

**THE EVOLUTION OF BIRD-
SONG, WITH OBSERVATIONS
ON THE INFLUENCE OF
HEREDITY AND LIMITATION**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649312221

The evolution of bird-song, with observations on the influence of heredity and limitation by
Charles A. Witchell

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

CHARLES A. WITCHELL

**THE EVOLUTION OF BIRD-
SONG, WITH OBSERVATIONS
ON THE INFLUENCE OF
HEREDITY AND LIMITATION**

THE EVOLUTION OF BIRD-SONG

THE
EVOLUTION OF BIRD-SONG

WITH
OBSERVATIONS ON THE INFLUENCE OF
HEREDITY AND IMITATION

BY
CHARLES A. WITCHELL
AUTHOR OF 'THE FAUNA OF GLOUCESTERSHIRE'

LONDON
ADAM AND CHARLES BLACK

1896

P R E F A C E

I WISH to mention in this place my deep sense of obligation to those kind helpers who have given me notes on the subjects discussed in this book. I wish also to acknowledge my gratitude to the late Professor Harker, F.L.S., whose lamented death recently occurred. He, from the first, encouraged me to continue my observation of bird-song ; and, in 1890, he devoted a considerable amount of time to harmoniously arranging the results of my investigations.

When I state that Mr. J. E. Harting generously offered to look over the proof-sheets of this work (which offer was, of course, gladly accepted), the public will appreciate the extent of my indebtedness to an author and editor so accomplished. The first

32 pages had then been returned to the printer; but, in revising the remainder, I continually perceived the great advantages derived from Mr. Harting's perusal.

However novel or otherwise may be the theories stated in this book, I can at least claim that, so far as I am concerned, they are absolutely original, all of them having been committed to writing, though, in some instances, not under their present titles, before I consulted any person, or any book, in regard to them.

CHARLES A. WITCHELL.

London, April 1896.

CONTENTS

INTRODUCTION	PAGES 1-11
------------------------	---------------

CHAPTER I

THE ORIGIN OF THE VOICE

Darwin's opinion that the voice resulted from involuntary movements of muscles—Combat the chief occasion for such movements—Prevalence of a puff or hiss as a menace—Accidental cries of newts	12-21
--	-------

CHAPTER II

ALARM-NOTES

Combat-cry serviceable as an alarm—Repetition of single alarm-cries, in terror—Theory of evolution of certain rattling cries by such repetitions—Discrimination of enemies evidenced by cries and deportment—Inherited knowledge of alarm-cries	22-32
---	-------

CHAPTER III

THE INFLUENCE OF COMBAT

Rivalry and emulation—Among polygamous species, selection dependent on combat—The snapping of bill as a menace—Chaffinch's war-note—Singing during combat	33-49
---	-------

CHAPTER IV

THE CALL-NOTE

Erroneous descriptions of call-notes—Chaffinch's cry *pink* not a call-note—Distress-cries of young are of use as call-notes when the birds leave the nest—Influence of gregariousness and of fear—Absence of call-notes from the songs of extravagant singers: prevalence of them in songs of inferior singers 41-48

PAGES

CHAPTER V

THE SIMPLEST SONGS

Repetition of call-notes in the breeding season—Construction of strains by this method—Examples—Call-notes concluding spring songs of skylark—Movements of wings during song—Repetition of same intervals of pitch 49-58

CHAPTER VI

NOTICEABLE INCIDENTS CONNECTED WITH BIRD-SONG

Songs are generally uttered by males: exceptions—Not until birds have attained full size: exceptions—Most frequently at morning and evening: influence of weather—Tendency to rise in pitch with vehemence—Only small birds properly sing—Singers arboreal birds generally—Effect of living amid foliage: on size, hearing, and voice—Accent in songs—Singers clad in sober hues—Development of the eyes in detecting danger—Necessity of leisure—Labour of parent-birds—Laborious and stealthy birds habitually poor in song—Flight in song: for purposes of display—Fluttering of wings a means of address—Ventriloquism—Singing in chorus . 59-85

CHAPTER VII

THE INFLUENCE OF HEREDITY IN THE PERPETUATION OF
THE CRIES OF BIRDS

	PAGES
Absolute inheritance of cries in plovers, common fowl, duck, swan, pheasant, etc.—Family cries—Cries of allied young more alike than those of allied adults—The <i>cahs</i> of the crows: heard in starling and jay—Similarity between starling and thrushes—Rattling alarm of mistle-thrush, modified in black-bird, ouzel, song-thrush, fieldfare, and American robin—Similarity of occasions of utterance of alarms by blackbird and European robin—Similarities traced in call-notes of birds of the thrush family: also between their songs—Prevalence of imitation—The warblers—Particular cry common to nightingale, willow-warbler, and chiffchaff—Similar alarm-croaks of nightingale, sedge-warbler, and lesser whitethroat—Recapitulation—Similarities between notes of wagtails—Songs of tree-pipit and meadow-pipit described: similarity to that of sky-lark—Larks of three continents, with the same manner of song—Family resemblances in the buntings—Resemblance between call-notes of yellow bunting and greenfinch in flight—Notes of the finches—Canary has family traits— <i>Till till</i> cries of house-sparrow and greenfinch—Similar cries of young chaffinch and young house-sparrow—Various other orders mentioned	86-139

CHAPTER VIII

VARIATION IN BIRD-VOICES: ITS CAUSES AND EFFECTS

Prevalence of variation—Instances mentioned by authors—Variation in songs of black-bird, yellow-hammer, chaffinch, robin, house-sparrow, and cuckoo—Illustrated in the robin's alarm	140-158
--	---------