

Federally and provincially protected Lepidoptera species COSEWIC, SARA, AESCC, and AWA

by Gregory Pohl, Natural Resources Canada, Canadian Forest Service



Traditionally, Lepidoptera and other invertebrates have not received very much attention from environmentalists and conservationists. Most of the energy has been directed towards mammals and birds, the "charismatic megafauna", rather than the less conspicuous organisms that dominate the planet. More recently, butterflies, the "charismatic megafauna" of the insect world, have begun to receive attention. A few of the better-known moth species, particularly those dependent on rare host plants, or associated with seriously threatened habitats such as sand dunes, have crept up on the radar as well. But how exactly does an insect species attain a status of "endangered" or "threatened", and what does that mean anyway? As a member on both the provincial and federal scientific subcom-

mittees charged with doing species assessments, I'll attempt to demystify the process here.

Federal Protection.

Federally, species are protected by the Species at Risk Act (SARA). Protection under SARA makes it illegal to kill or harm a species on federal lands. As well, the federal and relevant provincial governments are obligated to develop and implement recovery plans for protected species. Species are assessed for conservation status by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). COSEWIC reports to the Canadian Endangered Species Conservation Council (CESCC), which is made up of federal, provincial, and territorial ministers responsible for the management of species at risk. That body in turn makes recommendations to parliament, which

can designate protected status under SARA. The CESCC is comprised of:

- Four members from federal government departments (the Canadian Wildlife Service, Department of Fisheries and Oceans, Parks Canada, and the Canadian Museum of Nature on behalf of the Federal Biodiversity Information Partnership).
- Thirteen members from provincial and territorial governments
- Three members from national non-government scientific, conservation or environmental organizations
- Nine scientific specialists on particular taxonomic groups (chairs of Species Specialist Subcommittees (SSCs) see below)
- One chair from the Aboriginal Traditional Knowledge (ATK) Specialist Group.

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“Bewitched”

By Gary Anweiler

In the late summer of 1991 I was at the peak of my “Catocala madness”, lured down to southern Alberta by the possibility of finding those exotics (for someone from CENTRAL Alberta) like *C. meskei*, *hermia*, *parta*, et al. Years of having Holland’s magical essay on

“sugaring” for moths cooking away in my psyche had finally erupted into full bloom and I was out there in the dusk whenever I had time and weather permitted; can of sugar bait, knapsack full of rattling glass jars and extra flash-light batteries, paint brush and most importantly a casual

demeanor, surreptitiously painting bait on local golf-course and city park trees. A sticky business and, as one soon discovers this far north, a late night adventure as for much of the season it is approaching 11 PM before darkness finally arrives.

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THE OFFICIAL NEWSLETTER OF ALBERTA LEPIDOPTERISTS' GUILD

ALG NEWS

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Candidates for COSEWIC are recommended by CESSC and are appointed under federal legislation for a four year renewable term.

Each of the nine SSCs focuses on a particular taxonomic group. They are made up of scientific experts and at least one expert from the ATK Subcommittee. SSC members are selected by the relevant SSC, and are appointed to four-year renewable terms. COSEWIC members, including SSC members, do not represent the agency, group or region from which they are drawn. They are appointed on the basis of their expertise, and are expected to conduct assessments with strict impartiality and independent of non-scientific considerations.

Lepidoptera are handled by the Arthropod Specialist Subcommittee. Besides Lepidoptera, this group is actively assessing odonates, tiger beetles, bees, and selected other arthropod taxa. The subcommittee maintains a prioritized candidate list, and puts names forward for consideration by the parent committee (COSEWIC) to consider for evaluation. From the species put forward by the various SSCs, COSEWIC selects a small number of species each year and commissions status reports on them. COSEWIC may also accept unsolicited reports from the public. These reports are then approved by the subcommittee and used to suggest assessments of the

species' risk of extinction or extirpation. The assessment is a rigorous process based on the population size, geographic range, and perceived threats to the species. The result is a status recommendation; the species is deemed *not at risk*, *threatened*, *endangered*, *extirpated*, or *extinct*. Additionally, a species can be deemed to be of *special concern*, if it does not quite meet the requirements of *threatened* or *endangered*, but the subcommittee has a good reason to recommend that it be protected nevertheless. As well, a species can be deemed *data deficient*, meaning that not enough is known about the species, to make an accurate designation. Assessments of *threatened*, *endangered*, or of *special concern* are recommended for protected status under SARA. At that point, the recommendations are reviewed by the CESSC, and then sent to parliament for debate before (hopefully) being passed into law. Species are reassessed every ten years to see if a status change is warranted. So far, COSEWIC has assessed 28 butterfly and moths species for

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conservation status; 10 of these occur in Alberta (Table 1). Detailed status reports and regular summary reports of species at risk are available on the COSEWIC website. A list of species protected under SARA is available on the SARA registry website.

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Weidemeyer's Admiral (*Limenitis weidemeyeri*), currently the only provincially protected Lepidoptera in Alberta. This specimen is from Idaho where it is neither endangered nor protected (photo T. J. Simonsen).

(“Bewitched” – continued from page 1)

So there was I, August 27, in a little plantation along a prairie stream in the grasslands west of Claresholm, AB (near Willow Creek Provincial Park), in the blackness, checking baits. It can get a bit spooky out there when one is alone, especially if there is a bit of wind as there was this night. As I tired my mind wandered off like a child. There were a number of “cats” at the baits, a few other noctuids, but nothing very EXCITING. A voice in my head was babbling away and I heard it say “wouldn’t it be neat to find a...a a.. Black Witch at my bait! Like that

25 lb. pike one always knew could be down there when one was fishing (“guy caught one in this very lake just last year!!!”). Kid stuff. Two trees later, so help me Buddha, there it was - a great big Black Witch sucking bait!! Too big for any of the jars I had with me!!! And then she wasgone!!!

Back to the van for the BIG jar I had there, still not 100% certain I had not been hallucinating (always a possibility for those of us who survived the 60’s!). But when I returned to the tree there it

was, back on the bait, and then in my jar. No doubt about it....it was real! So, what does one do with a Black Witch??? What bit of science could be served by another specimen of a moth that is unmistakable?? I thought about the amazingly long flight it had made up from the tropics in the darkness, night after night, to a cottonwood along a creek in southern Albert, Canada, perfectly timed to coincide with the one in my head!

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species	common name	assessment date	COSEWIC recommendation	SARA protection
<i>Schinia avemensis</i>	Gold-edged Gem	2006	endangered	endangered
<i>Satyrrium semiluna</i>	Half-moon Hairstreak	2006	endangered	endangered
<i>Prodoxus quinquepunctellus</i>	Five-spotted Bogus Yucca Moth	2006	endangered	endangered
<i>Tegeticula corruptrix</i>	Non-pollinating Yucca Moth	2006	endangered	endangered
<i>Tegeticula yuccasella</i>	Yucca Moth	2002	endangered	endangered
<i>Schinia verna</i>	Verna's Flower Moth	2005	threatened	pending
<i>Danaus plexippus</i>	Monarch	2001	special concern	special concern
<i>Limenitis weidemeyerii</i>	Weidemeyer's Admiral	2000	special concern	special concern
<i>Melaporphyria immortua</i>	Dark-banded Flower Gem	2005	data deficient	none
<i>Copablepharon grandis</i>	Pale Yellow Dune Moth	2007	special concern	pending
<i>Copablepharon longipenne</i>	Dusky Dune Moth	2007	endangered	pending

Table 1. Alberta Lepidoptera species assessed for conservation status by COSEWIC, and resulting SARA protection.

Provincial Protection.

Protected status for threatened and endangered species is designated provincially under the Alberta Wildlife Act. Provincially, the process is very similar to the federal one. Species are assessed by the Scientific Subcommittee of the Alberta Endangered Species Conservation Committee (AESCC). The scientific subcommittee is made up of experts from across all biological

disciplines, and deals with plants and animals. Like its federal counterpart in COSEWIC, the subcommittee commissions status reports and makes status recommendations to the parent committee, the AESCC. The AESCC is made up of members from industry, governments, and non-governmental organisations. With such a diverse group of stakeholders at the table, the AESCC's review of protected status recommendations can be a po-

itically charged process. Recommendations are then made to the provincial Minister of Sustainable Resource Development to designate protected status under the Alberta Wildlife Act. The AESCC is not proactive about maintaining a candidate list and assessing species; they simply carry out provincial assessments of species that have already been designated federally. So far, only one Lepidoptera species (*Limenitis weidemeyerii* Edwards) is provincially protected, but a second species (*Tegeticula yuccasella* (Riley) is in the process of being assessed.

With such a diverse group of stakeholders at the table, the AESCC's review of protected status recommendations can be a politically-charged process.

Besides federal and provincial designations, species are given global conservation rankings. These global designations do not confer any protected status on species, but they help give different jurisdictions a global perspective on the conservation status of species. Global rankings for Canadian butterflies and for selected moth groups can be found on the NatureServe website.

For More Information:

- SARA Registry: http://www.sararegistry.gc.ca/default_e.cfm
- COSEWIC website: http://www.cosewic.gc.ca/eng/sct5/index_e.cfm
- AESCC website: <http://www.srd.gov.ab.ca/fishwildlife/escc/default.aspx>
- NatureServe website: <http://www.natureserve-canada.ca/>
- Xerces Society website: <http://www.xerces.org/>



The badlands of the Lost River Valley in extreme South-eastern Alberta is the only place in the province where yucca plants - and hence yucca moths - occur naturally.

(Photo: T. J. Simonsen)

THE OFFICIAL NEWSLETTER OF
ALBERTA LEPIDOPTERISTS' GUILD



ALG News - Volume 4: Issue 1
Chief Editor:
Thomas J. Simonsen
(thomas.simonsen@ualberta.ca)

What is the ALG?

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.

We are on the Web: <http://www.biology.ualberta.ca/uasm/alg/>

("Bewitched"— continued from page 2)

I took it back to the van, took a photo, and turned it loose.

Last I saw of it was heading towards Alaska.



Ascalapha odorata (L.) French Guiana

A Black Witch - though not the one from Claresholm (Photo: G. Anweiler)

2007 ALG Wolley Dod Award

The 2007 award went to Gerry Hilchie and Doug Macaulay, for doubling the number of known sites for *Erebia magdalena* in Alberta, as they found 2 new populations of this rare alpine butterfly, in their survey work in Wilmore Wilderness in the summer of 2007.



Erebia magdalena (Photo: G. Anweiler/
E. H. Strickland Entomological Museum)