

THE AUK

A QUARTERLY JOURNAL OF
ORNITHOLOGY

VOL. 62

APRIL, 1945

No. 2

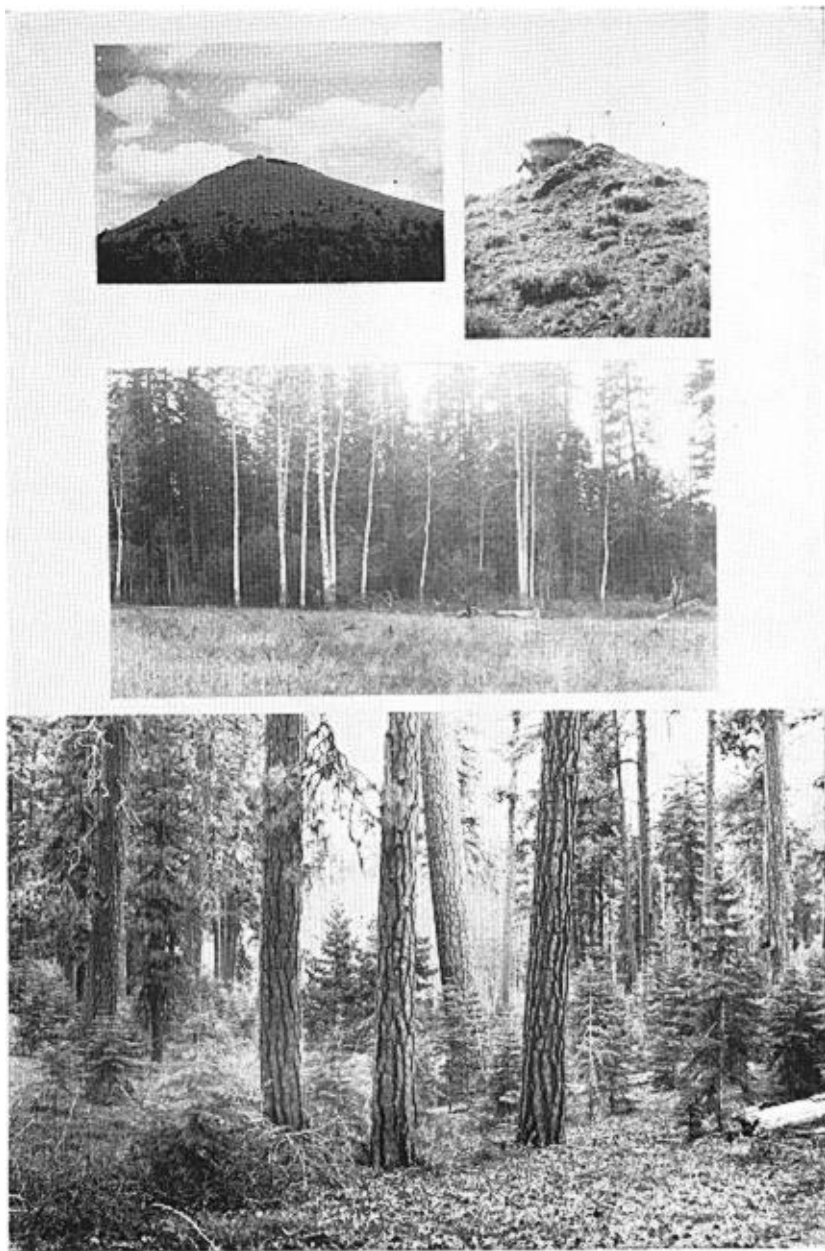
SUMMER BIRDS OF THE FREMONT NATIONAL FOREST, OREGON

BY THOMAS H. MCALLISTER, JR. AND DAVID B. MARSHALL

Plate 9

THIS report is an account of observations of bird life made while the authors were employed by the United States Forest Service on the Fremont National Forest from May 31 to September 2, 1943. We do not consider this to be a complete report of the birds inhabiting the Fremont Forest during the summer, since there were many areas which we never visited. Also, due to our work, we could only devote a very small part of our time to this pleasant pursuit, for we were on duty continuously the whole summer, except for several Sundays, and we had no choice as to areas. We hope, however, that there is information that will be of value and interest to others visiting this little-known region.

Fremont National Forest is situated in south-central Oregon, with its western edge in Klamath County and the rest in Lake County. Roughly, it lies south of Lapine between the Dalles California and Fremont highways, with the California border forming its southern boundary. The forest is divided into four ranger districts. In the north there is the Silver Lake District, to the south of this the Paisley District, then to the southwest the Bly District, and to the southeast the Warner District. The southern area on the Bly District is the most mountainous and receives the most moisture. The eastern area of the Silver Lake District is the most arid region, being level and frequently interspersed with rock and sage flats. The Warner District is broken by Goose Lake Valley, running north and south through Lakeview. The easternmost part of the forest appears again as a large tongue, formed by the Warner Mountains. All along the eastern edge there is a mingling of the forest and the high desert. The



FREMONT NATIONAL FOREST, OREGON.—(*Upper figs.*) HAGER MOUNTAIN. (*Middle fig.*) TYPICAL SCENE NEAR A WATERCOURSE; QUAKING ASPEN AND WILLOW IN FOREGROUND AND WHITE FIR AND YELLOW PINE IN BACKGROUND. (*Lower fig.*, 'U. S. Forest Service Photo') TYPICAL STAND OF YELLOW PINE.

altitude varies from 4,000 to 8,000 feet. The region is mostly in the Transition Life Zone, although there are areas in the Canadian and Upper Sonoran life zones. As a whole, Fremont Forest is untouched by man and has been left in its natural state. There are only a few areas that have been logged, and these only by selective logging. Except for the towns of Bly and Silver Lake, the areas in which we were stationed were many miles from human habitation.

Generally speaking, the northern part of the forest is comprised of vast stands of western yellow pine (*Pinus ponderosa*), while the southern part is of mixed western yellow pine and white fir (*Abies* sp.). In the northwestern corner, around Teatable Mountain and Sugarpine Mountain, a few sugar pines (*Pinus lambertiana*) are found. At higher elevations, white fir and lodgepole pine (*Pinus contorta*) are common, along with a few western white pine (*Pinus monticola*) and incense cedar (*Libocedrus decurrens*). On the eastern side of the Silver Lake District, around Teatable Mountain, the soil is composed of pumice and, as a result, the lodgepole pine forms large stands at lower elevations. The predominating cover of the forest floor is snow brush (*Ceanothus velutinus*) and manzanita (*Arctostaphylos* sp.). Lakes, streams, springs and other watercourses are surrounded by quaking aspens (*Populus tremuloides*) and also various forms of willows (*Salix* sp.). A great part of the area surrounding the forest and even parts within the forest contain desert and sagebrush areas. In these areas there are many forms of sage (*Artemisia*) and rabbit brush (*Chrysothamnus*). Western juniper (*Juniperus occidentalis*) is scattered along the edges of these sage lands.

Mammal life is quite abundant throughout the region. Rocky Mountain mule deer (*Odocoileus hemionus macrotus*) were seen wherever we went. Prong-horned antelope (*Antilocapra americana oregona*) and Oregon jack rabbits (*Lepus californicus wallawalla*) were found in the open or desert regions. Mountain coyotes (*Canis latrans lestes*) often serenaded us at night. The yellow-haired porcupines (*Erethizon epixanthum epixanthum*) made a general nuisance of themselves around our stations as did also the golden-mantled ground squirrel (*Callospermophilus chrysodeirus chrysodeirus*) and the western bushy-tailed wood rat (*Neotoma cinerea occidentalis*). We also found Sierra chickarees (*Sciurus douglasii albolimbatus*) and pale yellow-bellied marmots (*Marmota flaviventris avara*). One California badger (*Taxidea taxus neglecta*) and one Oregon cougar (*Felis concolor oregonensis*) were also seen by us.

McAllister was stationed in the Silver Lake Ranger District and Marshall in the Bly Ranger District. During the first part of June

we were both stationed in brush camps, where we piled slash. McAllister was at Cabin Springs and Marshall at Fishhole Mountain. In the third week McAllister was sent out on the Sycan Marsh as a guard for road equipment. From June 23 to June 26 we both took our guard training together at Dog Lake. After this, Marshall spent several days on maintenance work out of Finley Corrals. McAllister on June 28 and Marshall on July 1 were both sent to lookouts, where we spent the rest of the summer as lookout firemen.

Following are descriptions of the localities which we worked most extensively:

Bly, Section 3, Township 37 South, Range 14 East. Elevation, 4,356 feet. June 3 to 9, August 6 (Albert Marshall), September 2. A small logging town with marshland on the east side, and surrounded by sagebrush, western juniper and occasional western yellow pine. Bly is not within the boundaries of the forest, but is headquarters for the Bly Ranger District.

Silver Lake, Section 22, Township 32 South, Range 14 East. Elevation, 4,347 feet. May 31, June 10 to 14, June 19 to 23, June 27 and 28, September 2 and 3. A small town, now practically deserted. On the north side of it begins the Paulina Marsh, and on all other sides it is surrounded by sage and rims. Like Bly, it is not within the boundaries of the forest but is headquarters for the Silver Lake Ranger District. The ranger station is a mile southwest of the town, and Silver Creek, which is lined with large quaking aspen groves, runs by it.

Dog Lake, Section 22, Township 40 South, Range 17 East. Elevation, around 6,000 feet. June 7 and June 23 to 26. A large lake three miles long and one-fourth mile wide. The south end is mostly marshland. Timber: western yellow pine and white fir, with quaking aspen and willows surrounding the lake.

Teatable Mountain, Section 23, Township 27 South, Range 10 East. Elevation, around 6,500 feet. June 1 to June 10. Teatable is shaped like a mesa, for it is surrounded on all sides by high rims and on top forms a large plateau. One mile to the southwest is Cabin Springs. Timber: western yellow pine, sugar pine and lodgepole pine.

Fishhole Mountain, Section 20, Township 28 South, Range 16 East. Elevation, around 6,550 feet. June 8 to 23. The area covered here was between Lapham Reservoir and the top of Fishhole Mountain. It is very interesting country in that there are many small lakes scattered throughout the area surrounded by quaking aspens. Western yellow pine and white fir cover the area along with some incense cedar. Also, some of the higher slopes have stands of the curl-leaf mountain mahogany (*Cerocarpus ledifolius*).

Sycan Marsh, Township 32 and 31 South, Range 14 East. Elevation, 4,973 feet. June 15 to 18. A large marsh of about 9,000 acres. On the west it is bounded by large western yellow pine stands and on the east by sage flats.

Finley Corrals, Section 13, Township 38 South, Range 16 East. Elevation, around 6,000 feet. June 28 to July 1. Timber: western yellow pine, lodgepole pine, white fir, willows and quaking aspen.

Coleman Point, formerly known as Green Mountain, Section 16, Township 36 South, Range 17 East. Elevation: 7,000 feet. July 1 to August 31. Situated on the north end of Coleman Rim, Coleman Point is nine miles southeast of Gearhart Mountain. Unlike many lookout stations, this station is surrounded by heavy timber. This provided a great deal of bird life. Sierra Hermit Thrushes, Ruby-crowned Kinglets, Western Tanagers, Cassin's Purple Finches, Townsend's Solitaires and Warner Mountain Fox Sparrows provided the greatest bird chorus in the morning and evenings that one could hear anywhere. White fir is the most abundant tree; although the western yellow pine almost equals it in abundance. There are also occasional lodgepole pine, western white pine and incense cedar. Snow brush (*Ceanothus velutinus*) covers the grounds around the station.

The lookout house is perched on the highest point, from which Deadhorse Rim, Slide Mountain, the desert beyond Paisley, Round Mountain, Abert Rim, Drake's Peak, Shoestring Butte, Crane Mountain and Cougar Peak can be seen. Over all this area only two signs of man can be seen, a road far in the distance and another lookout station over ten miles away. Snow banks are found near the station into July. From Eagle Spring, which is to the west of the lookout, a branch of Deer Creek starts. Green grass, false hellebore (*Veratrum* sp., probably *viride*), and quaking aspen trees surround the spring and creek. One-half mile to the southeast of Coleman Point is the head of Spring Creek. It is in a wide canyon with the same cover as Eagle Spring but with the addition of many willows and sage. This is one of the great places for bird life around Coleman Point, but unfortunately Marshall was able to spend only several hours at this beautiful spot.

Hager Mountain, Section 25, Township 29 South, Range 14 East. Elevation, 7,614 feet. June 28 to September 1. A large mountain rising alone above the surrounding forest, eight miles south of Silver Lake. The slopes are covered with western yellow pine, and at higher elevations it mingles with white fir. At timberline, on the north side, is a small grove of western white pine. Above timberline, which is around 7,000 feet, is a large open area covered with sage, rabbit

brush and a few curl-leaf mountain mahogany (*Cerocarpus ledifolius*) trees. There is also a good growth of bunchgrass (*Festuca* sp.), which attracts large numbers of mule deer. Snow banks lie on top until July 18. There are two points on the summit with a saddle between. On the highest point is perched the lookout station. The view from here is without parallel. On a clear day, one may scan the Cascade skyline from Mount Shasta to Mount Jefferson. To the north lies Paulina Marsh, Fort Rock Valley, and Paulina Peak. To the east, one can look far out over the high desert to Wagontire Mountain. To the southeast stretches Winter Ridge. To the south lies Thompson Reservoir and Sycan Marsh. Beyond that one can see Horsefly, Gearhart and Slide Mountain, some of which are as much as fifty miles away. To the west and southwest lies the Klamath Indian Reservation.

To bring water up to the station was a most difficult task, for it had to be brought from Hager Spring, situated near the western foot of the mountain, over two miles of steep, rough mountain trail. On the southwest side lies another and much larger spring, which comes out of the rocks at the head of a large canyon. This is South Hager Spring. It is lined with large groves of aspen while Hager Spring has only a few willows around it. McAllister's trips to these two springs provided him with most of his records, for the barren summit of the mountain was practically devoid of bird life. Sparrow Hawks and Rock Wrens were the only inhabitants of the summit, except for occasional stragglers and migrants.

LIST OF BIRDS

WESTERN GREBE (*Aechmophorus occidentalis*). On June 25 we paddled into the marshes at the south end of Dog Lake and there observed several pairs of birds with young in the downy stage. We managed to catch a young one, which upon release followed the boat about as if we were its parents. On June 26 McAllister caught another young one.

PIED-BILLED GREBE (*Podilymbus podiceps podiceps*). Dog Lake, June 24. On June 26 a family of eight young was found just out of the nest.

WHITE PELICAN (*Pelecanus erythrorhynchos*). A flock of about fifty was observed on June 7 and again between June 23 and 27 at Dog Lake. Although they frequently rested in the marsh, they showed no indication of nesting. They probably came from Clear Lake which is not far distant.

FARALLON CORMORANT (*Phalacrocorax auritus albociliatus*). A few individuals were noted at Dog Lake on June 25.

TREGANZA'S HERON (*Ardea herodias treganzai*). Bly Marsh, August 6 and September 2. Antelope Flat, June 22. A common resident along Silver Creek near Paulina Marsh.

AMERICAN EGRET (*Casmerodius albus egretta*). One bird was found at the edge of the Chewaucan Marsh along the Fremont Highway, northwest of Valley Falls, June 27.

ANTHONY'S GREEN HERON (*Butorides virescens anthonyi*). One bird was discovered on Silver Creek near Silver Lake Ranger Station, June 21.

BLACK-CROWNED NIGHT HERON (*Nycticorax nycticorax hoactli*). One adult bird was observed at Dog Lake on June 25.

AMERICAN BITTERN (*Botaurus lentiginosus*). One bird was seen at Dog Lake on June 25.

COMMON CANADA GOOSE (*Branta canadensis canadensis*). Several large family groups were seen on June 25 at the south end of Dog Lake, where we also found three deserted nests on tule islands, which had clutches of unmolested eggs. On June 27 McAllister saw several family groups along the Fremont Highway at the edge of Summer Lake. The settlers at Silver Lake said they bred regularly on Paulina Marsh.

COMMON MALLARD (*Anas platyrhynchos platyrhynchos*). First seen at Antelope Flat on May 31 and from then on throughout the summer at Dog Lake, Fishhole Mountain, Paulina Marsh, Summer Lake, Silver Creek and Johnson Meadows. From this it may be seen that they breed commonly throughout the region, wherever conditions are suitable. On June 20 Marshall flushed a female from a nest on the side of Fishhole Mountain about seventy-five feet from a small, deep pond. The nest was on the ground next to a rotten log beneath a small white fir, and was lined with down and needles and contained three eggs. It is interesting to note that the pond contained no shallow water; the edge was a straight drop. Also, there was no vegetation around the pond except for the trees.

GADWALL (*Chaulelasmus streperus*). On June 25 we flushed a number of these ducks from the heavy cover of a tule island at the south end of Dog Lake, and found two nests. They contained eight and nine eggs, respectively, and were lined with down and grasses. On June 26 McAllister flushed a Gadwall off a nest containing five dark cream eggs and four of her own, which were smaller and creamy white. She had probably been imposed upon by a Redhead, as is so often the case.

CINNAMON TEAL (*Anas cyanoptera cyanoptera*). We found this the most abundant duck on June 24 at Dog Lake.

REDHEAD (*Nyroca americana*). Several pairs were seen at Dog Lake on June 24.

RUDDY DUCK (*Erismatyura jamaicensis rubida*). Two pairs were noted at Dog Lake on June 25.

TURKEY VULTURE (*Cathartes aura septentrionalis*). Individuals were observed throughout the forest from June 5 at Bly to August 28 at Coleman Point.

SHARP-SHINNED HAWK (*Accipiter striatus velox*). Hager Mountain, August 7 and Coleman Point, August 26. On August 21 Marshall saw one being chased by a flock of Robins at Spring Creek, half a mile southeast of Coleman Point.

COOPER'S HAWK (*Accipiter cooperii*). A pair flew over Hager Mountain on August 31 and September 1.

WESTERN RED-TAILED HAWK (*Buteo borealis calurus*). Individuals were observed throughout the forest from June 5 to Bly until August 28 at Coleman Point. On August 7 the first numbers of apparently migratory birds were noted over Hager Mountain.

SWAINSON'S HAWK (*Buteo swainsoni*). One bird was seen over Hager Mountain on August 9.

FERRUGINOUS ROUGH-LEG (*Buteo regalis*). Three individuals spent August 10 hunting over Hager Mountain from which they went on to the southward.

During August, McAllister frequently saw buteos in phases which he could not identify. Although Hager Mountain is ideally suited for hawks, he did not observe

any but Sparrow Hawks until the first week of August. From this he concluded that all the hawks he saw constituted the first of an early, light, fall migration.

GOLDEN EAGLE (*Aquila chrysaetos canadensis*). Two adults and two immature birds worked irregularly over Hager Mountain from June 12 to the end of July.

NORTHERN BALD EAGLE (*Haliaeetus leucocephalus washingtoniensis*). Two adults circled over Dead Indian Lookout on June 14. One adult near Bly on August 6.

MARSH HAWK (*Circus cyaneus hudsonius*). Hager Mountain, July 19 and August 9 to August 26. It was surprising for the first time to see Marsh Hawks flying over Hager, but they appeared intermittently throughout August, individually and in pairs. Sometimes they glided and flapped low over the summit of the mountain most of the day, alighting at intervals to rest on old snags, or else they drifted by in a southerly direction. On August 10, at Coleman Point, a Marsh Hawk spent the day in a similar fashion. The only time they were seen in customary surroundings was at Bly Marsh on August 6 by Albert Marshall.

PRAIRIE FALCON (*Falco mexicanus*). At Antelope Flat, on June, 10, two birds were seen along the rimrock where they probably nest. One bird worked around Hager Mountain on August 20.

WESTERN PIGEON HAWK (*Falco columbarius bendirei*). One bird joined company with the Sparrow Hawks on Hager Mountain on August 11, and caught dragonflies in the same fashion as they did.

EASTERN SPARROW HAWK (*Falco sparverius sparverius*). Noted throughout the forest between May 31 at Antelope Flat and September 1 at Hager Mountain. On Hager there were as many as three pairs, one of which bred on the side of the mountain in an old hollow snag. They were extremely audacious and chased everything from the Golden Eagle to the Prairie Falcon. Their chief food throughout August was a large dragonfly which swarmed over the mountain on hot days. They would neatly catch and devour the dragonflies on the wing without alighting.

SIERRA GROUSE (*Dendragapus obscurus sierrae*). A common resident on both Hager Mountain and Coleman Point. First observed on June 12 and last seen September 1 on Hager. On July 20, at Hager, an old hen, which was so tame as to allow one to walk up and all but touch her, brought her family of half-grown young up the mountain, and spent the rest of the summer on the summit.

SAGE HEN (*Centrocercus urophasianus*). Flocks were seen in the sage south of Silver Lake on June 11 and August 21.

SANDHILL CRANE (*Grus canadensis tabida*). On June 16, while camped on the edge of Sycan Marsh, McAllister heard a number of these birds calling in the evening. The birds are well known to the settlers in this region, who said they were also found on Seller's Marsh and Klamath Marsh.

AMERICAN COOT (*Fulica americana americana*). First seen at Dog Lake on June 7. Later, on June 25 at Dog Lake, a family of young coots was seen on the lake, and a nest of eight eggs was found.

KILLDEER (*Charadrius vociferus vociferus*). First seen May 31 at Antelope Flat. McAllister, while driving a truck near Thompson Reservoir on June 11, noticed a mother frantically 'playing injured' just in front of the truck, which he stopped in time to see a family of baby Killdeers scurry out of the ruts in the road. They were just out of the nest and he managed to catch one. Also noted at Bly on June 5 and August 6 and at Fishhole Mountain on June 12.

WILSON'S SNIBE (*Capella delicata*). Bly Marsh, June 3. Winnowing at evening on Dog Lake, June 25.

SPOTTED SANDPIPER (*Actitis macularia*). Fishhole Mountain, June 13; Lapham Reservoir, June 20; and Dog Lake, June 24.

WESTERN WILLET (*Catoptrophorus semipalmatus inornatus*). Numerous about Bly between June 3 and June 8, and Sycan Marsh, June 15 to 18. We were both surprised to see them playing about in the sage and junipers as far as a mile from water. It was amusing to see them teeter crazily, as they tried to alight in the slender top of a juniper.

WILSON'S PHALROPE (*Steganopus tricolor*). Several pairs were seen at Dog Lake on June 24, which were breeding near the Black Tern colony.

CALIFORNIA OR RING-BILLED GULL (*Larus californicus* or *L. delawarensis*). A few at Dog Lake on June 24. On July 22 a gull flew over Hager Mountain Lookout going due north.

FORSTER'S TERN (*Sterna forsteri*). One bird was seen at Drew's Reservoir on June 26. Bly Marsh, August 6.

BLACK TERN (*Chlidonias nigra surinamensis*). Common on Sycan Marsh, June 16 and Dog Lake, June 25. At Dog Lake there were nests scattered about on small tule islands. We found one with two downy young and another with a dead young and an egg. The other nests were slightly raised platforms of grass and tule, six inches in diameter, and in one inch of water.

WESTERN MOURNING DOVE (*Zenaidura macroura marginella*). This bird was seen in small numbers on meadows and flats throughout the region between May 31 at Antelope Flat and September 1 at Silver Lake.

PACIFIC HORNED OWL (*Bubo virginianus pacificus*). Fishhole Mountain, June 11 and June 20. Finley Corrals, June 30. Coleman Point July 3 and August 1. Hager Mountain, August 27.

NUTTALL'S POOR-WILL (*Phalaenoptilus nuttalli nuttalli*). First heard at evening east of Sycan Marsh on June 15. Heard regularly over Hager Mountain between June 28 and August 31.

PACIFIC NIGHTHAWK (*Chordeiles minor hesperis*). Dog Lake, June 7 and 24. Sycan Marsh, June 15.

VAUX'S SWIFT (*Chaetura vauxi*). Flocks were observed at Finley Corrals on June 28 and July 31. On Coleman Point, Marshall saw these birds two or three times a week between July 2 and August 26, but never more than two or three at a time. At Eagle Spring, just below Coleman, however, a flock of nineteen was seen on August 26.

RUFIOUS HUMMINGBIRD (*Selasphorus rufus*). On September 2, the matrimonial or desert vine around the Silver Lake Ranger Station was alive with Rufous Hummingbirds. The surprising thing was that there were no males among these birds.

CALLIOPE HUMMINGBIRD (*Stellula calliope*). First seen at Coleman Point on July 3, and from then on, frequently throughout the summer, until August 24. One once flew inside the lookout station through an open window, hovered in the middle of the room, and then darted out the only other open window in the station on the opposite side of the room. Also, a female was seen at Hager Spring, and another at South Hager Spring which spent July and August there. At Hager Spring, one was observed taking a bath. It would gently lower itself and hit the surface of the pool like a tiny helicopter, and repeat this performance until sufficiently wet. At no time during the summer were male Calliope Hummingbirds seen; all were females.

WESTERN BELTED KINGFISHER (*Megasceryle alcyon caurina*). Silver Creek, September 2.

RED-SHAFTED FLICKER (*Colaptes cafer collaris*). Found commonly throughout the forest between June 1 at Cabin Springs and September 1 on Hager Mountain. Two pairs nested in old white-fir snags on Hager Mountain.

WESTERN PILEATED WOODPECKER (*Ceophloeus pileatus picinus*). Seen occasionally on Coleman Point from June 3 to August 16.

LEWIS'S WOODPECKER (*Asyndesmus lewis*). Bly, June 6. This species was found nesting high in an old yellow pine near Sycan Marsh, June 17.

RED-NAPED SAPSUCKER (*Sphyrapicus varius nuchalis*). One bird was observed in an aspen grove on Silver Creek, June 20.

WILLIAMSON'S SAPSUCKER (*Sphyrapicus thyroideus thyroideus*). Very common on Coleman Point from July 4 to August 31. Sometimes two pairs could be seen on one tree. They were, however, seen only sparingly on Hager Mountain. On July 10, Marshall found a nest forty-five feet up in the dead top of a white fir. Young could be heard calling from the hole. These birds are very quiet and secretive. Very seldom were their calls ever heard.

MODOC WOODPECKER (*Dryobates villosus orius*). Found throughout the forest between June 4 on Teatable Mountain and September 1 on Hager Mountain.

NORTHERN WHITE-HEADED WOODPECKER (*Dryobates albolarvatus albolarvatus*). Lantern Flat, a large flat east of Finley Corrals, July 1. Coleman Point, July 7 and August 3.

ARCTIC THREE-TOED WOODPECKER (*Picoides arcticus*). Fishhole Mountain, June 13, 20 and 23.

EASTERN KINGBIRD (*Tyrannus tyrannus*). One bird was calling lustily in the timber on Hager Mountain, July 15.

ARKANSAS KINGBIRD (*Tyrannus verticalis*). Bly, June 3 through June 6, and August 6. Silver Lake, May 31 and June 13.

SAY'S PHOEBE (*Sayornis saya saya*). Silver Lake, May 31.

LITTLE FLYCATCHER (*Empidonax traillii brewsteri*). First seen at Finley Corrals on July 1. Later seen at South Hager Spring, Coleman Point and Spring Creek. Last seen August 26 on Spring Creek.

HAMMOND and WRIGHT'S FLYCATCHERS (*Empidonax hammondi* and *E. wrighti*). These little flycatchers were abundant from June 2 at Cabin Springs to September 2 at Finley Corrals. Because of their close similarity we never knew whether we were seeing *hammondi* or *wrighti*, although we presume that most of them were of the former species, since by far the majority were found fairly high up in the heavy timber. Wherever we went, these birds were always heard calling from the timber, even on warm afternoons, when everything else was still.

WESTERN FLYCATCHER (*Empidonax difficilis difficilis*). Fishhole Mountain, June 14, and Hager Spring, August 10.

WESTERN WOOD PEWEE (*Myiochanes richardsoni richardsoni*). A common resident throughout the forest from June 6 at Bly and Teatable Mountain to September 2 at Finley Corrals.

OLIVE-SIDED FLYCATCHER (*Nuttallornis mesoleucus*). First seen on Teatable Mountain on June 6. Later observed at Fishhole Mountain and Finley Corrals. Last seen at Coleman Point on August 26.

VIOLET-GREEN SWALLOW (*Tachycineta thalassina lepida*). On July 11, a few birds flew over Hager Mountain.

TREE SWALLOW (*Iridoprocne bicolor*). First seen at Bly on June 5. Later seen at Thompson Reservoir and Fishhole Mountain. Last seen at Dog Lake on June 25.

BARN SWALLOW (*Hirundo erythrogaster*). First seen at Bly on June 3. Later seen at Dog Lake and Thompson Reservoir. Last seen on August 8, when a small flock flew over Hager Mountain.

NORTHERN CLIFF SWALLOW (*Petrochelidon pyrrhonota pyrrhonota*). Dog Lake, June 7.

GRAY JAY (*Perisoreus canadensis griseus*). First seen at Cabin Springs on June 5, where they came regularly to be fed flapjacks. Also observed at Fishhole Mountain and Finley Corrals. At Coleman Point they were seen often from July 2 up to the time Marshall left on August 31, and were quite fond of the suet that was put out for them.

BLUE-FRONTED JAY (*Cyanocitta stelleri frontalis*). Found throughout the forest from June 6 at Bly to August 26 on Coleman Point.

AMERICAN MAGPIE (*Pica pica hudsonia*). First seen near Paulina Marsh on May 31. Later seen at Bly and Dog Lake. Last seen at Silver Lake on September 2.

AMERICAN RAVEN (*Corvus corax sinuatus*). First seen at Dog Lake on June 7. Later seen at Fishhole Mountain and Hager Mountain. Last seen at Coleman Point on August 24. On the few occasions that we saw these birds from our lookouts, they were in large flocks which would circle and drift above us, sometimes continuing this for long periods of time.

CLARK'S NUTCRACKER (*Nucifraga columbiana*). Large numbers were at Shelvin on June 2. Small flocks on Coleman Point and Hager Mountain up to September 1 at Hager.

SHORT-TAILED CHICKADEE (*Parus gambeli abbreviatus*). Found to be an abundant resident over the entire forest from June 1 at Cabin Springs to September 1 at Hager Mountain. On June 12 at Fishhole Mountain, Marshall found chickadees carrying nesting material into a yellow pine log three feet in diameter, which was lying flat on the ground. The entrance was a crack in the log, one foot from the ground.

ROCKY MOUNTAIN NUTHATCH (*Sitta carolinensis nelsoni*). Fairly common in all forest areas from June 6 at Bly to September 1 on Hager Mountain.

RED-BREASTED NUTHATCH (*Sitta canadensis*). Common in all forest areas from June 1 at Cabin Springs to August 31 on Coleman Point. Especially abundant at high elevations.

BLACK-EARED NUTHATCH (*Sitta pygmaea melanotis*). First seen at Thompson Reservoir on June 11. Last seen on Coleman Point on July 31. This bird was abundant in the northern part of the forest, where there are solid stands of yellow pine, but only occasional in the southern part, where the timber is only partly yellow pine.

SIERRA CREEPER (*Certhia familiaris zelotes*). Seen throughout the forest between June 6 at Teatable Mountain and September 1 on Hager Mountain. On July 3 at Hager, McAllister watched a pair taking food to their young. The nest was in a bark crevice thirty feet up in an old yellow-pine snag.

WESTERN HOUSE WREN (*Troglodytes aëdon parkmanii*). First seen on June 6 at Bly and Teatable Mountain. Other individuals noted at Dog Lake, Fishhole Mountain and Coleman Point. The aspens at Spring Creek on August 26 were alive with them. Also, large numbers appeared in the brush at Hager Mountain on August 27, where they had not been previously noted. These two records would indicate a migration.

WESTERN MARSH WREN (*Telmatorhynchus palustris plesius*). Dog Lake, June 25.

CAÑON WREN (*Catherpes mexicanus conspersus*). One adult bird came in on August 20 during a heavy morning fog and spent the day about Hager Mountain lookout station. On August 23 an adult spent the morning around Coleman Point Lookout. It continually gave a ringing call that could be heard from a great distance. Both birds offered an excellent chance for observation as they were quite tame.

COMMON ROCK WREN (*Salpinctes obsoletus obsoletus*). First seen at Bly on June 3. Also found at Dog Lake and Silver Lake. On Hager Mountain they were abundant

among the rocks and brush above timberline. Except for stragglers and the Sparrow Hawks, they were the only birds which inhabited the mountain top. Last seen at Hager on September 1.

SAGE THRASHER (*Oreoscoptes montanus*). Silver Lake, June 12.

WESTERN ROBIN (*Turdus migratorius propinquus*). Found throughout the region from June 3 at Bly to September 1 on Hager Mountain.

SIERRA HERMIT THRUSH (*Hylocichla guttata sequoiensis*). Found throughout the forest from June 1 at Cabin Springs to August 30 on Coleman Point. Not until the woods at evening echoed with their songs, did one fully realize the abundance of this shy bird.

TOWNSEND'S SOLITAIRE (*Myadestes townsendi*). Noted throughout the forest from June 13 at Fishhole Mountain to August 17 on Coleman Point. Sometimes one would never know that this bird existed until the solitaires from all around would go to the tops of the firs and all begin singing at once. On August 16, McAllister watched parents feeding berries to spotted young at South Hager Spring.

MOUNTAIN BLUEBIRD (*Sialia currucoides*). Seen in more open country at lower elevations. First noted on June 5 near Euwana Camp on Quartz Mountain. Later noted at Bly, Bear Flat and Dog Lake. Last seen at Finley Corrals on July 1.

WESTERN GOLDEN-CROWNED KINGLET (*Regulus satrapa olivaceus*). Flocks were frequently seen from June 1 at Cabin Springs to September 1 on Hager Mountain.

WESTERN RUBY-CROWNED KINGLET (*Regulus calendula cineraceus*). One of the common birds in the forest from May 31 at Silver Lake to August 30 on Coleman Point. During June and July the forest was constantly filled with their singing.

WESTERN PIPIT (*Anthus spinoletta pacificus*). A few birds flew over the summit of Hager Mountain on September 1.

CALIFORNIA SHRIKE (*Lanius ludovicianus gambeli*). One bird was noted near Dog Lake on June 7.

CASSIN'S VIREO (*Vireo solitarius cassinii*). First noted at Bly on June 6 and last noted at Spring Creek on August 26. Other individuals seen at Dog Lake, Fishhole Mountain, Coleman Point and South Hager Spring.

WESTERN WARBLING VIREO (*Vireo gilvus swainsonii*). Found in aspens and willows along most of the watercourses from May 31 at Silver Lake to August 29 at Eagle Spring near Coleman Point.

ROCKY MOUNTAIN ORANGE-CROWNED WARBLER (*Vermivora celata orestera*). Numerous in aspens at South Hager Spring on August 19 and 23, and among the willows at Spring Creek on August 21 and 26.

ROCKY MOUNTAIN YELLOW WARBLER (*Dendroica aestiva morcomi*). Found along watercourses in the willows and aspens, and in shade trees about ranches and towns from May 31 at Silver Lake to September 2 at Silver Lake.

AUDUBON'S WARBLER (*Dendroica auduboni auduboni*). A common forest resident, especially at higher elevations, from June 1 at Cabin Springs to September 1 on Hager Mountain.

BLACK-THROATED GRAY WARBLER (*Dendroica nigrescens*). One individual at Hager Spring on August 20.

TOWNSEND'S WARBLER (*Dendroica townsendi*). Several noted at South Hager Spring on August 23 and at Spring Creek on August 26. One appeared among a flock of Audubon Warblers at Coleman Point on August 20.

MACGILLIVRAY'S WARBLER (*Oporornis tolmiei*). Numerous at Spring Creek on August 26 and at South Hager Spring between August 19 and August 23. A few were also noted at Coleman Point on August 14 and 17 and at timberline on Hager Mountain on August 18.

WESTERN YELLOW-THROAT (*Geothlypis trichas occidentalis*). A few were present at Dog Lake on June 23.

NORTHERN PILEOLATED WARBLER (*Wilsonia pusilla chryseola*). Noted at Finley Corrals on June 28, timberline on Hager Mountain on August 18, South Hager Spring between August 19 and August 23, and at Spring Creek on August 26.

ENGLISH SPARROW (*Passer domesticus domesticus*). Seen about Bly and Lakeview.

WESTERN MEADOWLARK (*Sturnella neglecta*). Bly, June 3, and Drew's Reservoir, June 26.

YELLOW-HEADED BLACKBIRD (*Xanthocephalus xanthocephalus*). A small colony was found at Dog Lake on June 25, where a nest was discovered in the tules one and one-half feet above the water. It contained two eggs and two newly hatched young.

NEVADA RED-WING (*Agelaius phoeniceus nevadensis*). Common at all the marshes we visited from June 3 at Bly to September 2 at Bly.

BULLOCK'S ORIOLE (*Icterus bullockii*). Common between May 31 and June 21 among the aspens along Silver Creek near Silver Lake, where several nests were found.

BREWER'S BLACKBIRD (*Euphagus cyanocephalus*). First seen at Silver Lake on May 31 and last seen at Bly on September 2. Also noted at the Lapham Reservoir, Paisley, Lakeview and at Dog Lake, where a nest was found on June 24 at the edge of the lake. It was concealed on the ground in the grass and weed-cover, six inches high, and contained five eggs.

WESTERN TANAGER (*Piranga ludoviciana*). Very common throughout the forest between June 2 at Shelvin to August 31 on Coleman Point. At Shelvin, a large logging camp where they were especially numerous, they were found foraging about the streets and dooryards in company with large flocks of Clark's Nutcrackers. This apparently went on with a great deal of success, as there was plenty of refuse. At Coleman Point, also, they became very tame, and often came to the door of the station after eggshells that had been thrown out.

WESTERN EVENING GROSBEAK (*Hesperiphona vespertina brooksi*). Flocks were seen at Fishhole Mountain on June 20, Finley Corrals on June 28, and a few at Hager Mountain on July 12. Noted frequently from July 2 to August 20 on Coleman Point. One immature bird flew against the window of the Coleman Point station on August 20. It then rested for several minutes on the guy cable, and later in the afternoon repeated this performance for a second and third time. On the third occasion, Marshall held a soda cracker out to the bird and it took several nips at it, apparently tasting the salt on it, as it did not break off and eat any of the cracker. The bird then flew off, but late that afternoon it again flew against a window. This time, though, it flew off when Marshall approached it with some salt. The bird apparently came in with a flock that spent the early morning around Coleman Point but remained instead of leaving with the others.

CASSIN'S PURPLE FINCH (*Carpodacus cassinii*). Observed through the summer, first at Dog Lake on June 7, later at Fishhole Mountain, Finley Corrals, South Hager Spring, and last at Coleman Point on August 27.

COMMON HOUSE FINCH (*Carpodacus mexicanus frontalis*). Seen about Bly from June 3 to 7, and at Paisley and Lakeview on June 26.

NORTHERN PINE SISKIN (*Spinus pinus pinus*). First seen at Bly on June 3, then at Finley Corrals on July 1, and from then on frequently on Coleman Point up to August 26. Only a small flock was noted at Hager Mountain on July 12.

BENDIRE'S CROSSBILL (*Loxia curvirostra bendirei*). Flocks were seen regularly on Coleman Point from July 3 to August 18. Also noted at Dog Lake on June 24 and at Hager Mountain on August 18.

GREEN-TAILED TOWHEE (*Oberholseria chlorura*). Noted abundantly at Bly on June 6, the summit of Fishhole Mountain on June 20, Dog Lake July 24, and Spring Creek on August 26. Found from June 28 to September 1 around timberline on Hager Mountain.

NEVADA SAVANNAH SPARROW (*Passerculus sandwichensis nevadensis*). Bly, June 30.

NORTHERN SAGE SPARROW (*Amphispiza belli nevadensis*). Common about Silver Lake from May 31 to September 2.

THURBER'S JUNCO (*Junco oreganus thurberi*). Found throughout the forest from May 31 at Cabin Springs to September 1 on Hager Mountain.

WESTERN CHIPPING SPARROW (*Spizella passerina arizonae*). Noted from June 6 at Bly to August 26 at Spring Creek.

BREWER'S SPARROW (*Spizella breweri breweri*). First noted at Bly on June 6 and then at Silver Lake. Last seen on June 16 on the east side of the Sycan Marsh, where a nest with four eggs was found in the sage.

OREGON WHITE-CROWNED SPARROW (*Zonotrichia leucophrys oriantha*). Seen at Finley Corrals from June 28 to July 1 and again on July 17. One immature bird at Spring Creek on August 21, and a number of adults and several immatures seen at Spring Creek on August 26.

WARNER MOUNTAINS FOX SPARROW (*Passerella iliaca fulva*). Found throughout the forest from June 6 at Teatable Mountain to August 30 on Coleman Point. Near Fishhole Mountain, a partially albinistic bird was seen on June 20.

LINCOLN'S SPARROW (*Melospiza lincolni lincolni*). Noted at Finley Corrals from June 28 to July 1, and again on July 29. One individual was seen at Spring Creek on August 26.

MODOC SONG SPARROW (*Melospiza melodia fisherella*). Noted along water-courses in willows and aspens throughout the area from May 31 at Silver Lake to September 2 at Silver Lake.

Portland
Oregon

A STUDY OF THE NESTING ACTIVITIES OF THE AMERICAN REDSTART¹

BY LOUIS STURM

INTRODUCTION

ALTHOUGH the Redstart (*Setophaga ruticilla*) is one of the common warblers with a wide range throughout the northeastern United States and Canada, its life history, like that of many common birds, has received relatively little attention from investigators. Since Chapman's (1917: 287-295) summary account, Hickey (1940: 254) has described the territorial behavior and display flight of the males, and Mousley (1924: 284-288) and Baker (1944: 83-90) have given short accounts of the nesting behavior. The following study was made on

¹ Contribution from Franz Theodore Stone Laboratory, Ohio State University, Put-in-Bay, Ohio.