

Bryce Canyon Butterfly Count Results

11 July 2020

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Bryce Canyon Butterfly counts are a general inventory of what species are present, and species abundance. Continued butterfly monitoring will be useful for a future comparative study. Former Bryce Canyon National Park ranger Steve Mueller has been monitoring the Butterflies of the Bryce Canyon and environs much of his adult life. Ranger Steve has cooperated with the North American Butterfly Association to encourage citizen science, having a primary goal to connect people to the resource through field research, and develop the comradery of like-minds.

Monitoring organisms such as butterflies, birds, plants, aquatic invertebrates, etc., is an important way to indicate changes in ecosystems. A climate temperature increase and a decrease in precipitation are known changes/trends affecting the Bryce Canyon geographic province. Changes in land use such as grazing, mining, timber, fire ecology, and development are other likely impacts to this region.

Ranger Steve may not be able to lead future Bryce Canyon butterfly counts, since he would have to travel from the state of Michigan. His poor health has made such adventures difficult. Through a community of butterfly naturalists, I was asked to lead a count for this 2020 season.

In the last 18 years I have been a park ranger interpreter and biologist for the US National Park Service. I started participating in butterfly counts for Joshua Tree National Park, with Chief Ranger Joseph Zarki, from 2007 to 2015. I have led nine butterfly counts for the North American Butterfly Association (NABA):

South Rim Grand Canyon 6 September 2014

Desert View Grand Canyon 31 March 2015

South Rim Grand Canyon 14 June 2015

North Rim Grand Canyon 5 July 2015

South Rim Grand Canyon 16 August 2015

La Sal Mountains, UT 23 July 2016

Bryce Canyon 4 July 2019

La Sal Mountains, UT 11 July 2019

North Rim Grand Canyon 25 July 2019

La Sal Mountains, UT 4 July 2020

Bryce Canyon 11 July 2020

North Rim Grand Canyon 18 July 2020

11 July 2020 Count Results

The 15 mile diameter count-circle survey area is modelled after the Audubon Society's annual Christmas Bird Counts. The summer butterfly counts are usually held around USA's Independence Day, 4 July. This was the Bryce Canyon's 14th butterfly count. The center of the count circle is at Bryce Point bench-mark. Future counts should remain centered at the following location:

Bryce Canyon National Park, Garfield County, UT. 37.6053, -112.1574

Habitats in the Bryce Canyon count circle include: Urban interface, Great Basin Scrub, Agricultural (alfalfa & stock pasture), high-desert riparian, semi-arid grassland, ponderosa pine/Gambel oak forest, mixed-conifer forest, spruce/aspen forest, mountain meadow, montane riparian/lake, and subalpine conifer woodland.

The 4 July count began at 9:30 AM and ended at 3:30 PM. We met near the entrance of Bryce Canyon, and separated into two groups. Robb Hannawacker led a group into the national park, and Tony Jones

led a group to Tropic Reservoir, and then an arid grassland hill east of the Bryce Canyon Airport. Both groups rejoined at the Sunset Point parking lot. For the remaining group we had our last survey area at Sunset to Sunrise Points on the rim of the Bryce Canyon.

We had 16 participants: Robb Hannawacker (compiler) Tony Jones (lead), Linda Mazzu (superintendent), Amanda Barth (Utah DNR rare insect specialist), Hannah (DNR botanist), Haley Johnson (Park Ranger interpreter), Peter Densmore (visual information specialist), Doty Hoffman, Susan & Chris Wolf, Sharon, Jason & Alex Piech, Gabe LeMay (NPS contractor), Kim Barton, and Ella Swanger.

We observed 20 species. Tony's group saw 16, and my group saw 10 species:

Cercyonis oetus **Small wood-nymph** 33
Polygonia gracilis zephyrus **Zephyr Comma** 2
Phyciodes pallida **Pale Crescent** 2
Phyciodes pulchella **Field Crescent** 2
Junonia grisea **Gray Buckeye** 1
Satyrium behrii **Behr's Hairstreak** 5
Polites sabulita **Sandhill Skipper** 13
Colias eurytheme **Orange Sulphur** 3
Speyeria mormonia **Mormon Fritillary** 2
Speyeria sp. **Greater Fritillaries** 5
Plebejus melissa **Melissa Blue** 2
Satyrium sylvinum **Sylvan Hairstreak** 1
Colias eriphyle **Clouded Sulphur** 4
Polites sonora **Sonoran Skipper** 1
Euphilotes spauldingi **Spaulding's Blue** 2
Lycaena heteronea **Blue Copper** 1
Limenites weidemeyerii **Weidemeyer's Admiral** 4
Celastrina echo **Echo Azure** 1
Erynnis persius **Persius Duskywing** 1
Satyrium saepium **Hedgerow Hairstreak** 30

These results have been shared with e-butterfly.org & inaturalist.org

News Release Date: July 16, 2020

Contact: Peter Densmore

On Saturday, July 11th sixteen park visitors, local volunteers, and rangers gathered to conduct a butterfly count in the Bryce Canyon area. After a brief pep talk on the importance of citizen science, butterflies, and social distancing they shared a sunny morning and partly cloudy afternoon along hilltops, meadows, forests, and reservoir shores. By the end of the count they'd found 115 butterflies across 20 different species.

In years past, Ranger Steve Mueller had been this park's Lepidoptera expert—conducting seasonal research projects, leading thirteen July butterfly counts from 2001-2016, and even discovering a new species of Virgin Tiger moth in the park (*Grammia brillians*). Unfortunately, health reasons have precluded Ranger Steve from travelling from his home in Michigan to conduct further counts, and they were briefly discontinued. That is until last year when, partly in Ranger Steve's honor, and almost entirely out of his love for butterflies and public education, ranger Robb Hannawacker travelled 6 hours from Canyonlands to continue the tradition. He repeated the trip again this year and led one group of volunteers to areas including Swamp Canyon and Paria View, while Utah Lepidopterists' Society President Tony Jones led the other group to Tropic Reservoir and areas along Johns Valley Road.

A dry spring in the high plateaus has had a noticeable impact on the wildflower bloom this year, providing a challenge to butterflies that depend on them as host plants and nectar sources. Still, there were many beautiful surprises in flight. Small wood-nymphs, with their brown wings and yellow-ringed spots, were by far the most common species this year at thirty-three. Surprisingly close behind were the less-common Hedgerow Hairstreaks—so named for the slim hair-like tails on the corner of their hindwings—at thirty sightings. Sandhill Skippers followed with thirteen. Many of these were seen nectaring near East Creek meadow at Rocky Mountain irises, which was an unfamiliar butterfly/plant relationship to the group. Among other sightings were four boldly-colored Weidemeyer's Admirals, the sunny orange wings of seven Mormon and Zerene Fritillaries, and two Spaulding's Blues awaiting females atop redroot buckwheat. There was also a single Gray Buckeye which, like Monarchs and Painted Ladies, migrates into Utah every spring from the south. Other species included five Behr's Hairstreaks, three Clouded Sulphurs, three Orange Sulphurs, two Zephyr Commas, two Pale Crescents, two Field Crescents, two Melissa Blues, one Sylvan Hairstreak, one Sonoran Skipper, one Blue Copper, one Echo Azure, and one Persius Duskywing. Butterfly larvae are also counted as part of the census, and though many host plants were checked, none were seen.

Butterflies are especially sensitive to environmental changes, and scientists can refer to trends in their populations for indications of the general health of an area. The results of this count will be shared with the park's Resources division and posted to both iNaturalist and eButterfly. Previous years' count data was also entered through the North American Butterfly Association. Photos from this year's event can be found at <https://npgallery.nps.gov/AssetDetail/c1fd09f7-8ae1-447f-b717-6e9546f2ba9b?branding=NONE>

There are plans to continue the count next year, though an exact date has not yet been chosen. Those interested in other citizen science opportunities at the park should consider joining the 2020 Christmas Bird Count, another free event tentatively scheduled for December 19. To learn more about Bryce Canyon National Park, park conditions, and upcoming events, visit the park website at www.nps.gov/bryca or call the park's information line at (435) 834-5322.



Amanda Barth with a
Weidemeyer's Admiral



Melissa Blue



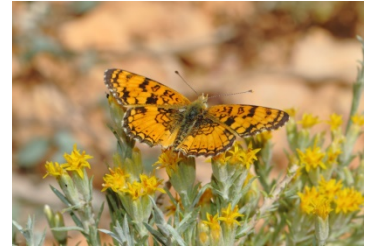
Pale Crescent (Tony Jones
photo)



Blue Copper



Small Wood-nymph



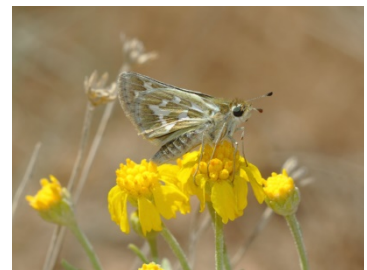
Pale Crescent (Tony Jones
photo)



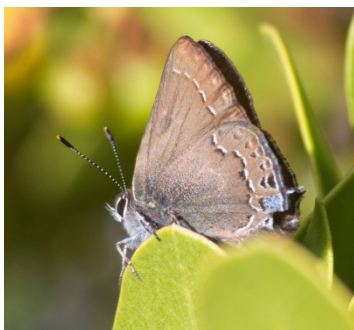
Echo Azure



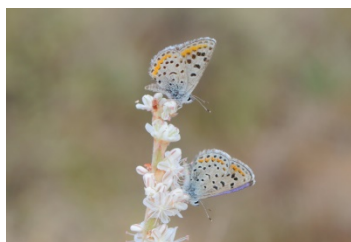
Zephyr Comma



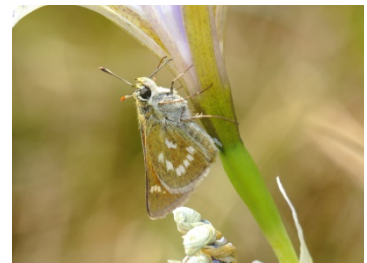
Sandhill Skipper (Tony Jones
photo)



Hedgerow Hairstreak



Spalding's blue (Tony Jones
photo)



Sonoran Skipper (Tony Jones
photo)