ANTS AND THEIR WAYS

WITH ILLUSTRATIONS, AND AN APPENDIX
GIVING A COMPLETE LIST OF GENERA AND SPECIES OF
THE BRITISH ANTS

BY THE

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'A little people,' but 'exceeding wise.'—Prov. xxx. 24, 25
'Go to the ant' . . . . 'consider her ways and be wise.'—Prov. vi. 6

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PREFACE TO SECOND EDITION

The fact that a large first edition of *Ants and their Ways* has been exhausted is an encouraging evidence that its publication satisfied a widely-felt need. This new edition is issued with but few additions. I have been fortunate in the re-discovery, at Bournemouth, of the species first captured unwittingly by the son of the late Mr. Frederick Smith, the celebrated Hymenopterist, to which species I have given the name of *Formica glabra*. After many a careful search, during frequent visits to that charming watering-place, which may be fairly designated the metropolis of the ant-world, I was rewarded in 1892, and again in 1893, by noticing, in the sunshine on the heather and the gorse, several workers, and, in 1892 for the first time, the queen, with a body-guard of her faithful subjects, taking a constitutional. I was thus able to make acquaintance with this brilliant species in its home. Since the publication of the first edition, I have, in company with the Rev. Canon Fowler, who kindly acted as my guide, met with several extensive colonies of the very rare species *Diplorhoptrum fugax*, near Sandown, in the Isle of Wight, and was made happy in witnessing the harvesting instinct in the delicately...
sculptured species, *Tetramorium caspitum*, at Branscombe, on the Devonshire coast. The diligent workers, I noticed, filing into their nest with grass-seeds in their mandibles; and in disturbing their habitation I found many seeds scattered among the *débris* of what I took to be their granary. I should add that the late Rev. J. Traherne Moggridge says in his attractive work on *Harvesting Ants and Trap-door Spiders*, that this species has been observed at Mentone and Cannes occasionally collecting and carrying in seeds. The instance I have given is, I believe, the first of the harvesting instinct having been witnessed in our own country.

The present work owes its origin to a series of papers which I was requested to prepare for the *Leisure Hour*, and which appeared during the year 1880. Since that date additional material illustrating the marvellous history of the 'little people' has accumulated through the researches of Sir John Lubbock,¹ Dr. McCook of Philadelphia, myself, and others. Dr. McCook has published two volumes, one which appeared in 1880, constituting a monograph of the habits, architecture, and structure of *Pogonomyrmex barbatus*, the agricultural ant of Texas; and the other, in 1882, giving the remarkable history of the honey ants of the Garden of the Gods, and also of the occident ants of the American plains. I would also call the reader's attention to the *Synopsis of British Heterogyna and Fossorial Hymenoptera*, by Edward Saunders, Treasurer of the

¹ Sir John Lubbock has gathered together his papers on the subject, and has published them, with additional matter bearing on the social Hymenoptera, under the title *Ants, Bees, and Wasps*, as one of the International Scientific Series.
Entomological Society, reprinted from the *Transactions* of the Society for December, 1880—a valuable contribution to the study of the British species. In this work he adopts a specific characteristic for the female of *Formica aliena* which I had brought forward in one of my papers, and which had been recognised as distinctive of the species by my late friend, Mr. Frederick Smith of the British Museum, formerly President of the Entomological Society, an eminent Hymenopterist, to whose unwearyed kindness and invaluable assistance I shall ever remain indebted. He, some twenty years ago, first stimulated my interest in the study of British ants into active exercise, and ever encouraged and aided me in my pleasant and profitable investigations, until his much lamented death in January, 1879. I have since secured possession of the greater part of his valuable collection of foreign *Aulacate Hymenoptera*, in which is numbered about six hundred different species of ants from almost every part of the world, as well as nearly two hundred and seventy species of the allied families *Mutilidae* and *Thynnidae*, popularly called Solitary Ants, and classed by Mr. F. Smith under the *Heterogyna*. Mr. Smith’s manuscript lectures, with their practical and pictorial illustrations, have tended also to enrich my happy experiences of the wonders of the formic world.

I have been thus explicit in directing the attention of the reader to these sources of new entomological wealth, that he may be prepared to find in the present publication, not merely a reprint of my former papers, but rather the outline of an old picture filled in with fresh lights and shadows.
The author desires to place on record his appreciation of the value of the illustrations which so enhance the interest of his work, and which with but few exceptions were engraved from the well-executed drawings of his wife: these exceptions being Fig. 34, in preparing which she availed herself of a skillful sketch by Miss E. E. White, and Figs. 39–43, which were taken from original diagrams by the late Mr. F. Smith.

If the reader can glean from the perusal of this imperfect attempt to give form and colouring to one of the most marvellous provinces of the wondrous empire of the King of Glory, some portion of the untold pleasure it has brought to my own mind in making it, I shall be more than satisfied, especially should the perusal lead to a more emphatic and practical recognition of the truth of the inspired declaration —'The works of the Lord are great, sought out of all them that have pleasure therein.'
CONTENTS

CHAPTER I.
The interest that clings to the study of ants—Their classical association—Their biographer of the last century—Their prehistoric origin—Their connection with amber—The ancestry of the white ant—The formation of amber—Dr. Livingstone and Sir John Kirk on the copal gum of Africa—The Kauri gum of New Zealand—The fossil resin of Galicia .... .... .... .... .... .... 17

CHAPTER II.
Morning walk to Blackheath—First sight of the little people at home—Representatives of two tribes under one roof—Ancient names for the ant—Many species found under stones .... 25

CHAPTER III.
The ants a little people—Examination of the head of Myrmica scabrinodis—Its antennæ and those of other species—The eyes of ants—Blind ants—The Ecitons of the Amazon Valley, and the driver ants of Africa—The special functions of the compound and simple eyes—The experiments of Sir John Lubbock as to the effect of light and colour on the vision of ants—The conditions under which they were made and the assumption on which they are founded considered—Artificial formicaria, and how their construction affects such experiments—The author's formicaria, and how they are adapted for securing trustworthy results—Ants do not dislike the light, but welcome it as necessary to their well-being—A
record of the author's observations bearing upon the subject
—Ants are attracted by the light because of the heat with
which it is associated ... ... ... ... 30

CHAPTER IV.

Continuation of the subject of the effect of light and colour on
ants—The prismatic colours possess different powers of
illumination and varying degrees of heating power—The
invisible rays at each end of the spectrum—The different
coloured rays, as well as the invisible rays, possess more or
less of chemical action—The significance of Mr. Busk's
suggestion that certain colours are avoided by the ants
because the chemical rays are distasteful to them—Professor
Tyndall's demonstration, after Melloni, of the diathermancy
of bisulphide of carbon—Sir John Lubbock's experiments
with bisulphide of carbon and sulphate of quinine—His
inference therefrom, and how far it should be modified ... 44

CHAPTER V.

The mouth with its allied appendages and their uses—The thorax
and nodes of the petiole of the abdomen—Formic acid—A
traveller's experience—A missionary's experience—The sting
of an ant—The number of species of British ants—The
house ant of Madeira added to the list—Naturalized ants—
Saunders's enumeration—The common house ant—Details
as to its habits—Another Madeira ant found in London—Its
tastes and distribution ... ... ... ... 54

CHAPTER VI.

The workers and their offices—They vary in function, size, and
structure—In some colonies more than two distinct forms—
Bates's record—The workers of three orders—The worker-
minors—Mounds and galleries—Cutting leaves—Robbing
the farinha baskets—The function of the worker-majors—
Worker-majors with unique frontal eye—The queen of
Myrmica sabrinodis described—The princesses—Their mid-
air dances—'The haunted tree's on fire!'—A political
demonstration in the ant-world—Their constitution a limited
monarchy—The princesses further described—The princes—
Their short career ... ... ... ... 67
CHAPTER VII.

The Ponerida—The two British species of Poner—a Mr. Smith’s son’s discovery at Bournemouth—A variety of Lasius umbratus (Formica umbrata) described—The Mutillidae, or solitary ants—Mutilla Europaea found in the nests of humble bees—The strange noise it utters—The rare Methoca ichneumonides—The question, Should Mutillidae be classed with the Heterogyna?—Number of species of social ants—Mr. F. Smith’s record and estimate—Exceptions to the general rule of the distinct characteristics of the families Formicideae and Myrmicideae—The honey ants of Mexico and Colorado—Also from Australia, Singapore, and Borneo—Anomalous form of the female of Anergates atratus—Strange constitution of the colony of this ant—Ants with large heads—The harvesting ants of the South of France ... ... ... 82

CHAPTER VIII.

The harvesting instinct of ants—Called in question by Gould, Latreille, Hüber, and others—The ancient belief true—The repudiation of the harvesting instinct accounted for—British ants possess the instinct—The reference in the Mishna—Lieut.-Col. Sykes’s notice of the Atta providens of India—The agricultural ant of Texas—Dr. McCook’s account of Pogonomyrmex barbatus—The architecture of their houses—The large formicaria in the neighbourhood of Austin, Texas, described—The Ecodoma cephalotes of South America—Belt discovers them to be mushroom growers—Honey ants—Other harvesting ants in America—Are they found in the Holy Land? ... ... ... ... ... ... 98

CHAPTER IX.

The manners and customs of the ants—The members of the royal family—The career of the males—The self-sacrifice of the females—The power of a single female to originate a colony—The labours of the workers—Election of the queen—The loyalty of the ants—Their frolicsome exercises ... ... 111
CHAPTER X.

The affection of the ants for their young—Their earlier life-history—The eggs—The larvæ—Instance of the care of the workers for the larvæ—How they keep them at a suitable temperature—The workers enjoy the sunshine—How the larvæ are fed and cleansed—The little weavers—The multiplied labours of the workers—How the foster-mothers guard the inclosed pupæ, and extricate the young ants from the cocoons—The workers conduct their education—The solicitude of the workers for the males—No pupæ in winter time—The pupæ of ants with stings not inclosed in cocoons ... 119

CHAPTER XI.

The ants at their toilet—Funeral rites—A funeral procession in Australia—Startling phenomena in the author's formicarium—Formic cemeteries—Habits of F. umbrata (L. umbratus)—Burial customs—Ants' affection for the living greater than their respect for the dead ... ... ... ... 129

CHAPTER XII.

Ants live happily together—Instance of unselfish devotion and disinterested kindness witnessed by the author—Exhuming buried companions—Concerted action—Joy at meeting after separation—A recognition after four months' absence recorded by Hüber—The author's observation of a recognition after a separation of one year and nearly three months—Successful experiments with members of a colony of F. sanguinea—Sir J. Lubbock's observations—Ants recognised by members of the colony when removed as pupæ—Intoxicated and chloroformed ants recognised by their friends ... ... ... 139

CHAPTER XIII.

The ants have a language, and are able to communicate their ideas and wishes to each other—Illustrations from the author's formicarium—How they make known the cause of fear or anger—How the military expeditions are conducted—The
antennæ serve also as organs of smell—The ants are little farmers and cattle breeders—Their many breeds of cattle—The blind clavigers yield milk to the ants, and are maintained by them—The number of ants’-nest beetles found in Britain 149

CHAPTER XIV.

The aphides or ant cows preserved and bred by the British ants—Their form and habits—How the little people milk their cows—Hüber’s observations—Do the ants breed their cows?—The author’s observations and discovery—Are the aphides both viviparous and oviparous?—The marvellous history of the milk-kine—the ‘eggs’ are pupæ or the nymphal form of the aphid—Bonnett’s view, indorsed by Hüber, correct—Sir J. Lubbock’s judgment—The cocci or gallinsecta—The cochineal insect—Some ants omnivorous ... ... 157

CHAPTER XV.

The slave-makers—How Formica sanguinea may be distinguished from Formica rufa—The author’s visits to Shirley Common in search of the Formica sanguinea—Discovery of a nest—The slaves—Other species of ants besides F. fusca found in the slave-maker’s nest—The workers, males, and females of the slave-makers described ... ... ... ... 167

CHAPTER XVI.

The slave-making instinct first observed by M. P. Hüber in Rufescens—Hüber’s historical sketch of the Amazon ants—a slave-making expedition described—Sir J. Lubbock’s experiment—Mr. Frederick Smith the first in England to witness the slave-making instinct in active exercise—Charles Darwin also observed it—The important relation the whole history of ants bears to Darwin’s theory of the origin of species—The author’s experiences—Sir J. Lubbock witnesses Polyergus in captivity carrying off the pupæ of F. fusca—Other slave-makers—Forel’s account of S. testaceus—a conflict between a mixed community of S. testaceus and T. caspium and an independent colony of T. caspium—Strange history of Anergates atratus—Two alternatives proposed for the solution of the mystery—Cataglyphis viatica a slave-maker—Aphenogaster barbara, the harvester, a slave 180
CHAPTER XVII.

The variety in the architectural designs of the ants—Habitation of the common yellow ant described—F. aliena (L. alienus) a miner and a mason—Typical nest of Formica—Dimensions of the nests of the wood ants—The common garden ant storming Exsecta’s castle and destroying the garrison ... 196

CHAPTER XVIII.

F. rufa and F. sanguinea take in lodgers—Distinct species found in the nests of other ants also—The jet ant both carpenter and wood-carver; sometimes a miner—The garden ant discovered to be a wood-carver—The author also discovers F. umbrata (L. umbratus) as wood-carver and carpenter—The plasterer and tent-maker from Sierra Leone—The umbrella ant—The thorn-nests of Pseudomyrma modesta from Panama—The ‘bull-dog’ ants in South Australia—The driver ant of Africa ... ... ... ... ... 206

CHAPTER XIX.

The white ants of tropical climes—The four classes found in the colony of the white ants described—The destructiveness of the white ants—How the true ant as well as the ‘white ant’ becomes a blessing in the tropics—The concluding summary of the ways of the little people ... ... ... ... ... 217

APPENDIX—Hymenoptera Britannica ... ... ... ... 227

INDEX ... ... ... ... ... ... ... ... 251

(255 pages) 255
**LIST OF ILLUSTRATIONS**

The slave-maker (*F. sanguinea*) attacking the nest of *F. fusca* on Shirley Common ... ... ... Frontispiece

1. *Myrmica scabrinodis* ... ... ... ... 31
2. *Formica flava (Lasius flavus)* ... ... ... 31
3. Antenna of *M. scabrinodis* ... ... ... 32
4. Portion of eye of ant ... ... ... ... 33
5. The Author’s *Formicarium* (front view) ... ... ... 42
6. ... (back view) ... ... ... 43
7. *M. scabrinodis*, with open mandibles ... ... ... 55
8. *Formica flava (Lasius flavus)*. Female ... ... 79
9. ... Male ... ... 79
10. ... Large worker ... ... 80
11. ... Small worker ... ... 80
12. *Poneria punctatissima* ... ... ... ... 83
13. *Mutilla Europaea*. Female ... ... ... ... 86
14. ... Male ... ... 87
15. *Myrmecocystus Mexicanus* ... ... ... ... 93
16. *Myrmica (Pheidole) lavigata*; House ant of Madeira ... ... 95
17. *Aphenogaster barbar*a ... ... ... ... 106
18. *Myrmica domestica (Diplorhoptrum domesticum)* ... 116
19. Cluster of eggs ... ... ... ... ... 120
20. Larve of ant ... ... ... ... ... 120
21. Cocoons of *Formica flava (Lasius flavus)* ... ... 125
22. Pupa of *Myrmica levinodis*, with pellicle partially removed ... 127
LIST OF ILLUSTRATIONS

FIG. PAGE
23. Front view of pupa of Myrmica ruginodis (female) in pellicle 127
24. Formicarium ... ... ... ... ... ... 133
25. Ants rescuing a buried companion ... ... ... 141
26. (1) Wingless aphis; (2) Aphis with rudimentary wings, ant- ennae bent back; (3) Winged aphis ... ... 158
27. Rose-branch with aphisides ... ... ... ... 159
28. (1) Aphis bred from nest of F. flava (L. flavus); (2) Aphis bred from nest of F. flava (L. flavus) ... ... ... 162
29. Formica sanguinea ... ... ... ... ... 168
30. Formica rufa (the Wood-ant) ... ... ... ... 168
31. Formica sanguinea. Large worker ... ... ... ... 171
32. " " Male ... ... ... ... ... 172
33. " " Female ... ... ... ... ... 173
34. Slave-makers returning home after a victorious expedition on Shirley Common ... ... ... ... 176
35. Section of nest of Formica rufa ... ... ... ... ... 201
36. Nest of Formica exsecta, Boscombe, near Bournemouth ... ... 204
37. Nest of Formica virescens (Cephalylla) on mango-tree ... ... 209
38. Formica virescens, larger worker (Cephalylla) ... ... ... 210
39. Umbrella ant. Male ... ... ... ... ... 211
40. " Female ... ... ... ... ... 212
41. Driver ant ... ... ... ... ... ... ... 215
42. The white ant (Termes bellicosus) ... ... ... ... 219
43. Nests of white ants ... ... ... ... ... 221
ANTS AND THEIR WAYS

'A LITTLE PEOPLE,' BUT 'EXCEEDING WISE,'

CHAPTER I.

An entrance charm undoubtedly clings to the study of ants—Their classical association with amber—The ancestry of the white ant—The Kauri gum of Africa—The gum of Galicia.