

be accounted for by the fact that no distinction was made in the comparison of old and juvenile birds.

It is difficult to tell the young from adults when the birds are in skin form, but in the flesh the difference is usually fairly apparent. In the adults of all geese the feathering of the neck is fuller, the knob on the carpus is more prominent, and the whole plumage has a distinct gloss seldom seen in the young bird. Could the tests of the measurement of culmen, and the comparative measurements of tarsus and middle toe, be applied to a series of geese where only young could be compared with young, and adults with adults, it is the writer's belief, based on the handling of many geese in the flesh, that there would prove to be three distinct species—not subspecies—*canadensis*, *hutchinsi*, and *minima*, with *occidentalis* as a subspecies of *canadensis*.

If the four birds accepted as subspecies occupied distinct breeding ranges, impinging only on their boundaries, the theory of their specific identity might be a sound one, but in the case of *canadensis*, *hutchinsi*, and *minima* their breeding ranges overlap to such an extent that they cannot be treated as climatic subspecies. In the field *minima* seems to be a very distinct species; in flight the neck looks shorter and the wings longer in proportion than in any other goose, not even excepting the Brant. It also has an unique and peculiar cackling or chuckling cry, only rarely heard, in addition to the ordinary high pitched "honk". Was this known to Mr. Ridgway when he gave it its common name?

It is unfortunate that Mr. Swarth had to work on material, the bulk of which is from California. He has evidently not seen the breeding *canadensis* from the coast strip south of the breeding range of *occidentalis*.

This is largely a non-migratory bird, nearly as dark as *occidentalis*, the under parts being dark gray-brown, but the measurements fully up to the maximum of *B. canadensis canadensis*.

This bird the present writer long took to be *occidentalis* until specimens were carefully measured. The next problem was to identify *occidentalis* among the numbers of *hutchinsi* that he had a chance to examine. The conclusion he was forced to was that as far as southern British Columbia was concerned *occidentalis* was a myth, even though so eminent an authority as Mr. Brewster identified skins sent to him as of that subspecies. The whole problem is a very difficult one and much work remains to be done on the group, but Mr. Swarth's treatise should serve as a basis, a sort of causeway over a hitherto impassable morass.

*Okanagan Landing, British Columbia, January 25, 1914.*

## THE BIRDS OF TETON AND NORTHERN LEWIS AND CLARK COUNTIES, MONTANA

By ARETAS A. SAUNDERS

WITH TEN PHOTOS BY THE AUTHOR

TETON COUNTY lies in the northern half of Montana and considerably west of the center of the state, its northern border formed by the Canadian boundary, and its western by the continental divide. Although in the western half of Montana, its bird-life is more nearly like that of the east-

ern part of the state, due to the fact that along the northern border the eastern prairie region extends farther westward than elsewhere, and in fact reaches the eastern base of the mountains forming the continental divide. I have included with Teton County that portion of Lewis and Clark County that lies in the drainage of the Sun River (see fig. 39). The southern boundary of Teton County is formed by the North Fork of the Sun River, but since my observations covered both sides of the river, and the character of the country is essentially the same on both sides, I have made the divide between the drainages of the Sun and Dearborn rivers the southern boundary of the region studied. This divide forms a natural division between different regions of the state, the character of the country being markedly different on the two sides of it.

In studying the distribution and occurrence of the birds of this region, it may be considered in two main parts, the prairies and the mountains. The



Fig. 39. VIEW IN THE CANADIAN ZONE ON THE SUN RIVER, LEWIS AND CLARK COUNTY, MONTANA.

prairies occupy the eastern portion, and cover considerably more than half of the total area. They lie entirely within the Transition zone, and their altitude varies from 3500 to 4500 feet. They consist of open grass land, rolling hills and flat-topped benches, steep-sided buttes, and broad valleys, watered by streams that are bordered by cottonwood groves and willow thickets. Alkaline ponds and lakes are quite frequent, in fact very numerous toward the westward, along the edge of the lower mountain slopes.

The mountains occupy a comparatively narrow strip through the western part of the counties. They embrace the headwaters of the Sun, Teton and Two Medicine rivers, and Birch Creek (see fig. 40). They lie in the Transition, Canadian, Hudsonian and Alpine zones, and range from 4,000 to 9,500 feet in altitude. These mountains are extremely rough, consisting of numerous limestone ridges with precipitous sides. In many places most of the timber has

been destroyed by repeated fires, but in other parts, particularly about the headwaters of the Sun River, there are extensive forests of evergreen trees.

In the Transition zone the principal trees are the Limber Pine (*Pinus flexilis*) and the Douglas Fir (*Pseudotsuga taxifolia*). The first forms rather extensive but open forests of crooked and stunted trees along the eastern border of the mountains. The latter occurs on north slopes and along streams, and extends up into the Canadian zone. The most extensive mountain forests lie in the Canadian zone. The principal trees in these forests are the Douglas Fir, Lodgepole Pine (*Pinus murrayana*) and Engelmann Spruce (*Picea engelmanni*). In the Hudsonian zone most of these species occur as stunted trees, and with them are also the White-bark Pine (*Pinus albicaulis*), Alpine Fir (*Abies lasiocarpa*), and Mountain Larch (*Larix lyalli*).

The observations in this list were made by myself during a period from June 21, 1911, to March 3, 1913, during which time I was assigned to work on the Lewis and Clark National Forest. Most of the observations in the prairie region were made in the vicinity of Choteau, a small but growing prairie town, the county seat of Teton County. The altitude there is about 3800 feet. Southeast of Choteau are two conspicuous buttes, known as Rattlesnake and Priest buttes, which rise to a height of 4500 feet. At the foot of Priest Butte lies a group of three alkaline lakes, known as the Priest Butte Lakes (see fig. 41). One of these is of considerable size, and all of them attract numerous water birds, particularly during the migrations.

Another point of interest within this region is the Willow Creek Bird Reservation, an area set aside by the government, originally in the interests of the Reclamation Service, but now also as a bird reservation. This area, which is in the prairie region, lies near the town of Augusta. I have not had opportunity to visit it during the breeding season, but have seen numerous water birds there during migrations. It contains one large lake which is frequented by many species of ducks, Snow Geese, and Whistling Swans. The birds recognize the protection afforded by this area, and flock there in preference to nearby areas that are otherwise similar. This area will be of great value in preserving such breeding species of this region as the Curlew, Avocet and various species of ducks, all of which are becoming less abundant as the settlement of the region advances.

My observations in Teton County were largely confined to the southern portion. It is quite probable that the county will be divided in the near future and the northern portion given some other name. In that case the observations in this list, except those from the vicinity of Lubec and the Two Medicine River, will still apply to Teton County. The county at present includes that portion of the Glacier National Park which lies east of the continental divide. Some previous ornithological work has been done there by Mr. George Bird Grinnell, and the results published in early numbers of *Forest and Stream*. I have been unable, however, to obtain access to these publications, so am not aware of just what they contain. I believe that work has also been done in this region by the Biological Survey, but most of the records are unpublished. In previous publications on birds in this region, I have spelled the name of the county seat of Teton County as Chouteau, rather than Choteau. Both spellings have been used commonly, and the first adopted by the post-office authorities. Since my publication, however, the town has been incorporated, and Choteau has been officially adopted. Unless otherwise stated, migration dates in this list were obtained at Choteau, or in the immediate vicinity.

## LIST OF SPECIES

**Colymbus holboelli.** Holboell Grebe. Migrant. Observed at Lubeck, September 25-27, 1911. A carcass found at Priest Butte Lakes in the fall of 1912.

**Colymbus nigricollis californicus.** Eared Grebe. Summer resident. Breeds commonly in sloughs that are overgrown with rushes. No nests found, but the birds were seen frequently with broods of young. Migration dates: September 4, 1911, and May 1, 1912.

**Podilymbus podiceps.** Pied-billed Grebe. Seen rarely in summer. Probably breeds with the above species.

**Gavia immer.** Loon. Rare migrant. Observed once on Priest Butte Lake, May 26, 1912.

**Larus delawarensis.** Ring-billed Gull. Migrant and summer resident. Adult birds are seen commonly all summer about the alkaline lakes and ponds, but I doubt if they breed, as I have never seen young birds until late in the fall.



Fig. 40. HUDSONIAN AND ALPINE ZONES, IN MOUNTAINS AT HEAD OF BIRCH CREEK, TETON COUNTY, MONTANA.

migration. Probably Herring Gulls and perhaps other species occur in migrations with this species, but no others have been positively identified. Migration dates: April 16, 1912, and November 19, 1912.

**Larus philadelphia.** Bonaparte Gull. A flock of these gulls was observed on an alkaline lake about ten miles from Choteau, October 31, 1912.

**Mergus americanus.** Merganser. Observed on the Teton River near Choteau on April 16 and 17, 1912. A pair of birds seen each day.

**Mergus serrator.** Red-breasted Merganser. Quite common along the Sun River inside the mountains, in August and September. A small flock observed near Choteau, May 23, 1912.

**Anas platyrhynchos.** Mallard. The most abundant duck in this region. Nests commonly all through the prairies, and is very abundant in migrations. Flocks also winter commonly on sloughs where there are warm springs that

keep the water open. The spring migration begins early in March, and the fall migration lasts until December 1, or even later. Nesting begins in late April and the first downy young may be seen early in June. (See fig. 42.)

**Chaulelasmus streperus.** Gadwall. Summer resident. Not very common, but occurs and nests regularly. Birds are seen with broods of young in June and July. Migration date: April 17, 1912.

**Mareca americana.** Baldpate. Summer resident, breeding commonly about the alkaline ponds. Very abundant in migrations. Probably nests a little later than the Mallard and Gadwall. The birds occur in small flocks in the spring migrations until May, whereas the above species are usually in pairs at this season. Migration dates: April 17, 1912, and November 28, 1912.

**Nettion carolinense.** Green-winged Teal. Common migrant and rather rare summer resident. Migration date: April 16, 1912. On December 27, 1912, I secured a crippled bird that was wintering on a small spring-hole near Choteau. The wing of this bird had been broken for a long time and had partially healed over, but not in a way to enable it to fly.

**Querquedula discors.** Blue-winged Teal. Quite common summer resident, particularly about the edges of ponds that are overgrown with rushes. Young seen near Choteau July 7, 1912.

**Spatula clypeata.** Shoveller. Common summer resident. Very abundant in migrations. Occurs in large flocks on the alkaline ponds in fall. Migration dates: March 24, 1912, and November 9, 1912.

**Dafila acuta.** Pintail. Summer resident and migrant. Breeds in similar places to the Mallard, but much less commonly. I examined a drake of this species that was shot by a hunter near Choteau, December 27, 1912.

**Marila americana.** Redhead. Observed twice in migrations: September 13, 1911, and April 17, 1912.

**Marila valisineria.** Canvasback. Common migrant on the alkali lakes, remaining in fall until these lakes freeze over. Migration dates: April 17, 1912, and November 24, 1912.

**Marila affinis.** Lesser Scaup Duck. Common summer resident. Breeds in the vicinity of the alkaline ponds. Migration date: May 1, 1912.

**Clangula clangula americana.** Golden-eye. Common migrant and winter resident. Abundant on the alkaline lakes in migrations, and along the rivers all winter. Seen in spring up to May 3, 1912, and not seen in fall until November 24, 1912.

**Charitonetta albeola.** Bufflehead. Common migrant on the alkaline ponds. Seen in spring from April 17 to May 14, 1912, and in fall from November 9 to 24, 1912.

**Histrionicus histrionicus.** Harlequin Duck. Rare summer resident in the mountains. I observed several birds on Birch Creek from May 30 to June 3, 1912, and believe the birds were breeding there but could not find a nest. They frequented the rapids and swiftest parts of the streams, evidently living largely on fish.

**Chen hyperboreus hyperboreus.** Snow Goose. Abundant migrant on the alkaline ponds and lakes. Occurs in large flocks, often numbering thousands. Flocks frequently light in the fields, apparently exhausted from long flight, and are then often killed with sticks before they can rise and fly. The people commonly call them "brant". Migration dates: April 9 to 23, 1912, October 24 to 31, 1911, and November 9 to 24, 1912.

**Chen rossi.** Ross Goose. One observed on the Teton River, near Choteau, May 8, 1912. This bird seemed exhausted, and I was able to approach it and examine it closely before it flew.

**Branta canadensis canadensis.** Canada Goose. Common migrant in March and November, but not in such large numbers as the Snow Geese. Formerly bred commonly along the rivers, and is reported to still breed in small numbers along the Marias River. Migration dates: November 24 to 28, 1912.

**Olor columbianus.** Whistling Swan. Common migrant on the larger alkaline lakes. I examined the remains of a dead bird found on the shores of Priest Butte Lake, and from the position of the nostril identified it as this species. Migration dates are October 31, 1911, April 23, 1912, and November 9 to 28, 1912.

**Botaurus lentiginosus.** Bittern. Summer resident in sloughs where rushes grow thickly, throughout the prairie portion of the region. Migration date: May 13, 1912.

**Ardea herodias herodias.** Great Blue Heron. Summer resident on the

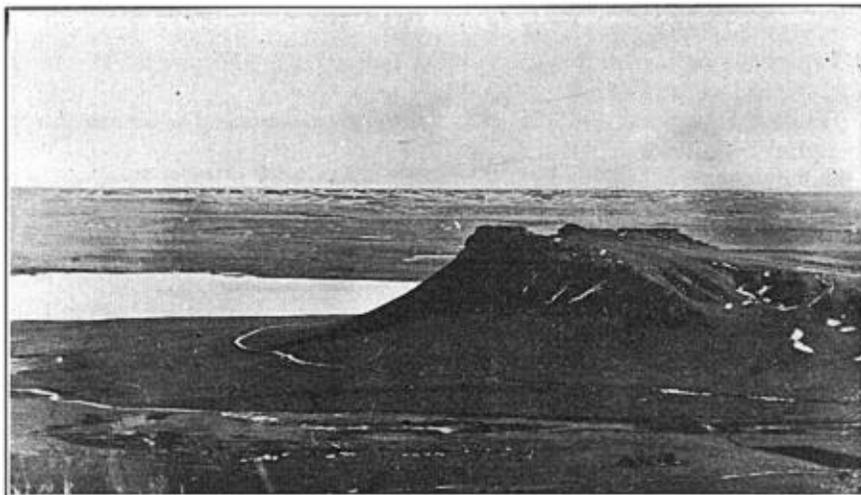


Fig. 41. PRIEST BUTTE, TETON COUNTY, MONTANA.

larger rivers. Common on the lower Sun River, but I have not seen it on the other rivers of this region.

**Grus mexicana.** Sandhill Crane. A pair observed near Choteau, April 28, 1912.

**Porzana carolina.** Sora. Summer resident in sloughs and marshes of the prairies. A nest found near Choteau, June 13, 1912 (see CONDOR, xv, 1913, p. 128). Migration date: May 14, 1912.

**Fulica americana.** Coot. Common summer resident and migrant. Nests are common in thick rushes about the borders of ponds and sloughs. In migration the birds occur in large flocks on the alkaline ponds and lakes. Migration dates: September 28, 1911, May 26, 1912, and November 9, 1912.

**Lobipes lobatus.** Northern Phalarope. Flocks observed in fall migration at Priest Butte Lakes, August 13 to September 4, 1911.

**Steganopus tricolor.** Wilson Phalarope. Common summer resident in marshy places on the edges of alkaline ponds. Downy young observed in

June. Migration date: May 23, 1912. Probably returns south very early, as I have no records later than July 3, 1911, and July 7, 1912.

**Recurvirostra americana.** Avocet. Common summer resident of the prairies, nesting on the shores of alkaline ponds, and on islands in the larger ones (see fig. 43). Begins nesting late in May, and downy young are seen by the middle of June. Migration date: May 23, 1912. Most of the birds evidently leave in August, but I have record of one September 1, 1911.

**Gallinago delicata.** Wilson Snipe. Found in small numbers all the year around. Nests regularly, but not commonly, in wet marshy meadows, and occurs all winter around warm springs where the water remains open.

**Pisobia maculata.** Pectoral Sandpiper. A small flock seen and one bird secured at Priest Butte Lakes, September 4, 1911.

**Pisobia bairdi.** Baird Sandpiper. Migrant on the shores of alkaline ponds. Observed August 13 to September 4, 1911.

**Pisobia minutilla.** Least Sandpiper. Found with the above species on August 13, 1911.

**Limosa fedoa.** Marbled Godwit. A single individual seen at Priest Butte Lakes, May 26, 1912.

**Totanus melanoleucus.** Greater Yellowlegs. Migrant. Observed at Priest Butte Lakes September 4, 1911.

**Totanus flavipes.** Yellowlegs. Common migrant. Dates are August 13 to September 4, 1911, and May 8 to 23, 1912.

**Helodromas solitarius cinnamomeus.** Western Solitary Sandpiper. Fall migrant. Observed about prairie ponds August 5 to 18, 1911, and on the upper Sun River in the mountains, August 13, 1912.

**Bartramia longicauda.** Upland Plover. Observed once near Choteau, June 27, 1911.

**Actitis macularius.** Spotted Sandpiper. Common summer resident along the borders of streams, both on the prairies and in the mountains up to about 5500 feet altitude. Migration dates: May 17, 1912, and August 28, 1911. I found several nests near Choteau in June, 1912; in one of these the eggs hatched on June 22. (See fig. 44.)

**Numenius americanus.** Long-billed Curlew. Summer resident. Still common in many places on the prairies, but becoming rare in the more thickly settled parts. Begins nesting in May. In late July the young and old birds gather in large flocks about the alkaline ponds, and most of them leave soon after this. Migration dates: September 4, 1911, and April 20, 1912.

**Squatarola squatarola.** Black-bellied Plover. Several birds of this species observed at Priest Butte Lakes, September 4, 1911.

**Oxyechus vociferus.** Killdeer. Abundant summer resident. Nests commonly throughout the prairies. Migration dates: March 26, 1912, and October 12, 1912. In fall migration the Killdeer evidently passes over in considerable numbers at night. The call of this bird may be heard late at night, coming from overhead, through September and in early October.

**Dendragapus obscurus richardsoni.** Richardson Grouse. Abundant resident throughout the mountains. Breeds on the grass slopes of the upper Transition and lower Canadian zones. Broods of young are very common in such places all summer, feeding very largely on grasshoppers. About the middle of September, when the first snowstorms come, the grouse move up the mountains; here they winter along the ridges of the upper Canadian and Hudsonian

zones, feeding on bear-berries and juniper, or on pine and fir needles when the berries are covered with snow. They return to the lower slopes again when the breeding season commences, about the middle of May.

**Canachites franklini.** Franklin Grouse. Permanent resident in the mountains, occurring in the thick, dense, spruce forests along the mountain streams, and in the bottoms of gulches. Said to be less common now than formerly.

**Bonasa umbellus umbelloides.** Gray Ruffed Grouse. Permanent resident in the mountains, between altitudes of 4500 and 6000 feet. Inhabits the willow and cottonwood thickets of the lower mountain streams. All the birds I have observed closely in this region are *B. u. umbelloides*, while those of more southern Montana are *B. u. togata*.

**Lagopus leucurus leucurus.** White-tailed Ptarmigan. Permanent resident in the Alpine zone along the higher ridges. Only found on the more remote ridges, along, or near, the continental divide.

**Pediocetes phasianellus campestris.** Prairie Sharp-tailed Grouse. Permanent resident of the prairies. The birds begin nesting in late May, when the cooing sound which accompanies the "chicken dance" may be heard any evening. The first young are usually seen early in July. In winter the birds gather in large flocks in the thickets, feeding largely on buffalo-berries and wild rose hips. In spring and fall they frequent alfalfa fields, and eat the alfalfa leaves.

**Zenaidura macroura marginella.** Western Mourning Dove. Summer

resident. Much less common than in southern Montana. I found nests with eggs in July. Migration date: May 19, 1912.

**Circus hudsonius.** Marsh Hawk. Common summer resident. The most abundant hawk in the prairie portion of the region. An account of the nesting of this bird in this region has been published (see CONDOR, xv, 1913, pp. 195-204). Migration date: April 7, 1912.

**Accipiter velox.** Sharp-shinned Hawk. Summer resident in the mountains. Nests commonly in aspen groves and spruce thickets. Young are usually not out of the nest till late August. Migration dates: May 8, 1912, September 8, 1911, and September 13, 1912.

**Accipiter cooperi.** Cooper Hawk. Summer resident. Usually seen only in the mountains, but I observed one in a cottonwood grove near Choteau, July 8 and 9, 1912.



Fig. 42. NEST AND EGGS OF THE MALLARD.

**Astur atricapillus atricapillus.** Goshawk. I observed a pair of these birds June 29, 1911, in a heavy stand of spruce timber on Beaver Creek, in the Sun River country. I believe they had a nest in the vicinity. I saw another bird on the West Fork of the Sun River September 3, 1912.

**Buteo borealis calurus.** Western Redtail. Common summer resident. The commonest hawk in the mountains, but occurs rarely on the prairies. Nests occasionally in large firs, but much more frequently on rocky ledges on the faces of steep cliffs.

**Buteo swainsoni.** Swainson Hawk. Common summer resident of the prairies, nesting in cottonwood groves. Also found along the base of the mountains, where it nests in the limber pines. I found one nest placed in a willow bush but six feet from the ground. Nesting begins late in May. Migration dates: May 1, 1912, and September 27, 1911.

**Archibuteo lagopus sancti-johannis.** Rough-legged Hawk. I observed this hawk but once: January 8, 1912.

**Archibuteo ferrugineus.** Ferruginous Rough-leg. Summer resident; not common. A pair nest each year on the precipitous face of Priest Butte. Nesting begins early in May, and I was informed that this nest contained eggs and newly-hatched young on June 2, 1912.

**Aquila chrysaetos.** Golden Eagle. Permanent resident. Most common along the bases of the mountains.

**Haliaeetus leucocephalus alascanus.** Northern Bald Eagle. Rare. I have seen it only in March and November, when there seems to be a migration of this species along the foothills of the mountains. I have listed it as the subspecies *alascanus* on the strength of a mounted specimen in the Forest Service office at Choteau. This is a bird in juvenal plumage. It measures: wing, 27.5 inches, tail, 16.0 inches, and tarsus, 4.4 inches, measurements certainly large enough to class it with the northern subspecies. This bird came from a little outside this region, having been secured by Mr. W. H. Daugs of the Forest Service on the South Fork of the Flathead River, west of the continental divide.

**Falco rusticolus rusticolus.** Gray Gyrfalcon. I observed a bird of this species very closely at Collins, January 8, 1912.

**Falco mexicanus.** Prairie Falcon. Summer resident in the prairie region. A pair nested on the side of Rattlesnake Butte in 1912.

**Falco peregrinus anatum.** Duck Hawk. Rare summer resident. I saw a pair near the cliffs on Priest Butte several times in the summer of 1911, and believe that they nested there. They were not present in 1912, however.

**Falco sparverius phalaena.** Desert Sparrow Hawk. Summer resident in the prairie region. I found a nest in an old flicker hole in a cottonwood near Choteau, in 1912. The young from this nest were on the wing July 14. This hawk is less common here than in southern Montana. Migration dates: May 19, 1912, and September 28, 1911.

**Pandion haliaetus carolinensis.** Osprey. Observed once, along the Teton River, near Choteau, May 19, 1912.

**Asio flammeus.** Short-eared Owl. Common summer resident of the prairies. I believe that at least four pairs nested within a radius of two miles of Choteau in 1912 (see CONDOR, xv, 1913, pp. 121-125).

**Bubo virginianus pallescens.** Western Horned Owl. Permanent resident

in the prairies, nesting in cottonwood groves. I observed young near Choteau, well able to fly, in late May, 1912.

**Nyctea nyctea.** Snowy Owl. Occasional winter visitor on the prairies.

**Surnia ulula caparoch.** Hawk Owl. One seen near Summit, in fire-killed pine timber, November 8, 1912.

**Glaucidium gnoma pinicola.** Rocky Mountain Pygmy Owl. Permanent resident. Observed frequently in different parts of the mountains, but most commonly in fir timber on Beaver Creek, a tributary of the Sun River.

**Ceryle alcyon alcyon.** Belted Kingfisher. Common summer resident along streams, both in the prairies and mountains. Migration dates: April 9, 1912, and September 27, 1912.

**Dryobates villosus monticola.** Rocky Mountain Hairy Woodpecker. Permanent resident. Found in winter and migrations in cottonwood groves along streams in the prairies. Breeds in pine and fir forests in the mountains. It is possible that the bird of this region is referable to *leucomelas*. I secured no specimens, but found a dead bird near Choteau, late in March, 1912, from which I saved a wing. From the markings on this wing, I believe that this bird was intermediate between *monticola* and *leucomelas*.

**Dryobates pubescens**  
(subspecies?). Downy Woodpecker. One bird seen near Choteau, January 5, 1913. Since this bird occurred in winter, and this species is certainly not common in this region in the breeding season, I believe that it may belong to *D. p. nelsoni*. In this connection I wish to call attention to a note of Bendire's (Life Hist. N. Amer. Birds, vol. II, p.

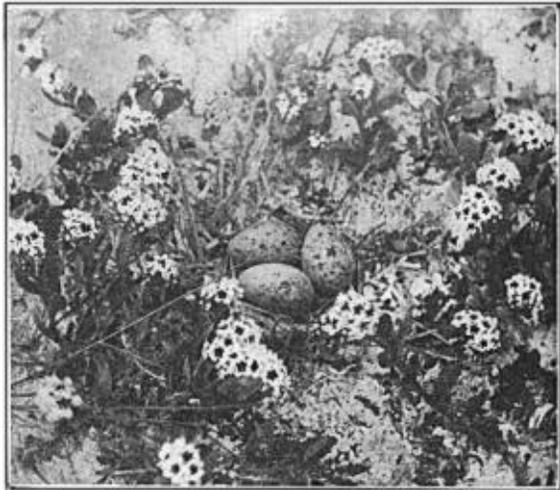


Fig. 43. NEST AND EGGS OF AVOCET.

56) made before this subspecies was described, but which undoubtedly proves the occurrence of *nelsoni* in Montana in winter.

**Picoides arcticus.** Arctic Three-toed Woodpecker. Observed in considerable numbers in fire-killed timber, on the South Fork of the Two Medicine River, January 15, 1912.

**Picoides americanus dorsalis.** Alpine Three-toed Woodpecker. Observed in considerable numbers with the above species at the same time and place. A single bird seen in the same place March 30, 1912, and one observed on Birch Creek June 2, 1912. A large area on the Two Medicine River was burned over in the summer of 1910. The next year the bark of the fire-killed trees was infested by a small beetle. The presence of this beetle evidently accounted for the abundance of three-toed woodpeckers on this area in January. No birds were seen there the following winter.

**Melanerpes erythrocephalus.** Red-headed Woodpecker. Rare summer resident. One bird seen near Choteau, July 16, 1911, and a pair near Strabane, June 5, 1912.

**Asyndesmus lewisi.** Lewis Woodpecker. Summer resident. I have seen it only in the southern part of the region, in cottonwood groves along the Sun River, just outside the mountains.

**Colaptes cafer collaris.** Red-shafted Flicker. Common summer resident. Nests in cottonwood groves in the prairies and in the lower mountain canyons up to 5500 feet. Most of the birds are hybrids, but I have seen none in this region that were typical of the eastern species. Migration date: April 7, 1912. Two birds wintered near Choteau in the winter of 1912-13.

**Chordeiles virginianus henryi.** Western Nighthawk. Common summer resident both in prairies and in the mountains below 6000 feet. Migration dates: June 7, 1912, August 28, 1911, and August 29, 1912.

**Selasphorus rufus.** Rufous Hummingbird. Summer resident. Not common, but found most frequently along the foothills of the mountains.

**Stellula calliope.** Calliope Hummingbird. Summer resident of the mountains. Seen rarely. I secured a male on Birch Creek, June 2, 1912.

**Tyrannus tyrannus.** Kingbird. Abundant summer resident in the prairies. The Kingbirds in this region depart from their usual habit of nesting high, and place their nests low down in young cottonwoods or buffalo-berry bushes, particularly those along the banks of streams. The nest frequently overhangs the water. In 1912 I found ten nests near Choteau, no one of which was higher than eight feet from the ground, and one of them was less than two feet from the water of the stream it overhung. Migration dates: May 23, 1912, and August 22, 1911. The first nests are built in this region about the middle of June. The eggs take fourteen days to hatch, and the young leave the nest when fourteen or fifteen days old, so that they are first on the wing in the latter half of July.

**Tyrannus verticalis.** Western Kingbird. Rare summer resident in the prairies. One pair nested near Choteau in 1912. Others seen on the Sun River, near Augusta. Migration dates: May 28, 1912, and August 18, 1911.

**Sayornis sayus.** Say Phoebe. Summer resident on the prairies. Not common. Nests on buildings or on rocks on the sides of buttes. A nest of this species on a building in Choteau is said to have been occupied for the past seventeen years. When I first arrived in Choteau, June 21, 1911, there were six young in this nest, that left the nest about July 4. The next year the owners returned April 28, sitting commenced on a set of seven eggs on May 23, the eggs all hatched on June 4, and the seven young were successfully reared and left the nest on June 23. A second brood was started and three eggs were laid by July 2.

**Nuttallornis borealis.** Olive-sided Flycatcher. Summer resident in the mountains, but not common. Rare migrant on the prairies. I secured a bird near Choteau, May 26, 1912.

**Myiochanes richardsoni richardsoni.** Western Wood Pewee. Abundant summer resident of cottonwood groves on the prairies. Migration dates: June 6, 1912, and August 13, 1911.

**Empidonax trailli trailli.** Traill Flycatcher. Rare summer resident. Observed on Willow Creek, northern Lewis and Clark County, June 30, 1911. A migrant bird secured near Choteau, May 24, 1912.

**Empidonax minimus.** Least Flycatcher. Abundant summer resident of cottonwood groves on the prairies. Migration date: May 22, 1912. Nesting

commences about the middle of June, the eggs hatch in about fourteen days, and the young are on the wing in the latter half of July.

**Empidonax hammondi.** Hammond Flycatcher. Rare summer resident in the mountains. Seen on the West Fork of the Sun River August 12, 1912.

**Empidonax wrighti.** Wright Flycatcher. Common summer resident in the mountains below 6000 feet. Abundant along the foothills.

**Otocoris alpestris arcticola.** Pallid Horned Lark. Winter visitor on the prairie benches. Occurs in large flocks with Snow Buntings and Alaska Longspurs. Last seen in spring on March 10, 1912.

**Otocoris alpestris leucolaema.** Desert Horned Lark. Abundant summer resident on the prairie benches. A few winter with the above species. The returning flocks of this bird are usually the first sign of spring. Migration dates: March 10, 1912, March 3, 1913. Young are first seen on the wing in the latter half of June, and again in August, which leads me to believe that there are two broods, one commencing early in May, and the second in July.

**Pica pica hudsonia.** Magpie. Abundant permanent resident on the prairies, nesting in cottonwood groves and willow thickets. Occasionally found in the mountains in fall, but does not nest there. Nesting begins in April. In 1912 I found the first eggs April 7, and also took a set of fresh eggs May 26. Young are first seen out of the nest about June 1. In the winter, in this region, magpies frequently make use of their last year's nests as a shelter from the heavy winds.

**Cyanocitta stelleri annectens.** Black-headed Jay. Permanent resident in the mountains. Not common.

**Perisoreus canadensis capitalis.** Rocky Mountain Jay. Permanent resident in the mountains. Somewhat less abundant than in southern Montana.

**Corvus corax principalis.** Northern Raven. Permanent resident in the mountains. Rare in most places, but fairly frequent in the vicinity of Lubec, along the southern border of the Glacier National Park.

**Corvus brachyrhynchos hesperis.** Western Crow. Common summer resident, nesting in cottonwood groves and willow thickets, in the prairies. Nesting commences about the middle of May, and young are on the wing in the latter half of June. Migration date: April 2, 1912. Occurs rarely in winter.

**Nucifraga columbiana.** Clarke Nutcracker. Abundant permanent resident in the mountains.

**Dolichonyx oryzivorus.** Bobolink. Summer resident in the wet meadows of the prairie region. Abundant locally. Said to be increasing in numbers. Migration date: May 25, 1912.



Fig. 44. NEST AND EGGS OF SPOTTED SAND-PIPER.

**Molothrus ater ater.** Cowbird. Abundant summer resident on the prairies. In 1912, I found the eggs of this species in nests of the Brewer Blackbird, Chipping Sparrow, Vesper Sparrow, Black-headed Grosbeak, Cedar Waxwing and Yellow Warbler. Migration date: May 10, 1912.

**Xanthocephalus xanthocephalus.** Yellow-headed Blackbird. Summer resident of rush-grown sloughs on the prairies. Migration date: May 7, 1912.

**Agelaius phoeniceus fortis.** Thick-billed Redwing. Summer resident, nesting in cat-tail sloughs on the prairies. Migration date: April 15, 1912. On this date I found both sexes present, though it is usually stated that the females come later than the males. Nesting begins about the middle of May, and the first young may be found on the wing in the latter half of June. (See fig. 45.)

**Sturnella neglecta.** Western Meadowlark. Abundant summer resident of the prairies. Migration date: April 4, 1912. Nesting begins late in May, and nests with eggs may be found in the first half of June. Young out of the nest are first seen late in June. The young leave the nest when about ten days old. (See fig. 46.)

**Icterus bullocki.** Bullock Oriole. Rare summer resident. A pair nested in Choteau in 1911, but were not seen in 1912. A few other birds were seen occasionally in the cottonwood groves. Migration date: May 25, 1912.

**Euphagus cyanocephalus.** Brewer Blackbird. Abundant summer resident on the prairies. Nests most commonly in shrubby cinquefoil and wild rose bushes. Migration dates: May 8, 1912, September 18, 1911. Nesting begins in the later half of May. A colony of these birds nests in the cinquefoil bushes near Choteau. I found nine nests there in 1912. The eggs hatch in twelve days, and the young leave the nest when ten days old. Most of them are on the wing in the latter half of June. The birds do not raise a second brood to my knowledge, but live in flocks with their young for the remainder of the summer.

**Quiscalus quiscula aeneus.** Bronzed Grackle. I secured a pair of these birds near Choteau, May 25, 1912. They were the only ones I observed in the region, which must be about the western limit of their range in Montana. Grackles are not uncommon, however, a little farther south and east, at Great Falls.

**Pinicola enucleator montana.** Rocky Mountain Pine Grosbeak. A rare summer resident of the high mountains in the Hudsonian zone. I have observed it only a few times.

**Carpodacus cassini.** Cassin Purple Finch. Summer resident in the mountains in the Canadian and Hudsonian zones. Not common.

**Loxia curvirostra minor.** Crossbill. A flock observed near Lubec, January 15, 1912.

**Leucosticte tephrocotis tephrocotis.** Gray-crowned Rosy Finch. Migrant in the mountains, and occasional winter resident on the prairies. Not common, but in large flocks when seen. Migration date: October 22, 1911.

**Leucosticte tephrocotis littoralis.** Hepburn Rosy Finch. Occurs with the above, but in smaller numbers.

**Acanthis linaria linaria.** Redpoll. Common winter visitor on the prairies. Migration dates: October 22, 1911, and April 23, 1912.

**Astragalinus tristis pallidus.** Western Goldfinch. Common summer resident of the prairie region, nesting in cottonwood groves. Migration date: May 23, 1912. Evidently does not nest until July.

**Spinus pinus.** Pine Siskin. Abundant summer resident in the mountains, nesting in lodgepole pine and Douglas fir forests, in the Canadian zone. Also found to a lesser extent in the Transition zone, nesting in cottonwoods along the foothills of the mountains.

**Plectrophenax nivalis nivalis.** Snow Bunting. Winter visitor on the prairies. Occurs in large flocks with the Pallid Horned Lark and Alaska Longspur.

**Calcarius lapponicus alascensis.** Alaska Longspur. Migrant and winter visitor, occurring on the prairies with the above species and the Pallid Horned Lark. Migration date: October 31, 1912.

**Calcarius ornatus.** Chestnut-collared Longspur. Summer resident on the prairies. Rather local in distribution, as I have observed it only in the neighborhood of Priest Butte, where it was first noted May 8, 1912. In this same locality I found a young bird just out of the nest, and a nest containing eggs, on June 23, 1912.

**Rhynchophanes mccowni.** McCown Longspur. Abundant summer resident on the prairies. In some places on the flat-topped prairie benches, this is the only bird to be found. Migration dates: October 16, 1911, and April 17, 1912. I believe that there are either two broods, or else the birds nest irregularly from the time of their arrival until late July. The evidence collected is as follows: The earliest nest I have record of was found May 22, 1912, when it contained two half-grown young, that left the nest on May 27. A second nest contained three fresh eggs on May 26, 1912. In 1911 I found a nest containing eggs on June 25. These eggs had not hatched on July 4, when I found another nest with eggs. On July 3, 1911, and again on July 17, I observed young birds out of the nest and barely able to fly. (See fig. 47.)



Fig. 45. NEST AND EGGS OF THICK-BILLED REDWING.

**Poocetes gramineus confinis.** Western Vesper Sparrow. Abundant summer resident in the prairie region, and in mountain meadows up to 6000 feet. Nesting begins early in June, and the first young are on the wing early in July. Migration dates: September 18, 1911, and April 29, 1912.

**Passerculus sandwichensis alaudinus.** Western Savannah Sparrow. Abundant summer resident of the prairie region, nesting in rather wet meadows. Migration date: April 30, 1912.

**Ammodramus bairdi.** Baird Sparrow. Observed in migrations September 4, 1911, and May 23, 1912. Possibly a summer resident. A sparrow nested in the grass about the borders of alkaline ponds which I was unable to identify. I heard the song, which was unfamiliar to me, frequently. I am not acquainted with the song of the Baird Sparrow, but believe it likely that it was this species.

**Chondestes grammacus strigatus.** Western Lark Sparrow. Seen once near Choteau, July 18, 1911.

**Zonotrichia leucophrys leucophrys.** White-crowned Sparrow.

**Zonotrichia leucophrys gambeli.** Gambel Sparrow. Apparently both of these birds are summer residents in the mountains, and migrants in the prairies. I observed *Z. l. leucophrys* very closely on the Teton River in the summer of 1911. These birds were about one of the Ranger Stations, and came to pick up oats in a corral where horses were fed. They became so tame, that they would almost eat out of my hand. In June, 1912, I secured specimens of *Z. l. gambeli* on Birch Creek. Two varieties of songs from this species are to be heard in this region, and I believe that they belong to the two different subspecies. The song which evidently belongs to *gambeli* is like that of *leucophrys*, but shorter, with three or four of the terminal notes omitted. I have never heard any but the longer song in southern Montana, where I believe only *leucophrys* breeds. Migration dates of birds seen in the prairies, without attempt to separate the two forms are: October 1, 1911, and May 8 to 28, 1912.

**Spizella monticola ochracea.** Western Tree Sparrow. Common winter visitor on the prairies. Migration dates: October 1, 1911, and April 3, 1912.

**Spizella passerina arizonae.** Western Chipping Sparrow. Common summer resident of evergreen forests in the mountains. Rarely a summer resident of cottonwood groves in the prairies. Common in both places in migration. Migration date: May 18, 1912. Nesting begins early in June, and young are on the wing in July.

**Spizella pallida.** Clay-colored Sparrow. Abundant summer resident of the prairies, nesting in patches of cinquefoil and buffalo-berry bushes. Migration date: May 12, 1912.

**Spizella breweri.** Brewer Sparrow. Rare summer resident. I observed a pair of these birds in a patch of buffalo-berry bushes along the Teton River near Choteau, several times in June and July, 1912.

**Junco hyemalis hyemalis.** Slate-colored Junco. Rare migrant on the prairies. Observed November 7, 1912, near Choteau.

**Junco hyemalis montanus.** Montana Junco. Common summer resident in the mountains. Rather rare migrant on the prairies. Migration date: April 2, 1912. In this region the great variety of juncos, so common in southern Montana during migrations, is lacking. Probably most of the other forms breed farther to the westward, and move that way as they go north, thus entirely avoiding this region.

**Melospiza melodia montana.** Mountain Song Sparrow. Rare summer resident, in the mountains, in willow thickets along streams. Seen most frequently in the southern part of the region, which is probably about the northern limit of its breeding range. A migrant song sparrow was observed near Choteau, May 8, 1912. My attempt to secure this bird failed, but I believe it probable that it belonged to another race, perhaps *M. m. juddi*.

**Melospiza lincolni lincolni.** Lincoln Sparrow. Common summer resident

in the mountains, nesting in willow thickets along streams in the Canadian zone. Migration date: May 30, 1912, on Dupayer Creek.

***Passerella iliaca iliaca.*** Fox Sparrow. I observed a bird that was evidently of this subspecies in Hannan Gulch on the Sun River, October 18, 1911. The bird was in a dense aspen thicket and approached to within three or four feet of me.

***Passerella iliaca schistacea.*** Slate-colored Fox Sparrow. Rare summer resident in the mountains, nesting in dense willow thickets along streams. This is evidently close to the northern limit of the breeding range on this side of the continental divide. I observed the species most frequently on the Sun River and on Willow Creek, in northern Lewis and Clark County.

***Pipilo maculatus arcticus.*** Arctic Towhee. Common summer resident of



Fig. 46. NEST AND EGGS OF WESTERN MEADOWLARK.

willow thickets on the prairies. Migration date: May 12, 1912.

***Zamelodia melanocephala.*** Black-headed Grosbeak. Common summer resident of willow thickets on the prairies. Begins nesting the middle of June. Young are on the wing the latter half of July. Migration date: June 7, 1912. (See fig. 48.)

***Passerina amoena.*** Lazuli Bunting. Summer resident. Not common, but most frequent along the foothills of the mountains in the southern part of the region.

***Calamospiza melanocorys.*** Lark Bunting. Summer resident on the prairies. Rare during my stay, but information indicates that here as well as elsewhere in Montana, these birds were very abundant in the year 1907.

**Piranga ludoviciana.** Western Tanager. Common summer resident in the mountains. Nests in fir forests. Migration dates: August 28, 1911, on the Sun River, and June 4, 1912, on Birch Creek.

**Petrochelidon lunifrons lunifrons.** Cliff Swallow. Abundant summer resident of the prairies. Nests commonly both on buildings and on the steep sides of buttes. People in Choteau destroy their nests as fast as they are built, believing that the birds carry bed-bugs. My observations seem to show that the birds will not nest on wooden buildings that are kept painted, preferring either stone buildings or unpainted wooden ones. Migration date: June 7, 1912.

**Hirundo erythrogastra.** Barn Swallow. Summer resident on the prairies. Occurs regularly in small numbers but is not common. Migration date: June 7, 1912.

**Tachycineta thalassina lepida.** Northern Violet-green Swallow. Summer resident in the mountain canyons. Most common in the southern part of the region and rare northward. These birds are known as "Rock Swallows" in this region.

**Riparia riparia.** Bank Swallow. Common summer resident in the prairie region. Colonies are very common along the steep clay banks of the rivers. Migration date: May 26, 1912.

**Stelgidopteryx serripennis.** Rough-winged Swallow. Common summer resident. Nests in clay banks along the rivers, usually as single, scattered pairs, but I have seen several pairs nesting in a colony with the above species. Migration date: May 22, 1912. This swallow was fairly abundant for several days before the other species arrived.

**Bombycilla garrula.** Bohemian Waxwing. Common winter visitor both on the prairies and in the mountains, being most abundant along the foothills of the mountains. Occurs in the mountains rarely in summer and probably breeds (see CONDOR, XIV, 1912, p. 224). Migration date: March 30, 1912.

**Bombycilla cedrorum.** Cedar Waxwing. Common summer resident on the prairies and in the lower mountain canyons, below 5000 feet. Migration date: June 23, 1912. Nesting generally begins the middle of July, but I found one nest at Choteau that was half built on June 28, and in which the four eggs were laid July 5 to 8.

**Lanius borealis.** Northern Shrike. Winter visitant. I found it rare in the winter of 1911-12, and saw none at all in 1912-13. From a few observations in other parts of the state I am inclined to think that these birds were rare all over the state in these two years. Migration date: October 16, 1911.

**Lanius ludovicianus excubitorides.** White-rumped Shrike. Summer resident of the prairie region. Quite common in the summer of 1911, but seen only once in 1912. This occurrence was at Choteau on April 9, when the bird had evidently just arrived. My migration dates for this species in Montana are quite variable, and lead me to believe that this is due to a wide difference in the migration dates of the two subspecies occurring in the state. *L. l. excubitorides* evidently breeds only in valleys of the Transition zone, below 4500 feet elevation, arriving early in April, as shown by the above date, and by another record, April 9, 1911, at Helena, at an elevation of about 4000 feet. The other subspecies *L. l. migrans*, is evidently a migrant only, occurring in the upper Transition zone, about 5000 feet elevation, in May. The evidence to show this is certain only in the case of a bird taken at Anaconda, May 14,

1911 (CONDOR, xiv, 1912, p. 30), but I now believe that the birds seen by me in Gallatin County in May (AUK, xxviii, 1911, p. 46), also belong to this subspecies.

**Vireosylva olivacea.** Red-eyed Vireo. Summer resident in the prairie region, nesting in cottonwood groves. Rare north of the Sun River and not very common there.

**Vireosylva gilva swainsoni.** Western Warbling Vireo. Common summer resident in aspen groves in the mountains up to about 5500 feet. Most abundant along the foothills. Found all summer in cottonwoods in the prairies, but in small numbers.

**Lanivireo solitarius cassini.** Cassin Vireo. Observed on the West Fork of the Sun River, at an altitude of about 5500 feet, on September 3, 1912.

**Vermivora celata celata.** Orange-crowned Warbler. Common summer



Fig. 47. NEST AND EGGS OF MCCOWN LONGSPUR.

resident of aspen groves in the mountains from the lower foothills to about 6000 feet.

**Dendroica aestiva aestiva.** Yellow Warbler. Abundant summer resident of cottonwood groves and willow thickets in the prairie region. Migration dates: May 22, 1912, August 18, 1911. Nesting begins early in June and young are on the wing about the first week in July.

**Dendroica auduboni auduboni.** Audubon Warbler. Common summer resident of evergreen forests in the mountains, occurring throughout the Canadian zone.

**Dendroica striata.** Blackpoll Warbler. Common migrant in cottonwood groves in the prairie region. Observed near Choteau in considerable numbers May 22 to 25, 1912. This region is probably at about the western limit of the migration range of this species in Montana.

**Oporornis tolmiei.** MacGillivray Warbler. Common summer resident of willow and wild-rose thickets in the foothills and lower mountains, up to 5000 feet. Occurs in the prairies in migrations. Migration date: May 23, 1912.

**Geothlypis trichas occidentalis.** Western Yellowthroat. Common summer resident of the prairie region and foothills, usually in willow thickets. On the prairies I have also heard the birds singing in the rushes on the borders of sloughs, and believe that they nest there. Migration date: May 19, 1912.

**Wilsonia pusilla pileolata.** Pileolated Warbler. Common summer resident of willow thickets in the mountains, from the foothills to 6000 feet. Common migrant in the prairie region. Observed in migration at Choteau, May 22-28, 1912, and on the Sun River August 26-28, 1911.

**Setophaga ruticilla.** Redstart. Summer resident of the willow thickets along the foothills and in the lower mountain canyons up to 5500 feet. Much more common as a migrant, when it also occurs in the prairie region. Observed in migration at Choteau, May 22-28, 1912.

**Anthus rubescens.** Pipit. Migrant in the prairie region. Occurs in large flocks with horned larks and McCown Longspurs, and feeds about the borders of alkaline ponds. Migration dates: September 17 to October 1, 1911.

**Anthus spraguei.** Sprague Pipit. Common summer resident of the prairies. Appears to prefer neither the dry prairie benches, nor the rich grass meadows, but occurs about the borders of ponds, or in hollow depressions in the prairie where the soil is moist, but too alkaline to be clothed with a tall thick growth of grasses. The bird itself is very difficult to see and observe, but the song is one of the commonest sounds on certain parts of the prairies in June and July. Migration date: May 23, 1912.

**Cinclus mexicanus unicolor.** Dipper. Permanent resident on mountain streams. Occurs in the vicinity of waterfalls in summer, but winters in places where the fall of the stream is not so steep, and yet where the current is swift enough to keep open water all winter. Begins nesting late in May.

**Dumetella carolinensis.** Catbird. Common summer resident in willow thickets on the prairies, and, along the foothills of the mountains, in thickets of wild-rose. Migration date: May 23, 1912.

**Salpinctes obsoletus obsoletus.** Rock Wren. Summer resident. Occurs in rocks about the edges of prairie buttes, and in the lower mountain canyons up to 5000 feet. Rather rare. Migration date: May 27, 1912.

**Troglodytes aedon parkmani.** Western House Wren. Common summer resident of the prairies, nesting about buildings and in dead stumps in cottonwood groves. Migration date: May 19, 1912.

**Nannus hiemalis pacificus.** Western Winter Wren. Rare summer resident of spruce forests in the mountains. A pair, with brood of young, were observed on Beaver Creek, in the Sun River country, on June 29, 1911. A single bird observed on Birch Creek, May 31, 1912.

**Certhia familiaris montana.** Rocky Mountain Creeper. Occurs rarely in spruce forests in the mountains. All my records are from about the headwaters of the Sun River, and are between August 29 and September 8, so I am doubtful if the species is more than a migrant here.

**Sitta carolinensis nelsoni.** Rocky Mountain Nuthatch. Summer resident in the mountains. Occurs in Lodgepole Pine and Douglas Fir forests in the Canadian zone, and in White-bark Pine forests in the Hudsonian zone.

**Sitta canadensis.** Red-breasted Nuthatch. Migrant. Common in the

mountains in late August and early September. Rare on the prairies, where I observed it near Choteau, May 25, 1912.

***Penthestes atricapillus septentrionalis***. Long-tailed Chickadee. Common permanent resident of willow thickets in the prairie region, and in the lower mountain canyons up to 5000 feet.

***Penthestes gambeli gambeli***. Mountain Chickadee. Common permanent resident of pine and fir forests in the mountains.

***Penthestes hudsonicus hudsonicus***. Hudsonian Chickadee. Probably a rare permanent resident of spruce forests in the mountains. I observed it but once, when I found a pair, accompanied by six nearly full-grown young, in a dense spruce thicket on the South Fork of the Teton River, at an altitude of 6000 feet.

***Regulus satrapa olivaceus***. Western Golden-crowned Kinglet. Common summer resident of spruce forests in the mountains.

***Regulus calendula calendula***. Ruby-crowned Kinglet. Common summer resident of fir forests in the mountains. Migrant in willow thickets in the prairies, where I observed it, near Choteau, May 25, 1912.

***Myadestes townsendi***. Townsend Solitaire. Common summer resident about steep cliffs and rocky ridges in the mountains.

***Hylocichla fuscescens salicicola***. Willow Thrush. Summer resident of willow thickets in the prairies. Most abundant along the foothills in the mountains. Common in Lewis and Clark County, but becoming rare northward in Teton County.

***Hylocichla ustulata swainsoni***. Olive-backed Thrush. Abundant summer resident in the moun-

tains, and abundant migrant in cottonwood groves on the prairies. Migration dates: May 22, 1912, August 21, 1911, and September 4, 1912. The latter two dates are from the mountains about the headwaters of the Sun River.

***Hylocichla guttata auduboni***. Audubon Hermit Thrush. Rare migrant. I observed it near Choteau, May 18 and 23, 1912, and on the West Fork of the Sun River, September 12, 1912. Have not observed it here in summer in the mountains, as I have in southern Montana.

***Planesticus migratorius propinquus***. Western Robin. Abundant summer resident in cottonwood groves in the prairies, and in pine and fir forests in the mountains up to 5500 feet. Migration dates: March 28, 1912, and October 29, 1911. Begins nesting in the latter part of May. The eggs take about fourteen days to hatch, and the young leave the nest in about ten or eleven days more, so that young are seen on the wing by the middle of June. The



Fig. 48. NEST AND THREE EGGS OF BLACK-HEADED GROSBEAR, WITH ONE EGG OF THE COWBIRD.

birds usually start a second brood about this time, the young of which appear late in July.

**Sialia currucoides.** Mountain Bluebird. Common summer resident of the foothills, but not common far into the mountains. More rare in the prairies, but fairly common locally about Choteau, where it nests in and about buildings. Migration date: March 28, 1912. Nesting begins about May 10. Two broods are usually reared.

*West Haven, Connecticut, December 21, 1913.*

## FROM FIELD AND STUDY

**California Murre at Newport Beach, Orange County, California.**—On January 28 of the present year, while looking for sea-birds which might have been washed up by the storm which swept the coast for ten days or more, I found a very "sick" Murre (*Uria troille californica*) sitting near the water's edge. The bird was captured after a short chase and its lower parts were found to be soaked with oil. This would argue that it had been blown south from the San Francisco Bay region, where so many birds fall victims to the oil thrown from the tank steamers, and was not a regular visitant this far south.

The main sufferers from the blow were the Cassin Auklets (*Ptychoramphus aleuticus*), nine being found in three miles of beach. Mr. A. B. Howell saw about forty in five miles of beach at Bay City a day or so previously. It is probably as much because of the inability to feed on very rough water as the battering they receive that so much havoc is caused among the Auklets; for all were extremely emaciated and the stomachs empty.—ADRIAAN VAN ROSSEM, *Pomona, California.*

**Return of a Western Flycatcher to a Particular Locality.**—During the spring and summer of 1913 a Western Flycatcher (*Empidonax difficilis difficilis*), inhabiting the laurels and live oaks along Strawberry Creek near the Faculty Club, attracted my attention by its note. This differed from that of all other birds of this species which I have observed, in that the usual single note of rising inflection was preceded and succeeded by single short monotonous notes. This year (1914) the same note has been heard almost daily in the same locality. I believe, therefore, that the identical bird has returned to the same haunts that it occupied during the previous year. If this be true we have here another exhibition of the homing instinct in birds.—TRACY I. STORER, *Department of Zoology, University of California, Berkeley, California.*

**Red-winged Blackbird on the Sierras in Winter.**—While sleighing to Donner Lake from Truckee on February 28, last, I was much struck by the absence of bird-life, only a couple of small birds flitting through some pines, having been seen. Unfortunately, it was impossible to form even an idea of the identity of these.

Upon approaching the lake, a solitary male Red-wing flew up from the snow into a nearby pine, which act was repeated as we set forth upon the return journey. The bird each time was within a few feet of the sleigh, and it was readily seen that its plumage was quite ragged; also that the red shoulder patches were quite heavily barred with buff.

Even with the probability that the bird had been forced to remain in such severe winter quarters through injury, its presence in such a locality upon the date mentioned seems worthy of record.—JOHN W. MAILLIARD, *San Francisco, California.*

**Desert Sparrow near Claremont, California.**—On March 14, 1914, while collecting in the brush north of here, I shot an adult male *Amphispiza bilineata deserticola*. As Mr. Willett, in his "Birds of the Pacific Slope of Southern California", mentions this sparrow as but an occasional visitant to this region, I thought the above instance worthy of note.—WRIGHT M. PIERCE, *Claremont, California.*