

***Tiaronthophagus* - List of the discrete characters**

- 1. Epipharynx, the anterior part on the whole:** (0) rounded; (1); squared, almost rectangular; (2) trapezoidal.
- 2. Epipharynx, setae of the acropariae:** (0) same length; (1) longer on sides and shorter in the middle.
- 3. Epipharynx, the fore margin:** (0) rectilinear, or only slightly rounded in the middle; (1) V-notched; (2) largely triangular notched.
- 4. Epipharynx, chaetopodia:** (0) evident, well-developed, constituted by many thick setae; (1) not much evident, reduced, carrying few and shorter setae.
- 5. Epipharynx, zygum:** (0) constituted by few long setae; (1) constituted by long and thick setae forming a tuft.
- 6. Epipharynx, proplegmatium:** (0) placed in the half of the epipharynx; (1) placed in the hind third.
- 7. Epipharynx proplegmatium sclerotization:** (0) triangular shaped, with narrow sides; (1) almost rectangular, being thus thick, enlarged, subequal also on sides; (2) thick, but clearly forming a triangle on the central third, the sides tapering to vertex.
- 8. Epipharynx, apotormae:** (0) present, variously shaped; (1) reduced or absent.
- 9. Epipharynx, chaetopariae setae:** (0) almost equal on the whole length; (1) far longer near the fore margin, then narrowing to base.
- 10. Epipharynx, anterior epitorma:** (0) narrow on the whole length, rod-shaped; (1) enlarged, triangular-shaped about the basal half; (2) largely elongate, ovalar at basal third; (3) basally rounded, or largely ovalar expanded on sides.

***Tiaronthophagus* - List of the discrete characters**

- 11. Epipharynx, laeotorma and dexiotorma:** (0) more or less asymmetrical; (1) symmetrical, almost alike.
- 12. Epipharynx, laeo- and dexiotormae:** (0) short and stout; (1) elongate and more slender.
- 13. Epipharynx, laeo- and dexiotormae joining part to mandibles:** (0) very large, ovalar-rounded; (1) smaller, triangular-shaped.
- 14. Female genitalia, receptaculum seminis [RS]:** (0) equal diameter on the whole length; (1) uneven diameter.
- 15. Female genitalia, RS overall shape:** (0) not lobate nor expanded at base; (1) plurilobate and expanded at base; (2) plurilobate, more expanded in the middle; (3) enlarged at base, but not plurilobate; (4) plurilobate, but not expanded at base.



(15.1)

T. aequatus



(15.2)

T. curtipilis



(15.3)

T. katanganus



(15.4)

T. liberianus

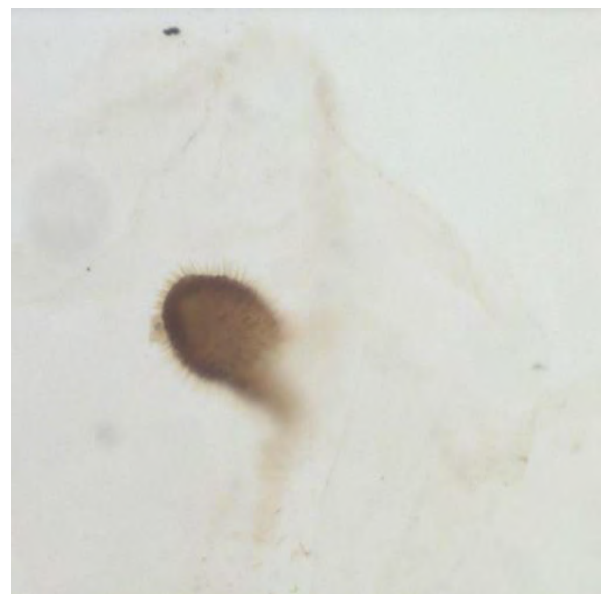
***Tiaronthophagus* - List of the discrete characters**

- 16. Female genitalia, RS apex:** (0) blunt; (1) sharp.
- 17. Female genitalia, RS connection to infundibular tube with tube insertion:** (0) in the middle, not lateral, sometimes with initial sclerotized joining part; (1) lateral, with basal portion usually expanded, the joining part membranaceous.
- 18. Female genitalia, shape of the vagina on the whole:** (0) high or very high, and rounded; (1) short and flat, sometimes with apical expansion; (2) short and triangular-shaped; (3) short and rounded.
- 19. Female genitalia, two symmetrical lateral protrusions:** (0) absent; (1) present, triangular-shaped; (2) present, rounded and large.
- 20. Female genitalia, if two protrusion present, then:** (0) membranaceous, without setae; (1) carrying thick small setae, and sclerotized; (2) rounded and membranaceous, but carrying two well-sclerotized, narrow diverticula.



(20.1)

T. pseudolibrianus



(20.2)

T. delahayei

***Tiaronthophagus* - List of the discrete characters**

- 21. Female genitalia, infundibular tube:** (0) tubuliform, scarcely sclerotized, not rigidly folded; (1) question mark shaped with a small loop, sclerotized, rigidly folded; (2) question mark shaped with a large loop, sclerotized, rigidly folded.



(21.1)

T. ebenus



(21.2)

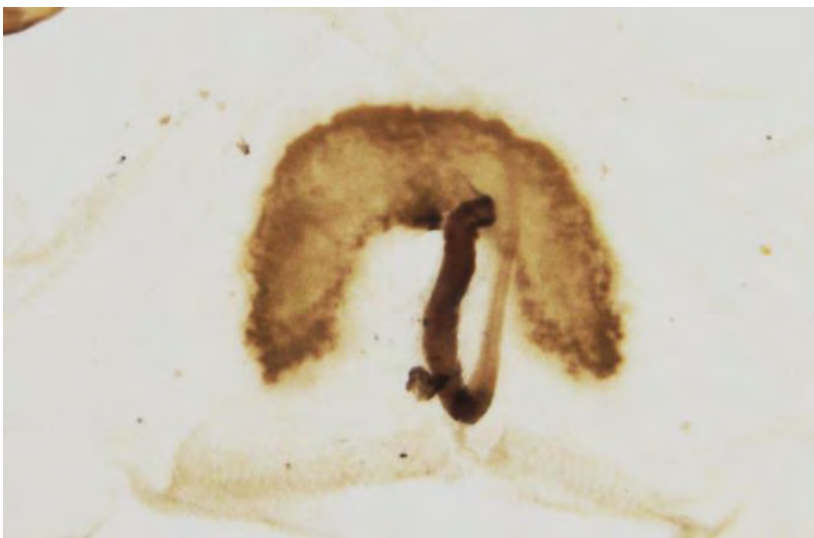
T. rougonorum

- 22. Female genitalia, infundibular tube inferior part:** (0) largely arched; (1) strongly upturned with a narrow folding.
- 23. Female genitalia, infundibular tube medial part:** (0) not sclerotized, variously folding, different size and shape; (1) well-sclerotized, rectilinear, thick and relatively large.
- 24. Female genitalia, infundibular wall sclerotization:** (0) present, evident and well-defined sclerotization in central area; (1) present, but thin sclerotization not defined, and extending on the vagina surface; (2) absent, vagina entirely membranaceous; (3) absent, but then well-sclerotized supporting structure internally.

***Tiaronthophagus* - List of the discrete characters**

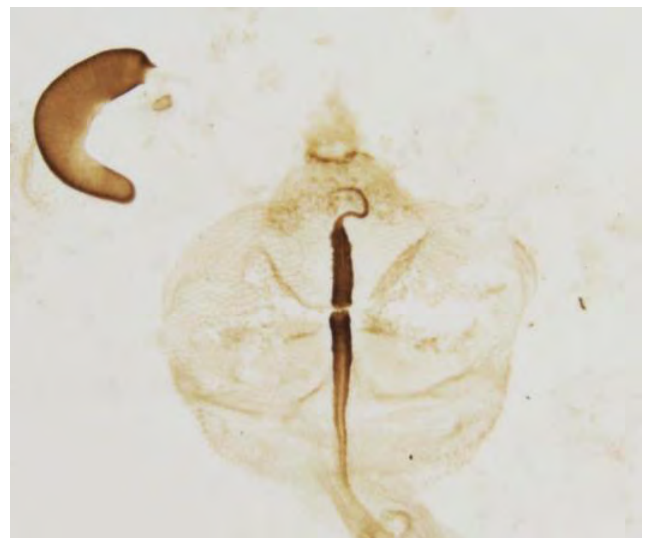
25. Female genitalia, infundibular wall sclerotization: (0) short; (1) elongate.

26. Female genitalia, infundibular wall sclerotization: (0) H-shaped; (1) U reverse shaped, narrow, not expanded, the upper part often squared; (2) arched, thick, the sides sometimes slightly enlarged; (3) triangular-shaped, sometimes the apex enlarged on sides (mushroom-shaped); (4) bilobed; (5) paddle-shaped.



(26.2)

T. rufostillans



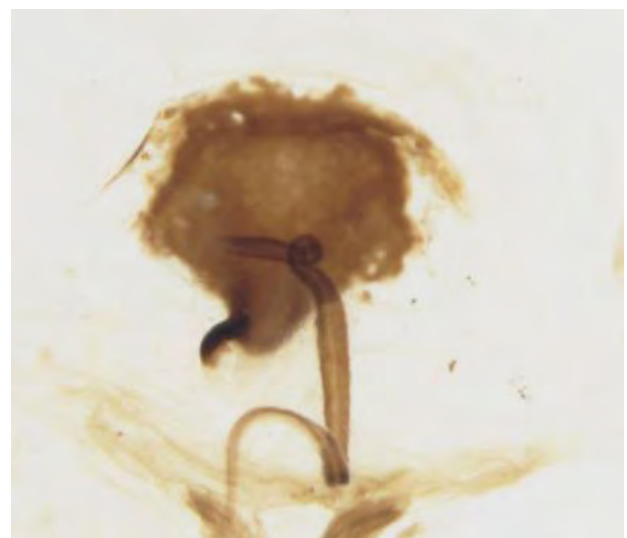
(26.3)

T. rougonorum



(26.4)

T. delahayeae

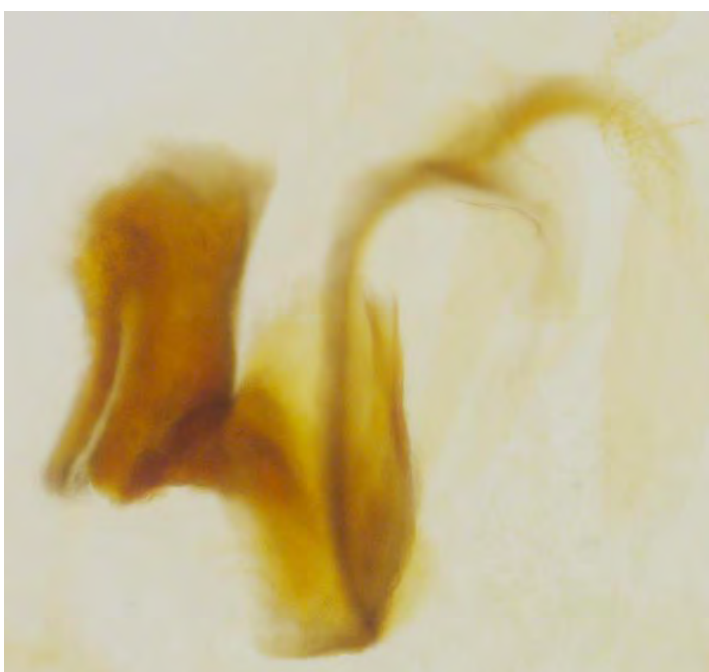


(26.5)

T. macroliberianus

***Tiaronthophagus* - List of the discrete characters**

- 27. Male genitalia, paramere apices (ventral view):** (0) parallel; (1) diverging; (2) converging.
- 28. Male genitalia, endophallus raspula:** (0) present; (1) absent.
- 29. Male genitalia, if raspula present, then:** (0) ovalar-shaped, constituted by a dense tuft of short, thick setae; (1) diffused, not differentiated, scattered setae; (2) constituted by a thick, large fringe of very long setae (Figs. 8-13).
- 30. Male genitalia, lamella copulatrix:** (0) present; (1) absent; (2) extremely reduced (Fig. 9G,H,I).
- 31. Male genitalia, if LC present:** (0) a single piece; (1) two pieces at least.
- 32. Male genitalia, if LC constituted by a single part then:** (0) comma-shaped with expanded apical part; (1) plate-shaped; (2) variously folded; (3) dome-shaped.



(32.2)

T. pseudolibrianus

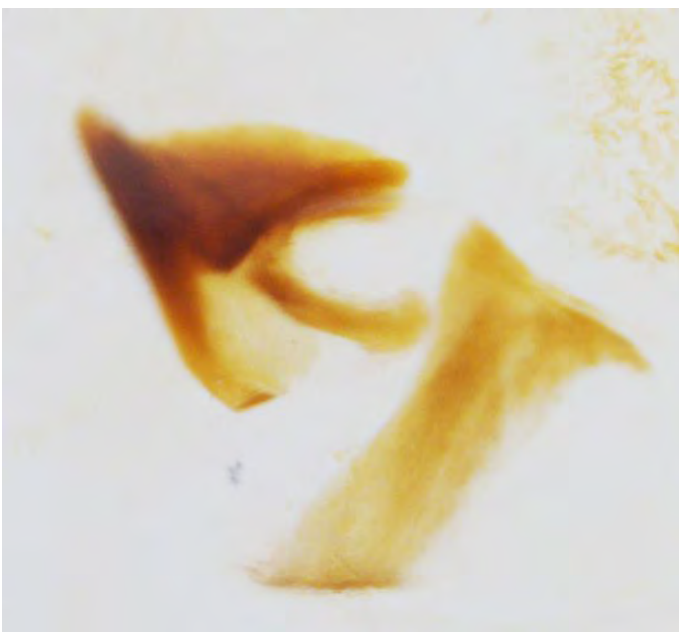


(32.3)

T. saadaniensis

***Tiaronthophagus* - List of the discrete characters**

33. Male genitalia, if lamella copulatrix constituted by two separate parts, then: (0) a flat, rectangular lamina, and a short, folded one; (1) two short, narrow, arched laminae, with the apice pointed; (2) a long, narrow lamina, with the apex expanded and spatulate, and a folded, smaller lamina; (3) a flat lamina angulate, and a smaller, thicker one triangular-shaped; (4) a nastriform, curved lamina, and a tricuspid with a large, flat expansion one; (5) a part large, rounded lamina-shaped, and a small, elongate rod-shaped part.



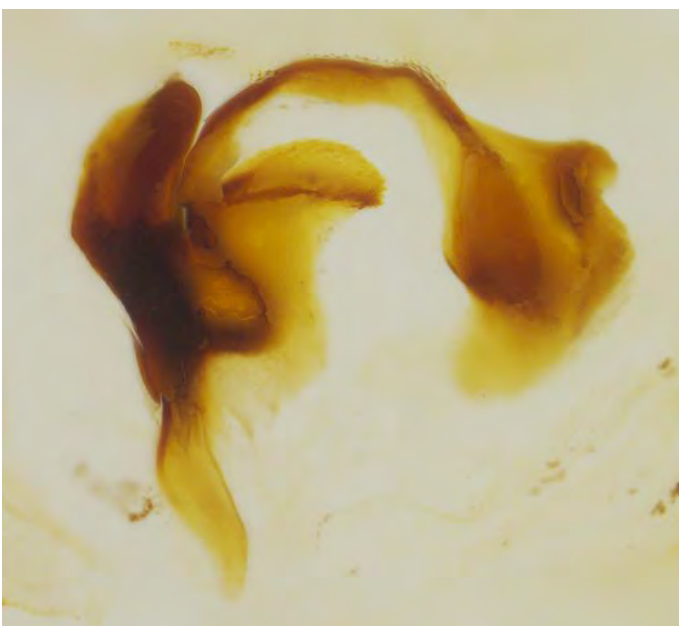
(33.0)

T. aequatus



(33.1)

T. schaufussi



(33.2)

T. delahayei



(33.3)

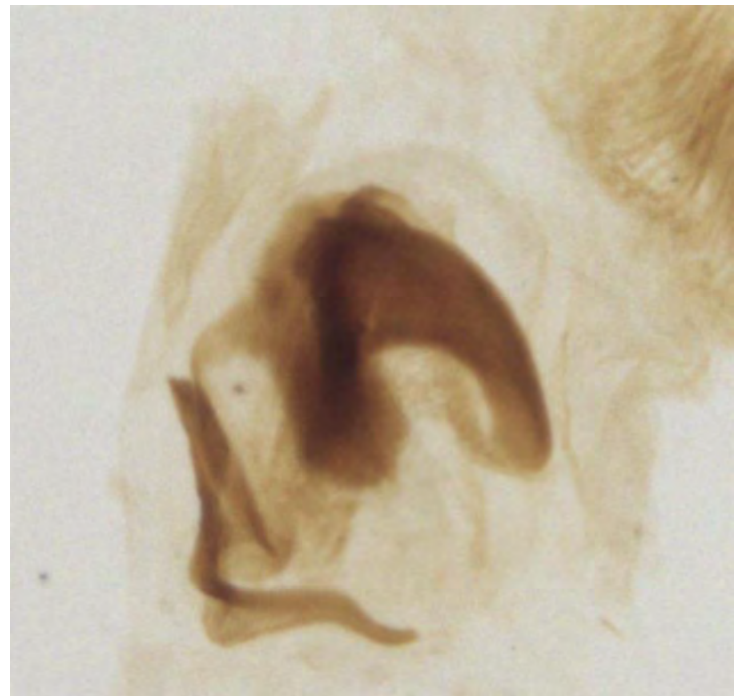
T. ebenus

Tiaronthophagus - List of the discrete characters



(33.4)

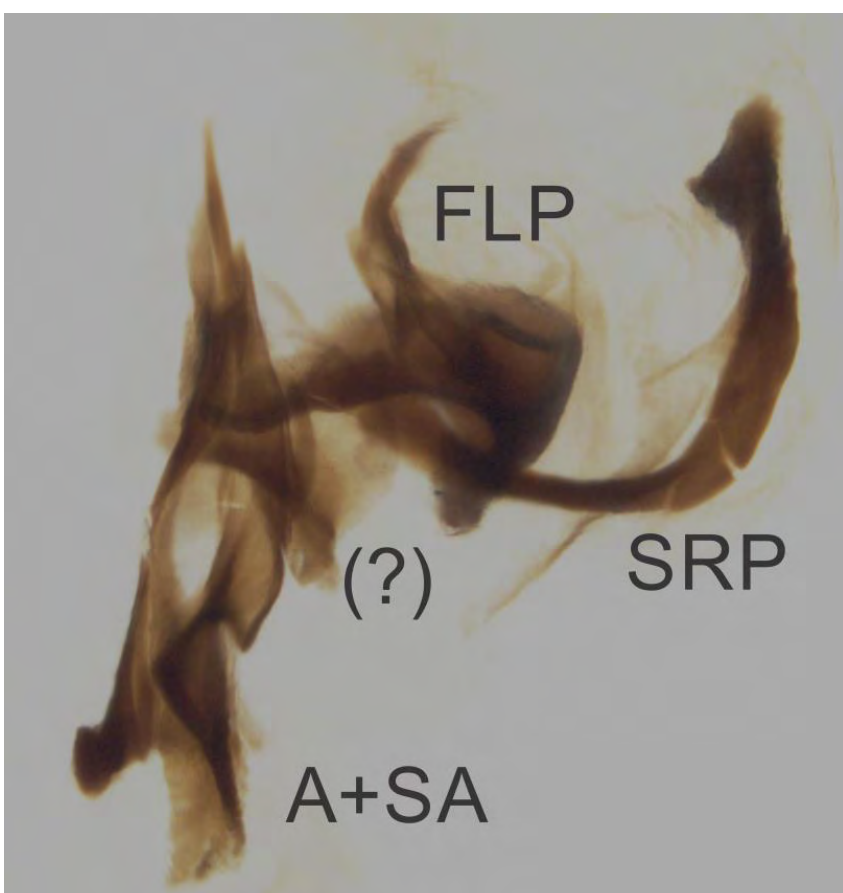
T. katanganus



(33.5)

T. rougonorum

34. Male genitalia, secondary lamellae: (0) well developed, constituted by different parts; (1) greatly reduced to a single lamina thick and well-sclerotized.



(34.0)

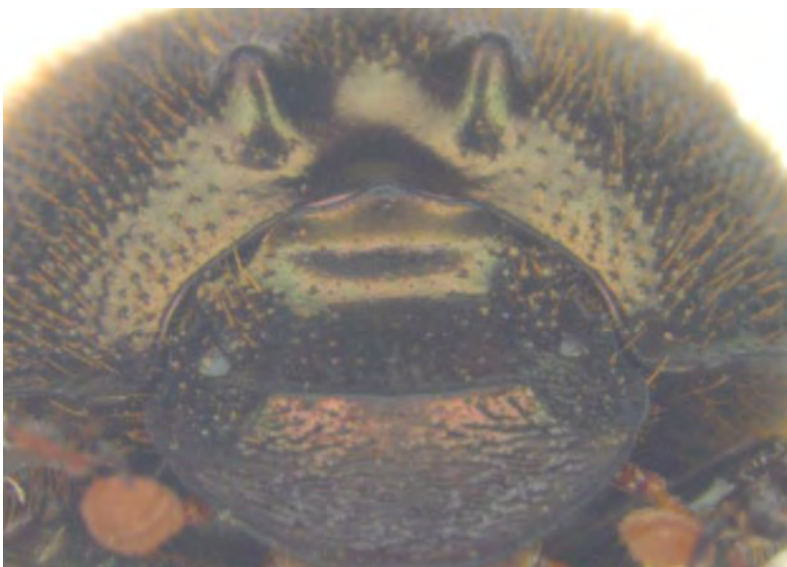
T. ebenus

The following accessory sclerites were identified in *Tiaronthophagus*: FLP (= fronto-lateral peripheral), SRP (= superior right peripheral), A (= axial), and SA (= subaxial) sclerites, plus an undetermined (?) small sclerite, which could be regarded as BSc (= basal semicircular) sclerite.

See Tarasov and Solodovnikov (2011) for further details.

***Tiaronthophagus* - List of the discrete characters**

- 35. Head, vertex carina in major males** (Figs. 6I,J; 8-13): (0) not modified, unarmed head; (1) modified into a long, narrow and curved horn; (2) modified into a squared, large lamina, carrying a pointed, curved petione-shaped extension apically; (3) modified into an extremely long, flat and large lamina; (4) modified into two symmetrical, narrow and arched horns.
- 36. Head frontal carina in major males:** (0) well-defined; (1) more or less evident, sometimes reduced in major males to a thin line barely visible (Fig. 6I,J); (2) inapparent/absent.
- 37. Head frontal carina in females:** (0) absent; (1) small, elevated only in the central part; (2) evident, and raised (Fig. 6G).
- 38. Head vertex carina in females:** (0) large, bisinuate; (1) rectangular lamina quite elevated; (2) narrow, interrupted in the middle, divided in two parts; (3) relatively narrow, rounded flap low-arched, or tricuspid; (4) very large, thick, subtrapezoidal (view from above); (5) narrow, more or less elevated; (6) trapezoidal inverted (frontal view).



(38.3)

T. naevius



(38.4)

T. rolandoi

***Tiaronthophagus* - List of the discrete characters**



(38.5)



(38.6)

T. lamtoensis

T. pendjarius

- 39. Head, some large points on the clypeus and genae (Fig. 6C):**
(0) present, but only on the edge of the head, not on the whole surface; (1) absent; (2) present, scattered on the genae and clypeus surface.
- 40. Head clypeus:** (0) very similar in both sexes, never wholly smooth in males; (1) in males only the anterior part is wrinkled and smooth the remaining 2/3 of the surface, while females clypeus is entirely wrinkled; (2) entirely smooth in males, and wrinkled (with a vermiform microsculpture) in females.
- 41. Pronotum, on sides two symmetrical ovalar areas, glabrous, but carrying a fringe of long yellow setae in superior margin, and smooth (the microsculpture is different from the pronotum other areas). Two corresponding hollow concavities on the elytra near the humeral callous:** (0) absent; (1) present (Fig. 6A,D).

***Tiaronthophagus* - List of the discrete characters**

42. Pronotum in females, and often in minor males, carrying: (0) no protuberances; (1) a single well-developed tubercle in the middle; (2) two tubercles, variously shaped; (3) two large laminar expansions.



(42.2)

T. zavattarii

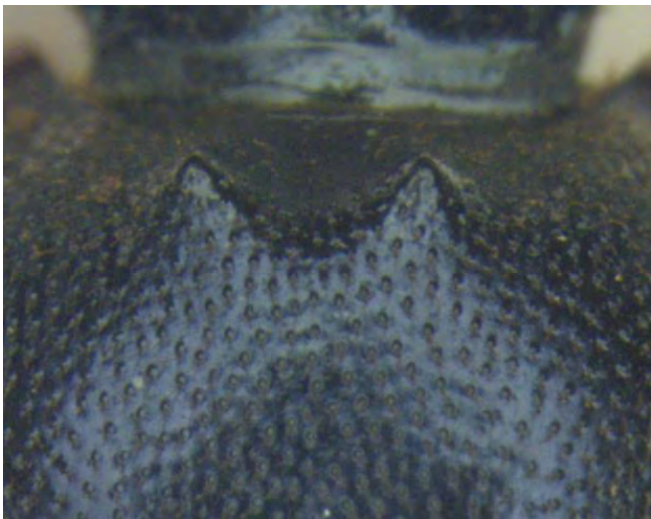


(42.3)

T. jossoi

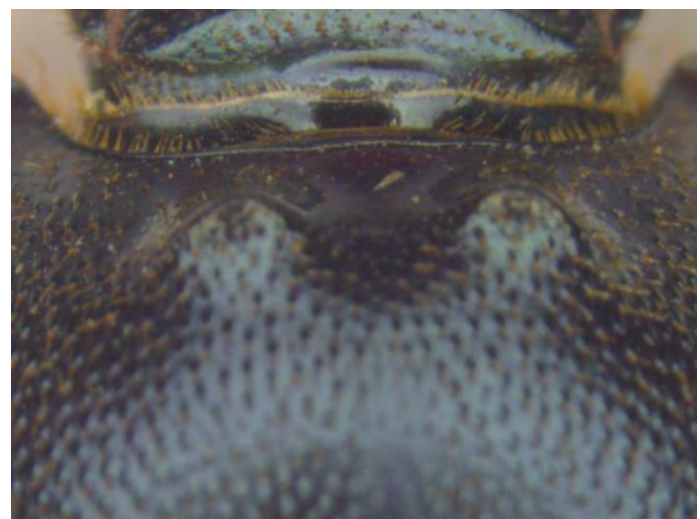
Tiaronthophagus - List of the discrete characters

43. Female pronotum, tubercles: (0); pointed, parallel apices (1) rounded, parallel apices; (2) pointed, diverging apices; (3) flat-rounded, parallel apices; (4) rounded, converging (almost fuse) apices.



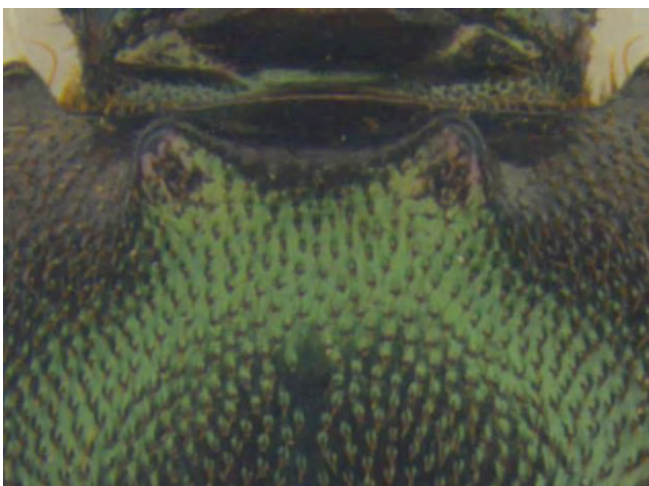
(43.0)

T. aequatus



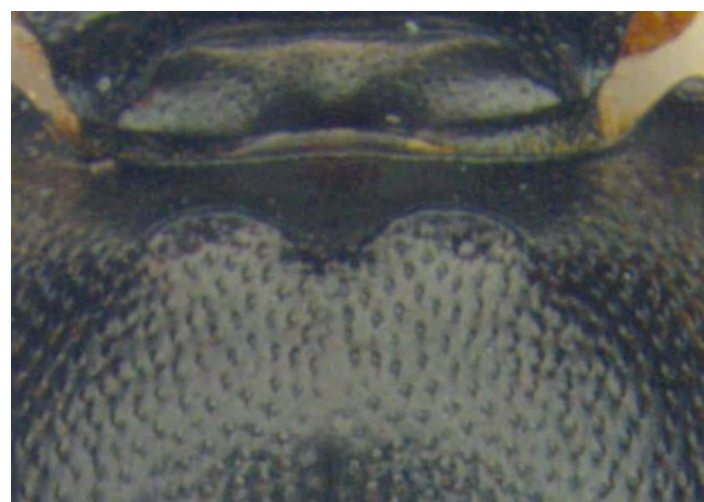
(43.1)

T. rolandoi



(43.2)

T. ebenus



(43.3)

T. katanganus



(43.4)

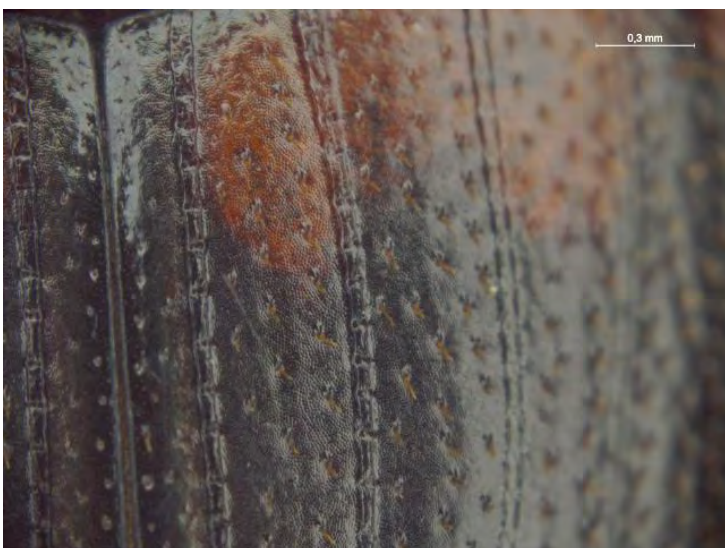
T. rougonorum

***Tiaronthophagus* - List of the discrete characters**

- 44. Pronotum microsculpture constituted by:** (0) simple, evident points, never granulate, sometimes differently sized; (1) large granules, without points and pubescence; (2) granulate points carrying a pubescence.
- 45. Pronotum pubescence:** (0) very reduced; (1) present, thick
- 46. Pronotum microsculpture:** (0) even on the whole surface; (1) smaller and/or scattered in the middle, and tighter on sides, often the granulate points larger and very close.
- 47. Pronotum points shaped as:** (0) simple; (1) ocellate, and granulate; (2) simple (or at least with a little rebord), and granulate.
- 48. Pronotum, granulate points:** (0) quite large, with oval granules beak-shaped; (1) very large with small granules; (2) rounded, with small, rounded granules; (3) ovalar, with ovalar granules.
- 49. Pronotum, anterior angles:** (0) no flat area anteriorly; (1) area quite flattened anteriorly; (2) very small flattened antero-lateral area; (3) small flattened anterior area.
- 50. Elytra, striae:** (0) more or less narrow, not reborded, simple points; (1) narrow, geminate points, not reborded; (2) large, geminate points, slightly reborded.
- 51. Elytra, interstriae:** (0) flat; (1) convex; (2) slightly convex.

Tiaronthophagus - List of the discrete characters

- 52. Elytra, interstriae:** (0) large and deep rough points, arranged on two rows, pubescence constituted by short, dark and (thick) straight setae; (1) simple points, pubescence varying from relatively dense to sparse; (2) large, well-developed and deep granulate points, dense pubescence, with long yellow setae; (3) thick granulate points, the granules relatively small, dense pubescence with yellow recumbent setae; (4) rather deep granulate points, the granules variously developed, arranged on three rows, pubescence rather developed, with yellow long and thin recumbent setae; (5) very thick granules, very dense pubescence, the setae yellow and long; (6) large and dense ocellate points with small granules, relatively dense pubescence with yellow clavate setae.
- 53. Elytra:** (0) with the same microsculpture on all the interstriae; (1) the first two interstriae almost smooth.



(53.0)

T. rufobasalis



(53.1)

T. rufostillans