

**Lectotype fixation and male imago distinguishing characters of *Rhithrogena gorganica*  
(Ephemeroptera: Heptageniidae)**

**Stanovení lektotypu a rozlišovací znaky samčího imága *Rhithrogena gorganica*  
(Ephemeroptera: Heptageniidae)**

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**Ephemeroptera, taxonomy. Heptageniidae, *Rhithrogena gorganica*, lectotype, type locality, adult male distinguishing characters**

**Abstract.** To determine at least intraspecific variability of the species, the lectotype and paralectotype of *Rhithrogena gorganica* Klapálek, 1907 based on the only 2 adult male pinned specimens of the original syntype series deposited in National Museum, Praha have been fixed and illustrated. Incomplete and somewhat confusing type locality data are discussed and the locality is defined, as follows: Ukraine, Ivano-Frankiv'sk Region, the Gorgany mountain range, S slope of the Khomyak Mt., Barani stream, 700-1200 m a.s.l. Critical characters of adult males distinguishing *R. gorganica* from other species of *R. loyolaea* Navás, 1922 and *R. semicolorata* (Curtis, 1834) species-groups are discussed and literature data on distribution of this species are reviewed.

## INTRODUCTION

Nearly a century ago, Klapálek (1907: 32) described the species *Rhithrogena gorganica* from the East Carpathians. This description is based on adult males collected by J. Dziędzielewicz at two localities in Ukraine. Dziędzielewicz (1919) completed the original Klapálek's description of adults on the basis of material collected at another locality nearby, however original description was not precised. Adults of this species were mentioned by Šámal (1931) who published a very schematic figure of genitalia of a specimen collected in the same region ("Podkarpatská Rus" by Šámal l. c., without any detailed data). Since then this species had not been mentioned till 1971 when Sowa (1971: 29) redescribed male imago and described, for the first time, females, subimagos and larvae collected in the Bieszczady Mts. in Poland (see also Sowa 1975a,b). However, Sowa (1971) had no possibility to study the Klapálek's type and his identification of *R. gorganica* is based solely on comparison of his material with original description. Although *R. gorganica* seems to be endemic to the Eastern Carpathians (Mikulski 1933, Puthz 1978) and earlier records on its distribution in the Balkan Peninsula (Šámal 1935a,b) are most probably not correct and confusing, individual populations show a pronounced, at least intraspecific, variation in critical morphological distinguishing characters. Recently, a large number of specimens of all developmental stages was collected in Poland (Kukuła 1991, 1995), Ukraine (Sinichenkova 1973a,b, Godunko 2000) and Slovakia (Novikmec & Krno 1998). There is no doubt that the name "*Rhithrogena gorganica*" is applied without any discrimination and its fixation is at least very

problematic from the strict taxonomical point of view since no recent material has not been compared to Klapálek's types so far.

Klapálek (1907) did not designate the holotype specimen and his very short description contained nearly no information on morphological details of male genitalia in addition to some confusing data (e. g. those on the absence of titulators). Consequently, a detailed description of type material seems to be urgently needed in order to provide a necessary base for future taxonomic revision of the whole respective species-group (Godunko & Kłonowska-Olejnik, in prep.).

The objective of this paper is to fix the lectotype and paralectotype and to define type locality of this species, to provide as much as possible detailed description of the type material and to define critical distinguishing characters of adult male separating this species from closely related species of the *Rhithrogena loyolae* Navás, 1922 species-group.

### SYNTYPE SERIES AND TYPE LOCALITY

Although Klapálek (1907: 33) mentioned altogether 6 adult males in his original description, only 2 specimens discussed below are contained in his collection deposited in the National Museum in Praha at the present time. The fate of remaining specimens of this type series is unknown. Šámal (1930) having revised the Klapálek's collection did not state the number of specimens present here. Most probably, remaining 4 specimens did not get to the National Museum or were destroyed long time ago. The only information on type series available is that by Sowa (1971): "MM V. Landa et J. Dlabola de Prague ont bien voulu m'informer que la collection originale de Klapálek, déposée au Musée National à Prague, comporte entre autres les deux imagos mâles secs de *R. gorganica*, en état assez bon, provenant du territoire des récoltes de Dziędzielewicz (le mont Chomiak, Gorgany), donc appartenant probablement à la série type". Apparently, no more original type series material is available since also remaining specimens of Dziędzielewicz (1919) collected at the same area (Roskuls'kyi stream, northern slope of the Khomyak Mt.) are lost or at least missing. Although they might be deposited in Dziędzielewicz's collection in L'viv or in its part in Kraków, they cannot be used to fix lectotype or to define the type locality anyway (ICZN, Article 74.1., Recommendation 74.7.).

The original type series by Klapálek (1907) actually representing syntypes according to ICZN Article 73.2. are mentioned, as follows: "Chomiak, potok Barania, 14./VII. 1906 (3 ♂♂), 10./VII. (2 ♂♂), potok Bogdan 1./VII. 1905 (1 ♂), leg. Jós. Dziędzielewicz". However, the only two specimens preserved are actually labelled by a rather different way: "Chomiak, pot. Barani, 10.-7.-1905. Dz." and "Chomiak, Barania. 14.-7.-1906. Dz. źródło", respectively. Evidently, the original labels were written by the hand of J. Dziędzielewicz, since identical labels occur in his collection in the State Museum of Natural History, National Academy of Science of Ukraine in L'viv. Data presented in the original description seem to be a little confusing mixing the geographical names of the Baran'ya Polonyna (= a part or slope of the Khomyak Mountain) and the Baranii potok (= a stream or water course). Not knowing detailed topography of this area, Klapálek (1907: 33) apparently summarized data actually concerning two different places into a single statement ("Chomiak, potok Barania"). Moreover, the proper elevation of these localities cannot be determined in the former case although the source of the stream (the latter locality, źródło = source) is situated at about 1100-1200 m a.s.l. Since we decided to fix the lectotype on the basis of the former specimen, we define, according to the Recommendation 74.7. of ICZN,

the type locality of *Rhithrogena gorganica* Klapálek, 1907, as follows: Ukraine, Ivano-Frankivs'k Region, the Gorgany mountain range, S slope of the Khomyak Mt., Baranii stream, 700-1200 m a.s.l.

#### FIXATION OF LECTOTYPE

(Figs 1-5)

Lectotype (dried pinned specimen, imago male, parts on slides) originally labelled "Chomiak, pot. Barani, 10.-7.-1905. Dz." and designated as such by R. Godunko and T. Soldán (October, 1999) is deposited in the collection of National Museum (Department of Entomology) in Praha, Czech Republic, under the Cat. No. 50 001.

Measurements: Length of head and thorax: 4.56 mm, length of fore wing 14.84 mm, length of cerci 33.40 mm (abdominal segments II-VII missing).

Description: Head and thorax generally brownish black dorsally, ventral sides paler, light brown. Eyes greyish black, bordered with narrow yellowish stripes well apparent in lateral view, ocelli paler. Fore wings unicolorous, translucent, light brownish, wing and costal area darker, brownish. Costa and subcosta of fore wings dark brown, other longitudinal veins and cross veins paler, light brown, of the same colour as wing membrane. Pterostigma with simple, unbranched veins. Hind wings of the same colour as fore wings. Fore legs dark brown (femora and tibiae, tarsi lost). Middle and hind legs pale brown or yellowish brown, apical portion of femora light brown, tibiae and tarsi yellowish. Abdominal segments dark brown, unicolorous, without markings, terga IX and X brownish. Nerve ganglia hardly distinguishable. Cerci light brown.

Styliger (forceps base, Figs 1, 2) and forceps segments 1 dark brown, segments 3 of forceps lost. Surface of styliger smooth, no structures apparent (cf. Klapálek 1907: 32). Posterior margin of styliger with two rounded lateral lobes, medially arcuately incurved (Figs 1-2). Colouration of these structures is apparent from Fig. 2. Penis dark brown, with a few lighter spots on medial and apical parts of lobes. Penis lobes (Fig. 3) slightly divergent, relatively short, not tapered, apical part conspicuous, right-angled and bluntly pointed projection well apparent in ventral view. Inner (dorsal) spines short and pointed, not visible in ventral view. Medial part of penis covered a membranous structure with straight posterior margins (Fig. 3). Titilators (Figs 4-5) relatively large, oblong-shaped and well apparent, approximately as long as one fifth of the penis lobe length and about 2.5-3 times longer than broad. Their lateral sides parallel or nearly parallel, apical margin perpendicular or moderately oblique to lateral sides, with 4-5 asymmetric teeth oriented outwards. Further smaller teeth occur on the surface of both titilators (Figs 4-5).

#### FIXATION OF PARALECTOTYPE

(Figs 6-8)

Paralectotype (dried pinned specimen, imago male, parts on slides) originally labelled "Chomiak, Barania. 14.-7.-1906. Dz. źródło" and designated as such by R. Godunko and T. Soldán (October, 1999) is deposited in the collection of National Museum (Department of Entomology) in Praha, Czech Republic, under the Cat. No. 50 002.

Measurements: Length of head and thorax and abdominal segments I-VIII: 10.64 mm, length of fore wings: 14.01 mm. Cerci missing.

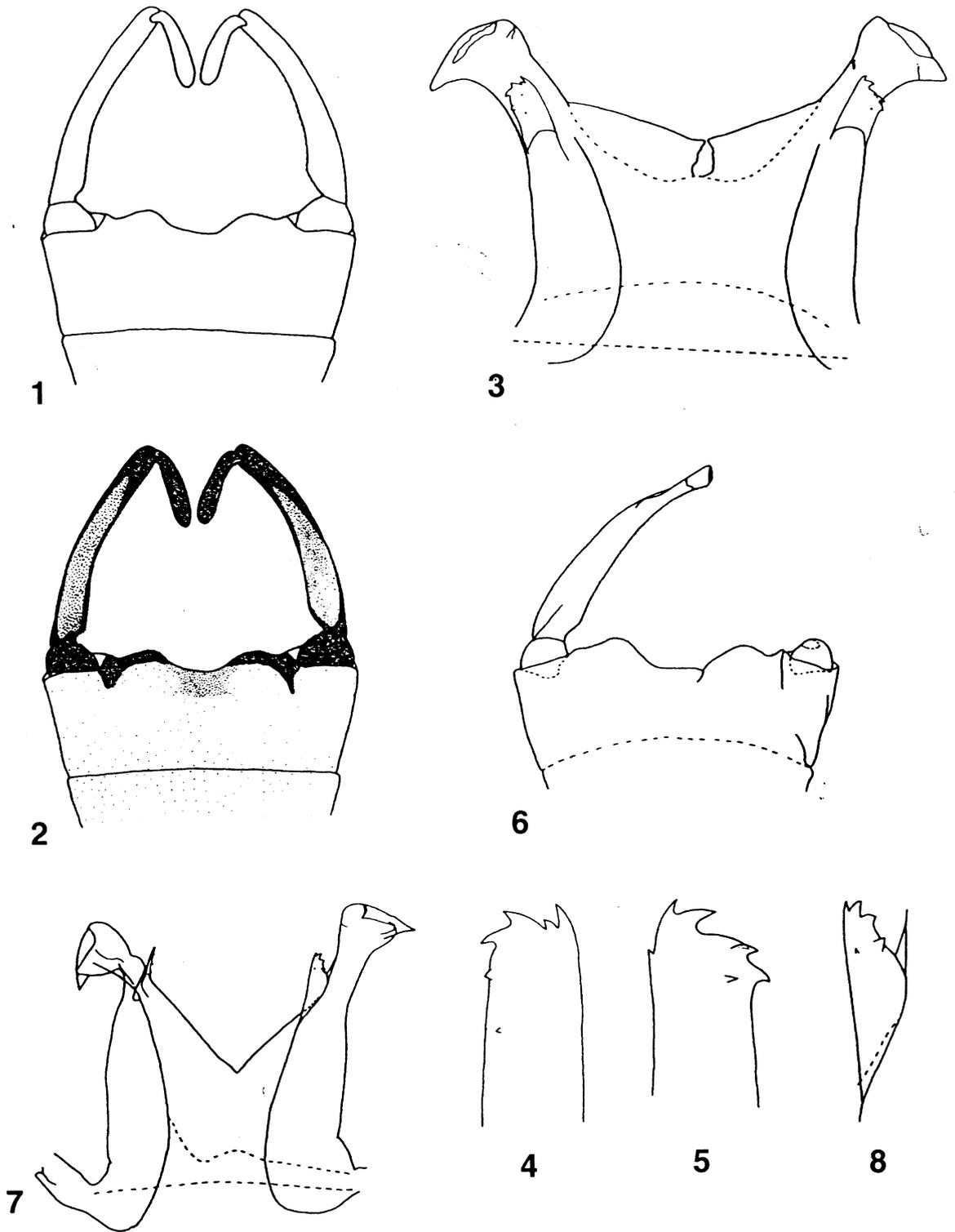
Description: Body generally dark brown, head darker than thorax and abdomen. Eyes greyish black, yellowish bordered as in lectotype, ocelli paler. Thoracic nerve ganglia not apparent. Fore and hind wings translucent, light brownish. Wing membrane of costal area and wing base intensively brown in fore wings, longitudinal veins in costal and subcostal area apparently stronger, dark brownish. Pterostigma as in lectotype. Right fore leg missing, left fore leg dark brownish with indistinct, diffuse dark smudge on femora. Middle and hind leg (right middle leg missing) brownish, tibiae and tarsi slightly paler, femoral smudges as in fore leg. Abdominal terga brownish, unicoloured without distinct marking but with dark brown-reddish smudges laterally, sterna lighter, with distinguishable nerve ganglia. Light markings consisting of a pair of short divergent strips and a pair of small rounded spots near nerve ganglia well apparent on the sterna I-III.

Styliger (forceps base) brownish, slightly paler than abdominal terga. Forceps brownish, heavily damaged, most parts missing (Fig. 6). Hind margin of styliger as in lectotype although medial incurvation deformed on slide. Penis lobes as in Fig. 7, generally resembling those of the lectotype although apparently deformed on slide. Medial membranous structure generally resembling those of the lectotype. Left titilator damaged or mounted in an oblique position, right titilator (Fig. 8) wider at base than at the apex, contrary to the lectotype. Arrangement of titilator spines similar to that of the lectotype.

## DISCUSSION

As usual in pinned dried specimens of mayflies, both lectotype and paralectotype are damaged in a certain way. We decided to fix lectotype on the basis of more damaged specimen since its external genitalia bearing the most important diagnostic characters were preserved in original condition. The genitalia of the second specimen (here fixed as paralectotype) were mounted in the Canada balsam earlier and they are rather deformed as shown in Figs 6-8, probably due to not correct procedure of treatment of the original material. Subsequent treatment of these slides seemed to be problematic and thus we abandoned the idea to make new slides from this (paralectotype) specimen.

In his original description written in Latin and Czech, Klapálek (1907: 32-33) provided only a very brief and short diagnosis of male adults accompanied by rather schematic drawing of male genitalia from the ventral view. Both Latin and Czech diagnoses perfectly correspond to specimens preserved although naturally omitting details now required to distinguish *Rhithrogena gorganica* from other species of the respective species-groups. There are only several evident differences between his description and actual morphological characters seen on lectotype and paralectotype. Klapálek (l. c.) mentioned the absence of titilators in *R. gorganica* the characters later cited e. g. by Šámal (1931) and Zelinka (1953) when describing related species *Rhithrogena tatica*. Actually, as noted by Sowa (1971) males of *R. gorganica* possess well developed titilators like any other species of its respective species-group and titilators were simply overlooked in dried specimens. Rounded depression mentioned and figured in his original description actually represents an artefact arising from drying of specimens. In fact, there is not any similar structure when studying fresh or alcohol-preserved material and similar structures do not exist in any *Rhithrogena* Eaton, 1881 species, as far as we know. As to measurements and tarsal segment ratio, there are no differences between lectotype/paralectotype data and the value range in original description ("Articulatorum maris tarsorum ratio 12:47:47:32:14 ... Long. corporis 12 mm, alarum antic.: 12-15 mm, setarum 35 mm", Klapálek l. c.).



Figs 1-8: External male genitalia of *Rhithrogena gorganica* Klapálek, ventral view: 1 - lectotype, styliger and forceps; 2 - lectotype, colour patterns; 3 - lectotype, penis; 4-5 - lectotype, left and right titilators; 6 - paralectotype, styliger and forceps; 7 - paralectotype, penis; 8 - paralectotype, right titilator.

Obr. 1-8: Vnější genitálie samce *Rhithrogena gorganica* Klapálek, ventrální pohled: 1 - lektotyp, styliger a gonostyly; 2 - lektotyp, zbarvení; 3 - lektotyp, penis; 4-5 - lektotyp, levý a pravý titilátor; 6 - paralectotyp, styliger a gonostyly; 7 - paralectotyp, penis; 8 - paralectotyp, pravý titilátor.

Since one of us collected fresh material at one of the Klapálek's original localities in the Bogdan stream (Godunko 2000) we can compare type material as far as natural colouration is concerned. General wing colour darker in type material, more translucent and paler wings occur in fresh specimens. Pterostigma of type specimens is hardly distinguishable, coloured in a similar way as costal area. In fresh material, pterostigma well apparent, greyish light brown, darker than costal area (cf. "Alae vitrinae, are costali et subcostali pallido, pterostigmate plus saturato brunneis" in original description). Abdominal nerve ganglia of lectotype specimen are hardly distinguishable while they are conspicuously pigmented in fresh ones tinged with violet as partly preserved in the paralectotype including characteristic markings on first abdominal sterna (cf. Sowa 1971: 31).

Naturally, although comparing his species with nearly all species of the genus known at that time (*Rhithrogena nivata* Eaton, 1871, *R. henschi* Klapálek, 1906, *R. semicolorata* (Curtis, 1834), and *R. aurantiaca* (Burmeister, 1837)) Klapálek (l. c.) was not able to define its differential diagnosis except for the statement that "... Penis tubulae *R. semicoloratae* simillimae". Modern taxonomic knowledge of the genus *Rhithrogena* range *R. gorganica* to the *R. loyolaea* species-group as defined by Sowa (1984) and later discussed e. g. by Sowa & Soldán (1986), Sowa & De-grange (1987) and Sartori & Oswald (1988). This species-group comprises, besides *R. gorganica* also *R. loyolaea* Navás, 1992, *R. zelinkai* Sowa et Soldán, 1984, and *R. tatica* Zelinka, 1953 (if this species is not conspecific with *R. loyolaea*, as indicated e. g. by Tomka & Rash (1993) or Krno & Valachová (1999)). According to adult male morphological characters, this group seems to be most related to the *Rhithrogena semicolorata* (Curtis, 1834) and *Rhithrogena germanica* Eaton, 1885 species-groups as defined by Sowa (1984) containing further 10 species (the "*Rhithrogena laevigata*-Gruppe, *R. semicolorata*-Untergruppe" according to Tomka & Rash (1993)). Larvae of the above species are relatively well known and can be distinguished according to existing keys (Sowa 1984, Tomka & Rash 1993, Soldán & Landa 1999) although those of assigned to *R. gorganica* were described recently (Sowa 1971, Godunko 2000). On the other hand, critical distinguishing characters of adults need more attention to be paid. The only reliable data on *R. gorganica* are those published by Sowa (1971). However, he did not study type material and his material originated from different locality than Klapálek's type series. Naturally, variability of this species could not be defined. In order to define this species properly we present the combination of the following characters to distinguish male adults of *R. gorganica* from related species: (1) eyes laterally light bordered, (2) Fore wings nearly unicolorous, pterostigma with straight, not branched cross veins, (3) femora with inconspicuous diffused longitudinal darker smudges in the middle of the outer side, (4) abdomen unicolorous, no oblique posterolateral spot or smudges apparent on terga, (5) abdominal nerve ganglia conspicuous, well visible, dark brownish tinged with violet, (6) abdominal sterna with characteristic paler markings of a pair of short divergent strips and a pair of small rounded spots near nerve ganglia, (7) hind margin of styliger with a pair of apparent rounded lateral lobes and medial incurvation (8) penis lobes with well apparent posterolateral bluntly pointed projections well visible in ventral view, (9) membraneous structure with sclerotized, straight posterior margins well developed between penis lobes, and (10) titillators large, oblong-shaped with parallel lateral margins and numerous both apical and subapical teeth. The characters (5, 8, 10) seem to be, except the above combination, species-specific characters the most important to distinguish the male of this species. The character (9) needs to be studied more in the future since they are present in all the populations of *R. gorganica* so far described but their detailed arrangement seems to be evidently different.

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## REFERENCES

- DZIEDZIELEWICZ J. 1919: Owady siatkoskrzydłowe ziem Polskich. [Neuropteroid insects of the Polish countries]. *Rozpr. Wiad. Muż. Dziedusz.*, 3: 105-169 (in Polish).
- GODUNKO R. J. 2000: Little Known Species of the Genera Rhithrogena and Electrogena (Ephemeroptera, Heptageniidae) from Ukraine. *Vestn. Zool.*, Suppl. 14: 60-66.
- KLAPÁLEK F. 1907: Příspěvek k znalosti zvířeny chrostíků a jepic Vých. Karpat. Additamentum ad Trichopterorum ac Ephemeroptorum in Karpathibus Orientalibus faunae cognitionem. *Čas. Čes. Společ. Entomol.*, 4: 24-36 (in Czech and Latin).
- KŁONOWSKA-OLEJNIK M. 1997: Monitoring jętek (Ephemeroptera) w potokach Bieszczadzkiego Parku Narodowego. [Monitoring of mayflies (Ephemeroptera) in streams of the Bieszczady National Park]. *Roczniki Bieszczadzkie*, 6: 313-318 (in Polish).
- KRNO I. & VALACHOVÁ S. 1999: Changes in macrozoobenthos of the Revúca River basin (The Vel'ká Fatra Mountains) during the period 1971-1993. *Ekológia* (Bratislava), 18: 310-324.
- KUKUŁA K. 1991: Mayflies (Ephemeroptera) of the Wołosatka stream and its main tributaries (The Bieszczady National Park, south-eastern Poland). *Acta Hydrobiol.*, 33: 31-45.
- KUKUŁA K. 1995: Life cycle of selected species of mayflies (Ephemeroptera) of the Wołosatka and Terebowiec stream (The Bieszczady National Park, south-eastern Poland). *Acta Hydrobiol.*, 37: 213-224.
- MIKULSKI J. 1933: Próba charakterystyki zoogeograficznej jętek (Ephemeroptera) fauny Polski. [An attempt of zoogeographical characteristics of mayflies (Ephemeroptera) of the Polish fauna]. *Pam. XIV Zjazdu Lek. i Przyrod. Pol.* (Poznań): 476-478 (in Polish).
- NOVIKMEC C. & KRNO I. 1998: First record of Rhithrogena gorganica (Ephemeroptera) from Slovakia. *Biología* (Bratislava), 53: 188.
- PUTHZ V. 1978: Ephemeroptera, pp. 256-263. In: ILLIES J. (ed.): *Limnofauna Europaea*. Gustav Fischer Verlag, Stuttgart, 862 pp.
- ŠÁMAL J. 1930: Klapáلكova sbírka jepic (Ephemeroptera) v Národním museu v Praze. [Klapálek's collection of mayflies (Ephemeroptera) in the National Museum in Prague]. *Sborn. Entomol. Odd. Nár. Mus. v Praze*, 8: 53-54 (in-Czech).
- ŠÁMAL J. 1931: Poznámky k revisi československých jepic. [Notes to the revision of Czechoslovak mayflies]. *Čas. Čs. Společ. Entomol.*, 28: 56-58 (in Czech).
- ŠÁMAL J. 1935a: Ephémères et les Pléoptères des ruisseaux de la Jougosl. Meridionale. *Verh. Internat. Ver. Theor. Angew. Limnol.*, 7: 113-116.
- ŠÁMAL J. 1935b: Ephemera et Plecoptera Balcanica. *Čas. Čs. Společ. Entomol.*, 32: 1-5.
- SARTORI M. & OSWALD R. 1988: Rhithrogena grischuna nov. sp., a new mayfly species from eastern Switzerland related to R. hercynia Landa, 1969 (Ephemeroptera; Heptageniidae). *Ann. Limnol.*, 24: 261-268.
- SINICHENKOVA N. D. 1973a: K poznaniyu roda Rhithrogena Eaton. (Ephemeroptera, Heptageniidae). [To the knowledge of the genus Rhithrogena Eaton. (Ephemeroptera, Heptageniidae)]. *Vestn. Moskov. Univ.*, 3: 16-22 (in Russian).
- SINICHENKOVA N. D. 1973b: Lichinki podenok palearkticheskikh vidov roda Rhithrogena Eaton. (Ephemeroptera, Heptageniidae). [Mayfly larvae of Palearctic species of the genus Rhithrogena Eaton. (Ephemeroptera, Heptageniidae)]. *Vestn. Moskov. Univ.*, 5: 9-17 (in Russian).
- SOLDÁN T. & LANDA V. 1999: A key to the Central European species of the genus Rhithrogena (Ephemeroptera: Heptageniidae). *Klapalekiana*, 35: 25-37.
- SOWA R. 1971: Note sur les deux espèces de la famille Heptageniidae (Ephemeroptera) des Carpathes polonaises. *Acta Hydrobiol.*, 13: 29-41.
- SOWA R. 1975a: Ecology and biogeography of mayflies (Ephemeroptera) of running waters in the Polish part of the Carpathians. 1. Distribution and quantitative analysis. *Acta Hydrobiol.*, 17: 223-297.
- SOWA R. 1975b: Ecology and biogeography of mayflies (Ephemeroptera) of running waters in the Polish part of the Carpathians. 2. Life cycles. *Acta Hydrobiol.*, 17: 319-352.
- SOWA R. 1984: Contribution à la connaissance des espèces européennes de Rhithrogena Eaton (Ephemeroptera, Heptageniidae) avec le rapport particulies aux espèces des Alpes et des Carpatas, pp. 37-52. In: LANDA V., SOLDÁN T. & TONNER M. (eds.): *Proc. IVth Internat. Confer. Ephemeroptera*. Czechoslovak Acad. Sci., České Budějovice, 286 pp.
- SOWA R. & DEGRANGE C. 1987: Taxonomie et repartition des Rhithrogena Eaton du groupe alpestris (Ephemeroptera, Heptageniidae) des Alpes et des Carpatas. *Pol. Pismo Entomol.*, 57: 475-493.

- TOMKA I. & RASCH P. 1993: Beitrag zur Kenntnis der europäischen Rhithrogena-Arten (Ephemeroptera, Heptageniidae): *R. intermedia* Metzler, Tomka & Zurwerra, 1987 eine Art der alpestris-Gruppe sowie ergänzende Beschreibungen zu fünf weiteren Rhithrogena-Arten. *Mitt. Schweiz. Entomol. Ges.*, 66: 255-281.
- ZELINKA M. 1953: K poznání jepic (Ephemeroptera) Vysokých Tater. [To the knowledge of mayflies of the High Tatra Mts., with a description of *Rhithrogena tatica* n. sp.]. *Spisy Přírodověd. Fak. Masaryk. Univ.* (Brno), 348: 157-167 (in Czech).

## SOUHRN

Druh *Rhithrogena gorganica* Klapálek, 1907 byl popsán z Východních Karpat na základě 6 samců sbíraných v letech 1905-1906 J. Dziędzielewiczem. Z původní syntypové serie (holotyp označen nebyl) se zachovali pouze dva na sucho preparovaní jedinci; tento materiál je uložen ve sbírce Entomologického oddělení Národního muzea v Praze. Od té doby byl tento druh nalezen v Polsku, na Slovensku i na jiných místech na Ukrajině. Srovnání tohoto materiálu s typovou serií však nikdy provedeno nebylo a je velmi pravděpodobné, že řada současných nálezů se týká jiného či jiných příbuzných druhů ze skupiny *Rhithrogena loyolaea*. Navíc, původní popis je velmi stručný, neobsahuje charakteristiku kritických diagnostických znaků a vyobrazení jsou velmi nepřesná. Tato práce se zabývá především stanovením těchto diagnostických znaků samčích dospělců na základě první revize původního typového materiálu a jeho srovnání s materiálem pocházejícím z typové lokality. Je stanoven lektotyp (jedinec kat. č. 50001, Národní muzeum Praha) a paralektotyp (jedinec kat. č. 50002, táž sbírka) a diagnostické znaky (především uspořádání gonopodů a styligeru a tvar laloků penisu i titilátorů) obou jedinců jsou vyobrazeny.

Na základě rozboru nekompletních a poněkud nepřesných původních údajů je podle doporučení ICZN nově stanovena také typová lokalita druhu: „Ukraine, Ivano-Frankivs'k Region, the Gorgany mountain range, S slope of the Khomyak Mt., Baranii stream, 700-1200 m a.s.l.“. Jsou shrnuty literární údaje o rozšíření druhu a diskutují se kritické diagnostické znaky odlišující samce *R. gorganica* od ostatních druhů příbuzných druhových skupin *R. loyolaea* a *R. semicolorata*. Fixace druhu *R. gorganica* Klapálek, 1907 umožňuje jak zavedení nových determinačních znaků do existujících klíčů, tak i revizi materiálu shromážděného v poslední době a případně celkovou revizi příslušné druhové skupiny.