

FIXATION OF SINGLE TYPE (LECTOTYPIC) SPECIMENS OF SPECIES OF
AMERICAN ORTHOPTERA.¹

SECTION ONE.

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The majority of present-day workers in systematic zoology are in accord on matters tending toward fixity of specific names, one of the most important of these being the limitation of the specific name to a single type specimen in cases where the original author had extensive series which he had considered typical, but of which no single type individual was selected. It not infrequently happened in such cases that two or more species were confused by the author, and the limitation of the name to one of the components is necessary for intelligible work.

In the distributional and taxonomic work on Orthoptera in which the authors are engaged, the necessity for single type (lectotypic) fixations has become imperative, and after due consideration and examination of the type series and study of the context of the original descriptions, we have made the following fixations.

In the few cases where the specific names have already been restricted or types already properly selected, such action has been followed unreservedly unless the author restricting the name has applied it to a form not represented in the original lectotypic series. In the case of proper previous limitations of names we have selected types in accord with such work.

In the ensuing papers the species will be treated in groups, using as divisions the titles of the various papers whose components are considered in the subsequent pages.

Although the selection of a single type was recommended by the last International Entomological Congress, no rules have as yet been adopted governing such selections. It seems to us to be obvious that under the present conditions certain logical methods should be followed in selecting the type, but not so rigidly that special cases which are found should not receive special treatment.

¹ In papers where other than North American species are treated it has seemed best for the unity of the work to fix such exotic types as well.

In fixing the types of the species of Orthoptera described in the papers treated below we follow the law of line priority, designating from the original series a specimen from the first locality mentioned, except where other factors are found to be of greater importance, the most important of which may be stated as follows:

1. Preference is given to the sex which shows the greater amount of differentiation.

2. A figured specimen is selected in cases where this specimen can be located with certainty and no faulty work is involved.

3. In cases where the first record or records given are too general, doubtful or erroneous in character, a cotype from the first definite and unquestionably authentic locality is selected.

Where a specimen would be selected as type in accordance with the above rules, but is found to be in a badly damaged condition or known to be either destroyed or lost, preference in the selection will be given the next available individual of the typical series.

The nomenclature given will be that of the original description, as these papers are not intended to be at all revisionary.

I. "NEW NORTH AMERICAN ACRIDIDÆ, FOUND NORTH OF THE MEXICAN BOUNDARY," by Lawrence Bruner. (Proc. U. S. Nat. Mus., Vol. 12, pp. 47-82, Pl. I, 1889.)

The specimens, on which the species described in the paper under consideration were based, are now to be found almost wholly in the United States National Museum and the Hebard Collection, the junior author having recently acquired from Professor Bruner his entire North American Collection of Orthoptera. The types themselves are divided between the two collections, as a small part of the material originally belonged to the United States National Museum, the rest to Professor Bruner. The author did not give the exact location of any of the material, leaving it understood that part was in his own collection and part in that of the National Museum.

The labelling of specimens treated in this paper is not uniform, in most cases the entire series of specimens of a new species was labelled "TYPE" by the author, but in a few instances no type labels whatever were written.

In the present paper we are unable to use the plate of figures, except in the case of the unique figured ♂ *Pedioscertetes pulchella*, owing to the fact that the author has given us no means of determining which specimen or specimens were used for figures, except in the single case here stated. All the specimens treated in this

paper, except those which were subsequently sent to McNeill, and the missing type of *Trimerotropis thalassica*, have been examined.

MESOPS CYLINDRICUS (p. 48).

Based on an unspecified number of specimens of both sexes from two localities.

Single type here designated: ♂; Valentine, Nebraska (along the north side of Keya Paha Creek)², [August 10th]; (L. Bruner); Hebard Collection, ex Bruner.

DRACOTETTIX MONSTROSUS (p. 50).

Based on two specimens of both sexes from the same locality.

Single type here designated: unique ♂; Los Angeles, California, March 5th; Coquillett; Hebard Collection, ex Bruner.

OCHRILIDIA (?) CRENULATA (p. 51).

Based on an unspecified number of specimens of both sexes from numerous localities.

Single type here designated: ♂; [Ft. Robinson],³ northwest Nebraska, [August, 1888]; (L. Bruner); Hebard Collection, ex Bruner.

OCHRILIDIA (?) CINEREA (p. 52).

Based on an unspecified number of specimens of both sexes from a number of localities.

Single type here designated: ♂; Ft. McKinney, Wyoming, [July, 1883]; (L. Bruner); Hebard Collection, ex Bruner.

MERMIRIA TEXANA (p. 53).

Based on an unspecified number of specimens of both sexes from two localities.

Single type here designated: ♂; El Paso, Texas, [November, 1887]; (L. Bruner); Hebard Collection, ex Bruner.

MERMIRIA MACULIPENNIS (p. 54).

Based on an unspecified number of specimens of both sexes from two localities.

Single type here designated: ♀; San Antonio, Texas, June; M. Newell; Hebard Collection, ex Bruner.

² The use of parentheses here is to show such data as is contained in the original description and not on the specimen; the use of brackets indicates information found on the specimen but not contained in the original description.

³ *Vide* Bruner in Rehn and Hebard, Proc. Acad. Nat. Sci. Phila., p. 140, 1910.

SYRBULA ACUTICORNIS (p. 55).

Based on three female specimens from one locality.

Single type here designated: ♀; Southwestern Texas; F. G. Schaupp; Hebard Collection, ex Bruner.

ERITETTIX VARIABILIS (p. 56).

Based on an unspecified number of specimens [of both sexes] from one locality.

Single type here designated: ♂; Silver City, New Mexico, (May); C. H. Marsh; U. S. N. M. Collection.

ERITETTIX ABORTIVUS (p. 56).

Based on an unspecified number of specimens of both sexes from two localities.

Single type here designated: ♂; Washington County, Texas, (April); (L. Bruner); Hebard Collection, ex Bruner.

BOÖTETTIX ARGENTATUS (p. 58).

Based on "numerous specimens" of both sexes from four localities.

Single type here designated: ♂;⁴ Lerdo, Durango, Mexico, November; (L. Bruner); Hebard Collection, ex Bruner.

PEDIOSCERTETES PULCHELLA (p. 60).

Based upon a single pair from the same locality.

Single type here designated: unique ♂; Birch Creek, Idaho, August, 1883; L. Bruner; U. S. N. M. Collection.

PSOLOESSA BUDDIANA (p. 61).

Based on two female specimens from one locality.

Single type here designated: ♀; Carrizo Springs, Texas, June, [1885]; A. Wadgymar; Hebard Collection, ex Bruner.

PSOLOESSA ? EUROTÆ (p. 62).

Based on an unspecified number of specimens of both sexes from one locality.

Single type here designated: ♂; Laramie River (just inside the Colorado line), July, 1883; (L. Bruner); Hebard Collection, ex Bruner.

⁴Owing to the fact that the specimens from the first localities given in the original description have been discolored by immersion in alcohol, we have selected as type a specimen from the first definite locality represented by perfect material.

ARPHIA SAUSSUREANA (p. 63).

Based on "a large series" of specimens of both sexes from one locality.

Single type here designated: ♂; Hills lying back of San Francisco, California, late October, [1887]; (L. Bruner, Koebele); Hebard Collection, ex Bruner.

AULOCARA SCUDDERI (p. 63).

Based on an unspecified number of specimens of both sexes from many localities.

Single type here designated: ♀; [Ft. Robinson], Nebraska, [August, 1888]; (L. Bruner); Hebard Collection, ex Bruner.

MESTOBREGMA PULCHELLA (p. 64).

Based on an unspecified number of specimens of both sexes from the Yellowstone Valley.

Single type here designated: ♂; Glendive, Montana (below the mouth of the Powder River), (L. Bruner); Hebard Collection, ex Bruner.

CONOZOA TEXANA (p. 65).

Based on an unspecified number of specimens of both sexes from one locality.

Type designated by McNeill, Proc. U. S. N. M., Vol. XXIII, p. 406, 1901.

"One male (type), El Paso, Texas, G. W. Dunn, collector; Bruner Collection."

This specimen, together with all others sent to McNeill for his "Revision of the Genus *Trimerotropis*," has not been returned to the collection from which it was borrowed.

CONOZOA ALBOLINEATA (p. 66).

Described from a single male specimen from Los Angeles, California, Coquillett, collector; Bruner Collection. Sent to McNeill.

CONOZOA KOEBELEI (p. 67).

Described from a single male specimen from Placer County, California, September, Koebele, collector; Bruner Collection. Sent to McNeill.

TRIMEROTROPIS CYANEIPENNIS (p. 68).

Based on "numerous specimens both male and female" from one locality.

Single type here designated: ♂; Near the mouth of Ogden Canon, on the upper shore line of ancient Lake Bonneville, Salt Lake Valley, Utah, [September, 1883]; (L. Bruner); Hebard Collection, ex Bruner.

TRIMEROTROPIS AZURESCENS (p. 69).

Based on an unspecified number of specimens of both sexes from four localities.

Single type here designated: ♀; Alkali Stage Station (Green River), Wyoming, [Elevation 6,000 feet, July 27, 1877]; (S. H. Scudder); Hebard Collection, ex Bruner. This is the only specimen in the U. S. N. M. or Bruner Collection at present with locality agreeing exactly with any of those given in the original description.

TRIMEROTROPIS BIFASCIATA (p. 70).

Based on an unspecified number of specimens of unstated sex from one locality.

Type designated by McNeill, Proc. U. S. N. M., Vol. XXIII, p. 419, 1901.

"One male, without locality, Bruner Collection." As the original description includes but one locality, Los Angeles, California (Coquillett), it is natural to suppose that this specimen marked type by Bruner came from that locality.

TRIMEROTROPIS CALIFORNICA (p. 71).

Based on two males and one female from one locality.

Single type here designated: ♂; San Louis Valley, California; Coquillett; Hebard Collection, ex Bruner.

TRIMEROTROPIS MODESTA (p. 72).

Based on two female specimens from one locality.

Type designated by McNeill, Proc. U. S. N. M., Vol. XXIII, p. 426, 1901.

"One female, Silver City, New Mexico, Bruner's Type, Hebard Collection, ex Bruner."

TRIMEROTROPIS THALASSICA (p. 72).

Based on an unspecified number of specimens of both sexes from one locality.

Single type here designated: ♂; Los Angeles, California, September-October; Koebele; U. S. N. M. Collection. Missing.

TRIMEROTROPIS PACIFICA (p. 73).

Described from a single male specimen from Los Angeles, California, Coquillett, collector; Bruner Collection. Sent to McNeill.

TRIMEROTROPIS PERPLEXA (p. 74).

Based on four males and seven females from one locality.

Single type here designated: ♀; Bad lands five or six miles to the north of Chadron, Nebraska, August, [1888]; (L. Bruner); Hebard Collection, ex Bruner.

CIRCOTETTIX LAPIDICOLUS (p. 75).

Based on an unspecified number of specimens of both sexes from one locality.

Single type here designated: ♂; Salmon City, Idaho (Salmon River Range west of the place), [August, 1883]; (L. Bruner); Hebard Collection, ex Bruner.

CIRCOTETTIX SHASTANUS (p. 76).

Described from a single male specimen from Hazel Creek, Shasta County, California, August, 1885; Behrens; U. S. N. M. Collection.

ŒDIPODA (?) *OCCIDENTALIS* (p. 77).

Based on an unspecified number of specimens from one locality.

Single type here designated: ♂; High stony hilltops to the southwest of San Francisco, California, late October, [1887]; (Koebele, L. Bruner); Hebard Collection, ex Bruner.

THRINCUS (?) *ARIDUS* (p. 78).

Based on an unspecified number of specimens of both sexes from one locality.

Single type here designated: ♂; Arid slopes back of Albuquerque, New Mexico, May [22, 1883]; (L. Bruner); Hebard Collection, ex Bruner.

THRINCUS (?) *MACULATUS* (p. 79).

Based on four female specimens from one locality.

Single type here designated: ♀; Needles, California; Wickham; Hebard Collection, ex Bruner.

HALDEMANELLA ROBUSTA (p. 81).

Based on two males and two females from one district.

Single type here designated: ♂; [Southwestern] Arizona; G. W. Dunn, Rivers; dried alcoholic specimen in Hebard Collection, ex Bruner.

- II. "THE NORTH AMERICAN CEUTHOPHILI," by Samuel Hubbard Scudder. (Proc. American Academy of Arts and Sciences, Vol. XXX, pp. 17-113, 1894.)

The specimens on which the species described in the present paper were based were gathered together from many sources by Mr. Scudder. The majority of these specimens became the property of Mr. Scudder, so that in choosing the lectotypic specimens we find twenty-six in the Collection of the Museum of Comparative Zoology, all but four being from the Scudder Collection. Of the remaining thirteen species described from material not in the Scudder Collection the lectotypes have been found to be in the following collections; nine in the Hebard Collection, ex Bruner; two in the United States National Museum Collection, and two are in the possession of H. Garman, Agr. Exp. Sta., University of Kentucky.

The labelling of specimens treated in this paper is rather uniform. All of the specimens examined and recorded, with but few exceptions, are labelled "Scudder's Type, 1894." The result is that such a label signifies only that the specimen, if belonging to a species described as new in the paper under consideration, is one of the typical series.

After each reference in the paper under consideration the collection to which the material belonged is given in parentheses, but where no parentheses are to be found it is understood that the material belonged to Mr. Scudder himself. In quite a few cases, however, where there are no parentheses the material did not belong to Mr. Scudder. After the publication of this paper a very complete series was sent to Professor Bruner, all the species being represented of which Mr. Scudder had more than two specimens.

All but two of the specimens chosen as lectotypes in the present paper have been examined by the authors.

There are no figures in the paper now before us and no general statement is made in regard to the sources of the material used or the location of the types.

CEUTHOPHILUS VARIEGATUS (p. 31).

Based on two pairs from three localities.

Single type here designated: ♂; Matamoras, Tamaulipas, Mexico; L. B. Couch; Scudder Collection.

CEUTHOPHILUS LATEBRICOLA (p. 37).

Described from four male and six female specimens from five localities.

Single type here designated: ♂; Washington, District of Columbia; Wright; Scudder Collection.

CEUTHOPHILUS GRANDIS (p. 38).

Described from one male and two females from a single locality.

Single type here designated: unique ♂; Chattanooga, Tennessee; J. W. Martin; U. S. N. M. Collection.

CEUTHOPHILUS SECRETUS (p. 39).

Based on six males and two females from one locality.

Single type here designated: ♂; Dallas, Texas; Boll; Scudder Collection.

CEUTHOPHILUS PALMERI (p. 40).

Described from fourteen pairs taken in three localities.

Single type here designated: ♂; from darkest recesses of side caverns of a bat cave, Georgetown, Williamson County, Texas; E. Palmer; Scudder Collection.

CEUTHOPHILUS CORTICICOLA (p. 41).

Based on five males and two females from two localities.

Single type here designated: ♂; Dallas, Texas; Boll; Hebard Collection, ex Bruner.⁵

CEUTHOPHILUS VARICATOR (p. 42).

Based on a pair from the same locality.

Single type here designated: unique ♂; Waco, Texas, July 13; Mus. Comp. Zool. Collection.

CEUTHOPHILUS SECLUSUS (p. 45).

Based on three males and seven females from three localities.

Single type here designated: ♂; Dallas County, Iowa, August 6; J. A. Allen; Scudder Collection.

CEUTHOPHILUS TERRESTRIS (p. 46).

Based on a series of eleven males and five females from thirteen localities.

Single type here designated: ♂; Nahant, Massachusetts⁶; A. Agassiz; Mus. Comp. Zool. Collection.

CEUTHOPHILUS CELATUS (p. 48).

Described from three males and five females from five localities.

⁵ There are no males of this species in the Scudder Collection.

⁶ All other males in the series of specimens on which the description was based are much less perfect.

Single type here designated: ♀; Shasta County, California; Behrens; [1885]; Hebard Collection, ex Bruner.⁷

CEUTHOPHILUS ARIZONENSIS (p. 52).

Based on three males and nine females from two localities.

Single type here designated: ♂; Prescott Mountain District, Central Arizona⁸; E. Palmer; Scudder Collection.

CEUTHOPHILUS UNIFORMIS (p. 53).

Described from five males and nine females taken in three localities.

Single type here designated: ♂; Plains of Northern New Mexico, eastern slope, October 14; Hebard Collection, ex Bruner.⁹

CEUTHOPHILUS HEROS (p. 54).

Described from three males and two females from North Carolina.

Single type here designated: ♂; North Carolina, in old hollow tree; H. K. Morrison; Scudder Collection.

CEUTHOPHILUS CÆCUS (p. 60).

Based on one male and two females from the same locality.

Single type here designated: unique ♂; Lexington, Kentucky, June 28; S. Garman; property of H. Garman, Agr. Exp. Sta., University of Kentucky.

CEUTHOPHILUS NIGRICANS (p. 61).

Based on a pair from the same locality.

Single type here designated: unique ♂; Tyrone, Kentucky, April 23; S. Garman; property of H. Garman, Agr. Exp. Sta., University of Kentucky.

CEUTHOPHILUS FUSIFORMIS (p. 62).

Described from a unique male; Lincoln, Nebraska; (L. Bruner); Hebard Collection, ex Bruner.

CEUTHOPHILUS SALLEI (p. 63).

Described from a series of one male and seven females from a single locality.

Single type here designated: unique ♂; New Orleans, Louisiana; Auguste Sallé; Scudder Collection.

⁷ There are no adults of this species in the Scudder Collection.

⁸ Owing to the name given by Scudder to this species, it would seem best not to choose as lectotype a specimen from the first locality mentioned in the original description.

⁹ There are no specimens of this species in the Scudder Collection with more data than "Colorado"; these cannot with certainty be considered to be of the typical series.

CEUTHOPHILUS MERIDIONALIS (p. 66).

Based on a unique male; Chihuahua, Mexico; Scudder Collection.

CEUTHOPHILUS NEGLECTUS (p. 67).

Based on thirty-one males and twenty-nine females from thirteen localities.

Single type here designated: ♂; Ithaca, New York; Comstock; Scudder Collection.

CEUTHOPHILUS TENEBRARUM (p. 70).

Described from seven males and four females from five localities.

Single type here designated: ♂¹⁰; Bee Spring, Kentucky, June; Sanborn; Mus. Comp. Zool. Collection.

CEUTHOPHILUS BICOLOR (p. 72).

Described from a unique male; Bee Spring, Kentucky, June 14; F. G. Sanborn; Mus. Comp. Zool. Collection.

CEUTHOPHILUS VALGUS (p. 74).

Based on six males and three females from two localities.

Single type here designated: ♂; Colorado, Elevation 7,000–8,000 feet; H. K. Morrison; Scudder Collection.

CEUTHOPHILUS OCCULTUS (p. 77).

Described from one male and two females from Georgia.

Single type here designated: ♀; Georgia; Morrison; Scudder Collection.

CEUTHOPHILUS ALPINUS (p. 78).

Based on two pairs from two localities.

Single type here designated: ♂; South Park, Colorado, Elevation 8,000–10,000 feet, August 11–16, [1877]; S. H. Scudder; Scudder Collection.

CEUTHOPHILUS BRUNERI (p. 79).

Based on four males and five females from four localities.

Single type here designated: ♀; Lincoln, Nebraska, [September, 1888]; (L. Bruner); Hebard Collection, ex Bruner.

CEUTHOPHILUS MEXICANUS (p. 82).

Described from six males from two localities.

Single type here designated: ♂; San Pedro, Coahuila, Mexico, May 20; Scudder Collection.

¹⁰ This male is in much the most satisfactory condition of the specimens in the type series.

CEUTHOPHILUS CRASSUS (p. 85).

Based on one male and three females from an unknown locality.

Single type here designated: unique ♂; Scudder Collection.

CEUTHOPHILUS PINGUIS (p. 86).

Based on four males from a single locality.

Single type here designated: ♂; Eagle Pass, Texas; C. O. Schott; Scudder Collection.

CEUTHOPHILUS INQUINATUS (p. 87).

Based on two males and one female from two localities.

Single type here designated: ♂; Fairbury, Nebraska, [September, 1892]; Dr. Eaton; Hebard Collection, ex Bruner.

CEUTHOPHILUS DISCOLOR (p. 88).

Described from a pair from different localities.

Single type here designated: unique ♂; West Point, Nebraska, [September, 1880]; L. Bruner; Hebard Collection, ex Bruner.

CEUTHOPHILUS VINCULATUS (p. 91).

Described from four males and one female from two localities.

Single type here designated: ♂; Fort Benton, Montana, Northern Pacific Railroad Survey below Lake Jessie; Dr. Suckley; Scudder Collection.

CEUTHOPHILUS TESTACEUS (p. 92).

Based on two pairs from three localities.

Single type here designated: ♂; West Point, Nebraska, [October]; from L. Bruner; Hebard Collection, ex Bruner.

CEUTHOPHILUS LATIPES (p. 95).

Described from a unique male; Sierra de San Miguelito, Mexico; E. Palmer; Scudder Collection. (This specimen is half destroyed.)

CEUTHOPHILUS HENSHAWI (p. 97).

Described from seven males and six females from six localities.

Single type here designated: ♂; Sausalito (*nec* Sanzalito), California; H. K. Morrison; Scudder Collection.

CEUTHOPHILUS DEVIUS (p. 99).

Described from a pair from one region.

Single type here designated: unique ♂; Explorations of Upper Missouri and Yellowstone under Lt. Warren, Montana; F. V. Hayden; Scudder Collection.

CEUTHOPHILUS NEOMEXICANUS (p. 100).

Based on four males and one female from a single locality.

Single type here designated: ♂; Fort Wingate, New Mexico; Shufeldt; U. S. N. M. Collection.

PHRIXOCNEMIS TRUCULENTUS (p. 103).

Based on two males and one female from two localities.

Single type here designated: ♂; Peru, Nebraska; Professor Taylor (*nec* Townsend); Hebard Collection, ex Bruner.

PHRIXOCNEMIS VALIDUS (p. 105).

Based on a unique male; California; H. Edwards; Scudder Collection.

PHRIXOCNEMIS BELLICOSUS (p. 106).

Based on a pair from Colorado.

Single type here designated: unique ♂; (probably Ute Pass,) Colorado, elevation 7,000 feet; H. K. Morrison; Scudder Collection.

III. "REVISION OF THE ORTHOPTERAN GROUP MELANOPLI (ACRIDIDÆ), WITH SPECIAL REFERENCE TO NORTH AMERICAN FORMS," by Samuel Hubbard Scudder. (Proc. U. S. Nat. Mus., Vol. 20, pp. 1-421, Plates I-XXVI, 1897.)

The greater portion of the material studied in the paper before us was the property of Mr. Scudder; but a great number of specimens, many of species which were not contained in his collection were loaned to him for study by Professor Bruner and still others were sent to him for examination by the United States National Museum. Others furnished material for this revision, but in such small quantities that the paper may be said to be based almost wholly upon the material in the three mentioned collections. A very fair idea of the relative importance of these collections in the present work may be had from the number of lectotypes chosen from each of the collections in the present paper. Of these types there are fifty-seven in the Collection of the Museum of Comparative Zoology (all but three being from the Scudder Collection), thirty-eight in the Hebard Collection, ex Bruner, nineteen in the United States National Museum, one in the McNeill Collection, one in the University of Kansas Collection, and one in the Brunner von Wattenwyl Collection.

The choice of the types in the paper under consideration has been greatly facilitated by the fact that in almost every case one of the best and most suitable specimens in the typical series is figured, the

locality at which the specimen figured was taken is given in the explanation of the plate, and each specimen so utilized bears the label "drawn" in Mr. Scudder's handwriting. It is practically certain that these are the specimens which Mr. Scudder would have chosen as the single types of his new species had such action at that time been customary.

Practically every specimen of the group used in the preparation of this work was labelled "Scudder's Type," consequently such a label signifies solely that the specimen, if belonging to a species there described as new, belonged to the typical series.

In Mr. Scudder's paper the collection to which the material belongs is given in parentheses after each reference, but where no parentheses are to be found it is understood that the material belonged to Mr. Scudder himself.

All but three of the specimens chosen as lectotypes in the present paper have been examined by the authors.

GYMNOSCIRTETES PUSILLUS (p. 15).

Based on one pair from the same locality.

Single type here designated: unique figured ♂; Jacksonville, Duval County, Florida, [August, 1886]; Ashmead; Hebard Collection, ex Bruner.

NETROSOMA FUSIFORMIS (p. 17).

Based on three male and fourteen female specimens from one locality.

Single type here designated: figured ♂; Montelovez, Coahuila [Chihuahua in error], Mexico, September 20; E. Palmer; Scudder Collection.

NETROSOMA NIGROPLEURA (p. 18).

Based on two males from a single locality.

Single type here designated: figured ♂; Lerdo, Durango, Mexico; L. Bruner; Hebard Collection, ex Bruner.

PHÆDROTETTIX ANGUSTIPENNIS (p. 22).

Based on six specimens of each sex from three localities.

Single type here designated: figured ♂; Mount Alvarez, San Luis Potosi, Mexico; E. Palmer; U. S. N. M. Collection.

CONALCÆA MIGUELITANA (p. 24).

Based on two male and three female specimens from one locality.

Single type here designated: figured ♂; Sierra de San Miguelito, San Luis Potosi, Mexico; E. Palmer; Scudder Collection.

CONALCÆA TRUNCATIPENNIS (p. 25).

Based on a single female specimen; Saltillo, Nuevo Leon, Mexico, March 21-28; E. Palmer; Scudder Collection.

CONALCÆA NEOMEXICANA (p. 26).

Based on a unique male: figured; Silver City, Grant County, New Mexico; Hebard Collection, ex Bruner.

BARYTETRIX CRASSUS (p. 28).

Based on one male specimen: figured; San Jose del Cabo, Lower California; G. Eisen; Hebard Collection, ex Bruner.

BARYTETRIX PENINSULÆ (p. 28).

Based on a unique female; Lower California; G. Eisen; Hebard Collection, ex Bruner.

PHAULOTETRIX COMPRESSUS (p. 30).

Based on a single male: figured; Montelovez, Coahuila, Mexico, September 20; E. Palmer; Scudder Collection.

CEPHALOTETRIX PARVULUS (p. 31).

Based on two males from different localities.

Single type here designated: figured ♂; Otoyac, Vera Cruz, Mexico, Elevation 2,700 feet, December; L. Bruner; Hebard Collection, ex Bruner.

RHABDOTETRIX CONCINNUS (p. 33).

Based on one male and two females from two localities.

Single type here designated: unique figured ♂; Waco, McLennan County, Texas, October 4, Mus. Comp. Zool. Collection.

RHABDOTETRIX PALMERI (p. 34).

Based on eight male and twelve female specimens from a single locality.

Single type here designated: figured ♂; Montelovez, Coahuila, Mexico, September 22; E. Palmer; Scudder Collection.

CYCLOCERCUS BISTRIGATA (p. 37).

Based on one male and four females from three localities.

Single type here designated: unique figured ♂; Venis Mecas, San Luis Potosi, Mexico, June 6; E. Palmer; Scudder Collection.

CYCLOCERCUS ACCOLA (p. 38).

Based on two males and a single female from two localities.

Single type here designated: figured ♂; Corpus Christi Bay,

Nueces County, Texas, December 11-20; E. Palmer; Scudder Collection.

CYCLOCERCUS VALGA (p. 39).

Based on a unique male: figured; Sierra Nola, Tamaulipas, Mexico, December 3-6; E. Palmer; Scudder Collection.

SINALOA BEHRENSII (p. 40).

Based on a pair from one locality.

Single type here designated: unique figured ♂; Sinaloa, Mexico; Koels; from Behrens; Scudder Collection.

PARAIDEMONA MIMICA (p. 43).

Based on four males and five females from four localities.

Single type here designated: figured ♂; Uvalde, Texas, last week of July; E. Palmer; Scudder Collection.

CAMPYLACANTHA SIMILIS (p. 52).

Based on a pair from a single locality.

Single type here designated: unique figured ♂; Lerdo, Durango, Mexico, November; L. Bruner; Hebard Collection, ex Bruner.

EOTETTIX SIGNATUS (p. 54).

Based on a single male: figured; East Florida; W. H. Ashmead; McNeill Collection.

HESPEROTETTIX MERIDIONALIS (p. 59).

Based on one male and two female specimens from two localities.

Single type here designated: unique figured ♂; Guanajuato, Mexico; A. Dugès; U. S. N. M. Collection.

HESPEROTETTIX FESTIVUS (p. 60).

Based on sixty-six males and fifty-eight females from five localities.

Single type here designated: figured ♂; Salt Lake Valley, Utah, Elevation 4,300 feet, August 1-4, [1877]; Scudder; Scudder Collection.

HESPEROTETTIX PACIFICUS (p. 61).

Based on two male and eight female specimens from two localities.

Single type here designated: figured ♂; Los Angeles [County], California; Koebele; Hebard Collection, ex Bruner.

HESPEROTETTIX CURTIPENNIS (p. 62).

Based on two females from one locality.

Single type here designated: ♀; Colorado, [1884]; Morrison; Hebard Collection, ex Bruner.

HESPEROTETTIX PRATENSIS (p. 64).

Based on forty males and sixty-eight females from thirty localities.

Single type here designated: figured ♂; Dallas, Texas, July 18; Boll; Scudder Collection.

ÆOLOPLUS TENUIPENNIS (p. 70).

Based on a single male: figured; Fort Grant, Graham County, Arizona; U. S. N. M. Collection.

ÆOLOPLUS ELEGANS (p. 71).

Based on one male: figured; Las Cruces, Donna Ana County, New Mexico, August 8, [1893]; T. D. A. Cockerell; U. S. N. M. Collection.

ÆOLOPLUS REGALIS Sc. (p. 71).

Nec Caloptenus regalis Dodge or *Melanoplus regalis* Bruner.

New name, *Æoloplus bruneri* Caudell (Proc. Ent. Soc. Wash., Vol. VIII, p. 134, 1906).

Based on five males and forty-one females from seven localities.

Single type here designated: figured ♂; Lakin, Kearny County, Kansas, elevation 3,000 feet, July–September; Scudder Collection.

ÆOLOPLUS CALIFORNICUS (p. 73).

Based on one male and four female specimens from California.

Single type here designated: unique figured ♂; California; Burrison; from Henshaw; Scudder Collection.

ÆOLOPLUS UNIFORMIS (p. 77).

Based on a pair from two localities.

Single type here designated: unique figured ♂; Fort Whipple, Yavapai County, Arizona; E. Palmer; Scudder Collection.

ÆOLOPLUS ARIZONENSIS (p. 78).

Based on five males and four females from one locality.

Single type here designated: figured ♂; Fort Whipple, Yavapai County, Arizona; Scudder Collection.

ÆOLOPLUS OCULATUS (p. 79).

Based on one male: figured; Mohave, Arizona; Wickham; Hebard Collection, ex Bruner.

BRADYNOTES CAURUS (p. 83).

Based on two male and six female specimens from three localities.

Single type here designated: figured ♂; Yakima River opposite Ellensburg, Kittitas County, Washington, July 8-9; U. S. N. M. Collection.

BRADYNOTES EXPLETA (p. 84).

Based on two males and one female from a single locality.

Single type here designated: figured ♂; Easton, Kittitas County, Washington; Scudder Collection.

BRADYNOTES PINGUIS (p. 85).

Based on five males and two females from two localities.

Single type here designated¹¹: ♂; Reno, Washoe County, Nevada, [June 23, 1890]; Hillman; Hebard Collection, ex Bruner.

BRADYNOTES REFERTA (p. 88).

Based on two males and three female specimens from two localities.

Single type here designated: figured ♂; Soldier, Logan County, Idaho; Hebard Collection, ex Bruner.

BRADYNOTES SATUR (p. 89).

Based on a pair from one locality.

Single type here designated: unique figured ♂; Placer County, California, September; [Koebele]; U. S. N. M. Collection.

PODISMA VARIEGATA (p. 101).

Based on two males and one female from two localities.

Single type here designated: figured ♂; Ithaca, Tomkins County, New York, elevation about 400 feet, November; J. H. Comstock; Scudder Collection.

PODISMA NUBICOLA (p. 102).

Based on ten male and seven female specimens from a single locality.

Single type here designated: figured ♂; Mount Lincoln, Park County, Colorado, above timber, elevation 11,000-13,000 feet, August 13, [1877]; S. H. Scudder; Scudder Collection.

PODISMA ASCENSOR (p. 107).

Based on a pair from one locality.

Single type here designated: unique figured ♂; American Fork Canyon, Utah; A. S. Packard; Scudder Collection.

¹¹ As the original locality of the figured specimen is in doubt, we use in this case the first exact record of locality given.

PODISMA PARNASSICA (p. 113).

Based on a pair from the same locality.

Single type here designated: unique figured ♂; Mt. Parnassus, Greece; Brunner von Wattenwyl Collection.

PODISMA DAIRISAMA (p. 114).

Based on a pair from Japan.

Single type here designated: unique figured ♂; Japan; U. S. N. M. Collection. Material can not be found.

PARATYLOTROPIDIA BRUNNERI (p. 118).

Based on a pair from different localities.

Single type here designated: unique figured ♂; Dakota; Hebard Collection, ex Bruner.

MELANOPLUS MARCULENTUS (p. 139).

Based on thirty-two male and forty-two female specimens from eight localities.

Single type here designated: figured ♂; Sierra de San Miguelito, San Luis Potosi, Mexico; E. Palmer; Scudder Collection.

MELANOPLUS SONORÆ (p. 143).

Based on one male and four females from one locality.

Single type here designated: unique figured ♂; Sonora, Mexico; A. Schott; Mexican Boundary Survey; U. S. N. M. Collection. Material cannot be found.

MELANOPLUS CUNEATUS (p. 147).

Based on three males from three localities.

Single type here designated: figured ♂; Silver City, Grant County, New Mexico; U. S. N. M. Collection.

MELANOPLUS SIMPLEX (p. 150).

Based on two males and one female from Colorado.

Single type here designated; figured ♂; Colorado, elevation 5,500 feet; Morrison; Scudder Collection.

MELANOPLUS RILEYANUS (p. 151).

Based on six males and seventeen females from four localities.

Single type here designated: figured ♂; Los Angeles County, California, (May, September); Coquillett; U. S. N. M. Collection.

MELANOPLUS FLAVESCENS (p. 155).

Based on a single male: figured; San Diego [County], California; Coquillett; U. S. N. M. Collection.

MELANOPLUS PICTUS (p. 156).

Based on a unique male: figured; Bradshaw Mountain, Arizona, June 21, [1892]; Hebard Collection, ex Bruner.

MELANOPLUS ELONGATUS (p. 160).

Based on five male and four female specimens from five localities.

Single type here designated: figured ♂; Bledos, San Luis Potosi, Mexico, October; E. Palmer; Scudder Collection.

MELANOPLUS BRUNERI (p. 164).

Based on twenty-three males and twenty-five females from twelve localities.

Single type here designated: figured ♂; Fort McLeod, Alberta, Canada, August [1882]; Hebard Collection, ex Bruner.

MELANOPLUS EXCELSUS (p. 166).

Based on four male and five female specimens from a single locality.

Single type here designated: figured ♂; Mt. Lincoln, Park County, Colorado, above timber, elevation 11,000–13,000 feet, August 13, [1877]; Scudder Collection.

MELANOPLUS UTAHENSIS (p. 167).

Based on a unique male; figured; Salt Lake [Valley], Utah, August 30; L. Bruner; U. S. N. M. Collection.

MELANOPLUS ALASKANUS (p. 169).

Based on two males and one female from two localities.

Single type here designated: figured ♂; Alaska; T. C. Mendenhall; U. S. N. M. Collection.

MELANOPLUS AFFINIS (p. 171).

Based on six males and four females from eight localities.

Single type here designated: figured ♂; Salt Lake Valley, Utah, August 30; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS INTERMEDIUS (p. 172).

Based on fifteen male and twenty-three female specimens from five localities.

Single type here designated: second¹² figured ♂; Yellowstone, Montana, August, [1888]; Hebard Collection, ex Bruner.

¹² This specimen was chosen as type rather than the first figured, owing to the fact that the specimen is in the best condition.

MELANOPLUS DEFECTUS (p. 177).

Based on a pair from the same locality.

Single type here designated: unique figured ♂; Grand Junction, Mesa County, Colorado, June, [1893]; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS DIMINUTUS (p. 190).

Based on five males and nine females from three localities.

Single type here designated: figured ♂; Monterey, California, October 19, next seashore; Scudder Collection.

MELANOPLUS CONSANGUINEUS (p. 192).

Based on a pair from a single locality.

Single type here designated: unique figured ♂; [Sonoma¹³] County, California, October; [Koebele]; U. S. N. M. Collection.

MELANOPLUS SIERRANUS (p. 193).

Based on twenty-eight male and twenty-three female specimens from three localities.

Single type here designated: figured ♂; Truckee, Nevada County, California, October 10; Scudder Collection.

MELANOPLUS ATER (p. 194).

Based on two males and three females from one locality.

Single type here designated: figured ♂; San Francisco, California, November, [1887]; Hebard Collection, ex Bruner.

MELANOPLUS VIRGATUS (p. 199).

Based on eleven males and twelve females from six localities.

Single type here designated¹⁴: ♂; Siskiyou County, California, July; Riley; Scudder Collection.

MELANOPLUS UNIFORMIS (p. 201).

Described from nine male and eight female specimens from five localities.

Single type here designated: figured ♂; Sacramento County, California; Coquillett; U. S. N. M. Collection.

¹³ Sacramento County instead of Sonoma County has been given by mistake in the original description, and for the same specimen, Sonora County in the plate reference.

¹⁴ As the figured specimen of this species is probably lost, having been sent to McNeill, we have chosen a specimen from the first definite locality given as the single type.

MELANOPLUS ANGELICUS (p. 202).

Described from two male specimens from the same locality.

Single type here designated: figured ♂; Los Angeles, California; Coquillett; U. S. N. M. Collection.

MELANOPLUS IMPUDICUS (p. 204).

Based on one male and two female specimens from two localities.

Single type here designated: unique figured ♂; Georgia; Morrison; Scudder Collection.

MELANOPLUS NITIDUS (p. 207).

Based on a pair from two localities.

Single type here designated: unique figured ♂; Tepic, Jalisco, Mexico, November; Hebard Collection, ex Bruner.

MELANOPLUS INDIGENS (p. 211).

Described from a single male: figured; Salmon City, Lemhi County, Idaho, August, [1883]; Hebard Collection, ex Bruner.

MELANOPLUS GILLETTEI (p. 215).

Based on two males from the same locality.

Single type here designated: figured ♂; Rabbit Ears Pass, Colorado, elevation about 10,000 feet, July 20; C. P. Gillette; Scudder Collection.

MELANOPLUS ARTEMISLÆ (p. 217).

Based on four male and ten female specimens from a single locality.

Single type here designated: figured ♂; Salmon City, Lemhi County, Idaho, August, [1888]; Scudder Collection.

MELANOPLUS CANCRI (p. 219).

Based on a pair from the same locality.

Single type here designated: unique figured ♂; Cape St. Lucas, Lower California; J. Xantus; Hebard Collection, ex Bruner.

MELANOPLUS REFLEXUS (p. 221).

Described from a pair from one locality.

Single type here designated: unique figured ♂; Ciudad del Maiz, San Luis Potosi, Mexico; E. Palmer; Scudder Collection.

MELANOPLUS MERIDIONALIS (p. 223).

Based on three males and eight females from a single locality.

Single type here designated: figured ♂; Mount Alvarez, San Luis Potosi, Mexico; E. Palmer; Scudder Collection.

MELANOPLUS MILITARIS (p. 224).

Based on a pair from the same locality.

Single type here designated: unique figured ♂; Soldier, Logan County, Idaho; Hebard Collection, ex Bruner.

MELANOPLUS GLADSTONI (p. 229).

Based on eighteen males and nine females from five localities.

Single type here designated: figured ♂; Medicine Hat, Assiniboia, September, [1882]; Hebard Collection, ex Bruner.

MELANOPLUS PALMERI (p. 230).

Based on four specimens of each sex from two localities.

Single type here designated: figured ♂; Fort Whipple, Yavapai County, Arizona; E. Palmer; Scudder Collection.

MELANOPLUS WALSHII (p. 235).

Based on one male and seven female specimens from three localities.

Single type here designated:¹⁵ ♀; Rock Island, Illinois; B. D. Walsh; Scudder Collection.

MELANOPLUS GRACILIPES (p. 238).

Based on three males and one female from one locality.

Single type here designated: figured ♂; Los Angeles, California; Coquillett; Hebard Collection, ex Bruner.

MELANOPLUS GENICULATUS (p. 239).

Described from a pair from Mexico.

Single type here designated: unique figured ♂; Mexico; from W. S. Blatchley; Scudder Collection.

MELANOPLUS TENUIPENNIS (p. 244).

Based on three males and five females from five localities.

Single type here designated: figured ♂; Los Angeles, California; Coquillett; Hebard Collection, ex Bruner.

MELANOPLUS MISSIONUM (p. 246).

Based on two males and one female from a single locality.

Single type here designated: figured ♂; Los Angeles [County], California, [July]; Coquillett; Scudder Collection.

MELANOPLUS FUSCIPES (p. 247).

Based on six male and four female specimens from five localities.

¹⁵ The unfigured female from Walsh is chosen as single type in accord with Scudder's notes. We have, however, examined the eight specimens and find them to be the same species.

Single type here designated: figured ♂; between San Luis Obispo and San Simeon Bay, California; E. Palmer; Scudder Collection.

MELANOPLUS SCITULUS (p. 249).

Based on two males and one female from one locality.

Single type here designated: figured ♂; Mount Alvarez, San Luis Potosi, Mexico; E. Palmer; Scudder Collection.

MELANOPLUS INORNATUS (p. 254).

Based on one male and two females from probably two localities.

Single type here designated:¹⁶ ♀; Montelovez, Coahuila, Mexico, (September 20); E. Palmer; Scudder Collection.

*MELANOPLUS VIRIDIPE*s (p. 255).

Based on twelve males and thirteen females from six localities.

Single type here designated: figured ♂; Moline, Rock Island County, Illinois; [June 5, 1888]; McNeill; Scudder Collection.

MELANOPLUS DECORUS (p. 257).

Based on two males from the same locality.

Single type here designated: figured ♂; Pungo Bluff (Dingo Bluff *sic*), North Carolina, November 15, [1876]; Parker [and] Maynard; Scudder Collection.

MELANOPLUS ATTENUATUS (p. 259).

Based on three male specimens from a single locality.

Single type here designated: figured ♂; Smithville, Brunswick County, North Carolina, November 22, [1876]; [Parker and] Maynard; Scudder Collection.

MELANOPLUS AMPLECTENS (p. 260).

Based on a single male: figured; Bee Spring, Edmonson County, Kentucky, June 14-15; F. G. Sanborn; Mus. Comp. Zool. Collection.

MELANOPLUS SALTATOR (p. 261).

Based on ten male and fourteen female specimens from four localities.

Single type here designated: figured ♂; Portland, Multnomah County, Oregon; Packard; Scudder Collection.

¹⁶ In this instance the unique figured male was sent to McNeill; the specimen had no data.

MELANOPLUS JUVENCUS (p. 266).

Described from a single male: figured; no data on specimen marked figured, in original description "Fort Reed, Orange County, Florida, April 8; Comstock" is given. Scudder Collection.

MELANOPLUS ALLENI (p. 273).

Based on two male specimens from two localities.

Single type here designated: figured ♂; Crawford County, Iowa; July 13-24; J. A. Allen; Scudder Collection.

MELANOPLUS SNOWII (p. 274).

Based on a pair from a single locality.

Single type here designated: unique figured ♂; Magdalena, Socorro County, New Mexico, July; F. H. Snow; University of Kansas Collection.

MELANOPLUS PROPINQUUS (p. 285).

Based on seventy-seven males and eighty-seven females from thirteen localities.

Single type here designated: figured ♂; Fort Reed, Orange County, Florida, April 23, [1876]; J. H. Comstock; Scudder Collection.

MELANOPLUS MONTICOLA (p. 290).

Based on two pairs from a single locality.

Single type here designated: figured ♂; Sierra Blanca, Colorado, above timber, elevation 12,000-13,000 feet, August 29, 1877; S. H. Scudder; Scudder Collection.

MELANOPLUS BISPINOSUS (p. 292).

Based on three males and two females from three localities.

Single type here designated:¹⁷ ♂; Tiger Mills, Burnet County, Texas; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS TERMINALIS (p. 293).

Based on five males from two localities.

Single type here designated: figured ♂; Gulf Coast of Texas; Aaron; Scudder Collection.

MELANOPLUS CYANIPES (p. 295).

Based on fifteen male and nine female specimens from four localities.

¹⁷ A male from the first definite locality is chosen because the figured specimen from the Bruner Collection has been destroyed.

Single type here designated: figured ♂; Pasadena, Los Angeles County, California, October 23; Scudder Collection.

MELANOPLUS COMPLANATIPES (p. 298).

Based on two males and three females from two localities.

Single type here designated: figured ♂; Cape St. Lucas, Lower California; J. Xantus; Scudder Collection.

MELANOPLUS CANONICUS (p. 300).

Based on a pair from the same locality.

Single type here designated: unique figured ♂; Grand Canyon of the Colorado, Arizona, July 10, [1892]; Hebard Collection, ex Bruner.

MELANOPLUS COMPTUS (p. 302).

Based on two males from different localities.

Single type here designated: figured ♂; Sidney, Cheyenne County, Nebraska, August 25; Hebard Collection, ex Bruner.

MELANOPLUS COCCINEIPES (p. 303).

Based on twenty-eight males and thirty-one females from seventeen localities.

Single type here designated: figured ♂; Sand Hills, Nebraska, July; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS IMPIGER (p. 306).

Based on sixteen males and thirty-six females from nine localities.

Single type here designated: figured ♂; Barber County, Kansas; Cragin; Hebard Collection, ex Bruner.

MELANOPLUS CORPULENTUS (p. 313).

Based on nineteen male and fifteen female specimens from seven localities.

Single type here designated: figured ♂; Sierra de San Miguelito, San Luis Potosi, Mexico; E. Palmer; Scudder Collection.

MELANOPLUS CONSPERSUS (p. 315).

Based on a pair from the same locality.

Single type here designated: unique figured ♂; Southwest Nebraska; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS COMPACTUS (p. 316).

Based on two pairs from two localities.

Single type here designated: figured ♂; Dakota; U. S. N. M. Collection.

MELANOPLUS VARIABILIS (p. 319).

Based on two pairs from two localities.

Single type here designated: figured ♂; City of Mexico, Mexico, November, [1887]; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS LEPIDUS (p. 321).

Based on six males and seven females from three localities.

Single type here designated: figured ♂; Truckee, Nevada County, California, October 10; Scudder Collection.

MELANOPLUS INOPS (p. 329).

Described from a unique male: figured; Florida; Pridday; Hebard Collection, ex Bruner.

MELANOPLUS PAROXYOIDES (p. 331).

Based on three males and four females from two localities.

Single type here designated: figured ♂; Key West, Florida; Morrison; Scudder Collection.

MELANOPLUS ALPINUS (p. 333).

Described from thirteen males and eleven females from three localities.

Single type here designated: figured ♂; Henry Lake, Idaho, August; L. Bruner; U. S. N. M. Collection.

MELANOPLUS CONFUSUS (p. 339).

Based on one male and three females from two localities.

Single type here designated: unique figured ♂; Munsons Hill (Kentucky?), July 12; Mus. Comp. Zool. Collection.

MELANOPLUS FURCATUS (p. 358).

Based on one pair from one locality.

Single type here designated: unique figured ♂; Jacksonville, Duval County, Florida; Pridday; Hebard Collection, ex Bruner.

MELANOPLUS THOMASI (p. 368).

Based on a unique male: figured; Lerdo, Durango, Mexico, November; L. Bruner; Hebard Collection, ex Bruner.

MELANOPLUS OLIVACEUS (p. 370).

Described from three males and two females from one locality.

Single type here designated: figured ♂; Los Angeles, California, July, [1886]; Coquillett; Hebard Collection, ex Bruner.

MELANOPLUS ARBOREUS (p. 372).

Described from six males and two females from three localities.

Single type here designated: figured ♂; Dallas, Texas; Boll; Scudder Collection.

PÆCILOTETTIX SANGUINEUS (p. 387).

Based on a pair from a single locality.

Single type here designated: figured ♂; Bradshaw Mountain, Arizona, June 21; A. B. Cordley; Hebard Collection, ex Bruner.

PÆCILOTETTIX COCCINATUS (p. 389).

Based on one male and three females from the same locality.

Single type here designated: unique figured ♂; Los Angeles [County], California, [July]; Coquillett; U. S. N. M. Collection.

IV. "SUPPLEMENT TO A REVISION OF THE MELANOPLI," by Samuel Hubbard Scudder. (Proc. Davenport Academy of Nat. Sci., Davenport, Iowa. Vol. VII, pp. 157-205, plates VII-IX, 1899.)

In the paper here considered we find all but four of the species described, with the specimens which should be chosen as lectotypes, in the Scudder Collection; of the four remaining, the lectotypes of two should be chosen from the Morse Collection, one from the Hancock Collection, and one from the Collection of C. F. Baker; the last two alone have not been personally examined by the authors.

The method followed is the same as in the Revision of the Melanopli, where figures are given in the present paper; so that the choice of the lectotype is likewise more easy and satisfactory than usual.

Although the first sets of all the material collected on the Pacific Coast in 1897 by Professor Morse and described in this paper by Mr. Scudder were to go to the author, the large series of many species remaining are all the property of Professor Morse.

PODISMA POLITA (p. 158).

Based on nineteen males and eight females from a single locality.

Single type here designated: figured ♂; Divide (*nec* Cottage Grove), Lane County, Oregon, September 12, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS BLANDUS (p. 161).

Based on seven males from one locality.

Single type here designated: figured ♂; summit of Mount

Wilson (*nec* Altadena), Los Angeles County, California, July 28, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS INCISUS (p. 163).

Described from a unique male; Fort Collins, Larimer County, Colorado, August 11; C. F. Baker; C. F. Baker Collection.

MELANOPLUS FEMUR-NIGRUM (p. 165).

Based on thirteen males and one female from one locality.

Single type here designated: figured ♂; San Francisco Mountains, near Flagstaff, Coconino County, Arizona, July 30, [1897]; Dr. J. L. Hancock; Scudder Collection.

MELANOPLUS VARICUS (p. 168).

Described from fourteen males and six females from a single locality.

Single type here designated: figured ♂; Tehachapi, Kern County, California, August 2, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS IMMUNIS (p. 170).

Described from two males and one female from one locality.

Single type here designated: ♂; Mary's Peak, Benton County, Oregon, September 16, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS ACUTUS (p. 171).

Described from two males and one female from one locality.

Single type here designated: ♂; Brown's Valley, Traverse County, Minnesota, October 26; O. Lugger; Scudder Collection.

MELANOPLUS USITATUS (p. 172).

Based on a pair from a single locality.

Single type here designated: unique ♂; Corvallis, Benton County, Oregon, June 9, [1895]; A. B. Cordley; Morse Collection.

MELANOPLUS PINCTUS (p. 175).

Based on seven pairs from three localities.

Single type here designated: figured ♂; San Diego, California, July 22, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS TRUNCATUS (p. 177).

Described from six males and one female from the same locality.

Single type here designated: figured ♂; San Francisco Mountains, ([near] Flagstaff), Coconino County, Arizona, July 31, [error pro 30], [1897]; Dr. J. L. Hancock; Scudder Collection.

MELANOPLUS PHCETALIOTIFORMIS (p. 179).

Described from nineteen males and fourteen females from a single locality.

Single type here designated: figured ♂; Gazelle, Siskiyou County, California, September 5, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS INCULTUS (p. 181).

Described from four males and two females from two localities.

Single type here designated: figured ♂; foothills five miles west of Fort Collins, Colorado, July 10; C. F. Baker; Scudder Collection.

MELANOPLUS FRANCISCANUS (p. 183).

Described from forty-eight males and twenty-one females from a single locality.

Single type here designated: figured ♂; San Francisco Mountains ([near] Flagstaff), Coconino County, Arizona, July 30, [1897]; Dr. J. L. Hancock; Hancock Collection.

MELANOPLUS ABLUTUS (p. 185).

Based on two males and nine females from one locality.

Single type here designated: figured ♂; Wawona, Mariposa County, California, August 13, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS NANUS (p. 187).

Based on twenty-seven males and twenty-two females from four localities.

Single type here designated: figured ♂; Berkeley, Alameda County, California, August 21, [error pro 20], [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS LIGNEOLUS (p. 188).

Based on eight pairs from two localities.

Single type here designated: figured ♂; Benicia, Solano County, California, August 26, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS DEALBATUS (p. 190).

Based on five males and thirteen females from a single locality.

Single type here designated: figured ♂; Ceres, Stanislaus County, California, August 17, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS PILATUS (p. 192).

Based on one pair from two localities.

Single type here designated: unique ♂¹⁸; mouth of Big South River, Larimer County, Colorado, elevation 8,000 feet, August 3; C. F. Baker; Scudder Collection.

MELANOPLUS ASCENSUS (p. 196).

Based on five males from two localities.

Single type here designated: figured ♂; Mount Shasta, Northern California, just below the forest line, September 2, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS VALIDUS (p. 197).

Based on forty-three males and females from three localities.

Single type here designated: figured ♂; Grant's Pass, Josephine County, Oregon, September 8, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS ALGIDUS (p. 199).

Based on thirty-six pairs from the same locality.

Single type here designated: figured ♂; Mary's Peak, Benton County, Oregon, September 16, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS DEBILIS (p. 201).

Described from twenty males and twenty-six females from two localities.

Single type here designated: figured ♂; Ashland, Jackson County, Oregon, September 7, [1897]; A. P. Morse; Scudder Collection.

MELANOPLUS CALIDUS (p. 203).

Described from a pair from the same locality.

Single type here designated: unique ♂; Gilman's Ranch, Eagle Creek, White Mountains, Lincoln County, New Mexico, elevation 7,000 feet, August 10-16, [1897]; E. O. Wooton; Morse Collection.

V. "SHORT STUDIES OF NORTH AMERICAN TRYXALINÆ," by Samuel Hubbard Scudder. (Proc. American Academy of Arts and Sciences, Vol. XXXV, pp. 41-57, 1899.)

The lectotypes here chosen of all the new species described in the paper before us are in the Scudder Collection and have been examined by the authors.

¹⁸ The female of this species has been figured, but the importance of the other sex in this genus makes it advisable to choose the unique unfigured male as the lectotype.

As is the case with other material collected by Professor Morse in 1897 and described by Mr. Scudder, the first sets of specimens of new species taken by Professor Morse are in the Scudder Collection while the remaining large series are in the Morse Collection.

MERMIRIA INTERTEXTA (p. 42).

Described from two pairs from two localities.

Single type here designated: ♂; Georgia; Morrison; Scudder Collection.

MERMIRIA VIGILANS (p. 43).

Described from two males and four females from a single locality.

Single type here designated: ♂; Smithville, North Carolina, November 22, [1876]; [Parker and Maynard]; Scudder Collection.

ACENTETUS CARINATUS (p. 45).

Based on a unique male; Florissant, Colorado, August 17-22, [1877]; (S. H. Scudder); Scudder Collection.

OPEIA TESTACEA (p. 46).

Described from twenty-five males and seventeen females from four localities.

Single type here designated: ♂; Lancaster, California, August 1, 1897; A. P. Morse; Scudder Collection.

CEONOMUS ALTUS (p. 47).

Based on fifteen males and nine females from a single locality.

Single type here designated: ♂; Mount Wilson, [*nec* Altadena], California, elevation 2,400 feet, July 27, [1897]; A. P. Morse; Scudder Collection.

HORESIDOTES CINEREUS (p. 49).

Described from nineteen male and eleven female specimens from two localities.

Single type here designated: ♂; (Palm Cañon), Palm Springs, California, July 13, [1897]; A. P. Morse; Scudder Collection.

STENOBOTHRUS OREGONENSIS (p. 50).

Described from numerous specimens from thirteen localities.

Single type here designated: ♂; Divide, Oregon,¹⁹ September 12, [1897]; A. P. Morse; Scudder Collection.

¹⁹ A specimen from this locality was chosen as the single type owing to the fact that Divide, Oregon, is about the middle of the northward and southward range of this species.

STIRAPLEURA PUSILLA (p. 52).

Based on eighty-nine males and eighty females from seventeen localities.

Single type here designated: ♂; Mesilla, New Mexico, July 1, [1897]; A. P. Morse; Scudder Collection.

STIRAPLEURA TENUICARINA (p. 53).

Described from a unique female; Sierra Blanca, El Paso County, Texas, June 26, [1897]; A. P. Morse; Scudder Collection.

AULOCARA RUFUM (p. 55).

Based on five males and four females from one locality.

Single type here designated: ♂; Pueblo, Colorado, August 30–31, [1877], [elevation 4,700 feet]; Scudder Collection.

AULOCARA FEMORATUM (p. 55).

Described from five males from four localities.

Single type here designated: ♂; Lakin, Kansas, September 1, [1877], [elevation 3,000 feet]; Scudder Collection.

AULOCARA PARALLELUM (p. 57).

Described from a pair from the same locality.

Single type here designated: unique ♂; Salt Lake Valley, Utah, August 1–4; Scudder Collection.

VI. "THE ORTHOPTERAN GENUS *SCHISTOCERCA*," by Samuel Hubbard Scudder. (Proc. American Academy of Arts and Sciences, Vol. XXXIV, pp. 441–476, 1899.)

There are twenty-three species described as new in the paper before us; of these we have found it advisable to choose the lectotypic specimens of nineteen of the new species from the Scudder Collection and the remaining four from the Hebard Collection, ex Bruner. The majority of specimens upon which these descriptions are based are dried alcoholics and many are, moreover, in very poor condition. In a few cases these factors have been consequently of more importance than usual in selecting a specimen from the type series as single type. There are no figures whatever. The labelling is the same as in "The North American Ceuthophili," the second paper treated in the present series, the date 1899, of course, being used. The exact location of the material is given as chiefly from the Scudder Collection.

SCHISTOCERCA GRACILIS (p. 447).

Described from a unique male; South America; Scudder Collection.

SCHISTOCERCA AURANTIA (p. 448).

Based on one male and eight females from four localities.

Single type here designated: ♀²⁰; Meridá [*nec* Meriden], Yucatan; Scudder Collection.

SCHISTOCERCA CARINATA (p. 449).

Based on a series of one male and six females from four localities.

Single type here designated: ♀²¹; Vera Cruz, Mexico; Heyde; Hebard Collection, ex Bruner.

SCHISTOCERCA CROCOTARIA (p. 450).

Described from a series of five females from two localities.

Single type here designated: ♀; Chontales, Nicaragua; Scudder Collection.

SCHISTOCERCA INTERRITA (p. 450).

Based on two females from Peru.

Single type here designated: ♀; Peru; H. Edwards; Scudder Collection.

SCHISTOCERCA CAMERATA (p. 451).

Described from a series of three females from one locality.

Single type here designated: ♀; Sinaloa, Mexico; Koels; Scudder Collection.

SCHISTOCERCA MELLEA (p. 452).

Described from a pair from one locality.

Single type here designated: unique ♂; Vera Cruz, Mexico; Heyde; Hebard Collection, ex Bruner.

SCHISTOCERCA ZAPOTECA (p. 453).

Based on twenty-one males and thirteen females from five localities.

Single type here designated: ♂; Venis Mecas, Mexico, January 6; Palmer; Scudder Collection.

²⁰ This specimen is chosen as single type as it comes from the first definite locality and is in much better condition than the other specimens of the typical series.

²¹ This specimen is chosen as the single type as it fits the description perfectly, is in good condition and comes from a definite locality; it is the only specimen of the typical series which is satisfactory in all of these respects.

SCHISTOCERCA PYRAMIDATA (p. 454).

Described from two males and five females from one locality.

Single type here designated: ♂; Cuernavaca, Mexico; Barrett; Scudder Collection.

SCHISTOCERCA DESILIENS (p. 455).

Described from one male and four females from two localities.

Single type here designated: unique ♂; Rio de Janeiro, Brazil, November; Scudder Collection, (from Mus. Comp. Zool.).

SCHISTOCERCA INFUMATA (p. 457).

Described from seven male and three female specimens from two localities.

Single type here designated: ♂; Montevideo, Uruguay; Meyer-Dür; Scudder Collection.

SCHISTOCERCA ÆQUALIS (p. 458).

Based on two males from the same locality.

Single type here designated: ♂; Demerara, British Guiana; Scudder Collection.

SCHISTOCERCA MAYA (p. 458).

Based on three males from two localities.

Single type here designated: ♂; Venis Mecas, Mexico, January 6; Palmer; Scudder Collection.

SCHISTOCERCA GULOSA (p. 459).

Based on a single female; Demerara, British Guiana; Scudder Collection.

SCHISTOCERCA BOGOTENSIS (p. 460).

Described from two females from a single locality.

Single type here designated: ♀; Bogotá, Columbia; Scudder Collection.

SCHISTOCERCA IDONEA (p. 461).

Based on three females from the same locality.

Single type here designated: ♀; Chapada [*nec* Crapada], Brazil, July-August; Scudder Collection, (from Mus. Comp. Zool.).

SCHISTOCERCA SONORENSIS (p. 463).

Based on two males from a single locality.

Single type here designated: ♂; Sonora, Mexico; Schott; Scudder Collection.

SCHISTOCERCA LINEATA (p. 465).

Based on two males and ten females from five localities.

Single type here designated: ♂; Barber County, Kansas; Cragin; Hebard Collection, ex Bruner.

SCHISTOCERCA VENUSTA (p. 467).

Described from twenty-two males and sixteen females from twelve localities.

Single type here designated: ♂²²; Indio, California, July 9, 1897; Morse; Scudder Collection.

SCHISTOCERCA MEXICANA (p. 468).

Described from a single male; Sinaloa, Mexico; Koels; Scudder Collection.

SCHISTOCERCA SEPARATA (p. 469).

Described from one male and two females from two localities.

Single type here designated: unique ♂; Chontales, Nicaragua; Scudder Collection.

SCHISTOCERCA OBLIQUATA (p. 470).

Based on one male and two females from a single locality.

Single type here designated: unique ♂; San José del Cabo, Lower California, Mexico; Hebard Collection, ex Bruner.

SCHISTOCERCA PERTURBANS (p. 471).

Based on five female specimens from three localities.

Single type here designated: ♀; Paramaribo, Dutch Guiana; Richardson; Scudder Collection, (from Mus. Comp. Zool.).

VII. "THE SPECIES OF THE ORTHOPTERAN GENUS *DEROTMEMA*,"
by Samuel Hubbard Scudder. (Proc. American Academy of
Arts and Sciences, Vol. XXXV, pp. 387-395, 1900.)

In the short paper before us we find all of the species described, with the specimens which should be chosen as lectotypes, in the Scudder Collection, and all of the specimens so chosen in the present paper have been examined by the authors.

The first sets of all the material collected on the Pacific Coast in 1897 by Professor Morse and described in this paper by Mr. Scudder were to go to the author, the great majority of remaining specimens were to go to Professor Morse.

²² This specimen is chosen as the single type as it is in the best of condition and is in accord with the description throughout.

DEROTMEMA LATICINCTUM (p. 389).

Based on thirty males and twenty-eight females from five localities.

Single type here designated:²³ ♂; Mesilla, New Mexico, June 30, [1897]; A. P. Morse; Scudder Collection.

DEROTMEMA DELICATULUM (p. 390).

Based on five males and three females from three localities.

Single type here designated: ♂; Lancaster, California, July 31, [1897]; A. P. Morse; Scudder Collection.

DEROTMEMA SAUSSUREANUM (p. 391).

Based on forty-five males and thirty-four females from eight localities.

Single type here designated: ♂; San Bernardino, California, July 16, [1897]; A. P. Morse; the type specimen has blue wings. Scudder Collection.

DEROTMEMA LENTIGINOSUM (p. 393).

Based on ten males and two females from two localities.

Single type here designated: ♂; South Park, Colorado, August 11-16, [1877], [Altitude 8,000-10,000 feet]; (S. H. Scudder); Scudder Collection.

DEROTMEMA LICHENOSUM (p. 394).

Based on forty males and fourteen females from ten localities.

Single type here designated: ♂; Alkali [Stage Station, Green River], Wyoming, July 27, [1877], [elevation 6,000 feet]; (S. H. Scudder); Scudder Collection.

SECTION TWO.

In this section of the series of Single Type papers it has been decided to treat the North American species which have been described by the authors. It has seemed best to consider these all in one paper, not making divisions of the different papers in which the new species were described, owing to the frequent brevity and considerable number of such papers. In the present paper we have few of the difficulties to contend with which we encountered and discussed in Section One of this series of articles, because it has always been the custom of the authors to describe new species from one specimen, if but one sex of a new species was at hand, and from two

²³ There is no male specimen in the typical series from Las Cruces, New Mexico, the first locality given in the original description.

specimens, one of each sex, if both sexes were available. It is consequently evident that, among the species at present under consideration, a great number will be found already limited to a single type, and the present limitations of the others consist merely in determining which sex should be selected as single type. There is but one case, that of *Homæogamia subdiaphana mohavensis*, where, in the original description, the limitation was accidentally overlooked. The present paper falls naturally into two portions. The first of these treats those species which have been described by the senior author; there are forty-five of these, of which twenty-four are located in the Academy of Natural Sciences of Philadelphia, eleven in the Collection of the University of Kansas, six in the Hebard Collection and two each in the United States National Museum and the Museum of the Brooklyn Institute of Arts and Sciences. The second portion treats those species described jointly by the authors of the present paper; there are thirty-eight of these, thirty-four in the Hebard Collection, three in the Academy of Natural Sciences of Philadelphia and one in the United States National Museum. The nomenclature given will be that of the original description, as these papers are not intended to be at all revisionary; the names generally conceded to be absolute synonyms, however, have been omitted.

PART ONE—SPECIES OF NORTH AMERICAN ORTHOPTERA DESCRIBED
BY JAMES A. G. REHN.

ISCHNOPTERA JOHNSONI.

Ent. News, Vol. XIV, p. 234, 1903.

Based on a unique male from St. Augustine, Florida; C. W. Johnson; A. N. S. P. Collection.

HOMÆOGAMIA ERRATICA.

PROC. ACAD. NAT. SCI. PHILA., 1903, p. 187.

Described from one male from Prescott, Arizona, June 10, 1902; Oslar; A. N. S. P. Collection.

CHORISONEURA PLOCEA.

Ent. News, Vol. XV, p. 164, 1904.

Described from a unique female from the coast of South Carolina [probably near Charleston];²⁴ Hebard Collection.

²⁴ Brackets are used in the present paper wherever additional data is given to that contained in the original description.

LITANEUTRIA SKINNERI.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 26, fig. 1.

Based on a pair from the same locality.

Single type here designated: figured ♂ type; Carr Canyon, Huachuca Mountains, Cochise County, Arizona, August, 1905; Dr. H. Skinner; A. N. S. P. Collection.

STAGMOMANTIS GRACILIPES.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 67, figs. 15, 16.

Described from a unique figured male from the Baboquivari Mountains, Pima County, Arizona, August, 1906; F. H. Snow; University of Kansas Collection.

VATES TOWNSENDI.

Proc. U. S. Nat. Mus., Vol. XXVII, p. 573, 1904.

Described from a unique female taken at Zapotlan, Jalisco, Mexico, July 8, 1902; C. H. T. Townsend; A. N. S. P. Collection.

SERMYLE ARBUSCULA.

Can. Ent., Vol. XXXIV, p. 141, 1902.

Based on a unique female taken at San Diego, California, May 7, 1901; G. W. Dunn; A. N. S. P. Collection.

PROROCORYPHA SNOWI.

Kan. Univ. Sci. Bull., Vol. V, No. 17, p. 301, Pl. LXIII, two figs., 1912.

Based on a pair from the same locality.

Single type here designated: unique, figured, nearly adult ♂ type; Santa Rita Mountains, Arizona, elevation 5,000–8,000 feet, June, 1907; F. H. Snow; University of Kansas Collection.

CORDILLACRIS PIMA.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 69, figs. 17, 18.

Based on a unique female specimen from the Baboquivari Mountains, Pima County, Arizona, 1906; F. H. Snow; University of Kansas Collection.

PLATYBOTHRUS ALTICOLA.

Ent. News, Vol. XVII, p. 284, 1906.

Described from one male from the Beaver Range Mountains, Beaver and Piute Counties, Utah, elevation 8,000–10,000 feet; Brooklyn Institute of Arts and Sciences Collection.

ARPHIA CANORA.

PROC. ACAD. NAT. SCI. PHILA., 1904, p. 564.

Based on a pair from different localities.

Single type here designated: ♂ type; Salt Lake City, Utah; A. N. S. P. Collection.

ARPHIA RAMONA.

Can. Ent., Vol. XXXIV, p. 142, 1902.

Based on a pair from one locality.

Single type here designated: ♂ type; San Diego, California, April 4, 1901; G. W. Dunn; A. N. S. P. Collection.

HIPPISCUS SIERRA.

Ent. News, Vol. XVIII, p. 350, 1907.

Described from a unique female taken on Mount Tyndall, Tulare County, California, elevation 12,000 feet; C. F. Baker; A. N. S. P. Collection.

SCIIRTETICA RITENSIS.

Kan. Univ. Sci. Bull., Vol. V, No. 17, Pl. LXIII, four figs., 1910.

Based on a unique female specimen from the Santa Rita Mountains, Arizona, elevation 5,000–8,000 feet, July, 1907; F. H. Snow; University of Kansas Collection.

CONOZOA CARINATA.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 38, figs. 2, 3.

Based on a pair from the same locality.

Single type here designated: figured ♂ type; Carr Canyon, Huachuca Mountains, Cochise County, Arizona, August, 1905; Dr. H. Skinner; A. N. S. P. Collection.

TRIMEROTROPIS ARENACEUS.

PROC. ACAD. NAT. SCI. PHILA., 1910, p. 13, fig. 1.

Based on a pair from the same locality.

Single type here designated: figured ♂ type; Springfield, Bingham County, Idaho, July 25, 1906; Dr. H. Skinner; A. N. S. P. Collection.

TRIMEROTROPIS MAGNIFICA.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 42, figs. 4, 5.

Described from a unique male specimen from Carr Canyon, Huachuca Mountains, Cochise County, Arizona, August, 1905; Dr. H. Skinner; A. N. S. P. Collection.

TRIMEROTROPIS RUBRIPES.

PROC. ACAD. NAT. SCI. PHILA., 1904, p. 568.

Described from a unique female specimen from Albuquerque, New Mexico, July 15, 1902; Oslar; A. N. S. P. Collection.

TRIMEROTROPIS SNOWI.

Proc. Kan. Acad. Sci., Vol. XIX, p. 223, 1905.

Based on a single female from Congress Junction, Yavapai County, Arizona; F. H. Snow; University of Kansas Collection.

PHRYNOTETTIX TAOSANUS.

PROC. ACAD. NAT. SCI. PHILA., 1902, p. 597.

Described from a single female specimen from the Taos Valley, Taos County, New Mexico; June, 1883; U. S. N. M. Collection.

CONALCÆA HUACHUCANA.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 48, figs. 6, 7.

Based on a pair from a single locality.

Single type here designated: figured ♂ type; Carr Canyon, Huachuca Mountains, Cochise County, Arizona, September 28, 1908; C. R. Biederman; Hebard Collection.

EOTETTIX HEBARDI.

Ent. News, Vol. XVII, p. 234, figs. 1, 2, 1906.

Based on a unique male from Tyty Plantation, Thomas County, Georgia, January 6, 1906; Hebard; Hebard Collection.

BRADYNOTES EXCELSA.

Ent. News, Vol. XVIII, p. 352, 1907.

Described from a pair from the same locality.

Single type here designated: ♂ type; Mount Tyndall, Tulare County, California, elevation 12,000 feet; C. F. Baker; A. N. S. P. Collection.

MELANOPLUS DESULTORIUS.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 51, figs. 8, 9.

Described from a pair from the same locality.

Single type here designated: figured ♂ type; Carr Canyon, Huachuca Mountains, Cochise County, Arizona, September 24, 1905; C. R. Biederman; Hebard Collection.

MELANOPLUS STONEI.

Ent. News, Vol. XV, p. 85, 1904.

Based on a pair from a single locality.

Single type here designated: ♂ type; between Harris and White Horse, Burlington County, New Jersey, August 13, 1902; Witmer Stone and Rehn; A. N. S. P. Collection.

APTENOPEDES CLARA.

Ent. News, Vol. XIII, p. 14, 1902.

Described from one male taken at Miami, Dade County, Florida, January 18, 1899; S. N. Rhoads; A. N. S. P. Collection, ex Rehn.

DICHOPETALA LÆVIS.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 56, fig. 10.

Described from a unique female from Carr Canyon, Huachuca Mountains, Cochise County, Arizona, August, 1905; Dr. H. Skinner; A. N. S. P. Collection.

HORMILIA APACHE.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 58, figs. 11, 12.

Based on a pair from a single locality.

Single type here designated: figured ♂ type; Carr Canyon, Huachuca Mountains, Cochise County, Arizona, August, 1905; Dr. H. Skinner; A. N. S. P. Collection.

ARETHÆA SELLATA.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 61, figs. 13, 14.

Described from a single male from Palmerlee, Cochise County, Arizona, July 30, 1905; C. Schaeffer; Brooklyn Institute of Arts and Sciences Collection.

DRYMADUSA ARIZONENSIS.

PROC. ACAD. NAT. SCI. PHILA., 1904, p. 573.

Based on a unique male from Florence, Arizona, 1903; C. R. Biederman; A. N. S. P. Collection.

PLAGIOSTIRA GRACILIS.

Proc. Kan. Acad. Sci., Vol. XIX, p. 227, 1905.

Based on a unique female from Bill Williams Fork, Arizona, August; F. H. Snow; University of Kansas Collection.

STIPATOR GRANDIS.

PROC. ACAD. NAT. SCI. PHILA., 1904, p. 544.

Described from one female from Alta Mira, Tamaulipas, Mexico, June 27, 1903; M. E. Hoag; A. N. S. P. Collection.

STENOPELMATUS TERRENUS.

Ent. News, Vol. XIII, p. 240, 1902.

Based on a unique female from Texas; A. N. S. P. Collection.

CEUTHOPHILUS LAMELLIPES.

Proc. Acad. Nat. Sci. Phila., 1907, p. 78, fig. 19.

Based on a pair from the same locality.

Single type here designated: figured ♂ type; Phoenix, Arizona, November 18, 1903; R. E. Kunzé; Hebard Collection.

CEUTHOPHILUS PAUCISPINOSUS.

Proc. Kan. Acad. Sci., Vol. XIX, p. 227, 1905.

Described from a unique female from Southern Arizona, August, 1902; F. H. Snow; University of Kansas Collection.

CEUTHOPHILUS TUCKERI.

Ent. News, Vol. XVIII, p. 445, text fig., 1907.

Based on a unique male from Lawrence, Kansas, October, at night; E. S. Tucker; University of Kansas Collection.

PRISTOCEUTHOPHILUS MARMORATUS.

Ent. News, Vol. XV, p. 280, 1904.

Based on a unique male from the mountains near Claremont, California; C. F. Baker; A. N. S. P. Collection.

PHRIXOCNEMIS FRANCISCANUS.

Proc. Kan. Acad. Sci., Vol. XIX, p. 228, 1905.

Based on a pair from one locality.

Single type here designated: unique ♂ type; Humphrey's Peak, Coconino County, Arizona, at base of mountain, elevation 9,500 feet; F. H. Snow; University of Kansas Collection.

PHRIXOCNEMIS HASTIFERUS.

Ent. News, Vol. XIII, p. 241, 1902.

Based on a unique female from Arizona; U. S. N. M. Collection.

PHRIXOCNEMIS INHABILIS.

Ent. News, Vol. XV, p. 282, 1904.

Described from a unique female specimen taken at St. Louis, Missouri, November 15, 1903; C. L. Heink; Hebard Collection.

PHRIXOCNEMIS SOCORRENSIS.

Proc. Kan. Acad. Sci., Vol. XIX, p. 229, 1905.

Based on a pair from a single locality.

Single type here designated: unique ♂ type; Magdalena Mountains, Socorro County, New Mexico, August, 1894; F. H. Snow; University of Kansas Collection.

UDEOPSYLLA SERRATA.

Proc. Kan. Acad. Sci., Vol. XIX, p. 230, 1905.

Based on a single male from Southern Arizona, August, 1902; F. H. Snow; University of Kansas Collection.

UDEOPSYLLA VIERECKI.

PROC. ACAD. NAT. SCI. PHILA., 1902, p. 725.

Described from a unique male (?) from Clouderoft, Otero County, New Mexico, May 27, 1902; H. L. Viereck; A. N. S. P. Collection.

GRYLLUS ALOGUS.

PROC. ACAD. NAT. SCI. PHILA., 1902, p. 726.

Based on a unique female taken at Albuquerque, New Mexico, 1902; T. D. A. Cockerell; A. N. S. P. Collection.

FALCICULA HEBARDI.

Ent. News, Vol. XIV, p. 258, 1903.

Based on a pair from the same locality.

Single type here designated: unique, subsequently figured²⁵ ♂ type; Thomasville, Georgia, April 17, 1903; Hebard; A. N. S. P. Collection.

PART TWO—SPECIES OF NORTH AMERICAN ORTHOPTERA DESCRIBED
BY JAMES A. G. REHN AND MORGAN HEBARD.

ISCHNOPTERA NOTHA.

PROC. ACAD. NAT. SCI. PHILA., 1910, p. 442, fig. 21.

Based on a pair from different localities.

Single type here designated: figured ♂ type; Huachuca Mountains, Arizona, August 22, 1903; Osler; U. S. N. M. Collection.

TEMNOPTERYX DESERTÆ.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 116, fig. 1.

Described from a unique female from Johnstone, Valverde County, Texas, July 8, 1907, under boulder on bare desert; Hebard; Hebard Collection.

²⁵ *Entomological News*, Vol. XIV, p. 302, 1903.

ISCHNOPTERA INSOLITA.

PROC. ACAD. NAT. SCI. PHILA., 1910, p. 450, fig. 27.

Described from a pair from different localities.

Single type here designated: figured ♂ type; Shovel Mountain, Texas, June 21, 1901; F. G. Schaupp; A. N. S. P. Collection.

HOMEOGAMIA SUBDIAPHANA MOHAVENSIS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 415.

Based on four males from the same locality.

Single type here designated: ♂; Cottonwood, San Bernardino County, California, September 9, 1907, on train attracted to light; Hebard; Hebard Collection.

YERSINIA SOPHRONICA.

PROC. ACAD. NAT. SCI. PHILA., 1908, p. 369, figs. 1, 2.

Based on a unique female specimen from Sonora Road Canyon, Tucson Mountains, Pima County, Arizona, elevation 3,000 feet, July 25, 1907; Hebard; Hebard Collection.

STAGMOMANTIS CALIFORNICA.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 416, figs. 1, 2.

Based on a pair from a single locality.

Single type here designated: figured ♀ type; Cottonwood, San Bernardino County, California, September 9, 1907, on train attracted to light; Hebard; Hebard Collection.

DIAPHEROMERA (CERATITES) COVILLEÆ.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 127, figs. 5, 6, 9.

Based on a pair from one locality.

Single type here designated: unique figured ♂ type; Franklin Mountains, El Paso County, Texas, elevation 4,500 feet, July 9, 1907, on greasewood, *Covillea tridentata*; Rehn; Hebard Collection.

PSEUDOSERMYLE TENUIS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 121, figs. 2, 3, 4.

Described from a unique male from the Franklin Mountains, El Paso County, Texas, elevation 4,500 feet, July 9, 1907, on wisp of dry grasses; Rehn; Hebard Collection.

APOTETTIX MINUTUS.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 34, Pl. I, figs. 3, 4.

Based on a unique male specimen from Miami, Florida, February 6, 1904, damp spot near river; Hebard; Hebard Collection.

MORSEA CALIFORNICA TAMALPAISENSIS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 421, figs. 3, 4.

Described from a pair from one locality.

Single type here designated: figured ♂ type; Mount Tamalpais, Marin County, California, August 23, 1907, on slopes, elevation 1,500-2,100 feet; Hebard; Hebard Collection.

PARAPOMALA ACRIS.

PROC. ACAD. NAT. SCI. PHILA., 1908, p. 371, figs. 3, 4.

Described from a unique male from Railroad Pass, Cochise County, Arizona, July 23, 1907; Hebard; Hebard Collection.

PARAPOMALA PERPALLIDA.

PROC. ACAD. NAT. SCI. PHILA., 1908, p. 373, figs. 5, 6.

Based on a unique male from the Bright Angel Trail, Grand Canyon of the Colorado, Coconino County, Arizona, elevation 3,750 feet, September 12, 1907; Hebard; Hebard Collection.

AMPHITORNUS NANUS.

PROC. ACAD. NAT. SCI. PHILA., 1908, p. 376, fig. 7.

Described from a single male from the Grand Canyon of the Colorado, Coconino County, Arizona, elevation 7,000 feet, September 11, 1907; Hebard; Hebard Collection.

CORDILLACRIS APACHE.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 139, figs. 10, [11].

Based on a pair from a single locality.

Single type here designated: figured ♀ type; Silver City, Grant County, New Mexico, July 20, 1907; Rehn and Hebard; Hebard Collection.

CORDILLACRIS GRINNELLI.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 425, fig. 8.

Described from a single female from the South Fork of the Santa Ana River in the San Bernardino Mountains, California, elevation 6,200 feet, July 6, 1906; Dr. J. Grinnell; A. N. S. P. Collection.

CLINOCEPHALUS PULCHER.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 36, Pl. I, figs. 1, 2.

Based on a pair from a single locality.

Single type here designated: figured ♂ type; Miami, Florida, July 20, 1903; W. S. Dickinson; Hebard Collection.

HORESIDOTES PAPAGENSIS.

PROC. ACAD. NAT. SCI. PHILA., 1908, p. 379, fig. 8.

Described from a unique female from the Sonora Road Canyon, Tucson Mountains, Pima County, Arizona, elevation 3,000 feet, July 25, 1907; Hebard; Hebard Collection.

AGENEOTETTIX SIERRANUS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 429, figs. 9, [10].

Based on a pair from one locality.

Single type here designated: figured ♂ type; Summit House, Madera County, California, September 3, 1907; Hebard; Hebard Collection.

CHORTOPHAGA AUSTRALIOR.

PROC. ACAD. NAT. SCI. PHILA., 1910, p. 589, figs. 1, 2.

Based on a pair from the same locality.

Single type here designated: figured ♀ type; Thomasville, Georgia, December 10, 1902; Hebard; A. N. S. P. Collection.

ENCOPTOLOPHUS ROBUSTUS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 435, figs. 11, 12.

Based on a unique female from the Los Angeles River, Los Angeles, California, August 24, 1907; O. Poling; Hebard Collection.

TRIMEROTROPIS BILOBATA.

PROC. ACAD. NAT. SCI. PHILA., 1906, p. 362, figs. 11, [12].

Described from a pair from a single locality.

Single type here designated: figured ♀ type; Antlers, Mesa County, Colorado, August 15, 1904; Hebard; Hebard Collection.

CIRCOTETTIX RABULA.

PROC. ACAD. NAT. SCI. PHILA., 1906, p. 393, figs. 13, [14].

Based on a pair from a single locality.

Single type here designated: figured ♀ type; summit of hills at head of Mammoth Hot Springs, Yellowstone National Park, Wyoming, elevation 7,000 feet, August 8, 1904; Hebard; Hebard Collection.

CIRCOTETTIX SPLENDIDUS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 456, figs. 13, [14].

Based on a pair from the same locality.

Single type here designated: unique, figured ♂ type; Mount

Lowe, San Gabriel Mountains, California, elevation 5,300 feet, August 8, 1907; Hebard; Hebard Collection.

CAMPYLACANTHA LAMPROTATA.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 157, figs. 12, 13, 14.

Based on a unique male from Hijito, Valverde County, Texas, July 8, 1907; Hebard; Hebard Collection.

PODISMA OREAS.

PROC. ACAD. NAT. SCI. PHILA., 1906, p. 402, figs. 15, 16.

Based on a pair from a single locality.

Single type here designated: unique, figured ♂ type; summit of foothills of Gallatin Range, Mammoth Hot Springs, Yellowstone National Park, Wyoming, elevation 7,000 feet, August 5, 1904; Hebard; Hebard Collection.

AMBLYCORYPHA FLORIDANA.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 42, Pl. I, fig. 5.

Based on a pair from different localities.

Single type here designated: figured ♀ type; Miami, Florida, July 20, 1903; W. S. Dickinson; Hebard Collection.

MICROCENTRUM ROSTRATUM.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 43, Pl. I, figs. 6, 7.

Described from a single female from Miami, Florida, March 16, 1903; Hebard; Hebard Collection.

CONOCEPHALUS LYRISTES.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 45, Pl. I, figs. 8, 9.

Based on a unique male specimen from Chokoloskee, Monroe County, Florida; Hebard Collection.

CONOCEPHALUS MELANORHINUS.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 304, figs. 1, 2.

Described from a unique female from Cedar Keys, Levy County, Florida, August 12, 1905; Hebard; Hebard Collection.

CONOCEPHALUS HOPLOMACHUS.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 46, Pl. I, figs. 10, 11.

Based on a single female specimen from Chokoloskee, Monroe County, Florida, May; Hebard Collection.

ORCHELIMUM FIDICINIUM.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 309, figs. 7, 8.

Described from a pair from a single locality.

Single type here designated: figured ♂ type; Cedar Keys, Levy County, Florida, August 15, 1905, in flooded salt marsh; Hebard; Hebard Collection.

ORCHELIMUM MILITARE.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 311, fig. 10.

Based on a pair from the same locality.

Single type here designated: unique, figured ♂ type; Gainesville, Alachua County, Florida, August 17, 1905, marshy sink-hole in pine woods; Rehn and Hebard; Hebard Collection.

ORCHELIMUM MOLOSSUM.

PROC. ACAD. NAT. SCI. PHILA., 1907, p. 307, figs. 4, 5.

Based on a pair from different localities.

Single type here designated: figured ♂ type; Pablo Beach, Duval County, Florida, August 13, 1905, in grass along railroad tracks; Rehn and Hebard; Hebard Collection.

AGLAOTHORAX SIERRANUS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 476, figs. 15, 16, 19.

Based on a pair from the Yosemite National Park.

Single type here designated: figured ♂ type; Yosemite Valley, Yosemite National Park, California, elevation 4,500 feet, September 1, 1907, hiding against bark on trunk of conifer several feet from ground; Hebard; Hebard Collection.

ATELOPLUS MACROSCELUS.

PROC. ACAD. NAT. SCI. PHILA., 1909, p. 169, fig. 17.

Described from a unique female specimen from El Paso, Texas, July 11, 1907, on Greasewood, *Covillea tridentata*; Rehn; Hebard Collection.

CEUTHOPHILUS VIRGATIPES.

PROC. ACAD. NAT. SCI. PHILA., 1904, p. 798.

Based on a pair from a single locality.

Single type here designated: ♂ type; Thomasville, Georgia, August 13, 1903, in heavy swamp; for Hebard by Emmanuel, (negro); Hebard Collection.

LIPHOPUS ZEBRA.

PROC. ACAD. NAT. SCI. PHILA., 1905, p. 49, Pl. I, fig. 12.

Described from a single male taken at Miami, Florida, February 6, 1904; Hebard; Hebard Collection.

NEMOBIUS PALUSTRIS AURANTIUS.

PROC. ACAD. NAT. SCI. PHILA., 1910, p. 597.

Described from a pair from the same locality.

Single type here designated: ♂ type; Thomasville, Georgia, December 6, 1903, in sphagnum mosses in swampy spot; Hebard; Hebard Collection.

SECTION THREE.

THE SPECIES DESCRIBED BY PROFESSOR LAWRENCE BRUNER IN THE
BIOLOGIA CENTRALI-AMERICANA AND LOCATED IN THE
HEBARD COLLECTION EX BRUNER.

One hundred and sixteen of the one hundred and seventy-three species of Acrididæ described by Professor Bruner in the Orthoptera portion of the *Biologia Centrali-Americana*²⁶ are located in the Hebard Collection ex Bruner. In this series are included all but one of the thirty-four species described by him in that work whose range of distribution is known to extend north of the Mexican boundary. The authors are at present mainly interested in locating the single types of species which are found in North America north of the Mexican line, but the present paper treats all of those species whose single types should be located in the Hebard Collection ex Bruner. The types of the remaining fifty-seven species should be found distributed as follows: twenty-four in the *Biologia Centrali-Americana* Collection in the British Museum; sixteen in Professor Bruner's South American Collection; six in the Scudder Collection in the Museum of Comparative Zoology at Cambridge; five in the United States National Museum; four in the Carnegie Museum in Pittsburgh and two in the Museum of Geneva. The nomenclature given in the original description is here used throughout, as this paper is not intended to be in any way revisionary.

PAROPOMALA PALLIDA (p. 40).

Based on three female specimens from a single locality.

Single type here designated: ♀; Indio, California; H. F. Wickham.

²⁶ *Biologia Centrali-Americana*, Orthoptera, II, pp. 19-342, 1901-1908.

PAROPOMALA DISSIMILIS (p. 41).

Based on a single female from Southern California or Northern Mexico; Gustav Eisen.

PAPAGOA ARIZONENSIS (p. 42).

Described from a unique male from Southern California or Northern Mexico; G. W. Dunn.

SYRBULA PACIFICA (pp. 43, 44).

Based on two females from the same locality.

Single type here designated: ♀; Tepic, Mexico; Eisen.

SYRBULA MODESTA (pp. 44, 46).

Based on two pairs from a single locality.

Single type here designated: ♂; Grand Cañon of the Colorado River, Arizona, [July 9, 1892]²⁷; C. H. T. Townsend.

ACROLOPHITUS VARIEGATUS (pp. 47, 48) Tab. I, fig. 3.

Based on an unspecified number of individuals from two localities.

Single type here designated: figured ♂; Carrizo Springs, Dimmit County, Texas, [June, 1885]; A. Wadgymar.

ACROLOPHITUS UNIFORMIS (p. 47).

Described from an unspecified number of specimens from various localities.

Single type here designated: ♀; [Sterling, Colorado, July].

MACHÆROCERA PACIFICA (pp. 49, 51).

Based on numerous specimens of both sexes from one locality.

Single type here designated: ♂; Tepic, Mexico, not far from San Blas on Pacific Slope; Eisen.

SILVITETTIX COMMUNIS (p. 56).

Based on numerous specimens from three localities.

Single type here designated: ♂; Monte Redondo, Costa Rica, March, [1902]; Professor Lawrence Bruner.

OCHROTETTIX SALINUS (p. 56) Tab. I, figs. 4, 4a.

Described from an unspecified number of individuals from a single locality.

²⁷ In the present paper all authentic information given, which was not contained in the original description, is enclosed in brackets.

Single type here designated: figured ♂; Salina Cruz, Tehuantepec, Mexico, [December, 1898]; C. C. Deam.

LEUCONOTUS BIOLLEYI (p. 57).

Based on five males from two localities.

Single type here designated: ♂; Rio Grande, Costa Rica, elevation 1,800 feet, [March 6, 1902]; Bruner.

OPEIA IMPERFECTA (p. 59).

Described from an unspecified number of specimens from three localities.

Single type here designated: ♂; Jimulco, Mexico, November, [1887]; Bruner.

OPEIA MEXICANA (pp. 59, 60).

Described from a unique female specimen from Tlalpam, near City of Mexico, Mexico, [November, 1887]; Bruner.

OPEIA PALMERI (pp. 59, 61).

Described from a pair from one locality.

Single type here designated: unique ♀; Sierra de San Miguelito, San Luis Potosi, Mexico; E. Palmer.

AMBLYTROPIDIA COSTARICENSIS (pp. 63, 66).

Based on a series of specimens from two localities.

Single type here designated: ♂; San José, Costa Rica; Prof. P. Biolley.

AMBLYTROPIDIA ELONGATA (pp. 63, 68).

Described from a single female from Tepic, Mexico.

THYRIPTILON VITRIPENNE (p. 69).

Based on fourteen males and six females from a single locality.

Single type here designated: ♂; Valladolid, Yucatan; Gaumer.

SISANTUM NOTOCHLORIS (p. 69) Tab. I, figs. 11, 11a.

Based on five males and two females from one locality.

Single type here designated: figured ♀; Medellin, Vera Cruz, Mexico, September; Rev. T. Heyde.

ORPHULA MERIDIONALIS (p. 73).

Based on a single female from Pozo Azul, Costa Rica, May or June, 1902; M. A. Carriker, Jr.

ORPHULELLA GRAMINEA (pp. 75, 78).

Based on numerous specimens from one locality.

Single type here designated: ♂; Phoenix, Arizona; Kunzé.

ORPHULELLA MERIDIONALIS (pp. 77, 81).

Based on an unspecified number of specimens from one locality.

Single type here designated: ♂; [San José]; Costa Rica; Biolley.

ORPHULELLA COSTARICENSIS (pp. 77, 82).

Described from an unspecified number of specimens from one locality.

Single type here designated: ♂; San José, Costa Rica; [Biolley].

LINOCERATIUM BOUCARDI (p. 84).

Based on a series of six specimens from three localities.

Single type here designated: ♂; Panama; Gustave Boucard.

DICHROMORPHA MEXICANA (pp. 86, 87) Tab. I, figs. 18, 18a.

Based on nine specimens from two localities.

Single type here designated: figured ♀; Tepic, Mexico.

DICHROMORPHA LONGIPENNIS (pp. 86, 87).

Based on one male, six females and two nymphs from Mexico.

Single type here designated: ♀; [Tepic], Mexico.

GOMPHOCERUS MERIDIONALIS (p. 93).

Described from a unique female from Cuernavaca, Morelos, Mexico, January [4, 1899]; Deam.

BOOPEDON FUSCUM (pp. 95, 96).

Based on a series of specimens from three localities.

Single type here designated: ♂; Nogales, Arizona; J. G. Lemmon.

BOOPEDON SAVANNARUM (pp. 95, 97).

Based on a series of specimens from one region.

Single type here designated: ♂; West Point, Nebraska. September, 1884.

BOOPEDON DIABOLICUM (pp. 95, 98) Tab. I, figs. 21, 21a.

Based on a unique female from Tepic, Mexico; Eisen.

BOOPEDON FLAVIVENTRIS (pp. 95, 98).

Based on an unstated series of both sexes from two localities.

Single type here designated: ♂; Tepic, Mexico.

PLECTROTETTIX CALIDUS (p. 101).

Based upon an unstated number of specimens from four localities.

Single type here designated: ♂; Cuernavaca, Morelos, Mexico; O. W. Barrett.

PLECTROTETTIX EXCELSUS (pp. 101, 102).

Described from two females from different localities.

Single type here designated: ♀; Tlalpam, near City of Mexico; Barrett.

ZAPATA BREVIPENNIS (p. 103) Tab. I, figs. 22, 22*a*.

Based on a pair from different localities.

Single type there designated: unique figured ♀; Lerdo, Durango, Mexico, November, [1887]; Bruner.

STIRAPLEURA SALINA (pp. 106, 107).

Described from two females from the same locality.

Single type here designated: ♀; Salina Cruz, Tehuantepec, Mexico, December, [1898]; Deam.

STIRAPLEURA MERIDIONALIS (pp. 106, 107).

Described from a pair from one locality.

Single type here designated: unique ♀; Salina Cruz, Tehuantepec, Mexico, December, [1898]; Deam.

STIRAPLEURA BRACHYPTERA (pp. 105, 108).

Described from a unique female from Oaxaca, Mexico, [June 28]; Deam.

AGENEOTETTIX AUSTRALIS (pp. 109, 110).

Based on a series of specimens from a single locality.

Single type here designated: ♀; Phoenix, Arizona; Kunzé.

AGENEOTETTIX CURTIPENNIS (p. 109).

Based on an unspecified number of specimens from southern Colorado.

Single type here designated: ♀; [Durango], Colorado, [August 7, 1899].

AULOCARA BREVIPENNE (p. 111).

Described from a unique male from Comancho, Zacatecas, Mexico. November, [1887]; Bruner.

GONIATRON PLANUM (p. 113) Tab. I, figs. 20, 20a, b.

Based on a single figured male from Comancho, Zacatecas, Mexico, November, [1887]; Bruner.

ARPHIA IMPERFECTA (pp. 121, 126).

Based on a single female specimen from Tlalpam, near Mexico City, Mexico, November, [1887]; Bruner.

ARPHIA CALIDA (pp. 121, 127).

Described from an unspecified number of specimens from one locality.

Single type here designated: ♂; Zacatecas, Mexico, November, [1887]; Bruner.

ARPHIA CRASSA (pp. 121, 128).

Based on a series of specimens from three localities.

Single type here designated: ♀; Southern Arizona; Lemmon.

ARPHIA TOWNSENDI (pp. 122, 129).

Described from an unstated number of specimens from two localities.

Single type here designated: ♂; Colonia Garcia, Chihuahua, Mexico; Townsend.

ARPHIA PULCHRIPENNIS (pp. 122, 131).

Described from a single male specimen from the vicinity of Los Angeles, California; Koebele.

ARPHIA PALLIDIPENNIS (pp. 122, 131).

Described from a pair from different localities.

Single type here designated: unique ♀; Eslava, Dist. Fed., Mexico; Barrett.

ARPHIA DECEPTA (pp. 123, 132).

Based on an unindicated series from four localities.

Single type here designated: ♀; Orizaba, Mexico, [November, 1887]; Bruner.

ARPHIA KOEBELEI (pp. 123, 133).

Based on a single male specimen from San Mateo County, California, [May]; Koebele.

CHORTOPHAGA MERIDIONALIS (pp. 135, 136).

Based on an unspecified number of specimens from a single locality

Single type here designated: ♀; slopes of the Volcan de Irazu, Costa Rica, elevation 7,500 to 9,000 feet; Biolley.

ENCOPTOLOPHUS MONTANUS (pp. 139, 140).

Based on an unindicated number of specimens (probably one pair) from a single locality.

Single type here designated: ♂; Bozeman, Montana, [September 10, 1904]; R. A. Cooley.

ENCOPTOLOPHUS FULIGINOSUS (pp. 139, 141).

Described from a large series of both sexes from one locality.

Single type here designated: ♂; Colonia Garcia, Chihuahua, Mexico, [September, 1899]; Townsend.

ENCOPTOLOPHUS HERBACEUS (pp. 139, 141) Tab. II, fig. 13.

Based on a series from one locality.

Single type here designated: figured ♀; Chapultepec, Dist. Fed., Mexico, [November, 1887]; Bruner.

ENCOPTOLOPHUS CALIFORNICUS (pp. 139, 142).

Based on an unspecified series from one locality.

Single type here designated: ♂; Los Angeles, California, [1888]; D. W. Coquillett.

ENCOPTOLOPHUS TEXENSIS (pp. 139, 142).

Based on an unspecified number of specimens from six localities.

Single type here designated: ♂; Carrizo Springs, Texas. October, 1884; Wadgymar.

HIPPISCUS AUSTRALIS (pp. 151, 157).

Described from a series from three localities.

Single type here designated: ♂; Eslava, Dist. Fed., Mexico; Barrett.

LEPRUS INTERIOR (pp. 158, 160).

Based on an unspecified number of specimens from one locality.

Single type here designated: ♂; Salt Lake Valley, Utah, [September, 1883].

DISSOSTEIRA PICTIPENNIS (pp. 162, 163).

Described from a unique female from California ("probably near Indio"); Leon La Forge.

DISSOSTEIRA PLANIPENNIS (pp. 162, 164).

Based on a single specimen ("taken between San Diego and San Bernardino, Southern") California; La Forge.

TRACHYRHACHIS COMPACTA (pp. 174, 175).

Described from an unspecified number of specimens (probably one pair) from one locality.

Single type here designated: ♀; Silver City, New Mexico, July, [1884; Charles H. Marsh].

TRACHYRHACHIS INCONSPICUA (pp. 174, 176).

Described from three specimens from one locality.

Single type here designated: ♂; Zacatecas, Mexico, November, [1887]; Bruner.

TRACHYRHACHIS TOWNSENDI (pp. 174, 176).

Described from a pair from the same locality.

Single type here designated: unique ♂; Colónia Garcia, Chihuahua, Mexico; Townsend.

TRACHYRHACHIS OCCIDENTALIS (p. 174).

Based on an unstated number of specimens (probably a single male) from one locality.

Single type here designated: ♂; San Francisco [County, California, June].

TRIMEROTROPIS TOWNSENDI (p. 180).

Described from numerous specimens of both sexes from a single locality.

Single type here designated: ♂; Colonia Garcia, Chihuahua, Mexico; Townsend.

ANCONIA GRISEA (pp. 185, 186).

Described from a unique male from Antelope Valley, California; Koebele.

ANCONIA CÆRULEIPENNIS (pp. 185, 186).

Described from a single female from Hawthorne, Nevada, [June]; H. F. Wickham.

RAMONA DESERTICOLA (p. 187).

Based on a single female specimen from Indio, California; Wickham.

BRACHYSTOLA PONDEROSA (pp. 193, 194).

Described from two pairs from a single locality.

Single type here designated: ♂; Guaymas, Mexico, [November, 1893; Eisen].

BRACHYSTOLA INTERMEDIA (pp. 193, 194).

Based on three female specimens from two localities.

Single type here designated: ♀; Mazatlan, Mexico; Woodruff.

BRACHYSTOLA EISENI (pp. 193, 196).

Based on a pair from the same locality.

Single type here designated: ♂; Tepic, Mexico; Eisen.

CALAMACRIS CALIFORNICA (pp. 200, 201) Tab. IV, figs. 25, 25a.

Described from an unspecified number of specimens from one locality.

Single type here designated: figured ♂; San José del Cabo, Lower California.

CALAMACRIS MEXICANA (pp. 200, 201) Tab. IV, fig. 26.

Described from a unique figured female from Patrocinio, Lower California, [April, 1889]; Charles D. Haines.

CALAMACRIS PALMERI (pp. 200, 202).

Described from an unspecified number of specimens from one locality.

Single type here designated: ♀; Cape St. Lucas, Lower California; Palmer.

CALAMACRIS OCLATA (pp. 200, 202).

Based on a unique male from (extreme Southern) Arizona.

SPHENARIUM BOLIVARI (pp. 203, 205).

Described from two males from different localities.

Single type here designated: ♂; Salina Cruz, Tehuantepec, Mexico, [December, 1898]; Deam.

SPHENARIUM MARGINATUM (pp. 204, 205).

Based on an unstated number of specimens from three localities.

Single type here designated: ♂; Orizaba, Mexico, [November, 1887]; Bruner.

SPHENARIUM RUGOSUM (pp. 204, 206).

Based on an unstated series (probably a pair) from a single locality.

Single type here designated: ♂; Cuernavaca, Morelos, Mexico, January [4, 1899]; Deam.

SPHENARIUM BARRETTI (pp. 204, 206).

Based on a single male specimen from Rio Cocula, Guerrero, Mexico, December; Barrett.

SPHENARIUM PLANUM (pp. 204, 207).

Described from a pair from one locality.

Single type here designated: unique ♂; Tehuantepec, Mexico, [November].

SPHENARIUM MINIMUM (pp. 204, 207).

Described from a unique specimen from Jalapa, Vera Cruz, Mexico, [December]; Barrett.

SPHENARIUM AFFINE (p. 207).

Described from a pair from one locality.

Single type here designated: unique ♂;²⁸ Orizaba, Mexico, [November, 1887; Bruner].

DRACOTETTIX CALIFORNICUS (p. 226).

Based on an unstated number of females (probably five) from four localities.

Single type here designated: ♀; Santa Cruz Mountains, California.

TÆNIOPODA MAXIMA (pp. 233, 235).

Based on an unstated series from a single locality.

Single type here designated: ♂; Limon, Costa Rica; Carriker.

TÆNIOPODA OBSCURA (pp. 233, 235) Tab. II, figs. 21, 21a.

Based on an unspecified number of specimens from two localities.

Single type here designated: figured ♂; Temax, Northern Yucatan; Gaumer.

TÆNIOPODA BICRISTATA (pp. 233, 236).

Described from a single female from Mat. (possibly Matamoras, Puebla), Mexico.

NAUTIA CONSPERSIPES (pp. 243, 244).

Based on an unspecified number of specimens from one locality.

Single type here designated: ♀; Chontales, Nicaragua.

²⁸ In giving the location of the male and female types Bruner has evidently confused the sexes.

TÆNIOPHORA FEMORATA (p. 245).

Described from an unstated number of specimens from one locality.

Single type here designated: ♂; Pozo Azul, Costa Rica; Carriker.

RHICNODERMA GLABRA (pp. 248, 249).

Based on two females from one locality.

Single type here designated: ♀; Pozo Azul, Costa Rica; Underwood and Carriker.

RHICNODERMA PUGNAX (pp. 248, 250).

Based on an unstated number of specimens (probably one male) from a single locality.

Single type here designated: ♂; Vera Cruz, Mexico, [January, 1892]; Heyde.

ARNILIA MARSCHALLI (pp. 255, 256).

Described from a series from two localities.

Single type here designated: ♂; Juan Viñas, Costa Rica, March, [1902]; Bruner.

ARNILIA PROPINQUA (pp. 255, 257).

Based on an unspecified number of specimens from three localities.

Single type here designated: ♀; Amatitlan, Guatemala, [February]; J. S. Hine.

INUSIA NANA (pp. 259, 260).

Based on a pair from different localities.

Single type here designated: unique ♂; Limon, Costa Rica; Carriker.

INUSIA BICOLOR (pp. 259, 260).

Based on an unstated series from eight localities.

Single type here designated: ♂; Los Amates, Guatemala, [February 26]; Hine.

INUSIA INORNATIPES (pp. 259, 260).

Described from several specimens from one locality.

Single type here designated: ♂; San Rafael, Vera Cruz, Mexico; Townsend.

PROCTOLABUS BRACHYPTERUS (pp. 265, 266) Tab. III, figs. 19, 19a.

Based on a male and female type from one locality.

Single type here designated: figured ♂; Jalisco, Mexico; Schumann.

LEIOSCAPHEUS GRACILICORNIS (p. 267).

Based on several specimens (probably all females) from a single locality.

Single type here designated: ♀; Pozo Azul, Costa Rica; Carriker.

ANNICERIS MERIDIONALIS (pp. 269, 271).

Based on an unstated number of specimens (probably one pair) from a single locality.

Single type here designated: ♂; Pozo Azul, Costa Rica; Carriker.

ANNICERIS APICALIS (pp. 269, 271).

Based on two males and three females from a single locality.

Single type here designated: ♂; San José, Costa Rica; Underwood.

PSILOTETTIX OBESUS (p. 276) Tab. IV, figs. 12, 12a.

Based on one figured adult female from Sierra Laguna (Lower California, Mexico?); Eisen.

ARISTIA DEPRESSICORNIS (p. 277).

Based on a single immature [female] specimen from Juan Viñas, Costa Rica, March, [1902]; Bruner.

LEPTOMERINTHOPHORA SMARAGDIPES (p. 287).

Based on several specimens of both sexes from a single locality.

Single type here designated: ♂; Pozo Azul, Costa Rica; Carriker.

LEPTOMERINTHOPHORA FLAVOVITTATA (pp. 287, 288).

Described from an unspecified number of specimens (probably one pair) from a single locality.

Single type here designated: ♂; Juan Viñas, Costa Rica, [March, 1902]; Bruner.

LEPTOMERINTHOPHORA MODESTA (pp. 287, 288).

Based on an unstated number of specimens from a single locality.

Single type here designated: ♂; Monte Redondo, Costa Rica, [March, 1902]; Bruner.

OMMATOLAMPIS ANNULICORNIS (p. 290).

Described from a single female specimen from Pozo Azul, Costa Rica; Carriker.

CEDOMERUS CORALLIPES (p. 293) Tab. IV, figs. 14, 14a.

Described from two females from a single locality.

Single type here designated: figured ♀; San José del Cabo, Lower California, [April, 1889]; Haines.

SCHISTOCERCA VITTAFRONS (p. 298).

Described from an unstated number of specimens (probably a single pair) from one locality.

Single type here designated: ♂; Boruca, Costa Rica, July; Carriker.

DASYSCIRTUS OLIVACEUS (p. 303).

Based on a single male from Cuernavaca, Morelos, Mexico, January 4, [1899]; Deam.

CYCLOCERCUS GRACILIS (p. 307).

Based on two males from one locality.

Single type here designated: ♂; Tampico, Mexico, December, [1906].

CALOTETTIX BICOLORIPES (p. 309).

Based on an unstated number of specimens (probably a unique male) from one locality.

Single type here designated: ♂; Victoria, Tamaulipas, Mexico; Barrett.

CALOTETTIX FLAVOPICTUS (pp. 309, 310).

Described from three females from a single locality.

Single type here designated: ♀; Montelovez, Coahuila, Mexico, [September 20]; Palmer.

CALOTETTIX OBSCURUS (pp. 309, 311).

Based on a single male from Tampico, Mexico, December, [1906].

AGRÆCOTETTIX MODESTUS (p. 312) Tab. IV, figs. 13, 13a.

Based on a single female from Villa Lerdo, Durango, Mexico, November, [1887]; Bruner.

MELANOPLUS PICTURATUS (p. 318).

Described from a single female from Colonia Garcia, Chihuahua, Mexico; Townsend.

TEINOPHAUS SAUSSUREI (p. 332) Tab. IV, figs. 3, 3a, 4, 4a.

Based on one male and two females from two localities.

Single type here designated: figured ♂ of pair taken in coitu (unique); Atoyac, Vera Cruz, Mexico, [November, 1887]; Bruner.

RHACHICREAGRA PALLIPES (pp. 339, 340).

Based on a pair and three nymphs from one locality.

Single type here designated: unique adult ♂; Juan Viñas, Costa Rica, March, [1902]; Bruner.

RHACHICREAGRA ÆRUGINOSA (pp. 339, 340).

Described from a single female from Limon, Costa Rica; Carriker.

RHACHICREAGRA GRACILIS (pp. 339, 340).

Based on a considerable series, particularly of males, from a single locality.

Single type here designated: ♂; Juan Viñas, Costa Rica, [March, 1902]; Bruner.

SECTION FOUR.

In the present section the single types are designated of all of the North American species of Orthoptera described by Professor Lawrence Bruner which have not been selected previously in Sections I and III. Section IV is divided into four parts; the first three treating the species described in three of Professor Bruner's larger papers, and the fourth treating those species described in various short papers from 1876 to 1905. The single types of forty-three species are located in the present section; thirty-eight are in the Hebard Collection ex Bruner; four in the United States National Museum and one in the collection of the Museum of Comparative Zoology at Cambridge.

PART I—"SOME NEW COLORADO ORTHOPTERA," BY LAWRENCE BRUNER. (Bulletin 94, Report of Entomologist, Colorado Experiment Station for 1903, pp. 57-67, 1904.)

In the paper now before us we find the entire first series of typical material retained by the author. The single types are therefore all in the Hebard Collection ex Bruner. No figures are given in the paper under consideration, and the material, if belonging to the typical series, is labelled "TYPE."

NEMOBIUS BREVICAUDUS (p. 57).

Based on a pair from the same locality.

Single type here designated: unique ♂; Fort Collins, Colorado, October 4, 1901.

CEUTHOPHILUS ARIDUS (p. 57).

Described from a unique male; Grand Junction, Colorado, November 17, [1902].

AGENEOTETTIX OCCIDENTALIS (p. 58).

Described from an unspecified number of specimens from Colorado west of the main range.

Single type here designated: ♂; [Glenwood Springs], Colorado, September [15, 1903].

ENCOPTOLOPHUS COLORADENSIS (p. 58).

Described from one male and two females from a single locality.

Single type here designated: unique ♂; Fort Collins, Colorado, [August 31, 1898]; [L. Bruner].

TRIMEROTROPIS INCONSPICUA (p. 59).

Based on an unspecified number of individuals from four localities.

Single type here designated: ♂; Palisade, Colorado, July [8, 1901].

ÆOLOPLUS MINOR (p. 60).

Based on a series of both sexes from a single locality.

Single type here designated: ♂; Delta, Colorado, July 13, 1901.

HESPEROTETTIX GILLETTEI (p. 61).

Based on an unspecified number of specimens from four localities.

Single type here designated: ♂; Rifle, Colorado, July 25, [1900]; (specimen has wings one-half as long as abdomen).

HESPEROTETTIX COLORADENSIS (p. 61).

Based on a pair from different localities.

Single type here designated: unique ♂; Durango, Colorado, August 7, [1899].

MELANOPLUS SANGUINEUS (p. 63).

Based on a series of both sexes from two localities.

Single type here designated: ♂; Lamar, Colorado, [September 10, 1898].

MELANOPLUS TRISTIS (p. 64).

Based on three males and five females from three localities.

Single type here designated: ♂; Durango, Colorado, August [3, 1900].

MELANOPLUS FLABELLIFER BREVIPENNIS (p. 65).

Described from six males and two females from two localities.

Single type here designated: ♂; Palisade, Colorado, July 8, 1901.

MELANOPLUS DIMIDIPENNIS (p. 66).

Based on a unique male; Fort Collins, Colorado, August 16, [1898].

PART II.—"TEN NEW SPECIES OF ORTHOPTERA FROM NEBRASKA—
NOTES ON HABITS, WING VARIATION, ETC.," BY LAWRENCE
BRUNER. (*Canadian Entomologist*, Vol. XXIII, pp. 36-40,
56-59, 70-73. 1891.)

Practically the entire series of Orthoptera used in the preparation of the paper before us is in the Hebard Collection ex Bruner, and all of the single types are there located. There are no figures accompanying this paper and typical material is labelled "TYPE" indiscriminately.

CYCLOPTILUS BOREALIS (p. 37).

Described from a series of specimens from two localities.

Single type here designated: ♀; Lincoln, Nebraska, September 15, 1888 (taken on margins of large salt basin on sandy soil); L. Bruner.

CEUTHOPHILUS PALLESCENS (p. 37).

Described from one female and one immature male from two localities.

Single type here designated: unique ♀; 17 miles north of Harrison, Sioux County, Nebraska (taken in shallow well).

UDEOPSYLLA COMPACTA (p. 38).

Based on an unspecified number of specimens from three States.

Single type here designated: ♀; [Barbour County], Kansas, [1886]; [F. W. Cragin].

XIPHIDIUM MODESTUM (p. 56).

Based on a series of specimens from five areas.

Single type here designated: ♀; [West Point], Nebraska, [September 4].

XIPHIDIUM NIGROPLEURUM (p. 58).

Described from a series of specimens taken in Eastern Nebraska.

Single type here designated: ♂; [West Point], Nebraska, [September 1].

ORCHELIMUM GRACILE²⁹ (p. 70).

Based on an unspecified number of specimens from Nebraska.

Single type here designated: ♂; West Point, Nebraska, [September 5].

ORCHELIMUM GLADIATOR (p. 71).

Described from two females taken in the same locality.

Single type here designated: ♀; West Point, Nebraska, September, 1886 (taken on flowers of golden-rod, *Solidago rigida*); L. Bruner.

ORCHELIMUM MINOR (p. 72).

Described from a single female; District of Columbia, [September 15, 1884].

CONOCEPHALUS NEBRASCENSIS (p. 72).

Based on an unspecified number of specimens from three States.

Single type here designated: ♂; [West Point], Nebraska, [August, 1887].

AMBLYCORYPHA SCUDDERÆ (p. 73).

Described from an unspecified number of individuals from eastern Nebraska.

Single type here designated: ♀; [Omaha], Nebraska, [September].

PART III.—“FIRST CONTRIBUTION TO THE KNOWLEDGE OF THE ORTHOPTERA OF KANSAS,” BY LAWRENCE BRUNER. (*Bulletin of the Washburn College Laboratory of Natural History*, Vol. IV, No. 4, pp. 125–139, 1885.)

The entire series of typical material, with the exception of one specimen, used in the descriptions of new species in the paper here under consideration, is in the Hebard Collection ex Bruner, and all of the single types are there located. No figures are given in this paper and all typical material is labelled “TYPE.”

GRYLLOTALPA PONDEROSA (p. 126).

Described from one female; Labette County, Kansas; Dr. Newlon.

DAIHINIA GIGANTEA (p. 127).

Based on a single male; Labette County, Kansas; Dr. Newlon.

²⁹ Bruner (*Ent. News*, III, p. 264, 1892) replaced this specific name with *delicatum* in consequence of Harris's previous use of the name for another species of the same genus.

THYREONOTUS CRAGINI (p. 129).

Based on a unique female; Barbour County, Kansas; Cragin.

THYREONOTUS SCUDDERI (p. 129).

Based on two pairs from two localities.

Single type here designated: ♂; Barbour County, Kansas; Cragin.

PART IV.—SPECIES OF NORTH AMERICAN ORTHOPTERA, DESCRIBED
BY PROFESSOR LAWRENCE BRUNER, IN VARIOUS SHORT PAPERS
FROM 1876 TO 1905.

ARPHIA ABERRANS.

Bruner in Caudell; *Proc. U. S. N. M.*, Vol. XXVIII, p. 467, 1905.

Described from a single female from the Huachuca Mountains, Arizona; Dr. R. E. Kunzé; Hebard Collection ex Bruner.

ENCOPTOLOPHUS PALLIDUS.

N. A. Fauna, No. 7, p. 266, 1893.

Based on an unstated number of specimens from one locality.

Single type here designated: ♂; Panamint Valley, California, April 6, 1891; Death Valley Expedition; U. S. N. M. Collection.

SCIRTETICA OCCIDENTALIS.

N. A. Fauna, No. 7, p. 267, 1893.

Described from a single female taken in the Argus Mountains, California, May, 1891; Death Valley Expedition; U. S. N. M. Collection.

TOMONOTUS FERRUGINOSUS.

Bruner in Caudell; *Proc. U. S. N. M.*, Vol. XXVIII, p. 470, Fig. 4, 1905.

Description based on an unstated number of specimens from six localities.

Single type here designated: ♂; Fort Grant, Arizona, [1882]; Hebard Collection ex Bruner.

TRIMEROTROPIS CÆRULEIPENNIS.

Can. Ent., Vol. XVII, p. 10, 1885.

Based on a series of both sexes from two localities.

Single type here designated: ♂; Umatilla, Washington, June 26, 1882; Hagen and Henshaw; U. S. N. M. Collection.

DRACOTETTIX PLUTONIUS.

N. A. Fauna, No. 7, p. 267, 1893.

Based on an unspecified number of males and females from two localities.

Single type here designated: ♂; Panamint Valley, California, April, 1891; Death Valley Expedition; U. S. N. M. Collection.

PEZOTETTIX CHENOPODII.

Insect Life, Vol. VII, p. 41, 1894.

Based on large numbers of both sexes from a single locality.

Single type here designated: ♂; Grand Junction, Colorado, June, [1893]; Bruner; Hebard Collection ex Bruner.

PEZOTETTIX HISPIDUS.

Can. Ent., Vol. XVII, p. 12, 1885.

Based on an unstated series of both sexes from one locality.

Single type here designated: ♂; Colville, Washington, July 24, 1882; Hagen and Henshaw; Hebard Collection ex Bruner.

MELANOPLUS FLUVIATILIS.

Ann. Rept. Nebr. Bd. Agr. for 1896, p. 136, fig. 34, 1897.

Based on an unstated series from one region.

Single type here designated: figured ♂; [Ashland, Nebraska, September, 1896]; Hebard Collection ex Bruner.

PEZOTETTIX GRACILIS.

Can. Ent., Vol. VIII, p. 124, 1876.

Based on an unstated number of males and females from a single locality.

Single type here designated: ♂; Omaha, Nebraska, August-October; Hebard Collection ex Bruner.

MELANOPLUS HERBACEUS.

U. S. Dept. Agr., Div. Entom., Bull. 28, p. 25, Fig. 13b, 1893.

Based on a number of specimens of both sexes from one locality.

Single type here designated: figured ♂; El Paso, Texas, [November,] 1887; Bruner; Hebard Collection ex Bruner.

PEZOTETTIX WASHINGTONIUS.

Can. Ent., Vol. XVII, p. 14, 1885.

Described from a large series of both sexes from one locality.

Single type here designated: ♂; Loon Lake, Colville Valley, Washington, July 25, 1882; Hagen and Henshaw; Hebard Collection ex Bruner.

BRADYNOTES MONTANUS.

Can. Ent., Vol. XVII, p. 16, 1885.

Based on specimens of both sexes from two localities.

Single type here designated: ♂; Colville; Loon Lake, Washington, July 23-25, [1882]; Hagen; Hebard Collection ex Bruner.

CONOCEPHALUS ATLANTICUS.

Ent. News, Vol. X, p. 38, 1899.

Based on fourteen specimens of both sexes from four localities.

Single type here designated: ♂; Philadelphia Neck, Pennsylvania, [from] J. B. Smith; Hebard Collection ex Bruner.

CEUTHOPHILUS SILVESTRIS.

Bull. Washb. Coll., Vol. I, p. 127, 1885.

Described from eight specimens from a single locality.

Single type here designated: ♀; Topeka, Kansas, under logs in woods, F. W. Cragin; Hebard Collection ex Bruner.

MYRMECOPHILA OREGONENSIS.

Can. Ent., Vol. XVI, p. 43, 1884.

Based on a single female specimen from Portland, Oregon, summer of 1882; Henshaw; Mus. Comp. Zool. Cambr.

MYRMECOPHILA PERGANDEI.

Can. Ent., Vol. XVI, p. 42, 1884.

Described from an unstated series from the South Atlantic States.

Single type here designated: ♀; Washington, D. C., April 22, 1883, with *Camponotus pennsylvanicus*; Hebard Collection ex Bruner.

MARCH 5.

Because of preparations for holding sessions, March 19th, 20th and 21st, in commemoration of the founding of the Academy, no arrangement was made for the stated meeting on the first Tuesday of March.



Rehn, James A. G. and Hebard, Morgan. 1912. "Fixation of single type (Lectotype) specimens of species of American Orthoptera." *Proceedings of the Academy of Natural Sciences of Philadelphia* 64, 60–128.

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