

CHECKLIST OF THE BUTTERFLIES OF PUERTO RICO (Lepidoptera, Rhopalocera, West Indies)

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Early workers like Ledru (1810), Moritz (1836), Dewitz (1877), Stahl (1882), Moschler (1890) and Gundlach (1891) described and prepared partial lists of the lepidopterous fauna of the island of Puerto Rico. William P. Comstock in 1944 published an excellent monograph on the Rhopalocera of Puerto Rico. In 1951 George N. Wolcott published the part of his "Insects of Puerto Rico" that dealt with the Lepidoptera, but he was the first one to admit that: "Mr. William Phillips Comstock has prepared such an excellent and wholly satisfactory account of the butterflies of Puerto Rico that the present account can be considered little more than a summary".

We may consider then that since 1944 no review of the butterfly fauna of the island has been made. This paper has the purpose to bring up-to-date the checklist of the butterflies of Puerto Rico.

In the following checklist those species preceded by an asterisk are not represented in the Ramos Entomological Collection. A num-

ber in parentheses after a species name refers to the notes at the end of the species list.

Order **Lepidoptera** Linnaeus, 1758

Suborder **Rhopalocera** Boisduval, 1840

Superfamily **Papilionoidea** Dyar, 1902

Family **Danaidae** Boisduval, 1833

Subfamily **Danainae** Bates, 1861

Genus *Danaus* Kluk, 1780

Subgenus *Danaus* Kluk, 1780

* 1. *Danaus (Danaus) plexippus plexippus* (Linnaeus), 1758 (1)

2. *Danaus (Danaus) plexippus portoricensis* (Clark), 1941 (1)

Subgenus *Anosia* Hubner, 1816

3. *Danaus (Anosia) gilippus cleothera* (Godart), 1820

4. *Danaus (Anosia) eresimus eresimus* (Cramer), 1777 (2)

STUART J. RAMOS

- Subfamily Lycoreinae Kirby, 1904
Genus *Lycorea* Doubleday, 1847
- * 5. *Lycorea ceres cleobaea*
(Godart), 1820
- Family Satyridae Boisduval, 1833
Subfamily Satyrinae Bates, 1861
Genus *Calisto* Hubner, 1823
6. *Calisto nubila* Lathy, 1899
- Family Aparturidae Boisduval, 1840
Subfamily Aparturinae Kirby, 1870
Genus *Asterocampa* Rober, 1916
7. *Asterocampa lycaon idyja*
(Geyer), 1828
- Subfamily Charaxinae Grote, 1900
Genus *Prepona* Boisduval, 1836
8. *Prepona amphitoe amphitoe*
(Godart), 1823 (3)
- Genus *Siderone* Hubner, 1823
9. *Siderone nemesis* (Illiger), 1801
- Genus *Anaea* Hubner, 1819
10. *Anaea troglodyte borinquenalis*
Johnson & Comstock, 1941
- Family Nymphalidae Swainson, 1827
Subfamily Marpesiinae Aurivillius, 1912
Genus *Marpesia* Hubner, 1818
11. *Marpesia chiron*
(Fabricius), 1775 (4)
12. *Marpesia petreus thetys*
(Fabricius), 1777
- Subfamily Limenitidinae Butler, 1869
Genus *Historis* Hubner, 1819
13. *Historis odius odius*
(Fabricius), 1775
- * 14. *Historis acheronta cadmus*
(Cramer), 1775
- Genus *Colobura* Billberg, 1820
15. *Colobura dirce wolcottii*
Comstock, 1942
- Genus *Hamadryas* Hubner, 1806
16. *Hamadryas ferox diasia*
(Fruhstorfer), 1916
- Genus *Biblis* Fabricius, 1807
17. *Biblis hyperia hyperia*
(Cramer), 1779
- Genus *Eunica* Hubner, 1819
18. *Eunica tatila tatilista*
Kaye, 1926
- * 19. *Eunica monima* (Stoll), 1782
- Genus *Adelpha* Hubner, 1819
20. *Adelpha arecosa*
(Hewitson), 1847
- Subfamily Nymphalidae Doubleday, 1845
Genus *Hypolinmas* Hubner, 1819
21. *Hypolinmas misippus*
(Linnaeus), 1764
- Genus *Precis* Hubner, 1819
22. *Precis evarete michaelesi*
Munroe, 1951 (5)
- Genus *Anartia* Hubner, 1819
23. *Anartia jatrophae semifusca*
Munroe, 1942

THE BUTTERFLIES OF PUERTO RICO

- Genus *Siproeta* Hubner, 1823
24. *Siproeta stelenes stelenes*
(Linnaeus), 1758
- Genus *Atlantea* Higgins, 1959
25. *Atlantea tulita* (Dewitz), 1877
- Genus *Antillea* Higgins, 1959
26. *Antillea pelops pelops*
(Drury), 1770
- Genus *Vanessa* Fabricius, 1807
27. *Vanessa virginiensis*
(Drury), 1770
28. *Vanessa cardui cardui*
(Linnaeus), 1758
- Genus *Hypanartia* Hubner, 1821
29. *Hypanartia paullus*
(Fabricius), 1793
- Subfamily Argynninae Duponchel, 1844
- Genus *Euptoieta* Doubleday, 1848
30. *Euptoieta claudia claudia*
(Cramer), 1775 (6)
31. *Euptoieta hegesia watsoni*
Comstock, 1944
- Family Heliconiidae Swanson, 1827
- Genus *Heliconius* Kluk, 1802
32. *Heliconius charitonius charitonius*
(Linnaeus), 1767 (7)
33. *Helioconius charitonius punctatus* (Hall), 1936 (7)
- * 34. *Heliconius melphis melphis* Godart, 1819
- Genus *Dione* Hubner 1819
35. *Dione vanillae insularis* (Maynard), 1889
- Genus *Dryas* Hubner, 1807
36. *Dryas iulia iulia*
(Fabricius), 1775
- Family Libytheidae Westwood, 1851
- Genus *Lilytheana* Michener, 1943
37. *Libytheana terena*
(Godart), 1819 (8)
- Family Lycaenidae Stephens, 1827
- Subfamily Strymoninae
- Genus *Chlorostrymon* Clench, 1961
38. *Chlorostrymon maesites maesites* (Herrich-Schaeffer), 1864
39. *Chlorostrymon simaethis simaethis* (Drury), 1770
- Genus *Nesiostrymon* Clench, 1964
40. *Nesiostrymon celida aibonito*
(Comstock & Huntington), 1943
- Genus *Allosmaitia* Clench, 1964
41. *Allosmaitia fidena*
(Hewitson), 1867
- Genus *Strymon* Hubner, 1818
42. *Strymon acis mars*
(Fabricius), 1777
43. *Strymon bubastus pence*
(Comstock & Huntington), 1943

STUART J. RAMOS

44. *Strymon columella arecibo*
(Comstock & Huntington), 1943
45. *Strumon limenia*
(Hewitson), 1868
- Genus *Electrostrymon* Clench, 1961
46. *Electrostrymon angelia boyeri*
(Comstock & Huntington), 1943
- Subfamily Polyommatae Swainson, 1827
Genus *Leptotes* Scudder, 1876
47. *Leptotes cassius theonus*
(Lucas), 1857
- Genus *Hemiargus* Hubner, 1818
Subgenus *Hemiargus* Hubner, 1818
48. *Hemiargus (Hemiargus)*
hanno watsoni
Comstock & Huntington, 1943
- Subgenus *Echinargus* Nabokov, 1945
- * 49. *Hemiargus (Echinargus)*
isola isola (Reakirt), 1866
- Subgenus *Cyclargus* Nabokov, 1945
50. *Hemiargus (Cyclargus)*
thomasi noelli (9)
Comstock & Huntington, 1943
51. *Hemiargus (Cyclargus)*
woodruffi
Comstock & Huntington, 1943
- Genus *Pseudochrysops* Nabokov, 1945
52. *Pseudochrysops bornoi*
(Comstock & Huntington), 1943
- Family Pieridae Duponchel 1832
- Subfamily Dismorphiinae Klots, 1931
Genus *Dismorphia* Hubner, 1816
53. *Dismorphia spio*
(Latreille), 1819
- Subfamily Pierinae Swainson, 1840
Genus *Ascia* Scopoli, 1777
Subgenus *Ascia* Scopoli, 1777
54. *Ascia (Ascia) monuste eubotea* (Godart), 1819 (10)
- Subgenus *Ganyra* Billberg, 1820
55. *Ascia (ganyra) josephina krugii*
(Dewitz), 1877
- Genus *Appias* Hubner, 1819
Subgenus *Glutophrissa* Butler, 1887
56. *Appias (Glutophrissa) drusilla boydi* Comstock, 1943
57. *Appia (Glutophrissa) punctifera*
d'Almeida. 1939
- Subfamily Rhodocerinae Duponchel, 1844
Genus *Eurema* Hubner, 1819
58. *Eurema दौर palmira*
(Poey), 1851 (11)
59. *Eurema elathea elathea*
(kramer), 1777 (11)
60. *Eurema portoricensis*
(Dewitz), 1877
61. *Eurema lisa euterpe*
(Ménétriés), 1832
62. *Eurema leuce sanjuanensis*
Watson, 1938

THE BUTTERFLIES OF PUERTO RICO

63. *Eurema nicippe* (Cramer), 1779
Genus *Kricogonia* Reakirt, 1863
64. *Kricogonia castalia* (Fabricius), 1793 (12)
Genus *Phoebis* Hubner, 1819
65. *Phoebis sennae sennae* (Linnaeus), 1758
66. *Phoebis argante martini* Comstock, 1944
67. *Phoebis agarithe antillia* Brown, 1929
68. *Phoebis philea philea* (Johanson), 1763
69. *Phoebis trite watsoni* Brown, 1929
- Genus *Aphrissa* Butler, 1873
70. *Aphrissa statira cubana* d'Almeida, 1939
- * 71. *Aphrissa godartiana* (Swainson), 1821
- Genus *Anteos* Hubner, 1819
72. *Anteos maerula maerula* (Fabricius), 1775
- Family Papilionidae Leach, 1815
Subfamily Papilionae Swainson, 1840
Genus *Battus* Scopoli, 1777
73. *Battus polydamas thymus* (Rothschild & Jordan), 1906
Genus *Papilio* Linnaeus, 1758
74. *Papilio aristodemus aristodemus* Esper, 1794
75. *Papilio androgeus epidaurus* Godman & Salvin, 1890
76. *Papilio pelaus imerius* Godart, 1819
- Superfamily Hesperioidea Wallengren, 1861
Family *Hesperidae* Stephens, 1828
Subfamily Pyrginae Lindsey, 1928
Genus *Phocides* Hubner, 1819
- * 77. *Phocides pigmalion bicolora* (Boddaert), 1783 (13)
Genus *Proteides* Hubner, 1819
78. *Proteides mercurius pedro* (Dewitz), 1877
Genus *Epargyreus* Hubner, 1819
79. *Epargyreus zestos* (Geyer), 1832
Genus *Polygonus* Hubner, 1825
80. *Polygonus leo savigny* (Latreille), 1824
Genus *Urbanus* Hubner, 1807
81. *Urbanus proteus domingo* (Scudder), 1872
82. *Urbanus dorantes cramptoni* Comstock, 1944
Genus *Astraptus* Hubner, 1819
83. *Astraptus talus* (Cramer), 1777
84. *Astraptus anaphus anausis* (Godman & Salvin), 1896
Genus *Achyodes* Hubner, 1819

STUART J. RAMOS

85. *Achlyodes thraso sagra*
Evans, 1953
- Genus *Gesta* Evans, 1953
86. *Gesta gesta gesta*
Herrich-Schaffer, 1863 (14)
- Genus *Ephyriades* Hubner, 1819
87. *Ephyriades arcas philemon*
(Fabricius), 1775
- * 88. *Ephyriades zephodes*
(Hubner), 1825 (15)
- Genus *Pyrgus* Hubner, 1819
89. *Pyrgus oileus oileus*
(Linnaeus), 1767
- Subfamily Hesperinae Lindsey, 1928
- Genus *Pyrrhocalles* Mabille, 1904
- * 90. *Pyrrhocalles antiqua antiqua*
(Herrich-Shaffer), 1863 (16)
- Genus *Cymaenes* Scudder, 1872
91. *Cymaenes tripunctus tripunctus*
(Herrich-Shaffer), 1865
- Genus *Perichares* Scudder, 1872
92. *Perichares philetetes philetetes*
(Gmeling), 1790
- Genus *Hylephila* Billberg, 1820
93. *Hylephila phileus phileus*
(Drury), 1773
- Genus *Polites* Scudder, 1872
94. *Polites vibex dictynna*
(Godman & Salvin), 1896
- Genus *Wallengrenia* Berg, 1897
95. *Wallengrenia druryi druryi*
(Latreille), 1824
- Genus *Atalopedes* Scudder, 1872
96. *Atalopedes mesogramma apa*
Comstock, 1944
- Genus *Choranthus* Scudder, 1872
97. *Choranthus vitellius*
(Fabricius), 1793
- * 98. *Choranthus haitensis*
Skinner, 1920
99. *Choranthus borinconus*
(Watson), 1937
- Genus *Euphyes* Scudder, 1872
- *100. *Euphyes singularis insolata*
(Butler), 1878 (17)
- Genus *Calpodes* Hubner, 1819
101. *Calpodes ethlius* (Stoll), 1782
- Genus *Panoquina* Hemming, 1934
102. *Panoquina panoquinoides pano-*
quinoides (Skinner), 1892
103. *Panoquina ocola*
(Edwards), 1863
104. *Panoquina sylvicola woodruffi*
Watson, 1937
105. *Panoquina nero belli*
Watson, 1937
- Genus *Nyctelius* Hayward, 1948

THE BUTTERFLIES OF PUERTO RICO

106. *Nyctelius nyctelius nyctelius*
(Latreille), 1823

Notes:

I consider *Danaus plexippus portoricensis* to be resident non-migratory subspecies of Puerto Rico. I am including *plexippus plexippus* in the list on the authority of previous authors (Comstock 1944, Wolcott 1936, 1941, 1952) although Clark (1941) does not include Puerto Rico in its distribution and I have never collected or even seen a specimen of this subspecies that has been collected in the Island. There is also the possibility (Brown and Heineman 1972) that this insect might occasionally reach the Antilles as a vagrant from migrations. I have not included *megalippe* in the list because although there are some specimens in my collection that fit this subspecies it believed to be sedentary and the possibility of it reaching Puerto Rico is very low. The resident form of the island (*portoricensis*) is very variable, the specimens that resemble *megalippe* might just be extreme variations of it.

Wolcott (1936) and Comstock (1944) reported *D. cleophile* from Puerto Rico. The specimen upon which this record was based was described by Clark (1941) as *D. plexippus portoricensis*.

(2) *Danaus eresimus eresimus*

This is a new record for Puerto Rico. A single specimen (was collected by Oscar Garcia, Jr. on Nov. 19, 1976 at Mayaguez. No other interception has been reported, but the situation of this species in the island could be similar to its situation in Jamaica, where Brown and Heineman (1972) found it to be a "local" butterfly.

(3) *Prepona amphitoe amphitoe*

This species has been reported before or *Prepona antimache insulicola* Fruhstorfer but Riley (1975) argues convincingly that the proper name is *P. amphitoe amphitoe*.

(4) *Marpesia chiron*

Comstock (1944) mentioned the fact that there was no definite record of the capture of *chiron* from Puerto Rico although it was mentioned as occurring there by earlier writers. Ramos (1976) informed the capture of *chiron* in the Island.

(5) *Precis evearete michaelesi*

Munroe (1951) described this subspecies from Puerto Rico. There are two forms in Puerto Rico. One is considered the wet form because it is found more frequently during the wet season and the other is called the dry form. See Munroe (1951) for description and details. Riley 1975) mentions a similar situation in Jamaica and also that "it appears now that, at least on Jamaica, a pair of sibling species co-exist which at present cannot be distinguished by external characters". This is a possibility that should be also examined in Puerto Rico.

(6) *Euptoieta claudia claudia*

A new record reported by Ramos (1976). Seven males and two females were capture by Héctor Quintero Vilella, José Figueroa Miró and the author on November 9-10, 1975 at Quebradillas.

(7) *Heliconius charitonius ssp.*

About 40 per cent of the specimens of *charitonius* from the Virgin Islands and 25 per cent of those from Puerto Rico have a small (from

2mm. to 8 mm. long) yellow streak along vein Cu of the forewing that is not present in typical *charitonius*. This form was described from St. Kitts by Hall as *punctatus*. Although I doubt very much that this subspecies is valid, as I believe this to be a case of genetic polymorphism, I am keeping it in the list until this situation is finally solved. Work is now in progress in our laboratory toward this end.

(8) *Libytheana terena*

As far as I have been able to ascertain there are only two specimens of this butterfly known to have been collected on Puerto Rico.

One is in the collection of the American Museum of Natural History with the following data: Porto Rico, COIL Jacob Doll. I have in my collection another specimen collected by Julio Micheli on Oct. 25, 1975 at Baños de Coamo, Coamo, P. R.

(9) *Hemiargus (Cyclargus) thomasi noelli*

Comstock (1944) included this species on his checklist as *Hemiargus ammon noelli*, his inclusion was based in a capture of a male on Mona Island on February 21-26, 1914 by Dr. F. E. Lutz, no captures in the Island of Puerto Rico proper were reported.

The author has in his collection a fairly large series of this species collected at Mona Island and five specimens (3 males, 2 females) from El Faro de Cabo Rojo (Nov. 25, 1975; Feb. 2, 1976) and a male collected at Guánica Forest (April 25, 1976). Both localities are xeric localities and are in the southwestern part of Puerto Rico.

This is the first time this species is reported from the Island of Puerto Rico proper.

(10) *Ascia monuste eubotea*

Comstock (1944) reported subspecies *monuste eubotea* and *virginia* from Puerto Rico although he mentioned that *eubotea* was preponderant. The author has also collected several females that fit the description of what is called "the melanic migratory form" *phileta*. Breeding experiments (in preparation) have demonstrated that *Ascia monuste* is a very variable species in the Island of Puerto Rico and from a batch of eggs laid by a single female the four "subspecies" have been obtained. Brown & Heineman (1972) found this species to be very variable in Jamaica also.

I follow their criteria and assign the population of Puerto Rico to subspecies *eubotea*.

(11) *Eurema दौरa palmira and Eurema elathea elathea*

Both species are found in two forms in Puerto Rico, a dry winter form and a wet summer form. See de la Terre and Alayo (1953) for details and descriptions.

(12) *Kricogonia castalia*

Comstock (1944) reported two species of *Kricogonia* from Puerto Rico: *lyside* and *castalia*. The difference being that in what was called *lyside* there is raised line of scales in the underside of the hindwing, extending from the base and passing thru the middle of the cell and extending variably from it; sometimes even reaching nearly to the margin.

De la Terre (1958), based in the study of the genitalia of a long series of *castalia* and *lyside* from Cuba, arrived at the conclusion that *lyside* was just a variant form of *castalia*. Turner (Howe 1975) confirmed this when he found that in Jamaica, eggs from any of the two forms, could produce offspring of any of the two forms.

(13) *Phocides pigmalion bicolora*

THE BUTTERFLIES OF PUERTO RICO

Comstock included in his taxonomic discussion this species as *Phocides pigmalion pyres* (Godman and Salvin) because, in the original description, it was reported from Puerto Rico, but did not include it in his checklist because he did not know of any captures in the Island. Evans (1955) reports a male from Puerto Rico in the British Museum as *Phocides pigmalion bicolora*.

(14) *Gesta gesta gesta*

This is the first time this insect is reported from the Island of Puerto Rico. It is also present in Hispaniola, Jamaica and Cuba (Riley 1975). It was first collected in Villa Taina, Cabo Rojo, P.R. on October 1979. Since then it has been collected in other areas nearby (Guaniquilla San Germán and Rd. 108, Km. 17.1, Cabo Rojo).

(15) *Ephyriades zephodes*

Evans (1953) reports a male and a female of this species from Puerto Rico in the British Museum.

(16) *Pyrrhocalles antigua antigua*

Evans (1955) reports a female from Puerto Rico in the British Museum.

(17) *Eupheys singularis insolata*

Riley (1975) includes this species based in a capture in El Yunque in July.

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STUART J. RAMOS

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