MISCELLANEOUS FAMILIES OF GUAM COLEOPTERA

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INTRODUCTION

The species included in this paper were determined by O. H. Swezey, unless otherwise stated. A number of specialists in Coleoptera have assisted in determinations, and some workers (particularly if there were new species to be described) submitted papers. Those who have contributed include: Max Bernhauer, K. G. Blair, E. B. Britton, G. E. Bryant, Karl E. Schedl, J. Balfour-Browne, E. A. Chapin, H. S. Barber, W. S. Fisher, L. L. Buchanan, J. Linsley Gressitt, and E. C. Zimmerman. Credit is given each contributor in appropriate places in the text. Reports on a few families sent to the British Museum for determination, which have not been turned in, include Monotomidae, Mycetophagidae, Cryptophagidae, some of the Cucujidae, Corylophidae, Erotylidae, and Histeridae.

So far as possible, records are included from material collected in Guam by D. T. Fullaway in 1911. These records were obtained from literature and from partially worked material in the U. S. National Museum, Washington, D.C., and in Bernice P. Bishop Museum, Honolulu.

Family CARABIDAE

Only a very few specimens of this family of beetles were collected in Guam in 1936.

1. **Chlaenius flaviguttatus** var. **guttatus** Eschscholtz.
   Chlaenius flaviguttatus Macleay, Annulosa Jav., 15, 1825.
   Chlaenius guttatus Eschscholtz, Zool. Atlas (5) : 26, pl. 25, fig. 8, 1833.
   Lissauchenius biguttatus Montrouzier, Soc. Ent. France, Ann. III, 8 : 237, 1860.
   Chlaenius flaviguttatus var. *guttatus* Eschscholtz, Andrews, Ins. Samoa 4 (1) : 3, 1927.

   Piti, Sept. 28, under old coconut husk in cow pasture, Swezey, two specimens; Piti, Nov. 10, on lawn, Swezey, one specimen. (Compared with specimens in Baker Philippine collection at U. S. National Museum.)

   This beetle was collected by Fullaway in 1911, and recorded as *Chlaenius biguttatus*. It occurs also in New Guinea, New Caledonia, and Samoa.

2. **Colpodes,** new species (?).

   Piti, April 30, on leaves of *Hibiscus tiliaceus,* Swezey; Piti, July 22, Aug. 19, at light, Swezey.

Four specimens of this shiny black species were obtained. The specimens were sent to the British Museum for determination and listed as *"Colpodes* sp. n.?", but none have been returned.

3. **Endynomena pradieri** (Fairmaire).
Plochionus pradieri Fairmaire, Rev. Mag. Zool. II, 1: 34, 1849.
Endynomena pradieri (Fairmaire) Andrews, Ins. Samoa 4(1): 12, fig. 9, 1927.
Machanao, June 30, Usinger, one specimen.

4. **Tachys** species.
One specimen of this tiny carabid was collected at Machanao, May 17, Usinger. It was determined as *Tachys* sp. by E. B. Britton, but was lost off the pin point on the return trip from the British Museum.

5. **Lesticus** species.
Machanao, June 30, Usinger, remains of one specimen (prothorax and elytra). Determined by E. B. Britton.

Family DYTISCIDAE

1. **Cybister tripunctatus hamatus** (Montrouzier).
Dytiscus tripunctatus Olivier, Entomologie 3(40): 14, pl. 3, fig. 24, 1795.
Dytiscus tripunctatus var. *hamatus* Montrouzier, Soc. Agr. Lyon, Ann. 7: 9, 1857.
Cybister tripunctatus var. *hamatus* (Montrouzier) Zimmermann, Coleopt. Catalog. (71): 266, 1920.
Upi Trail, May 5, in concrete reservoir, Usinger, one specimen; Inarajan, May 14, in rice field, Usinger, one specimen; Piti, Aug. 9, in pail of rain water, Swezey, one specimen; Fullaway, 1911. (Determined by J. Balfour-Browne. One specimen retained at British Museum.)
The variety *hamatus* was described from Woodlark Island.

2. **Eretes sticticus** (Linnaeus).
Dytiscus sticticus Linnaeus, Syst. Nat. 1(2): 666, 1767.
Eretes sticticus (Linnaeus) Schultze, Philip. Jour. Sci. **11,** D: 15, 1916.
Piti, May 23, Usinger; Agana Swamp, June 26, Usinger; five specimens. (Determined by L. L. Buchanan, U. S. National Museum.)
E. sticticus is a widely distributed species.

3. **Rhantus pulverosus** Stephens, Illus. Brit. Ent. 2: 69, pl. 12, fig. 2, 1828.
Zimmermann, Coleopt. Catalog. (71): 204, 1920.
Rhantus punctatus Fourcroy, Regimbart, Soc. Ent. France, Ann. 68: 306, 1899.

Upi Trail, May 5, in concrete reservoir, Usinger, one specimen. (Compared with specimens in Baker Philippine collection in U. S. National Museum.)

A widely distributed species in Europe, North Africa, Asia, Sunda Islands, and Australia.

4. **Bidessus gentilis** Sharp, Ent. Soc. London, Trans., 344, 1890. Zimmermann, Coleopt. Catalog. (71) : 53, 1920.

Agana Swamp, May 4, Usinger, five specimens. (Determined by J. Balfour-Browne. One specimen retained for the British Museum.)

Described from Ceylon. Collected on only one occasion in Guam.

Family STAPHYLINIDAE

The determinations are by Max Bernhauer, the references and records by O. H. Swezey.

Subfamily OXYTELINAE

1. **Lispinus foveatus** Fauvel, Mus. civ. stor. nat. Genova, Ann. 12 : 204, 1878.

Inarajan, May 14, Swezey, two specimens.

Described from New Guinea.

2. **Espeson crenicollis** Fauvel, Mus. civ. stor. nat. Genova, Ann. 12 : 196, pl. 1, fig. 16, 1878.

Agana, May 4, ex rotten *Pandanus* trunk, Swezey, Usinger; Piti, June 3, Usinger; 13 specimens.

Described from Key Island and Gilolo.

3. **Phloeonomus hebridensis** Bernhauer, Stylops 3 : 18, 1934.

Upi Trail, May 5, ex fig on ground, Swezey; Santa Rosa, May 19, Swezey; Piti, May 22, ex rotten breadfruit on ground; Nov. 7, ex rotten bean pod, Swezey; Barrigada, June 14, in trash under banyan tree, Usinger, July 6, Swezey; Mt. Alifan, June 27, in *Pandanus* fruit on ground, Swezey; Dededo, Aug. 11, on wild papaya, Swezey; Asan, Aug. 22, in rotten breadfruit on ground, Swezey; 33 specimens.

Described from New Hebrides. Commonly found in Guam preying on scavenger insects in rotten fruits on the ground.

4. **Phloeonomus singularis** (Kraatz), variety (?).

Phloeonomus singulare Kraatz, Arch. Naturgesch. 25(1) : 181, 1859.

Phloeonomus singulare (Kraatz) Bernhauer and Schubert, Coleopt. Catalog. (19) : 59, 1910.

Machanao, June 4, from *Pandanus,* Swezey.

The species was described from Ceylon. The single specimen I collected in Guam is labelled by Bernhauer "var.?".

5. **Trogophloeus exiguus** Erichson, Käf. Mark Brandenb., 604, 1839. Bernhauer and Schubert, Coleopt. Catalog. (29) : 105, 1911.
Umatac, May 28, Usinger, one specimen. A cosmopolitan species.

SUBFAMILY PAEDERINAE

6. **Astenus horni** (Bernhauer), as now determined.
Actobius horni Bernhauer, Arch. Naturg., Abt. A, 88: 231, 1922. Scheerpeltz, Coleopt. Catalog. (129) : 1329, 1933.
Piti, May 2, July 24, Aug. 24, Sept. 17, on weeds in cane field, Swezey, eight specimens.

7. **Dibelonetes formosae** Bernhauer, Arch. Naturg. Abt. A, 88:228, 1922. Scheerpeltz, Coleopt. Catalog. (129) : 1229, 1933.
Piti, July 3, at light, Swezey, one specimen. Described from Formosa.

8. **Stilicopsis setigera** (Sharp).
Acanthoglossa (?) *setigera* Sharp, Ent. Soc. London, Trans., 67, 1874.
Stilicopsis setigera (Sharp) Bernhauer and Schubert, Coleopt. Catalog. (40) : 220, 1912.
Asan, Aug. 22, in rotten breadfruit on ground, Swezey, two specimens. Described from Japan.

SUBFAMILY STAPHYLININAE

9. **Leptacinus flavipennis** Kraatz, as now determined.
Leptacinus parumpunctatus var. *flavipennis* Kraatz, Scheerpeltz, Coleopt. Catalog. (129) : 1303, 1933.
Piti, Sept. 21, ex cow dung, Swezey, one specimen.

10. **Philonthus discoideus** Gravenhorst, Col. Micr. Brunsv., 38, 1802. Bernhauer and Schubert, Coleopt. Catalog. (57) : 335, 1914.
Piti, April 27, Bryan, July 27, Swezey, two specimens. A cosmopolitan species.

11. **Philonthus quisquiliarius** (Gyllenhall).
(?) *quisquiliarius* Gyllenhall, Ins. Suec. 2 : 335, 1810.
Philonthus quisquiliarius (Gyllenhall) Erichson, Käf. Mark. Brandenb. 1 : 469, 1839. Bernhauer and Schubert, Coleopt. Catalog. (57) : 352, 1914.
Piti, May 14, at light, July 27, Swezey, two specimens. A cosmopolitan species.

SUBFAMILY ALEOCHARINAE

12. **Oligota flavicornis** Lacordaire, Faun. Ent. Paris 1 : 521, 1835. Bernhauer and Scheerpeltz, Coleopt. Catalog. (82) : 512, 1926.

Orote Point, July 19, Aug. 2, predacious on leaf mites on *Ipomoea* vines, Swezey, 13 specimens. A European species.

13. **Gyrophaena moluccensis** Fauvel, Mus. civ. stor. nat. Genova, Ann. **12**: 291, 1878. Bernhauer and Scheerpeltz, Coleopt. Catalog. (82) : 532, 1926.

Yona, May 12, 10 specimens; Mt. Alifan, May 21, one specimen; all from fungus, Usinger.

Described from Moluccas.

14. **Gyrophaena variolosa** Fauvel, Mus. civ. stor. nat. Genova, Ann. **12** : 292, 1878. Bernhauer and Scheerpeltz, Coleopt. Catalog. (82) : 535, 1926.

Mt. Alifan, May 21, in fungus, Usinger.

Described from New Guinea and Key Island. Six specimens collected in Guam.

15. **Homalota cribrum** (Fauvel), as now determined.

Thectura cribrum Fauvel, Mus. civ. stor. nat. Genova, Ann. 12 : 597, 1878.

Anomognathus cribrum (Fauvel) Bernhauer and Scheerpeltz, Coleopt. Catalog. (82) : 254, 1926.

Piti, May 22, ex rotten breadfruit, Aug. 19, ex rotten bamboo sprouts, Swezey; Mt. Alifan, May 26, ex rotten papaya trunk, Usinger, June 27, ex rotten *Pandanus* fruit, Swezey; Dededo, Aug. 11, ex wild papaya, Swezey; Asan, Aug. 22, ex rotten breadfruit on ground, Swezey; 36 specimens.

Described from New Guinea, very abundant in Guam.

16. **Thamiaraea insigniventris** Fauvel, Mus. civ. stor. nat. Genova, Ann. **12**: 299, pl. 2, fig. 36, 1878. Bernhauer and Scheerpeltz, Coleopt. Catalog. (82) : 682, 1926.

Asan, Aug. 22; Piti, Sept. 20, all from rotten breadfruit on the ground, Swezey, 17 specimens.

Described from New Guinea and Celebes.

Family TEMNOCHILIDAE

1. **Tenebroides mauritanicus** (Linnaeus).

Trogosita mauritanica Linnaeus, Syst. Nat., 10th ed., 1 : 417, 1758.

Tenebroides mauritanicus (Linnaeus) Leveillé, Coleopt. Catalog. (11) : 17, 1910.

Piti, Aug. 27, in oat bin at stable of Root Agricultural School, Swezey, one specimen of this cosmopolitan insect.

2. **Melambia cordicollis** Reitter, Verh. Nat. Ver. Brünn **14**: 25, pl. 1, fig. 16 a, 1876.

Libugon Farm, Nov. 10, under loose bark of dead orange tree, Swezey, four specimens.

Described from the Philippines. Guam specimens determined by E. A. Chapin, U. S. National Museum.

FAMILY NITIDULIDAE

1. **Urophorus humeralis** (Fabricius).

Nitidula humeralis Fabricius, Ent. Syst., suppl., 74, 1798.

Carpophilus humeralis (Fabricius) Fairmaire, Soc. Ent. France, Ann. IV, 9: 199, 1869. Grouvelle, Coleopt. Catalog. (56): 88, 1913.

Urophorus humeralis (Fabricius) Grouvelle, Col. Reg. Ind., 330, 336, 1908.

Piti, June 7, on sugar cane infested with *Pseudococcus boninsis,* Sept. 20, in rotten breadfruit, Nov. 7, in rotten cucumbers, Swezey.

A cosmopolitan species. Not found particularly abundant in Guam. Determined by E. A. Chapin, U. S. National Museum.

2. **Carpophilus vittiger** Murray, Monogr., 373, 1864. Grouvelle, Coleopt. Catalog. (56): 85, 1913.

Umatac, March 28, on beach shrubs, Bryan, May 28, Usinger; Piti, April 30, Swezey, May 2, in pods of *Pithecolobium dulce,* Usinger, May 22, in rotten breadfruit, Swezey, June 7, on sugar cane infested with *Pseudococcus boninsis,* Swezey, Sept. 20, in rotten breadfruit, Swezey; Dededo, May 11, under bark of dead *Pandanus,* Usinger; Agat, May 26, in ear of corn infested with corn earworm, Swezey; Machanao, June 4, under bark, Swezey; Merizo, June 11, on corn, Swezey; Asan, Aug. 22, in rotten breadfruit, Swezey; Yigo, Nov. 8, 13, on corn, among dead papaya leaves and in seed cluster of an ornamental palm, Swezey.

A cosmopolitan species which was very abundant in rotten fruits in Guam. Determined by G. E. Bryant, British Museum.

3. **Haptoncus luteolus** (Erichson).

Epuraea luteola Erichson, Germ. Zeitschr. 4: 272, 1843. Horn, Am. Ent. Soc., Trans. 7: 301, 1879.

Haptoncus luteolus (Erichson) Grouvelle, Coleopt. Catalog. (56): 96, 1913.

Mt. Alifan, May 26, Usinger, June 27, abundant in rotten *Pandanus* fruit on ground, Swezey; Piti, June 7, on sugar cane infested with *Pseudococcus boninsis,* Aug. 3, under stone, Sept. 20, in rotten breadfruit on ground, Oct. 23, in rotten sugar cane, Swezey. Fullaway, 1911.

Another widely distributed species in the tropics, and abundant in Guam.

4. **Haptoncus ocularis** (Fairmaire).

Epuraea ocularis Fairmaire, Rev. Mag. Zool. II, 1: 363, 1849.

Haptoncus ocularis (Fairmaire) Grouvelle, Coleopt. Catalog. (56): 97, 1913.

Dededo, Aug. 11, ex wild papaya, Swezey; Fadian, Aug. 19, ex rotten seed of *Ochrocarpus obovalis,* Swezey; Asan, Aug. 22, in rotten breadfruit, Swezey.

Distributed in Asia and the East Indies. Not abundantly collected in Guam. Determined by G. E. Bryant, British Museum.

5. **Haptoncus** species.

Umatac, March 28, on beach shrubs, Bryan; Piti, May 30, Swezey; Merizo, June 11, on corn, Swezey; Piti, Sept. 21, on flowers of *Leucaena glauca,* Swezey. Five specimens of an undetermined species.

FAMILY CUCUJIDAE

1. **Cryptamorpha desjardinsi** (Guèrin).

Psammoecus desjardinsi Guèrin, Ic. Regn. An. Ins., 196, 1829.

Cryptamorpha desjardinsi (Guèrin) Sharp, Fauna Hawaii. 3(4) : 428, 1908.

Piti, July 27, on sugar cane, Swezey, one specimen of this cosmopolitan species.

2. **Psammoecus insularis** (Sharp).

Telephanus insularis Sharp, Roy. Dublin Soc., Trans. 3 : 143, 1885.

Psammoecus insularis (Sharp), Fauna Hawaii. 3(4) : 428, 1908.

Agana, May 15, Usinger; Machanao, June 5, among dead leaves of a fallen tree, Usinger; Piti, July 21, on pumpkin vine, Sept. 26, Oct. 27, in house, Swezey; nine specimens. Fullaway, 1911.

Described from the Hawaiian islands.

3. **Oryzaephilus surinamensis** (Linnaeus).

Dermestes surinamensis Linnaeus, Syst. Nat., ed. 10, 357, 1758.

Silvanus surinamensis (Linnaeus) Sharp, Fauna Hawaii. 3(4) : 428, 1908.

Oryzaephilus surinamensis (Linnaeus) Hetschko, Coleopt. Catalog. (109) : 68, 1930.

Piti, April 30, May 26, in Grapenuts, July 5, Nov. 9, in house, Swezey; Inarajan, May 14, Swezey; Yigo, Nov. 8, on corn, Swezey.

This cosmopolitan species was found in the house, usually in food packages.

4. **Inopeplus metallescens** Fairmaire, Soc. Ent. France, Ann. VI, 1 : 254, 1881. Arrow, Insects of Samoa 4(1) : 43, 1927.

We found this species abundant in Guam, under bark, especially at Machanao, June 4, where there was quite a clearing of felled trees which had attracted a good many insects, and in which many of the logs had loosened bark. About 50 specimens were collected by Swezey and Usinger. Also collected at Barrigada, July 6, 22, under bark of *Intsia bijuga,* Swezey. E. C. Zimmerman's determination. This species was described from Fiji. It also occurs in Tonga and Samoa.

Besides these species, there were about half a dozen species of cucujids among miscellaneous Coleoptera sent for determination to the British Museum, and some of which yet remain to be reported on.

FAMILY LATHRIDIIDAE

Metophthalmus albofasciatus Reitter, Deutsche Ent. Zeitschrift, 23, 1891. Hetschko, Coleopt. Catalog. (85) : 19, 1926.

Machanao, June 30, sweeping dead twigs and leaves of a felled tree, Swezey, two specimens. Determined by G. E. Bryant, British Museum.

A minute pretty species described from Japan.

FAMILY COLYDIIDAE

1. **Colobicus parilis** Pascoe, Jour. Ent. 1 : 202, 1860. Scott, Fauna Hawaii. 3 : 430, 1908.

Machanao, June 4, under bark, Swezey; Barrigada, July 6, ex *Intsia bijuga,* Swezey; Yigo, Oct. 18, ex dead branch of small-leaved *Ficus,* Swezey.

Widely distributed in East Indies, Moluccas, Borneo, Philippines, Assam, Hongkong, Hawaii, North Australia.

2. **Bitoma siccana** (Pascoe).

Xuthia siccana Pascoe, Jour. Ent. 2 : 128, pl. 8, fig. 1, 1863.

Bitoma siccana (Pascoe) Arrow, Ann. Mag. Nat. Hist. VIII, 4 : 193, 1909. Ins. Samoa 4(1) : 48, 1927.

Agat, May 31, under bark, Usinger; Machanao, June 4, under bark, Swezey; Fadian, Aug. 19, under bark of dead *Annona reticulata,* Swezey.

A widely distributed species, known in Samoa, New Caledonia, Christmas Island, Moluccas, Philippines, Macassar, Sumatra, Malay Peninsula, India, Seychelles. We found a few in Guam in 1936.

3. **Neotrichus latiusculus** (Fairmaire).

Ditoma latiusculus Fairmaire, Soc. Ent. France, Ann. VI, 1 : 255, 1881.

Neotrichus latiusculus (Fairmaire) Arrow, Ann. Mag. Nat. Hist. VIII, 4 : 193, 1909. Arrow, Ins. Samoa 4(1) : 48, 1927.

Upi Trail, May 5, under bark of *Hibiscus tiliaceus,* Swezey; Mt. Alifan, May 26, in rotten log, Swezey; Barrigada, June 12, in rotten log; July 6, under bark, Swezey; Piti, Oct. 9, in dead orange twigs, Swezey; Libugon Farm, Nov. 10, under bark of dead orange tree, Swezey.

FAMILY ORTHOPERIDAE

Species ?

One small black beetle collected at Agana, May 25 on *Pithecolobium,* Usinger, was determined by E. A. Chapin of the U. S. National Museum as belonging to this family.

Ocholissa humeralis (Fairmaire).

Rhizophagus humeralis Fairmaire, Rev. Mag. Zool. 2 : 55, 1850.

Ocholissa humeralis (Fairmaire) Grouvelle, Soc. Ent. France, Ann. 62 : 385, 1893. Arrow, Ins. Samoa 4(1) : 52, 1927.

A widely distributed species, black with a red spot on humeri of elytra. Occurs in Samoa, Tahiti, Moluccas, Java, Borneo, Ceylon, and Madagascar. We found it common in Guam, under bark of felled trees, in 1936.

FAMILY ENDOMYCHIDAE

Trochoideus desjardinsii Guèrin, Rev. Zool., 22, 1838. Coquerel, Soc. Ent. France, Ann. III, 7 : 256, pl. 6, fig. 2, 1859.

Yona, April 29, among dead leaves, Bryan; Mt. Tenjo, May 3, in dead rachis of *Angiopteris evecta,* Swezey; Dededo, May 11, in rotten log, Swezey; Tarague, May 17, under coconut husk on ground, Swezey; Mt. Alifan, May 26, in log, Usinger; Agat, May 31, under bark, Usinger; Yigo, Oct. 21, in rotten banana stem, Nov. 13, among dead papaya leaves, Swezey; Fullaway, 1911.

This peculiar beetle occurs in South Asia, Mauritius, Madagascar, Reunion, New Guinea, Philippines. We found it common in Guam and widely distributed.

FAMILY COCCINELLIDAE

The ladybeetles now occurring in Guam have apparently all been purposely introduced, though I have not found records of introduction for all of them. The following were collected in 1936.

1. **Harmonia arcuata** (Fabricius).

Coccinella arcuata Fabricius, Mant. Ins. 1 : 55, 21, 1787. Crotch, Revision Coccinellidae, 110, 1874.

Harmonia octomaculata var. *arcuata* (Fabricius) Schultze, Philip. Jour. Sci. **11,** D : 35, 1916.

Harmonia arcuata (Fabricius) Timberlake Ms.

Yigo, April 13, Bryan; Inarajan, June 8, in rice field, Swezey, Usinger; Merizo, June 11, in corn field, Swezey; Barrigada, June 24, in corn field, Swezey; Dededo, Aug. 11, Swezey; Piti, Aug. 14, Oct. 1, Nov. 4, in corn field, Swezey; Merizo, Oct. 2, in rice field, Swezey; Yona, Nov. 18, on corn, Swezey.

This large, spotted ladybeetle was found already present in Guam, by Fullaway, in 1911. There is no record of when it was introduced. It has a wide distribution: China, Philippines, Singapore, Java, Cape York, New Caledonia, Cape of Good Hope, Queensland, Fiji. It feeds on plant lice and is a very effective enemy of the corn aphis. It is often present in large numbers in corn fields infested with aphis. It is also found abundant in rice fields where it is reputed to feed on leafhoppers.

2. **Coccinella transversalis** Fabricius, Spec. Ins., 97, 1781; Timberlake, Ms.
Coccinella repanda Thunberg, Nov. Insect. Spec. **1**: 18, fig. 25, 1781.
Crotch, Rev. Coccinellidae, 117, 1874.

Merizo, April 24, Bryan; Mt. Tenjo, May 3, Swezey; Piti, May 26, Usinger; Inarajan, Sept. 30, Swezey.

This is a smaller species than *Harmonia arcuata,* and not so abundant in Guam. It was recorded under the name *Coccinella repanda* by Fullaway in 1911. It feeds on plant lice. We collected it in only a few places. This ladybeetle has a wide distribution from China, India, Singapore, Java to New Caledonia, Queensland, New South Wales, and Tasmania. It is not known when it first appeared in Guam. Our specimens were determined by P. H. Timberlake.

3. **Coelophora inaequalis** (Fabricius).
Coccinella inaequalis Fabricius, Syst. Ent., 80, 1775.
Coelophora inaequalis (Fabricius) Mulsant, Spec. Coleopt., 404, 1851.
Crotch, Rev. Coccinellidae, 153, 1874.

Umatac, March 28, Bryan; Magua, Mar. 31, Bryan; Orote Pen., April 9, Bryan; Piti, April 30, May 1, Oct. 2, 10, Nov. 7, Usinger, Swezey; Upi Trail, May 5, Swezey; Inarajan, May 6, June 8, Sept. 30, Swezey, Usinger; Dededo, May 11, Usinger; Yona, May 12, Usinger; Agana, May 15, Swezey; Umatac, May 28, Swezey; Merizo, June 11, Swezey; Barrigada, June 14, 24, Swezey; Sinajana, June 15, Swezey; Talofofo, June 17, Nov. 18, Swezey; Mt. Alifan, June 19, Swezey; Machanao, June 30, Swezey; Fadian, Aug. 19, Swezey.

This nine-spotted ladybeetle has a very wide distribution from Japan and the Philippines through Malaysia to New Caledonia and Queensland. It is now recorded in Guam for the first time where it had no doubt been purposely introduced, but without being recorded. It feeds on plant lice. We found it common in corn fields and in rice fields, where it may have been feeding somewhat on young leafhoppers.

4. **Anisolemnia mulsanti** (Montrouzier).
Daulis mulsanti Montrouzier, Soc. Ent. France, Ann. IV, **1**: 304, 1861.
Coelophora mulsanti (Montrouzier) Crotch, Rev. Coccinellidae, 152, 1874.
Anisolemnia mulsanti (Montrouzier) Timberlake Ms.

Talofofo, April 11, Bryan; Merizo, June 11, Oct. 20, Usinger, Swezey; Sinajana, June 15, Swezey.

This is a rare ladybeetle in Guam. It was recorded by Fullaway in 1911. It was described from Woodlark Island, and is known in Australia. Guam specimens determined by P. H. Timberlake.

5. **Cryptolaemus montrouzieri** Mulsant, Opusc. Ent. 3: 140, 1853.

Tiyan, April 2, Bryan; Orote Pen., April 8, Bryan; Upi Trail, May 5,

Swezey; Inarajan, May 6, Usinger; Tumon, May 30, Swezey; Barrigada, June 14, Swezey; Mt. Alifan, June 19, Swezey; Dededo, Aug. 11, Swezey.

This Australian ladybeetle was introduced into Guam from Honolulu in 1926. It feeds on mealybugs and *Pulvinaria.*

6. **Azya luteipes** Mulsant, Spec. Coleopt. Trim. Sécuripalp., 928, 1850. Crotch, Rev. Coccinellidae, 279, 1874.

Agana, June 2, Swezey; Sumay Road, June 2, Swezey; Orote Pen., Sept. 1, 27, Swezey; Merizo, Oct. 20, Swezey.

This tropical American ladybeetle was probably introduced into Guam from Honolulu at the same time as *Cryptolaemus montrouzieri,* but there is no record of it. We found it occasionally in 1936. It feeds on soft scales.

7. **Rodolia cardinalis** (Mulsant).

Vedalia cardinalis Mulsant, Spec. Coleopt. Trim. Sécuripalp., 906, 1850.

Novius cardinalis (Mulsant) Crotch, Rev. Coccinellidae, 283, 1874.

Rodolia cardinalis (Mulsant) Essig, Insects of Western North America, 415, 1926.

Taragüe Beach, May 17, on *Sophora tomentosa,* Swezey, one specimen.

This Australian ladybeetle was introduced into Guam from Honolulu in 1926 to combat the cottony cushion scale. In 1936 both were scarce, and only one specimen of the ladybeetle was obtained.

8. **Sticholotis punctatus** Crotch, Rev. Coccinellidae, 201, 1874.

Agana, May 25, Swezey, one specimen.

This is a small Japanese ladybeetle, not previously recorded in Guam. It is not known whether it was purposely introduced.

9. **Telsimia nitida** Chapin, Biol. Soc. Washington, Proc. 39:131, 1926.

Piti, May 2, Sept. 17, Oct. 25, 29, Swezey; Upi Trail, May 5, Swezey; Inarajan, May 7, Swezey, Bryan; Mt. Alifan, May 21, Swezey; Agana, May 25, 30, Usinger, Swezey; Tumon, May 30, Swezey; Sinajana, June 8, 15, Swezey; Ypan, June 8, Usinger; Barrigada, June 12, July 6, Usinger, Swezey.

This tiny black ladybeetle was described from specimens collected in Guam in 1911 by Fullaway, and later by Edwards, Evans and Vandenberg. When *Aspidiotus destructor* was noted as injurious to coconut leaves in 1923, this ladybeetle was found associated with the scale. It was determined by Schultze as *Cryptogonus orbiculus* var. *nigripennis.* Later, Bryant of the British Museum gave the name as *Cryptogonus nigripennis* Weise. These names were used in reports of the Guam Agricultural Experiment Station. In 1927 it was reported to have effected complete control of the coconut scale in Guam. This control has continued, for in 1936 we found only scattered small infestations of the scale, and always the ladybeetles were present.

In November, the ladybeetles were found at Piti on bamboo infested with a different kind of scale, in sufficient numbers so that they were collected for shipment by Clipper plane to Honolulu. These were liberated on infestations of *Pinnaspis buxi* on *Monstera* at the Foster Park, and on coconut at Hanalei, Kauai. In both places they became well established. In about a year they became numerous enough at Hanalei so as to be collected for distribution. Determined by E. A. Chapin, U. S. National Museum.

10. Nephus species.

Umatac, March 28, May 14, 28, Bryan, Swezey; Orote Pen., April 8, May 24, Bryan, Swezey; Piti, April 30, May 2, Usinger; Mt. Tenjo, May 3, Swezey; Agana, May 15, 30, Usinger, Swezey; Taragüe, May 17, Usinger; Agat, May 31, Usinger; Machanao, June 4, Usinger; Sinajana, June 8, Usinger; Barrigada, June 14, Swezey; Mt. Alifan, June 19, Swezey; Fadian, Aug. 19, Swezey; Piti, Sept. 21, Nov. 6, Swezey; Agat, Oct. 17, Swezey; Tumon, Nov. 13, Swezey.

This is a small black ladybeetle with two reddish spots on the elytra. It occurs also in Hawaii where it was introduced from the Philippines. We found it in many places, and apparently it was responsible for the scarcity of the mealybug *Ferrisia virgata,* as it was found associated with it as well as with other mealybugs.

11. Pullus species.

Machanao, June 2, 30, Swezey, two specimens.

A small black species. Determined by E. A. Chapin, U. S. National Museum.

12. Stethorus species.

Piti, May 2, on mango, Swezey; Upi Trail, May 5, Swezey; Tumon, May 30, on *Barringtonia,* Swezey; Barrigada, June 12, Usinger, July 6, on *Morinda,* Swezey.

A still smaller black species which was collected at several places. Determined by E. A. Chapin.

Lindorus lophanthae (Blaisdell).

Two attempts to introduce this ladybeetle into Guam in 1925 and 1926 apparently failed to establish it, for we saw nothing of it in 1936.

FAMILY DERMESTIDAE

Apsectus species.

Merizo, June 11, Swezey, two specimens of this small black dermestid. Determined by E. A. Chapin.

FAMILY HYDROPHILIDAE

1. **Dactylosternum abdominale** (Fabricius).
   Sphaeridium abdominale Fabricius, Ent. Syst., 1, 79, 1792.
   Dactylosternum abdominale (Fabricius) Sharp, Fauna Haw. 3(5) : 579, 1908. d'Orchymont, Ins. Samoa 4(1) : 30, 1927.

Dededo, May 19, in rotten banana stem, Usinger, Sept. 7, in rotten banana stem, Swezey; Asan, Aug. 22, in rotten breadfruit on ground, Swezey; Piti, Sept. 20, in rotten breadfruit, Swezey; Agana, Oct. 3, in royal palm top where infested by *Rhabdocnemis obscura,* Swezey; Yigo, Nov. 13, in rotten banana stem, Swezey.

A widely distributed species, throughout the tropics. Occurs in Hawaii and Samoa. Determined by L. L. Buchanan, U. S. National Museum.

2. **Enochrus rubrocinctus** (Regimbart).
   Philydrus rubrocinctus Regimbart, Soc. Ent. France, Ann. 72 : 56, 1903.
   Enochrus rubrocinctus (Regimbart) Knisch, Coleopt. Catalog. (79) : 214, 1924.

Agana, May 4, at light, Bryan; Agana Swamp, May 4, Usinger; Machanao, May 17, Usinger; Piti, Aug. 20, at light, Sept. 7, at light, Swezey.

Described from India, Cochin China, Burma, Sumatra. Determined by L. L. Buchanan. (Guam specimens compared with Baker Philippine collection at U. S. National Museum.)

3. **Noteropagus obscurus** d'Orchymont, Soc. Ent. France, Ann. 88 : 135, 1919. Knisch, Coleopt. Catalog. (79) : 155, 1924.

Ritidian Pt., April 16, Bryan, one specimen; Mt. Alifan, May 26, in papaya log, Usinger, one specimen; Yigo, Nov. 13, in rotten banana stem, Swezey, three specimens.

A tiny black species, described from Borneo and Timor. One specimen retained by Buchanan, U. S. National Museum, and one specimen from Yigo at British Museum. Determined by J. Balfour-Browne.

FAMILY BOSTRYCHIDAE

1. **Xylothrips religiosus** (Boisduval).
   Xylopertha religiosa Boisduval, Voy. Astrolabe, 460, 1835.
   Xylothrips religiosus (Boisduval) Lesne, Soc. Ent. France, Ann. 69 : 624, figs. 473, 475-477, 1900.
   Machanao, June 4, under bark, Swezey, one specimen.
   Generally distributed in the Pacific islands.

2. **Xylopsocus capucinus** (Fabricius).
   Bostrichus capucinus Fabricius, Spec. Ins. 1 : 62, 1781.

Xylopsocus capucinus (Fabricius) Lesne, Soc. Ent. France, Ann. 69: 631, figs. 478, 481, 482, 1900.

Ritidian Pt., April 15, swept from ferns, Bryan, one specimen. Fullaway, 1911.

Distributed in Indo-Malaya, Philippines, Madagascar, Africa, tropical America. Determined by W. S. Fisher, U. S. National Museum.

3. **Dinoderus minutus** (Fabricius).

Bostrichus minutus Fabricius, Syst. Ent., 54, 1775.

Dinoderus minutus (Fabricius) Lesne, Soc. Ent. France, Ann. 66: 323, 329, figs. 12, 17, 18, 20, 23, 24, 27, 1897.

This cosmopolitan beetle was found infesting the bamboo shades on the porch of our residence at Piti, collected June 1, Swezey. Specimens determined by W. S. Fisher, U. S. National Museum.

Family ANOBIIDAE

1. **Lasioderma serricorne** (Fabricius).

Ptinus serricorne Fabricius, Ent. Syst. 1: 241, 1792.

Lasioderma serricorne (Fabricius) Bandi, Berlin Ent. Zeitschrift 17: 333, 1874. Pic, Coleopt. Catalog. (48): 57, 1912.

The cosmopolitan cigarette beetle was taken but once, a single specimen at Piti in the house, June 15, Swezey.

Family CLERIDAE

1. **Necrobia rufipes** (De Geer).

Clerus rufipes De Geer, Mem. Ins. 5: 165, 1775.

Necrobia rufipes (De Geer) Howard and Marlatt, U. S. Dept. Agric., Bur. Ent. Bull. 4, new ser.: 105, fig. 49, 1902.

Piti, April 30, Swezey; Tarague, May 17, Swezey; Piti, June 1, Sept. 9, 21, 26, in house, Sept. 30, Oct. 10, at light, Swezey. Fullaway, 1911.

This cosmopolitan beetle was present in great numbers in warehouse where copra was stored at Piti.

2. **Tillus notatus** Klug, Mon. Cleridae, 276, 1842. Schenkling, Coleopt. Catalog. (23): 12, 1910.

Tillus bipartitus Blanchard, Voy. Pôle Sud. 4: 59, pl. 4, fig. 13, 1853.

Piti, Nov. 15, swept from bamboo, Swezey, one specimen. Fullaway, 1911.

This species was described from the East Indies, and also occurs in Sumatra, Philippines and Japan. The species *bipartitus* was described from Guam, but has been synonymized with *notatus*. Determined by E. A. Chapin, U. S. National Museum.

FAMILY BUPRESTIDAE

Determined by W. S. Fisher, U. S. National Museum.

1. **Cyphogastra auripennis** Saunders, Ent. Soc. London, Trans., 432, pl. 22, fig. 2, 1867. Obenberger, Coleopt. Catalog. (84) : 116, 1926.

Mt. Lamlam, altitude 1,334 ft., April 21, dead on summit, Bryan; Sumay, May 9, Bryan; Piti, June 23, on *Antigonon leptopus* vine on trellis, Swezey. Three specimens.

This large green species was described from Guam. In the Junk Catalogue it is ascribed only to the Carolines.

2. **Chrysodema ventralis** Waterhouse, Ann. Mag. Nat. Hist., V, **15**: 381, 1885. Obenberger, Coleopt. Catalog. (84) : 135, 1926.

Dededo, Aug. 11, on corn leaf, Swezey; Piti, Aug. 13, 24, Sept. 21, Oct. 12, 25, 27, Nov. 6, Swezey.

Described from Guam, Ladrone Islands and not recorded elsewhere. This somewhat smaller bright green species was more abundant. One or two specimens were swept from *Glochidion marianum* trees on several occasions at Piti.

3. **Chrysobothris costata** Kerremans, Soc. Ent. Belgique, Ann. **39**: 213, 1895. Obenberger, Coleopt. Catalog. (132) : 600, 1934.

Dandan, July 17, on *Citrus,* Swezey; Barrigada, July 6, 22, on *Intsia bijuga,* Swezey; Machanao, Aug. 6, Swezey.

Described from Marianas Islands, and not recorded elsewhere. This abundant green species is smaller and duller. The larvae were found very abundant under bark of remaining top of an *Intsia bijuga* tree which had been cut off at Barrigada for timber. From portion of branch, taken home July 22, 10 adults issued between August 3 and October 1.

4. **Agrilus occipitalis** (Eschscholtz).

Buprestis occipitalis Eschscholtz, Entomogr., 79, 1822.

Agrilus occipitalis (Eschscholtz) Obenberger, Coleopt. Catalog. (152) : 1094, 1936.

Yona, March 28, on tangerine trunk, Bryan; Inarajan, May 7, on lime tree, Bryan; Barrigada, June 14, on *Citrus,* Usinger; Machanao, Aug. 6, Swezey; Agana, Aug. 7, on *Citrus,* Swezey; Piti, Oct. 2, Nov. 6, beaten from *Citrus,* Swezey. Fullaway, 1911.

Described from the Philippines, also recorded from China and Turkestan. This small black species was common on dead branches of *Citrus.*

5. **Buprestis aurulenta** Linnaeus, Syst. Nat., 12th ed., 661, 1767. Obenberger, Coleopt. Catalog. (111) : 407, 1930.

One specimen of this American species was obtained in our residence at Piti, July 9. It had apparently issued from a porch floor board as there was an exit hole which appeared fairly fresh. Two other similar holes had an older

appearance. The boards were of Douglas fir which had been shipped from the Puget Sound region. The house was constructed prior to 1915. It does not seem probable that the larva of this beetle could have existed for that length of time before maturing.

Family TENEBRIONIDAE

Those species marked with an asterisk were identified by comparison with specimens from the Philippines in the U. S. National Museum.

1. **Gonocephalum seriatum** (Boisduval).

Opatrum seriatum Boisduval, Voy. Astrolabe 2: 252, 1835.

Gonocephalum seriatum (Boisduval) Gebien, Nov. Guinea 13(3): 234, 1920. Coleopt. Catalog. (22): 326, 1910.

Umatac, May 14, Usinger; Piti, May 30, under cow dung, Swezey; Piti, Aug. 3, under stones, Swezey; Piti, Sept. 17, under stone, Swezey; Orote, July 19, Swezey. Fullaway, 1911.

This widely distributed species, common in Hawaii and Guam, was described from Marshall Islands and occurs also in New Guinea.

2. **Bradymerus acuticostis** Gebien (?), Philip. Jour. Sci. 26: 563, 1925.

Yona, April 27, among dead leaves, Bryan; Agana, May 4, in rotten *Pandanus* log, Swezey; Piti, May 30, under cow dung, Swezey; Piti, Aug. 4, Sept. 16, under rotten board, Swezey; Piti, Sept. 15, in dead stem of *Barleria cristata,* Swezey; Piti, Oct. 27, in rotten bamboo stumps, Swezey.

Described from the Philippines. I have found no other record. Very abundant in Guam under rotten boards, etc. The Guam material appears to agree more nearly with this species than with the more abundant Philippine species, *B. clathratus* Schaufuss.

*3. **Alphitobius laevigatus** (Fabricius).

Opatrum laevigatum Fabricius, Spec. Ins. 1: 90, 1781.

Alphitobius laevigatus (Fabricius) Gebien, Nov. Guinea 13(3): 277, 1920.

Alphitobius laevigatus (Fabricius) Blair, Ins. Samoa 4(2): 77, 1928.

Helops piceus Olivier, Encycl. Méth. 7: 50, 1792.

Piti, June 3, 12, July 5, Sept. 1, 18, 30, Oct. 19, at light, Swezey; Aug. 27, in oat bin, Swezey; Aug. 31, Sept. 27, Nov. 22, in house, Swezey; June 8, 15, July 27, 30, Aug. 1, without data, Swezey.

A widely distributed species, occurring in Hawaii.

*4. **Eutochia lateralis** (Boheman).

Heterophaga lateralis Boheman, Eugenies Resa, 94, 1858.

Eutochia lateralis (Boheman) Gebien, Coleopt. Catalog. (28): 408, 1911.

Piti, July 27, Oct. 23, in rotten sugar cane, Swezey; Piti, Sept. 28, Oct. 6, under coconut husk and stones in pasture, Swezey; Talofofo, Nov. 18, in dead corn stalk, Swezey.

A common widely distributed species, described from Hongkong. Occurs in Hawaii and the Philippines.

*5. **Uloma rufilabris** Fairmaire, Notes Leyden Mus. 4: 226, 1882. Gebien, Coleopt. Catalog. (28): 404, 1911. Schultze, Philip. Jour. Sci. **11**, D: 69, 1916.

Sinajana, June 15, Swezey; Piti, June 10, Sept. 21, under cow dung, Swezey; Piti, Oct. 19, at light, Swezey; four specimens.

*6. **Uloma picicornis** Fairmaire, Notes Leyden Mus. 4:224, 1882. Gebien, Coleopt. Catalog. (28): 403, 1911.

Piti, Oct. 27, ten specimens in rotten bamboo stubs, Swezey.

This species and *Uloma rufilabris* Fairmaire were described from Sumatra.

7. **Scotochares insularis** Boheman, Eugenies Resa, Ins. Col., 95, pl. 1, fig. 6, 1858.

Inarajan, June 25, in old cotton boll, Swezey, one specimen.

Described from Guam.

8. **Tribolium ferrugineum** (Fabricius).

Trogosita ferruginea Fabricius, Mant. Ins. **1**: 212, 1787.

Tribolium ferrugineum (Fabricius) Gebien, Coleopt. Catalog. (28): 394, 1911.

Piti, July 30, Aug. 9, Nov. 9, in house, Swezey; Piti, Oct. 29, in package of food, Swezey. A cosmopolitan species.

9. **Palorus ratzeburgi** (Wissmann).

Hypophloeus Ratzeburgii Wissmann, Stett. Ent. Zeitung **9** :77, 1848.

Palorus Ratzeburgi (Wissmann) Gebien, Coleopt. Catalog. (28): 397, 1911.

Barrigada, July 22, under bark of *Intsia bijuga* log, Swezey. A widely distributed species.

10. **Derosphaerus rotundicollis** (Castelnau).

Upis rotundicollis Castelnau, Hist. Nat. 2: 213, 1840.

Derosphaerus rotundicollis (Castelnau) Gebien, Coleopt. Catalog. (28): 449, 1911; Nova Guinea **13**(3): 305, 1920.

Ritidian Pt., April 15, on *Hernandia* blossoms, Bryan; Mt. Alifan, May 26, in rotten log, Swezey; Piti, June 12, at light, Swezey; Machanao, June 30, under bark of *Elaeocarpus joga* log, Swezey; Libugon Farm, Nov. 10, under bark of dead orange tree, Swezey. Seven specimens, found at widely distributed places.

Described from the Philippines, also recorded from Formosa and Saipan, Marianas Islands.

11. **Xyloborus nudus** (Gebien) ?

Cherostus nudus Gebien, Sarawak Mus. Jour. 2: 14, 1914.

Xyloborus nudus (teste Barber).

Talofofo plateau, June 17, in rotten *Areca* palm trunk, Usinger, one specimen. Described from Borneo. Determined by H. S. Barber, U. S. National Museum.

Family OEDEMERIDAE

Sessinia livida (Fabricius).

Lagria livida Fabricius, Syst. Ent., 14, 1775.

Sessinia livida (Fabricius) Blair, Insects of Samoa, 4(2): 93, 1928.

Piti, June 8, 13, at light, Swezey, two specimens. Fullaway, 1911.

This light brown species was described from Tahiti. It occurs also in Samoa, Tonga, Fiji and Ellice Islands. Determination was verified by H. S. Barber.

Family LUCANIDAE

1. **Figulus integricollis** Thomson, Ent. Soc. France, Ann. IV, 2: 431, 1862.

Mt. Tenjo, May 3, in *Areca* palm, Swezey; Agana, May 4, in *Pandanus,* Swezey; Dededo, May 11, in *Pandanus,* Usinger; Yona, May 12, in sugar cane, Swezey; Mt. Alifan, May 26, Usinger; Machanao, June 2, miscellaneous sweeping, June 30, under bark, Swezey; Barrigada, June 12, rotten log, July 6, in *Intsia bijuga,* July 22, in breadfruit, Swezey; Piti, June 18, in breadfruit, Oct. 27, in bamboo stubs, Swezey; Fadian, Sept. 18, in rotten log, Swezey; Yigo, Oct. 21, in petiole of dead coconut leaf, Swezey. Fullaway, 1911.

Described from the Marianas Islands and not recorded elsewhere. We found it quite common, the larvae feeding in rotten logs.

2. **Figulus lilliputanus** Westwood, Ent. Soc. London, Trans., 219, pl. 12, fig. 5, 1855. Van Roon, Coleopt. Catalog. (8): 52, 1910.

Agana Swamp, May 4, in rotten *Pandanus* trunk, Swezey; Yigo, Oct. 18, in rotten breadfruit trunk, Swezey. Three specimens.

This very small species was described from Australia. Our Guam specimens were taken in similar locations to *F. integricollis* Thomson. Determined by E. C. Zimmerman, Honolulu.

Family SCARABAEIDAE

1. **Ataenius gracilis** (Melsheimer).

Oxyomus gracilis Melsheimer, Phila. Nat. Sci. Acad., Proc. 2: 137, 1844.

Ataenius gracilis (Melsheimer) Horn, Am. Ent. Soc., Trans. 3 : 286, 1871.

Yona, April 29, among dead leaves, Bryan; Inarajan, June 8, in rice field, Usinger; Piti, Sept. 21, in cow dung, Swezey.

This species is widely distributed in North and South America. Determined by E. A. Chapin, U. S. National Museum.

2. **Ataenius cognatus** (Le Conte).

Euparia cognata Le Conte, Phila. Nat. Sci. Acad., Proc., 65, 1858.

Ataenius cognatus (Le Conte) Gemminger and Harold, Coleopt. Catalog. (4) : 1066, 1869.

Piti, July 27, Sept. 14, in corn field, Sept. 21, in cow dung, Swezey.

Dr. Chapin says that it may not be this species, as several species are involved in what has been called *cognatus*. Only a few specimens were collected in Guam.

3. **Aphodius lividus** (Olivier).

Scarabaeus lividus Olivier, Ent. 1 : 86, pl. 26, fig. 222, 1789.

Aphodius lividus (Olivier) Gemminger and Harold, Coleopt. Catalog. (4) : 1051, 1869.

Piti, May 30, in cow dung, June 24, in rotten breadfruit, July 27, Sept. 21, in cow dung, Swezey. Fullaway, 1911.

This cosmopolitan species was collected a few times in Guam.

4. **Anomala sulcatula** Burmeister, Handb. Ent., 4(1) : 261, 1844. Schultze, Philip. Jour. Sci. 11, D : 172, 1916.

Agana, April 19, 23, Bryan; Tarague, May 17, Swezey; Agat, May 21, on corn leaf, Swezey; Machanao, June 30, ex rotten breadfruit trunk, Swezey, Usinger; Piti, June 15, Usinger; Piti, June 12, 15, July 9, 12, 13, 19, Aug. 10, 27, Oct. 5, 6, Nov. 25, all at light, Swezey; Piti, Oct. 31, on bamboo, Swezey; Sumay, Nov. 28, about a dozen on screen door at Pan-American Airways mess hall, Swezey; grubs found at corn roots, a little north of Dededo, Nov. 25, Swezey.

A Philippine species which is now quite common in Guam. It is nocturnal, yet may be found on its food plants in the daytime. The grubs do some damage to corn roots, and are also found in other situations. Most of our adults were collected as they came to light. Determined by F. X. Williams, Experiment Station, Hawaiian Sugar Planters' Association, Honolulu.

5. **Holotrichia mindanaoana** Brenske, Berlin Ent. Zeitschr. 38 : 358, 1893. Schultze, Philip. Jour. Sci. 11, D : 179, 1916.

Agana, April 16, 19, May 4, at light, Bryan; Piti, May 30, June 8, 12, July 12, at light, Swezey; Piti, May 9, at light, Usinger. Grubs were found at corn roots at Dededo, Nov. 25, Swezey.

Another Philippine species considerably larger than *Anomala sulcatula* Burmeister. It is probably the species whose grubs were found at pineapple roots by Fullaway in 1911, and mentioned as *Lachnosterna* species by Vandenberg in the 1930 report of the Guam Agricultural Experiment Station. At present they are injurious to corn roots in some places. The beetles are nocturnal, and feed sometimes destructively on banana leaves. Determined by F. X. Williams.

FAMILY CERAMBYCIDAE

1. **Dihammus marianarum** (Aurivillius).

Monochamus (*Haplohammus*) *Marianarum* Aurivillius, Deutsche Ent. Zeitschrift, 216, 1908.

Dihammus Marianarum (Aurivillius) Coleopt. Catalog. (73) : 98, 1922.

Agfayan, March 28, Bryan; Orote Pen., April 9, Bryan; Merizo, April 24, Bryan; Upi Trail, May 5, Usinger; Machanao, June 2, Swezey; Piti, May 2, on *Pithecolobium,* Usinger; Dededo, May 11, Usinger; Talofofo, June 11, Usinger; Barrigada, June 12, on *Citrus,* June 14, on *Ficus,* June 24, Usinger; Dededo, Sept. 7, reared from *Hibiscus tiliaceus,* Swezey; Piti, Sept. 22, Oct. 3, Swezey; Yigo, Oct. 18, reared from dead *Ficus,* Swezey; Piti, Nov. 16, at light, Swezey.

This is the largest cerambycid in Guam. It was previously collected by Fullaway in 1911, and determined by Schultze as *Dihammus fistulator* Germar, a species having a wide range from Malay Peninsula and the Philippines to Australia and Samoa. The specimens identified by Schultze, however, have the lateral shining bare spots of the abdomen, the same as our 1936 specimens, which is a character by which Aurivillius distinguishes *marianarum* from other closely related species.

The work of the larvae of this beetle is very conspicuous in dead branches of the breadfruit tree. It also works similarly in *Pithecolobium, Ficus,* and *Hibiscus tiliaceus,* and any felled tree. Before getting too old and dried up, the leftover tree tops where logs had been cut were especially likely to have larvae working in them. At Yigo, November 13, larvae were found in living cacao trees. When working in or beneath the inner bark, they had a tendency to go spirally around a branch, which either crippled or killed it. One larva retained for rearing by A. I. Cruz matured February 19, 1937.

2. **Ceresium unicolor** (Fabricius).

Saperda unicolor Fabricius, Mant. Ins. **1**: 147, 1787.

Ceresium unicolor (Fabricius) Aurivillius, Insects of Samoa 4(2) : 138, 1928. Blair, B. P. Bishop Mus., Bull **114**: 274, 1935.

Piti, June 10, 15, July 9, 12, 19, 22, 23, 24, Sept. 14, 22, Oct. 12, 19, Nov. 25, Swezey; Mt. Alifan, June 27, Usinger; Barrigada, July 22, reared from

Intsia bijuga, Swezey; Fadian, Sept. 18, Swezey; Sumay, Sept. 28, Swezey; Merizo, Oct. 2, Swezey. Fullaway, 1911.

This species is widely distributed in the Pacific. In Hawaii it has been known as *Ceresium simplex.* We found it very abundant in 1936, breeding in dead branches or fallen trees of several kinds. The beetles often came to light.

3. **Gelonaetha hirta** (Fairmaire).

Stromatium hirtum Fairmaire, Rev. Mag. Zool. II, 2: 60, 1850.

Astrimus hirtus (Fairmaire) Sharp, Fauna Hawaii. 2(3): 96, 1900.

Gelonaetha hirta (Fairmaire) Gahan, Fauna Brit. India, Coleopt. 1: 155, fig. 62, 1906. Aurivillius, Coleopt. Catalog. (39): 126, 1912.

Machanao, June 4, Swezey; Piti, June 8, Swezey; Piti, Sept. 7, at light, Swezey. Three specimens.

This beetle is known in India, Philippines and Tahiti. It is now recorded from Guam for the first time.

4. **Chlorophorus annularis** (Fabricius).

Callidium annularis Fabricius, Mant. Ins. 1: 156, 1787.

Chlorophorus annularis (Fabricius) Chevrolat, Soc. Roy. Sci. Liege, Mem. 18: 290, 1863. Aurivillius, Coleopt. Catalog. (39): 402, 1912. Schultze, Philip. Jour. Sci. **11,** D: 107, 1916.

Merizo, April 24, Bryan; Barrigada, Aug. 28, attracted to corn tassels, Swezey. Fullaway, 1911.

The bamboo borer occurs in India, Burma, Siam, China, Japan, through the Malay Archipelago to New Guinea. It has been known in Hawaii since 1905, doubtless introduced in bamboo furniture or other articles.

5. **Prosoplus bankii** (Fabricius).

Lamia bankii Fabricius, Syst. Ent., 176, 1775.

Prosoplus bankii (Fabricius) Sharp, Fauna Hawaii. 2 (3): 114, 1900. Schultze, Philip. Jour. Sci. **11,** D: 115, 1916.

Piti, April 28, Bryan; Piti, April 30, from *Hibiscus tiliaceus,* Usinger; Piti, May 15, Usinger; Merizo, June 11, on corn, Swezey; Piti, June 15, Swezey; Fonte Valley, Aug. 7, on weeds, Swezey; Dededo, Aug. 11, on corn, Swezey; Piti, Aug. 13, 19, at light, Oct. 27, Swezey; Yigo, Nov. 8, attracted to corn tassels, Nov. 13, on seed cluster of palm, *Coccothrinax* species, Swezey. Fullaway, 1911.

This species has a wide distribution from Java, Borneo, and Philippines through the Malay Archipelago to Northern Australia, also Hawaii. Although we did not rear this common longicorn, it doubtless breeds in dead stems of many kinds of plants in Guam as it does in Hawaii.

6. **Prosoplus marianarum** Aurivillius, Deutsche Ent. Zeitschr., 222, 1908; Coleopt. Catalog. (73): 263, 1922.

Machanao, June 5; beach near Atao, June 25; Ritidian Pt., June 30, Usinger, three specimens. No data as to habits.

This species was described from the Marianas Islands and has not been recorded elsewhere. We found it only rarely.

Family CHRYSOMELIDAE

1. **Phytorus lineolatus** Weise (?), Philip. Jour. Sci. 8, D: 220, 1913.

Talofofo, March 28, April 1, on mango, Bryan; Tumon, April 2, Bryan; Tiyan, April 2, on mango, Bryan; Ritidian Pt., April 15, on ferns, Bryan; Yona, April 29, Bryan; Piti, April 30, on *Hibiscus tiliaceus,* Swezey, Usinger, July 26, at light, Swezey, Sept. 26, on mango, Swezey, Oct. 6, at light, Swezey, Nov. 29, on bamboo, Swezey; Agana, May 4, on mango, May 25, on *Pithecolobium dulce,* Swezey; Upi Trail, May 5, Bryan; Dededo, May 11, on *Cycas,* Usinger, on *Ochrosia,* Swezey; Inarajan, May 7, on coconut, June 8, on mango, July 25, on *Barringtonia racemosa,* Swezey; Umatac, May 28, on mango and *Thespesia populnea,* Swezey; Agat, May 31, on *Hernandia peltata,* Swezey; Merizo, June 11, on grape and mango, Swezey, Usinger; Sinajana, June 15, Swezey; Mt. Alifan, June 17, on *Macaranga,* Swezey; Dandan, July 17, on *Glochidion* and *Citrus,* Swezey; Orote Pen., on mango and *Mallotus,* Swezey; Yigo, Oct. 21, on small-leaved *Ficus,* Nov. 13, on *Terminalia catappa,* Swezey; Tumon, Nov. 13, on mango, Swezey; Yona, Nov. 18, on corn, Swezey.

Determined by H. S. Barber by comparison with specimens in the Baker Philippine collection determined by Weise and marked with a (?). Guam specimens have previously been determined as *P. pinguis* and *P. puncticollis,* but do not have the strong spine of front femora as in *pinguis,* nor the distinct puncturation of thorax as in *puncticollis.* An abundant chrysomelid, which sometimes defoliates mango trees. Many other kinds of trees are also fed on by this beetle. The larvae are unknown and nothing has been learned of the life history of the species. The species was described from the Philippines.

2. **Aphthona** species near **bicolorata** Jacoby.

Piti, May 26, June 2, on *Euphorbia hirta,* Usinger; Umatac, May 28, Usinger; Sumay, Aug. 17, on *Euphorbia atoto,* Swezey.

A small species collected only a few times on *Euphorbia.* Determined by G. E. Bryant, British Museum.