Annual Progress Report

Apr. 1962 - Mar. 1963

J. L. Gressitt, Principal Investigator

Bernice P. Bishop Museum, Honolulu, Hawaii

POTENTIAL VECTORS AND RESERVOIRS OF DISEASE IN NEW GUINEA AND SOUTH ASIA

Grant No. DA-MD-49-193-62-G65

1. Preparing Institution: Bernice P. Bishop Museum, Honolulu 17, Hawaii

2. Title of Report: Potential vectors and reservoirs of disease in New Guinea and South Asia.

3. Principal Investigator: J. L. Gressitt

4. Number of pages: 5

5. Grant Number: DA-MD-49-193-62-G65

6. Supported by: U. S. Army Medical Research and Development Command
Department of the Army
Washington 25, D. C.

ABSTRACT

During the period April 1, 1962 - March 31, 1963, funds in the amount of $82,560 from the U. S. Army Medical Research and Development Command provided support for field work particularly in West New Guinea where much political unrest occurred. In addition, further field work was done in Philippines, North Borneo, Australian New Guinea and Malaya. The primary objective was to collect arthropods, particularly those of medical importance. Special emphasis was placed on collection of ectoparasites from vertebrate hosts. An estimated total of 760,000 specimens of arthropods including about 235,000 ectoparasites taken from 10,400 vertebrates were collected, partly in conjunction with other projects supported by the U. S. Army Medical Research and Development Command and National Institutes of Health. These are being processed in Honolulu, Malaya, Taiwan and Japan in order to make them available early for study by collaborating specialists.

April 19, 1963

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This third grant from the U. S. Army Medical Research and Development Command provided further support for field work in New Guinea, Philippines, Malaya and North Borneo. The main objective was to collect ectoparasites from mammals, birds and other vertebrate hosts, as well as other arthropods of potential medical importance. Documentation of host-ectoparasite data was also made. Host vertebrate animals were collected. In addition, other miscellaneous insects, reptiles and amphibians were collected.

Field research was extensively concentrated in West New Guinea, commencing in June 1962, because of the impending political changeover. Every effort was made to collect as much material as possible during this period. In June 1962 Dr. J. L. Gressitt spent three weeks in Hollandia, Biak, Nabire and Enarotali to organize the expedition and to spend some time collecting specimens. He was joined by Dr. M. Wilson, acarologist, who became leader of the expedition from June through end of November. Mr. J. Sedlacek, Mr. H. Clissold and Bukam Simasi also joined the team from June - early September. On October 1, 1962 when West New Guinea was under United Nations Temporary Executive Authority, field work still continued. Other participants were Dr. L. P. Richards (vertebrate zoologist, Sept. 1962 - mid-March 1963) and Dr. H. Holtmann (entomologist, Sept. 1962 - Jan. 1963) who worked on Japen I., Manokwari and Oransbari (Vogelkop). In January 1963 Mr. M. Thompson was transferred from North Borneo to West New Guinea. Also, Mr. R. P. Temple and Mr. K. Straatman joined the team at Manokwari. The intention was to continue the field operations as long as possible; however, the situation became dangerous, with serious problems in connection with communication, travel, food, supplies, equipment, safety, etc. This made it impossible to continue the field work, and the West New Guinea expedition was terminated at the end of March 1963. The team was transferred to Wewak, Territory of Northeast New Guinea (Australian mandated New Guinea).

In Australian New Guinea, field activities continued in the vicinity of the Bishop Museum's Field Station at Wau where Josef Sedlacek is resident entomologist assisted by his wife and Mr. H. Clissold, vertebrate zoologist.

During October and November Mr. and Mrs. Sedlacek and Mr. Clissold went to the Gazelle Peninsula in New Britain to do field work, particularly emphasizing collection of ectoparasites from vertebrates. Transport difficulties (lack of road and good trails) were encountered, but there were some worthwhile results.

In Malaya, in collaboration with the University of Malaya, Kuala Lumpur, additional support was extended in order to carry out field work there and adjacent areas. Mr. I. B. Mohamed was hired to do half-time field assistance for the Museum under Mr. J. A. Bullock's supervision. Mr. K. J. Kuncheria also continued work in Malaya as well as in North Borneo.

Field work in North Borneo was partially supported by this grant. Participants for varying periods were Max Thompson, H. Holtmann, Y. Hirashima, J. L. Harrison, Lim Boo Liat, K. J. Kuncheria, I. B. Mohamed, A. Garcia, B. Ensoll, and J. A. Bullock. Areas worked were Tawau, Kalabakan and Tenom. The period of the expedition was June 1962 - February 1963.

Dr. D. S. Rabor, vertebrate zoologist, led an expedition to Palawan in mid-March - June 1962 with Dr. Yoshimoto, Mr. Thompson and Dr. Holtmann participating. From December 1962 through February 1963 a field party organized by Dr. Rabor worked on Mt. Katanglad. The team is currently collecting in Agusan and Surigao, Mindanao Island.

Approximate numbers of specimens collected during this period are as follows (including those collected in conjunction with projects supported by U. S. Army Medical Research and Development Command G-47 and National Institutes of Health:

Locality	Ectoparasites	Other Arthropods	Vertebrates
West New Guinea	100,000	75,000	2,000
Australian N. Guinea	50,000	150,000	1,000
New Britain	10,000	15,000	400
Philippines	50,000	75,000	5,000
N. Borneo	75,000	150,000	2,000
Malaya		10,000	
	285,000	475,000	10,400

Specimens are being processed at the Bishop Museum, Institute for Medical Research (Kuala Lumpur), in Taiwan and in Japan. Two technicians sorted ectoparasites and mounted mites in Honolulu. A number of groups of ectoparasites has been sent out to collaborating specialists for study.

The vertebrate specimens are being determined by collaborators at the American Museum of Natural History, U. S. National Museum, Peabody Museum, University of Kansas, Silliman University, University of Malaya and University of Singapore. Dr. J. L. Harrison, mammal ecologist, of the University of Singapore is being assisted with funds to determine the Borneo mammals.

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