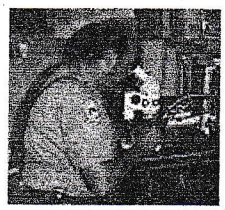
# The Maine Entomologist

A FORUM FOR STUDENTS, PROFESSIONALS & AMATEURS IN THE PINE TREE STATE

*Volume 5, Number 1 February 2001*



## From the President

Welcome to our fifth season and to a new millenium! While most insects remain securely snuggled away for the winter, entomologists look back to the past season's acquisitions while planning collecting and observation strategies for 2001. Some of you have taken time to write to us and include items for The Maine Entomologist. Thanks! These contributions make for interesting and educational reading.

The changes mentioned in our last issue are in place following a smooth transition. New editors (Laura Stone and Chuck Lubelczyk) have already been initiated into newsletter composition with this issue and Mrs. Edie King, our new Treasurer, will keep us fiscally responsible. Keeping those articles coming and dues paid will make their jobs much simpler. Few additional changes are anticipated although we do need to address our timetable and method for distributing new directories (which now run seven pages). Increased printing and mailing costs are expected to make our budget a little tighter. Directory updates are available upon request, however.

The 2001 season is starting out to look like another busy and exciting one for all. We have six field events lined up, beginning in Durham on May 19th and ending in Mount Vernon on October 8th. A list of all six is included in this newsletter and on our website. Many other events, too numerous and diverse to be listed here, have been brought to our attention. We encourage all members to become involved where you can whether with a natural resources inventory team along the St. John River or involvement on a Maine Stream Team. Your participation is invaluable! Your support will also help with other projects such as restoration of the Edith Patch House.

In this issue is a new biography, some summer educational opportunities, 2001 meeting announcements, websites, and other items of interest. We hope that you will treat this issue as you would your summer seed catalogue and dream your way into spring! I could go on but I hope to leave you time to enjoy this first issue from our new editors.

## Inside This Issue:



I look forward to serving you for another season and hope to meet you in the field. Invite a friend to join us and remember that there is always something new and exciting under the next rock or log, on a flower, at a porch light or in a weedy pond. Each trip is like a safari taking us to a new adventure.

Have a GREAT season!

- Dick Dearborn

## Ticking Away the Winter Months

*Winter hair loss on moose due to infestation of moose ticks. Photo courtesy of Bill Samuels.*

When the temperature begins to dip and the leaves turn from green to a mix of yellow, orange, and red, most people stop thinking about mosquitoes and black flies. But not ticks. As acorns and hickory nuts are falling, many people notice the deer ticks (*Ixodes scapularis*) that are out in the cooler months but not another little critter, the winter or moose tick that can be found abundantly from October through April.

***Continued on Page 6***

We felt that our biography series would not be complete without an account of the experiences which lead scientist and businessman, William Procter to finance, conduct and publish his unique and invaluable *Biological Survey of the Mount Desert Region.* This biography shows the importance of cooperation between scientists, government and business and what can be accomplished under such circumstances. Although we intended to write our own biography, it was felt that one written in 1951 by a long time friend and collaborator with Procter, dipterist Dr. Charles P. Alexander, was best suited for this purpose. We would like to thank Editor Howard P. Boyd of *Entomological News* (Published by The American Entomological Society) for granting us permission to reprint this excellent article. We have included it here in its entirety.

**Reprinted from *Entomological News*, Vol. LXII, No. 8, pp. 237-241, October 1951**

# Doctor William Procter (1872-1951)

## By Charles P. Alexander

*Doctor William Procter, distinguished scientist, died suddenly and unexpectedly in West Palm Beach, Florida, April 19, 1951. Doctor Procter was born in Cincinnati, Ohio, on September 8, 1872, the son of Harley Thomas and Mary Elizabeth Sanford Procter. His grandfather founded the Procter and Gamble Company in 1837.*

*Much of Doctor Procter's boyhood was spent in the Berkshires of western Massachusetts. He graduated from Phillips Exeter Academy in 1891, and from Yale University with the degree of Ph.B. in 1894, having specialized in chemistry and business. Between 1895 and 1897 he took an extended trip around the World, visiting Japan, China, India, and many other countries. He was a graduate student in the Sorbonne (Paris, France) in 1896-1897. For the succeeding twenty years he was engaged in business, chiefly in the field of railroad organization and securities. Later he became actively associated with, and a director of, the Procter and Gamble Company.*

*In 1917 Doctor Procter gradually relinquished business and began graduate work in zoology at Columbia University, continuing until 1920, but never working toward a higher degree. His interests were chiefly in genetics, embryology and protozoology, he being associated with men such as Wilson, Morgan, Calkins, Huettner, Sturtevant, and others of the brilliant group then in the Department of Zoology at Columbia. It was this inspiring experience that influenced Doctor Procter to devote the remainder of his life to work in biology.*

*Ever since he was a boy of about 15, or in the mid-80's, the Procter family had spent nearly every summer on Mount Desert Island, Maine, chiefly at Bar Harbor. In 1921 Doctor Procter established a research laboratory on the Island, at first in association with others at Salisbury Cove. Various disagreements led to his withdrawal from this association and instituting his own laboratory on his estate at Corfield, on Frenchman's Bay, about a mile north of Bar Harbor. Most of the early work of the laboratory was devoted to a study of the rich marine fauna of the Island, the results being published in a series of volumes mentioned later. Doctor Procter's fine work attracted the staff in biology at the University of Montreal, and in 1936 he was called to Montreal where he passed an examination and was awarded the degree of Doctor of Science. This same year he established "The Biological Survey of the Mount Desert Region, Incorporated."*

*It was in 1918 that the Boston Society of Natural History (later the New England Society) selected Mount Desert Island for detailed study of the insect fauna, and the curator of the collections, Charles W. Johnson, spent a portion of each summer on the Island until 1926. In that year, Procter and Johnson made elaborate plans for further study, but this was interrupted by Johnson's death in 1932. Doctor Procter then entered upon his work on the insect fauna of the Island with an unflagging interest and vigor. Parts of every year, usually from early May into October, were spent at the home at Corfield, and every part of the Island, including virtually every square foot, was combed for insects. The small station near Salisbury Cove called "Penikese" and the main laboratory at Corfield were the bases where much work was accomplished, by the running of light traps and other methods. As discussed in his publications, Doctor Procter constantly changed his light traps as to position, and color and intensity of the light, and these yielded a vast range of specimens and species.*

*Of the series of seven volumes, or parts, published in his survey, the first was by the late Charles W. Johnson who worked on the insect fauna of the Island. This was largely responsible for diverting Doctor Procter's interests from the marine to the terrestrial fauna. It is of interest to note that this first volume on the insects of Mount Desert was dedicated to the late Professor Charles Henry Fernald, founder of the Department of Entomology at the now University of Massachusetts, in 1886, who was born on the Island on March 16, 1838. Parts 2 to 7 of the series were written by Doctor Procter, Parts 2 to 5 relating to the marine fauna, Parts 6 and 7 to the insects.**

*In Part 7 of this series, Doctor Procter describes the 421 field stations that he had established and examined between 1927 and June 1945. Following the publication of this concluding volume, the study was continued and the number of field stations was further increased. In 1946, Doctor Procter had amassed records from the Island of no fewer than 349 families, 2,660 genera, and 6,578 species and subspecies of Arthropods, all but 200 of which were insects. Virtually all of these are represented in his personal collection.*

** Biological Survey of the Mount Desert Region. Part VI. The Insect Fauna, pp. 1496, map, 11 figs., portrait of C. W. Johnson; 1938. (Includes 5,465 species and subspecies, Hexapoda and Arachnida.) The Same, Part VII. The Insect Fauna, pp. 1566, map, 10 figs.; 1946. (Includes 6,578 species and subspecies.)*

*In this concluding volume on the insects, he dedicates the work as follows: "I have listed alphabetically the many persons who have shown their interest and kindness in giving me help of many kinds. To them I am profoundly grateful and, as mentioned elsewhere, I dedicate this volume to them as a mark of my appreciation." This list includes some 79 names. One name that was omitted inadvertently, since he was of the greatest help in the preparation of the work and is cited hundreds of times throughout the volume, is Doctor A. Edmund Brower, of Augusta, Maine. Doctor Brower was stationed on Mount Desert in the early and mid 30's and cooperated closely with Doctor Proctor both in collecting and in identification of the insects, particularly the Lepidoptera, and especially the Micros.*

*During his life Doctor Procter made many donations and contributions to various causes and to many persons, these never being publicized in any manner. Thus, during the difficult years of the recent war he made substantial contributions to the Entomological Society of America, which enabled the Society to publish their "Annals" of the period with little or no reduction in size. He served on the advisory board of the zoology department of Columbia University, on the board of the Wistar Institute of Anatomy and Biology, as a trustee of the American Museum of Natural History, and in several other important capacities. Likewise he was a member of many scientific societies, both in America and abroad.*

*In later years, and chiefly through his personal friendship with Doctor George A. Baitsell, of Yale University, he became very much interested in the Society of the Sigma Xi, contributing generously to its various Grants in aid, and particularly to RESA (The Scientific Research Society of America). This culminated in the establishment of the William Procter Prize for Scientific Achievement, the first award of which was made to Doctor Karl T. Compton at Cleveland, Ohio, on December 29, 1950.*

*Doctor Procter remained a bachelor until he was 38, when he married Miss Emily Pearson Bodstein on February 3, 1910. Seldom has there been a couple more devoted and appreciative of the efforts of the other than Doctor and. Mrs. Procter. A distinguished musician and French scholar, Mrs. Procter was invalided by arthritis for several years before her death at Bar Harbor on September 25, 1949.*

*Doctor Procter bequeathed his collection of insects, together with the cabinets, drawers, books and records appertaining thereto, to the University of Massachusetts. It will be maintained as a separate unit as "The William Procter Collection of Mount Desert Insects." In his will, Doctor Procter has specified that there be no additions made to this collection unless by specimens taken on Mount Desert Island, stating "My reason being that its great value is to show a biotic entity, and it has taken years of hard work to assemble same, though every hour one of pleasure."*

*Some of us were privileged to know Doctor Procter well and to appreciate his many splendid qualities. He was a most amazing combination of an outstanding man of business and a keen entomologist. In one moment he might be discussing the purchase of the World whale oil supply for his Company, while at the next he would be in raptures over the capture of a microscopic beetle or other insect new to his collection. His knowledge of the habits and habitats of the Mount Desert insects was profound. The detailed record of the fauna of his beloved Island will long serve as his monument.*

*Acadia National Park located on Mount Desert Island where Procter regularly collected. Photo courtesy of Laura Stone.*

# Procter Collection Update

Faced with staffing changes at the University of MA at Amherst and a National Park Service desire to use Procter's work, the collection was brought back to its original home on Mount Desert Island in June of 1999. Housed in the recently constructed William Otis Sawtelle Collections and Research Center at the Headquarters of Acadia National Park, the estimated 20,000 pinned and wet specimens, logs, and field notes are currently in the process of being catalogued. Anyone interested in learning more about this collection or in offering taxonomic assistance should contact curator Brooke Childrey at (207) 288-5463 or via email at **brooke_childrey@nps.gov**.

# Butterfly Notes

Tony Roberts in the November 2000 issue of the newsletter discussed some butterfly species that seemed unusual either for location or time this last season. I can vouch for all of the occurrences he mentioned.

This past July my annual butterfly count in Hiram turned up a Buckeye (*Junonia coenia*) – a find I was very excited about, as the only other time I have seen one in Maine was approximately 10 years ago. Also, this butterfly was near Brownfield Bog, north of my first sighting in Falmouth.

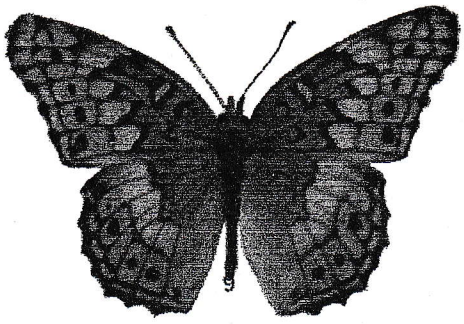
Like Mr. Roberts, I also saw some very late Canadian Tiger Swallowtails (*Papilio canadensis*) this year. In my opinion, this was due to the unusually long butterfly season. Any year when the warm weather extends into the fall and conditions aren't too dry, the swallowtails, viceroys, and white admirals have more time to complete a second brood.

As for the banded purple (*Limenitis arthemis*), I regularly see these intergrades in the Norway area. I have often wondered why the conventional wisdom has remained that the interzone for these forms is far to the south, when I can find any intergrade practically on demand. My collection now has four of these butterflies, each with a different amount of white on its wings, each a different size.

I have seen an occasional Variegated Fritillary (*Euptoieta claudia*), and collected one in 1994 from South Portland on a hot day in late August. Certainly the 1999 records are much more widespread. Any year when we have long, hot summers here and in southern New England, these little tourists seem to venture up here. They do lay eggs here (observed on *Viola lanceolata*) but since they arrive so late, the caterpillars don't have a chance to avoid the frost.

There are a couple more species that seem to be moving into Maine. One is the Delaware Skipper (*Atrytone logan*), a handsome creature that I have found on four of my July counts, both in Brownfield and Cornish, and have also seen them near the Maine Mall and other places in the Greater Portland area. The other is the Little Glassywing (*Pompeius verna*). Although it is notoriously difficult to identify, I have run into it enough times to believe it is a regular visitor to Maine, and probably much more common than anyone realizes. This small, dark skipper is often nearly impossible to see, let alone follow or capture, and could easily be overlooked.

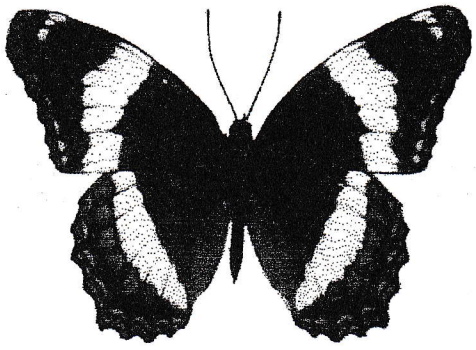
Lastly, recent taxonomy changes for the Pearl Crescent resulted in two species named *Phyciodes tharos*,



Variegated Fritillary

which covers most of the eastern US, and *Phyciodes selenis*, which replaces it in northern New England. Since this new taxonomy has taken hold, I have observed and collected what I think of as the Pearl Crescent, and there seem to be two species at two different times in Maine. In mid to late June I can find what appears to be the Northern Pearl Crescent (*P. selenis*) in great numbers. Then at the end of July, the noticeably smaller True Pearl Crescent (*P. tharos*) appears. They are always separated by about a month, and both are very numerous. I would love to rear some of the first "brood" and see if they produce the second (although summer forms are usually larger than their parent spring forms, not smaller), but I have never been able to find Crescent larvae.

- Gail Everett



Banded Purple

## Acadian Entomological Society Meeting

This year's Acadian Entomological Society meeting will be held on Prince Edward Island in late August. Specifics will be announced in a month or so or can be found on their website **http://www.upei.ca/~aes**. The website is currently under construction but should be up and running by March. There will be three sections focussing on General Ecology, Forestry and Agriculture. Prince Edward Island should be beautiful in August.

## Websites for Maine Insect Species Records

Maine Department of Conservation MFS/FH&M
**http://www.state.me.us/doc/mfs/idmcoll/collcover.htm**

University of Maine, Orono (this is the home page - click on "facilities" and then "entomology collection")
**http://www.umesci.maine.edu/biology**

## Research Review: Tomah Stream Caddisflies

The species composition of the caddisfly (Trichoptera) community occurring in a riparian wetland located along Tomah Stream (Washington County, ME) was described in the December 2000 edition of the *Northeastern Naturalist* by Alexander D. Huryn and Steven C. Harris. From May until October of 1997, light traps captured 148 different caddisfly species, approximately one half of the caddisfly species assemblage reported for the state of Maine. The reported species richness from this site is the highest level reported for the state, and one of the highest levels reported for northeastern North America. Of the adult, male caddisflies captured and identified, individuals from the family Leptoceridae were the most abundant (40%), followed by Hydroptilidae (24%), Limnephilidae (10%), Psychomyiidae (10%), and Hydropsychidae (4%). Most species identified were from the family Hydroptilidae (29 spp.), followed by Limnephilidae (28 spp.), Leptoceridae (21 spp.), and Polycentropodidae (18 spp.). This wetland is the only location in Maine for eleven of the species identified. Six of these species; *Rhyacophila manistee* (Rhyacophilidae), *Cheumatopsyche aphanta* (Hydropsychidae), *Hydrospsyche phalerata* (Hydropsychidae), *Polycentropus blickeli* (Polycentropidae), *Limnephilus perpusillas* (Limnephilidae), and *Platycentropus amicus* (Limniphilidae) are widely distributed across north central and northeastern North America, but four species; *Hydroptila alabama* (Hydroptilidae), *Hydroptila chattanooga* (Hydroptilidae), *Triaenodes* spp. C (Leptoceridae), and *Triaenodes ochraceus* (Leptoceridae) exhibited northeastward range extensions of 700 to 1500 km. One species of *Hydroptila* is new to science and has so far only been identified from Tomah Stream.

The authors suggested that the elevated species richness of the caddisfly population for this area was likely a result of light traps attracting insects from aquatic habitats adjacent to the Tomah Stream study site. This effect has been observed in other emerging insect studies as well. In the absence of interfering light, adult caddisflies have been captured in light traps up to 5 km from their larval habitat suggesting the potential for long distance dispersal.

The diversity of habitat located within a several kilometer radius around the sampling site could support the assemblage of emergent caddisflies collected, since they exhibit a wide range of habitat preference (e.g., lakes, marshes, temporary pools). The authors concluded that further experimentation was needed in similar northeastern systems in order to determine if the elevated species richness reported for the Tomah Stream was a local scale phenomenon or a general occurrence for wetland landscapes in this region.

- Rich MacKenzie

## A Tribute to Dr. Geddes Simpson

Like many others, I lost a friend and mentor with the passing of Dr. Geddes W. Simpson on December 28, 2000 at the age of 92. My first encounter with him was as a struggling student at UMO in the spring of 1958. Like so many others, I entered the school of forestry in the fall of 1957, not knowing what I wanted other than that I wanted to be in the woods. After two semesters just above the "bomb out" line I was led to talk with Geddes, whom I realized, loved to help young people. He was frank about my poor grade status but willing to give me a try in another field, forest entomology. I had one year to pull my grades up but he was there to encourage me. I did not let him down and although I was not a straight A student I received good grades and gained a deep love for insects and respect for a truly great man. I also had the opportunity to work with Geddes at the State Farm in Presque Isle for two years. Those were good times with Drs. Bonde, Shands, and Simpson. I began general survey work then and have not stopped. I might add that the one peculiarity that still stands out from my Presque Isle experience is that Geddes is the only person I have ever met who put peanut butter on everything, even potatoes! *The Bangor Daily News* ran an excellent obituary/tribute to Geddes on Monday, January1, 2001 on page B7. I have a copy for anyone who would like one.

- Dick Dearborn

*Adult caddisfly. Drawing courtesy of www.adventurefishing.com*

# Moose Ticks

***Continued from Page 1***

The moose or winter tick, *Dermacentor albipictus*, is a one-host tick that feeds primarily on moose and deer most of the year. A relative of the American dog tick (*Dermacentor variablis*), the moose tick is not associated with any diseases in Maine. It has been found to impact moose through blood loss and hair loss (leading to hypothermia). The so-called "ghost moose" that might be seen in February are not albinos, but are actually bald from infestations of these ticks! Although found in southern Maine, *D. albipictus* are more numerous in central and northern parts of the state.

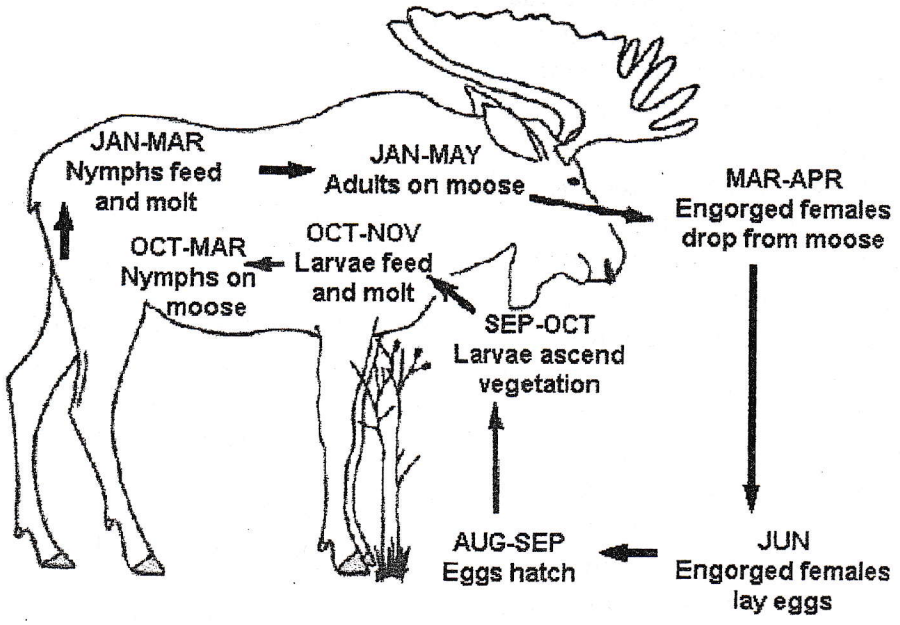
Safely under the leaf litter as eggs, *D. albipictus* hatch in late August and September. Subsequently, hunters and hikers encounter the newly hatched larvae through October and November. There is nothing like the feeling of horror (and fascination) that comes from watching so many tiny ticks swarming up my pant legs at one time!

When the larvae find a moose or deer, they hang on until January when they molt into nymphs. These nymphs will feed until March. At which point they change into adults, who mate on the host. A female may deposit up to 4000 eggs in June. Since these ticks spend most of their time on their hosts, they do not actively quest except as larvae. Adults might be found on clumps of shed moose hair in early spring. The sheer numbers of larvae encountered in any one sitting can lead to irritation.

Up close with a moose tick reveals a creature that is very different from deer ticks. Like their cousins, moose ticks have eyes with which to see their prey (deer ticks have no eyes). Their palps are also shorter than *Ixodes* ticks. Like dog ticks, *D. albipictus* have different dorsal markings than deer ticks. The males for both species have white lines or "lightning bolts" that run along their backs. The females of both species have a white scutum or shield behind their head instead of stripes.

Most *D. albipictus* submitted to the Maine Medical Center Lyme Disease Lab and the Insect and Disease Lab in Augusta come from hunters, some acquiring their ticks while in tree stands. In the woods, looking for sign of moose can give you a heads up for the presence of *D. albipictus*. While the moose's high browsing marks, large scat, and larger tracks will not definitely mean moose ticks are there, it's always wise to check yourselves when you come in after a trek in the autumn woods.

- Chuck Lubelczyk




*Drawing courtesy of Bill Samuels.*

## Summer Entomology Courses at Eagle Hill

Larval Dragonflies and Damselflies of the Northeast
May 27 - June 2

Adult Dragonflies and Damselflies of the Northeast
July 15 - 21

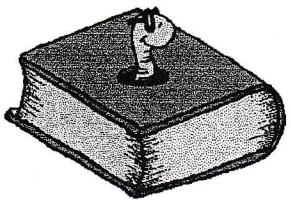
Aquatic Entomology: Systematics and Biomonitoring
July 15 - 21

The EPT Taxa: Systematics and Biomonitoring: Ephemeroptera, Plecoptera, and Trichoptera
July 22 - 28

Biology of Spiders
August 5 - 11

For more information contact:
Humboldt Field Research Institute
PO Box 9
Dyer Bay Road
Steuben, ME 04680-0009
PHONE: 207-546-2821,
FAX: 207-546-3042
**http://maine.maine.edu/~eaglhill**

## Book Review: *Man Eating Bugs* By Peter Menzel & Faith D'Aluisio



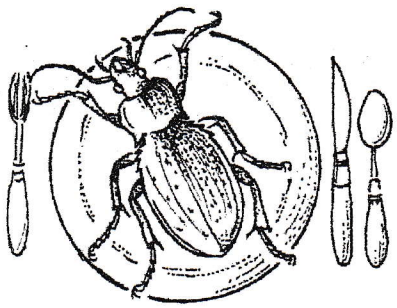
I've eaten a lot of insects. So have you. Fresh Brussels sprouts sometimes harbor teeny aphids. And your rice might have weevils in it (if you bought it on sale). Even sprigs of sage from your own garden may have bugs that will end up in your stew.

Most of us don't choose to eat insects deliberately. This book is about people who use insects because they are plentiful. In Mexico, grasshoppers become dinners because they are large and abundant while New Guinea stinkbugs are wrapped in leaves and roasted. Their bitter flavor results from a high concentration of iodine. Some African tastes have placed some species under threat. Larval emperor moths are sun-dried and sold in bulk, valued as a high protein source. Market value for these insects places them near the edge of extinction!

In this book, many of the photos were arranged for shock value: a two-page spread of marine worms, buckets full of scorpions, and handfuls of mealworms. Many of these photos were painstakingly taken and some are deliciously candid. The authors describe that some insects have been thrown in a pot to cook, dirt and all. Menzel is honest about the taste: some are great and some are awful. Almost everything is described as a "worm," whether it is a beetle grub or moth larva. For some readers, this will surely confirm that entomophagy is indeed gross: all you eat are worms!

Get this book if you want a quirky and fascinating travelogue of strange places. It offers a candid look at other cultures that we are not likely to see ourselves. But don't buy it if you want encouragement for eating insects or recipes for backyard bugs. It is published by Ten Speed Press and costs $19.95 softbound. And yes, I've eaten insects deliberately.

- Monica Russo



## Was That A Mosquito I Saw/Felt?

One of our mosquitoes which overwinters as an adult female can become active and bite on warmer winter days! And that's not all, you might even see a butterfly or two flitting across the snow during similar periods. In our March 1999 issue, I highlighted our winter active fauna that includes as many as 100 species! Some such as the wingless crane flies and scorpionflies are unique while others like the snowfleas and stoneflies occur in massive numbers. So keep your eyes to the ground occasionally when venturing forth on warm winter days (unless of course you're on skis or in traffic).

- Dick Dearborn

## New Look for *Maine Nature News*

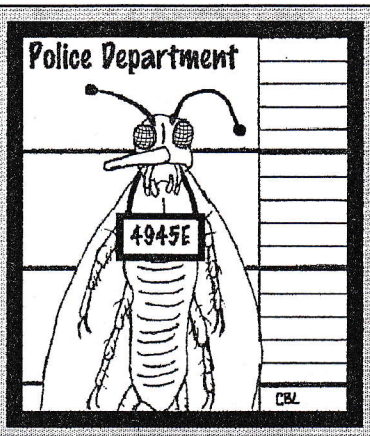
*Maine Nature News*, a weekly natural history online periodical, now has its own domain name, and a shorter address. Also, the web site has been redesigned so that pointing your browser to **http://www.mainenature.org** brings you to the home page and the current week's report on a single screen. Other changes have been made to give it a more attractive and less cluttered "look." Updated on Tuesdays, *Maine Nature News* covers natural history events, occurrences, and observations in Maine, as reported by natural history correspondents.

Now in its sixth year, its success depends totally on the continuing support of these volunteers. Surely the readers of *The Maine Entomologist* would be great potential correspondents. All are invited to e-mail the editor, Frank Wihbey, at **menature@maine.edu** about what they observe, at any time. The recommended format is: date, place, DeLorme Maine Atlas number of place, text of observation, and reporter's initials.

Seasonal features include the snow depth report, the black fly report and the wild blueberry fruiting stage report, which Frank compiles into weekly maps or tabulations. Past issues, now representing 253 weekly reports, are archived for natural history research interests, accessible from the home page menu "Prior weekly reports of *Maine Nature News*." Annual features include the Astronomical Diary for Maine, giving times of equinoxes, solstices, lunar and solar eclipses, New and Full Moon phases, and beginning/ending dates of Daylight Savings time, as an aid to observation planning.

*Maine Nature News* is a public service of the Fogler Library at the University of Maine.

- Frank Wihbey




# The Bug Mug Shot: Snowfleas

ORDER: Collembola (springtails), a primitive group of small, wingless, soft-bodied insects which possess a forked muscular structure at the tip of the abdomen (furcula) that enables them to hop about in a springing action.

FAMILY: Hypogastruridae

SPECIES: The most common snowfleas found in Maine belong to the genus *Hypogastrura spp. H. nivicola* Fitch is the more common of the two. *H. armata* Nicolet is the less common and is sometimes referred to as the snowmelt springtail.

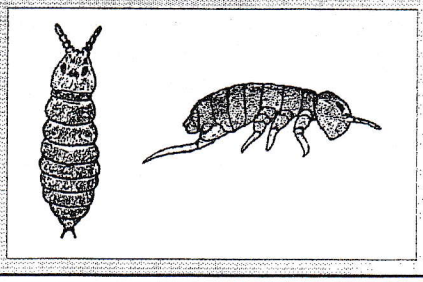
DESCRIPTION: Up to 2 mm in size, individuals vary in color although in most cases they are consistent in color when swarming. *H. nivicola* Fitch is usually a sooty or gunpowder black while *H. armata* Nicolet is usually a rusty red.

PRIMARY HABITAT: Damp or wet locations (i.e. decaying leaves, moss, or loose organically rich soil).

FOOD: These tiny creatures are known to feed on decaying plant material, fungi, and bacteria in soil or forest litter.

LIFE HISTORY: Being primitive insects, snowfleas do not undergo any metamorphosis. Their nymph stage looks just like a miniature adult. Females lay their eggs in the leaf litter. The active adult forms can be found from November through March.

NOTES: They were named snowfleas not because they bite, but for their ability to jump. On days with the right temperature and moisture they migrate in great numbers from forest litter to the surface of the snow. Swarms of them can literally blanket the surface of the snow, looking as if someone spilled pepper on the ground. Swarms are usually short lived and don't last more than a few days.



*Hypogastrura spp. magnified 25 times.*

*Drawing courtesy of Maine Department of Conservation.*

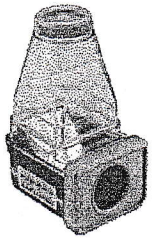
# Insect-Related Freebies

INSECT IDENTIFICATION GUIDE

This free 24 page full-color booklet from Orkin is an excellent book for beginning entomologists or children. It includes common arthropods such as butterflies, flies, bees, fireflies, praying mantis, beetles, termites, crickets, spiders, and more. Each entry has a color drawing and a profile with description, habits, diet, and reproduction.
**http://www.orkin.com**

INSECT VIEWER AND OTHER ITEMS

Free after a mail-in rebate, the Head to Tail Insect Explorer from CyberRebate.com allows you to see the captured insect from all sides, including its bottom with the use of mirrors and magnifiers. Although it is quite pricey, with a minimum of effort you can get *all* of your money back using the rebate. Even better, shipping and handling is free. To find this item and more (like Smithsonian insect replicas, ladybug jewelry, and bug suncatchers) type in "bug" in the search field.
**http://www.cyberrebate.com**



INSECT RECIPES

Lots of great recipes for cooking with insects if you're into that sort of thing.
**http://www.eatbug.com/recipes.htm**

GOLD SPIDER PENDANT

Free 14k gold spider pendant for shipping and handling. They have over 40 other designs to choose from, but this is the only arthropod.
**http://www.fortunesingold.com/free14k/index.shtml**

BEE POLLEN SAMPLE

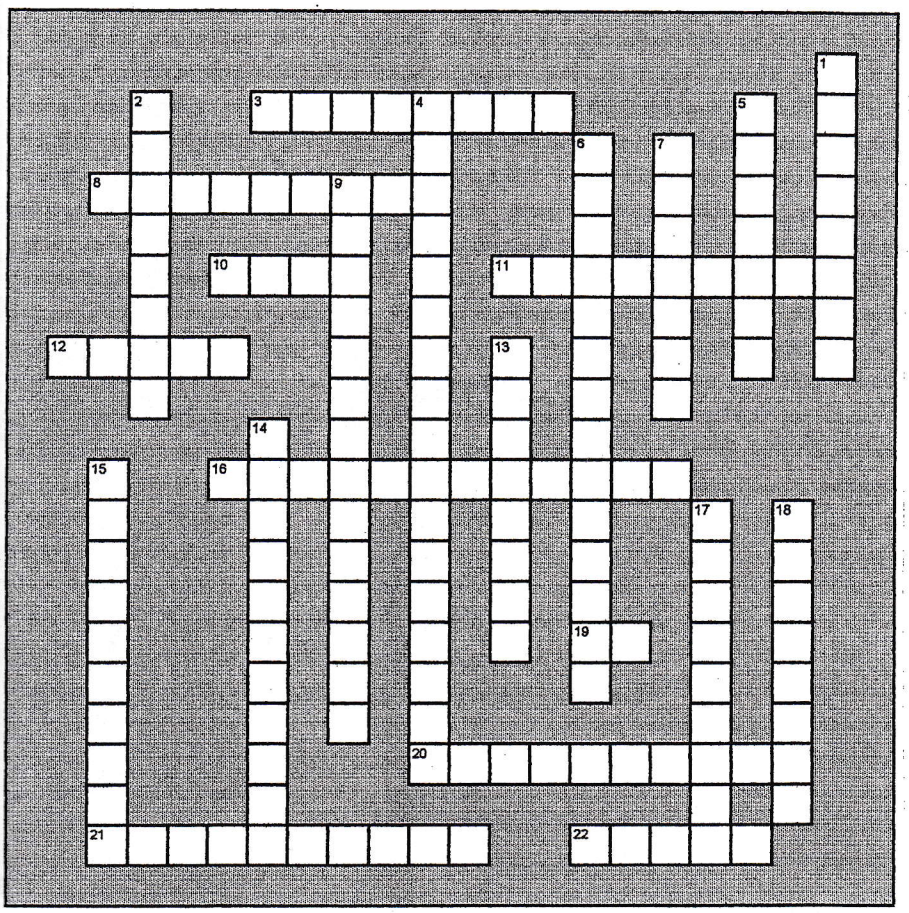
Get a free sample of this all-natural health supplement from Pollen Power.
**http://www.pollenpower.com**

MONARCH COLORING BOOK

Download and print out these free monarch butterfly lifecycle coloring pages to make your own book. Great for teachers and children.
**http://www.mesc.nbs.gov/butterfly/butterfly-coloring.html**

- Laura Stone

# Maine Butterflies and Moths



**Answers will be posted in the next issue.**

**ACROSS**

3. The larvae of this group of butterflies feed on legumes.
8. This long mouthpart is used to fee on flower nectar.
10. This green moth was named after the moon.
11. Lepidoptera means this.
12. The pellet-like excrement of caterpillars.
16. This brush-footed butterfly is named after a punctuation mark.
19. These moths have large eyespots on their rear wings and the larvae have mildly poisonous spines.
20. This blue butterfly feeds on lupine. It has been extirpated from Maine and is on the Federal Endangered Species List.
21. This butterfly commands a crimson ship.
22. The larvae of this moth are infamous for defoliating forest trees.

**DOWN**

1. This moth's range in Maine is limited to 3 southwestern pitch pine barrens.
2. Butterflies hold their wings in this position while at rest.
4. This butterfly, which lives in Atlantic cedar swamps, is listed as endangered in Maine.
5. Introduced from Europe, this moth is a pest in apple orchards.
6. This butterfly is endemic to Maine and is only found on Mt. Katahdin.
7. This butterfly mimics the toxic monarch to avoid being eaten.
9. This butterfly is currently known from only 10 sites globally, 9 of which are in Maine. Its larval host plant is shrubby cinquefoil.
13. These larvae of sphinx moths are detested by gardeners.
14. Gardeners often mistake this moth for a bird.
15. The width of this caterpillar's bands is reputed to predict the length of the coming winter.
17. Moths make cocoons, while butterflies make these.
18. Food fit for a "king" (butterfly that is).

- Laura Stone

# Coming Soon - A Maine Butterfly Atlas

Butterflies contribute a colorful and conspicuous component of Maine's biological diversity. Many neighboring states and provinces have compiled updated atlases of their butterfly fauna, but despite growing regional interest in butterflies and their conservation Maine has little baseline information on the group. While a large number of private collections and scientific papers have been generated, there has been little effort to coordinate this research and compile the data in a meaningful and accessible manner beyond an annotated checklist compiled over 25 years ago by Auburn Brower.

Recognizing this, the Maine Department of Inland Fisheries and Wildlife (MDIFW), in cooperation with the Maine Forest Service and The Maine Chapter of The Nature Conservancy, recently submitted and successfully attained a grant from the Maine Outdoor Heritage Fund to support the compilation of a baseline atlas and assessment of Maine's butterfly fauna. In addition to visiting major collections hosted by museums throughout the Northeast, MDIFW is interested in accessing data from private collections held by amateurs and professionals who have collected in Maine. If you, or anyone you know, holds a large private collection of butterfly specimens sampled in Maine we would like to know about it. Please contact Phillip or Reggie as soon as possible if you would be willing to share your valuable data with this important initiative.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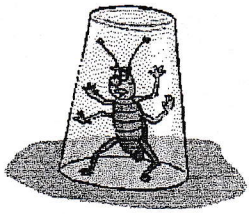
# Tentative 2001 Collecting Trips



**Saturday, May 19 at 9:30 am**
Runaround Pond, Durham (Cumberland County), Maine
Coordinator: Sam Ristich at 207-829-3375
Sam will be focusing on aquatic entomology, so bring your microscopes, field gear, and any guides that you need.

**Friday, June 15 at 9:00 am**
Chewonki Foundation, Wiscasset (Lincoln County), Maine
Coordinators: Dick Dearborn and Don Hudson (call Dick at 207-293-2288)
Saltmarsh, coniferous forests, and deciduous forests will be the collecting habitats for this trip.

**Saturday, July 14 at 9:00 am**
Wells Reserve National Estuarine Research Reserve, Wells (York County), Maine
Coordinators: Chuck Lubelczyk and Laura Stone at 207-324-2849
Successional fields, saltmarshes, and deciduous forests will be explored.
The Wells Reserve will be attempting to begin compiling a salt marsh species list.

**Saturday, August 4 (time to be announced, date subject to change)**
Jackman (Somerset County), Maine
Coordinators: Don Ouellette and Bob Nelson (call Don at 207-287-2431)

**September, date and time to be announced**
Milbridge or Lubec (Washington County), Maine

**Monday, October 8 (Columbus Day) all day**
Mt. Vernon (Kennebec County), Maine
Coordinator: Dick Dearborn at 207-293-2288
An opportunity to collect in Dick Dearborn's home environment: second-growth woods, meadow and hayfields, marsh in old beaver pond floor, and a small creek. Potluck lunch will be at noon with the annual meeting from 1:00 to 3:00 pm. PLEASE NOTE: This is the annual fall business meeting where new officers will be elected!

**These collecting trips are free and open to everyone. Please feel free to invite friends and family members.**

**If you are interested, please call the event coordinator. This gives them an idea of how many people to expect as well as allowing you to receive trip details and directions.**

**The Maine Entomologist is published quarterly by the Maine Entomological Society. Dues are $5 per year. Checks should be made out to Maine Entomological Society and sent to Mrs. Edie King, Treasurer, at 7 Salem Street, Waterville, ME 04901. Dues are paid through the year printed on the mailing label.**

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c/o Newsletter Editors
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***Please visit our website at www.colby.edu/MES***

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FEB 22 2001

**ATTENTION:**
***Submissions are needed for our spring newsletter including articles, artwork, and announcements. The deadline is May 1.***