

## GENERAL NOTES

**Marsh Hawk takes prey from Short-eared Owl.**—While driving in the Buena Vista Marsh area near Bancroft, Wisconsin, on the afternoon of March 25, 1956, I saw an adult male Marsh Hawk (*Circus cyaneus*) diving repeatedly at a Short-eared Owl, (*Asio flammeus*) which was perched on the ground. After stopping the car I continued watching the episode with a seven power binocular at a distance of about 125 yards.

After a short time the owl flew up carrying what appeared to be a vole (*Microtus*). After a close chase lasting no more than 30 seconds the pursuing Marsh Hawk drove the owl upwards until at a height of about 150 feet the owl released its prey. The mouse fell to the road in front of me and was quickly seized and carried away by the hawk.—DANIEL D. BERGER, *Cedar Grove Ornithological Research Station, Cedar Grove, Wisconsin, May 10, 1957.*

**Supernumerary rectrices in some raptors.**—On January 8, 1956, while trapping and banding American Kestrels (*Falco sparverius*) in south Texas, we obtained a bird of this species near Encinal in Webb County which possessed 13 rectrices instead of the usual 12. The rectrix which appeared to be the supernumerary was about six millimeters shorter than the others and inserted between numbers 1 and 2 (numbered from the center outward) on the right side. All growth in this feather appeared to have terminated.

The bird was considered to be an immature male on the basis of the fault bars in the plumage—primarily in the remiges and rectrices. However, error in age determination by this method is possible. Of Parkes' (1955. *Wilson Bull.*, 67:194–199) aging criteria only the tail character, which is admittedly rather unreliable, would remain useful by early January, since the other characters would have been obliterated by the postjuvenile body molt. The tail character indicated that the bird was adult. On this particular bird we considered the fault bar aging method to be more reliable.

Dr. Erich Awender (personal correspondence, April 2, 1957) once took a nestling European Goshawk (*Accipiter gentilis*) that had a perfectly-developed extra tail feather which was inserted between numbers 4 and 5 on the left side. A similar occurrence was reported by Bakheet Talatashar (1951. *Falconer*, 2:59), a falconer, who trapped an adult Peregrine Falcon (*Falco peregrinus pelegrinoides*), presumably near his home in Khartoum, Egyptian Sudan, which had "thirteen tail feathers, all fully formed and feather-perfect."—DANIEL D. BERGER AND HELMUT C. MUELLER, *Cedar Grove Ornithological Station, Cedar Grove, Wisconsin, May 10, 1957.*

**Data on relative heart size of the Warbling Vireo and other passerines from high altitudes.**—In an earlier account (1955. *Wilson Bull.*, 67:78–83) we offered some evidence in support of views held by Rensch and others to the effect that, in birds, the ratio of heart weight to body weight, or "heart ratio," increases with increase in altitude. The data included in that paper concerned only those species for which we had heart-ratio measurements from both high and low altitudes. Since relatively little has been published on heart size of birds from high altitudes (cf. Hartman, 1955. *Condor*, 57: 221–238 [esp. p. 226]), we are presenting data on heart ratios of 73 specimens of 24 species not included in our previous report. The specimens, obtained in the course of an expedition sponsored by the Museum of Vertebrate Zoology, were taken in the breeding season at elevations of 6700 to 12,000 feet in the White Mountains of extreme east-central California and adjacent Nevada. Subspecific status of the species in question may be

determined by consulting Grinnell and Miller (1944. *Pac. Coast Avif.* no. 27) and Miller and Russell's notes (1956. *Condor*, 58:75-77) on the distribution of certain forms in the White Mountains.

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HEART RATIOS OF SOME PASSERINE BIRDS FROM THE WHITE MOUNTAINS OF CALIFORNIA AND NEVADA

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	Males	Females
<i>Sayornis saya</i> . Say Phoebe.	1.04	
<i>Contopus sordidulus</i> . Western Wood Pewee.		1.37, 1.49
<i>Eremophila alpestris</i> . Horned Lark.	1.68 ± .08 <sup>1</sup> (5)	
<i>Parus gambeli</i> . Mountain Chickadee.	1.43, 1.54, 1.67	1.34
<i>Sitta carolinensis</i> . White-breasted Nuthatch.	1.62 ± .06 (5)	1.46
<i>Sitta canadensis</i> . Red-breasted Nuthatch.		1.90
<i>Thryomanes bewickii</i> . Bewick Wren.	1.59	
<i>Oreoscoptes montanus</i> . Sage Thrasher.		1.37
<i>Hylocichla guttata</i> . Hermit Thrush.	1.55 ± .09 (4)	1.18
<i>Polioptila caerulea</i> . Blue-gray Gnatcatcher.		1.03, 1.58
<i>Vireo gilvus</i> . Warbling Vireo.	2.16 ± .14 (6)	
<i>Vermivora virginiae</i> . Virginia Warbler.	1.58, 1.59	
<i>Dendroica petechia</i> . Yellow Warbler.	1.55	1.38
<i>Dendroica auduboni</i> . Audubon Warbler.	1.41, 1.57, 1.73	1.37
<i>Dendroica nigrescens</i> . Black-throated Gray Warbler.		1.41
<i>Oporornis tolmiei</i> . Tolmie Warbler.	1.59 ± .06 (8)	
<i>Molothrus ater</i> . Brown-headed Cowbird.	1.52	
<i>Piranga ludoviciana</i> . Western Tanager.	1.27, 1.51	
<i>Pheucticus melanocephalus</i> . Black-headed Grosbeak.	0.96, 1.08, 1.29	
<i>Passerina amoena</i> . Lazuli Bunting.	1.38	1.34
<i>Carpodacus cassinii</i> . Cassin Finch.	1.39, 1.54, 1.55	
<i>Loxia curvirostra</i> . Red Crossbill.	1.74 ± .09 (6)	1.82, 1.98
<i>Poocetes gramineus</i> . Vesper Sparrow.	1.24	1.14
<i>Spizella breweri</i> . Brewer Sparrow.	1.33	

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<sup>1</sup>Standard error of the mean; parentheses enclose number in sample.

We should like to call particular attention to the extremely high heart ratio of the Warbling Vireo. In the six males the heart weight averages more than 2 per cent of the total body weight. An additional bird of undetermined sex had a ratio of 2.06. Of the seven June-collected specimens, three were from approximately 7400 feet elevation, three from 8200 feet, and one from 10,500 feet. It is possible that samples of males (whose ratios average larger than females) of certain other species taken at high altitudes would yield ratios comparable to those of the male vireos. An example is the Red-breasted Nuthatch (for which we have but one value). However, as far as present data indicate, the Warbling Vireo has a relatively heavier heart than any other passerine species. Indeed its heart ratio approaches that of the smaller species of hummingbirds (Hartman, 1954. *Auk*, 71:467-469), whose ratios are generally in excess of 2 per cent. At present we can offer no conjecture as to why the heart ratio of this vireo is so large in comparison with that of most other passerines.—FRANCIS S. L. WILLIAMSON, *Arctic Health Research Center, United States Public Health Service, Anchorage, Alaska*, and ROBERT A. NORRIS, 1918 Hahn Avenue, Aiken, South Carolina, July 5, 1957.