

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

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NOTES ON COCKLEBURS (AMBROSIACEAE; XANTHIUM) OF THE DISTRICT OF COLUMBIA AND VICINITY.

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Receipt of a copy of the "Revision of North American Species of *Xanthium*"<sup>1</sup> by Drs. Charles F. Millspaugh and Earl E. Sherff stimulated the writers to investigate the cockleburs of the District of Columbia and vicinity. Approximately 150 samples of mature burs were collected chiefly in December 1919. These were studied with the assistance of the revision just noted and reduced to a set of 24 samples illustrating the principal variations. These have been examined and commented upon by Dr. Earl E. Sherff whose kindness in this respect we gratefully acknowledge. Specimens already on hand in the National Herbarium also were taken into account and copious representations of the species here recorded have been deposited in that collection.

Cockleburs strongly specialized for casual transportation are typical waifs and reach all sorts of places where the wastes of civilization and nature accumulate. The search for cockleburs takes the collector to such interesting spots as refuse-heaps about freight-yards, factories and wharves, to ash, trash and garbage dumps and the environs of the barnyard, cattle-pens and pig-sties. Cockle-burs like ground not especially occupied with other plants. In eroded places, on grades, anywhere there is new-turned earth they may be found. They grow well among crops of rather open stand as corn

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<sup>1</sup> Field Museum Publ. 204, Bot. Ser. Vol. 4, No. 2, April 1919, pp. 9-49, pls. 7-13.

and after harvest mature their fruits. They are formidable weeds found on every farm.

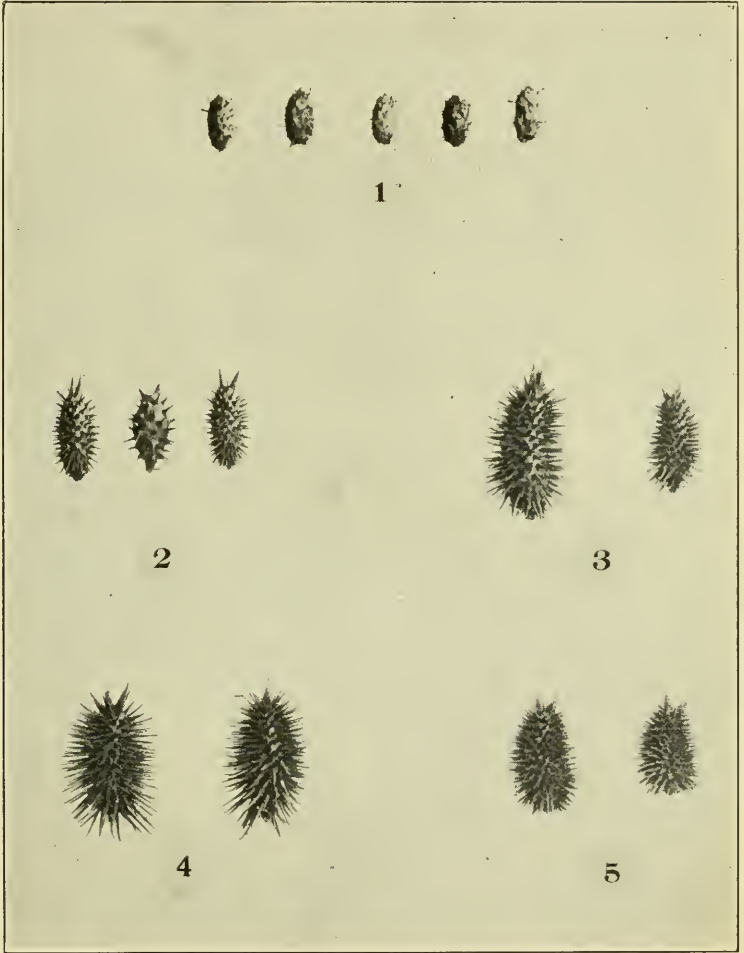
The classification of the species of *Xanthium* rests almost entirely on the characters of the fruits or burs. These, like most specific characters, are extremely variable, so that strict definition of the groups ranked as species may be quite difficult. After experience, however, the most dependable characters or combinations of characters are easily appreciated and identification is robbed of most of its perplexities. The subjoined key is based on the characters we have found most feasible for identifying the local cockleburs. The plate illustrating the burs we trust will be a useful adjunct to the key. For numerous other illustrations see Millspaugh and Sherff's "Revision."

The present contribution lists 5 species of *Xanthium* from the District of Columbia region, an increase of 2 over the number included in the recent "Flora."<sup>1</sup> *X. americanum* of that work is *X. chinense* Miller and *X. commune* no doubt covers both *X. italicum* Moretti and *X. pennsylvanicum* Wallroth as listed in the present paper.

#### KEY TO SPECIES

- A. Burs with inconspicuous beaks; spines weak and curved like a button-hook at apex; color usually greenish yellow.  
*X. spinosum.*
- AA. Burs with conspicuous beaks; spines strong, simply hooked; color usually reddish brown.
  - B. Body of fruit broadly oblong, oblong-ovoid or ovoid-oblong; spines densely hispid-pubescent, up to and beyond the middle.
    - C. Burs very large (2.8-4 cm. long and 2-3 cm. wide), broadly ovoid, oblong-ovoid or oval; spines stout, basal ones reflexed, thicker and longer than others and projecting much beyond stalk of bur.  
*X. speciosum.*
    - CC. Burs smaller (less than 2.8 cm. long and 2 cm. wide), oblong or ovoid-oblong, often widest at base; spines more slender, basal ones not reflexed or projecting much beyond stalk of bur.  
*X. italicum.*
  - BB. Body of fruit fusiform, ellipsoidal or narrowly oblong-ovoid; spines smooth, warty-glandular or if hispid usually only up to the middle.

<sup>1</sup> *Contr. Nat. Herb.*, Vol. 21, p. 267, Sept., 1919.





- D. Body (0.9–2.5 cm. long—rarely over 2 cm.) narrowly fusiform or ellipsoidal, usually straight; surface of body smooth or warty-glandular; base of beaks and spines usually glandular-warty or rarely short-pubescent; beaks comparatively longer, more slender, usually straight and more or less divergent. *X. chinense.*
- DD. Body (1–3.25 cm. long—often over 2.5 cm.) narrowly oblong-ovoid or ovoid-fusiform, often curved; surface of body pubescent, hispid or glandular pubescent; base of beaks and spines usually densely hispid-pubescent; beaks comparatively shorter, stouter especially at base and often incurved apically. *X. pennsylvanicum.*

## ANNOTATED LIST OF SPECIES.

*Xanthium spinosum* Linnæus.—Rather rare; apparently has been introduced several times, thrived for a season but failed to become permanently established; not recorded since 1896; has been collected near Alexandria, Va., in S. W. Washington and D. C. definite locality not given.

*Xanthium chinense* Miller.—Abundant in waste ground, cultivated fields and dumps throughout the District and vicinity. Collected near Benning Road, Navy Yard, Anacostia, War College, Water Street, near "I" S. W., Potomac Park, Lincoln Memorial, 29th and "K" streets, N. W., above Aqueduct Bridge, District Line near C. and O. Canal, also from Plummer's Island, Bladensburg and Laurel, Maryland, and Alexandria, Arlington Farm, Rosslyn, Chain Bridge and Cherrydale, Virginia.

*Xanthium pennsylvanicum* Wallroth.—Abundant in waste ground, cultivated fields and dumps throughout the District and vicinity. Collected near Benning Road, Southeast of Mt. Hamilton, Pennsylvania Avenue Bridge, S. E., Navy Yard, Anacostia, War College, Potomac Flats, Lincoln Memorial, Water Street, near "I" and 14th, S. W., and 33rd Streets, N. W., foot of 27th N. W., and Cleveland Park, also from Plummer's Island, Maryland, and Alexandria, Barcroft, Arlington Farm and Rosslyn, Virginia.

*Xanthium italicum* Moretti.—Frequent in waste ground. Collected from Benning Road, 19th and Mass. Ave., S. E., and Navy Yard, also Laurel, Maryland, and Alexandria, Arlington Farm and Aqueduct Bridge, Virginia.

*Xanthium speciosum* Kearney.—Rare, only a single, but very robust plant found in waste ground along Water Street about 33rd Street, N. W.

## EXPLANATION OF PLATE 4.

- Fig. 1. *Xanthium spinosum.*  
 Fig. 2. *Xanthium chinense.*  
 Fig. 3. *Xanthium pennsylvanicum.*  
 Fig. 4. *Xanthium speciosum.*  
 Fig. 5. *Xanthium italicum.*

Figures slightly less than natural size.