



# How to complete a Biological Survey of Canada

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# Biological Survey of Canada



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The Biological Survey of Canada (BSC) is a not-for-profit organization that helps to coordinate scientific research among specialists on the Canadian fauna. The BSC network of scientists discovers, synthesizes, and freely shares knowledge about Canada's biological diversity.

This web site describes the BSC and provides various resources for work on the Canadian fauna, including on-line publications and databases

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## What's New

### **Arthropods of Canadian Grasslands. Volume 2: Inhabitants of a Changing Landscape.**

This is the second of a planned three-volume series that will provide an overview of Canada's grasslands and its associated insects, mites, and their close relatives. Volume 1 reviews the formation and extent of native grasslands and subsets of their associated arthropods. Volume 2 expands this focus with chapters on arthropods in agro-ecosystems. Online ordering information will be posted shortly.

(June 2, 2011)

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Two new issues of CJAI have been published:

### **Staphylinidae of Eastern Canada and Adjacent United States**

### **Blow flies (Diptera; Calliphoridae) of eastern Canada with a key to Calliphoridae subfamilies and genera of eastern North**

**Staphylinidae of Eastern Canada and Adjacent United States**

**Blow flies (Diptera; Calliphoridae) of eastern Canada with a key to Calliphoridae subfamilies and genera of eastern North America, and a key to the eastern Canadian species of Calliphorinae, Luciliinae and Chrysomyiinae**

(January 21, 2011)

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**Biological Survey of Canada Newsletter Vol. 30(1)**

**Biological Survey of Canada Forum**

(July 29, 2011)

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For further information, please contact:

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Canadian Museum of Nature  
P.O. Box 3443, Station "D", Ottawa, Ontario K1P 6P4 Canada  
[bsc@mus-nature.ca](mailto:bsc@mus-nature.ca)*



Biological Survey of Canada  
Commission biologique du Canada

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## **Introduction**

The Biological Survey of Canada (BSC) is a not-for-profit organization that helps to coordinate scientific research among specialists on the Canadian fauna. The BSC network of scientists discovers, synthesizes, and freely shares knowledge about Canada's biological diversity. The BSC has been very successful over the years, and is productive and well recognized nationally and internationally in the scientific community. This page provides background information about the BSC and its work.

## **Objectives**

The objectives of the BSC are:

- Discover, survey, and inventory Canada's biological diversity and provide universal access to biodiversity information;
- Detect, measure, and predict changes in Canadian biological diversity, and provide science-based advice for sustaining native biodiversity in Canadian ecosystems;
- Promote the importance of fundamental taxonomic research on Canadian species and provide access to expertise on Canadian biodiversity;
- Promote awareness of the values and vulnerabilities of Canada's biological diversity by inspiring, educating, and engaging Canadians.

## **Activities of the BSC**

The Biological Survey of Canada facilitates research and dissemination of knowledge of Canada's biodiversity. This mandate is fulfilled by:

- facilitating and coordinating project-based research
- coordinating production of publications that characterize the Canadian biota.

Information on specific projects and publications can be found throughout this web site. Topics that help to interpret the nature or development of the Canadian fauna are of special interest to the BSC. Such topics focus on particularly significant regions, or kinds of animals, or subjects. For example, the Arctic is among the most fragile ecosystems on Earth; it is also under immense environmental pressure as the effects of global warming are felt most acutely at northern latitudes. With their diversity and potential for rapid population growth, arthropods can serve as barometers of environmental change. Forests, springs and other habitats are characteristic and informative.



## Organization of the BSC

The BSC is a federally incorporated not-for-profit organization managed by a **board of directors**. BSC projects and activities are carried out by the membership in collaboration with the greater scientific community, federal and provincial government departments and museums, academic institutions, and concerned citizens. The administration of the BSC is supported by a small Secretariat based in Ottawa at the **Canadian Museum of Nature**.

### **BSC membership**

Membership is open to those who can actively participate in a BSC project or who can contribute to the BSC objectives in a meaningful way and whose application for admission as a member has received the approval of the Board of the corporation. Members are admitted for a two-year term.

### **Meetings**

Annual general membership meetings are held in conjunction with the annual Entomological Society of Canada meetings. The next AGM will be held in Halifax in 2011.

## General strengths of the BSC

**Wide outreach.** The BSC is national in scope, and involves many people. Whereas individual scientists or organizations may have a limited geographic, taxonomic or programmatic terms of reference, BSC projects attain a scope that would not have developed or been possible otherwise. Major scientific projects and reviews are a uniting force and bring attention to the BSC.

**Experience and history.** Members of the BSC have a long history of undertaking collaborative field expeditions to study Canada's biodiversity, and of documenting biological diversity.

**Focus on key scientific themes.** Scientific expertise in the areas of systematics and ecology in Canada is small and scattered. The BSC helps to focus that expertise. The BSC uses a bottom-up approach to ensure that specific outputs are useful scientifically. The focus is on science and how to ensure quality knowledge of the fauna. National scientific priorities are set by a careful choice of projects, not just what comes to hand.

**Focus on products** that are of use to others, especially integrative works which are especially valuable. BSC publications are used by a wide audience such as managers or biologists charged with local biodiversity assessments, students, scientists, etc. Many past products and most future ones are freely available online.

### **Productivity**

The BSC produces many publications and other outputs (documented in detail on the [Publication Summary page](#)). Since 1981 (when its early contract-supported stages ended), in the scientific arena the BSC produced 13 major books (averaging 312 pp. each, and many containing multiple refereed chapters) and 64 additional papers as well as 16 briefs. Moreover, it contributed to or stimulated many other papers not so directly produced by the Survey. The quality of these publications is high as confirmed by reviews and other commentaries.

In a more general context, the BSC has published 85 newsletters to date (averaging 77 pp. per year), convened 17 symposia or workshops, and prepared numerous reports and letters to officials. The extensive web site currently contains about 1½ million words, including scientific and other documents.

The number of major publications fluctuates from year to year because BSC projects characteristically produce large publications at infrequent intervals in addition to the ongoing production of smaller documents.

### **Impact**

The BSC has had great influence on the direction and quality of Canadian entomology. The BSC identifies gaps in knowledge at a national level and its projects draw in participants, thereby attaining a scope that would not be possible otherwise, especially given current limitations in the country in scientific expertise for systematics and ecology. The BSC's interests are integrated nationally with those of the ESC. The work of synthesis of knowledge has led to the production of four major books by the Survey, as well as many shorter publications. A number of long-term scientific projects focus active efforts on key topics, and have begun where existing interest or resources made them feasible, or where interest was generated by Survey initiatives. Results from several projects have already been published. Moreover, numerous graduate students have been steered towards BSC projects and carry on these interests later.



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## People

### Database of Entomologists:

This database of personnel is maintained by the Secretariat to provide a source of readily available information on individuals interested in the systematics and faunistics of the terrestrial arthropods of Canada.

### Board of Directors

The BSC is a not-for-profit organization managed by a Board of Directors. Directors are elected by BSC members for a two-year period.

### BSC Members

Membership in the BSC is open to those who can actively participate in a [BSC project](#) or who can contribute to the BSC objectives in a meaningful way and whose application for admission as a member has received the approval of the Board of Directors. Membership is for a two-year term.

If you are interested in being a member of the BSC please send a brief email to [bsc@mus-nature.ca](mailto:bsc@mus-nature.ca). Tell us who you are, your background and how you could contribute to the BSC.

### Secretariat

The administration of the BSC is supported by a small Secretariat based in Ottawa and by the appointed officers of the corporation.

**Hugh Danks** was the Head of the Biological Survey from 1977 until he



**Hugh Danks** was the Head of the Biological Survey from 1977 until he retired on August 31, 2007.

### **BSC Board of Directors**

The BSC is a not-for-profit organization managed by a Board of Directors. The Board of Directors for 2009-2011 includes:

**Patrice Bouchard**

*Agriculture and Agri-Food Canada  
960 Carling Ave.  
Ottawa, ON K1A 0C6*

**Doug Currie**

*Department of Natural History  
Royal Ontario Museum  
100 Queens Park  
Toronto, Ontario M5S 2C6*

**Donna Giberson**

*Department of Biology  
University of Prince Edward Island  
Charlottetown, PE C1A 4P3*

**David Langor**

*Canadian Forest Service  
Northern Forestry Centre  
5320 - 122 Street  
Edmonton, AB T6H 3S5*

**Joe Shorthouse**

*Laurentian University  
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## BSC Publications

### The Survey publishes four kinds of documents:

- **scientific monographs** which provide authoritative synthesis of information.
- **briefs** and similar items, which provide information and make recommendations relevant to study of the fauna.
- **newsletters** which provide timely communication and foster interest about the BSC and its projects.
- The **Canadian Journal of Arthropod Identification**, a web-based publication that includes keys for identification of the Canadian arthropod fauna.

A list of all Survey publications and other products from 1981 to present is available [here](#).

# Biological Survey of Canada



*Français*

## Scientific Monographs

(how to order)

### **Arthropods of Canadian Grasslands (Volume 2: Inhabitants of a Changing Landscape) published.**

This is the second of a planned three-volume series that provides an overview of Canada's grasslands and its associated insects, mites, and their close relatives. Volume 1 reviews the formation and extent of native grasslands and subsets of their associated arthropods. Volume 2 expands this focus with chapters on arthropods in agro-ecosystems. (K. D. Floate, editor. 2011. \$46.10). Online ordering information will be posted shortly.

### **Arthropods of Canadian Grasslands. Volume 1: Ecology and**

**Interactions in Grassland Habitats.** This authoritative book is the first of a planned three volume series on Canada's grassland arthropods. Targeting a broad audience, chapters review the biotic and abiotic attributes of different types of grasslands in Canada, and select grassland habitats and their associated arthropods. Publication of the series is intended to increase awareness of Canada's vanishing grasslands, the rich diversity of arthropods that they support, and to provide a baseline reference for future studies in these fascinating environments. (J.D. Shorthouse and K. D. Floate, editors. 2010. 358 pp. \$45.95). To purchase this publication only please see <http://www.volumesdirect.com/detail.aspx?ID=4598>.

**Insects of the Yukon.** This authoritative book brings together work on the insects of the Yukon by 35 international experts, allowing a synthesis of zoogeographical information about the fauna of the region. (H.V. Danks and J.A. Downes, editors. 1997. x + 1034 pp., hard cover.



# Newsletters

Newsletter of the Biological Survey of Canada (Terrestrial Arthropods)  
Arctic Insect News  
Arthropods of Canadian Grasslands  
Arthropods of Canadian Forests

Some of the newsletters (Arthropods of Canadian Grasslands, Arctic Insects News and Arthropods of Canadian Forests) are available in pdf format only. To read pdf files you need Adobe Acrobat Reader ([Download Adobe Acrobat Reader](#))

The ***Newsletter of the Biological Survey of Canada (Terrestrial Arthropods)*** is published twice yearly (Spring and Fall). The Newsletter communicates information about systematic and faunistic entomology that may be of interest in Canada, and reports especially on activities relevant to the Biological Survey.

Current Issue: Volume 30 (1) Summer 2011 [pdf](#)

## Index of Past Issues

An [index](#) of the contents of all past issues is available [here](#). Selected articles from earlier issues (Vol. 1, No. 1 to Vol 16, No. 1) are available in pdf format. Beginning with the Fall 1997 issue (Vol. 16, No. 2) the entire newsletter is available in html and/or pdf format.

The following whole issues are available on this website:





A web-based journal devoted to the publication of works that contribute significantly to the recognition and documentation of Canada's arthropod fauna.

[Instructions to Authors](#)

[Editorial Board](#)

[Editor's Notebook](#)

[Acknowledgements](#)

### Recent Issues



A Matrix Key to Families,  
Subfamilies and Tribes of  
Lepidoptera of Canada  
CJAI 17  
J. J. Dombroskie



The Fireflies of Ontario  
(Coleoptera: Lampyridae)  
CJAI 16  
S.P.L. Luk, S.A. Marshall,  
and M.A. Branham



The Fruit Flies  
(Tephritidae) of Ontario  
CJAI 15  
M.D. Jackson, S.A. Marshall,  
R. Hanner, and A.L. Norrbom



Key to World Genera and  
North American Species of  
Clusiidae  
CJAI 14  
O. Lonsdale, D.K.B. Cheung,  
and S.A. Marshall



Tabanidae of Eastern Canada:  
Key to Tabaninae  
CJAI 13  
A. W. Thomas



Staphylinidae of Eastern Canada  
and Adjacent United States  
CJAI 12  
A. Brunke, A. Newton, J. Klimaszewski,  
C. Majka and S. A. Marshall



Blow Flies of Eastern Canada  
CJAI 11  
S. A. Marshall, T. Whitworth  
and L. Roscoe



Photographic key to the  
Pseudoscorpions of Canada  
and the adjacent USA  
CJAI 10  
C. Buddle

But who uses these kinds of resources?

## Community Taxonomy

- explicit recognition of the social component
- a process of learning and adapting
- sustainability given high value
- integration of multiple kinds of resources

**Example:** The Alberta Lepidopterists' Guild



### Recent News & Updates

:: [ALG Newsletter Winter 2007](#)»

:: [Moth Sugaring Techniques](#)»

### Contact Information

To contact us, you can reach the ALG Secretary/Treasurer at:

gpohl[at]nrcan.gc.ca  
(note spam avoidance: replace the "[at]" above with "@")

daytime phone: (780) 435-7211

### 2007 ALG Wolley Dod Award

This year our award goes to Gerry Hilchie and Doug Macaulay, for doubling the number of known sites for *Erebia magdalena* in Alberta. They found 2 new populations of this rare alpine butterfly, in their survey work in Wilmore Wilderness this past summer



*Papilio zelicaon*



*Leucoma salicis*



*Limnaecia phragmitella*

**The Alberta Lepidopterists' Guild (ALG)** is a non-profit society made up of amateur and professional Lepidopterists. Our objective is to support and encourage the study and appreciation of Alberta Lepidoptera (butterflies and moths). We coordinate research projects, facilitate the exchange of information among members, and host events where people can collect and look at Lepidoptera and exchange information and ideas. We have an elected executive, and hold at least one annual general meeting to handle society business. We also host a members-only electronic bulletin board, and numerous scientific and social events throughout the province.

Alberta is a province in western Canada which includes a diverse range of habitats, including mountains, boreal forest, and prairie. Over 3000 species of butterflies and moths are thought to live here; so far about three-quarters of these are known.



The Province of Alberta





The key is  
nurturing the  
human  
component of  
taxonomy

