

Eye-Colour in the Australian Raven (*Corvus coronoides*).

By E. F. Boehm, Sutherlands, S.A. 27/11/1939.

For many years it was believed by ornithologists that the Australian Raven differed from the Australian Crow (*C. ceciliae*) in possessing white eyes, and because of this fallacy most field notes in districts where the range of the two species overlap were practically worthless. That this fallacy is not yet dead is shown by statements made in some recent books(1). Even Leach(2), in a revised edition of his popular guide book on Australian birds, gave an additional impetus to the existing confusion. Campbell(3) had long ago realized that the brown-eyed Crows are immature birds, while Littler(4) had stated:—“Ravens are to be procured anywhere here, either white or hazel-eyed. I am of the opinion that the irides change from hazel to white, similarly to what occurs with the Silver Gull (*Larus novaehollandiae*).”

Ogilvie-Grant(5) wrote:—“The colour of the iris does not seem to be of any value as a specific character. In fully adult examples of all three species [of *Corvus* in Australia] it appears to be white.”

Discussing the same subject, McGilp(6) stated:—“The eyes of all Crows, including Bennett's Crow, are at birth a bluish colour, which in a few days changes to a light brown or hazel, and the adults have white eyes—so that we cannot separate the Crow from the Raven in this way.”

Hartert(7) wrote:—“A good deal of attention has been given to the colour of the iris, but field ornithologists in Australia have formerly overlooked the fact that old birds of all *Corvi* in Australia have as a rule a white iris, while the iris is brown in young birds—although it seems that the brown iris is also sometimes found in adults, at least of *coronoides*.”

It is very doubtful whether mature birds ever have the irides brown. What seems much more probable is that on occasions immature birds have been found breeding, as has been the case with certain Whistlers(8) and Robins(9). When freshly hatched, young Ravens are blind, and when the eyes open, on about the sixth day, the irides are bluish-grey in colour. Soon after, however, the eyes become darker, and when the young birds leave the nest the irides are dark brown. Later on the eyes become lighter in colour, a process which continues until maturity has been attained by the birds. According to White(10)

the irides have paled to yellowish-brown when the birds are a little over a year old. At about eighteen months, he says, the eyes change to dull golden, and at twenty-two months to the adult china-white. Keartland (11) described a bird which had one eye white and the other bright yellow, but he does not appear to have realized that immature specimens have brown irides(12).

In south-west Queensland, Jackson(13) secured both brown-eyed and white-eyed Ravens, and he concluded that the brown-eyed birds were immature.. He noted that in the white-eyed specimens there was a ring of pale blue on either the inner edge or the outer edge of the iris. Most white-eyed birds have this bluish ring, and it seems that its position on the iris varies in different individuals, irrespective of age or sex.

Mr. A. W. Milligan (Ref. 3, p. 57) found that the eyes of one bird in his possession changed to china-white when it entered its second year, and MacGillivray(14) stated that the irides turn white at the age of thirteen months.

The belief of Froggatt(15) that the Raven and the Crow interbreed was almost certainly based on seeing a white-eyed or mature bird mated with a brown-eyed or immature bird of the Raven (or the Crow), but probably not a case of the two species interbreeding in the field. It probably arose from the fallacy that the brown-eyed birds are Crows and the white-eyed birds Ravens.

Although we have no record of a genuine case of Raven and Crow interbreeding, such an occurrence, in isolated instances, should not be dismissed as impossible.

REFERENCES TO LITERATURE.

- (1) (a). Chisholm, A. H. "Bird Wonders of Australia," 1934, pp. 269-70. (b) Barrett, Charles. "Australian Birds and Blossoms," 1929, p. 18.
- (2) Leach, Dr. J. A. "An Australian Bird Book," 6th Edition, 1926, pp. 186, 188.
- (3) Campbell, A. J. "Nests and Eggs of Australian Birds," p. 55.
- (4) Littler, F. M. "Handbook of Birds of Tasmania," p. 12.
- (5) Ogilvie-Grant, W. R., quoted in "Emu," 12, p. 44.
- (6) McGilp, J. Niel. "Emu," 23, p. 68.
- (7) Hartert, Dr. Ernst. "Novitates Zoologicae," 35, p. 49.
- (8) "The Emu," 22, pp. 179-80, 218. *Ibid.*, 35, p. 120.
- (9) "Victorian Naturalist," 14, p. 35. "Emu," 19, pp. 68-9.
- (10) White, H. L. "Emu," 23, p. 3.
- (11) Keartland, G. A. "Victorian Naturalist," 12, p. 101.
- (12) *Ibid.*, 10, p. 143.
- (13) Jackson, Sidney W. "Emu," 18, p. 167.
- (14) MacGillivray, Dr. Wm. "Emu," 10, p. 24.
- (15) Froggatt, W. W. "Australian Zoologist," 1, p. 191. "Some Useful Australian Birds," p. 69.