

# INSECTS OF MICRONESIA

## Homoptera: Coccoidea, Supplement<sup>1</sup>

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This report lists several species of scale insects previously unreported from Micronesia as well as new distribution records, and corrections for previous misidentifications. All Micronesian records listed in this paper are new or corrected records. Complete distribution of species is listed only for species newly recorded. Two species described in the original paper (vol. 6, no. 7) of this series are placed in synonymy, and a new name is proposed for a species previously misidentified. The species are numbered according to the original treatment; additions are denoted by the letter a, b, etc., following the number of the species which precedes them in the original text.

In addition to the previously unpublished data given below, a number of new records of coccids from the Bonin (Ogasawara) Islands, including several not previously recorded in Micronesia, were given in a recent paper by Kawai & Matsubara (Appl. Entomol. Zool. **6**: 11-26, 1971). These authors also have confirmed or corrected a number of early records from the Bonins which I listed as questionable in my 1966 paper.

### FAMILY PSEUDOCOCCIDAE

#### **12. *Dysmicoccus neobrevipes* Beardsley**

*Dysmicoccus neobrevipes* Beardsley, 1959, Hawaiian Ent. Soc., Proc. **17**(1): 31.

DISTRIBUTION: Marshall Is.

MARSHALL IS. KWAJALEIN: Kwajalein I., Sugerman, 1965.

#### **26a. *Phenacoccus gossypii* Townsend and Cockerell**

*Phenacoccus gossypii* Townsend and Cockerell, 1898, J. N.Y. Ent. Soc. **6**:

170.—Zimmerman, 1948, Insects of Hawaii **5**: 161, fig. 94.

DISTRIBUTION: Mexico (type locality), North America, Hawaii, Guam.

S. MARIANA IS. GUAM: April 1972, LaPlante, on *Lantana*.

1. Published with the approval of the Director of the Hawaii Agricultural Experiment Station as Journal Series No. 1794.

**41. Pseudococcus neomaritimus** Beardsley

*Pseudococcus neomaritimus* Beardsley, 1966, Ins. Micronesia **6**(7): 454, fig. 16.—Salazar-Torres, 1972, Rev. Peru. Entomol. **15**: 283.

DISTRIBUTION: Micronesia, Peru.

MARSHALL IS. MAJURO: Dec. 1972, Otobed, on *Ipomea pse-carpae*, *Vigna morinalus*, and *Wedelia biflora*.

## FAMILY COCCIDAE

**55. Ceroplastes ceriferus** (Fabricius)

*Coccus ceriferus* Fabricius, 1798, Ent. Syst. Suppl. p. 546.

*Ceroplastes ceriferus*: Signoret, 1872, Soc. Ent. France, Ann. Ser. 5, **2**: 40.

*Ceroplastes pseudoceriferus*: Beardsley, 1966, Ins. Micronesia **6**(7): 481 (misidentification).<sup>2</sup>

**56. Ceroplastes rubens** Maskell

*Ceroplastes rubens* Maskell, 1892, New Zealand Inst., Trans. **25**: 214.

DISTRIBUTION: Marshall Is.

MARSHALL IS. KWAJALEIN: Kwajalein I., Aug. 1965, Moe.

Genus **Kilifia** DeLotto

*Kilifia* DeLotto, 1965, Brit. Mus. (Nat. Hist.) Ent., Bull. **16**: 206.

Type of genus: *Lecanium acuminatum* Signoret.

The separation of this genus from *Coccus* L. was made on the basis of the enlarged middle and hind legs and the elongate anal operculum. Two species, one previously unrecognized, are present in Micronesia.

**57. Kilifia acuminata** (Signoret)

*Lecanium acuminatum* Signoret, 1873, Soc. Ent. France, Ann. Ser. 5, **3**: 397.

*Coccus acuminatus*: Kirkaldy, 1902, Fauna Hawaiiensis **3**: 105.—Beardsley, 1966, Ins. Micronesia **6**(7): 483 (in part).

*Platycoccus acuminatus*: Takahashi, 1959, Kontyu **27**: 76.

*Kilifia acuminata*: DeLotto, 1965, Brit. Mus. (Nat. Hist.) Ent., Bull. **16**: 208.

DISTRIBUTION: Widespread.

S. MARIANA IS. GUAM: (as previously cited).

The Palau Is. records of this species cited in my 1966 treatment represent misidentifications of a closely related species; see 57a below.

**57a. Kilifia deltoides** DeLotto

*Kilifia deltoides* DeLotto, 1965, Brit. Mus. (Nat. Hist.) Entomol., Bull. **16**:

2. Correction of this misidentification was made by W.F. Gimpel, Dept. of Entomology, University of Maryland, in connection with a revisionary study of North American *Ceroplastes*.

208, fig. 13.

*Coccus acuminatus*: Beardsley, 1966, Ins. Micronesia **6**(7): 483, in part (misidentification).

DISTRIBUTION: Kenya (type locality), Zanzibar, Micronesia.

S. MARIANA IS. GUAM: specimens identified by S. Nakahara, USDA, Beltsville (personal communication).

PALAU. KOROR: July 1953, Beardsley, on *Premna* leaves; Apr. 1954, Beardsley, on *Glochidion* and *Nephrolepis*. NGERKABESANG: Aug. 1953, Beardsley, on guava leaves.

This species can be differentiated from *K. acuminata* by the presence of very small bilocular pores, in addition to minute circular pores, on the dorsum, and by the presence of a spur-like membranous process on the apices of the middle and hind tarsi.

**61. *Coccus moestus*** DeLotto

*Coccus moestus* DeLotto, 1957, Ent. Soc. S. Africa, J. **22**(1): 164.

DISTRIBUTION: Ponape.

PONAPE. Net, Feb. 1967, W. Mitchell, on *Calophyllum inophyllum*.

**70. *Saissetia nigra*** (Nietner)

*Lecanium nigrum* Nietner, 1861, Ceylon Times **31**: 9.

DISTRIBUTION: Marshall Is.

MARSHALL IS. KWAJALEIN: Kwajalein I., Aug. 1965, Moe.

**71. *Saissetia oleae*** (Olivier)

*Coccus oleae* Olivier, 1791, Encycl. meth. **6**: 95 (not seen)<sup>3</sup>.

DISTRIBUTION: Widespread, Micronesia?

DeLotto (1971, Bul. Ent. Res. **61**: 325-326) pointed out that three distinct species were, until recently, confused under this name (see 71a and 71b below). All of the Micronesian specimens which I previously assigned to this species were not available for re-examination in light of DeLotto's findings. None of the specimens which were re-examined could be assigned with certainty to *S. oleae*.

**71a. *Saissetia miranda*** (Cockerell and Parrott)

*Lecanium oleae mirandum* Cockerell and Parrott, in: Cockerell 1899, Biol. Centr. Amer. **2**(part 2): 12.

*Saissetia miranda*: DeLotto 1969, Ent. Soc. S. Africa, J. **32**: 419.

DISTRIBUTION: Mexico (type locality), California, Texas, West Indies, Hawaii, Johnston I., Micronesia.

3. See DeLotto, 1971, J. Entomol. (B) **40**(2): 149 for discussion of the authorship of this name.

S. MARIANA IS. GUAM: In quarantine at San Francisco, Feb. 1945, Galbraith, on *Barringtonia speciosa*; Mt. Bolanos, Aug. 1952, Krauss; Mt. Lamlam, Oct. 1952, Krauss, on *Crotalaria* stem; Nov. 1953, Liming, on *Erythrina variegata*.

**71b. *Saissetia neglecta* DeLotto**

*Saissetia neglecta* DeLotto, 1969, Ent. Soc. S. Africa, J. **32**: 419, fig. 4.

DISTRIBUTION: Florida (type locality), West Indies, Central America, Hawaii, Micronesia.

PALAU. NGERKABESANG: July 1946, Townes, on *Psidium guajava*. PELELIU: July 1946, Townes, on capparidaceous tree.

FAMILY DIASPIDIDAE

**123. *Lepidosaphes similis* Beardsley, n. sp.**

*Lepidosaphes bladhae*?, Beardsley, 1966, Insects Micronesia **6**(7): 536 (not *L. bladhae* Takahashi).

Virtually identical with *L. laterochitinoso* Green (as described and illustrated under the name *L. spinulosa* Beardsley, 1966, Ins. Micronesia **6**(7): 543–45, fig. 35), but differing in type of minute ornamentation on anterior part of head. In *L. laterochitinoso* this consists of many close-set minute spinules about 1.0 to 1.5  $\mu\text{m}$  long, on both dorsum and venter. In *L. similis* the spinules, particularly on the dorsum, are distinctly larger (2 to 3  $\mu\text{m}$  long), and fewer (about 70 discernible on dorsum of holotype).

Holotype, female (BISHOP 10,356) and 5 paratypes on 1 slide, Ponape, Colonia, 16 Nov. 1953, J. W. Beardsley, on leaves of *Ravenalia madagascariensis*. Five paratypes (UH) on one slide, same data as type. Additional specimens as cited under *L. bladhae*?, Ins. Micronesia **6**(7): 536–37.

DISTRIBUTION: Micronesia (S. Marianas, Palau, Yap, Ponape and Wake I.).

**129. *Lepidosaphes laterochitinoso* Green**

*Lepidosaphes laterochitinoso* Green, 1925, Ent. Month. Mag. **61**: 41.—Takagi, 1970, Insect. Matsumurana **33**: 14, fig. 41.

*Lepidosaphes bladhae* Takahashi, 1931, Soc. Trop. Agric. Taihoku Imp. Univ., J. **3**: 379.

*Lepidosaphes spinulosa* Beardsley, 1966, Ins. Micronesia **6**(7): 543, **New synonymy.**

DISTRIBUTION: England (in glasshouse, type locality), Taiwan, Philippine Is., S.E. Asia, Micronesia (S. Mariana Is., Palau Is.).

Takagi (1970: 14) synonymized the Micronesian records which I had

listed under the name *L. bladhiae* Takahashi? in my 1966 paper. However, I do not believe he was correct in doing so. It now appears that these specimens represent another, previously un-named species (see no. 123 above). The minor but apparently consistent difference in the size of the small, pointed spinules of the head will separate these two forms (see fig. 35, Ins. Micronesia 6(7): 544). It is of interest that none of the Micronesian specimens of *L. laterochitinos* which I have seen exhibit the sclerotization of the lateral thoracic regions which prompted Green to give the species its name. Takagi (1970) has shown that this is a variable character, and has found both sclerotized and unsclerotized individuals in the same populations in Taiwan.

Dr. D. J. Williams (pers. comm.)<sup>4</sup> has indicated that both *Lepidosaphes mcgregori* Banks (1906, Philippine Jour. Sci. 1: 223) and *Mytilaspis cocculi* Green (1896, Coccidae of Ceylon 1: 77) may be identical with *L. laterochitinos*. If so, the name *Lepidosaphes cocculi* (Green) would have priority. Both of these names have been used in Micronesian literature for the species designated above as *L. similis* Beardsley.

### 131. *Lepidosaphes rubrovittatus* Cockerell

*Lepidosaphes rubrovittatus* Cockerell, 1905, Davenport Acad. Nat. Sci., Proc. 10: 135.

*Lepidosaphes ulapa* Beardsley, 1966, Ins. Micronesia 6(7): 546, **New Synonymy.**

After comparing paratypes of *L. ulapa* from Palau with specimens from the type material of *L. rubrovittatus* it is apparent that the former is a junior synonym of the latter. I am indebted to Mr. Steve Nakahara, USDA, ARS, Beltsville, Maryland, for suspecting this synonymy and for providing specimens of *L. rubrovittatus* for comparison.

DISTRIBUTION: Philippine Is. (type locality, Manila), Micronesia.

S. MARIANA IS. ROTA: near Sabana, June 1946, Townes. GUAM: in quarantine at Hoboken, March 1946, Olsen, on *Cycas*.

PALAU. KOROR: Jan. 1954, Beardsley on *Eugenia javanica* (types of *L. ulapa* Beardsley). NGERKABESANG, Aug. 1953, Beardsley, on guava leaf.

### Genus *Lopholeucaspis* Balachowsky

*Lopholeucaspis* Balachowsky, 1953, Actualites Sci. et Indus., Entomol. Appl. 1202: 875.

Type species: *Leucaspis japonica* Cockerell.

4. I am indebted to Dr. Williams for comparison of specimens and comments concerning the identity of Micronesian *Lepidosaphes*.

**131a. Lopholeucaspis cockerelli** (Grandpré and Charmoy)

*Fiorinia cockerelli* Grandpré and Charmoy, 1899, Soc. Amicale Sci. Pub.

Maurice, The Planters and Commercial Gazette, p. 37 (not seen).

*Leucaspis cockerelli*: Leonardi, 1903, Portici R. Scuola Super. Agr., Ann. Ser. 2, **5**(1904): 15.

*Leucodiaspis cockerelli*: Lindinger, 1908, Jahrb. Hamburg Wiss. Anst. **25**: 122.—Zimmerman, 1948, Ins. Hawaii **5**: 374, fig. 192.

*Lopholeucaspis cockerelli*: Balachowsky, 1953, Actualités Sci. et Indus., Ent. Appl. **1202**: 877.

DISTRIBUTION: Widespread (type locality: Mauritius).

PONAPE: Net, Feb. 1967, Mitchell, on *Piper nigrum*.