GULL HABITS.

Every fall when the waves begin to beat heavily along the sea shore, a white-winged fleet sails into the rivers and bays to winter. Then most of the other flocks have gone to the Southland, this feathered fleet skims about the wharf-lined water from. These are the gulls and they add life to the landscape as they float about with grace and ease, just as the white-sailed boats of the summer skim about the waters of the inland harbors.

The gull comes not for pleasure alone, he comes because it is easier to find a living about the city than on the open sea. He pays for his existence in the amount of garbage he picks up. He skirmishes the river for dead fish, putrid flesh and waste stuff of every kind. If his food supply runs low on the river, he hunts overland. If the gulls are fed a along the water front, they become very tame and return regularly every day for their dinner.

about the harbors and they become quite fearless in their search for food. They will often come almost within arm's reach, yet these same birds are likely to be very wild when they are not in the harbor limits where the strict regulations protect them. Only a few years ago the gulls were allowed to be killed without limit, but they are protected under the different state game laws. Whenever a gull is shot and falls to the water, the other gulls crowd about either through curiosit;

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or sympathy and for several moments they will hover over a fallen comrade. Hunters took advantage of this trait and often large numbers of gulls were slaughtered wantonly or for their plumage which was used for millinery purposes.

One summer we visited the native haunts of the gulls and climbed about their homes on some of the rock islands off the Pacific Coast. We found them even more picturesque here as they flashed their white wings against the rough brown tock, than they are about the bays and rivers. We climbed the rocky slopes to the crevices where these birds had carried a few handsful of grass for nests. We saw them building on almost every suitable table ledge. But the largest number of nests were scattered about the green slopes on the top of the rock. Here each gull scratched out a little hollow and lined it with dry grasses. Two or three eggs of greenish hue, blotched with brown in each nest, were so closely matched with the green and dry grasses that we had to watch at every step to keep from treading on them.

Later we found the top of the rock fairly alive with mottled-gray sea gull chicks. A pair of these chaps are about as interesting as anything as I've seen in the bird line. They show little fear, but there is generally a look of surprise in their eyes when you stoop to pick them up. These young gulls retain their mottled dress intil after the first year. The snow-white breast and pearl-gray coat are only worn by the mor

mature birds. The brownish looking fellows perched along the docks of the city are not a different species; they are immature gulls.

About the rock where the gulls lived, we had a splendid opportunity to study the home life of these birds. We soon discovered that the greatest anxiety of the parents seemed to be to keep their children crouching low in the nest where they thought they would escape observation and would not run away and get lost among so many neighbors. I saw one young gull start to run off through the grass, but he hadn(t gone two yards before the mother dove at him with a blow that sent him rolling. He got up dazed and started off in a new direction, but she rapped him again on the head till he was glad to crouch down and lie hidden. It seemed also to be as much the duty of the parents to beat their neighbors' cildren if they didn't stay at home, for each mother recognized her own chicks largely by location.

Would do well to watch the gulls' flight. I have often looked at these birds as they hang in the air, or move straight up in the teeth of the wind in the rear of one of the ocean steam
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boats. They poise, resting apparently on outstretched wing.

It is a difficult feat. A small bird cannot do it. A sparrowhawk can only do it by the rapid beating of his wings. The
gull seems to hang perfectly still, yet there is never an in-

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stant when the wings and tail are not constantly adjusted to meet the different air currents, just as in shooting the rapids in a canoe, the paddle must be adjusted every moment to meet the different eddies, currents and whirlpools, which are never the same at two different instants. These gulls are complete masters of the air. A stal-boat can only tack up against the wind. A gull, by the perfect adjustment of his body, without a single flap of the wings, makes rapid headway straight against the wind. I've seen one retain perfect poise and ate same time reach forward with his foot and scratch an ear.

than along the Atlantic. All through the West, the gull is a versatile bird, for although he is born for the water, he seems to as much at home hunting about the fields as on the ocean. In Utah, the gulls that nest about the Great Salt Lake, fly all through the surrounding country and visit the beet fields where they catch crickets, grasshoppers and cut-worms. Mice are very plentiful in the alfalfa fields and when the land is irrigated and the water drives these pests from their holes, the gulls are always on hand and snap them up as soon as they appear. The gulls are sacred in Utah, they are of so much value to the farmers that they are protected in every way and become very tame.

In Southern California and Oregon, I have watched flocks of gulls leave the ocean and rivers at daybreak every morning and sail inland for miles where they skirmish about the country and hunt a living for themselves. I have watched a flock of them follow the plow all day long just as the blackbirds do, fighting at the farmer's heels for angle-worms.

Others rummage daily about the pig-pens and gorge on the offall that is thrown out from the slaughter-houses. But I have never seen the gulls spend the night about these places. Toward evening, they begin to collect in bands and sail back to the ocean where they can bathe and sleep. If any bird is useful to man, the gull is certainly of great economic importance as a scavenger; three of them are equal to a buzzard and ten equal to a pig.

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In another way the gull shows his quickness to take advantage of opportunity. In Southern California where the gulls and pelicans feed together in the bays, the gull is a parasite, living on the labor of the pelican. Although heavy and clumsy in shape, the pelican is as expert as the kingfisher at diving. From a height of thirty or forty feet, he drops like a plummet into a school of small fish and rises to the surface with pouch filled with fish and water. As the diver stretches his nesk and draws his bill straight up, the water runs out and the fish are left. The head is thrown back and the whole catch is swallowed at one gulp. But the pelican doe

not fish for himself alone, for he is always followed by one or more thieving gulls.

One day while standing on the wharf, I saw a Brown Pelican flapping along with a pair of gulls a few feet behind. A moment later, the big bird spied a fish, for with a back stroke of his wing, he turned to dive. He gathered speed as he went and with wings partly closed and rigid, he hit the water with a resounding splash. The lower mandible of his bill contracted and opened his pouch that held as much water as the weight of his body. He came to the surface and was in a help-less condition till the water ran out, and at this moment he was pounced upon by the swift-moving gulls who snatched the fish and were away before the slow pelican could retaliate.

At another time, I saw a band of a dozen pelicans hovering over a school of fish. They rose from the surface, swung around till about twenty feet above, and two or three of them dropped into the water at a time. A bevy of twenty gulls were fluttering around to pounce upon every pelican that dove. The instant one disappeared and came up with a fish? he was surrounded by a bunch of gulls, each screaming to get a nose in the pelican's big fish bag.

We were interested one winter in studying the great flocks of gulls that live about San Francisco Bay. Every morning at eight o'clock, the garbage is emptied at the long dock of the navy training station. The gulls about the neigh-

borhood know this as an ordinary laborer knows the lunch hour. They flock around by the thousands. It looks as if some one had poked a stick into a hive of big feathered bees, as the birds flutter about and fight for particles of food.

Protection has made these birds very tame. Cold whise whitey" used to be known to every sailor on the Pensacola training ship, and he showed for meals as regularly as the bugle blew. He had his own perch on the bowsprit and took bread or meat from the hand like any pet. There were always several owners riding the anchor chain, waiting for scraps from the table. Many of the birds were very expert at catching morsels in the air as they were often fed by the sailors. I have often seen them taking a crust of bread in mid air, rarely missing a catch.

The minute a new food supply is found anywhere about the bay, the news spreads in the gull world by wireless telegraph. A flock of half a dozen gulls will increase to as many hundred in an hour or so. You can't see just where they come from, but they come. When the steam dredger started to open the channel of the Oakland Estuary, a whole flock of gulls sailed in and settled at the mouth of the long pipe, which was belching forth a mixture of mud, water, rocks and clams. It was as bad as a crowd of a thousand noisy news-boys. Such a shoving, clambering, flapping, grabbing: Every clam was gob-

bled up the minute it struck ground.

I have often seen the Western Herring Gull act in ways that speak well for his sagacity. On several occasions, I watched them open clams and mussels. His bill is unfitted for crushing the hard shell. I saw one gull grasp a clam in his bill, rise to a height of thirty feet and drop it to the hard sand and gravel below. He followed it up closely, but it didn't break. He repeated the same performance over fifteen times before he was successful.

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