

***SYNANTHEDON RUBROCIINGULATA* SP. N. – A NEW SPECIES OF CLEARWING MOTHS FROM NORTH-WESTERN PAKISTAN (LEPIDOPTERA, SESIIDAE)**

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A new species, *Synanthedon rubrocingulata* sp. n., is described. It is similar to the West Palearctic species *Synanthedon stomoxyformis* (Hübner, 1790). The new species is collected in north-western Pakistan, Chitral province using pheromone trap. Bionomics and host plant are unknown.

Key words: *Synanthedon rubrocingulata* sp. n., Sesiidae, Lepidoptera, Chitral, Pakistan.

INTRODUCTION

The genus *Synanthedon* (sensu auctorum) comprises an extensive group of clearwing moths which inhabit practically all zoogeographic regions. It includes mainly xylophagous species and so far represents the most species-rich genus within family of clearwing moths. Within Palearctic fauna, most of the members of this genus can be placed into species groups partly containing large numbers of closely related species which are often found only in small distribution ranges, suggesting relatively recent species radiations (Kallies, 2003). While the rhizophagous genera from the tribe Synanthedonini Niculescu 1964 are mainly well defined monophyletic groups, the genus *Synanthedon* in the present concept, is likely to be paraphyletic (Lastuvka 1992, Kallies 2003). In most cases, Palearctic *Synanthedon* species can be differentiated clearly by external and genitalic characters.

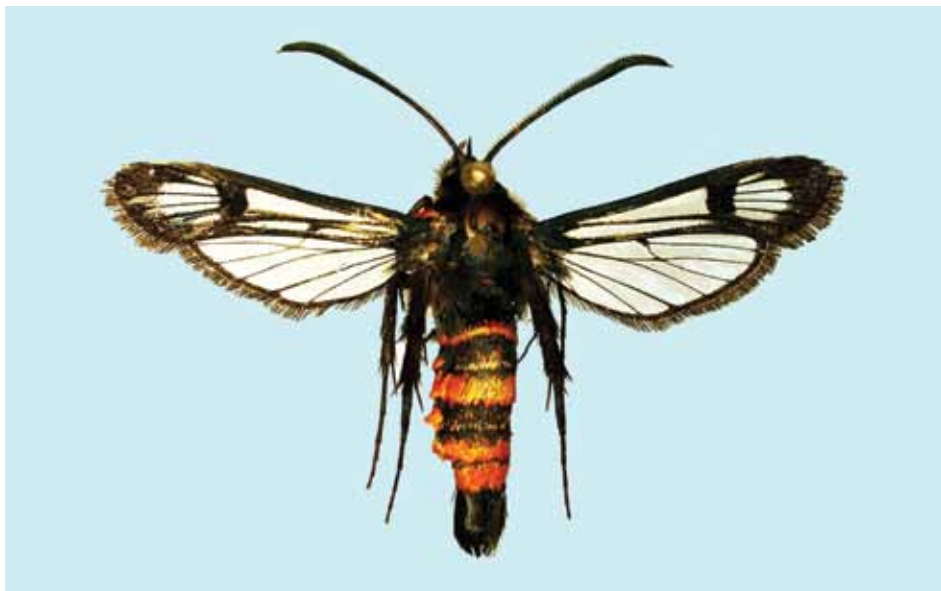
A comprehensive study of strictly allopatric species from *S. culiciformis* group gave new insights into species radiation within some group species from the genus

Synanthedon (Kallies, 2003). The Holarctic *Synanthedon culiciformis* shows circumpolar distribution with records from all over Palearctic and west part of North America, while closely related species south-western Caspian *S. talishensis* and the south Anatolian *S. pamphyla* are restricted to the Talish, south of the Caspian Sea and to the southern Toros Mts of Anatolia, respectively (Kallies 2003). In addition, Kallies, 2003, assumed that glacial oscillations and geographic separation may lead to differentiation of the particular populations inside narrow geographic range, supporting this statement with significant genetic divergence between them. In this paper we describe new species from North West Pakistan which is related with red-banded species group from the genus *Synanthedon*.

***Synanthedon rubrocingulata* sp. n.**

M a t e r i a l. Holotypus, male, North West Pakistan, Chitral, Kalam, 2500 m, 1.07.2006, lgt. Jerome Pages., in collection of MNHN (Muséum National d'Histoire Naturelle, Paris, France)

Description of holotype, (Picture 1). Alar expanse 32 mm, body length 18 mm, forewing length 14 mm, antenna 10 mm.



Picture 1 – *Synanthedon rubrocingulata* sp. n., Holotypus, North West Pakistan, Chitral, Kalam, 2500 m, 1.07.2006, lgt. Jérôme Pagés.

Slika 1 – *Synanthedon rubrocingulata* sp. n., Holotip, Severozapadni Pakistan, Čitral, Kalam, 2500 m, 1.07.2006, lgt. Jérôme Pagés.

Antenna: black with blue sheen. Head: black almost throughout; frons black, pericephalic scales black, posteriorly gray-brown; labial palpus black.

Thorax: black with orange-red scapular spot; mesothorax with black-grayish hairlike scales dorso-laterally. Legs: entirely black with discrete bluish sheen;

Abdomen: black with discrete blue sheen; tergites 2, 4, 6 and 7 dorsally with a wide red orange band along posterior margin, laterally with orange red spots; tergites 3 and 5 with a broad orange-red posterior margin; sternites 2-7 entirely orange-red; anal tuft completely black.

Forewing: black with transparent areas well-developed; discal spot of the forewing black, relatively large, a bit longer than wide; ATA (anterior transparent area) entirely transparent reaching discal spot; PTA (posterior transparent area) well-developed, transparent, reaching under discal spot; ETA (external transparent area) elongated round, relatively large, about twice broader than discal spot, divided into five transparent cells; apical area black; veins, costal and anal margins dorsally and ventrally black; fringe black.

Hindwing: transparent with black with relatively narrow discal spot which reaches M₃; ventrally basal portion of the costal margin black with scarce orange scales.

Genitalia of the holotype (Picture 2). Scopula androconialis large, well developed; gnathos distinct with all three crista well developed; crista medialis of the gnathos is as twice as broad than lateral crista, distally ending rectangular to its ventral margin. Valva trapeziform, with long and somewhat raised crista sacculi, obliquely situated, nearly reaching 1/2 of valva length, slightly hook-shaped apically. Aedeagus bulbous basally, as long as valva length.

Differential diagnosis: *S. rubrocingulata* sp. n. is very distinct species possessing red banded abdominal segments. Habitually the newly described species is similar to *S. stomoxiformis*, which possesses only single red band on 4th abdominal tergite. The difference on genital morphology are even more distinct, with crista medialis of the gnathos which is significantly narrow comparing well developed and broad in *S. rubrocingulata* sp.n. Topology of crista sacculi is also distinct. In *S. tomoxiformis*, crista sacculi forming a slightly convex twisted line reaching nearly apex valvae, while in *S. rubrocingulata* sp.n. crista sacculi is oblique situated reaching 1/2 of valva length.

Bionomics. The single specimen (holotypus) of the new species has been collected using commercial pheromone traps (Wageningen, Netherlands) The life cycle is probably biannual due to fact that species inhabit altitudes over 2500m. The host plant and biology is unknown.

Etymology. The new species is named after distinct red bands on the abdominal segments.



Picture 2 - *Synanthedon rubrocingulata* sp. n., male genitalia: aedeagus (left), uncus-tegumen (middle), valva (right).

Slika 2 - *Synanthedon rubrocingulata* sp. n., genitalije mužjaka: aedeagus (levo), uncus-tegumen (sredina), valva (desno).

REFERENCES

- Kallies, A. (2003): *Synanthedon pamphyla* sp. n. from southern Turkey with a comparative analysis of mitochondrial DNA of related species (Sesiidae). *Nota lepidopterologica* 26 (1/2), 35–46.
- Laštůvka, Z. (1992): Zur Systematik der paläarktischen Gattungen der Tribus *Synanthedonini*. 1. Morphologie und Klassifikation (Lepidoptera, Sesiidae). *Acta Universitatis Agricoltrae, Brno (A)* 38(1990), 221–233.
- Špatenka, K., Gorbunov, O.G., Laštůvka, Z., Toševski, I., Arita, Y. (1999): Sesiidae – Clearwing Moths. In: C. M. Naumann (ed.), *Handbook of Palaearctic Macrolepidoptera*. Vol. 1, 569 pp. – Gem Publishing, Company, Wallingford, England.

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SYNANTHEDON RUBROCIINGULATA SP. N. – NOVA VRSTA STAKLOKRILCA (LEPIDOPTERA, SESIIDAE) IZ SEVEROZAPADNOG PAKISTANA

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REZIME

U ovom radu prikazan je opis vrste *Synanthedon rubrocingulata* sp. n. Novoopisana vrsta je slična vrsti *S. stomoxyformis* (Hübner, 1790) iz zapadnog Palearktika. Nova vrsta je ulovljena na feromonske klopke u Čitral provinciji (severno-zapadni Pakistan). Biologija i biljka domaćin novoopisane vrste je nepoznata.

Ključne reči: *Synanthedon rubrocingulata*, Sesiidae, Lepidoptera, Chitral, Pakistan.

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