

**Notes on the genus *Paraspiculatus***  
**(Insecta: Lepidoptera: Lycaenidae: Eumaeini)**  
**with a synopsis of the taxa occurring in southern Brazil**

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**Abstract**

The genus *Paraspiculatus* is redefined using female genital characters. The type species *Paraspiculatus colombiensis* JOHNSON & CONSTANTINO, 1997 is a new junior synonym of *Thecla orobia* HEWITSON, 1867. Two eumaeine lycaenids, *Paraspiculatus vossoroca* sp.n. (type locality: Brazil, Santa Catarina, Joinville) and *P. hannelore* sp.n. (type locality: Brazil, RS, Dois Irmãos, Picada Verão) are described. The taxon *Thecla catrea* HEWITSON, 1874 is transferred to *Paraspiculatus*, comb.n.

**Key words:** Neotropical Region, Brazil, Colombia, Rondônia, Lycaenidae, Eumaeini, *Brangas*, *Mithras*, *Paraspiculatus*.

**Zusammenfassung**

Die Gattung *Paraspiculatus* wird unter Verwendung weiblicher Genitalstrukturen neu definiert. Die Typus-Art *Paraspiculatus colombiensis* JOHNSON & CONSTANTINO, 1997 ist ein neues jüngeres Synonym von *Thecla orobia* HEWITSON, 1867. Zwei Lycaenidae (Eumaeini), *Paraspiculatus vossoroca* sp.n. (Typusfundort: Brasilien, Santa Catarina, Joinville) und *P. hannelore* sp.n. (Typusfundort: Brasilien, RS, Dois Irmãos, Picada Verão) werden beschrieben. Das taxon *Thecla catrea* HEWITSON, 1874 wird zu *Paraspiculatus*, comb.n., transferiert.

**Introduction**

The genus *Paraspiculatus* was recently erected by JOHNSON & CONSTANTINO (1997), with the new type species *Paraspiculatus colombiensis* JOHNSON & CONSTANTINO, 1997, to include three taxa previously described: *Thecla orobia* HEWITSON, 1867, *T. orobiana* HEWITSON, 1867 and *T. orocana* DRUCE, 1912. In the same paper a significant diversity of the genus in Rondônia, Brazil was also mentioned by the authors several times, but details were not given (JOHNSON & CONSTANTINO 1997: 1, 2, 6).

During extensive faunistic studies carried out by the junior author in the south Brazilian states of Rio Grande do Sul, Santa Catarina and Paraná (Fig. 1) over a period of more than two decades, the above mentioned taxa have not been recorded. However, an undescribed species related to *P. orobia* was found in the region. Additionally, another undescribed species, exhibiting supraliminal wing shape, was also discovered. The detailed study of these species revealed that the rarely encountered Brazilian *Thecla catrea* HEWITSON, 1874 also belongs to the *P. orobia*-like assemblage. Consequently, the genus

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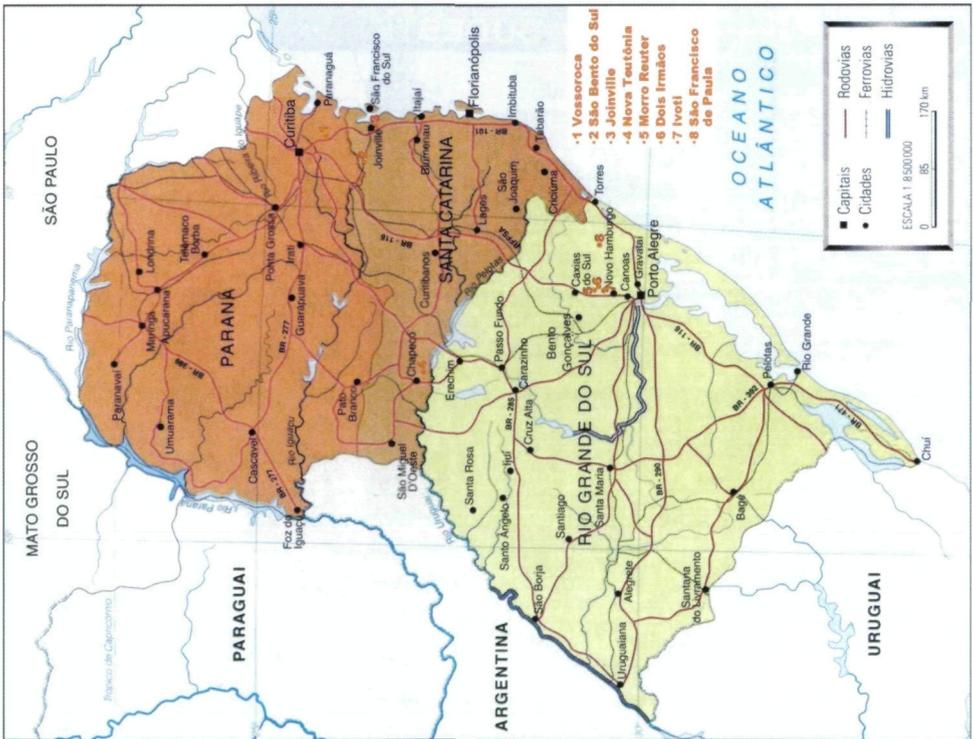
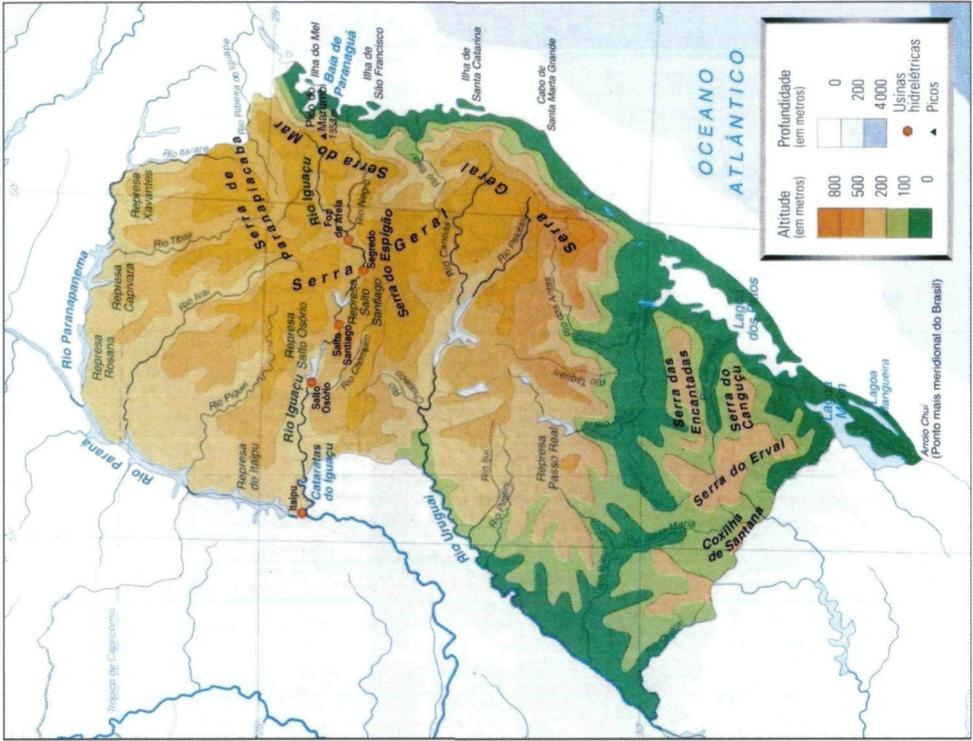


Fig. 1: The south Brazilian region showing the localities mentioned (compilation: A. Moser).

*Paraspiculatus* also has considerable diversity not only in the Amazon basin and adjacent regions including the Andes and Central America, but also in southern and southeastern Brazil.

Studying *Paraspiculatus* specimens, we have discovered that the character used by Johnson and Constantino as diagnostic is best described as situated on the tegumental part of the male genitalia rather than the vinculum as those authors stated and, as such, has been referred to previously in the literature as the "appendix angularis" (see Discussion).

In the present paper we (1) redefine the genus *Paraspiculatus*, (2) provide an identification key for the species placed in the genus, (3) present a synopsis of the species recorded from southern Brazil describing two new species and transferring one, *Thecla catrea*, to *Paraspiculatus*, and finally (4) discuss the identity of the type species of *Paraspiculatus*, the transfer of *catrea*, and the phylogenetic affinity of the genus.

Our results are based on the study of type material in the Natural History Museum, London, United Kingdom (BMNH), as well as additional material deposited in the Naturhistorisches Museum, Wien, Austria (NHMW), Universidade Federal do Paraná, Curitiba, Brazil (UFPR), Magyar Természettudományi Múzeum, Budapest, Hungary (MTM), and the collection of the junior author (MC). These materials are listed in detail. We also use the abbreviation "ICZN" for INTERNATIONAL COMMISSION OF ZOOLOGICAL NOMENCLATURE (1999) and refer therein to relevant articles. The capitalized colour names were taken from MAERZ & PAUL (1950).

### *Paraspiculatus* JOHNSON & CONSTANTINO, 1997

**Type species:** *Paraspiculatus colombiensis* JOHNSON & CONSTANTINO, 1997, by original designation, a junior subjective synonym of *Thecla orobia* (see Discussion) (Figs. 2, 3, 22, 23).

**Diagnosis:** Male: wings dorsally variously blue, androconial cluster lacking. Wings ventrally cryptic with median row of gold or white intercellular marks or spots (Figs. 2 - 3). Hind wing tailed or, if not, with conspicuous anal lobe. Genital brush organ absent, tegumen possessing appendix angularis, or, if reduced, occurring as sclerotized pad (Fig. 22).

Female: wings dorsally brown or silvery blue, ventrally identical to conspecific males. Genital ductus bursae divided into posterior and anterior elements of equal length by a transparent central juncture. Posterior plates of ductus bursae symmetrical. Anterior element of ductus bursae possessing a sclerotized process, cervix bursae also sclerotized and inclined anteriorly (Fig. 23).

**Diversity:** Previously including the species *P. orobia* (= type species *P. colombiensis*, see Discussion), plus the taxa *orobiana* and *orocana* placed in the genus by JOHNSON & CONSTANTINO (1997: 7). One male specimen of an other species from Peru was also recorded by D'ABRERA (1995: 1194, "T.? sp.") but remained hitherto unnamed. The occurrence of more unnamed species in western Brazil is also reported (JOHNSON & CONSTANTINO 1997: 1). The present paper describes southeast Brazilian species and transfers the species *catrea* from *Thecla*.

**Distribution:** Central America and South America (from Amazon Basin and adjacent area of eastern Andes from Bolivia via Paraguay to southern Brazil).

**Phylogenetic affinity:** The genus belongs to a group of Eumaeini genera possessing female genitalia with sclerotized ductus bursae divided by a transparent area into ante-



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Figs. 2 - 3: *Paraspiculatus orobia*: male, SO Peru, Puerto Maldonado, NHMW, coll. König, no. 259 (FW length: 16 mm): (2) dorsum, (3) ventrum (photos: A. Kun).

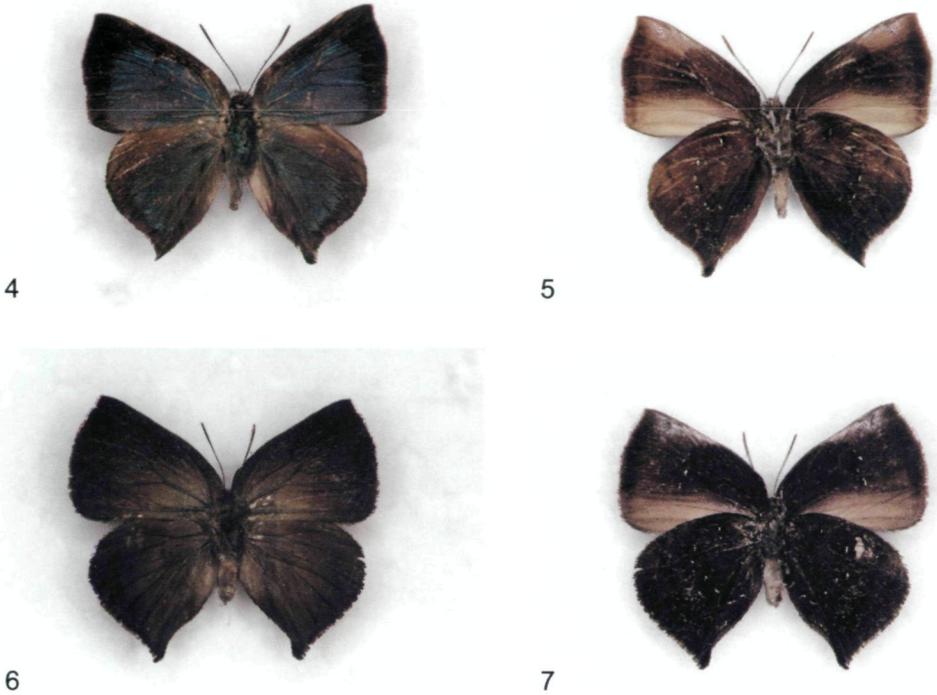
rior and posterior parts, and with corpus bursae with a sclerotized pouch beneath the ductus seminalis. We have found similar configurations in the genera *Mithras* HÜBNER, [1819] (type species: *Papilio nautes* CRAMER, [1779]) and *Brangas* HÜBNER, [1819] (type species: *Papilio caranus* STOLL, [1780]).

**Unique character state:** The degree of sclerotization and the shape of the dorsal posterior pouch beneath the ductus seminalis characterizes *Paraspiculatus*.

**Biology:** To our knowledge there is no published record dealing with the biology of any species of the genus.

### Wing character key to the species of *Paraspiculatus*

- |   |  |                           |
|---|--|---------------------------|
| 1 | Hind wing vein CuA2 not tailed. ....   | 2                         |
| - | Hind wing vein CuA2 tailed. ....   | 3                         |
| 2 | Distance between hind wing base and anal margin tip longer than fore wing vein 1A+2A. (S Brazil). ....     | <i>P. vossoroca</i> sp.n. |
| - | Distance between hind wing base and anal margin tip equal with fore wing vein 1A+2A length. (E Peru). .... | <i>P. orocana</i>         |
| 3 | Underside of hind wing with ruptive intercellular white median markings. (SE to S Brazil). ....            | <i>P. catrea</i>          |
| - | Underside of hind wing with intercellular gleaming median spots. ....                                      | 4                         |
| 4 | Underside of fore wing with median spots lineally arranged (Panama to Paraguay). ....                      | <i>P. orobia</i>          |
| - | Underside of fore wing with median spots not lineally arranged. ....                                       | 5                         |
| 5 | Underside of fore wing with median spots large and contiguous. (E Peru). ....                              | <i>P. sp.</i>             |
| - | Underside of fore wing with median spots small and distinct. ....  | 6                         |
| 6 | Underside of hind wing with white subapical spot. (Bolivia, SW Brazil). ....                               | <i>P. orobiana</i>        |
| - | Underside of hind wing without white subapical spot. (S Brazil). ....                                      | <i>P. hannelore</i> sp.n. |



Figs. 4 - 7: *Paraspiculatus vossoroca*: (4) dorsum and (5) ventrum of holotype; (6) dorsum and (7) ventrum of allotype (photos: A. Moser).

### Synopsis of the species of *Paraspiculatus* occurring in South Brazil

#### *Paraspiculatus vossoroca* sp.n. (Figs. 4 - 7, 16, 17)

**Type material:** **Holotype** male (deposited in UFPR), Brazil, Santa Catarina, Joinville, 200 m, I.1969, leg. Miers (gen. prep. Bálint, no. 959). **Paratypes:** 1 female (allotype, deposited in MC), Brazil, Paraná, Tijucas do Sul, Vossoroca, 900 m, 4.-13.I.1976, leg. Moser (gen. prep. Bálint, no. 960); 1 female (deposited in UFPR, sp. DZ 3548), Brazil, Santa Catarina, Joinville, 200 m, 20.II.1977, leg. Mielke & Miers.

**Diagnosis:** Similar to sympatric congeners but unique in having hind wings not tailed at vein CuA2 and tornal lobe conspicuously long and pointed. The allopatric species *P. orocana* is similarly untailed at vein CuA2 but without conspicuous hind wing tornal lobe.

**Description:** Male: Wings. Fore wing length measured from base to apex 17.5 mm (holotype). Dorsal ground colour Imperial Blue with wide (3 mm) black border on both wings. No androconial marks on either wing. Ventral ground colour Chestnut Brown. Fore wing postdiscal and subapical areas white in cells R2-3, median area with gleaming spot in cells M1-CuA1. Hind wing tornal area conspicuously lobed, pointed, median area with gleaming spot in cells Sc+R1 and 1A+2A. Postmedian areas with dark, inconspicuous waved band. Genitalia typical eumaeine without brush organ, appendix angularis large and tailed.

Female: Wings. Forewing length measured from base to apex 17.0 mm (n = 2). Dorsal ground colour Chocolate Brown, basally somewhat lighter with bronze shade. Ventrally similar to male, but darker. Genitalia typical to the genus with relatively slender posterior part of ductus bursae (length / width = 5 / 1).

**Distribution:** Geographical: Known from two localities in the south Brazilian Atlantic coastal forest, the Brazilian states Paraná and Santa Catarina, respectively. Temporal: The type specimens were collected in January and February. Spatial: Known from elevations at 200 m and 900 m.

**Type locality:** Brazil, Santa Catarina, Joinville, 200 m.

**Etymology:** The species is named after one of the localities.

### *Paraspiculatus hannelore* sp.n. (Figs. 8 - 11, 18, 19)

**Type material:** **Holotype** male (deposited in UFPR): Brazil, RS, Dois Irmãos, Picada Verão, 350 m, 22.III.1992, leg. Moser. **Paratypes:** male (MC): Rio Grande do Sul, Ivoti 200 m, 28.XII.1994, leg. Moser; male (MC): Rio Grande do Sul, São Francisco de Paula, 900 m, 1.V.1993, leg. Moser; male (MTM): Santa Catarina, São Bento do Sul, Serra Rio Natal, 600 m, 20.IV.2000, leg. Rank & Moser (gen. prep. Bálint, no. 961); (allotype) female (MC): Santa Catarina, Joinville, 200 m, 20.I.1992, leg. Moser. Following UFPR specimens, hitherto curated as "Thecla nr orobia 1" according to the curatorial work of Robert K. Robbins, are designated as paratypes: male: Santa Catarina, Seara, Nova Teutonia, II.1969, leg. Plaumann; male: Santa Catarina, Joinville, 200 m, 15.VII.1973, leg. Miers (gen. prep. Bálint no. 972); male: Santa Catarina, São Bento do Sul, 1.V.1973, 800 m, leg. I. Rank; two females: Santa Catarina, Seara, Nova Teutonia, leg. Plaumann, 1.XII.1952 and 2.II.1954 (with the additional label: gen prep. Bálint no. 973).

**Diagnosis:** Similar to sympatric *P. catrea* but the median markings of underside of the hind wing are gleaming spots, not white ruptured lines. Also similar to the allopatric *P. orobiana*, but underside of hind wing without subapical white spot.

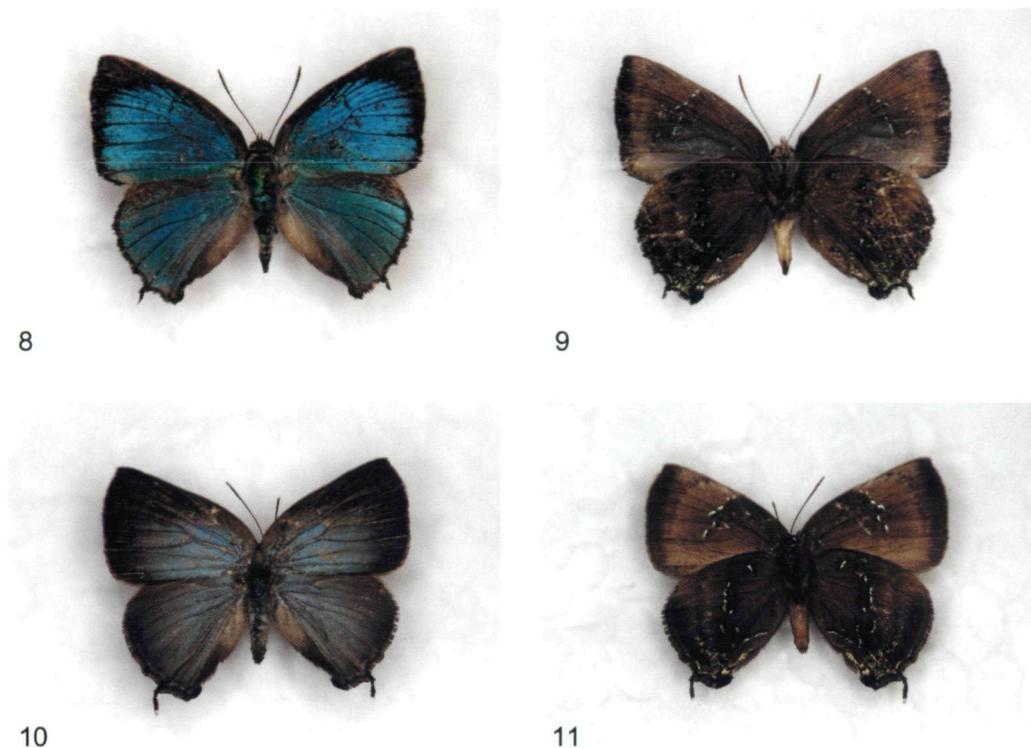
**Description:** Male: Wings. Fore wing length measured from base to apex 19.0 mm (holotype), 17.5 - 19.0 (paratypes, n = 2). Dorsal ground colour gleaming Sapphir Blue, with 1 mm black border extending towards the apex. Hind wing vein CuA2 tailed. No androconial marks on either wing. Ventral ground colour Castor Brown, fore wing postdiscal and subapical areas also brown but somewhat lighter. Submedian area with gleaming cell spot in each cell arranged in an interrupted line. Genitalia typical eumaeine without brush organ, appendix angularis missing but the sclerotized pad present.

Female: Wings. Fore wing length measured from base to apex 17.5 mm (allotype). Dorsal ground colour Peking Blue with very wide (4 mm) black border. Ventrally similar to male, but median and submedian area lighter. Genitalia typical to the genus with relatively wide posterior part of ductus bursae (length / width = 5 / 1.5).

**Distribution:** Geographical: Known from various localities of Brazilian states Santa Catarina, and Rio Grande do Sul. Temporal: The specimens were collected in January, February, April, May, July, and December. Spatial: Known from elevations at 200 - 900 m in the mountain region of the Atlantic coastal forest.

**Type locality:** Brazil, RS, Dois Irmãos, Picada Verão, 350 m.

**Etymology:** The species is named after the wife of the junior author.



Figs. 8 - 11: *Paraspiculatus hannelore*: (8) dorsum and (9) ventrum of holotype; (10) dorsum and (11) ventrum of allotype (photos: A. Moser).

***Paraspiculatus catrea* (HEWITSON, 1874), comb. n.** (Figs. 12 - 15, 20, 21)

*Thecla catrea*, HEWITSON. - HEWITSON 1874: 181, pl. 81, figs. 545 (male dorsum), 546 (female ventrum).

*Th[ecla](Loxurina-Gruppe) catrea* HEW. - DRAUDT 1919: 758, figs. pl. 150g: "catrea U" and "catrea".

*Thecla catrea* HEWITSON, 1874. - D'ABRERA 1995: 1142, figs. p. 1143: "T. catrea ♂ R" and "T. catrea ♀ V" (lectotype designation, see Discussion).

**Type material:** **Lectotype** male (see Discussion), BMNH(E)# 266588, Brazil: Brazil., Hewitson Coll., 79-69., *Thecla*, *catrea* Hew, (1), [label underside] Braz. \ Type \ B. M. Type, No. Rh. 601. \ B. M. (N. H.), Rhopalocera, V. No., 3508 \ Lecto-, type \ Lectotype, *Thecla*, *catrea* H., [label underside:] det. by, Zs. Bálint, 14. IX. '98.; female **paralectotype** (see Discussion), BMNH (E)# 266589, Brazil: Hewitson Coll., 79-69., *Thecla*, *catrea* Hew, (2) \ Type \ Para\, lecto-, type \ Paralectotype, *T. catrea*, Hew., [label underside:] det. by, Zs. Bálint, 14. IX. '98.

**Additional material examined:** MC material: male: Rio Grande do Sul, S. Francisco d. P., 900 m, 3.VI.1991; male: Rio Grande do Sul, Sta. Maria, Rio Cadeia, 300 m, 24.IX.1994; male: Rio Grande do Sul, Morro Reuter, 500 m, 28.12.1996; male: Rio Grande do Sul, Ivoti, 200 m, 27.XII.1998, leg. Moser; female: Santa Catarina, Serra do Faixinal, Praia Grande, 600 m, 20.XI.1994, leg. Moser; female: Santa Catarina, São Bento do Sul, Rio Vermelho, 800 m, 16.II.1993, leg. I. Rank. NHMW material: male: Brazil, Rio Grande do Sul, don. Dr. Kolar (Bálint gen. prep. no. 962). UFPR material: male: Santa Catarina, Nova Teutonia, leg. Plaumann; male: Santa Catarina, São Bento do Sul, 31.I.1982, 850 m, leg. Rank (Bálint gen. prep. no. 968); male: Santa Catarina, Corupa, Baumann; male: São Paulo, Umuarama, 1800 m, leg. Gagarin; male: Rio de Janeiro, Independência, 900 m, leg. Gagarin; male: Paraná, Curitiba, leg. Mielke; female: Paraná, Guarapuava, leg. Mielke and Casagrande; two females: Paraná, Ponta Grossa, IV.1959, leg. Justus Jor (one specimen dissected: Bálint gen. prep. no. 969).



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Figs. 12 - 15: *Paraspiculatus catrea*: (12 - 13) male: S Brazil, Rio Grande do Sul, Ivoti, MC (FW length: 16 mm), (12) dorsum and (13) ventrum. (14 - 15) female: SE Brazil, Santa Catarina, Praia Grande, Serra do Faxinal, MC (FW length: 16 mm), (14) dorsum and (15) ventrum (photos: A. Moser).

**Diagnosis:** The species is similar to the sympatric species *P. hannelore*, but the male fore wings dorsally have more extensive apical black scaling and wider marginal border, the white submedian spots in the hind wings of both sexes are white. Male genital appendix angularis is slightly sclerotized, the posterior part of ductus bursae of the female genitalia is robust (length / width = 4.5 / 1.3).

**Distribution:** Geographical: Known from southeastern Brazilian states, from Rio de Janeiro to Rio Grande do Sul. Temporal: Specimens were taken in January, February, March, April, June, September, November, and December. Spatial: Known from elevations at 200 m to 1800 m.

**Type locality:** Brazil.

### Discussion

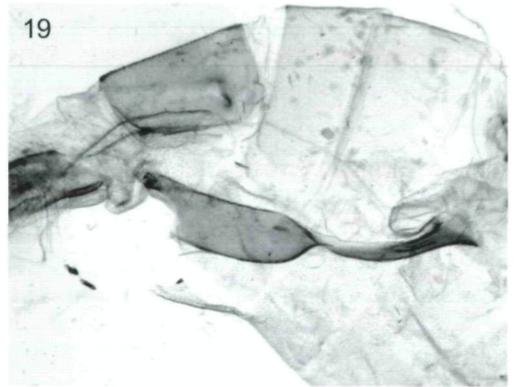
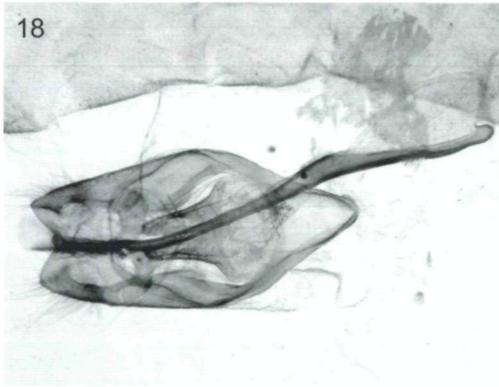
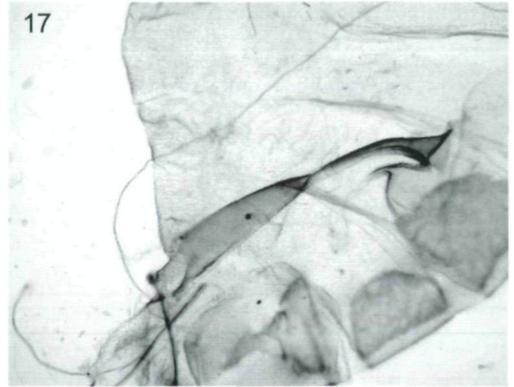
**Type species of *Paraspiculatus*.** The taxon *Paraspiculatus colombiensis*, the type species of *Paraspiculatus*, was described on the basis of a single male holotype (deposited in the American Museum of Natural History, New York, USA) from Colombia by JOHNSON & CONSTANTINO (1997: 1, figs. 1A [male genitalia of *P. colombiensis*], 1B

[female genitalia of "typical undescribed congener"], plate IX/A [dorsal and ventral view of the holotype]). The similarity of the previously described taxon *Thecla orobia* was already mentioned by the describers of *P. colombiensis* (JOHNSON & CONSTANTINO 1997: 4).

The taxon *orobia* was described as a species of *Thecla* from an unstated number of male and female specimens from "Amazon", Brazil. Later, DRAUDT (1919: 784) recorded *orobia* from Panama, Colombia, Venezuela, Amazonas, and Bolivia. According to D'ABRERA (1995: 1194) the distribution of the species is "Honduras to Amazonas". D'Abbrera also mentioned that "the type" is similar to the specimen from the Amazonas he figured. In the BMNH collection there are two specimens, one male and one female, which originate from the Hewitson collection, and we have examined them. These specimens can be considered with certainty as syntypes of *Thecla orobia*. These specimens were not illustrated in the book of d'Abbrera. Subsequently the male syntype specimen was listed by JOHNSON & CONSTANTINO (1997: 7) as the "type" of *Thecla orobia*; consequently it is a valid lectotype designation according to the ICZN Art. 74.5., and the female is a paralectotype (ICZN Arts. 73.2.2. and 74.1.3). The species is widely distributed in the Amazon Basin and the adjacent regions.

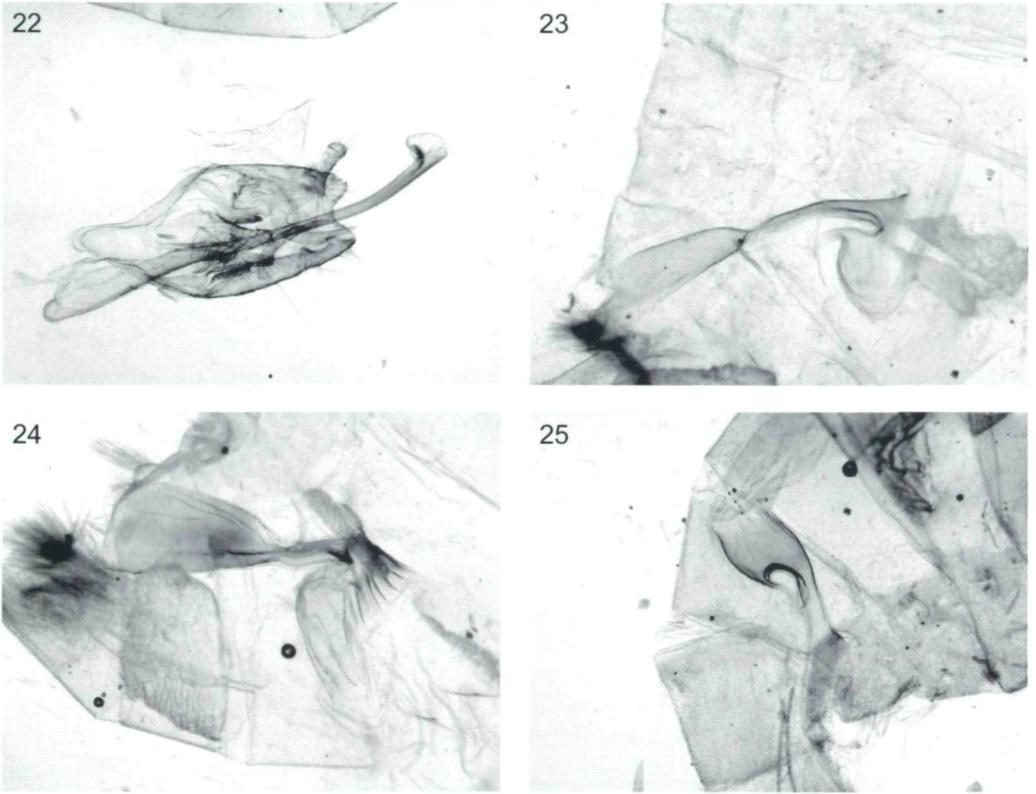
On the basis of critical reading of CONSTANTINO & JOHNSON (1997) and comparing the figures accompanied the paper with the type material of *Thecla orobia*, we consider *P. orobia* and *P. colombiensis* as subjective synonyms because (1) the dorsal ground colour and the ventral markings of the wings of *P. orobia* widely varies over the vast geographic range of the species; therefore the "much darker dorsum, deep blackish iridescent azure" cannot be diagnostic for *P. colombiensis* because of this continuous variation; (2) the forewing lengths of six NHMW and one MTM *Paraspiculatus* specimens we measured vary between 14.5 and 16.5 mm; therefore, *P. colombiensis* is certainly not "larger than most congeners (FW alar 16.0 mm)" but shows a measurement well within the variety; (3) the caudal extension of the male valvae has no diagnostic value, because it is identical amongst the specimens of *P. orobia* we have examined and compared with *P. colombiensis* (cf. Fig. 22, and JOHNSON & CONSTANTINO 1997: fig. 2, plus genital dissections listed in material examined below); and finally (4) the "spiculate pad" which seems to be a good specific character (see below), is also identical in *P. colombiensis* and *P. orobia*. Consequently: *Thecla orobia* HEWITSON, 1867 = *Paraspiculatus colombiensis* JOHNSON & CONSTANTINO, 1997, **syn. n.**

**Transferring the species *Thecla catrea* to *Paraspiculatus*.** The species was described from an unstated number of male and female specimens from Brazil and placed in *Thecla*, a genus which does not belong to the tribe Eumaeini (ELIOT 1973: 429, 430; 439, 440). Later DRAUDT (1919: 758) placed it to his "Loxurina-Gruppe" and mentioned the species as occurring in "Brasilien (Rio Grande do Sul)". The species was not mentioned in the paper of JOHNSON (1992) neither as a member of the *T. loxurina*-group nor as a species of any of the various outgroup genera, although Johnson (pers. com.) has examined and dissected specimens in the BMNH. Later D'ABRERA (1995: 1142) placed the species in the genus "Thecla Auctt." and figured one of the male syntype as holotype, thereby unintentionally designating the specimen as lectotype (ICZN Art. 74.5). The female is a paralectotype (see ICZN Arts. 73.2.2. and 74.1.3). We transfer the species to the genus *Paraspiculatus*, resulting the new combination *Paraspiculatus catrea* (HEWITSON, 1874), based on the female genitalia characters we described above (see Fig. 21).



Figs. 16 - 21: Genital structures of: *Paraspiculatus vossoroca*: (16) male, holotype (gen. prep. Bálint, no. 959) and (17) female, allotype (gen. prep. Bálint, no. 960); *P. hannelore*: (18) male paratype (gen. prep. Bálint, no. 961) and (19) female paratype (gen. prep. Bálint, no. 973); *P. catrea*: (20) male (gen. prep. Bálint, no. 962) and (21) female (gen. prep. Bálint, no. 969) (photos: Z. Bálint).

**Unique character state and phylogenetic placement of *Paraspiculatus*.** The erection of the genus was based on the suggested unique morphology: "Male genitalia differ from all Eumaeini by having a prominent spiculate pad on the lateral edge of the vinculum".



Figs. 22 - 25: Genital structures of: *P. orobia*: (22) male (gen. prep. Bálint, no. 964) and (23) female (gen. prep. Bálint, BMNH 5758); *Mithras nautes*: (24) female (gen. prep. Bálint, BMNH 5760); *Brangas silumena*: (25) (gen. prep. Bálint, BMNH 5794) (photos: Z. Bálint).

This character is identical with the structure figured as "appendix angularis" by SCOTT (1990: fig. 4/15) or as "ventral process of tegumen" by ROBBINS (1991: fig. 43). The presence of appendix angularis varies interspecifically in *Rekoa* (cf. ROBBINS 1991: table 1). The state of this character is also variable within the genus *Paraspiculatus*, but seems to be a good character on species level: the ventral process of the tegumen is a sclerotized "spiculate pad" in *P. orobia* (Fig. 19), a real appendage in *P. vossoroca* (Fig. 16) but weakly developed in *P. hannelore* (Fig. 18), and missing in *P. catrea* (Fig. 20). Johnson and Austin (pers. com.) inform us that each of the unnamed species they have studied from Rondônia has, along with other peculiar wing and morphological characters, a distinct condition of the "spiculate pad". Given our additional characters for the genus it is therefore possible that further unnamed Rondônian species exist.

The male genitalia of Eumaeni are in many ways generally homogeneous, and it is, therefore, sometimes very difficult to find obvious characters relevant for higher classification. This fact is reflected by the grouping of Eliot, who lumped almost seventy generic names into three entities (ELIOT 1973: 439 - 441) all of which turned out to be non-monophyletic (see ROBBINS 1986, 1991). We believe that the female genital organs

provide an abundant source for characters, informative for both generic and/or intra-generic groupings in the tribe.

We have examined female genitalia samples of Eumaeini in the BMNH (vial nos 5753-5903 by Bálint, plus dissections previously prepared by various workers) and MTM (Bálint gen. prep. nos 650 - 656, 734 - 739, 742, 804 - 809, 845 - 847, 860 - 879, 885 - 894, 900 - 917 and 959 - 973). We found that a similarly formed cervix bursae occurs in *Brangas* and *Mithras*. The anterior part of the *Mithras* bursa is bordered (*Mithras nautes*, Fig. 24), the wing pattern of the species also differs strikingly. Therefore, we consider *Mithras* as a distinct genus. *Brangas* also suggests affinity but its sclerotized pouch on the anterior ductus bursae is significantly larger and the wing pattern and shape of the species also differ markedly (*Brangas silumena* (HEWITSON, 1867), Fig. 25). We thus consider *Brangas* also as a separate genus. The superficially similar genus *Denivia* JOHNSON, 1992 (type species: *Thecla deniva* HEWITSON, 1874) also possesses a female genital ductus divided into anterior and posterior elements but its cervix is very different in shape. Accordingly, we consider *Denivia* as a distinct genus too, although it is at present a paraphyletic assemblage warranting further intensive study.

It should be emphasized that, in a simplistic view, the ductus bursae in the Eumaeini might be considered generally uniform. However, various discrete configurations of the structure occur within the tribe, and many of these display unique additional components as well. These cases, as in the genus *Paraspiculatus*, suggest it is possible to utilize the female genitalia to distinguish monophyletic groups among the Eumaeini and that the distinction of these groups is taxonomically useful, transcending the misleading tradition of applying the omnibus name "Thecla" (or, alternatively, several other old names) to all Neotropical hairstreaks and beginning the process of recognizing the natural system of the tribe.

## Material examined for comparison:

### *Paraspiculatus orobia* (HEWITSON, 1867)

BMNH **type material**: **Lectotype** male (unintendedly designated by JOHNSON & CONSTANTINO (1997: 7); ICZN Art. 74.5), BMNH(E)# 266789, Brazil: Amazon., Hewitson Coll., 79-69., *Thecla*, *orobia*, 2., [ventral side] Amaz. \ ♂, *Thecla*, Type, *orobia*, Hew. \ B. M. Type, No. Rh. 797. \ B. M. (N. H.), *Rhopalocera*, Vial no. 4737. **Paralectotype**, female, BMNH(E)# 266790, Brazil: Amazon., Hewitson Coll., 79-69., *Thecla*, *orobia*, 1., [ventral side] Amaz. \ ♀, *Thecla*, Type, *orobia*, Hew.

UFPR material: curated as "*Thecla nr orobia 2*": two males, Brazil, Amazonas, Manés, coll. Gagarin; female, Pará, Obidos, ex coll. Gagarin; Curated as "*Thecla nr orobia 3*"; three males, Brazil, Mato Grosso, Alto Rio Arinos, leg. Mielke and Furtado; male, Bolivia, Sta; Cruz. Curated as "*Thecla nr orobia 4*"; male: Paraguay, Itaquiri, leg. Mielke and Miers.

MC material: male, Peru, Depto. Amazonas, Rodriguez de Mendoza, XII.1998, Moser; male, Brazil, Rondônia, 6.-16.VIII.1998, leg. Furtado and Moser leg.; female, Brazil, Matto Grosso, Nobres, Serra do Tombador, 26.IX.1995, leg. Furtado and Moser.

NHMW material: male, N. Peru, Iquitos, I.1984, leg. König, coll. König no. 257 (Bálint gen. prep. no. 963); male, S.O. Peru, 200 m, Puerto Maldonado, XI.1986, leg. König, coll. König no. 255 (Bálint gen. prep. No. 964); male, same locality, 5.XI.1973, leg. König., coll. König no. 259 (Bálint gen. prep. no. 965); male, M. Peru, Chanchamayo, VI.1951, leg. König, coll. König no. 256 (Bálint gen. prep. no. 966).

***Paraspiculatus orobiana* (HEWITSON, 1867)**

**BMNH type material:** **Lectotype** male (unintendedly designated by JOHNSON & CONSTANTINO (1997: 7); ICZN Art. 74.5), BMNH(E)# 266791, Brazil: ♂ Ega \ Ega, U. Amazons., H. W. Bates. \ ♂ \ Godman-Salvin, Coll. 1911.-93. \ orobiana., orobiana, Hewts type \ Type \ B. M. Type, No, Rh. 798. \ B. M. (N. H.), Rhopalocera, Vial no. 4738.

NHMW material: male, M. Peru, Chanchamayo, XI.1965, leg. König, coll. König no. 260 (Bálint gen. prep. no. 967).

***Paraspiculatus orocana* (DRUCE, 1912)**

**BMNH type material:** **Holotype**, male (figured by D'ABRERA (1995: 1195) as holotype "T. orocana ♂ R" and "T. orocana ♂ V"): BMNH(E)# 266792, Peru: El Porvenir, E. Peru, 900 m, Oct '09 \ Thecla ♂, orocana, Type, H. H. Druce \ ex coll., Hamilton Druce, 1912. \ Joicey Coll., B. M. 1929-435. \ Type \ B. M. Type, No. Rh. 799. \ B. M. (N. H.), Rhopalocera, Vial no. 4739.

***Paraspiculatus* sp. (undescribed species)**

**BMNH material:** Male (figured by D'ABREA (1995: 1195) as "T. ? sp. ♂ R" and "T. ? ♂ V"), BMNH(E)# 266793, Peru: Cushi, Prov. Huanuco, Peru, 1900 m, (W. Hoffmanns) \ Rothschild, Bequest, B. M. 1939-I. \ B. M. (N. H.), Rhopalocera, Vial no. 4740.

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