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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.



5 April, 1950

Memo. to Dr. Little on Arizona-New Mexico Willows in his mss.

General Suggestions :

1. Distribution. Perhaps southwestern readers will grasp distribution if given as New Mexico to southern California and northward to Wyoming, Sask., Yukon and Alaska, rather than N.Mex. to Yonag, Yukon, and Alaska and southward to California and Arizona.
2. The term "lance-shaped" is used commonly, but, under *S. exigua*, *S. Scouleriana*, and *S. Bebbiana*, the terms "linear, oblong, elliptical, and obovate" are used, so why not lanceolate? I doubt if many readers ever saw a lance. If obovate were replaced by "reversed egg-shaped" what would it do to those who know only the greeds that lay oval eggs?
3. Other descriptives. Is not "shining" more in accord with general usage than "shiny" as in drooping, creeping, rooting, flowering, etc.? Will it be desirable to focus so much on "bluish" and "bluish-green" in describing leaves? Leaves either remain green or progress to varying degrees of whiteness beneath. The series: "paler", "whitish", and "white" seems to describe what happens, with perhaps "intense white" in extreme cases. Many species show a bluish tint while unfolding but it is evenescent.
4. Seeds. The phrase "with many cottony seeds" is used several times but not always. All species are about alike in the abundance of seeds produced but vary in the size of seeds somewhat. It might be better to state it just once for the genus.

Suggestions on Individual Species.

1. *S. lasiandra*. Height to 50 ft. in Calif. Twigs may be bright yellow in early spring. Unfolding leaves green beneath, progressing slowly to whitish and then white.
2. *S. caudata* var. *pyramidalis*. See notes on mss. The species is pubescent on vegetative organs, at least when young; this var. is glabrous.
3. *S. laevigata*. See notes on mss. and on "bluish" above. I wonder if we should change the name of a Mexican State.
4. *S. Bonplandiana*. See notes on mss. I don't see how the name "silver-leaf" can possibly be applied to this species. "Silvery" usually is restricted to sericeous hairiness, and it has none. Var. *Toumeyi* is the narrow-leaved phase, whether recognized or not.
5. *S. Gooddingii* var. *variabilis* Ball, ined. The species has hairy ovaries and young capsules (sometimes old ones also), and occurs eastward only to Yuma and Mohave Cos. in Ariz., Clark Co. in Nev., and Washington Co. in SW. Utah. East of that only the var. occurs, with ovaries and capsules always glabrous. For height of plant and elevations at which it occurs see GRB. mss. on variety.
6. *S. amygdaloides* adn. var. *Wrightii*. See notes on mss. I would start out with the idea of your last paragraph, so that readers would have the right idea from the beginning. The twigs often are slightly drooping, but I never have seen them "reddish brown" when well dried in press. The leaves are always whitish to white beneath. Many authors, from Bebb to Wootton and Standley mixed var. *Wrightii* and *Gooddingii* var. *variabilis* and never did get straightened out. Too bad. See Ball, Texas mss. for range.
7. *S. exigua*. The common N.M. plant is var. *stenophylla*, silvery-pubescent throughout. Part of your description must have come from var. *nevadensis*, the species is rare in the area. See Ball mss. on Texas willows. The twigs always are puberulent to pubescent when young, except in *nevadensis*. Have never seen it growing on a tree but it may. It always is clumpy, whatever the size.



8. *S. taxifolia*. See Ball ms. on Texas willows for description.
9. *S. lutea*. It will be a real service to your readers if you separate *S. lutea* and *S. ligulifolia*. For example, the twigs in *lutea* are always yellow (older grayish) and always glabrous. The twigs in *S. ligulifolia* are always brown to dark brown and often more or less pubescent-pubescent, the late summer twig densely so. The leaves in *S. lutea* run from lanceolate to broadly or ovate-lance. in var. *platyphylla* and are generally light green above. Those of *ligulifolia* are strap-shaped or narrowly lanceolate and dark green above.
10. *S. ligulifolia*. For full data see Ball ms. on this species.
11. *S. lasiolepis*. The only form occurring in Ariz. and N.M. is the narrow-leaved southern phase which I am describing as var. *Bracoliniae*. It has leaf linear, linear-oblong, or very narrowly oblanceolate, and extends into SW. Texas. I doubt if it becomes a tree but will check my descriptions of collections. See my ms. for heights and elevations and distribution.
12. *S. Seouleriana*. No notes but my herb. might show more distribution.
13. *S. hebbiana*. No comment.
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So far as I know, *S. irrorata* does not become tree-like. In Coulter & Nelson I included the narrow-leaved form of *S. lasiolepis* in Ariz. to Texas (now to be var. *Braceliniae*).

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Additional General Suggestions

5. You will be entirely welcome to run thro the extensive material in my herbarium, to check distribution, elevations, and plant heights, if you care to do so.
6. Recently, I have made rough lists of herbarium specimens of *S. Gooddingii* var. *variabilis*; *S. ligulifolia*, and *S. lasiolepis* var. *Braceliniae*, preparatory to publication of these combinations. You are welcome to consult these, as well as my Texas manuscript.

These notes are in reply to your letter of April 22, which accompanied your rough-draft ms.

Cordially yours,

Carleton R. Ball

7. In keys, keep the species as nearly as possible in their numerical order in the manuscript. This helps to an understanding of relationships.

WASHINGTON D. C.

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