

BIRDS OF THE ST. JOE NATIONAL FOREST, IDAHO

By R. L. HAND

In presenting the following record of my observations in one of northern Idaho's national forests, a few points should be made clear to the reader. In the first place, the author is under no illusion that the list approaches completeness for the area under consideration. Because of a preponderance of sight records, care has been taken to eliminate the questionable and unconfirmed. A few unusual species are included where the evidence seems conclusive, but many more have been "weeded out." No attempt has been made to assemble all previous records from this locality, but so far as the author is aware, Shaw's references to the Hepburn Rosy Finch in the Moscow Mountains (Auk, 53, 1936:9-16; 133-149) and a few of his own notes in past issues of the Auk and the Condor constitute the only published records. Merrill's "Birds of Fort Sherman" (Auk, 14, 1897:347-357; 15, 1898:14-22) and Rust's "Birds of Kootenai County, Idaho" (Condor, 17, 1915:118-129) refer to the "St. Joseph" or St. Joe Marshes, but the inference is that this means the extensive marsh area near the mouth of the St. Joe River and thus outside the scope of this paper.

Scope.—The St. Joe National Forest area under consideration embraces roughly one and one-half million acres lying in parts of Shoshone, Benewah, Latah, and Clearwater counties. The practical administrative, rather than the strictly legal, boundary has been used to restrict the range of this study for quite obvious reasons. The western half of the Forest appears as a checkerboard pattern of intermingled federal, state, and private land, as yet uninclosed by a technical boundary. Government acquisition has already added greatly to the original acreage so that eventual adjustments will almost certainly come about. In other words, the limits used for practical purposes are reasonably stable and well defined while the present legal boundary is not.

The town of St. Maries and the adjacent marshes, while lying partly outside the forest protective zone, are included because from a biological standpoint they are a natural part of the unit. Actually, any bird seen within this area is almost certain to occur at times in the National Forest, or at least to pass over some part of it.

The St. Joe National Forest as thus prescribed extends practically across the "pan-handle" of the state from the prairies of the Palouse, eastward to the Montana line and from the North Fork of the Clearwater River northward to the St. Joe-Coeur d'Alene Divide (see map, fig. 61).

Climate and topography.—In general, the eastern half or "Main Division" of the Forest is rough, broken and characterized by short, cool summers and heavy winter snowfall. Altitudes range from 2400 feet on the main river to about 7000 feet on the higher mountain tops. The bulk of this area is in the Canadian Life-zone with both the Transition and Hudsonian zones well represented, the former restricted to the larger valleys and adjacent lower southern exposures, the latter to the higher peaks and ridgetops. Except for "clean burns" and typical Alpine meadows, the entire area is heavily forested. Cedar and white pine predominate at the lower levels, white pine, Douglas fir and western larch at moderate altitudes, and spruce, lodgepole pine and subalpine types in the higher country. Approximately two-thirds of the area was burned over during the terrible fires of 1910 or subsequent thereto, but there still remains a large, continuous body of mature timber extending in a broad belt from Monumental Buttes in a northeasterly direction to the state line.

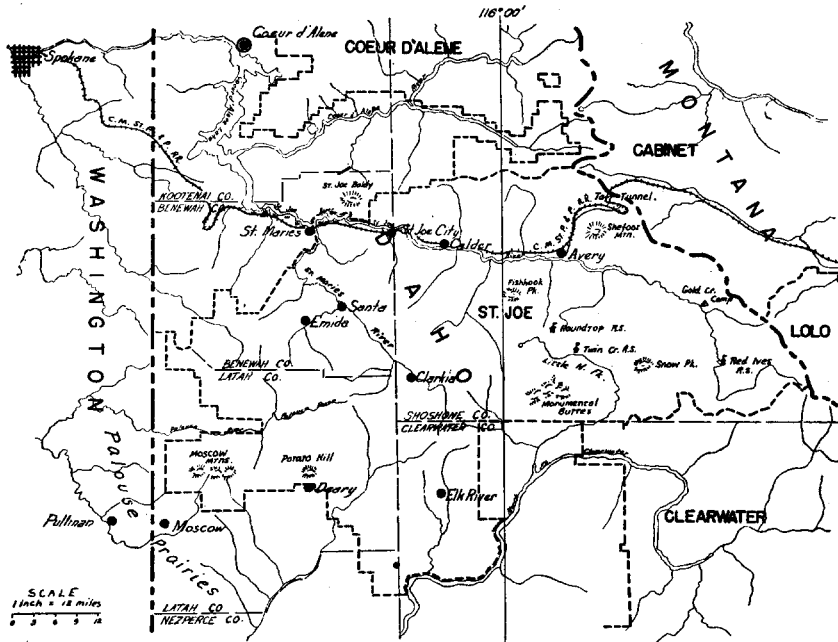


Fig. 61. Map of the St. Joe National Forest, northern Idaho.

Westward from the one hundred and sixteenth meridian, which very nearly bisects the forest, the topography gradually becomes less rugged, while the main canyon widens, imperceptibly at first, then more rapidly until it becomes the bottom-land, hay-meadow and marsh area of the lower St. Joe Valley. Altitudes here vary from 2100 feet at the town of St. Maries, which is the National Forest Headquarters, to somewhat above 5000 feet at the northern boundary and to at least 6000 feet at the eastern border where it joins the Main Division. The climate in general is somewhat milder and the snowfall correspondingly less, while the Transition Zone widens and the Hudsonian disappears, or at least shrinks, to a few isolated mountain-tops in the eastern part and possibly at the top of St. Joe Baldy. Only along the St. Joe, St. Maries, and Palouse rivers is there any open agricultural land of consequence, but on the mild south and west exposures the Transition Zone extends upward to include wide areas of open western yellow pine, a type almost wanting in the eastern half of the forest. To complete the picture one must visualize even here the Canadian Zone forests of cut-over white pine occupying the damp north and east exposures in a broken but nearly continuous belt westward almost to the edge of the prairies. This zone, however, is modified somewhat by the climatic effect of large denuded areas produced by the unrestricted logging of twenty years ago.

Perhaps one of the most interesting localities within an area in which rugged mountains and rushing torrents predominate is the lake and marsh belt in the vicinity of St. Maries. Here the annual change in water level brings about a diversity of conditions which provides habitats for numerous species not found elsewhere. Wide expanses of flooded bottom lands which attract numerous waterfowl in spring, become potholes surrounded by extensive mud flats that provide feeding grounds for several species of shore birds in fall. Willow and cottonwood swamps, cattail marshes and woodland-bordered lakes may all be found within this comparatively restricted area.



Fig. 62. Twin Creek Ranger Station, St. Joe National Forest; mountain meadow in the Canadian Zone.

Period of observation.—The author's observations in the St. Joe country began in the early summer of 1921 and continued, more or less interruptedly, to the present year. The summers of 1921 and 1922 were spent entirely in the mountains of the upper St. Joe and Little North Fork of the Clearwater, with the preceding and intervening winters at Moscow, which is only a few miles from the extreme southwestern boundary of the present St. Joe Forest protective zone. Then came an absence of seven years during which I was stationed in the Lochsa country some fifty miles to the south, followed by an equal period of almost constant occupancy and travel within the confines of the St. Joe Forest. During this latter period which extended from the spring of 1930 to the early summer of 1937, the writer crossed and recrossed the entire forest by car, horseback, and foot travel; included were several midwinter trips on snowshoes. While most of such travel was on government business not connected especially with the study of wildlife, the keeping of nature notes has been almost a lifelong habit, and these notes are the basis upon which the present list is founded. Observations in the past several years so far as the St. Joe Forest is concerned have been confined to occasional trips, as might be expected with a travel itinerary that now covers the entire northern Rocky Mountain region.

In defense of a list based largely on sight identification, the author wishes to emphasize the fact that his concern is not so much with the presentation of a complete record as in opening up channels for future study. While recognizing fully the value of scientific collecting, he makes no apology for the fact that he seldom carries a gun and that barring a few hawks, owls, and game birds, he has never shot a specimen in his life. Moreover, he believes that there is room for both the shotgun and field-glass student, and that the one is as likely to overstep the limits of scientific approval as the other.

In the following list, the approach to the question of subspecies is that which appears most logical under the circumstances. All the kinds of birds are discussed under their specific names, both scientific and vernacular. In those instances where some special comment is made concerning a race, it is included within the text under the account of the whole species. Thus, I have avoided making assumptions as to the identity of subspecies, which to be dependable need to be based on study of skins that are preserved in some museum. The field is rich in possibilities for a determined collector who could

no doubt solve many questions of subspecific identity as well as add greatly to the length of the list.

Gavia immer. Common Loon. Occasional spring migrant on floodwaters near St. Maries. Single birds noted between March 20 and April 30. To be looked for on alpine lakes in the mountains during fall migration, as I have noted them quite frequently at such times on lakes of the Clearwater Forest to the southward.

Colymbus nigricollis. Eared Grebe. Uncommon spring migrant in marshes near St. Maries. May. One individual in breeding plumage seen, July 11, 1936. Noted once in September on Steamboat Lake near Monumental Buttes. They are common fall migrants on lakes of the Clearwater Forest.

Podilymbus podiceps. Pied-billed Grebe. Common summer resident near St. Maries. April to November. Breeds. Noted rarely in mild winters.

Ardea herodias. Great Blue Heron. Noted commonly as a late summer and fall visitor in the marshes near St. Maries. July to October. Probably nests along lakes to the westward. Occasional in winter.

Botaurus lentiginosus. American Bittern. Common summer resident in the marshes of the lower St. Joe and St. Maries rivers. Mid-April to late September. Undoubtedly breeds.

Cygnus columbianus. Whistling Swan. Regular spring migrant at St. Maries. Late March to late April. Usually in flocks of from 15 to 75 individuals. Reported from Chattolet and Coeur d' Alene lakes in open winters.

Branta canadensis. Canada Goose. Formerly a common migrant at St. Maries but becoming scarce in recent years. March and November. Flocks occasionally seen flying over the high mountains in fall.

Anas platyrhynchos. Mallard. Common resident. Breeds in the marshes near St. Maries and probably elsewhere. Winters in small numbers on unfrozen waters and during mild winters in much larger numbers. Widely distributed at all ponds, sloughs and potholes in migrations.

Mareca americana. Baldpate. Usually a common migrant but varies greatly in abundance from year to year. Late March to May; October and November. Occasionally seen on the extreme upper St. Joe.

Dafila acuta. Pintail. Fairly common and regular spring migrant in the vicinity of St. Maries. March to May. Seldom noted in large flocks but usually well distributed.

Nettion carolinense. Green-winged Teal. A fairly common migrant. April to May; September to November. Usually in small flocks but quite widely distributed. Mated pairs seen near St. Maries on several occasions in early June indicate possibility of breeding there. Should be looked for on mountain lakes in the fall as I have noted them frequently in this environment in the Clearwater Forest.

Querquedula discors. Blue-winged Teal. Noted only in the marshes near St. Maries where it appears regularly in spring, though in small numbers. Late April or early May to June. Generally noted in mated pairs; may breed. Probably occurs in fall but difficult to distinguish at that time from the much more common Cinnamon Teal.

Querquedula cyanoptera. Cinnamon Teal. Common summer resident, breeding in the marshes near St. Maries. April to October.

Spatula clypeata. Shoveller. Irregular but usually common spring migrant in the marshes of the lower St. Joe and St. Maries rivers. April and May.

Aix sponsa. Wood Duck. Common summer resident along the woodland-bordered portions of the St. Joe from St. Joe City down to the lakes. April to October. Breeds. Frequents the marshes in fair-sized flocks in late summer and fall.

Nyroca americana. Redhead. Irregular spring migrant on the lower St. Joe. Early April to mid-May. Sometimes abundant for a short period; at other times rare. Noted once in late September near St. Maries.

Nyroca collaris. Ring-necked Duck. Irregular migrant in the vicinity of St. Maries. April to early May; November and early December. Never appears in large numbers but sometimes quite common and widely distributed.

Nyroca valisineria. Canvas-back. Usually an uncommon spring migrant at St. Maries but occasionally appears in fair numbers for a few days. April and early May.

Nyroca affinis. Lesser Scaup Duck. Common migrant on floodwaters of the lower St. Joe, remaining as long as there is open water. March to April; November and December. Occasional during mild winters.

Glaucionetta clangula. Golden-eye. A fairly common and regular migrant during floodwater stage of the lower St. Joe. Remains all winter so long as there is open water. December through April.

Charitonetta albeola. Buffle-head. A rather uncommon spring migrant at St. Maries. April and early May. Has become scarcer in recent years.

Histrionicus histrionicus. Harlequin Duck. Rare summer resident on the upper St. Joe and probably also on the Little North Fork of the Clearwater. I have noted this species only in May, but Forest Ranger C. H. Scribner of St. Maries has a good photograph which he took of a brooding female on its nest at the mouth of Malin Creek between Avery and Red Ives Ranger Station.

Erismatura jamaicensis. Ruddy Duck. Rare. Noted occasionally near St. Maries in May. For some reason Ruddies appear to be very scarce here though they are fairly common in similar situations in both eastern Washington and western Montana.

Lophodytes cucullatus. Hooded Merganser. Rather common migrant and occasional summer resident near St. Maries. Probably breeds. Late March to November.



Fig. 63. Monumental Buttes, showing country typical of the higher elevations in the Main Division of the St. Joe Forest.

Mergus merganser. American Merganser. Common summer resident, breeding along the St. Joe from St. Joe City to Red Ives Ranger Station and perhaps above. Probably breeds also on the Little North Fork of the Clearwater where I have seen it in late summer and fall. Frequent at St. Maries in open winters.

Cathartes aura. Turkey Vulture. An uncommon straggler in summer. One seen July 15, 1931, on the Little North Fork slope, east of Monumental Buttes, and a flock of nine noted July 9, 1935, on St. Maries Peak, just east of St. Maries.

Astur atricapillus. Goshawk. Probably resident in the mountains of the Main Division. A young male collected July 27, 1930, was believed to be of the western form (Condor, 35, 1933:36), although the validity of this race seems to be in doubt. Seen most frequently from late August to November.

Accipiter velox. Sharp-shinned Hawk. Resident. Undoubtedly breeds in the mountains. Common during migrations and occasional in winter.

Accipiter cooperii. Cooper Hawk. Summer resident; probably breeds. Usually less common than the Sharp-shin, but occasionally appears in large numbers in fall. April to October.

Buteo borealis. Red-tailed Hawk. Fairly common summer resident, especially in extensive burned areas in the mountains. March to late October.

Buteo swainsoni. Swainson Hawk. Noted only as a rare straggler in August on high, open ridge-tops. Should be looked for in the Moscow Mountain area, as I have seen them occasionally in the Palouse country.

Buteo lagopus. Rough-legged Hawk. Occasional migrant and winter visitor in the low valleys of the western part. October to late March.

Aquila chrysaetos. Golden Eagle. While I have noted them on both adjoining national forests (Coeur d'Alene and Clearwater) I have never actually seen a living specimen on the St. Joe. A mounted specimen seen at Moscow in 1935 was reported to have been shot near Elk River. Forest Ranger E. W. Renshaw, formerly of Avery, told me that a pair of eagles nested in the cliffs near the top of Shefoot Mountain in the late nineteen twenties. His description as well as the character of the site would indicate this species.

Haliaeetus leucocephalus. Bald Eagle. Rare. Probably resident. A pair nested along the Little

North Fork of the Clearwater in 1930 and 1931 and individuals were seen in the same vicinity and on the upper St. Joe on infrequent occasions in summer and fall. An adult seen at Chatcolet Lake, February 24, 1939.

Circus hudsonius. Marsh Hawk. Summer resident in the Palouse country but noted within the National Forest only in fall migration. Immature birds sometimes are common on high, open ridge tops in the mountains during August and early September. I have seen occasional individuals in the vicinity of St. Maries and on the upper Palouse from late March to May and in September and October.

Pandion haliaëtus. Osprey. Summer resident. April to September. Breeds along the larger streams of the Main Division. Noted regularly at St. Maries in spring. Not rare, but persecuted too much by fishermen ever to become common.

Falco mexicanus. Prairie Falcon. Rare; perhaps only accidental. A medium-sized falcon, presumably of this species, was seen near Snow Peak on the Main Division, June 16, 1930. On July 27, 1940, I saw one from the train window near Taft Tunnel, just over the state line on the Idaho side. It flew parallel to and close to the car I was in, so that under the excellent light conditions that prevailed, identity was practically certain.

Falco columbarius. Pigeon Hawk. Rare. Noted on the Main Division on a few occasions in August and once, October 3, 1936, near St. Maries.

Falco sparverius. Sparrow Hawk. Common summer resident. April to October. The commonest raptor in this locality, being found in open and burned areas throughout the mountains as well as in the low, agricultural valleys.

Dendragapus obscurus. Dusky Grouse. Common resident in the high mountains, occasionally wandering to low altitudes in fall. While the drain from hunters' kills, added to natural predation, keeps their numbers down, I have on a few occasions noted unusual concentrations of these birds. In August, 1934, no less than one hundred and fifty were seen feeding at one time on a bare mountain slope on the St. Joe-Clearwater divide. As evening approached, they took wing by individual coveys composed largely of young birds and flew down over the hill to their roosting grounds.

Canachites franklinii. Franklin Grouse. Resident. Usually quite common, locally, but fluctuating in numbers from year to year. Noted almost exclusively in the green-timbered belt of the Main Division at altitudes ranging from 4000 to 6000 feet.

Bonasa umbellus. Ruffed Grouse. Common resident. Noted at low to moderate altitudes in timbered and brushy country of both divisions.

Pedioecetes phasianellus. Sharp-tailed Grouse. Probably extinct in this locality, but formerly common north and east of Moscow. A covey of five seen October 27, 1920, near the southern base of Moscow Mountain.

Perdix perdix. European Partridge. Resident; introduced. Found in moderate numbers in the vicinity of St. Maries and along the upper Palouse.

Colinus virginianus. Bob-white. Rare resident; introduced. While common in the near-by prairie country it is almost unknown in the St. Joe region except possibly on the upper Palouse River. One heard calling on the outskirts of St. Maries, July 1, 1934.

Lophortyx californica. California Quail. I have never noted this species in the St. Joe country, although it has been introduced into many areas in northern Idaho and is common in some localities. Individuals have been reliably reported from the vicinity of Clarkia and I have seen the clearly recognizable photograph of one taken by Mr. W. E. Kickbush, a former ranger who acted as caretaker at the Gold Creek CCC Camp during the winter of 1934-35. Apparently a lone individual, it remained about this camp on the upper St. Joe and was fed by the caretaker throughout most of the winter.

Phasianus colchicus. Ring-necked Pheasant. Introduced and now quite common in the open, agricultural portion of the lower St. Joe, St. Maries, and Palouse valleys.

Rallus limicola. Virginia Rail. Evidently a summer resident; probably breeds in the marsh area surrounding the old abandoned sawmill at East St. Maries. Noted commonly between April 25 and June 6.

Porzana carolina. Sora. Fairly common summer resident; probably breeds in the marshes near St. Maries. April to September.

Fulica americana. American Coot. A very abundant migrant and common summer resident, breeding in the marshes near St. Maries. April to November. Individuals occasionally winter.

Oxyechus vociferus. Killdeer. Common summer resident; breeds in the open, agricultural areas. March to October. Occasional individuals noted in fall migration in the mountains. Winters rarely near St. Maries.

Squatarola squatarola. Black-bellied Plover. Rare fall migrant. From one to three individuals noted on numerous occasions in the mud flats near St. Maries between September 19 and October 4, 1936.

Capella delicata. Wilson Snipe. Common summer resident; undoubtedly breeds in the marsh areas of the St. Maries and lower St. Joe rivers. April to October. Individuals seen rarely in the mountains in fall migration.

Actitis macularia. Spotted Sandpiper. Common summer resident, breeding along the larger streams throughout the Forest. May to September.

Tringa solitaria. Solitary Sandpiper. Uncommon migrant, but noted both in the mountains and the lower valley. May; August to September.

Totanus melanoleucus. Greater Yellow-legs. I have never seen this species in the St. Joe region although I have noted it both to the north and south. There is one definite record, however. Victor Jones of Pocatello, Idaho, collected one from a flock of 25 on the Wonderlich Ranch at St. Maries, August 4, 1938.

Totanus flavipes. Lesser Yellow-legs. Rare. Single individuals noted on several occasions between April 19 and May 11, 1935, in the marsh just east of St. Maries.

Pisobia melanotos. Pectoral Sandpiper. Noted fairly commonly along the marsh borders and mud flats near St. Maries from September 17 to 30, 1934, and a single individual seen in the same locality September 26, 1936.

Limnodromus griseus. Dowitcher. Flocks of six to fifteen individuals noted frequently between September 7 and October 10, 1936, on the mud flats near St. Maries.

Phalaropus fulicarius. Red Phalarope. One seen at East St. Maries, October 13 and 14, 1934. While a sight record, I feel impelled to include this because of the exceptional nature of the observation. Observed at leisure with binoculars at extremely short range (Auk, 52, 1935:180-181).

Steganopus tricolor. Wilson Phalarope. Rather uncommon. Noted only in the marshes east of St. Maries, in May. Single individuals and groups of up to five or six.

Stercorarius parasiticus. Parasitic Jaeger. One seen near St. Maries, September 23, 1936. This is another case of a sight record under conditions making it almost impossible to mistake the identity. While I could not get within close range because of the treacherous mud flats, the bird was watched for at least a half hour through a 20X Wollensack telescope. For a time it stood in shallow water apparently feeding on the small fish that become concentrated as the water recedes with the drying up of the potholes. It was in the light color phase and its tern-like build and black cap were noticeable. When it took wing (as it frequently did), length of the central tail feathers and the general size of the bird pointed to this species rather than the Long-tailed.

Larus delawarensis. Ring-billed Gull. Rather common migrant, especially in fall; occasionally appears in winters when there is sufficient open water. Noted only in the vicinity of St. Maries. March to May; September to December.

Chlidonias nigra. Black Tern. Common summer resident; breeds in the marshes of the lower St. Joe. Arrives about May 10 and departs in mid-August. I have seen flocks of at least a hundred birds near St. Maries in May.

Zenaidura macroura. Mourning Dove. Common summer resident in the broad, open valleys of the lower St. Joe, St. Maries, and Palouse rivers. April to September. Occasional stragglers noted in the high mountains in fall.

Bubo virginianus. Horned Owl. Fairly common resident throughout the mountains and timbered areas. Most specimens examined appear to be typical *B. v. lagophonus*, but a paler, grayer race or color phase has been noted in the mountains of the Main Division in summer.

Nyctea nyctea. Snowy Owl. While I have never seen either a live or a freshly-killed specimen from this locality, there are at least a few mounted specimens in existence which undoubtedly came from the St. Joe region. In 1931 I examined one which had been shot near Emida the winter before and mounted by Ranger L. A. Williams, then of St. Maries.

Glaucidium gnoma. Pigmy Owl. Probably resident; presumably confined to the heavily-timbered areas in the breeding season and frequenting the edges of marsh and willow or cottonwood thickets in fall and winter. Actually I have seen them only in the latter season, at which time they appear to be common in the vicinity of St. Maries. I have heard what I feel certain is the note of this owl in the mountains of the Main Division in summer, and likewise in St. Maries in the late fall.

Scotioptex nebulosa. Great Gray Owl. Forest Ranger C. H. Scribner reports shooting an adult and an immature specimen along the trail between Roundtop and Fishhook Peak in the Main Division in the summer of 1924. A mounted specimen at St. Maries was reported to have been shot near Santa during the "bird hunting season" of 1924 or 1925. On June 24, 1931, I saw the wings and claws of two freshly-killed specimens (an adult and a half-grown young), which according to the Forest Service "smokechaser" who shot them, were taken the day before at "Forty-nine Meadows" which is just west of Roundtop Ranger Station. I have on numerous occasions heard what I believe is the note of this owl in the mountains of the Main Division. It is a single, deep-toned hoot.

Asio flammeus. Short-eared Owl. While this species is sometimes quite common, at least in winter, on the Palouse prairies to the westward, I have but a single record for the St. Joe Forest. On July 26,

1935, while driving over the Forest Service road between Avery and Roundtop Ranger Station, one of these owls flushed from the ground and flew ahead of my car at radiator height. At twenty miles per hour I was able to keep within a few feet of the bird, in fact I bumped it slightly once, causing it to swerve from its course and alight at the edge of the road. The owl was out of its element in this heavily-timbered area, and evidently bewildered.

Chordeiles minor. Nighthawk. Common summer resident, breeding throughout the lower altitudes. The last migrant to appear, usually arriving between the 5th and the 12th of June. Departs the latter part of August, although migrating flocks are sometimes seen as late as September 15. Noted rarely in the mountains.

Chaetura vauxi. Vaux Swift. Summer resident, probably breeding locally in the mountains. Noted occasionally as a migrant in the lower country. May to early September.

Archilochus alexandri. Black-chinned Hummingbird. Uncommon summer resident. May to July. Noted only at St. Maries.

Selasphorus rufus. Rufous Hummingbird. Common summer resident, generally distributed throughout the entire forest region. Arrives about the first of May and remains until early September. By far the most common of our hummingbirds.

Stellula calliope. Calliope Hummingbird. Fairly common summer resident in the mountains; has been noted near St. Maries, although not actually in town. Arrives in May and probably leaves in late August or early September, but the species is difficult to distinguish from the Rufous after the adult males disappear in July.

Megaceryle alcyon. Belted Kingfisher. Common summer resident along streams and lakes. April to November. Occasionally winters.

Colaptes cafer. Red-shafted Flicker. Very common resident. Widely distributed during the summer, often appearing at extremely high altitudes. In winter it is confined to the lower valleys where its occurrence is regular.

Ceophloeus pileatus. Pileated Woodpecker. Fairly common resident in the yellow-pine belt of the Palouse Division. More restricted but not rare in the larch-fir association of the Main Division. Wanders in fall to the highest mountain tops and has been seen in the town of St. Maries.

Asyndesmus lewis. Lewis Woodpecker. Common summer resident in open timber of the Transition Zone. May to September. Commonly wanders to high altitudes through open "snag areas" in the early fall.

Sphyrapicus varius. Red-naped Sapsucker. Fairly common summer resident in Canadian-Zone forests and often noted at low altitudes in migration. April to late September.

Dryobates villosus. Hairy Woodpecker. Common resident, widely distributed. Favors the Canadian-Zone forests in the breeding season but I have also found it nesting on cottonwood flats near St. Maries.

Dryobates pubescens. Downy Woodpecker. Fairly common resident among cottonwood growth in the low valleys. Rarely penetrates the conifer belt and never to high altitudes.

Picoides arcticus. Arctic Three-toed Woodpecker. Rather uncommon resident of the Canadian Zone forests. Much commoner in the Lochsa country forty or fifty miles to the south.

Tyrannus tyrannus. Eastern Kingbird. Very common summer resident in the open Transition Zone. Extends its range through heavily-burned areas to include the lower mountain slopes. Arrives about May 20 and leaves in late August.

Empidonax traillii. Traill Flycatcher. Summer resident of local and fluctuating abundance. Usually not very common. Confined during the breeding season to willow-bordered mountain streams or brushy deciduous growth in the larger valleys. May to early September.

Empidonax hammondi. Hammond Flycatcher. Common summer resident throughout the Transition Zone and on the edges of mountain meadows in the lower Canadian. May to September.

Empidonax difficilis. Western Flycatcher. Rather uncommon summer resident. Noted infrequently and at widely separated localities, usually along the larger streams in the mountains. May to August.

Myiochanes richardsonii. Western Wood Pewee. Common and widely distributed summer resident in the Transition Zone, particularly about parks, orchards and city shade trees. Late May to early September.

Nuttallornis mesoleucus. Olive-sided Flycatcher. Common summer resident in the mountains. Typical of the snaggy burned areas about the edges of mountain meadows in the Canadian Zone. Occasional at lower altitudes in migration. Late May to September.

Otocoris alpestris. Horned Lark. Large, pale Horned Larks with scarcely a tinge of yellow have been noted on high ridge-tops in the fall. They apparently are of the race *arctica* and have been seen only on barren mountain peaks, open ridge-tops and occasionally in alpine meadows on the Main Division in September and early October. Should be looked for in the lower country in winter as I have observed such larks at this time in the Clearwater Valley.

The Dusky Horned Lark (*merrilli*) is the resident form throughout the "Palouse Country" where it is common, especially in summer. In the St. Joe region it has been noted only in the extreme western part, near the base of the Moscow Mountains.

Tachycineta thalassina. Violet-green Swallow. A common and widely distributed summer resident. Common at St. Maries, although outnumbered greatly by the Tree Swallow. In the higher mountains it is the only species of swallow likely to be seen. Arrives in late March and departs in August.

Iridoprocne bicolor. Tree Swallow. Very common summer resident in the broad valleys and open country of the Palouse. Abundant at St. Maries and noted up the St. Joe River to Avery. Arrives in the last half of March and leaves in August.

Stelgidopteryx ruficollis. Rough-winged Swallow. Fairly common summer resident. Noted in suitable locations along the entire length of the St. Joe and St. Maries rivers, but never in very great numbers. Late April to August.

Hirundo erythrogaster. Barn Swallow. Rather uncommon about St. Maries, Clarkia, and the upper Palouse. Extremely rare elsewhere on the St. Joe River, although it becomes common a short distance westward. Nested at Clarkia in June, 1933. May to early September.

Petrochelidon albifrons. Cliff Swallow. Locally common summer resident in open agricultural areas. Nests at St. Maries, Calder, Clarkia, and elsewhere in the Palouse Division. Late April to late July.

Perisoreus canadensis. Canada Jay. Locally common resident in the more densely timbered areas of the Canadian Zone, from the western border of the Forest to the Montana line.

Cyanocitta stelleri. Steller Jay. Common resident throughout the forested areas at all altitudes, and to some extent even in the extensive "burns."

Pica pica. Magpie. Irregularly common resident in the broad valleys of the western part. In fall individuals sometimes appear on open ridges far back in the mountains.

Corvus corax. Raven. Not uncommon resident in the high mountains, wintering along the larger streams but confined to the wilder situations.

Corvus brachyrhynchos. Crow. Common summer resident in open, agricultural sections. March to October.

Nucifraga columbiana. Clark Nutcracker. Common resident of the high mountains. Frequently noted at lower altitudes in fall and winter.

Penthestes atricapillus. Black-capped Chickadee. Common resident of the Transition Zone, extending upward to about 4000 feet altitude. Favors willow and other deciduous growth.

Penthestes gambeli. Mountain Chickadee. Common resident of forests of subalpine type at high elevations. Extends its range to somewhat lower altitudes in winter but favors conifer instead of deciduous growth.

Penthestes rufescens. Chestnut-backed Chickadee. Common resident of Canadian and upper Transition zones. In summer its range is typical of the white pine forest and lies midway between the ranges of the other two chickadees. In spring and fall it overlaps the ranges of both species and in winter it is sometimes seen in St. Maries, but at all times this is strictly a bird of the coniferous timber.

Sitta carolinensis. White-breasted Nuthatch. Uncommon; probably resident but not noted in midwinter. I have seen individuals on infrequent occasions in the yellow pines of the Transition Zone and among the white-barked pines of the Hudsonian Zone, but never in the intervening areas.

Sitta canadensis. Red-breasted Nuthatch. A common and widely distributed resident, but irregular in its appearance in any given locality. One of the commonest summer birds in Canadian Zone forests of the Main Division. I have seen them in St. Maries in every month of the year and at altitudes of 6000 feet or higher in midwinter.

Certhia familiaris. Creeper. A rather uncommon resident. Breeds in the Canadian Zone and winters usually at lower levels. Occasional at St. Maries in the winter. These birds are much more common in the more extensive cedar-white fir forests of the Lochsa region, forty miles south of here.

Cinclus mexicanus. Dipper. Common resident along rapidly flowing streams in the mountains of both divisions.

Troglodytes aëdon. House Wren. Common summer resident. Generally speaking, a Transition-Zone species, but often noted at rather high altitudes where burned and brushy areas prevail. Late April to mid-September.

Nannus hiemalis. Winter Wren. Fairly common summer resident in Canadian-Zone spruce forests and quite frequently noted in winter along the larger streams.

Telmatodytes palustris. Long-billed Marsh Wren. Noted once in a marsh near St. Maries, October 3 and 4, 1936.

Salpinctes obsoletus. Rock Wren. Common summer resident among rock slides and outcroppings on high, open ridge tops from mid-June to early September. Between June 4 and July 3, 1936, individuals were noted frequently and in unusual situations near St. Maries. I have never recorded this species in that locality at any other time (Auk, 54, 1937:97-98).

Dumetella carolinensis. Catbird. Common summer resident among deciduous growth along the main rivers. Especially common in the vicinity of St. Maries and noted occasionally in brushy burns of the lower slopes in the Main Division. Arrives late in May and remains through September.

Turdus migratorius. Robin. Abundant summer resident throughout the mountains as well as in the lower valleys. Breeds up to 6500 feet or higher. Winters regularly but in varying numbers at the lower altitudes.

Ixoreus naevius. Varied Thrush. Common summer resident in Canadian-Zone forests. Frequently noted in flocks at lower altitudes during migrations. Appears regularly in spring at St. Maries in March and departs from its breeding grounds in the dense forests in October.

Hylocichla guttata. Hermit Thrush. I first became aware of the occurrence in Northern Idaho of a small race of Hermit Thrush (*H. g. guttata* ?) in 1928. Following a May snowstorm on the Lochsa River, the appearance of large numbers of Hermit and Olive-backed thrushes in the river flats gave me the opportunity on numerous occasions to view the two species together at close range and always, the smaller, trimmer appearance of the Hermit was noticeable. Similar comparisons with the breeding subspecies of Hermit Thrush indicates a much larger bird. Another fact of note was the occasional appearance of these smaller thrushes a month or more after the last breeding Hermits had left. I find one record for the St. Joe as follows: October 9, 1931, two seen about six miles east of Monumental Buttes; watched for a considerable period at close range, they appeared scarcely larger than Song Sparrows. The larger breeding hermit thrush is rather local but is a common summer resident. It is confined to the upper Canadian and Hudsonian zones. Early June to early September.

Hylocichla ustulata. Olive-backed Thrush. Common summer resident throughout the timbered areas in the upper Transition and Canadian zones. May to September.

Hylocichla fuscescens. Willow Thrush. Common summer resident in the willow and cottonwood swamps along the lower St. Joe and St. Maries rivers. Late May to August.

Sialia mexicana. Western Bluebird. Rare. A pair seen near the mouth of the St. Maries River, April 3, 1932. These birds are quite common a few miles to the north and west in Kootenai County.

Sialia currucoides. Mountain Bluebird. Common summer resident everywhere except in densely-timbered areas. March to October. Nests at St. Maries and also near the tops of the highest peaks in the Main Division.

Myadestes townsendi. Townsend Solitaire. Not uncommon summer resident in the mountains, nesting in both Canadian and Hudsonian zones. In migration it appears at lower levels and not infrequently in the winter at St. Maries.

Regulus satrapa. Golden-crowned Kinglet. Common summer resident in Canadian-Zone forests. Winters at lower levels and to some extent in the mountains.

Corthylus calendula. Ruby-crowned Kinglet. Common summer resident in forests of Transition and Canadian zones. During spring migrations it is frequently abundant among shade trees in St. Maries and other towns in the vicinity. Arrives about the middle of April and leaves in October.

Anthus spinoletta. Pipit. Noted as a fairly common fall migrant, appearing on high, open ridge tops in the mountains and also in the meadows and mud flats near St. Maries. September and October.

Bombycilla garrula. Bohemian Waxwing. An irregular and roving, but often abundant, winter visitor. Generally very common at St. Maries and largely restricted to the Transition Zone, although I have seen it occasionally in the mountains in fall. November to March.

Bombycilla cedrorum. Cedar Waxwing. Common summer resident at lower altitudes in the agricultural region. Occasional in the mountains in late summer and early fall. May to September.

Lanius borealis. Northern Shrike. Irregular but usually not uncommon winter visitor in open situations in the lower valleys. Noted rarely in the mountains in fall. October to March.

Vireo solitarius. Solitary Vireo. A rather common summer resident in coniferous forests of Canadian and Transition zones. Early May to September.

Vireo olivaceus. Red-eyed Vireo. Common summer resident in deciduous growth of the Transition Zone. Especially common near St. Maries. Late May to August.

Vireo gilvus. Warbling Vireo. A rather common summer resident in deciduous growth and to some extent on burned and brushy slopes in the mountains. Most common in the broad, low valleys. May to September.

Vermivora celata. Orange-crowned Warbler. Apparently an uncommon migrant, but perhaps overlooked among more noticeable species. Noted in brushy areas on both divisions. May and August.

Vermivora ruficapilla. Calaveras Warbler. Rather uncommon migrant. Possibly breeds in the Transition Zone along the Little North Fork of the Clearwater. Late April and May; July and August. A few June records. This species is a common summer resident forty miles to the southward.

Dendroica aestiva. Yellow Warbler. Very common summer resident in the Transition Zone throughout the main valleys. Rare on the upper St. Joe; it does not penetrate the conifer belt to any extent. Early May to August.

Dendroica auduboni. Audubon Warbler. Common summer resident in forested areas at all altitudes; the most widely distributed of our warblers. Late April to October.

Dendroica townsendi. Townsend Warbler. Fairly common summer resident in the conifer forests of the Canadian Zone. Extends its range somewhat downward into the Transition Zone during migrations, but rarely seen except in conifer timber. May to late August.

Seiurus noveboracensis. Water-thrush. A restricted, but not rare summer resident. Noted only in the dense, willow and cottonwood swamps along the lower St. Joe and St. Maries rivers. May to August (Auk, 54, 1937:97-98).

Oporornis tolmiei. Tolmie Warbler. Common summer resident in damp, brushy situations throughout the Transition and Canadian zones. May to early September.

Geothlypis trichas. Yellow-throat. Common summer resident along the lower St. Joe, St. Maries and Palouse rivers. May to late September.

Icteria virens. Chat. Rare, probably accidental. A pair noted May 26 and 27, 1937, on the outskirts of St. Maries.

Wilsonia pusilla. Pileolated Warbler. Common summer resident about the edges of mountain meadows and willow-bordered streams in the Canadian Zone. Frequently noted in migration at considerably lower altitudes. May to mid-September.

Setophaga ruticilla. American Redstart. Common summer resident along the larger watercourses in the western part. Noted rarely up the St. Joe River to Avery. Mid-May to late August. Especially common in the vicinity of St. Maries.

Passer domesticus. English Sparrow. Common resident about towns and ranches. Individuals occasionally seen about permanent camps in the mountains, although never at high altitudes.

Dolichonyx oryzivorus. Bobolink. Rather common summer resident in meadows between St. Maries and St. Joe City. Not noted elsewhere. Late May to July.

Sturnella neglecta. Western Meadowlark. Very common summer resident in open areas along main watercourses of the Palouse division. Occasionally noted in mountain meadows far back from civilization. March to October. Rare in winter.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird. Locally common in marshes near St. Maries and occasionally elsewhere. One record from Avery. Probably summer resident, but noted only from April through June.

Agelaius phoeniceus. Red-winged Blackbird. Very common summer resident in marshes of the lower St. Joe, St. Maries and Palouse rivers. Rare elsewhere. The earliest migrant to appear, often appearing in advance of the first migrating robins. February to October. Occasional in winter.

Euphagus cyanocephalus. Brewer Blackbird. Common summer resident in open valleys of the western part of the Forest. Rare elsewhere. April to October. A wintering flock noted at St. Maries during February, 1934.

Molothrus ater. Cowbird. Not uncommon summer resident in low valleys of the Palouse Division. Occasional individuals seen following saddle and pack horses and mules in the high mountain pastures. Most frequently noted near St. Maries. May to October.

Piranga ludoviciana. Western Tanager. Common summer resident in conifer forests of Transition and Canadian zones. May to September. Often seen on the outskirts of St. Maries.

Hedymeles melanocephalus. Black-headed Grosbeak. Common summer resident in partly-wooded valleys and brushy slopes of the Transition Zone, extending upward to high altitudes on favorable exposures. May to September.

Passerina amoena. Lazuli Bunting. Rather common summer resident, but somewhat local in distribution. Generally favors a similar habitat to the preceding species and like it, often extends its range up to five or six thousand feet in elevation on warm, exposed slopes. May to August.

Hesperiphona vespertina. Evening Grosbeak. Irregular, but usually common resident. Noted throughout the entire forest region in summer and in the lower valleys in winter. I have noted it in St. Maries in every month in the year, and, except in midwinter, on the highest mountain peaks.

Carpodacus cassinii. Cassin Purple Finch. Common summer resident through the entire area. One of the characteristic birds of St. Maries and equally common in the mountains of the Main Division. March or April to October.

Pinicola enucleator. Pine Grosbeak. Summer resident in the Canadian Zone of the Main Division; local but not rare. Irregular and generally uncommon winter visitor to the lower valleys, and, rarely, in the mountains. Breeding birds are probably *P. e. montana*, wintering flocks may contain *P. e. alascensis* or both races.

Leucosticte tephrocotis. Rosy Finch. Uncommon. A small flock seen at the top of "Potato Hill" near Deary, May 11, 1938, were definitely identified as of the race *littoralis*. I have found them to be more common in the Clearwater country to the south and southeast. Shaw (*op. cit.*) records them from the Moscow Mountains in spring. *T. t. tephrocotis* has been noted in spring and fall on the

middle fork of the Clearwater River and should occur among flocks of *littoralis* on the St. Joe Forest.

Acanthis linaria. Redpoll. Irregular winter visitor, usually absent from this region though noted commonly in the surrounding country. Seen frequently in flocks in March, 1936, in the vicinity of St. Maries.

Spizus pinus. Pine Siskin. Common resident throughout the area, but quite local in distribution during the winter. Its vertical range covers all altitudes. I have seen this species in every month of the year at St. Maries and on at least one occasion in the high mountains in midwinter.

Spizus tristis. Goldfinch. Common summer resident in the low valleys of the western part. April to November. Occasional in winter. Favors deciduous growth and does not occur in the mountains proper.

Loxia curvirostra. Red Crossbill. Resident of varying abundance. Never wholly missing from the yellow-pine areas of the Transition Zone, but may be either totally absent or very common in the mountains of the Main Division, depending on the cone crop. Usually most common from mid-July to October, but I have seen it in very large flocks in midwinter.

Loxia leucoptera. White-winged Crossbill. Probably resident, but even more irregular than the preceding species and generally much less common. Noted only on the Main Division where in "cross-bill years" they may for a time even outnumber *curvirostra* in abundance. Such a condition occurred from August 18 to September 14, 1930, and from July 15 to October 13, 1933.

Pipilo maculatus. Spotted Towhee. Rather common summer resident in brushy areas along the main watercourses, extending its range to moderately high altitudes on warm, south exposures. April to August.

Passerculus sandwichensis. Savannah Sparrow. Extremely local but not rare summer resident in wet meadows of the lower St. Joe and Palouse rivers. April to September.

Pooecetes gramineus. Vesper Sparrow. Rare. Noted on the upper Palouse, September 5, 1935.

Chondestes grammacus. Lark Sparrow. Casual. Individuals noted as follows: September 10, 1922, Roundtop Ranger Station; June 20, 1931, Twin Creek Ranger Station; September 5, 1935, upper Palouse River.

Junco oreganus. Oregon Junco. A common and widely distributed summer resident throughout the entire area. Often abundant during migrations; winters irregularly but quite commonly at lower altitudes. Occasional dark, highly-colored individuals seen in the lower country in winter suggest that the coastal race, *J. o. oreganus*, may occur.

Spizella passerina. Chipping Sparrow. A common summer resident, found at all altitudes and in open spots in the dense forests as well as in the agricultural sections. Late April to September.

Zonotrichia leucophrys. White-crowned Sparrow. The status of the races *leucophrys* and *gambelii* not definitely established, but both known to occur. I believe that *Z. l. leucophrys* is a common summer resident, breeding in mountain parks in the Canadian and Hudsonian zones. Has been definitely recognized at lower altitudes in spring and fall. May to October. The race *gambelii* was positively identified only in September and on the Main Division, but it probably occurs elsewhere, and at other times.

Passerella iliaca. Fox Sparrow. Common summer resident in forests of Canadian and Transition zones. Late March to September.

Melospiza lincolni. Lincoln Sparrow. Locally common summer resident in the Canadian Zone, favoring brushy openings along willow-bordered streams in the mountains. This is one of the typical birds about the meadows at Twin Creek Ranger Station. May to early September.

Melospiza melodia. Song Sparrow. A common resident in the Transition Zone along the main watercourses. Rare straggler at the higher altitudes. Though appearing throughout the year at St. Maries, it is migratory and its numbers are greatly augmented in spring.

The following species include all of those not listed above which the author believes might reasonably be expected to occur on the St. Joe Forest. It does not include remote possibilities such as might be indicated by casual occurrence on one of the adjoining national forests. Neither does it include a number of species reported by Merrill and Rust from the vicinity of Coeur d'Alene and the St. Joe Marshes. A complete list swelled from the above sources and from the author's notes from the Clearwater Valley would bring the total well beyond 200.

Aechmophorus occidentalis. Western Grebe. Noted at Fish and Eagle Mountain lakes on the Clearwater Forest in October, 1928 (Condor, 34, 1932:23-25). Both Merrill and Rust record it from Coeur d'Alene Lake and it should be looked for in the marshes near St. Maries in fall.

Chen hyperborea. Lesser Snow Goose. Noted as a common migrant in the Clearwater Valley. Should cross northwestern Clearwater and southeastern Latah counties in the regular migrations of April, and of October and November.

Larus californicus. California Gull. Noted frequently in the Clearwater Valley in late summer, and in fall and winter. More than likely the species has been overlooked among flocks of *delawarensis* in the St. Maries region.

Picoides tridactylus. Three-toed Woodpecker. Local but not uncommon resident in forests of the Canadian Zone of the Lochsa district in the Clearwater Forest. Should occur in similar situations on the Main Division of the St. Joe Forest.

Empidonax wrightii. Wright Flycatcher. I am almost certain that I have seen this species on the St. Joe in migrations. However, lacking specimens I cannot verify its occurrence and it has no distinctive notes that I can identify with certainty. Both Merrill and Rust report it from Coeur d'Alene.

Sitta pygmaea. Pigmy Nuthatch. A common resident species at Coeur d'Alene and at Spokane, Washington. It seems only a question of time until it is noted in the yellow-pine forest near St. Maries or in the Palouse.

Icterus bullockii. Bullock Oriole. Fairly common in the Clearwater Valley and reported by both Merrill and Rust from the vicinity of Coeur d'Alene. That it formerly occurred near St. Maries is evidenced by a few of the durable nests which still may be seen in the cottonwoods along the St. Joe River.

Plectrophenax nivalis. Snow Bunting. Occasional in late fall and winter in the western part of the Clearwater Country. Reported by Merrill and Rust from the Coeur d'Alene region.

General comments.—In comparing the above data with my notes from the Lochsa country, approximately forty miles to the south, I find certain significant differences.

The St. Joe is typically a white-pine forest, lying near the geographic center of the type range in the northern Rocky Mountain region. On the other hand, the Lochsa River forms a rather definite southern boundary of the commercial white pine forests in Idaho. This condition is reflected in the abundance of the Chestnut-backed Chickadee as a breeding species in the St. Joe Forest, whereas it is recorded as an irregular winter visitor and possible rare breeder at similar altitudes on the Lochsa. Another condition which seems to be purely environmental in character is a decided increase in the relative abundance of species which favor the cedar-white fir timber in the Lochsa Canyon where that type of timber prevails in broad zones. The most notable of these are the Creeper, as a breeder, and the Winter Wren during the migratory seasons.

Other differences appear to be more geographic than environmental and include the following:

Goshawk and Pine Grosbeak. Frequently seen in summer and probably breed on the St. Joe. Noted only as rare migrants or winter visitors in the Lochsa country.

Vaux Swift. Common migrant along the Lochsa River as well as the Middlefork of the Clearwater, often appearing in large flocks. Irregular and uncommon at all times on the St. Joe. Summers sparingly on both forests in the mountains.

Calliope Hummingbird. Rather common summer resident on the St. Joe. Not noted during seven years of observation in the Lochsa region.

Rock Wren. Fairly common summer resident in the mountains of the St. Joe, appearing on rocky peaks at high altitudes. Noted only a few times in the Lochsa country and then at low elevations.

Bohemian Waxwing. Irregular, but often abundant winter visitor throughout the lower valleys of the western part of the St. Joe. Flocks noted only at rare intervals in the Lochsa or Clearwater regions.

Calaveras Warbler. Fairly common summer resident and quite widely distributed in the Lochsa country. Uncommon and extremely local, even as a migrant on the St. Joe.

Comparisons between the St. Joe and the adjacent Lolo and Cabinet national forests in Montana appear to offer other interesting variations in the abundance and distribution of certain species, but more study and observation are needed before conclusions can be drawn.

Missoula, Montana, June 20, 1941.