

Basics: Yellowhammers have an extensive postjuvenile moult. It comprises body-feathers, lesser and median coverts and always all the greater coverts (n = 56). In addition, 70% renew 1-3 alula feathers, most only AL1 (63%) and 49% renew the carpal covert. 16% renew 1-3 of the inner tail feathers, mostly R1 (14%). 67% moult one to all tertials, the majority T8-9 (30%).

Adults have a complete post-nuptial moult.

1Y birds in autumn: 1Y birds before or at the beginning of postjuvenile moult can be recognised by the whitish tips to the unmoulted, conspicuously more loosely structured greater and median coverts. After the postjuvenile moult, age determination is extremely problematic. There can be no moult limit within the greater coverts, since these are all renewed. There is, however, a quite minimal colour difference, best looked for on the closed wing, due to progressive wear (in winter and in spring), between the ground-colour of the renewed greater coverts and the retained primary coverts and AL3. When AL1 is new, its fringe is of the same greenish tone as the adjacent lesser and median coverts, and contrasts with the yellow fringe of AL2. There is practically no difference in colour between juvenile and any renewed tertials. A moult limit within the coverts can only be established on the basis of differential wear, and can then be a certain determination that the bird is 1Y.

As a rule, tails of 1Y birds are very pointed, and in such cases provide a usable age criterion. There are however, some 1Ys with slightly rounded ends to their tails which cannot be distinguished from adults with less rounded ones than usual, so this character is not 100% reliable. Moult limits within the tail are rather easier to see (in 16% of 1Ys).

Adults: Tail shape in typical cases is rounded and then a good criterion. Beware intermediate tails. No moult limit within the alula: AL1 and 2 with the same colour fringes. Ground-colour of greater coverts and primary coverts and AL3 similar.

Ageing in winter and spring: According to the literature, Yellowhammers have no pre-breeding moult. We have, however, established that a few birds renew single head and mantle feathers in spring (5 out of 44 birds between February and May). They certainly had not renewed any coverts, tertials or tail feathers, so the above criteria still hold good through spring. By May or so, the tail feathers of adults become distinctly worn, and their rounded ends indistinguishable from those of 2Ys.

Sex determination: Even after the postjuvenile moult, sex determination is not always possible. It is mainly based on the intensity of the yellow colouration of the crown. There is a graduation in the intensity of the yellow from young females, through adult females and young males to adult males. The same is true of the black-brown streaking of the throat and breast. The variations merge together, so that no valid fixed rules can be applied.

Male: Crown and individual crown-feathers at least up to half pure yellow. The black-green tips of the head-feathers, which in autumn partially conceal the yellow crown, wear off during winter and spring to reveal (from April on into summer) a pure yellow head. Throat only weakly streaked or spotted brownish, often pure yellow from spring on. Olive-green neck band and connected red-brown breast band and breast sides uniformly coloured, without black-brown centres or shaft-streaks to the individual feathers.

Female: Crown and individual crown-feathers at most up to half pure yellow; in young females only partly or sometimes entirely without definite yellow colour. Crown and head even in late spring never pure yellow.

Throat more strongly streaked or speckled black-brown. Breast feathers mainly with black-brown centres or shaft-streaks, far fewer many with no uniform red-brown feathers. Scarcely any neck-band feathers olive green or without dark centres, The black-brown streaking on the throat, breast and flanks is more strongly defined in young females than in adults. Furthermore, birds with only weakly whitish yellow rather than rich yellow underparts are female.

Summary from Dunn and Wright *Ringing and Migration* 24 240-252

Male: more than 20% of crown visibly yellow

Female: less than 10% of crown visibly yellow

Male: may have pure yellow, pure chestnut, or chestnut flecks in malar stripe; may also be black or brown

Female: malar stripe often, but not always, brown or with brown flecks; rarely yellow or chestnut

Male: distinct region of yellow above and behind eye

Female: no distinct region of yellow above and behind eye

Male: white patch on R5 may be the same size as patch on R6; rarely very small in comparison with R6

Female: white patch on R5 often very small in comparison with patch on R6

Male: no or very little black on shaft of longest upper-tail covert

Female: completely or mostly black on shaft of longest upper-tail covert

Male: chestnut shaft may be present on short under-tail coverts

Female: chestnut shaft on short under-tail coverts very rare

Male: rump feather shaft same colour as rest of feather or paler

Female: rump feather shaft black or blackish

Male: adult wing 84-95; 80% above 87mm; 1Y 80-92mm

Female: adult wing 81-88; 80% below 87mm; 1Y 76-90mm

1Y: central tail feathers worn and bleached but may be fresh when tail has been replaced

Adult: central tail feathers usually fresh

1Y: Outer tail feathers sharply angled; central ones usually pointed

Adult Angle of outer tail feathers usually shallow; central ones usually rounded

1Y: some have white on both sides of R6 feather shaft

Adult: sides of R6 tail feather shaft never both white

1Y: some have chestnut shaft on undertail coverts

Adult: shaft on undertail coverts is rarely chestnut

1Y: tertial markings distinct

Adult: tertial markings diffuse

1Y: Secondaries notched

Adult: Secondaries flat