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TWO NOTABLE PLANT HYBRIDS FROM ALASKA

J. P. ANDERSON

Hybrids are known to occur in nature, but they are generally between closely related species and give rise to fertile offspring which often make the taxonomy of the group difficult. Natural hybrids that give rise to sterile forms are not so common. The purpose of this paper is to put on record two such hybrids observed in Alaska.

A HYBRID RANUNCULUS

Ranunculus acris L. is a European species widely naturalized in America. It has become increasingly widespread in Alaska during recent years. It grows up to 9 dm. tall. The flowers are bright yellow and showy. Petals on plants collected at Dutch Harbor and at Juneau are 12 - 15 mm. long and about 12 mm wide. The carpels and achenes have rather short, somewhat recurved beaks.

Ranunculus Bongardii Greene is a native species fairly common along the coastal regions of Alaska from the Aleutian Islands east and extending southward to Oregon and Colorado. It attains a height of 8 dm. The flowers are small and inconspicuous; specimens collected at Dutch Harbor and at Juneau have petals about 3 mm. long and 2 mm. wide, but some forms have petals somewhat larger. The carpels and achenes have long, strongly recurved beaks. The Juneau specimens are of the typical hairy form, but the Dutch Harbor specimen is of the glabrous variety tenellus (Nutt.) Greene.

Benson (1940) places both of these species in the section Chrysantha (Spach) L. Benson of the subgenus Euranaunculus (Gren. & Godr.) A. Gray.

In 1938 I found near the wharf at Dutch Harbor the two foregoing species growing together, and intermingled with them a form that appeared to be intermediate. Judgment on the taxonomic position of that form was suspended until further investigation could be made. In 1939 I found for the first time Ranunculus acris growing at the west entrance to Evergreen Cemetery at Juneau. Ranunculus Bongardii had been growing there for years. In 1940 there appeared mingled with these two species the same form observed at Dutch Harbor in 1938. This sudden appearance the season after Ranunculus acris appeared supported my suspicion that the intermediate form was a hybrid. Another strong evidence of hybridity is that the carpels all drop off without developing into achenes, indicating complete sterility. No developed achenes were found on the Dutch Harbor material.

In view of these observation I feel justified in reporting the following hybrids and citing specimens collected by me.

Ranunculus acris L. × Ranunculus Bongardii Greene. Characters intermediate between the parent species, but with a tendency to grow somewhat taller. Petals 5 - 6 mm. long x 4 mm. wide. Juneau, 1940 (6250).
EXPLANATION OF PLATE

Top row, flowering branches; lower row, leaves and nearly mature fruit of
A. _Ranunculus acris_ L.
B. _Ranunculus acris_ L. x _Ranunculus Bongardii_ Greene.
C. _Ranunculus Bongardii_ Greene.
(Photograph by the Snap Shop, Juneau, Alaska.)

_Ranunculus acris_ L. x _Ranunculus Bongardii_ Greene var. _tenellus_ (Nutt.) Greene. General characters intermediate but growing up to more than 1 meter in height. Petals 5 - 6 x 4 mm. Dutch Harbor, 1938 (4100).
A HYBRID RIBES

Ribes bracteosum Dougl. is a vigorous upright shrub 1 - 2.5 meters tall with very thick stems and twigs. The leaves are long-petioled, deeply 5 - 7-lobed, 1 -2.5 dm. wide, with sessile yellow glands. The flowers are greenish-white, borne in racemes 12 - 32 cm. long. The berries are glandular-dotted, black but covered with a white bloom so as to appear blue or even white. The aroma is similar to that of Ribes nigrum L. but even more pronounced. It is common in southeastern Alaska and extends along the coast to California.

Ribes laxiflorum Pursh is a trailing shrub with ascending tips, the stem and twigs being of about average thickness for the genus. The leaves are usually 5-lobed but less deeply so than in Ribes bracteosum, 5 - 12 cm. in diameter. The flowers have a reddish color, are borne in racemes 4 - 8 cm. long. The berry is black and stipitate-glandular. The aroma is rather unpleasant. It is common in southeastern Alaska and has a more extensive range than Ribes bracteosum.

Along the beach at the edge of the timber on Gastineau Channel about 2.5 kilometers northwest of the Federal building at Juneau there is a clump at least 10 meters long of a Ribes with twigs and leaves intermediate between the above mentioned species. The racemes of reddish flowers are about 1 dm. long. A close watch for two seasons failed to reveal any fruit although there was an abundance of flowers each season. Evidently this plant is sterile. I therefore feel justified in reporting it as a hybrid, it evidently being Ribes bracteosum Dougl. x Ribes laxiflorum Pursh, Juneau, 1940 (6111).

Crosses of Ribes bracteosum Dougl. and Ribes nigrum L. made by me in 1914 at the U. S. Agricultural Experiment Station at Sitka produced fertile progeny.

It may be noted that although Ribes bracteosum and Robes laxiflorum have been growing in close proximity for untold generations, hybrids between them must be rare. This is in sharp contrast to the Ranunculus species reported in this paper.

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LITERATURE CITED