

less severely injured around the head, apparently by adult gulls, and a heavy mortality was evident. Early reports are practically unanimous in saying that gulls took frequent opportunity to kill and eat young birds of both murrens and cormorants, and I see no reason why they would not do likewise with the young of their own kind. At any rate, we frequently saw adults peck viciously at the half-grown young, and there can be no doubt that the injuries we witnessed were so inflicted. Although the normal clutch of eggs is three, we saw only a single case of a parent caring for this number of young. Many of the adults were afflicted with a sort of paralysis, which seems fatal. The light-house keeper said he believed the disease was contracted from poultry formerly kept on the islands, which suffered from an apparently identical disease.

*Phalacrocorax auritus albociliatus*. Farallon Cormorant. Cormorants occupy the west end of the island, and this species occupies the less precipitous area. Several hundred young birds were found, of all sizes, and one nest of eggs, which, however, was probably deserted. Mention of this nest is included here, because it was surrounded by others of the same species, and because no nests of other forms were in the immediate vicinity. A number of entirely naked young were found, and the youngest was probably hatched not earlier than August 15.

*Phalacrocorax penicillatus*. Brandt Cormorant. The Brandt Cormorant occupies the steeper slopes of the west end of the island, and seems the most numerous of the three forms of cormorant. Although the number of young of this and of the preceding species was about equal, there were many more adults of this species than of the other. The breeding season is somewhat earlier, as the young seemed all to be more than half grown.

*Phalacrocorax pelagicus resplendens*. Baird Cormorant. Only about a hundred of these birds were seen, nearly all on the extremely steep slope at the southwest end of the island. A few were found on the equally precipitous slope at Tower Hill, northwest of the lighthouse. No young were identified as belonging to this species, but I believe that our presence, the first human intrusion since April 15, caused many of them to enter the water for the first time. There was a large "raft" of cormorants, both adults and juveniles, in the water near the nests and it seemed probable that many of them were of this form.

*Cephus columba*. Pigeon Guillemot. Guillemots were numerous on the east and northeast parts of the island. A few young were found, all nearly ready to fly. The lighthouse keeper told us that these, in common with all others except the murrens, had increased noticeably within the last two or three years.

*Falco peregrinus anatum*. Duck Hawk. A dead Duck Hawk was found and queries led to the information that this bird had been electrocuted while on the radio antenna, from which it was wont to attack and kill the petrels and auklets as they passed to and from their burrows. Two other hawks, presumably of the same species, left the island at the time of their companion's death, and have not been seen since. We were told by the lighthouse keeper that a pair of these birds successfully bred on the rocks below the lighthouse in 1932. I have found no previous record of this species nesting upon the Farallon Islands.

*Salpinctes obsoletus*. Rock Wren. Two broods of three each were found, one of which had just left the nest, and the other of which was just ready to leave. Wrens are common over the entire eastern half of the island, but seem not to inhabit West End, where plants are much less abundant.

Other birds seen while on the island include the English Sparrow (*Passer domesticus*), California Linnet (*Carpodacus mexicanus frontalis*), Wandering Tattler (*Heteroscelus incanus*), and Northern Phalarope (*Lobipes lobatus*). A careful look-out was kept for the Beal Petrel and the Rhinoceros Auklet, but it failed to reveal any indication of the presence of these forms. We searched the localities, as nearly as they could be determined, from which they have previously been taken, but in vain.

Reports of a high mortality from migrating birds striking lighthouses elsewhere, caused me to inquire from the lighthouse keeper whether he had noticed such an occurrence on the Farallon Islands. He told me that he was unaware of any deaths, except of petrels and auklets, from this source.—CLARENCE F. SMITH, *Berkeley, California, January 31, 1934.*

Unusual Nesting Records from Northern Arizona.—During the past few years it has been the writer's privilege to make certain observations of the birds of northern Arizona under the direction of the Museum of Northern Arizona as part of a project

to make better known the wild life of the country. The following records are offered separately at this time.

*Astur atricapillus striatulus*. Western Goshawk. Apparently there are no published nesting records of the Goshawk from northern Arizona. On July 2, 1931, Mr. D. Irvin Rasmussen, Ranger in the Kaibab National Forest, showed me the nest of a Goshawk. It was a platform eight inches thick and nearly one and one-half feet in diameter, and was placed on four south-facing branches, approximately forty-five feet above the ground, next to the trunk of a western yellow pine. The nest was made of large sticks and lined with fresh green twigs of Douglas fir; it contained two fledglings and these were photographed in a natural position. Both parents were quite shy and would not come close to the nest, but kept up a continuous squawking. The nest was near the fire observation tree in Road Hollow, five miles southwest of Dry Park, Kaibab Plateau, Coconino County, in the Transition Zone, at an altitude of 8000 feet. An attempt was made to collect one of the parents, but they both evaded the gun. Since this record, several rangers on the Kaibab Plateau have reported that they have seen Goshawks sparingly during the summer months. A. H. Miller (Condor, 34, 1932, p. 96) saw an adult Goshawk twice on the Kaibab Plateau, once near Dry Park, June 24; the second time near Jacob's Lake, June 25 or 26, 1931.

An immature female, young of the year, was shot during the last days of September, 1933, by Mr. W. A. McDowell of Jacob's Lake, Kaibab Plateau, but the bird was in too bad condition to be preserved. However, the wings and tail were sent to Mr. George Willett of the Los Angeles Museum who believes the bird to have been the Western Goshawk. Dr. H. C. Oberholser very kindly examined available breeding Goshawks from Arizona, New Mexico, and other western states, and says: "My opinion still is that the bird of New Mexico and Arizona is the western form, *A. a. striatulus*, if this race be recognized. In the adult there is not much difference between the two, but young birds are more easily distinguished."

*Pandion haliaëtus carolinensis*. American Osprey. The breeding status of the American Osprey in Arizona at the present time is rather uncertain, although Cooke (Auk, 31, 1914, p. 403) recorded "several" on the authority of A. K. Fisher from near Camp Verde, June 26-29, 1892; and Jackson (Condor, 24, 1922, p. 25) reported the bird common at Roosevelt Lake from May 19 to 29, 1916.

Ospreys with good sized young in the nest were observed by Mrs. Grover Pfluger of Espero, Arizona, July 2, 1933, on the nearby Black River in the Transition Zone of the White Mountains at an altitude of 7500 feet. For verification of this record, Mrs. Pfluger showed the writer two other Ospreys' nests which she said had been occupied for several summers previous. These nests were on Buffalo Creek, near Espero, in the Transition Zone, at an altitude of 7500 feet. The owners of the latter nests were well known to the ranchers of the vicinity. Also, several Ospreys were observed at the same place by the author during mid-June and mid-July, 1933.

*Actitis macularia*. Spotted Sandpiper. The status of the Spotted Sandpiper as a breeding bird of Arizona apparently rests upon the statement of Mearns (Auk, 7, 1890, p. 52). The birds were "apparently breeding" at a lake which, from the description, must have been Walker Lake, at the west base of San Francisco Mountain. Conditions at Walker Lake have changed little since Mearns' day, and the Spotted Sandpiper does not breed there now, as the writer has visited this lake frequently during the past few years without finding it. Mearns' belief was probably based on the presence of June migrants, as is almost certainly the case with his record of the White-crowned Sparrow on Hart Prairie near-by. Mearns further stated that this species bred in the low valleys of Arizona, but he gave no specific data as to location or date, thus leaving no satisfactory breeding records for the state.

The writer found several Spotted Sandpipers at ponds on the Kaibab Plateau between 7500 and 8500 feet, during the last days of June, 1931, but obtained no evidence of breeding at that time. On June 12, 1933, however, at White River Agency, Navajo County, in the Upper Sonoran Zone at an altitude of 5000 feet, he found two families of young barely able to fly. Three days later on Buffalo Creek, near Espero, in the Transition Zone at an altitude of 7500 feet, an adult Spotted Sandpiper was found with young. The latter were able to fly only a few feet. At this time adults were observed regularly on the nearby Black River and its tributaries. On June 15 and 16, 1933, a family of young already on the wing was seen at a represo near Phelps Ranger Station, at the north base of Mt. Thomas, White Moun-

tains, Apache County, in the Canadian Zone at an altitude of 9200 feet. On July 14, the writer again visited Buffalo Creek near Espero and found presumably the same family of young flying along the creek.

On August 5, 1933, Allan R. Phillips, also associated with the Museum of Northern Arizona, found a family of four young anxiously escorted by both parents. This observation was made on the south shore of Mormon Lake, Coconino County, in the Transition Zone, altitude 6950 feet. The young could fly only a few feet and thus barely escaped capture. These records establish the Spotted Sandpiper as a summer resident in the higher portions of Arizona.

*Picoides tridactylus dorsalis*. Alpine Three-toed Woodpecker. The following observations supplement the records of Mearns (Auk, 7, 1890, p. 252), who considered this bird to breed commonly throughout the pine belt of north-central Arizona. He mentioned only one specific nest, from the northwest slope of the San Francisco Mountains, June 8, 1887. During the past six years, 1928-1933, these woodpeckers have been observed throughout the summer months in the higher portions of the Canadian Zone and lower Hudsonian Zone, from 9000 to 10,000 feet, San Francisco Mountains.

On June 30, 1931, the writer discovered a nest in Dog Canyon, six miles east of V. T. Park, near the east rim of the Grand Canyon, Kaibab Plateau, in the Canadian Zone at an altitude of 8200 feet. The continual chattering of the parents betrayed their nest. Investigation disclosed a hole in an aspen tree, two and one-half inches in diameter, opening to the southeast, twelve feet from the ground. The cavity was eight inches deep and the nest was lined with a thick layer of maggot-infested sawdust. In spite of the crawling competitors, the nestlings, a male and a female, seemed quite contented. They were removed, banded, and photographed in a natural position nearby. The orange crown of the young male contrasted strikingly with the rest of his head. The parents continued chattering and scolding long after their offspring were returned but apparently soon forgot the incident, for the following day they were contentedly feeding the young. Several days later, another nest was found at Cougar Lake, also on the Plateau, about midway between Dry Park and the Castle Canyon Road, in the Transition Zone, at an altitude of 8100 feet. It was impossible to photograph this second group since the nest was in a hole about sixty feet above the ground in a western yellow pine. Throughout the higher portions of the Kaibab Plateau these woodpeckers were not uncommonly seen by the writer during the latter part of June and early July, 1931, and again at the end of July, 1933.

Several Alpine Three-toed Woodpeckers were also observed in the higher parts of the Transition Zone and in the Canadian Zone of the White Mountains, during mid-June and mid-July, 1933. A specimen collected July 14, 1933, no. 3920, is in the Museum of Northern Arizona. On June 15, 1933, on Home Creek, a tributary of Black River eight miles west of Espero, in the Canadian Zone, at an altitude of 8400 feet, a female Alpine Three-toed Woodpecker chattered continually and acted exactly as had the former one on the Kaibab Plateau when its nest was discovered two years previously. As the time was limited, no nest was found, although the impression was gained that this woodpecker nests in the vicinity of the White Mountains of Arizona. It would thus seem that the Alpine Three-toed Woodpecker is a less rare summer resident on the higher portions of the plateau of central and northern Arizona than formerly was believed.

*Empidonax wrightii*. Wright Flycatcher. On the west slope of the San Francisco Peaks, lies Hart Prairie, a large sloping meadow with a little stream bordered by mountain willows and wild gooseberries. This meadow is in the Canadian Zone at an average altitude of 8600 feet. Here, early in June, 1932, Wright Flycatchers were quite common. Three nests were discovered by the author and Allan R. Phillips, and specimens were secured. The specimens, M. N. A. nos. 3917-3919 inclusive, have been examined by Dr. J. Grinnell of the Museum of Vertebrate Zoology.

The first nest was found June 7 when the birds were building. On the 14th, the nest contained 1 egg; on the 15th, 2 eggs; and from the 17th to the last visit on June 19, there were 3 eggs. One nest minutely examined was found to consist of thin strips of aspen bark and toilet paper.

This appears to be the first definite breeding record of the Wright Flycatcher for Arizona. Dr. Alden Miller (Condor, 34, 1932, p. 97) secured evidence of breeding of this species on the Kaibab Plateau but found no nests. Henshaw (Rep. Orn. Spec.,

Wheeler Surv., 1874, p. 161) found "*Empidonax obscurus*" not uncommon in summer in the aspen groves of presumably the White Mountains. This species probably breeds in Arizona in the White and San Francisco mountains and on the Kaibab Plateau.

*Nuttallornis borealis*. Olive-sided Flycatcher. There is apparently no satisfactory statement of the breeding status of the Olive-sided Flycatcher in Arizona since 1890 when Mearns designated it as a common summer resident in the White Mountains, Mogollon Mountains, and San Francisco Mountains, "nesting near the tops of the tallest firs and balsams" (Auk, 7, 1890, p. 256). No nests have been found in New Mexico (F. M. Bailey, Birds of New Mexico, 1928, pp. 445-446). The following observations are therefore offered to substantiate those of Dr. Mearns.

A nest was found July 1, 1931, by the writer and Clifton M. Greenhalgh, in the Canadian Zone of Dog Canyon at an altitude of 8250 feet, near the east rim of the Grand Canyon, Kaibab Plateau. The nest was about seventy feet up in an Engelmann spruce and contained three young birds with eyes not yet open. The framework of the nest was of twigs and needles of the western yellow pine. The nest, two and one-half inches in diameter and one inch deep, was lined with grasses, and roots, and was saddled on top of one of the highest east-facing branches of the spruce, about two and one-half feet from the trunk. The parents were quite demonstrative and darted about threateningly. A climbing belt was used, and the young were photographed in the nest. Another nest containing two eggs was discovered the afternoon of the same day on the Plateau near V. T. Ranger Station, De Motte Park, altitude 8800 feet. A third egg had previously been broken in the nest. The eggs were lilac in ground color, one slightly darker than the others. Both had dark and light brown spots near the larger ends. This nest was practically the same as the former, except that it was lined with green lichens and rootlets. It also was placed on the top of a southeast-facing branch, about forty feet up in an Engelmann spruce, but five feet from the trunk. The nest and eggs were taken and are now M. N. A. no. 3921. Both parents were seen in the vicinity of the nest thereafter until we left the Kaibab, July 9, 1931 (Jenks, Grand Canyon Nature Notes, 5, no. 10, 1931, pp. 104-105). On August 1, 1933, an adult bird was observed at the very site of the earlier nest. These flycatchers were found to be not uncommon on the higher portions of the Kaibab Plateau at the end of July, 1933. Parents were seen carrying food to young in the nest at Dry Park, Kaibab Plateau, Transition Zone, as late as August 1, 1933. During the past six years, 1928-1933, the writer has found the Olive-sided Flycatcher to be a fairly common summer resident in the Canadian and Hudsonian zones of the San Francisco Peaks, from altitudes of 8300 to 10,500 feet. In several instances parents have been seen escorting young out of the nest as early as the middle of July.

Olive-sided Flycatchers were not uncommon in the higher parts of the Transition Zone, and in the Canadian and Hudsonian zones of the White Mountains, but were more numerous in the Canadian Zone in mid-June and mid-July of 1933. They were seen as high as 10,000 feet on Mt. Thomas on June 10, 1933. Near Brentwood Ranch, six miles west of Espero, in the Transition Zone at an altitude of 7800 feet, parents were carrying food to young already out of the nest on July 16, 1933. This species has also been observed at intervals during the past six summers on the higher portions of the Mogollon Plateau.

The above records, with the exception of those from the Kaibab Plateau, indicate that the Olive-sided Flycatcher still retains the same status which Dr. Mearns gave it in 1890.

*Regulus satrapa olivaceus*. Western Golden-crowned Kinglet. There appears to be no accepted published record of the Western Golden-crowned Kinglet in Arizona in summer, although Rhoads (Proc. Acad. Nat. Sci. Phila., 44, 1892, p. 125) reports having seen this bird in the Santa Catalina Mountains of southern Arizona in July. On July 15, 1933, the writer saw a flock of approximately twenty birds in a grove of Douglas firs at Reservation Ranch near the southeast base of Mt. Thomas, White Mountains, at an altitude of 9100 feet. Attention was attracted by the continuous high lispings of the birds. This observation was made during a heavy hailstorm and all the birds that were observed closely were young of the year, which could not have been long out of the nest. Two young were taken and have been examined by Dr. Grinnell. These specimens are M. N. A. nos. 3915 and 3916. This record establishes the Western Golden-crowned Kinglet as a summer resident of Arizona.

*Oberholseria chlorura*. Green-tailed Towhee. There is apparently no satisfac-

tory statement of the status of the Green-tailed Towhee in northern Arizona. Swarth considers this bird as "a common migrant, occurring indifferently on boreal mountain tops or on the semi-arid desert plains," but mentions no summer records for Arizona (Pacific Coast Avifauna, no. 10, 1914, p. 59). Dr. Merriam, however, suggested its possible breeding near San Francisco Mountain, "where an immature bird was shot in the pines August 5" (North American Fauna, no. 3, 1890, p. 97).

During the past six summers, the Green-tailed Towhee has been observed as a fairly common summer resident in the Canadian and the Hudsonian zones on the San Francisco Mountains. These birds inhabit the mountain willow and wild gooseberry thickets on the borders of alpine meadows, from altitudes of 8300 up to 10,500 feet. The writer has seen these birds in the mountains from April 3 until late in September. They may have arrived earlier and departed later, however, because the higher altitudes of the San Francisco Mountains were not studied before or after the given dates. Parent birds have been observed carrying food for young as late as August 11. There are numerous breeding records of the Green-tailed Towhee from the mountains of New Mexico, chiefly above 7800 feet, especially in the northern part of that state (F. M. Bailey, Birds of New Mexico, 1928, pp. 708-709).—RANDOLPH JENKS, *Museum of Northern Arizona, Flagstaff, Arizona, September 15, 1933.*

**A Second Record of the Black Merlin in Southern California.**—In the collection of the Museum d'Histoire Naturelle in Paris there is a specimen of *Falco columbarius suckleyi*, taken at Santa Barbara on October 28, 1878, by a collector named de Cessac. It is numbered 1880—1251 of the old catalogue and is not marked as to sex. However, it appears to be a fully adult female.

In an effort to locate other California specimens of note I spent some time in going over portions of the catalogue but discovered little beyond evidence that de Cessac and Pinart had collected extensively in central and southern California in the late seventies, and had sent to the Paris Museum nearly 3000 skins. Unfortunately, what was probably a valuable collection has been rendered virtually worthless through the removal, in almost all instances, of the original tags and the substitution of others which seldom bear more than a very unsatisfactory "Californie". In a few cases the original labels were still attached to the skins, some of the localities being "Vallee Tujo", Santa Barbara, Los Angeles, and several points in the San Francisco Bay region.—A. J. VAN ROSSEM, *California Institute of Technology, Pasadena, California, February 21, 1934.*

**Apparent Promiscuity in the Violet-green Swallow.**—In June, 1933, Violet-green Swallows (*Tachycineta thalassina lepida*) were abundant in the vicinity of Laguna Hanson, Sierra Juarez, Baja California, Mexico. On the morning of the tenth, the following incident was observed. A single bird alighted upon a small pine branch on the ground, and was quickly surrounded by four others. These later arrivals engaged in a general melee of quarreling and fighting among themselves, from which the bird on the branch remained aloof. In the midst of the flurry, a sixth bird arrived, alighted upon the back of the first bird and completed the act of copulation. All six swallows then took wing and, ascending above the pines, were soon lost to sight. Literature examined gives no record of the marital relations of these birds and so implies monogamy. The above would suggest that at times Violet-green Swallows may be promiscuous in their sexual activities.—FRANK F. GANDER, *San Diego Society of Natural History, San Diego, California, April 7, 1934.*

**Notes on Food Habits of Juncos.**—In a study of seedling survival at the Priest River Forest Experiment Station in northern Idaho, the seeds of six coniferous species were sown in the fall of 1932. Soon after the seedbeds were uncovered, early in May, 1933, juncos (thought to be *Junco hyemalis connectens*) were observed to be active about them. The following observations were made:

In order of preference, the seeds were: Western white pine, *Pinus monticola*; Douglas fir, *Pseudotsuga taxifolia*; western larch, *Larix occidentalis*; lowland white fir, *Abies grandis*; western hemlock, *Tsuga heterophylla*; western red cedar, *Thuja plicata*. Apparently the birds did not disturb the seeds of the last three species, which might be attributed to the smallness of the cedar and hemlock and to the bitter, resinous flavor of the white fir, although the white fir was the largest of