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TWO NEW SPECIES OF *ARCHIBACCHARIS* (ASTERACEAE: ASTEREAE) FROM MEXICO

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ABSTRACT

Two new species of *Archibaccharis* collected by Dennis Breedlove and Frank Almeda are described from southern México: ***A. breedlovei*** Nesom & Turner from three collections in central Oaxaca and ***A. almedana*** Nesom from a collection on the northwest slope of Cerro Tlacotepec in central Guerrero. The main features and relationships of each species are discussed.

KEY WORDS: *Archibaccharis*, Asteraceae, Astereae, México

Archibaccharis breedlovei Nesom & Turner, *spec. nov.* TYPE: MEXICO. Oaxaca: Steep slope with *Quercus* and *Cupressus*, 6.5 km E of the Mitla – Choapam road along road to Zacatepec, N slope of Cerro Zempoaltepetl, 2285 m, 26 Sep 1986, *D.E. Breedlove 64695* with F. Almeda (HOLOTYPE: CAS *fide* Turner; Isotype: TEX!).

Archibaccharide caloneura Blake similis foliis rigide chartaceis ac venatione valde reticulata elevata utrinque sed habitu subscandenti, capitulescentiis terminalibus ac axillaribus, capitulis floribus paucioribus, caulibus absque pigmento purpureo, et floribus staminatis ramis stylaribus ovati-deltatis trichomatibus crassis patentibus differt.

Subscandent shrubs, stems slightly zig-zag, moderately hairy with persistent (at least the bases), spreading hairs 0.2-0.3 mm long with conspicuous crosswalls, eglandular. Leaves dark green, stiffly coriaceous with a distinctly raised reticulum of veins on both the upper and lower surface, with 7-9 main lateral veins from the midvein, glabrous except for the main veins, eglandular, elliptic-ovate with a short-acuminate apex and rounded base, the larger mostly 8-12 cm long and 3-4 cm wide, petiole 4-5 mm long, margins coarsely but shallowly serrate with long-mucronate teeth. Heads numerous in terminal and axillary corymboid panicles, the ultimate peduncles mostly 2-7 mm long. Pistillate heads with 11-15 pistillate flowers and 1-3 central (sterile) disc flowers; phyllaries oblong-elliptic with rounded apex and fringed-

ciliate margins, in 3-4 graduate series, the inner 3-4 mm long; pistillate flowers fertile, the corollas tubular-filiform, 3.0-3.5 mm long, hairy, eligulate; central flowers with sterile ovaries, the corollas ca. 4 mm long, the tube 2.5 mm long, densely hairy with viscid trichomes, the lobes white, turning purple, 1.3 mm long, cut nearly to the tube, the style branches 0.8 mm long, with elliptic-ovate appendages 0.5 mm long. Staminate heads with 9-11 flowers; flowers as described for central flowers of pistillate heads but producing fertile pollen. Achenes 1.8-2.0 mm long, flattened, with 3-4 thick nerves, sparsely invested with sessile or short-stipitate glands scattered over the surface; pappus of numerous bristles in 1-2 series. The branches of the holotype and *Breedlove 72386* are staminate; those of *Breedlove 60006* are pistillate.

Additional collections examined: MEXICO. Oaxaca: steep slope with *Quercus*, *Pinus*, and *Clethra*, NE slope of Cerro Humo Chico, 2440 m, 9 Nov 1983, *Breedlove 60006* with Almeda (CAS *fide* Turner, TEX); NNE slope of Cerro Humo Chico, 2440-2740 m, 29 Oct 1991, *Breedlove 72386* with Mahoney (CAS *fide* Turner).

Archibaccharis breedlovei is superficially similar to *A. caloneura* Blake in its thick, shiny leaves with acuminate apices, serrate margins, and a strongly raised reticulum of veins on both surfaces. In contrast, *A. breedlovei* is more viney and bears both terminal and axillary capitulescences (vs. terminal only) that are smaller and more rounded; it produces fewer-flowered heads (9-11 staminate/12-18 pistillate vs. 24-36 staminate/22-28 pistillate) (see Jackson 1975), stems without purple pigmentation, and ovate-deltate staminate style branches with thick, spreading sweeping hairs.

The closest relationship of *Archibaccharis breedlovei* appears to be with the species of *Archibaccharis* sect. *Stylosa* Nesom (Nesom 1991), which are particularly characterized by thick staminate style branches with thick sweeping hairs. These species also have a subscandent habit and relatively thick leaves but none has the strikingly raised reticulum of veins of *A. breedlovei*.

Archibaccharis almedana Nesom, *spec. nov.* TYPE: MEXICO. Guerrero: Ridge with *Pinus*, *Quercus*, *Clethra*, and *Cleyera*, W of Puerto El Gallo along road to Toro Muerto, 2530 m, 9 Oct 1986, *D.E. Breedlove 65071* with F. Almeda (HOLOTYPE: TEX!).

Archibaccharide nephocephala Nesom similis habitu strictu et capitulescentia terminali grandi sed conspicue differt vestimento tenui arcte adpresso (vs. villoso vel hispidi-piloso) et capitulis majoribus (2.2-2.6 mm longis vs. 1.5-2.0 mm longis).

Erect shrubs, stems to 2 m tall, straight, thinly and closely pubescent with minute appressed hairs, eglandular. Leaves dark green, ovate-elliptic with a short-acuminate apex and shallowly serrate margins, the blades thin (not coriaceous), 8-12 cm long and 3.0-4.5 cm wide, basally attenuate to a narrow petiole 12-18 mm long, the upper surfaces glabrous and shiny, lower surfaces sparsely hairy on veins and lamina with minute appressed trichomes and with a reticulum of dark-colored imbedded veins. Heads numerous in terminal, dense, somewhat elongate panicles. Pistillate heads and achenes not seen. Staminate heads 3 mm wide with 20-22 flowers, the ovaries sterile; phyllaries oblong-lanceolate, in 3-4 graduate series, the inner 2.2-2.6 mm long, the margins thinly pilose-ciliate, with a few hairs on the lamina; corollas white, 2.4-2.5

mm long, the tube 1.2 mm long and sparsely hairy, with lobes cut $\frac{3}{4}$ to the tube; style branch appendages ovate-lanceolate, 0.6-0.8 mm long, with spreading sweeping hairs. The holotype bears only staminate branches.

The tall, primarily erect habit and the staminate style branch morphology of *Archibaccharis almedana* indicate that it is most closely related to the species of sect. *Tomentosa* Nesom: *A. nephocephala* Nesom, *A. peninsularis* Blake, and *A. serratifolia* (Kunth) Blake. The general appearance of *A. almedana* is closest to *A. nephocephala*, particularly in their massive and dense, terminal capitulescence, although the heads are larger in the new species (2.2-2.6 mm long vs. 1.5-2.0 mm long). The leaves and stems of *A. almedana* also produce a minute, close, and inconspicuous vestiture in contrast to the villous to hispid-pilose vestiture of *A. nephocephala* (and the tomentum for which the section is named) and the style branches of the new species are the longest among this group, but there apparently is no better choice for its infrageneric placement.

Archibaccharis almedana was collected from the area of high elevation in central Guerrero, apparently on the northwest slope of Cerro Tlacotepec, with Cerro Teotepec and Cerro El Gallo also in the close vicinity. Four other species of *Archibaccharis* apparently occur in this area: *A. asperifolia* (Benth.) Blake, *A. schiedeana* (Benth.) J.D. Jackson, *A. serratifolia*, and *A. simplex* (Blake) Blake, and it is likely that *A. auriculata* (Hemsl.) Nesom and *A. hirtella* (DC.) Heering also may be found there.

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