FIELD IDENTIFICATION OF THE RUFF AND REEVE (*PHILOMACHUS PUGNAX*) IN NORTH AMERICA

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Many shorebirds, particularly the smaller "peeps", are notoriously difficult to identify in the field, and they have, consequently, received considerable attention in most field guides. Most of the medium-sized species, however, have been given relatively cursory treatment, apparently on the assumption that field marks on these species are relatively distinct, and that situations of confusion are rarely encountered in the field. Several European species of shorebirds have received particularly scanty coverage.

One of these species, the Ruff (*Philomachus Pugnax*), has been reported with increasing frequency in eastern North America in recent years. In 1972 there were at least 54 records of the Ruff from the eastern states and Canadian provinces, including 4 records from New York State. Whether or not this increasing number of observations merely reflects an increase in the number of observers in the field or supports the hypothesis that a recently established breeding population exists in North America is unknown and irrelevant for the present discussion. However, difficulties with identification of the Ruff in the field complicate the interpretation of its relative frequency of occurence in North America.

The problem of identification of the Ruff is much more complex than that associated with most of our native shorebirds. This complexity is due to the marked seasonal and sexual dimorphism of the Ruff, compounded by the extremely wide range of individual variation within the species. The following descriptions will consider characteristics of each sex separately as well as the variability that can be expected. The discussion will then consider some potential sources of confusion between the Ruff and other eastern North American shorebirds.

Descriptions

Adult Male (Ruff) in Breeding Season:

The adult male ranges in size from 11½ to 12 inches in length. The bill measures from 34 to 38 mm in length and is straight or just perceptibly decurved. Bill color is thought to change with age from lead-grey to red. The leg color varies from shades of orange, yellow or red to greenish, brownish or grey. Leg color is also thought to changes with increasing age from greenish-grey to red or orange.

Male nuptial plumage is worn from early to mid-April through mid-to-late June. Complete male nuptial plumage consists of a large erectile pectoral ruff or collar of feathers arising from the chin, throat, cheeks,

and neck; two erectile head tufts arising from the crown; small wattles of bare flesh on the front of the head between the bill and the eyes; and long ornamental dorsal feathers on the back and rump. The male exhibits extreme color polymorphism (individual variation) in breeding plumage. No two males are exactly identical in color combination and pattern. Colors range from white, yellow, red, or brown to black. The ruff and head tufts may be solid colors or may contain one or two secondary colors. The colors of an individual's ruff and tufts may be alike or different. Patterns in the ruff and head tufts are formed by secondary colors in various patterns: transverse striping spots or blotches; or a bib just below the chin formed by color differences between the top and bottom feathers of the ruff. Different combinations of tranverse striping, spots, and bib may occur. Wattle colors also vary from grey to red or yellow.

Adult Female (Reeve) in Breeding Season:

The female is smaller than the Male, measuring from 8½ to 10 inches in length. The bill is also smaller, measuring 29 to 33mm in length, but the bill color is similar to that of the male. The female's legs are similar to the male's.

The female's nuptial plumage is less conspicious than the male's, being only slightly different from its winter plumage. Nuptial plumage is distinguished from winter plumage by the feathers of the head, upper body, and anterior parts exhibiting a brighter, bolder, and more sharply defined pattern. The feathering becomes quite dark, almost blackish, with very light borders. Female nuptial plumage also shows individual variation, although to a far less extent than that of the male. The variation is most apparent in the spotting pattern of the head, throat, throat, and breast as well as in the darkness of color in these regions. Some females are occasionally seen with conspicuous white eye-rings or bill-rings (around the base of the bill), and more rarely a female is found with a white head or neck. The ventral area from the abdomen to the tail is white.

Winter Plumage of Both Sexes:

The male and female winter plumages are essentially similar. The difference in size between the sexes is the main distinguishing characteristic in winter, the male being distinctly larger than the female. The male loses the nuptial ruff and head tufts. The feathers of the upper parts are various browns, ranging from dark brown to brownish-grey. These feathers have prominent pale margins, creating a scalloped effect. The breast and belly are light brownish, fading to white on the chin and from the abdomen to the tail.

Immature Plumage of Both Sexes:

The immatures are typically smaller than adults of either sex. The immature plumage is browner than the greyish or brownish-grey winter plumage of the adults, and the feathers have buffy edgings. The blackish-brown feathers and their buffy borders create a neat bold pattern on the back. The entire breast and sides are a warm pinkish buff color. A young male can be recognized during the breeding season by the presence of a very short, under-developed nuptial ruff and head tufts, both appearing relatively late in the season.

Birds in Flight:

The identification of birds in flight relies on a combination of several characteristics. Males in breeding plumage exhibit a thick-necked appearance due to the presence of the ruff feathers which are sleeked down on the neck in flight. Both male and females have a narrow white wing-stripe which is visible in flight. During all seasons both sexes have a distinctive tail pattern consisting of two oval white patches on either side of a dark area down the center of the tail. This tail pattern can be seen at close range during flight. Subjective impressions may also be helpful in the identification of this species. Both males and females exhibit a very headlong flight pattern, which, while also true of other waders, is more "reckless" in this species. A small flock twists, turns and zig-zags together in a highly synchronized manner, maintaining tight flock cohesion. This unified flock behavior may be expected of wintering birds, but it is also characteristic of birds during the breeding season, especially non-breeders.

Habitat and Feeding Behavior:

During the breeding season (April through August), the habitat of the Ruff is primarily wet meadows, old fields with shallow standing water and grassy marshes. On migration and during the non-breeding season, the habitat is similar to that frequented in spring and summer, but it is extended to include the muddy borders of lakes and rivers, and, more rarely, muddy seashores as well.

Ruffs may be seen feeding in wet meadows, employing three different methods: 1) They may bore into the wet ground, searching for worms and soil invertebrates. 2) They may walk along pecking the ground surface, feeding on walking insects and seeds. 3) They may walk through the grass snapping insects out of the air or from blades of grass. Ruffs also feel in shallow water, where they probe the mud on the bottom as they stand or walk along. If the water of a flooded field becomes too deep, they frequently swim along until they can walk on the bottom again. Since their legs are rather short (shorter

than the legs of either the Greater or Lesser Yellowlegs), Ruffs do not, as a rule, feed in very deep water.

When feeding, Ruffs move along with the body oriented horizontally, and when alarmed adopt an upright posture. Except during male display, Ruffs normally adopt a semi-upright stance when stationary.

Species Comparisons:

Field identification of the Ruff is complicated by the seasonal and sexual dimorphism of this species which increases the chances of misidentification. The Ruff may be easily confused with a wide variety of native North American shorebirds. The following descriptions and comparisons of distinguishing characteristics between the Ruff and a number of potential "look-alikes" may be of benefit to the field observer.

1. Pectoral Sandpiper (*Calidris melanotos*)

Because of their similar habitat preferences, Ruffs are most apt to be found in association with Pectoral Sandpipers. Thus the Pectoral Sandpiper, by virtue of its size, appearance and habitat preference for moist grassy areas presents the greatest potential source of confusion. The Pectoral Sandpiper's brown scaly back and breast, greenish legs, short bill which frequently exhibits a variable amount of yellow at the base, and dark rump line bordered by a white patch on either side, all suggest a juvenile or winter plumaged Ruff. Pectoral Sandpipers also exhibit considerable size variation, and they frequently adopt an erect stance which causes them to resemble the Ruff morphologically as well as behaviorally. However, the Pectoral Sandpiper's scaly back pattern tends to be arranged in buffy stripes, and the white rump patches are less extensive than those of the Ruff. Furthermore, the Pectoral Sandpiper lacks a white wing stripe and has an abrupt border to the breast pattern. In contrast, the Ruff's breast is indistinctly marked during the winter, and during the breeding season it has much more extensive dark patterning on the sides and upper abdomen. Another good field characteristic to use in discriminating between Ruffs and Pectoral Sandpipers in flocks of feeding shorebirds is the light eye-line of the Pectoral Sandpiper which is absent in the Ruff. However, this eye-line might occasionally be confused with the white areas which sometimes occur around the eyes and base of the bill of the Ruff, especially of females.

2. Greater and Lesser Yellowlegs (*Tringa melanoleuca* and *T. flavipes*)

Both of these species occur regularly with the Ruff, but they can both be readily identified by their longer, slimmer bills, their speckled appearance, and, in flight, their entirely white rumps and lack of a white wing stripe. The Ruff has much darker legs than the bright yellow legs of both the Greater and Lesser Yellowlegs.

3. Stilt Sandpiper (*Micropalama himantopus*)

Although this species, due to its adaptation for probing in deeper water for food, is separated by habitat perference from the Ruff, the extensive barring on the underparts shown by breeding Stilt Sandpipers may be a potential source of misidentification. In breeding plumage the rusty cheek, more extensive barring in the lower abdomen, and the light eye-line of the Stilt Sandpiper should be apparent. In all plumages of the Stilt Sandpiper, the absence of a light wing stripe and the entirely white rump will clearly separate it from the Ruff.

4. Upland Sandpiper (*Bartramia longicauda*)

This species is separated by habitat from the Ruff, normally preferring drier grass areas to the wet habitat occupied by the Ruff. Although the size, head and bill shapes, and leg and plumage colorations resemble those of immature or non-breeding Ruffs, the absence of both a white wing stripe and white oval rump patches should readily identify the Upland Sandpiper if it is not already distinguishable by habitat and behavior.

5. Baird's Sandpiper (*Calidris bairdii*)

Although considerably smaller (6″) than the Ruff (8″-10″), the Baird's Sandpiper prefers habitat similar to that of the Ruff, creating a situation where it might potentially be confused with an immature Ruff. The Baird's Sandpiper's buffy breast, light eye-line, and dark bill and legs may be used to distinguish it from the Ruff if the size difference alone is not conclusive.

6. Buff-breasted Sandpiper(*Tryngites subruficollis*)

This species is probably as uncommon as the Ruff in eastern North America. The profile, eye-ring, light-colored legs, and buffy plumage coloration of the Buff-breasted Sandpiper all resemble that of a juvenile Ruff. However, the Buff-breasted Sandpiper is almost as small (6½″) as the Baird's Sandpiper, and, like the Upland Sandpiper, it prefers dry grasslands over the wet habitats of the Ruff. The absence of a white wing stripe and the buffy abdomen and vent of the Buff-breasted Sandpiper should also help distinguish it from the Ruff.

7. Solitary Sandpiper (*Tringa solitaria*)

The Solitary Sandpiper's preference for muddy shores, its dark wings and rump, and its habit of nodding like a Spotted Sandpiper should readily identify this species, although its size and eye-ring may initially suggest a Ruff.

Conclusion:

The authors hope that the preceeding descriptions and species comparisons will facilitate identification of the Ruff in mixed flocks of medium-sized shorebirds. The following references may be of use to individuals interested in further accounts of the Ruff, its habits, identification, and occurrence in North America and New York State.

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