1979-208

THE STATUS OF SOME RARE PLANTS IN THE HAINES JUNCTION AREA, YUKON TERRITORY

Report Compiled

for

Shakwak Project

Department of Public Works, Canada

and

U. S. Department of Transportation

by

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ABSTRACT

The location of three rare vascular plant species (meadow arnica, western sea blite, and colopodium) in the Haines Junction area is described. The ecological impact on these species should be minimal during highway improvement work since the populations can easily be avoided.

INTRODUCTION

An environmental impact statement prepared for the Shakwak Highway Improvement Project identified a number of rare or unique vascular plant species (Douglas 1977). The present report considers the status of two of these rare species in the Haines Junction area. A third species, not previously known to occur in the area, is also discussed.

RARE PLANTS

1. Meadow arnica (Arnica chamissonia Less. ssp. incana (Gray) (Maguire).

   This distinctive subspecies, with its silvery or grayish leaves (Figs. 1 and 2), is extremely rare in Canada. To date it is known from only the Haines Junction and Marsh Lake area in the Yukon (Maguire 1943, Porsild 1966, Douglas and Ruyle-Douglas 1978, Douglas 1979a, 1979b) where it occurs in mesic meadows (Figs. 3 and 4). It is also known in Canada from two collections in the Northwest Territories (Maguire 1943, Raup 1947) and four collections in British Columbia (Douglas and Ruyle-Douglas 1978, Douglas 1979a).

2. Western sea blite (Suada occidentalis S. Wats.).

   This species (Fig. 5), although common farther south, is a rare disjunct in the north. This is probably due to the rarity of solonetzic soils in the north--the soil type to which this plant is restricted. It is known from a single collection in Alaska (Hulten 1968) and several collections in the south-western Yukon (Kluane Lake, Haines Junction, Whitehorse, Carcross and Marsh Lake) (Porsild 1951, 1966; Hulten 1968; Douglas 1979b).

Figure 1. Meadow arnica in the Haines Junction area.

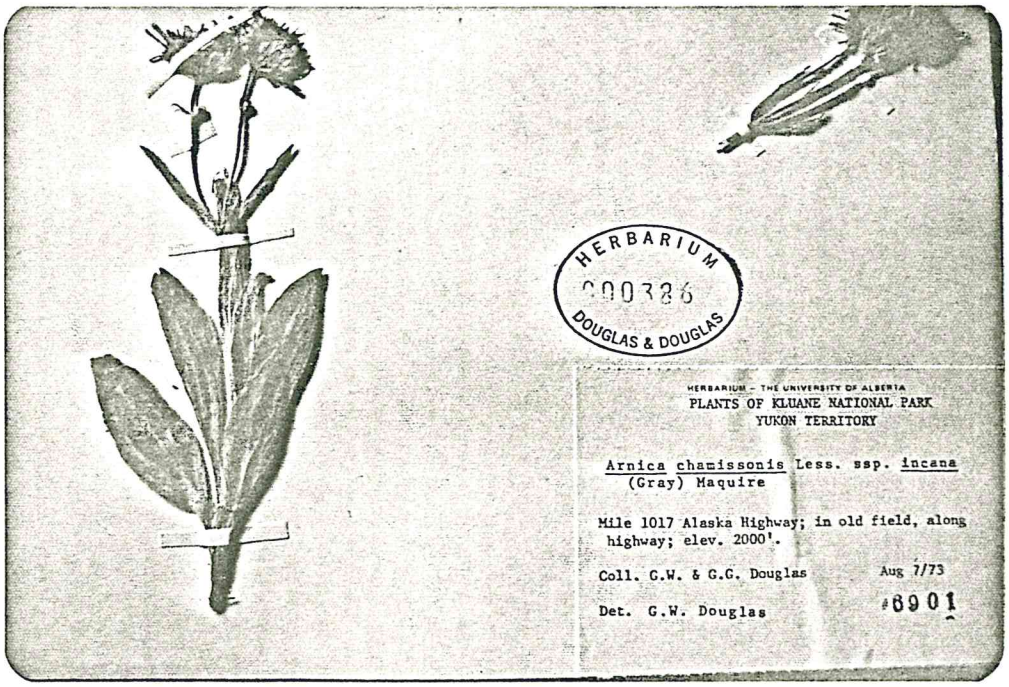

Figure 2. A pressed specimen of meadow arnica.

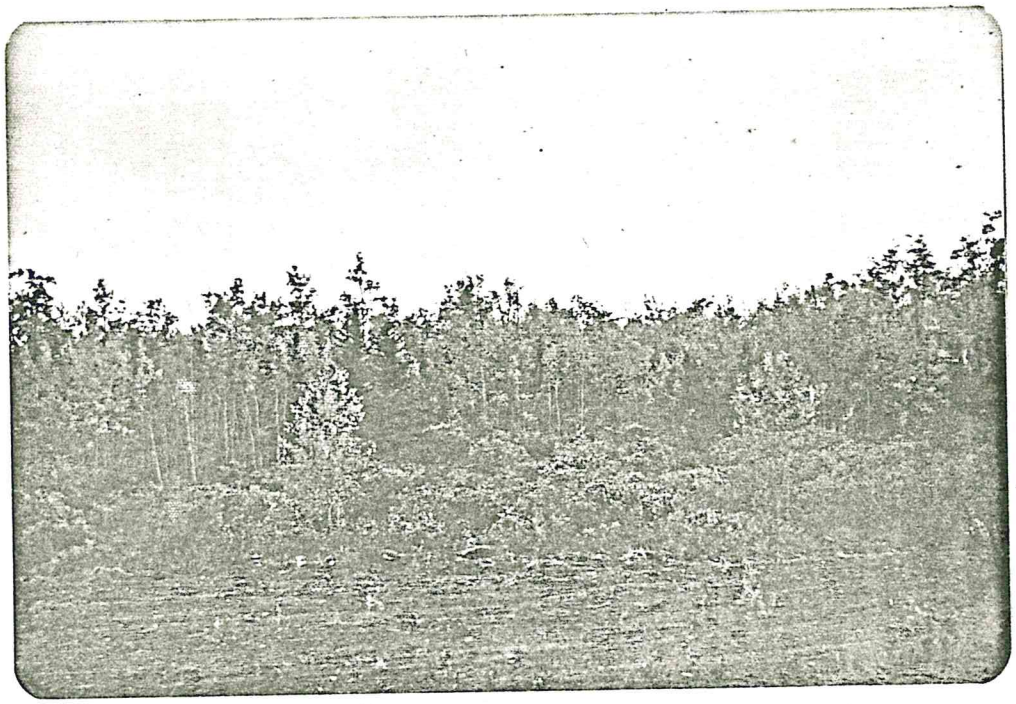

Figure 3. Mesic meadow habitat (Site A) of meadow arnica.

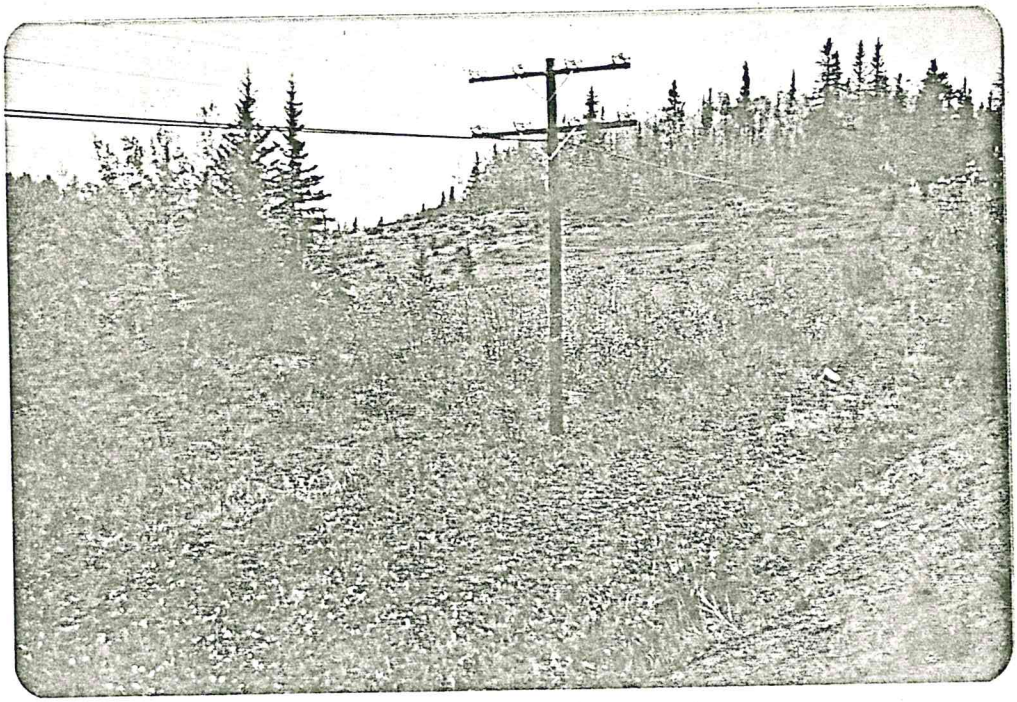

Figure 4. Mesic meadow habitat (Site B) of meadow arnica.

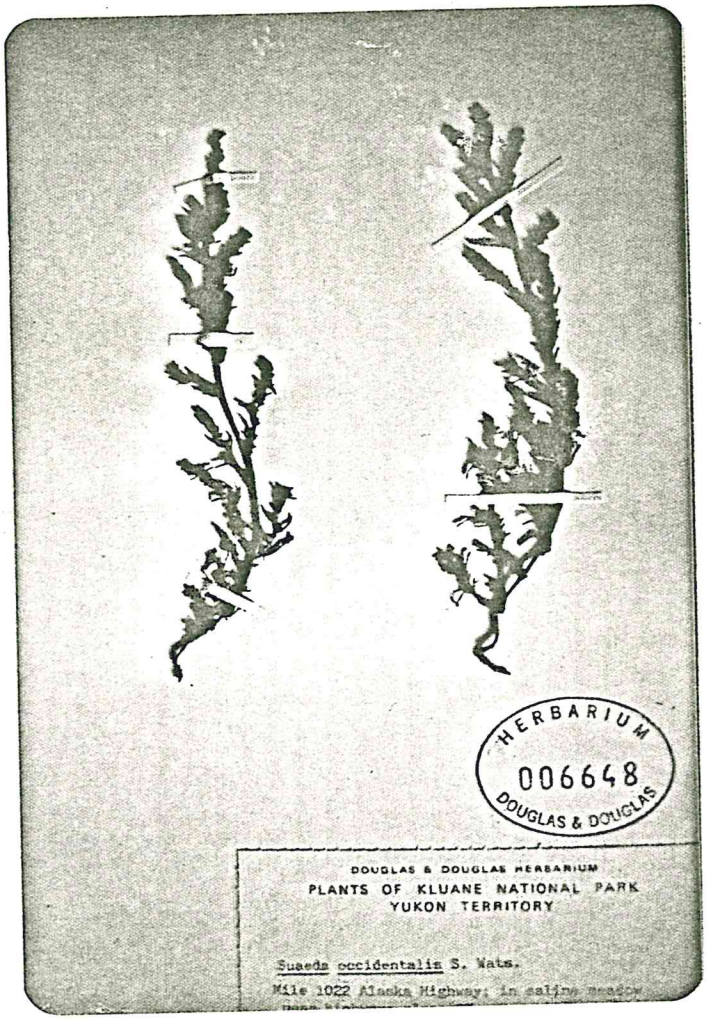

Figure 5. A pressed specimen of western sea blite. The succulent nature of the leaves is lost upon drying, thus plants in the field appear somewhat different.

Porsild (1951, 1966) and Welsh (1974) have placed the Yukon collections under the name Suaeda maritima (L.) Dumort, an essentially coastal species. At any rate, either species would have to be considered rare in the Yukon.

3. Colopodium (Colopodium vahlianum (Liebm.) Nevski)

This species was reported from a single collection in the Haines Junction area by Hulten (1968) and Douglas (1977). Further research indicates that Porsild (1966) collected and reported the plant from the alpine zone on Mt. Decoeli along the Alaska Highway. This would place the plant well outside the highway corridor.

POPULATION LOCATIONS

1. Meadow arnica.

A total of seven populations were identified and six of them staked out in the field on September 23, 1978. Due to the advanced decay of the plant at this time it is likely that additional populations could be located when the species is in flower. The seven population locations (Fig. 6) and estimates of population size and area are as follows:

Site A. Location: Km 1635 + 160 (m) to 1635 + 225
Population size: 300 - 400 plants
Population area: 1500 m^2

Site B. Location: Km 1635 + 130 to 1635 + 230
Population size: 300 - 600 plants
Population area: 8000 m^2

Site C. Location: Km 1638 + 780 to 1638 + 900
Population size: 100 - 200 plants
Population area: 1800 m^2

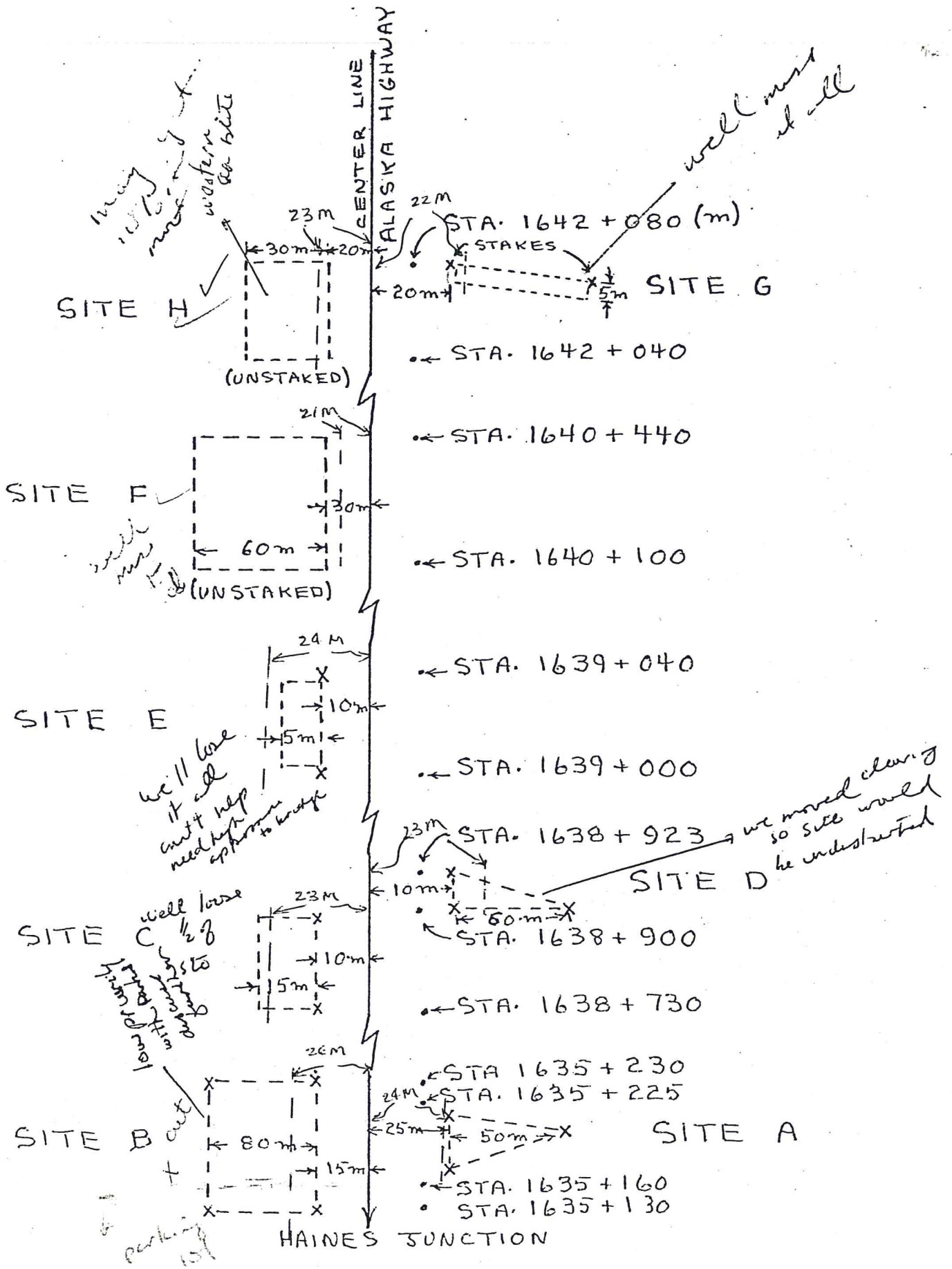

Figure 6. Location of meadow arnica (Sites A through G) and western sea blite (Site H) in the Haines Junction area.

Site D. Location: Km 1638 + 900 to 1638 + 923

Population size: 50 - 100 plants

Population area: 690 m^2

Site E. Location: Km 1639 + 000 to 1639 + 040

Population size: 50 - 100 plants

Population area: 200 m^2

Site F. Location: Km 1640 + 100 to 1640 + 440

Population size: 50 - 100 plants

Population area: 20400 m^2

Site G. Location: Km 1642 + 080

Population size: 100 - 300 plants

Population area: 600 m^2

2. Western sea blite.

A single population of this species is known in the Haines Junction area. The limits of this population were not staked due to the advanced decay of the plants. The extent of the population can easily be delimited in early summer when the reddish plants are fully developed. The population location (Fig. 6) and estimates of population size and area is:

Site H. Location: Km 1642 + 040 to 1642 + 080

Population Size: 500 - 1000 plants

Population area: 1200 m^2

POTENTIAL IMPACT

The impact of the highway improvement on meadow arnica will be slight since most of the populations range outside of the highway right-of-way. Unnecessary disturbance by construction equipment can be avoided by identifying the population location to construction personnel. The single population of western sea blite is somewhat

more critical since it is located on the edge of the right-of-way, but can probably be easily avoided if construction personnel are familiar with its location.

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