

tains of southern California. The subsp. *charlestonensis* is confined to the Charleston Mountains and the Sheep Range, both of Clark County, Nevada. Owing to the distinct geographical range as well as to the morphological differences, this entity should be considered a subspecies rather than a variety.

CASTILLEJA LINARIAEFOLIA Benth. var. *omnipubescens* (Pennell) comb. nov. *C. linariaefolia* Benth. forma *omnipubescens* Pennell, Proc. Acad. Nat. Sci. Phila. 89: 424. 1938.

As var. *omnipubescens* is confined to the southern part of the range of *C. linariaefolia* and in some areas is the only form found, it is considered worthy of varietal rank.

South Pasadena, California.

## A NEW PINE FROM MOUNT ROSE, NEVADA

HERBERT L. MASON AND W. PALMER STOCKWELL

In September of 1938 an unusual pine was observed growing on the east slopes of Mount Rose in Washoe County, Nevada. In general aspect this pine appears to be like its forest associate, *Pinus Jeffreyi* Murray, its most obvious difference being its diminutive cones. Closer examination, careful analyses, and preliminary breeding experiments, however, disclose a number of very important differences in structure, biochemistry and behavior that may serve to separate these two pines. A discussion of these differences and of the interrelationships of the new pine with other members of the genus must await further developments of a program of study now seven years under way at the Institute of Forest Genetics of the United States Forest Service in cooperation with the University of California. Some of this work, however, has reached a point where publication is desirable, hence it is necessary that the pine be named. It will suffice here to report that several successful field crosses have been made and many of the  $F_1$  hybrids are now growing in the nursery; the resin has been analyzed chemically and will be reported upon in due time. Precise statement of range must await the investigation of several recent reports of additional occurrences before it can be completely formulated. Hence the present paper will deal with the pine in the stand encompassing the type locality, which to date is the only stand positively known to exist by virtue of specimens in hand. As now understood the new pine is essentially confined to the lateral moraines about seven miles long and less than a mile wide flanking the upper reaches of Galena Creek and ranging in altitude from 7000 to 8500 feet. This precise habitat did not exist prior to the Pleistocene. Only a very few individuals occur off the moraines and these not more than a few hundred feet away. It is unfortunate that the stand today probably represents only



second growth timber, the area having been logged to supply mine timber and building materials for the development of the Comstock Lode at Virginia City in the middle of the last century. The original extent of the stand at this locality is probably lost to us unless some detail of wood anatomy can be discovered for the identification of the stumps of the original forest that eighty-five years of Nevada's climate have failed to erase from the scene. From these brief statements of the circumstances surrounding the occurrence of this species the reader will sense the fascination of the challenge to investigation offered by this problem. Whence came this pine? If it is of recent origin, what has been the nature of the isolating mechanism that set it apart in the genus? What of its history and parentage? It seems especially fitting to commemorate in the name of these trees the Washoe Indians who hunted in this forest.

*Pinus washoensis* sp. nov. Arbor pyramidatus, alta usque ad 60 m.; truncus valde fastigatus, diametros 1 m.; cortex tenue, maturans cum fissuris asperis vel aliquando laminatum; gemmae terminales ovoideae-acutae, 15–20 mm. longae, rufulae, margines squamarum gemmarum fimbriati; fasciculi ternati vel aliquando binati, vaginae persistentes, rugosae, summae squamarum persistente approximatae; acies virides-griseae, longae 10–15 cm., crassae, subtiliter aequaliterque serrulatae, ordinaes 12 stomata dorsales, ordines sex super superficiebus dorsualibus utrimque, hypodermis biformis, inter ordines stomatum intrusus, ductus resinae medii, 7 ad 10, cellulis parvulis muris crassis marginatae, inaequaliter multiseriatae, endodermis cum muris externis crassis, fasciae distinctae, nec pressae, iuli staminati breve cylindrati, 10–20 mm. longi, rubri-purpurei, eorum squamae gemmarum rubrae-ochraceae, marginis inaequaliter laceratae; iuli ovulati ellipsoidei, 15–20 mm. longi, 10–12 mm. lati, caerulei-purpurei obscuri; conus ovoideus, 5–8 mm. longus, badius, squamae in numero circa 160 ad 190, dehiscentes non reflexae, apophysis dorsualis, demisse pyramidatus; umbo rubrus-ochraceus, cum aculeo levis reflecto; semen 8 mm. longum, 3 mm. crassum, pars liberum alae rhomboideum-cuneatum, 1.5 ad 2 longitudes seminis.

Pyramidal tree up to 60 meters high; trunk strongly tapered, diameter 1 meter; bark maturing late, thin, becoming rough fissured or occasionally plated; terminal buds ovoid-acute, 15–20 mm. long, reddish, bud scale margins fimbriate; fascicles ternate or occasionally binate, sheaths persistent, rugose, scale tips remaining approximate; needles gray-green, 10–15 cm. long, stout, finely and regularly serrulate, dorsal stomata in 12 rows, ventral in 6 rows on each face, hypoderm biform, intrusive between the rows of stomata, resin ducts 7 to 10, median, bordered by small thick-walled cells, irregularly multiseriate, endodermis with heavy outer walls, bundles distinct, not crowded; staminate catkins short



cylindric, 10–20 mm. long, red-purple, their bud scales tan, with irregularly lacerate margins; ovulate catkins ellipsoid, 15–20 mm. long, 10–12 mm. wide, dark blue-purple; cone ovoid, 5–8 cm. long, nut brown, scales about 160 to 190 in number, not reflexed on dehiscence, apophysis dorsal, low pyramidal, umbo tan, with a slender slightly recurved prickly; seed 8 mm. long, 5 mm. wide, 3 mm. thick, free portion of wing rhombic-cuneate, 1.5 to 2 times the seed.

Specimens examined. Sierra Nevada, east side of Mount Rose, Washoe County, Nevada: altitude 7500 feet, Sept. 9, 1938, *Mason 12078*; altitude 7000 feet, Aug. 8, 1939, *Mason 12228*; altitude 8100 feet, Aug. 6, 1940, *Mason 12370* (type, Herbarium of the University of California, nos. 692993, ovulate, and 692994, staminate); altitude 8500 feet, July 18, 1939, *Stockwell and Cumming, 1455*; *Cumming*, Nov., 1941 (cones only).

Department of Botany, University of California, Berkeley.

California Forest and Range Experiment Station, Berkeley,  
conducted at and in cooperation with the University  
of California at Berkeley.

## REVIEW

*The Botanical Collections of Wilhelm N. Suksdorf, 1850–1932.* By WILLIAM A. WEBER. Research Studies of the State College of Washington, Vol. XII, No. 2. Pp. 51–121. Pl. 1, 2. June, 1944.

“And this,” said my guide, pausing for emphasis, “is the Suksdorf collection!” Dozens of bundles of specimens (wrapped and unwrapped, labeled and unlabeled) were piled on top of old wooden herbarium cases, on chairs, on and under tables, and on the floor. A thick coating of black dust covered them and the dingy basement room. This was the Suksdorf collection in 1934. Inside the packages, however, the specimens were still in the beautiful condition they had been left by their meticulous collector. That insects had not played havoc with them was partially due to the foresight of Dr. Harry F. Clements, then plant physiologist at the State College, who had put them all through a drying oven the previous year. The bundles were arranged in accordance with a variety of systems or with no system at all, and most of the external labels had become misplaced or lost. In the absence of field books, diaries, and correspondence, the collector’s symbols (in German script) defied translation.

However, the requests of specialists for certain materials were importunate, and were met as fully and promptly as possible. Preparing a loan of any group necessitated going through every bundle. In the absence of herbarium assistants, the “curator” and his graduate fellows (Dr. Reed C. Rollins and Mr. Louis O. Dillon) and a few willing undergraduate students spent long hours in tiresome searching. Despite these difficulties, a number of small groups and a few large ones (*Carex*, *Plectritis*, *Castilleja*,



Mason, H. L. and Stockwell, W Palmer. 1945. "A NEW PINE FROM MOUNT ROSE, NEVADA." *Madroño; a West American journal of botany* 8, 61–63.

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