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United States  
Department of  
Agriculture

Animal and  
Plant Health  
Inspection  
Service

Plant Protection  
and Quarantine

APHIS  
1  
USDA  
1982

# Checklist of the Armored Scales (Homoptera: Diaspididae) of the Conterminous United States

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**United States  
Department of  
Agriculture**



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There are approximately 1,700 species of armored scales (Diaspididae) in the world (Beardsley and Gonzalez (1975: 47) and 285 species in the conterminous United States. Although 297 species are treated in this list, 12 species are regarded as eradicated. These 12 species are known only from the original collections and have not been collected during the past 40 years, or are recorded only from localized infestations that have been subjected to eradication measures. Aonidiella inornata McKenzie was recorded from Houston, Texas (McDaniel 1968:212), and Quadraspidotus braunschvigi (Rungs) (Ferris 1942:426) is known only from the original collection. Although treated as eradicated, both species may still exist as localized infestations.

Melanaspis multiclavata (Green and Laing) recorded from Florida by Ferris (1941:429) is a misidentification of an undescribed species (Davidson 1978, per. comm.) and is excluded from this paper. Also excluded is Parlatoria ziziphi (Lucas) (= P. zizyphus) reported from Mississippi (Ferris 1937:90) on the basis of one old record from lemons and oranges of questionable origin.

Abgrallaspis comstocki (Johnson) and A. howardi (Cockereit) possibly are forms of Diaspidiotus ancylus (Putnam) (Stannard 1965:573), but are listed as separate species because of taxonomical problems with D. ancylus and related species. Although A. townsendi (Cockereit) is considered a synonym of A. howardi by various workers, it is treated here as a separate species. Diaspidiotus piceus (Sanders) was treated as a junior synonym of D. hunteri (Newell) by Ferris (1938:182), which in turn is a junior synonym of Quadraspidotus ostreaeformis (Curtis). Although treated here as a separate species, D. piceus may be a form of D. ancylus.

The information for each species consists of an abbreviated synonymy, world distribution, and an abbreviated list of host-plants. Some of the names used here differ

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from those currently used by other coccidologists; in these cases, the other names are included in the synonymy. For a detailed synonymy, refer to Borchsenius (1966). In the distribution, the States are abbreviated as given in the index. East and West Germany are treated as Germany. The island of Taiwan and mainland China are treated separately. Hawaii is placed in "Other Areas" because it is not a conterminous State. The foreign countries are grouped under the following headings: NEW WORLD (North and South America, Caribbean Islands, Bermuda); EUROPE (includes Azores, excludes European USSR); USSR; AFRICA (includes outlying islands in the Atlantic and Indian Oceans); ASIA (eastern shore of Mediterranean Sea to Far East); OTHER AREAS (Australia, New Guinea, Pacific Islands). The host plants include those reported from foreign countries. Most of the species infest many host plants and are indicated as polyphagous. However, if the species is commonly found on certain hosts, or known only from a few hosts, the names of the host plants are given.

The users of this list should be cognizant that many of the distribution records were obtained from the literature and agricultural quarantine interception records, and are unverified. Additional information was obtained from the slide material and card files in the Coccoidea Collection of the U. S. National Museum of Natural History, records in the Cooperative Economic Insect Report and Cooperative Plant Pest Report, U. S. Dept. of Agriculture, and various coccidologists. Unfortunately, up-to-date information of the insect fauna of many states and foreign countries is unavailable and distribution for many species is incomplete.

An asterisk after a State denotes old record(s) of 40 or more years. In some cases, the species may no longer exist in the State, especially for tropical species in northern greenhouses. Two asterisks after a species mean that the species apparently does not exist now in the United States. A plus sign after a country means that the distribution record is based on one or two quarantine interceptions and that no report from that country was found in the literature. Therefore, the record requires confirmation. Greenhouse means that the species was found on house plants or plants grown in hot houses.

Reference citations are presented only in the introduction, and only the major sources of information are included in the references. Although much information was obtained from the "List of Intercepted Plant Pests",

Cooperative Economic Insect Report and Cooperative Plant Pest Report, these sources are not included in the references.

My sincere appreciation to R. J. Gill, California Dept. of Food and Agriculture, Sacramento, G. W. Dekle and A. Hamon, Florida Dept. of Agriculture and Consumer Services, Gainesville, and J. F. Stimmel, Pennsylvania Dept. of Agriculture, Harrisburg, for verifying the records for their respective states; J. A. Davidson, University of Maryland, College Park, for reviewing the introduction, and for permitting me to include unpublished information about the species of Melanaspis; and D. R. Miller and T. J. Spilman, Systematic Entomology Laboratory, Beltsville, Maryland, for their constructive criticisms of the manuscript. I thank my associates in the Plant Importation and Technical Support Staff, Hyattsville, Maryland, for their assistances, and M. A. Keppler for typing the camera ready copy.





colorata  
(Cockerell)

Aspidiotus uvae var. coloratus Cockerell; Aspidiotus coloratus Cockerell; Hemiberlesia colorata (Cockerell)

DISTRIBUTION:  
NM, TX

HOSTS:  
Chilopsis linearis

comstocki  
(Johnson)

Aspidiotus comstocki Johnson; Aspidiella comstocki (Johnson); Hemiberlesia comstocki (Johnson); Gonaspidotus comstocki (Johnson)

DISTRIBUTION:  
DC, FL, GA, IL, IN, KY, MO, MS, NC, OH, PA, SC, TN, TX, VA, WV

HOSTS:  
Acer, A. saccharinum, A. saccharum

cyanophylli  
(Signoret)

Aspidiotus cyanophylli Signoret; Furcaspis cyanophylli (Signoret); Hemiberlesia cyanophylli (Signoret)

DISTRIBUTION:  
General distribution in U. S. Widespread throughout the tropical and subtropical areas of the world. Greenhouse in temperate areas

HOSTS:  
Polyphagous

degenerata  
(Leonardi)

Chrysomphalus degeneratus Leonardi; Aspidiotus degeneratus (Leonardi); Hemiberlesia degenerata (Leonardi); Dynaspidotus degeneratus (Leonardi)

DISTRIBUTION:  
CA, MD, OR  
Europe:  
Greece, Italy, Portugal  
Asia:  
China, Japan, Korea

HOSTS:  
Aralia, Camellia, Citrus, Eurya, Ilex, Osmanthus, Thea

fraxini  
(McKenzie)

Hemiberlesia fraxini McKenzie

DISTRIBUTION:

AZ, CA  
New World:  
Mexico

HOSTS:  
Fraxinus

howardi  
(Cockerell)

Aspidiotus howardi Cockerell; Aspidiotus epigaeae  
Marlatt; Aspidiotus pseudospinosus Woglum;  
Hemiberlesia howardi (Cockerell); Gonaspidotus  
howardi (Cockerell)

DISTRIBUTION:

AL, AZ, CA, CO, CT, DC, DE, FL, GA, IA, IL, LA, MA, MD,  
MO, MS, NC, NJ, NY, OK, PA, RI, SC, TN, TX, VA, WV  
New World:  
Mexico

HOSTS:  
Polyphagous

ithaeae  
(Ferris)

Aspidiotus ithaeae Ferris; Gonaspidotus ithaeae (Ferris)

DISTRIBUTION:

CT, GA, IN, MD, NY, OH, PA, TN, VA, WV

HOSTS:  
Abies, Pseudotsuga, Tsuga

oxycoccus  
(Woglum)

Aspidiotus oxycoccus Woglum; Aspidiella oxycoccus  
(Woglum); Aspidaspis oxycoccus (Woglum); Gonaspidotus  
oxycoccus (Woglum)

DISTRIBUTION:

MA, NJ, OR, WA

HOSTS:  
Rhododendron, Vaccinium, V. oxycoccus

quercicola  
(Ferris)

Hemiberlesia quercicola Ferris

DISTRIBUTION:

CA, NM

HOSTS:

Quercus

townsendi  
(Cockerell)

Aspidiotus townsendi Cockerell

DISTRIBUTION:

AL, AR, DC, FL, GA, LA, MA, MD, MO, MS, OH, PA, TN, TX,  
VA

New World:

Mexico

HOSTS:

Polyphagous

ACUTASPIS

agavis  
(Townsend &  
Cockerell)

Aspidiotus agavis Townsend & Cockerell; Chrysomphalus  
agavis (Townsend & Cockerell)

DISTRIBUTION:

AZ, TX. Greenhouse in DC\*

New World:

Costa Rica, Mexico, Trinidad, Venezuela

HOSTS:

Agave, Yucca

albopicta  
(Cockerell)

Aspidiotus albopictus Cockerell; Chrysomphalus  
albopictus (Cockerell); Aspidiotus albopictus  
var. leonis Townsend & Cockerell; Aspidiotus  
koebelii Townsend & Cockerell; Chrysomphalus  
koebelii (Townsend & Cockerell)

DISTRIBUTION:

TX, (CA eradicated)

New World:

Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Panama

HOSTS:

Polyphagous

morrisonorum  
Kosztarab

DISTRIBUTION:  
AL, FL, GA, LA, MA, MI, NC, OH, OK, PA, TN, VA  
New World:  
Bermuda, Canada (Quebec)

HOSTS:  
Abies, Chamaecyparis, Cupressus, Juniperus, Picea, Pinus,  
Thuja, Torreya, Tsuga

perseae  
(Comstock)

Aspidiotus perseae Comstock; Chrysomphalus perseae  
(Comstock)

DISTRIBUTION:  
AL, DC, FL, GA, LA, MO, MS, OK, SC, TN, TX: greenhouse in  
NY\*  
New World:  
Brazil, Central America, Colombia, Cuba, Trinidad,  
Venezuela  
Europe:  
Greenhouse in England, Germany :  
USSR:  
Kiev in greenhouse

HOSTS:  
Polyphagous

scutiformis  
(CockereTT)

Aspidiotus scutiformis Cockerell; Chrysomphalus  
scutiformis (CockereTT)

DISTRIBUTION:  
TX  
New World:  
Argentina, Aruba, Brazil, Colombia, Guatemala, Mexico

HOSTS:  
Polyphagous

ANCEPASPIS

edentata  
(Ferris)

Protodiaspis edentata Ferris

DISTRIBUTION:  
AZ

HOSTS:  
Acacia gregii

tridentata  
(Ferris)

Protodiaspis tridentata Ferris

DISTRIBUTION:

AZ, TX.

New World:

Mexico

HOSTS:

Prosopis glandulosa, P. velutina

ANDASPIS

hawaiiensis  
(Maskell)

Mytilaspis flava var. hawaiiensis Maskell; Lepidosaphes hawaiiensis (Maskell); Lepidosaphes moorsi Doane & Ferris

DISTRIBUTION:

FL, greenhouse in DC\*, MD\*

New World:

Barbados, Cuba, Jamaica

Africa:

Algeria, South Africa

Asia:

China, Philippines, Sri Lanka, Taiwan

Other Areas:

Bonin Is., Hawaii, Samoa

Hosts:

Polyphagous

mackieana  
(McKenzie)

Lepidosaphes mackieana McKenzie

DISTRIBUTION:

CA, FL; greenhouse in DC, NJ

Other Areas:

Hawaii

HOSTS:

Dendrobium, orchid

*Junicae (Ling)*  
*Hawaii*

*Dom. Rep. citrus sp.*

ANNULASPIS

polygona  
Ferris

DISTRIBUTION:

TX

HOSTS:

perennial grass

AONIDIA

atlantica  
Ferris

Cupressaspis atlantica (Ferris)

DISTRIBUTION:  
FL, GA

HOSTS:  
Chamaecyparis thyoides, Juniperus

lauri  
(Bouche)\*\*

Aspidiotus lauri Bouche

DISTRIBUTION:  
DC\*, MS\*, NY\*; (CA eradicated)  
Africa:  
Canary Is., Cape Verde, Madeira Is., North Africa  
Europe:  
Azores, southern Europe, greenhouse in central and north-  
ern countries  
Asia:  
Near East  
USSR:  
Greenhouse

HOSTS:  
Laurus nobilis

shastae  
(Coleman)

Aspidiotus coniferarum var. shastae Coleman;  
Crytaspidotus shastae (Coleman); Cupressaspis shastae  
(Coleman)

DISTRIBUTION:  
AZ, CA, KS, MO, NJ, OK, TX, UT

HOSTS:  
Cupressus, Libocedrus, Juniperus, Sequoia

AONIDIELLA

aurantii  
(Maskell)

Aspidiotus aurantii Maskell; Chrysomphalus aurantii  
(Maskell)

DISTRIBUTION:  
AL, CA, FL, GA, TX; greenhouse in DC\*, KS, NJ, MO\*, PA,  
OR\*  
New World:  
Antigua, Bahamas, Barbados, Bermuda, Dominica, Dominican  
Republic, Guadeloupe, Guyana, Jamaica, Mexico, Nicaragua,  
Martinique, Montserrat, Panama, St. Lucia, St. Vincent,

Trinidad, South America

Europe:

Countries in Mediterranean area

Africa:

North Africa, Angola, Canary Is., Congo, Ethiopia, Guinea, Kenya, Madagascar, Madeira Is., Malawi, Mauritius, Mozambique, Reunion, Rhodesia, Senegal, Seychelles, Sudan, South Africa, Tanzania, Togo, Uganda, Zambia

USSR:

Black Sea Coast, Transcaucasia

Asia:

Widely distributed

Other Areas:

Australia, Fiji, Guam, New Britain, New Caledonia, New Zealand, Russell Is., Samoa, Society Is., Solomon Is., Tonga, Wallis Is.

HOSTS:

Citrus and other hosts

citrina  
(Coquillett)

Aspidiotus citrinus Coquillett; Aspidiotus aurantii var. citrinus Coquillett; Anidiella aurantii citrina (Coquillett); Chrysomphalus aurantii citrinus (Coquillett); Chrysomphalus citrinus (Coquillett)

DISTRIBUTION:

CA, FL, TX

New World:

Chile, Jamaica, Mexico, Nicaragua.

Africa:

Guinea, South Africa, Zaire

USSR:

Armenia, Azerbaijan, Crimea, Georgia, Krasnodar region

ASIA:

Afghanistan, Bangladesh, China, India, Indonesia, Iran, Japan, Malaysia, Korea, Nepal, Pakistan, Okinawa, Philippines, Southern Yemen, Taiwan, Thailand, Turkey

Other Areas:

Australia, Bonin Is., Fiji, New Guinea, Western Samoa

HOSTS:

Citrus and other hosts

inornata  
McKenzie\*\*

DISTRIBUTION:

TX (1 record)

New World:

Ecuador+, Dominican Republic+, Puerto Rico

Asia:  
China, Hong Kong, India, Indonesia, Japan, Laos, Okinawa,  
Philippines, Taiwan, Thailand  
Other Areas:  
Australia, Guam, Hawaii, Kusaie, Marshall Is., Palau Is.,  
Ponape, New Guinea, Truk, Wake Is., Yap Is.

HOSTS:  
Polyphagous - often on Citrus, Mangifera indica, Cocos  
nucifera

orientalis  
(Newstead)

Aspidiotus orientalis Newstead; Aspidiotus (Aonidiella)  
cocotiphagus Maskell; Chrysomphalus orientalis (Newstead);  
Aonidiella cocotiphagus (Maskell)

DISTRIBUTION:

FL

New World:

Bahamas, Brazil, Caribbean Islands, Colombia, Mexico,  
Panama, Venezuela

Africa:

Ethiopia, Kenya, Madagascar, Mauritius, Somalia, South  
Africa, Sudan, Tanzania

Asia:

Afghanistan, Burma, Cambodia, China, Hong Kong, India,  
Indonesia, Iran, Iraq, Laos, Malaysia, Nepal, Nicobar Is.,  
Pakistan, Philippines, Saudi Arabia, Singapore, Sri Lanka,  
Thailand, Vietnam

Other Areas:

Australia, Mariana Is., Yap. Is.

HOSTS:

Polyphagous - often on cycads, Mangifera indica, palms

taxus  
Leonardi

Chrysomphalus taxus (Leonardi)

DISTRIBUTION:

AL, FL, LA, MD; (CA eradicated)

New World:

Argentina, Brazil

Europe:

Italy

USSR:

Black Sea coast of Western Georgia, Crimea

Asia:

Japan



HOSTS:  
Cephalotaxus, Podocarpus, Taxus

AONIDOMYTIUS

albus  
(Cockerell)

Mytilaspis albus Cockerell; Lepidosaphes alba (Cockerell);  
Coccomytilus dispar (Vayssiere); Lepidosaphes dispar  
(Vayssiere)

DISTRIBUTION:

FL

New World:

Argentina, Bahamas, Brazil, Caribbean Islands, Colombia,  
Honduras, Mexico, Peru, Surinam

Africa:

Angola, Gambia, Ghana, Ivory Coast, Kenya, Liberia,  
Madagascar, Malawi, Mauritius, Mozambique, Nigeria,  
Senegal, Tanzania, Uganda, Zaire

Asia:

India, Indonesia, Sri Lanka, Taiwan

HOSTS:

Often on Manihot esculenta; Carica papaya, Malvastrum,  
Malvaceae, other hosts.

bilobis  
Ferris

Dactylaspis biloba (Ferris)

DISTRIBUTION:

CA

HOSTS:

Allenrolfea, Atriplex

ceanothi  
(Ferris)

Lepidosaphes ceanothi Ferris; Chionaspis ceanothi (Ferris)

DISTRIBUTION:

CA

HOSTS:

Ceanothus

concolor  
(Cockerell)

Mytilaspis albus var. concolor Cockerell; Lepidosaphes  
concolor (Cockerell); Chionaspis concolor (Cockerell)

DISTRIBUTION:  
AZ, CA, CO, NM, TX  
New World:  
Mexico

HOSTS:  
Atriplex, Borrchia frutescens, Encelia farinosa,  
Franseria, Haplopappus laricifolius, Isomeris, Pedilanthus  
macrocarpus, Quercus, Prosopis, Suaeda

durus  
Ferris

Dactylaspis dura (Ferris)

DISTRIBUTION:  
CA

HOSTS:  
Lycium cooperi

hyperici  
Ferris

DISTRIBUTION:  
AL, DC, GA, FL, MS, NC, VA

HOSTS:  
Ascyrum hypericoides, Hypericum glomeratum

incisus  
Ferris

DISTRIBUTION:  
AZ, TX

HOSTS:  
Atriplex, Eurotia lanatum

multiglandulatus  
Kosztarab

DISTRIBUTION:  
FL, GA, IL, IN, MD, MO, OH, VA

HOSTS:  
Hypericum

peninsularis  
(Ferris)

Lepidosaphes peninsularis Ferris

DISTRIBUTION:  
TX  
New World:  
Mexico

HOSTS:  
Asclepias subulata, Euphorbia antisyphilitica, Porophyllum gracile

sabatius  
Tippins

DISTRIBUTION:  
AL

HOSTS:  
Polygala cymosa, Sabatia

solidaginis  
(Hoke)

Lepidosaphes solidaginis Hoke

DISTRIBUTION:  
AL, FL, GA, MD, MS, OK, SC, TN, VA  
New World:  
Cuba

HOSTS:  
Baccharis halimifolia, Borrchia frutescens, Eupatorium,  
Iva imbricata

variabilis  
Ferris

DISTRIBUTION:  
CA

HOSTS:  
Catalpa, Encelia, Haplopappus, Sambucus

#### ASPIDASPIS

arctostaphyli  
(Cockerell &  
Robbins)

Aspidiotus arctostaphyli Cockerell & Robbins;  
Aspidiella arctostaphyli (Cockerell & Robbins)

DISTRIBUTION:  
CA, OR

HOSTS:  
Arbutus menziesii, Arctostaphylos, laurel, Umbrellularia californica

densiflorae  
(Bremner)

Aspidiotus densiflorae Bremner; Aspidiella densiflorae  
(Bremner)

DISTRIBUTION:  
CA

New World:  
Mexico (Guadeloupe Is.)

HOSTS:  
Pasania densiflora, Quercus

florenciae  
(Coleman)

Aspidiotus florenciae Coleman

DISTRIBUTION:  
AZ, CA

HOSTS:  
Pinus pinderosa

gainesi  
McDaniel

DISTRIBUTION:  
TX

HOSTS:  
Antirrhinum

ASPIDIELLA

sacchari  
(Cockere11)

Aspidiotus sacchari Cockere11

DISTRIBUTION:  
FL, TX

New World:

Bahamas, most Caribbean Islands, Central America,  
Colombia, Guyana, Mexico

Africa:

Liberia, Madagascar, Mauritius, Nigeria, Reunion,  
Rodrigues, Sierra Leone.

Asia:

Indonesia (Java), Laos, Malaysia, Pakistan, Sri Lanka

Other Areas:

Fiji, Guam, Kwajalein, New Guinea, Palau Is., Saipan,  
Tahiti+, Tinian

HOSTS:

Canna, Cocos nucifera, Coix lacryma-jobi, Costus,  
Saccharum officinarum, various grasses.

ASPIDIOTUS

cryptomeriae  
Kuwana

DISTRIBUTION:  
CT, DE, IN, MD, NY, PA  
USSR:  
Far east  
Asia:  
China, Japan, Korea, Taiwan

HOSTS:  
Abies, Cedrus, Cephalotaxus, Chamaecyparis, Cryptomeria,  
Keteleeria, Picea, Pinus, Pseudotsuga, Taxus, Torreya

destructor  
Signoret

Aspidiotus transparentis Green; Aspidiotus translucens  
Cockerell & Robinson; Temnaspidotus destructor (Signoret)

DISTRIBUTION:  
FL, GA; greenhouse in CT, PA; (CA eradicated)  
New World:  
Widespread except no report from Argentina, Canada, Chile,  
Paraguay and Uruguay  
Europe:  
Germany (greenhouse)  
Africa:  
Reported from many countries south of Sahara Desert on  
continent, Canary Is., Cape Verde, Madagascar, Madeira  
Is., Mauritius, Reunion, Seychelles; no record from North  
Africa except Egypt  
USSR:  
Azerbaijan, Georgia  
Asia:  
Iran eastward to Indonesia, north into Japan and Korea  
Other Areas:  
Australia, Bonin Is., Caroline Is., Fiji, Hawaii, Mariana  
Is., Marshall Is., New Britain, New Caledonia, New Guinea,  
New Hebrides, Samoa, Society Is., Solomon Is., Tuamotu  
Is., Wallis Is.

HOSTS:  
Polyphagous

excisus  
Green

Temnaspidotus excisus (Green)

DISTRIBUTION:  
FL  
New World:  
Antigua, Colombia, Costa Rica, Dominican Republic,

Ecuador, El Salvador, Grenada, Guatemala, Guyana, Honduras, Jamaica, Martinique, Mexico, Panama, Puerto Rico, St. Croix, Surinam, Trinidad, Venezuela

Asia:

China, India, Indonesia, Japan, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand

Other Areas:

Fiji, New Guinea, Palau Is., Saipan, Tinian, Yap Is.

HOSTS:

Polyphagous; often on Aglaonema and Citrus

marisci  
Tippins &  
Beshear

DISTRIBUTION:

AL, FL, GA

HOSTS:

Cladium, Mariscus jamaicensis

nerii  
Bouche

Chermes nerii Bouche; Aspidiotus hederæ (Vallot);  
Aspidiotus vagabundus Cockerell

DISTRIBUTION:

General distribution in United States ; greenhouse in colder states

New World:

Antigua, Argentina, Bermuda, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Ecuador, Dominican Republic, Grenada, Guatemala, Guadeloupe, Haiti, Jamaica, Mexico, Panama, Peru, Puerto Rico, Uruguay

Europe:

Widespread; Azores

USSR:

Armenia, Azerbaijan, Crimea, Krasnodar; greenhouse

Africa:

North Africa, Canary Is., Ethiopia, Kenya, Madagascar, Madeira Is., Malawi, Mozambique, Nigeria, Rhodesia, South Africa, S.W. Africa, Tanzania, Uganda, Zaire

Asia:

China, Cyprus, Iran, Israel, Jordan, Korea, Lebanon, Japan, Saudi Arabia, Syria, Turkey

Other Areas:

Australia, Hawaii, New Caledonia, New Zealand

HOSTS:

Polyphagous

spinosus  
Comstock

Aspidiotus persearum Cockerell

DISTRIBUTION:

AL, CA, FL, GA, LA, MS, TX; greenhouse in DC\*, NY, VA

New World:

Bahamas, Bermuda, Brazil, Central America, Colombia, Cuba,  
Dominican Republic, Mexico, Peru, Puerto Rico, Uruguay

Europe:

Azores, Italy, Spain, greenhouse in England, Germany

USSR:

Georgia; greenhouse in Leningrad

Africa:

Algeria, Canary Is., Madagascar, Madeira Is., Mozambique,  
South Africa, Tanzania

Asia:

China, Israel, Japan, Syria, Turkey

Other Areas:

Hawaii, Yap Is.

HOSTS:

Polyphagous

AULACASPIS

rosae  
(Bouche)

Aspidiotus rosae Bouche

DISTRIBUTION:

General distribution in conterminous U.S.

New World:

Argentina, Brazil, Canada, Chile, Colombia, Costa Rica,  
Dominican Republic, Guatemala, El Salvador, Jamaica, Peru,  
Puerto Rico, Venezuela

Europe:

Many countries; Azores

USSR

Africa:

North Africa, Canary Is., Cape Verde, Madeira Is., South  
Africa, Tanzania, Zaire

Asia:

China, India, Iran, Iraq, Israel, Japan, Korea,  
Phillippines, Taiwan, Turkey

Other Areas:

Australia, Bonin Is., New Caledonia, New Zealand

HOSTS:

Rosa, Rubus, other Rosaceae.

CARULASPIS

juniperi  
(Bouche)

Aspidiotus juniperi Bouche; Diaspis carueli (Targioni-Tozzetti), Carulaspis carueli (Targioni-Tozzetti), Diaspis visci (Schrank), Carulaspis visci (Schrank)  
(misidentifications)

DISTRIBUTION:

AR, CA, CT, DC, DE, FL, GA, IN, ID, KS, KY, MA, MI, MD, MO, NC, NJ, NY, OH, OK, OR, PA, RI, SC, TN, TX, UT, VA, WA

New World:

Argentina, Brazil, Canada, Chile

Europe:

Many countries; Azores

USSR:

Crimea, north Caucasus, Turkmen SSR, Uzbek SSR

Africa:

Algeria, Canary Is., Egypt?, Madeira Is., Morocco

Asia:

Iran, Turkey

Other Areas:

Australia, New Zealand

HOSTS:

Biota, Callistris, Chamaecyparis, Cryptomeria,  
Cupressocyparis, Cupressus, Juniperus, Libocedrus,  
Sequoia, Taxodium, Thuja

minima  
(Targioni-Tozzetti)

Diaspis minima Targioni-Tozzetti; Carulaspis carueli  
(Targioni-Tozzetti)

DISTRIBUTION:

CA, FL, GA, KS, LA, MO, NC, NM, OK, PA, TN, TX, UT, VA, WA

New World:

Argentina, Bermuda, Chile, Colombia, Cuba, Mexico, Uruguay

Europe:

Azores, Austria, England, France, Greece, Italy, Portugal, Romania, Spain, Sweden

USSR:

Armenia, Crimea, Krasnodar Territory, Transcaucasus, Ukraine

Africa:

Algeria, Ethiopia, Guinea, Madeira Is., Morocco, South

Africa

Asia:

Iran, Israel, Jordan

Other Areas:

Hawaii



HOSTS:  
Callistris, Chaemacyparis, Cryptomeria, Cupressus,  
Juniperus, Sequoia, Thuja

CHIONASPIS

acericola  
Hollinger

DISTRIBUTION:  
MD, MO, OH, PA, TX

HOSTS:  
Acer, A. saccharinum, A. saccharum

americana  
Johnson

Fundaspis americana (Johnson)

DISTRIBUTION:  
AL, CA, CO, CT, DC, DE, FL, GA, IA, IL, IN, KS, LA, MA,  
MD, MO, MI, MN, MS, NC, NE, NJ, OH, OK, PA, SC, SD, RI,  
TN, TX, VA, WI, WV

HOSTS:  
Polyphagous - often found in Ulmus

caryae  
Cooley

DISTRIBUTION:  
CT, DC, FL, IA, IN, KS, MO, NC, OH, PA

HOSTS:  
Carya, Juglans nigra

corni  
Cooley

DISTRIBUTION:  
CA, ID, IL, KS, LA, MA, MD, MI, MS, NJ, NY, OH, PA, UT, WI  
New World:  
Canada (Ontario)

HOSTS:  
Cornus

etrusca  
Leonardi

DISTRIBUTION:  
AZ, CA, TX  
New World:  
Mexico  
Europe:  
France, Italy, Spain

Africa:  
Algeria, Canary Is., Egypt, Mauritania, Morocco, Tunisia  
Asia:  
Turkey

HOSTS:  
Tamarix

floridensis  
Takagi

DISTRIBUTION:  
FL

HOSTS:  
Fraxinus

furfura  
(Fitch)

Aspidiotus furfurus Fitch

DISTRIBUTION:  
General distribution in conterminous U.S.  
New World:  
Canada

HOSTS:  
Crataegus, Cydonia, Malus, Prunus, Pyracantha, Sorbus,  
other Rosaceae

gleditsiae  
Sanders

Phenacaspis spinicola Dietz & Morrison

DISTRIBUTION:  
FL, IL, IN, KS, LA, ME, MD, MO, MS, OH, PA, TN, TX;  
(CA eradicated)

HOSTS:  
Gleditsia triacanthos

heterophyllae  
Cooley

Chionaspis pinifoliae heterophyllae Cooley; Phenacaspis heterophyllae (Cooley)

DISTRIBUTION:  
AL, CT, DC, DE, FL, GA, LA, MA, MD, MO, MS, NC, NJ, NY,  
OH, PA, RI, SC, TN, TX, VA  
New World:  
Bahamas, Mexico

HOSTS:  
Pinus

kosztarabi  
Takagi

DISTRIBUTION:  
GA, MD, NC, OH, PA, SC, TN, VA

HOSTS:  
Fraxinus, Ostrya virginiana

lintneri  
Comstock

Chionaspis lintneri betulae Cooley

DISTRIBUTION:  
CT, DC, FL, IA, MA, ME, MI, NH, NY, OH, PA, TX, VT  
New World:  
Canada (Ontario, Quebec, Prince Edward Is.)

HOSTS:  
Alnus, Amelanchier, Betula, Cornus, Corylus, Juglans,  
Viburnum

longiloba  
Cooley

DISTRIBUTION:  
AR, FL, IA, KS, LA, MI, MO, MS, NE, OH, TX  
New World:  
Mexico

HOSTS:  
Populus, Salix

nyssae  
Comstock

Phenacaspis nyssae (Comstock); Chionaspis sylvatica  
Sanders; Fundaspis sylvatica (Sanders)

DISTRIBUTION:  
AL, AR, DC, CT, FL, GA, IN, MD, MO, NC, NJ, NY, OH, PA,  
SC, TN, TX, VA, WV

HOSTS:  
Celtis occidentalis, Lindera benzoin, Nyssa sylvatica,  
Quercus, Symplocos tinctoria

ortholobis  
Comstock

DISTRIBUTION:  
CA, ID, MT, NV, OR, WA  
New World:  
Canada (British Columbia)

HOSTS:  
Alnus, Ceanothus, Rhamnus purshiana

parkii  
Hottinger

Chionaspis platani Cooley; Phenacaspis platani (Cooley);  
Phenacaspis occidentalis Kosztarab

DISTRIBUTION:  
IN, KS, LA, MO, OH, TX, VA

HOSTS:  
Platanus

pinifoliae  
(Fitch)

Aspidiotus pinifoliae Fitch; Phenacaspis pinifoliae  
(Fitch)

DISTRIBUTION:  
General distribution in conterminous U.S.  
New World:  
Canada, Cuba, El Salvador, Honduras, Mexico  
Europe:  
England

HOSTS:  
Abies, Picea, Pinus, Pseudotsuga, Tsuga

salicisnigrae  
(Walsh)

Aspidiotus salicis-nigrae Walsh

DISTRIBUTION:  
AL, AR, CA, CO, FL, IA, ID, IL, IN, KS, LA, MA, MI, MN,  
MO, MS, MT, NC, ND, NE, NJ, NM, NY, OH, OK, PA, SD, TN,  
TX, WI, WY  
New World:  
Canada  
Asia:  
Japan

HOSTS:  
Amelanchier, Cornus, Fraxinus, Liriodendron, Populus,  
Salix

sassceri  
Cockerell &  
Robbins

DISTRIBUTION:  
CA, CO

HOSTS:  
Ceanothus

triformis  
Tippins &  
Beshear

Chionaspis betulae Tippins & Beshear

DISTRIBUTION:  
FL, GA

HOSTS:  
Betula

wistariae  
Cooley

Phenacaspis fugicola Kuwana

DISTRIBUTION:  
CA (1 localized infestation), PA  
Asia:  
Japan

HOSTS:  
Wistaria

CHORTINASPIS

consolidata  
Ferris

DISTRIBUTION:  
AZ, CA

HOSTS:  
Hilaria rigida

cottami  
McDaniel

DISTRIBUTION:  
TX

HOSTS:  
Stenotaphrum secundatum

divaricata  
Ferris

DISTRIBUTION:  
FL, GA

HOSTS:  
Aristida, Eleusine indica

frankliniana  
Ferris

DISTRIBUTION:  
TX

HOSTS:  
Hilaria cenchroides

graminella  
(Cockerell)

Aspidiotus graminellus Cockerell; Targionia graminella  
(Cockerell)

DISTRIBUTION:  
AZ, CO, FL, GA, NM, TX

HOSTS:  
Bouteloua, Monanthochloe, Poaceae

subhortina  
(Laing)

Aspidiotus subhortinus Laing

DISTRIBUTION:  
AZ, FL, MS, TX  
New World:  
Bahamas, Colombia, Jamaica, Mexico, Panama, Peru  
Other Areas:  
Hawaii

HOSTS:  
Andropogon, bromeliad, Eremochloa ophiuroides, Musa paradisiaca sapietum, Panicum, Saccharum officinarum, Stenotaphrum secundatum, grasses

CHRYSOMPHALUS

aonidum  
(Linnaeus)

Coccus aonidum Linnaeus; Chrysomphalus ficus Ashmead;  
Aspidiotus ficus (Ashmead)

DISTRIBUTION:  
Most States; greenhouse in colder areas. Widespread  
in tropical and subtropical areas of the world

HOSTS:  
Polyphagous

bifasciculatus  
Ferris

DISTRIBUTION:  
AL, CA, DE, GA, LA, MD, NC, NJ, OK, SC, TX, VA  
New World:  
Mexico  
Asia:  
China, Japan, Korea, Taiwan  
USSR:  
Greenhouse  
Other Areas:  
Hawaii

HOSTS:  
Polyphagous

dictyospermi  
(Morgan)

Aspidiotus dictyospermi Morgan

DISTRIBUTION:

AL, AZ, CA, CO\*, CT\*, DC\*, FL, GA, IL\*, IN\*, KS\*, LA, MA, MD, MI, MN\*, MO\*, MS, NC\*, NH\*, NJ, NM\*, NY\*, OH, PA, RI\*, SC, TN\*, TX, UT, VA, WV\*. Widespread throughout the tropical and subtropical areas of the world; greenhouse in temperate areas

HOSTS:  
Polyphagous

CIRCULASPIS

bibursa  
Ferris

DISTRIBUTION:  
TX

HOSTS:  
Triodia pilosa

fistulata  
(Ferris)

Odonaspis fistulata Ferris

DISTRIBUTION:  
TX  
New World:  
Mexico

HOSTS:  
Distichilis spicata, Sporobolus

CLAVASPIS

barbigera  
Ferris

DISTRIBUTION:  
FL  
New World:  
Trinidad

HOSTS:  
Bursera simaruba?, Manilkara zapota

coursetiae  
(Marlatt)

Aspidiotus (Diaspidiotus) coursetiae Marlatt; Aspidiotus coursetiae Marlatt; Diaspidiotus coursetiae (Marlatt)

DISTRIBUTION:  
AZ, FL, TX  
New World:  
Mexico, Panama

HOSTS:  
Polyphagous

covilleae  
(Ferris)

Aspidiotus covilleae Ferris

DISTRIBUTION:  
AZ, CA, NM, TX  
New World:  
Mexico

HOSTS:  
Acacia, Echinocereus, Euonymus, Forchammeria, Larrea,  
Lycium, Olea, Plumeria, Prosopis pubescens

crypta  
Howell &  
Tippins

DISTRIBUTION:  
GA

HOSTS:  
Carya illinoensis

diclusa  
Ferris

DISTRIBUTION:  
CA

HOSTS:  
Juglans regia

herculeana  
(Doane &  
Hadden)

Aspidiotus herculeanus Doane & Hadden; Aspidiotus  
subsimplis var. anoniae Houser; Clavaspis subsimplis var.  
anoniae (Houser); Chrysomphalus herculeanus (Doane &  
Hadden)

DISTRIBUTION:  
FL, TX  
New World:  
Mexico, many Caribbean Islands, most Central American and  
South American countries  
Africa:  
Guinea, Kenya, Madagascar, Malawi, Mauritius, Mozambique,  
Rhodesia  
Asia:  
Philippines, Singapore



Other Areas:  
Australia, Fiji, Hawaii, New Caledonia, Society Is.  
(Tahiti)

HOSTS:  
Polyphagous

mori  
(Herrick)

Aspidiotus mori Herrick; Diaspidiotus mori (Herrick)

DISTRIBUTION:  
TX

HOSTS:  
Morus alba, M. rubra

pedilanthi  
(Ferris)

Aspidiotus pedilanthi Ferris

DISTRIBUTION:  
TX

HOSTS:  
Franseria, Horsfordia, Lycium?, Pedilanthus macrocarpus,  
Populus, Quercus

subsimilis  
(Cockerell)

Aspidiotus subsimilis Cockerell; Hendaspidiotus subsimilis  
(Cockerell); Aonidiella subsimilis (Cockerell)

DISTRIBUTION:  
TX

New World:  
Guatemala, Mexico

HOSTS:  
Acacia constricta, Diospyros texana, Jatropha spathulata,  
Persea, Prosopis, Ptelea tomentosa

texana  
Ferris

DISTRIBUTION:  
TX

HOSTS:  
Diospyros texana, Ficus, Morus, Persea, Ziziphus lycioides

ulmi  
(Johnson)

Aspidiotus ulmi Johnson; Aonidiella ulmi (Johnson);  
Hendaspidiotus ulmi (Johnson)

DISTRIBUTION:  
CA, CO, CT, DC, GA, IL, IN, KS, LA, MD, MO, MS, NJ, NY,  
OH, SC, TX, WI, WV, VA  
New World:  
Canada

HOSTS:  
Acer, Aesculus, Catalpa, Celtis, Cornus, Euonymus,  
Juglans nigra, Robinia, Tilia, Ulmus

COMSTOCKIELLA

sabalis  
(Comstock)

Aspidiotus sabalis Comstock; Comstockiella sabalis var.  
mexicana Cockerell

DISTRIBUTION:  
CA, GA, FL, LA, MS, NC, SC, TX; greenhouse in NJ\*, OH\*  
New World:  
Bahamas, Bermuda, Cuba, Dominican Republic, Guadeloupe,  
Mexico  
Europe:  
Germany (greenhouse)

HOSTS:  
Arecastrum romanzoffianum, Citrus, Cocos nucifera, Erythea  
edulis, Latania commersoni, Livistona chinensis, Phoenix  
dactylifera, Sabal, Serenoa repens, Washingtonia robusta

CRASSASPIS

multipora  
(Ferris)

Pseudodiaspis multipora Ferris; Situlaspis multipora  
(Ferris)

DISTRIBUTION:  
AZ, CA  
New World:  
Mexico

HOSTS:  
Phoradendron flavescens, Prosopis grandulosa

CRENULASPIDIOTUS

mini  
Davidson

DISTRIBUTION:  
AZ

HOSTS:  
Prosopis

CUPIDASPIS

beshearae  
Howell &  
Tippins

DISTRIBUTION:  
AZ, CA, CO, UT

HOSTS:  
Calocedrus, Cupressus, Juniperus, Libocedrus

cupressi  
(Coleman)

Leucaspis cupressi Coleman; Lineaspis cupressi (Coleman)

DISTRIBUTION:  
CA, CO, NM, OR, TX, UT

HOSTS:  
Cupressus, Juniperus, Libocedrus decurrens

DACTYLASPIS

lobata  
Ferris

DISTRIBUTION:  
TX  
New World:  
Panama

HOSTS:  
Celtis mississippiensis, Erythrina

DIASPIDIOTUS

aesculi  
(Johnson)

Aspidiotus aesculi Johnson

DISTRIBUTION:  
AZ, CA, CO, ID, MT, ND, NM, NV, OR, TX, UT, WA  
New World:  
Canada (British Columbia, Ontario), Mexico

HOSTS:  
Acer, Adelia, Aesculus, Alnus, Arbutus, Fraxinus,  
Juglans, Populus, Salix

ancylus  
(Putnam)

Diaspis ancylus Putnam; Aspidiotus ancylus (Putnam);

Aspidiotus solus Hunter; Aspidiotus ohioensis York;  
Aspidiotus oxycratagei Hollinger

DISTRIBUTION:

General distribution in conterminous U.S.

New World:

Brazil, Canada, Chile, Mexico

Africa:

South Africa

Other Areas:

Australia

HOSTS:

Polyphagous

bumeliae  
Ferris

DISTRIBUTION:

KS, OK, TX

New World:

Mexico

HOSTS:

Bumelia lanuginosa, Crataegus, Maclura aurantiaca

caryae  
Kosztarab

DISTRIBUTION:

GA, OH

HOSTS:

Carya

coniferarum  
(CockereTT)

Aspidiotus (Diaspidiotus) coniferarum Cockerell;  
Comstockiaspis coniferarum (CockereTT)

DISTRIBUTION:

AZ, CA, CO, FL, GA, IN, KS, LA, MS, NM, OR, SC, TX, VA

New World:

Mexico

HOSTS:

Abies, Cupressus, Juniperus, Libocedrus decurrens, Pinus ponderosa var. scopulorum

crystallinus  
Ferris

DISTRIBUTION:

TX

HOSTS:

Ironwood

ehrhorni  
(Coleman)

Aspidiotus ehrhorni Coleman

DISTRIBUTION:

CA, CO, WA

HOSTS:

Abies concolor, Larix, Libocedrus decurrens, Picea, Pinus,  
Pseudotsuga taxifolia

liquidambaris  
(Kotinsky)

Cryptophyllaspis liquidambaris Kotinsky; Chemaspidotus  
liquidambaris (Kotinsky)

DISTRIBUTION:

AL, CA, CT, DC, DE, FL, GA, IL, IN, LA, MD, MO, MS, NC,  
NJ, NY, OH, OK, PA, SC, TN, TX, VA

HOSTS:

Liquidamber styraciflua

mccombi  
McKenzie

DISTRIBUTION:

AL, DC, FL, GA, LA, MD, MS, NC, PA, SC, VA

HOSTS:

Pinus

osborni  
(Newell &  
Cockerell)

Aspidiotus osborni Newell & Cockerell; Aspidiotus  
yulupae Bremner

DISTRIBUTION:

AL, CA, CT, DC, DE, FL, GA, IA, IL, IN, KS, KY, LA, MA,  
MD, MI, MO, MS, NC, NH, NJ, NY, NM, OH, OK, PA, SC, TN,  
TX, VA, VT, WI, WV

New World:

Canada, Mexico

Africa:

South Africa

HOSTS:

Often on Quercus. Also Betula, Castanea, Caprinus, Fagus,  
Fraxinus, Robinia, Tilia, other hosts

piceus  
(Sanders)

Aspidiotus piceus Sanders, Diaspidiotus hunteri (Newell)  
of Ferris

DISTRIBUTION:  
MO, OH, TN

HOSTS:  
Fraxinus, Liriodendron tulipifera, Sassafras

uvae  
(Comstock)

Aspidiotus uvae Comstock

DISTRIBUTION:  
AL, AR, CA, CT, DC, DE, FL, GA, IL, IN, KS, KY, MD, MO,  
MS, NC, NJ, NY, OH, PA, TN, TX, VA, WV

New World:

Brazil

Africa:

Canary Is.

Europe:

Spain

HOSTS:  
Vitis

DIASPIS

boisduvalii  
Signoret

Aulacaspis boisduvalii (Signoret)

DISTRIBUTION:  
Reported from most States; greenhouse in colder areas.  
Widely distributed throughout the world; greenhouse in  
temperate areas

HOSTS:  
Orchid, palms, other hosts

bromeliae  
(Kerner)

Coccus bromeliae Kerner; Aulacaspis bromeliae (Kerner)

DISTRIBUTION:  
CA, DC\*, FL, IL\*, MO, NJ, NY\*, OH\*, PA\*: greenhouse in  
colder areas

New World:

Antigua, Argentina, Bahamas, Brazil, Belize, Colombia,  
Cuba, Costa Rica, Dominica, Dominican Republic,  
Guadeloupe, Guatemala, Guyana, Haiti, Jamaica, Martinique,  
Mexico, Puerto Rico, St. Lucia, St. Vincent, Trinidad,  
Venezuela

Europe:

Azores; greenhouse in Belgium, Czechoslovakia, England,  
Denmark, France, Germany, Hungary, Italy, Netherlands,

Poland, Sweden

USSR:

Greenhouse

Africa:

Egypt, Kenya, Madeira Is., Mauritius, Morocco, Mozambique, Seychelles, South Africa, Sierra Leone

Asia:

Okinawa, Philippines, Taiwan

Other Areas:

Australia, Bonin Is., Fiji, Hawaii, New Caledonia, Pitcairin Is., Ponape, Samoa, Tahiti

HOSTS:

Ananas comosus, bromeliads

coccois  
Lichtenstein

Diaspis tentaculatus Morgan; Aulacaspis coccois (Lichtenstein); Diaspis coccois (Lichtenstein)

DISTRIBUTION:

CA; (FL eradicated)

New World:

Jamaica

Europe:

France

Africa:

Algeria

HOSTS:

Cocos nucifera, orchid

dignus  
Hoke

DISTRIBUTION:

FL, GA, MS

HOSTS:

Eryngium aquaticum, E. aromaticum, Liriope spicata

diospyri  
Ferris

DISTRIBUTION:

TX

HOSTS:

Diospyros texana

echinocacti  
(Bouche)

Aspidiotus echinocacti Bouche; Diaspis calyptroides Costa; Diaspis cacti Comstock; Diaspis opuntiae Cockerell; Diaspis opunticola Newstead

DISTRIBUTION:

Reported from most States; greenhouse in temperate areas

New World:

Widely distributed

Europe:

Greenhouse or out of doors in Mediterranean region; Azores

USSR:

Greenhouse

Africa:

Algeria, Cameroon, Canary Is., Egypt, Guinea, Madagascar, Madeira Is., Mauritius, Morocco, Mozambique, Reunion, Senegal, South Africa, St. Helena

Asia:

India, Iran, Iraq, Israel, Japan, Pakistan, Philippines, Syria, Turkey

Other Areas:

Australia, Hawaii

HOSTS:

Cactaceae

gilloglyi  
(McKenzie)\*\*

DISTRIBUTION:

(CA eradicated)

New World:

Belize, Guatemala, Jamaica, Mexico

HOSTS:

Bromeliad, Tillandsia

manzanitae  
(Whitney)

Aulacaspis manzanitae Whitney

DISTRIBUTION:

CA

HOSTS:

Arctostaphylos

parasiti  
McKenzie

DISTRIBUTION:

CA

HOSTS:

Phoradendron flavescens

radicicola  
Ferris

DISTRIBUTION:

TX



New World:

Mexico

Africa:

Algeria

HOSTS:

Opuntia, roots of unknown plant

simmondsiae

Ferris

DISTRIBUTION:

AZ

New World:

Mexico

HOSTS:

Idria, Simmondsia

texensis

(Cockere11)

Aulacaspis texensis Cockere11

DISTRIBUTION:

TX

New World:

Mexico

HOSTS:

Castela nicholsoni, Koeberlinia spinosa, mistletoe, sapote, Sophora secundiflora, Wistaria, other hosts

toumeyii

Cockere11

DISTRIBUTION:

AZ, TX

New World:

Mexico

HOSTS:

Holacantha emoryi, Koeberlinia spinosa

#### DUPLASPIDIOTUS

claviger

(Cockere11)

Pseudaonidia clavigera Cockere11

DISTRIBUTION:

FL

New World:

Panama

Africa:

Seychelles, South Africa

Asia:  
China, Indonesia, Japan, Sri Lanka, Taiwan  
Other Areas:  
Guam, Hawaii, Tahiti

HOSTS:  
Polyphagous

tesseratus  
(Grandpre &  
Charmoy)

Aspidiotus (Diaspidiotus) tesseratus Grandpre &  
Charmoy; Lattaspidotus tesseratus (de Charmoy);  
Pseudaonidia tesserata (de Charmoy)

DISTRIBUTION:

FL

New World:

Caribbean Islands, Bahamas, Brazil, Colombia, Ecuador, El  
Salvador, Guatemala, Guyana, Mexico, Nicaragua, Panama,  
Venezuela

Africa:

Ghana, Kenya, Liberia, Mauritius, Mozambique, Rhodesia,  
Rodrigues, South Africa, Uganda

Asia:

India, Indonesia (Java), Pakistan, Sri Lanka

Other Areas:

Guam, Hawaii

HOSTS:

Polyphagous

#### DYNASPIDIOTUS

britannicus  
(Newstead)

Aspidiotus britannicus Newstead

DISTRIBUTION:

CA, IL\*, IN\*, MA\*, MI\*, OR, PA\*, WA

New World:

Bermuda, Brazil, Canada (British Columbia)

Europe:

Many countries

USSR:

Crimea, Black Sea coast, Caucasus; greenhouse

Africa:

Algeria, Egypt, Madeira Is., Morocco

Asia:

Israel, Turkey

HOSTS:

Polyphagous, often on Buxus, Hedera, Ilex, Laurus

EPIDIASPIS

leperii  
(Signoret)

Diaspis leperii Signoret; Diaspis pyri Colvee; Diaspis  
piricola Del Guercio; Epidiaspis piricola (Del Guercio)

DISTRIBUTION:

CA, CT, MD, MT, NY, OK\*, PA\*, RI

New World:

Argentina, Chile, Mexico, Uruguay

Europe:

Central and southern regions; Azores

USSR:

Southern European region

Africa:

Algeria, Madeira Is., Morocco, Tunisia

Asia:

Iran, Turkey

HOSTS:

Malus, Prunus, Pyrus, Rosaceae and other hosts

montana  
(Cockerell)

Aulacaspis montana Cockerell: Diaspis montana (Cockerell)

DISTRIBUTION:

AZ, NM

HOSTS:

Quercus

salicicola  
Ferris

DISTRIBUTION:

AZ, CA

HOSTS:

Phoradendron californicum, Salix

tillandsiae  
Takagi &  
Tippins

DISTRIBUTION:

FL

HOSTS:

Tillandsia usneoides

EXUVIASPIS

enceliae  
Ferris

DISTRIBUTION:

CA

New World:  
Mexico

HOSTS:  
Encelia

FERRISIDEA

magna  
(Ferris)

Pseudodiaspis magna Ferris

DISTRIBUTION:  
CA, TX  
New World:  
Mexico

HOSTS:  
Lycium

FIORINIA

externa  
Ferris

DISTRIBUTION:  
CT, DC, MA, MD, NJ, NY, OH, PA, RI, VA  
Asia:  
Japan

HOSTS:  
Abies, Cedrus, Pinus, Pseudotsuga, Taxus, Tsuga

fioriniae  
(Targioni-  
Tozzetti)

Diaspis fioriniae Targioni- Tozzetti; Fiorinia pellucida  
Targioni-Tozzetti; Uhlaria fioriniae (Targioni-  
Tozzetti); Uhlaria camelliae Comstock; Fiorinia camelliae  
(Comstock)

DISTRIBUTION:  
CA, CT\*, DC\*, FL, GA, IL\*, MA\*, MS\*, OH\*, OK, PA\*, SC\*,  
TX; greenhouse in colder areas  
New World:  
Argentina, Barbados, Bermuda, Brazil, Costa Rica, Cuba,  
Dominican Republic, Jamaica, Mexico, Nevis, Peru, Puerto  
Rico, Trinidad  
Europe:  
Azores, Italy, Malta, Spain; greenhouse in England,  
France, Germany, Ireland, Monaco, Romania  
USSR:  
Greenhouse in European part  
Africa:  
Algeria, Canary Is., Egypt, Madeira Is., Mauritius,

Madagascar, Morocco, Mozambique, South Africa, Tanzania.

Asia:

China, India, Israel, Japan, Malay Peninsula, Philippines,  
Sri Lanka, Taiwan, Turkey

Other Areas:

Australia, Bonin Is., Canton Is., Hawaii, New Caledonia

HOSTS:

Polyphagous

japonica  
Kuwana

Fiorinia fioriniae var. japonica Kuwana

DISTRIBUTION:

VA; (CA eradicated)

Asia:

China, India, Japan, Philippines, Sri Lanka, Taiwan

Other Areas:

Bonin Is., Mauritius

HOSTS:

Abies, Cedrus, Juniperus, Keteleeria, Picea, Pinus,  
Podocarpus, Taxus, Tsuga

pinicola  
Maskell

Fiorinia juniperi Leonardi

DISTRIBUTION:

GA (Cumberland Is.); (CA eradicated)

Asia:

Hong Kong, Japan, Taiwan

Europe:

Portugal

Other Areas:

Bonin Is.

HOSTS:

Acuba, Cephalotaxus, Cupressus, Eurya, Ficus, Myrica,  
Pinus, Pittosporum, Podocarpus, Sciadopitys, Thea, Torreya

theae  
Green

DISTRIBUTION:

AL, AR, DC, FL, GA, IN, LA, MA, MD, MO, MS, NC, NY, OK,  
PA, SC, TX, VA; (CA eradicated)

New World:

Bahamas, Honduras, Mexico

Asia:

China, Hong Kong, India, Indonesia, Japan, Sri Lanka,  
Taiwan

HOSTS:  
Camellia, Citrus, Eurya, Ilex, Thea, other hosts

FISSURASPIS

ulmi  
(Hoke)

Crythemichionaspis ulmi Hoke

DISTRIBUTION:  
FL, GA, MS, TN, TX

HOSTS:  
Ulmus, U. americana

FURCASPIS

biformis  
(Cockerell)

Aspidiotus biformis Cockerell; Chrysomphalus biformis  
(Cockerell)

DISTRIBUTION:  
CO\*, DC\*, FL, NJ\*, WA\*  
New World:  
Mexico, most of Central and South America, many Caribbean  
Islands  
Europe:  
Germany (greenhouse)  
Asia:  
Indonesia, Malaya, Philippines, Singapore, Sri Lanka,  
Thailand  
Other Areas:  
Australia, Hawaii

HOSTS:  
Agave, orchid, Pedilanthus tithymaloides,  
Philodendron

FURCHADASPIS

zamia  
(Morgan)

Diaspis zamiae Morgan; Aulacaspis zamiae (Morgan);  
Furchadiaspis zamiae (Morgan)

DISTRIBUTION:  
CA; greenhouse in MA\*, MD\*, MO\*, NY, PA, WI\*  
New World:  
Argentina, Bermuda, Chile, Guatemala  
Europe:  
Azores, France, Italy, Portugal, Spain; greenhouse in

Czechoslovakia, Denmark, Germany, Great Britain, Poland,  
Sweden  
USSR:  
Greenhouse  
Africa:  
Algeria, Canary Is., Cameroon, Egypt, Madeira Is.,  
Morocco, Mozambique, South Africa, Rhodesia, Swaziland  
Asia:  
Turkey  
Other Areas:  
Australia, Hawaii

HOSTS:  
Ceratozamia mexicana, Cussonia spicata, Cycadaceae, Cycas  
revoluta, Dioon edule, Encephalartos villosus, Rhus,  
Strelitzia

### GENAPARLATORIA

pseudaspidotus  
(Lindinger)

Parlatoria pseudaspidotus Lindinger; Parlatoria  
mangiferae Marlatt

DISTRIBUTION:  
FL; greenhouse in DC\*, CO\*, TN  
New World:  
Barbados, Colombia, Costa Rica, Guyana, Jamaica, Panama,  
Puerto Rico, Surinam, Trinidad  
Europe:  
Greenhouse in England, Germany  
Africa:  
Sudan  
Asia:  
Burma, India, Indonesia, Japan, Malaya, Pakistan,  
Philippines, Singapore, Sri Lanka, Thailand, Vietnam  
Other Areas:  
Bonin Is., Guam, Hawaii, Ponape, Samoa

HOSTS:  
Dendrobium, Mangifera indica, Orchidaceae, Plumeria,  
Vanda

### GEODIAPIS

arundinariae  
Tippins &  
Howell

DISTRIBUTION:  
GA

HOSTS:  
Arundinaria

GYMNASPIS

aechmeae  
Newstead

DISTRIBUTION:  
AL, FL; greenhouse in DC, MD, NJ, MO\*, NY\*, PA\*  
New World:  
Argentina, Brazil, Costa Rica, Jamaica, Puerto Rico  
Europe:  
Greenhouse in Belgium, Bulgaria, England, France, Germany,  
Italy, Poland, Romania, Sweden  
USSR:  
Greenhouse  
Asia:  
Japan+

HOSTS:  
Bromeliaceae, other hosts

HALIASPIS - 1

asymmetrica  
(Ferris)

Duplachionaspis asymmetrica Ferris

DISTRIBUTION:  
FL, SC

HOSTS:  
Aristida

littoralis  
(Ferris)

Duplachionaspis littoralis Ferris

DISTRIBUTION:  
TX

HOSTS:  
Monanthocloe littoralis, Sporobolus wrightii

mackenziei  
(McDaniel)

Duplachionaspis mackenziei McDaniel

DISTRIBUTION:  
TX

HOSTS:  
Monanthocloe littoralis

peninsularis  
Howell

DISTRIBUTION:  
FL



HOSTS:  
Distichilis, Spartina spartinae

spartinae  
(Comstock)

Chionaspis spartinae Comstock; Duplachionaspis spartinae (Comstock)

DISTRIBUTION:  
CA, DE, FL, GA, MA, NJ, NY, SC, TX, VA

HOSTS:  
Distichilis, Spartina

uniolae  
Takagi

DISTRIBUTION:  
FL, GA, LA

HOSTS:  
Spartina, Uniola, grass

#### HEMIBERLESIA

candidula  
(Cockerell)

Aspidiotus (Hemiberlesia) candidulus Cockerell;  
Diaspidiotus candidulus (Cockerell)

DISTRIBUTION:  
AZ, CA  
New World:  
Mexico

HOSTS:  
Prosopis velutina, Phoradendron, Yucca

diffinis  
(Newstead)

Aspidiotus diffinis Newstead; Aspidiotus jatrophae  
Townsend & Cockerell; Aspidiotus diffinis parrotti  
Newell

DISTRIBUTION:  
AL, AR, DC, FL, GA, IL, KS, LA, MD, MO, MS, NC, NJ, NY,  
OH, SC, TN, TX, VA  
New World:  
Argentina, Brazil, Canada, Colombia, Costa Rica, Curacao,  
Dominica, Ecuador, Guyana, Jamaica, Mexico, Nicaragua,  
Panama, St. Kitts, Trinidad

HOSTS:  
Polyphagous

lataniae  
(Signoret)

Aspidiotus lataniae Signoret; Aspidiotus cydoniae  
Comstock; Aspidiotus punicae Cockerell

DISTRIBUTION:

AL, AR, AZ, CA, CO, DC, DE, FL, GA, IA, IL, IN\*, KS, LA,  
MA, MD, MI\*, MO, MS, NC, NJ, NY, OH, OK, PA, SC, TN, TX,  
VA; greenhouse in northern states. Widespread throughout  
the tropical and subtropical areas of the world; green-  
house in temperate areas

HOSTS:

Polyphagous

palmae  
(Cockerell)

Aspidiotus palmae Cockerell; Abgrallaspis palmae  
(Cockerell); Furcaspis palmae (Cockerell); Borchseniaspis  
palmae (Cockerell)

DISTRIBUTION:

FL, (CA Eradicated)

New World:

Antigua, Bolivia, Brazil, Central America, Chile, Col-  
ombia, Cuba, Dominica, Ecuador, Guyana, Jamaica, Mexico,  
Peru, Puerto Rico, St. Kitts, St. Lucia, Surinam, Trinidad

Europe:

Greenhouse in Belgium, England, Germany, Netherlands,  
Poland, Portugal

USSR:

Greenhouse

Africa:

Ghana, Guinea, Kenya, Madeira Is., Principe, Sao Tome,  
Seychelles, South Africa, Tanzania, Togo, Zaire, Zanzibar.

Asia:

China, Cyprus, India, Indonesia, Malaysia, Philippines,  
Singapore, Sri Lanka, Thailand, Vietnam

Other Areas:

Australia, Fiji, Guam, Kusaie, New Guinea, Palau Is.  
Ponape, Saipan, Solomon Is., Tonga, Wotje Atoll, Yap Is.

HOSTS:

Polyphagous

popularum  
(Marlatt)

Aspidiotus (Hemiberlesia) popularum Marlatt

DISTRIBUTION:

AZ, CA, ID, MT, NM, UT, TX

New World:

Canada (Alberta), Mexico

HOSTS:  
Malus, mistletoe, Populus, Salix

pseudorapax  
McKenzie

DISTRIBUTION:  
AZ

HOSTS:  
Abies

rapax  
(Comstock)

Aspidiotus rapax Comstock; Aspidiotus camelliae Signoret;  
Hemiberlesia camelliae (Signoret)

DISTRIBUTION:  
AL, CA, DC, FL, GA, ID, IN, IL, LA, MD, MI, MS, NJ, NY,  
OH, OR, PA, SC, TX, VA, WA  
New World:  
Argentina, Brazil, Bolivia, Chile, Colombia, Costa Rica,  
Cuba, Ecuador, Guyana, Guatemala, Mexico, Peru, Puerto  
Rico, Uruguay  
Europe:  
Many countries; Azores  
USSR:  
Armenia, Georgia  
Africa:  
Algeria, Canary Is., Egypt, Kenya, Madagascar, Madeira  
Is., Malawi, Mauritius, Morocco, Reunion, Rhodesia, South  
Africa, Tanzania  
Asia:  
China, India, Iran, Israel, Japan, Philippines, Okinawa,  
Sri Lanka, Syria, Taiwan  
Other Areas:  
Australia, Bonin Is., Christmas Is., Hawaii, New Zealand

HOSTS:  
Polyphagous

#### HEMIGYMNASPIS

jessopae  
Davidson &  
Miller

DISTRIBUTION:  
FL

HOSTS:  
Eugenia simpsonii

HOWARDIA

biclavis  
(Comstock)

Chionaspis? biclavis Comstock

DISTRIBUTION:

FL; greenhouse in DC\*, KS\*, MD, NY\*, OH\*, PA, MO; (CA eradicated)

New World:

Bahamas, Bermuda, Brazil, Central America, Caribbean Islands, Colombia, Ecuador, French Guiana, Galapagos Is., Guyana, Mexico, Peru, Venezuela

Europe:

Greenhouse in Czechoslovakia, England, France, Germany, Ireland, Italy, Poland, Switzerland

USSR:

Greenhouse

Africa:

Ghana, Kenya, Madagascar, Madeira Is., Malawi, Mauritius, Rhodesia, Rodrigues, South Africa, Sao Tome

Asia:

India, Indonesia, Philippines, Singapore, Sri Lanka, Taiwan

Other Areas:

Australia, Bonin Is., Fiji, Hawaii, New Caledonia, New Guinea, Palau Is., Truk Is.

HOSTS:

Polyphagous

ISCHNASPIS

longirostris  
(Signoret)

Mytilaspis longirostris Signoret; Ischnaspis filiformis  
Douglas

DISTRIBUTION:

CT\*, DC, FL, GA, IL\*, LA, MA\*, MD, MO, NJ, NY, OH, OK, PA, TN, WI\*; greenhouse in colder areas

New World:

Bahamas, Bermuda, Canada (greenhouse), Caribbean Islands, Central America, Brazil, Colombia, Ecuador, Guyana, Mexico, Surinam, Venezuela

Europe:

Italy; greenhouse in Czechoslovakia, England, France, Denmark, Germany, Ireland, Sweden

USSR:

Greenhouse

Africa:

Cameroon, Canary Is., Egypt, Ethiopia, Ghana, Guinea,

Kenya, Madagascar, Mauritius, Mozambique, Nigeria, Principe, Reunion, Rhodesia, Sao Tome, Seychelles, Sierra Leone, South Africa, Tanzania, Uganda, Zaire

Asia:

India, Indonesia, Japan, Malaysia, Philippines, Singapore, Sri Lanka

Other Areas:

Australia, Bonin Is., Fiji, Hawaii, Mariana Is., New Caledonia, New Guinea, Palau Is., Solomon Is., Tonga

HOSTS:

Polyphagous

### KUWANASPIS

hikosani  
(Kuwana)

Chionaspis? hikosani Kuwana; Tsukushiaspis hikosani  
(Kuwana)

DISTRIBUTION:

GA, SC: greenhouse in NY\*

Asia:

Japan

HOSTS:

bamboo, Phyllostachys bambusoides, Sasa

howardi  
(Cooley)

Chionaspis howardi Cooley; Kuwanaspis phyllostachydis  
Borchsenius & Chadbidjeli

DISTRIBUTION:

DC\*, GA, LA, MS, NJ\*, TX

Asia:

Japan, Korea

USSR:

Caucasian region of Black sea, southern Crimea

Other Areas:

Bonin Is.

HOSTS:

Arundinaria, bamboo, Phyllostachys

pseudoleucaspis  
(Kuwana)

Leucaspis bambusae Kuwana; Kuwanaspis bambusae (Kuwana);  
Chionaspis pseudoleucaspis Kuwana; Tsukushiaspis  
pseudoleucaspis (Kuwana)

DISTRIBUTION:  
AL, CA, DC\*, FL, GA, MD\*, NJ\*, SC; greenhouse in NY\*, VA\*  
Europe:  
France, Italy; greenhouse in England, Germany, Poland.  
USSR:  
Crimea, Black Sea coast of western Georgia  
Africa:  
Algeria, Morocco  
Asia:  
China, Japan, Korea, Taiwan, Turkey  
Other Areas:  
Hawaii

HOSTS:  
Arundinaria, bamboo, Bambusa, Phyllostachys,  
Semiarundinaria, Sinobambusa

### LAPAZIA

obscura  
Howett &  
Beshear

DISTRIBUTION:  
TX

HOSTS:  
Atriplex

### LEPIDOSAPHES

beckii  
(Newman)

Coccus beckii Newman; Aspidiotus citricola Packard;  
Mytilaspis beckii (Newman); Lepidosaphes citricola  
(Packard); Cornuaspis beckii (Newman)

DISTRIBUTION:  
AL, CA, GA, FL, LA, MS, SC\*, TX; greenhouse in KS, MO,  
NC, NY, OK, PA, TN. Widely distributed throughout the  
tropical and subtropical areas of the world

HOSTS:  
Citrus and other hosts

boguschi  
McDaniel

DISTRIBUTION:  
TX

HOSTS:  
Maurandia antirrhiniflora

camelliae  
Hoke

Insulaspis camelliae (Hoke)

DISTRIBUTION:

AL, AR, CT, DE, FL, GA, LA, MA, MD, MO, MS, NC, NY, OK,  
OR, SC, TX, VA; (CA eradicated)

New World:

Mexico

Asia:

China, Japan, Okinawa

HOSTS:

Camellia, Cleyera, Ilex, Ligustrum, Rhaphiolepis, Thea

chinensis  
Chamberlin\*\*

Cornuaspis chinensis (Chamberlin)

DISTRIBUTION:

(CA eradicated)

Asia:

China, Singapore, Taiwan

HOSTS:

Cymbidium, Magnolia, palm, Schomburgkia

conchiformioides  
Borchsenius

Mytilaspis conchiformioides (Borchsenius)

DISTRIBUTION:

DC\*, MD, MO

Asia:

China, Japan, Korea

HOSTS:

Althea, Cydonia, Diospyros, Fraxinus, Malus, Pyrus,  
Prunus, Punica, Syringa, Wistaria, other hosts

conchiformis  
(Gmelin)

Coccus conchiformis Gmelin; Mytilaspis conchiformis  
(Gmelin); Mytilaspis ficus Signoret; Lepidosaphes ficus  
(Signoret); Lepidosaphes ficifoliae (Berlese);  
Mytilococcus ficifoliae (Berlese); Lepidosaphes  
conchyformis form conchyformis Gmelin; Lepidosaphes  
conchyformis form minima Newstead

DISTRIBUTION:

CA

New World:

Argentina, Chile

Europe

Africa:  
North Africa  
USSR  
Asia:  
Iran, Iraq, Israel, Pakistan, Syria, Turkey

HOSTS:  
Polyphagous; often on Ficus

destefanii  
Leonardi

Mytilococcus destefanii (Leonardi); Mytilaspis flava  
Targioni-Tozzetti; Lepidosaphes flava (Targioni-  
Tozzetti)

DISTRIBUTION:

CA  
Europe:  
France, Greece, Italy, Spain  
Africa:  
Tunisia  
USSR:  
Abkhazia, Crimea, Turkmen SSR  
Asia:  
Israel

HOSTS:  
Olea, Phillyrea

gloverii  
(Packard)

Aspidiotus gloverii Packard; Mytilaspis gloverii  
(Packard); Mytilococcus gloverii (Packard); Insulaspis  
gloverii (Packard)

DISTRIBUTION:

AL\*, CA, FL, LA, SC, TX; greenhouse in OK. Widely dis-  
tributed throughout the tropical and subtropical areas  
of the world

HOSTS:  
Citrus and other hosts

machili  
(Maskell)

Mytilaspis machili Maskell; Lepidosaphes tuberculata  
Malenotti; Lepidosaphes cymbidicola Kuwana; Lepidosaphes  
cinnamoni Takahashi; Eucornaspis machili (Maskell);  
Eucornaspis pinnaeformis (Bouche)

DISTRIBUTION:

CA, FL; greenhouse in DC, DE, MA, MD, NJ, NY, PA



New World:  
Brazil+, Guatemala  
Europe:  
Greenhouse in Belgium, Czechoslovakia, England, France,  
Germany, Italy, Netherlands, Sweden  
USSR:  
Greenhouse  
Asia:  
China, India, Japan, Korea, Nepal, Taiwan, Thailand  
Other Areas:  
Australia, Bonin Is., Hawaii, New Zealand

HOSTS:  
Cinnamomum, Cymbidium, Dendrobium, Machilus, Orchidaceae,  
other hosts

noxia  
McKenzie\*\*

Insulaspis noxia (McKenzie)

DISTRIBUTION:  
(CA eradicated)  
Asia:  
Philippines  
Other Areas:  
Hawaii

HOSTS:  
Dendrobium, Vanda

pallida  
(Maskell)

Mytilaspis pallida Green (var.?) Maskell; Mytilaspis  
pallida v. maskelli Cockerell; Lepidosaphes maskelli  
(Cockerell); Insulaspis maskelli (Cockerell);  
Insulaspis pallida (Maskell); Lepidosaphes newsteadi  
(Sulc) of Ferris (misidentification)

DISTRIBUTION:  
AL, AR, CA, DC, DE, FL, GA, LA, MD, MS, NC, NJ, NY, PA, VA  
New World:  
Bermuda  
Asia:  
China, Japan, Korea, Taiwan  
USSR:  
Caucasian shore of Black Sea  
Other Areas:  
Hawaii

HOSTS:  
Cephalotaxus, Chamaecyparis, Cryptomeria, Cupressus,  
Juniperus, Picea, Podocarpus, Sciadopitys, Sequoia,  
Taxodium, Taxus, Thuja

pini  
(Maskell)

Poliaspis pini Maskell; Insulaspis pini (Maskell)

DISTRIBUTION:

MD (Towson), PA (Chester Co., Delaware Co.,  
Montgomery Co.)

Asia:

China, Japan, Korea, Taiwan

Other Areas:

Bonin Is., Hawaii

HOSTS:

Pinus

sciadopitysi  
McKenzie

Insulaspis sciadopitysi (McKenzie)

DISTRIBUTION:

CA, CT, DC, NY, OH, PA

HOSTS:

Sciadopitys

tokionis  
(Kuwana)\*\*

Mytilaspis newsteadi v. tokionis Kuwana; Lepidosaphes auriculata (Green); Lepidosaphes lasianthi (Green) of Ferris (misidentification); Insulaspis tokionis (Kuwana)

DISTRIBUTION:

MS\*; greenhouse in MA\*; (CA eradicated)

New World:

Antigua, Bahamas, Barbados, Bermuda, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Guyana, Jamaica, Mexico, Panama, Puerto Rico, St. Lucia, Trinidad, Venezuela, Virgin Islands

Africa:

Madagascar, Mauritius, Mozambique, Reunion, Seychelles, Zanzibar

Asia:

Burma, Hong Kong, India, Indonesia, Japan, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand

Other Areas:

Australia, Bonin Is., Fiji, Guam, Hawaii, Marquesas Is., Palau Is., Saipan, Tahiti, Truk Is.

HOSTS:

Codiaeum

ulmi  
(Linnaeus)

Coccus ulmi Linnaeus; Aspidiotus pomorum Bouche;  
Mytilaspis pomorum (Bouche); Mytilococcus ulmi (Linnaeus)

DISTRIBUTION:

Most states in conterminous U.S.

New World:

Argentina, Brazil, Canada, Colombia, Chile, Mexico,  
Peru, Uruguay

Europe

USSR

Africa:

North Africa, Canary Is., Madeira Is., South Africa

Asia:

China, Cyprus, Iran, Iraq, Israel, Japan, Korea, Saudi  
Arabia, Syria, Taiwan, Turkey

Other Areas:

Australia, New Zealand

HOSTS:

Polyphagous

yanagicola  
Kuwana

Insulaspis yanagicola (Kuwana)

DISTRIBUTION:

GA, IN, MA, MD, MO, NJ, OH, OK, PA, RI, TN, VA, WV

Asia:

China, Japan, Korea

USSR:

Saghalin Is., Ussuri area

HOSTS:

Albizzia, Celastrus, Euonymus, Pachysandra, Salix,  
Tilia, Ulmus

LEUCASPIS

portaeureae  
(Ferris)

DISTRIBUTION:

CA (one localized infestation.)

HOSTS:

Podocarpus

LINDINGASPIS

floridana  
Ferris

Chrysomphalus floridanus (Ferris)

DISTRIBUTION:  
FL  
New World:  
Haiti, Jamaica  
Asia:  
India, Pakistan, Philippines, Thailand  
Africa:  
Egypt

HOSTS:  
Polyphagous; often on Mangifera indica

rossi  
(Maskell)

Aspidiotus rossi Maskell; Chrysomphalus rossi (Maskell)

DISTRIBUTION:  
CA; greenhouse in NY\*  
New World:  
Argentina, Brazil, Chile, Mexico, Peru  
Europe:  
England (Kew garden), Italy (Sicily), Monaco, Portugal, Spain  
Africa:  
Guinea, Madeira Is., Mauritius, Mozambique, Reunion, Rhodesia, South Africa, Tanzania, Togo  
Asia:  
China, India, Japan, Philippines, Sri Lanka, Taiwan  
Other Areas:  
Australia, Hawaii, New Caledonia, New Zealand

HOSTS:  
Polyphagous

#### LOPHOLEUCASPIS

cockerelli  
(Grandpre &  
Charmoy)

Fiorinia cockerelli Grandpre & Charmoy; Leucaspis cockerelli (de Charmoy); Leucodiaspis cockerelli (de Charmoy); Lopholeucaspis cockerelli (de Charmoy)

DISTRIBUTION:  
FL; greenhouse in MA\*, NY\*, (CA eradicated)  
New World:  
Bahamas, Bermuda, Brazil, Central America, Colombia, Cuba, Dominica, Dominican Republic, Ecuador, Grenada, Jamaica, Martinique, Mexico, Peru, Puerto Rico, Trinidad, Venezuela  
Europe:  
Greece+; greenhouse in England, Germany  
Africa:  
Cameroon, Guinea, Kenya, Liberia, Madagascar, Mauritius,

Principe, Seychelles, Sierra Leone, Tanzania, Zaire  
Asia:  
India, Indonesia, Philippines, Sri Lanka  
Other Areas:  
Australia, Bonin Is., Fiji, Hawaii, Niue, Ponape, Tonga

HOSTS:  
Polyphagous

japonica  
(Cockerell)

Leucaspis japonica Cockerell

DISTRIBUTION:  
CT, DC, DE, GA, MD, NJ, NY, PA, RI, VA  
New World:  
Brazil  
USSR:  
Crimea, Georgia, far east (Vladivostok)  
Asia:  
Afghanistan, China, Iran, Japan, Korea, Okinawa, Taiwan,  
Turkey

HOSTS:  
Polyphagous

MELANASPIS

aliena  
(Newstead)\*\*

Aspidiotus alienus Newstead; Chrysomphalus alienus  
(Newstead); Pseudischnaspis alienus (Newstead)

DISTRIBUTION:  
(FL eradicated)  
New World:  
Brazil, Central America, Cuba, Ecuador, Jamaica, Mexico,  
Puerto Rico+  
Europe:  
England (greenhouse)  
Other Areas:  
Hawaii+

HOSTS:  
Orchidaceae

bromeliae  
(Leonardi)

Aonidiella bromeliae Leonardi; Aspidiotus bromeliae  
(Leonardi); Chrysomphalus bromeliae (Leonardi);  
Pseudischnaspis anassarum Lindinger; Targionia bromeliae  
(Leonardi); Melanaspis smilacis (Comstock) of Ferris  
(misidentification in part)

DISTRIBUTION:

FL; greenhouse in PA

New World:

Brazil, Colombia, Costa Rica, Cuba, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Panama, Puerto Rico

Europe:

Azores, Portugal; greenhouse in Belgium+, England, Netherlands+

Africa:

Canary Is., Cameroon, Guinea, Ivory Coast, South Africa, Seychelles, Togo

Asia:

Taiwan

Other Areas:

Hawaii, Guam, Palau Is., Ponape, Yap Is.

HOSTS:

Ananas comosus, Cocos nucifera, other hosts

coccolobae

Ferris

DISTRIBUTION:

FL

New World:

Bahamas, Barbados, Cuba, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Panama, Puerto Rico, St. Croix, Venezuela

HOSTS:

Coccoloba

delicata

Ferris

DISTRIBUTION:

TX

HOSTS:

Prosopis

deliquescens

Ferris

DISTRIBUTION:

TX

HOSTS:

Acacia constricta

elaeagni

McKenzie

DISTRIBUTION:

LA, TX

New World:

Costa Rica, Guatemala

HOSTS:  
Celtis, Elaeagnus, Pithecellobium, Populus, Yucca

latipyga  
Ferris

DISTRIBUTION:  
TX  
New World:  
Costa Rica, Mexico, Panama

HOSTS:  
Celtis, Coccoloba, Fraxinus, Piper, Salix, Solanum,  
Spondias, other hosts

lilacina  
(Cockerell)

Aspidiotus (Chrysomphalus) lilacinus Cockerell;  
Chrysomphalus lilacinus (Cockerell)

DISTRIBUTION:  
AZ, CA, NM, OK, TX

HOSTS:  
Quercus

marlatti  
(Parrott)

Aspidiotus (Targionia) marlatti Parrott; Targionia  
marlatti (Parrott); Targaspidotus marlatti (Parrott)

DISTRIBUTION:  
GA, KS, SD, TX

HOSTS:  
Andropogon, Panicum virgatum

mimosae  
(Comstock)

Aspidiotus mimosae Comstock; Chrysomphalus mimosae  
(Comstock)

DISTRIBUTION:  
FL\* (1920 record)  
New World:  
Mexico

HOSTS:  
mimosa, Spondias, Tillandsia

nigropunctata  
(Cockerell)

Aspidiotus nigropunctatus Cockerell; Chrysomphalus  
nigropunctatus (Cockerell)

DISTRIBUTION:

DC, TX, VA

New World:

Costa Rica, Guatemala, Mexico, Panama, Puerto Rico

HOSTS:

Baccharis, Cornus, Echeveria, Epidendrum, Fraxinus,  
Guaiacum officinale, Laelia majalis, Philodendron,  
Prunus capuli, Randia, Salix

obscura  
(Comstock)

Aspidiotus obscurus Comstock; Chrysomphalus obscurus  
(Comstock)

DISTRIBUTION:

AL, AR, CA, CT, DE, FL, GA, IA, IL, IN, LA, KS, KY, MD,  
MO, MS, NC, NJ, NY, OH, OK, PA, SC, TN, TX, VA, WV

New World:

Canada (Ontario)

HOSTS:

Acer, Carya, Castanea, Cornus, Fagus, Juglans, Planera  
aquatica, Prosopis, Quercus, Sapindus, Ulmus, Viburnum  
obovatum, Vitis

odontoglossi  
(Cockerell)\*\*

Aspidiotus biformis v. odontoglossi Cockerell;  
Aspidiotus odontoglossi Cockerell; Chrysomphalus  
odontoglossi (Cockerell); Melanaspis obtusa Ferris

DISTRIBUTION:

NY\* in greenhouse

New World:

Galapagos Is., Jamaica, Mexico, Panama

HOSTS:

Polyphagous

smilacis  
(Comstock)

Aspidiotus smilacis Comstock; Chrysomphalus smilacis  
(Comstock)

DISTRIBUTION:

DC, FL, GA, LA, MA, MD, SC, TX, VA

New World:

Mexico

HOSTS:

Dasyllirion, Nolina, Smilax



tenebricosa  
(Comstock)

Aspidiotus tenebricosus Comstock; Chrysomphalus  
tenebricosus (Comstock); Aonidiella tenebricosa (Comstock)

DISTRIBUTION:

AL, AR, DC, DE, FL, GA, IL, KY, LA, MD, MO, MS, NC, NJ,  
NY, OH, OK, PA, SC, TN, TX, VA, WV

HOSTS:

Polyphagous

MORGANELLA

cueroensis  
(Cockerell)

Aspidiotus cueroensis Cockerell; Targionia cueroensis  
(Cockerell); Targionia celtis Herrick

DISTRIBUTION:

FL, GA, LA, MD, MS, SC, TX

New World:

Mexico

HOSTS:

Acacia flexicaulis, Acer, Carica papaya, Celtis, Decumaria  
barbara, Fagara, Magnolia, Myrica cerifera,  
Parthenocissus, Persea, Pithecellobium dulce

longispina  
(Morgan)

Aspidiotus longispinus Morgan; Aspidiotus maskelli  
Cockerell; Aspidiotus maskelli var. ornatus Maskell;  
Morganella maskelli (Cockerell)

DISTRIBUTION:

FL (Miami)

New World:

Antigua, Bahamas, Barbados, Bermuda, Brazil, Costa Rica,  
Dominican Republic, Guatemala, Guyana, Haiti, Jamaica,  
Puerto Rico, St. Martin, Tabago, Trinidad

Africa:

Algeria, Cameroon, Mauritius, Mozambique, Rodrigues, Sao  
Tome, South Africa

Asia:

China, Hong Kong, India, Indonesia, Japan, Philippines,  
Sri Lanka, Taiwan

Other Areas:

Australia, Fiji, Guadalcanal, Hawaii, Marquesas Is., New  
Caledonia, New Guinea, Samoa, Tahiti

HOSTS:

Polyphagous; often on Citrus

MYCETASPIS

apicata  
(Newstead)

Aspidiotus (Chrysomphalus) apicatus Newstead; Pelomphala apicata (Newstead)

DISTRIBUTION:

TX (lower Rio Grande River - Cameron Co)

New World:

Brazil, Guyana, Mexico, Panama

HOSTS:

Acacia, Albizzia, Avicennia nitida, Clusia, Enterolobium cyclocarpum, Inga, Magnolia, Pithecellobium flexicaule

defectopalus  
Ferris

DISTRIBUTION:

FL, TX

New World:

Belize, Ecuador, Mexico, Nicaragua, Panama, Peru

HOSTS:

Bumelia tenax, Cercidium floridum, Chlorophora tinctoria, Fagara fagara, Portiera angustifolia, Sideroxylon, Spondias, Swietenia mahogani

personata  
(Comstock)

Aspidiotus personatus Comstock; Chrysomphalus personatus (Comstock)

DISTRIBUTION:

FL; greenhouse in DC\*

New World:

Argentina, Brazil, most Caribbean Islands, Central America, Colombia, Guyana, Mexico, Peru, Venezuela

Europe:

Greenhouse in Belgium, Czechoslovakia, England, France, Germany, Netherlands

USSR:

Greenhouse

Africa:

Canary Is., Cameroon, Egypt, Guinea, Madeira Is., Ivory Coast, Senegal, Sierra Leone, South Africa, Togo

Asia:

Philippines, Indonesia, Sri Lanka

Other Areas:

Hawaii

HOSTS:

Polyphagous

sphaerioides  
(Cockerell)

Aspidiotus sphaerioides Cockerell; Chrysomphalus  
sphaerioides (Cockerell)

DISTRIBUTION:

LA

New World:

Guatemala, Mexico, Panama

HOSTS:

Bursera, Chamaedorea, Euterpe, Dracaena, Mangifera indica,  
palm, Philodendron, Phorium tenax

NELASPIS

crookiae  
Ferris

DISTRIBUTION:

FL

HOSTS:

Crookia microsepalum

NEOPINNASPIS

harperi  
McKenzie

DISTRIBUTION:

CA, FL, GA

Asia:

Japan, Taiwan

Other Areas:

Hawaii

HOSTS:

Polyphagous

NICHOLIELLA

bumeliae  
Ferris

DISTRIBUTION:

AZ

HOSTS:

Bumelia rigida

NILOTASPIS\*\*

halli  
(Green)\*\*

Lepidosaphes (Coccomytilus) halli Green; Coccomytilus halli (Green); Lepidosaphes (Coccomytilus) zlocistii Bodenheimer

DISTRIBUTION:  
(CA eradicated)

Europe:

Greece

Africa:

Egypt

USSR:

Tadjik SSR, Turkmen SSR, Uzbek SSR

Asia:

Afghanistan, Iran, Iraq, Pakistan, Israel, Syria, Turkey

HOSTS:

Amygdalus, Cerasus, Malus, Prunus, Pyrus, other Rosaceae

NIVEASPIS

ilicis  
(Hoke)

Lepidosaphes ilicis Hoke; Lyraspis ilicis (Hoke)

DISTRIBUTION:

GA, MS, TX

HOSTS:

Forestiera pubescens, Ilex

NUCULASPIS

abietis  
(Schrank)

Coccus abietis Schrank; Aspidiotus abietis (Schrank);  
Dynaspidiotus abietis (Schrank)

DISTRIBUTION:

WA

Europe

USSR

Asia:

Iran, Turkey

HOSTS:

Abies, Juniperus, Picea, Pinus

apacheca  
Ferris

DISTRIBUTION:  
AZ  
New World:  
Guatemala, Mexico

HOSTS:  
Pinus

californica  
(Coleman)

Aspidiotus californicus Coleman; Aspidiotus? pini Comstock; Chrysomphalus californicus (Coleman); Aspidiotus abietis (Schrank) (misidentification)

DISTRIBUTION:  
General distribution in conterminous U.S.  
New World:  
Canada, Mexico

HOSTS:  
Pinus, Pseudotsuga, Tsuga

pseudomeyeri  
(Kuwana)

Aspidiotus pseudomeyeri Kuwana; Tsugaspidotus pseudo-  
meyeri (Kuwana)

DISTRIBUTION:  
PA (one collection), NY (two collections on Long Island)  
Asia:  
Japan

HOSTS:  
Cedrus, Chamaecyparis, cypress, Juniperus, Thuja, Tsuga

tsugae  
(Marlatt)

Aspidiotus (Diaspidiotus) tsugae Marlatt; Tsugaspidotus tsugae (Marlatt)

DISTRIBUTION:  
CT, NJ, RI  
Asia:  
Japan, Korea  
USSR:  
Far east

HOSTS:  
Juniperus, Picea, Taxus, Tsuga

ODONASPIS

graminis  
Bremner

DISTRIBUTION:  
CA  
New World:  
Mexico

HOSTS:  
Danthonia californica, grass

litorosa  
Ferris

DISTRIBUTION:  
TX  
New World:  
Mexico, Panama

HOSTS:  
Milium?, Rachidospermum mexicanum, Sporobolus wrightii,  
other grasses

minima  
Howell &  
Tippins

DISTRIBUTION:  
GA

HOSTS:  
Aristida

penicillata  
Green

Anoplaspis penicillata (Green); Dycryptaspis penicillata  
(Green); Frogattiella penicillata (Green)

DISTRIBUTION:  
AL, CA, FL, GA, LA, MS, TX  
New World:  
Guyana, Jamaica, Puerto Rico  
Africa:  
Algeria, South Africa  
Asia:  
China, India, Iran, Japan, Pakistan, Philippines, Sri  
Lanka, Taiwan  
Other Areas:  
Fiji, Hawaii, Palau Is.

HOSTS:  
Arundinaria, Bambusa, Dendrocalamus, Gigantochloa aspera,  
Phyllostachys, other bamboo

ruthae  
Kotinsky

Dycryptaspis ruthae (Kotinsky)

DISTRIBUTION:

AL, AR, AZ, CA, FL, GA, LA, MS, SC, TX

New World:

Argentina, Bermuda, Brazil, Chile, Cuba, Mexico, Puerto Rico, St. Croix

Africa:

Egypt, Ethiopia, Kenya, Madagascar, Mauritius, Reunion, Rhodesia, South Africa

Asia:

Chagos Arch., Israel, Sri Lanka

Other Areas:

Australia, Christmas Is., Hawaii, New Caledonia

HOSTS:

Poaceae; commonly found on Cynodon dactylon

saccharicaulis  
(Zehntner)

Aspidiotus sacchari-caulis Zehntner; Aspidiotus secretus v. sacchari-caulis Zehntner; Odonaspis secreta sacchari-caulis (Zehntner)

DISTRIBUTION:

AL, FL, MD

New World:

Cuba, Guatemala+, Honduras+, Puerto Rico, St. Croix, Venezuela

Africa:

Cameroon, Madeira Is., Mauritius, Sao Tome, South Africa, Tanzania, Uganda

Asia:

India, Indonesia, Philippines, Thailand+

Other Areas:

New Guinea, Palau Is.

HOSTS: Chloris gayana, Digitaria decumbens, Erianthus arundinaceus, Panicum purpurascens, Pennisetum purpureum, Saccharum officinarum, Sorghum halepense, other grasses

secreta  
(Cockere11)

Aspidiotus secretus Cockere11: Dycryptaspis secreta (Cockere11)

DISTRIBUTION:

LA, NJ\*; greenhouse in NY

Europe:

France; greenhouse in Czechoslovakia

USSR:

Crimea, Black Sea coast of Caucasus

Africa:  
Algeria  
Asia:  
China, India, Indonesia, Iran, Japan, Pakistan, Sri Lanka,  
Taiwan  
Other Areas:  
Bonin Is., Western Samoa

HOSTS:  
Arundinaria, Bambusa, Sasa, other bamboo

OPUNTIASPIIS

carinata  
(Cockereil)

Mytilaspis carinatus Cockereil; Lepidosaphes carinatus  
(Cockereil); Mytilaspis nigra Cockereil

DISTRIBUTION:  
FL (Broward Co., Dade Co., Lee Co., Palm Beach Co., St.  
Lucie Co.), TX (Hidalgo Co.)  
New World:  
Belize, Guatemala, Mexico, Peru

HOSTS:  
Anthurium, Beaucarnea, Citrus aurantifolia, Dracaena,  
Nolina, Oncidium, orchid, Pedilanthus, Philodendron,  
Theobroma cacao, Tillandsia, Yucca

PALINASPIS

quohogiformis  
(Merrill)

Targionia quohogiformis Merrill

DISTRIBUTION:  
FL  
New World:  
Cuba, Jamaica, St. Lucia

HOSTS:  
Polyphagous

PALLULASPIS

ephedrae  
Ferris

DISTRIBUTION:  
CA

HOSTS:  
Ephedra nevadensis



PARACUPIDASPIS

wilkeyi  
Howell &  
Tippins

DISTRIBUTION:  
AZ, CA, KS, NM, OR

HOSTS:  
Calocedrus decurrens, Juniperus, J. virginiana

PARLATOREOPSIS

chinensis  
(Marlatt)

Parlatoria chinensis Marlatt

DISTRIBUTION:  
CA, FL, MO  
Asia:  
China, India, Japan, Philippines, Taiwan

HOSTS:  
Polyphagous

pyri  
(Marlatt)

Parlatoria pyri Marlatt

DISTRIBUTION:  
DC, MD  
Asia:  
China, Japan

HOSTS:  
Acer, Cornus, Elaeagnus, Ligustrum, Malus, Osmanthus,  
Pyrus

PARLATORIA

blanchardi  
(Targioni-  
Tozzetti)\*\*

Aonidia blanchardi Targioni-Tozzetti; Parlatoria victrix  
Cockerell; Parlatoria blanchardii (Targioni-Tozzetti)

DISTRIBUTION:  
(AZ\*, CA\* eradicated)  
New World:  
Argentina, Brazil, Bolivia  
Europe:  
Italy  
Africa:  
North Africa, Chad, Mali, Mauritius, Niger, Somalia, Sudan

USSR:  
Turkmen SSR  
ASIA:  
Afghanistan, India, Iran, Iraq, Israel, Jordan, Pakistan,  
Saudi Arabia, Syria  
Other Areas:  
Austalia

HOSTS:  
Phoenix canariensis, P. dactylifera, Pritchardia filifera,  
Hyphaene thebaica

camelliae  
Comstock

Parlatoria pergandii var. camelliae Comstock

DISTRIBUTION:  
AL, CA, FL, DC, DE, GA, LA, MD, MS, NC, OR, SC, TX, VA  
New World:  
Argentina, Chile, Mexico  
Europe:  
France, Italy, Portugal, Switzerland  
USSR:  
Abkhazia  
Asia:  
China, Hong Kong, India, Indonesia, Japan, Korea, Pakis-  
tan, Taiwan

HOSTS:  
Polyphagous; often on Camellia

crotonis  
Douglas

Parlatoria proteus var. crotonis Douglas

DISTRIBUTION:  
FL, LA; greenhouse in DC, IL\*, MA\*, NY\*, OH\*, PA; (CA  
eradicated).  
New World:  
Antigua, Bahamas, Bermuda, Costa Rica, Cuba, El Salvador,  
Grand Cayman Is., Guadeloupe, Guyana, Honduras, Haiti,  
Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, St.  
Croix, St. Lucia  
Europe:  
Greenhouse in England, France  
Africa:  
Cameroon, Egypt, Guinea, Madagascar, South Africa  
Asia:  
India, Philippines, Taiwan?

Other Areas:  
Cook Is., Fiji, Hawaii, Kwajalein Is., New Caledonia,  
Palau Is., Tahiti, Truk Is., Western Samoa

HOSTS:  
Codiaeum

oleae  
(Colvee)

Diaspis oleae Colvee; Parlatoria calianthina Berlese &  
Leonardi; Syngenaspis oleae (Colvee)

DISTRIBUTION:

AZ, CA, DE, MD

New World:

Argentina, Brazil, Bolivia, Grand Cayman Is., Mexico

Europe:

Bulgaria, France, Greece, Italy, Malta, Portugal, Spain,  
Yugoslavia

Africa:

North Africa, Canary Is., Sudan

USSR:

Armenia, Azerbaijan, Crimea, Dugestan, Georgia, Kazakh  
SSR, Krasnodar region, Tadzhik SSR, Turkmen SSR, Uzbek SSR

Asia:

Afghanistan, Cyprus, India, Iran, Iraq, Israel, Jordan,  
Lebanon, Pakistan, Saudi Arabia, Syria, Turkey

Other Areas:

Australia

HOSTS:

Olea and many other hosts

pergandii  
Comstock

Parlatoria pergandei Comstock

DISTRIBUTION:

AL, CA, CT\*, DC\*, FL, GA, IL\*, KS, LA, MD, MO\*, MS, NY,  
OK, PA, SC, TX, VA\*; greenhouse in colder areas. Widely  
distributed throughout the tropical and subtropical areas  
of the world

HOSTS:

Polyphagous; common on Citrus

pittospori  
Maskell

Parlatoria myrtus Maskell; Parlatoria dryandrae Fuller;  
Parlatoria petrophilae Fuller

DISTRIBUTION:  
CA  
Africa:  
South Africa  
Other Areas:  
Australia, New Zealand

HOSTS:  
Polyphagous

proteus  
(Curtis)

Aspidiotus proteus Curtis; Parlatoria orbicularis Targioni  
-Tozzetti; Syngenaspis proteus (Curtis)

DISTRIBUTION:  
DC, FL, IL\*, KS\*, LA, MA\*, MD, MO\*, MS\*, NJ, NY, PA, TN,  
TX; (CA under eradication program); greenhouse in colder  
areas  
New World:  
Bahamas, Brazil, many Caribbean Islands, Central America,  
Colombia, Ecuador, Mexico, Paraguay, Peru, Surinam,  
Venezuela  
Europe:  
Greenhouse in Belgium, Bulgaria, Czechoslovakia, England,  
Denmark, France, Germany, Italy, Monaco, Spain  
USSR:  
Greenhouse  
Africa:  
Egypt, Mauritius, South Africa, Tanzania  
Asia:  
Iran, Pakistan eastward through Indonesia and north to  
Japan and Korea  
Other Areas:  
Australia, Bonin Is., Caroline Is., Fiji, Guam, Hawaii,  
New Guinea

HOSTS:  
Polyphagous; common on Orchidaceae

theae  
Cockerell

DISTRIBUTION:  
DC, GA, MD, MS, NC, TX, VA; (CA eradicated)  
Asia:  
China, Iran, Japan, Korea, Taiwan  
Europe:  
Greenhouse in England  
USSR:  
Black Sea coast, Caucasus

HOSTS:  
Polyphagous

vandae  
McKenzie\*\*

DISTRIBUTION:  
(CA eradicated)  
New World:  
Jamaica, Panama  
Other Areas:  
Guam, Hawaii

HOSTS:  
Vanda, other orchid plants

### PELLICULASPIS

celtis  
McDaniel

DISTRIBUTION:  
TX

HOSTS:  
Celtis spinosa var. pallida

### PINNASPIS

aspidistrae  
(Signoret)

Chionaspis aspidistrae Signoret; Hemichionaspis aspidistrae (Signoret); Pinnaspis ophiopogonis Takahashi; Pinnaspis caricis Ferris

DISTRIBUTION:  
AL, AR, CA, CT, DC, FL, GA, IA, IL, IN, KS, KY, LA, MA, MD, MI, MO, MS, NC, NJ, NY, OH, OK, OR, PA, SC, TN, TX, UT, VA; greenhouse in northern states. Widely distributed in the tropical and subtropical areas of the world; greenhouse in temperate regions

HOSTS:  
Polyphagous; common on Aspidistra, ferns, Liriope, Ophiopogon

buxi  
(Bouche)

Aspidiotus buxi Bouche; Mytilaspis buxi (Bouche); Mytilaspis? pandani Comstock; Pinnaspis pandani (Comstock); Pinnaspis siphonodontis Cockerell & Robinson

DISTRIBUTION:  
FL; greenhouse in DC\*, IL\*, MA\*, NY\*, PA\*  
New World:  
Argentina, Brazil, many Caribbean Islands, most Central

American countries, Colombia, Ecuador, Guyana, Mexico, Peru, Surinam, Venezuela

Europe:

Italy; greenhouse

USSR:

Greenhouse

Africa:

Cameroon, Egypt, Ghana, Madagascar, Mauritius, Reunion, Sao Tome, Seychelles, Sierra Leone, Tanzania, Togo, Zaire

Asia:

China, Hong Kong, India, Indonesia, Japan, Korea, Malaya, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand

Other Areas:

Australia, Bonin Is., Fiji, Guam, Hawaii, Kusaie, New Guinea, Palau Is., Ponape, Solomon Is., Tahiti, Truk Is.

HOSTS:

Polyphagous

strachani  
(Cooley)

Hemichionaspis minor var. strachani Cooley; Hemichionaspis marchali Cockerell; Hemichionaspis townsendi Cockerell; Pinnaspis marchali (Cockerell); Pinnaspis gossypii (Newstead); Pinnaspis minor of authors; Pinnaspis temporaria Ferris

DISTRIBUTION:

AL, FL, GA, LA, MS, TX, probably in other states; (CA eradicated)

New World:

Widespread south of U.S. border; Bermuda

Europe:

Greenhouse in Germany, Great Britain, Poland

USSR:

Greenhouse

Africa:

Cameroon, Cape Verde, Dahomey, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Madagascar, Mauritania, Mauritius, Mozambique, Nigeria, Principe, Reunion, Rodrigues, Sao Tome, Senegal, Seychelles, Tanzania, Togo, Zaire

Asia:

Chagos Arch., China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Nepal, Okinawa, Pakistan, Philippines, Saudi Arabia, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam

Other Areas:

Australia, Caroline Is., Canton Is., Christmas Is., Cook Is., Ellice Is., Fiji, Gilbert Is., Hawaii, Marshall Is.,

Mariana Is., New Caledonia, New Guinea, Niue, New Zealand,  
Ocean Is., Palau Is., Samoa, Tonga, Tokelau, Tahiti, Yap  
Is.

HOSTS:  
Polyphagous

POLIASPIS

cycadis  
Comstock\*\*

Poliaspis gaultheriae Green

DISTRIBUTION:  
DC\* in greenhouse  
Europe:  
England in greenhouse  
Asia:  
India

HOSTS:  
Cycas, Dioon edule, Microzamia

PRAECOCASPIS

diversa  
Ferris

DISTRIBUTION:  
FL

HOSTS:  
Trema

PROTODIASPIS

agrifoliae  
Essig

DISTRIBUTION:  
CA  
New World:  
Mexico

HOSTS:  
Quercus, Q. agrifolia

didymus  
McKenzie &  
Nelson-Rees

DISTRIBUTION:  
AZ

HOSTS:  
Quercus grisea, Q. turbinella

emoryi  
Ferris

DISTRIBUTION:  
TX

HOSTS:  
Quercus emoryi

lobata  
Ferris

Obluctaspis lobata (Ferris)

DISTRIBUTION:  
CO, NM, TX

HOSTS:  
Quercus gambeli, Q. grisea

pulchra  
Ferris

DISTRIBUTION:  
AZ  
New World:  
Mexico

HOSTS:  
Quercus, Q. toumeyi

varus  
Höke

DISTRIBUTION:  
AR, MS, TN, TX  
New World:  
Mexico

HOSTS:  
Quercus, Q. hypoleuca, Q. laurifolia

#### PSEUDAONIDIA

duplex  
(Cockerell)

Aspidiotus duplex Cockerell; Pseudaonidia rhododendri (Green); Aspidiotus theae Maskell; Pseudaonidia theae (Maskell)

DISTRIBUTION:  
AL, FL, GA, LA, MS, TX, VA  
Asia:  
China, India, Japan, Korea, Sri Lanka, Taiwan



USSR:  
Abkhazia, W. Gruzia

HOSTS:  
Polyphagous

paeoniae  
(Cockereil)

Aspidiotus duplex var. paeoniae Cockereil; Pseudaonidiella  
paeoniae (Cockereil)

DISTRIBUTION:  
AL, AR, DC, DE, FL, GA, LA, MD, MO, MS, NC, NJ, NY, PA,  
SC, TX, VA

Asia:  
China, Japan

Europe:  
Italy

USSR:  
Georgia

HOSTS:  
Azalea, Camellia, Ilex, Myrica, Rhododendron, Thea, other  
hosts

trilobitiformis  
(Green)

Aspidiotus trilobitiformis Green

DISTRIBUTION:  
FL (Dade Co.)

New World:  
Argentina, Bahamas, Bolivia, Brazil, Caribbean Islands,  
Colombia, Costa Rica, Ecuador, El Salvador, Guatemala,  
Guyana, Mexico, Panama, Peru, Surinam, Uruguay, Venezuela

Africa:  
Angola, Benin, Cameroon, Chad, Egypt, Guinea, Ivory Coast,  
Kenya, Liberia, Madagascar, Malawi, Mauritius, Mozambique,  
Nigeria, Principe, Reunion, Rodrigues, Sao Tome, Senegal,  
Sierra Leone, Somalia, South Africa, Tanzania, Togo,  
Uganda, Zaire, Zanzibar

USSR:  
Abkhazia in greenhouse

Asia:  
Pakistan east through Indonesia north into China and Japan

Other Areas:  
Australia, Fiji+, New Caledonia, Tahiti+

HOSTS:  
Polyphagous; often on Annona, Citrus, Ficus, Ixora,  
Mangifera indica, Nerium

PSEUDAULACASPIS

cockerelli  
(Cooley)

Chionaspis cockerelli Cooley; Chionaspis dilatata Green;  
Phenacaspis dilatata (Green); Phenacaspis natalensis  
Cockerell; Chionaspis aucubae Cooley; Phenacaspis aucubae  
(Cooley); Phenacaspis sandwicensis Fullaway; Chionaspis  
syringae Borchsenius; Pseudaulacaspis biformis Takagi;  
Phenacaspis ferrisi Mamet; Phenacaspis cockerelli (Cooley)

DISTRIBUTION:

AL, FL, GA, LA, MO, SC, TN, TX; greenhouse in MD, OR, PA,  
VA; (CA eradicated)

New World:

Guatemala+, St. Thomas+

Africa:

Egypt, Kenya, Madagascar, Mauritius, Mozambique, Reunion,  
Rhodesia, Rodrigues, Seychelles, South Africa, Zanzibar

Asia:

Bangladesh, Cambodia, China, Hong Kong, India, Indonesia,  
Japan, Korea, Malaya, Philippines, Singapore, Sri Lanka,  
Taiwan, Thailand, Vietnam

USSR:

Far east

Other Areas:

Australia, Bonin Is., Hawaii, Solomon Is.

HOSTS:

Polyphagous

major  
(Cockerell)

Chionaspis major Cockerell; Aulacaspis flacourtiae Ruther-  
ford; Pseudaulacaspis flacourtiae (Rutherford); Aulacaspis  
major (Cockerell); Diaspis major (Cockerell)

DISTRIBUTION:

FL

New World:

Antigua, Colombia, Costa Rica, Cuba, Dominican Republic,  
Galapagos Is., Guatemala, Honduras, Puerto Rico, Trinidad,  
Venezuela

Africa:

Madagascar, Mauritius, Seychelles, Zanzibar

Asia:

China, Indonesia (Java), Sri Lanka, Taiwan

Other Areas:

Hawaii

HOSTS:

Polyphagous

pentagona  
(Targioni-  
Tozzetti)

Diaspis pentagona Targioni-Tozzetti; Diaspis amygdali  
Tryson; Diaspis lanatus Morgan & Cockerell; Chionaspis  
prunicola Maskell; Aulacaspis pentagona (Targioni);  
Sasakiaspis pentagona (Targioni)

DISTRIBUTION:

AL, CT, DC, DE, FL, GA, IN, LA, MA, MD, MO, MS, NC, NJ,  
NY, OH, OR, PA, RI, SC, TN, TX, VA, WV: (CA eradicated)

New World:

Caribbean Islands, most countries in South America,  
Bahamas, Bermuda, Costa Rica, Honduras, Panama

Europe:

Bulgaria, England, France, Germany, Greece, Hungary,  
Italy, Malta, Switzerland, Yugoslavia

Africa:

Egypt, Ghana, Madagascar, Madeira Is., Malawi, Mauritius,  
Principe, Reunion, Rhodesia, Sao Tome, Seychelles, South  
Africa, St. Helena, Tanzania, Zanzibar

USSR:

Transcaucasus, Abkhazia, Adjara, Sakhalin, Ukraine

Asia:

China, Hong Kong, India, Indonesia, Iran, Israel, Japan,  
Korea, Malaya, Sri Lanka, Syria, Taiwan, Turkey, Viet-  
nam

Other Areas:

Australia, Bonin Is., Fiji, Guam, New Caledonia, New  
Guinea, New Hebrides, New Zealand, Palau Is., Ponape,  
Saipan, Solomon Is., Tonga, Truk Is.

HOSTS:

Polyphagous

PSEUDISCHNASPIS

bowreyi  
(Cockerell)

Aspidiotus bowreyi Cockerell; Chrysomphalus bowreyi (Cock-  
erell); Pseudischnaspis linearis Hempel

DISTRIBUTION:

FL; greenhouse in MO\*, NY\*

New World:

Argentina, Barbados, Bermuda, Bolivia, Brazil, Central  
America, Colombia, Cuba, Dominican Republic, Ecuador,  
Jamaica, Mexico, Peru, Puerto Rico, St. Thomas, Trinidad,  
Venezuela

HOSTS:

Polyphagous; often on bromeliads, Agave

PSEUDODIASPIS

larreae  
(Cockere11)

Aspidiotus (Pseudodiaspis) larreae Cockere11

DISTRIBUTION:  
AZ

HOSTS:  
Larrea tridentata

PSEUDOPARLATORIA

ostreata  
Cockere11

DISTRIBUTION:  
FL  
New World:  
Central America, Cuba, Dominican Republic, Ecuador,  
Guadeloupe, Guyana, Haiti, Jamaica, Mexico, Puerto Rico,  
St. Croix, Venezuela  
Europe:  
Greenhouse in France, Germany  
Africa:  
Cameroon, Guinea, Nigeria, Senegal, Sierra Leone

HOSTS:  
Polyphagous

parlatorioides  
(Comstock)

Aspidiotus? parlatorioides Comstock; Pseudoparlatoria  
pusilla Green

DISTRIBUTION:  
AL, FL, GA, MD, NJ, TX; (CA eradicated); greenhouse in  
colder areas  
New World:  
Many countries and islands south of U.S. border, Bermuda  
Europe:  
Spain; greenhouse in Belgium, Czechoslovakia, England,  
France, Germany, Italy, Netherlands, Sweden  
USSR:  
Greenhouse  
Asia:  
Sri Lanka  
Other Areas:  
Hawaii, New Zealand

HOSTS:  
Polyphagous

tillandsiae  
Tippins

DISTRIBUTION:  
FL

HOSTS:  
Tillandsia usneoides

QUADRASPIDIOTUS

braunschvigi  
(Rungs) \*\*

Aspidiotus braunschvigi Rungs; Aspidaspis braunschvigi  
(Rungs)

DISTRIBUTION:  
CA\*  
Africa:  
Morocco

HOSTS:  
Ficus, Pistacia

forbesi  
(Johnson)

Aspidiotus forbesi Johnson; Forbesaspis forbesi (Johnson)

DISTRIBUTION:  
General distribution in conterminous U.S.  
New World:  
Canada, Mexico  
Africa:  
South Africa

HOSTS: Polyphagous

gigas  
(Thiem &  
Gerneck)

Aspidiotus (Euraspidiotus) gigas Thiem & Gerneck;  
Diaspidiotus gigas (Thiem & Gerneck); Aspidiotus multi-  
glandulatus Borchsenius; Quadraspidotus ostreaeformis  
(Curtis) of Ferris

DISTRIBUTION:  
ID, MT, NY, OH, OR, PA, RI\*, UT, WA, WI\*, WY  
New World:  
Canada (New Brunswick, Nova Scotia, Ontario)  
Europe:  
Bulgaria, Czechoslovakia, France, Germany, Hungary, Italy,  
Netherlands, Poland, Spain, Switzerland  
USSR  
Africa:  
Algeria  
Asia:  
Turkey

HOSTS:  
Populus, Salix

juglansregiae  
(Comstock)

Aspidiotus juglans-regiae Comstock; Aspidiotus fernaldi  
Cockerell; Quadraspidotus fernaldi (Cockerell);  
Aspidiotus glanduliferus Cockerell; Quadraspidotus  
glanduliferus (Cockerell)

DISTRIBUTION:  
General distribution in conterminous U.S.  
New World:  
Canada, Mexico

HOSTS:  
Polyphagous

ostreaeformis  
(Curtis)

Aspidiotus ostreaeformis Curtis; Diaspidiotus  
ostreaeformis (Curtis); Aspidiotus betulae Baerensprung;  
Diaspidiotus hunteri (Newell)

DISTRIBUTION:  
CO, CT, IA, ID, KS, MA, ME, MI, MN, MT, NH, NY, OH, OR,  
PA, RI, SD, UT, WA, WI, WY  
New World:  
Argentina, Canada  
Europe  
USSR  
Asia:  
China, India, Iran, Iraq, Japan, Korea, Nepal, Pakistan,  
Turkey  
Other Areas:  
Australia, New Zealand

HOSTS:  
Polyphagous; common on Malus, Rosaceae

perniciosus  
(Comstock)

Aspidiotus perniciosus Comstock; Comstockiaspis  
perniciosus(Comstock); Diaspidiotus perniciosus  
(Comstock)

DISTRIBUTION:  
General distribution in conterminous U.S.  
New World:  
Argentina, Bolivia, Brazil, Canada, Chile, Cuba, Mexico,  
Paraguay, Peru, Uruguay, Venezuela  
Europe:  
Austria, Bulgaria, Czechoslovakia, France, Germany,

Greece, Hungary, Italy, Poland, Portugal, Romania, Spain,  
Switzerland, Yugoslavia

USSR:

Africa:

Algeria, Angola, Canary Is., Rhodesia, South Africa, Zaire

Asia:

China, India, Iran, Iraq, Japan, Korea, Nepal, Pakistan,

Turkey

Other Areas:

Australia, New Zealand

HOSTS:

Polyphagous; common on Malus, Prunus, Rosaceae

socialis  
(Hoke)

Aspidiotus socialis Hoke

DISTRIBUTION:

GA, MS, TX

HOSTS:

Quercus

taxodii  
Ferris

DISTRIBUTION:

DC, FL, GA, LA, MD, PA, TX

HOSTS:

Taxodium distichum

tillandsiae  
Takagi &  
Tippins

DISTRIBUTION:

GA

HOSTS:

Tillandsia usneoides

QUERNASPIS

insularis  
Howett

DISTRIBUTION:

FL, GA

HOSTS:

Quercus laurifolia, Q. stellata, Q. virginiana

quercicola  
Tippins &  
Beshear

DISTRIBUTION:  
GA

HOSTS:  
Quercus laurifolia

quercus  
(Comstock)

Chionaspis quercus Comstock

DISTRIBUTION:  
AZ, CA, FL, GA, LA, NM, OH, TX, WA  
New World:  
Mexico

HOSTS:  
Quercus

### RADIONASPIS

indica  
(Marlatt)

Leucaspis indica Marlatt; Suturaspis indica (Marlatt);  
Radiaspis indica (Marlatt)

DISTRIBUTION:  
FL  
New World:  
Cuba, Dominican Republic, Jamaica, Panama, Puerto Rico,  
Tortola  
Africa:  
Senegal+  
Asia:  
India, Indonesia (Java)  
Other Areas:  
Hawaii

HOSTS:  
Mangifera indica

### RHIZASPIDIOTUS

dearnessi  
(Cockerell)

Aspidiotus dearnessi Cockerell; Aspidiotus (Targionia)  
helianthi Parrott; Aspidiotus (Targionia) gutierreziae  
Cockerell & Parrott; Targionia dearnessi (Cockerell);  
Targionia helianthi (Parrott); Targionia gutierreziae  
(Cockerell & Parrott); Remotaspidotus dearnessi (Cock-  
erell)



DISTRIBUTION:  
AL, AZ, CA, CO, FL, GA, IN, KS, MA, MD, MO, NC, NE, NJ,  
NM, NY, OK, SC, TX, UT, VA, WI  
New World:  
Canada, Cuba, Mexico

HOSTS:  
Polyphagous

RUGASPIDIOTUS

arizonicus  
(Cockerell)

Diaspis arizonicus Cockerell

DISTRIBUTION:  
AZ, CA  
New World:  
Mexico

HOSTS:  
Lysiloma

nebulosus  
Ferris

DISTRIBUTION:  
AZ, CA

HOSTS:  
Eriogonum fasciculatum

sculpturatus  
Ferris

DISTRIBUTION:  
AZ

HOSTS:  
Encelia farinosa, Franseria dumosa

SELENASPIDUS

albus  
McKenzie

DISTRIBUTION:  
CA  
Africa:  
Eritrea, South Africa, S. W. Africa  
Europe:  
Netherlands+

HOSTS:  
Euphorbia

articulatus  
(Morgan)

Aspidiotus articulatus Morgan; Pseudaonidia articulatus  
(Morgan)

DISTRIBUTION:

FL; (CA eradicated)

New World:

Widespread south of U.S. border; Bermuda

Africa:

Angola, Benin, Cameroon, Chad, Ethiopia, Ghana, Guinea, Ivory Coast, Kenya, Madagascar, Mauritius, Morocco+, Mozambique, Principe, Reunion, Rhodesia, Sao Tome, Sierra Leone, Somalia, South Africa, Tanzania, Togo, Uganda, Zaire

Asia:

Philippines

Other Areas:

Fiji, Guam+

HOSTS:

Polyphagous; often on Citrus and palms

rubidus  
McKenzie

DISTRIBUTION:

CA (not collected since 1948), TX?

Europe:

Germany

Africa:

South Africa

Asia:

China, Singapore

HOSTS:

Euphorbia

SITULASPIS

atriplicis  
(Ferris)

Pseudodiaspis atriplicis Ferris

DISTRIBUTION:

AZ, CA

HOSTS:

Atriplex

condaliae  
(Ferris)

Pseudodiaspis condaliae Ferris

DISTRIBUTION:  
CA

HOSTS:  
Condalia, C. spathulata

daleae  
(Ferris)

DISTRIBUTION:  
CA

HOSTS:  
Dalea

yuccae  
(Cockerell)

Aspidiotus yuccae Cockerell; Pseudodiaspis yuccae (Cockerell); Targionia yuccae (Cockerell); Neosignoretia yuccae (Cockerell); Xerophilaspis parkinsoniae Ferris; Pseudodiaspis parkinsoniae (Ferris); Aspidiotus yuccae var. neomexicana Cockerell & Parrott; Diaspis celtidis Cockerell

DISTRIBUTION:  
AZ, CA, FL, NM, OK, TX  
New World:  
Mexico

HOSTS:  
Polyphagous; often on Yucca

#### STRAMENASPIS

kelloggi  
(Coleman)

Leucaspis kelloggi Coleman; Lepidosaphes kelloggi (Coleman); Dinaspis kelloggi (Coleman)

DISTRIBUTION:  
AZ, CA, NM, TX, WA  
New World:  
Mexico

HOSTS:  
Abies, Libocedrus, Pinus, Pseudotsuga, Tsuga

#### TARGIONIA

bigeloviae  
(Cockerell)

Aspidiotus (Hemiberlesia) bigeloviae Cockerell; Hemiberlesia bigeloviae (Cockerell); Targaspidotus bigeloviae (Cockerell)

DISTRIBUTION:

CA, TX  
New World:  
Mexico

HOSTS:

Asteraceae, Eriogonum fasciculatum, Gutierrezia, Haplopappus propinquus, Lepidospartum californicum

yuccarum  
(Cockerell)

Aspidiotus yuccarum Cockerell; Hemiberlesia yuccarum  
(Cockerell); Targaspidotus yuccarum (Cockerell)

DISTRIBUTION:

AZ, NM, TX  
New World:  
Mexico

HOSTS:

Polyphagous

UNASPIS

citri  
(Comstock)

Chionaspis citri Comstock; Prontaspis citri (Comstock)

DISTRIBUTION:

FL, LA

New World:

Widespread south of U.S. border; Bermuda

Europe:

Azores, Greece+, Portugal, Spain+

Africa:

Benin, Cameroon, Guinea, Ivory Coast, Liberia, Madagascar, Mali, Mauritius, Nigeria, Senegal, Sierra Leone, South Africa?, Togo, Zaire

Asia:

China, Hong Kong, Indochina, Indonesia, Malaysia, Philippines+, Singapore, Thailand+

Other Areas:

Australia, Cook Is., Fiji, New Caledonia, New Guinea, New Hebrides, New Zealand, Ponape, Solomon Is., Tonga, Truk Is., Wallis Is., Western Samoa

HOSTS:

Citrus, Severina

euonymi  
(Comstock)

Chionaspis euonymi Comstock

DISTRIBUTION:

AL, AR, CA, CT, DC, DE, FL, GA, IL, IN, KY, LA, MA, MD,  
MI, MO, MS, NC, NE, NH, NJ, NM, NY, OH, OK, PA, RI, SC,  
TN, TX, VA, WI, WV

New World:

Argentina, Canada (British Columbia), Mexico

Europe:

Austria, Bulgaria, England, France, Greece, Hungary,  
Italy, Malta, Spain, Switzerland, Yugoslavia

USSR:

Armenia, Azerbaijan, Crimea, Georgia, Krasnodar, Ukraine,  
Uzbek SSR

Africa:

Algeria, Morocco

Asia:

China, Hong Kong, Israel, Japan, Korea, Turkey

HOSTS:

Celastrus, Euonymus, Ilex, Pachysandra

VELATASPIS

anasterias  
Ferris

DISTRIBUTION:

TX

New World:

Mexico, Nicaragua, Panama

HOSTS:

Acacia constricta, A. vernicosa, Mimosa

dentata  
(Hoke)

Scobinaspis dentata Hoke; Lepidosaphes dentata (Hoke)

DISTRIBUTION:

AL, FL, GA, LA, MS, TN, TX

New World:

Panama

HOSTS:

Polyphagous

mimosarum  
(Cockerell)

Mytilaspis mimosarum Cockerell; Lepidosaphes mimosarum  
(Cockerell); Lepidosaphes chilopsidis Marlatt

DISTRIBUTION:  
TX  
New World:  
Guatemala, Mexico

HOSTS:  
Acacia, Carya illinoensis, Castela nicholsoni, Cercidium floridum, Mimosa, Pithecellobium, Prosopis, Psidium, Strombocarpa cinerescens

XEROPHILASPIS

prosopidis  
Cockerell

DISTRIBUTION:  
AZ, CA, TX  
New World:  
Mexico

HOSTS:  
Prosopis, P. chilensis, P. velutina

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ADDENDUM

CIRCULASPIS

fistulella  
Ferris

DISTRIBUTION:  
FL, GA, TX

HOSTS:  
Distichilis, D. spicata, Sporolobus

## References

- Ahmad, R. and M. A. Ghani. 1972. Coccoidea and their natural enemy complexes in Pakistan. Commonwealth Inst. Bio. Contr. Tech. Bull. no. 15, p. 59-104.
- Ali, S. M. 1969. A catalogue of the Oriental Coccoidea, Part I, (Insecta: Coccoidea: Diaspididae). Indian Mus. Bull. 4(1):67-83, illus.
- 1969. A catalogue of the Oriental Coccoidea, Part II, (Insecta: Coccoidea: Diaspididae). Indian Mus. Bull. 4(2): 38-73 illus.
- 1970. A catalogue of the Oriental Coccoidea, Part III, (Insecta: Coccoidea: Diaspididae). Indian Mus. Bull. 5(1): 9-94, illus.
- Almeida, D. M. de. 1971. Diaspididae (Homoptera-Coccoidea) de Mocambique, com descripto de uma especie nova. Rev. Entomol. Macambique 90:5-17
- 1973. Contribuicao para um conspecto dos Coccoidea de Mocambique. Port. Acta Biol. Ser. B, 12(1/4):49-68.
- Avidov, Z. and I. Harpaz. 1969. Plant pests of Israel. 549 p., illus. Israel Univ. Press, Jerusalem.
- Balachowsky, A. 1948. Les Cochenilles de France, D'Europe, du Nord de L'Afrique, et du Bassin Mediterranéen IV - Monographie des Coccoidea; Classification-Diaspidinae (Premiere Partie). Actual. Sci. et Indus. Entomol. Appl. 1054:243-394, illus.
- 1950. Les Cochenilles de France, D'Europe, du Nord de L'Afrique et du Bassin Mediterranéen V - Monographie des Coccoidea; Diaspidinae (Deuxieme Partie) Aspidiotini. Actual. Sci. et Indus. Entomol. Appl. 1087: 397-557, illus.
- 1951. Les Cochenilles de France, D'Europe, du Nord de L'Afrique et du Bassin Mediterranéen VI - Monographie des Coccoidea; Diaspidinae (Troisieme Partie) Aspidiotini (Fin). Actual. Sci. et Indus. Entomol. Appl. 1127:561-720, illus.
- 1953. Les Cochenilles du France, D'Europe du Nord de L'Afrique et du Bassin Mediterranéen VII - Monographie des Coccoidea; Diaspidinae - IV, Odonaspidini-Parlatorini. Actual. Sci. et Indus. Entomol. Appl. 1202: 725-929, illus.

- 1954. Les Cochenilles Palearctic de la tribu des Diaspidini. Inst. Pasteur [Paris] Mem. Sci., 450 p., illus.
- 1956. Les Cochenilles du continent Africain Noir. V. 1 - Aspidiotini (1ere Partie). Mus. Roy. Congo Belge (Tervuren) Ann. (n.s.) Sci. Zool. 3:1-142, illus.
- 1957. Les Cochenilles de la Guadeloupe et de la Martinique (Premiere liste). Rev. Path. Veg. Entomol. Agric. Fr. 36:198-208, illus.
- 1958. Les Cochenilles du Continent Africain Noir. V. 2 - Aspidiotini (2me partie) Odonaspidini and Parlatorini. Mus. Roy. Congo Belge (Tervuren) Ann. (n.s.) Sci. Zool. 4:149-356, illus.
- 1959. Otras cochinillas nuevas de Colombiana. Rev. Acad. Colomb. Cienc. Exactas Fis. Nat. 10:362-366, illus.
- Ballou, C. H. 1926. Los coccidos de Cuba y sur plantas hospederas. Cuba Estac. Exp. Agron. Bull. 51, 47 p.
- Bazarov, B. B. and G. P. Shmelev. 1971. Scale insects of Tadzhikstan and the adjoining regions of middle Asia. In Fauna of Tadzhikstan SSR. (In Russian). Akad. Nauk Tadzhikskoi SSR Inst. Zool. Parasitol. 11, 238 p., illus.
- Beardsley, J. W. 1966. Insects of Micronesia Homoptera: Coccoidea. In Insects of Micronesia. Bernice P. Bishop Mus. 6(7):377-562, illus.
- and R. H. Gonzalez. 1975. The biology and ecology of armored scales. Ann. Rev. Entomol. 20:47-73.
- Beshear, R. J., H. H. Tippins, and J. O. Howell. 1973. The armored scale insects (Homoptera: Diaspididae) of Georgia and their hosts. GA. Agric. Exp. Sta. Res. Bull. 146, 15p.
- Bodenheimer, F. S. 1952. The Coccidae of Turkey 1. Istanbul Univ. Fac. Sci. Rev. Ser. B, 17:315-351, illus.
- 1952. The Coccidae of Turkey II. Istanbul Univ. Fac. Sci. Rev. Ser. B, 18:1-61, illus.



Borchsenius, N. S. 1950. Mealybugs and scale insects of the USSR (Coccoidea). (In Russian), 250 p., illus. Akad. Nauk SSSR Zool. Inst.

----- 1963. 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.

----- 1966. A catalogue of the armoured scale insects (Diaspidoidea) of the world. 449 p. Akad. Nauk SSSR Zool. Inst. Leningrad.

Brimblecombe, A. R. 1962. Studies of the Coccoidea. 12. Species occurring on deciduous fruit and nut trees in Queensland. Queensl. J. Agric. Sci. 19:219-229, illus.

----- 1962. Studies of the Coccoidea. 13. The genera Anidiella, Chrysomphalus and Quadraspidiotus in Queensland. Queensl. J. Agric. Sci. 19:403-423, illus.

----- 1968. Studies of the Coccoidea. 14. The genera Aspidiotus, Diaspidiotus and Hemiberlesia in Queensland. Queensl. J. Agric. Anim. Sci. 25:39-56, illus.

Britton, W. D. 1923. The Hemiptera or sucking insects of Connecticut. CT. St. Geol. Nat. Hist. Surv. Bull. 34, 807 p., illus.

Brookes, H. M. 1957. The Coccoidea (Homoptera) naturalized in South Australia: An annotated list. Trans. Roy. Soc. S. Austral. 80:81-90.

----- and N. M. Hudson. 1969. The distribution and host-plants of the species of Quadraspidiotus (Homoptera: Diaspididae) in Australia. Austral. J. Exp. Agric. Anim. Husb. 9:228-233, illus.

Bruner, S. C., L. C. Scaramuzza, and A. R. Otero. 1945. Catalogos de los insectos que atacan a las plantas economicas de Cuba. Cuba Estac. Exp. Agron. Bol. 63, 246 p., illus.

Charlen, R. 1972. Distribucion geografica, plantas hospederas y nuevas indentificaciones de Coccidos para Chile. Rev. Peru Entomol. 15(2):215-218.

Chiesa Molinari, O. 1942. Superfamilia Coccoidea. In Lieberman, J., and Bertolini, L. H., Entomologia Agrícola. 571 p., illus. San Juan, Argentina.

Clavigo A., S. 1977. Escamas (Homoptera: Coccoidea) en plantas de viveros en la zona de Maracay, estado Aragua, Venezuela. Rev. Fac. Agron. (Maracay) 9(2):113-122

Cohic, F. 1958. Contribution a L'etude des cochenilles d'interet economique de Nouvelle-Caledonie et dependances. Comm. du Pacifique Sud Doc. Tech. 116, 35 p.; app. 1, 1 p.; app. 2, 3 p.

Commonwealth Institute of Entomology. 1955. Pest: Pseudaulacaspis pentagona (Targ.). Distr. Maps of Pests, Ser. A (Agric.), Map No. 58.

----- 1962. Pest: Parlatoria blanchardii (Targ.). Ibid. Map No. 148.

----- 1966. Pest: Aspidiotus destructor Sign. Ibid. Map No. 218.

----- 1967. Pest: Pinaspis buxi (Bch). Ibid. Map no. 232.

----- 1968. Pest: Aonidiella aurantii (Mask.). Ibid. Map No. 2 (revised).

----- 1970. Pest: Aspidiotus nerii Bch. Ibid. Map No. 268.

----- 1970. Pest: Unaspis euonymi (Comst.). Ibid. Map No. 269.

----- 1973. Pest: Diaspis bromeliae (Kerner). Ibid. Map No. 307.

----- 1975. Pest: Aonidiella citrina (Coq.). Ibid. Map No. 349.

----- 1978. Pest: Aonidiella orientalis (Newstead). Ibid. Map No. 386.

----- 1978. Pest: Aonidomytilus albus (Ckll.). Ibid. Map No. 81 (revised).

Comstock, J. H. 1883. Second report on scale insects. Including a monograph of the sub-family Diaspinae of the family Coccidae and a list, with notes, of the other species of scale insects found in North America. In Cornell Univ. Exp. Sta. Dept. Entomol. Rpt. 2 (1882-83):47-142, illus.

Danzig, E. M. 1967. S. Suborder Coccinea. In Keys to the insects of European USSR, edited by G. Ya. Bei-Bienko, vol. 1, p. 800-850, illus.

----- 1972. On the coccid fauna (Homoptera, Coccoidea) of Afghanistan. Rev. Entomol. 51(3):350-352.

----- 1980. Coccoids of the Far East of the USSR. With a phylogenetic analysis of the coccoid fauna of the world. Zool. Inst. Acad. Sci. USSR, 366 p.

Davidson, J. A. 1964. The genus Abgrallaspis in North America (Homoptera: Diaspididae). Ann. Entomol. Soc. Am. 57:638-643, illus.

Deitz, L. L. 1968. The genus Melanaspis in North America (Homoptera: Diaspididae). Master Thesis, Univ. MD, Dept. Entomol. 106 p., illus.

Dekle, G. W. 1976. Florida armored scale insects. In Arthropods of Florida and Neighboring Land Areas, vol. 3, 345 p., illus.

De Lotto, G. 1967. A contribution to the knowledge of the African Coccoidea (Homoptera). J. Entomol. Soc. Sth Afr. 29:109-120.

Dietz, H. F. and H. Morrison. 1916. The Coccidae or scale insects of Indiana. IN. St. Entomol. Ann. Rpt. 8(1914-1915), p. 195-321, illus.

Ezzat, Y. M. 1958. Classification of the scale insects, family Diaspididae, as known to occur in Egypt (Homoptera: Coccoidea). Soc. Entomol. d'Egypte Bull. 42:233-251.

Ferris, G. F. 1937. Atlas of the scale insects of North America, Ser. 1, Nos. 1-136, illus. Stanford Univ. Press, Stanford, CA.

----- 1938. Atlas of the scale insects of North America, Ser. 2, Nos. 1a, 2a, and 137-268, illus. Stanford Univ. Press, Stanford, CA.

----- 1941. Atlas of the scale insects of North America, Ser. 3, Nos. 2b, 269-384, illus. Stanford Univ. Press, Stanford, CA.

----- 1942. Atlas of the scale insects of North America, Ser. 4, Nos. 2c, 385-448, illus. Stanford Univ. Press, Stanford, CA.

----- and V. P. Rao. 1947. The genus *Pinnaspis* Cockerell (Homoptera: Coccoidea: Diaspididae). (Contribution no. 54). Microentomology 12: 25-58, illus.

Fonseca Ferraro, A. P. da and H. L. Cordoso. 1972. Lista de pragas de Angola identificados ate' 1967. Inst. Invest. Agron. Angola Ser. Tecnica no. 32, 49 p.

Forsyth, J. 1966. Agricultural insects of Ghana. Ghana Univ. Press, 163 p.

Froggatt, W. W. 1914. A descriptive catalogue of the scale insects ("Coccidae") of Australia (Part 1). Agric. Gaz. N. S. Wales 25:127-136, 311-319, 599-610, 677-684, 875-882, 983-989, illus.

Fullaway, D. T. 1946. Coccidae of Guam. In Insects of Guam II. Bernice P. Bishop Mus. Bull. 189:i-iii, 3-237, illus.

Giliomee, J. H. 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.

Gomez-Menor Guerrero, J. M. 1962. Diaspidos de Gran Canaria y Tenerife (Islas Canarias) (Hom. Coccoidea). Estud. Atlanticae An. 8:147-214, illus.

----- 1967. Coccoidea de las Islas Canarias, II parte, Eos 43:93-129, illus.

Gomez-Menor Ortega, J. 1937. Coccidos de Espana. Madrid Inst. Invest. Agron. Estac. Fitopat. Agric. Almeria. 432 p., illus.

----- 1941. Coccidos de la Republica Dominicana (Hem. Cocc.). Eos 26:125-143, illus.

- Green, E. E. 1896. The Coccidae of Ceylon Part I. p. i-xi, 1-103, illus. London, Dulau.
- 1899. The Coccidae of Ceylon Part II. p. xiii-xl, 105-169, illus. London, Dulau.
- 1937. An annotated list of the Coccidae of Ceylon, with emendations and additions to dates. Ceylon J. Sci. Sect. B, Zool. and Geol. Spolia Zelan. 20:277-341.
- Hall, W. J. 1946. On the Ethiopian Diaspidini (Coccoidea). Trans. Roy. Entomol. Soc. London 97:497-592, illus.
- Herrick, G. W. 1911. Some scale insects of Mississippi with notes on certain species from Texas. MS. Agric. Exp. Sta. Tech. Bull. 2, 78 p., illus.
- Hollinger, A. H. 1923. Scale insects of Missouri. MO. Agric. Exp. Sta. Res. Bull. 58, 71 p., illus.
- Howard, F. W. 1971. A taxonomic study of armored scale insects (Homoptera: Diaspididae) in Louisiana. Master Thesis, LA. St. Univ., Dept. Entomol. 374 p., illus.
- Howell, J. O. 1974. A new species of Haliaspis from Florida on Spartina spartinae (Homoptera: Coccoidea: Diaspididae). Ann. Entomol. Soc. Am. 67(1):40-42.
- Howell, J. O. and H. H. Tippins 1981. New genus and species of Diaspididae from conifers. Entomol. Soc. Am. 77(4):419-421.
- 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.
- Kloet, G. S. and W. D. Hincks. 1964. A checklist of the British insects, second edition (Rev.). Part I: Small orders and Hemiptera. In Handbook for the identification of British insects 11(1), 119 p. Roy. Entomol. Soc. London.
- Komosinska, H. 1968. Investigations on the scale insects (Homoptera, Coccoidea, Diaspididae) living in greenhouses in Poland. Part I. Polskie Pismo Entomol. 38:205-208.

----- 1969. Studies on the genus Abgrallaspis  
Balachowsky, 1948, (Homoptera, Coccoidea, Diaspididae).  
Acta Zool. Cracoviensea 14:43-85, illus.

Korean Society of Plant Protection. 1972. List of plant  
diseases, insect pests, and weeds in Korea. 424 p.

Kozar, F. M. Tzalev, R. A. Viktorin and J. Horvath. 1979.  
New data to the knowledge of the scale-insects of Bulgaria  
(Homoptera: Coccoidea). Folia Entomol. Hungarica 32(2):  
129-132.

Kosztarab, M. 1964. The armored scale insects of Ohio  
(Homoptera: Coccoidea: Diaspididae). OH. Biol. Surv.  
Bull. (n.s.) 2(1963), 120 p., illus.

----- and F. Kozar. 1978. Scale insects - Coccoidea.  
(In Hungarian). Fauna Hungariae No. 131, 17(22):1-192,  
illus.

Kozarzhevskaya, E. and J. Reitzel. 1975. The scale insects  
(Homoptera: Coccoidea) of Denmark. Statens  
Forsogsvirksomhedens Plantekultur, Beretning 1226, 40 p.

Lambdin, P. L. and J. K. Watson. 1980. New collection  
records for scale insects of Tennessee. J. TN. Acad.  
Sci. 55(3):77-81.

Lawson, P. B. 1917. Scale insects injurious to fruit and  
shade trees. The Coccidae of Kansas. KS. Univ. Bull.  
(Biol. Ser.) 18(1):161-279, illus.

Lepage, H. S. 1938. Catalogs dos Coccideos do Brazil.  
Rev. Mus. Paulista 23:327-491.

Lever, R. J. A. W. 1945. An annotated check list of the  
mealybugs and scale insects of Fiji. Agric. J. [Fiji]  
16(2):41-44.

Lizer y Trelles, C. A. 1938. Cochinillas exóticas intro-  
ducidas en la Republica Argentina y danos que causan.  
Jornadas Agron. Vet. 1937, p. 341-362.

Mamet, R. 1943. A revised list of the Coccoidea of the  
islands of the Western Indian Ocean, south of the equator.  
Mauritius Inst. Bull. 2(3):137-170.

----- 1949. An annotated catalogue of the Coccoidea of  
Mauritius. Mauritius Inst. Bull. 3(1):1-81.

----- 1950. Notes on the Coccoidea of Madagascar I. Inst. Sci. Madagascar Mem. 4 (ser. A), p. 17-38, illus.

----- 1951. Notes on The Coccoidea of Madagascar II. Inst. Sci. Madagascar Mem. 5 (ser A), p. 213-254, illus.

----- 1957. On some Coccoidea from Reunion Island (Homoptera). Inst. Sci. Madagascar Mem. 8 (ser. E), p. 367-386.

----- 1958. The Selenaspidus complex (Homoptera. Coccoidea). Mus. Roy. Congo Belge (Tervuren) Ann. (n.s.) Sci. Zool. 4:359-429, illus.

----- 1959. Notes on the Coccoidea 4. Inst. Sci. Madagascar Mem. 11 (ser. E), p. 369-479.

Martorell, L. F. 1976. Annotated food plant catalog of the insects of Puerto Rico. Agric. Exp. Sta. Univ. P. R., 303 p.

McComb, C. W. 1963. A checklist and host index of the Diaspididae of Maryland and the District of Columbia. Univ. MD Entomol. Leaflet 50, 39 p.

McDaniel, B. 1968. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part I. Southwest. Nat. 13(2):201-242, illus.

----- 1969. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part II. Southwest. Nat. 14(1):89-113, illus.

----- 1970. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part III. Southwest. Nat. 14(4):411-440, illus.

----- 1971. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part IV. Southwest. Nat. 15(3):275-308, illus.

----- 1972. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part V. Southwest. Nat. 16 (3 & 4):321-340, illus.

----- 1973. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part VI. Southwest. Nat. 17(4):389-404, illus.

----- 1974. The armored scale insects of Texas (Homoptera: Coccoidea: Diaspididae) Part VII. Southwest. Nat. 18(4):417-442, illus.

McKenzie, H. L. 1945. A revision of Parlatoria and closely allied genera. (Homoptera: Coccoidea: Diaspididae). Microentomology 10:47-121, illus.

----- 1947. Diaspid scale studies, with notes on California species (Homoptera: Coccoidea: Diaspididae). CA. Dept. Agric. Bull. 36:31-36, illus.

V. (Homoptera: Coccoidea: Diaspididae). Ca. Dept. Agric. Bull. 36:107-114, illus.

----- 1956. The armored scale insects of California. CA. Ins. Surv. Bull. 5, 209 p., illus.

----- and W. Nelson-Rees. 1962. Two new species and additional collection records for the genus Protodiaspis (Homoptera: Coccoidea: Diaspididae). Hilgardia 33:133-139, illus.

Morrison, H. 1939. Taxonomy of some scale insects of the genus Parlatoria encountered in plant quarantine inspection work. U.S. Dept. Agric. Misc. Publ. 344, 34 p., illus.

Munting, J. 1965. New and little known armoured scales (Homoptera: Diaspididae) from South Africa-2. J. Entomol. Soc. Sth Afr. 28(3):179-216, illus.

----- 1971. On the identity of the grey scale Diaspidiotus africanus Marlatt and some related species from southern Africa (Homoptera: Diaspididae). J. Entomol. Soc. Sth. Afr. 34(1):119-143, illus.

Murakami, Y. 1970. A review of biology and ecology of diaspine scales in Japan (Homoptera: Coccoidea). Mushi 43(7):65-114.

Nakahara, S. and C. E. Miller. 1981. A list of the Coccoidea species (Homoptera) of Puerto Rico. Proc. Entomol. Soc. Wash. 83(1):28-39.

Newell, W. 1899. On the North American species of the subgenera Diaspidiotus and Hemiberlesia, of the genus Aspidiotus. IA. St. Coll. Dept. Zool. Entomol. Contrib. 3, 31 p., illus.



Newstead, R. 1901. Monograph of the Coccidae of the British Isles, Vol. 1 (1900). London Roy. Soc., 220 p., illus.

Ramachandran, S. and T. V. Ramakrishna Ayyar. 1934. Host plant index of Indo-Ceylonese Coccidae. Imperil Council Agric. Res. Bull. 4, 113 p.

Rao, V. P. 1949. The genus Unaspis MacGillivray (Homoptera: Coccoidea: Diaspididae). Microentomology 14:59-72, illus.

--- and S. N. Chatterjee. 1952. The San Jose Scale and other scale insects usually mistaken therefor in India. Indian J. Entomol. 10:5-29, illus.

Reyne, A. 1957. Nederlandse schildluizen (Coccidae). Koninkr. der Nederlandse Natuurhist. Ver. Wetensch. Meded. No. 22, 43 p., illus.

----- 1961. Scale insects from Dutch New Guinea. Beaufortia 8:121-167, illus.

Richards, A. M. 1960. Scale insect survey on apples 1959-60. New Zeal. J. Agric. Res. 3:693-698.

Ruffinelli, A. and C. S. Carbonell. 1954. Segunda lista de insectos y otros artopodos de importancia economica en el Uruguay. Asoc. de Igen. Agron. Rev. 24(94):33-82.

Sanders, J. G. 1904. The Coccidae of Ohio, I. Proc, OH. St. Acad. Sci. 4(2):25-92, illus.

Schmutterer, A. 1959. Schildlause oder Coccoidea. 1. Deckelschildlause oder Diaspididae. In Die Tierwelt Deutschlands ud der Angrenzenden Meeresteile, T. 45, 260 p., illus. Jena, Fischer.

Schuh, J. and D. C. Mote. 1948. Insect pests of nursery and ornamental trees and shrubs in Oregon. OR. St. Agric. Exp. Sta. Bull. 449, 164 p., illus.

Seghatoleslami, H. 1977. List of scale insects (Fam. Diaspididae). J. Entomol. Soc. Iran 4(1,2):5-19.

Silva, A. G., E. D'Agraujo, et al. 1968. Quarto catalogo dos insectos que vivem nas plantas do Brazil. Part II. Insectos, Hospedeiros E Inimigos Naturais. Vol. 1, 622 p., Rio de Janeiro.

Simmonds, F. J. 1957. A list of the Coccidae of Bermuda and their parasites. Bermuda Dept. Agric. Bull. 30, 12 p.

Squire, F. A. 1972. Entomological problems in Bolivia. PANS 18(3):249-268.

Takagi, S. 1958. New or little known scale insects of the tribe Aspidiotini, with a list of the genera and species occurring in Japan. Ins. Matsumurana 21:121-131, illus.

----- 1960. A contribution to the knowledge of the Diaspidini of Japan (Homoptera: Coccoidea) Pt. I. Ins. Matsumurana 23:67-100, illus.

----- 1961. A contribution to the knowledge of the Diaspidini of Japan (Homoptera: Coccoidea) Pt. II. Ins. Matsumurana 24:4-42, illus.

----- 1961. A contribution to the knowledge of the Diaspidini of Japan (Homoptera: Coccoidea) Pt. III. Ins. Matsumurana 24:69-103, illus.

----- 1969. Diaspididae of Taiwan based on material collected in connection with the Japan-U.S. co-operative science programme, 1965 (Homoptera: Coccoidea). Part I. Ins. Matsumurana 32:1-110, illus.

----- 1970. Diaspididae of Taiwan based on material collected in connection with the Japan-U.S. co-operative science programme, 1965 (Homoptera: Coccoidea). Part II. Ins. Matsumurana 33(1):1-146, illus.

----- and J. O. Howell. 1977. The genus Quernaspis, a possible Asio-American element in scale insect biogeography (Homoptera: Coccoidea). Ins. Matsumurana (n.s.) 11:31-59, illus.

----- and S. Kawai. 1967. The genera Chionaspis and Pseudaulacaspis with a criticism on Phenacaspis (Homoptera: Coccoidea). Ins. Matsumurana 30:29-43, illus.

Takahashi, R. 1929. Observations of the Coccidae of Formosa, Part I. Formosa Govt. Res. Inst. Dept. Agric. Rpt. 40, 82 p., illus.

----- 1942. Some injurious insects of agricultural plants and forest trees in Thailand and Indo-China, II Coccidae. Formosa Govt. Agric. Res. Inst. Rpt. 81, 56 p., illus.

----- and T. Tachikawa. 1956. Scale insects of Shikoku (Homoptera: Coccoidea). Trans. Shikoku Entomol. Soc. 5(1-2):1-17, illus.

Tang, F. 1977. The scale insects of horticulture and forest of China. Vol. 1, 259 p. (In Chinese). The Inst. of Gardening-Forestry Science of Shenyang Liaoning, China.

Trimble, F. M. 1928. Scale insects of Pennsylvania (Homop.: Coccidae). Entomol. News 39:42-47.

Velasquez, F. J. and Rimando, L. 1969. A check list and host index of the armored scale insects of the Philippines (Diaspididae: Homoptera). Philippine Entomol. 1:195-208.

Williams, D. J. 1963. Synoptic revisions of I. Lindingaspis and II. Andaspis with two new allied genera (Hemiptera: Coccoidea). Br. Mus. (Nat. Hist.) Entomol. Bull. 15, 31 p., illus.

Williams, M. L. 1977. Scale insects of the Galapagos Islands. In Morphology and systematics of scale insects - No. 9. VA. Polytech. Inst. St. Univ. Res. Div. Bull. 127:85-98.

Zahradnik, J. 1968. Schildläuse unserer gewächshäuser, 42 p., illus., Neue Brehm-Bucherei.

Zimmerman, E. C. 1948. Insects of Hawaii, Vol. 5, Homoptera: Sternorrhyncha, 464 p., illus., Univ. Hawaii Press, Honolulu.

----- 1957. Insects of Hawaii, Ephemeroptera-Neuroptera-Trichoptera and supplement to Volumes 1-5. Vol. 6, 209 p., illus. Univ. Hawaii Press, Honolulu.

TWO LETTER ABBREVIATIONS OF STATES

ALABAMA .....	AL	MONTANA .....	MT
ALASKA .....	AK	NEBRASKA .....	NE
ARIZONA .....	AZ	NEVADA .....	NV
CALIFORNIA .....	CA	NEW HAMPSHIRE .....	NH
COLORADO .....	CO	NEW JERSEY .....	NJ
CONNECTICUT .....	CT	NEW MEXICO .....	NM
DELAWARE .....	DE	NEW YORK .....	NY
DIST. OF COLUMBIA ....	DC	NORTH CAROLINA .....	NC
FLORIDA .....	FL	NORTH DAKOTA .....	ND
GEORGIA .....	GA	OHIO .....	OH
HAWAII .....	HI	OKLAHOMA .....	OK
IDAHO .....	ID	OREGON .....	OR
ILLINOIS .....	IL	PENNSYLVANIA .....	PA
INDIANA .....	IN	RHODE ISLAND .....	RI
IOWA .....	IA	SOUTH CAROLINA .....	SC
KANSAS .....	KS	SOUTH DAKOTA .....	SD
KENTUCKY .....	KY	TENNESSEE .....	TN
LOUISIANA .....	LA	TEXAS .....	TX
MAINE .....	ME	UTAH .....	UT
MARYLAND .....	MD	VERMONT .....	VT
MASSACHUSETTS .....	MA	VIRGINIA .....	VA
MICHIGAN .....	MI	WASHINGTON .....	WA
MINNESOTA .....	MN	WEST VIRGINIA .....	WV
MISSISSIPPI .....	MS	WISCONSIN .....	WI
MISSOURI .....	MO	WYOMING .....	WY

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