THREE NEW GENERA AND A NEW SPECIES OF DIASPIDIDAE FROM JAPAN

(Coccoidea, Homoptera)

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Hypaspidiotus n. g.

Adult female: Body subcircular, with the pygidium protruding, not sclerotized. Anus moderate in size, much removed from the hind end of body. Pygidial dorsal ducts long, in 3 clusters; poriferous furrows not distinct. Pygidial lobes well developed, membraneous, 3 on each side, median lobes distinctly separated from each other. Pygidial plates slender and 2 between the median lobes and between the median and 2nd lobes, 3 between the 2nd and 3rd, wider and several outside of the 3rd. Paraphyses well developed, arising from only the basal corners of lobes; 2 paraphyses between the adjacent lobes curved towards each other and contiguous, forming an inverted U-shaped sclerosis. Perivulvar pores present.

Genotype: *Aspidiotus jordani* KUWANA.

This genus is recognizable by the well developed paraphyses very peculiar in shape. The relationships to other genera are not traceable.

Hypaspidiotus jordani (KUWANA)

Aspidiotus jordani KUWANA, Proc. Calif. Acad. Sc., Ser. 3, III, p. 69 (1902); Minist. Agric. and Forestry, Dept. Agr., Sc. Bull., no. 3, p. 11 (1933).

Adult female: Eyes not modified into spines. Prepygidial 2 segments (3rd and 4th abdominal segments) slightly convex laterally, with 1-3 marginal macroducts, which are much shorter than the pygidial dorsal ducts and sometimes wanting on the 3rd segment; submedian and submarginal macroducts wanting on these segments. Pygidial macroducts with no sclerotized rim at the orifice or pore, absent at the margin; no median duct present. Anal furrow distinct behind the anus. Paraphyses sometimes a little asymmetrical; other sclerosis not arising from the lobes. Pygidial marginal setae short. Microducts wanting on the venter of pygidium.

Host plant: *Shiia sieboldii*, attacking always the lower sides of the foliage under the hairy layer.

Very common at Tokyo and Yokohama, and was collected also in Shizuoka Prefecture. Usually found in association with *Andaspis crawii* COCKERELL at Tokyo.

Aspidiotus multipori n. sp.

Adult female: Scale circular, thick, slightly convex, dark brown, but yellowish red at the central larval skin, about 2 mm. in diameter. Body normal in shape, not sclerotized. Eyes rounded, sometimes not distinct. Antennae with a long seta. Anterior spiracles sometimes with one or 2 parastigmatic pores, posterior spiracles without them. A few long microducts present on the head and on the submedian area on the thorax and abdomen. Fourth abdominal segment a little convex laterally, slightly sclerotized on the marginal area; marginal macroducts of prepygidial segments nearly as stout as, but much shorter than, the pygidial dorsal ones, 5–8 on the basal abdominal segment, 4 or 5 on the 2nd segment, 8 on the 3rd, 4 on the 4th. Pygidium large, weakly sclerotized on the

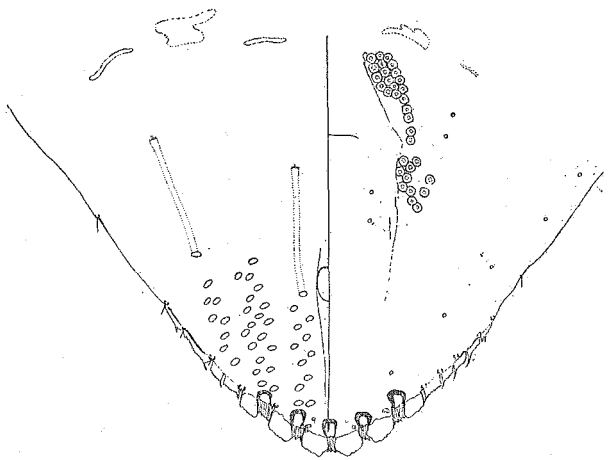

Fig. 1. *Hypaspidiotus jordani* (KUWANA).
Pygidium of adult female.

dorsum except on the furrows arising from between the median and 2nd lobes and between the 2nd and 3rd lobes. Median lobes approximately as long as wide, rounded apically, distinctly notched on each side, slightly diverging, distinctly larger than the 2nd lobe, slightly wider than the space between them; 3rd lobe large, but slightly smaller than the 2nd. Fimbriated plates between the lobes as usual in number, rather stout, as long as the lobes; 6–8 short and wide plates present outside of the 3rd lobe, which are with one or 2 long slender processes; these processes scarcely dilated, blunt at the apex. Pygidial dorsal ducts numerous, about 40–50 on each side, scattered, with an oval orifice; the anterior ducts reaching the base of pygidium, median duct distinctly separated from the hind end, not reaching the anus. Anus far removed from the hind end, moderate in size; genital opening far anterior to the anus. Paraphyses wanting, a short

sclerosis arising from the median lobe, which is not well defined, distinctly narrowed anteriorly and nearly reaching the level of median dorsal pore. A pair of faint prevulvar scars and some faint preanal ones present on the pygidium. A prominent spine-like seta present at the bases of 2nd and 3rd lobes and at the site of 4th lobe, which is somewhat lanceolate and as long as the lobes. Some submarginal microducts present on the venter of pygidium. Perivulvar pores in 4 clusters, 10–12 in anterior cluster, 7–12 in posterior cluster. Body about 0.8 mm. long.

Host plant: *Illicium anisatum*, attacking the upper sides of the leaves, forming a shallow pit under the body.

Many specimens were collected by Mr. A. YAMAZAKI at Moji and by Mr. HIGUCHI at Unzen, Kyushu (III. 1953).

This species is characterized by the diverging median lobes and the presence of numerous dorsal ducts on the pygidium. Differs from *Aspidiotus stauntoniae* TAKAHASHI in the body not sclerotized, the larger marginal ducts on the prepygidial segments, the greater number of pygidial ducts and by the diverging median lobes.

Cotypes are in the writer's collection.

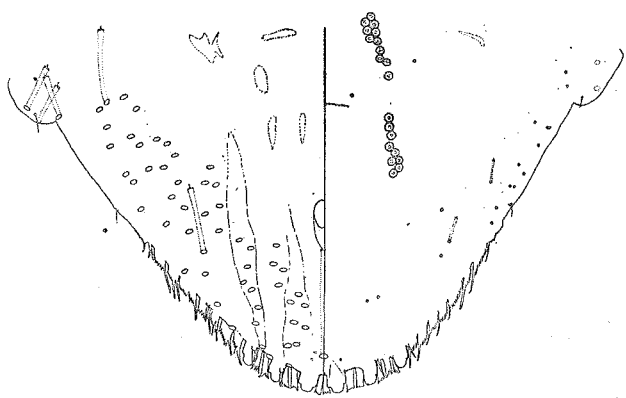

Fig. 2. *Aspidiotus multipori* n. sp.
Pygidium of adult female.

Diaonidia n. g.

Adult female: Scale circular, larval pellicle subcircular, entirely enclosing the adult body. Body not sclerotized, subcircular, with the pygidium small and abruptly protruding. Pygidium not sclerotized, with the anus far apart from the hind end. Pygidial dorsal ducts minute and very slender, scarce; marginal macroducts wanting. Pygidial lobes well developed, 3 on each side, median lobes distinctly separated from each other. Pygidial plates well developed, slender,

simple and spine-like, or slightly serrate or divided apically, 2 between the median lobes and between the median and 2nd, 3 between the 2nd and 3rd, several outside of the 3rd. Paraphyses and perivulvar pores wanting.

Genotype: *Aonidia yabunikkei* KUWANA.

Differentiated from *Aonidia* TARGIONI by the presence of 3 pairs of well developed pygidial lobes and of well developed plates along the margin of pygidium.

Diaonidia yabunikkei (KUWANA)

Aonidia yabunikkei KAWANA, Minist. Agric. and Forestry, Dept. Agric., Sc. Bull., no. 3, p. 41 (1933).

Adult female: Larval pellicle with 7 marginal and submarginal ducts on the posterior part of pygidium on each side, 2 posterior marginal ones of which are stouter, the pygidial lobes similar to those of adult. Pygidium sometimes with a conical gland spine near the base. Pygidial dorsal ducts variable in number. Pygidial median lobes sometimes slightly converging.

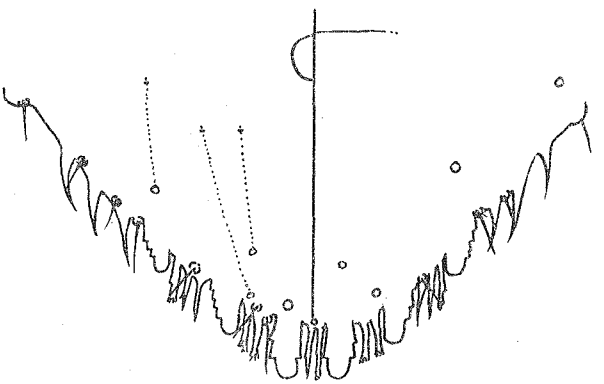

Fig. 3. *Diaonidia yabunikkei* (KUWANA).
Pygidium of adult female.

Host plant: *Cinnamomum pedunculatum*, attacking the upper sides of the foliage.

Collected by the writer at Enoshima, Shiono-misaki near Kushimoto and Mt. Nachi, Wakayama Prefecture, and Shimonoseki. Many specimens were taken on *Machilus* by Mr. K. SATO, at Ishigaki, the Loochoo Islands (VII. 1952). Previously recorded from Amami-Oshima and Mutsure Islet near Moji.

Microparlatoria n. g.

Adult female: Body subcircular, not sclerotized, minute, smaller than the larval pellicle. Many large gland spines arranged in a continuous series from the thorax to the anterior part of pygidium, which are somewhat lanceolate or

serrate, truncated or blunt at the tip; shorter fimbriated plates present posterior to these gland spines and between the pygidial lobes, 2 between the median lobes and between the median and 2nd, 3 between the 2nd and 3rd. Pygidium broad, not notched at the hind end. Anus posterior to the genital opening. Pygidial lobes not bilobed, 3 on each side; median lobes distinctly separated from each other, with a sclerosis arising from the base. Pygidial marginal macroducts large, 4 on each side of the posterior part; their orifices vertical to the margin, not surrounded by a broad sclerotized rim. Pygidial dorsal ducts minute, with the orifice circular and with no broad rim. Perivulvar pores in 5 clusters.

Genotype: *Parlatoria itabicola* KUWANA.

Closely related to *Parlatoria* but differs in the pygidial marginal macroducts reduced in number, with the orifice vertical to the margin and wanting a broad rim, and in the minute pygidial dorsal ducts with the orifice not surrounded by a broad rim.

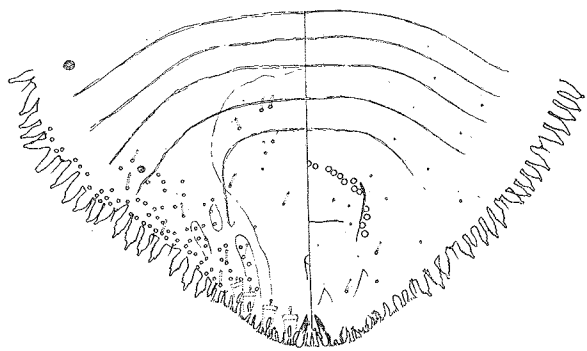

Fig. 4. *Microparlatoria itabicola* (KUWANA).
Abdomen of adult female.

Microparlatoria itabicola (KUWANA)

Parlatoria itabicola KUWANA, Zool. Mag. Tokyo, XLIII, p. 167 (1931).

Adult female: Scale yellowish brown, rather narrow, broadened posteriorly; larval pellicle subcircular, with distinct segmentation except for the marginal area, and each abdominal segment divided by furrows into a median and 2 lateral parts. Body without a lateral protuberance on the prosoma. Antennae with about 5 slender conical spines and a long seta, one or 2 of the spines larger. Anterior spiracles with 2 parastigmatic pores, posterior spiracles without them. Dermal granulations weakly developed near the mouth parts on the prosoma only. A circular sclerotized submarginal boss present on the metathorax and 3rd abdominal segment, a similar boss sometimes present on the prothorax and pygidium laterad of the anus; that on the metathorax the largest, sometimes divided by a furrow. Dermal pocket absent between the posterior spiracle and

body margin. Some marginal microducts present on the thorax. Gland tubercles one on the prothorax, one—3 on the mesothorax; gland spines shorter on the anterior part of metathorax. Pygidium somewhat sclerotized on the median area of dorsum. Anus small, distinctly posterior to the genital opening. Anal furrow somewhat developed. Median lobes prominently notched on either side, rounded apically, diverging, narrower than the space between them; 2nd and 3rd lobes smaller, equal in size, with a pair of short slender paraphyses at the base; 4th lobe not distinct. Pygidial marginal macroducts large, stout, 4 on each side, much broader than the median lobe; prominence of the posterior duct nearly reaching the apex of median lobe; median marginal duct wanting. Dorsal pygidial ducts scattered mostly on the marginal and submarginal areas, but wanting on the posterior marginal area. Perivulvar pores 2-4 in median cluster, 4-7 in each lateral cluster. Body about 0.26 mm.

Host plant: *Ficus foveolata*, attacking the upper sides of the leaves.

Originally described from Amami-Oshima; many specimens were taken by Mr. K. SATO on the island of Kume, the Loochoo Islands (11. VII. 1952).

Male scales common, greenish. *Parlatoria fici* TAKAHASHI described from Thailand (Govt. Agric. Research Inst. Formosa, Rept. no. 81, 1942, p. 45) is closely related to the present species and should be included in *Microparlatoria*. It differs from the Japanese species in the fewer dorsal pygidial ducts which are almost wanting in front of the marginal macroducts.

Prof. G. F. FERRIS and Dr. H. L. MCKENZIE have examined the specimens from the Loochoo Islands and they concur in the necessity of erecting a new genus for the present species.