



G'n^um*

The newsletter of the Washington Butterfly Association
P.O. Box 31317 Seattle WA 98103
www.naba.org/chapters/nabaws

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



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Monarch by
Jeanne Dammarell

Upcoming Programs

December 4: Restoration of Taylor's Checkerspot in Washington: Species and Habitats. Mary Linders, a highly respected naturalist from the WA Department of Fish and Wildlife, has led the program of restoring the Taylor's Checkerspot Butterfly (*Euphydryas editha taylori*) and its prairie habitat in the Fort Lewis and South Sound area. She will discuss WA state's unique prison program, the Sustainability in Prisons Project, which assists in rearing butterflies for release as well as in restoration of previously occupied prairie habitat. Mary is an excellent presenter.

January 25: Winter Party, no scheduled program.



Mary Linders surveys for Taylor's Checkerspots on the artillery range at Fort Lewis. (Regina Johnson)

Trip Reports

With three August trips in a row all cancelled due to weather, one carload made a final effort and hiked the Naches Loop Trail on August 31, suggested by Melanie Weiss who'd been doing butterfly surveys there for the Park Service. The weather and scenery were glorious and lots of flowers were still in bloom. The 5-mile loop goes through Mount Rainier National Park and then crosses into the William O. Douglas Wilderness on the Okanogan-Wenatchee National Forest.

Overall, we saw 14 species of butterflies, and in good number, especially frits and blues, plus a group of young dusky grouse chasing grasshoppers. They were nearly grown but this year's chicks.



Vantage-area bighorns,
photo by Melanie Weiss.

Still not giving up, David Droppers organized a trip to the Vantage area in search of the day-flying moth *Hemileuca nevadensis*, the Nevada buckmoth, which flies very late. Merrill Peterson found its larvae in the area 15 years ago. This group also hit great weather and had a fine trip. The moth wasn't found, but 6 species of butterflies were still out, including both clouded and orange sulphurs. For an extra thrill, a band of 13 bighorn sheep posed nearby.

There were no late season field trips on the Far East side of the state. Several lepidoptera lovers have continued to keep up some contact with John Baumann and have reported that we enjoyed a good seven month long butterfly season, spanning roughly from late March to October 22nd, when Jeanne Dammarell sighted several late flyers at Coffeepot Lake in Lincoln County. She found fresh Purplish Coppers, Mylitta Crescents and others, a full week later than I had ever seen any butterflies out in this area before! On the down side, the intense heat and dry weather in July appeared to reduce numbers of higher elevation butterflies at locations like Mt Spokane, where Painted and West Coast Ladies are usually common, but this year were not be found there. On the other hand, other migrants, like the Red Admiral and the Monarch, usually very uncommon, were both located at several places. New locales were located for the Coral Hairstreak, at Twin Lakes, Lincoln Co., and the Dun Skipper, at the Little Pend Oreille Wildlife Refuge during its 2nd annual Fourth of July Butterfly Count, the Two Banded Checkered Skipper and the Pacuvius Duskywing, both at Horseshoe Lake, Pend Oreille County. Stay tuned for next season's field trips! I will be interested in having our group explore the scablands more closely for the 1st trip, and then scout out Liberty Creek Trail, along the Idaho border.



Coral hairstreak by Jeanne Dammarell

President's Message from Richard Youel

WBA Annual Conference 2014

At the 2013 conference last year we explored a new area for many of us, the Goldendale area. This year the Board has supported the suggestion of our field trip leaders for an even less explored new area for us in selecting the Moscow, Idaho area as the site for our next conference. This will be new butterfly territory for most of us and it should be fun. It is located a little east of Pullman, WA (and WSU for you Cougars) at the east edge of the Palouse and the Columbia Basin where it transitions to the Rocky Mountains. It will be interesting to explore a part of the region many of us don't know very well.

The exact location is subject to further investigation, but Moscow, ID will be the general area. We haven't yet chosen dates for the conference. We are thinking mid-June. Our best planners are working on it and we'll give you specific information as soon as we decide.

This should be a special conference for members from all parts of the state.

WBA Winter Party

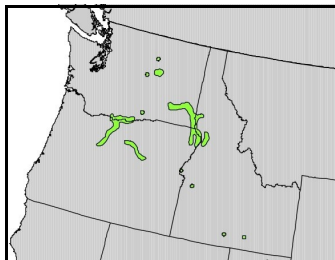
The date for our annual Winter Party is set for January 25. At the butterfly doldrums point in the year we celebrate the turning point with a potluck dinner, fun white elephant gift exchange and general good fellowship. More details will follow. Put it on your calendar.

Watching Washington Butterflies with Bob Pyle

Number Fifteen

Are There Hackberry Butterflies in Washington? Part Two: The Expedition

As I wrote in the first half of this report (WWB # 14, August, 2013), an October, 2012 sighting by lepidopterist Ray Stanford in Hell's Canyon suggested the presence of Hackberry Butterflies in Washington: a presence I had been looking for among the scrubby patches of Net-leaf Hackberry (*Celtis reticulata*) for many years. According to Ray's research, this tree occurs in riparian Cascadia thus: sparingly in Douglas, Grant, Okanogan, Klickitat, Benton, Franklin and Walla Walla counties, thickening along the Snake and its tributaries down through Whitman and Asotin counties to Idaho, where it grows from Nez Perce County south into Twin Falls, Cassia and Oneida counties; and in Oregon south of the Columbia from Wasco through Morrow and Jefferson counties, along the John Day into Wheeler and



Net-leaf Hackberry range (USGS)

Grant counties, and along the Snake in Wallowa and Baker counties. Hackberry headquarters lie farther southward through eastern Nevada, most of Utah, and all over the Southwest. So while Washington is much removed from the nearest records of the butterfly, it has its hostplant in plenty. The continuity of potential habitat renders the insect's occurrence here quite possible. Ray suggested an expedition to confirm his sighting, and such a foray was duly planned for last month. But first, to my surprise, came another sighting report!



Net-leaf Hackberry habitat.
(David Branch)

On September 20, 2013, Charles Rogers (unaware of Ray's report the previous fall) wrote to share what he suspected was an another *Asterocampa* encounter in Washington. Remarkably, it was also Charles who had turned in the second Variegated Fritillary sighting, after David James, the previous year—resulting in the state record for that species being shared by the two of them. So had he now confirmed a second new butterfly for the state's fauna?

Whereas Ray's dalliance with likely Hackberry Emperors had taken place just north of the Oregon state line along the Snake River, Charles's surprising episode transpired some six or seven miles farther north, as he describes here: "About 1.5 miles downstream on the Snake River Road from Heller's Bar in Asotin County, just past the point where the road curves from south to west. On the river side of the road there is a ten- to fifteen-foot vertical drop. Hackberry trees grow from the bottom of the drop with tops about five feet above the road level. These trees are in fresher condition than most hackberry trees along the Snake River Road."

And with his permission, here is Charles's narrative of the exciting meeting: "On September 19, 2013, at about one pm, I walked up to a hackberry tree on the river side of the road. As I was looking at the top of the tree, a dark brown butterfly flew across it and disappeared on the other side. I only saw it for about five seconds, looking down on its topside, at a distance of about six feet. It seemed a little small for a Hackberry Emperor, but the color of this butterfly was consistent with that species, and I could not connect it with any other Washington butterfly."

"I walked back and forth along the road for an hour. At about two pm, a second butterfly flew out of the trees and passed me at about three feet as it flew into a hackberry tree and disappeared. This butterfly was dark brown, and it had a bunch of white spots at the ends of the forewings. These spots were consistent with the Hackberry Emperor. I have not been able to find any other butterfly with the white spots match-



Hackberry Emperor (Butterfly)
(Wikipedia, Megan McCarty)

ing these. Again I was standing at the top of the tree looking down on the butterfly. This butterfly appeared about 50 feet away from the earlier butterfly in a different tree. Again I saw it for about 5 seconds. The only other butterflies appearing at this location were Cabbage Whites. I saw no other butterflies even remotely resembling these two in three hours of looking elsewhere along the road.

"On September 20, 2013, I returned to the same location at ten am. There were no butterflies seen until about noon when Cabbage Whites appeared. At 12:10 pm a larger butterfly came out of the trees and flew along the road for more than 50 ft before going back into the trees. This one flew like a Painted Lady, but it was not orange. Rather it was tan, not as dark as the two butterflies seen the day before. I believe this butterfly was consistent with a female Hackberry Emperor. The trees that it flew into were Hackberry. I saw this butterfly for about ten seconds at a distance of twenty feet. After another hour I had not seen any more butterflies and left for home."

Charles concluded, "It seems clear to me why these butterflies have not been previously reported. They were extraordinarily difficult to observe. I found binoculars, net, and camera all useless. If I had not been standing at the top of the trees looking down, I probably would not have even seen them. Whoever first catches or photographs these butterflies will succeed more out of luck than of skill. After five hours of observation at this location, I saw these three butterflies less than twenty seconds total."

So it sounded as if a), there was even more reason to conduct a search for Hackberry Butterflies in Washington; and b), we would have our work cut out for us. My field companion Dr. David Branch, of Seattle and Roslyn, met me in Richland late on September 29, to see what we could do. The weather looked good, and the timing seemed right, just ten days after Charles's sightings, and a little earlier than Ray's.



David and I reached the town of Asotin, at three pm on the semi-sunny afternoon of September 30, temperature in the sixties. Afraid of losing the sun to the canyon's lengthening shadows, we charged into the first hackberry stand we found, along the riverside bicycle path just north of town. No emperors appeared, but Cabbage Whites and Sachems abounded on the rabbitbrush, along with a few Juba and Common Checkered skippers. By the time we reached Heller Bar, the sun was indeed gone for the day and evening was coming on cool. We'd contemplated camping, but the gravelly campground was full of fishers' trucks and rain portended, so we took lodging at the very comfortable Vic and Dawna's Hells Canyon Lodge. After a fine repast, we played eight-ball pool and drank good ale to quell our excitement, as we importuned sun again for the morn.

Bob Pyle hunting Hackberry Butterflies (David Branch)

And lo, the morn came sunny! Soon we located the stretch of road where Charles had made his brief sightings. Nothing appeared directly, but we had a secret weapon. Emperor butterflies are not big nectarers, but they avidly come to rotting fruit, scat, carrion, and other sweet or pungent inducements. I had been squirreling ingredients for some time, and the previous evening had concocted a killer bait: frozen, thawed, and now rotting apricots, cherries, cherry tomatoes, and overripe bananas; several cans of old cheap lager; and a bottle of even older, absolutely execrable organic Kahlua. With all these stirred and stewing in the morning sun, we set out to paint the town—the hackberry town—with our disgusting and irresistible potion.

For the next several hours, David and I split up and worked the roadside and rivershore above, among, and below the dispersed groves of hackberries. We discovered that their purple fruit, small, firm berries, very sweet but mostly seed, were ripe, and we both OD'd on them; I wished we'd had a couple of pailsful of crushed ones to go in our king of butterfly baits.

Back and forth we walked, seeing no brown smudges, streaks, or flickers. At one point a dark butterfly shot through and David adeptly netted it. The Red Admirable went crazy over our bait when placed on it, until a fishermen's truck rumbled past and scared it off. In fact, the big fishing action detracted pretty substantially from an otherwise gorgeous day in

a deeply gorgeous place. There was a big run of fall chinook and steelhead in the Snake, and hundreds of fishers had converged to try their luck with them. The fly-fishers on shore were fine; but most of the anglers screamed and roared up and down the river in big, very loud boats. Then the Asotin County Sheriff's crew showed up with two speedboats and two jet-skis, and practiced squirreling around a little rapid right offshore of our hunting grounds, for hours. But they couldn't entirely spoil those vistas of serried stone and water. We took solace in the beauties of the day, and in the certain knowledge that among all these noisy recreators, we were the only people hunting Hackberry Butterflies.

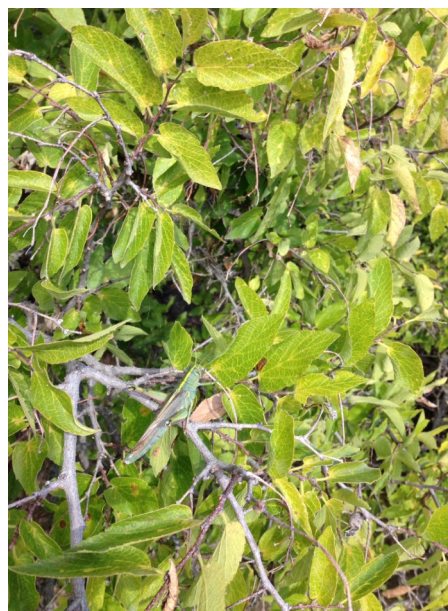
The roadside, though dry and dusty, produced a Clouded Sulphur, many Cabbage Whites, one Becker's White, one Northern White Skipper, and one bright, fresh little male Acmon Blue, apparently a county record—and, yes, of course



Hackberry Butterfly larva (Jim Brock)

there was blooming Snow Buckwheat (*Eriogonum niveum*) above us in the rim-rock. Along the basalt boulder shore, three species of asters were blooming (yellow, small mauve, larger purple) along with *Gaillardia*. Nectaring and flitting among them were several skippers—Juba, Sachem, and one worn Woodland; a singleton Gray Hairstreak; and one stunning, brand-fresh female Western White, evidence of a late, probably third, generation. But no matter how many times we scanned and net-flicked the crowns of the hackberries, or how often we inspected every bait-daubed stone, trunk, and log, not one *Asterocampa* candidate ever appeared—only drunken cadres of wasps and flies.

As the day waned, we fell back upon the next best thing: hunting chrysalides and spent pupal cases among the hackberry leaves themselves. We examined hundreds and hundreds, and spotted a great array of galls, insects, and others inhabiting and exploiting that sandpapery foliage. Several times I got all excited by the pale little crickets that inhabited the center of folded leaves just as the plump green pupae and their pallid, papery leavings do. The chief impression I gained from this exercise was this: if Hackberry Emperors do in fact inhabit this stretch of the Snake (and based on Ray's and Charles's reports, I suspect they do), they must exist, so far, at very low levels; for I detected almost no feeding damage on the leaves of the sort that Hackberry Butterfly larvae characteristically make. And, we may have been just too late.



Not a butterfly on the hackberry, but a grasshopper. (David Branch)

As the sun once again dipped behind the western rim, signaling the end of a good try, we decided to explore the Grande Ronde River Road, and its offshoot Joseph Creek Road, at least as far as the Oregon border. We wanted to see whether *Celtis reticulata* trees were dense enough along these streams to warrant a search of them next time. (The Grande Ronde is as far as the road goes along the Snake; you can't penetrate Hell's Canyon southward into Oregon without going by boat, as Ray and Kit Stanford had done. So if you wanted to try to find the butterfly in Oregon without hiking down from Imnaha or entering Hell's Canyon far to the south, Joseph Creek might provide an option.) As it turned out, there are plenty of hackberry trees for some distance up the Grande Ronde from its mouth at the Snake near Heller Bar, very much worth a look; and some along Joseph Creek southward; but they disappear almost entirely as soon as you get to Oregon!

And that's where things got strange for the good Drs. Branch and Pyle. Having gone that far, we decided to exit the canyon by a route that appeared (in the DeLorme atlas) to head south, into Oregon, and then back around north to Asotin by a different route. However, the Joseph Creek Road seemed to be taking much longer to emerge onto the plateau than we expected, and was getting rougher, too. David's GPS had no opinion on the matter. After the third member of the party,

Loke the spaniel, stretched her legs with a beautiful stalk and chase after a band of chukars, we resumed climbing, now in rain. And by the time we at last squeaked out onto the high flats, the temperature—almost *hot* down along the sunny Snake—had dropped steadily to 31°F., and driving snow was coating the pines! Throughout that windy, rainy, wet, slow, long uphill drive, we tried to ignore the very reasonable fear of a tree fallen



Hackberry Butterfly pupa (Jim Brock)

across the road ahead. And that, even after pulling a 180, we could very well find yet another tree blocking our way back—compelling us to spend that cold, stormy night in a very wild spot. Then there was the matter of the rapidly dwindling fuel supply.

The "road" had almost petered out, and only the occasional lights of hunters' camps through the snow gave us to know that there might be a way out the other side. And then, in David's words, came "the metamorphosis from wind and snow to a dry dark sky with an eerie chartreuse slit along the western edge...then, to a cloudless black dome with the first horizon-to-horizon Milky Way that either of us had ever seen." Tension gave way to awe, then sheer exhilaration.

On our right, the steppe dropped into another great, dark void...which, by my reckoning, should have been on our left. Soon we learned why: When we finally emerged onto Forest Road 46 in the Oregon Blue Mountains, it was near a place I know intimately—Billy Meadows—but not *remotely* where I thought we were. In fact, on the completely opposite side of giant Joseph Canyon. Looking back, I blame it on the different scales between the Washington and Oregon atlases; certainly not on my navigation! David and I overnighted in a piney motel in Enterprise, after good Mexican food washed down with the redoubtable local beverage, Terminal Gravity IPA. We licked our wounds, solaced our broken hopes, and gave thanks that we weren't camping in the Explorer up there on those high snowy barrens.

The next morn, continents of fresh snow were stacked on the glittering Wallows across the valley. Not quite finished exploring, we worked our way back to Tri-Cities via several challenging passages across little-traveled corners of the Blues, through brilliant fall color, including a good many miles across high, windblown wheatfields on narrow ruts of roads. We emerged onto the Walla Walla valley near Touchet, where hundreds of Orange Sulphurs flashed among the duller Cloudeds over alfalfa. That brought our species total for the trip to a respectable thirteen, including one county record, even if we hadn't confirmed the state record we'd come for.

Oh, yes: so, are there Hackberry Butterflies in Washington? So it would seem, from the two sighting reports of careful observers; but you couldn't prove it by us. Unlike in the case of the Variegated Fritillary, the State Records Committee has decided not to count the Hackberry Emperor on the state list yet. This is partly because, while there is only one *Eup-toieta claudia*, there are three resident species of *Asterocampa* in the U.S. It is extremely unlikely that Ray and Charles saw either of the other two, the Tawny Emperor or the Empress Leilia, which occur much farther away (Texas and points east) than the Hackberry Emperor (Utah, maybe Idaho). But for a state record, "likely" isn't good enough. As Dave Nunnallee has written, "In these times of global climate change, species lists help to build a compelling case that our natural world is changing. But if the lists are of doubtful veracity, I think this damages our credibility and weakens the climate change argument." Dave argues, and I think rightly so, for "stricter, rather than looser, verification standards." I'm sure that these gents whose remarkable sightings raised the very question asked in these two columns would agree. Ray himself suggested that the Hackberry Butterflies are moving north with warming, as the Sachem has demonstrably done already. I strongly suspect that their identifications were correct. But in this, as in most cases, we need a voucher specimen or a definitive photograph to finally answer the question I posed in the titles of these two columns.

David, Loke, and I are already planning a return visit to seek the early summer generation of this beautiful, elusive butterfly of the hackberry groves. I hope Ray and Charles will go back and try their luck again too, and anyone else who manages to penetrate our extreme southeast corner. Just watch out for Joseph Creek in a blizzard—and good luck!



The butterfly hunter and his hound. David Branch and Loke on the Great Washington Hackberry Butterfly expedition. (Bob Pyle)

Species Profile: Pale Crescent (*Phyciodes pallidus*) by Dave Nunnallee

In Washington State we have ten species of butterflies which are loosely grouped as “checkerspots” owing to the cancellate or squarish patterning of intersecting lines on the wings. Our checkerspots are scientifically grouped into three separate genera, *Euphydryas*, the “true checkerspots” to many lepidopterists, *Phyciodes*, also known as the “crescents” and including this species, and *Chlosyne*, the remaining checkerspots. The genus *Euphydryas* can be distinguished by the very straight leading edge of its forewings, and *Phyciodes* can be distinguished by the presence of a distinct light-colored crescent-shaped mark near the outer margin of the ventral hindwing. *Chlosyne* lacks the crescent-shaped mark.



Phyciodes pallidus is found only in western North America, from SE British Columbia through the interior to northern Arizona, west to Nevada and east to eastern Wyoming. This is a relatively rare species in Washington, occurring only east of the Cascades in shrub-steppe habitat. Occurrences are in small isolated colonies primarily in northern Okanogan County, also along the Columbia River just south of the Okanogan. There are also colonies along the Snake River north and east of the Blue Mountains and in a few spots along the Columbia River in Klickitat County.

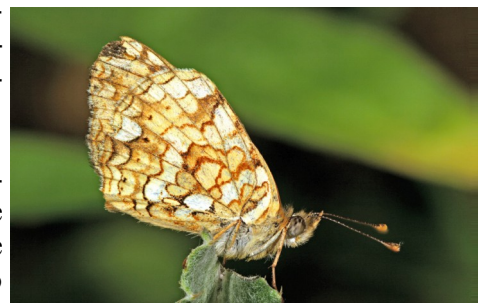
The Pale Crescent has a short flight period in Washington, found on the wing from early May to early July, and is single-brooded throughout its range. After mating the female lays large masses of eggs in late May on its native thistle host plant, typically *Cirsium undulatum*, Wavy-leaved Thistle. Eggs are laid on the underside of the thistle leaf, apparently always on younger (but not necessarily small) plants which do not yet have flower stalks. The eggs hatch ‘en masse’ and the young larvae live communally in very loosely-



woven silk nests usually in a fold of the thistle leaf. First and second instars bore completely into the thistle leaves where they remain out of sight while feeding on the internal layers, but later instars are too large to remain inside the leaves and stay on the surface. Each larva is tethered with a single strand of silk, anchoring it to the communal nest or adjacent thistle leaf. The larvae are supposed to diapause from late summer through the winter in the 2nd or 3rd instar, however when reared in captivity up to a third of the larvae may develop through to the pupal stage and eclose to 2nd brood adults while the remainder diapause as predicted. When the thistle host plants develop fresh growth in the spring the surviving larvae disperse to feed. If disturbed the larvae coil into a ball and tumble to the ground as a predator-escape response.



Phyciodes pallidus adults are often confused with the very common Mylitta Crescent. Mylitta can usually be differentiated by size, being much smaller than *P. pallidus*, however one sometimes encounters very large female Mylittas so this character alone is unreliable. Dorsally, females of the two species are almost inseparable, but males of *P. pallidus* are characterized by fewer lines and markings, the dorsal hindwing in particular being less heavily marked, often with a large clear patch. Ventrally the two species are more easily separated, *P. pallidus* being much lighter in color than *P. mylitta*. In *P. mylitta* the VHW is boldly marked with contrasting dark and light bands, and the “crescent” along the border is surrounded by dark coloration causing it to stand out strongly. In *P. pallidus* the VHW is much lighter with only subtle banding and the crescent is only mildly accented by slightly darker surrounding scales.



Pale Crescents are found only in dry shrub-steppe habitats where native thistles grow. Males eclose and fly before females, and adults of both sexes can be found nectaring on flowers. Adults seeking nectar may wander a short distance from their larval host plants but are more easily found in close proximity to their native thistles. Males perch conspicuously, challenging all fliers-by searching for mates, but the females are much less conspicuous, usually remaining low in the vegetation. (All photos this page by David Nunnallee.)

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