

Living in Nature Series

BUTTERFLIES OF THE ANTELOPE-BRUSH PLANT COMMUNITY

This fact sheet provides an introduction to ten groups of butterflies occurring in the hot, dry grasslands and shrub lands of the south Okanagan. A list of suitable plant species that attract butterflies and tips on butterfly garden maintenance are included for further information.

The dry lowlands of the south Okanagan and Similkameen valleys support an estimated 15,000 species of invertebrates, many of which we know little about. While many of these species are common and widespread, others are confined to the dry grasslands of the Southern Interior and occur nowhere else in the province.

Butterflies are one of the more captivating groups of invertebrates that thrive in the semi-arid conditions of the interior. They provide a fascinating display of colour throughout the spring and summer months. Alongside bees, flies and beetles, they are key players in pollination and are a critical component of the food chain.

Several butterfly species in the south Okanagan are considered to be at risk or endangered due to the loss or degradation of the habitats they depend on. Antelope-brush habitat in particular, which occurs only in the Okanagan valley and the southern Rocky Mountain Trench, is considered to be a provincially endangered plant community because of its small extent and the many threats to the remaining area it occupies.

Over sixty percent of the original area of antelope-brush habitat has been replaced by orchards, vineyards, golf courses, houses, blacktop and other urban developments. Some remaining areas of antelope-brush habitat have been damaged by off-road vehicles, invasive plants and intensive grazing. This has severe repercussions to the butterflies that use this habitat.



Behr's Hairstreak, a federally threatened butterfly, is dependent on antelope-brush. This shrub is the only known larval food plant for this species, while nectar plants for adults include buckwheat (*Eriogonum*), yarrow (*Achillia millefolium*) and an introduced clover (*Medicago lupulina*).

THE BUTTERFLIES OCCURRING IN THE SOUTH OKANAGAN HAVE BEEN SORTED INTO TEN DIFFERENT GROUPS, BASED ON THEIR COLOURATION, LARVAL PLANT AND/OR NECTAR SOURCE. THE FOLLOWING INFORMATION AND PHOTOGRAPHS PRESENT A BRIEF INTRODUCTION TO THE BUTTERFLIES OF THE ANTELOPE-BRUSH HABITAT.

Swallowtails and Monarchs: Six species of swallowtail can be found in the Okanagan valley. All are large yellow butterflies with black markings on the wing veins and margins. A tail-like projection extends from the hindwing. The swallowtails are resident throughout the year. They overwinter in the pupal stage and as a group are common and conspicuous butterflies. Because of their large size and dramatic coloration many local people refer to these butterflies as monarchs. In monarchs, the ground colour is orange rather than yellow and the hind wing lacks a tail. These butterflies are uncommon in the Okanagan valley and migrate from Mexico or California where they overwinter.



**Western
Tiger
Swallowtail**



**Stella's
Orangetip**

Whites, Marbles & Orangetips: The **Cabbage White** is a common garden pest throughout most of North America and is the only butterfly in the Okanagan that does cause significant crop damage. It is a small white butterfly with black dots and tip on the forewing and a pale yellow ventral hindwing. The other species in this group are both harmless and more attractively adorned. The most striking is **Stella's Orangetip** with a brilliant splash of orange on an otherwise white (male), or pale yellow (female) wing. The underside is exquisitely filigreed in black and yellow and green. The **Desert** and **Large Marble** also possess delicate "marbled" patterns on the hindwing. **Spring, Western** and **Becker's Whites** have striped patterns on the ventral hindwing which roughly follow the course of the major veins. All of these butterflies use members of the mustard family as hostplant, most notably Hoelbell's rockcress (*Arabis hoelbellii*).

Sulphurs: The sulphurs are a group of yellow butterflies the same size and shape as the whites to which they are related. The **Clouded Sulphur** and **Orange Sulphur** are the commonest species at low elevations. Both feed on clovers and alfalfa and have two or more generations over the year.



**Clouded
Sulphur**



**Acmon
Blue**

Blues and Coppers: Two species of copper and nine species of blue occur commonly at low elevations. The **Purplish Copper** has the copper-orange and black pigmentation characteristic of the group as a whole. It also has a sheen of purple caused by refraction of light which gives the species its common name. The male **Blue Copper** looks like a large and vividly coloured male blue. The female is more like a typical copper but it too is easily confused with the gray-brown colour of many female blues. The black marking on the underside of the hind wing and the presence or absence of small bands, dots or chevrons of orange near the outer wing margins distinguish blues species from each other. A succession of species appears throughout the spring and summer.

Hairstreaks: The hairstreaks are small, fast flying butterflies, which blend in with the background when at rest. This makes them easy to overlook and difficult to identify, but inspected at close range they are exquisite. Fourteen species of hairstreak occur in the south Okanagan valley within the range of the antelope-brush community, including four species restricted to the southern interior. The **Gray Hairstreak** is the most common species. It ranges widely throughout North America, occurring in many different habitats. The gray uses a wide range of larval hostplants, has multiple broods, and shares features with a large number of other hairstreak species. The **California Hairstreak** is easily confused with the gray but is darker. It feeds on antelope-brush in the south Okanagan and flies only in June and early July. **Behr's Hairstreak** flies at the same time and also requires antelope-brush as the larval hostplant. Behr's lacks the tail-like projection on the hindwing typical of many hairstreaks, has a bark-like pattern on the underside of its wings displayed when the butterfly perches. When in flight the dull orange on the upperside of the wings is evident. Both are of conservation concern in British Columbia and Behr's is considered threatened provincially and federally. Two green hairstreaks are found in antelope-brush habitat. **Sheridan's Hairstreak** is the commonest and flies in April and early May. The **Immaculate Green Hairstreak** flies later in similar habitat. Both species lay their eggs on parsnip-flowered buckwheat, a common woody perennial in antelope-brush habitat. The **Sooty Hairstreak** is the rarest of the group and is considered endangered in British Columbia. It looks and behaves more like a female blue than a hairstreak. It is almost black in appearance and flies slowly. Its larval hostplant in British Columbia is probably silky lupine.



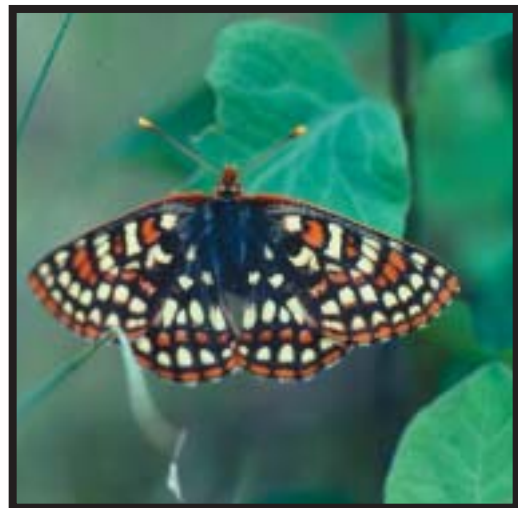
Gray Hairstreak

Ladies and Admirals: **Painted Ladies** and **Red Admirals** arrive in the South Okanagan from their overwintering sites in northern Mexico and the southwestern United States around the time lilacs bloom. **West Coast Ladies** are usually seen in late summer. The orange and black coloration of the ladies is shared with a number of other butterfly species but the white markings at the tip of the forewings separate them. The red slash across the black forewing, makes the **Red Admiral** unmistakable. **Lorquin's Admiral** is a permanent resident. Its white band on a black background is very distinctive.



Red Admiral

Fritillaries, Checkerspots and Crescents: About six species of fritillary can be found at low elevations in the valley. Although they differ in size they all look remarkably similar. Many species have silvered spots on the underside of the hindwing. All feed on violets and the larvae overwinter before beginning to feed in the spring. **Northern** and **Anicia Checkerspots** have strongly "checkered" patterning on the wings. The **Northern Checkerspot** feeds on asters and fleabanes and the checkers on the upperside of the wings are orange and black. The **Anicia Checkerspot** uses snowberry and penstemon, and is checkered red, cream and black. Our four species of crescents are the smallest of the orange and black butterflies. They feed on aster and fleabanes or thistles. All have a delicate appearance. Either black or orange may predominate on the upperside wing pattern with dark areas near the body and outer wing margins.



Anicia Checkerspot

**Milbert's
Tortoiseshell**



Anglewings, Tortoiseshells and Mourning Cloak:

This group overwinters locally as adult butterflies and these butterflies are the earliest species on the wing. They can be seen on warm days as early as February. Anglewings and Tortoiseshells share the orange coloration of fritillaries and ladies but their wings have irregular outer trailing edges. The **Mourning Cloak** is unmistakable and distinctive even though closely related. Anglewings often rest with the narrow forewing clearly separated by a gap from the hindwing and have only black and orange coloration on the upperside. The **Compton Tortoiseshell** has white eyespots on the hindwings, which it flashes when disturbed by a potential predator. **Milbert's Tortoiseshell** has a band of yellow grading into the orange region of the wing. The **California Tortoiseshell** is intermediate in size between

the others and lacks either feature. **Milbert's Tortoiseshell** and the **Satyr Anglewing** larvae feed on stinging nettle. The **Zephyr Anglewing** uses currants, while the **California Tortoiseshell** feeds on Ceanothus. The remainder of the group feed on deciduous trees and shrubs including willow and birch.

Wood Nymphs, Alpines and Ringlets (Satyrids): All members of this group of butterflies use grasses as the larval foodplant. **Common Ringlets** have a soft tan orange-brown ground colour and the patterning on the underwings is subdued. **Common Alpines** are nearly black, with a series of orange-bordered eyespots on the wing margins. Both species appear on the wing in late May. There are three species of **Wood Nymph** that may be encountered in antelope-brush habitat. They vary in size but all share a dark gray-brown ground colour and a pair of prominent eyespots on the forewing. They fly mostly in June and July.



**Common
Alpine**

**Western
Branded
Skipper**



Spread-wing and Grass Skippers: Approximately nine species of grass skipper and six species of spread-wing skipper can be found at low elevations in the south Okanagan. The former hold the wings closed or angled above the body when not flying, whereas the latter spread their wings in an open, relatively flat orientation. Grass skippers use grasses as the larval food plant and have varying amounts of rusty-brown coloration in the wings. The spread-wing skippers have a gray ground colour with white markings and feed on a variety of shrubs and herbs.

Some Considerations for Attracting Butterflies

If you are trying to attract butterflies to your garden or natural landscape, plants should be selected to ensure a flowering progression from early spring until late autumn. In addition to the nectar-producing flowers, adult butterflies also require special plants on which to lay their eggs. A list of plants that provide either a nectar source or are a larval food plant is provided on the following page.

Some butterflies prefer to nectar at deep-throated flowers such as lilac, while others prefer shallow flowers such as alyssum. Low growing and taller plants cater to butterflies with different foraging height preferences. Some plants may be wonderful nectar sources when in flower, but have a relatively short blooming period. Lilac is a good example. Other plants may not be a favorite on any butterfly's menu but have a long blooming season; such is the case with matronalis and yarrow.



Monarch

There are differences among flowers in nectar availability depending on time of day and different species of butterflies may nectar at different times. In general, late morning is the best period to observe butterflies nectaring.

Many butterflies like to visit moist soil to obtain both mineral nutrients and water. A wet patch will often be more popular than any flower.

The requirements for a butterfly garden are quite simple. Generally, butterflies require nectar rich flowers, moisture and appropriate plants for larval development. They also require a sunny location protected from prevailing winds, with ample sites for resting and sunning.

If you have the luxury of choice of where to site your butterfly garden, the optimal placement would be sunny, sheltered from wind, with a source of soil moisture, and as close as possible to unmowed, natural vegetation. The caterpillars of many butterflies feed on grasses or on other plants, which grow in lawns and meadows. The females are attracted to the vegetation in lawns, but the caterpillars do not survive the combination of irrigation and mowing which the well-groomed lawn requires.

Nectar Sources for Okanagan Butterflies

The plants on this list will provide a suitable nectar source for butterflies throughout the flight season. Plants are listed in approximate order of bloom.

Early spring: Heather, Pussy willow*

Mid spring: Basket-of-gold Alyssum, Silver dollar (Lunaria), Iberis, Grape hyacinth, Oregon-grape*, Flowering cherries, Apricot & Plum blossoms

Late spring: Sweet rocket (Hesperis matronalis), Lilac, Sweet William

Summer: Sumac, Butterfly bush, Phlox (Phlox paniculata), Fleabanes*, Zinnia, Oregano

Late summer: Russian sage, Sedum Autumn joy

Autumn: Michaelmas Daisies (Aster species), Rabbitbrush*

Host Plants (caterpillar food) for Butterflies

- Hoelbell's rockcress* (Stella's Orangetip, whites & marbles)
- Tarragon* (Oregon Swallowtail)
- Fennel, Carrot, Dill (Anise Swallowtail)
- Chokecherry* (Two-tailed Tiger Swallowtail, Coral Hairstreak)
- Willows* (Western Tiger Swallowtail, Mourning Cloak)
- Milkweed* (Monarch)
- Alfalfa, domestic clovers (sulphurs, Melissa Blue)
- Thistles (Painted Lady, Pale & Mylitta Crescents)
- Hollyhock, Mallows (Painted & West Coast Ladies, Gray Hairstreaks)
- Stinging nettle* (Red Admiral, Milbert's Tortoiseshell, Satyr Anglewing, West Coast Lady)
- Native Lupine* (hairstreaks, blues)
- Parsnip-flowered buckwheat* (hairstreaks, blues)
- Antelope-brush* (hairstreaks)

*native plants

Recommended References:

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