While scanning through a mixed flock of ducks, it is easy to ignore the females, as most of us are attracted to the stunning drakes. And the challenges that wigeons present are easily overlooked, since adult males of both northern hemisphere species are readily distinguishable. What about all those drab wigeons, though? They are clearly wigeons, but are they all Americans? Are they all females? How old are they, and how do you tell? These are the questions that we address in this article. Our hope is that this article will serve as an aid to identifying the more-challenging individuals in a complex that is not as simple as it seems. Note that our focus here is only on pure individuals, not on hybrids. Birders should be aware of the problem of hybrid wigeons in North America, however, and may wish to consult Hamilton (1996) and Jiquet (1999) for an introduction to the topic.

The Identification, Molts, and

On this pair of **adult American Wigeons**, note the female's cold, gray head that contrasts with its brown, heavily marked breast and much brighter flanks. Both birds show covert patterns typical of the species and demonstrate how views of the coverts can be altered by different arrangements of the scapulars. Note how the head pattern of the female basically mimics that of the male. *Vancouver, British Columbia; January 2002. © E.J. Peiker.*

Aging of American and Eurasian Wigeons in Female-type Plumages

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This article is based on our own field study of hundreds of Eurasian Wigeons and many thousands of American Wigeons on both coasts. In preparing this article we examined several hundred specimens of both species, housed at the American Museum of Natural History (New York), the Academy of Natural Sciences (Philadelphia), the Cornell University Museum of Vertebrates (Ithaca), and the Burke Museum of Natural History and Culture (Seattle). Our review of the published literature draws importantly from the excellent work of Votier et al. (2003). Other good, in-depth treatments of American and Eurasian Wigeons are to be found in Lewington et al. (1992) and Harrop (1994). Some good general references that contain additional information on these two species include Bellrose (1976), Madge and Burn (1988), Mowbray (1999), and Svensson et al. (1999).

Eurasian Wigeon Distribution

Eurasian Wigeons breed across northern Asia and northern Europe to Ireland and Iceland. The species winters widely in Europe, northern Africa, and southern Asia. Eurasian Wigeon has occurred throughout North America, being most numerous on the Pacific Coast from Canada to California. More than one hundred Eurasian Wigeons can sometimes be found mixed in with very large flocks of American Wigeons in British Columbia and northwestern Washington. They are regular in small numbers on the Atlantic coast and are rare and irregular throughout most of the interior of the continent. Any location with American Wigeons could potentially host a Eurasian Wigeon.

Molt and Aging Criteria

An understanding of molt and individual variation is a prerequisite for accurate aging and identification of wigeons. Both species follow the Complex Alternate molt strategy (Howell 2003, Howell et al. 2003), wherein birds have an additional plumage inserted into their first plumage-cycle (roughly their first year of life) that is not repeated in the subsequent plumage-cycles. This additional plumage is called Formative 1 (hereafter, "F1") plumage. It occurs soon after fledging in late August or September and is quickly followed by first-alternate plumage in October–November. The F1 plumage creates little change in appearance in either sex and ordinarily

goes undetected. While in first-alternate plumage, young males begin to acquire the appearance of an adult. Females remain largely the same as in their juvenal and F1 plumages. After the first plumage-cycle, wigeons have annual basic and alternate plumages, with molt timing similar to that of other dabblers. In the second plumage-cycle and thereafter, all male wigeons and those females without broods perform a molt-migration to areas of abundant food and cover, where they undergo a complete molt. Females with young molt on the breeding grounds. In both sexes, the body plumage and coverts are replaced first. Once these feathers have been replaced, the flight feathers are dropped simultaneously. At this time, the birds are flightless for four to six weeks, during which period they exhibit what used to be called eclipse plumage. It used to be thought that this "eclipse plumage" was found only in waterfowl, but we now know that molt in ducks is comparable to the molts of other groups of birds, differing only in timing. The confusion is understandable since the colorful alternate plumage follows almost immediately after basic plumage, sometimes before the primary molt has been completed. With these caveats in mind, we have chosen to adopt the modified Humphrey-Parkes terminology (see Humphrey and Parkes 1959; Howell et al. 2003) as the most relevant and accurate method for the naming of molts and plumages of wigeons.

Structure

Differences in body structure are subtle but frequently useful for picking out unusual birds. While structure alone cannot be the sole factor in identification, it should not be ignored. For example, to birders familiar with American Wigeon, Eurasian Wigeon can appear to have a surprisingly small head. Also, in relaxed posture, Eurasian Wigeon has a short, steeply rising forehead with a fairly flat crown dropping off sharply at the nape. American Wigeon typically had a higher forehead that reaches a slight peak just before or above the eye. After the peak, the head tapers off smoothly to a fairly rounded nape. This gives American a somewhat puffy, rounded appearance to the head, contrasting with Eurasian's smaller, angular head.

Eurasian Wigeons have proportionally longer wings and shorter tails than Americans. Usually, on the folded wing of Eurasian, the tips of the primaries reach nearly to the tip of the tail. This feature seems more variable in American Wigeon, but frequently the tip of the tail extends noticeably past the tip of the longest primary. Often the tip of the longest primary falls somewhere between the middle of the tail and the longest uppertail covert. Rarely, Americans can appear as long-winged as Eurasians.

Aging and Identification by Wing Pattern

The secondary upperwing coverts in wigeons differ among age and sex classes. These coverts are frequently visible in the field, allowing observers to age wigeons, which not only adds an extra element of interest to birding the local pond, but which can also be a crucial first step in identifying a difficult wigeon. While adult females of both species are fairly easy to separate from each other, identification of first-cycle birds can be much more challenging. A drab first-cycle female American Wigeon could be misidentified as a Eurasian if seen with bright adult female Americans; but by taking the time to study the secondary upperwing coverts and age the bird, this mistake is much less likely to happen. The pattern of the secondary upperwing coverts is the most reliable characteristic for both aging and identifying wigeons.

It may take some patience to see these coverts well, as they are often hidden beneath the scapulars and flank feathers when the bird is not in flight. However, with perseverance, good views may be obtained when birds preen or spread their wings—or fly away. These coverts can also be visible on swimming or standing birds, on which an oval-shaped patch can be seen peeking through the space between the scapulars and flank feathers.

Upperwing Coverts by Age and Sex

Adult males. Easily aged based on other characteristics, but the pattern of the secondary upperwing coverts can also be used to distinguish adult males from other age and sex classes. In all seasons, adult male wigeons of both species have bright white secondary upperwing coverts. These white coverts form the characteristic white ovals on the upperwing, visible in flight. American Wigeons show slightly smaller white wing-patches, as they have broader black tips to the greater coverts than do Eurasians.

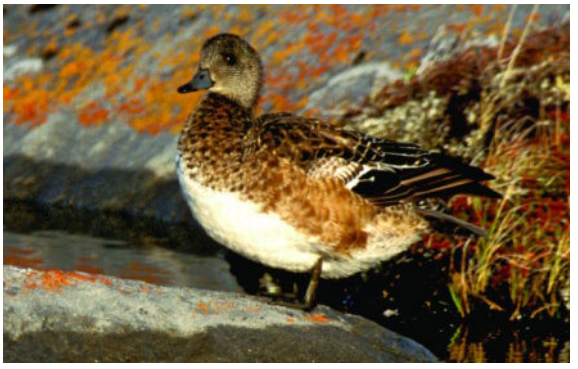
First-cycle males. Male American Wigeons in their first plumage-cycle show a covert pattern similar to that of adult males but less distinct. Instead of showing bright white coverts, each feather has a dusky center. This creates a clouded white oval on flying birds. The greater coverts have broad black tips. First-cycle male Eurasian Wigeons have much duller median coverts than do immature male Americans. The tips of the greater coverts of the first-cycle male Eurasian are white, forming a narrow greater covert bar. The central greater coverts may also have irregular dark markings, unlike the complete broad black tips of American.

Adult females. The covert pattern of adult female American Wigeons is variable, and care should be taken not to confuse these birds with immature females. Typical adult females have dark brown median and lesser coverts with sharply defined white edges. The greater coverts have

Age- and sex-based variation in Eurasian (top half) and American (bottom half) Wigeons. *Gouache on scratchboard by © Jessie Barry.*

On this **adult female American Wigeon** in flight, note that the white bases to the greater coverts form a bold bar across the wing. The lower margin of this bar is straight, not uneven as in a first-cycle male Eurasian. Note also the gray head and black ring around the base of the bill. *Orange County, California; November 1995. © Russ Kerr.*

This **female American Wigeon** shows diagnostic white axillaries and underwing coverts. In Eurasian these areas are gray and do not contrast with the rest of the wing. From the breast and flank pattern and the visible upperwing coverts, this bird appears to be in its **first plumage-cycle**. *Scottsdale, Arizona; January 2004. © E.J. Peiker.*



On this typical **adult female American Wigeon**, note the cold gray head contrasting with the heavily marked brown breast and orange tone to the flanks. Other indications of an adult female evident in this photo include the internal markings in the scapulars, the white bar across the greater coverts, and the sharply defined pale fringes to the smaller coverts. *Churchill, Manitoba; 18 June 1996. © Kevin T. Karlson.*

broad white bases with black tips. In flight, a distinct white bar shows across the center of the wing. Pale variants are not unusual and are similar to first-cycle male Americans, showing clouded white ovals on the upperwing. While the coverts of these pale variant females tend to be more heavily marked than in first-cycle males, it is best to use other characteristics, discussed below, to age and sex these individuals. The median and lesser coverts of adult female Eurasian Wigeons are much like those of adult female Americans. The pale edges to these feathers seem to be even more sharply defined than on Americans, so much so that the edges seem to shine. However, the greater coverts lack the white greater covert bar of adult female Americans and instead have pale tips and gray centers, like the median coverts, and may show irregular dark markings near the tip. Pale variants do not seem to occur in Eurasian Wigeon.

First-cycle females. In both species, the drabbest upperwings occur in this plumage. Female Americans in their first plumage-cycle show medium-brown median and lesser coverts that typically have diffuse pale edges. However, some show well-defined pale edges to these feathers, which are inseparable from those of adult females. Unlike the situation with adult females, the greater coverts of immature females are brown with a fine white subterminal band and narrow black tips. And unlike other age- and sex-classes, first-cycle female Americans show very little glossy black or green in the speculum, and Eurasians have none at all; instead, the secondaries are dull brown or gray. First-cycle female Eurasian Wigeons are even plainer than Americans of the same age and sex class. On Eurasians, the lesser and median coverts have indistinct pale or grayish fringes. The greater coverts are gray with narrow white tips and lack any dark markings.

Other Characteristics for Aging

Beside the differences in the greater coverts, there are several other characteristics that indicate age. A dusky line running down the culmen identifies an immature in either species. Adult females tend to be more heavily marked, with a more scalloped appearance, than is the case with immatures. Adult female Americans tend to have heavily black-spotted breasts, while immature Americans have irregular spotting or none at all. The undertail coverts of both species can be seen well on birds swimming away, and can be a useful aging characteristic. The undertail coverts of adult females tend to have long, pointed, dark-brown marks, while most first-cycle birds show rounded, paler-brown markings. While the shapes of the marks on the undertail are not always consistent, the markings on adults are usually much darker than on those of first-cycle birds. If seen well, heavily abraded rectrices (i.e., the flight feathers of the tail) with bare feather shafts near the

tip are a strong sign of a first-cycle bird.

Underwing Coverts

The well-known difference in the color of the axillaries or "wingpits" is diagnostic. Americans have pure white axillaries that contrast with gray underwing coverts. Eurasians show no contrast in the underwing, as the axillaries appear gray in the field. In the hand, it is clear that the axillaries of Eurasian Wigeon are white, covered with fine, silvery vermiculations. In bright sunlight the gray axillaries of Eurasian Wigeon can appear to be white.

Head and Flanks

Generally, female Americans have a cold gray or pale cream head color. Most female Eurasians have warm chocolate-brown heads, which are usually darker than the breast and flanks. It is safe to call birds with cold gray heads Americans; conversely, in most instances, if the head is darker than the breast, then you are looking at a Eurasian. The catch is that many birds, especially immatures, fall between these two extremes.

Both species have tiny dark flecks covering the face. When studied carefully, the dark flecking forms different patterns on the two species. Americans have dense spotting that is typically lighter on the lores, forehead, and fore-crown, being heaviest around the eye and forming a distinct eye-patch. Frequently, Americans also have a densely flecked area behind the eye encompassing the rear of the crown and running down the center of the nape. The face of Eurasians has sparser markings that are more evenly distributed. Eurasians also tend to have a dark eye-patch, sometimes as large as those of typical Americans. Since the base color of the head is darker, there is not as much contrast between the head color and eye-patch of Eurasian, making it is less noticeable in the field. Additionally, most Eurasians have much cleaner throats with very little flecking, whereas Americans usually have densely flecked throats. The palest Eurasians can have gray heads that approach those of Americans, but these pale birds also tend to have the palest throats and can be separated from Americans based on this feature.

It is also useful to step back from the details and look at head color in relation to the overall color of the rest of the bird. The cold-toned head of American Wigeon contrasts with a dark brown breast and the pinkish or orange washed flanks. The bright flanks usually catch the eye as the most colorful part of the bird. In adult female Americans, the breast is often coarsely marked with dark brown spotting, while immatures are usually much less distinctly marked. The scapulars and mantle feathers have broad rusty fringes, and these feathers often have conspicuous internal markings.

This **female American Wigeon** shows a brown wash to the head, but note that the throat contrasts sharply with the breast. The flanks are very bright and have an unmistakable orange tint. This individual lacks a noticeable line at the base of the bill. *Phoenix, Arizona; December 2002. © E.J. Peiker.*

This is a **first-cycle male American Wigeon** (with a Blue-winged Teal, behind) well into first-alternate plumage. It shows the same clouded white wing-patch as is seen on less-advanced first-cycle males. Note also the black line at the base of the bill, which is diagnostic for American Wigeon in any plumage. *Santa Ana National Wildlife Refuge, Texas; 15 February 1997. © Kevin T. Karlson.*

The dark brown head on this **adult female Eurasian Wigeon** is striking. The flanks are a richer reddish brown than on American Wigeon. All of the coverts have sharply defined pale fringes, and there is not a white greater covert bar as on an adult female American Wigeon. *Seattle, Washington; 20 November 2004. © Jessie Barry.*

Table. Summary of field marks for different age and sex classes of American and Eurasian Wigeons.

	Median and Lesser Coverts	Greater Coverts	Speculum, i.e., Secondaries	Pattern in Flight
ADULTS				
Male American	Bright white	White bases with broad black tips	Extensive glossy green	Clean white ovals, slightly smaller than on Eurasian
Male Eurasian	Bright white	White bases with narrow black tips	Extensive glossy green	Large clean white ovals
Female American	Dark brown centers with sharply defined white fringes	White with even black tips	Moderate glossy green	Brown upperwing with bold white bar running down center of wing
Female Eurasian	Gray-brown centers with sharply defined white fringes	Gray-brown centers with sharply defined white fringes	Moderate glossy green	Even brown upperwing
FIRST-CYCLES				
Male American	Extensively pale with dusky centers	Pale with broad black tips	Moderate glossy green	Irregular, clouded pale ovals
Male Eurasian	Dusky gray with indistinct pale fringes	Dusky gray with narrow white tips and irregular, dark subterminal markings	Moderate glossy green	Even brown upperwing with slight, pale greater covert bar
Female American	Gray centers with indistinct to distinct pale fringes	Gray, with a fine pale band separating narrow black tips	Mostly gray with little or no black or green	Even brown upperwing
Female Eurasian	Gray centers with indistinct pale fringes	Gray, with narrow white tips	Dusky gray with no black or green	Even brown upperwing

When used separately, none of these characteristics is conclusive and each shows much variation, but taken as a whole, these features give Americans a contrasting and colorful appearance.

Female Eurasians have a more uniform appearance with subtle and muted markings. The head shows little contrast with the breast and flanks. The back is extensively gray, the flanks are brown or reddish-brown, and the scapulars have narrower, less-contrasting fringes than on American. If the scapulars have internal markings, they tend to be less noticeable and paler than on Americans. The breast lacks spotting or is much less distinctly spotted than on adult female Americans.

Bill Line

A black outline around the base of the bill is a diagnostic feature of American Wigeon. This feature is present on most adult females and on the majority of immatures, but absence of the bill line is not uncommon. Therefore, it is useful only when present to verify that an individual is an American.

Supporting Characters

One character that shows potential, but that still needs further confirmation, is the color of the outer web of the innermost secondary. It sounds like an extremely difficult feature to see, but it can actually be obvious on resting birds. Interestingly, the color of this feather is the opposite of the color of the axillaries: pure white in Eurasian and gray in American. Look directly below the folded tertials to see this feature on resting birds. While this character can be useful, some Eurasian Wigeon specimens that we examined did show a grayish outer web, and in bright light the outer web can appear pale in American Wigeon. Obviously, this feature should be applied with caution.

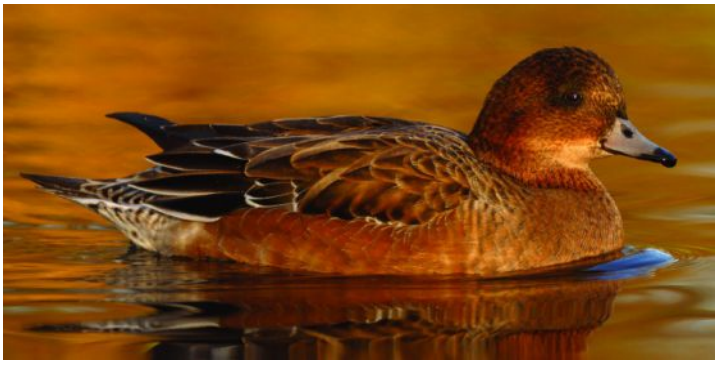
Differences in eyelid color between the species have been reported, as well (e.g., Larkin 2000). The eyelid is very pale in American and buffy brown in Eurasian. When Americans close their eyes, the flash of the pale eyelid creates the appearance of a wink. In Eurasians, the eyelid color more closely matches the color of the head. Therefore, the closing of the eyelid is not as distinct.

Summary

Next time you are fortunate enough to happen across a large flock of wigeons, try spending a few minutes separating the different age groups. You will no doubt be astounded by the incredible individual variation that is present in wigeons of all ages. You may find yourself continuing to pore through flocks of ducks long after other birders have declared that "nothing good is present" and moved onward. Should you locate an interesting wigeon, try to spend the time to see all of the characteristics before making an identification. Due to the variation

The key to the identification of this **female Eurasian Wigeon** is the complete lack of field marks. Compared to this individual, a female American Wigeon looks downright gaudy. On typical female Eurasian Wigeons, such as this one, note the overall lack of contrast, the pale throat, the gray mantle, and the lack of a line at the base of the bill. *Grounds of the Wildfowl and Wetlands Trust, Slimbridge, Great Britain; October 1997. © Arthur Morris / VIREO.*

The head is darker than the body on this **adult female Eurasian Wigeon**, but there is nonetheless little contrast overall. Note that although this bird has a large eye-patch, it blends into the head and does not stand out as on American Wigeon. Also, the primaries extend almost to the tip of the tail. *Toyoshina, Nagano, Japan; 29 December 1997. © T. Shimba / VIREO.*



This **female Eurasian Wigeon** in warm light appears a bit more richly colored than is typical for the species. But it is still readily identified by its dark head, pale throat, overall color, and lack of contrast. Pay attention to the scapulars: American Wigeons rarely, if ever, show such a blurry, ill-defined pattern on the scapulars. *Martin Mere, Lancashire, United Kingdom; 29 November 2004. © Ben Hall.*

shown by wigeons, careful attention to detail and prolonged views are often necessary to nail down a vagrant Eurasian. Male hybrids of these two species are well known, and female hybrids have been documented in museum collections. At the present time, it seems very unlikely that such a bird would be identifiable in the field. For this reason, any unusual female wigeon should be treated with great care. There is still much to be discovered about the identification and distribution patterns of females. Who knows?—Your observations may reveal previously unknown information, which will bring this little-studied subject into sharper focus.

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