This list generally follows the order found in the Miller and Brown (1981) *Catalogue/Checklist of the Butterflies of North America* and the supplement to that list by Ferris (1989c), both published as *Memoirs of the Lepidopterists' Society*. Generic name usage is conservative (when opinions vary on how to divide monophyletic groups) and generally follows that used in *A Field Guide to Eastern Butterflies* (Opler 1992, 1998), *A Field Guide to Western Butterflies* (Opler 1999) and the Stanford and Opler (1993) *Atlas to Western USA Butterflies* (updated as Opler et al. 2000). Some changes are made to conform with recent research results (e.g. Emmel 1998) and with Palaearctic and Neotropical publications (see References).

The list that follows includes superfamily, family, and subfamily categories (with tribes for some Lycaenidae), generally in accord with the arrangement presented by de Jong et al. (1996) and Ackery et al. (1999). The Listing order of families, subfamilies, genera, and species does not necessarily imply relationships of taxa to each other. It is the intent of the authors to use the original spelling of species names as described. We would be pleased if anyone would point out where names herein do not conform to their original orthography.

The main purpose of this list is to summarize our current knowledge of the nomenclature of North American butterflies at the species-level (and higher), and to generate interest in current nomenclatural problems. It is our hope that this list will serve as a point of reference for future studies and checklists; our goal will be met when arrangements adopted herein are proved incorrect through future research.

Synonyms, homonyms, and subspecies are not listed. A complete catalog of North American butterflies including all synonyms and subspecies is in preparation by Jonathan P. Pelham (Seattle, Washington). Citations to original descriptions have been provided for some recently described taxa (see References); these are indicated in the list by an asterisk. We have tried to be as precise as possible in our listing of taxon authors and dates of publication, and thank Gerardo Lamas (Lima, Peru) and J. Pelham for a great amount of help with these issues. All changes (from other checklists) in authorship or dates of publication made herein will be fully explained in Pelham's upcoming catalog. We note here, however, that our spelling of Leconte's name follows Rehn (1954).

This being a list of species, a few words on the species concepts held by the authors seem warranted. There are currently no fewer than 25 species concepts being used by taxonomists in various fields (Mayden 1997, Brower 1999, Sperling in press), and no fewer than five species concepts are currently applied in morphological and molecular studies of Lepidoptera taxonomy. Some of the more popular species concepts held by taxonomists today don’t even recognize subspecies. While subspecies are frequently named to describe geographical variants, the criteria for recognizing such variants as “subspecies” are subjective and vary greatly from author to author (even when those authors claim to apply the same species concept).

The authors of this list apply two different species concepts when making taxonomic decisions. The senior author (PAO) holds views most consistent with Mayr’s Biological Species Concept (Mayr 1957a,b). The most current version of this concept defines species as “groups of
interbreeding natural populations that are reproductively isolated from other such groups” (see Wheeler & Meier 2000). Earlier versions of Mayr’s concept required users to infer whether or not allopatric populations are capable of interbreeding, but later versions of the concept have abandoned this notion (since it is often impossible to make this inference anything other than a guess). The production of fertile offspring is an indication of a biological species.

The views of the junior author (ADW) are most consistent with the Phylogenetic Species Concept (Nixon & Wheeler 1990) when making taxonomic decisions. A phylogenetic species is defined as the “smallest aggregation of (sexual) populations or (asexual) lineages diagnosable by a unique combination of character states in comparable individuals (semaphoronts).” Under this concept, species are identified by unique character states, which show no intermediacy or signs of introgression with related organisms. For a debate between proponents of these and other species concepts, see Wheeler & Meier (2000).

Even with different species concepts, the authors of this list agreed on over 90% of the taxonomic decisions that have been incorporated herein, even before initial discussion. Subsequent discussion and re-evaluation of available evidence has resolved almost all the discrepancies in taxonomic opinions between the authors (only a few cases remain where the authors don’t entirely agree). Therefore, the majority of the species listed herein can be considered biological and phylogenetic species, in cases where sufficient information is known (and most likely qualify as species under other species concepts). Annotations after species entries will hopefully explain differences between this listing and previous checklists, and enable users with alternate species concepts to extract necessary information from this list.
SUPERFAMILY HESPERIOIDEA, FAMILY HESPERIIDAE

[Our arrangement of this family follows Evans (1951, 1952, 1953, 1955) and Voss (1952), as modified by Ackery et al. (1999) and Warren (2000, 2002). The higher-level classification of the family is currently being studied by ADW.]

Subfamily Pyrrhopyginae

*Pyrrothrix* Lindsey, 1921

1. *araxes* (Hewitson, 1867)

[Burns & Janzen (2001) treat *arizonae* (Godman & Salvin, 1893) as a full species based on genitalic differences observed in eleven male specimens, compared from Arizona and the Mexico City area. However, populations from areas in between (Sinaloa and Nayarit) show intermediacy in all of the genitalic differences cited by Burns and Janzen, and several additional geographic variants are known (ADW, unpublished). See Mielke (2002) for generic change from *Pyrrhopyge* Hübner, 1819.]

Subfamily Pyrginae

*Phocides* Hübner, [1819]

2. *pigmalion* (Cramer, 1779)

2.1 *belus* Godman & Salvin, 1893

Observed and photographed at Bentsen-Rio Grande State Park, Hidalgo Co. Texas on April 13, 2003 by David J. Hanson. Photo identified by Andrew D. Warren (Hanson, Knudson, & Bordelon, 2003).

3. *polybius* (Fabricius, 1793)

3.1 *polybius* (Fabricius, 1793)

[Note: *Papilio palemon* Cramer, 1777, being a primary homonym of *Papilio palaemon* Pallas, 1771, is not an available name (ICZN 1999).]

*Proteides* Hübner, [1819]

4. *mercurius* (Fabricius, 1787)

*Epargyreus* Hübner, [1819]

5. *clarus* (Cramer, 1775)

6. *zestos* (Geyer, 1832)

7. *exadeus* (Cramer, 1779)

8. species

[Arizona records of “exadeus” almost certainly refer to *E. windi* H.A. Freeman, 1969* (a resident of central Sonora, Mexico), but specimens have not been examined; *exadeus* is unknown in western Mexico north of Nayarit (ADW, unpublished). *Epargyreus aspina* Evans, 1952* could possibly also stray into our area; dissection of all exotic *Epargyreus* specimens in our area is needed to confirm their specific identity.]

*Polygonus* Hübner, [1825]

9. *leo* (Gmelin, [1790])

10. *savigny* (Latreille, [1824])

synonym of savigny; also see Mielke (2004).]

*Chioides* Lindsey, 1921
11. *albofasciatus* (Hewitson, 1867)
   [Raised to species level by Austin and Warren (2002); previously considered to be a subspecies of *C. catillus* (Cramer, 1779).]
12. *zilpa* (Butler, 1872)

*Aguna* R.C. Williams, 1927
13. *asander* (Hewitson, 1867)
14. *claxon* Evans, 1952*
15. *metophis* (Latreille, [1824])

*Typhedanus* Butler, 1870
16. *undulatus* (Hewitson, 1867)

*Polythrix* E.Y. Watson, 1893
17. *octomaculata* (Sepp, [1844])
18. *mexicanus* H.A. Freeman, 1969*

*Zestusa* Lindsey, 1925

*Codatractus* Lindsey, 1921
20. *alcaeus* (Hewitson, 1867)
21. *arizonensis* (Skinner, 1905)
22. *valeriana* (Plötz, 1881)
   [This species was placed in *Codatractus* by Burns (1996) as *mysie* (Dyar, 1904), but examination of the type of *valeriana* (Plötz) showed it to be the senior objective synonym (Mielke & Warren, 2004).]

*Urbanus* Hübner, [1807]
23. *proteus* (Linnaeus, 1758)
24. *belli* (Hayward, 1935)
   [Specimen reported from south Texas by Warren (1997).]
25. *pronus* Evans, 1952*
26. *esmeraldus* (Butler, 1877)
27. *dorantes* (Stoll, 1790)
28. *teleus* (Hübner, 1821)
29. *tanna* Evans, 1952*
30. *simplicius* (Stoll, 1790)
31. *procne* (Plötz, 1881)
32. *doryssus* (Swainson, 1831)

*Astraptes* Hübner, [1819]
33. *fulgerator* (Walch, 1775)
34. *egregius* (Butler, 1870)
35. *alardus* (Stoll, 1790)
36. *alector* (C. Felder & R. Felder, 1867)
   *[Astraptes gilberti* H.A. Freeman, 1969* is treated as a synonym of *A. alector hopfferi* (Plötz, 1881) by Scott (1986) and Warren (2000, 2002).]
37. *anaphus* (Cramer, 1777)

*Autochton* Hübner, 1823
38. *cellus* (Boisduval & Leconte, [1837])
39. *pseudocellus* (Coolidge & Clemence, [1910])

[Apparently extirpated from the U.S portion of its range (Bailowitz & Brock 1991).]

40. *cincta* (Plötz, 1882)

*Achalarus* Scudder, 1872

41. *lyciades* (Geyer, 1832)
42. *casica* (Herrich-Schäffer, 1869)
43. *albociliatus* (Mabille, 1877)
44. *toxeus* (Plötz, 1882)

*Thessia* Steinhauer, 1989*

45. *jalapus* (Plötz, 1881)

*Thorybes* Scudder, 1871

46. *drusius* (W.H. Edwards, [1884])
47. *pylades* (Scudder, 1870)
48. *bathyllus* (J.E. Smith, 1797)
49. *confusis* Bell, 1922
50. *diversus* Bell, 1927
51. *mexicana* (Herrich-Schäffer, 1869)

*Cabares* Godman & Salvin, 1894

52. *potrillo* (Lucas, 1857)

*Celaenorrhinus* Hübner, [1819]

53. *fritzgaertneri* (Bailey, 1880)
54. *stallingsi* H.A. Freeman, 1946*

*Spathilepia* Butler, 1870

55. *clonius* (Cramer, 1775)

*Cogia* Butler, 1870

57. *outis* (Skinner, 1894)
58. *caicus* (Herrich-Schäffer, 1869)
59. *calchas* (Herrich-Schäffer, 1869)

*Arteurotia* Butler & H. Druce, 1872

60. *tractipennis* Butler & H. Druce, 1872

*Nisoniades* Hübner, [1819]

61. *rubescens* (Möschler, 1877)

*Pellicia* Herrich-Schäffer, 1870

62. *arina* Evans, 1953*
63. *dimidiata* Herrich-Schäffer, 1870

*Noctuana* Bell, 1937

64. *stator* (Godman, 1899)

[Documented from Hidalgo Co., Texas, by Bob Stewart (Anonymous 2000).]

*Windia* H.A. Freeman, 1969*

65. *windi* H.A. Freeman, 1969*

[Specimen collected in Guadalupe Canyon, Cochise Co., Arizona, by Kilian Roever. Determined by J. Burns.]

*Bolla* Mabille, 1903
66. *brennus* (Godman & Salvin, 1896)
67. *clytius* (Godman & Salvin, 1897)

*Staphylus* Godman & Salvin, 1896
68. *ceos* (W.H. Edwards, 1882)
69. *mazans* (Reakirt, [1867])
70. *hayhurstii* (W.H. Edwards, 1870)

*Gorgythion* Godman & Salvin, 1896
71. *begga* (Prittwitz, 1868)
[Listed as *G. vox* Evans, 1953* by Neck (1996), although the U.S. specimens have been confirmed as *begga*. Dissection is required for certain identification. Also see Stanford (2002).]

*Sostrata* Godman & Salvin, 1895
72. *nordica* Evans, 1953*
[Treatment as a full species follows Warren (2000, 2002); *S. bifasciata* (Ménétriés, 1829) is a South American species. The relationship between these two taxa is currently being studied in detail by G.T. Austin and ADW.]

*Carrhenes* Godman & Salvin, 1895
73. *canescens* (R. Felder, 1869)

*Xenophanes* Godman & Salvin, 1895
74. *tryxus* (Stoll, 1780)
[The species name is often misspelled (e.g. Neck 1996).]

*Antigonus* Hübner, [1819]
75. *emorsa* (R. Felder, 1869)
75.1 *erosus* (Hübner, 1812)
[Antigonus erosus was first reported from the United States by Knudson et al. 2004].]

*Mylon* Godman & Salvin, 1885
75.2 *pelopidas* (Fabricius, 1793)
[First reported from the United States by Davis et al. 2005.]

*Systasea* W.H. Edwards, 1877
76. *pulverulenta* (R. Felder, 1869)
77. *zampa* (W.H. Edwards, 1876)

*Achlyodes* Hübner, [1819]
77.1 *pallida* (R. Felder, 1869)
[Photographed in the lower Rio Grande Valley in October, 2003 and reported by Warren et al., 2003.]

*Eantis* Boisduval, 1836
[Our treatment of *Eantis* is based on Warren (1996); these species were previously placed in *Achlyodes* Hübner, [1819]. Also see Brown & Heineman (1972).]
78. *tamenund* (W.H. Edwards, 1871)

[Eantis thraso (Hübner, [1807]) is a Central and South American species (Warren 1996).]

*Grais* Godman & Salvin, 1894
79. *stigmaticus* (Mabille, 1883)
Timocharis Godman & Salvin, 1896
80. *ruptifasciata* (Plötz, 1884)

Anastrus Hübner, [1824]
80.1 *sempiternus* (Butler & H. Druce, 1872)
[Anastrus sempiternus (Butler and Druce) was first collected in Starr Co., Texas by Charles Bordelon (Knudson, 2002).

Chiomara Godman & Salvin, 1899
81. *georgina* (Reakirt, 1868)
[Chiomara asychis (Stoll, 1780) is a South American species that does not occur in Costa Rica (Janzen et al. 1998) or Mexico (Warren 2000, 2002); however, its relationship to *georgina* is currently being studied in detail by G. Austin and ADW.]

Gesta Evans, 1953
83. *invisus* (Butler & H. Druce, 1872)
[Austin and Warren (2002) treat *G. invisus* and *G. gesta* (Herrich-Schäffer, 1863), a West Indian and South American taxon, as separate species.]

Ephyriades Hübner, [1819]
84. *brunnea* (Herrich-Schäffer, 1865)

Erynnis Schrank, 1801
85. *iceius* (Scudder & Burgess, 1870)
86. *brizo* (Boisduval & Leconte, [1837])
[Research is needed to determine if one or more subspecies should be elevated to the species-level.]
87. *juvenalis* (Fabricius, 1793)
[Research is needed to determine if *clitus* (W.H. Edwards, 1882) should be elevated to the species-level.]
88. *telemachus* Burns, 1960
89. *propertius* (Scudder & Burgess, 1870)
90. *meridians* Bell, 1927
91. *scudder* (Skinner, 1914)
92. *horatius* (Scudder & Burgess, 1870)
93. *tristis* (Boisduval, 1852)
94. *martialis* (Scudder, [1870])
95. *pacuvius* (Lintner, 1878)
96. *zarucco* (Lucas, 1857)
97. *funerality* (Scudder & Burgess, 1870)
98. *baptisae* (Forbes, 1936)
99. *lucilius* (Scudder & Burgess, 1870)
100. *afranius* (Lintner, 1878)
101. *persius* (Scudder, 1863)
[Research is needed to better define relationships among and within the above three taxa; see Burns (1964).]

Pyrgus Hübner, [1819]
102. *centaureae* (Rambur, [1842])
[Tentatively includes *wyandot* (W.H. Edwards, 1863), which was treated as a
specie-level taxon by Shapiro (1974) and Gochfield & Burger (1997) (based on
genitalic differences between it and freija (Warren, 1924) cited by Forbes (1960);
but see Lindsey (1928)). Its relationship to other North American and Eurasian taxa
associated with centaureae remains to be studied in detail. Also see Warren (1926,
1935, 1951), de Jong (1972), Devyatkin (1990) and Tuzov et al. (1997).]

103. ruralis (Boisduval, 1852)
104. xanthus W.H. Edwards, 1878
105. scriptura (Boisduval, 1852)
106. communis (Grote, 1872)
107. albescens Plötz, 1884

[Treatment as a full species follows Burns (2001).]

108. philetas W.H. Edwards, 1881
109. oileus (Linnaeus, 1767)

[The above four taxa were placed in Syrichtus Boisduval, [1834] by Durden (1982).
This is incorrect because Syrichtus is a synonym of Pyrgus (see Cowan 1970). There
is no published evidence indicating that these four species belong in a Palaearctic
genus other than Pyrgus (see de Jong 1972, 1978); however, further study is
needed.]

Heliopyrgus Herrera, 1957

[Treatment of Heliopyrgus is based on Austin & Warren (2001); also see Mielke &
Casagrande (2002).]

110. domicella (Erichson, [1849])

Heliopetes Billberg, 1820

111. ericetorum (Boisduval, 1852)
112. macaira (Reakirt, [1867])
113. laviana (Hewitson, 1868)
114. arsalte (Linnaeus, 1758)
114.1 sublinea (Schaus, 1902)

[First report for the United States by Basham et al., 2005]

Celotes Godman & Salvin, 1899

115. nessus (W.H. Edwards, 1877)
116. limpia Burns, 1974*

Pholisora Scudder, 1872

117. catullus (Fabricius, 1793)
118. mejicanus (Reakirt, [1867])

Hesperopsis Dyar, 1905

119. libya (Scudder, 1878)
120. alpheus (W.H. Edwards, 1876)
121. gracielae (MacNeill, 1970)*
Subfamily Heteropterinae
Carterocephalus Lederer, 1852

122. palaemon (Pallas, 1771)
[The relationships between New and Old World taxa of palaemon remain to be studied in detail.]

Piruna Evans, 1955*

123. pirus (W.H. Edwards, 1878)
124. haferniki H.A. Freeman, 1970*
125. polingii (Barnes, 1900)
126. aea (Dyar, 1912)
[Previously known as P. cingo Evans, 1955*, which was treated as a synonym of aea by Warren (2000, 2002).]
127. penaea (Dyar, 1918)
[Previously misidentified as P. microsticta (Godman, 1900) (see McGuire & Rickard 1976), a southwestern Mexican species (Freeman & Warren, in preparation).]

Subfamily Hesperiinae
[Includes genera formerly placed in the Megathyminae, following Ackery et al. (1999).]

Synapte Mabille, 1904

128. pecta Evans, 1955*
[Warren (2000, 2002) treated S. pecta and S. malitiosa (Herrich-Schäffer, 1865) as separate species.]
129. species
[We are uncertain if it is Synapte syraces (Godman, 1901), or the similar S. shiva Evans, 1955* (or both?) that is known from Arizona (Bailowitz & Brock 1991), since we have not examined specimens; both species occur in Sonora, Mexico. Synapte shiva was described as a subspecies of syraces, but was treated as a full species by Warren (2000, 2002).]
130. salenus (Mabille, 1883)

Corticea Evans, 1955*

131. corticea (Plötz, 1882)

Vidius Evans, 1955*

132. perigenes (Godman, 1900)

Monca Evans, 1955*

133. crispinus (Plötz, 1882)
[Mielke and Casagrande (2002) treat tyrtaeus (Plötz, 1882) as a junior synonym of crispinus. Monca telata (Herrich-Schäffer, 1869) is a South and Central American species (Bell 1941) which flies sympatrically with crispinus (= tyrtaeus) in Guatemala (Austin et al. 1996).]

Nastra Evans, 1955*

134. lherminier (Latreille, [1824])
135. neamathla (Skinner & R.C. Williams, 1923)
136. julia (H.A. Freeman, 1945)

Cymaenes Scudder, 1872

137. tripunctus (Herrich-Schäffer, 1865)
138. *trebius* (Mabille, 1891)

*Cymaenes trebius* was treated as a species distinct from *C. odilia* (Burmeister, 1878) by Warren (2000, 2002); however, relationships among taxa placed with *odilia* by Evans (1955) are under study by G. Austin and ADW.

*Lerema* Scudder, 1872

139. *accius* (J.E. Smith, 1797)
140. *liris* Evans, 1955*

[The relationship between *L. liris* and *L. ancillaris* (Butler, 1877) where they meet in Central America needs further study, as noted by Warren (2000).]

*Vettius* Godman, 1901

141. *fantasos* (Cramer, 1780)

*Perichares* Scudder, 1872

142. *philetes* (Gmelin, [1790])

*Rhinthon* Godman, 1900

143. *osca* (Plötz, 1882)

[Treatment as a distinct species from *cubana* (Herrich-Schäffer, 1865) follows McGuire & Rickard (1976), Ferris (1989c) and Warren (2000, 2002), but see Mielke & Casagrande (2002).]

*Decinea* Evans, 1955*

144. *percusius* (Godman, 1900)

*Conga* Evans, 1955*

145. *chydaea* (Butler, 1877)

*Ancyloxypha* C. Felder, 1862

146. *numitor* (Fabricius, 1793)
147. *arene* (W.H. Edwards, 1871)

*Oarisma* Scudder, 1872

148. *garita* (Reakirt, 1866)
149. *powesheik* (Parker, 1870)

[Corrected to the original orthography even though name was misspelled.]

150. *edwardsii* (Barnes, 1897)

*Copaeodes* Speyer, 1877

151. *aurantiaca* (Hewitson, 1868)
152. *minima* (W.H. Edwards, 1870)

*Adpaeoides* Godman, 1900

153. *prittwitzi* (Plötz, 1884)

*Thymelicus* Hübner, [1819]

154. *lineola* (Ochsenheimer, 1808)

*Hylephila* Billberg, 1820

155. *phyleus* (Drury, 1773)

*Pseudocopaeodes* Skinner & R.C. Williams, 1923

156. *eunus* (W.H. Edwards, 1881)

*Stinga* Evans, 1955*


*Hesperia* Fabricius, 1793

158. *uncas* W.H. Edwards, 1863
159. *juba* (Scudder, 1874)
160. *comma* (Linnaeus, 1758)
161. *assiniboia* (Lyman, 1892)

[Species-level status follows Layberry et al. (1998), but further elaboration on the relationship between this taxon and the next is needed.]

162. *colorado* (Scudder, 1874)

*Hesperia colorado* (Scudder, 1874) has priority over *H. harpalus* (W.H. Edwards, 1881) and *H. idaho* (W.H. Edwards, 1883). The *Hesperia comma* complex was discussed by MacNeill (1964, 1975) and by Scott (1975, 1998). Relationships of taxa placed with *assiniboia*, *comma*, and *colorado* are currently being studied by several researchers.

163. *woodgatei* (R.C. Williams, 1914)
164. *ottoe* W.H. Edwards, 1866
165. *leonardus* Harris, 1862
166. *pahaska* (Leussler, 1938)
167. *columbia* (Scudder, 1872)
168. *metea* Scudder, 1864
169. *viridis* (W.H. Edwards, 1883)
170. *attalus* (W.H. Edwards, 1871)
171. *meskei* (W.H. Edwards, 1877)
172. *dacotae* (Skinner, 1911)
173. *lindseyi* (Holland, 1930)
174. *sassacus* Harris, 1862
175. *miriamae* MacNeill, 1959
176. *nevada* (Scudder, 1874)

*Atalopedes* Scudder, 1872

177. *campestris* (Boisduval, 1852)

*Polites* Scudder, 1872

[See Burns (1994a) for synonymy of *Yvretta* Hemming, 1935 under *Polites*.]

178. *rhesus* (W.H. Edwards, 1878)
179. *carus* (W.H. Edwards, 1883)
180. *peckius* (W. Kirby, 1837)
181. *sabuleti* (Boisduval, 1852)
182. *draco* (W.H. Edwards, 1871)
183. *mardon* (W.H. Edwards, 1881)
184. *themistocles* (Latreille, [1824])
185. *baracoa* (Lucas, 1857)
186. *origenes* (Fabricius, 1793)
188. *sonora* (Scudder, 1872)
189. *vibex* (Geyer, 1832)

*Wallengrenia* Berg, 1897

190. *otho* (J.E. Smith, 1797)

[Tentatively includes *clavus* (Erichson, [1849]) and *curassavica* (Snellen, 1887); see
Burns (1994b). The complex is being studied by J.Y. Miller.

191. *egeremet* (Scudder, 1864)

_Pompeius_ Evans, 1955*

192. *verna* (W.H. Edwards, 1862)

_Atrytone_ Scudder, 1872

193. *arogos* (Boisduval & Leconte, [1837])

_Anatrytone_ Dyar, 1905

[Generic combination follows Burns (1994b).]

194. *logan* (W.H. Edwards, 1863)

195. *mazai* (H.A. Freeman, 1969)*

_Problema_ Skinner & R.C. Williams, 1924

196. *byssus* (W.H. Edwards, 1880)

197. *bulenta* (Boisduval & Leconte, [1837])

_Ochlodes_ Scudder, 1872

198. *sylvanoïdes* (Boisduval, 1852)

199. *agricola* (Boisduval, 1852)

200. *yuma* (W.H. Edwards, 1873)

[Our treatment of _Ochlodes_ species follows Chiba and Tsukiyama (1996).]

_Poanes_ Scudder, 1872

201. *hobomok* (Harris, 1862)

202. *zabulon* (Boisduval & Leconte, [1837])

203. *taxiles* (W.H. Edwards, 1881)

204. *melane* (W.H. Edwards, 1869)

205. *massasoit* (Scudder, 1864)

206. *viator* (W.H. Edwards, 1865)

207. *yehl* (Skinner, 1893)

208. *aaroni* (Skinner, 1890)

_Paratrytone_ Godman, 1900

[See Burns (1992) for generic combination.]

209. *snowi* (W.H. Edwards, 1877)

_Quasimellana_ Burns, 1994*

210. *eulogius* (Plötz, 1882)

_Euphyes_ Scudder, 1872

211. *pilatka* (W.H. Edwards, 1867)

212. *conspicua* (W.H. Edwards, 1863)

213. *berryi* (Bell, 1941)


[Includes _E. alabamae_ (Lindsey, 1923) as a subspecies, and _E. macguirei_ H.A. Freeman, 1975* as a synonym, following Shuey (1989); also see Shuey (1993).]

215. *bayensis* Shuey, 1989*

216. *dukesi* (Lindsey, 1923)

217. *bimacula* (Grote & Robinson, 1867)

218. *arpa* (Boisduval & Leconte, [1837])

219. *vestris* (Boisduval, 1852)

_Asbolis_ Mabille, 1904
220. *capucinus* (Lucas, 1857)

*Atrytonopsis* Godman, 1900
221. *hianna* (Scudder, 1868)
222. *loammi* (Whitney, 1876)
223. *deva* (W.H. Edwards, 1877)
224. *lunus* (W.H. Edwards, 1884)
225. *vierecki* (Skinner, 1902)
228. *cestus* (W.H. Edwards, 1884)
229. *edwardsi* Barnes & McDunnough, 1916

*Amblyscirtes* Scudder, 1872
230. *exoteria* (Herrich-Schäffer, 1869)
231. *cassus* W.H. Edwards, 1883
232. *aenus* W.H. Edwards, 1878

*Amblyscirtes* Scudder, 1872
233. *linda* H.A. Freeman, 1943
234. *oslari* (Skinner, 1899)
235. *elissa* Godman, 1900
236. *hegon* (Scudder, 1864)
237. *texanae* Bell, 1927
238. *carolina* (Skinner, 1892)
239. *reversa* W.M. Jones, 1926
240. *aesculapius* (Fabricius, 1793)
241. *nereus* (W.H. Edwards, 1876)
242. *nysa* W.H. Edwards, 1877
244. *vialis* (W.H. Edwards, 1862)
245. *alternata* (Grote & Robinson, 1867)
246. *celia* Skinner, 1895
247. *belli* H.A. Freeman, 1941
248. *toltca* Scudder, 1872

*Oligoria* Scudder, 1872
254. *maculata* (W.H. Edwards, 1865)
**Calpodes** Hübner, [1819]
  255. *ethlius* (Stoll, 1782)

**Panoquina** Hemming, 1934*
  256. *panoquin* (Scudder, 1864)
  257. *panoquinoides* (Skinner, 1891)
  258. *errans* (Skinner, 1892)
  259. *ocola* (W.H. Edwards, 1863)
  260. *lucas* (Fabricius, 1793)
  
  *Panoquina sylvicola* (Herrich-Schäffer, 1865) was treated as a synonym of *lucas* by Robbins et al. (1996); also see Mielke & Casagrande (2002).]
  261. *hecebolus* (Scudder, 1872)
  262. *evansi* (H.A. Freeman, 1946)*

**Nyctelius** Hayward, 1948
  263. *nyctelius* (Latreille, [1824])

**Thespieus** Godman, 1900
  264. *macareus* (Herrich-Schäffer, 1869)

**Agathymus** H.A. Freeman, 1959*
  
  *Includes chisosensis* (H.A. Freeman, 1952), following Roever (1975).]
  266. *polingi* (Skinner, 1905)
  267. *evansi* (H.A. Freeman, 1950)
  268. *aryxna* (Dyar, 1905)
  270. *gentryi* Roever, 1998*
  
  *Treatment of this taxon and baueri as subspecies of aryxna is unsupported by any compelling data (Cassie et al. 2001), and does not consider problems associated with the name aryxna; see dos Passos (1960) and Roever (1975).*
  271. *mariae* (Barnes & Benjamin, 1924)
  
  *Tentatively includes gilberti H.A. Freeman, 1964*, although the status of this taxon is uncertain (see Roever 1975).]
  272. *estelleae* (D. Stallings & Turner, 1958)
  
  *Includes valverdiensis H.A. Freeman, 1966*, following Roever (1975).]
  273. *stephensi* (Skinner, 1912)
  274. *alliae* (D. Stallings & Turner, 1957)

**Megathymus** Scudder, 1872
  275. *yuccae* (Boisduval & Leconte, [1837])
  
  *Includes coloradensis C.V. Riley, 1877*, following Roever (1975).]
  276. *streckeri* (Skinner, 1895)
  277. *cofaqui* (Strecker, 1876)
  278. *ursus* Poling, 1902

**Stallingsia** H.A. Freeman, 1959*
  279. *maculosus* (H.A. Freeman, 1955)

**SUPERFAMILY PAPILIONOIDEA**
FAMILY PAPILIONIDAE
[We have followed the generic arrangement proposed for this family by Miller (1987). We feel further study is needed on the generic relationships of swallowtails in order to subdivide them into smaller monophyletic groups with confidence.]

Subfamily Parnassiinae
Parnassius Latreille, 1804
280. eversmanni [Ménétriés], [1850]
281. clodius Ménétriés, 1857
282. phoebus (Fabricius, 1793)
283. behrii W.H. Edwards, 1870
284. smintheus Doubleday, [1847]
[Split of P. phoebus complex is discussed by Shepard & Manley (1998), Bird et al. (1995) and Layberry et al. (1998).]

Subfamily Papilioninae
Battus Scopoli, 1777
285. philenor (Linnaeus, 1771)
286. polydamas (Linnaeus, 1758)
Parides Hübner, [1819]
287. eurimedes (Stoll, 1782)
288. alopious (Godman & Salvin, 1890)
[Single specimen collected in Cochise Co., Arizona, by Neil Dankert; see Bailowitz & Brock (1991).]
Eurytides Hübner, [1821]
289. marcellus (Cramer, 1777)
290. philolaus (Boisduval, 1836)
Papilio Linnaeus, 1758
291. machaon Linnaeus, 1758
[Includes bairdii W.H. Edwards, 1866, and oregonius W.H. Edwards, 1876, following Sperling (1987, 1993a, 2003) and Sperling and Harrison (1994); but see Eitschberger (1993) and Pyle (2002).]
292. brevicauda Saunders, 1869
293. joanae Heitzman, 1973*
294. polyxenes Fabricius, 1775
295. zelicaon Lucas, 1852
[Papilio nitra W.H. Edwards, 1883 is considered by Fisher (1977) to be an eastern subspecies of zelicaon containing rare dark individuals, which may represent infrequent introgression with polyxenes. Lamas (2004) considers this to be a subspecies of P. polyxenes Fabricius despite a lack of published evidence of conspecificity.]
296. indra Reakirt, 1866
297. glaucus Linnaeus, 1758
297.1 appalachiensis (Pavulaan & Wright, 2002)
[Pterourus appalachiensis Pavulaan & D. Wright, 2002* was described, and suggestive evidence for its treatment as a full species was provided by Scriber and Ording, 2005.]

298. canadensis Rothschild & Jordan, 1906

[Specific distinctness of P. canadensis is detailed by Hagen et al. (1991), and further supported by Sperling (1993b).]

299. rutulus Lucas, 1852
300. eurymedon Lucas, 1852
301. multicaudata W.F. Kirby, 1884
302. pilumnus Boisduval, 1836
303. troilus Linnaeus, 1758
304. palamedes Drury, 1773
305. garamas (Geyer, [1829])

[Papilio garamas abderus Hoppfer, 1856 was reported from South Texas by Bordelon & Knudson (2000).]

306. victorinus Doubleday, 1844

[Treated as a subspecies of P. menatius Hübner [1819] by Tyler et al. (1994: but see page 26) and Lamas (2004); however, we feel that further study of the situation is needed (see DeVries 1987). The species was first reported from the U.S. by Adams (1984).]

307. thoas Linnaeus, 1771
308. cresphontes Cramer, 1777
309. astyalus Godart, 1819
310. ornithion Boisduval, 1836
311. aristodemus Esper, 1794
312. andraemon (Hübner, [1823])
313. androgeus Cramer, 1775
314. anchisiades Esper, 1788
315. rogeri Boisduval, 1836

[Papilio pharnaces Doubleday, 1846 is treated as a subspecies of P. rogeri Boisduval, 1836 by Lamas (2004); the two taxa were also considered to be conspecific by Tyler et al. (1994).]

*[Miller (1987) does not recognize Heraclides Hübner [1819], Priamides Hübner [1819] or Pterourus Scopoli, 1777 as valid genera. Tyler et al. (1994) present a considerably different generic arrangement for our swallowtail taxa; also see Lamas (2004).]

FAMILY PIERIDAE

Subfamily Dismorphiinae

Enantia Hübner, [1819]

316. albания (H.W. Bates, 1864)

[Texas specimen of this species illustrated by Kendall (1974a); see Llorente (1984) for notes on Enantia taxonomy.]
Subfamily Pierinae

*Catasticta* Butler, 1870

317. *nimbice* (Boisdouval, 1836)

*Neophasia* Behr, 1869

318. *menapia* (C. Felder & R. Felder, 1859)
319. *terlooi* Behr, 1869

[Spelling corrected to original orthography, following Llorente et al. (1997) and Lamas (2004).]

*Appias* Hübner, [1819]

320. *drusilla* (Cramer, 1777)

[This species is often placed in the genus *Glutophrissa* Butler, 1887, e.g. Hemming (1967) and Lamas (1981, 2004); but see Klots (1933), d’Almeida (1939a), Comstock (1943) and Brown & Heineman (1972).]

*Leptophobia* Butler, 1870

321. *aripa* (Boisdouval, 1836)


*Pontia* Fabricius, 1807

322. *beckerii* (W.H. Edwards, 1871)

[Results of studies by Chew & Watt (2006) show that *P. beckerii* is sufficiently divergent from *P. chloridice* (Hübner, [1813]).]

323. *protodice* (Boisdouval & Leconte, [1830])
324. *occidentalis* (Reakirt, 1866)

[Chew and Watts find sufficient mtDNA divergence with *P. callidice* (Hübner, [1800]) to suggest that it is not conspecific with *occidentalis*.]

324.1 *nelsonii* (Edwards, 1883)

[Chew & Watts (2006) have shown that the mtDNA sequence of this taxon shows that is strongly diverged from *P. occidentalis* (Reakirt).]

325. *sisymbrii* (Boisdouval, 1852)

*Pieris* Schrank, 1801

326. *rapae* (Linnaeus, 1758)
327. *oleracea* Harris, 1829
328. *marginalis* Scudder, 1861

[Relationship of *meckyae* Eitschberger, 1983* to *angelika* and *marginalis* needs clarification. Chew and Watt (2006) find sufficient mtDNA evidence to raise *macdunnoughii* (Remington) to the species level while leaving *angelika* as a synonym of *oleracea*.]

329. *angelika* Eitschberger, 1983*

[Study of type specimens is necessary; this may be a synonym of *P. pseudobryoniae* Barnes & McDunnough, 1917, which is an elevation of *P. napi* variety *frigida* form *pseudobryoniae* Verity, [1908], fide J. Pelham.]

*Pieris napi* Linnaeus, 1758, a Palaeartctic taxon, does not occur in North America as per several authors, e.g. Chew & Watt, 2006. North American species exclusive of the distinct *Pieris virginiensis* are treated as either three species by Chew & Watt
(2006), three species by Eitschberger (1981, 1983) or four species by Geiger and Shapiro (1992). This entire complex needs much more study before relationships can be understood with confidence. Also see Bowden (1972), Shapiro (1984), and Kudrna & Geiger (1985).]
330. virginiensis (W.H. Edwards, 1870)
* [See Robbins & Henson (1986) and Chew & Watt (2006) for use of Pieris over Artogeia Verity, 1947.]

Ascia Scopoli, 1777
331. monuste (Linnaeus, 1764)

Ganyra Billberg, 1820
332. josephina (Godart, 1819)
333. howarti (Dixey, 1915)
[Bailowitz (1988) describes the distribution and biology of this species in contrast with G. josephina; also see Beutelspacher (1986) and Llorente et al. (1997).]

Melete Swainson, [1831]
333.1. lycimnia (Cramer, 1777)
[Melete lycimnia isandra (Boisduval), 1836—One individual was collected in November 2004 in Mission, Hidalgo County, Texas. It is resident as far north as Ciudad Victoria in Tamalipas state, Mexico (Dauphin et al. 2005).]

Itaballia Kaye, 1904
333.2. demophile (Linnaeus, 1763)
[Itaballia demophile centralis Joicey and Talbot, 1928—One individual was photographed in Mission, Hidalgo County, Texas during December, 2004. The butterfly is native to Central and South America. It is resident only as far north as San Luis Potosi state in Mexico (Dauphin et al. 2005).]

Pieriballia Klots, 1933
333.3 viardi (Boisduval, 1836)
[Bordelon & Knudson (2006) document a female that was photographed by Booker, Gustafson, Dauphin, Stangeland, Davis, and others at Bentsen State Park/World Birding Center in Hidalgo County, Texas on December 6, 2005.]

Euchloe Hübner, [1819]
334. ausonides (Lucas, 1852)
[Includes ogilvia Back, [1991]*, although this was described as a full species; see Layberry et al. (1998).]
335. naina Kozhanchikov, 1923
336. guaymasensis Opler, 1987*
[Specimen collected in Bisbee, Cochise Co., Arizona, by Sandy Upson. Identity verified by R. Bailowitz, PAO and ADW.]
337. olympia (W.H. Edwards, 1871)
338. creusa (Doubleday, [1847])
339. hyantis (W.H. Edwards, 1871)
340. lotta Beutenmüller, 1898
[Above two species separated on basis of research by Opler (1965, 1967a,b, 1970,
1971, 1974) as well as unpublished data and communications. Detailed investigation has been initiated by PAO.]

_Anthocharis_ Boisduval, Rambur, [Duméril] & Graslin, [1833]
341. _cethura_ C. Felder & R. Felder, 1865
342. _sara_ W.H. Edwards, 1888. These two form a gradual cline between California, Nevada, and Arizona, as discussed by Emmel et al. (1998b: p. 132).]
343. _julia_ W.H. Edwards, 1872
344. _stella_ W.H. Edwards, 1879
345. _thoosa_ (Scudder, 1878)
346. _lanceolata_ Lucas, 1852
347. _midea_ (Hübner, [1809])

*[^Paramidea_ Kusnezov, 1929 was described as a monotypic genus for the Asian _scolymus_ (Butler, 1866). It was applied to _lanceolata_ and _midea_ by Ferris (1989c) without justification. It has been treated by several authors as a subgenus of _Anthocharis_, and is herein excluded as relating to any North American species.]

Subfamily Coliadinae

_Colias_ Fabricius, 1807
348. _philodice_ Godart, 1819
349. _eurytheme_ Boisduval, 1852
350. _occidentalis_ Scudder, 1862
351. _christina_ W.H. Edwards, 1863
352. _alexandra_ W.H. Edwards, 1863
353. _harfordii_ Hy. Edwards, 1877
354. _meadii_ W.H. Edwards, 1871
355. _johanseni_ Troubridge & Philip, 1990*
356. _hecla_ Lefèbvre, 1836
357. _canadensis_ Ferris, 1982
358. _tyche_ Böber, 1812
[Includes boothii Curtis, 1835 and thula Hovanitz, 1955, following Lafontaine & Wood (1997) and Layberry et al. (1998).]
359. nastes (Boisduval, 1832)
360. scudderii Reakirt, 1865
361. gigantea Streecker, 1900
362. pelidne Boisduval & Leconte, [1830]
363. interior Scudder, 1862
364. palaeno (Linnaeus, 1761)

[North American populations of this species have been referred to as species chippewa W.H. Edwards, 1872 (see Tuzov et al. 1997, Verhulst 2000, and Guppy & Shepard 2001), restricting palaeno to the Palaeartic region. Opinions vary, however (see Gorbunov 2001) and until a revision of the group is presented we retain palaeno for our populations.]
365. behrii W.H. Edwards, 1866

Zerene Hübner, [1819]
366. cesonia (Stoll, 1790)
367. eurydice (Boisduval, 1855)

Anteos Hübner, [1819]
368. maerula (Fabricius, 1775)
369. clorinde (Godart, [1824])

Phoebis Hübner, [1819]
370. sennae (Linnaeus, 1758)
371. argante (Fabricius, 1775)

[Stray specimens are known from Kansas (Field 1940) and Texas (Neck 1996, Stanford 2002).]
372. agarithe (Boisduval, 1836)
373. philea (Linnaeus, 1763)
374. neocypris (Hübner, [1823])

Aphrissa Butler, 1873
375. statira (Cramer, 1777)
376. orbis (Poey, 1832)

*[Recognition of Aphrissa follows Brown (1931), d'Almeida (1939b), Smith et al. (1994), Llorente et al. (1997), and Lamas (2004); but see Klots (1933). Also see Brown (1929) and d'Almeida (1940). No recent information to support or refute the lumping of Aphrissa with Phoebis has been presented, but further research is warranted.]

Kricogonia Reakirt, 1863
377. lyside (Godart, 1819)

Eurema Hübner, [1819]
378. daira (Godart, 1819)
379. boisduvaliana (C. Felder & R. Felder, 1865)

[Treated as a subspecies of E. arbela Geyer, 1832, by Lamas (2004).]
380. mexicana (Boisduval, 1836)
381. salome (C. Felder & R. Felder, 1861)
382. albula (Cramer, 1775)
[First U.S. record reported by Chuah & Cushing (1995).]

**Pyrisitia** Butler, 1870
383. *messalina* (Fabricius, 1787)
384. *proterpia* (Fabricius, 1775)
385. *lisa* (Boisduval & Leconte, [1830])
386. *nise* (Cramer, 1775)
387. *dina* (Poey, 1832)

**Abaeis** Hübner, [1819]
388. *nicippe* (Cramer, 1779)
*Although the above three genera are sometimes lumped under *Eurema* (e.g. Ferris 1989c), recent DNA analysis by Pollock et al. (1998) supports our arrangement.*

**Nathalis** Boisduval, 1836
389. *iole* Boisduval, 1836

**FAMILY LYCAENIDAE**
[Our arrangement of this family follows Ackery et al. (1999), which corroborates Eliot (1990), who unites the coppers, blues and hairstreaks into a single subfamily; also see Eliot (1973).]

**Subfamily Miletinae**
**Feniseca** Grote, 1869
390. *tarquinius* (Fabricius, 1793)

**Subfamily Lycaeninae**
**Tribe Lycaenini** (Coppers)
**Lycaena** Fabricius, 1807
[We place all of our coppers in the genus *Lycaena* following the lead of Klots (1936); also see Pratt et al. (1993) and Lamas (2004). We feel that further study is needed on the generic relationships of copper species worldwide (but see Miller & Brown 1979).]
391. *arota* (Boisduval, 1852)
392. *phlaeas* (Linnaeus, 1761)
[Relationships between eastern and western North American, Eurasian, and African populations of *phlaeas* need further study (see Larsen 1991).]
393. *cupreus* (W.H. Edwards, 1870)
[Tentatively includes *snowi* (W.H. Edwards, [1881]), although further elaboration on its status is needed.]
394. *xanthoides* (Boisduval, 1852)
395. *dione* (Scudder, 1868)
396. *editha* (Mead, 1878)
397. *gorgon* (Boisduval, 1852)
398. *hyllus* (Cramer, 1775)
[The name *hyllus* appears to be a nomen dubium (see ICZN, 1999), and the use of *thoe* (Guérin-Méneville, [1831]) in its place may be warranted; see Koçak (1983).]
399. *rubidus* (Behr, 1866)
400. *ferrisi* K. Johnson & Balogh, 1977*
401. *heteronea* Boisduval, 1852
402. *epixanthe* (Boisduval & Leconte, [1835])
403. *helloides* (Boisduval, 1852)
404. *dorcas* (W. Kirby, 1837)
405. *dospassosi* McDunnough, 1940
[Treated as a distinct species by Layberry et al. (1998) and Handfield (1999). Further study is needed to delineate this and related taxa (*dorcas* and *helloides*) with confidence; see Ferris (1977) and Scott (1978).]
406. *nivalis* (Boisduval, 1869)
407. *mariposa* (Reakirt, 1866)
408. *hermes* (W.H. Edwards, 1870)

**Tribe Theclini (Hairstreaks)**

*Hypaurotis* Scudder, 1876
409. *crystalus* (W.H. Edwards, 1873)

*Habrodaïs* Scudder, 1876
410. *gurunus* (Boisduval, 1852)

**Tribe Eumaeini (Hairstreaks)**

*Eumaeus* Hübner, [1819]
411. *toxea* (Godart, [1824])
[The occurrence of this species in our area needs to be verified; see Kendall & McGuire (1984).]
412. *atala* (Poey, 1832)

*Atlides* Hübner, [1819]
413. *halesus* (Cramer, 1777)

*Callophrys* Billberg, 1820
414. *affinis* (W.H. Edwards, 1862)
[Tentatively includes *apama* (W.H. Edwards, 1882) and *homoperplexa* Barnes & Benjamin, 1923, in accord with the treatment of Scott (1986); however, further elaboration on the relationship between *affinis* and *homoperplexa* is very badly needed.]
415. *perplexa* Barnes & Benjamin, 1923
[*Callophrys perplexa* and *C. affinis* occur together in the Pacific Northwest while maintaining separate hosts, habitats, and larval characteristics, according to Pyle (2002); also see Hinchliff (1996).]
416. *dumetorum* (Boisduval, 1852)
[Previously known as *C. viridis* W.H. Edwards, 1862, a synonym with the same type locality (Emmel et al. (1998a). Warren (2005) considers this taxon to be conspecific with *C. sheridanii* (W.H. Edwards, but nomenclatorial issues remain to be resolved.]
417. *sheridanii* (W.H. Edwards, 1877)
[Includes *comstocki* Henne, 1940, and *lemberti* Tilden, 1963, partly on evidence presented by Austin (1998b). The complex is being studied by ADW, J. Pelham & R. Stanford.]
418. *hesseli* (Rawson & Ziegler, 1950)
419. *nelsoni* (Boisduval, 1869)  
[Includes *C. rosneri* K. Johnson, 1976*; The status of *C. byrnei* K. Johnson, 1976* is uncertain (see Ferris 1991). Putative areas of contact between *nelsoni plicataria* K. Johnson, 1976* and *gryneus barryi* K. Johnson, 1976* need further study (see Hinchliff 1994).]  
420. *thornei* (J.W. Brown, 1983)*  
[Differences between this species and nearby juniper-feeding populations are detailed by Brown (1983, 1993).]  
421. *muiri* (Hy. Edwards, 1881)  
[Identity described by Tilden (1952), where it occurs parapatrically with *nelsoni*. Species status was further supported by Nice and Shapiro (2001).]  
422. *gryneus* (Hübner, [1819])  
[Includes all juniper-feeding taxa, including *barryi, loki* (Skinner, 1907), *siva* (W.H. Edwards, 1874), and *sweadneri* (Chermock, 1945), among others; see Ferris (1991).]  
423. *spinetorum* (Hewitson, 1867)  
[Includes *millerorum* Clench, 1981* as a synonym following Robbins (1990).]  
424. *johnsoni* (Skinner, 1904)  
425. *xami* (Reakirt, [1867])  
426. *mcfarlandi* P. Ehrlich & Clench, 1960  
427. *augustinus* (Westwood, 1852)  
[Guppy and Shepard (2001) treat *iroides* (Boisduval, 1852) as a distinct species but provide little evidence to support the split; also see Kondla (1999).]  
428. *mossii* (Hy. Edwards, 1881)  
429. *fotis* (Strecker, [1878])  
430. *polios* (Cook & Watson, 1907)  
431. *irus* (Godart, [1824])  
432. *henrici* (Grote & Robinson, 1867)  
[Includes *solatus* (Cook & Watson, 1909) as a subspecies, although this is sometimes treated as a full species (e.g. Durden 1982).]  
433. *niphon* Hübner, [1819]  
434. *eryphon* (Boisduval, 1852)  
435. *lanoraieensis* (Sheppard, 1934)  

**Cyanophrys** Clench, 1961*  
436. *goodsoni* (Clench, 1946)  
437. *herodotus* (Fabricius, 1793)  
438. *miserabilis* (Clench, 1946)  

**Rekoa** Kaye, 1904  
439. *palegon* (Cramer, 1780)  
440. *marius* (Lucas, 1857)  

**Arawacus** Kaye, 1904
441. *jada* (Hewitson, 1867)  

*Satyrium* Scudder, 1876  
442. *favonius* (J.E. Smith, 1797)  
443. *ilavia* (Beutenmüller, 1899)  
444. *polingi* (Barnes & Benjamin, 1926)  
445. *titus* (Fabricius, 1793)  
446. *acadica* (W.H. Edwards, 1862)  
447. *californica* (W.H. Edwards, 1862)  
448. *sylvius* (Boisduval, 1852)  

*[Includes *dryope* (W.H. Edwards, 1870).]*  
449. *caryaevorus* (McDunnough, 1942)  
450. *edwardsii* (Grote and Robinson, 1867)  
451. *calanus* (Hübner, [1809])  
452. *kingi* (Klots & Clench, 1952)  
453. *liparops* (Leconte, 1833)  
454. *auretorum* (Boisduval, 1852)  
455. *tetra* (W.H. Edwards, 1870)  
456. *saepium* (Boisduval, 1852)  
457. *behrii* (W.H. Edwards, 1870)  
458. *fuliginosa* (W.H. Edwards, 1861)  
458.1 *semiluna* Klots, 1930  

*[Warren (2005) discusses the status of both species and a paper is in preparation by Opler, Warren, and Austin. Several apparent relatives are found in temperate Asia (Tuzov et al. 2000, Weidenhoffer et al. 2004).]*  

*Species previously placed in *Fixsenia* Tutt, 1907 and *Harkenclus* dos Passos, 1970, are now placed in *Satyrium* by Robbins (2004).]*

*Phaeostrymon* Clench, 1961*  
459. *alcestis* (W.H. Edwards, 1871)  

*Ocaria* Clench, 1970  
460. *ocrisia* (Hewitson, 1868)  

*Chlorostrymon* Clench, 1961*  
461. *simaethis* (Drury, 1773)  
462. *maesites* (Herrich-Schäffer, 1865)  
463. *telea* (Hewitson, 1868)  

*Allosmaita* Clench, [1964]  
464. *strophius* (Godart, [1824])  

*[Allosmaita pion* (Godman & Salvin 1887) is a synonym, *fide* Robbins (2004); also see Ferris (1989c: p. 28).]*

*Electrostrymon* Clench, 1961*  
465. *hugon* (Godart, [1824])  

*Previously known as *E. endymion cyphara* (Hewitson, 1874), a name placed in synonymy by Robbins (2004). Also in 2004, Faynel and Balint reported that *sangala* (Hewitson, 1868) is a junior synonym of *hugon* (Godart, [1824]).*  
466. *joya* (Dognin, 1895)  

*Previously referred to as *E. canus* (Druce, 1907), a name placed in synonymy by
Robbins (2004).]
467. *angelia* (Hewitson, 1874)

_Calycopeis_ Scudder, 1876
468. *cecrops* (Fabricius, 1793)
469. *isobeon* (Butler & H. Druce, 1872)

_Strymon_ Hübner, 1818
470. *melinus* (Hübner, 1818)
471. *avalona* (W.G. Wright, 1905)
472. *rufofusca* (Hewitson, 1877)
473. *albata* (C. Felder & R. Felder, 1865)
474. *alea* (Godman & Salvin, 1887)
475. *bebrycia* (Hewitson, 1868)
476. *yoyoja* (Reakirt, [1867])
477. *cestri* (Reakirt, [1867])
478. *martialis* (Herrich-Schäffer, 1865)
479. *istapa* (Reakirt, [1867])

[Formerly known as _columella_ (Fabricius, 1793), which was determined to be a Caribbean species by Robbins & Nicolay (1999).]

480. *bazochii* (Godart, [1824])
481. *acis* (Drury, 1773)
482. *limenia* (Hewitson, 1868)
483. *serapio* (Godman & Salvin, 1887)

_Tmolus_ Hübner, [1819]
484. *echion* (Linnaeus, 1767)

_Ministrymon_ Clench, 1961*
486. *clytie* (W.H. Edwards, 1877)
487. *azia* (Hewitson, 1873)


_Strephonota_ K. Johnson, Austin, Le Crom & Salazar, 1997*
488. *tephraeus* (Geyer, 1837)

_Oenomaus_ Hübner, [1819]
489. *ortygus* (Cramer, 1779)

_Parrhasius_ Hübner, [1819]
490. *m-album* (Boisduval & Leconte, 1833)

_Hypostrymon_ Clench, 1961*
491. *critola* (Hewitson, 1874)

_Ehora_ Scudder, 1872
492. *laeta* (W.H. Edwards, 1862)
493. *quaderna* (Hewitson, 1868)

_Tribe Polyommatini_ (Blues)
[Our generic arrangement of this tribe follows Bálint & Johnson (1995).]

_Leptotes_ Scudder, 1876
494. *cassius* (Cramer, 1775)
495. marina (Reakirt, 1868)

_Zizula_ Chapman, 1910

496. cyna (W.H. Edwards, 1881)

_Brephidium_ Scudder, 1876

497. exilis (Boisduval, 1852)

498. pseudofea (Morrison, 1873)

[Brown & Heineman (1972), Riley (1975) and Smith et al. (1994) treat pseudofea as a separate species from exilis (based on genitalic differences between them reported by Comstock & Huntington (1943)), and treat isophthalma (Herrick-Schäffer, 1862) as a subspecies of exilis. Note that Bordelon & Knudson (2000) mention possible intermediates between exilis and pseudofea from Texas, and Pavulaan & Gatrelle (1999) suggest exilis and pseudofea may be conspecific (as treated by Scott (1986)), but provide little evidence to support their claim; further study is badly needed.]

_Cupido_ Schrank, 1801

499. comyntas (Godart, [1824])

500. amyntula (Boisduval, 1852)


_Celastrina_ Tutt, 1906

501. ladon (Cramer, 1780)

[A neotype of _Papilio ladon_ Cramer from Anne Arundel County, Maryland was designated by Miller and Brown (1981). This species is considered by Wright (in litt.) to be endemic to the Appalachian and Ozarkian regions. The neotype, which may require redesignation to comply with Article 75 of the International Code of Zoological Nomenclature, possesses unique male sex scales not possessed by male of other taxa that were previously grouped with this species.]

502. lucia (W. Kirby, 1837)

[Evidence of this taxon being a full species is provided by Pavulaan (1995), Kondla (1999), Nielsen (1999), and Oehlenschlager & Huber (2002).]

503. neglecta (W.H. Edwards, 1862)

504. echo (W.H. Edwards, 1864)

[Celastrina echo was treated as a full species by Guppy & Shepard (2001).]

*[Further elaboration on the relationships between echo, nigrescens (Fletcher, 1903), sidara (Clench, 1944), cinerea (W.H. Edwards, 1883), gozora (Boisduval, 1870), and Baja California populations (see Brown et al. 1992) is needed to determine their status; some or all of which may represent species-level taxa.]

505. nigra (Forbes, 1960)*

[Celastrina ebenina Clench, 1972* is a synonym; see Scott & Wright (1993).*]

506. neglectamajor Opler & Krizek, 1984*

507. humulus Scott & D. Wright, 1998*

508. idella Wright & Pavulaan, 1999*

508.1 serotina Pavulaan and Wright, 2005*

*[Additional species-level entities have been recognized by some (see Pratt et al. (1994), Wright (1995) and Layberry et al. (1998)), including violacea (W.H. Edwards, 1866).*]
*It is uncertain which, if any, of our North American *Celastrina* taxa are conspecific with the Palearctic *Celastrina argiolus* (Linnaeus, 1758), where they have traditionally been placed (see Eliot & Kawazoé 1983).]

**Glaucopsyche** Scudder, 1872  
509. *piasus* (Boisduval, 1852)  
510. *lygdamus* (Doubleday, 1841)  
[The extinct *G. xerces* (Boisduval, 1852) was suggested to be a subspecies of *lygdamus* by Scott (1986).]

**Philotes** Scudder, 1876  
511. *sonorensis* (C. Felder & R. Felder, 1865)

**Philotiella** Mattoni, [1978]  
512. *speciosa* (Hy. Edwards, 1877)  
513. *leona* Hammond & McCorkle, 2000*

**Euphilotes** Mattoni, [1978]  
[Most recent treatments of this genus are by Mattoni (1989), Pratt (1988, 1994, 1999), Pratt & Ballmer (1993), and Pratt & Emmel (1998). It is likely that additional species-level taxa will be delineated in the future. Warren 2005 cites two putative undescribed species from Oregon in the *Euphilotes battoides* complex.]  
514. *battoides* (Behr, 1867)  
[Traditionally includes, among others, *centralis* (Barnes & McDunnough, 1917).]  
516. *glaucon* (W.H. Edwards, 1871)  
[Warren tentatively includes *intermedia* (Barnes & McDunnough, 1917) and *oregonensis* (Barnes & McDunnough, 1917) and discusses variation of the putative species group in Oregon.]  
517. *ellisi* (Shields, 1975)*  
518. *baueri* (Shields, 1975)*  
519. *enoptes* (Boisduval, 1852)  
520. *ancilla* (Barnes & McDunnough, 1918)  
520.1 *columbiae* (Mattoni, 1954)  
[Warren 2005 raises taxon to species status and presents evidence based on distribution, hosts, and phenotype.]  
521. *mojave* (Watson & W.P. Comstock, 1920)  
523. *pallescens* (Tilden & Downey, 1955)  
524. *spaldingi* (Barnes & McDunnough, 1917)

**Hemiargus** Hübner, 1818  
525. *ceraunus* (Fabricius, 1793)  
[Note that Brown & Heineman (1972), Riley (1975), Smith et al. (1994) and Lamas (2004) treat *ceraunus* as a subspecies of *hanno* (Stoll, 1790); however, Clench (1977) and Johnson & Bálint (1995) consider the two as separate species, and Schwartz (1989) reported *hanno* and *ceraunus* as widely sympatric on Hispaniola. The situation needs further study.]  

**Echinargus** Nabokov, 1945*  
526. *isola* (Reakirt, [1867])

27
Cyclargus Nabokov, 1945*
  527. thomasi (Clench, 1941)
  528. ammon (Lucas, 1857)
  [This species was first reported in our region by Beck (1985), from Big Pine Key, Monroe Co., Florida; it was subsequently photographed there by Krizek (1998).]
* [Generic treatment of Hemiargus, Echinargus, and Cyclargus follows Nabokov (1945), Smith et al. (1994), Bálint & Johnson (1995), Johnson & Bálint (1995), and Lamas (2004); also see Brown & Heineman (1972).]

Plebejus Kluk, 1780
  529. idas (Linnaeus, 1761)
  530. anna (W.H. Edwards, 1861)
  [This taxon was treated as a full species by Bálint & Johnson (1997), Guppy & Shepard (2001), Pyle (2002), and Warren (2005); also see Nice & Shapiro (1999). More fieldwork and laboratory investigations are needed to clarify the situation in North America and Eurasia (see Tuzov et al. 2000).]
  531. melissa (W.H. Edwards, 1873)
  [See Lane & Weller (1994) for details on the taxonomic status of P. melissa populations, including samuelis (Nabokov, 1944).]
  532. saepiolus (Boisduval, 1852)
  533. emigdionis (F. Grinnell, 1905)
  534. icarioides (Boisduval, 1852)
  535. shasta (W.H. Edwards, 1862)
  536. acmon (Westwood, [1851])
  537. lupini (Boisduval, 1869)
  [The previous two species appear to represent a species complex containing, at present, an unknown number of species. The group appears to be much more diverse than was suggested by Goodpasture (1973, 1974). Recently, Scott (1998) transferred several subspecies from acmon to lupini, but presented almost no data to support the changes. Warren (2005) discusses an undescribed species-level taxon from the Oregon Cascades. The complex is currently under study by PAO (Opler, 2003).]
  538. neurona (Skinner, 1902)
  539. optilete (Knoch, 1781)
  540. glandon (de Prunner, 1798)
  541. podarce (C. Felder & R. Felder, 1865)
  542. cassiope (J. Emmel & T. Emmel, 1998)*
  [Relationships of the above three taxa were discussed by Emmel & Emmel (1998), but are still under debate. Some authors recognize additional species, including rusticus (W.H. Edwards, 1865) and franksini (Curtis, 1835); see Ferris (1989c).]
* [Our treatment of Plebejus follows that presented by Gorbunov (2001). He refers to it as a “supergenus” with many subgenera, which in our area include Lycaeides Hübner, [1819], Plebulina Nabokov, [1945], Icaricia Nabokov, [1945], Vacciniina Tutt, 1909, and Agriades Hübner, [1819]. Bálint & Johnson (1997) present a considerably different arrangement of the group, placing our members in Aricia [Reichenbach], 1817, Albulina Tutt, 1909 and Plebejus. None of these authors retain...
the use of *Lycaeides, Icaricia, Vacciniina or Plebulina* as valid genera.]

**FAMILY RIODINIDAE**
[Our treatment of the Riodinidae as a family follows Robbins (1988a,b) and Callaghan and Lamas (2004), but should be considered a tentative arrangement only. The relationship of this group to the Lycaenidae and Danainae requires further study, as noted by Campbell et al. (2000).]

**Subfamily Riodininae**
*Calephelis* Grote & Robinson, 1869
543. *virginiensis* (Guérin-Méneville, [1832])
544. *borealis* (Grote & Robinson, 1866)
545. *muticum* McAlpine, 1937
546. *nemesis* (W.H. Edwards, 1871)
547. *perditalis* Barnes & McDunnough, 1918
548. *wrighti* Holland, 1930
549. *rawsoni* McAlpine, 1939

[Scott (1986) lumped *freemani* McAlpine, 1971* and *arizonensis* McAlpine, 1971* as subspecies of *rawsoni*, yet presented no data in support of these changes (but did describe genitalic differences between these taxa). We do not accept his combinations, and stress that further study of this genus is badly needed; Neck (1996) treats *freemani* as a full species. The status of *C. dreisbachi* McAlpine, 1971* (one specimen from Arizona in the type series) needs clarification, and is tentatively not included in our list of species.]
550. *freemani* McAlpine, 1971*
551. *arizonensis* McAlpine, 1971*

*Caria* Hübner, 1823
552. *ino* Godman & Salvin, 1886

*Lasaia* H.W. Bates, 1868
553. *sula* Staudinger, 1888
554. *maria* Clench, 1972*

[Specimen collected in Guadalupe Canyon, Cochise Co., Arizona, by Kilian Roever; determination confirmed by R. Bailowitz.]

*Melanis* Hübner, [1819]
555. *pixe* (Boisdruval, 1836)

*Emesis* Fabricius, 1807
556. *zela* Butler, 1870

[Callaghan and Lamas (2004) treat *ares* as a synonym of *zela cleis* (W.H. Edwards, 1882), but we feel that further study of the types is needed, since two species indeed appear to be involved in our region (e.g. Bailowitz & Brock 1991).]
558. *emesia* (Hewitson, 1867)
559. *tenedia* C. Felder & R. Felder, 1861

*Apodemia* C. Felder & R. Felder, 1865
560. *mormo* (C. Felder & R. Felder, 1859)
[See Toliver et al. (1994) for notes on the specific status of *duryi*.

562. *virgulti* (Behr, 1865)
563. *mejicanus* (Behr, 1865)

[Species-level relationships of the *mormo* complex (above four taxa) remain poorly understood, and our arrangement is tentative. Our treatment is based, in part, on information in Pratt & Ballmer (1991), Cary & Holland (1992) and Toliver et al. (1994). The group has not been considered as a whole since the analysis of Opler & Powell (1962).]

564. *palmerii* (W.H. Edwards, 1870)
565. *hepburni* Godman & Salvin, 1886
566. *walkeri* Godman & Salvin, 1886
567. *multiplaga* Schaus, 1902
568. *phyciodoides* Barnes & Benjamin, 1924

[Possibly extirpated in U.S. portion of range (Bailowitz & Brock 1991); also see Holland & Forbes (1981).]

569. *nais* (W.H. Edwards, 1877)
570. *chisosensis* H.A. Freeman, 1964*

FAMILY NYMPHALIDAE

[Our subfamily and generic arrangement generally follows Harvey (1991), as modified by Ackery et al. (1999), Freitas (1999), Brower (2000), Wahlberg (2002), Freitas & Brown (in preparation) and Lamas (2004), although studies are under way to further resolve relationships. It is possible that the family, as presented here, is not a monophyletic group, since the exact placement of the Libytheinae and Danainae remains uncertain (see Campbell et al. 2000).]

Subfamily Libytheinae

*Libytheana* Michener, 1943

571. *carinenta* (Cramer, 1777)
[Many authors (e.g. Field 1940, Friedlander 1984, Shields 1984, 1985, Okano 1987, Ferris 1989c, Motono 1993, and Austin & Emmel 1998) treat *bachmani* (Kirtland, 1851) and *carinenta* as separate species. However, little information on populations across North and Central America is available, and reported genitalic differences between the two do not hold up in series (Kawahara 2001, pers. comm. 2002).]

572. *motya* (Hübner, [1823])
[Heitzman & Heitzman (1973) reported this species from Texas as rare strays or temporary colonists from Cuba; see Alayo and Hernández (1981).]

Subfamily Danainae

[In our area this subfamily includes the tribes Danaini and Ithomiini; see Ackery & Vane-Wright (1984), Ackery (1987), and Ackery et al. (1999).]

*Danaus* Kluk, 1780
573. plexippus (Linnaeus, 1758)
574. gilippus (Cramer, 1776)
575. eresimus (Cramer, 1777)

_Lycorea_ Doubleday, [1847]
576. _halia_ (Hübner, 1816)
[Central American populations are sometimes treated as species _cleobaea_ (Godart, 1819), e.g. Miller & Brown (1981), Schwartz (1989), Brown (1992), and Smith et al. (1994); but see Lamas (2004).]

_Dircenna_ Doubleday, 1847
577. _klugii_ (Geyer, 1837)

_Greta_ Heming, 1934
577.1 _morgane_ (Geyer, 1837)
[First documented for the United States by Dauphin et al. 2005.]

_Pteronymia_ Butler & Druce, 1872
577.2 _cotyto_ (Guérin-Méneville, [1844])
[Bordelon and Knudson (2006) reported a female that was found and photographed at the NABA International Butterfly Park in Hidalgo County, Texas by Dauphin on December 7, 2005.]

Subfamily Heliconiinae

_Dione_ Hübner, [1819]
578. _moneta_ Hübner, [1825]

_Agraulis_ Boisduval & Leconte, [1835]
579. _vanillae_ (Linnaeus, 1758)

_Dryas_ Hübner, [1807]
580. _iulia_ (Fabricius, 1775)

_Dryadula_ Michener, 1942
581. _phaetusa_ (Linnaeus, 1758)

_Eueides_ Hübner, 1816
582. _isabella_ (Stoll, 1781)

_Heliconius_ Kluk, 1780
583. _charithonia_ (Linnaeus, 1767)
[Spelling corrected to original orthography (Brower 1994).]
584. _erato_ (Linnaeus, 1758)

_Euptoieta_ Doubleday, 1848
585. _claudia_ (Cramer, 1776)
586. _hegesia_ (Cramer, 1779)

_Speyeria_ Scudder, 1872
587. _diana_ (Cramer, 1777)
588. _cybele_ (Fabricius, 1775)
[Includes _leto_ (Behr, 1862), although this is treated as a full species by some (e.g. Kondla 1999).]
589. _aphrodite_ (Fabricius, 1787)
590. _idalia_ (Drury, 1773)
591. _nokomis_ (W.H. Edwards, 1862)
592. edwardsii (Reakirt, 1866)
593. coronis (Behr, 1864)
594. zerene (Boisduval, 1852)
595. carolae (dos Passos & Grey, 1942)

[Although somewhat intermediate between coronis and zerene, this isolated, disjunct taxon was considered a full species by Emmel & Austin (1998).]
596. callippe (Boisduval, 1852)
597. egleis (Behr, 1862)
598. adiaste (W.H. Edwards, 1864)
599. atlantis (W.H. Edwards, 1862)
600. hesperis (W.H. Edwards, 1864)

[Pyle (2002) treats the above two taxa as a single species based on unpublished research by Paul Hammond. Until this evidence is presented, we follow the arrangement proposed by Scott et al. (1998); also see Ferris (1983).]
601. hydaspe (Boisduval, 1869)
602. mormonia (Boisduval, 1869)

_Boloria_ Moore, [1900]

[We follow a broad usage of _Boloria_; see dos Passos & Grey (1945), dos Passos (1964), Grey (1957, 1989) and Gorbunov (2001). Clossiana Reuss, 1920 and Proclossiana Reuss, 1926 are considered to be subgenera or synonyms (but see Warren (1944), Miller & Brown (1981) and Aubert et al. (1996)).]
603. alaskensis (Holland, 1900)

_Boloria napaea_ (Hoffmansegg, 1804) is a separate Eurasian species with differing genitalia that reportedly occurs sympatrically with alaskensis at some locations. See discussions by Crosson du Cormier (1977), Dubatolov (1992), Kosterin (2000), Tuzov et al. (2000), and Gorbunov (2001).]
604. eunomia (Esper, 1800)
605. seiene ([Denis & Schiffermüller], 1775)
606. bellona (Fabricius, 1775)
607. frigga (Thunberg, 1791)
608. improba (Butler, 1877)

[Includes acrocnema Gall & Sperling, 1980*.]
609. kriemhild (Strecker, 1879)
610. epithore (W.H. Edwards, 1864)
611. polaris (Boisduval, [1828])
612. freija (Thunberg, 1791)
613. natazhati (Gibson, 1920)

[Taxonomic status as a full species detailed by Troubridge & Wood (1995), Shepard et al. (1998), and Guppy & Shepard (2001).]
614. alberta (W.H. Edwards, 1890)
615. astarte (Doubleday, [1847])

[Tentatively includes distincta (Gibson, 1920), following dos Passos (1961); but see Wyatt (1958). The relationship of astarte to distincta and tschukotkensis (Wyatt, 1961) needs further elaboration. Guppy & Shepard (2001) very briefly summarize reasons for using tritonia (Böber, 1812) for our North American populations, a
combination also implied by Gorbunov (2000). However, no comprehensive review of the complex has been presented, and Tuzov et al. (2000) maintain *tritonia* and *distincta* as separate species.

616. *chariclea* (Schneider, 1794)

[Includes our former concept of *titania* (Esper, [1793]), a wholly Palaearctic taxon (see Shepard 1998); also includes *montinus* (Scudder, 1863). However, the possibility exists that more than one species is being represented in our area by this name (see Layberry et al. 1998).]

Subfamily Nymphalinae

*Poladryas* Bauer, 1961

617. *minuta* (W.H. Edwards, 1861)
618. *arachne* (W.H. Edwards, 1869)

[We do not feel that Scott (1974, 1986) presents sufficient data to lump the above two taxa. Several authors also maintain *arachne* and *minuta* as full species, e.g. Ferris (1989c) and Austin (1998a); however, further research in the U.S. and Mexico is needed to resolve the situation.]

*Chlosyne* Butler, 1870

619. *theona* (Ménétriés, 1855)

[Includes *chinatiensis* (Tinkham, 1944), according to Austin & Smith (1998).]

620. *cyneas* (Godman & Salvin, 1878)
621. *fulvia* (W.H. Edwards, 1879)
622. *leanira* (C. Felder & R. Felder, 1860)
623. *californica* (W.G. Wright, 1905)
624. *lacinia* (Geyer, 1837)
625. *definita* (E.M. Aaron, [1885])
626. *endeis* (Godman & Salvin, 1894)
627. *janais* (Drury, 1782)
628. *rosita* A. Hall, 1924
629. *melitaeoides* (C. Felder & R. Felder, 1867)

[See Kendall & McGuire (1984) for reports from Texas.]

630. *eumeda* (Godman & Salvin, 1894)

[Kons (2000) and Luis et al. (2003) consider *eumeda*, *melitaeoides* and *marina* (Geyer, 1837) to be separate species (these were lumped by Scott (1986) without justification). The report from Pima Co., Arizona, appears to be of the semi-desert species, *eumeda*; however, *C. marina* also occurs in Sonora, Mexico, in montane habitats.]

631. *gorgone* (Hübner, [1810])
632. *nycteis* (Doubleday, [1847])

[A petition to the International Commission on Zoological Nomenclature to suppress *ismeria* (Boisduval & Leconte, [1835]), a possible senior synonym of *nycteis* (see Gatrelle 1998, 2000), is in preparation; see ICZN (1999).]

633. *harrisii* (Scudder, 1864)
634. *palla* (Boisduval, 1852)
635. *gabbi* (Behr, 1863)
636. acastus (W.H. Edwards, 1874)
   [Includes neumoegeni (Skinner, 1895), among others.]
637. whitneyi (Behr, 1863)
   [Tentatively includes damoetas (Skinner, 1902), following Scott (1998) and Kons (2000), but further elaboration on the relationships of taxa in this group is needed.]
638. hoffmanni (Behr, 1863)
   *[Charidryas Scudder, 1872 (see Higgins 1960) and Thessalia Scudder, 1875 (see Wahlberg & Zimmerman 2000) are considered synonyms of Chlosyne.]

Microtia H.W Bates, 1864
639. elva H.W. Bates, 1864

Dymasia Higgins, 1960*
640. dymas (W.H. Edwards, 1877)

Texola Higgins, 1959
641. elada (Hewitson, 1868)

Phyciodes Hübner, [1819]
642. graphica (R. Felder, 1869)
   *Phyciodes graphica, described in April, 1869, supercedes P. vesta (W.H. Edwards, 1869), which was described in September-October, 1869; see Lamas (2004).]*
643. picta (W.H. Edwards, 1865)
644. orseis W.H. Edwards, 1871
645. pallida (W.H. Edwards, 1864)
646. mylitta (W.H. Edwards, 1861)
647. phaon (W.H. Edwards, 1864)
648. tharos (Drury, 1773)
649. cocyta (Cramer, 1777)
   *[Supersedes sellenis (W. Kirby, 1837), an apparent junior synonym; see Scott (1994).]*
   *[Whether Phyciodes incognitus Gatrelle, 2004 should be recognized as a separate species or referred to as a subspecies of Phyciodes cocyta remains to be ascertained (Gatrelle 2004).]*
650. batesii (Reakirt, [1866])
651. pulchella (Boisduval, 1852)
   *[Lectotype designation of pulchella by Emmel et al. (1998a) displaces pratensis (Behr, 1863). See Miller & Brown (1981) for synonymy of campestris (Behr, 1863).]*
   *[Our treatment of Phyciodes follows Wahlberg et al. (2003).]*

Anthanassa Scudder, 1875
652. frisia (Poey, 1832)
653. tulcis (H.W. Bates, 1864)
654. texana (W.H. Edwards, 1863)
   *[Anthanassa seminole (Skinner, 1911) was suggested to be a species distinct from texana by Watts & Habeck (1991), and treated as such by Neck (1996); further study is needed to determine its status.]*
655. ptolyca (H.W. Bates, 1864)
656. argentea (Godman & Salvin, 1882)
First U.S. record reported by Chuah & Cushing (1995); also see Bordelon & Knudson (2000). Anthanassa ardy (Hewitson, 1864) may have also strayed into Texas (see Excluded Species).

Tegosa Higgins, 1981*

657. anietta (Hewitson, 1864)

Euphydryas Scudder, 1872

658. gillettii (Barnes, 1897)
659. phaeton (Drury, 1773)
660. editha (Boisduval, 1852)
661. chalcedona (Doubleday, [1847])
662. anicia (Doubleday, [1847])

[We tentatively consider anicia to be a separate species from chalcedona following Ferris (1989b), Guppy & Shepard (2001) and Pyle (2002), however further elaboration on the relationship between the two taxa is needed. While the taxa clearly behave as two species in the Pacific Northwest, their relationship appears to be less well defined in other areas, e.g. Brussard et al. (1989), Austin & Murphy (1998). We tentatively consider colon (W.H. Edwards, 1881) to be conspecific with chalcedona, but again, much additional research is needed. A recent study by Zimmerman et al. (2000) did not resolve relationships among these taxa.]


Hypolimnas Hübner, [1819]

663. misippus (Linnaeus, 1764)

Junonia Hübner, [1819]

[Our use of Junonia instead of Precis Hübner, [1819] follows de Lesse (1952), Turner & Parnell (1985), and Lamas (2004); but see Hemming (1934) and Comstock (1944).]
664. coenia Hübner, [1822]
665. evarete (Cramer, 1779)

[Includes nigrosuffusa Barnes & McDunnough, 1916 (contra Turner & Parnell 1985), following Lamas (2004).]
666. genoveva (Stoll, 1780)

*[The relationships between these Junonia taxa need further elaboration; see Hafernik (1982), Turner & Parnell (1985), and Lamas (2004).]*

Anartia Hübner, [1819]

667. jatrophae (Linnaeus, 1763)
668. fatima (Fabricius, 1793)

[Sometimes treated as a subspecies of amatea (Linnaeus, 1758), e.g. Lamas (2004); but see Silberglied et al. (1979), Dasmahapatra et al. (2002), and Blum et al. (2003).]
669. chrysopelea (Hübner, [1831])

[Reported as a subspecies of lytre (Godart, 1819) by Anderson (1974), Bennett & Knudson (1976), Scott (1986), and Lamas (2004); but see Silberglied et al. (1979), Alayo & Hernández (1981), and Blum et al. (2003).]

Siproeta Hübner, [1823]
670. stelenes (Linnaeus, 1758)
671. epaphus (Latreille, [1813])

*Polygonia* Hübner, [1819]
672. interrogationis (Fabricius, 1798)
673. comma (Harris, 1842)
674. satyrus (W.H. Edwards, 1869)
675. faunus (W.H. Edwards, 1862)
676. gracilis (Grote & Robinson, 1867)
[Includes zephyrus (W.H. Edwards, 1870); see Scott (1984) and Layberry et al. (1998).]
677. progne (Cramer, 1775)
678. oreas (W.H. Edwards, 1869)
[This species was treated as distinct from progne (contra Scott 1984) by Bird et al. (1995), Layberry et al. (1998), and Guppy & Shepard (2001).]

*Aglais* Dalman, 1816
679. milberti (Godart, 1819)
680. urticae (Linnaeus, 1758)
[Several individuals of this common Palaearctic butterfly have been captured or photographed (e.g. Glassberg 1992, Zirlin & Ingraham 1997, Zirlin 2002), and this species is likely either an occasional accidental introduction or, less likely, a periodic vagrant.]

*Nymphalis* Kluk, 1780
681. vaualbum (Denis and Schiffermüller)
[Guppy & Shepard (2001; pp. 256-257) indicate that vaualbum may be a nomen nudum (see ICZN 1999), and use l-album (Esper, 1781) in its place. This treatment is repeated by Wahlberg & Nylin (2003). A petition to the ICZN is being prepared to resolve the issue, and until the commission rules, we maintain the name in widest use, vaualbum, as recommended by the ICZN (1999). See Sattler & Tremewan (1984) for further discussion.]
[The inclusion of l-album (formerly as vau-album) in Roddia Korshunov, 1995 by Guppy and Shepard (2001) and others is reversed by Wahlberg & Nylin (2003).]
682. antiopa (Linnaeus, 1758)
683. californica (Boisduval, 1852)
[Miller & Miller (1990) treat californica as a subspecies of the Eurasian xanthomelas Esper [1781], but see Nylin et al. (2001).]
*[Our arrangement of Nymphalis and Aglais follows Nylin et al. (2001) as modified by Wahlberg and Nylin (2003).]

*Vanessa* Fabricius, 1807
684. atalanta (Linnaeus, 1758)
685. cardui (Linnaeus, 1758)
686. annabella (Field, 1971)*
687. virginiensis (Drury, 1773)
[Some authors place the above three species in *Cynthia* Fabricius, 1807, following Field (1971), but several natural hybrids between *atalanta* and *annabella* are known (Comstock 1927, Dimock 1973, Tilden & Smith 1986).]
Subfamily Limenitidinae
[Our treatment of the Limenitidinae and Biblidinae follows Freitas (1999), Wahlberg (2002) and Freitas & Brown (in preparation), although Lamas (2004) places this subfamily within the Biblidinae, and Marpesia may belong elsewhere; further study is needed.]

Limenitis Fabricius, 1807
   [Basilarchia Scudder, 1872 is considered a synonym; see Chermock (1950), Niculescu (1986), Tuzov et al. (2000), and Gorbunov (2001).]
   692. artemis (Drury, 1773)
   693. archippus (Cramer, 1776)
   694. lorquini (Boisduval, 1852)
   695. weidemeyerii W.H. Edwards, 1861
   [Suggested to be conspecific with lorquini by Porter (1990), but see Boyd et al. (1999).]

Adelpha Hübner, [1819]
   696. bredowii Geyer, 1837
   697. fessonia (Hewitson, 1847)
   698. basiloides (H.W. Bates, 1865)
   [Opler (1992) and Neck (1996) reported this species from Texas.]

Marpesia Hübner, 1818
   699. chiron (Fabricius, 1775)
   700. petreus (Cramer, 1776)
   701. eleuchea Hübner, 1818
   702. zerynthia Hübner, [1823]
   [This species is occasionally listed as M. coresia (Godart, [1824]), a junior synonym of zerynthia (see Neild 1996).]

Subfamily Biblidinae
Biblis Fabricius, 1807
   703. hyperia (Cramer, 1779)
Mestra Hübner, [1825]
   704. amymone (Ménétriés, 1857)
   [This is sometimes treated as a subspecies of the Jamaican M. dorcas (Fabricius, 1775), e.g. Lamas (2004).]
Eunica Hübner, [1819]
   705. monima (Stoll, 1782)
   706. tatila (Herrich-Schäffer, [1855])
Myscelia Doubleday, [1845]
707. ethusa (Doyère, [1840])
708. cyananthe C. Felder & R. Felder, 1867

Dynamine Hübner, [1819]
709. dyonis Geyer, 1837

[Sometimes considered to be a subspecies of the Caribbean D. egaea (Fabricius, 1775), e.g. de la Maza & Turrent (1985) and Smith et al. (1994), but serina (Fabricius, 1775) has precedence over egaea (see Lamas 2004).]

709.1. postverta (Cramer, 1779)

[Bordelon & Knudson (2006) reported that three individuals of D. postverta mexicana d’Almeida were found in Hidalgo County, Texas during December, 2005. These butterflies were photographed by a number of observers and images of two of the individuals were illustrated by Bordelon and Knudson. Previously, the species was reported from Texas by Pyle (1986) as D. mylitta (Cramer, 1779) and by Stanford (2002), but there was no satisfactory documentation.]

Diaethria Billberg, 1820
710. species

[The west Texas Diaethria record (see Kendall & McGuire 1984, Neck 1996) is apparently of D. anna (Guérin-Méneville, [1844]) or D. astala (Guérin-Méneville, [1844]), since these are the only Diaethria species resident in northeastern Mexico (de la Maza & Turrent 1985); however, the west Texas specimen has not been positively determined and is reportedly no longer extant. There are also unverified records for both anna and astala from south Texas (Stanford 2002). See Excluded Species.]

Epiphile Doubleday, [1845]
711. adrasta Hewitson, 1861

Temenis Hübner, [1819]
711.1 laothoe (Cramer, [1777])

[First record from United States reported by Grishin (2005).]

Hamadryas Hübner, [1806]
712. februa (Hübner, [1823])
713. amphichloe (Boisduval, 1870)
714. glauconome (H.W. Bates, 1864)
715. atlantis (H.W. Bates, 1864)
716. feronia (Linnaeus, 1758)
717. guatemalena (H.W. Bates, 1864)
718. iphthime (H.W. Bates, 1864)
719. amphinome (Linnaeus, 1767)

Subfamily Charaxinae

Anaea Hübner, [1819]
720. troglodyta (Fabricius, 1775)

[Includes floridalis F. Johnson & W.P. Comstock, 1941, in accordance with Lamas (2004), but see discussion by Smith et al. (1994: p. 65).]
aidea (Guérin-Méneville, [1844])

[Often considered a species-level taxon (e.g. DeVries 1987), but sometimes treated as a subspecies of troglodyta (e.g. Lamas 2004).]

Memphis Hübner, [1819]

andria Scudder, 1875

glycerium (Doubleday, [1849])

[Some authors (e.g. Lamas 2004) place glycerium in the genus Fountainea Rydon, 1971*, but the monophyly of Fountainea has not been demonstrated and is questionable.]

pithyusa (R. Felder, 1869)
echemus (Doubleday, [1849])

Subfamily Apaturinae

Asterocampa Röber, 1915

celtis (Boisduval & Leconte, [1835])
leilia (W.H. Edwards, 1874)
clyon (Boisduval & Leconte, [1835])
idyja (Geyer, [1828])

[It is possible that Asterocampa argus (H.W. Bates, 1864), currently treated as the continental subspecies of idyja, may comprise a separate species (see Smith et al. 1994).]

*Our treatment of Asterocampa species follows Friedlander (1987), although further study of the genus is needed.

Doxocopa Hübner, [1819]

laure (Drury, 1773)
pavon (Latreille, [1809])

Subfamily Morphinae

Morpho Fabricius, 1807

clyton (Boisduval & Leconte, [1835])

Subfamily Satyrinae

[Our arrangement of this subfamily generally follows the classification presented by Miller (1968), as modified by Harvey (1991).]

Enodia Hübner, [1819]

portlandia (Fabricius, 1781)
anthedon A.H. Clark, 1936
creola (Skinner, 1897)

Satyrodes Scudder, 1875

eurydice (Linnaeus, 1763)
appalachia (R.L. Chermock, 1947)

Cyllopsis R. Felder, 1869

pyracmon (Butler, 1867)

[Cyllopsis henshawi (W.H. Edwards, 1876) is treated as a seasonal form of pyracmon, as suggested by Bailowitz & Brock (1991) and Brock (1998); but see

739. *pertepida* (Dyar, 1912)
740. *gemma* (Hübner, 1808)

*Hermeuptychia* Forster, 1964*

741. *sosybius* (Fabricius, 1793)

[The status of *sosybius* versus *hermes* (Fabricius, 1775) is uncertain and requires detailed study; see Forster (1964), Miller & Brown (1981: p. 241, note 624), and Smith et al. (1994). The use of *hermes* prevails in the Neotropical literature, e.g. Lamas (2004), for what may be (at least in part) the same species that occurs in our region.]

*Neonympha* Hübner, [1818]

742. *areolatus* (J.E. Smith, 1797)
743. *helicta* (Hübner, 1808)

[Species status recently proposed by Gatrell (1999); however, further research on this group is needed to clarify overall distributions and confirm the status of *helicta*.]

744. *mitchellii* French, 1889

*Megisto* Hübner, [1819]

745. *cymela* (Cramer, 1777)

[Includes *violata* (Maynard, 1891), following Catling & Calhoun (1997); however, it is still possible that more than one species is included under the name *cymela*, and further study is needed.]

746. *rubricata* (W.H. Edwards, 1871)

*Paramacera* Butler, 1868

747. *xicaque* (Reakirt, [1867])

[Tentatively includes *allynii* L. Miller, 1972*, following Scott (1986), but see Miller (1972). Further study is needed.]

*Coenonympha* Hübner, [1819]

748. *haydenii* (W.H. Edwards, 1872)
749. *tullia* (Müller, 1764)

[Treated as a species complex by Ferris (1989c); also see Davenport (1941) and Brown (1955, 1961). Included here are several taxa sometimes considered full species (e.g. dos Passos 1958); these include (among others) *ampelos* W.H. Edwards, 1871, *california* Westwood, 1851, *inornata* W.H. Edwards, 1861, *kodiak* W.H. Edwards, 1869, *ochracea* W.H. Edwards, 1861, and *nipisiquit* McDunnough, 1939. Layberry et al. (1998) treated *nipisiquit* as a full species based on (then) unpublished evidence by R. Webster; Webster (1999) subsequently treated *nipisiquit* as a subspecies of *tullia* but stressed that additional research was needed to determine its status. Handfield (1999) gave *nipisiquit* species-level status. Although gene flow between purported species was demonstrated by Porter & Geiger (1988) (also see Porter & Mattoon 1989), it is unclear which, if any, of our taxa are conspecific with the Eurasian *C. tullia*; see Kondla (1999) and Guppy & Shepard (2001). It is likely that more than one species-level taxon is included in this complex. Further research is badly needed since there is currently no satisfactory taxonomic arrangement for this group.]
Cercyonis Scudder, 1875
750. pegala (Fabricius, 1775)
751. sthenele (Boisduval, 1852)
752. meadii (W.H. Edwards, 1872)
753. oetus (Boisduval, 1869)

Erebia Dalman, 1816
754. vidleri Elwes, 1898
755. rossii (Curtis, 1835)
756. disa (Thunberg, 1791)
757. mancinus Doubleday, [1849]
[See Layberry et al. (1998) for separation of mancinus from disa.]
758. magdalena Strecker, 1880
759. mackinleyensis Gunder, 1932
[See Hilchie (1990) and Layberry et al. (1998) for separation of mackinleyensis from magdalena; however, Gorbunov (2001) treats the two as conspecific.]
760. fasciata Butler, 1868
761. discoidalis (W. Kirby, 1837)
762. pawloskii Ménétriés, 1859
[North American populations of this species have been referred to as Erebia theano (Tauscher, 1809), but Guppy & Shepard (2001) note that Erebia theano is restricted to eastern Siberia and Mongolia. See Tuzov et al. (1997). Gorbunov (2001, plate 41) illustrates the genitalia of both species.]
763. youngi Holland, 1900
764. occulta Roos & Kimmich, 1983*
[Our use of occulta over anyuica Kurentzov, 1966 follows Roos & Arnscheid (1984), Tuzov et al. (1997) and Belik & Zamolodchikov (2002); but see Dubatolov (1992) and Layberry et al. (1998).]
765. lafontainei Troubridge & Philip, 1983*
766. callias W.H. Edwards, 1871
767. epipsodea Butler, 1868

Gyrocheilus Butler, 1867
768. patrobas (Hewitson, 1862)

Neominois Scudder, 1875
769. ridingsii (W.H. Edwards, 1865)
[Scott (1998) described “Hipparchia (Neominois) ridingsii wyomingo” as a “new subspecies (or species?),” and suggested it is genetically isolated from ridingsii; Opler (1999) subsequently treated this as a full species. Additional field observations have shed some light on the situation but many questions remain and the status of wyomingo remains uncertain. The situation is currently under study by Matthew Garhart.]

Oeneis Hübner, [1819]
770. philipi Troubridge, 1988*
[The name rosovi Kurentzov, 1970 (a potential senior synonym of philipi) cannot be used in any meaningful way until a lectotype is designated, since two syntypes exist (but see Layberry et al. 1998). Oeneis rosovi was treated as a subspecies of O. norna]
(Thunberg, 1791) by Lukhtanov (1989), and as a synonym of that species by Gorbunov (2001). See also Lukhtanov & Eitschberger (2000).]
771. *polixenes* (Fabricius, 1775)
772. *jutta* (Hübner, [1806])
773. *melissa* (Fabricius, 1775)
774. *alpina* Kurentzov, 1970
[Includes *excubitor* Troubridge, Philip, Scott & Shepard, 1982* as a synonym, following Layberry et al. (1998).]
775. *bore* (Esper, 1798)
[Tentatively includes *taygete* Geyer, [1830], following Layberry et al. (1998), but further study is needed to clarify the relationship of these taxa; Tuzov et al. (1997) consider the taxa to be separate species.]
776. *chryxus* (Doubleday, [1849])
[Includes *ivallda* (Mead, 1878), following Porter & Shapiro (1991).]
777. *alberta* Elwes, 1893
778. *nevadensis* (C. Felder & R. Felder, 1867)
779. *macounii* (W.H. Edwards, 1885)
780. *uhleri* (Reakirt, 1866)
[Hassler & Feil (2002) recently reported the occurrence of *Oeneis nanna* (Ménétriers, 1859) in North America, with the description of a new subspecies (*kluanensis*). The authors did not examine sufficient material of *uhleri*, and the proper taxonomic placement of this taxon is currently being studied.]
Hawaiian Butterflies

Although not part of the North American continent, Hawaii is one of the 50 United States. For sake of completeness we present a list of the butterflies recorded from the Hawaiian Islands, based on Riotte & Uchida (1979). Additional information is provided by Zimmerman (1958).

Family Hesperiidae

*Erionota torus* Evans, 1941  
[Originally misdetermined as *E. thrax* (Linnaeus, 1767) by Riotte & Uchida (1979).]  
*Hylephila phyleus* (Drury, 1773)

Family Papilionidae

*Papilio xuthus* Linnaeus, 1767

Family Pieridae

*Pieris rapae* (Linnaeus, 1758)  
*Phoebis agarithe* (Boisduval, 1836)

Family Lycaenidae

*Tmolus echion* (Linnaeus, 1767)  
*Strymon bazochii* (Godart, [1824])  
*Lampides boeticus* (Linnaeus, 1767)  
*Brephidium exilis* (Boisduval, 1852)  
*Udara blackburni* (Tuely, 1878)  
[See Eliot & Kawazoe (1983) for generic combination.]

Family Nymphalidae

*Agraulis vanillae* (Linnaeus, 1758)  
*Vanessa virginiensis* (Drury, 1773)  
*Vanessa cardui* (Linnaeus, 1758)  
*Vanessa atalanta* (Linnaeus, 1758)  
*Vanessa tameamea* Eschscholtz, 1821  
*Danaus plexippus* (Linnaeus, 1758)

*Endemic to Hawaiian Islands. All others are introduced exotics.
Excluded Species

The species listed below have been excluded from the North American fauna due to erroneous or inadequate documentation, or recent change in status. This is not an exhaustive list, but treats most discrepancies in the post-1980 literature that are not discussed in the text. See Calhoun (1997) for a complete list of erroneous Florida records.

**Hesperiidae**

*Phocides urania* (Westwood, [1852])

[Dubious Texas records reported by Aaron (1890); Arizona records are unsubstantiated (see Bailowitz & Brock 1991).]

*Polythrix asine* (Hewitson, 1867)

[Erroneously reported from the U.S. based on an unjustifiable assumption of conspecificity with *mexicanus* by Scott (1986); see Freeman (1969) and Austin & Warren (2002).]

*Polythrix procerus* (Plötz, 1880)

[Misidentified but later corrected to *P. octomaculata* by Freeman (1967); *procerus* is now placed in *Cephise* Evans, 1952* (see Austin & Mielke 2000).]

*Codatractus melon* (Godman & Salvin, 1893) [Unsubstantiated records; see Bailowitz & Brock (1991: p. 25).]

*Urbanus evona* Evans, 1952

[Unsubstantiated sight record (Glassberg 2004). Genitalic examination is necessary for definite identification (Evans 1952, Warren, personal communication).]

*Urbanus pronta* Evans, 1952*

[Record refers to *U. pronus*; see Kendall & McGuire (1984).]

*Urbanus albimargo* (Mabille, 1876)

[Unsubstantiated records from Texas apparently refer to *doryssus*; see Ferris (1989c: p. 6).]

*Astraptes galesus* (Mabille, 1888)

[Unsubstantiated records; see Bailowitz & Brock (1991: pp. 30-31). The species is unknown from Mexico (Warren 2000, 2002).]

*Thorybes valeriana* (Plotz, 1881)

[Our records refer to *Codatractus mysie* (see Burns 1996); however the identity of *valeriana* remains a mystery.]

*Dyscophellus euribates* (Stoll, 1782)

[The report of this species from Texas by Aaron (1890), as *Eudamus hesus* (Westwood, [1852]), is unsubstantiated (see Lindsey et al. 1931); *euribates* remains unknown from Mexico (Warren 2000, 2002).]

*Cogia cajeta* (Herrich-Schäffer, 1869)

[One unsubstantiated record from Texas (Stanford 2002).]

*Pellicia costimacula* Herrich-Schäffer, 1870

[This South American species was shown to be separate from *arina* by Steinhauser (1989).]

*Pellicia angra* Evans, 1953*
[All reports from our area (e.g. Tilden 1974) apparently refer to *Pellicia arina.*]

*Staphylus azteca* (Scudder, 1872)

[Single individual reported from Texas by Freeman (1977) later identified as *Staphylus ceos* by ADW, not *mazans* as reported by Cassie et al. (2001).]

*Pyrgus adepta* Plötz, 1884

[Two highly unlikely and unverified records exist from Texas (Stanford 2002).]

*Helioptyrgus sublinea* (Schaus, 1902)

[Unsubstantiated record for this species from Texas reported by Stanford (2002); see Austin & Warren (2001) for generic combination.]

*Piruna cyclosticta* (Dyar, 1920)

[The recent report of *Piruna pirus* from Jeff Davis Co., Texas (Bordelon 2000), may represent this species, as listed (with a “?”) by Stanford (2002). We have not yet examined these specimens.]

*Callimormus saturnus* (Herrich-Schäffer, 1869)

[A single male of this species labeled from Texas (Evans 1955) is most likely mislabeled, although the species is common in tropical northern Mexico.]

*Repens florus* (Godman, 1900)

[A single unverified record exists from south Texas (Stanford 2002), although this species is resident in Sonora and Tamaulipas, Mexico; see Vargas et al. (1996), Warren et al. (1998) and Warren (2000, 2002) for generic combination.]

*Remella remus* (Fabricius, 1798)

[A single unsubstantiated record exists from Texas (Stanford 2002).]

*Decinea huasteca* (H.A. Freeman, 1969)*

[Although cited by Ferris (1989c), no U.S. voucher is known.]

*Polites subreticulata* (Plötz, 1883)

[Reports by Freeman (1951) of this species apparently refer to *P. carus*; see Burns (1994a).]

*Anatrytone potosiensis* (H.A. Freeman, 1969)*

[Although cited by Ferris (1989c), no U.S. specimens are known; see Burns (1994b) for generic combination.]

*Choranthus radians* (Lucas, 1857)

[Unsubstantiated records from Florida; see Smith et al. (1994) and Calhoun (1997).]

*Choranthus haitensis* Skinner, 1920

[Unsubstantiated records from Florida; see Smith et al. (1994).]

*Choranthus vitellius* (Fabricius, 1793)

[Single female of this species reportedly from Florida (Evans 1955) is most likely mislabeled; see Smith et al. (1994).]

*Quasimellana mexicana* (Bell, 1942)

[Cited by Miller & Brown (1981) and Ferris (1989c), but apparently no known U.S. specimen; see Bailowitz & Brock (1991) and Burns (1994b).]

*Atrytonopsis ovinia* (Hewitson, 1866)

[Burns (1983) treats *A. ovinia* and *A. edwardsi* as separate species.]

*Amblyscirtes fluonia* Godman, 1900

[Reports of this species from Texas (Stanford 2002) are unsubstantiated.]

*Panoquina fusina* (Hewitson, 1868)
[Erroneously reported from North America based on an assumption of conspecificity with *evansi* by Evans (1955) and Scott (1986).]

*Agathymus remingtoni* (D. Stallings & Turner, 1958)
[Confusion with *estelleae* based on Scott (1986) has led to erroneous reports of this species in the U.S.]

*Stallingsia smithi* (H. Druce, 1896)
[This was erroneously reported from the U.S. based on an assumption of conspecificity with *maculosus* by Scott (1986).]

**Papilionidae**

*Battus devilliers* (Godart, [1824])
[Unsubstantiated records from Florida; see Smith et al. (1994).]

*Eurytides celadon* (Lucas, 1852)
[Considered hypothetical for Florida; see dos Passos (1961) and Smith et al. (1994).]

*Papilio kahli* F. Cremers & R. Kremers, 1937
[Excluded as hybrid on basis of Layberry et al. (1998); also see Klassen et al. (1989).]

**Pieridae**

*Enantia mazai* Llorente, 1984

*Pontia callidice* (Hübner, [1800])
[Reports of *callidice* from our area refer to *P. occidentalis*; the two were considered conspecific by Higgins & Riley (1970) and Scott (1986). Also see Shapiro (1976) and Chew & Watt (2006).]

*Pontia chloridice* (Hübner, [1813])
[Erroneously reported from our area by Scott (1986), based on an unsupported assumption of conspecificity with *beckerii*. Chew & Watt (2006) provide evidence of its distinctness.]

*Pieris napi* (Linnaeus, 1758)
[A Palaearctic species; see Chew & Watt (2006) and text.]

*Pieris brassicae* (Linnaeus, 1758)
[Accidental introductions, but no known persistent North American colonies (see Mello 1999 [these are sight records], Cassie et al. 2001, and Zirlin 2002).]

*Anthocharis dammersi* J.A. Comstock, 1929
[Considered to be a hybrid on basis of Emmel & Emmel (1973: p. 24) and Shields & Mori (1979).]

*Phoebis intermedia* (Butler, 1872)
[Reports of this taxon (e.g. Scott 1986) and of *P. rurina* (C. Felder & R. Felder, 1861) from our area refer to *P. neoypris; intermedia* is a synonym of *neoypris virgo* (Butler, 1870) (see Lamas 2004).]

*Pyrisitia chamberlaini* (Butler, 1898)
[Unsubstantiated report from Florida; see Scott (1986) and Smith et al. (1994).]

**Lycaenidae**
Eumaeus minyas (Hübner, [1809])
[Misidentification of E. toxeus; see Kendall & McGuire (1984).]

Pseudolycaena marsyas (Linnaeus, 1758)
[Dubiously reported from our region by Pyle (1981); Pseudolycaena damo (H. Druce, 1875) is the continental species which remains a hypothetical stray for Texas.]

Cyanophrys amyntor (Cramer, 1775)
[Specimen from Brewster County, Texas, reported as this species, was misidentified. Its true identity as C. herodotus confirmed by Johnson & Le Crom (1997: p. 26).]

Cyanophrys longula (Hewitson, 1868)
[Reported from southeastern Arizona by unsubstantiated sight records (Bailowitz & Brock 1991: p. 182), and one unverified record exists for Texas (Stanford 2002); no specimen or photographic voucher has been located.]

Rekoa zebina (Hewitson, 1869)
[Excluded from the North American fauna by Robbins (1991); records refer to misdetermined R. marius.]

Riodinidae

Euselasia abreas (W.H. Edwards, 1881)
[Described from Arizona, but likely based on mislabeled material (Powell 1975); it is unknown from Mexico (de la Maza et al. 1989) or Costa Rica (DeVries 1997), and its identity was unknown to D’Abrera (1994). However, this taxon may be a senior synonym of E. sergia (Godman & Salvin, 1885); see Lamas (2004).]

Calephelis nilus (C. Felder & R. Felder, 1861)
[Erroneously reported from our area by Scott (1986); records refer to perditalis (see McAlpine 1971).]

Calephelis sinaloensis McAlpine, 1971*
[Reported occurrence in Texas by Durden (1982) requires confirmation.]

Caria domitianus (Fabricius, 1793)
[Casually reported from Texas by DeVries (1997), but no details on this record have been presented.]

Nymphalidae

Greta polissena (Hewitson, 1863)
[Highly questionable records from Texas summarized by Kendall & McGuire (1984: pp. 41-41); the species is unknown from Mexico (de la Maza et al. 1989).]

Philaeothria diatonica (Fruhstorfer, 1912)
[Sight record only, from Texas (as dido); see Bordelon (1991). Philaeothria diatonica is considered to be a separate species from dido (Linnaeus, 1763) by Lamas (2004).]

Boloria titania (Esper, [1793])
[According to Shepard (1998), this is a strictly Palaeartic species.]

Chlosyne ehrenbergii (Geyer, [1833])
[Highly questionable record from Texas summarized by Kendall & McGuire (1984: p. 26).]

Chlosyne marina (Geyer, 1837)
[This was erroneously reported from the U.S. based on an assumption of conspecificity]
with *melitaeoides* and *eumeda* by Scott (1986). See text.]

*Chlosyne erodyle* (H.W. Bates, 1864)
[Casually reported from Texas by Higgins (1960), but no authentic voucher specimen is known; see Neck (1996).]

*Anthanassa ardyx* (Hewitson, 1864)
[While the single record of this species from Texas may be valid (see Stanford & Opler 1993), details have not been presented in the literature and we have not examined the specimen.]

*Anthanassa drusilla* (C. Felder & R. Felder, 1861)
[A single unsubstantiated record for this species exists from south Texas (Stanford 2002).]

*Inachis io* (Linnaeus, 1758)
[Three or four almost certainly human-related, accidental introductions are known; see Hinchliff (1994: p. 176), Anonymous (1995), and Zirlin (2002).]

*Vanessa carye* (Hübner, [1812])
[This South American species is occasionally reported from our area instead of *annabella* (e.g. Scott 1986); but see Field (1971) and Shapiro & Geiger (1989).]

*Smyrna karwinski* Geyer, [1833]
[All records from North America apparently represent misidentifications of *S. blomfildia* (Kendall & McGuire 1984: p. 36-37).]

*Mestra cana* (Erichson, [1849])
[Reported as *cana floridana* Strecker, 1900, but it is likely that the types were mislabeled specimens; see Kimball (1965) and Masters (1970). Lamas (2004) treats *cana* and *floridana* as synonyms of *dorcas hersilia* (Fabricius, 1776).]

*Dynamine tithia* (Hübner, 1823)
[Texas specimen correctly identified and illustrated by Kendall & McGuire (1984: pp. 31-32); however it is a very unlikely long-distance stray and it may have been accidentally transported. The species is unknown from Mexico (de la Maza & Turrent 1985, de la Maza et al. 1989). The specimen is in Illinois Natural History Survey.]

*Diaethria asteria* (Godman & Salvin, 1894)
[Summary of history surrounding the single specimen reported from Texas provided by Kendall & McGuire (1984: p. 33). This record was seriously doubted by de la Maza & Turrent (1985: p. 32), and shown to be virtually impossible by Luis et al. (1996).]

*Diaethria clymena* (Cramer, 1775)
[Some records of *D. clymena* from our area, e.g. Klots (1951), apparently refer to this taxon; however, *clymena* is unknown from Mexico or the Caribbean (Kendall & McGuire 1984, de la Maza & Turrent 1985, Smith et al. 1994), and its occurrence in our area is assumed to be accidental.]

*Hamadryas fornax* (Hübner, [1823])
[Records of this species from the U.S. are based on misdetermined specimens (Jenkins 1983); but see Stanford (2002).]

*Morpho peleides* Kollar, 1850
[Texas sighting reported by Stallings & Turner (1946), Freeman (1960), and Neck (1996: p. 162.); see Penz & DeVries (2002) for systematics of the genus *Morpho*.]
*Opsiphanes boisduvallii* Doubleday, [1849]

[Circumstances surrounding a specimen of uncertain origin are discussed by Cassie et al. (2001).]

*Erebia dabanensis* Ershov, 1871

[Erroneously reported from North America based on an unsupported assumption of conspecificity with *youngi* by Scott (1986); see Troubridge & Philip (1983), Tuzov et al. (1997) and Belik & Zamolodchikov (2002).]

*Erebia kozhantshikovi* Sheljuzhko, 1925

[Erroneously reported from North America based on an unsupported assumption of conspecificity with *lafontainei* by Scott (1986); see Troubridge & Philip (1983) and Tuzov et al. (1997).]

*Erebia inuitica* Wyatt, 1966*[Known from only a single specimen whose authenticity is dubious; see Warren (1968) and Ferris (1989c: p. 59).]

*Erebia theano* (Tauscher, 1909)

[Although North American populations of this species have been referred to as *Erebia theano* (Tauscher, 1809) through several centuries, recently Guppy & Shepard (2001) demonstrated that *Erebia theano* is restricted to eastern Siberia and Mongolia. See Tuzov et al. (1997) for illustration of adult Eurasian *theano* and *pawloskii* Ménétriés, 1859, the latter which represents our North American butterfly. Gorbunov (2001, plate 41) illustrates the genitalia of both species. All North American infraspecific names now fall under *pawloskii*.]

Adequate documentation should consist of a specimen or photograph (when genitalic dissection is not necessary), identified by a specialist in the appropriate taxonomic group. Details should be reported in the literature (website or e-mail postings are not adequate), along with complete data, when possible. Preferably, it should be deposited in a major entomological institution [National Museum of Natural History, Washington, D.C.; American Museum of Natural History, New York; Natural History Museum of Los Angeles County; California Academy of Sciences, San Francisco; Allyn Museum of Entomology, Sarasota; Carnegie Museum of Natural History, Pittsburgh; Canadian National Collection, Ottawa, Ontario] or university. To our knowledge no major collections have established photographic documentation files, but they should. Sight records do not constitute adequate documentation for national records. Moreover, photographs of living individuals of species that may be identified only by dissection do not constitute adequate documentation.
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