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## A NEW ESTUARINE *BIDENS* FROM CHESAPEAKE BAY.

S. F. BLAKE.

THREE species of *Bidens* are now known confined to estuaries along the eastern coast of North America from the Delaware River northward. *Bidens hyperborea* Greene, which has been studied monographically by Dr. N. C. Fassett,<sup>1</sup> is well known from Massachusetts northward, and has recently been reported from the Hackensack marshes of New Jersey.<sup>2</sup> In its achenial characters it stands apart from the two other species. The more northern of these, *Bidens eatoni* Fernald, ranges in its various forms<sup>3</sup> from the Hudson River north to Maine. The more southern species, *Bidens bidentoides* (Nutt.) Britton, was long supposed to be confined to Delaware River and Bay, but is listed also by Fassett,<sup>4</sup> on the basis of previous records by Stone and Svenson, from the Susquehanna River, the Maurice River of southern New Jersey (which empties into Delaware Bay), and the Hudson River.

In 1926 I collected plentiful specimens of a species of this group at Havre de Grace on the Susquehanna River and at Charlestown, Maryland, the latter a town on Northeast River, the northeasternmost prolongation of Chesapeake Bay. Study of this material, in connection with that in the United States National Herbarium and the Gray Herbarium, has shown that the plant of Chesapeake Bay, while very closely allied to *Bidens bidentoides* of the Delaware system, is constantly different in its shorter awns and pubescent corollas. In *B. bidentoides* the corollas are always glabrous and the achenes are 6.5–12 mm. long and not over 1 mm. wide, with awns 6–9 mm. long and nearly or quite twice as long as the dried disk corollas. In the Chesapeake Bay plant the corollas of both ray and disk are sparsely pilose on the tube, and the achenes are 6–10 mm. long,

<sup>1</sup> RHODORA 27: 166–171. 1925.

<sup>2</sup> Fassett, Proc. Boston Soc. Nat. Hist. 39: 104. 1928.

<sup>3</sup> Fassett, RHODORA 27: 142–146. 1925.

<sup>4</sup> Proc. Boston Soc. Nat. Hist. 39: 102. 1928.



slightly broader in proportion (1–1.5 mm. wide), and with awns 3–6 mm. long and about equalling or only slightly surpassing the disk corollas. In the Chesapeake plant, moreover, the leaves are in general more sharply toothed, the larger being sometimes laciniate-lobed toward base, and the herbaceous outer phyllaries are generally shorter than in *B. bidentoides*.

In view of these differences, particularly the positive character of pubescence on the corollas, which is not shown by either *B. bidentoides* or the related *B. catoni* in the abundant material examined, I venture to describe the plant of Chesapeake Bay as a new species. Its relationship to *B. bidentoides* is so close that it is evident they have sprung from a common ancestor at no very remote date. Geologists tell us that in late Pleistocene times the peninsula of Maryland and Delaware was entirely submerged by a great depression known as the Wicomico Sea. This was followed by an uplift and then by the Talbot depression, which did not connect the two river systems, a further elevation and slight depression bringing us to the present time. The plant remains recovered from the Wicomico and older formations in this region include species of *Hicoria*, *Populus*, *Carpinus*, *Quercus*, *Ulmus*, *Celtis*, and *Platanus* very closely allied to living species. It is reasonable to suppose that the common ancestor of these species of *Bidens* grew in appropriate situations about the shores of Wicomico Sea, and that divergence of the two forms has taken place since that epoch.

**BIDENS mariana** Blake, sp. nov. Essentially glabrous annual, about 50–80 cm. high, with usually erect branches; leaves lanceolate, simple, attenuate, sharply serrate or serrulate, occasionally deeply laciniate-lobed toward base, the larger 13–24 cm. long, including the narrowly margined petiole; heads subcylindric or in age subcampanulate, in 2's and 3's at apex of stem and branches, forming a leafy panicle, the larger 18–32-flowered; outer phyllaries 4–5, oblanceolate or linear-oblanceolate, often twice as long as the heads; rays when present few, not exceeding disk; disk corollas sparsely pilose on tube; achenes narrowly linear-cuneate, densely antrorse-hirsute, 2(–4)-awned, the inner 8–10 mm. long, their awns slender, 5–6 mm. long.

Stems normally erect, stoutish, usually sparsely pilosulous at base of internodes, leafy; leaves mostly 1.5–3 cm. wide (occasionally 7.5 cm. across the basal lobes), thin, glabrous, the larger sometimes with 1 or 2 lance-linear spreading lobes on each side toward base; disk in flower about 1.5 cm. high, about 7 mm. thick; outer phyllaries loosely erectish, 1.3–3 cm. long, 1.5–4 mm. wide, sometimes minutely



denticulate above, not ciliate; inner phyllaries 9–13 mm. long, pale yellow, densely lined with shining brown except toward margin;



FIG. 1. *Bidens mariana* Blake, from a specimen of the type collection.  
Leaf and tip of stem,  $\times 1$ ; disk-achene and corolla,  $\times 4$

rays 0–3, not exserted, golden yellow, the tube sparsely pilose, about 1.5 mm. long, the lamina elliptic, tridenticulate, about 6 mm. long; disk corollas 17–31, golden yellow, 4–5-toothed, sparsely pilose on tube with several-celled hairs, 4–5.8 mm. long (tube 1.5–2.3 mm.,



throat subcylindric, 2–2.5 mm., teeth usually somewhat unequal, 0.5–1 mm. long); pales linear, yellow above, with 3 brown vittae, about 1.5 cm. long; ray achenes inane, linear, pubescent like disk achenes, 6 mm. long, 1 mm. wide, their awns 2, upwardly hispid, unequal, 1.2–2 mm. long; outer disk achenes narrowly linear-cuneate, flat, 1-ribbed on middle of each side, dull brownish, densely hirsutulous with subappressed entirely antrorse hairs, 6–6.5 mm. long, 1.2–1.5 mm. wide, 2- or sometimes 4-awned, the longer awns usually subequal, 3–4.5 mm. long, the shorter awns when present 1.5 mm. long or less, all slender and antrorse-hispid; inner achenes similar but longer and narrower, 8–10 mm. long, 1–1.5 mm. wide, the longer awns 5–6 mm. long, the shorter when present up to 3.5 mm. long.

MARYLAND: sandy shore of Northeast River, near Carpenter's Point, Charlestown, 17 Sept. 1926, *Blake* 9698 (TYPE no. 1,365,722, U. S. Nat. Herb.; duplicates in Gray Herb., N. Y. Bot. Gard., Field Mus., etc.); in vegetable refuse at mouth of drain of bog half mile south-southwest of Havre de Grace, 20 Sept. 1902, *G. H. Shull* 399 (U. S.); sandy shore of Susquehanna River, Havre de Grace, 17 Sept. 1926, *Blake* 9703 (U. S., Gray Herb., etc.); sandy shore, Bush River, *Canby* (Gray Herb.).

BUREAU OF PLANT INDUSTRY,  
Washington, D. C.

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## CONSIDERATION OF NOMENCLATURE AT THE FIFTH INTERNATIONAL BOTANICAL CONGRESS

[The following communications from the Executive Committee for the Fifth International Botanical Congress to be held at Cambridge, England, August 16th to August 23rd, 1930, are self-explanatory.—Eds.]

Dear Sir,

The Executive Committee of the Fifth International Botanical Congress will be very grateful if you will kindly publish in your periodical as soon as possible the enclosed notice on the subject of Nomenclature in *one* of the three languages in which the notice is printed.

As the matter is very urgent the Executive Committee trust that you will be able to comply with this request without delay.

Yours faithfully,

F. T. BROOKS

(Secretary)

Motions on the subject of Nomenclature for consideration by the Congress should be in the hand of the Rapporteur général, Dr. John Briquet, before *September 30, 1929*.



Blake, S. F. 1929. "A new estuarine *Bidens* from Chesapeake Bay." *Rhodora* 31, 87–90.

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