

Osoyoos file

Field's Lease

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# Land of contrasts

## A birder's view of the Okanagan

by STEVE CANNINGS

Sooner or later all Canadians who have more than a passing interest in birds will make a pilgrimage to British Columbia's Okanagan Region — lured by Canada's 'pocket desert' and the unusual birds that reach their northern limits in the bottom of these dry mountain valleys. Invariably the naturalists discover that there are more than desert birds breeding in the Okanagan. From the searing summer heat of the desert it is only a scant 30 km up the slopes of the Okanagan range to cold arctic-like peaks. In between, the rapid change of elevation and resultant cooling creates an array of vegetation and life conditions similar to those encountered in moving from the mid-latitudes to the arctic. Few places in Canada offer such a stunning range of habitats within such a compact area, and few places offer such an exciting challenge to the bird watcher.

In mountains there are so many variations in geography and climate that ecologists have devised new systems to describe local situations more precisely. A simplified concept has been introduced by the BC Provincial Museum and is described in the handbook *The Mammals of British Columbia*. In this system the small desert areas in the south Okanagan and lower Similkameen valleys are classed as the Osoyoos arid biotic area. The much larger open forest immediately upslope is called the dry forest biotic area. Above that is the subalpine forest and finally, above timberline, the southern alplands biotic area. A fascinating journey through these zones is possible in several places in the south Okanagan where timberline is about 2,135 metres.

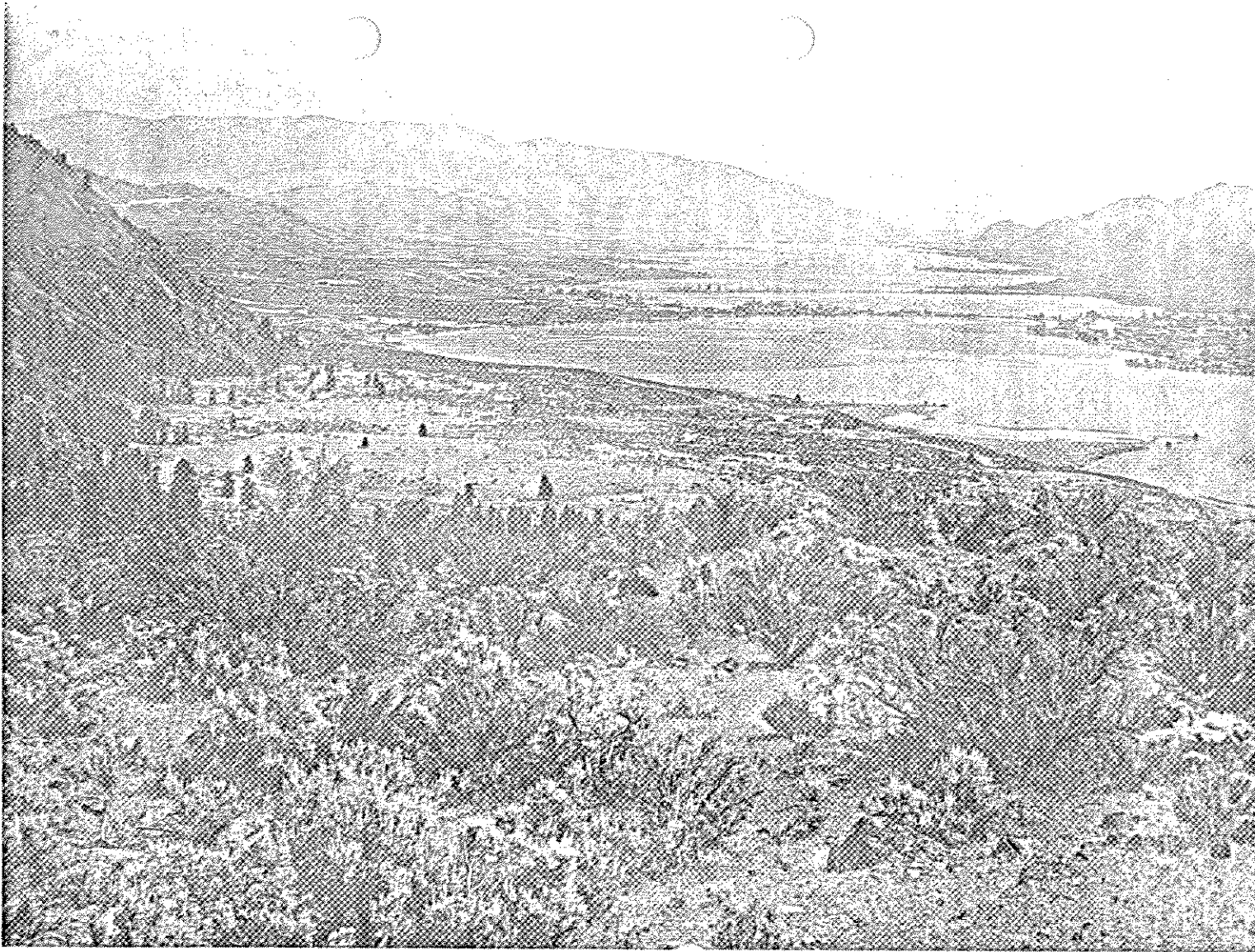
### Osoyoos arid

As you drive east and downwards from Princeton, through the Okanagan Range, trees become scattered and the landscape of the Similkameen valley becomes gradually drier. It is a sign that you are entering one of a series of rainshadows that run north-south along the

interior valleys of British Columbia. Air from the Pacific loses much of its moisture passing over the high western slopes of the mountains. Moving over the interior valleys, it descends and warms, and its relative humidity drops. Near Keremeos, the slopes become a treeless, starkly sculpted scrubland of browns and silver. This is the 'pocket desert', part of a continuum of arid lands that stretch north from Mexico and Arizona sending fingers into the Okanagan and Similkameen valleys in southern British Columbia. It is this broad region with its desert scrub, grassland and junipers that explains the presence of southern birds in the Okanagan — some of which are found nowhere else in Canada. On average, less than 30 cm of precipitation falls in these dry valley bottoms. Summers are long and hot, and winters mild by Canadian standards, with little snow. Only infrequently does cold continental air linger for long periods.

The native vegetation in this arid zone was mainly bunchgrass species with scattered sagebrush, *Artemisia tridentata*, and antelope bush, *Purshia tridentata*. Over a century of cattle grazing has had its impact. In the grasslands that remain, many less desirable species have been introduced, while sage and cactus, *Opuntia fragilis*, have probably increased. The greatest change to the natural environment has been the development of large scale irrigation systems and planting of orchards and vineyards on almost all suitable land. In more recent years urban and industrial growth have altered the whole Okanagan area. But it is the smaller desert zone in the south that has been affected most.

Despite these changes some good desert habitat remains and serious attempts are being made to preserve it. One such area is located at the northeast corner of Osoyoos Lake where part of a sandy bench (a bench is a level area on a hill or mountainside) and adjoining wetland is being considered for a provincial ecological reserve. The Okanagan Similkameen Parks Society has been working on this project for 12 years. The land



Clifford A. Fenner

has been used for cattle grazing for many years but the Society hopes that with suitable management some of the old natural environment can be restored. Sage thrashers and burrowing owls are among the former residents which may return.

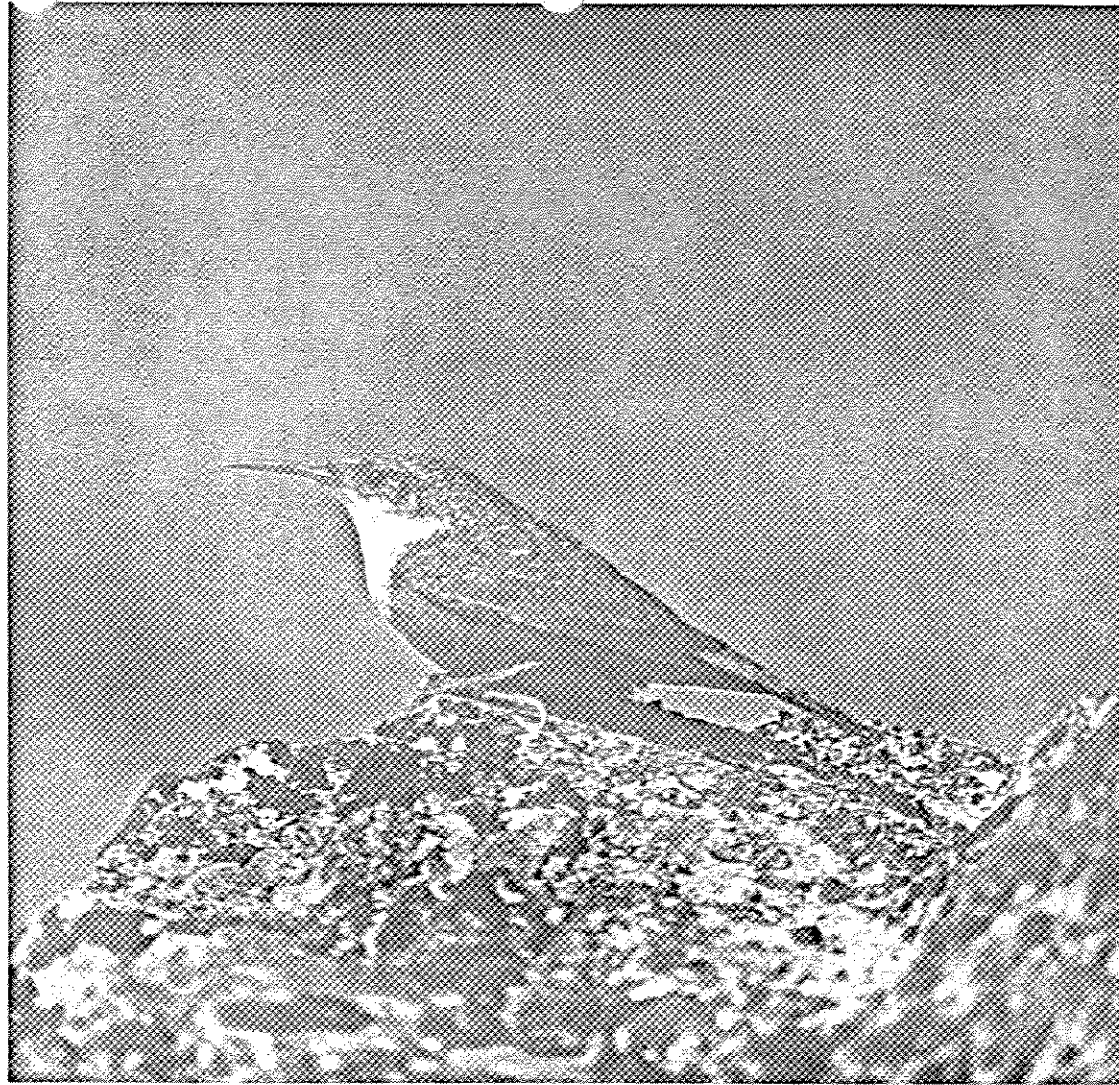
The value of the proposed ecological reserve is increased by its position immediately adjoining the Inkaneeep Indian Reserve, which extends along the east shore of Osoyoos Lake north of the southern trans-provincial highway. The reserve is a large refuge for desert type flora and fauna.

Vaseux Lake, to the north, is perhaps the most popular and most accessible birding spot within the Osoyoos arid zone. The Okanagan Valley narrows at this point and the desert benches are squeezed between the lake and spectacular 300 metre rock bluffs. Small groups of white-throated swifts sail at breakneck speed in and out of the canyons and from the rocky outcrops comes the clear "cher-ee, cher-ee, cher-ee" call of the rock wren. The Vaseux bluffs are also home to another Canadian rarity, the canyon wren. This small brown and white resident is at the northern limit of its range. After a severe winter the hardy birds disappear for a year or two and presumably are replaced by new birds from further south.

The male canyon wren can be located by its long descending song echoing from the cliffs. More often only a sharp "chink, chink" call is given as the tiny bird ceaselessly patrols its territory, scaling vertical rock walls and flitting among the jagged rockfall at the bottom of the cliffs. These rock bluffs form the boundary between the Osoyoos arid and next zone upslope, the dry forest, and birds from both zones live among the rocks and scattered pines. Say's phoebes, western kingbirds, violet-green swallows and black-billed magpies occur in this area although the last bird ranges through every Okanagan zone from desert to alpine.

Most of the grassland birds on the lower benches of the Osoyoos arid zone are also found in open habitats of the dry forest. The two exceptions are the sage thrasher and Brewer's sparrow, both of which are more common in the wide, arid sagebrush and cactus basin around White Lake, just over the hills west of Vaseux Lake. For a short time in the spring the edges of White Lake are green. The grass soon turns brown and the edges of the lake evaporate to a salt pan.

The Osoyoos arid area is far from being a homogeneous entity. Even the most extensive areas of typical desert scrub and grassland are scored by small creeks and gullies that contain enough moisture to support



S.R. Cannings

*Above left: The dry valleys of the Okanagan are an extension of the Great Basin of the western United States. Although agriculture and urbanization have consumed much of the natural desert habitat, desert animals and plants can still be found in some places on the valley floor and lower slopes. Above right: The cliffs and rock-falls of Vaseux Lake are the year-round home of the canyon wren — a species at the northern limit of a range that extends from Baja California through the deserts of the western United States. Right: For a brief period in May, the striking blooms of bitterroot, *Lewisia rediviva*, colour the dry slopes and valley bottoms. Beneath the ground is a large succulent storage root that can withstand prolonged drought.*



D. Leighton



aspens, birches and willows. Several larger creeks flow from the mountains on either side of the valley. Dippers and even harlequin ducks nest in their deep shady canyons, only a short distance from dry sagebrush flats. Near the smaller streams, yellow-bellied sapsuckers methodically drill rows of holes in the water birch and alder. It is not unusual to find three species of hummingbirds — including Canada's smallest bird, the calliope — as well as orioles and, of course, the sapsuckers, feeding on the sap from one group of drilled trees.

Many other colourful western birds nest in the cottonwoods, willows, birches and shrubs that edge the lakes and river on the valley floor. Gardens and orchards, too, are cool havens for species not adapted to life in the near desert. Among the better 'green' birding spots in the south Okanagan are the provincial park campgrounds at Haine's Point, Osoyoos, Inkaneep Park north of Oliver, Vaseux Lake and Okanagan Falls. Lazuli buntings, black-headed grosbeaks and yellow-breasted chats are just a few of the summer visitors whose songs can easily be learned here.

### Dry forest

As we move upslope we enter the dry forest zone, a region characterized by many different types of terrain and vegetation. Winters are still mild and summers long and dry, but an increase in moisture levels permits more widespread tree growth. Ponderosa, or yellow pine, a robust long-needled pine with large cones, is the dominant tree. In the days before white settlement this tree along with drought resistant bunchgrass, sage and other shrubs, formed an open, park-like forest on the lower hills and benches of the Okanagan Valley.

I like to think of the pygmy nuthatch as the typical bird of the Ponderosa pine woods because it is rarely found anywhere else. During the breeding season, it excavates a nest hole and raises its young in the dead tops of old pines or in rotted stubs. At other times it roams the pines in small noisy flocks. Both the other Canadian nuthatches are also resident in the pine woods. In fact, white-breasted nuthatches have a fairly restricted distribution in BC, being mainly confined to the dry forest zone. This often surprises easterners, who expect to find this bird in deciduous woods.

Western nuthatches run true to form in their flocking habits. In fall and winter they often travel together in the company of chickadees and the occasional brown creeper or downy woodpecker. Mountain chickadees are more common than black-capped in pine woods but both species occur in mixed woods and are often seen together, especially at winter feeding stations.

As soon as temperatures warm, poorwills arrive from their wintering grounds in the southwestern US and Central America. Unlike many other nocturnal members of the goatsucker family, poorwills can be easily seen as well as heard. The ground-nesting birds can be found by driving along unpaved country roads in mixed pine and deciduous growth. Warm summer nights seem to be best — watch for glowing red eyes as your headlights pick up the small moth-like bird sitting on the road.

One habitat within the dry forest zone is unique since it is higher than usual and also contains open stands of western larch as well as the more typical Ponderosa pine and Douglas fir. This is the south facing slope of Anarchist Mountain, along the highway about 16 km east of Osoyoos. Here we may find another Canadian rarity, the Williamson's sapsucker, usually nesting in and feeding on the thin-barked larch trees. This area is also a good place to observe western and mountain bluebirds, mountain chickadees, Townsend's solitaires, dusky flycatchers and perhaps a western tanager. The tanager nests in Douglas fir trees and is also found higher up in the subalpine forest. Dusky flycatchers select patches of mixed woods or aspen bluffs, while Townsend's solitaires prefer road cuts or canyons, where they can find exposed roots or cavities for their nests.

North of Skaha Lake the dry forest biotic area replaces the Osoyoos arid in the Okanagan Valley bottom. The extensive lakes, marshes, rivers and streams are breeding grounds for birds common in other parts of Canada and migration-stops for many water and shorebirds using the interior flyway. In fact, of the 240 species seen fairly regularly in the Okanagan, only about 60 could be called 'western' birds.

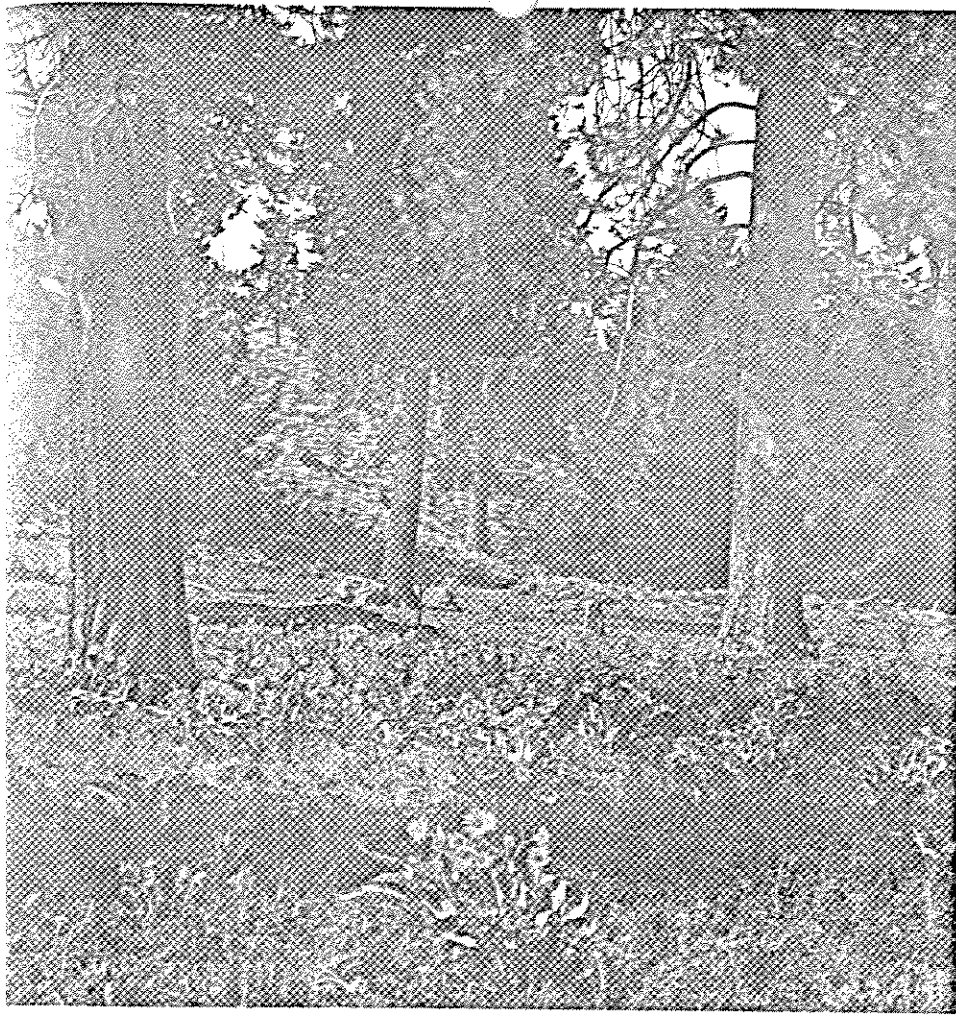
Vernon and Armstrong at the north end of the valley are still in the dry forest zone but nearby hills and tributary valleys are moister and cooler and more heavily wooded than farther south. The subalpine forest is close at hand and the Columbia forest zone in the interior wet belt is just a few mountains away to the east. The typically 'southern' birds that are fairly abundant around Osoyoos or Vaseux are noticeably scarce or absent in the north end of the valley. On the other hand, there are more forest species, especially hawks and owls.

### Subalpine forest

The subalpine forest is habitat for many birds that are common to the cool boreal forest of mid-Canada. Typical of these birds are spruce grouse, gray jay, northern three-toed woodpecker, boreal chickadee, hermit thrush, northern waterthrush and pine grosbeak. As well, there is a substantial contingent of birds that evolved to breed in similar conditions in the western mountains. These include the varied thrush, blue grouse and MacGillivray's warbler. One of the less common birds which nests in this zone is the black swift. The largest of the swifts, it flies great distances from its nest in mountain canyons, and has been observed in almost all parts of the valley. It is more often recorded in the north Okanagan, usually before summer rains when insects are flying low.

The small secluded lakes in the subalpine forest are especially rewarding for the birdwatcher since many birds in this zone tend to live near the forest edge and near water. Nearly every lake has a pair of common loons and the larger lakes may be home to ospreys or bald eagles — a great combination for natural drama.

Many roads lead into the mountains. Roads to ski hills are particularly useful, giving access to subalpine as well as alpine country. Ski resorts are usually built at the upper levels of the subalpine forest, below tim-



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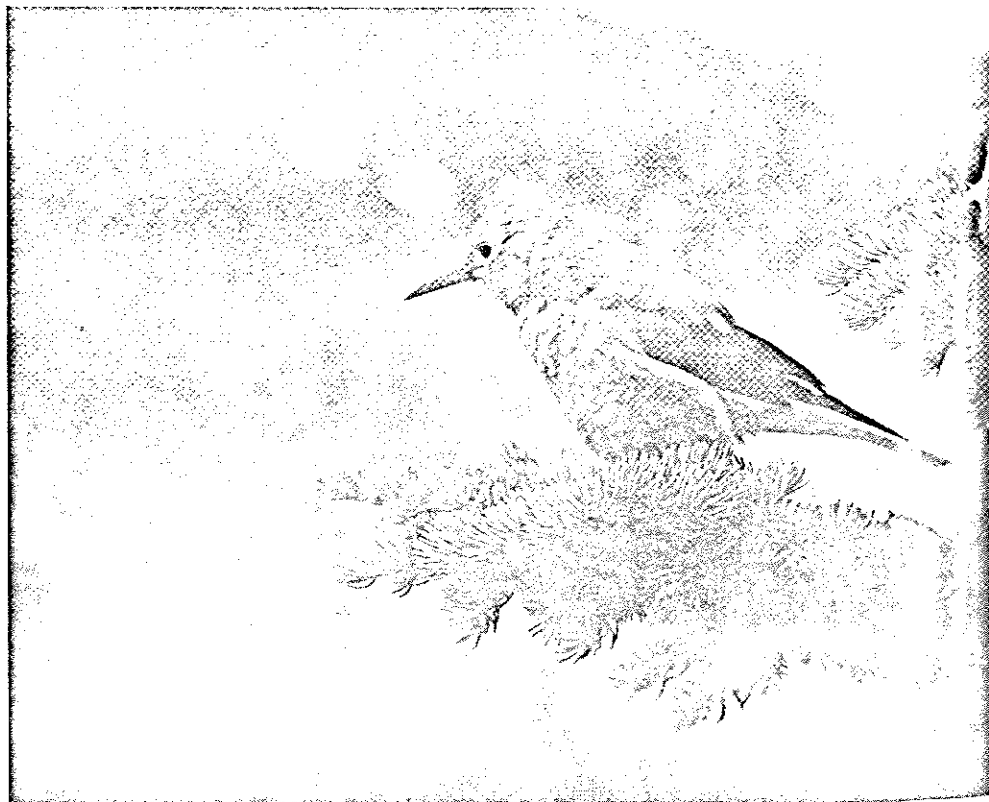
T.W. Hall

*Above left: Competition for water regulates plant communities in the dry forest. Ponderosa pines are widely-spaced, forming an open park-like forest. Left: Introduced into the Okanagan about 25 years ago, the Chukar partridge now thrives in dry rocky habitats, most notably the rockslides around Vaseux Lake. Above: The western tanager breeds in Douglas fir in the upper part of the dry forest and in the sub-alpine forest.*



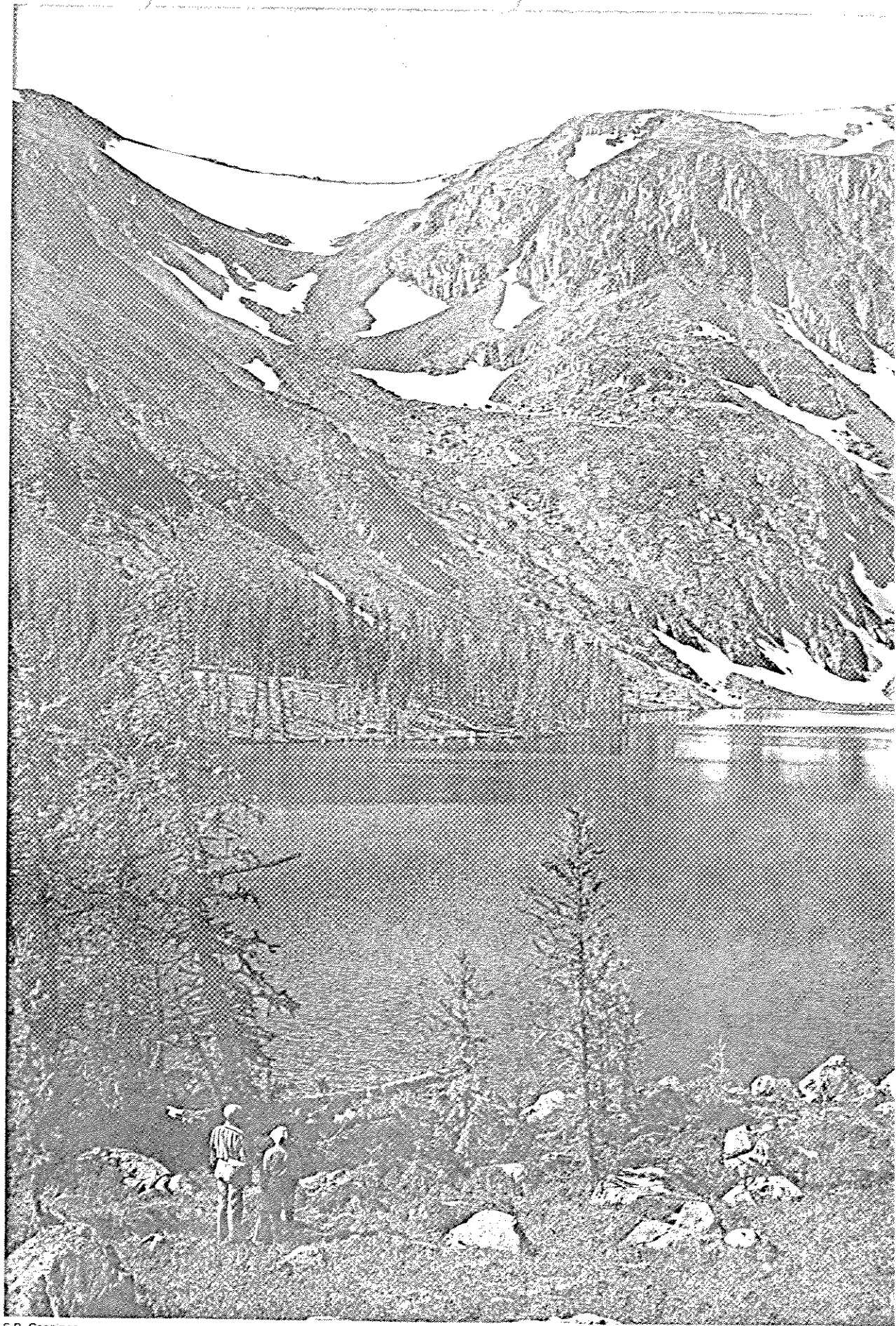
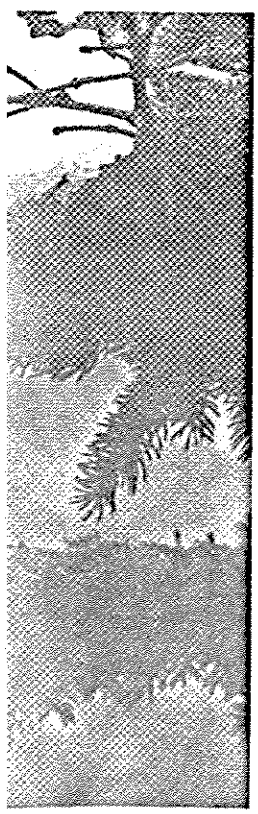
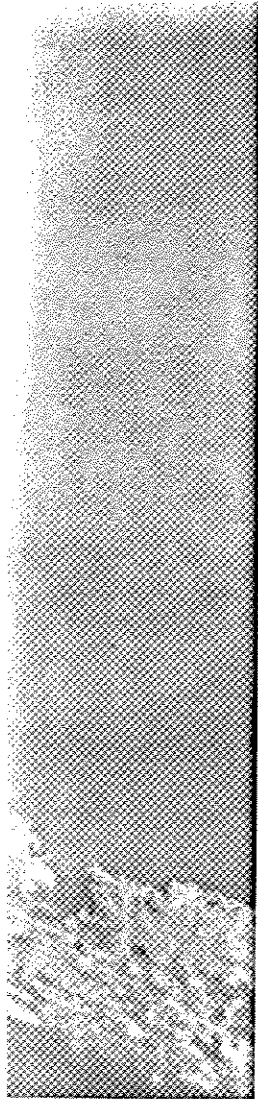
S.R. Cannings

*Above: The flammulated owl is one of the rarest of the southern birds breeding in British Columbia. It nests among Ponderosa pines and Douglas firs, usually in a woodpecker hole, or other small cavity. Right: Clark's nutcracker is a noisy inhabitant of the subalpine (photo) and dry forests. Birds breed early in the dry forest — the young are usually flying by late April. Far right: Few places near the Okanagan offer better alpine and subalpine birding than Cathedral Provincial Park. As the last snows melt in June, wildflowers come into bloom, their season crowded into the few brief months of summer.*



Edgar T. Jones





S.R. Cannings



James Raffan

*Above: With its two metre wingspread and massive bill, the golden eagle is an impressive sight as it soars high over the mountains and ridges above Osoyoos and Vaseux Lakes. The raptor carries ground squirrels and larger mammals such as bighorn lambs back to its young in the mountain eyries. This eagle usually raises one or two young per year.*

berline, so a little hiking may be necessary to reach alpine meadows and the arctic tundra type habitat above the 2,100 metre level.

### Southern alplands

The high alpine regions are characterized by short cool summers and long cold winters. Living conditions are harsh, only a few animals are resident; most of the other animals are summer visitors. Cold winds, abrasion and frost reduce vegetation to a mat-like layer.

The largest alpine area adjacent to the Okanagan and Simalkameen Valleys is in the Okanagan Range. This region, to the west, includes several peaks over 2,500 metres. To the west of that is a very similar but much more accessible region, Cathedral Provincial Park. The naturalist seeking an alpine experience closer to the Okanagan Valley can find it by hiking from one of three ski hills: Baldy Mountain, east of Oliver; Apex Mountain, west of Penticton; and Big White Mountain, east of Kelowna.

On the Okanagan high tundra, water pipits and horned larks nest among plants their cousins might find in the Arctic. A search through the dwarfed alpine firs near treeline may produce singing golden-crowned and fox sparrows. The alpine bird most sought after by bird watchers yet most difficult to find is the white-tailed ptarmigan. Its protective summer camouflage is so perfect that often the only clue to its presence is the soft clucking of a hen to its chicks. The ptarmigan is supremely adapted to alpine and subalpine conditions. Highly feathered feet give protection from the cold and enable the animal to walk easily on the surface of the snow.

R.J. Cannings







R.J. Cannings

*Above: White-tailed ptarmigan — perhaps the most sought-after alpine bird. Its dense feathers provide year-round insulation. Below: One of the insect residents of the alpine zone is the beautiful butterfly, Parnassius phoebus. The alpine meadows and rock slides are also good places to observe pikas and hoary marmots.*

Many familiar birds like ravens and the ubiquitous robin are also seen on the mountain tops as well as golden eagles and various hawks. Given the right conditions, mountain bluebirds will nest at high elevations. For several summers a pair used a box built in the gable of a privy at the forestry lookout on Apex Mountain — altitude 2,248 metres.

To complete our birding expedition through the life zones of the Okanagan, we must climb the highest rocky peaks of the Cathedral Mountains. These peaks are the summer domain of the gray-crowned rosy finch, a medium-sized finch that flies low, sheltering from the wind and feeding among the crags. From these heights, in the exhilarating mountain air, we can look back towards the valley and the life zones that we have passed through. The great variety of birds which live in the Okanagan are but one example of the diversity of species which live here. A visit to this region gives the naturalist almost unlimited subjects to explore and study. Because of the variations in climatic conditions — from desert to alpine — the Okanagan is a microcosm of the large ecosystems that cover much of the earth. □

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*Steve Cannings is one of the Okanagan's best known birders and nature photographers. For several years he had a regular column on birds in BC Outdoors. He was the founding president of the South Okanagan Naturalists' Club and also served as a director of the Okanagan Similkameen Parks Society during that organization's formative years.*

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