

# NEWSPACKET



M A Y - J U N E 2 0 1 6

## Cover Photo

*Getting families and children out into nature is very important. Recently NONC sponsored two Unplug & Play outings in partnership with the N.O. Optimist Club.*

## Terracettes

*Cattle tracks, marks of a mythical creature or the work of nature? In 1985 Joan Heriot had the answer to something we still see today.*  
— page 6

## NONC Natural Series

*Malcolm Martin concludes his series of short articles on natural history topics from the North Okanagan. Parts 9 to 12 appear in this issue on pages 6 & 7.*

## Birding 90 Years Ago

*What birds were seen in the North Okanagan in 1926? We have part 2 of a journal written at that time. Page 9 & 10.*

## How Monarch Butterflies' Compass is Wired for Canada-Mexico Migration

CBC News Posted: Apr 15, 2016

*Researchers decipher how monarch's brain circuit uses signals from its eyes and 'clock' in antennae*

**How** do you build a biological compass small and reliable enough to direct a monarch butterfly on its amazing 4,500-kilometre migration from Canada to Mexico each fall? Scientists say they think they've figured that out.

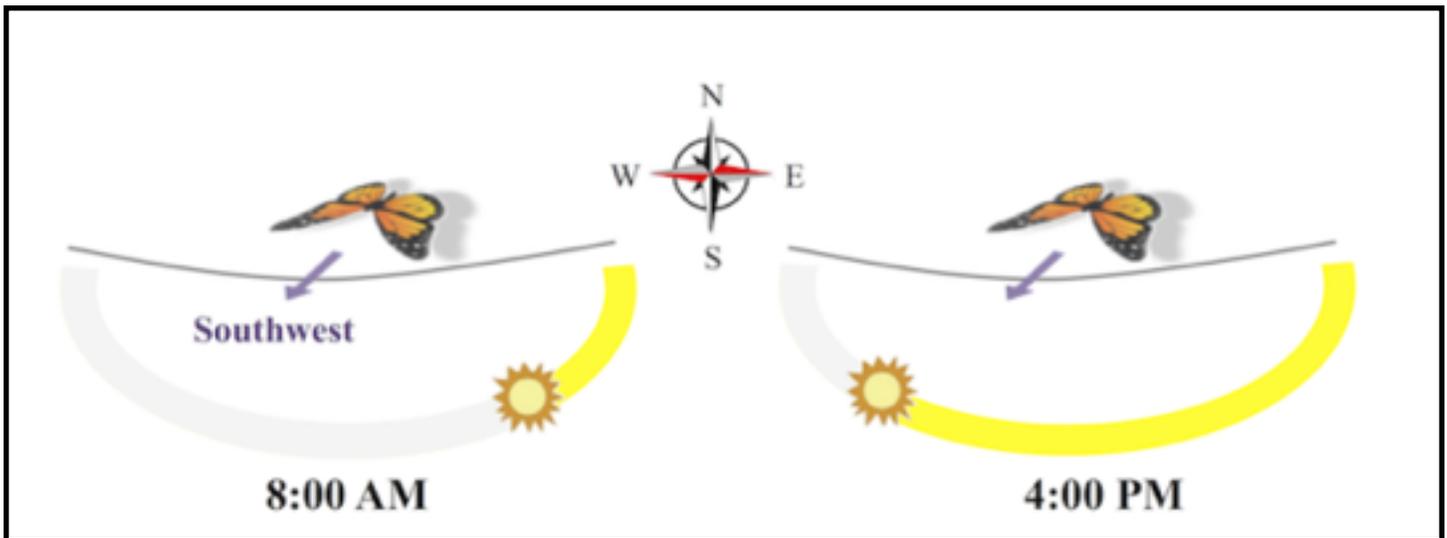
Researchers at the University of Washington and the University of Massachusetts say they've figured out the details of how the monarch's compass is wired within its brain. They published their results in the journal *Cell Reports* this week.

Canadian scientists had previously shown that monarchs navigate using nothing but a built-in compass calibrated to the sun's position in the sky at different times of day — no magnet required.

Eli Shlizerman, an assistant professor in applied mathematics and electrical engineering at the University of Washington, wanted to know the biological details.

"We wanted to understand how the monarch is processing these different types of information to yield this constant behavior — flying southwest each fall," he said in a news release.

The first step is monitoring the sun's position in the sky, something the monarch obviously does with its eyes. The second step is to match that up with the time of day in order to figure out which direction is



*Canadian scientists had previously shown that monarchs navigate using nothing but a built-in compass calibrated to the sun's position in the sky at different times of the day — no magnet required. (University of Washington)*

southwest — something the monarch does with its antennae.

Steven Reppert, neurobiologist at a University of Massachusetts who co-authored the paper, showed *continued on page 3*

## NONC

**Monarch Butterflies cont'd:**

that by recording signals from the nerves in the monarchs' antennae as they transmitted those to the brain.

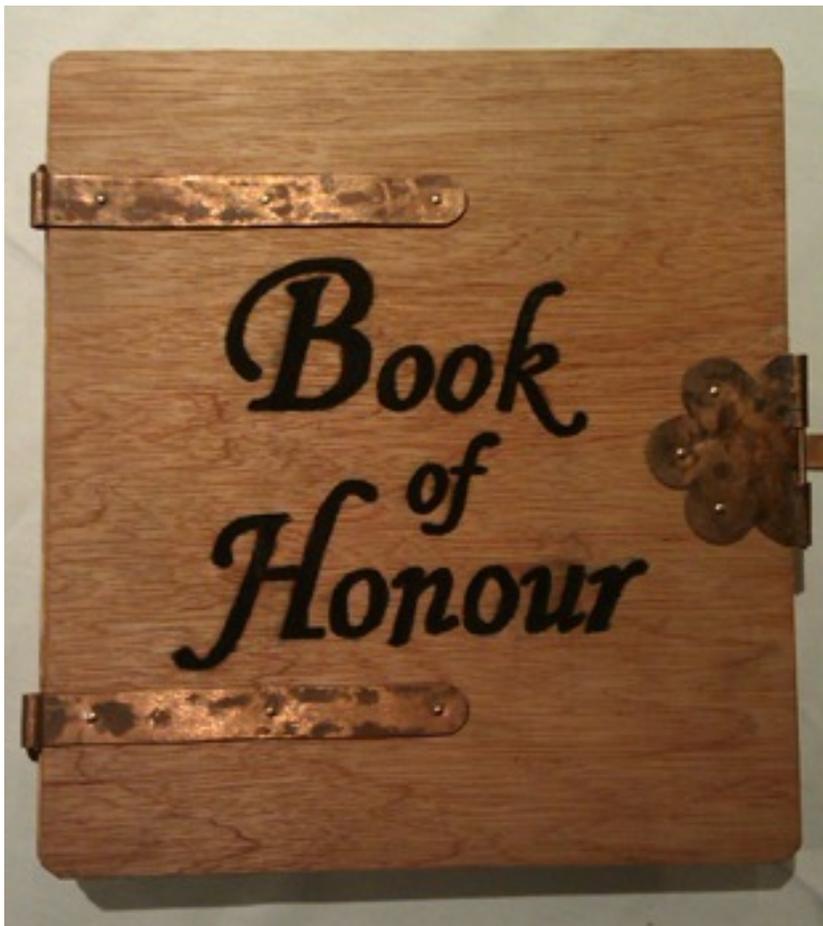
Using that information, Shlizerman figured out the layout of a brain circuit that could use those signals to control the butterfly's direction. He tested the model by simulating what would happen if a monarch had to go off-course because of a gust of wind or an obstacle.

He found that it produced a path that was consistent with what monarchs actually do — they often take a

long, meandering route to get back on course. Shlizerman's model predicts that way the navigation system is wired in the butterfly's brain makes it impossible to do a shorter turn.

The circuit's design also makes it easy for monarchs to reverse direction and fly northeast each spring. It takes them four generations to make it back to Canada from Mexico.

However, the researchers say that additional studies are still needed to confirm whether the model is really consistent with how the monarch's brain, body and behaviour actually work. 🌐



Last year the NONC Executive approved the creation of a Book of Honour. This book contains stories of individuals who have played a very important role in the club and which deserves recognition.

Rod Drennan and Louise Breneman have compiled the stories, while Norbert Maertens crafted a cover of recycled wood and metal.

Rod usually has it with him at the monthly meetings, so take a look at it next time.

## The Side-Hill Gouger

*This article was written by Joan Heriot and published in the December 1985 issue of B.C. Naturalist magazine.*

**Everyone** hereabouts must have noticed on certain steepish hillsides those curious little ridges which, people will tell you, are made by cattle. Yet in places, notably on the way out from Vernon to Kalamalka Lake along the west side of the golf course and beyond, not a single cow has ever trod.

Whatever it is that makes these ridges, works out-of-sight, giving rise to the legend of the "Side-Hill Gouger." This mythical beast of uncertain taxonomic status, has legs specially adapted for walking across steep slopes, those on one side being longer than those on the other. This arrangement is excellent of course, except that the creature is forced to proceed forever in the same direction!

Another curious feature of the S.H.G. is that it must come in very different sizes because the ridges range from tiny (a few inches), to large (two feet or more)—but on any one slope the ridges are as near-as-damn-it all the same size. So what, indeed, can the Side-Hill Gouger be?

Geographers tell us that its name is Solifluction or sludging, "a geomorphic process giving rise to a variety of land forms", amongst which, are "terraces", the "small terraces often seen on steep, grassy slopes".

Alternate freezing and thawing will produce these terraces where slope and aspect are suitable, and the soil contains a minimum of fine material and lies under a protective sod of grass and small plants.

During the day the soil water melts to produce a thick mud which flows down the slope over the frozen subsoil, eventually causing the sod to buckle. This buckling may be uneven, but is often so regular as to form the straight and evenly spaced terraces we so often see in our Interior.



*above: Can you see the terraces in this winter picture of the south slope of Vernon Hill? (picture by Harold Sellers)*

When the Vernon Golf Course was extended about twelve years ago, the lower part of the terraced slope was cut away. As each buckle of sod reached the cut edge, it broke away and started sliding down the steeper slope of newly exposed soil. This process continues and pieces of sod, some of them quite long strips, can be seen on their way down. Others above are just on the point of breaking away. Thus the terraces continually move down like a slow escalator while others form to take their place.

*continued on page 5*

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*Side-Hill Gouger continued from page 4*

Terracettes are not **made** by cattle, but they certainly can be used by cattle, deer, etc., which enlarge them into good trails. Where the soil is very fine, and covered by a thin layer of moss, they can occur in miniature as a series of ripples less than an inch in height. 🌍

*below: This picture was taken on the April 28th Thursday Hike and again shows terracettes (as well as the trail) on the south slope of Vernon Hill, overlooking Coldstream. (picture by Claude Rioux)*



**The poetry of earth is never dead.**

**— John Keats, “On the Grasshopper and Cricket”**

## NONC

**NONC Natural History**

*Parts 9 to 12. The final instalment in a series by Malcolm Martin*

**#9 (or Location, Location, Location)**

Is there a pecking order in new observations?

Finding new and unexpected additions to the flora and fauna of one's home area is always exciting, depending, of course, on how significant the find might be. Something new to Canada should rate higher on the thrill scale than something new to BC alone, which in turn beats a range extension within the province.

Running off Westside Road is the gravelled route leading to the north side of Short's Canyon. Just before it begins its rise is an offshoot, usually chained off, leading to a gravel pile. It was when scouting around the slope above that some strange shoots hardly more than a centimetre or two high were noticed among the grass. They looked for all the world like minute conifers except for having membranous flowers in some of the leaf axils. In one place where rain water had made a channel down towards the gravel pile a larger individual had benefitted from the extra water and made a horizontal patch as big as a hand span.

Study produced no answer and specimens were sent to a friend at RBCM who searched widely and came across the answer, a small weedy item from central Europe. This, suffering under the name of Crunch Weed or, better, under the alternative of Soft Needleleaf (*Polycnemum arvense*), was the first record in North America, but how on earth could something from half a world away turn up uninvited? It persisted for several years but could not be seen on a last visit. At least the definitive words of Flora of North America show it as a fact and not a wild deranged dream.

**#10 (or The Ones That Got Away - Part 1)**

Like love, life does not always run true, or at least it can have some very awkward complications. In the case of stories of NONC Natural History it is quite possible for each new mystery to progress towards a significant outcome and yet a break may occur in the chain, leaving the result hanging in the balance, rife with potential but just another "might-have-been". So it is in the three parts of this article.

Liverworts are superficially similar to mosses though with clear enough differences to put them in a separate category. During examination of Wrinkly Face Cliff, one was collected that seemed visually similar to pictures of a species depicted in American guidebooks. If this could be substantiated then it would be a new species for BC and possibly for Canada.

In appearance it is quite simple, forming a capital letter Y. In dry times it folds neatly in half down the middle to reduce desiccation and then appears like two blue-green lips pressed together. Did I say it is all of one and a half millimetres in length and half that in width? Specimens were sent to two different bryologists for confirmation, being told in each case that identification was not possible at the dormant stage and the presence of fertile spores would be necessary.

Visitors to Wrinkly Face will know the small meadows there are saturated with run off in late spring, baking later under summer sun, so when are liverworts fertile - under the melt water or later during the drying stage? Either way presents difficulty as it means lying spread-eagled on the wet ground peering hopefully for something that might not even be there. Already on one previous occasion, fleeting shadows had passed over the searcher while splayed out in that vulnerable position while a hopeful Turkey Vulture circled above, probably considering the possibility of a meal.

*continued on page 7*

## NONC

*Natural History continued from page 6*

### **#11 (or The Ones That Got Away - Part 2)**

The floor of Cougar Canyon where it runs through the Ecological Reserve has been surveyed at a reconnaissance level but not in any great detail. In that length there are 10 or 11 small lakes or ponds of various sizes. Water is seen first at the northern end rising from a modest spring and nearby a greater quantity flows from a seeping rock face (named the Weeping Wall). Elsewhere a few seasonal drainages fall down the canyon sides so the total surface water in-flow is not large and runs sporadically from lake to lake southwards to the Oyama end, where it ceases well above Kal and Wood Lakes.

How, then, could a small water basin without obvious connection to larger bodies of water ever become fish-bearing? Did some hardy angler fight through bush and steep slopes to one of the ponds and abandon a supply of bait fish rather than take them home? Did post-glacial melting at the end of the last Ice Age surge through Cougar Canyon linking it with the flooded valley and introduce flora and fauna from far and wide? Small fish in at least one of the canyon ponds might in this case have remained isolated for thousands of years with ample time to follow their own exclusive line of evolution. It is possibilities like this that offer diligent naturalists unexpected rewards following the analysis of Sherlock Holmes, that "after excluding the impossible whatever remains, however unlikely, must be the truth".

### **#12 (or The Ones That Got Away Part 3)**

For all the blood, sweat and tears expended in the depths of Cougar Canyon there are sometimes compensating rewards. Passing through a stand of Red Cedar one late summer day, a small collection of grape-ferns caught the eye. Apart from one species, grape-ferns are not all that fern-like in appearance, having a single small photosynthetic frond and

another that bears its spores. Subsequent study of a few specimens at home failed to produce a convincing match to any illustrated images in the literature so the collection was packed off to a helpful and knowledgeable curator at the provincial museum. He too was stymied and in turn sent them to a Dr. Wagner, at that time the reigning guru of grape-ferns in North America.

At this point events became a bit pear-shaped. Dr. Wagner smartly replied saying how very excited he was with the specimens received, and could he please have another 35, not realizing that this quantity was greater than had been seen. This message was closely followed by news through the grapevine that he had inconsiderately died. Could it have been a case of coincidence or over-excitement?

*Circumstances of NONC Natural History like these still lay open to be solved. Others such as coastal specimens seen in the Interior Wet Belt (Wap Lake - Revelstoke) but not collected and not recognized as present in our area, await rediscovery as well, and who can tell in the greater scheme of things what unforeseen stories Climate Change may bring? The Age of Discovery for naturalists has not yet reached its end, and perhaps never will. 🌍*

### **ADDENDUM**

As an Addendum to Malcolm Martin's article [in the March-April issue], you could mention that James Grant Island has been incorporated into Kopje Park and is administered by the Central Okanagan Regional District. There is a covenant on the island that it must remain a bird preserve.

V.E. (Vivian) Merchant

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## Why Do Owls Bob Their Heads?

www.audubon.org  
via Jack Van Dyk

**Here's the secret behind the head-turning phenomenon.**

**This** story is brought to you by BirdNote, a show that airs daily on public radio stations nationwide.

If you were to stand face to face with an owl, after a while it would start to move its head, bobbing rhythmically from side to side, then forward, then back. Or almost completely upside down. All while still looking at you, with its body still facing the front.

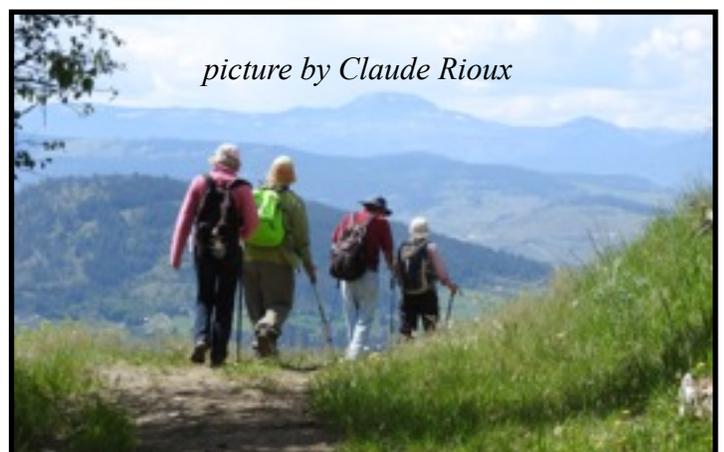
Is the owl trying to communicate something? Is this, perhaps, some kind of dance?

All these varied head movements help the owl judge the position and distance of things around it—essentially, to triangulate on objects, including potential prey, and to build a composite picture of its surroundings. This head-bobbing helps make up for an anatomical limitation: An owl's eyes are fixed in position, so they simply can't move the way our eyes do. To look up, down, or to the side, an owl has to move its head. They have very flexible necks and can do 270 degrees of a full head turn, looking over one shoulder, around the back, and almost over the opposite shoulder. And after a few of these head-bobs to triangulate on their prey, they rarely miss.

It's not only owls that measure the world this way. Most other birds of prey, like falcons and hawks, have the same intent, fixed, predator's eyes, and so they, too, perform their share of head bobs, figuring out what's what and what's where. 🌍



*These Great Horned Owl fledglings were seen along Bella Vista Road in late April. - photo by Norbert Maertens*



*picture by Claude Rioux*

## NONC

## RECORD OF NORTH OKANAGAN BIRDS 1926, Part 2

By Charles Haines, Coldstream BC

*This journal of observations was written in 1926 — 90 years ago! Some of the birds are seldom, if ever, seen in the North Okanagan today. Some of the place names will be unfamiliar today; in a future issue we may explain the locations. Enjoy this journey into the past. Thanks to John Stelfox for sharing it.*

*Part 1, in the March-April issue, covered January through May. We conclude the year's observations with June and July. - Harold Sellers, Editor*

June

2 In Parks' bush what I believe to be a Wilson's Thrush but I think Mr. Mackie has his doubts about this bird.

Several pairs of Brewer's Blackbirds in Dennison swamp, nesting in the short stumps

Several larks around, singing top note, one of the loveliest evenings of the year

4 For three nights heard a whoop sound from a fir in Dennison swamp, starting about one hour before dark. Billy found the bird, a beautiful Short-eared Owl, we got quite close to him, he still kept on with his low sounding whoop.

Last night about 11 o'clock, a Wilson's Thrush started singing and kept it up for fully an hour. I have never heard a bird singing like it in the night.

Watching the Bluebirds this morning, they hatched out about three weeks ago — 4 young, the old birds are building again, the 4 young are still flying around with them. It is easy to distinguish the young males from the females by the bright blue primary feathers. Swallows are busy after the insects flying from the telephone wire. If watched closely these birds play some very pretty turns in the air.

6 Lewis Woodpeckers busy after the insects. This bird, I find, gets his food mostly about one to two hundred feet from the ground. In the fall he is found in the orchard, the poplar tree or cottonwood is his favourite place for nesting. Very glossy plumage. Saw more of these birds in Lavington than in Coldstream.

7 Catbirds, several pairs around home; First nightjar

11 Pair of Yellow-bellied Sapsuckers. Mr. Mackie showed me a pair of these brilliant little birds nesting in his grounds. My opinion is these birds are the most beautiful of woodpeckers, very conspicuous

13 Ideal weather, birds numerous everywhere. Just took a stroll through Dennison's swamp. Pair Bullock's Orioles, male showed up conspicuously with his salmon-coloured breast markings, very similar to Oriole, (no particular note) very tame bird. I got quite close to it, apparently looking for nesting place, hopping in between small branches. Several species of Warbler still baffle me. Mr. Mackie thinks one is a vireo.

Another bird very much like the English Corn Bunting. Pair Evening Grosbeaks

Afternoon, went for a stroll through the bush to Coldstream Ranch. Have often wondered where the Nightjar nested in the daytime. I saw two on a fir tree on different branches, they lay flat long-ways on the limb of the tree. It is hard to detect them as their plumage is very like the bark of the tree. Was watching a Kansas Kingbird who was evidently annoyed at their presence. Saw again what I believe to be a pair of Red-tailed Hawks circling around, action in the air like the Golden Eagle.

Brewer's Blackbirds a large flock north of the cemetery, quite a distance from any inhabited place. I always find these birds wherever there are any short stumps of trees. Saw a deer on the range.

*continued on page 10*

## NONC

*Record of Birds, 1926, continued from page 9*

## June

27 A hot day. Stroll into Dennison's swamp, birds everywhere.

Put up 5 Snipes in different parts. I notice in particular these birds fly a straight slow course and drop suddenly without a note at this time of year. In winter they fly a zigzag course and very quick; was fortunate in finding a nest with one egg.

Saw a Water Rail, species unknown to me, a very small bird, lemon coloured beak, brown legs, bare of beak then feathers when very dark, diminishing to a lighter colour to nape of neck. Carried tail very erect. Disturbed a Sandpiper, believe by action of bird that she has a nest close by.

Red-winged Blackbirds and Brewer's Blackbirds numerous, several nests.

Many young birds including Robins, Flickers, Larks, several yellow Warblers, Kingbirds nesting in broken tree in middle of swamp.

Counted 15 different species of birds

## July

11 Dennison swamp, found the nest of Water Rail, which bird I saw on June 27. Nest had one egg in it.

Willow Thrush, brought off 4 young in bush at bottom of garden

14 Bittern by creek in Lavington

15 Many Swallows and Bluebirds are hatching their second broods.

Kansas Kingbirds are numerous. I saw several young broods on telephone wires. One brood the old birds were teaching to fly, it was interesting to watch the way they flew in small distances the same way as the wire ran, in all cases they flew back to where they started from.

16 I saw for the second time a Heron flying over the rowing club. It was being attacked by Kingbirds and eventually flew down the lake.

On the diving board off the Country Club was a brown looking Duck with seven young, species unknown to me.

25 In Galbraith's orchard was a lovely pair of Yellow-headed Blackbirds flying with young Brewer's Blackbirds, head and neck a salmon yellow.

Several Kingbirds nesting in the apple trees, I think these are the latest birds to hatch. Saw more Redstarts this year than before.

Migratory birds stayed late in September

***To be continued in the next issue as we move to 1928.***

**COLDSTREAM PLACE NAMES**

by Margaret French, 1998

Dennison: Present Drought and Postill properties. It went to corner of Kalamalka Lake Rd and Coldstream Creek Rd., north to the railway tracks. Dennison swamp was on the east side of the property

Haines: One acre adjoining Dennison place near the roads.

Giles: South of Kalamalka Lake Rd., east of Coldstream Creek Rd. across from Dennison land. Now owned by Denis Seymour.

Homer-Dixon: Across from Giles and Haines, SW of corner, usually called Giles' Comer.

Rome: Adjoining Homer-Dixon west side of Coldstream Creek Road.

Kirkpatrick: East side of Coldstream Creek Road across from Rome's. Now owned by Firman.

*more next time*

# NONC

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\* Okanagan Collaborative Conservation Program

**PROGRAMS & ACTIVITIES**

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Ray Arlt  
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# NONC

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Copy for publication should be sent to Harold Sellers, Editor, by e-mail to [hikerharold@gmail.com](mailto:hikerharold@gmail.com) or through the club postal address.

## MONTHLY MEETINGS

On the first Wednesday of the month (September through May), we hold a meeting for members and visitors at the Village Green Hotel, Sierra Room II. Start time, 7:00 pm. Guest speakers, club news, refreshments.



## NONC MEMBERSHIP

Clip or copy this form to begin or renew a membership with the North Okanagan Naturalists' Club. Annual dues are \$35 for an individual and \$50 for a couple or family.

Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

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