

INSECTS OF MICRONESIA

Homoptera: Aphididae

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The following list of aphids reports upon collections made in Micronesia during many insect surveys. Although but nine species were taken, they represent a fair sample. It appears that aphids, while perhaps more abundant in continental tropical areas, excepting Australia, are extremely rare or wholly absent on many of the Pacific islands.

Most of the specimens herein treated were collected over a period of several years, from May 1945 to February 1954, by a number of collectors under varied auspices. (See *Insects of Micronesia* 1: 12-14, 195 ff.) The difficulty of determining the host plants presented a problem to collectors, which accounts for the omissions of many plant names. In a few cases only a single immature individual aphid was collected, but this lack of material did not greatly interfere with determining the name of the species. Scattered records are also available in the reports of Dr. T. Esaki and Dr. R. Takahashi which were made during the period of Japanese Mandate. Only a few specimens were taken in the Bonin and Gilbert Islands. Since most of the species treated are widely distributed and well known, full synonymies are not given.

I mounted the specimens on microscope slides, and complete series are deposited in Bishop Museum and the United States National Museum.

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Distributional List of Micronesian Aphids

	MICRONESIAN ISLAND GROUPS										Other Localities	
	Bonins	S. Marianas	Caroline						Marshalls	Gilberts		
			Palau	Yap	Caroline Atolls	Truk	Ponape	Kusaie				
Subfamily Aphidinae												
1. <i>Hyalopterus pruni</i>		×										Pacific is., Asia, Europe, Africa, N. America
2. <i>Rhopalosiphum maidis</i>		×	×	×			×	×				Pacific is., Asia, Europe, Africa, N. and S. America, New Zealand
3. <i>R. pseudobrassicae</i>			?									almost cosmopolitan
4. <i>Aphis gossypii</i>	×	×	×	×	×	×	×	×	×	×	×	cosmopolitan
5. <i>A. medicaginis</i>		×		×	×	×	×	×	×	×		Pacific is., Europe, Africa, N. and S. America
6. <i>A. nerii</i>		×			×							Pacific is., Asia, Europe, Africa, N. and S. America, New Zealand
7. <i>Toxoptera aurantii</i>		×			×	×						cosmopolitan
8. <i>Myzodes persicae</i>		×										cosmopolitan
9. <i>Pentalonia nigronervosa</i>		×	×	×			×	×		×		Pacific is., Asia, Africa, S. America, Europe (greenhouses), Australia
Subfamily Mindarinae												
10. <i>Tetraneura akinire</i>		×										Japan, New Caledonia
Subfamily Hormaphidinae												
11. <i>Oregma bambusae</i>			×									S. Asia
12. <i>O. bambusae carolinensis</i>				×								
13. <i>Trichoregma rhapsidis</i>			×									Singapore, Sumatra, Java
14. <i>T. esakii</i>			×									
15. <i>Cerataphis lataniae</i>		×		×				×				Pacific is., Asia, Africa, S. America, Australia, Florida

KEY TO MICRONESIAN GENERA OF APHIDIDAE

1.	Alate females	2
	Apterous females	11
2(1).	Sensoria on antennal segment III narrow and annular; cornicles mere pores	3
	Sensoria on antennal segment III circular or nearly so; cornicles distinct, short or long.....	5
3(2).	Antennae five-segmented, media of forewing with a branch, anal plate indented, cauda constricted basally and knobbed.....	4
	Antennae six-segmented, media of forewing simple, not branched, anal plate not indented, cauda not constricted basally.....	Tetraneura
4(3).	Cornicles on hairy cones.....	Trichoregma
	Cornicles not on hairy cones.....	Cerataphis and Oregma
5(2).	Forewing with Rs following an abnormal course, directed posteriorly to M, and fused with it between first and second forks of M, making a closed cell between stigma and M, and making M appear as if it had three forks; hind wing lacking vein Cu.....	Pentalonia
	Forewing without above abnormal venation.....	6
6(5).	Media of forewing with a single branch.....	Toxoptera
	Media of forewing with two branches.....	7
7(6).	Cornicles swollen or tapering.....	8
	Cornicles cylindrical, short, without flanges.....	Hyalopterus
8(7).	Cornicles very short, almost as wide as long or a little longer than wide	Brevicoryne
	Cornicles distinctly longer than wide.....	9
9(8).	With prominent frontal tubercles.....	Myzodes
	Without distinct frontal tubercles.....	10
10(9).	Cornicles slightly swollen.....	Rhopalosiphum
	Cornicles not swollen, tapering.....	Aphis
11(1).	Cornicles mere pores or obscured.....	12
	Cornicles distinct, long or short.....	15
12(11).	Head fused with pronotum, with a pair of hornlike processes on vertex, anal plate divided, cauda constricted basally and knobbed.....	13
	Head distinct from pronotum, without hornlike processes, anal plate not divided, cauda not knobbed.....	Tetraneura
13(12).	Cornicles on hairy cones, body not sclerotized on dorsum, wax-pores arranged in a pair of transverse rows on abdominal tergite VIII.....	Trichoregma
	Cornicles not on hairy cones, body sclerotized at least on head and pronotum, wax-pores not in a pair of transverse rows on abdominal tergite VIII	14
14(13).	Body sclerotized over dorsum, with three divisions, wax-pores arranged in a row around whole body margin.....	Cerataphis
	Body sclerotized on head and pronotum, with some sclerotized parts on abdomen; wax-pores in a median cluster on abdominal tergite VIII.....	Oregma
15(11).	Body without numerous capitate or clavate setae.....	16
	Body with numerous capitate or clavate setae; frontal tubercles protuberant	Pentalonia
16(15).	Frontal tubercles neither distinctly developed nor protuberant.....	17
	Head with prominent frontal tubercles having derm imbricate or asperate; cornicles slightly swollen.....	Myzodes
17(16).	Cornicles not longer than cauda, or distinctly shorter.....	18
	Cornicles longer than cauda, usually much longer.....	20

18(17). Cornicles without flanges	Hyalopterus
Cornicles with a flange.....	19
19(18). Cornicles somewhat swollen.....	Brevicoryne
Cornicles cylindrical or tapering.....	Aphis
20(17). Cornicles somewhat swollen or clavate.....	Rhopalosiphum
Cornicles tapering, never swollen.....	21
21(20). Abdomen with prominent striae on each side below cornicle.....	Toxoptera
Abdomen without such striae.....	Aphis



FIGURE 1.—*Hyalopterus pruni*, the mealy plum aphid; a summer colony produced by a single alate female on *Typha latifolia* is shown.

SUBFAMILY APHIDINAE

TRIBE APHIDINI

SUBTRIBE APHIDINA

Genus **Hyalopterus** Koch, 1854

1. **Hyalopterus pruni** (Geoffroy). (Figure 1.)

Aphis pruni E. L. Geoffroy, 1762, Hist. Ins. Paris, ed. 1, 1: 497.

Aphis arundinis Fabricius, 1775.

Aphis spinarum Hartig, 1841.

The apterae are yellowish to green and covered with white powdery wax. So far as can be ascertained, the mealy plum aphid is being reported from Micronesia for the first time. However, the insect is widely distributed in many parts of the world. This species appears in American literature as *H. arundius* (Fabricius). The above synonymy is from Carl Börner, 1952.

DISTRIBUTION: Europe, Asia, Africa, North America, Marianas, and western Carolines.

S. MARIANA IS. GUAM: Inarajan, on *Phragmites karka* (*Trichoon roxburghii*), June 1936, Swezey.

PALAU. BABELTHUAP: Melekeiok (Marukyoku), Feb. 1936, Esaki.

HOSTS: In the temperate regions it overwinters on many species of *Prunus* and transfers during the summer to *Arundo*, *Calamagrostis*, *Phalaris*, *Phragmites*, *Poa*, *Scirpus*, *Typha*, and possibly other related plants.

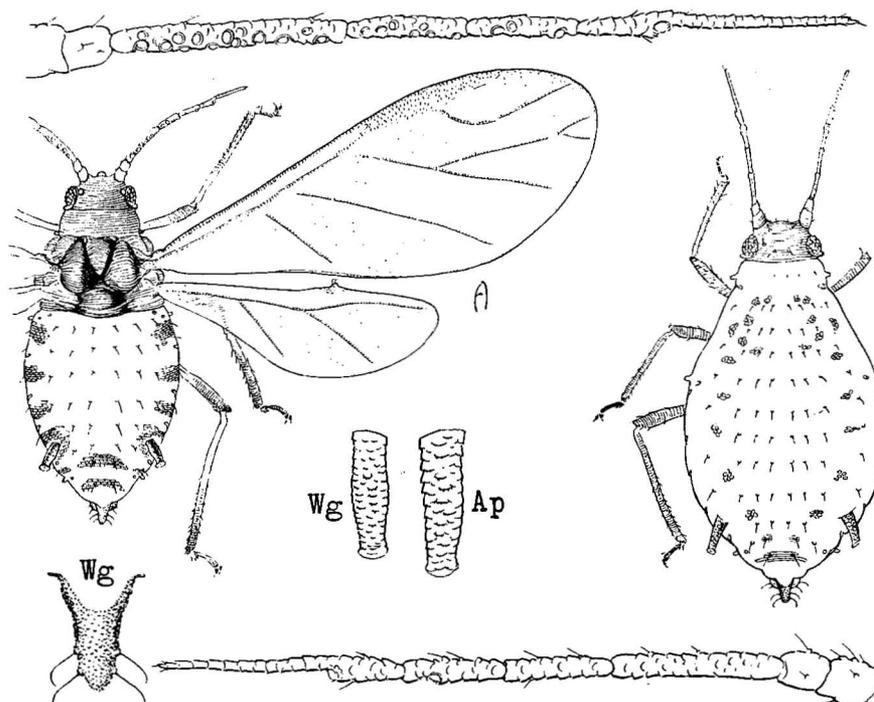


FIGURE 2.—*Rhopalosiphum maidis*, the maize, or corn, aphid (after Zimmerman, 1948).

Genus *Rhopalosiphum* Koch, 1854

2. *Rhopalosiphum maidis* (Fitch). (Figure 2.)

Aphis maidis Fitch, 1856, Second report on noxious, beneficial and other insects. New York Agric. Soc., Trans., 550-552.

This species is called the maize, corn, or corn-leaf aphid. It is a small and dark bluish-green aphid, covered with a whitish powder. It has a wide range of host plants among the Gramineae.

DISTRIBUTION: Europe, Asia, Africa, Pacific islands, New Zealand, North and South America.

S. MARIANA IS. SAIPAN: As Lito (Asilito), on corn, June 1946, Oakley; Magicienne Bay, on corn, May 1948, Lange. TINIAN: Camp Churo, on *Sorghum*, June 1946, Oakley. ROTA: On corn, June 1946, Oakley. GUAM: On grass, June 1946, Krauss; Agana, on grass, Apr. 1946, Krauss; Pt. Oca, on *Sorghum*, June 1945, G. Bohart and Gressitt.

PALAU. BABELTHUAP: On *Coix lacryma-jobi*, July 1946, Oakley. KOROR: On grass and corn, Mar., Nov., Dec. 1953, Beardsley.

YAP. On corn leaves, July 1946, Oakley; on corn, Aug. 1950, Goss; on corn, Aug. 1950, La Rivers.

TRUK. WENA (Moen): On corn, May 1946, Oakley; on *Sorghum vulgare*, May 1946, Townes. FEFAN: On *Sorghum*, May 1946, Townes, Oakley.

PONAPE. Colonia, on ears of corn, Aug. 1946, Oakley; on corn, Nov. 1953, Beardsley.

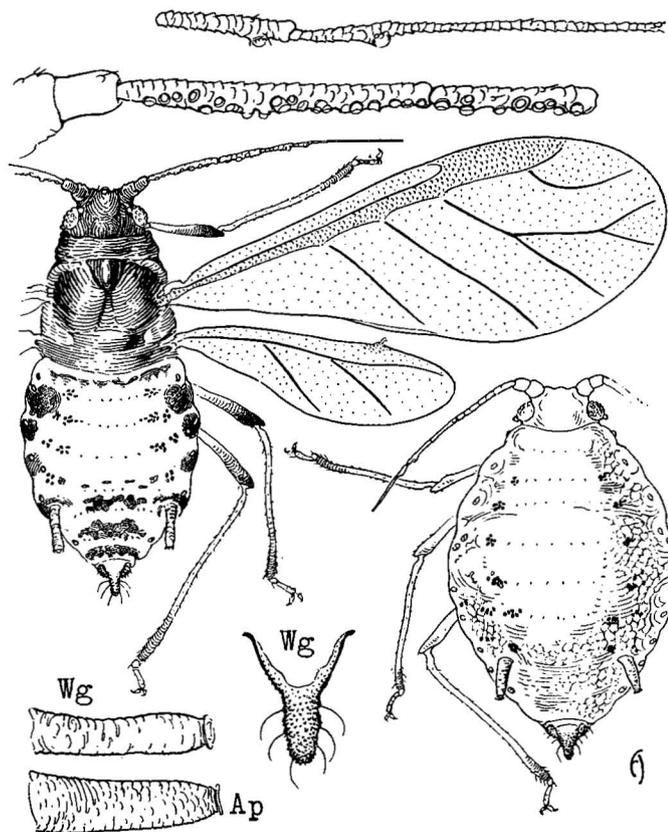


FIGURE 3.—*Rhopalosiphum pseudobrassicae*, the turnip aphid (after Zimmerman, 1948).

This aphid is widely distributed through the tropical and temperate regions of much of the world. In volume 1 of this series (1954, Introduction, pp. 183, 186) it is referred to as widespread on maize and as found also on *Sorghum* on Tinian and Guam.

HOSTS: Maize, *Sorghum*, *Coix lacryma-jobi*, and other grasses. Zimmerman (1948, Insects of Hawaii 5:77) lists 48 host plants, most of which are monocotyledons. It has long been a pest particularly of maize, millet, grasses, wheat, oats, sugar cane, and related species.

3. *Rhopalosiphum pseudobrassicae* (Davis). (Figure 3.)

Aphis pseudobrassicae Davis, 1914, Canadian Ent. 46: 231, figs. 21, 22.

Rhopalosiphum pseudobrassicae, Zimmerman, 1948, Insects of Hawaii 5: 97, fig. 56.

Lipaphis pseudobrassicae, C. Börner, 1952, Blattläuse Mittel-Europas 4: 111.

This is a relatively common species in Oceania, Hawaii, and Asia. C. Börner has placed this species in the genus *Lipaphis* Mordvilko, 1928. Specimens were reported by Oakley in Guam (1954, Insects of Micronesia 1: 185).

DISTRIBUTION: Nearly cosmopolitan.

S. MARIANA IS. GUAM: Reported by Oakley, but lacking in material submitted.

HOSTS: Broccoli, cardamine, Chinese cabbage, daikon, mustard cabbage, radish, shirona, tomato (after Zimmerman).

Genus *Aphis* Linnaeus, 1758

KEY TO MICRONESIAN SPECIES

- | | | |
|-------|--|--------------------|
| 1. | Alatae | 2 |
| | Apterous viviparous females..... | 4 |
| 2(1). | Terminal filament of sixth antennal segment shorter than third segment..... | 3 |
| | Terminal filament of sixth antennal segment longer than third segment;
length of body about 1 mm.; front margin of head evenly convex..... | <i>gossypii</i> |
| 3(2). | Third antennal segment with about four sensoria on posterior face; cauda
with only three hairs on each side..... | <i>medicaginis</i> |
| | Third antennal segment with about nine sensoria on posterior face; cauda
with generally more than three hairs on each side..... | <i>nerii</i> |
| 4(1). | Terminal filament of sixth antennal segment shorter than third segment..... | 5 |
| | Terminal filament of sixth antennal segment longer than third segment;
cauda with only three hairs on each side; body less than 2 mm. long..... | <i>gossypii</i> |
| 5(4). | Cornicle distinctly longer than third antennal segment; cauda with only
three hairs on each side; hexagonal pattern on dorsum..... | <i>medicaginis</i> |
| | Cornicle barely longer than third antennal segment; cauda with more than
three hairs on each side; without hexagonal pattern on dorsum..... | <i>nerii</i> |

4. *Aphis gossypii* Glover (fig. 4).

Aphis gossypii Glover, 1855, Rept. Comm. Patents [U.S.] for 1854, 62.

Aphis convolvuli Ferrari, 1872.

Aphis citrulli Ashmead, 1882.

Aphis cucumeris Forbes, 1882.

Aphis oxalis Macchiati, 1883.

Aphis heliotropii Macchiati, 1885.

Aphis cooki Essig, 1911.

Aphis parvus Theobald, 1915.

Aphis malvoides Das, 1918.

Aphis bauhinia Theobald, 1918.

Aphis shirakii Takahashi, 1921.

Toxoptera leonuri Takahashi, 1923.

Aphis oxalina Theobald, 1925.

Aphis viridula Nevsky, 1929.

Cerosipha aurantii (Boyer de Fonscolombe) Börner, 1952.

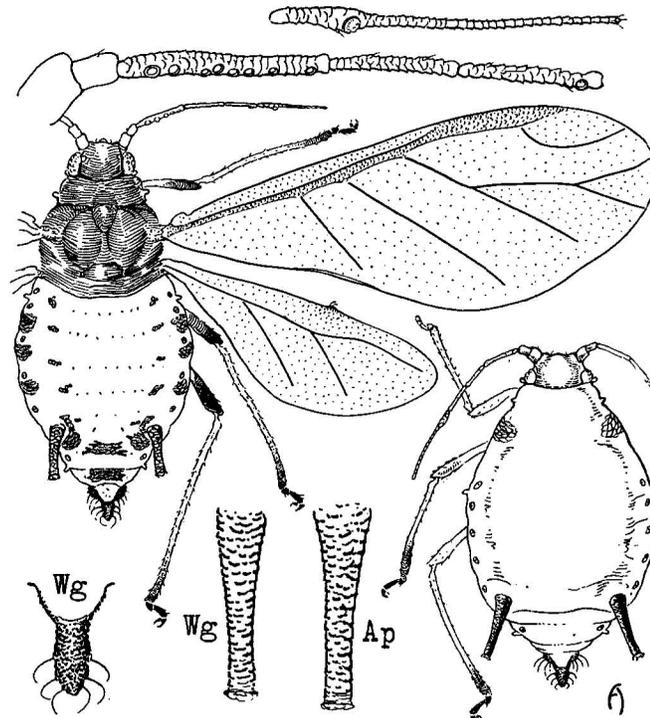


FIGURE 4.—*Aphis gossypii*, the cotton or melon aphid (after Zimmerman, 1948).

This small black and green species is called the cotton or melon aphid. Many of the apterous forms are covered with a fine whitish powdery wax.

A. gossypii is the commonest and most widely distributed aphid in the islands of the Pacific Ocean. It is also the most destructive species and has the most extensive range of host plants. It is particularly injurious to cucurbitaceous plants, and is also a very important vector of virus diseases.

Specimens collected within the tropics are almost invariably much smaller than those from the temperate regions of the world.

DISTRIBUTION: Cosmopolitan.

VOLCANO IS. IWO JIMA: Dec. 1945, Bertram.

S. MARIANA IS. SAIPAN: On *Cassia occidentalis*, Oct. 1947, Lange, and on eggplant, Nov. 1947, Lange; As Lito (Asilito), on cantaloupe, June 1946, Oakley; Kannat Edot (Ants Valley), on *Cocos nucifera*, May 1946, Oakley. TINIAN: Marpo Valley, on cantaloupe, June 1946, Oakley. ROTA: Shinaparu, on *Cassia occidentalis*, May 1946, Townes. GUAM: On *Phaseolus multiflorus*, Aug. 1945, Hensill, and on breadfruit, Oct. 1945, G. Bohart; Pt. Oca, sweeping, Mar. 1945, G. Bohart; Agana, May 1945, G. Bohart and Gressitt; Asan, Nov. 1947, Dybas; Mt. Alutom, on *Blechnum pyramidatum*, June 1946, Townes; Orote Pt., in water basin, Oct. 1947, Dybas; Yona, Oct. 1952, Krauss; Mt. Alifan, Apr. 1946, Krauss.

PALAU. BABELTHUAP: On taro, July 1946, Townes. KOROR: On cucumber, Apr. 1953, Beardsley. ANGAUR: On *Cassia fistula* and *Colocasia esculenta*, Jan. 1953, Beardsley.

YAP. YAP: On squash, Aug. 1952, and on composite, Sept. 1952, Krauss; July 1950, Goss. MAP: On marigold, Oct. 1952, Krauss.

CAROLINE ATOLLS. PULO ANNA: Sept. 1952, Krauss. SONSOROL: Sept. 1952, Krauss. SOROL: On composite shrub, Oct. 1952, Krauss. WOLEAI: Feb. 1953, Beardsley. FARAULEP: On breadfruit, Feb. 1953, Krauss, Beardsley. IFALUK: Sept. 1952, Krauss. LAMOTREK: On breadfruit and *Morinda*, Sept. 1952, Krauss. SATAWAL: Sept. 1952, Krauss. NAMOLUK: On *Premna*, Sept. 1953, Beardsley. NUKUORO: On *Capsicum frutescens*, taro, and *Premna*, Aug. 1946, Townes, Oakley. KAPINGAMARANGI: Matiro (Machiro) I., on *Premna*, Aug. 1946, Townes; Werua (Ueru) I. on *Premna*, Aug. 1946, Oakley.

TRUK. TOL: On *Premna*, May 1946, Townes; on *Sonneratia caseolaris*, July 1946, Oakley; Feb. 1948, Lange. ROMANUM: Mar. 1949, Potts; Feb. 1953, Gressitt; on *Acalypha indica*, Feb. 1954, Beardsley. WENA (Moen): On *Capsicum*, Mar. 1949, Potts; on *Acalypha*, *Capsicum frutescens*, taro, May 1946, Oakley; on *Premna*, June 1946, Townes.

PONAPE. Peipalap, July 1940, Adams. Colonia, on *Cassia fistula* and taro, Nov. 1953, Beardsley; on *Acalypha*, Feb. 1948, Dybas. Metalanim, on *Messerschmidia*, Nov. 1953, Beardsley.

KUSAIE. Lele (Lelu), Feb. 1953, Clarke; on orange, *Premna*, and taro, Aug. 1946, Oakley. Mutunlik, Jan. 1953, Clarke. Malem, on *Scaevola*, Feb. 1953, Clarke.

MARSHALL IS. ENIWETOK: On *Hibiscus*, Jan. 1945, R. Bohart; on *Scaevola frutescens*, May 1946, Oakley; Japtan I., on *Pandanus tectorius*, May 1946, Townes; Engebi I., on *Scaevola*, May 1946, Oakley. UJAE: Wojiak (Wojia) I., Mar. 1952, Fosberg. KWAJALEIN: On *Cucurbita* and *Scaevola frutescens*, Aug. 1946, Townes, Oakley. LIB (Elleb): Oct. 1953, and on *Morinda* and breadfruit, Oct. 1953, Beardsley. NAMU: On *Premna*, Oct. 1953, Beardsley; Majkon (Kaginen) I., on *Morinda*, Oct. 1953, Beardsley. AILING-LAPALAP: On *Artocarpus altilis*, Aug. 1946, Oakley. LIKIEP: On breadfruit, Aug. 1946, Oakley. MAJURO: On *Wedelia biflora*, Aug. 1946, Oakley, and on *Wedelia*, Aug. 1950, La Rivers; Ero (Eru) I., on breadfruit, Sept. 1953, Beardsley; Ulika (Uliga), on *Acalypha indica*, Oct. 1953, on *Scaevola* and *Ficus*, Nov. 1953, Beardsley. JALUIT: Imrodj I., on breadfruit, lime (*Citrus*), and *Morinda citrifolia*, Aug. 1946, Oakley. ARNO: Ine, on *Scaevola*, *Morinda*, and *Pipturus*, June 1950, Usinger; July 1950, La Rivers; on *Fleurya ruderalis* (?), Aug. 1950, La Rivers.

GILBERT IS. ONOTOA: North end of North Island, on *Sida fallax*, July 1951, Moul.

In addition to the above collection citations, this aphid was earlier (1911) reported on cucumbers and cotton on Guam (Insects of Micronesia 1: 179). Other reports cited in the Introduction to Insects of Micronesia are: On cabbage on Saipan (p. 173); on chili pepper on Truk by Oakley (p. 174); on eggplant by Swezey and Usinger on Guam (p. 181); on okra on Saipan and Guam (p. 184); and on taro on Guam by Peterson (p. 188). Injurious to cucurbits and widely distributed in Micronesia, it was noted on Guam in 1911 and, later, infesting eggplant on Guam by Swezey and Usinger (p. 180). Esaki (1941, Sixth Pacific Sci. Congr., Proc. 4: 412) referred to it as the "most injurious in all the islands."

HOSTS: Eggplant, cantaloupe, breadfruit, taro, cucumber, squash, pepper, orange, composite, marigold, *Cassia*, *Cocos*, *Phaseolus*, *Blechnum*, *Colocasia*, *Morinda*, *Premna*, *Capsicum*, *Sonneratia*, *Acalypha*, *Scaevola*, *Hibiscus*, *Pandanus*, *Cucurbita*, *Artocarpus*, *Wedelia*, *Ficus*, *Citrus*, *Pipturus*, *Fleurya*, and *Sida*.

5. *Aphis medicaginis* Koch (fig. 5).

Aphis medicaginis Koch, 1854, Die Pflanzenlaus, Aphiden (3): 94, figs. 125-126.

Pergandeida medicaginis (Koch) Börner, 1952.

Aphis laburni, Takahashi, 1939, Tenthredo 2 (3): 237.

The cowpea aphid (also known as the bean aphid and indigo aphid) is a shining black species, the nymphs of which are partially covered with white powdery wax, which may be arranged in a definite pattern.

DISTRIBUTION: Europe, Africa, Pacific islands, North and South America.

S. MARIANA IS. SAIPAN: On *Portulaca*, Mar. 1948, Lange; Chalan Laulau, on orange and cowpeas, June, 1946, Oakley; Luzon, Stevedore Camp, on mung bean (*Phaseolus aureus*), Mar. 1948, Lange. ROTA: Sabana, on *Mucuna gigantea*, May 1946, Townes; Rugi, on pigeon pea (*Cajanus cajan*), June 1946, Oakley. GUAM: Potts Junction, on *Cestrum*, Oct. 1952, Krauss; Barrigada, on beans, June 1936, Usinger; Mt. Lamlam, on *Hibiscus tiliaceus*, Oct. 1952, Krauss; Mt. Chachau, on sedge, May 1936, Usinger.

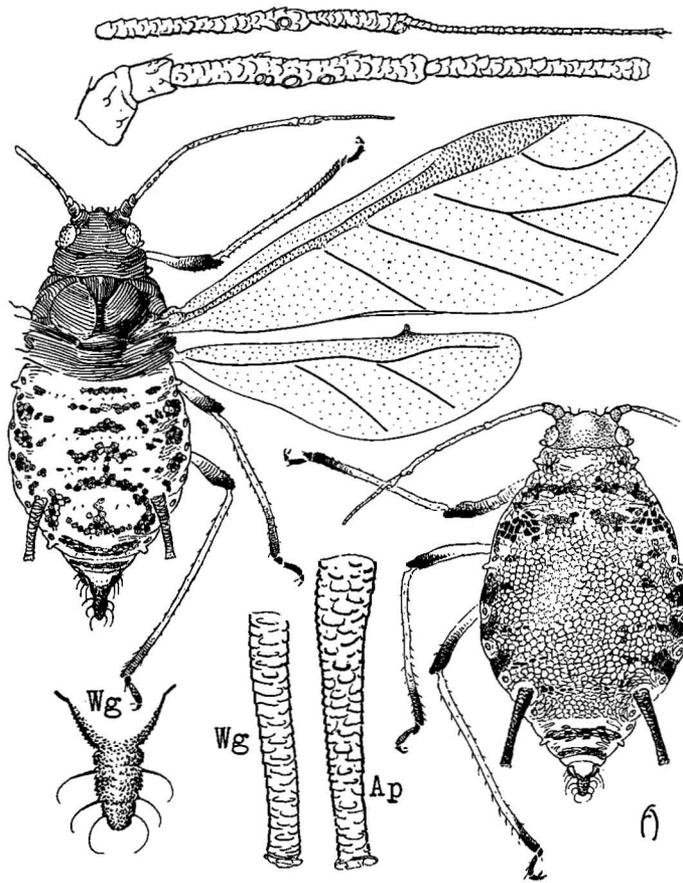


FIGURE 5.—*Aphis medicaginis*, the cowpea aphid (after Zimmerman, 1948).

YAP. YAP: Sept. 1952, Krauss; Nov. 1952, Gressitt; on leguminous tree, Oct. 1952, Krauss; on mango, Oct. 1952, Krauss. RUMUNG: On shrub, Oct. 1952, Krauss.

CAROLINE ATOLLS. TOBI: On composite flowers, Sept. 1952, Krauss. NGULU: on leguminous vine, Oct. 1952, Krauss. WOLEAI: Woleai I., on leguminous vine, Sept. 1952, Krauss, and on *Vigna marina*, Aug. 1953, Beardsley; Utagal I., on *Vigna marina*, Feb. 1953, Beardsley, July 1946, Townes. LAMOTREK: On leguminous vine, Sept. 1952, Krauss. SATAWAL: On legume shrub, Sept. 1952, Krauss. NAMA: On *Vigna marina*, Oct. 1952, Beardsley.

TRUK. WENA (Moen): On *Ipomoea pes-caprae*, Feb. 1948, Lange; on *Vigna marina*, Oct. 1952, Beardsley.

PONAPE. Agric. Exper. Sta., Aug. 1950, Adams.

KUSAIE. Lele (Lelu), on *Vigna marina*, Aug. 1946, Oakley. Inmen River, in debris, Jan. 1953, Clarke. Funaupes, sweeping, on legume, Jan. 1953, Clarke.

MARSHALL IS. ENIWETOK: Japtan I., on *Portulaca samoensis* and *Triumfetta procumbens*, May 1946, Townes, Oakley; Enjebi (Engebi) I., on *Cucurbita*, May 1951, Fosberg. KWAJALEIN: On legume, Dec. 1952, Clarke. LIB: On *Vigna marina*, Oct. 1953, Beardsley. AILINGLAPALAP: Bigatyelang, Aug. 1946, Oakley. NAMORIK: On *Vigna marina*, Sept. 1953, Beardsley. MAJURO: June 1950, Usinger; on *Vigna marina*, Aug. 1946, Townes; on breadfruit, Oct. 1953, Beardsley. ARNO: Ine, Aug. 1950, La Rivers; on *Scaevola*, June 1950, Usinger.

Next to the cotton or melon aphid, this species is the most widely distributed in Micronesia, as is indicated by the numbers of collections and specimens taken.

HOSTS: *Portulaca*, orange, cowpeas, beans, mango, breadfruit, *Phaseolus*, *Mucuna*, *Cajanus*, *Cestrum*, *Hibiscus*, *Vigna*, *Ipomoea*, *Triumfetta*, *Cucurbita*, *Scaevola*.

This species has a large host range and, though it feeds chiefly on members of the family Leguminosae, its hosts include members of the Chenopodiaceae, Compositae, Cruciferae, and Malvaceae.

In his report on the Entomological Survey of the Micronesian Islands under the Japanese Mandate, Esaki (1941, Sixth Pacific Sci. Congr., Proc. 4: 412) reported *Aphis medicaginis* as *A. laburni* Kaltenbach, stating that it was "commonest and most injurious to various kinds of beans including the peanut." It was found on beans and cowpeas on Saipan and on leaves of oranges on Saipan by Oakley (Insects of Micronesia 1: 171, 185). D. T. Fullaway also reported *A. laburni* on peanuts on Guam.

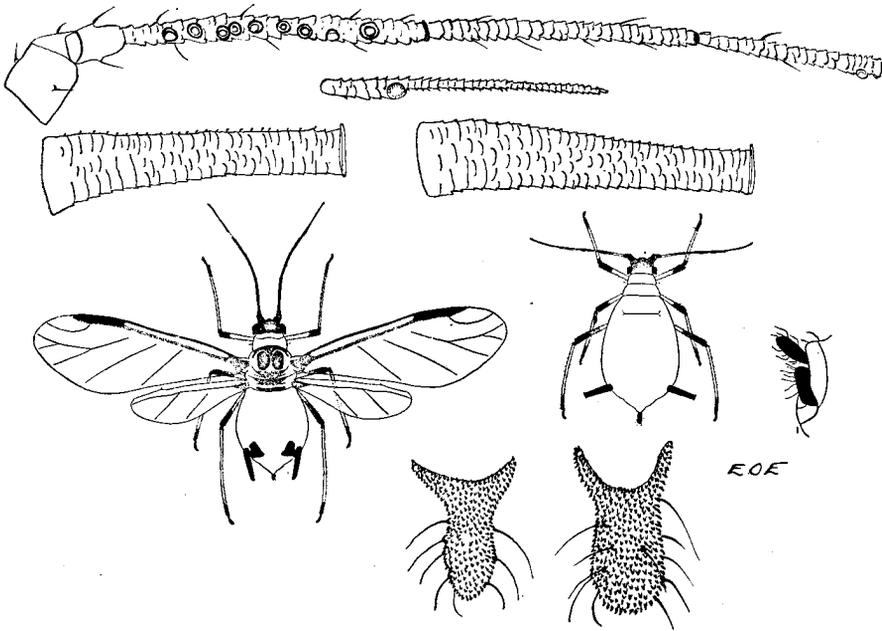


FIGURE 6.—*Aphis nerii*, the oleander aphid.

6. *Aphis nerii* Boyer de Fonscolombe (fig. 6).

Aphis nerii Boyer de Fonscolombe, 1841, Soc. Ent. France, Ann. 1841 : 179.

Myzus asclepiadis Passerini, 1863.

Aphis asclepiadis Fitch, 1851.

Aphis neriastri Boisduval, 1867.

Aphis lutescens Monell, 1879.

Cerosipha nerii (Boyer de Fonscolombe) Börner, 1952.

The oleander or milkweed aphid is a rather unusual species, in which the bodies are strikingly yellow and black. The cornicles are prominent and the cauda heavy; both are black.

DISTRIBUTION: Europe, Africa, Asia, Pacific islands, New Zealand, North and South America.

S. MARIANA IS. GUAM: Mt. Alifan, on *Asclepias*, Apr. 1946, Krauss; Yigo, on *Asclepias*, Aug. 1952, Krauss.

CAROLINE ATOLLS. NGULU: On *Asclepias*, Oct. 1952, Krauss.

HOSTS: Plants belonging to the families Apocynaceae, Asclepiadaceae, Convolvulaceae, and Solanaceae.

Genus *Toxoptera* Koch, 18567. *Toxoptera aurantii* (Boyer de Fonscolombe). (Figure 7.)

Aphis aurantii Boyer de Fonscolombe, 1841, Soc. Ent. France, Ann. 1841: 178.

Aphis camelliae Kaltenbach, 1843.

Toxoptera aurantiae, Koch, 1857.

The black citrus aphid is characterized by the very black color, the reticulations on the dorsum of the apterae, the single-branched media, and the peculiar toothed lines on the venter of the abdomen, particularly behind the bases of the cornicles.

DISTRIBUTION: Cosmopolitan.

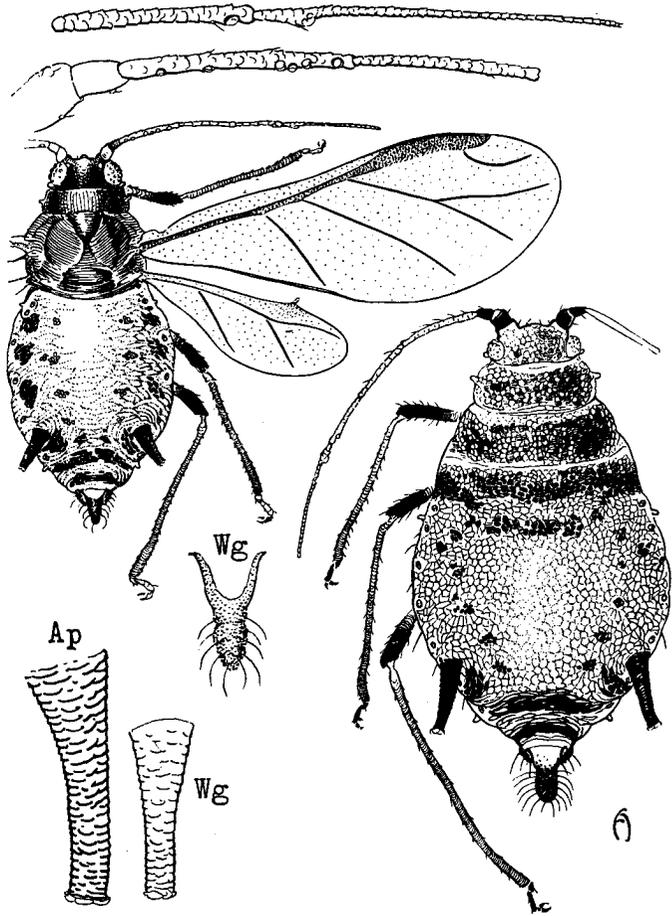


FIGURE 7.—*Toxoptera aurantii*, the black citrus aphid (after Zimmerman, 1948).

S. MARIANA IS. GUAM: Pt. Oca, July 1945, G. Bohart; Mt. Alifan, Apr. 1946, Krauss; Talofofu, on *Citrus*, Aug. 1952, Krauss.

CAROLINE ATOLLS. SATAWAI.: On *Scaevola*, Sept. 1952, Krauss.

TRUK. WENA (Moen): On *Ipomoea*, Feb. 1948, Maehler.

HOSTS: *Citrus*, *Scaevola*, *Ipomoea*.

SUBTRIBE MACROSIPHINA

Genus *Myzodes* Mordvilko, 1914

8. *Myzodes persicae* (Sulzer). (Figure 8.)

Aphis persicae Sulzer, 1776, Abgekürzte Geschichte der Insecten nach dem Linnaeischen System. (1) : 105.

Aphis dianthi Schrank, 1801.

Aphis malvae Mosley, 1841.

Myzus persicae (Sulzer).

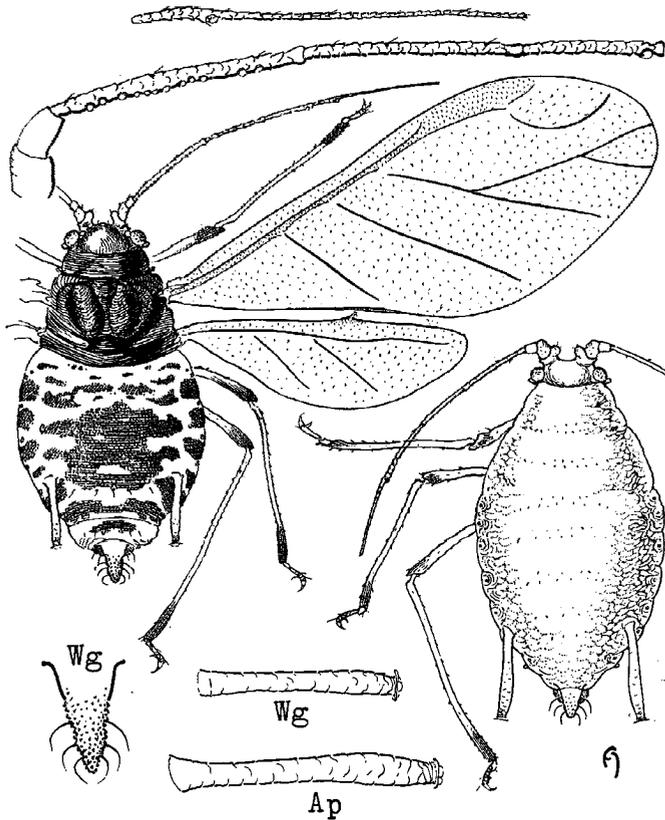


FIGURE 8.—*Myzodes persicae*, the green peach aphid (after Zimmerman, 1948).

Aphis cynoglossi Walker, 1848.

Myzus malvae Oestlund, 1886.

Phorodon cynoglossi Williams, 1910.

The bibliography of the green peach aphid is extensive. Of the 22 or more synonyms available, only the more important ones are included here.

This familiar aphid is black and yellow or green and is characterized by the black dorsal blotch on the abdomen, the basal antennal tubercles, the dusky swollen cornicles, and the pale-yellow or green-apterous forms.

DISTRIBUTION: Nearly cosmopolitan; Mariana Is.

S. MARIANA IS. SAIPAN: On *Portulaca*, Mar. 1948, Lange (aptera and alates); Chalan Kanoa, on Chinese cabbage, Mar. 1948, Lange (a single apteron).

This is a widely distributed cosmopolitan species and is, without doubt, the most important and injurious aphid outside the tropics because of its great numbers, wide distribution in the temperate regions, and its ability to carry, and to inoculate plants with, many kinds of plant virus diseases.

HOSTS: *Portulaca*, Chinese cabbage.

SUBTRIBE PENTALONINA

Genus **Pentalonia** Coquerel, 1859

9. **Pentalonia nigronervosa** Coquerel (fig. 9).

Pentalonia nigronervosa Coquerel, 1859, Soc. Ent. France, Ann. III, 7: 260, pl. 6, figs. 3; 3 a, b.

The banana aphid is readily recognized by its clouded and unusual wing venation in the forewings and the absence of the cubitus vein in the hind wings.

DISTRIBUTION: Tropical Pacific islands, East Indies, Australia, tropical Asia, Africa, South America, Europe (greenhouses).

S. MARIANA IS. SAIPAN: Matansa (Matansha), July 1939, Esaki. ROTA: South coast, Feb. 1936, Esaki. GUAM: Santa Rosa, on *Caladium*, May 1945, G. Bohart and Gressitt; on *Alpinia*, Oct. 1947, Dybas; on *Philodendron*, Jan. 1954, Liming.

PALAU. BABELTHUAP: Ngarard to Ngerehelong (Arukoron), Feb. 1936, Esaki; Ulimang, on banana, Dec. 1947, Dybas; Ngaremlengui (Arumonogui), Mar. 1936, Esaki. KOROR: On banana, Oct. 1947, Dybas; on *Caladium*, Jan. 1953, Beardsley; on *Hedychium* flowers, Sept. 1952, Krauss.

YAP. YAP: On banana, Oct. 1952, Krauss. MAP: On *Hedychium*, Oct. 1952, Krauss.

TRUK. WENA (Moen): On taro, Feb. 1948, Lange.

PONAPE. Colonia, on ginger, Nov. 1953, Beardsley; on banana, Feb. 1948, Dybas.

MARSHALL IS. LIB: On *Morinda*, Oct. 1953, Beardsley. ARNO: Ine, July 1950, La Rivers.

This aphid is already recorded as occurring on Palau, Guam, and Ponape. Esaki (1941, Sixth Pacific Sci. Congr., Proc. 4: 413) refers to it as follows: "Is found in Palau and Ponape, but is never destructive." This is referred to in *Insects of Micronesia* 1: 171.

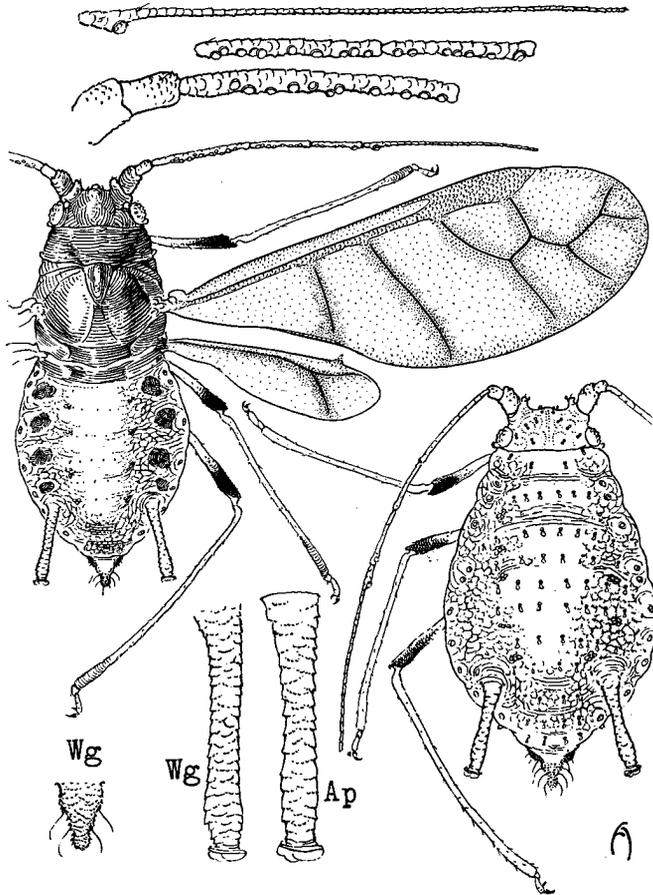


FIGURE 9.—*Pentalonia nigronervosa*, the banana aphid (after Zimmerman, 1948).

HOSTS: The species feeds on a wide variety of tropical and subtropical plants, including palms, certain ferns, aroids, amaryllids, orchids, hounds-tongue, alpinias, elephant-ears, plantains, kahili ginger, tomato, banana, taro, *Languas*, *Hedychium*, *Morinda*, *Caladium*, *Philodendron*, and possibly others.

SUBFAMILY MINDARINAE

TRIBE ERIOSOMATINI

Genus *Tetraneura* Hartig, 184110. *Tetraneura akinire* Sasaki (fig. 10).

Tetraneura akinire Sasaki, 1904, Zool. Mag., Tokyo 16: 403.

This is a small black and yellow aphid which develops in pointed pouch galls 8-13 mm. long and 4-5 mm. in diameter on the leaves of *Ulmus japonica*. It was originally described by Sasaki in Japan in 1904.

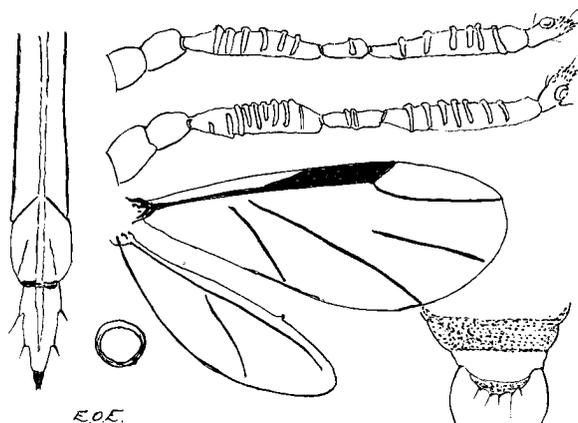


FIGURE 10.—*Tetraneura akinire*: Rostrum, antennae, cornicle, wings, and cauda.

DISTRIBUTION: Japan, western Pacific islands.

S. MARIANA IS. GUAM: Tumon Bay, Apr. 1946, Krauss; Orote Pt., Oct. 1947, Dybas.

HOST: *Ulmus japonica*.

Besides the records above, this species was also taken at Noumea, New Caledonia, May 1950, Krauss.

SUBFAMILY HORMAPHINAE

TRIBE HORMAPHIDINI

Genus *Oregma* Buckton, 189311. *Oregma bambusae* Buckton.

Oregma bambusae Buckton, 1893, Indian Mus. Notes 3 (2): 87.

Body without well-developed wax-pores; the fore and middle tarsi with two long setae and two shorter median setae on the basal segment, but the hind tarsi with only two long setae on the basal segment. (After Takahashi.)

DISTRIBUTION: Southern Asia, western Caroline Is.

PALAU. KOROR: Ngarmid and Ngarekesauol, Feb. 1936, Esaki.

HOST: *Bambusa stenostachya*.

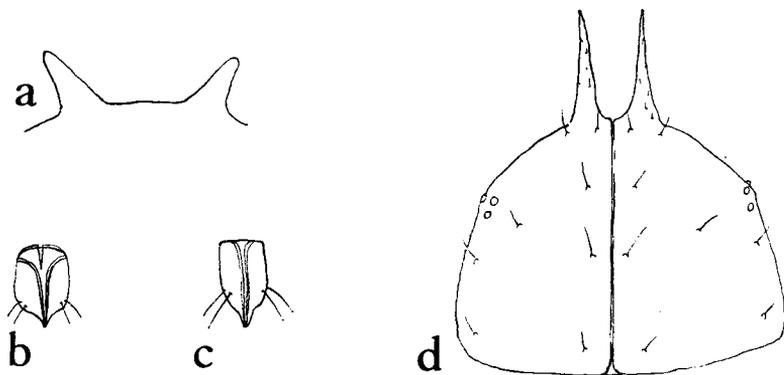


FIGURE 11.—*Oregma bambusae carolinensis*. a, b, apterous female: a, frontal horns; b, last rostral segment. c, d, first instar nymph: c, last rostral segment; d, cephalo-prothorax. (After Takahashi, 1941.)

12. *Oregma bambusae carolinensis* Takahashi (fig. 11).

Oregma bambusae var. *carolinensis* Takahashi, 1941, *Tenthredo* 3 (3): 211, fig. 2.

Apterous viviparous female: Body sclerotized over the dorsum, but meso- and meta-thorax and abdominal segments distinct; wax-pores wanting, or only one to three oval ones present at middle of eighth abdominal tergite. Frontal horns short, shorter than space between them, as long as scape, narrow, divergent, rounded apically. Cornicles small, indistinctly surrounded with three to five setae, which are distant from cornicles. Distal rostral segment about 1.5 times as long as wide, parallel at sides, or slightly narrowed basally. Body length 1.7 mm.; antenna 0.3 mm.; frontal horn 0.05-0.055 mm.; pronotum 0.6 mm. wide; cornicle 0.032 mm. wide at apex; hind tibia 0.55 mm.; hind tarsus 0.138 mm.

Alate viviparous female: Abdomen slightly sclerotized on last two tergites, with a small sclerotized part at the base of each cornicle. Antennae with 30 sensoria on third segment, 13 on fourth, nine on fifth; relative lengths of segments about as follows: III-22, IV-9, V-8 to 9. Cornicles very small. Body length 2.2 mm.; antenna 0.74 mm.; cornicle 0.023 mm. wide at apex. (After Takahashi.)

DISTRIBUTION: Western Caroline Is.

YAP. YAP: Okau (Okao), Sept. 1939, Esaki. GAGIL-TOMIL: Maki, Tomil, Sept. 1939, Esaki.

HOST: *Bambusa vulgaris*.

Genus *Trichoregma* Takahashi, 1929

Hille Ris Lambers [1955, Fiji Agric. Jour. 24 (3-4) : 1] has synonymized *Trichoregma* with *Astegopteryx*, but Takahashi believes the matter is not yet fully clarified. *Trichoregma* may prove to be the summer form on the intermediate host of *Astegopteryx*, which produces gall on *Styrax*, the primary host. However, *Astegopteryx* may need to be divided.

13. *Trichoregma rhapsidis* (van der Goot).

Oregma rhapsidis van der Goot, 1917, Contrib. Faune Indes Neerl. 1 (3) : 217.

Trichoregma rhapsidis, Takahashi, 1931, Gov. Res. Inst. Formosa, Dept. Agric., Rept. 53 : 98; 1941, Tenthredo 3 (3) : 210.

This material differs from the original description in lacking wax-pores on the head, thorax, and basal part of the abdomen in the apterous form, and in possessing fewer (about 25-35) sensoria on the third antennal segment in the alate form. These characters are, however, variable. (After Takahashi, 1941.)

DISTRIBUTION: Singapore, Sumatra, Java, western Caroline Is.

PALAU: PELELIU: Ngardololok (Garudoroko), Aug. 1939, Esaki.

HOST: *Cocos nucifera*.

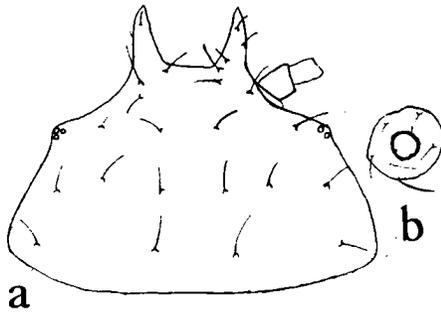


FIGURE 12.—*Trichoregma esakii*, cephalo-prothorax and cornicle of adult female (after Takahashi, 1941).

14. *Trichoregma esakii* Takahashi (fig. 12).

Trichoregma esakii Takahashi, 1941, Tenthredo 3 (3) : 210, fig. 1.

Apterous viviparous female: Body soft; frontal horns as long as basal two antennal segments combined, narrowed apically, parallel. Antennae a little shorter than width of head across eyes, four-segmented; third segment narrowed basally, slightly curved, lacking spinules and granules, with about four short setae; relative lengths of segments: III-23 to 25, IV-17. Rostrum reaching middle coxae, distal segment as long as wide, blunt apically. Cephalo-prothorax with about 22 dorsal setae; thoracic and basal seven abdominal segments with four setae in a row on dorsum; eighth abdominal tergite a little sclerotized, with eight setae including lateral ones, most of which are in a row. Cornicles small, on shallow cones, which have five to eight setae. Cauda constricted basally, with about 7-9

setae. Anal plate divided. Legs short, with a few setae; fore tarsus with a median stiff seta and a pair of much longer fine setae on basal segment; middle and hind tarsi each with a pair of long fine setae. Meso- and metathorax and basal six abdominal segments with one to five oval wax-pores in a dense row on side, or sometimes lacking; seventh abdominal segment with two or three similar wax-pores; eighth usually with no wax-pores, sometimes with one or two small oval or circular ones on each side. Body length 1.0-1.16 mm.; cornicle 0.023-0.032 mm. wide at apex. (After Takahashi.)

DISTRIBUTION: Western Caroline Is.

PALAU. BABELTHUAP: Ngchesar (Kaishar), Aug. 1939, Esaki.

HOST: Bamboo.

Genus *Cerataphis* Lichtenstein, 1882

Bodies black or very dark green; cornicles pore-like; anal plate bilobed, cauda knobbed, flattened, aptera broad, flattened with two body divisions, aleyrodid-like marginal border, two short toothlike pontal projections; with white marginal wax fringe in life. Wax-glands, five-segmented antennae. Alates with many ringlike sensoria on segments III-V, wings with media one-branched; hind wings normal.

15. *Cerataphis lataniae* (Boisduval). (Figures 13, 14.)

Coccus lataniae Boisduval, 1867, Ent. Horticole, 355, figs. 49, 50.

Boisduvalia lataniae (Boisduval) Signoret, 1868, Soc. Ent. France, Ann.

IV, 8: 400, pl. 10, figs. 2, 2 a.

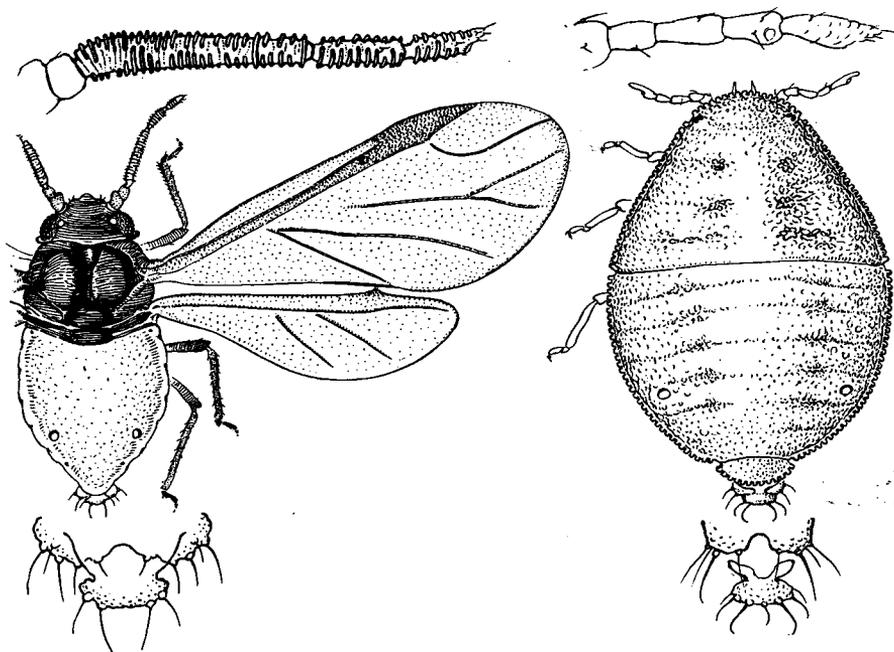


FIGURE 13.—*Cerataphis lataniae*: the latania or palm aphid (after Zimmerman, 1948).

Asterolecanium orchidearum Westwood, 1879, Gardners' Chronicle, n. ser., 12:796, fig. 131.

Ceratovacuna brasillensis Hempel, 1901, Ann. Mag. Nat. Hist. VII, 8: 384.

The apterous forms of the palm or latania aphid, a unique and beautiful species, are often mistaken for the nymphs of whiteflies because of the flattened and oval body which is circumscribed by a band or fringe of white wax plates. When the wax is removed they are similar to many other aphids. The alates, though unique, are also typical of many other aphids.

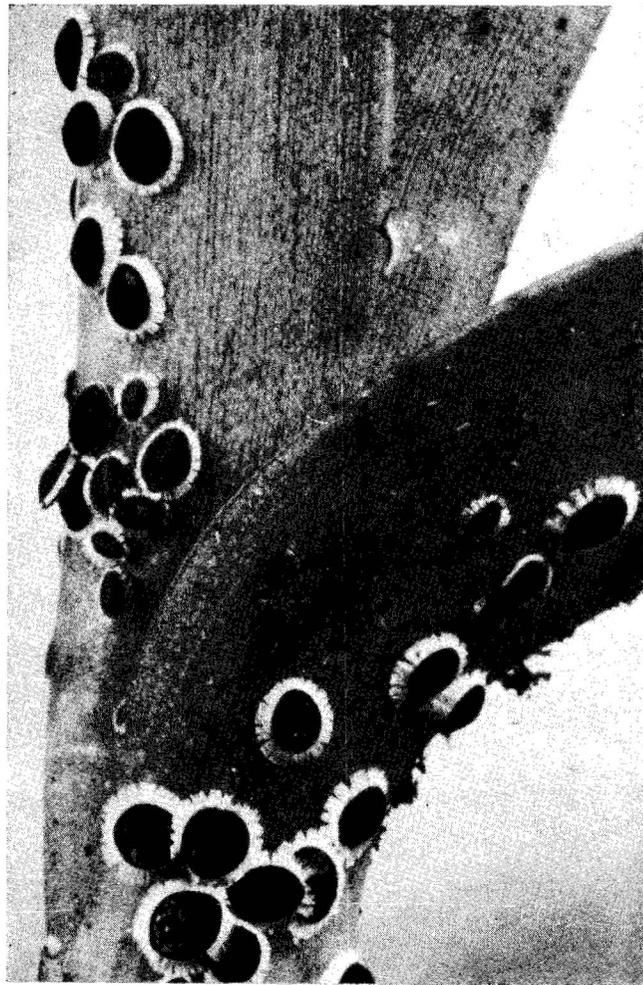


FIGURE 14.—*Cerataphis lataniae*, the palm or latania aphid, on *Epidendrum* orchid. This colony of nymphs was completely covered with debris by *Pheidole megacephala* ants. The "ant shed" has been removed, but some of the remaining detritus can be seen adhering to the plant. (After Zimmerman, 1948.)

DISTRIBUTION: Pacific islands, Africa, South America, Asia, Australia, Florida, Marianas, and Caroline Is.

S. MARIANA IS. SAIPAN: 1937, Esaki.

YAP. YAP: Okau (Okao), Esaki. GAGIL-TOMIL: Gachapar, Tomil, Esaki.

PONAPE. Mt. Kupwuriso, alt. 1,000-1,500 ft., beating, Mar. 1948, Dybas.

This widely distributed species is quite abundant in the tropical areas of the Pacific islands, Africa, South America, Asia, Australia, China, and Florida; and it is found in greenhouses throughout much of the rest of the world. It is rather surprising that only one collection of this conspicuous aphid was made during the Micronesian surveys.

HOSTS: *Cyrtomium*, *Areca catechu*, *A. oleracea*, *Calamus*, *Cocos nucifera*, *Kentia*, *Latania*, *Livistonia chinensis*, *Pritchardia*, *Raphia ruffia*, *R. vinifera*, *Zalacca edulis*, *Acorus calamus*, *Pothos seemanni*, *Agave*, *Cattleya*, *Coelia*, *Cypripedium*, *Dendrobium*, *Epidendrum*, *Sobralia*, *Vanda*, *Vanilla*, and *Cynoglossum*.

Other species of the Aphididae that might well be expected to occur in Micronesia are: *Aphis citricidus* Kirkaldy, *A. helichrysi* Kaltenbach, *A. sacchari* Zehntner, *Brevicoryne brassicae* (Linnaeus), and *Idiopterus nephrolepidis* Davis.

