



G'num*

The newsletter of the Washington Butterfly Association

P.O. Box 31317 Seattle WA 98103
www.naba.org/chapters/nabaws

*G'num is the official greeting of WBA. It is derived from the name of common Washington butterfly food plants, of 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.

OCTOBER 6:

“Everything You Wanted to Know about Swallowtails: Identification and Behavior” – *Jon Pelham*

NOVEMBER 3:

“Butterflies of Southern Africa” – *Bob Hardwick*

DECEMBER 1:

“Rare Butterflies of Washington” – *Robert Michael Pyle*

Huge Book Sale – December 1 Meeting – 6:15 PM

Bring nature and garden books that you wish to sell to the December 1 meeting. There is no charge for a table and you may set your own prices. We ask a donation of \$1 to WBA for each book sold.

Some of the excellent books which will be available are “Butterflies of Costa Rica”, “Natural History of Costa Rica”, and “Birds of Ecuador”.

Member Noticeline

Member Noticeline: This is an "opt in" service for WBA members in which announcements, butterfly related articles, and other WBA information will be sent to you via e-mail. We are very careful to not overuse this method but some very interesting and timely information has been sent.

Thanks to all of you for giving me the chance to lead WBA. I've enjoyed being a WBA member—I've learned a lot, had some wonderful experiences, and made some good friends. I'm glad to have a chance to give something in return. I hope my skills and experiences will make me a good president, even though I'm not an expert butterflyer.

WBA so far has been blessed with excellent leadership, and, although I don't presume to rise to that level, I hope the organization will continue on the course that has been set.

The Board will soon be deciding the projects we'll take on for the next year, and we'll ask members to help, I hope we'll offer some opportunities that you will find appealing and exciting. I also hope that you all will realize that being active with WBA is a lot of fun!

In every issue of G'Num, I'm going to try to offer opportunities for members to volunteer on some WBA projects. Contact me if you'd like to help with any of these activities. And, let me know if you have ideas for other things you'd like to work on.

Right now we're looking for volunteers to:

- Maintain the membership records WBA receives from NABA.
- Bring refreshments to one of the membership meetings.
- Help with the annual conference. We haven't identified specific tasks for the committee members, but could include everything from arranging for a keynote speaker to collecting tickets for the Saturday evening dinner. Many jobs will be limited to the weekend of the conference.

Thanks again for your confidence. It's going to be a great year for WBA!

-Maureen

WBA is assisting the Washington Department of Fish and Wildlife (WDFW) in assessing the wildlife present in the Sinlahekin Wildlife Area in north central Washington. WDFW is compiling an assessment of all forms of wildlife in the Sinlahekin, and has already compiled preliminary lists of birds, fishes, mammal, amphibians and reptiles. They are hoping to add a list of butterflies. The preliminary lists are presented on WDFW's [website](http://www.wdfw.wa.gov/lands/r2snlhkn.htm) <http://www.wdfw.wa.gov/lands/r2snlhkn.htm>.

The report of WBA's survey describes the Sinlahekin as "a little known paradise...consisting of streams, lakes, wetlands, fields, and flower-covered hills and meadows." Bob Hardwick, WBA's research chair, led two field trips to the area this summer; one in June, the other in July during the WBA Annual Conference. The WBA teams identified 35 butterfly species in June, and 31 species in July. In 2005, he plans to lead two more trips to the area—one in April or May and another in August—to give a more complete picture of the butterfly species found in the Wildlife Area.

Our species profile for this issue is the Ruddy Copper, *Lycaena rubida*.



Coppers belong to the worldwide Family Lycaenidae, which also includes blues, hairstreaks and metalmarks. Coppers are typified by a relatively small size, and by bright

copper-colored wings on the dorsal surface of males in most, but not all, species. Sexes are dimorphic, with females generally a drabber brown or gray color and with heavier black markings on the dorsal wing surfaces. None of our coppers fly before early May, and only one of our seven species has more than one brood per year. Most of our species overwinter in the egg stage.

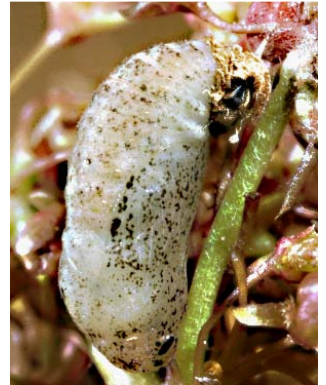
Lycaena rubida is a strictly western North American species, occurring from southern Alberta south through the Pacific and Rocky Mountain states, barely into the American southwest. Within Washington State the Ruddy Copper is confined to the Columbia Basin, and is not found west of the Cascades.

The preferred habitat of the Ruddy Copper is hot, dry shrub-steppe, although within such areas it may be found flying near watercourses or along meadow edges.



L. rubida is infrequently encountered throughout much of its Washington range, and indeed may be considered uncommon in most areas. Perhaps its greatest stronghold is in the Juniper Dunes Wilderness northeast of the Tri-Cities, where the species is quite abundant on the wing in late May. Further west the Ruddy Copper can sometimes be found along the lower reaches of Umtanum Canyon above its mouth with the Yakima River, although this population appears to fluctuate from year to year.

In Washington the recorded flight period for the Ruddy Copper extends from early May to late July, although it is much more likely to be found during the first half of this period. Adults appear to have a relatively long flight period, perhaps as much as two weeks, before the females become gravid with eggs and begin ovipositing. The larval hostplants are various species of *Rumex* (Dock), and because these plants die back each year the eggs are usually deposited on inert substrate surfaces near the plants. Eggs are deposited singly, but each female may produce a large number of them. In the Juniper Dunes area the favored food plant is *Rumex venosus* (Sand Dock) which often grows directly on the open sand.



Once deposited the eggs lie dormant throughout the summer and following winter, finally hatching early the next spring. The larvae are nocturnal, venturing onto the plant to feed on leaves during the night. During the daytime the larvae retreat under debris such as sticks and leaves, usually within about 10 inches of the plant base, and in sandy environments have been documented resting in holes in the sand. This species has been reported to have a symbiotic relationship with ants. In the later larval stages the larvae feed heavily, inflicting considerable damage on the host plant. When large holes in the *Rumex* leaves are observed, larvae can usually be found nearby. The larvae develop fairly rapidly and take on various shades of brown and green, attaining a large size for this family. The pupa is attached weakly at the posterior end, either hanging from a plant or (usually) hidden under debris. In captivity the adults emerge about seventeen days after pupation to restart the cycle.



Dorsally the adult male Ruddy Copper is a striking bright copper-orange color, our most brightly colored and largest copper. Ventrally the hindwing is almost pure white with scattered small black dots. Females vary from nearly as orange as the males to a drab gray color dorsally, and ventrally are white like the males. On both surfaces, but particularly the dorsal side, females are more heavily marked with black spots than their male counterparts. As in all coppers the ventral forewings of both sexes bear a row of bold black spots, but most of these spots will be covered from view while the butterfly is at rest.

Adult Ruddy Coppers fly actively in areas with nectar flowers near the *Rumex* host plants. Males stake out territory and perch conspicuously, flying out to challenge other males and searching for mates. Females meanwhile keep a lower profile, flying only as necessary to reach nectar flowers. Any available nectar source appears to be utilized. The orange morph females, presumably mimicing males, appear to be harassed much less by males than do their gray counterparts. Thus while they appear less camouflaged against predators these orange females may gain access to more nectar.

Confessions of a Beginning Butterflier

by Tom O'Connell

It was hot in Omak, Okanogan County, for WBA's Fourth Annual Conference in mid-July. Most of us Seattle and west-of-the-mountain types are not used to the 100 plus temperatures which we experienced in Omak.. To our relief, it was somewhat cooler up in the hills where most of the field trips took us.



As usual, everyone was good-natured and we had fun. The butterflying was great. The total count of butterflies we identified was 53. The total number of participants was just about the same: one butterfly species for each of us.

The favorite new participants for most of us were three-year old twin girls from Poulsbo – two blonde sweeties. When one of them was asked how old she was, she managed to free three fingers from each hand to hold up by way of response. Three for each of them. They kept reminding me of another little girl I heard about recently who while she was drawing had this exchange with her mother:

Mother: What are you drawing, honey.

Little girl: I'm drawing God.

Mother: But nobody knows what God looks like.

Little girl: Well, they will now.

Thank Heaven for little girls.

As usual, Jon Pelham was our star performer both in the field and at our evening get-togethers. On Friday, he and Idie Ulsh and Dave Nunnallee formed a panel to discuss with us how to identify some of the trickier Okanogan species that we'd likely be seeing in the field. Very helpful. On Saturday evening, Jon as at his best talking about 'Glaciation and Speciation'. Nobody I've known in a checkered career of dealing with scientists is as good as Jon at helping us non-scientists understand the joys and vexations of "doing science".

Our best conference yet.

Tom O'Connell

In western Washington, the 20th century was tough on prairies. Most open acres were farmed or developed into oblivion. As wild fires were extinguished and native prairie-burning ceased, both forests and plagues like the introduced Scot's Broom and invasive grasses took over, smothering the native prairie habitats. Not surprisingly it was a rough century for prairie butterflies too.

Four butterflies, especially, have suffered the brunt of prairies loss here in the Puget Trough: the Puget Blue (*Icaricia icariodes blackmorei*), the Valley Silverspot (*Speyeria zerene bremerii*), the Mardon Skipper (*Polites mardon*), and the Taylor's (or Whulge) Checkerspot (*Euphydryas editha taylori*). [Whulge, as **The Butterflies of Cascadia** will tell you, is the native (Salish) name for the Salish Lowlands = Puget Trough].

Earlier this month I sat down with Dan Grosboll (Fort Lewis Project Manager for The Nature Conservancy and recent butterfly biologist with the WA Dept. of Fish and Wildlife) to discuss Taylor's Checkerspot. Dan has developed rearing techniques for raising this butterfly, studied it in the field and worked to improve habitats where *E. e. taylori* once flourished, so he has a broad and unique perspective on this imperiled critter. Here is some of what I learned from him.

Once common, even abundant, in places like the 13th Division Prairie at Fort Lewis, Glacial Heritage Preserve and Mima Mounds as recently as the early 1990s – the last South Sound populations are now limited to the Bald Hills Area in southwestern Thurston County and the Artillery Impact Area at Fort Lewis south of Tacoma. There are also a few populations near Port Angeles and in Oregon's Willamette Valley. All of these populations are small, unstable and vulnerable; and several organizations, including the Xerces Society, have sued the US Fish and Wildlife Service to list *E. e. taylori* as endangered before it disappears forever.

Although native larval food plants including Harsh Paintbrush (*Castilleja hispida*) and Small-flowered Blue-eyed Mary (*Collinsia parviflora*) have been recognized for a long time, a new host plant has recently been identified in South Sound study areas: Sea Blush (*Plectritis congesta*).

One of the most common host plants for this lowland subspecies of Edith's Checkerspot has been the introduced English Plantain (*Plantago lanceolata*). This plantain, unlike many native hosts that senesce early in the year, remains green well into summer. This is may be important, as Dan points out, because the main cause of *E. editha* mortality is pre-diapause larval starvation and he speculates that the extra food may lead to a boom and bust cycle that makes populations more vulnerable to extirpation.

Larvae enter diapause after the 4th instar (mid-June to early July) and emerge as early as the following February to continue their growth. One of Dan's most interesting findings is that these spring-time larvae bask on open and mossy south-facing slopes at Bald Hill Natural Area Preserve. [Butterflies bask, so I suppose it should be no surprise that caterpillars do too.] These basking sites include the main access trail, so DNR is likely to restrict access between February and April.

Dan says that, when restoring prairies, The Nature Conservancy (TNC), "tries to see things through the butterfly's lens." For example, when working around host plants, volunteers pull Scot's Broom by hand to protect the native plants. Broom is being removed from a number of promising balds adjacent to Bald Hill NAP. TNC staff and volunteers have also been re-establishing habitat by planting native host plants: paintbrush for Checkerspots, *Viola adunca* for Valley Silverspots, and Roemer's Fescue (a subspecies or variety of Idaho Fescue) for Mardon Skippers. The restorative use of fire, and eliminating Scot's Broom and invasive grasses also are critical.

Much of this work has been supported by partners - Dan credits the funding and assistance from Fort Lewis for restoration work, while the captive rearing



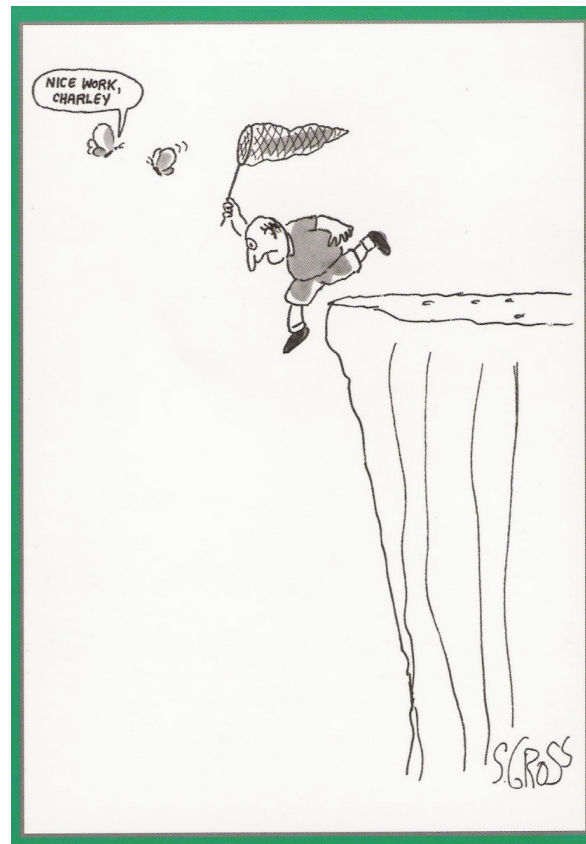
was supported by the Washington Department of Fish and Wildlife. WBA volunteers, organized by Bob Hardwick, assisted by conducting butterfly surveys on the prairies of Fort Lewis; and Dave Nunnallee raised Mardon Skipper larvae.

Because Taylor's Checkerspot populations have "winked out" at many sites, reintroduction is a long-term goal. Dan has passed the captive-rearing torch to researchers at the Oregon Zoo in Portland who will be working to increase production of adults. Timing adult emergence remains one of the main challenges,

as captive butterflies miss the development cues that they would get in nature. If good numbers of this handsome butterfly can be raised to emerge in synchrony with prairie host plants, and if prairie habitats can be protected and restored to meet the butterfly's needs, there's a chance *E. e. taylori* may make it though the 21st Century.

WBA Mission Statement

**The Washington Butterfly Association is devoted to
scientific understanding and enjoyment of butterflies and their ecology
through conservation and education.**



Board Members

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Bob Hardwick	WBA Research
Roberta Roberts	Membership

Membership Application

Washington Butterfly Association

The Washington State Chapter of the
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: _____

City, State, Zip _____

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