BIRD DISPLAY

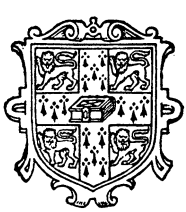
BIRD DISPLAY

An Introduction to the Study of Bird Psychology

BY

EDWARD A. ARMSTRONG

Omne adeo genus in terris hominumque ferarumque,
et genus aequoreum, pecudes pictaeque volucres,
in furias ignemque ruunt: amor omnibus idem.
Virgil, *Georgic* III.



CAMBRIDGE
AT THE UNIVERSITY PRESS
1942

To

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CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781107511576

First published 1942
First paperback edition 2015

A catalogue record for this publication is available from the British Library

ISBN 978-1-107-51157-6 Paperback

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Preface

AN interesting observation of a bird's behaviour should be no less carefully recorded and reverently preserved than the type specimen of a new subspecies. Lack of regard for this principle has long prevented the outdoor study of birds from being considered much more than the harmless hobby of men who preferred looking at birds to killing them. Now that field ornithology is increasingly recognised to be a serious scientific discipline from which careless observation and wanton generalisation should be sternly excluded, it is essential that its literature should eschew the vagueness which has hampered the progress of bird-behaviour studies in the past. It is not enough to be told that birds do this or that; we should be told what reliable observer has seen them do it. Acting on this principle I have tried to document these pages adequately so that the reader may, if he wishes, trace the source and assess the value of specific observations. If facts are the stones of which the Palace of Science is constructed, sources are the cement. By means of documentation and bibliography I have provided a supply of building materials. No doubt under the scrutiny of architects with larger resources and more spacious plans will rise nobler theories than have suggested themselves to me as I carried my hod of facts and plied my metaphorical shovel and trowel.

Perhaps the belated emergence of field ornithology from the stage of anecdotalism is not surprising in view of the much greater readiness with which man studies inanimate objects and dead structures than living things. Many centuries were necessary before psychology advanced beyond the standpoint of Aristotle; and comparative psychology, of which the study of

bird behaviour is not the least important branch, is only just achieving scientific status. The structure of the lifeless bird in the hand is much more completely understood than the behaviour of volatile birds in bushes, but the field ornithologist should be the first to acknowledge the yeoman services of the museum naturalist, as without his prior labours useful field work would be impossible. Moreover, it is now evident that the progress of ornithology is dependent on the close collaboration of the field worker and the laboratory specialist, for the activities of birds are not to be understood without an appreciation of the physiological processes involved. I could wish this book no happier fate than that it might provide both types of worker with some material and facilitate their co-operation.

There must always be a much larger number of people taking delight in watching birds than able to specialise in sustained laboratory or field research. Such naturalists have contributed greatly to our knowledge in the past, and if their efforts are wisely directed they have remarkable opportunities of doing useful, even thrilling, work at the present time. I trust that those called by the pleasant and honourable name 'amateur' will not find as they read these pages that I have cumbered them unduly with technical terms.

The unwary projection of human thoughts, feelings and motives into the minds of animals has vitiated so much scientific work in the past and so many authors consciously or unconsciously exploit a false humanisation of birds and beasts that anthropomorphism has become the *bête noir* of critics, and it is hardly possible for a writer to escape this charge unless he takes refuge in clumsy periphrases and recondite terminology; but if the reader is on his guard, there is no need to write in a style more appropriate to automatons than to birds. If it be true that man never knows how anthropocentric he is, it is not less true that in this age man never knows how mechanistic he is—and

a mechanistic philosophy can be no less misleading than anthropomorphism. The discerning reader will not attach a deeper emotional connotation than they deserve to such terms as 'courtship' or 'love' when he finds them in these pages, and he will remember that when I speak of 'Nature' I have in mind Darwin's definition: 'I mean by Nature only the aggregate action and product of many natural laws, and by laws sequences of events as ascertained by us.' Under the term 'Display' I include movements, postures and sounds, generally of a conventionalised kind, which have the capacity to initiate specific responses in other creatures, more particularly in members of the same species.

I have not hesitated to point out similarities between the behaviour of birds and other creatures varying from insects and fish to man. Indeed, one of the outstanding impressions gained as a result of the study of behaviour-patterns is the tendency of certain types of activity to recur in groups of organisms widely separated from each other. These parallelisms are not to be explained as coincidences but are due to the operation of fundamental psychological forces. The ritualisation of activities, for example, characteristic of the human and the subhuman animal alike, is only one amongst many indications of continuity of mental constitution at different levels. Beneath the threshold of distinctively human thought and activity may be perceived processes which find their clearest manifestation in the life of animals. Thus the most profitable technique in comparative psychology is reciprocal, the exploration of the complexities of the human mind aiding the understanding of animal behaviour, the study of man's lowlier fellows revealing mechanisms which operate in the recesses of human personality.

While it is apparent that bird behaviour conforms to definite patterns, only assiduous observation can determine the extent to which variations occur. Future study may show that a few

of the instances of display quoted in the following pages are not entirely typical.

No reader can be more conscious than I am of deficiencies in my treatment of this fascinating theme. There are aspects of the subject with which I have been forced to deal in niggardly fashion; particularly is this true of the relationship between adornment and display. But in order to compress this study into reasonable bounds I have had to restrict the discussion primarily to psychological and behavioural matters. The youthfulness of field ornithology as a science may be best realised by a comparison between the meagre references to bird psychology and display in Alfred Newton's *Dictionary of Birds*, published less than fifty years ago, and the *embarras de richesses* with which the modern student has to contend. He may, however, take courage from the knowledge that there are very few birds whose life history has been at all thoroughly worked out. Great opportunities are his, interesting discoveries assuredly await him. These pages, by chronicling the labours of those who have already borne the burden and heat of the day, may, I hope, be found useful by those who, though later on the scene, may reap a still richer reward.

The numerous references constitute an acknowledgement of the heavy debt which I owe to other writers. My long friendship with Dr W. H. Thorpe has been still further cemented by his patience in reading manuscript and proofs, checking references and providing opportunities for library work at Cambridge. The treatment of the physiological aspects of bird behaviour has profited greatly by the criticisms of Dr F. H. A. Marshall, F.R.S.—who also read the proofs and gave me much encouragement—and the advice of Dr W. S. Bullough with whom I discussed the problems concerned with the relationship between behaviour and internal state. I owe a special debt of thanks to Mr W. B. Alexander, Director of the Edward

Grey Institute of Field Ornithology. He sought out and verified the scientific names of birds mentioned in the text, arranged them in systematic order, placed the resources of the Institute library at my disposal, and in many other kindly ways facilitated my work. Miss Averil Morley also gave much generous assistance in checking references and Mr D. Lack's comments and suggestions have been valuable. I am grateful also to the City Librarian of Leeds and the staff of the Central Library for their efficient assistance. The Leverhulme Trustees greatly aided and encouraged me by granting me an Award. I am very grateful to them. Mr Daniel Lehrman, of New York, sent me an important paper published in Germany since the outbreak of war, and to him and Mr B. W. Tucker I am indebted for some references. Discussion of many a matter with my wife has helped to reduce obscurities of expression and clumsiness of style. Had it not been for the ready help of all these in greater or lesser measure as it was needed, my work, heavily handicapped as it has been by war conditions both as regards observation in the field and research amongst books, would have been conducted amidst difficulties too great for any ingenuity or enthusiasm to surmount.

Dr F. M. Chapman and the authorities of the American Museum of Natural History have willingly allowed me to use some of their photographs. Professor A. A. Allen, of Cornell University, also graciously provided some illustrations, and through the kindness of Mr Lee Crandall and the New York Zoological Society I am able to reproduce a set of photographs depicting the display of birds of paradise and other species. Two friends who were good enough to provide photographs, Miss E. L. Turner and Mr Riley Fortune, have passed away. For other photographs I have to thank Mr George Bird, Dr W. S. Bullough, Mr N. Chaffer, Mr Ralph Chislett, Aircraftsman C. D. Deane, Mr R. T. Littlejohns, Dr L. H. Matthews,

Dr Neal Rankin, Mr Dennis Rankin, Lieutenant-Colonel H. Morrey Salmon, Mr H. B. Savory and Mr Stanton Whitaker. Mr C. Bryant kindly helped me to obtain the photographs of Australian birds. Through the good offices of Professor Spaul some of the illustrations are more adequately reproduced than would otherwise have been the case. It is a pleasant duty to record my thanks to all these.

EDWARD A. ARMSTRONG

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March 1942