

BULLETIN
OF
ENTOMOLOGICAL RESEARCH.

ISSUED BY THE IMPERIAL
INSTITUTE OF ENTOMOLOGY.

EDITOR: THE DIRECTOR.

VOL. XXI

LONDON:
THE IMPERIAL INSTITUTE OF ENTOMOLOGY,
41, QUEEN'S GATE, S.W.7.
1930.

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., 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.
- Major-General Sir DAVID BRUCE, K.C.B., F.R.S., Chairman of the Governing Body, Lister Institute.
- 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.
- The Hon. Sir GEORGE FULLER, K.C.M.G., Agent General for New South Wales.
- Sir SIDNEY F. HARMER, K.B.E., F.R.S.
- Dr. R. STEWART MACDOUGALL, late Reader in Agricultural Entomology, Edinburgh University.
- Sir JOHN MCFADYEAN, late Principal, Royal Veterinary College, Camden Town.
- Sir DANIEL MORRIS, K.C.M.G., late Adviser to the Colonial Office in Tropical Agriculture.
- Mr. J. MURRAY, C.M.G., Foreign Office.
- Emeritus Professor R. NEWSTEAD, F.R.S., The University of Liverpool.
- Professor G. H. F. NUTTALL, F.R.S., Quick Professor of Protozoology, Cambridge.
- Mr. A. C. C. PARKINSON, C.M.G., O.B.E., Colonial 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.
- Dr. A. T. STANTON, C.M.G., Chief Medical Adviser to the Secretary of State for the Colonies.
- Mr. F. A. STOCKDALE, 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. G. F. SEEL (Colonial Office).

DIRECTOR.

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

ASSISTANT DIRECTOR.

Dr. S. A. NEAVE.

SUPERINTENDENT OF FARNEHAM 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
ADLER, S., THEODOR, O., & LOURIE, E. M.	On Sandflies from Persia and Palestine (<i>illustrated</i>)	529
AYYAR, P. N. KRISHNA.	A Note on <i>Stibaropus tabulatus</i> , Schiö. (Hem., Pent.), a new Pest of Tobacco in South India	29
BARNES, H. F.	Gall Midges (Cecidomyiidae) as Enemies of the Tingidae, Psyllidae, Aleyrodidae and Coccidae	319
	A new Thrips-eating Gall Midge, <i>Thripsobremia liothripis</i> , gen. et sp. n. (Cecidomyiidae) (<i>illustrated</i>)	331
BEDFORD, H. W.	The Distribution of Tsetse-flies in the Sudan (<i>illustrated</i>) ...	413
BOX, H. E.	A new Moth Borer of Sugar-cane in Argentina (Lepidoptera: Pyralidae) (<i>illustrated</i>)	307
BRYANT, G. E.	Some new injurious Phytophaga from Somaliland and Uganda (<i>illustrated</i>)	361
CHINA, W. E.	A new Species of <i>Erythroneura</i> (Homoptera, Jassoidea) injurious to Cassava in East Africa (<i>illustrated</i>)	267
DAVIDSON, J., & BALD, J. G.	Description and Bionomics of <i>Frankliniella insularis</i> , Franklin (Thysanoptera) (<i>illustrated</i>)	365
DE MEILLON, B.	On the Ethiopian Simuliidae (<i>illustrated</i>)	185
EDWARDS, F. W.	Mosquito Notes.—IX & X (<i>illustrated</i>)	287, 541
FERRIÈRE, C.	On some Egg-parasites from Africa (<i>illustrated</i>)	33
	Notes on Asiatic Chalcidoidea	353
GARDNER, J. C. M.	The early Stages of <i>Niponius andrewesi</i> , Lew. (Col., Hist.) (<i>illustrated</i>)	15
GIBBINS, E. G.	A simple Method of making permanent Microscope Mounts of Mosquito Larvae (<i>illustrated</i>)	429
GLOVER, P. M.	Entomological Aspects of Lac Research in India (<i>illustrated</i>) ...	261
HAMLIN-HARRIS, R.	Halticinae (Col.) as possible Factors in Natural Control of Mosquitos in Queensland	159
HARDY, G. H.	The Queensland Species of <i>Calliphora</i> subgenus <i>Neopollenia</i> (<i>illustrated</i>)	441
HOWLAND, L. J.	The Nutrition of Mosquito Larvae, with special Reference to their Algal Food (<i>illustrated</i>)	431
JACKSON, C. H. N.	Contributions to the Bionomics of <i>Glossina morsitans</i> (<i>illustrated</i>)...	491
KIRKPATRICK, T. W.	A preliminary Note on Leaf-crinkle of Cotton in the Gezira Area, Sudan	127

CONTENTS

	PAGE
LAING, F.	
A new Genus and two new Species of Coccidae from the Solomon Islands (<i>illustrated</i>)	19
LEESON, H. S.	
A new Variety of <i>Anopheles funestus</i> , Giles, from Southern Rhodesia (<i>illustrated</i>)	125
Variations in the Wing Ornamentation of <i>Anopheles funestus</i> , Giles (<i>illustrated</i>)	421
MARSHALL, J. F.	
A new Form of Apparatus for photographing Insects (<i>illustrated</i>)	139
MASSE, A. M.	
On some Species of Gall-mites (Eriophyidae) found on <i>Corylus avellana</i> , L. (<i>illustrated</i>)	165
MAULIK, S. .	
New injurious Hispinae (<i>illustrated</i>)	45
MEHTA, D. R.	
Observations on the Influence of Temperature and Humidity on the Bionomics of <i>Dysdercus cingulatus</i> , Fabr. (<i>illustrated</i>) ...	547
MISRA, A. B.	
On a Collection of Lac Insects from Northern India (<i>illustrated</i>) ...	161
On the post-embryonic Development of the Female Lac Insect, <i>Laccifer lacca</i> , Kerr (Hem. Coccidae) (<i>illustrated</i>)... .. .	455
MOREAU, R. E.	
Locust-hoppers and Birds in East Africa	141
MORISON, G. D.	
On a Collection of Thysanoptera from South Australia (<i>illustrated</i>)	9
New Thysanoptera from South Australia (<i>illustrated</i>)	449
MYERS, I. H.	
Notes on Parasites of the Gall Midge (<i>Jatrophia brasiliensis</i> , Rüb.) of Cassava in Trinidad	309
MYERS, J. G.	
<i>Carabumia myersi</i> , Watrst. (Hym., Encyrtidae), a Parasite of nymphal Froghoppers (Hom., Cercopidae) (<i>illustrated</i>)	341
NASH, T. A. M.	
A Contribution to our Knowledge of the Bionomics of <i>Glossina morsitans</i> (<i>illustrated</i>)	201
NOYES, W. M.	
Moth Pests of Cocoa and Confectionery	77
ROBERTS, A. W. RYMER.	
A Key to the principal Families of Coleoptera in the larval Stage (<i>illustrated</i>)	57
ROBERTS, J. I.	
The Tobacco Capsid (<i>Engytatus volucer</i> , Kirk.) in Rhodesia (<i>illustrated</i>)	169
ROHDENDORF, B.	
Records of Sarcophagidae with new Species (<i>illustrated</i>)	315
RUTLEDGE, W.	
Notes on <i>Argas brumpti</i> (Acarina)	273
SHORTT, H. E., SMITH, R. O. A., & SWAMINATH, C. S.	
The Breeding in Nature of <i>Phlebotomus argentipes</i> , Ann. & Brun....	269
TAMS, W. H. T.	
A Note on certain Species of the Genus <i>Tirathaba</i> , Walker (Lepid., Pyral.) (<i>illustrated</i>)	73
Two new Moths with Larvae injurious to Coffee in Uganda (<i>illustrated</i>)	73

CONTENTS

	PAGE
TAMS, W. H. T.	
A new Moth damaging Oil-palm in the Belgian Congo (<i>illustrated</i>)	75
Four Moths of the Family Limacodidae injurious to Coconut Palms (<i>illustrated</i>)	489
TAYLOR, A. W.	
<i>Glossina palpalis</i> and Sleeping Sickness at Ganawuri, Plateau Province, Northern Nigeria (<i>illustrated</i>)	333
THORPE, W. H.	
Observations on the Parasites of the Pine-shoot Moth, <i>Rhyacionia</i> <i>buoliana</i> , Schiff. (<i>illustrated</i>)... ..	387
TRÄGÅRDH, I.	
Some Aspects in the Biology of Longicorn Beetles (<i>illustrated</i>) ...	1
Studies on the Galleries of the Bark-beetles (<i>illustrated</i>)	469
WILKINSON, D. S.	
A Revision of the Indo-Australian Species of the Genus <i>Microplitis</i> (Hym., Bracon.)	23
New Species and Host Records of Ichneumonidae and Braconidae (<i>illustrated</i>)	147
New Braconidae and other Notes (<i>illustrated</i>)	275
New Species and Host Records of Braconidae (<i>illustrated</i>) ...	481

MISCELLANEOUS.

Collections received 123, 257, 417, 563

ERRATA.

Page 196, line 2, for " H. K. Barnard " read " K. H. Barnard "

„ 326, line 26, for " *Anoma* " read " *Anona* "

„ 391, line 11, for " *buolianae* " read " *buolianus* "

„ 395, 5 lines from end, for " nine pairs " read " ten pairs "

„ 397, line 13, for " *Pamene* " read " *Pammene* "

„ 410, lines 9, 15, for " 80° C." read " 80° F."

„ 478, line 20 & 480, line 1, for " *Pityogenes* " read " *Pityophthorus* "

„ 485, line 30, for " *utetheisae*, sp. n.," read " *guyanensis* Cam."