



Washington Butterfly
Association

G'num*

The newsletter of Washington Butterfly Association
Volume 4, Number 2 April—June, 2003

*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*.

WBA Meeting Programs

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.

April 2:	Butterfly Anatomy by <i>Jonathan Pelbam</i>
May 7:	Butterfly Physiology by <i>Jonathan Pelbam</i>
June 4:	Recovery Program for Endangered Oregon Silverspot, <i>Speyeria zerene hippolyta</i> by <i>Erin Sullivan, Woodland Park Zoo</i>

WBA Annual Conference—A Rocky Mountain Connection

You are all enthusiastically invited to the Fourth Annual Washington Butterfly Association Conference. This year we're visiting a particularly beautiful area in the northeast corner of Washington State. Species you may have difficulty finding elsewhere, like the silver-bordered fritillary (*Boloria selene*) or Queen Alexandra's sulphur (*Colias alexandra*), you'll find in abundance here. Skipper enthusiasts will be charmed by the 14 species found in Pend Oreille County. The chryxus arctic (*Oeneis chryxus*) and a different type of margined white (*Pieris marginalis*) are likely to make appearances. The moist boreal forests and boggy meadows provide habitat for species in numbers similar to those found in the Rocky Mountains—but it's all here in our own state.

Act now to mail in the registration form included with this issue of *G'Num*. And please note, you will need to make your own room reservations; accommodations are limited so do it today! The registration form includes lodging information.

Metline Falls is a picturesque, historic town on the beautiful Pend Oreille River. In this remote location, accommodations are limited, and there may be competition for rooms from seasonal mine workers. **It's imperative that you reserve a room as soon as possible.** Some motels are unwilling to guarantee rooms until after the mine workers are settled, in mid-May. We look forward to seeing you there!

If you have questions about the conference, please contact Joyce Bergen, 509-996-7808 or maggie@mymethow.com.

2003 Field Trips

We are looking forward to another exciting field season in 2003. We're very pleased to welcome back Richard Lindstrom as Field Trip Chair.

WHERE & WHEN TO MEET: Trips to western Washington destinations will depart from the Ravenna Park & Ride at 7:00 a.m. unless expressly stated otherwise. The park & ride is located under I-5 at Ravenna Blvd between NE 50th & NE 65th St. We meet in the north half of the park & ride.

Eastern Washington trips will also leave Ravenna at 7:00 am, but on request will also stop at the Issaquah Park & Ride at 7:30 a.m. To reach the Issaquah Park & Ride, take I-90 east to Issaquah, exit to the south via Exit 16, and go 3 blocks. The Park & Ride is on the left.

SIGN UPS: Members or non-members can sign up for field trips at any WBA monthly meeting. People can also sign up by contacting Richard Lindstrom at (206) 842-4817. If you need to cancel, please remember to contact Richard as soon as you can so another person can take your place, and so that the group does not wait unnecessarily for you at the park & ride.

FIELD TRIP PROTOCOLS: All field trips are conducted by carpool—without the volunteer participation of drivers the trips are not possible. If you have a car you are willing to drive, please have the gas tank full and ready to go. Passengers are expected to share gasoline expenses.

Please tend to any personal matters, such as getting breakfast, coffee or gasoline, before the departure time so others are not delayed.

All WBA-sponsored field trips are fully insured through our parent organization, NABA.

The trip leader will collect a voluntary donation of \$5 per person (children free) for each field trip to help offset expenses of the organization.

SCHEDULING & WEATHER: Weather is always a major factor for planning butterfly trips in Washington, particularly March through June. The key to dealing with weather is flexibility; our leaders reserve the right to make last-minute itinerary changes in order to provide you with the best possible butterfly experience. On occasion it may be necessary to cancel or postpone an outing if the weather does not permit a viable alternative. The flow of the season is also important, and it may be necessary to adjust some trips to earlier or later dates to best match the seasonal weather patterns. WBA will make every effort to keep you informed of any changes.

Date	Destination
May 10	Cowiche Canyon
May 17	Swakane Canyon
June 14	Quincy Lakes (<i>Note: This is a special trip—we will be joined by Dr. Dennis Paulson, an expert on dragonflies.</i>)
June 29	NABA 4th of July Butterfly Count (<i>See following article</i>)
July 12	Lion Rock WBA Butterfly Count
July 19	Quartz Mountain
August 2	Crystal Mtn with optional chair lift ride for higher elevation butterflies
August 16	Mount Townsend

Join NABA's Chumstick Mountain "4th of July" Butterfly Count

WBA members are invited to join the 2003 Annual Chumstick Mountain NABA Fourth of July Butterfly Count on Sunday, June 29, 2003. Butterfly counters will meet and register at 9:30 at the WSDOT Easy Street Park-and-Pool Lot at the north end of Wenatchee. The lot is located at the junction of Easy Street and Highway 2 (97), across Easy Street from the USFS Wenatchee National Forest Supervisor's Office Building. Area maps, count forms, and butterfly identification guides will be available, and a \$3.00 fee will be collected from each participant. Car pools from Seattle will be arranged.

Groups will form for the various routes to the summit of Chumstick Mountain. Each group will travel by auto on unimproved dirt roads between viewing sites. At each viewing site, we will walk about in the roadway, meadows, and openings in the forest to view the butterflies.

Weather permitting, the count will conclude at about 4:30 p.m., with all groups converging on Chumstick Summit (5,810 ft.). At this glorious old Forest Service Lookout site, we'll combine our

data, confirm the identity of any "mystery" butterflies, and share a watermelon feast while enjoying the stunning view of the Stewart Range. The air temperature at that altitude can be cool, so bring a warm jacket.

Gear for this trip is the same as for WBA field trips. Bring your lunch and a canteen of water. Wear outdoor clothes, sturdy footwear and bring a warm jacket. Sun protection (wide-brimmed hat, long sleeves, long pants) is appropriate. Close-focusing binoculars are best for viewing butterflies. Bring them if you have a pair. If you don't, sharing is part of the fun.

This North American Butterfly Association program is intended to promote interest in butterflies. A fee of \$3.00 will be collected from each adult participant to defray NABA's costs of printing forms and programs.

More information on NABA and the count program is available at the website at www.naba.org. For details about the Chumstick Count, contact Don Rolfs at (509) 662-7196, or donrolfs@aol.com.

WBA Member Gives Author Reading at the Burke Museum

Unfortunately the late publication date of this issue of *G'nnum* means you are reading this announcement too late to attend, but we want you to know that David Williams read from his upcoming book on the natural history of Seattle at the Burke Museum on April 24, 2003. It was his first ever public reading from his book, and we hope some of you were able to attend.

Many of you know that David has been working over the past couple of years on a book about natural history in Seattle. This book, which will be published by West Winds Press in 2005, will mix together personal musings, natural history interpretation, and scientific observations. David will tell of animals we see daily, of plants we take for granted, and of the rocks under our feet. His goal is to examine the relationships between humans and the flora, fauna, and landscape that make up the natural environment of Seattle.

The reading was supported in part by the Cultural Development Authority of King County and the Seattle Office of Arts and Cultural Affairs.

Butterfly and Ant Associations

On March 5, 2003, an audience of WBA members were treated to a presentation by Dr. Merrill Peterson of Western Washington University about the associations between butterfly larvae and ants. This article attempts to summarize the presentation although it cannot adequately convey all the information from Dr. Peterson's talk and slides.

According to Dr. Peterson, 75 percent of the world's lycaenid species associate with ants. Some of these associations are obligate (meaning the creatures can survive only when the association exists); some are facultative (meaning the association is beneficial, but not essential). Ants are interested in such associations because butterfly larvae secrete nutritive substances such as amino acids and sugars. In return, the ants serve the larvae as a well-organized militia defending them from predators and parasites.

Butterfly larvae need special adaptations to survive an association with ants—ants tend to be prickly creatures, and they produce formic acid. Some butterfly species are adapted to communicate with ants; others have adapted feeding habits that reduce their vulnerability to ants. Examples of adaptations are the thick cuticle (skin) of many lycaenid larvae. Lycaenid larvae also tend to be slow-moving which may mean they are less likely to provoke ant attacks. Some scientists believe the butterfly larvae are even able to fool the ants by producing chemical signatures or stridulations that resemble those of ant larvae. Some larvae are adapted to resemble ant larvae so precisely that the ants carry them into the ant nest and rear them as part of their brood. Of course, the ants discover the ruse and danger arises when the larvae in the nest mature into adult butterflies.

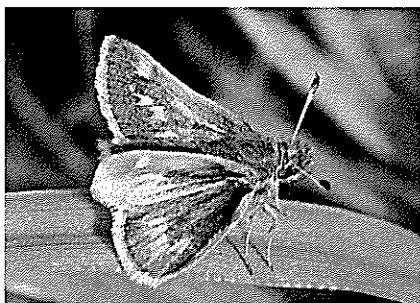
The larvae have several organs that contribute to their ant associations. They have a dorsal nectary organ on their seventh abdominal segment that secretes sugars and amino acids that attract ants. Many lycaenids also possess port cupola organs that may produce pheromones that communicate information to ants, sometimes called "appeasement pheromones". These pheromones may be

similar to scents produced in an ant brood. Some lycaenid larvae may possess stridulatory organs capable of producing grunts, drumming and hissing sounds that resemble sounds produced by ants.

Several Washington butterflies take advantage of associations with ants. All of them are believed to be facultative relationships. The species include Edith's, ruddy and blue coppers; almost all Washington species of blues; hedgerow, gray, and sooty hairstreaks; and moss' elfin. There may be more undiscovered associations.

Mardon Skipper *Polites mardon*

by Dave Nunnallee



Polites mardon—dorsal view

Our species profile for this issue is the Mardon Skipper, *Polites mardon*.

The Mardon Skipper belongs to a group of butterflies known as the Grass Skippers. All 17 of our Washington state grass skippers use grasses, reeds or sedges as their larval host plants. Grass skippers are typified by their small size, orange and brown coloration, recurved tips on their antennae, and a habit of perching with their forewings held at an elevated angle to their horizontal hindwings. Among the grass skippers, those in the genus *Polites* have yellow rather than white spots on their

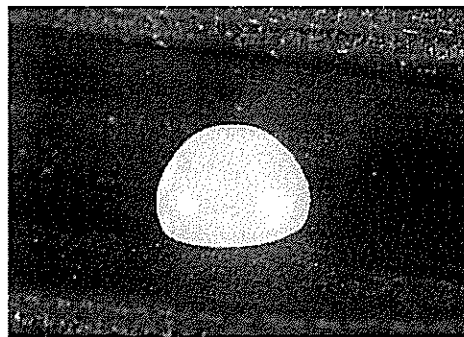
ventral hindwings, and generally fly quite close to the ground. Their flight is often relatively weak in appearance, but they can dart away powerfully when disturbed.

Polites mardon is a fairly scarce species with a short flight period at any specific locality. Mardons' preferred habitat is grassy prairie and savannah openings. Its populations appear to vary significantly from one year to another. In Washington the Mardon Skipper is state-listed as endangered, and is protected by the State Fish and Wildlife Department. Its habitat continues to retract under land use pressures, and BT spraying in the southern Cascades has threatened populations there.

The Mardon Skipper is found only in small, isolated pockets in Washington, Oregon and far northwestern California. In Washington there are two distinct isolated populations—one in the Puget Prairies of Thurston and Pierce Counties, the other in the southeastern foothills of Mount Adams. Because of elevation differences the two populations fly at different times, the lower Puget Prairie populations in May and those near Mount Adams in late June and July. Mardon was previously believed to be found only in Washington, but colonies have now been found in southwestern Oregon and northwestern California.



P. mardon—chrysalis



P. mardon—egg

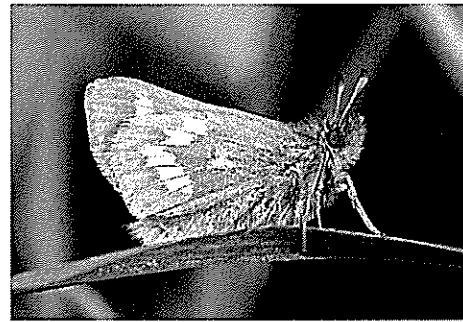
Polites mardon overwinters in the chrysalis, rendering it ready to emerge and fly relatively early in the spring. After the adults have mated during their relatively short flight period, the female scatters her eggs randomly in the vicinity of the grass host plants, particularly near the narrow-leaved Idaho fescue which grows in bunches on the prairies. On hatching, the early caterpillar instars are pale and rather maggot-like in appearance, but as they mature they become a more handsome dark brown.

The typical skipper "collar" constriction is obvious behind the head in early instars, but diminishes somewhat with growth. The larvae live in nests of grass blades tied loosely together with silk. Early instars eat grass leaves partially through from the side, but later instars eat clear through the tender grass tips, causing much of the blade to fall to the ground uneaten. Pupation occurs in the leaf nest about 40 days after the eggs are laid. The pupa is long and slender, and dark in color. In captivity the pupa may eclose to an adult butterfly the same season, but in nature this is not yet known to occur.

The adult Mardon Skipper is not particularly easy to identify, and may be confused with other *Polites* skippers as well as the Woodland Skipper. The range of Mardon overlaps only with the Sonoran and Sandhill Skippers in the *Polites* group. Sandhill (*P. sabuleti*) is easily separated by its "spider-web"-like spots on the ventral hindwing, but the Sonoran (*P. sonora*) is quite similar. Sonora



P. mardon—fifth instar larva



P. mardon—ventral view

has smaller, more crisply separated spots on the ventral hindwing, which diagnostically separates it from Mardon. Finally, Mardon has long, bristly "hairs" (actually modified scales) on the head and body, and rather rounded forewing tips. Both these characteristics give it a different jizz from the Woodland Skipper, *Ochlodes sylvanoides*, which has pointed forewings and shorter, less obvious "hair" on the head and body. Also, dorsally the Woodland Skipper has a much more distinct dark scent patch, or stigma, on the dorsal forewing of the male.

Confessions of a Beginning Butterfliier

by Tom O'Connell

I am a bit chagrined to have to report that, except for enjoying many views of gorgeous Gulf Fritillaries and Zebra and Julia Longwings, I didn't do much serious butterflying in Cuba in January. For a variety of reasons I was just unable to do it. Because of strict limitations on allowed baggage I had to leave behind the excellent but cumbersome and heavy butterfly guide which I mentioned in my last *Confession*. But I did take along a fine, compact guide which serves well for anyone going to Florida or nearby places. *Florida Butterflies* by Gerbert and Arnett has most of the bugs one will see in Florida, at least on a brief trip. Many of those same species can also be found on the islands of the Caribbean.

I can report on two non-butterfly impressions about Cuba which were strongly reinforced this trip. First, Cubans are the most engaging, fun people I've ever met. They are putting up with their current hardships with amazing good nature. A fellow elderhosteler summed it up by asking me, "How can they be so happy?" Second, Cuba is rapidly becoming a two-class society, made up of those who can get some U.S. Dollars by serving us numerous tourists versus those who don't serve us and who are therefore living in dismal poverty. Relying on tourism to keep an economy going is ultimately a corrupting course. But that's what Fidel Castro is doing.

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NonBoard Position: Bob Hardwick is WBA Research Coordinator, organizing WBA field projects. His phone number is (253) 858-6727.			

Membership Application

Washington Butterfly Association

the Washington State chapter of
North American Butterfly Association (NABA)

Yes! I want to join WBA/NABA and receive *American Butterflies*, *Butterfly Garden News* and *WBA Newsletter*, as well as other member privileges.

Name: _____

Address: _____

Phone: _____ Email Address: _____

Special Interest (circle): Listing, Gardening, Observation, Photography, Conservation, and Other _____

Dues enclosed (circle): Regular \$30 (\$60 outside U.S., Canada, Mexico)

Family \$40 (\$80 outside U.S., Canada, Mexico)

Payment must be in U.S. dollars.

Mail application form to: NABA, 4 Delaware Rd., Morristown, NJ 07960

Further information: wabutterflyassoc@earthlink.net or call Idie Ulsh at (206) 364-4935.