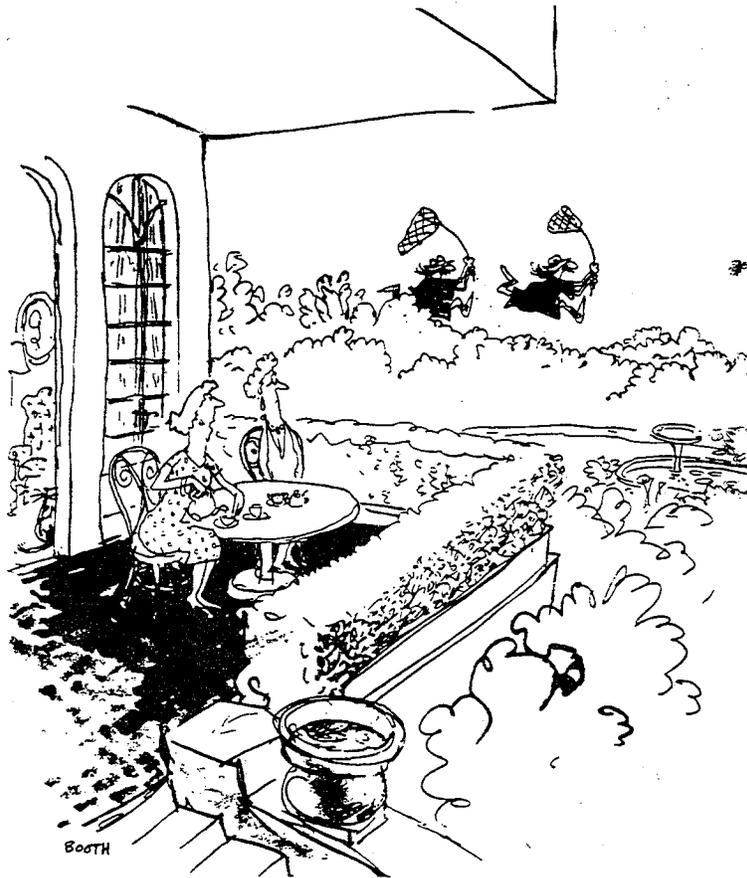


MASSACHUSETTS
BUTTERFLIES
No. 6

August 1995



"The Armentrout brothers never achieved much success in the business world, but they have caught lots of butterflies."

'MASSACHUSETTS BUTTERFLIES" is a publication of the Massachusetts Butterfly Club, a chapter of the North American Butterfly Association. Membership in NABA-MBC brings you "American Butterflies," "Massachusetts Butterflies," "The Anglewing," and all of the benefits of the association and club, including field trips and meetings. Regular annual dues are \$25.00. National office : NABA 4 Delaware Road , Morristown, NJ 07960 [201-285-0907]. Local address : P.O.Box 211 Foxboro, MA 02035-0211. Separate subscription to "Massachusetts Butterflies" for non-members of NABA-MBC is \$6.00. Address subscription inquiries to Lyn Lovell, Treasurer, NABA-MBC, 198 Purchase St. Milford, MA 01757 [508-474-7327].

OFFICERS OF NABA-MASSACHUSETTS BUTTERFLY CLUB

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"MASSACHUSETTS BUTTERFLIES" STAFF

EDITOR-BRIAN CASSIE
PRODUCTION MANAGER-GEORGE CASSIE

AMHERST MEETING OF NABA-MBC

The first western Massachusetts meeting of the MA Butterfly Club was held at the Hitchcock Center for the Environment on Monday, May 1. Thirty-two persons turned out to hear an introduction to the MBC and its recent affiliation with NABA, as presented by MBC president Mark Fairbrother. Also discussed was a butterfly census of conservation lands in Amherst, starting in 1995 and running for an as yet undetermined length of time, perhaps two to three years. Twenty volunteers have signed up so far [contact Mark Fairbrother @ 413-367-2695 or the Hitchcock Center for more details]. The evening concluded with a slide show review of local species and a question and answer discussion. Thanks to the staff of the Hitchcock Center for hosting the meeting and to Jeff Boettner for providing slides.

FALL NABA-MBC MEETING

CAPE ANN BUTTERFLY TOUR AND NABA-MBC MEETING

Saturday September 16 [Rain date Sunday September 17]

This is a great opportunity to see fall Monarchs at the best migration spot in Massachusetts. In addition, there may be Question Marks, Common Buckeyes, Gray Hairstreaks, American and Painted Ladies, and other interesting butterflies. Tour leaders Claudia Tibbetts and Doug Savich know Cape Ann inside-out. This is a happening, folks. Don't miss it!

We will meet at 10:00 a.m. and car pool to the butterfly sites. Please bring a picnic lunch. After enjoying Cape Ann's butterflies, we will have lunch and the meeting, with time remaining in the afternoon for further exploration in you wish.

One main point of discussion at the meeting will be the direction of the club, so please bring along your ideas for programs, activities, policies, etc.

Please call Vice-President Madeline Champagne if you have any questions [508-543-3380]. Also, if the weather is dubious, call her after 7:30 a.m. on Saturday morning for a trip/meeting update.

DIRECTIONS

Take Route 128 north to Gloucester. Staying on Route 128 north, at the first Gloucester rotary follow the signs to 128 North-Rockport. At the second Gloucester rotary [1+ miles] take the second off exit. This road will end shortly at a traffic light, where you will turn left. This is Eastern Avenue, Route 127. Go 0.2 miles to Para Research, at 85 Eastern Ave. It is a brick building. Park in the lot in the back.

WELCOME TO OUR NEW MEMBERS

We now have 94 NABA-MBC members, as well as 13 "Massachusetts Butterflies" subscribers. Thank you for your financial support. We welcome your presence at meetings and field trips and invite you to submit articles or comments for this magazine. Please contribute and make this the best NABA chapter on the planet!

HOW MANY SPECIES OF AZURES IN MASSACHUSETTS, OR WILL THE REAL SPRING AZURE PLEASE OPEN YOUR WINGS ?

by Harry Pavulaan

After conducting several years of research on the North American Spring Azure complex with Dr's. David Wright and Gordon Pratt, we are finally beginning to develop a picture of the true relationships of the various entities in the Northeast, though it will be some time before we finally crystallize our concepts. Our conclusions, still pending, are the result of a combination of laboratory work, field work, rearing studies, and examination of specimens in various institutional and private collections. The examination of specimens was the key in determining the true range of each entity, as identification in the field may be a virtual impossibility for the two earliest entities. In a nutshell, there are at least three species of azures in Massachusetts, likely a fourth, plus one very possible fifth candidate. I hesitate in using Latin species-level names for some of the entities, rather using their current form names, as we are still trying to untangle a nightmare of taxonomic names assigned by earlier authors. Common names are from an article by David Wright in "American Butterflies." A brief summary follows:

1. Northern Azure (*Celastrina lucia*) - This is the northernmost representative of the genus. It resides primarily in Canada but ranges from Alaska to northern New England. Isolated population clusters inhabit the New Jersey and Long Island pine barrens. This entity has the classic heavily-marked undersides (popularly referred to as forms lucia, marginata, and violacea) quite evident in the field and familiar to most of us from popular field guides. A surprising finding we have made is that, contrary to popular belief, the common April "Spring Azure" in most of Massachusetts is NOT the Northern Azure, which is primarily a denizen of the Berkshire region (but may also be found along the northern border of Massachusetts). The predominant April insect in Massachusetts is Edwards' Azure, which follows. I would like to stress here that the undersides of the Northern and (Appalachian) Edwards' Azures are virtually identical, with exactly the same range of variation, and unfortunately cannot be used to visually separate the species in the field. Habitat (woodland), hosts (blueberries), and

flight (April-May) are also virtually identical between this species and Edwards' Azure. We have reason to believe that the Northern Azure may occur on Cape Cod and the large islands.

2. Edwards' Azure (= violacea Edwards) - This is an Appalachian endemic which ranges northeast into southern New England. This is the predominant "Spring Azure" throughout most of Massachusetts, emerging in April. The males have a unique scale character that differentiates the species from all other azure species, including the Northern Azure. Referring to the previous discussion, the adults cannot be separated from the Northern Azure in the field, as the range of variation on the undersides is identical to the Northern Azure. After examination of hundreds of specimens, we have found a consistent unique scale character on the upper sides, which differentiates only the males of the Northern Azure from the Appalachian Edwards' Azure (the females are virtually impossible to tell apart). As only the males can be told apart, one would need to very carefully examine the upraised of a male in-hand; they almost never rest with wings open. Male Edwards' Azures appear to have a whitish film on the violet upraised forewings, while male Northern Azures have a metallic purplish-blue look.

3. Cherry Gall Azure (= Spring Azure Celastrina ladon) - This is the late spring flight, emerging in May. We are currently trying to determine if this entity represents a new species, or a host-specific population of the true southern Spring Azure. If this is the case, as evidence seems to be pointing to, then it will simply be referred to as the Spring Azure in Massachusetts. Adults are virtually identical to those of the widespread southeastern Spring Azure, but the larvae feed primarily on leaf galls of Black Cherry. In the Southeast, related populations feed on cherry flower buds (in the mountains) and various hollies (on the coastal plain). It can be differentiated from the Northern and Edwards' Azures by a whitish-looking underside, as opposed to the heavily-marked appearance of the April emergers. I must caution readers, though, that marginata-like and lucia-like forms also occur in the Cherry Gall Azure, though rarely, but the upper sides of the males can be differentiated, at least from Edwards' Azure. Male upper sides are velvety light violet-blue. The outer wing margins of the Cherry Gall Azure are generally white, while the outer wing margins of the Northern and Edwards' Azures are strongly checkered with alternating black and white. Rearing studies have been

inconclusive. Some laboratory experiments indicate that this butterfly is univoltine (single brooded), while other experiments have produced adults identical to the Summer Azure.

4. Summer Azure (Celastrina neglecta) - This insect emerges in July and is the summer representative of the genus in Massachusetts. Rearing studies have shown that the Summer Azure does not come from either the Northern or Edwards' Azures. Electrophoretic research has confirmed this. However, there is still some doubt about it being a true univoltine summer insect in New England. Rearing and genetic studies have produced inconclusive results and may indicate a connection to the Cherry Gall Azure. In this case, we would have a double-brooded "Spring Azure", with the Summer Azure being the summer brood. The females of the Summer Azure lay eggs on a wide variety of hosts, but seem to prefer Meadowsweet in Rhode Island. On Long Island, they prefer shrubby, July-blooming dogwoods.

5. Appalachian Azure (Celastrina neglectamajor) - I have included this only as a candidate member of the Massachusetts fauna, as it ranges almost to the Massachusetts state line in eastern New York, and reportedly, though not confirmed, in extreme western Connecticut.

The host is Black Cohosh, which grows rarely in the mountainous region of extreme southeastern Massachusetts. The butterfly is very closely associated with the host plant and is generally found only about stands of the plant in May. The adults are very elusive, but are quite large compared to the other azures. The best way to find the species is to examine the unfurling flower buds of the hosts in May. These look like tiny green (peeled) corn cobs, rising on stems above the fern-like plant. If the young "cobs" have tiny greenish-white eggs tucked among the buds, then you will have found the Appalachian Azure and this species will be confirmed as a member of the genus occurring in Massachusetts. The challenge is offered : who will be the first to find the Appalachian Azure in Massachusetts ?

BUTTERFLIES THROUGH BINOCULARS

by George Lewis

There is no place like Weir Hill in Sudbury for a quick exercise - a few ups and downs, at least. And you do get to check the Sudbury River at Sherman's Bridge (very low on July 3, 1995) and the bank of Ebony Spleenworts on Weir Hill Road (doing unusually well).

In late afternoon I parked at the foot of the hill, took my binoculars, and checked out all the nearby bluebird boxes. No action that I could see, but I did spot a very handsome specimen of Tall Meadow Rue that I determined to photograph on the return trip.

So, I started up the west side trail - slowly, as I thought of the Huntington Ravine Trail on Mount Washington ! Once on top, it was very quiet and pleasant, no deer flies and few mosquitoes. The wood chip path offered a perfect walking surface. Up ahead I saw a butterfly flying zig-zag-zig rapidly in a spot of sunlight. Orange and brown, smallish. When I was only six or eight feet away, it lit on a wood chip and boldly spread out its wings. An anglewing, definitely, and just beautiful.

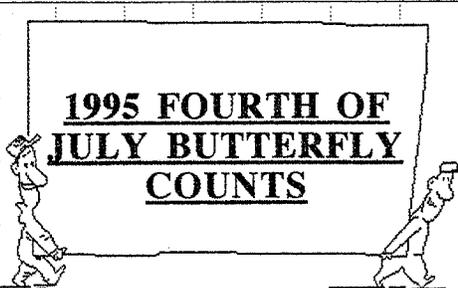
Suddenly, I realized that I had my binoculars. I could check out the butterfly, like the book suggests. But I was too close, so I had to back off into the underbrush, keeping an eye on my friend. The butterfly calmly opened and closed its wings, keeping them perpendicular to the sun's rays. I focused in on it and determined to my satisfaction that it was an Eastern Comma. As I watched the butterfly took off, performed a wildly erratic flight into the shady forest, then returned to the same spot of sunlight and wood chip.

You can't stand still too long so eventually I walked on, down the east side of the river, where I checked everything out, including the remarkable flow of water out of the cistern or whatever it is at the bottom of the slope. A kayaker glided by, oblivious to me.

On my return trip I slowed down as I approached the site of the earlier encounter. Just as I passed the spot of sunshine, which had shifted a little, zig-zag, flit, flit, the butterfly dropped down and landed on a wood chip and slowly opened and closed its wings.

Too much ! What an unexpected treat. And the binoculars added a very special dimension. Better take them every time.

A - NORTHERN BERKSHIRE COUNTY
 B - CENTRAL BERKSHIRE COUNTY
 C - SOUTHERN BERKSHIRE COUNTY
 D - CENTRAL FRANKLIN COUNTY
 E - LOWER PIONEER VALLEY
 F - CONCORD
 G - FOXBORO
 H - BRISTOL COUNTY



SPECIES	A	B	C	D	E	F	G	H
Black Swallowtail			3	5				
Eastern Tiger Swallowtail		5	3	10	2	13	7	
Canadian Tiger Swallowtail	71							
Spicebush Swallowtail		2		19			1	10
Mustard White		21						
Cabbage White	71	99	11	43	16	133	138	2
Clouded Sulphur	42	51	56	57	5	78	80	3
Orange Sulphur	5	22	13	18		13	40	1
Harvester	3							
American Copper		7	1	33	12	55	314	11
Bog Copper				781		20	26	
Bronze Copper						1		
Coral Hairstreak	6	4		2	5	6	8	1
Acadian Hairstreak	11	1	1		4	1	6	14
Edwards' Hairstreak							19	
Banded Hairstreak	2	5		2		1		
Striped Hairstreak	1	5		1	1	2	1	
Gray Hairstreak	2				1	3	9	
White-M Hairstreak								1
Eastern Tailed-Blue	1	9	3	27	13	69	84	2
"Summer" Azure	18	5	8	3		4	12	3
Variegated Fritillary					1			
Great Spangled Fritillary	44	32	12	32	3	27	30	14
Aphrodite Fritillary	2	6	6			5	8	
Atlantis Fritillary	95	133						
Silver-bordered Fritillary				5	2		3	
Meadow Fritillary	30		1	10				
Harris' Checkerspot	1							
Pearl Crescent	1		212	4	57	10	2	
Baltimore Checkerspot		7		7		2	151	4
Question Mark	1			1	1	6	10	1
Eastern Comma	17		2	3	9	7	4	
Compton Tortoiseshell	1	1				1	2	

SPECIES	A	B	C	D	E	F	G	H
Mourning Cloak	11	4		3	2	10	16	10
Red Admiral		3	2	3	2	1	4	1
American Lady	10	3	1	5	3	4	31	1
Painted Lady	3	1	2		1	1	6	1
Red-spotted Purple	87	11	2	1		1		
White Admiral	76	2		4				
Viceroy	2	4	3	8	3	4	8	
Hackberry Emperor					3			
Northern Pearly Eye	43	33		2		1	2	
Eyed Brown		8	24	27		16	5	1
Appalachian Brown		3	2	10		12	4	2
Little Wood Satyr	2			1	14	69	23	2
Common Ringlet	22			2		3		
Common Wood Nymph	11	99	409	3	16	51	214	23
Monarch	52	51	56	46	10	43	46	2
Silver-spotted Skipper	16	9	65	107	28	17	11	5
Hoary Edge					5	5	1	
Southern Cloudywing				4			1	
Northern Cloudywing		1		1		1	1	
Horace's Duskywing							2	2
Wild Indigo Duskywing					7		1	1
Common Sootywing				1	13	1	1	
Least Skipper	3	2	2	6	1	2	6	1
European Skipper	524	90	2	190		39	254	2
Peck's Skipper	20	104	1					
Tawny-edged Skipper					1	16	3	
Crossline Skipper		3		9	1	4	17	
Long Dash	9	1		1		2	3	
Northern Broken Dash	2	2	1	12	14	8	8	
Little Glassywing	3	4	1	5	6	9	22	1
Delaware Skipper	1	16	2	50	6	28	71	2
Mulberry Wing		1	32		13	35	18	
Hobomok Skipper	15			1				
Broad-winged Skipper			4		1	1		1
Black Dash	3		5	18	5	14	5	
Dun Skipper	21	44	103	23		11	20	2
Common Roadside Skipper	1							
Total # of Species	43	43	35	46	39	50	52	30
Total # of Individuals	1362	919	1051	1606	342	866	1764	132
Total # of Participants	6	8	6	13	4	18	22	3
Total # of Party-hours	29	22.5	15.75	30.5	6.3	24.5	54	4
Count Date	7-12	7-16	7-21	7-8	7-15	7-8	7-9	7-16

FOURTH OF JULY COUNT COMMENTS

Northern Berkshire County : Nectar sources good despite dry weather leading up to count day. - Mark Fairbrother, compiler

Southern Berkshire County : Season warmer and drier than normal; most notable butterflies were four Broad-winged Skippers, probably only the second county record. - Rene Laubach, compiler

Central Franklin County : A large thunderstorm crossed the area at midday, disturbing three of the parties for an hour or so each. The number of Bog Coppers probably established a new national high. - Mark Fairbrother, compiler

Lower Pioneer Valley [Springfield] : An albino American Copper was seen and photographed in Karen Parker's garden. - Roger Pease, compiler

Concord : The total number of species [50] established a count record. New for the count was Compton Tortoiseshell. Total numbers were low and probably related to the cloudy conditions. - Richard Walton, compiler

Foxboro : White-M Hairstreak, Northern Pearly Eye, and Common Sootywing were new for the count. The hairstreak is a genuine rarity; we had been waiting for the other two. - Brian Cassie, compiler

Bristol County : The count timing was in-between broods of several things. For example, there were no Pearl Crescents, usually the commonest species on the count. Two weeks later they were out in droves..

EDITOR'S NOTE : There were approximately 20% fewer butterflies per party-hour in 1995 compared with 1994. No wonder some counters, including myself, were complaining. Butterfly numbers fluctuate from year to year, depending on many factors. Let's hope that 1996 is a banner year for all butterflies, April to October !

SOME MBC FIELD TRIP REPORTS

MAY 27 - FOXBORO AND EASTON

Many of the participants, including the two under ten years old, saw their first Juniper Hairstreaks and Tawny-edged Skippers. Also found were numerous larvae of Baltimore and Harris' Checkerspots and European Skippers. Brian Cassie - leader.

JUNE 10 - WESTERN MASSACHUSETTS

Canadian Tiger Swallowtails and ten Arctic Skippers were features of this joint walk of the MBC and the Athol Bird & Nature Club. Mark Fairbrother - leader.

JUNE 18 - HOLDEN

No one finds the immature stages of butterflies like Tom Dodd. Tom wanted to take a shot at finding all four life stages of the uncommon Harris' Checkerspot on one day - on this trip. It took him all of fifteen minutes !! Total : 500 eggs, 75 larvae, 5 pupae, 200 adults.

JULY 4 - EASTERN FRANKLIN COUNTY

As reported in the Athol Daily News, trip participants visited grasslands, bogs, powerlines, and fields and found some fascinating plants, birds, dragonflies, and oh yes, butterflies, including Bog Copper and Southern Cloudywing. Mark Fairbrother - leader.

WHY I ALWAYS KEEP A NET HANDY !

by

MARK FAIRBROTHER,
KEEPER OF THE PEACE

Last night at 3:00 a.m., I got a burglar alarm from my workplace. Responded with the local police. After brief chase, apprehended culprit in corridor by use of butterfly net. Escorted outside of building and released one unidentified small brown bat. [Good work, Mark !]

1995 SIGHTINGS

Painted Lady - This spring, Massachusetts had its earliest recorded flight of Painted Ladies, with numbers arriving in various eastern Mass. localities on April 20. Remarkably, this is exactly the date on which the species arrived in large numbers in southern New Jersey, indicating a tremendous front moving west to east. The editor witnessed a Painted Lady migration across a wide front in eastern New York state on May 12, 1992, with all the butterflies flying in an easterly direction.

Sachem - Harry Pavulaan, our intrepid reporter from Virginia, wrote in July to say that very large numbers of Sachems were on the wing. In early July, Paul Miliotis and Allen Keith discovered female Sachems at separate localities on Martha's Vineyard. Except for a reported New Hampshire specimen, these were the first New England records for the butterfly until another female was sighted at World's End Reservation in Hingham in early August. Please be on the lookout for this distinctive, rather large skipper, especially coastally and in the Connecticut Valley. This may be your best chance ever to see the Sachem in Massachusetts. We would love to see a photograph !

Red-banded Hairstreak - This beautiful butterfly is apparently spreading northward and while it has not yet been found in the Commonwealth, it just missed on July 4, when Harry Pavulaan found one in northeastern Rhode Island. This hairstreak is inordinately fond of the flowers of the Dwarf, or Winged Sumac, the last sumac to blossom. It is definitely worth looking for !

American Snout - Doug Savich and Claudia Tibbetts found one in North Gloucester on July 30. Keep an eye out !

Hackberry Emperor - Roger Pease discovered a perfectly fresh Hackberry Emperor roosting under a leaf at Forest Park, Springfield on August 20, no doubt part of a second brood. This is the first time Roger has seen evidence of a second flight at the species' Springfield stronghold.

**ADDITIONS AND CORRECTIONS TO
SEASON SUMMARY - MA BUTTERFLIES
#5**

ADDITION

Arctic Skipper June 13 Adams S.Blanchard

CORRECTIONS

April 11 Compton Tortoiseshell and 3 Mourning Cloaks at Belmont were attributed to Andrew McGinnis and "JS". This is Jill Smith, not Jackie Sones.

Banded Hairstreak @ Gill on July 9 was seen by Mark Fairbrother, not Diane Potter.

Harvester @ Rowe on June 15 should be @ Peru on August 1.

Red-Spotted Purple and White Admiral @ Rowe on June 23 should be 14 of each form, not 23.

Broad-winged Skipper @ Heath on August 27 should be on July 27.

BUTTERFLY GARDEN MILESTONE

[SENT IN BY DIANE POTTER, WITH ALL OF HER WONDERFUL
BUTTERFLY RECORDS, PHOTOGRAPHS, AND STORIES]

I was on the phone around 6:00 p.m. when Patrick came in and said that there was something that looked like a "funny Red Admiral" out in the garden, so I went out and found a gorgeous Milbert's Tortoiseshell on my ornamental chives ! I felt very guilty by scaring it off by snapping several photographs - it flew a short distance and perched on some daisies out on the lawn then took off over the roof of the house. Next morning, when I went out to do some watering, I was delighted to see it right back on the very same plant. It appeared again five days later, nectaring on my Cosmos and briefly on Liatrus. It made a very classy 50th species for my yard list in less than two years of record-keeping. Cool !

SOME NEWS FROM WELLFLEET BAY SANCTUARY

Mass. Butterfly Club member and M.A.S. naturalist Jackie Sones wants all of us to know that there is a new Cape Cod Natural History Hotline, and the number is 508-349-WING [9464]. This is a recorded message, updated weekly, reporting recent sightings of birds, butterflies, dragonflies, and other natural history events occurring on Cape Cod.

Jeffrey Glassberg, president of the North American Butterfly Association and author of Butterflies Through Binoculars, will be the keynote speaker on Saturday night, September 23, at the Cape Cod Natural History Weekend, an annual event sponsored by the Wellfleet Bay Sanctuary. Jeff will also lead a butterfly walk on Sunday. For more information, call the sanctuary at 508-349-2615, or write P.O.Box 236 South Wellfleet, MA 02663-0236.

MONARCHS - GOOD NEWS AND BAD

Over-wintering Mexican Monarchs survived in high numbers in the winter of 1994-1995, as documented by butterfly biologist Bill Calvert, discoverer of many of the Monarch roosting areas. While the eastern Monarch populations, those which winter in the Mexican mountains, are holding their own, West Coast Monarchs are disappearing at an alarming rate. The California wintering sites have lost 75-98% of their populations in the past five years. The butterflies may be suffering from a protozoan parasite, but this is speculation.

Richard Walton, founder of the Monarch Migration Association of North America, has been studying Monarchs for the last several years. His newsletter, from which the above news was gleaned, is sent to all supporters of MMANA. Write Richard Walton, 7 Concord Greene #8, Concord, MA 01742 for more information.

'IDENTIFICATION'

from Bright Wings of Summer by David G. Measures
Prentice-Hall, Inc. , 1976

Lepidoptera, the butterflies and moths, make up one of the insect families. There is no simple way to separate the two - each dividing line has exceptions. Most butterflies are sun-loving, day-flying, and usually brightly coloured. Most moths are night-flying, and those that breed and fly by day can be as brilliant as any butterfly - another reason for learning patterns of behaviour and identity clues rather than relying on appearance.

It is well to remember that even when you know a great deal about butterflies, there can be considerable confusion between some species, especially with dead specimens in a box. It is too late then to relate your find to its life pattern, which might establish its family immediately.

In my early butterfly days, I was visiting a research centre staffed by experienced and fully-trained lepidopterists. I asked about the Brown Argus, which is often confused with the female Common Blue, since both can be entirely brown on the top wing surface. One distinguishing mark often listed in textbooks is a little black speck in the centre of the Argus cock's forewings. During the day, students had thundered across the headland with nets and killing bottles, bringing home their 'catches', and that evening our lecturer picked out two specimens for me to compare, one Brown Argus and one Blue hen. I looked, and drew, and began to feel totally inadequate in the presence of their expert knowledge, because I was completely nonplussed. After the most careful examination, i could not see which was which. Finally I asked the lecturer for advice, and both he and his colleague came to help me. Or rather, to try and help me, since both had to admit in the end that they could not see any difference either, and perhaps they were both female Blues !

Of course, this was an extreme case - the two remain one of the most difficult species to tell apart [in England, ed.], but if notes had been taken when they were alive, their habits, food patterns and flight characteristics would have sorted them out at once.

Collecting by sight instead of specimens has its problems, too. This is particularly true for the beginner, who finds it very difficult to get close enough to see the top wing surface anyway, much less worry about tiny specks on forewings. And it is also true that some species will never open their wings except in flight, or only

momentarily during courtship or mating. So even with your textbook picture right to hand, short of killing them and opening their wings (which is not recommended) , how do you begin ?

Over and over, we come back to behaviour as the best clue. Keep careful notes, and any doubts you may have out in the field will be resolved, if not at once, then over the next season or two. Identification without capture may seem an unnecessary chore, but make your notes on the spot, with as much detail as you can, and you will find that you have almost unintentionally begun a study of wildlife behaviour. Modern bird handbooks give 'habits' as important a role in identification as markings, but this essential ingredient is most often minimal or absent altogether in butterfly books. And you will find it easier and easier to recognize by habit without ever needing to see colouring or marking, just as an ornithologist will recognize the flight pattern of a distant bird.

ANNOUNCING A NEW BUTTERFLY BOOK FOR CHILDREN

The Butterfly Alphabet Book
by
Brian Cassie and Jerry Pallotta

illustrated by Mark Astrella

Mark Astrella's marvelous illustrations have just won him the NABA Butterfly Artist of the Year [see "American Butterflies", Fall 1995]. They are great. We think you will like the words, too. You may order your inscribed copy by sending a check to Brian Cassie 28 Cocasset St. Foxboro, MA 02035. The price is \$7.00 paperback ; \$15.00 hardcover , including postage and MA tax.