

# THE VICTORIA NATURALIST

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VICTORIA NATURAL HISTORY SOCIETY

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(See also inside back cover)

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SWALLOWTAIL BUTTERFLIES OF BRITISH COLUMBIA

Swallowtails belong to the family PAPILIONIDAE, so called after the genus Papilio (meaning butterfly in Latin), which was the first generic name to be given to the butterflies by the great Swedish naturalist Carl von Linne in his monumental work of 1758 in which he described and named every animal and plant known in his day.

In English they are called Swallowtails after the solitary British species (Papilio machaon), which has tailed hindwings, somewhat reminiscent of the elongated outer tail feathers of a barn swallow. Not all the Papilios have tailed hindwings, but most of the North American species do.

The family is regarded as ancient and primitive; it occurs all over the world and is especially well represented in the tropics. Over 400 species have been described, and they include some of the largest, most brilliant and most interesting of all insects. The huge green, blue and gold "Birdwing" butterflies of New Guinea, the Solomon Islands and Indonesia and the spectacular 9 inch Papilio antimachus of the African forests are members of this family. Some Swallowtails, especially in tropical America and in Asia feed on poisonous plants of the Dutchman's Pipe family (Aristolochia) and are highly distasteful to birds and to other predators. They advertise their repellent properties by being boldly coloured and

Cover photo - MOUNTAIN SWALLOWTAIL LARVA  
by Harold Hosford

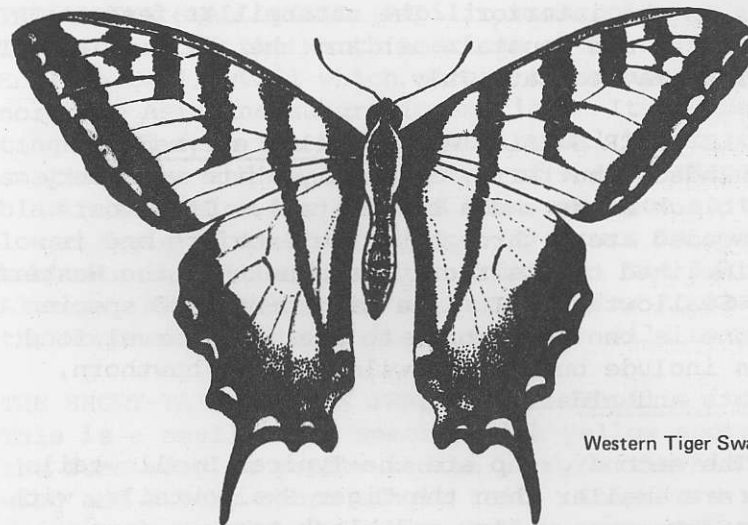
marked (many are black with vivid spots and blotches of crimson), and they are frequently imitated by edible species which thus derive some protection from their resemblance to non edible models. In North America the well known Pipe-vine Swallowtail (Battus philenor) serves as a model for the Spice-bush Swallowtail (Papilio troilus) and for a dark variety of the female of the Tiger Swallowtail (Papilio glaucus). In Africa the Mocker Swallowtail (Papilio dardanus) has a typical Papilio-like tailed yellow male, but the female occurs in more than a dozen distinct varieties, most of which are tail-less and imitate a wide range of inedible models of other families.

The eggs of Swallowtails are usually smooth and dome-shaped, laid singly on the leaves of the food plant. The caterpillars are hairless and have two scent emitting organs (osmeteria) which look like horns arising from behind the head; they are extruded when the insect is alarmed. The chrysalis is attached to a solid surface by a silk button at the tail and by a silk girdle round the middle, always with the head pointing upwards. The caterpillars often resemble bird droppings when young, but later become bright green or black, with various markings. Swallowtail caterpillars feed on a variety of plant families, but mostly on the Rutaceae and the Umbelliferae. In warm countries, some species frequently defoliate orange and lemon trees.

Some thirty species of Swallowtails have been recorded from America north of the Mexican border; in Europe there are only four species and eight species occur in British Columbia.

Our local Swallowtails fall into two well characterised groups: The large Tiger Swallowtails which have a pattern of longitudinal black bands on a yellow or white background, a green caterpillar with false eye spots behind the head and a thickened front end and which feed principally on willows, poplars and other deciduous trees and shrubs. They comprise the following species:

THE WESTERN TIGER SWALLOWTAIL (Papilio rutulus)



Western Tiger Swallowtail  
by R.W.C.

Yellow with black stripes and a single tail to each hind wing. This is the commonest Swallowtail at the coast and may often be seen in gardens and parks in and around Victoria. It is on the wing from late May to early July. The larvae feed on willows, poplars, elms and maples.

THE EASTERN TIGER SWALLOWTAIL (Papilio glaucus)  
Very similar to P.rutulus, it may be distinguished by the presence of one or more orange marginal spots on the underside of each hind wing. It occurs in wooded habitats in the interior where it replaces the Western Tiger Swallowtail. The black variety of the female mentioned earlier in connection with mimicry and its model (Battus philenor) are unknown in British Columbia and occur only east of the Rocky Mountains. This is also a single-brooded insect which flies in late spring and early summer. The caterpillar feeds on birch, wild cherry, poplar, willow and mountain ash.

THE MANY-TAILED TIGER SWALLOWTAIL (Papilio multi-caudatus). One of the largest North American butterflies and the largest in Canada. Yellow with rather narrow black bands and two to three tails on each hind wing. It is scarcer than the other Tiger

Swallowtails and occurs in very dry, open situations in the interior. The caterpillar feeds on wild cherry and mountain ash and the adult flies from late May to late July.

THE PALE TIGER SWALLOWTAIL (Papilio eurymedon)

This handsome butterfly is creamy white with very heavy black bands and a single tail. It favours well wooded areas throughout the Province and is less inclined to visit city gardens than the Western Tiger Swallowtail. It is a single-brooded species and June is the best month to see it. Larval food plants include buckthorn, wild cherry, hawthorn, currants and alder.

The second group are the Typical Swallowtails which are smaller than the Tiger Swallowtails, with a more intricate yellow and black pattern (some species are black with yellow spots and bands), a single, shorter tail and sausage-shaped caterpillars marked with alternating black and light rings; they feed on members of the parsnip and carrot family (Umbelliferae) and on some daisies (Compositae). This group also comprises four species in British Columbia.

THE MOUNTAIN SWALLOWTAIL (Papilio zelicaon)

More heavily marked than the two following species, it may be recognised by its mostly black abdomen. In British Columbia it is the commonest and most widespread member of the group. It may be found in dry, open situations all over the Province and likes to congregate on the tops of small hills. It has an early brood which appears in late April and May and a second brood in late summer which produces overwintering pupae. The larva is green with black rings interrupted by orange spots and feeds on fennel, wild carrot and other umbellifers.

THE OREGON SWALLOWTAIL (Papilio oregonia)

Similar to the Mountain Swallowtail, but larger and paler, with a mostly yellow abdomen. It favours open, rather arid situations in the southern interior. It is double-brooded and the green and blue black-banded and yellow-spotted larva feeds on

tarragon (Artemisia dracunculus).

THE ALASKA SWALLOWTAIL (Papilio machaon)

This is one of the North American races of the English Swallowtail which occurs throughout Europe, northern Asia and subarctic America. It may be distinguished from the Oregon Swallowtail by its smaller size and by the absence of a club-shaped black mark below the red and blue eye-spot at the lower angle of the hind wing. It occurs in open habitats in northern British Columbia, the Yukon and Alaska. The caterpillar is very similar to that of the Mountain Swallowtail and feeds on wild carrot.

THE SHORT-TAILED BLACK SWALLOWTAIL (Papilio indra)

This is a small black species with yellow spots on the fore wing, a yellow median band on the hind wing and a very short single tail. This is a rare species in British Columbia, having been recorded only from Manning Park, but it is fairly numerous in certain dry, open situations south of the border. The caterpillar, which is marked with alternate black and pinkish rings, feeds on tarragon and on several members of the parsnip family.

R.W. Carcasson  
Provincial Museum, Victoria.

JEFFREE AIKEN CUNNINGHAM

1886 - 1974

Long-time members of the Society will remember with affection Dr. Jeffree Cunningham, president from 1952 to 1954. He will especially be remembered for his contribution in Marine Biology, a section of the Society which flourished as it never did before, or has since, under his 5-year tenure as its leader. Not only did he lead the usual low-tide explorations but also arranged for evenings of more penetrating studies in the laboratory.

Jeffree Cunningham was a true son of Victoria. His early interest in nature brought him into contact with the renowned Dr. C.F. Newcombe with the

result that he was often invited to accompany Newcombe on collecting expeditions for the Provincial Museum.

After graduating from Queen's University, he returned to Victoria to spend his working life in teaching and administration closing out his career as head of the Biology Department at Victoria College.

In retirement, this kindly unassuming man could usually be found working, with his wife, in their large and luxuriant garden. This rather peaceful existence was, however, broken rather dramatically twice in his later years when the University of Victoria bestowed upon him an Honorary L.L.D. and later when the new Biology building was named the Cunningham Building in his honour.

During the 30 years of our existence the Society has been blessed with many outstanding leaders like Jeffree Cunningham, people who have given so unstintingly of their time, knowledge and enthusiasm. Our debt to them is enormous. Without them our Society would have neither meaning nor substance.

... *Katherine Sherman*

### FOOD IS WHERE YOU FIND IT!

In a recent number of the National Geographic there was an article about a Green Heron that had learned, on its own, to use artificial fish-food pellets to attract food. Not only that but he was also apparently teaching a brother to do likewise!

This made me think of some other unusual techniques used by birds to get food. For example, the Egyptian Vulture's use of stones to crack open Ostrich eggs; or the habit of Britain's Blue Tit which, on the introduction of milk bottles with cardboard caps in that country, almost immediately learned to pry up these lids to get at the cream beneath.

There are many such instances of the adaptability of birds and mammals but I came across two new ones (new to me at least) in the past year.

You will remember 1973 as the Year of the Wasp. We had a prize example of one of their hanging nests in our garden. It hung at the end of a cedar bough, in full view, and was at least 18 inches in diameter.

One evening a Raven was heard making an unusual amount of aggravating noises, even for a raven. We found him perched on a branch above the wasp's nest and at first thought he had been stung. Which may have been so but after only a brief rest, he took off and flew straight away from the nest for about 50 feet where he wheeled and returned at top speed striking the nest and dislodging a large chunk of it. The chunk fell to the ground with the raven in hot pursuit. Landing beside the piece of nest he began picking the wasp larvae from their cells.

After several such attacks the nest was a total loss. Examination of the pieces on the ground revealed that the comb had been picked clean of larvae.

The second instance involved a pair of Steller's Jays.

Behind our house is a large moss-covered expanse of rock which, in late summer, was used by grasshoppers as a feeding and sunning place. The moss was brown and the grasshoppers well-camouflaged and difficult to see except when disturbed or flying.

It was apparently for this reason that the jays would slowly walk onto the rock where one of them would suddenly leap up about 3 feet, disturbing grasshoppers in the process and making it easy for both jays to pounce on at least one grasshopper at each performance.

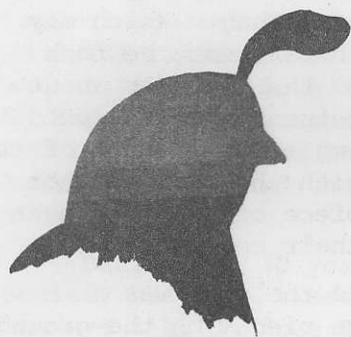
Such observations may not have great scientific import but they are interesting and often amusing. Perhaps also, they could help us to look at birds more as individuals with personalities of their own and not just as members of a species.

For instance, watching our pair of Canada Geese,

it seems that the gander, who spends most of his time on watch, crops much faster, when his turn comes, than the goose - no doubt to make up for lost time.

Do all ganders behave this way?

... Giff Calvert



## BIRD REPORTS

Common Nighthawk (47)	Aug. 4	Malahat Summit Harold Hosford
Screech Owl (3 young out of nest)	Aug. 11	Kinsmen Park Peggy Goodwill
Dunlin (7 - full summer plumage)	Aug. 12	Island View Beach Jack Williams
American Kestrel (1 male)	Aug. 12	Island View Beach Jack Williams
Red Phalarope (2)	Aug. 12	Clover Point Ron Satterfield & the Goodwills
Solitary Sandpiper (1)	Aug. 14	Duncan Ponds
" "	(2) Sep. 4	Mill Bay Vic Goodwill

Semipalmated Sandpiper (2)	Aug. 14	Cowichan Bay Vic Goodwill
Pectoral Sandpiper (5)	Aug. 15	Martindale the Goodwills
Baird's Sandpiper (2)	Aug. 17	Cadboro Bay the Goodwills
Say's Phoebe (1)	Aug. 19	Ten Mile Point Bristol Foster
Bank Swallow (1)	Aug. 19	Blenkinsop Lake Vic Goodwill
Northern Waterthrush (1)	Aug. 21	Duncan Ponds the Goodwills and John Comer
Dipper (1)	Aug. 22	Goldstream Park Jack Williams
Purple Martin (4)	Aug. 26	Spectacle Lake Harold Hosford
Virginia Rail (1 imm.)	Aug. 26	Spectacle Lake Harold Hosford
Green Heron (1 imm.)	Aug. 29	Uplands Rob Mackenzie-Grieve
" " (1 adult)	Sep. 3	Hyacinth Park Joan Crabbe & Ann Knowles
" " (1)	Sep. 4	Duncan Ponds the Goodwills
Horned Lark (3)	Aug. 31	Oak Bay Golf Course Ron Satterfield & the Goodwills
Pomarine Jaeger (1)	Aug. 31	Cadboro Point Bristol Foster

Northern Phalaropes (in flocks of more than 1000 birds) and Parasitic Jaegers, have been seen at Oak Bay. Jack Robinson saw one of the Jaegers on July 28 and Harold Hosford, Ron Satterfield, and the Goodwills all reported seeing one on August 20, with the Goodwills seeing another on September 4. Harold reports that his Jaeger forced a Common Tern to drop a minnow which the Jaeger retrieved before it hit the water, whereupon a group of terns started chasing the Jaeger which quickly outmanoeuvred them.

Rob Mackenzie-Grieve has been busy as usual. He reports Anna's Hummingbirds are still at his feeder; a female from August 20 to 27 and a male on September 1. Rob also had some early returning sparrows in his garden, a Fox and a Lincoln's on September 3 and 2 Golden Crowns on September 4. On August 28 he found 8 Evening Grosbeaks and 1 Black-throated Grey Warbler on Prevost Hill.

Spotted Sandpipers seem to have had a good season; Rob saw 6 on Cadboro Bay Beach on September 4 and on July 25 I saw a flock of 12 together on Mt. Douglas Beach.

We might almost take the Stilt Sandpiper off the vagrant list this year. The Goodwills have had no less than 5 sightings; 1 at Duncan Ponds on August 21, 1 at Cadboro Bay Beach on September 1 and at Martindale, singles on August 22 and 27 and 2 on August 24. Eric Counsell is sure he spotted one at the Interurban Slough along with some Common Snipe.

While on a visit to Parksville Flats on August 21 I came on 2 Bobwhite, a male and a female, probably escapees from dog trials or a game farm, but nice to see anyway. Also a Short-eared Owl - same time, same place.

Many observers have seen the Osprey fishing at Cadboro Bay. I watched it one day, chased by several Common Terns (the Osprey, not me). It finally caught a fairly large fish with which it

had a little trouble but finally bringing it under control, gained altitude and headed for Elk Lake.

The Goodwills saw what was probably the first Thayer's Gull of the season, at Clover Point on September 4, and early sparrows at Royal Oak reservoir on August 31 included 1 Fox and 1 Lincoln's.

Anyone reporting Green Herons this fall will have to line up; 3 have already been reported, 1 in the unlikely area of Uplands.

Peggy Goodwill didn't say whether her Screech Owls were seen in the daytime or not but I have a suspicion that Vic is starting a night shift now.

While out picking blackberries on September 5 I heard a hawk cry and looked up to see a Sharpshin flying over surrounded by about 300 Goldfinches. The hawk made no attempt to take one of the birds but sure made a lot of noise.

... Jack Williams

OOPS! We nearly missed the Davidson's entries in this month's birding derby. Here are just a few of their finds:

- a Semipalmated Sandpiper at Stelly's X Rd. on the 10th
  - a Nashville Warbler and a Yellowthroat at Hood Lane on the 21st
- and
- 7 Mourning Doves in Gordon Head the same day.

A week later they turned up a Parasitic Jaeger off the Chinese Cemetery and on September 4th they hit the jackpot at a little pond on Interurban Road with 2 Buff-breasted, 4 Pectoral and 3 Solitary Sandpipers, and 8 Water Pipits to boot.

SKYWATCH!

Looking for something to wile away those lengthening evenings this month? Here's something you could try; sky watching - at night! It'll add a new dimension to your natural history enjoyment and possibly give you a new perspective on life.

The night skies of October this year will feature the spectacular progress of our solar system's most majestic planet - mighty Jupiter, the largest of them all. Look south, and east, just after sunset and you'll see (weather permitting) Jupiter's unblinking orb as it rises with the constellation of Aquarius, the water carrier. Next to the moon, Jupiter will be the brightest object in our evening skies.

With a good pair of binoculars, 8 power or better, and a solid base to rest them on, a tree trunk or fence post, you should be able to pick out 4 of Jupiter's 12 moons or satellites. It'll be worth the effort.

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INFORMAL MEETINGS ANYONE?

Jack Williams, our ornithology maestro, is testing the air on informal meetings, meetings where where any topic of natural history interest might be discussed, where slides might be shown or where recordings might be enjoyed.

These might be held once a month, at various homes, and be in addition to the regular general meetings.

If you're interested and have some ideas give Jack a call at 656-1484.

WE'RE THIRTY YEARS OLD!

It may have passed almost unnoticed but the Victoria Natural History Society reached a milestone in its history this year when it 'celebrated' its 30th birthday.

On March 14, 1944, a group of kindred spirits gathered in the Provincial Library to hear a talk on 'Animals and Man' by Cliff Carl, see two films on "animals preying on one another", provided by Mr. C.D. Ferris, and to lay the foundations of a club for Victoria's naturalists.

Drawn from those present that evening were the first officers of the Society, some with names well-known even today and others who, having made their contribution, faded into that limbo so often reserved for hard, but unspectacular, workers. There was Major Allan Brooks and the Honourable G. Perry, Honourary Presidents; Rev. Robert Connell, President, and Clifford Carl, Vice-president.

Within a month the first edition of The Naturalist appeared. The 10-page mimeographed booklet, edited by A.L. Meugens, featured an introduction from the President, a summary of Cliff Carl's talk given at the inaugural meeting of the Society, and three short descriptions of spring plants - easter lily, satin flower and calypso - prominent in the fields and woods around Victoria at the time.

Even as the world moved into the final years of the war, years many of us look back on with nostalgia, the pressures of modern life were beginning to be recognized. Robert Connell revealed this in his introduction to The Naturalist when he said "members find release from the pressures of a mechanical world in the observation and study of our natural and aboriginal environment".

Words as true today as they were when first written.

... Harold Hosford



ADULTS BEWARE!KIDS COUNTRY AHEAD!READ THE NEXT TWO PAGES AT YOUR PERIL!

This month, and for as long as they can keep it going, the following two pages of The Naturalist will be reserved for the junior arm of the Society to do their thing. Until they come up with something better we'll call it KIDS COUNTRY.

FUN QUIZ

*(Discover the answers on a nature hike)*

1. What's the leg difference between a centipede and a millipede?

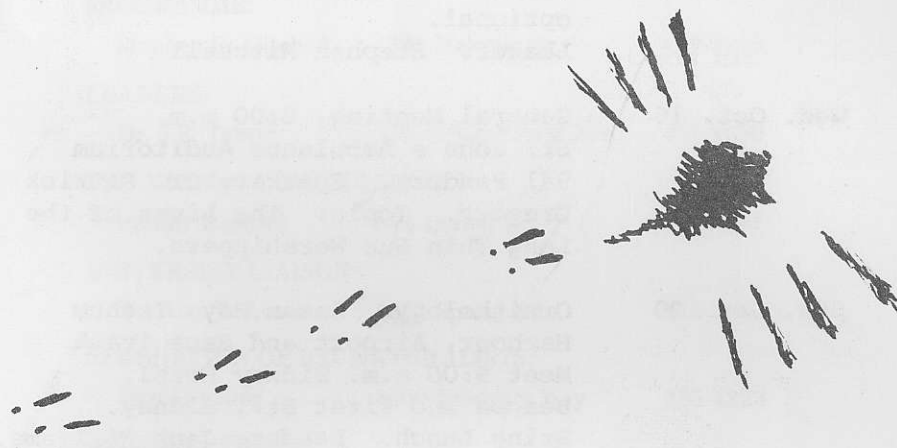


2. What is this duck?  
Is it a diver or a dabbler?  
Where is it found?
3. Where does 'hardhack' (*Spiraea douglasii*) like to grow?
4. What is a gribble?

WHAT THE CAT DRAGGED IN

One Saturday morning the cat dragged in a flicker. It got away from the cat and tried to fly out the living room window and knocked itself out. Mom gathered it up and put it in an old bird cage and put a blanket over the cage so it wouldn't be scared. Then we put some water in a dish. We fed it some grubs by gently placing them in the end of his beak. We kept it one day. Sunday morning we let it go in Mount Douglas Park. It flew up in a tree and sang for us. Then Dad took a picture of him. After we got in the car he flew away. And we drove off to church.

... Paul Whitney (9)

WHAT'S HAPPENED HERE?

A story, written in the snow.

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Don't miss next month's KIDS COUNTRY. We start a serialized version of a trip across Canada by Chris Walsh and his family. Chris now lives in Ottawa and is a member of the Ottawa Field Naturalist Club but he says a lot of his heart is still in Victoria with his friends in our club.

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O.K. kids, there you have it. The grey hairs put this one together. The rest is up to you. Send your drawings (should be in black on white paper), riddles, puzzles, ideas, stories and whatever else you can come up with to me, the editor.

And please, no spelling mistakes. My spelling is worse than yours. And don't make your drawings too big. They should fit into the page without reduction.

ADULT PROGRAM

- Sat. Oct. 12 Botany. Mill Hill Park. Meet 9:30 a.m. Mayfair Lanes, or 10:00 a.m., Mill Hill Parking lot. Lunch optional.  
Leader: Stephen Mitchell
- Wed. Oct. 16 General Meeting, 8:00 p.m.  
St. John's Ambulance Auditorium  
941 Pandora. Speaker: Dr. Patrick Gregory. Topic: The Lives of the Long Thin Sun Worshippers.
- Sun. Oct. 20 Ornithology. Bazan Bay, Tsehum Harbour, Airport and Race Track  
Meet 9:00 a.m. Sidney Hotel, Beacon and First St., Sidney.  
Bring Lunch. Leader: Jack Williams.
- Fri. & Sat.  
Oct. 25 & 26 Audubon Film, Florida's Cypress Sanctuary: Fisheating Creek, by Richard Kern. Newcombe Auditorium 8:00 p.m. both nights.

JUNIOR PROGRAM

- Sat. & Sun.  
Oct. 5 & 6 Juniors and intermediates. Overnight to Vancouver, Picnics, excursions and fun, all by the Western Society of Young Naturalists. You should have already made your reservations but Gail says there might be squeezin' room for a couple of late-comers. Try her at 477-9248.
- Sat. Oct. 19 Juniors, Prospector's Trail, Goldstream Park. Meet Mayfair Lanes 1:30 p.m. Drivers: Parrish & Whitney
- Sat. Oct. 26 Juniors & Intermediates. Audubon Film (see above for details)  
Admission 50¢

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