

## FROM FIELD AND STUDY

**Feeding Habits of the Black-bellied Plover in Winter.**—When we arrived at La Jolla, California, at the end of October, 1933, there were three Black-bellied Plovers (*Squatarola squatarola*) on the strip of shore-line directly in front of what was to be our home for the winter. And as it turned out these plovers were also established for the winter. Each bird had his own particular strip of shore-line, and each had his own favored loafing ground. Each claimed and held for his very own a strip of perhaps a hundred yards. No other Black-bellied Plover was permitted to encroach, but shore birds of other species were allowed to forage freely. Up and down the beach for a distance of several miles, wherever there were patches of sandy beach between rocky headlands, there were likely to be found lone Black-bellied Plovers established for the winter. The far stretches of unbroken sandy beach were not favored by the plovers so far as we observed.

The Black-bellied Plover, once established on his winter quarters, is the least active of all the shore birds. He seems not to have the appetite of other shore birds, and hours each day he spends in silent contemplation. Occasionally when the sun shines warmly the Black-bellied lies flat on his belly and takes a sun bath. When actually sleeping he tucks his bill in the feathers of his back and stands on one leg. Often when but slightly disturbed he hops away rather than untuck his sleeping leg. It might be said that he has this habit in common with many other shore birds.

When foraging, the Black-bellied Plover runs a few mincing steps and then assumes a thoughtful attitude. He is a dainty feeder; he seldom probes for his food, but dabs lightly here and there, picking his food up from the surface of the beach. Much of his foraging he does at low tide when the kelp-covered rock flats lie exposed about his station. When feeding on the kelp-covered flats he is often associated with other shore birds. He never objects to the presence of Sanderling, Curlew, Godwit, Willet, Black Turnstone, or even the great American Egret, and he is quite friendly to the five little Least Sandpipers that come to feed on his preserves. But let one of his neighbor Black-bellied Plovers come onto his domain and he at once declares war. He ruffles his neck feathers, crouches into a belligerent attitude and trots toward his enemy as though to butt him from the premises. His bluff always seems to work, no blows ever are struck. But should he go onto his neighbor's territory the situation is reversed and he is soon persuaded to turn tail. When once established on his winter claim the Black-bellied Plover is able and eagerly willing to protect the claim against all comers of his own race.

These lone Black-bellied Plovers on their chosen territories stayed all winter, and as the weeks of March began to slip away the birds still remained. Now we began to hope that we might see them take on their black-bellied summer plumage. On March 20 we noted the first change; on one of the birds, black appeared to be spreading out across the breast from under the wings. The belly and breast of this bird were now mottled black and white.

On the shore of Mission Bay on the morning of April 2, in a flock of ten Black-bellied Plovers, there was one bird in full black-bellied plumage. On the morning of April 3 our three Black-bellied Plovers were missing from their stations. However, up until the day we left La Jolla (April 12) stray birds were occasionally noted.

When traveling the migration lanes the Black-bellied Plovers move in flocks. Early in November a flock containing four or five hundred birds was seen at Mission Bay. And again on January 23 a flock of fifty was seen. These birds probably moved farther south, as no large groups were seen during February, March, or April.—CHAS. W. MICHAEL, *Yosemite, California, June 4, 1934.*

**Two Records for San Diego County, California.**—*Mniotilta varia*. Black and White Warbler. This warbler apparently is sufficiently rare in San Diego County to warrant the recording of a specimen that was taken on September 14, 1933, at Bird Rock, a residential section between San Diego and La Jolla. It was given to me by a small boy who shot it with his BB gun while it was climbing, creeper fashion, up the trunk of a pepper tree in his garden. Although not received until about three days after its death, I was able to save it and add it to my collection. It was not sexed on account of mutilation by the shot, but by comparison with specimens at the museum