

## **ACQUISITIONS STRATEGY (E.H. Strickland Entomological Museum)**

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### **A. COLLECTIONS AND PROGRAMS**

#### **1. Describe the purpose of the Collection and why it is maintained by the unit**

The University of Alberta Strickland Museum (the “UASM”) is maintained by the Department of Biological Sciences (DBS). It specializes in the following: insects classified as “beetles” (Coleoptera) and “butterflies and moths” (Lepidoptera) but including also material from most other orders of insects as well as some orders of arthropods other than insects, such as spiders and ticks. Smaller but high quality collections for particular groups include caddisflies (Trichoptera) preserved in fluid, and insect fossils (both shale compression and amber). Insects are mostly from localities in Canada, United States and Mexico but also include material from other parts of the world.

The UASM supports research and teaching in the following ways:

- as a repository for undergraduate and graduate thesis collections;
- as a repository for voucher specimens from published research, including type materials; as a reference collection to assist researchers in the morphological identification of insects;
- as a source of properly-identified material suitable for testing by modern molecular techniques;
- as a collection documenting the history of field entomological research done by researchers affiliated with the University of Alberta;
- as a teaching collection to support undergraduate and graduate teaching within DBS;
- as a source of display material for on- and off-campus outreach activities, including tours and exhibits; as a source of data on insect distributions over time, both from specimen labels and card files and the Virtual Museum (VM); and
- as a repository for reprints of research publications on insect taxonomy and biodiversity.

Dr. Edgar Harold Strickland, of the former Department of Entomology, established the UASM about 1925 with material largely from his own personal collection. The collection grew steadily with the addition of material collected by the curators (Strickland, Hocking, Ball and Sperling), their graduate students, other faculty (e.g. Acorn, Craig, Heming, Proctor, Roland, Spence, Wilson and others) and through exchanges. An important collection of Alberta Lepidoptera was purchased in November of 1955. Another large collection of over 44,000 Lepidoptera (appraised at nearly \$410,000.00) was donated in 2006. Smaller donations and gifts have also added to the numbers of specimens. The UASM currently has more than one million specimens, and of this number, more than 317,000 have been accessioned to date, including more than 3,000 paratype specimens. The accessioned material includes more than 14,700 species, of which 259 are represented by the accessioned paratypes. The oldest specimens in the collection date to the late 1890s. The UASM contains numerous species that may have been common at the time of collection, but are now threatened or endangered, particularly due to habitat loss. Consequently it would be difficult or impossible to obtain specimens for these species today.



## 2. Type of Material in Current Collection

Material More than one million specimens, with locality information, are included. They are preserved dry on pins; in ethanol-filled vials, in Canada balsam, on microscope slides, or frozen in -80°C freezers.	# of accessioned	# to be accessioned	# pending decision
Type and Voucher Material: specimens of Coleoptera and Lepidoptera, several other orders of insects, as well as non-insect arthropods, including mites, which serve as reference material to assist in the identification of unknown material	paratypes: 3,051 vouchers: 1,498		
Research Specimens: high-quality, well documented, Coleoptera and Lepidoptera as well as most orders of insects, from various worldwide geographic locales, which serve as reference material to assist in the identification of unknown material. Majority of material is pinned, with remainder preserved in vials of alcohol or mounted on glass slides.	311,000+	~700,000+	
Total	~315,000	~700,000	

## 3. List the academic programs supported by the Collection

- Entomology 427/527; Biology 498 and 499 (8-15 undergraduate and graduate students, run every year). Undergraduate or graduate students use specimen data to build species pages.
- Various M.Sc. and Ph.D. thesis research projects from the Department of Biological Sciences, Earth and Atmospheric Sciences and Renewable Resources. Graduate students use the specimens and specimen data for their thesis projects. At the end of their thesis project, graduate students usually deposit some or all of the specimens they collected during their study.
- Our curators have supported the Biological Survey of Canada (Terrestrial Arthropods) for 35 years, including its website (<http://www.biology.ualberta.ca/bsc/bschome.htm>).
- Specimens in the collection are used by the staff for systematic revisions, as well as by other researchers worldwide through loans of specimens.
- Currently there are no new courses being developed that would make use of the specimens in the collection.



#### 4. List community engagement programs/activities supported by the Collection

We have conducted tours (e.g. Alumni Weekend), participated in U of A Science Sunday, done presentations at grade schools in Edmonton (especially at Windsor Park Elementary School) and given presentations off-campus (e.g. Snow Goose Chase in Tofield) and local businesses like Hole's Greenhouses in St. Albert. We have run an insect identification hotline for over 30 years, with about 125 queries per year, and we have run two local insect related listserves (AlbertaBugs and Altaleps) since 2000, and one national list, Canadian-arthropods, since 2008). Also we have supported numerous amateur lepidopterists through the Alberta Lepidopterists' Guild, a local society focused on butterflies and moths. One of the mandates of the Strickland Museum is to make our collections available to the public, in essence unlocking the legacy of our collections. We are making our collection available both as basic specimen information and knowledge summaries in the form of species pages through our VM, which can be viewed at <http://www.entomology.ualberta.ca/>. Many of our VM's Lepidoptera species pages are also available through the Encyclopedia of Life web page [<http://www.eol.org/>]. All of the VM specimen records are available through the Global Biodiversity Information Facility (GBIF) portal [<http://data.gbif.org/welcome.htm>]. Numerous requests for identification of ground beetles are done for other researchers worldwide. Requests to borrow specimens are received from graduate students and researchers at other institutions in Canada and United States. Loans are then processed if requested material is available.

### B. STRATEGY AND CRITERIA FOR NEW ACQUISITIONS

#### 1. Identify the types of new acquisitions that are essential to support the current and proposed programs identified above

Methods of Acquisition include: Donations, exchanges, purchases, field collection

The UASM should continue to acquire specimens from North America (Alberta and contiguous provinces, territories and states will have first priority) and other regions of the world that help to expand the taxonomic coverage of the collection, with emphasis on taxa that (a) are the focus of curators and associated researchers, (b) have no or few current representatives in the collection, or (c) are currently represented by specimens in poor condition. The UASM will continue to act as a repository for type material of new species described from UASM specimens. The UASM should also continue to act as a repository for voucher specimens reported in student theses or in publications by U of Alberta academic staff, and for specimens collected during surveys conducted by organizations such as the Lepidopterists Guild of Alberta, private naturalists as well as contracts through provincial and federal agencies of natural areas in Alberta.

These specimens must be properly preserved, have adequate data (location, date, collector's name at minimum), and be identified to family level at minimum. Specimens collected in provincial or national parks must be accompanied with documentation of collector's permits from the relevant governmental authority.



2. List any existing collecting area that will no longer be supplemented

The UASM will no longer accept mass collections of unsorted, unidentified specimens, other than those suitable for display or show-and-tell purposes.

3. List any additional requirements unique to the Collection that would affect a decision to acquire

None.

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Approved by Unit/Department/Faculty

Felix Sperling  
Designated Curator (Print Name)

Felix Sj  
(Signature)

MICHAEL CADWELL  
Chair/Dean/Director (Print Name)

[Signature]  
(Signature)

17 Oct. 2011  
Date Completed

Approved by Museums and Collections Services

[Signature]  
Janine Andrews, Executive Director

Nov 9/2011  
Date

Approved by U of A Museums Policy and Planning Committee

Heather Proctor  
Chair, Policy and Planning Committee (Print Name)

[Signature]  
Signature

OCTOBER 25, 2011  
Date of Committee Meeting

OCTOBER 25, 2016  
Date of Next Review

