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## The Importance of Research Collections

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The Survey has long been concerned with the general status of systematics and systematics research in Canada, and is currently pursuing several initiatives in support of these broad interests. One particular initiative, pertaining to the value of the collections that both form the basis for systematics research and represent the major data base on the fauna, has resulted in the brief noted on page 32: *The importance of research collections of terrestrial arthropods.*

The abstract of that brief reads:

Terrestrial and freshwater ecosystems of the world include millions of species of insects and arachnids, most of them still unknown to science. Inability to identify these arthropod species is a severe impediment for scientific investigation of terrestrial and freshwater ecosystems; therefore, some of the most critical gaps in biological science occur in the systematics of terrestrial arthropods. Underlying this deficiency in biological science in Canada is inadequate and declining funding for research collections of terrestrial arthropods and their associated curatorial programs. These collections are an irreplaceable scientific resource. They are the source of much that is known about the systematics of insects and mites of Canada, and the base for what has still to be learned; and they are part of the ecological database of the country which is essential for detecting and correcting man-made perturbations of natural biological systems. These collections represent a major part of Canada's participation in the task of documenting the biota of the world.

Recommendations are made to address the declining state of research collections of terrestrial arthropods in Canada, culminating

in a proposal for a national plan to improve the infrastructure of all biological research collections, administered by the Canadian Museum of Nature and funded through a specified supplement to the annual budget of the Museum.

The brief's recommendations are as follows:

In recognition of the issues considered in this brief, the Biological Survey of Canada (Terrestrial Arthropods) makes the following recommendations to sectors of government, both national and provincial, and to universities, where public funds are assigned in support of science in Canada.

1. Research collections of terrestrial arthropods and the associated curatorial programs are a significant part of the scientific and cultural resources of Canada at both provincial and national levels. These collections and programs represent Canada's participation in the task of documenting the biota of the world, essential for a better understanding of natural ecosystems. Therefore it is critically important that financial support for the collections be maintained, and where necessary increased, as responsible investments of public funds.
2. Documented collections of insects and other terrestrial arthropods that can no longer be maintained by the institutions or individuals currently responsible for them should be recognized as significant scientific assets, and directed to a museum or similar institution in Canada whose mandate it is to maintain research collections.

3. Officials responsible for scientific and environmental programs within each provincial government of Canada should ensure that a functioning regional repository receives documented field collections of insects and other terrestrial arthropods acquired in biological investigations supported by public funds. In many cases, this repository will be the provincial museum; and appropriate steps should be taken to ensure that the museum is adequately equipped and financed to meet the obligations of long-term curation of the collections.
4. Universities in Canada maintaining institutional research and teaching collections of terrestrial arthropods should recognize that these collections and their associated curation are an integral part of advanced scholarship, and warrant funding appropriate to their requirements. Advanced study in the systematics of terrestrial arthropods is severely impaired without these collections. The significance of the collections is similar to that of a library, and more particularly to an archive of irreplaceable scientific data.
5. In applications for research support to the Natural Sciences and Engineering Research Council of Canada, funds requested for the acquisition and maintenance of collections of terrestrial arthropods involved in the study should be accepted as legitimate expenses required in the research. But as a condition of support for those collections, compliance with the NSERC guidelines for awards should be required, i.e. "...Such collections, and type material of new taxa in particular, should be deposited as quickly as possible in an appropriate repository (preferably a Canadian museum administered by the federal or provincial government or by a university), where they will be assured of long-term curatorial care, and where other scientists will have reasonable access".
6. Since there is in Canada no federal agency concerned with the maintenance of biological research collections generally, this brief recommends that the Canadian Museum of Nature take the initiative in developing a national plan for the support of collections, and that an allocation of funds specified for this purpose be added to the annual budget of the Canadian Museum of Nature.

Copies of the brief are being made widely available to entomologists and other biologists, and to selected officials. Copies are available on request from the Secretariat.