

BULLETIN
OF
ENTOMOLOGICAL RESEARCH.

ISSUED BY THE IMPERIAL
INSTITUTE OF ENTOMOLOGY.

EDITOR : THE DIRECTOR.

VOL. XXIII.

LONDON :
THE IMPERIAL INSTITUTE OF ENTOMOLOGY,
41, QUEEN'S GATE, S.W.7.
1932.

IMPERIAL INSTITUTE OF ENTOMOLOGY.

HONORARY COMMITTEE OF MANAGEMENT.

THE EARL BUXTON, P.C., G.C.M.G., *Chairman.*

- Dr. W. HORNER ANDREWS, M.R.C.V.S., Director, Veterinary Laboratory, Ministry of Agriculture and Fisheries.
- Major E. E. AUSTEN, D.S.O., late Keeper, Entomological Department, British Museum (Natural History).
- Dr. A. G. BAGSHAWE, C.M.G., Director, Bureau of Hygiene and Tropical Diseases.
- Mr. C. E. BAINES, India Office.
- The Hon. Sir HENRY BARWELL, K.C.M.G., Agent-General for South Australia.
- Dr. P. A. BUXTON, University Reader in Medical Entomology, London School of Hygiene and Tropical Medicine.
- Mr. J. C. F. FRYER, O.B.E., Director, Pathological Laboratory, Ministry of Agriculture and Fisheries.
- Sir SIDNEY F. HARMER, K.B.E., F.R.S.
- Dr. A. D. IMMS, F.R.S., Reader in Entomology, Cambridge.
- Sir DANIEL MORRIS, K.C.M.G., late Adviser to the Colonial Office in Tropical Agriculture.
- Emeritus Professor R. NEWSTEAD, F.R.S., The University of Liverpool.
- Professor G. H. F. NUTTALL, F.R.S., late Quick Professor of Protozoology, Cambridge.
- Mr. M. D. PETERSON, Foreign Office.
- Professor E. B. POULTON, F.R.S., Hope Professor of Zoology, Oxford.
- Lieutenant-Colonel Sir DAVID PRAIN, C.M.G., C.I.E., F.R.S.
- Sir HERBERT J. READ, K.C.M.G., C.B., late Assistant Under Secretary of State, Colonial Office.
- Mr. G. F. SEEL, Colonial Office.
- Dr. A. T. STANTON, C.M.G., Chief Medical Adviser to the Secretary of State for the Colonies.
- Mr. F. A. STOCKDALE, C.M.G. C.B.E., Agricultural Adviser to the Secretary of State for the Colonies.
- Mr. C. WARBURTON, Zoologist to the Royal Agricultural Society of England.

The Chief Entomologist in each of the Self-governing Dominions is *ex officio* a member of the Committee.

SECRETARY.

Mr. S. CAINE (Colonial Office).

DIRECTOR.

Sir GUY A. K. MARSHALL, C.M.G., F.R.S.

ASSISTANT DIRECTOR.

Dr. S. A. NEAVE, O.B.E.

SUPERINTENDENT OF FARNHAM HOUSE LABORATORY.

Dr. W. R. THOMPSON.

Head Office.—British Museum (Natural History), Cromwell Road, London, S.W.7.

Publication Office.—41, Queen's Gate, London, S.W.7.

CONTENTS.

ORIGINAL ARTICLES.

	PAGE
BEATTIE, M. V. F.	
The Physico-chemical Factors of Water in Relation to Mosquito Breeding in Trinidad (<i>illustrated</i>)	477
BONNE-WEPSTER, J.	
A Mosquito with larval Habits like <i>Taeniorhynchus</i> (<i>illustrated</i>) ...	69
A remarkable Malformation in the Male Hypopygium of <i>Aedes</i> (<i>Stegomyia</i>) <i>albopictus</i> , Skuse (<i>illustrated</i>)	233
BRUG, S. L.	
Notes on Dutch East Indian Mosquitos (<i>illustrated</i>)	73
Chitinisisation of Parasites in Mosquitos (<i>illustrated</i>)	229
CURRIE, G. A.	
Oviposition Stimuli of the Burr-seed Fly, <i>Euaresia aequalis</i> , Loew (Dipt. Trypetidae) (<i>illustrated</i>)	191
DAVIES, W. MALDWYN.	
Ecological Studies on Aphides infesting the Potato Crop (<i>illustrated</i>)	535
EDWARDS, F. W.	
Mosquito Notes. XI (<i>illustrated</i>)	559
FAURE, J. C.	
The Phases of Locusts in South Africa (<i>illustrated</i>)	293
GOLDING, F. D.	
Sodium Fluosilicate as a Poison against the Hoppers of <i>Locusta migratoria migratorioides</i> , R. & F., in Nigeria	449
HARDY, G. H.	
Notes on the <i>Sarcophaga peregrina</i> Group (Dipt.)	45
Some Australian Species of <i>Calliphora</i> (Subgenera <i>Neopollenia</i> and <i>Proekon</i>) (<i>illustrated</i>)	549
HODSON, W. E. H.	
A Comparison of the Larvae of <i>Eumerus strigatus</i> , Fln., and <i>Eumerus tuberculatus</i> , Rond. (Syrphidae) (<i>illustrated</i>)	247
The Large Narcissus Fly, <i>Merodon equestris</i> , Fab. (Syrphidae) (<i>illustrated</i>)	429
JOHNSTON, H. B.	
Notes on two Locusts of minor economic Importance in the Sudan	49
JOLLES, P.	
A Study of the Life-history and Control of <i>Cerambyx dux</i> , Fald., a Pest of certain Stone-fruit Trees in Palestine (<i>illustrated</i>) ...	251
KING, H. H., & RUTTLEDGE, W.	
On Experiments in the Use of Poison Dusts against Adult <i>Locusta migratorioides</i> , Rch. & Frm., in the Sudan	65
LEESON, H. S.	
Methods of Rearing and Maintaining large Stocks of Fleas and Mosquitos for Experimental Purposes (<i>illustrated</i>)	25

CONTENTS.

	PAGE
LE PELLEY, R. H.	
<i>Lygus simonyi</i> , Reut. (Hem. Capsid.), a Pest of Coffee in Kenya Colony (<i>illustrated</i>)	85
On the Control of <i>Antestia lineaticollis</i> , Stål (Hem., Pentatom.) on Coffee in Kenya Colony (<i>illustrated</i>)	217
MACGILL, E. I.	
The Biology of <i>Erythroneura (Zygina) pallidifrons</i> , Edwards (<i>illustrated</i>)	33
MACLAGAN, D. S.	
An ecological Study of the "Lucerne Flea" (<i>Smynthurus viridis</i> , Linn.) I & II (<i>illustrated</i>)	101, 151
MER, D.	
The Determination of the Age of <i>Anopheles</i> by Differences in the Size of the Common Oviduct (<i>illustrated</i>)	563
MILES, H. W.	
Biological Studies of Sawflies infesting <i>Ribes</i> (<i>illustrated</i>)	1
MILLER, D.	
The Biology and economic Status of New Zealand Muscidae and Calliphoridae.—Part I. Historical Review	469
MILLER, N. C. E.	
Observations on <i>Melamphaus faber</i> , F. (Hem., Pyrrhocoridae) and Descriptions of early Stages (<i>illustrated</i>)	195
MYERS, J. G.	
The original Habitat and Hosts of three major Sugar-cane Pests of Tropical America (<i>Diatraea</i> , <i>Castnia</i> and <i>Tomaspis</i>) (<i>illustrated</i>)	257
PICKLES, A.	
Notes on the natural Enemies of the Sugar-cane Froghopper (<i>Tomaspis saccharina</i> , Dist.) in Trinidad, with Descriptions of new Species (<i>illustrated</i>)	203
POMEROY, A. W. J., & MORRIS, K. R. S.	
The Tsetse Problem on the Eastern Cattle Route in the Gold Coast (With an Appendix by K. R. S. Morris on an Ecological Study and Experimental Clearing at Makongo) (<i>illustrated</i>)	501
SALT, G.	
Superparasitism by <i>Collyria calcitrator</i> , Grav. (With an Appendix by R. H. Stoy)	211
The natural control of the Sheep Blowfly, <i>Lucilia sericata</i> , Meigen	235
TAYLOR, A. W.	
Pupal Parasitism in <i>Glossina morsitans</i> and <i>G. tachinoides</i> at Gadau, Northern Nigeria (<i>illustrated</i>)	463
THEODOR, O.	
On the Structure of the Buccal Cavity, Pharynx and Spermatheca in South American <i>Phlebotomus</i> (<i>illustrated</i>)	17
UVAROV, B. P.	
Ecological Studies on the Moroccan Locust in Western Anatolia (<i>illustrated</i>)	273

MISCELLANEOUS.

Collections received	147, 289, 425, 567
------------------------------	--------------------

ERRATA.

- Page 82, legend to fig. 11, *d* should read " scale of 8th segment of larva of *C. castrensis* " and *e* " scale on 8th segment of larva of *C. castrensis* var. *foliatus*, n., according to Senior-White "
- „ 83, line 5, for " broader " read " narrower "
 - „ 224, line 11, and page 226, line 31, for " *Toxopterum* " read " *Toxoptera* "
 - „ 255, line 5, for " 15 cm." read " 15 mm."
 - „ 255, line 42, for " 17 cm." read " 17 mm."

DATES OF PUBLICATION IN PARTS.

Part I	pp. 1-150	...	31 March 1932.
Part II	pp. 151-292	...	14 July 1932.
Part III	pp. 293-428	...	27 September 1932.
Part IV	pp. 429-570	...	30 December 1932.