



Washington Butterfly
Association

*G'nun**

The newsletter of the Washington Butterfly Association

P.O. Box 31317 Seattle WA 98103

<http://wabutterflyassoc.org>

Facebook: Washington Butterfly Association. Instagram: #washingtonbutterflies (anyone can use this hashtag)
iNaturalist: <https://www.inaturalist.org/projects/washington-state-butterflies>

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



WBA's Winter Party on January 11, 2025.

Upcoming Programs by Zoom First Wednesday at 6 PM

5 March: It's Finally Done! The North Cascades Loop Butterfly Survey
David Droppers

2 April: Native Pollinators in our Gardens
Julie O'Donald

7 May: Aspirations for the Extinct Xerxes Blue Butterfly
Stu Weiss

Washington Butterfly Association *G'nun*

In this issue:

Camp Read-a-Rama	p 2
WBA's New Website	p 3
Butterflies from the 1970s	p 5
Butterfly Conservation Project	p 6
Field Trip Schedule	p 7
Species Profile	p 11
Table of G'nun Issues	p 12

WBA goes to Camp Read-a-Rama

Dan Dunphy and Liz Kuehn

One goal/priority that gets discussed with regularity is how to attract "the next generation" of butterflyers to the joys and wonders of leps and by extension, the natural world. Last June, an opportunity for us to share our message of joy and wonder came knocking from Sydney Geyer, the program coordinator for an organization called "Read-a-Rama". Read-a-Rama is a "fully-immersive, accessible and inclusive literary program for elementary aged readers;" champions of literacy for kids in underfunded communities. Founded in 2009, Read-a-Rama's co-creator, Dr. Michelle H. Martin ("Doc Martin"), has offered the program in Washington State. Last summer's weeklong camp entitled "Kaleidoscope of Color" was hosted by a community center north of Seattle, and one topic for investigation was iridescence in butterflies. The question asked of WBA was: would we be interested in joining them for about an hour to share our expertise? Of course, we accepted the invitation.



Camp Read-a-Rama campers and staff. Doc Martin is front row, far right. Photos this page courtesy of Camp Read-a-Rama staff.

WBA president, Liz Kuehn, and I arrived equipped with magnifying glasses, butterfly stickers, field guides, a small collection of pinned Washington butterflies, a few science reference sheets on the topic - and a gorgeous (and iridescent!) Blue Morpho butterfly in a display case - procured by Liz via the internet. Last minute additions for the presentation: butterfly net and bug jar. We led off with introductions and Liz explained what WBA is and our "mission." A brief explanation of iridescence science, and how it related to butterfly (and other animals') coloration, was capped off by passing around the Blue Morpho. Next, was a quick demonstration of what us butterflyers might do in the field; and it seemed like it was a crowd pleaser.

I had received "inside information" that it was the birthday of one of the campers. I asked the birthday girl (wearing a butterfly-sequined dress, and turning 6 years old) if she would assist me. With a little encouragement from a parent, she nodded her agreement. I asked her to hold one of our plastic butterfly props with her arm outstretched and walk around the room to make it appear that the butterfly was flying.



The butterfly collection and Blue Morpho proved to be good subjects for studying with the magnifying glasses.

I followed close behind with the net while giving a play by play narration to the group how I was both observing its flight and hoping that it would possibly find a nice flower to land on for nectar - and how that would make it easier to catch. I did also mention that we could also sometimes net them in the air. Once the faux insect was in the net, the method for transferring the butterfly into the bug jar was done; further explaining that this was done so that we could observe the butterfly up close and take its photo. This activity really grabbed their attention and generated questions and discussion: "do they get hurt?" "do you kill them?" were the most common.

We wrapped up the day by allowing the kids to use the magnifying equipment, try out the net, inspect the butterfly collection, look through the field guides and



Birthday Girl!

Washington butterfly show -and-tell.

(Continued on page 13)

New WBA Website Blog Search Made Easy

By Liz Kuehn and Regina Johnson

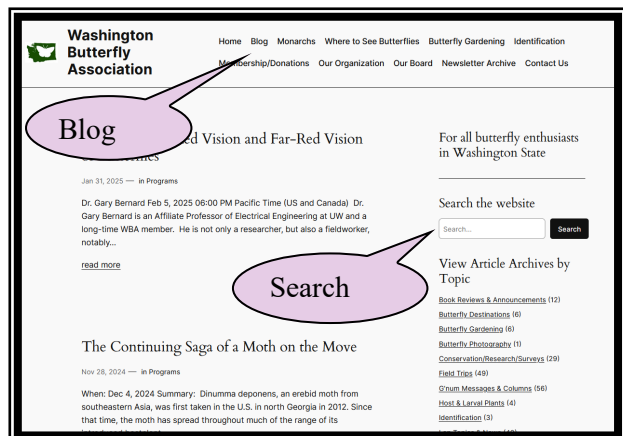


Figure 1: Our new website's Blog tab:

<https://wabutterflyassoc.org/blog-home/>

Our updated WBA Website has something new. We now have a Blog that you can use to search for articles from over 97 issues of the G'num (and counting!), from the first volume published in 2000 through the most recent. This includes species profiles, trip reports, and more. The power of the Blog is the ability to search for the topic or article you want. We have a few suggestions below to help you efficiently find what you want.

The search box is accessed via the Blog tab in the navigation menu. From the Blog screen, the search box is found at the bottom or right side of the screen, depending on which device you are using (**Figure 1**). (Our website now works on phones!)

To get an idea of the Blog content, anything from a particular G'num issue by year and volume number, a list of articles by species, a field trip summary, or any number of topics, you can search for it.

Narrow your search by adding keywords or changing your keywords. The more keywords you use, the more specific the results. Putting "quotation marks" around keywords tells the search engine you are only looking for the exact phrase. You can also pick a topic from the "View Article Archives by Topic" list below the search bar.

A few examples:

To get specific results select a more specific phrase, "**G'num2000Vol1No1**"

You will only get the articles from the first Quarter Volume from the year 2000. All G'num articles can be found by Volume using the search phrases. From Table 1 on page X, just copy and paste them into the search bar.

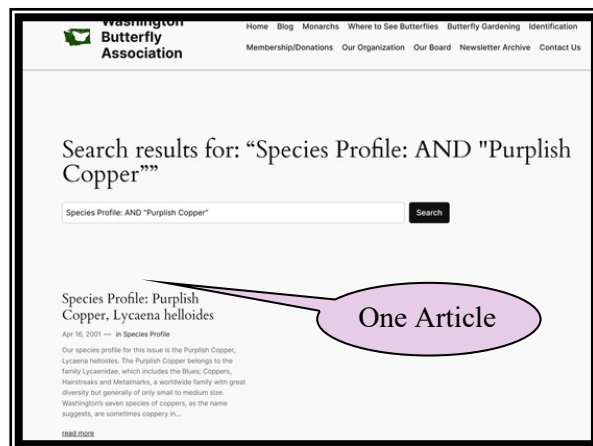
Another example is to find an article about a specific butterfly species. Using keywords separated by "AND" provides only those articles having those elements.

For example, **Species Profile: AND "Purplish Copper"**, will limit the number of results to specific articles found in the Species Profiles (**Figure 2**).

A search using only "**Purplish Copper**" results in every article in which the phrase 'purplish copper' appears. But, searching for the words **Species Profile Purplish Copper**, with no quotation marks at all, returns every species profile that includes the words 'purplish' and 'copper' (**Figure 3**).

"**Species Profile: Coronis fritillaria**" will change the species but keeps the Species Profile topic (**Figure 4**). These keyword searches will narrow the results to only articles having those specific butterflies.

Figure 2: using AND limits results to articles that meet both conditions—just one, here.



(Continued on page 4)

(Continued from page 3)

On the other hand, searching for the words **species profile** returns several articles, mostly but not limited to Species Profiles, all including one or the other of these two words. A lot of our articles include the word ‘**species**’! Search results don’t always work as hoped, but we encourage you to explore.

This is the Web standard Boolean search type, not the new natural-language searches that Google and Firefox can do now, where you can search with “**how to ...**” or “**when is ...**” whatever. Boolean search terms are the international standard for all kinds of databases, including online search engines, so you can use these techniques in all your Web searches. Check out the University of Toronto’s explanation of how to use AND, OR, and NOT, and be sure to watch the videos for hip hop hippos and “dancing monkey boxer shorts”!
<https://oneseach.library.utoronto.ca/faq/what-are-boolean-operators-how-can-i-use-them-improve-my-searches>

To recap – narrow your search results by using:

- Keywords
- AND, NOT, OR between keywords
- “Quotation Marks” to search by a phrase, not individual words.

Thanks to Sylvia’s extraordinary efforts, all of our G’num articles are preserved and available to search and enjoy from your device of choice and available from our website Blog. The G’num PDF versions are now available on the webpage under Newsletter Archive. The G’num quarterly issues will continue to be emailed directly to our amazing members.

Good reading to you!

Give it a try:<https://wabutterflyassoc.org/blog-home/>

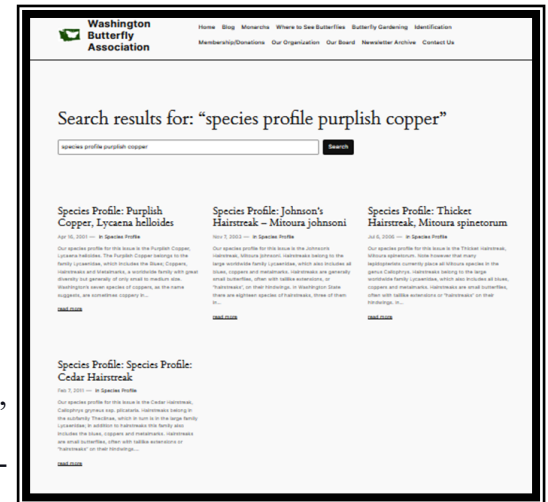


Figure 3: not using quotation marks returns more items. All these articles mention Copper butterflies and/or purplish coloration.



Figure 4: Quotation marks return one article.

Sylvia Sheets is leaving the Board to focus on her other passions, her family, garden and of course butterflying! We thank her for her exceptional work in supporting the Washington Butterfly Association and transforming our website! The Website is now a showcase for Washington butterflies and the Association. We will miss her expertise but understand her need for a break after months of revitalizing the webpages. Although she is stepping down, she will continue to join us in the field. When you see her, give her a high five!

Thank you, Sylvia, for your contributions during your WBA Board tenure and enjoy your other passions!

Three Hundred Butterflies from the 1970s return home to Washington!

By David James

Hank Tomlinson was a Washington lepidopterist back in the 1970s. He collected butterflies far and wide in Washington and throughout the west. I believe he lived in the Liberty-Wenatchee area since many of his specimens come from that area. As many of our pioneering lepidopterists did, he assembled a collection of butterflies but instead of pinning them he used Riker mounts, where specimens are mounted on cotton wool (aka cotton batting in the US; the stuff that cotton balls are made of) in a flat, framed display case. This makes the display much sturdier and less fragile than cases of pinned specimens.

As Lady Luck would have it, I was contacted late last year by Adriane Grimaldi, Director of Education at Butterfly Wonderland in Scottsdale, Arizona. I had met Adriane years earlier at a Monarch conference and she had remembered I was a butterfly guy from Washington and thought of me when she was wondering where to donate a collection of 15 display cases of Hank Tomlinson's butterflies! Just weeks before Adriane contacted me, your WBA Board had decided to increase our conservation and outreach focus of the organization and agreed that we needed some butterfly display cases to show at events! So, I immediately told Adriane we would be ecstatic to accept this amazing and timely donation of historical Washington butterflies!

So, just before Christmas, 15 cases totaling around 300 butterflies returned to Washington! These will be put to good use in our WBA mission of educating and enthusing people about butterflies, particularly our Washington butterflies. This is crucial because without people being interested in butterflies and invested in their conservation, the future of butterflies will be very bleak.

This amazing gift to us also has historical significance, making the donation so right for WBA! Many of the 300 butterflies came from Washington and in most cases, Hank provided details of date and location where specimens were found. These data will be harvested from the collection and entered in the Washington butterfly database curated by Jon Pelham.

Hank Tomlinson lives in Arizona now and I have expressed my thanks to him on behalf of WBA for this truly amazing gift to us and our butterfly mission in Washington. Be sure to watch out for Hank's butterflies at future WBA events!



All photos by D. James.

WBA-WDFW Butterfly Conservation Project

By David James

Twenty-one of Washington's ~150 species of butterflies are on the Washington Department of Fish and Wildlife (WDFW) Species of Greatest Conservation Need (SGCN) list. In common with most of our butterfly species, we know very little about the biology and ecology and threats to these 21 species. This project is aimed at supporting recovery actions for five of these SGCN butterflies in Washington, four of which are state candidate species (Yuma Skipper, Juniper Hairstreak, Meadow Fritillary, Silver-bordered Fritillary) and one recently federally listed threatened species (Monarch).

I have submitted a funding proposal for this project to the Wildlife Biodiversity Grant Program administered by the WDFW. If funded, this would allow me to conduct comprehensive field work on the distribution, abundance and biology of the five butterfly SGCN in my position as Entomology Professor at Washington State University, over the next three butterfly seasons. One of the priorities of WBA is to support and help with the conservation of Washington's butterflies, so in the proposal I have indicated that the project will likely be enhanced by the volunteer efforts of WBA members.

I anticipate WBA's contribution to this project will take the form of member participation in field trips specifically targeted to gain information and data on one of the butterfly SGCN. If you participate in one of these trips you will be making a practical and important contribution towards conserving these threatened species.

While I will not know until May if my proposal is successful, I plan to begin butterfly WBA-SGCN field trips in April by trying to locate the Juniper Hairstreak at Juniper Dunes north of the Tri-Cities. Juniper Dunes was formerly a stronghold for this species but it hasn't been recorded from the site since 2008. You can find a profile of this species elsewhere in this issue of GNum.



Juniper Hairstreak from Juniper Dunes. (D. James)

A preliminary list of proposed SGCN field trips for the 2025 season is below. Dates are provisional and subject to change as determined by weather, progression of the season and new information. Further dates may be added. If you are interested in being involved with SGCN field trips and would like to be kept informed via email about upcoming trips, email me at tl_DavidJ@wabutterflyassoc.org and I will give you updates on trips and timing as we go through the season.

SGCN-WBA FIELD TRIPS 2025

- April 25 or 26: Juniper Dunes (SGCN: Juniper Hairstreak- Columbia Basin Segregate)
- May 9 or 10: Bickleton (SGCN: Juniper Hairstreak- Columbia Basin Segregate)
- May 30 or 31: Rocky Ford, Upper Crab Creek (SGCN: Silver-bordered Fritillary)
- June 16-19: Blue Mountains (SGCN: Meadow Fritillary)
- June 27 or 28: Ferry County (SGCN: Meadow Fritillary)
- July 19: Sun Lakes State Park (SGCN: Yuma Skipper)
- August 8 or 9: Along Snake River from Pasco North (SGCN: Monarch)
- August 15-16: Rocky Ford, Upper Crab Creek and/or Spiva Butte (SGCN: Silver-bordered Fritillary)
- September 5-6: Along Snake River from Pasco North (SGCN: Monarch)

2025 FIELD TRIP DESCRIPTIONS:

NOTE: A DATE RANGE IS GIVEN FOR SOME OF THE TRIPS. THE PRECISE DATE WILL BE DETERMINED BY THE LEADER BASED ON WEATHER AND THE SEASON'S PROGRESSION. CONTACT THE TRIP LEADER TO SIGN UP AND BE NOTIFIED OF THE SPECIFIC TRIP DATE.

Contact emails are not provided for each trip, but check the website in the next few weeks for WBA organizational emails for our trip leaders. We have had several incidents of Board and Field Trip Leader emails being harvested by web bots for targeted phishing attempts, so we will no longer publish private email addresses.

We have a bounty of trip offerings this year including 9 Field Trips, our annual Butterfly Weekend, a conservation project focusing on WA's Species of Greatest Conservation Needs, a Butterfly Count at McNary National Wildlife Refuge, a joint community trip with Cowiche Canyon Conservancy, and the initiation of a month long WBA Big Butterfly Count which we hope will become an annual event.

WBA-WDFW Butterfly Conservation Project

See David James' article in this issue.

Big Butterfly Month

June 21 to July 20, 2025

WBA is having a month-long butterfly count this summer, the first year for this WBA citizen science project. Let's see how many butterflies everyone sees around our state. We will be documenting butterflies from our yards, camping, hiking, at a park, or wherever you may find yourself throughout Washington. It is easy to participate. Recognition will be given for SGCN and County Records. You may post your photo observations on as many days as you like in the date range above, on iNaturalist, an increasingly respectable network for sharing biodiversity information. Our iNat project's name is Big Butterfly Month Washington State.

Additional information on the project and a primer on using iNat may be found on our website and in the May 'G'num'.



McNary National Wildlife Refuge Butterfly Count

Tentative date of June 7, 2025

Further information on participation in this NWR sponsored event will be available in May on our website, and a Noticeline will be sent to members.

Douglas Creek

Saturday, May 17, 2025

This Douglas Creek site is a sort of WBA "legacy" field trip location that could provide an ideal meeting spot for WBA members from around the state to converge with cameras, nets and their sharp eyes to kickoff the 2025 season together. Our beloved past board member, Sister Sue Orłowski found years ago how rich the site could be for butterfly and bird sightings, and has passed it on to us. Mid May visitors may expect to find a puddlers' paradise of five swallowtail species, including the Indra Swallowtail, as well as Sagebrush Checkerspots, Western Green Hairstreaks, and Common Roadside and Common Sootywing Skippers. Little hiking is required, but we strongly recommend higher clearance vehicles for safe travel on occasionally rough gravel roads. An optional side trip to another more northerly point in the canyon on Kelly Davis Road will be offered if time permits.

We should plan to meet at the intersection of State Highway 2 and H Road, 10:30am.

Difficulty: Level 1-2. Leader: John Baumann tl_JohnB@wabutterflyassoc.org

(Continued on page 8)

WBA & Cowiche Canyon Conservancy joint Community Butterfly Field Day

Wednesday, May 21

Washington Butterfly Association and the Cowiche Canyon Conservancy in Yakima will be teaming up to present a Community Butterfly Field Day at Snow Mountain Ranch on the western outskirts of Yakima in late May. Targeted mostly at children, we will start with a Show and Tell session presenting an overview of butterflies and showing them some examples of butterflies and caterpillars. Then we will lead a field trip into Snow Mountain Ranch where we will show and tell everyone about butterflies in their natural habitat! This is a chance for WBA members to share their passion and knowledge about our butterflies!

Difficulty: Level 2. Leader: David James tl_DavidJ@wabutterflyassoc.org



Snow Mtn. Ranch. (M. Weiss)

Little Spokane River Natural Area, VanHorn-Edburg-Bass Conservation Area, a.k.a. “The Knothead Trail”

Saturday, May 31

We ought not take the name of this amazing butterfly lovers’ trail personally: the “knothead” moniker refers to the rocky knob located 2 miles above and beyond the area that we’ll focus on, and not to trail users! Here, at spring time, visitors find rich and varied wildflowers and butterfly fauna along a trail that passes through an interesting forest fire recovery zone and proceeds into an older growth dry forest. Before the 2015 wildfire, Spokane area butterflies had identified over 40 species of butterflies that frequented this conservation area, and, after the fire, one or two new species seem to pop up each season. This moderately challenging hike, 2 to 3 miles round-trip, follows a gradual incline on good trail, and you might be harassed by mosquitoes or wood ticks. Those who can brave these risks may find all four species of Washington state elfins, Thicket Hairstreaks, Western Arctic Skippers, and numerous Swallowtails, Blues, Whites, Anglewings, Tortoiseshells and Ladies. Silver-spotted Skippers, which started appearing regularly here several years after the fire, might also make an early showing.

We should plan to meet in the parking lot of the Yoke’s grocery store on Indian Trail Road at 10 AM, where we can organize ourselves into carpools before driving to the trailhead at Indian Painted Rocks. State Discover Passes are required for all those offering to drive to the trailhead.

Difficulty: Level 2-3, some distance, moderate, gradual climb. Leader: John Baumann tl_JohnB@wabutterflyassoc.org

Kamiak Butte County Park

Early June, TBD (To Be Determined)

Kamiak Butte County Park is located off SR 27 between Palouse and Pullman. The area offers 5 miles of hiking trails and reaches an elevation of 3,641 feet. There will be an abundance of birds, critters, plants and butterflies! Please pack snacks/lunch and bring plenty of water. Camping is an option on a first come, first served basis. Contact Hailey for more details or if you would like to sign up.

Leader: Hailey Armstrong tl_HaileyA@wabutterflyassoc.org



Hailey photographing a butterfly.
(Sue Orlowski)

Spiva Butte Preserve

June 8 TBD

This beautiful Preserve was significantly impacted by fire in September of 2020, and the Chelan-Douglas Land Trust would like an update on what butterflies are currently present. It is an opportunity to observe the recovery status five years after the fire. Hopefully we will find the Silver-bordered Fritillary, a Species of Greatest Conservation Need

(Continued on page 9)

(Continued from page 8)



WBA at Spiva Butte in 2019, pre-wildfire. From left: Jon Pelham, Melanie Weiss, Paulette Murphy, and Cheryl Bellin with back to camera. (R. Johnson)

(SGCN). The fire burned 100% of the property and eliminated big sagebrush, the plant that provides critical cover and food for sage grouse. Re-planting of sagebrush and native plants has been ongoing. This prime shrub-steppe habitat previously had a four-acre lake, three springs, a diversity of birds, plants, animals and butterflies in addition to the sage grouse lek nearby. On earlier visits prior to the fire we had documented Silver-bordered Fritillary flying in good numbers along with the Garita Skipperling, Coronis Fritillary, Northern Crescent, Arrowhead Blue, Ruddy Copper, Large Marble, Sheridan's Hairstreak, Western Green Hairstreak, Blue Copper, and more.

Difficulty: Level 4, mostly off road through recovering shrub steppe and up the butte for hill-topping butterflies. Leader: Melanie Weiss. The number of participants to be allowed will be determined by the Preserve soon.

tl_MelanieW@wabutterflyassoc.org

Umtanum Ridge, Yakima River Canyon

Sunday, June 15

David has never seen a Nevada Skipper, but he also doesn't have a high clearance, 4 wheel drive vehicle to get up the sketchy road to Umtanum Ridge. So he's going to walk the trail leading up from Umtanum Recreation Area to the ridge! Expect a 2400 foot, but leisurely taken, climb up to the ridge where the butterfly is known to be. Other possibilities are Western Green Hairstreak, scores of blues, hilltopping swallowtails, etc. Expect plenty of sweat, butterflies, and good times!

Meet at Tibbett's Valley Park at 7:00 AM and we'll carpool from there. Parking payment necessary at Umtanum Recreation Area - bringing your federal America the Beautiful pass is best, or cash.

Difficulty: Level 3-4. Leader: David Droppers tl_DavidD@wabutterflyassoc.org



David Droppers at Wings over Metaline Falls. (M. Weiss)

WBA Annual Butterfly Weekend, Wings Over Yakima

June 20-22

Additional information and how to register for this event may be found on our website.

Mt. Spokane State Park, trail to Mt. Kit Carson Summit Meadows

Saturday, July 12

Among the most ecologically rich, intact areas of eastern Washington, Mt. Spokane State Park and its surrounding foothills have provided habitat to 65 butterfly species. We will most likely hike to the Mount Kit Carson Summit by way of the Mount Kit Carson upper loop trail, an approximately 2.5 mile path that mostly follows an old logging road through higher elevation forest until reaching a steeper, single track climb with multiple switchbacks which takes a hiker the last three quarters of a mile to the Mount Kit Carson Summit. Midsummer, the meadows just beneath the summit should be awash with wildflowers. Parnassians, Swallowtails, Fritillaries, Blues, Ladies and Crescents may all be seen here in numbers on a good season.

Plan to meet at the Upper Kit Carson Loop Trailhead parking area at 10:30 AM. State Discover Passes are required.

Difficulty: 3-4, some distance and climbing involved. Leader: John Baumann tl_JohnB@wabutterflyassoc.org

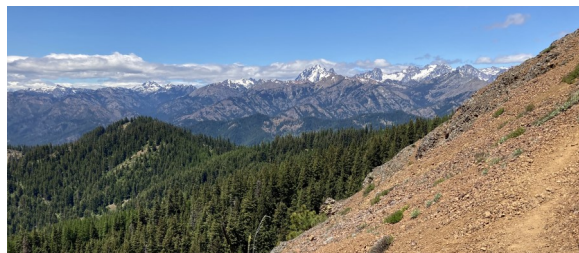
(Continued on page 10)

(Continued from page 9)

Red Top Lookout

Sunday, July 13

Located south of Blewett Pass, we'll stop at several roadside spots to look for butterflies on our way up to the lookout. Butterflies are also present around the upper parking lot. Once we reach the trailhead, it will be a short, but steep, 3/4 mile walk to the lookout, with butterflies and meadows along the way.



Red Top. (M. Weiss)

Meet at Tibbett's Valley Park at 7:00 AM and we'll carpool from there.

Difficulty: 1-3. Leader: David Droppers tl_DavidD@wabutterflyassoc.org

Little Quilcene for Zerene and more.

Late July or August, to be determined. Meeting Time: 10:00.

Participants will join Karen Holtrop and Tanna Knouse for a walk in the Olympic National Forest, Little Quilcene River watershed. The goal will be to count the numbers and species of butterflies, while noting nectar plants, search time, and weather conditions. Potential sightings include Zerene and Hydaspe Fritillaries, Western Branded and Woodland Skippers, Painted Lady, Red Admiral, and Clodius Parnassian. The walk will be relatively flat along an old road but may involve rocky terrain and dense vegetation.

The group will meet at the Forest Service office in Quilcene and carpool for a 40-minute drive to the site.

Difficulty: 3. Leader: Karen Holtrop tl_KarenH@wabutterflyassoc.org



Zerene Fritillary. (M. Weiss)

2024 Field Trip Protocols

Non-consumptive appreciation of butterflies is central to our purpose, basic to our approach, and the guiding principle behind general membership field trips. Collecting of adult butterflies is not allowed on these trips. Collecting of eggs and larvae for rearing is accepted on condition that individuals raised to adult stage are released at their original location.

HOW TO SIGN UP: Anyone can sign up by contacting the trip leader. Emails for doing so will be published on our website when available, and in the May G'num. This is a work in progress, please be patient!

Check our website and Facebook page for last-minute additions (Flash Field Trips!).

DIFFICULTY RATINGS:

- 1 Easy, mostly by car, minor walking along roads.
- 2 Fairly limited walking, some slopes may involved.
- 3 Moderate, 3-4 miles walking, or with some slopes.
- 4 Difficult, hiking required off road, may have short steep sections, total of 4 miles or so.
- 5 Strenuous, extended hiking on trails with steep terrain, 4-8 miles.

Species Profile: Juniper Hairstreak (*Callophrys nelsoni*) (Columbia Basin Segregate) By David James

This is a butterfly with a very confused nomenclature! Today it is *Callophrys nelsoni* but when Dave Nunnallee and I wrote our Life Histories book it was *Callophrys gryneus*. Tomorrow? Who knows? *Callophrys nelsoni* is the name given now to all Juniper/Cedar Hairstreaks in Washington and it seems likely or reasonable to assume that the segregate that occurs in the arid Columbia Basin is at least a different subspecies from the segregates that occur in moister and forested landscapes in western and northern Washington. But for now, we can only use the Columbia Basin moniker to separate it from its commoner cousins.

The Juniper Hairstreak in south eastern WA is a rare butterfly that the Washington Department of Fish and Wildlife has designated as a Species of Greatest Conservation Need (SGCN) and it is one of the five species that will be targeted by WBA and myself over the next three seasons to obtain information and data on distribution, abundance, and biology (see article: WBA-WDFW Butterfly Conservation Project, page 6). This butterfly season, the Juniper Hairstreak will be the first SGCN that I will be looking for in the Columbia Basin and nearby areas and I very much hope some of you will join me.

The Juniper Hairstreak, like all hairstreaks, is a small butterfly with a wingspan of about an inch and a quarter with brown wings above and below but it is the markings on the ventral surface of the hindwings that are beautiful and characteristic of the species (page 6). Hard to put into words, the ventral coloration is a variable shade of brown with striking violet or purple highlights with a crooked white band. There is a variable pale area sometimes with variably-sized black dots near the small hairstreak tails. The Columbia Basin segregate of this species is found only where Western Junipers (*Juniperus occidentalis*) grow. The distribution and abundance of these trees in Washington is limited (Fig. 1).

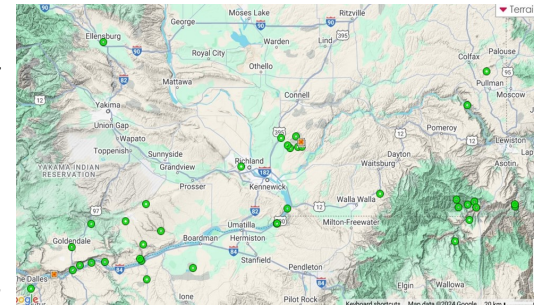


Figure 1. Burke Herbarium records of Western Juniper in SE WA.

There appear to be two areas in SE WA where Western junipers are more common, Juniper Dunes, in Franklin County north of the Tri-Cities and on the dry hills north of the Columbia River in Klickitat County. Juniper Dunes was an area that supported a significant population of Juniper Hairstreaks in the past but it has not been seen there since 2008. Currently, the only Juniper Hairstreak populations known in SE WA are found in Klickitat County. A survey conducted by the Xerces Society in 2023 discovered four sites in this county supporting populations of the butterfly with numbers seen ranging from 3 to 33.

Very little is known about the biology and ecology of Juniper Hairstreaks, aside from the life history studies that Dave Nunnallee and I conducted more than a decade ago. Eggs are whitish-green and laid singly (Fig. 2). The caterpillars go through four instars taking between 30-50 days to reach pupation (Figs. 3-4). The caterpillars feed on Juniper needles and their camouflage in later instars is exceptional. In captivity, pre-chrysalis caterpillars wander and they pupate on the bottom of the cage they are reared in. Presumably, in the wild they leave the tree they fed on and pupate on the ground but this has not been confirmed. The chrysalids are 11mm long and can be black or brown (Fig. 5).



Figure 2. Egg of Juniper Hairstreak



Figure 3. First instar caterpillar of Juniper Hairstreak

(Continued on page 12)

(Continued from page 11)



Figure 4. Fourth instar of Juniper Hairstreak

Adult behavior of the Columbia Basin segregate of the Juniper Hairstreak has not been fully documented. We know

Figure 5. Chrysalids of Juniper Hairstreak



they nectar on early season buckwheats and desert parsley. We also know males are territorial, spending much of their time perching, flying out when other males and insects get too close. The flight period in SE WA is oddly earlier (April-May) than in central Oregon (June-July), and more southerly populations of Juniper Hairstreaks can be double-brooded while ours are single-brooded.

Our first WBA-SGCN field trip in late April will be to Juniper Dunes where we will try to relocate this species in the habitat it used to occupy. Recent (2017, 2023) expeditions to find the species at Juniper Dunes were late in the field season, a mistake we will avoid this year!

From Page 3, Table 1: every issue of Gnum in the archive on our new website..

"G'num2000Vol1No1"	"G'num2005Vol6No1"	"G'num2009Vol10No1"	"G'num2013Vol14No1"	"G'num2017Vol18No2"	"G'num2021Vol22No2"
"G'num2001Vol2No2"	"G'num2005Vol6No2"	"G'num2009Vol10No2"	"G'num2013Vol14No2"	"G'num2017Vol18No3"	"G'num2021Vol22No3"
"G'num2001Vol2No3"	"G'num2005Vol6No3"	"G'num2009Vol10No3"	"G'num2013Vol14No3"	"G'num2017Vol18No4"	"G'num2021Vol22No4"
"G'num2001Vol2No4"	"G'num2005Vol6No4"	"G'num2009Vol10No4"	"G'num2013Vol14No4"	"G'num2018Vol19No1"	"G'num2022Vol23No1"
"G'num2002Vol3No1"	"G'num2006Vol7No1"	"G'num2010Vol11No1"	"G'num2014Vol15No1"	"G'num2018Vol19No2"	"G'num2022Vol23No2"
"G'num2002Vol3No2"	"G'num2006Vol7No2"	"G'num2010Vol11No2"	"G'num2014Vol15No2"	"G'num2018Vol19No3"	"G'num2022Vol23No3"
"G'num2002Vol3No3"	"G'num2006Vol7No3"	"G'num2010Vol11No3"	"G'num2014Vol15No3"	"G'num2018Vol19No4"	"G'num2022Vol23No4"
"G'num2002Vol3No4"	"G'num2006Vol7No4"	"G'num2010Vol11No4"	"G'num2014Vol15No4"	"G'num2019Vol20No1"	"G'num2023Vol24No1"
"G'num2003Vol4No1"	"G'num2007Vol8No1"	"G'num2011Vol12No1"	"G'num2015Vol16No1"	"G'num2019Vol20No2"	"G'num2023Vol24No2"
"G'num2003Vol4No2"	"G'num2007Vol8No2"	"G'num2011Vol12No2"	"G'num2015Vol16No2"	"G'num2019Vol20No3"	"G'num2023Vol24No3"
"G'num2003Vol4No3"	"G'num2007Vol8No3"	"G'num2011Vol12No3"	"G'num2015Vol16No3"	"G'num2019Vol20No4"	"G'num2023Vol24No4"
"G'num2003Vol4No4"	"G'num2007Vol8No4"	"G'num2011Vol12No4"	"G'num2016Vol17No1"	"G'num2020Vol21No1"	"G'num2024Vol25No1"
"G'num2004Vol5No1"	"G'num2008Vol9No1"	"G'num2012Vol13No1"	"G'num2016Vol17No2"	"G'num2020Vol21No2"	"G'num2024Vol25No2"
"G'num2004Vol5No2"	"G'num2008Vol9No2"	"G'num2012Vol13No2"	"G'num2016Vol17No3"	"G'num2020Vol21No3"	"G'num2024Vol25No3"
"G'num2004Vol5No3"	"G'num2008Vol9No3"	"G'num2012Vol13No3"	"G'num2016Vol17No4"	"G'num2020Vol21No4"	"G'num2024Vol25No4"
"G'num2004Vol5No4"	"G'num2008Vol9No4"	"G'num2012Vol13No4"	"G'num2017Vol18No1"	"G'num2021Vol22No1"	

(Continued from page 2)

again check out the amazing Blue Morpho specimen. It was a pleasure and a treat to visit the campers at Camp Read-a-Rama and their appreciative camp stewards. We would like to thank Doc Martin and Sydney Geyer for bringing together the ideas of youth literacy with science, nature and fun (there was also singing!) We are grateful for the opportunity to share what we do at WBA with the kids. For them to have independently sought us out for "expertise" illustrates their thoughtfulness and creativity (thinking "outside the box" perhaps?) of the Read-a-Rama staff.

WBA hopes to do more outreach events like this in the future, for youth and the general public. Please contact WBA at our website, www.wabutterflyassoc.org with any ideas or suggestions for places, outdoor shows, events, &c where you think WBA might be able to have a presence and "share our expertise." Also, we are always looking for volunteers to help with tabling events and other outreach opportunities. Please contact us through our website!



Collection of different species of blue *Morpho* butterflies. (Anaxibia on Wikipedia)

Board Members

President	Liz Kuehn	pres@wabutterflyassoc.org	Science Advisor	Jon Pelham
Vice President	Dan Dunphy	vp@wabutterflyassoc.org	Membership	Reg Reisenbichler
Secretary	Karen Holtrop	sec@wabutterflyassoc.org	Annual Conference	Available
Treasurer	Regina Johnson	tres@wabutterflyassoc.org	Field Trips	Melanie Weiss
At-Large	David James		Programs	Paulette Murphy
At-Large	Carolyn Heberlein		Publicity/Website	Carolyn Heberlein
At-Large	Paulette Murphy		Newsletter	Regina Johnson
At-Large	Alex Corsten			
At-Large	Melanie Weiss			
At-Large				

Committees

The views expressed in articles in this newsletter are those of the authors, and not necessarily those of the WBA.