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Corrections in Misc. Publ. 1281

p. 12: 1967a Coccoidae = Coccoidea

p. 17: 1962a Coccoidae = Coccoidea

p. 70: 1955 341-246 = 341-346

p. 122: 1920b = 1902b

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**By Louise M. Russell, Michael Kosztarab, and
Matilda P. Kosztarab**

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SECOND SUPPLEMENT

By LOUISE M. RUSSELL, *Systematic Entomology Laboratory, Northeastern Region, Agricultural Research Service*, and MICHAEL KOSZTARAB and MATILDA P. KOSZTARAB, *Virginia Polytechnic Institute and State University*

The second supplement to "A Selected Bibliography of the Coccoidea" (U.S. Dept. Agr. Misc. Pub. 734, 1957) cites the important literature on the classification of coccids that appeared between January 1, 1963, the cutoff date of the first supplement (U.S. Dept. Agr. Misc. Pub. 987, 1965), and December 31, 1969. In addition, it includes numerous earlier articles that were omitted from the previous bibliographies but that are now available and appear to be relevant. This supplement also corrects the few errors in authorship, dates, volume numbers, and pages that have been noted in the former bibliographies. Alphabet letters are combined here with dates of the first supplement where such letters were inadvertently left out but where they are needed to insure the continuity of the citation system and the sequence of publication. This second supplement contains about 1,250 entries.

The format and scope of this supplement and the preceding bibliographies are similar and are outlined in the introduction to the original one.

Scientists may want to refer to the bibliography and its supplements in their citations, giving only the author and date of publication followed by the alphabet letter when present. This practice will save time and space.

Although most citations refer to scale insect taxonomy, pertinent articles in related fields of coccidology are included and are as follows:

(a) Papers dealing primarily with coccid anatomy, both external and internal: Bielenin 1962, 1962a, 1963, 1963a, Bielenin and Weglarska 1965, 1967, Bocheńska 1939, Dikshith 1966a, Krishnaswami, Majumdar, and Krishnan 1964, Ramachandran 1963, Sankaran 1965, Sinha 1966, Srivastava and Sinha 1965, 1966, 1966a, 1966b, Tulsyan 1966, Waterhouse 1957, Yadava 1966a, 1966b, 1968, 1968b, 1969, Yadava and Chandel 1968, 1969.

(b) Papers primarily on coccid cytology: Baer 1965, Berlowitz 1965, 1965a, Berlowitz, Loewus, and Pallotta 1968, Berlowitz, Pallotta, and Sibley 1969, Bielenin and Weglarska 1967, Boratynski 1934, Bose and Tulsyan 1966, Brown 1963, 1964, 1965, 1966, 1967, 1969, Brown and Cleveland 1968, Brown and Nur 1964, Brown and Wiegmann 1969, Chandra 1962, 1963, 1963a, Chauhan 1967a, Chauhan and Majumdar 1967, Delavault and Royer 1966, Dikshith 1962, 1964, 1964a, 1966, 1966a, Drozdovski 1966, Giannotti 1967, Giliomee 1965, Hadzibejli 1968a, Häusermann 1966, Hughes-Schrader 1963, Hughes-Schrader and Monahan 1966, Hughes-Schrader and Tremblay 1966, Jura 1959, Manichote and Middlekauff 1967, Nelson-Rees 1962, Nur 1962, 1962a, 1962b, 1963, 1965, 1966, 1966a, 1966b, 1967, 1967a, 1968, 1968a, 1969, Nur and Chandra 1963, Pawlowski and Berlowitz 1969, Pesson 1948, Robison 1966, Ross and Robison 1969, Tremblay 1960b, 1969, Tulsyan 1963, Weglarska 1962, 1962a, 1966, 1968.

(c) Papers primarily on coccid histology: Bénassy 1961, Bielenin 1958, 1962, 1962a, 1963, 1963a, Bielenin and Weglarska 1967, Delavault and Royer 1966, Dziedzicka and Sermak 1967, Gianotti 1967, Latif and Khan 1961, Tamaki, Yushima, and Kawai 1969, Yadava 1966b, Yadava and Chandel 1969.

(d) Papers with information on the preservation and mounting of coccids for study: Afifi and Kosztarab 1967, Dziedzicka 1967, Keifer 1946, Kosarzewska 1968, Ossianilsson 1966.

(e) Papers on coccid symbionts: Boratynski 1934a, Buchner 1953, 1958, 1961, 1963, 1963a, 1965, 1966, 1967, 1969, Giliomee 1965, Jura 1959, Louis 1965, 1967, 1969, Tremblay 1960b, 1969, Weglarska 1962.

(f) Papers dealing primarily with coccid chemistry, including chemistry of wax produced: Bielenin and Weglarska 1965, Burns and Davidson 1966, Calderón and Ríos 1968, Hackman 1951, Hackman and Trikojus 1952, Ríos 1966, Ríos and Colunga 1965, Ríos and Gomez 1969, Ríos and Pérez 1969, Ríos and Quijano 1969, Srivastava and Varshney 1966, Tamaki 1963, 1964, 1964a, 1966, 1969, Tamaki and Kawai 1966, 1967, 1968, 1969, Thomson 1960, Weglarska 1962a, Wolf and Ewart 1955.

Many of the more recent articles cited in this supplement that are published in non-English include subtitles and abstracts or summaries in English. These translations have greatly facilitated our compilation and annotation of the papers. We urge authors to continue, or to initiate, this practice because it adds perceptibly to the general understanding and usefulness of the subject matter. Incorporating the order, suborder, superfamily, or family

names of insects in titles will assist nontaxonomic librarians and bibliographers.

We are greatly indebted to numerous coccidologists and others who have provided reprints of articles and have assisted in obtaining obscure publications, in furnishing translations, and in many other ways. We thank all these individuals and especially M. B. Callaway, formerly of the Systematic Entomology Laboratory, and personnel of the National Agricultural Library (all U.S. Dept. Agr.); G. De Lotto, Plant Protection Research Institute, Pretoria, South Africa; and D. J. Williams, Commonwealth Institute of Entomology, London, England. Without the unfailing cooperation of many persons this supplement would have fallen far short of our intent.

AFIFI, S. [AFIFI, S. A.]

- 1968 MORPHOLOGY AND TAXONOMY OF THE ADULT MALES OF THE FAMILIES PSEUDOCOCCIDAE AND ERIOCOCCIDAE (HOMOPTERA: COCCOIDEA). Brit. Mus. (Nat. Hist.) Ent. Bul. Sup. 13: 3-210, illus.

Detailed study of 17 pseudococcid spp. in 13 gen. and 7 eriococcid spp. in 4 gen.; keys to families downward to spp.; affinities of spp. determined and analyzed.

- 1969 SYSTEMATIC STATUS OF THE FAMILY CONCHASPIDIDAE BASED ON THE MALES OF CONCHASPIS LATA HEMPEL (HOMOPTERA: COCCOIDEA).

Va. Polytech. Inst. Res. Div. Bul. 36: 25-37, illus.

Discusses family relationships; conchaspidoid male more closely related to lecanoid than to diaspidoid type; describes male of *C. lata*.

See Ezzat, Y. M., and Afifi, S.

AFIFI, S., and KOSZTARAB, M.

- 1967 STUDIES ON THE MORPHOLOGY AND TAXONOMY OF THE MALES OF ANTONINA AND ONE RELATED GENUS (HOMOPTERA: COCCOIDEA, PSEUDOCOCCIDAE). Va. Polytech. Inst. Res. Div. Bul. 15: 43 p., illus.

Males of 5 spp. of *Antonina* and 1 sp. of *Sphaerococcus* described; keys to various groups of coccid males; *Antonina* placed in *Saccharicoccus* group of gen.

- 1969 MORPHOLOGICAL AND SYSTEMATIC STUDIES ON THE ADULT MALES OF SOME SPECIES OF LECANODIASPIS (HOMOPTERA: COCCOIDEA: LECANODIASPIDIDAE). Va. Polytech. Inst. Res. Div. Bul. 36: 1-23, illus.

Males of *L. brabei*, *africana*, *anomala*, and *acaciae* described and keyed; trochantofemur an exclusive characteristic of this gen.

AL-ALI, A. S.

- 1969 THE BREEDING OF PLANOCOCCUS CITRI (HOMOPTERA: PSEUDOCOCCIDIDAE) ON SPROUTING POTATO. Roy. Ent. Soc. London, Proc. Ser. A: Gen. Ent. 44: 45-47.

Life history in laboratory.

ALAM, M. Z.

- 1965 A NOTE ON THE LIFE HISTORY OF BROWN SCALE, SAISSETIA COFFEEAE (WALKER) (COCCIDAE, HEMIPTERA) ON A NEW HOST RAUWOLFIA SERPENTINA BENTH. In Alam, M. Z., et al., eds., A Review of Research Division of Entomology (1947-1964). Agr. Inform. Serv. (Dacca, 1964/1965) 1965, p. 208-210.

Life history of female; injury.

ALAM, M. Z., and BHUIYAN, S. R.

- 1965 STUDIES ON THE BIOLOGY OF RICE MEALY BUG RIPSERSIA ORYZAE GREEN IN EAST PAKISTAN. In Alam, M. Z., et al., eds., A Review of Research Division of Entomology (1947-1964). Agr. Inform. Serv. (Dacca, 1964/1965) 1965, p. 121-122, illus.

Notes on damage, parasites, and predators.

ALAM, M. Z., and HOQ, H.

- 1965 ON THE BIOLOGY OF PSEUDOCOCCUS VIRGATUS COCKERELL (COCCIDAE, HEMIPTERA) ON COTTON IN EAST PAKISTAN. In Alam, M. Z., et al., eds., A Review of Research Division of Entomology (1947-1964). Agr. Inform. Serv. (Dacca, 1964/1965) 1965, p. 211-217.

Describe instars of female; seasonal history; damage; parasites and predators.

ALAM, M. Z., and SATTAR, A.

- 1965 ON THE BIOLOGY OF CITRUS YELLOW SCALE AONIDIELLA CITRINA COQUILLETT IN EAST PAKISTAN. In Alam, M. Z., et al., eds., A Review of Research Division of Entomology (1947-1964). Agr. Inform. Serv. (Dacca, 1964/1965) 1965, p. 167-171.
Hosts and distribution; parasites and predators.

ALI, S. M.

- 1957a SOME BIO-ECOLOGICAL STUDIES ON PSEUDOCOCCUS VASTATOR MASK. (COCCOIDEA: HEMIPTERA). Indian Jour. Ent. 19: 54-58, illus.
Life cycle.
- 1961 A NEW RECORD OF ICERYA PULCHER (LEONARDI) IN INDIA AND ITS IDENTITY (COCCOIDEA). Indian Jour. Ent. 23: 151-152.
First record for Bihar.
- 1961a SOME NEW HOST PLANTS OF FERRISIANA VIRGATA (CKLL.) IN BIHAR (INDIA) (PSEUDOCOCCIDAE: HEMIPTERA). Indian Jour. Ent. 23: 236-238, illus.
Records 11 new hosts.
- 1961b A NOTE ON NIPAEOCCUS VASTATOR (MASK.) (PSEUDOCOCCIDAE: HEMIPTERA). Indian Jour. Ent. 23: 304-305.
Records 1 new host for Bihar.
- 1962 COCCIDS AFFECTING SUGARCANE IN BIHAR (COCCIDAE: HEMIPTERA). Indian Jour. Sugarcane Res. and Devlpmt. 6: 72-75, illus.
Records 6 spp. in 6 gen.
- 1964 SOME STUDIES ON PULVINARIA CELLULOSA GREEN—A MEALY SCALE OF MANGO IN BIHAR, INDIA. Indian Jour. Ent. 26: 361-362, illus.
Life cycle.
- 1967 CURRENT TRENDS IN THE TAXONOMY OF COCCIDS (INSECTA). Natl. Inst. Sci. India Bul. 34: 212-218, illus.
Suggests correlation of structural characters and habit characteristics in developing classification system; discusses 3 mealybug spp. as examples.
- 1967a DESCRIPTION OF A NEW AND RECORDS OF SOME KNOWN COCCIDS (HOMOPTERA) FROM BIHAR, INDIA. Oriental Insects 1: 29-43, illus.
Describes *Indococcus* n. gen. and *I. pipalae* n. sp.; hosts and distribution of 25 spp. in 16 gen.
- 1968 COCCIDS (COCCOIDEA: HEMIPTERA) AFFECTING FRUIT PLANTS IN BIHAR (INDIA). Bombay Nat. Hist. Soc. Jour. 65: 120-137.
Hosts and distribution of 34 spp. in 19 gen.; literature citations.
- 1969 A CATALOGUE OF THE ORIENTAL COCCOIDEA. PART I. (INSECTA: COCCOIDEA: DIASPIDIDAE). Indian Mus. Bul. 4 (1): 67-83, illus.
Hosts and distribution of 81 spp. in 8 gen.; literature citations.
- 1969a A CATALOGUE OF THE ORIENTAL COCCOIDEA. PART II. (INSECTA: COCCOIDEA: DIASPIDIDAE). Indian Mus. Bul. 4 (2): 38-73, illus.
Hosts and distribution of 176 spp. in 25 gen.; literature citations.

AMITAI, S.

- 1969 MORPHOLOGICAL IDENTIFICATIONS OF THE STAGES OF THE FLORIDA WAX SCALE—CEROPLASTES FLORIDENSIS COMST. (COCCOIDEA). Israel Jour. Ent. 4: 89-95, illus.
Describes some morphological characters of 3 nymphal instars and young adult female.

See Kehat, M., and Amitai, S.

ANDERSON, J.

- 1790b THE CONCLUSION OF LETTERS ON COCHINEAL TO THE HON. JOHN HOLLAND ESQ. 21 p. C. Ford, Madras. (Coccid p. 15, 18.)
Mentions lac insect; does not give scientific name.

- 1791 CORRESPONDENCE FOR THE INTRODUCTION OF THE COCHINEAL INSECTS FROM AMERICA, THE VARNISH AND TALLOW TREES FROM CHINA, THE DISCOVERY AND CULTURE OF WHITE LAC, THE CULTURE OF RED LAC. AND ALSO FOR THE INTRODUCTION, CULTURE AND ESTABLISHMENT OF MULBERRY TREES AND SILK WORMS, WITH A REDESCRIPTION AND DRAWING OF AN IMPROVED PIEMONTESE REEL FOR THE MANUFACTURE OF RAW SILK TOGETHER WITH THE CULTURE OF THE FINEST CINNAMON TREES OF CEYLON, INDIGO AND SOME OTHER VALUABLE ARTICLES. 78 + 6 p. J. Martin, Madras.

Mentions lac insect on p. 59-61 as "different from anything of the Coccus kind."

ANDISON, H.

- 1940 THE SOFT SCALE (COCCUS HESPERIDUM) INFESTING HOLLY ON VANCOUVER ISLAND (A PRELIMINARY REPORT). Ent. Soc. Brit. Columbia Proc. 36: 3-5.
Life history and habits; hosts and distribution; injury and control.

ANDRES CANTERO, F. DE.

- 1965 ENFERMEDADES Y PLAGAS DEL OLIVO, MADRID. 296 p., illus. Dir. Gen. Agr., Secc. Fitopatol. y Plagas del Campo. (Coccids p. 114-130.)
Notes on appearance, biology, hosts and distribution, damage, and control of 6 coccid spp.

ANDREWARTHA, H. G., *see* Newman, L. J., O'Connor, B. A., and Andrewartha, H. G.

ANNANDALE, N.

- 1904 XIII. CONTRIBUTIONS TO THE TERRESTRIAL ZOOLOGY OF THE FAROES. Roy. Phys. Soc. Edinb. Proc. 15 (1902-04): 153-160. (Coccids p. 156-157.)
Orthezia cataphracta and *O. floccosa*.

ANNECKE, D. P.

- 1966 BIOLOGICAL STUDIES ON THE IMMATURE STAGES OF SOFT BROWN SCALE, COCCUS HESPERIDUM LINNAEUS (HOMOPTERA: COCCIDAE). So. African Jour. Agr. Sci. 9: 205-227, illus.
Life history; morphology of different instars of female.

ANTHON, E. W.

- 1967 RELATIONSHIP OF THE DEVELOPMENT OF OVERWINTERING SAN JOSE SCALE FEMALES AND THEIR CRAWLERS TO TEMPERATURE. Jour. Econ. Ent. 60: 299-300.

ARAKELIAN, A. O.

- 1967 SPECIES OF PESTS ON FRUIT CULTURE NEW FOR ARMENIAN SSR FROM NORTH-EASTERN ZONE. [In Russian.] Biol. Zhur. Armenia 20: 67-72. (Not seen.)
Includes *Neopulvinaria imeretina*; notes on biology; hosts.

ARDLEY, J. H., *see* Szent-Ivany, J. J. H., and Ardley, J. H.

ARGYRIOU, L. C.

- 1963 STUDIES ON THE MORPHOLOGY AND BIOLOGY OF THE BLACK SCALE [SAISSETIA OLEAE (BERNARD)]. Ann. Inst. Phytopath. Benaki (n.s.) 5: 353-377, illus.

Describes all female instars; biology; damage.

- 1967 THE SCALES OF OLIVE TREES OCCURRING IN GREECE AND THEIR ENTOMOPHAGOUS INSECTS. Ann. Inst. Phytopath. Benaki (n.s.) 8: 66-73.

Notes on 11 spp. in 11 gen. in 3 families; hosts and distribution; parasites and predators.

ATANASOV, P.

- 1959 A CONTRIBUTION TO THE KNOWLEDGE OF SCALE INSECTS IN THE PEOPLES REPUBLIC OF MACEDONIA. [In Macedonian. English summary.] Ybk. Faculty of Agr. and Forest., Univ. Skopje, Yugoslavia 12 (1958/59): 425-435, illus.

Records 35 spp. in 25 gen.; 22 spp. new for Macedonia.

AVDALBEGIAN, S. T.

- 1962 THE ARMENIAN COCHINEAL AND ITS DISTRIBUTION IN THE ARARAT LOWLANDS. [In Armenian.] Akad. Nauk Armianskoi SSR Biol. i Sel'sk. Nauk. Izv. 15: 89-93.

Reviews literature on *Porphyrophora hameli* Brandt; hosts and distribution; notes on occurrence of *Coccus cacti* and its use in production of carmine.

AVIDOV, Z., and HARPAZ, I.

- 1969 PLANT PESTS OF ISRAEL. 549 p., illus. Israel Univ. Press, Jerusalem. (Coccids p. 143-226.)

Include 32 pest spp. of coccids in 6 families; descriptions; biology and habits; hosts and distribution; economic importance; natural enemies.

AZAB, A. K., TAWFIK, M. F. S., and EZZ, A. I.

- 1969 STUDIES ON ICERYA AEGYPTIACA (DOUGLAS) [HOMOPTERA: MARGARODIDAE]. Soc. Ent. d'Egypte Bul. 52 (1968): 155-178.

Biology; description of egg and 3 nymphal instars; external morphology and internal anatomy of adult female; hosts; economic importance; predators.

BACHMAIER, F.

- 1965 UNTERSUCHUNGEN UBER DIE INSEKTEN- UND MILBENFAUNA DER ZWERGBIRKE (BETULA NANA L.) IN SUDEUTSCHEN UND OSTERREICHISCHEN MOOREN, UNTER BESONDERER BERUICKSICHTIGUNG DER PHYTOPHAGEN ARTEN UND IHRER PARASITEN. Zool. Staatssamml. München. Veröffentl. 9: 55-158, illus. (Coccids p. 82.)

Spilococcus nanae new for Germany; 3 other coccids listed.

BAER, D.

- 1965 ASYNCHRONOUS REPLICATION OF DNA IN A HETEROCHROMATIC SET OF CHROMOSOMES IN PSEUDOCOCCUS OBSCURUS. Genetics 52: 275-285, illus.

BAILEY, S. F.

- 1964 A STUDY OF THE EUROPEAN FRUIT LECANIUM SCALE, *LECANIUM CORNI*, ON PRUNE. Jour. Econ. Ent. 57: 934-938.
Reports 6 years' study of population trends of *L. corni* on prune in California.

BALACHOWSKY, A. S.

- 1925 LES COCHENILLES NUISIBLES AUX AURANTIACEES EN ALGERIE ET LEUR TRAITEMENT. Rev. Agr. de l'Afrique du Nord 13: 653-655, 669-673, 685-689, illus.
Brief description of 10 spp. in 7 gen.; biology; control.
- 1926a LES PRINCIPALES COCHENILLES DONT IL FAUT REDOUTER L'INTRODUCTION EN ALGERIE. Rev. Agr. de l'Afrique du Nord 14: 310-317, illus.
Several spp. reported from citrus, other fruit trees, and cotton; notes on biology; control.
- 1926b NOTE SUR UN COCCIDE DE LA FAUNE NEO-TROPICALE RECEMMENT ACCLIMATE ET NUISIBLE AU FIGUIER EN ALGERIE. Soc. d'Hist. Nat. de l'Afrique du Nord Bul. 17: 63-69, illus.
Describes several instars of *Morganella longispina*; brief note on biology.
- 1927a LES INSECTES NUISIBLES AU FIGUIER EN ALGERIE ET LEURS TRAITEMENTS. Soc. d'Hist. Nat. de l'Afrique du Nord Bul. 17: 69-75, illus.
Descriptive and biological notes on *Mytilaspis minima*, *Morganella longispina*, and *Ceroplastes rusci*; parasites and predators.
- 1930e CONTRIBUTION A L'ETUDE DES COCCIDES DE FRANCE (4^E NOTE) QUELQUES HYMENOPTERES CHALCIDIENS PARASITES DE COCCIDES RECUEILLIS DANS LES ALPES-MARITIMES ET LE VAR DURANT L'ANNEE 1929. Rev. de Path. Veg. et d'Ent. Agr. de France 17: 218-221.
List of chalcid parasites includes names of their coccid hosts with some plant host and distribution records.
- 1932g CONTRIBUTION A L'ETUDE DES COCCIDES DE FRANCE (12^E NOTE). SUR LA PRESENCE D'ASPIDIOTUS BAVARICUS LDGR. [HEM. COCCIDAE] DANS LA FORET DE FONTAINEBLEAU. Assoc. des Nat. de la Vallée du Loing Bul. 15: 102-106.
Description; hosts and distribution.
- 1935c CONTRIBUTION A L'ETUDE DES COCCIDES DES COLONIES FRANCAISES (2^E NOTE). SUR LA PRESENCE DE NEOMARGARODES ERYTHROCEPHALA GREEN AU SOUDAN FRANCAIS. Soc. d'Hist. Nat. de l'Afrique du Nord Bul. 26: 284-285.
Reports third collection of single male.
- 1936e CONTRIBUTION A L'ETUDE DES COCCIDES DE FRANCE (24^E NOTE). LA COCHENILLE FLOCONNEUSE EST-ELLE INDIGENE DANS LES FORETS DE FRANCE? Rev. de Path. Veg. et d'Ent. Agr. de France 23: 307-312, illus.
Biological notes on *Pulvinaria floccifera*; hosts and distribution.
- 1967 UN NOUVEAU DIASPIDINI-CHIONASPIDINA (COCCOIDEA) DE LA REPUBLIQUE DU NIGER. [CONTRIBUTION A L'ETUDE DES COCCOIDEA-DIASPIDINI DE L'AFRIQUE TROPICALE ET EQUATORIALE (7^E NOTE).] Soc. Ent. de France Ann. (n.s.) 3: 619-623, illus.
Gadaspis grassei n. sp. differentiated from 3 related spp.

BALACHOWSKY, A. S.—Continued

- 1967a UNE ESPECE NOUVELLE DE FIORINIA [COCCOIDEA-DIASPIDINI] VIVANT SUR PALMIER-DATTIER DANS LES OASIS DU SUD DE L'IRAN. Soc. Ent. de France Ann. (n.s.) 3: 771-775, illus.
Describes adult female and second-instar nymph of *F. phoenicis*.
- 1968 SUR UN QUADRASPIDIOTUS [COCCOIDEA-ASPIDIOTINI] NOUVEAU DU CENTRE DE L'ÎLE DE TENERIFFE (CANARIES). Soc. Ent. de France Ann. (n.s.) 4: 75-79, illus.
Q. arroyoi n. sp. compared with related spp. in Mediterranean area.
- 1968a SUR UNE NOUVELLE SOUS-TRIBU DE LEPIDOSAPHEDINI (COCCOIDEA-DIASPIDIDAE) CREEE PAR LA DECOUVERTE D'UN NOUVEAU GENRE NUISIBLE AU CAFEIER D'ARABIE A SAO-TOME. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE TROPICALE ET EQUATORIALE, 12^e NOTE]. Rev. de Zool. et de Bot. Africaines 78: 53-63, illus.
Andaspidina n. subtribe, *Parandaspidis* n. gen., *P. castelbrancoi* n. sp.; keys to subtribes of Lepidosaphedini and to gen. of Andaspidina.
- 1969 LE GENRE AMONOSTHERIUM MORR. & MORR. DANS LE BASSIN OCCIDENTAL DE LA MEDITERRANEE [HOM. COCCOIDEA PSEUDOCOCCINAE]. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE LA FAUNE DE FRANCE, 34^e NOTE.] Soc. Ent. de France Bul. 74: 145-152, illus.
A. delassusi (Balachowsky) n. comb. and *A. rorismarinis* (Fonscolombe) redescribed.
- BALACHOWSKY, A. S., and FERRERO, D.
- 1965 SUR UN SELENASPIDUS CKLL. [COCCOIDEA-ASPIDIOTINI] NOUVEAU DE REPUBLIQUE CENTRE-AFRICAINE. Soc. Ent. de France Ann. (n.s.) 1: 711-715, illus.
S. aubrevillei n. sp. compared with *S. malzii*.
- 1965a SUR UN GENRE NOUVEAU DE COCCOIDEA-DIASPIDINI DE LA FORET CENTRAFRICAINE. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE EQUATORIALE (2^e NOTE).] Soc. Ent. de France Ann. (n.s.) 1: 995-999, illus.
Sphaeroceraspis n. gen. and *S. saccasi* n. sp.; gen. compared with *Protodiaspis*.
- 1965b SUR UN DENTASPIS MCGILL. NOUVEAU DE LA FORET CENTRAFRICAINE [HOM. COCCOIDEA-CHIONASPIDINI]. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE EQUATORIALE (3^e NOTE).] Soc. Ent. de France Bul. 70: 233-236, illus.
D. langloisi n. sp. compared with 2 related spp.
- 1965c SUR UN SAISSETIA DEPL., (COCCOIDEA-LECANINAE) NOUVEAU DE LA FORET CENTRAFRICAINE. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE EQUATORIALE (4^e NOTE).] Cahiers de la Maboké 3: 134-136, illus.
S. lobayana n. sp. compared with *S. pterolobina*.
- 1966 REMARQUES SUR LES PSEUDOCOCCINI (COCCOIDEA-COCCIDAE) AFROTROPICAUX AVEC DESCRIPTION D'UN PLANOCOCCUS FERRIS NOUVEAU VIVANT SUR CACAoyer EN REPUBLIQUE CENTRAFRICAINE. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE EQUATORIALE (5^e NOTE).] Cahiers de la Maboké 4: 68-72, illus.
P. lamabokensis n. sp. compared with other spp.

BALACHOWSKY, A. S., and FERRERO, D.—Continued

- 1966a SUR UN DEUXIEME SPHAEROCERASPIS NOUVEAU DE LA FORET CENTRAFRICAINE [HOM. COCCOIDEA DIASPIDINI]. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE EQUATORIALE (6^e NOTE).] Soc. Ent. de France Ann. (n.s.) 2: 343-348, illus.
S. joannae n. sp. differentiated from *S. saccasi*.
- 1967 UN NOUVEAU DIASPIS [COCCOIDEA DIASPIDINI] VIVANT SUR COPALIER DANS LE MASSIF DU BENA (REPUBLIQUE DE GUINEE). [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE TROPICALE ET EQUATORIALE 8^e NOTE.] Soc. Ent. de France Ann. (n.s.) 3: 985-988, illus.
D. uniglandulosus n. sp. distinguished from other spp. from tropical Africa.
- 1967a UN NOUVEAU GENRE DE DIASPIDINI-CHIONASPIDINA (COCCOIDEA) DE LA FORET EQUATORIALE CENTRAFRICAINE. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE TROPICALE ET EQUATORIALE, 9^e NOTE.] Cahiers de la Maboké 5: 37-42, illus.
Heimaspis n. gen. and *H. centrafricanus* n. sp.; relationship of gen. discussed.
- 1967b UN NIMBASPIDIS BALACHW. [COCCOIDEA-ODONASPIDINI] NOUVEAU DE LA SAVANE CENTRAFRICAINE. [CONTRIBUTION A L'ETUDE DES COCCOIDEA DE L'AFRIQUE TROPICALE ET EQUATORIALE, 10^e NOTE.] Inst. Fondamental d'Afrique Noire Bul. (sér. A) Sci. Nat. 29: 1021-1025, illus.
N. squamosus n. sp. compared with 2 related spp.
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BALLARD, E.

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- 1963a NOTES ON HAWAIIAN PSEUDOCOCCUS, WITH A DESCRIPTION OF A NEW ENDEMIC SPECIES (HOMOPTERA: PSEUDOCOCCIDAE). Hawaii. Ent. Soc. Proc. 18 (1962): 229-234, illus.

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cini of Morrison from Xylococcinae and placement in Matsucoccinae.
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J. B., and Moreno, D.; Tashiro, H., Chambers, D. L., Moreno, D.,
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¹ Lapsus or misspelling of a scientific name.

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- 1969 NOTAS SOBRE ORTHEZIA PSEUDOINSIGNIS MORRISON (HOM.: ORTHEZIIDAE), PLAGA DE ALGUNAS PLANTAS CULTIVADAS Y ORNAMENTALES EN EL PERU. [English summary.] Rev. Peruana de Ent. 12: 96-118, illus.

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BEN-DOV, Y.

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BERLOWITZ, L.

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Discuss DNA and cell number in second-instar males and females of *Planococcus citri* and *Pseudococcus obscurus*.

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BHUIYAN, S. R., *see* Alam, M. Z., and Bhuiyan, S. R.

BIANCHI, H., *see* Bénassy, C., and Bianchi, H.

BIBBY, F. F.

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BIELENIN, I.

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BLACKITH, R. E., *see* Blair, C. A., Blackith, R. E., and Boratynski, K.

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BLUMBERG, B.

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BODENHEIMER, F. S., and HARPAZ, I.

- 1955 DESCRIPTION OF THE VARIOUS STAGES OF *MATSUCOCCLUS JOSEPHI* N. SP.
In Bodenheimer, F. S., and Neumark, S., The Israeli Pine *Matsucoccus*, p. 12-22, illus. Jerusalem.
Describe males and females.

BODENHEIMER, F. S., and STEINITZ, H.

- 1937 STUDIES IN THE LIFE HISTORY OF THE CITRUS MUSSEL SCALE (*LEPIDOSAPHES PINNAEFORMIS* BCHE) IN PALESTINE. Hadar 10 (7-8): 153-159, illus.
Distribution; life history; seasonal fluctuation and mortality; damage; enemies.

BODKIN, G. E.

- 1927 THE FIG WAX SCALE (*CEROPLASTES RUSCI* L.) IN PALESTINE. Bul. Ent. Res. 17: 259-264, illus.
Life history and habits; distribution; natural enemies; control.

BOER, J. A. DE.

- 1967 NEW RECORDS OF PSEUDOCOCCIDAE FROM NEW-ZEALAND (HOMOPTERA: COCCOIDEA). New Zeal. Ent. 3: 8-10.
Host and distribution records; first records for *Chorizococcus lounsburyi*, *Rhizoecus falcifer*, and *Spilococcus cactearum*.
- 1967a TAXONOMY OF NEW ZEALAND PSEUDOCOCCIDAE, PART 1 (HOMOPTERA: COCCOIDEA). New Zeal. Jour. Sci. 10: 138-141, illus.
Chorizococcus miro n. sp. and *Spilococcus zealandicus* (Brittin) n. comb.
- 1968 TAXONOMY OF NEW ZEALAND PSEUDOCOCCIDAE, PART 2 (HOMOPTERA: COCCOIDEA). New Zeal. Jour. Sci. 11: 328-336, illus.
Antoninoides chionochloae, *Pseudantonina junci*, and *P. raouliae* n. spp.; *P. poae* (Maskell) n. comb. redescribed; key to New Zealand spp. of *Pseudantonina*.

BOHART, R. M., see Miller, D. R., Bohart, R. M., and Wilkey, R. F.

BOISDUVAL, A. M.

- 1869 NOTE SUR DEUX ESPECES NOUVELLES DE COCCIDES VIVANT SUR LES BAMBOUS CULTIVES AU JARDIN DU HAMMA. *L'Insectologie Agr.* 3: 260-262.

Chermes bambusae and *C. miliaris*.

BOLLOW, H., see Mark, R., and Bollow, H.

BORATYNSKI, K. [BORATYNSKI, K. L.]

- 1934 SYSTEM KRWIONOSNY U TARCZYKOW (COCCIDAE). 14th Polish Sci. and Med. Cong. (Poznan, 1933) Mem. 1934, p. 541-544.

Blood system in *Porphyrophora polonica*.

- 1934a INTRACELULARNA SYMBIOZA U CZERWCA POLSKIEGO. 14th Polish Sci. and Med. Cong. (Poznan, 1933) Mem. 1934, p. 549-552.

Intracellular symbiosis in *Porphyrophora polonica*.

- 1953 SEXUAL DIMORPHISM IN THE SECOND INSTAR OF SOME DIASPIDIDAE (HOMOPTERA: COCCOIDEA). Roy. Ent. Soc. London, Trans. 104: 451-479, illus.

Correction of Morrison and Renk 1957 bibliography from 1952b to 1953.

- 1960 A NOTE ON LOPHOLEUCASPIS COCKERELLI (GRANDPRE AND DE CHARMOY, 1899) (DIASPIDIDAE, COCCOIDEA, HOMOPTERA). Ent. Monthly Mag. 95: 193-197, illus.

Correction of Morrison and Morrison 1965 first supplement from 1959 to 1960.

- 1960b MATSUCOCCUS PINI (GREEN) (HOMOPTERA, COCCOIDEA, MARGARODIDAE) IN NORFOLK. Ent. Monthly Mag. 95: 240.

Notes on biology, host, distribution.

- 1964 COCCOIDEA (SCALE INSECTS). In McClintock, D., Natural History of the Garden of Buckingham Palace, London. So. London Ent. Nat. Hist. Soc. Proc. (1963, pt. II) 1964, p. 85-86.

Lists 10 spp. in 9 gen. in 5 families.

- 1966 COMMUNICATIONS. Roy. Ent. Soc. London, Proc. Ser. C: Jour. Mtgs. 31: 46.

Eriopeltis sp. new to British fauna; discusses its possible identity.

- 1968 A NEW SPECIES OF LACOMBIA GOUX, 1940, (PSEUDOCOCCIDAE, HOMOPTERA) FROM ANTS' NESTS IN THE MALTESE ISLANDS. Accad. Gioenia di Sci. Nat. Catania Bol., Ser. IV, 9: 401-409, illus.

L. urbanii.

- 1968a A NOTE ON SOME SPECIES OF THE GENUS DIASPIS COSTA, 1828, (HEMIPTERA, COCCOIDEA) IN THE COLLECTIONS OF THE NATURHISTORISCHES MUSEUM IN VIENNA; WITH THE DESCRIPTION OF A NEW SPECIES. Ann. Nat. Hist. Mus. Wien 72: 33-43, illus.

D. iodinae n. sp.; identifies 10 spp. in 6 gen.; discusses nymphs of *Pseudoparlatoria*.

See Blair, C. A., Blackith, R. E., and Boratynski, K.

BORATYNSKI, K., and WILLIAMS, D. J.

- 1964 A NOTE ON SOME BRITISH COCCOIDEA, WITH NEW ADDITIONS TO THE BRITISH FAUNA. Roy. Ent. Soc. London, Proc. Ser. B: Taxonomy 33: 103-110, illus.

Discuss spp. of Diaspididae, Coccidae, Eriococcidae, and Pseudococcidae; redescribe female of *Parthenolecanium rufulum*.

BORCHSENIUS, N. S.

- 1937a QUARANTINE AND OTHER SCALE INSECTS (COCCIDAE) OF USSR. [In Russian. English summary.] 272 p. + 72 pls. Plant Quar. Sta., Tbilisi, Georgia.
Textbook used by Plant Quarantine Service; includes keys to sub-families, tribes, gen., and spp. of quarantine importance; gives references, hosts, and distribution for each sp.
- 1947 TWO NEW GENERA OF MEALYBUGS AND A NEW SPECIES OF ARMORED SCALE (HOMOPTERA: COCCOIDEA) FROM ARMENIA. [In Russian.] Akad. Nauk Armianskoi SSR Dok. 7: 141-143.
Recorded in Morrison and Renk 1957 bibliography and also in Morrison and Morrison 1965 first supplement.
- 1948f 7. COCCOIDEA. [In Russian.] *In* Fauna of SSSR (Dry Lands), v. 2, p. 261-269, illus.
Treats coccids in general.
- 1949a IDENTIFICATION OF SOFT AND ARMORED SCALES OF ARMENIA. [In Russian.] 271 p., illus. Akad. Nauk Armianskoi SSR Izd. Erevan.
Change in Morrison and Morrison 1965 first supplement from 1949 to 1949d.
- 1953a 9. COCCOIDEA. [In Russian.] *In* Fauna of SSSR (forests), v. 4, p. 522-526, illus. Moscow, Leningrad.
Discusses coccids in general.
- 1958d 5. SCALE INSECTS—COCCOIDEA. [In Russian.] *In* Animal World SSSR. Mountain Region of European SSSR, v. 5, p. 129. Akad. Nauk SSSR, Zool. Inst. Leningrad.
Lists 24 spp. found in Crimea; few hosts.
- 1958e SOFT AND HARD SCALE INSECTS. [In Russian.] *In* Animal World SSSR. Mountain Region of European SSSR, v. 5, p. 431-434. Akad. Nauk SSSR, Zool. Inst. Leningrad.
Discusses coccid fauna of Caucasus; lists many species and their hosts.
- 1963 ON THE REVISION OF THE GENUS *LEPIDOSAPHE* SHIMER (COCCOIDEA, HOMOPTERA, INSECTA). [In Russian. English summary.] Zool. Zhur. 42: 1161-1174, illus.
Divides *Lepidosaphes* auct. into 10 gen., including *Parainsulaspis*, *Pistaciaspis*, *Cornimytilus*, *Eucornuaspis*, and *Pinomytilus* n. gen.; notes on 5 other gen.
- 1963a PRACTICAL GUIDE TO THE DETERMINATION OF SCALE INSECTS OF CULTIVATED PLANTS AND FOREST TREES OF THE USSR. [In Russian.] 311 p., illus. Akad. Nauk SSSR, Zool. Inst. Leningrad.
Keys for the identification of pest coccids; hosts and distribution.
- 1963b ON THE DECREASED NUMBER OF LARVAL STAGES AND NYMPHAL STAGES IN THE PROCESS OF EVOLUTION OF THE COCCOIDEA (INSECTA, HOMOPTERA). [In Russian.] Akad. Nauk SSSR Dok. 148: 468-469.
Discusses number of immature instars in various coccids.
- 1964 NEW GENERA AND SPECIES OF SCALE INSECTS (HOMOPTERA, COCCOIDEA, DIASPIDIDAE) FROM TRANSCAUCASIA, MIDDLE AND EASTERN ASIA. [In Russian. English summary.] Ent. Obozr. 34: 152-168, illus. [Translation, Ent. Rev. 43: 77-82, illus.]
Parapudaspis and *Takahashiella* n. gen. and 10 n. spp.

BORCHSENIUS, N. S.—Continued

- 1964a NOTES ON THE COCCOIDEA OF INDIA. 1. A NEW GENUS AND THREE NEW SPECIES OF LEUCASPIDINI (DIASPIDIDAE). [In Russian. English summary.] Ent. Obozr. 43: 864-872, illus. [Translation, Ent. Rev. 43: 442-444, illus.]

Maniaspis n. gen. and *M. manii* n. sp.; *Lopholeucaspis excoecariae* and *L. menoni* n. spp.; key to gen. of Leucaspidini and spp. of *Leucaspis*.

- 1965 ESSAY ON THE CLASSIFICATION OF THE ARMORED SCALE INSECTS (HOMOPTERA, COCCOIDEA, DIASPIDIDAE). [In Russian.] Ent. Obozr. 44: 362-376, illus. [Translation, Ent. Rev. 44: 208-214, illus.]

Ferrisidea n. gen.; 5 n. tribes and 10 n. subtribes; key to tribes and subtribes; descriptive notes on many taxa; chart on phylogeny of diaspid groups.

- 1966 A CATALOGUE OF THE ARMORED SCALE INSECTS (DIASPIDOIDEA) OF THE WORLD. [In Russian.] 449 p. Akad. Nauk SSSR Zool. Inst. Leningrad.

Includes virtually all diaspidid names published before 1964; literature citations on taxonomy and biology; hosts; very complete.

- 1967 MATERIALS ON THE FAUNA OF SCALE INSECTS (HOMOPTERA, COCCOIDEA) FROM INDIA. 2. ANDASPID MACG. WITH THREE NEW ALLIED GENERA (DIASPIDIDAE). [In Russian.] Ent. Obozr. 46: 724-734, illus. [Translation, Ent. Rev. 46: 429-433, illus.]

Raoaspis, *Pararaoaspis*, *Roonwalaspis* n. gen.; *Andaspis artocarpis*, *Raoaspis betulae*, *indica*, *raoi*, *Roonwalaspis quercicola* n. spp.; keys to gen. and spp.

BORCHSENIUS, N. S., and DANZIG, E. M.

- 1966 A NEW SPECIES OF GREENISCA BORCHS. (HOMOPTERA, COCCOIDEA, ERIOCOCCIDAE) FROM THE USSR. In Bykhovskii, B. E., New Species of Insects of the Fauna of the USSR and Adjacent Countries. [In Russian.] Akad. Nauk SSSR, Zool. Inst. Trudy 37: 41-44, illus.

G. brachypodii; generic characters; key to 5 spp.

BORCHSENIUS, N. S., and KOSARZEWSKA, E. F.

- 1966 THREE NEW SPECIES OF PSEUDOCOCCIDAE (HOMOPTERA, COCCOIDEA) FROM THE USSR. In Bykhovskii, B. E., New Species of Insects of the Fauna of the USSR and Adjacent Countries. [In Russian.] Akad. Nauk SSSR, Zool. Inst. Trudy 37: 36-40, illus.

Paracoccus betulae, *Neotrionymus maritimus*, and *Peliococcus mesasiaticus*.

BORCHSENIUS, N. S., and WILLIAMS, D. J.

- 1963 A STUDY OF THE TYPES OF SOME LITTLE-KNOWN GENERA OF DIASPIDIDAE WITH DESCRIPTIONS OF NEW GENERA (HEMIPTERA: COCCOIDEA). Brit. Mus. (Nat. Hist.) Ent. Bul. 13: 353-394, illus.

Discuss type spp. of 28 gen. including 8 n. gen.; 15 gen. in Diaspidini, 4 in Parlatorini, 9 in Aspidiotini.

BORCHSENIUS, N. S., and WILLIAMS, D. J.—Continued

- 1963a SCALE-INSECTS OF THE GENUS CONTIGASPIS MACGILLIVRAY (HOMOPTERA, COCCOIDEA) OF THE WORLD FAUNA. [In Russian. English summary.] Ent. Obozr. 42: 594-610, illus. [Translation, Ent. Rev. 42: 322-327, illus.]

C. coimbatorensis, *euphorbiarum*, and *salsolae* n. spp.; gen. revised; key to 12 spp. (in Russian and English).

BORG, P.

- 1919 THE SCALE INSECTS OF THE MALTESE ISLANDS. 71 p., illus., Malta. Description; biology; hosts; economic importance.

BOSE, K. C., and TULSYAN, G. P.

- 1965 EFFECT OF DIET ON THE PERCENTAGE OF WINGED MALES IN LACCIFER LACCA KERR (COCCOIDEA: HEMIPTERA). Natl. Acad. Sci., India, Proc. (sect. B) 35 (pt. I): 21-24.

Partial starvation of immatures increased percentage of winged forms.

- 1966 THE CHROMOSOME COMPLEMENT AND SOMATIC MITOSIS IN THE LAC INSECTS, LACCIFER LACCA KERR (HEMIPTERA, LACCIFERIDAE). 2d All-India Cong. Zool. (Varanasi, 1962) Proc. 1966, pt. 2, p. 34-35.

BOULARD, M.

- 1967 HEMIPTEROIDES NUISIBLES OU ASSOCIES AUX CACAOYERS EN REPUBLIQUE CENTRAFRICAINE. PREMIERE PARTIE. Café Cacao Thé 11: 220-232, illus.

Includes 6 gen. with 2 determined and 4 undetermined spp. of coccids; descriptive notes; biology and habits.

BREMI, H. [BREMY, BRAMI, J.; BREMI-WOLF, J. J., according to Horn and Schenkling.]

- 1847 UBER DIE SCHILDLAUSE. Verhandl. Schweiz. Naturf. Gesell., Versamml. zu Schaffhausen. 32, p. 41-45.

Mentions several coccid genera and "Dorthesia Vitis;" discusses 2 groups of *Aspidiotus* without including names of spp.

- 1849a MITTEILUNGEN UBER DIE INSECTEN DER EICHEN. Naturf. Gesell. in Zürich, Mitt. 1 (14): 1-16. (Coccid p. 11.)

Correction of Morrison and Renk 1957 bibliography from 1847 to 1849a.

BRIMBLECOMBE, A. R.

- 1961 SCALE INSECTS ON PAPAWS. Queensland Agr. Jour. 87, 2 p., illus. (Also as Queensland Dept. Agr. and Stock, Div. Plant Indus. Advisory Leaflet 601, 2 p.)

Records 5 spp.

- 1962 STUDIES OF THE COCCOIDEA. 12. SPECIES OCCURRING ON DECIDUOUS FRUIT AND NUT TREES IN QUEENSLAND. Queensland Jour. Agr. Sci. 19: 219-229, illus. (Also as Queensland Dept. Agr. and Stock, Div. Plant Indus. Bul. 215: 219-229, illus.)

Records 30 spp. in 4 families.

BRIMBLECOMBE, A. R.—Continued

- 1962a STUDIES OF THE COCCOIDEA. 13. THE GENERA AONIDIELLA, CHRYSOMPHALUS AND QUADRASPIDIOTUS IN QUEENSLAND. Queensland Jour. Agr. Sci. 19: 403-423, illus. (Also as Queensland Dept. Agr. and Stock, Div. Plant Indus. Bul. 224: 403-423, illus.)
A. aurantii, *C. ficus*, and *Q. perniciosus* are widely distributed; *A. eremocitri*, *C. rubribullatus*, and *C. trifasciculatus* are indigenous spp.
- 1966 THE OCCURRENCE OF THE GENUS ANTONINA (HOMOPTERA: COCCOIDEA) IN QUEENSLAND. Ent. Soc. Queensland Jour. 5: 5-6.
A. australis from *Cyperus rotundus* transferred to genus *Kuwanina* and *K. hilli* Laing made n. syn. of *A. australis*; Queensland records on *A. indica* Green referred to *A. graminis* (Maskell).
- 1968 STUDIES OF THE COCCOIDEA. 14. THE GENERA ASPIDIOTUS, DIASPIDIOTUS AND HEMIBERLESIA IN QUEENSLAND. Queensland Jour. Agr. and Anim. Sci. 25: 39-56, illus. (Also as Queensland Dept. Primary Indus., Div. Plant Indus. Bul. 425: 39-56.)
 Lists synonyms of gen. and included spp.; lists names used in Australian literature; hosts and distribution.
- 1968a FELTED GRASS COCCID ON RHODESGRASS IN QUEENSLAND. Queensland Agr. Jour. 94: 258-261, illus. (Also as Queensland Dept. Primary Indus., Div. Plant Indus. Advisory Leaflet 957: 1-5.)
Antonina graminis macroscopic appearance; life history and habits; distribution; control.

BRIMBLECOMBE, A. R., and HEATHER, N. W.

- 1965 OCCURRENCE OF THE KAURI COCCID, CONIFERICOCCLUS AGATHIDIS BRIMBLECOMBE (HOMOPTERA: MONOPHLEBIDAE) IN QUEENSLAND. Ent. Soc. Queensland Jour. 4: 83-85, illus.
 Life history and habits; distribution; damage.

BRITTON, W. E.

- 1901 THE SAN JOSE SCALE-INSECT: ITS APPEARANCE AND SPREAD IN CONNECTICUT. Conn. Agr. Expt. Sta. Bul. 135, Ent. Ser. 5: 3-14, illus.
 General description; hosts, distribution, and control; introduction to Eastern States; inspection; legislation.
- 1905 THE CHIEF INJURIOUS SCALE INSECTS OF CONNECTICUT. Conn. Agr. Expt. Sta. Bul. 151, Ent. Ser. 12: 3-16, illus.
 General description and notes on biology and hosts of 29 spp. in 16 gen.
- 1905a THE MORE IMPORTANT COCCIDAE OR SCALE INSECTS OF CONNECTICUT. In Fifth Rpt. of State Ent. Conn. Agr. Expt. Sta. Rpt. for 1905, pt. 4, p. 234-245, illus.
 Lists 41 spp. in 19 gen.; hosts.

BROOKES, H. M.

- 1964 THE COCCOIDEA (HOMOPTERA) NATURALIZED IN SOUTH AUSTRALIA: A SECOND ANNOTATED LIST. Roy. Soc. So. Austral. Trans. 88: 15-20. Records 12 spp. in 10 gen.; first records for *Trionymus diminitus*, *Rhizoecus falcifer*, *Phenacoccus graminosus*, and *Quadraspidotus lenticularis*.

See Hudson, N. M., and Brookes, H. M.

BROOKES, H. M., and HUDSON, N. M.

- 1968 THE IDENTIFICATION AND DISTRIBUTION OF QUADRASPIDIOTUS SPECIES (HOMOPTERA: DIASPIDIDAE) ON POME AND STONE FRUITS IN AUSTRALIA. Austral. Ent. Soc. Jour. 7: 90-100, illus.

List *Q. perniciosus*, *lenticularis*, *ostreaeformis*, and *pyri*; keys to second-instar nymphs and adult females; descriptions and figures of both stages; distribution.

- 1969 THE DISTRIBUTION AND HOST-PLANTS OF THE SPECIES OF QUADRASPIDIOTUS (HOMOPTERA: DIASPIDIDAE) IN AUSTRALIA. Austral. Jour. Expt. Agr. and Anim. Husb. 9: 228-233.

Record *Q. perniciosus*, *ostreaeformis*, *pyri*, and *lenticularis*.

BROWN, L. R., and EADS, C. O.

- 1965 A TECHNICAL STUDY OF INSECTS AFFECTING THE SYCAMORE TREE IN SOUTHERN CALIFORNIA. Calif. Agr. Expt. Sta. Bul. 818: 3-38, illus. (Coccids p. 4, 8-12.)

Brief discussion of *Lepidosaphes ulmi*; general discussion of *Stomacoccus platani* includes descriptive notes of adult female and 4 nymphal instars; biology; hosts; injury and control.

BROWN, S. W.

- 1963 THE COMSTOCKIELLA SYSTEM OF CHROMOSOME BEHAVIOR IN THE ARMORED SCALE INSECTS (COCCOIDEA: DIASPIDIDAE). Chromosoma (Berlin) 14: 360-406, illus.

Comstockiella system intermediate between lecanoid and diaspidid systems; one of most divergent chromosome systems; study based on *Ancepaspis tridentata*, *Aonidia lauri*, *Comstockiella sabalis*, *Nicholiella bumeliae*, and *Odonaspis penicillata*.

- 1964 AUTOMATIC FREQUENCY RESPONSE IN THE EVOLUTION OF MALE HAPLOIDY AND OTHER COCCID CHROMOSOME SYSTEMS. Genetics 49: 797-817, illus.

Correlates relationship between lecanoid and *Comstockiella* systems.

- 1965 CHROMOSOMAL SURVEY OF THE ARMORED AND PALM SCALE INSECTS (COCCOIDEA: DIASPIDIDAE AND PHOENICOCOCCIDAE). Hilgardia 36: 189-294, illus.

Studied 140 spp. in 73 gen.; found lecanoid, *Comstockiella*, and diaspidid chromosome systems.

- 1966 HETEROCHROMATIN. HETEROCHROMATIN PROVIDES A VISIBLE GUIDE TO SUPPRESSION OF GENE ACTION DURING DEVELOPMENT AND EVOLUTION. Science 151: 417-425, illus.

Mentions mealybug chromosome system.

BROWN, S. W.—Continued

- 1967 CHROMOSOME SYSTEMS OF THE ERIOCOCCIDAE (COCCOIDEA—HOMOPTERA). 1. A SURVEY OF SEVERAL GENERA. *Chromosoma* (Berlin) 22: 126–150, illus.
Synopsis of chromosome systems; summary of chromosome numbers and system for 33 eriococcid spp.; host and locality for each sp.; taxonomic notes.
- 1969 DEVELOPMENTAL CONTROL OF HETEROCHROMATIZATION IN COCCIDS. *Genetics* 61: 191–198.
Used *Planococcus citri*.
See Loewus, M. W., Brown, S. W., and McLaren, A. D.

BROWN, S. W., and CLEVELAND, C.

- 1968 MEIOSIS IN THE MALE OF PUTO ALBICANS (COCCOIDEA—HOMOPTERA). *Chromosoma* (Berlin) 24: 210–232, illus.
P. albicans represents most primitive example known of meiotic inversion in coccids and aphids; other spp. discussed.

BROWN, S. W., and NUR, U.

- 1964 HETEROCHROMATIC CHROMOSOMES IN THE COCCIDS. *Science* 145: 130–136, illus.
Report studies on mealybugs, soft and armored scale insects.

BROWN, S. W., and WIEGMANN, L. I.

- 1969 CYTOGENETICS OF THE MEALYBUG PLANOCOCCUS CITRI (RISSO) (HOMOPTERA: COCCOIDEA): GENETIC MARKERS, LETHALS, AND CHROMOSOME REARRANGEMENTS. *Chromosoma* (Berlin) 28: 255–279, illus.

BRUES, C. T., MELANDER, A. L., and CARPENTER, F. M.

- 1954 CLASSIFICATION OF INSECTS. *Mus. Compar. Zool. Bul.* 108, 917 p., illus. (Coccids p. 161–167.)
Include keys to 13 coccid families and 12 subfamilies; numerous references.

BUCHNER, P.

- 1953 ENDOSYMBIOSE DER TIERE MIT PFLANZLICHEN MICROORGANISMEN. 771 p., illus. Birkhäuser, Basel/Stuttgart. (Coccids p. 211–249.)
Includes coccid symbionts; literature citations.
- 1958 EINE NEUE FORM DER ENDOSYMBIOSE BEI APHIDEN. *Zool. Anz.* 160: 222–230, illus.
Mentions 7 coccid spp. in discussion.
- 1961 FUNFZIG JAHRE SYMBIOSEFORSCHUNG. *Wiss. Ztschr. Ernst-Moritz-Arndt Univ.* 10: 89–102, illus.
Summation of author's 50 years' work on endosymbionts, including notes on coccids.
- 1963 ENDOSYMBIOSESTUDIEN AN SCHILDLAUSEN. 7. WEITERE BEITRÄGE ZUR KENNNTNIS DER STICTOCOCCINENSYMBIOSE. *Ztschr. f. Morph. u. Okol. der Tiere* 52: 401–458, illus.
Studied endosymbiosis in *Stictococcus acaciae*, *intermedius*, *formicarius*, and *Stictococcus* n. sp.

BUCHNER, P.—Continued

- 1963a DIE GESCHLECHTSBEGRENZTE SYMBIOSE DER STICTOCOCCINEN. [English and French summaries.] Pavia Univ. Symp. Genet. et Biol. Ital. 12: 347-358.

Study of types of endosymbiosis in 6 spp. of *Stictococcus*.

- 1965 ENDOSYMBIOSIS OF ANIMALS WITH PLANT MICROORGANISMS. 909 p., illus. Interscience Pub., John Wiley & Sons, Inc., New York. (Coccids p. 232-296.)

Expanded and revised translation of 1953 German edition.

- 1966 ENDOSYMBIOSESTUDIEN AN SCHILDLAUSEN. 8. DIE SYMBIOSEN DER PALAEOCOCCOIDEA. PT. 1. Ztschr. f. Morph. u. Okol. der Tiere 56: 275-362, illus.

Discusses groups without endosymbionts; discusses symbiosis in Eurhizococcidae, Termitococcidae, and Margarodidae.

- 1967 ENDOSYMBIOSESTUDIEN AN SCHILDLAUSEN. 8. DIE SYMBIOSEN DER PALAEOCOCCOIDEA. PART 2. Ztschr. f. Morph. u. Okol. der Tiere 59: 211-317, illus.

Discusses symbiosis in Callipappini, Marchalini, Coelostomidiini, Stigmatococcini, and Monophlebini.

- 1969 ENDOSYMBIOSESTUDIEN AN SCHILDLAUSEN. 8. DIE SYMBIOSEN DER PALAEOCOCCOIDEA. PART. 3. Ztschr. f. Morph. u. Okol. der Tiere 64: 201-308, illus.

Discusses symbiosis in Drosichini, Monophlebulini, Llaveiini, and Iceryini.

BUCHWALD, N. F., *see* Thomsen, M., Buchwald, N. F., and Hauberg, P.

BUGDANOV, G. B.

- 1933 SPECIES AND DISTRIBUTION OF THE SCALE-INSECT-FAUNA (COCCIDAE) IN THE EASTERN FOOTHILL ZONE OF THE NORTH CAUCASUS. [In Russian.] Ber. des Gorsky Landw. Inst. (Izv. Gorskogo Sel'skoko-khoziaistvennogo Inst.) 2: 1-11.

Lists several spp. and their hosts.

BUHR, H.

- 1964 SMICRONYX REICHI (GYLL.) UND WEITERE PARASITEN AN ENZIAN IN THURINGEN. Nachrichtenbl. der Bayer. Ent. 13: 73-79.

Notes on galls of *Asterolecanium arabidis* and *A. fimbriatum*.

BUND, C. F. VAN DE, *see* Rossem, G. van, Burger, H. C., and Bund, C. F. van de.

BURGER, H. C., *see* Rossem, G. van, Burger, H. C., and Bund, C. F. van de.

BURNS, D. P., and DAVIDSON, R. H.

- 1966 THE AMINO ACIDS AND SUGARS IN HONEYDEW OF THE TULIPTREE SCALE, TOUMEYELLA LIRIODENDRI, AND IN THE SAP OF ITS HOST, YELLOW POPLAR. Ent. Soc. Amer. Ann. 59: 1071-1073.

Identified by paper chromatography.

BUTLER, G. D.

- 1961 INSECTS AND OTHER ARTHROPODS FROM LAYSAM ISLAND. Hawaii. Ent. Soc. Proc. 17 (1960): 379-387.

Lists 7 coccid spp. in 7 gen.; hosts.

CADAHIA, D., and MONTOYA, R.

- 1967 MATSUCOCCUS FEYTAUDI DUC., UN PELIGROSO ENEMIGO PARA PINUS PINASTER SOL. EN ESPANA. Serv. Plagas Forest. Bol. (Madrid) 10: 95-102, illus.

Describe various instars of males and females; biology; damage; control.

- 1968 PROSPECCION DE MATSUCOCCUS FEYTAUDI, DUC., Y MATSUCOCCUS PINI, GREEN (HOMOPTERA, MARGARODIDAE) EN LA MITAD NORTE DE ESPANA. Serv. Plagas Forest. Bol. (Madrid) 11: 133-134.

Notes on ecology; distribution in Spain; predators.

CALDERON, J., and RIOS, T.

- 1968 IDENTIFICACION DE ACIDOS GRASOS EN LA CERA DE LOS INSECTOS CEROPLASTES ALBOLINEATUS. [English summary.] Bol. Inst. Quím., Univ. Nac. Autónoma Méx. 20: 91-94, illus.

Fatty acids were isolated and identified.

CANARD, M.

- 1965 SUR QUELQUES PULVINARIINI (HOMOPTERA, COCCOIDEA) DU MIDI DE LA FRANCE. 12th Internatl. Cong. Ent. (London, 1964) Proc. 1965, p. 170.

Notes on *Pulvinaria oxyacanthae*, *Chloropulvinaria floccifera*, *Eupulvinaria hydrangeae*, and *Neopulvinaria imeretina*.

- 1965a OBSERVATIONS SUR UNE PULVINAIRE PEU CONNUE DU MIDI DE LA FRANCE: EUPULVINARIA HYDRANGEAE (STEINW.) [COCCOIDEA—COCCIDAE]. [English summary.] Soc. Ent. de France Ann. (n.s.) 1: 411-419, illus.

Redescribes adult female; life cycle; hosts; compares 4 characters of *Chloropulvinaria*, *Eupulvinaria*, and *Pulvinaria*.

- 1965b UTILISATION DES LARVES NEONATES POUR AIDER A LA DETERMINATION DES COCHENILLES FLOCONNEUSES [COCCIDAE—PULVINARIINI]. [English summary.] Soc. Ent. de France Ann. (n.s.) 1: 421-424, illus.

Compares crumena lengths in first-instar nymphs of 6 spp. in 6 gen.

- 1966 UNE PULVINAIRE DE LA VIGNE, NOUVELLE POUR LA FRANCE: NEOPULVINARIA IMERETINA [COCCOIDEA COCCIDAE]. [English summary.] Soc. Ent. de France Ann. (n.s.) 2: 189-197, illus.

Detailed description of adult female; brief note on first-instar nymph and male puparium; life cycle; hosts.

- 1966a REMARQUES SUR LE GENRE RHIZOPULVINARIA ET SUR UNE ESPECE PEU CONNUE DU MIDI DE LA FRANCE: RH. GRASSEI (BALACHOWSKY)—(COCCOIDEA, COCCIDAE). [English and German summaries.] Vie et Milieu Ser. C: Biol. Terrestre 17: 443-452, illus.

Defines *Rhizopulvinaria* and discusses hosts and distribution of gen.; morphology and life cycle of *R. grassei*.

- 1967 UNE NOUVELLE PULVINAIRE DU LITTORAL MEDITERRANEEN: RHIZOPULVINARIA MARITIMA NOV. SP. (COCCOIDEA—COCCIDAE). [English and German summaries.] Vie et Milieu Ser. C: Biol. Terrestre 18: 159-167, illus.

Detailed description of adult female and brief description of first-instar nymph; biology; host; parasite.

CANARD, M.—Continued

- 1967a LES RHIZOPULVINAIRE DES OEILLETS MEDITERRANEENS (COCCOIDEA—COCCIDAE). [English and German summaries.] *Vie et Milieu Ser. C: Biol. Terrestre* 18: 169–184, illus.
Rhizopulvinaria arenaria, *saxatilis*, and *gracilis* n. spp.; notes on biology and ecology; first-instar nymphs of *R. arenaria* and *R. saxatilis* and male of *arenaria* described.
- 1968 CONTRIBUTION A L'ETUDE DES RHIZOPULVINAIRE MEDITERRANEENNES [HOM. COCCIDAE]. *Soc. Ent. de France Bul.* 73: 90–96, illus.
 Morphological and biological characters of *Rhizopulvinaria artemisiae*; key to adult females of 7 spp. of *Rhizopulvinaria*; crumena and stilet lengths of first-instar nymphs of 5 spp.
- 1968a UN NOUVEAU PULVINARIA [HOM. COCCOIDEA] NUISIBLE AUX ARBRES D'ALIGNEMENT DANS LA REGION PARISIENNE. [English summary.] *Soc. Ent. de France Ann. (n.s.)* 4: 951–958, illus.
P. regalis n. sp.; biology.
- 1969 LA LIGNEE MALE DE EUPULVINARIA HYDRANGEAE [HOM. COCCIDAE]. [English summary.] *Soc. Ent. de France Ann. (n.s.)* 5: 457–460, illus.
 Describes third-instar nymph and puparium of male and second- and third-instar nymphs of female.

CARLE, P.

- 1968 METHODE D'OBTENTION MASSIVE DES PONTES DE MATSUCOCCUS FEYTAUDI DUC. [COCCOIDEA, MARGARODIDAE] PAR PIEGEAGE DES FEMELLES. [English and German summaries.] *Ann. des Sci. Forest.* 25: 57–68, illus.
 Describes efficient method of trapping adult females to be used in various investigations.

CARMIN, J.

- 1956 PSEUDOCOCCUS VARIABILIS HALL. *Israel Independ. Biol. Lab. Bul.* 12 (4): 1–7, illus.
 Describes different instars.

CARPENTER, F. M., see Brues, C. T., Melander, A. L., and Carpenter, F. M.

CASTEL-BRANCO, A. J. F.

- 1956 ENTOMOFAUNA OF PORTUGUESE GUINEA AND OF THE ISLANDS OF S. TOME AND PRINCIPE. I. HEMIPTERA (COCCIDAE AND PSILIDAE) AND HYMENOPTERA. *Commun. Conf. Internat. dos Africanistas Occidentalis* [sic] 4: 79–86.
 Includes brief descriptions of several coccids; distribution.
- 1964 UMA NOVA COCHONILHA DA ILHA DO PRINCIPE ("ASTEROLECANIUM PUSTULANS" CKLL. VAR. NOV. "PRINCEPS"). [English summary.] *Garcia de Orla (Lisboa)* 12: 627–632, illus.
 Brief description of *A. princeps* and its hosts; notes on *A. pustulans*.

CHAMBERLIN, J. C., see Ferris, G. F., and Chamberlin, J. C.

CHAMBERS, D. L., see Tashiro, H., and Chambers, D. L.; Tashiro, H., Chambers, D. L., Moreno, D., and Beavers, J. B.

CHANDEL, B. S., *see* Yadava, R. L., and Chandel, B. S.

CHANDRA, H. S.

1962 INVERSE MEIOSIS IN TRIPLOID FEMALES OF THE MEALY BUG, *PLANOCOCCUS CITRI*. *Genetics* 47: 1441-1454, illus.

1963 CYTOGENETIC STUDIES FOLLOWING HIGH DOSAGE PATERNAL IRRADIATION IN THE MEALY BUG, *PLANOCOCCUS CITRI*. I. CYTOLOGY OF X_1 EMBRYOS. *Chromosoma* (Berlin) 14: 310-329, illus.

1963a CYTOGENETIC STUDIES FOLLOWING HIGH DOSAGE PATERNAL IRRADIATION IN THE MEALY BUG, *PLANOCOCCUS CITRI*. II. CYTOLOGY OF X_1 FEMALES AND THE PROBLEM OF LECANOID SEX DETERMINATION. *Chromosoma* (Berlin) 14: 330-346, illus.

See Nur, U., and Chandra, H. S.

CHAPIN, S. F.

1882 SCALE INSECTS ON DECIDUOUS AND ORNAMENTAL TREES. Pacific Rural Press and Calif. Farmer 24: 325-328, 343-353, illus.

Recognition characters; biology and control of several pest coccids in Santa Clara Valley.

CHARLIN, R., *see* Gonzáles, R. H., and Charlin, R.

CHAUHAN, N. S.

1967 A COLOUR MUTANT IN THE INDIAN LAC INSECT. *Indian Jour. Ent.* 29: 216-217.

Breeding behavior of 2 color forms of *Kerria lacca* tabulated; discusses results of feeding on different hosts on color of forms.

1967a ON THE ABNORMAL CELLED FEMALE LAC INSECT. *Indian Jour. Ent.* 29: 395-396.

Reports results of breeding experiments with abnormal celled females.

See Teotia, T. P. S., and Chauhan, N. S.

CHAUHAN, N. S., and MAJUMDAR, N.

1967 GENETIC EVIDENCE OF "SPURIOUS EMERGENCE" IN THE AGHANI GENERATION OF *KERRIA LACCA* (KERR). *Indian Jour. Ent.* 29: 218-219.

Report results of crossing Aghani females with Katki males; note maturity difference in 2 strains; indicate economic significance of "spurious emergence."

CHAVANNES, A.

1847 MEMOIRE SUR DEUX COCCUS CERIFERES DU BRESIL (*COCCUS PSIDII* ET *COCCUS CASSIAE*). *Bul. Soc. Vaudoise Sci. Nat.* 2 (1846-48): 209-216.

C. psidii and *C. cassiae* n. spp.; other spp. mentioned.

CHIESA MOLINARI, O.

1942 SUPERFAMILIA COCCOIDEA. In Liebermann, J., and Bertolini, L. H., *ENTOMOLOGIA AGRICOLA*. 571 p., illus. San Juan, Argentina. (Coccids p. 173-246.)

Characterizes superfamily, several families, and subfamilies; lists 52 spp.; descriptive notes for some; keys to various groups.

CHIESA MOLINARI, O.—Continued

- 1963 ABGRALLASPIS CORPORIFUSCUS ESPECIE NUEVA (COCCOIDEA: DIASPIDIDAE). [English summary.] Soc. Ent. Argentina Rev. 26: 159-162, illus.

From *Laurus nobilis* in San Juan Prov., Argentina; characters to separate n. sp. from *Hemiberlesia flabellata*.

CHUMAKOVA, B. M.

- 1964 THE SAN JOSE SCALE, DIASPIDIOTUS PERNICIOSUS COMST. (COCCOIDEA, DIASPIDIDAE) AND ITS PARASITES IN THE SOVIET FAR EAST. [In Russian.] Ent. Obozr. 43: 535-552, illus. [Translation, Ent. Rev. 43: 272-279, illus.]

CILLIERS, C. J.

- 1967 A COMPARATIVE BIOLOGICAL STUDY OF THREE CEROPLASTES SPECIES (HEM. COCCOIDEAE [!]) AND THEIR NATURAL ENEMIES. [Afrikaans summary.] So. Africa Dept. Agr. Tech. Serv. Ent. Mem. 13, 59 p., illus.

Describes different instars of *C. mimosae*, *brevicauda*, and *destructor*; biology; hosts; host relationships; natural enemies.

CLEVELAND, C., see Brown, S. W., and Cleveland, C.

COCKERELL, T. D. A.

- 1892f COCCIDAE FROM JAMAICA. Entomologist 25: 119.

Lists 8 armored and 2 soft scales.

- 1893gg THE COCCIDAE OF A GUAVA TREE. Ent. Monthly Mag. 29: 71-72.

Found 8 spp. in 5 gen. on 1 tree.

- 1893hh THE FOOD PLANTS OF SOME JAMAICAN COCCIDAE, (II). Insect Life 5: 245-247.

Continuation of earlier (1893b) list; gives additional collection records.

- 1895aa THE COCCID GENUS BERGROTHIA KRAATZ. Ent. News 6: 261-262. Generic name preoccupied in Coleoptera; refers coccid spp. previously placed in *Bergrothia* to *Dactylopius*.

- 1895bb SCALE INSECTS. (HARDWICKE'S) Sci. Gossip (n.s.) 2: 151-152. General notes on few coccids.

- 1895cc DESCRIPTION OF A NEW LECANIUM FROM TRINIDAD. Trinidad Field Nat. Club Jour. 2: 219-220.

L. urichi in nest of ants; also in Brazil.

- 1898y A MEXICAN WAX-SCALE IN ENGLAND. Entomologist 31: 119-120. *Ceroplastes cistudiformis* found on orchid from Mexico.

- 1898z CEROPLASTES CISTUDIFORMIS AGAIN. Entomologist 31: 141. Additional host and distribution records in Mexico.

- 1899p THE COCCIDAE OF THE SANDWICH ISLANDS. Entomologist 32: 93, 164.

Lists 7 spp. as new to islands.

- 1899q THE COCCIDAE OF MAURITIUS. Amer. Nat. 33: 899-901.

Lists with corrections coccids reported by de Charmoy (1899) from Mauritius.

COCKERELL, T. D. A.—Continued

- 1899r NEW RECORDS OF COCCIDAE. N.Y. Ent. Soc. Jour. 7: 257-259.
Host records and distribution for 17 spp.; most from Mexico and southern United States.
- 1899s SOME INSECT PESTS OF SALT RIVER VALLEY AND THE REMEDIES FOR THEM. Ariz. Agr. Expt. Sta. Bul. 32: 273-295, illus. (Coccids p. 282-285.)
Brief descriptive notes; hosts; control for 8 spp. in 7 gen.
- 1900j EGGS OF CEROPLASTES IRREGULARIS. Entomologist 33: 201.
Found 1,181 eggs under 1 female.
- 1901m ASPIDIOTUS ARTICULATUS, MORGAN, IN COSTA RICA. Ent. Monthly Mag. 37: 171.
New to Costa Rica.
- 1902u ICERYA SEYCHELLARUM (WESTWOOD), IN S. AFRICA. Ent. Monthly Mag. 13: 86.
New to South Africa.
- 1902v FIORINIA SULCII, NEWSTEAD, IN FRANCE. Ent. Monthly Mag. 13: 86.
New to France.
- 1902w BAMBOO COCCIDS IN ALGERIA. Ent. Monthly Mag. 13: 86.
Odonaspis secretus var. *greenii* and *Mytilaspis bambusicola*.
- 1902x ADDENDA. In King, G. B., The Association of Coccidae. Psyche 9: 404.
Records 8 spp. from 1 guava tree and 2 spp. from nests of *Lasius*.
- 1904 A THIRD TRIONYMUS. Ent. News 15: 40.
Records *T. hordei* [n. comb.] (*Westwoodia hordei* Lindemann 1886), a species omitted from Fernald Catalogue.
- 1905h CONTRIBUTIONS TO THE NATURAL HISTORY OF THE ROCKY MOUNTAINS.
I. Colo. Univ. Studies 3: 45-50. (Coccids p. 46-47.)
Discusses *Trionymus nanus*, *Pseudococcus gutierreziae*, and *Pulvinaria coulteri*.
- 1911a COCCIDAE AFFECTING RUBBER TREES. Entomologist 44: 327.
Changes 2 names appearing in Green 1911; proposes *Cardiococcus castilloae* (Green) for *Inglisia castilloae* Green and *Lepidosaphes rubrovittatus* Ckll. for *Mytilaspis fasciata* Green.
- 1912a ERIOCOCCUS BOREALIS IN COLORADO. Jour. Econ. Ent. 5: 295.
Records *E. borealis* and *Erium lichtensioides*.
- 1912b PSEUDOCOCCUS PHORADENDRI COCKERELL, NEW SPECIES. In Wheeler, W. M., Notes on a Mistletoe Ant. N.Y. Ent. Soc. Jour. 20: 130-134. (Coccid p. 133-134.)
Coccid attended by *Crematogaster arizonensis*.
- 1912c BIRDS AND THE COTTON SCALE. Auk 29: 400-401.
Identifies as *Pulvinaria innumerabilis* the coccids eaten by redpolls and pine finches in Colorado.
- 1913a PHENACOCCUS BETHELI AGAIN. Canad. Ent. 45: 14-15.
P. betheli a valid sp.
- 1913b AN ERIOCOCCUS ON ERIOGONUM. Jour. Econ. Ent. 6: 424.
E. borealis in Colorado.
- 1920a FURCASPIS BIFORMIS (HOMOP., COCCIDAE). Ent. News 31: 109.
In greenhouse, Boulder, Colo.

COCKERELL, T. D. A.—Continued

- 1922a SOME COCCIDAE FOUND ON ORCHIDS (HOM.). Ent. News 33: 149.
Aonidia pseudaspidiotus, *Chrysomphalus dictyospermi*, and *Diaspis boisduvalii* in greenhouses at Boulder, Colo.
- 1929c DROSICHA BURMEISTERI WESTWOOD APPARENTLY REDISCOVERED (COCCIDAE). Ent. Soc. Wash. Proc. 31: 16.
 Male collected in Siam; brief descriptive notes.
- 1936 THE TYPE LOCALITY OF CHIONASPIS ASPARAGI, LAING AND COCKERELL. Entomologist 69: 156.
 Umzumbi, 16 miles northeast of Port Shepstone, Natal.
- 1937 RECOLLECTIONS OF A NATURALIST, 6. SCALE INSECTS AND MEALY BUGS. Bios 8: 122-127.
 Mentions several coccid spp.
 See Newell, W., and Cockerell, T. D. A.

COCKERELL, T. D. A., and FALK, L. H.

- 1910 TWO COCCIDAE NEW TO COLORADO. Ent. News 21: 47.
Targionia helianthi and *Diaspis zamiae* in greenhouse.

COCKERELL, T. D. A., and ROBINSON, E.

- 1915b AN ERIOCOCCUS ON GAYLUSSACIA. Jour. Econ. Ent. 8: 549.
E. borealis.

COLUNGA, F., see Ríos, T., and Colunga, F.

COMMEAU, J., and SOLA, E.

- 1964 UNE NOUVELLE COCHENILLE DES AGRUMES SUR LA COTE D'AZUR. Phytoma 16 (158): 49-50.
Unaspis yanonensis; notes on 3 other diaspidids.

COSTA, O. G.

- 1828b PROSPETTO DI UNA NUOVA DIVISIONE METODICA DEL GENERE COCCUS LIN., FABR., LATR., LAMARK. Pontano 1: 449-454.
 Different printing with different pagination of Costa 1828a in Morrison and Renk 1957 bibliography.
- 1835a NUOVE OSSERVAZIONI INTORNO ALLE COCCINIGLIE ED AI LORO PRETESI MASCHI. 24 p., illus. F. Fernandes, Napoli. (Also in Atti R. Ist. Incoragg. Sci. Nat. 6 (1840): 31-52, illus.)
 Notes on *Coccus oleae* and *Dactylopius coccus*; mentions *hesperidum* in combination with generic names *Calymmatus*, *Calypiticus*, and *Coccus*.
- 1839 MONOGRAFIA DEGLI' INSETTI OSPITANTI SULL' ULIVO, E NELLE OLIVE. Corrisp. Zool. 1: 91-136. (Coccids p. 130-132.)
 Apparently confuses "*Calypiticus hesperidum* (L.)" with "*Coccus oleae* Oliv."

COUBEAUX, E.

- 1892 ENUMERATION DES HEMIPTERES DE BELGIQUE (FIN), SECT. 2—STERNORHYNCHA AM. S. Soc. Ent. Belgique Ann. 36: 80-83.
 Lists numerous coccids.

CRAW, A.

- 1891 2. SCALE INSECTS. DESCRIPTION, HISTORY, AND REMEDIES FOR THEIR DESTRUCTION. Calif. State Bd. Hort. Div. Ent. 1891, p. 7-16, illus.

Lecanium armeniacum n. sp.; treats 12 spp. in 6 gen.

- 1894 SCALE INSECTS. Calif. State Bd. Hort. Bul. 67: 11-17, illus.

Lecanium insignicolla [!] n. sp.; treats 7 spp. in 4 gen.

CRITTENDEN, C. R., see Reed, D. K., Selhime, A. G., and Crittenden, C. R.

CURTIS, J.

- 1838 BRITISH ENTOMOLOGY; BEING ILLUSTRATIONS AND DESCRIPTIONS OF THE GENERA OF INSECTS FOUND IN GREAT BRITAIN AND IRELAND. CONTAINING COLOURED FIGURES FROM NATURE OF THE MOST RARE AND BEAUTIFUL SPECIES, AND IN MANY INSTANCES OF THE PLANTS ON WHICH THEY WERE FOUND. V. 15, pls. and text Nos. 674-721. London. (Coccid pl. and text No. 717.)

"Coccus aceris. The Sycamore scale-insect."

DAMMERMAN, K. W.

- 1919 LANDBOUWDIERKUNDE VAN OOST-INDIE, DE SCHADELIJKE EN NUTTIGE DIEREN VOOR LAND-, TUIN- EN BOSCHBOUW IN OOST-INDIE. I-X + 368 p., illus. J. H. de Bussy, Amsterdam. (Coccids p. 177-184.)

- 1929 THE AGRICULTURAL ZOOLOGY OF THE MALAY ARCHIPELAGO. THE ANIMALS INJURIOUS AND BENEFICIAL TO AGRICULTURE, HORTICULTURE AND FORESTRY IN THE MALAY PENINSULA, THE DUTCH EAST INDIES AND THE PHILIPPINES. I-XI + 473 p., illus. J. H. de Bussy, Amsterdam. (Coccids p. 246-254.)

Enlarged English edition of 1919 book by Dammerman.

DANZIG, E. M.

- 1962b A SHORT ANALYSIS OF THE FAUNA OF THE SCALE INSECTS (HOMOPTERA, COCCOIDEA) AND THEIR DISTRIBUTION IN THE LENINGRAD REGION. [In Russian.] Akad. Nauk SSSR Zool. Inst. Trudy 31: 25-32, illus.

Records numerous spp.; discusses hosts, distribution, and ecological relationships.

- 1964 5. SUBORDER COCCINEA—COCCIDS OR MEALYBUGS AND SCALE INSECTS. [In Russian.] Akad. Nauk SSSR Zool. Inst. 1: 616-654, illus. [English translation in Keys to the Insects of the European USSR, edited by G. Ya. Bei-Bienko, 1967, v. 1, p. 800-850, illus. Pub. for Smithsn. Inst. and Natl. Sci. Found., Washington, D.C., by Israel Program for Sci. Transl.]

- 1965 THE WAX SCALE—ERICERUS PELA CHAV. (HOMOPTERA, COCCOIDEA) IN THE USSR. [In Russian. English summary.] Zool. Zhur. 44: 537-546, illus.

Describes various stages; biology; ecology.

DANZIG, E. M.—Continued

- 1966 THE REDUCTION OF WAX-SECRETING DERMAL STRUCTURES OF THE FEMALES OF PULVINARIA TARG. (HOMOPTERA, COCCOIDEA) INFESTED BY PARASITES. [In Russian. English summary.] Zool. Zhur. 45: 1488-1492, illus.
P. crassispina n. sp. and *P. aestivalis* n. sp. (in litt.) nomen nudum; discusses differences between parasitized and unparasitized specimens of *P. betulae*.
- 1967 CONTRIBUTIONS TO THE KNOWLEDGE OF THE COCCIDAE (HOMOPTERA) OF THE PRIMORYE TERRITORY. [In Russian.] Akad. Nauk SSSR Zool. Inst. Trudy 41: 139-172, illus.
 Records 31 spp. in 11 gen. of which 14 spp. and 1 gen. are new; 1 n. comb.; 2 n. syn.; further descriptions; key to spp. of each gen.; hosts.
- 1968 CONTRIBUTION TO THE FAUNA AND BIOLOGY OF SCALE INSECTS AND WHITE-FLIES (HOMOPTERA, COCCOIDEA ET ALEYRODOIDEA) FROM NORTHERN KARELIA. [In Russian. English summary.] Ent. Obozr. 47: 499-504. [Translation, Ent. Rev. 47: 304-306.]
 Records 21 coccid spp.; notes on biology and ecology; hosts.
- 1968a ON THE TYPES OF SPECIES DESCRIBED BY N. S. BORCHSENIUS IN THE ARTICLE "MATERIALS ON THE FAUNA OF SCALE INSECTS (HOMOPTERA, COCCOIDEA) FROM INDIA. II." [In Russian. English summary.] Ent. Obozr. 47: 843. [Translation, Ent. Rev. 47: 514.]
 Correction of collection data: Type specimens of *Raoaspis indica* Borchs., *R. raoi* Borchs., and *Roonwalaspis quercicola* Borchs. were collected not in India but in southwestern China (Yunnan and Kunming).
- 1968b THE CRYPTOZOIC MEALYBUG PHENACOCOCCUS HALIMIPHYLLI DANZIG, SP. N., AND PH. ARTHROPHYTI ARCH. (HOMOPTERA, COCCOIDEA, PSEUDOCOCCIDAE) OF THE CENTRAL ASIAN DESERTS. [In Russian. English summary.] Ent. Obozr. 47: 844-847, illus. [Translation, Ent. Rev. 47: 515-516, illus.]
P. halimiphylli settles in fruits of *Halimiphyllum gontscharovii* through openings made by lepidopterous larvae; *P. arthropityi* is an inquiline of leafhopper galls; reduces loss of body moisture by concealment.
- 1969 THE FIRST NOTE ON THE SCALE INSECTS (HOMOPTERA, COCCOIDEA) OF MONGOLIA. [In Russian. English summary.] Zool. Zhur. 48: 1579-1581, illus.
 Records 6 spp. in 6 gen., including *Euripersia mongolica* n. sp.
 See Borchsenius, N. S., and Danzig, E. M.
- DANZIG, E. M., and SUGONJAEV, E. S.
- 1969 INSECT GALLS AND SOME OTHER INJURIES OF PLANTS USED BY DIFFERENT ARTHROPODS AS ECOLOGICAL NICHES IN THE DESERT. [In Russian. English summary.] Ent. Obozr. 48: 116-124, illus. [Translation, Ent. Rev. 48: 62-66, illus.]
 Many insects, including *Phenacoccus arthropityi* and *Schizotargionia arthropityi*, occupy protective niches in *Gaillardia*; *Phenacoccus halimiphylli* enters wounds in fruit of *Halimiphyllum*.

DAS, G. M., and DAS, S. C.

- 1962 ON THE BIOLOGY OF *FIORINIA THEAE* GREEN (COCCOIDEA: DIASPIDIDAE) OCCURRING ON TEA IN NORTH-EAST INDIA. Indian Jour. Ent. 24: 27-35, illus.

Includes short description of different stages of males and females; damage; control.

DAS, G. M., and GANGULI, R. N.

- 1961 COCCOIDS ON TEA IN NORTH-EAST INDIA. Indian Jour. Ent. 23: 245-256, illus.

Record 28 spp. in 19 gen.; brief descriptive notes; habit; distribution; damage.

DAS, S. C., *see* Das, G. M., and Das, S. C.

D'ASCOLI, A., and KOSZTARAB, M.

- 1969 MORPHOLOGICAL STUDIES ON THE THREE NYMPHAL INSTARS OF *CONCHASPIS LATA* HEMPEL (HOMOPTERA: COCCOIDEA: CONCHASPIDIDAE). Va. Polytech. Inst. Res. Div. Bul. 36: 39-51, illus.

Describe nymphs of female.

DAS GUPTA, J. M., and MEHRA, B. P.

- 1967 RECORDED AND UNRECORDED LAC-HOSTS FROM WEST BENGAL. Indian Forester 93: 332-340.

Record 28 hosts for *Kerria lacca*, including 2 new hosts and 11 first records for West Bengal.

DAVATCHI, A. G. [DAVATCHI, A.]

- 1946 SAISSETIA OLEAE BERNARD (HOMOPTERA—COCCIDAE). [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 1: Persian 7 p., French p. 1-2, illus.

Notes on appearance, biology, distribution, economic importance, and control.

- 1946a NOTE COMPLEMENTAIRE SUR SAISSETIA OLEAE BERN. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 1: Persian 2 p., French p. 8.

Discusses introduction of *S. oleae* into Iran.

DAVIDSON, J. A.

- 1964 THE GENUS *ABGRALLASPIS* IN NORTH AMERICA (HOMOPTERA: DIASPIDIDAE). Ent. Soc. Amer. Ann. 57: 638-643, illus.

Key to 13 spp. of *Abgrallaspis*; *A. howardi* redescribed; *A. townsendi* resurrected from synonymy; *A. perseus* n. sp.

- 1965 ERRATA. Ent. Soc. Amer. Ann. 58: 405.

Correction of collection data for *Abgrallaspis perseus*.

See McComb, C. W., and Davidson, J. A.

DAVIDSON, R. H., *see* Burns, D. P., and Davidson, R. H.

DEBACH, P., and FISHER, T. W.

- 1956 EXPERIMENTAL EVIDENCE FOR SIBLING SPECIES IN THE OLEANDER SCALE, *ASPIDIOTUS HEDERAE* (VALLOT). Ent. Soc. Amer. Ann. 49: 235-239, illus.

Found uniparental and biparental forms occurring as distinct populations.

DEKLE, G. W.

- 1957 SPECIAL PROJECTS, ASIATIC RED SCALE. *In* Fla. Dept. Agr. 21st Bien. Rpt. (1954-1956) 1957, p. 71-72.
Aonidiella taxus new to Florida.
- 1962 CAMELLIA MINING SCALE (PSEUDAONIDIA CLAVIGERA (CKLL.)). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 1: 1, illus.
Description of scale cover; hosts and distribution.
- 1962a NEW SCALE AND MEALYBUG INSECTS TO FLORIDA. Fla. Dept. Agr. 24th Bien. Rpt. (1960-1962) 1962, p. 74-82, illus.
Collection records for 6 spp. in 6 gen.
- 1963 PUTEANUM SCALE (ASTEROLECANIUM PUTEANUM RUSSELL) (HOMOPTERA: ASTEROLECANIIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 13: 1, illus.
Brief description of female test; hosts; distribution in eastern United States; control.
- 1963a A FIELD KEY TO WAX SCALES IN FLORIDA. Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 19: 1, illus.
Key to *Ceroplastes ceriferus*, *cirripediformis*, *floridensis*, and *rubens*, *Cerococcus* sp., and *Vinsonia stellifera*.
- 1964 AN ARMORED SCALE (MORGANELLA LONGISPINA (MORGAN)) ON HAITIAN CITRUS (HOMOPTERA: COCCIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 23: 1, illus.
Intercepted in Florida; description of scale covers; hosts; world distribution; control.
- 1964a CAMPHOR SCALE (PSEUDAONIDIA DUPLEX (COCKERELL)) (HOMOPTERA: COCCIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 28: 1-2, illus.
Description of scale covers; hosts and distribution in Florida; control.
- 1965 OLEANDER SCALE (PHENACASPIS COCKERELLI (COOLEY)) (HOMOPTERA: COCCIDAE [!]). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 32: 1-2, illus.
Description of scale covers; hosts; distribution in Florida; economic importance; control.
- 1965a SNOW SCALES ON FLORIDA CITRUS (HOMOPTERA: COCCIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 39: 1-2, illus.
Unaspis citri, *Pinnaspis strachani*, and *P. aspidistrae*; key to 3 spp. based on scale covers; hosts and distribution in Florida; economic importance.
- 1965b A ROOT MEALYBUG (GEOCOCCUS COFFEAEE GREEN) (HOMOPTERA: PSEUDOCOCCIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 43: 1-2, illus.
Brief description; hosts and distribution; economic importance; control.
- 1965c FLORIDA ARMORED SCALE INSECTS. *In* Arthropods of Florida and Neighboring Land Areas. V. 3, 265 p., illus. Fla. Dept. Agr. Div. Plant Indus., Gainesville, Fla.
Revision of armored scale section of Merrill 1953; records 120 spp., 17 more than Merrill listed; descriptions of scale covers; scientific and common names; hosts and distribution in Florida; indices to insects and hosts.

DEKLE, G. W.—Continued

- 1966 AGLAONEMA SCALE (TEMNASPIDIOTUS EXCISUS (GREEN)) (HOMOPTERA: DIASPIDIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 49: 1-2, illus.
Description of scale covers; hosts and distribution in Florida and world distribution map; control.
- 1967 ROOT MEALYBUGS. RED WAX SCALE. CITRUS SNOW SCALE. AGLAONEMA SCALE. Fla. Dept. Agr. 26th Bien. Rpt. (1964-1966) 1967, p. 35-42, illus.
Survey records on *Rhizoecus americanus*, *R. pritchardi*, *Geococcus coffeae*, *Ceroplastes rubens*, *Unaspis citri*, and *Temnaspidotus excisus*.
- 1969 STELLATE SCALE (VINSONIA STELLIFERA (WESTW.)) (HOMOPTERA—COCCIDAE). Fla. Dept. Agr. Div. Plant Indus. Ent. Cir. 80: 1-2, illus.
Brief descriptive note; hosts and distribution; eradicated from Florida.

DEKLE, G. W., and KUITERT, L. C.

- 1968 ORCHID INSECTS, RELATED PESTS AND CONTROL. 2. SCALE INSECTS. Fla. Dept. Agr. Bul. 8: 2-9, illus.
Brief descriptions of 10 spp. in 9 gen.

DELAVAUULT, R., and ROYER, M.

- 1966 LE DEBUT D'UNE SECONDE SPERMATOGENESE, EN FIN DE VIE DES INDIVIDUS HERMAPHRODITES, CHEZ ICERYA PURCHASI MASK. (INSECTE, HOMOPTERE). Acad. des Sci. Paris, Compt. Rend., Ser. D, 262: 2502-2505, illus.
Results of histological studies of gonads.

DEL GUERCIO, G.

- 1902 NOTE ED OSSERVAZIONI. R. Staz. di Ent. Agr. di Firenze, Nuove Relazioni ser. 1, No. 4, 497 p., illus. (Coccids p. 280-354.)
Descriptions of different stages of 1 Monophlebinae, 3 Coccinae, 1 Asterolecaniinae, 9 Lecaniinae, and 12 Diaspinae spp.

DE LOTTO, G.

- 1963 THE AUTHORSHIP AND TYPE OF THE GENUS DIASPIDIOTUS (HOMOPTERA: DIASPIDIDAE). Ent. Soc. South. Africa Jour. 26: 144-145.
Author is Berlese, 1896; type of genus is *Aspidiotus patavinus* Berlese, 1896=*A. pyri* Lichtenstein, 1881.
- 1963a NEW SPECIES AND A NEW GENUS OF HARD SCALES FROM EAST AFRICA (HOMOPTERA: COCCIDAE). Roy. Ent. Soc. London, Proc. Ser. B: Taxonomy 32: 191-200, illus.
Saissetia chitonoides and *S. orbiculata* n. spp.; *Udinia* n. gen.; *U. glabra*, *paupercula*, and *scitula* n. spp.; key to 6 spp. of *Udinia*.
- 1964 OBSERVATIONS ON AFRICAN MEALY BUGS (HEMIPTERA: COCCOIDEA). Brit. Mus. (Nat. Hist.) Ent. Bul. 14: 343-397, illus.
7 n. gen., 30 n. spp., 5 n. comb., 1 n. name; keys to spp.; redescrptions of *Chorizococcus lounsburyi* and *Phenacoccus graminosus*; new host and locality records.

DE LOTTO, G.—Continued

- 1964a A NEW SPECIES OF MOMBASINIA (HOM.: PSEUDOCOCCIDAE) FROM SOUTH AFRICA. Linn. Soc. London, Proc. 175: 135-136, illus.
M. superba.
- 1964b A NEW SPECIES OF PULVINARIA (HOMOPT.: COCCIDAE) ATTACKING SUGAR CANE IN SOUTH AFRICA. [Afrikaans and French summaries.] So. African Jour. Agr. Sci. 7: 863-866, illus.
P. saccharia.
- 1965 THE NOMENCLATURE STATUS OF THE COMMON LONG TAILED MEALY BUG (HOMOPTERA: PSEUDOCOCCIDAE). Ent. Soc. South. Africa Jour. 27: 226-229, illus.
Valid name is *Pseudococcus longispinus* (Targioni Tozzetti, 1867).
- 1965a ON SOME COCCIDAE (HOMOPTERA), CHIEFLY FROM AFRICA. Brit. Mus. (Nat. Hist.) Ent. Bul. 16: 175-239, illus.
Treats soft scales in 12 gen.; 1 n. gen. name; 14 spp. redescribed; 6 n. spp.; 12 n. comb.; 1 n. status; keys to spp.; new host and locality records.
- 1966 DESCRIPTIONS OF THREE NEW SPECIES OF COCCUS (HOMOPTERA: COCCIDAE) FROM SOUTH AFRICA. Roy. Ent. Soc. London, Proc. Ser. B: Taxonomy 35: 41-46, illus.
C. callosus, *leurus*, and *sectilis*; key to South African spp.
- 1966a ANOTHER NEW SPECIES OF PULVINARIA (HOM.: COCCIDAE) FROM SUGAR CANE. [Afrikaans and French summaries.] So. African Jour. Agr. Sci. 9: 467-472, illus.
P. longisqua n. sp. in Kenya; *P. elongata durbanensis* Munro and Fouché, 1936, nomen nudum, n. syn. of *P. iceryi* (Signoret, 1869).
- 1966b A NEW GENUS AND FOUR NEW SPECIES OF COCCIDAE (HOMOPTERA) FROM SOUTH AFRICA. Linn. Soc. London, Proc. 177: 143-149, illus.
Messinea n. gen., *M. conica* n. sp.; *Ceroplastes rufus*, *Houardia abdita*, and *Toumeyella obunca* n. spp.
- 1967 THE MEALYBUGS OF SOUTH AFRICA (HOMOPTERA: PSEUDOCOCCIDAE), I. [Afrikaans summary.] Repub. So. Africa Dept. Agr. Tech. Serv. Ent. Mem. 12, 28 p., illus.
5 n. gen.; 6 n. spp.; 1 n. comb.; redescrptions of 4 spp.; key to spp. of *Vryburgia* n. gen.
- 1967a A CONTRIBUTION TO THE KNOWLEDGE OF THE AFRICAN COCCOIDEA (HOMOPTERA). Ent. Soc. South. Africa Jour. 29: 109-120.
Lists 71 spp. in 7 families; 2 n. comb.; discusses relationship of altitude to distribution of spp.; new host and locality records.
- 1967b THE SOFT SCALES (HOMOPTERA: COCCIDAE) OF SOUTH AFRICA. I. [Afrikaans and French summaries.] So. African Jour. Agr. Sci. 10: 781-810, illus.
3 n. spp.; 3 n. comb.; 10 spp. redescribed; discusses identity and variation of nigra scale in eastern and southern Africa.
- 1968 A GENERIC DIAGNOSIS OF TAKAHASHIA COCKERELL, 1896 (HOMOPTERA, COCCIDAE). Linn. Soc. London, Proc. 179: 97-98, illus.
Detailed diagnosis of gen. based on *T. japonica*, its type-sp.

DE LOTTO, G.—Continued

- 1968a SECOND CONTRIBUTION TO THE KNOWLEDGE OF THE AFRICAN COCCOIDEA (HOMOPTERA). Ent. Soc. South. Africa Jour. 31: 83-86, illus.
1 n. comb.; 1 n. syn.; new host and locality records.
- 1969 THE MEALYBUGS OF SOUTH AFRICA (HOMOPTERA: PSEUDOCOCCIDAE), II. [Afrikaans summary.] Repub. So. Africa Dept. Agr. Tech. Serv. Ent. Mem. 20, 30 p., illus.
1 n. gen.; 9 n. spp.; 1 n. comb.; records of other spp.; new locality records.
- 1969a ON A FEW OLD AND NEW SOFT SCALES AND MEALYBUGS (HOMOPTERA: COCCOIDEA). Ent. Soc. South. Africa Jour. 32: 413-422, illus.
Ceroplastes hololeucus, *Coccus acrossus*, *Gascardia constricta*, *Saissetia neglecta* n. spp.; 1 n. comb.; 1 n. status; new host and locality records; introduces "clistostomatic ducts" for tubular ducts.
- 1969b A NEW GENUS OF WAX SCALES (HOMOPTERA: COCCIDAE). [Italian summary.] Portici Lab. di Ent. Agr. "Filippo Silvestri" Bol. 27: 210-218, illus.
Cerostegia n. gen. includes *C. floridensis* (Comstock, 1881) n. comb.; *japonica* (Green, 1921) n. comb., *rufa* (De Lotto, 1966) n. comb.; all transferred from *Ceroplastes*.

DE SANTIS, M. A.

- 1967 APUNTES PARA LA BIOLOGIA DE LA "COCHINILLA COMA" LEPIDOSAPHES BECKII NEWM. EN EL DELTA DEL PARANA. Delta del Parana Invest. Agr. An. 6 (10-11) (1966/1967): 35-44, illus.
Study includes meteorological data for 1953-62.

DICK, J.

- 1969 THE MEALYBUGS OF SUGAR CANE. In Williams, J. R., et al., Pests of Sugar Cane. I-XII + 568 p. Elsevier Pub. Co., Amsterdam, London, New York. (Coccids p. 343-365.)
Primarily biology, parasites, and predators.

DIETZ, S. M., and HARWOOD, R. F.

- 1960 HOST RANGE AND DAMAGE BY THE GRASS MEALYBUG, HETEROCOCCUS GRAMINICOLA. Jour. Econ. Ent. 53: 737-740, illus.
Record coccid from 67 spp. and 1 var., representing 23 gen. of Gramineae.

DIKSHITH, T. S. S.

- 1962 CHROMOSOME NUMBER OF LACCIFER LACCA (KERR) (KUSMI STRAIN) HOMOPTERA—COCCOIDEA. Current Sci. [India] 31: 383-384, illus.
Diploid chromosome number of 18 found in different types of cells.
- 1964 CHROMOSOME NUMBER AND THE SPERM STRUCTURE OF THE YELLOW LAC INSECT, LACCIFER LACCA (KERR), LACCIFERIDAE—COCCOIDEA. Indian Jour. Ent. 26: 127-129, illus.
Diploid chromosome number of 18 observed in all cells.
- 1964a SPERMATOGENESIS IN LACCIFER LACCA (KERR) LACCIFERIDAE: COCCOIDEA [!]. A CORRECTION. Indian Jour. Ent. 26: 367-369, illus.
Corrects statements of Tulsyan, 1963.

DIKSHITH, T. S. S.—Continued

- 1966 STUDIES ON THE CYTOLOGY OF COCCIDS II. CYTOLOGY OF RASTROCOCCUS ICEROYIDES [!] (GREEN) (PSEUDOCOCCIDAE—COCCOIDEA). *Cytologia* 31: 117-124, illus.

Detailed cytological study; diploid number of chromosomes in both sexes is 10.

- 1966a A CONTRIBUTION TO THE EMBRYOLOGY OF LACCIFER LACCA (KERR) LACCIFERIDAE—COCCOIDEA. 1. OVARIAN STRUCTURE AND EARLY DEVELOPMENT OF THE EGG. *Zool. Anz.* 177: 247-258, illus.

Describes female reproductive organs.

DOLBY-TYLER, C. H.

- 1899 THE DEVELOPMENT OF CEROPLASTES ROSEATUS TOWNS. AND CKLL. *Ent. Soc. London, Trans.* (pt. 3) 1899, p. 277-280, illus.

Describes day-to-day development of waxy secretion of female.

DOUGLAS, J. W.

- 1895 NOTES ON SOME BRITISH AND EXOTIC COCCIDAE (NO. 28). *Ent. Monthly Mag.* 31 (ser. 2, v. 6): 137-139.

States that his 1888 determination of male coccid as *Orthezia insignis* was erroneous.

DOZIER, H. L.

- 1923 THE JAPANESE CAMPHOR SCALE. *Gulf Coast Grower* 1: 3-6, illus. (Also in *Ala. Polytech. Inst. Ext. Cir.* 75 (1924), 15 p., illus.)

Pseudaonidia duplex history; description; biology; world distribution; natural enemies; control.

DRAKE, C. J., and GUTHRIE, H. E.

- 1931 SOME IMPORTANT SCALE INSECTS OF IOWA. *In Iowa Dept. Agr.* 31st Ybk. Agr. 1931, p. 1-27, illus.

Biology, hosts, distribution, and control for 16 spp. in 11 gen.

DROZDOVSKIY, E. M.

- 1966 ON CHROMOSOMAL SETS IN SOME COCCIDS (HOMOPTERA, COCCOIDEA). [In Russian.] *Ent. Obozr.* 45: 712-714, illus. [Translation, *Ent. Rev.* 45: 402-403, illus.]

Chromosome number determined for 7 spp.; status of some spp. discussed; taxonomic value of chromosome study demonstrated.

DUDA, E. J.

- 1962 THE GENUS MATSUCOCCUS WITH SPECIAL REFERENCE TO *M. RESINOSAE* B. & G. *Sci. Tree Topics* 2(9): 1-10, illus.

Literature review of gen.; lists spp. in gen.; hosts and distribution of *M. resinosae*.

DUMBLETON, L. J.

- 1967 A NOTE ON THE GENUS ULTRACOELOSTOMA COCKERELL (HOMOPTERA: MARGARODIDAE). *New Zeal. Ent.* 3: 39-40.

Genus found on endemic plant *Dracophyllum* on Chatham, Auckland, and Stewart Islands; females probably parthenogenetic.

DUZGUNES, Z.

- 1969 POSITION IN TURKEY OF THE SAN JOSE SCALE (*QUADRASPIDIOTUS PERNICIOSUS* COMST.). [French summary.] In *Rapport de la Conférence Internationale OEPP-OILB sur le Pou de San José* (Milan-Vérone, 1968). European Mediter. Plant Protect. Organ. (Paris) Ser. A (48), 111 p., illus. (Not seen.)

DZIEDZICKA, A.

- 1961 STUDIES ON MORPHOLOGY AND BIOLOGY OF *GOSSYPARIA SPURIA* (MOD.) (HOMOPTERA, COCCOIDEA). [In Polish. English and Russian summaries.] *Fragmenta Faunistica* 9 (14): 203-219, illus.
Describes different instars, including wingless and winged males; notes on biology.
- 1967 SCALE-INSECTS (COCCOIDEA)—GENERAL REMARKS, METHODS OF PREPARATION. [In Polish. English and Russian summaries.] *Rocznik Nauk.-Dydaktyczny WSP w Krakowie Z.* 29: (Prace z Zool.) 17-24, illus.
Mentions biological and morphological characteristics; gives directions for observing, collecting, and preparing specimens for study.
- 1968 STUDIES ON THE MORPHOLOGY AND BIOLOGY OF *LECANIUM FLETCHERI* CKLL. (HOMOPTERA, COCCOIDEA) AND RELATED SPECIES. [Polish and Russian summaries.] *Zool. Polon.* 18: 125-165, illus.
Description of various instars of *L. fletcheri*, *corni*, *pomeranicum*, and *rufulum*; life histories; hosts and distribution; parasites.

DZIEDZICKA, A., and SERMAK, W.

- 1967 THE VARIABILITY OF THE DORSO-MARGINAL GLANDS IN LARVAE II AND FEMALES OF *LECANIUM CORNI* BOUCHE OF *TAXUS BACCATA* 1. [In Polish. English and Russian summaries.] *Rocznik Nauk.-Dydaktyczny WSP w Krakowie Z.* 29: (Prace z Zool.) 25-31, illus.
Note significant variation in occurrence of glands.

EADS, C. O., see Brown, L. R., and Eads, C. O.

EBELING, W.

- 1959 SUBTROPICAL FRUIT PESTS. 436 p., illus. Calif. Univ. Div. Agr. Sci., Berkeley. (Coccids p. 175-207, 233-235, 329-330, 342-343, 354, 366-368, 373-374, 380-381, 385, 388-390.)
Biology and control of citrus and noncitrus pests; includes field characteristics, life history, injury, natural enemies, and control for many spp.; treats pests of major and 12 minor fruits.

EHRHORN, E. M.

- 1914 PSEUDOCOCCUS SPECIES FOUND ON SUGAR CANE IN HAWAII. Hawaii. Ent. Soc. Proc. 3 (1913): 1-3.
Records *P. bromeliae*, *sacchari*, and *saccharifolii*.

EISENSCHMIDT, H., see Müller, F. P., and Eisenschmidt, H.

ELIZAROVA, A.

- 1966 COMSTOCK MEALYBUG. [In Russian.] *Zashch. Rast.* 11 (10): 47-48, illus.
Description of male, female, and nymphs; biology and habits; ecology; pest on mulberry trees; distribution; parasite noted.

EMDEN, F. I. VAN.

- 1957 THE TAXONOMIC SIGNIFICANCE OF THE CHARACTERS OF IMMATURE INSECTS. *Ann. Rev. Ent.* 2: 91-106.
Mentions coccids briefly.

ESSIG, E. O.

- 1909c NOTES ON COCCIDAE I. *Pomona Col. Jour. Ent.* 1: 11-14, illus.
Notes on waxy secretion and habits of 4 pest spp.
1911 NOTES ON COCCIDAE VI. *Pomona Col. Jour. Ent.* 3: 404-411, illus.
Descriptive notes on 4 pest spp.; hosts; control.
1945 THE PIT-MAKING PITTSPORE SCALE. *Calif. Dept. Agr. Bul.* 34: 134-136, illus.
Notes on hosts and distribution of *Asterolecanium arabidis*; damage.

EUDES-DESLONGCHAMPS, J. A.

- 1859 L'ANALYSE D'UN MEMOIRE SUR UNE MALADIE DU CAFEIER, PUBLIE A TAITI PAR M. E. DEPLANCHE. *Soc. Linn. de Normandie* 4: 203-207.
Cited under Déplanche in Morrison and Renk 1957 bibliography; *Saissetia coffeae* Déplanche was published before analysis of Eudes-Deslongchamps.

EVANS, J. W.

- 1963 THE PHYLOGENY OF THE HOMOPTERA. *Ann. Rev. Ent.* 8: 77-94, illus.
Relationship of Coccoidea to Aphidoidea, Aleyrodoidea, and Psylloidea; literature citations.

EWART, W. H., *see* Wolf, J. P., and Ewart, W. H.

EZZ, A. I., *see* Azab, A. K., Tawfik, M. F. S., and Ezz, A. I.

EZZ, A. I., and SAMHAN, M.

- 1969 ICERYA SEYCHELLARUM (WESTWOOD), A MARGARODID NEW TO U.A.R. (HOMOPTERA—COCCOIDEA). *Agr. Res. Rev. (Cairo)* 47 (3): 117-118, illus.
Descriptive notes; hosts and distribution in U.A.R.

EZZAT, Y. M.

- 1956b STUDIES ON THE "KEW BUG," ORTHEZIA INSIGNIS BROWNE [COCCOIDEA—ORTHEZIIDAE]. *Soc. Ent. d'Egypte Bul.* 40: 415-431, illus.
Brief description; life cycle; control.
1957 BIOLOGICAL STUDIES ON THE OLIVE SCALE, PARLATORIA OLEAE (COLVEE) (HEMIPTERA-HOMOPTERA: COCCOIDEA-DIASPIDIDAE). *Soc. Ent. d'Egypte Bul.* 41: 351-363, illus.
Studies conducted in Maryland, U.S.A.
1963 AEGYPTOCOCCUS, A NEW GENUS FOR INERMIS OF HALL (HOMOPTERA: COCCOIDEA—PSEUDOCOCCIDAE). 16th Internatl. Cong. Zool. (Washington, 1963) *Proc.* 1: 192.
Aegyptococcus, established for *inermis*, type-sp. of *Mirococcus* Borchenius 1947, was synonymized with *Mirococcus* by Morrison and Morrison 1966.

EZZAT, Y. M.—Continued

- 1966 AEGYPTOCOCCUS, A NEW GENUS FOR INERMIS OF HALL (HOMOPTERA: COCCOIDEA-PSEUDOCOCCIDAE). Soc. Ent. d'Egypte Bul. 49 (1965): 163-167, illus.

Further description of *Aegyptococcus* 1963, syn. of *Mirococcus* Borchsenius 1947, and of *inermis*, type-sp. of both gen.

- 1966a ERIMOCOCCUS, A NEW GENUS FOR LIMONIASTRI OF PRIESNER AND HOSNY (HOMOPTERA: COCCOIDEA-PSEUDOCOCCIDAE). Soc. Ent. d'Egypte Bul. 49 (1965): 169-173, illus.

Describes n. gen. and *E. limoniastri*.

EZZAT, Y. M., and AFIFI, S.

- 1966 REDESCRIPTION AND CLASSIFICATION OF THE SCALE INSECTS OF THE FAMILY DIASPIDIDAE, ORIGINALLY DESCRIBED BY W. J. HALL FROM EGYPT (HOMOPTERA: COCCOIDEA). Soc. Ent. d'Egypte Bul. 49 (1965): 367-409, illus.

Keys to subfamilies, tribes, gen., and spp.; n. comb.; redescrptions; hosts and distribution for 16 spp. in 13 gen.

EZZAT, Y. M., and HUSSEIN, N. A.

- 1969 REDESCRIPTION AND CLASSIFICATION OF THE FAMILY COCCIDAE IN U.A.R. (HOMOPTERA: COCCOIDEA). Soc. Ent. d'Egypte Bul. 51 (1967): 359-426, illus.

Discussion of morphology of Coccidae; redescrptions of 20 spp. in 16 gen.; key to 21 spp.; *Habibius* n. name and *H. acuminatus* n. comb.

FABRICIUS, J. C.

- 1803 SYSTEMA RHYNGOTORUM. I-XI, + 314 + 1-23 p. Brunsvigae. (Coccids p. 306-312, 8.)

Lists 29 coccid spp. with citations and habitat data in text; lists 30 coccid names in index.

FAGUNDES, A. C.

- 1964 NOTAS SOBRE A BIOLOGIA DA "PEROLA DA TERRA" (EURHIZOCOCCUS BRASILIENSIS-HEMPEL, 1922). Divulgaçao Agron. (Shell) 11: 18-22, illus.

Describes female instars; life history.

FAHRINGER, J.

- 1923 EINE RHYNCHOTENAUSSBEUTE AUS DER TURKEI, KLEINASIEN UND DEN BENACHBARTEN GEBIETEN. Konowia (1922), p. 296-307. (Coccids p. 305-307.)

Includes 10 coccid spp.

FALK, L. H., see Cockerell, T. D. A., and Falk, L. H.

FARAHBAKHCH, G., see Kaussari, M., and Farahbakhch, G.

FENTON, F. A.

- 1917 OBSERVATIONS ON LECANIUM CORNI BOUCHE, AND PHYSOKERMES PICEAE SCHR. Canad. Ent. 49: 309-320, illus.

Describes males and females of *L. corni* and females of *P. piceae*; life history; hosts and distribution; parasites and predators of each sp.

FENTON, F. A.—Continued

- 1940 THE BROWN ELM SCALE: DESCRIPTION AND CONTROL. Okla. Agr. Expt. Sta. Bul. 245: 1-4, illus.
Brief note on appearance, life cycle, hosts, and control of *Lecanium corni*.

FERNANDEZ, A.

- 1958 LAS ESCAMAS PALOMILLAS DEL CAFETO EN VENEZUELA. Shell Co. de Venezuela, Ser. A, Inform. 11, 29 p., illus.
Biology, distribution, damage, and control of 4 spp.

FERNANDO GARCIA, M.

- 1969 BIOECOLOGIA DA LA COCHINILLA NEGRA DEL OLIVO SAISSETIA OLEAE BERNARD Y SU CONTROL BIOLOGICO. [English summary.] Rev. Invest. Agropecuarias Ser. 5, Patol. Veg. 6: 69-81, illus.
Descriptive notes on immature stages and adult female; biology in Argentina; biological control.

FERRERO, D., see Balachowsky, A. S., and Ferrero, D.

FERRIS, G. F., and CHAMBERLIN, J. C.

- 1928 ON THE USE OF THE WORD "CHITINIZED." Ent. News 39: 212-215.
Suggest use of "sclerotized" instead of "chitimized" in coccid morphology.

FISHER, T. W., see De Bach, P., and Fisher, T. W.

FLANDERS, S. E.

- 1952 A METHOD FOR TRANSFERRING INFESTATIONS OF PURPLE SCALE. Jour. Econ. Ent. 45: 891.
Describes method suitable for coccids that deposit most of their eggs before any hatch.

FLETCHER, T. B.

- 1916 REPORT OF THE IMPERIAL ENTOMOLOGIST. Agr. Res. Inst. and Col. (Pusa, 1915-16) Rpt. 1916, p. 58-77. (Coccid p. 62.)
Ripersia sacchari niger nomen nudum.
- 1917 ICERYA PURCHASI IN CEYLON: A WARNING TO INDIA. Agr. Jour. India 12: 525-531, illus. (Also summary in Ent. News 29: 274.)
Notes on host and distribution, damage, and control of *I. purchasi*.
- 1917a [INJURIOUS INSECTS.] In Proc. 2d Ent. Mtg. (Pusa, 1917) Rpt. 1917, 340 p., illus.
Includes *Ripersia sacchari oryzae* and numerous other coccid spp. under hosts; injury.

FONSECA, J. P. DA.

- 1958 O CEROCOCCUS DO CAFEIRO. Biologico 24: 23-25, illus.
Describes male and female tests of *C. catenarius*; injury.
- 1965 UMA COCHONILHA DE ESCAMA RECENTEMENTE OBSERVADA EM LARANJAIS DE SAO PAULO. Biologico 31: 216-219, illus.
Lists spp. of *Parlatoria* in Brazil; first record of *P. cinerea* in São Paulo, description of female; hosts and distribution.

FONSECA, J. P. DA.—Continued

- 1967 UMA COCHONILHA DE CAPIM RECENTEMENTE INTRODUZIDA NO BRASIL. *Biologico* 33: 57-61, illus.
Macroscopic description, hosts, and distribution of *Antonina graminis*; injury and control.
- 1969 CONTRIBUICAO AO CONHECIMENTO DOS COCCIDEOS DO BRASIL (HOMOPTERA-COCCOIDEA). [English summary.] *São Paulo Inst. Biol. Arq.* 36: 9-40, illus.
3 n. gen., 9 n. spp., and 2 n. sspp.; 3 other diaspidids redescribed.

FREITAS, A. DE.

- 1966 O COMPORTAMENTO BIO-ECOLOGICO DA COCHONILHA-DE-SAO-JOSE [QUADRASPIDIOTUS PERNICIOSUS (COMST.)] EM PORTUGAL CONTINENTAL. [English summary.] *Agron. Lusitana* 26 (1964): 289-335, illus.
Biological and ecological studies in several localities.

FROGGATT, W. W.

- 1897 COCCIDS (SCALE INSECTS) IN SYDNEY GARDENS. *Dept. Agr. N.S. Wales Misc. Pub.* 175: 1-7, illus.
Hosts and distribution for 10 spp.
- 1919a INSECTS AND ST. JOHN'S WORT. *Agr. Gaz. N.S. Wales* 30: 470-472, illus.
Icerya hyperici n. sp.

GABARDO, J. C., *see* Vernalha, M. M., Rocha, M. A. Loyola da, and Gabardo, J. C.

GAMBARO, P. I.

- 1963 NOTE SULLA BIOLOGIA DELLA CHIONASPIS EUONYMI COMST. (HEMIPT. COCCIDAE). *Frustula Ent.* 6: 1-8, illus.
Detailed study.

GANGULI, R. N., *see* Das, G. M., and Ganguli, R. N.

GANGULI, R. N., and GHOSH, M. R.

- 1964 COCCOIDS OF TRIPURA. *Indian Jour. Ent.* 26: 358-359.
List 25 spp. in 22 gen.; hosts.

GANGULY, G., *see* Varshney, R. K., and Ganguly, G.

GARRETT, W. T., and LANGFORD, G. S.

- 1969 SEASONAL LIFE CYCLE OF FIORINIA EXTERNA IN MARYLAND. *Jour. Econ. Ent.* 62: 1221-1222, illus.
Report 2 generations per year.

GEE, W. P.

- 1912 PRELIMINARY LIST OF THE SCALE INSECTS OF SOUTH CAROLINA WITH SOME NOTES ON THE BEHAVIOR OF LECANIUM QUERCIFEX FITCH. *Jour. Econ. Ent.* 5: 484-486.
Lists 26 spp.; notes on chemotaxis, geotaxis, phototaxis, and thigmotaxis.

GERSON, U.

- 1964 *PARLATORIA CINEREA*, A PEST OF CITRUS IN ISRAEL. FAO Plant Protect. Bul. 12: 82-85, illus.
Records for Israel confirmed; compared with *P. pergandii*; hosts and distribution; parasites and predators.
- 1967 INTERRELATIONSHIPS OF TWO SCALE INSECTS ON CITRUS. Ecology 48: 872-873, illus.
Parlatoria pergandii more numerous in summer, *P. cinerea* in winter.

GHANI, M. A., *see* Kazimi, S. K., and Ghani, M. A.

GHOSE, S. K.

- 1961 STUDIES ON SOME COCCIDS (COCCOIDEA: HEMIPTERA) OF ECONOMIC IMPORTANCE OF WEST BENGAL, INDIA. Indian Agr. 5 (1): 57-78, illus.
Lists 42 spp. in 9 families; 25 spp. recorded first time from State; 2 new for India; hosts and distribution in India.
- 1963 LAC INSECTS (LACCIFERIDAE, HEMIPTERA) FROM WEST BENGAL. Indian Agr. 7 (1-2): 124-127.
Hosts and distribution for *Laccifer chinensis*, *fici*, *lacca*, and *Tachardina theae*.

GHOSH, C. C.

- 1940 INSECT PESTS OF BURMA. PART II. THE PESTS. 216 + XV p., illus. Govt. Printing and Stationery, Rangoon, Burma. (Coccids p. 44-45, 66-67, 87, 112, 117, 140, 179-180.)
Brief notes on 6 coccids.

GHOSH, M. R., *see* Ganguli, R. N., and Ghosh, M. R.

GIANOTTI, J.

- 1967 FORMATIONS GLANDULAIRES DU TEGUMENT DORSAL DE SAISSETIA OLEAE [HOM. COCCIDAE]. [English summary.] Soc. Ent. de France Ann. (n.s.) 3: 53-65, illus.
Detailed description of glands; 3 types of cell structures besides the hypoderm in dorsal tegument of adult females.

GIARD, A.

- 1898 SUR LES COCHENILLES DU GENRE ORTHEZIA BOSC. Soc. Ent. de France Bul. 1 (1898): 8-12.
Synonyms and distribution of *O. cataphracta* and *O. floccosa*; notes on other spp.

GILIOME, J. H.

- 1965 SOME ADVANCES IN THE TAXONOMY OF THE COCCOIDEA (HOMOPTERA). 12th Internatl. Cong. Ent. (London, 1964) Proc. 1965, p. 118.
Morphology of sperm bundles, host symbiont relationships, cytological mechanisms, and adult male morphology are useful in classification.

GILIOMEE, J. H.—Continued

- 1966 A LIST OF SOUTH AFRICAN SCALE INSECTS (HOMOPTERA: COCCOIDEA) IN THE COLLECTION OF THE BRITISH MUSEUM (NATURAL HISTORY) WITH INFORMATION ON THEIR HOST PLANTS AND DISTRIBUTION. Stellenbosch Univ. Ann. 41 (ser. A, 8): 411-428.
Includes numerous spp. in 9 families.
- 1967 MORPHOLOGY AND TAXONOMY OF ADULT MALES OF THE FAMILY COCCIDAE (HOMOPTERA: COCCOIDEA). Brit. Mus. (Nat. Hist.) Ent. Bul. Sup. 7, 168 p., illus.
Detailed study of 23 spp. in 19 gen.
- 1967a THE MORPHOLOGY AND RELATIONSHIPS OF THE MALE OF LECANIODIASPIS ELYTROPAPPI MUNTING AND GILIOMEE (HOMOPTERA: COCCOIDEA). Ent. Soc. South. Africa Jour. 30: 185-197, illus.
Detailed description and discussion.
- 1968 MORPHOLOGY AND RELATIONSHIPS OF THE MALE OF AN ASTEROLECANIUM SPECIES (HOMOPTERA: COCCOIDEA: ASTEROLECANIIDAE). Ent. Soc. South. Africa Jour. 31: 297-308, illus.
Detailed description and discussion of male of *A. proteae*.

See Munting, J., and Giliomee, J. H.

GILIOMEE, J. H., and MUNTING, J.

- 1968 A NEW SPECIES OF ASTEROLECANIUM TARG. (HOMOPTERA: COCCOIDEA: ASTEROLECANIIDAE) FROM SOUTH AFRICA. Ent. Soc. South. Africa Jour. 31: 221-229, illus.
A. proteae; describe nymphs and adults of males and females.

GIMINGHAM, C. T.

- 1934 THE MALE LECANIUM CORNI BOUCHE. Ent. Monthly Mag. 70: 41-42.
Brief description of male; biological notes.

GOIDANICH, A.

- 1956 SULLA PERMEABILITA' DEL FOLLICOLO SERICEO IN ALCUNI DIASPIDIDI (HEM. COCC. DIASPIDIDAE). 10th Internatl. Cong. Ent. (Montreal, 1956) Proc. 1956, p. 207-224, illus.
Discusses permeability of wax covers of *Dynaspidotus abietis* and *Diaspis boisduvalii*.

GOKULPURE, R. S., see Mehra, B. P., and Gokulpure, R. S.

GOMEZ, G. F. see Ríos, T., and Gómez, G. F.

GOMEZ, J. C.

- 1913 EL DIASPIDIS PENTAGONA. Repub. Uruguay, Min. Indus. Defensa Agr. Pub. 3: 1-14, illus.
Description and control.

GOMEZ-MENOR GUERRERO, J. M.

- 1960 UN "COCCIDO" PERJUDICIAL QUE NO ATACA A CULTIVOS ECONOMICOS EN LAS ISLAS CANARIAS. SUPERFAMILIA COCCOIDEA. FAM. DIASPIDAE. ISCHNASPIDIS LONGIROSTRIS (SIGN.). Estud. Atlanticos An. 6: 317-324, illus.
Redescription; biology; hosts.

GOMEZ-MENOR GUERRERO, J. M.—Continued

- 1962 DIASPIDOS DE GRAN CANARIA Y TENERIFE (ISLAS CANARIAS) (HOM. COCCOIDEA). *Estud. Atlanticos* An. 8: 147–214, illus.
Redescriptions of 15 spp. in 10 gen.; keys to families, subfamilies, tribes, gen., and spp.
- 1967 COCCOIDEA DE LAS ISLAS CANARIAS. II PARTE. *Eos* 43: 93–129, illus.
Keys to gen. and spp. of Diaspidinae; generic characters; redescrptions of some spp; hosts and distribution; *Adiscaspis* n. subgen. to include *Diaspis barrancorum* Lindinger.

GOMEZ-MENOR ORTEGA, J.

- 1956b QUELQUES NOUVEAUX COCCIDES D'ESPAGNE. 14th Internatl. Cong. Zool. (Copenhagen, 1953) *Proc.* 1956, p. 482–486.
Aspidiotus vellae and *Quadraspidiotus caricis* n. spp.
- 1958c HOMOPTEROS STERNORRHYNCHA DE LA PROVINCIA DE GRANADA. *Bol. Real Soc. Españ. de Hist. Nat.* 55: 403–408.
Lists 37 coccid spp. in 28 gen.; hosts and distribution.
- 1958d UN INSECTO PLAGA DEL CULTIVO DE LA PINA DE AMERICA (ANANAS ANANAS L.) EXISTENTE EN LAS ISLAS CANARIAS. *Estud. Atlanticos* An. 4: 1–11, illus.
Redescribes *Diaspis boisduvalii*; biology; hosts.
- 1959 HOMOPTEROS "STERNORRHYNCHA" QUE ATACAN A LA ENCINA, II PARTE. *Rev. Ent. Españ.* 17: 141–201, illus.
Redescribes 5 Diaspididae, 1 Coccidae, 2 Asterolecaniidae, 1 Eriococcidae, and 3 Kermidae; hosts, distribution, and natural enemies.
- 1965 ADICIONES A LOS "COCCIDOS DE ESPANA", VI NOTA. ESPECIES DEL GENERO EVALLASPIS CON SU DISTRIBUTION GEOGRAFICA EN LA PENINSULA E ISLAS BALEARES (HOMOPTERA). *Eos* 41: 87–114, illus.
Lists 47 spp. in 3 families; includes *Cajalecanium* n. gen., *C. salicorniae* n. sp., and *Hemiberlesia lataniae laciniata* n. form; descriptions of some spp.; hosts and distribution.
- 1967 LISTA DE COCCOIDEA DE LAS ISLAS CANARIAS (ADICIONES). *Eos* 43: 131–134.
Lists 30 spp. in 3 families; hosts and distribution.
- 1968 ADICIONES A LOS "COCCIDOS DE ESPANA" VII NOTA (HEM. HOMOPTERA). *Eos* 43: 541–563, illus.
Lists 45 spp. in 3 families; includes *Aonidia ilicitana* n. sp. and *Rhizaspidotus artemisiae adiscus* n. form; redescrptions of some spp.; hosts and distribution.

GONCALVES, M. L.

- 1968 A COCHONILHA ROSADA DA CANA-DE-ACUCAR EM MOCAMBIQUE SACCHARI-COCCUS SACCHARI (COCKERELL) (HEMIPTERA: PSEUDOCOCCIDAE). [English and French summaries.] *Agron. Moçambicana* (Laurenço Marques) 2: 57–64, illus.
Describes adult female; gives incidence of nymphs and adults.

GONZALES, R. H., and CHARLIN, R.

- 1968 NOTA PRELIMINAR SOBRE LOS INSECTOS COCCOIDEOS DE CHILE. [English summary.] Chilena de Ent. 6: 109-113.
Preliminary checklist of coccids of Chile, including old and new records; hosts of spp. not previously reported.

GONZALES, R. H., KIDO, H., MARIN, A., and HUGHES, P.

- 1969 BIOLOGIA Y ENSAYOS PRELIMINARES DE CONTROL DEL MARGARODES DE LA VID, MARGARODES VITIS (PHILIPPI). [English summary.] Agr. Tech. (Chile) 29: 93-122, illus.
Description of immatures and adult female; biology, population dynamics; distribution; control.

GORKUM, N. VAN.

- 1913 DACTYLOPIUS SACCHARI BRASILIENSIS. Bol. Estac. Expt. Canna Assuc. (Escada) 1: 29-31.

GOUX, L.

- 1933a NOTES SUR LES COCCIDES (HEM.) DE LA FRANCE (6^e NOTE). NOUVELLES OBSERVATIONS SUR LES PSEUDOCOCCINES. Soc. Ent. de France Bul. 38: 234-236.

Notes on morphology; hosts and distribution for several mealybugs and 2 eriococcids.

- 1953a CONTRIBUTION A L'ETUDE DE NEOTRIONYMUS MONSTATUS BORCHS., COCHENILLE (HOM. COCCOIDEA) DU TURKESTAN, OBSERVEE EN ITALIE ET NOUVELLE POUR LA FAUNE EUROPEENNE. Bul. du Mus. d'Hist. Nat. de Marseille 13: 1-7, illus.

N. monstatus periolanus n. spp.; describes nymphs and adult male and female; notes on gen. *Neotrionymus*.

GREEN, E. E.

- 1899e THE "LANTANA BUG." (ORTHEZIA INSIGNIS, DOUGLAS.) Ceylon Roy. Bot. Gard. Cir. 1: 83-94.

Description; life cycle; habits, hosts, distribution, and control in Ceylon.

- 1902c NOTE ON ORTHEZIA FLOCCOSA, DE GEER. Ent. Monthly Mag. 38 (2d ser. 13): 284-285.

Newsteadia n. subgen. and *O. floccosa* type-sp.

- 1909c NO. XXV.—NOTE ON THE PRESENCE OF THE COCCID GENUS MARGARODES IN INDIA. Bombay Nat. Hist. Soc. Jour. 19: 761-762.

Male of *Margarodes* sp.; first record of gen. in India.

- 1914d ON SOME COCCID PESTS FROM THE SEYCHELLES. Jour. Econ. Biol. 9: 47-48.

Lists 5 spp. in 2 gen.; hosts.

- 1914e NOTE ON ASPIDIOTUS BROMELIAE. Jour. Econ. Biol. 9: 75.

Discusses Canary Islands as place of origin of this sp.

- 1922b A BRIEF REVIEW OF THE INDIGENOUS COCCIDAE OF THE BRITISH ISLANDS. So. London Ent. and Nat. Hist. Soc. Proc. 1922, p. 12-25, illus.

Lists 127 spp. in 26 gen., including 67 known from greenhouses only; notes on general appearance; hosts; damage.

GRESSITT, J. L., and SZENT-IVANY, J. J. H.

- 1968 BIBLIOGRAPHY OF NEW GUINEA ENTOMOLOGY. Pacific Insects Monog. 18: 674 p.

Include many papers on coccids.

GRIGOROV, S.

- 1964 A CONTRIBUTION TO THE BULGARIAN ENTOMOFAUNA. [In Bulgarian. English summary.] Rast. Zashch. 12 (4): 28-33, illus.

New hosts of *Phenacoccus aceris*; *Heterococcus tritici* new for Bulgaria.

GUERIN-MENEVILLE, F. E.

- 1868 ETUDES SUR LES INSECTES CONSIDERES COMME LA CAUSE DE LA MALADIE DES CANNES A SUCRE DANS LES ILES MAURICE ET DE LA REUNION. Soc. Imp. et Cent. d'Agr. de France Bul. de Séances 3 (ser. 3): 245-248.

Correction of Morrison and Renk 1957 bibliography from 30: 245-248 to 3: 245-248.

GUTHRIE, H. E., *see* Drake, C. J., and Guthrie, H. E.

HABIB, A.

- 1955a SOME BIOLOGICAL ASPECTS OF THE EULECANIUM CORNI BOUCHE GROUP (HEMIPTERA: COCCIDAE). Soc. Ent. d'Egypte Bul. 39: 217-228. Change in Morrison and Morrison 1965 first supplement to bibliography from 1955 to 1955a.

- 1955b THE BEHAVIOR OF THE NYMPHAL STAGES OF EULECANIUM CORNI BOUCHE (HEMIPTERA-COCCIDEA) [!]. Soc. Ent. d'Egypte Bul. 39: 229-240. Change in Morrison and Morrison 1965 first supplement to bibliography from 1955a to 1955b.

HACKMAN, R. H.

- 1951 THE CHEMICAL COMPOSITION OF THE WAX OF THE WHITE WAX SCALE CEROPLASTES DESTRUCTOR (NEWSTEAD). Arch. Biochem. and Biophys. 33: 150-154.

Detailed discussion.

HACKMAN, R. H., and TRIKOJUS, V. M.

- 1952 THE COMPOSITION OF THE HONEYDEW EXCRETED BY AUSTRALIAN COCCIDS OF THE GENUS CEROPLASTES. Biochem. Jour. 51: 653-656.

Detailed discussion.

HADZIBEJLI, Z. K.

- 1941 NOTES ON THE SCALE INSECT FAUNA OF TBILISI—PESTS OF ORNAMENTS. [In Russian.] Akad. Nauk Gruzinskoi SSR Inst. Zool. Trudy 4: 181-192.

Lists 53 spp. in 6 subfamilies.

- 1950a NOTES ON THE SOFT SCALE—EULECANIUM CORNI BOUCHE OF EASTERN GEORGIA. [In Georgian. Russian summary.] Akad. Nauk Gruzinskoi SSR Inst. Zashch. Rast. Trudy 7: 229-232.

Description; biology; hosts.

- 1953 A STUDY ON THE EULECANIUM PERSICAE F. OF GEORGIA. [In Georgian. Russian summary.] Akad. Nauk Gruzinskoi SSR Inst. Zashch. Rast. Trudy 9: 127-142, illus.

Morphology; biology; hosts; parasites.

HADZIBEJLI, Z. K.—Continued

- 1956b SCALE INSECTS (HOMOPTERA, COCCOIDEA) INJURIOUS TO OAKS IN GEORGIA (TRANSCAUCASIA). [In Russian.] Ent. Obozr. 35: 50-55, illus.

Notes on several coccids with host and biological records.

- 1963 COCCIDS OF THE FAMILY ORTHEZIIDAE (HOMOPTERA, COCCOIDEA) IN THE FAUNA OF GEORGIA. [In Russian.] Ent. Obozr. 42: 611-620, illus. [Translation, Ent. Rev. 42: 328-333, illus.]

Arctorthesia vardziae and *Orthezia shirakensis* n. spp.; *A. cataphracta* and *O. urticae* redescribed.

- 1966 ON THE BIOLOGY AND MORPHOLOGY OF THE GENERA NEOMARGARODES GREEN AND PORPHYROPHORA BRANDT (HOMOPTERA, COCCOIDEA). [In Russian. English summary.] Ent. Obozr. 45: 693-711, illus. [Translation, Ent. Rev. 45: 395-401, illus.]

Discusses gen; describes nymphs and adults of *N. borchsenii*, *N. setosus*, and *P. georgica*; biology; hosts.

- 1967 TWO NEW COCCID SPECIES (INSECTA, HOMOPTERA, COCCOIDEA) OF EASTERN TRANSCAUCASIA. [In Russian. Georgian summary.] Akad. Nauk Gruzinskoi SSR Soobshch. 46: 715-720, illus.

Scythia stipae and *Eulecanium gyranicum*.

- 1968 SOFT SCALES OF GRAIN (HOMOPTERA, COCCOIDEA) OF THE GEORGIAN FAUNA. [In Russian.] Akad. Nauk Gruzinskoi SSR Inst. Zashch. Rast. Trudy 20: 61-70, illus.

Notes on 7 spp. in 4 gen.

- 1968a ECOLOGY OF LACCIFER LACCA KERR (HOMOPTERA, COCCOIDEA) UNDER THE CONDITIONS OF THE BLACK SEA COAST OF GEORGIA. [In Russian. English summary.] Ent. Obozr. 47: 10-18, illus. [Translation, Ent. Rev. 47: 5-9, illus.]

Life cycle, embryonic development.

- 1969 ON MARCHALINA CAUCASICA, SP. N. (HOMOPTERA, COCCOIDEA) FROM THE CAUCASUS. [In Russian. English summary.] Ent. Obozr. 48: 612-625, illus. [Translation, Ent. Rev. 48: 391-398, illus.]

Biology and habits; compared with *M. hellenica*.

HAFEZ, M., and SALAMA, H. S.

- 1967 POLYMORPHISM IN THE MALE OF THE MEALY BUG SACCHARICOCCUS SACCHARI (COCKERELL). Roy. Ent. Soc. London, Proc. Ser. A: Gen. Ent. 42: 25-29, illus.

Describe 3 different forms of adult males.

HAGEN, H. A.

- 1887 THE COCCIDAE IN THE MUSEUM OF COMPARATIVE ZOOLOGY, CAMBRIDGE, MASS. Canad. Ent. 19: 60.

Two-thirds of 168 spp. enumerated by Comstock 1883 were present in collection; includes some European spp.

HALE, D. L., see Kosztarab, M., and Hale, D. L.

HALL, W. J.

- 1939 A NEW GENUS AND FOUR APPARENTLY NEW SPECIES OF COCCIDAE (HOMOPTERA) FROM THE UNION OF SOUTH AFRICA. Ent. Soc. South. Africa Jour. 2: 93-100, illus.

Correction of Morrison and Renk 1957 bibliography from p. 7-100 to p. 93-100.

HARMAN, S. W.

- 1927 THE PEACH COTTONY SCALE. N.Y. State Agr. Expt. Sta. Bul. (Geneva) 542: 1-19, illus.

Describes immature and adult female of "*Pulvinaria amygdali* Ckll. ?"; biology; control.

HARPAZ, I., *see* Avidov, Z., and Harpaz, I.

HART, T. H., and McLACHLAN, R.

- 1887 CONCERNING BRACHYSCHELIS MUNITA, SCHRADER, AN AUSTRALIAN GALL MAKING COCCID. Ent. Monthly Mag. 24: 1-3.

Observations on galls, adult males and females, and first-instar nymphs.

HARTZELL, A.

- 1956 TWO NEW HOSTS OF MATSUCOCCUS BARK SCALE. Boyce Thompson Inst. Contrib. 18: 281-282.

- 1957 RED PINE SCALE WITH SPECIAL REFERENCE TO ITS HOST PLANTS AND COLDHARDINESS. Boyce Thompson Inst. Contrib. 18: 421-428, illus. Brief description; biology; hosts; damage; natural enemies.

HARWOOD, R. F., *see* Dietz, S. M., and Harwood, R. F.

HAUBERG, P., *see* Thomsen, M., Buchwald, N. F., and Hauberg, P.

HAUSERMANN, W.

- 1966 UNTERSUCHUNGEN ZUR VARIABILITÄT DER SEX RATIO VON PLANOCOCCUS CITRI (RISSO) (COCCOIDEA: HOMOPTERA). [French and English summaries.] Rev. Suisse de Zool. 73: 55-111, illus.

Postembryonic development in both sexes; factors affecting life cycle, fertility, and sex determination.

HAYWARD, K. J.

- 1941 INSECTOS DE IMPORTANCIA ECONOMICA EN LA REGION DE CONCORDIA (ENTRE RIOS). Rev. Soc. Ent. Argentina 11: 68-109. (Coccids p. 74-89.)

Lists 67 spp. in 7 families; hosts; parasites and predators.

- 1942 INVESTIGACIONES. COCHINILLAS VARIAS. Rev. Indus. y Agr. de Tucumán 32: 48-55. (Coccids p. 48, 51, 54.)

Lists coccid spp. found in Province of Tucumán; hosts.

- 1943 PRIMERA LISTA DE INSECTOS TUCUMANOS PERJUDICIALES. Pub. Misc. Estac. Expt. Agr. Tucumán (1942) 1: 1-110. (Coccids p. 39-45.) (Not seen.)

- 1960 INSECTOS TUCUMANOS PERJUDICIALES. Rev. Indus. y Agr. de Tucumán 42 (1958-60): 3-144. (Coccids p. 39-46.)

Lists 55 coccid spp.; hosts.

HEATHER, N. W., *see* Brimblecombe, A. R., and Heather, N. W.

HERNANDEZ PAZ, M.

- 1967 COCHINILLAS DE LA RAIZ. *Rev. Cafetalera* 76 (Dec.): 14-18, illus.
Lists 9 spp. on roots of coffee; some characters for *Geococcus*,
Rhizoecus, and *Brevicoccus*; life cycle and habits; damage; control.

HINCKS, W. D., *see* Kloet, G. S., and Hincks, W. D.

HIRLING, W.

- 1960 BESTIMMUNGSSCHLUSSEL DER AUF IMPORTEN AUS DEM SUDEN EUROPAS,
INSBESONDERE AUS ITALIEN, VORKOMMENDEN SCHILDLAUSE. [En-
glish summary.] *Ztschr. f. Pflanzenkrank. u. Pflanzenschutz* 67:
333-339, illus.

Lists 29 spp.; brief descriptions of some.

HODGSON, C. J.

- 1967 NOTES ON RHODESIAN COCCIDAE (HOMOPTERA: COCCOIDEA) PART 1.
THE GENERA COCCUS, PARASAISETIA, SAISSETIA AND A NEW GENUS
MASHONA. *Arnoldia* (Rhodesia) 3 (5): 1-22, illus.

Keys to spp. of *Coccus* and *Saissetia*; 6 n. spp.; 1 n. comb.

- 1967a SOME PULVINARIA SPECIES (HOMOPTERA: COCCIDAE) OF THE ETHIOPIAN
REGION. *Ent. Soc. South. Africa Jour.* 30: 198-211, illus.

P. uapacae n. sp.; redescribes 6 other spp.; key to 9 spp.; hosts and
distribution.

- 1967b A SPECIES OF CONCHASPIS (HOMOPTERA: CONCHASPIDIDAE) FROM CEN-
TRAL AFRICA. *Arnoldia* (Rhodesia) 3 (21): 1-3, illus.

C. acaciae n. sp.

- 1967c A REVISION OF THE SPECIES OF THE GENUS CERONEMA MASKELL
(HOMOPTERA: COCCOIDEA) RECORDED FROM THE ETHIOPIAN REGION.
Arnoldia (Rhodesia) 3 (22): 1-8, illus.

Redescribes 3 spp.; key to 4 spp.; concludes that none of 4 spp. are
congeneric with type-sp. of gen.

- 1967d A REVISION OF THE SPECIES OF INGLISIA MASKELL (HOMOPTERA [!]:
COCCOIDEA) RECORDED FROM THE ETHIOPIAN REGION. *Arnoldia*
(Rhodesia) 3 (23): 1-11, illus.

Redescribes 4 spp.; key to 6 spp.; concludes that none of 6 spp. are
congeneric with type-sp. of gen.

- 1968 FURTHER NOTES ON THE GENUS PULVINARIA TARG. (HOMOPTERA: COCCOIDEA) FROM THE ETHIOPIAN REGION. *Ent. Soc. South. Africa Jour.* 31: 141-174, illus.

Macropulvinaria n. gen.; *M. acaciae* n. sp.; 3 n. spp. of *Lagosinia*;
1 n. sp. of *Pulvinaria*; 4 n. comb.; 5 n. syn.; discussions and rede-
scriptions of gen. and spp.; keys to gen. and spp.

- 1968a FOUR NEW SPECIES AND A NEW GENUS OF COCCIDAE (HOMOPTERA:
COCCOIDEA) FROM AFRICA. *Roy. Ent. Soc. London, Proc. Ser. B: Taxonomy* 37: 114-120, illus.

Umwinsia n. gen.; *U. cavernosa*, *Coccus arens*, *milanzianus*, and
saltuarius n. spp.

HODGSON, C. J.—Continued

- 1969 NOTES ON RHODESIAN COCCIDAE (HOMOPTERA: COCCOIDEA) PART II. THE GENERA CEROPLASTES AND GASCARDIA. *Arnoldia* (Rhodesia) 4 (3): 1-43, illus.
C. brachystegiae and *G. gwaai* n. spp.; n. status; n. syn.; redescrptions; keys to spp.; discussion of environmentally induced variation.
- 1969a NOTES ON RHODESIAN COCCIDAE (HOMOPTERA: COCCOIDEA) PART III. *Arnoldia* (Rhodesia) 4 (4): 1-42, illus.
 8 n. spp.; 3 spp. redescrbed; 7 spp. new to Rhodesia; keys to gen. and spp.; hosts and distribution.
- 1969b THE STATUS OF HEMILECANIUM IMBRICANS (GREEN) (HOMOPTERA: COCCOIDEA) IN AFRICA SOUTH OF THE SAHARA. *Jour. Nat. Hist.* 3: 321-327, illus.
 Redescrbes gen., *H. imbricans* and *H. theobromae*.

HOLLINGER, A. H.

- 1917b THE SHELL-BARK HICKORY MEALY-BUG. *Canad. Ent.* 49: 19-21, illus.
 Description of adult female of *Pseudococcus jessica*.

HOOD, C. E.

- 1907 THE LECANIUMS, OR SOFT SCALES. *Mass. Agr. Expt. Sta. Cir.* 6: 1-3.
 Notes on field recognition, biology, and control of *Eulecanium armeniacum*, *cerasifex*, *nigrofasciatum*, *tulipiferae*, and *Saissetia hemisphaerica*.

HOQ, H., see Alam, M. Z., and Hoq, H.

HOSNY, M.

- 1939 ON COCCIDS FOUND ON ROOTS OF PLANTS IN EGYPT. *Egypt Min. Agr. Tech. and Sci. Serv. Bul.* 237: 1-21, illus.
 Correction of Morrison and Renk 1957 bibliography from 1933 to 1939.
 See Beshir, M., and Hosny, M.

HOUSER, J. S.

- 1918 DESTRUCTIVE INSECTS AFFECTING OHIO SHADE AND FOREST TREES. *Ohio Agr. Expt. Sta. Bul.* 332: 165-487, illus. (Coccids p. 280-308.)
 Notes on appearance, life history, hosts, natural enemies, and control of 22 spp. in 13 gen.

HOWARD, L. O.

- 1894b ON THE GEOGRAPHICAL DISTRIBUTION OF SOME COMMON SCALE INSECTS. *Canad. Ent.* 26: 353-356.
 Brief discussion of 7 diaspidid spp.
- 1895d SOME SCALE INSECTS OF THE ORCHARD. *U.S. Dept. Agr. Ybk.* 1894: 249-276, illus.
 Descriptions and keys for 8 spp. in 5 gen.; life cycle; hosts and distribution; parasites.

HOWARD, L. O.—Continued

- 1898a THE SAN JOSE SCALE IN 1896-1897. U.S. Dept. Agr. Bul. (n.s.) 12: 1-31.

Keys to scale covers of males and young and old females of this and 2 related spp.; hosts and distribution; natural enemies; control; legislation; supplement to Howard and Marlatt 1896 bibliography of this sp.

HOY, J. M.

- 1949 CONTROL OF MANUKA BY BLIGHT. New Zeal. Jour. Agr. 79: 321-324, illus.

Discusses role of *Eriococcus* sp. in disease; notes on life history; mentions 2 spp. of *Coelostomidia*.

- 1954a MANUKA BLIGHT. SCALE INSECTS ASSOCIATED WITH MANUKA SPECIES IN NEW ZEALAND. New Zeal. Jour. Agr. 89: 601-604, illus.

Lists 8 spp. in 6 gen.; appearance and habits of *Eriococcus* sp. and *E. leptospermi*; injury; control.

- 1958 COCCIDS ASSOCIATED WITH RATA AND KAMAHI IN NEW ZEALAND. New Zeal. Jour. Sci. 1: 179-200, illus.

Capulinia orbiculata, *Eriococcus rata*, *pohutukawa*, and *kamahi* n. spp.; lists several other named and unnamed spp.

- 1958a THE IMMATURE STAGES OF ERIOCOCCUS ORARIENSIS HOY (HOMOPTERA, COCCOIDEA). New Zeal. Jour. Sci. 1: 258-280, illus.

Describes various stages; measurements of body and appendages; combined length of tibia and tarsus in hind leg only measurement of value for distinguishing instars; life cycle.

- 1963 A CATALOGUE OF THE ERIOCOCCIDAE (HOMOPTERA: COCCOIDEA) OF THE WORLD. New Zeal. Dept. Sci. and Indus. Res. Bul. 150, 260 p.

Reviews 69 gen. and includes 57 in family; 481 spp.; extensive bibliography; indices to geographical distribution, host plants, and coccid names.

HUDSON, N. M.

- 1967 A LIST OF THE ARMoured SCALE INSECTS (DIASPIDIDAE) AND THEIR HOSTS IN TASMANIA. Roy. Soc. Tasmania, Papers and Proc. 101: 91-95.

40 spp. in 23 gen.; host plant list of 79 spp. in 31 families; distribution; list based on permanent collection of Tasmania Department of Agriculture.

See Brookes, H. M., and Hudson, N. M.

HUDSON, N. M., and BROOKES, H. M.

- 1961 IDENTIFICATION OF SAN JOSE AND RELATED SCALE INSECTS OCCURRING ON POME FRUITS IN AUSTRALIA. 5 p. Dept. Primary Indus., Canberra.

Pictorial key to adult females and second-instar nymphs of *Quadraspidiotus perniciosus*, *ostreaeformis*, and *pyri*.

HUGHES, P., see Gonzles, R. H., Kido, H., Marn, A., and Hughes, P.

HUGHES-SCHRADER, S.

- 1963 HERMAPHRODITISM IN AN AFRICAN COCCID, WITH NOTES ON OTHER MARGARODIDS (COCCOIDEA-HOMOPTERA). Jour. Morph. 113: 173-184, illus.

Detailed study on cytology of *Icerya tremae*, *maxima*, *aegyptiaca*, *bimaculata*, and *Kuwania oligostigma*; gives chromosome complement for each sp.; discusses cytotaxonomy.

HUGHES-SCHRADER, S., and MONAHAN, D. F.

- 1966 HERMAPHRODITISM IN ICERYA ZETEKI COCKERELL, AND THE MECHANISM OF GONIAL REDUCTION IN ICERYINE COCCIDS (COCCOIDEA: MARGARODIDAE MORRISON). Chromosoma (Berlin) 20: 15-31, illus.

Detailed study.

HUGHES-SCHRADER, S., and TREMBLAY, E.

- 1966 GUERINIELLA AND THE CYTOTAXONOMY OF ICERYINE COCCIDS (COCCOIDEA: MARGARODIDAE). Chromosoma (Berlin) 19: 1-3, illus.

Detailed cytological study of *G. serratulae* and comparison of findings with conditions in other Iceryini.

HUSSEIN, N. A., see Ezzat, Y. M., and Hussein, N. A.

HUSSEINY, M. M., and MADSEN, H. F.

- 1962 THE LIFE HISTORY OF LECANIUM KUNOENSIS KUWANA (HOMOPTERA: COCCIDAE). Hilgardia 33: 179-203, illus.

Describe all instars; life cycle; hosts and distribution; injury; natural enemies.

IMAMKULIEV, A. G.

- 1966 COCCIDS (HOMOPTERA, COCCIDAE) MOST INJURIOUS TO FRUIT AND SUBTROPICAL CULTURES IN THE LENKORAN ZONE OF AZERBAIDZHAN. [In Russian.] Akad. Nauk Azerb. SSR Izv. Ser. Biol. 4: 45-51.

Lists 5 spp. of Pseudococcidae, 11 Coccidae, 16 Diaspididae; some new for Azerbaidzhan.

- 1966a OBLONG CUSHION SCALE (CHLOROPULVINARIA FLOCCIFERA WESTW.) — PEST OF TEA IN LENKORAN ZONE OF AZERBAIDZHAN. [In Russian.] Akad. Nauk Azerb. SSR Zakavkaz. Sovet Koordin. Nauchono-Issled. Rabot Zashch. Rast., Min. Selsk. Khoz. SSR, 1966, p. 271-274. Biology and habits; parasites and predators.

- 1969 THE OLIVE SCALE, PARLATORIA OLEAE COLVEE (HOMOPTERA, COCCOIDEA) IN THE LENKORAN DISTRICT (AZERBAIDZHAN). [In Russian.] Ent. Obozr. 48: 470-476. [Translation, Ent. Rev. 48: 297-300.] Biology; ecology; hosts and distribution; parasites and predators.

IUKHNEVICH, L. A., see Matesova, G. Ia., Mitiaev, I. D., and Iukhnevich, L. A.

IWAI, M.

- 1933 COCCIDS IDENTIFIED BY THE LATE DR. KUWANA. [In Japanese.] Insect World 37: 370-374.

Lists 9 spp., including *Eriococcus abeliceae* n. sp.

JAKUBSKI, A. W.

- 1965 A CRITICAL REVISION OF THE FAMILIES MARGARODIDAE AND TERMITOCOCCIDAE (HEMIPTERA, COCCOIDEA). 187 p., illus. Pub. by Trustees of Brit. Mus. (Nat. Hist.).

Margarodidae includes 4 subfamilies (2 n.), 5 tribes (3 n.), 8 gen. (1 n.), 65 spp. (12 n., 1 unnamed), 10 n. comb.; Termitococcidae n. family includes 1 n. subfamily, 2 n. tribes, 2 gen., 5 spp. (1 n.).

JASNOSH, V. A., see Nikolskaya, M. N., and Jasnosh, V. A.

JOSHI, H. C., and MATHUR, Y. K.

- 1966 SOME NEW PESTS OF BETELVINE. Indian Jour. Ent. 28: 566-567. Include *Ferrisiana virgata* and *Lepidosaphes cornutus*.

JURA, C.

- 1959 THE EARLY DEVELOPMENTAL STAGES OF THE OVOVIVIPAROUS SCALE INSECT QUADRASPIDIOTUS OSTREAEFORMIS (CURT.) (HOMOPTERA, COCCIDAE, ASPIDIOTINI). [Polish summary.] Zool. Polon. 9 (1958): 17-34, illus.

Embryology; symbionts.

KAJITA, H.

- 1964 A REVISED LIST OF HOST PLANTS OF CEROPLASTES PSEUDOCERIFERUS GREEN WITH A PRELIMINARY STUDY ON ITS MASS CULTURE. [In Japanese. English summary.] Kyushu Univ. Faculty Agr. Sci. Bul. 21: 1-6.

Records 110 host spp. in 45 families.

- 1965 SOME VISIBLE CHARACTERS OF PARASITIZED CEROPLASTES PSEUDOCERIFERUS GREEN. [In Japanese. English summary.] Kyushu Univ. Faculty Agr. Sci. Bul. 22: 29-34, illus.

Discusses differences in size and color of parasitized and unparasitized specimens; seasonal changes noted and shown in graphs.

KALSHOVEN, L. G. E., and VAN DER VECHT, J.

- 1950 DE PLAGEN VAN DE CULTUURGEWASSEN IN INDONESIE (PESTS OF INDONESIAN CROPS). Deel I. 512 p., illus. N. V. Uitgeverij W. Van Hoeve, 'S-Gravenhage, Bandoeng. (Coccids p. 298-353.)

Notes on appearance, biology, habits, and enemies of several coccid pest spp.

KANDA, S.

- 1941d THE GENUS XYLOCOCCLUS AND THE GENNS [!] TRICHOCOCCNS [!] N. G. FROM JAPAN (HOMOPTETA) [!]. [In Japanese.] Insect World 44: 68-72, illus.

KAUSSARI, M.

- 1946 INSECTES NUISIBLES AUX AURANTIACEES, SUR LES COTES DE LA MER CASPIENNE. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 1: Persian 7 p., French p. 8-9, illus.

Lists 11 spp.; economic importance.

KAUSSARI, M.—Continued

- 1947 LES COCHENILLES NUISIBLES AUX ARBRES FRUITIERS EN IRAN. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 5: Persian 7 p., French p. 16-17, illus.
Lists 6 spp.; descriptions; hosts.
- 1948 LES COCHENILLES NUISIBLES AUX ARBRES FRUITIERS EN IRAN (SUITE). [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 6 et 7: Persian 6 p., French p. 6-7.
Brief descriptive notes on 4 spp. of *Lepidosaphes*; hosts.
- 1949 COCHENILLES NUISIBLES AUX ARBRES FRUITIERS EN IRAN (SUITE ET FIN). [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 9: Persian 22 p., French p. 1-4, illus.
Discusses 13 spp.
- 1950 LES COCCIDAE DU SAULE EN IRAN. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 11: Persian 18 p., French p. 1-5, illus.
Descriptive notes on 5 spp.; distribution.
- 1955b SUR TROIS COCCOIDEA DIASPIDINAE NOUVEAUX DE L'IRAN. Rev. de Path. Veg. et d'Ent. Agr. de France 34: 229-236, illus.
Change in Morrison and Morrison 1965 first supplement to bibliography from 1955 to 1955b.
- 1963 VORASPIS ADLEI BALACHOWSKY ET KAUSSARI. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 21: Persian 2 p., French p. 13, illus.
Separates gen. *Voraspis*, *Rolaspis*, and *Tecaspis* and spp. *V. adlei*, *veratonia*, and *nerii*.
- 1964 GENRES NOUVEAUX ET ESPECES NOUVELLES DE DIASPIDIDAE DE L'IRAN. [In Persian. French summary.] Min. de l'Agr. Cons. Super. de Rech. Agron. Bul. 5: Persian 86 p., French 27 p., illus.
Redescribes gen. and spp. originating in Iran.
- 1968 UNE ESPECE NOUVELLE DE FIORINIA "F. PHOENICIS BALACHOWSKY" SUR LE PALMIER DATTIER AU SUD DE L'IRAN. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 27: Persian 4 p., French p. 81, illus.
New to Iran; descriptive notes; also mentions *Parlatoria blanchardi* and *Phoenicococcus marlatti*.

KAUSSARI, M., and FARAHBAKHCH, G.

- 1968 LOPHOLEUCASPIS JAPONICA COCKERELL. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 27: Persian 4 p., French p. 67, illus.
Descriptive notes; hosts.
- 1968a MONOGRAPHIE DES COCCOIDEA TRIBU ASPIDIOTINI, SOUS-TRIBU ASPIDIOTINA AU RANG DE FAMILLE DIASPIDIDAE. [In Persian. French introduction and summary.] Min. de l'Agr. Rech. Agron. Bul. 1968: Persian 154 p., French 10 p., illus.

KAWAI, S., see Takagi, S., and Kawai, S.; Tamaki, Y., and Kawai, S.; Tamaki, Y., Yushima, T., and Kawai, S.

KAWAI, S., and TAMAKI, Y.

- 1967 MORPHOLOGY OF CEROPLASTES PSEUDOCERIFERUS GREEN WITH SPECIAL REFERENCE TO THE WAX SECRETION. Appl. Ent. Zool. 2: 133-146, illus.

Detailed description of different instars and wax secretions.

KAWECKI, Z.

- 1934 MISECZNIK DWUGUZEK (LECANIUM BITUBERCULATUM TARG.). Odbitka Z "Ogrodnictwa" 30: 1-7, illus.
Recognition characters; biology; hosts and distribution.
- 1936 MATERJALY DO POZNANIA FAUNY CZERWCOW (COCCIDAE) PODOLA, OPOLA I WOLYNIA (Z POLESIE WOLYNSK.) (BEITRAGE ZUR KENNTNIS DER SCHILDLAUSE-FAUNA PODOLIENS, OPOLIENS UND WOLHYNIENS SAMT DEM WOLHYNISCHEN POLESIE). [In Polish. German summary.] "Kosmos" Jour. de la Soc. Polon. des Nat. "Kopernik" 61: 319-324.
4 spp. in 4 gen. new to Poland; collection records for 15 other spp.
- 1948 SOME COCCIDAE FROM POLAND. [In Polish. English summary.] Polska Akad. Umiej. Mater. Fiz. Kraju 10: 1-10, illus.
Discusses 6 spp.; some new for Poland.
- 1962 THE APPEARANCE OF COCCIDAE OF THE GENUS LECANIUM BURM. ON MISTLETOE (HOMOPTERA, COCCOIDEA, LECANIIDAE). [Italian summary.] Mem. Soc. Ent. Ital. 41: 15-24, illus.
L. persicae goidanichi n. ssp.
- 1965 ON THE SUITABLE TERM FOR THE SECOND PAIR OF WINGS IN MALE SCALE INSECTS (HOMOPTERA-COCCOIDEA). Frustula Ent. 7 (4): 1-4.
Proposes term hamulohaltera (plural: hamulohalterae).
- 1965a THE IMPORTANCE OF THE DEGREE OF REDUCTION IN MALE WING APPARATUS FOR STUDIES ON THE PHYLOGENESIS OF SCALE INSECT (HOMOPTERA, COCCOIDEA). [Polish and Russian summaries.] Zool. Polon. 14 (1964): 205-211, illus.
Compares reduction in hamulohalteres and number of hamuli in 6 families.
- 1967 STUDIES ON THE GENUS LECANIUM BURM. VI. LECANIUM SMRECZYNSKII SP. N. (HOMOPTERA, COCCOIDEA, LECANIIDAE). Acad. Polon. Sci. Bul. 15: 687-689, illus.
Compares first-instar nymphs of n. sp. with those of *L. corni*.
- 1968 AN OUTLINE OF THE BIOLOGY AND THE GEOGRAPHICAL DISTRIBUTION OF THE GLOBOSE SCALE SPHAEROLECANIUM PRUNASTRI (FONSC.) (COCCOIDEA, LECANIIDAE). Acad. Polon. Sci. Bul. 16: 689-693, illus.
Compares *S. prunastri* with *Lecanium corni* and *L. persicae*; hosts.

KAZIMI, S. K., and GHANI, M. A.

- 1964 A LIST OF COCCOIDEA OF PAKISTAN AND THEIR NATURAL ENEMIES. Commonwealth Inst. Biol. Control Tech. Bul. 3 (1963): 31-39.
List 67 coccids; host plants; parasites.

KEHAT, M.

- 1967 SOME NOTES ON THE LIFE CYCLE OF THE DATE PALM SCALE, PARLATORIA BLANCHARDI TARG., IN ISRAEL. Israel Jour. Agr. Res. 17: 175-179, illus.
Presents data on life cycle over 2-year period.

KEHAT, M., and AMITAI, S.

- 1967 THE MORPHOLOGY AND PHENOLOGY OF THE SCALE ASTEROLECANIUM PHOENICIS RAO ON DATE PALMS IN THE BET SHEAN VALLEY. Israel Jour. Agr. Res. 17: 85-93, illus.
Describe male and female nymphs and adults; control.

KEIFER, H. H.

- 1946 ISOPROPYL ALCOHOL AND PHENOL USED IN ENTOMOLOGICAL MICROTÉCHNIQUE. Jour. Econ. Ent. 39: 665-666.
Gives materials and methods for clearing, staining, and mounting coccids and other small insects.

KHAN, A. A., *see* Latif, A., and Khan, A. A.

KHAN, M. S. H., *see* Menon, M. G. R., and Khan, M. S. H.

KIDO, H., *see* Gonzles, R. H., Kido, H., Marn, A., and Hughes, P.

KING, G. B.

- 1897 APHIDS AND COCCIDS ASSOCIATING WITH ANTS. AN ACCOUNT OF THEIR HABITS; WITH BIBLIOGRAPHICAL NOTES. Ent. News 8: 125-129.
Several coccid spp. associated with ants.
- 1899f [NOTE ON RIPSERSIA LASIL.] Psyche 8: 299.
R. lasii found feeding at roots of China asters, attended by *Lasius americanus*.
- 1899g CHINA ASTERS INFESTED BY A COCCID. Psyche 8: 312.
Ripsersia lasii attached to roots of China asters and attended by *Lasius americanus*.
- 1899h TWO NEW COCCIDS FROM BERMUDA. Psyche 8: 350.
Aspidiotus hederæ and *Aulacaspiæ elegans*.
- 1900e BIBLIOGRAPHY OF MASSACHUSETTS COCCIDAE—SUPPLEMENTARY TO CONTRIBUTIONS TO THE KNOWLEDGE OF MASSACHUSETTS COCCIDAE. Canad. Ent. 32: 9-13.
Lists literature published before August 1899; 56 citations.
- 1902h ON THE PROGRESS IN THE DESCRIPTION OF THE COCCIDAE. Ent. News 13: 255-258.
Discusses characters mentioned by earlier workers and suggests giving measurements of antennal segments.
- 1902i THE ASSOCIATION OF COCCIDAE. Psyche 9: 401-404.
List of coccids associated together on same hosts or in ants' nests.
- 1903b SOME NEW RECORDS OF COCCIDAE. Canad. Ent. 35: 191-197.
Lists, with hosts and distribution, spp. from 12 States; describes *Phenacoccus cockerelli* n. sp. and *Pulvinaria innumerabilis betheli* n. ssp.

KIRITCHENKO, A. N., ed.

- 1937a THE SAN JOSE SCALE IN CONDITIONS OF USSR. [In Russian. English summary at end of each chapter.] 274 p., illus. Ukrainian Quar. Lab., Moscow.
Bionomics; distribution; effect on fruits and trees; control; chronological world bibliography.

KIRITCHENKO, A. N., ed.—Continued

- 1938a 5. SUBORDER COCCODEA. [In Russian.] In Filip'eva and Ogloblina, eds., Identification of Insects, ed. 2, p. 174-186, illus. Gosud. Izdatel. Kolkhoznai i Sovkhoznai Lit. Moscow.
- Change in Morrison and Morrison 1965 first supplement to bibliography from 1938 to 1938a.
- 1940a DESCRIPTION OF SOME NEW SPECIES OF PHENACOCYCUS (COCCODEA) FROM USSR. [In Russian. English summary.] Odessa Univ. Biol. Ser. 4: 187-192, illus.
- P. kimmericus*, *ostioplurimus*, and *tritubulatus* n. spp.; *P. cingulatus*, *colchicus*, *solanaceus*, *tubiferus*, and *turcomanicus* nomina nuda.

KIRIUKHIN, G.

- 1946 LES INSECTES NUISIBLES AU PISTACIER EN IRAN. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 1: Persian 17 p., French p. 2-4, illus.
- Includes 5 coccids.
- 1947 NOTE COMPLEMENTAIRE SUR DEUX COCCIDES NUISIBLES AU PISTACIER. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 3: Persian 1 p., French p. 21.
- Aspidiotus* sp. and *Lecanium* sp. of Kiriukhin 1946 publication identified by Borchsenius as *Aonidiella inopinata* and *Eulecanium rugulosum*.
- 1947a LES COCHENILLES FARINEUSES ET LEURS PARASITES EN IRAN. (SOUS-FAMILLE: PSEUDOCOCCINAE). [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 4: Persian 17 p., French p. 6-11, illus.
- Descriptive notes on 8 coccid spp.; parasites and predators.
- 1948 SYNGENASPIS OLEAE COLVEE, COCHENILLE NUISIBLE AUX ARBRES FRUITIERS ET SES PARASITES. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 6 et 7: Persian 8 p., French p. 22-23, illus.
- Brief descriptive note; biology; hosts; parasites.

KIRIUKHIN, G., and TAGHI-ZADEH, F.

- 1946 PULVINARIA AURANTII CKLL. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 2: Persian 3 p., French p. 9, illus.
- New for Iran; compared with *P. floccifera*; hosts.
- 1947 LES COCCIDES DU GENRE AONIDIELLA DANS LES REGIONS SUBTROPICALES DU NORD DE L'IRAN. [In Persian. French summary.] Min. de l'Agr. Ent. et Phytopath. Appl. (Tehran) 3: Persian 4 p., French p. 19, illus.
- Compare *A. citrina*, *A. aurantii*, and *Chrysomphalus dictyospermi*.

KIRK, T. W.

- 1909 THE GUM-TREE SCALE. New Zeal. Dept. Agr. Div. Biol. Bul. 13, 8 p., illus.
- Brief discussion of spp. of *Eriococcus* native to New Zealand; redescription of *E. coriaceus*; injury; natural enemies and control.

KIRKPATRICK, T. W.

- 1927 THE COMMON COFFEE MEALY-BUG (*PSEUDOCOCCUS LILACINUS*, CKLL.) IN KENYA COLONY. Kenya Colony Dept. Agr. Bul. 18, 110 p., illus. General discussion; brief description; life cycle and habits; ant association; notes on other mealybugs and other coccids on coffee; hosts; damage; natural enemies, control.

KLOET, G. S., and HINCKS, W. D.

- 1964 A CHECK LIST OF BRITISH INSECTS, SECOND EDITION (REVISED). PART I: SMALL ORDERS AND HEMIPTERA. In Handbooks for the Identification of British Insects 11 (pt. 1), 119 p. Roy. Ent. Soc. London. (Coccids p. 87-94.)

List of coccids prepared with aid of K. Boratynski and D. J. Williams.

KLOFT, W., and PAVAN, M.

- 1961 RINVENIMENTO DI *CRYPTOCOCCUS FAGI* BAR. IN ITALIA SU *FAGUS SILVATICA* L. (HEMIPT., HOM., COCCIDAE). [German summary.] Min. Agr. e For. (Roma) Collana Verde 7: 9-11, illus. Distribution of *C. fagi* in Europe; first record of sp. in Italy.

KNECHTEL, W. K.

- 1930 ZUR KENNTNIS DER COCCIDENFAUNA RUMANIENS. Premier Cong. des Nat. de Roumanie (Cluj, 1928) 1930 (pt. 2), p. 230-237. Discusses coccid fauna and gives hosts and distribution of 42 spp. in 23 gen.

KOCH, A.

- 1966 EIN LEBEN FÜR DIE SYMBIOSEFORSCHUNG. PAUL BUCHNER ZU SEINEM 80. GEBURTSTAG AM 12 APRIL 1966. Zool. Beitr. 12: 1-16, illus. Biography of Buchner and list of his publications.

KOMOSINSKA, H. [KOMOSINSKA-CZWARTACKA, H.]

- 1961 ON SOME SCALE-INSECTS (HOMOPTERA, COCCOIDEA) LIVING IN GREEN-HOUSES IN POLAND. [In Polish. English and Russian summaries.] Fragmenta Faunistica 9: 221-232, illus. Redescribes 4 diaspidids new to Poland; hosts.

- 1964 ARMORED SCALE INSECTS (HOMOPTERA, COCCOIDEA, DIASPIDIDAE) OF CITRUS FRUITS IMPORTED TO POLAND. [In Polish. English and Russian summaries.] Fragmenta Faunistica 11: 207-231, illus. Redescribes 9 spp. in 6 gen.; synonyms; notes on biology; hosts and countries of origin.

- 1965 RECLAVASPIS GEN. N. AND RECLAVASPIS AUSTRALICUS SP. N. FROM AUSTRALIA (HOMOPTERA, COCCOIDEA, DIASPIDIDAE). Frustula Ent. 8 (2): 1-4, illus. Compares *Reclavaspis* with *Diaspidiotus* and *R. australicus* with *R. everus*.

- 1965a A NEW SPECIES OF *ABGRALLASPIS* BALACH. (HOMOPTERA, COCCOIDEA, DIASPIDIDAE) FROM GREENHOUSES IN POLAND. Frustula Ent. 8 (4): 1-6, illus.

Compares *A. gliwicensis* n. sp. with *A. degeneratus* and *A. cyanophylli*.

KOMOSINSKA, H. [KOMOSINSKA-CZWARTACKA, H.]—Continued

- 1968 INVESTIGATIONS ON THE SCALE INSECTS (HOMOPTERA, COCCOIDEA, DIASPIDIDAE) LIVING IN GREENHOUSES IN POLAND. PART I. [In Polish. English summary.] *Polskie Pismo Ent.* 38: 205-208.
Aonidia lauri, *Furchadiaspis zamiae*, *Umbaspis regularis*, and *Kuwanaspis pseudoleucaspis* new to Poland; notes on hosts, distribution, and damage.
- 1968a QUADRASPIDIOTUS GIGAS (THIEM ET GERNECK) A NEW SPECIES OF SCALE INSECT (HOMOPTERA COCCOIDEA) FOR THE FAUNA OF POLAND. [In Polish. English and Russian summaries.] *Sylvän* 1: 51-54, illus. Compares *Q. gigas* with *Q. ostreaeformis*; hosts and distribution.
- 1969 STUDIES ON THE GENUS ABGRALLASPIS BALACHOWSKY, 1948, (HOMOPTERA, COCCOIDEA, DIASPIDIDAE). [Polish and Russian summaries.] *Acta Zool. Cracoviensia* 14: 43-85, illus.
 Detailed discussion of gen.; 15 spp. redescribed; 5 n. comb.; key to *Abgrallaspis* and related gen. and to 17 spp. of *Abgrallaspis*; hosts and distribution.
- 1969a STUDIES OF SCALE INSECTS (HOMOPTERA, COCCOIDEA, DIASPIDIDAE) OF POLAND, I. [In Polish. English and Russian summaries.] *Fragmenta Faunistica* 15: 267-271.
 Records *Mytilaspis conchiformis* f. *conchiformis* and *Insulaspis juniperi* as new to Poland; notes on biology of *M. conchiformis*.

KOMOSINSKA, H., and PODSIADLO, E.

- 1967 MATERIALS TO THE FAUNA OF SCALE INSECTS (HOMOPTERA, COCCOIDEA) —STEPPE RESERVATIONS IN THE NIDA VALLEY (SOUTH POLAND). I. *Acad. Polon. Sci. Bul.* 15: 683-686.
 List 13 spp. in 10 gen.; 5 spp. new to Poland.

KORONEOS, J.

- 1939 LES INSECTES DE L'OLIVIER DANS LE PELION. [In Greek and French.] 71 p., illus. Athens. (Coccids p. 16-19 in Greek, p. 41-44 in French.)
 Notes on 9 spp. in 9 gen.; coccid natural enemies.

KOSARZEWSKA, E. F.

- 1968 TECHNIQUE OF PREPARING SLIDES FOR COCCID (HOMOPTERA: COCCOIDEA) DETERMINATION. [In Russian.] *Ent. Obozr.* 47: 248-253. [Translation, *Ent. Rev.* 47: 146-149.]
 Gives 8 methods used by 5 workers and suggests modification in procedure.

See Borchsenius, N. S., and Kosarzewska, E. F.

KOSZTARAB, M.

- 1956a PARASITOLOGISCHE UNTERSUCHUNGEN AN SCHILDLAUSEN. [English and Russian summaries.] *Acta Agron. Acad. Sci. Hungaricae* 6: 393-410, illus.
 Records on 28 spp. in 17 gen., including 5 new to Hungary.

KOSZTARAB, M.—Continued

- 1964 THE ARMORED SCALE INSECTS OF OHIO (HOMOPTERA: COCCOIDEA: DIASPIDIDAE). Ohio Biol. Survey Bul. (n.s.) 2 (1963), 120 p., illus.
Taxonomic study with biological records, based on 52 spp. in 20 gen., including 15 new to Ohio, and *Acutaspis morrisonorum*, *Aonidomytilus multiglandulatus*, *Diaspidiotus caryae*, and *Phenacaspis occidentalis* n. spp.
- 1968 CRYPTOCOCCIDAE, A NEW FAMILY OF THE COCCOIDEA (HOMOPTERA). Va. Jour. Sci. 19: 12.
Cryptococcus and *Kuwanina* included in new family; notes on generic placement of *Sphaerococcus obscuratus* Maskell.
- See Afifi, S., and Kosztarab, M.; D'Ascoli, A., and Kosztarab, M.; Yang, S. P., and Kosztarab, M.

KOSZTARAB, M., and HALE, D. L.

- 1968 A NEW CRYPTOCOCCUS SPECIES FROM NORTH AMERICA, WITH A KEY TO THE SPECIES OF THE GENUS (HOMOPTERA: COCCOIDEA). Va. Jour. Sci. 19: 7-11, illus.
Describe adult female and first-instar nymph of *C. williamsi*.

KOSZTARAB, M., and MCDANIEL, B.

- 1969 A NEW SPECIES OF ANTONINA SIGNORET FROM SOUTH DAKOTA WITH NEW RECORDS FOR A. BOUTELOUAE PARROTT (HOMOPTERA: COCCOIDEA: PSEUDOCOCCIDAE). Ent. Soc. Wash. Proc. 71: 111-114, illus.
A. dakotensis.

KOSZTARAB, M., and VEST, D. F.

- 1966 TWO NEW CEROCOCCUS SPECIES, WITH A REVISED KEY TO THE GENUS IN NORTH AMERICA (HOMOPTERA: COCCOIDEA: ASTEROLECANIIDAE). Ent. Soc. Amer. Ann. 59: 369-376, illus.
C. deklei and *C. russellae*.

KOTEJA, J.

- 1964 NOTES ON SCALE INSECTS (HOMOPTERA, COCCOIDEA) IN POLAND'S FAUNA. [In Polish. English summary.] Polskie Pismo Ent. 34: 177-184, illus.
Rhizococcus herbaceus, *R. insignis*, *Luzulaspis frontalis*, and *Pulvinaria ribesiae* new to Poland; notes on other spp.
- 1966 STUDIES ON MORPHOLOGY AND BIOLOGY OF LUZULASPIS FRONTALIS GREEN (HOMOPTERA, COCCOIDEA). [Polish summary.] Polskie Pismo Ent. 36: 17-43, illus.
Describes first-, second-, and third-instar nymphs, adult female and male, and male puparium, prepupa, and pupa; discusses moulting, growth rate, and biology; habits; hosts; parasites.
- 1966a LUZULASPIS NEMOROSA SP. N. (HOMOPTERA, COCCOIDEA, COCCIDAE). [Polish summary.] Polskie Pismo Ent. 36: 45-56, illus.
Detailed comparison of *L. nemorosa* and *L. luzulae*; bibliography for gen.

KOTEJA, J.—Continued

- 1969 *PSILOCOCCUS PARVUS* BORCHSENIUS (HOMOPTERA, COCCOIDEA)—MORPHOLOGY, BIOLOGY AND TAXONOMY. [Polish and Russian summaries.] *Acta Zool. Cracoviensia* 14: 21–41, illus.
Detailed description of all instars of males and females; systematic position; phenology; biology; hosts and distribution.
- 1969a NOTES ON THE POLAND'S SCALE INSECTS FAUNA (HOMOPTERA, COCCOIDEA). II. [Polish summary.] *Polskie Pismo Ent.* 39: 3–15, illus.
6 spp. new to Poland; additional records on some previously reported spp.; distinguishing characters of some spp.

See Zak-Ogaza, B., and Koteja, J.

KOTEJA, J., and ZAK-OGAZA, B.

- 1966 INVESTIGATIONS ON SCALE INSECTS (HOMOPTERA, COCCOIDEA) OF PIENINY-KLIPPEN BELT. [Polish and Russian summaries.] *Acta Zool. Cracoviensia* 11: 305–332, illus.
List 38 spp., including *Luzulaspis pieninica* n. sp.; *L. pieninica* compared with *L. grandis* and *L. caucasica*; some spp. new for Poland; hosts and distribution; describe biotope.
- 1969 THE SCALE INSECT FAUNA (HOMOPTERA, COCCOIDEA) OF THE OJCOW NATIONAL PARK IN POLAND. [Polish and Russian summaries.] *Acta Zool. Cracoviensia* 14: 351–373.
List 53 spp. in 41 gen., including 11 new for Poland; hosts; biotopes.

KOTINSKY, J.

- 1910 COCCIDAE NOT HITHERTO RECORDED FROM THESE ISLANDS (HEMIPTERA-HOMOPTERA). *Hawaii. Ent. Soc. Proc.* 2 (1910): 127–131.
Lists 25 spp. from Hawaiian Islands.

KRAUSS, N. L. H.

- 1944 NOTES ON INSECTS AND OTHER ARTHROPODS FROM THE ISLANDS OF MOLOKAI AND MAUI, HAWAII. *Hawaii. Ent. Soc. Proc.* 12 (1943): 81–94.
Lists 11 coccid spp. in 7 gen.; hosts.
- 1945 NOTES ON SOME HAWAIIAN INSECTS. *Hawaii. Ent. Soc. Proc.* 12 (1944): 309–317.
Lists 16 coccid spp.; hosts and distribution in Hawaii.
- 1953 NOTES ON INSECTS ASSOCIATED WITH LANTANA IN CUBA. *Hawaii. Ent. Soc. Proc.* 15 (1952): 123–125.
Lists *Orthezia insignis*, *Pseudococcus* sp., and *Pulvinaria* sp.
- 1961 INSECTS FROM AITUTAKI, COOK ISLANDS. *Hawaii. Ent. Soc. Proc.* 17 (1960): 415–418.
Lists 7 spp. in 4 gen.; hosts.
- 1964 INSECTS ASSOCIATED WITH FIREBUSH (*MYRICA FAYA* AITON). *Hawaii. Ent. Soc. Proc.* 18 (1963): 405–411.
Lists 7 coccid spp. in 5 gen. on 3 *Myrica* spp. in different countries.
- 1965 INVESTIGATIONS ON BIOLOGICAL CONTROL OF MELASTOMA (*MELASTOMA MALABATHRICUM* L.). *Hawaii. Ent. Soc. Proc.* 19 (1964): 97–101.
Several coccid spp. from various Pacific areas sent to Hawaii for study as possible control agents.

KRISHNAN, Y. S., *see* Krishnaswami, S., Majumdar, N., and Krishnan, Y. S.

KRISHNASWAMI, S., MAJUMDAR, N., and KRISHNAN, Y. S.

- 1964 STUDIES ON THE LAC INSECT-HOST PLANT RELATION—MODE OF FEEDING OF THE LAC INSECT. *Indian Jour. Ent.* 26: 453-457, illus.

Describe structure of mouth parts in *Laccifer lacca*, mode of host penetration, and feeding site.

KRZYSZTOFOWICZ, A.

- 1957 L'ADDITION A LA FAUNE D'ASPIDIOTINI DE LA POLOGNE (HOMOPTERA, COCCOIDEA, ASPIDIOTINI). [In Polish. French and Russian summaries.] *Zeszyty Nauk. Uniw. Jagiellonskiego* 10: 223-240, illus.

Redescribes *Quadraspidotus piri* and *Q. marani* and compares them with *Q. perniciosus* and *Q. ostreaeformis*; biology; hosts.

KUITERT, L. C., *see* Dekle, G. W., and Kuitert, L. C.

KUMAR, S., *see* Majumdar, N., Bhattacharya, A., and Kumar, S.

KUNKEL, H.

- 1967 SYSTEMATISCHE UBERSICHT UBER DIE VERTEILUNG ZWEIER ERNAHRUNGSFORMTYPEN BEI DEN STERNORRHYNCHEN (RHYNCHOTA, INSECTA). [English summary.] *Ztschr. f. Angew. Zool.* 54: 37-74.

Tabulation of results of study from literature and observations of author; survey of mode of feeding of all Rhynchota, including 15 families of coccids; detailed bibliography.

- 1968 UNTERSUCHUNGEN UBER DIE BUCHENWOLLSCHILDLAUS CRYPTOCOCCUS FAGI BAR. (INSECTA, COCCINA), EINEN VERTRETER DER RINDENPARENCHYMSAUGER. [English summary.] *Ztschr. f. Angew. Ent.* 61: 373-380, illus.

Study of population dynamics and feeding.

KUZNETSOV, N.

- 1966 COCCIDS-PESTS OF CONIFERS. [In Russian.] *Zashch. Rast.* 11 (7): 46-47, illus.

Discussion of 5 important pest spp.; distribution; biology of *Leucaspis pusilla*, *Syngenaspis parlitoriae*, *Carulaspis minima*, *Physokermes piceae*, and *Nemolecanium abietis*.

LACROIX, D. S.

- 1926 MISCELLANEOUS OBSERVATIONS ON A CRANBERRY SCALE TARGIONIA DEARNESSI (CKLL.) (HOMOP.: COCCIDAE). *Ent. News* 37: 249-251.

Description; life cycle; parasites.

LAMEERE, A.

- 1937 PRECIS DE ZOOLOGIE. V. 4, 468 p., illus. Issued as sup. to *Rec. de l'Inst. Zool. Torley-Rousseau*, t. I-VI, fasc. 1, 1937. (Coccids p. 408-418, 454-455.)

Describes adult males and females of several coccid spp.

LANGFORD, G. S., *see* Garrett, W. T., and Langford, G. S.

LA RIVERS, I.

- 1967 A NEW SPECIES OF MARGARODES FROM NEVADA (COCCOIDEA: MARGARODIDAE). Biol. Soc. Nev. Occas. Papers 14: 4-6, illus.
M. chukar.

LATIF, A., and KHAN, A. A.

- 1961 HISTOLOGY AND ATTACHMENT OF THE MUSCLES OF DROSICHA STEBBINGI GR. (COCCIDAE: HOMOPTERA). Pakistan Jour. Sci. Res. 13: 1-6, illus.
 Detailed study.

LAUDEHO, Y., and BENASSY, C.

- 1969 CONTRIBUTION A L'ETUDE DE L'ECOLOGIE DE PARLATORIA BLANCHARDI TARG. EN ADRAR MAURITANIEN. Fruits (Paris) 24: 273-287, illus.
 Detailed ecological study.

LEECH, H. B.

- 1959 BIBLIOGRAPHY OF GORDON F. FERRIS. Pan-Pacific Ent. 35: 29-50.
 Includes 217 publications and 25 untitled notes, most on coccids.

LELLAKOVA-DUSKOVA, F.

- 1963 THE MORPHOLOGY, METAMORPHOSIS, AND THE LIFE-CYCLE OF THE SCALE INSECT QUADRASPIDIOTUS GIGAS (THIEM ET GERNECK) (HOMOPTERA, COCCOIDEA, DIASPIDIDAE). Acta Ent. Mus. Nat. Pragae 35: 611-648, illus.
 Detailed description of all stages; biology; host and distribution; economic importance; natural enemies.
- 1965 QUADRASPIDIOTUS MARANI ZHR., THE MORPHOLOGY OF DEVELOPMENTAL STAGES IN THE MALE (HOMOPTERA, COCCOIDEA, DIASPIDIDAE). Acta Ent. Bohemoslov. 62: 202-209, illus.
 Describes second instar, prepupa, pupa, and adult; biology.
- 1966 DIE AUF WEIDENGEWACHSEN (SALICALES) LEBENDEN SCHILDLAUSE (COCCOIDEA) IN DER TSCHEHOSLOWAKEI. [English summary.] Ztschr. f. Angew. Ent. 57: 294-309, illus.
 Lists 7 spp. in 6 gen. with key to their identification.

LEONARDI, G.

- 1898d LA ICERYA PURCHASI MASK. Bol. di Not. Agr. Min. di Agr., Indus. e Com. Rome 20 (6): 235-238, illus.
 Description; history of sp. in Europe; control.

LE PELLEY, R. H.

- 1959 AGRICULTURAL INSECTS OF EAST AFRICA. 307 p. East Africa High Comm., Nairobi, Kenya. (Coccids p. 33-48.)
 Lists East African coccids with their hosts, parasites, and predators.
- 1968 PESTS OF COFFEE. 590 p., illus. Longmans, Green and Co., Ltd., London and Harlow.
 Taxonomy; life history and seasonal activity; hosts and distribution; damage; natural enemies; biological and chemical control for many coccids.

LEROUX, E. J., see Samarasinghe, S., and Leroux, E. J.

LIDGETT, J.

- 1898 DESCRIPTION OF TWO NEW AUSTRALIAN COCCIDS. *Wombat* 4 (13): 13-15.
Aspidiotus myoporii and *Poliaspis casuarinae* n. spp.

LINDINGER, L.

- 1905b UBER EINIGE NADELHOLZCOCCIDEN. *Naturw. Ztschr. f. Land-u. Forstw.* 3: 252-253.
 Compares *Leucaspis pini* and *L. sulci*.
- 1905c EINE VARIATION DES SOGENANNTEN MINIRENS BEI SCHILDLAUSEN. *Ztschr. f. Wiss. Insektenbiol.*, ed. 1 (heft 7), p. 291-292.
- 1907c UBER EINIGE SCHILDLAUSE AUS AMANI. *Pflanzer. Ratgeber f. Landw. Inst. Amani* 3: 353-360.
 Discusses *Aspidiotus destructor*; hosts and distribution; mentions 5 other spp.
- 1907d NEUERE ARBEITEN UBER COCCIDEN. *Ztschr. f. Wiss. Insektenbiol.* 3: 158-160.
 Review of published papers; occasional notes on synonymy or identity.
- 1907e DIE COCCIDEN-LITERATUR DES JAHRES 1907. *Ztschr. f. Wiss. Insektenbiol.* 4: 432-436, 470-476.
 List of published papers; includes names of spp.
- 1913c ASPIDIOTUS BAVARICUS, LDGR.: A SCALE-INSECT NEW TO THE BRITISH LIST. *Ent. Monthly Mag.* 49: 103-104.
- 1913d COCCIDEN, SCHILDLAUSE. In Sorauer, P., *Handbuch der Pflanzenkrankheiten*, ed. 3, v. 3, 774 p., illus. Paul Parey, Berlin. (Coccids p. 683-698.)
 Includes spp. of economic importance in 9 subfamilies; hosts and distribution based primarily on literature review.
- 1914a UBER DAS VORKOMMEN UND DIE HEIMAT VON PSEUDISCHNASPIS (ASPIDIOTUS) BROMELIAE. *Jour. Econ. Biol.* 9: 73-74.
- 1917 OBSERVACIONES E INVESTIGACIONES EN LAS ISLAS CANARIAS. *Eco del Magisterio Canario* 3 (140): 3-6.
 Lists 34 spp.; hosts and distribution.
- 1920 DIE BELASTIGUNG DER OBSTEINFUHR DURCH DIE SAN JOSE-SCHILDLAUSGESETZGEBUNG VOM WISSENSCHAFTLICHEN STANDPUNKT AUS. *Ztschr. f. Angew. Ent.* 7: 205-207.
 Discusses possibility of *Aspidiotus perniciosus* becoming established from imported fruit.
- 1927 BERICHT UBER DIE TATIGKEIT DER ABTEILUNG F. PFLANZENSCHUTZ. *Hamburg. Inst. f. Angew. Bot. Jahresber.* (1917-24) 1927, p. 121-128. (Coccids p. 124-127.)
 Lists 14 coccids as interceptions; hosts and origin of spp.
- 1929 BERICHT UBER DIE TATIGKEIT DER ABTEILUNG F. PFLANZENSCHUTZ, GLEICHZEITIG HAUPTSTELLE FUR PFLANZENSCHUTZ FUR DAS HAMBURGISCHE STAATSGEBIET. A. UBERWACHUNG DER EIN-UND AUSFUHR VON OBST, PFLANZEN UND PFLANZENTEILEN (AMTLICHE PFLANZENBESCHAU.). *Hamburg. Inst. f. Angew. Bot. Jahresber.* (1928) 1929, p. 104-114.
 Lists 36 coccids as interceptions with their hosts and origin; includes "*Leucaspis archangelskyae* Ldgr. sp. nov." nomen nudum.

LINDINGER, L.—Continued

- 1932h COCCOIDEA, SCHILDLAUSE. In Sorauer, P., Handbuch der Pflanzenkrankheiten, ed. 4, v. 5, 1082 p., illus. Paul Parey, Berlin. (Coccids p. 716-750.)
Key to 11 subfamilies; lists spp. of economic importance; hosts and distribution; based primarily on literature review.
- 1938a BEMERKENSWERTE SCHILDLAUSFUNDE. *Bombus* 6: 22-23.
Lists *Mytilococcus piniformis*, *Lepidosaphes tuberculatus*, *Aspidiotus hederæ*, and *Rhizococcus halophilus*; hosts and distribution; discusses generic placement of *R. halophilus*.
- 1938b ZUR SCHILDLAUSFAUNA NORDWESTDEUTSCHLANDS. *Bombus* 7: 27.
Lists *Selenaspis pumilus*, *Cryptococcus fagisuga*, *Nidularia spuria*, and *Talla quercus*; hosts and distribution.
- 1941 UBER NORDWESTDEUTSCHE SCHILDLAUSE. *Bombus* 17: 66-67.
Lists 7 spp.; hosts and distribution; discusses names *Eucalymnatus*, *Calymmata*, *Calymnatus*, *Calymnatus*, and *Coccus*.
- 1941a EINIGE WEITERE FUNDE. *Bombus* 19: 76.
Lists 27 spp.; hosts and distribution.
- 1942 COCCOIDEA (HOMOPT.). In Titschack, E., Beitr. z. Fauna Perus Bd. 2: 119-129.
Addition of p. 119-129 to Morrison and Renk 1957 bibliography.
- 1942a BEITRÄGE ZUR KENNNTNIS DIKOTYLER PFLANZEN. Bot. Centbl. Beihefte 61: 369-398. (Coccids p. 377, 381.)
Discusses *Dactylopius coccus* and *Protortonia cacti*; lists several additional spp. with hosts and distribution.
- 1942b DIE KOMMALAUS AN STRASSENBAUMEN IN HAMBURG. *Bombus* 23: 102.
Discusses *Mytilococcus ulmi*; lists 9 additional spp. with hosts.
- 1955 SCHRIFTENNACHWEIS DER MITTELAMERIKANISCHEN SCHILDLAUSE AUS DER GATTUNG LLAVEA [!] SIGN. UND IHRER VERWANDTEN (COCCIDAE: COCCIONELLINAE (MARGARODINAE AUT.)). Beitr. z. Ent. 5: 341-246.
Correction of Morrison and Renk 1957 bibliography from Coccoidae to Coccidae and p. 541-546 to p. 341-346.

LINNAEUS, C.

- 1763 CENTURIA INSECTORUM RARIORUM. V. 4, V + 32 p. Submittit Boas Johansson, Upsaliae. (Coccid p. 17-18.) (Not seen.)
Descriptions of 100 rare and mostly undescribed species of insects from Carolina, Pennsylvania, Surinam, and Java; *Coccus capensis*.

LINSLEY, E. G., and USINGER, R. L.

- 1966 INSECTS OF THE GALAPAGOS ISLANDS. Calif. Acad. Sci. Proc. 33: 113-196. (Coccids p. 139.)
List 11 named coccid spp. with original citation and 1 unnamed sp.

LIZER Y TRELLES, C. A. [Lizer, C.]

- 1915 TROIS INSECTES PARASITES DES PLANTES NOUVEAUX POUR L'ARGENTINE ET LEUR DISTRIBUTION GEOGRAPHIQUE. Physis 1: 569-572.
Epidiaspis leperiei and *Howardia elegans*.

LIZER Y TRELLES, C. A. [LIZER, C.]—Continued

- 1916a UN COCCIDO ASIATICO NUEVO PARA LA REPUBLICA ARGENTINA: "CHRYSOMPHALUS DICTYOSPERMI PINNULIFERA" (MASK.) (HEM. HOM.). Physis 2: 177.
- 1916b UN COCCIDO NUEVO PARA LA REPUBLICA ARGENTINA: "SAISSETIA HEMISPHERICA" (TARG.). Physis 2: 422.
- 1916c SOBRE LA PRESENCIA DEL "CHRYSOMPHALUS PAULISTUS" HEMP. EN EL DELTA DEL PARANA. Physis 2: 432-433.
- 1916d EL "CEROPLASTES GRANDIS" HEMP., NUEVO PARA LA FAUNA ARGENTINA. Physis 2: 438.
- 1922a TRES COCCIDOS NUEVOS PARA LA FAUNA ARGENTINA. Physis 6: 99-100. *Orthezia insignis*, *Asterolecanium variolosum*, and *Lecanium persicae*.
- 1943 APUNTACIONES COCCIDOLOGICAS. II. Soc. Ent. Argentina Rev. 11: 455-460.
Eulecanium corni and *Phoenicococcus marlatti* new for Argentina; notes on dye-producing coccids.
- 1954a APUNTACIONES COCCIDOLOGICAS. 3. RESUME. Soc. Ent. Argentina Bol. 4: 3.
Change in Morrison and Morrison 1965 first supplement to bibliography from 1954 to 1954a.

LOEWUS, M. W., see Berlowitz, L., Loewus, M. W., and Pallotta, D.

LOEWUS, M. W., BROWN, S. W., and McLAREN, A. D.

- 1964 BASE RATIOS IN DNA IN MALE AND FEMALE PSEUDOCOCCUS CITRI. Nature 203 (4940): 104.

LOMAKINA, L. G.

- 1963 SUCTORIAL INSECT PESTS OF CITY ORNAMENTAL PLANTS OF THE FOOT-HILLS LOWLAND OF TRANS-ILI ALA-TAU. [In Russian.] Akad. Nauk Kazakhskoi SSR Inst. Zool. Trudy 21: 31-44. (Coccids p. 39-40.)
Biology, hosts, and parasites of *Parthenolecanium corni*, *Eulecanium rugulosum*, *Lepidosaphes ulmi*, *Diaspidiotus slavonicus*, and *D. gigas*; records on 8 other spp.
- 1967 INSECTS, PESTS OF CITY ORNAMENTAL PLANTINGS OF SOUTHEASTERN KAZAKHSTAN. [In Russian.] 143 p., illus. Akad. Nauk Kazakhskoi SSR Zool. Inst. (Alma-Ata). (Coccids p. 32-40.)
Includes 17 coccid spp. in 5 families; brief descriptions; biology; hosts and distribution; control.

LOUIS, C.

- 1965 POLYMORPHISME DES BACTERIES SYMBIOTIQUES DU MYCETOME DE PSEUDOCOCCUS CITRI RISSO (HOMOPTERE COCCIDAE). Acad. des Sci. Paris, Compt. Rend. 260: 1755-1757, illus.
- 1967 CYTOLOGIE ET CYTOCHIMIE DU MYCETOME DE PSEUDOCOCCUS MARITIMUS (EHRHORN) (HOMOPTERA COCCIDAE). Acad. des Sci. Paris, Compt. Rend. (ser. D) 265: 437-440, illus.
- 1969 HISTOCHIMIE ET ULTRASTRUCTURE DES MYCETOMES ET SYMBIOTES D'ICERYA PURCHASI MASK. (HOMOPTERA-COCCOIDEA-MONOPHLEBINAE). Acad. des Sci. Paris, Compt. Rend. (ser. D) 268: 445-448, illus.

LOEW, F.

- 1883c EINE NEUE COCCIDEN-ART (XYLOCOCCUS FILIFERUS). Zool.-Bot. Gesell. Wien, Verhandl. 32 (1882): 271-278, illus.
Correction of Morrison and Renk 1957 bibliography from 1882b to 1883c.
- 1883d DER SCHILD DER DIASPIDEN. Zool.-Bot. Gesell. Wien, Verhandl. 32 (1882): 513-522.
Correction of Morrison and Renk 1957 bibliography from 1882c to 1883d.

LUPO, V.

- 1957a PRECISAZIONE SULLA POSIZIONE E ROTTURA DELLE ESUVIE LARVALI DELLE DIASPIDINAE. [English, French, and German summaries.] Accad. Gioenia di Sci. Nat. Catania Bol. (ser. 4) 3: 419-429, illus.
Indicates position of nymphal exuviae in Diaspidinae.
- 1966 IL GENERE CARULASPIS MCGILL. E LE SPECIE PALEARCTICHE AD ESSO APPARTENENTI. Accad. Naz. Ital. di Ent. Atti, Rend. 13 (1965): 34-48, illus.
Describes gen. and *C. silvestrii* n. sp.; key to 5 spp.
- 1966a VECCHIA E NUOVA SISTEMATICA DELLE COCCINIGLIE. VI Cong. Naz. Ital. di Ent. Atti (Padova, 1965) 1966, p. 24-44.
Reviews previous work in coccid systematics and suggests study of males; gives distinguishing characters for several families.

LUPPOVOI, E. P., see Narzikulova, M. N., and Luppovoi, E. P.

MACALONEY, H. J.

- 1961 PINE TORTOISE SCALE. U.S. Dept. Agr. Forest Pest Leaflet 57, p. 1-7, illus.
Notes on appearance, life history and habits; hosts and distribution; injury and control.

McCAMBRIDGE, W. F., and PIERCE, D. A.

- 1964 OBSERVATIONS ON THE LIFE HISTORY OF THE PINYON NEEDLE SCALE MATSUCOCCUS ACALYPTUS (HOMOPTERA, COCCOIDEA, MARGARODIDAE). Ent. Soc. Amer. Ann. 57: 197-200, illus.

McCOMB, C. W.

- 1963 A CHECKLIST AND HOST INDEX OF THE DIASPIDIDAE OF MARYLAND AND THE DISTRICT OF COLUMBIA. Md. Univ. Ent. Leaflet 50, 39 p.
Lists 54 spp. in 27 gen., some from greenhouses.

McCOMB, C. W., and DAVIDSON, J. A.

- 1969 ARMORED SCALE INSECTS. A CHECKLIST OF THE DIASPIDIDAE OF MARYLAND AND DISTRICT OF COLUMBIA. Md. Univ. Ent. Leaflet 50, 3 p.
List 59 spp. in 27 gen., some from greenhouses.

McCONNELL, H. S.

- 1930 PARLATORIA OLEAE COLV., A PEST OF PRIVET IN MARYLAND. Jour. Econ. Ent. 23: 142-144, illus.
Description; notes on biology, food plants, natural enemies, and control.

MCDANIEL, B.

- 1963 A NEW SCALE INSECT FROM THE PANHANDLE OF TEXAS (ERIOCOCCIDAE, COCCOIDEA). *Tex. Jour. Sci.* 15: 111-114, illus.
Eriococcus stellatus.
- 1964 KEY TO TEXAS SPECIES OF THE GENUS ERIOCOCCUS AND A DESCRIPTION OF A NEW SPECIES (COCCOIDEA, ERIOCOCCIDAE). *Tex. Jour. Sci.* 16: 101-106, illus.
E. boguschi; hosts of Texas spp.
- 1965 NORTH AMERICAN SPECIES OF THE GENUS MARGARODES GUILDING, WITH A DESCRIPTION OF A NEW SPECIES FOUND IN TEXAS (COCCOIDEA: MARGARODIDAE). *Ent. Soc. Wash. Proc.* 67: 15-23, illus.
M. morrisoni; redescription of 3 other spp.; key.
- 1966 A NEW SPECIES OF THE GENUS MARGARODES GUILDING FROM BUFFALO-GRASS IN TEXAS (COCCOIDEA, MARGARODIDAE). *Ent. Soc. Wash. Proc.* 68: 237-240, illus.
M. dactyloides; key to 5 spp. in North America.
- 1968 THE ARMORED SCALE INSECTS OF TEXAS (HOMOPTERA: COCCOIDEA: DIASPIDIDAE). PART I. *Southwest. Nat.* 13: 201-242, illus.
Aspidaspis gainesi and *Chortinaspis cottami* n. spp.; descriptive notes for spp. in 9 gen.; synonyms; keys to spp.; hosts and distribution in Texas.
- 1968a TWO SCALE PARASITES OF GRASSES. *S. Dak. Farm and Home Res. Agr. Expt. Sta. S. Dak. State Univ.* 19 (4): 27-29.
Discusses habits and distribution of *Antonina boutelouae* and distribution of *Antoninoides* sp.
- 1969 THE ARMORED SCALE INSECTS OF TEXAS (HOMOPTERA: COCCOIDEA: DIASPIDIDAE). PART II. *Southwest. Nat.* 14: 89-113, illus.
Descriptive notes for 16 spp. in 4 gen.; synonyms; keys to spp.; hosts and distribution in Texas.

See Kosztarab, M., and McDaniel, B.

MCDANIEL, E. I.

- 1930 SOFT SCALES INJURIOUS TO DECIDUOUS ORNAMENTALS. *Mich. Agr. Expt. Sta. Cir. Bul.* 133: 3-17, illus.
Notes on appearance in field and on biology, hosts, and control of 11 spp. in 8 gen.

MACDOUGALL, R. S.

- 1926 PSEUDOCOCCUS COMSTOCKI, KUW., AS AN ENEMY OF THE BANANA (MUSA CAVENDISHII). *Bul. Ent. Res.* 17: 85-90, illus.
Brief description; biology; distribution; control; lists 6 other coccids from banana and 7 from other hosts.

MACGILLIVRAY, A. D.

- 1923 THE MASKELL COLLECTION OF COCCIDAE. *Science* 57 (1487): 734-735.
Review of Harold and Emily Morrison's 1922 publication on type-spp. of Maskell gen.

MACGREGOR, L. R.

- 1961 NOTAS SOBRE COCCIDOS, ORTHEZIA ACAPULCOA MORRISON 1952. NUEVA PLAGA DE LA CANA DE AZÚCAR EN MÉXICO (HOM. ORTHEZIIDAE). Bol. Azucarero Mex. 143: 14-16, illus.
Distribution and importance.

McKENZIE, H. L.

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Uses antennal segments in separating instars.

MURAKAMI, Y.—Continued

- 1965 DEVELOPMENTAL RATE AND REPRODUCTIVE CAPACITY OF THE COMSTOCK MEALYBUG CULTURED ON THE SUBSTITUTE HOST PLANTS. [In Japanese. English summary.] Hort. Res. Sta. (Min. Agr. and Forestry) Ser. A (Hiratsuka) Bul. 4: 145–152, illus.
Cultured on bleached potato sprouts and fruit of Japanese pumpkin.

NARZIKULOVA, M. N., and LUPPOVOI, E. P.

- 1966 FAUNA and ZOOGEOGRAPHY OF MIDDLE ASIAN INSECTS. [In Russian.] 260 p., illus. Akad. Nauk Tadzhikskoi SSR, Dushanbe. (Coccids p. 33.)
List 8 coccid spp.

NAWA, Y.

- 1901 ILLUSTRATED TREATISE ON SCALE INSECTS. [In Japanese.] Occas. Paper 3, rev. and enl. ed., 4 + 98 p., illus.
In Morrison and Renk 1957 bibliography, Kuwana (1901a) was cited erroneously as author of this article; includes list of 116 spp. known or reported from Japan.

NELSON-REES, W. A.

- 1962 THE EFFECTS OF RADIATION DAMAGED HETEROCHROMATIC CHROMOSOMES ON MALE FERTILITY IN THE MEALY BUG, *PLANOCOCCUS CITRI* (RISSO). Genetics 47: 661–683, illus.

NEWELL, W.

- 1899 SOME INJURIOUS SCALE INSECTS. Iowa Agr. Expt. Sta. Bul. 43: 145–176, illus.
Brief notes on appearance, biology, and hosts of 21 spp. in 7 gen.; control.

NEWELL, W., and COCKERELL, T. D. A.

- 1898 [DESCRIPTIONS OF NEW COCCIDS.] In Osborn, H., Notes on Coccidae Occurring in Iowa. Iowa Acad. Sci. Proc. 5 (1897): 224–231.
Aspidiotus ancylus var. *serratus* Newell and Cockerell n. var. and *A. osborni* Newell and Cockerell n. sp.; recorded under Osborn (1898) in Morrison and Renk 1957 bibliography.

NEWMAN, L. J., O'CONNOR, B. A., and ANDREWARTHA, H. G.

- 1929 WAX SCALE. (*CEROPLASTES CERIFERUS*, ANDERSON). West. Austral. Dept. Agr. Jour. 6 (2d ser.): 516–526, illus.
General description of different stages; life cycle; control.

NEWSTEAD, R.

- 1891a ON THE ALTERATION IN THE FORM OF THE SCALES OF *LECANIA* CAUSED BY INTERNAL PARASITES. Ent. Monthly Mag. 27 (2d ser. 2): 267–268.
Observations on *Lecanium aesculi*, *capreae*, *fuscum*, and *genevense*.
1900a THE INJURIOUS SCALE INSECTS AND MEALY BUGS OF THE BRITISH ISLES. Roy. Hort. Soc. Jour. 23: 219–262, illus.
Notes on appearance and habits of 33 spp.; control.

NEWSTEAD, R.—Continued

- 1903a KERMES QUERCUS, LINN., A COCCID NEW TO BRITAIN. Ent. Monthly Mag. 39 (2d ser. 14): 57-58.

NICOLOPOULOS, C. N.

- 1964 SUR LA DECOUVERTE DE L'INCONNU JUSQU' AUJOURD'HUI INDIVIDU MALE DE L'ESPECE MARCHALINA HELLENICA (GENNADIUS) (HEMIPTERA MARGARODIDAE-COELOSTOMIDIINAE). [In Greek. French summary.] Ecole de Hautes Etudes Agron. a Athènes, Lab. Zool. Agr. et Séric. 1964, 15 p., illus. (Also in Prakt. Akad. Athènes 40: 1-10, illus.)

Describes male.

- 1965 MORPHOLOGY AND BIOLOGY OF THE SPECIES MARCHALINA HELLENICA (GENNADIUS) (HEMIPTERA MARGARODIDAE-COELOSTOMIDIINAE). [In Greek. English summary.] Ecole de Hautes Etudes Agron. a Athènes, Lab. Zool. Agr. et Séric. 1965, 31 p.

Apicultural importance of sp.; distribution, parasites, and predators; control.

NIEDIELSKI, M.

- 1869 [TITLE UNKNOWN.] Gaz. Agr. Russ. 2: (?). (Not seen.) Citation taken from P. Voelkel.

NIKOLOVA, V.

- 1969 ENTOMOCENOLOGICAL AND BIOLOGICAL STUDIES IN ROSA DAMASCENA MILL. PLANTATIONS. III. HOMOPTERA. [In Bulgarian. English summary.] Bulgar. Akad. na Nauk Zool. Inst. s Muz. Izv. 29: 191-208, illus. (Coccids p. 201-202, 205.)

Includes *Rhodococcus bulgariensis*, *Parthenolecanium corni*, and *Aulacaspis rosae*.

NIKOLSKAYA, M. N.

- 1952 THE CHALCID FAUNA OF THE U.S.S.R. (CHALCIDOIDEA). [In Russian.] Akad. Nauk SSSR Zool. Inst. 44: 575 p., illus. [English translation in Keys to the Fauna of the USSR, 1963, 593 p., illus. Pub. for Smithsn. Inst. and Natl. Sci. Found., Washington, D.C., by Israel Program for Sci. Transl.]

Includes records of many coccid hosts of chalcids.

NIKOLSKAYA, M. N., and JASNOSH, V. A.

- 1966 APHELINIDAE OF THE EUROPEAN PART OF THE USSR AND THE CAUCASUS (CHALCIDOIDEA, APHELINIDAE). [In Russian.] Akad. Nauk SSSR Zool. Inst. Opredeliteli po Faune SSSR 91, 295 p., illus.

Include records of many coccid hosts of aphelinids.

NIXON, G. E. J.

- 1951 THE ASSOCIATION OF ANTS WITH APHIDS AND COCCIDS. 36 p. Commonwealth Inst. Ent., London.

NUR, U.

- 1962 SPERMS, SPERM BUNDLES AND FERTILIZATION IN A MEALY BUG, *PSEUDOCOCCUS OBSCURUS* ESSIG (HOMOPTERA: COCCOIDEA). Jour. Morph. 111: 173-199, illus.
- 1962a A SUPERNUMERARY CHROMOSOME WITH AN ACCUMULATION MECHANISM IN THE LECANOID GENETIC SYSTEM. Chromosoma (Berlin) 13: 249-271, illus.
Supernumeraries may have originated from fragments followed by subsequent duplications; used *Pseudococcus obscurus*.
- 1962b POPULATION STUDIES OF SUPERNUMERARY CHROMOSOMES IN A MEALY BUG. Genetics 47: 1679-1690.
Utilized *Pseudococcus obscurus*.
- 1963 MEIOTIC PARTHENOGENESIS AND HETEROCHROMATIZATION IN A SOFT SCALE, *PULVINARIA HYDRANGAE* (COCCOIDEA: HOMOPTERA). Chromosoma (Berlin) 14: 123-139, illus.
Meiotic parthenogenesis of type not previously described was found in *P. hydrangae*.
- 1965 A MODIFIED COMSTOCKIELLA CHROMOSOME SYSTEM IN THE OLIVE SCALE INSECT PARLATORIA OLEAE (COCCOIDEA: DIASPIDIDAE). Chromosoma (Berlin) 17: 104-120, illus.
- 1966 NONREPLICATION OF HETEROCHROMATIC CHROMOSOMES IN A MEALY BUG, *PLANOCOCCUS CITRI* (COCCOIDEA: HOMOPTERA). Chromosoma (Berlin) 19: 439-448, illus.
- 1966a HARMFUL SUPERNUMERARY CHROMOSOMES IN A MEALY BUG POPULATION. Genetics 54: 1225-1238.
Found no differences in frequencies of supernumeraries between mothers and their offspring; supernumeraries have little or no effect on females, yet are harmful to males of *Pseudococcus obscurus*.
- 1966b THE EFFECT OF SUPERNUMERARY CHROMOSOMES ON THE DEVELOPMENT OF MEALY BUGS. Genetics 54: 1239-1249, illus.
In males of *Pseudococcus obscurus* a single supernumerary caused reduction in number of sperms and increased developmental time; in females supernumerary showed no effect.
- 1967 REVERSAL OF HETEROCHROMATIZATION AND THE ACTIVITY OF THE PATERNAL CHROMOSOME SET IN THE MALE MEALY BUG. Genetics 56: 375-389, illus.
Studied *Planococcus citri*, *Pseudococcus gahani*, and *P. obscurus*.
- 1967a CHROMOSOME SYSTEMS IN THE ERIOCOCCIDAE (COCCOIDEA HOMOPTERA). II. GOSSYPARIA SPURIA AND ERIOCOCCUS ARAUCARIAE. Chromosoma (Berlin) 22: 151-163, illus.
- 1968 ENDOMITOSIS IN THE MEALY BUG, *PLANOCOCCUS CITRI* (HOMOPTERA: COCCOIDEA). Chromosoma (Berlin) 24: 202-209, illus.
Describes endomitosis in Malpighian tubules of *P. citri* and compares chromosomes in various stages of endomitosis with those in other hemipterous insects.
- 1968a THE MAINTENANCE OF HARMFUL CHROMOSOMES IN A MEALY BUG. 12th Internatl. Cong. Genetics (Tokyo, 1968) Proc. 2: 119-120.
Observed *Pseudococcus obscurus*.

NUR, U.—Continued

- 1969 HARMFUL B-CHROMOSOMES IN A MEALY BUG: ADDITIONAL EVIDENCE.
Chromosoma (Berlin) 28: 280-297, illus.
Studied *Pseudococcus obscurus*.
See Brown, S. W., and Nur, U.

NUR, U., and CHANDRA, H. S.

- 1963 INTERSPECIFIC HYBRIDIZATION AND GYNOGENESIS IN MEALY BUGS.
Amer. Nat. 97: 197-202.
Crosses between 6 spp. from 3 gen. failed to produce offspring that
lived beyond first instar; male embryos died.

NUZZACI, G.

- 1969 NOTA MORFO-BIOLOGICA SULL'EULECANIUM CORNI (BOUCHE) SPP.
APULIAE NOV. Entomologica (Bari) 5: 9-36, illus. (Not seen.)
Morphology; biology; host and distribution; economic importance.
1969a OSSERVAZIONI CONDOTTE IN PUGLIA SULLA SAISSETIA OLEAE BERN.
(HOMOPTERA-COCCIDAE) E SUOI SIMBIONTI. Entomologica (Bari)
5: 127-138, illus. (Not seen.)

OBENBERGER, J.

- 1957 ENTOMOLOGIE III. SYSTEMATICKA CAST 2. XVII. RAD MALLOPHAGA.
XVIII. RAD ANOPLURA. XIX. RAD HOMOPTERA. 467 p., illus. Nakla-
datelstvi Ceskoslov. Akad. Věd, Praha. (Coccids p. 344-439).
IV. Podřád Coccinea-Cervci (reviewer K. Vondráček) has sections
on morphology, anatomy, metamorphosis, biology, and keys to fami-
lies, subfamilies, and tribes; systematic part includes general descrip-
tions of 15 families.

O'CONNOR, B. A., see Newman, L. J., O'Connor, B. A., and Andrewartha, H. G.

ODA, T.

- 1963 STUDIES ON THE DISPERSION OF THE MULBERRY SCALE, PSEUDAULACAS-
PIS PENTAGONA. [In Japanese. English summary.] Jap. Jour.
Ecol. 13: 41-46.
Studied distribution of females on twigs, oviposition rates, and
mortality; also studied specimens in laboratory.

OSBORN, H.

- 1904 A FURTHER CONTRIBUTION TO THE HEMIPTEROUS FAUNA OF OHIO. Ohio
Nat. 4: 99-103.
Lists 45 coccid spp. in 17 gen.

OSSIANNILSSON, F.

- 1951a THE MOUNTAIN FAUNA OF THE VIRIHAURE AREA IN SWEDISH LAPLAND.
Lunds Univ. Arsskr. 46: 51-59. (Coccid p. 58.)
Includes *Arctorthezia cataphracta*.
1966 MAKING PERMANENT FLUID MOUNTS OF MINUTE ARTHROPODS. Ent.
Tidskr. 87 (1-2): 1-4, illus.
Places nymphs and genitalia in glass capillaries containing mounting
fluid.

OUELLETTE, G. B., *see* Martineau, R., and Ouellette, G. B.

OZKOK, A.

- 1940 EINE MONOGRAPHIE UBER EINE SCHILDLAUS, DIE ICH IN DER TURKEI ERSTMALIG FESTGESTELLT HABE. [In Turkish. German summary.] *Ziraat Dergisi* 1 (10): 30-32, illus.
Redescribes *Diaspis gennadii*.

- 1941 A DESCRIPTION OF A NEW COCCID KERMES SAFINAZAE N. SP. (RHYNCHOTA, COCCIDOIDEA, KERMESINAE). [In Turkish. English summary.] *Ziraat Dergisi* 2: 18-22, illus.

PALLOTTA, D., *see* Berlowitz, L., Loewus, M. W., and Pallotta, D.; Berlowitz, L., Pallotta, D., and Sibley, C. H.

PANIS, A.

- 1968 LES RHIZOECUS (HOM. COCCOIDEA PSEUDOCOCCIDAE) EUROPEENS ET MEDITERRANEENS D'INTERET ECONOMIQUE. DESCRIPTION D'UNE NOUVELLE ESPECE. [English summary.] *Soc. Ent. de France Ann. (n.s.)* 4: 549-554, illus.

R. gentianae n. sp.; taxonomic position and biology.

- 1969 OBSERVATIONS FAUNISTIQUES ET BIOLOGIQUES SUR QUELQUES PSEUDOCOCCIDAE (HOMOPTERA, COCCOIDEA) VIVANT DANS LE MIDI DE LA FRANCE. [English summary.] *Ann. Zool. Ecol. Anim.* 1: 211-244, illus.

Includes descriptions of nymphs of *Pseudococcus adonidum*, *P. obscurus*, and *Planococcus citri*.

PAOLI, G.

- 1934 PRODROMO DI ENTOMOLOGIA AGRARIA DELLA SOMALIA ITALIANA. *Bibliot. Agr. Colon., Inst. Agr. Colon. Ital., Firenze* (1931-33) IX-XII, 427 p., illus. (Coccids p. 109-122.)

Brief descriptions, hosts, and distribution for several coccid spp.; notes on biology, injury, and natural enemies of each sp.

PAVAN, M., *see* Kloft, W., and Pavan, M.

PAWLOWSKI, P. J., AND BERLOWITZ, L.

- 1969 NON-REPLICATING CHROMATIN: ITS ATTACHMENT TO THE NUCLEAR MEMBRANE IN MEALY BUGS. *Expt. Cell Res.* 56: 154-156, illus.
Heterochromatin in testis sheath cells of third-instar male of *Planococcus citri* studied by electron microscopy.

PEARSON, G.

- 1794 OBSERVATIONS AND EXPERIMENTS ON A WAX-LIKE SUBSTANCE, RESEMBLING THE PE-LA OF THE CHINESE, COLLECTED AT MADRAS BY DR. ANDERSON, AND CALLED BY HIM WHITE LAC. *Phil. Trans. Roy. Soc. London* 84: 383-401.

Discusses properties and possible uses of white lac; does not give name of insect that produced wax.

PECK, O.

- 1963 A CATALOGUE OF THE NEARCTIC CHALCIDOIDEA (INSECTA: HYMENOPTERA). *Canad. Ent. Sup.* 30, 1092 p.

Includes coccid hosts of spp.; systematic host list gives known chalcid parasites of each coccid sp.

PEGAZZANO, F.

- 1949 UN DIASPIRO NUOVO PER LA FAUNA PALEARCTICA: PSEUDAONIDIA POEONIAE [!] COCKILL. (HEMIPTERA, COCCIDAE). Redia (ser. 2) 34: 233-235.

Descriptive note; hosts.

PEMBERTON, C. E.

- 1963 INSECT PESTS AFFECTING SUGAR CANE PLANTATIONS WITHIN THE PACIFIC. 11th Cong. Internatl. Soc. Sugar Cane Technol. (Mauritius, 1962) Proc. 1963, p. 678-689. (Coccids p. 681.)

Lists 15 pest coccid spp. with countries of origin.

PEREZ, C. S., see Ríos, T., and Pérez, C. S.

PESSON, P.

- 1948 SUR UN PHENOMENE DE PHORESIE DES SPERMATOZOIDES PAR DES CELLULES OVIDUCTAIRES, CHEZ ASPIDIOTUS OSTREAIFORMIS CURT. (HEMIPTERA-HOMOPTERA-COCCOIDEA). 8th Internatl. Cong. Ent. (Stockholm, 1948) Proc. 1948, p. 566-570, illus.

PESSON, P., and BIELENIN, I.

- 1966 GIGANTOCOCCUS NOUVEAU GENRE DE COCHENILLE MARGAROIDAE POUR ICERYA MAXIMA NEWSTEAD 1914 = ICERYA CORTICALIS VAYSSIÈRE 1926. REDESCRIPTION DE L'ESPECE AFRICAINE GIGANTOCOCCUS MAXIMUS (NEWSTEAD). [English summary.] Soc. Ent. de France Ann. (n.s.) 2: 219-251, illus.

Detailed description of nymphs and adult male and female; systematic position.

PETERSON, P. M.

- 1965 A NEW PHENACOCCUS FROM SOUTHERN CALIFORNIA (HOMOPTERA: COCCOIDEA: PSEUDOCOCCIDAE). Pan-Pacific Ent. 41: 96-100, illus. *P. harbisoni*.

PETTIT, R. H.

- 1902 SOME INSECTS OF THE YEAR 1901. Mich. State Agr. Col. Expt. Sta. Ent. Dept. Bul. 200: 179-212, illus. (Coccids p. 181-194.) Redescribes *Lecanium armeniacum*, *L. nigrofasciatum*, *Lecanium* sp., *Aspidiotus juglansregiae*, and *Dactylopius trifolii*; biology; control.

PHILLIPS, J. H. H.

- 1955 IDENTITY OF A COTTONY SCALE ON PEACH IN ONTARIO. Canad. Ent. 87: 245.

Pulvinaria vitis.

- 1965 NOTES ON SPECIES OF LECANIUM BURMEISTER (HOMOPTERA: COCCOIDEA) IN THE NIAGARA PENINSULA, ONTARIO, WITH A DESCRIPTION OF A NEW SPECIES. Canad. Ent. 97: 231-238, illus.

L. putmani n. sp.; notes on *L. caryae*, *cerasifex*, *coryli*, *fletcheri*, and *persicae*.

- 1965a BIOLOGICAL AND BEHAVIOURAL DIFFERENCES BETWEEN LECANIUM CERASIFEX FITCH AND LECANIUM PUTMANI PHILLIPS (HOMOPTERA: COCCOIDEA). Canad. Ent. 97: 303-309, illus.

Includes chromosomal patterns distinguishing 2 spp.

PIERCE, D. A., *see* McCambridge, W. F., and Pierce, D. A.

PINGLE, S. V., *see* Trehan, K. N., and Pingle, S. V.

PODSIADLO, E., *see* Komosinska, H., and Podsiadlo, E.

PODTIAGUIN, B.

- 1944 NOTULAE ENTOMOLOGICAE 1—INSECTOS QUE ATACAN A LAS PLANTAS CULTIVADAS EN EL PARAGUAY. Soc. Cient. del Paraguay Rev. 6 (4): 3-16.

Lists 9 coccid spp.

POLLARD, D. G.

- 1969 DIRECTIONAL CONTROL OF THE STYLETS IN PHYTOPHAGOUS HEMIPTERA. Roy. Ent. Soc. London, Proc. Ser. A: Gen. Ent. 44: 173-186, illus. Includes discussion of *Lepidosaphes ulmi* and *Pseudococcus brevipes*.

PORTER, C. E., and VAYSSIÈRE, P.

- 1914 L'ASTEROLECANIUM VARIOLOSUM (RATZEBURG) AU CHILI. Soc. de Path. Vég. France Bul. 1: 1-2.

QUADRI, N. [QADRI, N.]

- 1964 HARD-WAX IN THE ARCHITECTURE OF THE CROWN-SHAPED CELL. Pakistan Jour. Sci. and Indus. Res. 7: 115-120, illus. Studied cell of *Lakshadia sindica*.
1965 THE FIRST STAGE LAC CELL UNDER POLARIZED LIGHT. Zool. Anz. 175: 395-406, illus. Studied cell of *Lakshadia sindica*.

QUAYLE, H. J.

- 1911b THE MALE OF THE BLACK SCALE (SAISSETIA OLEAE BERN.) (HEMIP.). Ent. News 22: 167-170. Describes all stages of male, except first-instar nymph.
1911c THE BLACK SCALE. SAISSETIA OLEAE BERN. Calif. Agr. Expt. Sta. Bul. 223: 151-200, illus. Description; life history and habits; hosts; parasites and predators.

QUIJANO, L., *see* Ríos, T., and Quijano, L.

RAMACHANDRAN, S.

- 1963 THE STRUCTURE AND DEVELOPMENT OF THE COMPOUND EYE IN THE MALE OF DROSICHA STEBBINGII (STEBBING) (HOMOPTERA: COCCOIDEA, MARGARODIDAE). Roy. Ent. Soc. London, Proc. Ser. A: Gen. Ent. 38: 23-31, illus.

RAMAKRISHNA AYYAR, T. V.

- 1923 SOME INSECTS NOTED AS PESTS OF FRUIT TREES IN SOUTH INDIA. Agr. Jour. India 18: 50-59. Mentions several coccids under hosts.
1938 THE RICE MEALY BUG IN SOUTH INDIA. Mysore Agr. and Expt. Union Jour. 17: 179-188. Biology of *Ripersia oryzae*; hosts; its importance as transmitter of "soorai" disease; natural enemies and control.

RAO, B. S.

- 1965 PESTS OF HEVEA PLANTATIONS IN MALAYA. 98 p., illus. Rubber Res. Inst., Kuala Lumpur, Malaya. (Coccids p. 28-37.)
Notes on appearance, life history, habits, injury, and economic importance of several coccid spp.

RAO, V. P., and SANKARAN, T.

- 1969 THE SCALE INSECTS OF SUGAR CANE. In Williams, J. R., et al., eds., Pests of Sugar Cane, I-XI + 568 p., illus. Elsevier Pub. Co., Amsterdam, London, New York. (Coccids p. 325-341.)
Record 35 spp. in 18 gen.; include other hosts, distribution, and parasites.

RASINA, B. P. [RASINIA, B. P.]

- 1966 NEUE ARTEN DER COCCIDEN (COCCOIDEA, PSEUDOCOCCIDAE) AUS DER LETTISCHEN SSR. [In Russian. German summary.] Latvijas Ent. 11: 3-29, illus.
Pseudococcus alfredii, *borchsenii*, *latvicus*, *paludicola*, *zirnitsi*, *Acanthococcus baldonensis*, and *Greenisca baltica* n. spp.

RATHVON, S. S.

- 1854 COCCUS INNUMERABILIS, (BARK LOUSE.). Pa. Farm Jour. 4: 256-258, illus.
C. innumerabilis n. sp.

RAWAT, R. R., see Saxena, D. K., and Rawat, R. R.

RAWAT, R. R., and MODI, B. N.

- 1969 BIOLOGY AND NATURAL ENEMIES OF THE BRINJAL MEALY-BUG, CENTROCOCCUS INSOLITUS (GREEN) IN MADHYA PRADESH. Indian Jour. Agr. Sci. 39: 112-116, illus.
Hosts and distribution in India.

REED, D. K., SELHIME, A. G., and CRITTENDEN, C. R.

- 1967 OCCURRENCE OF SNOW SCALE, UNASPIS CITRI, ON SEVERAL VARIETIES OF CITRUS IN FLORIDA. Jour. Econ. Ent. 60: 300-301, illus.

REHACEK, J.

- 1959a BEITRAG ZUR VERBREITUNG DER SCHILDLAUSE (COCCIDAE, COCCOIDEA, HOMOPTERA) IN DEN GEWACHSHAUSERN DER BOTANISCHEN GARTEN IN DER TSCHECHOSLOWAKEI. [In Czech. German and Russian summaries.] Biologia (Bratislava) 14: 622-625, illus.
Hosts and distribution of 6 soft scale spp. in 4 gen. in greenhouses; 3 new for area.

REYNE, A.

- 1954c SCALE INSECTS (COCCOIDEA). In Results of the Norwegian Scientific Expedition to Tristan da Cunha 1937-1938, v. 31, p. 3-4. Oslo.
Records *Hemiberlesia rapax*.
1963 SCALE INSECTS FROM THAILAND WITH DESCRIPTION OF A FILIPPIA N. SP. Beaufortia (Amsterdam) 10: 29-39, illus.
Describes adult male and female and first- and second-instar nymphs of *F. orientalis* n. sp.; lists several other spp.

REYNE, A.—Continued

- 1963a NEDERLANDSE SCHILDLUIZEN II. [English summary.] Ent. Ber. 23: 115-117.
Records 4 mealybug spp.
- 1964 SCALE INSECTS FROM THE NETHERLANDS ANTILLES. Beaufortia (Amsterdam) 11: 95-130, illus.
Collection records with hosts for 41 spp. in 6 families; describes various instars of *Eriococcus curassavicus*, *Ceroplastes caesalpiniae*, *C. magnicauda*, and *Protortonia crotonis* n. spp.
- 1965 NEDERLANDSE SCHILDLUIZEN III. [English summary.] Ent. Ber. 25: 96-97.
Collections in Holland of *Atrococcus paludinus* and *Phenacoccus sphagni*; habitat note for *P. sphagni*.
- 1965a SANGICOCCUS GEN. NOV. (HOMOPTERA, COCCOIDEA). Ent. Ber. 25: 180.
New name to replace *Haematococcus* Reyne 1961 preoccupied in Protozoa.
- 1965b OBSERVATIONS ON SOME INDONESIAN SCALE INSECTS. Tijdschr. v. Ent. 108: 145-188, illus.
Buchnericoccus n. gen.; *B. javanus*, *Ceroplastes sumatrensis*, *Drosicha minor*, *Monophlebulus toxopei*, and *M. montanus* n. spp.; re-describes several spp.; discusses Monophlebinae males; *Hippeococcus* and pseudococcid nymph transported by flying ants.
- 1965c ON THE DISTRIBUTION OF THE SCALE INSECT STEATOCOCCUS SAMARAIUS MORR. Ent. Ber. 25: 212-214, illus.
Discusses distribution of *S. samaraius* and distinguishes it from *Icerya seychellarum*; new for Indonesia.

RICE, R. E., and MORENO, D. S.

- 1969 MARKING AND RECAPTURE OF CALIFORNIA RED SCALE FOR FIELD STUDIES. Ent. Soc. Amer. Ann. 62: 558-560, illus.
- 1969a COMPARATIVE PRODUCTION OF PHEROMONE BY THE CALIFORNIA RED SCALE REARED ON LEMONS AND POTATOES. Jour. Econ. Ent. 62: 958.

RICHARDS, A. M.

- 1960 SCALE INSECT SURVEY ON APPLES 1959-60. New Zeal. Jour. Agr. Res. 3: 693-698.
Records *Quadraspidiotus perniciosus*, *Q. ostreaeformis*, *Lepidosaphes ulmi*, *Aonidiella aurantii*, *Parlatoria pittospori*, *P. virescens*, and *Aspidiotus rapax* from apples in New Zealand; first record for *Q. ostreaeformis* in New Zealand.
- 1962 THE OYSTER-SHELL SCALE, QUADRASPIDIOTUS OSTREAIFORMIS (CURTIS), IN THE CHRISTCHURCH DISTRICT OF NEW ZEALAND. New Zeal. Jour. Agr. Res. 5: 95-100.
Life history; hosts; parasites and predators.
- 1962a DAMAGE TO APPLE CROPS INFESTED WITH SAN JOSE SCALE, QUADRASPIDIOTUS PERNICIOSUS (COMST.). New Zeal. Jour. Agr. Res. 5: 479-484, illus.
Gives life history in relation to development of fruit; type of damage.

RICHARDS, W. R.

- 1964 THE SCALE INSECTS OF THE CANADIAN ARCTIC (HOMOPTERA: COCCOIDEA).
Canad. Ent. 96: 1457-1462, illus.
Pulvinaria ellesmerensis and *Pseudococcus altoarcticus* n. spp.

RIMANDO, L., see Velasquez, F. J., and Rimando, L.

RÍOS, T.

- 1966 CEROALBOLINIC ACID A NEW ANTHRAQUINONE PIGMENT ISOLATED FROM
CEROPLASTES ALBOLINEATUS. Tetrahedron 22: 1507-1512, illus.
See Calderón, J., and Ríos, T.

RÍOS, T., and COLUNGA, F.

- 1965 THREE NEW ALCOHOLS FROM INSECT WAX. CEROPLASTOL I, II AND
ALBOLINEOL. Chem. and Indus. 26: 1184-1185.
Wax of *Ceroplastes albolineatus*.

RÍOS, T., and GOMEZ, G. F.

- 1969 ALBOLIC-ACID, A NEW SESTERTERPENIC ACID ISOLATED FROM INSECT WAX.
Tetrahedron Let. 34: 2929-2930, illus.
Wax of *Ceroplastes albolineatus*.

RÍOS, T., and PEREZ, C. S.

- 1969 GERANYLFARNESOL, A NEW ACYCLIC C₂₅ ISOPRENOID ALCOHOL ISOLATED
FROM INSECT WAX. Chem. Commun. 5: 214-215, illus.
Wax of *Ceroplastes albolineatus*.

RÍOS, T., and QUIJANO, L.

- 1969 THE STRUCTURE OF CEROPLASTOL II, A SESTERTERPENIC ALCOHOL ISO-
LATED FROM INSECTS WAX. Tetrahedron Let. 17: 1317-1318, illus.
Sp. producing wax is not named.

ROBINSON, E., see Cockerell, T. D. A., and Robinson, E.

ROBISON, W. G.

- 1966 MICROTUBULES IN RELATION TO THE MOTILITY OF A SPERM SYNCYTIIUM
IN AN ARMORED SCALE INSECT. Jour. Cell Biol. 29: 251-265, illus.
Studied *Parlatoria oleae*.
See Ross, J., and Robison, W. G.

ROCHA, M. A. LOYOLA DA, see Vernalha, M. M., Rocha, M. A. Loyola da, and
Gabardo, J. C.

ROGOJANU, V.

- 1966 SPECII NOI DE COCCIDE PENTRU FAUNA REPUBLICII SOCIALISTE ROMANIA.
Studii si Cercet. Biol., Ser. Zool. (Bucuresti) 18: 431-432, illus.
Eriopeltis agropyri, *Lecanopsis porifera*, *Planchonia arabidis*, and
Rhizococcus agropyri new for Rumania; hosts.

ROSS, J., and ROBISON, W. G.

- 1969 UNUSUAL MICROTUBULAR PATTERNS AND THREE-DIMENSIONAL MOVE-
MENT OF MEALYBUG SPERM AND SPERM BUNDLES. Jour. Cell Biol.
40: 426-445, illus.
Studied *Pseudococcus obscurus*.

ROSSEM, G. VAN, BURGER, H. C., and BUND, C. F. VAN DE.

- 1965 SCHADELIJKE INSECTEN IN 1964. [English summary.] Ent. Ber. 25: 148-150.

Include notes on 4 introduced coccid spp.

- 1966 SCHADELIJKE INSECTEN IN 1965. Ent. Ber. 26: 175-178.

Include notes on 3 introduced coccid spp.

ROYER, M., see Delavault, R., and Royer, M.

SAAKJAN-BARANOVA, A. A.

- 1964 ON THE BIOLOGY OF THE SOFT SCALE COCCUS HESPERIDUM L. (HOMOPTERA, COCCOIDEA). [In Russian.] Ent. Obozr. 43: 268-296, illus. [Translation, Ent. Rev. 43: 135-147, illus.]

Describes all instars of female; biology; lists outdoor and greenhouse hosts of *C. hesperidum*; natural enemies.

SAJO, K.

- 1894 BERICHT UBER DIE UNGARN IN DEN JAHREN 1884-1889 VORGEKOMMENEN LANDWIRTSCHAFTLICHEN INSEKTENSCHADEN. Ztschr. f. Pflanzenkrank. 4: 150-157.

Diaspis ostreaeformis, *Mytilaspis pomorum*, *Lecanium cymbiforme*, and *Westwoodia hordei* in Hungary.

SALAMA, H. S., see Hafez, M., and Salama, H. S.

SAMARASINGHE, S., and LEROUX, E. J.

- 1966 THE BIOLOGY AND DYNAMICS OF THE OYSTERSHELL SCALE, LEPIDOSAPHES ULMI (L.) (HOMOPTERA: COCCIDAE), ON APPLE IN QUEBEC. Ent. Soc. Quebec Ann. 11: 206-292, illus.

Include external morphology of different stages.

SAMHAN, M., see Ezz, A. I., and Samhan, M.

SANDERS, J. G.

- 1905 THE COTTONY MAPLE SCALE. (PULVINARIA INNUMERABILIS RATHVON). U.S. Dept. Agr. Bur. Ent. Cir. 64, 6 p., illus.

Hosts and distribution; habits; life history; parasites and predators; control.

- 1907 THE TERRAPIN SCALE. (EULECANIUM NIGROFASCIATUM PERGANDE). U.S. Dept. Agr. Bur. Ent. Cir. 88, 4 p., illus.

Description; hosts; parasites; control.

- 1909b THE EUONYMUS SCALE. (CHIONASPIS EUONYMI COMSTOCK). U.S. Dept. Agr. Bur. Ent. Cir. 114, 5 p., illus.

Description; hosts and distribution; control.

SANKARAN, T.

- 1962 THE EXTERNAL CHARACTERS OF THE POST-LARVAL STAGES OF THE WAX SCALE, CEROPLASTES PSEUDOCERIFERUS GREEN (HEMIPTERA: COCCIDAE). Indian Jour. Ent. 24: 1-18, illus.

Detailed description; key to immature instars.

- 1965 ANATOMICAL STUDIES OF THE WAX SCALE, CEROPLASTES PSEUDOCERIFERUS GREEN. Zootomical Indian Jour. 6: 1-14, illus.

Studies on alimentary canal and reproductive system.

See Rao, V. P., and Sankaran, T.

SARAIVA, A. C.

- 1939 A PRELIMINARY LIST OF THE INSECT PESTS OF CROPS AND FRUIT TREES IN PORTUGUESE EAST AFRICA. Ent. Soc. South. Africa Jour. 2: 101-114.

Lists 9 coccid spp. in 5 gen. and 4 families; hosts and distribution.

SATTAR, A., see Alam, M. Z., and Sattar, A.

SAVESCU, A.

- 1953 PADUCHII TESTOSI LA PRUN SI COMBATEREA LOR. Repub. Pop. Română Min. Agr. Inst. de Cercet. Agron. Indrumări Teh. 36: 3-46, illus. Description, biology, distribution, and control for *Eulecanium corni*, *E. coryli*, *Sphaerolecanium prunastri*, *Aspidiotus ostreaeformis*, *A. perniciosus*, and *Epidiaspis leperii*.

- 1954 CONTRIBUTII LA STUDIUL BIOLOGIEI SI COMBATERII PADUCHELUI DIN SAN JOSE. [French and Russian summaries.] Bul. Sti., Sect. Sti. Biol. Agr. and Geol. and Geog. 6: 673-707, illus. Description of different stages; biology; hosts and distribution; control.

- 1960 ALBUM DE PROTECTIA PLANTELOR I. DAUNATORII POMILOR, ARBUSTILOR FRUCTIFERI SI VITEI DE VIE. [Introduction separately printed in English, French, German, and Russian.] 270 p., illus. Min. Agr., București. (Coccids p. 117-126, 201-202, 225-226; pls. 8-12, 49, 59.) [Russian translation, 1963, 278 p.] (Coccids p. 127-136.) Recognition with aid of color plates; biology; economic importance of 8 coccid spp. of fruit trees, shrubs, and grapevine.

- 1961 ALBUM DE PROTECTIA PLANTELOR. II. DAUNATORII PLANTELOR DE ORNAMENT SI LEGUMELOR. 90 p., illus. Min. Agr., București. (Coccids p. 15-48, 71-72, 75-76; pls. 74-86, 96, 98.) Recognition with aid of color plates; biology; economic importance of 26 coccid spp. of ornamental plants and vegetables.

SAXENA, D. K., and RAWAT, R. R.

- 1968 BIONOMICS OF DROSICHA MANGIFERAE (GREEN) ON CITRUS INCLUDING NEW RECORD OF ITS THREE NATURAL ENEMIES. Madras Agr. Jour. 55: 309-313.

Life history; seasonal development; damage; natural enemies.

SCHEVESTER, D., see Vasseur, R., and Schevester, D.

SCHLEE, D.

- 1969 DIE VERWANDTSCHAFTSBEZIEHUNGEN INNERHALB DER STERNORRHYNCHA AUFGRUND SYNAPOMORPHER MERKMALE. [English summary.] Stuttgart. Beitr. z. Naturk. 199: 1-19, illus.

Indicates that monophyletic Sternorrhyncha form 2 pairs of intergroups: Psyllina and Aleyrodina, and Aphidina and Coccina, and that Aphidina and Coccina monophyly is proved by 16 synapomorphic features.

- 1969a DER FLUGEL VON SPHAERASPIS (COCCINA), PRINZIPIELL IDENTISCH MIT APHIDINA-FLUGELIN. [English summary.] Stuttgart. Beitr. z. Naturk. 211: 1-11, illus.

Indicates that wing venation of *Sphaeraspis* represents primitive wing type of the Coccina.

SCHMUTTERER, H.

- 1955b ERGEBNISSE VON ZEHRWESPENZUCHTEN AUS SCHILDLAUSEN (HYMENOPTERA: CHALCIDOIDEA). 2. TEIL. Beitr. z. Ent. 5: 510-521.

Includes collection records in south Germany for several coccid spp. serving as hosts of chalcid parasites.

- 1957a DIE MERKMALE DER DEUTSCHEN DECKELSCHILDLAUSE UND IHRE BEDEUTUNG FÜR DIE ARTBESTIMMUNG. Ber. über die 8. Wanderversamml. Deut. Ent. (München, 1957) 1957, p. 148-150.

Discusses morphological characteristics useful in determining higher categories and some spp. of armored scale insects.

- 1958a DIE HONIGTAUERZEUGER MITTELEUROPAS. [English summary.] Ztschr. f. Angew. Ent. 42: 409-419, illus. (Coccids p. 416-418.)

Includes 7 coccid spp. in 3 gen. in discussion of honeydew-producing insects.

SCHREAD, J. C.

- 1961 SCALES AND MEALYBUGS. Conn. Agr. Expt. Sta. Cir. 216, 11 p., illus. Appearance on host plant; injury and control of 7 spp.

SCHUSTER, M. F.

- 1967 RESPONSE OF FORAGE GRASSES TO RHODESGRASS SCALE. Range Mangt. Jour. 20: 307-309.

Records 38 grass spp. affected by scale, 9 spp. infested that were not affected, and 9 that were not infested.

SEABRA, A. F. DE.

- 1917 I—QUELQUES OBSERVATIONS SUR LA COCHENILLE DES FEUILLES DU CACAOYER. Soc. Portug. Sci. Nat. Mem. 3: 3-13, illus.

Describes first-instar nymph, adult male, and female of *Aspidiotus trilobitiformis*.

SELHIME, A. G., see Reed, D. K., Selhime, A. G., and Crittenden, C. R.

SERMAK, W., see Dziedzicka, A., and Sermak, W.

SHIROMA, E. S.

- 1964 NOTES AND EXHIBITIONS. Hawaii. Ent. Soc. Proc. 18 (1963): 351-352.

Clavaspis herculeana new for the State of Hawaii.

- 1966 NOTES AND EXHIBITIONS. Hawaii. Ent. Soc. Proc. 19 (1965): 137.

Mycetaspis personata new for State of Hawaii; *Icerya purchasi* and *Pseudococcus vastator* new for Canton Island, Phoenix group.

- 1969 NOTES AND EXHIBITIONS. Hawaii. Ent. Soc. Proc. 20 (1968): 283.

Plant Quarantine interception records show that *Aspidiotus destructor* was present in State of Hawaii in 1964 and possibly in 1947.

SHMELEV, G. P., see Bazarov, B., and Shmelev, G. P.

SIBLEY, C. H., see Berlowitz, L., Pallotta, D., and Sibley, C. H.

SILVA, A. G. D'ARAUJO E, ET AL.

- 1967 QUARTO CATALOGO DOS INSETOS QUE VIVEM NAS PLANTAS DO BRASIL. SEUS PARASITOS E PREDADORES. PARTE I. Bibliog. Ent. Brasileira (A-K) 1: 1-422. Rio de Janeiro.

Index to author names A-K.

SILVA, A. G. D'ARAUJO E, ET AL.—Continued

- 1967a QUARTO CATALOGO DOS INSETOS QUE VIVEM NAS PLANTAS DO BRASIL. SEUS PARASITOS E PREDADORES. PARTE I. Bibliog. Ent. Brasileira (L-Z) 2: 423-906. Rio de Janeiro.
Index to author names L-Z.
- 1968 QUARTO CATALOGO DOS INSETOS QUE VIVEM NAS PLANTAS DO BRASIL. PARTE II. INSETOS, HOSPEDEIROS E INIMIGOS NATURAIS. V. 1, 622 p. Rio de Janeiro. (Coccids p. 132-200.)
Index to insect names; distribution of spp. in Brazil.
- 1968a QUARTO CATALOGO DOS INSETOS QUE VIVEM NAS PLANTAS DO BRASIL. PARTE II. SEUS PARASITOS E PREDADORES. INDICE DE INSETOS E INDICE DE PLANTAS. V. 2, 265 p. Rio de Janeiro.

SILVA, P.

- 1950 THE COCCIDS OF CACAO IN BAHIA, BRAZIL. Bul. Ent. Res. 41: 119-120.
Lists several spp.

SILVESTRI, F.

- 1934 RASSEGNA DEGLI INSETTI DELL'OLIVO DEL BACINO DEL MEDITERRANEO. XI Internaz. Cong. di Olivicoltura (Lisbona, 1934) Atti 1934, p. 3-42. (Coccids p. 26-29.)
Notes on 18 coccid spp. in 5 families.

SIMMONDS, F. J.

- 1958 THE OLEANDER SCALE, PSEUDAULACASPIS PENTAGONA (TARG.), (HOMOPTERA, COCCIDAE) IN BERMUDA. Bermuda Dept. Agr. Bul. 31, 44 p., illus.
History in Bermuda; incidence; natural enemies.
- 1959 THE GREEN SHIELD SCALE, PULVINARIA PSIDII MASK. (COCCIDAE) IN BERMUDA. Bermuda Dept. Agr. Bul. 32, 21 p.
Gives hosts and distribution; discusses incidence and fluctuation; damage; natural enemies; notes presence of *P. floccifera* in Bermuda.
- 1969 SOME INSECTS AND OTHER ARTHROPODS COLLECTED IN SAO TOME AND PRINCIPE, PORTUGUESE WEST AFRICA. Commonwealth Inst. Biol. Control Tech. Bul. 11: 19-30.
Includes several coccid spp. in 6 families, their hosts, parasites, and predators.

SINHA, P. K.

- 1966 STUDIES ON THE POSTEMBRYONIC DEVELOPMENT OF THE NERVOUS SYSTEM OF CENTROCOCCUS INSOLITUS GREEN (HEMIPTERA: COCCOIDEA). Natl. Acad. Sci., India, Proc., Sect. B, 36: 544-552, illus.

See Srivastava, U. S., and Sinha, P. K.

SMIRNOFF, W.

- 1960 LEPIDOSAPHES BECKII, NEWM. PARASITE DES AGRUMES AU MAROC, AVEC DESCRIPTION D'UNE METHODE D'ETUDE DES COCHENILLES DE LA FAMILLE DES DIASPIDIDAE. Moroc. Cahiers Rech. Agron. 10: 37-68, illus.
Descriptive notes, biology, ecology, and factors limiting populations of *L. beckii*; methods of study applicable to other diaspinines.

SMITH, W. W.

- 1892 COCCIDS IN ANTS' NESTS. Ent. Monthly Mag. 28: 307.
Ripersia formicicola in nests of 3 spp. of *Monomorium*.

SNETSINGER, R.

- 1966 BIOLOGY AND CONTROL OF A ROOT-FEEDING MEALYBUG ON SAINTPAULIA.
 Jour. Econ. Ent. 59: 1077-1078.
 Biology, hosts, distribution, and control of *Rhizoecus pritchardi*.

SOLA, E., *see* Commeau, J., and Sola, E.

SOUKUP, J.

- 1945 LISTA DE ALGUNOS HOMOPTEROS PERUANOS. Bol. Mus. de Hist. Nat.
 "Javier Prado" 9: 274-283.
 Lists 36 coccid spp. with hosts and distribution.

SRIVASTAVA, P. N., and VARSHNEY, R. K.

- 1966 COMPOSITION OF THE HONEYDEW EXCRETED BY THE LAC INSECT, KERRIA
 LACCA (HOMOPTERA: COCCOIDEA). I. FREE AMINO ACIDS. [Dutch
 summary.] Ent. Expt. and Appl. 9: 209-212.
 1968 FREQUENCY OF HONEYDEW EXCRETION IN THE LAC INSECT, KERRIA LACCA
 (KERR) (HOMOPTERA: TACHARDIIDAE). Canad. Jour. Zool. 46: 600-
 601.

SRIVASTAVA, U. S., and SINHA, P. K.

- 1965 ON THE RESPIRATORY SYSTEM OF THE ADULT MALE AND LARVA OF CEN-
 TROCOCCLUS INSOLITUS GREEN (HEMIPTERA: COCCOIDEA). Entomol-
 ogist 98: 280-287, illus.
 1966 THE EYES OF CENTROCOCCLUS INSOLITUS GREEN (HOMOPTERA, COCCOIDEA).
 (1) INTRODUCTION AND EYE STRUCTURE. Entomologist 99: 247-253,
 illus.
 Study of structure of larval, primary, and accessory eyes of male.
 1966a THE EYES OF CENTROCOCCLUS INSOLITUS GREEN (HOMOPTERA, COCCOIDEA).
 (2) DEVELOPMENT OF THE ACCESSORY EYES. Entomologist 99:
 261-268, illus.
 Adult male has 1 pair of primary eyes developing from preexisting
 nymphal ocelli and 2 pairs of accessory eyes, dorsal and ventral pair
 developing de novo.
 1966b THE ALIMENTARY CANAL AND MALPHIGIAN TUBULES OF THE MALE
 CENTROCOCCLUS INSOLITUS GREEN (ADULT AND LARVA) TOGETHER
 WITH OBSERVATIONS ON THE POST-EMBRYONIC DEVELOPMENT OF THE
 SAME. Zool. Anz. 177: 120-133, illus.

STANEZ, M., *see* Tzalev, M.

STANNARD, L. J.

- 1965 POLYMORPHISM IN THE PUTNAM'S SCALE, ASPIDIOTUS ANCYLUS (HOMOP-
 TERA: COCCOIDEA). Ent. Soc. Amer. Ann. 58: 573-576, illus.
A. howardi and *A. comstocki* synonymized under *A. ancylus*.

STEINITZ, H., *see* Bodenheimer, F. S., and Steinitz, H.

STERNLICHT, M.

- 1969 KERMES BYTINSKII N. SPEC. (COCCOIDEA, KERMESIDAE) IN ISRAEL AND
 OBSERVATIONS ON ITS LIFE HISTORY. Israël Jour. Ent. 4: 251-270,
 illus.
 Describes all instars of male and female and gives life history; sep-
 arates 7 spp. of Israeli *Kermes*.

STEVENS, R. M., *see* Szent-Ivany, J. J. H., and Stevens, R. M.

STIMMANN, M. W.

- 1969 SEASONAL HISTORY OF A UNISEXUAL POPULATION OF THE PINE NEEDLE SCALE, PHENACASPIS PINIFOLIAE. Ent. Soc. Amer. Ann. 62: 930-931.

Includes cytological comparison of unisexual and bisexual populations.

STRAND, E.

- 1928 MISCELLANEA NOMENCLATORICA ZOOLOGICA ET PALAEONTOLOGICA. I-II. Arch. f. Naturgesch. 92 (Abt. A, h. 8) (1926): 30-75. (Coccid p. 47.)

Correction of Morrison and Renk 1957 bibliography from 1926 to 1928.

SUGONJAEV, E. S., *see* Danzig, E. M., and Sugonjaev, E. S.

SWEZEY, O. H.

- 1913 SUGAR CANE MEALY BUGS IN THE HAWAIIAN ISLANDS. Hawaii. Planters' Rec. 8: 200-208.

Biology of *Pseudococcus sacchari*, *saccharifolii*, and *bromeliae*; natural enemies.

- 1952 INSECT FAUNA OF A COCONUT TREE. Hawaii. Ent. Soc. Proc. 14 (1951): 377-378.

Lists 4 diaspidids and 1 mealybug and their natural enemies.

SZENT-IVANY, J. J. H.

- 1956 NEW INSECT PEST AND HOST PLANT RECORDS IN THE TERRITORY OF PAPUA AND NEW GUINEA. Papua and New Guinea Agr. Jour. 11: 82-87. (Coccids p. 84-85.)

Hosts and distribution of 25 coccid spp.

- 1960 THE ZOOGEOGRAPHICAL FACTOR IN ECONOMIC ENTOMOLOGY ON PACIFIC ISLANDS WITH SPECIAL REFERENCE TO NEW GUINEA. XI. Internatl. Kong. f. Ent. (Wien, 1960) Verhandl. 1: 534-537. (Also in Papua and New Guinea Sci. Soc. Trans. 2 (1961): 1-11.)

Planococcus dioscoreae is endemic to Papua and New Guinea and is a major pest of yam.

- 1961 INSECT PESTS OF THE THEOBROMA CACAO IN THE TERRITORY OF PAPUA AND NEW GUINEA. Papua and New Guinea Agr. Jour. 13: 127-147, illus.

Discusses 11 coccid spp. in 8 gen.

- 1963 NON-COLEOPTEROUS INSECTS OF COCOS NUCIFERA ON SOUTH PACIFIC ISLANDS, WITH SPECIAL REFERENCE TO THE TERRITORY OF PAPUA AND NEW GUINEA. 9th Pacific Sci. Cong. (Bangkok, 1957) Proc. 9: 67-71.

Notes on *Aspidiotus destructor*.

- 1963a FURTHER RECORDS OF INSECT PESTS OF THEOBROMA CACAO IN THE TERRITORY OF PAPUA AND NEW GUINEA. Papua and New Guinea Agr. Jour. 16: 37-43.

Hosts and distribution of 7 coccid spp. in 7 gen.

See Gressitt, J. L., and Szent-Ivany, J. J. H.

SZENT-IVANY, J. J. H., and ARDLEY, J. H.

- 1962 INSECTS OF SACCHARUM SPP. IN THE TERRITORY OF PAPUA AND NEW GUINEA. Papua and New Guinea Sci. Soc. Trans. 3: 9-17. (Also in 11th Cong. Internatl. Soc. Sugarcane Technol. (Mauritius, 1962) Proc. 1963, p. 690-694.)

Distribution and predators of *Saccharicoccus sacchari*.

SZENT-IVANY, J. J. H., and STEVENS, R. M.

- 1966 INSECTS ASSOCIATED WITH COFFEA ARABICA AND SOME OTHER CROPS IN THE WAU-BULOLO AREA OF NEW GUINEA. Papua and New Guinea Agr. Jour. 18: 101-119, illus.

Discuss 14 coccid spp. in 13 gen.; include biological records and distribution.

SZENT-IVANY, J. J. H., and WOMERSLEY, J. S.

- 1962 FIRST RECORD OF THE GALL-FORMING COCCID GENUS APIOMORPHA RUEBSAAMEN (HEMIPTERA, COCCIDAE) IN PAPUA. Papua and New Guinea Sci. Soc. Trans. 3: 20-22.

A. pedunculata.

TAGHI-ZADEH, F., see Kiriukhin, G., and Taghi-Zadeh, F.

TAKAGI, S.

- 1962a DISCOVERY OF LEPIDOSAPHES FOLIICOLA BORCHSENIUS IN JAPAN (HOMOPTERA: COCCOIDEA). Insecta Matsumurana 25: 50-52, illus.
Includes additional morphological features.

- 1962b RECORDS OF SOME DIASPIDIDAE OF JAPAN. Insecta Matsumurana 25: 52.

New host and distribution records for *Chrysomphalus ficus*, *Metaspidiotus multipori*, *Diaspidiotus naracola*, *Fiorinia nachiensis*, and *Greenaspis yunnanensis*.

- 1962c AONIDIELLA COMPEREI MCKENZIE FROM FORMOSA. Insecta Matsumurana 25: 52.

Taken in Japan on bananas from Takao, Formosa; *A. orientalis* taken on bananas imported from Canton, China.

- 1963 NOMENCLATURE OF A SCALE INSECT. Insecta Matsumurana 25: 123.
Lepidosaphes foliicola Borchsenius 1961 n. syn. of *L. cupressi* Borchsenius 1958.

- 1963a DISCOVERY OF DUPLASPIDIOTUS CLAVIGER IN JAPAN. Insecta Matsumurana 25: 123.

Descriptive note.

- 1963b A NEW SPECIES OF PINNASPIS FROM THE PHILIPPINES (HOMOPTERA: COCCOIDEA). Insecta Matsumurana 25: 137-138, illus.

P. musae.

- 1963c NOTES ON THE ASPIDISTRAE-COMPLEX OF PINNASPIS, WITH DESCRIPTION OF A NEW SPECIES (HOMOPTERA: COCCOIDEA). Insecta Matsumurana 26: 64-68, illus.

P. piperis n. sp.; key to 5 spp.

- 1963d DISCOVERY OF FIORINIA EXTERNA FERRIS IN JAPAN (HOMOPTERA: COCCOIDEA). Insecta Matsumurana 26: 115-117, illus.

Descriptive note.

TAKAGI, S.—Continued

- 1963e A NEW GENUS FOR RECEPTION OF THREE AMERICAN SCALE INSECTS HITHERTO REFERRED TO DUPLACHIONASPIS (HOMOPTERA: COCCOIDEA). *Insecta Matsumurana* 26: 118-121, illus.
Proposes *Haliaspis* n. gen. for reception of *D. spartinae*, *distichlii*, and *litoralis*; redescribes these and *boquetensis*.
- 1965 ON THE SCALE INSECTS OF THE GENUS AULACASPIS FROM THE RYUKYUS (HOMOPTERA: COCCOIDEA). *Kontyû* 33: 39-41, illus.
A. takarai and *A. isobeae* n. spp.; lists *A. amamiana*, *distylii*, and *yabunikkei*.
- 1965a THREE NEW SCALE INSECTS OF PINNASPIS (HOMOPTERA: COCCOIDEA). *Kontyû* 33: 446-451, illus.
P. muntingi, *yamamotoi*, and *sciadopityos* n. spp.; further description of *P. aspidistrae* and *P. strachani*.
- 1966 RECORDS OF SOME PINNASPIS-SPECIES OF JAPAN. *Insecta Matsumurana* 28: 119-120.
Collection records for *P. juniperi* and *P. boehmeriae*; morphological notes on *P. chamaecyparidis*, *hikosana*, and *piperis*.
- 1967 EXAMINATIONS OF THE TYPE SLIDES OF THREE DIASPIDIDAE DESCRIBED FROM JAPAN (HOMOPTERA: COCCOIDEA). *Insecta Matsumurana* 30: 52-55, illus.
Further descriptions of *Chionaspis kiushiuensis*, *Aulacaspis waka-yamaensis*, and *Aspidiotus corticispini*.
- 1967a AN ADDITIONAL NOTE ON DIMORPHISM IN CHIONASPIS NYSSAE. *Insecta Matsumurana* 30: 55-56.
Indicates that *C. nyssae* and *C. sylvatica* are 2 forms of 1 sp., 1 associated with leaves and 1 with woody parts of host; further description.
- 1969 A NEW SPECIES OF CHIONASPIS FROM FLORIDA (HOMOPTERA: COCCOIDEA). *Kontyû* 37: 269-271, illus.
C. floridensis.
- 1969a DIASPIDIDAE OF TAIWAN BASED ON MATERIAL COLLECTED IN CONNECTION WITH THE JAPAN-U.S. CO-OPERATIVE SCIENCE PROGRAMME, 1965 (HOMOPTERA: COCCOIDEA). PART I. *Insecta Matsumurana* 32: 1-110, illus.
Describes 3 n. gen. and 15 n. spp.; names 4 other n. gen. and 25 n. spp. (nomina nuda); redescribes or notes 20 gen. and 34 spp.; lists 31 additional gen. and 51 spp.; evolutionary patterns; higher group characteristics.

TAKAGI, S., and KAWAI, S.

- 1966 SOME DIASPIDIDAE OF JAPAN (HOMOPTERA: COCCOIDEA). *Insecta Matsumurana* 28: 93-119, illus.
Clavaspidotus and *Japaspidotus* n. gen.; 21 n. spp.; further descriptions or notes on other gen. and spp.; several spp. new for Japan.

TAKAGI, S., and KAWAI, S.—Continued

- 1967 THE GENERA CHIONASPIS AND PSEUDAUACASPIS WITH A CRITICISM ON PHENACASPIS (HOMOPTERA: COCCOIDEA). *Insecta Matsumurana* 30: 29–43, illus.

C. kosztarabi n. sp.; *Phenacaspis* n. syn. of *Chionaspis*; North American and some Asiatic spp. of *Phenacaspis* form aggregate of dimorphic forms of *Chionuspis*; some spp. of *Phenacaspis* transferred to *Pseudaulacaspis*.

TAKAHASHI, R.

- 1936e FLATTENING OF THE BODY IN THE INSECTS OF THE STERNORRHYNCHA, HEMIPTERA. [In Japanese. English summary.] *Zool. Mag. (Japan)* 48: 469–473, illus.

Includes 7 coccid gen.

- 1955f SOME SCALE INSECTS OF THE LOOCHOO ISLANDS (HOMOPTERA). *Biogeog. Soc. Japan Bul.* 16–19: 238–242, illus.

Change in Morrison and Morrison 1965 first supplement to bibliography from 1955 to 1955f.

TAKEZAWA, H., and UCHIDA, M.

- 1969 RELATIONSHIP BETWEEN THE OVARIAL DEVELOPMENT AND THE APPEARANCE OF NYMPHS IN ARROWHEAD SCALE, WITH SPECIAL REFERENCE TO ITS APPLICATION TO FORECASTING. [In Japanese. English summary.] *Jap. Jour. Appl. Ent. and Zool.* 13: 31–39.

Studied *Unaspis yanonensis*.

TAMAKI, Y.

- 1963 PRELIMINARY STUDIES ON WAX MATERIAL AND HONEYDEW EXCRETION OF CEROPLASTES PSEUDOCERIFERUS (GREEN) (HOMOPTERA). [In Japanese.] *Jap. Jour. Appl. Ent. and Zool.* 7: 355–357, illus.

- 1964 AMINO ACIDS IN THE HONEYDEW EXCRETED BY CEROPLASTES PSEUDOCERIFERUS (GREEN). [Japanese summary.] *Jap. Jour. Appl. Ent. and Zool.* 8: 159–164, illus.

- 1964a CARBOHYDRATES IN THE HONEYDEW EXCRETED BY CEROPLASTES PSEUDOCERIFERUS (GREEN). [Japanese summary.] *Jap. Jour. Appl. Ent. and Zool.* 8: 227–234, illus.

- 1966 CHEMICAL COMPOSITION OF THE WAX SECRETED BY A SCALE INSECT (CEROPLASTES PSEUDOCERIFERUS GREEN). *Lipids* 1: 297–300.

- 1969 WAXY COVERING OF SCALE INSECTS—SECRETION, CONSTRUCTION AND CHEMICAL NATURES. [In Japanese.] *Botyu-Kagaku* 34: 86–96, illus.

Treats spp. in several families.

See Kawai, S., and Tamaki, Y.

TAMAKI, Y., and KAWAI, S.

- 1966 SEASONAL CHANGES OF THE WAXY COVERING AND ITS COMPONENTS OF A SCALE INSECT, CEROPLASTES PSEUDOCERIFERUS GREEN. [Japanese summary.] *Botyu-Kagaku* 31: 148–153, illus.

Discuss quantitative and qualitative change of waxy covering during growth and biological significance of aqueous substance in covering.

TAMAKI, Y., and KAWAI, S.—Continued

- 1967 FATTY ACIDS, ALCOHOLS AND HYDROCARBONS IN THE BODY LIPID OF CEROPLASTES PSEUDOCERIFERUS GREEN, CEROPLASTES JAPONICUS GREEN, AND CEROPLASTES RUBENS MASKELL (HOMOPTERA: COCCIDAE). [Japanese summary.] Botyu-Kagaku 32: 63-69.
- 1968 FATTY ACIDS, ALCOHOLS AND HYDROCARBONS IN THE WAXY COVERING OF CEROPLASTES PSEUDOCERIFERUS GREEN, CEROPLASTES JAPONICUS GREEN, AND CEROPLASTES RUBENS MASKELL (HOMOPTERA: COCCIDAE). [In Japanese. English summary.] Jap. Jour. Appl. Ent. and Zool. 12: 23-28.
- 1969 X-RAY DIFFRACTION STUDIES ON WAXY COVERING OF SCALE INSECTS (HOMOPTERA: COCCOIDEA). Appl. Ent. and Zool. (Japan) 4: 79-86, illus.
Studies include spp. of Coccidae, Diaspididae, and Kermidae; most waxy coverings contained some crystalline substances.

TAMAKI, Y., YUSHIMA, T., and KAWAI, S.

- 1969 WAX SECRETION IN A SCALE INSECT, CEROPLASTES PSEUDOCERIFERUS GREEN (HOMOPTERA: COCCIDAE). Appl. Ent. and Zool. (Japan) 4: 126-134, illus.
External features of waxy covering, dermal glands, and integument observed with scanning electron microscope.

TAPIA, E. A.

- 1967 DOS COCHINILLAS NUEVAS PARA LA ARGENTINA. Argentina Inst. Patol. Veg. Hoja Inform. 7: 1.
Platinglisia noacki and *Lepidosaphes gloverii*.

TARGIONI TOZZETTI, A.

- 1891 COCCINIGLIE DEGLI AGRUMI IN ITALIA E SPECIALMENTE IN SICILIA. SECONDO LE NOTIZIE RACCOLTE, LE OSSERVAZIONI E LE ESPERIENZE. 32 p., illus. R. Staz. di Ent. Agr. di Firenze.
Redescribes several coccid spp.; predators; control.

TASHIRO, H.

- 1966 IMPROVED LABORATORY TECHNIQUES FOR REARING CALIFORNIA RED SCALE ON LEMONS. Ent. Soc. Amer. Ann. 59: 604-608, illus.

TASHIRO, H., and BEAVERS, J. B.

- 1968 GROWTH AND DEVELOPMENT OF THE CALIFORNIA RED SCALE, AONIDIELLA AURANTII. Ent. Soc. Amer. Ann. 61: 1009-1014, illus.
Reared in laboratory; correlated growth and development between 2 sexes.

TASHIRO, H., BEAVERS, J. B., and MORENO, D.

- 1969 COMPARATIVE RESPONSE OF TWO STRAINS OF CALIFORNIA RED SCALE, AONIDIELLA AURANTII, MALES TO PHEROMONE EXTRACT AND TO FEMALES OF THE RECIPROCAL STRAIN. Ent. Soc. Amer. Ann. 62: 279-280.

TASHIRO, H., and CHAMBERS, D. L.

- 1967 REPRODUCTION IN THE CALIFORNIA RED SCALE, *AONIDIELLA AURANTII* (HOMOPTERA: DIASPIDIDAE). I. DISCOVERY AND EXTRACTION OF A FEMALE SEX PHEROMONE. Ent. Soc. Amer. Ann. 60: 1166-1170, illus.

TASHIRO, H., CHAMBERS, D. L., MORENO, D., and BEAVERS, J. B.

- 1969 REPRODUCTION IN THE CALIFORNIA RED SCALE, *AONIDIELLA AURANTII*. III. DEVELOPMENT OF AN OLFACTOMETER FOR BIOASSAY OF THE FEMALE SEX PHEROMONE. Ent. Soc. Amer. Ann. 62: 935-940, illus.

TASHIRO, H., and MOFFITT, C.

- 1968 REPRODUCTION IN THE CALIFORNIA RED SCALE, *AONIDIELLA AURANTII*. II. MATING BEHAVIOR AND POSTINSEMINATION FEMALE CHANGES. Ent. Soc. Amer. Ann. 61: 1014-1020, illus.

TAWFIK, M. F. S.

- 1969 MICROFAUNA OF THE LEAF-ROLLS OF *FICUS NITIDA* THUNB.-HORT. Soc. Ent. d'Egypte Bul. 51 (1967): 483-487.

Lists 5 coccid spp. in 4 families associated with *Gynaikothrips ficorum* in *F. nitida* leaf rolls.

See Azab, A. K., Tawfik, M. F. S., and Ezz, A. I.

TENORIO, J. A.

- 1969 NOTES AND EXHIBITIONS. Hawaii. Ent. Soc. Proc. 20 (1968): 279.
First record of *Aspidiotus destructor* for State of Hawaii.

TEOTIA, T. P. S.

- 1964 LAC INSECT. In Entomology in India. Indian Jour. Ent. Silver Jubilee Number 1964, p. 513-529. New Delhi Pub. Ent. Soc. India. Taxonomy of family Lacciferidae; biology; anatomy and physiology; natural enemies; lac cultivation; 82 literature citations.

See Varshney, R. K., and Teotia, T. P. S.

TEOTIA, T. P. S., and CHAUHAN, N. S.

- 1964 A CONTRIBUTION TO THE STUDY OF REPRODUCTION IN THE LAC INSECT, LACCIFER LACCA (KERR). (LACCIFERIDAE: HOMOPTERA). Indian Jour. Ent. 26: 411-416, illus.

State that there is no effective parthenogenesis in *L. lacca*.

TEREZNIKOVA, E. M.

- 1959 SCALE INSECTS OF CEREALS (HOMOPTERA, COCCOIDEA). [In Russian.] Akad. Nauk SSSR, Tezisi Dok. 1: 178-180.

Mentions 20 spp., 11 gen., and 3 families.

- 1959a DISTRIBUTION OF SCALE INSECTS (INSECTA, HOMOPTERA, COCCOIDEA) BY LIFE ZONES IN THE FORESTS OF THE TRANSCARPATHIAN REGION. [In Ukrainian. Russian and English summaries.] Akad. Nauk Ukrain. RSR Dopovidi 4: 446-450.

Records 36 spp. in 23 gen. and 6 families.

TEREZNIKOVA, E. M.—Continued

- 1959b ZOOGEOGRAPHICAL CHARACTERISTICS OF THE SCALE INSECT FAUNA (INSECTA, HOMOPTERA, COCCOIDEA) OF THE TRANSCARPATHIAN REGION. [In Ukrainian. Russian and English summaries.] Akad. Nauk Ukrain. RSR Dopovidi 7: 795-799.
Reports no endemic spp.; most are European-Siberian elements, some Mediterranean, and 1 sp. Pan-Palaeartic.
- 1959c STUDY OF TROPHIC ASSOCIATIONS OF SOFT AND ARMORED SCALES (HOMOPTERA, COCCOIDEA). [In Ukrainian.] *In Problemi Entomologii na Ukraini*, p. 92-93. Akad. Nauk Ukrain. RSR, Kiev.
Classifies fauna of Transcarpathian oblast as polyphagous, oligophagous, and monophagous; reports preference for particular parts of host plants.
- 1960 SOFT AND ARMORED SCALES (HOMOPTERA, COCCOIDEA)—FRUIT PESTS OF THE TRANSCARPATHIAN REGION. [In Ukrainian. Russian and English summaries.] Akad. Nauk Ukrain. RSR Dopovidi 1: 110-114.
Lists 6 spp. as constant pests of fruit trees and 6 additional spp. normally living on other host plants that can live on and injure fruit trees.
- 1960a ON THE BIOLOGY OF SOFT AND ARMORED SCALE INSECTS (INSECTA, HOMOPTERA, COCCOIDEA) UNDER CONDITIONS OF THE TRANSCARPATHIAN REGION. [In Ukrainian. Russian and English summaries.] Akad. Nauk Ukrain. RSR Dopovidi 4: 536-539.
Development studied in mountain and lowland conditions; 27 spp. mentioned.
- 1963 TROPHIC ASSOCIATIONS OF SCALE INSECTS (INSECTA, HOMOPTERA, COCCOIDEA) OF THE TRANSCARPATHIAN REGION. [In Russian.] *In Flora i Fauna Karpat* 2: 182-191. Akad. Nauk SSSR, Kiev.
Lists numerous coccid spp. under host plants.
- 1963a ECOLOGIC-FAUNISTIC SURVEY OF SCALE INSECTS (HOMOPTERA, COCCOIDEA) OF THE UKRAINIAN WOODLANDS. [In Ukrainian. Russian summary.] *In Materials for Ukrainian Entomology*. Akad. Nauk Ukrain. RSR, Inst. Zool. Trudy 19: 41-57, illus.
54 spp. in 37 gen. and 8 families; redescribes some spp.; hosts.
- 1963b A PRELIMINARY ECOLOGIC-FAUNISTIC REVIEW OF THE COCCIDS (COCCOIDEA) OF THE KANEVSK FOREST PRESERVE. [In Russian.] *Sborn. Rabot Lab. Arakhno-Ent.* Kiev. Univ. 1963, p. 151-157.
Reports 25 spp. in 18 gen. and 5 families.
- 1963c ECOLOGIC-GEOGRAPHIC GROUPS OF COCCIDS (HOMOPTERA, COCCOIDEA) OF THE UKRAINIAN WOODLANDS. [In Ukrainian. English summary.] Akad. Nauk Ukrain. RSR Dopovidi 11: 1527-1529.
Reports no endemic sp.; most are from central Europe, some others from mixed forests, taiga, steppe, and Mediterranean.
- 1964 CHARACTERISTICS OF THE ECOLOGY OF SOFT AND ARMORED SCALE INSECTS (HOMOPTERA, COCCOIDEA) OF THE UKRAINIAN WOODLANDS. [In Ukrainian. Russian summary.] *In Kasianenko, V. G., et al., Ecology and Geographical Distribution of Arthropods*. Akad. Nauk Ukrain. RSR, Inst. Zool. Trudy 20: 91-97.
Lists spp. of 5 biotopes.

TEREZNIKOVA, E. M.—Continued

- 1965 NEW SPECIES OF THE GENUS *GREENISCA* BORCHS. (COCCOIDEA, ERIOCOC-
CIDAE). [In Ukrainian. English summary.] Akad. Nauk Ukrain.
RSR Dopovidi 7: 957-959, illus.
G. laeticoris from Ukraine.
- 1966 ECOLOGIC-FAUNISTIC SURVEY OF THE SCALE INSECTS (HOMOPTERA,
COCCOIDEA) OF THE TRANSCARPATHIAN REGION. [In Ukrainian.
Russian summary.] Akad. Nauk Ukrain. RSR Ser. Prob. Zool.
1966, p. 20-37, illus.
80 spp. in 47 gen. and 7 families; some descriptive notes; hosts.
- 1966a PHENOLOGICAL OBSERVATIONS ON COCCOIDEA OF THE UKRAINIAN WOOD-
LANDS. [In Ukrainian. English summary.] Akad. Nauk Ukrain.
RSR Dopovidi 4: 542-545.
Data on periods of development of 21 spp.
- 1966b ECONOMIC IMPORTANCE OF COCCIDS (INSECTA, HOMOPTERA, COCCOIDEA)
OF THE UKRAINIAN WOODLANDS. [In Ukrainian. Russian and
English summaries.] Akad. Nauk Ukrain. RSR Dopovidi 5:
678-681.
Lists coccids of economic importance under host plants.
- 1966c FOOD PLANTS OF COCCIDAE OF THE UKRAINIAN WOODLANDS. [In
Ukrainian. Russian and English summaries.] Akad. Nauk
Ukrain. RSR Dopovidi 7: 961-965.
Records 41 host plants in 16 families; notes host specificity of
some spp.
- 1967 REDESCRIPTION OF THE GENUS *PSILOCOCCUS* BORCHS. (HOMOPTERA,
COCCOIDEA) OF THE USSR FAUNA. [In Russian. English summary.]
Vest. Zool. 4: 22-27, illus.
Redescribes *P. ruber* and *P. parvus*.
- 1967a GEOGRAPHICAL CHARACTERISTICS OF COCCIDS IN THE CRIMEA (INSECTA,
HOMOPTERA, COCCOIDEA). [In Ukrainian. Russian and English
summaries.] Akad. Nauk Ukrain. RSR Dopovidi 1967, p. 473-476.
Lists numerous spp., most of European origin; only *Pseudococcus*
jailaensis is endemic to Crimea.
- 1967b PHENOLOGICAL OBSERVATIONS ON SCALE INSECTS (INSECTA, HOMOPTERA,
COCCOIDEA) IN CRIMEA. [In Ukrainian. Russian and English
summaries.] Akad. Nauk Ukrain. RSR Dopovidi 1967, p. 560-563.
Discusses 34 spp. in 26 gen. and 6 families.
- 1968 A NEW SPECIES OF THE GENUS *SPINOCOCCUS* KIR. (COCCOIDEA, PSEU-
DOCOCCIDAE). [In Ukrainian. Russian and English summaries.]
Akad. Nauk Ukrain. RSR Sup. Ser. B, v. 3, p. 281-283, illus.
S. artemisiae.
- 1968a A NEW SPECIES OF *RHIZOECUS* KUNCK. (COCCOIDEA, PSEUDOCOCCIDAE).
[In Ukrainian. Russian and English summaries.] Akad. Nauk
Ukrain. RSR Sup. Ser. B, v. 4, p. 377-379, illus.
R. pallidus.
- 1968b REVIEW OF THE COCCOIDEA (INSECTA, HOMOPTERA) FAUNA OF THE
CRIMEA ACCORDING TO LIFE ZONES. [In Russian. English sum-
mary.] Vest. Zool. 2: 46-51.

TEREZHNIKOVA, E. M.—Continued

- 1968c FOOD PLANTS OF THE COCCOIDEA (HOMOPTERA) OF THE CRIMEA. [In Russian. English summary.] Vest. Zool. 3: 44–53.
Lists 147 host plants belonging to 48 families.
- 1968d A NEW SPECIES OF PAROUDABLIIS CKLL. (COCCOIDEA, PSEUDOCOCCIDAE). [In Ukrainian. Russian and English summaries.] Akad. Nauk Ukrain. RSR Dopovidi Ser. B, v. 5, p. 472–475, illus.
P. graminis.
- 1969 COCCOIDEA—PESTS OF AGRICULTURAL PLANTS IN WESTERN REGIONS OF THE UKRAINE. [In Russian. English summary.] Vest. Zool. 1: 60–65.
Discusses 18 spp. in 14 gen.; hosts.

TER-GRIGORIAN, M. A.

- 1946 THE GLOBOSE SOFT SCALE INSECT (SPHAEROLECANIUM UNIFASCIATUM) IN ARMENIA. [In Russian. Armenian and English summaries.] Akad. Nauk Armianskoi SSR Dok. 5: 145–148.
Description; biology; pest of peach, almond, and fig.
- 1951 PEST COCCIDS OF FRUIT TREES. [In Armenian.] 38 p., illus. Akad. Nauk Armianskoi SSR.
Short descriptions; biology; natural enemies.
- 1953 ARMENIAN COMMA SCALE INSECT AND ITS CONTROL. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Izv. 6: 79–88, illus.
Lepidosaphes malicola morphology, biology, and control.
- 1956a THE MEALYBUG (PHENACOCCLUS TERGRIGORIANAE BORCHS.) PEST OF CEREAL PLANTS IN THE ARMENIAN SSR. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Izv. 9: 57–62, illus.
Description; biology; hosts.
- 1963 A NEW SPECIES OF MEALYBUG (HOMOPTERA, COCCOIDEA, PSEUDOCOCCIDAE) IN ARMENIA. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Dok. 36: 123–128, illus.
Phenacoccus affinis n. sp.; redescribes *P. karaberdii*.
- 1964 NEW SPECIES OF MEALYBUGS (HOMOPTERA, COCCOIDEA, PSEUDOCOCCIDAE) FROM MOUNTAIN-STEPPE AND ALPINE ZONES OF ARMENIA. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Dok. 38: 181–188, illus.
Pseudococcus saxatilis, *P. arakelianae*, and *Phenacoccus juniperi*.
- 1964a NEW GENERA OF MEALYBUGS (HOMOPTERA, PSEUDOCOCCIDAE) FROM ARMENIA. [In Russian.] Ent. Obozr. 43: 858–863, illus. [Translation, Ent. Rev. 43: 439–441, illus.]
Eumirococcus n. gen., *E. borchsenii* n. sp., *Pararhodania* n. gen., *P. armena* n. sp., *Densispina* n. gen., and *D. graminea* n. sp.
- 1964b NEW SPECIES OF MEALYBUGS (HOMOPTERA, COCCOIDEA, PSEUDOCOCCIDAE) IN ARMENIA. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Dok. 38: 245–249, illus.
Mirococcopsis avetianae and *Mirococcus ashtarakensis*.

TER-GRIGORIAN, M. A.—Continued

- 1966 FAUNA OF MEALYBUG (PSEUDOCOCCIDAE) PESTS OF CEREAL PLANTS IN ARMENIA. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Biol. Zhur. Armenii 19: 84-92.
Distribution, ecological and biological records for 34 spp.
- 1966a HARMFUL COCCIDS OF CULTIVATED PLANTS AND FOREST TREE VARIETIES IN THE ARMENIAN SSR. [In Russian.] In Ibragimov, G. R., et al., Materialji Sessii Zakavkazskogo Soveta po Koordinatzii Nauchno-Issledovatel'skikh Rabot Zashite Rastenii. Akad. Nauk Azerb. SSR 1966, p. 371-373.
Lists spp. under host plants.
- 1967 NEW SPECIES OF MEALYBUGS (COCCOIDEA, PSEUDOCOCCIDAE) FROM THE MOUNTAIN-STEPPE ZONE OF ARMENIA. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Dok. 44: 91-95, illus.
Mirococcus affinis and *Rhizoecus desertus*.
- 1967a TWO NEW SPECIES OF THE GENUS HELIOCOCCUS SULC (COCCOIDEA, PSEUDOCOCCIDAE) FROM ARMENIA. [In Russian. Armenian summary.] Akad. Nauk Armianskoi SSR Dok. 44: 134-138, illus.
H. artemisiae and *H. kehejanae* n. spp. compared with *H. caucasicus*.
- 1969 DISTRIBUTION OF MEALYBUGS (PSEUDOCOCCIDAE) IN THE LIFE ZONES OF ARMENIA. [In Russian.] Anniversary Sess. on Armenian SSR Fauna. Presentation at 25th Anniversary of Armenian SSR Akad. Sci. Tezisy Dok. Erevan, p. 52-54.
- 1969a PEST COCCIDS OF CULTIVATED PLANTS IN ARMENIA AND METHODS OF CONTROL. [In Armenian.] 118 p., illus. Aiastan, Erevan.
Short descriptions; keys to spp.

THEOBALD, F. V.

- 1904 EGYPTIAN COCCIDAE. In 2d Rpt. Econ. Zool. Brit. Mus. (Nat. Hist.) App., p. 185-189, illus.
Diaspis squamosus Newstead and Theobald n. sp.; notes on 11 other spp. in 7 gen.

THERON, J. G.

- 1968 STUDIES ON THE MORPHOLOGY AND RELATIONSHIPS OF MALE APIOMORPHA AND OPISTHOSCELIS (HEMIPTERA: COCCOIDEA). Austral. Jour. Zool. 16: 87-99, illus.
Both genera belong to lecanoid group of Coccoidea, but their relationship to various families of lecanoid group is uncertain; they show some affinity with Eriococcidae.

THOMSEN, M., BUCHWALD, N. F., and HAUBERG, P.

- 1949 ANGREB AF CRYPTOCOCCUS FAGI, NECTRIA GALLIGENA OG ANDRE PARASITER PAA BOG I DANMARK 1939-43. [English summary.] Det Forstl. Forsøgsv. i Danmark 18: 97-326, illus.
Distribution in Denmark; bionomics; control.

THOMSON, R. H.

- 1960 INSECT PIGMENTS. Symp. 3. XI. Internatl. Kong. f. Ent. (Wien, 1960) Verhandl. 3: 21-43. (Coccids p. 26-28.)
Includes chemical formula diagrams for colors of *Dactylopius coccus*, *Kermes ilicis*, and *Laccifer lacca*.

THORNE, F. T.

- 1948 ADDITIONAL HOST RECORDS FOR THE SCALE PARLATORIA THEAE IN CALIFORNIA. Jour. Econ. Ent. 41: 649.
Lists 5 previously unrecorded hosts.

THORPE, W. H.

- 1967 ORTHEZIA CATAPHRACTA (SHAW) (HEM., COCCIDAE) FEEDING ON A BASIDIOMYCETE FUNGUS, COLLYBIA SP. Ent. Monthly Mag. 103: 155.
First record of *Orthezia* on mushrooms.

THUNEBERG, E.

- 1966 BEITRAGE ZUR KENNTNIS DER FINNISCHEN BLATT-UND SCHILDLAUSE (HOM. APHIDOIDEA ET COCCOIDEA) SOWIE DEREN PARASITEN. IV. Ann. Ent. Fenn. 32: 153-158.
Includes collection records for *Orthezia urticae*, *Heliococcus bohemicus*, and *Pseudococcus vovae*.

TIKHONOV, N. P.

- 1966 QUARANTINE PESTS OF FRUIT-BERRY CROPS AND VINEYARDS IN THE RSFSR. [In Russian.] 110 p., illus. Moscow.
Includes several coccids; short descriptions of various stages; life cycles; distribution; control.

TIMLIN, J. S.

- 1964 THE DISTRIBUTION AND RELATIVE IMPORTANCE OF SOME ARMoured SCALE INSECTS ON PIP FRUIT IN THE NELSON/MARLBOROUGH ORCHARDS DURING 1959/60. New Zeal. Jour. Agr. Res. 7: 531-535, illus.
Records *Quadraspidotus perniciosus*, *Parlatoria pittospori*, *Lepidosaphes ulmi*, and *Lindingaspis rossi*; *L. rossi* new on apple fruit in New Zealand.

TIPPINS, H. H.

- 1968 OBSERVATIONS ON PHENACASPIS COCKERELLI (COOLEY) (HOMOPTERA: DIASPIDIDAE), A PEST OF ORNAMENTAL PLANTS IN GEORGIA. Ga. Ent. Soc. Jour. 3: 13-15, illus.
Biology; hosts and distribution; notes on coccinellid predator.
1968a A NEW SPECIES OF AONIDOMYITILUS FROM ALABAMA (HOMOPTERA: DIASPIDIDAE). Ga. Ent. Soc. Jour. 3: 167-169, illus.
A. sabatius.

TIPPINS, H. H., and BESHEAR, R. J.

- 1968 VARIATIONS IN THE NUMBER AND GROUPINGS OF DISC PORES IN COM-STOCKIELLA SABALIS (COMST.) (HOMOPTERA: DIASPIDIDAE). Ga. Ent. Soc. Jour. 3: 67-69, illus.
Recognize 4 types based on number of perivulvar pore groups and on number of pores in each group.

TIPPINS, H. H., and BESHEAR, R. J.—Continued

- 1968a SCALE INSECTS (HOMOPTERA: COCCOIDEA) FROM GRASSES IN GEORGIA. Ga. Ent. Soc. Jour. 3: 134-136.
Notes on 16 spp. in 11 gen.
- 1969 NEW COLLECTION RECORDS FOR NIVEASPIDILICIS (HOKE), (HOMOPTERA: DIASPIDIDAE). Ent. News 80: 304.
New hosts and localities in Georgia.

TOMLIN, B.

- 1892 CHIONASPIS VACCINII, BOUCHE. Ent. Monthly Mag. 28: 289.
On stems instead of leaves of *Vaccinium*; identified by Newstead.

TRABOULSI, R., and BENASSY, C.

- 1965 LES COCHENILLES DES AGRUMES AU LIBAN ET LEURS PARASITES NATURELS. [English summary.] Magon (Ser. Sci.) 5: 1-13.
List 11 spp. in 4 families and parasites of 8 injurious coccid spp. encountered in citrus orchards of Lebanon.

TREHAN, K. N., and PINGLE, S. V.

- 1946 ANNOTATED LIST OF CROP PESTS IN THE BOMBAY PROVINCE. Bombay Nat. Hist. Soc. Jour. 46: 139-153.
List coccids under host plants.

TREMBLAY, E.

- 1960b BEOBACHTUNGEN UBER DAS SCHICKSAL DER RICHTUNGSKORPER UND DIE ENDOSYMBIOSE BEI EINIGEN COCCIDEN. XI. Internatl. Kong. f. Ent. (Wien, 1960) Verhandl. 1: 415-418, illus.
- 1969 I CASI DI MACRO-TRASMISSIONE EREDITARIA DELL'ENDOSIMBIOSI NEGLI INSETTI. [English summary.] Soc. Ent. Ital. Mem. 48: 17-24, illus.
Includes *Pseudaulacaspis pentagona* and *Macrocerococcus superbus* in study.

See Hughes-Schrader, S., and Tremblay, E.

TRIKOJUS, V. M., see Hackman, R. H., and Trikojus, V. M.

TRIMBLE, F. M.

- 1925 SCALE INSECTS INJURIOUS IN PENNSYLVANIA. Pa. Dept. Agr. Bul. 8, 21 p., illus.
Notes on 24 spp. in 16 gen.; hosts; control.

TRYON, H.

- 1897 SCALE INSECTS—COCCIDAE. Queensland Agr. Jour. 1: 118-129, illus.
General discussion of several pest spp.

TULSYAN, G. P.

- 1963 STUDIES ON THE CHROMOSOME NUMBER AND SPERMATOGENESIS IN THE LAC INSECT, LACCIFER LACCA (KERR). Current Sci. [India] 32: 374-375, illus.
Indicates chromosome number is 17 in males and 18 in females.
- 1965 ON THE ABSENCE OF MALES IN ICERYA AEGYPTIACA DOUGLAS (COCCOIDEA: MARGARODIDAE). Entomologist 98: 104-106.
Denotes type of parthenogenesis as "obligatory haplodiploid amphitokous."

TULSYAN, G. P.—Continued

- 1966 ON THE GLANDULAR FUNCTIONS OF THE SPERMATHECA IN LACCIFER LACCA (KERR). (LACCIFERIDAE: COCCOIDEA). Ann. and Mag. Nat. Hist. (ser. 13) 9: 681-688, illus.

See Bose, K. C., and Tulsyan, G. P.

TZALEV, M. [STANEV, M. Z., STANEV, M. IS., TSALEV, M., ZALEV, M.]

- 1964 KERMES NEW FOR THE FAUNA OF BULGARIA. [In Bulgarian.] Rast. Zashch. 12 (2): 23-26, illus.

Kermococcus gibbosus, *quercus*, and *roboris*; descriptive and biological notes.

- 1964a NEW SCALE INSECTS ESTABLISHED ON PLANTS IN GREENHOUSES. [In Bulgarian. Russian and English summaries.] Rast. Zashch. 12 (8): 16-20, illus.

Hemiberlesia rapax, *H. lataniae*, *Abgrallaspis cyanophylli*, *Gymnaspis aechmeae*, and *Pinnaspis aspidistrae* new for Bulgaria; descriptive notes; hosts.

- 1964b NEW SCALE INSECTS ESTABLISHED ON PLANTS IN GREENHOUSES IN THIS COUNTRY [BULGARIA]. [In Bulgarian. Russian and English summaries.] Rast. Zashch. 12 (9): 15-20, illus.

Diaspis boisduvalii, *D. bromeliae*, *Chrysomphalus dictyospermi*, *Parlatoria proteus*, and *P. pergandii* new for Bulgaria; descriptive notes; hosts.

- 1965 PARASITES OF SCALE INSECTS OF THE GENUS PARTHENOLECANIUM SULC IN BULGARIA. [In Bulgarian.] Rast. Zashch. 13 (5): 25.

Includes notes on 5 spp. of *Parthenolecanium*; hosts and economic importance; first record for *P. fletcheri* and *P. pomeranicum* in Bulgaria.

- 1967 BEITRAG ZUR BIOLOGIE DER KOMMALAUS/LEPIDOSAPHES POPULI SAV. (COCCOIDEA) DIASPIDINAE/UND IHRE BEKAMPFUNG. [In Bulgarian. German summary.] Akad. na Selsk. Nauki Gorskostopanska Nauka (Forest Sci. 4(3): 5-36, illus.

Notes on biology, hosts, natural enemies.

TZALEV, M., and VALCHEVA, M.

- 1965 THE QUADRASPIDIOTUS MARANI ZHR. [In Bulgarian.] Rast. Zashch. 13 (4): 22-25, illus.

Redescription; compared with *Q. piri*; biology and habits; hosts; parasites; records for Bulgaria.

UCHIDA, M., see Takezawa, H., and Uchida, M.

UNDERHILL, G. W.

- 1943 SOME INSECT PESTS OF ORNAMENTAL PLANTS. Va. Polytech. Inst. Agr. Expt. Sta. Bul. 349, 38 p., illus. (Coccids p. 14-18.)

Biology, hosts, and natural enemies of *Chionaspis euonymi*; control.

URICH, F. W.

- 1895 NOTES ON SCALE INSECTS. I. Trinidad Field Nat. Club 2: 221-225. *Dactylopius citri* and *D. virgatus* var. *ceriferus* new to Trinidad; descriptions; biology; natural enemies.

USINGER, R. L., *see* Linsley, E. G., and Usinger, R. L.

VALCHEVA, M., *see* Tzalev, M., and Valcheva, M.

VALLOT, J. N.

- 1824 OBSERVATIONS SUR QUELQUES ARTICLES DU BULLETIN D'AOUT. *Bul. des Sci. Nat. et de Géol.* 3: 251-252.
Discusses identity of *Coccus oleae*.

VAN DER VECHT, J., *see* Kalshoven, L. G. E., and Van der Vecht, J.

VAN DINE, D. L.

- 1904 THE PINEAPPLE SCALE (DIASPIS BROMELIAE KERNER). *Hawaii. Forest and Agr.* 1: 111-114, illus. (Also in *Hawaii Agr. Expt. Sta. Press Bul.* 10, 6 p., illus.)
Hosts and distribution; control.
- 1906 THE AVOCADO MEALY-BUG (PSEUDOCOCCUS NIPAE MASK.). *Hawaii Agr. Expt. Sta. Press Bul.* 16, 12 p., illus.
Biology; hosts; distribution in Hawaii; natural enemies, control; notes on other spp.

VARSHNEY, R. K.

- 1962 SHORT NOTES. TACHARDIA DECORELLA—A MISNOMER. *Indian Jour. Ent.* 24: 282-283.
Indicates that *T. decorella* of Das and Ganguli (1961) on tea is *Tachardina theae*.
- 1964 ON THE HOMONYMY OF ORTHEZIOLA SIGNORETI (HALLER) (HOMOPTERA, ORTHEZIIDAE), AND ITS VALID NAME. *Entomologist* 97: 280.
Concludes that *O. vej dovskyi* Sulc is valid name for this coccid.
- 1965 ON THE AUTHORSHIP OF TACHARDINA THEAE (HOMOPTERA: LACCIFERIDAE). *Ent. Soc. Wash. Proc.* 67: 5-6.
Authorship credited to Green only, not Green and Mann.
- 1966 THE INDIAN LAC INSECT—A CHANGE IN NOMENCLATURE (HOMOPTERA: COCCOIDEA). *Indian Jour. Ent.* 28: 116-118.
Indicates valid name for insect is *Kerria lacca* (Kerr); 18 other spp. cataloged under gen. *Laccifer* by Kapur now form new combinations in gen. *Kerria*; change of higher group names to Tachardiidae, Tachardiinae, Tachardiini, and Tachardii are attributed to Cockerell 1901.
- 1967 A NOTE ON THE SEVERAL SPECIES OF INDIAN COCCIDS (HOMOPT., COCCOIDEA), PROPOSED BY E. E. GREEN AS NOMINA NUDA. *Ent. Monthly Mag.* 102: 77-79.
52 names with references.
- 1968 ON A BIBLIOGRAPHY OF LAC AND SHELLAC. (Abstract) *In* 55th Indian Sci. Cong. (Calcutta, 1968) *Proc.*, Pt. III, Sect. X-Agr. Sci., p. 625, (Not seen.)
Book entitled "Lac Literature—A Bibliography of Lac Insects and Shellac" (1970, 216 p.) followed by this abstract; it gives 2,606 titles arranged alphabetically by authors and subject index; we refer workers to this book for coverage of literature on lac insects.

See Srivastava, P. N., and Varshney, R. K.

VARSHNEY, R. K., and GANGULY, G.

- 1968 ADVANCES IN THE TAXONOMY OF LAC INSECTS. Patna Univ. Jour. 23: 55-63.

Review history of lac insects, including systematics.

VARSHNEY, R. K., and TEOTIA, T. P. S.

- 1968 A SUPPLEMENTARY LIST OF THE HOST-PLANTS OF LAC INSECTS. Bombay Nat. Hist. Soc. Jour. 64 (1967): 488-511.

Alphabetical list of 217 host spp. taken from literature; include names of plant families, country from which recorded, and references.

VASHCHINSKAYA, N. V.

- 1969 ON THE BIOLOGY OF THE SOFT SCALE PALAEOLECANIUM BITUBERCULATUM (TARG.) (HOMOPTERA, COCCOIDEA) IN ARMENIA. [In Russian. English summary.] Ent. Obozr. 48: 745-751. [Translation, Ent. Rev. 48: 472-476.]

VASSEUR, R., and SCHEVESTER, D.

- 1957 BIOLOGIE ET ECOLOGIE DU POU DE SAN JOSE (QUADRASPIDIOTUS PERNICIOSUS COMST.) EN FRANCE. Ann. des Epiphyt. (Ann. de l'Inst. Nat. Rech. Agron. Ser. C) 8: 5-66, illus.

Detailed study including description, biology, distribution in France; factors affecting populations.

VAYSSIÈRE, P.

- 1950 COCCIDAE (HEMIPTERA HOMOPTERA). In Exploration du Parc National Albert Mission G. F. de Witte (1933-1935), fasc. 70: 2. M. Hayes, Brussels.

Records *Ceroplastes africanus* and *Ceroplastes* sp.

- 1954 LES RELATIONS ENTRE LES ZONES DESERTIQUES ET LA PULLULATION DES PARASITES DES PLANTES. BIOLOGY OF DESERTS. Proc. Symp. Inst. Biol. 1954, p. 80-84. (Not seen.)

Mentions 4 coccids.

- 1955 LES ANIMAUX PARASITES DU CAFEIER. In Coste, R., Les Cafés et les Cafés Dans le Monde, v. 1, 379 p., illus. Paris. (Coccids p. 257-267.)

Lists 69 coccid spp. in 30 gen.; descriptive or other notes on some.

- 1958 ENTOMOLOGIE MALAISE (LEPIDOPTERES, COLEOPTERES, HEMIPTERES). Jour. d'Agr. Trop. et de Bot. Appl. 5: 789-808, illus. (Coccids p. 806-807.)

Includes several coccids.

- 1968 UNE COCHENILLE NOUVELLE, AFRODROSICHA NIMBAE, N. G., N. SP., (MARGARODIDAE) DU MONT NIMBA (GUINEE). Inst. Fondamental d'Afrique Noire, Bul. (Sér. A) Sci. Nat. 30: 1493-1500, illus.

Describes adult female and nymph; affinities noted.

See Porter, C. E., and Vayssièrre, P.

VAYSSIÈRE, P., and MIMEUR, J.

- 1926 DIX INSECTES NUISIBLES AUX CULTURES DE L'AFRIQUE OCCIDENTALE FRANCAISE. Agron. Colon. Bul. 78: 166-190, illus. (Coccids p. 178-182.)

Descriptive notes; host and distribution; biology of *Pseudococcus bromeliae*, *Aspidoproctus mimeuri*, and *Ceronema africana*.

VEIGA, M. L.

- 1967 NOTAS ENTOMOLOGICAS. II—A COCHONILHA ("LEPIDOSAPHES BECKII" NEWM.) DAS LARANJEIRAS DE CABO VERDE E SEU COMBATE. [English and French summaries.] *Estud. Agron. (Lisboa)* 8: 151-156, illus.

First record for Cape Verde; description of female; synonyms.

VELASQUEZ, F. J., and RIMANDO, L.

- 1969 A CHECK LIST AND HOST INDEX OF THE ARMORED SCALE INSECTS OF THE PHILIPPINES (DIASPIDIDAE: HOMOPTERA). *Philippine Ent.* 1: 195-208.

List 64 diaspidid spp. and 90 plant spp.

VENGELIAUSKAITE, A. [VYANGYALYAUSKAITE, A. P.]

- 1965 INVESTIGATION OF COCCOIDEA OF ORNAMENTAL PLANTS UNDER CONDITIONS OF THE LITHUANIAN SSR. (1 COCCOIDEA OF GREENHOUSE PLANTS OF THE KAUNAS BOTANICAL GARDEN.) [In Russian. Lithuanian summary.] *Akad. Nauk Litovsk. SSR, Ser. B, Trudy* 1 (36): 125-139.

Hosts and distribution, biology, and damage of 11 spp. in 6 gen. in Pseudococcidae, Coccidae, and Diaspididae.

VENTURI, F.

- 1964 LE COCCINIGLIE CHE DETERMINANO ANORMALI MACULATURE SULLE SUSINE E RELATIVI MEZZI DI LOTTA. *Osserv. per le Malattie delle Piante (Sez. Ent.)* 3: 1-24, illus.

Description, biology, hosts, parasites, predators, and control of *Quadraspidiotus perniciosus* and *Parlatoria oleae*.

VERESTCHAGIN, B. V., *see* Zotsenko, L. N., and Verestchagin, B. V.

VERNALHA, M. M.

- 1957 CONTRIBUICAO PARA O CONHECIMENTO DOS COCCIDEOS (HOMOPTERA: COCCOIDEA) DE ILEX SP. NO ESTADO DO PARANA. *Bol. Inst. Biol. e Pesquisas Tecnol. (IBPI)* 39: 1-52, illus.

Lists several species with hosts; includes *Saissetia vellozoi* n. sp.; some redescrptions.

VERNALHA, M. M., ROCHA, M. A. LOYOLA DA, and GABARDO, J. C.

- 1965 UMA NOVA ESPECIE DO GENERO DIASPIDIS COSTA 1828 (HOMOPTERA—COCCIDAE). [English summary.] *Rev. da Esc. Agron. e Vet.* 1: 5-7, illus.

D. cuneatus.

VEST, D. F., *see* Kosztarab, M., and Vest, D. F.

VIEIRA, R. M. S.

- 1953 DUAS ESPECIES DE COCCIDEOS NOVAS PARA A MADEIRA. *Soc. Portug. de Cien. Nat. Bol. (ser. 2)* 4: 205-208, illus.

Coccus viridis and *Lecanium persicae* new to Madeira; mentions several other spp.

VIREY, J. J.

- 1821 HISTOIRE NATURELLE DE LA LACQUE (RESINE), AVEC DE NOUVELLES OBSERVATIONS SUR LES INSECTES QUI LA PRODUISENT. Jour. Complémentaire du Dictionnaire des Sci. Méd. 10: 193-207.
Discusses derivation and uses of wax produced by scale insects; describes lac cells; mentions several spp., including *Coccus ilicis* and *C. lacca*.
- 1821a OBSERVATIONS SUR UNE NOUVELLE ESPECE DE COCHENILLE QUI FAIT PERIR LES ROSIERS. Jour. Complémentaire du Dictionnaire des Sci. Méd. 10: 207-211.
Coccus rosae n. sp.

VOELKEL, P.

- 1870 RAVAGES DU KERMES DE LA VIGNE (*COCCUS VITIS* L.) EN CRIMEE. Soc. Imp. Zool. d'Acclim. Bul. (2d ser.) 7: 328-333. [Abstract of article by M. Niedoński.]
Redescription; notes on biology; habits and injury.

VOUTE, A. D.

- 1935 DE PLAGEN VAN DE DJEROEKULTUUR IN NEDERLANDSCH-INDIE (PESTS OF CITRUS IN THE NETHERLANDS INDIES). [English summary.] Meded. Inst. v. Plantenziekten (Batavia) 86, 65 p., illus. (Coccids p. 35-50.)
Includes keys to 5 subfamilies and few spp.; notes on biology, hosts, and control of several spp.

WAGNER, W., see Weidner, H., and Wagner, W.

WALGENBACH, D. D., and BENJAMIN, D. M.

- 1966 BIOLOGY OF THE BLACK PINE LEAF SCALE. Wis. Univ. Agr. Expt. Sta. Res. Bul. 265, 16 p., illus.
Describe all instars; hosts and distribution; seasonal history; damage caused by *Nuculaspis californica*.

WARD, A.

- 1966 MEALYBUGS (HEMIPTERA: PSEUDOCOCCIDAE) IN HAWKE'S BAY ORCHARDS. New Zeal. Jour. Agr. Res. 9: 452-454.
Notes on morphology, hosts, and distribution of *Pseudococcus obscurus*, *P. adonidum*, and *Phenacoccus graminosus*; last sp. new for New Zealand.
- 1968 DIASPIDIDAE ON COMMERCIALY GROWN ORCHIDS IN NEW ZEALAND. New Zeal. Ent. 4: 50.
Notes on 4 spp. in 4 gen.; *Lepidosaphes machili* and *Pseudoparlatoria parlatoriodes* new to New Zealand.

WASHBURN, R. I.

- 1965 DESCRIPTION AND BIONOMICS OF A NEW SPECIES OF PUTO FROM UTAH (HOMOPTERA: COCCOIDEA: PSEUDOCOCCIDAE). Ent. Soc. Amer. Ann. 58: 293-297, illus.
Describes male and female of *P. sandini*; life history and habits.

WATERHOUSE, D. F.

- 1957 DIGESTION IN INSECTS. Ann. Rev. Ent. 2: 1-18. (Coccids p. 11-12.)
Mentions *Coccus hesperidum*, *Icerya purchasi*, and pineapple mealybug.

WAY, M. J.

- 1963 MUTUALISM BETWEEN ANTS AND HONEYDEW-PRODUCING HOMOPTERA. *Ann. Rev. Ent.* 8: 307-344.

Mentions several coccids associated with specific spp. of ants.

WEBER, W. A.

- 1965 THEODORE DRU ALISON COCKERELL 1866-1948. *Colo. Univ. Studies Ser. Bibliog.* 1, 124 p.

Titles and references of 3,904 papers by Cockerell published 1882-1949.

WEBSTER, W. J.

- 1968 A RECORD OF PARLATORIA PITTOSPORI MASK. (HEMIPTERA: DIASPIDIDAE) ON APPLES. *Austral. Ent. Soc. Jour.* 7: 85-86, illus.

Recorded from fruits in Victoria; biology; hosts and distribution.

WEGLARSKA, B.

- 1962 OOGENESIS IN THE OVOVIVIPAROUS SCALE INSECT QUADRASPIDIOTUS OSTREAIFORMIS (CURT.) (HOMOPTERA, COCCIDAE, ASPIDIOTINI). PART I. MORPHOLOGICAL AND CYTOLOGICAL INVESTIGATIONS. [Polish summary.] *Zool. Polon.* 11 (1961): 267-294, illus.

- 1962a OOGENESIS IN THE OVOVIVIPAROUS SCALE INSECT QUADRASPIDIOTUS OSTREAIFORMIS (CURT.), (HOMOPTERA, COCCIDAE, ASPIDIOTINI). PART II. HISTOCHEMICAL INVESTIGATIONS. [Polish and Russian summaries.] *Zool. Polon.* 12: 41-68, illus.

- 1966 DEVELOPMENT OF TESTES AND SPERMATOGENESIS IN QUADRASPIDIOTUS OSTREAIFORMIS (CURT.) (HOMOPTERA, COCCOIDEA, ASPIDIOTINI). DEVELOPMENT OF TESTES INCLUDING SPERM BUNDLES FORMATION. [In Polish. English and Russian summaries.] *Zeszyty Nauk. Univ. Jagiellonskiego Prace Zool.* 12 (136): 59-98, illus.

- 1968 SPERMATOGENESIS IN QUADRASPIDIOTUS OSTREAIFORMIS (CURT.) (HOMOPTERA, COCCOIDEA, ASPIDIOTINI). [In Polish. English and Russian summaries.] *Zeszyty Nauk. Univ. Jagiellonskiego Prace Zool.* 14 (186): 63-82, illus.

See Bielenin, I., and Weglarska, B.

WEIDHAAS, J. A.

- 1968 IMPORTANCE AND CONTROL OF SCALE INSECTS. 44th Internatl. Shade Tree Conf. (Chicago, 1968) *Proc.* 1968, p. 246-256.

General review of biology, feeding mechanism, and control; checklist of 53 pest spp.

WEIDNER, H.

- 1963 7. DIE BEOBACHTUNG VON MANNCHEN BEI DER BRENNESSEL-ROHRENLAS, ORTHEZIA URTICAE (LINNAEUS, 1767) (COCCOIDEA: ORTHEZIIDAE). In Weidner, H., Beitr. u. Bemerkungen z. Insektenfauna Unterfrankens. 2: Aschaffenburg Naturw. Mus. Mitt. 11: 5-28, illus. (Coccids p. 20-21.)

Descriptive notes; biology and habits; hosts.

- 1967 4. INSEKTEN IM VOLKSBRUCH UM DIE WENDE VOM 18. ZUM 19. JAHRHUNDERT. In Weidner, H., *Gesch. der Ent. in Hamburg. Abhandl. Verhandl. Naturw. Ver. Hamburg N. F. Bd. IX. Sup.*, p. 58-60, illus.

Historical report on *Porphyrrophora polonica*.

WEIDNER, H., and WAGNER, W.

- 1968 DIE ENTOMOLOGISCHEN SAMMLUNGEN DES ZOOLOGISCHEN STAATSINSTITUTES UND ZOOLOGISCHEN MUSEUMS HAMBURG. TEIL VII, INSECTA IV. Hamburg Zool. Mus. u. Inst. Mitt. 65: 123-179. (Coccids p. 163-179.)

Notes on 119 type specimens and other specimens of coccids; brief historical review of works of some taxonomists; bibliography; list types of 5 Lindinger spp. in Zool. Mus. of Berlin; hosts.

WEISS, H. B.

- 1916 THE COCCIDAE OF NEW JERSEY GREENHOUSES. Psyche 23: 22-24. Lists 32 coccid spp. in 17 gen.; hosts.
- 1917 THE STATUS OF LECANIUM CORNI BOUCHE IN NEW JERSEY (HOMOP.). Canad. Ent. 49: 119-120.
Lists 11 names that have been used for *L. corni* in literature; gives hosts.

WESTIGARD, P. H.

- 1964 DISTRIBUTION OF THE GRAPE MEALYBUG ON PEAR. Jour. Econ. Ent. 57: 1-3.
Motile stages of *Pseudococcus maritimus* distribute themselves in nonrandom pattern.

WHELLAN, J. A.

- 1964 OUTBREAKS AND NEW RECORDS. RHODESIA AND NYASALAND. FAO Plant Protect. Bul. 12: 22.
Margarodes sp. on sugarcane; *Antonina natalensis* increasingly prevalent on lawn grasses.
- 1965 PLANT PEST SITUATION IN SOUTHERN RHODESIA DURING 1964. FAO Plant Protect. Bul. 13: 67.
Coccus africanus found on coffee; *Dactylopius confusus* is pest of spineless *Opuntia* sp., a fodder plant.

WIEGMANN, L. I., see Brown, S. W., and Wiegmann, L. I.

WILKEY, R. F., see Miller, D. R., Bohart, R. M., and Wilkey, R. F.

WILLIAMS, D. J.

- 1963 SOME TAXONOMIC NOTES ON THE COCCOIDEA (HOMOPTERA). Entomologist 96: 100-101.
Proposes *Palmicultor* n. name for *Palmicola*; 4 n. syn.
- 1963a A NEW SPECIES OF ENTASPIDIOTUS MACGILLIVRAY (HOMOPTERA: COCCOIDEA: DIASPIDIDAE) FROM SOUTH AFRICA. Roy. Ent. Soc. London, Proc. Ser. B: Taxonomy 32: 44-46, illus.
E. giliomeei; key to 3 spp.
- 1963b SYNOPTIC REVISIONS OF I. LINDINGASPIS AND II. ANDASPIS WITH TWO NEW ALLIED GENERA (HEMIPTERA: COCCOIDEA). Brit. Mus. (Nat. Hist.) Ent. Bul. 15, 31 p., illus.
L. kenyae and *L. mackenziei* n. spp., notes or redescriptions of 3 other spp., key to 22 spp.; *A. dasi* and *A. kazimiae* n. spp., 5 n. comb. in *Andaspis*, descriptive notes on 6 spp., key to 22 spp.; *Caia* n. gen., *C. querneae* n. sp.; *Metandaspis* n. gen., type-sp. *Mytilaspis recurvata* Froggatt; *M. javanensis* n. sp.

WILLIAMS, D. J.—Continued

- 1967 A NEW GENUS AND SPECIES OF MEALYBUG FROM THE PHILIPPINE ISLANDS (HOMOPTERA: PSEUDOCOCCIDAE). Biol. Soc. Wash. Proc. 80: 27-30, illus.
Tympanococcus n. gen., type-sp. *Pseudococcus tympanistus* Ferris;
T. gardeniae n. sp.
- 1969 A NEW SPECIES OF ERIOCOCCUS INFESTING AMERICAN BEACH-GRASS IN NORTH CAROLINA (HOMOPTERA: COCCOIDEA). Ent. Soc. Wash. Proc. 71: 90-93, illus.
E. carolinae.
- 1969a THE FAMILY-GROUP NAMES OF THE SCALE INSECTS (HEMIPTERA: COCCOIDEA). Brit. Mus. (Nat. Hist.) Ent. Bul. 23: 317-341.
Contains all categories from superfamily to subtribe with their earliest date of usage; notes on taxonomy and nomenclature; also lists group names not based on nominal gen.
- 1969b A NEW NAME FOR MYTILASPIS PALLIDA GREEN (HEMIPTERA: COCCOIDEA). Ent. Monthly Mag. 105: 60-61.
Discusses validity of *M. pallida* Maskell, *pallida* Green, and *pallida maskelli* Cockerell.
- 1969c A NEW SPECIES OF PARLAGENA MCKENZIE ATTACKING COCONUT TREES IN TRINIDAD (HOM., COCCOIDEA, DIASPIDIDAE). Bul. Ent. Res. 59: 97-99, illus.
P. bennetti, tentative generic assignment; key to 4 spp.
- 1969d A NEW SPECIES OF CATAENOCOCCUS FERRIS (HOM., COCCOIDEA, PSEUDOCOCCIDAE) ON BANANA IN COSTA RICA. Bul. Ent. Res. 59: 101-104, illus.
C. larai; key to 5 spp.
- 1969e A REVISION OF THE GENUS GEOCOCCUS GREEN (HOMOPTERA, COCCOIDEA, PSEUDOCOCCIDAE). Bul. Ent. Res. 59 (1968): 505-517, illus.
G. johorensis and *G. lawrencei* n. spp.; redescribes gen. and 4 spp.; key to 6 spp.
- 1969f CORRECTION: INSULASPIS PALLIDULA NOM. N. (HEM., COCCOIDEA). Ent. Monthly Mag. 105: 114.
I. pallida nomen nudum, in Ent. Monthly Mag. 105: 60-61, 1969, should read *I. pallidula* nomen nudum.
- See Boratynski, K., and Williams, D. J.; Borchsenius, N. S., and Williams, D. J.; McKenzie, H. L., and Williams, D. J.

WILLIAMS, J. R.

- 1967 CANE PESTS. Mauritius Sugar Indus. Res. Inst. Ann. Rpt. 1966: 61-67, illus. (Coccid p. 67.)
Includes control of *Aulacaspis tegalensis* in nursery.

WILLIAMS, J. R., and MAMET, J. R.

- 1954 INSECTS AND OTHER INVERTEBRATES WHICH FEED UPON SUGAR CANE IN MAURITIUS AND REUNION AND THEIR NATURAL ENEMIES. Mauritius Dept. Agr. Bul. 89, 19 p. (Coccids p. 3-4, 8-9.)
List 7 spp. from Mauritius and 4 from Réunion; discuss 4 other spp. probably erroneously reported on sugarcane.

WILLIAMS, J. R., and MAMET, J. R.—Continued

- 1962 THE INSECTS AND OTHER INVERTEBRATES OF SUGAR CANE IN MAURITIUS AND REUNION. Mauritius Sugar Indus. Res. Inst. Occas. Paper No. 8, 23 p.

Annotated list includes 8 coccid spp. in 7 gen. from Mauritius and 6 spp. in 5 gen. from Réunion.

WOLF, J. P., and EWART, W. H.

- 1955 CARBOHYDRATE COMPOSITION OF THE HONEYDEW OF COCCUS HESPERIDUM L.: EVIDENCE OF THE EXISTENCE OF TWO NEW OLIGOSACCHARIDES. Arch. Biochem. and Biophysics 58: 365-372.

WOMERSLEY, J. S., *see* Szent-Ivany, J. J. H., and Womersley, J. S.

Woo, S. H.

- 1967 STUDIES ON THE ECOLOGY OF THE UME GLOBOSE SCALE, LECANIUM KUNOENSIS KUWANA AND ITS NATURAL ENEMIES. [In Korean. English summary.] Korea Off. Rural Devlpmt. Res. Rpts. 10 (3): 97-104, illus.

Biology; hosts; natural enemies.

WRAY, D. L.

- 1950 INSECTS OF NORTH CAROLINA. Sup. 2, 59 p. N.C. Dept. Agr. Div. Ent., Raleigh. (Coccids p. 15.)

List includes 9 coccid spp. new to North Carolina; hosts and distribution.

- 1967 INSECTS OF NORTH CAROLINA. Sup. 3, 181 p. N.C. Dept. Agr. Div. Ent., Raleigh. (Coccids p. 33, 157.)

WRIGHT, N. P.

- 1963 A THOUSAND YEARS OF COCHINEAL: A LOST BUT TRADITIONAL MEXICAN INDUSTRY ON ITS WAY BACK. Amer. Dyestuff Rptr. 52: 635-639, illus.

History of cochineal in Mexico.

YADAVA, R. L.

- 1966 FEEDING HABIT OF THE PINK SUGAR CANE MEALYBUG SACCHARICOCCUS SACCHARI COCKERELL (HOMOPTERA: PSEUDOCOCCIDAE). Indian Jour. Ent. 28: 106-108, illus.

Stylet penetration is intracellular, avoids vascular bundles, and ends in parenchymatous cell.

- 1966a MORPHOLOGY OF THE MALE PINK SUGARCANE MEALYBUG, SACCHARICOCCUS SACCHARI COCKERELL (PSEUDOCOCCIDAE: HOMOPTERA)—PART I. MACROPTEROUS FORM. Agra Univ. Jour. Res. 15: 71-129, illus. Detailed description; discusses possible relationship of Pseudococcidae to other subdivisions of Coccoidea.

- 1966b THE REPRODUCTIVE SYSTEM OF THE FEMALE PINK SUGARCANE MEALYBUG, SACCHARICOCCUS SACCHARI (HOMOPTERA: PSEUDOCOCCIDAE). Indian Jour. Ent. 28: 351-358, illus. Morphological and histological study.

YADAVA, R. L.—Continued

- 1967 THE NERVOUS SYSTEM OF THE FEMALE SACCHARICOCCLUS SACCHARI COCKERELL (PSEUDOCOCCIDAE: HOMOPTERA). Indian Acad. Sci. Proc., Sect. B, 65: 94-102, illus.
Detailed study.
- 1968 SUGARCANE AND ITS PROBLEMS. A NOTE ON THE INCIDENCE, ECONOMIC IMPORTANCE AND FOOD PLANTS OF SACCHARICOCCLUS SACCHARI COCKERELL (PSEUDOCOCCIDAE: HOMOPTERA). Indian Sugar 17: 871-878.
Habits; attended by ants.
- 1968a MORPHOLOGY OF THE MALE PINK SUGARCANE MEALYBUG, SACCHARICOCCLUS SACCHARI COCKERELL (PSEUDOCOCCIDAE: HOMOPTERA)—PART III. BRACHYPTEROUS FORM. Agra Univ. Jour. Res. 16 (1967): 141-172, illus.
Detailed description; compares important characters of this form with those of apterous and macropterous forms.
- 1969 EXTERNAL MORPHOLOGY OF THE FEMALE SACCHARICOCCLUS SACCHARI (COCKERELL) (PSEUDOCOCCIDAE: HOMOPTERA), WITH A NOTE ON THE EVALUATION OF THE IMPORTANT MORPHOLOGICAL FEATURES FOR THE TAXONOMIC CONSIDERATIONS. Ztschr. f. Agnew. Ent. 63: 9-24, illus.

YADAVA, R. L., and CHANDEL, B. S.

- 1968 A CONTRIBUTION TO THE ALIMENTARY CANAL, SALIVARY GLANDS AND MALPIGHIAN TUBULES OF SACCHARICOCCLUS SACCHARI COCKERELL (HOMOPTERA: PSEUDOCOCCIDAE). Zool. Jahrb. Anat. 85: 597-608, illus.
Detailed study.
- 1969 THE FILTER CHAMBER OF THE PINK SUGARCANE MEALYBUG SACCHARICOCCLUS SACCHARI COCKERELL (HOMOPTERA: PSEUDOCOCCIDAE). Zool. Anz. 182: 361-369, illus.
Histological details of digestive system described.

YAMAMOTO, M.

- 1964 NOTES ON THE SCALE INSECTS FOUND UPON BANANAS ENTERING KOBE PORT. [In Japanese.] Osaka Plant Protect. 88: 16-22, illus.
Records 18 spp. in Diaspididae, Pseudococcidae, and Coccidae.

YANG, S. P., and KOSZTARAB, M.

- 1967 A MORPHOLOGICAL AND TAXONOMICAL STUDY ON THE IMMATURE STAGES OF ANTONINA AND OF THE RELATED GENERA (HOMOPTERA: COCCOIDEA). Va. Polytech. Inst. Res. Div. Bul. 3, 73 p., illus.
Descriptions of and keys to first-instar nymphs of 14 spp., second-instar nymphs of 7 spp., and third-instar nymphs of 2 spp.

YULDASHEVA, KH. YU.

- 1964 [PHENACOCCLUS MESPIII.] [In Russian.] Zashch. Rast. ot Vred. i Boleznei 9 (10): 54-55, illus.
Records for Uzbekistan; descriptive notes on male and female; biology and habits; note on association of saprophytic fungi.

YUSHIMA, T., *see* Tamaki, Y., Yushima, T., and Kawai, S.

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ZAHRADNIK, J.

- 1951 CONTRIBUTION A LA CONNAISSANCE DES COCHENILLES. (HOMOPT. COCCOIDEA.) [In Czech. French summary.] Acta Soc. Ent. Cechoslovak. 48: 198-200, illus.

Notes on *Diaspidiotus bavaricus* and *Nipaecoccus nipae*.

- 1952b DEUX DIASPIDES NOUVEAUX POUR LA FAUNE DE LA TCHECOSLOVAQUIE. (RHYNCH. COCC.). [In Czech. Russian and French summaries.] Acta Soc. Ent. Cechoslovak. 49: 92-97, illus.

Diaspidiotus wunni and *Quadraspidiotus gigas*.

- 1953a ORTHEZIA INSIGNIS BROWNE V CESKOSLOVENSKU. [Russian and French summaries.] Casopis Národ. Mus. Oddeleni Přírodovedny 122: 201-203, illus.

- 1954 LA COCHENILLE AUSTRALIENNE PERICERYA PURCHASI (MASK.) ET SA REPARTITION EN EUROPE CENTRALE. [In Czech. Russian and French summaries.] Zool. Ent. Listy 17: 295-297.

- 1954a O NEKTERÝCH CERVČÍCH SKUDČÍCH OVOCNÝCH STROMU. Ziva 2: 22-23, illus.

Discusses 8 coccid spp.

- 1954b O NEJHOJNEJSÍCH STÍTENKÁCH NASÍCH SKLENÍKU. Ziva 2: 137-138, illus.

Discusses 5 coccid spp.

- 1965 SUR DES COCHENILLES NOUVELLES DANS LES SERRES EN TCHECOSLOVAQUIE (COCCINEA). [Czech summary.] Acta Faunistica Ent. Mus. Nat. Pragae 11: 303-306.

43 subtropical or tropical coccid spp. reported in 6 families, including 4 spp. new for Czechoslovakian greenhouses.

- 1968 SCHILDLAUSE UNSERER GEWACHSHAUSER. 42 p., illus. Neue Brehm-Bücherei.

Discusses most important pest coccids in central European greenhouses; hosts; parasites and predators; control.

ZAK-OGAZA, B.

- 1961 STUDIEN ÜBER ZEHRWESPEN (HYMENOPTERA, CHALCIDOIDEA) DIE AUF DER FAUNA POLENS BEKANNTEN SCHILDLAUSEN (HOMOPTERA, COCCOIDEA) SCHMAROTZEN. [Polish summary.] Polskie Pismo Ent. 31: 349-410.

Reared 56 spp. of chalcid parasites from 34 coccid spp. in 20 gen. of 5 families; several coccid spp. new to Poland.

- 1966 A NOTE ON SOME SCALE INSECTS (HOMOPTERA, COCCOIDEA) OF THE HUNGARIAN FAUNA. Acta Agron. Acad. Sci. Hungaricae 15: 79-83.

9 spp. in 7 gen. new to Hungary; 2 n. spp. to be described later.

- 1967 MATERIALS TO THE KNOWLEDGE OF THE SCALE INSECT FAUNA OF YUGOSLAVIA (HOMOPTERA, COCCOIDEA). [Polish and Russian summaries.] Acta Zool. Cracoviensia 12: 211-217.

Records 25 spp. in 24 gen.; 7 new to Yugoslavia; hosts and distribution.

See Koteja, J., and Zak-Ogaza, B.

ZAK-OGAZA, B., and KOTEJA, J.

- 1964 INVESTIGATIONS ON SCALE INSECTS (HOMOPTERA, COCCOIDEA) OF THE PIENINY MOUNTAINS. [Polish and Russian summaries.] Acta Zool. Cracoviensia 9: 417-439.

Annotated list of 37 spp. in 27 gen. and 6 families, 12 new to Poland; hosts and distribution; life cycle of *Acanthococcus aceris*, *Ceroputo pilosellae*, and *Paroudablis piceae*.

ZALEV, M., see Tzalev, M.

ZECK, E. H.

- 1932 INVESTIGATIONS ON TWO WHITE WAX SCALES (CEROPLASTES) AS PESTS IN AUSTRALIA. Agr. Gaz. N.S. Wales 43: 611-616, illus. (Also issued as Misc. Pub. 2880: 611-616, illus.)

Description, hosts, and distribution for *C. ceriferus* and *C. destructor* in N.S. Wales.

- 1954 WHITE PALM SCALE PHENACASPIS EUGENIAE. Agr. Gaz. N.S. Wales 65: 425, illus.

Brief description of male and female scale covers and insects; hosts; control.

- 1954a SALTBUSH SCALE PULVINARIA MASKELLI. Agr. Gaz. N.S. Wales 65: 583, 585, illus.

Brief description of male and female; hosts; control.

- 1955 THE BLACK SCALE (SAISSETIA OLEAE). Agr. Gaz. N.S. Wales 66: 374-375, illus.

Descriptive notes on adult male and female and nymphs; injury; control.

- 1956 THE SOFT BROWN SCALE COCCUS HESPERIDUM. Agr. Gaz. N.S. Wales 67: 207, illus.

Brief description; injury; control.

ZELINSKA, L. M.

- 1961 INSECT PESTS OF TREES OF THE BLACK SEA NATIONAL RESERVATION. [In Ukrainian. Russian summary.] Akad. Nauk Ukrain. RSR Inst. Zool. Trudy 17: 19-29.

Includes 7 coccid spp.

ZETTERSTEDT, J. W.

- 1828 FAUNA INSECTORUM LAPPONICA. PARS I, 563 p. Libraria Schulziana, Hammone (= Hamburg, Germany). (Coccids p. 562-563.)

Dortheia chiton n. sp., *D. characias*, and *Coccum aceni*.

ZHIZHILASHVILI, T. I.

- 1941 ENTOMOFAUNA OF THE TUNG OIL TREE. [In Russian.] Akad. Nauk SSSR Gruzinskoi Filiale Zool. Sek. Trudy 3: 249-261. (Coccids p. 255-259.)

Includes several coccids.

ZIMMERMAN, A.

- 1902 UEBER EINIGE KRANKHEITEN UND PARASITEN DER VANILLE. Zentbl. f. Bakt., Parasitenk. u. Infektionskrank. 8: 469-481, illus. (Coccids p. 477-478.)

Aspidiotus aurantii in Experimental Garden; brief description.

ZIMMERMAN, A.—Continued

1902a SAMMELREFERATE UBER DIE TIERISCHEN UND PFLANZLICHEN PARASITEN DER TROPISCHEN KULTURPFLANZEN. IV. DIE PARASITEN DER SCHATTENBAUME UND WINDBRECHER. Zentbl. f. Bakt., Parasitenk. u. Infektionskrank. 8: 774-776, 798-805. (Coccids p. 801-802.)

1920b OPMERKINGEN OVER EENIGE OP KOFFIELANDEN VON OOST-EN MIDDEN—JAVA WAARGENOMEN PLANTENZIEKTEN. Teysmannia 12: 639-654. (Coccids p. 653.)

Chionaspis dilatata and *Aspidiotus* sp.

ZIMSEN, E.

1964 THE TYPE MATERIAL OF I. C. FABRICIUS. 656 p. Munksgaard, Copenhagen. (Coccids p. 341.)

ZOTSENKO, L. N.

1955 THE ACACIA FALSE HARDCASE (EULECANIUM CORNI BOUCHE) IN SUBTROPICAL CULTURE OF ORIENTAL PERSIMMON. [In Russian.] Ent. Obozr. 34: 67-76, illus.

Biology with special reference to transfer of insects to introduced plants; discussion of control by parasites.

ZOTSENKO, L. N., and VERESTCHAGIN, B. V.

1957 CONTRIBUTION TO THE BIOLOGY OF THE ACACIA FALSE-HARD SCALE ON PLUM IN MOLDAVIA AND ITS CONTROL. [In Russian.] Sborn. Trud. Moldavskoi Sta. Zastch. Rast. (Kishinev) 2 (1953-56): 159-166. *Eulecanium corni*.

ZVEREZOMB-ZUBOVSKII, E. V.

1957 SUGAR BEET PESTS. [In Russian.] 276 p., illus. Akad. Nauk Ukrain. SSR Inst. Ent. i Fitopat. (Coccids p. 36-37.)

Brief description, biology, and injury caused by *Lecanium corni*; also mentions *Pseudococcus gahani*.