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SYSTEMATIC CATALOGUE OF *SPEYERIA* (LEPIDOPTERA, NYMPHALIDAE) WITH DESIGNATIONS OF TYPES AND FIXATIONS OF TYPE LOCALITIES

BY CYRIL FRANKLIN DOS PASSOS AND LIONEL PAUL GREY

INTRODUCTION

In a recent paper (1945a, p. 12) concerning the genital armature of Argynninae, we have shown that the Nearctic species heretofore referred to *Argynnis* Fabricius (1807, p. ix) structurally as well as geographically are isolated, comprising a group of generic importance for which *Speyeria* Scudder (1872, p. 23) is available. In the present paper we recognize *Semnopsyche* Scudder (1875, p. 258) in a subgeneric sense for the species having a secondary bursal sac in the female genital armature. The synonymy of the genera is as follows:

SPEYERIA (SPEYERIA) SCUDDER

Speyeria SCUDDER, 1872, p. 23. Genotype: *Papilio* [Nym.] *phalis* [Phal.] *eratus* [Idalia] Drury, [1773], index to vol. 1, p. 11; 1770, tom. cit., p. 25, pl. 13, figs. 1-3. Fixation: Original designation monotypic.

SPEYERIA (SEMNOPSYCHE) SCUDDER

Semnopsyche SCUDDER, 1875, p. 258. Genotype: *Papilio* [Nymph.] *alis* [Phaler.] *atus* [Diana] Cramer, [1777], vol. 2, pp. 4, 148, pl. 98, figs. D-E. Fixation: Original designation monotypic.

Neacidalia REUSS, 1926a, p. 69. Genotype: *Papilio cybele* Cramer [sic]. Fixation: Original designation.

Following the fundamental works of W. H. Edwards between 1862 and 1892, which are to be found scattered throughout the literature but particularly in his classical treatise on the butterflies of North America, there have been six revisions of *Speyeria* (*Argynnis*), i.e.:

Elwes, 1889, pp. 535-575.

Holland, 1898, pp. 101-127, pls. 9-14, 18.

Snyder, 1900, pp. 27-38.

Lehmann, in Seitz, 1913, pp. 404-421, 429, pls. 85-88.

Reuss, [1922], pp. 180-230.

Holland, 1931b, pp. 82-104, pls. 9-14, 18, 55, 56, 59, 71.

In addition, Barnes and McDunnough in numerous papers have treated of the North American species, particularly those described by W. H. Edwards, and Comstock (1927) has dealt with the Californian species.

As a result of our studies of *Speyeria*, during which we endeavored to examine all names published prior to December 31, 1946, we have concluded that 109 names are valid. In our opinion these represent but 13 distinct species; consequently we have placed the remaining 96 names as subspecies and 58 names as synonyms. Two names are found in the literature which we do not consider to have been published in fact. These have been listed near the end of the catalogue under the heading *Nomina Nuda* with references to where they may be found. On the same page we have listed also three exotic species of Argynninae erroneously described from, or reported as occurring in, North America. In this catalogue the systematic arrangement differs considerably from previous revisions. In so far as possible we have aimed to avoid incongruities in associations, e.g., genitalic data show conclusively that our *Semnopsyche* group (1945a, pp. 13-14) and *callippe* group (*ibid.*, p. 12) should be listed in a fashion to obviate interpolation of species not so directly interrelated. Aside from these considerations the arrangement, perforce, is somewhat arbitrary.

Since it is necessary to acknowledge the

fact that classification in a genus like *Speyeria* inevitably is partly subjective, no more defense of the purely taxonomic portion of this catalogue is offered than to say that it presents (so far as data now show) a consistent hypothesis of relationships subject to revision as field and laboratory studies proceed. Our classification of the various names as species, subspecies, and synonyms (in which latter class we place most aberrational names unless otherwise available) is disclosed by the arrangement of the text. The names are numbered when species, lettered when subspecies, and indented in smaller type when synonyms. A full bibliography of all references is appended.

Leaving aside the more or less elusive definability of species and subspecies, the major purpose of this catalogue is to organize, fix, and designate type data. Even here, dealing with more tangible things, occasional ambiguities have had to be resolved upon the basis of a fiat. In all such instances no ascertained facts have been ignored, and it is hoped that the few matters which might lend themselves to quibbling may be allowed to rest hereafter by common consent.

No attempt has been made to write a complete synonymic catalogue. Desirable as that would be, many species of *Speyeria* are difficult to determine. The literature is replete with erroneous determinations and many more are of doubtful validity. It is practically impossible to check some of the determinations without seeing the actual specimens. In many cases this no longer is possible. In later papers we shall attempt to untangle somewhat the synonymy, at least in so far as it is founded upon specimens still in existence, or based on publications containing good figures of the insects.

The following information is supplied in this catalogue in six paragraphs: 1. The name as published, the author, and a reference to the original description; this is followed by the synonymy, if any. 2. A reference to the type if figured, or if not, to a typical specimen as well as to the genitalia if they have been figured. 3. The type locality with a fixation if one has been

made, or our fixation when necessary. 4. A reference to the collection where the type is deposited with a designation of a lectotype or neotype when necessary. 5. A reference to the preparatory stages—the catalogue of Henry Edwards (1889), or the bibliography of Davenport and Dethier ([1938]), or both, rather than to the paper containing the description of the preparatory stages. 6. The distribution of the insect, in Canada by provinces, and in the United States and Mexico by states.

Many names proposed by W. H. Edwards present special problems. In his original descriptions he never designated holotypes. When his description was drawn from a single specimen, that specimen became the holotype. When he wrote a description from a series of specimens, all the specimens before him became cotypes. Sometimes these series consisted of two or more species. Edwards usually did not label his types at the time of publication. When a type was designated it was done by writing the word "type" across a label attached to the insect. This word sometimes was written in black ink and at other times in red ink. It is believed that when it was written in black ink it was done at or about the time of the publication of the original description, or at least before Edwards sold his collection. When it was written in red ink it is probable that the label was removed from the insect by W. J. Holland, who then owned Edwards' collection, and sent to Edwards who wrote "type" across the label in red ink. This is a question that requires further investigation and may never be solved completely.

In 1931, when Holland published the second edition of "The butterfly book," usually in referring to Edwards' species he employed the word "type" sometimes in the text, at other times in the explanation of plates, and now and then in both places. Were these sufficient designations of the types to make the specimens thus indicated lectotypes?

The International Rules of Nomenclature are silent upon this subject, the only reference to a type being found in the Appendix under the heading "A" wherein it is recommended "that in published de-

scriptions of a new species or new subspecies only one specimen be designated and labeled as *type*, the other specimens examined by the author at the same time be *paratypes*." This provision does not cover any of Edwards' names. The Entomological Code by Banks and Caudell (1912), while not official, is followed usually by entomologists in cases where it supplements the International Rules. Ferris (1928, p. 153) recommends that procedure.

With respect to Holland's use of the word "type," the Entomological Code is very definite. It provides in Section 73.B.i, "The first intentional definite type designation in accord with the above rules is final. The mere reference to a specimen as type is not considered as type fixation." Since Holland referred to certain specimens of Edwards only as types (sometimes these specimens were male and female of the same species), and inasmuch as he made no definite type designations beyond the use of the word "type," rarely having attached any labels to the specimens that he called types, we have concluded that Holland made no valid designations of Edwards' types. Consequently, in this paper we have designated lectotypes or neotypes for all of Edwards' species, except where he described a species from one specimen that is still in existence, but in so far as possible we have selected the same specimen that Holland termed a type, because other things being equal such a specimen figured in colors in "The butterfly book" is most useful and readily available to students.

Some species of *Speyeria*, especially in the west, occur sometimes with silvered and at other times with unsilvered markings on the under side of the wings. Such specimens frequently have been named for this reason alone. Where silvered and unsilvered specimens of the same species are found flying together, we have placed the second name in the synonymy of the first. Where, however, silvered or unsilvered populations occur in substantially different localities, we have treated the populations as valid subspecies and used the applicable names. It seems to us that no real purpose is served by retaining names for silvered or unsilvered specimens in those cases where

they constitute but a small fraction of the populations.

We have not overlooked the hypothetical restriction by Barnes and McDunnough (1913, p. 94) of *Argynnis artonis* Edwards (1881, p. 1) to the male type from Big Horn, Montana, but believe their action, if intended as a fixation, does not comply with Section 73.B of the Entomological Code. Gunder (1932, p. 283), who refers to a spurious type from a different locality, does not appear to have complied with that Code either, nor does Brown (1934, p. 160).

The type localities of most of Boisduval's species are quite indefinite and in a few instances most likely are incorrect. Boisduval himself did not collect the specimens, but received them from Lorquin with the usual possibility of error, especially in those days when precision in publishing type localities was not considered as important as it is today. Consequently, we have deemed it our duty to question at least one of Boisduval's type localities, and to use some latitude in fixing certain others. In one case particularly, involving the name *Argynnis adiante* (1869, p. 61), no specimens matching Boisduval's type ever have been found (and apparently do not exist) outside of the narrow belt of coastal mountains in which we have fixed the type locality.

While *Argynnis bischoffii* Edwards (1870b, p. 189) was described from Aliaska opposite Kodiak, meaning thereby the peninsula of Alaska opposite Kodiak, all the specimens are labeled "Kodiak." From an examination of certain unpublished correspondence between W. H. Edwards and Henry Edwards, it appears that the former was not certain where these specimens were taken by Bischoff. We are satisfied that the specimens were taken on the Alaskan Peninsula, but believe that they were labeled Kodiak because that was the nearest locality having a well-known name which would fix, more or less, the exact locality. At that time there was no generally known locality opposite Kodiak on the Alaskan Peninsula, there being merely some small Eskimo villages. Consequently, we have designated one of the Kodiak specimens as the lectotype.

In addition to the special instances discussed above, a number of other names required considerable study before satisfactory solutions of their status were found. It would require more space than seems warranted to explain all of these matters. In a few instances we have inserted brief notes in the text.

In preparing a paper of this character, it is impossible to complete the study without visiting many museums. To a large extent we have been able to examine and photograph the types. However, many problems remained which had to be handled by correspondence. Accordingly, we take pleasure in extending our thanks and appreciation to Dr. A. Avinoff, Director-Emeritus, and Dr. W. R. Sweadner, Curator of Entomology, Carnegie Museum, for many courtesies extended while studying the W. H. Edwards and W. J. Holland collections, and wish to record our obligation to the late Dr. H. Kahl, Curator of Entomology of the same museum, for similar favors; Dr. A. H. Clark, Curator of Echinoderms, United States National Museum, for re-checking some of Boisdual's types; Dr. J. A. Comstock, Associate Director, Los Angeles County Museum, for information concerning his types; Dr. A. S. Corbet, Assistant Keeper, Department of Entomology,

British Museum (Natural History), for locating certain types in that museum's collection; Mr. W. J. Gerhard, Curator of Insects, Chicago Natural History Museum, for lending certain types of Behr and Strecker and for furnishing us with valuable information concerning the latter's collection; Dr. J. H. McDunnough, former Chief, Division of Systematic Entomology, Department of Agriculture, Ottawa, now a Research Associate, Department of Insects and Spiders, American Museum of Natural History, for valuable criticisms and checking data on the types in the Canadian National Collection; Mr. V. Nabokov, Research Fellow, Museum of Comparative Zoölogy, for his enthusiastic interest in our work and in assisting our examination of that museum's collection; Dr. E. S. Ross, Associate Curator of Insects in Charge, California Academy of Sciences, for furnishing photographs of three of Wright's types. Finally, we desire to express our sincere thanks and appreciation to Miss H. G. Young for typing the various drafts of the manuscript, checking the references, and running down innumerable elusive questions which round out and give completeness to the paper. Her conscientious and careful attention to many trying details has made our task much easier.

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SPEYERIA (SPEYERIA) SCUDDER

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astarte (Behr *nec* Doubleday)
montivaga (Edwards *nec* Behr)
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rubyensis (Gunder)
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clio (Edwards)
igeli dos Passos and Grey
eris (Igel *nec* Meigen)
benjamini (Gunder)
brucei (Gunder)
fieldi dos Passos and Grey
gunderi (Field *nec* Comstock)
 - j. S. (S.) *mormonia luskii* (Barnes and McDunnough)

SYSTEMATIC CATALOGUE

SPEYERIA (SEMNOPSYCHE) SCUDDER

1. *Speyeria* (*Semnopsyche*) *diana* (Cramer)

Papilio *Nymphalis* *Phaleratus* *Diana*
CRAMER, [1777], vol. 2, pp. 4, 148.

FIGURED: *Tom. cit.*, pl. 98, figs. D-E.

TYPE LOCALITY: Virginia. Hereby fixed as Jamestown, James City County, Virginia.

TYPE DEPOSITED: British Museum (Natural History), *ex* collection Tring Museum, *ex* collection Felder, *ex* collection M. J. C. Sylvius van Lennep.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: Pennsylvania, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Alabama, Kentucky, Indiana, Tennessee, Illinois, Arkansas.

2. *Speyeria* (*Semnopsyche*) *cybele* (Fabricius)a. S. (S.) *cybele cybele* (Fabricius)

Papilio *Nymphalis* *P[haleratus]* *Cybele*
FABRICIUS, 1775, p. 516, no. 311.

Papilio *Nymphalis* *Phaleratus* *Daphnis*
CRAMER, [1775], vol. 1, p. 89; [1776], *tom. cit.*, p. 152. [1775], *tom. cit.*, pl. 57, figs. E-F. New York and Jamaica. Hereby fixed as New York City, New York County, New York. A female, British Museum (Natural History), labeled "Papilio cybele. Fabr. Sp. Ins. No. 477," is hereby designated the neotype, being the type of

P[apilio] *N[ympalis]* *P[haleratus]* *Cybele* Fabricius.

Papilio Nymph[alis] *Phalerat[us]* *Daphnis?*
MARTYN, 1797, pp. 7, 7, pl. 3, fig. 7, pl. 4, fig. 9.¹ Surinam. Hereby fixed as New York City, New York County, New York. A female, British Museum (Natural History), labeled "Papilio cybele. Fabr. Sp. Ins. No. 477," is hereby designated the neotype, being the type of *P[apilio]* *N[ympalis]* *P[haleratus]* *Cybele* Fabricius. The name *Papilio Nymph[alis]* *Phalerat[us]* *Daphnis?* Martyn is preoccupied by *Papilio* *Nymph[alis]* *Phalerat[us]* *Daphnis* Cramer.

Argynnis Cybele ab. ♂ Baal STRECKER, 1878, p. 111. [Toledo, Lucas County], Ohio. Chicago Natural History Museum, *ex* collection H. Strecker.

FIGURED: Holland, 1931b, pl. 9, figs. 3-4, pl. 13, fig. 1.

TYPE LOCALITY: America. Hereby fixed as New York City, New York County, New York.

TYPE DEPOSITED: British Museum (Natural History), *ex* collection Banks.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: Ontario, Maine, Vermont, New Hampshire, Massachusetts, Connecticut, New York, New Jersey, Maryland, Delaware, Pennsylvania, Vir-

¹ We have examined the two copies of *Psyche* in this country. The numbers of the figures on the plates cited do not agree. We have followed those appearing in the copy of *Psyche* in the Smithsonian Institution, because the numbers of the figures in that copy agree with the text of *Psyche*.

ginia, West Virginia, North Carolina, Indiana, Tennessee, Ohio, Illinois, Minnesota, Iowa, Wisconsin, Kansas, Missouri, Arkansas, Oklahoma, Montana.

b. **S. (S.) cybele novascotiae**
(McDunnough)

Argynnis cybele novascotiae McDUNNOUGH, 1935, p. 19.

TYPE LOCALITY: White Point Beach, Queens Co[unty], N[ova] S[cotia], July 29, 1934 (J. H. McDunnough).

TYPE DEPOSITED: Canadian National Collection No. 3859.

DISTRIBUTION: Nova Scotia, Quebec, Maine.

c. **S. (S.) cybele krautwurmi** (Holland)

Argynnis cybele var. *krautwurmi* HOLLAND, 1931a, p. 255.

FIGURED: Holland, 1931b, pl. 56, fig. 2.

TYPE LOCALITY: Les Cheneaux, [Mackinac County], Michigan, August 15, 1905 (B. Krautwurm).

TYPE DEPOSITED: Carnegie Museum.

DISTRIBUTION: Pennsylvania, Michigan, Wisconsin, Kansas.

d. **S. (S.) cybele pseudocarpenteri**
(Chermock and Chermock)

Argynnis cybele pseudocarpenteri CHERMOCK AND CHERMOCK, 1940, p. 82.

TYPE LOCALITY: Sand Ridge, Manitoba, July 19, 1934.

TYPE DEPOSITED: Canadian National Collection [No. 4369].

DISTRIBUTION: Manitoba, Saskatchewan, Alberta.

e. **S. (S.) cybele carpenteri**
(Edwards)

Argynnis Carpenterii EDWARDS, 1876a, p. 204.

FIGURED: Holland, 1931b, pl. 55, figs. 5-6.

TYPE LOCALITY: [Taos Peak, Taos County], New Mexico, above timber line, 1875 (W. C. Carpenter).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Carpenterii ♂ top Taos Mtn N. M.," and "Butterfly Book Pl. 55 Fig. 5," is hereby designated the lectotype, being the specimen figured by Holland (*op. cit.*, pl. 55, fig. 5).

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: Colorado, New Mexico.

f. **S. (S.) cybele charlottii** (Barnes)

Argynnis Charlottii BARNES, 1897, p. 39.

FIGURED: Holland, 1931b, pl. 56, fig. 1.

TYPE LOCALITY: Glenwood Springs, [Garfield County], Colo[rado], September 1-7.

TYPE DEPOSITED: A male, United States National Museum, labeled "Argynnis Charlottii Type Barnes," "Glenwood Spgs, Col.," and "Sept. 1-7," is hereby designated the lectotype.

DISTRIBUTION: Colorado.

g. **S. (S.) cybele letona** dos Passos and Grey

Speyeria cybele letona DOS PASSOS AND GREY, 1945b, p. 1.

FIGURED: *Tom. cit.*, figs. 3-4.

TYPE LOCALITY: City Creek Canyon, Salt Lake City, [Salt Lake County], Utah, 4500 feet, July 17, 1939 (W. L. Phillips).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection L. P. Grey.

DISTRIBUTION: Utah.

h. **S. (S.) cybele leto** (Behr)

Argynnis Leto BEHR, 1862, p. 173.

Argynnis v. *letis* WRIGHT, 1905, p. 130, pl. 12, fig. 111. Sisson, [Siskiyou County], California], August, 1891 (W. G. Wright). California Academy of Sciences, Ent. No. 4289.

Argynnis leto Behr, tr. f. *lethe* GUNDER, 1934, p. 125. Big Horn M[oun]t[ain]s, Wyoming, Aug[ust] 3, 1932 (E. J. Osler). American Museum of Natural History, *ex* collection J. D. Gunder.

Acidalia Hbn., *Semnopsyche* Scudder, *leto* f. *valesinoides-alba* REUSS, 1926a, p. 69. Berlin Museum.

FIGURED: Holland, 1931b, pl. 9, figs. 5-6.

TYPE LOCALITY: Near Carson City, [Ormsby County, Nevada] (P. J. M. Lorquin).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Leto ♂ Neva Mor.," "Holland Collection," and "Butterfly Book Pl. IX Fig. 5," is hereby designated the

neotype, being the specimen figured by Holland (*op. cit.*, pl. 9, fig. 5).

PREPARATORY STAGES: Comstock, 1940, p. 75, pl. 8, fig. D.

DISTRIBUTION: Alberta, British Columbia, Montana, Idaho, Wyoming, Nevada, California, Oregon, Washington.

3. *Speyeria* (*Semnopsyche*) *aphrodite* (Fabricius)

a. *S. (S.) aphrodite aphrodite* (Fabricius)

P[apilio] N[ymphalis] P[halaratus] Aphrodite FABRICIUS, 1787, vol. 2, p. 62, no. 590.

Argynnis cybele Fabr. forma *Bartschi* REIFF, 1910, p. 255, pl. 13. West Roxbury, [Suffolk County], Mass[achusetts], July 1-7, 1907 (R. C. Bartsch). Museum of Comparative Zoölogy, ex Bussey Institution.

Argynnis aphrodite, ab. *bakeri* CLARK, 1932, pl. 19, figs. 1-2. Waynesburg, [Stark County], Ohio, July 2, 1927 (C. W. Baker). United States National Museum.

FIGURED: Holland, 1931b, pl. 14, fig. 11.

TYPE LOCALITY: Meridionali America. Hereby fixed as New York City, New York County, New York.

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "No. 22 New York City and vicinity. Coll. S. L. Elliot." is hereby designated the neotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: Quebec, Ontario, Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Maryland, Delaware, Pennsylvania, Virginia, West Virginia, North Carolina, Indiana, Tennessee, Ohio, Michigan, Illinois, Minnesota, Iowa, Wisconsin.

b. *S. (S.) aphrodite winni* (Gunder)

Argynnis aphrodite Fabr., race *winni* GUNDER, 1932, p. 278.

TYPE LOCALITY: St. Calixte de Killenny, Que[bec], July 13, 1931.

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: New Brunswick, Quebec, Maine, Vermont, New Hampshire.

c. *S. (S.) aphrodite alcestis* (Edwards)

Argynnis Alcestis EDWARDS, 1876b, p. 289.

Argynnis alcestis ab. *suffusa* WOLCOTT, 1916, p. 98, pl. 4, fig. 5. Bog south of Grand Rapids, [Kent County], Michigan, August, 1897. Ohio State University, Columbus, Ohio, ex collection R. A. Leussler, ex collection R. H. Wolcott.

FIGURED: Holland, 1931b, pl. 10, fig. 6. This specimen is not mentioned in the original description.

TYPE LOCALITY: Northern Illinois, Iowa, and Colorado. Hereby fixed as Galena, Jo Daviess County, Illinois (T. Bean).

TYPE DEPOSITED: A female, Carnegie Museum, labeled "type alcestis ♀ Ills." with a line through the top of the label, is hereby designated the lectotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: Indiana, Ohio, Michigan, Illinois, Minnesota, Iowa, Wisconsin.

d. *S. (S.) aphrodite mayae* (Gunder)

Argynnis aphrodite cypris Edw., tr. f. *mayae* GUNDER, 1932, p. 279.

Argynnis manitoba CHERMOCK AND CHERMOCK, 1940, p. 83. Sand Ridge, Manitoba, July 29, 1934. Canadian National Collection [No. 5129].

TYPE LOCALITY: Sand Ridge, Bener Dam Lake, near Kelwood, Man[itoba], Can[ada], Sept[ember] 10, 1931 (M. May).

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: Manitoba, Saskatchewan, Alberta.

e. *S. (S.) aphrodite whitehousei* (Gunder)

Argynnis whitehousei GUNDER, 1932, p. 279.

TYPE LOCALITY: Jaffray, B[ritish] C[olumbia], Aug[ust] 5, 1929 [A. C. Whitehouse].

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: British Columbia.

f. *S. (S.) aphrodite columbia* (Henry Edwards)

Argynnis Columbia HENRY EDWARDS, 1877, p. [1].

FIGURED: Holland, 1931b, pl. 14, fig. 3.

TYPE LOCALITY: Lahache, near the Alaskan border of British Columbia (G. R. Crotch).

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "No. 4229 Collection Hy. Edwards," "♂ Lahache ♂ like aphe," "B. Columbia," "5412," "Type Specimen," "Argyn. Columbia. Hy. Ed.," and "TYPE No. A.M.N.H.," is hereby designated the lectotype.

DISTRIBUTION: British Columbia.

g. *S. (S.) aphrodite ethne* (Hemming)

Argynnis ethne HEMMING, 1933, p. 276.

Argynnis cypris EDWARDS (*nec* Meigen), 1886, p. 62. Holland, 1931b, pl. 12, figs. 3-4 (and pl. 10, fig. 8 as *electa* Edwards [1878, p. 143]). Arizona to Montana; Colorado, 1871 (T. L. Mead); Colorado and Arizona (H. K. Morrison); Colorado (H. W. Nash and D. Bruce). Hereby fixed as Bighorn, Treasure County, Montana. A male, Carnegie Museum, labeled "type Cypris ♂ Big Horn. Mont.," is hereby designated the lectotype, being the specimen figured by Holland (*op. cit.*, pl. 12, fig. 3). The name *Argynnis ethne* Hemming was proposed for *Argynnis cypris* Edwards, which is a homonym of *Argynnis cypris* Meigen (1828, p. 59). The type of *Argynnis cypris* Edwards is the type of *Argynnis ethne* Hemming.

TYPE LOCALITY: Bighorn, Treasure County, Montana, as fixed above.

TYPE DEPOSITED: Carnegie Museum.

DISTRIBUTION: Montana, Wyoming, Colorado, Utah.

h. *S. (S.) aphrodite byblis* (Barnes and Benjamin)

Dryas aphrodite race byblis BARNES and BENJAMIN, 1926, p. 91.

TYPE LOCALITY: White Mountain, Arizona, (no dates).

TYPE DEPOSITED: United States National Museum.

DISTRIBUTION: Arizona.

SPEYERIA (SPEYERIA) SCUDDER

4. *Speyeria (Speyeria) idalia* (Drury)

Papilio Nymphalis Phalaris Idalia DRURY, [1773], index to vol. 1, p. [1]; 1770, *tom. cit.*, p. 25.

Argynnis astarte FISHER (*nec* Doubleday), 1858, p. 179, pl. 2. Succasunna Plains near Schooley's Mountain, Morris County, [New Jersey], July, 1858. Chicago Natural History

Museum, *ex* collection H. Strecker, *ex* collection T. Reakirt, *ex* collection J. Fisher.

Argynnis Ashtaroth FISHER, 1859, p. 352. This name was proposed for *Argynnis astarte* Fisher, which is a homonym of *Argynnis Astarte* (Doubleday) (1848, p. 181), and is founded on the same specimen.

Argynnis Idalia-Infumata OBERTHÜR, 1912, p. 315, pl. 104, no. 969. Newark, [Essex County], New Jersey, July, 1909. United States National Museum, *ex* collection C. Oberthür.

Argynnis idalia Dru., *tr. f. dolli* GUNDER, 1927, p. 286, pl. B, figs. 20, 20b. Richmond Hill, [Queens County], Long Island, [New York], July 15, 1886 (J. Doll). United States National Museum, *ex* collection Brooklyn Museum.

Argynnis idalia Drury *f. pallida* EISNER, 1942, p. 124. Rijksmuseum van Natuurlijke Historie, Leiden, *ex* collection A. Collier.

FIGURED: Drury, 1770, pl. 13, figs. 1-3.

TYPE LOCALITY: New York, June 28. Hereby fixed as New York City, New York County, New York.

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "No. 1349 Coll. J. Angus, West Farms, New York City.," is hereby designated the neotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Maryland, Delaware, Pennsylvania, Virginia, West Virginia, Indiana, Ohio, Michigan, Illinois, Minnesota, Wisconsin, Kansas, Nebraska, Montana, South Dakota.

5. *Speyeria (Speyeria) nokomis* (Edwards)

a. *S. (S.) nokomis nokomis* (Edwards)

Argynnis Nokomis EDWARDS, [1863b], p. 221. *Acidalia* Hbn., *Semnopsyche* Seudder, *nokomis f. valesinoides-alba* REUSS, 1926a, p. 69. Berlin Museum.

FIGURED: Edwards, 1868, p. [71], pl. *Argynnis* 4 [original plate].

TYPE LOCALITY: Rocky Mountains and mountains of California. Hereby fixed as Mount Sneffels, Ouray County, Colorado.

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "Osler Sneffels Mts Ouray Co Col Aug 9000 Ft.,"

"A. nokomis," and "Ex Coll. Wm. C. Wood Acc. 36915," is hereby designated the neotype.

DISTRIBUTION: Colorado.

b. **S. (S.) nokomis nigrocaerulea** (W. P. and T. D. A. Cockerell)

Argynnis nitocris var. *nigrocaerulea* W. P. and T. D. A. COCKERELL, 1900, p. 622.

Argynnis nitocris ab. *rufescens* T. D. A. COCKERELL, 1909, p. 186. Sapello Cañon, Beulah, [San Miguel County, New Mexico]. United States National Museum.

TYPE LOCALITY: Sapello Can[y]on, Beulah, [San Miguel County], New Mexico, August, 1900.

TYPE DEPOSITED: United States National Museum.

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: New Mexico.

c. **S. (S.) nokomis nitocris** (Edwards)

Argynnis Nitocris EDWARDS, 1874a, p. 15; 1879b, p. 83.

FIGURED: Holland, 1931b, pl. 13, fig. 4.

TYPE LOCALITY: White Mountains, Arizona, August, 1873 (H. W. Henshaw).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Nitocris ♂ W. Mts. Ariz. type," and "Butterfly Book Pl. XIII Fig. 4," is hereby designated the lectotype, being the specimen figured by Holland (*loc. cit.*).

DISTRIBUTION: Arizona, Utah, Nevada.

d. **S. (S.) nokomis apacheana** (Skinner)

Argynnis apacheana SKINNER, 1918, p. 67.

Argynnis apacheana, Skinner. aberration *hermosa* COMSTOCK, 1925a, p. 3. Comstock, 1927, pl. 23, fig. 4. Round Valley, Inyo County, California, July 30, 1922 (J. A. Comstock). Los Angeles County Museum. Comstock, 1928, p. 89, pl. 17, figs. a, b; 1940, p. 77, pl. 8, fig. B.

FIGURED: Edwards, 1873, pl. *Argynnis* 4 [redrawn plate], figs. 1-4, as *nokomis* Edwards.

TYPE LOCALITY: Arizona.

TYPE DEPOSITED: Academy of Natural Sciences of Philadelphia.

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 157.

DISTRIBUTION: Arizona, California.

e. **S. (S.) nokomis coerulescens** (Holland)

Argynnis nitocris, var., *coerulescens* HOLLAND, 1900, p. 332.

FIGURED: Holland, 1931b, pl. 55, figs. 2-4.

TYPE LOCALITY: Head of Rio Piedras Verdes, Sierra Madre region, Chihuahua, Mexico, 7100 to 7300 feet, [September (C. H. T. Townsend)].

TYPE DEPOSITED: A male, Carnegie Museum, labeled "A. nitocris var. *coerulescens*, ♂ Type. Holland. Chihuahua, 7200 ft. Sept. 15/99. Townsend," "Aug. 24," "Chihuahua Townsend," and "Butterfly Book Pl. 55 Fig. 3," is hereby designated the lectotype, being the specimen figured by Holland (*op. cit.*, pl. 55, fig. 3).

DISTRIBUTION: Chihuahua.

f. **S. (S.) nokomis wenona** dos Passos and Grey

Speyeria wenona DOS PASSOS AND GREY, 1945b, p. 1.

FIGURED: *Tom. cit.*, figs. 1-2.

TYPE LOCALITY: Cerro Potosi, Municipio de Galeana, Nuevo Leon, Mexico, 12,000 feet, July 18, 1938 (R. A. Schneider).

TYPE DEPOSITED: American Museum of Natural History.

DISTRIBUTION: Nuevo Leon.

6. **Speyeria (Speyeria) edwardsii** (Reakirt)

Argynnis Edwardsii REAKIRT, 1866a, p. 137.

A[cidalia] Edwardsi montana REUSS, 1926b, p. 439. Montana. Berlin Museum.

Argynnis edwardsii Reak., tr. f. *edonis* GUNDER, 1934, p. 125. Beaver City, Larimer County, Colorado, (10-12,000 f[ee]t), Aug[ust] 1, 1892 (C. P. Gillette). American Museum of Natural History, ex collection J. D. Gunder.

FIGURED: Holland, 1931b, pl. 11, figs. 4-5.

TYPE LOCALITY: California; Pike's Peak, [Teller County], Colorado Territory, (Coll[ection] Tryon Reakirt.) Colorado Territory; Washington, D[istrict of] C[olumbia]? (Coll[ection] W. H. Edwards.) Rocky Mountains. (Coll[ection] Ent[omological] Soc[iety].) Hereby fixed as Pike's Peak, Teller County, Colorado.

TYPE DEPOSITED: A male, Chicago Natural History Museum, ex collection

H. Strecker, *ex* collection T. Reakirt, labeled "A. Edwardsii Reak Orig. Type Coll Reak," is hereby designated the lectotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19.

DISTRIBUTION: Manitoba, Alberta, Nebraska, Montana, South Dakota, Wyoming, Colorado.

7. *Speyeria (Speyeria) coronis* (Behr)

a. *S. (S.) coronis coronis* (Behr)

Argynnis Coronis BEHR, 1864, p. 435.

Argynnis californica SKINNER, 1917, p. 328. Edwards, 1887, pl. *Argynnis* 4, figs. 1-4. Alma, Santa Clara County, California (J. G. Grundel). Academy of Natural Sciences of Philadelphia.

FIGURED: Holland, 1931b, pl. 11, figs. 10-11.

TYPE LOCALITY: Hereby fixed as Alma, Santa Clara County, California.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Coronis ♂ Behr's type," and "juba B type," is hereby designated the lectotype.

DISTRIBUTION: California.

b. *S. (S.) coronis hennei* (Gunder)

Argynnis hennei GUNDER, 1934, p. 126.

TYPE LOCALITY: Near summit, elevation 7700 f[ee]t, M[oun]t Pinos, Frazier Mountain Park, Santa Barbara Nat[ional] Forest, Ventura Co[unty], Calif[ornia], July 10, 1933 (C. Henne and J. D. Gunder).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: California.

c. *S. (S.) coronis semiramis* (Edwards)

Argynnis Semiramis EDWARDS, 1886, p. 61.

Argynnis semiramis Edw., tr. f. *bernardensis* GUNDER, 1933, p. 172. Camp Wasew[a]gan for Boy Scouts, San Bernardino M[oun]t[ain]s, San Bernardino Co[unty], Calif[ornia], 5000 feet, July 14, 1932 (J. S. Garth). American Museum of Natural History, *ex* collection J. D. Gunder.

FIGURED: Holland, 1931b, pl. 13, figs. 2-3. This specimen cannot be a type because it was collected after the publication of the original description.

TYPE LOCALITY: San Bernardino, [San

Bernardino County], California (W. G. Wright).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Semiramis ♂ So. Cala. W G W," is hereby designated the lectotype.

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: California.

d. *S. (S.) coronis carolae* (dos Passos and Grey)

Argynnis coronis carolae DOS PASSOS AND GREY, 1942, p. 2.

FIGURED: *Tom. cit.*, fig. 1.

TYPE LOCALITY: Charleston Park, Clark County, Nevada, [8000 feet], July 8-9, 1928 (E. Schiffer).

TYPE DEPOSITED: American Museum of Natural History.

DISTRIBUTION: Nevada.

e. *S. (S.) coronis gunderi* (Comstock)

Argynnis gunderi COMSTOCK, 1925b, p. 67.

FIGURED: Comstock, 1927, pl. 27, fig.

4.

TYPE LOCALITY: [Mountains above Davis Creek ranger station, north of Alturas], Modoc Co[unty], Cal[ifornia], June 3, 1924 [J. A. Comstock].

TYPE DEPOSITED: Los Angeles County Museum.

DISTRIBUTION: California.

f. *S. (S.) coronis simaetha* dos Passos and Grey

Speyeria coronis simaetha DOS PASSOS AND GREY, 1945b, p. 2.

FIGURED: *Tom. cit.*, figs. 5-6.

TYPE LOCALITY: Black Canyon, Cascade Mountains, near Brewster, Washington, June 25, 1939 (J. C. Hopfinger).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection L. P. Grey.

DISTRIBUTION: Oregon, Washington.

g. *S. (S.) coronis snyderi* (Skinner)

Argynnis Snyderi SKINNER, 1897, p. 154.

FIGURED: Holland, 1931b, pl. 18, fig. 6.

TYPE LOCALITY: Salt Lake City, [Salt Lake County], Utah, June 23, 1895 (A. J. Snyder); Ogden, [Weber County, Utah],

July 6, 1895 (A. J. Snyder). Hereby fixed as City Creek Canyon, Salt Lake City, Salt Lake County, Utah.

TYPE DEPOSITED: A male, Academy of Natural Sciences of Philadelphia, labeled "Salt Lake 6/23/95," "Ut.," "collect. Skinner," and "TYPE No. 7033 *Argynnis snyderi* Henry Skinner," is hereby designated the lectotype.

DISTRIBUTION: Montana, Wyoming, Utah, Nevada, California, Oregon.

h. *S. (S.) coronis halcyone* (Edwards)

Argynnis Halcyone EDWARDS, [1869], p. [81].

FIGURED: *Tom. cit.*, pl. *Argynnis* 9; Holland, 1931b, pl. 13, figs. 5-6.

TYPE LOCALITY: Colorado (J. W. Velie). Hereby fixed as Estes Park, Larimer County, Colorado.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "*Halcyone* ♂ type. Colo.," is hereby designated the neotype.

The original types were destroyed, according to Barnes and McDunnough (1916, p. 78).

DISTRIBUTION: Colorado.

8. *Speyeria (Speyeria) zerene* (Boisduval)

a. *S. (S.) zerene zerene* (Boisduval)

Argynnis Zerene BOISDUVAL, 1852, p. 303.

Argynnis monticola BEHR, 1863, p. 84. Holland, 1931b, pl. 13, figs. 7-8, pl. 14, fig. 17. Yosemite Valley, and other localities of the Sierra Nevada [Mountains, California]. Hereby fixed as Yosemite Valley, Mariposa County, California. A male, Chicago Natural History Museum, ex collection H. Strecker, ex collection H. Behr, labeled "*A. monticola* Behr orig. Type Dr. Behr," and "*Argynnis* sp. ♂ Transaction," is hereby designated the lectotype.

FIGURED: Oberthür, 1914, pl. 258, figs. 2168-2169.

TYPE LOCALITY: In the low mountains of California, June (P. J. M. Lorquin). Hereby fixed as Yosemite Valley, Mariposa County, California.

TYPE DEPOSITED: A male, United States National Museum, labeled "*Zerene*. Boisd. Calif. Californie.," "EX MUSAEODris. BOISDUVAL," "*Argynnis Zerene* ♂ l'un des 2 types. Boisduval. Ann. Fr. 1852. p. 303.," "Oberthür Collection," "2168 [figure]," "Type A *zerene* Bdv. a/c

Hofer," and "Barnes Collection," is hereby designated the lectotype, being the specimen figured by Oberthür (*tom. cit.*, pl. 258, fig. 2168).

DISTRIBUTION: California.

b. *S. (S.) zerene conchyliatus* (Comstock)

Argynnis zerene form *conchyliatus* COMSTOCK, 1925b, p. 63.

Argynnis zerene ab. *shastaensis* COMSTOCK, 1925b, p. 65. Comstock, 1927, pl. 26, fig. 1. M[oun]t Shasta, Siskiyou Co[unty, California], July [J. E. Cottle]. American Museum of Natural History, ex collection J. D. Gunder, ex collection J. E. Cottle.

FIGURED: Comstock, 1927, pl. 25, fig. 1.

TYPE LOCALITY: M[oun]t Shasta, [Siskiyou County], Calif[ornia], July 19, 1921 [J. A. Kusche].

TYPE DEPOSITED: Los Angeles County Museum.

DISTRIBUTION: California, Oregon.

c. *S. (S.) zerene sordida* (Wright)

Argynnis Bremneri [sic] v. *Sordida* WRIGHT, 1905, p. 133.

TYPE LOCALITY: ?Puget Sound, Wash[ington] (W. G. Wright).

TYPE DEPOSITED: California Academy of Sciences, Ent. No. 4326.

DISTRIBUTION: ?Washington.

d. *S. (S.) zerene malcolmi* (Comstock)

Argynnis malcolmi COMSTOCK, 1920a, p. 4.

Argynnis montivaga (Behr.), race *malcolmi* Comst., tr. f. *sineargentatus* GUNDER, 1927, p. 286, pl. B, fig. 19. Mammoth, Mono Co[unty], Calif[ornia], Aug[ust] 7, 1922. American Museum of Natural History, ex collection J. D. Gunder.

FIGURED: Comstock, 1920a, pl. [1], figs. 4-6.

TYPE LOCALITY: Mammoth, [Mono County], California, August 18, 1918 (G. Malcolm).

TYPE DEPOSITED: Los Angeles County Museum.

DISTRIBUTION: California.

e. *S. (S.) zerene hippolyta* (Edwards)

Argynnis Hippolyta EDWARDS, 1879b, p. 81.

FIGURED: Holland, 1931b, pl. 12, fig. 10.

TYPE LOCALITY: Oregon and northern

California. Hereby fixed as Oceanside, Tillamook County, Oregon.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Hippolyta ♂ Oreg.," and "Butterfly Book Pl. XII Fig. 10," is hereby designated the lectotype, being the specimen figured by Holland (*loc. cit.*).

DISTRIBUTION: Oregon, Washington.

f. **S. (S.) zerene behrensii** (Edwards)

Argynnis Behrensii EDWARDS, 1869, p. 370.

FIGURED: Holland, 1931b, pl. 14, fig. 10.

TYPE LOCALITY: Mendocino, [Mendocino County], California.

TYPE DEPOSITED: A male, Carnegie Museum, *ex* collection J. Behrens, labeled "Behrensii ♂ type. Mendo. Cal.," is hereby designated the lectotype.

DISTRIBUTION: California.

g. **S. (S.) zerene myrtleae** dos Passos and Grey

Speyeria zerene myrtleae DOS PASSOS AND GREY, 1945b, p. 3.

FIGURED: *Tom. cit.*, figs. 7-8.

TYPE LOCALITY: San Mateo, [San Mateo County], California, July 27, 1919 (W. F. Breeze).

TYPE DEPOSITED: American Museum of Natural History.

DISTRIBUTION: California.

h. **S. (S.) zerene bremnerii** (Edwards)

Argynnis Bremnerii EDWARDS, 1872, p. 63.

FIGURED: Holland, 1931b, pl. 10, fig. 7.

TYPE LOCALITY: San Juan Island, [Vancouver], 1871 (Dr. Bremner).

TYPE DEPOSITED: A male, Carnegie Museum, *ex* collection H. Edwards, labeled "Bremnerii ♂ type Vancouver," and "Butterfly Book Pl. X Fig. 7," is hereby designated the lectotype, being the specimen figured by Holland (*loc. cit.*).

DISTRIBUTION: British Columbia, Washington.

i. **S. (S.) zerene picta** (McDunnough)

Argynnis halcyone Edw., race *picta* McDUNNOUGH, 1924, p. 43.

TYPE LOCALITY: Aspen Grove, B[ritish] C[olumbia], July 14, [1922] (P. N. Vroom).

TYPE DEPOSITED: Canadian National Collection No. 634.

DISTRIBUTION: British Columbia.

j. **S. (S.) zerene garretti** (Gunder)

Argynnis garretti GUNDER, 1932, p. 282.

TYPE LOCALITY: Cranbrook, B[ritish] C[olumbia], Can[ada], July 29, 1929.

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: British Columbia, Montana, Idaho, Wyoming, Oregon, Washington.

k. **S. (S.) zerene sinope** dos Passos and Grey

Speyeria zerene sinope DOS PASSOS AND GREY, 1945b, p. 4.

FIGURED: *Tom. cit.*, figs. 9-10.

TYPE LOCALITY: Rocky Mountain National Park, Estes Park area, Colorado, 8000 feet, July (R. Weist).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection L. P. Grey.

DISTRIBUTION: Colorado.

l. **S. (S.) zerene platina** (Skinner)

Argynnis platina SKINNER, 1897, p. 154.

FIGURED: Holland, 1931b, pl. 18, fig. 7.

TYPE LOCALITY: Ogden, [Weber County], Utah, July 18-24 (A. J. Snyder); Beaver Can[y]on, [Fremont County], Idaho, nearly same dates (A. J. Snyder). Hereby fixed as Ogden, Weber County, Utah.

TYPE DEPOSITED: A male, Academy of Natural Sciences of Philadelphia, labeled "Ogden 7/18/95," "collect. Skinner," and "TYPE No. 7032 Argynnis platina Henry Skinner," is hereby designated the lectotype.

DISTRIBUTION: Idaho, New Mexico, Utah, Nevada.

m. **S. (S.) zerene pfoutsi** (Gunder)

Argynnis pfoutsi GUNDER, 1933, p. 171.

TYPE LOCALITY: M[oun]t Loafer, n[ea]r Payson, [Utah County], Utah, July 16, 1932.

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Utah.

n. **S. (S.) zerene cynna** dos Passos and Grey

Speyeria zerene cynna DOS PASSOS AND GREY, 1945b, p. 4.

FIGURED: *Tom. cit.*, figs. 11-12.

TYPE LOCALITY: Humboldt National Forest, Ruby Valley, Elko County, Nevada, 1931-1932 (E. Schiffel).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Nevada, Oregon.

9. **Speyeria (Speyeria) callippe** (Boisduval)

a. **S. (S.) callippe comstocki** (Gunder)

Argynnis callippe [sic] Bdv. var. *comstocki* GUNDER, 1925, p. 8.

Argynnis comstocki Gun., tr. f. *creelmani* GUNDER, 1934, p. 127. East San Diego, [San Diego County], California, June 13, 1933. American Museum of Natural History, *ex* collection J. D. Gunder.

FIGURED: Gunder, 1925, pl. 1, figs. 6-7.

TYPE LOCALITY: Los Angeles, Los Angeles County, California, May 26, 1919.

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

PREPARATORY STAGES: Comstock, 1940, p. 77, pl. 8, fig. C.

DISTRIBUTION: California.

b. **S. (S.) callippe callippe** (Boisduval)

Argynnis callippe BOISDUVAL, 1852, p. 302.

FIGURED: Oberthür, 1914, pl. 258, figs. 2166-2167.

TYPE LOCALITY: California, June (P. J. M. Lorquin). Hereby fixed as San Francisco, San Francisco County, California.

TYPE DEPOSITED: A male, United States National Museum, labeled "Calippe. Boisd. Calif. Californie.," "EX MUSAEODris. BOISDUVAL," "Argynnis Callippe Boisduval ♂ type.," "Oberthür Collection," "2166 [figure]," "Type callippe Bdv.

a/c Hofer," and "Barnes Collection," is hereby designated the lectotype, being the specimen figured by Oberthür (*tom. cit.*, pl. 258, fig. 2166).

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: California.

c. **S. (S.) callippe liliana** (Henry Edwards)

Argynnis Liliana HENRY EDWARDS, [1877], p. 170.

Argynnis Liliana var. *Baroni* EDWARDS, 1881, p. 2. Northern California (O. T. Baron). Hereby fixed as Bale Station, near Mount St. Helena, Napa County, California. United States National Museum, *ex* collection Brooklyn Museum.

FIGURED: Holland, 1931b, pl. 13, fig. 11.

TYPE LOCALITY: [Bale Station], near [Mount] St. Helena, Napa Co[unty, California] (H. Edwards).

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "5415 California.," "TYPE No. A.M. N.H.," "No. 4276. Collection Hy. Edwards.," and "Argyn. Liliana Hy. Edw.," is hereby designated the lectotype.

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: California.

d. **S. (S.) callippe semivirida** (McDunnough)

Argynnis nevadensis Edw., race *semivirida* McDUNNOUGH, 1924, p. 42.

TYPE LOCALITY: Aspen Grove, B[ritish] C[olumbia], July 14, 1922 (P. N. Vroom).

TYPE DEPOSITED: Canadian National Collection No. 633.

DISTRIBUTION: British Columbia, Oregon.

e. **S. (S.) callippe elaine** dos Passos and Grey

Speyeria callippe elaine DOS PASSOS AND GREY, 1945b, p. 5.

FIGURED: *Tom. cit.*, figs. 13-14.

TYPE LOCALITY: Butte Falls, [Jackson County], Oregon, May 21, 1931 (W. F. Lawrence).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Oregon.

f. **S. (S.) callippe rupestris** (Behr)

Argynnis rupestris BEHR, 1863, p. 84.

FIGURED: Holland, 1931b, pl. 12, figs. 8-9.

TYPE LOCALITY: Steep rocky declivities of the lower part of the Sierra [Nevada Mountains, California] at a moderate elevation (W. H. Brewer). Hereby fixed as Trinity Center, Trinity County, California.

TYPE DEPOSITED: A male, Chicago Natural History Museum, *ex* collection H. Strecker, *ex* collection H. Behr, labeled "A. Rupestris Behr Orig. Type Dr. Behr," "Rupestris," and "We would restrict A. rupestris Behr to the species represented by this ♂ specimen B. & McD.," is hereby designated the lectotype.

DISTRIBUTION: California.

g. **S. (S.) callippe juba** (Boisduval)

Argynnis Juba BOISDUVAL, 1869, p. 60.

Argynnis Inornata EDWARDS, 1872, p. 64. Holland, 1931b, pl. 13, fig. 10. Downieville, [Sierra County], California. A male, Carnegie Museum, *ex* collection J. Behrens, labeled "Inornata ♂ type Cala," is hereby designated the lectotype.

FIGURED: Oberthür, 1914, pl. 262, fig. 2197.

TYPE LOCALITY: High prairies of the Juba [Yuba], California (P. J. M. Lorquin). Hereby fixed as Downieville, Sierra County, California.

TYPE DEPOSITED: A male, United States National Museum, labeled "EX MUSAE O Dris. BOISDUVAL," "Coronis Behr Juba Bd. Calif.," "Supposed ♂ type juba Bdv.," "Oberthür Collection," and "2197 [figure]," is hereby designated the lectotype, being the specimen figured by Oberthür (*loc. cit.*).

DISTRIBUTION: Nevada, California.

h. **S. (S.) callippe laura** (Edwards)

Argynnis Laura EDWARDS, 1879a, p. 49.

FIGURED: Holland, 1931b, pl. 12, figs. 11-12.

TYPE LOCALITY: Nevada (H. K. Morrison). Pending further collecting it seems unwise to fix the type locality of this subspecies, which is probably in the region between Carson City and Reno, Nevada.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Laura ♂ Nev. Mor.," "Collection W. H. Edwards," and "Butterfly Book Pl. XII Fig. 11," is hereby designated the lectotype, being the specimen figured by Holland (*op. cit.*, pl. 12, fig. 11).

DISTRIBUTION: Nevada.

i. **S. (S.) callippe sierra dos Passos and Grey**

Speyeria callippe sierra DOS PASSOS AND GREY, 1945b, p. 5.

FIGURED: *Tom. cit.*, figs. 15-16.

TYPE LOCALITY: Gold Lake, Sierra County, California, July 6, 1928 (C. Hill).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: California.

j. **S. (S.) callippe nevadensis** (Edwards)

Argynnis Nevadensis EDWARDS, 1870a, p. 14.

FIGURED: Holland, 1931b, pl. 10, fig. 4.

TYPE LOCALITY: Valleys of the Sierra [Nevada Mountains], near Virginia City, [Storey County, Nevada], 1869.

TYPE DEPOSITED: A female, American Museum of Natural History, labeled "Virj. City," "Nevada," "258," "CO-TYPE No. A.M.N.H.," "No. 4249. Collection Hy. Edwards.," and "true Nevadensis W H E," is hereby designated the lectotype.

DISTRIBUTION: Nevada.

k. **S. (S.) callippe macaria** (Edwards)

Argynnis Macaria EDWARDS, 1877, p. 86.

FIGURED: Holland, 1931b, pl. 13, fig. 9.

TYPE LOCALITY: Havilah, [Kern County], California.

TYPE DEPOSITED: A male, Carnegie Museum, *ex* collection H. Edwards, labeled "type Macaria ♂ Cala. H. Edw.," "Collection W. H. Edwards," and "Butterfly Book Pl. XIII Fig. 9," is hereby designated the lectotype, being the specimen figured by Holland (*loc. cit.*).

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: California.

1. *S. (S.) callippe laurina* (Wright)

Argynnis v. *Laurina* WRIGHT, 1905, p. 138.

Argynnis Wrighti WRIGHT, 1905, p. 139. Hereby fixed as the Greenhorn Mountains, Kern County, California. A male, California Academy of Sciences, Ent. No. 4290, is hereby designated the lectotype, being the specimen figured by Wright (*op. cit.*, pl. 15, fig. 134). The type of *Argynnis* v. *Laurina* Wright is the type of *Argynnis Wrighti* Wright.

FIGURED: *Op. cit.*, pl. 15, fig. 134.

TYPE LOCALITY: S[outhern] Cal[ifornia] Mountains, [California], June 20, 1888 (W. G. Wright). Hereby fixed as the Greenhorn Mountains, Kern County, California.

TYPE DEPOSITED: California Academy of Sciences, Ent. No. 4290.

DISTRIBUTION: California.

m. *S. (S.) callippe harmonia* dos Passos and Grey

Speyeria callippe harmonia DOS PASSOS AND GREY, 1945b, p. 6.

FIGURED: *Tom. cit.*, figs. 17-18.

TYPE LOCALITY: Mount Wheeler (Snake Range near Utah border), Nevada, June 24, 1929.

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: Idaho, Utah, Nevada, Oregon.

n. *S. (S.) callippe meadii* (Edwards)

Argynnis Meadii EDWARDS, 1872, p. 67.

Argynnis nevadensis Edw., race *meadii* Edw., tr. f. *gerhardi* GUNDER, 1927, p. 287, pl. B, figs. 24, 24a. Colorado (D. Bruce). Hereby fixed as Turkey Creek Junction, Jefferson County, Colorado. Chicago Natural History Museum, ex collection H. Strecker.

FIGURED: Holland, 1931b, pl. 14, figs. 1-2.

TYPE LOCALITY: Turkey Creek Junction, [Jefferson County], Colorado, [June], 1871 (T. L. Mead, and Hayden Yellowstone Expedition).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Meadii type return to T L," and "Colorado," is hereby designated the lectotype.

DISTRIBUTION: Colorado.

o. *S. (S.) callippe gallatini* (McDunnough)

Argynnis nevadensis var. *gallatini* McDUNNOUGH, 1929, p. 106.

TYPE LOCALITY: Elkhorn Ranch, Upper Gallatin Canyon, [Gallatin County], Montana, 7000 feet], Aug[ust] 1, [1928] (J. H. McDunnough).

TYPE DEPOSITED: Canadian National Collection No. 2954.

DISTRIBUTION: Montana.

p. *S. (S.) callippe calgariana* (McDunnough)

Argynnis nevadensis Edw., race *calgariana* McDUNNOUGH, 1924, p. 42.

TYPE LOCALITY: Calgary, [head of Pine Creek], Al[ber]ta, June 23, 1900 (F. H. Wolley-Dod).

TYPE DEPOSITED: Canadian National Collection No. 632.

DISTRIBUTION: Manitoba, Saskatchewan, Alberta.

10. *Speyeria* (*Speyeria*) *egleis* (Behr)a. *S. (S.) egleis adiate* (Edwards)

Argynnis Adiate EDWARDS, 1864b, p. 436.

Argynnis Adiante BOISDUVAL, 1869, p. 61. ?Eastern part of California (P. J. M. Lorquin). Hereby fixed as Santa Cruz Mountains, California. A male, Carnegie Museum, labeled "adianthe type," and "type *Adiante* ♂ type sent W H E by Dr Boisduval & figd in But. N. A.," is hereby designated the lectotype.

A[rgynnis] Adraste KIRBY (*lapsus calami*), 1871, p. 160.

Argynnis adianthe BARNES AND McDUNNOUGH (*lapsus calami*), 1917, p. 8.

FIGURED: Holland, 1931b, pl. 14, fig. 4.

TYPE LOCALITY: California. Hereby fixed as Santa Cruz, Santa Cruz County, California.

TYPE DEPOSITED: A female, United States National Museum, labeled "Adiante Bd Calif.," "EX MUSAEOL Dris. BOISDUVAL," "Oberthur Collection," "Type adiante a/c Hofer," and "Barnes Collection," is hereby designated the lectotype.

DISTRIBUTION: California.

b. *S. (S.) egleis clemencei* (Comstock)

Argynnis adiate race *clemencei* COMSTOCK, 1925b, p. 67.

FIGURED: Comstock, 1927, pl. 28, fig. 7.

TYPE LOCALITY: [In low mountains west of] Atascadero, [San Luis Obispo County], Calif[ornia], June 30, 1922 (V. L. Clemence).

TYPE DEPOSITED: Los Angeles County Museum.

DISTRIBUTION: California.

c. S. (S.) *egleis atossa* (Edwards)

Argynnis Atossa EDWARDS, 1890, p. [125].

Argynnis atossa form *tejonica* COMSTOCK, 1925b, p. 68. Comstock, 1927, pl. 28, fig. 6. Tejon region, (Collins Ranch), [Los Angeles County], California, August 12, 1923 (J. D. Gunder). Los Angeles County Museum.

FIGURED: Edwards, 1890, pl. *Argynnis* 8, figs. 4-6; Holland, 1931b, pl. 13, fig. 12.

TYPE LOCALITY: Tehachipe [sic], [Kern County], south California, about 4800 feet, July 4-8, 1889 (H. K. Burrison).

TYPE DEPOSITED: A female, Carnegie Museum, labeled "type Atossa ♀ Tehachipe. Cal. 1889. Burrison," and "Collection W. H. Edwards," is hereby designated the lectotype.

PREPARATORY STAGES: Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: California.

d. S. (S.) *egleis tehachapina*
(Comstock)

Argynnis montivaga, var. *tehachapina* COMSTOCK, 1920b, p. 6.

FIGURED: *Tom. cit.*, pl. [1], figs. 7-9.

TYPE LOCALITY: The highest peak, 7994 feet, Tehachapi M[oun]t[ain]s, Kern County, California, July 18, 1918 (J. A. Comstock).

TYPE DEPOSITED: Los Angeles County Museum.

DISTRIBUTION: California.

e. S. (S.) *egleis egleis* (Behr)

A[rgynnis] Egleis BEHR, 1862, p. 174.

Argynnis montivaga BEHR, 1863, p. 84. Wright, 1905, pl. 17, figs. 145, a, b, c. Sierra [Nevada Mountains, California], 10,500 feet. Hereby fixed as vicinity of Gold Lake, Sierra County, California. A male, Chicago Natural History Museum, ex collection H. Strecker, ex collection H. Behr, labeled "A. Montivago, Behr orig. Type Dr. Behr," is hereby designated the lectotype.

Argynnis Astarte EDWARDS (nec *Argynnis Astarte* [Doubleday], nec *Argynnis Astarte* Ed-

wards, 1862, p. 221), 1864b, p. 435. Mountainous regions of California. Hereby fixed as vicinity of Gold Lake, Sierra County, California. The lectotype of *A[rgynnis] Egleis* Behr, as hereinafter designated, is hereby designated the type of *Argynnis Astarte* Edwards, 1864.

Argynnis montivaga Behr. ab. ♂ *mammothi* GUNDER, 1924, p. 157, pl. 2, fig. H. Mammoth Camp, Mono County, California, July 31, 1921. Collection J. Riddell, Hollywood, California.

Argynnis montivaga Behr., tr. f. *boharti* GUNDER, 1929, p. 326, pl. 31, fig. 5. Mono Pass Trail (Yosemite to Mono Lake), California], July 16, 1929 (R. M. Bohart). American Museum of Natural History, ex collection J. D. Gunder.

FIGURED: Oberthür, 1914, pl. 261, fig. 2194, pl. 262, fig. 2195.

TYPE LOCALITY: High up in the mountains [of California]. Hereby fixed as vicinity of Gold Lake, Sierra County, California.

TYPE DEPOSITED: A male, United States National Museum, labeled "Prob. type *egleis* Bdv.," "Egleis Bdv. California," "EX MUSAE O Dris. BOISDUVAL," "Argynnis Egleis, Bdv. ♂ ex typic. specim.," "Oberthür Collection," "2194 [figure]," and "Barnes Collection," is hereby designated the lectotype, being the specimen figured by Oberthür (*tom. cit.*, pl. 261, fig. 2194).

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: California.

f. S. (S.) *egleis oweni* (Edwards)

Argynnis Oweni EDWARDS, 1892, p. 105.

FIGURED: Holland, 1931b, pl. 12, figs. 5-6.

TYPE LOCALITY: M[oun]t Shasta, [Siskiyou County, California], 7500 feet (E. T. Owen).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Oweni ♂ Shasta," and "Butterfly Book Pl. XII Fig. 5," is hereby designated the lectotype, being the specimen figured by Holland (*op. cit.*, pl. 12, fig. 5).

DISTRIBUTION: California, Oregon.

g. S. (S.) *egleis linda* (dos Passos and Grey)

Argynnis utahensis linda DOS PASSOS AND GREY, 1942, p. 1.

FIGURED: *Tom. cit.*, fig. 1.

TYPE LOCALITY: Heyburn Peak, Sawtooth-Boise, [Custer County], Idaho, 9500-10,000 feet, July 15, 1931 (C. W. Herr).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Idaho.

h. **S. (S.) egleis macdunnoughi**
(Gunder)

Argynnis macdunnoughi GUNDER, 1932, p. 280.

TYPE LOCALITY: Elkhorn Ranch Resort, [Upper Gallatin Canyon], Gallatin County, Mont[ana, 7000 feet], August 1, 1928 (J. H. McDunnough).

TYPE DEPOSITED: Canadian National Collection [No. 3655].

DISTRIBUTION: Montana, Idaho, Wyoming, Oregon.

i. **S. (S.) egleis albrighti** (Gunder)

Argynnis albrighti GUNDER, 1932, p. 281.

TYPE LOCALITY: Highwood M[oun]t[ain]s, Chouteau County, Montana, June 24, 1931 (C. C. Albright).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Montana.

j. **S. (S.) egleis utahensis** (Skinner)

Argynnis utahensis SKINNER, 1919, p. 216.

FIGURED: Holland, 1931b, pl. 56, fig. 3.

TYPE LOCALITY: City Creek Canyon, Salt Lake City, [Salt Lake County], Utah, July 6 (H. Skinner).

TYPE DEPOSITED: Academy of Natural Sciences of Philadelphia.

DISTRIBUTION: Utah, Nevada.

k. **S. (S.) egleis secreta** dos Passos and Grey

Speyeria montivaga secreta DOS PASSOS AND GREY, 1945b, p. 7.

FIGURED: *Tom. cit.*, figs. 19-20.

TYPE LOCALITY: Rocky Mountain National Park, Estes Park area, Colorado, 8000 feet, July, 1942 (R. Weist).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection L. P. Grey.

DISTRIBUTION: Colorado.

11. **Speyeria (Speyeria) atlantis**
(Edwards)

a. **S. (S.) atlantis atlantis** (Edwards)

Argynnis Atlantis EDWARDS, [1863a], p. 54.

A[rgynnis] a[tlantis] ab. *chemo* SCUDDER, 1889, p. 573. Lake Chemo, 10 miles northeast of Bangor, [Penobscot County], M[aine], July 1, 1887 (A. G. Davis). A female, Museum of Comparative Zoölogy, labeled "Lake Chemo. Near Bangor July, 1887 A. G. Davis Arg. ab chemo Scudd." and "M.C.Z. Type 25828," is hereby designated the lectotype.

FIGURED: Holland, 1931b, pl. 10, fig. 9.

TYPE LOCALITY: Mountainous districts of the northern states and parts of British America; Catskill Mountains, [New York], 1861; White Mountains, [New Hampshire]; Williamstown, [Berkshire County], Mass[achusetts]; Lake Winnipeg, [Manitoba], north side of Lake Superior (L. Agassiz); near Hudson's Bay. Fixed as Hunter, [Greene County], Catskill Mountains, New York, by dos Passos (1935, p. 85).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Atlantis ♂ Catskills," is hereby designated the lectotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19; Davenport and Dethier, [1938], p. 158.

DISTRIBUTION: Maritime Provinces, Quebec, Ontario, Maine, Vermont, New Hampshire, Massachusetts, New York, Pennsylvania, West Virginia, Michigan, Minnesota, Wisconsin.

b. **S. (S.) atlantis canadensis** (dos Passos)

Argynnis atlantis canadensis DOS PASSOS, 1935, p. 85.

TYPE LOCALITY: Doyle's Station, Newfoundland, July 20, 1934 (H. McIsaac).

TYPE DEPOSITED: American Museum of Natural History.

DISTRIBUTION: Newfoundland, Labrador.

c. **S. (S.) atlantis hollandi** (Chermock and Chermock)

Argynnis atlantis hollandi CHERMOCK AND CHERMOCK, 1940, p. 82.

TYPE LOCALITY: Riding Mountains, Manitoba, July 24, 1934.

TYPE DEPOSITED: Canadian National Collection [No. 4370].

DISTRIBUTION: Manitoba.

d. **S. (S.) atlantis hesperis** (Edwards)

Argynnis Hesperis EDWARDS, 1864a, p. 502.

FIGURED: Holland, 1931b, pl. 12, figs. 1-2.

TYPE LOCALITY: Rocky Mountains. Hereby fixed as Turkey Creek Junction, Jefferson County, Colorado.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Hesperis ♂ type Colo," is hereby designated the lectotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19.

DISTRIBUTION: Colorado.

e. **S. (S.) atlantis nikias** (Ehrmann)

Argynnis nikias EHLMANN, 1917, p. 55.

TYPE LOCALITY: Temez [sic] Springs, [Sandoval County], New Mexico (J. Woodgate).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "A. nikias Ehrm. ♂. Type," "Jemez Springs J. Woodgate Col. 7/9 1914 New Mexico," "Type," and "Ehrman Coll. Carn. Mus. Acc. 7815," is hereby designated the lectotype.

DISTRIBUTION: New Mexico.

f. **S. (S.) atlantis nausicaa** (Edwards)

Argynnis Nausicaa EDWARDS, 1874b, p. 104.

Argynnis faphrodite forma *Arizonensis* ELWES, 1889, p. 546. Arizona (Wheeler Expedition). A male, Carnegie Museum, labeled "Nausicaa ♂ Ariza. Wheeler Ex type," hereinafter designated the lectotype of *Argynnis Nausicaa* Edwards, is hereby designated the neotype of *Argynnis faphrodite* forma *Arizonensis* Elwes.

FIGURED: Holland, 1931b, pl. 11, fig. 9.

TYPE LOCALITY: Rocky Can[yl]on, [Cochise County], Arizona, August 21, 1874 (H. W. Henshaw).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Nausicaa ♂ Ariza. Wheeler Ex type," is hereby designated the lectotype.

DISTRIBUTION: New Mexico, Arizona.

g. **S. (S.) atlantis chitone** (Edwards)

Argynnis chitone EDWARDS, 1879b, p. 82.

FIGURED: Holland, 1931b, pl. 14, fig. 16.

TYPE LOCALITY: Southern Utah and

Arizona. Hereby fixed as Cedar Breaks National Monument, Iron County, Utah.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Chitone ♂ So. Utah," is hereby designated the lectotype.

DISTRIBUTION: Utah.

h. **S. (S.) atlantis wasatchia** dos Passos and Grey

Speyeria atlantis wasatchia DOS PASSOS AND GREY, 1945b, p. 9.

FIGURED: *Tom. cit.*, figs. 25-26.

TYPE LOCALITY: Payson Canyon, Payson, [Utah County], Utah, July 16, 1932 (L. D. Pfouts).

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: Utah.

i. **S. (S.) atlantis tetonia** dos Passos and Grey

Speyeria atlantis tetonia DOS PASSOS AND GREY, 1945b, p. 9.

FIGURED: *Tom. cit.*, figs. 27-28.

TYPE LOCALITY: Teton Mountains, Wyoming, July 11, 1931.

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: Wyoming.

j. **S. (S.) atlantis viola** dos Passos and Grey

Speyeria atlantis viola DOS PASSOS AND GREY, 1945b, p. 10.

FIGURED: *Tom. cit.*, figs. 29-30.

TYPE LOCALITY: Trail Creek, Sawtooth Mountains, Idaho, 7400 feet, July 11, 1931 (C. W. Herr).

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: Idaho.

k. **S. (S.) atlantis dodgei** (Gunder)

Argynnis dodgei GUNDER, 1931, p. 46.

TYPE LOCALITY: Diamond Lake, Douglas Co[unty], Oregon, July 10, 1930 (J. Strohbeen).

TYPE DEPOSITED: American Museum of Natural History, ex collection J. D. Gunder.

DISTRIBUTION: Idaho, Oregon.

l. **S. (S.) atlantis irene** (Boisduval)*Argynnis Irene* BOISDUVAL, 1869, p. 60.*Argynnis cottlei* COMSTOCK, 1925b, p. 64. Comstock, 1927, pl. 26, fig. 2. Near Alturas, Modoc Co[unty], Calif[ornia], J. E. Cottle]. Collection J. E. Cottle, Hayward, California.

FIGURED: Oberthür, 1914, pl. 262, fig. 2196.

TYPE LOCALITY: Interior of California. Hereby fixed as Massack, Plumas County, California.

TYPE DEPOSITED: A female, United States National Museum, labeled "Montivaga Behr irene Bd. Calif.," "EX MUS-AEO Dris. BOISDUVAL," "Argynnis Egleis ♀ (Irene, Bdv. Lepid. Californie, p. 60) specim. typic.," "Oberthür Collection," "2196 [figure]," "Type irene Bdv. a/c Hofer.," and "Barnes Collection," is hereby designated the lectotype, being the specimen figured by Oberthür (*loc. cit.*).

DISTRIBUTION: California.

m. **S. (S.) atlantis electa** (Edwards)*Argynnis Electa* EDWARDS, 1878, p. 143.*Argynnis Cornelia* EDWARDS, 1892, p. 106. Holland, 1931b, pl. 11, fig. 8. Ouray, [Ouray County], Manitou, [El Paso County], and adjacent districts, Colorado (E. T. Owen), and Crested Butte in the Ouray region, [Gunnison County, Colorado] (D. Bruce). Hereby fixed as Ouray, Ouray County, Colorado, as indicated by Barnes and McDunnough (1916, p. 75). A male, Carnegie Museum, labeled "Ouray," is designated the lectotype, as suggested by Barnes and McDunnough (*loc. cit.*).FIGURED: The specimen figured as *electa* Edwards by Holland, 1931b, pl. 10, fig. 8, is *ethne* Hemming (= *cypri*s Edwards *nec* Meigen).

TYPE LOCALITY: Colorado. Hereby fixed as Rocky Mountain National Park, Colorado.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "type Electa ♂ Colo. Mead '71," "Collection W. H. Edwards," and "Argynnis cornelia ♂. Fide W. J. Holland.," is the lectotype, as pointed out by Barnes and McDunnough (*loc. cit.*).

DISTRIBUTION: Colorado.

n. **S. (S.) atlantis lurana** dos Passos and Grey*Speyeria atlantis lurana* DOS PASSOS AND GREY, 1945b, p. 8.FIGURED: *Tom. cit.*, figs. 23-24.

TYPE LOCALITY: Harney Peak, Black Hills, South Dakota, June 25, 1939 (A. C. Frederick).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection L. P. Grey.

DISTRIBUTION: South Dakota.

o. **S. (S.) atlantis hutchinsi** (Gunder)*Argynnis atlantis beani* B. & Benj., tr. f. *hutchinsi* GUNDER, 1932, p. 280.

TYPE LOCALITY: T[o]w[nshi]p 2 N-[orth] Range 1 W[est], Jefferson County, Mont[ana], July 21, 1929 (R. E. Hutchins).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Montana.

p. **S. (S.) atlantis beani** (Barnes and Benjamin)*Dryas atlantis* race *beani* BARNES AND BENJAMIN, 1926, p. 92.

TYPE LOCALITY: Banff, Al[ber]ta, August 8-15.

TYPE DEPOSITED: United States National Museum.

DISTRIBUTION: Alberta, British Columbia.

q. **S. (S.) atlantis lais** (Edwards)*Argynnis Lais* EDWARDS, 1883b, p. 209.

FIGURED: Holland, 1931b, pl. 14, figs. 12-13.

TYPE LOCALITY: Red Deer River, [Alberta] (G. Geddes); Fort Edmonton, [Edmonton, Alberta], *fide* Geddes (1883, p. 222). Hereby fixed as Edmonton, Alberta.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Lais ♂ N. W. Terr type Ged.," is hereby designated the lectotype.

DISTRIBUTION: Saskatchewan, Alberta.

r. **S. (S.) atlantis dennisi** (Gunder)*Argynnis lais* Edw., tr. f. *dennisi* GUNDER, 1927, p. 287.FIGURED: *Tom. cit.*, pl. B, figs. 21, 21a.

TYPE LOCALITY: Beulah, Man[itoba], Can[ada], June 28, 1910 (A. J. Dennis).

TYPE DEPOSITED: American Museum of Natural History, *ex* collection J. D. Gunder.

DISTRIBUTION: Manitoba.

12. **Speyeria (Speyeria) hydaspe**
(Boisduval)

a. **S. (S.) hydaspe hydaspe** (Boisduval)

Argynnis Hydaspe BOISDUVAL, 1869, p. 60.

FIGURED: Oberthür, 1914, pl. 263, figs. 2200-2202.

TYPE LOCALITY: Southern California. Hereby fixed as Yosemite Valley, Mariposa County, California.

TYPE DEPOSITED: A male, United States National Museum, labeled "Argynnis Hydaspe ♂, Boisduv. *ex* 2 typic. specim.," "Argynnis Hydaspe Bdv Californie," "Monticola Behr. Hydaspe Bd. Californ.," "EX MUSAE O Dris. BOISDUVAL," "Oberthür Collection," "2200 [figure]," "Type hydaspe a/c Hofer," and "Barnes Collection," is hereby designated the lectotype, being the specimen figured by Oberthür (*tom. cit.*, pl. 263, fig. 2200).

DISTRIBUTION: California.

b. **S. (S.) hydaspe viridicornis**
(Comstock)

Argynnis hydaspe form *viridicornis* COMSTOCK, 1925b, p. 64.

FIGURED: Comstock, 1927, pl. 25, fig. 3.

TYPE LOCALITY: Greenhorn Mountains, Calif[ornia], July, 1923 (W. H. Ireland).

TYPE DEPOSITED: Los Angeles County Museum.

PREPARATORY STAGES: Comstock, 1940, p. 77, pl. 8, fig. A.

DISTRIBUTION: California.

c. **S. (S.) hydaspe purpurascens** (Henry Edwards)

Argynnis monticola var. *purpurascens* HENRY EDWARDS, [1877], p. 170.

Argynnis hydaspe ab. *caliginosa* COMSTOCK, 1925b, p. 66. Comstock, 1927, pl. 26, fig. 3. Modoc County, Calif[ornia], J. E. Cottle. American Museum of Natural History, *ex* collection J. D. Gunder, *ex* collection J. E. Cottle.

FIGURED: Holland, 1931b, pl. 55, fig. 7.

TYPE LOCALITY: Soda Springs, Siskiyou County, [California], fall, 1875 (H. Edwards).

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "2243 Cal. Soda Springs Siskiyou Co.," "Argyn. var. *Purpurascens* Hy. Edw.," "No. 4238 Collection Hy. Edwards.," and "TYPE No. A.M.N.H.," is the lectotype, as determined by Barnes and McDunnough (1916, p. 78).

DISTRIBUTION: Idaho, California, Oregon.

d. **S. (S.) hydaspe minor**
(McDunnough)

Argynnis hydaspe rhodope Edw., form. alt. *minor* McDUNNOUGH, 1927, p. 155.

TYPE LOCALITY: M[oun]t McLean, [Lillooet], B[ritish] C[olumbia], (5000 feet), "June" [July] 12, 11926 [*sic*] (J. H. McDunnough).

TYPE DEPOSITED: Canadian National Collection No. 2427.

DISTRIBUTION: British Columbia, Washington.

e. **S. (S.) hydaspe rhodope** (Edwards)

Argynnis Rhodope EDWARDS, 1874a, p. 13.

Argynnis rhodope Edw., tr. f. *gregsoni* GUNDER, 1932, p. 281. Mount Washington, (6000 f[ee]t), Forbidden Plateau, V[ancouver] I[land], B[ritish] C[olumbia], Can[ada], July 7, 1931 (J. D. Gregson). American Museum of Natural History, *ex* collection J. D. Gunder.

FIGURED: Holland, 1931b, pl. 11, fig. 6.

TYPE LOCALITY: British Columbia, 1873 (G. R. Crotch). Hereby fixed as Cariboo District, British Columbia.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "A. Rhodope," and "Argynnis Rhodope Edw (One of the 3 Original Types)," is hereby designated the lectotype.

DISTRIBUTION: British Columbia.

f. **S. (S.) hydaspe sakuntala** (Skinner)

Argynnis sakuntala SKINNER, 1911, p. 108.

A[rgynnis] skinneri HOLLAND, 1931b, p. 95, pl. 56, fig. 4. Kaslo, B[ritish] C[olumbia]. Academy of Natural Sciences of Philadelphia. This name was proposed to replace *Argynnis sakuntala* Skinner, because of its similarity to *Argynnis sakuntala* Kollar ([1848], p. 439, pl. 12). The type of *Argynnis sakuntala* Skinner is the type of *A[rgynnis] skinneri* Holland.

FIGURED: Holland, 1931b, pl. 56, fig. 4.

TYPE LOCALITY: Kaslo, B[ritish] C[olumbia], July 7, 1890 (J. W. Cockle).

TYPE DEPOSITED: A male, Academy of Natural Sciences of Philadelphia, labeled "Kaslo, B. C. 7.VII.1890 (Cockle)," and "TYPE No. 7035 *Argynnis sakuntala* Henry Skinner," is hereby designated the lectotype.

DISTRIBUTION: Alberta, British Columbia, Montana, Idaho, Wyoming, Colorado, Utah.

g. **S. (S.) *hydaspe conquista*** dos Passos and Grey

Speyeria hydaspe conquista DOS PASSOS AND GREY, 1945b, p. 8.

FIGURED: *Tom. cit.*, figs. 21-22.

TYPE LOCALITY: Little Tesuque Canyon, near Santa Fe, [Santa Fe County], New Mexico, 8000 feet, August 8, 1932 (A. B. Klots).

TYPE DEPOSITED: American Museum of Natural History.

DISTRIBUTION: New Mexico.

13. ***Speyeria* (*Speyeria*) *mormonia***
(Boisduval)

a. **S. (S.) *mormonia mormonia***
(Boisduval)

Argynnis Mormonia BOISDUVAL, 1869, p. 58.

FIGURED: Oberthür, 1914, pl. 261, figs. 2192-2193.

TYPE LOCALITY: On the frontiers of Oregon [Territory] (P. J. M. Lorquin). Hereby fixed as Salt Lake City, Salt Lake County, Utah.

TYPE DEPOSITED: A male, United States National Museum, labeled "Mormonia Bd. Lac Sal.," "EX MUSAEOL Dris. BOISDUVAL," "argynnis Mormonia ♂. Bdv. ex typ. sp.," "Oberthür Collection," "2192 [figure]," and "Barnes Collection," is hereby designated the lectotype, being the specimen figured by Oberthür (*tom. cit.*, pl. 261, fig. 2192).

DISTRIBUTION: Utah, Nevada.

b. **S. (S.) *mormonia bischoffii***
(Edwards)

Argynnis Bischoffii EDWARDS, 1870b, p. 189.

FIGURED: Holland, 1931b, pl. 11, fig. 7.

TYPE LOCALITY: Alaska, [Alaskan Peninsula], opposite Kodiak (M. Bischoff).

TYPE DEPOSITED: A female, Carnegie Museum, labeled "*Bischoffii* ♀ type Kodiak," is hereby designated the lectotype.

DISTRIBUTION: Alaska.

c. **S. (S.) *mormonia opis*** (Edwards)
Argynnis Opis EDWARDS, 1874b, p. 105.

FIGURED: Holland, 1931b, pl. 14, fig. 8.

TYPE LOCALITY: Bald Mountain, Cariboo, British Columbia, 1873 (G. R. Crotch).

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Butterfly Book Pl. XIV Fig. 8," and "*Opis* ♂ Bald Mtn type Cariboo," is hereby designated the lectotype, being the specimen figured by Holland (*loc. cit.*).

DISTRIBUTION: British Columbia.

d. **S. (S.) *mormonia jesmondensis***
(McDunnough)

Argynnis bischoffii opis Edw., form *jesmondensis* MCDUNNOUGH, 1940, p. 25.

TYPE LOCALITY: Jesmond, B[ritish] C[olumbia], 3500 feet, July 24, 1937 (J. K. Jacob).

TYPE DEPOSITED: Canadian National Collection No. 4925.

DISTRIBUTION: British Columbia.

e. **S. (S.) *mormonia washingtonia***
(Barnes and McDunnough)

A[rgynnis] bischoffii [sic] washingtonia BARNES AND MCDUNNOUGH, 1913, p. 95.

Argynnis eurynome washingtonia B. & McD., form *rainierensis* GUNDER, 1932, p. 282. Paradise Valley, Mount Ranier [sic], Pierce County, Washington, Aug[ust] 12, 1931. American Museum of Natural History, ex collection J. D. Gunder. Gunder proposed the name *ranierensis* for this insect, but McDunnough (1938, p. 15) corrected this *lapsus*.

FIGURED: Barnes and McDunnough, 1913, pl. 1, figs. 5-8.

TYPE LOCALITY: [Paradise Valley], M[oun]t Ranier [sic], [Pierce County], Wash[ington], 7000 feet, July 24-30 (J. H. McDunnough).

TYPE DEPOSITED: A male, United States National Museum, labeled "July 24-31," "Paradise Valley, Mt. Rainier, Wash.," "A. bischoffii v. *washingtonia* B & McD Type ♂," and "Photograph Pl. 1 No. 5," is hereby designated the lectotype.

DISTRIBUTION: Washington.

f. **S. (S.) mormonia erinna** (Edwards)

Argynnis Eurynome Edw. Var. *Erinna* EDWARDS, 1883a, p. 33.

Argynnis erinna ab. f. *cunninghami* OWEN, 1893, p. 246. Klamath County, Oregon (B. L. Cunningham). United States National Museum.

FIGURED: Holland, 1931b, pl. 56, fig. 7.

TYPE LOCALITY: Spokane Falls, [Spokane, Spokane County], W[ashington] T[erritory] (ex W. J. Holland Collection); Colorado, 1871 (T. L. Mead); Mount Hood, [Hood River County], Oregon (H. K. Morrison); and Big Horn, [Treasure County], Mont[ana]. Hereby fixed as Spokane Falls, Spokane County, Washington.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Eurynome ♂ var. *Erinna* Spokane Falls W. Tr." and "Butterfly Book Pl. 56 Fig. 7." is hereby designated the lectotype, being the specimen figured by Holland (*loc. cit.*).

DISTRIBUTION: Oregon, Washington.

g. **S. (S.) mormonia arge** (Strecker)

Argynnis Arge STRECKER, 1878, p. 114.

Argynnis Astarte EDWARDS (*nec* Doubleday), 1862, p. 221. Oregon, California. Hereby fixed as Monache Meadows, Tulare County, California. The lectotype of *Argynnis Arge* Strecker, as hereinafter designated, is hereby designated the type of *Argynnis Astarte* Edwards, 1862.

Argynnis Montivaga BEHR (*nec* Behr, 1863, p. 84), 1864, p. 435. California. Hereby fixed as Monache Meadows, Tulare County, California. The lectotype of *Argynnis Arge* Strecker, as hereinafter designated, is hereby designated the type of *Argynnis Montivaga* Behr.

FIGURED: Comstock, 1927, pl. 31, figs. 7-9 as *mormonia* Boisduval.

TYPE LOCALITY: California. Hereby fixed as Monache Meadows, Tulare County, California.

TYPE DEPOSITED: A male, Chicago Natural History Museum, ex collection H. Strecker, ex collection H. Behr, labeled "A. Arge. Streck. orig. Type Dr Behr," is hereby designated the lectotype.

DISTRIBUTION: California.

h. **S. (S.) mormonia artonis** (Edwards)

Argynnis Artonis EDWARDS, 1881, p. 1.

Argynnis eurynome artonis Edw., form *ruby-*

ensis GUNDER, 1932, p. 282. Franklin Slough, near Wright's Ranch, Ruby Valley, Elko Co[unty], Nevada, July 9, 1929 (J. E. Cottle). American Museum of Natural History, ex collection J. D. Gunder.

FIGURED: Holland, 1931b, pl. 12, fig. 13.

TYPE LOCALITY: Colorado (T. L. Mead); Big Horn, [Treasure County], Montana; Wells, Elko Co[unty], Nevada. Hereby fixed as Wells, Elko County, Nevada.

TYPE DEPOSITED: A male, American Museum of Natural History, labeled "*Argynnis artonis*," "Nev.," "So. Abington, Mass. July [dashes through this word], 1880 ♀ Col J E. Bates," and "No. 4258. Collection Hy. Edwards," is hereby designated the lectotype.

DISTRIBUTION: Nevada, Oregon.

i. **S. (S.) mormonia eurynome** (Edwards)

Argynnis Eurynome EDWARDS, 1872, p. 66.

Argynnis Clio EDWARDS, 1874b, p. 106. Holland, 1931b, pl. 14, figs. 5-7. Plains at the Teton Mountains (F. V. Hayden's last expedition to Montana), and Rocky Mountains (E. Coues), 1874. Hereby fixed as Jackson, Teton County, Wyoming. A male, American Museum of Natural History, ex collection C. F. dos Passos, labeled "28 VII/17/1929 Moose P. O. Jackson Hole Wyo. Coll. Klots Alt. 6700 ft.," and "Collection A. B. Klots Ac. 33133," is hereby designated the neotype.

Arg[ynnis] eurynome ab. *eris* IGEL (*nec* Meigen), 1922, p. 20. Calgary (Alberta). Collection L. M. Igel, Schellenberg, [Bavaria], Germany.

Speyeria mormonia eurynome ab. *igeli*, NEW NAME. This name is proposed to replace *Arg[ynnis] eurynome* ab. *eris* Igel, which is a homonym of *Argynnis eris* Meigen (1828, p. 64). The type of *Speyeria mormonia eurynome* ab. *igeli* dos Passos and Grey is the type of *Arg[ynnis] eurynome* ab. *eris* Igel.

Argynnis mormonia Bdv., tr. f. *benjamini* GUNDER, 1927, p. 287, pl. B, figs. 22, 22a. Arangie [?Arangee precinct, or Arange Peak, Fremont County], Idaho. United States National Museum, ex collection W. Barnes.

Argynnis eurynome Edw., tr. f. *brucei* GUNDER, 1927, p. 287, pl. B, figs. 23, 23a. Colorado, 1890 (D. Bruce). Hereby fixed as Denver, Denver County, Colorado. Chicago Natural History Museum, ex collection H. Strecker.

Argynnis eurynome Edw. race *clio* Edw. tr. f. *gunderi* FIELD (*nec* Comstock), 1936, p. 23. Broadwater Co[unty], Montana, July 27, 1930. Collection W. D. Field, Lawrence, Kansas.

Speyeria mormonia eurynome ab. *fieldi*, NEW NAME. This name is proposed to replace *Argynnis eurynome* Edw. race *clio* Edw. tr. f. *gunderi*

Field, which is a homonym of *Argynnis gunderi* Comstock. The type of *Speyeria mormonia eurynome* ab. *fieldi* dos Passos and Grey is the type of *Argynnis eurynome* Edw. race *clio* Edw. tr. f. *gunderi* Field.

FIGURED: Edwards, 1875, pl. *Argynnis* 1, figs. 1-4.

TYPE LOCALITY: Colorado (T. L. Mead). Hereby fixed as Fair Play, Park County, Colorado.

TYPE DEPOSITED: A male, Carnegie Museum, labeled "Eurynome ♂ type Colo," is hereby designated the lectotype.

PREPARATORY STAGES: Henry Edwards, 1889, p. 19.

DISTRIBUTION: Manitoba, Saskatchewan, Alberta, Montana, North Dakota, South Dakota, Idaho, Wyoming, Colorado, New Mexico.

j. *S. (S.) mormonia luski* (Barnes and McDunnough)

A[rgynnis] eurynome luski BARNES AND McDUNNOUGH, 1913, p. 95.

FIGURED: *Tom. cit.*, pl. 1, figs. 1-4.

TYPE LOCALITY: White M[oun]t[ain]s, Arizona (R. D. Lusk).

TYPE DEPOSITED: A male, United States National Museum, labeled "A. eurynome v. luski B & McD Type ♂," "White Mts., Ariz," and "Photograph Pl. 1 No. 1," is hereby designated the lectotype.

DISTRIBUTION: Arizona.

NOMINA NUDA

Argynnis Baucis GEDDES, 1883, p. 222. Fort Edmonton, [Alberta, Canada].

D[ryas] a[phrodite] var. *hughi* CLARK, 1927, p. 126. Essex, [Essex County], Massachusetts. United States National Museum.

ARGYNNINAE ERRONEOUSLY DESCRIBED FROM, OR REPORTED AS OCCURRING IN, NORTH AMERICA

A[rgynnis] aglaia, EDWARDS, 1864a, p. 504.

Brenthis Morrisii REAKIRT (= *P[apilio] N[ymphalis] Phaleratus*) *Euphrosyne* Linnaeus, 1758, p. 481, no. 142), 1866b, p. 246.

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