



Washington Butterfly
Association

G'num*

The newsletter of Washington Butterfly Association

Volume 3, Number 1 January—March 2002

*G'num is the official greeting of the Washington Butterfly Association. It is derived from the name of common Washington butterfly food plants, belonging to the genus *Eriogonum*.

Introducing "G'num"!

WBA is proud to announce the new name of our newsletter—"G'num"! The name is also the official greeting of WBA. The greeting was coined on a field trip in WBA's inaugural year, and is taken from *Eriogonum*, which, most of you know, is a common food plant for butterflies in Washington. We hope the name captures some of the friendly, welcoming spirit of WBA. Our thanks to Spencer Smith and David Williams who both suggested the name.

Upcoming programs: Year 2001

WBA meetings are held on the first Wednesday of each month. They are held at the UW Center for Urban Horticulture (3501 NE 41st Street, Seattle) and begin at 7:00 p.m. The first fifteen minutes are used for social reception and viewing of displays.

January 2: "Wintering of Butterflies" Jon Pelham will discuss the various stages in which Washington butterflies overwinter and the scientific explanations for how they do it.

February 6: Dr. Andy Brower from Oregon State University will present a program titled "Evolution of Mimicry in Heliconus Butterflies". Dr. Brower is nationally known for his work in this field.

March 6: Jon Shephard, co-author of the new book, *Butterflies of British Columbia*, will share information on the naming and classification of butterflies.

April 3: Nationally recognized expert on skippers, Andy Warren from Oregon State University, will present a fascinating program on skippers.

Note: There will be no meeting in July because of proximity to the WBA and NABA conferences.

Third Annual WBA Conference: Columbia Gorge Butterflying

Mark your calendars for **June 28–30, 2002** for the third annual WBA conference. Activities will begin Friday evening and continue through mid-afternoon on Sunday. Headquarters for the conference will be in or near Hood River, Oregon. We had lots of fun and learned a lot at the past two conferences, and hope you can attend. More details in the next newsletter...

NABA Biennial Meeting to be Held in Oregon This Summer

You can also mark your calendars for another notable butterflying event this summer. The North American Butterfly Association will hold its biennial conference in Bend, Oregon in 2002. The conference will be held July 19-21, 2002. The Inn of the Seventh Mountain at Mount Bachelor will be the conference headquarters, just a few miles from Bend. The conference will feature numerous field trips, workshops about butterflies, photography and gardening, and many opportunities to meet other butterfly enthusiasts.

WBA Tee Shirts Now Available

WBA tee shirts are now available! They were designed for the 2001 Annual Conference by WBA's Joyce Bergen. They are royal blue and feature a beautiful image of an Indra swallowtail on the front. Shirts can be purchased at monthly WBA membership meetings, or by contacting Idie Ulsh at wabutterflyassoc@earthlink.net or (425) 364-4935. The shirts come in sizes small to XX large for a cost of \$15.00. There will be an additional charge for shirts that are mailed.

WBA Newsletter Subscriptions

The WBA newsletter has been a benefit of WBA membership. Now it is also available by subscription to non-members at a cost of \$8.00 per year. Anyone interested in a non-member subscription should contact Idie Ulsh at wabutterflyassoc@earthlink.net or (425) 364-4935. Subscriptions will continue to be free to WBA members.

WBA Research Project

Last summer, WBA partnered with the Washington State Department of Fish and Wildlife (WDFW) for a research project. Bob Hardwick led WBA's efforts to document butterfly species at Colockum Pass, a portion of the Colockum Wildlife Area. This Wildlife Area is approximately 88,000 acres, located in Chelan and Kittitas counties.

The Colockum Management Unit was purchased by the State primarily to provide habitat for Rocky Mountain elk and other vertebrate species including mule deer, bighorn sheep, chukar and grouse. Many other species use the area such as owls, eagles, goshawk and bear. Uncommon flowering plants are also found in the area of the Pass.

Since little is known about the butterflies in the area, the State asked WBA to visit the area and catalog the species. Bob Hardwick reported to WDFW on three WBA trips to the area. All three trips were hindered by poor weather--butterflies are often inactive in cool or damp weather. Nonetheless, several species were recorded, although none were unusual. Bob believes this summer's work didn't provide the best indication of the species at Colockum Pass because of the weather. Over the winter, Bob and the WBA Board will consider plans for future research projects. Options include additional attempts to record species at Colockum Pass, hoping for better weather; and choosing another of the areas for which WDFW would like butterfly information. WDFW is grateful for our efforts, and is eager to continue the partnership. For more information or copies of the WDFW reports, contact Bob Hardwick at (253) 858-6727.

CHALCEDON CHECKERSPOT-*Euphydryas chalcedona* by Dave Nunnallee

[Editor's Note: All photos are by Dave Nunnallee.]

Our species profile for this issue is the Chalcedon Checkerspot, *Euphydryas chalcedona*.

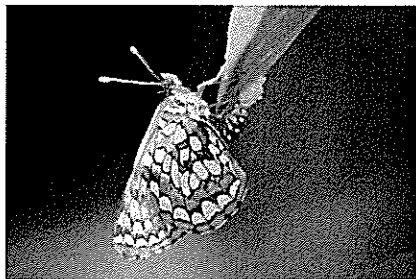
The Chalcedon Checkerspot belongs to the family Nymphalidae, a huge worldwide family with great diversity. Washington's checkerspot group includes nine species in three different genera, *Chlosyne*, *Phyciodes* and *Euphydryas*. Of these, the species within *Phyciodes* are called crescents, and, while both *Chlosyne* and *Euphydryas* are called checkerspots, they are not extremely closely related, and only *Euphydryas* has a checkered appearance ventrally.



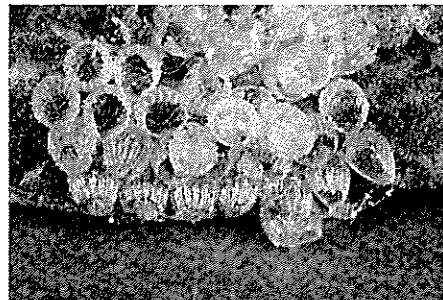
Within *Euphydryas* (u-phid'-ree-us), we have three very closely related species—the Anicia, Chalcedon and Edith's Checkerspots. These three species have a complex orange, black and white patterned appearance dorsally, while ventrally they are generally pale orange with rows of white spots outlined in black, giving a checkered appearance. Hence the name "checkerspot".

The Chalcedon Checkerspot ranges across North America west of the Rocky Mountains, from British Columbia to southern California and probably into Baja Mexico. In Washington, *chalcedona* occurs in four distinct, separated areas. The largest area, encompassing three subspecies, straddles the southern Cascades and foothills from King and Kittitas Counties south into Oregon. Another population and different subspecies occurs in the northern Olympics. Other isolated populations occur in the far northeast (Pend Oreille County) and southeast (Blue Mountains), encompassing a total of four subspecies in the state. The species is absent from most of the Columbia Basin and from the western Washington lowlands. To the north, Chalcedon is replaced by the Anicia Checkerspot and is absent there, except for Pend Oreille County.

The Chalcedon Checkerspot prefers open forests in mountainous areas, extending into the edge of the sagebrush steppe, generally avoiding the driest parts of the state. The species can be very abundant during summer, especially along unpaved roads in open forest and flowery meadow areas where penstemons occur. The Chalcedon Checkerspot larval food is primarily penstemons, but also indian paintbrush, snowberry and plantain.

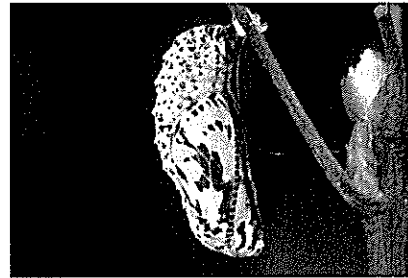


Female ovipositing



Hatched egg mass

Adults can be found through much of the summer, depending on elevation. Females oviposit clusters of eggs on the food plant leaves, and the eggs hatch in late summer. The black and orange spiny larvae are initially communal, living in clusters in webbed nests of silk and leaves, overwintering in the nests as small second or third instars. In the spring the larvae disperse to a few per plant, and grow to the final instar, pupating in late spring or early summer. The hanging chrysalis is attractive, white and heavily speckled with contrasting black spots. Adults emerge in early to mid summer.

**Fourth instar larva—15 mm****Chrysalis**

Euphydryas checkerspots are readily recognized by the straight leading edge of the forewing. In the related *Chlosyne* checkerspots and *Phyciodes* crescents, the leading edge of the forewing is strongly and broadly curved adjacent to the body. Of the three *Euphydryas* species, the Edith's Checkerspot can be identified by details of the lines on the ventral hindwing. One of these lines, known as the "editha line", has red coloration on both sides, while the corresponding line on the other two species is white on at least one side. Also, dorsally the Edith's has a sharper, crisper appearance. The last two species, *chalcedona* and *anicia*, are inseparable in the field—indeed NABA has combined the two species into one, named the Variable Checkerspot. These two species cannot be separated based on the amount of orange or black dorsally, as both species are highly variable.

Anicia and *chalcedona* differ in details of the male genitalia, and can be separated by laboratory dissection. Based on years of sampling and dissection by Jon Pelham, we know the species are fairly well separated geographically in Washington as follows:

1. Only *chalcedona* occurs west of the Cascades, with the exception of Whatcom County where only *anicia* occurs.
2. In eastern Washington, only *anicia* occurs north of Kittitas County, with the exception of Pend Oreille County where only *chalcedona* occurs.
3. In Kittitas, Yakima and Klickitat counties, both species occur. In the mountainous areas these will be *chalcedona*. But in the springtime in sagebrush areas both species can occur and cannot be field separated.
4. In the Blue Mountains both species occur and cannot be field separated.

Jon's Arctic Adventure: Part 2

by Jonathan Pelham

[Editor's note: The following article is a continuation of a travelogue begun in the last issue of this publication. Jon and his friend, Lars Crabo (who is "crazy for Noctuid moths"), took an extended trip to the Arctic region of the Yukon Territory in the summer of 1989. In the last issue, in addition to Lars, we met Jon's other companions, Jon and Sigrid Shephard, Kenelm Philip, and Glenn Morrel. The saga will be continued in future editions of the newsletter.]

1 JUNE--DAY ONE: ON THE ROAD

Lars and I were party number one; the others would join us along the way. We loaded all our gear into a Toyota Tercel hatchback (amazing!) and left. An important part of our journey was to be a full complement of music tapes. Though Lars and I had discussed this, I was the only one who brought any. Thus it was that we listened to Bob Marley throughout our trip. The significance of these tapes becomes obvious if you consider that it could be a very long trip with me riding shotgun. It was Marley vs. Pelham. Hoo-haw!

We arrived at our first camp, for the purpose of our labels called "NW shore of Green Lake" in the Lillooet District of British Columbia. After setting up camp and having "Pelham's Special Fish

Soup", we set up the moth light. It was an uneventful night, since all of the moths were typical of the "Boreal Forest", so not too interesting. It seems that we disparage the boreal forest. This is due to the fact that this heavily-forested biome is broadly distributed across northern North America, and has a fairly uniform fauna that is well known. This is true for both butterflies and moths. For those, like us, who are seeking novelties or rarities, it is like sampling in a city park.

2 JUNE--DAY TWO: MORE ROAD

Upon rising the next day, we experienced our first "Aha!" of the trip. As we trekked back to the car, laden with equipment, we saw small orange butterflies flitting about commonly. This was the Freija Fritillary (*Boloria freija*). In Washington this would truly be a reason to celebrate, but it is a common butterfly in the north (boreal forest, again). We drove; I talked; Marley sang.

Get Up, Stand Up.

Our goal was to penetrate deep into British Columbia, and arrive in the Peace River District today, so that we might experience that wonder. It is a long way. Lars is driving and I am driven. We take few breaks along the way, but we notice that the world is changing. By the time we arrive at Dawson Creek, we have seen the transformation from west coast to continental climate. The boreal forest is more dominated by black spruce, with openings dominated by poplar. The timberline has descended to about 4500 feet as well. We did a little sampling along the way, and at a place we called "Hwy 97, milepost 35, N of Summit Lake" I got a new butterfly for me. It was the Frigga Fritillary (*Boloria frigga*). This area was a series of bogs, and slow running creeks; not very interesting actually, but "Ya gotta stop sometime".

The Peace River is a remarkable example of how the fluctuating climate influences the size and extent of various habitats. At one time the Peace River prairies were confluent with the Great Plains, at their northern extent. Now they are isolated, but still maintain much of the flora and fauna that characterize the prairies to the south in Alberta. This resemblance extends to the butterflies, for here we find several species of butterfly usual for the southern prairies, but unique in British Columbia. We were enthralled.

We set up camp in an (apparently) abandoned field. There was late daylight. (We're getting closer to the north pole all the time!) And we were able to sample some bugs that were pestering us. There were Western Tailed-Blues (*Everes amyntula*), but not like those in Washington; nor were the Silvery Blues (*Glaucopsyche lygdamus*). Here they had a brown ventral ground color, instead of light grey like our northwestern variety. Very nice to look at. Also, and this will tickle the hearts of those who venture to Slate Peak to find 'em, we found Arctic Blues. Yep, in an old field. Things change in the north. A moth came and investigated the "Fish Soup" (at least the moth appreciated my soup), and it turned out to be a Bumble-Bee Sphinx, but huge compared to the ones we see in Washington. I don't know the common name for it (*Hemaris thysbe*). Even though it did not get truly dark until after 11:00, we set up the moth light, and brought some interesting sphinx moths. One is very like our common one. You know, the one with pink hindwings with big, blue eye-spots on them (*Smerinthus cerisyi*). This one is different though, and doesn't occur in Washington (*Smerinthus geminatus*). Oh, yeah, there were Noctuids. Lars had a blast.

3 JUNE--DAY THREE: MANY BUTTERFLIES

This day was to be a big one. To begin with, it was a beautiful, sunny day. We left the vicinity of Dawson Creek, heading towards the Peace River. This whole area consists of Cretaceous sediments, layer upon layer horizontally. Where the Peace River dissects them, they form steep canyons. As we approached the canyon, we could detect that something big was just over the hill. Then there it was! Folks in Washington just don't get to see this sort of thing much. We don't have the kind of sedimentary formations that support this erosional feature. Maybe it is a little like the Yakima River Canyon, with no curves, and no rimrock. Just straight down.

On the south-facing slopes, there are extensive prairie formations; mostly grass, with few herbaceous flowers. Here and there are cherries, poplars and a variety of shrubs and herbs. Since we approached from the south, we had to descend the canyon, cross the bridge, and then climb the opposite side. We found an appropriate place. Lars and I both guessed it was appropriate because it was so weird looking. A funny, blue-gray grass was predominant. It became clear we were in the right place when an Old World Swallowtail buzzed us (*Papilio machaon*). Well, actually it might be called Baird's Swallowtail. For all that we knew, it could have been an Oregon Swallowtail 'cause it looked like it, flew like it, and occurred in a place that at least resembled the habitat of the Oregon. Anyway, there's no way to make a living chasing swallowtails, so we nabbed them as we could, in passing. Our real objective was to climb the sloping prairies and find the real prize. It's called Uhler's Arctic (*Oeneis uhleri*), named after a Dr. Uhler who was important to the author of the name. That's OOH-ler. It is a cool butterfly. They were really common, so I got to watch a lot of them. They were not strong flyers, but didn't need to be on that slope. When they would light, the cryptic ventral surface made them difficult to see. I think that it was here where I fell in love with Arctics, since these butterflies played a big role for me wherever we found them on the rest of the trip.

There were lots of other butterflies. The Canadian Tiger Swallowtails (*Papilio canadensis*) were just emerging; there were some Blues, Meadow Fritillaries (*Boloria bellona*), Common Ringlets (*Coenonympha tullia*) and Common Alpines, all quite different from our northwestern varieties.

We proceeded to another tributary of the Peace River, the Beatton River. Here were mostly the same butterflies, but on the way we came to a spruce bog near the little town of Goodlow, and in it we found Grizzled Skippers (*Pyrgus centaureae*) and Jutta Arctics (*Oeneis jutta*). This bog occurred in an area that was semi-agricultural, and stood out on the horizon as we approached it. Upon entering it, we knew we were in a different sort of place. We vowed to return here on our way back. Remarkably, there were few mosquitoes.

We were still on a schedule, so late in the day we again hit the road. Driving late into the night, we finally found an appropriate place to camp near Fort Nelson on the Al-Can Highway. Camp was made, dinner was prepared, and two very tired butterflyers drifted into slumber. The adventure was only begun!

4 JUNE--DAY FOUR: MAJOR BREAKTHROUGH—COLD BATH

Arising early, our schedule intact, we began the road trip to the Summit Lake area in northern British Columbia. Again, stops along the way centered on the need to stretch and "relax". We found another bog, and sampled here briefly. There was nothing special, though we found Hoary Commas of the eastern type, not like ours.

As we approached the Continental Divide, the mountains towered above us. The timberline in this area is rather low, at approximately 4000 feet. The mountains towered to over 7000 feet. The site we chose to sample was above timberline. The whole area was majestic, with higher peaks all about. It resembled an arctic landscape in its barren aspect. We traveled the road to the top, at the summit of a gentle peak. There were not many butterflies about, even though it was a glorious day. This was because it is still early in the season. Nonetheless we discovered a spectacular butterfly, the Pleistocene Fritillary (*Boloria natasphata*); an unusual variety of that species. This was a butterfly that Jon Shepard had told us to look for, hoping more than expecting. It is a most remarkable fritillary, huge for a lesser fritillary, and nearly BLACK. When first I saw it, I thought it was an Alpine! This butterfly was virtually unknown. No one had sampled any for 50 years. Needless to say, we were ecstatic over our discovery. The mountaintop habitat was austere, with few herbs and lots of stones. With it were Polixenes Arctics (*Oeneis polixenes*) and Melissa Arctics (*Oeneis melissa*), and my newfound love of Arctics was titillated further. As we descended to the valley, we found moist tundra and even willow bogs. Here were Grizzled Skippers and Freija Fritillaries in abundance. Though there were not many species of butterfly present, they were all very interesting. We worked hard.

The schedule still beckoned, so we departed with butterfly time to spare. We vowed to stop if we spotted another area that looked enticing. So we did, but little else was found. As we descended westward we came to Macdonald Creek, though we would call it a river. Lars suggested we take this opportunity to bathe. I don't know why. Now most of you know that at this latitude and altitude, the water in a creek is derived from melt-off from glaciers and snowfields. Thus, it is obvious that it is bound to be cold. I would go so far as to say "just above freezing". Lars is Swedish. I don't know precisely how or why the Swedes are immune to shocking cold, but they seem to be. I am not. We proceeded to doff our clothes, and enter the stream. Lars jumped in with great vigor, splashing and nearly submerging himself. I entered with great timidity, laving myself gingerly, determined to make my visit fleeting. Despite my efforts, I still turned blue. Lars thought it hilarious. I was so, so cold. Freezing. Shivering blue. In my miserable, shrunken, frigidity, I treaded gingerly over the same rocks that a few minutes before had seemed far more friendly. I warmed up over the next few days, but I have never been the same.

"No Woman No Cry"

5 JUNE--DAY FIVE: ON THE ROAD AGAIN; PIZZA IN WHITEHORSE

From the Peace River District in British Columbia we were determined to drive straight through to the Ogilvie Mountains. In this we were aided by inclement weather. We stopped to sleep and eat. When finally we arrived in Whitehorse, we determined that a special meal was warranted. It was not clear to me then, but quite so now, that a major feature in that decision was that the monotony of my "Fish Soup" was finally getting to Lars. We found ourselves in an arctic pizzeria. It was good.

"Dem Belly Full, But We Hungry"

6-7 JUNE--DAYS SIX AND SEVEN: ARRIVAL; THE WAITING GAME

Most of the sixth is a blur; we were tired and we passed through a lot of country. We would see this country again, so I won't speak of it now. We drove through the night of the sixth, penetrating the Ogilvie Mountains' southern slopes in the eerie light of a late dusk and early dawn that typifies this latitude now. We drove through landscapes barely seen, but it was obvious we were in a strange place. As we came to Windy Pass, we were exhausted, and wearily set up camp and slept. We came to at around 10:00 on the seventh, and proceeded to refresh ourselves. In our weary, bleary, state we had picked the perfect spot. A small brook, fed by the permafrost, trickled several meters away. We were in a valley just north of Windy Pass, the northernmost of three at the pass. We called it Camp Valley. It was largely stony and dry, save where streams and brooks penetrated the tundra, or springs supported little pockets of dwarfed black spruce. There was an aspect that reminded me of places in eastern Washington, a little like a Schnebly Coulee with a much broader bottom, and, of course, the water. Above us, north and south, were ragged ridges that appeared barren and lifeless. We would discover that they were neither, but they were steep. It was a blessing that the weather on the sixth and seventh was cloudy, if not cold. We were allowed to recover and investigate. We wandered the valleys and ridges adjacent our camp, set up various pieces of equipment, and waited for sunshine. In the arctic, creatures protect themselves from incipient bad weather by hiding immediately as the sun is obscured. If it is not sunny, the threat of poor weather is severe enough that it behooves all creatures to prepare for the worst as quickly as possible. We found no butterflies. But we found some moths. Lars discovered his first "Skraelingia". It is a wonderfully dull Noctuid moth, rare as all get out. Lars was enlivened, to say the least. Nonetheless, our rest period was more than complete. We were ready for action.

"Comin' In From The Cold".

To Be Continued...

Officers/Board Members

Idie Ulsh	President/Programs
Dave Nunnallee	Vice President
Richard Youel	Secretary
Spencer Smith	Treasurer
Käthe Watanabe	Special Projects
Jon Pelham	Science Advisor
Richard Lindstrom	Field Trip Coordinator
Tom O'Connell	Writer/Reporter
Jo Nunnallee	Hospitality
Vivian Gross	Conference Coordinator
Maureen Traxler	Newsletter/Publicity
NonBoard Position: Bob Hardwick is WBA Research Coordinator, organizing WBA field projects.	

Membership Application

Washington Butterfly Association

<https://wabutterflyassoc.org/membership/>
