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The Hemiptera-Sternorrhyncha (Insecta) of Hong Kong, China—an annotated inventory citing voucher specimens and published records

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Front cover and on title page—Adult female of *Icerya jaihind* (Rao) (Coccoidea, Monophlebidae) in Aberdeen Country Park, Hong Kong Island.

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Abstract

An account of the Sternorrhyncha recorded from Hong Kong, comprising approximately 485 species, is presented. This is primarily based upon voucher holdings in the collection of the Natural History Museum, London and it includes incompletely identified taxa. Also included are records based solely on published data. Host plant data are included where known and there are four appendices for quick cross-reference of names, groups and hosts. One new species in the Aleyrodidae is described, *Rhachisphora takahashii* **sp. nov.**. One new synonymy in the Aleyrodidae is proposed, *Aleurocanthus cheni* Young (1942) becoming a junior synonym of *A. spiniferus* (Quaintance, 1903) **syn. nov.**. Two nomenclatural changes in the Psylloidea are proposed: *Colophorina hungtouensis* Fang & Yang (1986) **comb. nov.** is transferred from *Psylla*; *Macrohomotoma sinica* Yang & Li (1984) is proposed as a junior synonym of *M. gladiatum* Kuwayama (1908), **syn. nov.**. One nomenclatural change in the Diaspididae (Coccoidea) is proposed: *Neoparlatoria lithocarpi* Takahashi (1934) is removed from synonymy with *N. formosana* Takahashi (1931), **stat. rev**.

Key words: Hong Kong, China, Sternorrhyncha, Hemiptera, host plants, check lists, specimen vouchers, specimen preparation

Abbreviations used in this paper

AFCD—Agriculture, Fisheries and Conservation Department, Government of the Hong Kong Special Administrative Region, China
ANIC—Australian National Insect Collection, CSIRO, Canberra, Australia
BMNH—The Natural History Museum, London, U.K., formerly British Museum (Natural History)
CAS—California Academy of Sciences, San Fransisco, U.S.A.
CIE—former Commonwealth Institute of Entomology, London
CDFA—California Department of Agriculture, Sacramento, U.S.A.
HK—Hong Kong Special Administrative Region, China
HUSJ—Entomological Institute, Faculty of Agriculture, Hokkaido University, Sapporo, Japan
ICZN—International Code of Zoological Nomenclature
IEAUN—Dipartimento de Entomologia e Zoologia Agraria di Portici, Universita di Napoli Federico II, Italy
IIE—former CAB International Institute of Entomology, London
LEW— Laboratory of Entomology, Wageningen, Netherlands
MHNG—Muséum d'Histoire Naturelle, Genève, Switzerland
MMB—Moravian Museum, Brno, Czech Republic
NT—New Territories
NZAC—New Zealand Arthropod Collection, Auckland, New Zealand
PPRD—Plant and Pesticides Regulatory Division, based at AFCD Headquarters at Cheung Sha Wan, Kowloon
TARI—Taiwan Agricultural Research Institute, Taichung, Taiwan
TLF—Tai Lung Experimental Station (previously known as Tai Lung Farm), Lin Tong Mei, Sheung Shui, NT (the agricultural experimental station of AFCD)
UCD—R.M. Bohart Museum of Entomology, University of California, Davis, U.S.A.
USDA—United States Department of Agriculture
USNM—US Department of Agriculture, Beltsville, Maryland, U.S.A. (custodians of the Sternorrhyncha collections of the United States National Museum of Natural History, Washington DC)
ZMB—Zoological Museum, Institute of Zoology, Chinese Academy of Sciences, Beijing, China

Introduction to Sternorrhyncha

The Sternorrhyncha are one of the suborders of Hemiptera, an order of insects whose members feed via mouthparts modified into stylets. This feature facilitates the piercing of a substrate and ingestion of liquid food through a tube-like structure guided by a rostrum. All sternorrhynchous groups are phytophagous, feeding on plant sap. The Sternorrhyncha comprises about 16,000 described species in four superfamilies (Gullan & Martin, 2009). Aphidoidea (aphids, adelgids and phylloxerids, figs 14–24) contains about 4300 species worldwide, Coccoidea (scale insects,

mealybugs, etc, figs 25–32) has an estimated 8000 species, Psylloidea (jumping plant lice, figs 33–36) comprises about 2500 species and Aleyrodoidea (whiteflies, figs 8–13) has 1560 described species. Each group has its own fascinating biology and its own peculiar taxonomic difficulties that render identification a challenging process. Good general accounts of Sternorrhyncha were presented by Gullan & Cranston (2000) and by Gullan & Martin (2003, 2009).

Introduction to Hong Kong

Hong Kong (HK) is a Special Administrative Region of China, situated on the southern edge of mainland China between the islands of Hainan and Taiwan. HK undoubtedly has one of the world's densest human populations. It includes the New Territories (NT), Chiulung [Kowloon] Peninsula and Hong Kong Island (Fig. 1), as well as a number of other islands. Until the 1980s the NT were predominantly agricultural in nature, with scattered small villages that relied on smallholdings for their survival. As urbanisation has gathered pace, new towns like Tsuen Wan, Yuen Long, Tin Shui Wai, Ma On Shan and Sha Tin have engulfed much formerly agricultural land. Some isolated villages, such as Pak Sha O (Fig. 6) and others on the Sai Kung Peninsula, now house second-homers or retirees seeking tranquility. Even once-remote islands suffer the pressure of increasing population as can be witnessed by the presence of HK International Airport, a Disneyland complex and the burgeoning new town of Tung Chung (Fig. 2), all on the island of Lantau. Although all vehicles on Lantau had, until quite recently, to be specially brought over by boat, and although permits are still needed for any vehicular access to undeveloped parts of the island, the urbanised areas and airport are now served by two of the largest suspension bridges in the world (Tsing Ma and Kap Shui Mun), bringing both highways and rapid transit railway links. Work already underway will see Macau and the city of Zhuhai linked to HK by a westward extension of the existing bridges and causeways to Lantau, effectively creating a Pearl River-delta mega-city.

However, even though development and expansion have been relentless, it is still true that 90% of the population occupy just 10% of the land. Further, an increasing realisation of the value of open spaces and countryside has resulted in HK's now-extensive country park and country trail networks (Figs 3–5). Several of the country parks are key to the protection of the metropolitan water supply, and the reservoirs also form part of the public recreation resource. On the island of HK particularly, the floristically diverse mantle of greenery today (Figs 3, 5) is in marked and positive contrast to the situation a century ago. When Pieter van der Goot briefly visited HK in 1917, during a circuitous journey home from Java to the Netherlands, he described HK thus (van der Goot, 1918): "*HK, as is very likely known, has been built against the bare hills of a small island close to the continent of China. ….….. The town and her suburban quarters possess numerous beautiful gardens and many well-kept roads lined with trees; the rest of the island seems practically bare.*" One feels that van der Goot would hardly recognise the verdant island that is HK today.

HK's geographical position, a single degree within the Tropic of Cancer, combined with rugged but low-altitude terrain and good annual rainfall, has resulted in a very diverse flora. Although the importance of food-producing agriculture in the territory has lessened significantly, urban silviculture and horticulture have increased in importance (Martin, 2000) and the protection afforded to plants in the country parks has enabled a rich native flora to flourish. For example, an omnibus edition of *Hong Kong Trees* includes accounts of 300 species (Thrower, 1988). A published check list of the whole HK flora included over 3100 species accommodated in 1374 genera and 261 families (HK Herbarium, 2004).

Materials and methods

Most specimens of Sternorrhyncha intended for accurate identification require mounting on slides (Figs 27, 41). For some of the commoner species, an expert eye may enable identification from fresh, dried or alcohol-stored material. Where there is sufficient material available, dry duplicates can be kept and these have the additional value that their molecular composition may be studied later in connection with detailed studies of particular taxonomic assemblages.

In the field, spirit (usually 70–95 percent ethanol) is often used to preserve aphids, psyllids, adult whiteflies and many scales. Storage in spirit is not recommended for the longer term, however, because it becomes increas-

ingly difficult to make slides with passing time—the maceration process becomes slower and less effective. If slides are not to be made promptly then drying material is preferable.

Each group of Sternorrhyncha is treated slightly differently when being processed for slide-mounting. However, the core process is the same in all cases—

- maceration of body contents in dilute alkali, at room temperature or warmed
- removal of waxy secretions if necessary
- staining (Fig. 27) or bleaching of cuticle (both processes mostly used for whiteflies and scales)
- dehydration
- clearing
- display in a permanent mountant such as Canada balsam

One key principle needs to be borne in mind, namely that each subsequent reagent must be miscible with the previous one — with this in mind it is possible to go backwards and forwards through certain stages several times if necessary. A selection of mounting protocols follows—

- whiteflies (Euparal)—Bink (1979), Bink-Moenen (1983)
- whiteflies (balsam)—Martin (1987, 1999, 2004).
- aphids (gum chloral mountants, including recipes)—Eastop & van Emden (1972)
- aphids (balsam)—Martin (1983), Blackman & Eastop (2000)
- scale insect groups—Stumpf & Lambdin (2006), Miller & Davidson (2005), Kosztarab & Kozár (1988), Gill (1988), Williams & Granara de Willink (1992).
- psyllids—Hodkinson & White (1979)

For most groups of Sternorrhyncha the adult is mounted entire, usually on its front or back to allow examination of dorsal and ventral surfaces. Exceptions to this general rule are whiteflies (where puparia are usually used taxonomically and where adults, when used, are usually mounted laterally) and psyllids (where adults are dissected into about 10 parts to allow compound microscope examination of characters in a flat plane). Staining with acid Fuchsin may be carried out for any group where a sample comprises very pale individuals: however, convention has led to aphids and psyllids rarely being stained, even when having very pale cuticle; conversely, many scale groups require staining in order to reveal details of minute pores on the body surface. In contrast to taxa with pale cuticle, bleaching with a room-temperature mixture of ammonia and hydrogen peroxide will enable taxa with even the blackest cuticle to become translucent enough to transmit light for microscopy.

Field collection of samples usually employs the following methods to allow safe delivery to a laboratory:

- whiteflies—adults must be collected into spirit; leaves with puparia attached are dried in paper envelopes that are protected from crushing during transit.
- aphids—adults and nymphs are usually collected into spirit, and may be protected from agitation by a tight tissue paper plug pushed into the vial until almost touching the specimens.
- scale insect groups—sessile taxa may be left on dried leaves or stems as for whitefly puparia; mobile taxa (mostly mealybugs and cushion scales) are usually collected into spirit as for aphids.
- psyllids—adults are usually collected into spirit (see aphids above) for slide-mounting, or kept dry in layered tissue paper for subsequent mounting on card points; nymphs are collected into spirit as for aphids.

All material collected by the authors was slide- or dry-mounted at BMNH by the first author. Unless stated otherwise, all vouchers and samples refer to BMNH, where they are available for further study.

Many of the samples taken during field work by the authors benefitted from the simultaneous collection of host-plant samples. These host samples were kindly examined by staff of the HK Herbarium and this has resulted in a particularly high proportion of the insect samples having associated host-plant data. For host-plant names we have generally followed HK Herbarium (2004) and the HK Herbarium's website—http://www.hkherbarium.net/Herbarium/frame.html. A synopsis of host records in HK is given for each insect-species entry in the main text.

All photography is the work of the authors.

Sternorrhyncha in Hong Kong

We have already mentioned the fleeting visit to HK by the Dutch aphidologist Pieter van der Goot, and he managed to collect eight species of aphid during just two hours ashore on 6th April 1917. Through the kindness of Yde

Jongema (LEW), some of van der Goot's HK slides were examined for this study. The slide-making technique employed by van der Goot is best described as inadequate, with no attempt having been made either to clear the body contents or to display the specimens. Despite van der Goot (1918) writing that he was only in HK on 6th April 1917, these slides bear several dates from April 1917 to May 1918 and most do not match the taxa he discussed in his 1918 paper: we do not know the reason for the discrepancy.

Japanese entomologist Ryoichi Takahashi also collected in HK, in 1940: from Takahashi's accounts of 11 aphid species (1941c), 18 whitefly species (1941a, 1941b) and four armoured scale species (1942), he appears to have enjoyed three productive field days in the territory (7th, 8th & 9th March 1940), rather than van der Goot's two hours (but see above). Some of Takahashi's slides are in TARI—discussed under individual species headings.

Subsequent to World War II many collections of Sternorrhyncha from HK were made by the former Agriculture & Fisheries Department, in order to gain identifications of pests of field agriculture and silviculture. These, and other samples originating from the University of HK, were usually submitted to the CAB International Institute of Entomology (IIE) or one of its precursors—Commonwealth Institute of Entomology (CIE), International Bureau of Entomology or Imperial Institute of Entomology. The voucher specimens of most of these samples now reside in the Natural History Museum, London (BMNH). Lee & Winney (1981) published a list of HK's agricultural insects, many of the records probably from determinations carried out by the staff of these identification services, although this was not stated. Today, the Agriculture, Fisheries and Conservation Department of HK Special Administrative Region are the body responsible for quarantine inspections and for investigating pest outbreaks. They also maintain the amenities of the Country Parks (Fig. 4).

Tao (1999a, 1999b) published lists of Aphidoidea and Coccoidea known from China, with the distribution of each species listing Chinese provinces (including HK) and wider geographical occurrence. The Tao volumes list 776 aphid species and 988 species of Coccoidea—huge totals even given China's large area and diversity of habitat and flora. While the introductory paragraphs of each Tao volume list the major sources of the records, individual species entries are too brief to give any such detail. Further, Tao did not mention Lee & Winney's (1981) work in either of his volumes. The result is that Tao's data on distribution and hosts for each species are effectively anonymous, as is also the case with Lee & Winney's. HK and Taiwan are listed as separate provincial units within the Chinese distributional data in Tao's volumes but, again, the sources of data are not given. Where the work of Tao or of Lee & Winney is the only known source for a HK record in our account, we state this, and there is then no verifiable voucher material. However, some conclusions can be drawn on the origin of Lee & Winney's records, as is discussed in individual species accounts below.

Since 1979, the authors of the present work have collected from a much broader spectrum of plants than just those of agricultural importance, revealing many more insect species and including a significant number that remain undescribed. Access to the diverse flora has been by minor roads, urban pathways, urban parks, private gardens, country park trails and even power-pylon access paths (Fig. 7). The voucher specimens, almost always slide-mounted, reside in the collections of BMNH, with some duplicates in Plant and Pesticides Regulatory Division (PPRD) of the HK AFCD's collection at its Headquarters in Cheung Sha Wan Government Offices in north Kowloon.

The diversity of phytophagous insects reflects the richness of the flora discussed in the Introduction. Hill *et al*. (1982) presented a general account of HK's insect fauna but this was inevitably a very broad and incomplete overview, although giving a good indication of the variety of insects to be found. Perusal of Hill *et al.*'s treatment of the whiteflies, for example, reveals some questions about the identifications—and this is likely to be the case for other groups, too. For example, a large and damaging population of whiteflies on *Oxalis* (discussed by Hill *et* al. with accompanying photographs) was said to involve *Aleyrodes lonicerae* Walker—but there is no reference to the existence of voucher specimens that might be examined to test this identification, nor any of the other determinations in the book. No Oriental Region material of *A. lonicerae* is present in BMNH and without readily-accessible vouchers such a doubtful identification cannot be reassessed.

Appendix 1 (p. 59) comprises an abbreviated alphabetical check list of HK Sternorrhyncha with the taxonomic group to which each species belongs. **The non-bulleted entries in Appendix 1 make up the master check list**, which is correlated with names in **bold type** in the main discursive text that follows here. Bullet-pointed entries in Appendix 1 refer to taxa discussed in the discursive text (where they are not in bold type) but are excluded from the check list for stated reasons. Appendix 2 (p. 70) indexes host-plant genera with their families. Appendix 3 (p. 73) lists host-plants by family, along with the Sternorrhyncha associated with them in HK. Appendix 4 (p. 106) lists

voucher specimens of HK Sternorrhyncha species located in the collection of PPRD. We include many published records that we consider to be doubtful, whilst stressing that they are not backed by vouchers, but we also state that certain records should be entirely omitted from the check list for reasons that we state. Conversely, we list species that have been only partially or tentatively identified (whether by ourselves or by other determinators), but which can be further investigated in the future by examination of their voucher specimens in BMNH or elsewhere. These taxa will undoubtedly comprise a mixture of undescribed ("new") species and those that have been poorly described or have been described but in obscure papers. Identification of many little-known species relies on descriptions that may be ambiguous and the location of type material is often unknown, making the job even more difficult. We therefore consider it extremely likely that some of our identification decisions will be amended by future work on the permanent voucher specimens. It is certain that further specialist sampling, and more detailed study of existing voucher material, will increase the known Sternorrhyncha fauna of HK and will almost certainly yield further undescribed taxa.

Although not recorded from HK at present mention should be made of the so-called "spiralling whitefly" (*Aleurodicus dispersus* Russell, Aleurodicinae), which is established in Taiwan (Wen *et al.*, 1994) and on Hainan Island (Zhu Wenjing pers. comm.; BMNH vouchers), indicating a considerable risk of it becoming established in HK. Climate appears to be the limiting factor in this species' geographical expansion, and it has been present in the Canary Islands and Madeira for many years without moving into the Mediterranean and Middle East area (Martin, 2008: 29). This species is highly polyphagous and readily observed on account of its flocculent secretions. Should it arrive in HK, it is certain to be noticed quickly.

The inventory of Hong Kong Sternorrhyncha

Our present check list of HK Sternorrhyncha comprises 484 species. This total is broken down as 215 Coccoidea, 124 Aphidoidea, 105 Aleyrodidae and 40 Psylloidea. These figures are inevitably approximate, with several very tentative species determinations and sometimes imprecise numbers of species determined only to generic level. For whiteflies (Aleyrodidae) only, records for Macau and Hainan with BMNH vouchers are added for species that are also recorded from Hong Kong.

The groups of Sternorrhyncha are treated here in the following sequence—Aleyrodoidea, Aphidoidea, Coccoidea, Psylloidea—alphabetically and not implying any order of importance.

The heading for each species, and the references to species names alone in the text, give authors and dates of description but we do not list those references in the bibliography. There are various sources of the full descriptive references including—

- whiteflies—Martin & Mound (2007)
- aphids—Remaudière & Remaudière (1997)
- scale insect groups—the best source is ScaleNet, an online resource hosted by the USDA: http://www.sel.barc.usda.gov/SCALENET/SCALENET.HTM , with most input from Yair Ben-Dov and Douglass Miller, and currently being updated by Ben-Dov, Miller, Barbara Denno and Nate Hardy.
- psyllids—Hodkinson (1986)

Throughout the account that follows, species names that are regarded as belonging on the HK check list are in **bold type** (and these names are not bullet-pointed in Appendix 1), whilst taxa excluded from the check list (erroneous records, incorrect determinations, records published as synonyms, etc.) are in ordinary type (and the names are bullet-pointed in Appendix 1).

Aleyrodoidea

- We follow here the check list of world whiteflies by Martin & Mound (2007)
- Taxonomy is based almost exclusively on the fourth nymphal (puparial) stage, the history of this situation discussed by Martin (2003)

Aleyrodidae—Aleyrodinae

Acanthaleyrodes styraci Takahashi (1942)

Collected several times in HK, always on *Rubus reflexus*, a plant with densely tomentose lower surfaces of its leaves. Young (1944) reported *A. callicarpae* Takahashi from *Rubus* in Szechwan, China, but his descriptive account does not match the HK vouchers in BMNH and PPRD, which better answer the description of *A. styraci*.

Aleurocanthus citriperdus Quaintance & Baker (1916)

Very common in HK, with BMNH and PPRD vouchers from *Citrus* spp, *Litsea cubeba, L. glutinosa, Macaranga tanarius* & *Psidium guajava*. Also in Macau, on *Citrus* spp and *Psidium guajava*.

Aleurocanthus gordoniae Takahashi (1941)

Described from HK by Takahashi (1941b) with syntypes in TARI (Shu-Pei Chen, pers. comm.). Vouchers in BMNH and PPRD of several samples from *Gordonia axillaris* and one sample from *Tutcheria spectabilis*.

Aleurocanthus husaini Corbett (1939)

Three samples in BMNH, two from *Citrus reticulata* and the other from *Aporusa dioica*, all from Sai Kung Peninsula (NT). Puparia extremely small, only 0.7 mm long, with some dorsal spines exceptionally long. This species was erroneously placed as a junior synonym of *A. woglumi* Ashby (1915) by Martin (1985: 316) but this was corrected by Martin (2005: 8).

Aleurocanthus inceratus Silvestri (1927)

Vouchers in BMNH and USNM from *Michelia champaca* in HK, and in BMNH from *Areca catechu* in Hainan.

Aleurocanthus longispinus Quaintance & Baker (1917)

Single sample in BMNH, from Hatton Road path, HK Island, on a small-leaved bamboo.

Aleurocanthus rugosa Singh (1931)

Vouchers in BMNH and PPRD, from *Aporusa dioica, Aquilaria sinensis, Gnetum luofuense* and *Plumeria rubra*. This is one of only a few *Aleurocanthus* species with pale or brownish puparial cuticle.

Aleurocanthus spiniferus (Quaintance, 1903)

Aleurocanthus cheni Young (1942) **syn. nov.**

Voucher material in BMNH and PPRD, from *Citrus* sp., *C. grandis* and an undetermined host. A common crop pest occurring pan-tropically except in the neotropics (Martin, 1987). Single Takahashi slide from HK, determined as this species, present in TARI (Shu-Pei Chen, pers. comm.) but was not discussed in either of Takahashi's two 1941 papers dealing with HK whiteflies. *A. cheni* was described from citrus plants in Szechwan Province, China (Young, 1942): the illustration and description lead to the conclusion that it is synonymous with *A. spiniferus* despite several small variations mentioned as having been observed in just some of Young's study specimens.

Aleurocanthus woglumi Ashby (1915)

Reported from HK by Hill *et al*. (1982) but no known vouchers. No HK vouchers in BMNH exactly match typical *A. woglumi* Ashby (1915), the third posteriormost pair of submarginal spines not being doubled in the HK material, but one sample from *Symplocos* ?*confusa* on East Ping Chau I. (also a slide in PPRD) has tentatively been identified as *A. woglumi*. Two slides in USNM, intercepted on *Citrus* sp. from HK (18.v.1976 and 17.iv.1979) appear to match the atypical HK specimens in BMNH (Greg Evans, pers. comm.).

***Aleurocanthus* undetermined sp. 1, *woglumi*-group**

Specimens from HK (*Ficus microcarpa,* and *Litsea glutinosa*) and Hainan (*Areca catechu* and *Streblus asper*) in BMNH represent a species that belongs to the *woglumi-husaini* species-group. The puparia have unusually large subcircular pale eyespots.

***Aleurocanthus* undetermined sp. 2, *woglumi*-group**

Single sample from *Cansjera rheedii* on East Ping Chau I. represents a member of the *woglumi* species-group with 10 pairs of submarginal spines, none of them doubled, and tiny eyespots.

***Aleurocanthus* undetermined sp. 3** (Fig. 10)

Large sample on single leaf of *Gnetum luofuense* in BMNH, with exceptionally perfect puparia. Puparia bear 13–14 pairs of submarginal spines, resembling *A. citriperdus* Q. & B. except for the slightly reduced spine complement and the abdominal submarginal spines being more even in length.

Aleuroclava aucubae (Kuwana, 1911)

This species was described from Japan and is now of high quarantine interest. Colonies have been found in mainland China, Italy, Korea and California, and it has been intercepted in the Netherlands from several sources. No HK material in BMNH. However, a single US quarantine interception record on *Citrus* from HK is in USNM (Greg Evans, pers. comm.), but the material could be of transhipment nature because AFCD has recorded no citrus exports in recent years, and this record for HK should therefore be regarded with caution.

Aleuroclava gordoniae (Takahashi, 1932)

Reported from HK by Takahashi (1941a) but no known voucher material. Very common in HK with vouchers in BMNH from *Adinandra millettii, Cinnamomum parthenoxylon, Elaeocarpus dubius, Ficus variolosa, Gordonia axillaris, Ilex cinerea, I. pubescens, Pentaphylax euryoides, Rhaphiolepis indica* and *Schefflera heptaphylla* [= *S. octophylla*].

Aleuroclava guyavae (Takahashi, 1932)

Reported from HK by Takahashi (1941a), his voucher material from *Cinnamomum* sp. in TARI (Shu-Pei Chen, pers. comm.). Very small numbers of HK vouchers in BMNH, from *Leptospermum petersenii, Litsea rotundifolia* var. *oblongifolia,* ?*Machilus* sp. and *M. chinensis.*

Aleuroclava indicus (Singh, 1931)

Reported from HK by Takahashi (1941a) but no known voucher material. HK vouchers in BMNH from *Ficus hispida* at The Peak and *Litsea monopetala* (also a slide in PPRD) at Fung Yuen village (NT). Also from Hainan on *Persea americana*.

Aleuroclava jasmini (Takahashi, 1932)

The earliest HK sample of this species in BMNH is from an undetermined host in Kowloon in 1979 (coll. Martin). More recent vouchers from *Aporusa dioica, Diplospora dubia* and *Maesa perlarius*. Interception material in USNM from HK, on *Citrus* spp and *Jasminum* sp. (Greg Evans, pers. comm.). Also material in BMNH from Macau on *Murraya* sp.

Aleuroclava lanceolata (Takahashi, 1949)

see *Dialeurodes mirabilis* Takahashi (1942)

Aleuroclava meliosmae (Takahashi, 1932)

Single sample in BMNH, from undetermined woody host at Tai Po Kau forest (NT).

Aleuroclava psidii (Singh, 1931)

Reported from HK by Takahashi (1941a), his voucher material located in TARI (Shu-Pei Chen, pers. comm.). Very few HK vouchers in BMNH, from *Acronychia pedunculata, Ficus superba japonica, Litsea glutinosa* and *L. rotundifolia* var. *oblongifolia*. Material in USNM from HK, intercepted on *Michelia* sp. and *Magnolia* sp., and field-collected from "*Momordica umbellata*" (now *Solena amplexicaulis*) in NT (Greg Evans, pers. comm.).

Aleuroclava rhododendri (Takahashi, 1935)

Vouchers in BMNH and PPRD, from *Rhododendron pulchrum* at several localities.

Aleuroclava subindica Martin & Mound (2007)

This is a replacement name for preoccupied *A. papillata* Dubey & Sundararaj (2005). A single HK specimen in BMNH, from *Citrus* sp. at Fung Yuen village (NT), was determined in comparison with a paratype from India; there are also small HK samples, more tentatively determined, from *Gordonia axillaris* and ?Rubiaceae.

***Aleuroclava,* undetermined sp. 1**

Three samples in BMNH, comprising pale and brown-pigmented puparia, resemble *A. lithocarpi* (Takahashi, 1934), and were collected from *Cyclobalanopsis myrsinifolia, C. neglecta,* and undetermined Fagaceae on HK Island.

***Aleuroclava,* undetermined sp. 2**

Large sample of pale puparia in BMNH, from *Syzygium hancei* at Tai Po Kau forest (NT), possibly having affinities with *A. eugeniae* (Corbett, 1935). A further sample, from the same host, was later received at BMNH.

***Aleuroclava,* undetermined sp. 3**

Single sample of pale puparia in BMNH, from *Ficus hispida* at TLF.

***Aleuroclava,* undetermined sp. 4**

Solitary pale puparium in BMNH, from *Melastoma sanguineum* at Tai Tam Country Park, HK Island.

Aleurolobus marlatti (Quaintance, 1903)

Reported from HK by Hill *et al*. (1982) but no known vouchers. Several HK samples of *Aleurolobus* present in BMNH, from *Aporusa dioica, Bauhinia* sp. or spp (on which it is particularly common), *Celtis biondii, Citrus* sp., *Desmos chinensis, Litsea glutinosa, Murraya paniculata* and *Phyllanthus emblica*: these match with *A. marlatti* to varying degrees but the variability of this species is not well understood. Two samples of US quarantine interception material in USNM, on *Citrus* spp from HK (Greg Evans, pers. comm.).

Aleurolobus osmanthi Young (1944)

Two samples in BMNH, both from *Osmanthus fragrans* (Oleaceae). This whitefly species has clear affinities with the European species, *A. olivinus* Silvestri (1911).

Aleurolobus rhododendri Takahashi (1934)

Several vouchers in BMNH and PPRD, all from *Rhododendron pulchrum*.

Aleurolobus setigerus Quaintance & Baker (1917)

Reported from HK by Takahashi (1941a), the two specimens located in TARI (Shu-Pei Chen, pers. comm.). Quarantine interception material from HK in USNM, on *Psidium guajava* (Greg Evans, pers. comm.). This species is not represented in BMNH.

Aleurolobus subrotundus Silvestri (1927)

Vouchers in BMNH, PPRD and USNM, from *Aglaia odorata, Citrus* spp, *C. grandis, Glycosmis citrifolia, Ligustrum sinense, Murraya* sp. and *M. paniculata*. This is not a typical *Aleurolobus*—the puparia have little evident secretion, bear 10 pairs of extremely long and fine submarginal setae, are almost perfectly circular in outline, are markedly dimorphic (puparia of males are much smaller than those of females) and require significant bleaching for examination on slides.

Aleuroplatus liquidambaris Takahashi (1941)

Described from *Liquidambar* sp. in HK (Takahashi, 1941b) but no type depository was given in Mound & Halsey's (1978) world whitefly catalogue. However, a series of syntype slides has been located in TARI (Shu-Pei Chen, pers. comm.). Species not represented in BMNH.

Aleuroplatus pectiniferus Quaintance & Baker (1917)

Vouchers in BMNH, from *Aquilaria sinensis, Myrica rubra, Syzygium hancei* and undetermined Dilleniaceae. This is a somewhat variable species with six junior synonyms (Martin, 1999). All BMNH samples are very small and this species does not appear to be common in HK.

Aleuroplatus spina (Singh, 1931)

This species has not been recorded in HK at the time of writing. However, it is extremely common on municipal *Ficus rumphii* trees throughout nearby Macau (BMNH vouchers), and this tree species is present in HK (Thrower, 1988).

Aleuroplatus translucidus Quaintance & Baker (1917)

Described from Pakistan on *Citrus*, a single voucher sample is in BMNH from an undetermined shrub on The Peak, HK Island.

***Aleuroplatus*, undetermined sp. 1**

A distinctive species, developing dense colonies of orange-coloured nymphal stages that become embedded in copious secreted gelatinous material that becomes glassy when dried out. Cuticle is evenly slightly dusky when slide-mounted. It is very common across HK on *Maesa perlarius* (many vouchers in BMNH). *A. alcocki* (Peal, 1903), described from *Ficus indica* and *F. religiosa* in India, is similar but has smaller puparia, a patch of brownish pigmentation, and its marginal tracheal comb teeth are more exaggerated. This HK species, and *A. alcocki*, are certainly members of the same group as *A. pectiniferus* (*q.v.*, above) whose puparia are shining black.

Aleurotrachelus camelliae (Kuwana, 1911)

Single sample in BMNH, from *Camellia sinensis* at Tai Mo Shan (NT). Also in Hainan on *Camellia japonica*.

Aleurotrachelus fissistigmae Takahashi (1931)

Vouchers in BMNH from small groups of slightly brownish puparia collected amongst other taxa under leaves of *Desmos chinensis* in Sai Kung Peninsula (NT).

Aleurotrachelus maesae Takahashi (1935)

Reported from HK on *Maesa* sp. by Takahashi (1941b) but no known voucher material. Species not represented in BMNH.

Aleurotrachelus tuberculatus Singh (1933)

Reported from HK by Takahashi (1941b) but no known voucher material. Vouchers in BMNH, from *Bridelia tomentosa*, *Litsea* ?*monopetala* and an undetermined host. Also in Macau on *Bridelia tomentosa* and in Hainan on *Psidium guajava*.

Aleyrodes lonicerae Walker (1852)

Reported from HK by Hill *et al*. (1982), who described and illustrated a very severe infestation on *Oxalis corymbosa*, but no vouchers are known to exist. Lee & Winney (1981) also reported this species from HK, presumably referring to the same infestation. No Oriental Region material of *A. lonicerae* is present in BMNH and the record is unsafe in the absence of study material (see Introduction, p. 7).

***Asialeyrodes*, undetermined sp. 1**

Single sample in BMNH, collected by the authors from *Acronychia pedunculata* in Tai Tam Country Park, HK Island. This is the only record of *Asialeyrodes* Corbett (1935) occurring in HK.

Bemisia afer (Priesner & Hosny, 1934)

B. afer is thought to be part of a species-complex, with numerous puparial variants (BMNH vouchers) whose significance is poorly understood. HK specimens in BMNH from *Bridelia tomentosa* (also PPRD) have been determined as *Bemisia afer* with some confidence: however, other samples from *Bauhinia* sp., *Celtis* sp. and *Erythrina speciosa* are assigned only to the broad *afer*-group. Also recorded from Macau on *Bridelia tomentosa*.

Bemisia ?berbericola (Cockerell, 1896)

Solitary puparium in BMNH, from euphorbiaceous shrub at the old Tung Chung village (Lantau Island), very tentatively determined as a result of a study of many variants of the *Bemisia afer*-group discussed above (Raymond Gill, pers. comm.).

Bemisia emiliae (Chen & Ko, 2006)

Described from material from both Taiwan and HK, as *Lipaleyrodes emiliae*, this species is common in HK on *Emilia sonchifolia* with vouchers from several samples in BMNH. *Lipaleyrodes* was placed as a junior synonym of *Bemisia* by Dubey *et al*. (2009).

Bemisia giffardi (Kotinsky, 1907)

Single specimen in BMNH, from *Citrus* sp. at Shek Kong (NT). Interception material in USNM from HK, on *Citrus* sp. and *Fortunella* sp. (Greg Evans, pers. comm.).

Bemisia phyllanthi (Takahashi, 1962)

Single sample in BMNH, from *Blumea* sp. at Tai Tam Intermediate Reservoir, HK Island. This is the type species of *Lipaleyrodes* Takahashi, placed as a junior synonym of *Bemisia* by Dubey *et al*. (2009).

Bemisia tabaci (Gennadius, 1889) (Figs 44–47)

Reported from HK by Hill *et al*. (1982) but no known vouchers. HK voucher material in BMNH from *Codiaeum variegatum*, *Ipomoea batatas* (also in PPRD), *Lantana camara*, *Scaevola* ?*sericea*, *Solanum melongena* and undetermined Asteraceae. Interception material in USNM from HK, from several hosts (Greg Evans, pers. comm.). Also material in BMNH from *Cucurbita moschata* in Hainan.

Variously known under the common names tobacco, cotton or sweet potato whitefly, this is the world's most investigated whitefly species, by far, because of the many problems it causes for worldwide agriculture. *B. tabaci* is regarded by most workers as a morphologically variable single species, with an exceptionally wide range of host plants, following demonstration of the phenomenon of puparial plasticity by Mound (1963). Several population biotypes have been recognised for some years but "biotype B" was eventually given its own species name, *B. argentifolii*, by Bellows & Perring (in Bellows *et al.*, 1994), along with its own common name, "silverleaf whitefly". However, *B. argentifolii* has now been placed as a junior synonym of *B. tabaci* by De Barro *et al.* (2005) although much controversy remains.

The HK material from *Codiaeum*, listed above and in Appendix 3, and shown in figs 44–47, was from a very large colony in the grounds of the second author's office complex in 2010. The density was such that the lower surfaces of most leaves were completely covered by the immature stages, suggesting an invasion by one of the more virulent biotypes. Eradication measures were taken.

***Bemisia*, undetermined sp. 1**

A single sample in BMNH from *Phyllanthus cochinchinensis* at Middle Gap Road, HK Island, resembles *B. tabaci* but differs in aspects of chaetotaxy and in characters of the vasiform orifice and caudal region (where *B. tabaci* shows little variation).

Cockerelliella bladhiae (Takahashi, 1931)

Reported from HK on *Eurya* sp. by Takahashi (1941a) but no known voucher material. HK vouchers in BMNH, from *Michelia figo* and *Elaeocarpus dubius*.

Cockerelliella psidii (Corbett, 1935)

Single sample in BMNH, from *Glochidion zeylanicum* at Pak Sha O (NT). This species is extremely common through the tropical Austro-oriental Region—see Martin (1985: 326).

Crenidorsum caerulescens (Singh, 1931)

Vouchers in BMNH, from *Aporusa dioica* and *Schefflera heptaphylla* [= *S. octophylla*].

Crenidorsum micheliae (Takahashi, 1932)

Vouchers in BMNH, from *Daphniphyllum calycinum* and *Embelia laeta*. Another small sample, on *Ilex pubescens* from Sai Kung Peninsula, is also provisionally assigned to this species.

***Crenidorsum*, undetermined sp. 1**

Solitary puparium in BMNH, from *Ilex asprella* at Quarry Bay Country Park, HK Island.

Dialeurodes agalmae Takahashi (1935)

Common on *Schefflera* spp in HK, with vouchers of several samples in BMNH and material also in PPRD. Puparia rather variable, probably according to the nature of the host-plant leaf surfaces, and the species is clearly closely related to *D. citri* (Ashmead) *q.v.*, below.

Dialeurodes citri (Ashmead, 1885)

Vouchers in BMNH and PPRD of several samples of *D. citri sens. lat.* from *Citrus* sp., *Daphniphyllum calycinum*, *Diplospora dubia*, *Embelia laeta*, *Murraya paniculata*, *Strophanthus divaricatus*, undetermined Apocynaceae and undetermined woody host. Interception material in USNM from HK, on *Citrus* spp (Greg Evans, pers. comm.). Also one sample in BMNH from *Murraya* sp. in Macau. It is uncertain whether *D. citri* in Asia comprises one variable species, or a suite of similar species. It is interesting to note that some HK samples of *D. citri* from Rutaceae are marked with the same pigmented longitudinal median line as is often regarded as diagnostic for *D. kirkaldyi* (*q.v.*, below).

Dialeurodes citrifolii (Morgan, 1893)

see *Singhiella citrifolii* (Morgan, 1893)

Dialeurodes hongkongensis Takahashi (1941) (Fig. 12)

Described from HK by Takahashi (1941a), syntypes from undetermined host in TARI (Shu-Pei Chen pers. comm.). Several samples in BMNH (one slide in USNM), from *Dendrotrophe frutescens* and *D. varians*, on which hosts puparia form shallow pits in the lower surfaces of leaves and are thus easily seen as raised bumps on the upper surfaces. Puparia characteristically pigmented with dark blotches.

Dialeurodes kirkaldyi (Kotinsky, 1907)

Single colony in BMNH, on *Achronychia pedunculata* at Ma On Shan Country Park (NT). This species is most often associated with *Jasminum sambac*, on which there are vouchers in BMNH from Hainan. Puparia of *D. kirkaldyi* usually display a darkly pigmented median longitudinal line, often used as a diagnostic feature: however, some HK samples with this character have been determined as *D. citri*—see above.

Dialeurodes mirabilis Takahashi (1942)

A few individuals from several collections from *Aporusa dioica* are in BMNH. The nature of the vasiform orifice appears to indicate that this species could be better placed in *Singhius* Takahashi, but specimens from Sulawesi (*Dialeurodes*-group, unidentified Sulawesi sp.12 in BMNH, see Martin, 1988) are intermediate and a new combination is not proposed here. Interception material in USNM from HK in 1957, on *Melastoma sanguineum* (Greg Evans, pers. comm.), seems best placed as *D. mirabilis* despite having originally been determined as *D. lanceolata* Takahashi (now placed in *Aleuroclava*).

***Dialeurodes sens. str.* undetermined sp. 1**

Single sample in BMNH, from ?Rubiaceae (woody host) in gallery forest on Lantau Island, is a member of the *citri-kirkaldyi-ixorae* group.

***Dialeurodes sens. lat.* undetermined sp. 2**

Single sample in BMNH, from an undetermined shrub at Magazine Gap Road, HK Island. This species has its dorsal disc extremely smooth, devoid of the numerous tubercles seen in some other *Dialeurodes*-group species.

***Dialeurodes sens. lat.* undetermined sp. 3**

Single sample in BMNH, from *Cratoxylum cochinchinense* at Pak Sha O (NT), resembles *Massilieurodes* but with no marginal modification at tracheal openings.

***Dialeurodes sens. lat.* undetermined sp. 4**

Single sample in BMNH, from *Ficus microcarpa* at Wanchai, HK Island. Puparia very large with a cluster of tubercles on each side of pro- and metathorax, above legs.

***Dialeurodes sens. lat.* undetermined sp. 5**

Two samples in BMNH, both from *Ficus superba* var. *japonica*, from Tanner Hill and Aberdeen Country Park. Puparia large and with protuberant very fine combs of teeth at tracheal openings at margin.

***Dialeurodes sens. lat.* unexamined sp.**

Several specimens present in TARI on a Takahashi slide (Shu-Pei Chen pers. comm.) but have not been examined by the authors. The data are only "Hong Kong, 9.iii.1940" and it does not appear to have been mentioned in either of Takahashi's two 1941 papers treating HK Aleyrodidae.

Dialeuropora brideliae (Takahashi, 1932)

see *D. decempuncta* (Quaintance & Baker, 1917)

Dialeuropora decempuncta (Quaintance & Baker, 1917) (Fig. 11)

Extremely common in HK, with vouchers in BMNH and PPRD from *Aporusa dioica, Achronychia pedunculata, Bridelia tomentosa, Celtis* sp., *Glochidion eriocarpum, G. zeylanicum, Litsea glutinosa, L. monopetala, Macaranga tanarius, Machilus* sp., *M. chinensis,* and an undetermined euphorbiaceous shrub. Also BMNH vouchers from *Persea americana* and *Piper sarmentosum* in Hainan and from *Bridelia tomentosa* in Macau. Material in USNM, intercepted from HK on *Bridelia noxica,* had been determined as *D. brideliae* (Takahashi) but an electronic image (Greg Evans, pers. comm.) clearly shows lanceolate spines in the outer submargin, and the determination is here corrected to *D. decempuncta* despite the absence of large simple pores (this phenomenon was discussed by Martin, 1999: 72).

Highly characteristic iridescent blue waxy rods under leaves (Fig. 11) indicate the presence of this species, whose feeding stages are almost invisible otherwise.

Indoaleyrodes laos (Takahashi, 1942)

Only two HK specimens in BMNH, both from *Aporusa dioica* at Pak Sha O (NT). One agrees very closely with the description, whereas the other has much-extended dorsal sculpture overlying the thoracic tracheal folds, and the puparium stage of this species is clearly variable.

Lipaleyrodes

see *Bemisia*

Massilieurodes formosensis (Takahashi, 1933)

Reported from HK on *Maesa* sp. by Takahashi (1941a) but no known voucher material. Four HK samples from *Maesa perlarius* present in BMNH. Puparia of *M. formosensis* appear to vary significantly and other HK vouchers, from *Aquilaria sinensis, Berchemia floribunda, Ilex cinerea, Schefflera heptaphylla* [= *S. octophylla*] and an undetermined shrub, are provisionally determined.

Specimens from *Maesa* with tubercles along the median line of the dorsum, and without a pair of submarginal setae situated on the caudal ridges between vasiform orifice and caudal setae (see Jensen, 2001: 284, 296), may possibly be a variant but are here thought to represent a different species—see undetermined sp. 3, below.

***Massilieurodes* undetermined sp. 1**

Sample from *Symplocos crassifolia*, and single specimen from ?*Celtis* sp., are assigned to *Massilieurodes* but appear likely to be outside the range of variability of *M. formosensis*.

***Massilieurodes* undetermined sp. 2**

Single sample in BMNH, from undetermined host.

***Massilieurodes* undetermined sp. 3**

Specimens from *Maesa perlarius* with tubercles along the median line of the dorsum, and without a pair of submarginal setae situated on the caudal ridges between vasiform orifice and caudal setae (see Jensen, 2001: 284, 296), may possibly be a variant of *M. formosana* but are here thought to represent a different species.

Neomaskellia andropogonis Corbett (1926)

The authors have collected two large HK samples. One colony, on *Saccharum spontaneum* at Ho Pui Reser-

voir (NT) (BMNH, PPRD), agrees extremely closely with syntypes from Sri Lanka. The other colony, on ?*Neyraudia reynaudiana* near Pak Tam, Sai Kung Peninsula (NT) (BMNH, USNM), has the same array of "bright" pores submedially on abdominal segments IV-VII but these are very much smaller and less prominent. Whilst it is possible that the ?*Neyraudia* sample may represent a separate species, that is considered unlikely. The description and illustration of *N. hainanensis* Chou & Yan (1988) exactly agrees with the syntypes of *N. andropogonis* and it was placed as its junior synonym by Martin & Mound (2007).

Orchamoplatus mammaeferus (Quaintance & Baker, 1917)

In December 2003 the authors discovered large colonies of this species on amenity plantings of "croton" (*Codiaeum variegatum* cultivars) in the Braemar Hill district of HK Island. Immediate eradication action was undertaken by AFCD in all local parks and other accessible areas. There has not been any further detection of this species since 2003. Numerous vouchers are in BMNH and PPRD. *Orchamoplatus* is a Pacific / Australasian genus, with only *O. mammaeferus* now also found in the Austro-oriental and Oriental regions.

Parabemisia myricae (Kuwana, 1927)

Small samples in BMNH, from *Aporusa dioica, Citrus reticulata, Elaeocarpus dubius, Ficus* sp., *Stephania longa* and an unidentified host. Interception material in USNM from HK, on *Mangifera indica* (Greg Evans, pers. comm.). This species gained some notoriety as a pest of citrus crops and avocado in areas of new introduction (e.g. Mediterranean / Middle East, California, Florida, Hawaii), and is often called the Japanese bayberry whitefly, but it appears to be uncommon in HK.

***Parabemisia* undetermined sp. 1** (Fig. 9)

This species is very common on *Smilax* spp in HK. It is a most striking whitefly in life, with puparia readily visible against the smooth greyish lower surfaces of leaves—each individual secretes a peripheral fringe of very long white rays and its dorsal surface is dusted with pretty white, mealy material; the puparia are numerous but are usually rather evenly distributed over each leaf. Vouchers in BMNH, both on slides and dry. A sample from *Stephania longa* at Pak Sha O (NT) comprises puparia that were extremely cryptic in life, but were probably teneral—these appear to belong to this same species.

***Parabemisia* undetermined sp. 2**

Single sample in BMNH, from *Maesa perlarius* at The Peak. Puparia have very long submarginal setae and rather short vasiform orifice, but the lingula is not of the "D"-shaped *Pealius*-type.

***Parabemisia* undetermined sp. 3**

Single sample in BMNH, from *Aporusa dioica* at Shing Mun arboretum (NT). This species is close to *P. myricae* but the vasiform orifice characters differ.

***Parabemisia* undetermined sp. 4**

Specimens from huge colony of pale puparia without obvious secretions, covering lower surfaces of numerous leaves of *Gnetum luofuense* in Aberdeen Country Park (HK Island). This colony was clearly defunct by the time it was collected and few specimens are in good condition. However, this does appear to be a further species of *Parabemisia*.

Pealius chinensis Takahashi (1941)

Described from HK by Takahashi (1941b) but no known type material. Species not represented in BMNH.

Pealius fici Mound (1965)

See *Pealius* undetermined sp. 1

Pealius liquidambari (Takahashi, 1932)

Single sample in BMNH, from *Liquidambar formosana* at Nai Chung (NT).

Pealius machili Takahashi (1935)

Sampled from very large colony on *Annona squamosa* at Mong Tseng village, Tin Shui Wai (NT). This is rather tentatively determined, differing slightly from the species' description. Slide-mounted and dry vouchers in BMNH and PPRD. Sumalde & Salinas (2000) reported "*Pealius* near *machili* Takahashi" from the same host (local name "atis") in the Philippines, and this closely matches the HK material.

Pealius psychotriae Takahashi (1935)

Three samples in BMNH, all from *Alocasia odora* (Araceae). Specimens have been compared with syntypes and the determination is considered to be sound.

Pealius rhododendri Takahashi (1935)

Three samples in BMNH, from *Rhododendron pulchrum*. Two other samples, from *Boehmeria nivea* and an undetermined shrub, match samples from rhododendron that have longer-than-usual submarginal setae, and these are also determined as *rhododendri*.

***Pealius* undetermined sp. 1**

Hill *et al*. (1982) and Lee & Winney (1981) both reported *Pealius fici* Mound (1965) from HK. A single slide with four specimens is in BMNH, from *Ficus microcarpa* at HK University and sent to London by Hill, with "cf. *fici* Mound" written on the slide in Mound's handwriting. This is almost certainly the source of the published records, but these puparia have prominent dorsal pore-tubercles and a much broader and more reticulate post-vasiform orifice pit, along with characteristic pigmentation that is lacking in *P. fici*. These records of *P. fici* are erroneous, it having been described from Nigeria and not otherwise recorded from outside Africa. A further sample of this HK species is now in BMNH, from the same host in Wanchai (HK Island).

***Pealius* undetermined sp. 2**

Single puparium in BMNH, from *Ficus superba japonica* in Aberdeen Country Park (HK Island).

***Pealius* undetermined sp. 3**

Single puparium in BMNH, from *Desmos chinensis* in Sai Kung Peninsula (NT).

Pentaleyrodes hongkongensis Takahashi (1941)

Described from HK by Takahashi (1941b) from undetermined Lauraceae, but with no known type material. HK material of several samples in BMNH and PPRD, from *Litsea* sp. or spp, *L. rotundifolia* var. *oblongifolia* and *Machilus chinensis*.

Rhachisphora koshunensis (Takahashi, 1933)

see *R. machili* (Takahashi, 1932)

Rhachisphora machili (Takahashi, 1932)

One sample in BMNH, from *Machilus* sp., contains puparia that match the description and other studied specimens of *R. machili*. Two further samples, both from *Litsea glutinosa* (BMNH & PPRD), display a mixture of features of *R. machili* and *R. koshunensis* (Takahashi, 1933). A single specimen from *Cinnamomum parthenoxylon* at Pak Sha O (NT) is also provisionally determined. It appears that *R. machili* may be a variable species, or that these two species are part of a species-group.

***Rhachisphora takahashii* sp. nov.** (Figs 37-42)

Background. This species was reported from HK, as an undescribed species of *Rhachisphora* feeding on *Gordonia* sp., by Takahashi (1941a: 353). Takahashi gave some descriptive detail, closely comparing it with *R. maesae* (Takahashi, 1932), but he did not formally describe it "since the specimens are incomplete", and there is no known voucher material. However, there are now several HK samples of what is undoubtedly this species, also from *Gordonia axillaris*, along with 3 specimens from *Schima superba*, all material collected by the authors and deposited in BMNH, PPRD and USNM. Both hosts are members of the plant family Theaceae. We have pleasure in completing the description of this species here: in naming it we dedicate it to the late Dr Ryoichi Takahashi.

Puparium. Elongate-oval, strongly dimorphic, 1.55–1.81 mm long, 1.05–1.32 mm wide (female), 1.23–1.31 mm long, 0.80–0.91 mm wide (male), widest opposite transverse moulting sutures. Abdomen with pronounced rhachis with 5 pairs of lateral arms extending towards submargin (Fig. 41), with similar developments posterior to vasiform orifice parallel to puparial axis and defining a caudal furrow that is punctuated by coarse granular markings (Fig. 40). Anterior edges of basal parts of lateral rhachis arms marked by cuticular thickening that may be distinctly dentate (Fig. 42). Entire dorsum bearing evenly-distributed geminate pore / porettes (Figs 37, 38, 41, 42). Thoracic (Fig. 39) and caudal (Fig. 40) tracheal openings at margin each in form of an invagination with two mesally-directed teeth. Vasiform orifice rather elongate-cordate as shown, lingula in some specimens unfolded and excluded beyond vasiform orifice, finely spinulose, digitiform (Fig. 38). *Puparial chaetotaxy*—Anterior and posterior marginal setae present, long and fine; all dorsal setae short, spiniform; 13 pairs in outer submargin including caudal pair (Fig. 40) situated anterolateral to caudal tracheal pore; single submedian pairs in posterior-cephalic area, meso- and metathorax, and abdominal segments II–III (Fig. 37) or II–IV; eighth abdominal pair antero-lateral to vasiform orifice (Fig. 38).

Comments. The photographic image here (Fig. 41), along with our drawings of *R. takahashii* (Figs 37-40), Takahashi's drawing of *maesae* (Fig. 43) and our own brief descriptive notes should serve to define *R. takahashii*. As stated by Takahashi, *R. takahashii* is extremely similar to *R. maesae* but displays a reduced submedian chaetotaxy (abdominal submedian pairs only on segments II–III or II–IV, compared with segments II–VI in *maesae*), and *maesae* has a prothoracic pair of spiniform setae (absent in *takahashii*). As Takahashi also observed, the dorsal setae in *R. takahashii* are not truly lanceolate, somewhat more slender than in *maesae*, gradually tapering from base to acute apex. Puparia of *R. takahashii* possess an additional pair of rhachis "arms" on abdominal segment VII (Fig. 41) as compared with *R. maesae* (Fig. 43). Ko, in Ko *et al*. (2002) described *R. taiwana* from the same two hosts and *Litsea acuminata*: however, this Taiwan species differs in possessing many tiny dorsal capitate "seta-glands" (which are absent from both *maesae* and *takahashii*), and also lacks sclerotic teeth on the antero-mesal edges of the abdominal rhachis arms (present in both *maesae* and in *takahashii*, figs 43 and 42 respectively).

Material examined. **Holotype** puparium (female), HONG KONG: HK, Tai Tam Reservoir Road, 06 December 1999, on *Gordonia axillaris* (Theaceae), J.H. Martin #7312 (BMNH). **Paratypes**, HONG KONG: 10 puparia, 1 third-instar nymph, same data as holotype (BMNH, USNM); 4 puparia, Lantau I., hillside east of Shek Pik Reservoir, 15 November 1996, on *Gordonia* sp., Martin #6819 (BMNH); 1 puparium, HK, slopes of High West, 28 November 1999, on *G. axillaris*, Martin #7302 (PPRD); 2 puparia, HK, Pok Fu Lam Country Park, below The Peak, 12 December 2001, on *G. axillaris*, Martin #7565 (BMNH); 7 puparia, 1 emerged adult male, NT, Ma On Shan Country Park mountain trail, 09 December 2003, on *G. axillaris*, Lau & Martin, Martin #7919 (BMNH); 3 puparia, NT, Plover Cove Country Park, near Bride's Pool, 26 November 2005, on *Schima superba*, Martin #8203 (BMNH).

Rusostigma radiirugosa (Quaintance & Baker, 1917)

Reported from HK by Takahashi (1941a), the sole specimen discussed by Takahashi located in TARI (Shu-Pei Chen, pers. comm.). No HK material present in BMNH.

***Rusostigma* undetermined sp. 1**

Single HK voucher specimen in BMNH, from *Gnetum luofuense* at Pok Fu Lam Country Park, HK Island. This specimen is damaged by a centrally located and very large parasitoid emergence hole, but it is still clear that it does not match any of the four described *Rusostigma* species listed by Martin & Mound (2007).

Singhiella chinensis (Takahashi, 1941)

Takahashi (1941a) described this species from HK, as *Aleuroputeus chinensis*, but no type material known. Four HK samples in BMNH from *Machilus* spp, and one sample from *Persea kadooriei*.

Singhiella citrifolii (Morgan, 1893)

Five samples in BMNH from *Citrus* spp, and one sample from *Randia spinosa*. Interception material in USNM from HK, on several hosts (Greg Evans, pers. comm.). A slide in PPRD, under *Dialeurodes citrifolii*. Also known from *Citrus* sp. in Macau (BMNH). Still widely known as *Dialeurodes citrifolii* despite Jensen's (2001) nomenclatural change.

Singhiella simplex (Singh, 1931)

S. simplex was originally described within *Aleurocanthus* from very limited Indian material on the Indian banyan, *Ficus bengalensis*. The HK and south China banyan is *F. microcarpa*. David & Subramaniam (1976: 206) described *Pealius indicus*, also from *F. bengalensis* in India, and this has been placed as a junior synonym of *S. simplex* (see Martin & Mound, 2007, for synonymy details). David & Subramaniam noted that puparia of *P. indicus* occurred on both the upper and lower leaf surfaces, an unusual habit for whiteflies. HK vouchers are in BMNH and PPRD of three samples from *Ficus microcarpa*, two samples noted as feeding on the upper surfaces of leaves. Puparia developing on the upper surfaces have extremely short dorsal setae, whereas those from the lower surfaces tend to have varying numbers of setae very long and stout—hence Singh's original mistaken placement of the species in *Aleurocanthus*. HK specimens bear close resemblance to paratypes of *P. indicus* in BMNH: given the proven variability of *S. simplex* the HK samples are provisionally determined as *S. simplex*. Three BMNH specimens from *F. superba japonica* in HK and six puparia from *F. microcarpa* at Xiamen Botanic Gardens, Fujian Province (coll. Andrew Polaszek) are also provisionally determined as this species.

***Singhiella* undetermined sp. 1**

Single 3-specimen sample in BMNH, from undetermined shrub on The Peak, HK Island. These puparia dif-

fer from *S. chinensis* in possessing a distinct pore at each of the tracheal openings at the margin, along with long and stout dorsal disc setae (including the 8th abdominal setae).

***Singhius hibisci* (Kotinsky, 1907)**

10 small samples from HK in BMNH, from *Aporusa dioica*, ?*Breynia* sp., ?*B. fruticosa*, ?*Bridelia tomentosa, Clerodendrum fortunatum* and *Litsea glutinosa*. One voucher slide in PPRD. There is considerable variation in the nature and size of dorsal setae (but not chaetotaxy), and puparia from upper and lower leaf surfaces of the same plant differ from each other. All of these specimens are assigned to *S. hibisci*.

Singhius russellae David & Subramaniam (1976)

Two HK samples in BMNH, from ?*Bridelia* sp. and ?Euphorbiaceae. These specimens are devoid of thoracic tracheal pores on the puparial margin, and this absence is the main diagnostic character for this species. Also from *Bridelia tomentosa* in Macau (BMNH).

Tetraleurodes acaciae (Quaintance, 1900)

Three HK samples in BMNH, from *Erythrina speciosa* (also a slide in PPRD), *Leucaena leucocephala*, and an undetermined mimosoid host. Also known from *Erythrina* sp. in Hainan (BMNH). This is a legume-feeding introduction from the neotropics. Villacarlos *et al*. (2003) reported this species from *Gliricidia sepium* in the Philippines (vouchers in BMNH): it is likely to occur more widely in Asia than these sparse records indicate.

Tetraleurodes graminis Takahashi (1934)

Single sample of just three specimens in BMNH, from the blade of an undetermined grass on waste ground by the old Sheung Shui KCR railway station (NT) in 1979 (coll. Martin).

Trialeurodes ricini (Misra, 1924)

Two specimens in BMNH, from *Macaranga tanarius* at Mai Po Marshes (NT). Material in PPRD recorded from "grass blade" should be regarded as an unsafe host record—see Appendix 4. Puparia of this species secrete a tough, transparent leathery covering that requires mechanical removal to reveal the dorsal surfaces. It may be distinguished from the similar *T. floridensis*-group by the presence of thorn-like leg-base spines in *T. ricini*.

Trialeurodes vaporariorum (Westwood, 1856)

T. vaporariorum is cosmopolitan and highly polyphagous and has long been known as a worldwide pest, particularly of herbaceous crops under glass, leading to its often-used common name, glasshouse or greenhouse whitefly. It was assumed by Westwood (almost certainly correctly) to be a New World native, with the descriptive material suspected of having been imported into England from Mexico. Curiously, there is no HK material in BMNH. However, interception material is in USNM from HK, on several hosts (Greg Evans, pers. comm.).

Tuberaleyrodes machili Takahashi (1932)

Single HK sample in BMNH, from *Machilus chinensis* at The Peak.

Vasdavidius concursus Ko (1998) (Fig. 13)

Seven HK samples in BMNH, from *Miscanthus* sp., *M. sinensis, Saccharum* ?*spontaneum* (also slides in PPRD and USNM) and undetermined grasses. There is some variation in the puparial morphology but only one species is thought to be involved. Feeding nymphal stages are extremely cryptic on the grass blades, each with a delicate secreted fringe of glassy rays.

Vasdavidius setiferus (Quaintance & Baker, 1917)

Single sample in BMNH, from undetermined grass at TLF. The only named (apparently the usual) host for this whitefly species is *Imperata* sp or spp.

Viennotaleyrodes megapapillae (Singh, 1932)

Single sample in BMNH, from *Millettia* sp at Pok Fu Lam Country Park, HK Island.

Aleyrodidae—Aleurodicinae

Aleurodicus machili Takahashi (1931)

see *Palaealeurodicus machili* (Takahashi, 1931)

Palaealeurodicus machili (Takahashi, 1931) (Fig. 8)

The genus *Palaealeurodicus* was described and discussed by Martin (2008), accommodating native Asian

species resembling *Aleurodicus*. *P. machili* reported from HK on *Actinodaphne* sp. by Takahashi (1941a) but no known vouchers. This species is common on *Litsea rotundifolia* var. *oblongifolia*, *Machilus* spp, including *M. chinensis*, *M. wangchiana* and *M. ?breviflora*, and some other members of the Lauraceae in HK, Hainan and Taiwan, where the immature stages tend to develop against the lower midribs of leaves. This is the only native member of the Aleurodicinae known from HK. Voucher material in BMNH, PPRD and USNM, material in the latter two collections still under *Aleurodicus*.

Paraleyrodes minei Iaccarino (1990)

Although this species was described from *Citrus* crops in Syria, all *Paraleyrodes* species are native to the Neotropical Region. *P. minei* is now often called the "nesting whitefly", but this name should be used with caution, because it describes the wax-deposition habits of females of many, possibly all, members of this genus. *P. minei* is clearly a mobile species. It was first discovered in HK by the authors on several host plants in 2003, which were also the first records of this species occurring in Asia. It is now extremely common all over HK and it has recently been found on *Costus* sp. in West Malaysia (single emerged male + its pupal case, 2009, Martin, BMNH).

Two puparia from Ma On Shan Country Park (NT) were collected from a grass blade, *Miscanthus sinensis*, and an adult female emerged from each of these. Further adult females were observed nearby, on the same grass species, with the presence of eggs and much secreted wax indicating further colonisation; this may be the first record of any member of the Aleurodicinae developing on a poaceous host, and it was first published by Martin (2004: 67). It is interesting to note that in April 2010 all collected *Paraleyrodes* samples in HK were *P. minei*, with *P. pseudonaranjae* (see below) not observed at all.

HK vouchers in BMNH from *Alpinia hainanensis, Aporusa dioica, Aquilaria sinensis,* ?*Celtis* sp., *Citrus grandis, C. reticulata, Desmos chinensis, Elaeocarpus dubius, Emilia sonchifolia, Ficus superba japonica, Gnetum luofuense, Gordonia axillaris, Ilex pubescens, Machilus* sp., *M. chekiangensis, Schefflera heptaphylla, Schima superba, Smilax* sp., and undetermined Apocynaceae.

Paraleyrodes pseudonaranjae Martin (2001)

P. pseudonaranjae was described from HK, on *Citrus grandis* and other hosts, holotype collected at TLF. It is a neotropical native, however, as is *P. minei q.v.*, above. In early reports of this species appearing beyond its native neotropics it had mistakenly been determined as *P. naranjae* Dozier (Martin, 2001). This species is also known in Macau and Hainan, and there is now also West Malaysian material (2007, 2008, 2009) in BMNH. *P. pseudonaranjae* was not found during intensive collecting in HK in April 2010—see *P. minei*, above.

HK vouchers are in BMNH from *Annona squamosa, Aporusa dioica, Bridelia tomentosa, Citrus grandis, C. paradisi, Ficus microcarpa, Glochidion zeylanicum, Gnetum luofuense, Ilex* ?*asprella, Liquidambar formosana, Randia spinosa, Rhododendron pulchrum* and *Smilax* ?*glabra*.

Aphidoidea—Aphididae

• The taxonomic arrangement of family-group names in the Aphididae, especially certain of the smaller subfamilies, has been very fluid in recent years. Remaudière & Remaudière (1997) published a catalogue of world aphids, but corrections to some family-group names were published by Nieto Nafria *et. al*. (1998). We have therefore followed the Remaudière & Remaudière system with the Nieto Nafria *et. al.* corrections.

Aiceoninae

Aiceona actinodaphnis Takahashi (1921)

Described from Taiwan but three of Takahashi's slides in TARI comprise specimens from *Litsea "monoptera"* [?*monopetala*] in HK in March 1940 (Shu-Pei Chen, pers. comm.), referred to by Takahashi (1941c).

Aiceona robustiseta Ghosh, M.R. & Raychaudhuri, 1973

A sample of aphids from *Machilus* sp. from Tsuen Wan (NT) was submitted to BMNH for determination in

2005, and this comprised only alatoid nymphs that were only determined as a species of *Aiceona*. In November 2009 a large sample of aphids from *Machilus chekiangensis* at Tai Tam Country Park (coll. Lau), and also sent to BMNH, were found to match the earlier sample of nymphs. This species is characterised by having apterae almost entirely pale but for the hind tibiae which are evenly brownish to black; alatae have wing membranes that are not pigmented as they are in many other *Aiceona* species, combined with the only dorsal pigmentation on abdominal segments IV–VIII being the siphuncular sclerites.

The HK material appears to be conspecific with material in BMNH from *Eurya nitida* in Thailand and from *Machilus bombycina* in India (Assam), provisionally determined as *Aiceona robustiseta*. This species appears to have the potential to cause considerable damage, with the Assam sample noted to have been causing defoliation of the host, and the 2009 HK sample also a very heavy infestation.

Aiceona titabarensis (Raychaudhuri & Ghosh, A.K., 1964)

This aphid is common in HK, with several samples in BMNH and PPRD from *Litsea monopetala, L. rotundifolia* and *Michelia alba*. Lee & Winney (1981) also list this species from HK, under its junior synonym *A. litseae* Basu & Hille Ris Lambers (1968). It may eventually prove that the HK records of *A. actinodaphnis* and *A. titabarensis* —see host plant quoted for *A. actinodaphnis*, above—in fact concern only a single species, but examination of type material will be required to test this possibility.

Aphidinae—Aphidini

Aphis citricola van der Goot (1912)

see *Aphis spiraecola* Patch (1914)

Aphis craccivora Koch (1854)

Samples in BMNH, from *Hyacinthus* sp., *Pisum sativum, Spinacia oleracea*, ?*Trifolium* sp., *Vigna sesquipedalis* and *Zea mays*, with legumes the normal hosts for this aphid species. Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Aphis eugeniae van der Goot (1917)

Samples in BMNH, from *Phyllanthus reticulatus* and *P. emblica* on the Sai Kung Peninsula. The aphids are bright yellow to orange in life and thus easily seen and easily mistaken for *A. nerii* Boyer de Fonscalombe, *q.v.*, below.

Aphis fabae s. sp. *solanella* Theobald (1914)

see *Aphis solanella* (Theobald, 1914)

Aphis glycines Matsumura (1917)

Single sample in BMNH, from *Desmodium intortum* at TLF.

Aphis gossypii Glover (1877)

Vouchers in BMNH from *Averrhoa carambola, Capsicum frutescens, Chrysanthemum* sp., *Colocasia esculenta, Duranta erecta* [= *D. repens*], *Eucalyptus tereticornis, Hibiscus esculentus* [= *Abelmoschus esculentus*], *H. rosa-sinensis, Pachystachys lutea, Psidium guajava, Vitex negundo* and *Zea mays*. Reported from HK by Tao (1999a) and by Lee & Winney (1981). Also material in PPRD. This is one of the most common and polyphagous of worldwide aphid pests, probably comprising a number of cryptic species or races.

Aphis nerii Boyer de Fonscalombe (1841)

Samples in BMNH, from *Nerium oleander* (coll. Hill) and from *Graphistemma pictum* on HK Island. Reported from HK by Tao (1999a) and by Lee & Winney (1981). This species feeds on *Nerium* species and members of the Asclepiadaceae, where these bright yellow aphids with black cauda and siphunculi are immediately recognisable. Of similar appearance, but on euphorbiaceous hosts in HK, is *A. eugeniae* van der Goot (see above) whose body colour tends to vary from yellow to orange.

Aphis solanella (Theobald, 1914)

Single HK sample in BMNH, from *Solanum nigrum* at TLF. Probably this was the record reported by Lee & Winney (1981) as *Aphis fabae*-group. Until recently this blackish aphid remained a subspecies of *A. fabae*, as originally described by Theobald. However, Thieme & Dixon (2004) elevated it to full species status, accepted by Blackman & Eastop (2006).

Aphis spiraecola Patch (1914)

HK samples in BMNH, from *Chrysanthemum morifolium, Emilia sonchifolia, Mikania guaco* and *Schefflera arboricola*. Reported from HK by Tao (1999a) and by Lee & Winney (1981), under the name *A. citricola* van der Goot. *A. citricola* has recently been shown to be a junior synonym of *A. fabae* Scopoli, but many published records of *A. citricola* concern what is now recognised as *A. spiraecola*.

Aphis umbrella (Börner, 1950)

This record is unsafe and this species should not be retained on the HK check list. Single specimen, sifted from litter, was referred to by De Rougemont (2001). Lee & Winney (1981) also listed this species, but under its junior synonym *A. malvae* Koch (1854), with no reference to the record's source. We feel that Tao (1999a) was correct in not recording this species from HK.

Hyalopterus persikonus Miller, Lozier & Foottit, in Lozier *et al.* (2008)

Experimental data analysed by Lozier *et al.* (2008) revealed that a distinct species of *Hyalopterus* host-alternates between *Prunus persica* (the primary host) and *Phragmites* sp. or spp (secondary, summer, hosts in temperate regions). *H. persikonus* is difficult to distinguish morphologically from *H. pruni* (Geoffroy) whose primary hosts are *Prunus* spp of the *domestica* and *amygdali* groups, and it is likely that populations of both species are able to remain on *Phragmites* year-round in parts of the world where reeds do not die back in winter. Several HK voucher samples in BMNH, from *Prunus persica* (all from TLF), and two samples from *Phragmites* sp., at Mai Po Marshes (NT) and Tai O (Lantau I.). Reported from HK by Tao (1999a) and by Lee & Winney (1981), as *H. pruni*.

Hyalopterus pruni (Geoffroy, 1762)

see *Hyalopterus persikonus* Miller, Lozier & Foottit, in Lozier *et al.* (2008).

Hysteroneura setariae (Thomas, 1878)

A native of North America (Blackman & Eastop, 2000) this aphid is now tropicopolitan on grasses and sometimes other monocotyledonous plants, usually feeding on inflorescences. Several HK samples in BMNH, from *Cyperus iria* and the grasses *Dactyloctenium aegyptium, Echinochloa colona, Eichhornia crassipes, Eleusine indica, Oryza sativa, Paspalum distichum, Panicum* sp., *Pennisetum purpureum* and undetermined Poaceae. Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Longiunguis sacchari (Zehntner, 1897)

see *Melanaphis sacchari* (Zehntner, 1897)

Melanaphis bambusae (Fullaway, 1910)

Vouchers in BMNH, from unspecified bamboo hosts. This species was recorded from HK by van der Goot (1918) without reference to voucher specimens.

Melanaphis sacchari (Zehntner, 1897)

Samples in BMNH, from *Paspalum distichum, Saccharum* sp., and *S. spontaneum*. Also reported from HK by Lee & Winney (1981).

Rhopalosiphum maidis (Fitch, 1856)

Samples in BMNH, from *Zea mays* (Pak Sha O and TLF) and undetermined grasses. Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Rhopalosiphum nymphaeae (Linnaeus, 1761)

Single HK sample in BMNH, from *Eichhornia crassipes* at TLF. Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Rhopalosiphum padi (Linnaeus, 1758)

Reported from HK by Tao (1999a) and by Lee & Winney (1981). Lee & Winney quoted tomato and *Prunus mume* as hosts, the tomato record almost certainly involving vagrant individuals [personal observation]. Material collected by the authors from *P. mume* has been determined as *R. rufiabdominale* and no HK material of *R. padi* is present in BMNH. However, it is considered likely that this species will prove to be present in HK, possibly occurring year-round on grasses.

Rhopalosiphum rufiabdominale (Sasaki, 1899)

Vouchers in BMNH, from *Allium fistulosum, Avena sativa, Malus pumila, Prunus mume, Zea mays* and light traps. Specimens on *P. mume* were feeding in large numbers on the bark of tree-base suckers at Pak Sha O (NT). Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Toxoptera aurantii (Boyer de Fonscalombe, 1841)

Vouchers in BMNH, from *Citrus* sp., *Gordonia axillaris*, *Murraya paniculata* and undetermined shrub. Reported from HK by Tao (1999a) and by Lee & Winney (1981). This common species colonises new growth of a wide variety of trees and shrubs throughout the tropics, subtropics and warm-temperate zones. *T. aurantii* is more common in HK than these few records would indicate.

Toxoptera citricidus (Kirkaldy, 1907)

HK material in BMNH comprises several samples from *Citrus* spp, along with two samples from *Zanthoxylum* sp. or spp from Ma On Shan Country Park (NT) and Peel Rise (HK Island). Reported from HK by Tao (1999a) and by Lee & Winney (1981). Nieto Nafria *et al*. (2005) discussed the frequent spelling of this species name both as *citricidus* and *citricida*, and provided a careful argument for their conclusion that *citricidus* is the correct name despite being a masculine species name in combination with a feminine generic name.

Toxoptera odinae (van der Goot, 1917) (Fig. 24)

Vouchers in BMNH and PPRD, from *Ailanthus fordii*, *Rhus hypoleuca*, *R. succedania*, *R. chinensis*, *Sapium* sp., *S. sebiferum*, *Schefflera heptaphylla* [= *S. octophylla*], *Zanthoxylum scandens*, undetermined shrubs and TLF yellow pan traps. Reported from HK by Tao (1999a) and by Lee & Winney (1981). With body colour often coppery-brown, and siphunculi short and conical, *T. odinae* colonises a number of shrubs and some trees in tropical and subtropical Asia and (more recently) in Africa.

Toxoptera schlingeri Tao (1961)

Described from HK, the type sample having been collected by Dr Evert Schlinger on 27.ii.1961 (Tao, 1961). Remaudière & Remaudière (1997) listed *T. schlingeri* as a junior synonym of *T. aurantii*, quoting Mondal *et al*. (1976): however, Blackman & Eastop (1994) retained it as a separate species "not or hardly distinguishable from *T. aurantii*". A single BMNH sample, from *Ficus microcarpa* at Pok Fu Lam, agrees with Tao's description: this was sent for determination by Hill. Tao did not mention deposition of type material and the whereabouts of Schlinger's material is unknown.

Toxoptera victoriae Martin (1991)

Described from *Zanthoxylum scandens*, growing in shrubbery on the bank of Pok Fu Lam Reservoir Road (HK Island), in October 1990 (Martin, 1991). Holotype in BMNH and paratypes deposited in BMNH, PPRD and USNM. This aphid was subsequently collected again in 1996, 1999, 2003 and 2005, always on HK Island and on the same host. In 2010 samples were collected from East Ping Chau Island on *Zanthoxylum* sp. and *Z. nitidum*. Other samples collected from *Zanthoxylum* spp have been determined as *T. citricidus* (*q.v.*, above).

Aphidinae—Macrosiphini

Amphorophora vagans (van der Goot, 1917)

see *Aulacorthum* undetermined sp. 1

Aulacophoroides millettiae Qiao, Jiang & Martin (2006)

Described from HK, the type samples collected by Martin from a long, leafless tendril of *Millettia* sp. and from an undetermined vine tendril in Pok Fu Lam Country Park, HK Island in 2001 and 2005 respectively. Holotype and paratypes in BMNH, with paratypes also in ZMB.

Aulacorthum nipponicum Essig & Kuwana (1918)

Samples in BMNH, from *Gymnema tingens*, *Mikania micrantha* and *Paederia scandens*. Blackman & Eastop (2006) list only *Paederia* spp as hosts for this species. The discovery of a very large colony on *Mikania micrantha*, a notorious climbing weed, is most noteworthy. Reported from HK by Tao (1999a) and by Lee & Winney (1981) [where mis-spelt *nipparicum*].

Aulacorthum perillae (Shinji, 1924)

Determined only provisionally, from single alata from yellow tray at TLF (BMNH).

Aulacorthum solani (Kaltenbach, 1843)

Reported from HK by Tao (1999a) and by Lee & Winney (1981) but no known vouchers. No HK material is in BMNH but its presence in the territory is considered likely.

***Aulacorthum* undetermined sp. 1**

Two HK voucher samples, sent to CIE, now in BMNH: host data quoted as *Aleurites montana* and *A. fordii* (now *Vernicia*—HK Herbarium, 2004), the former being sent from HK University by Hill in 1976, and the latter sent from TLF in 1989. The second sample carries the observation "looks like *Aphis nerii* in life" which we assume to mean a yellow body colour. Both samples were originally cautiously determined as van der Goot's (1917) species *Rhopalosiphum vagans*, subsequently placed in *Amphorophora* by Mason (1925), presumably on the basis that the alata's siphunculi were described by van der Goot as "long and distinctly swollen with the surface quite smooth". This HK record was also reported by Lee & Winney (1981), as *Aulacorthum* ??*vagans*, an unpublished combination that was also marked on the BMNH slides. However, it was not listed under any of these combinations, for HK or anywhere else in China, by Tao (1999a). Curiously, Eastop & Hille Ris Lambers (1976) and Remaudière & Remaudière (1997) each list *vagans* twice—under *Amphorophora* and *Sinomegoura*, with the *Sinomegoura* entry being listed as *nomen dubium* by Remaudière & Remaudière.

The apterae of the HK samples have pale cuticle excepting black antennae; the head and antennal tubercles are spiculose and well-developed, with a deep frontal trough; the siphunculi are rather tapering—with these characters it is thus better suited to placement in *Aulacorthum* and the HK material is therefore placed as an undetermined species of *Aulacorthum*. The north Indian species, *vagans*, with its swollen siphunculi should remain in *Amphorophora* at least until its sole type specimen (Indian Museum) can be appraised.

Brachysiphoniella montana (van der Goot, 1917)

Reported from HK by Tao (1999a). This is a grass-feeding species with a tropical distribution, and this HK record is regarded as questionable.

Capitophorus hippophaes (Walker, 1852)

Single sample in BMNH comprises 8 alatae from yellow water trap at TLF. Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Capitophorus hippophaes* s. sp. *javanicus Hille Ris Lambers (1953) (Fig. 22)

Single sample in BMNH, from *Polygonum chinense* on waste ground in Sai Kung Peninsula (NT). Specimens were collected along with those of *C. mitegoni*—see comments on *C. mitegoni*, below.

Capitophorus mitegoni Eastop (1956)

Originally described as another subspecies of *C. hippophaes*. The specimens of the single HK voucher sample in BMNH were found on the same individual *Polygonum chinense* plant as examples of *C. hippophaes javanicus* (*q.v.*, above). The two taxa differ from each other markedly, with *mitegoni* being significantly smaller than *javanicus* but bearing dorsal capitate setae on the abdomen and head that are much longer and more robust. Finding two nominal taxa on one isolated plant surely raises questions of intraspecific variability, but both names are treated as valid here.

Cavariella araliae Takahashi (1921)

Two samples in BMNH, from *Schefflera* ?*heptaphylla* [= *S.* ?*octophylla*] at Central's fire station compound (HK Island) and from *Aralia armata* at Sai Kung (NT). A van der Goot slide in LEW was collected in HK on 6.v.1918, and bears the determination "*Siphonocoryne*"—these specimens are almost certainly *C. araliae*.

Coloradoa artemisiae (Del Guercio, 1913)

Material in BMNH from single enormous colony on semi-cultivated *Artemisia indica* at Tai O (Lantau I.). Small numbers of *Pleotrichophorus glandulosus* (*q.v.*) were on the same plants.

Dactynotus

see *Uroleucon*

Hyadaphis undetermined sp. 1

see *Semiaphis heraclei* (Takahashi, 1921)

Hyperomyzus carduellinus (Theobald, 1915)

Single sample in BMNH, from *Sonchus* sp. at Tai O (Lantau I.). Body setae are noted as being a little longer than is typical for this species.

Lipaphis erysimi (Kaltenbach, 1843)

see *L. pseudobrassicae* (Davis, 1914)

Lipaphis pseudobrassicae (Davis, 1914)

HK vouchers in BMNH, from *Abelmoschus esculentus*, *Brassica chinensis*, and *Raphanus sativus*. Many, if not most, records of this common aphid, which colonises many brassicaceous plants, appear under the name

L. erysimi (Kaltenbach). However Blackman & Eastop (2000) say the following: "The name *L. erysimi* (Kaltenbach) is applicable to a European species with [chromosome count] 2n=10 which shows some morphological differences and is not normally a pest of brassica crops." Reported from HK by Tao (1999a) and by Lee & Winney (1981), as *L. erysimi*.

Macrosiphoniella sanborni (Gillette, 1908)

Single sample in BMNH, from *Chrysanthemum* sp. at TLF. This shiny black aphid is a well-known pest of chrysanthemums. Reported from HK by Tao (1999a) and by Lee & Winney (1981).

Megoura lespedezae (Essig & Kuwana, 1918)

Single alata in BMNH, trapped at TLF in 1976 and sent to CIE for determination (CIE A. 9012). Also reported from HK by Lee & Winney (1981), perhaps based on this individual.

Micromyzella judenkoi (Carver, 1965)

3 alatae in BMNH, from a yellow pan trap at TLF in 1976 and sent to CIE for determination (CIE A. 9012). Reported from HK by Tao (1999a) and by Lee & Winney (1981) as *Micromyzus judenkoi*.

Micromyzus judenkoi Carver (1965)

See *Micromyzella judenkoi* (Carver, 1965)

Myzus persicae (Sulzer, 1776)

HK samples in BMNH, from *Beta vulgaris, Brassica caulorapa, B. alboglabra, B. chinensis, B. oleracea, Calonyction aculeatum* ("moon flower"), *Capsicum frutescens Chrysanthemum* sp., *Dahlia pinnata* cult. var., *Ipomoea* sp., *Lactuca sativa, Lycium chinense, Lycopersicon esculentum, Pisum sativum, Prunus persica, Raphanus sativus, Solanum tuberosum, Spinacia oleracea,* and *Tagetes erecta,* mostly collected at TLF. Reported from HK by Tao (1999a) and by Lee & Winney (1981). A common, polyphagous, agricultural pest.

Myzus varians Davidson (1912) (Fig. 16)

*S*ingle sample in BMNH, collected by the authors from *Clematis chinensis* on East Ping Chau Island.

Pentalonia nigronervosa Coquerel (1859)

Several HK samples from *Musa sapientum* in BMNH. Reported from HK by Tao (1999a), with no known vouchers, and by Lee & Winney (1981) whose record is based on material sent to BMNH via CIE (A9012).

Pentalonia caladii van der Goot (1917)

Material in BMNH comprises a single trapped alata from TLF yellow pan trap, and specimens collected from *Alpinia katsumadai* at HK Botanical & Zoological Gardens. Foottit *et al.* (2010) discussed the reinstatement of *caladii* to full species status.

Pleotrichophorus glandulosus (Kaltenbach, 1846)

Vouchers in BMNH, from *Artemisia indica* at Tai O, Lantau I. Small numbers of this species were living amongst much more numerous *Coloradoa artemisiae* (*q.v.*).

Semiaphis heraclei (Takahashi, 1921)

HK samples in BMNH from *Apium graveolens* and *Coriandrum sativum*. Reported from HK by Tao (1999a). Lee & Winney (1981) reported a species of *Hyadaphis* from *Apium graveolens* in HK but this record is likely to involve *S. heraclei* even though they also list *S. heraclei* separately.

Sinomegoura citricola (van der Goot, 1917)

This species usually feeds on woody hosts, most frequently members of the Rutaceae and Lauraceae. HK samples in BMNH, from *Cassytha filiformis, Cuscuta japonica, Litsea monopetala* and *Murraya paniculata*. *Cassytha filiformis* is a member of the Lauraceae known as "dodder laurel" because of its strong resemblance to true dodders, *Cuscuta* spp: the *Cuscuta japonica* host record should therefore be treated cautiously. A van der Goot slide in LEW, collected in HK on 8.iii.1918 and bearing the determination "*Macrosiphum*", appears to be *S. citricola* from the limited detail visible in the poor preparation. *S. citricola* was reported from HK by Takahashi (1941c) and by Lee & Winney (1981) but no vouchers known.

Sinomegoura evodiae (Takahashi, 1929)

Single sample in BMNH, from *Acronychia pedunculata* on HK Island, is provisionally determined as this species.

Sitobion alopecuri (Takahashi, 1921)

Three alatae from yellow pan traps at TLF are in BMNH and are provisionally determined. The record of this species in HK by Lee & Winney (1981) is probably based upon this material.

Sitobion avenae (Fabricius, 1775)

see *S. miscanthi* (Takahashi, 1921)

Sitobion berchemiae (Takahashi, 1938)

Single apterous adult (coll. Martin) from *Berchemia floribunda* on HK Island (BMNH).

Sitobion ibarae (Matsumura, 1917)

Single sample in BMNH, from *Rosa* sp. at TLF. Also reported from HK by Lee & Winney (1981).

Sitobion miscanthi (Takahashi, 1921)

HK samples in BMNH, from *Avena fatua*, undetermined grasses and yellow pan traps. Reported from HK by Tao (1999a). Records of *S. avenae* (Fabricius, 1775) from HK probably refer to this species—some slides now placed as *miscanthi* in BMNH were originally determined as *avenae*. Lee & Winney (1981) recorded both *S. avenae* and *S. miscanthi* from HK.

Sitobion smilacifoliae (Takahashi, 1921)

Four samples in BMNH, one also with PPRD vouchers, from *Smilax china* on East Ping Chau Island, and from *S. glabra* and *Heterosmilax japonica* var. *gaudichaudiana* on HK Island.

Sitobion takahashii (Eastop, 1959)

Single voucher sample in BMNH (coll. Martin), numerous bright green aphids having been found feeding under leaflets of *Phyllanthus leptoclados* on Sai Kung Peninsula (NT).

Trichosiphonaphis lonicerae (Uye, 1923)

Vouchers in BMNH comprise two alatae from yellow pan trap and one vagrant alata, all three from TLF, and are almost certainly the material listed by Lee & Winney (1981) as *T. tade* (Shinji, 1927). This revised determination is still cautious because the genus requires revision.

Trichosiphonaphis polygoni (van der Goot, 1917)

Vouchers comprise three alatae from yellow pan traps at TLF. These are determined with caution because the genus requires revision.

Trichosiphonaphis tade (Shinji, 1927)

see *T. lonicerae* (Uye, 1923)

Uroleucon formosanum (Takahashi, 1921)

HK samples in BMNH, from *Lactuca* sp., *L. sativa, L. indica, Sonchus arvensis* and yellow pan traps. Also reported from HK by Lee & Winney (1981), under both *Uroleucon* and the now-unavailable genus *Dactynotus*.

***Uroleucon* undetermined sp. or spp**

Two samples in BMNH, single alata from yellow pan trap at TLF; and an old slide with several uncleared specimens, bearing the sole data "HK, 7.vi.1918, leg van der Goot". A van der Goot slide in LEW was collected from *Sonchus* in HK on 7.v.1918: this bears the determination *Rhop*[*alosiphum*] *lactucae* (now *Hyperomyzus lactucae*) but the specimens can be seen to be *Uroleucon* despite the atrocious preparation.

Calaphidinae—Panaphidini

Castanocallis margituberculatus Zhang, G.-x. & Zhong (1981)

see *Tuberculatus margituberculatus* (Zhang, G.-x. & Zhong, 1981)

Chucallis bambusicola (Takahashi, 1921)

Three samples in BMNH, all from small-leaved "stick bamboo", including *Arundinaria cantorii*, on HK Island. Prior to these collections only a single syntype slide, from Taiwan, was in BMNH. Takahashi (1941c) recorded this species from HK in March 1940, under its original combination *Myzocallis bambusicola*.

Myzocallis bambusicola Takahashi (1921)

see *Chucallis bambusicola* (Takahashi, 1921)

Phyllaphoides bambusicola Takahashi (1921) (Fig. 23)

Single large sample in BMNH, from bamboo blades on East Ping Chau Island. The aphids were almost hidden within secreted flocculent whitish wool, each group of aphids within a mealy patch under the leaf. With secretion removed the aphids were whitish with completely pale cuticle requiring staining for slide-mounting, a procedure made extremely difficult by exceptionally slender appendages.

Sarucallis kahawaluokalani (Kirkaldy, 1907)

Several samples in BMNH, from *Lagerstroemia indica*, including one sample from Governor's House. Reported from HK by Tao (1999a), and twice by Lee & Winney [perhaps understandably mis-spelt *Sarucallis kahanaluokalan* and *Tinocallis* (*Sarucallis*) *kahawalus kalani*!]. *Sarucallis* has been treated as a subgenus of *Tinocallis* by many authors.

Shivaphis catalpinari Quednau & Remaudière (1985)

Single alata in BMNH, from *Celtis biondii* in Pok Fu Lam Country Park, HK Island.

Shivaphis celti Das (1918)

Several samples in BMNH and PPRD, from *Celtis sinensis* and *Celtis* spp. This is a very common aphid, of striking appearance with flocculent bluish-white secreted woolly material. Also reported from HK by Takahashi (1941c) and by Lee & Winney (1981).

Shivaphis szelegiewiczi Quednau (1979)

Samples in BMNH, from *Celtis biondii* in Pok Fu Lam Country Park, HK Island, and from *C. biondii* and *C. sinensis* on East Ping Chau Island.

Takecallis taiwana (Takahashi, 1926)

Single sample in BMNH, from *Phyllostachys aurea* at Shing Mun arboretum (NT).

Tinocallis dalbergicola Quednau (2001)

Described from HK, type series a small sample from *Dalbergia hancei* on Hatton Road path, HK Island (coll. Martin). Holotype and paratypes in BMNH.

Tinocallis insularis (Takahashi, 1927)

Single large sample, with vouchers in BMNH, PPRD and USNM, was collected by the authors from *Sapindus mukorossi* near Tung Chung village, Lantau Island.

Tinocallis kahawaluokalani (Kirkaldy, 1907)

see *Sarucallis kahawaluokalani* (Kirkaldy, 1907)

Tuberculatus margituberculatus (Zhang, G.-x. & Zhong, 1981)

Single large sample collected by the authors from a venerable *Castanea mollissima* tree in an old village near Shing Mun (NT). This tree species is rare in HK although *Castanea* spp become more common further north in mainland China. This aphid was originally described in *Castanocallis*, whose status varies according to authors—Tao (1999) and Blackman & Eastop (1994) regarded it as a valid genus whereas Remaudière & Remaudière (1997) placed it as a junior synonym of *Nippocallis* (subgenus of *Tuberculatus*): Quednau (1999) followed this decision, as do we. Vouchers from this sample are in BMNH, PPRD and USNM.

Eriosomatinae—Eriosomatini

Colopha kansugei (Uye, 1924)

Single sample in BMNH, collected by the authors from the stem of a grass or sedge at Fei Ngo Shan (NT).

Tetraneura fusiformis Matsumura (1917)

Three samples, previously determined as *T. nigriabdominalis* (Sasaki, 1899), have been redetermined as *T. fusiformis*, this species being regarded as distinct by Blackman & Eastop (1994). The HK samples in BMNH and PPRD are from "corn" [?*Zea mays*], "roots in a termite nest" [these would almost certainly be grass roots], and TLF yellow pan traps. Also reported from HK by Tao (1999a) and by Lee & Winney (1981), as *T. nigriabdominalis*.

Tetraneura nigriabdominalis (Sasaki, 1899)

see *Tetraneura fusiformis* Matsumura (1917)

Eriosomatinae—Fordini

Formosaphis micheliae Takahashi (1925)

Two HK samples from *Michelia alba* and one sample from *Magnolia grandiflora* are in BMNH. Also reported from HK by Lee & Winney (1981).

Geoica lucifuga (Zehntner, 1897)

Reported from HK by Tao (1999a) but no known vouchers. No HK material in BMNH. This species colonises grass roots, notably rice (*Oryza*) and sugar cane (*Saccharum*) and is common across warmer parts of Asia and the Indian Region. It is extremely likely to occur in HK.

Schlechtendalia chinensis (Bell, 1851)

The data for the sole HK voucher sample in BMNH are "Chinese gall on *Rhus semialata* [not in the HK Herbarium check list but listed as a synonym of *R. chinensis* elsewhere], imported from HK in m.v. [merchant vessel] 'Elpenor' ". There are also two samples from mainland China in BMNH, one of them the lectotype / paralectotype series from the 19th century with minimal data, and the other from 1975. One slide, in Laing's handwriting, has the intriguing note: "?China. Makes a large gall which is imported at the London docks for extraction of gallic acid—A. W. Richardson".

Eriosomatinae—Pemphigini

Ceratopemphigus zehntneri Schouteden (1905)

Three HK samples in BMNH, all from galls on *Ligustrum sinense*. One sample was collected by Hill at The Peak and another anonymously collected at TLF, with both samples being sent to CIE in 1974 and initially determined as *Prociphilus* sp., that determination communicated back to the sender and the record being quoted by Lee & Winney (1981) as ?*Prociphilus* sp.. The corrected determination for these 1974 samples was by Eastop. The third, large, sample in BMNH was collected by the second author from *L. sinense* at TLF and sent to the IIE in 1991: this was determined as *Prociphilus ligustrifoliae* (Tseng & Tao, 1938). However, the alatae of this third sample do not match those of *P. ligustrifoliae* from Japan and Korea in BMNH, but do closely agree with other material of *C. zehntneri*, including syntypes from Sri Lanka and the two 1974 HK samples. Cock *et al*. (2010) provided a detailed treatise on the most interesting biology of this species, based on an observed population on *Ligustrum robustum* subspecies *walkeri* in Sri Lanka. The second author has compared his photographs of galls of the 1991 HK sample with photographs in the Cock *et al* paper, concluding that there is great similarity. From the morphology of the alatae and the features of the galls we therefore conclude that the 1991 sample was erroneously determined as *P. ligustrifoliae* and is in fact *C. zehntneri*.

Prociphilus ligustrifoliae (Tseng & Tao, 1938)

See *Ceratopemphigus zehntneri* Schouteden (1905)

Prociphilus undetermined sp.

See *Ceratopemphigus zehntneri* Schouteden (1905)

Greenideinae—Cervaphidini

Anomalosiphum tiomanense Martin & Agarwala (1994)

This species was described from West Malaysia, from *Dalbergia candenatensis*, as its junior synonym *D. torta*. This host is recorded from HK but a single HK sample in BMNH, collected in Pok Fu Lam Country Park, was feeding on shoots of an undetermined *Dalbergia* species. The name of this species was originally published as *tiomanensis* by Martin & Agarwala (1994) but was corrected to *tiomanense* by Quednau & Martin (2006), the generic name being of neuter gender.

Greenideinae—Greenideini

Allotrichosiphum cyclobalanopsidis Qiao, Jiang & Martin (2006)

Described from HK, type sample collected by Martin from *Cyclobalanopsis neglecta* at Stubbs Road, HK Island. Holotype and paratypes in BMNH.

Eutrichosiphum dubium (van der Goot, 1917)

Single HK sample in BMNH, from *Lithocarpus glaber*. Lee & Winney (1981) reported *Metatrichosiphon* ?*lithocarpi* (Takahashi, 1931) from the same host and this may refer to the BMNH material now determined as *E. dubium*—slides in BMNH were marked "*Metatrichosiphon*", now struck out and replaced by *E. dubium*.

Greenidea artocarpi (Westwood, 1890)

see *Greenidea ficicola* Takahashi (1921)

Greenidea brideliae Takahashi (1928)

Two samples in BMNH from HK Island, from *Bridelia tomentosa*; there is also a sample from the HK Wetland Centre, Tin Shui Wai (NT), on *B. tomentosa*.

Greenidea ficicola Takahashi (1921)

Blackman & Eastop (1994) gave the distribution of *G. artocarpi* (Westwood, 1890) as southern India and Sri Lanka only, attributing south-east Asian records to *G. ficicola*. The record of *G. artocarpi* in HK, reported by Tao (1999a) but without reference to vouchers, is therefore unsafe. Tao also reported *G. ficicola* from HK. Samples of *G. ficicola* are in BMNH from *Ficus variegata* var. *chlorocarpa* at HK University (probably the source of Lee & Winney's, 1981, record), and from *F. microcarpa* at Pak Sha O (NT). *G. ficicola* was also reported from *Ficus* sp. in HK by van der Goot (1918) without reference to vouchers.

Greenidea formosana (Maki, 1917)

see *Greenidea psidii* van der Goot (1916)

Greenidea psidii van der Goot (1916)

Reported from HK by Tao (1999a), as *G. formosana* (Maki), but no known vouchers. Three HK samples in BMNH, one from an undetermined tree sucker at TLF, the others from *Psidium guajava* on Sai Kung Peninsula (NT). Nymphs only were observed on guava by the authors at Tai O (Lantau I.) but not collected.

There has been confusion over the name of this species for many years. Halbert (2004) concluded that the often-quoted *G. formosana* (Maki, 1917) should be replaced by *G. psidii* van der Goot, and we give here a short synopsis of the reasons. *G. psidii* had also been listed as being described in 1917, but two libraries each have an "extrait" [reprint] that appears to have been distributed in 1916. Under the ICZN rules for pre-2000 publications, such "advance copies" would advance the effective date of publication to the date of this advance distribution. In this case the description of *G. psidii* van der Goot is now regarded as having been published in 1916, thereby becoming the senior synonym.

***Greenidea* undetermined sp. 1**, [subgenus *Trichosiphum*]

Three substantial samples in BMNH, all from *Aporusa dioica*, from TLF, Sai Kung Peninsula and Tai Mei Tuk (NT). This species, with shining black apterae, is almost certainly undescribed.

Metatrichosiphon ?*lithocarpi* (Takahashi, 1931)

see *Eutrichosiphum dubium* (van der Goot, 1917)

Mollitrichosiphum glaucae Takahashi (1962)

This species, originally described as a subspecies of *M. nigrofasciatum* (*q.v.*, below), was raised to full species by Remaudière & Remaudière (1997). It is represented in HK by a single aptera collected from *Cyclobalanopsis neglecta* on Stubbs Road, HK Island and determined by Victor Eastop. This HK record was listed by Zhang & Qiao (2010).

Mollitrichosiphum nigrofasciatum (Maki, 1917)

BMNH vouchers from HK comprise a large population (coll. Martin), with alatae and apterae, collected from tree-base suckers of an undetermined host, probably a member of the Fagaceae, in Aberdeen Country Park, HK Island.

Mollitrichosiphum yamabiwae Suenaga (1934)

Single HK sample in BMNH, from *Meliosma rigida* at Pak Sha O (NT). This HK record was listed by Zhang & Qiao (2010).

Greenideinae—Schoutedeniini

Schoutedenia emblica (Patel & Kulkarni, 1953)

see *S. ralumensis* Rübsaamen (1905)

Schoutedenia ralumensis Rübsaamen (1905) (Fig. 15)

Several HK samples in BMNH, from *Breynia fruticosa*, *Glochidion wrightii*, *G. zeylanicum*, *Phyllanthus emblica* and undetermined euphorbiaceous shrubs. The sample from *Phyllanthus emblica*, originally determined as *S. emblica* (Patel & Kulkarni, 1953), has proved to be *S. ralumensis* despite the host plant's identity.

Hormaphidinae—Cerataphidini

Aleurodaphis blumeae van der Goot (1917) (Fig. 14)

This extremely pretty aphid, with pinkish-purple body colour and glassy marginal wax rays, was collected twice on HK Island, on *Blumea megacephala* and *Erechtites hieraciifolius*, the dense colonies mostly affecting the stems of its hosts. Vouchers in BMNH.

Astegopteryx bambusae (Buckton, 1893)

Samples in BMNH, from *Arundinaria* sp., *Bambusa cornigera*, *B. glaucescens* cult. var. "Fernleaf" and *B. vulgaris*. Also reported from HK by Tao (1999a) and by Lee & Winney (1981).

Astegopteryx jamuritsu Takahashi (1931)

see *Cerataphis jamuritsu* (Takahashi, 1931)

Astegopteryx minuta (van der Goot, 1917)

Reported from HK by van der Goot (1918) and by Tao (1999a). There is a slide in BMNH from *Bambusa textilis* in Macau (coll. Lau), but no known HK voucher material.

Astegopteryx styracophila Karsch (1890)

Two samples in BMNH, on *Alpinia* sp. at The Peak and on undetermined Zingiberaceae at Fung Yuen village (NT).

***Astegopteryx* undetermined sp. or spp**

Samples in BMNH, from undetermined Zingiberaceae, *Bambusa* sp. and three alatae from TLF yellow pan traps.

Cerataphis brasiliensis (Hempel, 1901) (Fig. 21)

Single sample in BMNH and PPRD (coll. Lau), from *Archontophoenix alexandrae*, a planted amenity palm on Braemar Hill Road, HK Island, apparently the first time palm-feeding *Cerataphis* had been observed in HK. The nomenclature of this, the common *Cerataphis* species on palms throughout the tropics, has been controversial for many years. *C. fransseni* was the name used by Remaudière & Remaudière (1997), with the more familiar *C. variabilis* HRL listed as its junior synonym. However, Russell (1996) regarded *C. brasiliensis* as the valid name, and this was accepted by Blackman & Eastop (2006). *Aleurocanthus palmae* Ghesquière, later regarded as a synonym of *Cerataphis lataniae* Boisduval by Ghesquière himself, was declared *nomen dubium* by Remaudière *et. al*. (1987).

Cerataphis jamuritsu (Takahashi, 1931)

Single large sample in BMNH, from a gall on *Styrax suberifolius*, sent to the CIE and with determination label written by Eastop.

Ceratovacuna hoffmani Takahashi (1936)

Single large sample in BMNH (coll. Lau), from *Arundinaria shiuyingiana* at Fei Ngo Shan (NT).

Ceratovacuna japonica (Takahashi, 1924)

Single sample in BMNH, from under blades of undetermined bamboo on Sai Kung Peninsula (NT). Body colour was brown, with copious secreted woolly wax. This determination is made cautiously.

Ceratovacuna lanigera Zehntner (1897)

Samples in BMNH, from *Miscanthus sinensis*, *Saccharum officinarum* and *Saccharum* sp. Also reported from HK by Lee & Winney (1981).

Ceratovacuna longifila (Takahashi, 1929)

Single sample in BMNH, from *Saccharum spontaneum* at The Peak, HK Island.

***Ceratovacuna* undetermined spp**

Vouchers in BMNH, from undetermined bamboo and *Saccharum spontaneum*.

Chaitoregma tattakana (Takahashi, 1925)

A large sample in BMNH (coll. Lau), from *Arundinaria shiuyingiana* at Eagle's Nest, Fei Ngo Shan (NT).

***Glyphinaphis* undetermined sp. 1**

Single aptera in BMNH, collected by the authors from "stick bamboo" on HK Island.

Pseudoregma bambucicola (Takahashi, 1921)

Note: this is the correct spelling. Several samples in BMNH from undetermined bamboos, and a single sample from *Dendrocalamus pulverulatus* at the Chinese University, Sha Tin (NT). One sample, from Tai O (Lantau I.) was noted as being clustered around nodes of the host. Lee & Winney (1981) also reported this species from HK, mis-spelt *bambusicola*. Takahashi (1941c) reported this species from HK in March 1940, under its original combination *Oregma bambusicola [sic]*, mis-spelling his own species.

Pseudoregma koshunensis (Takahashi, 1924)

Two samples in BMNH, on undetermined bamboo at Shing Mun arboretum (NT), and on ?*Bambusa* sp., with ants, HK Island.

Pseudoregma panicola (Takahashi, 1921)

Vouchers in BMNH and PPRD, from *Oplismenus compositus*, *Oplismenus* sp., and stems and inflorescences of undetermined grasses. Takahashi (1941c) recorded this species from HK in March 1940, under its original name, *Oregma panicola*, but no known vouchers.

***Tuberaphis* undetermined sp. 1**

Represented in BMNH by several HK samples from *Dendrotrophe frutescens*, on which it develops very large colonies. This appears to be the same species for which Indian material in BMNH, from an undetermined orchid in West Bengal, bears a manuscript name of Hille Ris Lambers. Despite the quantity of study material, alatae remain unknown.

Hormaphidinae—Nipponaphidini

***Dermaphis* undetermined sp. 1** (Fig. 20)

Large sample in BMNH (coll. Martin) from the brown-bark stems of *Cyclobalanopsis championii* on High West summit, HK Island. Colonies were protected by debris sleeves created by attendant ants. Mature apterae heavily sclerotic, black, covered by greyish secretion, but teneral specimens reveal taxonomic characters well. Despite the density of individuals in the collected sample, no alatae or alatoid nymphs have been seen. It is clear that this species is not one of the three currently placed in *Dermaphis* and is likely to be undescribed (pers. obs. and Masato Sorin, pers. comm.).

Microthoracaphis elongata Takahashi (1958)

see *Neothoracaphis elongata* (Takahashi, 1958)

***Neohormaphis* undetermined sp. 1** (Fig. 19)

Large sample of alatae and nymphs in BMNH, from *Cyclobalanopsis championii* from High West, HK Island [the same small tree as the *Neothoracaphis* undetermined sample, below]. Alatoid nymphs secrete curious glassy filaments dorsally (Fig. 19), resembling miniature fibre-optic bundles. This generic determination is tentative (Victor Eastop, pers. comm.). The genus *Neohormaphis*, and its type species, *N. calva* Noordam (1991) was described from Javanese samples that had been collected by van der Goot from galls on *Distylium stellare* (Hamamelidaceae) and from *Quercus* sp. (Fagaceae). Noordam noted curious circular "button organs" sparsely and singly distributed on the dorsum of the fourth-instar alatoid nymph of *N. calva* from *Quercus*. The equivalent nymphal stage in the HK sample has distinct plates, each with several (larger) circular structures that appear (especially in lateral view) to match the button organs of *N. calva*: it is these groups of organs that secrete the glassy filaments referred to, above. The biology of this curious aphid will certainly prove to be very interesting, and it is most likely to be undescribed. *N. wuyiensis* Jiang *et al.* (2008), described from China, appears to be intermediate between *N. calva* and this HK species.

Neothoracaphis elongata (Takahashi, 1958) / ***saramaoensis*** (Takahashi, 1935) group of species (Fig. 18)

Slide-mounted vouchers in BMNH (coll. Lau), from *Cyclobalanopsis neglecta* at Black's Link, and from *C. edithiae* at Tai Tam Country Park Management HQ (both HK Island). These differ from the undetermined species (below) in having the hind legs much paler than the body (a character of both *N. elongata* and *N. saramaoensis*, according to Takahashi), and the anterior two pairs of legs apparently fused with the venter; the shape of the abdominal plates also differs from the undetermined species. This species in life has its five pairs of secreted dorsal wax rods distinctly curved (Fig. 18).

***Neothoracaphis* undetermined sp. 1** (Fig. 17)

An intriguing aphid with numerous specimens in BMNH, from *Cyclobalanopsis championii* from High West and Black's Link, HK Island: the High West host was the same small tree as for the *Neohormaphis* sample, above. We originally placed this aphid in the genus *Microthoracaphis* but this was, however, regarded as a junior synonym of *Neothoracaphis* by Remaudière & Remaudière (1997). As with the preceding species the apterous adults are extremely small, jet black and nestle amongst the leaf hairs, with teneral specimens needed to show morphological characters clearly; nymphs are pale but alatae have yet to be seen. This species differs from the preceding one in having its anterior two pairs of legs freer, its hind legs not paler than remainder of body, a row of crenulations present mesal to the body margin and its dorsal secreted wax rods almost straight. It appears likely that there is a suite of *Neothoracaphis* species on species of *Cyclobalanopsis*.

Quernaphis tuberculatus (Takahashi, 1933)

A single apterous adult female (BMNH) was originally found amongst specimens of *Neothoracaphis* and *Neohormaphis* (see above), feeding on *Cyclobalanopsis championii* at High West, HK Island. Subsequently more apterae were found on the same host species from Black's Link, the extremely irregular body outline clearly being caused by the immobile aphids growing amid dense and stout leaf hairs. The HK material differs from Japanese specimens in BMNH, also determined as *Q. tuberculatus*, in possessing considerably more numerous stout dorsal setae (exactly as described and illustrated by Takahashi, 1933). These specimens are extremely small, body length between 0.25 and 0.4 mm.

Reticulaphis fici (Takahashi, 1923)

Vouchers in BMNH, from *Ficus superba*, *F. superba japonica* and *Ficus* spp. A single Takahashi slide is in TARI (Shu-Pei Chen, pers. comm.), under an earlier combination, *Thoracaphis fici*, collected from HK in March 1940 with no host information. Extensive municipal plantings of *Ficus rumphii* in Macau are also heavily infested with this aphid.

Reticulaphis inflata Yeh & Hsu (2008)

Described from material from Taiwan and HK. Paratypes in BMNH, from *Ficus microcarpa* at Wanchai, HK Island, and a small sample from Pok Fu Lam Country Park.

***Reticulaphis* undetermined sp. 1**

Single sample split between BMNH and PPRD, collected from *Ficus hispida* at The Peak. The colony was exceptionally large, with a heavy coating of sooty mould on the upper surfaces of leaves. The very small apterae (a few are sufficiently teneral to reveal most characters well) display similarities with *R. asymmetrica* HRL & Takahashi (1959) and *R. mirabilis* (Takahashi, 1939). However, this undetermined species has only 8 pairs of stout submarginal setae that have rather serrate apices: Yeh *et al*. (2008) reviewed *Reticulaphis* and stated that all species possess 10 pairs of submarginal setae, but careful examination of specimens of this species confirms only 8 pairs.

Schizoneuraphis gallarum van der Goot (1917)

Single large sample in BMNH, from *Litsea glutinosa* at Sham Shui Po police post, Kowloon (coll. Lau). Three Takahashi slides are present in TARI (Shu-Pei Chen, pers. comm.), under the junior synonym *Thoracaphis hongkongensis* van der Goot (1918), collected from an undetermined host in HK in March 1940 and referred to by Takahashi (1941c); another TARI slide bearing Takahashi's writing on the label was collected in HK in 1924, the collector given as Silvestri.

Thoracaphis fici van der Goot (**nomen nudum**)

This species was listed from HK as "*Thoracaphis fici* v.d.G. (M.S.)" by van der Goot (1918). The only details given were "some apterous females and larvae, observed on the underside of the leaves of *Ficus benjamina*." Blackman & Eastop (1994) only list three aphid species from *F. benjamina*, one of them a greenideine: of the other two, *Nipponaphis ficicola* HRL & Takahashi is quoted as feeding on the bark of stems and twigs, not under leaves. The third aphid listed on *F. benjamina* is *Reticulaphis distylii* group. Whilst it is very possible that van der Goot's manuscript species was a *Reticulaphis*, it seems curious that van der Goot didn't then place it in *Schizoneuraphis*, where he had already described what is now *Reticulaphis distylii* (van der Goot) only a year earlier. Unless voucher material can be found in one of the Dutch collections, this record necessarily refers to an unknown taxon within the Nipponaphidini.

Thoracaphis hongkongensis van der Goot (1918)

See *Schizoneuraphis gallarum* van der Goot (1917)

Lachninae—Eulachnini

Cinara formosana (Takahashi, 1924)

Two samples in BMNH, from *Pinus massoniana* at Tai Po Kau forest (NT) and (more tentatively determined) from the same host at Castle Peak (NT).

Cinara tujafilina (del Guercio, 1909)

Reported from HK on *Juniperus chinensis* by Chan (1998) but no known vouchers.

Eulachnus agilis (Kaltenbach, 1843)

Reported from HK by Tao (1999a). This species was also recorded from HK by van der Goot (1918). No known HK voucher specimens.

Eulachnus thunbergii Wilson (1919)

Three HK samples are in BMNH, all from *Pinus massoniana*.

Eulachnus tuberculostemmatus (Theobald, 1915)

Several specimens collected from *Pinus* sp. in HK in March 1940 are on a single Takahashi slide in TARI (Shu-Pei Chen, pers. comm.): they are referred to by Takahashi (1941c), where he considers that van der Goot's record of *E. agilis* (see above) may in fact concern *E. tuberculostemmatus*.

Schizolachnus orientalis (Takahashi, 1924)

One sample in BMNH, from needles of *Pinus* sp. at Tai Mo Shan (NT). A second, more tentatively determined, sample is from *P. massoniana* at Shing Mun (NT): Lee & Winney (1981) list *Schizolachnus* sp., from the same host, possibly quoting this BMNH sample.

Schizolachnus pineti (Fabricius, 1781)

Recorded from HK by van der Goot (1918), under the name *Lachnus tomentosus* De Geer, without reference to voucher specimens. A van der Goot slide in LEW, collected in HK on 4.ix.1917 from *Pinus* sp., bears the determination *Lachnus tomentosus* but the mount is too poor for the species determination to be checked—it is possible, even likely, that this record may concern *S. orientalis*, above.

Lachninae—Lachnini

Tuberolachnus salignus (Gmelin, 1790)

Single sample in BMNH, from *Salix* sp. at Shek Kong (NT). Also listed from HK by Lee & Winney (1981).

Neophyllaphidinae

Neophyllaphis brimblecombei Carver (1971)

Blackman & Eastop (1994) stated that "specimens from *Podocarpus chinensis* in HK (BMNH) also key to this species [*N. brimblecombei*]" but the only BMNH specimens are two alatae in poor condition. Despite the poor condition of the two BMNH alatae, this determination has been confirmed through re-examination of the material (Wolfgang Quednau, pers. comm.). *N. brimblecombei* was also reported from HK, on *P. macrophyllus* by Tao (1999a), and on *P. macrophyllus* var. *maki* by Lee & Winney (1981) but there are no known vouchers in either case. HK Herbarium (2004) did not list *P. chinensis*, even as a synonym, but it is listed as a synonym of *P. macrophyllus* var. *maki* elsewhere. Tao mistakenly listed the distribution of *N. brimblecombei* as solely HK, whereas it was actually described from *P. elatus* in Queensland, Australia.

Neophyllaphis podocarpi Takahashi (1920)

Several HK samples in BMNH, all from *Podocarpus macrophyllus*. Also reported on *P. macrophyllus* var. *maki* from HK by Lee & Winney (1981) but not reported from HK by Tao (1999a). However, the species is referred to by Takahashi (1941c), who collected material from *Podocarpus chinensis* [see *P. brimblecombei*,

above] in HK in March 1940. *N. podocarpi* is common in HK but the frequency of occurrence of *N. brimblecombei* in HK remains unknown.

Phyllaphidinae

Machilaphis machili (Takahashi, 1928)

HK samples in BMNH and PPRD, from *Machilus chinensis*, *M. breviflora*, *M. oreophila* and *Machilus* spp.

Taiwanaphidinae

Taiwanaphis decaspermi Takahashi (1934)

A large sample in BMNH, from *Syzygium buxifolium* at TLF. Reported from HK by Lee & Winney (1981) and by Tao (1999a), probably based on this sample. Also, BMNH has a single Hille Ris Lambers slide that comprises remounted specimens from a former Takahashi preparation whose original label is on the obverse of the slide: the Takahashi label data are "*Taiwanaphis decaspermi* Takah., 8.iii.1940, Hongkong, R. Takahashi", and this material is referred to by Takahashi (1941c). PPRD has a single slide-mounted vagrant alata, collected by the authors from Tai Po Headland.

Aphidoidea—Adelgidae

Pineus pini (Macquart, 1819)

A single sample in BMNH, from *Pinus massoniana* at Tai Lam Chung reserve, is provisionally determined. This species was reported from HK by Tao (1999a) [who mistakenly attributed the species to Linnaeus, 1746] and was also reported from HK by van der Goot (1918) but with neither referring to vouchers.

Coccoidea

• We have generally followed the nomenclatural system used by *ScaleNet*, an online resource hosted by the USDA at http://www.sel.barc.usda.gov/SCALENET/SCALENET.HTM

Aclerdidae

Aclerda yunnanensis Ferris (1950)

As part of McConnell's (1954) redescription, HK material with the following data was examined—"miscellaneous grasses mixed together, Fanling (NT), May 18, 1949, G.F.Ferris coll., Ferris China #884". There are two slides in USNM, with the location given as "Faling" and the date quoted as May 28, but with the same Ferris number "China 884" (D Miller pers. comm.). More material from this Ferris sample is likely to reside in UCD. No HK material of this species in BMNH.

Asterolecaniidae

Asterolecanium spp

all HK species are now placed in *Bambusaspis*

Bambusaspis bambusae (Boisduval, 1869)

BMNH vouchers from *Bambusa ventricosa* and *Bambusa* sp. Lee & Winney (1981) reported this species, under the former combination *Asterolecanium bambusae*.

Bambusaspis chinae (Russell, 1941)

Described from Kowloon, on *Bambusa* sp., and from mainland China. The HK material is from the Koebele collection, collected in 1900 (USNM). No HK material of this species in BMNH.

Bambusaspis longula (Russell, 1941)

Described from HK on *Arundinaria sinica*. Type material was collected by A.S. Hitchcock in 1921 (USNM). No HK material of this species in BMNH.

Bambusaspis mimica (Russell, 1941)

Described from mainland China and HK by Russell (1941), the HK material having been collected by G. Compere and by C.W. Howard, on undetermined bamboos. The holotype (USNM) is from mainland China. No HK material of this species in BMNH.

Bambusaspis minuta (Takahashi, 1930)

Three Takahashi slides from an undetermined bamboo in HK, March 1940, are present in TARI (Shu-Pei Chen, pers. comm.): the name on these slides is the original combination, *Asterolecanium minutum*. No HK material of this species in BMNH.

***Bambusaspis* / *Asterolecanium* undetermined sp. or spp.**

Two HK samples in BMNH, from undetermined bamboos.

Coccidae

Ceroplastes actiniformis Green (1896)

Single sample in BMNH, from *Duranta erecta* [= *D. repens*] at Deepwater Bay Country Club, sent to CIE by Winney.

Ceroplastes ceriferus (Fabricius, 1798)

Single sample in BMNH, from *Podocarpus macrophyllus* in the Castle Peak area.

Ceroplastes floridensis Comstock (1881)

Single sample from *Citrus* in BMNH (examined by Hodgson), sent from HK by Winney in 1976, where it had earlier been intercepted from Manila (Philippines). Another HK sample, from unknown host (sent to IIE, ref. A20924) was not present in BMNH at time of this study. This species was proposed as the type of a new genus, *Paracerostegia*, by Tang (1991) but the genus was regarded as a synonym of *Ceroplastes* by Hodgson (1994).

Ceroplastes murrayi Froggatt (1919)

Single sample present in PPRD and UCD, from *Melicope pteleifolia* on Braemar Hill, HK Island. This determination was by courtesy of Ana Peronti. Vouchers from this sample not in BMNH.

Ceroplastes rubens Maskell (1893)

Samples in BMNH from "*Euphoria longan*" (now *Dimocarpus longan*), *Pinus* sp., *Psidium guajava, Schefflera heptaphylla* [= *S. octophylla*] and "mangroves". *Ceroplastes rubens minor* Maskell (1897), a junior synonym of *C. rubens*, was described from HK on *Pinus sinensis* and *P. thunbergii*: syntypes in NZAC and USNM. Reported from HK by Lee & Winney (1981).

Ceroplastes rubens minor Maskell (1897)

see *Ceroplastes rubens* Maskell (1893)

***Ceroplastes* undetermined sp. 1**

Single specimen in BMNH from *Rhodomyrtus* sp., sent by Hill.

Chloropulvinaria psidii (Maskell, 1893)

see *Pulvinaria psidii* Maskell (1893)

Coccus acutissimus (Green, 1896)

see *Prococcus acutissimus* (Green, 1896)

Coccus capparidis (Green, 1904)

Single sample in BMNH, from *Desmos chinensis* in Sai Kung Peninsula (NT).

Coccus formicarii (Green, 1896) (Fig. 26)

Two samples in BMNH, from "*Euphoria longan*" (now *Dimocarpus longan*) at Castle Peak (NT) and from *Schefflera heptaphylla* (covered and vigorously attended by ants) at Fei Ngo Shan (NT), with a slide from

the latter also in USNM. *Lecanium globulosum* Maskell (1897), a junior synonym of *C. formicarii*, was described from HK on *Stillingia sebifera* (host not listed by HK Herbarium) and syntypes are in NZAC and UCD. Reported from HK by Lee & Winney (1981).

Coccus* sp. near *formicarii (Green, 1896)

Single HK sample in BMNH, from stems of *Symplocos lancifolia* (covered over by ants) on Lantau Island. It is noted that this species has up to 6 stigmatic spines at each cleft.

Coccus hesperidum Linnaeus (1758)

Vouchers in BMNH from *Carica papaya, Cassia* sp., *Euphoria longan* [now *Dimocarpus longan*], *Hedera helix, Oxalis* sp., *Roystonea regia* and *Schefflera heptaphylla* [= *S. octophylla*]. This is an extremely common and polyphagous soft-scale species worldwide.

Coccus longulus (Douglas, 1887)

Vouchers in BMNH from *Acacia confusa*, *Bauhinia* sp. and "croton" [*Codiaeum* cultivated variety]. Reported from HK by Lee & Winney (1981).

Coccus viridis (Green, 1889)

Samples in BMNH from *Aralia armata, Citrus* sp., *Manilkara zapota, Maesa perlarius, Psidium guajava* and undetermined Rubiaceae. Reported from HK by Lee & Winney (1981).

***Coccus* undetermined spp**

Three small samples in BMNH, from *Ficus* sp., *Macaranga tanarius* and undetermined host. These may represent one or more species.

Cribropulvinaria tailungensis Hodgson & Martin (2001) (Fig. 25)

This genus, with its sole known species, was described from HK, where a large colony was found on *Aporusa dioica* bushes lining the boundary fence at TLF (Hodgson & Martin, 2001). The holotype is in BMNH and paratypes are in BMNH, PPRD and USNM. A second large colony on the same host was later discovered at Pak Sha O (NT), with vouchers in BMNH, PPRD and USNM.

Drepanococcus cajani (Maskell, 1891)

Single sample in BMNH, from *Litchi chinensis* at TLF.

Fistulococcus pokfulamensis Hodgson & Martin (2005) (Figs 27, 28)

This genus, and its type species, were described from HK, where a large colony was found on *Gnetum luofuense* at Pok Fu Lam Country Park, HK Island. A second species, *F. intsiae* from Papua New Guinea, was described in the same paper (Hodgson & Martin, 2005). The holotype of *F. pokfulamensis* is in BMNH and paratypes are in BMNH, PPRD and USNM. A second large colony, on the same host, was subsequently discovered at Aberdeen Country Park, HK Island, with vouchers in BMNH and PPRD; a very few further specimens were collected from the same host close to this location in April 2010. In life the adults and nymphs are almost completely hidden by the opaque white secreted wax, with just a hint of ovoid outlines visible with a lens (Fig. 28).

Kilifia acuminata (Signoret, 1873)

Single large sample collected by the authors from *Gnetum luofuense* at Tai Tam Country Park, HK Island (vouchers in BMNH, PPRD, USNM).

Lecanium globulosum Maskell (1897)

see *Coccus formicarii* (Green, 1896)

Maacoccus bicruciatus (Green, 1904)

Described from Sri Lanka on *Nothopegia colebrookiana*. Single HK sample in BMNH, comprising females in good condition from *Zanthoxylum avicennae* at Lady Clementi's Ride, Aberdeen Country Park. The individuals were feeding on the upper surface midribs of their host. The authors have made this cautious determination in comparison with the lectotype of *Lecanium bicruciatus* (BMNH).

Mallococcus sinensis (Maskell, 1897)

Described from "China" on *Callicarpa tomentosa*, and the lectotype is in USNM (see ScaleNet). Hodgson (1994: 333), quoting Deitz & Tocker (1980), believed that Maskell's original material came from HK, although "no host was stated". Single specimen in BMNH, possibly a paralectotype.

***Marsipococcus* undetermined sp. 1**

Single sample in BMNH, from *Rhodomyrtus* sp. at Sai Kung (NT). Reported from HK by Lee & Winney (1981), probably quoting this sample.

Milviscutulus mangiferae (Green, 1889)

Two small HK samples in BMNH, on *Aporusa dioica* and *Citrus paradisi*, both from TLF. Neither sample is entirely typical but we cautiously assign them to this species.

Paralecanium expansum (Green, 1896) species-group

Four samples in BMNH, from *Dendrotrophe frutescens*, *Ficus microcarpa, Machilus* or *Litsea*, and an undetermined host. Members of the *expansum*-group are completely without legs, whereas several other species have legs developed to varying degrees. Several varieties and subspecies of *P. expansum* have been described.

Paralecanium geometricum (Green, 1896)

Three slides in UCD, from *Laurus canariensis* in HK (the host not listed by HK Herbarium), are very cautiously determined (Penny Gullan, pers. comm.)—see also comments on *P. peradeniyense*, below.

Paralecanium peradeniyense (Green, 1904)

This species was described from *Piper nigrum* in Sri Lanka [Ceylon] in 1904. A HK sample from *Gnetum luofuense* in Tai Tam Country Park agrees closely with syntypes of this species, especially the marginal setae being transversely ovoid and in the characters of the stigmatic clefts and setae. With the type specimens of most *Paralecanium* species being mature and heavily sclerotic, most determinations in this genus are somewhat cautious. One specimen of the HK sample is newly moulted (teneral), showing all characters exceptionally well, but all the syntypes are mature-sclerotic.

Paralecanium planum (Green, 1896)

Vouchers from single sample in BMNH, from upper midribs of *Syzygium hancei* on HK Island. Sample determined with caution—see comments on *P. peradeniyense*, above.

Paralecanium **undetermined sp. 1**

Observed by the second author, on *Kandelia candel* in Tai Tam Country Park (IIE ref. 22505) but the location of the material is now unknown.

Paralecanium **undetermined sp. 2**

A large colony discovered as this contribution went to press, on upper surfaces of the fern *Neottopteris nidus* at a plant nursery in NT. Specimens do not match other *Paralecanium* samples from HK or in BMNH, but a few teneral females should aid identification in the future.

Parasaissetia nigra **(Nietner, 1861)**

Samples in BMNH and PPRD from *Ficus elastica, Ficus* sp., *Macaranga tanarius* and *Rhus succedanea*. Reported from HK by Lee & Winney (1981).

Parthenolecanium persicae (Fabricius, 1776)

The second author has a record of this species being determined by the former CIE, from material submitted by Dennis Hill. However, there are presently no HK vouchers present in BMNH. Although a slide is present in PPRD, from "croton" [assumed to be *Codiaeum* cultivar], we are uncertain whether this is part of the sample in question.

Prococcus acutissimus (Green, 1896)

Single voucher in BMNH, from *Machilus* sp. on Peel rise, HK Island.

Protopulvinaria longivalvata Green (1909)

Two samples in BMNH, from *Aporusa dioica* at Pak Sha O (NT) and *Cinnamomum burmannii* at TLF.

Pulvinaria hydrangeae Steinweden (1946)

Two samples in BMNH, from *Celtis sinensis* and *Reevesia thyrosidea*.

Pulvinaria kuwacola Kuwana (1907)

A single small sample, whose only data are "Hong Kong, 1973", was sent by Hill and is now in BMNH.

Pulvinaria polygonata Cockerell (1905)

Single sample in BMNH, sent by Hill from *Citrus paradisi* on HK Island, the record quoted by Lee & Winney (1981).

Pulvinaria psidii Maskell (1893)

Vouchers in BMNH, from *Cycas* sp., *Ixora chinensis, Ixora* sp., *Litchi chinensis, Manilkara zapota* (= *Achras sapota*), *Plumeria rubra, Psidium guajava*, undetermined Rubiaceae and undetermined Asteraceae. Reported from HK by Lee & Winney (1981), under both *Pulvinaria* and *Chloropulvinaria*.

***Pulvinaria* undetermined sp. 1**

Single HK sample, tentatively determined as *Pulvinaria*, in BMNH from *Diospyros* sp. at Kadoorie Farm (NT).

Saissetia coffeae (Walker, 1852)

Samples in BMNH from *Citrus sinensis*, *Citrus* sp., *Cycas revoluta*, *Eugenia uniflora*, *Gardenia jasminoides*, *Mandevilla boliviensis* ("*Dicladenia bolivi*" [sic]), *Manilkara zapota [= Achras sapota]*, *Momordica charantia*, *Plumeria* cultivated variety, *Psidium guajava*, *Rhodomyrtus tomentosa*, *Sechium edule* and *Talinum paniculatum*. Reported from HK by Lee & Winney (1981).

Saissetia miranda (Cockerell & Parrot, 1899)

Two samples in BMNH, from Mai Po Marshes (NT) and Kowloon, both on *Melia azedarach*.

Saissetia neglecta De Lotto (1969)

Single sample in BMNH, uncertainly determined, from *Telosma cordata* at Fanling (NT).

Saissetia oleae (Olivier, 1791)

Reported by Hill *et al*. (1982) but no known vouchers. A slide is in PPRD with three nymphs and a parasitized female, from *Ilex rotunda* var. *microcarpa*.

Saissetia vivipara Williams & Watson (1990)

We have cautiously determined a single small sample in BMNH, from *Schefflera heptaphylla* [= *S. octophylla*] within a nest of *Oecophylla* ants at Pat Sin Leng Country Park (NT). The sole slide bears teneral females and observations (by the first author) that the dorsal setae are shorter than described but still setose, there are fewer interstigmatic marginal setae, and that polygonal areolations are not discernible.

Conchaspididae

Conchaspis angraeci Cockerell (1893)

Material from *Hibiscus rosa-sinensis* at Sha Tin (NT) in 2009 was determined by Gillian Watson of CDFA. In September 2010, at a late stage of preparation of this contribution, the second author collected a large sample from twigs and petioles of *Schefflera arboricola* at a nursery at Tai Po (NT) and these were also confirmed to be *C. angraeci*. An eradication programme was initiated following each of these occurrences. A voucher sample in 90% alcohol is kept in PPRD, with slides in BMNH and CDFA.

Diaspididae—Aspidiotinae

Abgrallaspis cyanophylli (Signoret, 1869)

Single sample in BMNH, from *Maesa perlarius* at Magazine Gap Road, HK Island.

Aonidiella aurantii (Maskell, 1879)

Two samples in BMNH, from *Citrus paradisi* and *Schefflera heptaphylla* [= *S. octophylla*].

Aonidiella citrina (Coquillett, 1891)

Single sample in BMNH, from *Schefflera heptaphylla* [= *S. octophylla*] on HK Island.

Aonidiella inornata McKenzie (1938)

Single sample in BMNH, from *Podocarpus macrophyllus* in the Castle Peak area. The slide labels note that this population was "causing extensive damage".

Aonidiella orientalis (Newstead, 1894)

Two samples in BMNH, both from *Carica papaya*. The earlier sample, from Wu Kwai Sha and sent by Hill in 1976, is probably the source of Lee & Winney's (1981) report; the later sample was from Mong Tseng village (NT) in 2003.

Aspidiotus destructor Signoret (1869)

Two samples in BMNH, from *Chrysalidocarpus lutescens* (Mid Levels, HK Island) and from the rare and localised medicinal plant *Asarum hongkongense* (gallery forest, Lantau Island).

Aspidiotus excisus Green (1896)

Two samples in BMNH, from *Murraya paniculata* at Yuen Long (NT) and *Duranta erecta* at Tai Po Headland (NT).

***Aspidiotus*-group, undetermined sp.1**

Single sample in BMNH, from *Pinus massoniana* at Tai Mo Shan (NT).

Chortinaspis biloba (Maskell, 1898)

Described from HK on undetermined grass, collected by Koebele. Syntypes in NZAC. No material in BMNH.

Chrysomphalus aonidum (Linnaeus, 1758)

Samples in BMNH, from *Garcinia multiflora* and *Podocarpus macrophyllus*. Reported by Lee & Winney (1981).

***Chrysomphalus* undetermined sp. 1**

Single specimen in BMNH, from *Ficus* sp. on HK Island.

Furcaspis biformis (Cockerell, 1893)

Single sample in BMNH, from an undetermined orchid sent from HK by Winney but originating from Vietnam. As this sample is unlikely to represent established presence in HK, the record should be excluded from the check list—see Appendix 1.

Hemiberlesia lataniae (Signoret, 1869)

Samples in BMNH, from *Chrysalidocarpus lutescens, Chrysanthemum* sp. and *Ficus* sp., all from TLF. Reported from HK by Lee & Winney (1981).

Hemiberlesia pitysophila Takagi (1969)

Samples in BMNH, from *Pinus* sp. at TLF and Tai Mo Shan (NT).

Lindingaspis tingi McKenzie (1950)

Single sample in BMNH sent from HK by Winney, on an undetermined orchid. The locality was given as "Sha Tin quarantine centre" but with no indication of the origin of the plant. As this sample is unlikely to represent an established presence in HK, the record should be excluded from the check list—see Appendix 1.

Morganella longispina (Morgan, 1889)

Reported from HK by Nakahara (1982: 57) without reference to vouchers. No HK material in BMNH.

Mycetaspis personata (Comstock, 1883)

Reported from HK by Chou (1985)—see ScaleNet. No HK material in BMNH.

Pseudaonidia duplex (Cockerell, 1896)

A single sample from bonsai *Acer palmatum* was intercepted from HK by the Netherlands quarantine service, with three voucher slides in BMNH.

Pseudaonidia trilobitiformis (Green, 1896)

Single voucher specimen in BMNH, from an undetermined host at TLF.

Diaspididae—Diaspidinae

Acanthomytilus imperatae (Kuwana, 1931)

Single sample in BMNH, from upper surfaces of blades of *Saccharum* sp. at Middle Gap Road, HK Island.

Andaspis hawaiiensis (Maskell, 1894)

Single small sample in BMNH, from a stem of *Pyrus* sp., Hung Shui Kiu, probably the record quoted by Lee & Winney (1981).

Aonidomytilus albus (Cockerell, 1893)

Reported from HK by Takagi (1970: 134), under the synonym *Coccomytilus dispar* (Vayssière, 1914), feeding on *Manihot* sp. but with no reference to voucher material.

Aulacaspis acronychiae Takagi & Martin (2010)

Single specimen (the holotype) in BMNH, from *Acronychia pedunculata* at Ma On Shan Country Park (NT). This had been provisionally determined by Sadao Takagi as *A. guangdongensis* Chen *et al*. (1980), but further investigations have led to its description as a distinct species.

Aulacaspis alisiana Takagi (1970)

Samples in BMNH, from *Machilus chinensis, Machilus* sp. and an undetermined host. A note with the specimens suggests that this species may be a synonym of *A. ferrisi* Scott (1952).

Aulacaspis calcarata Takagi (1999)

Single sample BMNH, from *Machilus chekiangensis* from Fei Ngo Shan (NT), is cautiously determined.

Aulacaspis crawii (Cockerell, 1898)

Vouchers in BMNH, from *Aglaia odorata*, *Melia azedarach* and *Melia* sp., the latter sample being collected at the AFCD's offices at Canton Road, Kowloon. Reported from HK by Lee & Winney (1981).

Aulacaspis divergens (Takahashi, 1935)

Reported from HK by Hua (2000)—see ScaleNet. No HK material in BMNH.

Aulacaspis machili (Takahashi, 1931)

A single sample in BMNH, from *Machilus wangchiana* at Shing Mun arboretum (NT), is provisionally determined.

Aulacaspis megaloba Scott (1952)

Described from Yunnan, China, with holotype in UCD, but Scott (1952) also reported this species from HK, with paratypes from *Rubus* sp. at Tai Po (NT) collected by Ferris. No BMNH material from HK.

Aulacaspis murrayae Takahashi (1931)

Several samples in BMNH and PPRD, from *Murraya paniculata* and *Murraya* sp.

Aulacaspis robusta Takahashi (1931)

Single sample in BMNH, from undetermined host at Tai Tam Country Park, HK Island.

Aulacaspis thoracica Robinson (1917)

Single sample in BMNH, from *Cocculus orbiculatus* at Sai Kung (NT).

Aulacaspis tubercularis Newstead (1906)

Vouchers in BMNH, from *Cinnamomum parthenoxylon*, *Litsea rotundifolia* var. *oblongifolia* and *Persea kadooriei*.

Aulacaspis yabunikkei Kuwana (1926)

Vouchers in BMNH, from *Cinnamomum parthenoxylon* and *Litsea glutinosa*. There are three Takahashi slides in TARI, from HK in March 1940 (Shu-Pei Chen, pers. comm.), one with the host given as Lauraceae, and these are the material reported by Takahashi (1942). Also reported by Lee & Winney (1981).

Aulacaspis yasumatsui Takagi (1977)

Takagi (1977) described this species, collected from a cycad in Bangkok in 1972, mainly because it was the first record of a species of *Aulacaspis* on a cycad. It was not implicated as an economic species until the 1990s. It is now a serious pest of cycads and Hodgson & Martin (2001) compared its effects in HK and Singapore. Takagi, *in* Takagi & De Faveri (2009), discussed increasing morphological variability in this species, as it expands is geographical range and develops huge colonies in the absence of its native control agents. There are several HK samples in BMNH, and also material in PPRD, all from *Cycas revoluta*: several of these samples include the information that the affected cycads were dead or dying at the time of collecting scales from them.

***Aulacaspis* undetermined sp. or spp.**

Single sample in BMNH, from *Cinnamomum camphora* at HK University, sent by Hill. Also five of Takahashi's slide-mounted specimens (on five separate slides) are in TARI, from Lauraceae in HK in March 1940 (Shu-Pei Chen, pers. comm.).

Chionaspis eugeniae Maskell (1892)

see *Pseudaulacaspis eugeniae* (Maskell, 1892)

Chionaspis stanotophri Cooley (1899)

see *Duplachionaspis natalensis* (Maskell, 1896)

Chionaspis vermiformis Takahashi (1930)

see *Mohelnaspis vermiformis* (Takahashi, 1930)

***Chionaspis* undetermined sp. or spp**

Vouchers in BMNH, from *Chrysalidocarpus lutescens* and *Nerium oleander*, the former from the Governor's House, both samples labelled as *Phenacaspis* sp: these two records are almost certainly those listed by Lee & Winney (1981: 40), as *Phenacaspis* sp. In TARI (Shu-Pei Chen, pers. comm.) there is a single slide with specimens collected in HK: this bears the following data in a mixture of Japanese and English—"Shirochiku ", Hong Kong, 12.v.1913" on one label, and "*Phenacaspis*, June 1936, Hong Kong, Shirochiku" on the other label, both labels apparently in Takahashi's writing. Seiki Yamane, Kagoshima University, Japan (pers. comm.) reports the word "shirochiku" as having two possible interpretations, a *Phyllostachys* species

(Poaceae) with a whitish stem, or the small palm *Rhapis humilis*—it is felt unlikely that determining the diaspid species further would give additional clues to its host. Our interpretation is that an unknown collector acquired the specimens in 1913, and that Takahashi made the slide and determined the specimens to genus level in 1936, some four years prior to his own fleeting visit to HK.

Coccomytilus dispar (Vayssière, 1914)

see *Aonidomytilus albus* (Cockerell, 1893)

Diaspis echinocacti (Bouché, 1833)

Single slide in BMNH, from *Hylocereus undatus* (Cactaceae) at TLF, with the words "quarantine intercept" but not stating the source of the sample. As this is unlikely to represent an established presence in HK, the record should be excluded from the check list—see Appendix 1.

***Duplachionaspis natalensis* (**Maskell, 1896)

Reported from HK on sugar-cane by Takahashi (1936: 218), under the synonym *Chionaspis stanotophri* Cooley (1899). No material in BMNH.

Fiorinia coronata Williams & Watson (1988)

Material from *Jatropha hastata* in a park on HK Island in 2005 (coll. Lau) is deposited at CDFA where it was sent and determined by Gillian Watson. Official eradication in HK was carried out following determination of this sample. No HK material in BMNH.

Fiorinia fioriniae (Targioni Tozzetti, 1867)

Vouchers in BMNH, from *Averrhoa carambola, Camellia japonica* and *Gnetum luofuense*. Reported from HK by Lee & Winney (1981).

Fiorinia japonica Kuwana (1902)

Reported from HK by Tao (1999b).

Fiorinia minor Maskell (1897)

Described from HK on undetermined palm (Arecaceae). Syntypes deposited in NZAC, UCD and USNM.

Fiorinia pinicola Maskell (1897)

Described from HK on *Pinus sinensis*, and from Taiwan on *Cupressus juniperinus*. Syntypes in CAS, UCD and USNM. Vouchers in BMNH from *Araucaria* sp. and *Schefflera heptaphylla* [= *S. octophylla*]: one *Araucaria* sample had been determined as *F. juniperi* but ScaleNet states that all records of *F. juniperi* are misidentifications of *F. pinicola*.

Fiorinia theae Green (1900)

Single sample in BMNH, from *Camellia japonica* at Sha Tin (NT), probably the record quoted by Lee & Winney (1981).

Fiorinia turpiniae Takahashi (1934)

Reported from HK by Tao (1999b).

***Fiorinia* undetermined sp. or spp**

Four samples in BMNH determined only as *Fiorinia* sp., a genus that is notoriously difficult to identify because the delicate females are protected within the hard exuviae of the nymphs (they are termed "pupillarial"). These samples are from *Citrus grandis* at Tai Po Kau, *Schefflera octophylla* at North Point City Garden, *Bambusa vulgaris* at HK Botanical Garden and *Ilex pubescens* at Aberdeen Country Park. The *Ilex pubescens* sample appears to be closely related to *F. taiwana* Takahashi (1934) and similar species (Sadao Takagi, pers. comm.).

Formosaspis formosana (Takahashi, 1931)

Reported from bamboo in HK by Takahashi (1942), with three of Takahashi's slides now located in TARI (Shu-Pei Chen, pers. comm.). No BMNH material from HK.

***Formosaspis* undetermined sp. 1**

Single sample in BMNH, from bamboo at Shing Mun arboretum (NT).

Greenaspis elongata (Green, 1896)

Two samples in BMNH, from blades of bamboo at Po Lin Monastery (Lantau I.) and from *Bambusa multiplex* in Kowloon, are cautiously determined.

Insulaspis pinea Borchsenius (1964)

see *Lepidosaphes pinea* (Borchsenius, 1964)

Ischnafiorinia bambusae (Maskell, 1897)

Described from HK on *Bambusa fortunei*. Syntypes deposited in NZAC, UCD and USNM—see ScaleNet. Single voucher sample present in BMNH, from *Bambusa vulgaris* on HK Island.

Kuwanaspis elongata (Takahashi, 1930)

Three adult females present in BMNH, from upper surface midrib of undetermined bamboo on High West summit, HK Island, are cautiously determined as this species.

Kuwanaspis hikosani (Kuwana, 1902)

Reported from HK by Tao (1999b), but vouchers unknown. Takahashi (1942) described *K. hikosani* var. *hongkongensis* from HK, the variety later synonymized with *hikosani* - see ScaleNet. No HK material in BMNH.

Kuwanaspis linearis (Green, 1922)

Single sample in BMNH, from undetermined bamboo at Shing Mun arboretum (NT). The specific determination is provisional and was provided by Sadao Takagi.

Lepidosaphes beckii (Newman, 1869)

Single sample in BMNH, from *Citrus grandis* at TLF.

Lepidosaphes chinensis Chamberlin (1925)

Single sample in BMNH, from *Cymbidium sinense* at TLF.

Lepidosaphes cocculi (Green, 1896)

Single sample in BMNH, from *Gnetum luofuense* at Aberdeen Country Park, provisionally determined.

Lepidosaphes corni Takahashi (1957)

Single sample in BMNH, from *Acronychia pedunculata* at Tai Tam Country Park, provisionally determined.

Lepidosaphes cupressi Borchsenius (1958)

Single sample in BMNH, intercepted from HK at London Heathrow airport, UK, but with no further data. This may have been from a transhipment plant. The occurrence of this species in HK is somewhat uncertain.

Lepidosaphes cycadicola Kuwana (1931)

Single sample in BMNH, from *Osmanthus fragrans,* provisionally determined.

Lepidosaphes gloverii (Packard, 1869)

Vouchers in BMNH, from *Citrus* sp., *C. grandis* and *C. paradisi*. Reported from HK by Lee & Winney (1981).

Lepidosaphes laterochitinosa Green (1925)

Single sample in BMNH, from *Schefflera actinophylla* on HK Island, cautiously determined.

Lepidosaphes pinea (Borchsenius, 1964)

Single sample in BMNH, from *Pinus taeda* at Shing Mun (NT). This HK record was discussed by Williams (1971), under the original combination *Insulaspis pinea*, and is probably that listed as *Lepidosaphes* sp. by Lee & Winney (1981).

Lepidosaphes pitysophila Takagi (1970)

Single sample in BMNH, from *Pinus* sp.

Lepidosaphes tapleyi Williams (1960)

Single sample in BMNH, from *Pinus elliottii*.

Lepidosaphes yanagicola Kuwana (1925)

Single sample in BMNH, from undetermined host, provisionally determined by Sadao Takagi (pers. comm.)

Lepidosaphes **undetermined sp. 1**

Single sample in BMNH, from *Cymbidium sinense*, has been cautiously matched with a slide from Taiwan bearing a Takahashi manuscript name.

Mohelnaspis vermiformis (Takahashi, 1930)

Single slide in BMNH, from upper surface of blade of *Bambusa vulgaris* in HK Botanical Gardens. Takahashi (1942) reported this species from HK under its original combination, *Chionaspis vermiformis*. Also reported from HK by Takagi (1970), quoting Takahashi.

Nanhaiaspis chiulungensis Takagi & Martin (2010)

Single sample in BMNH (coll. Martin, 2001), from rolled leaf bases of undetermined bamboo at Shing Mun arboretum (NT), represented an undescribed genus and species, described and discussed by Takagi & Martin (2010).

Neoquernaspis chiulungensis (Takagi, 1977)

Single sample in BMNH, from *Castanopsis indica*, from Takagi's collection.

Phenacaspis undetermined sp. or spp

see *Chionaspis* undetermined sp. or spp

Pinnaspis aspidistrae (Signoret, 1869)

Reported from HK by Wu (1935)—see ScaleNet.

Pinnaspis buxi (Bouché, 1851)

Reported from HK by Nakahara (1982: 70).

Pinnaspis hainnanensis Tang (1986)

Single sample in BMNH, from unrecorded host at TLF, cautiously determined.

Pinnaspis strachani (Cooley, 1899)

HK samples in BMNH from *Citrus* sp. and *Rhododendron* sp.

Pseudaulacaspis cockerelli (Cooley, 1897) (Fig. 30)

Samples in BMNH and PPRD, from *Vernicia montana [= Aleurites montana], Canarium album, Ficus microcarpa, Gnetum luofuense, Ilex cinerea, I. viridis, Michelia alba, M. champaca, M. figo,* "oleander" (*Nerium oleander*) and *Thevetia peruviana*.

Pseudaulacaspis dendrobii (Kuwana, 1931)

Described from HK material intercepted at Kobe, Japan, on *Dendrobium* sp. Type depository is given by ScaleNet as "Ibaraki-ken, Insect Taxonomy Laboratory, National Institute of Agricultural Environmental Sciences, Kannon-dai, Yatabe, Tsukuba-shi, (Kuwana), Japan". Four HK samples in BMNH, from *Chrysalidocarpus lutescens* at Governor's House, and from HK Island on *Lepironia articulata*, an undetermined ornamental grass and an undetermined member of the Cyperaceae.

Pseudaulacaspis eugeniae (Maskell, 1892)

Reported from HK by Maskell (1897: 242), as *Chionaspis eugeniae*, on undetermined palm and undetermined grass. No HK material in BMNH.

Pseudaulacaspis pentagona (Targioni Tozzetti, 1886)

Samples in BMNH and PPRD, from *Allamanda cathartica, Firmiana simplex, Prunus persica* and *Rhus chinensis*. Reported from HK by Lee & Winney (1981).

Pseudaulacaspis simplex Takagi (1961)

Single sample in BMNH, from *Sapium discolor* at Tai Po Kau (NT).

Pseudaulacaspis **undetermined sp. 1**

Single sample in BMNH, from *Ficus microcarpa* on HK Island, sent by Hill.

Pygalataspis miscanthi Ferris (1921)

Single large sample in BMNH (coll. Martin) from ligules at blade bases of undetermined tall grass near the old Tung Chung village (Lantau I.). Voucher material was also presented to Sadao Takagi (HUSJ). Takagi (1997) published the description of the first-instar nymph from material collected from *Miscanthus* sp. on the Kowloon peninsula in 1965 by an unstated collector. Takagi also stated that Ferris had reported this species from HK in 1955. Reported from HK by Tao (1999b).

Serrataspis maculata Ferris (1955)

Reported from HK by Tao (1999b).

Smilacicola crenatus Takagi (1983)

Described from HK Island on *Smilax* sp., holotype is in HUSJ. See Takagi (1983) for discussion.

Thysanofiorinia leei Williams (1971)

Described from HK. Holotype and paratypes on "lychee (*Nephelium* sp.)" [almost certainly *Litchi chinensis*] from the former Governor's Lodge at Fanling (NT); also paratypes on same host from Taiwan (all type material in BMNH). This record is the basis for Lee & Winney's (1981) listing.

Thysanofiorinia nephelii (Maskell, 1897)

Maskell's brief description mentions China as a collecting locality, and Williams (1971) also reported *T. nephelii* from "China (mainland and Taiwan)". A former reference in ScaleNet, quoting HK as a syntype locality, was incorrect but HK voucher material exists in USNM in the form of quarantine material from *Litchi chinensis* fruit, intercepted at Seattle from HK in 1973 (D. Miller pers. comm.). Tao (1999b) listed this species for HK, but gave no further details.

Unaspis citri (Comstock, 1883)

Reported from HK by Wu (1935)—see ScaleNet.

Unaspis euonymi (Comstock, 1881)

Reported from HK by Nakahara (1982: 85).

Unaspis yanonensis (Kuwana, 1923)

Reported from HK by Blackburn & Miller (1984b: 3).

Diaspidinae, undetermined genus 1

Single slide in BMNH, with two curious immature stages, from upper midrib of undetermined bamboo on High West summit, HK Island (coll. Martin). Three females of *Kuwanaspis* ?*elongata* (Takahashi) (*q.v.*) are also on this slide.

Diaspididae—Leucaspidinae

Lopholeucaspis cockerelli (Grandpré & de Charmoy, 1899)

Single sample in BMNH, with host quoted as *Ulmus parvifolia* [no *Ulmus* species is listed from HK by HK Herbarium] from Kadoorie Farm (NT); also reported from HK by Tao (1999b) and by Lee & Winney (1981), almost certainly quoting this record.

Neoparlatoria formosana Takahashi (1931) (Fig. 29)

Specimens in BMNH (coll. Lau) from *Cyclobalanopsis myrsinifolia* on HK Island, the sample mixed with *N. yunnanensis* (see below). A further sample was collected by the first author (vouchers in BMNH), probably from the same host species. Tang (1977:136) placed *N. lithocarpi* Takahashi (1934) as a junior synonym of *N. formosana*. The descriptions, and BMNH material of both species from Takahashi's collection (probably syntypic), suggest this synonymy to be erroneous, the nature and number of pygidial gland spines being quite different—*N. lithocarpi* is therefore here reinstated as a valid species **stat. rev.**, but it is not known from HK.

Neoparlatoria yunnanensis Young (1985)

Specimens in BMNH, from ?*Litsea* sp. by Shek Pik—Fan Lau road (Lantau I.) and from *Cyclobalanopsis myrsinifolia* on HK Island, the latter sample mixed with *N. formosana* (see above). Both samples appear to comprise the same species and the determination is tentative with the possibility that it is a similar but undescribed species (S. Takagi, pers. comm.).

***Neoparlatoria*, undetermined sp. 1**

A member of the *Neoparlatoria* group is in BMNH, probably undescribed (S. Takagi, pers. comm.), collected from *Cyclobalanopsis neglecta* on HK Island.

Parlatoria acalcarata McKenzie (1960)

Described from HK on *Clausena lansium* collected by S.K. Cheng in 1957. Holotype in UCD, and a paratype in USNM.

Parlatoria camelliae Comstock (1883)

Reported from HK by Maskell (1897)—see ScaleNet.

Parlatoria cinerea Hadden (1909)

Reported from HK by Kuwana & Muramatsu (1932)—see ScaleNet.

Parlatoria desolator McKenzie (1960)

Paratypes in USNM, from *Pyrus sinensis* in HK, Koebele collection #1429. No HK material in BMNH.

Parlatoria pergandii Comstock (1881)

Single sample in BMNH, from *Citrus maxima*. *Parlatoria sinensis* Maskell (1897), a synonym of *P. pergandii*, was described from HK on *Citrus* sp., with syntypes in NZAC and USNM.

Parlatoria proteus (Curtis, 1843)

Vouchers in BMNH and PPRD, from *Chrysalidocarpus lutescens, Cymbidium sinense, Dracaena sanderiana, Ficus tinctoria, Melia azedarach, Phoenix canariensis, Schefflera heptaphylla* [= *S. octophylla*], *Vanda* sp. and undetermined orchid. Reported from HK by Lee & Winney (1981).

Parlatoria sinensis Maskell (1897)

see *Parlatoria pergandii* Comstock (1881)

Parlatoria ziziphi (Lucas, 1853)

Vouchers in BMNH and PPRD, from *Atalanta buxifolia*, *Citrus grandis*, *C. limon*, *C. paradisi* and *C. reticulata*. Reported from HK by Lee & Winney (1981), and by Blackburn & Miller (1984a).

Silvestraspis uberifera (Lindinger, 1911)

Vouchers in BMNH, from *Syzygium hancei* at Tai Tam, HK Island. Reported from the Kowloon Peninsula, on *Syzygium jambos*, by Takagi (1969).

Thysanaspis acalyptus Ferris (1955)

Reported from HK by Tao (1999b).

Leucaspidinae, undetermined genus 1

Specimens in BMNH, from *Cyclobalanopsis championii* at Black's Link, HK Island. The individuals were partially hidden by the overhanging lower-surface leaf midribs and by leaf pubescence. This species is pupillarial, and the authors have not succeeded in dissecting any of the delicate females from their protective nymphal exuviae. Sadao Takagi (pers. comm.) also experienced great difficulties with preparation of specimens for examination and he noted that this is a highly modified taxon, almost certainly belonging to an undescribed genus. Takagi was able to observe most of the important characters over a series of specimens—but no complete female could be dissected for illustrative purposes. It is still uncertain whether this armoured scale belongs to the Leucaspidini or the Thysanaspidini.

Diaspididae—Odonaspidinae

Froggattiella mcclurei Ben-Dov (1988)

Described from mainland China but also reported from HK on *Bambusa* sp. by Ben-Dov (1988), with voucher material in USNM.

Froggattiella penicillata (Green, 1905)

Reported from HK by Ben-Dov (1988), based on a US quarantine interception on *Bambusa pervariabilis*, with voucher material in USNM.

Odonaspis greenii Cockerell (1902)

Reported from HK by Ben-Dov (1988), based on a US quarantine interception on *Bambusa pervariabilis*, with voucher material in USNM [Same data as for *F. penicillata*, above.]

Odonaspis morrisoni Beardsley (1966)

Reported from HK by Ben-Dov (1988), from *Distichlis* sp. at Sha Tau Kok (NT) with voucher material in UCD.

Odonaspis siamensis (Takahashi, 1942)

While this work was in progress HK specimens were received at BMNH from *Bambusa glaucescens* cultivated variety "Fernleaf", the first record from HK. Sadao Takagi (pers. comm.) also expressed the opinion that NHM material on loan to him [mixed with *Kuwanaspis linearis*, see above] answered the description of *O. siamensis*. This species was described from Thailand, in the genus *Froggattiella*, but Ben Dov (1988) retained it in *Odonaspis*, following Ferris (1955). Ben Dov also quoted several examined samples (USNM) from China and one sample from the Philippines, all from species of *Bambusa* or *Dendrocalamus*.

Diaspididae—Parlatoriinae

see Diaspididae—Leucaspidinae, above

Diaspididae—Rugaspidiotinae

see Diaspididae—Diaspidinae, above

Diaspididae—Smilacicolinae

see Diaspididae—Diaspidinae, above

Eriococcidae

Asiacornococcus exiguus (Maskell, 1897)

Described from HK on undetermined host. Syntypes in NZAC, UCD and USNM.

Eriococcus graminis Maskell (1897)

Described from HK on undetermined grass collected by Koebele. Syntypes in NZAC, UCD and USNM.

Halimococcidae

Thysanococcus squamulatus Stickney (1934)

Described from material from Guangdong (mainland China) on *Calamus tetradactylus*, and from HK on undetermined host. Syntypes in USNM.

Kerriidae

Kerria greeni (Chamberlin, 1923)

Reported from HK by Schroer *et al*. (2008)—see ScaleNet. Material from *Ficus pumila* is in UCD.

Tachardina aurantiaca (Cockerell, 1903)

Single sample in BMNH, from *Averrhoa carambola* at Governor's Lodge, Fanling (NT), this sample listed as *Tachardina* sp. by Lee & Winney (1981).

***Tachardina* undetermined sp. 1**

Single sample in BMNH, from *Michelia figo* on HK Island, sent by Hill. This record was referred to by Hill *et al*. (1982) and by Lee & Winney (1981).

Margarodidae

Margarodidae *sens. lat*. has been split into 11 families (see ScaleNet), with all HK species belonging to the Monophlebidae, below.

Monophlebidae

Crypticerya jakobsoni (Green, 1913)

see *Icerya jacobsoni* Green (1913)

***Crypticerya* undetermined sp. or spp**

HK samples provisionally determined as *Crypticerya* in BMNH, from *Alchornea trewioides, Litsea glutinosa* and undetermined host. These were initially cautiously placed in *Steatococcus* prior to its placement as a junior synonym of *Crypicerya* by Unruh & Gullan (2008a, 2008b).

Drosicha corpulenta (Kuwana, 1902)

Sample collected from *Malvaviscus arboreus* at TLF was determined by Tang, but the whereabouts of vouchers is not known.

Drosicha frauenfeldi (Karsch, 1877)

Described from HK but host plant was not indicated. Syntypes only males, depository unknown.

Drosicha maskelli (Cockerell, 1902)

Described by Maskell (1897) from HK under a homonym (*Monophlebus burmeisteri*), the replacement name *maskelli* proposed by Cockerell. Original material was collected from *Gardenia florida*, with syntypes in USNM. Single HK sample in BMNH, from *Citrus reticulata*.

***Drosicha* undetermined sp. or spp.** (Fig. 31)

Vouchers in BMNH, mostly single individuals, from *Ficus hispida*, *Malvaviscus arboreus* var. *penduliforus*, *Schefflera heptaphylla* [= *S. octophylla*], and undetermined host.

Icerya aegyptiaca (Douglas, 1890)

Vouchers in BMNH, from *Alchornea trewioides, Aporusa dioica, Bridelia tomentosa, Bridelia* sp., *Codiaeum variegatum* var. *pictum, Ficus hirta, Litsea rotundifolia, Macaranga tanarius* and *Psychotria asiatica*. Reported from HK by Lee & Winney (1981).

Icerya assamensis (Rao, 1951)

Vouchers in BMNH, from *Codiaeum variegatum* var. *pictum, Gnetum luofuense, Litsea glutinosa* and *Rhodomyrtus* sp. Listed by Lee & Winney (1981) as *Steatococcus* ?*assamensis* Rao.

Icerya crocea Green (1896)

Samples in BMNH, from *Rubus reflexus* and *Trema orientalis*, both at Fung Yuen village (NT).

Icerya formicarum Newstead (1897)

Reported from HK by Tang & Hao (1995)—see ScaleNet.

Icerya jacobsoni Green (1913)

Reported from HK by Tao (1999b) as *Crypticerya jakobsoni* [*sic*], without reference to vouchers. Voucher specimen from *Citrus* sp. in PPRD—see Appendix 4.

Icerya jaihind (Rao, 1951) (cover and title page photograph)

Two samples in BMNH, from *Litsea glutinosa* and *Machilus velutina*. Also samples at PPRD, from *Artocarpus hypargyreus* and *Ficus variegata* var. *chlorocarpa*. Single sample from *Syzygium jambos* due to be deposited in ANIC (P. Gullan, pers. comm.). This species has a spectacular appearance when its secreted woolly "fingers" and dorsal coating are intact—see title page photograph.

Icerya purchasi Maskell (1879)

Vouchers in BMNH, from *Cassia surattensis, Casuarina* sp., *C. equisetifolia, Citrus limon, C. grandis* and *Rosa* sp. Reported from HK by Lee & Winney (1981).

Icerya seychellarum (Westwood, 1855)

Samples in BMNH, from *Bridelia tomentosa, Cinnamomum camphora, Livistona chinensis, Psidium guajava, Syzygium jambos* and *Trema orientalis*. Reported from HK by Lee & Winney (1981).

Icerya **undetermined sp. or spp**

Two samples in BMNH, from *Ficus microcarpa* and undetermined host.

Iceryini, undetermined taxon

Small sample in BMNH from *Bridelia tomentosa*, and much larger sample from undetermined *Bridelia* sp.

Monophlebus burmeisteri Maskell (1897)

see *Drosicha maskelli* (Cockerell, 1902)

Steatococcus ?*assamensis* Rao

see *Icerya assamensis* (Rao, 1951)

Steatococcus spp

see *Crypticerya* spp

Ortheziidae

Insignorthezia insignis (Browne, 1887)

Single Takahashi slide, bearing several specimens from *Lantana* sp., collected in HK in 1940, present in TARI (Shu-Pei Chen, pers. comm.). This slide is labelled with the original and much better-known name, *Orthezia insignis*.

Orthezia insignis Browne (1887)

see *Insignorthezia insignis* (Browne, 1887)

Pseudococcidae

Antonina crawi Cockerell (1900)

Reported from HK by Hendricks & Kosztarab (1999)—see ScaleNet.

Antonina graminis (Maskell, 1897)

Described from HK on undetermined grass. Lectotype in NZAC.

Antonina nakaharai Williams & Miller (2002)

Reported from HK, on *Sinobambusa tootsii* and on "?*Ixora*" [an unlikely host], by Williams & Miller (2002), the material deposited in USNM.

Antonina pretiosa Ferris (1953)

Two samples in BMNH, from ?*Arundinaria* sp. by Sai Kung—Ma On road (NT), and from an undetermined stick bamboo at HK Wetland Centre (NT). This heavily sclerotised mealybug feeds under blade-base sheaths and its presence is indicated by ant interest.

Antonina socialis Newstead (1901)

Reported from HK, on *Bambusa* sp., by Williams & Miller (2002), the material deposited in USNM.

Crisicoccus pini (Kuwana, 1902)

Single sample in BMNH, from *Pinus massoniana* at TLF.

Dysmicoccus angustus (Ezzat & McConnel, 1956)

An interception in China of material from HK, on *Indocalamus herklotsii*, was reported by Tang (1992: 284) but the whereabouts of vouchers is not known.

Dysmicoccus brevipes (Cockerell, 1893)

Single sample in BMNH, from *Ananas comosus* at TLF. Reported from HK by Lee & Winney (1981), probably quoting this sample.

***Dysmicoccus* undetermined sp. 1**

Single sample in BMNH, from *Pinus* sp. at Castle Peak.

Eumyrmococcus smithii Silvestri (1926)

Species described from Macau, with lectotype (IEAUN) designated by Williams (1978), and a paralectotype in BMNH. Williams listed further examined Chinese material, along with material from Taiwan and Okinawa (Japan). Three slides in BMNH bear the data "China, Taipo Market, 26 December 1926, Silvestri"—these were referred to by Williams (1978) but not in his subsequent account of *Eumyrmococcus* in 1998. Scrutiny of Silvestri (1926) reveals that these slides refer to the locality Tai Po Market in the NT of HK—"una seconda volta presso Taipò Market (Penisola di Kowloon)….." Tao (1999b) recorded this mealybug from two mainland Chinese provinces, along with Taiwan and Japan, but did not refer to HK or to voucher material.

Ferrisia virgata (Cockerell, 1893) (Fig. 32)

Samples in BMNH, from *Citrus* sp., *Cocculus orbiculatus* and *Melia azedarach.*

Formicococcus robustus (Ezzat & McConnell, 1956)

Single sample in BMNH, collected from stem nodes of *Gnetum luofuense* in Aberdeen Country Park (HK Island), cautiously determined by the authors.

Geococcus lawrencei Williams (1969)

Single sample in BMNH, collected from *Codiaeum variegatum* var. *pictum* in Kowloon by the second author. The infestation was causing serious die-back of the seedling host.

Lankacoccus ornatus (Green, 1922)

Two samples in BMNH, both from *Jasminum lanceolarium* on HK Island. There is also material in PPRD and in USNM.

Maconellicoccus hirsutus (Green, 1908)

Samples in BMNH, from *Dimocarpus longan [= Euphoria longan], Ficus* sp., *Hibiscus rosa-sinensis, H. tiliaceus* and *Hibiscus* sp. Reported from HK by Lee & Winney (1981).

Nipaecoccus vastator (Maskell, 1895)

see *Nipaecoccus viridis* (Newstead, 1894)

Nipaecoccus viridis (Newstead, 1894)

Samples in BMNH, from *Citrus* sp., *Clausena lansium, Dimocarpus longan [= Euphoria longan]* and *Nerium oleander.* Reported from HK by Lee & Winney (1981), under the junior synonym *N. vastator* (Maskell, 1895).

Palmicultor lumpurensis (Takahashi, 1951)

Single large sample in BMNH, from bamboo collected by Hill in 1973 but with no further data.

Phenacoccus madeirensis Green (1923)

Vouchers in BMNH and PPRD, from single large colony defoliating undetermined member of the Malvaceae on HK Island.

Phenacoccus parvus Morrison (1924)

Three samples in BMNH, all from undetermined hosts. Material is present in PPRD from *Emilia sonchifolia*.

Phenacoccus solani Ferris (1918)

Two samples in BMNH, on *Emilia sonchifolia* and *Melia azedarach*, both from Kowloon.

Phenacoccus solenopsis Tinsley (1898)

Material collected from *Hibiscus mutabilis* in HK in 2008 was determined by Gullan, with voucher material to be deposited in ANIC. Eradication measures were carried out in HK in 2009, following this determination.

Planococcus angkorensis (Takahashi, 1942)

Single sample in BMNH, from *Psidium guajava* at TLF.

Planococcus citri (Risso, 1813)

Samples in BMNH, from *Codiaeum variegatum, Desmodium intortum, Dimocarpus longan* [= *Euphoria longan*], "*Erigeron canadiensis*" [possibly *Conyza canadensis*], *Ipomoea batatas* and *Psidium guajava*. Reported from HK by Lee & Winney (1981), and some of the host records quoted by them are now thought to concern *P. minor*, see below.

Planococcus litchi Cox (1989)

Sole individual from HK is the holotype (BMNH), collected from a lychee leaf intercepted at London Heathrow airport, U.K., but there is now also material from *Eriobotrya japonica* in PPRD (see Appendix 4).

Planococcus minor (Maskell, 1897)

Samples in BMNH and PPRD, from *Bridelia tomentosa, Camellia* sp., *Ficus elastica, Macaranga tanarius, Psidium guajava* and *Codiaeum variegatum*. Many earlier published records for *P. citri* in fact concern *P. minor.*

Pseudococcus citriculus Green (1922)

see *P. cryptus* Hempel (1918)

Pseudococcus comstocki (Kuwana, 1902)

see discussion of *P. cryptus* Hempel (1918), below

Pseudococcus cryptus Hempel (1918)

Single small HK sample in BMNH, from *Psidium guajava*. There is also another HK voucher sample in BMNH, originally determined as its junior synonym *P. citriculus*, from curled leaves of an undetermined host at Pak Sha O (NT). CAB International (1975) record *P. comstocki* (Kuwana, 1902) from HK, but ScaleNet states that many records of *comstocki* actually refer to *P. cryptus* and ScaleNet does not list HK in the distribution of *P. comstocki*—we therefore also omit *P. comstocki* from the HK check list.

Pseudococcus gilbertensis Beardsley (1966)

Samples in BMNH, from *Asparagus lucidus, Citrus* sp., *Ficus* sp. and *Ligustrum sinense*.

Pseudococcus jackbeardsleyi Gimpel & Miller (1996)

A single sample, with individuals mixed with *Planococcus citri* (Risso), is distributed between two slides in BMNH, determined by Douglas Williams. The host is only given as "leguminous vine in scrubland" at the old Tung Chung village, Lantau I.

Pseudococcus odermatti Miller & Williams (1997)

HK material in BMNH comprises one paratype specimen, from *Pittosporum tobira* at Sheung Shui (NT), and also three individuals from *Rapanea neriifolia* at Tai Tam Country Park, HK Island.

Pseudococcus **undetermined sp. or spp**

HK voucher slides, with immature specimens only, are in BMNH from *Litchi chinensis* and *Phyllanthus cochinchinensis.*

Rastrococcus chinensis Ferris (1954)

Samples in BMNH and PPRD, from *Alocasia* sp., *Aporusa dioica, Ardisia lindleyana, Psychotria asiatica* and *Syzygium hancei.*

Rastrococcus iceryoides (Green, 1908)

Reported from HK by Ferris (1954) (feeding on *Mallotus* sp.), by Ben-Dov (1994) and by Tao (1999b). No HK vouchers in BMNH or PPRD.

Rastrococcus invadens Williams (1986)

Single female and nymphs in BMNH, from undetermined host at TLF. Tao (1999b) listed this species, mistakenly implying that it was described from HK [it was described from Pakistan].

Rastrococcus rubellus Williams (1989)

Samples in BMNH, from *Citrus grandis*, *Ficus* sp., *Mallotus paniculatus* and *Plumeria rubra* c.v. *acutifolia*.

Rhizoecus hibisci Kawai & Takagi (1971)

A single specimen in BMNH, from *Rhapis* sp. intercepted in the Netherlands from HK, along with other slides of material intercepted in the Netherlands from mainland China. Williams (1996) discussed the quarantine importance of this species.

Saccharicoccus sacchari (Cockerell, 1895)

Two samples in BMNH, both from *Saccharum officinarum*, at TLF and Fung Yuen Village (NT). Reported from HK by Lee & Winney (1981), probably referring to the TLF record above, and by Tao (1999b).

Trionymus orientalis (Maskell, 1898)

Described from HK on undetermined grass. Syntypes in NZAC.

***Trionymus* undetermined sp. 1**

Single Takahashi slide bearing several specimens from *Citrus* sp., collected in HK in 1940, present in TARI (Shu-Pei Chen, pers. comm.).

Xenococcus acropygae Williams (1998)

Reported from HK by Silvestri (1926), Williams (1978) and by Tao (1999b) as *X. annandalei* Silvestri. Williams (1998: 25) considered that the HK material is probably in fact referable to his new species *X. acropygae*. *X. annandalei* is currently only known from its type sample, from Orissa, India. This curious mealybug genus is habitually ant-attended (by *Acropyga* species) and is found underground, feeding on roots. Williams (1985) opined that *X. acropygae* will probably be found to occur throughout south-east Asia.

Xenococcus annandalei Silvestri (1924)

see *Xenococcus acropygae* Williams (1998), above.

Psylloidea

- We generally follow the nomenclatural system of Hodkinson (1986)

Calophyidae

Calophya triangula Yang (1984)

Two HK males from Pui O village, Lantau I., present in MMB (Igor Malenovsky, pers. comm.). This species was described from Taiwan, its host plant unknown.

Cecidopsylla schimae Kieffer (1905)

see *Cecidopsylla sinensis* Burckhardt (1996)

Cecidopsylla sinensis Burckhardt (1996)

Two paratype females from HK in MHNG, collected from Kadoorie Farm (NT), but no host data given (Burckhardt, 1996). Single large HK sample in BMNH, from galls on *Schima superba* at Plover Cove Country Park (NT): Daniel Burckhardt (pers. comm.) determined this sample, and additional vouchers are also in MHNG and USNM, those in USNM under an earlier determination of *C. schimae* Kieffer (1905).

Carsidaridae

Carsidara marginalis Walker (1869)

Two samples in BMNH, one from *Sterculia nobilis* (coll. Lau) and the other sent to CIE by HK Agriculture & Fisheries Department from “noble bottle tree” (recorded as *Brachychiton rupestris* by Hollis, 1987, but not listed by HK Herbarium). Also reported from HK by Hodkinson (1986). Reported from HK by Lee & Winney (1981) as *Carsidara* sp.

Mesohomotoma camphorae Kuwayama (1908)

Reported from HK on *Murraya paniculata* by Chan (1998) but no known voucher material. Material deter-

mined as this species is in PPRD (see Appendix 4), the host data quoted as *Hibiscus tiliaceus*, so this may prove to be *M. hibisci*, below, as was suggested in discussion by Hollis (1987: 106-107).

Mesohomotoma hibisci (Froggatt, 1901)

Two samples in BMNH, both from *Hibiscus tiliaceus* in NT, the earlier sent for determination by Hill.

Tenaphalara acutipennis Kuwayama (1908)

Three samples in BMNH, all from *Bombax ceiba* [=*B. malabaricum*], and two slides are in PPRD.

Tyora congrua Walker (1869)

see discussion of *T. guangdongana*, below

Tyora guangdongana Yang & Li (1985)

Two samples of adults and nymphs in BMNH, from *Sterculia lanceolata* (the true host), along with a sample of adults-alone taken from "chrysanthemum" on which plant they were almost certainly vagrant. Reported from HK by Lee & Winney (1981), under the mis-spelt name *Tyara* sp. David Hollis (BMNH, pers. comm.) considers that this HK material is likely to be *T. congrua* Walker (1869), in which case a synonymy may be indicated.

Homotomidae

Caenohomotoma radiata (Kuwayama, 1908)

see *Homotoma radiata* Kuwayama (1908)

Homotoma radiata Kuwayama (1908)

Single sample in BMNH, from *Ficus superba japonica*. Hill *et al*. (1982) also reported this species from HK, as did Lee & Winney (1981) and Hollis & Broomfield (1989). The combination *Caenohomotoma radiata* has been used by several authors but the genus *Caenohomotoma* Yang & Li was synonymized with *Homotoma* Guérin-Méneville by Hodkinson (1986: 312).

Homotoma ?yunnanica Yang & Li (1984) (Fig. 34)

Large sample in BMNH, from a venerable village-centre *Ficus tinctoria gibbosa* at Tai O, Lantau I. Our determination is provisional, many similar species having been described from mainland China.

Macrohomotoma gladiatum Kuwayama (1908)

= *Macrohomotoma sinica* Yang & Li (1984) **syn. nov.**

Reported from HK by Hodkinson (1986). Several samples in BMNH, collected on banyan trees (*Ficus microcarpa*) from 1973 onwards, and these were eventually determined as *M. sinica* Yang & Li. However, re-examination of these specimens in comparison with Kuwayama's and Yang & Li's original descriptions, combined with verbal opinions expressed by other psylloid specialists, has led us to conclude that *M. sinica* should be placed as a junior synonym of *M. gladiatum*. One slide of HK material is in PPRD. See also discussion of *M. striata* Crawford, below.

Macrohomotoma sinica Yang & Li (1984)

see *Macrohomotoma gladiatum* Kuwayama (1908)

Macrohomotoma striata Crawford (1925)

Described from India and reported from HK by Hodkinson (1986) and by Hill *et al*. (1982). Material in BMNH initially determined as *M. striata* was redetermined as *M. sinica* and, later, as *M. gladiatum* (see above). However further collecting, or vouchers elsewhere, may support the presence of *M. striata* in the territory. Certainly, Chinese records of *M. striata* on *Ficus microcarpa* are likely to be misidentifications of *M. gladiatum*.

***Macrohomotoma* undetermined sp. 1**

Reported from *Camellia japonica* in HK by Lee & Winney (1981).

Phacopteronidae

Cornegenapsylla sinica Yang & Li (1982)

Single sample in BMNH, from *Dimocarpus longan* [= *Euphoria longan*], sent to IIE by Winney in 1980—all material dry-mounted. This was originally determined as an undetermined species of *Pseudophacopteron* and there is also BMNH material of this species from Singapore, West Malaysia and Thailand.

Pseudophacopteron undetermined sp. 1

See *Cornegenapsylla sinica* Yang & Li (1982)

Psyllidae

***Acizzia* undetermined sp. 1**

Single sample in BMNH, from "wattle" *Acacia* sp. in West Tai Mo Shan Country Park (NT).

Blastopsylla occidentalis Taylor (1985)

Two samples in BMNH, one with vouchers also in PPRD and USNM, collected from *Eucalyptus tereticornis* at TLF and from *Eucalyptus* sp. in NT.

Cacopsylla fatsiae (Jensen, 1957)

Described from USA (California) but possibly introduced to there from the Oriental Region. Hosts were given as *Fatsia* spp and *Schefflera heptaphylla* [= *S. octophylla*] by Hodkinson (1986), who also reported its presence in HK. Reported on *Schefflera heptaphylla* [= *S. octophylla*] from HK by Lee & Winney (1981). No HK material in BMNH.

Cacopsylla schefflerae (Yang, 1984)

Several HK samples in BMNH, all from *Schefflera heptaphylla* [= *S. octophylla*].

***Cacopsylla* undetermined sp. 1** (Figs 35, 36)

Two adult males in BMNH, said to have been part of large colony on *Rhaphiolepis indica*. The authors subsequently collected a single adult female and a number of exuviae from the same host at the HK Wetland Centre (NT).

Colophorina* sp. near *hungtouensis (Fang & Yang, 1986) **comb. nov.** (from *Psylla*).

This species is represented in BMNH by two HK samples, from *Phyllodium pulchellum* at the old Tung Chung village (Lantau I.) and from *P. elegans* at Three Fathoms Cove (NT). *Psylla hungtouensis* had been placed under *Colophorina* in the BMNH collection, as a manuscript change resulting from unpublished work on the group by David Hollis (pers. comm.).

***Colophorina*-group, undetermined sp. 1**

Single specimen in BMNH, from *Dalbergia hupeana* at Lam Tsuen Valley.

***Colophorina*-group, undetermined sp. 2**

BMNH has two samples from *Dendrotrophe frutescens*, one sample from *Ilex graciliflora* and a single (vagrant) specimen from grass, all appearing to belong to this one species.

***Ctenarytaina* undetermined sp. 1**

Single sample in BMNH, from *Syzygium hancei* at Tai Po Kau forest (NT).

***Ctenarytaina* undetermined sp. 2**

Single sample in BMNH, from *Syzygium* sp. on HK Island. It is noted on two slides that this sample is not conspecific with sp.1 above.

Diaphorina citri Kuwayama (1908)

Three samples, from *Citrus sinensis* and *Citrus* spp, are in BMNH dry collection, the oldest collected from "orange leaves" in July 1908 by F. W. Terry and determined by F. Laing—but apparently no slides have been prepared. There is also dry material in PPRD, from *Murraya paniculata* collected in 2010. This species colonises various species and varieties of *Citrus* and *Murraya*. Reported from HK by Lee & Winney (1981).

Heteropsylla cubana Crawford (1914)

Five samples in BMNH, from *Leucaena leucocephala*, ?*Albizia corniculata* and an undetermined planted legume. There is slight variation between these samples but *H. cubana* is an exotic introduction from the neotropics and it is unlikely that there is more than one species concerned. BMNH material from *L. leucocephala* at Tai O (Lantau I.) is only dry-mounted.

Livia khaziensis Heslop-Harrison (1949)

Single sample in BMNH, from *Juncus prismatocarpus* at Wu Kwai Sha, slide-mounted and dry. This record was reported by Lee & Winney (1981), under its junior synonym *L. nigra* Klimaszewski (1964).

Livia nigra Klimaszewski (1964)

see *Livia khaziensis* Heslop-Harrison (1949)

Paurocephala bifasciata Kuwayama (1931) (Fig. 33)

Several samples in BMNH, all from *Ficus hispida*. Hill *et al*. (1982) reported this species from HK, but as an undescribed taxon. This is the species recorded as *Paurocephala* sp. by Lee & Winney (1981).

Paurocephala boehmeriae Mifsud & Burckhardt (2002)

Single large sample in BMNH, from *Boehmeria nivea* on the Po Lin Monastery—Tung Chung path, Lantau I.

Paurocephala chonchaiensis Boselli (1929)

Single sample in BMNH, from *Ficus pumila* on HK Island.

Paurocephala psylloptera Crawford (1914)

see *Paurocephala* undescribed sp. near *boehmeriae*, below

Paurocephala* undescribed sp. near *boehmeriae Mifsud & Burckhardt

Two large samples in BMNH, from *Trema orientalis*. Almost certainly this is the species reported from the same host in HK by Lee & Winney (1981) as *P. psylloptera* Crawford (1914). However, many samples of *Paurocephala* have been erroneously determined as *P. psylloptera* and that species has not been recorded from HK (Mifsud & Burckhardt, 2002).

***Paurocephala* undetermined sp. 1**

Single specimen from HK present in MMB (Igor Malenovsky, pers. comm.).

Psylla sp. near *hungtouensis* (Fang & Yang, 1986)

see *Colophorina* sp. near *hungtouensis* (Fang & Yang, 1986)

Syntomoza hsenpinensis (Fang & Yang, 1986)

This species was listed from HK by Burckhardt and Mifsud (2003), the host plant quoted as *Homalium hainanensis*. Two males from HK are present in MMB (Igor Malenovsky, pers. comm.).

Triozidae

Megatrioza eugenioides Crawford (1917)

Reported from *Syzygium jambos* in HK by Lee & Winney (1981), as a tentative determination, but with no known voucher material.

Megatrioza vitiensis (Kirkaldy, 1907)

No HK vouchers in BMNH but this species was reported from HK by Hodkinson (1986). However, it is likely that Hodkinson's report refers to the species below, which belongs to the same group but differs from *vitiensis*.

***Megatrioza* undetermined sp. 1**

Single sample in BMNH, from *Syzygium* sp. Hill *et al*. (1982) also refer to this species in HK, as *Megatrioza* sp. near *vitiensis*. It is possible that this is also *Megatrioza* ?*eugenioides* Crawford (1917), listed on *Syzygium jambos* by Lee & Winney (1981), see above, but we retain that as a separate species entry pending further collecting from *Syzygium* / *Eugenia* species.

Pauropsylla depressa Crawford (1912)

No HK vouchers in BMNH but this species was reported from HK by Hodkinson (1986).

Pauropsylla udei Rübsaamen (1899)

Three samples in BMNH, from *Ficus variegata chlorocarpa* and *F. variegata*. One sample, from *F. variegata* at Tai O (Lantau I.), comprises only nymphs from near-spherical galls. Hill *et al*. (1982) described and illustrated the feeding effects of this species on its host. Reported from HK by Lee & Winney (1981).

Trioza camphorae Sasaki (1910)

Single sample in BMNH, from *Cinnamomum camphora*. Hill *et al*. (1982) also reported this species from HK, as did Lee & Winney (1981). Sasaki (1910) gave the distribution as the "main island of Japan, Shikoku, Kiusiu, as well as Formosa, South China, etc".

Trioza erytreae (del Guercio, 1918)

Hill *et al*. (1982) mentioned this species in discussion of HK Psylloidea, but is unclear whether they were implying its presence in the territory. There are no known HK vouchers of this African pest of *Citrus* crops, and it is considered that this species is not included in the HK fauna.

Trioza jambolanae Crawford (1917)

Single sample in BMNH, from *Syzygium jambos*.

Trioza syzygii Li & Yang (1991)

Single specimen present in PPRD, bearing this determination. It was collected in 1975, is dry-mounted and there is no indication of the identity of the determiner. This record is uncertain.

***Trioza* undetermined sp. 1**

Single sample in BMNH, comprising several adults but no nymphs, taken from *Ficus microcarpa* in Kowloon (coll. Martin).

***Trioza* undetermined sp. 2**

Four vagrant individuals in BMNH, from two separate samplings in the same locality on HK Island.

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Appendix 1. Alphabetical check list of Hong Kong Sternorrhyncha, indicating the group to which each species belongs

• = names excluded from the check list accounts – entries appear in the main text but refer the reader to other taxa or other name combinations, or are regarded as erroneous records for stated reasons

Abgrallaspis cyanophylli (Signoret, 1869)	Coccoidea – Diaspididae – Aspidiotinae
Acanthaleyrodes styraci Takahashi (1942)	Aleyrodidae – Aleyrodinae
Acanthomytilus imperatae (Kuwana, 1931)	Coccoidea – Diaspididae – Diaspidinae
Acizzia undetermined sp. 1	Psylloidea – Psyllidae
Aclerda yunnanensis Ferris (1950)	Coccoidea – Aclerdidae
Aiceona actinodaphnis Takahashi (1921)	Aphididae – Aiceoninae
Aiceona robustiseta Ghosh & Raychaudhuri (1973)	Aphididae – Aiceoninae
Aiceona titabarensis (Raychaudhuri & Ghosh, 1964)	Aphididae – Aiceoninae
Aleurocanthus citriperdus Quaintance & Baker (1916)	Aleyrodidae – Aleyrodinae
Aleurocanthus gordoniae Takahashi (1941)	Aleyrodidae – Aleyrodinae
Aleurocanthus husaini Corbett (1939)	Aleyrodidae – Aleyrodinae
Aleurocanthus inceratus Silvestri (1927)	Aleyrodidae – Aleyrodinae
Aleurocanthus longispinus Quaintance & Baker (1917)	Aleyrodidae – Aleyrodinae
Aleurocanthus rugosa Singh (1931)	Aleyrodidae – Aleyrodinae
Aleurocanthus spiniferus (Quaintance, 1903)	Aleyrodidae – Aleyrodinae
Aleurocanthus woglumi Ashby (1915)	Aleyrodidae – Aleyrodinae
Aleurocanthus undetermined sp. 1, *woglumi*-group	Aleyrodidae – Aleyrodinae
Aleurocanthus undetermined sp. 2, *woglumi*-group	Aleyrodidae – Aleyrodinae
Aleurocanthus undetermined sp. 3	Aleyrodidae – Aleyrodinae
Aleuroclava aucubae (Kuwana, 1911)	Aleyrodidae – Aleyrodinae
Aleuroclava gordoniae (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Aleuroclava guyavae (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Aleuroclava indicus (Singh, 1931)	Aleyrodidae – Aleyrodinae
Aleuroclava jasmini (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
• *Aleuroclava lanceolata* (Takahashi, 1949)	Aleyrodidae – Aleyrodinae
Aleuroclava meliosmae (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Aleuroclava psidii (Singh, 1931)	Aleyrodidae – Aleyrodinae
Aleuroclava rhododendri (Takahashi, 1935)	Aleyrodidae – Aleyrodinae
Aleuroclava subindica Martin & Mound (2007)	Aleyrodidae – Aleyrodinae
Aleuroclava, undetermined sp. 1	Aleyrodidae – Aleyrodinae
Aleuroclava, undetermined sp. 2	Aleyrodidae – Aleyrodinae
Aleuroclava, undetermined sp. 3	Aleyrodidae – Aleyrodinae
Aleuroclava, undetermined sp. 4	Aleyrodidae – Aleyrodinae
Aleurodaphis blumeae van der Goot (1917)	Aphididae – Hormaphidinae – Cerataphidini
• *Aleurodicus machili* Takahashi (1931)	Aleyrodidae – Aleurodicinae
Aleurolobus marlatti (Quaintance, 1903)	Aleyrodidae – Aleyrodinae
Aleurolobus osmanthi Young (1944)	Aleyrodidae – Aleyrodinae
Aleurolobus rhododendri Takahashi (1934)	Aleyrodidae – Aleyrodinae
Aleurolobus setigerus Quaintance & Baker (1917)	Aleyrodidae – Aleyrodinae
Aleurolobus subrotundus Silvestri (1927)	Aleyrodidae – Aleyrodinae
Aleuroplatus liquidambaris Takahashi (1941)	Aleyrodidae – Aleyrodinae
Aleuroplatus pectiniferus Quaintance & Baker (1917)	Aleyrodidae – Aleyrodinae
• *Aleuroplatus spina* (Singh, 1931)	Aleyrodidae – Aleyrodinae
Aleuroplatus translucidus Quaintance & Baker (1917)	Aleyrodidae – Aleyrodinae
Aleuroplatus, undetermined sp. 1	Aleyrodidae – Aleyrodinae
Aleurotrachelus camelliae (Kuwana, 1911)	Aleyrodidae – Aleyrodinae

Aleurotrachelus fissistigmae Takahashi (1931)	Aleyrodidae – Aleyrodinae
Aleurotrachelus maesae Takahashi (1935)	Aleyrodidae – Aleyrodinae
Aleurotrachelus tuberculatus Singh (1933)	Aleyrodidae – Aleyrodinae
• *Aleyrodes lonicerae* Walker (1852)	Aleyrodidae – Aleyrodinae
Allotrichosiphum cyclobalanopsidis Qiao, Jiang & Martin (2006)	Aphididae – Greenideinae – Greenideini
• *Amphorophora vagans* (van der Goot, 1917)	Aphididae – Aphidinae – Macrosiphini
Andaspis hawaiiensis (Maskell, 1894)	Coccoidea – Diaspididae – Diaspidinae
Anomalosiphum tiomanense Martin & Agarwala (1994)	Aphididae – Greenideinae – Cervaphidini
Antonina crawi Cockerell (1900)	Coccoidea – Pseudococcidae
Antonina graminis (Maskell, 1897)	Coccoidea – Pseudococcidae
Antonina nakaharai Williams & Miller (2002)	Coccoidea – Pseudococcidae
Antonina pretiosa Ferris (1953)	Coccoidea – Pseudococcidae
Antonina socialis Newstead (1901)	Coccoidea – Pseudococcidae
Aonidiella aurantii (Maskell, 1879)	Coccoidea – Diaspididae – Aspidiotinae
Aonidiella citrina (Coquillett, 1891)	Coccoidea – Diaspididae – Aspidiotinae
Aonidiella inornata McKenzie (1938)	Coccoidea – Diaspididae – Aspidiotinae
Aonidiella orientalis (Newstead, 1894)	Coccoidea – Diaspididae – Aspidiotinae
Aonidomytilus albus (Cockerell, 1893)	Coccoidea – Diaspididae – Diaspidinae
• *Aphis citricola* van der Goot (1912)	Aphididae – Aphidinae – Aphidini
Aphis craccivora Koch (1854)	Aphididae – Aphidinae – Aphidini
Aphis eugeniae van der Goot (1917)	Aphididae – Aphidinae – Aphidini
• *Aphis fabae* s. sp. *solanella* Theobald (1914)	Aphididae – Aphidinae – Aphidini
Aphis glycines Matsumura (1917)	Aphididae – Aphidinae – Aphidini
Aphis gossypii Glover (1877)	Aphididae – Aphidinae – Aphidini
Aphis nerii Boyer de Fonscalombe (1841)	Aphididae – Aphidinae – Aphidini
Aphis solanella (Theobald, 1914)	Aphididae – Aphidinae – Aphidini
Aphis spiraecola Patch (1914)	Aphididae – Aphidinae – Aphidini
• *Aphis umbrella* (Börner, 1950)	Aphididae – Aphidinae – Aphidini
Asiacornococcus exiguus (Maskell, 1897)	Coccoidea – Eriococcidae
Asialeyrodes, undetermined sp. 1	Aleyrodidae – Aleyrodinae
Aspidiotus destructor Signoret (1869)	Coccoidea – Diaspididae – Aspidiotinae
Aspidiotus excisus Green (1896)	Coccoidea – Diaspididae – Aspidiotinae
Aspidiotus-group, undetermined sp.1	Coccoidea – Diaspididae – Aspidiotinae
Astegopteryx bambusae (Buckton, 1893)	Aphididae – Hormaphidinae – Cerataphidini
• *Astegopteryx jamuritsu* Takahashi (1931)	Aphididae – Hormaphidinae – Cerataphidini
Astegopteryx minuta (van der Goot, 1917)	Aphididae – Hormaphidinae – Cerataphidini
Astegopteryx styracophila Karsch (1890)	Aphididae – Hormaphidinae – Cerataphidini
Astegopteryx undetermined sp. or spp	Aphididae – Hormaphidinae – Cerataphidini
• *Asterolecanium* spp	Coccoidea – Asterolecaniidae
Aulacaspis acronychiae Takagi & Martin (2010)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis alisiana Takagi (1970)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis calcarata Takagi (1999)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis crawii (Cockerell, 1898)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis divergens (Takahashi, 1935)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis machili (Takahashi, 1931)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis megaloba Scott (1952)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis murrayae Takahashi (1931)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis robusta Takahashi (1931)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis thoracica Robinson (1917)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis tubercularis Newstead (1906)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis yabunikkei Kuwana (1926)	Coccoidea – Diaspididae – Diaspidinae
Aulacaspis yasumatsui Takagi (1977)	Coccoidea – Diaspididae – Diaspidinae

Aulacaspis undetermined sp. or spp	Coccoidea – Diaspididae – Diaspidinae
Aulacophoroides millettiae Qiao, Jiang & Martin (2006)	Aphididae – Aphidinae – Macrosiphini
Aulacorthum nipponicum Essig & Kuwana (1918)	Aphididae – Aphidinae – Macrosiphini
Aulacorthum perillae (Shinji, 1924)	Aphididae – Aphidinae – Macrosiphini
Aulacorthum solani (Kaltenbach, 1843)	Aphididae – Aphidinae – Macrosiphini
Aulacorthum undetermined sp. 1	Aphididae – Aphidinae – Macrosiphini
Bambusaspis bambusae (Boisduval, 1869)	Coccoidea – Asterolecaniidae
Bambusaspis chinae (Russell, 1941)	Coccoidea – Asterolecaniidae
Bambusaspis longula (Russell, 1941)	Coccoidea – Asterolecaniidae
Bambusaspis mimica (Russell, 1941)	Coccoidea – Asterolecaniidae
Bambusaspis minuta (Takahashi, 1930)	Coccoidea – Asterolecaniidae
Bambusaspis / *Asterlocanium* undetermined sp. or spp.	Coccoidea – Asterolecaniidae
Bemisia afer (Priesner & Hosny, 1934)	Aleyrodidae – Aleyrodinae
Bemisia ?berbericola (Cockerell, 1896)	Aleyrodidae – Aleyrodinae
Bemisia emiliae (Chen & Ko, 2006)	Aleyrodidae – Aleyrodinae
Bemisia giffardi (Kotinsky, 1907)	Aleyrodidae – Aleyrodinae
Bemisia phyllanthi (Takahashi, 1962)	Aleyrodidae – Aleyrodinae
Bemisia tabaci (Gennadius, 1889)	Aleyrodidae – Aleyrodinae
Bemisia, undetermined sp. 1	Aleyrodidae – Aleyrodinae
Blastopsylla occidentalis Taylor (1985)	Psylloidea – Psyllidae
Brachysiphoniella montana (van der Goot, 1917)	Aphididae – Aphidinae – Macrosiphini
Cacopsylla fatsiae (Jensen, 1957)	Psylloidea – Psyllidae
Cacopsylla schefflerae (Yang, 1984)	Psylloidea – Psyllidae
Cacopsylla undetermined sp. 1	Psylloidea – Psyllidae
• *Caenohomotoma radiata* (Kuwayama, 1908)	Psylloidea – Homotomidae
Calophya triangula Yang (1984)	Psylloidea – Calophyidae
Capitophorus hippophaes (Walker, 1852)	Aphididae – Aphidinae – Macrosiphini
Capitophorus hippophaes s. sp. *javanicus* Hille Ris Lambers (1953)	Aphididae – Aphidinae – Macrosiphini
Capitophorus mitegoni Eastop (1956)	Aphididae – Aphidinae – Macrosiphini
Carsidara marginalis Walker (1869)	Psylloidea – Carsidaridae
• *Castanocallis margituberculatus* Zhang & Zhong (1981)	Aphididae – Calaphidinae – Panaphidini
Cavariella araliae Takahashi (1921)	Aphididae – Aphidinae – Macrosiphini
• *Cecidopsylla schimae* Kieffer (1905)	Psylloidea – Calophyidae
Cecidopsylla sinensis Burckhardt (1996)	Psylloidea – Calophyidae
Cerataphis brasiliensis (Hempel, 1901)	Aphididae – Hormaphidinae – Cerataphidini
Cerataphis jamuritsu (Takahashi, 1931)	Aphididae – Hormaphidinae – Cerataphidini
Ceratopemphigus zehntneri Schouteden (1905)	Aphididae – Eriosomatinae – Pemphigini
Ceratovacuna hoffmani Takahashi (1936)	Aphididae – Hormaphidinae – Cerataphidini
Ceratovacuna japonica (Takahashi, 1924)	Aphididae – Hormaphidinae – Cerataphidini
Ceratovacuna lanigera Zehntner (1897)	Aphididae – Hormaphidinae – Cerataphidini
Ceratovacuna longifila (Takahashi, 1929)	Aphididae – Hormaphidinae – Cerataphidini
Ceratovacuna undetermined spp	Aphididae – Hormaphidinae – Cerataphidini
Ceroplastes actiniformis Green (1896)	Coccoidea – Coccidae
Ceroplastes ceriferus (Fabricius, 1798)	Coccoidea – Coccidae
Ceroplastes floridensis Comstock (1881)	Coccoidea – Coccidae
Ceroplastes murrayi Froggatt (1919)	Coccoidea – Coccidae
Ceroplastes rubens Maskell (1893)	Coccoidea – Coccidae
• *Ceroplastes rubens minor* Maskell (1897)	Coccoidea – Coccidae
Ceroplastes undetermined sp. 1	Coccoidea – Coccidae
Chaitoregma tattakana (Takahashi, 1925)	Aphididae – Hormaphidinae – Cerataphidini
• *Chionaspis eugeniae* Maskell (1892)	Coccoidea – Diaspididae – Diaspidinae
• *Chionaspis stanotophri* Cooley (1899)	Coccoidea – Diaspididae – Diaspidinae

• *Chionaspis vermiformis* Takahashi (1930)	Coccoidea – Diaspididae – Diaspidinae
Chionaspis undetermined sp. or spp	Coccoidea – Diaspididae – Diaspidinae
• *Chloropulvinaria psidii* (Maskell, 1893)	Coccoidea – Coccidae
Chortinaspis biloba (Maskell, 1898)	Coccoidea – Diaspididae – Aspidiotinae
Chrysomphalus aonidum (Linnaeus, 1758)	Coccoidea – Diaspididae – Aspidiotinae
Chrysomphalus undetermined sp. 1	Coccoidea – Diaspididae – Aspidiotinae
Chucallis bambusicola (Takahashi, 1921)	Aphididae – Calaphidinae – Panaphidini
Cinara formosana (Takahashi, 1924)	Aphididae – Lachninae – Eulachnini
Cinara tujafilina (del Guercio, 1909)	Aphididae – Lachninae – Eulachnini
• *Coccomytilus dispar* (Vayssière, 1914)	Coccoidea – Diaspididae – Diaspidinae
• *Coccus acutissimus* (Green, 1896)	Coccoidea – Coccidae
Coccus capparidis (Green, 1904)	Coccoidea – Coccidae
Coccus formicarii (Green, 1896)	Coccoidea – Coccidae
Coccus sp. near *formicarii* (Green, 1896)	Coccoidea – Coccidae
Coccus hesperidum Linnaeus (1758)	Coccoidea – Coccidae
Coccus longulus (Douglas, 1887)	Coccoidea – Coccidae
Coccus viridis (Green, 1889)	Coccoidea – Coccidae
Coccus undetermined spp	Coccoidea – Coccidae
Cockerelliella bladhiae (Takahashi, 1931)	Aleyrodidae – Aleyrodinae
Cockerelliella psidii (Corbett, 1935)	Aleyrodidae – Aleyrodinae
Colopha kansugei (Uye, 1924)	Aphididae – Eriosomatinae – Eriosomatini
Colophorina sp. near *hungtouensis* (Fang & Yang, 1986)	Psylloidea – Psyllidae
Colophorina-group, undetermined sp. 1	Psylloidea – Psyllidae
Colophorina-group, undetermined sp. 2	Psylloidea – Psyllidae
Coloradoa artemisiae (del Guercio, 1913)	Aphididae – Aphidinae – Macrosiphini
Conchaspis angraeci Cockerell (1893)	Coccoidea – Conchaspididae
Cornegenapsylla sinica Yang & Li (1982)	Psylloidea – Phacopteronidae
Crenidorsum caerulescens (Singh, 1931)	Aleyrodidae – Aleyrodinae
Crenidorsum micheliae (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Crenidorsum, undetermined sp. 1	Aleyrodidae – Aleyrodinae
Cribropulvinaria tailungensis Hodgson & Martin (2001)	Coccoidea – Coccidae
Crisicoccus pini (Kuwana, 1902)	Coccoidea – Pseudococcidae
• *Crypticerya jakobsoni* (Green, 1913)	Coccoidea – Monophlebidae
Crypticerya undetermined sp. or spp	Coccoidea – Monophlebidae
Ctenarytaina undetermined sp. 1	Psylloidea – Psyllidae
Ctenarytaina undetermined sp. 2	Psylloidea – Psyllidae
• *Dactynotus*	Aphididae – Aphidinae – Macrosiphini
Dermaphis undetermined sp. 1	Aphididae – Hormaphidinae – Nipponaphidini
Dialeurodes agalmae Takahashi (1935)	Aleyrodidae – Aleyrodinae
Dialeurodes citri (Ashmead, 1885)	Aleyrodidae – Aleyrodinae
• *Dialeurodes citrifolii* (Morgan, 1893)	Aleyrodidae – Aleyrodinae
Dialeurodes hongkongensis Takahashi (1941)	Aleyrodidae – Aleyrodinae
Dialeurodes kirkaldyi (Kotinsky, 1907)	Aleyrodidae – Aleyrodinae
Dialeurodes mirabilis Takahashi (1942)	Aleyrodidae – Aleyrodinae
Dialeurodes sens. str. undetermined sp. 1	Aleyrodidae – Aleyrodinae
Dialeurodes sens. lat. undetermined sp. 2	Aleyrodidae – Aleyrodinae
Dialeurodes sens. lat. undetermined sp. 3	Aleyrodidae – Aleyrodinae
Dialeurodes sens. lat. undetermined sp. 4	Aleyrodidae – Aleyrodinae
Dialeurodes sens. lat. undetermined sp. 5	Aleyrodidae – Aleyrodinae
Dialeurodes sens. lat. unexamined sp.	Aleyrodidae – Aleyrodinae
• *Dialeuropora brideliae* (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Dialeuropora decempuncta (Quaintance & Baker, 1917)	Aleyrodidae – Aleyrodinae

Diaphorina citri Kuwayama (1908)	Psylloidea – Psyllidae
Diaspidinae, undetermined genus 1	Coccoidea – Diaspididae – Diaspidinae
• *Diaspis echinocacti* (Bouché, 1833)	Coccoidea – Diaspididae – Diaspidinae
Drepanococcus cajani (Maskell, 1891)	Coccoidea – Coccidae
Drosicha corpulenta (Kuwana, 1902)	Coccoidea – Monophlebidae
Drosicha frauenfeldi (Karsch, 1877)	Coccoidea – Monophlebidae
Drosicha maskelli (Cockerell, 1902)	Coccoidea – Monophlebidae
Drosicha undetermined sp. or spp.	Coccoidea – Monophlebidae
Duplachionaspis natalensis (Maskell, 1896)	Coccoidea – Diaspididae – Diaspidinae
Dysmicoccus angustus (Ezzat & McConnel, 1956)	Coccoidea – Pseudococcidae
Dysmicoccus brevipes (Cockerell, 1893)	Coccoidea – Pseudococcidae
Dysmicoccus undetermined sp. 1	Coccoidea – Pseudococcidae
Eriococcus graminis Maskell (1897)	Coccoidea – Eriococcidae
Eulachnus agilis (Kaltenbach, 1843)	Aphididae – Lachninae – Eulachnini
Eulachnus thunbergii Wilson (1919)	Aphididae – Lachninae – Eulachnini
Eulachnus tuberculostemmatus (Theobald, 1915)	Aphididae – Lachninae – Eulachnini
Eumyrmococcus smithii Silvestri (1926)	Coccoidea – Pseudococcidae
Eutrichosiphum dubium (van der Goot, 1917)	Aphididae – Greenideinae – Greenideini
Ferrisia virgata (Cockerell, 1893)	Coccoidea – Pseudococcidae
Fiorinia coronata Williams & Watson (1988)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia fioriniae (Targioni Tozzetti, 1867)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia japonica Kuwana (1902)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia minor Maskell (1897)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia pinicola Maskell (1897)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia theae Green (1900)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia turpiniae Takahashi (1934)	Coccoidea – Diaspididae – Diaspidinae
Fiorinia undetermined sp. or spp	Coccoidea – Diaspididae – Diaspidinae
Fistulococcus pokfulamensis Hodgson & Martin (2005)	Coccoidea – Coccidae
Formicococcus robustus (Ezzat & McConnell, 1956)	Coccoidea – Pseudococcidae
Formosaphis micheliae Takahashi (1925)	Aphididae – Eriosomatinae – Fordini
Formosaspis formosana (Takahashi, 1931)	Coccoidea – Diaspididae – Diaspidinae
Formosaspis undetermined sp. 1	Coccoidea – Diaspididae – Diaspidinae
Froggattiella mcclurei Ben-Dov (1988)	Coccoidea – Diaspididae – Odonaspidinae
Froggattiella penicillata (Green, 1905)	Coccoidea – Diaspididae – Odonaspidinae
• *Furcaspis biformis* (Cockerell, 1893)	Coccoidea – Diaspididae – Aspidiotinae
Geococcus lawrencei Williams (1969)	Coccoidea – Pseudococcidae
Geoica lucifuga (Zehntner, 1897)	Aphididae – Eriosomatinae – Fordini
Glyphinaphis undetermined sp. 1	Aphididae – Hormaphidinae – Cerataphidini
Greenaspis elongata (Green, 1896)	Coccoidea – Diaspididae – Diaspidinae
• *Greenidea artocarpi* (Westwood, 1890)	Aphididae – Greenideinae – Greenideini
Greenidea brideliae Takahashi (1928)	Aphididae – Greenideinae – Greenideini
Greenidea ficicola Takahashi (1921)	Aphididae – Greenideinae – Greenideini
• *Greenidea formosana* (Maki, 1917)	Aphididae – Greenideinae – Greenideini
Greenidea psidii van der Goot (1916)	Aphididae – Greenideinae – Greenideini
Greenidea undetermined sp. 1, [subgenus *Trichosiphum*]	Aphididae – Greenideinae – Greenideini
Hemiberlesia lataniae (Signoret, 1869)	Coccoidea – Diaspididae – Aspidiotinae
Hemiberlesia pitysophila Takagi (1969)	Coccoidea – Diaspididae – Aspidiotinae
Heteropsylla cubana Crawford (1914)	Psylloidea – Psyllidae
Homotoma radiata Kuwayama (1908)	Psylloidea – Homotomidae
Homotoma ?*yunnanica* Yang & Li (1984)	Psylloidea – Homotomidae
• *Hyadaphis* undetermined sp. 1	Aphididae – Aphidinae – Macrosiphini
Hyalopterus persikonus Miller, Lozier & Foottit (2008)	Aphididae – Aphidinae – Aphidini

• *Hyalopterus pruni* (Geoffroy, 1762)	Aphididae – Aphidinae – Aphidini
Hyperomyzus carduellinus (Theobald, 1915)	Aphididae – Aphidinae – Macrosiphini
Hysteroneura setariae (Thomas, 1878)	Aphididae – Aphidinae – Aphidini
Icerya aegyptiaca (Douglas, 1890)	Coccoidea – Monophlebidae
Icerya assamensis (Rao, 1951)	Coccoidea – Monophlebidae
Icerya crocea Green (1896)	Coccoidea – Monophlebidae
Icerya formicarum Newstead (1897)	Coccoidea – Monophlebidae
Icerya jacobsoni Green (1913)	Coccoidea – Monophlebidae
Icerya jaihind (Rao, 1951)	Coccoidea – Monophlebidae
Icerya purchasi Maskell (1879)	Coccoidea – Monophlebidae
Icerya seychellarum (Westwood, 1855)	Coccoidea – Monophlebidae
Icerya undetermined sp. or spp	Coccoidea – Monophlebidae
Iceryini, undetermined taxon	Coccoidea – Monophlebidae
• *Insulaspis pinea* Borchsenius (1964)	Coccoidea – Diaspididae – Diaspidinae
Indoaleyrodes laos (Takahashi, 1942)	Aleyrodidae – Aleyrodinae
Insignorthezia insignis (Browne, 1887)	Coccoidea – Ortheziidae
Ischnafiorinia bambusae (Maskell, 1897)	Coccoidea – Diaspididae – Diaspidinae
Kerria greeni (Chamberlin, 1923)	Coccoidea – Kerriidae
Kilifia acuminata (Signoret, 1873)	Coccoidea – Coccidae
Kuwanaspis elongata (Takahashi, 1930)	Coccoidea – Diaspididae – Diaspidinae
Kuwanaspis hikosani (Kuwana, 1902)	Coccoidea – Diaspididae – Diaspidinae
Kuwanaspis linearis (Green, 1922)	Coccoidea – Diaspididae – Diaspidinae
Lankacoccus ornatus (Green, 1922)	Coccoidea – Pseudococcidae
• *Lecanium globulosum* Maskell (1897)	Coccoidea – Coccidae
Lepidosaphes beckii (Newman, 1869)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes chinensis Chamberlin (1925)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes cocculi (Green, 1896)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes corni Takahashi (1957)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes cupressi Borchsenius (1958)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes cycadicola Kuwana (1931)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes gloverii (Packard, 1869)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes laterochitinosa Green (1925)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes pinea (Borchsenius, 1964)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes pitysophila Takagi (1970)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes tapleyi Williams (1960)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes yanagicola Kuwana (1925)	Coccoidea – Diaspididae – Diaspidinae
Lepidosaphes undetermined sp. 1	Coccoidea – Diaspididae – Diaspidinae
Leucaspidinae, undetermined genus 1	Coccoidea – Diaspididae – Leucaspidinae
• *Lindingaspis tingi* McKenzie (1950)	Coccoidea – Diaspididae – Aspidiotinae
• *Lipaleyrodes*	Aleyrodidae – Aleyrodinae
• *Lipaphis erysimi* (Kaltenbach, 1843)	Aphididae – Aphidinae – Macrosiphini
Lipaphis pseudobrassicae (Davis, 1914)	Aphididae – Aphidinae – Macrosiphini
Livia khaziensis Heslop-Harrison (1949)	Psylloidea – Psyllidae
• *Livia nigra* Klimaszewski (1964)	Psylloidea – Psyllidae
• *Longiunguis sacchari* (Zehntner, 1897)	Aphididae – Aphidinae – Aphidini
Lopholeucaspis cockerelli (Grandpré & de Charmoy, 1899)	Coccoidea – Diaspididae – Leucaspidinae
Maacoccus bicruciatus (Green, 1904)	Coccoidea – Coccidae
Machilaphis machili (Takahashi, 1928)	Aphididae – Phyllaphidinae
Maconellicoccus hirsutus (Green, 1908)	Coccoidea – Pseudococcidae
Macrohomotoma gladiatum Kuwayama (1908)	Psylloidea – Homotomidae
• *Macrohomotoma sinica* Yang & Li (1984)	Psylloidea – Homotomidae
• *Macrohomotoma striata* Crawford (1925)	Psylloidea – Homotomidae

Macrohomotoma undetermined sp. 1	Psylloidea – Homotomidae
Macrosiphoniella sanborni (Gillette, 1908)	Aphididae – Aphidinae – Macrosiphini
Mallococcus sinensis (Maskell, 1897)	Coccoidea – Coccidae
Marsipococcus undetermined sp. 1	Coccoidea – Coccidae
Massilieurodes formosensis (Takahashi, 1933)	Aleyrodidae – Aleyrodinae
Massilieurodes undetermined sp. 1	Aleyrodidae – Aleyrodinae
Massilieurodes undetermined sp. 2	Aleyrodidae – Aleyrodinae
Massilieurodes undetermined sp. 3	Aleyrodidae – Aleyrodinae
Megatrioza eugenioides Crawford (1917)	Psylloidea – Triozidae
• *Megatrioza vitiensis* (Kirkaldy, 1907)	Psylloidea – Triozidae
Megatrioza undetermined sp. 1	Psylloidea – Triozidae
Megoura lespedezae (Essig & Kuwana, 1918)	Aphididae – Aphidinae – Macrosiphini
Melanaphis bambusae (Fullaway, 1910)	Aphididae – Aphidinae – Aphidini
Melanaphis sacchari (Zehntner, 1897)	Aphididae – Aphidinae – Aphidini
Mesohomotoma camphorae Kuwayama (1908)	Psylloidea – Carsidaridae
Mesohomotoma hibisci (Froggatt, 1901)	Psylloidea – Carsidaridae
• *Metatrichosiphon* ?*lithocarpi* (Takahashi, 1931)	Aphididae – Greenideinae – Greenideini
Micromyzella judenkoi (Carver, 1965)	Aphididae – Aphidinae – Macrosiphini
• *Micromyzus judenkoi* Carver (1965)	Aphididae – Aphidinae – Macrosiphini
• *Microthoracaphis elongata* Takahashi (1958)	Aphididae – Hormaphidinae – Nipponaphidini
Milviscutulus mangiferae (Green, 1889)	Coccoidea – Coccidae
Mohelnaspis vermiformis (Takahashi, 1930)	Coccoidea – Diaspididae – Diaspidinae
Mollitrichosiphum glaucae Takahashi (1962)	Aphididae – Greenideinae – Greenideini
Mollitrichosiphum nigrofasciatum (Maki, 1917)	Aphididae – Greenideinae – Greenideini
Mollitrichosiphum yamabiwae Suenaga (1934)	Aphididae – Greenideinae – Greenideini
• *Monophlebus burmeisteri* Maskell (1897)	Coccoidea – Monophlebidae
Morganella longispina (Morgan, 1889)	Coccoidea – Diaspididae – Aspidiotinae
Mycetaspis personata (Comstock, 1883)	Coccoidea – Diaspididae – Aspidiotinae
• *Myzocallis bambusicola*	Aphididae – Calaphidinae – Panaphidini
Myzus persicae (Sulzer, 1776)	Aphididae – Aphidinae – Macrosiphini
Myzus varians Davidson (1912)	Aphididae – Aphidinae – Macrosiphini
Nanhaiaspis chiulungensis Takagi & Martin (2010)	Coccoidea – Diaspididae – Diaspidinae
Neohormaphis undetermined sp. 1	Aphididae – Hormaphidinae – Nipponaphidini
Neomaskellia andropogonis Corbett (1926)	Aleyrodidae – Aleyrodinae
Neoparlatoria formosana Takahashi (1931)	Coccoidea – Diaspididae – Leucaspidinae
Neoparlatoria yunnanensis Young (1985)	Coccoidea – Diaspididae – Leucaspidinae
Neoparlatoria undetermined sp. 1	Coccoidea – Diaspididae – Leucaspidinae
Neophyllaphis brimblecombei Carver (1971)	Aphididae – Neophyllaphidinae
Neophyllaphis podocarpi Takahashi (1920)	Aphididae – Neophyllaphidinae
Neoquernaspis chiulungensis (Takagi, 1977)	Coccoidea – Diaspididae – Diaspidinae
Neothoracaphis elongata / saramaoensis-group	Aphididae – Hormaphidinae – Nipponaphidini
Neothoracaphis undetermined sp. 1	Aphididae – Hormaphidinae – Nipponaphidini
• *Nipaecoccus vastator* (Maskell, 1895)	Coccoidea – Pseudococcidae
Nipaecoccus viridis (Newstead, 1894)	Coccoidea – Pseudococcidae
Odonaspis greenii Cockerell (1902)	Coccoidea – Diaspididae – Odonaspidinae
Odonaspis morrisoni Beardsley (1966)	Coccoidea – Diaspididae – Odonaspidinae
Odonaspis siamensis (Takahashi, 1942)	Coccoidea – Diaspididae – Odonaspidinae
Orchamoplatus mammaeferus (Quaintance & Baker, 1917)	Aleyrodidae – Aleyrodinae
• *Orthezia insignis* Browne (1887)	Coccoidea – Ortheziidae
Palaealeurodicus machili (Takahashi, 1931)	Aleyrodidae – Aleurodicinae
Palmicultor lumpurensis (Takahashi, 1951)	Coccoidea – Pseudococcidae
Parabemisia myricae (Kuwana, 1927)	Aleyrodidae – Aleyrodinae

Parabemisia undetermined sp. 1	Aleyrodidae – Aleyrodinae
Parabemisia undetermined sp. 2	Aleyrodidae – Aleyrodinae
Parabemisia undetermined sp. 3	Aleyrodidae – Aleyrodinae
Parabemisia undetermined sp. 4	Aleyrodidae – Aleyrodinae
Paralecanium expansum (Green, 1896) species-group	Coccoidea – Coccidae
Paralecanium geometricum (Green, 1896)	Coccoidea – Coccidae
Paralecanium peradeniyense (Green, 1904)	Coccoidea – Coccidae
Paralecanium planum (Green, 1896)	Coccoidea – Coccidae
Paralecanium undetermined sp. 1	Coccoidea – Coccidae
Paralecanium undetermined sp. 2	Coccoidea – Coccidae
Paraleyrodes minei Iaccarino (1990)	Aleyrodidae – Aleurodicinae
Paraleyrodes pseudonaranjae Martin (2001)	Aleyrodidae – Aleurodicinae
Parasaissetia nigra (Nietner, 1861)	Coccoidea – Coccidae
Parlatoria acalcarata McKenzie (1960)	Coccoidea – Diaspididae – Leucaspidinae
Parlatoria camelliae Comstock (1883)	Coccoidea – Diaspididae – Leucaspidinae
Parlatoria cinerea Hadden (1909)	Coccoidea – Diaspididae – Leucaspidinae
Parlatoria desolator McKenzie (1960)	Coccoidea – Diaspididae – Leucaspidinae
Parlatoria pergandii Comstock (1881)	Coccoidea – Diaspididae – Leucaspidinae
Parlatoria proteus (Curtis, 1843)	Coccoidea – Diaspididae – Leucaspidinae
• *Parlatoria sinensis* Maskell (1897)	Coccoidea – Diaspididae – Leucaspidinae
Parlatoria ziziphi (Lucas, 1853)	Coccoidea – Diaspididae – Leucaspidinae
Parthenolecanium persicae (Fabricius, 1776)	Coccoidea – Coccidae
Paurocephala bifasciata Kuwayama (1931)	Psylloidea – Psyllidae
Paurocephala boehmeriae Mifsud & Burckhardt (2002)	Psylloidea – Psyllidae
Paurocephala chonchaiensis Boselli (1929)	Psylloidea – Psyllidae
• *Paurocephala psylloptera* Crawford (1914)	Psylloidea – Psyllidae
Paurocephala undescribed sp. near *boehmeriae* Mifsud & Burckhardt	Psylloidea – Psyllidae
Paurocephala undetermined sp. 1	Psylloidea – Psyllidae
Pauropsylla depressa Crawford (1912)	Psylloidea – Triozidae
Pauropsylla udei Rübsaamen (1899)	Psylloidea – Triozidae
Pealius chinensis Takahashi (1941)	Aleyrodidae – Aleyrodinae
• *Pealius fici* Mound (1965)	Aleyrodidae – Aleyrodinae
Pealius liquidambari (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Pealius machili Takahashi (1935)	Aleyrodidae – Aleyrodinae
Pealius psychotriae Takahashi (1935)	Aleyrodidae – Aleyrodinae
Pealius rhododendri Takahashi (1935)	Aleyrodidae – Aleyrodinae
Pealius undetermined sp. 1	Aleyrodidae – Aleyrodinae
Pealius undetermined sp. 2	Aleyrodidae – Aleyrodinae
Pealius undetermined sp. 3	Aleyrodidae – Aleyrodinae
Pentaleyrodes hongkongensis Takahashi (1941)	Aleyrodidae – Aleyrodinae
Pentalonia caladii van der Goot (1917)	Aphididae – Aphidinae – Macrosiphini
Pentalonia nigronervosa Coquerel (1859)	Aphididae – Aphidinae – Macrosiphini
• *Phenacaspis* spp	Coccoidea – Diaspididae – Diaspidinae
Phenacoccus madeirensis Green (1923)	Coccoidea – Pseudococcidae
Phenacoccus parvus Morrison (1924)	Coccoidea – Pseudococcidae
Phenacoccus solani Ferris (1918)	Coccoidea – Pseudococcidae
Phenacoccus solenopsis Tinsley (1898)	Coccoidea – Pseudococcidae
Phyllaphoides bambusicola Takahashi (1921)	Aphididae – Calaphidinae – Panaphidini
Pineus pini (Macquart, 1819)	Aphidoidea – Adelgidae
Pinnaspis aspidistrae (Signoret, 1869)	Coccoidea – Diaspididae – Diaspidinae
Pinnaspis buxi (Bouché, 1851)	Coccoidea – Diaspididae – Diaspidinae
Pinnaspis hainnanensis Tang (1986)	Coccoidea – Diaspididae – Diaspidinae

Pinnaspis strachani (Cooley, 1899)	Coccoidea – Diaspididae – Diaspidinae
Planococcus angkorensis (Takahashi, 1942)	Coccoidea – Pseudococcidae
Planococcus citri (Risso, 1813)	Coccoidea – Pseudococcidae
Planococcus litchi Cox (1989)	Coccoidea – Pseudococcidae
Planococcus minor (Maskell, 1897)	Coccoidea – Pseudococcidae
Pleotrichophorus glandulosus (Kaltenbach, 1846)	Aphididae – Aphidinae – Macrosiphini
• *Prociphilus ligustrifoliae* (Tseng & Tao, 1938)	Aphididae – Eriosomatinae – Pemphigini
• *Prociphilus* undetermined sp.	Aphididae – Eriosomatinae – Pemphigini
Prococcus acutissimus (Green, 1896)	Coccoidea – Coccidae
Protopulvinaria longivalvata Green (1909)	Coccoidea – Coccidae
Pseudaonidia duplex (Cockerell, 1896)	Coccoidea – Diaspididae – Aspidiotinae
Pseudaonidia trilobitiformis (Green, 1896)	Coccoidea – Diaspididae – Aspidiotinae
Pseudaulacaspis cockerelli (Cooley, 1897)	Coccoidea – Diaspididae – Diaspidinae
Pseudaulacaspis dendrobii (Kuwana, 1931)	Coccoidea – Diaspididae – Diaspidinae
Pseudaulacaspis eugeniae (Maskell, 1892)	Coccoidea – Diaspididae – Diaspidinae
Pseudaulacaspis pentagona (Targioni Tozzetti, 1886)	Coccoidea – Diaspididae – Diaspidinae
Pseudaulacaspis simplex Takagi (1961)	Coccoidea – Diaspididae – Diaspidinae
Pseudaulacaspis undetermined sp. 1	Coccoidea – Diaspididae – Diaspidinae
• *Pseudococcus citriculus* Green (1922)	Coccoidea – Pseudococcidae
• *Pseudococcus comstocki* (Kuwana, 1902)	Coccoidea – Pseudococcidae
Pseudococcus cryptus Hempel (1918)	Coccoidea – Pseudococcidae
Pseudococcus gilbertensis Beardsley (1966)	Coccoidea – Pseudococcidae
Pseudococcus jackbeardsleyi Gimpel & Miller (1996)	Coccoidea – Pseudococcidae
Pseudococcus odermatti Miller & Williams (1997)	Coccoidea – Pseudococcidae
Pseudococcus undetermined sp. or spp	Coccoidea – Pseudococcidae
• *Pseudophacopteron* undetermined sp. 1	Psylloidea – Phacopteronidae
Pseudoregma bambucicola (Takahashi, 1921)	Aphididae – Hormaphidinae – Cerataphidini
Pseudoregma koshunensis (Takahashi, 1924)	Aphididae – Hormaphidinae – Cerataphidini
Pseudoregma panicola (Takahashi, 1921)	Aphididae – Hormaphidinae – Cerataphidini
• *Psylla* sp. near *hungtouensis* (Fang & Yang, 1986)	Psylloidea – Psyllidae
Pulvinaria hydrangeae Steinweden (1946)	Coccoidea – Coccidae
Pulvinaria kuwacola Kuwana (1907)	Coccoidea – Coccidae
Pulvinaria polygonata Cockerell (1905)	Coccoidea – Coccidae
Pulvinaria psidii Maskell (1893)	Coccoidea – Coccidae
Pulvinaria undetermined sp. 1	Coccoidea – Coccidae
Pygalataspis miscanthi Ferris (1921)	Coccoidea – Diaspididae – Diaspidinae
Quernaphis tuberculatus (Takahashi, 1933)	Aphididae – Hormaphidinae – Nipponaphidini
Rastrococcus chinensis Ferris (1954)	Coccoidea – Pseudococcidae
Rastrococcus iceryoides (Green, 1908)	Coccoidea – Pseudococcidae
Rastrococcus invadens Williams (1986)	Coccoidea – Pseudococcidae
Rastrococcus rubellus Williams (1989)	Coccoidea – Pseudococcidae
Reticulaphis fici (Takahashi, 1923)	Aphididae – Hormaphidinae – Nipponaphidini
Reticulaphis inflata Yeh & Hsu (2008)	Aphididae – Hormaphidinae – Nipponaphidini
Reticulaphis undetermined sp. 1	Aphididae – Hormaphidinae – Nipponaphidini
• *Rhachisphora koshunensis* (Takahashi, 1933)	Aleyrodidae – Aleyrodinae
Rhachisphora machili (Takahashi, 1932)	Aleyrodidae – Aleyrodinae
Rhachisphora takahashii **sp. nov.**	Aleyrodidae – Aleyrodinae
Rhizoecus hibisci Kawai & Takagi (1971)	Coccoidea – Pseudococcidae
Rhopalosiphum maidis (Fitch, 1856)	Aphididae – Aphidinae – Aphidini
Rhopalosiphum nymphaeae (Linnaeus, 1761)	Aphididae – Aphidinae – Aphidini
Rhopalosiphum padi (Linnaeus, 1758)	Aphididae – Aphidinae – Aphidini
Rhopalosiphum rufiabdominale (Sasaki, 1899)	Aphididae – Aphidinae – Aphidini

Rusostigma radiirugosa (Quaintance & Baker, 1917)	Aleyrodidae – Aleyrodinae
Rusostigma undetermined sp. 1	Aleyrodidae – Aleyrodinae
Saccharicoccus sacchari (Cockerell, 1895)	Coccoidea – Pseudococcidae
Saissetia coffeae (Walker, 1852)	Coccoidea – Coccidae
Saissetia miranda (Cockerell & Parrot, 1899)	Coccoidea – Coccidae
Saissetia neglecta De Lotto (1969)	Coccoidea – Coccidae
Saissetia oleae (Olivier, 1791)	Coccoidea – Coccidae
Saissetia vivipara Williams & Watson (1990)	Coccoidea – Coccidae
Sarucallis kahawaluokalani (Kirkaldy, 1907)	Aphididae – Calaphidinae – Panaphidini
Schizolachnus orientalis (Takahashi, 1924)	Aphididae – Lachninae – Eulachnini
Schizolachnus pineti (Fabricius, 1781)	Aphididae – Lachninae – Eulachnini
Schizoneuraphis gallarum van der Goot (1917)	Aphididae – Hormaphidinae – Nipponaphidini
Schlechtendalia chinensis (Bell, 1851)	Aphididae – Eriosomatinae – Fordini
• *Schoutedenia emblica* (Patel & Kulkarni, 1953)	Aphididae – Greenideinae – Schoutedeniini
Schoutedenia ralumensis Rübsaamen (1905)	Aphididae – Greenideinae – Schoutedeniini
Semiaphis heraclei (Takahashi, 1921)	Aphididae – Aphidinae – Macrosiphini
Serrataspis maculata Ferris (1955)	Coccoidea – Diaspididae – Diaspidinae
Shivaphis catalpinari Quednau & Remaudière (1985)	Aphididae – Calaphidinae – Panaphidini
Shivaphis celti Das (1918)	Aphididae – Calaphidinae – Panaphidini
Shivaphis szelegiewiczi Quednau (1979)	Aphididae – Calaphidinae – Panaphidini
Silvestraspis uberifera (Lindinger, 1911)	Coccoidea – Diaspididae – Leucaspidinae
Singhiella chinensis (Takahashi, 1941)	Aleyrodidae – Aleyrodinae
Singhiella citrifolii (Morgan, 1893)	Aleyrodidae – Aleyrodinae
Singhiella simplex (Singh, 1931)	Aleyrodidae – Aleyrodinae
Singhiella undetermined sp. 1	Aleyrodidae – Aleyrodinae
Singhius hibisci (Kotinsky, 1907)	Aleyrodidae – Aleyrodinae
Singhius russellae David & Subramaniam (1976)	Aleyrodidae – Aleyrodinae
Sinomegoura citricola (van der Goot, 1917)	Aphididae – Aphidinae – Macrosiphini
Sinomegoura evodiae (Takahashi, 1929)	Aphididae – Aphidinae – Macrosiphini
Sitobion alopecuri (Takahashi, 1921)	Aphididae – Aphidinae – Macrosiphini
• *Sitobion avenae* (Fabricius, 1775)	Aphididae – Aphidinae – Macrosiphini
Sitobion berchemiae (Takahashi, 1938)	Aphididae – Aphidinae – Macrosiphini
Sitobion ibarae (Matsumura, 1917)	Aphididae – Aphidinae – Macrosiphini
Sitobion miscanthi (Takahashi, 1921)	Aphididae – Aphidinae – Macrosiphini
Sitobion smilacifoliae (Takahashi, 1921)	Aphididae – Aphidinae – Macrosiphini
Sitobion takahashii (Eastop, 1959)	Aphididae – Aphidinae – Macrosiphini
Smilacicola crenatus Takagi (1983)	Coccoidea – Diaspididae – Diaspidinae
• *Steatococcus* ?*assamensis* Rao	Coccoidea – Monophlebidae
• *Steatococcus* spp	Coccoidea – Monophlebidae
Syntomoza hsenpinensis (Fang et Yang, 1986)	Psylloidea – Psyllidae
Tachardina aurantiaca (Cockerell, 1903)	Coccoidea – Kerriidae
Tachardina undetermined sp.1	Coccoidea – Kerriidae
Taiwanaphis decaspermi Takahashi (1934)	Aphididae - Taiwanaphidinae
Takecallis taiwana (Takahashi, 1926)	Aphididae – Calaphidinae – Panaphidini
Tenaphalara acutipennis Kuwayama (1908)	Psylloidea – Carsidaridae
Tetraleurodes acaciae (Quaintance, 1900)	Aleyrodidae – Aleyrodinae
Tetraleurodes graminis Takahashi (1934)	Aleyrodidae – Aleyrodinae
Tetraneura fusiformis Matsumura (1917)	Aphididae – Eriosomatinae – Eriosomatini
• *Tetraneura nigriabdominalis* (Sasaki, 1899)	Aphididae – Eriosomatinae – Eriosomatini
• *Thoracaphis fici* van der Goot (**nomen nudum**)	Aphididae – Hormaphidinae – Nipponaphidini
• *Thoracaphis hongkongensis* van der Goot (1918)	Aphididae – Hormaphidinae – Nipponaphidini
Thysanaspis acalyptus Ferris (1955)	Coccoidea – Diaspididae – Leucaspidinae

Thysanococcus squamulatus Stickney (1934)	Coccoidea – Halimococcidae
Thysanofiorinia leei Williams (1971)	Coccoidea – Diaspididae – Diaspidinae
Thysanofiorinia nephelii (Maskell, 1897)	Coccoidea – Diaspididae – Diaspidinae
Tinocallis dalbergicola Quednau (2001)	Aphididae – Calaphidinae – Panaphidini
Tinocallis insularis (Takahashi, 1927)	Aphididae – Calaphidinae – Panaphidini
• *Tinocallis kahawaluokalani* (Kirkaldy, 1907)	Aphididae – Calaphidinae – Panaphidini
Toxoptera aurantii (Boyer de Fonscolombe, 1841)	Aphididae – Aphidinae – Aphidini
Toxoptera citricidus (Kirkaldy, 1907)	Aphididae – Aphidinae – Aphidini
Toxoptera odinae (van der Goot, 1917)	Aphididae – Aphidinae – Aphidini
Toxoptera schlingeri Tao (1961)	Aphididae – Aphidinae – Aphidini
Toxoptera victoriae Martin (1991)	Aphididae – Aphidinae – Aphidini
Trialeurodes ricini (Misra, 1924)	Aleyrodidae – Aleyrodinae
Trialeurodes vaporariorum (Westwood, 1856)	Aleyrodidae – Aleyrodinae
Trichosiphonaphis lonicerae (Uye, 1923)	Aphididae – Aphidinae – Macrosiphini
Trichosiphonaphis polygoni (van dr Goot, 1917)	Aphididae – Aphidinae – Macrosiphini
• *Trichosiphonaphis tade* (Shinji, 1927)	Aphididae – Aphidinae – Macrosiphini
Trionymus orientalis (Maskell, 1898)	Coccoidea – Pseudococcidae
Trionymus undetermined sp.1	Coccoidea – Pseudococcidae
Trioza camphorae Sasaki (1910)	Psylloidea – Triozidae
• *Trioza erytreae* (del Guercio, 1918)	Psylloidea – Triozidae
Trioza jambolanae Crawford (1917)	Psylloidea – Triozidae
Trioza syzygii Li & Yang (1991)	Psylloidea – Triozidae
Trioza undetermined sp. 1	Psylloidea – Triozidae
Trioza undetermined sp. 2	Psylloidea – Triozidae
Tuberaleyrodes machili Takahashi (1932)	Aleyrodidae – Aleyrodinae
Tuberaphis undetermined sp.1	Aphididae – Hormaphidinae – Cerataphidini
Tuberculatus margituberculatus (Zhang & Zhong, 1981)	Aphididae – Calaphidinae – Panaphidini
Tuberolachnus salignus (Gmelin, 1790)	Aphididae – Lachninae – Lachnini
• *Tyora congrua* Walker (1869)	Psylloidea – Carsidaridae
Tyora guangdongana Yang & Li (1985)	Psylloidea – Carsidaridae
Unaspis citri (Comstock, 1883)	Coccoidea – Diaspididae – Diaspidinae
Unaspis euonymi (Comstock, 1881)	Coccoidea – Diaspididae – Diaspidinae
Unaspis yanonensis (Kuwana, 1923)	Coccoidea – Diaspididae – Diaspidinae
Uroleucon formosanum (Takahashi, 1921)	Aphididae – Aphidinae – Macrosiphini
Uroleucon undetermined sp. or spp	Aphididae – Aphidinae – Macrosiphini
Vasdavidius concursus Ko (1998)	Aleyrodidae – Aleyrodinae
Vasdavidius setiferus (Quaintance & Baker, 1917)	Aleyrodidae – Aleyrodinae
Viennotaleyrodes megapapillae (Singh, 1932)	Aleyrodidae – Aleyrodinae
Xenococcus acropygae Williams (1998)	Coccoidea – Pseudococcidae
• *Xenococcus annandalei* Silvestri (1924)	Coccoidea – Pseudococcidae

Appendix 2. Index to plant genera with their families

Gymnospermae

Araucaria – Araucariaceae
Cycas – Cycadaceae
Gnetum – Gnetaceae
Juniperus – Cupressaceae
Pinus – Pinaceae
Podocarpus – Podocarpaceae

Angiospermae – Dicotyledones

Abelmoschus – Malvaceae
Acacia – Fabaceae: Mimosoideae
Acer – Aceraceae
Achras – see Manilkara – Sapotaceae
Acronychia – Rutaceae
Actinodaphne – Lauraceae
Adinandra – Theaceae
Aglaia – Meliaceae
Ailanthus – Simaroubaceae
Albizia – Fabaceae: Mimosoideae
Alchornea – Euphorbiaceae
Aleurites [= Vernicia] – Euphorbiaceae
Allamanda – Apocynaceae
Annona – Annonaceae
Apium – Apiaceae
Aporusa – Euphorbiaceae
Aquilaria - Thymelaeaceae
Aralia – Araliaceae
Ardisia – Myrsinaceae
Artemisia – Asteraceae
Artocarpus – Moraceae
Asarum – Aristolochiaceae
Atalantia – see Severinia – Rutaceae
Averrhoa – Oxalidaceae
Bauhinia – Fabaceae: Caesalpinioideae
Berchemia – Rhamnaceae
Beta – Chenopodiaceae
Blumea – Asteraceae
Boehmeria – Urticaceae
Bombax – Bombacaceae
Brassica – Brassicaceae
Breynia – Euphorbiaceae
Bridelia – Euphorbiaceae
Callicarpa – Verbenaceae
Calonyction – Convolvulaceae
Camellia – Theaceae
Canarium – Burseraceae
Cansjera – Opiliaceae
Capsicum – Solanaceae
Carica – Caricaceae
Cassia – Fabaceae: Caesalpinioideae
Cassytha – Lauraceae
Castanea – Fagaceae
Castanopsis – Fagaceae
Casuarina – Casuarinaceae
Catuneregam [= Randia] – Rubiaceae
Celtis – Ulmaceae
Chrysanthemum – Asteraceae
Cinnamomum – Lauraceae
Citrus – Rutaceae
Clausena – Rutaceae
Clematis – Ranunculaceae
Clerodendrum – Verbenaceae
Cocculus – Menispermaceae
Codiaeum – Euphorbiaceae
Conyza – Asteraceae
Coriandrum – Apiaceae
Cratoxylum – Clusiaceae
Cuscuta – Cuscutaceae
Cyclobalanopsis – Fagaceae
Dahlia – Asteraceae
Dalbergia – Fabaceae: Papilionoideae
Daphniphyllum – Daphniphyllaceae
Dendrotrophe – Santalaceae
Desmodium – Fabaceae: Papilionoideae
Desmos – Annonaceae
Dianthus – Caryophyllaceae
Dillenia – Dilleniaceae
Dimocarpus [= Euphoria] – Sapindaceae
Diospyros – Ebenaceae
Diplospora – Rubiaceae
Duranta – Verbenaceae
Elaeocarpus – Elaeocarpaceae
Embelia – Myrsinaceae
Emilia – Asteraceae
Erechtites – Asteraceae
Eriobotrya – Roscaeae
Erythrina – Fabaceae: Papilionoideae
Eucalyptus – Myrtaceae
Eugenia – Myrtaceae
Euphoria – see Dimocarpus – Sapindaceae
Eurya – Theaceae
Ficus – Moraceae
Firmiana – Sterculiaceae
Fortunella – Rutaceae
Garcinia – Clusiaceae
Gardenia – Rubiaceae
Glochidion – Euphorbiaceae
Glycosmis – Rutaceae

Gordonia – Theaceae
Graphistemma – Asclepiadaceae
Gymnema – Asclepiadaceae
Hedera – Araliaceae
Hibiscus – Malvaceae
Homalium – Flacourtiaceae
Ilex – Aquifoliaceae
Ipomoea – Convolvulaceae
Ixora – Rubiaceae
Jasminum – Oleaceae
Jatropha – Euphorbiaceae
Kandelia – Rhizophoraceae
Lactuca – Asteraceae
Lagerstroemia – Lythraceae
Lantana – Verbenaceae
Laurus – Lauraceae
Leptospermum – Myrtaceae
Leucaena – Fabaceae: Mimosoideae
Ligustrum – Oleaceae
Liquidambar – Hamamelidaceae
Litchi – Sapindaceae
Lithocarpus – Fagaceae
Litsea – Lauraceae
Lycium – Solanaceae
Lycopersicon – Solanaceae
Macaranga – Euphorbiaceae
Machilus – Lauraceae
Maesa – Myrsinaceae
Magnolia – Magnoliaceae
Mallotus – Euphorbiaceae
Malus – Roscaeae
Malvaviscus – Malvaceae
Mandevilla – Apocynaceae
Mangifera – Anacardiaceae
Manihot – Euphorbiaceae
Manilkara [= Achras] – Sapotaceae
Melastoma – Melastomataceae
Melia – Meliaceae
Melicope – Rutaceae
Meliosma – Sabiaceae
Michelia – Magnoliaceae
Mikania – Asteraceae
Millettia – Fabaceae: Papilionoideae
Murraya – Rutaceae
Myrica – Myricaceae
Nerium – Apocynaceae
Osmanthus – Oleaceae
Oxalis – Oxalidaceae
Pachystachys – Acanthaceae
Paederia – Rubiaceae
Pentaphylax – Pentaphylacaceae
Persea – Lauraceae
Phyllanthus – Euphorbiaceae
Phyllodium – Fabaceae: Papilionoideae
Pisum – Fabaceae: Papilionoideae
Pittosporum – Pittosporaceae
Plumeria – Apocynaceae
Polygonum – Polygonaceae
Prunus – Roscaeae
Psidium – Myrtaceae
Psychotria – Rubiaceae
Pueraria – Fabaceae: Papilionoideae
Pyrus – Roscaeae
Quercus – Fagaceae
Randia – see Catuneregam – Rubiaceae
Rapanea – Myrsinaceae
Raphanus – Brassicaceae
Reevesia – Sterculiaceae
Rhaphiolepis – Roscaeae
Rhododendron – Ericaceae
Rhodomyrtus – Myrtaceae
Rhus – Anacardiaceae
Rosa – Roscaeae
Rubus – Roscaeae
Salix – Salicaceae
Sapindus – Sapindaceae
Sapium – Euphorbiaceae
Scaevola – Goodeniaceae
Schefflera – Araliaceae
Schima – Theaceae
Sechium – Cucurbitaceae
Severinia – Rutaceae
Solanum – Solanaceae
Solena – Cucurbitaceae
Sonchus – Asteraceae
Spinacia – Chenopodiaceae
Stephania – Menispermaceae
Sterculia – Sterculiaceae
Stillingia – Euphorbiaceae
Strophanthus – Apocynaceae
Styrax – Styracaceae
Symplocos – Symplocaceae
Syzygium – Myrtaceae
Tagetes – Asteraceae
Talinum – Portulacaceae
Telosma – Asclepiadaceae
Tetracera – Dilleniaceae
Thevetia – Apocynaceae
Trapa – Trapaceae
Trema – Ulmaceae
Trifolium – Fabaceae: Papilionoideae
Tutcheria – Theaceae

Ulmus – Ulmaceae
Vernicia – see Aleurites – Euphorbiaceae
Vicia – Fabaceae: Papilionoideae
Vigna – Fabaceae: Papilionoideae
Vitex – Verbenaceae
Zanthoxylum – Rutaceae

Angiospermae – Monocotyledones

Allium – Liliaceae
Alocasia – Araceae
Alpinia – Zingiberaceae
Ananas – Bromeliaceae
Archontophoenix – Arecaceae
Arundinaria – Poaceae
Asparagus – Liliaceae
Avena – Poaceae
Bambusa – Poaceae
Chrysalidocarpus – Arecaceae
Chrysopogon – Poaceae
Colocasia – Araceae
Cymbidium – Orchidaceae
Cyperus – Cyperaceae
Dactyloctenium – Poaceae
Dendrobium – Orchidaceae
Dendrocalamus – Poaceae
Dieffenbachia – Araceae
Digitaria – Poaceae
Distichlis – Poaceae
Dracaena – Agavaceae
Echinochloa – Poaceae
Eichhornia – Pontederiaceae
Eleusine – Poaceae
Hyacinthus – Liliaceae
Imperata – Poaceae
Indocalamus – Poaceae
Juncus – Juncaceae
Lepironia – Cyperaceae
Livistona – Arecaceae
Miscanthus – Poaceae
Musa – Musaceae
Neyraudia – Poaceae
Oplismenus – Poaceae
Oryza – Poaceae
Panicum – Poaceae
Paspalum – Poaceae
Pennisetum – Poaceae
Pheonix – Arecaceae
Phragmites – Poaceae
Phyllostachys – Poaceae
Rhapis – Arecaceae
Roystonea – Arecaceae
Saccharum – Poaceae
Sinobambusa – Poaceae
Smilax – Smilacaceae
Vanda – Orchidaceae
Zea – Poaceae

Pteridophytae

Neottopteris – Aspleniaceae

Appendix 3. Host plants, arranged by family, and the Sternorrhyncha recorded from them in Hong Kong

• Host nomenclature generally follows that of HK Herbarium.
• The note ("not listed for HK") refers to a name appearing in specimen data but not listed in the HK Herbarium's database or printed plant checklists.

GYMNOSPERMAE

Araucariaceae

Araucaria spp
- Fiorinia pinicola

Cupressaceae

Juniperus chinensis
- Cinara tujafilina

Cycadaceae

Cycas revoluta
- Aulacaspis yasumatsui
- Saissetia coffeae

Cycas sp.
- Pulvinaria psidii

Gnetaceae

Gnetum luofuense
- Aleurocanthus rugosa
- Aleurocanthus undetermined sp. 3
- Fiorinia fioriniae
- Fistulococcus pokfulamensis
- Formicococcus robustus
- Icerya aegyptiaca
- Icerya assamensis
- Kilifia acuminata
- Lepidosaphes cocculi
- Parabemisia undetermined sp. 4
- Paralecanium peradeniyense
- Paraleyrodes pseudonaranjae
- Paraleyrodes minei
- Pseudaulacaspis cockerelli
- Rusostigma undetermined sp. 1

Pinaceae

Pinus elliottii
- Lepidosaphes tapleyi

Pinus massoniana
- Aspidiotus-group, undetermined sp.1
- Cinara formosana
- Crisicoccus pini

Eulachnus thunbergii
Pineus pini
Schizolachnus orientalis
Pinus sinensis (not listed for HK)
Ceroplastes rubens
Fiorinia pinicola
Pinus taeda
Lepidosaphes pinea
Pinus thunbergii (not listed for HK)
Ceroplastes rubens
Pinus spp
Ceroplastes rubens
Dysmicoccus undetermined sp.
Hemiberlesia pitysophila
Eulachnus tuberculostemmatus
Lepidosaphes pitysophila
Schizolachnus orientalis

Podocarpaceae

Podocarpus macrophyllus
Aonidiella inornata
Ceroplastes ceriferus
Chrysomphalus aonidum
Neophyllaphis podocarpi
Podocarpus macrophyllus var. *maki* (= *chinensis*)
Neophyllaphis brimblecombei
Neophyllaphis podocarpi

ANGIOSPERMAE - DICOTYLEDONES

Acanthaceae

Pachystachys lutea
Aphis gossypii

Aceraceae

Acer palmatum
Pseudaonidia duplex

Anacardiaceae

Mangifera indica
Parabemisia myricae
Rhus chinensis
Pseudaulacaspis pentagona
Schlechtendalia chinensis
Toxoptera odinae
Rhus hypoleuca
Toxoptera odinae
Rhus succedanea

Parasaissetia nigra
Toxoptera odinae

Annonaceae

Annona squamosa
Paraleyrodes pseudonaranjae
Pealius ?machili
Desmos chinensis
Aleurolobus cf. marlatti
Aleurotrachelus fissistigmae
Coccus capparidis
Paraleyrodes minei
Pealius undetermined sp. 3

Apiaceae [Umbelliferae]

Apium graveolens
Semiaphis heraclei
Coriandrum sativum
Semiaphis heraclei

Apocynaceae

Allamanda cathartica
Pseudaulacaspis pentagona
Mandevilla boliviensis
Saissetia coffeae
Nerium oleander (=*indicum*)
Aphis nerii
Nipaecoccus viridis
Phenacaspis undetermined sp.
Pseudaulacaspis cockerelli
Plumeria rubra
Aleurocanthus rugosa
Pulvinaria psidii
Plumeria rubra var. *acutifolia* (= *rubra*)
Rastrococcus rubellus
Plumeria cult. vars
Saissetia coffeae
Strophanthus divaricatus
Dialeurodes citri
Thevetia peruviana
Pseudaulacaspis cockerelli
undetermined Apocynaceae
Dialeurodes citri sens. lat.
Paraleyrodes minei

Aquifoliaceae

Ilex asprella
Crenidorsum undetermined sp. 1
Paraleyrodes pseudonaranjae

Ilex cinerea
- Aleuroclava gordoniae
- Massilieurodes ?formosensis
- Pseudaulacaspis cockerelli

Ilex graciliflora
- Colophorina-group, undetermined sp. 2

Ilex hanceana
- Aiceona titarbarensis (unlikely host)

Ilex pubescens
- Aleuroclava gordoniae
- Crenidorsum ?micheliae
- Massilieurodes ?formosensis
- Paraleyrodes minei

Ilex rotunda var. *microcarpa*
- Saissetia oleae

Ilex viridis
- Pseudaulacaspis cockerelli

Araliaceae

Aralia armata
- Cavariella araliae
- Coccus viridis

Hedera helix
- Coccus hesperidum

Schefflera actinophylla (not listed for HK)
- Lepidosaphes laterochitinosa

Schefflera arboricola
- Aphis spiraecola
- Conchaspis angraeci

Schefflera heptaphylla (= *octophylla*)
- Aleuroclava gordoniae
- Aonidiella aurantii
- Aonidiella citrina
- Cacopsylla fatsiae
- Cacopsylla schefflerae
- Cavariella araliae
- Ceroplastes rubens
- Coccus formicarii
- Coccus hesperidum
- Crenidorsum caerulescens
- Dialeurodes agalmae
- Drosicha undetermined sp.
- Fiorinia pinicola
- Massilieurodes ?formosensis
- Paraleyrodes minei
- Parlatoria proteus
- Saissetia ?vivipara
- Toxoptera odinae

Aristolochiaceae

Asarum hongkongense
- Aspidiotus destructor

Asclepiadaceae

Graphistemma pictum
Aphis nerii
Gymnema inodorum (= *tingens*)
Aulacorthum nipponicum
Telosma cordata
Saissetia ?neglecta

Asteraceae [Compositae]

Artemisia indica
Coloradoa artemisiae
Pleotrichophorus glandulosus
Blumea megacephala
Aleurodaphis blumeae
Blumea sp.
Bemisia phyllanthi
Chrysanthemum morifolium
Aphis spiraecola
Chrysanthemum morifolium var. *sinense*
Myzus persicae
Chrysanthemum spp
Aphis gossypii
Hemiberlesia lataniae
Macrosiphoniella sanborni
Myzus persicae
Tyora guangdongana (unlikely host record)
Conyza canadensis
Planococcus citri
Dahlia pinnata cult. var.
Myzus persicae
Emilia sonchifolia
Aphis spiraecola
Aspidiotus excisus
Bemisia emiliae
Paraleyrodes minei
Phenacoccus parvus
Phenacoccus solani
Tetraneura fusiformis (unusual insect / host combination)
Erechtites hieraciifolius
Aleurodaphis blumeae
Lactuca indica
Uroleucon formosanum
Lactuca sativa
Myzus persicae
Uroleucon formosanum
Lactuca sp.
Uroleucon formosanum
Mikania guaco (not listed for HK)
Aphis spiraecola
Mikania micrantha
Aulacorthum nipponicum

Sonchus arvensis
Uroleucon formosanum
Sonchus sp.
Hyperomyzus carduellinus
Tagetes erecta
Myzus persicae
undetermined Asteraceae
Bemisia tabaci
Pulvinaria psidii

Bombacaceae

Bombax ceibia
Tenaphalara acutipennis
Bombax malabaricum (= *ceibia*)

Brassicaceae [Cruciferae]

Brassica alboglabra
Myzus persicae
Brassica caulorapa
Myzus persicae
Brassica chinensis
Lipaphis pseudobrassicae
Myzus persicae
Brassica oleracea
Myzus persicae
Raphanus sativus
Lipaphis pseudobrassicae
Myzus persicae

Burseraceae

Canarium album
Pseudaulacaspis cockerelli

Cactaceae

Hylocereus undatus
Diaspis echinocacti

Caricaceae

Carica papaya
Aonidiella orientalis
Coccus hesperidum
Myzus persicae

Caryophyllaceae

Dianthus caryophyllus
Myzus persicae

Casuarinaceae

Casuarina equisetifolia
Icerya purchasi
Casuarina spp
Icerya purchasi

Chenopodiaceae

Beta vulgaris
Myzus persicae
Spinacia oleracea
Aphis craccivora
Myzus persicae

Clusiaceae

Cratoxylum ligustrinum (= *cochinchinense*)
Dialeurodes sens. lat. undetermined sp. 3
Cratoxylum polyanthum (not listed for HK)
Toxoptera aurantii
Garcinia multiflora
Chrysomphalus aonidum

Compositae – see Asteraceae

Convolvulaceae

Calonyction aculeatum
Myzus persicae
Ipomoea batatas
Bemisia tabaci
Planoccus citri
“morning glory”
Myzus persicae

Cruciferae – see Brassicaceae

Cucurbitaceae

Sechium edule
Saissetia coffeae
Momordica charantia
Saissetia coffeae
Solena amplexicaulis
Aleuroclava psidii

Cuscutaceae

Cuscuta japonica
Sinomegoura citricola

Daphniphyllaceae

Daphniphyllum calycinum
Crenidorsum micheliae
Dialeurodes citri sens. lat.

Dilleniaceae

Dillenia indica
Aleuroclava indicus
Tetracera asiatica
Aleuroplatus pectiniferus
undetermined Dilleniaceae
Aleuroplatus pectiniferus

Ebenaceae

Diospyros sp.
?Pulvinaria undetermined sp.

Elaeocarpaceae

Elaeocarpus dubius
Aleuroclava gordoniae
Cockerelliella bladhiae
Parabemisia myricae
Paraleyrodes minei

Ericaceae

Rhododendron pulchrum
Aleuroclava rhododendri
Aleurolobus marlatti
Aleurolobus rhododendri
Parabemisia undetermined sp. 2
Paraleyrodes pseudonaranjae
Pealius rhododendri

Rhododendron sp.
Pinnaspis strachani

Euphorbiaceae

Alchornea trewioides
Crypticerya undetermined sp.
Icerya aegyptiaca
Aporusa dioica
Aleurocanthus husaini
Aleurocanthus rugosa
Aleuroclava jasmini
Aleurolobus marlatti
Crenidorsum caerulescens
Cribropulvinaria tailungensis

Dialeurodes mirabilis
Dialeuropora decempuncta
Greenidea (Trichosiphon) undetermined sp.
Indoaleyrodes laos
Milvisculus mangiferae
Parabemisia myricae
Parabemisia undetermined sp. 3
Paraleyrodes minei
Paraleyrodes pseudonaranjae
Protopulvinaria longivalvata
Rastrococcus chinensis
Singhius hibisci

Breynia cernua (not listed for HK)
Dialeuropora decempuncta

Breynia fruticosa
Schoutedenia ralumensis
Singhius hibisci

Breynia sp.
Singhius hibisci

Bridelia noxica (not listed for HK)
Dialeuropora decempuncta

Bridelia tomentosa (= *monoica*)
Aleurotrachelus tuberculatus
Bemisia afer
Dialeuropora decempuncta
Greenidea brideliae
Icerya aegyptiaca
Icerya seychellarum
Iceryini, undetermined
Paraleyrodes pseudonaranjae
Planococcus minor
Singhius hibisci

Bridelia spp
Icerya aegyptiaca
Singhius russellae

Codiaeum variegatum var. *pictum*
Icerya aegyptiaca
Icerya assamensis
Geococcus lawrencei

Codiaeum variegatum cult. vars
Bemisia tabaci
Coccus longulus
Orchamoplatus mammaeferus
Parthenolecanium persicae
Planococcus citri
Planococcus minor

Glochidion eriocarpum
Dialeuropora decempuncta

Glochidion wrightii
Schoutedenia ralumensis

Glochidion zeylanicum
Cockerelliella psidii
Dialeuropora decempuncta

Paraleyrodes pseudonaranjae
Schoutedenia ralumensis
Jatropha hastata
Fiorinia coronata
Macaranga tanarius
Aleurocanthus citriperdus
Coccus undetermined sp.
Dialeuropora decempuncta
Icerya aegyptiaca
Parasaissetia nigra
Planococcus minor
Trialeurodes ricini
Mallotus paniculatus
Rastrococcus rubellus
Mallotus sp.
Rastrococcus iceryoides
Rastrococcus invadens
Manihot sp.
Aonidomytilus albus
Phyllanthus cochinchinensis
Bemisia undetermined sp. 1
Pseudococcus undetermined sp. or spp
Phyllanthus emblica
Aleurolobus marlatti
Aphis eugeniae
Schoutedenia ralumensis
Phyllanthus leptoclados
Sitobion takahashii
Phyllanthus reticulatus
Aphis eugeniae
Aphis gossypii
Sapium discolor
Pseudaulacaspis simplex
Sapium sebiferum
Toxoptera odinae
Sapium sp.
Toxoptera odinae
Stillingia sebifera (not listed for HK)
Coccus formicarii
Vernicia fordii (= *Aleurites fordii*)
Aulacorthum undetermined sp. 1
Vernicia montana (= *Aleurites montana*)
Aulacorthum undetermined sp. 1
Pseudaulacaspis cockerelli
undetermined Euphorbiaceae
Bemisia ?berbericola
Dialeuropora decempuncta
Schoutedenia ralumensis
Singhius russellae

Fabaceae – Caesalpinioideae

Bauhinia spp
- Aleurolobus marlatti
- Bemisia afer-group
- Coccus longulus

Cassia fistula
- Coccus hesperidum

Cassia surattensis
- Icerya purchasi

Cassia spp
- Coccus hesperidum

Fabaceae – Mimosoideae

Acacia confusa
- Coccus longulus
- Icerya purchasi

Acacia "wattle" sp.
- Acizzia undetermined sp.

Albizia corniculata
- Heteropsylla cubana

Leucaena leucocephala
- Heteropsylla cubana
- Tetraleurodes acaciae

undetermined Mimosoideae
- Tetraleurodes acaciae

Fabaceae – Papilionoideae

Dalbergia hancei
- Tinocallis dalbergicola

Dalbergia hupeana (not listed for HK)
- Colophorina-group, undetermined sp. 1

Dalbergia sp.
- Aleurotrachelus tuberculatus
- Anomalosiphum tiomanense

Desmodium intortum (not listed for HK)
- Aphis glycines
- Planococcus citri

Desmodium sp.
- Tetraleurodes acaciae

Erythrina speciosa
- Bemisia afer-group
- Tetraleurodes acaciae

Millettia spp
- Aulacophoroides millettiae
- Viennotaleyrodes megapapillae

Phyllodium elegans
- Colophorina sp. near hungtouensis **comb. nov.**

Phyllodium pulchellum
- Colophorina sp. near hungtouensis **comb. nov.**

Pisum sativum
- Aphis craccivora

Myzus persicae
Pueraria hirsuta (not listed for HK)
Planococcus angkorensis
Trifolium sp.
Aphis craccivora
Vicia faba
Myzus persicae
Vigna unguiculata ssp sesquipedalis
Aphis craccivora

Fabaceae

undetermined legume
Heteropsylla cubana
undetermined legume vine
Pseudococcus jackbeardsleyi

Fagaceae

Castanea mollissima
Tuberculatus margituberculatus
Castanopsis indica (not listed for HK)
Neoquernaspis chiulungensis
Cyclobalanopsis championii
Dermaphis undetermined sp. 1
Neohormaphis undetermined sp. 1
Neothoracaphis undetermined sp. 1
Quernaphis tuberculatus
Cyclobalanopsis edithiae
Neothoracaphis elongata / saramaoensis-group
Cyclobalanopsis myrsinifolia
Aleuroclava undetermined sp. 1
Neoparlatoria formosana
Neoparlatoria yunnanensis
Cyclobalanopsis neglecta
Aleuroclava undetermined sp. 1
Allotrichosiphum cyclobalanopsidis
Mollitrichosiphum glaucae
Neoparlatoria undetermined sp. 1
Neothoracaphis elongata / saramaoensis-group
Lithocarpus glaber
Eutrichosiphum dubium
Quercus sp.
Schizoneuraphis gallarum
undetermined Fagaceae
Mollitrichosiphum nigrofasciatum

Flacourtiaceae

Homalium hainanensis
Syntomoza hsenpinensis

Goodeniaceae

Scaevola taccada (= *sericea*)
Bemisia tabaci

Hamamelidaceae

Liquidambar formosana
Paraleyrodes pseudonaranjae
Pealius liquidambari
Liquidambar sp.
Aleuroplatus liquidambaris

Lauraceae

Actinodaphne sp. (not listed for HK)
Palaealeurodicus machili
Cassytha filiformis
Sinomegoura citricola
Cinnamomum burmannii
Aleurocanthus spiniferus
Protopulvinaria longivalvata
Cinnamomum camphora
Aulacaspis undetermined sp.
Icerya seychellarum
Trioza camphorae
Cinnamomum parthenoxylon
Aleuroclava gordoniae
Aulacaspis tubercularis
Aulacaspis yabunikkei
Rhachisphora ?machili
Cinnamomum spp
Aleuroclava guyavae
Laurus canariensis (not listed for HK)
Paralecanium geometricum
Litsea cubeba
Aleurocanthus citriperdus
Litsea glutinosa
Aleurocanthus citriperdus
Aleurocanthus undetermined sp. 1, woglumi-group
Aleuroclava psidii
Aleurolobus marlatti
Aulacaspis yabunikkei
Crypticerya undetermined sp.
Dialeuropora decempuncta
Icerya assamensis
Icerya jaihind
Rhachisphora ?machili
Schizoneuraphis gallarum
Singhius hibisci
Litsea monopetala
Aiceona actinodaphnis
Aiceona titabarensis

Aleuroclava indicus
Aleurotrachelus tuberculatus
Dialeuropora decempuncta
Sinomegoura citricola

Litsea "monoptera" [?*monopetala, q.v.* above]

Litsea rotundifolia
Aiceona titabarensis
Icerya aegyptiaca

Litsea rotundifolia var. *oblongifolia*
Aleuroclava guyavae
Aleuroclava psidii
Aulacaspis tubercularis
Palaealeurodicus machili
Paralecanium expansum-group
Pentaleyrodes hongkongensis

Litsea spp
Neoparlatoria yunnanensis
Pentaleyrodes hongkongensis

Machilus breviflora
Machilaphis machili
Palaealeurodicus machili

Machilus chekiangensis
Aiceona robustiseta
Aulacaspis calcarata
Paraleyrodes minei

Machilus chinensis
Aleuroclava guyavae
Aulacaspis alisiana
Dialeuropora decempuncta
Machilaphis machili
Palaealeurodicus machili
Pentaleyrodes hongkongensis
Tuberaleyrodes machili

Machilus oreophila (not listed for HK)
Machilaphis machili

Machilus velutina
Icerya jaihind

Machilus wangchiana (= *Persea kadooriei*)
Aulacaspis tubercularis
Aulacaspis undetermined sp.
Palaealeurodicus machili
Singhiella chinensis
Toxoptera aurantii

Machilus spp
Aleuroclava guyavae
Aulacaspis alisiana
Dialeuropora decempuncta
Machilaphis machili
Palaealeurodicus machili
Paraleyrodes minei
Pentaleyrodes hongkongensis
Prococcus acutissimus
Rhachisphora machili

Singhiella chinensis
Persea kadooriei – see *Machilus wangchiana*
undetermined Lauraceae
Aulacaspis yabunikkei
Aulacaspis undetermined sp.
Paralecanium expansum-group
Pentaleyrodes hongkongensis

Leguminosae – see Fabaceae

Lythraceae

Lagerstroemia indica
Sarucallis kahawaluokalani

Magnoliaceae

Magnolia grandiflora
Formosaphis micheliae
Magnolia sp.
Aleuroclava psidii
Michelia x. *alba*
Aiceona titabarensis
Formosaphis micheliae
Pseudaulacaspis cockerelli
Michelia champaca
Aleurocanthus inceratus
Pseudaulacaspis cockerelli
Michelia figo
Cockerelliella bladhiae
Pseudaulacaspis cockerelli
Tachardina undetermined sp.
Michelia sp.
Aleuroclava psidii

Malvaceae

Abelmoschus esculentus (= *Hibiscus esculentus*)
Aphis gossypii
Lipaphis pseudobrassicae
Hibiscus mutabilis
Phenacoccus solenopsis
Hibiscus rosa-sinensis
Aphis gossypii
Conchaspis angraeci
Maconellicoccus hirsutus
Hibiscus tiliaceus
Maconellicoccus hirsutus
Mesohomotoma camphorae
Mesohomotoma hibisci
Hibiscus spp
Maconellicoccus hirsutus
Malvaviscus arboreus
Drosicha corpulenta

Malvasviscus arboreus var. *penduliflorus*
Drosicha undetermined sp.
undetermined Malvaceae
Phenacoccus madeirensis

Melastomataceae

Melastoma sanguineum
Aleuroclava undetermined sp. 4
Dialeurodes ?mirabilis

Meliaceae

Aglaia odorata
Aleurolobus subrotundus
Aulacaspis crawii
Melia azedarach
Aulacaspis crawii
Ferrisia virgata
Parlatoria proteus
Phenacoccus solani
Saissetia miranda
Melia sp.
Aulacaspis crawii

Menispermaceae

Cocculus orbiculatus
Aulacaspis thoracica
Ferrisia virgata
Stephania longa
Parabemisia myricae
Parabemisia undetermined sp. 1

Moraceae

Artocarpus hypargyreus
Icerya jaihind
Ficus elastica
Planococcus minor
Parasaissetia nigra
Ficus hirta
Icerya aegyptiaca
Sitobion undetermined sp.
Ficus hispida
Aleuroclava indicus
Aleuroclava undetermined sp. 3
Drosicha undetermined sp.
Paurocephala bifasciata
Reticulaphis undetermined sp. 1
Ficus microcarpa
Aleurocanthus undetermined sp. 1, woglumi-group
Dialeurodes sens. lat. undetermined sp. 4

Greenidea ficicola
Icerya undetermined sp.
Macrohomotoma gladiatum
Paralecanium expansum-group
Paraleyrodes pseudonaranjae
Pealius undetermined sp. 1
Pseudaulacaspis cockerelli
Pseudaulacaspis undetermined sp. 1
Pseudococcus cryptus
Pulvinaria psidii
Reticulaphis inflata
Singhiella simplex
Toxoptera schlingeri
Trioza undetermined sp. 1

Ficus pumila
Kerria greeni
Paurocephala chonchaiensis

Ficus religiosa
Maconellicoccus hirsutus

Ficus rumphii
Aleuroplatus spina [in Macau]
Reticulaphis fici [in Macau]

Ficus superba
Reticulaphis fici

Ficus superba var. *japonica*
Aleuroclava psidii
Dialeurodes sens. lat. undetermined sp. 5
Homotoma radiata
Paraleyrodes minei
Pealius undetermined sp. 2
Planoccus minor
Reticulaphis fici
Singhiella ?simplex

Ficus tinctoria
Parlatoria proteus

Ficus tinctoria s. sp. *gibbosa*
Homotoma sp. near yunnanica
Massilieurodes undetermined sp. 1
Parlatoria proteus

Ficus variegata
Pauropsylla ?udei

Ficus variegata var. *chlorocarpa*
Greenidea ficicola
Icerya jaihind
Pauropsylla udei

Ficus variolosa
Aleuroclava gordoniae

Ficus spp
Chrysomphalus undetermined sp.
Coccus undetermined sp.
Hemiberlesia lataniae
Maconellicoccus hirsutus
Parabemisia myricae

Parasaissetia nigra
Pseudococcus gilbertensis
Rastrococcus rubellus
Reticulaphis fici

Myricaceae

Myrica rubra
Aleuroplatus pectiniferus

Myrsinaceae

Ardisia lindleyana
Icerya jaihind
Rastrococcus chinensis
Embelia laeta
Crenidorsum micheliae
Dialeurodes citri sens. lat.
Maesa perlarius
Abgrallaspis cyanophylli
Aleuroclava jasmini
Aleuroplatus undetermined sp. 1
Coccus viridis
Massilieurodes formosensis
Massilieurodes undetermined sp. 3
Parabemisia undetermined sp. 2
Paraleyrodes minei
Maesa sp.
Aleurotrachelus maesae
Massilieurodes formosensis
Rapanea neriifolia
Pseudococcus odermatti

Myrtaceae

Eucalyptus tereticornis
Aphis gossypii
Blastopsylla occidentalis
Eucalyptus undetermined sp.
Blastopsylla occidentalis
Eugenia uniflora
Saissetia coffeae
Leptospermum petersenii (not listed for HK)
Aleuroclava guyavae
Psidium guajava
Aleurocanthus citriperdus
Aleurocanthus spiniferus
Aleurolobus setigerus
Aphis gossypii
Ceroplastes rubens
Coccus viridis
Greenidea formosana
Icerya seychellarum

Planococcus ankorensis
Planococcus citri
Planococcus minor
Pseudococcus cryptus
Pulvinaria psidii
Saissetia coffeae
Rhodomyrtus tomentosa
Saissetia coffeae
Rhodomyrtus sp.
Ceroplastes undetermined sp. 1
Icerya assamensis
Marsipococcus undetermined sp.
Syzygium buxifolium
Taiwanaphis decaspermi
Syzygium hancei
Aleuroclava undetermined sp. 2
Aleuroplatus pectiniferus
Cternarytaina undetermined sp. 1
Paralecanium planum
Rastrococcus chinensis
Silvestraspis uberifera
Syzygium jambos
Icerya jaihind
Icerya seychellarum
Megatrioza eugenioides
Silvestraspis uberifera
Trioza jambolanae
Syzygium sp.
Cternarytaina undetermined sp. 2
Megatrioza undetermined sp.

Oleaceae

Jasminum lanceolarium
Lankacoccus ornatus
Jasminum sambac
Bemisia undetermined sp. (slide at PPRD, labelled Lipaleyrodes sp.)
Jasminum spp
Aleuroclava jasmini
Ligustrum sinense
Aleurolobus subrotundus
Ceratopemphigus zehntneri
Pseudococcus gilbertensis
Osmanthus fragrans
Aleurolobus osmanthi

Opiliaceae

Cansjera rheedii
Aleurocanthus undetermined sp. 2, woglumi-group

Oxalidaceae

Averrhoa carambola
Aphis gossypii
Fiorinia fioriniae
Tachardina aurantiaca
Oxalis corymbosa
Aleyrodes lonicerae (unsubstantiated determination)
Oxalis sp.
Coccus hesperidum

Pentaphylacaceae

Pentaphylax euryoides
Aleuroclava gordoniae

Pittosporaceae

Pittosporum tobira
Pseudococcus odermatti

Polygonaceae

Polygonum chinense
Capitophorus hippophaes s. sp. javanicus
Capitophorus mitegoni

Portulacaceae

Talinum paniculatum
Saissetia coffeae

Ranunculaceae

Clematis chinensis
Myzus varians

Rhamnaceae

Berchemia floribunda
Massilieurodes ?formosensis
Sitobion berchemiae

Rhizophoraceae

Kandelia obovata (= *candel*)
Paralecanium undetermined sp. 1

Rosaceae

Eriobotrya japonica
Planoccus litchi
Rhopalosiphum nymphaeae (unusual insect / host combination)

Malus pumila (not listed for HK)
Rhopalosiphum rufiabdominale
Prunus mume
Rhopalosiphum padi
Rhopalosiphum rufiabdominale
Prunus persica
Hyalopterus persikonus
Myzus persicae
Pseudaulacaspis pentagona
Pyrus pyrifolia
Parlatoria desolator
Pyrus sinensis (= *pyrifolia*, *q.v.* above)
Pyrus sp.
Andaspis hawaiiensis
Rhaphiolepis indica
Aleuroclava gordoniae
Cacopsylla undetermined sp.
Rosa spp
Icerya purchasi
Sitobion ibarae
Rubus reflexus
Acanthaleyrodes styraci
Icerya crocea
Rubus sp.
Aulacaspis megaloba

Rubiaceae

Catuneregam spinosa (= *Randia spinosa*)
Paraleyrodes pseudonaranjae
Singhiella citrifolii
Diplospora dubia
Aleuroclava jasmini
Dialeurodes citri sens lat.
Gardenia florida (not listed for HK)
Drosicha maskelli
Gardenia jasminoides
Saissetia coffeae
Ixora chinensis
Pulvinaria psidii
Ixora stricta (not listed for HK)
Antonina nakaharai (unexpected host record)
Ixora spp
Pulvinaria psidii
Paederia scandens
Aulacorthum nipponicum
Psychotria asiatica
Icerya aegyptiaca
Paraleyrodes pseudonaranjae
Rastrococcus chinensis
undetermined Rubiaceae
Aleuroclava ?subindica
Coccus viridis

Dialeurodes sens. str. undetermined sp. 1
Pulvinaria psidii

Rutaceae

Acronychia pedunculata
Aleuroclava psidii
Asialeyrodes undetermined sp.
Aulacaspis acronychiae
Dialeuropora decempuncta
Dialeurodes kirkaldyi
Toxoptera aurantii
Citrus aurantifolia
Singhiella citrifolii
Sinomegoura evodiae
Citrus limon
Aleuroclava jasmini
Icerya purchasi
Parlatoria ziziphi
Rastrococcus invadens
Citrus maxima (= *grandis*)
Aleurocanthus citriperdus
Aleurocanthus spiniferus
Aleurolobus subrotundus
Icerya purchasi
Lepidosaphes beckii
Lepidosaphes gloverii
Paraleyrodes minei
Paraleyrodes pseudonaranjae
Parlatoria pergandii
Parlatoria ziziphi
Rastrococcus rubellus
Citrus x paradisi
Aonidiella aurantii
Lepidosaphes gloverii
Milviscutulus mangiferae
Paraleyrodes pseudonaranjae
Parlatoria ziziphi
Pulvinaria polygonata
Citrus reticulata
Aleurocanthus citriperdus
Aleurocanthus husaini
Aleurolobus subrotundus
Coccus hesperidum
Dialeurodes citri
Drosicha maskelli
Icerya aegyptiaca
Parabemisia myricae
Paraleyrodes minei
Parlatoria zizyphi
Saissetia coffeae
Citrus sinensis
Diaphorina citri

Nipaecoccus viridis
Saissetia coffeae

Citrus spp
Aleurocanthus citriperdus
Aleurocanthus spiniferus
Aleurocanthus ?woglumi
Aleuroclava aucubae
Aleuroclava jasmini
Aleuroclava subindica
Aleurolobus marlatti
Aleurolobus subrotundus
Bemisia giffardi
Ceroplastes floridensis
Coccus viridis
Dialeurodes citri
Diaphorina citri
Ferrisia virgata
Icerya jacobsoni
Lepidosaphes gloverii
Nipaecoccus viridis
Parlatoria pergandii
Pinnaspis strachani
Pseudococcus gilbertensis
Saissetia coffeae
Singhiella citrifolii
Toxoptera aurantii
Toxoptera citricidus
Trionymus undetermined sp.

Clausena lansium
Nipaecoccus viridis
Parlatoria acalcarata

Fortunella sp.
Bemisia giffardi

Glycosmis parviflora (= *citrifolia*)
Aleurolobus subrotundus

Melicope pteleifolia
Ceroplastes murrayi

Murraya paniculata (= *exotica*)
Aleurolobus marlatti
Aleurolobus subrotundus
Aspidiotus excisus
Aulacaspis murrayae
Ceroplastes floridensis
Chaitoregma undetermined sp.
Dialeurodes citri
Diaphorina citri
Mesohomotoma camphorae
Sinomegoura citricola
Toxoptera aurantii

Murraya spp
Aleurolobus subrotundus
Aulacaspis murrayae

Severinia buxifolia (= *Atalantia buxifolia*)
Parlatoria ziziphi
Zanthoxylum avicennae
Maacoccus bicruciatus
Zanthoxylum nitidum
Toxoptera victoriae
Zanthoxylum scandens
Toxoptera odinae
Toxoptera victoriae
Zanthoxylum sp.
Toxoptera citricidus
Toxoptera victoriae

Sabiaceae

Meliosma rigida
Mollitrichosiphum yamabiwae

Salicaceae

Salix sp.
Tuberolachnus salignus

Santalaceae

Dendrotrophe frutescens
Colophorina-group, undetermined sp. 2
Dialeurodes hongkongensis
Paralecanium expansum-group
Tuberaphis undetermined sp.
Dendrotrophe varians (not listed for HK)
Dialeurodes hongkongensis

Sapindaceae

Dimocarpus longan (= *Euphoria longan*)
Aleurocanthus spiniferus
Aphis gossypii
Ceroplastes rubens
Coccus formicarii
Coccus hesperidum
Cornegenapsylla sinica
Maconellicoccus hirsutus
Nipaecoccus viridis
Planococcus citri
Thysanofiorinia nephelii
Litchi chinensis
Bemisia tabaci
Drepanococcus cajani
Planococcus litchi
Pseudococcus undetermined sp. or spp
Pulvinaria psidii
Thysanofiorinia leei

Sapindus saponaria (= *mukorossi*)
Tinocallis insularis

Sapotaceae

Manilkara zapota (= *Achras sapota*)
Coccus viridis
Pulvinaria psidii
Saissetia coffeae

Simaroubaceae

Ailanthus fordii
Toxoptera odinae

Solanaceae

Capsicum annuum (including *frutescens* vars)
Aphis gossypii
Myzus persicae
Lycium chinense
Myzus persicae
Trialeurodes vaporariorum
Lycopersicon esculentum
Myzus persicae
Solanum melongena
Bemisia tabaci
Myzus persicae
Solanum nigrum
Aphis solanella
Solanum tuberosum
Myzus persicae

Sterculiaceae

Firmiana simplex
Pseudaulacaspis pentagona
Reevesia thyrsoidea
Pulvinaria hydrangeae
Sterculia lanceolata
Tyora guangdongana
Sterculia nobilis
Carsidara marginalis

Styracaceae

Styrax suberifolius
Cerataphis jamuritsu

Symplocaceae

Symplocos confusa
Aleurocanthus ?woglumi

Symplocos glauca
Aleuroclava gordoniae
Symplocos lancifolia
Coccus sp. near formicarii
Symplocos lucida (= *crassifolia*)
Massileurodes undetermined sp. 1

Theaceae

Adinandra millettii
Aleuroclava gordoniae
Camellia japonica
Fiorinia fioriniae
Fiorinia theae
Macrohomotoma undetermined sp.
Camellia sinensis
Aleurotrachelus camelliae
Camellia spp
Planococcus minor
Eurya sp.
Cockerelliella bladhiae
Gordonia axillaris
Aleurocanthus gordoniae
Aleuroclava gordoniae
Aleuroclava ?subindica
Paraleyrodes minei
Rhachisphora takahashii sp. nov.
Toxoptera aurantii
Gordonia sp.
Rhachisphora takahashii sp. nov.
Schima superba
Cecidopsylla sinensis
Paraleyrodes minei
Rhachisphora takahashii sp. nov.
Tutcheria spectabilis
Aleurocanthus gordoniae

Thymelaeaceae

Aquilaria sinensis
Aleurocanthus rugosa
Aleuroplatus pectiniferus
Massilieurodes ?formosensis
Paraleyrodes minei

Trapaceae

Trapa natans (not listed for HK)
Rhopalosiphum nymphaeae

Ulmaceae

Celtis biondii
Aleurolobus marlatti

Shivaphis catalpinari
Shivaphis szelegiewiczi
Celtis sinensis
Pulvinaria hydrangeae
Shivaphis celti
Shivaphis szelegiewiczi
Celtis spp
Bemisia afer-group
Dialeuropora decempuncta
Massilieurodes undetermined sp. 1
Paraleyrodes minei
Shivaphis celti
Trema orientalis
Icerya crocea
Icerya seychellarum
Paurocephala undetermined sp. near boehmeriae
Ulmus parvifolia (not listed for HK)
Lopholeucaspis cockerelli

Umbelliferae – see Apiaceae

Urticaceae

Boehmeria nivea
Paurocephala boehmeriae
Pealius rhododendri

Verbeneceae

Callicarpa tomentosa (not listed for HK)
Mallococcus sinensis
Clerodendrum fortunatum
Singhius hibisci
Clerodendrum splendens
Parlatoria proteus
Duranta erecta (= *repens*)
Aphis gossypii
Aspidiotus excisus
Ceroplates actiniformis
Lantana camara
Bemisia tabaci
Lantana sp.
Insignorthezia insignis
Vitex negundo
Aphis gossypii

ANGIOSPERMAE – MONOCOTYLEDONES

Agavaceae

Dracaena sanderiana
Parlatoria proteus

Araceae

Alocasia odora (= *macrorrhiza*)
Pealius psychotriae
Alocasia sp.
Rastrococcus chinensis
Colocasia esculenta
Aphis gossypii
Dieffenbachia picta (= *sanguine*)
Pentalonia nigronervosa
Dieffenbachia hybrid "Camilla"
Pulvinaria psidii

Arecaceae [Palmae]

Archontophoenix alexandrae
Cerataphis brasiliensis
Chrysalidocarpus lutescens
Aspidiotus destructor
Hemiberlesia lataniae
Parlatoria proteus
Phenacaspis undetermined sp.
Pseudaulacaspis dendrobii
Livistona chinensis
Icerya seychellarum
Rhapis sp.
Rhizoecus hibisci
Pheonix canariensis
Parlatoria proteus
Roystonea regia
Coccus hesperidum
undetermined palms
Fiorinia minor
Pseudaulacaspis eugeniae

Bromeliaceae

Ananas comosus
Dysmicoccus brevipes

Cyperaceae

Cyperus iria
Hysteroneura setariae
Lepironia articulata
Pseudaulacaspis dendrobii
undetermined Cyperaceae
Pseudaulacaspis dendrobii

Gramineae – see Poaceae

Juncaceae

Juncus prismatocarpus
Livia khaziensis

Liliaceae

Allium fistulosum
Rhopalosiphum rufiabdominale
Asparagus lucidus (not listed for HK)
Pseudococcus gilbertensis
Hyacinthus sp. (not listed for HK)
Aphis craccivora

Musaceae

Musa x paradisiaca (= *sapientum*)
Pentalonia nigronervosa

Orchidaceae

Cymbidium sinense
Lepidosaphes chinensis
Lepidosaphes undetermined sp.
Parlatoria proteus
Dendrobium sp.
Pseudaulacaspis dendrobii
Vanda superba (not listed for HK)
Parlatoria proteus
Vanda teres
Parlatoria proteus
Vanda sp.
Parlatoria proteus
undetermined orchids
Furcaspis biformis
Lindingaspis tingi
Parlatoria proteus

Palmae – see Arecaceae

Poaceae [Gramineae]

Arundinaria cantorii
Chucallis bambusicola
Arundinaria shiuyingiana
Ceratovacuna hoffmani
Chaitoregmata tattakana
Arundinaria sinica
Bambusaspis longula
Arundinaria spp
Antonina pretiosa
Astegopteryx bambusae
Avena fatua
Sitobion miscanthi

Avena sativa
Rhopalosiphum rufiabdominale
Bambusa cornigera
Astegopteryx bambusae
Bambusa fortunei (not listed for HK)
Ischnafiorinia bambusae
Bambusa glaucescens cult. var. “Fernleaf”
Astegopteryx bambusae
Odonaspis siamensis
Bambusa multiplex
Bambusaspis undetermined sp.
Greenaspis elongata
Bambusa mutabilis
Pseudoregma koshunensis
Bambusa pervariabilis
Froggattiella penicillata
Odonaspis greenii
Bambusa ventricosa
Bambusaspis bambusae
Bambusa vulgaris
Astegopteryx bambusae
Ischnafiorinia bambusae
Mohelnaspis vermiformis
Bambusa spp
Antonina socialis
Astegopteryx undetermined sp.
Bambusaspis bambusae
Bambusaspis chinae
Froggattiella mcclurei
Pseudoregma koshunensis
Chrysopogon sp.
Eriococcus graminis
Dactyloctenium aegyptium
Hysteroneura setariae
Dendrocalamus pulverulentus
Pseudoregma bambucicola
Digitaria radicosa
Hysteroneura setariae
Distichlis sp. (not listed for HK)
Odonaspis morrisoni
Echinochloa colona
Hysteroneura setariae
Eleusine indica
Hysteroneura setariae
Imperata sp.
Vasdavidius setiferus
Indocalamus herklotsii
Dysmicoccus angustus
Miscanthus sinensis
Ceratovacuna lanigera
Paraleyrodes minei
Vasdavidius concursus

Miscanthus spp
- Pygalataspis miscanthi
- Vasdavidius concursus

Neyraudia reynaudiana
- Neomaskellia andropogonis

Oplismenus compositus
- Pseudoregma panicola

Oplismenus spp
- Pseudoregma panicola

Oryza sativa
- Hysteroneura setariae

Panicum sp.
- Hysteroneura setariae

Paspalum paspaloides (= *distichum*)
- Hysteroneura setariae
- Melanaphis sacchari

Pennisetum purpureum
- Hysteroneura setariae

Phragmites spp
- Hyalopterus persikonus

Phyllostachys aurea
- Takecallis taiwana

Saccharum officinarum
- Ceratovacuna lanigera
- Duplachionaspis natalensis
- Saccharicoccus sacchari

Saccharum spontaneum
- Ceratovacuna longifila
- Ceratovacuna undetermined sp.
- Melanaphis sacchari
- Neomaskellia andropogonis
- Vasdavidius concursus

Saccharum spp
- Acanthomytilus imperatae
- Ceratovacuna lanigera
- Melanaphis sacchari

Sinobambusa tootsik
- Antonina nakaharai

Zea mays
- Aphis craccivora (unusual insect / host combination)
- Aphis gossypii (unusual insect / host combination)
- Rhopalosiphum maidis
- Rhopalosiphum rufiabdominale
- Tetraneura fusiformis (root-feeding)

undetermined bamboos
- Aleurocanthus longispinus
- Antonina pretiosa
- Bambusaspis mimica
- Bambusaspis minuta
- Bambusaspis undetermined sp. or spp
- Ceratovacuna japonica
- Ceratovacuna undetermined sp.
- Diaspidinae, undetermined genus 1

Formosaspis formosana
Formosaspis undetermined sp.
Glyphinaphis undetermined sp.
Greenaspis elongata
Kuwanaspis elongata
Kuwanaspis linearis
Melanaphis bambusae
Mohelnaspis vermiformis
Nanhaiaspis chiulungensis
Odonaspis siamensis
Palmicultor lumpurensis
Phyllaphoides bambusicola
Pseudoregma bambucicola
Pseudoregma koshunensis

undetermined grasses / sedges
Aclerda yunnanensis
Antonina graminis
Chortinaspis biloba
Colopha kansugei
Eriococcus graminis
Geoica lucifuga (root-feeding)
Hysteroneura setariae
Pseudaulacaspis dendrobii
Pseudoregma panicola
Pygalataspis miscanthi
Pseudaulacaspis eugeniae
Rhopalosiphum maidis
Sitobion miscanthi
Tetraleurodes graminis
Tetraneura fusiformis (root-feeding)
Trialeurodes ricini (unusual insect / host combination)
Trionymus orientalis
Vasdavidius setiferus

Pontederiaceae

Eichhornia crassipes
Hysteroneura setariae
Rhopalosiphum nymphaeae

Smilacaceae

Heterosmilax japonica var. *gaudichaudiana*
Sitobion smilacifoliae
Smilax china
Sitobion smilacifoliae
Smilax corbularia (= *hypoglauca*)
Parabemisia undetermined sp. 1
Smilax glabra
Paraleyrodes pseudonaranjae
Sitobion smilacifoliae

Smilax spp
Parabemisia undetermined sp. 1
Smilacicola crenatus

Zingiberaceae

Alpinia hainanensis (= *katsumadai*)
Paraleyrodes minei
Pentalonia caladii
Alpinia spp
Astegopteryx styracophila
undetermined Zingiberaceae
Astegopteryx styracophila
Astegopteryx undetermined sp.

PTERIDOPHYTAE

Aspleniaceae

Neottopteris nidus
Paralecanium undetermined sp. 2

Appendix 4. Sternorrhycha voucher material deposited in Hong Kong at PPRD (as at August 27, 2010, compiled by C.S.K. Lau)

• Logistical constraints have meant that the determinations on these slides have not been checked. Some of the host / insect combinations are unlikely to be correct, perhaps reflecting vagrant individuals.
• Authorities for botanical names are not given here. For most plants, the authorities may be obtained from the HK Herbarium website (http://www.hkherbarium.net/Herbarium/frame.html, or HK Herbarium (2004).

Insect	Host
Acanthaleyrodes styraci Takahashi, 1942	Rubus reflexus
Aiceona titabarensis (Raychaudhuri & Ghosh, 1964)	Ilex hanceana (unexpected host)
	Litsea monopetala
Aleurocanthus citriperdus Quaintance & Baker, 1916	Citrus maxima
	Citrus sp.
	Litsea cubeba
	Litsea glutinosa
Aleurocanthus gordoniae Takahashi, 1941	Gordonia axillaris
	Tutcheria spectabilis
Aleurocanthus rugosa Singh, 1931	Aporusa dioica
	Plumeria rubra
Aleurocanthus spiniferus (Quaintance, 1903)	Cinnamomum burmannii
	Citrus maxima
	Dimocarpus longan
	Psidium guajava
Aleurocanthus woglumi Ashby, 1915	Symplocos confusa
Aleuroclava gordoniae (Takahashi, 1932)	Adinandra millettii
	Ilex pubescens
	Symplocos glauca
Aleuroclava indicus (Singh, 1931)	Dillenia indica
	Litsea ?monopetala
Aleuroclava jasmini (Takahashi, 1932)	Citrus limon
Aleuroclava psidii (Singh, 1931)	Acronychia pedunculata
Aleuroclava rhododendri (Takahashi, 1935)	Rhododendron pulchrum
Aleuroclava sp. indet. 1	Cyclobalanopsis myrsinifolia
	Cyclobalanopsis neglecta
Aleurolobus marlatti (Quaintance, 1903)	Rhododendron pulchrum
Aleurolobus rhododendri Takahashi, 1934	Rhododendron pulchrum
Aleurolobus subrotundus Silvestri, 1927	Citrus maxima
	Citrus reticulata
Aleuroplatus pectiniferus Quaintance & Baker, 1917	Tetracera asiatica
Aleurotrachelus tuberculatus Singh, 1933	Dalbergia sp.
Aphis [fabae s. sp.] solanella Theobald, 1914	Solanum nigrum
Aphis gossypii Glover, 1877	Dimocarpus longan
	Phyllanthus reticulatus
	Eucalyptus tereticornis
Aspidiotus excisus Green, 1896	Emilia sonchifolia
Aulacaspis alisiana Takagi, 1970	Machilus sp.
Aulacaspis murrayae Takahashi, 1931	Murraya sp.
Aulacaspis tubercularis (Newstead, 1906)	Persea kadooriei
Aulacaspis yasumatsui Takagi, 1977	Cycas revoluta
Aulacaspis sp. indet. 1	Acronychia pedunculata
Aulacaspis sp. indet. 3	Cinnamomum camphora

..... *continued on the next page*

Appendix 4 (continued)

Insect	Host
Aulacorthum nipponicum (Essig & Kuwana, 1918)	Paederia scandens
Aulacorthum sp.	Vernicia montana
Bambusaspis longula (Russell, 1941)	Arundinaria sinica
Bemisia afer (Priesner & Hosny, 1934)	Bridelia tomentosa
Bemisia emiliae (Chen & Ko, 2006)	Emilia sonchifolia
Bemisia tabaci (Gennadius, 1889)	Ipomoea batatas
	Litchi chinensis
Blastopsylla occidentalis Taylor, 1985	Eucalyptus tereticornis
Cerataphis brasiliensis (Hempel, 1901)	Archontophoenix alexandrae
Ceratopemphigus zehntneri Schoutenden, 1905	Ligustrum sinense
Ceratovacuna sp. indet.	Saccharum spontaneum
Ceroplastes floridensis Comstock, 1881	Murraya paniculata
Ceroplastes murrayi Froggatt, 1919	Melicope pteleifolia
Chaitoregma sp.	Murraya paniculata
Chucallis bambusicola (Takahashi, 1921)	Arundinaria cantorii (as "stick bamboo”)
Coccus hesperidum Linnaeus, 1758	Cassia fistula
	Citrus reticulata
Coccus viridis (Green, 1889)	Psidium guajava
Colophorina sp. near hungtouensis (Fang & Yang, 1986) **comb. nov.**	Phyllodium pulchellum
Conchaspis angraeci Cockerell, 1893	Hibiscus rosa-sinensis
Crenidorsum micheliae (Takahashi, 1932)	Daphniphyllum calycinum
	Embelia laeta
Cribropulvinaria tailungensis Hodgson & Martin, 2001	Aporusa dioica
Dialeurodes agalmae Takahashi, 1935	Schefflera octophylla
Dialeurodes citri (Ashmead, 1885)	Citrus reticulata
	Murraya paniculata
Dialeurodes hongkongensis Takahashi, 1941	Dendrotrophe frutescens
Dialeurodes sens. lat. undetermined sp. 2	Ficus microcarpa
Dialeuropora decempuncta (Quaintance & Baker, 1917)	Breynia cernua
	Glochidion zeylanicum
	undetermined shrub
Diaphorina citri Kuwayama, 1908	Murraya paniculata
Eriococcus graminis Maskell, 1897	Chrysopogon sp.
Fiorinia pinicola Maskell, 1897	Araucaria sp.
	Pinus sinensis
Fiorinia theae Green, 1900	Camellia japonica
Fistulococcus pokfulamensis Hodgson & Martin, 2005	Gnetum luofuense
Greenidea brideliae Takahashi, 1928	Bridelia tomentosa
Hysteroneura setariae (Thomas, 1878)	Digitaria radicosa
	Paspalum distichum
Icerya aegyptiaca (Douglas, 1890)	Citrus reticulata
Icerya jacobsoni Green, 1913	Citrus sp.
Icerya jaihind (Rao, 1951)	Ardisia lindleyana
Icerya purchasi Maskell, 1879	Acacia confusa
Icerya seychellarum (Westwood, 1855)	Bridelia tomentosa
Lankacoccus ornatus (Green, 1922)	Jasminum lanceolarium
Lepidosaphes beckii (Newman, 1869)	Citrus maxima
Lepidosaphes undetermined sp.	Gnetum luofuense
Lipaleyrodes sp. indet.	Jasminum sambac
Machilaphis machili (Takahashi, 1928)	Machilus chinensis

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Appendix 4 (continued)

Insect	Host
	Machilus ?oreophila
Maconellicoccus hirsutus (Green, 1908)	Ficus religiosa
Macrohomotoma gladiatum Kuwayama, 1908	Ficus microcarpa
Massilieurodes formosensis (Takahashi, 1933)	Aquilaria sinensis
Mesohomotoma camphorae Kuwayama, 1908	Hibiscus tiliaceus
Myzus persicae (Sulzer, 1776)	Carica papaya
	Chrysanthemum morifolium
	Dianthus caryophyllus
	Solanum melongena
	Vicia faba
?Neohormaphis sp. indet.	Cyclobalanopsis championii
Neomaskellia andropogonis Corbett, 1926	Saccharum ?spontaneum
Neothoracaphis ?elongata (Takahashi, 1958)	Cyclobalanopsis championii
Nipaecoccus viridis (Newstead, 1894)	Citrus sinensis
	Dimocarpus longan
Orchamoplatus mammaeferus (Quaintance & Baker, 1917)	Codiaeum variegatum
Palaealeurodicus machili (Takahashi, 1931)	Litsea rotundifolia var. oblongifolia
	Machilus breviflora
	Machilus chinensis
	?Machilus sp.
Parabemisia sp. indet. 2	Rhododendron pulchrum
Paralecanium expansum (Green, 1896) - group	Litsea rotundifolia var. oblongifolia
Paraleyrodes minei Iaccarino, 1990	Aquilaria sinensis
Paraleyrodes pseudonaranjae Martin, 2001	Bridelia tomentosa
	Citrus maxima
	Cratoxylum ligustrinum
	Glochidion zeylanicum
	Psychotria asiatica
	Randia spinosa
	Rhododendron pulchrum
Parasaissetia nigra (Nietner, 1861)	Macaranga tanarius
Parlatoria proteus (Curtis, 1843)	Clerodendum splendens
	Cymbidium sinense
	Dracaena sanderiana
	Ficus tinctoria s.sp. gibbosa
	Vanda superba
	Vanda teres
	Schefflera (cultivated var.)
	undetermined tree
Parlatoria ziziphi (Lucas, 1853)	Atalanta buxifolia
	Citrus paradisi
Parthenolecanium persicae (Fabricius, 1776)	“Croton sp.” [probably *Codiaeum* cult. var.]
Pealius rhododendri Takahashi, 1935	Rhododendron pulchrum
Pentaleyrodes hongkongensis Takahashi, 1941	Litsea rotundifolia var. oblongifolia
	Machilus sp.
Pentalonia nigronervosa Coquerel, 1859	Dieffenbachia picta
Pentalonia caladii van der Goot, 1917	Alpinia hainanensis
Phenacoccus madeirensis Green, 1923	undetermined Malvaceae
Phenacoccus parvus Morrison, 1924	Emilia sonchifolia
Planococcus angkorensis (Takahashi, 1942)	Pueraria hirsuta

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Appendix 4 (continued)

Insect	Host
Planococcus citri (Risso, 1813)	Ipomoea batatas
Planococcus litchi Cox, 1989	Eriobotrya japonica
Planococcus minor (Maskell, 1897)	Ficus superba var. japonica
	Macaranga tanarius
Pseudaonidia trilobitiformis (Green, 1896)	undetermined host
Pseudaulacaspis cockerelli (Cooley, 1897)	Ilex cinerea
Pseudaulacaspis pentagona (Targioni Tozzetti, 1886)	Allamanda cathartica
Pseudococcus cryptus Hempel, 1918	Ficus microcarpa
Pseudococcus gilbertensis Beardsley, 1966	Citrus sp.
Pseudoregma koshunensis (Takahashi, 1924)	Bambusa mutabilis
Pseudoregma panicola (Takahashi, 1921)	undetermined grass inflorescence
Pulvinaria hydrangeae Steinweden, 1946	Celtis sinensis
Pulvinaria psidii Maskell, 1893	Dieffenbachia hybrida var. 'Camilla'
	Ficus microcarpa
	Manilkara zapota
	Plumeria rubra
	undetermined Asteraceae
Rastrococcus chinensis Ferris, 1954	Aporusa dioica
	Ardisia lindleyana
Rastrococcus invadens Williams, 1986	Citrus limon
	Mallotus sp.
Rastrococcus rubellus Williams, 1989	Plumeria rubra c. v. acutifolia
Reticulaphis undetermined sp.	Ficus hispida
Rhachisphora machili / koshunensis-group	Litsea glutinosa
Rhizoecus hibisci Kawai & Takagi, 1971	Rhapis sp.
Rhopalosiphum nymphaeae (Linnaeus, 1761)	Eriobotrya japonica
	Trapa natans
Rhopalosiphum rufiabdominalis (Sasaki, 1899)	Allium fistulosum
Saissetia coffeae (Walker, 1852)	Citrus reticulata
	Gardenia jasminoides
	Momordica charantia
	Sechium edule
	Manilkara zapota
Schizolachnus orientalis (Takahashi, 1924)	Pinus massoniana
Schizoneuraphis gallarum van der Goot, 1917	Quercus sp.
Shivaphis celti Das, 1918	Celtis sinensis
	Celtis sp.
Singhiella chinensis (Takahashi, 1941)	Persea kadooriei
Singhiella citrifolii (Morgan, 1893)	Citrus aurantifolia
	Citrus maxima
Singhius hibisci (Kotinsky, 1907)	Aporusa dioica
	Bridelia tomentosa
	Clerodendrum fortunatum
Sinomegoura citricola (van der Goot, 1917)	Cassytha filiformis
Sitobion smilacifoliae (Takahashi, 1921)	Smilax glabra
Sitobion sp.	Ficus hirta
Syntomoza hsenpinensis (Fang & Yang, 1986)	Homalium hainanensis
Taiwanaphis decaspermi Takahashi, 1934	[vagrant alata] on Rhododendron pulchrum
Tenaphalara acutipennis Kuwayama, 1907	Bombax ceiba
Tetraleurodes acaciae (Quaintance, 1900)	Desmodium sp.

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Appendix 4 (continued)

Insect	Host
	Erythrina speciosa
	Leucaena leucocephala
Tetraneura fusiformis Matsumura, 1917	Emilia sonchifolia [presumed vagrant]
	[vagrant alata] on Hibiscus rosa-sinensis
Tinocallis insularis (Takahashi, 1927)	Sapindus saponaria
Toxoptera aurantii (Boyer de Fonscolombe, 1841)	Acronychia pedunculata
	Cratoxylum polyanthum
Toxoptera odinae (van der Goot, 1917)	Sapium sp.
Toxoptera victoriae Martin, 1991	Zanthoxylum scandens
Trialeurodes ricini (Misra, 1924)	grass blade (unexpected host)
Trialeurodes vaporariorum (Westwood, 1856)	Lycium chinense
Trioza ?syzygii Li & Yang, 1991	undetermined host
Vasdavidius concursus (Ko, 1998)	Saccharum spontaneum

FIGURES 1, 2— Developed Hong Kong. (1) The coastal fringe of HK Island has long been a byword for population density. (2) The new town of Tung Chung on the developing north side of Lantau Island, with appartment towers, expressway and rapid transit links.

FIGURES 3, 4—Green Hong Kong A. (3) A spillway from the Aberdeen reservoirs on HK Island, flanked by slopes covered by diverse woodland. (4) Country Park walking trails miander for miles throughout HK's territory, affording ready access for insect sampling.

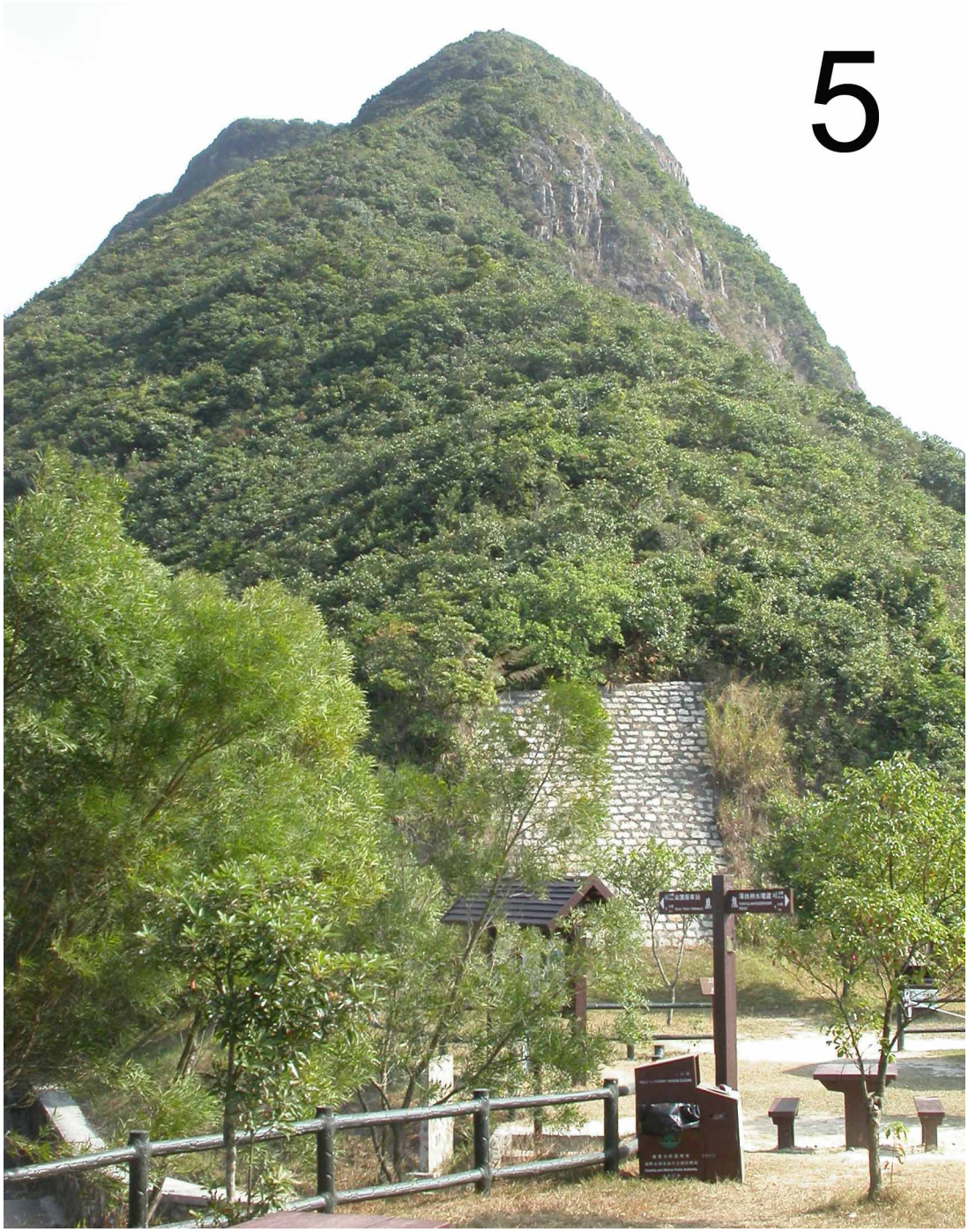
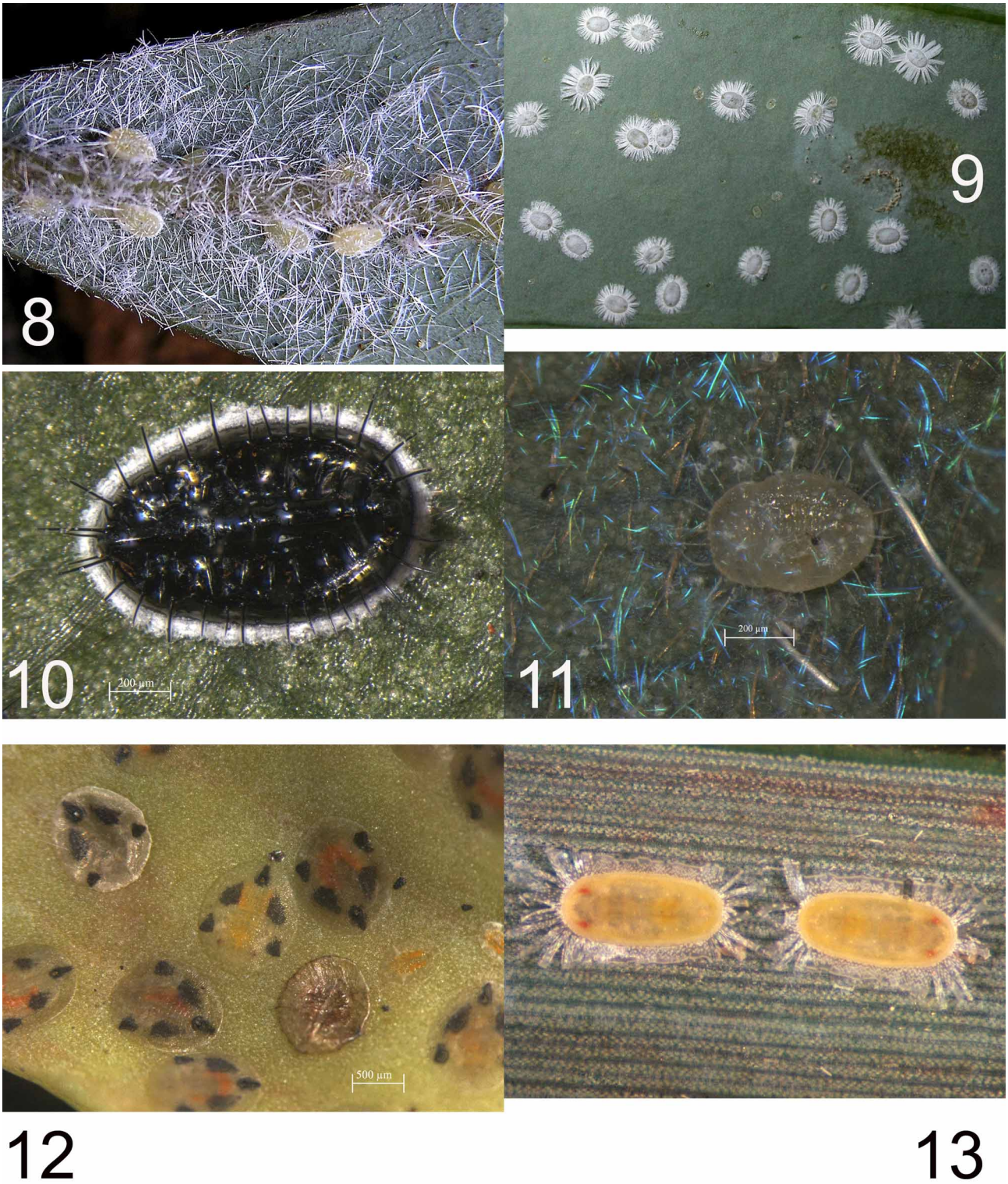
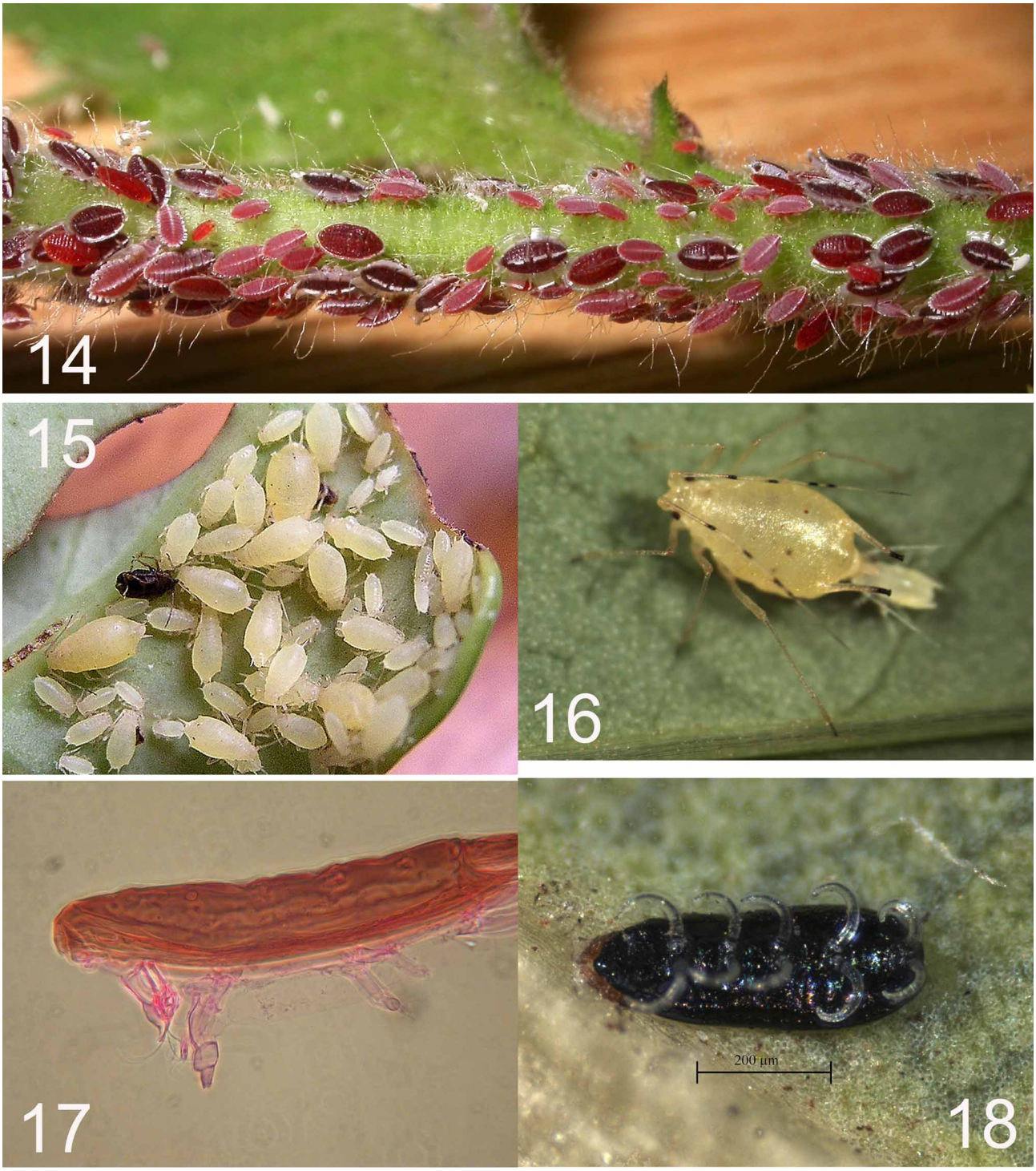


FIGURE 5—Green Hong Kong B—the quiet summit of High West on HK Island, only a short distance from the tourist crowds on The Peak, and served by excellent trails. On weekdays visitors have it almost to themselves.

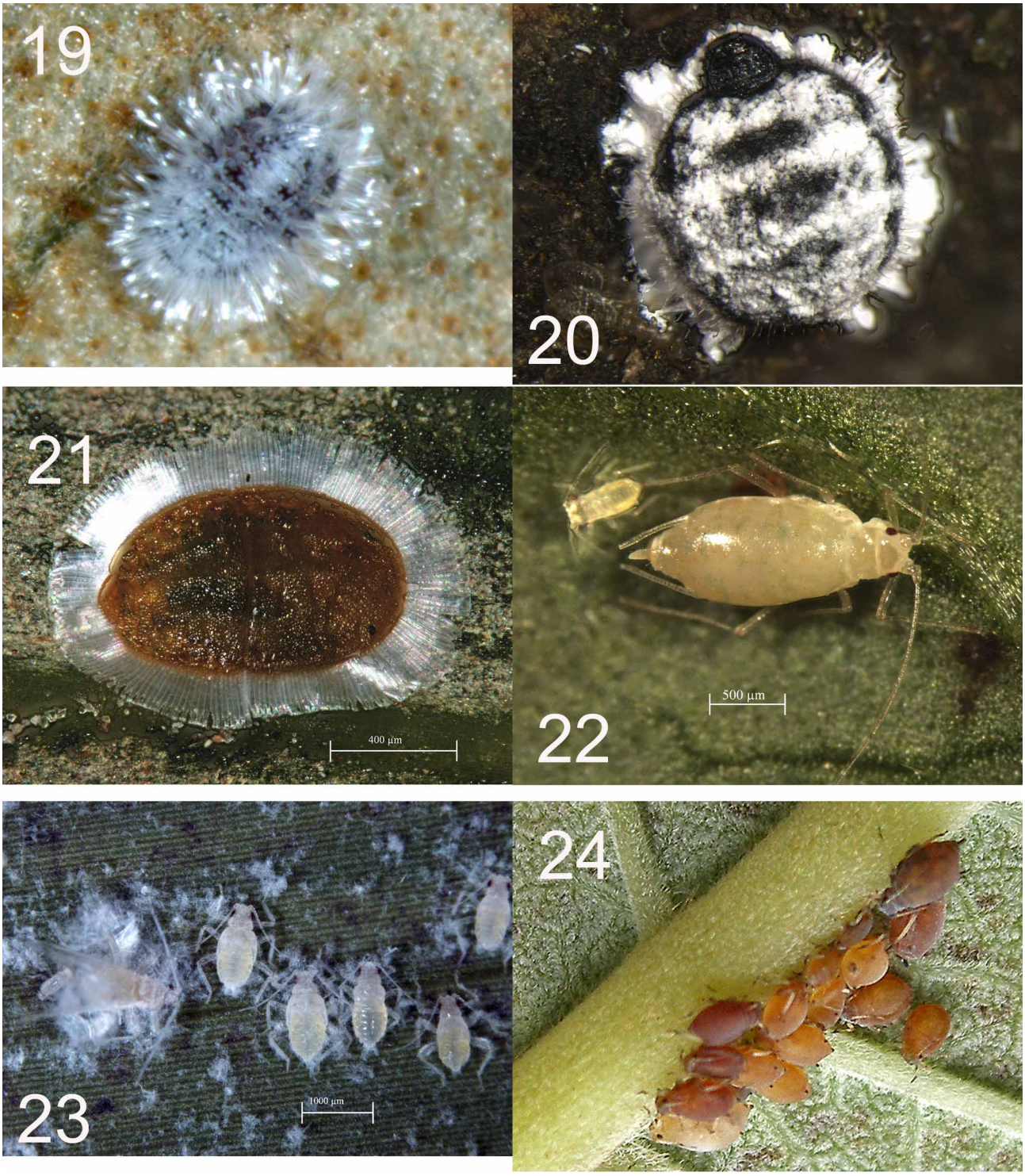
FIGURES 6, 7—Green Hong Kong C. (6) Pak Sha O village, Sai Kung Peninsula, a typical traditional New Territories village with small-scale agricultural and horticultural planting amid native shrub-woodland. (7) Electricity pylon access paths provide another means of access to natural habitat.



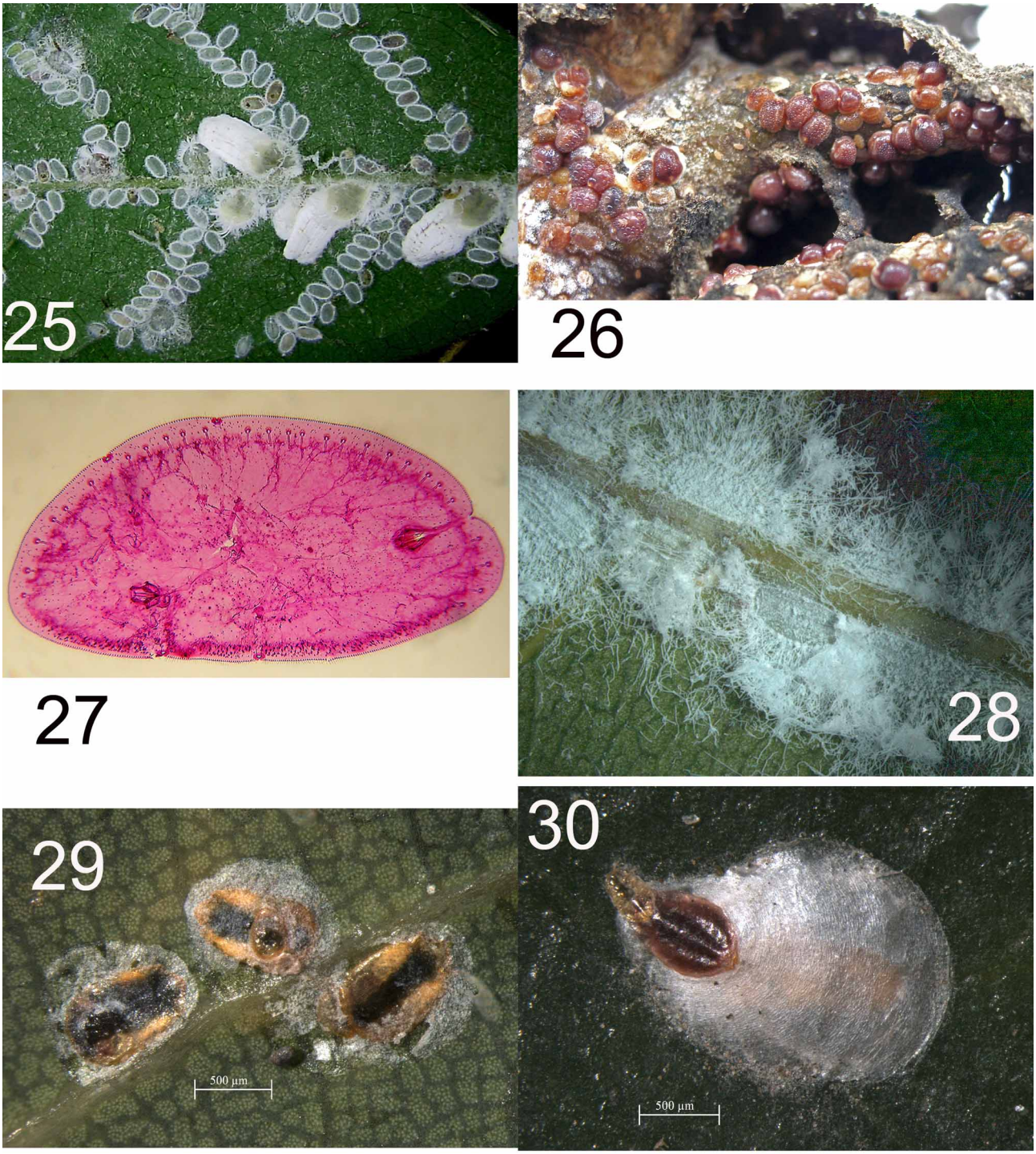
FIGURES 8–13, Aleyrodidae. (8) *Palaealeurodicus machili*, HK's only native member of the Aleurodicinae, puparia and secreted wax rods on Lauraceae. (9) *Parabemisia* undetermined sp. 1, puparia on *Smilax* sp. vine. (10) *Aleurocanthus* undetermined sp. 3, puparium on *Gnetum luofuense*. (11) *Dialeuropora decempuncta*, puparium and characteristic blue-iridescent secreted wax filaments, on *Aporusa dioica*. (12) *Dialeurodes hongkongensis*, puparia on *Dendrotrophe frutescens*. (13) *Vasdavidius concursus*, puparia with eyespots of developing adults visible, on grass blade.



FIGURES 14–18, Aphididae. (14) *Aleurodaphis blumeae*, apterae and nymphs on stem of Asteraceae. (15) *Schoutedenia ralumensis*, apterae and nymphs on Euphorbiaceae. (16) *Myzus varians*, aptera and first-instar nymph on *Clematis chinensis*. (17) *Neothoracaphis* undetermined sp. 1, slide-mounted teneral aptera on *Cyclobalanopsis championii*. (18) *Neothoracaphis elongata* / *saramaoensis* group, mature aptera, habitus, on *Cyclobalanopsis edithiae*.

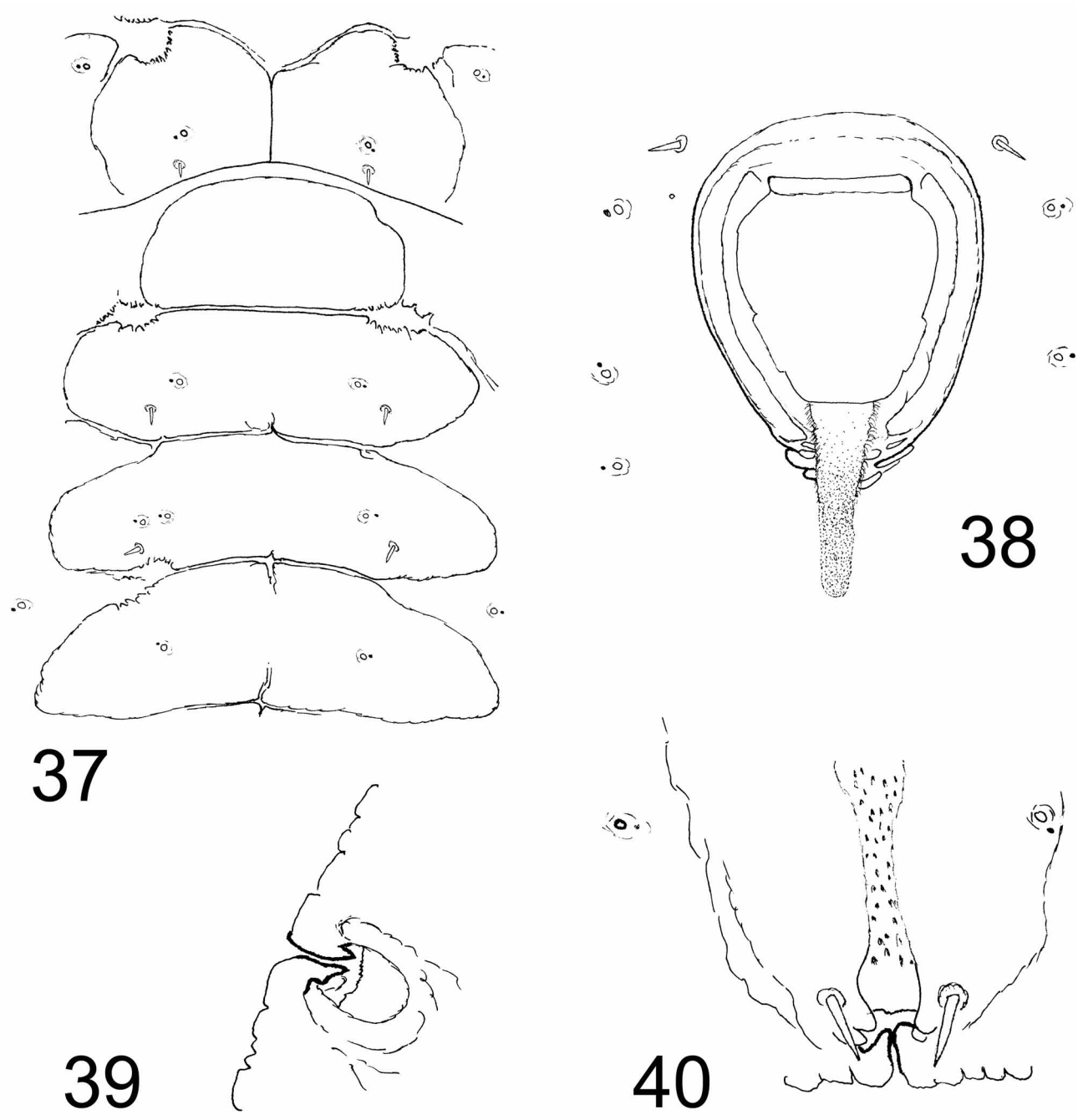


FIGURES 19–24, Aphididae. (19) *Neohormaphis* undetermined sp., alatoid nymph on *Cyclobalanopsis* championii. (20) *Dermaphis* undetermined sp., mature aptera on *Cyclobalanopsis championii*. (21) *Cerataphis brasiliensis*, aptera on *Archontophoenix alexandrae*. (22) *Capitophorus* sp., aptera and first-instar nymph on *Polygonun sinense*. (23) *Phyllaphoides bambusicola*, alata and nymphs on bamboo leaf. (24) *Toxoptera odinae*, apterae and nymphs on undetermined host.

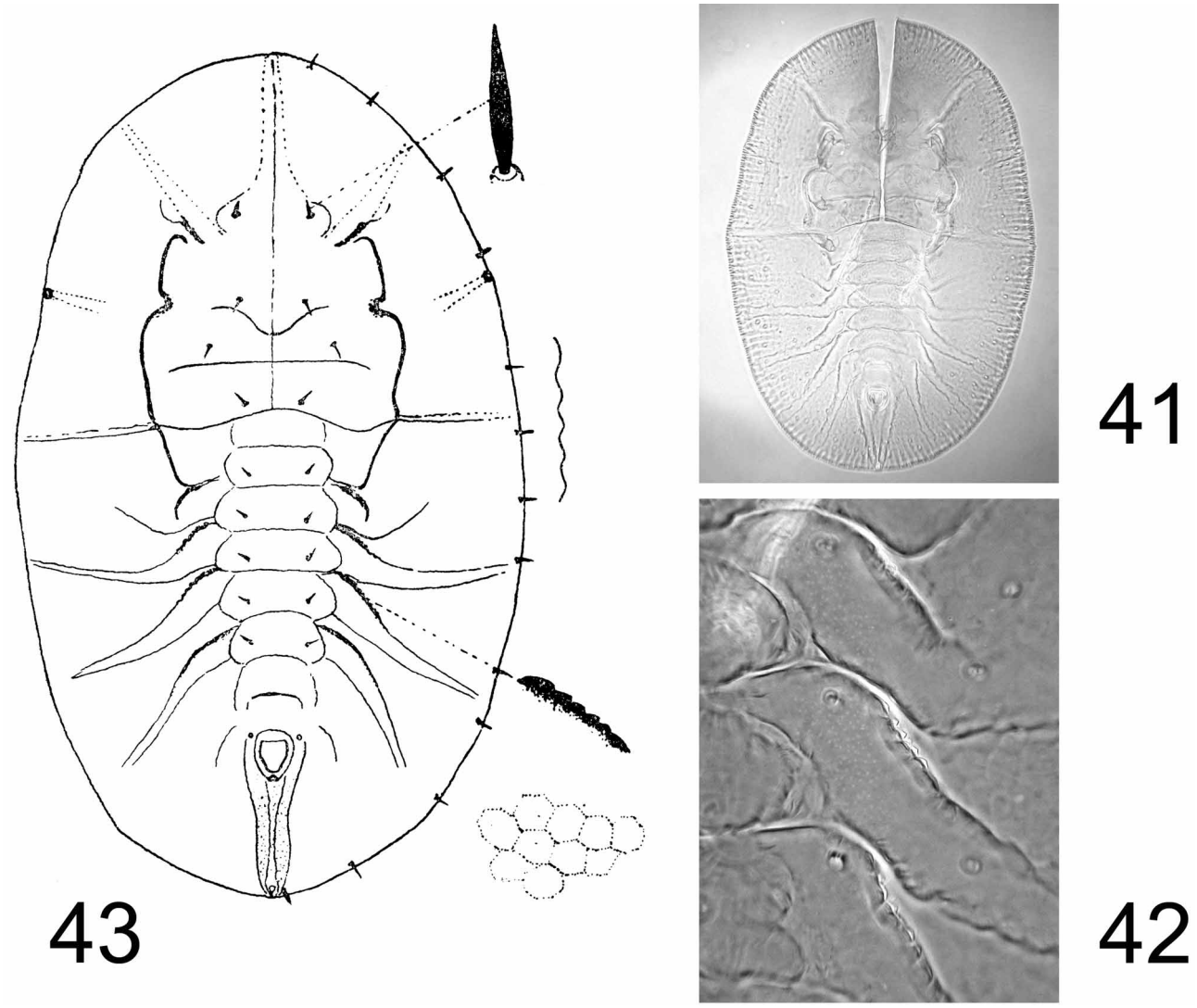


FIGURES 25–30, Coccoidea. (25) *Cribropulvinaria tailungensis* (Coccidae), adult females and nymphs on *Aporusa dioica*. (26) *Coccus formicarii* (Coccidae), spherical mature females on bark of *Schefflera heptaphylla* (originally covered over with debris by ants). (27) *Fistulococcus pokfulamensis* (Coccidae), microscope slide preparation of adult female, showing glandular structures responsible for secretion of waxy material (28) *Fistulococcus pokfulamensis*, adult females and nymphs almost invisible beneath a layer of secreted white meal, under leaf of *Gnetum luofuense*. 29) *Neoparlatoria formosana* (Diaspididae, Leucaspidinae), adult females on *Cyclobalanopsis* sp. (30) *Pseudaulacaspis cockerelli* (Diaspididae, Diaspidinae), adult female on *Michelia figo*.

FIGURES 31–36, Coccoidea and Psylloidea. (31) *Drosicha* undetermined sp. (Coccoidea, Monophlebidae), adult female on undetermined host. (32) *Ferrisia virgata* (Pseudococcidae), adult females on *Citrus* sp. (33) *Paurocephala bifasciata* (Psylloidea, Psyllidae), adult and nymph on *Ficus hispida*. (34) *Homotoma* ?*yunnanica* (Psylloidea, Homotomidae), adult female from *Ficus tinctoria gibbosa*. (35, 36) ?*Cacopsylla* sp., adult and nymph on *Rhaphiolepis indica*.



FIGURES 37–40, *Rhachisphora takahashii* **sp. n.** (Aleyrodidae, Aleyrodinae), holotype puparium. (37) submedial dorsum of metathorax and abdominal segments I-IV to show chaetotaxy and geminate pore / porettes. (38) vasiform orifice and eighth abdominal setae. (39) thoracic tracheal opening at margin. (40) caudal setae, caudal tracheal opening at margin and posterior part of caudal furrow.



FIGURES 41–43, *Rhachisphora* spp. (Aleyrodidae, Aleyrodinae). (41) *R. takahashii* **sp. n.**, post-emergence male pupal case, entire puparium, particularly to show rhachis with 5 pairs of abdominal lateral arms, and submarginal geminate pore / porettes. (42) *R. takahashii* **sp. n.**, detail of basal parts of three lateral abdominal rhachis arms, to show dentate anterior edges. (43) *R. maesae* Takahashi, original drawing after Takahashi (1932).

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FIGURES 44–47, *Bemisia tabaci* (Aleyrodidae, Aleyrodinae) on *Codiaeum variegatum*. (44, 45) newly emerged adults amid post-emergence exuviae [“pupal cases”] and feeding fourth-instar nymphs [“puparia”]. (46) freshly emerged adult with wings yet to expand and dry. (47) puparia, pupal cases and many eggs.