

## New subspecies of *Brachyta rosti* Pic, 1900 from North Caucasus (Coleoptera, Cerambycidae)

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**Résumé.** *Brachyta rosti* Pic, 1900 est redécrit. *Brachyta rosti alexeevi* ssp. n. est décrit d'Ossetie Nord et *Brachyta rosti baksaniense* ssp. n. est décrit de Kabardino-Balkarie.

**Abstract.** *Brachyta rosti* Pic, 1900 is redescribed. *Brachyta rosti alexeevi* ssp. n. is described from North Ossetia and *Brachyta rosti baksaniense* ssp. n. is described from Kabardino-Balkaria.

**Keywords.** Coleoptera, Cerambycidae, Rhagiini, *Brachyta*, taxonomy, zoogeography, new subspecies.

### Introduction

The detail study of different series of very rare *Brachyta rosti* Pic, 1900 from North Caucasus allows to separate three distinct subspecies, which can be characterized by general color, elytral design, proportions of antennal joints and type of punctuation.

Several abbreviations were used in the text : MD collection of M. Danilevsky, Moscow (Russia); ZMM Zoological Museum of Moscow State University, Moscow (Russia).

### *Brachyta rosti* Pic, 1900 (figs 1-13)

*Brachyta variabilis* var. *rosti* Pic, 1900 : 82 - "Elburs (Caucase)".

*Brachyta rosti*, Pic. 1901 : 16; Lobanov & et al., 1981 : 787 ("*B. rosti* = *B. caucasicola*"), 796; Danilevsky, Miroshnikov, 1985 : 130; Miroshnikov, 1990 : 27; 2000; 2004 : 133 (distribution, bionomy, larvae).

*Evodinus variabilis* var. *rosti*, Aurivillius, 1912 : 188 - "Kaukasus"; Plavilstshikov, 1932 : 188 - "Cauc.".

*Evodinus variabilis* ab. *rosti*, Plavilstschikov, 1914 : 326 - «Kosout»; 1915 : 366 - «Caucase»; Winkler, 1929 : 1150 - "Ca.".

*Evodinus caucasicola* Plavilstshikov, 1936 : 197, 517 - "Kaukasus : beim Elbrus; Chassaut; Fl. Laba; ... Daghestan".

**Type locality.** Elbrus Mt., North Caucasus. The locality was mentioned as : "Elburs (Caucase)" in the original description.

### Description

The species is characterized by short antennae with very short subglobose 6<sup>th</sup>-10<sup>th</sup> joints; elytra never with regular longitudinal lines, sometimes short longitudinal strokes present; elytral punctuation very distinct, deep, but not very dense; pronotal and elytral pubescence rather sparse without erect setae; pronotum often looks glabrous; male elytra hardly tapering posteriorly.

Head and thorax always black, deeply punctated without erect setae; prothorax in males a little longer than basal width, or about as long as wide, in females a little broader than long; much wider at base; elytra usually yellow with black design from separate black spots to nearly totally black with several yellow spots or totally black; antennae, legs and abdomen usually totally black, sometimes antennae, legs and abdomen partly or totally red. Body length in males 10.9–15.8 mm, in females 14.1–18.5 mm

### Distribution

High mountains of the North Caucasus from about Dzhuga Mt. in Krasnodar Region and Maykop district of Adygeia through Karachaevo-Cherkessia and Kabardino-Balkaria to North Ossetia. The records for Dagestan by PLAVILSTSHIKOV (1936) with

the reference to KOENIG (1899) was just a mistake, repeated by MIROSHNIKOV (1990, 2000). KOENIG did not mention in his text this taxon. The species must occur in Georgia, though up to now no records published.

### Bionomy

Imagos are active in June-August, development in soil, larval food plants unknown.

### *Brachyta rosti rosti* Pic, 1900 (figs 1-2)

*Brachyta variabilis* var. *rosti* Pic, 1900 : 82 (“Elbrus (Caucase)”).

*Brachyta rosti* Pic. 1901 : 16; Mirosnikov, 1990 : 27 (“Dzhuga Mt.”), part.; Arzanov et al., 1993 (“Daut Canyon”); Kasatkin, Arzanov, 1997 : 68 (“Kichi-Balyk”, “Ullukol”).

*Brachyta rosti* “sous-variété” *brevinotata* Pic, 1901 : 16.

*Evodinus variabilis* ab. *rosti*, Plavilstshikov, 1914 : 326 (“Kosout”); 1915 : 366 (“Kavkaz”); Winkler, 1929 : 1150.

*Evodinus variabilis* ab. *brevinotatus*, Bogdanov-Katkov, 1917 : 39 (“Elbrus”, “Murutchu”).

*Evodinus caucasicola* ab. *ingenuus* Plavilstshikov, 1936 : 198.

*Evodinus caucasicola* ab. *anticeconjunctus* Plavilstshikov, 1936 : 198.

*Evodinus caucasicola* ab. *sexnotatus* Plavilstshikov, 1936 : 198.

*Evodinus caucasicola* ab. *nigripennis* Plavilstshikov, 1936 : 198.

**Type locality.** Elbrus Mt., North Caucasus. The locality was mentioned as : “Elbrus (Caucase)” in the original description.

### Description

Elytra relatively dark, pale ground color is dirty-yellow and usually strongly reduced; pronotal punctation big and dense; antennal joints 6<sup>th</sup>-10<sup>th</sup> relatively short; elytral punctation a little denser, with microsculpture between dots; elytra slightly raised along suture. Antennae, legs and abdomen usually black, sometimes antennae, legs and abdomen partly or totally dark-red; emargination of male pygidium rather shallow or indistinct. Body length in males 13.3–14.0 mm, in females 14.1–16.7 mm

**Material.** Lectotype, designated by DANILEVSKY, 2009 (fig. 1), male with 4 labels : 1) Typus [red]; 2) Cauc. centr., Chossout, prope Elbrus, 3.VI.1909, I. Parfentiev; 3) *Evodinus caucasicola* m., N. Plavilstshikov det., 1935; 4) Lectotypus *Evodinus caucasicola* Plavilstshikov, 1936, M. Danilevsky des., 2008 – ZMM; 4 Paralectotypes, designated by DANILEVSKY, 2009. female, 1) with the geographical label as above; 2) Paralectotypus *Evodinus caucasicola* Plavilstshikov, 1936, M. Danilevsky des., 2008 – ZMM; 1 male, 1) Typus [red]; 2) Cauc. bor. occ., fl. Laba sup., 1.VIII.1909; 3) *Evodinus caucasicola* m., a. *ingenuus* m., N. Plavilstshikov det., 1935; 4) Paralectotypus *Evodinus caucasicola* Plavilstshikov, 1936, M. Danilevsky des., 2008 – ZMM; 1 male : 1) Typus [red]; 2) Elbrus, 1.VIII.1909; 3) *Evodinus caucasicola* m., a. *anticeconjunctus* m., N. Plavilstshikov det., 1935; 4) Paralectotypus *Evodinus caucasicola* Plavilstshikov, 1936, M. Danilevsky des., 2008 – ZMM; 1 female (fig. 2) : 1) Typus [red]; 2) Murudzhinskie lakes, Kuban region, 10640', VII.1915, N. Bogdanov-Katkov; 3) *Evodinus caucasicola* m., a. *sexnotatus* m. N. Plavilstshikov det., 1935; 4) Paralectotypus *Evodinus caucasicola* Plavilstshikov, 1936, M. Danilevsky des., 2008 – ZMM.

### Distribution (map 1)

The west part of the species area; Republic Adygeya : Dzhuga Mt., about 40 km eastwards Fisht Mt. (MIROSHNIKOV, 1990) – the western most locality; Karachaevo-Cherkessia : eastern slopes of Dzhentu Mt., 2000-2100m (MIROSHNIKOV, 2004) – near western border of Republic; the source of Bolshaia Laba River (PLAVILSTSHIKOV, 1936); Khasaut Canyon, Bermamyt Mt., about 30km SSW Kislovodsk (PLAVILSTSHIKOV, 1914, 1936); Murutchu (or Marudzhu) – Murudzhinskie lakes in Teberda Natural Reserve near Klukhor Pass (BOGDANOV-KATKOV, 1917); Verkhnaya Mara (MIROSHNIKOV, 2004) – about 20km eastwards Karachaevsk; Daut Canyon (ARZANOV et al., 1993);

Kabardino-Balkaria : north slopes of Elbrus Mt. (type locality); Ullukol (KASATKIN, ARZANOV, 1997) – about 10km S Kislovodsk, most probably the record of Kichi-Balyk (KASATKIN, ARZANOV, 1997) was connected with same population.

### Bionomy

The taxon is known from high mountains alpine and subalpine areas of about 1800–3000m above the level of the sea. Larvae develop in the soil feeding on roots of herbaceous plants; food plants unknown; pupation in soil. Pupae is deposited in horizontal direction at about 10–11 cm under the ground surface (MIROSHNIKOV, 2004). According to the labels of available materials imagoes are active in June–July, but according to MIROSHNIKOV (2004) also in August; PLAVILSTSHIKOV (1914) recorded two specimens collected on 3<sup>th</sup> of May.

### **Brachyta rosti baksaniense ssp. n.** (figs 3–9)

*Brachyta rosti*, Miroshnikov, 1990 : 27 (“Ullutau Mt.”), part.

**Type locality.** Kabardino - Balkaria, Baksan Canyon, Tyrnyauz environs, 2200–2400m.

### Description

Elytra relatively dark, pale ground color is dirty-yellow; most of specimens have contrast black elytral design consisting of two transverse stripes joined along suture and two big lateral round spots, but in females specimens with considerably reduced yellow elytral areas are dominated; 6<sup>th</sup>–10<sup>th</sup> antennal joints are a little elongated; pronotal punctures smaller and sparser; elytral punctation sparser, without microsculpture between dots; suture not convex posteriorly. Antennae, legs and abdomen usually black, sometimes antennae, legs and abdomen partly or totally dark-red; pygidium in males deeply emarginated. Body length in males 10.9–13.8 mm, in females 14.9–18.5 mm

**Material.** 1 male, **Holotype** (fig. 3), 2 labels : 1) Balkaria, Tyrnyauz, 2200–2400, 04.06.1988, M. Danilevsky; 2) “Holotypus *Brachyta rosti baksaniense ssp.n.* Lazarev det., 2009” – MD. 31

**Paratypes** (MD) : 1 male, Kabardino - Balkaria, Tyrnyauz, left bank Baksan, 2200, 31.05.1988, M. Danilevsky - MD; 4 males, 3 females, Balkaria, Tyrnyauz, 2200–2400, 04.06.1988, M. Danilevsky - MD; 16 males, 7 females, Balkaria, Tyrnyauz, 1800–2200, 07.06.1988, M. Danilevsky - MD.

### Distribution (map 1)

Kabardino-Balkaria : Baksan Canyon, Tyrnyauz (type locality). Most probably, the locality mentioned by MIROSHNIKOV (1990) as “Ullutau Mt. in Kabardino-Balkaria” (about 10km SE Bolshoy Baksan) is also connected with *B. rosti baksaniense ssp. n.*

### Bionomy

Larvae develop in the soil feeding on roots of herbaceous plants; food plants unknown; pupation in soil. Imagoes are active in June–July. M. L. DANILEVSKY observed numerous imagoes in Baksan Canyon above Tyrnyauz-city at about 2200–2400 m above the level of the sea in the beginning of June. A lot of beetles were crawling and mating among dry grass, sometimes flying between snow areas. No flowering plants or new green grass were observed in the locality that time. It seems, females do not need in food before oviposition.

### **Brachyta rosti alexeevi ssp. n.** (figs 10–13)

*Brachyta rosti*, Miroshnikov, 1990 : 27 (“North-Ossetia Natural reserve”), part.; 2004 : 134, 135 (“Kionkhokh Mt.”)

**Type locality.** North Ossetia, Skalistyj Ridge, Ardon River, West Karivkhokh Mountain, Khallon urotchishche, 2300–2500 m, about 20 km to the south from Alagir-city.

## Description

Elytra usually light; pale ground color is light-yellow; black elytral design is usually strongly reduced: transverse black elytral stripes are diminished to small lateral spots, suture black line often disappear posteriorly; elytral design normally consists of a row of lateral black spots; only one female has rather wide sutural and lateral black elytral areas, but still transverse stripes are widely interrupted; antennae and legs are always red; abdomen black or black with partly red apical segments; totally black forms are unknown. Body length in males 15.0–15.8 mm, in females 16.5–17.6 mm

**Material.** 1 male, **Holotype** (fig. 10), 2 labels: 1) "Severnaja Osetia, Skalistyj Khribet, Ardon uschele reki Ardon, zapadnyj otrog gory Karivkhokh, urochische Khallon, 2300m, 3.6.1985, S. Alexeev leg." [Russian], 2) "Holotypus *Brachyta rosti alexeevi* ssp.n. Lazarev det., 2009" – MD. 5 **Paratypes** (MD): 2 males, 3 females, same locality, 2300-2500m, 12.7.1985, S. Alexeev leg. Besides two specimens are known to me after good photographs: male and female collected in same locality as type series and preserved in the collection of S. Alexeev (Kaluga). Male belongs to the same series as type specimens and is very similar to the holotype, but female was collected 12.08.1985 and represents the darkest known specimen.

## Distribution (map 1)

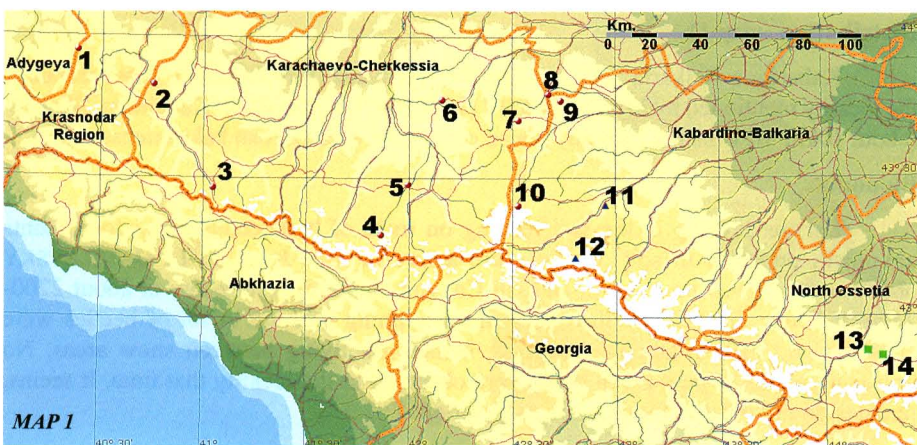
North Ossetia, Skalistyj Ridge, Ardon River, west slopes of Karivkhokh Mountain (fig. 12) - about 20km southwards Alagir-city. According to the personal message (2010) by S. Alekseev the beetles were also collected in Fiagdon river valley above Tzmitiy village (2780m) - east Karivkhokh slope. MIROSHNIKOV (2004) also mentioned south slopes of the mountain.

## Bionomy

The biotope of the taxon is represented by rich motley grass subalpine meadow at about 2300-2500 m above the level of the sea with the domination of *Anemone* flowers (fig. 13). Larvae develop in the soil feeding on roots of herbaceous plants; food plants unknown, but very possible it is local *Anemone* sp.; pupation in soil. Imagoes are active in June-August.

## Etymology

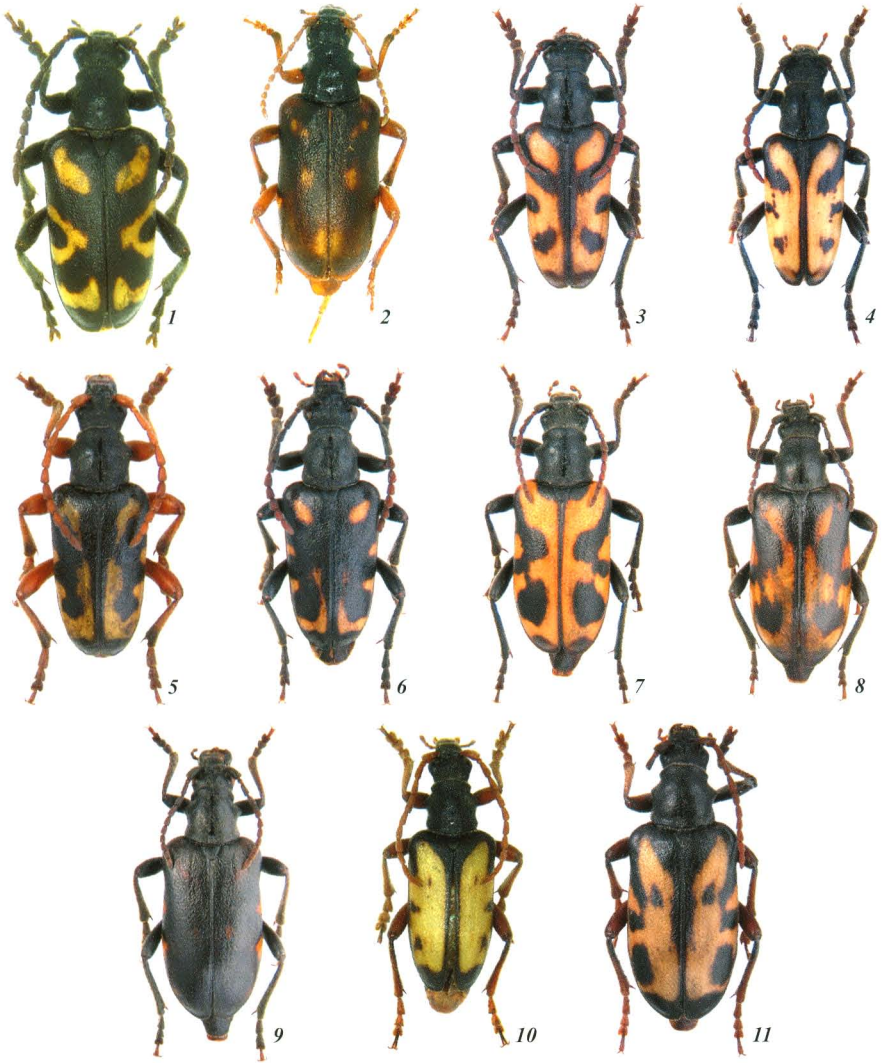
The new species is dedicated to a well known entomologist Sergey K. ALEKSEEV from Kaluga, who discovered the new taxon.



*Brachyta rosti rosti* Pic, 1900. Republic Adygeya: 1 - Dzhuga Mt.; Karachaevo-Cherkessia: 2 - Dzhenyu Mt., 3 - Bolshaia Laba River, 4 - Murutchu (or Marudzhu), 5 - Daut Canyon, 6 - Verkhnyaya Mara, 7 - Khasaut Canyon, Bermamyt Mt.; Kabardino-Balkaria: 8 - Kichi-Balyk, 9 - Ullukol, 10 - Elbrus Mt. (type locality).

*Brachyta rosti baksaniense* ssp. n. Kabardino-Balkaria: 11 - Baksan Canyon, Tyrnyauz (type locality), 12 - Ullutau Mt.

*Brachyta rosti alexeevi* ssp. n. North Ossetia: 13 - Skalistyj Ridge, Ardon River, west slopes of Karivkhokh Mt., 14 - Fiagdon River valley above Tzmitiy village.



**Figs 1-2, *Brachyta rosti rosti* Pic, 1900** : fig. 1 – male, lectotype, designated by Danilevsky, 2009, Cauc. centr., Chossout, prope Elbrus – ZMM; fig. 2 – female, paralectotype, Murudzhinskije lakes, Kuban region – ZMM.  
**Figs 3-9, *Brachyta rosti baksaniense* ssp. n.** : fig. 3 – male, holotype, Balkaria, Tyrnyauz, 2200-2400m – MD; figs 4-6 – males, paratypes, same locality - MD; figs 7-9 – females, paratypes, same locality - MD.  
**Figs 10-13, *Brachyta rosti alexeevi* ssp. n.** : fig. 10 - male, holotype, North Ossetia, Skalistyj Ridge, Ardon Canyon, west slope of Karivkhokh Mt., urochishche Khallon, 2300m – MD; fig. 11 – female, paratypes, same locality - MD; fig. 12 – area of the taxon, Karivkhokh Mt. (photo by S. ALEXEEV); fig. 13 – locality of the taxon, urochishche Khallon (photo by S. ALEXEEV).

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## Bibliography

- ARZANOV, JU. G., KASATKIN, D. G., FOMICHEV, A. I. & KHATCHIKOV, E. A., 1993. – [Materials on the beetle fauna (Coleoptera) of North Caucasus and Low Don. IV, P.1. Timber-beetles. Fauna, Ecology, Area Records.] *Preserved in "Viniti"* 21 04 993 N 1042 – B 93 : 18pp [in Russian].
- AURIVILLIUS, C., 1912. – Cerambycidae : Cerambycinae. Pars 39. In : Schenkling S. (ed.) : *Coleopterorum Catalogus. Volumen 22. Cerambycidae I*. Berlin : Junk, 108 + 574 pp.
- BOGDANOV-KATKOV, N. N., 1917. – [To the fauna of Longicorn-beetles of Kuban Region. *Archives of Caucasian Museum*], 11 : 33-52. [in Russian].
- DANILEVSKY, M. L., 2009. – Species Group Taxa of Longhorned Beetles (Coleoptera, Cerambycidae) Described by N. N. PLAVILSTSHIKOV and Their Types Preserved in the Zoological Museum of the Moscow State University and in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg. *Entomological Review*, 89 (6): 689-720.
- DANILEVSKY, M. L., MIROSHNIKOV A. I., 1985. – Timber-Beetles of Caucasus (Coleoptera, Cerambycidae). Key.– Krasnodar : 419 pp.
- KASATKIN, D. G., ARZANOV, JU. G., 1997. – Der Bockkaffer (Cerambycidae). Material fur fauna der Kaffer (Coleoptera) norden Kaukasus und untere Don. *Records of Kharkov Ent. Soc.*, 5 (2) : 63-70.
- KOENIG, E., 1899. – Coleoptera Caucasica. In : Radde G. Die Summlungen des Kauasischen Museums. 1. Tiflis. S. 339-403. [Cerambycidae : S. 393-397].
- LOBANOV, A. L., DANILEVSKY, M. L., MURZIN, S. V., 1981. – [Systematic list of longicorn beetles (Coleoptera, Cerambycidae) of the USSR. 1. *Entomologicheskoe Obozrenie*], 60 (4) : 784-803. [in Russian].
- MIROSHNIKOV, A. I., 1990. – [Longicorn beetles of the genus *Brachyta* (Coleoptera, Cerambycidae) from the Caucasus. *Vestnik Zoologii*], 3 : 23-28. [in Russian].
- MIROSHNIKOV, A. I., 2000. – [Family Longicorn-Beetles, or Timber-Beetles - Cerambycidae. Red-Data Book of Adygeya Republic. Rare and endangered objects of fauna and flora. Maykop] : 223-236, illustr. : 70-87, 141-143. [in Russian].
- MIROSHNIKOV, A. I., 2004. – [To the knowledge of timber-beetles (Coleoptera, Cerambycidae) of Caucasus. *Actual questions of plant protection, agrochemistry, agrosolstudy and insect fauna in Krasnodar Region. Transactions of Kuban State Agricultural University*], 409 (437) : 133-138 [in Russian].
- PIC M., 1900. – Contribution à l'étude des longicornes. *L'Échange, Revue Linnéenne*, 16 (191) : 81-83.
- PIC M., 1901. – Notes diverses. *Matériaux pour servir à l'étude des longicornes. 3ème cahier, 3ème partie* : 15-19.
- PLAVILSTSHIKOV, N. N., 1914. – Notices sur les Longicornes de la faune paléarctique (Coleoptera, Cerambycidae). *Revue Russe d'Entomologie*, 14 (2-3) : 326-329.
- PLAVILSTSHIKOV, N. N., 1915. – Espèces eurasiques du genre *Evodinus* J. Lec. (Coleoptera, Cerambycidae). *Revue Russe d'Entomologie*, 15 (3) [1915-1916] : 354-382.
- PLAVILSTSHIKOV, N. N., 1932. – Timber-beetles - Timber Pests. Moscow, Leningrad : 200pp. [in Russian].
- PLAVILSTSHIKOV, N. N., 1936. – Fauna SSSR. Nasekomye zhestokrylye. T. XXI. Zhukidrovoseki (ch. 1). Moskva - Leningrad : Izdatel'stvo Akademii Nauk SSSR, 612 + [1] pp.
- WINKLER, A., 1929. – Cerambycidae.- In : *Catalogus Coleopterorum regionis palaearticae*. Wien, Wenkler et Wagner. : 1135-1226.