The Length of the Intestines in Crows, Bower-birds and Birds-of-Paradise

By J. BURTON CLELAND, University of Adelaide, S.A.

In *The Emu*, vol. 51, 1951, p. 183, I asked for information as to the length of the intestines in the above birds, as it seemed to me they were unusually short and broad in a Regent Bower-bird and not so in a Crow, and I thought that such a difference would be unlikely if the crows and the bower-birds were closely related.

I am much indebted to Mr. R. A. Patten, Curator of Taronga Zoological Park Trust, Sydney, who, through Mr. Vincent Haggard, has kindly obtained the following measurements for me of the intestines and other parts of three bower-birds and two crows:

1) *Satin Bower-bird*, I. Female, May 1951: Length of trachea, 9 cm.; oesophagus, 10 cm.; crop not present; proventricle, 1.8 cm.; gizzard, 2.3 cm.; small intestine, 5 cm., very short; caecum, only represented by a dilated sac, 1.3 cm.; large intestine, 23 cm., very long.

2) *Satin Bower-bird*, II. Female, May 1951: Length of trachea, 8.5 cm.; oesophagus, 10.5 cm.; crop not present; proventricle, 2 cm.; gizzard, 2.5 cm.; small intestine, 4.5 cm.; caecum sac, 3 cm.; large intestine, 25.5 cm.

3) *Spotted Bower-bird*, Male, June 1951: Length of trachea, 9 cm.; oesophagus, 10 cm.; crop not present; proventricle, 2.3 cm.; gizzard, 2.5 cm.; small intestine, 3.5 cm.; caecum sac, 2 cm.; large intestine, 26 cm.

4) *Crow*, Female, February 1952: Length of trachea, 8 cm.; oesophagus, 13 cm.; crop not present; proventricle, 3 cm.; gizzard, 5 cm.; small intestine, 6 cm.; caecum sac, 2.5 cm.; large intestine, 54 cm.

5) *Crow*, Female, April 1953: Length of Trachea, 10 cm.; oesophagus, 15 cm.; crop not present; proventricle, 2.5 cm.; gizzard, 4 cm.; small intestine 8 cm.; caecum sac, 3 cm.; large intestine, 65 cm.

I have a note of my own on a Satin Bower-bird examined on March 3, 1952, as follows: Duodenum to pancreas, 2 ins. (5 cm.) and the rest of the intestines 11.5 ins. (29 cm.)—a wide almost straight tube about 1 cm. in diameter with a few 'kinks', no obvious sign of difference between small and large intestine even when cut open, no caecum detected.

The 'total length' (though this includes the tail) may give some idea of the relative sizes of the bower-birds and the Crow. North gives 20 ins. (50 cm.) for the Crow and the Raven, and 12 ins. (30 cm.) for the Spotted Bower-bird and 12.5 ins. (31 cm.) for the Satin Bower-bird. The Crow is appreciably less than twice as large as these bower-birds.
In Newton’s (and Gadow’s) *Dictionary of Birds* (p. 139) the relative length of the intestinal canal of a species is estimated by dividing the absolute length of the intestines by the length of the body of the bird from the root of the neck to the anus. ‘Short-gutted’ birds are those with a relative length of not more than 5, ‘long-gutted’ ones those where it is more than 8. Amongst the examples given are *Corvus corax*, absolute length of intestinal canal 120 cm., relative length 8, and *Manucodia atra*, 29 cm. and 2-3 respectively. The Manucode is very short-gutted—the shortest in the sixteen species in the table given, the Crow barely long-gutted. These authors say that the intestinal canal is very short in all purely frugivorous and insectivorous birds, and very long in those which live on fishes, carrion, grain and grass.

I am indebted to the late Professor T. Harvey Johnston for calling my attention to the following works dealing with the intestines of birds. F. E. Beddard in *The Structure and Classification of Birds*, 1898, gives a table, on p. 177, in which the lengths of the small intestines of two Satin Bower-birds are given as 10·25 and 10·5 ins. (25·6 and 26·2 cm.), of the large intestines as 0·75 and 1·25 ins. (1·8 and 3 cm.), and of the caecum as 0·25 and 0·5 ins. (0·6 and 1·2 cm.), and of a Crow (*Corvus corax*) as 29·75 ins. (74 cm.), 2·5 ins. (6 cm.) and 0·5 ins. (1·2 cm.) respectively. It will be seen that Beddard makes the small intestines much the longer in all, whilst Mr. Patten, who is a veterinary surgeon, finds the large intestines the longer. Dr. Hans Gadow’s paper ‘On the Taxonomic Value of the Intestinal Convolutions of Birds’, *Proc. Zool. Soc.*, 1889, p. 303, and Chalmers Mitchell ‘On the Intestinal Tract of Birds’, *Proc. Zool. Soc.*, 1896, p. 136, have nothing bearing on the question.

**Stray Feathers**

Swift Parrot in South-west Victoria.—In *The Emu*, vol. 52, page 212, E. F. Boehm expresses the opinion that the Swift Parrot (*Lathamus discolor*) may migrate westwards or south-westwards through south-west Victoria into South Australia, though he does not quote any actual records of the bird in the south-east area of his State. In the *South Australian Ornithologist*, vol. 19, parts 6-8, page 78, S. E. Jerrill and C. E. Rix, in their paper on the distribution of South Australian birds, do not suggest that the Swift Parrot occurs in the south-east of their State in any numbers, if at all. In view of the extreme rarity of this species in south-west Victoria, I feel that the South Australian birds which occur near Adelaide must come from an inland source. Until yesterday I had not seen this bird in western Victoria, and the only record of which I know in this area