***Ornithoica vicina* (Diptera: Hippoboscidae) a new host record from the Marsh Hawk.**—While working with Dr. Frances Hamerstrom on a nesting study of the Marsh Hawk (*Circus cyaneus*), I had opportunity to examine several adult and subadult hawks that had been live-trapped by methods described by Dr. Hamerstrom (*Proc. XIII Intern. Orn. Congr.*, pp. 866–869, 1963) and by D. D. Berger and H. C. Mueller (*Bird-Banding*, 30: 18–26, 1959). I have identified as *Ornithoica vicina* individuals in two collections, one of four specimens taken from an adult male on 13 July 1964 and another of one specimen taken on 30 July 1964 from an adult female (both from Portage County, Wisconsin). I wish to thank Dr. Kenneth MacArthur, who checked the recent literature and found (pers. comm.) that: "Apparently *Ornithoica vicina* has not been recorded from the marsh hawk although it has been reported from seven of the Falconiformes." An unidentified louse (Mallophaga: Ishnocera) found attached to the abdomen of one of the flies strongly suggests a phoretic relationship between the fly and louse.—WILLIAM C. SCHARF, *Department of Biology, Northwestern Michigan College, Traverse City, Michigan.*

Additional observations on "foot-stirring" feeding behavior in herons.—In a previous paper (Meyerriecks, *Wilson Bull.*, 71: 153–158, 1959), I described the foot-stirring feeding behavior of three species of North American herons (Snowy Egret, *Leucophoyx thula*; Reddish Egret, *Dichromanassa rufescens*; Louisiana Heron, *Hydranassa tricolor*), and cited literature concerned with this behavior for four additional species (Reef Heron, *Demiegretta schistacea*; Little Egret, *Egretta garzetta*; Pied Heron, *Notophoyx picata*; and White-faced Heron, *Notophoyx novaehollandiae*).

Since then Sally F. Hoyt, now Spofford (*Wilson Bull.*, 73: 386, 1961) has described foot-stirring by a Green Heron (*Butorides virescens*), based on a motion picture film record. The Black Heron (*Melanophoyx ardesiaca*), a tropical African species, is best known for its odd habit of shading the water surface by making a "canopy" of its wings (see discussion in Meyerriecks, *Publ. Nuttall Ornith. Club*, no. 2, 1960, pp. 108–109), but M. B. Markus (*Bokmakerie*, 15: 21–22, 1963) has seen foot-stirring in this species as well. In describing a photograph of a Black Heron canopy-feeding he states "This particular one was clearly seen to shuffle its feet in the manner of the little egret, presumably to attract or to induce aquatic animals into moving."

My purpose here is to describe my own observations of foot-stirring by a Green Heron and to describe the use of this foraging method by Snowy Egrets in a rather unusual habitat.

On 16 September 1964 I was watching the feeding behavior of seven species of herons at the eastern end of the Courtney Campbell Causeway, Tampa Bay, Florida. At 1745 hours the following conditions prevailed: no wind; temperature 75° F; 10 per cent cloud cover; extremely low tide; and very clear shallow water near shore. Two Green Herons were standing on the mud at the edge of the shallows about 50 feet from my position. The birds were about 30 feet apart, and their plumages indicated that both were birds of the year. The nearest Green Heron was standing in an extremely low crouch, its abdominal feathers in the mud, and was following the movements of a school of tiny fish swimming about two to three feet in front of it. Suddenly the heron moved its whole body smoothly forward, shifted its weight slightly to the right foot, extended its left foot fully forward with toes widespread, and then scraped or raked the mud in the shallows with a long, slow, deliberate backward motion of its left leg and foot. The heron paused for a moment then repeated the single scrape with its left foot.

Following the second scrape the heron crouched motionless for a moment, then quickly struck and captured a tiny fish from a spot about a foot from its bill. The bird moved away from my position toward the second Green Heron, which turned and flew away. The foot-raking was again repeated twice, both times with the left foot, but the bird did not strike after raking. I watched this bird for 15 minutes from this point, until it flew away, but it did not foot-rake again.

This Green Heron used its foot in a manner much like that of Reddish Egrets (Meyerriecks, *op. cit.*: 109), employing a deliberate raking or scraping motion rather than the more rapid stirring so typical of Snowy Egrets. Green Heron foot-raking differs from that of Reddish Egrets in that in the former the leg and foot are extended much farther forward, the toes are widespread, the bird starts from a very low crouch, and the leg is brought to the rear by a smooth, slow motion. Hoyt (*op. cit.*) states that the Green Heron she filmed "stirred the water several times with his right foot." I have not seen Hoyt's film, so I am unable to compare our observations in any greater detail, but apparently Green Herons both stir and rake occasionally. These must be rather unusual foraging techniques for Green Herons, however, for I have watched birds of this species forage for hundreds of hours over ten years and I am aware of these two records only.

Snowy Egrets regularly use foot-stirring and foot-scraping foraging techniques, and in my experience they do so more often and with greater success than any other North American species (Meyerriecks, *op. cit.*: 126). Prior to 1962 I had never seen Snowy Egrets use their feet in foraging other than in water, typically shallow. From the summer of 1962 through 1964, however, on four occasions I have seen individual Snowy Egrets foot-stir in a dry, short-grass field. Usually Snowy Egrets capture fish or other aquatic prey by foot-stirring in water, but on the four occasions above-mentioned, all at Tampa, Florida, grasshoppers were the sole food taken. The observations were made in a pasture containing a small pond. The pasture usually contains a few cattle and horses, and is regularly visited by Cattle Egrets (*Bubulcus ibis*). Other herons, including Snowy Egrets, forage around the edge of the pond. On three of the four occasions when I saw Snowy Egrets foot-stir in the grass, Cattle Egrets were present in the pasture in association with cattle or horses. On these three occasions a single Snowy Egret foraged around the pond for from 5 to about 30 minutes, then walked slowly about the pasture. I could clearly see the bird pause, extend one leg and foot, vibrate the foot rapidly, and thereby stir a tuft of grass. Through my telescope I could see grasshoppers fly up, with the Snowy Egret in close pursuit. Sometimes the egret would run quickly to where the insect had alighted; sometimes it would fly over and search for its prey. At other times the egret would foot-stir, peer, and then stab at its prey before the grasshopper flew.

On the one occasion when I saw a Snowy Egret foot-stirring in grass without Cattle Egrets or grazing mammals of any kind present in the pasture, the bird landed near the pond, foraged briefly around the edge, then spent an hour and a half foraging around the entire pasture. This egret foot-stirred dozens of times and was most successful with this foraging technique. It made 42 strikes and was able to capture 34 grasshoppers.

Snowy Egrets in Florida often associate with a variety of hoofed mammals in pastures in order to secure their prey, as do Cattle Egrets, but it is of interest that a regular part of their more typical, aquatic, foot-stirring feeding behavior has been put to use most successfully in a very different habitat and not in association with any pasture mammals.—Andrew J. Meyerriecks, *Department of Zoology, University of South Florida, Tampa, Florida.*