

THE WOODPECKERS OF LINCOLN COUNTY, MONTANA

WITH THREE ILLUSTRATIONS

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LINCOLN County, in the extreme northwestern corner of Montana, offers an excellent opportunity for an ecological study of the woodpeckers. Approximately 2,290,000 acres, or 98 per cent, of this area originally was heavily forested. At the present time about 150,000 acres have been cut over, and lumbering operations undoubtedly will be continued for many years in the future, as the county contains some of the finest stands of timber in the state. In 1925 only 4.2 per cent of the total area was in farms.

As the timber is gradually removed and more land is brought under cultivation and into use for pasture, the numbers and habits of the woodpeckers change. In order to furnish a definite comparison for later studies in the region, and thus to permit of more or less correct conclusions regarding the influence of timber cutting on the different species, this summary of their present status is given. As definite breeding dates for woodpeckers in Montana are almost lacking, some of the nesting records obtained in Lincoln County by the writers are also included.

A brief description of the physiography of this region is desirable. Ranging in altitude from 1800 to 8640 feet above sea level, the county embraces areas in the Transition, Canadian, Hudsonian, and Alpine-Arctic zones. The only naturally treeless section at low elevation is the Tobacco Plains, where biotic characteristics approach those of the Upper Sonoran zone. The entire area is well watered with mountain and glacial lakes, and innumerable streams.

Some idea of the comparative abundance of the different species of woodpeckers, which are considered separately below, is given by the following table compiled from the writers' notes.

COMPARATIVE ABUNDANCE OF THE DIFFERENT SPECIES OF LINCOLN COUNTY WOODPECKERS

Number of days seen during representative periods

SPECIES	EASTERN HALF		WESTERN HALF	
	June 4 to 30, July 23 to Sept. 16, 1922 83 days	June 15 to Sept. 15, 1923 93 days	June 15 to Sept. 15, 1924 93 days	June 15 to July 4, 1924 20 days
Northern Hairy	75	90	41	11
Batchelder	5	34	3	1
Arctic Three-toed	22	24	7	2
Alaska Three-toed	0	0	1	0
Alpine Three-toed	10	2	4	3
Red-naped Sapsucker	50	68	12	4
Williamson Sapsucker	1	2	0	0
Northern Pileated	50	59	41	7
Lewis	6	50	36	4
Red-shafted Flicker	82	93	91	20

Dryobates villosus leucomelas. Northern Hairy Woodpecker.

An abundant permanent resident throughout the county, intergrading with *monticola*. Breeds most commonly in the cut-over lands of the river valleys, in the Transition and the lower part of the Canadian zone. It occurs more commonly in the sparsely-timbered higher mountains than in the heavily-forested hills of the central Canadian zone, ranging to the timberline.

In the valleys it is most numerous, during summer, in forests containing a large percentage stand of western larch (*Larix occidentalis*). The next trees in attractiveness seem to be Douglas fir (*Pseudotsuga taxifolia*), western yellow pine (*Pinus ponderosa*), and Engelmann spruce (*Picea engelmanni*), in the order named. In the Hudsonian zone it frequents trees of white-bark pine (*Pinus albicaulis*) and

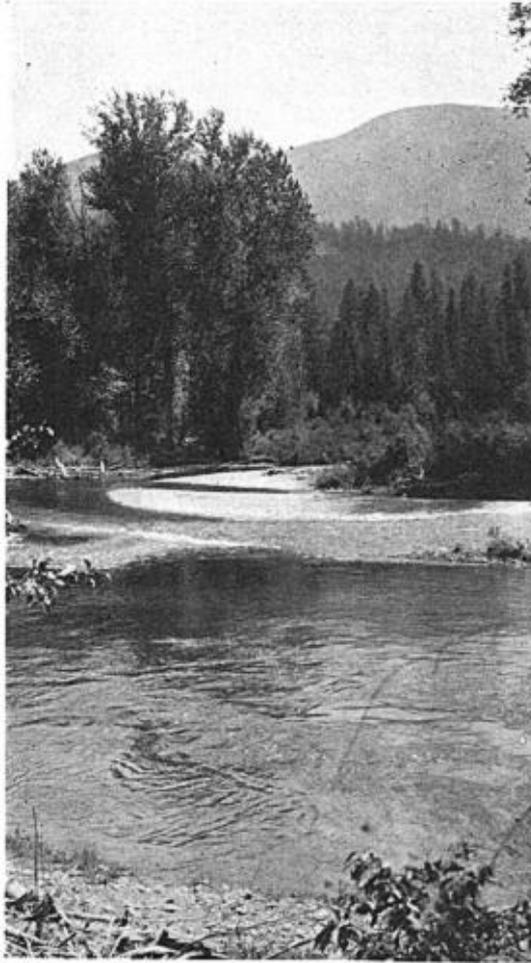


Fig 91. MIXED BROAD-LEAF AND CONIFER WOODS, TRANSITION ZONE. COMMONEST BREEDING WOODPECKERS: RED-NAPED SAPSUCKER, RED-SHAFTED FLICKER, BATCHELDER, NORTHERN HAIRY, LEWIS. ARCTIC AND ALPINE THREE-TOED, AND NORTHERN PILEATED ALSO OCCUR.

alpine larch (*Larix lyallii*). The species is noticeably rare or absent in forests containing nearly pure stands of western white pine (*Pinus monticola*), arborvitae (*Thuja plicata*), or lodgepole pine (*Pinus contorta*), except where the woods have been logged or injured by fire.

During winter this woodpecker is commonly found in mixed broad-leaf and conifer associations along streams, but it is most abundant at that season in the larch woods of the valleys. At all times of the year it is more common about farms and wooded pastures, and in woods where lumbering is being carried on, than in heavy forests and unsettled parts of the mountains and valleys.

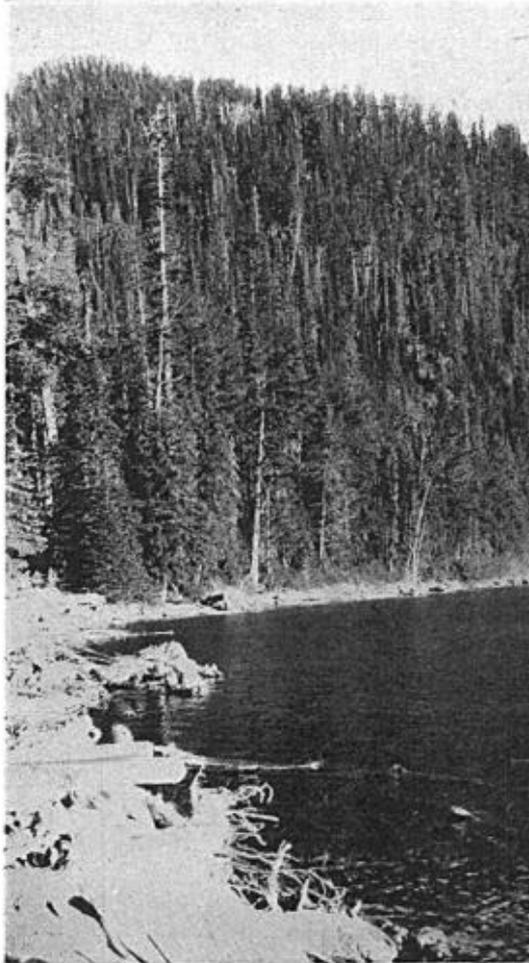


Fig. 92. CANADIAN ZONE FOREST, CEDAR LAKE. ALPINE FIR AND LODGEPOLE PINE WOODS, WITH SOME WHITE PINE AND ENGELMANN SPRUCE. COMMONEST WOODPECKERS: NORTHERN HAIRY, RED-SHAFTED FLICKER, ALPINE THREE-TOED. ARCTIC THREE-TOED, NORTHERN PILEATED, BATCHELDER, AND RED-NAPE SAPSUCKER ALSO OCCUR.

In abundance this woodpecker ranks next to *Colaptes cafer collaris*, which is the commonest species. Individuals may be seen within its range on any day of the

year. A close observer, during a day's observation in woods of larch and fir, will ordinarily see from six to twelve adult birds.

In Lincoln County this species uses a wide variety of nesting sites. Of eight nests included in our records, three were in live aspens; one in a live cottonwood; one in a live larch; one in a dead larch; one in a dead Douglas fir; and one in a woodpecker nesting box.

Our dates would indicate a rather late nesting on the part of this species, in this locality: May 29, 1921, one egg and two newly-hatched young; June 26, 1921, young; July 27, 1921, one young on wing; June 10, 1922, half-grown young; June 17, 1922, nearly-grown young; June 17, 1922, half-grown young; July 9, 1922, young on wing; June 4, 1923, three-fourths-grown young; July 1, 1923, nest in preparation; July 6, 1923, young on wing; June 13, 1924, nearly-grown young. These records include nests or young in the Transition, Canadian, and Hudsonian zones, in altitudes from 2950 to 5400 feet.

Dryobates villosus monticola. Rocky Mountain Hairy Woodpecker.

This form of the Hairy Woodpecker intergrades with *leucomelas* throughout most of the county, appearing to be relatively more common in the Transition zone than in the Canadian. Apparently typical individuals are sometimes seen, but more often the birds show signs of intergradation. Some of the nests given in the preceding section for *leucomelas* were evidently of intergrades between the two forms.

Dryobates pubescens homorus. Batchelder Woodpecker.

A rather rare permanent resident, irregular in winter. Occurs throughout the county, but is rare at high elevations. It frequents mixed broad-leaf and conifer woods along the lower streams, where it undoubtedly breeds in preference to other locations. During winter it is often seen about farmsteads and pastures, and in bordering woods of Douglas fir, yellow pine, and larch. In the Canadian zone it occurs sparingly in lodgepole pine and alpine fir (*Abies lasiocarpa*) woods, usually along streams.

In the western half of the county, an observer may consider himself fortunate to see an individual of this species twice a week. In the eastern portion, during July and August, along Transition zone streams, one or two birds may be seen nearly every day.

We have obtained no definite nesting dates for this species, although it evidently breeds in suitable locations. On July 22, 1923, a brood of young on the wing was seen near Fortine in woods of spruce and aspen, in the Transition zone, at 2960 feet altitude.

Picoides arcticus. Arctic Three-toed Woodpecker.

A fairly common resident, occurring throughout the county, though more commonly in the eastern than in the western part. It is found most frequently in Transition zone woods that have been logged or burned over. In virgin forests it occurs sparingly in yellow pine woods at low elevations; more commonly in mixed broad-leaf and conifer, and Douglas fir, associations; and rarely in alpine fir and lodgepole pine woods of the higher mountains, in the Canadian zone. Its favorite feeding trees are Douglas fir and western larch.

Within its range this species may be seen about three times a week in the central eastern part of the county, where there are large cut-over areas; and five or six times a month in the remainder of the county.

A nest containing young about a week old was found May 25, 1923, in a larch tree near Fortine, in the Transition zone.

Picoides americanus fasciatus. Alaska Three-toed Woodpecker.

A very rare resident. During five years we have seen this species but six



Fig. 93. HUDSONIAN ZONE, WITH ALPINE-ARCTIC IN BACKGROUND, SHOWING PART OF BLACKWELL GLACIER; NEAR LIBBY. BREEDING WOODPECKERS: RED-SHAFTED FLICKER, NORTHERN HAIRY. THE ALPINE THREE-TOED AND THE RED-NAPED SAPSUCKER SOMETIMES RANGE INTO THE LOWER BORDER OF THIS ZONE.

times, all in autumn or winter: October 14, November 28, December 5, December 17, 1922; September 15, 1924; and December 24, 1925. These records were all obtained in Transition zone woods of Douglas fir, western larch, and yellow pine.

Picoides americanus dorsalis. Alpine Three-toed Woodpecker.

A regular but rather uncommon permanent resident in the mountainous parts of the county. Unlike *arcticus*, this species prefers dense, virgin forests to cut-over woods and open woodland pastures. It ranges throughout the Canadian zone, upward into the borders of the Hudsonian zone, and downward into the denser forests of the Transition zone. It is not often seen in cut-over woods, nor near farmsteads.

In the higher elevations, this woodpecker may be found in white pine, lodgepole pine, alpine fir, and Engelmann spruce forests. In the Transition zone, it shows a preference for spruce woods, with larch and yellow pine forests as second choice. In the Canadian zone, this species is somewhat commoner than *arcticus*; in the Transition zone, it occurs only about one-third as frequently as does the larger bird.

Sphyrapicus varius nuchalis. Red-naped Sapsucker.

A common summer resident in the Transition zone, and in the lower borders of the Canadian. It occurs most abundantly and typically in mixed broad-leaf and conifer associations along streams, where it nests regularly. It ranges less commonly into virgin forests of fir, larch, yellow pine, and hemlock (*Tsuga heterophylla*) in the valleys; and into arborvitae, lodgepole pine, and spruce woods of the foothills. Occasional birds are seen in alpine fir and spruce woods upward to the lower borders of the Hudsonian zone.

Like the Hairy and Arctic Three-toed woodpeckers, this species is not driven from its normal range by moderate lumbering, as it occurs even more commonly in slashings than in untouched forests of the same type. In burned-over areas, however, the Red-naped Sapsucker is relatively much less common than the other two species named.

As elsewhere in the state, this bird in Lincoln County nests most commonly in live aspens. Our records for this area include four nests in live aspens, one in a live larch, and one in a dead Engelmann spruce. These nests were all in the Transition zone, near streams. Three of the nests in aspens were in a single tree, in successive years.

Nest-hole preparation usually commences immediately upon the arrival of the birds in the spring, about April 20. As indicated by the following records, eggs are evidently laid during the latter half of May. May 29, 1921, eggs; June 30, 1921, large young; June 13, 1922, half-grown young; June 30, 1922, nearly-grown young; July 9, 1922, young on the wing; June 3, 1923, eggs; June 19, 1925, young.

Sphyrapicus thyroideus. Williamson Sapsucker.

A rare summer resident. This seems to be the status of the species throughout its range in the state, as there are only a few records of its occurrence. Our records in Lincoln County are the following: June 13, 1921, pair; August 31, 1922, male; July 1, 1923, pair; August 23, 1923, pair. These birds were all seen at an altitude of about 3000 feet, in the Transition zone near Fortine, in cut-over woods of larch, fir, and yellow pine.

We have not found the species nesting, but it probably does so in suitable locations. On June 13, 1925, a pair was found nesting under similar conditions along the Hell Gate River, near Missoula.

Phloeotomus pileatus abieticola. Northern Pileated Woodpecker.

A common permanent resident in all the lower portions of the county. Evi-

dently this species enjoys a wider zonal range in Lincoln County than in the state in general. Aretas A. Saunders states that this woodpecker occurs regularly only in yellow pine forests of the Transition zone (Pacific Coast Avifauna Number 14: A Distributional List of the Birds of Montana, pp. 22, 77). In Lincoln County, at all seasons of the year, the species is most common in woods containing a heavy mixture of western larch, irrespective of the occurrence therein of yellow pine. Larch occurs throughout the Transition, and most of the Canadian, zone, from 1800 to 5400 feet altitude. No birds have been observed in growths of alpine larch, in the Hudsonian zone, although individuals have been seen at the lower borders of this zone.

Next to western larch, this bird favors forests of yellow pine and Douglas fir. It occurs, but is not common, in mixed broad-leaf and conifer associations, in woods where Engelmann spruce is the predominating type, and in forests of hemlock and arborvitae. In cut-over larch woods containing a moderately heavy second-growth of several years standing, the species ranges as commonly as in virgin forests. Both in the Transition and the Canadian zone, it is relatively common in forests of western white pine.

In the Canadian zone this woodpecker is not so widely nor commonly distributed, although it may be found in suitable forest types to the border of the Hudsonian zone. It occurs wherever larch and white pine grow abundantly, and irregularly in woods of lodgepole pine, spruce, and alpine fir. In lodgepole pine woods, it has been found from an elevation of 6500 feet, in the Canadian zone, to 2000 feet, in local stands of the tree in the Transition zone.

In present abundance, this species ranks third among Lincoln County woodpeckers, being outnumbered only by the Red-shafted Flicker and the Northern Hairy Woodpecker.

There appear to be no records of the nesting of this species in Montana. Nesting holes may be seen, in Lincoln County, in dead larches, yellow pines, and white pines. A number of years ago, we observed a nest containing eggs in a larch felled for firewood, but have no record of the date.

Asyndesmus lewisi. Lewis Woodpecker.

A common summer resident throughout most of the Transition zone. It occurs most regularly in mixed broad-leaf and conifer woods in river valleys, and in open forests of yellow pine along the foothills. It rarely ranges into the higher mountains, although we observed one individual in a Canadian zone forest of lodgepole pine and alpine fir, at an altitude of 6160 feet. In cut-over or burned woods, it ranges to a higher elevation than in virgin forests.

In the eastern part of the county, this woodpecker is most common around farms and slashings, and in the more open woods of fir, larch, and yellow pine. Near Libby, in the western part, it seems to prefer creek-bottom woods of aspen, spruce, and cottonwood.

For nesting trees, the species exercises a wide range of selection. Of the four nests included in the following records, two were in larch stubs, one in a dead cottonwood, and one in a live yellow pine. Elsewhere we have found nests also in dead firs. These nests were in the Transition zone, at elevations between 2000 and 3100 feet: July 2, 1923, eggs; July 13, 1923, nearly-grown young; June 17, 1923, young on the wing; June 22, 1924, young; July 1, 1924, large young outside nest, on the tree. A great variation in the date of nesting is shown.

Colaptes cafer collaris. Red-shafted Flicker.

The most abundant and widely-distributed of Lincoln County woodpeckers. Occurs throughout the entire county, except in the Alpine-Arctic zone. It is the only woodpecker regularly occurring in the interior of the Tobacco Plains district. It is normally a summer resident, but many individuals winter in the valleys.

The Flicker is most abundant about farms and in cut-over woods, nesting commonly near barnyards and in pastures. An observer will note fewer and fewer individuals as he passes from cultivated farms into stump-lands; from there to virgin forests of fir, larch, and yellow pine; thence into the lodgepole pine and white pine woods of the lower part of the Canadian zone; and onward into denser forests of alpine fir, spruce, and arborvitae. But he will find the birds increasing in numbers on the rocky mountain slopes and upward through the Hudsonian zone, where the species ranges to timberline. In common with several others of the woodpeckers, the Flicker readily adapts itself to the results of conservative timber cutting, nesting even more abundantly in lumbered regions than in untouched forests.

Within its commonest range, this species nests most frequently in Douglas fir dead trees or rotting stubs. Of twelve nests found in the Transition zone within the county, ten were in fir stubs, one in a dead yellow pine, and one in a dying larch. The dates on these nests are the following. 1921: May 1, eggs; May 15, eggs; June 5, probably eggs; June 5, small young; June 10, young; June 12, young; June 20, young. 1922: July 1, nearly-grown young. 1923: June 14, young; June 22, large young. 1924: June 8, two nests, evidently containing young.

Moccasin, Montana, April 17, 1926.