

Taxonomic Notes on *Sachalinobia rugipennis* (NEWMAN)
and *S. koltzei* (HEYDEN)
(Coleoptera, Cerambycidae, Lepturinae)

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Abstract *Sachalinobia rugipennis* (NEWMAN, 1844) and *S. koltzei* (HEYDEN, 1887) are specifically distinct. Morphological differences between the two species are described, and synonymies of the two species are given.

The genus *Sachalinobia* JACOBSON, 1899, comprises two allopatric forms: *S. rugipennis* (NEWMAN, 1844) in eastern Canada and the northeastern United States, and *S. koltzei* (HEYDEN, 1887) in eastern Siberia, Sakhalin, northeastern China, Korea, Hokkaido and central Honshu of Japan. GRESSITT (1953) assigned *koltzei* to a subspecies of *rugipennis* by comparing only females of *rugipennis* and a male of *koltzei* in the collection of the California Academy of Sciences. CHEMSAK and LINSLEY (1963), LINSLEY and CHEMSAK (1972), HAYASHI (1980) and KUSAMA and TAKAKUWA (1984) also treated *koltzei* as a subspecies of *rugipennis*. However, there are no descriptions of useful characters to distinguish the two forms in these treatises. LEE (1987) treated *koltzei* as a synonym of *rugipennis*.

After comparing series of specimens of *rugipennis* and *koltzei*, I have come to the conclusion that these two forms should be regarded as two distinct species because of differences in the proportional lengths of the antennal segments and in proportions of the width and length of the prothorax and elytra.

Sachalinobia koltzei (HEYDEN)

(Figs. 1-2)

Brachyta koltzei HEYDEN, 1887, Dt. ent. Z., 31: 304.

Sachalinobia retata JACOBSON, 1899, Ezhegodnik zool. Mus. imp. Akad. Nauk, 4: 40-41 (=Annu. Mus. zool. Acad. imp. Sci. St. Pétersb., 4: 40-41).

Sachalinobia koltzei: JACOBSON, 1902, Dt. ent. Z., 1902: 363; AURIVILLIUS, 1912, Coleopt. Cat., (39): 193; BOPPE, 1921, Gen. ins., (178): 64; ASAHINA, 1931, Kontyû, Tokyo, 5: 54; MATSUSHITA, 1933, J. Fac. Agric. Hokkaido imp. Univ., 34: 174; PLAVILSTSHIKOV, 1936, Fn. SSSR, Coléopt., (21): 204-206, 518; TAMANUKI, 1939, Fn. nipp. Cerambyc., 1: 81-83, fig. 34; MITONO, 1940, Cat. Coleopt. japon., (94): 12; GRESSITT, 1947, Proc. ent. Soc. Wash., 49: 191; GRESSITT, 1951, Longicornia, 2: 55-56; CHO, 1961, Taxon. Stud. Longicorn Beetles Korea, p. 19; OHBAYASHI, 1963, Iconogr. Ins. Japan. Col. nat. ed., 2: 271, pl. 136, fig. 6; KOJIMA & HAYASHI, 1969, Insect's Life in Japan, 1: 11-12, pl. 4, fig. 4; KUSAMA, 1972, List Jpn. Cerambycidae w. Ecol. & Distr., p. 11; NAKANE, 1974, Nat. & Ins., Tokyo, 9 (10): 5; GOH, 1978, Elytra, Tokyo, 6: 53-55, figs.; LEE, 1979,

Kor. J. Ent., **9** (2): 34; CHEREPANOV, 1979, Ceramb. North Asia, **1**: 135–138, fig. 63; PU, 1980, Econ. Ins. Fn. China, **19**: 17, pl. 2, fig. 14; LOBANOV, DANILEVSKY & MURZIN, 1981, Ent. Obozr., **60**: 796; NAKAMURA, 1981, Morphol. taxon. Stud. Cerambyc. Pupae Japan, pp. 22–23, pl. 68, figs. 167 A–C; LEE, 1982, Ins. Koreana, **1**: 8; HUA, 1982, Check List Longicorn Beetles China, p. 18; HAYASHI, 1984, Coleopt. Japan Col., Osaka, **4**: 12, pl. 3, fig. 3; ŠVÁCHA & DANILEVSKY, 1989, Acta Univ. Carol., (Biol.), **32** [for 1988]: 46–49.

Sachalinobia rugipennis koltzei: GRESSITT, 1953, Pan-Pacif. Ent., **29**: 207; HAYASHI, 1955, Col. Illustr. Ins. Japan, (Coleopt.), p. 23, pl. 10, fig. 18; KEIHIN-KONCHU-DOKOKAI (ed.), 1959, New Ins. Coll. Tokyo, **2**: 368; HAYASHI, 1962, Col. Illustr. Ins. Japan, (Coleopt.), p. 135, pl. 42, fig. 959; CHEMSAK & LINSLEY, 1963, Pan-Pacif. Ent., **39**: 86; HAYASHI, 1980, Check-list Coleopt. Japan, (19): 3–4; KUSAMA & TAKAKUWA, 1984, Longicorn-beetles Japan Col., pp. 158–159, pl. 7, figs. 36, 36 a; SAITO, 1989, Elytra, Tokyo, **17**: 72, fig. 7.

Sachalinobia rugipennis: LEE, 1987, Longicorn Beetles Korean Pen., p. 23.

Head, prothorax and elytra usually black with dark bronze tint, rarely dark coppery brown; antennae with apex of 11th segment reaching basal three-fourths of elytra in males and reaching the middle of elytra in females; ratio of lengths of 3rd and 5th segments less than that of *rugipennis* (3rd/5th: ♂=1:1.06; ♀=1:1.4); in males, 6th segment nearly equal in length to 1st, 7th segment distinctly longer than 1st, in females, 7th segment nearly equal in length to 1st; width of prothorax across lateral tubercles equal to length, median longitudinal glabrous line on disk extremely short or indistinct; elytra about twice as long as humeral width (♂: 1.97–2.05 times; ♀: 1.90–2.06 times), each elytron with a median transverse band which is slightly slanted or nearly transverse; legs longer, hind tarsi with 1st and 2nd segments narrower and weakly dilated towards apical margin. Length: ♂, 13.5–15.0 mm; ♀, 16.0–19.0 mm (measured from tips of mandibles to elytral apices).

Type locality. Nikolajevk, Amur.

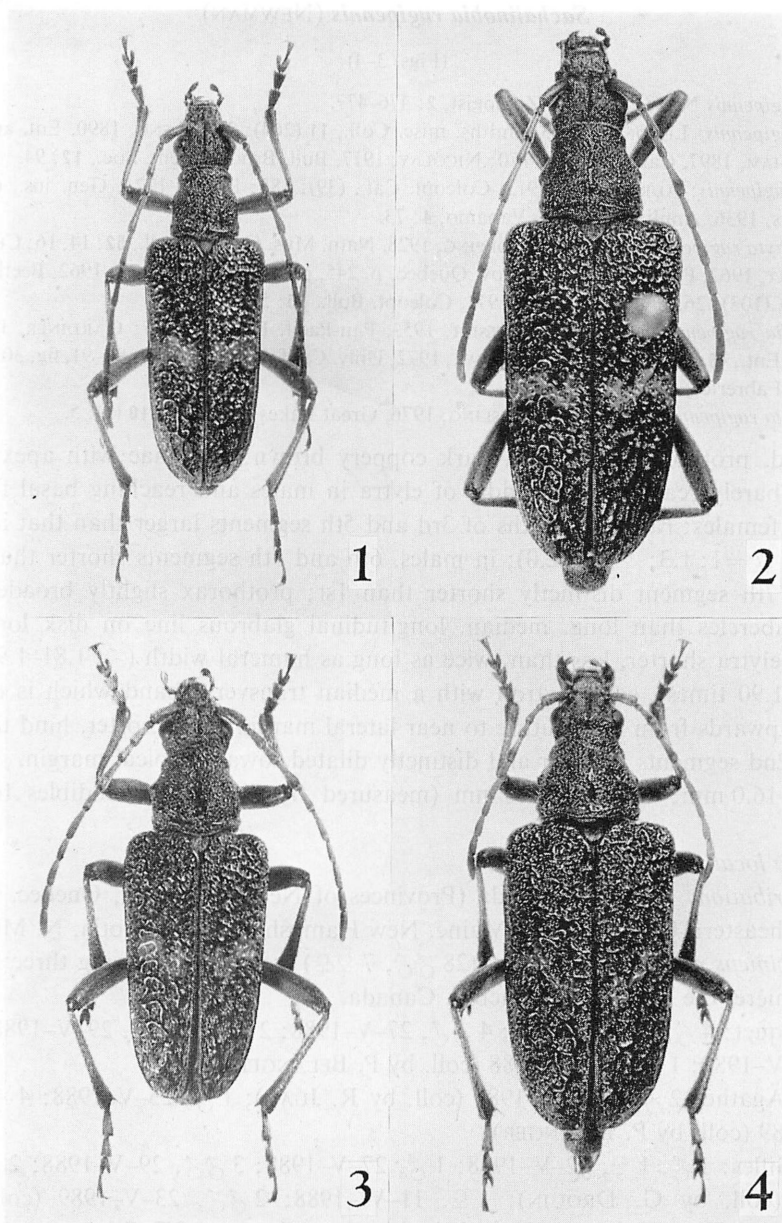
Distribution. Eastern Siberia (Amur-Ussuri Region), Sakhalin, northeastern China, Korea, Japan (Hokkaido and central Honshu).

Specimens examined. 40 exs. (29 ♂♂, 11 ♀♀).

Sakhalin (Russia): 1 ♂, 1 ♀, Shpamberg Mt., 3–VII–1976, NESTEROV leg.

Hokkaido (Japan): Tokachimitsumata, Tokachi-shichô: 1 ♀, 13–VII–1981, R. OIDAIRA leg.; 1 ♂, 1 ♀, 18 & 28–VII–1983, K. HOSOKAWA leg.

Honshu (Japan): 1 ♀, nr. Miike, Hinoemata-mura, Fukushima Pref., 28–VI–1987, N. KOBAYASHI leg.; 1 ♂, 1 ♀, Mt. Sannoboushiyama, 1,800 m, NE of Yumoto, Tochigi Pref., 19–VII–1981, N. MORISHIMA leg.; Sugenuma, 1,700 m, Katashina-mura, Gunma Pref.: 1 ♂, 8–VII–1976, Y. ODA leg.; 1 ♂, 1 ♀, 22–VII–1976, S. SAITO leg.; 1 ♂, 7–VII–1978, N. OGURA leg.; 1 ♀, 27–VI–1980, T. SHIMOMURA leg.; 8 ♂♂, 3 ♀♀, 11–VII–1984, T. MIYAMOTO leg.; 1 ♂, Hirogawara, 1,600 m, Ashiyasumura, Yamanashi Pref., 5–VI–1987, T. SHIMOMURA leg.; 1 ♂, Mt. Fujisan, 1,700 m, NW slope, Yamanashi Pref., 8–VII–1989, T. SHIMOMURA leg.; Azumi-mura, Minami-azumi-gun, Nagano Pref.: 1 ♂, 30–VI–1976, Y. ODA leg.; 1 ♀, 22–VII–1980, Y. ISHIKAWA leg.; 4 ♂♂, 1–VII–1984, Y. ISHIKAWA leg.; 6 ♂♂, 8–VI–1987, Y. ISHIKAWA leg.; 2 ♂♂, Honzawa Spa, Mts. Yatsugatake, Nagano Pref., 13–VII–1981, Y. ISHIKAWA leg. (in coll. T. SHIMOMURA & N. KOBAYASHI).



Figs. 1-4. — 1-2. *Sachalinobia koltzei*; 1, male; 2, female. — 3-4. *Sachalinobia rugipennis*; 3, male; 4, female.

Sachalinobia rugipennis (NEWMAN)

(Figs. 3-4)

Toxotus rugipennis NEWMAN, 1844, Zoologist, 2: 476-477.*Pachyta rugipennis*: LECONTE, 1873, Smiths. misc. Coll., 11 (264): 207; LENG, 1890, Ent. am., 6: 97; WICKHAM, 1897, Can. Ent., 29: 170; NICOLAY, 1917, Bull. Brooklyn ent. Soc., 12: 94.*Evodinus rugipennis*: AURIVILLIUS, 1912, Coleopt. Cat., (39): 188; BOPPE, 1921, Gen. ins., (178): 72; SAALAS, 1936, Anni. Zool. Soc. Vanamo, 4: 73.*Pseudopachyta rugipennis*: SWAINE & HOPPING, 1928, Natn. Mus. Canada Bull., 52: 14, 16; CHAGNON & ROBERT, 1962, Princip. Coleopt. Prov. Quebec, p. 245, pl. 15, fig.7; ARNETT, 1962, Beetles United States, (103): 26, p. 876; WILSON, 1971, Coleopt. Bull., 25: 59.*Sachalinobia rugipennis rugipennis*: GRESSITT, 1953, Pan-Pacif. Ent., 29: 207; GARDINER, 1970, Pan-Pacif. Ent., 46: 287; LINSLEY & CHEMSAK, 1972, Univ. Calif. Publ. Ent., 69: 90-91, fig. 30; DROUIN, 1989, Fabriques, 14 (2): 28-31.*Sachalinobia rugipennis*: GOSLING & GOSLING, 1976, Great Lakes Entomol., 10 (1): 5.

Head, prothorax and elytra dark coppery brown; antennae with apex of 11th segment barely reaching the middle of elytra in males and reaching basal fourth of elytra in females; ratio of lengths of 3rd and 5th segments larger than that in *koltzei* (3rd/5th: ♂=1: 1.3; ♀=1: 2.0); in males, 6th and 7th segments shorter than 1st, in females, 7th segment distinctly shorter than 1st; prothorax slightly broader across lateral tubercles than long, median, longitudinal glabrous line on disk longer and distinct; elytra shorter, less than twice as long as humeral width (♂: 1.81-1.92 times; ♀: 1.78-1.90 times), each elytron with a median transverse band which is distinctly slanted upwards from near suture to near lateral margin; legs shorter, hind tarsi with 1st and 2nd segments broader and distinctly dilated towards apical margin. Length: ♂, 12.5-16.0 mm; ♀, 14.0-17.0 mm (measured from tips of mandibles to elytral apices).

Type locality. Canada.*Distribution.* Eastern Canada (Provinces of New Brunswick, Quebec, Ontario) and northeastern United States (Maine, New Hampshire, Nova Scotia, N. Michigan).*Specimens examined.* 35 exs. (28 ♂♂, 7 ♀♀) from the following three localities in Lotbinière, the Province of Quebec, Canada.

Dosquet: 4 ♂♂, 29-V-1987; 4 ♂♂, 27-V-1988; 2 ♂♂, 2 ♀♀, 29-V-1988; 2 ♂♂, 1 ♀, 31-V-1988; 1 ♀, 11-VI-1988 (coll. by P. BÉLANGER).

Ste-Agathe: 2 ♂♂, 23-V-1988 (coll. by R. JUAN); 1 ♂, 25-V-1988; 4 ♂♂, 1 ♀, 29-V-1989 (coll. by P. BÉLANGER).

St-Gilles: 1 ♂, 1 ♀, 22-V-1988; 1 ♂, 27-V-1988; 3 ♂♂, 29-V-1988; 2 ♂♂, 23-V-1989 (coll. by G. DROUIN); 1 ♀, 11-VI-1988; 2 ♂♂, 23-V-1989 (coll. by P. BÉLANGER). The specimens are deposited in the collection of T. SHIMOMURA.

Notes. *Sachalinobia* appears to be related to *Evodinus*, *Brachyta*, *Pachyta*, *Rhagium* and *Gaurotes*. ŠVÁCHA and DANILEVSKY (1989) reported that *Sachalinobia* is similar to the monotypic genus, *Xenoleptura* DANILEVSKY, LOBANOV et MURZIN, 1981 in larval characters, and proposed that the two genera, *Sachalinobia* and *Xenoleptura*, have a tribal rank.

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要 約

下村 徹: アラメハナカミキリとホクベイアラメハナカミキリの分類学的知見。—— シベリア東部, 樺太, 朝鮮, 中国北東部, 北海道および本州中部に分布するアラメハナカミキリ *Sachalinobia koltzei* (HEYDEN, 1887) は, GRESSITT (1953) により, カナダ東部とアメリカ北東部に分布するホクベイアラメハナカミキリ *S. rugipennis* (NEWMAN, 1844) の亜種として取り扱われた。その後, 両者は亜種あるいは種として扱われてきたが, 両者を識別するための有効な特徴の記述がなかった。多数の両者の標本を比較した結果, 触角の長さ, 触角節の比, 前胸・上翅のそれぞれの幅と長さの比, などの形態的相違と分布状態 (異所的分布による生殖隔離) により, 両者を独立種とみなした。

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