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A NEW BACOPA FROM CALIFORNIA

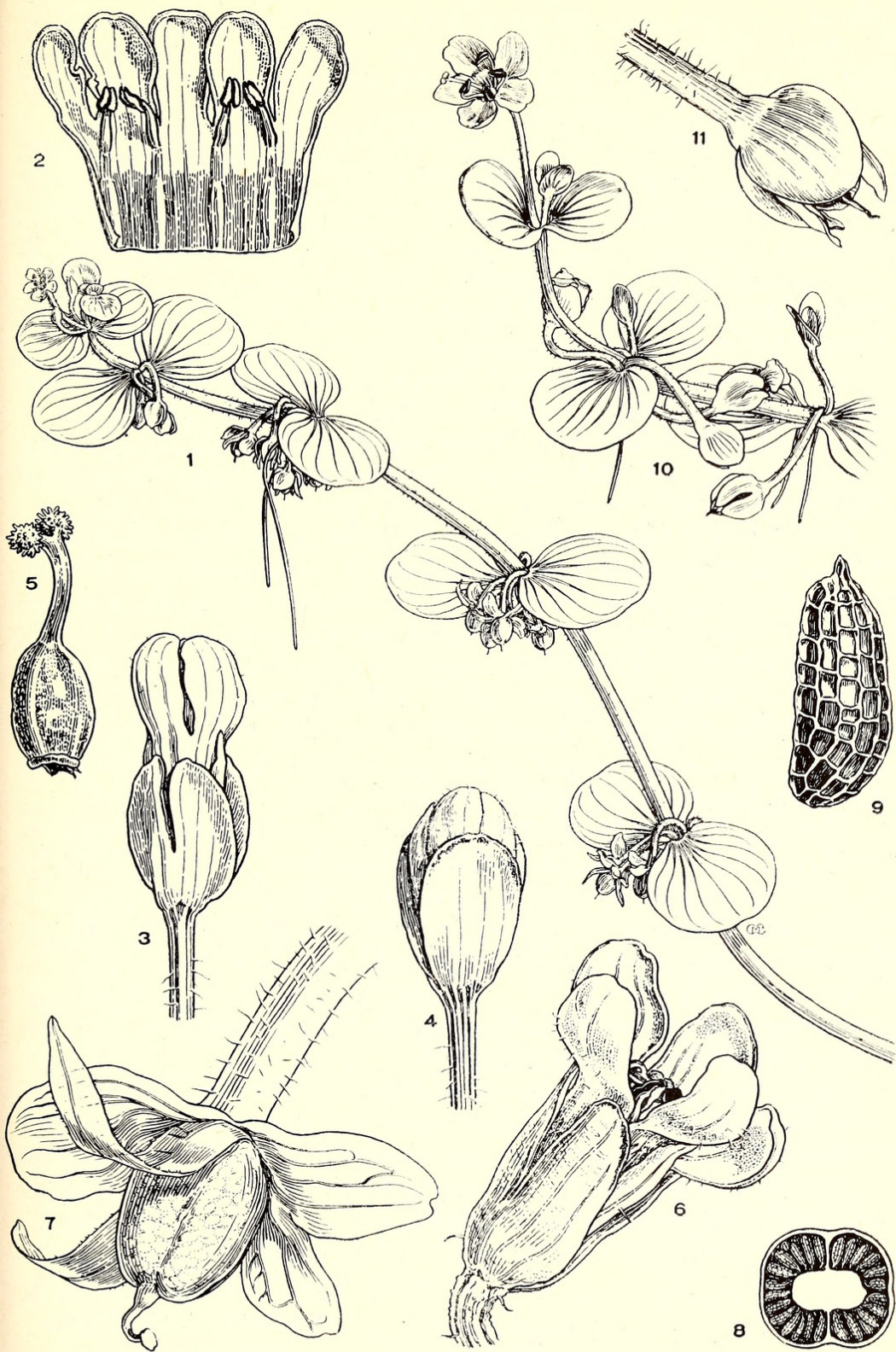
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Bacopa Nobsiana sp. nov. *Bacopa* habitu *B. Eisenii* similis sed ab illa specie floribus parvioribus pedicellis quam folia suffulcentia brevioribus sepalis fructiferis patentibus capsulis ovoideis secundum septum valde canaliculatis discedit.

Floating, or prostrate and creeping herb, rooting at some of the nodes; stems and pedicels pilose to hirsute when young, becoming glabrate in age; leaves opposite, sessile, 1-2 or 3 cm. long, nearly as wide; orbicular-cuneate, clasping the stem, conspicuously palmately 5-7-nerved, glabrous, succulent; flowers 1-4 in each leaf axil; in anthesis pedicel and flower together, shorter than subtending leaf, sometimes elongating in fruit; calyx growing with fruit, the sepals 4 or 5, spreading in age; outer sepals 2, each 2 mm. long, almost orbicular, foliaceous, 5-7-nerved, one or sometimes both deeply cleft or parted; inner sepals oblong, 2 mm. long, 1 mm. wide, minutely ciliate-margined on lower half or sometimes glabrous, at first membranous, becoming firmer in age; corolla campanulate, white with yellow throat, lobes nearly equal, weakly disposed toward a grouping of two and three; stamens 4, inserted on throat, anthers versatile; ovary in anthesis asymmetrical; capsule broadly ovoid, 4 mm. long, conspicuously grooved up the sides and across the top along

EXPLANATION OF FIGURES 1-11.

FIGS. 1-11. *Bacopa*. 1-9, *B. Nobsiana*: 1, habit, $\times 0.8$; 2, opened corolla, $\times 4$; 3, 4, two views depicting zygomorphic character of calyx, $\times 4$; 5, pistil, $\times 8$; 6, flower $\times 8$; 7, mature fruit showing spreading calyx lobes, $\times 6$; 8, cross section of ovary, $\times 6$; 9, seed, $\times 40$. 10, 11, *B. Eisenii*: 10, habit, $\times 0.8$; 11, mature fruit showing appressed calyx lobes, $\times 2$. Figs. 1, 3-9 drawn from *Mason 12980*, and *Nobs & Smith 1097*; fig. 2 from *Carter 3064*; figs. 10, 11, from *Nobs & Smith 424*.



FIGS. 1-11. *Bacopa Nobsiana* and *B. Eisenii*.

the septum; seeds many, ellipsoid to oblong, testa bladdery, reticulately sculptured with 7-8 rows of transverse areolae.

Type. Rice fields, Sutter bypass, just south of Marysville, Sutter County, California, July 29, 1949, *Nobs & Smith 1097* (University of California Herbarium No. 927650).

Other collections. California: marshes along Butte Creek, Grey Lodge Game Refuge, Butte County, July 10, 1945, *Mason 12630*; eight miles north of Colusa, Colusa County, August 7, 1946, *Mason & Grant 12980*; two miles west of Colusa on Williams highway, Colusa County, August 13, 1946, *Mason & Grant 13010*; rice fields 0.1 mile east of Valley Home, Stanislaus County, June 10, 1951, *Carter 3064, 3065*; vernal border of pond, Los Banos Wildlife Refuge, 2 miles north of Los Banos, Merced County, July 6, 1948, *Nobs & Smith 10*; alkaline pools, 2 miles west of Tranquility, Fresno County, July 23, 1941, *Bacigalupi, Wiggins & Ferris 2673* (in part).

Bacopa Nobsiana occurs in shallow ponds and rice fields in the San Joaquin and Sacramento valleys of California. It closely resembles *B. Eisenii* (*B. rotundifolia* of western American authors, non Wettstein) in size of plant and habit. It differs in (1) the smaller size of the flower, (2) the shorter length of pedicel relative to the subtending leaf, (3) the sepals which spread in age, thus exposing the capsule, and (4) the broadly ovoid capsule which is conspicuously grooved apically along the septum.

Bacopa Eisenii is reputed to be a perennial. This may be true, but both *B. Eisenii* and *B. Nobsiana* behave as annuals in the rice fields as well as in some of the seasonal ponds in California. Apparently the herbage is relished by water fowl for it disappears suddenly with the arrival of the first migrations of ducks in late August. So complete is its disappearance that there is little opportunity to observe its possible perennial habit in the wild.

Bacopa Nobsiana is named in honor of Mr. Malcolm Nobs, who first called to my attention the differences between these two species; through his diligent field interest a fine series of specimens was obtained and many of the facts presented here were established.

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Mason, H. L. 1952. "A NEW BACOPA FROM CALIFORNIA." *Madroño; a West American journal of botany* 11, 206–208.

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