show that a 12-hour photoperiod is insufficient to cause full gonadal recrudescence, this observation supports their concept that food availability is the probable stimulus for final gonadal maturation.

Although it has long been assumed that the Red Crossbill breeds in Minnesota (Roberts, The birds of Minnesota, vol. 2, Minneapolis, Univ. Minnesota Press, 1932: 372; R. B. Janssen, pers. comm.), this is the first verified nesting record for the species in the state. Grateful acknowledgment is extended to Mrs. Elsie Welter for several notes on behavior at the nest.—OSCAR W. JOHNSON, *Department of Biology, Moorhead State College, Moorhead, Minnesota 56560.*

**Notes on fossil hawks (Accipitridae).**—This paper places on record two fossil accipitrids from the Early Eocene and Late Oligocene of North America. The first represents the second oldest fossil of the Falconiformes and the oldest record for the Accipitridae; the latter is an apparently heretofore unknown species of the genus *Buteo*.

FAMILY ACCIPITRIDAE, SUBFAMILY ?

*Material.*—Nearly complete left carpometacarpus, American Museum of Natural History Department of Vertebrate Paleontology No. 7434; collected from latest Early Eocene (Huerfano Formation, upper faunal zone; Locality II: "Fossil Creek," NW¼ Sec. 12, T26S, R70W; see Robinson, Peabody Museum Bull., No. 21: 23, 1966, for data on stratigraphy); near Gardner, Huerfano County, Colorado.

*Measurements.*—Length of bone 54.5 mm; maximum width at distal end 10.5 mm; proximodistal length of distal metacarpal symphysis (through facet for digit III) 5.1 mm (approximate); width (external to internal) of metacarpal II (30 mm from proximal end of bone) 5.0 mm; depth of metacarpal II (30 mm from proximal end of bone) 3.7 mm; width (external to internal) of carpal trochlea 6.5 mm.

*Remarks.*—The fossil is assigned to the Accipitridae on the basis of the characteristic features of its distal end. Unfortunately the proximal end is so damaged (the process of metacarpal I is broken at its base and the carpal trochlea has been somewhat crushed) that naming the fossil at this time would be premature. Definite allocation to a particular subfamily is impossible as no consistent characters of the distal end of the carpometacarpus were found to be diagnostic of the various subfamilies. Of the genera compared, the fossil carpometacarpus seems most similar to that of the living *Rostrhamus sociabilis* in size and shape; it is slightly smaller, but differs in having: (1) metacarpal III wider proximally and somewhat larger distally, (2) junction (at proximal end) of metacarpals II and III located more distad relative to total length of bone, (3) tuberosity of metacarpal II slightly less developed, (4) area of distal metacarpal symphysis broader (proximodistally), (5) metacarpal II slightly more square-shaped, being less rounded on its sides, and (6) a deeper and broader groove between the facets for digits II and III. In general, the fossil differs from other accipitrids examined in the reduced size of the facet for digit III, in the deeper and broader groove between the facets for digits II and III, and in having the posterior face of metacarpal II flatter. A more precise statement regarding relationships will be possible only after a detailed osteological study of recent and fossil forms.

The oldest falconiform is the cathartid vulture *Lithornis vulturinus* Owen from the Upper Paleocene (London Clay) of England. Another cathartid, *Eocathartes robustus* Lambrecht from the Middle Eocene of Germany, is nearly contemporaneous

with the Huerfano carpometacarpus. The oldest accipitrids are *Palaeocircus cuvieri* Milne-Edwards, *Aquilavus hypogaeus* (Milne-Edwards), and *A. corroyi* (Gaillard), all from Upper Eocene (or Lower Oligocene) deposits of France. Kitelike birds of the genera *Milvus* and *Promilo* are found in Lower Miocene deposits of France and the United States (Nebraska and Florida). The fossil carpometacarpus provides evidence for the presence of an early Tertiary line of hawklike (or kitelike?) birds, which was distinct from presently known forms.

SUBFAMILY BUTEONINAE, GENUS *Buteo*

*Material.*—Complete left ulna, American Museum of Natural History F: A. M. No. 42996, from Upper Oligocene sediments (from one of the lowest *Protoceras* channels, about 100 feet above the base of the Poleslide Member of the Brule Formation; for stratigraphic information see Bump, Amer. J. Sci., 254: 429, 1956), northeast of Indian Stronghold, Washington County, South Dakota.

*Measurements.*—Length 93.0 mm; width (external to internal) across cotylae 10.5 mm; width of external condyle (palmar to anconal direction) 7.5 mm; the shaft is crushed and was not measured.

*Remarks.*—The characters of the fossil ulna suggest a close relationship to the genus *Buteo*, and in fact it differs from that genus in only one feature, namely, the external cotyla is more distally oriented so that it more closely parallels the shaft of the bone. The fossil is approximately the same size as the living *Buteo platypterus*.

Six species of the genus *Buteo* have been described from Oligocene and Miocene sediments, as follows: *B. grangeri* Wetmore and Case, Middle Oligocene (lower Brule Formation); *B. fluviaticus* A. H. Miller and Sibley, Middle Oligocene (lower Brule Formation); *B. antecursor* Wetmore, Late Oligocene (Brule Formation); *B. ales* (Wetmore), Early Miocene (Harrison Formation); *B. contortus* (Wetmore), Late Miocene (lower portion of Snake Creek Beds); and *B. typhoius* Wetmore, Late Miocene (lower portion of Snake Creek beds). All of these birds were too large to have had an ulna as small as the one reported here.

Without additional material it does not seem advisable to apply a name to the fossil ulna, a bone that is not an especially diagnostic element. It is doubtful whether the fossil can be distinguished from species place in Recent genera that are closely related to *Buteo* but which may not be osteologically separable from that genus (Amadon, Condor, 65: 407, 1963, for a discussion of fossil and Recent species of hawks). Hence the fossil is assigned to the genus *Buteo* simply as a matter of convenience.

I especially wish to thank Malcolm C. McKenna for allowing me to study these fossils. The authorities of the Department of Ornithology, American Museum of Natural History, and the Division of Birds, United States National Museum, graciously permitted me the use of their collections. Dean Amadon and Walter J. Bock made helpful comments.—JOEL CRACRAFT, *Department of Biological Sciences, Columbia University, New York, New York 10027.*

**A Black-capped Chickadee variant.**—Throughout the winter of 1966–67 a Black-capped Chickadee (*Parus atricapillus*) with unusual plumage came almost daily to my home window feeder in Plainfield, New Hampshire. Instead of the normal black "bib," this chickadee had a narrow band of black feathers at the throat, which prompted my children to name the bird "Bowtie" (Figure 1). In all other respects