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Two new species of the genus *Paraselenis* SPAETH, 1913 (Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. *Paraselenis nigropunctata* n. sp. from Bolivia and *Paraselenis flavopunctata* n. sp. from Argentina and Brazil are described. Both belong to the subgenus *Spaethiechoma* HINCKS, 1950, a group of species with coarse punctures on elytral marginalia. *Paraselenis (Spaethiechoma) amplicollis* (SPAETH, 1907) is synonymised with *P. (S.) scapulosa* (BOHEMAN, 1854). Key to the species of the subgenus *Spaethiechoma* is given.

Key words: entomology, taxonomy, new species, new synonymy, Coleoptera, Chrysomelidae, Cassidinae, Stolaini, *Paraselenis*, Bolivia.

The genus *Paraselenis* comprises hitherto 27 species divided into three subgenera, 24 of which belong to the subgenus *Spaethiechoma* HINCKS, 1950. They are distributed in tropical South America, only one species extends its northern range to the Central America north to Costa Rica (BOROWIEC 1999, BOROWIEC and ŚWIĘTOJAŃSKA 2002). In the material studied recently I found specimens of two new species of the subgenus *Spaethiechoma* HINCKS, 1950. Their descriptions are given below. Having studied two syntypes of *Paraselenis (Spaethiechoma) amplicollis* (SPAETH, 1907) preserved in the Manchester Museum (Manchester, England) and holotype of *P. (S.) scapulosa* (BOHEMAN, 1854) preserved in the Zoologisches Museum, Humboldt Universität (Berlin, Germany), I concluded that both taxa were conspecific (**new synonymy**). Because members of the subgenus *Spaethiechoma* HINCKS, 1950 have never been keyed, a key to the species is given.

***Paraselenis nigropunctata* n. sp.**

ETYMOLOGY

Named after black puncturation of elytral marginalia.

DIAGNOSIS

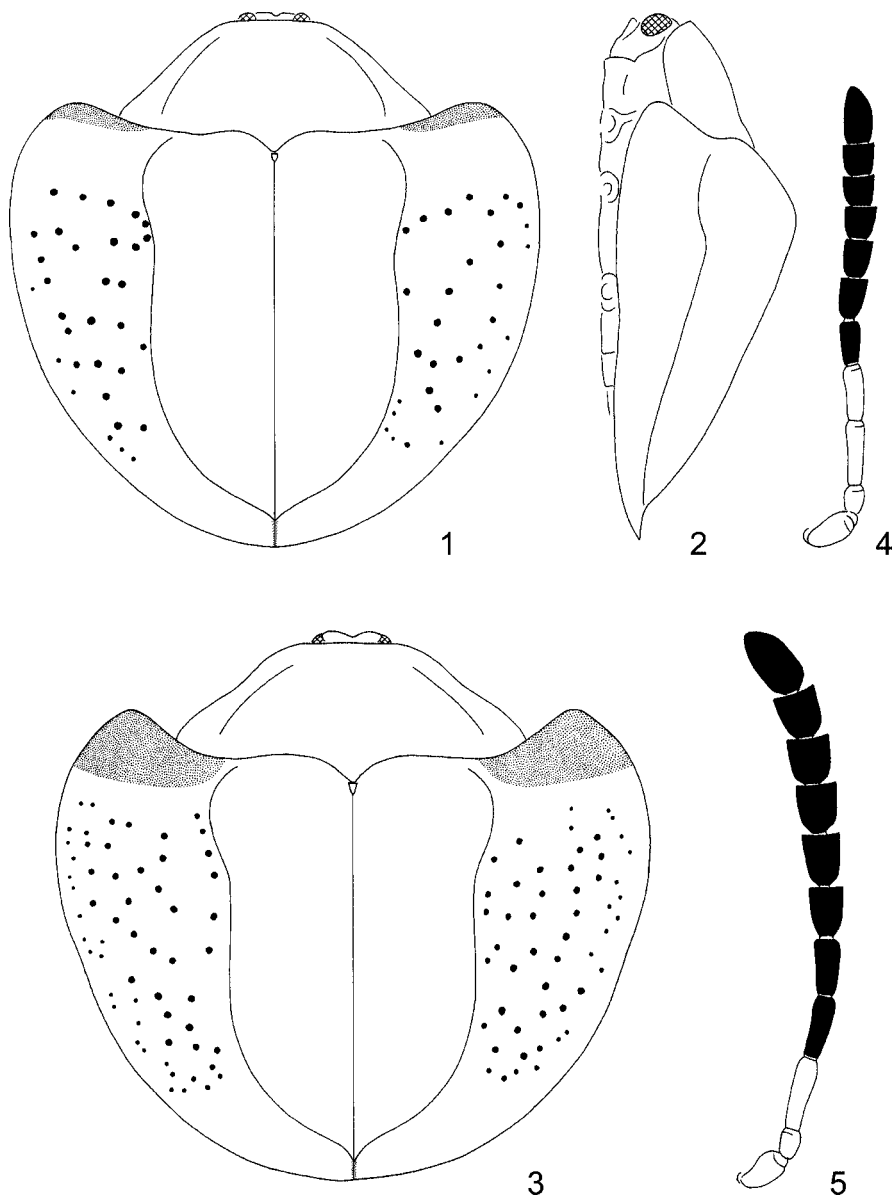
Only *Paraselenis nigropunctata* n. sp., *P. flavopunctata* n. sp., *P. collata* (BOHEMAN, 1854), *P. nupta* (BOHEMAN, 1854), and *P. transversalis* (BOHEMAN, 1854) have elytral marginalia with coarse puncturation, often brown or black. *P. nigropunctata* and *P. flavopunctata* distinctly differ from the three related species in pronotum and elytra of the same yellowish colour, while in *P. collata*, *P. nupta* and *P. transversalis* pronotum is distinctly darker than the yellow elytra, reddish-brown to brown. *P. flavopunctata* differs in coarse puncturation on marginalia not marked with black (black in *P. nigropunctata*), uniformly reddish antennae (black apically in *P. nigropunctata*) and the presence of a reddish scutellar spot (absent in *P. nigropunctata*). *P. collata* differs also in reddish elytral suture and reddish coarse punctures on marginalia (yellow suture and black punctures in *P. nigropunctata*). *P. nupta* differs also in large reddish-brown scutellar spot and small reddish-brown sutural apical spot (no scutellar and sutural spots in *P. nigropunctata*, or only males with very small and narrow reddish scutellar spot). *P. transversalis* differs also in whole basal part of elytra reddish-brown, presence of apical sutural spot, suture narrowly reddish-brown, and only few coarse brownish punctures on marginalia, grouped in humeral third of the explanate margin (disc with no brownish base, no sutural apical spot, suture yellowish, and numerous black coarse spots spread in whole central part of surface of explanate margin in *P. nigropunctata*).

DESCRIPTION

Length: male 7.2-8.2 mm, female: 7.7-7.9 mm, width: male 7.2-8.4 mm female 7.3-7.7 mm, length of pronotum: male 2.0-2.2 mm, female 2.0-2.1 mm, width of pronotum: male 4.3-5.0 mm, female 4.2-4.5 mm, length/width ratio: male 0.95-1.03, female 1.03, width/length of pronotum ratio: both sexes 2.1-2.3. Sexual dimorphism distinct, male antennae strongly explanate apically, on ventral side with dense vestiture, in female antennae unmodified.

Pronotum uniformly yellow, only basal margin narrowly black. Elytra yellow, of the same colour as pronotum, basal margin narrowly black. No scutellar spot, only sutural margin narrowly black. Apex of suture with indistinct, small, reddish sutural spot. Humeral part of explanate margin in male with broad reddish spot, in the widest part as wide as length of third antennomere, in female humeral spot narrow, not wider than length of first antennomere. Head rusty yellow. Ventrites mostly black, only abdominal sternites on sides with yellowish spot, sometimes also posterior margin of sternites narrowly yellowish. Legs rusty yellow, femora at base usually with black spot. Sometimes whole basal half of hind femora black,

often femora in middle with black spot or ring. Antennal segments 1-3 (male) or 1-4 (female) rusty yellow and segments 6-11 black. Sometimes in female apical part of segment 4 black. Apex of segment 11 in both sexes rusty yellow.



1-5. *Paraselenis nigropunctata*: 1 - female dorsal, 2 - female lateral, 3 - male dorsal, 4-5 - antenna (4 - female, 5 - male)

Pronotum trapezoidal, transverse, posterior corners elongate, sides in female almost straight, in male distinctly concave, anterior margin straight, not emarginate, head visible from above. Disc moderately convex, along middle with narrow impunctate line. Puncturation of disc moderately coarse, shallow, moderately dense, distance between punctures mostly wider than puncture diameter. Surface of top of disc in both sexes slightly opaque, sides of disc distinctly opaque. Explanate margin distinctly opaque in both sexes, sparsely, finely, very shallowly punctate.

Scutellum very small but perceptible. Basal crenulation of elytra large. Humeral part of marginalia in both sexes only slightly protruding anterad, anterior margin of humerus in male between humeral callus and humeral angle forms very soft angle, humeral angles broadly rounded. Sides of elytra in both sexes evenly convex, elytra broadest in 1/3 length, then sides regularly converging posterad. Elytral disc strongly convex, but profile behind the top of convexity straight to only slightly concave. Puncturation completely irregular, moderately coarse and moderately dense, distance between punctures 1.5-2.5 times wider than puncture diameter. Puncturation of explanate margin double. In humeral part, along external margin and in 1/3 posterior part of marginalia puncturation moderately coarse, slightly coarser than on disc, of the same colour as background. Central part of marginalia with 26-40 coarse punctures, marked with black. Punctures in middle of the area with black areola larger than that around punctures placed more externally, thus black central punctures appear coarser than external punctures. Integument of disc and marginalia mostly slightly opaque, only postscutellar angulation and anterior part of marginalia slightly shiny. Apex of elytral epipleura in male with few short setae, in female glabrous.

Ventrites with no diagnostic characters. Antennae typical for the subgenus *Spaethiechoma*, strongly sexually dimorphic. Distal segments in both sexes depressed, in male antennae distinctly longer than in female, segments 6-7 distinctly, segments 8-10 slightly longer than wide, on ventral side with dense, felt hairs, in female segments 6-10 distinctly longer than wide, on ventral side without felt hairs. Length ratio of antennal segments: male 100:60:172:140:124:108:112:108:104:104:172, female 100:58:164:125:108:92:95:83:79:79:142. Claws with large basal tooth.

MATERIAL EXAMINED

Holotype male: "BOLIVIA, Caranavi prov., La Paz dp., IX 2000, C. Tello"; two male paratypes: the same data; three male and two female paratypes: the same data but date "X 2000"; three female paratypes: the same data but "XI 2000"; nine male and ten female paratypes: the same data but date "I 2001" (holotype at P.I.M.E. Entomological Museum, Monza, Italy, paratypes at P.I.M.E. Entomological Museum, Monza, Italy, at the Department of Biodiversity and Evolutionary Taxonomy, Wrocław University, Wrocław, Poland, and in D. SASSI collection, Castelmarte, Italy)

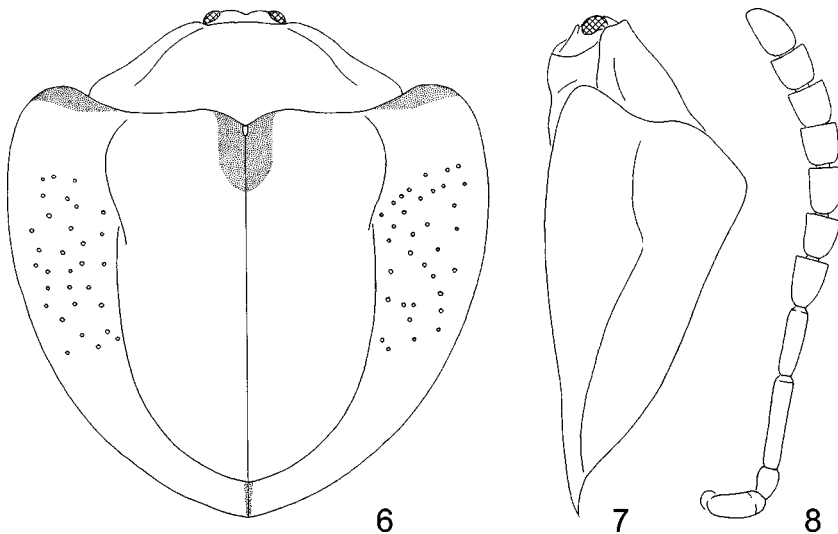
***Paraselenis flavopunctata* n. sp.**

ETYMOLOGY

Named after yellow coarse puncturation of elytral marginalia.

DIAGNOSIS

Only *Paraselenis nigropunctata* n. sp., *P. flavopunctata* n. sp., *P. collata* (BOHEMAN, 1854), *P. nupta* (BOHEMAN, 1854), and *P. transversalis* (BOHEMAN, 1854) have elytral marginalia with coarse puncturation, often brown or black. *P. flavopunctata* and *P. nigropunctata* distinctly differ from the three related species in pronotum and elytra of the same yellowish colour, while in *P. collata*, *P. nupta* and *P. transversalis* pronotum is distinctly darker than yellow elytra, reddish-brown to brown. *P. nigropunctata* differs in coarse puncturation on marginalia marked with black (not marked with black in *P. flavopunctata*), antennae black apically (uniformly reddish in *P. nigropunctata*) and no reddish scutellar spot (present in *P. nigropunctata*). *P. collata* differs also in reddish elytral suture and reddish coarse punctures on marginalia (yellow suture and yellow punctures in *P. flavopunctata*). *P. nupta* differs also in black coarse punctures on marginalia and bicolours antennae (yellow punctures and unicolours antennae in *P. flavopunctata*). *P. transversalis* differs in whole basal part of elytra reddish-brown, suture narrowly reddish-brown, and only few coarse brownish punctures on marginalia grouped in humeral third of the explanate margin (disc with no brownish base, suture yellowish, and numerous yellow coarse punctures spread in whole central part of surface of explanate margin in *P. flavopunctata*).



6-8. *Paraselenis flavopunctata*: 6 - female dorsal, 7 - female lateral, 8 - female antenna

DESCRIPTION

Only female known: length: 8.0-8.1 mm, width: 7.15-7.55 mm, length of pronotum: 2.1-2.2 mm, width of pronotum: 4.8-4.9 mm, length/width ratio: 1.06-1.13, width/length of pronotum ratio: 2.23-2.29.

Pronotum yellow, basal corners reddish, also basal margin narrowly reddish. Elytra mostly yellow, the same colour as pronotum, basal margin with black crenulation. Scutellar spot present, reddish, broad, approximately twice as long as wide. Humeral part of explanate margin with narrow reddish spot, which in its widest part is not wider than length of the first antennomere. Apex of suture with narrow, reddish sutural spot. Head rusty yellow. Ventrites rusty yellow, thorax slightly darker than abdomen. Legs rusty yellow, unicolour. Antennae uniformly rusty yellow.

Pronotum trapezoidal, strongly transverse, basal corners narrow, sides straight or slightly concave, anterior margin shallowly emarginate, head visible from above. Disc moderately convex, along middle very narrow impunctate line. Puncturation of disc shallow, moderately coarse but dense, distance between punctures from twice narrower to twice wider than puncture diameter. Surface of disc slightly opaque. Explanate margin distinctly opaque, sparsely, moderately coarsely punctate, in area close to border of disc punctures denser than in area along lateral margin.

Scutellum very small but perceptible. Basal crenulation of elytra large. Humeral part of marginalia broad, humeri slightly protruding anterad, humeral angles broadly rounded. Sides of elytra evenly convex, elytra broadest in 1/3 length, then sides regularly converging posterad. Elytral disc distinctly angulate in profile, elytral outline behind the top of convexity slightly concave. Puncturation completely irregular, moderately coarse and dense, distance between punctures mostly slightly wider than puncture diameter. Puncturation of explanate margin double, in humeral part, along external margin and in 1/3 posterior part of marginalia moderately coarse, similar as on disc, in the middle very fine and shallow. Finely punctate area with 18-28 coarse punctures, distinctly coarser than punctures of disc, but of the same colour as neighbouring primary puncturation. Integument of disc and marginalia mostly slightly opaque, only postscutellar angulation slightly shiny. Apex of elytral epipleura glabrous.

Ventrites with no diagnostic characters. Antennae typical for the subgenus *Spaethiechoma*. Distal segments depressed, segments 6-7 slightly longer than wide, segment 8 as wide as long, segments 9-10 slightly wider than long. Length ratio of antennal segments in female 100:40:148:124:84:76:80:72:68:60:104. Claws with large basal tooth.

Male unknown.

MATERIAL EXAMINED

Holotype female: "BRAZIL, Mato Grosso, Chapada"; paratype female: "ARGENTINA, Corrientes, Goya" (both preserved at the Department of Biodiversity and Evolutionary Taxonomy, Wrocław University, Wrocław, Poland).

KEY TO *SPAETHIECHOMA* HINCKS

(for colour photos of most species see BOROWIEC & ŚWIĘTOJAŃSKA 2002)

1. Explanate margin of elytra with coarse punctures between normal fine puncturation, these additional punctures often reddish, brown or black 2.
- Explanate margin of elytra without coarse punctures 6.
2. Pronotum reddish to brown, distinctly darker than elytra 4.
- Pronotum and elytra of the same colour, yellowish 3.
3. Antennae bicolours, reddish basally and black apically. Coarse punctures on marginalia black. Elytral disc without scutellar spot. Ventrites mostly black ***nigropunctata* n. sp.**
- Antennae uniformly reddish. Coarse punctures on marginalia not marked with black. Elytral disc with reddish scutellar spot. Ventrites rusty yellow ***flavopunctata* n. sp.**
4. Basal part of elytra with reddish to reddish-brown scutellar and humeral area, basal part of disc yellow. Coarse punctures on explanate margin numerous, spread in whole central part of marginalia 5.
- Whole basal part of elytra reddish-brown. Coarse punctures on explanate margin not numerous, mostly grouped in humeral third of surface of marginalia ***transversalis* (BOH.)**
5. Suture reddish. Humeri in male angulate ***collata* (BOH.)**
- Suture, except scutellar and sutural apical spot, yellowish. Humeri in male rounded ***nupta* (BOH.)**
6. Elytral margin simple 7.
- Elytral margin multisinuate ***multisinuata* Sp.**
7. Along elytral suture runs reddish or brown band, occupying at least 1/3 sutural length 8.
- Elytral suture without band, at most sutural margin narrowly reddish or black 10.
8. Pronotum yellow. Band along suture narrow, in posterior part as wide as or narrower than in anterior part 9.
- Pronotum brown. Band along suture broad, in posterior third distinctly wider than in the middle ***aulica* (BOH.)**
9. Whole basal part of elytra reddish to reddish-brown. Humeral angles in male obtuse ***normalis* (GERM.)**
- Only humeral and scutellar part of elytra reddish, basal part of disc yellow. Humeral angles in male acute ***decipiens* (BOH.)**
10. At least basal antennal segments reddish. Legs partly or completely reddish or brown 11.
- Antennae and legs black ***generosa* (BOH.)**
11. Base of elytra more or less wider than pronotum, body outline never appears circular. Upper side of body only occasionally uniformly yellow, pronotum sometimes brownish, elytra usually with humeral and scutellar spots, often also with apical sutural spot 12.

- Base of elytra only slightly wider than pronotum, body outline appears almost circular. Upper side of body uniformly yellow *flavata* (BOH.)
- 12. Antennae uniformly reddish to brown 13.
- Antennae bicolours, basal segments yellowish to brown, distal segments dark brown to black 15.
- 13. Pronotum and elytra of the same colour, yellow 14.
- Pronotum and elytra of different colour, pronotum brown and elytra yellow *dichroa* (GERM.)
- 14. Scutellar spot present, distinctly extending behind sutural margin. Humeral spots in both sexes distinct, as wide as to slightly wider than 10th antennal segment. Humeral angles in male broad and obtuse *filia* (SP.)
- Scutellar spot absent, especially in female, or very narrow, not extending behind sutural margin. Humeral spots narrow, narrower than 10th antennal segment, in female often obsolete. Humeral angles in male narrow and angulate *hyalina* (BOH.)
- 15. Pronotum reddish to brown, always distinctly darker coloured than yellow elytra (only fully sclerotised specimens have the character well developed) 16.
- Pronotum usually yellow, the same colour as elytra, or only slightly darker yellowish-red 18.
- 16. Pronotum strongly trapezoidal with straight or concave sides and sharp basal corners. Elytra usually with reddish or brown scutellar spot. Humeral angles in male moderately protruding anterad 17.
- Pronotum more semicircular than trapezoidal, sides slightly convex, basal corners straight. Elytra without scutellar spot, only sutural margin narrowly black. Humeral angles in male strongly protruding anterad *scapulosa* (BOH.)
- 17. Pronotum usually dark brown, moderately broad, with straight or only slightly concave sides. Scutellar spot broad, reddish-brown to black. Ventrites partly brown to black. Large, length usually above 10 mm *puncticollis* (SP.)
- Pronotum usually yellowish-red to red, very broad, with distinctly concave sides. Scutellar spot narrow, pale red. Ventrites uniformly yellow to reddish. Small, length below 10 mm *brunnidorsis* (SP.)
- 18. Basal margin of elytral disc reddish 19.
- Basal margin of elytral disc yellow, the same colour as other part of disc 20.
- 19. Elytral disc very coarsely punctate. Pronotum trapezoidal with almost straight basal corners *punctata* (SP.)
- Elytral disc moderately coarsely punctate. Pronotum very broad, with narrow basal corners *contemta* (SP.)
- 20. Humeri in male slightly or moderately protruding anterad, obtuse or angulate 21.
- Humeri in male extremely long, strongly protruding anterad, acute *jugata* (BOH.)

21. Apical sutural spot absent. Scutellar spot small, usually black, or absent, sometimes only sutural margin behind scutellum narrowly reddish or black. Humeral spots absent or very narrow (four species very difficult to proper identification, only males are diagnostic) 22.
- Apical sutural spot at least in male present. Scutellar spot broad, red to brown. Humeral spot in male broad, in female narrow but always present *tersa* (Boh.)
22. Humeral angles in male broad, obtuse. Scutellar spot, if present, usually black 23.
- Humeral angles in male angulate. Only sutural margin behind scutellum narrowly reddish-brown *suspecta* (Sp.)
23. Large, body length in both sexes usually above 10 mm. Humeral angles in male distinctly protruding anterad. Scutellar spot, if present, forms elongate black stripe. Surface of pronotum and elytra distinctly shiny 24.
- Small, body length in both sexes usually below 10 mm. Humeral angles in male only slightly protruding anterad. Scutellar spot usually present, round. Surface of pronotum and elytra slightly opaque *flava* (L.)
24. Elytra strongly angulate in profile. Anterior margin of humeral angle in male forms a soft angle. Broad, length/width ratio in both sexes below 1.1 *solieri* (Boh.)
- Elytra softly angulate in profile. Anterior margin of humeral angle in male forms a distinct angle. Slim, length/width ratio in both sexes usually above 1.1 *saltaensis* Bor.

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