



How to sex and age Grey Partridges (*Perdix perdix*)

Identification Guide for bird ringers and field observations

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Ring

Size E. The BTO's species alert lists the species with the following advice: 'Fewer than 5,000 ringed. Ring size changed from Fvo based on tarsus measurements. Care. Use flattening technique to get oval ring' http://app.bto.org/ringers/ringers/information/species_alerts.htm

Key steps

To reliably sex and age grey partridges the following five features should be examined together:

1. Head feathering,
2. Pattern in wing coverts,
3. Shape of primary tips,
4. Leg colour,
5. Bill colour

Sexing

A. Facial features of adult birds

In the hand, adult male and female grey partridges are primarily identified based on differences in facial features together with differences in the feather pattern of the scapulars, lesser and medium wing-coverts. Males have a mostly orange-coloured face with a clearly visible reddish bare skin above, behind and below the eye ('rose'). The latter is most prominently bright red in late winter and usually much smaller and faded in autumn. Females typically have a brownish coloured face and a white supercilium. However, some females may lack a white supercilium and some have a whitish rather than brownish face.

Fig 1.

Adult male (left) and adult female (right) in autumn (age code 4). Note active body moult in facial feathers with worn, old feathers (mainly in neck area) clearly contrasting with new feathers (darker and neater, mostly around eye and bill) in both birds. At this stage, females with heavily worn facial plumage may be confused with males based on facial features alone (especially females without a white supercilium). Adult birds also tend to have a light-grey or horn-coloured bill.



B. Facial features of juvenile birds

In the hand as in the field, juvenile birds can be difficult to sex when still in active body moult, especially when body moult of facial feathers has just started. However, once body moult has progressed, juvenile males always have more orange-coloured facial feathers than females and no white supercilium. In the hand, always double check with 'Cross of Lorraine', shape of primaries and leg-colour (see further below).

Fig 2.

Left: Juvenile male with almost completed body moult in autumn (age code 3). Note the lack of heavily worn facial feathers and much darker bill than in adult male.

Right: Juvenile female in late autumn (age code 3). The white supercilium clearly identifies it as a female. The bill colour is already remarkably similar to that of adult females. The almost complete body moult makes this bird difficult to age based on facial features alone.



C. 'Cross of Lorraine'

In the hand, male and female Grey Partridges are best sexed based on the barring in the scapulars (shoulder coverts).

Fig 3.

Left: Males have long white streaks along the shaft without any cross bars, whereas **females (right) have clear cross bars also called the 'Cross of Lorraine'**. The difference in barring is also clearly visible in the lesser and medium wing-coverts.



D. The Horseshoe

All males have a prominent well-defined brown or black patch on the breast ('horseshoe') whereas females usually have none or just a few black spots on the breast. **Some females however, do also have a small horseshoe, therefore cross-checking the pattern in their scapulars is necessary.**

Fig 4.

Left: Male with typical 'horseshoe'

Right: Female with small 'horseshoe'.



Ageing

A. Plumage and Molt

Juveniles complete their post-juvenile moult at an age of 17 weeks in October-November. Once body moult is completed, juvenile birds can only be aged based on leg colour in the field. In the hand, ageing after complete post-juvenile moult in autumn is best done based on the shape of the tips of the outermost two primaries. **Adults have rounded primary tips whereas juveniles (age code 3) or last year's juveniles (age code 5) have pointed tips.**

Adults typically finish their complete annual moult in September-October, sometimes as late as December. Juveniles replace all secondaries and primaries 1-8 in autumn of their first calendar year; but retain the outermost primaries 9 and 10 until autumn of the following calendar year. Juveniles can therefore be given age code 5 from 1 January until September of their second calendar year; while adults can be aged 6.

Fig 5.

Left: Wing of adult male with rounded outermost primaries 9 and 10 still growing in early November (also note the white streaks along the feather shafts of the lesser and medium wing-coverts identifying this bird as a male).

Right: Wing of juvenile female in autumn of its first calendar year with primaries 7 and 8 still growing. Primaries 9 and 10 are retained juvenile feathers and clearly pointed, the rest of the wing is mostly adult. Also note the different bar pattern between juvenile and adult primaries (the 'Cross of Lorraine' pattern in the medium and marginal covers further identifies this bird as a female).



B. Leg colour

Juveniles (age code 3) can also be aged based on leg colour which is yellowish. Birds entering their 2nd calendar year (age code 5) change the colour of their legs to grey in mid to late-winter; so care needs to be taken from January onwards.

Fig 6.

Left: Juvenile with yellowish legs.

Right: Adult with grey legs, hence the name Grey Partridge.



Sexing before complete post-juvenile moult

Post-juvenile body moult starts at primary one (the innermost) at an age of 4-5 weeks. Body moult starts at seven weeks with the back feathers and flanks, the latter noticeably changing from the juvenile brown to the adult grey breast feathers, which are completed at approx. 9-10 weeks. At this stage the presence of a well-defined large horseshoe on the breast is a clear sign for a male, whereas females typically show no or only a small ill-defined horseshoe. Head moult starts at 10 weeks and the new red-coloured adult facial feathers are completed at an age of 13 weeks. The moult in the scapulars and the lesser coverts starts at an age of 8 weeks, but care must be taken in female birds, as juvenile and adult scapular, lesser and medium wing coverts look very similar. Therefore, sexing is best not attempted before at least half of the facial feathers are moulted, usually at around 10-11 weeks of age.

Fig 7.

Covey of juvenile grey partridges with adult cock. The four birds in focus in the foreground from left to right: The first three birds are clearly juvenile based on their head plumage and almost complete moult of the flank and breast feathers, as well as yellowish leg colour. Note the still unmoulted juvenile feathers around their throats. These birds have an age of 8-9 weeks and hence sexing is not possible, unless male scapular feathers can be seen in the hand. The bird to the right is the adult male based on head plumage.



Fig 8.

Covey of juvenile grey partridges at an age of approx. 12 weeks. Three birds in the foreground from left to right: **1. female** (note still incomplete moult of head, showing predominantly juvenile plumage, but white supercilium together with female-pattern in shoulder coverts), **2. male**, **3. male** (note almost complete moult of facial feathers together with male adult shoulder coverts). Also note yellowish leg colour of all juvenile birds..



Wild or reared?

In the UK, large numbers of reared grey partridges are released every year mostly for shooting purposes. For recommendations how to release grey partridges for conservation purposes see 'Guidelines for re-establishing grey partridges through releasing' at: www.gwct.org.uk/advisory/guides/re-establishing-grey-partridges-through-releasing/

In the field, released birds from game farms are often recognisable based on their tame behaviour, unnaturally large group size and 'raptor-like' bill shape. The upper mandible in reared birds is often notably longer than the lower mandible giving it a raptor-like look. This is caused by the provision of pure pelleted food with little opportunity to wear the bill down. In the hand one can also often see some heavy wear on the tips of the primaries, caused by walking up and down the sides of wire-mesh pen sections.

Reared birds should never be ringed.

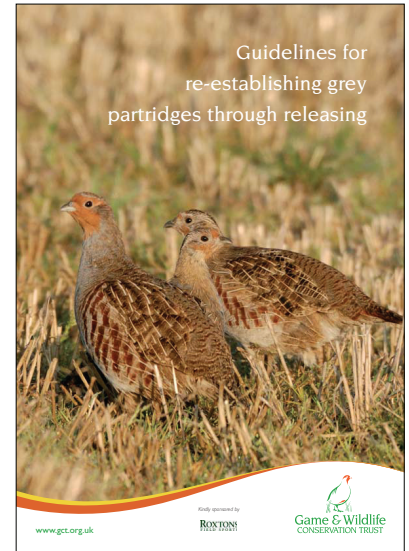


Fig 9.

Reared male grey partridge with deformed 'raptor-like' bill.



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For over 75 years our scientists have been researching why species like the grey partridge, water vole, corn bunting and black grouse have declined. We are continually developing practical measures to reverse these declines.

Our aim is simple - a thriving countryside rich in game and other wildlife.

We are an independent charity reliant on voluntary donations and the support of people who care about the survival of our natural heritage.

More information

The Game & Wildlife Conservation Trust's Advisory Service can provide further advice on grey partridges, and on all aspects of game management. For information, please contact 01425 651013.



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