CICADA (HOMOPTERA: CICADOIDEA) TYPE MATERIAL IN THE COLLECTIONS OF THE AMERICAN MUSEUM OF NATURAL HISTORY, CALIFORNIA ACADEMY OF SCIENCES, SNOW ENTOMOLOGICAL MUSEUM, STATEN ISLAND INSTITUTE OF ARTS AND SCIENCES, AND THE UNITED STATES NATIONAL MUSEUM

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ABSTRACT

This work is a comprehensive listing of the type material of the cicadas found in the collections of the American Museum of Natural History, California Academy of Sciences, Snow Entomological Museum, Staten Island Institute of Arts and Sciences, and the United States National Museum. I have included all type material identified in the collections. The California Academy of Sciences collection contains 4 types, 17 holotypes, 14 lectotypes, 19 allotypes, and 257 paratypes from 64 species in 14 genera. The American Museum of Natural History contains 105 types, 2 holotypes, 8 co-types, 64 allotypes, and 149 paratypes from 136 species in 27 genera. Lectotypes and allotypes for *Tibicen linnei* and *T. lyricen* var. *engelhardti* are designated. In addition, an allotype (one of a pair) of *Platypedia putnami* var. *lutea* is designated as a paratype. The Snow Museum has 10 types, 6 allotypes, and 351 paratypes from 35 species in 8 genera in the collection. The Staten Island Institute collection contains 15 types, 8 syntypes, 10 co-types, 5 allotypes, and 1,327 paratypes from 116 species in 24 genera. The U.S. National Museum contains 55 types, 178 co-types, 11 allotypes, and paratypes from 111 species of 36 genera identified. References to the original species descriptions are provided.

Key Words: cicadas, Cicadidae, Tibicinidae, type material

RESUMEN

En este trabajo se presenta una lista comprensiva de los ejemplares tipos de las chicharras que se encuentran en las colecciones de las siguientes instituciones: American Museum of Natural History, California Academy of Sciences, Snow Entomological Museum, Staten Island Institute of Arts and Sciences, y United States National Museum. Se incluye todo material tipo identificado en las colecciones. La colección en la Academia de Ciencias de California tiene 4 tipos, 17 holotipos, 14 lectotipos, 19 alotipos, y 257 paratipos de 64 especies en 14 géneros. El Museo Americano de Historia Natural tiene 105 tipos, 2 holotipos, 8 cotipos, 64 alotipos, y 149 paratipos de 136 especies en 27 géneros. Lectotipos y alotipos de *Tibicen linnei* y *T. lyricen* var. *engelhardti* son designados aquí. Ademas, un alotipo (uno de un par) de *Platypedia putnami* var. *lutea* es designado como un paratipo. El Museo Snow de Entomología tiene 10 tipos, 6 alotipos, y 351 paratipos de 35 especies en 8 géneros en la colección. La colección del Instituto de Artes y Ciencias de Staten Island tiene 15 tipos, 8 sintipos, 10 cotipos, 5 alotipos, y 1,327 paratipos de 116 especies en 24 géneros. El Museo Nacional de Estados Unidos tiene 55 tipos, 178 cotipos, 11 alotipos, y paratipos de 111 especies en 36 géneros identificados. Se proveen referencias para las descripciones originales de las especies.

Several of my current research projects have resulted in a need to locate type specimens of cicadas. I have found the information available in the literature is often inadequate for determining the specific identity of specimens, particularly as I collect a greater number of species. Many of the early species descriptions are vague or simply do not provide sufficient information to allow distinct separation of species. Often, only a few sentences were used to describe characteristics which, although sufficient to identify a species at that time as unique, have subsequently been found in other animals that were described later. Another common problem with the original descriptions is the use of comparisons to other species as an integral part of the species description. You are unable to determine if you have a particular species from these descriptions if you do not possess examples of all the species used in the comparisons. Similarly, the keys that have been produced for the cicadas are incomplete when trying to identify a large number of species from a wide geographic range. The keys generally are restricted to the species found within a specific state, e.g. California (Simons 1954) or Michigan (Moore 1966), and may, even then, be incomplete.

Due to these circumstances, a positive identification often requires comparing specimens to the type material. However, the location of the type specimens is not always known. Many of the original descriptions do not state where a type was deposited or simply state that the type is part of the author's collection. Over the years these private collections have been acquired by larger institutions or parts of individual collections may have been transferred between institutions.

This work is an effort to identify type material in the large cicada depositories of the United States. Each of these institutions has either had scientists associated with it who described cicada species or has acquired significant collections which included cicada type material. The California Academy of Sciences (CAS) collection contains the collections of E. P. Van Duzee, F. H. Wymore, and B. P. Bliven. The Snow Entomological Museum of the Kansas Museum of Natural History at the University of Kansas (SEMK) contains the collections of F. H. Snow and R. H. Beamer, collaborators of W.T. Davis. The United States National Museum (USNM) contains the P. R. Uhler collection. The collections of the American Museum of Natural History (AMNH) and the Staten Island Institute of Arts and Sciences (SIIS) share material that was originally the Davis collection. A significant transfer of type material took place between the SIIS and the AMNH in 1945. A large number of the cicada types designated by W. T. Davis were transferred to the AMNH after his death (Pallister 1946a). However, there were questions raised about the location of the type material for several species (Pallister 1946b). The SIIS collection still contains the bulk of the Davis Collection including type material for many of the species he described.

The following list identifies all type material found in the collections. Designations of type, holotype, co-type, allotype, lectotype, and paratype were made by the original author or by a subsequent researcher. It includes specimens that were reported to be on loan. Labels identifying the type status of individual insects are attached to the individual specimens. Type numbers in the CAS and USNM collections are listed if a number was attached to the specimen. Current orthography for the species is used with higher classification following Duffels & van der Laan (1985) and Duffels (1993).

Superfamily Cicadoidea

Family Cicadidae

Tribe Platypleurinae

Subtribe Platypleuraria

Platypleura machadoi Boulard 1972: 163.

CAS - one male paratype.

Platypleura fenestrata Uhler 1862a: 282.
USNM - type male.

Tribe Zammarini

Borencona aguadilla Davis 1928a: 31.
AMNH - type male and allotype female.

Chinaria mexicana Davis 1934: 52.
AMNH - type male, allotype female, and one female paratype.

Chinaria similis Davis 1942: 178.
AMNH - type male and allotype female.
SIIS - two male and one female paratypes.

Chinaria vivianae Ramos 1985: 63.
USNM - type male, allotype female, and one male and three female paratypes.

Odopoea cariboea Uhler 1892a: 169.
USNM - type female.

Tribe Thophini

Arenopsaltria nubivena (Walker 1858: 17).
USNM - co-type male.

Uhleroides hispaniolae Davis 1939: 292.
SIIS - one female paratype.
USNM - type male, allotype female, and one female paratype.

Uhleroides maestra Davis 1939: 291.
AMNH - type male and allotype female.
SIIS - two male and one female paratypes.

Uhleroides samanae Davis 1939: 294.
USNM - type male.

Tribe Thophini

Thopha saccata (Fabricius 1803: 34).
USNM - co-type male.

Tribe Cyclochilini

Henicopsaltria eydouxii (Guérin Méneville 1838: 181).
USNM - co-type female.

Psaltoda harrisii (Leach 1814: 89).
USNM - co-type male.

Psaltoda moerens (Germar 1834: 67).
USNM - co-type female.

Tribe Tibicenini

Cacama californica Davis 1919a: 75.
SIIS - one male and one female paratypes.
USNM - type male, allotype, and three male paratypes.

Cacama carbonaria Davis 1919a: 76.
SIIS - type male.

Cacama crepitans (Van Duzee 1914: 45).
CAS - lectotype male (CAS Type No. 2128) and five male paratypes.

Cacama valvata (Uhler 1888: 84).
USNM - type male.

Cacama variegata Davis 1919a: 73.
AMNH - type male and allotype female.
CAS - one male paratype.
SEMK - one male paratype.
SIIS - 12 male and 11 female paratypes.

Cornuplura curvispinosa (Davis 1936: 102).
AMNH - one male paratype.
SIIS - two male paratypes.

Cornuplura nigroalbata (Davis 1936: 104).
AMNH - type female.

Diceroprocta alacris var. *campechensis* Davis 1938: 297.
SEMK - type male and five female paratypes.

Diceroprocta albomaculata Davis 1928b: 452.
USNM - type male.

Diceroprocta apache (Davis 1921: 3).
AMNH - type male and allotype female.
CAS - four male and one female paratypes.
SIIS - 99 male and 37 female paratypes.
USNM - one male and one female paratypes.

Diceroprocta apache var. *ochroleuca* Davis 1942: 174.
AMNH - type male and allotype female.

Diceroprocta arizona (Davis 1916a: 51).
AMNH - type male, allotype female, and one male paratype.
SEMK - three male paratypes.
SIIS - one male paratype.
USNM - one male paratype.

Diceroprocta averyi Davis 1941: 93.
AMNH - type male and allotype female.
SIIS - seven male paratypes.

Diceroprocta bequaerti (Davis 1917b: 210).
AMNH - type male.
SIIS - eight male paratypes.

Diceroprocta bibbyi Davis 1928b: 453.
AMNH - type male and allotype female.
CAS - one male paratype.

SEMK -one male paratype.
SIIS - seven male and one female paratypes.
USNM - one male paratype.

Diceroprocta bicolor Davis 1935a: 188.
AMNH - type male and allotype female.
SIIS - one male paratype.

Diceroprocta biconica var. *obscurior* Davis 1935a: 183.
SIIS - type male, allotype female, and seven male paratypes.

Diceroprocta bilaqueata (Uhler 1903a: 7).
USNM - type male.

Diceroprocta canescens Davis 1935a: 179.
AMNH - type male and allotype female.
CAS - one male paratype.
SEMK - one male paratype.
SIIS - 18 male and one female paratypes.

Diceroprocta cinctifera (Uhler 1892a: 156).
USNM - type male.

Diceroprocta cinctifera var. *limpia* Davis 1932: 246.
AMNH - type male.
SIIS - four male paratypes.
USNM - one male paratype.

Diceroprocta cinctifera var. *viridicosta* Davis 1930: 60.
SEMK - type male, allotype female, and 22 male and one female paratypes.
SIIS - six male and one female paratypes.

Diceroprocta cleavesi Davis 1930: 61.
SIIS - type male.

Diceroprocta delicata var. *aurantiaca* Davis 1938: 300.
SEMK - type male, allotype female, and 13 male and one female paratypes.
SIIS - 28 male and seven female paratypes.
USNM - one male paratype.

Diceroprocta eugraphica (Davis 1916a: 52).
AMNH - type male and six male paratypes.
SEMK - 89 male and 21 female paratypes.
SIIS - three male and one female paratypes.
USNM - female allotype and five male paratypes.

Diceroprocta fraterna Davis 1935a: 187.
AMNH - type male.
SIIS - five male paratypes.

Diceroprocta knighti (Davis 1917b: 208).
AMNH - type male and one male paratype.
SIIS - three male paratypes.

Diceroprocta lucida Davis 1934: 44.

AMNH - type male, allotype female, and one male and one female paratypes.
SEMK - one female paratype.
CAS - one male paratype.
SIIS - six male and three female paratypes.
USNM - one male and one female paratypes.

Diceroprocta marevagans Davis 1928b: 446.

AMNH - type male.

Diceroprocta oculata Davis 1935a: 189.

AMNH - type male.
SIIS - two male paratypes.

Diceroprocta operculabrunnea Davis 1934: 45.

AMNH - type male, allotype female, and one male paratype.
USNM - one male paratype.

Diceroprocta pinosensis Davis 1935a: 184.

AMNH - type male.

Diceroprocta pusilla Davis 1942: 177.

AMNH - type male.
SIIS - three male paratypes.

Diceroprocta reperta (Uhler 1892b: 177).

USNM -type female.

Diceroprocta reticularis (Uhler 1892a: 157).

USNM - type male.

Diceroprocta semicincta (Davis 1925: 41).

AMNH - type male, allotype female, and two male and one female paratypes.
CAS - one male and one female paratype.
SEMK - three male and seven female paratypes.
SIIS - 12 male and five female paratypes.
USNM - six male and seven female paratypes.

Diceroprocta semicincta var. *nigrans* Davis 1942: 175.

SEMK - type male.

Diceroprocta sordidata (Uhler 1892b: 175).

USNM - type male.

Diceroprocta swalei var. *davisi* Metcalf 1963: 210 nom. nov. pro *D. swalei castanea* Davis 1916a: 49.

AMNH - type male, allotype female, and one male paratype.
SEMK - one male paratype.
SIIS - 11 male and two female paratypes.
USNM - one female paratype.

Diceroprocta tepicana Davis 1938: 298.

AMNH - type male and allotype female.

SIIS - one female paratype.

Diceroprocta texana (Davis 1916a: 54).

AMNH - type male and one male paratype.

SEMK - three male paratypes.

SIIS - 13 male paratypes.

USNM - one male paratype (USNM Paratype No. 42725).

Diceroprocta texana var. *lata* Davis 1941: 91.

AMNH - type male.

Macrotristria angularis (Germar 1834: 68).

USNM - co-type male.

Macrotristria extrema (Distant 1892: 56).

USNM - co-type female.

Macrotristria hieroglyphicus (Kirkaldy 1909: 391 nom. nov. pro *M. hieroglyphica* Goding and Froggatt 1904: 581).

USNM - co-type female.

Macrotristria internata (Walker 1850: 98).

USNM - co-type female.

Tibicen bifidus (Davis 1916a: 47).

AMNH - type male, allotype female, and one male paratype.

SEMK - two male and two female paratypes.

SIIS - two male and two female paratypes.

Tibicen bifidus var. *simplex* Davis 1941: 88.

AMNH - type male.

Tibicen chiricahua Davis 1923: 8.

SEMK - one male paratype.

SIIS - one male and one female paratypes.

Tibicen chisosensis Davis 1934: 37.

AMNH - type male and allotype female.

Tibicen chloromerus var. *australis* (Davis 1912b: 261).

SIIS - type male and type female.

Tibicen cultriformis (Davis 1915d: 239).

AMNH - allotype female.

USNM - type male (USNM Type No. 200068).

Tibicen davisi (Smith & Grossbeck 1907: 121).

USNM - two co-type females.

Tibicen davisi var. *hardeni* Davis 1918: 146.

SIIS - type male and one female paratype.

Tibicen dealbatus (Davis 1915c: 162).

AMNH - type male and one male paratype.

SIIS - nine male paratypes.

Tibicen duryi Davis 1917b: 206.

AMNH - type male, allotype female, and one female paratype.

SIIS - one male and two female paratypes.

Tibicen fuscus Davis 1934: 43.

USNM - type male.

Tibicen hidalgoensis Davis 1941: 88.

AMNH - type male.

SIIS - three male paratypes.

Tibicen inauditus Davis 1917b: 204.

AMNH - type male and one male paratype.

SIIS - one male paratype.

Tibicen latifasciatus (Davis 1915a: 8).

AMNH - type male.

SIIS - 21 male paratypes.

Tibicen linnei (Smith & Grossbeck 1907: 127).

AMNH - two co-type males and one co-type female.

SIIS - one co-type male and one co-type female.

USNM - three co-type males (all USNM Co-type No. 42730) and one co-type female (USNM Co-type No. 42730).

Tibicen longioperculus Davis 1926: 179.

USNM - type male.

Tibicen lyricen var. *engelhardti* (Davis 1910: 458).

AMNH - type male and type female.

Tibicen lyricen var. *virescens* Davis 1935a: 175.

AMNH - type male and one female paratype.

SEMK - allotype female.

SIIS - two male and one female paratypes.

Tibicen minor Davis 1934: 41.

AMNH - type male.

SIIS - two male paratypes.

USNM - three male paratypes.

Tibicen parallelus Davis 1923: 10.

AMNH - type male.

Tibicen paralleloides Davis 1934: 39.

AMNH - type male.

SIIS - type male.

Tibicen pruinosus var. *fulvus* Beamer 1924: 201.

SEMK - type male, allotype female, and 12 male and three female paratypes.

SIIS - one male paratype and one female paratypes.

Tibicen robinsonianus Davis 1922: 41.

AMNH - type male and allotype female.

CAS - two male paratypes.
SIIS - 22 male and one female paratypes.
USNM - two male paratypes.

Tibicen sayi (Smith & Grossbeck 1907: 121).
AMNH - two male and three female co-types.
SIIS - three male co-types and three female co-types.
USNM - seven co-type males and five co-type females.

Tibicen similaris (Smith and Grossbeck 1907: 125).
USNM - type male.

Tibicen sublaqueatus (Uhler 1903a: 9).
USNM - type male.

Tibicen sugdeni Davis 1941: 89.
AMNH - type male.
SIIS - four male paratypes.

Tibicen texanus Metcalf 1963: 319 nom. nov. pro *T. tigrinus* Davis 1927: 374.
AMNH - type male, allotype female, and one male paratype.
CAS - one female paratype.
SIIS - 15 male and seven female paratypes.
USNM - one male paratype.

Tibicen townsendi (Uhler 1905: 74).
USNM - type male.

Tibicen walkeri var. *pronotalis* Davis 1938: 292.
AMNH - allotype female and one male paratype.
SIIS - five male and one female paratypes.
USNM - type male.

Tibicen winnemanna (Davis 1912a: 3).
SIIS - two male and one female paratypes.
USNM - type male and type female.

Tribe Cryptotympanini

Subtribe Cryptotympanaria

Cryptotympana albolineata Hayashi 1987b: 8.
USNM - type male and five male and three female paratypes.

Cryptotympana distanti Hayashi 1987b: 25.
USNM - one male and one female paratypes.

Cryptotympana moultoni Hayashi 1987a: 206.
USNM - one male paratype.

Cryptotympana praeclara Hayashi 1987a: 182.
USNM - one male paratype.

Cryptotympana sibuyana Hayashi 1987b: 9.
USNM - type male and two female paratypes.

Cryptotympana socialis Hayashi 1987b: 13.
USNM - type male.

Cryptotympana viridicostalis Hayashi 1987b: 14.
USNM - one male and one female paratypes.

Tribe Fidicinini

Beameria venosa (Uhler 1888: 82).
USNM - type male.

Beameria wheeleri Davis 1934: 49.
AMNH - type male and one male paratype.
SEMK - five male paratypes.
SIIS - three male paratypes.
USNM - one male paratype.

Fidicina compostela Davis 1934: 55.
AMNH - type male and one male and one female paratypes.
SIIS - four male and one female paratypes.

Fidicina panamaensis Davis 1939: 288.
SIIS - one male paratype.
USNM - type male, allotype female, and 11 male and three female paratypes.

Ollanta caicosensis Davis 1939: 295.
USNM - type male and three male paratypes.

Proarna cocosensis Davis 1935a: 191.
AMNH - allotype female.
CAS - type male (CAS Type No. 4220).
SIIS - one male paratype.

Proarna squamigera Uhler 1895: 56.
USNM - type female (USNM Co-type No. 10194).

Tympanoterpes pusilla (Berg 1879: 140).
SIIS - type male and type female.

Tribe Dundubiini

Subtribe Leptopsaltriaria

Calcagninus divaricatus Bliven 1964: 98.
CAS - holotype male (CAS Type No. 13802), allotype female (no CAS type number), and 16 male paratypes.

Subtribe Cosmopsaltriaria

Aceropyga corynetus ungulatus Duffels 1988: 56.
USNM - one male paratype.

Cosmopsaltria aurata Duffels 1983: 81.
AMNH - twelve female paratypes.
CAS - 25 female paratypes.

Cosmopsaltria giganta occidentalis Duffels 1983: 72.

AMNH - holotype male and one male and one female paratypes.

Cosmopsaltria gracilis Duffels 1983: 56.
AMNH - one male paratype.

Cosmopsaltria huonensis Duffels 1983: 62.
AMNH - holotype male and one female paratype.

Cosmopsaltria signata Duffels 1983: 86.
AMNH - 19 female paratypes.

Diceropyga gravesteini Duffels 1977: 90.
AMNH - two male paratypes.

Tribe Cicadini

Cicada obtusa Uhler 1903a: 11.
USNM - type male.

Cicadatra atra appendiculata Linnavuori 1962: 31.
AMNH - type male.

Cicadatra erkowitensis Linnavuori 1973: 69.
AMNH - type male.

Cicadatra flavicollis Horváth 1911: 114.
USNM - type female.

Cicadatra naja Dlabola 1979: 238.
USNM - nine male and one female paratypes.

Cicadatra ramanensis Linnavuori 1962: 33.
AMNH - type male.

Leptosemia fuscolimbata (Schumacher 1915: 111).
SIIS - two type females.

Neocicada chisos (Davis 1916a: 62).
AMNH - allotype female and one male paratype.
SIIS - one male paratype.
USNM - type male.

Tribe Psithyristriini

Subtribe Pomponariaria

Pomponia zebra Bliven 1964: 99.
CAS - type male and eight male paratypes.

Tribe Moganniini

Mogannia histrionica Uhler 1862a: 283.
USNM - type male.

Family Tibicinidae

Subfamily Tibicininae

Tribe Dazini

Daza nayaritensis Davis 1934: 54.
AMNH - type male, allotype female, and one male and one female paratypes.
SIIS - nine male and 16 female paratypes.
USNM - one male and one female paratypes.

Tribe Carinetini

Carineta martiniquensis Davis 1934: 54.
AMNH - type male, allotype female, and one male paratype.
SIIS - four male and one female paratypes.

Carineta socia Uhler 1875: 285.
USNM - type male.

Herrera laticapitata Davis 1938: 304.
AMNH - allotype female.

Herrera lugubrina var. *compostelensis* Davis 1938: 303.
AMNH - type male, allotype female, and one male and one female paratypes.
SEMK - four male and one female paratypes.
SIIS - 56 male and 20 female paratypes.

Tribe Tibicinini

Clidophleps astigma Davis 1917a: 7.
SIIS - one male paratype.

Clidophleps beameri Davis 1936: 116.
SEMK - type male and three male paratypes.
SIIS - three male paratypes.

Clidophleps blaisdelli (Uhler 1892a: 163).
USNM - type male.

Clidophleps distanti (Van Duzee 1914: 47).
CAS - lectotype male (CAS Type No. 2131) and three male paratypes.

Clidophleps distanti pallidus (Van Duzee 1914: 47).
CAS - lectotype female (CAS Type No. 2133) and one male paratype.

Clidophleps distanti truncatus (Van Duzee 1914: 47).
CAS - lectotype male (CAS Type No. 2132) and one male paratype.

Clidophleps rotundifrons (Davis 1916b: 235).
SEMK -type female.

Clidophleps tenuis Davis 1927: 382.
AMNH - type male and allotype female.
CAS - one female paratype.
SIIS - five male paratypes.

Clidophleps vagans Davis 1925: 48.
AMNH - type male.

Clidophleps wrighti Davis 1926: 188.
AMNH - type male and allotype female.

Okanagana albibasalis Wymore 1934a: 167.

CAS - holotype male (CAS Type No. 3906), allotype female (CAS Type No. 3906), and 27 male and three female paratypes.

SEMK - one male paratype.

Okanagana annulata Davis 1935b: 304.

AMNH - type male and allotype female.

SIIS - nine male and two female paratypes.

Okanagana arboraria Wymore 1934a: 166.

CAS - holotype male (CAS Type No. 3903), allotype female (CAS Type No. 3903), and 29 male paratypes.

SEMK - one male paratype.

SIIS - one male paratype.

Okanagana arboraria crocea Wymore 1934a: 167.

CAS - holotype male (CAS Type No. 3905).

SEMK - one male paratype.

Okanagana arctostaphylae Van Duzee 1915: 34.

CAS - lectotype male (CAS Type No. 3024), allotype female (CAS Type No. 3025), and 1 male paratype.

USNM - co-type male (USNM Co-type No. 21358).

Okanagana aurantiaca Davis 1917a: 9.

SIIS - one male paratype.

Okanagana aurora Davis 1936: 107.

AMNH - type male and allotype female.

SIIS - one female paratype.

Okanagana balli Davis 1919b: 211.

AMNH - type male, allotype female, and one male paratype.

CAS - one male paratype.

SIIS - six male and one female paratypes.

USNM - five male and one female paratypes.

Okanagana bella Davis 1919b: 198.

AMNH - type male and allotype female.

SIIS - 36 male and 14 female paratypes.

Okanagana canescens Van Duzee 1915: 37.

CAS - lectotype male (CAS Type No. 3028), and allotype female (CAS Type No. 3029).

Okanagana cruentifera (Uhler 1892a: 161).

USNM - type male.

Okanagana davisi Simons 1953: 191.

CAS - holotype male (CAS Type No. 7155) and 4 male paratypes.

Okanagana ferrugomaculata Davis 1936: 110.

SIIS - one male paratype.

USNM - type male.

Okanagana formosa Davis 1926: 181.
AMNH - type male and allotype female.

Okanagana fratercula Davis 1915b: 20.
AMNH - type male.

Okanagana fumipennis Davis 1932: 251.
AMNH - type male and allotype female.
SEMK - one male and one female paratypes.
SIIS - 13 male and four female paratypes.

Okanagana gibbera Davis 1927: 377.
AMNH - type male, allotype female and one male and one female paratypes.
CAS - two female paratypes.
SIIS - four male and 11 female paratypes.
USNM - one male paratype.

Okanagana hesperia (Uhler 1876: 342).
USNM - type male.

Okanagana hirsuta Davis 1915b: 13.
AMNH - type female.

Okanagana hirsuta var. *catalina* Davis 1936: 114.
SIIS - type male.
USNM - allotype female.

Okanagana lurida Davis 1919b: 192.
USNM - type male.

Okanagana luteobasalis Davis 1935b: 302.
AMNH - type male, allotype female, and one male and one female paratypes.
CAS - two male and two female paratypes.
SEMK - one male and one female paratypes.
SIIS - 45 male and 12 female paratypes.
USNM - one male and one female paratypes.

Okanagana magnifica Davis 1919b: 189.
AMNH - type male, allotype female, and one male and one female paratypes.
SEMK - 12 male and 11 female paratypes.
CAS - one male and one female paratypes.
SIIS - 62 male and 94 female paratypes.
USNM - seven male and seven female paratypes.

Okanagana mariposa Davis 1915b: 12.
AMNH - type male.

Okanagana mariposa var. *oregonensis* Davis 1939: 300.
AMNH - type male and allotype female.

Okanagana napa Davis 1919b: 194.
USNM - type male.

Okanagana nigriviridis Davis 1921: 9.

AMNH - type male and allotype female.
SIIS - one male paratype.
USNM - one male paratype.

Okanagana nigrodorsata Davis 1923: 13.
AMNH - type male and allotype female.
CAS - three male paratypes.
SIIS - two male paratypes.
USNM - one male and two female paratypes.

Okanagana opacipennis Davis 1926: 186.
AMNH - type female.

Okanagana oregona Davis 1916b: 233.
AMNH - type male and one male paratype.
CAS - allotype female (CAS Type No. 2130) and one male paratype.
SIIS - three male and four female paratypes.

Okanagana ornata Van Duzee 1915: 33.
SIIS - type male and co-type male.

Okanagana orithyia Bliven 1964: 97.
CAS - holotype male (CAS Type No. 13803), allotype female (no CAS type number), and 11 male and seven female paratypes.

Okanagana ornata Van Duzee 1915: 33.
CAS - lectotype female (CAS Type No. 3032).

Okanagana pallidula Davis 1917b: 213.
AMNH - one male paratype.
CAS - one male paratype.
SIIS - type male and seven male paratypes.

Okanagana pallidula var. *nigra* Davis 1938: 308.
AMNH - type male.
SIIS - five male paratypes.

Okanagana pernix Bliven 1964: 93.
CAS - holotype male (CAS Type No. 13804) and one male paratype.

Okanagana rhadine Bliven 1964: 96.
CAS - holotype male (CAS Type No. 13805) and one female paratype.

Okanagana rubrocaudata Davis 1925: 46.
AMNH - type male and allotype female.

Okanagana rubrovenosa Davis 1915b: 11.
AMNH - type male.
CAS - one male paratype.

Okanagana rubrovenosa var. *rubida* Davis 1936: 113.
SEMK - type male, allotype female, and 23 male and two female paratypes.
SIIS - three male paratypes.

Okanagana salicicola Bliven 1964: 92.

CAS - holotype male (CAS Type No. 13806), allotype female (no CAS type number), and five male paratypes.

Okanagana schaefferi Davis 1915b: 11.

USNM - type male.

Okanagana sequoiae Bliven 1964: 94.

CAS - holotype male (CAS Type No. 13807), allotype female (no CAS type number), and seven female paratypes.

Okanagana simulata Davis 1921: 12.

AMNH - one male paratype.

CAS - one male paratype.

SIIS - type male and one male paratype.

Okanagana sperata Van Duzee 1935: 25.

CAS - holotype male (CAS Type No. 4077).

Okanagana striatipes var. *beameri* Davis 1930: 68.

CAS - two male paratypes.

SEMK - type male, allotype female, and 26 male paratypes.

SIIS - 18 male and one female paratypes.

USNM - five male paratypes.

Okanagana sugdeni Davis 1938: 306.

AMNH - allotype female.

SIIS - one female paratype.

Okanagana synodica var. *nigra* Davis 1944: 220.

AMNH - type male and allotype female.

Okanagana tanneri Davis 1930: 64.

AMNH - one male paratype.

SEMK - type male.

Okanagana triangulata Davis 1915b: 14.

AMNH - type male.

Okanagana triangulata croncina Wymore 1934b: 174.

CAS - holotype male (CAS Type No. 3915) and three male paratypes.

SEMK - one male paratype.

Okanagana tristis Van Duzee 1915: 35.

CAS - lectotype male (CAS Type No. 3026), allotype female (CAS Type No. 3027), and one male paratype.

SIIS - co-type female.

Okanagana tristis var. *rubrobasalis* Davis 1926: 184.

AMNH - type male and allotype female.

Okanagana uncinata Van Duzee 1915: 41.

CAS - lectotype male (CAS Type No. 2129).

Okanagana utahensis Davis 1919b: 216.

AMNH - type male, allotype female, and one male and one female paratypes.

SIIS - 22 male and four female paratypes.

USNM - three male paratypes.

Okanagana vandykei Van Duzee 1915: 38.

CAS - lectotype male (CAS Type No. 3030), allotype female (CAS Type No. 3031), and two male paratypes.

Okanagana venusta Davis 1935b: 299.

AMNH - type male and allotype female.

SIIS - two male and three female paratypes.

Okanagana villosa Davis 1941: 95.

CAS - type male (CAS Type No. 4980).

Okanagana viridis Davis 1918: 153.

AMNH - type male.

Okanagana vocalis Bliven 1964: 90.

CAS - holotype male (CAS Type No. 13808), and allotype female (CAS Type No. 13808).

Okanagana wymorei Davis 1935b: 305.

AMNH - type male.

SIIS - one male paratype.

Okanagana yakimaensis Davis 1939: 299.

SIIS - one male paratype.

Okanagodes gracilis Davis 1919b: 221.

AMNH - type male, allotype female, and one male paratype.

SIIS - one male and two female paratypes.

USNM - 13 male and four female paratypes.

Okanagodes gracilis var. *pallida* Davis 1932: 256.

AMNH - type male and allotype female.

SEMK - one male and one female paratypes.

SIIS - 25 male and 15 female paratypes.

Okanagodes gracilis var. *viridis* Davis 1934: 57.

AMNH - type male, allotype female, and one male paratype.

SIIS - 103 male and 12 female paratypes.

USNM - one male paratype.

Okanagodes terlingua Davis 1932: 257.

AMNH - type male.

SIIS - one male paratype.

Tibicinoides cupreosparsus (Uhler 1889: 43).

USNM - type female.

Tibicinoides mercedita (Davis 1915b: 16).

AMNH - type male and one male and one female paratypes.

CAS - one male and one female paratypes.

SIIS - two male and one female paratypes.

USNM - one male paratype (USNM Paratype No. 42728).

Tibicinoides minuta (Davis 1915b: 17).
AMNH - type male and one male paratype.
CAS - two male paratypes.
SIIS - three male paratypes.
USNM - one male paratype (USNM Paratype No. 42729).

Tribe Parnisini

Adeniana planiceps (Horváth 1917: 7).
USNM - type male and allotype female.

Tribe Taphurini

Psallodia espinii Uhler 1903b: 18.
USNM -two co-type males.

Selymbria ahyetios Ramos & Wolda 1985: 178.
USNM - type male, allotype female, and two female paratypes.

Selymbria pluvialis Ramos & Wolda 1985: 177.
USNM - type male, allotype female, and two female paratypes.

Tribe Chlorocystini

Papuapsaltria brassi de Boer 1995b: 17.
AMNH - one male and one female paratypes.

Papuapsaltria dioedes de Boer 1995b: 37.
AMNH - one male and two female paratypes.

Papuapsaltria woodlarkensis de Boer 1995b: 39.
AMNH - one male and two female paratypes.

Thaumastopsaltria lanceola de Boer 1992: 38.
AMNH - three male and three female paratypes.

Thaumastopsaltria pneumatica de Boer 1992: 29.
AMNH - two male and two female paratypes.

Tribe Gymnotympanini

Baeturia colossea de Boer 1994b: 144.
AMNH - one male paratype.

Baeturia digitata Blöte 1960: 78.
AMNH - one male paratype.

Baeturia gressitti De Boer 1989: 26.
CAS - one male and two female paratypes.

Baeturia guttulinervis Blöte 1960: 67.
AMNH - five female paratypes.

Baeturia marmorata Blöte 1960: 67.
AMNH - two male paratypes.

Baeturia nana (Jacobi 1903: 13).

SIIS - type male and type female.

Baeturia nasuta Blöte 1960: 61.
AMNH - four male and 17 female paratypes.

Baeturia retracta de Boer 1994a: 170.
AMNH - one female paratype.

Baeturia toxopeusi Blöte 1960: 76.
AMNH - three male and five female paratypes.

Baeturia versicolor de Boer 1994b: 150.
AMNH - one male paratype.

Gymnotympana nenians Jacobi 1903: 14.
SIIS - type female.

Gymnotympana stenocephalis de Boer 1995a: 58.
AMNH - one male paratype.

Tribe Cicadettini

Cicadetta calliope var. *floridensis* (Davis 1920: 131).
AMNH - type male and allotype female.

Cicadetta camerona (Davis 1920: 134).
USNM - type male (USNM Type No. 42721), allotype female (USNM Type No. 42732), and one male paratype.

Cicadetta hackeri (Distant 1915: 51).
USNM - co-type male.

Cicadetta kansa (Davis 1919c: 340).
AMNH - type male and allotype female.
SIIS - one male paratype.

Cicadetta pellosoma (Uhler 1862a: 283).
USNM - type female.

Cicadetta rubea (Goding & Froggatt 1904: 651).
USNM - type female (USNM Type No. 27411).

Cicadetta stradbrokensis (Distant 1915: 50).
USNM - co-type male.

Cicadetta texana (Davis 1936: 105).
AMNH - type male.

Cicadetta toowoombae (Distant 1915: 52).
USNM - co-type male.

Cicadetta tympanistria Kirkaldy 1907: 18.
USNM - type male.

Leptosalta radiator (Uhler 1897: 276).
USNM - type male (USNM Type No. 3144) and six male co-types.

Pauropsalta mneme (Walker 1850: 181).
USNM - co-type male.

Subfamily Platypediidae

Tribe Platypediini

Neoplatypedia ampliata (Van Duzee 1915: 29).

CAS - lectotype male (CAS Type No. 3017) and one female paratype.

Neoplatypedia constricta Davis 1920: 123.

SIIS - type male, allotype female, one male and one female paratypes.

USNM - four male and one female paratypes.

Platypedia affinis Davis 1939: 301.

USNM - type male.

Platypedia aperta Van Duzee 1915: 29.

CAS - lectotype male (CAS Type No. 2134), allotype female (CAS Type No. 2135), and 5 male paratypes.

Platypedia areolata (Uhler 1862b: 285).

USNM - type female.

Platypedia australis Davis 1941: 95.

AMNH - type female.

Platypedia balli Davis 1936: 118.

AMNH - type male.

SIIS - three male paratypes.

Platypedia barbata Davis 1920: 120.

SIIS - type male and allotype female.

Platypedia bernardinoensis Davis 1932: 259.

AMNH - type male and allotype female.

CAS - 1 male paratype and 2 female paratypes.

SEMK - one male and one female paratypes.

SIIS - three male and five female paratypes.

Platypedia falcata Davis 1920: 113.

SIIS - type male.

Platypedia intermedia Van Duzee 1915: 30.

CAS - lectotype male (CAS Type No. 3018) and allotype female (CAS Type No. 3019).

Platypedia laticapitata Davis 1921: 14.

SIIS - type male and allotype female.

Platypedia latipennis Davis 1921: 14.

AMNH - type male.

Platypedia mariposa Davis 1935b: 307.

AMNH - type male and allotype female.

SIIS - one male paratype and two female paratypes.

Platypedia middlekauffi Simons 1953: 194.

CAS - holotype male (CAS Type No. 7156), allotype female (no CAS type number), and one male and two female paratypes.

Platypedia minor Uhler 1888: 81.

USNM - type male.

CAS - two male and four female paratypes.

Platypedia mohavensis Davis 1920: 100.

AMNH - type male and allotype female.

SIIS - 23 male and 23 female paratypes.

USNM - one male and one female paratypes.

Platypedia mohavensis var. *rufescens* Davis 1932: 258.

AMNH - type male and allotype female.

CAS - two male paratypes.

SEMK - 54 male and 3 female paratypes.

SIIS - 29 male and 37 female paratypes.

Platypedia putnami (Uhler 1877: 455).

USNM - type male.

Platypedia putnami var. *keddiensis* Davis 1920: 108.

AMNH - type male and allotype female.

SIIS - one male paratype and one female paratype.

Platypedia putnami var. *lutea* Davis 1920: 106.

AMNH - type male, two allotype females, and one male paratype.

CAS - one male and one female paratypes.

USNM - ten male and seven female paratypes.

Platypedia putnami var. *occidentalis* Davis 1920: 106.

CAS - lectotype male (CAS Type No. 3020) and allotype female (CAS Type No. 3020).

SIIS - one male and one female paratypes.

USNM - one female paratype.

Platypedia rufipes Davis 1920: 101.

SIIS - two female paratypes.

USNM - type male, allotype female, and three female paratypes.

Platypedia rufipes var. *angustipennis* Davis 1932: 260.

AMNH - type male and allotype female.

SEMK - one male and one female paratypes.

SIIS - 16 male and 18 female paratypes.

Platypedia scotti Davis 1935b: 308.

SIIS - type male, allotype female, and three male and four female paratypes.

Platypedia sierra Wymore 1935: 143.

CAS - holotype male (CAS Type No. 4104), allotype female (no CAS type number), and 19 male and 12 female paratypes.

SIIS - two male paratypes.

Platypedia similis Davis 1920: 112.

AMNH - type male and allotype female.

CAS - one male paratype.

SIIS - one male and one female paratypes.

Platypedia sylvesteri Simons 1953: 193.

CAS - holotype male (CAS Type No. 7157).

Platypedia tomentosa Davis 1942: 182.

AMNH - type male.

SIIS - one male paratype.

Platypedia usingeri Simons 1953: 192.

CAS - holotype male (CAS Type No. 7158), allotype female (no CAS type number), and two male paratypes.

Platypedia vanduzeei Davis 1920: 115.

CAS - type male (CAS Type No. 3022) and allotype female (CAS Type No. 3023).

SIIS - three male and one female paratypes.

I am designating the male and female co-types of *Tibicen linnei* (Smith & Grossbeck) from West Farms in the AMNH collection as the lectotype and allotype of the species. Both the male and female specimens of *T. lyricen* var. *engelhardti* (Davis) in the AMNH collection are labeled as type. Pallister (1946a) identified the male as the type and the female as an allotype. The male, therefore, should be labeled as a lectotype and the female as the allotype for the species since Davis did not make a designation when he described the species (Davis 1910). I would also change the designation of one of the two female specimens of *Platypedia putnami* var. *lutea* Davis from allotype to paratype. Both were collected at the same location on the same date. No change to the co-type designation of the *T. sayi* specimens is made because *T. sayi* has been synonymized with *T. chloromerus* (Walker) (Davis 1923).

This list adds type material from 93 species to the material identified in Hennessey (1990) in the SIIS collection. I have identified an additional type specimen for *Okanagana simulata*, a co-type of *O. ornata*, and an allotype for *Neoplatypedia constricta*. Hennessey (1990) listed the specimens of *Tibicen latifasciatus* and *T. winnemanna* as syntypes although they are labeled as paratypes. He states there is, and I found, a *T. latifasciatus* specimen labeled as "type" in the AMNH. I found both a male and female *T. winnemanna* specimen labeled "type" in the USNM. The specimens in the SIIS collection should be considered paratypes since Davis identified the specimens as such when he described the species (labels attached to specimens and Davis 1912a). Davis (1912a) also designated the male specimen in the USNM as the type and the female as the allotype for the species.

Pallister (1946b) identified 15 species whose types and/or allotypes were either deposited in the Davis Collection or probably in the Davis Collection. Of the specimens he lists as part of the Davis collection I have been unable to find the allotypes of *Tibicen davisi* var. *hardeni* and *Okanagana simulata*. I found the type of *Clidophleps rotundifrons* (Davis 1916b: 235) in the SEMK. Of the specimens he lists as probably in the Davis Collection I found the type and allotype of *Tibicen winnemanna* in the USNM, the type and allotype of *Okanagana rubrovenosa* var. *rubida* at the SEMK, and *Platypedia scotti* in the SIIS. The remaining specimens Pallister (1946b) identified are currently part of the SIIS collection.

I can answer some of the questions raised by Pallister (1946b) with this work. This list adds type material from 48 Davis species to the material identified in Pallister (1946a). I have identified additional types from 18 species, allotypes from 11 species, and paratypes from 33 species. There are two specimens identified in Pallister (1946a)

as being transferred to the AMNH collection that I was unable to locate. I found the type male of *Okanagana tanneri* not in the AMNH collection but in the SEMK. I have not located the allotype of *O. viridis*.

There is one specimen of *Okanagana striatipes* (Haldeman) and one specimen of *Okanagana triangulata* Davis that are labeled respectively as "Type" and "Holotype male" in the general CAS collection. The specimen of *O. striatipes*, however, was collected in 1929 in Sedona, Arizona, while Haldeman (1852: 359) described the species from a specimen collected on an expedition to the Great Salt Lake Valley of Utah. I found the type of *O. triangulata* designated by a label in Davis' handwriting with a location label matching the type location given in the original description (Davis 1915b: 14) in the AMNH. These two specimens in the CAS collection are therefore incorrectly labeled as types.

Finally, there are 43 male and 17 female specimens identified as paratypes of *Platypedia plumbea* Van Duzee (manuscript name) in the CAS collection. The description for *P. plumbea* has not been published.

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