

WAYS OF THE "SEA GULLS"

JOHN J. ELLIOTT

PART II

General Feeding Habits

In Part I Herring Gulls feeding on farm lands of Eastern Long Island on menhaden (mossbunkers) many years ago, and more recently on earth worms, was discussed. We now deal with the general habits in pursuit of food which brings them around garbage dumps, mud-flats, sand bars, shallow estuaries and coves, grassy drains, tidal run-offs and breakwaters.

Because of its boldness, search for food by the Herring Gull has been easiest to study. Its diet ranges from the tough tail of a skate tossed into the air by a fisherman and swallowed, through garbage including chicken heads on the dumps, offal at sewer outlets, and various shell-fish, to the delectable bay scallops which here and there are found in shallow water such as at Zachs Bay. As scavengers they crowd the city dumps, flying up by the hundreds as garbage trucks arrive to unload. Sewer outlets have now been largely if not entirely eliminated in many places. The one at The Narrows in Brooklyn a few years ago, which attracted numerous Herring Gulls and occasionally Black-headed Gulls (*Larus ridibundus ridibundus*) and Little Gulls (*Larus minutus*), mentioned by Cruickshank (1942), is now a thing of the past.

Besides scavenger-feeding as mentioned above, occasionally Herring Gulls will fly in fast and snatch bread thrown on the water as visitors feed feral ducks.

Shell-fish. Because of the abundance of Herring Gulls on the South Shore, a good cross-section of varieties of shell-fish in each location may be acquired by looking over various areas for the strewn shells along concrete highways and on large parking fields, such as at Jones Beach.

For example, on the Wantagh Causeway near the south bridge over Sloop Channel, hard clams and gray or black mussels may carpet the roadside in places, along with an occasional whelk. Along the western bays of Long Island the most abundant of the larger shell-fish is the gray mussel which is found in thick clusters along the marshy banks of creeks and drains. These are inedible to man, but are used for bait, or may be crushed in a bag and sunk close to a boat to attract flounders.

On the brick promenade at Zachs Bay, Jones Beach, broken scallop shells dot the area in this only location locally where these are abundant. At Oak Beach during some seasons oyster shells are found on the concrete roadway. These represent repeated drops on the cement before their hard chalky layers break, in direct contrast to the brittle hard clam. Along the ocean-front parking fields in the winter of 1958-59, with little else available, sand-crab shells were sparsely sprinkled on the concrete surface. All these give a rough indication of what gulls eat on western Long Island. On eastern Long Island, where there is little or no concrete, Latham describes the gulls as rising higher each time as they drop a shell-fish on the hard sand until it strikes a rock or the valve is broken. He says that scallops soon open their valves when exposed to the air, whereupon the gulls feed on them. Scallops being lighter in weight descend less rapidly and so are less likely to break than heavy clams and whelks. He also remarks that shell-fish to the size

of adult decker-shells are swallowed whole and the young of larger species to the size of an inch in diameter, and that on plowed ground he has counted as many as 22 of these little mussel shells in a single excreta.

During winter weather, in times of severe storms and heavy frost and ice, hundreds of hard clams sometimes wash out of the mud, and on days of stormy, northwest winds, which drive the tide to extreme low levels, the gulls may partly deplete the clam crop in some areas. Also at times of extremely low tides, Herring Gulls have been known to probe for hard clams, pulling away the mud and exposing the clam to remove it. On one occasion, when the upper one third of some half dozen or more clams had been cleared of mud, an observer approached along the channel edge in his boat. Inasmuch as the tide was covering the mud-flats, and with more digging to be done, the flooding waters thwarted these gulls from getting their meal.

In one case a Ring-billed Gull (*Larus delawarensis*) acquired a medium-sized hard clam where it didn't want it: gripped on its lower mandible, presumably while probing in the mud. The weight of the clam pulled its tired neck, threatening to drown it, as it swam along head partly down in the water. Upon release, the Ring-bill ungraciously pecked my hand, then swam away from the boat with head held high, but apparently was unable to fly for the moment with its saturated plumage.

The sharp eyes of the gulls are ever on the watch. Once on the ocean front at Jones Beach, when my back was turned, several gulps by a Herring Gull took about a dozen blood and sand worms out of a nearby cardboard container, leaving only the sea-cabbage. Needless to say my bait-casting that day ended then and there. Roy Latham tells of a man in East Marion, near Orient, who dug a dozen big oysters and opened them, planning to visit a friend. After dressing, and when about to leave, he found that Herring Gulls had flown onto his porch and eaten the whole dozen leaving only the shells.

Fish. The stretchability of the gapes and gullets of gulls is phenomenal and if that sounds like a mouthful, one should watch a Great Black-backed Gull swallow a flounder! At Montauk, one November day, the writer saw a Great Black-backed Gull standing on the edge of a rocky breakwater, where among kelp and mussel-shells, it found a dead flounder. This was estimated to be six to seven inches long. Walking over, it picked up the fish, bent it back head meeting the tail and tried to force it down. The action looked ridiculous as the sole-shaped form, stiff and springy utterly failed to enter its throat.

On a second attempt it took the flounder by the fore parts, curved it lengthwise, angling it to one side, but again failed to swallow it. Another similar try was also unsuccessful. No attempt was made to peck the flounder to soften or divide it as the gull picked it up for the fourth time. This time it applied strong pressure with its powerful mandibles across the head and shoulders; whereupon it curved the fish lengthwise into a pointed roll; then with a mighty effort it got the fish inside its mouth and with its throat extended to an unbelievable degree, the flounder stiffly disappeared into its gullet. The gull then followed the common procedure of water-drinking following the swallowing of a large object. It did this by repeatedly dipping its bill into the edge of the channel. After a few seconds it swam out into the deep water and with crop extended and head held high drifted regally

with the tide to the opposite shore for more bill-dipping, preening and quietude to digest its heavy meal.

In the fall of 1959 Emanuel Levine saw a Herring Gull on one of the parking fields at Jones Beach with a starfish in its bill. Arranging the starfish it strained to fold the five points back on themselves and then, with a violent effort tried to swallow it. According to Levine, the starfish disappeared halfway down the gull's throat but the slightly spread points kept the gape forced open and the bird seemed ludicrous as it made several other attempts at swallowing its gritty object. Finally tossing it out on the concrete, it pecked away at the starfish until it separated it into three portions and then swallowed each piece separately.

In connection with feeding behind fish boats, Irwin Alperin of Babylon Biologist of Marine Fisheries, while observing with commercial fishermen on Gardiners Bay in the summer of 1952, watched Herring Gulls and Ospreys capturing undersized porgies and butterfish of about five or six inches in length which were thrown overboard by the net fishermen. These either floated in the wake of the boat or recovered and swam away.

Sometimes as many as seven or eight Ospreys would be in sight following the boat at about a thousand feet distant, where they would plunge downward and as they hit the water grasp their prey with extended talons. The Herring Gulls excitedly followed close enough in the wake for Alperin to see them pick up and swallow head-first both butterfish and porgies, although the fishermen were of the impression that the gulls avoided the spiny and heavy-dorsaled porgies. Alperin expressed the opinion that this practice could be highly dangerous, as the quick erection of the needle-sharp dorsal fin of the porgy could easily penetrate the membranes, obstruct the throat passage and kill the gull.

According to Roy Latham of Orient, toad fish are commonly caught while spearing eels in winter through the ice. The larger of these big-headed, bony fish cannot be swallowed whole, so they would chop them up with an ax in suitable sizes and throw them to the Herring Gulls.

Eels. Latham writes: "From 1910 to 1912 we used to spear eels through the ice for a business. Gulls have a preference for eels and become most familiar at such times. Gulls will snatch an eel almost from under your feet on the ice; they grasp the eel by the head and fly to a safe distance on the ice while the eel is wiggling and squirming. If the gull cannot swallow the eel entirely it picks them to pieces starting at the weaker spot around the stomach."

Walter Dawn (1952) tells of a Great Black-backed Gull forcing a Herring Gull to disgorge an eel which it had possibly seen it swallow earlier. At any rate, after chasing the smaller gull through an intricate maze of flight over the Loop Causeway, between Jones Beach and Point Lookout, the Great Black-backed Gull halted the Herring Gull in mid-flight and stabbed at its crop, whereupon the eel was ejected and fell to the sand below. The Great Black-backed Gull immediately dropped down and, according to the writer, "Without seeming to break its powerful line of flight, picked up the eel to successfully down it in one clean movement as it proceeded on its way." Dawn estimated the eel by its impression on the sand to be ten inches long by an inch in diameter.

Not so easily swallowed was a somewhat heavier eel, estimated at 12 to 13 inches long, which was caught by an immature Great Black-backed Gull one summer day on the north side of Jones Beach Sanctuary pond near the eastern end. When first seen it was pounding the eel on the dry, baked mud. All blows were directed at the head and the continuous pounding of the gull's powerful beak became almost monotonous as I watched through a 50-powered telescope from a quarter-mile distance, entirely unknown to the gull. As the eel's squirming ceased, the gull picked up its limp form, walked about a dozen feet to a pool, wet it to restore the sliminess and then took it back on the mud. The first two tries got the slippery eel only about halfway down its throat, whereupon the gull ejected it. On the third effort it evidently coiled the limp eel to some extent in its gullet without violent gulping, whereupon, after it got it past a certain point, the eel rather rapidly slid down the rest of the way and disappeared from view. This no doubt accounts for the continual beating to cause limpness in the eel, as any squirming in the extended crop might prove rather uncomfortable. After swallowing the eel the gull resorted to the frequent water drinking, which I have noticed on several occasions to follow immediately after heavy meals. Apparently it makes little difference whether fresh or salt water is used, as evinced by this instance and the one concerning the Great Black-back swallowing the flounder at Montauk.

Predation

Although no interference was noted by Irwin Alperin between gulls and Ospreys on his eastern Long Island commercial trips in a news item in the New York Times, July 15, 1958, the Times writer tells of accompanying Roy Wilcox on his annual trip to Gardiners Island.

In this particular case an Osprey was carrying a fish in its talons and had to weave through an almost solid umbrella of flying gulls. The article states that eight Herring Gulls immediately peeled away from circling to dive and peck at the Osprey all the way to its nest.

Latham writes: "Predation concerning other birds is only casual to me. I have seen Herring Gulls pick dead waterfowl and other birds to pieces when found on the beaches. Three times I have seen them attack helpless, badly oiled waterfowl, and crippled ducks stranded on the beach are rarely killed there. When the big tern colony was flourishing in Orient, Herring Gulls did take some young terns and eggs and they were troublesome to the adult terns . . ."

Regarding the Great Black-backed Gull he claims their habits do not differ materially around Orient from the Herring Gull, except that they are more predatory. "The Great Black-backs are very strong birds" writes Latham, "I have seen two of these attack and quickly kill a Herring Gull with a broken wing on the beach. The Great Black-backs are too scarce in the Orient region to form any true decision on their predatory behavior. In connection with this I quote Mr. George H. Lings, an oologist in England, who told me personally on a trip to Gardiners Island that the Great Black-backs, which breed commonly in parts of the British Isles, are very domineering on a nesting site and will take eggs and young and even attack adult birds and that they soon drive away all other breeding species from the location. He advises checking the breeding of the Great Black-backed whenever it started to nest in a location where other species are breeding".

On one occasion at Lake Montauk, members of the Lyman Langdon Audubon Society of Port Washington reported to me that on one winter day, about five years ago, a Great Black-backed Gull continually attacked an American Coot (*Fulica americana*) until it killed it. Each time the gull swooped the Coot dove, until exhausted it lay on top of the water, whereupon the gull stabbed at its head, ate only its brains and flew away.

Relative to crop predation, Latham claims the most serious is that to cucumbers in the fall. He writes: "Whole fields may be destroyed when a flock of gulls stop in a field during a stormy day. They attack all sizes from pickles to jumbos, swallow the pickles whole and a few jabs groove out the larger sizes, making them worthless for market or table use. It is difficult to drive a flock of gulls from a cuke field. I have seen a farmer keep a man sitting in a rocking chair in cucumber fields to scare the gulls away, but this is not workable in a large acreage. Late in the season I have seen every pickle in a field cleaned off down to an inch in length, the field being completely destroyed for that season."

Status

As may be seen above, the tremendous increase of the Herring Gull has caused a considerable decrease in our more desirable and attractive birds on Eastern Long Island, such as Ospreys, Terns and Skimmers. All writers in recent years, when mentioning the Herring Gull, remark of its tremendous increase, and Irwin Alperin (1954), in "Whither the Herring Gull" states: "All the evidence points to the fact that the Herring Gull colonies on Long Island will continue to grow and there will be many breeding stations scattered throughout the area. This is gratifying in the sense that it illustrates how remarkably an adaptive, aggressive species can take over when given protection. But it may not be to our interest to allow this population to get out of hand and depress many other breeding birds which we are anxious to maintain in this region."

About the only natural enemy the Herring Gull appears to have now is the rat and that only on one island east of the Ponquogue bridge on Shinnecock Bay. Here rats have been found to have killed and eaten young of the Herring Gull, having taken them there for several years.

Cornelius Ward of Roosevelt says he saw a Pigeon Hawk this fall several times attack a Herring Gull, forcing it down toward the water. Other occasional killing or crippling attacks from various sources may be observed, but there appears to be no serious detrimental factors affecting its present status and future rapid increase. Each year additional new areas are infiltrated by the Herring Gull and in the fall and winter of 1958 hundreds could be found even on the roofs of institutional buildings of the State Hospitals near the Long Island Sound in Kings Park, and scores in the interior at Pilgrim State Hospital. More noticeable, two years ago, a large flock resorted the grassy reserve land at Greenfield Cemetery at Hempstead. Last winter they invaded the cemetery itself, their somber gray backs blending in with the tombstones as they walked between them or while standing on top of some monument, an unnecessary addition to its grace and beauty.

Neil Smith of the Brooklyn Bird Club sent in an exhaustive census of the gulls in Brooklyn a few years ago. The census was taken November 2, 1956, with — counts of two and a half hours spent on the Floyd-Bennett

dump alone, the entire circuitous route traversing from the 69th Street Ferry in Brooklyn along The Narrows, Gravesend Bay, Canarsie, Spring Creek, Cross Bay, The Raunt to Rockaway Peninsula, Rockaway Point Jetty to Coney Island and Sea Gate. The results of this circuitous route were a showing of 23,309 Herring Gulls, 556 Great Black-backed Gulls, 246 Ring-billed Gulls, 60 Laughing Gulls and 55 Bonaparte's Gulls. On the Floyd-Bennett Field dump alone there were 12,355 Herring Gulls and 265 Great Black-backed Gulls.

"Why did we take the census?" Smith asks. "Well, with the presence of birds as numerous as gulls in your area, the good observer should know the answer 'How many?' Fish and Wildlife might be interested. It will also boost the claim of metropolitan New York as 'The Gull Capital of the United States'.

"Estimating the number of gulls is very difficult. I agree that this count is representative but not the ultimate. A better way would be to count all the gulls at one hour all over the region using many observers. This count is a progress report on gulls in our region."

Banding

Allan Penberthy of Babylon, with his associates, has banded young Herring Gulls consistently at the Captree colony since 1956. Out of the many hundreds banded have come the following recoveries:

Captree Recoveries

1st year birds

Date Banded	Recovery Date	Place	Remarks
July 7, 1957	Aug. 25, 1957	Fire Island Inlet, L. I.	Caught in fish net, released
June 22, 1958	Aug. 30, 1958	Beach Haven, N. J.	Found dead
July 13, 1958	Oct. 18, 1958	Cartaret, N. J.	Found dead
June 15, 1957	Sept. 3, 1957	Absecon, N. J.	Broken wing, killed
June 23, 1957	Nov. 26, 1957	Portsmouth, Va.	Sick, died
June 22, 1958	Nov. 23, 1958	Atlantic Beach, N. C.	Found dead on ocean beach
June 22, 1958	Dec. 30, 1958	Patrick Air Force Base, Fla.	Killed on runway
July 8, 1956	Jan. 1957	Pt. Arthur, Texas	Sick, died
June 22, 1958	Oct. 4, 1958	Stephenville, New Foundland, Can.	Shot and killed

2nd yr recovery

June 23, 1957	April 1959	Oakdale, L. I.	Found dead
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Although the above records are too few to draw definite conclusions from, they do indicate a trend of southward dispersal of the immatures, the later the fall date almost invariably the further the southern movement. In one case, however, we find an individual traveling northward to New Foundland, but as it was taken in early Oct. it might have moved southward before winter set in.

It is interesting to note that with the southward moving immature Herring Gulls, three had reached various parts of New Jersey in extremely late Aug. to mid Oct. November birds were found in Virginia and North Carolina, a Dec. one was in Florida and a Jan. individual was found dead at Port Arthur, Tex.

The one record of a second year gull in April, almost two years after banding, indicates in this instance a return to less than 10 miles away from the nesting grounds.

Summary

The Herring Gull has increased tremendously, and the Great Black-backed Gull to a lesser degree, over the past 40 years, with protection. The former began breeding on Long Island with three pairs nesting at Orient in 1931, two years ahead of published accounts in our literature (Fishers Island, 1933).

Breeding at Cartwright Island was first discovered in 1936. Increases into present day thousands has occurred there and also on the north and south sandy ends of Gardiners Island.

The first Great Black-backed Gull was discovered nesting at Cartwright Island in 1942 with a juvenile banded by Wilcox on one of his annual banding trips. This species was discovered next on Gardiners Island. The combined Gardiners and Cartwright Island breeding counts exceeded 100 adult Great Black-backed Gulls for the first time in 1958. Also that year three young were banded at Captree and a pair for the first time nested in Orient.

By 1955 two Shinnecock islands were each occupied by several hundred Herring Gulls and one pair of Great Black-backs and Captree in 1958 had an estimated 600 to 700 adults and a further increase was noted in 1959.

Feeding habits were discussed from the turn of the century when men-haden were used on the farms for fertilizer to the present day search behind the tractor-plow for earthworms, wire worms, etc. General feeding includes: methods of attaining, and a capacity for swallowing large objects such as fish, eels, etc. and descriptions of local dropping of shell fish on eastern and western Long Island.

Predation on Tern colonies and neighboring sea birds appears to be heavy; killing of others such as crippled gulls, coot, etc. less so. The molestation of the Osprey seems to be serious and the nonbreeding usurping of beach-lands and inland areas and tracts appear to make it a sort of nuisance.

As to its status, the Herring Gull seems to have become a problem bordering on its population getting out of hand to the preference of more desirable species, especially around Long Island and New York City — the latter probably correctly called the "Gull Capital of the United States".

Banding indicates with the few recoveries involved, a southward movement into the deep south among first year birds except for one individual which went to New Foundland.

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