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Ball, C. R.
Far west^{ern} novelties in Salix
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FAR WESTERN NOVELTIES IN SALIX

By Carleton R. Ball

Activities of collectors continue to bring to light hitherto unrecognized variations in willows. Continuing studies of relationships indicate a need for new combinations which better represent actual affinities. This paper contains some novelties in each category.

The abbreviations for herbariums containing specimens cited are as follows: BPI, National Arboretum Herbarium of the Division of Plant Exploration and Introduction, U. S. Bureau of Plant Industry; CAS, Herbarium of the California Academy of Sciences; CRB, Salix herbarium of Carleton R. Ball; CUA, Herbarium of the Catholic University of America; H or USN, United States National Herbarium; SU, Herbarium of Stanford University; UC, Herbarium of the Department of Botany, University of California.

NEW VARIETIES OF SALIX PULCHRA CHAMISSE

Salix pulchra, with rather broadly elliptical leaves acute at both ends, is a species of far northwestern North America. It occurs throughout Alaska, except the southeastern portion, and in northwestern British Columbia, most of Yukon Territory, and the lower Mackenzie Valley.

Like many species of *Salix*, it exhibits both broad-leaved and narrow-leaved variations from the normal or average. The Swedish salicologist, Andersson, frequently added varieties latifolia and angustifolia when describing new species, or reviewing old ones, as in the case of *S. Richardsonii*. The recent American salicologist, Bebb, often did likewise for one or both variations, as in the cases of

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S. lasvigata, *S. glaucophylla*, etc. More recently, Fernald has separated the Labradorian *S. cordifolia* into a series of varieties based on leaf size, shape, and pubescence. Still more recently, Schneider has erected varieties of *S. anglorum*, *S. ovalifolia*, etc., on leaf width and shape. The writer also has done this in *S. lasiandra*, *S. lutea*, *S. glauca*, *S. reticulata*, and others. Because these variations in *S. pulchra* render difficult its complete recognition from descriptions of the more typical material, it seems desirable to describe as varieties its two chief leaf variations.

Salix pulchra var. *Looffiae*, var. nov.

~~*Salix pulchra* var. *Looffiae*, var. nov. forma typica speciei~~
differt foliis anguste vel late obovatis vel obovato-ovalibus; apice
retundatis vel apiculatis vel terminalibus acutis.

Variety *Looffiae* differs from the species in having its leafblades narrowly to broadly obovate, or obovate-oval, rounded to apiculate at apex or the distal leaves acute. Common dimensions are 1 x 2-2.5, 1.5 x 3-3.5, 2 x 3-4, 2.5 x 3.5-4, and 3 x 4, 2.5-3 x 5, and 3-3.5 x 6-7 cm.

It is a pleasure to name this willow for Mrs. Ethel H. (Mrs. Henry B.) Loeff of Oak Harbor, Washington, who has done critical ecological and taxonomic collecting on Kodiak Island during two seasons. Her work has done much to explain the distribution and the peculiar expression of arctic willows on that island.

Specimens referred to this variety are listed below. Most of the plants from coastal areas are recorded as of prostrate or depressed habit, but this is true also of specimens of typical *S. pulchra*. The Setchell specimen appears to have been erect in habit.

Southern Alaska. Kodiak Island: Alitak, prostrate on mountain slope, eastern exposure, elev. 500 ft. Ethel H. and Henry B. Loeff 1191 (Type, pistillate, Herb. Carleton R. Ball, 3 sheets); prostrate, southern exposure, elev. 500 ft., 1196A (?), both May 26, 1940 (GRB); - Decumbent, in mixed moss and grass association, elev. 75 m., Walter J. Eyerdam 2047 (2), June 25, 1939 (GRB); - (no specific locality), Roland Snodgrass 39, in 1933 (GRB); Gulkana to Paxson, elev. 1385-2500 ft., Wm. A. and Clara B. Setchell 77, June 26, 1931 (GRB, UC).

Western Alaska. Pribilof Ids., St. Paul Island, C. Hart Merriam, August 7, 1891 (USN). Nunivak Island, O. J. Murie 2060 (Eaten by muskoxen), Aug. 14, 1936 (GRB). St. Matthew Id., Coville & Kearney 2086a, July 15, 1899 (USN). St. Lawrence Id., Northeast Cape, Coville and Kearney 2001, July 13, 1899 (USN). King Island, Bering Sea, J. P. Andersson 3607A, June 25, 1938 (GRB).

Northern Alaska: Walker Lake, Kobuk R., W. C. Mendenhall, Aug. 21, 1901 (USN); Alatna R., 65 mi. above mouth, Mendenhall, July 23, 1901 (USN); Beaver, Yukon R., W. A. and C. B. Setchell 408, June 19, 1932 (GRB, UC, USN); Circle City, Yukon R., the Setchells 392, June 18, 1932 (GRB, UC, USN).

The more vigorous plants, like those from the Yukon River and the Alatna River (tributary of the Koyukuk) have elongated seasonal shoots with broad leaves at the outer end and relatively narrower blades below.

Salix pulchra var. Palmeri var. nov.

~~Salix pulchra~~ ~~var. Palmeri~~ ~~var. nov.~~ #2 forma typica speciei

differt foliis anguste oblongis vel elliptico-oblongis vel anguste elliptico-oblancoelatis, apice acutis vel acuminatis, 0.8-1.5 cm. latis, 4-6(8) cm. longis.

Variety Palmeri differs from the species in having narrowly oblong, elliptic-oblong, or narrowly elliptic-oblancoelate leaf blades, 0.8-1.5 cm. wide by 4-6 or 8 cm. long, and acute to acuminate at apex. Common sizes are 0.7 x 3.5, 0.8-1 x 4, 0.8-1.2 x 5, 1-1.3 x 6, 1.5 x 7, and 1-2 x 8 cm.

A form described by Andersson of Sweden requires consideration.

In 1858, he published a paper on American willows simultaneously in Sweden (Oefvers. Kon. Vet.-Akad. Forh. 15:100-133) and America (Proc. Am. Acad. Arts & Sci. 4:50-78). In the Swedish paper (p. 123), he described S. phyllioides, believed by Bebb to be S. pulchra but by Schneider to be a different Asiatic species, and added: "- latifolia. -angustifolia," without description or indication of rank. In the American paper, edited and annotated by Asa Gray, these entities are called forms and described (p. 64). The second reads: "Forma angustifolia: foliis 1-2 pollicaribus 1/2 poll. latis lanceolatis integerrimis." Gray doubtless got this information from Andersson. In his Monographia Salicum, 1867, Andersson described this form as "- angustifolia: foliis lanceolato-linearibus, 4-5 pollices longis medio 1/2-3/4 poll. latis" In his treatment of world Salices (DC. Prodrum 16 (2): 190-323, 1868), he writes "2, argentifolia: foliis lanceolato-linearibus 2-3 poll. longis...." (p. 245). ~~The name argentifolia doubtless was a typographical error but the striking discrepancies in leaf length remain unexplained. No localities or collectors are cited in any paper. Because of this omission, the discrepancies noted, and the uncertain identity of S. phyllioides, Andersson's form must be disregarded.~~

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The specimens referred to var. Palmeri are listed below. The variety apparently is most common in a belt extending south-north through Central Alaska, with an outlier to the west on Norton Sound and to the east on the Arctic Coast of northeastern Yukon Territory. The type (Palmer 121) was collected in the Matanuska Valley of southcentral Alaska. Another specimen of the type collection is in the herbarium of the Fish and Wildlife Service at the Research Laboratory of the Patuxent Wildlife Refuge near Beltsville, Md. It is a pleasure to name this variety for L. J. Palmer of the U. S. Fish and Wildlife Service at Fairbanks, whose collections of plants browsed by moose and reindeer have done much to increase our knowledge of their distribution, ecology, and taxonomy.

NEW SPECIFIC AND VARIETAL COMBINATIONS

Following study of more adequate material, it often becomes necessary to elevate varieties to specific rank, to degrade specific entities to varietal rank, or to transfer varieties from one species to another. Changes of all three kinds are made herein.

South-Central Alaska. Alaska Peninsula, Kukak Bay, Coville and Kearney 1633, July, 1899 (GRB, USN); Kenai Peninsula, between Skilak and Tustumena Lakes (moose-browse reconnaissance), L. J. Palmer, 1, 6, 22, 32, 36, 56, and 66, July, 1933 (GRB). Kodiak Id., Olga Bay, above 1600 ft. elev., Loeff and Loeff 356, July, 1938 (GRB). Matanuska Valley (mountain shrub type), L. J. Palmer 121, June 24, 1940 (GRB, type). Richardson Highway, Oulkena to Paxman, W. A. & C. B. Setchell 81; Summit Lake, the Setchells 105, both June, 1931 (GRB, US). Mt. McKinley Natl. Park, Savage River Hdqrs., elev. 3500-4200 ft., the Setchells 185, 186, 189, 193, June 30, 1931 (GRB, US).

West-Central Alaska. Norton Sound: Egnvik, C. H. Rouse 13, 14, Aug. 11, 1931; Pastolik Reindeer Camp, Rouse 26, July 25, 1931 (GRB).

Central Alaska. Vicinity of Fairbanks: Pedro Dome, elev. 2800 ft., R. S. Kellogg, Aug. 11, 1909 (USN); McKinley Creek, tributary of Forty-mile River, O. J. Murie 141, July 11, 1920 (USN). Steece Highway, Fairbanks to Circle City: 12-Mile Summit, alt 3225 ft., the Setchells 551, July 6, 1932 (GRB, US).

Yukon Territory. Mackenzie Bay (near delta of Mackenzie River), Shingle Point, Lat. 69° N., long. 137° W., A. Dutilly 18141 (GUA), 18143, 18144 (GRB, GUA), July, 1940.

Salix Walpoleii (Coville & Ball) Ball, n. comb.

436. 1921. Salix Farras Walpoleii Coville and Ball, Bot. Gaz. 71:435-

It was a mistake to arrange this northern willow as a variety of the more southern species belonging to Section Cordatae. Further study and more abundant material show that it is most closely related to *S. pyrifolia* Andersson (*S. balsamifera* Barratt), which Schneider separated from the Cordatae and made the basis of a new section, *Balsamiferae*. Our plant, however, appears to be more properly regarded as a second species in that section than as a variety of *S. pyrifolia*.

The description given at the time of varietal publication still is reasonably adequate. The branchlets are somewhat more pubescent than was then indicated, the distal leaves on vigorous shoots may be subovate and rounded at base, the stipules reach 8 mm., and the styles sometimes are 0.4 mm. long. A comparison of some contrasting characters of *S. pyrifolia* and *S. Walpoleii* is given below.

<u>Organ</u>	<u>In pyrifolia</u>	<u>In Walpoleii</u>
Branchlets, young	Glabrous	Pubescent, more or less
Blades, shape	Ovate or ovate-lanceolate	Elliptical-lanc. to obovate
base	Cordate or rounded	Acute or distal roundish
margin	Serrulate or crenately so	Entire or remotely crenulate
venation	Shallowly rugose	Reticulate
Stipules	Wanting or minute	2-6 or 8 mm. long
Aments, pistillate	3-8 cm. long	2-5 or 6 cm. long
Capsules	7-9 mm. long	5-7 mm. long
Pedicels	2.5-3.5 mm. long	1.0-1.5 mm. long

The known range of this plant has been greatly extended since 1921. The nine specimens then listed were all from northwest Alaska and ranged in location from Seward Peninsula at Bering Strait to the Dall River north of the Yukon River, at about longitude 150°W. More recent collections have extended its recorded range far to the south and east, as shown below.

ALASKA

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West-central Alaska. Seward Peninsula and Adjacent Yukon Valley.
Without locality, Seward Peninsula, A. J. Collier, in 1900 (USN).
Vicinity of Port Clarence: north side and east end of Grantley Harbor,
F. A. Walpole 1594, July 20 (USN); rocky banks, northwest shore of
Imunuk Basin, Walpole 1624 (GRB, photo; USN, pistillate type) July 30;
banks of Tukuk Channel, Walpole 1742 (GRB, USN, / ^{staminate type}), Aug. 5, 1901.
Vicinity of Nome: - Cape Nome, F. E. Blaisdell, summer 1900 (USN);
gravelly bluff near road, Hastings Creek, G. W. Thornton 614, June 26
(USN); near Nome, Thornton 630, June, 1929 (GRB, USN); Tundra, Nome,
Geo. H. Jones 9043B, July 15, 1930 (GRB). Kaltag, Yukon River east of
Morton Sound: Bank of Yukon R., Chas. H. Rouse 45, July 4, 1931 (GRB);
water's edge, W. A. & G. B. Setchell 457, 458, 459, June 24, 1932 (GRB, US).

North-central Alaska. Valley of Kobuk River, near camp, W. C.
Mendenhall, Aug. 20 (USN); Valley of Alaskuk R., 30 mi. above mouth,
Mendenhall, July 21 (USN); Valley of Alaskuk (Alatna?) R., along Help-
me-Jack Creek, near camp, Mendenhall, July 26 (USN); Dall R., 75 mi.
above mouth, Mendenhall, June 25 (USN, 2 sheets), all 1901. Wiseman,
middle fork of Koyukuk R., J. P. Anderson & G. W. Gasser 5815, July 31,
1939 (GRB).

East-central Alaska. Steese Highway, Fairbanks to Circle City:
Creek, close to 12-Mile Roadhouse, alt. 2450 ft., W. A. & G. B. Setchell
530, 534b, July 4 (GRB, US,); Faith (?) Creek, some distance below
12-Mile Summit, to Cleary Summit, alt. 2600-2700 ft., Setchell's 555, 561,
July 6 (GRB, US), all 1932; 12-Mile Roadhouse, J. P. Anderson 2433,
July 17, 1935 (GRB,). Mt. McKinley Natl. Park: Igloo Camp, alt.
2600 ft., Setchell's 173, June 29, 1931, (GRB, US); Stream banks

near Park Headquarters, Aven Nelson 3595, 3604, June 30-July 1, 1939
(GRB); Cantwell, at S. E. corner of Park, Nelson 4215, Aug. 18, 1939.
(GRB, ). Richardson Highway: Rapids Roadhouse, elev. 2130 ft.,
Setchells 110, 120, June 27, 1931 (GRB, US ); Paxson, elev. 2700-
3000 ft., Setchells 87, 90, 95, June 26, 1931 (GRB, US, ).

MACKENZIE, N.W.T. Aklavik, Lat. 66° 13' N., Long. 135° W., A.
Dutilly 18054 (GRB, CUA), 18055 (CUA), Aug. 13, 1940. Mackenzie Delta, Pete's
east side of Richards Island, between 69 and 70° lat. N.,
Creek, the common willow of alluvial ridges, J.J. Lynch and C.E. Gilliam
1805, July 27, 1940 (Herbarium of U.S. Fish and Wildlife Service).

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Salix Hindsiana variety leucodendroides (Rowlee) Ball, n. comb.
~~Salix Hindsiana variety leucodendroides (Rowlee) Ball, n. comb.~~

Salix macrostachya leucodendroides Rowlee in Bull. Torr. Bot. Club 27:250, pl. 9, fig. 6 (doubtfully representing this variety), 1900;--Abrams, Fl. Los Angeles and Vic. 102 (at least in part), 1904;-- Abrams, ibid., Suppl. ed. 102, 1911.

S. argophylla (of Nuttall) as understood by Rowlee, in Bull. Torr. Bot. Club 27:251, pl. 9, fig. 7, 1900 (in part);-- by Abrams, Fl. Los Angeles and Vic. 102, 1904 (probably in part);-- by Jepson, Man. Fl. Pl. Calif. 264, 1923 (in part), not of Nuttall.

S. exigua virens Rowlee in Bull. Torr. Bot. Club 27:255, 1900 (in part).

S. integrifolia leucodendroides Rowlee in Bull. Torr. Bot. Club 27:250, 1900 (nomen nudum).

S. longifolia (of Muhlenberg) as understood by Parish (Distrib. So. Calif. Trees) in Zee 4:347, 1894 (in part, as indicated by localities), not of Muhlenberg.

S. longifolia argyrophylla (of Andersson) as understood by Jepson (Silva Calif.) in Mem. Univ. Calif. 2:178, 1910 (in part), not of Andersson.

S. sessilifolia (of Nuttall) as understood by Britton and Shafer, No. Amer. Trees, 156, 1908 (in part);-- by Jepson (Silva Calif.), in Mem. Univ. Calif. 2:178, 1910 (in part), not of Nuttall.

S. sessilifolia leucodendroides (Rowlee) Schneider in Bot. Gaz. 65:26, 1918;-- Schneider in Bot. Gaz. 67:319-322, (synonymy, discussion, and citation of specimens), 1919;-- Schneider in Jour. Arnold Arb. 3:64, 86, and pages cited for S. sessilifolia, 1922;-- Ball in Abrams, Illus. Fl. Pac. States 1:491 (discussed under S. hindsiana Benth), 1923;-- Jepson, Man. Flow. Pl. Calif., 264, 1923.

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Differing from the species in longer, relatively narrower, more pointed, and always remotely denticulate leaves; usually less densely pilose capsules and flower scales, and less evident styles.

Seasonal shoots usually densely white-pubescent, older branchlets less so; blades linear to linear-elliptical, 5-8 cm. long and 4-7 mm. wide or, on vigorous shoots, 9-10.5 cm. long and 6-8 or 9 mm. wide, common sizes being 4 by 0.5, 5 by 0.4-0.5, 6 by 0.4-0.6, 7 by 0.5-0.7, 8 by 0.5-0.7, ~~9 by 0.6~~⁹⁻ and 10 by 0.6-0.8 cm., short-acuminate at apex, tapering at base into a short petiole, always remotely denticulate, especially on the outer half, the teeth sometimes subapinulose, densely pilose-pubescent and usually silvery when young, becoming more thinly clad by expansion, and frequently becoming more or less glabrate and greenish with age (and then often referred to S. *exigua* *virans* Rowlee).

Aments coetaneous, leafy-peduncled, solitary or 2-4 together; peduncles 1-5 cm. long in flower, the pistillate up to 8 cm. long in fruit; staminate aments 1 or usually 2-3, or occasionally 4, on one peduncle; pistillate aments 1 or 2 together, 2.5-4 or sometimes 5-6 cm. long; capsules lanceolate, 5-5.5 or 6 cm. long, closely sessile or occasionally very short-pedicelled, densely to thinly pilose, often becoming glabrate and brownish in age; styles scarcely evident or 0.1-0.3 cm. long; stigmas 0.5-0.7 mm. long, divided and reflexed.

For convenience, the brief description and discussion given by Rowlee for his new variety are quoted here.

"One to three meters high, wood soft; leaves much larger, 10-12 cm. long, 1 cm. wide, densely white tomentose on both sides, largest remotely denticulate; aments larger, cylindrical, 4-5 cm. long, otherwise as in the type".~~XXX~~
~~XXXXXXXXXXXXXXXXXXXX~~

"S. integrifolia var. leucodendroides is a very striking form from southern California collected by Mr. S. B. Parish, nos. 2134, 2040, and 540. There does not seem to be enough difference to warrant its separation as a species although integrading forms are wanting."

The above description and discussion of variety leucodendroides leave much to be desired. First, Rowlee redescribed the common California long-leaf willow, S. Hindsiana Benthams, under the name S. macrostachya Nuttall, a plant of the Columbia River Valley, and cited several California specimens. Then he asserted that, from the description, Benthams's California plant is the same as S. argophylla Nuttall, another plant from the Columbia Valley. Facts are that S. macrostachya is a synonym of S. argophylla and that S. Hindsiana Benthams is a good species, confined to California and adjacent Oregon and much more closely related to S. sessilifolia Nuttall, of Oregon and Washington, than to S. argophylla. Finally, the leaf size given by Rowlee is much larger than the average and denticulation is not confined to the larger leaves but is universal. The result was to confuse readers as to the characters and relationships of his variety. As the plant Rowlee held to be S. macrostachya really is S. Hindsiana Benthams, the present combination merely accomplishes what Rowlee thought he was doing.

His reference to a species, S. integrifolia, in the discussion above, is wholly without meaning. It seems probable that Rowlee contemplated renaming Benthams's plant but later decided it was Nuttall's S. macrostachya.

Rowlee obviously did not designate a type, although he cited 3 collections by Parish (see above). The writer has seen a specimen of No. 2040 in the herbarium of the University of California (sheet No. 55027). On the label, the word "Type" has been written in Rowlee's own hand. There are 2 specimens of No. 640 in the U. S. National Herbarium (sheets 780021, 940755). They are var. leucodendroides but there is no evidence that Rowlee ever saw them.

Variety leucodendroides occurs sparingly in at least five counties in the Coast Range and Central Basin of California north of the Tehachapi, where the species is common. It occurs more abundantly in all of the counties south of this divide, where the species is much less common. Several specimens from Humboldt Co., in the northwestern part of the State, have been referred to this variety but they need further study and are not cited here.

In the western part of southern California this variety is the dominant representative of the Section Longifoliae, the long-leaf or sandbar willows. To the eastward it gradually is replaced by varieties of S. exigua Nuttall. In the northern edge of its southern range it overlaps the range of the species. On the south it extends into Lower California and on the east into the edge of Arizona. Its altitudinal range is from approximately sea level along the Colorado River and the southern Coast to elevations of approximately 5000 feet in the southern mountains.

Because specimens of variety leucodendroides are seldom correctly identified, but usually are found under such names as argophylla, argyrophylla, exigua, Hindsiana, longifolia, macrostachya, and sessilifolia, it is desirable to cite the numerous specimens which have been referred to it by the writer. These are given below.

CALIFORNIA (Counties from north to south). Santa Clara Co. Upper part east fork Coyote Creek, W. R. Dudley 4207, June 1, 1895 (GAS). San Benito Co. Creek east of Lookout Mtn., 3300 ft., H. M. Hall 9926, May 26, 1915 (N); The Pinnacles, Alice Eastwood 6750, Oct. 21, 1917 (GAS); San Juan, A.D.E. Elmer 4908, May, 1903 (GAS, N). Monterey Co. Nacimiento River, W. H. Brewer 544, May 3, 1861 (N). Tulare Co. Shores of the Kern River, Peppermint Valley, elev. 4800 ft., W. R. Dudley 779, July 16, 1895 (SU). Three Rivers, near Britton's, W. R. Dudley, June 15, 1902 (SU). Kern Co. Bakersfield, G. V. Piper 6406, May 18, 1904 (N); E. A. McGregor 13, Sept. 28, 1910 (SU). Santa Fe Railroad, west of Bakersfield, A. A. Heller 7591, April 6, 1905 (SU, 2 sheets; US).

Ventura Co. Santa Ynez Mts.: - Matilija Canyon, 6.5 km. below Matilija Hot Springs, 270-300 m., F. R. Fosberg 7423, 7425, April 15, 1932 (GRB, 2 sheets each; N, US); Matilija Canyon, 4 km. from Meiner's Oaks, Ojai Valley, 270 m., Mrs. H. P. Dracelin 633, 634, 635, 636, April 16, 1932 (GRB, 3 sheets of each; N, US); Ojai and vicinity, Shady (?) Canyon 600 ft., S. F. Peckham, May 22, 1866; Sespe, F. W. Hubby 134, 135 (label reads "Santa Barbara Co."), May 4, 1897 (SU); Sespe Canyon, B. W. Evrman, Sept., 1914 (GAS). Piru Creek, 10 mi. above Piru, Ralph Hoffmann 354, May 2, 1931 (GRB); Piru Creek, 5 km. above Piru, 270 m., Sta. Barbara Nat. For., F. R. Fosberg 7426, April 15, 1932 (GRB, 4 sheets; N, 3 sheets); 3.2 km. east of Piru, 180 m., Mrs. H. P. Dracelin 629 (GRB, 2 sheets), 630, 631, April 16, 1932 (GRB, 2 and 3 sheets; N, US). Along Pacific Ocean: - Hueneke, Jos. Durré Davy, April 7, 1902 (US); Oxnard, Patterson Ranch, Joseph Durré Davy 7630, May-June, 1901 (US); Delta plain of Santa Clara River, Ralph Hoffmann 181, Feby. 19, 1931 (GRB); Ventura, along beach, Alice Eastwood 5034, 5035, April 17, 1916 (GAS).

Los Angeles Co. San Gabriel or Sierra Madre Mts. and their southern foothills: Arraster, 2750 ft., F. W. Peirson, May 10, 1919 (GRB); Castaic Creek, below Castaic, cir. 300 m., F. R. Fosberg 7411, 7413 (GRB, N, UO); Gorman, C. R. & R. S. Hall 2526, July 6, 1933 (GRB, 3 sheets; N, UO); Sangus, A.D.M. Elmer 3650, June, 1902 (N); Canons of Sierra Madre Mts., E. Hassel, May, 1888 (N); Little Tujunga Cañon (near Burbank), F. Farney 233, March (CAS); Burbank, J. C. Nevin, 1904 (SU); San Gabriel Wash, 700 ft., Peirson, March 6, 1921 (GRB); Tujunga Cañon, 1300 ft., Peirson, March 30, 1919 (GRB); Tujunga Wash, Stonehurst, San Fernando Valley, Mrs. Fay A. MacFadden 11047, April, 1933 (GRB); Verdugo Hills, La Tuna Canyon, Mrs. MacFadden 3069, March 1931 (SU, UO); ditto, 11044, June, 1933 (GRB); west fork of Garapito Creek, 1150 ft., J. A. Egan 4219, May 16, 1931 (GRB); Riddingsstone Canyon, San Jose Hills, L. C. Wheeler 17231, B, May 12, 1933 (GRB). Santa Monica Mts.: Between Calabasas and Agoura, Fosberg 5850, Oct. 23, 1931 (CAS, GRB, 3 sheets; N, SU, UO, 3 sheets). Los Angeles and Vicinity: Elysian Park, Geo. B. Grant 2294, Mar. 22, 1900 (SU); Grant 1156, April, 1904 (UO); Los Angeles River bottom, near L.A., E. Hassel, June, 1888 (N); ditto, F. Grinnell, Jr., Sept. 9, 1917 (SU); El Monte, 300 ft., I. Johnston 1242, May 13, 1917 (SU); Eaglewood, L. R. Abrams 1493, April 12, 1901 (SU, 2 sheets). Mohave Desert, Lovejoy Dam, Lovejoy Dutton, F. W. Peirson 9859, April 17, 1932 (GRB).

San Bernardino Co. Mojave Desert: Cushmanberry Cañon, S. B. Parish 4931, June 2, 1901 (SU, on sheet 51351 with S. exigua); about 150 mi. north of Victorville, 815 m., Mrs. H. P. Bracelin 597, 598, April 11, 1932 (GRB, 2 sheets, N, UO); Helendale (Judson), along Mojave R., Bracelin 591 (GRB), 592 (GRB, N), April 11, 1932; Hesperia, Mojave R., bed, G. I. Moxley 950, May 30, 1921 (N). San Bernardino Mts. & foothills:

Waterman Cañon, Shaw and Illingworth 4, August, 1900 (SU); mouth of Waterman Cañon, 1500 ft., S. B. Parish 11401, June 15, 1917 (UG); borders of streams, 1200 ft., Parish 11763, May 20, 1918 (UG); Keanbrook, Cajon Pass, S. B. Parish 4930, May 30, 1901 (SU); Cajon Pass, Abrams and McGregor 694, July 6, 1908 (SU); Cucamonga Cañon, 3000 ft., I. Johnston 1241, May 27, 1913 (SU); Red Hill near Upland, Ivan Johnston 1243, April 28, 1917 (SU). San Antonio Mts., Prairie Fork of San Gabriel River, Transition Zone, 5000 ft., I. M. Johnston 1685, Aug. 23, 1917 (SU). San Bernardino and vicinity: San Bernardino, P. B. Kennedy 1673, April 24, 1907 (GAS); Marian L. Campbell 45, 46, Mar. 20 & 18, 1921 (GAS); Vicinity of S.B., 1000-2500 ft., S. B. Parish 4591, 4592, April 8, 1899 (SU); Santa Ana R., 1000 ft., Parish 4786, 4787, May 15, 1901 (H, SU), 5197, April 13, 1903 (SU); ditto, Alfred Rehder 158, July 25, 1914 (GAS); San Bernardino Valley, small shrub, 6-8 ft. high, S. B. & W. F. Parish 640, April, 1882 (H, 2 sheets; this No. cited by Rowlee); about 300 m., S. B. Parish 11134, May 2, 1917 (UG); Colton, M. E. Jones, May 20, 1882 (GAS, GRB, UG).

Orange Co. Los Alamitos: I. J. Condit, July 20, 1908 (UG, 2); Dixie Ave., 1 km. west of Hansen Rd., G. R. Wolf 3843, 3845, July 7, 1932 (GRB, H, UG). Santa Ana R.: Santa Ana, Helen D. Geis 553, 554, spring 1902 (SU); Santa Ana Cañon, 500 ft., J. T. Howell 2440, June 6, 1927 (GAS, 2); ditto, 120 m., G. R. Wolf 2953, 2954, April 15, 1932 (GRB, H, UG).

Riverside Co. Riverside and Vicinity: Santa Ana R. near Riverside, S. B. Parish 2040 (type ?) May 20, 1888 (UG); ditto, H. DeForest 3, May 5, 1932 (GRB); Santa Ana R. near Corona, Crawford and Johnston 1244, June 9, 1917 (SU); Santa Ana R., 500 ft., F. W. Peirson 4282, June 22, 1920 (GRB);

Santa Ana R., 4.8 km. no. of Arlington on road to Pedley, west of Riverside, elev. 240 m., Mrs. H. P. Bracelin 599, 602, 604 (ORB, H. U), 605, 606 (ORB, 2 sheets each). ^{juv} San Jacinto Mts. & River: San Jacinto, Ethel H. Campbell, June, 1921 (GAS); San Jacinto Mts., east base, along the borders of the Colorado Desert, H. M. Hall 2105, June, 1901 (SU, U); San Jacinto Valley, George F. Reinhardt, June, 1897 (U); San Jacinto River Canon, Oak Lodge, 3000 ft., S. B. Parish 11702, April, 1918 (U). Colorado Desert, 1000-Palm Canyon, H. DeForest 2, Mar. 24, 1932 (ORB).

San Diego Co. Mountain Spring (International Boundary Commission, United States and Mexico), Edgar A. Mearns 3040, May 10, 1894 (H, SU). Tia Juana River, Tia Juana, A. C. Herre, August, 1902 (SU); ditto, LeRoy Abrams 3485, May 14, 1903 (SU); near Tia Juana, S. G. Stokes, June, 1895 (SU). San Diego River, San Diego, LeRoy Abrams 3419, May 6, 1903 (SU); Old Town, Mrs. Bracelin 620, 621, 622, 623, 625, 626, 627, 628, April 15, 1932 (ORB, 1-3 sheets each; H, except last 3; U). Flats of the San Luis Rey River, 1 mile west of the Mission, Ira L. Wiggins 3034, June 12, 1928 (SU); U, 2 sheets). Jacumba Valley, near the hot springs, LeRoy Abrams 3679, June 1, 1903 (SU). Laguna Mts., Alice Eastwood 9253, June 28, 1919 (GAS). Lakeside, George B. Grant 6860 (SU). Oneonta, elev. 25 (?) ft., H. P. Chandler 5116, April 24, 1904 (SU). Warner's Hot Springs, Alice Eastwood 2822, April 18, 1913 (GAS).

Imperial Co. Colorado River bottoms, 10 miles from Yuma, Ariz., Rosana S. Ferris 1030, June 20, 1918 (SU, 2 sheets).

MEXICO. Baja (Lower) California, near Tia Juana, Marcus E. Jones 3730, April 6, 1882 (GAS).

ARIZONA. Botanical Expedition along the Colorado River, Needles to Yuma, Chenebuevis Valley, 150 to 4500 ft., W. L. Jepson 5208, Oct.-Nov., 1912 (SU).

Salix Hindsiana var. parishiana (Rowlee) Ball, n. comb.

Salix parishiana Rowlee in Bull. Terr. Bot. Club 27:249, pl. 9, fig. 3, 1900;--Abrams, Fl. Los Angeles, suppl. ed., 101, 1911;--Schneider, in Bot. Gaz. 67:323-325, 1919; in Jour. Arnold Arb. 3:65, 92, 96, 1921;--Ball in Abrams, Illus. Fl. Pac. States 1:492, fig. 1198, 1923.

S. exigua parishiana (Rowlee) Jepson, Man. Fl. Fl. Calif., 264, 1923.

Rowlee drew a fairly adequate description of his new species, parishiana, when it is considered that the foliage and aments of the type were not yet fully developed. For convenience of discussion and comparison it is reproduced here:

"A slender shrub, one to three meters high, bark grayish or brown, young twigs cinereous strigose; leaves linear-lanceolate, minutely and remotely denticulate, 5-7 cm. long by 3 mm. wide, silky canescent when young, glabrous and somewhat coriaceous when mature, veins few but very prominent: stipules none: aments on long leafy peduncles, appearing about April 1, 2-3 cm. long by 1-2 (sic) cm. peduncles often 10 cm. long, the upper leaves of the branch much surpassing the ament: ament densely flowered, scales white densely villous all over, oblong, acute: filaments scanty (sic) hairy at the base: capsules densely villous, oblong, closely sessile: style distinct: stigmas linear, three times as long as thick."

"A very peculiar form, differing from S. taxifolia by its larger leaves and cylindrical aments and quite distinct from other species with linear stigmas."

"CALIFORNIA: Matilija Cañon, San Bernardino Co. (F. W. Hobby (sic), nos. 54, 55), Springs Valley, Inyo Co. (F. V. Coville and F. Munson, no. 263)."

Had Rowlee studied the more mature material, with the consequent larger and more evidently denticulate leaves and larger aments, he scarcely would have compared his species with taxifolia alone. Nor would he have stated so positively that it was "quite distinct from other

species with linear stigmas." The type, as so frequently is the case, represents an extreme form of the entity.

Certain characters assigned by Rowlee, such as the glabrousness, linear-lanceolate shape, and vainness of the mature leaves, must have been taken from Coville and Funston 263, from Inyo Co., as they are not exhibited by the type specimens. No. 263 probably is a desert form of S. exigua, as suggested by Schneider, who in turn considered parishiana probably to be intermediate between S. exigua as it occurs in southern California and his S. sessilifolia var. leucedendroides.

Through the courtesy of Professors A. J. Eames and K. M. Wiegand the types of S. parishiana Rowlee were made available to the writer from the herbarium of Cornell University. Both types, male and female, are mounted on one sheet. The label reads as follows: "S. longifolia, var argyrophylla And., Pistillate fl., Cliff Glen; staminate fl., Ojai Hot Spgs., Matilija Cañon, Sta. Barbara Co., F. W. Hubby, No. 54, April 3, 1896". In the upper right corner are pencilled the words: "S. parishiana n. sp. W. W. R.". A second sheet bears a single more nearly mature pistillate specimen and a label reading: "Salix longifolia var. argyrophylla as to leaf characters; S. sessilifolia var. hindsiana as to style and stigma. Matilija Cañon, Kennedy's, Sta. Barbara Co., F. W. Hubby, No. 55, April 19, 1896." It has the same pencilled annotation as the first label, and both annotations are in Professor Rowlee's handwriting.

Hubby No. 54 consists of a male (type) shoot 38 cm. long with a half dozen aments, and a female (type) shoot 30 cm. long with some 5 aments. Hubby No. 55 is a single pistillate shoot about 24 cm. long, with two aments. On each of the herbarium sheets is the inked annotation "S. parishiana n. sp., WWR." in Rowlee's hand.

From these three specimens, all from Matilija Canon, and all annotated by Rowlee and cited with his original description, it is possible to give the following amended description.

Aspect gray or silvery-gray; seasonal branchlets puberulent to pubescent, the 1-year glabrate to puberulent; leaves subpetiolate, exstipulate, blades linear (not linear-lanceolate), 4-7 or 8 cm. long, 2-3.5 mm. wide, some common sizes being 5 cm. by 2.5 mm., 6 by 2.5-3.5, 7 by 2-3, and 8 cm. by 3.5 mm., acute at base and apex, margins somewhat revolute, remotely and minutely denticulate, the midrib and primary veins slightly raised (not 'very prominent') on the gray to silvery puberulent upper surface, the lower surface silvery pubescent (leaves immature and therefore not 'glabrous and coriaceous when mature').

Pistillate peduncle 2-3 cm. long in flower, to 4 cm. long in fruit, the staminate 7-10 cm. long in flower, each bearing 8-10 foliage leaves; pistillate aments 2 cm. long in flower, 3 cm. long and 1 cm. wide in fruit (not '1-2 cm.'); capsule (No. 55, nearly mature) narrowly lanceolate (not 'oblong'), 4.5-5 mm. long, sessile, pilose, style evident but very short, 0.1-0.2 mm. long, stigmas linear-oblong, 0.5-0.6 mm. long, divided, spreading; flower scales broadly elliptical or elliptical-oblancoate, 2-2.5 mm. long, thinly pilose-pubescent or subglabrate on the outside, more pilose-pubescent within (not 'densely villous all over'); staminate aments about 2 cm. long and 0.5 cm. wide; stamens two, filaments free or united only at the extreme base, pilose with crinkly hairs on the lower half or two-thirds; ament scales as in the pistillate ament.

Variety parishiana apparently is confined to the southern coastal district of California and occurs chiefly in the mountains from relatively low elevations to 5000 feet above sea level. Present material indicates

a range from the Pinnacles in San Benito County to San Diego County at the international boundary. Specimens of the variety are found in herbariums under the names of various species of the Section Longifoliae, as argophylla, exigua, hindsiana, longifolia, macrostachya, and sessilifolia, and their varieties.

San Benito Co. Stream bank, The Pinnacles, John Thomas Howell 4620, March 30, 1930 (CAS); Bear Valley, near Pinnacles, Chester Dudley 6 (CAS).

Ventura Co. (In the following list of localities, Matilija Canon is a tributary of the Ventura River, whereas all other streams are part of the Santa Clara River system.) Matilija Cañon, Cliff Glen (male type), Ojai Hot Springs (female type), F. W. Hubby 54, April 3, 1896; Kennedy's, F. W. Hubby 55, April 19, 1896 (Types, Cornell Univ. photographs, GRB, UG); Matilija Cañon, 6.5 km. below Matilija Hot Springs, Santa Ynez Mts., alt. 270-300 m., F. R. Fosberg 7424, April 15, 1932 (GRB, 2 sheets; N, UG). Sespe Creek (between Sulphur Mtn. and Pine Mtn.), near Ten-Sycamore Flat, alt. 2300-2500 ft., L. R. Abrams and E. A. McGregor 169, June 9, 1908 (SU, m. and f.); lvs. 5-7 cm. by 3-4 mm., style 0.2-0.4 mm., stigmas 1 mm. long). Mt. Pinos (lying near the center of the northern boundary of Ventura County and its eastern flank drained by Lockwood Creek, a tributary of Piru Creek); Lockwood Lamb 4632, June 23, 1896 (SU, bearing cone galls); Goodenough Creek, below Snedden's, W. R. Dudley and F. H. Meadow, Dudley and Lamb 4717, June 28, 1896 (SU, lvs. on fruiting branchlet 4-7.5 cm. by 2-3.5 mm., style 0.1-0.2 mm. long; UG, "near Lockwood Valley Schoolhouse, June 26"); Lockwood Creek, Ralph Hoffmann, June 5, 1930 (CAS); Seymour Creek, alt. 5300 ft., H. M. Hall 6343, June 21, 1905 (UG); south side of Highway, 3.2 km. east of Piru, alt. 180 m., Mrs. H. P. Bracelin 632, April 16, 1932 (GRB, 2 sheets; N, UG).

Los Angeles Co. San Francisquito Canon, S. B. Parish 1984,
June, 1887 (UC); San Antonio Mts., Prairie Fork of San Gabriel River,
Transition Zone, elev. 5000 ft., I. M. Johnston 1685, Aug. 23, 1917 (UC,
sterile, leaves shorter and broader than normal); near Camp Rock Creek,
Piñon Ridge, San Gabriel Mts., 4500 ft., F. W. Peirson 716, June 15,
1919 (GRB).

Orange Co. Los Alamitos, I. J. Condit, July 20, 1908 (UC).

San Diego Co. Tia Juana, Alice Eastwood 2926, April 24, 1913 (CAS).

ms.

Far West. Nov. in Salix

1941-42

October 15, 1941

Dr. Herbert L. Mason,
Herbarium, Department of Botany,
University of California.
Berkeley, California.

Dear Dr. Mason:

I am enclosing the ribbon copy of a willow manuscript entitled "Far Western Novelties in Salix" which I am submitting for publication in Rhodora. It contains descriptions, discussion, and citations of specimens of two new varieties of *S. pulchra* Chamisso from Alaska.

It contains also three new combinations, one Alaskan and two Californian. The two Californian entities are *S. Hindsiana* var. *leucodendroides* (Rowlee) Ball and *S. Hindsiana* var. *Parishiana* (Rowlee) Ball. These have been so completely misunderstood and appear in herbariums under so many different specific and varietal names, as noted in the text, that I have given synoptic description, discussion, and citation of specimens in full in the hope that these plants may be better understood in the future.

With personal regards, I am

Cordially yours,

Carleton R. Ball,
Executive Secretary

MADRONO

A WEST AMERICAN JOURNAL OF BOTANY

Published by the California Botanical Society, Inc.

4004 Life Sciences Building, University of California, Berkeley, California.

October 20, 1941

Dr. Carleton R. Ball

Extension Service

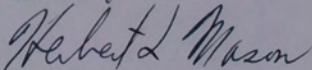
U. S. Department of Agriculture

Washington, D. C.

Dear Dr. Ball

I am in receipt of your manuscript "Far Western Novelties in Salix". In the letter accompanying the article it was stated that you are submitting it for publication in "Rhodora." I assume that this is a typographical error and that Madrono is meant, since all the undescribed entities are western. At any rate we are very glad to have the article for Madrono, and will publish it as soon as space is available. A considerable number of manuscripts are already on hand; it is possible that your article may not appear before July, 1942.

Sincerely



Herbert L. Mason
Chairman, Editorial Board

November 1, 1941

Dr. Herbert L. Mason,
Chairman, Editorial Board,
Madrono,
4004 Life Sciences Building,
University of California,
Berkeley, California.

Dear Dr. Mason:

On returning to Washington recently I find your letter of October 20 regarding the manuscript I sent. It was intended for publication in Madrono and the reference to Rhodora was an error.

Three of the new combinations contained in this manuscript were in a paper submitted to the University of California for publication before I left there. At the time of my leaving, I was assured by Dr. Goodspeed that the paper would be published but apparently it never was because one of my friends recently asked where I had published a certain combination and when I told him he said there wasn't any such animal. This proved to be correct.

Because of this long delay in getting these new combinations published, I will greatly appreciate anything that you can do legitimately to expedite the appearance of this paper in Madrono.

Cordially yours,

Carleton R. Ball,
Executive Secretary

November 4, 1941

Dr. Herbert L. Mason,
Herbarium, Department of Botany,
University of California,
Berkeley, California.

Dear Dr. Mason:

In further reference to the manuscript I sent you on
October 15, I now have additional data on the location of
Pete's Creek in the Mackenzie Delta.

On page 8, in the next to the last line, after the word
"Creek," please insert the following:

east side of Richards Island, between
69° and 70° Lat. N.

Appreciating your help in this matter, I am

Cordially yours,

Carleton R. Ball,
Executive Secretary

MADRONO

A WEST AMERICAN JOURNAL OF BOTANY

Published by the California Botanical Society, Inc.

4004 Life Sciences Building, University of California, Berkeley, California.

February 26, 1942

Dr. Carleton R. Ball
United States Department of Agriculture
Washington, D. C.

Dear Dr. Ball

In going over your article on "Far Western Novelties in Salix" I find a few points which I should like to take up with you before sending the manuscript to the printer.

The citations of specimens does not exactly follow the form customarily used in Madrono and since the changes are of form rather than content I trust you will have no objection to our bringing these into closer agreement with our usual practice. The main differences are::

1. The date, if given, should precede the collector's name.
2. Initials or first names of collectors are given only when necessary to avoid confusion or for comparatively little known collectors, thus Eastwood, Heller, Elmer, Brewer, will be at once recognized by any taxonomist; but for less well known collectors the name or initials may be given the first time mentioned, thereafter, in order to save space, only the surname, thus E. A. McGregor, S. F. Peckham, B. W. Everman, and thereafter, McGregor, Peckham, Everman.
3. To avoid the appearance of inconsistency in any one article, distances and elevations are all given in the metric system or all in the English, and if you have no serious objection we should like to change all such measurements in your paper to the English measurements giving round numbers since these are more commonly used in the article than the metric.

I should also like to have your opinion as to the feasibility of condensing the citations by the following omissions:

- OK
OK
1. It would save considerable space if dates could be omitted whenever the collector's number is given since the number identifies the collection.
 2. Elevations above sea level might be omitted entirely from citations, since interested persons will consult the specimens and see the labels, or a general statement could be made as to the altitudinal range for each entity under consideration.
 3. By omitting unimportant words such as "near", "vicinity of", "along", considerable space may be saved.
 4. When a series of numbers follows a collector's name space may be saved by using the form "625-628" instead of "625, 626, 627, 628"; I believe the former will be correctly understood.
- OK

For your convenience I am sending one page of citations revised according to the suggestions mentioned above. Please let me know as soon as possible to what extent you approve of these changes.

February 26, 1942

A few other suggested changes, mainly in sentence structure, are:

Page 1, last two lines: "as in *S. richardsonii*." The late American salicologist Bebb likewise often described one or both variations, as in *S. laevigata*, to avoid ~~use~~ "in the case of " and "did likewise" (ungrammatical).

Page 2, line 5: "The writer also has followed this practice," to avoid "done this." Line 8 from bottom: "Looff...who has collected on Kodiak Island during two seasons and whose ~~careful and~~ critical work has done much..."

Page 19: Since paragraphs two and three constitute a technical description should they not follow directly the synonymy on page nine? Paragraph one on page ten (a comment) would then follow naturally (instead of preceding the technical description).
No, a brief desc but contrasting with species

Page 18, line 3: I find the word "Glabrity" in the dictionaries at hand but not "glabrousness" although for all I can say the latter may be also good usage. Fifth line from bottom: to avoid beginning with a collector's name representing a specimen the paragraph might be changed to read: "The first cited collection by Hubby (no. 54)..." and in the next line: "The second cited collection by Hubby (no. 55)..."

Page 3 and elsewhere: The form "W. A. & C. B. Setchell" is preferable, I believe, to "The Setchells." although it occupies a little more space.

The article is scheduled for the July issue of Madrono.

Sincerely

Herbert L. Mason

Herbert L. Mason
Chairman of the Editorial Board

EC:pw

Our concern as to space saving is due to the possible paper shortage. Science Press has asked us to justify the use of paper for Madrono during the present emergency.

CALIFORNIA(counties from north to south). Santa Clara County:
upper east fork, Coyote Creek, W. R. Dudley 4207 (CAS). San Benito County:
creek east of Lookout Mountain, H. M. Hall 9926 (USN); The Pinnacles,
Eastwood 6750 (CAS); San Juan, Elmer 4908 (CAS, USN). Monterey County:
Nacimiento River, Brewer 544 (USN). Tulare County: Kern River, Pepper-
mint Valley, Dudley 779 (SU); Three Rivers, near Britton's, June 15, 1902,
Dudley (SU). Kern County: Bakersfield, Piper 6406 (USN); E. A. McGregor
13 (SU); Santa Fe Railroad, west of Bakersfield, Heller 7591 (SU, 2 sheets;
UC). Ventura County: Matilija Canyon, Santa Ynez Mountains, 4 miles below
Matilija Hot Springs, Fosberg 7423, 7425, (CRB, 2 sheets each; USN, UC);
Matilija Canyon, 2.5 miles from Meiner's Oaks, Ojai Valley, Mrs. H. P.
Bracelin 633-636 (CRB, 3 sheets of each; USN, UC); Shady (?) Canyon near
Ojai, May 22, 1866, S. F. Peckham (✓); Sespe, F. W. Hubby 134-135 (label
reads "Santa Barbara County") (SU); Sespe Canyon, September, 1914, B. W.
Everman (CAS); Piru Creek, 10 miles above Piru, ^{Ralph} Hoffmann 354 (CRB);
Piru Creek, 4 miles above Piru, Santa Barbara National Forest, Fosberg
7426 (CRB, 4 sheets; USN, 3 sheets); 2 miles east of Piru, Bracelin 629
(CRB, 2 sheets) 630-631 (CRB, 2 and 3 sheets; USN, UC); Hueneme, April
7, 1902, Burt-Davy (UC); Patterson Ranch, Oxnard, Burt-Davy 7630 (UC);
delta plain of Santa Clara River, Hoffmann 181 (CRB); along beach, Ven-
tura, Eastwood 5034, 5035 (CAS).

March 2, 1942

Dr. Herbert L. Mason,
Chairman of the Editorial Board,
Madrono,
4004 Life Sciences Building,
University of California,
Berkeley, California.

Dear Dr. Mason:

I greatly appreciate the thought you and Miss Gurn have given to my paper on *Far Western Novelities in Salix*. In general, from the standpoint of both principles and practices, I would say go ahead as far as seems necessary or desirable in connection with each of the points raised. I am adding, however, some comments on some of the points.

Changing of the figures for distances and elevations to English measurements in round numbers seems to have one danger, namely, that of changing a fact as given by an author. I have discovered cases where authors have computed metric system measurements from the English system measurements and have made errors in doing so. If we reconvert their figures we become responsible for any errors. In most cases this problem is not at all important.

The whole question of citing specimens is one which permits great individual variation. In many cases locality, collector's name and number are sufficient. Where a number is lacking, its date or at least the year should be given. Many ways of shortening may be employed between citing these three essential facts and the full data on the label.

The omission of elevations requires some consideration. Where the range and habitat of the entity discussed is fairly well known, elevations mean little. If the entity is rare or local and it occurs in an area having a sharp change of elevation, it would seem desirable to include the elevation. This probably would be true for *S. Hindsiana* var. *parishiana*, as it is of rare and local occurrence and elevation changes sharply in the mountains above Los Angeles.

In this connection I would point out that your sample page of citations shows the name of the collector and the numbers of specimens in italics. This practice is expensive in that the typesetter must change from one type font to another and I cannot see that it serves any useful purpose. The name and collector's number cannot be anything else than these in a citation.

Regarding the suggestion that paragraph 1 on page 10 is a comment rather than a discussion, I would point out that it is partly both. Many taxonomists give a very brief description of their plant as the first paragraph in the extended description. The Salicologist Andersson did this habitually. I do it myself if the complete description is long. In this case I made my brief introductory description a comparison of this variety with its species and gave the characters by which the variety differs. Differentiations usually are given after the description. Putting it before the description enables the reader of the description to know what are the important points beforehand instead of afterward.

I have no objection to the change of the language regarding Mrs. Loeff's work on Kodiak Island, but would suggest that the phrase "careful and critical", which might be thought to be redundant, be changed to the phrase "critical ecological". Her critical work with willows was chiefly in the field of ecology.

I hold no brief for either glabrousness or glabry. I am more familiar with the former, but either is a recognized ending for words of this character.

With personal appreciation of your labors, I am

Cordially yours,

Carleton R. Ball,
Executive Secretary

MADRONO

A WEST AMERICAN JOURNAL OF BOTANY

Published by the California Botanical Society, Inc.

4004 Life Sciences Building, University of California, Berkeley, California.

March 9, 1942

Dr. Carleton R. Ball
Extension Service
United States Department of Agriculture
Washington, D. C.

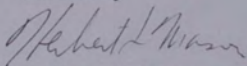
Dear Dr. Ball

I have your letter regarding proposed changes in your manuscript on "Far Western Novelties in Salix" and appreciate your willingness to cooperate in condensing the citations to a certain extent. This will be done, therefore, by omitting initials of well-known collectors, omitting dates if the collector's number is given, and omitting unimportant words such as "in", "along", and "near."

Your reasons for wishing to retain the elevations in the citations of the specimens and to follow the collector as to the system of measurements used are satisfactory. We shall make no changes of this kind and shall also follow your expressed wishes as to other points mentioned.

We adopted the policy of underlining collectors' names and numbers with volume 3, and for the sake of consistency we wish to continue this practice. I think it has some value in enabling one to determine which of the collections at hand have been cited by monographers.

Sincerely



Herbert L. Mason
Curator of the Herbarium

EC:pw

March 16, 1942.

Dr. Herbert L. Mason,
Curator of the Herbarium,
University of California,
Berkeley, California.

Dear Dr. Mason:

Your letter of March 9 is here and I thank you for the information given.

Retention of elevations above sea level seems desirable in the case of the species having limited distribution, such as *S. parishiana*, as I noted in my former letter. In this case, actual elevations along a given creek would help a collector seeking to recover his plant. Where a species has a wide distribution, a general statement of elevation would be quite sufficient.

Cordially yours,

Carleton R. Ball,
Executive Secretary

MADRONO

A WEST AMERICAN JOURNAL OF BOTANY

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4004 Life Sciences Building, University of California, Berkeley, California.

June 19, 1942

Dr. Carleton R. Ball
Extension Service
U. S. Dept. of Agriculture
Washington, D. C.

Dear Dr. Ball:

The galley proof of your article "Far Western Novelties in Salix" is enclosed. Will you kindly make the necessary corrections and return the proof within twenty-four hours after receipt? If corrected proof is not received within the time limit specified, it will be necessary for the editor to return to return his copy to the printer with the corrections of only such errors as have been noted by him.

Changes in sentence structure or other extensive changes are not advisable, since they increase considerably the cost of printing. Corrections, therefore, should be limited to actual errors or omissions.

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Sincerely,

Herbert L. Mason
Herbert L. Mason

HLM:AC
Enclosure

Far West Nov. in Salix

June 24, 1942

Dr. Herbert L. Mason,
Madrono,
4004 Life Sciences Bldg.,
University of California,
Berkeley, California.

Dear Dr. Mason:

On my return to the office this morning, I find your letter of June 19 and accompanying galley proof of my paper entitled "Far Western Novelties in Salix". Let me thank you and your associates for having caught a few errors in the text, especially in the spelling of the name of J. P. Anderson. I am making a few comments on the text.

On galley 26, the collector's number was omitted from one specimen. In order to insert it without resetting the entire paragraph, I have suggested that the word "pistillate" in the citation of specimens be abbreviated to "pist." or that the abbreviation "fem." for female be used instead.

On galley 28 I have inserted in parentheses the words "which has entire leaves." This insertion will require the changing of only one line and clarifies Rowley's unpublished name *S. integrifolia*.

I am much distressed by the lumping of all my paragraphs in the citation specimens of *S. hindsiana* variety *lucodendroides*. The result is one single paragraph more than two pages long in which it is almost impossible for any one to find the counties. In my list I had underscored the county names so that they would be set in a distinct type but this was not done and now they are completely lost in this maze of citations.

All printing is for the reader and theoretically it is so arranged as to make reading and finding of information as easy as possible. I am at a loss to understand why paragraphs were left in the text and completely destroyed in the citations of material. It certainly could not have been to save space because where I abbreviated you have spelled out in full such words as "feet", "meters," "centimeters," "millimeters," "longitude," "latitude," etc. These words are abbreviated in practically all botanical magazines where employed in the citation of herbarium specimens. If the reader is to get any break at all it will be necessary to reparagraph the solid setting of galleys 28 and 29. I had lumped several counties together in the first paragraph. There is no reason why two should not be lumped in the final paragraph, but the other half dozen divisions should be made.

In these citations of specimens on galley 28, I note that the word "Mojave" is spelled "Mohave" the first time it is used and "Mojave" in other instances. The editor has indicated the spelling "Mohave" in all cases. In my citations I took the spelling as it appeared on the label and I do not think we should change this when citing collectors labels. If it is to be done in the case of Mojave, it would have to be done in the case of several other place names. For example, the springs in southern California are spelled variously "Cushenberry," "Cushewberry," and "Cushewberry." I have always followed the practice of using the spelling as it appeared on the label.

Please enter my order for 200 reprints of this paper, without covers, in accordance with the schedule in your letter.

Cordially yours,

Carleton R. Ball,
Executive Secretary