

Identification of North A Different



The peeps, common slang for the five smallest North American sandpipers, tend to create more identification headaches than the rest of the shorebirds put together. A fair bit of the identification literature does little to help, keying in on bill length and bill shape and a host of relatively subtle plumage marks that vary with age. For the three smallest peeps, differences in structure *not* related to the bill are usually downplayed, with the implication that they are too subtle to be useful.

But is that really accurate? Most experts stress the importance of structure in shorebird identification in general, so it seems logical that structure should play a key role in the identification of this most difficult group of shorebirds. In this article, I explore various non-plumage characteristics that may be of use in the identification of peeps. I hope to show that much can be done without relying on plumage.

The method of identification presented in this article is effective only if you are willing to take birding beyond the simple field-mark-based approach taught to beginning birders and instead look at birds critically. This takes an initial investment of time to study birds, but it pays dividends by allowing you to identify birds more confidently and correctly, and to do so at greater distances. Be aware that, at any point, an individual bird can adopt an unusual posture or behavior. Therefore, while first impressions can be useful, it is important to watch individuals over an extended period. By doing so you will not only understand the typical appearance of a species, but will also know how various behaviors or situations can create changes in this typical appearance. Use caution when applying the methods described in this article to photographs, which often freeze a bird in an odd posture and lead to faulty assumptions.

An expanded online version of this article is available on the ABA website

[<aba.org/birding/v40n4p40w1.pdf>](http://aba.org/birding/v40n4p40w1.pdf)



American Peeps

Approach to an Old Problem



In this article, peeps are divided into three different categories: Least Sandpiper, “Standard Peeps” (Semipalmated and Western Sandpipers), and “Long-winged Peeps” (White-rumped and Baird’s Sandpipers). Placing an unknown peep into one of these three categories is an effective first step in the identification process. In doing so, you will either identify the bird immediately or be left with only two possibilities on which to concentrate. Therefore, each section begins with an overview of the group and how its members are separated from the other two groups. More detailed, species-specific information follows the overview.

Least Sandpiper

The most distinctive group, containing only one species, is the Least Sandpiper. This is the smallest shorebird in the world, clearly smaller in direct comparison than the other peeps. Least Sandpipers rarely form large, tightly packed flocks. Instead, they usually spread themselves out along muddy edges, especially near vegetation that can be used as cover. They typically feed from a crouched position, often almost brushing the ground with their breasts. Their “knees” (the tibia–tarsus joint) are often bent sharply as they delicately pick food from the surface. Their feet can be planted so far forward that they appear to feed between their toes. It is safe to identify any peep that does this for an extended period as a Least. Least often seem quite nervous, frequently glancing around and freezing in place at any sudden noise.

The five species of “peeps” in North America present a well-known identification challenge. Many birders are aware of subtle differences in plumage and bill structure among the peeps, but it is less widely appreciated that the five species of peeps differ appreciably and consistently in foraging behavior and overall body structure. This article provides an overview of those structural and behavioral distinctions that are surprisingly reliable for identifying peeps. *From left to right: White-rumped, Western, Baird’s, Semipalmated, and Least Sandpipers.*

Cameron Cox

119 North G Street
Muskogee, Oklahoma 98105
cameron_cox@hotmail.com

Structure

Least Sandpipers look dinky, with small, rounded heads and short bills that taper to a fine point. Their large, round eyes dominate the face and give the bird a wide-eyed appearance. This effect is due in part to the lack of a strong supra-orbital ridge, the bone structure that runs above the eye, slightly more prominent in other peeps and giving other peeps a squinting appearance. Primary extension is short in Least Sandpiper, with no extension past the tertials. The leg bones and joints are noticeably finer than those of other peeps.

Flight and Voice

In flight, Least Sandpipers resemble small bats. They have short, rounded wings that are noticeably kinked back at the wrist joint. In the fall, adults often show conspicuous gaps in the flight feathers caused by molt. In a mixed flock of peeps overhead, their wings clearly have narrower bases than those of other peeps. Leasts frequently seem excluded from the main body of a mixed flock, relegated to the edges or the back of the flock. As they buzz by, they usually give their shrill, rising *trreee* call.

STANDARD PEEPS**Semipalmated and Western Sandpipers**

By far the most numerous of the peeps in most of North America, these two species form huge flocks on tidal mudflats. They prefer more-open habitat than does Least Sandpiper, often packing themselves shoulder to shoulder in large feeding flocks. They feed by dropping their necks while keeping the breast well above the surface. Their tarsi are angled back only slightly when feeding, completely unlike the deep knee-bend of Least. When feeding on a mudflat, the two standard peeps tend to plant their feet farther back and reach slightly forward with their bills. So unlike Least, there is a large gap between where the feet are placed and where the bill is probing. The standard peeps suggest a person bending at the waist and reaching forward to pick up something in front, while Least Sandpiper's feeding style is more like someone crouching down to pick up something that is right by his or her feet. Standard peeps usually seem very focused while feeding, pausing to glance around less frequently than Least. If a falcon is in the vicinity, though, they may appear more cautious. Both Western and Semipalmated show slight primary projection, a little bit longer in juveniles. Their legs are clearly more substantial ("heavier") than those of Least, with more obviously knobby joints. These two species are the only peeps with "palmations"—small webs of skin be-

tween the toes, which can be seen if you look for them, especially on birds standing on sandy beaches.

Semipalmated Sandpiper

Semipalmated is the dominant species of peep throughout most of eastern North America except during the late fall and winter, by which time virtually all have departed for wintering areas in the West Indies and northern South America. Adult Semipalmateds molt to varying degrees during migration (rarely up to 95% of their body plumage), but they do not usually show full basic plumage in the U.S. or Canada; they never molt their flight feathers until they reach the wintering grounds. In late fall, first-year Semipalmated Sandpipers are instantly separated from Westerns because they maintain their brown juvenal plumage while Westerns are already in gray formative (first-winter) plumage. Semipalmated averages more aggressive than Western, often engaging in highly physical squabbles (C. Wright, personal communication).

Structure. Semipalmated Sandpipers are compact. Both the breast and the belly are robust; this makes the underparts appear smoothly rounded and the head proportionately smaller than on Western. Semipalmated often appears bullnecked, unlike Western, which looks rangier. Semipalmated's legs appear to be placed at the center of the body, so the distribution of weight looks even.

Typical bill shape is short and straight with a blunt and slightly swollen tip. However, many do not have this classic shape. Both length and shape vary a great deal because of several variables. Females are substantially longer-billed than males. They also vary clinally, with birds breeding in the East having longer bills than western birds. The greatest variability is seen along the East Coast, where typically short-billed individuals may be seen alongside relatively long-billed females. In the fall, bills also vary somewhat by age, as many juvenile shorebirds attain their full bill length during their first winter, so some fall migrants will have relatively short bills. On top of all this, add individual variation. Semipalmateds with longer bills also have finer bill tips, and the longest-billed females can even show a bit of a droop, closely approximating Western Sandpiper. Individuals with the classic bill shape can be identified by that feature alone, but more often several other characteristics must be used along with bill shape.

Western Sandpiper

Western is the dominant peep on the West Coast, and Western and Least are the only peeps likely to be seen in North America in winter. In fall, molt timing can be a



1 • The typical stance of a feeding **Least Sandpiper** is distinctive. Notice how far forward the front foot is planted, and note the close proximity of the bill and foot. This photo shows the small head and delicate legs of this species. *Cape May, New Jersey; September 2003. © Richard Crossley.*

2 • A **Least Sandpiper** (center) is sandwiched by **Semipalmated** (top) and **Western** (bottom) Sandpipers. Compare head shape, bill shape, and leg thickness among the three. The difference in head shape between the two “standard peeps” (Western and Semipalmated) is noticeable. Note also the long-necked, lanky look of the Western compared to the bullnecked, sturdy look of the Semipalmated. The Semipalmated is still in full juvenal plumage, despite the relatively late date. *Avalon, New Jersey; September 2005. © Tony Leukering.*



3 • This comparison of **Least Sandpiper** (left) and **Western Sandpiper** (right) highlights the different feeding stances of Least and the two “standard peeps” (Western and Semipalmated). The front foot of the Least is plant well forward, the tarsus is angled back sharply, and the bill points down. The Western is reaching forward, and the distance between the foot and bill is greater. Note that both birds look quite plump, having gorged themselves at rich feeding areas on the Alaskan coast. Observers should bear in mind that a bird’s structure can appear to be influenced by behavioral and physiological responses to the environment. *Cordova, Alaska; May 2005. © Kevin T. Karlson.*

4 • When feeding, **Least Sandpiper** often crouches low, bringing the breast quite close to the ground. Other peeps do this rarely and never for very long. The crouched posture enhances the Least Sandpiper’s diminutive appearance. This posture also causes Least to take shorter, shuffling steps, quite different from the full stride of other peeps. On the right bird, note the extremely slender bill. *High Island, Texas; March 2005. © Kevin T. Karlson.*

quick way to separate Western from Semipalmated. Western Sandpipers molt much earlier, with some attaining full basic plumage by August. Large gaps appear in the wings of adult Westerns because of missing flight feathers, while Semipalmated Sandpipers are unlikely to be seen replacing flight feathers in North America. Any first-cycle standard peep with extensively gray formative (first-winter) plumage is a Western.

Structure. Western is lanky and long-legged compared to Semipalmated. Its head usually looks slightly too large for the body, whereas the reverse is true of Semipalmated. Western appears to be carrying more weight in front of its legs, which are placed slightly farther back on the body compared to Semipalmated. This creates a heavy-chested appearance that is quite pronounced—so much so that it seems surprising that the bird is able to stay upright. This effect is particularly apparent on roosting birds.

Although bill length does not vary clinally in Western as it does in Semipalmated, the variation between the sexes in Western is greater than in Semipalmated. Most, but not all, Westerns have a perceivable droop to the bill. At one extreme, many females have bills that recall Dunlin. Although some juvenile males have short bills that are absolutely straight, like Semipalmated, their bills are nonetheless slimmer with a finer tip.

Flight and Voice

I have yet to notice structural characteristics that allow consistent separation of the two standard peeps in flight. In fall, adult Westerns are instantly identified by the large gaps in the flight feathers because of molt. Fortunately, both species are extremely vocal in flight, and their calls are easily recognized. Semipalmated gives a low-pitched, rolling *chrrk* while Western gives a high, sharp *shik* with a slightly whining quality. Feeding flocks may give these calls, but when feeding, both species give a wide variety of short, sharp notes that are too variable to be consistently distinguishable.

LONG-WINGED PEEPS

Baird's and White-rumped Sandpipers

These are the ultimate *Calidris* sandpipers, with bodies built for annual round-trip journeys between the high Arctic and the tidal flats of the southern cone of South America. Where numerous, they form large flocks, but many birders encounter them in smaller numbers, mixing with flocks of standard peeps. The ability to pick these guys out of a large flock of shorebirds is a sign of true peep proficiency.

When standing next to a standard peep, a long-winged peep is noticeably longer-bodied; next to a Least Sand-

piper, a long-winged peep is positively hulking. Unlike the standard peeps, which are similar in their habits, the two long-winged peeps fill different niches. White-rumped is a habitat generalist, found almost anywhere frequented by peeps, but showing more of a tendency than any other peep to wander out into open water. Baird's, however, prefers drier habitat: sod farms, moist mud, even dry, short-grass fields. Baird's almost always picks from the surface when feeding, even in deep muck or while wading. It often looks tentative and uncertain, suggesting Least Sandpiper; White-rumped, however, feeds much like the standard peeps.

Both species have considerably more body projecting behind the legs than in front, and this accentuates their attenuated shape. White-rumpeds tilt forward sharply to reach the ground as they feed, causing their rear to wag up and down. Baird's may do this as well, but more often it feeds in a perfectly horizontal, flat-backed posture. Both these species have such long wings that their primary tips frequently cross. Often, this wing-crossing is easier to see from a distance than whether the wings project past the tail. The crossed-winged posture is distinctive and instantly places an individual in the long-winged category. Although the primary tips of Western Sandpipers sometimes overlap slightly, the effect is nothing like the distinctly crossed sickles of the long-winged peeps.

Baird's Sandpiper

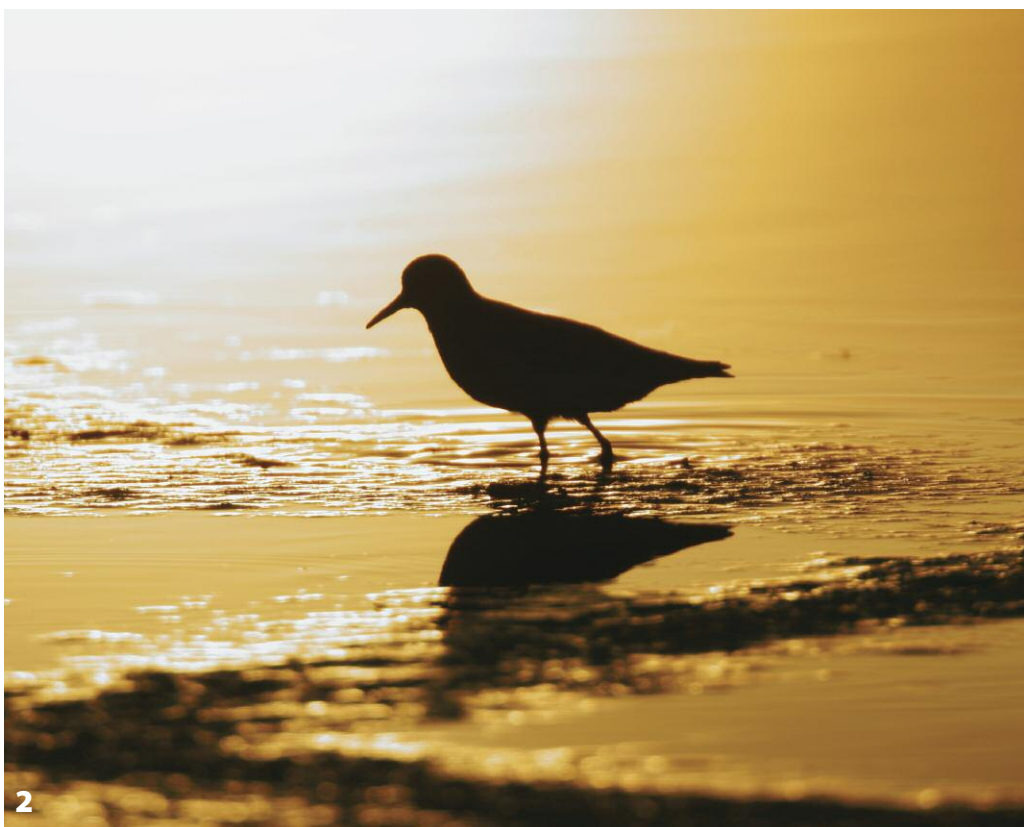
This species is primarily a migrant through the middle of the continent, uncommon to downright rare on either coast, but outnumbering all other peeps combined in much of the Great Plains, particularly in fall. Baird's is an earlier migrant than White-rumped, both in spring and fall. During migration Baird's is sometimes found in small numbers high in the western mountains, feeding on the tundra or in active migration. Baird's is the only peep that regularly occurs in such habitat. When feeding, Baird's sometimes takes very short steps that moves it at a slow steady pace, creating the impression that it is shuffling its feet. This gait seems unique to Baird's and is quite distinctive. Also more noticeable on Baird's than other peeps is the tendency to bob the head back and forth while walking. All peeps do this to some degree, but Baird's cannot take a step without a corresponding jerk of the head, a behavior reminiscent of Buff-breasted Sandpiper.

Structure. Like Least Sandpiper, Baird's has a small head. The bill is fairly short, and unlike that of other peeps, is fine along its entire length. Baird's has a prominent, rounded eye that gives a permanently frightened appearance. Unlike other peeps, the body has a distinct, laterally flat-



1 • The bird in the foreground is clearly a **Least Sandpiper**. Note the fine bill, the tiny head, and the wide-eyed appearance. Now look at the blurry **Semipalmated Sandpiper** in the background. Compare the head shape of these two birds. Compare the feeding stance of the Semipalmated with the birds in Figs. 3 & 4 on p. 35. Its stance is similar to that of the Western Sandpiper (Fig. 3, p. 35), but clearly different from the postures of the feeding Least Sandpipers in both photos. *Cape May, New Jersey; August 2004. © Richard Crossley.*

2 • In situations like this, it is important to pay attention to structure and behavior. No plumage details can be seen on this **Semipalmated Sandpiper** but by combining structure and (in the field) behavior, the correct identification may be made. In this photo, the rounded head and short, stout bill are perfect for Semipalmated, and the overall compact shape indicates this species as well. *Cape May, New Jersey; May 2005. © Richard Crossley.*



3 • Shorebirds are often found in situations that allow multiple species to be compared side by side. Compare this adult **Semipalmated Sandpiper** (center) with the basic-plumage **Dunlin** (left) and the alternate-plumage **Dunlin** (right). A single Dunlin can sometimes be confused with peeps, but notice how Dunlin have small heads and fat, rounded bodies. Also, Dunlin have substantially thicker legs than any peep. *Cape May, New Jersey; July 2004. © Richard Crossley.*



tened shape; viewed head on, this is reminiscent of an egg lying on its side. This shape is not illustrated in any North American field guide, but it is shown perfectly in *Birds of Europe* by Killian Mullarney and coauthors. Baird's Sandpiper has short legs, and this, in conjunction with its flattened shape, gives the impression of hugging the ground. At times, this posture can be striking—enough so to allow one to quickly pick a Baird's out of a flock. Standing next to a standard peep, Baird's is “wider” but not as “deep.” Unlike other peeps, White-rumped and Baird's have strikingly long primaries extending well past the tail.

White-rumped Sandpiper

White-rumped Sandpiper is an elliptical migrant, with substantially different spring and fall routes. The species is a late-spring migrant through mid-continent North America, whereas the fall return is primarily over the Atlantic Ocean, taking off from the Canadian Maritimes through New England. (However, White-rumped is regular in small numbers in the Midwest and along the length of the East Coast in fall.) Fall migration is relatively late, and juveniles can linger into November.

Structure. This species is heavy-chested, but it appears more balanced than Western Sandpiper because the breast is offset by the long, attenuated body. White-rumped usually feeds quickly and aggressively, much like Semipalmated Sandpiper. In a flock of smaller peeps, White-rumped's most notable features are the distinctly crossed primaries and the habit of tilting sharply forward while feeding. The difference in the angle of forward tilt in probing White-rumpeds compared to standard peeps is almost as dramatic as that of Stilt Sandpiper compared to yellowlegs. Note that all peeps have a threat posture in which the body is tilted forward and the wings are drooped. This posture could be confused with the tilted stance of White-rumped, but in the threat posture the tail stays up constantly and is not jerked up and down with the feeding motion of the bird. White-rumped has a heavier bill than Baird's and looks bulkier and larger-headed, with a slightly more upright stance.

Flight and Voice

With practice, the long-winged peeps can be picked out of a flock of standard peeps in flight, as their larger size is apparent in close comparison. The difference in wing structure may be visible, although it is by no means easy to see in a rapidly moving flock. Frozen in a sharp photo, the long-winged peeps show wings that are more pointed, as the outermost primary (P10) is the longest primary. In the standard peeps, P9 is marginally the longest primary and

the outer three primaries (P8–10) are closer in length, causing the wing to be more rounded. The wings of the long-winged peeps are narrow and parallel-sided with exceptionally long “hands” that taper gradually. In the field, it is a feat just to notice that a long-winged peep has longer, slimmer wings than other peeps. White-rumped, and possibly Baird's as well, sometimes performs an extended glide as it lands, something the smaller peeps never do. In a glide, the profile is remarkably similar to a Peregrine Falcon, with the primaries slightly drooped from the wrist and the tip of the wing curled up slightly.

These species are often heard before they are seen, particularly White-rumped. Fortunately, both species have distinctive vocalizations. White-rumped's call is a sharp, high-pitched *siit* with an explosive quality. This call is sharper and more piercing than that of a Western, lacking the whining quality of Western. White-rumped is highly vocal, especially in flight, and learning its vocalization will increase your encounters with the species by a factor of two or three. Baird's is less vocal, but the call is also distinctive once learned; the species gives a dry *crrrep* that is softer than the calls of other peeps and is closer to a soft Pectoral Sandpiper call.

Caveats

Note that feeding behavior can vary greatly with the surface on which birds are feeding. I have tried to describe the most common behaviors, but in certain situations, as when feeding on an uneven surface or in strong wind, these behaviors and postures will change. In these situations, all three groups will feed differently; you just have to discover what the differences are.

Many of the impressions described here are subject to the perception of the observer and may differ from those which I have perceived and described. However, since these impressions are based largely on actual differences in structure, they are valid. Armed with the knowledge that these species differ in significant and consistent ways, each person can form individually tailored impressions of these species. By combining the characteristics described here with traditional field marks, you will have greater success when identifying members of this difficult group.



Photos continue on pp. 39–40. Additional photos and captions are available as a WebExtra for this article <aba.org/birding/v40n4p40w1.pdf>



1 • Comparing similar species side by side is the fastest way to learn shorebirds. Note that **White-rumped Sandpiper** (left) is larger and has a longer body than **Semipalmated Sandpiper** (right). The larger head and stouter bill of the White-rumped are particularly apparent; the primaries extending well beyond the tip of the tail are also evident. The Semipalmated clearly shows a rounded head shape and relatively short primary projection. *Cape May, New Jersey; June 2006. © Kevin T. Karlson.*

2 • This typical **White-rumped Sandpiper** has a heavy chest balanced by a long, attenuated body. White-rumped and Western Sandpipers share a blocky head shape that is subtly distinctive from other peeps. Note also the long, crossed primaries projecting beyond the tail. *Sandy Hook, New Jersey; September 2004. © Scott Elowitz.*

3 • This mass of sandpipers consists mainly of alternate-plumage **Western Sandpipers**, but it also includes an alternate-plumage **White-rumped Sandpiper** (center left) and an alternate-plumage **Semipalmated Sandpiper** (lower right). The size of the White-rumped Sandpiper causes it to stand out amid the “standard peeps.” The Western Sandpipers in this flock show significant variation in bill length and shape, but none of them have bills as short and straight as Semipalmated. Note also that most of the Western Sandpipers appear to have heavier chests and flatter bellies than the Semipalmated, which appears to have a deeper, smoothly rounded belly. *Bolivar Flats, Texas; April 2005. © Kevin T. Karlson.*



4 • These four **Western Sandpipers** exhibit a feeding posture typical of the species. Western and Semipalmated assume a similar stance while feeding, but Western tends to have a more hunchbacked appearance and to reach farther forward to feed. *San Diego, California; March 2006. © Jessie H. Barry.*



1 • The profile of this **Baird's Sandpiper** is typical: long, low, and lean. Note the small head and slender bill. Baird's Sandpipers rarely probe when feeding; they move constantly, picking delicately from side to side. Except when the primaries are drooped below the wing, they are held crossed, like open scissors, and project well beyond the tail. *Cape May, New Jersey; September 2005.* © Richard Crossley.

2 • Compare this **Baird's Sandpiper** to the White-rumped Sandpiper in Fig. 2, p. 39. The head of Baird's is smaller than that of the White-rumped, and the bill is more delicate. Baird's shows some of the wide-eyed appearance of Least Sandpiper, and although they are unlikely to be confused, these two species share some habitat preferences and behavioral traits that other peeps do not exhibit. The projecting primary tip visible on the bird's right side (our left) is actually from the left wing, so, like White-rumped, Baird's holds its wings distinctly crossed. *Sandy Hook, New Jersey; September 2004.* © Scott Elowitz.

3 • In the foreground are three standard-issue juvenile **Semipalmated Sandpipers** showing the typical rounded head shape. Compare how the closest Semipalmated Sandpiper and the **White-rumped Sandpiper** in the background hold their primaries. Note also the differences in bill shape and the blocky head of the White-rumped. *Cape May, New Jersey; September 2006.* © Richard Crossley.