

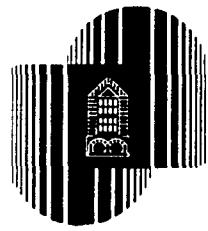
# HAWAIIAN TERRESTRIAL ARTHROPOD CHECKLIST

Second Edition

Editor

Gordon M. Nishida

HAWAII BIOLOGICAL SURVEY  
Contribution No. 94-04



BISHOP MUSEUM

The State Museum of Natural and Cultural History  
Honolulu, Hawaii

Bishop Museum Technical Report No. 4

July 22, 1994

**Editorial Advisors**

Neal L. Evenhuis, Francis G. Howarth, Scott E. Miller,  
Dan A. Polhemus, G.A. Samuelson, S.F. Swift

© Bishop Museum 1994

Bishop Museum Technical Report No. 4  
ISBN 0-930-897-85-4

Available from Bishop Museum Press  
P.O. Box 19000-A  
1525 Bernice Street  
Honolulu, Hawaii 96817

Cover Illustration:

*Plagithmysus koebelei* (Perkins, 1908)

Scanned from an illustration in R.C.L. Perkins, 1908

Artist: W.E. Chambers

*Proceedings of the Hawaiian Entomological Society* Vol. 1, page 210

Scanned using a Hewlett-Packard ScanJet and DeskScan™  
Retouched using DeskPaint™

## INTRODUCTION

This list provides an authority file of terrestrial arthropod names for the Hawaiian Islands. The Hawaiian Islands are used in the broadest sense, extending from Kure Island in the northwest to Hawaii Island in the southeast. Information in the checklist is based on literature references with the names reviewed by specialists in their area of expertise. The checklist is extracted from a citation database of some 90,000 records that is continually updated as corrections are noted and/or new information is published or becomes available. Only **published information** on Hawaiian arthropods, terrestrial or freshwater (and the few marine insects) is included here. Only data that were at hand prior to 1 July 1994 are incorporated. Publication is defined here as printed output from any organization as well as formally published works (e.g., some newsletters were included as sources). In cases of disputes over names, the last published major revision was used as the standard. The primary literature sources for this compilation were *Fauna Hawaiensis* (1899–1913), *Insects of Hawaii* (1948– ), and the Amy Suehiro card file, which is located at Bishop Museum. This compilation is an updated version of the first checklist, which was published in September 1992, and builds on the base established by that checklist. The intervening time has been invaluable for adding new information to the checklist, making corrections, and strengthening the database supporting the entries.

At first glance, this checklist may not look very different from the first. However substantial improvements have been made including additions, deletions, and corrections in names, year published, status, and distribution information. This version has slightly fewer entries (8,552 species) than the first version (8,682 species) primarily because of consolidation of names referring to a single species, better documentation of non-established species, and more references establishing synonymies. Cross references to older names and misidentifications have been included in the index in this version, making it significantly easier to find a species whose published name may no longer be in use.

Many of the species on this list may no longer be present in Hawaii. Care should be taken with numerical compilations from this list. Possible extinctions may have already occurred for some taxa, and those species that were purposely released or were adventive may not be established. When in doubt, we erred on the side of “overincluding” as it is always easier to see and correct an error rather than trying to find and add a species that is missing. It is always risky to state whether a biological element is extinct or not established. Past experience shows that some species long considered extinct have been rediscovered (albeit in extremely small populations), and some that have been purposely released have only been recollected decades after the original date of release.

Though the information contained herein is as correct as we can provide, some errors may still be incorporated owing to lack of complete information or misinterpretation of available information. If any errors are detected, we would appreciate being contacted for correction in a future release of the Checklist.

### Format

This checklist is organized alphabetically by higher taxon, followed by family, genus, and species. For non-insect groups, the higher taxa are entered at subclass level; for the insect groups, the ordinal level is used. Author and year of publication are included as well as distribution by island and the residency status of the species. The terms used for residency status include *endemic* (found only in the Hawaiian Islands), *indigenous* (natural distribution includes, but not restricted to, the Hawaiian Islands), *adventive* (immigrant; used in place of “introduced” to differentiate from those *purposely introduced*). Species that are known only from quarantine records (reported as intercepted) or those published as not established are present in the database, but do not appear in the checklist.

No island distribution appears in some cases because the distribution data in the literature was not specific (e.g., “Hawaiian Islands” or “Sandwich Islands” or “most islands”). If an island distribution does not appear, assume “Hawaiian Islands.” Unnamed species are included if the species is published as “n.sp.” or some other differentiating manner, or if the unnamed species is the only member of the genus in Hawaii or somehow indicated as being different from other species listed. Listed unnamed new species are followed by the designator and year of publication in brackets.

A table of contents is provided in addition to the cross-referenced index. No distinction is made between subspecies, race, or variety so all infraspecific epithets have been treated as subspecies. The nominate subspecies do not have the subspecific epithet added so they appear ahead of the other subspecies in the checklist and index.

#### Future Developments

The checklist is the authority file for a suite of databases currently being developed under the auspices of the Hawaii Biological Survey. The checklist was extracted from a citation database that includes published information regarding the publication of the citation and pertinent information about the species within the citation. Nearly completed and expected to be released soon is a bibliography that is also based on the citations. Several pilot projects are begun, incorporating specimen information into a specimen database, and completion of this database will be the next major project. The specimen database will probably have a significant impact on the checklist as undoubtedly specimens exist in the collections representing species that have not been published as present in the Hawaiian Islands.

Versions of the authority files are intended to be available on the Bishop Museum's Internet gopher server. We intend to maintain the authority files as up-to-date as possible.

#### EDITORS (of the first release of the Checklist)

G. A. Samuelson, J.S. Strazanac & K.S. Kami, Co-editors; S.E. Miller, N.L. Evenhuis, F.G. Howarth, D.A. Polhemus & S.F. Swift, Editorial Advisors.

#### REVIEWERS (of the first release of the Checklist)

J.W. Amrine, F.G. Andrews, R.H. Arnett, M. Asche, G.E. Ball, W.F. Barr, R.S. Beal, J.W. Beardsley, J. Beatty, R.A. Beaver, V.O. Becker, C.L. Bellamy, P.F. Bellinger, E.L. Bousfield, R.L. Brown, J.M. Carpenter, D.S. Chandler, J. Chazeau, J.A. Chemsak, K.A. Christiansen, J.F.G. Clarke, J.A. Coddington, H.V. Daly, D.R. Davis, T.W. Donnelly, J.T. Doyen, R.E. Elbel, K.C. Emerson, T.L. Erwin, D.C. Ferguson, T. Fincher, E.J. Ford, R.C. Froeschner, E.J. Gerberg, G.A.P. Gibson, R.J. Gill, M.L. Goff, R.D. Gordon, E.E. Grissell, M. Hansen, T.J. Henry, D.F.J. Hilton, Y. Hirashima, H. Hoch, R.W. Hodges, R.L. Hoffman, J.D. Holloway, A.T. Howden, H.F. Howden, J. Huber, C. Johnson, P.J. Johnson, D.H. Kavanaugh, J. Kethley, J.S. Kingsolver, G.W. Krantz, J.F. Lawrence, J.K. Liebherr, P.M. Marsh, L. Masner, A.S. Menke, W.B. Muchmore, E.G. Munroe, J. Muona, S. Nakahara, A.F. Newton, R.A. Norton, J. Paclt, J. Pakaluk, T. Pape, L. Pereira, N.I. Platnick, R.W. Poole, J.A. Powell, R.D. Price, N. Reimer, A.A.M. Richardson, J.C.E. Riote, R.K. Robbins, H. Roberts, E.S. Ross, L.M. Roth, V.D. Roth, K. Sakimura, U. Scheller, T.N. Seeno, M.J. Sharkey, W. Shear, R.M. Shelley, R.R. Snelling, M.A. Solis, T.J. Spilman, C.L. Staines, H. Steinmann, S. Taiti, C.A. Tauber, M.K. Thayer, R.T. Thompson, C.A. Triplehorn, D.B. Wahl, M.J. Westfall, N.A. Wilson, S.L. Wood.

Many people have contributed to this database over the years. We sincerely apologize if we missed anyone whose name should appear on this list.

FamilyGenusSpecies Describer, YearStatus Ne Na Nu Ka Oa Mo Ln Kh Ma Ha NW**Homoptera**

Aphididae (continued)

Wahlgreniella

nervata (Gillette, 1908)

adv

Ma Ha

Asterolecaniidae

Asterolecanium

bambusae (Boisduval, 1869)  
miliaris (Boisduval, 1869)  
pseudomiliaris Green, 1922  
pustulans (Cockerell, 1892)  
robustum Green, 1908  
scirrosis Russell, 1941adv  
adv  
adv  
adv  
adv  
advKa Oa  
Ka Oa  
Oa  
Ka Oa Mo  
Ka Oa  
OaHa  
Ha  
Ma  
Ha

Cercopidae

Philaenus

spumarius (Linnaeus, 1758)

adv

Ha

Cicadellidae

Acinopterus

angulatus Lawson, 1922

adv

Ka Oa

Agallia

lingula Van Duzee, 1907  
peregrinans (Stål, 1859)adv?  
adv?Oa  
Oa

Ha

Ambigonalia

varicolor (Signoret, 1854)

end

Oa

Balclutha

fuscifrons Knight & Webb, 1988  
grandis Namba, 1956  
incisa hospes (Kirkaldy, 1910)  
lobata Namba, 1956  
nigriventris Knight & Webb, 1988  
peregrina (Kirkaldy, 1910)  
phoxocephala Namba, 1956  
plutonis (Kirkaldy, 1910)  
rufofasciata (Merino, 1936)  
saltuella (Kirschbaum, 1868)  
timberlakei (Osborn, 1935)  
usitata Namba, 1956  
volcanicola (Kirkaldy, 1910)end  
end  
adv  
end  
endKa  
Nu Ka Oa Mo Ln  
Ka Oa Mo  
Oa  
Ka Oa Mo  
Ka Oa Mo  
Oa  
Ka Oa Mo Ln  
Ka Oa Mo  
MoMa  
Ma Ha  
Ma Ha  
Ma Ha  
Ma Ha  
Ma Ha  
Ma Ha  
Ma Ha Mi  
Ma Ha  
Ma Ha

Balolina

kilauaeae (Kirkaldy, 1910)

end

Ka Oa Mo

Ma Ha

Carneocephala

sagittifera (Uhler, 1895)

adv

Ka Oa

Ma Ha

Circulifer

tenellus (Baker, 1896)

adv

Ne

Na

Ka Oa Mo

Ma Ha Ku,Ly,Fr

Deltocephalus

hospes (Kirkaldy, 1904)  
sonorus Ball, 1900adv  
advNu Ka Oa Mo  
Na Ka Oa MoHa  
Ku,Ly,Fr

Draeculacephala

minerva Ball, 1927

adv

Nu Ka Oa Mo

Ma Ha

Empoasca

solana DeLong, 1931  
stevensi Young, 1953adv  
advNe  
KaNa  
Oa

Ka Oa Mo Ln

Ma Ha Ku

Exitianus

exitiosus (Uhler, 1880)

adv

Oa

Graphocephala

cythura (Baker, 1898)

adv

Oa

Island Distribution: Fr=French Frigate Shoals, Ga=Gardner Pinnacles, Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui.

Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl &amp; Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

FamilyGenus

Species Describer, Year

Status Ne Na Nu Ka Oa Mo Ln Kh Ma Ha NW

**Homoptera**

Cicadellidae (continued)

## Gyponana

germari (Stål, 1864)

adv

Ka Oa

## Kirkaldia

euphorbiae Osborn, 1935

end

Mo

ewana Osborn, 1935

end

Oa

## Kunzeana

kunzei (Gillette, 1898)

adv

Oa Mo

Ha

## Macropsis

occidentalis (Van Duzee, 1889)

adv

Ha

## Nephrotettix

apicalis (Motschulsky, 1859)

adv

Oa

## Nesolina

lineata Osborn, 1935

end

Oa

Ha

## Nesoprosyne

affinis Osborn, 1935

end

Oa

Ha

albicosta Osborn, 1935

end

Oa

Ma

angulifera Osborn, 1935

end

Oa

bicolorata Osborn, 1935

end

Oa

bobeae Kirkaldy, 1910

end

Oa

caelicola Kirkaldy, 1910

end

Ln

cinerea Osborn, 1935

end

Ma

comma Osborn, 1935

end

Oa

Ha

craterigena Kirkaldy, 1910

end

Oa

Ha

cuprescens Osborn, 1935

end

Oa

eburneola Osborn, 1935

end

Oa

Ha

ehu Kirkaldy, 1910

end

Oa

Ma Ha

furculata Osborn, 1935

end

Ln

giffardi Kirkaldy, 1910

end

Oa

Ln

Ha

giffardi interrupta Osborn, 1935

end

Oa

Ha

gouldiae Kirkaldy, 1910

end

Oa

Ma

haleakala Kirkaldy, 1910

end

Oa

halemanu Kirkaldy, 1910

end

Ka

ignigena Kirkaldy, 1910

end

Ha

imbricola Kirkaldy, 1910

end

Ln

Ha

insularis Kirkaldy, 1910

end

Ha

koleae Kirkaldy, 1910

end

Ka Oa

Ha

lineata Osborn, 1935

end

Mo Ln

mabae Osborn, 1935

end

Ha

marginalis Osborn, 1935

end

Ha

maritima Kirkaldy, 1910

end

Ka Oa

Ha

milu Kirkaldy, 1910

end

Ln

monticola Kirkaldy, 1910

end

Oa

montium Kirkaldy, 1910

end

Ha

montivaga Kirkaldy, 1910

end

Ha

myrsines Kirkaldy, 1910

end

Ha

nimbicola Kirkaldy, 1910

end

Oa

Ln

Ha

nimbigena Kirkaldy, 1910

end

Oa

Ma

notatula Osborn, 1935

end

Oa

Ln

nubigena Kirkaldy, 1910

end

Ln

nuenue Kirkaldy, 1910

end

Ln

Ha

obliqua Osborn, 1935

end

Ln

Ma

oceaniae Kirkaldy, 1910

end

Oa

Ha

oneanea Kirkaldy, 1910

end

Ln

opalescens Kirkaldy, 1910

end

Oa

Island Distribution: Fr=French Frigate Shoals, Ga=Gardner Pinnacles, Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui, Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl &amp; Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

FamilyGenus

<u>Species</u>	<u>Describer</u>	<u>Year</u>	<u>Status</u>	<u>Ne</u>	<u>Na</u>	<u>Nu</u>	<u>Ka</u>	<u>Oa</u>	<u>Mo</u>	<u>Ln</u>	<u>Kh</u>	<u>Ma</u>	<u>Ha</u>	<u>NW</u>
<b>Homoptera</b>														
Cicadellidae														
Nesophrosyne (continued)														
oreadis Kirkaldy, 1910			end					Oa					Ha	
palolo Osborn, 1935			end					Oa						
paludicola Kirkaldy, 1910			end						Mo					
palustris Kirkaldy, 1910			end						Mo					
pele Kirkaldy, 1910			end										Ha	
peleae Osborn, 1935			end					Oa					Ha	
perkinsi (Kirkaldy, 1904)			end					Oa	Mo	Ln		Ma	Ha	
pipturi Kirkaldy, 1910			end					Oa	Mo	Ln		Ma		
pluvialis Kirkaldy, 1910			end					Oa					Ha	
ponapona Kirkaldy, 1910			end					Ka	Oa	Mo			Ha	
procellaris Kirkaldy, 1910			end							Mo				
sanguinea Osborn, 1935			end								Ln			
signatula Osborn, 1935			end					Oa						
silvicola Kirkaldy, 1910			end							Ln			Ha	
silvigena Kirkaldy, 1910			end					Ka						
sinuata Osborn, 1935			end						Oa				Ha	
touchardii Osborn, 1935			end						Oa				Ha	
ulaula Kirkaldy, 1910			end						Oa			Ma	Ha	
ulaula nigrolineata Kirkaldy, 1910			end						Oa					
umbratilis Kirkaldy, 1910			end					Ka						
umbricola Kirkaldy, 1910			end							Ln				
umbrogena Kirkaldy, 1910			end										Ha	
Nesophryne														
alticola Namba, 1955			end						Oa		Ln			
kaiamamao (Kirkaldy, 1902)			end						Ka					
kukanaroa (Kirkaldy, 1902)			end						Ka					
Opsius														
stactogalus Fieber, 1866			adv						Ka	Oa	Mo	Ln	Ma	
Protalebrella									Ka	Oa			Ma	Ha
brasiliensis (Baker, 1899)			adv											
Scaphytopius														
loricatus (Van Duzee, 1894)			adv			Na		Ka	Oa	Mo				
Spanbergiella									Ka	Oa				
quadripunctata Lawson, 1932			adv											
Stragania									Ka	Oa	Mo		Ma	
robusta (Uhler, 1877)			adv											
Zygina														
penapacha (Beamer, 1941)			adv							Oa				
Cixiidae														
Iolania														
koolauensis Giffard, 1925			end						Oa					
lanaiensis Giffard, 1925			end						Oa		Ln			
mauiensis Giffard, 1925			end									Ma		
oahuensis Giffard, 1925			end						Oa					
perkinsi Kirkaldy, 1902			end						Ka	Oa		Ln	Ha	
perkinsi notata Kirkaldy, 1909			end										Ha	
Oliarus														
acaciae Kirkaldy, 1909			end							Oa				
albatus Giffard, 1925			end							Oa				
consimilis Giffard, 1925			end						Ka					
discrepans Giffard, 1925			end							Oa				
euphorbiae Giffard, 1925			end								Mo		Ma	
filicicola Kirkaldy, 1909			end							Oa		Ma	Ha	

Island Distribution: Fr=French Frigate Shoals. Ga=Gardner Pinnacles. Ha=Hawaii. Ka=Kauai. Kh=Kahoolawe. Ku=Kure. Li=Lisiansky. Ln=Lanai. Ly=Laysan. Ma=Maui.

Mi=Midway. Mo=Molokai. Ne=Necker. Na=Nihoa. Nu=Niihau. Oa=Oahu. Pe=Pearl &amp; Hermes.

Status: end=endemic. ind=indigenous. adv=adventive. pur=purposely introduced. ?=unknown

FamilyGenus

Species Describer, Year

Status Ne Na Nu Ka Oa Mo Ln Kh Ma Ha NW

**Homoptera**

## Cixiidae

## Oliarus (continued)

haleakalae Kirkaldy, 1909	end		Mo		Ma	
haleaku Giffard, 1925	end				Ma	
halemanu Giffard, 1925	end	Ka				
hevaheva Kirkaldy, 1902	end		Mo	Ln		Ha
immaculatus Giffard, 1925	end	Ka				
inaequalis Giffard, 1925	end				Ha	
inaequalis koebelei Metcalf, 1936	end				Ha	
inaequalis kohala Metcalf, 1936	end				Ha	
inaequalis konana Metcalf, 1936	end				Ha	
inconstans Giffard, 1925	end				Ha	
instabilis Giffard, 1925	end	Oa				
instabilis bryani Metcalf, 1936	end	Oa				
instabilis crawi Metcalf, 1936	end	Oa				
instabilis ehrhorni Metcalf, 1936	end	Oa				
instabilis osborni Metcalf, 1936	end	Oa				
instabilis terryi Metcalf, 1936	end	Oa				
instabilis williamsi Metcalf, 1936	end	Oa				
intermedius Giffard, 1925	end	Ka				
kahavalu Kirkaldy, 1909	end		Mo		Ma	
kaiulani Giffard, 1925	end	Oa				
kanakanus Kirkaldy, 1902	end	Oa	Mo		Ma	Ha
kanakanus punaensis Metcalf, 1936	end				Ha	
kaohinani Kirkaldy, 1909	end	Oa				
kaohinani perkinsi Metcalf, 1936	end	Oa				
kaonohi Kirkaldy, 1909	end	Oa	Mo			Ha
kauaiensis Kirkaldy, 1909	end	Ka				
kaumuahona Giffard, 1925	end	Oa				
kirkaldyi Giffard, 1925	end	Oa				
koae Giffard, 1925	end	Ka				
koanoa Kirkaldy, 1902	end	Oa	Mo		Ha	
koele Giffard, 1925	end	Oa		Ln		
kulanus Giffard, 1925	end				Ma	
lihue Giffard, 1925	end	Ka				
likelike Giffard, 1925	end	Oa				
makaala Giffard, 1925	end	Oa				
mauiensis Giffard, 1925	end	Ka			Ma	
montanus Giffard, 1925	end					
monticola Kirkaldy, 1909	end	Ka			Ma	
morai Kirkaldy, 1902	end		Mo		Ma	
muiri Giffard, 1925	end	Ka				
myoporicola Giffard, 1925	end	Oa				
nemoricola Kirkaldy, 1909	end				Ha	
neomorai Giffard, 1925	end		Mo	Ln	Ma	
neomorai oahuana Metcalf, 1936	end	Oa			Ha	
neotarai Giffard, 1925	end	Oa				
niger Giffard, 1925	end	Ka				
nubigenus Kirkaldy, 1909	end	Oa				
olympus Giffard, 1925	end	Oa				
olympus paliensis Metcalf, 1936	end	Oa				
opuna Kirkaldy, 1909	end	Ka				
orono Kirkaldy, 1902	end					Ha
orono molokaiensis Kirkaldy, 1909	end		Mo			
orono oahuensis Kirkaldy, 1909	end	Oa				

Island Distribution: Fr=French Frigate Shoals. Ga=Gardner Pinnacles. Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui, Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl & Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

FamilyGenus

<u>Species</u>	<u>Describer</u>	<u>Year</u>	<u>Status</u>	<u>Ne</u>	<u>Na</u>	<u>Nu</u>	<u>Ka</u>	<u>Oa</u>	<u>Mo</u>	<u>Ln</u>	<u>Kh</u>	<u>Ma</u>	<u>Ha</u>	<u>NW</u>
<b>Homoptera</b>														
Cixiidae														
Oliarus (continued)														
paludicola Kirkaldy, 1909			end						Mo					
pele Kirkaldy, 1909			end				Ka	Oa	Mo			Ma	Ha	
pele alpha Metcalf, 1936			end										Ma	
pele beta Metcalf, 1936			end						Oa					
pluvialis Kirkaldy, 1909			end				Ka							
polyphemus Fennah, 1973			end										Ha	
priola Fennah, 1973			end									Ma		
procellaris Kirkaldy, 1909			end					Oa						
silvestris Kirkaldy, 1909			end				Ka							
similis Giffard, 1925			end						Mo	Ln		Ma		
similis lanaiana Metcalf, 1936			end						Mo	Ln		Ma		
similis mauiana Metcalf, 1936			end									Ma		
similis molokaiana Metcalf, 1936			end						Mo			Ma		
swezeyi Giffard, 1925			end				Ka							
tamehameha Kirkaldy, 1902			end				Ka							
tantalus Giffard, 1925			end					Oa						
tarai Kirkaldy, 1902			end					Oa	Mo			Ha		
tarai alpha Giffard, 1925			end									Ha		
tarai hawaiiensis Metcalf, 1936			end									Ma		
tarai kohalana Metcalf, 1936			end									Ha		
waialeale Giffard, 1925			end				Ka							
wailupensis Giffard, 1925			end					Oa						
Coccidae														
Ceroplastes														
cirripediformis Comstock, 1881			adv				Ka	Oa	Mo			Ma	Ha	
rubens Maskell, 1893			adv				Ka	Oa	Mo	Ln		Ma	Ha	
Coccus														
acutissimus (Green, 1896)			adv					Oa				Ma	Ha	
capparidis (Green, 1904)			adv				Ka	Oa						
hesperidum Linnaeus, 1758			adv					Oa				Ma	Ha	
longulus (Douglas, 1887)			adv					Oa	Mo			Ma	Ha	
pseudohesperidum (Cockerell, 1895)			adv					Oa						
viridis (Green, 1889)			adv					Oa						
Eucalymnatus														
tessellatus (Signoret, 1873)			adv				Ka	Oa				Ma	Ha	
Kilifia														
acuminata (Signoret, 1873)			adv					Oa				Ma	Ha	Mi
Milviscutulus														
mangiferae (Green, 1889)			adv					Oa						
Parasaissetia														
nigra (Nietner, 1861)			adv				Nu	Ka	Oa	Mo		Ma	Ha	Mi,Li,Ly
Pulvinaria														
mammeae Maskell, 1895			adv					Oa						
psidii Maskell, 1893			adv				Ka	Oa	Mo	Ln			Ha	
urbicola Cockerell, 1893			adv					Oa	Mo	Ln				
Saissetia														
coffeae (Walker, 1852)			adv				Ka	Oa				Ma	Ha	
miranda (Cockerell & Parrott, 1899)			adv					Oa	Mo					
neglecta De Lotto, 1969			adv					Oa					Ha	
oleae (Olivier, 1791)			adv					Oa				Ma	Ha	Fr
Conchaspidae														
Conchaspis														
angraeci Cockerell, 1893			adv					Oa						

Island Distribution: Fr=French Frigate Shoals. Ga=Gardner Pinnacles. Ha=Hawaii. Ka=Kauai. Kh=Kahoolawe. Ku=Kure. Li=Lisiansky. Ln=Lanai. Ly=Laysan. Ma=Maui. Mi=Midway. Mo=Molokai. Ne=Necker. Na=Nihoa. Nu=Niihau. Oa=Oahu. Pe=Pearl & Hermes.

Status: end=endemic. ind=indigenous. adv=adventive. pur=purposely introduced. ?=unknown

FamilyGenusSpecies Describer, YearStatus Ne Na Nu Ka Oa Mo Ln Kh Ma Ha NW**Homoptera (continued)**

## Dactylopiidae

## Dactylopius

opuntiae (Cockerell, 1896)

pur

Ha

## Delphacidae

## Aloha

artemisiae (Kirkaldy, 1910)

end

Oa

campylothecae Muir, 1916

end

Oa

dubautiae (Kirkaldy, 1910)

end

Oa

flavocollaris Muir, 1916

end

Oa

ipomoeae Kirkaldy, 1904

end

Ka Oa Mo Ln Ma Ha

kirkaldyi Muir, 1916

end

Oa

myoporicola Kirkaldy, 1910

end

Nu Ka Oa Mo Ln

Ha

plectranthi Muir, 1916

end

Oa

swezeyi Muir, 1916

end

Ka Oa Ma Ha

## Dictyophorodelphax

mirabilis Swezey, 1907

end

Oa

praedicta Bridwell, 1919

end

Ma

swezeyi Bridwell, 1918

end

Oa

usingeri Swezey, 1937

end

Ln

zwaluwenburgi Beardsley, 1956

end

Ka

## Kelisia

emoloa Muir, 1917

end

Oa

eragrosticola Muir, 1919

end

Oa

Ma

sporobolicola Kirkaldy, 1910

end

Ka Oa

Ma Ha Ly

sporobolicola immaculata Muir, 1921

end

Ha

swezeyi Kirkaldy, 1910

end

Ka Oa

## Leialoha

hawaiiensis Muir, 1916

end

Ha

kauaiensis Muir, 1916

end

Ka

lanaiensis Muir, 1917

end

Ln

lehuae (Kirkaldy, 1910)

end

Ka Oa

Ma Ha

mauiensis Muir, 1919

end

Mo

Ma

naniicola (Kirkaldy, 1910)

end

Ka Oa

Ha

oahuensis Muir, 1916

end

Oa

Ln

oceànides (Kirkaldy, 1910)

end

Ka

ohiae (Kirkaldy, 1910)

end

Ka Oa Mo

Ma Ha

pacifica (Kirkaldy, 1910)

end

Ka Mo

scaevoiae Muir, 1922

end

Ka

suttoniae Muir, 1922

end

Ka

## Megamelus

davisi Van Duzee, 1897

adv

Oa

## Nesodryas

freycinetiae Kirkaldy, 1908

end

Oa

swezeyi Zimmerman, 1948

end

Ha

## Nesorestias

filicicola Kirkaldy, 1908

end

Oa

nimbatia (Kirkaldy, 1910)

end

Oa

## Nesosydne

acuta (Muir, 1919)

end

Ma

ahinahina (Muir, 1922)

end

Ma

aku (Muir, 1921)

end

Ha

amaumau (Muir, 1921)

end

Ma

anceps Muir, 1916

end

Ha

argyroxiphii Kirkaldy, 1908

end

Ma

asteliae Muir, 1917

end

Oa

Island Distribution: Fr=French Frigate Shoals, Ga=Gardner Pinnacles, Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui,

Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl &amp; Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

## Family

## Genus

Species Describer, Year

Status Ne Na Nu Ka Oa Mo Ln Kh Ma Ha NW

**Homoptera**

## Delphacidae

Nesosydne (continued)

boehmeriae (Muir, 1921)	end	Oa										
bridwelli (Muir, 1919)	end		Ma									
campylothecae (Muir, 1922)	end	Ka										
chambersi Kirkaldy, 1908	end		Ha									
chenopodii Zimmerman, 1952	end		Ha									
coprosmicola (Muir, 1919)	end		Ha									
cyathodis Kirkaldy, 1910	end		Ma	Ha								
cyrtandrae Muir, 1916	end		Ma									
cytandricola Muir, 1918	end		Ha									
dubautiae (Muir, 1921)	end		Ma									
eeke (Muir, 1919)	end		Ma									
fullawayi (Muir, 1916)	end	Mo	Ma									
geranii (Muir, 1921)	end		Ma									
giffardi Muir, 1916	end	Oa										
gigantea (Muir, 1921)	end	Oa										
gouldiae Kirkaldy, 1910	end	Oa										
gunnerae Muir, 1917	end	Oa										
haleakala Kirkaldy, 1910	end		Ma									
halia Kirkaldy, 1908	end	Oa										
hamadryas Kirkaldy, 1910	end	Oa										
hamata Muir, 1917	end		Ln									
imbricola Kirkaldy, 1910	end		Ma									
incommoda Muir, 1916	end	Oa										
ipomoeicola Kirkaldy, 1907	end	Ka	Oa	Mo		Ma	Ha					
koae Kirkaldy, 1907	end	Ka	Oa			Ma	Ha					
koaephylloides Muir, 1916	end	Ka	Oa				Ha					
koebelia Muir, 1917	end	Oa										
kokolau (Muir, 1919)	end		Ma									
kuschei (Muir, 1922)	end	Ka										
lanaiensis Muir, 1917	end		Ln		Ma							
leahi (Kirkaldy, 1904)	end	Ka	Oa	Mo								
lobeliae Muir, 1916	end	Oa										
longipes (Muir, 1919)	end		Ma									
mamake (Muir, 1919)	end		Ma									
mauiensis (Muir, 1919)	end		Ma	Ha								
monticola Kirkaldy, 1910	end		Ma									
montistantalus Muir, 1916	end	Oa										
naenae (Muir, 1922)	end	Ka										
neocyrtandrae (Muir, 1919)	end		Ma									
neoraillardiae (Muir, 1921)	end		Ha									
neowailupensis (Muir, 1919)	end	Oa										
nephelias Kirkaldy, 1910	end		Ln									
nephrolepidis Kirkaldy, 1908	end	Oa		Ma	Ha							
nesogunnerae Muir, 1917	end		Ln									
nesopele (Muir, 1921)	end		Ma	Ha								
nigriceps Muir, 1917	end		Ln									
nigrinervis (Muir, 1919)	end		Ma									
nubigena Kirkaldy, 1910	end	Mo										
oahuensis Muir, 1916	end	Oa										
olympica (Muir, 1921)	end	Oa										
osborni Muir, 1916	end		Ma									
painiu (Muir, 1919)	end		Ma									
palustris Kirkaldy, 1908	end	Mo										

Island Distribution: Fr=French Frigate Shoals. Ga=Gardner Pinnacles. Ha=Hawaii. Ka=Kauai. Kh=Kahoolawe. Ku=Kure. Li=Lisiansky. Ln=Lanai. Ly=Laysan. Ma=Maui. Mi=Midway. Mo=Molokai. Ne=Necker. Na=Nihoa. Nu=Niihau. Oa=Oahu. Pe=Pearl & Hermes.

Status: end=endemic. ind=indigenous. adv=adventive. pur=purposely introduced. ?=unknown

Family

Genus

<u>Species</u>	<u>Describer</u>	<u>Year</u>	<u>Status</u>	<u>Ne</u>	<u>Na</u>	<u>Nu</u>	<u>Ka</u>	<u>Oa</u>	<u>Mo</u>	<u>Ln</u>	<u>Kh</u>	<u>Ma</u>	<u>Ha</u>	<u>NW</u>
<b>Homoptera</b>														
Delphacidae														
Nesosydne (continued)														
perkinsi Muir, 1916			end									Ma		
phyllostegiae Muir, 1918			end									Ha		
pilo (Muir, 1922)			end									Ma		
pipturi Kirkaldy, 1908			end				Oa	Mo						
procellaris Kirkaldy, 1910			end					Mo						
pseudorubescens (Muir, 1919)			end									Ma	Ha	
railliardiae Kirkaldy, 1908			end									Ha		
railliardiicola (Muir, 1919)			end									Ma		
rocki Muir, 1916			end				Oa							
rubescens Kirkaldy, 1907			end			Ka	Oa				Ma	Ha		
rubescens pele Kirkaldy, 1910			end				Oa					Ha		
sharpi Muir, 1916			end					Oa						
sola Muir, 1917			end					Oa						
stenogynicola (Muir, 1919)			end									Ma		
sulcata (Muir, 1921)			end									Ma		
swezeyi Muir, 1916			end				Oa							
tetramolopii (Muir, 1919)			end									Ma		
timberlakei Muir, 1917			end				Oa							
ulehihi (Muir, 1919)			end									Ha		
umbratrica Kirkaldy, 1910			end				Oa	Mo			Ma	Ha		
viridis (Muir, 1922)			end			Ka								
waikamoiensis (Muir, 1919)			end									Ma		
Nesothoe														
antidesmae (Muir, 1917)			end				Oa							
bobaeae Kirkaldy, 1908			end				Oa							
dodonaeae (Muir, 1916)			end				Ka							
dryope (Kirkaldy, 1910)			end				Ka	Oa				Ha		
elaeocarpi (Kirkaldy, 1908)			end					Oa						
eugeniae (Kirkaldy, 1908)			end					Oa		Ln				
fletus Kirkaldy, 1908			end			Ka			Ln		Ma			
frigidula Kirkaldy, 1908			end								Ha			
giffardi (Kirkaldy, 1908)			end					Oa						
gulicki (Muir, 1916)			end					Oa		Ln		Ha		
haa (Muir, 1921)			end									Ha		
hula Kirkaldy, 1908			end							Ka				
jaka Kirkaldy, 1908			end									Ma		
maculata (Muir, 1916)			end					Oa		Ln		Ha		
magnacornis Beardsley, 1960			end				Ka							
munroi (Muir, 1917)			end							Ln		Ha		
perkinsi Kirkaldy, 1908			end					Oa						
piilani Kirkaldy, 1908			end					Ka	Mo	Ln				
pluvialis Kirkaldy, 1908			end						Ka					
semialba (Muir, 1922)			end						Ka					
seminigrofrons (Muir, 1922)			end						Ka					
silvestris Kirkaldy, 1908			end								Ln	Ma		
terryi Kirkaldy, 1908			end							Oa				
Nothorestias														
badia Muir, 1917			end					Oa						
swezeyi Muir, 1922			end					Oa						
Opiconsiva														
paludum (Kirkaldy, 1910)			adv					Oa	Mo			Ha	Ku,Mi,Pe,Ly	
Peregrinus														
maidis (Ashmead, 1890)			adv				Nu	Ka	Oa	Mo	Ln		Ma	Ha

Island Distribution: Fr=French Frigate Shoals, Ga=Gardner Pinnacles, Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui.

Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl & Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

<u>Family</u>	<u>Genus</u>	<u>Species</u>	<u>Describer</u>	<u>Year</u>	<u>Status</u>	<u>Ne</u>	<u>Na</u>	<u>Nu</u>	<u>Ka</u>	<u>Oa</u>	<u>Mo</u>	<u>Ln</u>	<u>Kh</u>	<u>Ma</u>	<u>Ha</u>	<u>NW</u>
<b>Homoptera</b>																
Delphacidae (continued)																
Perkinsiella																
saccharicida Kirkaldy, 1903																
Sardia																
rostrata pluto (Kirkaldy, 1906)																
Sogatella																
kolophon (Kirkaldy, 1907)																
Sogatodes																
eupompe (Kirkaldy, 1907)																
Tarophagus																
colocasiae (Matsumura, 1932)																
Toyo																
dryope (Kirkaldy, 1907)																
Derbidae																
Lamenia																
caliginea (Stål, 1854)																
Diaspididae																
Abgrallaspis																
cyanophylli (Signoret, 1869)																
palmae (Cockerell, 1893)																
Andaspis																
hawaiiensis (Maskell, 1895)																
leucophloeae Rao, 1952																
mackieana (McKenzie, 1943)																
punicae (Laing, 1929)																
Aspidiotus																
destructor Signoret, 1869																
nerii Bouche, 1833																
selangorensis Hall & Williams, 1962																
Aulacaspis																
alisiana Takagi, 1970																
crawii (Cockerell, 1898)																
rosarum Borchsenius, 1958																
Carulaspis																
giffardi (Adachi & Fullaway, 1953)																
minima (Targioni-Tozzetti, 1869)																
Chionaspis																
citri (Comstock, 1881)																
Chortinaspis																
subcortina (Laing, 1929)																
Chrysomphalus																
aonidum (Linnaeus, 1758)																
bifasciculatus Ferris, 1938																
dictyospermi (Morgan, 1889)																
propsimus Banks, 1906																
Clavaspis																
herculeana (Doane & Hadden, 1909)																
Diaspis																
boisduvalii Signoret, 1869																
bromeliae (Kerner, 1778)																
echinocacti (Bouche, 1833)																
Duplaspidiotus																
claviger (Cockerell, 1901)																
tesseratus (Grandpre & Charmoy, 1899)																

Island Distribution: Fr=French Frigate Shoals, Ga=Gardner Pinnacles, Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui.

Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl & Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

FamilyGenus

<u>Species</u>	<u>Describer</u>	<u>Year</u>	<u>Status</u>	<u>Ne</u>	<u>Na</u>	<u>Nu</u>	<u>Ka</u>	<u>Oa</u>	<u>Mo</u>	<u>Ln</u>	<u>Kh</u>	<u>Ma</u>	<u>Ha</u>	<u>NW</u>
<b>Homoptera</b>														
Diaspididae														
Parlatoria (continued)														
<i>proteus</i> (Curtis, 1843)			adv				Ka	Oa				Ma	Ha	
<i>ziziphi</i> (Lucas, 1853)			adv				Ka	Oa	Mo			Ma	Ha	
Pinnaspis														
<i>aspidistrae</i> (Signoret, 1869)			adv				Ka	Oa	Mo			Ma	Ha	
<i>buxi</i> (Bouche, 1851)			adv				Ka	Oa	Mo			Ma	Ha	
<i>strachani</i> (Cooley, 1899)			adv			Nu	Ka	Oa		Ln		Ma	Ha	Mi
<i>uniloba</i> (Kuwana, 1909)			adv				Ka	Oa						
Pseudaulacaspis														
<i>cockerelli</i> (Cooley, 1897)			adv				Ka	Oa	Mo			Ma	Ha	
<i>major</i> (Cockerell, 1894)			adv			Nu	Ka	Oa				Ma	Ha	
<i>pentagona</i> (Targioni-Tozzetti, 1887)			adv				Ka	Oa						
<i>subcorticalis</i> (Green, 1905)			adv					Oa						
Pseudoparlatoria														
<i>parlatorioides</i> (Comstock, 1883)			adv					Oa						
Radionaspis														
<i>indica</i> (Marlatt, 1908)			adv					Oa						
Thysanofiorinia														
<i>leei</i> Williams, 1971			adv				Ka	Oa						
<i>nephelii</i> (Maskell, 1897)			adv					Oa						
Eriococcidae														
Acanthococcus														
<i>araucariae</i> (Maskell, 1878)			adv				Ka	Oa	Mo			Ma	Ha	
Eriococcus														
<i>coccineus</i> Cockerell, 1894			adv				Ka							
Flatidae														
Melormenis														
<i>basalis</i> (Walker, 1851)			adv				Ka	Oa	Mo			Ma	Ha	
Siphanta														
<i>acuta</i> (Walker, 1851)			adv				Ka	Oa	Mo	Ln		Ma	Ha	
Halimococcidae														
Colobopyga														
<i>browni</i> Beardsley, 1963			end					Oa						
<i>kewensis</i> (Newstead, 1901)			adv					Oa						
<i>pritchardiae</i> (Stickney, 1934)			end					Oa	Mo					
Platycoccus														
<i>tylocephalus</i> Stickney, 1934			end		Na			Oa						
Homotomidae														
Macrohomotoma														
<i>apsylloides</i> (Crawford, 1919)			adv?					Oa						
Margarodidae														
Icerya														
<i>purchasi</i> Maskell, 1878			adv				Ka	Oa	Mo	Ln		Ma	Ha	Ku,Mi,Fr
Membracidae														
Antianthe														
<i>expansa</i> (Germar, 1835)			adv				Ka	Oa		Ln		Ma	Ha	
Spissistilus														
<i>festinus</i> (Say, 1830)			adv				Ka	Oa	Mo	Ln		Ma	Ha	Mi
Tricentrus														
<i>albomaculatus</i> Distant, 1908			adv				Ka	Oa				Ha		
Vanduzeea														
<i>segmentata</i> (Fowler, 1895)			adv				Ka	Oa	Mo			Ma	Ha	Mi

Island Distribution: Fr=French Frigate Shoals, Ga=Gardner Pinnacles, Ha=Hawaii, Ka=Kauai, Kh=Kahoolawe, Ku=Kure, Li=Lisiansky, Ln=Lanai, Ly=Laysan, Ma=Maui, Mi=Midway, Mo=Molokai, Ne=Necker, Na=Nihoa, Nu=Niihau, Oa=Oahu, Pe=Pearl & Hermes.

Status: end=endemic, ind=indigenous, adv=adventive, pur=purposely introduced, ?=unknown

# HAWAIIAN TERRESTRIAL ARTHROPOD CHECKLIST SUMMARY

version 20 Jul 1994

## NON-INSECT ARTHROPODS

Group	No. of families	No. of genera	No. of species	No. endemic	No. indigenous	No. adventive	No. purposely introduced
ACARI	113	293	521	104	9	335	4
AMPHIPODA	1	5	9	6	0	3	0
ARANEAE	30	87	197	118	0	71	0
CHILOPODA	11	19	24	12	0	12	0
DIPLOPODA	7	11	26	16	0	9	0
ISOPODA	10	27	46	15	2	26	0
PALPIGRADA	1	1	1	0	0	1	0
PAUROPODA	1	2	2	0	0	1	0
PSEUDOSCORPIONIDA	7	7	12	12	0	0	0
SCHIZOMIDA	1	1	1	0	0	1	0
SCORPIONIDA	1	1	1	0	0	1	0
SYMPHYLA	2	4	5	0	0	5	0
TARDIGRADA	4	11	22	1	0	19	0
<b>SUBTOTALS</b>	<b>189</b>	<b>469</b>	<b>867</b>	<b>284</b>	<b>11</b>	<b>484</b>	<b>4</b>

## INSECTS

Order	No. of families	No. of genera	No. of species	No. endemic	No. indigenous	No. adventive	No. purposely introduced
Anoplura	5	7	14	0	0	14	0
Archaeognatha	1	1	5	5	0	0	0
Blattaria	4	14	19	0	0	19	0
Coleoptera	62	500	1984	1358	9	427	170
Collembola	6	49	168	95	0	71	0
Dermoptera	5	14	24	9	1	14	0
Diplura	3	4	4	0	0	4	0
Diptera	58	338	1426	1048	10	331	30
Embiidina	1	2	2	0	0	2	0
Ephemeroptera	1	1	1	0	0	1	0
Heteroptera	24	116	313	214	2	87	9
Homoptera	23	221	686	385	0	298	1
Hymenoptera	45	401	1282	654	0	437	167
Isoptera	3	5	5	0	0	5	0
Lepidoptera	35	209	1151	950	0	160	30
Mallophaga	5	46	102	5	51	44	0
Mantodea	1	4	6	0	0	6	0
Neuroptera	4	10	60	51	0	6	2
Odonata	3	8	40	31	2	7	0
Orthoptera	6	35	86	56	1	26	0
Protura	1	1	1	0	0	0	0
Psocoptera	15	25	135	89	3	42	0
Siphonaptera	4	8	11	1	0	10	0
Strepsiptera	2	2	3	0	0	3	0
Thysanoptera	4	71	147	29	0	113	3
Thysanura	2	5	6	0	0	6	0
Trichoptera	2	3	3	0	0	3	0
Zoraptera	1	1	1	0	0	1	0
<b>SUBTOTALS</b>	<b>326</b>	<b>2101</b>	<b>7685</b>	<b>4980</b>	<b>79</b>	<b>2137</b>	<b>412</b>
<b>TOTALS</b>	<b>515</b>	<b>2570</b>	<b>8552</b>	<b>5264</b>	<b>90</b>	<b>2621</b>	<b>416</b>