Diseases of the skin and soft parts of wild birds

By I. F. Keymer and D. K. Blackmore

(Plates 22-23)

We wish to draw attention to the frequency with which wild birds have been reported as showing lesions of the skin, legs and bill, especially in recent years. Unfortunately, however, not many have been carefully observed in the field and few carcasses have been sent to veterinary pathologists. With the co-operation of ornithologists a great deal more could undoubtedly be learnt about these diseases, which might be of considerable interest not only to veterinarians but also to ecologists and conservationists.

Various parts of the body may show lesions and, although a variety of causes have been diagnosed, much remains to be learnt. For convenience, the conditions are discussed according to the area of the body mainly affected.

Skin
Loss of feathers (alopecia) combined with scaliness, encrustations and thickening of the skin usually affects the head region but also occurs elsewhere (plate 22a). On occasions it is associated with external parasites: epidermoptid mites of the species Microlichus avus were found in the skin of a Starling* by Keymer et al. (1962) and Myialges sp. on a Blue Tit by Macdonald (1963).

Alopecia of the head of a Robin has been investigated by us and another cases recorded by Soper and Hosking (1961). In both instances fungi were isolated from the affected areas of skin. However, it was not certain that this infection was the primary cause of the condition, although in the case examined by us fungal hyphae were demonstrated to be infiltrating the superficial layers of skin and the feather follicles. Keymer (quoted anonymously by Soper and Hosking) described extensive lesions of alopecia in a Blackbird, but could find no cause. Favus caused by the fungus Trichophyton gallinae produces alopecia but is rare even in poultry, although it has been described in the Black Grouse by Patiala (1951) in Finland.

The species most commonly affected by alopecia appear to be Blackbirds and Robins. This is borne out by a number of sight records received by the editors of British Birds as a result of the note by Soper and Hosking. These cover the years 1956-61 and were submitted by P. A. Banks, P. G. R. Barbier, D. G. Bell, H. Briden, H. B. Camplin, *Scientific names of all bird species mentioned in the text are given in appendix 1 on page 179.

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Mrs. Anne Carney, R. J. Douthwaite, R. J. Dowsett, M. D. England, R. Frankum, M. P. Harris, A. J. Harthan, T. Kitching, J. H. Lawton, J. Lockerbie, P. B. Lowe, B. S. Nau, Major W. W. A. Phillips, N. Picozzi, H. E. Pounds, M. P. M. Richards, R. J. Salmon, P. L. Simmonds, N. F. Stewart, J. H. Vaughan, L. S. V. and U. M. Venables, and Mrs. U. G. Wilson. The descriptions of the affected birds vary in detail and the loss of feathers ranged from small areas around the eyes or beak to complete baldness of head and neck. The species involved, with the number of each shown in parentheses, were Blackbird (18), Robin (n), Dunnock (8), Starling (5), Song Thrush (3), Great Tit (2), Blue Tit (1), Bearded Tit (1), Chaffinch (1), Whitethroat (1), Pied Wagtail (1) and Jackdaw (1). From the description given, one of the Dunnocks may have been affected by avian pox (see below).

Eyelids

Sinusitis and swollen eyelids causing partial blindness and excessive lachrymation are not uncommon in young Pheasants and both Partridges and Red-legged Partridges (Keymer unpublished). This disease is believed to be caused by *Mycoplasma gallisepticum*, an organism related to bacteria. Almost identical clinical signs described by Dobson (1937) in Pheasants, however, were found to have been caused by pox virus. Passerine or Canary pox also results in swelling of the eyelids or in lesions similar to those shown in the Goldfinch on plate 22b and we have also seen this condition affecting Greenfinches. Wart-like lesions of the eyelids of Wood pigeons may be caused by the pigeon strain of pox.

"Legs and feet"

Pox is a common cause of wart-like excrescences on the feet and legs, especially in Wood pigeons (Marriage and Keymer 1961); in this connection, see the Woodpigeon legs on plate 23a and the Carrion Crow legs illustrated by Poulding (1960). Keymer (1958) also gave records of this disease in the Jackdaw, Starling and 'sparrows' (probably House Sparrows), and he suspected the infection in Partridges (Keymer unpublished). Mercier and Poisson (1923) in France diagnosed pox in a Dunnock and it seems very likely that the interesting outbreak of disease in this species in Yorkshire in 1949 (Edwards 1955) was caused by this infection.

We have examined three cases of a large unilateral papilloma of the feet of Chaffinches (see plate 23b and the note by Derek Washington elsewhere in this issue, *Brit. Birds*, 57: 184) and received records of three apparently similar cases, one of which had been examined by the Hanover Veterinary School in Germany (H. Krauss *in litt*). These records are similar to the condition described by Emell (1930) as affecting the feet of Slate-coloured Juncos in America; he considered
it to be due to previous injury. It would be interesting to ascertain whether some form of dermotrophic virus is responsible, as is often the case when domestic animals are affected by warts.

Wart-like growths on the legs and toes of three Chaffinches and a Sedge Warbler in 1961 were reported in notes sent to the editors of *British Birds* by A. W. Diamond, E. C. Dickinson, Robert J. Dowssett, D. E. Paull and Geoffrey Webber.

Another virus disease, termed 'puffinosis' and producing vesicles on the feet, was described by Dane (1948) and Miles and Stoker (1948) in Manx Shearwaters. Jennings and Soulsby (1956) reported a similar disease, which they called vesicular dermatitis, in Common and Black-headed Gulls.

Cnemidocoptic mange, causing 'scaly leg', is not uncommon in cage-birds and back-yard poultry, especially bantams, and it has also been described by Macdonald (1962) in a Chaffinch. A Rook reported by K. G. Spencer was examined by A. R. Jennings of the Department of Animal Pathology, Cambridge, and was found to have very severe leg mange due to *Cnemidocoptes mutatis* (in addition to fungal pneumonia). The *Cnemidocoptes* mites burrow beneath the skin, causing eruptions of the scales, encrustations and excrescences of cellular debris.

Injuries may sometimes be responsible for deformities of the feet and legs and even thistles have been blamed for causing swollen hocks and staphylococcal arthritis in Pheasants (Hole and Purchase 1931), the bacteria gaining access to the joints through abrasions in the skin. Congenital deformities are probably rare, although Keymer (quoted by Walton 1962) believed that the foot deformities of an Oystercatcher shown in a photograph were congenital.

**Mandibles**

The subject of abnormal bills has been thoroughly investigated by Pommeroy (1962), who listed the main causes as genetic, accident and disease.

The mite *Cnemidocoptes pila* commonly attacks the beak, adjacent skin and cere of Budgerigars, but we are unaware of any authentic records in wild birds. Wood pigeons with chronic infections of pox occasionally develop deformity of the mandibles. Accumulations of pollen adhering to the bills of small passerines (Ash 1959 and Ash et al. 1961) might be mistaken for disease.

**CONCLUSIONS**

Alopecia can be due to a variety of causes and it would be very interesting to obtain more information about it, especially regarding its incidence and geographical distribution. This should not be difficult, especially as garden birds appear to be not infrequently affected.
Pox may cause lesions in a large number of species on any part of the body, but the infection is probably confined to the orders Galliformes, Columbiformes and Passeriformes. However, the lesions may easily be confused with other conditions and a proper laboratory investigation is therefore essential in all cases.

*We hope that, as a result of this summary of what is known, field observations and especially specimens will be sent to us. All sight records will be welcome and observers are asked to provide the following information wherever possible: species; sex; whether adult, immature or nestling; number of birds affected; dates seen; exact locality; description of lesions and areas of body affected; behaviour of bird; and any other relevant details. Photographs of affected birds would be particularly welcome. Dead specimens should be carefully packed in a sealed tin and sent with as much information as possible to D. K. Blackmore, B.Sc, F.R.C.V.S., Avian Biologist, Petfoods Ltd., Melton Mowbray, Leicestershire. External parasites should be collected if possible, bottled and preserved in surgical spirit and sent with the carcass. On completion of the post-mortem and laboratory investigation a report will be sent free of charge to the sender.*

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**REFERENCES**


NOTES


Appendix 1. Scientific names of birds mentioned in the text

Manx Shearwater Procellaria puffinus
Black Grouse Lyrurus tetrix
Red-legged Partridge Alectoris rufa
Partridge Perdix perdix
Phesant Phasianus colchicus
Oystercatcher Haematopus ostralegus
Common Gull Larus canus
Black-headed Gull Larus ridibundus
Woodpigeon Columba palumbus
Budgerigar Melopsittacus undulatus
Carrion Crow Corvus corone
Rook Corvus frugilegus
Jackdaw Corvus monedula
Great Tit Parus major
Blue Tit Parus caeruleus

Bearded Tit Panurus biarmicus
Song Thrush Turdus philomelos
Blackbird Turdus merula
Robin Erithacus rubecula
Sedge Warbler Acrocephalus schoenobaenus
Whitethroat Sylvia communis
Dunnock Prunella modularis
Pied Wagtail Motacilla alba
Starling Sturnus vulgaris
Greenfinch Chloris chloris
Goldfinch Carduelis carduelis
Chaffinch Fringilla coelebs
Slate-coloured Junco Junco hyemalis
House Sparrow Passer domesticus
Plate 22A. Starling *Sturnus vulgaris* with some feathers removed to show skin lesions on neck and sides of abdomen. The skin was infested with an epidermoptid mite, *Microlichus avus*; red mites *Dermanyssus gallinae* and poultry fleas *Ceratophyllum gallinae* were also found to be present (page 175)

Plate 22B. Head of Goldfinch *Carduelis carduelis* with waxy thickening of eyelids; pox infection was suspected, but this could not be confirmed (page 176)
PLATE 23. Above, typical lesions of chronic pox involving the toes on both feet of two Woodpigeons *Columba palumbus* (page 176). Below, papilloma of foot of male Chaffinch *Fringilla coelebs*; two of the toes have been lost (pages 176-177 and 184)