

piper; but whereas the latter did so without aid other than its long bill, the Blackbird resorted to holding the "walking stick," as these larvae are commonly called, in its feet to extract the tenant. Sometimes the Blackbird went so far as to immerse its own head to gather prey when such was within reach or its host was slow in handing out the food.—LEWIS O. SHELLEY, *East Westmoreland, N. H.*

Sexual Differentiation in the Plumage of the Black-bellied Plover.—It is my purpose to present briefly some evidence in support of the belief that adult male and female Black-bellied Plover (*Squatarola squatarola*) have distinct nuptial plumages, the females never acquiring a completely black breast.

While collecting birds at Long Point on Lake Erie, Ontario, in the spring of 1928, a series of twenty-one Black-bellied Plover was secured. From one to four specimens were secured on thirteen different days between May 7 and 28. The series should therefore fairly represent a cross-section of the birds on their way to the breeding grounds. Careful examination of the genitalia disclosed that the gonads were enlarged, the development being strikingly uniform throughout the series. However, the degree of maturity as indicated by the plumages was not uniform.

On returning to the Museum the 21 specimens were arranged in a series beginning with the one having the least black on the ventral surface at one end and ending with the one having the blackest breast at the other. Arranged in this way the gradation in the amount of black was almost complete. There was however, a definite break in the series at one point. It was then discovered that all of those at the light-breasted end of the series were females and those at the dark-breasted end of the series, males. The male which exhibited the most white feathers ventrally is darker than the darkest female.

The sexual differences are also apparent when the dorsal areas of the specimens are examined. Males are whiter on the head and have more contrasting black and white markings on the back, less of the gray characteristic of winter plumage. Females, particularly young individuals, retain considerable of their winter feathers as pointed out by Dwight.¹

In the matter of age it may be stated that there appears to be at present no way to separate with certainty birds in their first year from older ones. Although the three lightest of the light-breasted females are considered by me as being within their first year, it is apparent that there is no sharp difference between these and the remainder of the series of females.

The sexual difference in plumages which has been noted in migrant birds probably persists on the breeding ground. Such material as I have been able to examine indicates that this is true and I quote a few references from the literature which support my observation.

¹ Dwight, Dr. Jonathan. The Moults of the North American Shore Birds Limicolae. ('The Auk,' vol. XVII, No. 4, p. 384.)

Seebohm and Brown,¹ speaking of observations made on breeding birds in northern Europe, say that "The males appeared darker to the eye, black-breasted, and whiter over the eye; but some females are much darker than others, and are *nearly*² as dark as some males." Trevor-Battye,³ speaking of breeding birds in northern Russia, states that "The breasts of the males we shot were all equally black, but those of females varied a great deal."

There is one other point of difference in the sexes of this species which I have found to be but rarely referred to in descriptive accounts. This is in regard to the degree of blackness, in other words, the actual local color of the dark feathers. In the males the feathers are intensely black with a metallic luster, while the dark feathers of females are brownish black. This difference is best exhibited in fresh skins.

It would appear that the species is in a primary stage of sex differentiation—L. L. SNYDER, *Royal Ontario Museum of Zoology, Toronto, Ont.*

Golden Plover (*Pluvialis dominicus*) near Dover, Delaware.—On the afternoon of August 4, 1929, I saw a flock of five Golden Plover from the beach near Kittshammock, Del. The flock, all of which appeared to be adults, was flying north along the beach. Since the tide was near flood and it was late in the afternoon they were probably seeking a resting place for the night. A good view of the birds was obtained as they flared overhead, the black axillars and dark tail being the most conspicuous characters aside from the dark blotches on the bellies of the two males. No note was heard.

Kittshammock is a summer resort on the Delaware Bay about eight miles southeast of Dover.—R. O. BENDER, *Ridley Park, Pa.*

A Bobwhite × California Quail Hybrid.—These two partridges were introduced into Utah, many years ago and at the time of my sojourn at Salt Lake City, in 1895, both were plentiful in that vicinity. About December 14 of that year, while shooting at a valley farm south of the city, I killed a fine plumaged male bird that was undoubtedly a cross between the two species. My pointer had made game in a little island of rocks and wild rose bushes, fifty yards out in plowed ground and I followed. A full covey, apparently of Bobwhites, whirred up from the close cover and I dropped one with my right barrel. At the shot a second covey arose from close to where the first had been and I caught one of these with my other barrel. This bird was a normal Bobwhite but the other was the hybrid. The general color effect was similar to a Bobwhite but the pattern was modified and there were two straight plumes two inches long on the head. These recalled the Plumed Quail but I saw at

¹ Seebohm, Henry and Brown, John A. Harvie, Notes on the Birds of the Lower Petchora. 'The Ibis,' Third Series, No. XXII, April, 1876, p. 228.

² Italics mine.

³ Trevor-Battye, Aubyn. Notes on the Birds of Kolguev (In "Ice-bound on Kolguev"), p. 432.