A CRANBERRY FROM THE TAHOE NATIONAL FOREST

William A. Dayton

No botanical manual or other floral publication, so far as the writer has ascertained, attributes cranberries to the California flora. Mr. Leland S. Smith of the Supervisor's staff of the Tahoe National Forest, an indefatigable collector and observer of Sierran plants, has collected two very interesting specimens of cranberry in Nevada County.

Oxycoccus macrocarpos[1] (Ait.) Pursh. Hydraulic digging, one mile south of North Columbia, 3000 feet elevation, with ponderosa pine (western yellow pine), willows and sphagnum and other mosses, November 14, 1936, *L. S. Smith 2800* (United States Forest Service serial no.73019), sterile specimen; bog, southwest side of Columbia Hill diggings, 2900 feet elevation, July 17, 1937, *L. S. Smith 2800A* (United States Forest Service serial no. 75678), specimen in immature fruit, with some late flowers. Duplicates of the above collections are deposited in Forest Service herbaria at Nevada City and San Francisco, California, and at Washington, D. C.

In a memorandum of July 26, 1937, Mr. Smith writes:

> This species evidently blooms earlier than I thought, as I found a large amount of half-formed berries. Flowers no doubt appear around July 1 or possibly some years, in June.
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> I have visited other similar sites and have not found any indication of this species being present. So far as I can learn, this is the only place on the Forest where it is found, and no one now living in the locality (North Columbia) knows anything about it. It was only recently discovered, and it seems possible that some cranberries were dropped or thrown into the water in the early days by some miner, and became lodged in this pocket, at the end of the hydraulic mining in this vicinity, which was in the early eighties.
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> Fruit was collected here, and made very fine jelly and sauce. The bog is limited in size, and area of cranberry plants will not grow much unless seed is carried to other bogs by rodents or birds.

This material was provisionally identified by Mr. Smith as *Vaccinium oxycoccos*[1] L. var. *intermedium* A. Gray. It seems natural that, if any cranberry were to be found in California, it would be this variety. However, in view of the rather long, narrowly oblong, clearly revolute leaves, distinctly rounded and blunt at both ends, the small but foliaceous and relatively broad bractlets subtending the pedicels, and the large fruits, typically longer than broad, the plant, is, in my judgment, the commonly cultivated cranberry, *Oxycoccus macrocarpos* (Ait.) Pursh (*Vaccinium macrocarpon* Ait.), sometimes called big cranberry or American cranberry. The so-called small (European) cranberry, *Oxycoc-*

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[1] In this case the Latin ending *-us* is usual in literature, but in view of the original spelling the Greek termination *-os* should be used.

cus palustris Pers. (*O. oxycoccos* (L.) MacM., *Vaccinium oxycoccos* L.) is also native in parts of our country and is occasionally cultivated. Its smaller, round fruits are considered by many to have a flavor superior to those of *Oxycoccus macrocarpos.* In our Northwest there occurs a native variety of the small cranberry, to which I have applied[2] the name "western cranberry," *O. palustris* var. *intermedius* (A. Gray) Howell (*O. oxycoccos intermedius* (A. Gray) Piper, *O. intermedius* (A. Gray) Rydb., *Vaccinium oxycoccos* var. *intermedium* A. Gray). This differs from typical forms of the species, chiefly in its coarser stems, blunter, broader and less revolute leaves, larger fruit, and in a pronounced tendency for the shoots to proliferate after flowering.

Herbarium material of these three cranberries is often badly mixed and it is quite possible to match Mr. Smith's Tahoe plants with specimens in folders labeled *Oxycoccus macrocarpos, O. palustris* or *O. palustris* var. *intermedius.* Perhaps the best generally available key to these three forms is that by Rydberg (Fl. Rocky Mts. 646. 1917). Dr. Rydberg regarded *O. intermedius* as a species, although, as its name implies, it appears to be intermediate between *O. palustris* and *O. macrocarpos.* It may be a natural hybrid between those species, a problem which should be investigated by geneticists and cytologists.

The generic separation of *Oxycoccus* from *Vaccinium,* which dates from Tournefort, is, of course, a matter of taxonomic concept. The writer prefers to maintain this separation as was done by Dr. Frederick V. Coville. One can hardly forbear an expression here of sorrow and regret at the passing of Dr. Coville, our foremost American student of Vacciniaceae.

Mr. Smith properly mentions the possibility that this cranberry had been introduced accidentally by man in this California bog. The possibility of introduction by birds, such as grouse, or by other animals should also be considered. I see no reason, however, why some cranberry might not locally be native "in the higher northern parts of the Sierra Nevada" of California, as Brewer and Watson suggested (Bot. Calif. 1: 450. 1876) about sixty years ago. At any rate, Mr. Smith's keen eye and enthusiasm has added another genus and species to the known flora of California.

Range Forage Investigations,
Division of Range Research,
United States Forest Service,
Washington, D. C.,
November 24, 1937.

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[2] Dayton, W. A. Important western browse plants. U. S. Dept. Agric. Misc. Publ. 101. 1931.

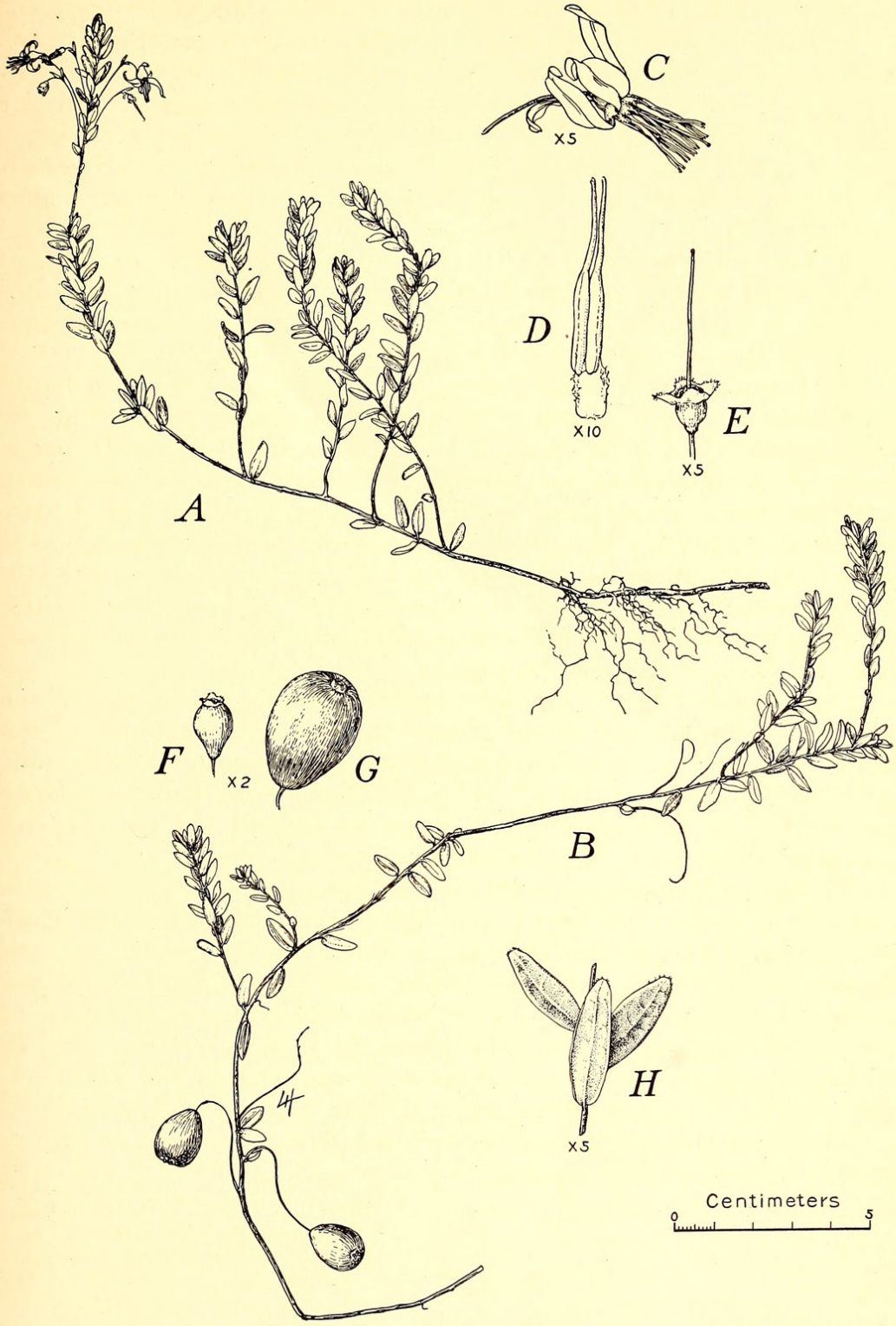

PLATE XXX. OXYCOCCUS MACROCARPOS (Ait.) Pers. A, late flowering specimen; B, immature fruiting specimen; C, flower; D, stamens; E, calyx and style; F, G, immature fruits; H, portion of stem with leaves. Drawing by Miss Leta Hughey of the United States Forest Service from specimen collected in Tahoe National Forest, California, by L. S. Smith (no. 2800A).