Sockeye salmon spawn in considerable numbers along the shores of Flathead Lake during October, November, and December. When I noticed that flocks of golden-eyes were feeding over the spawning beds in the fall of 1941, I took several specimens in order to investigate their food habits. Of six birds taken between December 19 and 21 at Yellow Bay and Boulder Creek on the east shore of the lake, the stomachs of two contained large numbers (78 and 93) of undigested eggs and the other four had eggs which were partly digested and recognizable from the ruptured egg membranes. No other food was found in any of the stomachs. To what extent the golden-eyes are destroying eggs that would hatch if undisturbed is impossible to state. Since the water level in the lake is reduced continuously during the winter months by control of a dam at the foot of the lake, many of the spawning beds are exposed before the eggs hatch in the spring. This manipulation of the water level is undoubtedly much more destructive to the salmon than several hundred golden-eyes which winter on the lake. The sockeye salmon in Flathead Lake is land-locked and reaches a size of about one and one-half pounds before spawning. It is not used commercially but is taken in large numbers by fishermen throughout the year and especially during the spawning season.—PHILIP L. WRIGHT, *Montana State University, Missoula, Montana, January 11, 1944.*

Avocet on Humboldt Bay, California.—What may well be the northernmost coastal record for the Avocet (*Recurvirostra americana*) was the sight of a beautiful example of this species standing full leg-depth at the very edge of an almost submerged, pickle weed-covered knoll on Humboldt Bay, California, on January 26, 1944. William Anderson of Samoa, California, and the writer, with binoculars in hand, observed this bird; it was separated by ten feet of glassy water from an immense flock of Marbled Godwits, in which there was a sprinkling of Western Willets.

A Sharp-shinned Hawk approached the long line of Godwits, sailing at a two-foot level, and caused the entire flock to rise. The Avocet took a place in the middle of the flock. The entire line flew ahead of the hawk, gradually rising to a height of sixty feet above the water. At this point the hawk, which had maintained a steady pace, passed in under, seemingly oblivious to the undulating movement of the brown horde above. The godwits circled and returned to the jutting knolls which they formerly occupied. The Avocet, separating from the godwits, alighted in the water at exactly the same spot from which it left when the hawk approached.—C. I. CLAY, *Eureka, California, February 12, 1944.*

Gulls as Vegetarians.—Gulls of most species are well known for their scavenging proclivities, so that it should not be surprising to discover that some of the refuse they consume is of vegetable origin. Birds of this family are commonly seen feeding at garbage dumps or outfall sewers. Organic refuse, small fish, large insects, and other animal life constitute their normal food. This adaptability and omnivorousness may be encountered from the arctic regions to the tropics, apparently occurring in most, if not all, species of gulls.

Obviously, an occasional seed or leaf blade might be accidentally or incidentally consumed in the course of feeding, be it in a marsh or water area, for fish or other animal life, or in the upland for insects. Though such traces of plant items have been taken with regularity, it was somewhat contrary to expectation to find certain individuals (at times many) feeding almost exclusively upon plant foods.

Overcrowding and competition for a limited food supply encourage marked deviation from the typical diet and perhaps cause some individuals to acquire the habit of feeding extensively upon plant foods not present in an orthodox gull diet. Such an example comes from the Sacramento Valley of California, where careful investigation showed that a flock of California Gulls (*Larus californicus*) was causing considerable damage to a patch of sprouting barley late in the winter of 1942 and early in the spring of 1943. Two birds from the flock were collected and found to have gorged themselves with the sprouting kernels. This type of feeding has been observed on a number of occasions; it occurs when sufficient rain has fallen to uncover the newly sown barley kernels, temporary puddles making such fields attractive feeding areas.

Presumably because of overabundance, the California Gull in the Salt Lake Valley of Utah is becoming a problem of some concern to cherry growers, as the bird eats and destroys no insignificant amount of the tempting ripe fruit (see Cottam, Condor, 37, 1935:170).

Franklin Gulls (*Larus pipixcan*) in the Prairie States sometimes feed extensively upon wheat, oats, and other grains.

The Herring Gull (*Larus argentatus*) of the Maine coast causes appreciable damage each year to the blueberry crop. Though many exaggerated complaints are received, field investigations have disclosed that depredations of this nature are of annual occurrence and at times the damage is severe. A farmer from Millbridge, Maine, writes that these birds destroyed more than 500 bushels of blue-

berries valued at $4 a bushel. Stomachs of birds collected in the blueberry fields of Maine have been largely filled with these berries. The late Lt. Robert C. McClanahan (U. S. Biol. Surv. Wildlife Leaflet 141, 1939) described such depredations and outlined a program of prevention and control.

As further evidence that various species of gulls sometimes deliberately choose vegetable foods, the following data are cited from the extensive food-habits files of the United States Fish and Wildlife Service:

Species of gull	Locality	Date	Food	Per cent of volume
Herring	Petit Manan, N. B.	Aug. 2, 1928	107 blueberries	93
	New York, N. Y.	Dec. 1, 1930	Bread garbage	100
	Los Angeles, Calif.	Oct. 20, 1926	Pear peelings	48
Glaucous	Greenland	Aug. 13, 1932	Kelp and other algae, moss plant fiber	9
			Seedheads of *Alopecurus alpinus* and other grasses	60
	Juneau, Alaska	Jan. 11, 1920	Apple pieces	22
			Gall cases and other vegetable food	8
	St. Paul I., Alaska	April 18, 1915	Marine algae	100
Short-billed	Hayward, Calif.	Feb. 7, 1904	Marine algae	70
Ring-billed	Klamath Falls, Ore.	July 21, 1930	Leaves, flowers, seeds of *Bromus, Avena, Echinochloa, Polygonum*, and *Trifolium*	49
	Athabaska Lake, Canada	Aug. 29, 1920	130 seeds of crowberry (*Empetrum*)	1
	Bear River, Utah	May 29, 1915	Seeds, plant fiber of sago pondweed	85
	Napoleon, N. D.	July 19, 1915	15 seeds of bulrush	2
Bonaparte	Los Angeles, Calif.	Oct. 20, 1926	Fragments of apple, corn, and tomatoes (garbage)	40
	Lake Erie, Ohio	Nov. 28, 1922	Fragments of tubers	95
	Lake Erie, Ohio	Nov. 28, 1922	Leaves and tubers	11
Franklin	Shoal Lake, Man.	June 5, 1917	Oat kernels	30
	Stump Lake, N. D.	May 11, 1894	Wheat kernels and hulls	74
	Stump Lake, N. D.	May 11, 1894	Wheat kernels and hulls	75
	Heron Lake, Minn.	May 19, 1899	Lemnaceae plant fiber	10
	Napoleon, N. D.	July 17, 1915	Grass plant fiber	10

—CLARENCE COTTAM, *United States Fish and Wildlife Service, Chicago, Illinois, February 19, 1944.*

A Secondary Function of the Gular Pouch of the White Pelican.—The extensive bag-like sac associated with the bill of the White Pelican (*Pelecanus erythrorhynchos*) serves primarily as a scooping device enabling these birds to forage effectively for fish. Being continuous at its base with the large and distensible gullet, any food scooped up slides down the alimentary canal if the bill is tilted upward even slightly. Another feature about the bill and pouch is that the young in feeding can insert their heads into the bill and part way down the gullet of the adult and ingest partially digested food which the adult brings up. A possible secondary function of this large pouch structure is suggested by the following observations made by the writer at Gunnison Island, Great Salt Lake, on May 29, 1943.

The nesting season was well along and very few eggs were seen. For the most part adults were standing over and shading young. At some colonies, however, the young were gathered in groups, having left the nesting sites. It was a hot day and young and adults alike were "panting"; that is, they were holding their bills slightly open and were rapidly vibrating their gular pouches. I had noticed this behavior on previous visits to pelican colonies but had not attached any special significance to it. I thought it was possibly a nervous reaction because of our presence. However, on this occasion a breeze came up which had a cooling effect noticeable to the writer and significantly, the vibrating of the pouches of most of the adults ceased and to a large extent the same was true in the young. It then occurred to me that this vibration of the gular pouch was probably similar in function to the cooling device of dogs, when, after great exertion or in hot weather, they pant and "drool" with accompanying dilation of the tongue and oral area. As substantiating evidence it was observed that the tissue making up the gular sac of the pelicans was somewhat transparent and in the strong light it could be seen that the walls were highly vascular. While the pelicans were vibrating the pouches, the blood vessels appeared as prominent dark streaks in clear surroundings.

From these field observations it would seem that the pelicans have a rather unusual device for cooling the blood stream and for temperature regulation. Physiological studies may show this inference to have some merit.—WILLIAM H. BEHLE, *University of Utah, Salt Lake City, Utah, December 1, 1943.*