

# Abnormal Plumage Survey: an update



Dunnock wing-flicking, by John Harding



The BTO Abnormal Plumage Survey, which is exploring plumage irregularities of garden birds, has now received well over 1,000 records, involving 48 species. Here, the BTO's Tim Harrison is joined by Hein van Grouw, an expert on plumage colouration, from the Natural History Museum.

We have received reports of birds showing abnormal plumage from across Britain & Ireland.

Perhaps the most obvious plumage abnormalities are those that involve some form of white feathering, either just a few white feathers on an otherwise black bird or an individual that is completely white (such as the Dunnock pictured above).

Over three-quarters of the sightings reported through the BTO Abnormal Plumage Survey have been categorised as 'Leucistic', with Blackbirds and House Sparrows most frequently spotted. We have used the term 'Leucism' to describe plumage abnormalities where feathers become paler or turn white unexpectedly, but where eyes retain their normal dark colour. The latter feature has been used to distinguish Leucistic birds from Albinistic ones, which have red or pink eyes, owing to blood being visible through colourless tissue.

While these broad categorisations have proved useful when recording birds at distance in gardens, there are subtleties to discover.

## EXPLORING WHITE BIRDS

A common misnomer for a bird with a few white feathers is 'partial Albino'. This is a contradiction in terms; an individual is either Albino or it is not. Albinism is characterised by a total lack of melanin pigments (*i.e.* black, grey and brown) due to an inherited absence of an enzyme that catalyses melanin production. Albino individuals are totally white unless carotenoid pigments (*i.e.* pale yellow to scarlet red) are also present. An Albino adult Goldfinch, for example, would be white all over, except for its red face and gold wing bars.



Tim Harrison (front) and Hein van Grouw (back)

Seeing an adult Albino in the wild is very unlikely, since bad eyesight (one of the consequences of Albinism) means that survival prospects are poor. It is also worth noting that an apparently Albino bird might be confused with an 'Ino' individual. In an Ino individual melanin is still produced but it loses its dark qualities. An Ino can appear white all over and has reddish eyes, but its eyesight is much better than an Albino's and so an adult bird matching this description is almost certainly an Ino not an Albino.

### LEUCISM

'Leucism', as we have used the term in our survey, should really be broken down into a number of distinct types of abnormality. While Leucism, from the Greek *Leukos*, means 'white', amongst birdwatchers the definition has drifted from white feathers to include pale, washed-out colouration. The latter, however, is caused by other heritable aberrations, of which 'Brown' and 'Diluted' are the most common. In Brown, changes in the appearance of melanin pigments cause black feathers to turn brown. These, in turn, are easily bleached by sunlight, causing them to turn whitish. Dilution, whereby reduced melanin production causes individuals to appear washed out, might also cause confusion.

Leucism itself is an inherited absence of pigment cells, and can be total (causing whiteness of the whole plumage) or partial (causing whiteness in just parts). The white pattern is present throughout a bird's life and does not change with age. Far more common than Leucism is Progressive Greying, which is acquired rather than inherited. Progressive Greying sees the progressive loss or failure of pigment cells with age, although this can also be caused by physical disorders. From the onset of the condition, the bird will gain increasing numbers of white feathers after every moult. Should the bird live long enough, it will eventually be all-white. Progressive Greying is particularly common in Blackbirds, House Sparrows and Jackdaws but is difficult to distinguish from Leucism without knowing the history of the individual.

### WHAT NEXT?

Please keep sending in your records and photographs to the Abnormal Plumage Survey, as these help us to clarify abnormality types in greater detail, identify which species are affected most often and where these birds are being found. Visit [www.bto.org/gbw](http://www.bto.org/gbw) to take part online, or 'phone 01842-750050 for a paper form. ■

Additional detail on the results to date can be found via [www.bto.org/gbw](http://www.bto.org/gbw). Alternatively, send a stamped, self-addressed envelope to APS results, GBW, The Nunnery, Thetford, Norfolk, IP24 2PU.

Clockwise from top left: Brown House Sparrow (Martin Goodey); Progressive Greying Blackbird (Finlay Dowell); Progressive Greying House Sparrow (John Harding); Diluted Robin (Donna McGhee)

