

**NAMA QUIEXOBANUM (HYDROPHYLLACEAE): A NEW SPECIES
FROM OAXACA, MÉXICO**

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ABSTRACT

Nama quixobranum *sp. nov.* is known only from Cerro Quiexobra in the Sierra Madre del Sur, Oaxaca. In several aspects, *N. quixobranum* approaches *N. sericeum* Willd. *ex* Roem. & Schult. and *N. organifolium* H.B.K., but its seeds are most similar to those of the primitive species, *N. hirsutum* Mart. & Gal. and *N. prostratum* Brand. *Nama quixobranum* appears to link the derived *N. sericeum*, *N. organifolium*, and several annual species to these basal taxa.

KEY WORDS: *Nama*, Hydrophyllaceae, México

Nama quixobranum* Bacon & McDonald, *sp. nov.

N. sericeo Willd. *ex* Roem. & Schult. caulibus fragilibus cymis laxis terminalibus ac lateralibus, corollis infundibuliformis ac obconicis usque ad 22 mm longis tangit, sed foliis angustioribus usque ad 7 mm latis sine trichomatibus densis sericeis in pagina inferiore, seminibus corrugatis costis minutis longitudinalibus 0.8-1.1 mm longis differt.

TYPE: MÉXICO. Oaxaca: 35 km ESE of Miahuatlán, 5 km NE of Santo Domingo Ozolotepec, Cerro Quiexobra, 16° 10' N Lat., 96° 15' W Long., 3650-3800 m. Timberline vegetation along ridges and in mountain "saddles," dominated below by pine forest, occasional on upper margins of rock outcrops or less commonly in damp, shaded ravines, soft wooded perennials, flowers dark blue-purple, 4 Oct 1990, *McDonald 3014* (HOLOTYPE: TEX!; Isotypes: GH!, MEXU!, NY!, US!).

Erect, mealy-glandular perennials to 40 cm tall, the brittle stems branching above their base, moderately to densely puberulous tomentose, or bearing scattered, hirsute-hispid trichomes to 1 mm long. Leaves 10-28 mm long, 1.5-7.0 mm broad, oblong, elliptic, oblanceolate, or obovate, plane, or the younger weakly to strongly revolute, acute to rounded at apex, attenuate and sessile or with a distinct petiole 1.0-3.5 mm long, invested with moderate to dense, appressed, short, strigillose trichomes. Flowers in loose, terminal or lateral, racemoid cymes; peduncles and pedicels slender, (1.7-) 4.5-18.0 (-34.0) mm long; sepals 6.0-11.5 mm long, broadly linear to spatulate, acute to rounded apically, and moderately hispid-hirsute; corollas 18-22 mm long, broadly tubular-obconic, dark blue-purple; filaments 11.0-12.8 mm long, the free portions distally terete but soon becoming somewhat flattened and expanded some distance above their insertion 5.0-6.3 mm above corolla base, about twice as long as the prominently winged adnate portions; mature styles 6.4-8.2 mm long. Capsules 6.8-7.4 mm long, 2.8-4.4 mm broad, ovoid to ellipsoid; seeds 0.8-1.1 mm long, multifaceted, rarely somewhat ovoid, brown, with weak transverse corrugations and longitudinal ridges. Chromosome number, $n = 7$ pairs.

Nama quiezobranum Bacon & McDonald is an interesting taxon in that it combines features found in a number of species of *Nama*. Its obconic-broadly tubular corollas, often exceeding 20 mm in length, and loose, terminal inflorescences are similar to those of *N. sericeum* Willd. ex Roem. & Schult.; it also has the unusual brittle stems found in both *N. sericeum* and *N. organifolium* H.B.K. The latter two species are Mexican perennials distributed to the north of the state of Oaxaca. All three species are readily differentiated, however, by leaf shape, size, and pubescence or flower size. *Nama organifolium* differs from *N. quiezobranum* by corollas 4.5-7.5 mm long, its usually velvety-villous indument, and smaller, black seeds 0.3-0.5 mm long. *Nama sericeum* is distinguished by broader leaves (7.0-22.0 mm wide), densely sericeous leaf undersurfaces, and weakly reticulate, smaller seeds (0.6-0.8 mm long).

Seeds of *Nama quiezobranum* and *N. hirsutum* Mart. & Gal. (a perennial found in southern México and northern Guatemala), are strikingly similar in their size (0.8-1.1 mm long), shape, and texture, exhibiting weak transverse corrugations and longitudinal ridges. In addition, wall thickenings in cells of the outermost testa of both species are essentially alike; columnar, often basally branched, generally extending from the radial wall into and across the lower transverse wall that forms the floor of the cell. In wall thickening patterns, seeds of *N. quiezobranum* and *N. hirsutum* are much like those of *N. prostratum* Brand, another perennial distributed in central and southern México. Based on seed features, both *N. hirsutum* and *N. prostratum* were suggested by Chance & Bacon (1984) to be primitive elements in *Nama*. Thus, similarities of seed features among these taxa suggest that *N. quiezobranum* represents yet another basal member in the genus. At the same time, morphological

similarities among *N. quiezobranum*, *N. sericeum*, and *N. organifolium* argue that the latter two species are to be positioned near the former. As Chance & Bacon (1984) allied *N. sericeum* and *N. organifolium* with several annual species found in México and southwestern United States (see Bacon 1987), *N. quiezobranum* appears to link these derived species with basal elements in the genus.

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