



Zootaxa 3143: 1–163 (2011)
www.mapress.com/zootaxa/

Copyright © 2011 · Magnolia Press

Monograph

ISSN 1175-5326 (print edition)

ZOOTAXA

ISSN 1175-5334 (online edition)

ZOOTAXA

3143

Parasites of animals in Papua New Guinea recorded at the National Veterinary Laboratory: a catalogue, historical review and zoogeographical affiliations

IFOR L. OWEN

*c/o National Veterinary Laboratory, National Agriculture Quarantine and Inspection Authority, PO Box 741, Port Moresby,
Papua New Guinea. E-mail: iowen@datec.net.pg*



Magnolia Press
Auckland, New Zealand

Accepted by N. Dronen: 30 Sep. 2011; published: 23 Dec. 2011

IFOR L. OWEN

**Parasites of animals in Papua New Guinea recorded at the National Veterinary Laboratory:
a catalogue, historical review and zoogeographical affiliations**

(*Zootaxa* 3143)

163 pp.; 30 cm.

23 Dec. 2011

ISBN 978-1-86977-831-6 (paperback)

ISBN 978-1-86977-832-3 (Online edition)

FIRST PUBLISHED IN 2011 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

<http://www.mapress.com/zootaxa/>

© 2011 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

Table of contents

Abstract	3
Introduction	3
Material and methods	6
Results and discussion	84
Domestic Animals—Endemic and Well-Established Parasites	84
Domestic Animals—Exotic and Recently Discovered Parasites	136
Wildlife—Ectoparasites	137
Wildlife—Endoparasites	138
Acknowledgments	140
References	140

Abstract

The catalogue includes more than 700 parasites of domestic and wild animals recorded at the National Veterinary Laboratory, Papua New Guinea, since data began to be gathered at the end of World War 2. It incorporates some information already published and data on parasites, particularly of indigenous fauna, not recorded previously in the country. Wildlife host species include wild pig, deer, bats, murine rodents, marsupials, monotremes, birds, reptiles, amphibians, fishes and invertebrates. The range of parasites in domestic and many wild animals shows great affinity with that found in Australia. Some notable exceptions amongst domestic animal parasites are the endoparasites *Trichinella papuae*, *Capillaria papuensis* and *Mammomonogamus laryngeus* and the economically significant ectoparasites *Chrysomya bezziana*, *Tropilaelaps mercedesae* and *Varroa jacobsoni* that are not recorded in Australia. Unusual host-parasite associations include the larvae of the insects *Chrysomya* spp. and *Lucilia* sp., parasites of warm-blooded animals, infesting, respectively, cold-blooded crocodiles and cane toads, and the mammalian mite, *Sarcoptes scabiei*, on an avian host, cassowaries. No host switching of helminths was seen between domestic and wild animals, or between populations of deer, wild pigs and wallabies when grazing together. The economic importance of certain parasites for domestic animals, the potential threats from introduced or newly-discovered parasites, and the relationship between some parasites and their wildlife hosts, are discussed. Information is presented in two tables: a parasite–host list that includes the location of a parasite in or on a host as well as a list of references of relevance to the country, and a host–parasite list that contains the distribution of the parasites according to province or locality.

Key words: ectoparasites, endoparasites, bacteria, protozoans, helminths, acanthocephalans, annelids, insects, acarines, pentastomids, crustaceans, domestic animals, wildlife

Introduction

The first survey of animal parasites in the country was carried out in 1945/46 by the 1st Australian Mobile Veterinary Survey Unit (AMVSU) (Anonymous 1946) to check the disease status of domesticated animals and to ascertain if animals, mainly horses and dogs, imported by the various armed forces during the second World War (WW2), had introduced animal diseases and parasites that were exotic to Papua New Guinea (PNG). The survey revealed that some had been brought in, but these were effectively eliminated by the subsequent slaughter of affected and “in contact” animals (Egerton & Rothwell 1964).

Dumbleton (1954), on behalf of the South Pacific Commission, prepared a list of parasites and diseases of mostly domestic animals in PNG (as well as other South Pacific countries), based on the AMVSU report and information supplied by the then Department of Agriculture, Stock and Fisheries (DASF); the information was updated by Anderson (1960). A more comprehensive list was produced by Egerton and Rothwell (1964) and further new parasite records were published by Talbot (1968/69). The parasites of particular domestic and farm animals have been reported subsequently by staff of the National Veterinary Laboratory (NVL), namely, Talbot (1969—chickens; 1970—cats; 1972—pigs), Copland (1974, 1975, 1976—pigs), Humphrey (1979, 1984—chickens), Hamir (1984, 1987—dogs), Hamir and Wernery (1987—dogs), Owen (1984, 1990—cattle; 1998—sheep); Owen and Talbot (1983—cattle), Owen *et al.* (2000—pigs) and Ladds and Sims (1990—farmed crocodiles).