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U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ENTOMOLOGY.
L. O. HOWARD, Entomologist and Chief of Bureau.

MISCELLANEOUS PAPERS.

CATALOGUE
OF
RECENTLY DESCRIBED COCCIDÆ.

By J. G. SANDERS, M. A.,
Assistant.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF ENTOMOLOGY,

Washington, D. C., April 16, 1906.

SIR: I have the honor to transmit herewith the manuscript of a Catalogue of Recently Described Coccidae (Scale Insects), prepared by Mr. J. G. Sanders, of this Bureau. Owing to the economic importance of this group of insects and the scientific interest attached thereto, I recommend that it be published as Technical Series No. 12, Part I, of the Bureau of Entomology.

Respectfully,

C. L. MARLATT,

Acting Chief of Bureau.

Hon. JAMES WILSON,

Secretary of Agriculture.

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MISCELLANEOUS PAPERS.

CATALOGUE OF RECENTLY DESCRIBED COCCIDÆ.

By J. G. SANDERS, M. A., *Assistant.*

Since the publication, in March, 1903, of Mrs. Fernald's Catalogue^a many new genera, species, and varieties of Coccidæ from various regions have been described by enthusiastic entomologists. Nine genera, 6 subgenera, 137 species, and 22 varieties comprise the following catalogue, which is fairly complete to date. The majority of the references are to publications which have appeared since March, 1903; however, a few previous to this date are cited, which were overlooked by Mrs. Fernald in the stupendous task of preparing her most useful contribution to coccidology.

The Bureau of Entomology maintains a complete bibliography, by the card-index system, of all publications pertaining to Coccidæ, both economic and systematic. At the suggestion of Prof. T. D. A. Cockrell, and with his valuable assistance, the writer has prepared a supplementary catalogue of new species only, which he hopes to publish *annually* hereafter. In this work the writer respectfully begs the assistance of all authors by the sending of separates or notices of publication, and specimens, if possible, to this Bureau, where they will be properly cared for and recorded.

The large national collection of Coccidæ, containing 1,038 identified species, of which number 660 are types and cotypes—besides much unidentified material from Australia, India, China, and Japan—has been carefully arranged alphabetically in cases built especially for the purpose. Each specimen is carefully wrapped in lens paper and put into a small telescopic pasteboard box, 50 by 75 mm. and varying from 10 to 50 mm. in depth, properly labeled on the edge. Five rows of these boxes, card-index style, fill the regulation insect drawer; and, with the drawers labeled, but a moment is necessary to find any specimen desired. Locality cards, giving all known data for each specimen, are also filed in alphabetical order.

The writer once more begs the assistance of all workers on Coccidæ in publishing annually a complete bibliography of all new species and in the maintenance of a complete bibliographical card index of all publications relating to scale insects.

^a Bul. 88, Hatch Exp. Sta., Mass. Agric. Coll. A Catalogue of the Coccidæ of the World. By Mrs. Maria E. Fernald.

Subfamily **MONOPHLEBINÆ**.**Monophlebus stebbingii mangiferæ** Green.

Monophlebus stebbingii mangiferæ "Green," Stebbing, Jn. Linn. Soc. Lond., xxix, p. 142 (1904).

Habitat—Lahore, India.

On Mango.

Monophlebulus townsendi Ckll.

Monophlebulus townsendi Ckll., Proc. Dav. Ac. Sci., x, p. 127 (1905).

Habitat—Philippine Islands.

Mimosicerya, new section of *Icerya*; Ckll., The Entom., xxxv, p. 233 (1902). Type, *hempeli*.

Icerya candida Ckll.

Icerya candida Ckll., Proc. Dav. Ac. Sci., x, p. 128 (1905).

Habitat—Philippine Islands.

"On cultivated tree with large oblong-ovate rough leaves."

Icerya colimensis Ckll.

Icerya colimensis Ckll., Mem. Soc. Cient. Ant. Alz., xix, p. 81 (1902).

Habitat—Mexico.

On undetermined shrub.

Icerya littoralis tonilensis Ckll.

Icerya littoralis var. *tonilensis* Ckll., Mem. Soc. Cient. Ant. Alz., xix, p. 80 (1902).
The Entom., xxxv, p. 318 (1902).

Habitat—Mexico.

Icerya rileyi larreæ Ckll.

Icerya rileyi var. *larreæ* Ckll., Mem. Soc. Cient. Ant. Alz., xix, p. 82 (1902).

Habitat—Mexico.

On Larrea.

Subfamily **MARGARODINÆ**.

Ultracelostoma, n. subg. of *Celostomidia*; Ckll., The Entom., xxxv, pp. 114, 258 (1902). Type, *assimilis*.

Xylococcus matumuræ Kuwana.

Xylococcus matumuræ Kuwana, Insect World, ix, 3, March (1905). Fig.

Subfamily **ORTHEZIINÆ**.

Polyocellaria ^a n. gen., Imhof, Biol. Centralblatt, xx, p. 527 (1900).

Kirkaldy, Can. Ent., xxxviii, p. 10 (1906).

Arctorthezia, n. sect. of *Orthezia*; Ckll., The Entom., xxxv, pp. 114, 259 (1902). Type, *occidentalis*.

^aDescribed from Switzerland as a two-winged insect with hooked halteres, 10-jointed antennæ, 8 and 12 eyes and single-jointed tarsi. It is without much doubt a male *Orthezia*, but can not be an aphide, as considered by Kirkaldy.

Orthezia galapagoensis Kuwana.*Orthezia galapagoensis* Kuwana. Jn. N. Y. Ent. Soc., x, p. 28 (1902). Fig.

Habitat—Galapagos Islands.

On *Cordea lutea*; *Scalesia microcephala*.**Orthezia olivacea** Ckll.*Orthezia olivacea* Ckll., Can. Ent., xxxvii, p. 136 (1905).

Habitat—Colorado.

In nests of *Lasius* sp. under rocks.**Orthezia solidaginis** Sanders.*Orthezia solidaginis* Sanders, Ohio Naturalist, iv, p. 94 (1904). Fig.Pr. Ohio Ac. Sci., iv, sp. papers No. 8, Coccidæ of Ohio,
p. 32 (1904). Fig.

Habitat—Ohio.

On *Solidago canadensis*; *Solidago* sp.Subfamily **CONCHASPINÆ**.**Conchaspis fluminensis** Hempel.*Conchaspis fluminensis* Hemp., Bol. Agr. Sao Paulo, v, p. 312 (1904).

Habitat—Rio de Janeiro.

On an unknown shrub.

Subfamily **DACTYLOPIINÆ**.**Bambusaspis**, n. sect. of *Asterolecanium*; Ckll., The Entom., xxxv, p. 114 (1902).Type, *miliaris*.**Asterolecanium greeni** Marchal.*Asterolecanium greeni* Marchal, Bul. Mus. d'Hist. Nat., vii, p. 455 (1904). Fig.

Habitat—France (in greenhouse); Ceylon.

On *Rheedia lateriflora*.**Asterolecanium pustulans sambuci** Ckll.*Asterolecanium pustulans* var. *sambuci* Ckll., The Entom., xxxvi, p. 112 (1903).

Habitat—Egypt.

On *Sambucus*.**Asterolecanium rehi** Rübsaamen.*Asterolecanium rehi* Rübs., Marcellia, i, p. 62 (1902).

Habitat—Madeira Islands.

On *Globularia salicina*.**Phenacobryum** Ckll., The Entom., xxxv, p. 114 (1902).Synonym of *Antecrococcus* Green (1900).**Eriococcus sordidus** Green.*Eriococcus sordidus* Green, Victorian Naturalist, xxi, p. 68 (1904). Fig.

Habitat—Australia.

On *Helichrysum ferrugineum*.

Eriococcus tricarinatus Fuller.

- Eriococcus tricarinatus* Fuller, Notes on Coccidæ W. Austr., p. 8 (1897).
 Trans. Ent. Soc. Lond., p. 442 (1899). Fig.
Eriococcus simplex dealbata Fernald, Catalogue of Coccidæ, p. 78 (1903).
 Habitat—Western Australia.
 "On *Eucalyptus gomphocephala*, on galls of *Maskellia globosa* Fuller."

Genus **AMELOCOCCLUS** Marchal. Type, *alluaudi*.

Amelococcus Marchal, Ann. Soc. Ent. France, LXXIII, p. 557 (1904).

Amelococcus alluaudi Marchal.

Amelococcus alluaudi Marchal, Ann. Soc. Ent. Fr., LXXIII, p. 557 (1904).
 Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Madagascar.

On branches of *Euphorbia intisy*.

Sphærococcus pustulans Green.

Sphærococcus pustulans Green, Victorian Naturalist, XXII, p. 7 (1905). Fig.
 Habitat—Australia.
 On *Eucalyptus goniocalyx*.

Phenacoccus cockerelli King.

Phenacoccus cockerelli King, Can. Ent., XXXV, p. 195 (1903).
 Habitat—Colorado.
 On *Amelanchier*.

Phenacoccus kuwanæ Coleman.

Phenacoccus kuwanæ Coleman, Jn. N. Y. Ent. Soc., II, p. 62 (1903). Fig.
 Habitat—California.
 On lichen on *Picea breweriana*.

Phenacoccus ripersioides W. & T. Ckll.

Phenacoccus ripersioides W. & T. Ckll., Tr. Am. Ent. Soc., XXIX, p. 112 (1903).
 Habitat—New Mexico.
 With *Lasius niger* (8,000 feet altitude).

Genus **TRABUTINA** Marchal. Type, *elastica*.

Trabutina Marchal, Bul. Mus. d'Hist. Nat., VII, p. 448 (1904).

Trabutina elastica Marchal.

Trabutina elastica Marchal, Bul. Mus. d'Hist. Nat., VII, p. 448 (1904). Fig.
 Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).
 Habitat—Algeria.
 On *Tamarix articulata*.

Trionymus hordei Lindeman.

Westwoodia hordei Lindeman, ——— ———.

Korbuly, Csanad: Banhegyes (Kaszaper) (1886).
 Horvath, Magyar, K. A. Rov. A. Koz., Jelentes, (1) 8, p. 96 (1892).
 Sajo, Zeitschr. f. Pflanzenkr., IV, p. 151 (1894).

Trionymus hordei Ckll., Ent. News, XV, p. 40 (1904).

Trionymus nanus Ckll.*Trionymus nanus* Ckll., Can. Ent., xxxvii, p. 136 (1905).

Habitat—Colorado.

On roots of grass under stones.

Pseudococcus andersoni (Coleman).*Dactylopius andersoni* Coleman, Jn. N. Y. Ent. Soc., xi, p. 62 (1903). Fig.

Habitat—California.

On *Cupressus goveniana*; *Libocedrus decurrens*.**Pseudococcus crotonis** (Green).*Dactylopius crotonis* Green (sine descr.), Tropic. Agric., xxiv, p. 44 (1905).

Habitat—Ceylon.

On *Castilleja* sp.**Pseudococcus dudleyi** (Coleman).*Dactylopius dudleyi* Coleman, Jn. N. Y. Ent. Soc., xi, p. 63 (1903). Fig.

Habitat—California.

On *Cupressus macnabiana*.**Pseudococcus elongatus** (Reuter).*Dactylopius elongatus* Reut., Medd. Soc. Faun. Fennicæ, 66, 251 (1903).**Pseudococcus ephedræ** var., Ckll.*Pseudococcus ephedræ* var., Ckll., Mem. Soc. Cient. Ant. Alz., xvii, p. 145 (1902).

Habitat—Mexico.

On agave.

Pseudococcus lilacinus Ckll.*Pseudococcus lilacinus* Ckll., Pr. Dav. Ac. Sci., x, p. 128 (1905).

Habitat—Philippine Islands.

On cultivated orange.

Pseudococcus tayabanus Ckll.*Pseudococcus tayabanus* Ckll., Pr. Dav. Ac. Sci., x, p. 129 (1905).

Habitat—Philippine Islands.

On cultivated cacao.

Pseudococcus vagabundus (Von Schilling).*Dactylopius vagabundus* Von Schill., Allg. Zeits. f. Ent., viii, p. 305 (1903).

Giard, Bul. Soc. Ent. France, pp. 232, 233 (1903).

Reh, Allg. Zeits. f. Ent., ix, p. 36 (1904).

"=a mixture of *Pulvinaria camellicola* *Phenacoccus aceris*, *P. æsculi*, and *P. mespili*=*pruni*."—Giard.**Pseudococcus virgatus** var., Ckll.*Pseudococcus virgatus* (Ckll.) var., Pr. Dav. Ac. Sci., x, p. 128 (1905).

Habitat—Philippine Islands.

On cultivated Croton.

Antonina australis Green.*Antonina australis* Green, Proc. Linn. Soc. N. S. W., pt. 3, p. 463 (1904). Fig.

Habitat—Australia.

On *Cyperus rotundatus*.

Subfamily **TACHARDIINÆ****Tachardia albizziæ** Green.

Tachardia albizziæ Green (sine descr.), Ind. Mus. Notes, v, p. 98 (1903).

Habitat—Ceylon.

Tachardia aurantiaca Ckll.

Tachardia aurantiaca Ckll., Can. Ent., xxxv, p. 65 (1903).

Habitat—Java.

On grape fruit (*Citrus*).

Tachardia cærulea Hempel.

Tachardia cærulea Hemp., Bol. Agr. Sao Paulo, v, p. 314 (1904).

Habitat—Rio de Janeiro.

Tachardia fici Green.

Tachardia fici Green, Ind. Mus. Notes, v, p. 97 (1903). Fig.

Habitat—India.

On *Ficus religiosa*; *F. bengalensis*.

Tachardia glomerella Ckll.

Tachardia glomerella Ckll., Ent. News, xvi, p. 52 (1905).

Habitat—New Mexico.

On *Gutierrezia glomerella*.

Subfamily **COCCINÆ****Pulvinaria coulteri** Ckll.

Pulvinaria coulteri Ckll., Zool. Anzeiger, xxix, p. 514 (1905).

Habitat—Colorado.

On *Rosa* sp. (wild).

Pulvinaria goethei King.

Pulvinaria goethei King (sine descr.), Allg. Zeits. f. Ent., viii, p. 460 (1903).

Habitat—Germany.

On *Alnus glutinosa*.

Pulvinaria grabhami Ckll.

Pulvinaria grabhami Ckll., The Entom., xxxvi, p. 261 (1903).

Habitat—Madeira.

On leaves of *Jossinia tinifolia*, attended by *Iridomyrmex humilis*.

Pulvinaria innumerabilis betheli King.

Pulvinaria innumerabilis var. *betheli* King, Can. Ent., xxxv, p. 195 (1903).

Habitat—Colorado.

On *Alnus*.

Pulvinaria maxima Green.

Pulvinaria maxima Green, Ent. Mo. Mag., xl, p. 206 (1904). Fig.

Habitat—Java.

On stems of *Erythrina lithosperma*.

Pulvinaria polygonata Ckll.

Pulvinaria polygonata Ckll., Pr. Dav. Ac. Sci., x, p. 131 (1905).

Habitat—Philippine Islands.

"On a cultivated shade tree."

Pulvinaria psidii philippina Ckll.*Pulvinaria psidii philippina* Ckll., Pr. Dav. Ac. Sci., x, p. 132 (1905).

Habitat—Philippine Islands.

On a cultivated *Ficus*.**Pulvinaria rehi** King.*Pulvinaria rehi* King (sine descr.), Allg. Zeits. f. Ent., viii, p. 460 (1903).

Habitat—Germany.

Pulvinaria tyleri Ckll.*Pulvinaria tyleri* Ckll., Pr. Dav. Ac. Sci., x, p. 132 (1905).

Habitat—Philippine Islands.

On "cadena de amor."

Pulvinaria vitis opacus King.*Pulvinaria vitis* var. *opacus* King (sine descr.), Allg. Zeits. f. Ent., viii, p. 461 (1903).

Habitat—Germany.

Pulvinaria vitis sorbusæ King.*Pulvinaria vitis* var. *sorbusæ* King (sine descr.), Allg. Zeits. f. Ent., viii, p. 461 (1903).

Habitat—Germany.

Pulvinaria vitis verrucosæ King.*Pulvinaria vitis* var. *verrucosæ* King (sine descr.), Allg. Zeits. f. Ent., viii, p. 461 (1903).

Habitat—Germany.

Eriopeltis coloradensis Ckll.*Eriopeltis coloradensis* Ckll., Can. Ent., xxxvii, p. 136 (1905).

Habitat—Colorado.

On stems of grass.

Ceroplastes sanguineus Ckll.*Ceroplastes sanguineus* Ckll., Ent. News., xvi, p. 162 (1905).

Habitat—Paraguay.

On *Maytenus* sp.**Ceroplastes schrottkyi** Ckll.*Ceroplastes schrottkyi* Ckll., Ent. News., xvi, p. 162 (1905).

Habitat—Paraguay.

On *Salix chilensis*.**Ctenochiton serratus** Green.*Ctenochiton serratus* Green, Victorian Nat., xxi, p. 67 (1904). Fig.

Habitat—Australia.

On *Styphelia* sp.**Eucalymnatus subtessellatus** (Green).*Lecanium subtessellatum* Green, Cocc. Ceylon, pt. iii, p. 206 (1904). Fig.

Habitat—Ceylon.

On leaves of undetermined tree.

Genus **STICTOCOCCUS** Ckll. Type, *sjostedti*.*Stictococcus* T. D. A. Ckll., Can. Ent., xxxv, p. 64 (1903).

Stictococcus sjostedti T. & W. Ckll.

Stictococcus sjostedti T. & W. Ckll., Can. Ent., xxxv, p. 64 (1903).

Habitat—Cameroons, Western Africa.

Coccus arundinariæ (Green).

Lecanium arundinariæ Green, Cocc. Ceylon, pt. iii, p. 220 (1904). Fig.

Habitat—Ceylon.

On *Arundinaria* sp.

Coccus bicruciatus (Green).

Lecanium bicruciatum Green, Cocc. Ceylon, pt. iii, p. 214 (1904). Fig.

Habitat—Ceylon.

On *Memecylon umbellatum*; *Nothopegia colebrookiana*; *Eleagnus latifolia*; *Calophyllum* sp.; *Eugenia* sp.

Coccus capparidis (Green).

Lecanium capparidis Green, Cocc. Ceylon, pt. iii, p. 187 (1904). Fig.

Habitat—Ceylon.

On *Capparis moonii*.

Coccus diversipes Ckll.

Coccus diversipes Ckll., Pr. Dav. Ac. Sci. x, p. 130 (1905).

Habitat—Philippine Islands.

“On cultivated fern ‘parasite.’”

Coccus frontalis (Green).

Lecanium frontale Green, Cocc. Ceylon, pt. iii, p. 192 (1904). Fig.

Habitat—Ceylon.

On leaves of “kina” (*Calophyllum* sp.).

Coccus incisus King.

Calymnatus incisus King, Rev. Chil. Hist. Nat., vi, p. 255 (1902).

Habitat—South America.

On nutmeg.

Coccus marsupialis (Green).

Lecanium marsupiale Green, Cocc. of Ceylon, pt. iii, p. 212 (1904). Fig.

Habitat—Ceylon.

On *Piper nigrum*; *Pothos scandens*; *Anona* sp.

Coccus signiferus (Green).

Lecanium signiferum Green, Cocc. of Ceylon, pt. iii, p. 197 (1904). Fig.

Habitat—Ceylon.

On *Caryota urens*; *Alpinia nutans*; *Begonia* sp. (cult.).

Mesolecanium inflatum Hempel.

Mesolecanium inflatum Hemp., Bol. Agr. Sao Paulo, v, p. 316 (1904).

Habitat—Rio de Janeiro.

On Myrtaceæ.

Eulecanium curtisi Kirkaldy. (Not valid.)

Eulecanium curtisi Kirkaldy, The Entom., xxxvii, p. 257 (1904).

Eulecanium folsomi Ckll.*Eulecanium folsomi* Ckll., Can. Ent., xxxv, p. 193 (1903).

Proc. Ent. Soc. Wash., vii, p. 129 (1905).

Habitat—Illinois.

On Paw-paw (*Asimina triloba*).**Eulecanium lüstneri** (King).*Lecanium lüstneri* King, Allg. Zeits. f. Ent., viii, p. 409 (1903) (sine descr.).**Eulecanium pulchrum** (King).*Lecanium pulchrum* King, Allg. Zeits. f. Ent., viii, p. 410 (1903) (sine descr.).**Paralecanium calophylli** (Green).*Lecanium* (*Paralecanium*) *calophylli* Green, Cocc. Ceylon, pt. iii, p. 240 (1904). Fig

Habitat—Ceylon.

On *Calophyllum* sp.**Paralecanium expansum javanicum** (Green).*Lecanium expansum* var. *javanicum* Green, Ent. Mo. Mag., xl, p. 205 (1904).

Habitat—Java.

On *Anomianthus heterocarpus*.**Paralecanium expansum metallicum** (Green).*Lecanium expansum* var. *metallicum* Green, Ent. Mo. Mag., xl, p. 205 (1904).Ann. Mag. Nat. Hist., (7), xiv, p. 377
(1904).

Habitat—Java; Malay Peninsula.

On *Myristica fragrans*.**Paralecanium expansum quadratum** (Green).*Lecanium expansum* var. *quadratum* Green, Cocc. of Ceylon, pt. iii, p. 236 (1904). Fig.

Habitat—Ceylon.

On cultivated nutmeg; undetermined tree.

Paralecanium expansum rotundum (Green).*Lecanium expansum* var. *rotundum* Green, Ent. Mo. Mag., xl, p. 206 (1904).

Habitat—Java.

On *Rhizophora mucronata*.**Paralecanium peradeniyense** (Green).*Lecanium* (*Paralecanium*) *peradeniyense* Green, Cocc. Ceylon, pt. iii, p. 241 (1904). Fig.

Habitat—Ceylon.

On *Piper nigrum* (cult.).**Paralecanium zonatum** (Green).*Lecanium* (*Paralecanium*) *zonatum* Green, Cocc. Ceylon, pt. iii, p. 245 (1904). Fig.

Habitat—Ceylon.

On *Garcinia spicata*.**Saissetia discrepans** (Green).*Lecanium discrepans* Green, Cocc. Ceylon, pt. iii, p. 204 (1904). Fig.

Habitat—Ceylon.

On tea plant, in nest of *Cremastogaster dolrni* or exposed.

Saissetia psidii (Green).

Lecanium psidii Green, Cocc. Ceylon, pt. III, p. 225 (1904). Fig.

Habitat—Ceylon.

On *Psidium guava*; *Mangifera indica*; *Artocarpus integrifolia*; *Eugenia* sp.; *Fagrea*; *Myristica moschata*. Often inclosed in nests of *Ecophylla smaragdina*.

Saissetia punctulifera (Green).

Lecanium punctuliferum Green, Cocc. Ceylon, pt. III, p. 205 (1904). Fig.

Habitat—Ceylon.

On *Michelia champaca*; *Erna lanata*.

Physokermes concolor Coleman.

Physokermes concolor Coleman, Jn. N. Y. Ent. Soc., XI, pp. 72, 77 (1903).

Habitat—California.

On *Abies concolor*.

Physokermes taxifoliae Coleman.

Physokermes taxifoliae Coleman, Jn. N. Y. Ent. Soc., XI, pp. 73, 77 (1903).

Habitat—California.

On *Pseudotsuga taxifolia*.

"Lecanium" insolens King.

Lecanium insolens King, Rev. Chil. Hist. Nat., VI, p. 255 (1902).

Habitat—Brazil.

On *Philodendron*.

"Lecanium" limnanthemii Goury.^a

Lecanium limnanthemii Goury, Feuille des Jeunes Nat., Feb., p. 62 (1905).

Habitat—France.

On submerged petiole of *Limnanthemum nymphoides*.

"Lecanium" tenebricophilum Green.

Lecanium tenebricophilum Green, Ent. Mo. Mag., XI, p. 204 (1904). Fig.

Habitat—Java.

Within tunnels in branches of *Erythrina lithosperma*.

Subfamily **DIASPINÆ**.**Chionaspis angustata** Green.

Chionaspis angustata Green, Victorian Nat., XXI, p. 67 (1904). Fig.

Habitat—Australia.

On *Leptospermum levigatum*.

Chionaspis candida Green.

Chionaspis candida Green, Victorian Nat., XXII, p. 6 (1905). Fig.

Habitat—Australia.

On *Callistemon salignus*.

Chionaspis cinnamomi Green.

Chionaspis cinnamomi Green, Jn. Bomb. N. H. Soc., XVI, p. 354 (1905). Fig.

Habitat—Ceylon.

On leaves of *Cinnamomum*.

^a No description was given. It is very improbable that it is a Coccid.

Chionaspis coronifera Green.*Chionaspis coronifera* Green, Jn. Bomb. N. H. Soc., xvi, p. 353 (1905). Fig.

Habitat—Ceylon.

On undetermined tree.

Chionaspis decurvata Green.*Chionaspis decurvata* Green, Ind. Mus. Notes, v, p. 63 (1903). Fig.

Habitat—India.

On rice (*Oryza sativa*).**Chionaspis formosa** Green.*Chionaspis formosa* Green, Pr. Linn. Soc. N. S. W., pt. iii, p. 462 (1904). Fig.

Habitat—Australia.

On leaves of *Eucalyptus tereticornis*.**Chionaspis gleditsiæ** Sanders.*Chionaspis gleditsiæ* Sanders, Ohio Naturalist, iii, p. 413 (1902). Fig.

Pr. Ohio Ac. Sci., iv, sp. papers No. 8, p. 46 (1904). Fig.

Habitat—Ohio, Pennsylvania, West Virginia, Maryland, Virginia, District of Columbia.

On *Gleditsia triacanthos*.**Chionaspis ortholobis bruneri** Ckll.*Chionaspis ortholobis bruneri* Ckll., Can. Ent., xxx, p. 133 (1898).A synonym of *Chionaspis salicis-nigræ* (Walsh).**Chionaspis subcorticalis** Green.*Chionaspis subcorticalis* Green, Jn. Bomb. N. H. Soc., xvi, p. 351 (1905). Fig.

Habitat—Ceylon.

Under loose bark of *Artocarpus integrifolia*.**Chionaspis sylvatica** Sanders.*Chionaspis sylvatica* Sanders, Ohio Naturalist, iv, p. 95 (1904). Fig.

Pr. Ohio Ac. Sci., iv, sp. papers No. 8, p. 46 (1904). Fig.

Habitat—Ohio, Pennsylvania, West Virginia, Maryland, Virginia, District of Columbia.

On *Nyssa sylvatica*.**Howardia lobulata** Del Guercio.*Howardia lobulata* Del Guercio, Bul. Ent. Soc. Ital., xxxiv, pp. 179, 185 (1902).

Leonardi, Ann. R. Scuola Sup. Agr. Portici, v, pp. 1-5 (1903).

Synonym of *Rhopalospis riccæ* (Targ.).**Diaspis cordiæ** Rübsaamen.*Diaspis cordiæ* Rübs., Marcellia, iv, 5, p. 122 (1905).

Habitat—Rio de Janeiro.

On *Cordia curassavica*.**Diaspis squamosus** Newst. & Theobald.*Diaspis squamosus* Newst. & Theob., 2d Rep. Ec. Ent. Br. Mus., p. 185 (1904). Fig.

Habitat—Egypt.

On peach and pear.

Phenacaspis bupleuri (Marchal).

Chionaspis (*Phenacaspis*) *bupleuri* Marchal, Bul. Mus. d'Hist. Nat., VII, p. 454 (1904).
 Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Algeria.

On *Bupleurum gibraltarium*.

Phenacaspis ceratoniae (Marchal).

Chionaspis (*Phenacaspis*) *ceratoniae* Marchal, Bul. Mus. d'Hist. Nat. VII, p. 452 (1904).
 Fig.

Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Algeria.

On *Ceratonia siligua*.

Phenacaspis strobilanthis (Green).

Chionaspis strobilanthis Green, Jn. Bomb. N. H. Soc., XVI, p. 352 (1905). Fig.

Habitat—Ceylon.

On *Strobilanthes* sp.

Hemichionaspis theae ceylonica (Green).

Chionaspis theae var. *ceylonica* Green, Jn. Bomb. N. H. Soc., XVI, p. 354 (1905). Fig.

Habitat—Ceylon.

Hemichionaspis townsendi Ckll.

Hemichionaspis townsendi Ckll., Pr. Dav. Ac. Sci., X, p. 135 (1905).

Habitat—Philippine Islands.

On bark of *Gossypium* sp.

Leucaspis corsa Lindinger.

Leucaspis (*Euleucaspis*) *corsa* Lind., Zool. Anzeiger, XXIX, 8, p. 252 (1904).

Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Corsica.

On *Pinus laricio*.

Leucaspis cupressi Coleman.

Leucaspis cupressi Coleman, Jn. N. Y. Ent. Soc., XI, p. 71 (1903). Fig.

Habitat—California.

On *Cupressus goveniana*.

Leucaspis kelloggi Coleman.

Leucaspis kelloggi Coleman, Jn. N. Y. Ent. Soc., XI, p. 68 (1903). Fig.

Habitat—California.

On *Pseudotsuga taxifolia*; *Abies magnifica*; *A. grandis*; *A. concolor*; *A. shastensis*.

Leucaspis kermanensis Lindinger.

Leucaspis (*Salicicola*) *kermanensis* Lind., Zool. Anz., XXIX, 8, p. 253 (1904).

Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Corsica.

On *Salix persica*; *S. zygostemon*; *Populus euphratica*.

Leucaspis leonardi Ckll.

Leucaspis pini Berl. & Leon., Cherm. Ital., Fasc. I, No. 19 (1895).

Leucaspis leonardi Ckll., Jn. N. Y. Ent. Soc., XI, p. 84 (1903).

Habitat—Italy.

On *Pinus picea*.

Fiorinia bidens Green.

Fiorinia bidens Green, Jn. Bomb. N. H. Soc., xvi, p. 351 (1905). Fig.

Habitat—Ceylon.

“On leaves of undetermined tree.”

Genus **RHOPALOASPIS** Del Guercio. Type, *riccæ*.

Rhopaloaspis Del Guercio, Bul. Soc. Ent. Ital., xxxiv, pp. 185-188 (1902).

Rhopaloaspis riccæ (Targ.) = *Leucaspis riccæ* Targ.

Aspidiotus californicus Coleman.

Aspidiotus californicus Coleman, Jn. N. Y. Ent. Soc., xi, p. 64 (1903). Fig.

Habitat—California.

On *Pinus sabiniana*; *P. ponderosa*; *P. lambertiana*; *P. attenuata*.

Aspidiotus capensis Walker.

Aspidiotus capensis Green, Ann. Mag. Nat. Hist. (7), xiv, p. 375 (1904). Fig.

Habitat—Cape Colony.

On undetermined plant.

This species, which is in the British Museum, has been redescribed and restored to science by Mr. E. E. Green.

Aspidiotus capsulatus Green.

Aspidiotus capsulatus Green (sine descr.), Jn. Bomb. N. H. Soc., xvi, p. 343 (1905).

Habitat—Java.

On *Piper nigrum*.

Aspidiotus coniferarum shastæ Coleman.

Aspidiotus coniferarum var. *shastæ* Coleman, Jn. N. Y. Ent. Soc., xi, p. 67 (1903). Fig.

Habitat—California.

On *Cupressus macnabiana*.

Aspidiotus cuculus Green.

Aspidiotus cuculus Green, Jn. Bomb. N. H. Soc., xvi, p. 341 (1905). Fig.

Habitat—Ceylon.

In abandoned galls of *Amorphococcus mesuæ* Green.

Aspidiotus ehrhorni Coleman.

Aspidiotus (*Diaspidiotus*) *ehrhorni* Coleman, Jn. N. Y. Ent. Soc., xi, p. 68 (1903).

Fig.

Habitat—California.

Under lichens on *Abies concolor*; *Libocedrus decurrens*.

Aspidiotus florenciæ Coleman.

Aspidiotus florenciæ Coleman, Jn. N. Y. Ent. Soc., xi, p. 66 (1903). Fig.

Habitat—California.

On *Pinus ponderosa*.

Aspidiotus immaculatus Green.

Aspidiotus (*Hemiberlesia*) *immaculatus* Green, Victorian Nat., xxi, p. 65 (1904). Fig.

Habitat—Australia.

On *Styphelia virgata*.

Aspidiotus moreirai Hempel.

Aspidiotus moreirai Hemp., Bol. Agr. São Paulo, v, p. 320 (1904).

Habitat—Rio de Janeiro.

On leaves of *Drymus* sp.

Aspidiotus ohioensis York.

Aspidiotus (Diaspidiotus) ohioensis York, Ohio Naturalist, v, p. 325 (1905). Fig.

Habitat—Ohio.

On *Esculus glabra*.

Aspidiotus oxycoccus Woglum.

Aspidiotus oxycoccus Woglum, Can. Ent., xxxviii, p. 73 (1906). Fig.

Habitat—New Jersey.

On Cranberry (*Oxycoccus*).

Aspidiotus piceus Sanders.

Aspidiotus piceus Sanders, Ohio Naturalist, iv, p. 96 (1904). Fig.

Pr. Ohio Ac. Sci., iv, sp. papers No. 8, p. 66 (1904). Fig.

Habitat—Ohio.

On *Liriodendron tulipifera*.

Aspidiotus pisai Hempel.

Aspidiotus pisai Hemp., Bol. Agr. São Paulo, v, p. 320 (1904).

Habitat—Rio de Janeiro.

On leaves of *Drymus* sp.

Aspidiotus pseudospinosus Woglum.

Aspidiotus pseudospinosus Woglum, Can. Ent., xxxviii, p. 75 (1906). Fig.

Habitat—Florida.

On saw-palmetto.

Aspidiotus pustulans Green.

Aspidiotus pustulans Green, Ent. Mo. Mag., xli, p. 31 (1905). Fig.

Habitat—Java.

On *Erythrina lithosperma*.

Aspidiotus riveræ Ckll.

Aspidiotus riveræ Ckll., Ent. News, xvi, p. 161 (1904).

Habitat—Chile.

On stems of *Chusquea*.

Aspidiotus subfervens Green.

Aspidiotus (Targionia) subfervens Green, Victorian Nat., xxi, p. 66 (1904). Fig.

Habitat—Australia.

On *Acacia* sp.; *Pomaderris* sp.

Aspidiotus subrubescens corticoides Green.

Aspidiotus (Evaspidiotus) subrubescens var. *corticoides* Green, Victorian Nat., xxii, p. 3, (1905). Fig.

Habitat—Australia.

On *Eucalyptus globosus*.

Aspidiotus tayabanus Ckll.

Aspidiotus tayabanus Ckll., Pr. Dav. Ac. Sci., x, p. 133 (1905).

Habitat—Philippine Islands.

“On cultivated plant called ‘rosal’ or ‘campopot.’”

Cryptophyllaspis bornmülleri Rübsaamen.

Cryptophyllaspis bornmülleri Rübs., Marcellia, I, fasc. i-ii, p. 62 (1902).

Habitat—Canary Islands; Madeira.

On *Globularia salicina*.

Cryptophyllaspis occultus elongatus (Green).

Aspidiotus (*Cryptophyllaspis*) *occultus* var. *elongatus* Green, Jn. Bomb. N. H. Soc., xvi, p. 345 (1905). Fig.

Habitat—Ceylon.

On leaves of *Grewia* sp.

Pseudaonidia curculiginis (Green).

Aspidiotus (*Pseudaonidia*) *curculiginis* Green, Ent. Mo. Mag., xl, p. 208 (1904). Fig.

Habitat—Java.

On leaves of *Curculigo recurvata*.

Chrysomphalus cistuloides (Green).

Aspidiotus (*Chrysomphalus*) *cistuloides* Green, Jn. Bomb. N. H. Soc., xvi, p. 342 (1905). Fig.

Habitat—Ceylon.

On leaves of *Cinnamomum*.

Chrysomphalus malleolus (Green).

Aspidiotus (*Chrysomphalus*) *malleolus* Green, Jn. Bomb. N. H. Soc., xvi, p. 342 (1905). Fig.

Habitat—Ceylon.

On leaves of *Mimusops hexandra*.

Chrysomphalus pedronis (Green).

Aspidiotus (*Chrysomphalus*) *pedronis* Green, Jn. Bomb. N. H. Soc., xvi, p. 341 (1905). Fig.

Habitat—Ceylon.

“On leaves of undetermined tree.”

Chrysomphalus quadriclavatus (Green).

Aspidiotus (*Chrysomphalus*) *quadriclavatus* Green, Jn. Bomb. N. H. Soc., xvi, p. 343 (1905). Fig.

Habitat—Ceylon.

On leaves of *Murraya exotica*.

Chrysomphalus taprobanus (Green).

Aspidiotus (*Aonidiella*) *taprobanus* Green, Jn. Bomb. N. H. Soc., xvi, p. 344 (1905). Fig.

Habitat—Ceylon.

On leaves of *Phyllanthus myrtifolius*.

Targionia phyllanthi (Green).

Aspidiotus (*Targionia*) *phyllanthi* Green, Jn. Bomb. N. H. Soc., xvi, p. 344 (1905).
Fig.

Habitat—Ceylon.

On stems and twigs of *Phyllanthus myrtifolius*.

Odonaspis penicillata Green.

Odonaspis penicillata Green, Jn. Bomb. N. H. Soc., xvi, p. 346 (1905). Fig.

Habitat—Ceylon.

On a large bamboo (*Gigantochloa aspera*).

Aonidia ebeni "Green" Leonardi=*Aonidia crenulata* Green. Green in litt., July 6, 1905.

Aonidia echinata Green.

Aonidia echinata Green, Jn. Bomb. N. H. Soc., xvi, p. 347 (1905). Fig.

Habitat—Ceylon.

On *Hemicyclia sepiaria*.

Aonidia javanensis Green.

Aonidia javanensis Green, Ent. Mo. Mag., xli, p. 31 (1905). Fig.

Habitat—Java.

On leaves of *Myristica fragrans*.

Aonidia pulchra Green.

Aonidia (*Greeniella*) *pulchra* Green, Victorian Nat., xxii, p. 4 (1905). Fig.

Habitat—Australia.

On leaves of *Callistemon salignus*.

Aonidia pusilla Green.

Aonidia pusilla Green, Jn. Bomb. N. H. Soc., xvi, p. 347 (1905). Fig.

Habitat—Ceylon.

On leaves of *Carissa spinarum*.

Gymnaspis spinomarginata Green.

Gymnaspis spinomarginata Green, Jn. Bomb. N. H. Soc., xvi, p. 348 (1905). Fig.

Habitat—Ceylon.

On leaves of *Mesua ferrea*.

Genus **MYTILELLA** Leonardi. Type, *carinata*.

Mytilella Leonardi, Annali di Agr., v, p. 120 (1903).

Genus **AONIDOMYTILUS** Leonardi. Type, *concolor*.

Aonidomytilus Leonardi, Annali di Agr., v, p. 102 (1903).

Genus **FERNALDIELLA** Leonardi. Type, *indentata*.

Fernaldiella Leonardi, Annali di Agr., v, p. 105 (1903).

Lepidosaphes cockerelliana Kirkaldy. (Not valid.)

Lepidosaphes cockerelliana Kldy., The Entom., xxxvii, p. 257 (1904).

Synonym of *L. alba* Ckll.

Lepidosaphes bicornis (Green & Lidg.).*Mytilaspis bicornis* Green & Lidg., Victorian Nat., xvii, p. 9 (1900). Fig.

Leonardi, Annali di Agr., v, p. 85 (1903). Fig.

Habitat—Victoria, Australia.

On *Eucalyptus globulus*.**Lepidosaphes cassiniæ** Green.*Mytilaspis cassiniæ* Green, Victorian Nat., xxii, p. 4 (1905). Fig.

Habitat—Victoria, Australia.

On *Cassinia aculeata*.**Lepidosaphes corrugata** Green.*Lepidosaphes corrugata* Green, Ent. Mo. Mag., xl, p. 209 (1904).

Habitat—Java.

On stems of *Coffea arabica*.**Lepidosaphes ficifolii** (Berlese).*Mytilaspis ficifolii* Berlese, Atti del R. Inst. d'Incorrag. (5), v (1903). Fig.

Habitat—Italy.

On leaves of *Ficus carica*.**Lepidosaphes hymenanthæræ** (Green).*Mytilaspis* (*Coccomytilus*) *hymenanthæræ* Green, Victorian Nat., xxii, p. 5 (1905). Fig.

Habitat—Victoria, Australia.

On *Hymenanthera banksii*.**Lepidosaphes intermedia victoriæ** (Green).*Mytilaspis intermedia* var. *victoriæ* Green, Victorian Nat., xxii, p. 5 (1905).

Habitat—Victoria, Australia.

On *Acacia montana*.**Lepidosaphes multipora** (Leonardi).*Mytilaspis multipora* Leon., Annali di Agr., v, p. 87 (1903). Fig.

Green, Victorian Nat., xxii, p. 6 (1903).

Habitat—New Zealand.

On *Pittosporum undulatum*.**Lepidosaphes rubrovittatus** Ckll.*Lepidosaphes rubrovittatus* Ckll., Pr. Day. Ac. Sci., x, p. 135 (1905).

Habitat—Philippine Islands.

On cultivated *Eugenia malaccensis*.**Lepidosaphes ungulata** Green.*Lepidosaphes ungulata* Green, Ent. Mo. Mag., xli, p. 30 (1905). Fig.

Habitat—Java.

On *Syzygium pseudo-jambolanum*.**Lepidosaphes wilga** (Green).*Mytilaspis wilga* "Green" Leonardi, Annali di Agr., v, p. 43 (1903). Fig.

Habitat—Australia.

On "Wilga."

Opuntiaspis javanensis Green.

Opuntiaspis javanensis Green, Ent. Mo. Mag., xli, p. 28 (1905). Fig.

Habitat—Java.

On *Agave mexicana*.

Euparlatoria Leonardi, Ann. R. Sc. Sup. di Agr. Portici, v, p. 15 (1903).

To include *banksiæ*, *calianthina*, *cingala*, *myrtus*, *parlatoriæ*, *pergandii*, *proteus*, and *thææ*.

Parlatoria atalantiæ Green.

Parlatoria (*Websteriella*) *atalantiæ* Green, Jn. Bomb. N. H. Soc., xvi, p. 350 (1905). Fig.

Habitat—Ceylon.

On leaves of *Atalantia zeylanica*.

Parlatoria pergandii phyllanthi Green.

Parlatoria pergandii var. *phyllanthi* Green, Jn. Bomb. N. H. Soc., xvi, p. 350 (1905). Fig.

Fig.

Habitat—Ceylon.

On leaves of *Phyllanthus myrtifolius*.

Parlatoria pseudaspidiotus Lindinger.

Parlatoria pseudaspidiotus Lindgr., Insekten Börse, xxii, 33, p. 131 (1905).

Habitat—India.

On orchids (*Vanda hookeriana* and *V. teres*).

Genus **CRYPTOPARLATOREA** Lindinger. Type, *leucaspis*.

Cryptoparlatorea Lindgr., Insekten Börse, xxii, 33, p. 132 (1905).

Cryptoparlatorea leucaspis Lindinger.

Cryptoparlatorea leucaspis Lindgr., Insekten Börse, xxii, 33, p. 132 (1905).

Habitat—Japan.

On needles of *Juniperus* sp.

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