lateral portion consequently pulls forward with respect to the quadrate, elevating the upper jaw while depressing the lower jaw. The efficiency of the depressor mandibulae in raising the upper mandible, as explained above, is increased by the resistance to depression of the lower mandible encountered while gaping. It seems likely to me that an important part of the force which raises the upper jaw in gapers within the Icteridae is contributed by the depressor mandibulae, and that its disproportionate increase in size relative to that of the protractor quadrati, and the alteration of its fiber direction, are adaptations to the gaping method of feeding.

In the starling (*Sturnus*), which "repeatedly parts the grass mat or probes by spreading the mandibles" (Beecher, Auk, **70**, 1953: 284), the depressor mandibulae pulls parallel to the quadrate and therefore has no effect on the upper jaw. Raising of the upper jaw is accomplished solely by the protractor quadrati, which is indeed much better developed in *Sturnus* than in non-gapers or in the gapers already mentioned (Fig. 1). The different patterns of muscle development found in gapers of the Icteridae and Sturnidae represent different structural adaptations to similar feeding methods which can be explained in terms of the dual function of the depressor mandibulae in the Icteridae.

I am grateful to William J. Beecher for reading the manuscript and making several helpful suggestions.—RICHARD L. ZUSI, *Department of Zoology, Coburn Hall, University of Maine, Orono, Maine.*

***Falco peregrinus pealei* shot in Northern Ohio.**—In February, 1958, the writer received a Peregrine Falcon frozen in the flesh through the courtesy of Mr. John A. Anderson, manager of the Winous Point Club in Ottawa County, Ohio. The bird had been shot and brought in for mounting for display in the trophy room by a hunter on November 15, 1957. Mr. Anderson presented the specimen to the University of Cincinnati, at the suggestion of Mr. Mike Nauer, then outdoor sports writer for a Cincinnati newspaper.

The bird, a beautiful immature female, was identified by the writer as belonging to the northwestern race, *F. p. pealei,* because of its generally very dark, coarsely marked plumage, particularly on the underparts. The specimen was sent for checking to Dr. Harry C. Oberholser, who confirmed the identification; pointing out that it is a typical example of this well-marked race. Dr. Oberholser showed the bird to Dr. John W. Aldrich and Dr. Herbert Friedmann, who concurred in the identification. The specimen apparently establishes the first record of this race of the Peregrine Falcon east of the Cascade and Sierra Nevada Ranges.—EMERSON KEMSIES, *Curator of Ornithology, University of Cincinnati, Cincinnati 21, Ohio.*

Probable Eskimo Curlew on Galveston Island, Texas.—On March 22, 1959, Messrs. Trevor Feltner and Dudley Deaver, members of the Texas Ornithological Society, saw on Galveston Island a curlew that attracted their attention because it was noticeably smaller than two Long-billed Curlews *(Numenius americanus)* between which it was feeding. On April 5, 1959, the same two men, accompanied by Messrs. Victor Emanuel and Roland Fowler, also members of the Texas Ornithological Society, saw the same, or a similar, bird on Galveston Island in a 200-acre grassy pasture about six miles north of the place of the previous observation. The party, which had a 30x telescope, identified the bird as an Eskimo Curlew *(N. borealis).* Emanuel saw it again on April 8, in the same pasture, and told me about

it the next day. Since the weather continued cold and rainy that night, I accompanied Emanuel to Galveston on April 10, in hopes of seeing the bird.

We had no difficulty in spotting the bird, at a distance of about 400 yards, in the same pasture. Many Whimbrels *(N. phaeopus)*, as well as a few Long-billed Curlews and a few Buff-breasted Sandpipers *(Tryngites subruficollis)* were feeding in the pasture; but the bird in question fed by itself. Its lower neck and breast were of a very noticeably darker (more cinnamon) shade than the same area on the Whimbrels. Seen with a 20x telescope, it seemed to lack a medial crown stripe; but the 30x telescope showed a thin medial stripe.

We took the 30x telescope into the pasture and set it up on its tripod several times as we approached the bird, which showed no nervousness, but walked about, fed, squatted in the grass, and preened itself. We finally set up the telescope less than 200 feet from the bird, and observed it at leisure. Eventually several Whimbrels wandered over near it, and made comparisons very easy. While I was looking through the telescope, a Whimbrel ran up beside and beyond the other bird, and began pecking in the same clump of grass where the other was pecking broadside to me. The opportunity for comparison could not have been better.

The bird in question was not so tall as the Whimbrel, and was several inches shorter; its bill was very much shorter and thinner; and it was altogether a smaller, more delicately formed bird than the Whimbrel. The Whimbrel's lower neck and breast were a dull *grayish;* the other bird's lower neck and breast were *buffy* shading to a darker *cinnamon.* The contrast in colors was very striking. The sides were much more heavily marked with wavy vertical bars than the sides of the Whimbrel. Several times the bird stretched its wings above its back; the entire area beneath the wings was a delicate pinkish buff. The legs were dark bluish gray; the bill was dark brown or rusty black. It was interesting to note that when this bird squatted in the grass it almost disappeared, but when the Whimbrels squatted they were always clearly visible.

Since the only two curlews that are pronouncedly smaller than the Whimbrel, with much shorter and thinner bills, are the Eskimo Curlew and the closely related Least Curlew *(N. minutus)*, and since the latter is an Asiatic-Australian species that has never been reported in North America, and is most improbable in spring in southern Texas, I am convinced that the bird I saw was an Eskimo Curlew.

About twenty members of the Texas Ornithological Society saw it in April, and were satisfied that it was an Eskimo Curlew. Among those who identified it were Dr. E. P. Edwards (Associate Director of the Museum of Natural History of Houston), Mrs. Edna W. Miner (Department of Zoology, University of Houston), and Mr. and Mrs. Charles Hamilton, who observed it from a distance of about 60 feet. Emanuel observed it with a 30x telescope from a distance of about 100 feet, as it fed alongside Whimbrels and Golden Plovers *(Pluvialis dominica);* he reports that it was "almost the same size as the Golden Plovers." Mr. Armand Yramategui was the last person to report it—April 26, 1959, in the same pasture where it was seen so often.

Joseph M. Heiser, Jr., Mrs. Edna Miner, and Miss Mabel Kaiser reported two Eskimo Curlews on April 29, 1945, on Galveston Island about three miles from the place where this one was seen (Heiser, Auk, **62**: 635). The species has not been reported from that date until now.

A few observations about the bird's habits and behavior may be of interest. The pasture in which the bird was seen most often was being grazed by cattle; it was well drained and gently rolling, with grass about three to four inches high. Though

Whimbrels, Long-billed Curlews, Buff-breasted Sandpipers, Lesser Yellowlegs, Pectoral Sandpipers, Golden Plovers, Mountain Plovers, and Killdeer were present in the pasture either continuously or occasionally throughout April, the Eskimo Curlew consorted with none of them regularly. But Emanuel and Fowler report that, on April 12, the bird flew into the pasture in company with a flock of about 20 Golden Plovers, and stayed with this flock (flying and settling with it) the entire afternoon. On April 26, Yramategui saw it keeping company with four Golden Plovers; a few hours later the plovers, and also the curlew, had disappeared. When the Eskimo Curlew was feeding, and was approached, other birds nearby generally departed before it did. But once it had been disturbed, it flushed more easily thereafter, and would fly off alone even when other birds remained. Only Feltner and Deaver heard it call. They said the call was different from that of both Whimbrel and Long-billed Curlew; they described it as "a low tremulous whistle."—GEORGE G. WILLIAMS, *The Rice Institute, Houston, Texas.*

Ed. Note: Because of variation in bill length, the conclusive feature distinguishing the Eskimo Curlew from the Whimbrel is that the former has the blackish primaries unmarked, while in the Whimbrel there are buff barrings on the inner webs of the outer primaries and on both webs of the inner primaries. This distinction is, unfortunately, of questionable value in the field, for with closed wing the Whimbrel usually shows only the plain outer webs of the longer primaries, the inner primaries being concealed by the secondaries (which are barred in both species). The character of the primaries was therefore not mentioned by Griscom in Peterson's "Field Guide to the Birds," (Rev. ed., 1947); he however distinguished the leg color of the Eskimo Curlew as *"dark greenish,* instead of bluish gray" (p. 92). Coues' "Key to North American Birds" (vol. 2, p. 844, 5th ed., 1903) similarly calls the legs "greenish-black". On the other hand, Ridgway ("Birds of North and Middle America", pt. 8, p. 412, 1919) and Forbush ("Birds of Massachusetts and other New England States", vol. 1, p. 457, 1925) respectively describe the legs of the Eskimo Curlew as "dull slate color or dark gray in life" and "grayish-blue". The only Eskimo Curlew specimen in the American Museum of Natural History with indication of soft parts is labelled "feet gray". Specimens in the American Museum of the closely allied Least (or Pygmy) Curlew or Little Whimbrel, *N. minutus,* of northeastern Asia (wintering chiefly in Australia) bear labels variously describing the legs as "light brown", "leaden grey", or "grey blue". According to Ridgway (*op. cit.,* p. 411), while *minutus* differs from *borealis,* the Eskimo Curlew, in certain toe and tarsal characters, the only plumage difference is that the Asiatic bird has pale buff (rather than cinnamon buff) axillars and under wing-coverts. N. A. Gladkov ("Birds of the Soviet Union", vol. 3, p. 316, 1951) treats *minutus* as a subspecies of *N. borealis.*

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