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Eight Range Extensions for the Alaska Flora

Abstract

A floristic survey of the Cinnabar Creek area of the Kuskokwim District of Alaska revealed eight species previously unknown to the area: *Arabis arenicola* (Richards.) Gelert, *Fragaria virginiana* Duchesne, *Galium triflorum* Michx., *Geum macrophyllum* Willd., *Parnassia fimbriata* König, *Pleum commutatum* Gandoger, *Rumex crispus* L., and *Trichophorum alpinum* (L.) Pers. Searches of the literature and herbaria with significant Alaskan collections confirmed the range extensions of 200-640 km for the eight species. Four specimens apparently represent the westernmost collections in North America.

Introduction

Numerous botanical collections have been made in Alaska in the last 200 years, but due to the size of the state and the relative inaccessibility of many areas, the ranges of many species are still incompletely known (Hulten 1968). The lower Kuskokwim River area between the Yukon River and the Wood River Lakes region is one of the least botanically known (D. F. Murray, University of Alaska, pers. comm.). A floristic survey of a localized area in this region revealed range extensions of eight species.

Methods

The observations reported herein are the result of a botanical survey conducted around the Cinnabar Creek area, T8N R54-55W (Seward Meridian) in the Kuskokwim District of southwestern Alaska (Fig. 1). A search of the literature published since the publication of Hulten's (1968) Flora of Alaska was made to substantiate the reported range extensions. Herbaria with substantial Alaskan plant collections were also consulted: State Museum of Natural History (Riksmuseum), Stockholm—S; Gray Herbarium—GH; U.S. National Herbarium—US; National Herbarium of Canada—CAN; University of British Columbia—UBC; and University of Alaska at Fairbanks—ALA.

Voucher specimens have been deposited at the Emory University Herbarium (GEO). Nomenclature follows Hulten (1968).

Range Extensions

Arabis arenicola (Richards.) Gelert (Brassicaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 12, near ore (cinnabar) dump at Princess mine, stream side, 400 m, 29 August 1980, Phillips 208. Associated species: *Juncus castaneus*, *Carex* spp. Range extension: 300 km SSE of the previous southernmost Alaskan record (Hulten 1968).

Fragaria virginiana Duchesne subsp. *glauca* (S. Wats.) Standt (Rosaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 12, 0.5 km east of Cinnabar Creek

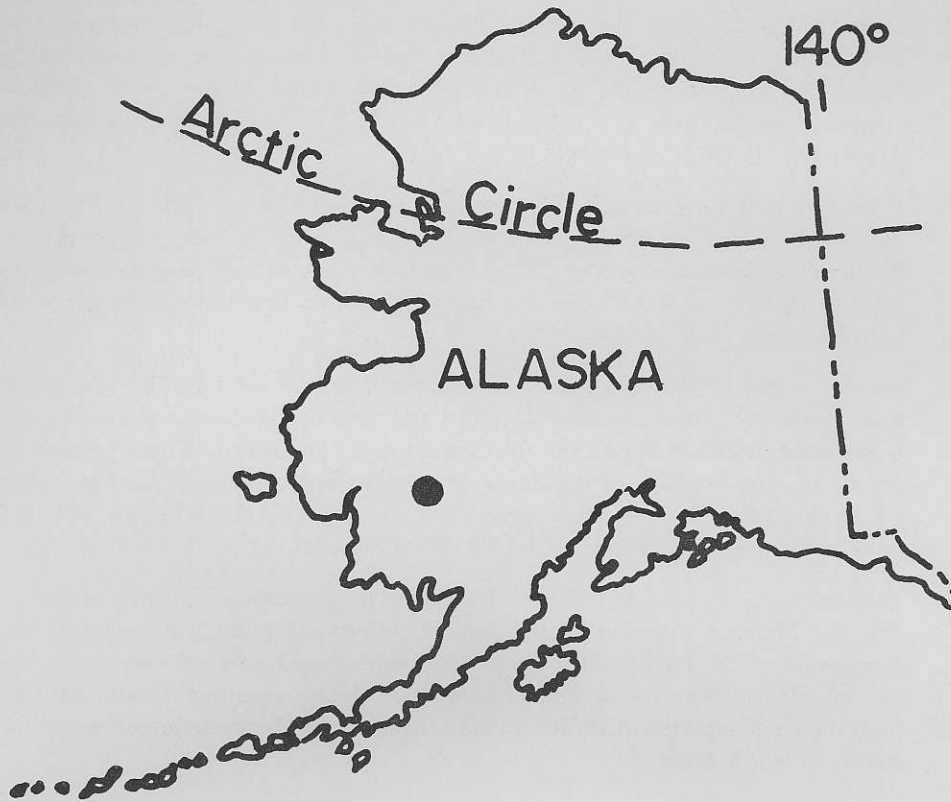


Figure 1. Location of the study site (black dot).

on road to Princess mine, roadside, 365 m, 4 September 1980, Phillips 224. Associated species: *Cornus canadensis*, *Alnus tenuifolia*, *Salix* sp. Range extension: 640 km SW of a collection originally labelled *F. yukonensis*, 5 July, 1941, J. P. Anderson 7094 (CAN), which was taken at Manly Hot Springs. This extension represents the new westernmost point of ranges of both subsp. *glauca* and the species as a whole.

Galium triflorum Michx. (Rubiaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 12, 0.2 km northeast of Princess mine, alder thicket, 450 m, 4 September 1980, Phillips 223. Associated species: *Alnus tenuifolia*. Range extension: approximately 280 km to the northwest from the previously known range (Hulten 1968).

Geum macrophyllum Willd. subsp. *perincisum* (Rydb.) Hult. (Rosaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 12, near ore (cinnabar) dump at Princess mine, stream side, 400 m, 29 August 1980, Phillips 210. Associated species: *Juncus castaneus*, *Carex* spp. Range extension: approximately 200 km S of the nearest collection shown by Hulten (1968) and 200 km SW of another collection along the Kuskokwim River—14 July, 1949, W. H. Drury 1978 (CAN).

Parnassia fimbriata König (Saxifragaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 12, 0.5 km W of Princess mine, wet lowlands, 365 m, 4 September

1980, Phillips 215. Associated species: *Sphagnum* sp., *Carex* spp., *Vaccinium uliginosum*, *Betula nana*, *Potentilla fruticosa*, *Trichophorum alpinum*. Range extension: approximately 340 km SW of the previous westernmost record (Drury 2858 (CAN); 12 August, 1949; Farewell, Alaska; 62° 31'N, 153° 53'W). This record represents the new westernmost locality for the species.

Pleum comutatum Gandoger (Poaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 13, 0.5 km N of mine camp, roadside, 335 m, 5 September 1980, Phillips 229. Associated species: *Alnus tenuifolia*, *Salix barclayi*. Range extension: approximately 300 km WNW from the base of the Alaska Peninsula where several collections have been made (Hulten 1968).

Rumex crispus L. (Polygonaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 13, at mine camp, disturbed areas around buildings and airstrip, 335 m, 6 September 1980, Phillips 235. Associated species: *Epilobium angustifolium*. Range extension: 500 km NW of the closest of several widely scattered Alaskan collections (Raspberry Island in the Kodiak group; Eyerdam 3794 (CAN), 8-10 July, 1945). This report is the new westernmost record for North America.

Trichophorum alpinum (L.) Pers. (Cyperaceae). Kuskokwim District: T8N R55W (Seward Meridian) Section 12, 0.5 km W of Princess mine, wet lowlands, 365 m, 4 September 1980, Phillips 216. Associated species: *Sphagnum* sp., *Carex* spp., *Vaccinium uliginosum*, *Betula nana*, *Potentilla fruticosa*. Range extension: about 300 km SW from the range reported in Hulten (1968), representing the westernmost record for the species in North America.

Literature Cited

Hulten, E. 1968. Flora of Alaska and Neighboring Territories. Stanford Univ. Press, Stanford, California.

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