



*G'nun**

The newsletter of the Washington Butterfly Association

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Facebook: Washington Butterfly Association. Instagram: #washingtonbutterflies (anyone can use this hashtag)

*G'nun 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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New species spotted in
Bellevue by Melanie
Weiss during February's
Seattle Snowpocalypse:
Papilio frigidorum.



Upcoming Programs

Wednesday Feb 20, Spokane: Dr. Gary Chang, Wool Carder Bees. Gary's program will summarize his field study of the unusual behaviors of a relative newcomer to western landscapes, the European Wool Carder Bee, and its interactions with other species.

Wednesday, March 6, Seattle: Maybe a second shot at the WSDOT Pollinator Habitat program cancelled in February.

Wednesday, March 20, Spokane: Photography Workshop. Jeanne Dammarrell, Carl Barrentine and John Baumann team up to offer three perspectives on photography of butterflies and moths. They will chat about their preferred gear, methods, software and field locations in the hopes that many more area naturalists will be inspired to try their hands and lenses at lepidoptera photography! Jeanne's and Carl's photos have been extensively published in field resources in print and online.

Wednesday, April 10, Seattle: TBA

Wednesday, April 17, Spokane: David Droppers will present an update of his program "**A Dichotomous Key for Identification of the Blues of Washington**", in which all the species of the several genera of Washington's Polyommatus tribe are described in vivid live photos and specimen photos. David is a long time member of WBA and the Lepidopterist Society, and has taught classes and done extensive field work on western butterflies

Wednesday, May 1, Seattle: TBA

Wednesday, May 15, Spokane: Bob Pyle's Butterfly Big Year The renowned lepidopterist Dr. Robert M Pyle, PhD visits Spokane! None other than the founder of the Xerces Society for Invertebrate Conservation, and much published writer in the science and lore of butterflies and Bigfoot, a poet and now novelist, Bob Pyle will talk to us about some of his recent writing and field experience. Further details will be announced. Don't miss this one!

President's Message from David Jennings

Belated Happy New Year! May your 2019 field season be filled with amazing encounters, educational opportunities and a growing sense of wonder and appreciation of our natural world.

Fieldtrips

The WBA board is going to do our best to help you maximize your butterfly explorations, with a plethora of field trips around the state plus a very exciting “Butterfly Weekend” with our 18th annual WBA conference based out of Colville. One of the most exciting aspects of our growing range of opportunities is the increasing number of field trips focused on the east side of state, with the incredible team we have in Spokane leading the way.

WBA is continuing our tradition of field trips for folks on the west side, with trips planned to excellent habitats around Ellensburg, Yakima and similar areas east of the Cascades. While the weather is much more fickle on the west side of the Cascades, we may try some field trips that can be organized relatively quickly if the weather in the Olympics or down in the Olympia area will cooperate.

We are also trying to figure out the logistics for some “weekend long” expeditions around the state—for those sites we know are excellent but are hard to do in a single day due to travel time involved. Sites similar to one of our previous “Wings over Washington” conference—the areas around Tonasket including the Sinlahekin Wildlife Area, managed by our Department of Fish and Wildlife. With Dale Swedberg now on our board, I am hopeful that we can find “someone” knowledgeable about that part of the state, in particular where to look and what to expect.

Summer Study Weekend

The board has a great summer Butterfly Weekend planned for this summer. Mark your calendars for the last weekend of June: June 28th through June 30th with an optional day for a fieldtrip on Monday July 1st. Our host city is Colville and we are already working with land managers in the area to determine where we can maximize observations of many different species. There is a lot of habitat, and habitat diversity, in that part of the state. As a board, we are very excited about this location. I would like to give a special shout out to Lora Langford, Sue Orłowski and Mary Schu, for organizing this year's butterfly study weekend!

Membership Dues

Running an independent state-wide organization does have costs associated with it. WBA has not raised our dues in over 10 years. After much discussion this past fall at our annual board retreat, the board decided it was time to make a small increase to our membership fees. Our past dues were \$20 for an individual and \$25 for a family. Moving forward the dues are now \$25 for an individual membership and \$30 for a family. We hope you still think it is a bargain for what you get in return.

Conservation

I started this message with a focus on WBA helping you gain a growing sense of wonder in the diversity and beauty of our natural world. Now it's time for the conservation component. Our vice-chair John Baumann recently came across a very sobering article in the New York Times: Insect Apocalypse. It focuses on how scientists all around the world—from nature preserves in Germany to the tropical forests of South America—are documenting an alarming, almost precipitous decline in all types of insect populations. Please go online and read it at

<https://www.nytimes.com/2018/11/27/magazine/insect-apocalypse.html> . The implications are staggering.

It's nice when the USA can be role model for others, but currently we seem to be doing just the opposite when it comes to conservation. The infamous “Wall” that our federal administration is pushing to be built will be a very negative blow to biodiversity across the states that border Mexico. A sad example is what is being proposed for our National Butterfly Center, just outside of McAllen, TX, situated between Benson State Park and the very famous Santa Ana Federal Wildlife Refuge. The department of Homeland Security has notified the butterfly center that the feds intend to exert eminent domain and build a physical wall bisecting the NBC. What is even more egregious is that the federal plans call for destroying all the native habitat on the south side of the NBC—bulldozing it into oblivion. For more details on this proposed conservation tragedy contact the National Butterfly Center (<https://www.nationalbutterflycenter.org/>). Melanie Weiss, a past WBA board member is tracking this closely. For a more detailed understanding please contact her at

Feedback and Participation appreciated

The WBA board always appreciates feedback on how we can better serve our membership. If you wish to participate on any of our standing committees (membership, programs, website, newsletter, field trips, finance, conference), please let us know!

In closing, thank you for your membership and active participation in WBA! We look forward to spending time with you in the field this summer! Stay tuned for lots of good field trips!

Watching Washington Butterflies with Bob Pyle

Number Thirty-six

Where Are the Backpacking Butterflies?

In the late 1960s, when the Ecology Action club was going strong at the UW, we members had to come up with a program every month. When we couldn't find anything else, we fell back on the films made by David Brower, president of the Sierra Club, about one major conservation campaign or another. One of our favorites concerned the North Cascades, and as we were ourselves deeply involved in the struggle to create a North Cascades National Park, this beautiful film furnished not only entertainment and enlightenment, but also pep talk, no matter how many times we watched it. We also ogled the Sierra Club exhibit format book on the North Cascades, and Ira Spring and Harvey Manning's *101 Hikes in the North Cascades*. We simply assumed that we would, in the fullness of time, hike all those trails, see all those lakes, and in general become as intimate with the wildlands of Washington as were our idols. I likewise reckoned that we would one day sample the butterflies in all these high redoubts.



Indian Henry's Hunting Ground,
Mt. Rainier, David Droppers

As the years passed, we got up there where and when we could, and walked some of the trails: Cascade Pass from Stehekin, the Suiattle River (with Justice Douglas, protesting Kennecott Copper's plan to place an open-pit mine on Miner's Ridge by Image Lake), and other spots accessible from Stevens or Snoqualmie passes. Some of us got out and up more than others. However, the time has come to admit (half a century later) that we're never going to get up to most of the wilderness whose eventual visitation we took for granted all those years ago. So now we return to Slate Peak and Hurricane Ridge and the very few other alpine heights we can reach by automobile. And very few of the working lepidopterists seem to put their REI gear to work in the remote high country.



Bandera Mountain, Alpine Lakes, Al Wagar

Now, there have been exceptions. There were Andy Anderson of Pateros and John Hopfinger of Brewster, who trudged up into the Sawtooths, Twisp Pass, and other remote enclaves from the twenties on, first finding the Astarte Fritillary in the Lower 48 and making many other important early records. There were the Svihlas, who clambered over High Divide and other Olympic passages in the thirties, coming up with some of the few butterfly records of the High Olympics that we possess, beyond Hurricane Ridge. In the seventies, young Shaundelle Vail and her parents backpacked into the Pasayten Wilderness and extended our knowledge of the distribution of the Labrador Sulphur, the Alpine Checkered Skipper, and others. Jon Pelham, Merrill Peterson, and Jimmy

Pearson followed up a few years later, packing into Horseshoe Basin. Robert Kirk regularly took to the alpine wilderness with his net, establishing for the first time that Vidler's Alpine occurs south of Snoqualmie Pass, at Mt. Margaret, in 1983—still the southernmost known record in the world for this Cascadian endemic species. Ed and Cathy Maxwell extended its known occurrence in the southeastern Olympic wilderness, and



Enchantment Lakes, Cathy Clark

Bill Yake did the same for the Valerata Arctic. My party and I found the Makah Copper well beyond the trailhead in Olympic National Park's northwestern corner. Thea and I recorded new beach-heads for the Mountain Parnassian and Arctic Blue in the Dark Divide de facto wilderness of Skamania County while backpacking with a group from the Washington Native Plant Society.

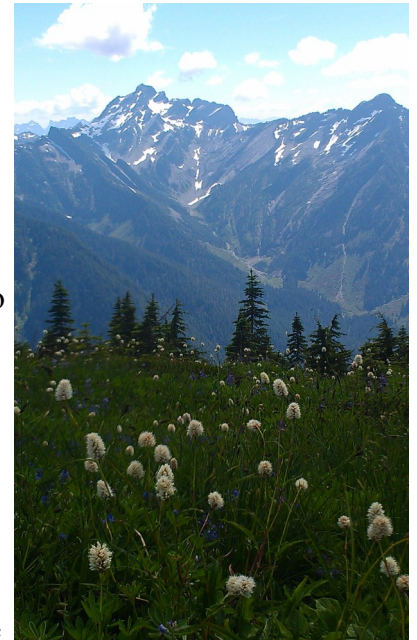
But such forays on foot have been far fewer than motoring butterfly outings. Most of us stick to the near-vicinity of the roadways, and while we may cover some off-road territory on our day-hikes, the number of people who take nets when hiking deeper into the national forests is vanishingly small. Even among those who prefer cameras to nets (a necessity in national parks, unless you can score a permit), few images have been returned from *terra incognita*. As for the people charged with exploring our mountain parks for but-

terflies, the Cascades Butterfly Project, while their work has been excellent and valuable, it tends to focus on the same transects year after season. This has its profound purposes, such as measuring the response of high-country butterflies to changing temperatures, but it doesn't aspire toward expanding their known ranges into remote, unrecorded localities.

So what are we missing? Only the last major areas in Washington with no butterfly records at all, or next to none. The Enchantments, the William O. Douglas and Norse Mountain wildernesses, Trapper Creek, the upper Wenaha-Tucannon, even the Goat Rocks and the farther parts of Mt. Adams and Glacier Peak, have very few dots on the map. And as for the Pickett Range and certain other sections of the North Cascades National Park, as well as whole high watersheds such as the Napeequa, the northern Pasayten, and vast areas of the interior Olympics, we have no butterfly knowledge at all. And there are a good many others. Any sampling or reliable photos at all would constitute whole new quanta of biogeographical and faunistic information about our natural heritage. The maps and data books are thirsty for such knowledge.

What about species? Just what butterflies are you likely to find in the uncharted wilderness? Well, that's just the point: we can't quite say. If we could, there wouldn't be much point in going to all the effort, and it *will* be a lot of effort to get into these places. Nor is there any guarantee: you might backpack for a week in, a week out, only to find an entirely ordinary fauna (though there are no useless records: even such a result would help fill out the picture). And (of course you know this): the weather, hatch, and (these days) fire season might not cooperate, skunking your best-laid one-foot-after-the-other, mile after mile trek, all uphill.

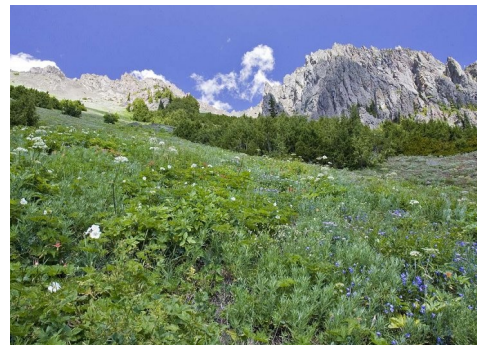
But! The opposite outcome might also come true. You might get up there, take off your half-ton pack, pitch camp, and wake the next morning to crystal skies and butterflies abounding. This happened on my fiftieth birthday, when Thea and I made a short backpack up to Silver Star Mountain in Clark County, where most people merely take day-hikes, for lack of water (which we carried in). The lug paid off in vast sunny meadows fairly painted with wildflowers, and the best array of butterflies we'd ever seen on the West Side, apart from the meadows of the high Olympics.



Mt. Dickerman, North Cascades, David Droppers

And if you should find yourself in fresh territory for butterfly exploration in optimal conditions, you just could come up with a state or county record, or at least (by definition) range extensions. Since most such vir-

gin grounds are at high elevation and in the North, you should be on the lookout for Canadian species that might or might not ever have been recorded on the U.S. side of the border. A few of the species that just could show up in northernmost Washington include the Aphrodite Fritillary, the White Admiral, and Macoun's Arctic at middle-montane elevations; and the Draco Skipper and the Rockslide Checkerspot in the Arctic-Alpine. More likely would be new locations for those very sparsely found grails of the Washington list, the Alpine Checkered Skipper, the Lustrous Copper, the Astarte Fritillary, and the Melissa Arctic. It would be a very fine thing to extend our knowledge of these species in the state, especially now that their future may be imperiled by rising temperatures, drying, and bigger fires.



Buckhorn Wilderness, Rod Gilbert

I hope my arguments will induce the trailworthy amongst us to put our boots on and get out there! I include myself. I'm no longer up to many of those far-flung hikes that I took for granted I would someday do, all those years ago. But I can still wander past the "Wilderness Area" sign as far as I feel like, and there are wonders to behold even quite close to the road. Even if you don't make your intended goal, you may find great things along the way as far as you get. Once, on another birthday, I intended to backpack into the Enchanted Valley in the middle of Olympic National Park. Between ill-fitting boots and excruciating flies, my hiking partner and I decided to bail on the long-distance objective, and as far as I know, the Enchanted Valley has still never been sampled for butterflies. But on the way out, well above Lake Quinault, I found the first record for the Western Sulphur in the southwestern Olympics. Don't forget that horses and llamas may be enlisted on many trails, too, spreading the burden and increasing the reach.



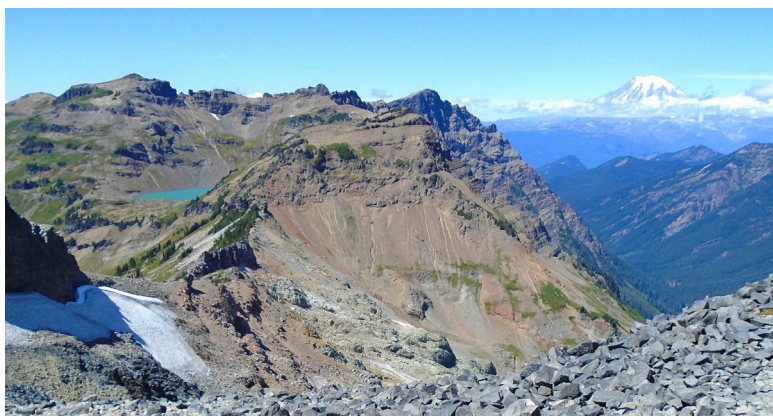
Tucquala Lake, Salmon La Sac, Melanie Weiss

I especially hope that younger, fitter hikers with a soft spot for butterflies may read this and be induced to wander high, wide, and handsome, far beyond the known country, deep into our precious federal wilderness, with nets, notebooks, and cameras in hand. Lepidopterists are famous for being creatures of habit, returning to known localities and favorite habitats again and again, and for collecting close to their cars. Let's encourage a new generation of butterfly explorers, undaunted by healthy exertion and enchanted by the prospect of new knowledge and fresh discovery. Let's birth a batch of backpacking butterflies—then sit back and watch to see what they bring back!



Pasayten Wilderness, Dale Swedberg

Mt. Adams from Goat Rocks, David James



2019 Winter Parties

Spokane's WBA chapter celebrated its first winter party, having been inspired by Seattle WBA's longstanding tradition. It was a housewarming event for us all, as we had our first opportunity to meet at a new location at Corbin Art Center on the lower South Hill, a grand old mansion of the early 1900's with plenty of meeting space that was graciously offered us by Spokane Parks and Rec in coordination with our volunteer, Hailey Armstrong. Izzy Langford, Spokane's first Idie Ulsh Young Naturalist scholarship winner in 2018, gave a brief presentation on her experience with our group at the White Salmon/Hood River Study Weekend. The Corbin Art Center will be our meeting place from now on.



Spokane's new meeting place, The Corbin Art Center. (Carl Barrentine)



Izzy does her presentation. (John Baumann)



Al Wagar shows off his classic sweet potato casserole in his custom-made insulated carrying box. (Cathy Maunu)

Seattle's winter party was again held at the home of Ed and Ann Lipkin, to whom we extend our thanks for hosting us in their beautiful home. This year we had attendees from as far away as Olympia, Gig Harbor and Tonasket.



Melanie got a butterfly umbrella in the White Elephant exchange. (Cathy Maunu)

Are Cultivars Bad Nectar Sources? By Regina Johnson

Pollinator decline is a hot topic. Many groups are pushing pollinator-friendly practices to help stave off pollinator decline in general and honeybee colony collapse disorder in particular. Stories on pollinator decline even appear in general news articles. People who never otherwise give a thought to the environment, or where their food comes from, have heard of pollinator declines and colony collapse. A couple of widespread recommendations for pollinator-friendly gardening are: to plant species that are native to the area being gardened; and to not plant horticultural cultivars or hybrids. A cultivar is a cultivated variety, an individual plant selected for a unique trait. All cultivars have a name in single quotes, usually in English though not always: 'David' phlox has white flowers and good mildew resistance, 'White Icicle' red-flowering currant has white flowers, 'Granny Smith' apple has green skin, firm tart flesh and is good for cooking. You'll also find that some garden plants are natural varieties, like a naturally-occurring red-flowered dogwood, *Cornus florida* var. *rubrum*; or a naturally occurring subspecies like climbing hydrangea *Hydrangea anomala* ssp. *petiolaris*. Sometimes the 'var' or 'ssp.' is left out; you can infer it from the presence of three Latin names in italics. But, most of the red and pink flowering dogwoods in the trade are cultivars, not the naturally occurring variety. If your garden plant has a X in the name that means it's a hybrid though that could mean a cross between two named cultivars of the same species, or between two different species.

What are the reasons behind these recommendations? Let's take a look at the first one, planting native species. The logic behind this one is that plants that are native to your area will be the best adapted ones and won't need supplemental irrigation or fertilizing, or much care at all; that they won't be invasive, and that they will provide the best food



A white coneflower cultivar, popular with the Woodland Skippers. (R. Johnson)

sources for native insects and other wildlife. Now anyone who's made the mistake of planting Douglas aster or Canada goldenrod in their garden can attest that yes, native plants can be very invasive in the wrong spot. But that aside: how to find out what's native in your area? If you live in any low-density area that still has lots of natural vegetation and unpaved areas, planting native species will be both easy and effective. You can look at what's growing around you to get an idea of what is native to your area. But if you live in a highly urbanized area your task is much more complicated. All or most of the native vegetation is gone. You can do a little research and find plant lists of what used to grow there, and plant those, but that doesn't mean that what's on the list you found is actually what used to grow on your site, and what used to grow there won't necessarily be the best adapted plants for your site anymore. The urban environment

is radically changed physically from the natural habitat it replaced. Pavement and buildings create a completely different environment for plants and wildlife than unbuilt environments. The soil in urban areas has been stripped of topsoil and organic matter, and bulldozed and compacted to make suitable building sites. Pavement blocks air and water from what soil is left. Pavement and storm drains deflect rain from infiltrating the soil and channel it away, leaving the soil dry while creating flash flooding elsewhere. Buildings create artificial shade, much denser and with a different color spectrum than the shade that any tree creates; and reflect heat and sunlight like a cliff face would. This is the urban heat island effect you've heard of, where cities can be significantly warmer than the surrounding rural areas. As far as your plants can tell, highly-developed parts of Seattle might be more like Spokane as far as temperature, humidity, insolation, and soil moisture go. So while, for example, vine maple and evergreen huckleberry used to grow in places like Seattle, and still do in more natural parts of town, planting these forest understory, humus-loving plants in disturbed soils in parking lot islands or on south-facing walls is a totally unnatural environment for them and they don't do well at all. In the highly disturbed and radically altered urban environment, plants that used to be native to the site are not necessarily going to be the best adapted plant choices. Which doesn't mean you can't plant natives in these situations, but you will have to rethink what natives will be adapted to the current conditions, and plant those.

So what are the reasons behind the second recommendation, to not plant cultivars or hybrids? Hybrid species, since they combine the traits of two different species, may not provide the wildlife benefits of either parent (though some do) so you'll want to check on that. Hybrid cardinal flowers, *Lobelia x speciosa* are not good for pollinators. One parent is a bumblebee flower, the other a hummingbird flower; the hybrid serves neither. On the other hand, hybrids of Louisiana native irises, *Iris fulva* and *I. brevicaulis*, combined the best of both parents to produce lots of nectar on long-lasting flowers. *I. fulva* is a hummingbird flower, while bumblebees prefer the purple-flowered hybrids. All garden roses and rhododendrons are complex mixes of several species, yet all are attractive to bees so long as the flowers are not too double. One reason given for not planting cultivars is that cultivars are said to not produce nectar or pollen for pollinators or appropriate food for native herbivorous insects. This is taken as gospel by native plant enthusiasts, but it's not really true where nectar and pollen are involved. Keep in mind when someone tells you that cultivars don't produce pollen or nectar, that nearly all our agricultural crops are cultivars and yet they still produce the pollen and nectar necessary for pollination by honey bees. 'Fuji' apple, anyone? For herbivores like caterpillars, native plants are critical and cultivars and hybrids could be bad—see G'num Volume 18 #4 page 6. But nectar-feeding butterflies are not nearly so fussy as their herbivorous caterpillars. Yes some cultivars don't produce much nectar, but many do, and some even produce more nectar than their parent species ('Jeana' phlox is particularly good for butterflies)! And many cultivars are perfectly good food sources for the herbivorous insects that feed on their parent species. It is true that plant breeders don't select for nectar produc-



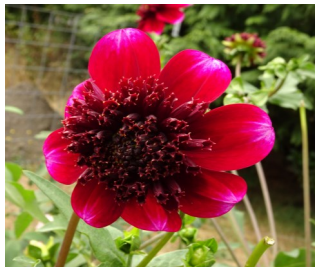
Pearly Everlasting grows well in gardens and attracts lots of butterflies. (R. Johnson)

tion but it doesn't mean that nectar production is automatically lost - just because a trait is not being selected for doesn't mean it always disappears. We still have an appendix, after all. Finding information on which cultivars are still good wildlife plantings is not going to be easy though. What research is done on nectar production, is done on agricultural crops used by honey bees, so not terribly applicable to butterfly gardening. Also measuring nectar production is complicated. In many species nectar is produced on a cycle, not continuously; there will be peaks in production every 8 hours or 24 hours depending on species and cultivar. Nectar production also depends on weather and plant moisture status, and can vary with how many pollinator visits an individual flower has had. It's more than just counting pollinator visits since you can't tell how much nectar each visit produces and what the sugar balance is –yes, that varies too. A very little research is being done on garden plants for native pollinators, mostly at the Mt. Cuba Center in Delaware and by Annie White at the University of Vermont, by the count-the-visits methods, but that usually does not include butterflies. Even so we can see that results are all over the map and vary not just by specific cultivar, but by specific pollinator too.



Left to right: Single, semi-double, and fully double rose flowers. Bonus points for anyone who can name them! (R. Johnson)

A few generalizations have been established, which you can use to inform your decisions. Most important is that if you can't see the flower's stamens when it's open, it's no good as a pollen or nectar source. This rules out full, double flowers, like most garden roses and dahlias, and double-flowered petunias. This is not new information though, this has been well known for the many decades that I have been working in horticulture. 'Double flower' means the flower has extra rows of petals, sometimes replacing stamens. A single flower has a single row of petals; semi-double flowers have one or two extra rows of petals; double flowers have more than that. Another useful generalization is that if the flower color is significantly shifted from the parent species, then it probably won't attract the same pollinators, although exceptions exist. Butterflies prefer flowers in reds, oranges, yellows, pinks and purples, but my white coneflowers attract more skippers than the natural purple color. For herbivorous insects like caterpillars, a good generalization is that blue, purple or red foliage color won't be good. The chemicals the plant produces that make the leaves red or purple seem to be toxic to insect herbivores. These chemical pigments are always present in small amounts which leave the leaves green, but you can see a red tinge to the green leaves when the plant is stressed by cold or drought. Blue color comes from wax on the leaves—obviously not good.



This is a double-flowered dahlia cultivar. Stamens are replaced by petals. Does not attract anything. (R. Johnson)



This is a single-flowered dahlia cultivar. You can see the stamens. (R. Johnson)

Another reason given for not planting cultivars is that in most cases they are propagated vegetatively, so every plant is a clone of every other plant of the same cultivar. (There are many cultivars that are propagated from seed, like most vegetables, field crops and annual flowers but I can't explain how that works, but obviously they're not clones. 'Cascadia' snap pea, 'Trailing Sapphire' lobelia, 'Walla Walla' onion are examples.) This is said to reduce genetic diversity in the garden. This is very important in large scale ecological restoration projects but hardly matters at all in your city garden. Just how many plants of one cultivar were you planning on getting? Most people buy one or three of everything, not 100 of the same thing. So yes your rudbeckia might be the same cultivar as your neighbor's down the block but there are plenty of other unrelated plants in between to provide diversity. Fortunately the rudbeckia cultivar 'Goldsturm', by far the most common in nurseries, is equally attractive to pollinators as its parent species. And the rudbeckias the new neighbor buys next year will be different from what you have – garden cultivars come and go out of fashion like everything else. Sure, when I'm buying hundreds of kinnikinnik plants for an ecological restoration project, I look for a restoration nursery that propagates from seed for genetic diversity, I don't buy the garden cultivar 'Vancouver Jade' available at any local nursery. But if you're buying a dozen plants for your garden, at that scale, the lack of diversity doesn't matter all that much. Better to have a few cultivars of a native, than a nonnative species, for insect habitat.

2019 Field Trip Schedule (Subject to Change)

Date	Destination/Description	Difficulty	Trip Leader
April 6	Schnebley Coulee, Vantage. The traditional season-opening hunt for Sheridan's Hairstreaks and other early-season shrub-steppe butterflies.	1	John Baumann
April 13	Hog Lake and Folsom Farm, Spokane	3	Sue Orłowski
April 26	Yakima Training Center. We will return at an earlier date than last year to get more of the spring shrub-steppe species that might be there. This date will need to be confirmed with the YTC. And I have not yet heard as to whether our participants from last year need to be revetted. Stay tuned.		Melanie Weiss
May 11	Rutter Canyon, Little Spokane Natural Area	2	Sue Orłowski
May 17	Reecer Canyon, Ellensburg. We will visit one of our classic Central WA canyons at an earlier time in the season. Habitats will be explored at several elevations. Probable sightings of early blues, elfins, checkerspots, swallowtails.	2	Melanie Weiss
May 23	Spokane Falls Community College butterfly class	2	John Baumann
May 25	Douglas Canyon, Douglas County	1	Sue Orłowski
July 13	Salmon La Sac area	1-2	Al Wagar
July 23	Stevens Creek and Stevens Lakes, Shoshone County, ID	4-5	John Baumann
June 28-July 1	Annual Butterfly Study Weekend, Colville		
July 27	Bethel Ridge, Yakima County		Jim Reed
August 2 (Friday) Rain will cancel.	Mt. Townsend, Olympic National Forest. We will hike about 2 miles uphill to the subalpine meadows. Stay overnight in Sequim or Port Angeles and get 2 field trips in one trip to the Olympic Peninsula! See next item.	4-5 steep and unrelenting	Regina Johnson
August 3	Deer Park and Blue Mtn., Olympic National Park (no nets). Subalpine meadows. Warning: Deer Park Road is notorious for being steep, narrow and scary.	2-3	Jim Reed

Non-consumptive appreciation of butterflies is central to our purpose, basic to our approach, and the guiding principal 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 (See Board and Committee list in this issue for contact information). **Be sure to sign up ahead of time for last-minute changes/cancellations.**

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 involved.
- 3 Moderate, 3-4 miles walking with some slopes.
- 4 Difficult, hiking required off road, may have short steep sections, total of 4 miles or so. For experienced hikers.
- 5 Strenuous, extended hiking on trails with steep terrain, 4-8 miles. For experienced hikers.

Field Trip Instructions

WHERE & WHEN TO MEET: Trips depart from the north half of the Ravenna Park & Ride at 7:00 a.m. unless expressly stated otherwise. The park & ride is located under I-5 at Ravenna Blvd between NE 50th & NE 65th St. On request we also stop at the Issaquah Park & Ride at 7:30 a.m. To reach the Issaquah Park & Ride: going eastbound on I-90 take Exit 15 (1st Issaquah exit). At exit stoplight turn right (south) and drive 0.45 mile to Newport Way intersection (traffic light). Turn left (east) on Newport Way and drive 0.1 mile to another light, and turn right (south) into the Park & Ride. If you live in another part of the state, contact the trip leader to arrange where to meet the field trip group.

Please tend to personal matters such as getting coffee or lunch food before departure time so others are not delayed. Bring your own beverages, snacks and lunch for a day in the field.

All field trips are conducted by carpool. Without the volunteer participation of drivers, the trips are not possible. If you have a car that you are willing to drive, please have the gas tank full and ready to go.

All WBA-sponsored field trips are fully insured.

COSTS: Passengers are expected to share gasoline expenses. Typically this is \$10-20 each. Each rider should also pay a share of any park entry fees, ferry fares, etc. The trip leader will collect a voluntary donation of \$5 per person (children under 12 are free) for each field trip to help offset expenses of the organization.

Board Members

President	David Jennings		
Vice President	John Baumann		
Secretary	Mary Schu		
Treasurer	Regina Johnson		
At-Large	David James		
At-Large	Lora Langford		
At-Large	Paulette Murphy		
At-Large	Sue Orlowski		
At-Large	Jim Reed		
At-Large	Dale Swedberg		
At-Large	Alex Wright		

Committees

Science Advisor	Jon Pelham		
Membership	Reg Reisenbichler		
Annual Conference	Available		
Field Trips	Available		
Programs	Paulette Murphy		
Publicity/Website	Carolyn Heberlein		
Newsletter	Regina Johnson		
Trip Leader, Central WA	David James		