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# HESPERIIDÆ (LEPIDOPTERA, RHOPALOCERA) OF THE RORAIMA AND DUIDA EXPEDITIONS, WITH DESCRIPTIONS OF NEW SPECIES

By E. L. Bell

It has been the privilege of the writer to examine the Hesperiidæ collected by Mr. G. H. H. Tate on two expeditions to the northern part of South America organized under the auspices of The American Museum of Natural History. The first of these expeditions was to Mt. Roraima, which lies at the junction of the boundaries of extreme northern Brazil, Venezuela, and British Guiana, and is known as the "Lee Garnett Day Expedition" to Mt. Roraima. The expedition was made during the latter part of 1927 and extended to the first part of January, 1928. The course taken was up the Amazon, Rio Negro, Rio Branco, and Rio Cotinga to the village of Limao, the limit of navigation, thence overland approximately one hundred miles to Mt. Roraima. The return trip was through British Guiana via the Copenang and Potaro Rivers to Georgetown.

The second expedition, the "Tyler Duida Expedition," was to Mt Duida, which lies about four hundred miles west by south of Mt. Roraima, at the western end of the Parima Mountains, in southern Venezuela. It was made during the latter part of 1928 and the first part of 1929. The course taken was up the Amazon and Rio Negro, and by way of the Casiquiare Canal to the Orinoco. A base was established at Esmeralda, on the Orinoco, eight miles south of Mt. Duida.

About three months' time was spent on the top of the mountain. The return trip was made over the same course.

Several papers have been published on the results of the two expeditions.¹ In addition, other papers have been published on specialized subjects. There are excellent maps accompanying some of the papers. Mr. Tate has a contribution in press, to appear in Ecology, which will contain a full bibliography of the papers dealing with the results of the Roraima expedition.

<sup>&</sup>lt;sup>1</sup>Dr. F. M. Chapman, 1929, 'Descriptions of New Birds from Mt. Duida, Venesuela,' American Museum Novitates, No. 380, and 1931, 'The Upper Zonal Bird Life of Mts. Roraims and Duida,' Bull. American Museum of Natural History, LXIII, Article I. H. A. Gleason, 1931, 'The Botanical Results of the Tyler Duida Expedition,' Torrey Botanical Bulletin, LVIII, Nos, 5, 6, 7, 8, with an index in No. 9. G. H. H. Tate, 1930, 'Notes on the Mount Roraima Region,' The Geographical Review, XX, No. I, pp. 53–68; G. H. H. Tate and C. B. Hitcheock, 1930, 'The Cerro Duida Region of Venesuela,' The Geographical Review, XX, No. I, pp. 31–52.

The small number of species of Hesperiidæ taken on these two expeditions can represent but a small fraction of those to be found in these two isolated regions and it is remarkable that this small number should contain several that appear to be undescribed. Twenty-one specimens representing fifteen species were collected during the expedition to Mt. Roraima; forty-three specimens distributed among twenty-nine species on the Mt. Duida expedition. The distribution of the species overlaps but slightly: three and possibly a fourth species were taken on both expeditions. The combined number from the two expeditions is sixtyfour specimens representing forty or forty-one species, of which thirty are identified as known species, and seven described as new. Another may be the same as one of the newly described species, but certain differences in maculation render it impossible to positively identify it as such; and the male, having lost the abdomen there is no means of checking it up. Three species are represented by females which the writer is unable to identify as belonging to any of the species known to him. With the exception of the allotype and paratypes of one of the newly described species, all of the specimens recorded here were taken by Mr. G. H. H. Tate.

A list of the localities, with the data pertaining to them, precedes the list of species taken on each expedition. To avoid repetition, the data are omitted under the individual record of each species.

#### LEE GARNETT DAY EXPEDITION TO MT. RORAIMA

#### BRAZIL

Paulo.—Ten miles southwest of Mt. Roraima, 4000 feet altitude. Arabupu.—Ten miles southeast of Mt. Roraima, 4200 feet altitude.

Savannas.

Rondon Camp, Mt. Roraima.—6900 feet altitude. Rain-forest belt.

#### BRITISH GUIANA

Anundabaru.—Headwaters of the Copenang River, one hundred miles east of Mt. Roraima, 2000 feet altitude.

Tukeit, Potaro River, 2000 feet altitude.

# Pyrrhopyginæ Mysoria acastus Cramer

Paulo, Brazil, October 29, 1927, 1 3.

This specimen has the orange marginal area of the secondaries

beneath extremely wide, occupying nearly the entire outer half of the wing opposite the cell. It lacks the red costal marginal stripe on the under side of the secondaries, which is present in the form *M. venezuelæ* Scudder, and thus agrees in this characteristic of *acastus* which Cramer described from "Les Berbices and Surinam."

#### Jemadia azeta Hewitson

Anundabaru, British Guiana, January, 1928, 1 3.

This specimen is very lightly marked on the upper side, the lower half of the submarginal band of the secondaries being present only in the form of a very thin line of blue scales. An examination of the genitalia conclusively proved the specific identity of this specimen. The species has been recorded from Guatemala to southern Brazil.

# **Pyrginæ**

#### Goniurus eurycles Latreille

Arabupu, Brazil, December 26, 1927, 1  $\circlearrowleft$ , 1  $\circlearrowleft$ .

Anundabaru, British Guiana, January, 1928, 1 9.

The Arabupu specimens have the maculation of the primaries very much reduced. In the male the subapical spots are entirely absent on the upper side, the discal band is represented by a barely discernible streak in the cell and a minute dot immediately below it; on the under side the subapical spots and the band are more plainly present. The female has the subapical spots on the upper side of the primaries reduced to two small dots and the discal band is very narrow, both being plainer beneath. This species is widely distributed in Central and South America and in Trinidad and is usually extremely abundant.

#### Chioides catillus Cramer

Paulo, Brazil, October 29, 1927, 1 &.

Widely distributed from Costa Rica to southern Brazil and in some of the West Indian islands.

# Autochton itylus Hübner

Arabupu, Brazil, December 26, 1927, 2 ♂. Recorded from Guiana to Brazil.

#### Entheus priassus Linnæus

Anundabaru, British Guiana, January, 1928, 1 2.

Recorded by Godman and Salvin, in the 'Biologia Centrali-Americana,' from Colombia to southern Brazil.

#### Pellicia macarius Herrich-Schäffer

Tukeit, British Guiana, January, 1928, 2 Q.

Recorded by Godman and Salvin from Mexico to the Amazon valley and there are specimens in the writer's collection from Ecuador, Peru, southern Brazil, and Trinidad.

#### Hesperiinæ

#### Chærephon lindseyi, new species

Figure 7

Male.—Upper side light brown. Primaries with a poorly defined yellowish-white spot in interspace 2, a similarly colored smaller spot obliquely above it in interspace 3, and three small, ill-defined subapical spots of the same color. The discal spots are small and sometimes very minute. There are sparse fulvous scales along the costal margin, a fulvous reflection in the basal half of the wing and externally bordering the stigma, and some olive-brown hairs along the inner margin of the wing. The stigma is prominent and of the form found in this genus. The secondaries have olive-brown hairs in the disc and along the abdominal fold, with or without an ill-defined discal band of three or four small pale spots. Fringes of both wings are brown, sometimes paler at the tip, and with a dark marginal line before them.

Beneath.—Paler than above. Primaries with the discal and subapical spots more distinct and an ill-defined pale spot in interspace 1 under the spot in interspace 2; base of wing below the costa black, costal margin and apical area with fulvous-brown overscaling, the stigma faintly outlined. Secondaries with tan, or rusty brown, and whitish overscaling. The discal band of pale spots is curved, ill-defined, and varies in distinctness; when well represented it consists of seven spots between veins 1b and 8 and a spot in the end of the cell. The dark marginal line before the fringes is present on both wings. The fringes are much the same as on the upper side, and sometimes are spotted with dark brown at the end of the veins.

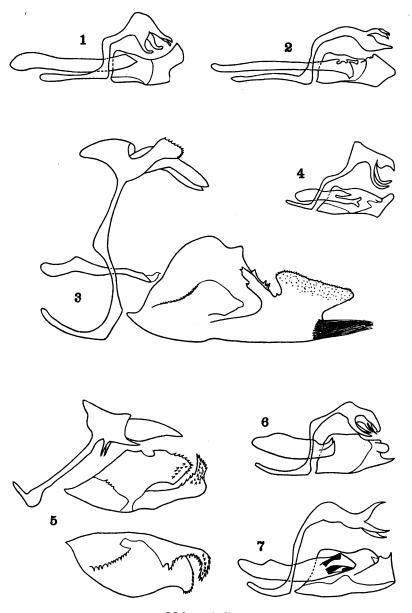
Body blackish above, with olive-brown hairs. Thorax grayish beneath, abdomen varying from pale brown to yellowish gray. Legs brown. Head brown or olive-brown, intermixed with grayish hairs. Palpi beneath and pectus grayish or pale yellowish. Antennæ black above, pale yellowish beneath, the club red.

FEMALE.—Similar to the male, the spots of the primaries and sometimes those of the secondaries more distinct. Sometimes there is an additional small spot in the lower part of the cell near the end. There is, of course, no stigma on the primaries.

Expanse.—Male, 28-32 mm.; female, 30-34 mm.

Types.—Holotype, male, Arabupu, Brazil, January 2, 1928; allotype, female, Villa Rica, Paraguay, May; in collection of The American Museum of Natural History. Paratypes: five males, one female, Coroico, Bolivia; two males, Buenavista, 75 km. southwest of Santa Cruz, Bolivia; one female, Chapada, Matto Grosso, Brazil; eight males, two females, Villa Rica, Paraguay; five males, three females, Sapucay, Paraguay, in collection of The Academy of Natural Sciences, Philadelphia, Pa.; one male, St. Laurent, French Guiana; two males, Santa Cruz, Bolivia; four males, two females, Villa Rica, Paraguay; three males, two females, Massaranduba, Blumenau, Santa Catharina, Brazil, in collection of the author.

Named for Dr. A. W. Lindsey, who has contributed so much to the knowledge of the Hesperiidæ.



Male genitalia.

- Fig. 1. Mnestheus roraimæ, new species. Fig. 4. Eutocus arabupuana, new species.
- Fig. 2. Thespius duidensis, new species. Fig. 5. Eracon (?) duidæ, new species.
- Fig. 3. Yanguna tatei, new species. Fig. 6. Eutocus paulo, new species.

Fig. 7. Chærephon lindseyi, new species.

This species somewhat resembles *Chærephon citrus* Mabille, differing from it in the much less developed and not so distinctly yellow maculation of the upper side of the wings and in the less contrastive appearance of the under side. The form of the genitalia is somewhat similar in the two species but constantly differs in slight details.

This is the species to which Dr. Lindsey referred in his paper as Chærephon pudorina Plötz (1925, Denison University Bulletin, Journal of the Scientific Laboratories, XXI (March), p. 92, Pl. xxvi, fig. 10, Pl. xxx, fig. 11. Scientific Results. No. II. Hesperioidea. The Cornell University Entomological Expedition to South America of 1919–1920). The Plötz species is a member of the genus Catia.

Lindseyi also resembles, on the upper side, the figure of "Pamphila" mengeli Weeks (1911, 'Illustrations of Diurnal Lepidoptera,' II, Pl. xi, fig. I), but it does not entirely agree with the text of the description on page 17 of that publication. Dr. D. M. Bates compared a specimen sent to the Museum of Comparative Zoölogy, Cambridge, Mass., with the type of mengeli, but it differed from the type in so many points that it does not seem probable that they are conspecific, one of the principal differences being the prominently paler veins on the under side of the secondaries of mengeli, as noted in the description.

Only the holotype male was taken by Mr. Tate; the allotype female was taken from the collection of the author; and the paratypes have long stood unidentified in the collections noted.

#### Prenes fusina Hewitson

Arabupu, Brazil, December 26, 1927, 1 3.

#### Euroto saramacca Williams and Bell

Paulo, Brazil, November 5, 1927, 1 3.

There are specimens in the collection of the author, from Surinam, British Guiana, Peru, and Trinidad.

## Euroto (?) species

Anundabaru, British Guiana, January, 1928, 1 9.

This female remains unidentified and may not belong in this genus, but it is provisionally placed here because of its general appearance.

#### Papias phæomelas Hübner

Arabupu, Brazil, November 26, 1927, 1 ♀.

Rondon Camp, Mt. Roraima, Brazil, December 3, 1927, 1 &.

Recorded from Mexico to Brazil.

#### 1932]

# Eutocus arabupuana, new species

#### Figure 4

MALE.—Upper side dark brown. Primaries with a few scattered, yellowish scales along the costa. The stigma is a small, indistinct, blackish patch in the angle at the rise of vein 2.

Beneath.—A little paler than above. Primaries with a pale stripe along the inner margin, lightly over caled with yellowish on the costal margin and at the apex; two darker brown spots extend across the cell a little beyond the center; three bands of dark brown spots extend beyond the cell-end, the first two slightly curved and stopping on vein 3, the outer one submarginal and stopping just below vein 2; a similarly colored terminal line stops on vein 1. Secondaries lightly overscaled with yellowish. There are five transverse, sinuous bands composed of darker brown spots. Between the second and third band from the base of the wing are some similarly colored spots in the costal area, and there is a prominent dark brown terminal line.

Fringes slightly paler than the ground color. Body, above, brownish with some paler brown hairs; beneath, dark grayish, the abdomen somewhat paler with a central line of brown spots. Legs brown, striped with grayish. Head brown, with some fulvous hairs. Pectus grayish. The palpi are missing, but from the remaining scales at the base it seems probable that they were grayish. Antennæ brown above; beneath, a little paler at the joints, the apiculus grayish.

Expanse.—24 mm.

Types.—Holotype, male, and one male paratype, Arabupu, Brazil, December 26, 1927, in collection of The American Museum of Natural History.

This species is smaller than *Eutocus phthia* Godman and differs from it in the paler ground color and the sinuous bands on the under side of the secondaries.

#### **Eutocus paulo**, new species

#### Figure 6

Male.—Upper side light brown with a more or less fulvous sheen. Primaries on the costal margin lightly overscaled with fulvous from the base to the apex; a discal, transverse stripe of similarly colored, scattered scales extends around the end of the cell and accumulates as hazy spots in interspaces 2 and 3. The stigma is a small, inconspicuous, subtriangular patch filling the angle at the rise of vein 2. Secondaries in the discal area and along the abdominal fold with longer fulvous-brown hairs and a few scattered fulvous scales in the discal area. Fringes brown, slightly paler at the tip of the secondaries.

Beneath.—Paler than above. Primaries above vein 2 overscaled with fulvous brown, the two hazy spots of the upper side a little more distinct but ill-defined; below vein 2 the overscaling is absent and makes this area seem paler than the rest of the wing. There is a narrow, irregular brown line just beyond the cell-end, followed by a similar brown line from near the apex to vein 2, the space between these two lines appearing as a band of light brown spots in the apical area. There is a narrow, brown terminal line before the fringes. Secondaries with a small, brown transverse line in the cell-end, three wavy brown lines composed of slightly lunate spots in the inter-

spaces between veins 2 and 7, and a brown terminal line before the fringes which are a little paler than above.

Thorax and abdomen, above, brown with long fulvous-brown hairs at the base of the thorax and some similarly colored scales on the abdomen. Beneath, the thorax is gray, and the abdomen whitish with a brown central stripe. Head with black and fulvous-brown hairs. Tegulæ fulvous brown. Palpi, beneath, whitish and fulvous brown, the last joint black above and grayish beneath. Pectus grayish. Most of the legs are missing but those present are brown. Antennæ black above; beneath, vellowish between the joints, the club yellowish.

Expanse.—32 mm.

HOLOTYPE.—Male, Paulo, Brazil, November 5, 1927, in collection of The American Museum of Natural History.

The form of the genitalia is quite similar to that of *Eutocus phthia* Godman, from which it differs superficially in being much larger and paler in color and the maculation of the under side being entirely different. It is larger but with different maculation than either *E. ranesus* Schaus or *E. illepidus* Bell, and differs in the same manner from *E. schmithi* Bell, although approaching it in size.

# Mnestheus roraimæ, new species

#### Figure 1

Male.—Upper side. Primaries blackish brown. A transverse discal band of five fulvous spots. The lowest in interspace 1, constricted in the center; a subquadrate one in interspace 2; a sub-triangular one in interspace 3; an oblong one in interspace 4; a small, narrow dash just above vein 5; two similarly colored subapical spots in interspaces 6 and 7; basal two-thirds of the costal margin fulvous. The stigma is a short, indistinct stripe along the median vein to the angle of vein 2 and a small longitudinal stripe just below that vein. Secondaries with a large fulvous discal area which is continued along the veins toward the outer margin, producing a dentate appearance; costal area broadly brownish black, outer margin and abdominal fold brownish black. Between the fulvous discal area and the abdominal fold there are brownish-fulvous hairs.

Beneath.—Primaries with the upper half of the cell, costal margin, and apical area overscaled with fulvous; the rest of the wing is black. The veins in the apical area are paler; the discal spots in interspaces 2, 3, and 4 and the two subapical spots are repeated. Secondaries brownish fulvous with paler veins.

Thorax, above, with greenish-fulvous hairs; basal half of the abdomen blackish brown, anal half fulvous. Beneath, the thorax has fulvous hairs, abdomen whitish, the side fulvous. Legs brown with fulvous hairs. Head black and fulvous. Palpi missing but probably yellowish or fulvous. Pectus grayish fulvous. Antennæ black above; beneath, spotted with fulvous at the joints, the club fulvous. The fringes are nearly worn off, but those of the primaries appear to have been concolorous, and a few scales left at the anal angle of the secondaries are fulvous, above which there are remnants of whitish scales.

Expanse.—28 mm.

HOLOTYPE.—Male, Arabupu, Brazil, December 26, 1927, in collection of The American Museum of Natural History.

This species superficially resembles Padraona epictetus Fabricius and Padraona eudesmia Plötz, but the presence of the stigma easily separates it from either. It differs from the other species of Mnestheus in the much broader discal band of the primaries and fulvous discal area of the secondaries.

#### TYLER DUIDA EXPEDITION

#### BRAZIL

Barcellos, Rio Negro.—This and the following Rio Negro localities are below three hundred feet altitude and in tropical forest.

Santa Yzabel, Rio Negro.

Caiari-Uaupes, mouth of the Rio Uaupes.

São Gabriel, Rio Negro.

Yucabi, Rio Negro.

Rio Negro.

São Carlos, Rio Negro.

#### VENEZUELA

Esmeralda.—On the Orinoco, 325 feet altitude. Open savannas.

Grand Savana, Mt. Duida.—At the foot of the mountain, 325 feet altitude.

Middle Camp, Mt. Duida.—At the foot of the mountain, 325 feet altitude.

Base River Playa, Mt. Duida.—At the foot of the mountain, in the forest, 350 feet altitude.

Foothills Camp, Mt. Duida.—At the foot of the mountain, in the forest 800 feet altitude.

Savana Hills Camp, Mt. Duida.—Summit of the mountain, 4500 feet altitude.

Provisional Camp, Mt. Duida.—On the summit of the mountain, crest of ridge No. 23, 6000 feet altitude.

#### **Pyrrhopyginæ**

# Mysoria acastus Cramer

Barcellos, Brazil, September 5, 1928, 1 3.

It seems rather remarkable that the only two specimens taken, including the one from Paulo, Brazil, on the Mt. Roraima expedition, should be representative of the typical insect, which seems generally to be rather less common than the form M. venezuelx Scudder. The orange marginal band on the under side of the secondaries is less broad in this specimen than in the one from Paulo, but this character seems to be variable.

# Mysoria thasus Cramer

Esmeralda, Venezuela, October 29, 1928, 1 .

Occurs also in Surinam, Colombia, Ecuador, Bolivia, and northern Brazil.

# Yanguna tatei, new species

#### Figure 3

Male.—Upper side black, with a bright green sheen. Primaries with a transverse, semi-hyaline discal band of three orange-red spots, the upper one quadrate and extending across the cell, the next one a little longer than wide and extending across interspace 2, the lowest one narrower than the other two and extending across interspace 1. The veins of the secondaries in the outer two-thirds are paler green.

Beneath.—Primaries paler than above, becoming pale brownish toward the base, the discal band repeated but paler in color, the lowest spot paler than the other two. Secondaries with a brilliant green sheen, the veins not paler green as above.

The fringes of the primaries are practically worn off, but from the remaining scales they appear to have been white, except perhaps at the apex; the fringes of the secondaries are white. Body above and beneath shining greenish black. Legs greenish black, fringed with long greenish-black hairs. Tegulæ greenish black. Shouldercovers greenish black with a large red spot on each side. Collar red. Head black with a large red spot behind the antennæ. Palpi red, the tips brown. Cheeks red. Pectus greenish black. Anal tuft red. Antennæ black.

Expanse.—58 mm.

HOLOTYPE.—Male, Mt. Duida (Provisional Camp), Venezuela, December 12, 1928, in collection of The American Museum of Natural History.

Named for Mr. G. H. H. Tate, who collected the specimen on the summit of Mt. Duida.

Mr. Tate states that the specimen was found basking in the sunshine. This seems to be a characteristic trait of such Pyrrhopyginæ as the writer has observed in the field. This species has much the same wing shape as Yanguna staudingeri Plötz, it but differs conspicuously from it and the other allied species in having an orange-red discal band on the primaries instead of white. There are, of course, other differences, but the orange-red discal band is an outstanding character.

#### Jemadia zonara Hewitson

Esmeralda, Venezuela, October 31, 1928, 1 &.
Also occurs in Colombia and the upper Amazons of Brazil.

# Pyrginæ

# Goniurus simplicius Stoll

Mt. Duida (Grand Savana), Venezuela, November 3, 1928, 1 3.

Widely distributed and usually common, flying with Goniurus eurycles Latreille with which it is often confused. Recorded from southern Texas and Arizona, through Central and South America to southern Brazil and Paraguay, and in Trinidad.

# Goniurus eurycles Latreille

Esmeralda, Venezuela, October 27, 1928. 1 .

#### Goniurus dorantes Stoll

Santa Yzabel, Brazil, September 8, 1928, 1 %.

Caiari-Uaupes, Brazil, September 18, 1928, 1 ♂.

Widely distributed and common. Recorded from Texas and Arizona to Argentine and in races from Lower California, Antilles, and Galapagos Islands.

#### Proteides mercurius Fabricius

Esmeralda, Venezuela, October 14, 1928, 1 ......

Widely distributed. Recorded from Texas, New Mexico and Arizona to southern Brazil and Paraguay. Also occurs in races in the Antilles.

# Telemiades (?) species

Mt. Duida (Base River Playa), Venezuela, 1  $\, \circ$ .

This unidentified female is of similar appearance to *megallus* Mabille, but it is a little smaller and without subapical spots on the primaries, and the dark bands of the secondaries are more regular and even, especially on the under side, where the bluish-gray color at the anal angle is absent.

# Hyalothyrus nitocris Cramer

Mt. Duida (Base River Playa), Venezuela, November 14, 1928, 1  $\,\circ$ . The writer also has specimens from French and British Guiana.

Sophista aristoteles Doubleday, Westwood and Hewitson

Mt. Duida (Foothills Camp), Venezuela, November 15, 1928, 1  $\sigma$ . Occurs in the Rio Negro region.

# Sophista calendris Hewitson

Mt. Duida (Base River Playa), Venezuela, November 14, 1928, 1 ♂. The writer also has specimens from French Guiana and Obidos, Brazil.

# Eracon (?) duidæ, new species

#### Figure 5

Male.—Upper side brown. Primaries with a prominent black spot near the end of the cell and another smaller one just below it in the angle of vein 2; a less distinct sub-basal blackish-brown band; an irregular blackish-brown band from the costal margin to the inner margin bent around the end of the cell; and an irregular sub-marginal blackish-brown band. Fringes concolorous. No costal fold. Secondaries darker basally, a sub-basal blackish-brown band forked in the cell, leaving a small, paler bar between the two forks, a discal blackish-brown band merging with the outer fork of the sub-basal band at the cell end, and a submarginal band of spots of similar color. Costal margin paler. Fringes concolorous, paler at the anal angle.

Beneath.—Paler than above; the maculation reduced. The primaries have the submarginal and discal bands of the same shape as above; a small blackish spot just outside the cell-end; the black spot of the upper side lying in the cell and the one below it present but very pale brown; the sub-basal band barely discernible. Secondaries with the blackish-brown bands of the upper side of the same form; the pale bar in the cell is followed by another pale spot toward the base of the wing; and there is a large, irregular blackish-brown spot at the anal angle.

Body and head, above, brown; thorax, beneath, grayish brown, the abdomen whitish with a brown central stripe. Palpi grayish beneath. Legs pale brownish. Antennæ blackish brown, the club, beneath, with some fulvous scales.

Expanse.-34 mm.

HOLOTYPE.—Male, Mt. Duida (Middle Camp), Venezuela, November 4, 1928, in collection of The American Museum of Natural History.

It is difficult to assign this species to any of the described genera as it does not entirely agree with any of them. In the general wing-shape it resembles *Pellicia*, but it differs from that genus in lacking the hair-tuft on the costal margin of the upper side of the secondaries and the swollen veins in the costal area of the under side of those wings. It differs from the genus *Mycteris* in the same manner; from the genus *Nisoniades* in the broader and more pointed wings; and from the genus *Cyclosæmia* in the more elongate and less rounded secondaries. It differs also from the genus *Eracon* in the more pointed primaries and apparently lacks the hair-tuft of the hind tibiæ. There are no white dots in the black cell-spot of the primaries.

#### Pellicia macarius Herrich-Schäffer

Mt. Duida (Foothills Camp), Venezuela, November 24, 1928, 1 ♂. Taken on drying clothes.

#### Pellicia bessus Möschler

Mt. Duida (Foothills Camp), Venezuela, November 15, 24, 1928, 2 d.

The individual taken on the 24th also was found resting on drying clothes. These two specimens are very much of the same appearance as P. macarius Herrich-Schäffer, but the hair-tuft of the secondaries is considerably longer than in that species. They differ from P. ephora Herrich-Schäffer in the more rounded secondaries.

# Potamanaxas violacea Dognin

Mt. Duida (Savana Hills Camp), Venezuela, February 2, 1929, 1 Q. This specimen is rather darker than specimens of the opposite sex in my collection and seems to be intermediate between the typical insect and the form fumida Draudt from the western Cordilleras of Colombia. The difference may be sexual, but this point cannot be determined at present as there are no females from the type locality for comparison.

# Ebrietas anacreon Staudinger

Mt. Duida (Middle Camp), Venezuela, November 4, 1928, 2 %. Extends from Mexico to south Brazil.

# Ebrietas osyris Butler

São Gabriel, Brazil, September 18, 1928, 1 . Mt. Duida (Foothills Camp), Venezuela, November 19, 1928, 1 ♂. Extends from Mexico to south Brazil.

#### Charidia lucaria Hewitson

Caiari-Uaupes, Brazil, September 19, 1928, 1♀. Also found in Surinam, Colombia, Bolivia.

## Heliopetes alana Reakirt

Mt. Duida (Foothills Camp), Venezuela, November 19, 1928, 1 ♂. Recorded from Mexico to south Brazil and Paraguay.

#### Chiomara punctum Mabille

Esmeralda, Venezuela, October 27, 1928,  $1 \circlearrowleft$ ,  $1 \circlearrowleft$ .

Mt. Duida (Middle Camp), Venezuela, November 4, 1928, 1 Q.

Draudt, in Seitz, 'Macrolepidoptera of the World,' states that this species is widely distributed in South America. There are specimens in my collection from Surinam and Bolivia.

#### Hesperiinæ

#### Talides athenion Hübner

Yucabi, Brazil, September 12, 1928, 1 %.

An extremely common species, distributed from Mexico to southern Brazil.

#### Catia otho Abbot and Smith

Santa Yzabel, Brazil, September 8, 1928, 1 %.

Otho from Trinidad and South America differs in some respects from the typical form occurring in the southeastern United States. It is said to occur as far south as Brazil.

# Atrytone (?) species

Mt. Duida (Savana Hills Camp), Venezuela, January 31, 1929, 1 Q. This unidentified female may not belong in this genus, but the general appearance and rather short antennæ seem at least to place it near it.

#### Paraides ocrinus Plötz

Rio Negro, Brazil, April, 1929, 1 Q. Recorded from Panama to Brazil.

#### Thespius duidensis, new species

#### Figure 2

Male.—Upper side brown. All of the specimens are worn, but in the type and some of the others there are traces of bluish hairs in the basal area of the secondaries; in others these hairs are entirely absent. The primaries have eight white hyaline spots on each wing; one cellular, a little constricted in the center; four discal in an oblique line toward the apex, the lowest (small) on vein 1, and varying in shape among individuals, the next (the largest) irregular in shape and extending across interspace 2, the next (small) in interspace 3, the fourth (smallest) in interspace 4; three subapical spots in a straight line, the lowest one the smallest. The stigma is narrow, gray, and of the form characterising this genus. Secondaries with three white hyaline discal spots and a small one in the cell; the two lower discal spots are larger than the upper spot but the inner edge of all forms a continuous, straight line.

Beneath.—Primaries reddish brown, becoming paler brown in the basal area where a patch of black hairs is enclosed. Spots of the upper side repeated, that in interspace 1 a little larger than above and somewhat diffuse, a pale area below the apex, internally edged with whitish scales from the upper discal hyaline spot to the apex. Secondaries red-brown. A distinct but ill-defined white line from vein 1b to the costal margin crosses the basal third of the wing; a white stripe from the base through the center of the cell merges with this line near the end of the cell, thus forming a

sharp angle which encloses a triangular patch of dark reddish color. The three white hyaline discal spots and the cell-spot are repeated. The discal spots are surrounded by a narrow line of white scales. The cell-spot is enclosed at the point of mergence of the cellular white stripe and the transverse white line. A short, ill-defined white stripe extends from the lowest of the discal spots to vein 1b, and another from the upper spot extends obliquely to the margin of the wing at the upper angle. The outer margin of the wing below this stripe is paler. The white markings leave a broad, reddish, central area of the wing constricted at the cell-end.

Fringes of primaries concolorous; of secondaries a little paler, becoming whitish at the anal angle. Body black above, with brown and greenish hairs extending over the base of the abdomen. Thorax grayish beneath. Abdomen dark brownish-gray. Legs brown, fringed with reddish hairs, particularly prominent on the hind tibiæ, Head, shoulder-covers, and collar are red-brown. Palpi and pectus grayish with some red-brown hairs intermixed. Anal tuft blackish brown, sometimes with whitish hairs in the center. Antennæ brown above, the club over-scaled with whitish, the apiculus orange; beneath, with a white central line, the club and apiculus as above.

Female.—Similar to the male. The wings are more rounded, the primaries less pointed at the apex. The primaries have an additional very small spot in the discal band, lying in interspace 5 and somewhat lunate in shape. Beneath, this spot lies in the line of white scales limiting the pale apical area and is practically indiscernible unless the specimen is held to the light. The outer marginal area of the secondaries, beneath, is paler and somewhat more hoary than in the male.

Expanse.—Male, 43-45 mm.; female, 46-48 mm.

Types.—Holotype, male, Mt. Duida (Provisional Camp), Venezuela, December 12, 1928; allotype female, same locality, December 10, 1928; one male and one female paratype, December 10, 1928, three male paratypes, December 12, 1928, all same locality, in collection of The American Museum of Natural History. One male paratype, same locality, December 12, 1928, in collection of the author.

This species bears a superficial resemblance to *Thespius macareus* Herrich-Schäffer from which it differs principally on the upper side in smaller spots of the discal band of the primaries and in this band being composed of four spots in the male instead of three as in *macareus*; in the secondaries having a cell-spot, absent in *macareus*; and in the upper spot of the discal band of these wings being small and not extending to the outer edge of the two lower spots. Beneath, the pattern of the maculation, while similar, differs in detail, and the two dark spots near the outer angle of the secondaries present in *macareus* are absent in *duidensis*.

#### Vehilius venosus Plotz

São Carlos, Brazil, September 24, 1928, 1 9. Distributed from Panama to Brazil.

#### Cœliades fiscella Hewitson

Mt. Duida (Middle Camp), Venezuela, November 12, 1928, 1 Q. Distributed from Nicaragua to Brazil.

# **Eutocus** species

Mt. Duida (Savana Hills Camp), Venezuela, January 31, 1929, 1 ♂, 1 ♀.

This insect may be the same as that described as *Eutocus paulo* on a previous page of this paper, but the ground color is a little darker in shade, especially on the under side, where the distinct wavy bands of the secondaries and the maculation in the apical area of the primaries is in part absent and the rest very much reduced; the palpi are also darker. As the male lacks the abdomen it is impossible to determine the exact relationship of the two insects. The stigma of the primaries of the male is of the form occurring in this genus: a small indistinct patch lying in the angle of the rise of vein 2.

The measurements of expanse given in the above descriptions represent twice the distance from the center of the thorax to the apex of one primary.