(Mugilidae), to an old pier piling 90 m SE of my position. Using 7× binoculars, I noted that the bird was wet about the head, neck, and breast, although I could not judge the wetness of the wings due to their position. A minute later, the Osprey began a sequence of postures and actions similar to those of wet anhingas and cormorants (Clark, Auk 86:136–139, 1969). A detailed, running account of the wing positions and associated behavior is illustrated in Fig. 1.

It may be that the Osprey's posture was not due to wet plumage but to some other cause. One possibility is that the bird was hunched over its prey to protect it from piracy by other predatory birds. Bent (1937) described an Osprey which, upon the arrival of its mate, spread its wings and tail and crouched over its catch until the offender flew off. However, save for an immature Laughing Gull (*Larus atricilla*), there were no other birds in the immediate vicinity of the piling nor any other predatory birds in the general bay area that I could see. Also, the spread-wing posture was held for more than 7 min before the arrival of the gull; therefore, a protective motivation does not seem likely.

Acknowledgments.—I am grateful to J. P. Hailman, K. L. Bildstein, and R. Bancroft for their criticisms which greatly improved the manuscript. I acknowledge the skill of Cheryle Hughes who did the illustration.—A. M. ELOWSON-HALEY, *Dept. Zoology, Univ. Wisconsin, Madison, Wisconsin 53706.* *Accepted 15 Dec. 1981.*

Wilson Bull., 94(3), 1982, pp. 368–369

Rough-winged Swallows scavenging adult midges.—Wolinski (Wilson Bull. 92:121–122, 1980) reported Rough-winged Swallows (*Stelgidopteryx ruficollis*) landing and feeding on fly larvae on dead fish on a Lake Huron beach. As this swallow seldom lands on the ground (see also Lunk, Publ. Nuttall Ornithol. Club, No. 4, 1962) this behavior probably represented opportunistic foraging in response to a temporary, high-density food source.

In the morning of 31 May 1980, for 10 min from ca. 5 m, I observed four Rough-winged Swallows standing on wet sand 0.5 m from the water's edge of Lake Manitoba (ca. 5 km west of Delta, Manitoba). The birds fed continuously on dead midges (Diptera: Chironomidae) that had washed ashore. I did not observe aggressive interactions by any individuals in the flock, despite their feeding within a few centimeters of each other.

Other swallow species are abundant summer residents and visitants in this area, but this is only the second time I have recorded *Stelgidopteryx* here in 7 years of work on passerine ecology. A juvenile was mist-netted on 9 August 1978. I have seen no other species of swallows taking dead midges or other insects in the manner described above, although I often have seen Barn Swallows (*Hirundo rustica*) picking up nesting material on this lakeshore.

Annually in this area, massive emergences of midges occur frequently from May through August (Busby and Sealy, Can. J. Zool. 57:1670–1681, 1979; Biermann, M.Sc. thesis, Univ. Manitoba, Winnipeg, Manitoba, 1980). In 1980, the first emergences transpired on 26 May and swarming adult midges were abundant until 6 June. Dead individuals were first noticed on the beach and elsewhere by 28 May.

Diptera comprise about 33% of the diet of *Stelgidopteryx* (Beal, USDA Bull. 619, 1918; Bent, U.S. Natl. Mus. Bull. 179, 1942). However, as Wolinski (1980) pointed out, these insects are generally taken aerially. That the prey were dead and hence the swallows were scavenging (see McNicholl, Can. Field-Nat. 91:416, 1977) reveals a plasticity in this swallow's feeding that has not been reported previously. While the swallows fed on the dead midges, live midges swarmed only a few meters away. As I did not see the flock land, I do not know whether it was the windrowed midges to which the swallows first responded. The dead midges appeared fresh and their nutritional content was likely still similar to that of living midges. The swallows exploiting this clumped, stationary food source probably used less energy than they would in aerial pursuit. Such hypothesized conservation of energy might have been important if the swallows had flown a long distance the previous day or night.

Acknowledgments.—My work on passerine ecology has been funded by grants from the Natural Sciences and Engineering Research Council of Canada (A9556) and the University of Manitoba Research Board. The continued support of J. M. Shay, Director, and the staff and students of the University of Manitoba Field Station (Delta Marsh) is greatly appreciated. H. R. Carter and R. A. Wishart offered helpful suggestions on the mansucript, as did also the referees, J. P. Hailman and E. E. Klaas. The present contribution is publication No. 77 of the University of Manitoba Field Station (Delta Marsh).—SPENCER G. SEALY, *Dept. Zoology, Univ. Manitoba, Winnipeg, Manitoba R3T 2N2 Canada.* *Accepted 1 Oct. 1981.*

Wilson Bull., 94(3), 1982, pp. 369–372

Diet of Glaucous Gulls in western Alaska.—The Glaucous Gull (*Larus hyperboreus*) is an arctic circumpolar species that has received attention because its diet includes economically important species of fish and birds (Olson, Fed. Pittman-Robertson Rept., Proj. 3-R-6:34–62, 1951; Uspenski, Can. Dept. North. Aff. and Nat. Resour., 1958; Belopolskii, Israel Prog. Sci. Transl., Jerusalem, Israel, 1961). With one exception (Olson 1951), however, large-sample diet studies of this gull have been conducted only in the northern Atlantic and European areas.

This report describes a comparative field study of Glaucous Gulls in two different habitats near the Bering Sea, in western Alaska. The coastal study area was at Kokechik Bay (60°40'N, 166°W), on the western tip of the Yukon-Kuskokwim Delta of Alaska, within Clarence Rhode National Wildlife Range. I used this area from 20 June–17 August 1972 and 10 May–17 August 1973. Gulls at the coast nested both in colonies and as isolated pairs.

The inland study area, 40 km SE of the coastal area, was 11 km from the nearest point on the Bering Sea coast. I used this area from 26 April–9 September 1974 and 11 June–2 July 1979. Inland Glaucous Gulls bred only in isolated pairs. Both study areas are less than 3 m above mean sea level and are subject to floods.

I determined the diet of Glaucous Gulls from stomach contents, and from regurgitated pellets and food remains collected at nests (food remains are items too large to be organized into pellets by the digestive tract). Weathered pellets and food remains from previous years were not collected. The stomachs for 1972 were collected by D. Eisenhauer (Eisenhauer and Kirkpatrick, Wildl. Monogr. 57:1–62, 1977) at Kokechik Bay.

I summarized the data as percentage of stomachs, pellets, and food remains containing each food category (i.e., as percent frequency occurrence). Lumping together different sources of food data appears to be justified. Pellets and food remains were collected at the same time in the same manner. In 1972, the only year from which sufficient numbers of both stomachs and other food data are available for comparison, the stomachs, pellets, and food remains ranked the food categories similarly, except for a bias in favor of mammals in the pellets plus food remains, and a bias in favor of terrestrial invertebrates in the stomachs. With few exceptions, the more limited data from other years support this result. Statistical analysis of the data comprised χ^2 comparisons, interpreted conservatively ($P \leq 0.01$) by consideration of patterns of differences rather than results of individual tests.