

**Subspecific structure of *Brachyta interrogationis* (Linnaeus, 1758) (Coleoptera, Cerambycidae) in West Europe with a description of a new subspecies**

**M.L. Danilevsky<sup>1</sup> & H. Peks<sup>2</sup>**

<sup>1</sup>A.N. Severtzov Institute of Ecology and Evolution, Russian Academy of Sciences, Leninsky prospect 33, Moscow 119071 Russia

e-mail: danilevskym1@rambler.ru, danilevsky@cerambycidae.net

<sup>2</sup>Röthenweg Str. 7, Schwanfeld, 97523 Deutschland

e-mail: heinz.peks@googlemail.com

**Key words:** new subspecies, Cerambycidae, Lepturinae, Austria, France, Slovakia, Germany, Italy, Switzerland.

**Abstract:** *Brachyta interrogationis gabzdili* **ssp. n.** is described from Slovakia. The new subspecies is also known from South Poland. *B. i. marginella* (Fabricius, 1793), **stat. nov.** is accepted for South Tirol and neighbor areas of Italy, Austria, France, Germany, Italy, Switzerland. *B. i. ebenina* (Mulsant, 1839), **stat. nov.** is accepted for Central Massif in France.

*Brachyta interrogationis* (Linnaeus, 1857) was described (as *Leptura*) from “Europa”, but according to the original description (“*L. nigra*, elytris lividis: fascia longitudinale arcuata maculisque quator nigris”) it was rather pale form distributed in Scandinavia. So, the type locality of the species is situated in Scandinavian Peninsula.

All Scandinavian populations consist of moderately pale forms. Each specimen usually has central “)”-shaped” band and several black spots. Specimens with mostly yellow spotted elytra or rather black specimens are known but very rare. Nine specimens of the nominative subspecies are available at my disposal: eight from Sweden (3 males, 3 females, “Dir. Mora, Fulåberg, 6.6.1978, B. Cederberg”; 1 male, “Skrövån; Lu. Lpm. 28.6.1998 Hentrik Wallin”; 1 female, Sweden, Province Dalarna, Transtrand, Mornäs, 24.6.1995, Lars Hole leg.”), one from Finland (1 female, “FIN, Oulanka N.P. 30.6-1.7.1998, Hentrik Wallin”).

All populations in West Europe (without Scandinavia) consist of rather dark specimens. A portion of predominantly black specimens is rather different in different populations, and that character could be the base for the subspecies separation. Largely black specimens are very rare in populations of the species in East

Europe, and are not known in Caucasus or Kazakstan. The darkest known Asian subspecies *B. i. mannerheimii* Motschulsky, 1860 usually has yellow elytra with rather wide black stripes; black elytra with yellow spots were observed in a very small portion of specimens in certain populations from Sayans, Tuva and Mongolia.

*B. i. eitschbergeri* Danilevsky & Peks, 2015 was described from Bavaria, but penetrates to Western Czechia. It is characterized by all specimens with black elytra (type series: 238 specimens), very small yellow spots and narrow yellow lines could be observed.

According to Kierdorf-Traut (2007) the populations of *B. interrogationis* in South Tirol (Italy) consist of rather dark specimens (in general much darker than populations in Scandinavia or East Europe). But the number of specimens with relatively light elytra (similar to the nominative form or lighter) is considerable in certain localities. So, all Italian populations must be accepted as a good subspecies *B. i. marginella* (Fabricius, 1793), **stat. nov.** described from Italy. The populations from neighbor areas of France, Austria, Switzerland, South Germany can belong to same subspecies, but detail investigations of south European populations are desirable. Hellrigle (2010) also mentioned the domination of black form in certain localities in Tirol, but other aberrations were also mentioned.

According to Maneval (1936: 78) all specimens collected in Haute-Loire belong “tous à la variété *ebeninus* Muls.” - about totally black form. According to Vincent & Guillot (1983: 57) “à l’Auvergne” “il est représenté par les variétés noires *bimaculata* Muls et *ebenina* Muls.” According to Lacoste (2009: 17) record for Puy-de-Dôme: “Tous les individus rencontrés se rapportent à la variété *ebenina* Mulsant à élytres noires avec deux petites taches jaunes latéraux”; and similar record was published for about same area by Binon & Secchi (2000: 20): “*Brachyta interrogationis* (Linné) v. *ebenina* Mulsant (la seule variété rencontrée)”. According to Balazuk (1984: 265) publication for Ardèche: “Cleu cite cette espèce de la montagne (Le Pal, Bois de Cuze, Suc de Bauzon. juin-jullet) et confirme qu’elle est toujours entièrement noire”. According to Pupier (1996: 11) for “département de la Loire”: “il s’agit constamment des formes noires de l’espèce”. So, according to the references mentioned above, light forms are just absent in French Massif Central. The local subspecies must be accepted with valid name *B. i.*

**M.L. Danilevsky, H. Peks**

*ebenina* (Mulsant, 1839), **stat. nov.** It seems to be morphologically close to *B. i. eitschbergeri*, but strongly distant geographically. A map by Allemand et al. (2009: 164) with many localities of *B. interrogationis* in South-East France shows the distance between *B. i. ebenina* (Mulsant, 1839), **stat. nov.** of Massif Centrale and *B. i. marginella* (Fabricius, 1793), **stat. nov.** “dans les massifs des Préalpes”.

***Brachyta interrogationis gabzdili* ssp. n.**

**Figs 1-4**

**Type locality:** Slovakia, Velka Fatra, Ostredok env.

The new subspecies is characterized by about equal proportions of dark and pale forms (black specimens seem to constitute about 1/3 of all specimens in the populations). The palest forms are represented by specimens with typical elytral design, but black stripes are rather wide; besides the yellow elytral color is relatively dark; pale-yellow tone typical for the nominative subspecies from Scandinavia are not known in Slovakia; the darkest forms are represented in available materials by specimens of totally black elytra with narrow yellow suture and two small lateral yellow spots; dark specimens with wide yellow suture and big yellow spots are also known; length of available males: 10.9-14.4 mm, width: 3.9-5.0 mm; length of available females: 12.2-15.0, width: 4.4-5.2 mm.

**Materials.** Holotype male, Slovakia, Velka Fatra, Ostredok env., 21.07.1993, R.Gabzdil leg. - collection of M.Danilevsky; 27 paratypes; 5 males and 4 females (1 male and 1 female black, 1 male rather dark, 3 males, 3 females with typical design) with same label - collections of M.Danilevsky and R.Gabzdil (Michalovce, Slovakia); 1 male (black), Slovakia, Zdiar [49°16'15"N, 20°15'55"E], 2.7.1992, R.Gabzdil leg. - collection of R.Gabzdil; 1 male (typical design), Slovakia, Donovaly [48°53'N, 19°14'E], 7.2002, Kašovský leg. - collection of R.Plewa (Raszyn, Poland); 7 males (6 black specimens), 4 females, Slovakia, Banská Bystrica, Donovaly env., 9.7.2009, Š. Hofmeister lgt. - collection of Š. Hofmeister (Malá Hraštice, Slovakia).

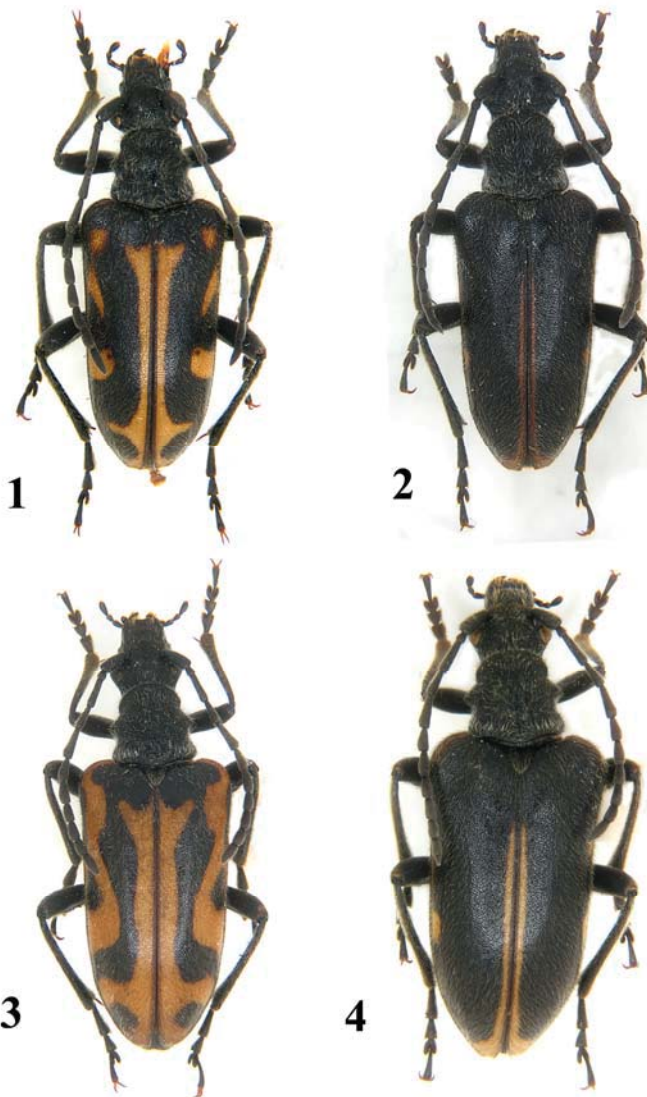
**Dedication.** We are glad to dedicate the new subspecies to Rudolf Gabzdil - Slovak coleopterologist, who supplied us with the materials for study.

## M.L. Danilevsky, H. Peks

**Acknowledgements.** We are very grateful to Rudolf Gabzdil, Maxim Lazarev and Henrik Wallin for supplying us with specimens for study. We wish to express our sincere gratitude to Frédéric Lacoste and Georg Kierdorf-Traut for providing us with necessary publications. Our special thanks to the staff of Zoological Museum of Moscow University and Zoological Institute (Sankt-Petersburg) for the opportunity to study corresponding collections.

### REFERENSES

- Allemand R., Dalmon J., Pupier R., Rozier Y. & Marengo V. 2009. Coléoptères de Rhône-alpes. Cérambycides. Lyon:Musée des Confluences. 352 p.
- Balazuc J. 1984. Coléoptères de l'Ardèche. - Supplément au Bulletin mensuel de la Société linnéenne de Lyon. 53: 1-334.
- Binon M. & Secchi F. 2000. Les Coléoptères de la Chaîne des Puys (Puy-de-Dôme): Liste commentée. - Revue scientifique du Bourbonnais et du centre de la France, 1998: 12-26.
- Fabricius J.C. 1793. Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species, adjectis, synonymis, locis, observationibus, descriptionibus. Tomus I. Pars II. Hafniae: C.G. Proft, xx + 538 pp.
- Hellrigle K. 2010. Faunistik der Bockkäfer von Südtirol (Coleoptera: Cerambycidae). - Forest Observer. 5: 31-152.
- Kierdorf-Traut G. 2007. Notizen zum Vorkommen der Gattungen *Brachyta* Fairmaire, 1864 und *Evodinus* LeConte, 1850 in Südtirol (Coleoptera: Cerambycidae). - Gredleriana. 7: 219-232.
- Lacoste F. 2009. Un point sur les Cerambycidae du Puy-de-Dôme (Coleoptera). - Rutilans. 12(1): 16-32.
- Maneval H. 1932-1938. Contribution au catalogue entomologique de la Haute-Loire.- Bulletin historique, scientifique, littéraire, artistique et agricole du Puy et de la Haute-Loire. 143 p. (inachevé). [Cerambycidae: 1936: 77-78, 1937: 41-46]
- Mulsant E. 1839. Histoire naturelle des coléoptères de France. Longicornes. Paris: Maison Libraire, Lyon: Imprimerie de Dumoulin, Ronet et Sibuet. 304 pp., 3 pls.
- Pupier R. 1996. Inventaire faunistiques du département de la Loire. I. Atlas des Coléoptères Cerambycidae.- Société de Sciences naturelles Loire-Forez, Saint-Etienne. 82 p.
- Vincent R. & Guillot J. 1983. A propos de la biologie larvaire d'*Evodinus* (*Brachyta*) *interrogationis* L. (Col. Cerambycidae) en Europe Occidentale. - Revue des Sciences Naturelles d'Auvergne. 49: 55-62.



**Figs 1-4.** *Brachyta interrogationis gabzdili* ssp. n.: (1 - male, holotype; 2 - male, paratype; 3-4 - females, paratypes), Slovakia, Velka Fatra, Ostredok env., 21.07.1993, R.Gabzdil leg.

Received: 05.03.2016

Accepted: 28.03.2016