

COSEWIC
Status Appraisal Summary

on the

Island Marble
Euchloe ausonides insulanus

in Canada

EXTIRPATED
2010

COSEWIC
Committee on the Status
of Endangered Wildlife
in Canada



COSEPAC
Comité sur la situation
des espèces en péril
au Canada

COSEWIC status appraisal summaries are working documents used in assigning the status of wildlife species suspected of being at risk in Canada. This document may be cited as follows:

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Production note:

This status appraisal summary constitutes a review of classification of the Island Marble *Euchloe ausonides insulanus* in Canada which was last assessed by COSEWIC in 2000. The 2000 COSEWIC Status Report on the Island Marble *Euchloe ausonides insulanus* in Canada is posted on the Species at Risk Public Registry at this link: http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=602

COSEWIC would like to acknowledge James Miskelly for writing the status appraisal summary on the Island Marble *Euchloe ausonides insulanus* in Canada, prepared under contract with Environment Canada. This status appraisal summary was overseen and edited by Laurence Packer, Co-chair of the Arthropods Specialist Subcommittee.

For additional copies contact:

COSEWIC Secretariat
c/o Canadian Wildlife Service
Environment Canada
Ottawa, ON
K1A 0H3

Tel.: 819-953-3215
Fax: 819-994-3684
E-mail: COSEWIC/COSEPAC@ec.gc.ca
<http://www.cosewic.gc.ca>

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COSEWIC Assessment Summary

Assessment Summary – April 2010

Common name

Island Marble

Scientific name

Euchloe ausonides insulanus

Status

Extirpated

Reason for designation

** A reason for designation is not specified when a review of classification is conducted by means of a status appraisal summary.*

Occurrence

British Columbia

Status history

Extirpated by 1910. Designated Extirpated in April 1999. Status re-examined and confirmed in May 2000 and in April 2010.



COSEWIC

Status Appraisal Summary

Euchloe ausonides insularis
Island Marble

Marbré insulaire

Jurisdictions: BC

Current COSEWIC Assessment:

Status category:

XT E T SC

Date of last assessment: May 2000

Reason for designation at last assessment: This butterfly was formerly found on two islands off the west coast, but disappeared from both sites by 1910 because of loss of the larval host plant. It has not been seen in Canada since that time.

Criteria applied at last assessment: N/A

If earlier version of criteria was applied¹, provide correspondence to current criteria: N/A

Recommendation: Update to the status report NOT required (wildlife species' status category remains unchanged)

Reason:

- sufficient information to conclude there has been no change in status category.
 not enough additional information available to warrant a re-assessment.

Evidence (indicate as applicable):

Wildlife species:

Change in eligibility, taxonomy or designatable units:

yes no

Explanation:

No additional data since previous assessment.

¹ An earlier version of the quantitative criteria was used by COSEWIC from October 1999 to May 2001 and is available on the COSEWIC website: . http://www.cosewic.gc.ca/eng/sct0/original_criteria_e.cfm

Range:

Change in Extent of Occurrence (EO): yes no
Change in Area of Occupancy (AO) : yes no
Change in number of known or inferred current locations: yes no
Significant new survey information yes no

Explanation:

Considerable effort has been devoted to butterfly surveys in the historic range of the Island Marble in Canada since 2001. Southeastern Vancouver Island and the Gulf Islands have been surveyed extensively in a series of projects aimed at threatened and endangered butterflies. The British Columbia Ministry of Environment and Environment Canada have been the major proponents of these projects and the principal investigators have been Crispin Guppy, Nick Page, James Miskelly, and Jamie Fenneman. At least 500 person hours have been spent conducting professional surveys in the historic range of the Island Marble during the period of the year that the species is detectable. In addition, butterfly enthusiasts on southern Vancouver Island have volunteered at least 2000 person hours conducting surveys in the historic range of the Island Marble since 2001 (Victoria Natural History Society 2001-2008). The Island Marble has not been detected in these surveys.

Population Information:

Change in number of mature individuals: yes no
Change in total population trend: yes no
Change in severity of population fragmentation: yes no
Significant new survey information yes no

Explanation:

There are no known Canadian populations.

Threats:

Change in nature and/or severity of threats: yes no

Explanation:

No additional data since previous assessment.

Protection:

Change in effective protection: yes no

Explanation:

No additional data since previous assessment.

Rescue Effect:

Evidence of rescue effect. yes no

Explanation:

The closest populations to Canada are small, declining, and located at least 15 km away across Haro Strait (Miskelly and Potter 2008). There is no evidence that the species can cross such a wide expanse of unsuitable habitat. Other subspecies of *Euchloe ausonides* disperse an average of less than 200 m per day (Scott 1975a). The greatest recorded dispersal distance is 3 km (Scott 1975b).

Quantitative Analysis:

Change in estimated probability of extirpation:

yes no

Details:

The species is already extirpated.

Summary and Additional Considerations:

Recent studies of the Island Marble in San Juan County, Washington, where the butterfly still persists, have provided much new information about its habitats and ecology. Contrary to previous reports (Shepard 2000, Guppy and Shepard 2001, Parks Canada Agency 2006), there is no evidence that it has ever been found in Garry Oak woodland or has ever been associated with rockcress (*Arabis* sp.) as a larval host plant (Miskelly and Potter 2005, Miskelly and Fleckenstein 2006, Miskelly and Potter 2008). Extant populations of Island Marble are found in old fields, along eroding shorelines, in disturbed native grassland, and around tidal lagoons. Larval host plants are field mustard (*Brassica campestris*), tall tumble mustard (*Sisymbrium altissimum*) and tall pepper-grass (*Lepidium virginicum*). Only the latter is a native species.

The historic Canadian range of the Island Marble has been extensively surveyed since 2001 in an effort to locate it along with other at risk butterflies. These surveys have targeted a variety of habitats, including the habitats used by the Island Marble in its extant American range. During these surveys, neither the Island Marble nor apparently suitable habitat has been detected. All available evidence suggests that the Island Marble is extirpated in Canada.

List of reviewers:

The Status Appraisal Summary was sent to the following jurisdictions for review:

- Canadian Wildlife Service
- Parks Canada Agency
- Province of British Columbia (Dave Fraser)
- Members of the COSEWIC Arthropods Species Specialist Subcommittee
- Members of the Aboriginal Traditional Knowledge Subcommittee (Donna Hurlburt and Dan Benoit)

Consultations:

Heron, Jennifer. Chair, British Columbia Invertebrates at Risk Recovery Team. Invertebrate specialist, BC Ministry of Environment. Vancouver, BC.

Sources of information:

Guppy, C.S. and J.H. Shepard. 2001. The butterflies of British Columbia. Royal BC Museum and UBC Press, Victoria and Vancouver, BC.

Miskelly, J. and J. Fleckenstein. 2006. Surveys for Island Marble butterfly (*Euchloe ausonides insulanus*) in San Juan County, Washington, 2006. Natural Heritage Report 2007-01. Washington Department of Natural Resources, Olympia, WA.

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- Scott, J.A. 1975a. Movements of *Euchloe ausonides* (Pieridae). *Journal of the Lepidopterists' Society* 29(1): 24-31.
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- Shepard, J.H. 2000. Status Report on the Island Marble, an Undescribed Subspecies of *Euchloe ausonides* (Lucas) (Lepidoptera: Pieridae) in British Columbia. Committee on the Status of Wildlife in Canada, Ottawa, ON.
- Victoria Natural History Society. 2001-2008. Unpublished data associated with Victoria Butterfly Counts. Victoria, BC.



COSEWIC HISTORY

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was created in 1977 as a result of a recommendation at the Federal-Provincial Wildlife Conference held in 1976. It arose from the need for a single, official, scientifically sound, national listing of wildlife species at risk. In 1978, COSEWIC designated its first species and produced its first list of Canadian species at risk. Species designated at meetings of the full committee are added to the list. On June 5, 2003, the *Species at Risk Act* (SARA) was proclaimed. SARA establishes COSEWIC as an advisory body ensuring that species will continue to be assessed under a rigorous and independent scientific process.

COSEWIC MANDATE

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species, subspecies, varieties, or other designatable units that are considered to be at risk in Canada. Designations are made on native species for the following taxonomic groups: mammals, birds, reptiles, amphibians, fishes, arthropods, molluscs, vascular plants, mosses, and lichens.

COSEWIC MEMBERSHIP

COSEWIC comprises members from each provincial and territorial government wildlife agency, four federal entities (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biodiversity Information Partnership, chaired by the Canadian Museum of Nature), three non-government science members and the co-chairs of the species specialist subcommittees and the Aboriginal Traditional Knowledge subcommittee. The Committee meets to consider status reports on candidate species.

DEFINITIONS (2010)

Wildlife Species	A species, subspecies, variety, or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.
Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)*	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)**	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)***	A category that applies when the available information is insufficient (a) to resolve a species' eligibility for assessment or (b) to permit an assessment of the species' risk of extinction.

* Formerly described as "Vulnerable" from 1990 to 1999, or "Rare" prior to 1990.

** Formerly described as "Not In Any Category", or "No Designation Required."

*** Formerly described as "Indeterminate" from 1994 to 1999 or "ISIBD" (insufficient scientific information on which to base a designation) prior to 1994. Definition of the (DD) category revised in 2006.



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