



North Cascades National Park Service Complex

Butterflies in the Park

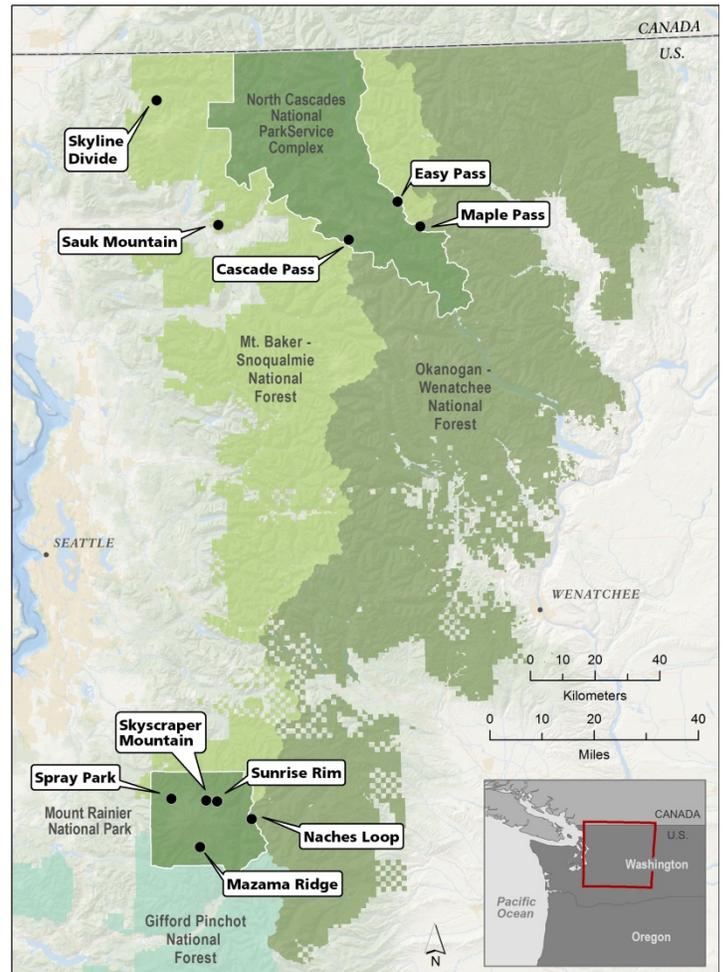
Future Pacific Northwest summers will be warmer and drier, snow will melt earlier, and forest fires may be more frequent. High-elevation ecosystems are especially vulnerable to warming climates because plants and animals are adapted to long winters and short summers with mild temperatures.

Butterflies are sensitive indicators of climate change because air temperature influences their life cycle and their geographic distribution. As individuals develop from egg to larvae to pupae and finally to mature butterfly, temperature thresholds may trigger the timing of these changes. We are monitoring butterfly abundances and plant phenology to understand how pollinators in our parks will be influenced by warming climates.

Butterflies have been monitored at North Cascades National Park since 2011 at Easy Pass and 2012 at Cascade Pass. The surveys are part of a larger effort called Cascades Butterfly Project, which is a long-term program, powered by Citizen Scientists. The mission of the project is to engage Citizen Scientists in the collection of quantitative data on the abundance and distribution of subalpine butterflies and plant phenology and to provide these data to inform and guide the protection of national parks and forests in the Cascade Range of Washington.

The information collected during the surveys, and earlier inventories, was used to develop the butterfly species list for the Park and this checklist. Butterflies listed as probably present have been documented on survey routes close to the park and probably also occur in the park.

The Easy Pass survey route is the most diverse of the ten survey routes in the Cascades Butterfly project. Thirty-one species have been documented on this route and 22 have been recorded at Cascade Pass. The most abundant species at both locations include Anna’s Blue (*Plejebus anna*), Mariposa Copper (*Lycaena mariposa*), Anicia Checkerspot (*Euphydryas anicia*), and Mormon Fritillary (*Speyeria mormonia*).



Map of Cascades Butterfly Project monitoring locations, including North Cascades National Park



Easy Pass butterfly monitoring site

Each year we find new species on our survey routes thanks to our growing number of volunteers. Chryxus Arctic (*Oeneis chryxus*) was documented for the first time in Skagit County during the 2013 surveys at Easy Pass (6,343 ft.). In 2016, a Boisduval's Blue (*Plebejus icariodes*) was recorded for the first time on the Cascade Pass survey route and a Pale Swallowtail (*Papilio eurymedon*) and Common Alpine (*Erebia epipsodea*) were observed for the first time on the Easy Pass survey route.

Most species of the checkerspots, like the common Anicia Checkerspot, have reddish-orange and black as their base color with white or cream square spots giving this butterfly its namesake. Rare in the North Cascades, Arctic Blues (*Plebejus glandon*) are found in arctic-alpine ecosystems in North America, Europe, and Asia, and even in parts of Siberia! This hardy and fascinating species that is seldom seen below 5,000 ft. was observed at Easy Pass in 2012 and 2016.



Anicia Checkerspot (*Euphydryas anicia*)



Anna's Blue, female (*Plebejus anna*) (Photo by Melanie Weiss)



Arctic Blue (*Plebejus glandon*)

If you would like to get involved in the Cascades Butterfly Project, visit the project website (<https://www.nps.gov/noca/getinvolved/supportyourpark/butterfly-project.htm>).



Chryxus Arctic (*Oeneis chryxus*) (Photo by Michelle Toshack, NPS)

This checklist was compiled on January 5, 2017, using data exported from the National Park Service NPSpecies database. The database can be accessed at: <https://irma.nps.gov/NPSpecies/>. We are currently working on generating other reports based on NPSpecies. Please be advised that Latin scientific names often change as a result of new research; therefore, scientific names used here may not reflect the most current accepted nomenclature.



Butterfly Species List for North Cascades National Park Service Complex

This represents information currently in the NPSpecies data system at the date and time the list was generated. Records are continually being added or updated by National Park Service staff. There is a key with definitions at the bottom of the report.

This report is filtered by the following Park Tags: **Butterfly** and by the following Taxonomic Categories: **Insects**

To generate your own report, go to <https://irma.nps.gov/NPSpecies/Report/>, select park name, and click on Species List with Park Tag Filter under the Park Custom Reports heading.

Scientific Name	Common Names	Occ	Abd	Nat	NPS Tags	Park Tags	Checklist
Insects							
Hesperiidae							
<i>Carterocephalus palaemon</i>	Arctic Skipper	P	R	N		Bf	[]
<i>Hesperia comma</i>	Common Branded Skipper	P	U	N		Bf	[]
Lycaenidae							
<i>Agriades glandon</i>	Arctic Blue	P	R	N		Bf	[]
<i>Glaucopsyche lygdamus</i>	Silvery Blue	P	C	N		Bf	[]
<i>Lycaena belloides</i>	Purplish Copper	P	C	N		Bf	[]
<i>Lycaena heteronea</i>	Blue Copper	P	R	N		Bf	[]
<i>Lycaena mariposa</i>	Mariposa Copper	P	C	N		Bf	[]
<i>Plebejus acmon</i>	Acmon Blue	P	R	N		Bf	[]
<i>Plebejus anna</i>	Anna's Blue	P	A	N		Bf	[]
<i>Plebejus carioides</i>	Boisduval's Blue	P	C	N		Bf	[]
<i>Plebejus lupini</i>	Lupine Blue	P	R	N		Bf	[]
Nymphalidae							
<i>Aglais milberti</i>	Milbert's Tortoiseshell	P	Uc	N		Bf	[]
<i>Boloria chariclea</i>	Arctic Fritillary	P	A	N		Bf	[]
<i>Boloria epithore</i>	Western Meadow (Pacific) Fritillary	P	C	N		Bf	[]
<i>Chlosyne palla</i>	Northern Checkerspot	P	R	N		Bf	[]
<i>Coenonympha tullia</i>	Ochre Riglet	P	R	N		Bf	[]
<i>Erebia pipsodea</i>	Common Alpine	PP		N		Bf	[]
<i>Erebia vidleri</i>	Vidler's Alpine	P	C	N		Bf	[]
<i>Euphydryas anicia</i>	Anicia Checkerspot	P	A	N		Bf	[]
<i>Euphydryas editha</i>	Edith's Checkerspot	P	Uc	N		Bf	[]
<i>Limenitis lorquini</i>	Lorquin's Admiral	P	R	N		Bf	[]
<i>Oeneis chryxus</i>	Chryxus Arctic	P	R	N		Bf	[]
<i>Polygonia faunus</i>	Green Comma	P	Uc	N		Bf	[]
<i>Polygonia gracilis</i>	Hoary Comma	P	Uc	N		Bf	[]
<i>Polygonia satyrus</i>	Satyr Comma	P	Uc	N		Bf	[]
<i>Speyeria coronis</i>	Coronis Fritillary	P	R	N		Bf	[]



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Scientific Name	Common Names	Occ	Abd	Nat	NPS Tags	Park Tags	Checklist
<i>Speyeria hydaspes</i>	Hydaspe Fritillary	P	Uc	N		Bf	[]
<i>Speyeria mormonia</i>	Mormon Fritillary	P	A	N		Bf	[]
<i>Vanessa antalanta</i>	Red Admiral	P	R	N		Bf	[]
<i>Vanessa cardui</i>	Painted Lady	P	R	N		Bf	[]
Papilionidae							
<i>Papilio eurymedon</i>	Pale Swallowtail	P	R	N		Bf	[]
<i>Papilio zelicaon</i>	Anise Swallowtail	P	O	N		Bf	[]
<i>Parnassius clodius</i>	Clodius Parnassian	P	C	N		Bf	[]
<i>Parnassius smintheus</i>	Mountain Parnassian	P	Uc	N		Bf	[]
Pieridae							
<i>Anthocharis sara</i>	Sara Orangetip	P	Uc	N		Bf	[]
<i>Colias eurymedon</i>	Orange Sulphur	P	R	N		Bf	[]
<i>Colias philodice</i>	Clouded Sulfur	P	Uc	N		Bf	[]
<i>Neophasia menapia</i>	Pine White	P	Uc	N		Bf	[]
<i>Pieris marginalis</i>	Margined White	P	Uc	N		Bf	[]
<i>Pontia occidentalis</i>	Western White	P	Uc	N		Bf	[]
Species In Review - proposed or provisional records needing additional review							
Insects							
Hesperiidae							
<i>Ochlodes sylvanoides</i>	Woodland Skipper	PP		N		Bf	[]
Lycaenidae							
<i>Callophrys augustinus</i>	Brown Elfin	PP		N		Bf	[]
<i>Callophrys mossii</i>	Moss' Elfin	PP		N		Bf	[]
Nymphalidae							
<i>Nymphalis antiopa</i>	Mourning Cloak	PP		N		Bf	[]
<i>Phycodes mylitta</i>	Mylitta Crescent	PP		N		Bf	[]
Papilionidae							
<i>Papilio andra</i>	Indra Swallowtail	PP		N		Bf	[]
Report Species Count: 46							

NPSpecies - The National Park Service biodiversity database. <https://irma.nps.gov/npspecies/>. To report an error or make a suggestion, go to <https://irma.nps.gov/npspecies/suggest>.

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Key	Code	Term	Definition
Occurrence (Occ)	P	Present	Species occurs in park; current, reliable evidence available.
	PP	Probably Present	High confidence species occurs in park but current, verified evidence needed.
	Un	Unconfirmed	Species is attributed to park but evidence is weak or absent.
	NP	Not In Park	Species is not known to occur in park.
Abundance (Abd)	A	Abundant	Animals: May be seen daily, in suitable habitat and season, and counted in relatively large numbers. Plants, Chromista, Protozoa, and Fungi: Large number of individuals; wide ecological amplitude or occurring in habitats covering a large portion of the park
	C	Common	Animals: May be seen daily, in suitable habitat and season, but not in large numbers. Plants, Chromista, Protozoa, and Fungi: Large numbers of individuals predictably occurring in commonly encountered habitats but not those covering a large portion of the park
	Uc	Uncommon	Animals: Likely to be seen monthly in appropriate habitat and season. May be locally common. Plants, Chromista, Protozoa, and Fungi: Few to moderate numbers of individuals; occurring either sporadically in commonly encountered habitats or in uncommon habitats
	O	Occasional	Animals: Occurs in the park at least once every few years, varying in numbers, but not necessarily every year. Plants, Chromista, Protozoa, and Fungi: Abundance variable from year to year (e.g., desert plants)
	R	Rare	Animals: Present, but usually seen only a few times each year. Plants, Chromista, Protozoa, and Fungi: Few individuals, usually restricted to small areas of rare habitat
	U	Unknown	Abundance unknown
Nativeness (Nat)	N	Native	Species naturally occurring in park or region.
	Nn	Non-native	Species occurring on park lands as a result of deliberate or accidental human activities.
	U	Unknown	Nativeness status is unknown or ambiguous.
Nativeness Tags	R	Restoration	Also refers to reintroductions. Native species that has been extirpated or substantially diminished from the park as a result of human-induced change, and that has been or is in the process of being restored.
	C	Cultivated	Species has been introduced or is maintained as part of the park's mission, significance, or cultural landscape (e.g., orchards, crops, fields)
	I	Invasive	Non-native species whose introduction is likely to cause economic or environmental harm.
	N	Noxious	Designation by a governmental authority. Species grows aggressively and has broad environmental tolerance that allows it to establish in many locations.
NPS Tag (Management)	EC	Exploitation Concern	Species is considered a target for collection, poaching, commercial harvesting, or other non-permitted or exploitative activities.
	MP	Management Priority	Species warrants particular management attention as determined by park management staff.
NPS Tag (Seasonality)	B	Breeder	Population reproduces in the park.
	R	Resident	A significant population is maintained in the park, but it is not known to breed there.



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NPS Tag (Seasonality)	M	Migratory	Species occurs in the park only while in transition between breeding and wintering grounds.
	S	Summer	Typically spending only summer months in the park.
	W	Winter	Typically spending only winter months in the park.
	V	Vagrant	Park is outside of species' usual range.

ParkTags	Code	Term	Definition
Broad response pattern of animal species to its environment			
	An	Anadromous	Species of fish which migrates from the ocean into fresh water to spawn
Vegetation life forms			
	Tr	Trees	Tree species
	SV	Shrubs and vines	Shrub and vine species
	Fb	Forbs	Herbaceous flowering plant species
	Gr	Grasses sedges and rushes	Grass, sedge, and rush species
	Fe	Ferns and allies	Fern and fern ally species
	Br	Bryophytes	Moss, hornwort, and liverwort species
	Li	Lichens	Lichen species
Tags highlighting resources of interest to the public			
	Bt	Bat	Bat species present or likely present in the park
	Be	Bee	Bee species present or likely present in the park
	Bf	Butterfly	Butterfly species present or likely present in the park
	Sf	Syrphid fly	Syrphid fly species present or likely present in the park
	Wf	Wildflower	Showy flowering plant species that can be seen in areas frequented by visitors

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