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DESCRIPTIONS OF NEW HESPERIIDAE FROM PANAMA AND ECUADOR

(Pyrginae and Hesperinae)

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Collecting by the author and Gordon B. Small, Jr. over the past seven years in Panama and Ecuador, two of the smallest Neotropical countries in the hemisphere, has yielded a surprising number of undescribed species in various families of the Lepidoptera. One of the most prolific families from this standpoint continues to be the HesperIIDae. This might be expected if all or most of these discoveries were small, unicolored, unobtrusive species, but such is not the case; the species described herein represent a reasonable cross-section of the Pyrginae and Hesperinae, the Pyrrhopyginae being the subject of a separate paper.

Based upon our own field work and observations, there appear to be two primary reasons for this. First, in spite of their relatively small size, the two countries provide some of the most widely diversified environmental habitats to be found anywhere. Many of these habitats have, until recently, been quite inaccessible by road. Ironically, such accessibility normally results in a rather short life; hence, some of the localities named in this paper no longer exist in their original state, and many of the species originally discovered there have disappeared. Second, the species described herein have unusual flight habits as well as habitats and apparently have thus far eluded or gone unnoticed by the casual collector.

As noted in a previous paper on new Neotropical HesperIIDae (Nicolay, 1973) the descriptions utilize the English system of numbered veins and interspaces. Unless of significant and specific importance, generic characters are omitted from the description and lengthy, detailed wordy descriptions of the male genitalia are omitted. Each is shown in detail in a lateral view with the left valva removed, the aedeagus in place with the inner surface of the right valva figured and a ventral view of the uncus. Notable differences from other species in the genus are discussed where appropriate and helpful.

Ouleus negrus, new species

Figs. 1A, 1B, 2, 2a

Male: Length of forewing, 16 mm. Upperside: forewing unmarked dark velvety brown with a vague, indistinct black postdiscal macular band. Hindwing the same velvety brown with a vague outline of a darker postdiscal and discal band. All fringes concolorous dark brown. Underside: forewing brown, paler along the inner margin, with an indistinct dark, short discal band from the costal margin to vein 2. Hindwing brown with two indistinct dark spots in interspace 7, another in the cell and a dark discal band from 1b to vein 7 with a pale bar at the cell end. Antennae brown; cheeks pale grey; palpi grey below, dark brown above; collar with a few reddish scales. Hind tibia with a

long, recumbent dorsal hair tuft and a single spur above the lower pair. Male genitalia with a long, broad spatulate style, concave at the tip; uncus heavy, beak-like, tapered to a point with two horn-like lateral processes extending from the base; the gnathos four-fifths the length of the uncus, divided one-third of its length at the tip.

Female: Unknown.

Holotype male, Santa Fe, Veraguas Province (850 m) Panama, 1 September 1975, collector S. S. Nicolay. Paratypes, 3 males with the same locality and date. The holotype will be deposited in the Allyn Museum of entomology, Sarasota, Florida, the paratypes remaining in the author's collection.

Like most of the taxa in this genus of generally dark, unmarked species, the male genitalia provide the most reliable means of identification. With the exception of a size differential, which may or may not be valid from season to season, it is indeed difficult to distinguish *negrus* from *Ouleus fatanitza* Plötz (to which it is obviously closely related) and *O. dilla baru* Nicolay and *O. clavus* G. & S.

Negrus flies along the edge of the dense, uncut rainforests and rather restricted sunlit

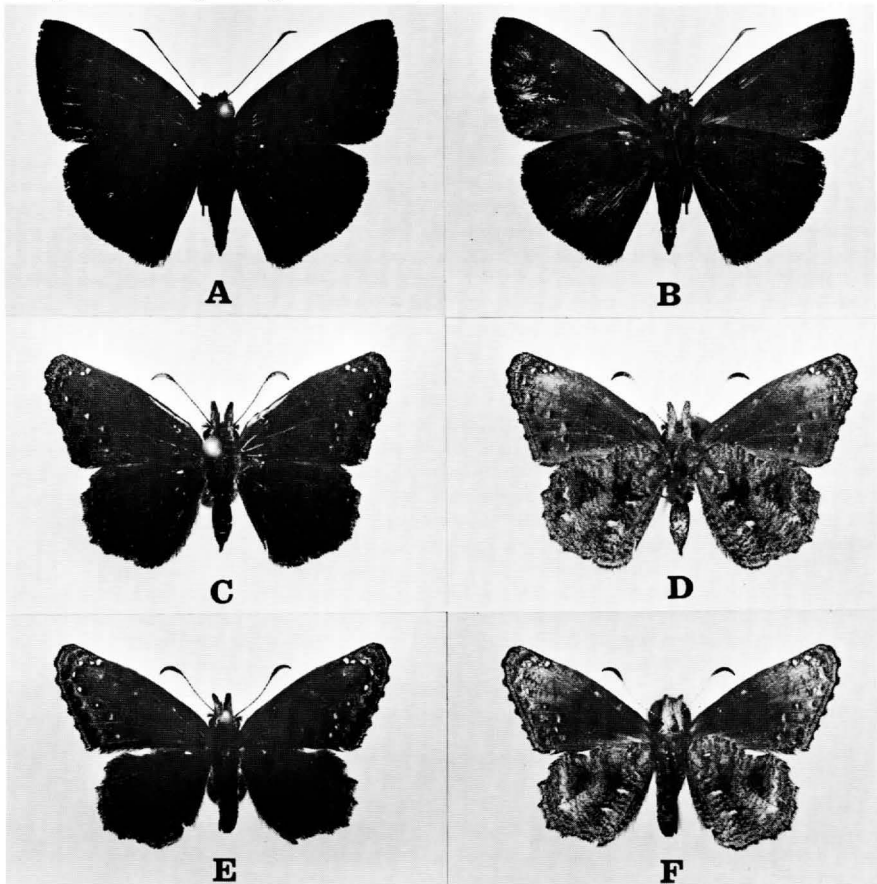


Figure 1. (A) *Ouleus negrus* Nicolay ♂ Holotype, Santa Fe, Veragua Province (850 m) Panama, 1 September 1975, collector S. S. Nicolay, (B) underside of (A); (C) *Anisochoria nadia* Nicolay ♂ Holotype, Loja-Catamayo road, Loja Province (1700 m) Ecuador, 11 September 1975, collector S. S. Nicolay, (D) underside of (C); (E) *Anisochoria nadia*, allotype ♀, same data as ♂, (F) underside of (E).

openings in these forests in the mountains of central Panama. It is a rapid flier, but like most species in the genus, alights rather frequently on the leaves of low bushes and small trees to bask in the sun. It has thus far, been taken only in the type locality.

***Anisochoria nadia*, new species**

Figs. 1C, 1D, 1E, 1F, 3, 3a

Male: Length of forewings, 13 mm. Upperside: forewing with a costal fold; dark brown, outer third with pale overscaling, apex margin with sparse grey overscaling. A submarginal row of small black spots; tiny post-discal spots arranged in a shallow arc, two semi-hyaline spots in interspace 1b and one in interspace 2, one hyaline spot in each of interspaces 3 - 5, the latter almost touching the submarginal black spot; three small hyaline apical spots in interspaces 6 - 8. Fringes inconspicuously checked black and brown. Hindwing dark brown, outer margin slightly scalloped. Underside: forewing light brown with a pale yellow-brown subapical area. Outer margin and apex with grey scaling; hyaline and semi-hyaline spots of the upper side repeated in like manner with an additional tiny pale spot on the mid-costal margin. Hindwing costal margin with a basal arch dipping into a concave discal area, rising again to a rounded apex. Wing grey with dark brown striations with two concentrations of heavy brown striations and scaling below the apex and the sub-basal area between veins 1c and 7; red-brown scaling in interspace 1c with a pale spot at each end. A narrow macular submarginal line of white scales from interspace 4 thru 7. Fringes mixed grey and dark brown, inconspicuously checkered.

Hind tibia with a hair tuft entering a thoracic pouch; palpi very long, pendulous, dark brown above, grey below. Antennae short, checkered, dark brown above, grey below; apiculus grey beneath. The male genitalia with symmetrical valvae, their structure quite unlike any other species in the genus. The aedeagus has three distinct chitinous spines.

Female: Length of forewing, 15 mm. Upperside: forewing markings identical to the male with indications of a vague, pale lower cell spot. Hindwing dark brown as in the male with vague submarginal crescents preceding the dark submarginal spots. Underside: forewing markings the same as in the male with two tiny white spots on the costal margin in the discal and sub-basal area. Hindwing grey, paler than in the male, but with the same striated pattern more boldly marked.

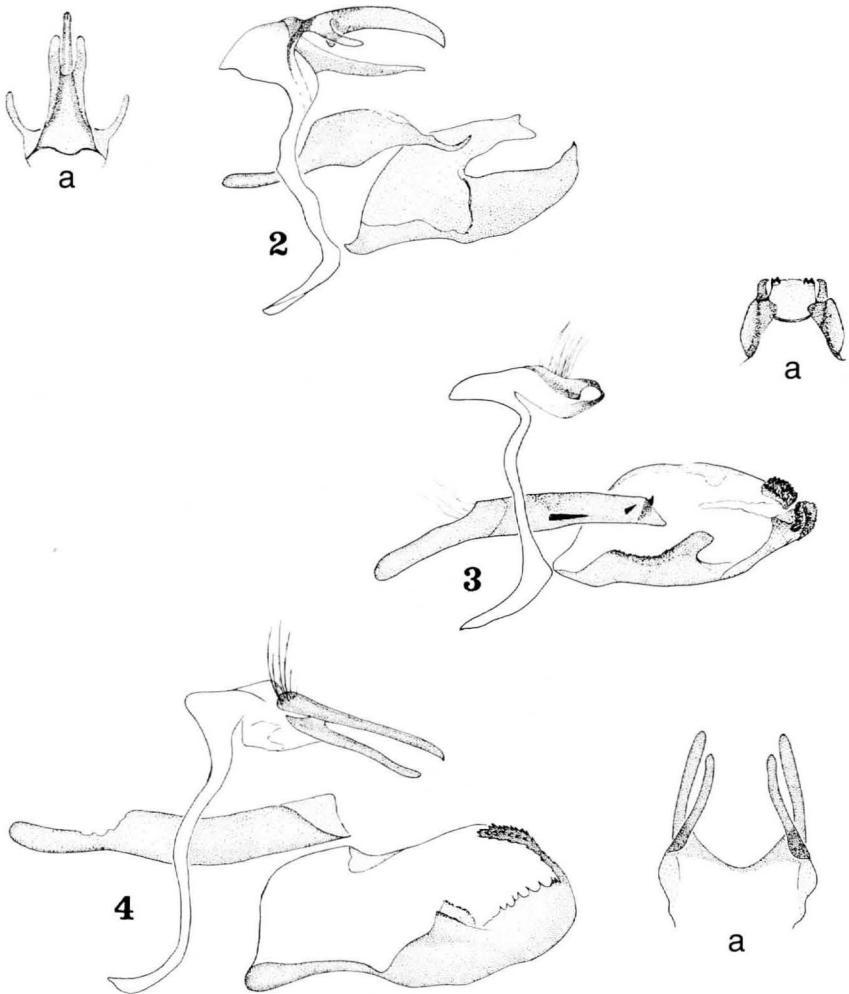
Holotype male, Loja-Catamayo Road, Loja Province, Ecuador, 1700 m. 11 September 1975, collector S. S. Nicolay. Allotype female, same data as the male. Paratypes, 10 males from the same locality as the holotype, and dates of 11 and 12 September 1975. The holotype and a paratype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida. The allotype and additional paratypes will remain in the author's collection.

Nadia is a distinctive member of the genus *Anisochoria* in that it is the only species with a costal fold in the male, thereby requiring modification of the generic description to that extent. All other features of this most interesting species fall within the parameters of the genus. The dark brown ground color and pattern of tiny pale spots on the forewing are similar to those found in *A. pedalioidina polysticta* Mabille, but the line of apical spots in *nadia* is directed to the closest margin below the apex rather than to the tornal angle as in *A. p. polysticta*. The convex costal margin and rounded apex of the hindwing and the male costal fold on the forewing readily separate *nadia* from any other species in the genus. *Nadia* too, is somewhat smaller than most other species, a typical male averaging from 3 to 6 mm less in total wing expanse.

Nadia is thus far known only from the type locality in the arid, semi-desert western slope of the cordillera lying between the towns of Loja and Catamayo in Ecuador. It flew in a dry creek bed that coursed down a narrow, boulder-strewn canyon in company with a number of other 'sibling' Hesperiidæ such as *Staphylus cordillera* Lindsey from which it was very difficult to distinguish in flight or in a resting position. It is very swift in flight and extremely wary; most specimens were taken while they were taking

moisture from wet sandy places in the creek bed. As with other lepidopterous species in this area, it flew only during those times when the sun shone warm and bright; all quickly vanished from sight in cloudy weather.

It is a pleasure to name this interesting species in honor of Mrs. Yuri Venedictoff of Quito, Ecuador, a good friend and collecting companion and an accomplished and enthusiastic Lepidopterist. Without her knowledge of the remote areas of Ecuador and active support, I doubt that this species would have been 'discovered'.



Figures 2-4. ♂ genitalia of Neotropical Hesperiidae (Pyrginae and Hesperinae): (2) *Ouleus negrus* Nicolay - lateral view, (a) ventral view of uncus; (3) *Anisochoria nadia* Nicolay - lateral view, (a) ventral view of uncus; (4) *Synapte infusco* Nicolay - lateral view, (a) ventral view of uncus.

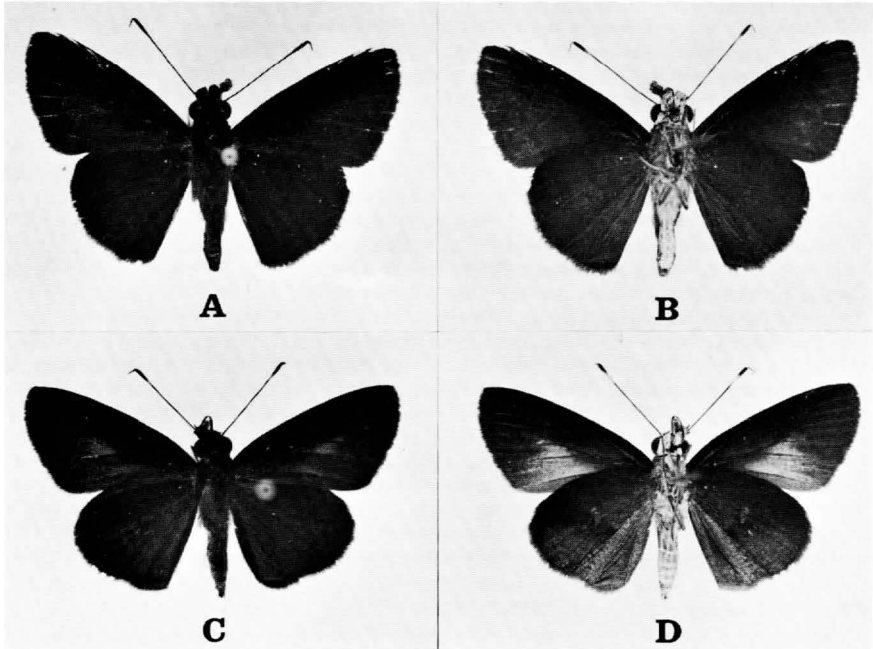
***Synapte infusco*, new species**
Figs. 5A, 5B, 5C, 5D, 4, 4a

Male: Length of forewing, 17 mm. Upperside: forewing dark brown with an indistinct, tawny band in spaces 1b and 2. Hindwing unmarked dark brown. Underside: forewing brown, darker at the base, paler distally toward the outer margin and at tornus. Hindwing brown, darker at the costal margin and apex, with a faint lilac tinge, and pale grey scaling in the disc; a faint pale cell-end streak. Fringes paler at tornus.

Abdomen pale yellow below; legs tawny and pale yellow; palpi with mixed yellow and brown scales, cheeks bright yellow. Antennae dark brown with a yellow circle at the base of the club and yellow scaling beneath the apiculus. Top of the head, collar and palpi with mixed brown and pale yellow hairs and scales.

Female: Length of forewing, 16 mm. Upperside: forewing dark brown with a faint tawny discal band from interspace 1b through 3 and paler at the base of the inner margin. Hindwing dark brown, the discal area faintly lighter. Underside: forewing dark brown along the costal margin through the cell, all of the apex and outer margin to vein 2; inner margin and discal area from 1b through space 2 to tornus, pale tawny. Hindwing brown with a faint lilac wash at the base an postdiscal area; and indistinct chocolate-brown inverted triangular area from the costal margin through the end of the cell to 1c. A pale cell-end spot.

Holotype male, Bayano, Panama Province, Panama, 14 October 1974, collector G. B. Small. Allotype female, same locality and collector as the holotype, 26 October 1974. Six male paratypes all from the same locality with dates of 26 October 1974, 10 January 1975, 26 January 1975 and 8 February 1975. The holotype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida. The allotype and 4 male paratypes will be in



Figures 5. (A) *Synapte infusco* Nicolay ♂ Holotype, Bayano, Panama Province, Panama, 14 October 1974, collector G. B. Small, (B) underside of (A); (C) *Synapte infusco*, allotype ♀, same locality and collector as male, 26 October 1974, (D) underside of (C).

the G. B. Small collection, the remaining two paratypes in the author's collection.

S. Infusco is somewhat larger than any other species in the genus, and the rather sharp apex of the forewing resembles that of *S. lutulenta* Herrich-Schaffer, but the hindwing is not as round. The indistinct, pale discal area of the forewings is also similar to that of *lutulenta* and some darker specimens of *S. salenus* Mabille. The underside of the hindwing is unlike any other species of the genus with which I am familiar. The male genitalia provides ample and specific differences from all other species, particularly in the valvae with a long, slender spined clasp overlapping the cuiller. The uncus and gnathos are sub-equal but the latter is shorter and is overlapped by the uncus. Both are slender and chitinous, structurally resembling *S. malitiosa* Herrich-Schaffer rather than *lutulenta*.

Infusco was originally found in the lowland rainforests of the Darien, an area little known entomologically. In July, 1978, the author took a single female of this species at Km 715 on the Cuiaba-Santarem road in Mato Grosso, Brazil. Apparently the species is far more widespread than the scant statistics available would indicate. Hopefully, collecting will be allowed to continue in the area adjacent to the type locality before it is opened to general traffic and development. In the few years since the type series was collected near the Rio Bayano, the type locality has been destroyed.

***Psoralis concolor*, new species**

Figs. 6A, 6B, 7, 7a, 17A

Male: Length of forewing, 16 mm. Upperside: forewing concolorous dark brown with a conspicuous tri-partite dark grey stigma from the beginning of vein 3 along cubitus to vein 2 then in two short pieces in-line to vein 1 (fig 17A). Hindwing unmarked, the same dark brown as the forewing. Underside: forewing dark brown, black at the wing base, tiny pale spots in spaces 3 and 6, slightly paler along the inner margin in 1a and 1b to tornus. Hindwing dark chocolate-brown with faint indications of pale discal spots in 1b through 3. Head, top of palpi, thorax and collar with shining dark green hairs. Palpi with mixed grey and brown scales, third segment stout, conical. Antennae shaft brown, with yellow scaling under the club; apiculus with 9 segments; mid-tibia spined.

Female: Unknown.

Holotype male, Cotundo, Napo (800 m) Ecuador, 17 December 1976, collector S. S. Nicolay. Paratypes: 5 males from the same locality, dates of 17, 18 December 1976, 3 September 1977; 1 ♂ Rio Jondachi, Napo (1,000 m), 2 October 1976; 1 ♂ Lumbaqui, Napo (700 m) 25 September 1975; 1 ♂ Puyo, Pastaza (1,000 m) 7 September 1977. The holotype and a paratype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida, the remaining paratypes in the author's collection.

It is obvious from the brief description of *Psoralis ravus* Evans (1955) that *concolor* is very similar in general coloration and in the lack of wing pattern or spots. *concolor* is marked to an even lesser degree than *ravus* for there is no indication of any spots on the upper wing surfaces and only slight indications of two tiny spots on the undersurface of the fore and hindwings. The male genitalia show a degree of similarity in the structure of the uncus, but the valvae are quite different.

I first took this species, a single male, in the foothills of the Andes in eastern Ecuador in an area drained by tributaries of the Rio Coca. In the following two years, I took additional specimens at about the same altitude further south along the same Andean chain. *concolor* flies along the forested trails and is particularly fond of perching on low shrubs and trees in the sunlit clearings along the banks of small streams.

***Thoon maritza*, new species**

Figs. 6C, 6D, 8, 8a, 17D

Male: Length of forewing, 16 mm. Upperside: forewing brown with blue-green scaling at the immediate base of the wing with scattered yellow overscaling along the costa. Tapered grey brand along the cubitus from mid vein 2 and the beginning of vein 3, another oval brand below vein 2 (fig. 17D). A yellow opaque spot in space 1b, hyaline

white spots in spaces 2, 3, 6, 7 and a dot in 8; a single hyaline upper cell spot, a tiny dot below. Hindwing brown with a few bluish-green hairs at wing base. A tiny opaque white post-discal spot in space 2, a larger one in space 3, another smaller in space 5. Underside: forewing brown, heavy ochreous scaling along the costa and toward the middle of the wing, darker at the wing base and along the inner margin; all spots of the upperside repeated in like manner, the spot in 1b with added diffused white scaling. Hindwing brown, with heavy ochreous scaling along the costal half of the wing, darker brown toward the lower half; a round spot in 1c, a straight row of white spots in spaces 2 - 5, a round spot in the cell-end, a larger spot in space 7. Head, collar, thorax and abdomen with shining bluish-green hairs and scaling. Palpi below with mixed grey, green and brown scaling; greenish-blue hairs along the thorax and legs. Antennae dark brown, yellow under the club.

Female: Unknown.

Holotype male, Cotundo, Napo (800 m) Ecuador, 3 October 1976, collector S. S. Nicolay. Paratypes: 1 male, same locality, 4 October 1976; 1 male, Rio Jondachi, Napo (1000 m) 4 October 1976. The holotype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida. The paratypes will remain in the author's collection.

T. maritza carries a mixture of characters that relate it to other species in the genus; the straight row of white spots on the underside of the hindwing is very similar to that feature in Evans' *canta*. However, the upperside of the forewing is almost identical to that of *modius* Mabille as are the brands appressed to the cubitus above vein 2 and a shorter one below the vein. The male genitalia are vaguely similar to *canta* in outline of the valvae but are much different from those of other taxa in the genus.

Most species of this genus are extremely swift in flight and wary. *Maritza* carries

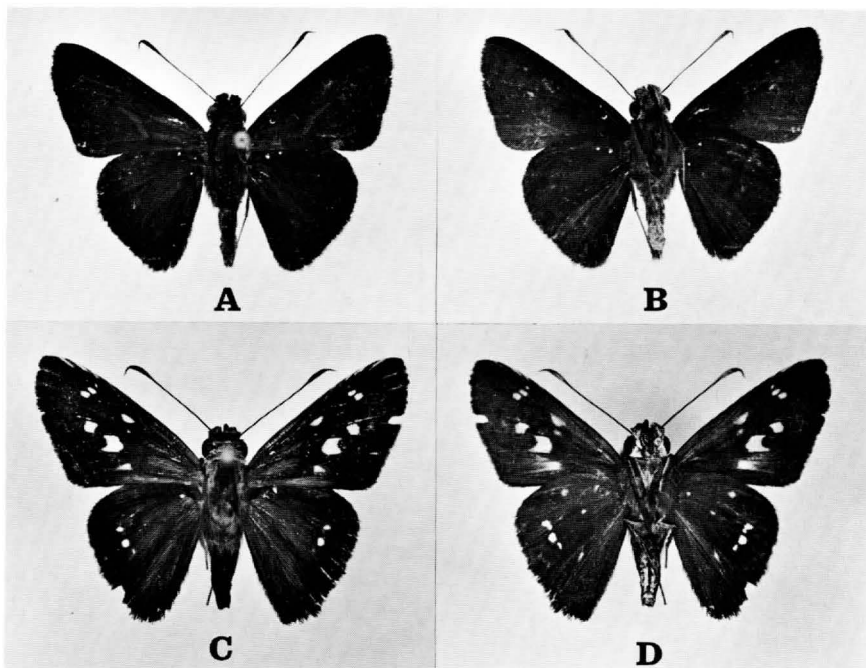


Figure 6. (A) *Psoralis concolor* Nicolay ♂ Holotype, Cotundo, Napo (800 m) Ecuador, 17 December 1976, collector S. S. Nicolay, (B) underside of (A); (C) *Thoon maritza* Nicolay ♂ Holotype, Cotundo, Napo (800 m) Ecuador, 3 October 1976, collector S. S. Nicolay, (D) underside of (C).

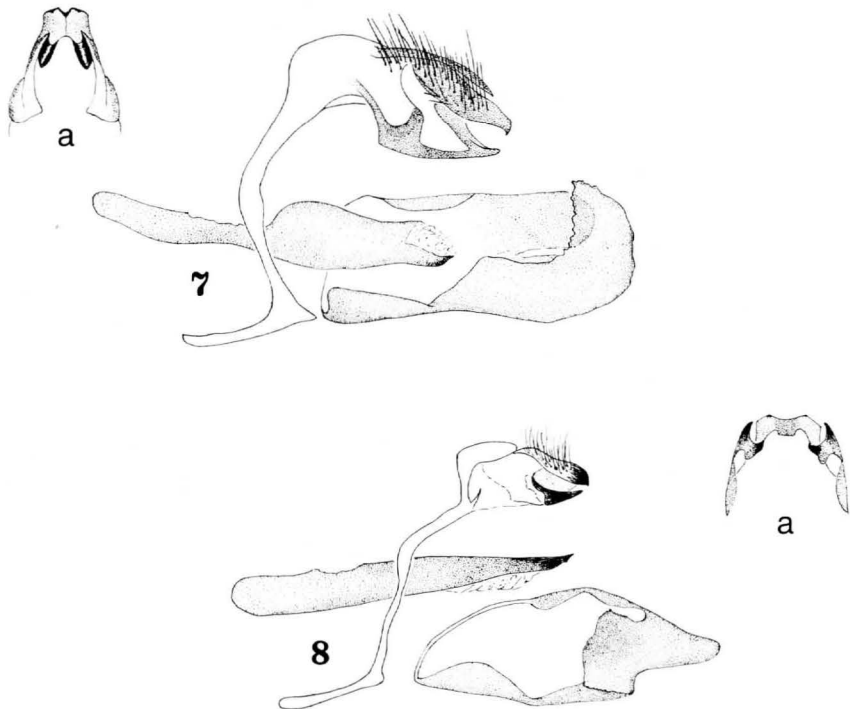
these characteristics to an extreme in that I have never seen one alight on a branch or leaf less than 10 feet above the ground. The mere movement of a net toward the insect will send it rocketing skyward and it may or may not return to its original perch. Apparently its 'territorial' urge is not great. In addition to being extremely wary, it is also very uncommon. I have seen a few additional specimens that I 'guessed' to be this species because of their behavior, but I was unable to get within reach of them.

T. maritza is found resting high on the leaves of small trees along wooded pathways and small streams in the forested slopes of the lower altitudes of the eastern Andes in Ecuador.

It is a pleasure to name this interesting species after my lovely collecting companion Maritza Mionet, whose help and knowledge of the pathways and woodlands of her homeland were a great help to my collecting efforts.

***Tisias carystoides*, new species**
Figs. 9A, 9B, 9C, 9D, 10, 10a, 17E

Male: Length of forewing, 21 mm. Upperside: forewing dark brown with large white hyaline spots across interspaces 1b, 2, 3 and two conjoined spots across the cell; a line of three small subapical spots from spaces 6 - 8. A band of white scaling along the outer margin from vein 3 to 7, widest at veins 5 and 6. An obscure narrow broken stigma from the beginning of vein 3 to vein 1. Fringes brown. Hindwing dark brown with small round pale spots in the cell and in space 3. Fringes white. Underside: forewing dark



Figures 7-8. ♂ genitalia of Neotropical Hesperidae (Hesperiinae): (7) *Psoralis concolor* Nicolay - lateral view, (a) ventral view of uncus; (8) *Thoon maritza* Nicolay - lateral view (a) ventral view of uncus.

brown tinged with violet; hyaline white spots of the upperside repeated in like manner but the spot in space 1b scaled white. A submarginal band of violet-grey scaling from vein 3 to the apex and in interspaces 4 and 5 beneath the line of sub-apical spots; ferruginous scaling along the costal margin and sparsely dusted over the apex and outer margin. Hindwing dark violet-brown with heavy ferruginous overscaling, particularly at the wing base. Pale spots in the cell and discally in spaces 2 and 3 with a patch of vague pale scaling in interspace 1c. A broad submarginal band of pale violet-grey scaling from vein 2 to the apex. Fringes creamy-white; palpi greyish-brown; leg clothing ferruginous; antennae yellow at the base of the club.

Female: Length of forewing, 23 mm. Upperside: forewing dark brown with 2 hyaline white spots in interspace 1b, a large spot in 2, smaller in 3 and a double fused spot across the cell with the white dots in spaces 4 and 5 placed closer to the outer margin than the 3 subapical spots in-line from spaces 6 - 8. The base of the wing overlaid with ochreous scaling. Hindwing unmarked dark brown with the disc and base ochreous. Underside: forewing dark brown with pale violet-grey scaling along the costa and from mid-costa across the apex to vein 2 encompassing the spots in spaces 3 - 5 and 6 - 8. Hyaline spots of the upperside repeated in like manner with sparse white scaling diffused across the spots in 1b. Hindwing pale violet-grey with vague darker brown basal and discal bands. Fringes paler on both wings. Leg clothing grey-brown; palpi grey; antennae yellow at the base of the club.

Holotype male, Rio Palenque, Pichinca (200 m) Ecuador, 2 May 1976, collector Nadia Venedictoff. Allotype female, Alluriquin, Pichincha (700 m) Ecuador, 27 September 1976, collector S. S. Nicolay. The type will be deposited in the Allyn Museum of Entomology, Sarasota, Florida; the female allotype remains in the author's collection.

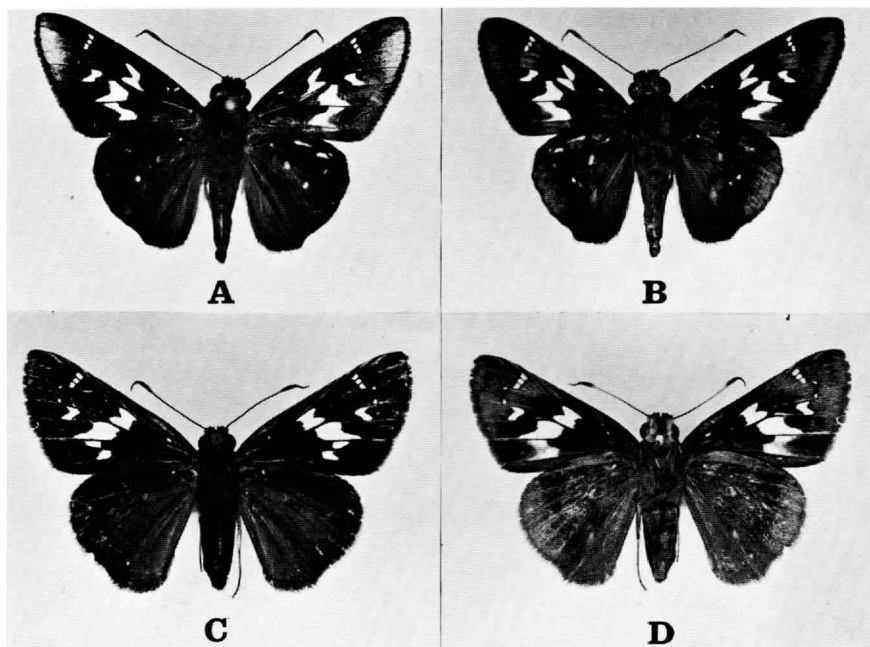


Figure 9. (A) *Tisias carystoides* Nicolay ♂ Holotype, Rio Palenque, Pichincha (200 m) Ecuador, 2 May 1976, collector Nadia Venedictoff, (B) underside of (A); (C) *Tisias carystoides*, allotype ♀, Alluriquin, Pichincha (700 m) Ecuador, 27 September 1976, collector S. S. Nicolay, (D) underside of (C).

The similarity of this species to many of those in the genus *Carystoides* is obvious, hence the given name. That many species of both genera are crepuscular is therefore not surprising. The holotype was collected by Mrs. Venedictoff at lights while collecting Heterocera at the research station on the Rio Palenque in western Ecuador. The female was taken just at dusk while collecting at flowering trees and bushes for such crepuscular species.

Carystoides is the second species in this genus with a male stigma rather than a series of brands (fig. 17c) and in this regard is most closely related to *Tisias caesena* Hewiston. The male genitalia of all species in the genus are similar, but in the shape of the valvae, *carystoides* most resembles that of the Evans' species *rinda*, rather than *caesena* from which it differs in considerable detail.

The currently known habitat of *T. carystoides* is the lower altitude slopes of the western cordillera in Ecuador.

Enosis topo, new species
Figs. 12A, 12B, 11, 11a, 17C

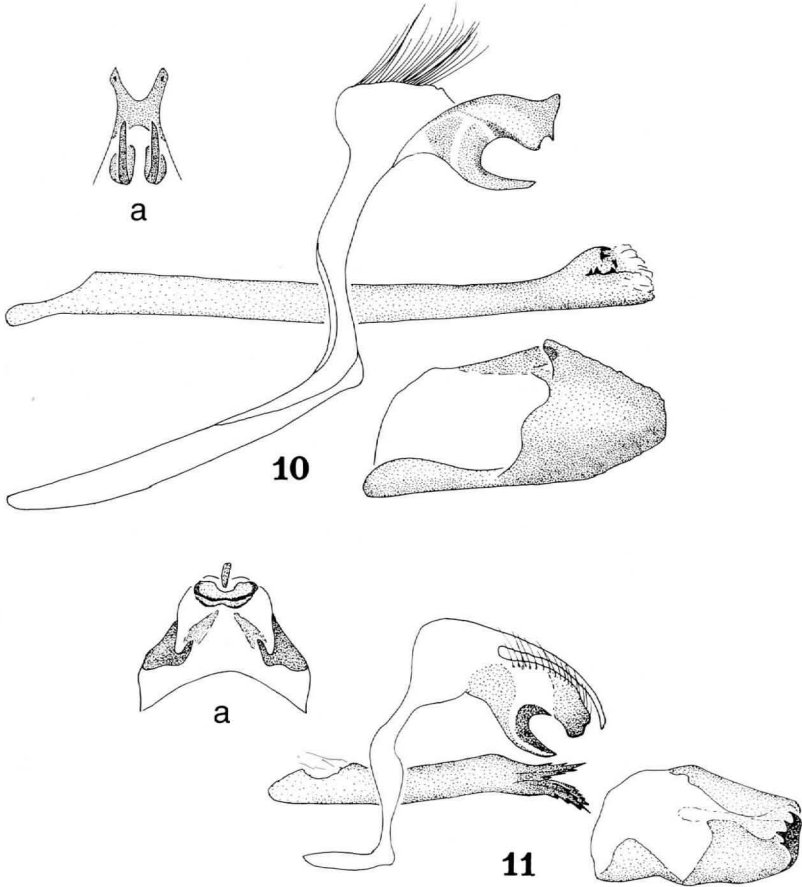


Figure 10-11. ♂ genitalia of Neotropical Hesperiidæ (Hesperiiinae): (10) *Tisias carystoides* Nicolay - lateral view, (a) ventral view of uncus; (11) *Enosis topo* Nicolay - lateral view, (a) ventral view of uncus.

Male: Length of forewing, 19 mm. Upperside: forewing unmarked dark brown with heavy black overscaling surrounding the stigmal area and the wing base. A large grey stigma begins at the origin of vein 3, thence along the cubitus to vein 2, a horizontal brand-like patch below vein 2 and a separate longer brand-like section above vein 1. Hindwing unmarked dark brown. Fringes concolorous dark brown. Underside: forewing unmarked dark brown, faintly paler along the inner margin. Hindwing unmarked dark brown. Fringes concolorous dark brown. Palpi with mixed yellow and brown hairs; leg clothing ferruginous and brown; thorax and head brown above, cheeks narrowly yellow-scaled around the eyes. Antennae black with yellow scales at the base of the club and beneath the apiculus.

Female: Unknown

Holotype male, Rio Topo, Tungurahua (1500 m) Ecuador, 8 September 1977, collector S. S. Nicolay. The holotype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida.

Enosis topo is the epitomy of the dark brown, unmarked skipper; there is no trace of markings or bands on any wing surface. The dark grey stigma is the most noticeable feature and is shaped like none other in the genus. The male genitalia is an obvious mixture of characters found in *E. dognini* Mabille and *E. aphilos* Herrich-Schaffer with the valvae of the former and the divided and spined aedeagus of the latter.

The type locality is thus far the only place from which the species is known, but I would guess that it is found at medium altitudes along the eastern Andean cordillera in Ecuador.

***Penicula criska jon*, new subspecies**

Figs. 12C, 12D, 14, 14a, 17F

Male: Length of forewing, 16 mm. Upperside: forewing dark brown, with a small

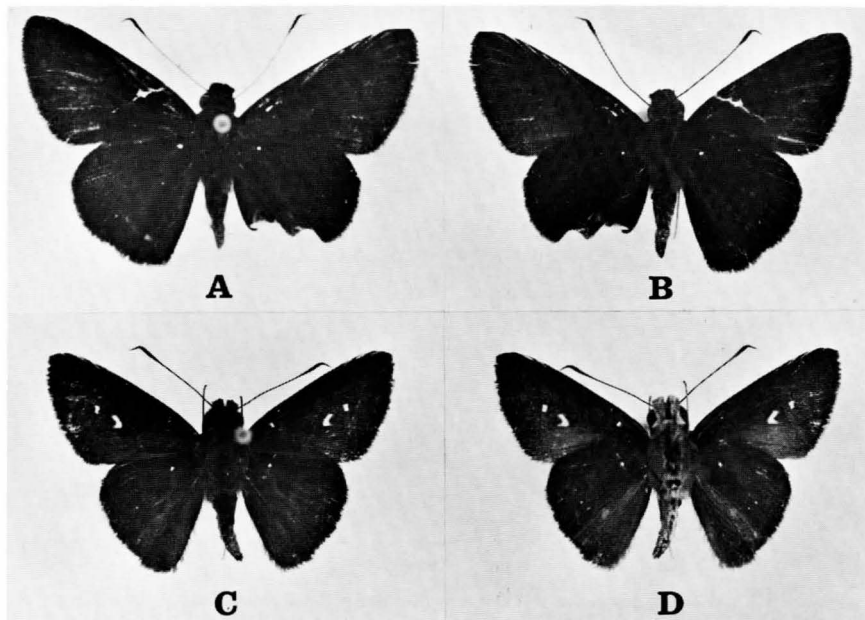


Figure 12. (A) *Enosis topo* Nicolay ♂ Holotype, Rio Topo, Tungurahua (1500 m) Ecuador, 8 September 1977, collector S. S. Nicolay. (B) underside of (A); (C) *Penicula criska jon* Nicolay ♂ Holotype, Cotundo, Napo (800 m) Ecuador, 17 December 1976, collector S. S. Nicolay.

white crescent-shaped, hyaline spot across space 2, a small square white spot in space 3; a small black, round brand below vein 2 and a tiny black dot above vein 1. Hindwing brown with a thick hair tuft arising from the base of the cell covering a large, oblong grey area at the base of veins 2 and 3. Underside of the forewing brown, paler along the inner margin, spots as on the upperside. Hindwing brown, with a faint yellowish spot in interspace 1c, tiny white dots in spaces 2, 3 and 5. Abdomen grey below, thoracic and leg clothing tinged with green; palpi with mixed black and grey scaling. Thorax, and head green above. Antennae black, with sparse grey scaling under the club.

Female: Unknown.

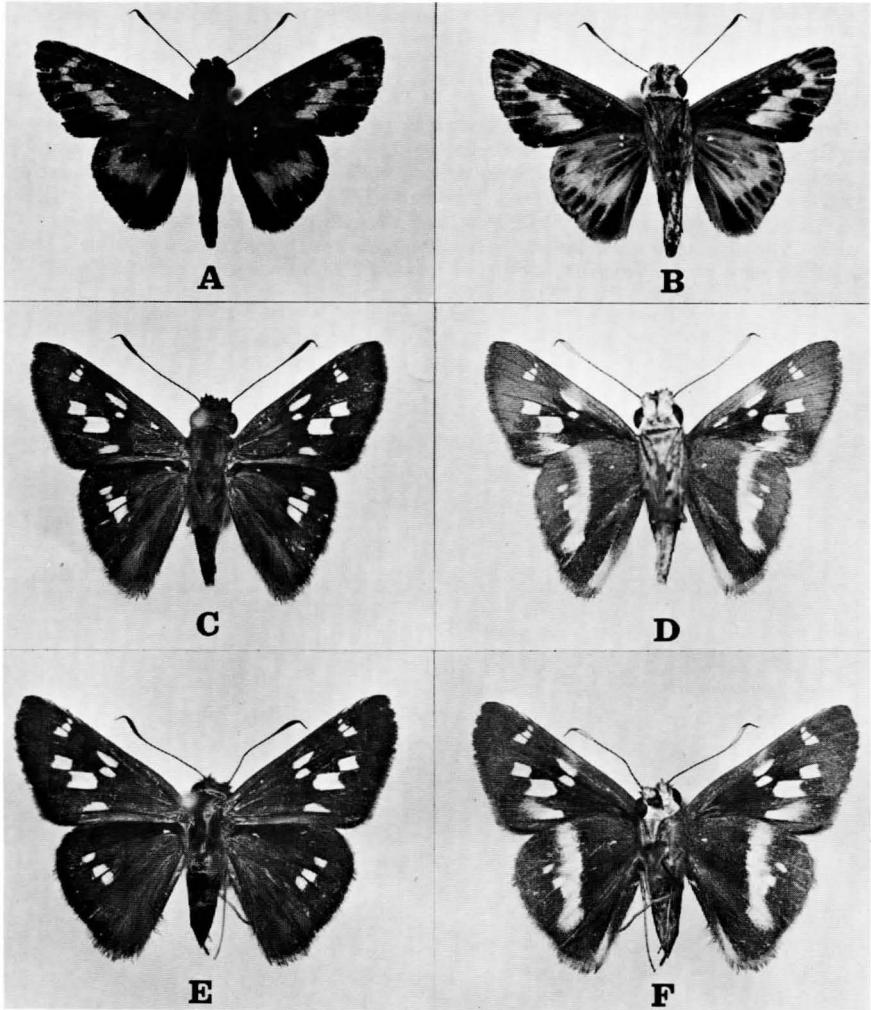
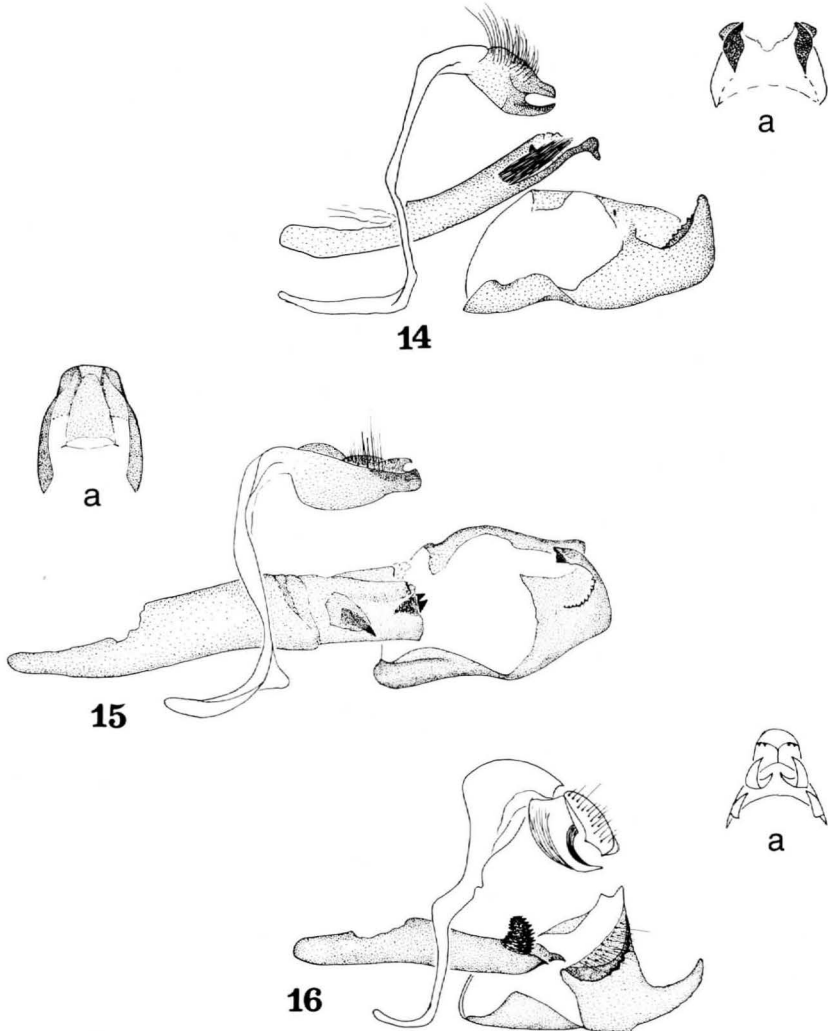


Figure 13. (A) *Hansa cotundo* Nicolay ♂ Holotype, Cotundo, Napo (800 m) Ecuador, 13 December 1976, collector S. S. Nicolay, (B) underside of (A); (C) *Niconiades tina* Nicolay ♂ Holotype, Alluriquin, Pichincha (700 m) Ecuador, 13 September 1976, collector S. S. Nicolay, (D) underside of (C); (E) *Niconiades tina*, allotype ♀, same locality and collector as male, 14 September 1976, (F) underside of (E).

Holotype male, Cotundo, Napo (800 m) Ecuador, 17 December 1976, collector S. S. Nicolay. The holotype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida.

The most obvious difference in the subspecies *jon* from nominate *criska* is the marked reduction in the hyaline spots on both fore- and hindwings. Evans' *criska* has rather large hyaline spots in spaces 2 and 3 on the forewing in addition to an upper and a lower cell spot and a sub-apical spot in space 6; there are three visible spots on the upper side of the hindwing. On the underside, the spotting of both wings is magnified and more ob-



Figures 14-16. ♂ genitalia of Neotropical Hesperidiidae (Hesperiinae): (14) *Penicula criska jon* Nicolay - lateral view, (a) ventral view of uncus; (15) *Hansa cotundo* Nicolay - lateral view, (a) ventral view of uncus; (16) *Niconiades tina* Nicolay - lateral view, (a) ventral view of uncus.

vious. By comparison, the subspecies *jon* is relatively unmarked.

Thus far, this subspecies is known only from the type locality on the lower eastern slope of the Ecuadorian cordillera. It is a pleasure to name this interesting subspecies after Jon Mionet, a young Ecuadorian friend and collecting companion whose home is near the type locality.

***Hansa cotundo*, new species**

Figs: 13A, 13B, 15, 15a, 17f

Male: Length of forewing, 14 mm. Upperside: forewing black with a tri-partite stigma-like band along the cubitus from the beginning of vein 3 to 2, a short rectangular band below vein 2, a small square band above vein 1 (Fig. 17B). A tawny macular discal band from 1b through 8, a small yellow lower cell spot and a discal streak of yellow scales and hairs in space 1a along the inner margin. Hindwing black with a wide tawny discal band from 1c thru 6; vein 1c yellow scaled almost to the outer margin. Underside: forewing dark brown, the yellow discal band of the upperside repeated in like manner, a lower cell spot and veins from the apex along the outer margin with sparse yellow scaling. Hindwing brown, veins with wide, heavy yellow scaling; a yellow post-discal band from 1c through 7.

Head, thorax and abdomen with mixed yellow and black hairs and scaling. Mid-tibia heavily spined; palpi with mixed yellow and black scales, the third segment conical, short. Abdomen cream-colored below with a narrow black central stripe. Antennae greater than one-half the costa, plain brown, the apiculus with 8 segments, the club with sparse yellow scaling below.

Female: Unknown.

Holotype male, Cotundo, Napo (800 m) Ecuador, 13 December 1976, collector S. S. Nicolay; a paratype male is from the same locality, 4 September 1977. The type will be deposited in the Allyn Museum of Entomology, Sarasota, Florida, the paratype remains in the author's collection.

Evans (1955) erected the genus *Hansa* to take two rather diverse species, *hyboma* Plotz and *devergens* Draudt, both having characters of maculation and male genitalia that separate both from the Evans' genera *Libra* and *Chalcone*. I have examined examples of both of these species. The Seitz (1922) figure of *devergens* is very similar to that of *cotundo*, but the male genitalia are markedly different and the markings on the wing underside will serve at once to differentiate the two species. The primary features of the male genitalia in *Hansa* are the heavy undivided gnathos — in *cotundo* the gnathos has two chitinous outer sections joined by a heavy membranous central section — and a very short, stout complex aedeagus. In *cotundo*, the aedeagus contains two chitinous spines near the tip.

An uncommon and extremely wary species, *cotundo* is found along wooded trails in rather heavily forested areas in the lower altitude mountains of the eastern Andean range in central Ecuador.

***Niconiades tina*, new species**

Figs. 13C, 13D, 13E, 13F, 16, 16a, 17G

Male: Length of forewing, 15 mm. Upperside: forewing dark brown with yellow scaling basally, along the costa and long yellow hairs along vein 1a and, to a lesser degree in 1b; with two small inconspicuous grey brands over and under vein 2 near its origin. A semihyaline yellow discal spot in 1b, hyaline pale yellow spots in 2, 3, apically in 6-8, the smallest, a dot in 8; two cell spots, the upper larger and longer than the lower, the latter placed at the inner edge of the upper cell spot. Hindwing dark brown, wing bases clothed with long yellow hairs, particularly heavy in 1b; the wing outer margin above the termen, convex. Pale yellowish hyaline discal spots in spaces 3 through 5, the smallest, a dot in space 4. Fringes pale. Underside: forewing black basally; along the costa and distally beyond the cell and discal spots above vein 3, greenish ochreous; below vein 3, brown. Spots of the upperside repeated in like manner with the spot in 1b

diffused toward the outer margin; heavy yellow scaling on the costal margin above the cell spot. Hindwing greenish-ochreous with a continuous, straight pale yellow band from the costa to 1c, expanded slightly inward at the termen. Hyaline discal spots on the upperside repeated, and are located within the outer edge of the band in spaces 2 and 3, outside the band in spaces 4 and 5. Space 1b black, a 5 mm terminal yellow streak in 1a. Fringes ochreous.

Head, top of palpi, collar and thorax clothed with shining green hairs and scaling. Antennae greater than one-half the costa, plain above, slightly checked below, yellow scaled under the club. Palpi with mixed yellow, black, white and green scales. Mid-tibia spined.

Female: Length of forewing, 16 mm. Upperside: forewing dark brown with pale yellow hyaline markings the same as in the male. Hindwing dark brown with 3 pale yellowish hyaline discal spots in spaces 2, 3 and 5; the outer margin above the termen, convex. Underside: Forewing greenish ochreous, black at the base, hyaline spots of the upperside repeated, the remaining features the same as in the male. Hindwing basally brown with a pale yellow straight discal band as in the male, but wider, the wing distally beyond the band, greenish-ochreous. All other features the same as in the male.

Holotype male, Alluriquin, Pichincha (700 m) Ecuador, 13 September 1976, collector S. S. Nicolay. Allotype female from the same locality, 14 September 1976. Paratypes: four males and one female, all from the same locality with dates of 13 September 1976, 14 March 1977 and 26 August 1977. The holotype will be deposited in the Allyn Museum of Entomology, Sarasota, Florida; the remaining paratypes and the allotype will remain in the author's collection.

Tina is somewhat similar to the species *gladys* Evans, both in the form of the male genitalia and the convex outer margin of the hindwing above the termen. The differences are in the basic color of the wings — black with white hyaline markings in *gladys* and ochreous brown with pale yellow markings in *tina*; the latter has small grey brands, *gladys* has black brands. General color and markings of *tina* are similar to those of *nikko* Hayward, but *tina* does not have the elongate hindwing with the concave outer margin above the termen of *nikko* and the male genitalia show marked differences, particularly in the form of the valvae.

I caught my first glimpse of this species in a sunlit clearing in the forest when it suddenly appeared out of nowhere to sit on a short shrub; it disappeared just as quickly as I started to move the net toward it. That first experience was repeated a number of times but with somewhat better success, resulting in the capture of the type series. *Tina*'s rapid flight is such that it can hardly be followed; it will appear on a leaf as if by magic, and once missed, offers no second chance. The males are not territorial as is the case of *N. viridis* Bell, nor does it appear to be bound to the shaded areas of heavy forest as is *xanthaphes* Hubner. *Tina* is found infrequently along the narrow roads or sunlit paths of the lower altitude rainforest on the western slope of the Andes, and thus far, is known only from the type locality.

It is a pleasure to name this interesting species in honor of Ernestina Garzon, a good friend and the gracious owner and hostess of Tinalandia, a beautiful and unusual resort located on the main road from Quito to Santo Domingo de los Colorados. Tinalandia is the type locality for the species, *Niconiades tina*.

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examine and study the collections in their care.

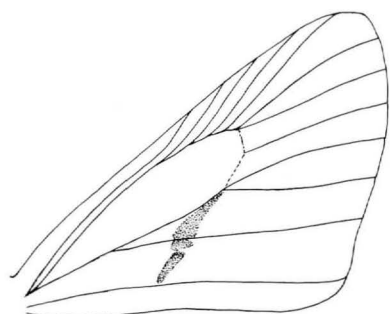
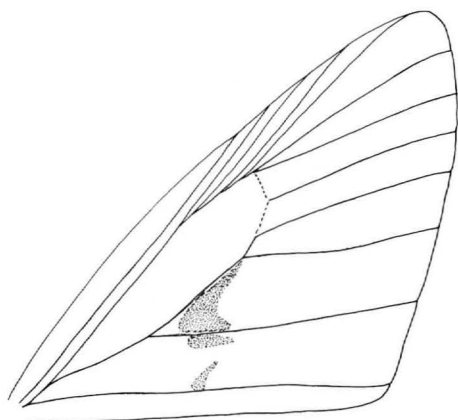
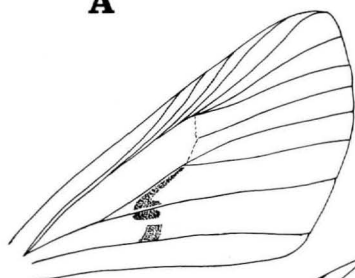
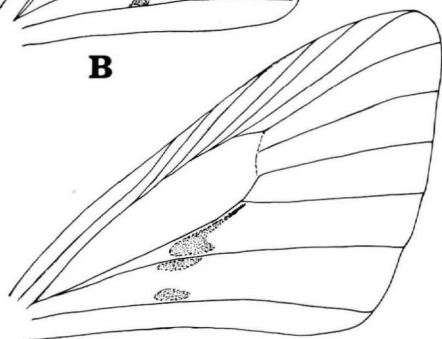
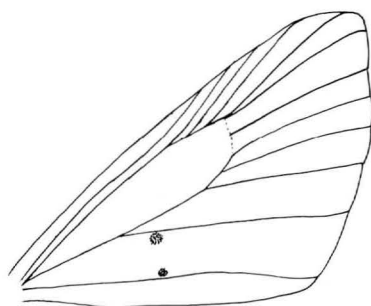
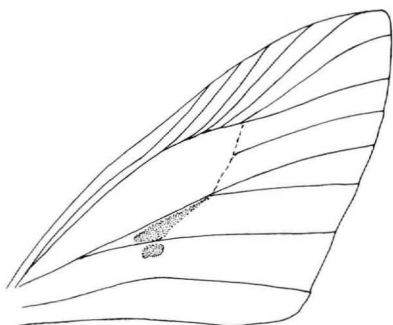
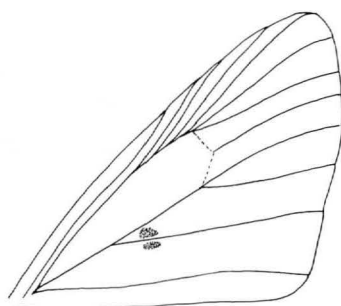
The Allyn Museum of Entomology under curators Dr. Lee D. Miller and his wife Jacqueline made its excellent collection available for study and full use of its unmatched scientific facilities in addition to providing needed technical help assistance. Mr. Arthur Allyn provided the photographs with his usual skill and technical competence. The line drawings were made by the author.

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Figure 17. Forewing ♂ stigmatal patterns: (A) *Psoralis concolor* Nicolay; (B) *Hansa cotundo* Nicolay; (C) *Enosis topo* Nicolay; (D) *Thoon maritza* Nicolay; (E) *Tisias carystoides* Nicolay; (F) *Penicula criska jon* Nicolay; (G) *Niconiades tina* Nicolay.

**A****E****B****C****F****D****G**

