

It is obviously a dangerous policy to attempt to elucidate definitely the movements of any widely distributed species by applying to the case a few records of the positive character of bird banding returns. Such cases, frequently of a most striking and unexpected nature, may be no more than exceptions to a general rule. On the other hand, they often point the way for more extensive investigations by indicating the great fields of the unknown that are still awaiting intensive treatment.

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## OCCURRENCE AND BEHAVIOR OF CERTAIN SHOREBIRDS IN SOUTHERN CALIFORNIA

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THE following observations were made in the marshes at Playa del Rey, Los Angeles County, during the period from June 9 to October 7, 1923. There the shorebirds frequent the shallow waters spread out in great sheets over the mud flats, and also the shallow waters found in growths of salicornia and sedgy places. They are less common about the deeper waters, such as in the duck ponds.

**Lobipes lobatus.** Northern Phalarope. On August 30, found in numbers; September 3 there were many large flocks on the ocean beyond the surf, from Del Rey to El Segundo pier; September 10 smaller numbers in marsh; more flocks on ocean. By October 10 only a few birds were about.

They were observed sleeping on land and water, bill along the back under a wing. Their ablutions were absurd attempts to get a swan-like breast and neck under water, when such airy grace and buoyancy forbade any sub-aquatic ventures. To get the proper ducking the Phalarope stretches up and drives his pretty head and breast down in the water, which effort promptly forces his tail-end up; whereupon like a cork he rebounds, to ride high and dry above the water with hardly a sign of moisture on the close-fitting plumage. At once he jerks up and ducks again, and again, all to little avail, seemingly. This up-jerk and ducking motion can be observed at a good distance, and the birds may be identified by it.

The Northern Phalarope is quite fearless in this region but seldom does one find the birds so confiding as in the following instance: Mr. Ray Francisco, the warden for the gun club on this marsh, was working in water a foot or two deep, pulling out sedges, dock and arrowweed. The Northern Phalaropes took an interest in this roiled up water and drew close to dab at the surface and "whirligig" about in their unique way. As the man kept at work they drew nearer until actually about his feet. They stayed with him until he stopped work in that section.

**Steganopus tricolor.** Wilson Phalarope. On July 20 a single bird was seen; on August 16 the birds were reported here in numbers by members of the Los Angeles Audubon Society; on August 30 and on September 1, 3 and 6, a flock averaging twenty individuals, and on September 16 one only.

As I found them the birds kept fairly well together; though scattered they covered a definite area. Among the other waders their uniform gray or brown-gray set them off in a distinct mass. When feeding along the shallows with Least, Western and Red-backed sandpipers, they differed from them not only in size and color, but in their habit of steady, *energetic* walking and the constant "sidesweeping" with the bill. Occasionally they picked objects from the surface with their needle bills, but this was not very actively pursued.

In deeper water they fed among the Northern Phalaropes, Knots and Dowitchers, wading along until they swam in places. However, they were able to wade where the Northern swam. At such depths they feed with the head clear under and the energy of the feeding operation was indicated by the motion of the tail. They commonly walked steadily back and forth through the deeper sections of the ponds, and in such deep places they moved as headless bodies, evidently feeding as usual in

the surface mud. From the vigorous side moves of the tail it would seem they were feeding in their usual manner as well, that is "sidesweeping." When the birds were standing to feed in the deeper places the tail was again much in evidence, and indicated the manner of feeding. This would seem to be a probing motion performed with some rapid vibration which was communicated to the tail as a series of quivers. It is rather a droll sight, and arresting as well, to see a certain area marked out by headless gray bodies buried in the water up to the bend of the wing, the vibrating tail indicating the vigorous operations being carried on down below. It seemed their best feeding was in the deeper waters. But whether walking or standing at such depths (while engaged in feeding) they constantly raised the head from the water to give a short look before returning below the surface. This *motion* and the erect and elevated *position* of the head were significant field characters to me. In an area alive with countless moving waders the grayish birds, half submerged and working with such uniform diligence, could be easily overlooked were it not for such characteristics as the sidesweeping motion and the suddenly upraised head held *motionless* for a brief moment before returning to work.

The following field marks for the fall season were evident to me:

*When moving:* 1. Long neck, legs and needle bill. 2. "Sidesweeping." 3. Energetic but steady walking when at water's edge, contrasted with the changeful and irregular movements of other small waders. 4. In deeper waters the tail wagging caused by the sidesweeping below the surface. 5. Large area of white on rump and tail (except the tip) and an unmarked wing.

*When quiet:* 1. Uniform brown gray color, in mass effect. 2. Submerged head and neck. 3. Quick head raising and momentary gaze. 4. Tail vibration when standing to feed in deep water.

These characters, though not striking in a single bird among hordes of various sandpipers, are most evident and do attract attention when a *flock* of the phalaropes is at work. Their actions mark out from the moving sea of mingled waders a definite area where they are.

*Recurvirostra americana*. Avocet. On September 16, Messrs. Wyman and Hoffmann pointed out an Avocet "tipping" for bottom food in water where he was swimming. In plunging the foreparts beneath the water his body turned as if on a pivot. He maintained a vertical position by kicking out, quite often thrusting the long "blue-stocking" legs clear of the water. Coming up, the mandibles were worked rapidly before the next plunge was made.

While the colony was nesting in June I found several nests with demolished shells. Two or three hundred gulls habitually rested on a portion of the mud flat nearby, but I never saw them robbing eggs. One, however, was so hotly pursued by an Avocet who charged the gull repeatedly and like a meteor from every side, that the big flapper screamed for mercy, guilty or no.

*Macrorhamphus griseus scolopaceus*. Long-billed Dowitcher. One found on June 9. None seen thereafter until July 12, when a flock of thirty was found. They were in migration evidently, for they rose and maneuvered in beautiful formation every few minutes. Finally at dusk their tinkling voices were lost in a distant flight and I left the marsh convinced that I had witnessed the departure of a migrant flock. Small flocks were found September 1 and 6, and on until October 7, the numbers being a dozen or less to a flock.

*Calidris canutus*. Knot. On August 17, Miss Mary Mann Miller found Knots here; on August 30 I located two small flocks. As the individuals wandered apart in feeding the numbers changed each time the birds were put up. I made out at least nine birds; but not until September 10, after five more visits, could I be sure of the total, fourteen birds. These stayed about in flocks varying from four to nine (at times in one group of fourteen) until September 20. My next visit, September 26, was the last, and I neither saw nor heard them. The area they favored was close to the duck blinds and I was not allowed to enter that section of the marsh, with the gunning season so near. It is my opinion they were gone by the 26th, as before that date I had always been able to locate them in certain areas.

When feeding close together and put up, they bunch well and separate frequently from the other waders. If the flock is scattered among the others the Knots join in the maneuvers of the mixed flock. They are easily distinguished in the

crowd by their large *sandpiper* size, the large white rump area, and the prominent bill carried at an inclined angle. The heavy, hoarse voice located them instantly, whether a-wing or afoot.

The Knots fed at times in water above their bellies, and frequently joined with Dowitchers in quietly probing in some one spot. Both birds probe with head and bill under water, but the Knots have a habit of moving before probing again, while the Dowitchers commonly work in one spot for some time. Often the Knots left the Dowitchers, and the still-probing business, to march in a line or a bunch through the deep portions and feed by plunging the bill as they moved. This the Dowitchers do, but not on the rapid march and not, to my knowledge, in a close flock.

When in shallows and on bare mud they walk industriously but not hurriedly, holding the bill pointed down and picking with it as they move. Their appearance when on the move is quite erect, contrasting with most other waders. Thus the Least Sandpipers run about with faces to the ground, the Red-backs look dumpy, etc. There was a constant shifting of individuals in a flock due to desertions and re-enlistments. While one bird would fall out of the parade and work alone, another would hop out of a sedgy cove and flutter over to the group. While watching the flock the low croaking voices of stragglers could be heard from several sides. As a group, they kept out of the sedges and marsh grasses; but single birds were often found pushing through them.

The Knots allowed far closer approach than Yellowlegs. Frequently they have fed to within twenty or twenty-five feet of me, seated in the open. Yet they are more wary than Dowitchers and smaller pipers. With heads stretched up they walk long-leggedly away, turning to look, and giving a slight head-ducking motion.

In size the Knots are larger than Killdeer and a little smaller than Dowitchers. When standing by the latter the Knot's bill is seen to be about half as long as the Dowitcher's. A further distinction is the Knot's grayer coloration (in the fall season). When flying together the bills and color separated them, but a quicker distinction was found in the large area of white on rump and tail coverts of the Knot; the Dowitcher has a restricted and vertical white rump patch. The hoarse croak was in striking contrast to the clear xylophone-like tinkle of the Dowitcher's cry.

In form, the Knot is a large edition of the smaller sandpipers. Except for the black bill and the white rump, upper and lower tail coverts, and back portion of the belly, the bird is of fairly uniform gray color. The head is lighter and the cheeks, throat and line over eye show a trifle lighter still. The color, larger size and sedate walking distinguish the Knot from the smaller waders. The Wilson Phalarope comes nearest in color and size. The habit of picking while walking is distinctive in that the bill is pointed vertically, seldom at an angle.

The common call is a low-pitched, hoarse "skéuk," the lowest and heaviest voice on the flats. It struck one as a dull croak, coming pretty regularly from the feeding birds and especially strong when they took wing. A lone bird in joining the flock would croak his coming. The sound can be imitated in quality and form but in a higher pitch. Make the facial contortions necessary to "cluck" to a horse, but don't "cluck;" make it "skéuk" and locate it in the wisdom teeth on the side being dislocated. Pitch it low; it will still be two tones too high. At a distance the sucking or harsh quality is lost. A softer, more musical rendition is given when the birds are well bunched and feeding, which came to my ear as "choök."

*Numenius americanus*. Long-billed Curlew. My notes record this bird only twice, on June 9 and September 16, a single bird each time. I recall seeing a few at some other place, but at best that makes only three occasions. Is this an actual scarcity or merely my misfortune?

*Nature Department, City Schools, Los Angeles, California, February 1, 1924.*