

**Status of the  
Rabbitbrush Goldenweed  
in British Columbia**

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by  
George W. Douglas

Wildlife Bulletin No. B-92

**March 1999**

*British Columbia, Canada's most westerly province, has a bounty of biological diversity. British Columbia's snowclad peaks, rain-drenched forests, arid grasslands, all sizes of rivers, lakes, and wetlands, and a long and rugged coast provide habitats for more species of living organisms than are found anywhere else in Canada. However, this very diversity means that there is much to be discovered about these organisms — their distribution, abundance, habitat requirements, and interrelationships with their environment. Increasing our knowledge of this biodiversity will help us with the complex task of sustainably managing our land and waters.*

*In 1992, the Provincial Government initiated a co-operative biodiversity research program with funding from the Corporate Resource Inventory Initiative, the British Columbia Ministries of Forests (Research Branch), Environment, Lands, and Parks (Wildlife and Habitat Protection Branches), and Tourism and Culture (Royal B.C. Museum); and the Forest Resource Development Agreement (FRDA II). In 1996, funding from Forest Renewal BC (FRBC) was received for a biodiversity research extension proposal. One goal of the original research program, and more recently the FRBC extension project, is to extend information to scientists, resource managers, and the public through biodiversity publications. These publications are intended to increase awareness and understanding of biodiversity, promote the concepts and importance of conserving biodiversity, and communicate provincial government initiatives related to biodiversity. We hope that they will be used as tools for the conservation of British Columbia's rich, living legacy.*

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# STATUS OF THE RABBITBRUSH GOLDENWEED IN BRITISH COLUMBIA

by  
George W. Douglas



Ministry of Environment, Lands and Parks  
Wildlife Branch  
and  
Resources Inventory Branch  
Victoria, B.C.

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*“Wildlife Bulletins frequently contain preliminary data, so conclusions based on these may be subject to change. Bulletins receive some review and may be cited in publications. Copies may be obtained, depending upon supply, from the Ministry of Environment, Lands and Parks, Wildlife Branch, P.O. Box 9374 Stn. Prov. Govt., Victoria, BC V8W 9M4.”*

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**FRONTISPIECE**

*Ericameria bloomeri*



by Elizabeth Stevens



## **FOREWORD**

In cases where a Wildlife Bulletin is also a species' status report, it may contain a recommended status for the species by the author. This recommendation is the opinion of the author and may not necessarily reflect that of the Wildlife Branch.

Official designation will be made by the Wildlife Branch in consultation with experts, and the data contained in the status report will be considered during the evaluation process.

## **ABSTRACT**

In British Columbia, rabbitbrush goldenweed (*Ericameria bloomeri*) is restricted to extreme south-central British Columbia where it is known only from a single, 1924 collection at Westbridge. Since recent surveys have failed to relocate this species at this site, or any other location in south central or southeastern British Columbia, this species should be considered extirpated.



## **ACKNOWLEDGEMENTS**

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## INTRODUCTION

The status report on rabbitbrush goldenweed (*Ericameria bloomeri*<sup>1</sup>) is part of an ongoing program of the British Columbia Ministry of Environment, Lands, and Parks, Wildlife Branch, designed to manage species-at-risk more effectively for long term viability.

*Ericameria* is part of the large family Asteraceae that encompasses about 950 genera and 20,000 species throughout the world (Bailey and Bailey 1976). The family is divided into 12 or 13 tribes and numerous subtribes. *Ericameria* belongs to the tribe Astereae.

Until recently, most taxonomists in western North America (e.g., Cronquist 1955; Ferris 1960; Peck 1961; Straley *et al.* 1985; Douglas *et al.* 1989; Douglas 1995) followed the monograph of Hall (1928) and treated this taxon within the genus *Haplopappus*. Nesom (1990), however, presented convincing evidence to segregate *Ericameria* as a legitimate genus. This concept has been followed in a number of recent taxonomic works (Brown and Keil 1993; Kartesz 1994; Douglas *et al.* 1998). *Ericameria bloomeri* is one of two members of the genus in British Columbia. It was first described by Asa Gray (as *Haplopappus bloomeri*) from a collection made near Virginia City, Nevada.

*Ericameria bloomeri* is one of two members of the genus occurring in British Columbia. It is distinguished by its shrubby habit, linear leaves and its few, yellow ray flowers.

In British Columbia it could be mistaken for either *E. nauseosus* (Pallas *ex* Pursh) Nesom & Baird (*Chrysothamnus nauseosus* [Pallas *ex* Pursh] Britt. in Britt.) or *C. viscidiflorus* (Hook.) Nutt., both of which are low shrubs with similar linear leaves. The latter taxa, however, lack ray flowers, while *E. bloomeri* has 1-5 yellow ray flowers on most, if not all, of the heads. In addition, the involucre of *E. nauseosus* and *C. viscidiflorus* are tomentose while those of *E. bloomeri* are tomentose-ciliate only on the margins.

*Ericameria bloomeri* is a perennial branching shrub with a woody base, stems 20-60 (rarely 90) cm tall. Leaves are numerous, linear, up to 6 cm long and 0.4

cm wide, straight or twisted, sessile, and glabrate to glandular or woolly-hairy. Flowers are composed of numerous heads, clustered at the ends of branches in elongate inflorescences. Involucres are 7-11 mm tall, and ray flowers are 1-5 (rarely absent), yellow, and 6-12 mm long. The disc flowers are 4-12, 7-11 mm long. Fruits are elongate, 5-angled, glabrous to hairy achenes, about 5-7 mm long. The pappus is white, and approximately 7-11 mm long.

## GENERAL BIOLOGY

There is no specific biological information available for *E. bloomeri*. In general, the species has the morphological characteristics of a number of other genera in the Asteraceae. These genera, since their flowers are not highly attractive, probably do not have the ability to attract a large variety of insects for pollination. Therefore, either self-pollination or dispersal of pollen by wind likely plays a large role in pollination. Wind dispersal is also important in the distribution of the achenes with their bristle-like pappus.

## HABITAT

### Description

Little is known about the habitat at the Westbridge collection site. In general, elsewhere in its range the species grows on dry, rocky slopes, open areas and open woods in the steppe and lower montane zones (Cronquist 1955, 1994; Brown and Keil 1993; Douglas 1995).

There are no climatic stations in the Westbridge area, but extrapolations may be made from the southern Okanagan Valley, 30 km to the west. The southern Okanagan valley, and the Osoyoos Lake area in particular, have a cold, semi-arid steppe climate. Summers are hot and dry with mean July temperatures around 20° C. Precipitation is low with mean annual rainfall of about 300 mm. Growing seasons are relatively short with mean monthly temperatures falling below freezing from December to February in the valley bottoms. In the Westbridge area, however, temperatures would be slightly lower and precipitation would be slightly higher throughout the year.

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<sup>1</sup> Nomenclature follows Douglas *et al.* (1989-1994).

## Ecoprovince and Biogeoclimatic Zone

*Ecoprovinces* — All *E. bloomeri* occurrences fall in one ecoprovince and two ecosections in British Columbia, the Southern Okanagan Basin (SOB) and the Thompson Basin (THB) within the Southern Interior (SOI). The ecoregions of British Columbia have been delineated by Demarchi (1993).

*Biogeoclimatic zones* — All occurrences of *E. bloomeri* in the province fall in two biogeoclimatic zones, the Bunchgrass zone (BG), and the Interior Douglas-fir (IDF), delineation of which was done by the B.C. Ministry of Forests Research Branch (1992).

## DISTRIBUTION

*Ericameria bloomeri* occurs in western North America from extreme south central British Columbia south through Idaho, eastern Washington and Oregon to eastern California and western Nevada. In British Columbia, it is known only from Westbridge, about 19 km north of the U.S.A. border (Figure 1).

## POPULATION SIZE AND TRENDS

The only known collection in British Columbia is that taken in 1924 at Westbridge by George Copley. Searches by the author and several others in the general area of the original collection, and in other appropriate sites in south central and southeastern British Columbia, during the past 10 years have been unsuccessful. In the opinion of the author, the plant probably no longer exists in British Columbia.

A collection by George Hardy from Keremeos (cited by Scoggan [1979]) and one by J. Parris from Spences Bridge (cited by Douglas [1995]) have been reidentified as *E. nauseosus*.

## PROTECTION

Currently there is no specific legislation for the protection of rare and endangered vascular plants in British Columbia. Pending federal, endangered species legislation may eventually protect a few special cases. However, most rare vascular plants would not be conserved under this legislation, whereas pending under the *Forest Practices Code Act of British Columbia*, more species could be protected; red-listed vascular plants may be protected when they become designated as *Identified Wildlife*.

Some species, however, which are located in parks or ecological reserves receive some protection from human activities. In addition, rehabilitation of this species has not been undertaken. Due to lack of knowledge, with respect to the biology or ecology of this species, rehabilitation would be difficult at this time.

## LIMITING FACTORS

If this species is again found in extreme south central or southeastern British Columbia, the sites would likely be threatened by resource development such as land clearing or logging. Much of the lower elevation habitat present in this area has been disturbed.

Since the species apparently no longer persists in British Columbia there is no information on the original and only population.

## EVALUATION

### Comments on Status

Globally, *Ericameria bloomeri* is ranked as a G4 species by The Nature Conservancy (U.S.). This ranking indicates that, on a global scale, it is considered to be "frequent to common (greater than 100 occurrences); apparently secure but may have a restricted distribution; or there may be perceived future threats."

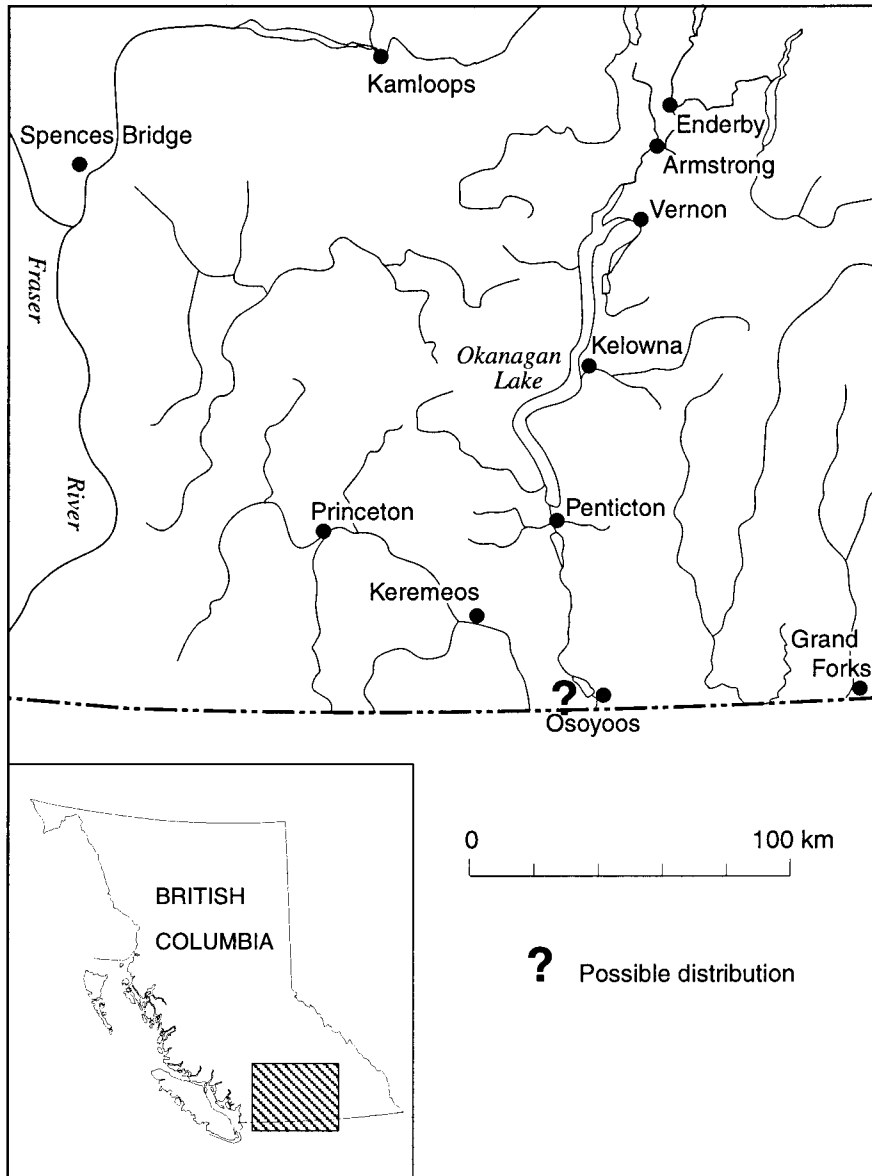


Figure 1. The location and status of *Ericameria bloomeri* in British Columbia

In British Columbia, *E. bloomeri* is ranked by the Conservation Data Centre (British Columbia Ministry of Environment, Lands and Parks) as an SX species. This ranking indicates that, on a provincial scale, this species is "apparently extinct or extirpated, without the expectation that it will be rediscovered. "

### Status Recommendation

*Ericameria bloomeri* was last collected over 70 years ago. It should be ranked as an Extirpated species since recent surveys have failed to recollect it.

### Prognosis

Since this species is considered extirpated, the chances are probably very slight that this species will be found again in British Columbia.

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