

Bryce Canyon Butterfly Count Results

4 July 2019

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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 a known changes/trends effecting 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 2019 season.

In the last 17 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 (two new GRCA species recordings)
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

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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 commuted to the Cannonville Bridge. From there, we surveyed the xero-riparian and edges of ag-land. Then we had visited the town of Tropic, surveying along the showy milkweed for *Danaus sp.* But none were found. We surveyed Water Canyon, and then an arid grassland hill east of the Bryce Canyon Airport. We broke for lunch at the Pines Restaurant, and the lepidopterists Tony Jones and Todd Stout had to be on their way. For the remaining group we had our last survey area at Sunset to Sunrise Points on the rim of the Bryce Canyon. There was 76-100% sunshine in the AM and 76-100% in the PM. The temperature varied from 60 F. to 75 F. Wind speeds varied from 3-5 MPH.

Butterfly counters included Robbie Hannawacker (lead and compiler), Todd Stout (SLC lepidopterist), Tony Jones (St. George lepidopterist), Peter Densmore (BRCA biologist), Katey (artist and birder) and Kelly Higgins (CANY SCA).



Ridings' Satyr
Neominois ridingsii,
4 July 2019
Bryce Canyon, UT
Robb Hannawacker



Melissa Blue *Plebejus melissa*
4 July 2019
Bryce Canyon, UT
Robb Hannawacker



Reakirt's Blue *Echinargus isola*
4 July 2019,
Bryce Canyon, UT
Robb Hannawacker

The following is a list of the butterfly species encountered, and observed quantities. We did not encounter any new species for the park during this 4 July 2019 count.

Western Tiger Swallowtail *Papilio rutulus* 6
Checkered White *Pontia protodice* 11
Cabbage White *Pieris rapae* 3
Orange Sulphur *Colias eurytheme* 6
Clouded Sulphur *Colias philodice* 2
Sulphur *Colias* sp. 1
Dainty Sulphur *Nathalis iole* 1
Gray Hairstreak *Strymon melinus* 2
Western Pygmy-blue *Brephidium exile* 1
Reakirt's Blue *Echinargus isola* 1
Marine Blue *Leptotes marina* 1
Melissa Blue *Plebejus melissa* 9
Lupine Blue *Icaricia lupine* 1
Variegated Fritillary *Euptoieta claudia* 7
Arachne Checkerspot *Poladryas arachne* 1
Crescent *Phyciodes* sp. 1
Painted Lady *Vanessa cardui* 2
Riding's Satyr Neominois *ridingsii* 8
Small Wood-nymph *Cercyonis oetus* 1
Weidemeyer's Admiral *Limenitis weidemeyerii* 3
Western Branded Skipper *Hesperia colorado*

These results have been shared with the North American Butterfly Association, and iNaturalist.org.



Western Tiger Swallowtail
Papilio rutulus, 4 July 2019
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Checkered White
Pontia protodice
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"Jeepy" official butterfly patrol vehicle
Robb Hannawacker