

Maritimes Butterfly Atlas



Photograph by Denis Doucet

Participant's Manual

April 2010

<http://accdc.com/butterflyatlas.html>

Maritimes Butterfly Atlas Supporters

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Introduction

Although butterflies are the most well known group of invertebrates, there are still significant gaps in our knowledge of this group in the Maritimes. That knowledge gap is of increasing concern given that many Maritime butterfly species are, or may become, species of conservation concern. The Maritimes Butterfly Atlas (MBA), the first comprehensive and systematic survey of butterflies in our region, will start to fill this knowledge gap. By harnessing the combined efforts of conservation scientists and interested naturalists, this project will dramatically improve our understanding of the numbers, distribution, and conservation status of butterflies in the Maritimes. It will help identify which are truly rare, and which are more common but have been overlooked in the past. The Atlas will also produce a snapshot of butterfly populations in the Maritimes today and a baseline dataset for the future. It could become increasingly valuable in the decades to come, as scientists examine the effects of climate change and other disturbances on the distribution and abundance of our native animal species.

The project, which will start in the spring of 2010, should continue for a minimum of 5 years. For the most part records will be submitted by naturalists like you, allowing anyone with an interest in butterflies, or natural history in general, to become a contributor to this important conservation effort. Data will be compiled in the Atlantic Canada Conservation Data Centre database. That database currently provides the foundation for conservation decisions throughout the region, and improvements will only make that foundation stronger. Results will also be uploaded regularly to this website, and over the course of the Atlas will be compiled into easily accessible distribution maps

and species synopsis pages showing the most up-to-date and complete information on all Maritime butterfly species available anywhere.

Specifically, the goals of the MBA are to

- Document the distribution of every butterfly species occurring in the Maritimes, establishing a baseline to which future survey efforts can be compared
- Refine the conservation status of Maritime butterfly species and identify those species truly at risk
- Make distribution maps and background information about Maritime butterflies available to the general public, the scientific community, and policy makers
- Educate and engage the public in discovery and protection of the Maritimes' natural heritage

Survey Instructions

What follows are specific instructions on how to participate in the MBA. Information is provided about how to select a survey area, what habitats to target in that area, how to prepare vouchers, how to fill out required field sheets, and how to submit data. This manual should be read carefully before any atlassing is completed. Should any questions arise do not hesitate to contact John Klymko, the Atlas director, at jklymko@mta.ca or 506-364-2660.

Training Workshops

As a participant you are encouraged to attend a MBA training workshop. Training workshops will be approximately three to four hours, and will include a discussion of

general butterfly biology and taxonomy, detailed instruction about how to participate in the Atlas, and, if possible, a hands-on demonstration of specimen capture and handling. Workshops will take place at several locations across the Maritimes in at least the first three years of this 5-year project. Check the MBA website for workshop times and dates.

How to select a survey area

While the MBA will accept records from anywhere in the Maritimes, atlasers are encouraged to adopt their own priority square. The MBA is using the same 10 km by 10 km squares that are used in the Maritimes Breeding Bird Atlas (<http://www.mba-aom.ca/english/index.html>). These are the heavy blue squares seen on a typical topographic map. Because there are not enough people to effectively survey all survey squares, a subset of squares has been selected and designated as priority squares. These squares are distributed throughout the three Maritime Provinces, so there is definitely a priority square near you.

The priority squares can be viewed on the MBA website at <http://www.accdc.com/butterflyatlas/Maps.html>. Once you have a few preferred survey squares in mind you are encouraged to contact the MBA (jklymko@mta.ca, 506-364-2660) for final selection so that overlap with other atlasers can be avoided.

When you have confirmed your survey square you can retrieve a printable topographic map from the Maritimes Breeding Bird Atlas' website (<http://www.mba-aom.ca/jsp/pdfdownload.jsp?lang=en>). Simply follow the instructions on the site; all

you need is your survey square number and Adobe Reader © (which you can download free of charge from the Bird Atlas webpage). If you don't have internet access contact the MBA (506-364-2660).

Selecting Survey Sites and General Survey Strategies

Once you have your survey square, you will need to select survey sites. The printable topographic maps have a lot of information on habitat type, so it is worthwhile to plan your trip with these in mind (remember that the information on the maps may be out of date for some areas that have experienced very recent logging or development). Habitats to target include forest openings (natural or man-made, including the margins of forest roads), forest margins, old fields, flower gardens, open bogs, and wetlands. To encounter the greatest butterfly diversity it is best to survey a variety of habitats within a given block.

Within each habitat there will be certain features that attract butterflies. Flowers are always an excellent place to find butterflies actively feeding (“nectaring”), so large flower patches are worth visiting. Some species, like the commas, don't frequent flowers but can be found “nectaring” at animal dung or rotting fruit. These species are attracted to banana peels and other fruits, which you may consider leaving as “bait” within your square. Puddles can also attract butterflies. Butterflies “puddle” to acquire salt and other minerals, and they can often be seen in large numbers “puddling” at damp spots on logging roads. Some collectors bring their own puddles by putting out a pan with salty

mud. These artificial watering holes are sometimes further enhanced with cut-out butterfly decoys!

Different butterfly species have different flight periods (the period during the year when adults are present). For example, the elfins are a spring species, with adults flying from late April to the end of June. Arctic Fritillary and Maritime Ringlet are only on the wing in late July and August. So in addition to visiting a variety of habitats, it is best to visit sites several times from late April until it gets cold in the fall.

And finally pick warm sunny days with little wind for your surveys. Butterflies are ectothermic (cold-blooded), so they will only fly when their surroundings are warm.

Species At Risk

Two species of butterfly occurring in the Maritimes are listed as at risk at either a federal or provincial level. Information on how to handle these two species is presented below.

Maritime Ringlet

This species is protected under Canada's Species at Risk Act and New Brunswick's Endangered Species Act. Without a permit it is illegal to capture or collect this species, or disturb its habitat. Maritime Ringlet is limited to saltmarshes of Chaleur Bay, with the largest population being in the Bathurst and Beresford area. Anyone who is interested in surveying saltmarshes on Chaleur Bay for the atlas should apply for a permit from Maureen Toner or Pascal Giasson at the New Brunswick Department of Natural

Resources Fish and Wildlife Branch (506-453-2440). Because there are existing monitoring programs, permits will generally not be given to visit the populations around Bathurst and Beresford. However atlassers are encouraged to pursue permits to survey elsewhere on Chaleur Bay. There is no fee for permit application, and in general they can be obtained quite rapidly. All specimens collected for the Atlas have to be deposited in the New Brunswick Museum (i.e. no specimens may be retained for personal collections).

Monarch

Monarch is listed as Special Concern under Canada's Species at Risk Act. This listing does not prohibit the capture or collection of this species. However, because it is considered a species at risk, atlassers are encouraged to photograph this species instead of collecting it when possible.

Vouchers

So that all sightings are verifiable, the occurrence of a particular species within a count square must be supported by a voucher. Vouchers can be a physical specimen or a close-up photograph. Because we are striving for the best quality and most defensible data possible, **sight records will not be accepted.**

We realize that some participants may decide not to collect butterflies, and we respect that decision. The majority of Maritime butterfly species can be readily identified through photos, so those not contributing specimens can still contribute significantly to the Atlas

effort. That said, there are some limitations inherent to photographs. Species in some of the more cryptic groups, like the azures and commas, cannot always be reliably distinguished with photographs, so some photos will go unidentified. Physical specimens provide material to expert taxonomists, and have the potential to contribute to future taxonomic studies. For example, the taxonomy of *Celastrina* is still poorly understood, and specimens collected during the Atlas may be used by researchers studying this genus to discover new species. Those with concerns about the impacts of collecting on local butterfly populations should read Dr. Robert M. Pyle's paper "The Beauty of Butterfly Nets" available online at [http://mbs.umf.maine.edu/Pyle%20-%20Butterfly%20nets%20\(Wings_Spr09\)%20web.pdf](http://mbs.umf.maine.edu/Pyle%20-%20Butterfly%20nets%20(Wings_Spr09)%20web.pdf) .

Road-killed butterflies also make suitable vouchers. Road-killed butterflies are (unfortunately) common, and the carcasses of larger species can even be spotted while driving. Treat a road-kill in the same manner you would treat a physical specimen, but indicate on the Voucher Data Card (as explained below) that the specimen was road-killed. Use the roadside habitat as the habitat for the specimen. To get a road-killed specimen into an envelope you may need to fold its wings. A dried out individual can be made supple by placing it in a container with a wet paper towel for a short period of time.

Photograph Vouchers

For the purposes of the Atlas we recommend catching your subjects before photographing them. While we are certainly happy to receive photos of well posed butterflies (they may even be shown on the webpage!), the quickest way to get a

photograph suitable for the Atlas is to transfer a net-caught specimen to a ziplock bag (for advice on netting butterflies see “Specimen Vouchers”). The butterfly can then be restrained long enough for a photo before it is released. These shots won’t make it to the cover of National Geographic, but they will provide the Atlas with the necessary information.

While digital photos can be sent to the Atlas via email, and the data from all forms can be input at the MBA website, a printed Voucher Data Card (as explained below) must be filled out as you collect each specimen. These Voucher Data Cards do not need to be mailed into the Atlas, though you are encouraged not to discard them should their data need to be revisited. Cards need to be filled out for each photographic voucher so that each one receives a unique MBA voucher number.

Information on how to submit digital or printed photographs is provided below in **Data Submission**.

Specimen Vouchers

Catching butterflies can at times be challenging and frustrating, but through continued practice one can become a much more efficient netter. Below are a few pointers about how to improve your skill:

- Be patient – if you don’t catch an individual on your first attempt, try again!

- Many territorial species will return to their perch when disturbed, so if you miss a butterfly it may return to the same perch (some will come back again and again so you get lots of chances)
- Remain inconspicuous – butterflies are easiest to catch if they are unaware of your presence
 - Avoid bright clothing
 - Don't let your shadow go over a perched butterfly
 - Move slowly when approaching a perched butterfly
- Keep your catch in your net!
 - When you catch a butterfly make sure it doesn't escape. By turning the net handle over you fold the net pouch over the rim, effectively closing the net and preventing escape

Once you have the butterfly in your net it then must be dispatched. This can be accomplished by either using a killing jar¹, a freezer, or by pinching its thorax.

Whichever technique is chosen, care must be taken to damage the butterfly as little as possible.

Transferring a butterfly to a killing jar is best accomplished in the net so as to avoid handling (and damaging) the specimen. Place your uncapped killing jar under your specimen until it drops in, then replace the lid. Once dead use tweezers to transfer the specimen into a glassine envelope. During transfer the wings should be folded behind the thorax.

¹ Instruction on making a killing jar will be given at training workshops.

Butterflies can be killed upon your return home by placing them in the freezer. This works best with summer caught specimens. Butterflies caught in early spring, especially species like Mourning Cloak that overwinter as adults, are tolerant of freezing. Live specimens can either be placed in the freezer already in glassine envelopes or in collecting containers such as small jars or film canisters. If specimens are brought home live each should be kept in its own container. Once specimens have been in the freezer for several days they can be removed. Any frozen in collecting jars can be placed in envelopes once they have thawed.

Butterflies can also be killed quickly by pinching their thoraxes. This technique takes a little practice and can be difficult with smaller species. With the butterfly still in the net place your thumb and forefinger on either side of its thorax and give it a squeeze. The pinch needs to be strong enough to kill it, but not so strong as to damage the body. Once dead remove the butterfly from the net with your tweezers and place it in a small glassine envelope.

Site Visit Form

Every time you visit a site you will need to fill out a Site Visit Form. If you return to the same site regularly (as recommended above) you need only fill out the sheet in detail (*i.e.*, location specifics, habitat *etc.*) the first time you visit. During subsequent visits simply record the Site Name, Site Code, Date, Observers, and Specimen Information fields. Even if you visit the same site twice in the same day you should fill out two Site Visit Forms. Site Visit Forms are available on the MBA website. If you do not have

access to the internet or a printer contact John Klymko (jklymko@mta.ca, 506-364-2660) for printed copies. Brief instructions on how to fill out a Site Visit Form are provided below, along with a sample form.

If you are submitting a casual observation not associated with a dedicated sight visit you may wish to simply submit a Voucher Data Card. Instructions for that form are provided below.

Site Name: Give the site a recognizable name or use the commonly used name of the area (if there is one) from the map. Use the same name for all future visits to the site. Try to reference mapped landmarks (*e.g.*, Bells Pond) in the site name if possible.

Site Code: Assign a unique six digit code to each site. The first three digits are your initials, the second three a number starting with 001. For the fictional Mary Elizabeth Rogers the site number one (1) would be MER 001, site number two (2) MER002 *etc.* Always use the same 6 digit code for a particular sample site. In this context a “site” is a pretty general term. It could be a single habitat such as a meadow or a combination of habitats such as a meadow and the adjacent woodlot. Use your discretion when defining a site, and define it in the Habitat Notes.


Survey Square #:

Every 10 km by 10 km square has a unique number. It is indicated on your printable topographic map.

Town: The town where your site is located or the nearest town to the site. If the site is near a town give a distance and bearing from the town (*e.g.*, 2.5 km NNE of Mount Pleasant, NS).

County: The county in which your site is located.

Park or Protected Area Name: Include the name of the area if applicable. Remember that special collecting permits may be required to collect in designated parks and protected areas.

Maritimes Butterfly Atlas 	Site Name (Use the same name for each visit)		Site Location (give directions or attach a photocopy of a map and mark the site location)									
	Site Code (your 3 initials & 3 digit #, e.g. ABC001)											
	Site Visit Form		Survey square # (e.g. 19EP50)		Latitude dec.degrees		Longitude dec.degrees					
	Return To: John Klymko Atlantic Canada Conservation Data Centre Box 6416, Sackville NB E4L 1G6 jklymko@mta.ca (506) 364-2660		Town		Observer(s)							
	ID Codes		County		Province		Cloudcover <input type="checkbox"/> <10 <input type="checkbox"/> 10-50% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%					
	S = Specimen R = Road-killed P = Photograph or Video		Park or Protected Area Name		Wind <input type="checkbox"/> Still <input type="checkbox"/> Light <input type="checkbox"/> Moderate <input type="checkbox"/> Strong							
	Habitat Codes		Landowner (if known)		Temperature _____ °C		Date (Format: 24 May 2010)		Start Time		End Time	
	Old or Regenerating Fields <input type="checkbox"/> Barren (little vegetation) <input type="checkbox"/> Grass/Herbs (no shrubs) <input type="checkbox"/> Few Shrubs <input type="checkbox"/> Shrubland (shrubs > grass) <input type="checkbox"/> Brush-hogged Cuts/Year ____ Last Cut: ____		Agricultural		Species		# of Vouchers		# Observed		ID Code	
	Other Openings <input type="checkbox"/> Active Crop Land <input type="checkbox"/> Pasture or Hayfield <input type="checkbox"/> Orchard or Vineyard <input type="checkbox"/> Power Line Right-of-Way <input type="checkbox"/> Coastal Barren <input type="checkbox"/> Rock Outcrop		Forest Gaps									
	Forest Type <input type="checkbox"/> Natural (blowdown, etc.) <input type="checkbox"/> Forestry (log landing, etc.) <input type="checkbox"/> Regenerating Area <input type="checkbox"/> Woods Road or Trail <input type="checkbox"/> Ski Slope <input type="checkbox"/> Deciduous Dominated <input type="checkbox"/> Coniferous Dominated <input type="checkbox"/> Mixed Woods (<30% Dom.)		Wetlands									
Road/Roadside <input type="checkbox"/> Sedge/Grass <input type="checkbox"/> Cattail/Reed <input type="checkbox"/> Shrub <input type="checkbox"/> Beaver Pond <input type="checkbox"/> Wooded <input type="checkbox"/> Deciduous Dominated <input type="checkbox"/> Coniferous Dominated <input type="checkbox"/> Mixed (<30% Dominated) <input type="checkbox"/> Bog/Fen		Road/Roadside										
<input type="checkbox"/> Gravel <input type="checkbox"/> Paved Residential <input type="checkbox"/> Lawn <input type="checkbox"/> Garden <input type="checkbox"/> Urban Shoreline <input type="checkbox"/> Natural Lake (>5 ha) <input type="checkbox"/> Natural Pond (<5 ha) <input type="checkbox"/> Reservoir <input type="checkbox"/> Ocean River or Stream <input type="checkbox"/> River (>10 feet wide) <input type="checkbox"/> Stream (<10 feet wide)		Other (use Habitat Description)										
Habitat Description and Notes (Dominant vegetation, plants flowering <i>etc.</i>)												

Landowner: Provide landowner name if that is known.

Site Location: Describe the site location as precisely as possible using permanent landmarks and roads (*e.g.*, 1.8 km NNE jct. Hwy 2 & Brookside Rd, off north side of Brookside Rd). Avoid using civic addresses as these may change over time.

Latitude and Longitude: If you have a GPS unit provide the Latitude and Longitude of your site in decimal degrees (*e.g.*, 45.89117N, 64.43814W). Be sure to have the projection set to NAD83 (contact John Klymko [jklymko@mta.ca, 506-364-2660] if you need help setting this). If you use Google Earth or topographic maps to produce your Lat/Longs, please indicate the source on the sheet.

Observer(s): List all people surveying.

Cloud Cover: Estimate the percent cloud cover and check the appropriate box.

Wind: Estimate the wind intensity and check the appropriate box.

Temperature: Provide or estimate the temperature in degrees Celsius.

Date: Provide the date in the format indicated.

Start Time and End Time: The time you started and finished surveying (The 24 hour format is preferred [13:56, 20:03, *etc.*]).

Species: If you know the common or Latin name of the species you have vouchers for enter them here. If you don't that is fine, just leave it blank; all submissions will be verified by a butterfly expert.

of Vouchers: Record the number of individuals you have collected (or photographed) of each species.

Observed: Provide an estimate of the number of individuals present at the site for each species vouchered. If you aren't sure if all the similar looking butterflies you are seeing are the same species, leave it blank.

ID Code: Indicate if the voucher is a specimen, photograph, or road-killed individual using the ID Codes on the left side of the Site Visit Form.

Voucher #: Enter the voucher number from each voucher (specimen or photograph). All physical specimens will be associated with a preprinted Voucher Data Card which has a unique voucher number printed on it. Each digital photo will have a temporary voucher number assigned by the participant (see **Voucher Data Card**).



Habitat Codes: Mark the boxes that best describe the habitat of your site (or in the case of a road-killed specimen the habitat adjacent to the road). You may need to check more than one box. If no description matches your site check “Other” and describe the habitat in the **Habitat Description and Notes** box.

Habitat Description: Provide more detail in this section about the dominant plant species found on the site, particularly plants associated with observed butterfly activity (nectaring, oviposition [egg laying], and larval feeding). While identifying plant species onsite isn't critical, it does improve what can be said about butterfly habitat preference. If there are dominant plants you are unfamiliar with you can provide photos to John Klymko (jklymko@mta.ca, 506-364-2660). The Atlantic Canada Conservation Data Centre staff has a wealth of plant knowledge and should be able to identify just about anything. Feel free to include any other information you feel might be important (human disturbance, adjacent habitats, *etc.*).

Voucher Data Card

Many of the fields on the Voucher Data Card are identical to those on the Site Visit Form. This was done to allow the Voucher Data Card to accompany vouchers from more casual encounters where a Site Visit Form is not merited. For example, if you collect a single road-killed specimen on your walk to work you need only fill out a Voucher Data Card. For vouchers associated with a thorough site visit where a Site Visit Form was filled out, many of the repeated fields can be left blank on the Voucher Data Card. The fields shaded grey are required, even if you complete a Site Visit Form.

The only field unique to the Voucher Data Card is “voucher condition”. This is an assessment of the amount of wear on a specimen’s wings. Upon emergence from the chrysalis a butterfly is in “mint’ condition, with a full complement of wing scales. Over time scales wear off and wing margins become frayed, sometimes to the point where

 Maritimes Butterfly Atlas – Voucher Data Card 			
Observer:		MBA Voucher #:	
Confirmer:		Site Name:	Province:
Date: (Format: 24 May 2010)	Site Code:	Site Location:	MBA Square #:
Common Name:			
Scientific Name:			
Voucher Type: <input type="checkbox"/> Specimen <input type="checkbox"/> Photo <input type="checkbox"/> Roadkill		Lat:	Long:
# of Vouchers:	# Observed:	RETURN TO	
Voucher condition (F,S,W,E):		John Klymko	
F = Fresh S = Slightly Worn W = Worn E = Extreme		Atlantic Canada Conservation Data Centre	
		Box 6416	
		Sackville NB E4L 1G6	
		jklymko@mta.ca (506) 364-2660	

HABITAT			
Old or Regenerating Fields <input type="checkbox"/> Barren (little vegetation) <input type="checkbox"/> Grass/Herbs (no shrubs) <input type="checkbox"/> Few Shrubs <input type="checkbox"/> Shrubland (more shrubs than grass) <input type="checkbox"/> Brush-hogged Cuts/Year ____ Last Cut: ____ Agricultural <input type="checkbox"/> Active Crop Land <input type="checkbox"/> Pasture or Hayfield <input type="checkbox"/> Orchard or Vineyard Other Openings <input type="checkbox"/> Power Line Right-of-Way <input type="checkbox"/> Rock Outcrop <input type="checkbox"/> Coastal Barren	Forest Gaps <input type="checkbox"/> Natural (blowdown, etc.) <input type="checkbox"/> Forestry (log landing, etc.) <input type="checkbox"/> Regenerating Area <input type="checkbox"/> Woods Road or Trail <input type="checkbox"/> Ski Slope Forest Type <input type="checkbox"/> Deciduous Dominated <input type="checkbox"/> Coniferous Dominated <input type="checkbox"/> Mixed Woods	Wetlands <input type="checkbox"/> Sedge/Grass <input type="checkbox"/> Cattail/Reed <input type="checkbox"/> Shrub <input type="checkbox"/> Beaver Pond <input type="checkbox"/> Wooded <input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed <input type="checkbox"/> Bog/Fen	Shoreline <input type="checkbox"/> Natural Lake (>5 ha) <input type="checkbox"/> Natural Pond (<5 ha) <input type="checkbox"/> Reservoir <input type="checkbox"/> Ocean River or Stream <input type="checkbox"/> River (>10 feet wide) <input type="checkbox"/> Stream (<10 feet wide)
	Road/Roadside <input type="checkbox"/> Gravel <input type="checkbox"/> Paved	Residential <input type="checkbox"/> Lawn <input type="checkbox"/> Garden <input type="checkbox"/> Urban	<input type="checkbox"/> Other (please describe) _____ _____
NECTAR PLANT(S)		HOST PLANT(S)	
NOTES			

the specimen becomes difficult to identify and you wonder just how it is still able to fly. Assess the condition of your specimens to the best of your ability, using one of the four choices available on the Voucher Data Card.

A Voucher Data Card must accompany every specimen and photographic voucher.

Instructions for both type of voucher is given below.

Specimens

For physical specimens use preprinted Voucher Data Cards supplied by the Atlas. Each preprinted card has a unique number, the voucher number, which must be entered on the

Site Visit Form. A supply of these cards and glassine envelopes should be taken into the field with you during every site visit, and they should be filled out as you collect specimens and take photographs. You will receive a supply of cards when you start atlassing. Should you run out of Voucher Data Cards, or suspect you will soon, contact John Klymko (jklymko@mta.ca, 506-364-2660) for a fresh supply.

Photographs

For printed photographs use preprinted Voucher Data Cards as though your photos were physical specimens.

For digital photographs use the online data entry portal. Because you are not using a preprinted Voucher Data Card, assign a temporary voucher number to each butterfly photographed using the date and a unique three digit number (1May2010-001, 1May2010-002, 1May2010-003 *etc*). A voucher number will be assigned at a later date in the MBA database. If you submit photos from multiple sites for a single date be sure to carry over your unique three digit numbers to the next site (*e.g.* number your specimens from site one 1May2010-001, 1May2010-002, and from site two 1May2010-003, 1May2010-004).

Specimen Storage

Physical specimens should be stored with their Voucher Data Cards in a dry safe place. To allow specimens to properly dry they should be stored in an open container for approximately 7-10 days. Once dry, specimens should be stored in a sealed container

(Tupperware works well). Dermestid beetles pose a threat to any insect collection as their larvae can rapidly turn your specimens into dust. To prevent dermestid beetle damage add mothballs to your storage container or keep it in the freezer.

Data Submission

Information from Site Visit Forms can be submitted electronically at the Maritimes Butterfly Atlas website, or mailed to John Klymko at the address below. Voucher Data Cards can also be entered through the same online portal, but a hard copy must also be submitted with any physical specimens.

Digital photos should be submitted as an email to John Klymko (jklymko@mta.ca) at the time of electronically submitting your observations. Please use “MBA Photo” as the email subject. Digital photos should be submitted as JPGs. Use the temporary voucher number (as explained in the **Voucher Data Card** section) to label each photograph (1May2010-001.jpg, 1May2010-002.jpg, 1May2010-003.jpg *etc*). If you take multiple shots of a single butterfly, label them *a, b, c, etc* (1May2010-001a.jpg, 1May2010-002b.jpg, 1May2010-003c.jpg)

In future the website will be able to accept photos. Directions will be available on the website once this is available.

All forms can also be sent in as hard copies. Photographic vouchers submitted in hard copy should be printed and then trimmed so they fit into the glassine envelope. Photos

should be placed in an envelope along with the corresponding Voucher Data Card. Please realize that because of the large volume of photos we will receive we will not be able to return any prints.

To avoid damage during shipping, specimens should be sent in a well padded box.

Putting specimens in a small container, then placing that container in a larger box packed with shipping peanuts (stryrofoam) or similar packing material will ensure best results.

Specimens and forms sent as hard copies should be sent to:

John Klymko
Atlantic Canada Conservation Data Centre
PO Box 6416
Sackville, NB
E4L 1G6