the individual. In a telephone conversation with me, Lamb recalled shooting the nuthatch, and remembered that it had behaved normally and that the condition of the legs and feet was evident only after the bird was in hand. The infestation of this mite has never before been reported in the White-breasted Nuthatch. I am grateful to Mr. Hubbard for calling my attention to this specimen. This is contribution no. 68 of the Moore Laboratory.—JOHN WILLIAM HARDY, *Moore Laboratory of Zoology, Occidental College, Los Angeles, California, October 9, 1964.*

Unusual Bathing Habits of the Turkey Vulture.—On September 12, 1964, I was hiking in Walnut Canyon National Monument, eight miles east of Flagstaff, Arizona. A flock of 14 Turkey Vultures (*Cathartes aura*) were seen flying overhead and perching in nearby ponderosa pine approximately one-fourth mile due south of the Walnut Canyon Visitor Center. There had been numerous thunder showers throughout the afternoon and as the rain again began to fall, the vultures settled in dead snags. Soon other vultures were flying from the protection of the living trees into more open areas. Birds silhouetted against the sky were observed to spread their wings and manipulate the primary and secondary feathers allowing them to be washed by the rain. This accomplished, they ruffled their body feathers and turned into the wind, allowing the water to run off their body. The birds then shook themselves and flapped their wings. With their feathers properly arranged, they returned to the shelter of the pines and continued to preen themselves. The bathing occupied a period of about 45 minutes.—MIKE MCKELVEY, *Arizona State College, Flagstaff, Arizona, October 8, 1964.*

Northern Limit of the Acorn Woodpecker.—Gabrielson and Jewett (Birds of Oregon, 1940: 374) give Lane County as the northern limit of the Acorn Woodpecker (*Melanerpes formicivorus*) in Oregon. Walker (Condor 54, 1952:315) observed a pair on several occasions at Corvallis, and Jewett (Murrelet 33, 1954:14) reported a road-killed Acorn Woodpecker at Salem, Oregon. On three occasions, December 26, 1960, August 17, 1961, and December 29, 1963, I have noted two (presumably paired) Acorn Woodpeckers in The Dalles, Oregon, on the south bank of the Columbia River. On August 16, 1961, a single bird was seen in the same locality. This extends the northern limit of the species and is one of very few records of its occurrence east of the Cascade Mountains.

The country around The Dalles supports mixed ponderosa pine (*Pinus ponderosa*) and scrub oak (*Quercus* sp.), and it is possible that a limited number of Acorn Woodpeckers could breed in the vicinity. Although this species has never been reported from Washington state, habitat similar to that at The Dalles can be found about 15 miles northwest and 30 miles northeast of The Dalles, at White Salmon and Satus Pass, Washington, respectively. A thorough search of these areas is likely to yield the first Washington record of the Acorn Woodpecker.—JARED VERNER, *Department of Zoology, University of California, Berkeley, October 6, 1964.*

Two Western Occurrences of the Orchard Oriole.—On March 25, 1964, a singing Orchard Oriole (*Icterus spurius*), in adult male plumage, was observed foraging in citrus trees in El Centro, Imperial County, California. Several 35 mm. color photographs were made of the bird and are now on file at the Museum of Vertebrate Zoology, Berkeley, California. This is apparently the fourth recorded occurrence of this species in the state and the first inland report.

On May 22, 1964, an adult male Orchard Oriole was collected near San Simon Cienaga, approximately 15 miles north of Rodeo, in Hidalgo County, New Mexico, as it foraged in the flowers of mesquite (*Prosopis juliflora*). The specimen, which had some subcutaneous fat and moderately enlarged testes (4 × 6 mm.), has been deposited in the collection of The University of Michigan Museum of Zoology. Two fall-taken specimens from the nearby Chiricahua Mountains in Arizona (Monson and Phillips, A Checklist of the Birds of Arizona, 1964:60) represent the only other substantiated records of this species in the Southwest east of California and west of southeastern New Mexico.—JOHN P. HUBBARD, *The University of Michigan Museum of Zoology, Ann Arbor, Michigan, September 17, 1964.*

Physiological Aspects of the Onset of Molt in the Redwinged Blackbird.—The onset of molt in the Redwinged Blackbird (*Agelaius phoeniceus*) was studied during June, July, and

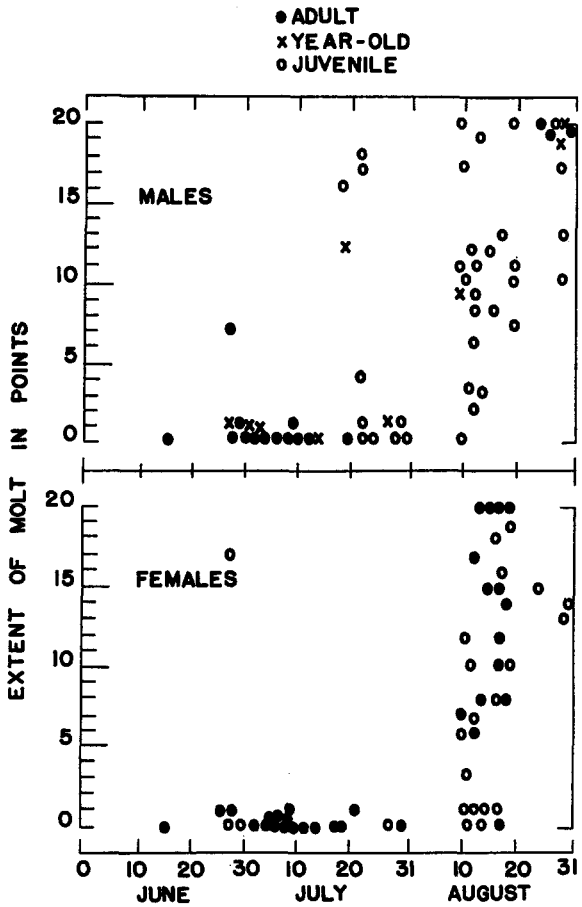

Fig. 1. The onset of molt (see text for description of point system).

August, 1960, in relation to the size of the bursa of Fabricius, the incubation patch, the gonads, and the cloacal protuberance.

One hundred and twenty-one Redwinged Blackbirds were collected within a 30-mile radius of Atlanta, Georgia, between June 15 and September 1, 1960. The birds were placed in five per cent formaldehyde after skinning; the gonads and bursa were removed at a later date for weighing. As a means of tabulating molt stages one point was arbitrarily given for the presence of molt in any of the 16 body regions and four wing regions as diagrammed by Blake (Bird-Banding, 27, 1956: 22–31). Thus birds could vary between zero and 20 points depending on the number of areas in molt (fig. 1).

Table 1 illustrates the degree of sexual dimorphism in total weight, wing length, and tail length. Males were larger in all respects than females. It is also apparent that juvenal birds have nearly attained the adult weight.

Adult males began molting in late June and specimens collected in late August were in full molt (fig. 1). Testicular weight and the size of the cloacal protuberance in adult males decreased considerably at the end of the breeding season in middle and late July (fig. 2). Estimation of subcutaneous fat indicated no excessive deposition in any of the birds at the end of the summer.

The testicular weight of year-old males varied from 0.8 mg. to 26.9 mg., in comparison with

TABLE 1

WEIGHT, WING LENGTH AND TAIL LENGTH IN THE REDWINGED BLACKBIRD*

Age, sex, and sample size	Mean total weight (gm.)	Mean wing length (cm.)	Mean tail length (cm.)
Adult males, 16	60.7 (2.4)	11.9 (0.2)	9.5 (0.4)
Year-old males, 9	61.2 (3.7)	11.3 (0.3)	8.6 (0.4)
Juvenal males, 31	54.1 (3.1)	10.9 (0.3)	8.1 (0.5)
Adult and year-old females, 33	38.8 (2.5)	9.6 (0.2)	7.4 (0.3)
Juvenal females, 22	36.8 (2.6)	8.9 (0.2)	6.7 (0.3)

* Standard deviations are in parentheses.

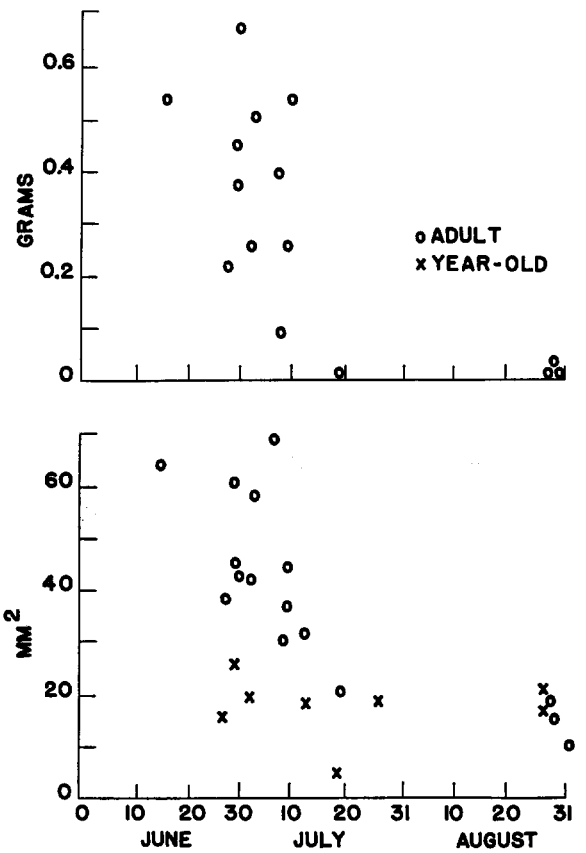

FIG. 2. Above, adult male testes weight; below, male cloacal protuberance (mm.^{2} = height times diameter).

the mean testes weight of 285.4 mg. for adult males. None of the one-year-old males had a bursa of Fabricius, and the cloacal protuberance was much smaller than in adult males (fig. 2).

The testes of the juvenal males were very small, varying from 0.2 to 2.4 mg. The bursa of Fabricius was always present, and its weight did not vary significantly during the summer or as a function of total weight. The juvenal males collected apparently came from two main hatching periods. One group seemed to be in complete molt by August 20 and the other after September 1. The first juvenal male in molt was collected on July 18; the last nonmolting individual was collected on August 10.

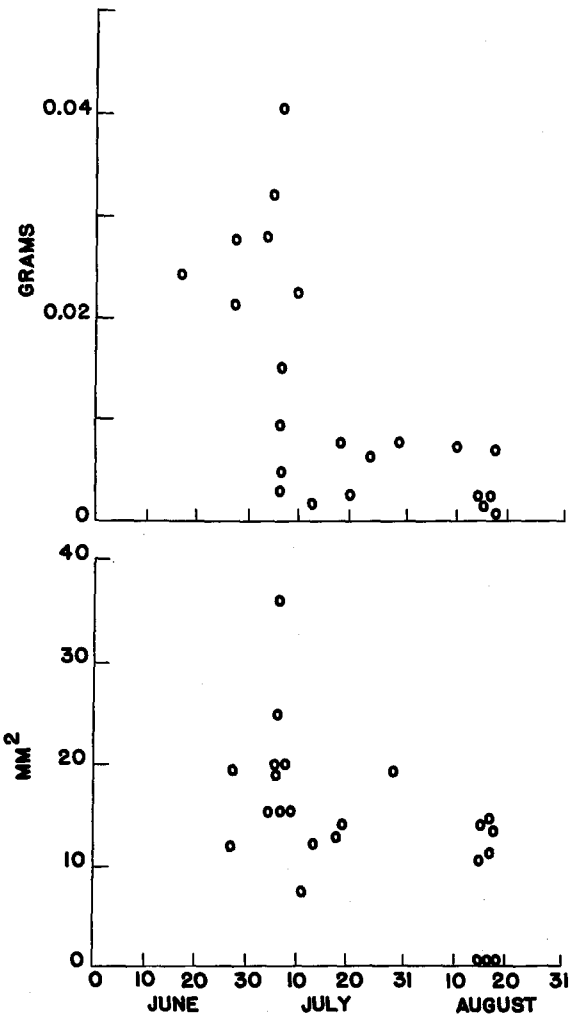

Fig. 3. Above, adult female ovary weight; below, adult female cloacal enlargement ($mm.^2$ = height times diameter).

Average weight of adult females increased slightly during the summer: 38.09 gm. for June, 37.04 gm. for July, and 40.04 gm. for August. Weight increased after the breeding season apparently because of the cessation of extra energy expenditure by the female in rearing young. Weight of the left ovary showed a large decrease and size of the cloacal enlargement a small decrease at the end of the breeding season in early to middle July (fig. 3). Adult females started the second (or third, fourth, and so on) postnuptial molt in late June and were in full molt by the middle of August (fig. 1). The first adult female in molt was collected on June 27; the last adult female not in molt was collected on August 17. Only two adult females with enlarged ovaries and incubation patches were found to be in molt, and in these birds the molt was very limited.

The left ovary of juvenal females averaged 1.3 mg. Postjuvenal molt in juvenal females was initiated in mid-July, although an exceptional individual was in nearly full molt in late June (fig. 1). The last juvenal female that was not in molt was collected on August 12.

Gonadal regression of adult birds was coincident with the initiation of molt. Energy conservation may explain the observed lack of significant overlap between breeding and molt.

The enlargement of the cloacal region observed in adult females during the breeding season needs further study, in view of the fact that a cloacal protuberance is usually thought to be present only in adult males.

This investigation was sponsored by a National Science Foundation Undergraduate Research Participation Award. I am indebted to Dr. Philip Humphrey for valuable criticism and advice.—WILLIAM A. DUNSON, *Department of Biology, Yale University, New Haven, Connecticut, November 23, 1964.* (Present address: *Department of Zoology, University of Michigan, Ann Arbor, Michigan.*)

Goshawk Nesting in the Upper Sonoran in Colorado and Utah.—Hall and Grinnell (Proc. Calif. Acad. Sci., 4th ser., 9, 1919:62), Bent (U. S. Nat. Mus. Bull. 167, 1937:139), and Dixon (Condor, 40, 1938:3–11) all agree that the Goshawk (*Accipiter gentilis*) in western North America is usually restricted in its nesting to the montane coniferous forests and rarely nests in the upper Transition Life Zone. Bond (Condor, 42, 1940:100–103) seems to be the first to record the nesting of the Goshawk in the Upper Sonoran Zone. The following records seem to corroborate Bond's observations.

On July 7, 1962, in Moffat County, Colorado, we observed another nesting of the Goshawk in the Upper Sonoran Zone. The nest observed was on the flood plain of the Yampa River, about one-half mile east of the eastern limits of Dinosaur National Park. The nest itself was situated about 20 feet above the ground in a Fremont cottonwood some 100 yards from the river's edge. Schnell (Condor, 60, 1958:378), in summarizing tree types utilized by this hawk for nesting, records several species of conifers, the aspen, and the narrow-leaf cottonwood, but he does not record the Fremont cottonwood. The fact that the hawks utilized the Fremont cottonwood is in itself significant, since the Lower and Upper Sonoran zones of western North America constitute the place of occurrence of this tree, its distribution being especially typical of river terraces such as those along the Colorado River.

This area had apparently been used in past years, as some old nests were seen in the immediate vicinity. The ecological environment of this nesting location is similar to that described by Bond (*op. cit.*). Surrounding hills are covered by sagebrush, juniper, greasewood, and horsebrush, with a rather broad flood plain on both sides of the river dominated by cottonwoods. The pair of hawks was successful in raising two young which, when found, were out of the nest and old enough to maintain a rather steady, direct flight for about 75 yards. While the extent of the defended territory was not determined for this pair, it may be important to note that a pair of Cooper Hawks (*Accipiter cooperii*) nested at the river's edge in the same habitat about one mile downstream. There are few previous nesting records of the Goshawk in Colorado (A. M. Bailey, personal communication).

Two similar nestings of the Goshawk have been observed in Utah within the past six years along the western front of the Wasatch Mountains. One was in Parley's Canyon, at an elevation of about 5600 feet, and another in Hobble Creek Canyon, about 5700 feet above sea level. Both nests were in narrow-leaf cottonwoods along a stream. The surrounding area was typical of the extreme lower portion of the Transitional Zone.—CLAYTON M. WHITE and GARY D. LLOYD, *Department of Zoology, University of Utah, Salt Lake City, Utah;* and GERALD L. RICHARDS, *Department of Zoology, Brigham Young University, Provo, Utah, September 27, 1964.*

Specimens of Nuttall Woodpecker from Oregon.—Although listed as occurring in southern (or southwestern) Oregon in the 2nd, 3rd, and 4th editions of the A.O.U. Check-list, the range of the Nuttall Woodpecker (*Dendrocopos nuttallii*), as given in the 5th edition (A.O.U. Check-list, 1957:328), does not include Oregon. Gabrielson and Jewett (Birds of Oregon, 1940: 604–605) did include the species in their hypothetical list of Oregon birds, on the basis of a specimen reportedly taken by Dr. J. S. Newberry "in the Umpqua Valley in August 1855" (*op. cit.*:604). Gabrielson and Jewett were unable to trace this specimen. While studying specimens