

AN ANNOTATED LIST OF BUTTERFLIES  
COLLECTED IN BRITISH HONDURAS IN 1961

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During the late summer of 1961, I had the opportunity to spend nearly one month collecting butterflies in Central America's northern-most country, British Honduras. With the help of several faculty members at Louisiana State University and with the generous cooperation of the Forestry Commission of Belize, I was able to visit and lodge at two forestry camps in that country. The first camp, known as Augustine, is located in the country's western district, the Cayo District. The second camp known as Melinda, is located in the coastal Stann Creek District (fig. 1).

Information concerning the butterflies of British Honduras is very scanty as it is indeed for many tropical lands. Other than a few locality records in Godman & Salvin (1879-1901) and in Seitz (1923), the only work devoted to the butterflies of that country is by Davis (1928) who records 228 species as occurring there. The present survey adds 28 additional species to this (20 of which belong to the Lycaenidae and Riodinidae) bringing the total to 259 species. Probably 100 additional species are yet to be collected in this area.

All species collected will be discussed following a brief description of the two collecting sites. It should be stated here that comments referring to the abundance of the species are often based largely upon sight observations, few individuals actually having been captured. Those species marked with an asterisk represent new national listings.

AUGUSTINE

Augustine lies on the edge of a rolling pineland called the Mountain Pine Ridge which ranges in elevation from 1,000-3,000 feet above sea level. The actual camp is located at approximately 1,600 feet and receives an average annual rainfall of 65 inches.

Three basic types of forests occur within a relatively short distance of Augustine. First, pine forest surrounds the camp proper. *Pinus caribaea* M. forms an extensive stand here on the rather poor soil which tops the lower granite substrate. Several other trees, notably *Quercus barbeyana* T., *Q. hondurensis* T., *Clethra hondurensis* B., *Leucothoe mexicana* (S.) and *Byrsonima crassifolia* (L.) occur here also (Lundell, 1940). Due to the frequent fires which rage throughout this hilly region,

the undergrowth is kept low and is composed of various sedges and grasses, many of which belong to the genera *Polygala*, *Panicum*, and *Paspalum* (Standley & Record, 1936).

The second type of forest lies just west of the camp. This area ranges in altitude from approximately 1,200-1,500 feet. The soil is richer due to the limestone substrate. These conditions produce a more tropical or humid type of forest which is best termed a second growth succession due to its appearance subsequent to the abandonment of the corn fields or milpas. Trees average in height up to 40-50 feet and include the following species: *Cecropia mexicana* H., *Belotia campbellii* S., *Cordia alliodora* R. & P., *Ceiba pentandra* (L.), *Ochroma concolor* R., *Schizolobium parahybum* (V.) (Russell, 1962). Many of these same tree species are found in the numerous valleys and revines throughout the Pine Ridge section and the butterfly faunas are also very comparable.

The third type of forest lies still farther west of the camp and is actually

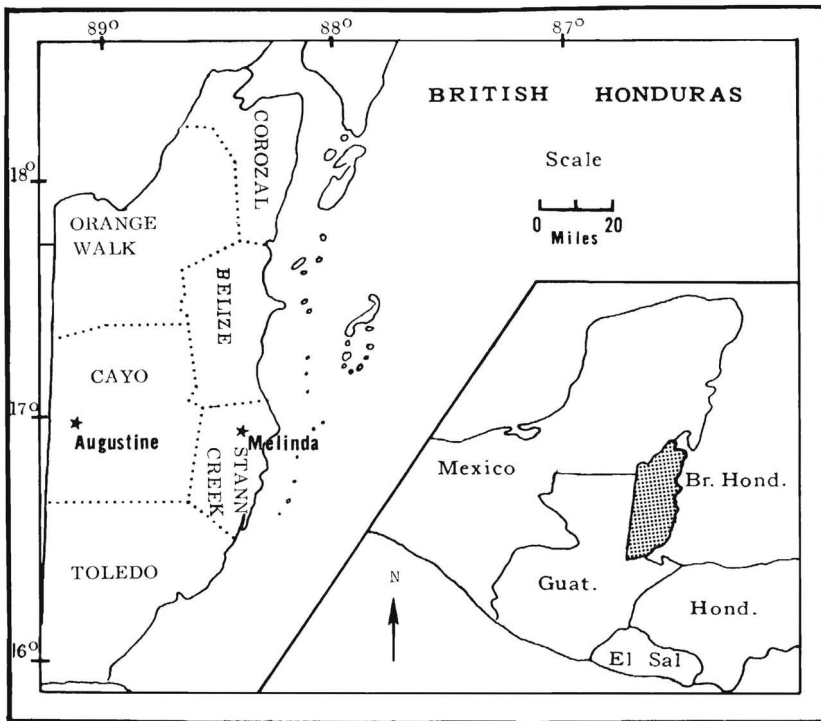


Figure 1. Map of British Honduras showing political districts, two collecting sites (Augustine, Melinda), and relationship of the country to Mexico and the remainder of Central America.

an encroachment from the Peten of Guatemala. This type can be termed an advanced forest, tall tropical forest, or rain forest. However, it is not a rain forest in the classic sense of the term because all forests throughout British Honduras experience a four-month dry season (February-May) and contain several deciduous species of trees. This forest is relatively undisturbed and trees reach a height of approximately 80-100 feet. Some of the common trees encountered in this type include *Swietenia macrophylla* K., *Calophyllum brasiliense* C., *Terminalia obovata* (R. & P.), *Nectandra globosa* (A.), *Aspidosperma megalocarpon* M., *Achras zapota* L. and *Dialium guianense* (A.) (Russell, 1962). The Cohune Palm, *Orbigyna cohune* (M.) forms a predominant species here.

During my stay at Augustine (August 12-29), I collected in all three of the forest types mentioned above. My total catch was 305 specimens representing 95 species.

#### MELINDA

This camp is situated approximately eleven miles inland from the gulf coast and the city of Stann Creek. The rainfall is somewhat more abundant than at Augustine, the average being 102 inches annually (Standley & Record, 1936). The elevation is approximately 50 feet above sea level.

Melinda lies in the heart of the Middlesex Valley Agricultural Region and thus the surrounding forest is all of a secondary succession type containing many of the same species listed previously.

In addition to collecting in the immediate vicinity of Melinda, I made several excursions south into the pine savannah which lies on the coastal plain. This lowland pine forest (*Pinus caribaea* M.) contains large stands of the palmetto *Acoelorrhophe wrightii* (G.). Also present are *Curatella americana* L., *Quercus olloides* C. & S., *Byrsonima crassifolia* (L.), *Rhynchospora barbata* (V.) (Russell, 1962).

During my stay at Melinda (August 30-September 4), I collected 62 specimens representing 38 species.

#### ANNOTATED LIST OF SPECIMENS COLLECTED

##### FAMILY PAPILIONIDAE

The four species of *Parides* listed below all exhibit a common behavioral pattern. They all fly in company of one another in localized colonies scattered throughout both the secondary and advanced forests. These colonies may be separated from each other by distances of one-half to one mile, depending on the extent of the forest. Furthermore, they were usually found in places where the forest trail was comparatively wide and clear, allowing the sunlight to reach the ground.

In such a colony, it appeared as if the individuals had a definite, preferred "flyway" which was actually a section of the trail from 40-60 feet in length. These insects would fly approximately 3-5 feet above the ground at a medium velocity along such a section of trail. They would never stray into the undergrowth except when they reached the boundaries of the "flyway". Then, they would zig-zag off into the shrubbery, make a small circle and begin flying along the trail once again, this time in the opposite direction. The factor which determined the boundaries of these flyways was not at all apparent; the trail beyond, at least for a short distance, appeared to be similar if not exactly the same. I observed the phenomena described above day after day and no change in flyways ever was apparent. This behavioral characteristic seems to be peculiar to this tribe (Cressidini) of the Papilionidae.

*Parides sesostris zestos* Gray. Cayo Dist. 5♂♂; Stann Creek Dist. 2♂♂. This species along with *P. iphidamas* were the two most common forest swallowtails at Augustine; however, at Melinda it was the commoner of the two species.

*Parides iphidamas* Fabricius. Cayo Dist. 5♂♂, 1♀. These specimens constitute the first records of this species from the Cayo. It was a very common insect in the surrounding tropical forests.

*Parides polyzelus polyzelus* Felder. Stann Creek Dist. 3♂♂. This species was not seen at all at Augustine although Davis (1928) recorded it as being common in the Cayo District. However, at Melinda it was very common and was the second most abundant species of *Parides*.

*Parides arcas mylotos* Bates. Cayo Dist. 1♂; Stann Creek Dist. 1♂. Although this species was not common at either locality, the specimen from Stann Creek constitutes a new district record.

*Papilio thoas autocles* Rothschild & Jordan. Cayo Dist. 2♂♂, 1♀. This species was by far the most common representative of the entire family, being found in practically all sunny places.

#### FAMILY PIERIDAE

*Dismorphia praxinoe* Doubleday. Cayo Dist. 1♂, 1♀; Stann Creek Dist. 1♂. All of the listed specimens were taken along trails in the tall rain forest. This species has a very slow "fluttery" flight that is usually never over 4 feet above the ground. The color pattern of this species bears a remarkable resemblance to the color patterns exhibited by members of several other, unrelated genera, notably *Heliconius* (Nymphalidae) and *Mechanitis* (Ithomiidae). This resemblance or "mimicry" has been described by several authors, in particular Punnett (1915). However, nowhere are the behavioral similarities between these groups mentioned in any detail. The flight patterns of *Heliconius ismenius*,

*Mechanitis egaensis* and *Dismorphia praxinoe* (all of which were sympatric species) are so nearly identical that it is virtually impossible to distinguish between them when they are on the wing even when the individuals are very close. (*H. ismenius* is slightly larger in size than the other two species and therefore, with time and experience, this heliconid can be identified on the wing.) This is truly a remarkable phenomenon and appears to be an excellent example of Müllerian mimicry since all three groups are presumably distasteful to predators. When specimens of these three species were pinched, a noticeable foul or sourish odor was detected which appeared to be quite distinctive for each species.

*Dismorphia fortunata* Lucas. Cayo Dist. 1♂, 1♀. These specimens represent a new district record. All were taken along trails in the tall rain forest as in the above species. *D. fortunata* has an extremely weak flight, even weaker than in the preceding species, and rarely ever flies more than one foot above the ground. This flight pattern is almost exactly the same as that of the two species of ithomiids (*Oleria paula* and *Pteronymia cotytto*) which were taken in the same area of forest. Here again, when specimens are on the wing, it is almost impossible to distinguish the ithomiid from the pierid, morphologically or behaviorally. This species also gave off a rather sour odor when pinched.

*Phoebis philea* Linnaeus. Cayo Dist. 2♀♀; Stann Creek Dist. 2♂♂. This huge sulphur was common in both localities but was extremely hard to capture due to its rapid flight which was seldom closer than 20-30 feet of the ground.

*Phoebis agarithe maxima* Neumoegen. Cayo Dist. 1♀. This specimen was captured while it was feeding on a zinnia flower.

*Phoebis argante argante* Fabricius. Cayo Dist. 2♂♂, 2♀♀; Stann Creek Dist. 2♂♂. This species was by far more common than the preceding species at both localities.

*Phoebis sennae marcellina* Cramer. Cayo Dist. 1♀; Stann Creek Dist. 1♂. This was the most common member of the genus at both stations. It was frequently taken on *Hibiscus* flowers.

*Phoebis statira* Cramer. Cayo Dist. 4♂♂; Stann Creek Dist. 2♂♂. This species was fairly common at both localities. The males from Augustine were decidedly more yellow than the ones from Melinda. Individuals were commonly seen around mudholes in association with other pierids.

*Eurema albula* Cramer. Cayo Dist. 5♂♂, 1♀; Stann Creek Dist. 1♂. This species was fairly common along the trails in the secondary forests. It was never found in the deep shade of the forest or in the bright sunlight of the surrounding fields, it seems to have been more common in the partially shaded areas.

*Eurema दौरa* Latreille. Cayo Dist. 4♂♂, 2♀♀; Stann Creek Dist. 1♂, 1♀. This was a very numerous species at both locations, particularly in the pine lands. A great deal of variation was exhibited by these specimens (pure white females, solid yellow males and females and males with yellow forewings and white hindwings).

*Eurema bcisduvaliana* Felder. Cayo Dist. 1♀. This individual represents a new district record. One other specimen was seen but not captured.

*Eurema proterpia* Fabricius. Cayo Dist. 3♂♂, 2♀♀. Although no specimens were taken at Melinda, this species was likewise common there.

*Eurema lisa euterpe* Ménétries. Cayo Dist. 2♀♀; Stann Creek Dist. 1♂, 3♀♀. This species was common in all open places, even in the pine lands.

*Eurema nise perimede* Prittwitz. Cayo Dist. 4♂♂; Stann Creek Dist. 1♂, 1♀. This species was often taken in the company of *E. lisa*. Both were equally common.

*Appias drusilla* Cramer. Cayo Dist. 1♂. This was not a common species. The single male was captured while it was feeding on a zinnia flower.

#### FAMILY DANAIIDAE

*Danaus eresimus* Cramer. Cayo Dist. 1♂, 1♀. This was the only danaid seen around Augustine. It was fairly common in the sunny fields.

#### FAMILY ITHOMIIDAE

All the species listed below belonging to this family have very similar flight patterns. They all flew slowly and in the deep shade of the tall forests. Furthermore, when pinched, they all gave off a sourish odor that was decidedly different from the odors given off by *Dismorphia* and *Heliconius*.

*Mechanitis egaensis doryssus* Bates. Cayo Dist. 2♂♂, 2♀♀. This species generally flew between 5 and 6 feet of the ground and was very common.

*Hypothyris lycaste dionaea* Hewitson. Cayo Dist. 2♂♂, 3♀♀. This species is very similar to the above in its flight. It was likewise very common.

*Napeogenes tolosa* Hewitson. Cayo Dist. 3♀♀. This species is similar to the above also.

*Oleria paula* Weymer. Cayo Dist. 2♂♂. This species and *Pteronymia cottyto* differ from all of the preceding species in that they both fly very close to the ground, seldom more than 2 feet above the forest floor. *O. paula* was fairly common in the tall forest and its capture constitutes a new district listing.

*Dircenna klugi* Geyer. Cayo Dist. 1♂. This species was captured on the border of some tall forest flying approximately 5 feet above the ground. No other specimens were seen.

*Dircenna euchytna* Felder. Cayo Dist. 2♂♂. This species was definitely more numerous than the preceding. The two males were captured flying about 6 feet above the ground along a wide trail.

*Pteronymia cotyttto* Guérin. Cayo Dist. 1♂, 2♀♀. This was a common species in the virgin forests. As stated previously, its flight is very much like that of *O. paula* and *Dismorphia fortunata*.

#### FAMILY SATYRIDAE

*Pierella luna heracles* Boisduval. Cayo Dist. 3♂♂, 1♀. This species was fairly numerous, but local, along the trails in the secondary forest surrounding the village. It seems to confine itself to the paths, very seldom straying off into the underbrush. Individuals usually fly 2 to 3 inches above the ground and frequently alight on the leaf litter.

*Taygetis mermeria* Cramer. Cayo Dist. 1♂. This single individual was flying along a roadside.

*Taygetis andromeda* Cramer. Cayo Dist. 1♀; Stann Creek Dist. 1♂. The record from Stann Creek represents a new district listing. Both specimens were found in second growth forests.

\**Euptychia gemma freemani* Stal. & Tur. Cayo Dist. 1♂, 1♀. These specimens constitute a new national record. Both individuals were taken in the pine lands surrounding the village. The species was fairly common in the grassy ground cover. No individuals were ever seen in the tropical forests.

*Euptychia hesione* Sulzer. Cayo Dist. 1♂, 4♀♀; Stann Creek Dist. 2♂♂. This species was very numerous along the borders of the secondary forests at both camps.

*Euptychia metaleuca* Boisduval. Cayo Dist. 2♂♂. These specimens were taken in the virgin forest west of the village. No individuals were ever seen in the secondary forests as was *E. hesione*.

\**Euptychia themis* Butler. Cayo Dist. 4♂♂. This species was very common around Augustine although no specimens were recorded previously from the country. Individuals were frequently encountered along roadsides and in the secondary forests.

*Euptychia hermes* Fabricius. Cayo Dist. 4♂♂, 1♀; Stann Creek Dist. 2♀♀. This was by far the most common species of satyrid at both collecting sites. Literally hundreds of individuals were observed during the course of my stay.

\**Euptychia glaucina* Bates. Cayo Dist. 1♂. This single male represents a new record for Br. Honduras. The insect was captured in a ravine in the Mt. Pine Ridge.

## FAMILY BRASSOLIDAE

*Caligo memnon* Felder. Cayo Dist. 3♂♂. This species was fairly common in both the secondary and virgin forests around Augustine; one specimen was seen at Melinda. All individuals were taken while they were resting on tree trunks.

## FAMILY NYMPHALIDAE

*Morpho polyphemus luna* Butler. Cayo Dist. 2♀♀. This magnificent butterfly was common in the tall rain forest west of the camp. Its domain is the canopy of the forest and thus it was exceedingly difficult to net (one of the specimens was actually shot down using 22 caliber dust shot).

*Morpho peleides montezuma* Guérin. Cayo Dist. 7♂♂, 2♀♀. This species was very common in both the secondary forests and virgin forests. It was also numerous around the woodlands at Melinda. *M. peleides* flies relatively close to the ground (3 to 4 feet) in contrast to the preceding species.

*Actinote guatemalena* Bates. Stann Creek Dist. 2♂♂, 1♀. All of the above specimens were taken while they were feeding on an unidentified white-flowering bush which was growing along the edge of a small patch of secondary forest. No specimens were seen anywhere else other than at this one locality.

*Heliconius ismenius telchinia* Doubleday. Cayo Dist. 3♂♂, Stann Creek Dist. 2♂♂, 2♀♀. This species was fairly common at both localities. It was found in both the secondary growth and virgin forests. When squeezed, these specimens extruded two bright yellow glands from the tip of their abdomens. Immediately following this, a very pungent, acrid odor was noticed. This odor diffused through the air for several yards and lingered for several minutes. These glands were noticed on all of the species listed in this tribe. As stated previously, the odor was very different from that produced when the two species of Dismorphiinae and the various species of Ithomiinae were squeezed.

*Heliconius doris transiens* Staudinger. Cayo Dist. 4♂♂. This species was encountered only in the advanced forest surrounding the village and its capture represents a new district record. Where ever small clearings existed in the forest and where the sunlight was able to penetrate the canopy and reach the ground, *H. doris* was always to be found. This species was never observed in close proximity to the ground but always from 7 to 15 feet in the air.

*Heliconius petiveranus* Doubleday. Cayo Dist. 6♂♂, 1♀; Stann Creek Dist. 1♂. This species, unlike the preceding, was encountered consistently in the secondary forests. Likewise, its flight is very different from that of *H. doris* for it was never seen above 4 feet of the ground.



*Heliconius charitonius vasquezae* Comstock & Brown. Cayo Dist. 2♂♂, 3♀♀. The Zebra was the most frequently encountered heliconid in both districts, it being most numerous around the tall, grassy or shrubby areas. It was never seen in the shade of the forest. Its flight was usually from 6 to 10 feet above the ground and was fairly rapid and erratic, very much in contrast to the preceding species.

*Eueides aliphera gracilis* Stichel. Cayo Dist. 1♂, 1♀; Stann Creek Dist. 1♂. This species was fairly common in the sunny fields at both collecting sites. In flight, it was usually within 2 to 5 feet of the ground.

*Eueides cleobaea zorcaon* Reakirt. Cayo Dist. 1♀. This individual was captured while it fed on a zinnia flower. This was the only specimen seen and it constitutes a new district record.

*Dryas julia delila* Fabricius. Cayo Dist. 2♀♀. This was a very common species along the roadside and in the grassy fields at both collecting stations.

*Agraulis vanillae incarnata* Riley. Cayo Dist. 1♂. Although Davis (1928) records this insect as being common everywhere in the country, I failed to find it so. This single male was captured while it was flying about a passion flower vine (*Passiflora* sp.). One other specimen was seen here at this time but was not captured.

*Euptoieta hegesia* Cramer. Stann Creek Dist. 1♀. At Stann Creek, this insect was fairly common in the coastal pine lands. However, due to its strong, erratic flight, only one individual was captured. Although no specimens were captured at Augustine, several were seen as they rested on the red mud roads in the pine ridge section.

*Chlosyne theona theona* Ménétries. Cayo Dist. 1♂, 4♀♀. This species was numerous in the grassy fields around the village.

*Chlosyne lacinia lacinia* Geyer. Cayo Dist. 1♂, 1♀. This was not a common species at either locality. All specimens that were taken, were netted while they fed on flowers growing along the roadsides.

*Chlosyne erodyle* Bates. Cayo Dist. 5♂♂, 1♀; Stann Creek Dist. 1♂. This species was fairly common around Augustine but a bit scarcer at Melinda. All individuals were netted either while they fed on flowers or while they rested on bare rocks or cement in the full sun. The latter is quite an interesting behavioral pattern because on many occasions I noticed individuals at rest on these two types of objects. At such times, they were not absolutely still but were engaged in spreading and closing their wings.

*Phyciodes claudina guatemakena* Bates. Cayo Dist. 2♂♂, 2♀♀. Although recorded only from the southern part of the colony (Davis, 1928), I found this species to be fairly common at Augustine in all sunny fields that were surrounded by secondary forests. Individuals

never were observed far from shrubbery.

*Phyciodes myia* Hewitson. Cayo Dist. 3♀♀. This species, like the preceding, was recorded only from Punta Gorda in the southern part of the country (Davis, 1928). However, it too, was fairly common around Augustine although not quite as common as *P. claudina*.

*Precis genoveva* Stoll. Stann Creek Dist. 1♂, 2♀♀. This species was fairly common in both the Mt. Pine Ridge and the coastal pine land area.

*Metamorpha steneles biplagiata* Fruhstorfer. Cayo Dist. 1♂, 3♀♀. All specimens were taken along the borders of secondary forests. The species appeared to be locally common.

*Anartia jatrophae luteopicta* Fruhstorfer. Cayo Dist. 3♀♀; Stann Creek Dist. 1♂, 1♀. This species was very abundant at both collecting sites, being found in all open, sunny places.

*Anartia fatima fatima* Fabricius. Cayo Dist. 1♂, 4♀♀; Stann Creek Dist. 1♂. This species and *Mestra amymone* were the two most frequently seen butterflies around Augustine, being slightly less abundant at Melinda.

*Pyrrhogyra hypensor* Godman & Salvin. Stann Creek Dist. 1♀. This specimen, which represents a new district listing, was taken along the Hummingbird Highway just east of Melinda. Two other individuals were seen here but escaped capture due to the thickness of the grass in which they were flying.

*Pyrrhogyra otolais neis* Felder. Cayo Dist. 3♀♀. This species was common in the secondary forests around the village. Individuals were frequently encountered along the sunny paths that led through the woods.

*Pseudonica flavilla canthara* Doubleday. Cayo Dist. 1♀. This species was fairly common in the cultivated corn fields scattered about the village. Its flight is usually from 2 to 3 feet above the ground.

*Tenenis laothoe liberia* Fabricius. Cayo Dist. 2♀♀. All specimens were taken on the borders of secondary forests. The species was not common.

*Catonephele nyctimus* Westwood. Cayo Dist. 1♂, 1♀; Stann Creek Dist. 1♀. These specimens were all taken along trails in second growth forests. The specimen from Stann Creek represents a new district listing. *C. nyctimus* appeared to be more numerous in shrubby areas where the undergrowth was quite tangled.

*Mestra amymone* Ménétries. Cayo Dist. 1♂, 4♀♀. This species was one of the most common butterflies around Augustine being found even in the pine stands. Its flight was usually never over 3 feet off the ground.

*Hamadryas februa gudula* Fruhstorfer. Cayo Dist. 1♂. This species was fairly numerous in the corn fields surrounding the village. In-

dividuals were frequently seen resting on tree stumps and on burned debris lying on the ground. When at rest, they keep their wings spread in a horizontal plane. In such a position, specimens are not easily distinguished from the lichen-covered tree trunks. The clicking sound made by members of this species, as well as of the following species, is audible for distances up to 30 yards.

*Hamadryas feronia farinulenta* Fruhstorfer. Cayo Dist. 2♂♂, 1♀; Stann Creek Dist. 1♀. This species was more numerous than the preceding one. Individuals were frequently seen in small patches of woods.

*Biblis hyperia aganisa* Boisduval. Cayo Dist. 4♂♂, 1♀. This species was reported by Davis (1928) to be uncommon throughout the country. However, at Augustine, *B. hyperia* proved to be very common. Indeed, it was quite numerous along the roadsides which were bordered by shrubby areas.

\**Limenitis melanthe* Bates. Cayo Dist. 1♂, 1♀. These two specimens represent the first records of this species from the country. Both individuals were captured as they were flying around some shrubs which were growing on the top of a small knoll. Several other specimens were seen during the course of my stay at Augustine but due to their fast, erratic flight, they could not be netted. It appears that *L. melanthe* is quite local in its occurrence.

*Limenitis cytherea marcia* Fruhstorfer. Stann Creek Dist. 2♂♂. These two specimens constitute a new district record. Both were captured along the border of a small patch of tropical forest in the coastal pine land south of Melinda.

*Limenitis iphicla* Linnaeus. Cayo Dist. 2♀♀; Stann Creek Dist. 1♂. The habitat of this species is very similar to that of the preceding.

\**Dynamine theseus* Felder. Cayo Dist. 3♀♀. These three specimens represent a new listing for the country. They were all taken in a cultivated corn field north of the village. The species was quite common at that locale, frequently alighting on the leaves of the corn plants. Individuals of *theseus* fly close to the ground.

*Dynamine mylitta* Cramer. Cayo Dist. 1♂, 2♀♀. These individuals were taken along a roadside near the village. They were flying approximately 2 feet above the ground.

\**Dynamine glauce* Bates. Cayo Dist. 1♀; Stann Creek Dist. 1♂. These represent a new national record. This species was definitely less common than the preceding two. Its habits were similar to them, however, with the exception that *D. glauce* was seen near heavier forest cover more frequently than either *D. theseus* or *D. mylitta*.

\**Dynamine dyonis* Geyer. Cayo Dist. 6♂♂, 4♀♀. These records constitute a new national listing, also. *D. dyonis* was the most common

representative of the genus around Augustine. All of the females listed above were found fluttering in open, grassy areas. The males were captured as they flew around the new foliage of a mango tree. This tree was approximately 15-20 feet in height and these butterflies could be seen every sunny morning flying about and frequently alighting on the new leaves. After alighting (or when resting), all individuals held their wings out in a horizontal position fully exposed to the direct rays of the morning sun. However, after 11:00 A.M. (approximately), not a single male was seen near this tree and females were not seen around the tree at any time.

*Marpesia chiron* Fabricius. Stann Creek Dist. 1♂. This insect was a fairly common one at both localities but due to its erratic flight, only a single specimen was taken.

*Smyrna blomfieldia datis* Fruhstorfer. Cayo Dist. 1♂. This individual was taken as it fed on some sap which was exuding from the trunk of a mango tree. No other specimens were seen.

*Gynaecia dirce* Linnaeus. Stann Creek Dist. 1♀. This female was the only individual of this species observed during my entire stay in Br. Honduras. It was captured in a small track of secondary forest.

\**Prepona amphimachus* Fabricius. Cayo Dist. 2♀♀. This is the first record of this species from Br. Honduras. Both females were taken as they flew along a path in a section of virgin forest. The flight of this specimen was extremely swift and erratic. Several other specimens of the genus *Prepona* were seen in this forest but none could be captured and their identity could not be ascertained.

*Anaea electra* Westwood. Cayo Dist. 1♀. This individual was captured along the edge of a small patch of woods.

*Anaea morvus boisduvali* W. P. Comstock. Cayo Dist. 1♀. This species is listed as *A. morta* by Davis (1928) who states that "a single specimen was taken in a forest road in the Western District". Therefore, it appears that the female listed above represents the second specimen from the country.

#### FAMILY LYCAENIDAE

*Eumaeus minyas* Hübner. Cayo Dist. 3♂♂, 2♀♀. This species was locally common around Augustine being found in isolated colonies in several areas of secondary forest.

\**Thecla ragalis* Cramer. Cayo Dist. 1♀. This specimen, which represents a new national record, was taken along a wide path in some secondary forest. No other specimens were seen.

*Thecla marsyas damo* Druce. Cayo Dist. 4♀♀. This was a common species in the shrubby fields near Augustine. One specimen was seen at Melinda.

\**Thecla mavors* Hübner. Cayo Dist. 2♂♂, 1♀. These individuals constitute a new national record. All were captured as they rested on the leaves of a mango tree (see *Dynamine dyonis*). This species was quite common on this tree during the morning hours.

*Thecla linus togarna* Hewitson. Cayo Dist. 3♂♂. These specimens represent a new district listing. All were taken along the borders of small woodlands.

\**Thecla meton* Cramer. Stann Creek Dist. 1♂. This insect represents a new record for the country. The single specimen was collected on the edge of some secondary forest. No other specimens were seen.

\**Thecla syncellus syncellus* Cramer. Stann Creek Dist. 1♀. This individual was found in a small patch of tropical woods in the coastal pine region south of Melinda. This species was unrecorded previously from the country.

\**Thecla orcidia* Hewitson. Cayo Dist. 3♂♂. These three individuals are new records for Br. Honduras. All were taken as they flew around the top of the same mango tree as described under *D. dyonis*. Several other individuals were seen at this same spot.

\**Thecla ahola* Hewitson. Cayo Dist. 2♀♀. This species represents a new national record. Both specimens were captured in a very shrubby field.

*Thecla gabatha* Hewitson. Cayo Dist. 1♀. This species, previously recorded by Seitz (1923) for the country, was taken as it rested on a *Bromelia* sp. flower in a dense, secondary forest.

\**Thecla celmus* Cramer. Cayo Dist. 1♂. This individual which represents a new national record, was captured on the edge of primary forest west of the village.

\**Thecla scopas* Godman & Salvin. Stann Creek Dist. 1♀. This specimen was taken along a trail in some secondary forest which was located in the coastal pine land south of Melinda. This is the first record of this species for the country.

\**Thecla serapio* Godman & Salvin. Cayo Dist. 1♂. This specimen represents a new national record. It was captured on the margin of a small patch of second growth woods.

\**Thecla basalides* Gayer. Cayo Dist. 1♂. This species was found in the same locale as the preceding one. It, likewise, constitutes a new record for Br. Honduras.

\**Thecla mulucha* Hewitson. Cayo Dist. 2♂♂. This is the first listing of this species from the country. Both individuals were netted along a roadside.

\**Thecla* sp. Cayo Dist. 1♂. Mr. Harry K. Clench informs me that this specimen (Field No. 629) represents an undescribed species. He

further states that he has a similar specimen also from Br. Honduras in his possession. The species will be described by him at a later date.

\**Tmolus echion echiolus* Draudt. Cayo Dist. 1♀. This specimen represents a new national record. It was captured in a grassy area. No other individuals were observed.

\**Calycopis isobeon* Butler & Druce. Cayo Dist. 2♂♂. These individuals constitute new records for Br. Honduras. They were also captured in a grassy field.

*Calycopis* sp. Cayo Dist. 2♀♀. Two females belonging to this genus still remain unidentified. (Field nos. 496, 631).

*Everes comyntas* Godart. Cayo Dist. 2♂♂. This species was very common in the grassy areas both in the tropical regions and in the pine regions.

#### FAMILY RIODINIDAE

\**Perophthalma tullius lasius* Stichel. Cayo Dist. 1♂. This small individual, which represents a new listing for Br. Honduras, was taken in some tall rain forest. It was flying about five feet above the ground and along a fairly wide trail. No other specimens were seen.

*Mesosemia tetrica* Stichel. Cayo Dist. 2♂♂, 1♀. These specimens constitute a new district record. All were taken in the shade of some secondary forest. The species was local, colonies being isolated from each other by as much as a mile. Individuals, when at rest, hold their wings at a 45° angle to the body.

\**Cremna umbra* Boisduval. Cayo Dist. 1♂. This individual represents a new national record. The specimen was captured along the margin of a small patch of secondary woods. It was resting on the undersurface of a leaf.

\**Lyropteryx lyra cleadas* Druce. Cayo Dist. 1♀. This individual constitutes a new record for Br. Honduras. It was captured along a trail in some secondary forest.

*Ancyluris inca inca* Saunders. Cayo Dist. 1♀. This individual was captured as it was flying about 3 feet above the ground along a path in some primary forest.

*Rhetus arcus thia* Morrison. Cayo Dist. 1♂. Recorded under the name of *Diorhina butes* (Godman and Salvin, 1879-1901), as being taken at Corozal in the northeastern part of the country, this specimen represents a significant range extension for the species. This male was taken as it was flying around a mango tree. One other specimen was seen during my stay at Augustine.

*Calephelis velutina* Godman & Salvin. Stann Creek Dist. 2♂♂. This species was previously recorded only from the extreme southern part of the colony (Davis, 1928). However, at Melinda, this species was

not uncommon.

\**Calephelis argyrodines* Bates. Cayo Dist. 3♂♂, 1♀; Stann Creek Dist. 2♂♂. This species was common in the open fields at both localities. At Augustine, the species extended into the pine forests. These are the first records of this species from Br. Honduras.

*Emesis lucinda saturata* Godman & Salvin. Stann Creek Dist. 1♀. This insect was captured along a trail leading through some secondary woods.

\**Emesis liodes* Godman & Salvin. Stann Creek Dist. 1♀. This insect was taken in the same locality as the preceding species. It represents a new national record.

*Peplia lamis molpe* Hübner. Cayo Dist. 1♀. This insect was fairly common in the grassy fields which were immediately adjacent to second growth forest. *P. lamis* was recorded previously only from the Corozal (Godman & Salvin, 1879-1901).

\**Theope diores* Godman & Salvin. Stann Creek Dist. 1♂. This male constitutes a new national record. It was captured in the shade of some secondary forest.

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#### MIGRATION OF *KRICOGONIA LYSIDE* IN MEXICO (PIERIDAE)

A huge migration of *Kricogonia lyside* Latr. was seen flying across the highway between Ciudad Mante and Ciudad Victoria in the state of Tamaulipas, Mexico, on October 23, 1963. Tremendous clouds of the butterflies were seen which obscured much of the surrounding landscape and even obliterated the highway at intervals. There were six principal waves of the butterflies that were spaced a few yards apart, with many intermingling between the clouds. They were flying rather close to the ground, not more than ten feet high. Their directional flight was from the east to the west in an almost due course towards the foothills of the Sierra Madre Oriente range. The samples observed were of *lyside* only, without an admixture of other species, were about equally males and females, and most examples were in fresh condition. The main flights were seen at eleven in the morning. The day was sunny with no wind. The flight was not more than about one fourth of a mile thick, and there were no specimens observed at Ciudad Victoria.