

The Hesperornithiformes are a primitive side branch of the early avian radiation that shares many characters with *Archaeopteryx* and theropod dinosaurs (Martin and Tate, 1976). However the immature *Baptornis* material shows that the major features of the mesotarsal joint must have been fully established before the separation of the Hesperornithiformes from the main avian line. The fusion of the tarsals near the time of the termination of growth was also established before this split.

It seems certain that KUVF 16112 is from a young bird considerably smaller than an adult and lacking the development of many of the grooves and ossified articular surfaces which assist the functioning of the foot. One wonders if such a young bird would be likely to have traveled long distances away from shore or if the skeleton may be interpreted as evidence that *Baptornis* nested in the vicinity of the find.

Over one-third of the known specimens of *Baptornis advenus* have been from immature birds while *Hesperornis*, which is known from many more specimens, has not produced any comparably young individuals. This suggests that the young of *Hesperornis* did not venture so far out to sea as did those of *Baptornis*, or that *Hesperornis* nested in a different region.

We are grateful to M. Jenkinson and M. A. Neuner for critically reading the manuscript. Special thanks are due to C. B. Schultz, University of Nebraska State Museum (UNSM), R. Zangerl, Field Museum (FMNH), and John Ostrom, Yale Peabody Museum (YPM) for the use of specimens in their care. Marjorie Joseph prepared the illustrations.

LITERATURE CITED

- HOWARD, H. 1945. Observations on young tarsometatarsi of the fossil turkey *Parapavo californianus* (Miller). *Auk* 62: 596-603.
- MARSH, O. C. 1880. *Odontornithes*, a monograph of the extinct toothed birds of North America. U. S. Geol. Expl. 40th Parallel, vol. 7: Washington, D. C., GPO.
- MARTIN, L. D., AND J. TATE, JR. 1976. The skeleton of *Baptornis advenus* (Aves, Hesperornithiformes): in *Collected papers in avian paleontology honoring the 90th birthday of Alexander Wetmore* (Storrs L. Olson, Ed.), *Smithsonian Contributions to Paleobiology* 27: 35-66.
- MILLER, H. W., G. F. STERNBERG, AND M. V. WALKER. 1957. *Uintacrinus* Localities in the Niobrara Formation of Kansas. *Trans. Kansas Acad. Sci.* 60(2): 163-166.
- WALKER, M. V. 1967. Revival of interest in the toothed birds of Kansas. *Trans. Kansas Acad. Sci.* 70(1): 60-66.

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Golden Eagle predation on pronghorn antelope.—The pronghorn antelope (*Antilocapra americana*) and Golden Eagle (*Aquila chrysaetos*) coexist in many parts of the West, but direct observations of golden eagle predation on pronghorns are rare. Burns (1970, *Canadian Field Naturalist* 84: 301) described in detail the killing of a female fawn which had an estimated weight of 31.7 kg. Lehti (1947, *J. Wildl. Mgmt.* 11: 348) reported finding a pronghorn carcass believed to have been killed by a Golden Eagle. Although predation by Golden Eagles has been reported for several game species and livestock, most studies show a predominance of lagomorphs in Golden Eagle diets (McGahan 1968, *Auk* 86: 1).

On 31 December 1974, while censusing pronghorns in a winter concentration ground along Interstate 80, 45 km west of Laramie, Wyoming, I saw a Golden Eagle attack a male pronghorn fawn. The incident occurred at 0745 hours. The fawn was in a herd of 135 pronghorns feeding midway up a small hill. The eagle approached over the top of the hill approximately 10 m above the ground and struck the fawn in the back, momentarily stunning it. Momentum carried the eagle to the ground. The herd ran off in the opposite direction and had traveled 400 m before the eagle again became airborne. The fawn followed the herd, although far behind it.

After the fawn had run about a kilometer the eagle again hit it in the back, injuring it severely. Both fell to the ground. The eagle could not hold on to the fawn, which got up and ran slowly after the herd. After the fawn had run 200 m the eagle struck again and pulled the fawn to the ground with its talons embedded in the fawn's back. After about 30 sec, the fawn stood up with the eagle on his back and charged around in a circle.

The eagle remained on his back, wings extended to maintain balance. After this last attempt to escape, the fawn fell to the ground and did not move. Another eagle alighted on the fawn as I drove up to examine it. Both eagles flew away when I approached to 50 m.

Examination revealed several cuts and puncture wounds in the fawn's lumbar region. The fawn was still alive but seemed in a very deep state of shock. Breathing was irregular (10–20 sec intervals), and there was some bleeding through the nose and mouth. At the base of the neck an area 6–10 cm in diameter was eaten, exposing the trachea and several blood vessels which were undamaged. As the fawn was severely wounded, I killed it.

The attack, made in a 15 km-per-hour wind at 8°C with 2.5–5 cm of snow on the ground, took about 10 min. Although the animal was still alive when I arrived, it would have died shortly if the eagles had continued feeding. The animal weighed about 20 kg.

I have found evidence of two additional instances of Golden Eagle predation on pronghorns in this same general area. On 30 January 1975, at 1200 hours about 12 km south of the previous kill, I found a female pronghorn fawn carcass with two Golden Eagles perched on it. The animal was dead, but still warm from body heat. It was bleeding from deep talon cuts in the thoracic and lumbar regions. The eagles had just started feeding on the muscles of the rib cage. A faint trail of blood on the snow indicated the animal had run approximately 800 m before succumbing.

On 15 December 1975 at 1230 hours near Elk Mountain, Wyoming, I discovered a freshly killed male pronghorn fawn with two Golden Eagles feeding on it and another standing beside it. As I approached the two feeding eagles left and the third (a juvenile) began to feed on the carcass, allowing me to approach to within 15 m before it left. This pronghorn also had talon marks in the thoracic and lumbar regions and was warm from body heat. The eagles had eaten a considerable portion of the muscles on the rib cage and along the back toward the hind quarters. There were 3 cm of new snow on the ground, allowing me to backtrack the trail of blood for about 300 m to where the fawn had fallen when attacked by the eagle(s).

My superficial examination of these three pronghorn fawns suggests that death was probably caused by shock, exhaustion, and initial feeding attempts, combined with muscle and possible spinal damage. Golden Eagle predation on pronghorn antelopes may be a more significant mortality factor than previously thought.—GREGORY A. GOODWIN, *Rocky Mountain Forest and Range Experiment Station, University Station Box 3313, Laramie, Wyoming 82071*. Accepted 13 Sep. 76.

American Wigeon Breeding in Maine.—Because historical range expansion or pioneering of species is often hard to document in retrospect, the observation reported here may be of more future value than immediate scientific significance. To the best of my knowledge, this constitutes the first report of the American Wigeon (*Anas americana*) breeding in Maine. On 14 August 1975 at about 1500 on a bright, sunny afternoon, Perry Cogburn and I flushed a female wigeon with a flightless brood of 5 young about 4 + weeks old. The sighting occurred on Corinna Stream (East Branch of Sebasticook River) approximately 1¼ miles upstream from the village of Corinna in Penobscot County. We had ample opportunity to study the bird with binoculars at ranges from 50–200 feet. The grayish head, pale shoulder patches, dark breast and white belly were clearly discernible. The female was very broody and continued to circle over us in the air at short range after the brood sought refuge in dense cattails bordering the sluggish stream. I have had considerable experience with wigeons in the west and had ample time to study the bird in excellent light.

Although a "first," it comes as no great surprise as several Maine wildlife biologists have reported mated wigeon pairs on some of our central Maine marshes, well into the breeding season (unpub.). Similarly, Boyer (1972, Canadian Wildl. Serv. Occ. Pap. No. 8) reports that small numbers breed annually at Amherst Point Sanctuary in Nova Scotia. Davis Finch (1976, pers. comm.) reports they are now more common than when Boyer reported them. Bartlett (1960, Canadian Field-Naturalist 74: 153) reported the first brood in 1957. Fred Payne, water-fowl biologist in Nova Scotia, found a nest in June 1965 at Cower Nappan. Nisbet (1972, Amer. Birds 26: 834) reported a female American Wigeon with seven downy young at Penikese Island, Massachusetts on 1 July 1972. Godfrey (1966, Birds of Canada) reports wigeon nesting recently in Nova Scotia (Amherst Point), New Brunswick (St. John Valley), and Prince Edward Island (Deroche Pond).—HOWARD E. SPENCER, JR., *Department of Inland Fisheries and Wildlife, University of Maine, Orono, Maine 04473*. Accepted 3 Sep. 76.