



White- Headed Woodpecker

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make this bird
Threatened in
British Columbia.*





Why are White-headed Woodpeckers at risk?

For a number of reasons the White-headed Woodpecker is at risk in British Columbia. Unlike other Woodpeckers which feed primarily on wood-boring insects, the food source of the White-headed Woodpecker is largely the seeds of ponderosa pine trees. This dependence on such a specific food supply restricts the White-headed Woodpecker to the distribution of this tree species. Ponderosa pines are confined to the southern interior of the province at low elevations, and have been under extensive alterations from human activities for the past 80 years. Finally, this woodpecker is found only within a small portion of the ponderosa's range in British Columbia. It is at the northern limit of its range there, and as is usual with populations at the edge of their range there are dramatic fluctuations in numbers. These factors of small population size, restricted range, narrow niche, and dramatic habitat change have combined to make this bird threatened in British Columbia.

The White-headed Woodpecker has probably always been rare in the province, and its populations are thought to have fluctuated naturally in response to severe winters, forest fires or diseases which affected ponderosa pine seed production. But this situation has undoubtedly been made worse by human activities. Much ponderosa pine forest in the valley bottoms and on lower mountain slopes, particularly in the Okanagan Valley, has been permanently displaced by urban development, rural subdivisions, orchards and pasture. The remainder has been

greatly affected by logging and by the suppression of formerly frequent ground fires. Since the large, thick-barked pines could withstand most fires, the ground fires controlled smaller, competing vegetation. Now, many pine stands are gradually being replaced by Douglas-fir growing up in their shade. Frequent fires also reduced

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the largest trees.

Snags needed for woodpecker nest sites are also in short supply, partly due to Workers Compensation Board regulations which require them to be felled when logging occurs, and due to firewood cutting in a few places. Very few ponderosa pine stands are protected in parks or ecological reserves, certainly not enough at present to support many pairs of these threatened birds. Although tolerant of human activity and sometimes seen at bird feeders, a viable resident population of White-headed Woodpeckers can not be maintained without a well-distributed supply of mature ponderosa pine.

What is their status?

The White-headed Woodpecker is generally rare throughout the northern part of its range. Authorities have referred to it as scarce and rather local in Idaho and rare to

uncommon in Washington. It is somewhat more abundant in Oregon and California. In British Columbia it is a *very rare* breeding resident in the Okanagan Valley, and of *casual* occurrence in the Similkameen Valley and east of the Okanagan. Its provincial and thus Canadian population consists of fewer than 100 birds.

Because of its extremely restricted range, small population size, and threats to its ponderosa pine habitat, the White-headed Woodpecker is very much at risk in British Columbia and has been assigned to the provincial Red List. This is the category of most serious endangerment. Nationally, this species has been designated as Threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

The White-headed Woodpecker, its nests and eggs are protected in Canada and the United States under terms of the Migratory Birds Treaty. In Canada this protection falls under the federal *Migratory Birds Convention Act* of 1994. Similar protection is provided under the British Columbia *Wildlife Act*.

The British Columbia population of White-headed Woodpeckers appears to have varied considerably in abundance in recent decades. About twelve birds were sighted per year in the 1960s, two to four per year from 1970 to 1975, and only one or two from 1976 to the present. The period of maximum populations in the 1960s was one of mild winters. There appears to have been a sharp decline about 1970, possibly resulting from a severe winter which caused a failure of the ponderosa pine cone crop. Such fluctuations in abundance are typical of populations which occur at the northern limit of a species range. It is hoped that the British Columbia population of White-headed Woodpeckers will gradually recover through local reproduction, northward dispersal of birds from Washington, or both.



What do they look like?

This is one of the most distinctive woodpeckers in British Columbia and not likely to be confused with other members of the family. Both sexes have snow-white heads and throats which contrast sharply with their black bodies. They also have white wing patches which are conspicuous in flight but are reduced to narrow bars when the wings are folded. The sexes are easily distinguished by a red patch on the back of the male's head, which is absent in the female. About 24 centimetres in length, this woodpecker

Both sexes have snow-white heads and throats which contrast sharply with their black bodies.

is about the same size as its more common and widely distributed relative the Hairy Woodpecker.

Like other woodpeckers, the White-headed Woodpecker is highly specialized for climbing tree trunks and digging out wood-boring insects.

The bill is hard, straight and chisel-like; the tongue is slender, can be extended far beyond the bill tip, and has barbs on the end for drawing insect larvae out of narrow crevices. Its skull is thick and heavy to withstand hammering against solid wood. To aid in climbing vertical trunks, it has two toes directed forward and two backward (*zygodactyl* feet), each with sharp claws, and stiff tail feathers which act as props.

The call of the White-headed Woodpecker has been described as a sharp

“chick” or a repeated “chick-ik-ik-ik.” It also makes a rattle sound similar to that of the Downy Woodpecker.

What makes them unique?

White-headed Woodpeckers are unusual in their narrow distribution range and high degree of habitat specialization. Like the Giant Panda and its precious bamboo, these birds have few options if their ponderosa pines should be lost due to logging, disease, or climate change. Compared to most species of woodpeckers, particularly those in Canada, this one tends to rely less on insects, to nest almost exclusively in dead snags, and to nest relatively close to the ground.

The striking black and white plumage of these birds also sets them apart from other woodpeckers, and their rarity alone makes them much sought after by keen birders. Prior to 1950 there were only three documented sightings in British Columbia (and hence Canada); the first Canadian nest was not found until 1967. The Okanagan Valley offers the only realistic opportunity for keen naturalists to add this species to their British Columbia or Canadian lists. Few experiences in Canadian birding can match the first sight of a White-headed Woodpecker. This was aptly summed up by the Cannings brothers in their book “Birds of the Okanagan Valley”: “... there is a surge of excitement as any tapping noise in a ponderosa pine stand is tracked down. Will that black and white head appear among the green needles, or will it be just another hairy, downy, or over-enthusiastic nuthatch?”

How do they reproduce?

White-headed Woodpeckers establish breeding territories in spring which are about 100 hectares in size in continuous old-growth pine forest in central Oregon, but larger (over 300 ha) in fragmented areas. Nest-

ing sites are typically in open-canopied mature or over-mature forest stands dominated by ponderosa pine or other pine species. They are primary cavity nesters, which excavate a new cavity each year, and may begin several holes before selecting one for nesting. This activity creates valuable nest sites for other (secondary) cavity users.

For nesting, White-headed Woodpeckers prefer dead trees, often broken-topped snags, but also use leaning and fallen snags or logs, and stumps. Nests are rarely in living trees. They nest closer to the ground than most cavity nesters, mostly in the range of 1 to 10 metres above ground. The diameter of their nest trees is usually over 60 centimetres. Nest entrances are about 4 to 4.5 cm in diameter and circular, nest cavities 25 to 40 cm deep. White-headed Woodpeckers lay three to nine (usually four or five) glossy white eggs, which are incubated for about 14 days by both the male and female. The nestling period is not accurately known, but is probably about 26 days. Young are fed by both parents.

Only seven nests have ever been discovered in British Columbia, of which five were in ponderosa pines, one in a Douglas-fir snag, and one in a stump. All were in the South Okanagan valley at elevations of 450 to 600 m. One had four fresh eggs on 10 June. In British Columbia it is estimated that eggs could

be found from mid-May to mid-June, and broods in nests from the beginning of June to mid-July. Nestlings may fledge as early as late June.

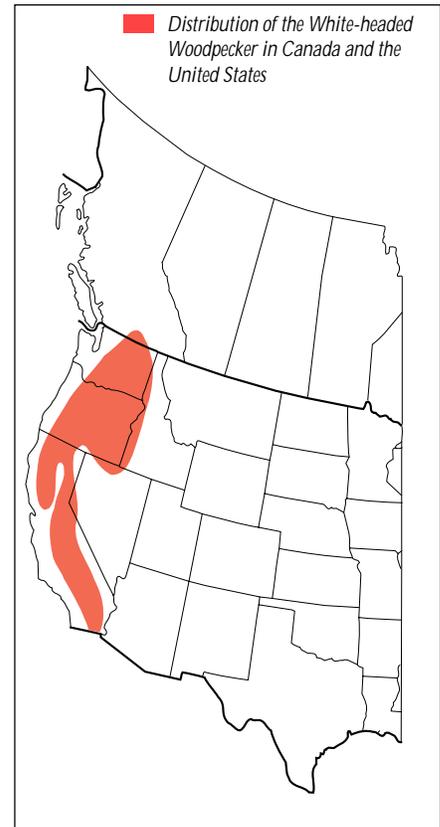
Very little is known about nesting by White-headed Woodpeckers in British Columbia, and birdwatchers are urged to be on the lookout for additional evidence.

What do they eat?

In British Columbia and adjacent areas the White-headed Woodpecker is closely associated with ponderosa pine forests and relies on pine seeds for sustenance, especially from late summer through winter. Insects can dominate their diet in spring and early summer. One study found that about 60 percent of its diet is pine seeds and 40 percent is insects.

Insects are obtained by excavating rotten wood and by gleaning them from bark crevices and foliage. Ants are a prominent part of their insect food, and wood-boring beetles, spiders and fly larvae are also taken. These woodpeckers also “hawk” for insects on the wing. They have been noted to forage on the flower heads of the great mullein, a roadside weed, for either seeds or insects. In spring, White-headed Woodpeckers may “sapsuck” from young trees by excavating sapwells in concentric rings up and down the tree trunks. They are also attracted to suet in bird feeders, and drink frequently from puddles, springs or creeks. One U.S. study recorded flights of over 5 kilometres from nest sites to forage on locally abundant spruce budworms.

Cone production by ponderosa pines is quite variable, good seed crops often being five or more years apart. This may affect year to year abundance of White-headed Woodpeckers in British Columbia where this is the only suitable pine for them to forage

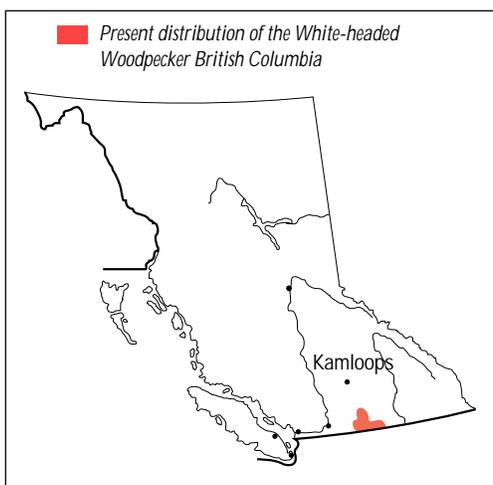


on. Seed production depends on the age and density of the pine stands, and on productivity of the site. Most seeds are produced by old, large-diameter trees, over 60 to 100 years, that are fairly widely spaced. Many ponderosa pine stands in the Okanagan area are young and dense due to previous logging. In others, fire control has prevented the return of nutrients to the soil. These situations result in poor cone crops.

Where do They Live?

The White-headed Woodpecker has a restricted distribution, confined to a narrow belt of dry, pine-dominated mountains and valleys from extreme southern British Columbia to southern California.

In British Columbia, the few breeding records are confined to the southern Okanagan valley, from Naramata to the U.S. border, particularly in the Vaseux Lake and Anarchist Mountain areas. Confirmed sightings have been made north to the Vernon area, at Manning Provincial Park, in the Similkameen and

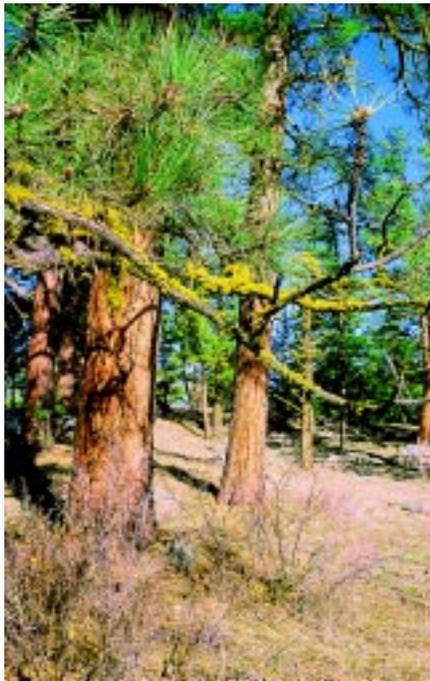


Kettle River valleys, and in the vicinity of Castlegar and Creston. Possible sightings have been reported near Lytton and Cranbrook. It is a resident (non-migratory) bird within this range, and has been sighted in all seasons.

The White-headed Woodpecker is an excellent example of a species that is dependent on only one or a few kinds of trees for its survival: the ponderosa pine in the northern part of its range and the related Jeffrey and Coulter pines in California and Nevada. This is undoubtedly because of the importance of the seeds of those trees in the woodpecker diet. Although they frequently nest in ponderosa pines, a variety of trees will serve as nest sites. Researchers have emphasized that this woodpecker is so partial to mountain slopes covered with ponderosa pine "... that it is almost useless to look for it elsewhere." Of over 100 recorded



THE MALE WHITE-HEADED WOODPECKER HAS A RED PATCH ON THE BACK OF THE HEAD. Leah Ramsay photo



MATURE PONDEROSA PINE FOREST IS PREFERRED WHITE-HEADED WOODPECKER HABITAT. David F. Fraser photo

sightings in British Columbia, 85 percent have been in ponderosa pine forests, 5 percent in ornamental plantings, and the remainder in other forest types. Since nesting is usually in decadent trees and foraging in living trees, stands having both components are important. In Oregon it has been calculated that the density of large-diameter snags (dead trees) should be at least 550 per 100 ha of forest to support maximum nesting densities. That is the highest snag density requirement for any Oregon woodpecker. Snag needs in British Columbia are expected to be similar.

Scattered ponderosa pine trees, usually mixed with more abundant Douglas-firs, are fairly widely distributed in the warm, dry valleys of southern British Columbia. But sizeable stands dominated by predominantly mature pines are discontinuous and scarce, partly accounting for the very limited distribution of White-headed Woodpeckers in the province.

What can we do?

To date in British Columbia there have been no habitat management activities aimed directly at improving the lot of the White-headed Woodpecker. The main need is to improve and sustain the supply of ponderosa pine trees of cone-bearing age. Although it may be desirable to increase the supply of nesting snags as well, recent fluctuations in woodpecker numbers suggest that food rather than nest sites is the limiting resource.

Every effort should be made to establish additional parks or reserves in the ponderosa pine zone. However, it is unlikely that enough reserves could be acquired to

maintain viable woodpecker populations. Most White-headed Woodpeckers will probably continue to be supported on Crown lands or large private parcels managed for timber production; therefore integrated forest management is the most logical means

Of over 100 recorded sightings in British Columbia, 85 percent have been in ponderosa pine forests.

to improve their habitat. This will be best for the birds if the objective is to achieve relatively open stands (20 to 25 percent canopy density) containing many large old ponderosa pines and pine snags. This does not rule out logging. Logging can

serve to thin dense stands nearing maturity, and to remove competing trees like Douglas-fir or lodgepole pine. Thinning reduces the danger of high intensity crown fires which destroy mature pines, and can allow the re-



FEMALE WHITE-HEADED WOODPECKER.
Steve Cannings photo



WHITE-HEADED WOODPECKERS USE SNAGS SUCH AS THIS FOR NESTING. *Leah Ramsay photo*

sumption of ground fires to which ponderosa pine stands are historically adapted. Surface fires remove competing vegetation which helps to maintain the dominance of ponderosa pine, and also release nutrients into the soil – nutrients which are needed to stimulate cone production.

Selective cutting is much preferred over clear-cutting in White-headed Woodpecker habitats. However, small, scattered clearcuts on a very long rotation (e.g. every 180 years) could maintain sufficient trees of cone-bearing age, that is, over 100 years old.

Retention of naturally occurring snags and stubs for potential nest sites is important when logging occurs. If they are a safety hazard for forest workers, they can be “high-stumped” 3 or 4 m above the ground and still be suitable

for this species. Where snags are in short supply they can be created by girdling a few live trees. Snags need not be ponderosa pine (although these are preferred); densities of about four or five snags per hectare are ideal for White-headed Woodpeckers.

The public can help White-headed Woodpeckers by encouraging the implementation of beneficial forest management practices, and by applying them on their own woodlots. More reserves containing old-growth ponderosa pines are also badly needed in the Okanagan area and would benefit a host of other rare wildlife species

which are also confined to that area. Cutting down large ponderosa pine trees, even dead ones for firewood, should be avoided. People are urged to search for these delightful birds and to report any sightings, and particularly nests, to the nearest BC Environment office. People with residences adjacent to ponderosa pine woods may be rewarded by appearance of this rare species at their feeders, particularly if suet is part of the menu.

White-headed Woodpeckers may be on the verge of extinction in British Columbia and need all the help they can get. 



David S. Fraser photo

FOR MORE INFORMATION ON THE WHITE-HEADED WOODPECKER, CONTACT:
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