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The West Palearctic species of *Hesperus* FAUVEL, 1874, with descriptions of three new species from Turkey (Coleoptera: Staphylinidae: Staphylininae)

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Abstract

The West Palearctic species of *Hesperus* FAUVEL, 1874 (Coleoptera: Staphylinidae) are treated. Three species, all discovered in southern Turkey, are described as new: *Hesperus auricomus*, *H. gozukurai*, *H. turcicus*. The habitat requirements of the new taxa are described and a key to the West Palearctic species of *Hesperus* is provided. The male copulatory organs of all species studied herein are illustrated. *Hesperus rufipennis* (GRAVENHORST, 1802) is recorded from Bulgaria for the first time.

Key words: Coleoptera, Staphylinidae, Staphylininae, Philonthina, *Hesperus*, new species, West Palearctic, Turkey, Bulgaria, systematics, taxonomy, key, new record, faunistics.

Introduction

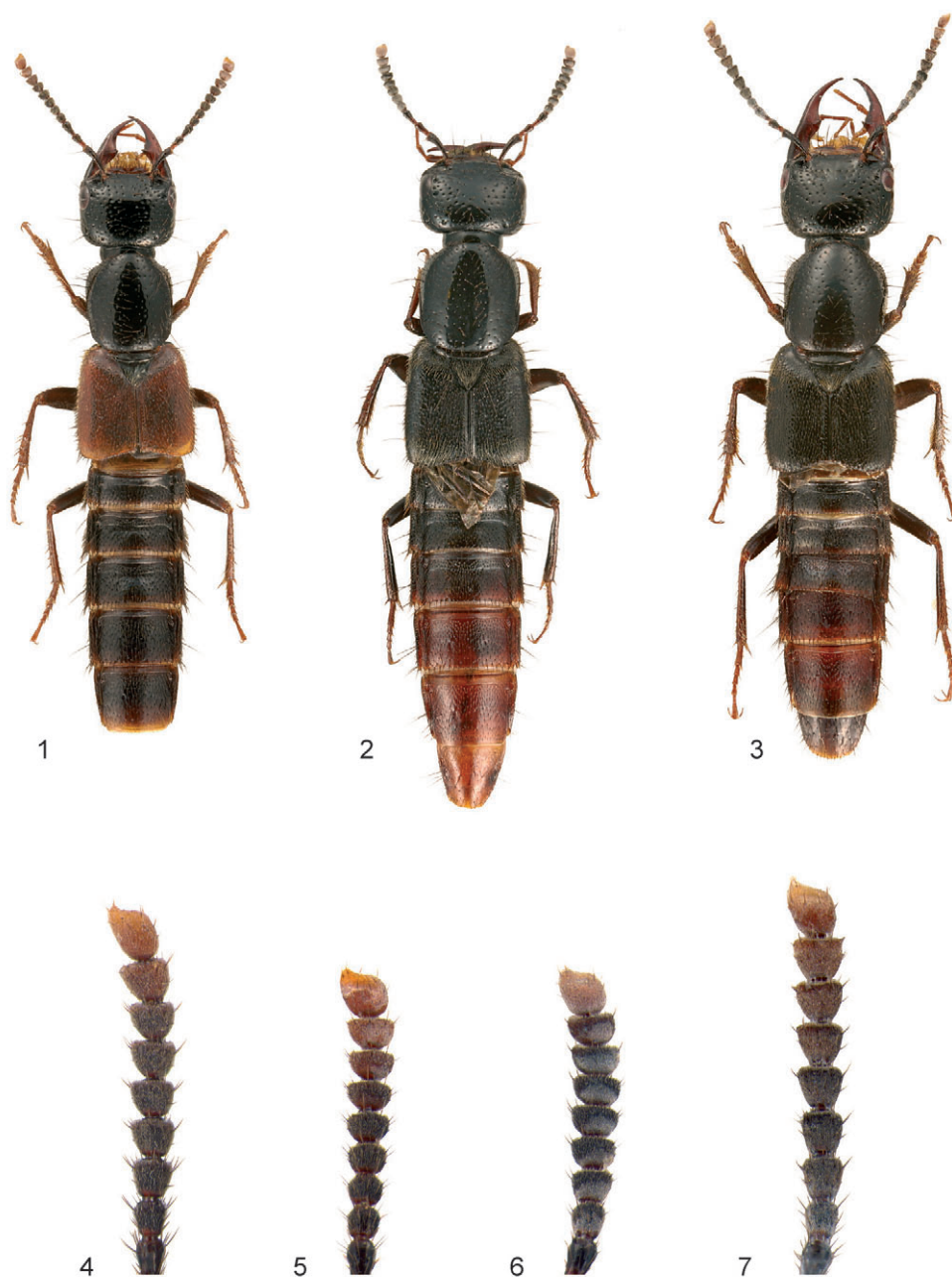
To date, the genus *Hesperus* FAUVEL, 1874 comprises roughly 200 species world-wide (HERMAN 2001), the majority of species being of tropical provenance. Only a handful of species is known from the Palearctic Region with just one single species, *H. rufipennis* (GRAVENHORST, 1802), having been known from the West Palearctic. Among material recently collected in southern Turkey, we detected no less than three species new to science which are described herein. In the light of the numerous new species of Staphylinidae which have been discovered in Turkey within the last few years, these findings confirm the status of the territory of Turkey as being a major biodiversity hotspot – but also one of the less explored areas – in the West Palearctic.

Abbreviations and acknowledgement

The specimens treated in this paper are deposited in the following collections.

CNJ	Coll. Nicklas Jansson, Linköping (Sweden)
CSS	Coll. S. Snäll, Tumba (Sweden)
CUA	Çukurova University, Adana (P. Özalp)
NMW	Naturhistorisches Museum Wien
ZML	Zoological Museum, Lund (R. Danielsson)

We want to thank Necmi Aksoy (İstanbul University) for identification of the *Quercus* species, Kadir Kocalar and Tamer Kayış (Çukurova University) for help in the field, İskender Emre and Pınar Özalp (Çukurova University) for support and finally, Nihat Öz, Mustafa Gözükara, Erdoğan Üstüner and Fatih Aytar (Turkish Forest Ministry in Mersin) for providing guide and equipment.



Figs. 1–7: 1–3: Habitus of 1) *Hesperus turcicus*, 2) *H. auricomus*, 3) *H. gozukai*; 4–7: antenna of 4) *H. rufipennis*, 5) *H. turcicus* (male), 6) *H. auricomus*, 7) *H. gozukai*. Photographs by H. Schillhammer.

Hesperus rufipennis* (GRAVENHORST, 1802)Staphylinus rufipennis* GRAVENHORST, 1802: 40

REDESCRIPTION: 8.0–11.5 mm long (4.3–5.2 mm, abdomen excluded). – Black, rather shiny, elytra usually bright reddish testaceous, rarely dark reddish or paler yellowish red; antennae black, outer one or two segments reddish; palpi dark brown with last segment of labial palpi and last two segments of maxillary palpi usually markedly paler reddish brown than basal segments; mandibles reddish testaceous, to variable extent darkened at base and along lateral margin; femora dark brown to black brown, middle and hind tibiae paler, brown to reddish brown, medial faces to variable extent infusate.

Head subrectangular, distinctly wider than long (ratio 1.35–1.45 in males, 1.25–1.35 in females), tempora slightly narrowed toward base of head, markedly longer than eyes in males (ratio 1.25–1.35), as long as or slightly longer than eyes in females (ratio 1.00–1.15); disc of head multipunctate but with diffusely delimited, variably extended, impunctate portion on vertex and frons, clypeus entirely glabrous (except for pair of large setiferous punctures on front margin); surface between punctures with very fine microsculpture of transverse waves; antennae (Fig. 4) with segments 4–5 about as long as wide, remaining segments increasingly, slightly asymmetrically extended, segments 8–10 inconspicuously transverse; pronotum 1.03–1.09 times as long as wide, widest approximately at level of large lateral setiferous puncture, narrowed toward base in almost straight line, disc multipunctate, punctures separated by 1–2 puncture diameters in transverse direction, with rather well delimited impunctate midline, surface between punctures with fine wavy microsculpture as on head; elytra rather densely and uniformly punctate, punctures much finer than those of pronotum, separated by 1–2 puncture diameters in transverse direction, with yellowish to greyish (depending on angle of light) ground pubescence; scutellum finely and densely punctate and with exceedingly fine but very dense microsculpture of rather confused waves and striae; first three visible abdominal tergites with two basal lines, elevated area between basal lines with a single, partly irregular, transverse row of punctures, remaining parts of tergites moderately densely, rather coarsely punctate, punctuation markedly denser at base of tergites; male sternite VIII with moderately deep and moderately wide medio-apical emargination and very narrow semi-membranous extension medially.

Aedeagus (Fig. 8) with median lobe rather broad, subparallel-sided, approximately at level of apex of paramere narrowed toward obtusely pointed apex in slightly concave line; in lateral view apical portion slightly bent dorsad (away from paramere); paramere flat and broad, with slightly convex sides, at widest point (at about midlength) inconspicuously wider than median lobe, apical margin quite variable, usually convex to angulate, but sometimes also subtruncate.

Additional records: “Nord-Bulgarien, Balkan, Schipka” (NMW); “Bulgarien, Zlatni Piassatzi, 1-21/8 70, Palm” (ZML, NMW).

DISTRIBUTION: The distribution of the species seems to encompass entire Europe except Great Britain. SMETANA (2004) lists the following countries from which *H. rufipennis* has been recorded (alphabetically): Austria, Bosnia Hercegovina, Croatia, Czech Republic, France, Germany, Hungary, Italy, Luxemburg, Poland, Romania, Slovakia, Switzerland, Ukraine, Serbia-Montenegro, Morocco. For some major countries that are missing in the above list (e.g. Spain, Greece, Belarus, Russia), it is most likely just a matter of time until the species will be discovered there. It is here newly recorded from Bulgaria.

Hesperus turcicus sp.n.

Holotype ♂: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü 19P. Pit-fall trap in a hollow *Quercus* sp. H1480m 24/6 2006 M. Coskun & N. Jansson” (NMW). **Paratypes** (13 exs.): 1 ♀: same data as holotype (NMW); 1 ♀: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü 8W. Window trap on an old *Quercus* sp. H1480m 26/8 2006 M. Coskun & N. Jansson” (NMW); 1 ♀: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü 19P. Pit-fall trap in a hollow *Quercus* sp. H1480m 26/7 2006 M. Coskun & N. Jansson” (CNJ); 1 ♀: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü 9W. Window trap on an old *Quercus* sp. H1480m 26/7 2006 M. Coskun & N. Jansson” (CNJ); 1 ♀: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü 16P. Pit-fall trap in a hollow *Quercus cerris* L. H1480m 26/8 2006 M. Coskun & N. Jansson” (CNJ); 1 ♂: “Turkey, Kizilen, 50 km N Erdemli, 4W. Window trap on an old *Quercus cerris* L. 23/5 2005 N. Jansson / M. Coskun” (CSS); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 6W. Window trap on an old *Quercus cerris* L. 23/5 2005 N. Jansson / M. Coskun” (CUA); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 6W. Window trap on an old *Quercus cerris* L. 17/6 2005 N. Jansson / M. Coskun” (CUA); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 12W. Window trap on an old *Quercus infectoria*. 07/7 2005 N. Jansson / M. Coskun” (CUA); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 8W. Window trap on an old *Quercus cerris* L. 11/8 2005 N. Jansson / M. Coskun” (CSS); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 5P. Pit-fall trap in a hollow *Quercus cerris* L. 11/8 2005 N. Jansson / M. Coskun” (CUA); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 12P. Pit-fall trap in a hollow *Quercus infectoria*. 11/8 2005 N. Jansson / M. Coskun” (CSS); 1 ♀: “Turkey, Devrent, 30 km N Erdemli, 19W Window trap on an old *Quercus cerris* L. 11/8 2005 N. Jansson / M. Coskun” (CUA).

DESCRIPTION (Habitus: Fig. 1): 8.5–11.0 mm long (4.0–5.3 mm, abdomen excluded). The species is very similar to *H. rufipennis* but differs as follows:

The head is slightly longer (thus less transverse; ratio 1.32–1.34 in males, 1.18–1.31 in females), being the result of longer tempora (1.37–1.45 times as long as eyes in males, 1.05–1.16 in females). The antennae (Fig. 5) have distinctly transverse segments 8–10. The pronotum is slightly more oblong (ratio 1.07–1.13) and with sides more distinctly narrowed toward base.

Aedeagus (Fig. 9) similar to that of *H. rufipennis*, but in lateral view with slenderer apical portion, dorsal subapical emargination slightly more extensive; paramere with truncate and even slightly emarginate apical margin.

DISTRIBUTION: The species is at present known only from Mersin province in southern Turkey.

ETYMOLOGY: The species is named after the country where it was collected.

Hesperus auricomus sp.n.

Holotype ♂: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü 8W. Window trap on an old *Quercus* sp. H1480m 24/6 2006 M. Coskun & N. Jansson” (NMW). **Paratypes** (8 exs.): 1 ♂: same label data as holotype (CSS); 1 ♂: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü, 17W. Window trap on an old *Quercus* sp. H1480m 24/5 2006. M. Coskun / N. Jansson” (CSS); 1 ♂: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü, 11W. Window trap on an old *Quercus* sp. H1480m 24/6 2006. M. Coskun & N. Jansson” (CUA); 1 ♂: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü, 17W. Window trap on an old *Quercus* sp. H1480m 26/7 2006 M. Coskun & N. Jansson” (CUA); 1 ♂: “Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşdüştü, C5. Window trap on an old *Quercus* sp. H1480m 26/7 2006 M. Coskun & N. Jansson” (CNJ); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 7W. Window trap on an old *Quercus cerris* L. 11/08 2005 N. Jansson / M. Coskun” (NMW); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 5P. Pit-fall trap in a hollow *Quercus cerris* L. H1250m 11/08 2005 N. Jansson / M. Coskun” (CUA); 1 ♀: “Turkey, Kizilen, 50 km N Erdemli, 2W. Window trap on an old *Quercus ithaburensis*. 07/7 2005 N. Jansson / M. Coskun” (CNJ).

DESCRIPTION (Habitus: Fig. 2): 8.6–12.3 mm long (4.1–5.8 mm, abdomen excluded). – Head, pronotum and elytra black, rather shiny; abdomen with first two visible segments black, third visible segment dark reddish testaceous, with a broad transverse black band, or entire segment black with only posterior margin narrowly but sharply dark reddish, remaining segments reddish, visible segments IV and V often to various extent transversely darkened in middle; antennae

black, bases of segments 2 and 3 to various extent reddish, last segment distinctly yellowish to reddish; palpi dark red brown to black brown, last segment of both maxillary and labial palpi usually markedly paler reddish than preceding segments, styli of tergite IX black, proximal third or half reddish; mandibles darker or paler reddish testaceous, usually blackened medio-basally; legs with femora dark brown to almost blackish, front tibiae reddish, middle and hind tibiae with strongly infusate medial faces, usually infusate medial and reddish lateral portions sharply delimited, sometimes reddish color shortly extending to medial face at base and apex of tibia, tarsi reddish.

Head quadrangular, distinctly transverse, 1.3–1.4 times as wide as long in males (1.25–1.3 times in females); eyes moderately large, hardly protruding; tempora parallel (males) or slightly convergent (females), longer than eyes in males (ratio 1.05–1.40), shorter than eyes in females (ratio 0.83–0.95); dorsal surface of head moderately densely, rather coarsely punctate, punctures separated by about 1–2 puncture diameters, clypeus (from base of antennal insertions to anterior margin) and a diffusely delimited portion along midline glabrous, entire surface between punctures with fine microreticulation of short, transverse and oblique meshes; antennae of males (Fig. 6) with segment 2 inconspicuously longer than 3, both slightly more than 2 times as long as wide, segment 4 about as long as wide, segments 5–10 distinctly transverse, slightly asymmetrical, antennae of females shorter than antennae of males, with segments 2–3 of about equal length, slightly less than 2 times as long as wide, segment 4 very small, inconspicuously transverse, segments 5–10 less distinctly transverse than those of males; mandibles long and slender, sickle-shaped; pronotum 1.06–1.11 times as long as wide, widest at level of large lateral seta, sides slightly convergent posteriad, hind angles not indicated, regularly rounded, surface multipunctate, punctures spaced as on head but slightly less coarse, with diffusely delimited impunctate midline, microreticulation as on head; scutellum large, very finely and densely punctate, punctuation inconspicuously asperate; elytra subparallel-sided, along sides markedly longer than pronotum along midline, with distinct transverse depression along posterior margin, rather finely punctate, punctures separated by about 1–1.5 puncture diameters in transverse direction on disc, becoming distinctly finer and denser in entirely punctate basal depression and near posterior margin, setation on disc blackish-reddish, distinctly pale golden in posterior fifth where punctuation becoming finer and denser, also around shoulders with golden silvery pubescence but less distinct than at posterior margin of elytra, hind wings fully developed; first three visible abdominal tergites with two basal lines, second basal line bent posteriad laterally, most distinctly on first visible tergite, elevated area between basal lines with a row of fine punctures on first visible tergite, with denser and almost pit-like punctuation on second and third visible tergites, punctuation dense and quite uniform in basal half of tergites, becoming more sparing toward posterior margin, being very obvious on third and fourth visible tergites (tergites VI and VII), tergite VIII very finely and sparingly punctate, posterior margin of tergite VII with whitish seam of palisade setae; male sternite VIII with broad, moderately deep medio-apical emargination, without semi-membranous extension, disc with three large primary setae on each side at about midlength; male sternite IX with long, asymmetrical, weakly sclerotized proximal portion, distal portion with distinctly emarginate apex.

Aedeagus (Fig. 10) very small; median lobe moderately slender, almost rod-like with subacute tip, apical portion slightly asymmetrical, in lateral view characteristically bent dorsad (away from paramere); paramere broad, very thin (usually deformed in dried condition), convexly widened in basal half, narrowed toward apex in almost straight line, apical margin subtruncate.

RECOGNITION: The species is easily recognized by the tuft of golden pubescence along the posterior margin of the elytra.

DISTRIBUTION: The species is at present known only from two places in southern Turkey (Prov. Mersin).

ETYMOLOGY: The name of the species is derived from the Latin words *aurum*, *-i* (gold) and *coma*, *-ae* (hair) and refers to the characteristic golden pubescence along the posterior margin of the elytra.

Hesperus gozukai sp.n.

Holotype ♂: "Turkey, Kizilen, 50 km N Erdemli, 4W. Window trap on an old *Quercus cerris*. H1250m 08/11 2005 N. Jansson / M. Coskun" (NMW). **Paratypes** (6 exs.): 1 ♀: "Turkey, Kizilen, 50 km N Erdemli, 1P. Pit-fall trap in a hollow *Quercus cerris* L. H1250m 04/5 2005 N. Jansson / M. Coskun" (NMW); 1 ♂: same as before (CNJ); 1 ♂: "Turkey, Devrent, 30 km N Erdemli, 13W. Window trap on an old *Quercus infectoria*. 11/8 2005 N. Jansson / M. Coskun" (CUA); 1 ♀: "Turkey, Devrent, 30 km N Erdemli, 18P. Pit-fall trap in a hollow *Quercus infectoria*. 17/6 2005 N. Jansson / M. Coskun" (CNJ); 1 ♂: "Turkey, Mersin, Gülnar 50 km N. Köseçobalı & Taşduştü 7P. Pit-fall trap in a hollow *Quercus* sp. H1480m 24/6 2006 M. Coskun & N. Jansson" (CSS); 1 ♀: "Turkey, Alanya, Dimçay, In a hollow *Quercus* sp. 1998-05-26, N. Jansson" (CSS).

DESCRIPTION (Habitus: Fig. 3): 9.0–13.0 mm long (5.0–6.1 mm, abdomen excluded). – The species resembles *H. auricomus* very closely but differs as follows:

Coloration very similar but abdominal segments VI–VIII showing trend towards being darker, particularly segment VIII (there is one specimen with entirely dark abdomen); distal antennal segments gradually becoming paler.

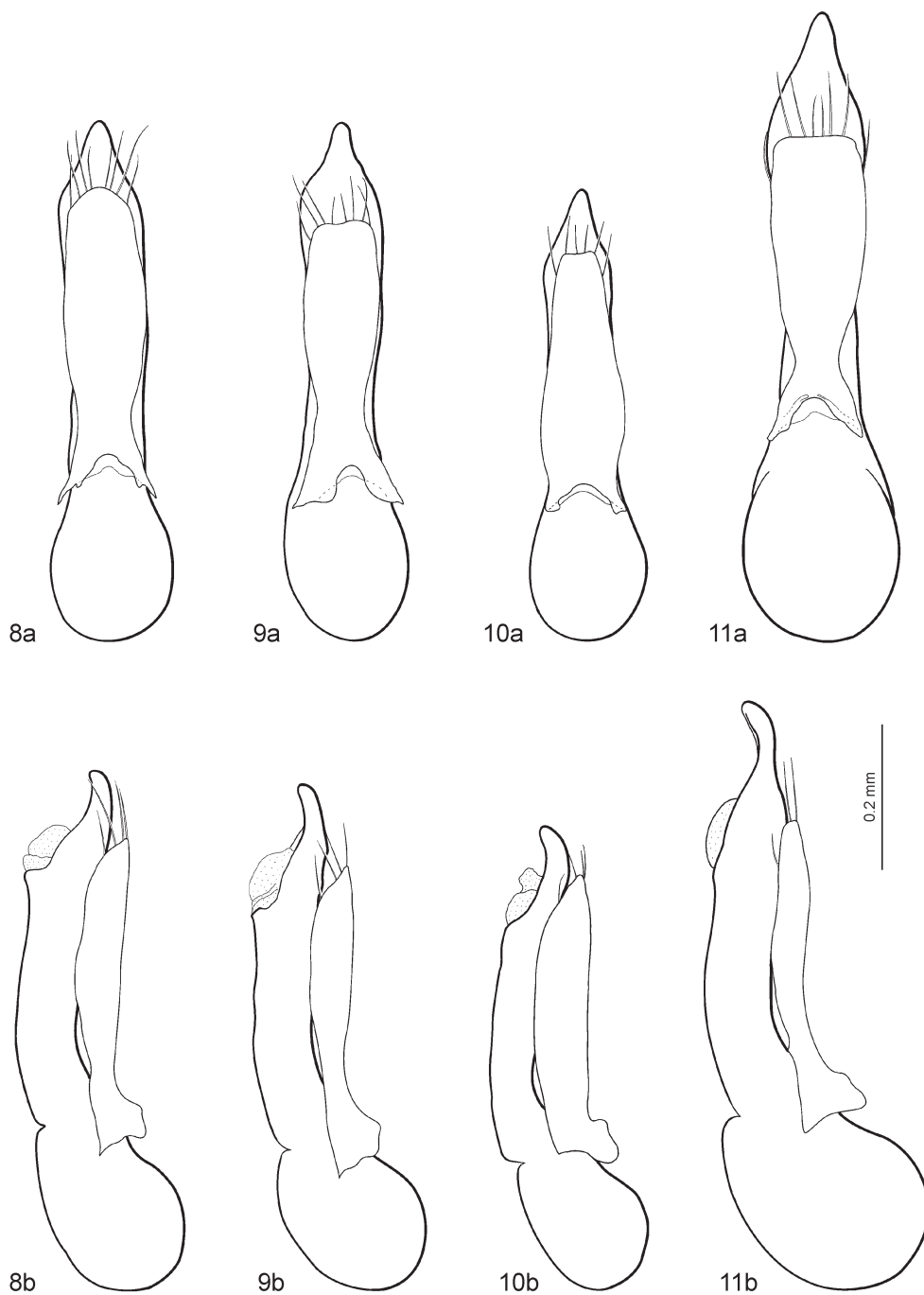
Head similarly shaped, distinctly wider than long (ratio: 1.35 in males, 1.25–1.30 in females), but with markedly longer tempora than in *H. auricomus*, 1.70–1.75 (males) or 1.25–1.33 (females) times as long as eyes; antennae (Fig. 7) with segments 5–10 much less transverse, about as long as wide; pronotum 1.05–1.13 times as long as wide, with sides more distinctly narrowed toward base; punctuation of head and pronotum similar to that of *H. auricomus* but with broader and better defined impunctate midline; scutellum somewhat broader, similarly punctate; elytra with glabrous basal depression, without conspicuous depression along posterior margin, punctuation similar but hardly becoming finer toward posterior margin, without golden pubescence in posterior fifth; male sternite IX with slightly longer and more distinctly curved proximal portion.

Aedeagus (Fig. 11) markedly larger than that of *H. auricomus*; median lobe similarly shaped in ventral view but with somewhat slenderer hook-like apical portion in lateral view; paramere very broad, with distinct constriction near base, distinctly widened till almost near apex, apically almost as wide as median lobe, apical margin almost perfectly straight.

RECOGNITION: Among the West Palearctic species of *Hesperus*, this species is easily recognized by the large size and black color of the fore body. From the similar *H. auricomus* it differs at once by the lack of the golden pubescence at the posterior margin of the elytra and by the hardly transverse antennal segments 5–10.

DISTRIBUTION: The species is at present known only from southern Turkey (Prov. Mersin and Prov. Alanya).

ETYMOLOGY: The species is named in honor of Mustafa Gözükar at the Turkish Forest Ministry in Mersin who has helped us with guidance and field equipment for collecting the remarkable material treated in this paper.



Figs. 8–11: Aedeagus of 8) *Hesperus rufipennis*, 9) *H. turcicus*, 10) *H. auricomus*, 11) *H. gozukurai*. – a) ventral view, b) lateral view.



Figs. 12–17: Habitats of *Hesperus* spp.: 12–13) Gülnar, 14–15) Kizilen, 16) Gülnar (window trap), 17) Kizilen (pitfall trap). Photographs by N. Jansson (12, 14, 15, 17) and M. Coskun (13, 16).

Key to West Palearctic species of *Hesperus*

- 1 Elytra reddish testaceous 2
- Elytra black 3
- 2 Penultimate antennal segments weakly transverse (Fig. 4) *rufipennis*
- Penultimate antennal segments distinctly transverse (Fig. 5) *turcicus*
- 3 Elytra with uniformly black pubescence, penultimate antennal segments about as long as wide (Fig. 7) *gozukai*
- Elytra with band of golden pubescence along posterior margin, penultimate antennal segments distinctly transverse (Fig. 6) *auricomus*

Bionomics

Hesperus rufipennis has been repeatedly reported (in litt.) to show a preference for hollows of deciduous trees, occasionally they are also sifted from leaf litter at the base of the respective trees. The Turkish species seem to be associated with old oaks (*Quercus* spp). The surveyed oaks are pollarded and sparsely distributed in a dry and grazed landscape at an altitude of 1140–1480 m. To collect the specimens window traps (Fig. 16) were placed in front of the tree holes and pit-fall traps (Fig. 17) were placed in the wood mould inside the hollow trunks of the trees. As preservative a 50:50 mixture of ethylene-glycol and water was used. A few drops of detergent were added to break the surface tension of the preservative. Habitat photographs: Figs. 12–17.

Other coleoptera species common in the same traps were: **Staphylinidae**: *Bisnius palmi* (SMETANA); **Tenebrionidae**: *Mycetochara quadrimaculata* (LATREILLE), *Hymenalia morio* (REDTENBACHER), *Allecula striata* THOMSON, *Alphitophagus bifasciatus* (SAY); **Aderidae**: *Aderus populneus* (PANZER); **Elateridae**: *Melanotus fusciceps* (GYLLENHAL), *Mulsanteus manuelae* (PLATIA & GUDENZI), *Pittonotus theseus* (GERMAR); **Histeridae**: *Merohister ariasi* (MARSEUL), *Dendrophilus punctatus* (LEWIS); **Dermestidae**: *Globicornis picta* (KÜSTER), *Ctesias syriaca* GANGLBAUER, *Attagenus quadrimaculatus* (KRAATZ); **Cryptophagidae**: *Cryptophagus immixtus* REY.

Zusammenfassung

Die westpaläarktischen Arten der Gattung *Hesperus* FAUVEL, 1874 werden behandelt. Drei neue Arten, alle in der südlichen Türkei entdeckt, werden beschrieben: *H. auricomus*, *H. gozukai*, *H. turcicus*. Die Fundumstände der neuen Taxa werden besprochen und ein Schlüssel soll die Bestimmung der westpaläarktischen *Hesperus*-Arten ermöglichen. Die männlichen Kopulationsorgane aller hier besprochenen Arten werden abgebildet. *Hesperus rufipennis* (GRAVENHORST, 1802) wird zum ersten Mal für Bulgarien gemeldet.

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