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Washington Butterfly Association

G'num*

The newsletter of the Washington Butterfly Association

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

Bob Hardwick (1942-2014) in Ecuador, Sept. 2013. Obituary on page 7. (Robin Lewis)

The Corral Pass road. They mean it, too, especially that last part. Trip Report on page 2. (R. Johnson)

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Upcoming Programs (more on back page)

Oct. 1: The Flight, Nectaring and Roosting Behavior of Leona's Little Blue Butterfly (*Philotiella leona*)

Jasmine James will talk about her observations on Leona's Little Blue Butterfly that she made in the Antelope Desert in southern Oregon during 2011-13. She studied and will present information on adult behavior including flight activity, roosting, nectaring, and courtship. The sole known metapopulation of Leona's Little Blue, *Philotiella leona*, in the Antelope Desert of Klamath County, Oregon was surveyed and studied during 2011-2013. Observations were made on adult behavior. The flight period extended from mid-June to mid-late July or early August (35-47 days). Flight activity was meandering and low to the ground and mostly occurred after midday, as did mating and oviposition. Nectaring was observed on 9 plant species with *Eriogonum umbellatum* most favored. *Philotiella leona* spent much time roosting particularly before 1100 h despite sunshine and ambient temperatures of 10-20 ºC. Most roosting occurred on the ground or on bare twigs of low-growing shrubs like *E. umbellatum* and *Purshia tridentata* (Pursh) (Bitterbrush). Ground roosters usually chose warm stones or small rocks in direct sunlight.

David James will give us an update on his Monarch project.

President's Message

We lost a very important WBA member in September in the sudden death of Bob Hardwick. Bob taught us so much both in programs as well as in the field. Many of you may remember the excellent programs he gave on Hairstreaks and Crescents using his own stunning photographs. Copies of these will be available at WBA meetings and can be ordered through Al Wagar.

Bob's energy and enthusiasm added fun to our field trips where he was always willing to explain how to identify a species to someone new to butterflying. He conveyed as much enthusiasm about Woodland Skippers as Red Admirals and always took time to explain ID points to butterflying beginners. He was an excellent teacher, as many of his former students from Stadium HS in Tacoma recalled at his memorial. Bob taught us so much about approach to life (be excited about the common) and share knowledge about the most common of butterflies! Bob made us a better organization. We will miss him deeply!

Bob (front, kneeling) with fellow WBA members and guides in Ecuador, Sept. 2013. (C. Heberlein)

Idie

Trip Reports

Little Pend Oreille 4th of July butterfly Count, July 12

Though numbers of species and total number of butterflies seen were both low, we were really pleased with a very good human turnout of 17 counters, the highest yet so far, making two sizable teams. Further, we were able to locate some of the area's more interesting skippers, Peck's Skipper, the Long Dash and the Dun Skipper. The two latter species did not deign to show up until after everyone had broken up for the day, hiding out in plain sight near Brenda's and my (John Baumann's) campsite in a personal appearance. We located 24 species. Given the high heat we are considering trying before the holiday next year and are tentatively looking at June 27. So put it on your calendar now.

Dun Skipper (J. Baumann)

Arctic Blues (J. O'Donald)

Corral Pass, Pierce Co., August 2

The weather was a mixture of sun, clouds and thunderstorms as we reached the 6,100 ft. vista point on the Rainier View Trail, a 1-mile hike south of Corral Pass. Mount Rainier was moody, partially cloaked in clouds, but the views were still spectacular. We had lunch in the sun at a rocky viewpoint while Arctic Blues flitted just below around their Spotted Saxifrage host plants. A big thunderstorm was brewing just east of Mt Rainier and was slowly progressing our way. When the lightning reached within 2 miles we retreated a little lower, taking refuge under trees for a heavy brief rainstorm. After the storm passed we continued in the sun up the ridge to the south. While many of us stayed back, a few daredevils (most notably Bob Hardwick channeling his inner mountain goat) continued up the rocky ridge to a high point ½ mile farther on and 6,400 ft elevation. Towering just beyond is inaccessible Castle Mountain. Butterflies were not abundant; wildflowers were widespread and interesting, but the state of blooming suggested we were still early in the season at these elevations. Both flowers and butterflies will surely increase in coming weeks. Kudos to Regina Johnson and Marty Witt who bravely drove up the daunting Corral Pass Road (aka the 'Road from Hell' - don't try it in a Prius).

First WBA Monarch Tagging Event a Great Success!

On Saturday August 23, a group of 25 WBA members assembled at 9am at Lower Crab Creek near Vantage in eastern Washington. The Monarchs were already flying as we drove into this area dominated by Russian Olives and Milkweed.

Trip Reports Continued

Our sample Monarch flew to Marty's shoulder. Notice that you can read the email address and the number! (C. Heberlein)

I have been monitoring Monarch populations at this site for two years and it has been exciting to see a steadily increasing population during this summer. A few days before the tagging event I counted 74 Monarchs in a 3 hr period! So the timing and weather were perfect for our first attempt at tagging a wild population of Monarchs in Washington. To my knowledge this has never been done before. Before now we have not been aware of a large population of Monarchs at a single site sufficient to make tagging a viable proposition.

After quick instruction on how to tag a Monarch, the group dispersed over the habitat in small groups seeking their quarry. Monarchs were seen flying and were chased but the group soon learned it was more profitable to net them as they fed from the blooms of Purple Loosestrife.

By lunchtime more than 30 Monarchs had been tagged! Unfortunately, they became harder to find after lunch as they sought shade in the increasing temperatures. However, by the time the group set off home, we had tagged 41 Monarchs! This I think is the largest number of naturally occurring Monarchs tagged on a single day at a single location in Washington.

One of the goals of my research on Monarchs in Washington is to determine their overwintering destinations. One or two Monarchs tagged in earlier years in Washington have been found at overwintering sites in California but some observational and tagging evidence suggests that some may fly more directly southward, perhaps ending up in Mexico. Perhaps one of the 41 Monarchs WBA members tagged will help by providing another piece of data? I will certainly let you all know if one of our 41is recovered!

My sincere thanks to everyone who participated in the Monarch Tagging event. You will all be mentioned in the scientific paper I will write in a few years on Monarch population biology at Lower Crab Creek.

Despite the doom and gloom surrounding Monarchs and their population decline, we've had a great year for Monarchs in Washington! Numbers have been higher than seen for at least 5 years and hopefully this will continue. If it does we will certainly hold more tagging days.

David James, Monarch Tagging Event Organizer

Hera Buckmoth

(J. Dammarell)

Buckeyes in Washington

The past week or two has been very exciting for butterfly lovers in the easternmost Washington counties. We have developed a great fascination with the Coffeepot Lake and Twin Lakes BLM areas of central Lincoln County. Jeanne Dammarell and Sue Orlowski began reporting Mormon Metalmarks and Hera Buckmoths (*Hemileuca hera*) during the week of 8/15-8/22. On our way home from the WBA Monarch tagging event on August 23rd, Brenda and I stopped here on the hunch that we would see some of the great sightings reported by our friends, and located not only the Mormon Metalmark, but the Buckeye (*Junonia coenia),* apparently a first record for the state. Tom Munson visited the same area and got some splendid Metalmark photos and found the moth present as well. Jeanne returned on Sunday, Aug 24th, to locate a lovely fresh Old World Swallowtail, an infrequently seen and impressive scablands species. WBA members may be interested in a tour of the area next season? Call us! John Baumann.

The Common Buckeye was found for the second time this year and the second time ever in WA in Benton County. It is fairly common in Oregon, where there is a bumper crop this year. This one was sighted by Jane Abel on September 16 on Johnson Island in the Columbia River about 6 miles N of Richland.

Benton County Buckeye
(J. Abel)

Watching Washington Butterflies with Bob Pyle

Number Eighteen

How About Those Monarchs?

On the fourth Saturday of August this year, Dr. David James led a contingent of WBA members on Washington's first ever mass monarch tagging exercise. It was a great success, with more than forty monarchs tagged along Lower Crab Creek just above where it meets the Columbia. This was the first season in years when the number of monarchs returning to Washington was high enough to produce an autumn flight large enough to support such an exercise. For some weeks, as monitored by Professor James, the monarchs could actually be called abundant at Crab Creek.

Monarch on loosestrife (Melanie Weiss)

So the participants of the tagging party, like many other people, will have greeted the news that the monarch butterfly has been proposed for listing under the Endangered Species Act with bewilderment, if not incredulity. How can this icon among American butterflies, once proposed in Congress as our National Butterfly, this common companion of childhood for generations, possibly be *threatened with extinction*?

It is true that the immediately recognizable, citrus-orange glider we call the monarch has been almost ubiquitous in many parts of the continent for much of the past century, and likely long before. But its numbers on the famous overwintering grounds in Mexico last winter were fewer than 10 % of what they were in the 1990s, and its breeding habitat in the Midwest--the breadbasket of monarchs—has been reduced by millions of acres in recent years. The petitioning parties are the Center for Biological Diversity, the Center for Food Safety, the Xerces Society for Invertebrate Conservation, and Professor Lincoln P. Brower, of Sweet Briar College. You can read many more details in their press release, here: http://www.xerces.org/after-90-percent-decline-federal-protection-sought-for-monarch-butterfly-2/

The entire species *Danaus plexippus* is not in equal jeopardy everywhere it occurs. But the main subspecies, *D. plexippus plexippppus*, is certainly at risk as a whole. Introduced populations from Hawaii to Australia are subject to fluctuation and a variety of extinction factors as well as genetic isolation, and could not be counted on to restore the native North American population if it drops out. Nor could the non-migratory populations that occur in parts of the Neotropics and are vulnerable to drought, development, and many other threats. The core of the species, and the core concern, is also the grandest butterfly spectacle in the world: the migratory North American monarchs. These were declared a threatened phenomenon almost thirty years ago by Professor Brower and myself, in the IUCN Invertebrate Red Data Book and elsewhere. However, the subspecies as a whole must now be deemed threatened by extinction, for if the central population goes, the introduced and non-migratory outliers will surely follow eventually. So it's true: the monarch is in serious trouble. How did this sad state come to pass?

Monarchs overwintering on cypress trees in Pacific Grove, California. (Wikipedia user Agunther)

We have known for decades that the Mexican wintering grounds were declining owing to illegal logging of the essential oyamel firs in the Michoacan highlands; and in their much smaller California colonies, because of property development, tree cutting, and drought. But it is only in recent years that the problem has quickly grown to critical proportions, largely due to influences in the northern breeding range rather than in the winter quarters.

The key lies with the monarchs' necessary caterpillar food plants: milkweeds, and only milkweeds. For the last century, the monarchs got on fine with the farmers, utilizing harmless milkweed that thrived in the field edges and corners, hedgerows and windrows. But in this century, Monsanto has introduced herbicide-tolerant, genetically modified soy, corn, and other crops, which farmers have little choice but to use, and this binds them into massively increased use of glyphosate herbicide, also manufactured by Monsanto. This expensive and reckless cycle is already generating glyphosate-resistant weeds; but it has also led to the destruction of millions of milkweed plants across the Midwest. And the monarch numbers have plummeted in response. Many now consider "Monsanto" the antonym of "monarch."

Showy milkweed *Asclepias speciosa*. (Wikipedia user Yvan Leduc)

In my book *Chasing Monarchs*, I tell the tale of an epic trek to follow the monarch migration in the West. Along the way, I fill in the natural history of monarchs and their amazing migration, and also parse the long history of efforts to conserve them and their habitats, both in the North and the South. I like to call it "the Monarch of the Americas," since all three North American countries enjoy the migration through their territory, and hold it jointly in their care.

The listing process will probably be lengthy, involving much debate. So far, most of the monarch scientists and conservationists, including me, support it. If a listing of threatened or endangered species comes about, there may be many repercussions. But the petitioners have taken care to stipulate that ongoing monarch science and citizen science—such as schoolchildren raising wild local monarchs in their classroom, and the tagging of monarchs for migration studies—should not be unduly affected by restrictions Nor should the burden all fall on the farmers. As ethnobotanist and author Gary Nabhan, co-author of *The Forgotten Pollinators* and co-founder of the consortium Make Way for Monarchs, has written, "Farmers already are, and will continue to be, part of the solution to recover the monarch butterfly populations; much of the milkweed restoration work that has already begun is within our nation's farmscapes. We hope that a broad spectrum of participants across the entire food supply chain—from fertilizer and herbicide producers to restaurant owners and consumers—will begin to invest in farmers' efforts to restore habitat for monarchs and other pollinators on private lands." The listing should help this collaborative process to happen.

Monarch caterpillar from New Zealand. (Wikipedia user Antilived)

A few days after the extraordinarily detailed, 159-page monarch petition was lodged with the Department of the Interior, we marked the 100th anniversary of the extinction of the passenger pigeon. There, too, was a hugely abundant organism that no one thought could possibly become extinct. Yet for a variety of reasons, it did. While some may consider monarch listing to be an overreaction or premature, I think of it as a properly cautious use of what I call the Passenger Pigeon Principle: if we don't do everything we can now to protect and perpetuate our once-abundant wildlife species, they may well become the passenger pigeons of tomorrow.

When the pigeons were finally gone, the skies were wiped clean of these beautiful and valuable birds that once darkened them for hundreds of miles. Shall we also watch our most beloved butterflies, which have always brightened our childhoods and lifted our glad hearts—Canadians, Mexicans, and Americans alike—be wiped away as well? I, for one, do not want to wait to find out. Listing might or might not make the difference, but it seems the least we can do for monarchs now. And far from being hasty, I only hope that we are not too late.

Species Profile: Sylvan Hairstreak (*Satyrium sylvinus*)
by Dave Nunnallee

Satyrium sylvinus adult

Hairstreaks belong to the large worldwide family Lycaenidae, which also includes all blues, coppers and metalmarks. Hairstreaks are small butterflies, often with tail-like extensions or "hairstreaks" on their hind wings, particularly in members of the genus *Satyrium*. In Washington State there are eighteen species of hairstreaks, six of them in the genus *Satyrium*. Butterflies in the genus *Satyrium* fly in mid-summer, peaking in July, and are highly prized by butterfly enthusiasts.

The reported flight period in Washington extends from early June to mid-August. The Sylvan Hairstreak is relatively uncommon, and is confined to well-defined colonies where it can be found year after year. Typically colonies are found where Coyote Willow (*Salix exigua*), the preferred larval host plant, occurs together with a good nectar source such as Showy Milkweed. As Coyote Willow usually occurs along waterways and wet ditches, so too does the Sylvan Hairstreak.

The Sylvan Hairstreak occurs in two forms, a light form which is placed in subspecies *sylvinus*, and a darker form in subspecies *nootka*. *S. s. sylvinus* flies a little earlier in the year, typically in late June to mid-July, and is clearly associated with willows, especially *Salix exigua*. *S. s. nootka* flies as late as mid-August at higher elevations; its larval food plants are surely willows as well but the species are not known with certainty.

Satyrium sylvinus eggs

Satyrium sylvinus is a strictly western North America species, occurring from British Columbia south to Baja California, and east into the western parts of the Great Plains. Within Washington State *S. sylvinus* is mostly restricted to the east side of the Cascade Mountains, occurring in the foothill and mountain areas surrounding the Columbia Basin, but also sparsely in a few colonies within the west part of the Basin itself. This species does also occur in western Washington, but is limited to small areas in the Olympic Mountains, also in Mason County, and along the west slopes of the Cascades in the southern part of the state.

Eggs are laid on the host plant, usually *Salix exigua*, in July. The eggs have a normal Lycaenid ("flattened tennis ball") shape, but are unusual in that they have a very dark color and are attached to the host plant with a tough, shiny, glue-like substance. The eggs are placed in a protected location such as a narrow crotch in the smaller twigs of the host plant. Eggs remain unhatched until the following spring, whereupon the larvae eclose and leave the egg shells uneaten. The larvae feed on tender new deciduous host plant leaves, eating holes clear through. About 50 days after hatching the larvae reach a length of about 17 mm and pupate. After an additional 12 days or so the adult butterfly ecloses, and the cycle is repeated.

Satyrium sylvinus larva

Adult Sylvan Hairstreaks are easily separated from all Washington hairstreaks except *Satyrium californica*, the California Hairstreak, with which the dark *S. s. nootka* form is often confused. The Sylvan Hairstreak is generally less heavily marked on the ventral hindwing than is *S. californica*. *S. sylvinus* has fewer marginal orange spots above the blue 'thecla' spot (usually only one, sometimes a second pale one) than *californica* which has several such spots. Both species have a second row of black spots lying proximally (toward the body) from the orange band, but in *californica* these spots are more chevron-shaped than in *sylvinus*. Most notably the black spot proximal to the blue 'thecla' spot is distinctly chevron-shaped in *californica* but nearly straight or flat in *sylvinus*. Interestingly, while the adults may be confusing, *S. californica* and *S. sylvinus* are distinct and easily separated at all immature stages.

Satyrium sylvinus pupa

Adults of *S. sylvinus sylvinus* are often found in the higher shrub-steppe, and up to the lower timber line. Watch for this species in July wherever you find blooming Showy Milkweed and Coyote Willow (the larval host plant and a good nectar source) together.

All photos this page by David Nunnallee.

Bob Hardwick 1942-2014

Robert Hardwick (Bob) Age 72, passed away unexpectedly at home in his sleep on September 4, 2014. Born in Bellingham on April 6, 1942, he resided in Gig Harbor for the last 25 years. He graduated from Bellingham High School in 1960, received his Bachelor's of Education from WWU in 1964 and received his Masters of Education from University of North Carolina in 1970.

Bob exuded joy and enthusiasm and made people feel at ease with his friendly, vibrant, and outgoing nature. He had a love for teaching, and taught science classes at Stadium High School for 27 years. The study of butterflies was his focus. He wrote a book, The Butterflies of Washington, a compilation of his lifetime of study and the first of its kind with color photographs and descriptions of every species in Washington State. He also led numerous field trips and gave presentations as a member of the Washington Butterfly Association (WBA). Bob enjoyed hiking, camping, traveling, gardening, fishing, and spending time in nature collecting and photographing butterflies, including one that had been considered extinct. He and his wife traveled for leisure to countries in Europe, Central and South America, and he taught science at an international school in Lagos, Nigeria for three years in the early 1970s.

Bob was very involved with and loved by his family. He is survived by his wife of 50 years, Jean; daughters Diane Wilson (Jeff), Melissa Lee (Rob), and Jennie Bevan (Dave); son Jeff Hardwick (Alison); six grandchildren: Zach, Jake, Rachel, Matthew, Claire, and Cody; and brother Charles Hardwick (Angela). He was preceded in death by his parents Donald and Dorothy (Dempster) Hardwick, and his sister Donna Jean Benish. In lieu of flowers, donations may be made to WBA. Please sign the online guestbook at www.havenrest.com .

Sheep Lake, Sept. 6 was the last WBA field trip of the year. Unfortunately Bob, the leader, died two days before the trip. Some members decided to go anyway, and to spend time at the lake reminiscing about Bob.

New Bylaws

The North American Butterfly Association (NABA), of which WBA is a chapter, has substantially modified its bylaws. Before the WBA Board decides whether or not to sign and accept these bylaws, we would like your thoughts. An email or special edition of the G'num will follow shortly with those bylaws for your review and comment.

Recent Programs

At our September "Share the Wealth" meeting, Dave Nunnallee led off with the Clodius Parnassian as the species of the month. Three ladies (now all using identical cameras) showed some gorgeous images: Marty Witt showed butterflies from southern Florida. Cathy Clark showed not only butterflies but some spectacular, vividly-colored larvae including a large hornworm and an anise swallowtail larva. Melanie Weiss showed close-ups of monarchs from Lower Crab Creek, including an unusually light morph, which led to a discussion of the white monarchs in Hawaii and elsewhere. Gary Bernard showed striking video of an eastern swallowtail flashing from black to iridescent blues as the wings flapped. Al Wagar showed bits of two work-in-progress DVDs, a butterfly ID video we might review each spring, and a stand-alone outreach video "The Lives and Times of Butterflies."

Upcoming Programs Continued from Front Page

November 5: Wildfire and Habitat Recovery. Jim Cronan is a Research Scientist for the Fire and Environmental Research Team at the US Forest Service, Pacific Northwest Research Station in Seattle and a PhD Candidate at the School of Environmental and Forest Sciences at the University of Washington. He has been studying fires and their effects on natural communities for 12 years. He is interested in how vegetation recovers from this unique disturbance, specifically how characteristics of fire can produce a range of ecological outcomes. This type of research is important because it increases our ability manage fire in ways that produce higher quality habitat for rare species and increase biological diversity. Join us and learn more about fire, and its dynamic relationship with plants.

December 3: Digital Insect Collecting by Richard Palmer, member of Scarabs: The Bug Society.

Richard Palmer is interested in collecting insects, but doesn't want to bother with storing delicate specimens and/or keeping them from being eaten up by other insects. He has a system for documenting the insects he sees with the camera, while at the same time keeping full scientific data about each one. All of this ultimately results in additions to the vast online database that is BugGuide.net. Come see how Richard does it.

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