TWO INNOVATIONS IN MEXICAN MALVACEAE

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ABSTRACT

Two innovations in the nomenclature of Mexican Malvaceae are proposed. First, *Ayenia sidifolia* is reestablished as the correct name for the species currently known as *A. mexicana*: this latter name was incorrectly proposed as a replacement name in *Ayenia* for *Cybiostigma sidifolium*. Second, the monotypic genus *Veeresia* endemic to Mexico is placed in synonymy under the Asian genus *Reevesia,* and the new combination **Reevesia clarkii** is proposed.

Key Words: Malvaceae, Mexico, *Ayenia*, *Cybiostigma*, *Reevesia*, *Veeresia*

RESUMEN

Se proponen dos cambios en la nomenclatura de las Malvaceae mexicanas. En primer lugar, *Ayenia sidifolia* se restablece como el nombre correcto para la especie actualmente conocida como *A. mexicana*: este último nombre fue propuesto incorrectamente como un nombre de reemplazo en *Ayenia* para *Cybiostigma sidifolium*. En segundo lugar, el género monotípico *Veeresia* endémico de México se pone en sinonimia bajo el género asiático *Reevesia* y se propone la nueva combinación **Reevesia clarkii.**

Palabras Claves: Malvaceae, Mexico, *Ayenia*, *Cybiostigma*, *Reevesia*, *Veeresia*

The recent publication of a checklist of the native vascular plants of Mexico (Villaseñor 2016) has prompted me to propose two changes in the nomenclature of Mexican Malvaceae. The first innovation emanates from a review of the American taxa of vascular plants described by Loefling (Dorr & Wiersema 2010a, b) and especially several of his species of *Ayenia* L. The second innovation is one that came to my attention in the early 1980s, but was set aside then out of deference to a student who undertook a project to revise the genus *Reevesia* Lindl. (Solheim 1991).

Reestablishment of *Ayenia sidifolia* (Malvaceae: Byttnerioideae)

When Turczaninow (1863) synonymized *Cybiostigma* Turcz. with *Ayenia* he proposed the replacement name *A. mexicana* Turcz. because he thought that *A. sidifolia* Loefl. ex DC. prevented him from making a new combination based on *C. sidifolium* Turcz. However, *A. sidifolia* is a nomen nudum; an unintentional orthographic corruption of the earlier *A. sidiformis* Loefl., nom. rej. There was therefore no impediment to making a combination based on *C. sidifolium* and the correct name for this species in the genus *Ayenia* as a consequence is *A. sidifolia* (Turcz.) Hemsl.

Standley (1923) treated *Ayenia mexicana* as a doubtful species, but it is not clear why he did this. Cristóbal (1960, 1961), who revised the genus *Ayenia*, adopted *A. mexicana* and her choice, albeit incorrect, has been followed in the few floras that treat this species (Fryxell 2001; Machuca-Machuca 2015) as well as in the checklist of the vascular flora of Mexico (Villaseñor 2016).

Ayenia sidifolia (Turcz.) Hemsl., Biol. Cent.-Amer., Bot. 1(2):135. 1879 (as "*sidæfolia*"), non *Ayenia sidiformis* Loefl., Iter. Hispan. 257. 1758 (as "*Sidaeformis*"), nom. rej. *Cybiostigma sidifolium* Turcz., Bull. Soc. Imp. Naturalistes Moscou 25(3):155. 1852. *Ayenia mexicana* Turcz., Bull. Soc. Imp. Naturalistes Moscou 36(2):569. 1863, nom. superfl. Type: Mexico. Oaxaca: savannah near the Pacific, 3000 ft, 1840 (fl), *H. Galeotti 326* (lectotype, as "tipo" designated by Cristóbal 1960: G [G00358304 as image!]; isolectotypes: BR [BR0000005423101 as image!], K [K000543778]!, K [K000543779]!, KW [KW001000156 as image!], P [P02286136 as image!]).

Ayenia nelsonii Rose, Contr. U.S. Natl. Herb. 8(4):321. 1905 (as "*nelsoni*"). Type: Mexico. Chiapas: roadside between San Ricardo and Ocozantla, 1600–3300 ft, 18 Aug 1895 (fl), *E.W. Nelson 2982* (holotype: US [US000102169]!).

Distribution.—This species occurs in central, western, and southern Mexico and adjacent Guatemala; 400–1850 m. Its precise range needs clarification; in particular the state records from the Yucatán Peninsula cited by Villaseñor (2016) are suspect and need to be verified.

Representative specimens examined: **MEXICO. Chiapas:** Mpio. Osumacinta: steep canon between Soyalo and La Bombana on road to Chicoasen, 10 km WNW of Soyalo, 7 Aug 1981 (fl), *D.E. Breedlove 51986* (US); Hacienda Monserrate, Sep 1923 (fl), *C.A. Purpus 9228* (MO, US). **Guerrero:** Mpio. Apango: Tlamamacan, 17°54'48", 099°31'50"W, 1 Sep 2005 (fl), *J. Amith et al. 669* (US); Mpio. Tepecoacuilco de Trujano: Cerca de Iguala, en Valerio Trujano, 30 Aug 1960 (fl), *C. Cristóbal 601* (MO); Coyuco, Jaripo, 5 Nov 1934 (fr), *G.B. Hinton 6928* (K). Near Iguala, 3500 ft, 11 Oct 1900 (fl, fr), *C.G. Pringle 9254* (MO, US); bluffs of Balsas River, 2000 ft, 27 Sep 1905 (fl), *C.G. Pringle 10070* (K, MO, P [P06697391 as image], US(2)). **México:** District of Temascaltepec, Chorrera, 15 Oct 1932 (fr), *G.B. Hinton 2193* (ASU [ASU0049915 as image], DES [DES00005210 as image], GBH [as image], US).

A new combination in *Reevesia* (Malvaceae: Helicteroideae)

When the monotypic American genus *Veeresia* Monach. & Moldenke was described, its authors (Monachino & Moldenke in Monachino 1940) recognized that it was closely related to the Asian genus *Reevesia*. They thought their new genus differed from *Reevesia* principally in the presence of staminodes. Solheim (1987, 1991) synonymized the two genera because this principal differentiating character is not supported; both genera have minute tooth-like staminodes at the summit of the anther column. Subsequently, Terada & Suzuki (1998), Pire & Cristóbal (2001), Bayer (2003), and Tang et al. (2007) have considered these two genera to be synonymous. The failure to formally make this synonymy explicit by transferring *Veeresia clarkii* Monach. & Moldenke to *Reevesia* muddles discussions about relationships between the floras of eastern Asia and North America (see e.g., Cristóbal 1987; Manchester et al. 2009) and about the phylogenetic relationships of fossil woods (Terada & Suzuki 1998; Kvaček 2006; Jeong et al. 2009; Manchester et al. 2006; Lim et al. 2010; Li et al. 2015).

Reevesia clarkii (Monach. & Moldenke) Solheim ex Dorr, comb. nov. (**Fig. 1**). *Veeresia clarkii* Monach. & Moldenke, Bull. Torrey Bot. Club 67:621. 1940 (as "*Clarkii*"). Type: Mexico. Hidalgo: mountainsides N of Chapahuacan, 8000 ft, 2 Jul 1935 (fl), *O.M. Clark 7401* (holotype: NY [NY00222433]!; isotypes: MO [MO-194628]!, NY [NY00023376]!).

Distribution.—Endemic to Mexico where it is found in the mountains of Hidalgo and Querétaro; 800–1300 m. A Guatemalan record (Parker 2008, as "*Veeresia clarkii*") is not vouchered and cannot be verified. Several Nicaraguan records (Cristóbal 2001, as "*Veeresia clarkii*") probably represent a distinct species of *Reevesia* (Solheim, 1991).

Common names.—Aquiche, conote [sic], jonote, and jonote amargoso.

Representative specimens examined: **MEXICO. Hidalgo.** Mpio. Chapulhuacan: N of Chapahuacan, 2 Jul 1935, *O.M. Clark 2212* (UNM [UNM00035 as image]); 2 km N of Chapulhuacan along trail to transmission tower W of road from Chapulhuacan to Hacienda de Cahuazas, ca. 1.5 km E of Hwy 85, ca. 17 km SW of Tamazunchale, S.L.P., 21°10'N, 098°53'W, 22 Jun 1986, *G.E. Schatz 1200* (MO); 2 km N of Chapulhuacan around trail to transmission tower W of road from Chapulhuacan to Hacienda de Cahuazas, ca. 1.5 km E of Mexico Highway 85, ca. 14 km SW of Tamazunchale, S.L.P., 21°10'N, 098°53'W, 7 Jul 1984 (fl), *S.L. Solheim 1765* (BR [BR0000005422852 as image], K, MO, NY, P [P02286062 as image], US); 2 km N of Chapulhuacan, near transmission tower W of road to Cahuazas, ca. 1.5 km E of Mex. Hwy 85, 14 km SW of Tamazunchale, 21°10'N, 098°53'W, 25 Oct 1986 (fr), *S.L. Solheim 2067* (MO, NY(2), US(2)). **Querétaro:** Mpio. Jalpan: 3–4 km al Norte de La Parada, 28 Jun 1991 (fl), *B. Servín 1144* (MO, US); 5–6 km al Norte de La Parada, 19 Sep 1991 (fr), *B. Servín 1337* (US); Mpio. Landa: Al W de El Humo, 23 Jul 1991 (fl), *E. Carranza 3295* (US); 2 km al Norte de Neblinas, 29 Sep 1988 (fr), *H. Rubio 183* (US); Rancho Nuevo, 2 km al Sureste de San Onofre, 7 Jul 1989 (fl), *H. Rubio 875* (US); 1 km al Sureste de San Onofre, 17 Jun 1991 (fl), *H. Rubio 2435* (US); 1.5 km al Noroeste de San Onofre, 30 Jun 1991 (fl), *H. Rubio 2444* (US); 1 km al Noroeste de San Onofre, 3 Aug 1991 (im fr), *H. Rubio 2522* (US); 1 km al Poniente de El Humo, 19 Aug 1991 (fr), *H. Rubio 2557* (US); 10 km al NE de Agua Zarga, sobre el camino a Neblinas, 23 Jun 1988 (fl), *J. Rzedowski 46826* (MO, US).

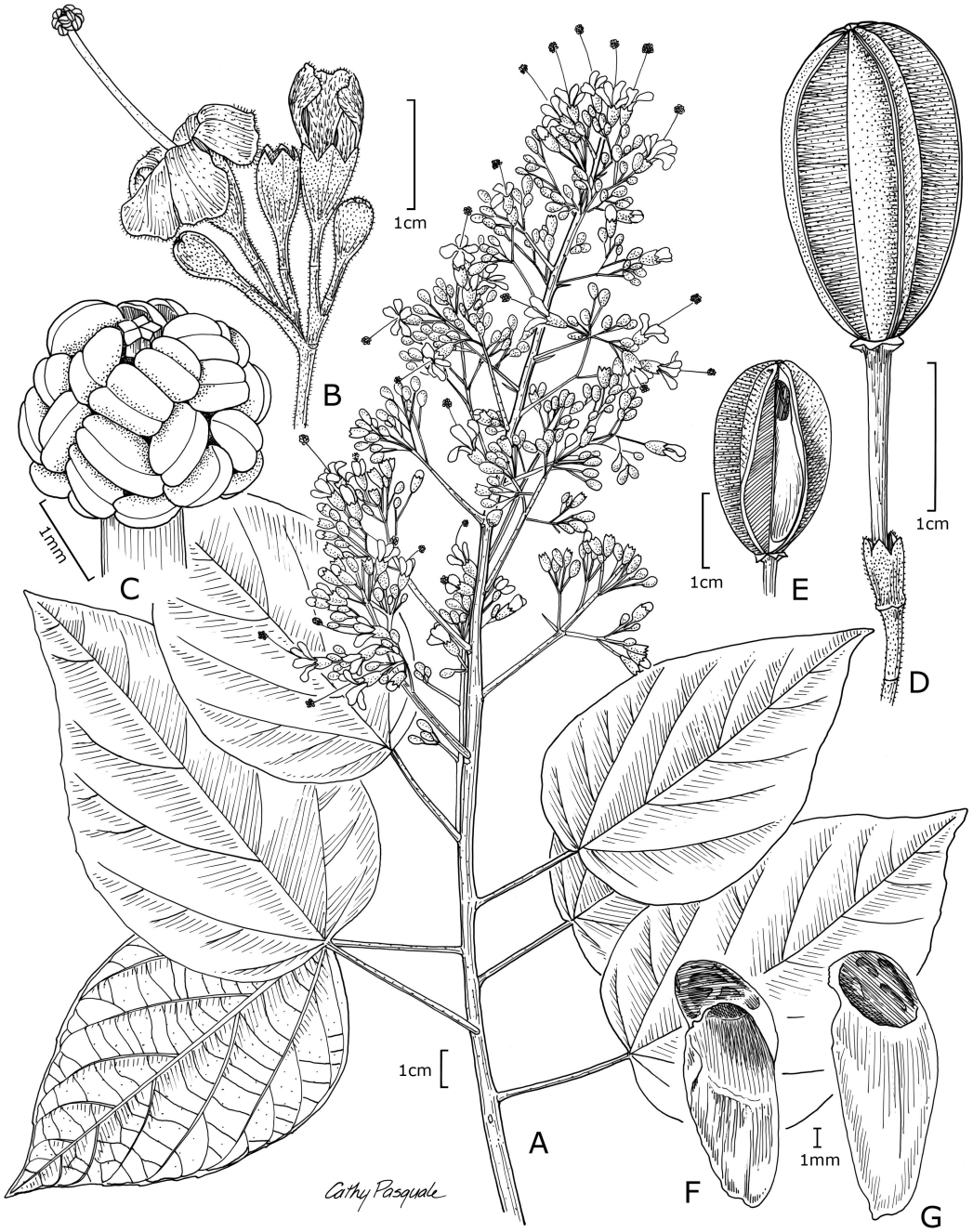

Fig. 1. *Reevesia clarkii*. **A.** Habit. **B.** Flower at anthesis and floral buds. **C.** Anthers clustered at apex of staminal column; 5-lobed stigma visible in center. **D.** Fruit. **E.** Fruit with one locule open to show the apical attachment of a seed. **F, G.** Pair of seeds showing development of the wings. (A, C, *Servín 1144*; B, *Rubio 2444*; D–G, *Solheim 2067*. Illustration by C. Pasquale).

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