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Winter Insects *Ron Lyons*

It is winter on the coast, and like everywhere else in Oregon and the Pacific Northwest, arthropod activity has dropped off. But it is not zero. Certainly there are some species that are active mainly during the winter, but there are also occasionally some that one would not normally expect to find.

The last couple of years I have found at least one adult beetle of *Ellychnia* (Coleoptera: Lampyridae), a diurnal firefly, on the wall of my house in January. My records for this location extend well into August. This year, however, one individual appeared off and on between November 21 and December 12.

At the recent Northwest Lepidopterists' Workshop, I presented some work on the question of overwintering *Vanessa* butterflies (see page 9). In connection with this presentation, I began to search out and photograph late season butterflies along Oregon's south coast. During October I encountered 6 species—*Colias* sp., *Nymphalis californica*, *Coenonympha tullia*, *Adelpha californica*, *Vanessa atalanta*, *Vanessa cardui*, and *Vanessa virginiensis*. Several trips in November to Humbug Mountain State Park and Arizona Beach State Park, both in Curry County, did not turn up any butterflies. (It is possible at least one species was there, but one never knows.) On December 23 and 25, I found a single *Vanessa virginiensis* at Bullards Beach State Park in Coos County. On both days it was basking in the sun on the lea side of a small sand ridge. These dates are several weeks later than my previous late date for this species (December 6, 2015), and suggest I might find this species present in January.

I can use my photographs to determine which individuals I have encountered multiple times in a given location. For butterflies, the wing markings and scale patterns, in some cases, can be used to determine uniqueness. (Some other insects have prominent markings that could be used.) When the images of a given individual are closely spaced in time this approach works well; it is probably less certain when the images are separated by a long period due to the changes caused by wear and tear. However, the number of late season butterflies is small, so the comparisons can

be made quickly. The individual found in December at Bullards Beach was not one of the 3 individuals I found there in October.



Ellychnia sp. found near Bandon in Coos County, Oregon on December 11, 2017. The obscured part of the lower reddish arc can be used to identify this individual. Photo by Ron Lyons.



Vanessa virginiensis (American Lady) found in Bullards Beach State Park, Coos County, Oregon on December 25, 2017. Photo by Ron Lyons.

Feel free to distribute this newsletter to others.

Submit content to **Ron Lyons** <pondhawk@uci.net>. To be included on the distribution list contact **Jim Johnson** <gomphusjim@google.com>.

Funding Opportunities

Pacific Northwest Lepidopterists' Fund in Honor of Harold Rice

"In honor of Mr. Rice, we [the Oregon State Arthropod Collection (OSAC)] have allocated funds to support the community of Pacific Northwest lepidopterists to which Harold belonged. In particular, we hope the fund will encourage and facilitate the valuable research, work and contributions made each year by individuals, who like Mr. Rice, were not employed fulltime as lepidopterists, yet spend much of their personal time and resources collecting and studying these amazing creatures."

– excerpted from the Fund's write-up

This fund, which provides one or two awards for up to \$500 each, is given annually to encourage activities directly related to PNW Lepidoptera and/or activities related to the improvement of OSAC's Lepidoptera collection.

More information, as well as directions for how to apply, can be found at [http://osac.oregonstate.edu/PNW LepidopteristsFund](http://osac.oregonstate.edu/PNW_LepidopteristsFund). The website contains a sample application. For full consideration, applications must be received by January 31; late applications will be considered if funds are available.

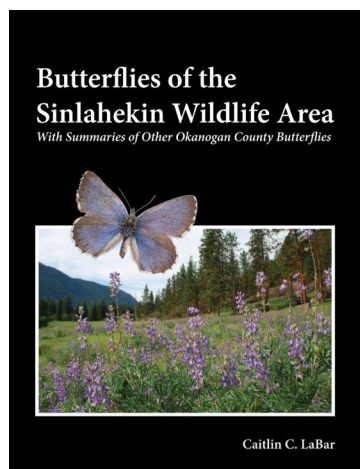
New Publications on Washington Butterflies

The following books written by Caitlin LaBar will be available from her new website which will be launched soon: <http://www.northwestbutterflies.com>. Watch her blog, <http://northwestbutterflies.blogspot.com>, for the launch announcement.

Butterflies of the Sinlahekin Wildlife Area, Speyeria Press, 2017, \$55.50

This book describes and illustrates the 124 butterfly species of Okanogan County along with maps of the 92 species found on or

near the 14,314 acre Sinlahekin Wildlife Area in north-central Washington State. Although this book focuses on the Sinlahekin, only 31 of Washington's 155 butterfly species are not found in Okanogan County, making this book useful for much of the state. It contains images of 691 specimens and many other live adults and immatures, and is one of very few books to illustrate many less-than-perfect specimens,



If you have any questions (e.g., am I eligible?, would this project qualify?) or need some advice on writing your proposal (e.g., how specific do I need to be?), please contact Chris Marshall at OSAC, Christopher.Marshall@oregonstate.edu.

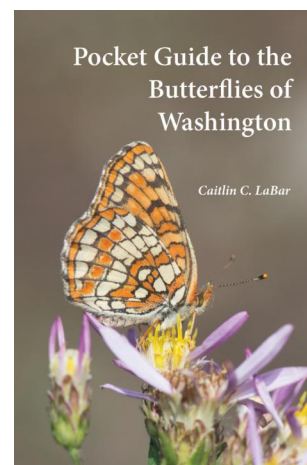
US Fish and Wildlife Service Section 6 Opportunity—Oregon

The US Fish and Wildlife Service and the Oregon Parks and Recreation Department have requested proposals for rare invertebrate research projects to be funded under their section 6 program for fiscal year 2018. Funds will be available to study federally listed, proposed, and candidate invertebrate species, and conduct status surveys for species of special concern in Oregon. Project budgets need to show 25% non-federal matching funds. The money from these grants will be used for projects in the 2019 field season, and projects are expected to be completed by December 31, 2019. Proposals, with estimated costs and match amounts, need to be submitted to Eleanor Gaines at the Oregon Biodiversity Information Center by February 1, 2018. If you are interested in submitting a proposal, please contact Eleanor at egaines@pdx.edu for information on the proposal format and the funding timeline.

which grants the user a more realistic idea of what they might see in the wild. It also contains many helpful tips on identifying difficult species such as duskywings, blues and fritillaries. At 296 pages and 3 pounds, this is a reference book, not a pocket guide!

Pocket Guide to the Butterflies of Washington, Speyeria Press, 2017, \$18.50

This 42-page guide covers all 155 butterfly species recorded in Washington. Specimen images are used to illustrate nearly all of these species, together with short tips for identification, providing an easily comparable standard. The goal of this booklet is not to replace field guides or other reference texts, but rather to supply a lightweight, quick reference guide that can easily be thrown in a pack. The spiral binding allows you to easily view the pages with one hand while holding a butterfly or camera in the other hand for identification. A list of books and other resources is included for those who wish to learn more details about these and other species.



Northwest Lepidopterists' Workshop 2017

On 21–22 October 2017, just over 50 people gathered in Cordley Hall on the campus of Oregon State University for the 39th annual workshop for lepidopterists of the Pacific Northwest. The meeting was hosted by Drs. Paul Hammond and David McCorkle and sponsored by the Oregon State Department of Integrative Biology and the Oregon State Arthropod Collection (OSAC).

Oral presentations were made by David Maddison, Chris Marshall, Ann Potter, Dana Ross, Paul Hammond, Bob Pyle, Glenn Goerlick, David Specht, David Lee Myers and Ron Lyons.

On Saturday afternoon Chris Marshall hosted an open house in the Oregon State Arthropod Collection. The butterfly collection recently donated by Dr. Bill Neill of Portland was on exhibit. The Saturday evening keynote address was given by Drs. Robert Pyle and Paul Hammond.

In the pages that follow, I (Ron Lyons) have summarized most of the presentations, as well as some of the other conversations. Dana Ross summarized his own contributions. The summaries have been looked over and enhanced and/or corrected as necessary by the various speakers. Resources (in print and online) mentioned at the meeting are included with the relevant material.

The groups of Lepidoptera for emphasis this year were:

- Butterflies: Whites (Pierinae), Swallowtails (Papilionidae) and Green Hairstreaks (*Callophrys*)
- Moths: tiger moths (Arctiidae), *Catocala* and other Erebidae

A sample of specimens of *Cercyonis oetus*, showing their undersides, from the collection of Dr. Bill Neill recently donated to the Oregon State Arthropod Collection. Photo by Ron Lyons



David Maddison—Welcome

David Maddison, Director of the Oregon State Arthropod Collection (OSAC) and professor in the Department of Integrated Biology, welcomed the group on behalf of the University, the Department, and the OSAC.

David indicated that he and Collections Manager Chris Marshall are interested in building a fossil collection at the OSAC. Towards that end they have acquired some pieces of Burmese amber (Cretaceous period about 100,000,000 years ago) from dealers over the internet. While he and Chris were particularly interested in the fossil beetles, the image he showed taken through one of the pieces featured a number of small moths that had been trapped there during the age of dinosaurs.

David suggested that the group members consider mounting a

display in the exhibit area of the meeting room of the Department of Integrated Biology to showcase their work. The area currently contains art work from the scientific illustration class that David recently taught and other exhibits are planned.

David said that Cordley Hall, where the arthropod collection is housed, has a number of serious infrastructure problems and is at the top of the university's renovation list. As a member of the renovation committee, David indicated that the planning stage was well underway. One of its goals is to improve the arthropod collection in several ways, including by housing it in a climate controlled environment. It is expected that the renovations will be completed around 2023, but in the meantime, there will be some significant disruptions.

Northwest Lepidopterists' Workshop 2017 (cont.)

Chris Marshall—Oregon State Arthropod Collection (OSAC) Update

Chris Marshall, Curator and Collections Manager of the Oregon State Arthropod Collection (OSAC), updated the audience on the OSAC's ongoing contributions to LepNet, the NSF-funded collaborative butterfly digitization project. He reported that the database now contained about 60,000 of the ~120,000 records from the OSAC Lepidoptera collection. The swallowtails are almost completed; the pierids and hesperiids will be available by the end of the year. Chris pointed out that locality records and even new taxa keep popping up as the material is brought together and examined and/or curated by Jon Shepard, Paul Hammond, Dana Ross and others before Jon enters the data. All the LepNet data will be made available publicly via GBIF at the end of the grant.

This year, Portland lepidopterist and author of several butterfly books, Dr. Bill Neill, donated his butterfly collection to the OSAC (it was on display for the participants to see during the OSAC open house). Smaller contributions came in regularly from

other lepidopterists, notably Paul Hammond, David McCorkle, Jeff Miller, Terry Stoddard and Dana Ross. North American records from these recent acquisitions are also being included in the LepNet data. This year, the OSAC also acquired a significant mite collection and another big beetle collection was expected soon.

Dana Ross and Chris Marshall collaborated with Louisa Hooven and Jessica Green to conduct an outreach event during National Moth Week. The event included a farmers market table about Lepidoptera and a 'nocturnal moth walk' at Bald Hill Farm, a property of the Greenbelt Land Trust (<http://greenbeltlandtrust.org/>), and involved 30–35 members of the public.

Finally, Chris announced that a special cabinet had been set aside in the collection for use as an official repository for type material—holotypes, allotypes and some paratypes.

Activity Reports—Oregon *Dana Ross*

Dana Ross introduced friends and first time attendees Joseph Smith and Jennifer Tiehm to the group before presenting Powerpoint slides about some important 2017 butterfly and moth discoveries.

Oregon moths: Dana presented Rick Westcott's Lincoln County record for *Acrionicta funeralis* (Noctuidae) from a caterpillar Rick photographed 10/15/2017; a Benton County record for *Xanthia tatago* (Noctuidae) from Bald Hill Farm (a Greenbelt Land Trust property near Corvallis) taken 10/16/2017; and 11 records from Steens Mountain (Harney County) that included an Oregon state record for *Euxoa ustelata* and county records for *Andropolia diversilineata* and 9 species of *Sympistis*

noctuid moths, all taken from a single light trap that Dana and his son Zane put out on 8/25/2017. Paul Hammond discussed the regional phenotypic variation he'd noticed in *Andropolia diversilineata* and suggested that the two morphotypes might represent unique species, or subspecies. Paul and Dana showed images of a potentially new species of *Eusarca* (Geometridae) from Jackson County, and then of the extremely rare tiger moth *Apantesis bolanderi*, taken from Klamath Marsh NWR (Klamath County) on 7/8/2017.

Dana then briefly mentioned various PNW moth inventories that he and Paul Hammond were involved in: near Applegate (Jackson County; with Linda Kappen), at Eight Dollar Mountain/Siskiyou



Apantesis bolanderi collected from the Klamath Marsh National Wildlife Refuge (above) and *Euxoa ustelata* collected from Steens Mountain (right) by Dana Ross. Photos by Dana Ross.



Northwest Lepidopterists' Workshop 2017 (cont.)

Field Institute (Josephine County), at Bald Hill Farm (Benton County), at the Conboy Lake (Washington) and Umatilla (Oregon & Washington) refuges, and at Zumwalt Prairie Preserve near Imnaha (Wallowa County), thanks to sampling by TNC employees Heidi Schmalz and Jason Dingledein.

Oregon butterflies: Paul Hammond told how he captured the second known Oregon record for the Variegated Fritillary (*Euptoieta claudia*) in the Stinkingwater Mountains east of Burns (7/16/2017). He said he almost overlooked it as an important butterfly to voucher since he had seen “gobs of them” over the previous weeks while collecting *Speyeria* in the Midwest. The first Oregon record for the Variegated Fritillary was taken by Cara Benfield (wife of Paul Severns) from 3 Creeks Meadow in the Cascades on 7/20/2003.



Variegated Fritillary (*Euptoieta claudia*) collected east of Burns by Paul Hammond on 7/16/2017. Photo by Dana Ross.

Activity Reports—Washington

Ann Potter collects lepidopteran records and reports them for the Lepidopterists' Society annual Season Summary to the Pacific Northwest Regional Coordinator, Jon Shepard. Ann monitors the Northwest Leps listserver (<<https://groups.yahoo.com/neo/groups/NorWestLeps/info>>) and collects records directly from many lepidopterists. She recommended that people who want their observations to become records either collect a specimen or get good photographs. Some reports do not become records because they are not well enough documented.

Ann passed on the reports she had received for Washington. The first butterfly observation reported in 2017 was from Dennis Deck who found the *Anthocaris sara* (Sara Orange-tip) on March 31 in the Klickitat County Katherine Creek area in the Columbia River Gorge. In Spokane County, John Baumann found *Euphydryas colon* (Snowberry Checkerspot); there were also several records of *Nymphalis l-album* (Compton Tortoiseshell). Kelly McAlister found *Strymon melinus* (Gray Hairstreak) on the Quinalt Indian Reservation—there were only a few previous records from Grays Harbor County. Down in Skamania County, Noelle Nordstrom found a colony of *Euphydryas colon* (Snowberry Checkerspot).

There has been an effort the last couple of years to document milkweed and Monarchs in eastern Washington and Idaho. During this year's effort, in Franklin County in an area just north of the Tri-Cities, Monarch surveyors reported seeing hundreds of White-lined Sphinx Moths (*Hyles lineata*) nectaring in milkweed patches.

Ann indicated that this had been a good year in Washington for the migratory *Vanessa cardui* (Painted Lady) both in the spring of

2017 and in the fall.

Bob Pyle found *Anagrapha falcifera* (Celery Looper) far more abundant than he had ever seen on his *Buddleia*. On a trip to the Columbia Gorge to find Juba Skippers the week before the workshop, Bob checked the numerous rabbitbrush which were in great condition; instead of the expected Juba Skippers there were Celery Loopers in abundance. From Ferry County, Bob also reported *Thymelicus lineola* (European Skipperling), *Polygonia oreas threatafuli*, and *Speyeria egleis* (Great Basin Fritillary), the latter two collected by David W. Branch. *S. egleis* is a very unexpected record and range extension, its determination confirmed by Paul Hammond. Bob collected the first Washington voucher specimen of *Euptoieta claudia* (Variegated Fritillary) from the Mount Annie Road in Okanogan County on July 19, his 70th birthday. Two previous sight records had been accepted for Washington because of the observer's experience and the detailed nature of their observations, but a specimen confirmation was welcome.

Caitlin LaBar reported *Chlosyne palla* (Northern Checkerspot) from Skamania County, a county record.

Dana Ross presented 16 Washington moth distribution (1st, 2nd or 3rd county) records from Conboy Lake National Wildlife Refuge in Klickitat County and Umatilla National Wildlife Refuge in Benton County.

There was a brief discussion of the common reed, *Phragmites australis*, an invasive plant subject to eradication efforts in a number of areas. It is very similar to *Phragmites americanus*, a native western plant and the larval host plant for *Ochlodes yuma* (Yuma Skipper).

Northwest Lepidopterists' Workshop 2017 (cont.)

Robert M. Pyle and Paul Hammond—A Pocketful of Coppers: A Review of *Lycaena mariposa* and the discovery of the Makah Copper

Bob and Paul summarized their paper on Mariposa Coppers, scheduled for publication in the Journal of the Lepidoptera Society for February, 2018 (Pyle and Hammond, in press).

For over 100 years, the great diversity of Mariposa Coppers in physical appearance and habitat preferences across the west was encompassed by 3 taxa:

- 1) The first named subspecies, *Lycaena mariposa mariposa*, was described from the Sierra Nevada by Tryon Reakirt in 1866; it's unclear whether Reakirt derived the specific epithet from Mariposa County, town, or elsewhere—mariposa itself means butterfly in Spanish.
- 2) The next subspecies designated, darker and considerably smaller, was *Lycaena mariposa charlottensis* from the Queen Charlotte Islands, now known as Haida Gwaii, named in 1930 by William Jacob Holland from the Carnegie Museum, author of The Butterfly Book—someone who didn't name very many species. It is one of the few butterfly species occurring on the islands.
- 3) The third subspecies, *Lycaena mariposa penroseae*, was named in 1938 from the Yellowstone area by William D. Field, who wrote the Manual of the Butterflies and Skippers of Kansas.

Lepidopterists had to fit all the Mariposa Coppers into one of these three names—*charlottensis* which didn't work very far beyond the islands, *penroseae* from the Rockies, and *mariposa* for everything else in the West.

The modern story goes back to 1975. Bob was working on his doctorate, studying the distribution of Washington butterflies with respect to the distribution of nature reserves (Pyle 1976). As part of an effort to gather more butterfly records, Bob visited Ahlstrom's Prairie near Cape Alava on the Olympic Peninsula, a potentially interesting habitat for which there were no butterfly records (see Bach and Conca ~2004). Out on the prairie in the morning, Sally Hughes, one of his team members, caught a Mariposa Copper that looked dramatically different from any that Bob had ever seen before. Bob called it the Makah Copper, after the Makah tribe who had owned this land before it became a national park, and who once had a large village nearby, now a significant archaeological site having been buried by an earthquake-related mud-slide. While this common name was placed on the state watch list for butterflies, the species was not formally described.

People recognized that the Makah Copper was different. However, Jon Pelham and Jon Shepard later encouraged Bob not to describe this one subspecies in isolation, but rather to undertake a comprehensive species review which he and Paul have now completed. In their paper, Bob and Paul name and describe 9 new

L. mariposa subspecies, one being the Makah Copper. They used the wing color patterns, the sizes of the individuals, and ecological and biogeographical traits as the primary distinguishing characteristics.



Ron Lyons

Paul pointed out that, in order to study the biology and distribution of Mariposa Coppers, you really had to pay attention to the biology and distribution of their food plants, various species of *Vaccinium*. A lot of the observation has focused on these food plants, using instances of female oviposition. The distributions of the food plants and their butterflies have been heavily affected by the climatic fluctuations due to glaciation with range expansions, contractions, fragmentation and so forth. As a result some *L. mariposa* subspecies are widely distributed whereas others are much more restricted, three of them being extremely narrow endemics.

Bob pointed out that the paper is a traditional one, based on phenetics, biogeography, and ecology and invited others to subject their conclusions to further inquiry, hopefully involving molecular DNA studies, to see if such investigations sustain their conclusions.

Bob and Paul offered thanks to all the other individuals who had worked on these butterflies over the years and those that had helped directly with the paper.

References

- Field, W.D. 1938. A New Race of *Lycaena mariposa* (Reakirt) (Lepid. Lycaenidae). The Pan-Pacific Entomologist 14(3): 142–143.
- Pyle, R.M. 1976. The eco-graphical basis for Lepidoptera conservation. PhD thesis Yale University.
- Pyle, R.M. and P. Hammond. 2018. A Review of the Mariposa Copper (*Lycaena (Epidemia) mariposa*, Lycaenidae) with description of nine new subspecies and a model for their biogeographical origins. Journal of the Lepidoptera Society (in press).
- Bach, A. and D. Conca. ~2004. Final Report: Natural History of the Ahlstrom's and Roose's Prairies, Olympic National Park, Washington. 42 p. (Download from <http://depts.washington.edu/pnwcesu/reports/J9W88040025_Final_Report.pdf>.)

Northwest Lepidopterists' Workshop 2017 (cont.)

Glenn Gorelick—Nearctic *Callophrys* – how many species?

Glenn discussed the green hairstreak species *Callophrys dumetorum* along with the related green hairstreaks, *Callophrys affinis* and *Callophrys sheridanii*, in the Pacific Northwest.

Glenn credits Washington lepidopterist E.J. Newcomer for starting him off on his journey, when he provided Glenn with *Callophrys* specimens from Yakima County, Washington that looked like Californian *Callophrys dumetorum* but weren't. Eventually these became *Callophrys dumetorum oregonensis*, described by Glenn in 1968 (named at least partly because the other names he considered, *newcomeri* and *washingtonia*, were already in use).

During the last 3 years, Glenn has been exploring various parts of Washington and Oregon, visiting known locations and looking for previously unknown locations for these green hairstreaks. He has been aided in his search by maps of various areas and pictures and descriptions of potential sites gleaned from various internet sites. He has also used herbarium records and information from the native plant societies to identify potential sites based on the larval food plants.

Glenn took this occasion to discuss his search, show some different locations and the specimens collected there, and discuss some of the problems documenting this group. He encountered one of the usual problems with field work in the Pacific Northwest—uncooperative weather. His search area centered on Klickitat County in Washington, which he christened the 'dumetorum capital.' On Saturday, Glenn reported that he had found a small colony of *Callophrys dumetorum oregonensis* on Penny Ridge in Skamania County, Washington and *Callophrys sheridanii interrupta* on Pine Mountain in Deschutes County, Oregon, both county records.

Glenn had a recommendation for those who want to collect *Callophrys*—field spread your specimens. The green coloration is a structural color from the scale surface rather than a pigment color, and gets lost when the specimens are relaxed and spread later. He encouraged collectors and photographers to take copious notes (e.g., location, elevation, host plant/plant associations, weather, wind conditions, temperature, etc.) including habitat and specimen photographs to help identify the individuals seen and/or collected.

A lot of patience is needed to pursue these butterflies. In the Pacific Northwest the species/subspecies are sympatric (found in the same place), parapatric (found right next to one another) and synchronic (found at the same time). Investigators should be prepared to cover a lot of territory.

Finally, Glenn thanked a number of people who had helped him along the way and during his more recent investigations. Among these were Dave McCorkle, Jon Pelham, Andy Warren, Jim Reed, Sue Anderson, and others employed by Oregon and Washington state conservation organizations and native plant societies.

Glenn is preparing a publication for the News of the Lepidopterists' Society and admitted the conclusions he presented might change between his workshop presentation and his published paper.

Reference

Gorelick, G.A. 1968. A New Subspecies of *Callophrys* (*Callophrys*) *dumetorum* from Washington and Oregon (Lycaenidae). *Journal of Research on the Lepidoptera* 7(2): 99-104. (Available as a PDF from <<http://lepidoptera.researchfoundation.org/journals/07/PDF07/07-099.pdf>>.)



Callophrys sheridanii interrupta (underside) collected near the summit of Pine Mountain ~6300' in Deschutes County, Oregon VI-7-2016 by Glenn Gorelick (OSAC 0001027413). Photo by Ron Lyons.

North American Butterfly Association (NABA) Eugene-Springfield Chapter

The results of the butterfly surveys by the members of the Eugene-Springfield chapter of NABA can be found on their website <<http://www.naba.org/chapters/nabaes/>>.

Northwest Lepidopterists' Workshop 2017 (cont.)

Dave Specht—Powell Butte Update 2017

Dave's efforts last year to affect the management practices for the stinging nettle habitat along the trails at Powell Butte met with some success. This year, these habitats were hand trimmed rather than mowed. While stinging nettle is the larval food plant of *Polygonia satyrus* (Satyr Anglewing), their number did not increase, as one might have expected. Unfortunately, the trimming was done too late in the season, probably destroying the eggs that

had been laid.

Dave indicated that he was unable to get into the field until May because April had been so cold, rainy and windy. After that, the weather was hot and dry for the rest of the summer and the butterfly season essentially ended early with only 4 species seen in late August and September.

David Specht—Anza-Borrego Desert State Park

The wet winter gave Dave and Carol a chance to get away to southern California and explore the Anza-Borrego Desert State Park (<http://www.parks.ca.gov/?page_id=6388>), an area of about 1000 square miles east of San Diego. The area takes its name, in part, from Juan Baptiste de Anza, a Spanish explorer and soldier, who passed through this desert region on an epic 1775–1776 expedition to San Francisco Bay. Borrego is the Spanish word for sheep and the Peninsular Bighorn Sheep is the symbol of this desert wilderness.

The area had received about 7 inches of rain instead of the usual 3 inches before they arrived at the end of February.

Dave interspersed his butterfly and vegetation shots with scenic shots of some of the areas they visited—Borrego Palm Canyon, Montezuma Viewpoint with a view looking down into Hellhole Canyon and another overlooking the Borrego Valley, Yaqui Well and the Sentenac Cienega, Plum Canyon, and Kwaaymi Point with a tremendous view over the San Felipe Valley. Dave showed a picture of a road cut along Arroyo Salado Road which exhibited a number of smoothly cut solid geodes.

Their butterfly list from the trip included Desert and Sara Orange-tips, Tiny Checkerspot, a desert species resting on

chuparosa, its larval food plant, Painted Lady, Spring White, Gray Hairstreak, California Patch, another butterfly unique to the desert habitat, Sonora Blue, Becker's White, and Sleepy Orange, familiar to Dave from his youth when it was called Nicippe Yellow.

Unfortunately, Dave and Carol missed seeing the Swainson's Hawks that stop off on their yearly 6000 mile migration from South America to the Great Plains of the West (<<http://borregohawkwatch.blogspot.com/>>). They gather annually in March to feed on the abundant White-lined Sphinx Moth caterpillars that feed on the desert vegetation.

Dave recommended the book "Butterflies & their Favorite Flowering Plants: Anza-Borrego Desert State Park and Environs" by Lynn and Gene Monroe with its numerous pictures of larval food plants and their associated butterflies.

Dave commented on the difficulty of photo collecting ideally positioned images of a target butterfly that is not nectaring and not mud-puddling on an 85 °F day on a desert mountain. You have to take what you can get because you won't get a second chance.

David Lee Myers—Adventures Locally and in South America

David showed pictures taken on a trip to Ecuador and Peru last winter. For travel purposes David used a little Sony pocket camera.

He followed these pictures with ones from more local excursions including some pictures from the July 1 butterfly census in the Bigelow Lakes area of the Oregon Caves Monument and Preserve. David was the photographer for one of the census groups. He returned to the area two weeks later and photographed *Agriades*

podarce klamathensis (Sierra Blue) which was abundant then.

David is currently working on a book which will feature his fine art photographs of butterflies. He thanked the group for their help over the years.

Samples of David's work can be seen at <<http://DavidLeeMyersPhoto.com>>.

Northwest Lepidopterists' Workshop 2017 (cont.)

Dana Ross—Seasonal Work *Dana Ross*

During the group's "show and tell" session, Dana gave a Powerpoint presentation summarizing his many 2017 field activities. It started with an early spring trip with Gary Pearson to the Jasper area cliffs to look for Moss's Elfin where they found the elfin and fellow Eugene butterfly enthusiast Bruce Newhouse. He went on to discuss Hoary Elfin surveys on the North Santiam River, Taylor's Checkerspot population estimates (numbers of adults were down this year) and Fender's Blue counts (also a fairly poor year). He then mentioned National Wildlife Refuge moth surveys, the 2017 (2nd Annual) Oregon Caves/Bigelow Lakes Basin butterfly bioblitz (with Linda Kappen, Gary Pearson, Ron

Lyons, Joe Smith, Jenn Tiehm, Rick Ahrens, Celeste Searles Mazzacano, Rob and Cathy Santry, David Lee Myers, Mike Hansen and Kim Zumwalt, as well as four National Park Service employees), a Bigelow Lakes insect-pollinator study (assisted by Rob and Cathy Santry and Linda Kappen). Dana's field season wrapped up with two trips to Steens Mountain: one with Gary Pearson, where Gary caught seven "life-time firsts" and a second trip with his son Zane (that included Mormon Metalmarks and a Pygmy Blue) when they got all the interesting moths (mentioned under Activity Reports—Oregon on page 4).

Ron Lyons—On the Overwintering Status of the *Vanessa* Butterflies in the Pacific Northwest

The status of the *Vanessa* butterflies—*Vanessa annabella* (West Coast Lady), *Vanessa cardui* (Painted Lady), *Vanessa virginiensis* (American Lady) and *Vanessa atalanta* (Red Admiral or Red Admirable)—in the Pacific Northwest over the winter months has been under discussion for a number of years (see Pyle 2002, Warren 2005, and James and Nunnallee 2011). Are they frost tolerant in any stage and if so how tolerant are they? Do they, as is thought, replenish their populations solely from adults migrating into the area from the south each year? What happens with the adults occasionally reported during the winter?

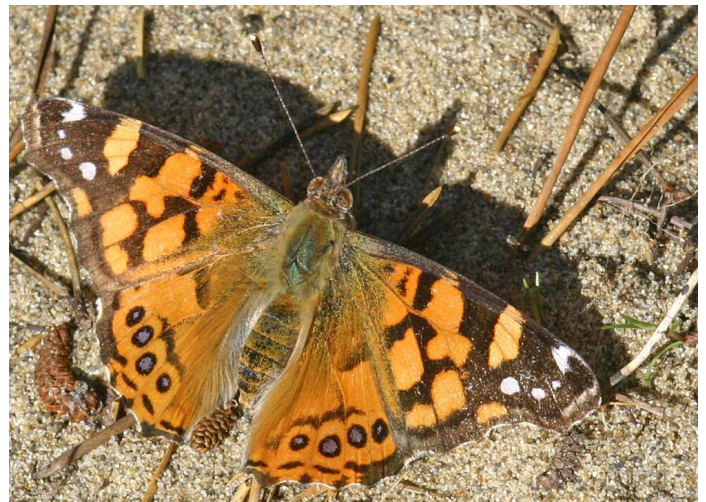
The maximum adult flight period in the Pacific Northwest was determined from the 3 published sources: Pyle (2002), Warren (2005), and James and Nunnallee (2011). Online databases (BugGuide, Butterflies and Moths of North America [BAMONA], iNaturalist, and the Lepidopterists' Society Seasonal Summary) were then searched for records of adults outside the specified date ranges, with particular interest in winter dates.

***Vanessa annabella* (Field, 1971) – West Coast Lady**

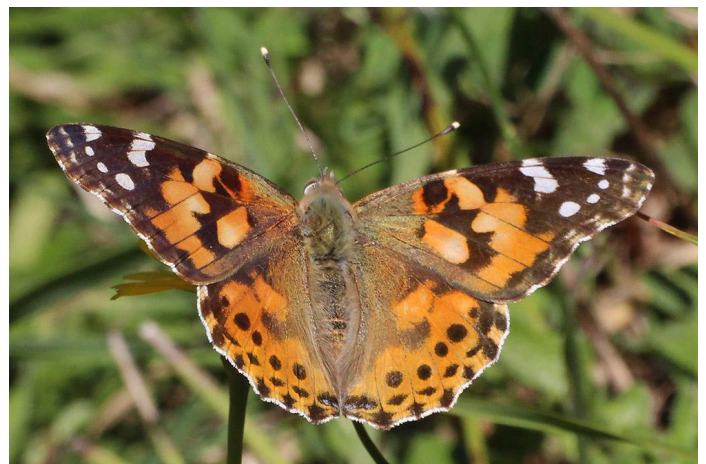
Adults have been reported from early March (James and Nunnallee 2011); March 19 (Warren 2005 – Oregon) to mid-November (James and Nunnallee 2011). A comparable but specific late date of November 20 came from the Seasonal Summary records for Idaho (LEPSOC_A_00024855). There are no anomalous late/early dates that would indicate this species overwinters as an adult in the Pacific Northwest.

***Vanessa cardui* (Linnaeus, 1758) – Painted Lady**

This species is known to migrate into our area, sometimes in great numbers, from the south. Adults have been reported from early March (Warren 2005 – Oregon) to early November (Pyle 2002). The Seasonal Summary records for Oregon gives a late date of



Vanessa annabella (West Coast Lady) at the New River Area of Critical Environmental Concern Storm Ranch section, Coos County on April 25, 2005. Photo by Ron Lyons.



Vanessa cardui (Painted Lady) photographed at Arizona Beach State Park, Curry County on October 15, 2017. Photo by Ron Lyons.

Northwest Lepidopterists' Workshop 2017 (cont.)

November 15 (LEPSOC_A_00024870). There are no anomalous late/early dates that would indicate this species overwinters as an adult in the Pacific Northwest.

Vanessa virginiensis (Drury, 1773) – American Lady

Adults have been reported from mid-April (Pyle 2002); April 16 (Warren 2005 – Oregon) to October (James and Nunnallee 2011); October 30 (Warren 2005 – Oregon).

I know of 3 later occurrences, all from Coos County in Oregon: November 25, 2013 – Shore Acres State Park (BAMONA 940550), November 29, 2015 – New River ACEC Storm Ranch and December 06, 2014 – Bullards Beach State Park, the latter two being my photo records. There is also one winter date recorded in the Seasonal Summary for Washington – February 22, 2005 from Wahkiakum County (LEPSOC_A_29145593).

The new late dates, almost 1 month beyond the maximum published date range combined with the February observation, suggest that, under certain favorable conditions, *Vanessa virginiensis* might survive well into the winter. If so, then this February date would be an extreme late date. On the other hand, 2005 was the year of the biggest Painted Lady migration on record so the February date might actually have been an early co-migrant.

Vanessa atalanta (Linnaeus, 1758) – Red Admiral

Adults have been reported from late March (Pyle 2002, James and Nunnallee 2011) to November 24, 2004 (Warren 2005 – Oregon). Records from online sources extend the early date to March 19, 2017 in Oregon's Lane County (iNaturalist) and the late date to December 11, 2016 in Washington's Clark County (BAMONA 1109417).

Warren (2005) published two winter records: January 18, 2005 – Oregon: Curry County – 3 mi west of Brookings (2 individuals) and February 24, 2001 – Oregon: Benton County (2 individuals). Three more winter records are contained in the online databases: January 21, 2017 – King County in Washington (BAMONA 1111092), February 13, 2017 – Clark County in Washington (iNaturalist) and February 13, 2015 – Yamhill County in Oregon (BugGuide 1040596).

Evidence for occasional overwintering is strongest for this species. However, the distribution of the anomalous observations is not what one would expect.

Discussion

It is difficult to separate the latest overwintering individuals from the earliest migrants without more research into species' migration

patterns and detailed weather information. Certainly the January and February dates suggest overwintering in some circumstances. How common this might be is difficult to say since few people are looking for, or reporting, such early occurrences, yet. It is important to remember that just because a butterfly is seen in January or February or even March does not necessarily mean that it will survive to breed that year—many bad storms come late in the winter/early in the spring.

So far, there are few winter records for *Vanessa* butterflies from the Pacific Northwest. It is possible that additional winter records can be obtained, by looking for records from other northern tier states and possibly Canada with similar or colder winters.

All of the online databases examined provide incidental observations – i.e., no one, as far as I know, has been out systematically looking for these butterflies in our area. The fact that these databases present a random sample from motivated individuals means that many potentially relevant observations probably go unreported. Just going by the numbers reported, West Coast Lady mentions seem underreported, perhaps because of its similarity to the Painted Lady, which can at times be extremely abundant. Stages other than adults are seldom reported.

We tend to represent date ranges for species in a state or region by just two numbers. As our observational material grows we should consider a more realistic approach, so that we have a better idea which dates are truly unusual for a given area.

Credit goes to all the various observers, photographers and collectors who have submitted or will submit their material for inclusion in various online websites.

References

- Pyle, R.M. 2002. The Butterflies of Cascadia. Seattle Audubon Society. 420 p.
Warren, A.D. 2005. Lepidoptera of North America 6: Butterflies of Oregon—Their Taxonomy Distribution and Biology. Contributions of the C.P. Gillette Museum of Arthropod Diversity, Colorado State University. 408 p.
James, D.G. and D. Nunnallee. 2011. Life Histories of Cascadia Butterflies. Oregon State University Press. 447 p.

Online Databases Accessed (September-October 2017)

Butterflies and Moths of North America (BAMONA)
<<https://www.butterfliesandmoths.org/>>
BugGuide <<https://bugguide.net/>>
iNaturalist <<https://www.inaturalist.org/>>
Lepidopterists' Society Season Summary <<https://www.lepsoc.org/content/season-summary>>

Northwest Lepidopterists' Workshop 2017 (cont.)

Book Announcements

Taxonomy, Ecology, and Evolutionary Theory of the genus *Colias* (Lepidoptera: Pieridae: Coliadinae) by Paul C. Hammond and David V. McCorkle

While Cliff Ferris wrote several monographs on this group in the late 1980s–early 1990s, it turned out that he had just explored the tip of the iceberg. Excluding *Colias eurytheme* and *Colias philodice* which feed on all kinds of widely distributed plants, the other taxa in this genus actually have a very restricted distribution because they rely on one, or at most several, larval food plants. In this book Paul and Dave describe 31 new taxa of *Colias*. Paul noted that the butterflies can be abundant where the food plants are common, but otherwise you are not going to find these butterflies. The authors discuss their ideas on the theory of organic evolution which Paul admitted depart from the current understanding, but were presented if for no other reason than to stimulate discussion.

For more information or to order a copy contact Paul Hammond at <copoblepharon@gmail.com>.

Butterflies of the Sinlahekin Wildlife Area

Pocket Guide to the Butterflies of Washington

Information on both of these publications written by Caitlin LaBar can be found on page 2.

Butterflies of the Pacific Northwest by Robert Michael Pyle and Caitlin C. LaBar Coming from Timber Press, 2018

This long-awaited book is a reworking of Bob's *The Butterflies of Cascadia* published in 2002 by the Seattle Audubon Society. Bob revised and updated the text while Caitlin created new specimen plates and searched through thousands of live adult photos, and together they decided on roughly 1,000 photos from around 60 contributors representing all species and most subspecies across Washington, Oregon and the surrounding area. The book will be around 460 pages and is in a similar format to other Timber Press field guides, such as *Birds of the Pacific Northwest*. It will be available from many major retailers and local bookstores beginning around April 2018.

Paul Hammond—The Status of Great Plains Fritillaries

For a number of years, Paul has been monitoring the fritillary populations—particularly the Regal Fritillary (*Speyeria idalia*) and Edwards' Fritillary (*Speyeria edwardsii*)—on the native prairie lands of the Great Plains. About 4 years ago there was a severe drought which had a devastating impact on all the butterflies on the Great Plains.

The big fritillary populations—Alcestis Fritillary (*Speyeria aphrodite alcestis*) and the Regal Fritillary—on the native prairie preserves in Iowa were extirpated. The Regal Fritillary disappeared from most of eastern Nebraska as well. Last year Paul started to see some recovery in the Nebraska Sand Hills populations and reported that the Regal Fritillary had recovered this year in eastern Nebraska. Paul was happy to see that the butterflies, absent from one beautiful native prairie site near Sioux City for a good 3 years, were back. But they hadn't crossed the river into Iowa yet.

Edwards' Fritillary had also pretty much disappeared from the Black Hills of South Dakota, although a few were seen. These butterflies have been doing much better further west in eastern Wyoming and eastern Montana.

Paul briefly discussed the fire management policy for the native prairie reserves in Iowa; all of these reserves are small. There used to be a rich diversity of native prairie skippers on these reserves but the skippers appear to be totally extirpated now—the frequency and extent of the burning was just too much. The Alcestis Fritillary also disappeared while the Regal Fritillary populations were greatly reduced and were gone after the drought. Paul thought that the fritillaries might have disappeared anyway due to the severity of the drought, since they had also disappeared from reserves not subject to this type of management.

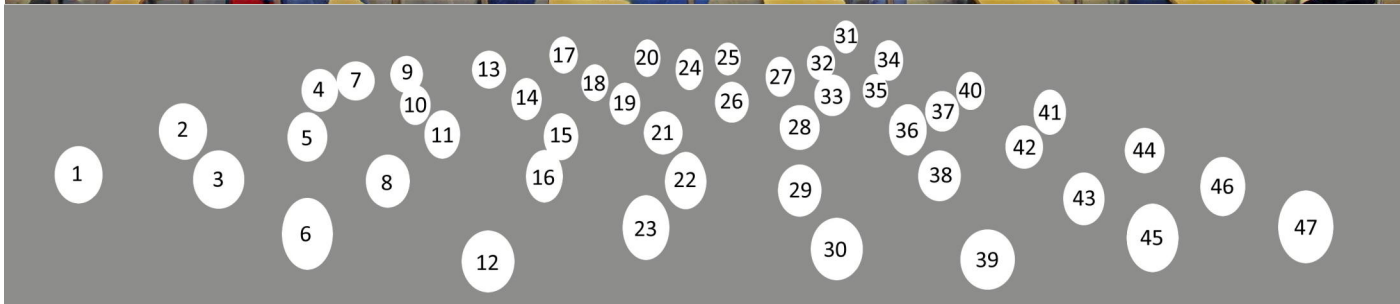
Fender's Blue Mosaic by Caroline Moses

If you are in Corvallis Oregon and interested in insect art, check out the large mosaic of the endangered *Icaricia icarioides fenderi* (Fender's Blue) at 1545 NW Monroe on the wall facing the parking area in front of the Monroe Avenue Salon. You can see a picture at Caroline's website <<http://www.CarolineMosesArt.com>>.

Northwest Lepidopterists' Workshop 2017 (cont.)



Ron Lyons



Northwest Lepidopterists' Workshop 2017—Participants Photo Key

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2 Jim Reed	14 David Maddison	26 Steve Kohler	38 Mike Langley
3 Dana Ross	15 Don Severns	27 Dan Thackaberry	39 Linda Kappen
4 Ann Potter	16 Terry Stoddard	28 Alison Center	40 Paul Hammond
5 Glenn Gorelick	17 Carol Specht	29 Anita McMillan	41 Lori Humphreys
6 Matthew Campbell	18 Dave Specht	30 Celeste Searles Mazzacano	42 Jennifer Tiehm
7 Sara Neill	19 Ed Schmitt	31 Ron Lyons	43 Marquetta Mitchell
8 Mike Raschko	20 Ray Stanford	32 Andrea Peters	44 Joseph Smith
9 Bill Neill	21 Riley Duncan	33 Gary Pearson	45 Caitlin LaBar
10 Lars Crabo	22 Dave McCorkle	34 Bob Pyle	46 Jon Shepard
11 Jim Dillman	23 Steve Van Campen	35 Bev Koch	47 Jonathan Pelham
12 Emma Van Campen	24 Gary Lindberg	36 John DeLuca	

Next Year: Northwest Lepidopterists' Workshop 2018

In 2018 the groups of emphasis will be:

- ▶ Butterflies: *Phyciodes*, *Chlosyne* and Hesperiiidae (skippers)
- ▶ Moths: Sphingidae

Acknowledgements

I would like to thank Dana Ross for preparing the Activity Report for Oregon and the summary for his own presentation. I would like to extend my sincere thanks to all the presenters for their comments, corrections, and changes to the summaries prepared from the meeting record. I know all the feedback improved the accuracy and usefulness of the material.

Thank you all very much. *Ron Lyons*