

THE CONDOR

VOLUME 45

NOVEMBER-DECEMBER, 1943

NUMBER 6

BIRDS OF THE KINGS CANYON NATIONAL PARK AREA OF CALIFORNIA

By JOSEPH S. DIXON

The present check-list of birds and a companion list of mammals of Kings Canyon National Park represent the combined efforts of several naturalists and trained observers whose field work in this area has extended from 1916 to 1942. In this quarter of a century the following institutions and individuals have participated importantly in this work by collecting specimens.

In the summer of 1916 the Museum of Vertebrate Zoology of the University of California organized and sent an expedition to study the wildlife of the Kings Canyon area. The typical trans-Sierran section chosen extended westward from Kearsarge Pass on the extreme crest of the Sierra, which is now the eastern boundary of the Park, down by Bullfrog and Charlotte lakes and Bubbs Creek to the main south fork of Kings River where studies were made at Kanawyers, Zumwalt Meadow, Roaring River and Cedar Grove. Later in the fall, field work was continued westward at Horse Corral and Summit meadows, Hume, General Grant Grove, and Dunlap, and thence down to Minkler where the Kings River widens out as it enters the San Joaquin Valley. Study of the Owens Valley portion of this section was completed later.

This initial work was carried on for the University by H. S. Swarth, Joseph S. Dixon and H. G. White who recorded their findings in 230 pages of field notes and 119 photographs. In addition to this they collected and preserved as study specimens 382 birds, 556 mammals, 334 reptiles and 49 amphibians. This material plus specimens and records collected in the General Grant Section by Professor William T. Shaw of Fresno State College, together with critical material collected in the summer of 1942 by the writer and representatives from the Museum of Vertebrate Zoology in Kings Canyon form the basic specimen material for the names, occurrences and distribution set forth in this report. In July, 1942, assisted by my son David and two elderly pack mules, I made a survey of the extreme northern part of the Park that lies north of the Goddard Divide along the headwaters of the South Fork of the San Joaquin River. This area is the only part of the Park that lies outside of the Kings River drainage. Several species new to the Park list were detected.

After the creation of Kings Canyon National Park by Congress on February 18, 1940, various representatives of the Department of the Interior made trips there to survey the wildlife. Dr. H. C. Bryant made observations during his extended travels through the Park while serving as Consultant in 1940-41. His own observations and the records of former Park Ranger Bruce I. Barclay, Ranger-naturalist Basil Jamison and Professor William T. Shaw made it possible for Dr. Bryant to include 52 species of mammals and 107 kinds of birds in his 1941 check-list for the Park.

Between July 8 and 31, 1936, Mr. E. Lowell Sumner, Jr., visited Bubbs Creek,

Paradise, South Fork of Kings, Goddard Canyon, Middle Fork, Daugherty Creek and Kearsarge Pass. In the summer of 1940 he covered the main parts of the Park while making his "Range Management and Wildlife Study." Many records are included here from his report of May 23, 1941. In August, 1941, Dr. James Moffett and the writer investigated fish and wildlife conditions at Kings Canyon, Bubbs Creek, East Lake, Reflection Lake, Vidette Lakes, Lewis Creek, and Cedar Grove and compared wildlife conditions with those found there a quarter of a century before in 1916.

It is realized that the present check-lists do not include all of the different kinds of birds and mammals that will eventually be found in the Park. It is probable that quite a few species that have been found in Sequoia and Yosemite national parks will in time also be found in Kings Canyon. Certain records have been made just outside the Park for species that may in the future be found to occur rather commonly within it. Thus a record marked with an asterisk indicates that the locality is *outside* but believed close enough to the Park boundary to indicate that the species occurs in the Park.

In order to give proper credit and to fix the authority for the various records, the name of the person vouching for the record is given. In critical instances where actual specimens have been collected, the specimen numbers are given. Unless indicated otherwise, specimen numbers refer to the Museum of Vertebrate Zoology. Unpublished field notes are filed in the Museum of Vertebrate Zoology at Berkeley and in the files of the National Park Service at San Francisco.

Most of the reports on the birds of Kings Canyon consist of original field notes or are in manuscript form as indicated in the following list of references: Barclay, B. S., and Jamison, B. E., Revised Check-list of Birds of General Grant National Park, December 1, 1937 (MS); Bryant, Mrs. A. M., field notes, 1940-41; Bryant, H. C., Check-list of birds of Kings Canyon National Park, completed July 7, 1941 (MS); Dixon, Joseph S., field notes and specimens, 1916, 1940, 1941, 1942; Graff, A., Bird List of General Grant National Park, California (MS); Hopping, Guy, General Grant National Park Monthly Report, September, 1935 (MS); Miller, Alden H., field notes, May, 1942; Shaw, W. T., A Provisional Check-list of Birds of General Grant National Park, California, 1936 (MS); Swarth, H. S., Revision of the Avian Genus *Passerella*, with Special Reference to the Distribution and Migration of the Races in California, Univ. Calif. Publ. Zool., 21, 1920:75-224, and field notes and specimens, 1916; Sumner, E. L., Jr., Wildlife Distribution in Kings Canyon, 1941 (MS); White, H. G., field notes and specimens, 1916.

Thanks are extended to all the institutions and people who have so generously assisted by granting use of personal field notes or by granting free use of specimens. Identification of "difficult" bird specimens, including song sparrows, small flycatchers and red-winged blackbirds, has been kindly furnished by Dr. Alden H. Miller, Director of the Museum of Vertebrate Zoology. This aid is particularly appreciated because in these instances actual specimens were found to be essential to proper identification of the breeding races; Kings Canyon seems to be an area where the Yosemite and southern Sierra faunas meet.

Thanks are also due Park Superintendent Scoyen and Ranger Gim, as well as to Mrs. Joseph Grinnell and the entire group of officers and advanced students from the University of California who gave valuable assistance to the field investigations in Kings Canyon in May, 1942.

Colymbus nigricollis californicus. Eared Grebe. Occasional fall visitant at Sequoia Lake* (Bryant, 1941). Hume Lake*, August 23, 1916, one seen (Dixon); three seen, August 17, 1916 (Swarth).

Podilymbus podiceps podiceps. Pied-billed Grebe. Occasional fall visitant. One seen at Hume Lake*, August 23, 1916 (Dixon).

Ardea herodias hyperonca. California Blue Heron. Occasional visitant at Sequoia Lake* (Bryant, 1941). One seen at headwaters of the Middle Fork, September 3, 1941 (Sumner). Boulder Creek*, one seen, September 22, 1916 (Dixon). Hume*, one seen, August 17, 1916 (Swarth).

Egretta thula brewsteri. Brewster Snowy Egret. A rare migrant. On July 29, 1942, at the lower end of McClure Meadow in Evolution Valley where there was a series of shallow, sedgy fresh-water ponds, I found a lone Snowy Egret feeding in one of these ponds and was able to examine it for 20 minutes with 8-power binoculars in good light at a distance of 160 feet. The bird had a height of about 24 inches. Its bill and legs were black. When the egret foraged along the creek bank, its feet were seen to be distinctly yellowish.

Anas platyrhynchos platyrhynchos. Common Mallard. Occasional visitant to the park. At Bullfrog Lake, 10,634 feet, on September 4, 1916, five were seen and recorded both by Swarth and Dixon in 1916.

Mareca americana. Baldpate. Occasional visitant to Sequoia Lake*. Observed there October 21-22, 1940, by A. E. Thompson (Bryant, 1941).

Nettion carolinense. Green-winged Teal. Occasional fall migrant. A flock of seven was observed at Bullfrog Lake, 10,634 feet, August 27, 1916 (Dixon).

Nyroca valisineria. Canvas-back. Occasional winter visitant. Noted at Sequoia Lake*, November 24-25, 1940, by A. E. Thompson (Bryant, 1941).

Nyroca affinis. Lesser Scaup Duck. Winter visitant. At Sequoia Lake* on November 25, 1940, 168 were noted by A. E. Thompson (Bryant, 1941).

Erismatura jamaicensis rubida. Ruddy Duck. Occasional visitant to Sequoia Lake*. Seen there on October 21, 1940, by A. E. Thompson (Bryant, 1941).

Cathartes aura. Turkey Vulture. An occasional summer visitant. Noted at Cedar Grove, August 22, 1941 (Dixon). Observed at General Grant in 1936 (Shaw).

Astur atricapillus. Goshawk. Resident in Canadian Zone (Bryant, 1941). One seen, September 2, 1940, at "Little Upper Pete" Meadow by Sumner. On May 12, 1942, an adult female hawk of this species was seen hunting along the ridge just west of Frypan Meadow. From the actions of the bird it was thought to be nesting in the red firs near the head of Lewis Creek (Dixon).

Accipiter velox velox. Sharp-shinned Hawk. An uncommon summer visitant. General Grant, 1937 (Barclay and Jamison). Observed at Grant, 1940 (Bryant, 1941). One seen at Scaffold Meadow, September 24; one at Moraine Meadow, September 25; and one above Hotel Creek Trail, September 29, 1940 (Sumner, 1941).

Accipiter cooperii. Cooper Hawk. Fairly common resident. Seen at Kanawyers, August 26, 1916 (Dixon). One seen at Bullfrog Lake, September 16, 1916 (Dixon). One seen at Charlotte Lake, September 3, 1916 (Swarth). One seen at LeConte Canyon, September 1, 1940; one at Grouse Meadow, September 2, 1940, and one at Palisade Creek, September 2, 1940 (Sumner, 1941). Nested at Sheep Creek in 1941 (Dixon). General Grant (Bryant, 1941).

Buteo borealis calurus. Western Red-tailed Hawk. Fairly common resident. One seen near summit of Mount Gould, August 30, 1916 (Dixon). One seen carrying a partly eaten squirrel on Generals Highway inside park boundary, June 10, 1936 (Sumner, 1941). Observed at General Grant in September and October, 1940 (Bryant, 1941). One seen on May 21, 1942, at 6800 feet on Sheep Creek Trail (Miller, 1942).

Buteo swainsoni. Swainson Hawk. Occasional visitant. One observed on summit of Mount Gould, August 30, 1916 (Swarth and Dixon).

Aquila chrysaetos canadensis. Golden Eagle. Resident. A pair observed at Kearsarge Pinnacles, September 2, 1916. Observed along walls of Kings Canyon, May, June, and October 4, 1940 (Bryant, 1941). One seen May 17, 1942, along north rim Kings Canyon near Hotel Creek. On July 28, 1942, one seen at Evolution Lake (Dixon, 1942).

Circus hudsonius. Marsh Hawk. Rare visitant. One seen at Rae Lakes, August 29, 1940 (Bryant, 1941).

Pandion haliaëtus carolinensis. Osprey. Rare visitant. Observed at Sequoia Lake*, October, 1940. by A. E. Thompson (Bryant, 1941).

Falco mexicanus. Prairie Falcon. Rare visitant. One seen close overhead at 12,200 feet near summit of Mount Gould, August 30, 1916 (Dixon and Swarth).

Falco columbarius. Pigeon Hawk. Rare winter visitant. Observed at Converse Basin*, October 5, 1940, and at Sequoia Lake*, October 21, 1940, by A. E. Thompson (Bryant, 1941).

Falco sparverius sparverius. Sparrow Hawk. Common summer visitant nesting at middle altitudes. When the young are able to fly, entire families migrate to the timberline basins where grasshoppers are numerous in August and September. Noted as follows: Zumwalt Meadow, July 21; young on wing. Tent Meadow, July 22, young calling. Dougherty Meadow, August 26, several seen. Upper Basin, September 4, common in family groups (Sumner, 1941). Noted above summit of Mount

Gould, 13,001 feet, August 30, 1916 (Dixon). Common in Kings Canyon (Bryant, 1941).

Dendragapus fuliginosus sierrae. Sierra Dusky Grouse. Common resident. Heard in spring from middle altitudes up to 8500 feet. At Goat Mountain, Halfmoon Meadow, Tent Meadow, and Granite Basin on July 25, 1940. One at Grouse Meadow, August 28; Cloud Canyon, September 23 (Sumner, 1941). Observed in Grant Section by Ranger Barclay (Shaw, 1936); and at Copper Creek, August, 1940; Simpson Meadows, August, 1940; Woods Creek, August 27, 1940 (H. C. Bryant, 1941). Bubbs Creek, 7200 feet, August 21, 1941, and East Lake, August 24, 1941 (Dixon). At Deer Cove, on May 12, 1942, one female was watched catching grasshoppers. On May 14, 1942, one male grouse was seen at Lookout Peak. In a yellow pine forest near Lewis Creek one male grouse was found on the ground eating fresh green lupine leaves on May 16, 1942. On May 20, 1942, at West Fork Hotel Creek, 4 male Sierra Grouse were all hooting at once within a radius of one-fourth mile (Dixon). One was heard May 21, 1942, at 6800 feet on Sheep Creek (Miller).

Oreortyx picta picta. Mountain Quail. Common resident, being especially noticeable in spring and fall. Bubbs Creek, 5500 feet, August 21, 1941, specimens 10349-54, female adult and immature. Kings Canyon, 5000 feet, September 15, 1916. At Coffee Mill Meadow, on July 30, seven young barely able to fly were seen. Simpson Meadow, September 5, one bird seen. Cloud Canyon, September 23, one flushed. On September 25, 1941, nine seen near Moraine Meadow; September 27, 1941, one at Jerky Meadow (Sumner). One seen at Stag Dome, May 6, 1942. One was seen at Lookout Peak, May 29, 1942 (Dixon).

Porzana carolina. Sora. A rare transient. One immature specimen, no. 10256, was collected at Bullfrog Lake, 10,634 feet, August 29, 1916 (Swarth).

Fulica americana americana. American Coot. Occasional visitant. On August 18, 1916, at Hume Lake* one Coot was observed (Swarth). Nest noted at Sequoia Lake* by A. E. Thompson (Bryant, 1941).

Oxyechus vociferus vociferus. Killdeer. A summer visitant, observed around General Grant Meadow (Barclay and Jamison, 1936). Nests observed at Sequoia Lake* by A. E. Thompson (Bryant, 1941). One observed at Hume Lake*, August 16, 1916 (Swarth).

Actitis macularia. Spotted Sandpiper. A rare summer visitant along lake and stream banks. Sumner spent a whole summer covering the meadows in the park without seeing any Spotted Sandpipers. Bryant saw one on May 22, 1941, where Roaring River flows into Kings River. On May 6, 1942, a pair was seen mating on Kings River just above Lewis Creek (Dixon).

Tringa solitaria cinnamomea. Western Solitary Sandpiper. A rare migrant. One specimen, no. 81235, collected by Miller at Bullfrog Lake, August 14, 1924, is our only record for the park.

Larus delawarensis. Ring-billed Gull. Occasional fall visitant to high mountain lakes (Bryant, 1941).

Columba fasciata fasciata. Band-tailed Pigeon. Resident. Observed at General Grant by Barclay in 1934 (Shaw, 1936). Kings Canyon, July, 1940; General Grant, October, 1940 (Bryant, 1941). At Hotel Creek, May 29, 1942, at 9 a.m., the skeleton, flight and tail feathers of a Band-tailed Pigeon that had just been killed and eaten by a hawk was noted (Dixon).

Zenaidura macroura marginella. Western Mourning Dove. Summer visitant. One seen at Kings Canyon, September 12, 1940 (Bryant, 1941). On May 19, 1942, one of these doves was seen at the east side of Sheep Creek just inside the park boundary (Dixon). One was seen at Kanawyers, September 10, 1916 (Swarth).

Otus asio quercinus. Pasadena Screech Owl. Rare resident on floor of Kings Canyon. One adult female, no. 27188, was collected by H. G. White at Kanawyers, September 10, 1916.

Bubo virginianus pacificus. Pacific Horned Owl. Common resident. One heard calling at Kanawyers, September 10, 1916 (Swarth). Reported from General Grant by Ranger Barclay (Shaw, 1936); Kings Canyon, July, 1940 (Bryant, 1941). Simpson Meadow, August 4, 1940 (Bryant). Sugarloaf Meadow, September 21, 1941 (Sumner).

Glaucidium gnoma californicum. California Pigmy Owl. Regular resident at General Grant and Kings Canyon in July, 1940 (Bryant, 1941). I collected a specimen, no. 27189, at Kanawyers, September 15, 1916. On May 20, 1942, at North Rim Kings Canyon near Hotel Creek, a Pigmy Owl called repeatedly at 9:30 a.m. At Cedar Grove, May 22, 1942, a Pigmy Owl was heard calling repeatedly and rapidly at 5 a.m. near the river (Miller).

Strix occidentalis occidentalis. California Spotted Owl. Resident at General Grant, July, 1940 (Bryant, 1941) and on floor of Kings Canyon where a male (no. 27187) was collected September 12, 1916. Specimen no. 74640, taken May 31, 1938, from the west slope of Redwood Mountain, contained 3 bats and one deer mouse; specimen no. 79355, from the same place, contained 1 long-eared bat and 4 crickets (Marshall, Condor, 44, 1942:66).

Cryptoglaux acadica acadica. Saw-whet Owl. A rare resident. The only specimen that we have



Fig. 53. Female Calliope Hummingbird on nest in golden oak.
Sheep Creek, Kings Canyon, May 28, 1942.

for this owl within the park is furnished by Mr. Milton Hildebrand who picked up a fresh wing feather of this species at 6500 feet in Paradise Valley in Kings Canyon on August 8, 1941. This feather has been carefully compared with specimens by both Alden Miller and the writer and was found to belong unquestionably to this species. Mr. Joe Marshall reports finding remains of a Saw-whet that had been eaten by another larger owl at Whitaker Forest just outside the park, near Redwood Mountain, and Mrs. Lofberg (Condor, 30, 1928:314) reports detailed observations of life habits of this species at Florence Lake* near the north boundary of the park.

Phalaenoptilus nuttallii californicus. Dusky Poor-will. Summer visitant; not common in the park. One heard at Kanawyers, September 13, 1916 (Dixon). One flushed from Long Meadow and one from Hotel Creek trail about one mile from Cedar Grove on September 29, 1940 (Sumner, 1941).

Chordeiles minor hesperis. Pacific Nighthawk. Summer visitant in high open mountain meadow country (Bryant, 1941).

Nephoecetes niger borealis. Black Swift. Summer resident at General Grant and Kings Canyon, July, 1940 (Bryant, 1941). Nested at Ella Falls in 1936 (A. E. Thompson). One observed over summit of Mitchell Peak, September 21, 1916. One seen May 25, 1942, at Zumwalt Meadow (Dixon).

Aëronautes saxatalis saxatalis. White-throated Swift. Summer visitant. Observed in flocks near Kanawyers on August 25, 1916, by Swarth. Kings Canyon, July, 1940 (Bryant, 1941). Ten were seen below Lookout Peak, May 14, 1942.

Calypte anna. Anna Hummingbird. Occasional summer visitant at lowest elevations. One observed at Mist Falls, July, 1940 (Bryant, 1941).

Selasphorus rufus. Rufous Hummingbird. Spring and fall migrant. Observed at General Grant, September, 1940 (Bryant, 1941).

Selasphorus alleni. Allen Hummingbird. Summer visitant. The Allen Hummingbird is believed by the writer to breed in Kings Canyon, although we still lack a bird collected with nest and eggs. The Rufous Hummingbird passes through the Sierran foothills in March and April on its journey north and migrates south again in late summer. Specimens taken between May 11 and July 8 in the Kings and Sequoia areas have proved to be the Allen Hummingbird. The first spring arrival of *alleni* was noted May 14, 1942, when an adult male was seen on south slope at 6500 feet on Sheep Creek. On May 27, 1942, a female Allen was seen gathering nest materials at Zumwalt Meadow. On July 22, 1942, an adult male and female were seen at Florence Lake* where Bartholemew says they nest. On July 24, 1942, one adult male was seen in Goddard Canyon at 8500 feet. On July 27, 1942, four, including two adult males, were seen at Colby Meadow in Evolution Valley at 9900 feet (Dixon).

Stellula calliope. Calliope Hummingbird. Summer resident in fir forests. Observed near Mitchell Peak, September 21, 1916 (Swarth and Dixon). One observed at Copper Creek on August 1, 1940 (Bryant, 1941). The first spring arrival was noted on May 8, 1942, at Lewis Creek. On May 21, 1942, at Sheep Creek, a nest was found in a small golden oak near the trail and about 40 feet from the stream. It was placed on top of a limb three-fourths of an inch in diameter which was protected by a larger limb above and slightly to one side of the nest. It was made of compacted plant fiber and camouflaged with bits of gray lichen (see fig. 53) (Miller). On May 28, 1942, this nest contained two small young just hatched. On July 27, 1942, three were seen at McClure Meadow in Evolution Valley at 9800 feet and on July 28, 1942, one was seen feeding on meadow pentstemon at 10,400 feet on the John Muir trail below Evolution Lake (Dixon).

Megaceryle alcyon caurina. Western Belted Kingfisher. Common resident along major streams. One was heard at Bullfrog Lake on September 7, 1916 (Swarth). One female specimen (no. 27190) was collected at Kanawyers on August 18, 1916. Observed in Kings Canyon from July to September, 1940 (Bryant, 1941). One seen at Wildman Meadow, August 1, 1940; Paradise Valley, August 12, 1940; Cedar Grove, August 14, 1940; Grouse Meadow, September 2, 1940; and Cloud Canyon, September 23, 1940 (Sumner, 1941). Kingfishers were observed regularly in August along Kings River between Cedar Grove and Bubbs Creek in 1940. Comparison of field notebook records of August, 1916, with August, 1941, showed there had been an appreciable increase in kingfishers in the 25-year interval (Dixon).

Colaptes cafer collaris. Red-shafted Flicker. Common resident at General Grant (Bryant, 1940). Common in forests at middle altitude and thence to timber line; becomes scarce by the end of September (Sumner, 1941). Noted as follows: July 29, numerous at Frypan Meadow; August 11, several at Woods Lake; August 25, frequent at Tent and Halfmoon meadows; September 1, several in Le-Conte Canyon; September 4, one on Sphinx Creek trail; September 27, one at Hotel Meadow and one at Jerky Meadow (Sumner, 1941). Swarth records one flicker at Bullfrog Lake, 10,634 feet, on August 28, 1916, also one at Kanawyers, on September 10, 1916. Seen at Kings River Canyon, at Cedar Grove and Kanawyers, and at Bubbs Creek in August, 1916, and again in August, 1941. A slight increase was noted in 1941 over 1916 (Dixon).

Ceophloeus pileatus picinus. Western Pileated Woodpecker. Resident at General Grant Grove where evidence of its work is numerous (Shaw, 1936) and where it was seen May-October, 1940, by Bryant. We also heard one on August 10, 1916, at Kanawyers. On May 14, 1942, near Lookout Peak, a pair was busy digging a nest cavity in a white fir stub. They were courting and giving mating calls. On May 20, 1942, at Hotel Creek, one was seen and heard in red firs at 8000 feet. On May 29, 1942, one was seen at the head of the west fork of Sheep Creek (Dixon).

Balanosphyra formicivora bairdi. California Woodpecker. Resident along lower west margin of the park. Sumner (1941) states that this species is numerous only at low altitudes near the west boundary and that many were seen on September 27, 1940, near the Hotel Creek trail. It was seen in Kings Canyon, September 25, 1940, and at Copper Creek, October 4, 1940, by Bryant who also records that it occurs in the oaks in the western part of the General Grant section. Found near the mouth of Lewis Creek and at Cedar Grove in August, 1941, and in May, 1942 (Dixon).

Asyndesmus lewis. Lewis Woodpecker. Fall migrant. First arrivals noted on September 27, 1940, at Hotel Creek and Lewis Creek where they became numerous two days later (Sumner, 1941). None observed in this area between August 18 and September 16, 1916 (Swarth) or from August 22 to 31, 1941 (Dixon). Observed at General Grant Grove on September 29, 1940 (Bryant, 1941).

Sphyrapicus varius daggetti. Southern Red-breasted Sapsucker. A summer visitant at lower altitudes in forested areas. At Kanawyers an adult male (no. 27202) was collected on September 12, 1916 (Swarth). Listed by Shaw at General Grant Grove where it was observed nesting in 1940 (Bryant, 1941).

Sphyrapicus thyroideus thyroideus. Williamson Sapsucker. A fall and winter visitor at General Grant Grove (Shaw, 1936). An adult male (no. 27211) was collected at Horse Corral Meadow*, September 20, 1916. Occurs in the higher lodgepole pine forest (Dixon, 1942).

Dryobates villosus hyloscopus. Cabanis Hairy Woodpecker. Common resident at General Grant (Shaw, 1936, and Bryant, 1941). Two birds were seen, September 10, 1916, and one specimen (no. 27191) was collected September 10, 1916, at Kanawyers by Swarth. It was not observed by Sumner, White, Swarth, or Dixon in any of the higher forested areas of the park. On May 8, 1943, at Lewis Creek, one was seen, and another was noted on May 14, 1942, at Sheep Creek (Dixon). Miller saw one at Cedar Grove on May 21, 1942.

Dryobates pubescens turati. Willow Downy Woodpecker. Rare resident in lowest forested part of Kings Canyon. One specimen (no. 27196), an immature male, was collected at Hume*, August 23, 1916 (Swarth). Copper Creek, August 1, 1940; Kings Canyon, August 31, 1940 (Bryant, 1941). One was seen at Lewis Creek on May 8, 1942 (Dixon).

Dryobates nuttallii. Nuttall Woodpecker. A fall visitor. Observed by Mrs. A. M. Bryant at General Grant Grove, September 30, 1940.

Dryobates albolavatus albolavatus. Northern White-headed Woodpecker. Common resident in Transition and Canadian zones of the park. Several seen July 31, 1941, in Lewis Creek drainage up to 10,000 feet. One was seen, May 8, 1942, at Lewis Creek and another seen inside park on Lewis Creek, May 17, 1942. One seen, May 29, at Lookout Peak (Dixon). Miller saw one on May 21, 1942, at Cedar Grove Camp. Observed nesting at General Grant Grove, May 22, 1936 (Shaw).

Picoides arcticus. Arctic Three-toed Woodpecker. Resident in Hudsonian Zone (Bryant, 1941). One seen at Reflection Lake, 10,168 feet, on August 24, 1941 (Dixon).

Myiarchus cinerascens cinerascens. Ash-throated Flycatcher. A rare summer visitant. On May 6, 1942, on south side of Stag Dome, one Ash-throated Flycatcher was seen and heard calling at 5500 feet (Dixon).

Sayornis saya. Say Phoebe. A rare fall visitor. One individual was seen in the meadow near Kanawyers on September 10, 1916 (Swarth).

Empidonax traillii brewsteri. Traill Flycatcher. Summer resident at General Grant where it nested in 1940 (Bryant, 1941). An adult female of this species was collected on August 22, 1916, at Hume* by H. G. White (no. 27224). On May 27, 1942, at Zumwalt Meadow I collected a Traill Flycatcher in the willows at the water's edge.

Empidonax hammondii. Hammond Flycatcher. A summer resident. Seen in the forested area at General Grant, May, 1940 (Bryant). The similarity of the small flycatchers of the genus *Empidonax* makes them notoriously difficult to identify in the field even by such experienced ornithologists as Grinnell and Swarth. It has frequently been found that birds identified as Hammond's in the field proved to be Wright's when taken to the museum. An immature female *hammondii* (no. 27226) was collected on September 25, 1916, at Hume* by H. G. White. One was collected on May 26, 1942, at Zumwalt Meadow. On July 27, 1942, two flycatchers believed to be *hammondii* were seen at close range at McClure Meadow in Evolution Valley (Dixon, 1942).

Empidonax wrightii. Wright Flycatcher. Common summer resident. It has been the experience of Swarth, Bryant and Dixon that this is the small flycatcher most frequently met in summer in the "deer brush" of the Transition Zone at Kings Canyon. Extreme altitudes of occurrence based on specimens are 5000 feet at Kanawyers (no. 27229), on September 15, 1916, and 10,634 feet (no. 27228) at Bullfrog Lake, August 28, 1916.

Empidonax difficilis difficilis. Western Flycatcher. A summer resident. Observed at Bubbs Creek, May, 1940 (Bryant, 1941). A specimen (no. 27223) collected by Swarth at Hume* on August 18, 1916.

Myiochanes richardsonii richardsonii. Western Wood Pewee. A common summer resident. A male (no. 27222) was collected at Kanawyers, September 12, 1916. Four seen at General Grant Grove, May 22, 1936 (Shaw, 1936). Noted at Frypan Meadow, July 31, 1940, and at Little Pete Meadow, August 29, 1940 (Sumner, 1941). Noted at Cedar Grove and Zumwalt Meadows on August 9, 1940. On May 13, 1942, at Lewis Creek two of these birds were snapping up a great number of swarming, winged, adult termites that were emerging from a pile of old logs. On July 27, 1942, at Colby Meadow, two were seen and one collected (Dixon).

Nuttallornis mesoleucus. Olive-sided Flycatcher. Summer resident in lower forested areas (Bryant, 1941). Five were seen on May 26, 1936, at General Grant (Shaw, 1936). Common in heavy timber but not heard calling after August 29. Numerous below Cartridge Pass on September 4, 1940 (Sumner, 1941). Observed at East Lake, August 8, 1940, by Frances Payne. First spring arrival noted on May 12, 1942, at 5500 feet, on Stag Dome. On May 14, 1942, one was seen at Sheep Creek. On May 20, 1942, two were heard calling along yellow pine ridge beside Hotel Creek. One noted on east face of Lookout Peak, May 29, 1942. July 24, 1942, one adult male seen in Goddard Canyon at 8500 feet (Dixon).

Tachycineta thalassina lepida. Violet-green Swallow. Summer visitant. Observed flying over meadows. A flock of about 100 was seen near Hume*, August 17-19, by Swarth. One was seen at 6000 feet on Stag Dome, May 6, 1942 (Dixon).

Cyanocitta stelleri frontalis. Blue-fronted Jay. Common resident in the timber at middle altitudes. Four were seen at Kanawyers on September 10, 1916 (Swarth). Noted on July 31, 1941, at Frypan Meadow; August 29, between Simpson Meadow and Cartridge Creek; September 6, between Tent Meadow and Copper Creek and September 21-23 at Scaffold Meadow (Sumner, 1941). Two were observed building a nest at Lewis Creek on May 9, 1942 (Dixon).

Aphelocoma californica immanis. Long-tailed California Jay. A visitor in late summer and fall to the lower western portion of the park. I saw one in Kings Canyon just below Kanawyers on September 17, 1916. Seen at Big Stump, September, 1940 (Bryant, 1941).

Corvus corax. Raven. Rare resident. Two were seen on September 27, 1940, above the canyon wall in vicinity of Hotel Creek trail (Sumner, 1941).

Nucifraga columbiana. Clark Nutcracker. Resident. Most frequently encountered in the vicinity of timber line; noted infrequently low down in the heavy forests. Swarth collected an adult male (no. 27249) at Bullfrog Lake on August 30, 1916. We have a record for Kanawyers on September 10, 1916 (Swarth, 1916) and H. G. White collected a specimen (no. 602 H.G.W.) at Kanawyers, on September 12, 1916. Reported near headquarters at General Grant, September 30, 1935 (Hopping). One seen at Woods Lake on August 12, 1940; also near Simpson Meadow on August 28, 1940 (Sumner, 1941). At McClure Meadow, 9700 feet, in Evolution Valley, on July 25, 1942, one Clark Nutcracker was seen near camp. Six were seen on July 29, 1942, at Colby and McClure meadows in Evolution Valley. One was seen feeding on July 28, 1942, in an alpine meadow near The Hermit (Dixon).

Pensthes gambeli abbreviatus. Short-tailed Mountain Chickadee. Resident in forests up to timber line. Moderately common at General Grant (Shaw, 1936). I observed three above timber line at 12,200 feet on Mount Gould on September 1, 1916, and I saw two near Bullfrog Lake on September 5, 1916; on September 6, 1916, Swarth saw an entire family at Bullfrog Lake, and H. G. White collected three specimens (nos. 27531-27533) there. Sixteen of these chickadees were seen at Kanawyers on September 10, 1916 (Swarth). In 1940 Sumner found them on July 31 at Lewis Creek. At south base of Stag Dome on May 6, 1942, one chickadee was watched building its nest in an old woodpecker hole 30 feet up in a cottonwood. One pair was seen nesting at Hotel Creek on May 20, 1942, and one was seen at Lookout Peak on May 29, 1942 (Dixon).

Psaltriparus minimus californicus. California Bush-tit. A casual fall visitor along extreme western portion of park. Observed at General Grant Grove on September 8, 1940, by Mrs. A. M. Bryant.

Sitta carolinensis aculeata. Slender-billed Nuthatch. Summer resident at General Grant. Seen at Simpson Meadow, August 4, 1940 (Bryant). White collected a male (no. 27509) on September 3, 1916, at Hume*. Sumner reports it fairly common in timber at middle altitudes. Seen September 25 near Moraine Meadow and September 27, 1940, on trail to Hotel Creek (Sumner, 1941). I saw one on September 5, 1916, at Bullfrog Lake and Swarth saw one at Charlotte Lake, September 3, 1916.

Sitta canadensis. Red-breasted Nuthatch. Resident at General Grant Grove (Shaw, 1936) and observed there from June to October, 1940 (Bryant, 1941). Noted at Halfmoon Meadow on August 25, 1940 (Sumner, 1941). Swarth saw a Red-breasted Nuthatch at Kanawyers on September 10, 1916. One was seen on the east side of Sheep Creek, May 19, 1942. Another was seen at Lookout Peak on May 29, 1942 (Dixon). Miller saw one at 4800 feet on a bench above Sheep Creek, May 21, 1942.

Sitta pygmaea melanotis. Black-eared Pigmy Nuthatch. Summer resident. On May 21, 1942, Miller heard and saw this nuthatch on a bench above Sheep Creek. It is believed to be restricted to the lower, hotter areas along the western boundary of the park. Reported nesting, April 27, 1941, at Indian Basin* (Bryant, 1941).

Certhia familiaris zelotes. Sierra Creeper. Summer resident in timbered areas at middle altitudes. Observed by Barclay at General Grant (Shaw, 1936). Noted by Bryant in Kings Canyon during July, 1940. One seen August 4 at East Lake, two at Simpson Meadow on September 5, and one at Scaffold Meadow on September 24, 1940 (Sumner, 1941). The first one noted in 1942 was seen on May 12 at 5500 feet on Stag Dome. Two were seen on May 29, 1942, at Lookout Peak. On May 21, 1942, Miller noted one near Cedar Grove.

Chamaea fasciata henschawi. Pallid Wren-tit. A rare resident in lower Kings Canyon. One observed, July 20, 1940, on hot, dry slope at Copper Creek (Bryant, 1941). On May 9, 1942, a Wren-tit sang lustily and came within ten feet of me in the thick brush at Lewis Creek. Two Wren-tits were seen May 16, 1942, at Little Creek inside the park. On May 20, 1942, two were seen near Hotel Creek (Dixon).

Cinclus mexicanus unicolor. Dipper. Resident along all of the larger streams and occasional in summer along the rocky margins of alpine lakes. One seen at Bullfrog Lake, August 8, 1916, and at Kanawyers on September 19, 1916 (Swarth). Noted at Ouzel Creek at East Lake by Sumner in 1940

and by Dixon in 1941; September 1, 1940, Evolution Lake; September 3, 1940, at the first lake opposite the Middle Palisade en route to Mather Pass (Sumner, 1941). Nested on Copper Creek in July, 1940. Observed at Zumwalt Meadow, September 25, 1940, and at Roaring River, September 12, 1940 (Bryant, 1941). Observed at mouth of Roaring River in August, 1941; Cedar Grove, Bubbs Creek, Reflection Lake, East Lake and Vidette Creek, in August, 1941 (Dixon). On May 11, 1942, at Lewis Creek a nest was located in a cluster of moss behind a water fall. On May 21, 1942, at Sheep Creek a nest was found behind a waterfall. The Dipper flew directly through the curtain of water (fig. 54)

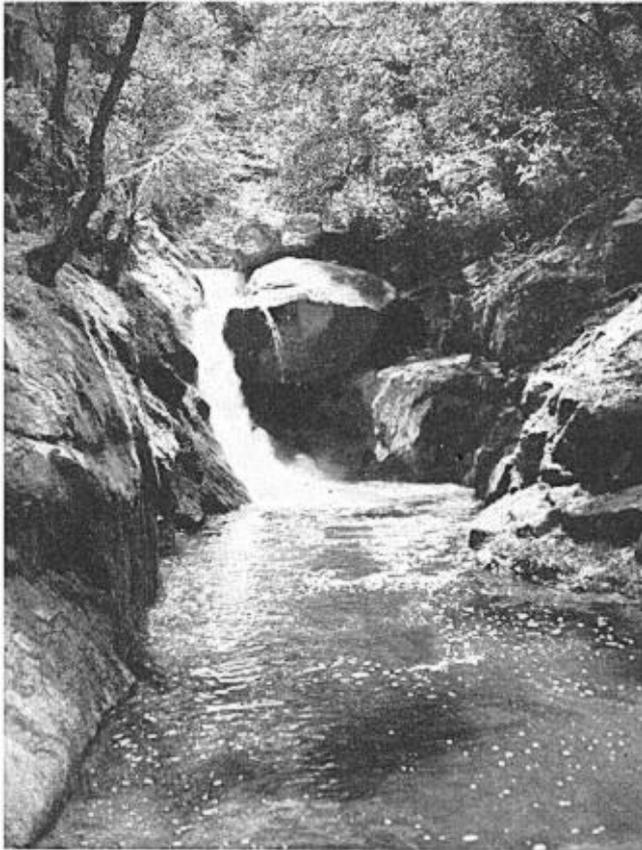


Fig. 54. Waterfall on Sheep Creek, Kings Canyon. A Dipper nest was placed in a mossy niche behind this fall; May 19, 1942.

to reach her nest. At Cedar Grove Bridge, May 28, 1942, a pair of Dippers built their nest on a steel beam that supports the bridge. The birds were careful to place the nest where it would be directly over the stream. They were still feeding young in the nest although one youngster had left the nest and perched on boulders beside the river where it was being fed by the parents. On July 28, 1942, one was seen at Darwin Canyon at 11,500 feet near the lowest of the four Darwin Lakes (Dixon).

Troglodytes aëdon parkmanii. Western House Wren. Summer resident, breeding in the lower and middle forested areas. Seen at Simpson Meadow, August 4, 1940 (Bryant, 1941).

Nannus hiemalis pacificus. Western Winter Wren. Reported as resident in Canadian and Hudsonian zones by Bryant, 1941, based on the sight record of Frances Payne at East Lake in August, 1940. In August, 1941, I made a special search for this wren at East Lake but all the small wrens that I found proved to be brownish immature Western House Wrens. All the specimens taken at high altitudes in this area have proved to be House Wrens. Specimens collected at 9600 feet near

Bullfrog Lake on September 3, 1916 (no. 27502) by H. G. White and at 9800 feet near Twin Lakes (no. 30922) on August 15, 1919, by Louise Kellogg are both Western House Wrens. Swarth, Bryant, Dixon, Sumner and White all failed to find any Winter Wrens and an actual specimen is needed to substantiate this record.

Thryomanes bewickii drymoecus. San Joaquin Bewick Wren. Late summer and fall vagrant. Wrens with long tails and hence presumed to be of this species were observed on August 27, 1940, on the ridge between the east and middle forks of Dougherty Creek. On September 14, 1940, one was seen at Cartridge Meadow (Sumner, 1941). Specimens (nos. 27496, 27497) were collected lower down on the Kings River near Dunlap* by Swarth on September 30 and October 1, 1916.

Telmatodytes palustris. Marsh Wren. Rare summer visitant. Swarth observed a Marsh Wren in 1916 at such close quarters in a marshy meadow near Kanawyers that, although certain of the species, he was too close to shoot it for a specimen.

Catherpes mexicanus. Canyon Wren. Resident. One female (no. 27489) was collected on September 15, 1916, at Kanawyers. One or two others were heard on September 10, 1916, in the rock slides along Kings Canyon near Kanawyers (Swarth). Observed in Kings Canyon during July, 1940 (Bryant, 1941).

Salpinctes obsoletus obsoletus. Common Rock Wren. Resident. This species has been observed from the highest to the lowest parts of the park. Thus one was seen at Horseshoe Bend, July 3, 1941, by Bryant, and one was seen at Bullfrog Lake on August 27, 1916, and another near the summit of Mount Gould, 13,001 feet on August 30, 1916 (Swarth). Another was seen on September 21, 1916, on the summit of Mitchell Peak (Dixon). Observed at Granite Basin, August 6, 1940; Rae Lakes, August 29, 1940. Seen August 11, 1940, at Woods Lake. On September 2, 1940, it was numerous on both sides of Mather Pass (Bryant, 1941).

Turdus migratorius propinquus. Western Robin. Common summer resident nearly to timber line in all wooded sections. Three were seen about camp at Kanawyers, September 10, 1916 (Swarth). Seen as follows in 1940: July 31, fairly common at Frypan Meadows; August 29, common at Little Pete Meadow; September 21, two seen at Marvin Pass. On September 25, 1940, one was seen on slope east of Moraine Meadow, but none thereafter (Sumner, 1941). First noted in 1942 on May 6 at Lewis Creek where five robins were seen along lower western park boundary. One was seen building its nest at Lewis Creek on May 8, 1942. At Summit Meadow, six were seen on May 29, 1942 (Dixon). Robins were heard calling every morning at Cedar Grove by Miller (1942).

Ixoreus naevius. Varied Thrush. Occasional winter visitant. Seen at General Grant on November 15, 1940 (Bryant, 1941).

Hylocichla guttata sequoiensis. Sierra Hermit Thrush. Summer resident in Hudsonian and Canadian zones. Several were seen at Bubbs Creek, 8000 feet, on August 27, 1916, and one at Bullfrog Lake, on September 6, 1916 (Swarth). One specimen was collected near Horse Corral Meadow* on September 21 (Swarth, 1916). One observed at Woods Lake on August 11, 1940, and two seen on August 26, 1940, at Fallen Moon Meadow (Sumner, 1941). Observed at Panorama Point in June, 1941, and at Paradise Valley in June (Bryant, 1941). One Sierra Hermit Thrush was preserved on May 11, 1942, at Lewis Creek (no. 9202, J. S. Dixon) and was identified by Miller as *sequoiensis*. At the mouth of Evolution Creek the Sierra Hermit Thrushes were still singing on July 22, 1942. On July 26, 1942, Hermit Thrushes were singing in the lodgepole pines along McGee Creek, and on July 28, 1942, at the upper end of Evolution Valley, two of these thrushes were watched as they fed a bobbed-tailed youngster just out of the nest (Dixon).

Hylocichla ustulata ustulata. Russet-backed Thrush. Summer resident in willows along streams in Transition and Canadian zones. Observed from June to August, 1940, in Kings Canyon and from July to August, 1940, at Paradise Valley (Bryant, 1941).

Sialia mexicana occidentalis. Western Bluebird. Summer resident along western margin of area. Seen at General Grant during September, 1940 (Bryant, 1941). The first spring arrival was noted May 6, 1942, at 6500 feet on Stag Dome. On May 17, 1942, on north rim of the south fork of Kings Canyon between Lewis Creek and Hotel Creek, a breeding pair of Western Bluebirds was found at 6000 feet. They were mating and nesting in a woodpecker hole in a dead yellow pine stub on a warm south-facing hillside (Dixon).

Sialia currucoides. Mountain Bluebird. Fairly common summer resident near timber line. On August 28, 1916, several were seen at Bullfrog Lake (Swarth). Two were observed at Center Basin on August 7, 1940; eight at Woods Lakes Basin, August 11, 1940; one at timber line in Upper Basin on September 3, 1940 (Sumner, 1940). Seen at Granite Pass, August 1, 1940 (Bryant, 1941).

Myadestes townsendi. Townsend Solitaire. An unobtrusive summer resident in Canadian and Hudsonian zones. Found at lower elevations during the winter. The species was observed at Bubbs Creek junction in June, 1940, by Bryant. One was seen on August 26, 1940, near Granite Pass and four together at Dusy Lakes, August 29, 1940 (Sumner, 1941). In the fall one was seen on Septem-

ber 18, 1916, at Summit Meadow (Swarth), and was recorded at General Grant in September, 1940 (Bryant, 1941). The first spring arrival was seen on May 6, 1942, at 6700 feet on Stag Dome. Two were seen on May 9, 1942, at Lewis Creek. A pair was seen mating at head of Sheep Creek on May 14, 1942. A pair in nuptial flight and singing loudly was seen on May 16, 1942, at Little Creek (Dixon).

Poliophtila caerulea amoenissima. Western Gnatcatcher. An occasional late summer visitant along lower western margin of the park. Three were seen at Kanawyers on September 10-17, 1916 (Swarth). Observed at Copper Creek, July, 1940 (Bryant, 1941). Seen only once near Lewis Creek, August 1, 1940 (Sumner, 1941).

Regulus satrapa olivaceus. Western Golden-crowned Kinglet. Spring and fall migrant and summer resident in the fir belt. At Horse Corral Meadow* two specimens were collected; one male (no. 27547) was taken on September 22, 1916 (Swarth). Observed in Kings Canyon on September 24, 1940, and at General Grant, September to October, 1940 (Bryant, 1941). Sumner saw a flock on August 25, 1940, at Halfmoon Meadow.

Regulus calendula cineraceus. Western Ruby-crowned Kinglet. Spring and fall migrant and summer resident in the Canadian and Hudsonian zones. Two specimens were taken at Bullfrog Lake, August 30, 1916 (White). One seen at Bullfrog Lake, August 27, 1916, and one at Charlotte Lake, September 2, 1916. Also seen nearly every day at Kanawyers, September 14-17, 1916; numerous along western boundary of the park near Horse Corral Meadow*, September 18-24, 1916 (Swarth).

Anthus spinoletta rubescens. American Pipit. Fall migrant. A good-sized flock was seen on the meadow along the west boundary of the park near Horse Corral Meadow* on September 20, 1916 (Swarth).

Vireo solitarius cassinii. Cassin Solitary Vireo. A summer resident. Two were seen at Kanawyers on September 10, 1916, and others were observed there at the rate of about one a day in September (Swarth). Recorded at General Grant (Shaw, 1936) and Kings Canyon in July, 1940 (Bryant, 1941). Three were seen and heard on May 9, 1942, inside the park at Lewis Creek. Miller heard and saw this vireo on Sheep Creek trail up to 6000 feet on May 21, 1942.

Vireo gilvus swainsonii. Western Warbling Vireo. Common summer resident. Recorded at Kings Canyon, July, 1940 (Bryant, 1941), and at General Grant (Shaw, 1936). Seen and heard on Sheep Creek trail up to 6000 feet on May 21, 1942, by Miller.

Vermivora celata lutescens. Lutescent Orange-crowned Warbler. Summer resident. One seen just below Bullfrog Lake where a specimen (no. 27463) was collected on September 6 (Dixon). One seen September 3, 1916, at Charlotte Lake. Three or four seen at Kanawyers, September 10-17, 1916, and a specimen collected there September 16. Several seen, seemingly in migration, on September 24, 1916, at Horse Corral Meadow* and a specimen (no. 10364) collected on September 20.

Vermivora ruficapilla ridgwayi. Calaveras Warbler. Summer resident. Seen at Copper Creek, August 6, 1940 (Bryant, 1941). One seen at 6600 feet on Bubbs Creek, August 26, 1916 (Swarth). On May 21, 1942, at Sheep Creek, Calaveras Warblers were heard singing by Miller in the pines above scattered ceanothus bushes.

Dendroica aestiva brewsteri. California Yellow Warbler. Summer resident. One was seen at Hume*, August 17, 1916 (Swarth). Seen at General Grant (Shaw, 1936). Seen at Big Stump*, June, 1940, and in Kings Canyon, June to August, 1941 (Bryant, 1941).

Dendroica auduboni auduboni. Audubon Warbler. Summer resident. Several groups were seen at Bullfrog Lake, some feeding young, on September 2, 1916; the species was rare, only one or two being seen daily at Kanawyers, September 10-17, 1916 (Swarth). Seen at General Grant (Shaw, 1936, and Bryant, 1941). Sumner found a nest at Granite Basin with nearly grown young on July 23, 1940. Noted at Little Pete Meadow, August 29, 1940, one at north side Mather Pass, September 3, 1940, one at south side Cartridge Pass, September 4, 1940, and two at Cub Meadow, September 27, 1940 (Sumner, 1941). First seen in spring on May 6, 1942, at 6500 feet on Stag Dome. One pair was seen mating in ponderosa pine forest near Lewis Creek on May 16, 1942. At Hotel Creek three were seen in yellow pines at 7000 feet, on May 20, 1942. Seen and heard, May 21, 1942, by Miller at Cedar Grove. On July 27, 1942, three were seen at McClure Meadow in Evolution Valley (Dixon).

Dendroica nigrescens. Black-throated Gray Warbler. Summer resident in canyon live oaks. Swarth took a specimen (no. 27475) at Hume*, August 19, 1916. Seen at Kings Canyon, July, 1940, and at General Grant, May, 1941 (Bryant, 1941). One was seen, May 8, 1942, at Lewis Creek (Dixon). Miller saw one May 21, 1942, on the Sheep Creek trail.

Dendroica townsendi. Townsend Warbler. A rare fall migrant. One specimen (no. 27476) was collected, September 20, 1916, along the western boundary of the park near Horse Corral Meadow* (Swarth).

Dendroica occidentalis. Hermit Warbler. Spring and fall migrant, and summer resident. Several were seen at Bullfrog Lake, September 1-7, 1916. Two specimens (nos. 27477, 27478) were taken at

Hume*, August 18, 19, 1916 (Swarth). Found in the conifers at General Grant (Shaw, 1936). Seen at General Grant in June, 1940, and May 24, 1941 (Bryant). One adult male, the first of the season, was seen at 6800 feet on May 6, 1942, at Stag Dome (Dixon). Miller records "Hermit Warblers singing in the sugar pines at the bench on Sheep Creek" on May 21, 1942.

Oporornis tolmiei. Macgillivray Warbler. Summer resident. One seen at Bullfrog Lake, August 27, and September 7, 1916. A specimen (no. 27480) was collected at Bullfrog Lake, September 1, 1916. This species was found in migration in considerable numbers on September 24, 1916, near the west boundary of the park in and near Horse Corral Meadows*. Seen May 26, 1941, in Kings Canyon (Bryant, 1941). First seen May 8, 1941, at Lewis Creek. One seen May 16, 1942, at Little Creek (Dixon).

Wilsonia pusilla chryseola. Golden Pileolated Warbler. Summer resident. One seen August 27, 1916, near Bullfrog Lake and a female (no. 27484) collected at Bubbs Creek, September 3, 1916 (Swarth). A few were seen in the wet meadow near Kanawyers, September 10-17, 1916 (Swarth). Reported in wet meadows at General Grant section (Shaw, 1936); also seen there in June, 1940 (Bryant, 1941). One was seen in willow thicket at 8000 feet on Hotel Creek on May 20, 1942. One was noted in a dwarf willow at 10,700 feet on Darwin Creek on July 28, 1942 (Dixon).

Sturnella neglecta. Western Meadowlark. Occasional summer visitor on meadow land. Only two records. One was seen on August 18, 1916, at Hume* (Swarth), and one was seen at Woods Creek Meadow, 8500 feet, August 27, 1940 (Bryant, 1941).

Agelaius phoeniceus nevadensis. Nevada Red-wing. Summer resident. Nested at Zumwalt Meadow, July, 1940 (Bryant, 1941). Two pairs of Red-wings preparing to nest were found in the cattail swamp at Zumwalt Meadow on May 25, 1942. On May 26, 1942, six female Nevada Red-wings and two males were found breeding in the cattail swamp. On May 27, 1942, at Zumwalt Meadow, I collected an adult breeding female Red-wing (no. 9215, J. S. Dixon) which Miller states is clearly *nevadensis*. The size of the ovaries showed she was about to lay eggs. Her gullet contained four green caterpillars each three-fourths inch in length. On July 30, 1942, on the south fork of the San Joaquin River I saw a female Red-wing in a pond grown up to tules at the lower end of Blaney Meadow; apparently both Red-wings and Song Sparrows breed here. However, I found no evidence that either species goes up into the park along the south fork of the San Joaquin.

Icterus bullockii. Bullock Oriole. Occasional summer resident. One observed on August 20, 1916, at Hume* (Swarth). First spring arrival noted on May 25, 1942, at Zumwalt Meadow. One seen, May 29, 1942, at Cedar Grove (Dixon).

Euphagus cyanocephalus. Brewer Blackbird. Summer visitant to higher mountain lakes and meadows. Forty were seen at Hume* on August 23, 1916 (Dixon); also noted at Horse Corral Meadow* (Swarth, 1916). Reported as occasional in meadows at General Grant (Shaw, 1936). Nested at General Grant in June, 1940. Seen at Sixty Lake Basin, August 29, 1940 (Bryant, 1941). One female seen at Rae Lake and a male at Dougherty Meadow, September 6, 1940 (Sumner, 1941).

Piranga ludoviciana. Western Tanager. Summer resident. I collected a female (no. 27454) at Bullfrog Lake, September 2, 1916. Nested in Kings Canyon, July, 1940 (Bryant, 1941). First spring arrival noted May 16, 1942, at Little Creek (Dixon).

Hedymeles melanocephalus. Black-headed Grosbeak. Summer resident. In 1916 Dixon and Swarth found a characteristic feather and a used nest of this species at Kanawyers but saw no birds. Two were seen at Hume*, August 18 (Swarth, 1916). Nested at General Grant in July, 1940 (Bryant, 1941). First arrivals in spring were noted May 6, 1942, when two males were seen and heard singing at 5000 feet on Stag Dome (Dixon).

Passerina amoena. Lazuli Bunting. Rare summer vagrant. One male was seen on July 31, 1940, in a chinquapin thicket along the trail to Coffee Mill Meadow at an elevation of 10,000 feet (Sumner, 1941).

Hesperiphona vespertina brooksi. Western Evening Grosbeak. Summer visitant; also spring and fall migrant. Found* among conifers (Shaw, 1936, and Graff, 1936). Seen at Dougherty Meadows, August 2, 1940 (Bryant, 1941).

Carpodacus purpureus californicus. California Purple Finch. Summer resident. A specimen (no. 10228) was taken on August 22, 1916, by Swarth at Hume*. First spring arrival noted May 8, 1942, at Lewis Creek where two were seen. On May 9, 1942, an adult breeding male (no. 9200, J. S. Dixon) was collected; identification checked by Miller. On May 27, 1942, at Zumwalt Meadow, one adult male (no. 9214, J. S. Dixon) in breeding condition was collected (Dixon). Miller found California Purple Finches in cottonwoods at Cedar Grove on May 21, 1942.

Carpodacus cassinii. Cassin Purple Finch. Summer resident. A few seen at Kanawyers, September 10-17, 1916. Four seen near Bullfrog Lake on September 4, 1916 (Dixon). At McClure Meadow, Evolution Valley, on July 25, 1942, I found a pair of Cassin Purple Finches eating mud at a mineral spring near the center of the meadow. This behavior was again verified on July 27, when I visited

this spring and found sixteen adults and immatures and collected an adult male (no. 9222, J. S. Dixon) in the act of eating mud. A post-mortem examination showed that the throat and gullet were both full of mud. On July 28, 1942, at Evolution Valley, one female was watched as she fed a bobbed-tailed youngster just out of the nest and barely able to fly (Dixon). On May 21, 1942, Miller saw and heard Cassin Purple Finches along Sheep Creek trail at 4800 to 6800 feet.

Pinicola enucleator californica. California Pine Grosbeak. Rare resident. On July 25, 1942, at 9000 feet on Evolution Creek I went down along the bare, glaciated granite near its point of contact



Fig. 55. Typical habitat of the Rosy Finch. Evolution Basin looking toward Muir Pass; July 26, 1942.

with the silicated limestone and in a crevice above the stream I found a male California Pine Grosbeak in full red, breeding plumage feeding on the red, ripening fruit of a twin-berry bush. The male was soon joined by his mate and the two fed quietly together for several minutes within 20 feet of me; I was able to examine them in good light with 8-power binoculars. This locality is the southernmost known record station for this subspecies (Dixon, Condor, 44, 1942:280).

Leucosticte tephrocotis dawsoni. Sierra Nevada Rosy Finch. Resident. Found in summer about the higher peaks, talus slides and lakes above timber line. On August 30, 1916, two Rosy Finches were seen feeding young at 12,500 feet on Mount Gould just west of Kearsarge Pass (Swarth and Dixon) and on August 28 a flock of between 40 and 50 Rosy Finches was seen at a little lake near the west end of Kearsarge Pinnacles and both adult and immature birds (nos. 27267, 27268) were collected (Swarth). Three or four were seen, August 9, 1940, on snow banks at Glenn Pass and a flock of about seven was seen on snow one mile east of Muir Pass, September 1, 1940 (Sumner, 1941). Seen at Glenn Pass and East Lake, August, 1940 (Frances Payne). On July 26, 1942, at McGee Lakes, 10,900

feet, I found many Rosy Finches feeding along the rocky margin of the lakes. On the John Muir Trail, July 28, 1942, at the upper end of Evolution Valley (fig. 55), I watched a Rosy Finch eating buds and flowers of a dwarf *Collinsia*. On that day in Darwin Canyon at Evolution Lake and at 11,000 feet on Darwin Creek Rosy Finches were abundant. I actually counted over 100 in the course of one day that were feeding on the buds and opening flowers of dwarf buckwheat and other plants growing close to the ground. I have never before seen them feeding so largely on the green flowering parts of plants (Dixon, 1942).

Spinus pinus pinus. Northern Pine Siskin. Transient, found in the higher forested areas of the park. On September 2, 1916, a few were seen at Bullfrog Lake and on September 3, 1916, several were seen at Charlotte Lake (Swarth). One noted on July 31, 1940, near Coffee Mill Meadow (Sumner, 1941).

Spinus psaltria hesperophilus. Green-backed Goldfinch. Summer visitant. Several were seen by us at Hume* on August 19, 1916. I also saw one on September 2, 1916, at 11,000 feet, near Bullfrog Lake (Dixon). One seen in the meadow at Kanawyers on September 17, 1916 (Swarth).

Loxia curvirostra. Red Crossbill. Summer visitant at timber line; slightly lower in winter. Three Red Crossbills were seen on August 28, 1916, and several heard near Bullfrog Lake, September 6, 1916 (Swarth). On July 25, 1942, at McClure Meadow, an adult male was found feeding in a lodgepole pine (Dixon).

Oberholseria chlorura. Green-tailed Towhee. Summer resident. One was seen at Charlotte Lake, September 2, 1916. Noted as rather common, July 31, 1940, in vicinity of Coffee Mill Meadow and one seen, September 3, 1940, in a willow at timber line on the north side of Mather Pass (Sumner, 1941). Seen at Grant section (Bryant, 1941).

Pipilo maculatus falcinellus. Sacramento Spotted Towhee. Resident. Several were seen at Kanawyers, September 10-17, 1916 (Swarth). A male (no. 27423) was collected by White at Kanawyers, September 17, 1916. Seen on floor of Kings Canyon (Bryant, 1941). This species is also reported from General Grant (Bryant, 1941). Two seen, September 27, 1940, on warm south-facing slope at Hotel Creek (Sumner, 1941). Two were seen at Lewis Creek on May 8, 1942 (Dixon).

Pipilo fuscus carolae. Sacramento Brown Towhee. Late summer visitant. Seen in southern part of General Grant area (Barclay and Jamison, 1937, and Bryant, 1941).

Passerculus sandwichensis. Savannah Sparrow. Fall migrant. A sparrow was examined at close range with aid of binoculars at Bullfrog Lake, 10,634 feet, on August 27, 1916, and identified as this species (Swarth).

Amphispiza bilineata deserticola. Desert Sparrow. A fall migrant. One specimen (no. 27320) was collected by Swarth near Charlotte Lake, September 3, 1916. Because of the immature plumage of this individual, Swarth thought the species might nest at Charlotte Lake west of the Sierran crest. The other more probable alternative is that this young individual came over Kearsarge Pass during late summer.

Junco oregonus thurberi. Thurber Oregon Junco. Common summer resident over most of the park. An adult female specimen was collected, August 23, 1916, at Bullfrog Lake (Swarth, 1916). On September 4, 1916, thirty were counted between Charlotte and Bullfrog lakes. Contrasted to this, juncos were rare at Kanawyers, August 27-September 17, 1916, only one small flock of 8 or 10 being seen (Swarth). In 1940, they were found in abundance almost throughout the park by Sumner who records them on July 31 at 10,500 feet on Lewis Creek and on August 4 they were abundant at East Lake. On September 4, found numerous near Cartridge Pass and on September 22 a few were seen in Deadman Canyon (Sumner, 1941). On May 9, 1942, at Lewis Creek, two were seen inside the park. Eight were seen between Cedar Grove and Lookout Peak. On July 27, 1942, juncos were common at Colby Meadow in Evolution Valley where fourteen were counted in one day (Dixon).

Spizella passerina arizonae. Western Chipping Sparrow. Summer resident. A few seen at Kanawyers, September 10-17, 1916 (Swarth). Two were seen between Bullfrog and Charlotte lakes, September 5, 1916. On August 21, 1941, on the floor of Kings Canyon above Cedar Grove, I watched a Cooper Hawk walking around a small clump of manzanita that was isolated out in an open flat. When I stopped to investigate, I drove the hawk away and found a Western Chipping Sparrow closely hidden in the dense brush near the ground where it had evidently taken refuge from the hawk. Specimen no. 559, H. G. White, was collected at 9900 feet on Bubbs Creek, September 3, 1916. On May 17, 1942, a pair was observed mating near Lewis Creek and on July 27, 1942, two were seen at McClure Meadow in Evolution Valley (Dixon).

Zonotrichia leucophrys leucophrys. White-crowned Sparrow. A summer resident breeding in the high meadows and willow thickets near timber line. On August 28, 1916, I saw and counted ten birds of this species at Bullfrog Lake, 10,634 feet, and on August 24, 1941, I saw three, two adults and one young, at Reflection Lake, 10,168 feet. On September 5, 1916, I saw one between Charlotte and

Bullfrog lakes. Specimens (nos. 27281, 27282, male and female) were collected at Bullfrog Lake, August 30, 1916 (Swarth). Reported as a fall migrant at General Grant (Bryant, 1941). The first spring arrival inside the park was seen after a snow storm on May 12, 1942, at Lewis Creek. On July 26, 1942, at Evolution Lake, White-crowned Sparrows were numerous among the willows at the upper end of Evolution Lake. At Colby Meadow White-crowned Sparrows were fairly common, six being counted in the willows on July 27, 1942. Several were seen in the willows at Evolution Lake and a pair with young just out of the nest was seen at 10,300 feet in willows on Darwin Creek on July 28, 1942 (Dixon).

Zonotrichia leucophrys gambelii. Gambel White-crowned Sparrow. A fall and winter migrant arriving from the north in the fall about the time the breeding White-crowns leave; departs in the spring about the time the White-crowns return. Thus in 1916, the first Gambel Sparrow was seen along the western boundary of the park near Horse Corral Meadow* on September 20, and they became numerous two days later. Many seen at close range at Hume*, September 26, 1916 (Swarth).

Passerella iliaca altivagans. Alberta Fox Sparrow. Fall and winter visitant. Specimen (no. 26364) taken at Horse Corral Meadow*, September 22, 1916 (Swarth, 1920).

Passerella iliaca insularis. Kodiak Fox Sparrow. Fall migrant. Specimen (no. 27370) taken at Hume*, September 25, 1916 (Swarth, 1920).

Passerella iliaca sinuosa. Valdez Fox Sparrow. Fall and winter visitant. Specimen (no. 27369) taken at Horse Corral Meadow*, September 22, 1916 (Swarth, 1920).

Passerella iliaca schistacea. Slate-colored Fox Sparrow. Fall migrant. Two specimens were taken on the floor of Kings Canyon at 5000 feet, at Kanawyers, on September 12, 1916 (no. 27373) and on September 15, 1916 (no. 27371) (Swarth, 1920).

Passerella iliaca mariposae. Yosemite Fox Sparrow. Fall migrant. Specimen (no. 27384) taken at Horse Corral Meadow*, September 20, 1916; another (no. 27385), same locality, September 22, 1916 (Swarth, 1920).

Passerella iliaca stephensi. Stephens Fox Sparrow. Common summer resident. Many specimens collected (Swarth, 1920).

Swarth in his "Review of the Genus *Passerella*" in 1920, found six kinds of fox sparrows in the Kings Canyon area. All six races are verified by actual specimens which we collected in 1916 and which are in the Museum of Vertebrate Zoology. Of the six kinds, two, the Valdez and Alberta fox sparrows, are fall and winter visitors. Two others, the Kodiak and Slate-colored, are fall migrants usually wintering farther south. The Yosemite Fox Sparrow may breed in the northern portion of the park. The Stephens Fox Sparrow is the common breeding form at General Grant and at Kings Canyon. The first spring arrival was noted May 11, 1942, at Lewis Creek. On May 12, 1942, two Stephens Fox Sparrows were seen in manzanita thickets inside the park and by May 14, at Sheep Creek, six were seen, some carrying nest material. On May 20, 1942, at Hotel Creek, 12 birds were seen in chinquapin and snow brush and several were carrying nest material. Males were then in full song. On May 29, 1942, on the east face of Lookout Peak below Summit Meadow, I counted 10 breeding Fox Sparrows in full spring song (Dixon). Miller records that on May 21, 1942, he found many at 6500 feet on Sheep Creek trail amid chinquapin and snow brush. I saw two at Junction Meadow on Bubbs Creek, August 23, 1941. Numerous young on the wing seen on July 31, 1940, in Lewis Creek Basin.

Melospiza lincolni alticola. Montane Lincoln Sparrow. Rare summer resident. Nested at General Grant Meadow in June, 1940, and in July, 1941 (Bryant).

Melospiza melodia heermanni. Heermann Song Sparrow. A summer visitant along Kings River. I saw one and heard another at Zumwalt Meadow, August 17, 1916. Swarth shot a sparrow at the same locality but was unable to find it in the cattails. Without a specimen it is impossible to state the exact geographic race represented. On May 9, 1942, at Zumwalt Meadow, none could be found in the cattail swamp; vegetation was not up enough to give any real protection. On May 25, 1942, at Zumwalt Meadow, one Song Sparrow was seen in the willows beside the cattail swamp. On May 26, 1942, at Zumwalt Meadow, two Song Sparrows were seen and one breeding male (no. 9308, J. S. Dixon) collected. One Song Sparrow was caught in a mouse trap set at the edge of the water on May 27, 1942. Two Song Sparrows were seen in a wet meadow near a patch of tules on July 22, 1942, at Blaney Meadow*. It is not believed likely that any move up as far as the mouth of Piute Creek or into the park along the south fork of the San Joaquin River (Dixon, 1942).

United States Fish and Wildlife Service, Berkeley, California, April 30, 1943.