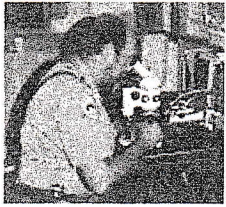


The Maine Entomologist

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

Volume 6, Number 1 February 2002

SAMPLE



From the President

It hardly seems possible, but the 2002 season begins our sixth year as a group. We have now fledged and as we learn to appreciate our wings, let us continue to do even more exciting things in the years ahead. I hope that those of you who participated in our 2001 activities enjoyed them and that more of you will join us in our ambitious plans that are evolving for 2002! Your Board met in early January to discuss plans for the year. The results are a schedule of seven tentative field events from May through October and a photo contest! You can preview these in this issue and on our website.

I want to point members to the July 21-23 MES/AES meeting in Machias. I urge all who can to show up especially on our day (July 21st) and really make our group shine. And don't forget our photo contest. I am sure that nearly all of you have a special photo somewhere that you would like to share. Also, please send in those articles for our newsletters - the next deadline is May 1. We would not have such interesting things to read without them. I would like to thank our editors Chuck Lubelczyk and Laura Stone, web master Bob Nelson, treasurer Edie King, board members Sam Ristich and Monica Russo and board scribe, my wife Marj, who have been the ones keeping the MES machinery moving. And of course I would be remiss not to thank all of you who have submitted all of the great articles that provide a lot of enjoyable reading. The MES survives with input and we need yours. I hope to see or hear from you in 2002. Don't forget that MES t-shirts are still available. Contact Laura if you would like to place an order. There are only a limited number left!

I would like to close with the words of a favorite writer of mine, William Henry Hudson:

*Unless the Soul goes out to meet
What we see, we do not see it,
Nothing do we see, not a beetle
Not a blade of grass.*

Have a great year! And don't forget- the bugs are still out there!

- Dick Dearborn

Inside This Issue:



Keeping Your Collection Pest-Free



Nest Reuse by *Polistes* Wasps



2002 Field Trip Schedule



Insect Photography Contest

Labelling Pinned Insect Specimens

In previous issues of The Maine Entomologist, we have discussed a number of insect species inventories, atlas projects, faunal lists, and efforts to track the movement of both native and introduced species. These efforts depend heavily on historic records as well as current collection information. Historic insect data often must be taken from the labels of pinned specimens. Although a wealth of information is generally available from these labels, data from specimens in some collections are inadequate or difficult to interpret. Collectors should *always* include enough information to allow someone who does not know them to be able to place a specimen properly in space and time. Even though there are many excellent sources of information on labeling procedures, we felt that it might be helpful to outline the basic label data requirements for our members. To emphasize the significance of proper label data, Wheeler, Huber, and Currie (2001) end their recent treatise on the subject by stating that:

"A complete label incorporates sufficient data to allow future researchers to repeat the locality, date, ecological conditions and methods of the collecting event. Furthermore, those data must be clear and unambiguous. Ensuring complete label data may seem time-consuming and inconvenient on a sunny summer afternoon, but taking a shortcut now will be a disservice to future users of specimen data. Poorly labeled specimens, no matter how rare or carefully mounted, are ultimately useful only in expendable teaching collections or displays; they are lost to the research community."

Continued on Page 4

Keeping Your Insect Collections Pest-Free

One of the biggest threats to insect collections is other insects. The major culprits are dermestid beetles (Family Dermestidae) and psocids or booklice (Order Psocoptera). Telltale signs for the presence of dermestids are powder underneath specimens and/or larval exuviae on the bottom of the box. Booklice because of their small size (1-3 mm in length) often remain undetected until there are relatively large numbers of individuals in the collection. One will often see a fine dust under specimens or patches of missing scales on the wings of Lepidoptera specimens. If left unchecked museum pests can completely destroy a collection.

A variety of precautions can be taken to protect insect collections from insect pests. Naphthalene in either flake or ball form (mothballs) can be used. A red-hot pin can be inserted into the mothball and then the mothball can be pinned into the specimen box once the pin has cooled. Naphthalene flakes are usually placed into small screened-covered boxes that are pinned into the corner of the specimen box. A related compound, paradichlorobenzene is commonly used in larger museum collections. It is used in the same manner as the naphthalene flakes. However, paradichlorobenzene volatilizes more rapidly and must be renewed more frequently. It must be stressed that paradichlorobenzene and naphthalene are repellents. They will keep pests from entering a collection, but will not kill pests already present.

Probably the best way to kill pests already present in a collection is heat treatment. Heating specimen boxes to 150°F for several hours will destroy all insect pests. A word of caution; please check to insure that materials in the box can withstand these temperatures before doing this. I have found that freezing at 0°F or below is also effective. This is fairly easy to do in the winter on one of those real cold nights so common in our northern climate. Some collectors use small pieces of Dichlorovs fumigant strips ("No Pest Strips", Vapona) in their collections. These will kill all insect pests and are quite effective. However, I have found that Dichlorovs can cause noticeable changes (fading) in the colors of moth specimens close to these strips. One wonders what the long-term effects might be for other specimens in a box.

The above fumigants and repellents are effective and widely used in larger institutional museum collections. However, paradichlorobenzene and naphthalene are considered to be hazardous chemicals by the Department of Transportation. Dichlorovs is an insecticide. This chemical is supposed to be harmless to vertebrates and is often used in pet collars or as a hanging strip for household pest control. However, these strips are supposed to be kept away from the skin and food. In my view all the above chemicals should be used with caution in private collections where one may have long-term exposure to their fumes.

Personally, I do not like the smell and with children in the house I don't want them exposed to chemicals that we do not what the effects of long-term exposure are. Now I use no fumigants or repellents in my collection.

For prevention of museum pest outbreaks I check my collection frequently for pests (once every two or three months), keep my material in well made wooden boxes that are essentially pest proof, and heat treat or freeze all new material before adding them to the collection. Use of well-made boxes is essential. The box should have a cover that is close fitting and preferably has a tongue and groove type of cover. The wooden Cornell or California Academy drawers offered by Bioquip and other entomological supply houses are quite good. The extra cost is worth it in the long-term, especially when one considers the effort that has gone into making the collection. Using these precautions, I have had very few problems with museum pests since I stopped using fumigants (about 20 years now).

If one loses interest in the insect collection he or she has made, it should be donated to a reputable museum or to another active collector. I urge you not to give the collection to your local high school, as these collections often are neglected and end up being destroyed by museum pests.

- Reginald P. Webster



In our last issue of *The Maine Entomologist* (Vol.5, No.4, p.10), the article by Tony Roberts titled "A Sasquatch Sighting in Maine" mentioned Procter and the Procter collection. We refer you to *The Maine Entomologist* 5(1): 2-3 in which these are discussed. The Procter collection is housed in the William Otis Sawtelle Collections and Research Center at the Headquarters of Acadia National Park in Bar Harbor, ME. For more information on this collection contact Brooke Childrey at (207) 288-5463.

Nest Reuse by a Colony of *Polistes* Paper Wasps

In the June 1999 issue of Bembix, a German Rundbrief for hymenopterists, there was a surprising article regarding paperwasps: "*Polistes dominulus* (Christ) Colony Probably Founded on the Previous Year's Nest," by Dr. Georg Artman-Graf from Olten, Switzerland. We have had this species of paperwasp in Maine for the past few years, so I translated the article. Here is a brief summary:

In the spring of 1992, Dr Artmann-Graf and his wife began to make observations of a colony of *P. dominulus*, which had nested in the frame of their study window. That autumn, they removed the nest since it did not have any further function.

A year later, on March 20th, an overwintering female appeared at the site of the old nest! After a few days, more females showed up, and a new nest was underway. The nest remained intact that autumn.

In 1994, on March 10, females were observed at the old nest. The nest was enlarged and the wasps hatched out of the first brood. After that, they only used the part of the nest that was newly constructed.

The next spring, on March 13, 1995, one female appeared at the old nest, and two weeks later more showed up. Again the nest was enlarged.

March 26, 1996 saw females on the now 3-year old nest. However the landlord wanted to put in a new window. The authors worried about the fate of their *haustieren* (their house pets). So, on a cold day, Dr. Artmann-Graf gently frightened the females away from the nest and removed it from the windowframe. He re-attached it on a balcony table, about five meters from the original site. The result - females came, tended the nest the same day and the colony was active all summer. During the winter, however, the nest was destroyed, perhaps by birds.

In March 1997, an overwintering female appeared at the window, the original nesting site. On March 22, another female showed up. Nothing further happened, and this was felt to be due to the cold weather. Females hung about their balcony railings but did not start any nestbuilding; perhaps the new windowframe did not meet their approval. In the middle of April, the author's wife set a decorative wooden flowerpot on the balcony table and on the next day, the wasps had accepted this as their new site!

The nest remained intact as of March 1998, thus making several consecutive years of observation.

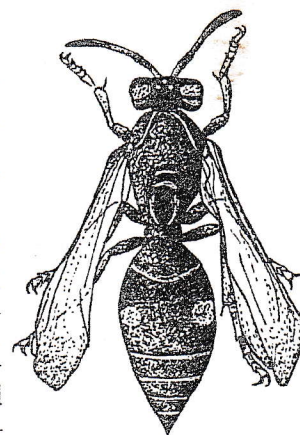
Polistes wasps do not generally reuse their old nests. Krombein's Catalog of Hymenoptera in America North of Mexico says, "In most of the Temperate Zone species, the nests are annual." In The Social Biology of Wasps by Ross and Matthews, it is reported that parasites, pathogens, and physical deterioration of the nest itself prohibit reuse, with only 7% of nest reuse seen in *Polistes annularis* (a species not found in Maine).

So the Bembix article describes a rare and strange event. Yet how often do any of us have the opportunity to watch a wasp nest closely for any period of time? And how many of us, as interested as we are in insects, might take the time-and risk- to move an active nest so it might survive? The tempting hint here is that these observations were made in Switzerland-at about the same latitude as northern Maine. It could be very exciting to set up winter-protected nest sites for our own *Polistes* or move the nest to see if reuse occurs. Experiments in the early 1970's showed that *Polistes* nests in Texas could be harbored then moved about agricultural fields to hunt destructive caterpillars, the wasps' homing ranges apparently good enough to keep up with the changing locations of the nests.

The Bembix article should make us all aware that even the most common and familiar species around us need observation. Insects are so adaptable to changes, including climate, that their home life and life histories (which may have been previously well documented) could very well be altered each season.

This raises enticing questions: Could reuse of nests imply a low incidence of parasites locally? Does one *Polistes* foundress make better choices in construction materials than another, so that a dynamic enclave can be established with reusable nests? It's a fertile field for entomology students.

My many thanks go to Mike Mazurkiewicz and Ken Weber from the University of Southern Maine for reviewing my translations. I will be glad to send the Bembix article (in German) and my complete translation to anyone who would like to see it.



The paper wasp
Polistes dominulus.
Drawing by
Monica Russo.

- Monica Russo

Labelling Specimens Continued from Page 1

While there is some flexibility in how label data is presented or how much additional information is desired, there is a core of critical information that must be included. However, some current surveys require much more data and special specimen preparation (e.g. the MDDS) even beyond this core. When collecting for a particular project or grantor you should always ask up front how they want the specimens to be prepared, labeled, and identified, and where they will reside.

The following guidelines presented for your consideration are based on a system of three labels per specimen:

1. White, 100% rag content, archival-quality, 36-pound acid-free paper is preferred. Commercially available card or label stock will do in a pinch.

2. Labels should not exceed 17mm in length or 6mm in width. This will allow room for four to five lines of data.

3. Use only permanent, black, archival quality ink.

4. A 3 to 4 point font should be used for print size or an ultra fine-line ink pen. It is imperative that the print be legible.

5. Positioning of the labels on the pin depends on; the size of the insect (avoid breaking off legs or tarsi), number of labels used (Some only use the locality label in which case it can be placed further down), and the discretion of the collector. The following should serve only as a guide. Use a three stage pinning block or allow for 23 mm from the point of the pin to the bottom of the insect (the highest stage of the block in most cases); 12mm to the top label; and 7mm to the second label (the lowest stage). The very bottom or the third label should rest on the pinning bottom of the storage box or drawer.

6. Labels should be arranged on the pin so as to lie parallel to the long axis of the insect with the left side of the label at the head of the insect.

The top or locality label is essential and the most important of all. While the order of some entries may vary in format they should include all of the following information:

FIRST LINE - Country (e.g. USA or Canada is desirable), State-spelled out although the US and Canadian Postal Service abbreviations (eg. ME, NH, OR, etc.) are acceptable (avoid archaic or personal abbreviations) and County (Ken. Co. or Kennebec Co.).

SECOND LINE - Legal town/township designation. Make sure that you are using a legal minor civil division (e.g. Biddeford should be used but NOT Biddeford Pool or Fortune's Rocks as the town. Biddeford Pool could and probably should be used to clarify the location within Biddeford). Use North, South, East or West only if it applies to a legal minor civil division (e.g. South Berwick, West Paris, etc.). Also be careful on this one to include a distinct

identifier as in Maine there may be more than one town/township with the same name or number (e.g. T1R2NBKP and T1R2TS are different places so to use only T1R2 without the survey designation, as is often done, would be meaningless). You may wish to use a specific locality or GPS (latitude and longitude) coordinates here or on the next line.

THIRD LINE - The date most often goes on the third line but could go on the fourth. Due to great differences in how dates are cited casually, this is one of the most commonly confused entries. The date should be understandable to all and you should preferably spell out the month - day - year in full (e.g. June 15, 2001). The only other acceptable form is to use the ascending order from day-month-year with Roman numerals for the month (eg. 15-vi-2001 or 15-VI-2001). *Never* use Arabic numbers for the month *and always* use all four digits for the year.

FOURTH LINE - The date sometimes gets bumped to the fourth line especially on a five-line label but most give the collector on this line. Be sure and use a recognizable combination (e.g. R.G. Dearborn). In some cases, a collector will place a collection method (e.g. light trap) or project code on this label but most reserve the second label for these entries.

FIFTH LINE - The collector may get bumped to this line or some collectors include collection method (e.g. at light) here especially if only one label is used.

The **second label** down is usually reserved for Project names (e.g. WNV Mosq Proj.) and codes which are often of more value to the collector, collection methods (e.g. at light) and habit/habitat information. This label is often very helpful to the individual trying to define associations or distribution so information should be clear and concise but as complete as possible. In the case of predators and parasites, the host species is placed on this label. Other species associations are also included here. Be sure and clarify the association (e.g. reared from—, parasite of—, feeding on—, beaten from—, at 1500ft. on Mt. Pisgah, etc.).

The **third label** down is for the identification and identifier.

In closing, I realize that you may take issue with some of what I have said and will undoubtedly customize a method that works for you. But whatever method you choose I would like to emphasize how important it is to label all of your specimens as soon as you collect them in some fashion and to have at least *all* data suggested for the first or top label with the specimen when it is pinned. Each year members find new and unusual species and without data these records are useless. If it's worth collecting, it's worth preparing and labeling properly. Thanks from those of us who have to interpret collection records.

-Dick Dearborn

More Info on Specimen Labels

Of the many good, readily available sources of information on label standards here are two which should give you a good start and cover most of your needs:

Borror, D.J. and R.E. White 1970. *Insects*. No. 19 in the Peterson Field Guide Series. NY. Houghton Mifflin Co. 404 pp.

Wheeler, T.A., J.T. Huber and D.C. Currie 2001. Label Data Standards for Terrestrial Arthropods. Ottawa, Ont., Canada. Biological Survey of Canada (Terrestrial Arthropods) Document Series No. 8 (2001). 20 pp. This item is also available online at:

www.biology.ualberta.ca/bsc/bschome.htm.

Examples of Specimen Labels

First label:

**USA, ME, KEN. Co.
Mt Vernon, at light
June 15, 2001
Coll. R.G. Dearborn**

USA, ME, KEN. Co.
Mt Vernon, at light
June 15, 2001
Coll. R.G. Dearborn

OR

**USA, ME, KEN. Co.
Belgrade: Great Bog
44 33'N, 69 48' W
6 - VII - 1997
R.E. Nelson coll.**

USA, ME, KEN. Co.
Belgrade: Great Bog
44 33'N, 69 48' W
6 - VII - 1997
R.E. Nelson coll.

Middle Label:

**Sweeping *Solidago*
Bright sun**

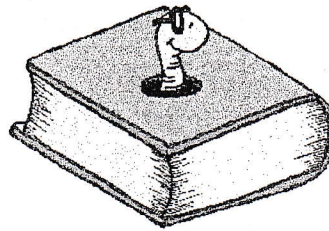
Sweeping *Solidago*
Bright sun

Bottom Label:

***Chlaenius cordicollis* Kirby
Det. R.G. Dearborn Sept. 2001**

Chlaenius cordicollis Kirby
Det. R.G. Dearborn Sept. 2001

The left hand labels are magnified three times for readability. The labels on the right are printed in a four point font to show actual label size.



Book Review: Pilgrim at Tinker Creek by Annie Dillard

Every once and a while, a book comes along that is a milestone, both generally to the public and on a more personal, individual level. Twenty-eight years since its first printing, *Pilgrim at Tinker Creek* still fills both roles admirably. Strictly speaking, this book is more “general nature” than pure entomology, but I think that this heightens rather than detracts from the book’s appeal. I suggest this book to bug lovers because it fits insects in among the natural course of events – the flooding of the creek one summer after Hurricane Agnes, the flowering of redbuds in spring, and the wonders of the sycamore. These things, along with the feeding habits of the chalcid wasp, the fecundity of the mantis, and the scent of a migrating monarch butterfly become integral parts of Dillard’s world on this small Virginia stream.

Although Annie Dillard seems enthusiastic about every aspect of nature she encounters, I think she is a closet entomologist waiting to come out. Her writing, analytical and heartfelt, displays childlike wonder at the smallest discoveries. For her, the water strider lives “on jetsam” (a small fly trapped by the water tension in the stream). A large section of the chapter titled “Northing” devotes itself to the monarch butterfly migration in the fall. The migrants, inundating Dillard’s grounds, fill the air “burnished like throngs of pennies.”

In many ways, I regret not discovering this book before now. There is much in it of worth. While not a field guide, it provides enough information to make you look for things while out tramping in the woods. Moreover, it impels you to do so! I think it would be wonderful if everyone went outdoors once in a while with the same purpose and zeal of Dillard – to watch, to listen, and to discover something for its own sake.

-Chuck Lubelczyk

Websites of Interest

www.biosci.ohio-state.edu/~ohbiol/

The Ohio Biological Survey Website covers a wide variety of biodiversity and biological survey topics of wide interest and application. It is a colorful and interesting site to visit.

www.atpm.com/6.08/desktop-pictures.shtml

This page allows you to download free macro-images of insects to use as backgrounds for your computer desktop. The photographer also gives some helpful hints for photographing insects.

News from Humboldt Field Station

Field Seminar Schedule for 2002

The following entomology seminars will be offered this year at the Humboldt Institute in Steuben:

*May 26-June 1. Larval and Adult Dragonflies and Damselflies: Systematics and Biomonitoring. Instructor: Paul-Michael Brunelle.

*June 30-July 6. Systematics of Lepidoptera and their Use in Management and Monitoring. Instructor: Dr. Brian Scholtens.

*August 4-10. Mayflies: Systematics and Biomonitoring. Instructor: Dr. Steven Burian.

*August 11-17. Aquatic Entomology: Systematics and Biomonitoring. Instructor: Dr. Steven Burian.

Call for Photographs

The Northeastern Naturalist is looking for color photographs with unusual "Northeastern" natural history motifs for its greeting card series. The series tends to focus on species portraits of animals or plants rather than scenic images. If your image is used for one of the greeting cards, you will receive 100 free greeting cards plus a 1-year renewal of your Northeastern Naturalist subscription! Sales of the greeting cards help to support the publishing efforts of the journal.

For more information contact:

Humboldt Institute
PO Box 9, Dyer Bay Road
Steuben, ME 04680
(207) 546-2821
e-mail: humboldt@loa.com
<http://maine.maine.edu/~eaghill>



New Naturalist Group

A new organization, called the Kennebec Naturalist Society (KNS), is forming in the Augusta area. KNS features monthly presentations on topics such as amphibians, birds, fish, geology, insects, mammals, and plants. Starting in March, presentations will be held on the third Thursday of the month. Spring meetings will be on March 21, April 18, May 16, and June 20. There is no cost to join KNS or attend the presentations. For more information, contact Tom Danielson at (207) 621-4160.



Patch House News

Last fall, the historic home of Maine entomologist Edith Patch was assessed by preservation architects. The architects' conclusion—that Braeside was in good condition and "well worth restoring" as the Edith Marion Patch Center for Entomology, the Environment, and Education.

Included in the survey were design plans for the Patch Center, and a teaching library. The scheduled opening date for the Center is autumn 2003, the anniversary of Patch's arrival at the University of Maine and the beginning of her career as an entomologist.

Despite not having a physical location yet, the Patch Center has teamed up with the University of Maine Department of Entomology and the College of Education and Human Development, to offer the education program *Small Wonders: Discovering the World of Insects*. It teaches educators about the biology and ecology of insects and of the role of insects in history. Participants will receive free resource packets to enhance insect study and teaching and have the option to receive three academic credits. Thanks to support from the Entomological Foundation, this course is offered for free on several dates. Those interested may choose from March 2, April 6, or May 4. All workshops will be held at the University of Maine from 8:30 to 3:00. For further information Patch Center programs or to find out more about The Friends of Dr. Edith Patch, contact Cassie Gibbs at (207) 862-3578 or Mary Bird at (207) 581-2434.

Notes on Collecting

I am a general collector of insects, collecting anything I come across (but usually only an individual specimen of each species because of limited box space). All specimens are labeled with collection location, date and collector, and are arranged in boxes by order and family. My collection now consists of about 1700 species (only a portion identified) in 16 Schmitt boxes and one large glass top box. These include 530 Lepidoptera, 504 Coleoptera, 185 Diptera, 170 Hymenoptera, 111 Hemiptera, 94 Homoptera, 32 Orthoptera, 22 Odonata, and 11 Neuroptera. The collection is protected from pests by occasionally placing some paradichlorobenzene moth crystals in each box.

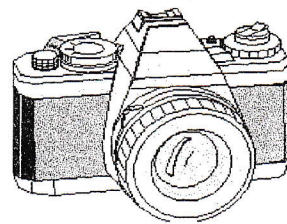
Because my work takes me around to nurseries, greenhouses and farms around the state, I have been able to collect a wide variety (more than 200 species) of pest insects of agriculture and ornamental horticulture. Some of the insects have been raised from larval or pupal stages, but the bulk have been collected by capture in small pill bottles. The insects are collected in many ways. During my inspection work, a wide variety of plant material is checked for insect and disease problems. If chewing damage, leaf webbing, frass or other signs of insects are present, a closer search is made to find the cause.

Insects may be found on flowers, stems, leaves, on or under bark, under rocks and other objects, on open ground and in any number of other places. Many insects are collected by chance. A couple of years ago, I happened to find linden bark borer adult moths flying around a large linden tree in a nursery on June 28. The next year I stopped at the nursery a few weeks later and found no trace of the moth. A grower will often mention some plant problem of concern, and something else is found. Once, a grower wanted recently delivered *Nyssa* trees with unsightly black spots on the bark checked. The spots turned out to be septobasidium felt fungus growing in association with a healthy population of sourgum scurfy scale. A homeowner complained about yellow jackets all over a magnolia tree, which were feeding on the honeydew from a heavy infestation of magnolia scale.

Scale insects are common on ornamentals (particularly on plants originating in the south). I have collected 25 different species of scale and numerous unidentified scales. Black vine weevil is a common nursery pest, but adults are not often seen because they feed at night. When root damage from larvae or adult leaf notching is observed, adult weevils may often be found playing dead under fallen leaves or surface debris around plants. Moths can be collected in great numbers around lights at night. In the winter, check houseplants for aphids, mealybugs, whiteflies, scales, thrips, fungus gnats, shore flies, and springtails. If firewood is stored inside, watch for emerging wood boring beetles or ants. Insects that overwinter in structures, such as cluster flies

and Asian lady beetles, may easily be found. Stored product pests such as larder beetles, carpet beetles, spider beetles, Indian meal moth, bean weevils and others can be collected in the winter. A windowsill near messy drainpipes may offer samples of moth flies. Insect collecting can continue year round if you know where to look.

-Dick Folsom



MES Insect Photography Contest

The Maine Entomological Society is holding a photography contest to select photos for publication in our first ever 2003 Insect Calendar. The focus will be on species portraits, but any photo related to entomology will be considered (e.g. a child collecting insects or a beehive). Insects must be species that are known to occur in Maine, but the photo does not have to be from a Maine location.

Images may be submitted as black and white prints, color prints, or 35mm slides. Digital images, retouched or digitally enhanced photos, and previously published work will not be accepted. Please keep in mind that the calendar will be in landscape (horizontal) format so images may be enlarged or cropped to fit this format.

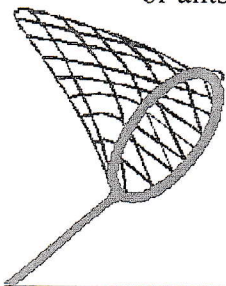
In addition to having their work published, winners will receive a copy of the calendar, a one-year MES membership, and a T-shirt.

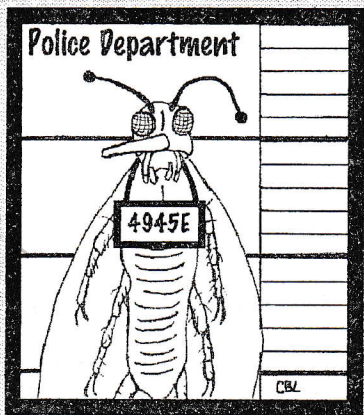
All amateur and professional photographers are invited to submit up to two entries before the **June 1 deadline**.

For further information or an entry form, please contact Laura Stone at (207) 324-2849 or naturbuf@gwi.net. We also hope to have this information posted on the website soon. Please help us spread the word!



**Don't forget to pay
your dues for 2002!**





The Bug Mug Shot: March Flies

A.K.A., "Love Bugs"

ORDER: Diptera, the true flies

FAMILY: Bibionidae. Insects in this family tend to be medium-sized flies, usually 8-12 mm in length. From the side, they look somewhat "hunchbacked", a characteristic usually associated with much smaller flies.

SPECIES: There are at least four species of March fly found throughout Maine. Three of these are species of *Bibio* (*B. longipes*, *B. slossoni*, and *B. xanthopus*), and the fourth is *Penthetria heteroptera* (*Plecia heteroptera* in older works). It is likely that there may be additional species in the state that have not yet been recorded.

DESCRIPTION: Our March flies are about 1 cm long, and readily recognized by the large head with enormous eyes and short antennae (arrow 1 on the picture), a very large, circular and usually black (in our species) thorax (arrow 2), and particularly by a large, dark field in the outer distal area of the wing (arrow 3).

PRIMARY HABITAT: Adult March flies are common at flowers in the late spring and early summer, and are among the first flying insects to appear in the spring. Early specimens can commonly be found resting on the side of a house or fence, in the sun. The larvae live underground.

FOOD: The adults are probably nectar feeders, given their association with flowers. Some larvae feed on plant roots, but most feed on decaying vegetation in the shallow soil.

LIFE HISTORY: Adults emerge early in the spring as the ground warms then feed and mate, laying eggs in early summer. The larvae develop and crawl through the soil by anchoring their "head end" with a hook, then contracting muscles down the length of the body, to pull it forward. The head is then pushed ahead into the soil and the process repeated. It is likely that they pupate in the soils, and in particularly cold regions may conceivably take two years to complete a life cycle.

NOTES: One species of the American southeast, *Plecia nearctica* Hardy, has a bright red thorax. This is the famous "love bug", so named because they are most commonly found as mating pairs. This species can form swarms so large and dense that cars driving through them have overheated as their radiators clogged, and their windshields became so splattered with juice that driving became unsafe. (See the web site <http://eny3005.ifas.ufl.edu/lab1/Diptera/Bibionid.htm> for photographs of and more information about the Florida "love bugs.")

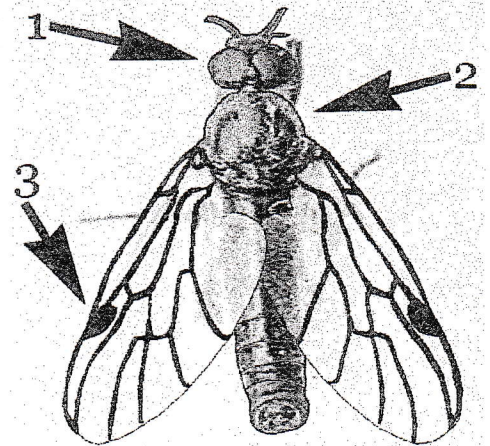
Wall Street Entomology

The next time you pick up the Wall Street Journal to read about your diversified investments, take a look at the front page for articles on – insects! In the past few years, the paper has had "above-the-fold" feature stories on entomology issues. In the January 14th issue was an article entitled "Butterflies are Free?" It had a realistic and straightforward view of the commercialism of butterfly breeders who may release hundreds or thousands of butterflies at a time and place they aren't supposed to be found. There was even a second entomology article in the same issue, on the problem of Mediterranean fruit fly larvae in those luscious little Clementines that get shipped over from Spain in refrigerated cargo ships. The larvae aren't supposed to survive the cold in the hold, but they do.

Other Wall Street Journal articles have focused on how insects used in movies must receive appropriate and safe handling (March 29, 2001 "As Hollywood Sharks Attest, They Wouldn't Hurt a Fly: Insects Receive Star Treatment"). A front-pager on July 26, 2001 was on malaria and DDT, and another past article was about bees.

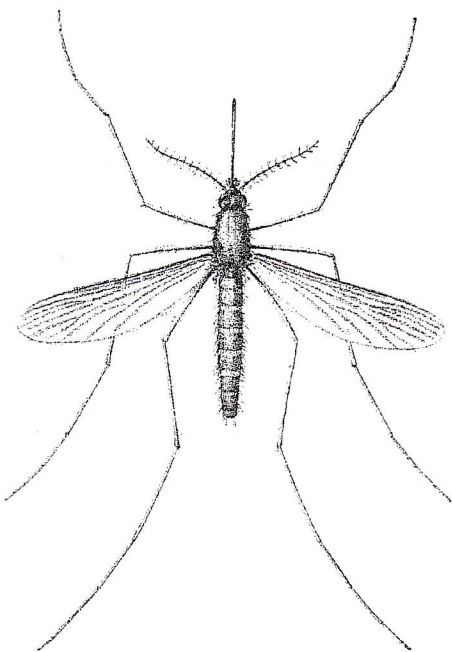
So, keep your eye on the WSJ. You just might find your choice subject on the front page!

- Monica Russo



A March fly (*Bibio* sp.).
Image courtesy of Robert Nelson.

Mosquitoes Word Search



The house mosquito, *Culex pipiens*.
Drawing reproduced from The Mosquitoes of North America
by Robert Matheson.

Abdomen
Aedes
Anopheles
Bite
Bloodmeal
Catch Basin
Cavity
Culex
Dengue
Egg Raft
Gravid
Heartworm
Larva
Mansonia
Melanura
Proboscis
Setae
Scales
Vexans
West Nile



"Whether we contemplate the whole or only some particular portion of the realm of living things...we are, indeed, obsessed by problems...It quite saddens me to think that when I cross the Styx, I may find myself among so many professional biologists, condemned to keep on trying to solve problems and that Plato, or whoever is in charge there now, may condemn me to sit forever trying to identify specimens from my own specific and generic diagnoses, while the amateur entomologists, who have not been damned professors, are permitted to roam at will among the fragrant asphodels of the Elysian meadows, netting gorgeous, ghostly butterflies until the end of time."

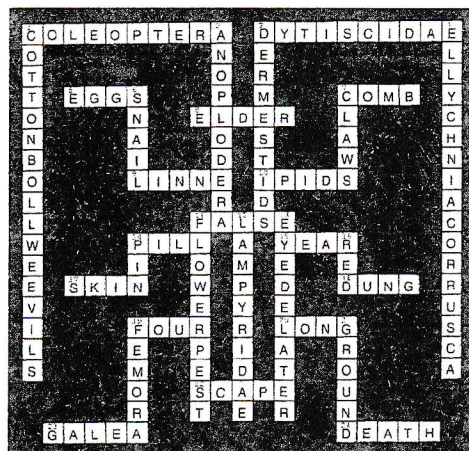
From "Entomologist in Hades," by William Morton Wheeler, author of Ants: Their Structure, Development and Behavior.

Insect Order Anagrams

Rearrange each of the following phrases to spell the name of an insect order.

- | | |
|-----------------|-------------------|
| 1) POUR TAR | 9) LOCATE ROPE |
| 2) NO OAT AD | 10) PEOPLE CART |
| 3) LIAR AT BAT | 11) PRIME HEAT |
| 4) ROAST PIE | 12) CRATE POEM |
| 5) DIRT APE | 13) PARROT ETHIC |
| 6) APPLE EDITOR | 14) PARTISAN HOPE |
| 7) THERAPY OMEN | 15) CARTOON RIDE |
| 8) TEEN UPROAR | 16) PARADE TERM |

Last Issue's Crossword Answers



Tentative MES 2002 Field Trip Schedule



Below is a tentative schedule for MES 2002 field excursions. Check our website for changes and updated information.

May 18. Shapleigh/Newfield (York County). This trip will occur on the Vernon Walker Wildlife Management Area on Route 11. Oak and pine forests are found here as well as streams, alder swamps, and a large pond. This gathering will begin at 9 am and signs will be posted. Contact Chuck Lubelczyk for more details at (207) 324-2849 or (207) 842-7142. A map of the area is provided on the IF&W website at www.state.me.us/ifw/wma/a4.htm.

June 16. East Waterford (Oxford County). For this trip, we will be collecting in the western Maine foothills, on Gail Everett's property along the Crooked River. Habitats include riparian, old fields (mostly dry), mixed forest, and even a bog. Gail's nine acres have something for everyone. Contact Gail by e-mail at capriolee@yahoo.com or at (207) 878-8183.

June 28-29. Fort Kent (Aroostook County). Details in May issue.

July 21. Machias (Washington County). This event is a joint meeting with the Acadian Entomological Society in Machias, Maine, on July 21-23 (Sunday-Tuesday). Tentative plans are for the July MES meeting and collecting trip to be held that Sunday, with the Society hosting a "mixer" Sunday evening for the joint meeting. A call for papers for this meeting has been announced. The deadline is May 31st. We are hoping to get as many members out for this one as we can. Contact Dick Dearborn or Andrei Alyokhin at andrei.alyokhin@umit.maine.edu or (207) 581-2977 for more information.

August. Wells (York County). Details in May issue.

September 14. Caratunk (Somerset County). Details in May issue.

October 14. Mt. Vernon (Kennebec County). Annual meeting. Details in May issue.

The Maine Entomologist is published quarterly by the Maine Entomological Society. Dues are \$10 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.



Maine Entomological Society
c/o Newsletter Editors
Chuck Lubelczyk & Laura Stone
25 Springhill Dr.
Springvale, ME 04083

Please visit our website at www.colby.edu/MES



2001

Charlene Donahue
Insect & Disease Laboratory
50 Hospital Street
Augusta, ME 04330