 cm. longis, laminis foliorum ovatis usque ad elliptico-ovatis, ca. 4-6.5 cm. longis, 2-3.5 cm. latis, ad basin rotundato-cuneatis, ad apicem acuminatis, triplinervis, reticulo venularum undique modice prominente; fructis sphaericis magnis ca. 8 cm. diam., seminibus numerosis ca. 2.5 cm. longis, 1.8 cm. latis.

Vine, the vegetative parts completely glabrous, the branches cinereous; petioles ca. 2-3 mm. long; blades ovate to elliptic-ovate, ca. 4-6.5 cm. long, 2-3.5 cm. broad, broadly or roundly cuneate at base, acuminate at apex, little shining above, somewhat paler beneath, drying greyish with some tint of yellow, subcoriaceous, 3-plinerved and also with a pair of faint marginal nerves, the inner pair opposite and diverging near base of blade, the principal lateral nerves (secondaries) ascending (making ca. 60 degree angle with the midrib at middle of blade), the reticulation moderately prominent on both surfaces. Inflorescence and flowers lacking. Fruit globose, very large, (4.5-) 8 cm. diam., shell ca. 3 mm. thick, seeds numerous, flattened, irregular, ca. 2.5 cm. long, 1.8 cm. broad, the surface lightly roughened, glabrous, cinereous, the testa crustaceous.

Type. - R. L. Fróes 25844, Brazil, Territorio do Amapá, Rio Oiapoque, entre Igarapé Moncherri e Igarapé Nataia, floresta alta, terra firme, baixa, 4-II-1950, cipó de 9 cm. (Matured leafy stem and two separate fruits, deposited at The New York Botanical Garden.) The river has variant spelling: Oyapok, Oyapock, Oyapoc, Oiapock; it is on the boundary of French Guiana and northern Brazil.

Although the flowers of S. eugeniaefolia are not known and consequently its alliance is not revealed, it is easily distinguished from all the American species of Strychnos described, by its small ovate leaves and the total lack of puberulence or any kind of indumentum on its branchlets, petioles and leaf-blades. Verruculosity and microscopic (atomic) dots are absent from the leaves. Tendrils, but not spines, have been observed on this vine.

The association of large fruits with small leaves recalls S. pachycarpa. According to A. Ducke, the fruit resembles that of S. Blackii.

Dr. Ducke informed me (letter of March 30, 1952) that the species was collected twice by Fróes and later also by G. A. Black. The fruits were obtained on the first collection. R. Fróes has made attempts to locate flowers of the plant, but without success.

Sr. Fróes has provided me with an illustration showing a branching stem with foliage and also a detached fruit. It is from this sketch I infer that the plant has tendrils.

Since the original monograph in 1942, six new species of Strychnos have been proposed: pachycarpa Ducke (1945), Duckei Kruk. & Monach. (1946), Krukoffiana Ducke (1947), Torresiana Kruk. & Monach. (1948), Blackii Ducke (1950), Froesii Ducke (1951). In addition, three old species have been reinstated. Only one, S. hachensis Karsten (nomen confusum), was deleted in 1947 from our list of valid species. At least one other, S. Barnhartiana Krukoff, has been questioned; S. Smithiana Krukoff also needs clarification.

S. Torresiana, originally described from sterile material, falls in the intricate complex involving S. rubiginosa and relatives in the section Breviflorae; this has been ascertained by recent collection of its flowers. Ducke (1951) thought he had the fruit of the species from Rio de Janeiro, demonstrating an easy distinction between it and other members of the Breviflorae. But later (letter of Oct. 10, 1952) he visited the station where the fruit had been collected and found S. trinervis and S. Torresiana climbing on the same tree, and he verified that the fruit described and depicted in the Boletim was of S. trinervis.

S. Froesii very closely resembles S. javariensis vegetatively, judging from a sterile specimen collected by Ducke at Manaus ("No. 6," Aug. 8, 1941) and deposited at The New York Botanical Garden. The other Garden specimen, cited by Ducke as belonging to a young plant of S. Froesii (Luiz Emygdio de Mello Filho 567), is like S. hirsutus. S. javariensis has terminal flowers (Ducke 1770), whereas the inflorescence of S. Froesii was described as axillary. Ducke (1950) wrote that the fruits of S. javariensis are perfectly like those of S. diaboli, frequently a little larger. The fruit-shell of S. diaboli is fragile and thin, 1 mm. or less thick, whereas that of S. Froesii is described as hard-woody and very thick, 5-7 mm. thick. Experiments made at the Instituto Agronômico do Norte indicate that the extract of the bark of young plants of S. Froesii is more poisonous than that of any other species of Strychnos studied there.

Ducke has discovered that the fruits are very

important in the diagnoses of certain species of Strychnos. This is particularly so in the section Breviflorae, in which the flowers are nearly identical in many species. S. brachistantha and S. nigricans have nearly identical flowers and also nearly identical foliage, and it has been hinted that they may be conspecific. The former was believed confined to the northern region, Mexico and Central America to northern South America. Collections from Brazil were reported as S. nigricans, principally because of geographical considerations; but the safety of this criterion has been exploded. Ducke examined fruiting specimens resembling S. nigricans in every respect except for the very different fruits, collected in São Paulo and Minas by Dr. Kuhlmann and his nephew. The fruits were incomparably larger, hard-shelled, and contained many seeds, different from those of S. nigricans. Believing at first he had a new species, Ducke did not rest, but with his customary meticulousness borrowed for comparison flowering specimens, including an isotype, and a fruit of Central American S. brachistantha. It seemed hardly admissible that the same species could grow in two widely separated areas with very different climates (in the plateau of São Paulo and Minas the mean annual temperature is 17 to 18 degrees Centigrade, minima sometimes below zero). Yet Ducke found the two morphologically not separable (letter of Sept. 29, 1951). On basis of this discovery, S. brachistantha must be acknowledged the most wide-spread Strychnos in America.

The foregoing discussion, then, would suggest that expansion has been the general trend in Strychnos since 1942. Only one species has been submerged; of the six recently described, I would hold S. Torresiana under suspicion, but little reduction is otherwise anticipated. One can, thus, with some confidence a priori accept novelties in the genus if proposed after reasonable study. S. eugeniaefolia, however, needs no such circumstantial support, for it is so different from other species that not even affinity can be suggested.

Fróes and Ducke communicate that a second new species from Rio Oiapoque was recently discovered by Fróes, who is describing it in the Boletim of I. A. N. Its specific epithet will be based on the name of the river. I rely completely on information received from Fróes and Ducke that S. eugeniaefolia and Fróes' new species are surely not the same.

The chief studies on American Strychnos since the monograph in 1942 have been conducted by Dr. Ducke. True that a score of papers on the genus has

been written by the authors of the monograph, but these supplements and regional recapitulations hold a distant second place to the discoveries and explorations by Ducke and Fróes. Because of the superior work now being done by these botanists, I desired S. eugeniaefolia, which I first announced to be a new species in 1950 on basis of leafy material only, to be published by them. But they encouraged me to describe it myself, and to help the diagnosis, Rubens Rodriques Lima on the recommendation of Ducke and Fróes dispatched to me, late in 1952, two fruits of the species, without which I would not have submitted the present article.

REFERENCES TO PUBLICATIONS BY A. DUCKE

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