

FIELD IDENTIFICATION OF WESTERN SANDPIPERS IN MASSACHUSETTS

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Shorebirds are a very perplexing group for many birders. Yet of all the shorebird species which pass through Massachusetts, the Western Sandpiper (*Calidris mauri*) could be the most difficult of all to identify. Very similar to Semipalmated Sandpipers (*C. pusillus*) at any time of year, the two species are virtually identical through the late fall, winter, and early spring.

Distribution and Occurrence in Massachusetts

If Western Sandpipers occurred in Massachusetts only as spring migrants, when they are near the peak of their breeding plumage, the identification problem for birders here would be considerably diminished. This is not the case, however, as Western Sandpipers are much more regular in Massachusetts as fall migrants. After leaving their breeding grounds in northwest Alaska, the majority of their population passes down the Pacific coast of North America. However, a percentage of the population swings east across Canada, then heads southeast towards the Atlantic coast of the continent. It is rather unusual as a migrant much to the north of Massachusetts, and is still uncommon here on our coast. As one travels south along the Atlantic seaboard, though, the species increases in abundance, becoming quite common or even abundant in the Carolinas, Georgia, and Florida. Some of these birds remain for the winter along the southern Atlantic and Gulf coasts of the United States, while others continue south to winter in the islands of the West Indies, or along the northern coast of South America.

The first fall migrants in Massachusetts are generally found in late July. This first "wave", made up of adult birds, lasts through early August. Usually there is then a break of a couple of weeks before the second larger "wave" of juveniles in late August. (This is usually two or three weeks after the appearance of the first juvenile Semipalmated Sandpipers.) The numbers of juveniles build to a peak sometime in early September, when on a good day up to fifty or a hundred individuals may be seen at one of the better spots. The numbers then gradually decline until late October, when the last are usually seen.

Winter sightings are scarce, but have occurred in late November, December, and January.

In Spring migration Western Sandpipers migrate up the Mississippi Flyway, this accounting for the scarcity of spring sightings in Massachusetts. The spring sightings that have been made in Massachusetts are generally from the last two weeks of May through the first week of June.

Habits

While they are here, Western Sandpipers stick to the coast as a rule. They are generally closely associated with flocks of Semipalmated Sandpipers, feeding over tidal sand or mudflats at low tide, and roosting higher up on the beach or up in the saltmarsh at high tide. Very much like Semipalmated Sandpipers in habits and manner of feeding, there are, however, a few differences between the two species which can aid in identifying them. For one thing, Westerns tend to be found more along the periphery of a flock of Semipalmateds, whether the birds are feeding or roosting. This is also true of other of the more uncommon "peeps", such as Baird's (*C. bairdii*) and White-rumped Sandpipers (*C. fuscicollis*). If there are several Westerns in the flock they will tend to group together. Secondly, Westerns sometimes feed in slightly deeper water than Semipalmateds, due to their proportionately longer bills and legs. When feeding in the deeper water their manner of probing becomes distinguishable--their stance is more vertical, and the probes of the bill are straight up and down, somewhat reminiscent of a Stilt Sandpiper's (*Micropalama himantopus*) manner of feeding.

Size and Measurements

Western Sandpiper's most important mensural feature, and the one usually noted in field guides is its longer bill. This is often the most significant criteria used in separating Westerns from Semipalmateds, especially in winter, when there is practically nothing else to go on. However, it can be a misleading field mark as both Westerns and Semipalmateds have immense variation in the length of their bills. It is true that on the average Western Sandpipers have longer bills, and Semipalmated Sandpipers have shorter bills. But as with most shorebirds there is also a sexual dimorphism, with females having

significantly longer bills than males. There would not be much difficulty in identifying a small-billed male Semipalmated Sandpiper, or a long-billed female Western Sandpiper, but the ranges of bill length for female semipalmateds and male Westerns do overlap considerably. (SEE DRAWING) This is a very important point to keep in mind when searching through flocks of "peeps" for a Western. During a banding program on Plymouth Beach from 1971 to 1973 the bill lengths of netted Semipalmated Sandpipers ranged from 16mm to 25.5 mm, with an average length of about 20.5mm (approximately only one bird in one or two hundred had a bill measuring 25mm). Working with Western Sandpipers in California, Page and Fearis (1971) found a range of bill lengths from 20.4 to 25.5mm, with a mean of 22.8mm for males, and a range of from 22.5 to 30.1mm, with a mean of 26.5mm for females. According to that data, all of their male Western Sandpipers fall within the range of bill lengths of Semipalmateds from Plymouth Beach. Assuming that the bill lengths of Western Sandpipers here on the east coast are comparable to those of birds from California, that would make all male Westerns unidentifiable on the basis of bill length, and even a percentage of the females unidentifiable!

Aside from its greater length, the bill of a Western Sandpiper is supposedly shaped slightly different. It is said to be thicker at the base, coming to a narrower tip. Yet on Western and Semipalmated Sandpipers that have the same length bills, the bills are very close to the same thickness at base and tip on both species. However, the droop of the bill does seem to be slightly different between the two species. On a long-billed Semipalmated Sandpiper the bill seems to droop more throughout its entire length, whereas on a Western the droop is more at the tip of the bill.

The longer legs of Westerns comprise a second mensural difference. Both sections of the leg are longer than the corresponding sections on the leg of a Semipalmated Sandpiper. This has the effect of giving the Western a spindly-legged look, further emphasized by the slightly longer body and wings. When this effect is combined with the often longer bill, which is held at a more downward angle when roosting or walking, it gives the bird an appearance of being slightly tipped forward.

Plumage

The similarity in the plumage of Western and Semipalmated Sandpipers varies greatly in relation to age and time of year. Knowing when the two age groups of Western Sandpipers pass through the state, and understanding the timing and sequence of its plumages are key factors in successfully locating and identifying them.

Breeding or Alternate Plumage--This is the most distinctive plumage of the species. It is usually attained in April and kept, at least partially, until late August or September. The birds which do appear in the spring and the few adult birds comprising the first "wave" in late July and early August are in this plumage. At the peak of the breeding plumage the Western Sandpiper is much redder over the dorsal surface than the Semipalmated Sandpiper. This is due to wide reddish-cinnamon edgings to the feathers of the back and scapulars, a reddish-cinnamon cap, and a reddish cinnamon ear patch (much like on a breeding plumage Stilt Sandpiper (*Micropalama himantopus*)). The breast and flanks are usually covered with heavy, dark, sharply demarcated streaking. The corresponding streaking on a Semipalmated Sandpiper is much lighter, and more restricted in its extent. The plumage generally seems to have a coarser appearance to it than on a Semipalmated.

By the time the first adult birds reach our coast on their way south this plumage will be somewhat worn and faded. The reddish-cinnamon edgings to the feathers of the mantle are not as wide and conspicuous, and the cap and ear patch have lost some of their color. Also, this plumage will be mixed with the beginnings of the winter plumage. Dull grayish brown feathers will be scantily sprinkled throughout the dorsum, and many of the breast and flank streaks will have disappeared. Just the same, it is still quite distinctive, and much redder or rustier than the corresponding plumage of Semipalmated Sandpipers.

Juvenile Plumage--In a normal year's birding in Massachusetts most Western Sandpipers seen will be in this plumage. The second "wave" of juvenile Westerns, arriving in late August, far outnumber the few adults that were around earlier in the season. However, the juvenile plumage is very temporary, the young sandpipers retaining it in full for only a short time. Even a week or two after they first arrive the initial traces of the winter plumage appear in the dorsal feathers. This molting process then continues through the fall, and is usually complete sometime after mid-October. The first juvenile Semipalmated Sandpipers arrive in Massachusetts two to three weeks before the first juvenile Westerns, and are present for the time that the juvenile Westerns are here. Semipalmated's schedule of molting from juvenile plumage to winter plumage is on a comparable

timetable.

The juvenile plumage can be recognized as such by its very fresh, sharp, unworn appearance. The feathers of the back and wings have narrow, but very well defined light edges, giving them a scaly appearance. The breast is washed and very lightly marked with buff. Unfortunately this plumage is not pictured in field guides. Basically this pattern of scaly, neatly marked upperparts and a buffy wash on the breast applies to the juvenile plumage of all of the sandpipers of the genus *Caladris*. Once the pattern is learned it is easily recognized, even if the species at hand is not known.

In the juvenile plumage Western Sandpipers are considerably less distinctive than when in breeding plumage, and closely resemble juvenile Semipalmated Sandpipers. The main difference between Westerns and Semipalmateds at this time lies in the color of the scapulars, and to a lesser extent, the tertials and central back. On Semipalmateds the edging of these feathers is a buffy or sandy to light rusty or orangish color, while on Westerns the edging is a deeper rusty or reddish-cinnamon color, somewhat the same color as these feathers are in the adult breeding plumage. A second difference is in the extent of the buffy coloring on the breast of the two species. The breast of the juvenile Western Sandpiper is whiter than that of Semipalmated, with the buffy coloring restricted to a smudge on the sides of the upper breast, much the same as on a Spotted Sandpiper (*Actitis macularia*) in winter plumage, only much lighter. A third difference is the lighter appearing head of the Western. At a distance the whole bird can give a slightly paler effect overall.

For birders, the main problem with this plumage is that it is so temporary. In addition to the molting, fading and wear of the feathers can be noticed even a week or so after their arrival. Juvenile feathers are structurally less durable than adult feathers and the combined action of sun, sand, and salt water take effect on them faster. As the plumage fades and wears it becomes progressively more similar to the juvenile plumage of Semipalmated Sandpipers, which is also wearing. The remarks on recognizing it as the juvenile plumage still hold though, as it is always much newer looking and more sharply marked than the adult plumage.

Winter or Basic Plumage--Identification problems are relatively simple as long as the bird in question has a few remaining scapulars from either the breeding or juvenile plumage. Fortunately, the scapulars are usually the last feathers to molt. Eventually, though, the last rusty scapular is lost. This is usually sometime after mid-October, with the exact time varying from bird to bird. Once in full winter plumage Western and Semipalmated Sandpipers become essentially identical, identifiable, when possible, only on the basis of measurements.

In winter plumage Westerns and Semipalmateds are mostly gray or gray-brown above, whitish below, with less distinct graying markings on the upper breast. There are but a few subtle differences that can possibly be noted between the winter plumages of the two species. Though hardly anything to base an identification on, they might be useful as corroborating evidence. As with the juvenile plumage, a Western Sandpiper in winter plumage presents an overall slightly paler appearance, especially so on the head. The mantle seems to have a slightly grayer cast, Semipalmateds seeming a bit browner. At very close range, Westerns seem to have a finer dark shaft streak through the feathers of the mantle. As with the breeding plumage, the winter plumage has a coarser appearance on Westerns than on Semipalmateds.

It must be emphasized once more how similar the two species are in this plumage. Individuals should only be identified when bill length and other size differences are obvious. Any birds which are questionable would be just as well left alone.

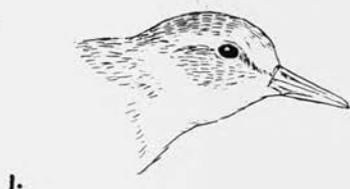
Where to Look

Very briefly, the spots which seem to be most productive for finding Western Sandpipers are: 1. Nauset or Coast Guard Beach in Eastham, at high tide, 2. Plymouth Beach in Plymouth, also at high tide, 3. Newburyport Harbor, about 3 1/2 - 4 hours after Boston high tide, and 4. Parker River National Wildlife Refuge, the first pool on the refuge, at high tide.

Bibliography

Griscom, L. and D. E. Snyder, 1955, The Birds of Massachusetts, Peabody Museum, Salem
Page, G. and B. Fearis, 1971, Sexing Western Sandpipers by Bill Length, Bird-Banding 42,
297-298

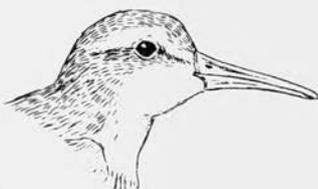
Petersen, R. T., 1947, A Field Guide to the Birds, Houghton Mifflin, Boston
Pough, R. H., 1951, Audubon Water Bird Guide, Doubleday and Co., N.Y.
Stout, G. D. (ed.), 1967, The Shorebirds of North America, Viking Press, N.Y.



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1. Semipalmated Sandpiper - 15.5 mm. bill
2. Semipalmated Sandpiper - 25 mm. bill
3. Western Sandpiper - about 25 mm. bill

(drawings taken from photographs of netted birds) by Paul Donahue

Book Review

Another Penguin Summer, Olin Sewall Pettingill, Jr., Scribners, New York, \$10.

Most of our readers have heard of Dr. Pettingill or used his books A Guide to Bird Finding East of the Mississippi and A Guide to Bird Finding West of the Mississippi. Now he shares with us his experiences with the penguins in the Falkland Islands. The Falklands are at the tip of Argentina. The Pettingills first visited the islands in 1953 and 1954 to film for Walt Disney Productions, which led to a film-lecture called "Penguin Summer." The material for this book was gathered over a five-month period in 1971-72. The Falklands were chosen because of their accessibility by commercial airlines and proximity to hotel accommodations as a base camp.

The book provides excellent pictures and many humorous notes on the habits of the Gentoo, Rockhopper, King, Magellanic (Jackass) and Macaroni Penguins. Dr. Pettingill's description of these super-aquatic birds' trials and tribulations on land gives them very human characteristics. Their vocalizations are comical and nesting habits seem impossible. The color photographs are superb. Alas, many are in black and white. The photographs should have related better with the text. For example, I would prefer to see the pictures of the Rockhopper following or interspersed with, the information on that bird. Some of the "above-below-opposite" captions are confusing. One photo had me changing reading lights and cleaning my glasses to check my vision--a panoramic scene of a penguin colony half in color, half in black and white. The King Penguin "teddy bear" babies are great, color or not. What Ogden Nash said of the canary certainly is applicable to the penguin--"and when they're moultin' they're pretty revoltin'." Despite these layout problems, this is a very enjoyable and informative book and I recommend it for your bookshelf.

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