A New Species of *Tapirira* (Anacardiaceae) from Ecuador

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ABSTRACT. *Tapirira rubrinervis* Barfod, sp. nov., is described from the coastal plain of Ecuador. It is easily distinguished from its congeners by the few-foliate leaves, the obovate, unequally sized leaflets, and the striking red venation of the lower surfaces of the leaflets. The variation in leaf morphology and phenology is discussed.

RESUMEN. Se describe una especie nueva, *Tapirira rubrinervis* Barfod, de la región costera de Ecuador. Se distingue fácilmente de sus congéneres por tener las hojas con pocos foliolos, los foliolos desiguales y obovados, con llamativa nervadura roja del envés. Asimismo, se comenta la variación en la morfología de las hojas y su fenología.

A recent revision of Ecuadorian Anacardiaceae for the *Catalogue of the Vascular Plants of Ecuador* (Jørgensen & León-Yánez, 1999) revealed a new species of *Tapirira*. Barfod (1987) described only two species of *Tapirira* in *Flora of Ecuador: Tapirira guianensis* Aublet, with two subspecies (Barfod, 1986), and *T. peckoltiana* Engler, which should be correctly named *T. obtusa* (Bentham) J. D. Mitchell (Mitchell, 1993). Since this flora treatment was published, *T. guianensis* has been recorded several times west of the Andes in the provinces of Esmeraldas and Carchi, Ecuador. It has been found on the northern coastal plain along the upper tributaries of the Cayapas and Mira rivers. In the Cayapas river system, it is locally known as “sajo de arriba,” or “sajo chío.” “Sajo” is the name for *Campnosperma panamense* Standley, a rare simple-leaved species of Anacardiaceae growing near Borbón (Little & Dixon, 1969).

In 1993, I received for the first time material of an undescribed species of *Tapirira* growing along the Mira River and its tributaries in the province of Carchi, where it is locally known as “cuilde.” The congener *T. guianensis* also occurs in that area. It is called “cuilde blanco.” There was little doubt that the new material represented a separate species, and it is described here based on nine collections. Although it has several very distinctive features, it is probably most closely related to *Tapirira guianensis*. Like this species it has chartaceous leaflets that are inconspicuously hairy beneath or glabrous. The flowers are typical for the genus.

KEY TO ECUADORIAN SPECIES OF *TAPIRIRA*

1a. Leaves (1—)3—5 foliolate, obovate, rounded apically, glabrous, venation bright red beneath . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
Figure 1. *Tapirira rubrineris* Barfod. —A. Flowering branch. —B. Distal floral branch. —C. Flower at staminate anthesis. —D. Longitudinal section of C. —E. Infructescence. (A–D based on van der Werff *et al.* 1971; E based on Tipaz *et al.* 1339.)
Leaf morphology. The leaves are few-foliolate, typically trifoliolate. From the material, it appears that trees with 5-foliolate leaves are common. One specimen (Tipaz et al. 1031) has simple (unifoliolate) leaves, at least toward the tips of the inflorescence-bearing branches.

Phenology. The sexual expression within Tapirira needs to be studied in detail before any conclusions can be drawn. As interpreted here, T. rubrinervis is functionally dioecious like other species of Tapirira. However, most of the material examined is in bud and difficult to determine to sex. Fully open flowers with reflexed petals and unequal stamens, to 2 mm long, were only found in Quela 647 and van der Werff et al. 11971. The anthers are past dehiscence, and a large proportion of the pollen grains has germinated.

In other specimens, e.g., Aulestia 1257, Tipaz et al. 1339, and Mendez et al. 400, flowers have just opened. These are generally smaller than the fully opened flowers described above, with petals 1.2–1.3 mm long and stamens of equal length. The filaments are only 0.3–0.4 mm long and the anthers rounded. These are interpreted as functionally staminate flowers at early anthesis. Aberrant pollen grains were not observed, and the gynoecium was very similar to that of the long-staminate flowers, except for being a little smaller. It should be noted that in the material examined, I did not see pistillate flowers with developing, fertilized gynoecia.

Fruiting material of Tapirira rubrinervis was long past anthesis and gave few indications of the morphology of the assumed pistillate flower. Only the 0.8–1.0-mm-long, wilted stamens suggest that the flowers are different in proportions from their staminate homologues.

Based on this limited evidence, it cannot be excluded that Tapirira rubrinervis has hermaphroditic flowers with sexual expression separated temporally but not spatially. This seems unlikely, since all other species of Tapirira are known as functionally dioecious or polygamousdioecious.

Common name. “Sajo de arriba” (Esmeraldas), “Cuilde” (Carchi).

Use. Fibers are extracted from this species according to Quela et al. 267. What they are used for is not specified, however. The fruits are eaten by several birds in the area.

Distribution. Tapirira rubrinervis is only known from the province of Carchi in Ecuador.

Paratypes. ECUADOR. Carchi: border area between Prov. Carchi and Esmeraldas, km 20 Lita–Alto Tambo road, 700 m, 23 June 1991 (fr), H. van der Werff, B. Gray & G. Tipaz 11094 (AAU, MO, QCA, QCNE); Parroquia Tobar Donoso, Reserva indígena Awá, bosque primario noreste de la casa comun, cerca de Río Botella, 73°24'W, 1°30'N, 650–1000 m, 19–23 June 1992 (fr), G. Tipaz, J. Zuleta & N. Guanga 1359 (AAU, MO, QCA, QCNE); Parroquia Chical, Gualpi Medio, Reserva Indígena...
gena Awá, Sendero a San Marcos al norte de la casa communal, 23–27 May 1992 (fl. bud and early anthesis), G. Tipaz, C. Quelal & G. Cantincuz 1031 (AAU, MO, QCA, QCNE); Chical, Reserva etnica Awá–Canumbí, 78°16’W, 0°53’N, 1700–1900 m, 20–29 July 1991 (fr), C. Quelal, C. Aulestia & F. Nastacuaz 267 (AAU, MO, QCA, QCNE); Comunidad de Gualpi Medio, 78°16’W, 1°1’N, 900 m, 21 May 1992 (fl. staminate anthesis), C. Quelal, G. Tipaz & J. Taicuz 647 (AAU, MO, QCA, QCNE); San Marcos de los Coaqueres and surrounding perhumid forest on trail Chical–Tobar Donoso, 78°16’W, 1°6’N, 800 m, 8 Feb. 1985 (fl. bud), B. Öllgaard, J. Korning, A. Thomsen & J. Illeung 57652 (AAU, MO, QCA); Parroquia Alto Tambo, la Unión, Reserva etnica Awá, 78°26’W, 0°52’N, 250 m 22 Mar. 1993 (fl. bud and early anthesis), C. Aulestia & M. Aulestia 1259 (AAU, MO, NY, QCA, QCNE); Parroquia el Chical, San Marcos, 78°14’W, 01°06’N, 900–1100 m, 20–30 Apr. 1993 (fl. bud and early anthesis), P. Méndez, J. Aulestia & J. Pai 400 (AAU, MO, NY, QCA, QCNE).

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