

Mosquitoes collected in the
British Solomon Islands Protectorate between
March 1964 and October 1968
(Diptera: Culicidae)

by

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INTRODUCTION

During an assignment with the malaria pre-eradication programme in the British Solomon Islands Protectorate (B.S.I.P.), from March 1964 until October 1968, the writer had an opportunity to identify mosquitoes collected on most islands of the group. As the collections were carried out in connection with anti-malaria work, the sampling was biased in favour of species of the genus *Anopheles* Meigen.

Identifications were based on the keys and illustrations in BELKIN's book on the mosquitoes of the South Pacific (BELKIN, 1962). No species new to science were discovered, but a number of species were recorded from islands from which they had not been known previously. The findings relate mainly to the vectors of human malaria, *Anopheles punctulatus* Dönitz 1901, *A. farauti* Laveran 1902, and *A. koliensis* Owen 1945.

In view of the scarcity of published distribution records pertinent to this part of the globe, it seems desirable to put even the most modest findings on record. Data presented below should be regarded in this light.

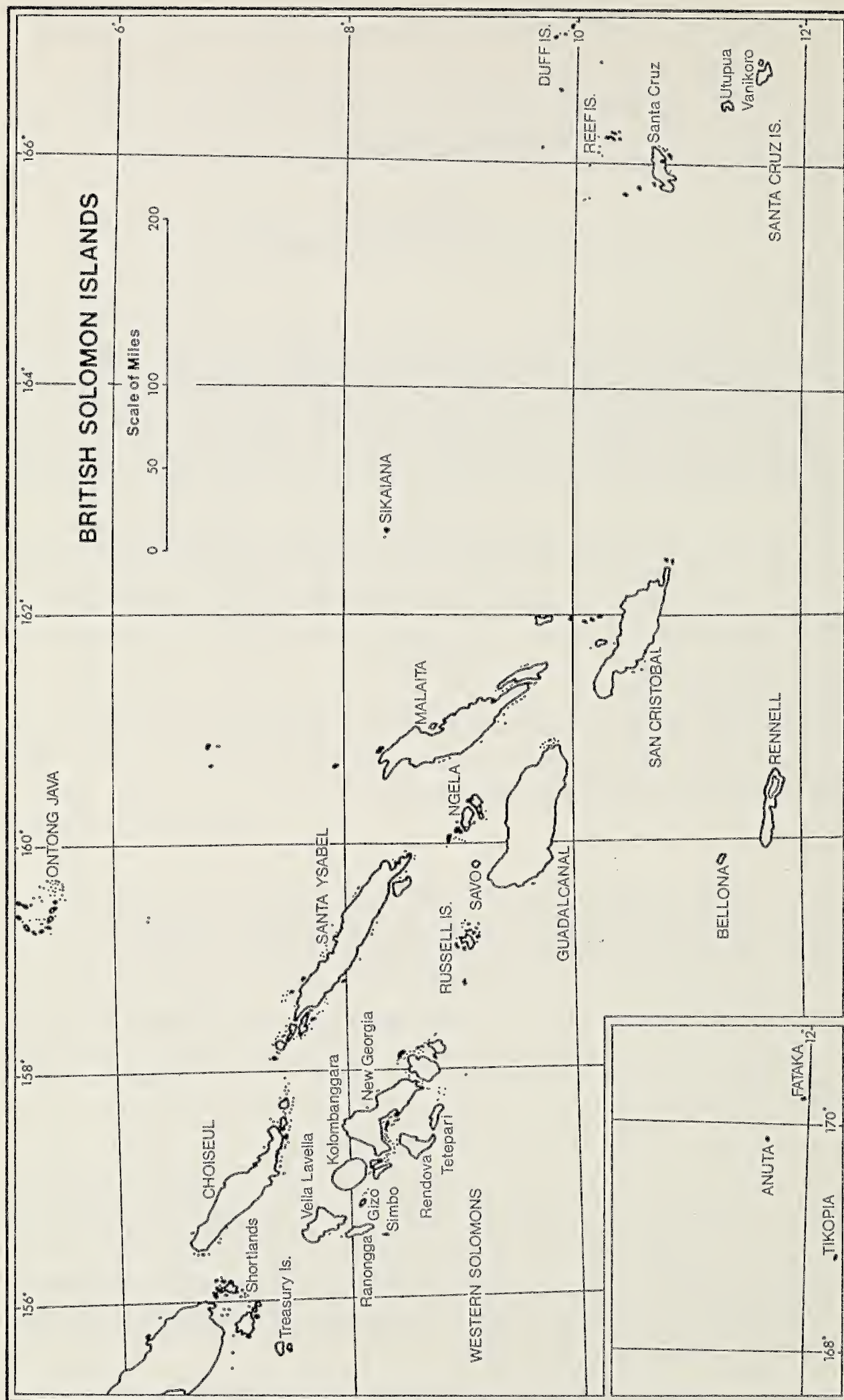
METHODS

As anti-malaria spraying with DDT was going on in only part of the B.S.I.P., the entomological methods applied during the period under consideration were not uniform. It will be necessary to distinguish three categories of islands: (a) islands where regular spraying of all houses with residual DDT took place at intervals of six months, (b) islands where no DDT spraying was undertaken but where entomological surveys were carried out from time to time, and (c) islands not sprayed and not surveyed.

(a) Islands under regular spray cover.

Since 1962, all houses on the following islands had been under regular spray cover (2 gr DDT per square meter, once every six months): GUADALCANAL, SAVO, and in the WESTERN SOLOMONS the islands of New Georgia, Gizo, Simbo, Ranongga and Vella Lavella. In 1965 the following islands in the Western Solomons were added to the house spraying programme: Kolombanggara, Rendova, Tetepari, Shortlands and Treasury islands.

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Entomological observations on these islands were concentrated in fixed collection stations, where at regular intervals collections of mosquitoes biting human baits at night, or resting inside houses at night, would be carried out. The length of the intervals between collections would depend on the incidence of malaria in the stations. Four stations along the North coast of Guadalcanal were visited at fortnightly intervals, three stations on Savo at monthly intervals (transport facilities permitting), while another two stations in the interior of Guadalcanal, two on the South coast of Guadalcanal and seven scattered in the Western Solomons were visited only once every six months. Besides such observations in fixed collection stations, collections would be carried out as spot checks in other localities in order to arrive at a more representative picture. Occasionally, mosquitoes resting out of doors were collected.

(b) Unsprayed islands where surveys were carried out.

Pre-spraying surveys were carried out on unsprayed islands in order to provide base-line data for the evaluation of future spraying programmes. During the period under consideration, the following pre-spraying surveys were undertaken: in the RUSSELL ISLANDS in Nov. 1965 and March 1966; on CHOISEUL in Januari 1966, in May 1966, in April/May 1968 and in June 1968; on SANTA YSABEL in August/September 1966, February 1967 and July 1967; on NGELA in September 1964, from March to May 1965, December 1965 and May/June 1967; on MALAITA from August to October 1967; on SAN CRISTOBAL in September 1967 and November 1967; on RENNELL and BELLONA in April 1966; on ONTONG JAVA ATOLL and SIKAIANA in January 1968; in the SANTA CRUZ ISLANDS (comprising of Santa Cruz, Utupua and Vanikoro) in February/March 1968 and June 1968 (before the June 1968 survey, one round of DDT was sprayed in Utupua and Vanikoro).

These surveys were aimed at sampling mosquito populations in as many different localities and in as many different types of environment as possible. Localities were selected in haphazard fashion rather than at random, but with due regard to obtaining a reasonable cross-section of the various types of human settlements as well as covering most of the total geography of each island concerned.

The techniques applied on unsprayed islands consisted of collections of mosquitoes attacking human baits at night, specimens resting inside houses at night, or resting inside houses by day. Especially the lastnamed method proved very fruitful, as while only one night catch could be carried out during a twenty-four hour period, many different villages could be inspected for indoor resting mosquitoes during daylight hours. In the islands mentioned under (a) above, the presence of DDT deposits on the inner walls of all houses rendered any attempt to find indoor resting anophelines in the daytime pointless. In addition to collections of adult mosquitoes, surveys for mosquito larvae were carried out in a variety of breeding places.

(c) Islands not sprayed and not surveyed.

These include Tikopia, Anuta, Fataka, the REEF and DUFF ISLANDS in the Eastern parts of the B.S.I.P.

RESULTS

Results of our identifications will be presented below. For each species encountered we will state the island where it was found (offshore islets will be considered as belonging to the nearest main island), the locality or area of capture, and the life stage examined (L = larvae, P = pupae, A = adults).

Tribe ANOPHELINI

Genus *Anopheles* Meigen*A. farauti* Laveran 1902

This is by far the most common of the malaria vectors in the B.S.I.P. It was found on all of the major islands. Spraying of houses with residual DDT, started in some islands in 1962 and in others in 1965, did not wipe out this species. In some sprayed areas, such as most of the Western Solomons and parts of the interior "bush" and the Southern coast of Guadalcanal, the densities of *A. farauti* had been brought down considerably. However, very high densities despite DDT spraying, could often be recorded in localities along the Northern coast of Guadalcanal, where *A. farauti* was found biting man mostly within one hour following sunset. Residual malaria transmission in such areas appeared to be difficult to control. The reasons why this species showed such an unsatisfactory response to DDT house spraying in certain parts of the project area could not be determined. The phenomenon was not due to DDT-resistance.

GUADALCANAL — Generally found all over the island (L, P, A), but relatively rare in the interior "bush" and most of the Southern coast.

SAVO — Generally all over the island (L, P, A), in fluctuating densities.

WESTERN SOLOMONS — Generally very rare, except in Vori (Ranongga) (L, P, A), where collections could be made at all times of the year.

RUSSELL ISLANDS — Banika station (A), Hoi (A), Lever point (A), Louna (A), Nukafeta (A), Number Six (A), Ufa (A), White beach (A), Yandina (L, A).

CHOISEUL — Balaaso (A), Banganoe (A), Bobokuana (A), Boe (A), Chenani (A), Dudurava (L, A), Gagara (A), Kakasa (A), Katurasele (A), Keala (A), Kilanavae (A), Kuku (A), Lokalanje (L), Liu Liu (A), Malangono (A), Mamarama (A), Manango island (A), Mango (A), Maqo (A), Naravure (A), Nukiki (L), Ogo (A), Pagoe (L, A), Palagagi (A), Palagaju (A), Panarui (A), Papara (L, A), Patubelo (L, A), Penitave (A), Polo (L, A), Poroporo (L, A), Posarai (L), Pututu (L), Sagigai (L), Sasamonga (L, A), Sepo (A), Serevana (A), Sipozae island (L, A), Supesupe (A), Susuka (L), Tabasaru (A), Tamata (L, A), Taro island (L), Tigibanara (L), Tungala (A), Tunoe (A), Vanakuva (A), Varuga (L, A), Vavundu (A), Voza (A).

SANTA YSABEL — Buala (A), Bulavu (A), Burusoleh (A), Gnulahage (A), Gove (A), Huali (A), Hurapelo (A), Japuana (A), Kesao (L), Kia (A), Kilokaka (A), Kolopakisa (A), Kuboloto (A), Lighare (A), Muana (A), Popogeo (A), Rechi (A), Samasodu (A), Sigana (A), Sisiga (A), Sorustano (A), Suavana (A), Suma (A), Susubona (A), Tatamba (A), Tuarugu (A).

NGELA — Belaga (A), Bokolonga (A), Bola (A), Borohinaba (A), Boromoli (A), Bungana school (A), Buronia (A), Burungia (A), Dadala (A), Gole (A), Hagela (A), Hainevaivine (A), Halavo (A), Haleta (A), Haroro (A), Koelovalala (A), Koleala (A), Kombi (A), Komurarara (A), Longridge school (A), Nata (A), Polumhu (A), Rara (A), Salisapa (A), Sebelea (A), Siarana (A), Siota (A), Soso (A), Tahi (A), Takavali (A), Takopikopi (A), Taroaniara (A), Tavulea (A), Tinaidari (A), Toa (A), Tumuligohu (A), Vatapura (A), Vunuha (A), Vura (A), Vuranimala (A).

MALAITA — Ato'ifi (A), Auki (L, A), Daringali (A), Fiu Ngarifata (A), Fuambu (A), Kavosila (A), Kiluufi (A), Kiu (A), Koukousurisau (A), Lilisiano (A), Malou (A), Mariki (A), Nafinua (A), Nasupa'a (A), Hauhui (A), Nggwaiau (A), Oteota (A), Pipisu (A), Rioreta (A), Rohinari (A), Subonbona (A), Surairo (A), Talakali (A), Tarawasi (A), Tawani (A), Tiula (A).

SAN CRISTOBAL — Baunasugu (A), Bauro (A), Pamua (A), Tawane (A), Waimapuru (A), Wmanigari (A).

RENNELL — Matangi (L), Niupani (A), Teovamaga (L).

SANTA CRUZ ISLANDS — Banoemba (Sta. Cruz) (A), Bimbo (Sta. Cruz) (A), Buma (Vanikoro) (L, A), Nambuko (Vanikoro) (L, A), Nangu (Sta. Cruz) (A), Nembao (Utupua) (L, A), Pala (Sta. Cruz) (A), Urongo (Sta. Cruz) (A).

A. koliensis Owen 1945

A common species in West Irian and the Territory of Papua and New Guinea (T.P.N.G.). In the B.S.I.P., BELKIN (1962) recorded *A. koliensis* only from areas near its type locality, Koli, on the Northern coast of Guadalcanal. Subsequent observations by LIU (1963) and MATAIKA (1964) had shown that its area of distribution on Guadalcanal must have been larger. However, regular DDT house spraying operations have obscured the picture again, and today *A. koliensis* is believed to be extinct from Guadalcanal.

GUADALCANAL — Recorded previously by BELKIN (1962), LIU (1963) and MATAIKA (1964), but not found during the present writer's stay.

SAVO & WESTERN SOLOMONS — There are no records of *A. koliensis* from these areas, past or present, but in the light of happenings on Guadalcanal this could be attributed to insufficient collecting in these islands before DDT spraying was commenced in 1962 and 1965.

CHOISEUL — Balaaso (A), Banganoe (A), Bokokuana (A), Chenani (A), Dudurava (A), Gagara (A), Kilanavae (A), Koloe (A), Lokolanji (A), Maqo (A), Nambusana (A), Naravure (A), Ogo (A), Pagoe (A), Palagaju (A), Panarui (A), Papara (A), Patebelo (A), Polo (A), Sasamonga (A), Sepo (A), Seravana (A), Tabasaru (A), Tamata (A), Vanakuva (A), Varuqa (A), Vavundu (A), Voza (A).

SANTA YSABEL — Huali (A), Hurupelo (A), Kilokaka (A), Muana (A), Sorustano (A), Tuarugu (A).

NGELA — Belaga (A), Borohinaba (A), Boromoli (A), Hainevaivine (A), Siarana (A), Tavulea (A).

MALAITA — Anololo (A), Daringali (A), Fiu Ngarifata (A), Hauhui (A), Kavosila (A), Kiluufi (A), Kiu (A), Malu'u (A), Mariki (A), Nafinua (A), Nggwaiau (A), Rohinari (A), Rioreta (A), Subonbona (A), Takwa (A), Tiula (A).

SAN CRISTOBAL — Baunasugu (A), Bauro (A), Tawana (A), Waimapuru (A), Wmanigari (A).

RENNELL — Not found by present author, but MAFFI (1969) found larvae during a later visit to the island.

A. punctulatus Dönitz 1901

This is the least common species of the *punctulatus* complex, in the B.S.I.P. as well as elsewhere. Breeding is almost exclusively in temporary rainwater pools, which renders the species dependent not only on the occurrence of stable climatic conditions but also on the existence of geological features which allow such pools to form. Sandy soils and limestone are not suitable for this species. BELKIN (1962) reported *A. punctulatus* in the B.S.I.P. only from the islands of Guadalcanal and Savo.

GUADALCANAL — Pre-spraying records of LIU (1963) and MATAIKA (1964) are fully in agreement with those published by BELKIN (1962). The species used to be fairly common and widespread in the interior "bush" areas, sometimes outnumbering all other anophelines. Since DDT spraying operations began in 1962, however, *A. punctulatus* was recorded only once. This record is from Voghulonga (A), — a village in the interior at an altitude of about 1,200 feet. There have not been any further postspraying records since.

SAVO & WESTERN SOLOMONS — Not found by present author. Evidence that the species existed on Savo island before DDT spraying was introduced in 1962 was given by BELKIN (1962). As with regard to *A. koliensis*, the absence of records of *A. punctulatus* from the Western Solomons may be due to the general paucity of pre-spraying collections in those islands.

SANTA YSABEL — Buala (A).

MALAITA — Fiu Ngarifata (A), Mariki (A).

A. lungae Belkin & Schlosser 1944

This species was first found on Guadalcanal. It bites man only occasionally, and although it is quite a common species (in outdoor collections of resting specimens, mainly), it plays no role in the transmission of human diseases. Precipitin tests on stomach contents collected by the present author revealed that more than 80 % of the bloodmeals had been taken on birds. The B.S.I.P. records given by BELKIN (1962) include the Western Solomons, Ngela and Guadalcanal.

GUADALCANAL — Our findings agree with those of BELKIN (1962). Very abundant in certain localities along the Northern coast: Lunga (L, A), Koli (L, A), Ilu farm (L, A).

CHOISEUL — Koloe (L), Sasamonga (L, A), Varuvaru (L).

SANTA YSABEL — Kesao (L).

NGELA — Vunuha (A, man-biting).

MALAITA — Matanasi (A, man-biting).

A. nataliae Belkin 1945

Like *A. lungae*, this species was first described from Guadalcanal. Rather little is known about the bionomics of *A. nataliae*, except that the larvae appear to be found mostly in springs, seepages and creeks, in dense jungle shade. BELKIN's (1962) B.S.I.P. records included New Georgia island (in the Western Solomons) and Guadalcanal only.

GUADALCANAL — Throughout the island, in accordance with BELKIN (1962). Never very abundant. Not found to bite man.

SANTA YSABEL — Kesao (L).

A. solomonis Belkin, Knight & Roseboom 1945

This species is related to the preceding two and shares with them the feature of having been described originally from Guadalcanal. BELKIN (1962) does not record it from any other island in the B.S.I.P.

GUADALCANAL — Mostly on Northern coast. Collected while biting a human bait in Vura, August 1964.

SANTA YSABEL — Kesao (L).

Genus *Bironella* Theobald

B. hollandi Taylor 1934

This is the only species of *Bironella* known from the B.S.I.P., where BELKIN (1962) noted its presence on Vella Lavella and New Georgia (both in the Western Solomons), in the Russell islands and on Guadalcanal. Only aquatic stages have been collected in the field.

GUADALCANAL — Very common throughout the island. Often breeding together with *A. farauti*.

WESTERN SOLOMONS — Munda (New Georgia) (L, P), Niumada (Gizo) (L), Sageragi (Gizo) (L).

CHOISEUL — Nukiki (L), Sipokana (L).

Tribe URANOTAENIINI

Genus *Uranotaenia* Lynch Arribalzaga

U. barnesi Belkin 1953

CHOISEUL — Jungle area near Choiseul bay (L).

SANTA CRUZ ISLANDS — Buma (Vanikoro) (L).

U. quadrimaculata Edwards 1929

CHOISEUL — Liu Liu (L, P, A).

Tribe CULICINI

Genus *Culex* Linnaeus

C. (Culex) annulirostris Skuse 1889

GUADALCANAL — Common on Northern coast, often breeding together with *A. farauti*: White river (L), Lengakiki ridge (L), Kola ridge (L), Kukum (L), Lunga (L), Henderson field (L), Ilu farm (L), Koli (L).

CHOISEUL — Sipozae island (A).

RUSSELL ISLANDS — Yandina (L).

ONTONG JAVA ATOLL — Leuaniau (L).

C. (Culex) sitiens Wiedemann 1828

GUADALCANAL — A common species along the coast. In the Honiara township it is often found breeding in swimming pools filled with sea water.

CHOISEUL — Taro island (L).

C. (Culex) whittingtoni Belkin 1962

CHOISEUL — Sibe Sibe (L).

C. (Culiciomyia) pullus Theobald 1905

CHOISEUL — Poroporo (L), Sibe Sibe (L).

C. (Lophoceraomyia) lairdi Belkin 1962

CHOISEUL — Sibe Sibe (L).

C. (Lophoceraomyia) walukasi Belkin 1962

CHOISEUL — Liu Liu (L).

C. (Lutzia) halifaxii Theobald 1903

CHOISEUL — Liu Liu (L), Poroporo (L).

Tribe AEDINI

Genus *Aedes* Meigen

Ae. (Aedimorphus) alboscuteclatus (Theobald) 1905

CHOISEUL — Poroporo (A), Sipozae island (A), — in both places biting man.

Ae. (Finlaya) albilabris Edwards 1925

CHOISEUL — Liu Liu (L), Poroporo (L, P, A).

Ae. (Ochlerotatus) vigilax (Skuse) 1850

CHOISEUL — Sipozae island (A, man-biting).

Ae. (Stegomyia) albolineatus (Theobald) 1904

WESTERN SOLOMONS — Emu harbour (Ranongga) (L), Labete (New Georgia) (L).

CHOISEUL — Liu Liu (L), Poroporo (L).

Ae. (Stegomyia) hebrideus Edwards 1926

SANTA CRUZ ISLANDS — Nebo river area (Sta. Cruz) (L).

Ae. (Stegomyia) varuae Belkin 1962

WESTERN SOLOMONS — Labete (New Georgia) (L, P, A).

CHOISEUL — Liu Liu (L).

SIKAIANA — No locality given (L).

Ae. (Verrallina) carmenti Edwards 1924

CHOISEUL — Taro island (A).

Ae. (Verrallina) lineatus (Taylor) 1905

SIKAIANA — No locality given (A).

Ae. (Geoskusea) longiforceps Edwards 1929

WESTERN SOLOMONS — Niumada (Gizo island) (A), collected in the act of feeding on mud-skipper fish. This first authenticated record of mosquitoes biting a fish was published elsewhere (SLOOFF & MARKS, 1965).

Ae. (subgenus undetermined) "Bougainville" form Belkin 1962

CHOISEUL — Sipozae island (L) (identifications confirmed by Dr. BELKIN).

Genus *Armigeres* Theobald

Arm. breinli (Taylor) 1914

CHOISEUL — Kodakanipoko island (A), Poroporo (A), Sibe Sibe (A), Sipozae island (L, P, A), jungle area near Choiseul bay (L, P, A).

DISCUSSION

A comparison with the distribution records as given by BELKIN (1962) reveals that the above list contains thirty-six new island records, of which one is a new B.S.I.P. record. These may be summarised as follows:

WESTERN SOLOMONS	<i>Bironella hollandi</i> (Gizo island)
	<i>Aedes (Stegomyia) varuae</i> (New Georgia)
	„ (<i>Geoskusea</i>) <i>longiforceps</i> (Gizo island)
CHOISEUL	<i>Anopheles farauti</i>
	„ <i>koliensis</i>
	„ <i>lungae</i>
	<i>Bironella hollandi</i>
	<i>Uranotaenia barnesi</i>
	„ <i>quadrifasciata</i>

- Culex (Culex) annulirostris*
 „ „ *sitiens*
 „ „ *whittingtoni*
 „ (*Culiciomyia*) *pullus*
 „ (*Lophoceraomyia*) *lairdi*
 „ „ *walukasi*
 „ (*Lutzia*) *halifaxii*
Aedes (Aedimorphus) alboscuteatus
 „ (*Finlaya*) *albilabris*
 „ (*Ochlerotatus*) *vigilax*
 „ (*Stegomyia*) *albolineatus*
 „ „ *varuae*
 „ (*Verrallina*) *carmenti*
 * „ (subgenus undetermined) "Bougainville"
 form, of Belkin 1962

Armigeres breinli

SANTA YSABEL

- Anopheles koliensis*
 „ *punctulatus*
 „ *lungae*
 „ *nataliae*
 „ *solomonis*

NGELA

- Anopheles koliensis*

MALAITA

- Anopheles koliensis*
 „ *punctulatus*
 „ *lungae*

SAN CRISTOBAL

- Anopheles koliensis*

RENNELL

- Anopheles koliensis* (larvae, MAFFI 1969)

SANTA CRUZ ISLANDS

- Uranotaenia barnesi* (Vanikoro)

* New record for B.S.I.P.

The relatively high number of new non-anopheline records for Choiseul island is due to two factors. First of all, Choiseul was never investigated thoroughly, and even BELKIN was not able to study much material from the island. This point may be illustrated by the absence of *A. farauti*, from his Choiseul records. Secondly, the present author undertook two surveys of the Northern part of Choiseul at the request of B.S.I.P. Government to study the mosquito fauna of an area earmarked for a new administrative centre and an aerodrome. As a consequence of the scope of these surveys the non-anopheline part of the mosquito fauna received much more attention than usually in malaria pre-spraying collections.

It is tempting to try to use the new species records for Choiseul to determine the faunistic relationship of the island with regard to the rest of the B.S.I.P. Of the twenty-six new Choiseul records, sixteen relate to species which had already been found on Bougainville (T.P.N.G.) immediately to the North-West of Choiseul, as well as on Guadalcanal, roughly two hundred miles to the South-East. These are

species with a relatively wide area of distribution. Their presence on Choiseul does not assist in clarifying the faunistic affinities of the island.

The remaining five species include two not known from either Bougainville or Guadalcanal (*Aedes varuae* and *Culex whittingtoni*), two known from Guadalcanal but not from Bougainville (*Anopheles koliensis* and *Aedes vigilax*), and one known previously only from Bougainville (*Aedes* "Bougainville" form).

Aedes (*Stegomyia*) *varuae* was considered by BELKIN (1962) as being endemic on Santa Cruz, and introduced by natives in Sikaiana. Such introductions would be facilitated by the habit of this species of breeding in sea-going canoes. Our records confirm the presence of *varuae* on Sikaiana. In addition it was found on Choiseul and on New Georgia, which might well be due to recent introduction and hence does not necessarily reflect any faunistic link between Choiseul and New Georgia.

In the case of *Culex* (*Culex*) *whittingtoni* the situation is different inasmuch as this species was recorded by BELKIN (1962) only from the Treasury islands and from New Georgia (both are part of the Western Solomons). Being a ground pool breeder from coastal areas (brackish water), our record of *whittingtoni* indicates that it is indigenous on Choiseul, which suggests a possible relationship between this island and the Western Solomons.

Anopheles koliensis was never recorded from the Western Solomons or Savo, but as we pointed out this might be due to incomplete pre-spraying surveys rather than an absence of this species. However, there are neither any records of *koliensis* from Bougainville (T.P.N.G.) or from the Russell islands, which were surveyed by us. This might suggest that in the B.S.I.P. *koliensis* is not indigenous in the belt stretching from Savo in the South-East, through the Russell islands towards the Western Solomons in the North-West, where the belt connects with Bougainville. Our records of *koliensis* from Choiseul seem to set the island rather apart from the *koliensis*-free belt on its West, but bring it closer to the other main islands in the chain which runs from Choiseul all the way down to San Cristobal, on all of which we found *koliensis*.

The absence from Bougainville of such a common species as *Aedes* (*Ochlerotatus*) *vigilax* is upsetting. The species has a wide area of distribution ranging from South-East Asia, through Indonesia and New Guinea, the Solomons and New Hebrides to Fiji. Future collections may well prove this species to occur on many more islands in the B.S.I.P., and not just Guadalcanal and Choiseul as the records at the moment seem to suggest. According to BELKIN (1962) "The smaller populations (of *Aedes vigilax*) in unfavourable areas are frequently missed because, under these conditions, the females seldom attack man except in the immediate vicinity of the breeding sites" (quoted). In this respect it is interesting that our record from Choiseul should relate to Sipozae island, just one mile offshore in the Choiseul bay area, where the present author and his party were attacked by literally thousands of female *vigilax* as soon as they entered the shady forest beyond the beach. Similar numbers alighted even on the luggage carried by the team. Very obviously *vigilax* could hardly be missed here.

This leaves the "Bougainville" form of Belkin (*Aedes*, subgenus undetermined) as the only possible link between Choiseul and Bougainville.

SUMMARY

Based upon collections carried out between March 1964 and October 1968 the mosquito fauna of the British Solomon Islands Protectorate was studied. A total of thirty-six new island records, including one species new to the B.S.I.P., could be listed. Sixteen of these records concerned anopheline species. Possible affinities between Choiseul and the remainder of the B.S.I.P. were discussed briefly.

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In deze lange serie van de K.N.N.V. is nu dit werkje verschenen, het eerste dat betrekking heeft op mijten. De persoon van de auteur staat er borg voor dat de inhoud goed is. Het is de eerste poging in Nederland om de studie der Acari binnen het bereik te brengen van studenten en serieuze amateurs, en geeft een overzicht van o.a. de systematiek, verzameltechniek, bouw en ontwikkeling, levenswijze en voorkomen. De studie van de mijten is moeilijk en gecompliceerd en dus is dit boekje ook niet „gemakkelijk”. Maar de tekeningen zijn subliem en de tekst is woord voor woord waardevol, zodat ik het van harte aanbeveel bij ieder, die eens wat meer wil weten van de zo wonderlijke maar veelal verborgen levende mijten, die bovendien economisch soms zo belangrijk zijn. — G. L. VAN EYNDHOVEN.

Afdeling Noord-Holland en Utrecht. In het seizoen 1972—1973 zullen de vergaderingen gehouden worden op de woensdagen van 27 september, 29 november, 24 januari en 7 maart, telkens 's avonds om 8 uur in Hotel Krasnapolsky, Warmoesstraat, Amsterdam.

W. J. KABOS, Secretaris.