CHAPTER TEN

INSECTS

10.1 The insect fauna of south central Seram

The insect fauna of Seram is extraordinarily diverse and abundant. Forbes, 1885: 291, writing in his *A Naturalist's Wanderings*, reports that on Ambon alone insects - particularly beetles - are numerous and of great variety. By the end of the nineteenth century, Ribbe [Ribbe, 1892: 46] had recorded some 19,000 different species, including 10,000 butterflies, and reckoned to collect 300 insects daily. Today the number of certain species for all orders of insects must be many more than this. Clearly, only a very few specimens compared with the total number of known species were collected in the field, but even so they constitute the largest single group of specimens. Most importantly they include all common species encountered by the Nuaulu. A checklist of insect species for which specimens were collected in south Seram is presented in table 17.

10.2 Nuaulu categories applied to insects

Nuaulu terms for insects represent the largest single group in their animal inventory and provide the ethnographer with the greatest problems in presentation and analysis.

10.2.1 makasisi popole

The Nuaulu name for this predaceous insect, in AM 'capung', relates to its habit of feeding on insects (such as mosquitos) immediately above fresh water, and to the touching of the surface of the water or tips of plants with its tail. **Maka** comes from **makae** ('hard'), referring to the head; and **sisi**, meaning 'to tap, touch or scrape'. Thus **eresisi waene** is 'to scrape (the) water', where **ere** is a pronominal vowel prefix indicating a non-human actor. It was explained to me that the compound **makasisi** meant 'to dive' or 'to swoop', while **popo** meant 'to copulate with the water', referring to the way the insect hovers and touches the surface of the water with its cerci (extreme rear end).

The term is applied to fairly robust dragon-flies, commonly of the family Libellelidae, and to the thin-bodied damsel-flies frequently encountered in large numbers in the sago swamp forests of Somau (Tihun), at the Nua-Ruatan confluence. It may also be used more widely to include ant-lion flies such as *Myrmeleon*, which resemble dragon flies of the narrow bodied type.

Five types are recognised.

10.2.1.1 makasisi popolo msinae

Msinae = 'red', applying to a red-bodied dragon-fly.

10.2.1.2 makasisi popolo marae

Marae = 'blue-green (grue)', applying to greenish blue dragon-flies

10.2.1.3 makasisi popolo putie

Putie = 'white', applying to whitish or neutral-coloured dragon-flies

10.2.1.4 makasisi popolo masikune

Masikune = 'yellow', applying to yellow-winged dragon-flies. On one occasion was applied to the Protoneurid damselfly *Nososticta*.

10.2.1.5 makasisi popole pokotuene

Pokotuene = 'circular, round, spherical'; referring to the fact that the bodies of these damsel-flies tend to be round rather than long.

10.2.2 uri usue

Uri = 'banana, plantain' and **usue** = 'heart'; that part of the banana plant used as a vegetable. A term applied to small black earwigs *(DERMAPTERA)* which feed on and infect bananas and plantains.

10.2.3 matamaine

Mata = 'eye'. A term applied to cockroaches (Blattidae) generally. Without further qualification it was used to describe specimens of both *Periplaneta australasiae* and *P. americana*. Two specific types of **matamaine** are recognised, referring to developmental stages.

10.2.3.1 matamai putie

Putie = 'white'

10.2.3.2 matamai reunosu

Reunosu = 'to shed'; referring to a white cockroach which has just shed its skin. Applied to both species of *Periplaneta* identified.

10.2.4 kinahorake (inae)

Kina may be from **kinate** (= 'glue, stuck, sticky'), referring to the difficulty of removing these insects from flesh once adhered. It appears to have no categorical implication. Applied to Panesthids (Blattidae).

TABLE 17 Checklist of insects recorded in the Nuaulu region of south central Seram, 1970-1975.

Species	Ecological zones 1	2	3	4	5	Nuaulu gloss
ODONATA - dragonflies and damselflies						
indet. spp.	-	-	-	+	-	**makasisi popole marae**
	-	-	-	+	-	**makasisi popole metene**
	-	-	-	+	-	**makasisi popole pokotuene**
ANISOPTERA - dragonflies						
Orthetrum villosovittatum	-	-	-	+	-	**makasisi popole msinae**
ZYGOPTERA - damselflies						
Protoneuridae						
Nosoticta sp.	-	-	-	+	-	**makasisi popole masikune**
DERMAPTERA - earwigs	-	+	-	-	-	**uri usue**
ORTHOPTERA						
Mantidae - praying mantids						
Hierodula sp.	+	+	-	-	-	**kau nimunone, kau kahe kamane**
Tenodera australasiae	-	+	+	-	-	**kau (mam) kahe kamane**
Blattidae - cockroaches						
Periplaneta australasiae	+	-	-	-	-	**matamaine**
?Periplaneta sp.	+	-	-	-	-	**matamai reunosu**
Periplaneta americana						**matamai putie**
Panesthidae						
indet. nymph	-	+	+	-	-	**kinahorake (inae)**
Phasmidae - stick and leaf insects	+	+	+	-	-	**kau ai otoe metene**
(Hierodula sp.)?	+	+	+	-	-	**kau ai otoe marae**
Xestophyrs sp.	-	+	+	-	-	**kauke**
indet. sp.	-	+	+	-	-	**kau ai otoe**
Platycrana viridana	-	+	+	-	-	**kau ai otoe**
Tettigonidae - bush crickets						
indet. sp.	+	+	+	-	-	**kau hatane**
Salomona marmorata ceramica	+	+	+	-	-	**kau nimunone**
Phyllophora bidentata	+	+	+	-	-	**kau kapine**
Hexacentrus sp.	-	+	+	-	-	**kau nesate**

Sexara coriacea	-	+	+	-	-	**kau suto**
indet. spp.	-	+	-	-	-	**kau kasipi totue, kau putie**
Gryllidae - crickets						
Cardiodactylus novaeguineae	-	+	-	-	-	**kinapari**
Gryllotalpidae - mole crickets						
Teleogryllus consimilis	-	+	+	-	-	**kau tuaman anoe**
Gryllacrididae						
Gryllaocris sp.	-	-	+	-	-	**kau suto**
Acrididae - locusts or short-horned grasshoppers						
Valanga nigricornis						**kau nimunone**
	-	+	+	-	-	**kau nuhune (kau Matoke)**
indet. spp.	+	+	+	-	-	**kau hatu tinaie**
	-	+	-	-	-	**kau suenie**
ISOPTERA - termites	+	+	+	-	-	**tananae, tananae inae**
Eutermes amboinensis						
Captotermes sp.						
Microcerotermes amboinensis						
ANOPLURIDA - sucking lice						**utu**
Haematopinus suis apri - pig louse (*Sus scrofa*)	-	-	-	-	+	**hahu utue (hahutue)**
Pediculus humanus	-	-	-	-	+	**utu**
HEMIPTERA - true bugs						
Scuttelleridae						
Tectocoris diophthalmus	-	+	+	-	-	**rikune, riku anae,**
	-	+	+	-	-	**riku pate, riku hanaie**
Calliphora billardierii	-	+	+	-	-	**kina puku paine**
Cantao ?rudis	-	+	+	-	-	**kapetite anae**
Pentatomidae - stink bugs						
prob. *Oncomeris* (Tessanataminae)	-	+	+	-	-	**rikune, rikune anae**
Flatidae						
Euphanta monoleuca	-	+	+	-	-	**rikune**
Coreidae - squash bugs						
Mictis amboinensis	-	+	+	-	-	**rikune**
Mictis profana	-	+	+	-	-	**riku wesie**

Pyrrhocoridae - firebugs						
Dysdercus singulatus	-	+	+	-	-	**makarota pina msahane**
indet. sp.	-	+	+	-	-	**kinapopote**
Acanthiidae						
Cimex sp. - bed bug						
Tesseratomidae						
Plisthenes merianae	-	+	+	-	-	
Nogodinidae						
Papuana huebrieri	-	+	-	-	-	**kitoe**
Mindura sp.	-	+	-	-	-	**kitoe**
Physomenus grossipes	-	+	-	-	-	**kitoe**
Aspidomorpha areata	-	+	-	-	-	**kitoe**
HOMOPTERA						
Cicadidae						
Baeturia sp.	-	+	+	-	-	**sisie, sisie putie**
Platypleura sp.	-	+	+	-	-	**hana-hana**
(Dandubia) sp.	-	+	+	-	-	**nai**
indet.	+	+	+	-	-	**sisie numa, sisie kauke**
Fulgoridae						
Birdantis sp.	-	+	+	-	-	**kau tuamane anoe, tananae inae**
Gerridae						
immature sp. - pond skater	-	-	-	+	-	**sa sahune**
NEUROPTERA - lacewing flies						
Myremeleonidae						
Myrmeleon sp.	-	+	+	-	-	**makasisi popole**
COLEOPTERA - beetles						
Aspidomorpha creata	-	+	-	-	-	
Lymexylidae						
Atractocerus sp.	-	+	+	-	-	**kunte inae**
Elateridae - click beetles						
Lanelalus insularis	-	+	+	-	-	**ka(u)petite**
Agrynus resectus						
Buprestidae - metallic wood-borers						
Chrysodema sp.	-	+	+	-	-	**riku pate**
Chrysodema malacca						

Coccinellidae - ladybirds						
Coccinella repanda	+	+	+	-	-	**hite anae**
Anobiidae						
Anobium sp. - woodworm	+	+	+	-	-	**susine**
Lucanidae - stag beetles						
Lucanus sp.	-	+	+	-	-	**atori (nione)**
Scarabaeidae - scarab beetles						
Glycyphana perridis	-	+	+	-	-	**hite, kinapuku paine**
Oryctes rhinoceros - rhinoceros beetle	-	+	+	-	-	**atori (nione), sinne inae**
Cerambycidae - long-horned beetles						
Gnoma giraffa	-	+	+	-	-	**kamanahu metene**
Gnoma zonaria						
Glenea corona	-	+	+	-	-	**kamanahu putie**
Glenea sp.						
Mulciper linnaei	-	+	+	-	-	**kamanahu, sinne inae**
Hexamitodera semivelutina	-	+	+	-	-	**susine**
Coptocerus biguttatus	-	+	+	-	-	**susine**
Chrysomelidae - leaf beetles						
Altica sp.	-	+	+	-	-	**kinapopo(te) inae kinapopote (marae)**
Glyciphanax sp.						
Lampyridae - fireflies	+	+	+	-	-	**kinapopote**
Anthribidae						
Xenocerus semiluctuosus	+	+	-	-	-	**rikune ari ai kanapua**
Xenocerus sp.	+	+	-	-	-	**kinoi (metene)**
Curculionidae - weevils						
Rhynochophorus bilineatus	-	+	-	+	-	**kinapukune**
Rhynochophorus ferrugineus						
Calandra oryzae - rice weevil	+	-	-	-	-	**kinapukune anae**
Calandra granaria						
Passalidae						
Labienus moluccanus	+	+	+	-	-	**kinapari**
indet. (prob. *Podops* sp.)	-	+	+	-	-	**rikune, riku ai ukune**

HYMENOPTERA						
Formicidae-Myrmicidae - ants						
	-	+	+	-	-	**kinawerie**
	+	+	+	-	-	**muna usite**
	-	+	+	-	-	**kumte**
	+	+	+	-	-	**sohone**
Odontomachus simillimus	+	+	+	-	-	**isanone**
Solenopsis germinata						
Dolichoderus thoracicus	+	+	+	-	-	**isanon metene** **isanon msinae**
Monomorium spp.	+	+	+	-	-	**uane utue**
Vespidae						
Ropalidia sp. - double-bodied wasp	+	+	+	-	-	**imanine (inae)**
Sphecidae - digger wasps						
Sphex sp.	+	+	+	-	-	**sene nan**
Eumenidae						
Eumenes - potter wasp	+	+	-	-	-	**sene tuamane**
Apidae - honey bees	-	+	+	-	-	**inae kilalante**
Apis indica						
Apis dorsata						
Apis florea						
Apis cerana						
LEPIDOPTERA - butterflies and moths						
Cossidae						
Duomitus ceramicus	-	+	+	-	-	
Morphidae						
indet.	-	+	+	-	-	**kori-kori marae**
Pyralididae - flour and meal moths						
Parotis sp.	+	+	+	-	-	**marane tina totue**
Papilionidae- swallow-tails and apollos						
Papilio fuscus	+	+	+	-	-	**kori-kori metene,**
	+	+	+	-	-	**kori-kori nika pante**
Papilio ulysses						
Papilio alcidinus						
Papilio lorguinionas						

Pachliopta polydorus	-	+	+	-	-	**kori-kori nika pante**
Arctiidae						
Maenas maculifascia	-	+	+	-	-	
indet. Lithosiinae						**kinopopote**
Noctuidae						
Lyssa docile	-	+	+	-	-	**kori-kori inahai kori-kori uri**
Danaidae						
Danaus juventa	+	+	+	-	-	**kori-kori metene**
Euploea						
Nymphalidae						
Inachis						
Lycaenidae	+	+	+	-	-	**kori-kori marae**
small *Lycaena*						
Dendorix ceramensis						
Arhopala ate						
Uraniidae						
Nyctalemon agathyrsus						
Pieridae						
Aporia crataegi						
Danaideu						
Priamus						
Helana						
Parthenos var *brunea*						
Alimena						
Erionata thrax	-	+	+	-	-	**kori-kori ikine**
Hypolimnas pandanus	-	+	+	-	-	**kori-kori metene**
Troides oblongmaculatus	-	+	+	-	-	**kori-kori (onate)**
Graphium codrus	-	+	+	-	-	**kori-kori onate**
indet.	+	+	-	-	-	**inahai**
Kallima pylarchus						
Sphingidae - hawkmoths						
Geometridae						
indet.	-	+	+	-	-	**kori-kori marae**
DIPTERA - two-winged flies						
Tipulidae - crane flies	+	+	+	-	-	**kunte inae**
Culicidae - mosquitos	-	-	-	+	+	**kunte**
Anopheles farauti moluccensis						
Anopheles (Myzomia) punctulatus						

Culex incl. *ceramensis*						
Tabanidae - horse flies						
Tabanus sp. (*fumipennis* group)	+	+	-	-	-	**imanane**
Tabanus sp. (nr. *furunculigenus*)						
Asilidae - robber flies						
Laphria sp.	+	+	-	-	-	**sene nanan**
indet. sp.	+	+	-	-	-	**kinawerie inae**
Syrphidae - hover flies						
Allograpta sp.						
Drosophilidae - small fruit flies						
Drosophila ananassae	+	+	+	-	-	**mumne mum anae**
Trypetidae	+	+	+	-	-	**mumne**
Micropezidae						
Muscidae						
Musca domestica	+	-	-	-	-	**imanane**
Orthellia timorensis	+	-	-	-	-	**inapone (marae)**
Calliphoridae - blow flies	+	+	+	-	-	**atinotoe**
Neriidae						
Nerius (?)nigrofuscus	+	+	+	-	-	**uri usue, kumte inae**
Nerius sp.						
indet. small flies	+	+	+	-	-	**sohane inae**
SIPHONAPTERA						
Pulex irritans - human flea	-	-	-	-	+	**utu**
indet. insect	+	+	+	-	-	**monote inae**
indet. small mites	+	+	-	-	-	**nione inae**

Key. Zone 1 = village; zone 2 = cultivated areas; zone 3 = forest; zone 4 = freshwater, including sago swamp; zone 5 = zooparasites.

10.2.5 The general category 'kauke'

Kauke is a generic term applied focally to mantids, stick-insects, crickets, bush-crickets, gryllids and grasshoppers; in other words, most orthopterans (though notably excluding cockroaches). The focal form, therefore, appears to be an insect with straight wings, a distinctive 'armoured' head, and with hind legs which are disproportionately large compared with body size. As with all terms applied to insects, where the number of encountered species vastly exceeds those which are terminologically distinguished, many species are simply labelled **kauke** without further nominal differentiation. Despite my own very considerable efforts to find individuals who could

'identify' certain specimens with proper names which they had learned, rather than *ad hoc* descriptions which they had invented, some could not be classified more specifically than **kauke** e.g. the leaf-mimic, *Xestophyrs*.

At least two categories labelled by the prefix **kau** are neither orthopterans, nor considered by the Nuaulu to be **kauke** in the broad sense: **kau atinotoe** (10.2.43), and optionally **(kau) kamanahune** (10.2.21).

10.2.5.1 kau kahe kamane, mam kahe kamane

The interiors of Nuaulu houses are still mostly lit using torches usually made of resin from the screwpine *Agathis dammara*, known locally as **kamane** [1]. As the resin burns it leaves an ash which unless periodically removed, dulls the flame and will eventually result in its extinction. The verbal phrase **kahe kamane,** 'to scrape the kamane', refers to this activity, which is usually performed with a small slither of sago palm leafstalk. The specific allusion in the name appears to be that the movement of the feet resembles the scraping of dammar.

Applied to mantids, including *Tenodera australasiae* and *Hierodula*.

10.2.5.2 kau ai otoe

Ai otoe is a short piece of wood or twig; thus a highly appropriate homolexeme for stick-insects. Applied to *Platycrana viridana*, and perhaps other species. Two types are recognised, but rarely distinguished.

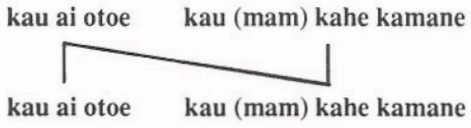
10.2.5.2.1 kau ai otoe metene

Metene = 'black'

10.2.5.2.2 kau ai otoe marae

Marae = 'green-blue, grue'

Mantids and stick-insects are seen as being closely related forms, presumably on account of their both being camouflaged, long-bodied and long-legged insects. On several occasions I have heard people suggest that mantids are a type of **kau ai otoe,** but never that stick-insects were a type of **kau (mam) kahe kamane:**



10.2.5.3 kau hatane

Hatane = 'the sago palm, *Metroxylon sagu*'. Applied to brown bush crickets of the family Tettigonidae, commonly found on dry banana leaves and on sago palms in cultivated areas.

10.2.5.4 kau (ni)munone

Nimunone (and possibly also **nemonone**)= *Melanthera biflora,* and other Compositae, known in AM as 'sunga-sunga'; a type of coastal weed of the upper shoreline of the coast of south Seram, on which this insect is found. Appears to be applied focally to the bush-cricket *Salomona marmorata ceramica* and grasshoppers such as *Valanga nigricornis.* One specimen of the mantid *Hierodula* (otherwise **kau (mam) kahe kamane**) was unaccountably given this label. Regarded as edible.

10.2.5.5 kau kapine

Kapine are decorated box-like containers made from sago leaf-stalk (**tope**) and pandanus leaf (**koae**). The larger boxes of this kind, generally associated with the Manusela area or with the islands off southeast Seram, are not made by the Nuaulu, although they are sometimes to be seen in Nuaulu villages. However, smaller containers in the same style, and used for betel-chewing requisites, are commonly found and manufactured. A term applied to the box grasshopper *Phyllophora bidentata,* and perhaps related species.

10.2.5.6 (kau) nesate, kau kasipi totue

Nesate is raw sago flour cooked in sago leaves, a common food on sago-extracting expeditions. **Kasipi** = 'manioc, *Manihot esculenta'; totue* = 'leaf'. Applied to large bush crickets, including *Hexacentrus.* The synonym is a reference to a common food of this cricket: manioc leaves. Regarded as **mine,** 'inedible'.

10.2.5.7 kau putie

Putie = 'white': bush crickets of indeterminate species, also nymphs of the family Tettigonidae (see 10.2.5.3).

10.2.5.8 kau suto

Suto = type of crustacean (chapter 12.2.4). Applied to the bush cricket *Sexara coriacea* and the gryllacrid *Gryllaocris,* and perhaps other gryllids; said to live on river banks and to be generally edible. Regarded as an omen (**monne**) by the clan Matoke: if a newly-born baby sees or is in close

contact with a **kau suto** before its umbilicus has shrivelled-up, its chances of survival are thought to be slim.

10.2.5.9 kau tuaman anoe (kau tuamane)

Tuaman anoe, lit. 'inside (**anoe**) the earth (**tuamane**)', referring to the fact that this wingless mole-cricket lives in the ground and in low underbrush. Applied to *Teleogryllus consimilis,* and on one occasion to the lantern-fly *Birdantis.* Komisi says that it can only be caught at night.

10.2.5.10 kau nuhune, kau Matoke

Nuhune is a reference to certain birth rituals found in a number of clans, including Matoke. A brown grasshopper ritually restricted for the clan Matoke; hence the synonymous usage. Applied to the short-horned grasshopper *Valanga nigricornis.*

10.2.5.11 kau hatu tinaie

Tinaie = 'tree'; **hatu** = 'stone'. Indeterminate Orthoptera. Found in the ground surrounding places where villagers collect their water. At night they are attracted to village lamps.

10.2.5.12 kau suenie

Suenie = a type of bamboo (*Schizostachyum* spp.), on which these otherwise indeterminate Orthoptera are found.

10.2.6 tanana(e inae)

Inae = 'mother'; **tanana** = 'land, earth'; thus, 'mother of earth'. Applied to all species of termites, including *Captotermes,* the common *Eutermes amboinensis* known to nest in several kinds of tree including *Alstonia scholaris* and the sea hibiscus *Hibiscus tiliaceus*; and *Microtermes amboinensis*, known to nest in the coconut palm. The term was also applied to a specimen of the lantern fly, *Birdantis.*

10.2.7 (k)utu

Utu is the PAN root for the human head and body louse, *Pediculus humanus,* though it is sometimes extended to ticks and mites (table 22), and also to the human flea. Because of the irritation and inflammatory reaction (**heni-heni**) caused by lice, and the amount of time devoted to delousing and grooming, as well as the cultural importance attached to it, the life-cycle is well-understood. The eggs are termed **tenie.** These incubate after about eight days into the nymph (**utu putie, utu meni anae;** that is the 'white' or

'young' louse). Nymphal development, which takes a further 16-19 days results in an **utu metene** or **utu tia pokone** (lit. 'black louse' and 'full stomach', respectively). However, the transmission by lice of more serious diseases is not understood.

Although temporary relief from irritation can come from scratching or (as I have often seen) knocking the head with the back of a bushknife blade, lice are only effectively removed by careful and systematic grooming and then using a special comb (**senie**; made from bamboo with binding of *Lygodium scandens*). Cleaning is seldom complete and re-infestation rapid. Really effective treatment only comes with shaving the head, a practice which is now common for young children of both sexes after they have had their first hair-cutting ceremony. Lice are removed and crushed between the fingernails if they are large enough, or squashed on the head with the specially designed end of a comb. It is believed that squashed lice which remain in the hair can regrow. Young children will groom each other, or be groomed by their parents. As children grow older grooming between the sexes becomes an embarrassment, except between brothers and sisters. On marriage husband and wife will groom each other. Bonds expressed through grooming are clearly of great intimacy and psychologically significant, as indicated in the grooming of quite old unmarried adolescents by their mothers.

Lice, mites and ticks are familiar from other animals e.g. **ha(hu) utue** or **hahu te** [2] ('pig louse'), **asu utue** ('dog louse'), and so on.

10.2.8 rikune

Rikune is also the verb 'to gargle', but while homophonous the two terms are semantically distinct. As applied to insects, **rikune** refers to various kinds of true bugs and beetles. Without further qualification it was applied to the bugs *Oncomeris, Euphanta monoleuca, Mictis profana, M. amboinensis* and stink beetles

10.2.8.1 rikune ai kanapua

Lit. 'bug (which) eats **kanapua** bushes'. **Kanapua** = *Dryobalanops aromatica,* the camphor tree. Applied to the anthribid beetle *Xenocerus semiluctuosus.*

10.2.8.2 riku anae

Lit. 'child of the **rikune**'; applied to stink-bugs. Nuaulu believe that when these bugs urinate it makes your eyes hurt. More likely is the fact that they exude some noxious substance which when rubbed on the eyes makes

them sting. Applied to the scuttellid bug *Tectocoris diophthalmus*.

10.2.8.3 rikupate

Pate is a tree of the primary rain forest. Applied, like **ansiha** (10.2.9), to the black scuttellid bug *Tectocoris diophthalmus*. It is said to have a nasty smell. Also applied to the metallic wood-borer *Chrysodema*, it is said to cause damage to house posts, and to eat rotting pork and venison.

10.2.8.4 riku hanaie

Lit. 'male bug'. Applied, as with **ansiha** and **rikupate,** to the scuttellid bug *Tectocoris diophthalmus*.

10.2.8.5 riku pina

Lit. 'female bug'; said to emit a fluid which stings the eyes and is generally unpleasant. It is unclear whether this is the female of **reku hanaie,** or whether it is a quite separate species.

10.2.8.6 riku wesie, riku ai ukune

Lit. 'forest bug'. Applied to the phytophagous squash bug *Mictis profana*. Regarded as a garden pest, found particularly on **karatupa** bushes (*Capsicum* spp.; chilli). The term **riku ai ukune,** lit. 'bug of the treetop', appears to be used synonymously.

10.2.8.7 riku nasate

Nasate = langsat fruit (*Lansium domesticum)* on which this bug is said to live and feed. Applied to *Plisthenes merianae*.

10.2.9 ansiha

Applied only to the scuttellid bug *Tectocoris diophthalmus,* commonly found on the branches of **kanapua** bushes (see 10.2.8.1) along the upper shoreline. **Ansiha** is regarded by most informants as a type of **rikune.**

10.2.10 makarota pina msahane

Pina msahane are 'female affines'. Applied to the cotton-stainer *Dysdercus singulatus,* and commonly found on the musk plant, *Abelmoschus moschatus*.

10.2.11 kitoe (inae)

Although **kitoe** also means 'a leak (in the roof of a house)', these appear to occur as semantically unrelated homophones. A brown beetle which eats and lives on the leaves of taro (*Colocasia esculenta)* when young; although also found on sweet potato (*Ipomoea batatas*): the taro beetle (technically a true bug) *Papuana huebrieri*, and also *Mindura* sp. Possibly also includes the true beetles *Aspidomorpha areata* and *Physomenus grossipes*. Edible.

10.2.12 sisie

Glossed in AM as 'uir-uir' or 'tunggaret', and not further reducible semantically. It is applied in its unqualified form to the cicada *Baeturia*. It is, however, used polysemously to refer to cicadas in general (distinguished by their distinctive sound-production) and to *Baeturia* in particular.

However, a number of specific types of **sisie** are recognised.

10.2.12.1 sisi putie

Lit. 'white cicada'; applied to *Baeturia*.

10.2.12.2 sisi kauke

On the meaning of **kauke** see 10.2.5. Not reported by R.B.

10.2.12.3 sisi numa

Lit. 'house cicada'. R.B. reports the possible synonym **sisi noine (mai numa)**, where **noine** = 'bud'.

10.2.12.4 sisi marae

Marae = 'green-blue (grue)'. Reported by R.B.

10.2.13 nai

The sound of this cicada is said to be 'the cry of the ancestors'. Possibly applied to *Dundubia*.

10.2.14 hana-hana

Applied to the cicada *Platypleura*, although no informant suggested that it might be related to either **sisie** or **nai.**

10.2.15 sa sahune

On the meaning of this term see chapter 9.2.39; applied to pond skaters of the family Gerridae.

10.2.16 hite

These beetles gather round lamps in the evening. The term was applied to the scarab beetle *Glycyphana perridis.*

10.2.16.1 hite anae

Lit. 'child of the **hite'.** The term is applied to the lady-bird, *Coccinella repaude,* which is thought eventually to grow into a **hite.**

10.2.17 kapetite

Kapetite = 'to beat, to tremble, to click'; the name is thus an appropriate one for these click beetles with their power of leaping when lying on their back. The term was applied to *Lanelalus insularis.* The term **kapetite anae** was on one occasion applied to the scuttellid bug *Cantao ?rudis.* It is interesting that occasionally such beetles should be described as **kau petite,** perhaps an understandable conflation arising from the application of a verbal form to insects where **kau** is a common prefix. Alternatively it may indicate some earlier perceived affiliation.

10.2.18 susine

The term is applied to 'woodworm' of the family Anobiidae. The Nuaulu distinguish clearly between the larvae (**susi ikine:** lit. 'small **susine'**) and the mature beetle (**susi onate:** lit. 'large **susine'**). The latter is sacred (**monne**) for the clan Sonawe-ainakahata. Also applied to Cerambycid beetles which attack the clove tree: *Hexamitodera semivelutina* and the twig-borer *Coptocerus biguttatus.*

10.2.19 atori (nione), atoreo

The word **atori** is also used for 'scissors'. The comparison between the greatly developed mandibles of the male of this large stag beetle, and the results of their activity on leaves, and scissors is clear. The term for this well-known pest is generally qualified by **nione** (= 'coconut'; *Cocos*

nucifera) indicating the coconut palm as the type habitat of this beetle, and the young palmate leaves as its principal food. It is a well-known pest. The term is glossed in AM as 'kwangwung', and was applied to the genus *Lucanus*. I have also heard the term applied to rhinoceros scarab beetles (see 10.2.20), *Oryctes rhinoceros*.

10.2.20 sinne inae

Sinne = 'house walls running from east to west'; thus lit. 'mother (**inae**) of the east-west house walls', but the term is also applied to a category of Nuaulu spirits. The term was applied to rhinoceros scarab beetles (*Oryctes rhinoceros*) which are believed to be the physical manifestation of spirits of the same name. The large grubs (**etine**) are much sought after as food. On one occasion the longhorn beetle *Mulciper linnaei* was described as **sinne inae.**

10.2.21 (kau) kamanahune

Kama(ne) is resin (see 10.2.5.1); **kamanahune** being the ghost or spirit of a person killed by falling from a tree in the throes of hunting cuscus. The prefix **kau** was only used on one occasion. The term refers collectively to long-horned beetles, which are regarded as edible. Two types of **kamanahune** are widely recognised, and perhaps up to four others less widely, though they are not generally distinguished terminologically. When they are, they are distinguished as follows:

10.2.21.1 kamanahu metene

Lit. 'black' long horn beetle. The term was applied to *Gnoma giraffa*.

10.2.21.2 kamanahu putie

Lit. 'white' long horn beetle. This was applied to *Glenea corona*.

10.2.22 kinapopote

For the possible meaning of **kina** see 10.2.4. **Popote** is a kind of jambu, an edible fruit of the genus *Eugenia*. The term, glossed in AM as 'kunung-kunung', is applied to all light-producing beetles and appears to include both light-producing click-beetles and true fire-flies (Lampyridae). However, on various occasions I have heard the term applied, in both a qualified and unqualified form, to the leaf-beetle *Altica* and to an Arctiid moth.

the following.

10.2.24.1 kinapuku anae

Lit. 'child of the **kinapuku'.** The term is applied to the rice weevil, *Calandra oryzae,* known in AM as 'kipik beras'.

10.2.24.2 kinapuku wesie

Lit. 'forest **kinapuku'.** Many weevils found on forest trees. Appears to be partially synonymous with **riku wesie** (10.2.8.6), being used on those occasions were the focal reference group is **kinapukune** rather than **rikune.**

10.2.24.3 kinapuku paine

(P)aine = 'wound, scar'. The term is applied to the shield bug, *Calliphora billardierii,* and to the scarab beetle, *Glycyphana perridis.*

10.2.25 kinapari

A term applied to Passalid beetles living in decaying wood, for example *Labienus moluccanus.* It was also applied on one occasion to crickets of the species, *Cardiodactylus novaeguineae.*

10.2.26 kinawerie (kinawane)

Applied to large tree-living ants which are reputed to bite with great fierceness. In particular associated with symbiots of the ubiquitous ant-tree, **timnisie,** the Asdepiad *Hoya* with its distinctive large galls, which is common along the shoreline.

10.2.26.1 kinawerie metene

Lit. 'black **kinawerie'.**

10.2.26.2 kinawerie msinae

Lit. 'red **kinawerie'.**

10.2.26.3 kinawerie inae

Lit. 'mother of **kinawerie'.** The term was applied to robber-flies.

10.2.27 isanone

Refers specifically to a large-bodied but long-legged species of ant. Includes *Odontomachus simillimus, Monomorium* spp. and *Solenopsis germinata.* Two types are recognised, but the term may occasionally be extended to include **kinawerie:** hence **isanon kinawerie** (10.2.26).

10.2.27.1 isanon metene

10.2.22.1 kinopopo marae, kinapopo inae

Marae = 'grue'; **inae** = 'mother of'. Both of the first two terms are applied to *Altica*. Glossed in AM as 'mai mai terong' (eggplant mite), on account of being a parasite of *Solanum melonogena*.

10.2.23 kinoi

Applied to fungus weevils of the family Anthribidae, some of which must be crop pests. At least three types are recognised.

10.2.23.1 kinoi metene

Metene = 'black'. Applied consistently to what were described as 'male' specimens of *Xenocerus*. 'Females' are said to be 'chocolate' in colour. *Xenocerus*, with its long antennae, resembles a long horn beetle, and it is some indication of the depth of Nuaulu entomological knowledge that they readily distinguish between the types terminologically.

10.2.23.2 kinoi msinae

Msinae = 'red'.

10.2.23.3 kinoi nikate

Nikate = 'pattern, drawing, design, decoration'.

10.2.24 kinapukune (kina puku hatane)

On the possible meaning of **kina** see 10.2.4; **pukune** = 'short'; **hatane** = the sagopalm, *Metroxylon sagu*. Applied focally and on most occasions to the sagopalm weevil, *Rhynochophorus bilineatus*. The eggs of this weevil are laid in the soft tissue at the base of the sago palm leafstalk, in lesions, in stored sago flour, in heaps of waste pith or in the rotting bole of felled stands. The larvae sometimes feed on the living stem and to this extent are a pest, but they are also much desired as food. Indeed, felled palms will often be deliberately left with some fibrous pith remaining to encourage the growth of larvae, which are later harvested (plate 15). Because the term **kinapukune** is so focally associated with *Rhynochophorus*, adjectival qualification is hardly necessary, although occasionally I have heard the term referred to as **kinapuku hatane,** in contrast to other forms of weevil for which the uninomial is sometimes employed.

The term **kinapukune** is applied by extension to many kinds of weevils, usually terminologically qualified by the name of the host on which they are parasitic, e.g. **kinapuku yakon**, 'maize weevil'. In some cases it is difficult to know whether such terms are accepted names shared by a large number of people, or spontaneous *ad hoc* descriptions. We can, however, distinguish

Lit. 'black **isanone.**' Includes *Dolichoderus thoracicus.*

10.2.27.2 isanon msinae

Lit. 'red **isanone'.** Found on dry coconut leaves.

10.2.28 uane utue

Uane = 'rain'. Without further affix, the term **utu** is applied to lice. Refers to winged-ants of the genus *Monomorium,* known in AM as 'mai-mai hujan', 'rain bug'. These creatures are said to bite and are encountered in large numbers following heavy rain, when they swarm around kerosene lamps like kamikaze pilots. If they are deliberately killed it is believed that a headache will follow.

10.2.29 muna usite, mausite

Applied to a small red long-legged ant commonly found on domestic food scraps. Regarded as a type of **isanone.**

10.2.30 kumte

A large unidentified ant.

10.2.31 sohone

Unidentified ant.

10.2.32 imanine

Applied to wasps.

10.2.32.1 imanine (inae)

Lit. 'mother of **imanine'.** In both its qualified and unqualified forms this term is applied to double-bodied wasps, such as *Ropalidia,* which are well-known for their painful bites and the swellings which result.

10.2.32.2 imanine on

A term applied to a small red wasp.

10.2.32.3 imanine bunara

Bunara, the Nuaulu village of that name, gives its name to this large red wasp.

10.2.33 senete

Like **imanine,** this term is applied to wasps (and hornets), and there may be some overlap in content between the two categories, to such an extent that for some informants they are virtually synonymous.

10.2.33.1 sene ohu

Ohu refers to the dangerous bite of this large ground-living wasp which builds its nest in the earth.

10.2.33.2 sene nan

Nan(te) = 'sky', referring to the fact that this wasp 'lives in the above', building a large nest in roof-timbers of houses. The term is applied to the digger-wasp, *Sphex*.

10.2.33.3 sene tuamane

Tuamane = 'earth, ground (though in this sense) clay'. Applied to the potter wasp, *Eumenes*, the nests of which are a common sight in house roof spaces.

10.2.33.4 senete inae

Lit. 'mother of **senete'.** Possibly *Bombus*, or some other large bee.

10.2.34 (inae) (kilalante), kilalante inae, mui suane

Kilalante refers to 'honeycomb'; **lante** the split bamboo flooring of Nuaulu houses; hence, lit. 'mother of the honeycomb'. The terms **inae, kilalante, kilalante inae** and **inae kilalante** are apparently used interchangeably when in the forest, but are proscribed within the village where **mui suane** (**suane** = village ritual house, AM 'baileo') must be used. Applied to honey bees, a group which certainly includes *Apis indica*, but possibly *A. florea* and *A. dorsata* as well. In 1990 specimens of *Apis cerana* were obtained, a species hitherto unknown east of Sulawesi.

10.2.35 kori-korie

A generic term for butterflies and moths. The special problems relating to the application of adjectival qualifiers to **kori-korie** are dealt with in section 10.4.

10.2.35.1 kori-kori metene

Lit. 'black **kori-kori'.** The term was applied to the swallow-tail, *Papilo fuscus, Hypolimnas, Danaus juventa,* and other butterflies whose wing colour was predominantly black.

10.2.35.2 kori-kori masikune

Lit. 'yellow **kori-kori'.** Applied to some indeterminate butterflies of various species with yellow or ochrous wings, and some with yellow backgrounds and black markings; and to a small brown butterfly with eye-spots.

10.2.35.3 kori-kori waene anoe

Lit. 'in the river butterfly', referring to the fact that individual forms assigned to this category are found along rivers and streams. The term was applied to specimens which were described by other informants as **kori-kori masikune.**

10.2.35.4 kori-kori msinae

Lit. 'red **kori-kori'.** Applied to a butterfly whose wings were largely brown-black, but with some orange.

10.2.35.5 kori-kori putie

Lit. 'white **kori-kori'.** The term was applied to a small black and white butterfly. Possibly includes many Pieridae.

10.2.35.6 kori-kori nikate

Lit. 'patterned **kori-kori'.** The term was applied to a small black and white butterfly labelled by other informants **kori-kori putie** and to a butterfly with a black and white design on an orange and light brown ground.

10.2.35.7 kori-kori nusi

Lit. 'lime butterfly'; **nusi** = collective term for various species of the genus *Citrus.* A homophone is applied to a group which includes most of the larger birds of the sea coast plus some similar forms of the rivers and inland waters (4.2.2-8). In this context the term was applied to a large black and white butterfly.

10.2.35.8 kori-kori marae

Lit. 'green-blue butterfly'. The term was applied to a small blue butterfly and to a large butterfly with black and light blue wings and a light blue body with white fur. In so far as this term is applied to small blue butterflies (as is largely the case), it is focussed on Lycaenidae (e.g. *Dendorix ceramensis* and *Arhopala ate*). Possibly also includes some Morphidae and Geometridae.

10.2.35.9 kori-kori sinatane

Sinatane are nettles, including *Laportea stimulans* and *Procris frutescens,* upon which the caterpillars of this butterfly congregate. The term was applied to a small white form with a black rim around the wing edge and

with a black dot in the centre of each wing. Komisi claimed that one specimen was also an immature **kori-kori marae.**

10.2.35.10 kori-kori tuamane anoe

Lit. 'in the ground butterfly', referring to the nesting place used by this butterfly. Tan wings with black markings, including eye-spots. Application uncertain.

10.2.35.11 kori-kori mani ahue

Lit. 'bird *mani* of the secondary forest butterfly'; **ahue** = secondary forest, referring to habitat. An account of the ecological characteristics of **ahue** is to be found elsewhere [Ellen, 1978c: 117]. The wings of this butterfly have a grey-brown ground with an orange rim.

10.2.35.12 kori-kori onate

Lit. 'big butterfly'. The term was applied to *Graphium codrus,* and a brown butterfly found on pathside leaves, but must undoubtedly be applied on an *ad hoc* basis to many large butterflies.

10.2.35.13 kori-kori uri (usue)

Lit. 'banana (or banana heart) butterfly', alluding to the principal food and habitat of this group of species. A term applied to the moth *Lyssa docile,* a brown-winged butterfly found on pathside leaves, a butterfly with yellow patches on a brown-buff ground, and a small brown butterfly of unknown colour but with eye-spots. Edible.

10.2.35.14 kori-kori ikine

Lit. 'small butterfly'; a term applied to *Erionata thrax,* though by extension no doubt to many small forms. C.f. **kori-kori onate** (10.2.35.12).

10.2.35.15 kori-kori nika pane putie

Nika(te) = 'pattern, design'; **pane** is 'pole' and also the Nuaulu name for *Anthocephalus macrophyllus,* a deciduous monopodial tree of the secondary forest. The term is applied to a butterfly with brown and white patterned wings. One informant described a specimen as a young **kori-kori marae.**

10.2.35.16 kori-kori nika pante

Nika as in **kori-kori nika pane putie** (10.2.35.15); **pante** is either 'left' or is a contraction of the term for the house verandah (**pantetane**). Applied to Papilionids such as *Papilio fuscus* and *Pachliopta polydorus*.

10.2.36 (kori-kori) inahai

This term is only occasionally prefixed by **kori-kori** and can generally be glossed by the English 'moth'. It refers to nocturnal Lepidoptera. Without further qualification it was applied to various species of moth.

10.2.36.1 inahai putie

Lit. 'white moth', a term applied to all such; perhaps focally Danaid milk-weed butterflies.

10.2.36.2 inahai metene

Lit. 'black moth'. This may be an *ad hoc* description rather than a recognised natural kind. If it is the latter it indicates a very open residual category.

10.2.37 (inahai) peni wanu

Peni is an animal category which includes pig, cassowary and deer [Ellen 1993: chapter 4.4]; **wanu** is 'sign', in the sense of augury. The term is applied to a moth which, if killed in the village at night, will ensure good hunting the following day. The use of the prefix **inahai** is variable.

10.2.38 (kori-kori) mara tina totue

Lit. 'ear leaf of cuscus'. The allusion is to the glossy wing sheen of this small white butterfly. The term was applied to *Parotis* and perhaps other related genera. It is regarded by all Nuaulu as a type of **kori-korie.**

10.2.39 nika pan (masikune)

Nika pante or **nikate** means 'pattern, design' or 'multi-coloured'; thus this is lit. 'the yellow pattern'. The term was applied in both its qualified and unqualified form to a moth with brown wings and yellow markings.

10.2.40 kunte

A term applied to all species of mosquito, and certain Micropezid flies, which to the untrained eye resemble mosquitos. Of the many species of mosquito found on Seram, *Anopheles (Myzomia) punctulatus* is a known carrier of malaria, breeding in stagnant pools between sagopalms. *Anopheles farauti* and *Culex ceramensis* were also collected in the field.

10.2.40.1 kunte inae

Lit. 'mother of the mosquito'. The term was applied to crane-flies, and the long-legged fly *Nerius(?) nigrofuscus*. These species bear a morphological resemblance to mosquitos despite being much larger, though application of the term to the Lymexylid beetle *Atractocerus* is less clear.

10.2.41 mumne, mum (n)anae(a)

These terms are applied to *Drosophila ananassae* and other fruit-flies, including the Trypetid flies found on jambus. They are identified by the Nuaulu through their small size and habit of hovering in large numbers (often in clouds) over perishable food and rotting flesh and vegetation, where they are known to lay eggs giving rise to grubs (**uneu**). They are said to be the responsible agents for infecting wounds. **Sohane inae** are regarded as being similar in this respect, but larger (10.2.47; also 14.1.1-4).

10.2.42 imanane

A term applied to the house-fly, *Musca domestica*, the horse-fly (including *Tabanus sp. near furunculigenus*), and sometimes to blow-flies.

10.2.43 inapone

A term applied to the Muscid *Orthellia timorensis*. This fly is also closely identified with egg-laying on food and the production of **uneu.**

10.2.44 kau atinotoe

Atinotoe refers to wood that has been cut. A term applied to blow-flies.

10.2.45 uri usue

Lit. 'heart of the banana'. See also 10.2.35.13. The term was applied to *Nerius(?) nigrofuscus*, often found on bananas (**uri**).

10.2.46 sohane inae

Lit. 'mother of **sohane'.** The term is applied to a small fly, whose larvae **sohane,** are found in abundance at old sago workings, over opened sago trunks (see 14.1.1-4). **Supana** is also used for insects described in this way, probably synonymously.

10.2.47 monote inae

Lit. 'mother of **monote**', where **monote** refers to a large category of plants which can be approximately, but inadequately, glossed as 'weed'. Large numbers of this indeterminate insect are to be found periodically in gardens.

10.2.48 nione inae

Lit. 'mother of the coconut'. This term, glossed in AM as 'mai-mai kelapa', was applied to small mites habitually found on neglected coconut flesh.

10.3 Caterpillars, grubs and maggots

In general terms, the Nuaulu may be said to understand the process of metamorphization and reproduction in insects, and the links between many imagos, their eggs and larvae (and in some cases, nymphs, pupas and cocoons) are known. The term **popo nukue nukue** is used to describe the process; **pokonukue** = 'parcel, bundle', 'to compress'. However, in particular cases detailed knowledge is lacking or contradictory, and other non-empirical explanations interposed. This is particularly interesting since Rumphius, writing towards the end of the seventeenth century, was inclined to accept a theory of spontaneous generation in insects which was even then being challenged by natural philosophers such as Redi. Despite his occasional protestations of agnosticism, he found it possible to record how cicadas, beetles and caterpillars arose spontaneously from bark or leaves of trees, or from dirt and decaying wood, and even provides 'experimental' evidence to support his position [Diakonoff, 1959: 128-9]. Clearly, Rumphius found further vindication of his views in the beliefs of the Ambonese, when he notes in a matter-of-fact way that they claim that cicadas arise out of (appropriately) 'caju lapy' (kayu lapi: 'cicada wood'), probably *Eonymous* [Wit, 1959: Lib. IV, 79].

The Nuaulu distinguish two kinds of larvae, approximately corresponding to the British English folk terms 'caterpillars' and 'grubs'. These are **une-une** and **etine** respectively. The number of terms listed here and habitually proferred by Nuaulu informants in no way reflects a complex knowledge of the relationship between imagos and mature forms. Additional terms may be generated on an *ad hoc* basis through addition of the suffix **anae** or prefixes **une** and **eti**, though most non-salient forms are assigned to an unqualified residual category of unnamed caterpillars or grubs.

10.3.1 une-une

These are generally the larvae of butterflies and moths, and although some of them may be eaten, it is only children who do so.

10.3.1.1 une nusi

The caterpillar of the butterfly **kori-kori nusi (totue),** a term applied to specimens of the moth *Lyssa docile* (see 9.2.34.7). Regarded as inedible.

10.3.1.2 une asu

The term refers to the 'dogtail' (**asu** = dog; see 2.2.6) at the rear of this caterpillar, which may be either green or brown. It is inedible and most probably a hawk-moth grub (Sphingidae), which are distinguished by a horn or tubercle on the abdomen.

10.3.1.3 une putute

Putu = 'hot, very dangerous, blood of a person who has been murdered'. Appears to refer to at least two kinds of caterpillar. One is largely black with blue eye-spots, red spots and light green lines running laterally along the abdomen, and is blue at the base of each spine; may sting on contact with the skin, and is said to develop into **kori-kori metene**, a term applied to *Papilio fuscus, Hypolimnas pandanus* and *Danaus juventa* (10.2.35.1). The other is furry with an orange head and black and yellow banded abdomen, about 2 cms long and said to sting like **sina,** the nettle *Laportea decumana.*

10.3.1.4 une sinatane

Sinatane urone is the nettle *Procris frutescens.* The term for this black and white caterpillar, which is about 1 cm long, would therefore seem to allude to its stinging properties. Probably a synonym for 10.3.1.3.

10.3.2 etine

A term applied to the larvae of insects other than Lepidoptera, usually to those of beetles and bugs, which are generally regarded as edible.

10.3.2.1 eti ai

Lit. 'wood (or tree) larva'. This term seems to cover 'woodworm' in the English sense, that is *Anobium* (**susine:** 10.2.18), the larvae of metallic wood borers (**rikupate:** 10.2.8.3) and of *Duomitus ceramicus*, found in fallen trees and known in AM as 'olong-olong'.

10.3.2.2 eti sene, eti onate

Synonymous terms for the larvae of wasp imagos (**senete** = 'wasp': see 10.2.33. **onate** = 'large'). These are largish grubs found in dead tree trunks and are highly-valued as delicacies, alive or dead, cooked or raw. **Eti onate** may also be applied to the thick white grubs of large black beetles (possibly Dynastid beetles or large Passalids) found in old rotting tree-trunks.

10.3.2.3 eti hatane

Lit. 'sago grub'. this is the grub of the sago weevil, *Rhynochophorus bilineatus* (**kina puku hatane:** 10.2.23), and known in AM as 'ular sagu'. These are possibly those grubs most sought after as food (plate 15).

10.3.2.4 eti nione

Lit. 'coconut grub'. Small grub which infests coconut.

10.3.3 kusumun

The term for this larva may be derived from the AM word for *Phalanger*, 'kusu'. Applied to grubs of various crickets, cockroaches, weevils and beetles; all of which are said to be inedible.

10.3.4 uneu

Plural of **une-une**. A term generally applied to the larvae of flies, found on decomposing matter of all descriptions.

10.4 Some general features of Nuaulu knowledge and classification of insects

There is no single term for insects, or for any large group of invertebrates which have 'insect-like' or 'wug' characteristics, such as might be taken to include also forms such as spiders, scorpians, mites and centipedes. However, amongst these latter, mites and ticks are less obviously distinctive, often sharing Nuaulu categories with insects. It is for this reason that it has been convenient to include them here (10.2.7, 10.2.48).

Two large sub-divided categories stand out above all others in Nuaulu classification of insects. These are denoted by the terms **kauke** and **kori-kori. Kauke** is focussed on crickets, grasshoppers, mantids, bushcrickets, stick-insects and gryllids, but may include other forms. **Kori-kori** are distinguished by wing-form and are rigorously restricted to Lepidoptera. However, the category **inahai** (moths) is sometimes contrasted with **kori-kori,** sometimes treated as a sub-category. Nuaulu **inahai** is best regarded as

PLATE 15: Searching for the larvae of the sago weevil (**eti hatane**: *Rhynochophorus bilineatus*) in rotten sagopalm trunk, Rohua: 23 August 1973.

referring to nocturnal Lepidoptera, and thus excludes certain species (e.g. *Lyssa docile*) which would be treated as moths in English folk zoology.

There is considerable variability among informants on what names to apply to particular specimens, especially when it comes to the names for different colour phases or developmental stages. Given the enormous diversity of insect species, the Nuaulu must be highly selective with those that they individually name. If we examine a large category, such as **kori-kori, etine**

or **kauke,** we may note that some species and genera are salient (well-known) and given specific names e.g. **kori-kori uri totue, eti hatane, kau tuaman anoe, kau kapine.** These types are known either because they are of economic significance, or because they are visually or behaviourally distinctive. Those ordinarily considered not to come within these quite specific categories are put in a residual category. It may be said that they are 'just **kori-kori',** or they may be put into an *ad hoc* category which locates them but does not make them into a true natural kind (e.g. **kori-kori wesie** : 'butterflies of the forest'). Finally, similarities in habits and form may make it possible for some unfamiliar types to be placed in existing categories, by their legitimate extension.

A second kind of category applied to insects are covert or pseudo-covert groupings. Thus, the cicadas **sisie, nai** and **hana-hana** are commonly grouped together on account of their sound production and morphology. They, and other groups are pseudo-covert in the sense that on any one occasion **hana-hana** might be said to be a type of **sisie,** or **sisie** and **hana-hana** might be said to be types of **nai.** We can distinguish five main pseudo-covert groups of this kind:

1. **sisie - nai - hana-hana**: cicadas
2. **kinawerie - isanone - uma usite - kumte**: ants
3. **senete - inae kilalante**: wasps and bees
4. **imanona - mumne - inapone - uri usue - atinotoe**: true flies
5. **etine - une-une - kusumun**: caterpillars, grubs and maggots

Some pseudo-covert groups are more *ad hoc* than this. For example, on one August evening during 1973 Naupate brought some specimens of the sago weevil *Rhynochophorus bilineatus* to my hut. In answer to my question as to whether there were other kinds of **kinapukune** he listed the following and indicated that there were also others:

kinapuku wesie
kinapuku hatane
kinapari
rikupate
rikune

The remaining categories for insects are either not further sub-divided at all (e.g. **susune**), or are only sub-divided into a few terminal categories (e.g. **rikune, matamaine**).

10.5 The social and economic significance of insects

Some of the larger crickets, grasshoppers and locusts (**kinapari, kinoi, kinapukune, rikune**) are frequently roasted and eaten, but more often by children in the context of play. Grubs of certain species (e.g. *Rhychophorus bilineatus*) are highly-valued and sought-after. Children may sometimes also eat certain types of caterpillar, but generally the rule is **une-une** and **kusumun** (inedible) : **etine** (edible). Grubs may be eaten live or dead, uncooked, boiled or roasted. Apart from this they are not prepared further, for example by skinning and disposal of intestine, as mentioned by Wit, 1959: Lib. V, p. 201 for the Ambonese. The range of edible insects is ritually restricted only in a very limited way (e.g. **kau Matoke**), but many more are not eaten simply because they are too small, or because the tradition does not exist. It cannot, however, be claimed that insects represent a significant part of Nuaulu diet, even if in the absence of other forms of animal protein or under famine conditions they may occasionally prove critical.

Honeycomb is collected from at least one species of bee, and the propolis is used as an adhesive, for example in the manufacture of the **orane** ritual headress. Although the Nuaulu consume some honey themselves, current high interest in honey-collecting reflects much more market demand outside the immediate area. Some insects are important ingredients in hunting magic, eaten in order to make the 'liver hot', to make men more efficient hunters. These potions are generally clan-specific, and administered with an appropriate verbal formula. For example, in the clan Somori, two types of large ant (**kinawerie msinae**), wasps (**senete**) and two varieties of double-bodied wasp (**imanine**) are used in this way. The last of these is administered mixed with *Capsicums*. It may be significant that these are all predatory social insects, which can inflict a nasty bite. The imagery of the *Capsicums* will be obvious. Among the hunting potions of the clan Nepane-tomoien is one containing the Muscid fly, **inapone** (10.2.43).

Insects are recognised as pests, although little is done to control them. The common white wood-worm (**susine**) is among the most common and visible, and is widely-known to be responsible for killing off clove-trees. However, the Nuaulu are new to clove-cultivation and do not appear to have suffered through epidemics of clove tree parasites. More familiar and better understood are bugs such as **kitoe**, parasitic on edible aroids and sweet potato.

Insects feature prominently in children's play activity. Not only are they cooked and eaten in imitation of adult food preparation, but may be the source of endless hours of amusement. Large butterflies, for example, are

attached by thread to the thorax and kept as short-term pets, almost like animate kites.

Notes to Chapter 10

1 *AM* = *'dammar'*. *A. dammara* = *A. alba* in some earlier publications.

2 Also known as **hahu wanane. Numa wanane** is a temporary shelter built as a resting place along a forest path, so **wanane** may here indicate the pig as the resting place of the louse.