

A NEW DURANTA (VERBENACEAE) FROM HISPANIOLA

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Judd, Walter S. (Department of Botany, University of Florida, Gainesville, FL 32611), Roger W. Sanders (Fairchild Tropical Garden, 11935 Old Cutler Rd., Miami, FL 33156). A new *Duranta* (Verbenaceae) from Hispaniola. *Moscosoa* 4: 217-221. 1986. *Duranta arida* Britton & Wilson subsp. *serpentina* Sanders & Judd is described from Pic la Selle in the Massif de la Selle of Haiti and is compared with its close relatives. The flora of the Pic la Selle region is discussed briefly.

Una nueva *Duranta* (Verbenaceae) de la isla Española por Walter S. Judd y Roger W. Sanders. La *Duranta arida* subsp. *serpentina* se describe como un taxon nuevo para la ciencia. Es nativa a Pic La Selle, Massif de la Selle, Haití. Se describe brevemente la flora de Pic La Selle.

The genus *Duranta* L. (Verbenaceae: Lantaneae) consists of ca. 17 species ranging from Florida and Texas south to Argentina and Brazil; it is characterized by eight-loculed ovaries and by fruiting calyces that enclose the mature fruits (Sanders, 1984). Species of this group are quite showy due to their bluish purple flowers and fleshy, bright yellow-orange fruits. Previously described taxa occurring in Hispaniola include *D. arida* Britton and Wilson and *D. erecta* L. (usually referred to as *D. repens* L., but see discussion in Bromley, 1984).

In May of 1984 one of us (W. Judd) collected in the Massif de la Selle and Massif de la Hotte, Haiti, as part of a biogeophysical inventory of two proposed Haitian national parks conducted by the Florida State Museum (Judd, manuscript). Fieldwork in the Pic la Selle region (in the Massif de la Selle) resulted in the discovery of an undescribed subspecies of *Duranta arida*, apparently endemic to the high elevations of the Massif de la Selle.

***Duranta arida* Britton & Wilson subsp. *serpentina* Sanders & Judd, subsp. nov., Fig. 1.** TYPE: HAITI. Departement de L'Ouest: Massif de la Selle, ridges to the west and southwest of Pic la Selle, ca. 2300-2550 m alt., open forest of *Pinus occidentalis* and *Agave antillarum*, 21 May 1984, W. S. Judd 4931 (holotype: FLAS; isotype: JBSD).

Differt a *Duranta arida* ssp. *arida* habitu prostrato serpentino, foliis parvioribus rotundioribus validius revolutis parce pubescentibus emarginatisque, calyce fructificanti apice aperto, fructu non perfecte includenti.

Prostrate shrub; the branches 2-3 m long, flexuous, trailing over substrate, infrequently branched, distally puberulent, to 8 cm tall; internodes short, 1-1.5 cm long. Thorns mostly ternate, spiniform, 7-15 mm long with a single usually prominent node in distal half, subtended by persistent cauline leaf or by whorl of leaves on shortshoot. Leaves mostly 5-9 mm long, 3.5-7 mm wide, shorter than adjacent thorns; petioles 1-2 mm long, puberulent; blades broadly obovate to rotund, basally cuneate to rounded, marginally strongly revolute for entire length, apically emarginate or tricuspidate, lustrous above with sparse scattered minute

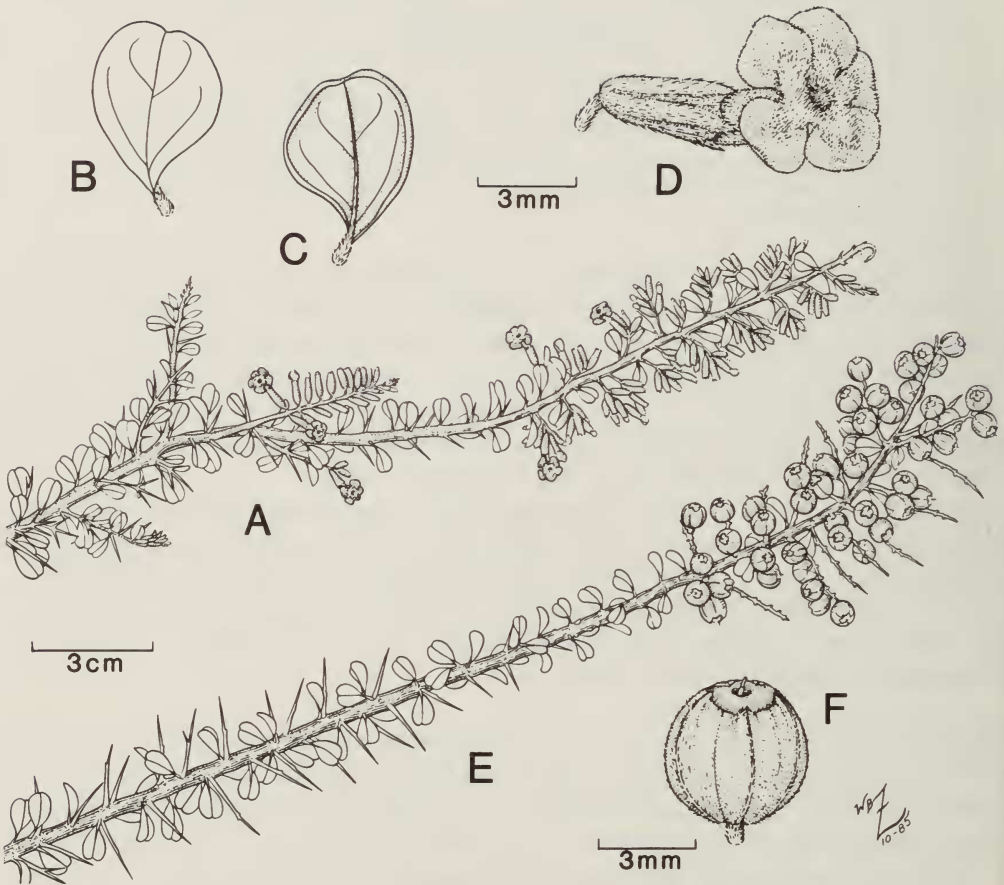


Fig. 1. *Duranta arida* subsp. *serpentina* Sanders & Judd. subsp. nov. A- Flowering branch; B- Leaf, adaxial view; C- Leaf, abaxial view; D- Flower; E- Fruiting branch; F- Fruit.

stiff antrorse hairs 0.1-0.3 mm long, dull and lighter green below with scattered appressed hairs ca. 0.1 mm long. Inflorescence a terminal leafy panicle ca. 8 cm long or axillary leafy racemes to 4 cm long. Flowers subtended by somewhat reduced leaves, or bracts 1-2 mm long. Calyces 4-5.5 mm long including apiculate lobes 0.5 mm long; tube with 5 prominent dark maroon ribs separated by thin often whitish walls, usually densely puberulent or tomentulose between the ribs from the mouth in a proximally tapering pattern, otherwise sparsely puberulent; sinuses shallow; mouth tomentose inside; in fruit, dilating around expanding fruit, becoming thinner, more lustrous, and with more apparent veins, urceolate, mouth open, apicules not convergent, enclosing only lower 4/5 of fruit. Corolla bluish lavender with a light blue throat, salverform, slightly zygomorphic, puberulent outside and inside at throat; tube 7-10 mm long; lobes 5, subequal, 2.5-3 mm long. Fruit yellow-orange, 5-6 mm in diameter.

Additional Specimen Examined: HAITI. Dept. de L'Ouest: Plateau Pistache, east slope of Massif de la Selle, 2000 m alt., 15 Sept. 1955, G. R. Proctor 10740 (US!).

This taxon is named for the serpentine or snake-like prostrate stems that meander more or less unbranched over the ground. It is very close to typical *Duranta arida* but differs in the prostrate habit, several leaf characters, and the apically open fruiting calyx. The prostrate habit is unknown in *D. arida* ssp. *arida*, which forms a rather strict shrub 2-3 m tall. The remaining distinctions between subspecies *serpentina* and *arida* are not completely discontinuous. The diagnostic leaf and calyx characters of ssp. *serpentina* occur infrequently in ssp. *arida*, but are not found correlated in a single population. Likewise, the apically open calyx may be somewhat variable in ssp. *serpentina* since the Proctor 10740 collection bears immature fruits that are apically closed. Whether expanding fruits would have forced the calyces open is unknown. Thus the most prudent treatment is to retain this new taxon in *D. arida* rather than giving it specific status. Although *D. arida* ssp. *arida* also occurs in the Massif de la Selle, it has not been collected in the Pic la Selle region, and the two subspecies appear to be allopatric.

More distant relations are with *Duranta armata* Mold. and *D. triacantha* A. L. Juss. *Duranta armata* has smaller flowers than does *D. arida* but has open fruiting calyces as in *D. arida* subsp. *serpentina*. *Duranta triacantha* is generally more robust, larger, and more densely pubescent than is *D. arida*.

The key to the species of *Duranta* in Sanders (1984) may be modified to incorporate *D. arida* ssp. *serpentina* as follows:

- 5. Flowering calyx 3-4 mm long, mouth nearly truncate, the apicules less than 0.5 mm long, the tomentose sinus ornamentations broadly triangular and present only at mouth of calyx tube; Andes of southern Peru. *D. armata*.
- 5. Flowering calyx (4-) 4.5-8 mm long, mouth apiculate-sinuate, the apicules 0.5-1 mm long, the tomentose sinus ornamentations long triangular and extended down calyx tubes 6.

6. Leaf blades mostly 5-17 mm long, glabrous, glabrescent, or sparsely stiffly pubescent, especially below; calyx mostly 4.5-5.5 mm long; West Indies (*D. arida*) 6a.
 6a. Stems erect, 2-3 m tall; leaves acute to rounded-mucronate; fruiting calyx usually closed at apex. *D. arida* subsp. *arida*.
 6a. Stems prostrate, ascending only to 8 cm tall; leaves emarginate; fruiting calyx usually open at apex *D. arida* subsp. *serpentina*.
 6. Leaf blades mostly 18-30 mm long, densely and softly pubescent below; calyx mostly 5.5-8 mm long; Andes of Ecuador and adj. Colombia and Peru
 *D. triacantha*.

The region of Pic la Selle (peak at 2674 m alt) in the Massif de la Selle is dominated by an open dry forest of *Pinus occidentalis* Sw. with the conspicuous associate, *Agave antillarum* Desc. The substrate is more or less exposed limestone, giving the area a stark and barren appearance, although in places several associated shrubs and/or grasses and sedges occur. The floristic diversity is quite low, especially on the peak itself, but the steep, more or less north-facing ridges (at 2300 to 2550 m alt.) to the west of the peak support an interesting and more diverse plant community.

The dominant (or conspicuous) species at the peak, itself, include *Pinus occidentalis* Sw. along with *Agave antillarum* Desc., *Baccharis myrsinites* (Lam.) Pers. (var. *mornicola* Urb.*¹), *Eupatorium illitum* Urb., *Fuchsia pringsheimii* Urb., *Garrya fadyenii* Hook., *Phytolacca icosandra* L., *Pilea* spp., *Pteridium aquilinum* (L.) Kuhn., *Ranunculus domingensis* Urb. & Ekm., *Satureja viminea* (L.) Urb., and *Senecio buchii* Urb. The loranthaceous parasite, *Dendropemon pycnophyllus* Krug & Urb., is commonly present on the pines.

Duranta arida ssp. *serpentina* occurs at slightly lower elevations on moister steep ridges and slopes to the west and southwest of the peak. Associated woody species on these floristically more diverse ridges include the above mentioned species along with: *Bocconia frutescens* L., *Coreopsis buchii* (Urb.) Blake, *Eupatorium* cf. *barahonense* Urb., *E. mornicolum* Urb. & Ekm.*, *Forestiera selleana* Urb. & Ekm., *Fuchsia triphylla* L., *Gundlachia compacta* Urb. & Ekm.*, *Ilex tuerckheimii* Loes., *Juniperus urbaniana* Pilger & Ekm.*, *Lobelia rotundifolia* Juss., *Lyonia alpina* Urb. & Ekm.*, *Miconia domingensis* Cogn., *M. luteola*, Cogn., *M. rigidissima* Urb. & Ekm., *Rhytidophyllum auriculatum* Hook., *Rondeletia merillona* Urb. *, *Salvia arduinervis* Urb. & Ekm.*, *Senecio picardae* Krug & Urb., and *Weinmannia pinnata* L. (W. Judd, personal observations; E. Ekman, unpublished field notes). Common to occasional herbs include: *Carex ekmanii* Kuk., *Chamaesyce adenoptera* (Bertol.) Small, *Danthonia domingensis* Hack. & Pilger, *Fragaria vesca* L., *Gnaphalium eggersii* Urb., *G. selleanum* Urb. & Ekm.*, *Phyllanthus lindeniianus* Baill., *Phytolacca icosandra* L., *Pilea lanceolata* (Lam.) Wedd., *P. microphylla*

1. Species endemic to the Pic la Selle region are indicated by an asterisk.

(L.) Liebm., *P. cf. selleana* Urb., *Piqueria trinerva* Cav., *Relbunium hypocarpium* (L.) Hemsl., *Rubus* spp., *Saracha antillana* Krug & Urb., *Scutellaria havanensis* Jacq., and *Taraxicum officinale* Weber.

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