

New Oculate *Trechiana* (Coleoptera, Trechinae) Mainly from Non-volcanic Mountains of Northern Honshu, Northeast Japan¹⁾

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Abstract Five new oculate species of the trechine genus *Trechiana* are described from high mountains at the western side of northern Honshu, Northeast Japan. One of them, named *T. yoshikoeae*, belongs to the *nivalis* lineage and is endemic to an isolated volcano, while the remaining four are restricted to non-volcanic mountains and form a homogeneous group to be called the *meridianus* lineage.

For many years, I have endeavoured to clarify the trechine fauna of the high mountains of northern Honshu, Northeast Japan. I have climbed up many of them, but the material now at my hands is not yet satisfactory because of difficulty of making repeated investigations in remote areas. On these high mountains in the northern territory, good collecting season is much limited due to bad weather in the autumn and heavy snowfall in the winter. It is therefore impossible to carry out time-consuming searches for small subalpine beetles within a short time.

In the present paper, I am going to describe five new oculate species of trechine beetles belonging to the genus *Trechiana*, which are now known fairly well. One of them is endemic to a recent volcano standing at the western side of northern Honshu. It belongs to the *nivalis* lineage of the group of *T. oreas* but is unique in the elytral chaetotaxy and configuration of the aedeagus. All the others are restricted to such non-volcanic mountains as the Mahirus, Taiheis and Shirakamis, all seldom visited by entomologists, and form a subgroup of their own within the same species-group. Though their differentiation is rather subtle, I have regarded every one of them as a full species, not as a subspecies of a single polymorphic species, in view of remarkable speciation of their relatives on very recent volcanoes distributed in the same general area.

The abbreviations employed in this paper are the same as those explained in previous papers of mine.

Before going further, I wish to express my hearty thanks to the following friends of mine, who either helped me in field investigations or submitted their collections to me for taxonomic study: Professor Yoshiaki NISHIKAWA, Messrs. Azuma ABE, Ma-

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Trechiana (s. str.) *yoshikoe* S. UÉNO, sp. nov.

[Japanese name: Chôkai-naga-chibigomimushi]

(Figs. 1–4)

Length: 5.20–5.70 mm (from apical margin of clypeus to apices of elytra).

Belonging to the *nivalis* lineage of the group of *T. oreas*, and recognized at first sight on its narrow elytra with two setiferous dorsal pores of the external series. Besides, this species is unique in the peculiarly shaped aedeagus, which is very slender, regularly arcuate, and with very long apical lobe.

Externally similar in many respects to *T. nivalis* S. UÉNO (1986, p. 132, figs. 1–4) of the Iidé Mountains, but the fore body is usually larger, the antennae are stouter and somewhat shorter, the elytra are more elongate and more parallel-sided, bearing two setiferous dorsal pores on the 5th stria instead of one, and the legs are stouter.

Colour as in dark individuals of *T. nivalis*, dark reddish brown to blackish brown in fully mature individuals, shiny, faintly iridescent on elytra; palpi, apical halves of antennae, and legs light reddish brown, venter of hind body also paler than dorsum.

Head more transverse than in *T. nivalis*, obviously wider than long, with frontal furrows more strongly curved behind; eyes variable in both size and convexity, though usually smaller and flatter in ♀ than in ♂; genae also variable in convexity, sometimes rather tumid, five-ninths to four-fifths as long as eyes; neck very wide, neck constriction distinct at the sides; mentum tooth large and broad, widely truncated or slightly emarginate at the apex; antennae stouter and usually somewhat shorter than in *T. nivalis*, reaching basal third to two-fifths of elytra and usually a little longer in ♂ than in ♀, segments 8–9 each 2.5 times or a little more as long as wide.

Pronotum ample, subcordate and convex, widest at about three-fifths from base, and a little more gradually narrowed towards base than towards apex, with the sides more widely and strongly arcuate than in *T. nivalis*, especially behind the widest part, briefly and less deeply sinuate at a level between 1/12 and 1/8 from base, and then slightly divergent towards hind angles, which are sharp, sometimes acute, and produced postero-laterad; front angles obtuse, hardly porrect; base bisinuate, more or less wider than apex; PW/HW 1.37–1.44 (M 1.40), PW/PL 1.16–1.24 (M 1.20), PW/PA 1.51–1.62 (M 1.56), PW/PB 1.33–1.43 (M 1.39), PB/PA 1.08–1.19 (M 1.12); sculptures as in *T. nivalis*.

Elytra elongated subovate, widest slightly before the middle, and almost equally narrowed towards bases and towards apices, though more pointed at the latter than at the former; EW/PW 1.41–1.47 (M 1.44), EL/EW 1.57–1.65 (M 1.62); shoulders more distinct than in *T. nivalis* though rounded, with prehumeral borders gently arcuate; sides feebly arcuate, rather abruptly convergent in apical parts without distinct emargination; each apex either obtuse or narrowly rounded, re-entrant angle at suture

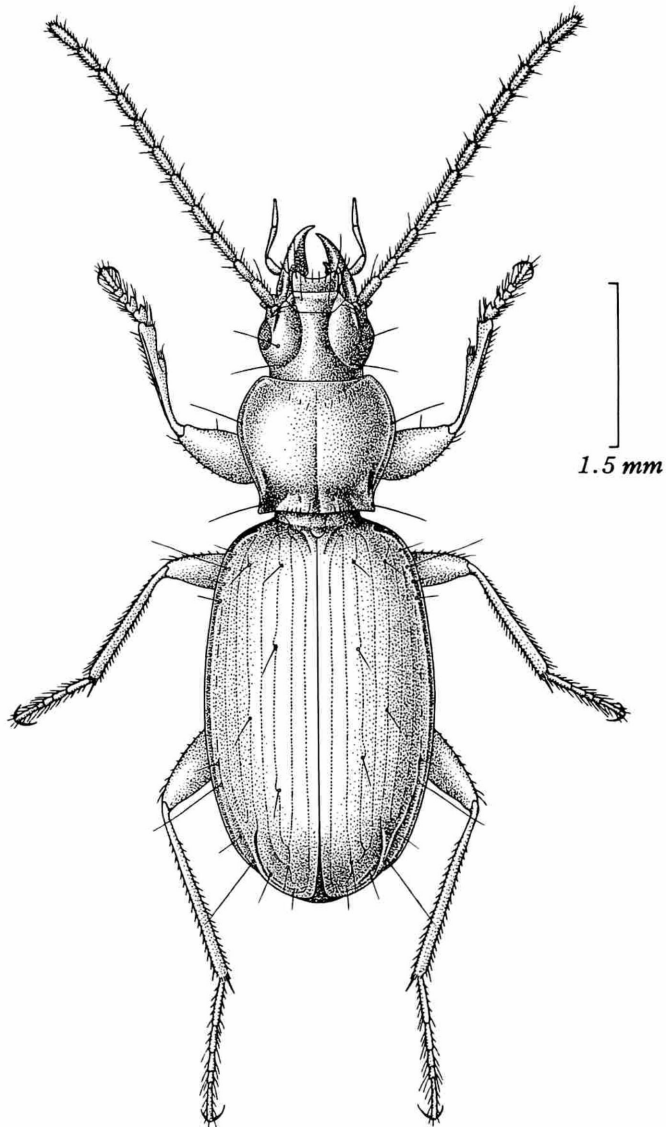
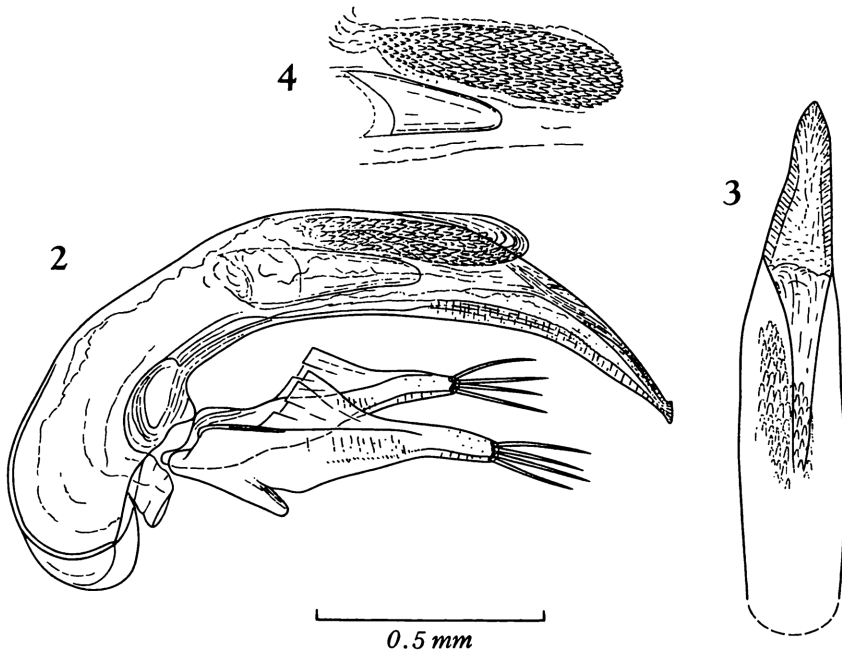


Fig. 1. *Trechiana* (s. str.) *yoshikoeae* S. UÉNO, sp. nov., ♂, from Mt. Chôkai-zan (vicinities of Zenjin-numa).

very small; surface gently convex though widely depressed on the disc, marginal declivity steep; striae entire, fairly deep even at the side, finely punctate, stria 8 deeply impressed behind the middle set of marginal umbilicate pores; scutellar striole fairly long; apical striole deep and moderately curved, either joining or almost joining stria 5 (rarely joining stria 7 on one elytron); intervals gently convex and smooth, apical



Figs. 2-4. Male genitalia of *Trechitama* (s. str.) *yoshikoeae* S. UÉNO, sp. nov., from Mt. Chōkai-zan (vicinities of Zenjin-numa); left lateral view (2), apical part of aedeagus, dorso-apical view (3), and separated inner armature, left lateral view (4).

carina prominent; stria 3 with three setiferous dorsal pores at $1/11-1/8$, $3/10-2/5$ (usually about $1/3$) and about $2/3$ from base, respectively; preapical pore situated at the apical anastomosis of striae 2 and 3, well behind the level of the terminus of apical striole but still more distant from apex than from suture; stria 5 always with two setiferous dorsal pores at $1/10-1/8$ and $3/7-3/5$ (usually about $1/2$) from base, respectively; marginal umbilicate pores completely aggregated.

Ventral surface smooth; anal sternite with the apical margin more strongly and evenly arcuate in ♂ than in ♀, bisetose in the former, quadrisetose in the latter. Legs relatively stout, evidently stouter than in *T. nivalis*, with protibiae more widely dilated towards apices than in the latter.

Male genital organ large, slender and heavily sclerotized. Aedeagus about three-sevenths as long as elytra, tubular, long, regularly arcuate, gradually tapered towards apex from before the level of apical orifice, and produced into a long apical lobe, with the dorsal margin semicircularly rounded in profile; basal part elongate, curved ventrad, and slightly emarginate at the sides of basal orifice, with a fairly large sagittal aileron; viewed dorsally, apical lobe very gradually narrowed apicad and forming a subtriangular apical portion pointed at the extremity; viewed laterally, apical lobe narrow, feebly curved ventrad, gradually tapered apicad, and dorsally tuberculate at the ex-

tremity; ventral margin widely emarginate in profile. Inner sac armed with an anisotropic copulatory piece and a large patch of heavily sclerotized teeth; copulatory piece subtriangular with rounded apex, somewhat spatulate, and becoming membranous at the basal part; teeth-patch dorsal, lying at the right dorsal side of copulatory piece just behind middle of aedeagus. Styles relatively small and narrow, left style longer than the right, each bearing four or five setae at the apex; in one of the paratypes, a short sixth seta present on the right style.

Variation in elytral chaetotaxy. Unlike *T. nivalis*, this species shows a high stability of elytral chaetotaxy. Of the total 19 specimens examined, only one male is aberrant in having a fourth dorsal pore on the third stria of the left elytron. No aberrancy is found in the number of dorsal pores on the fifth elytral stria.

Type series. Holotype: ♂, Zenjin-iké, 28-VIII-1982, S. UÉNO leg. Allotype: ♀, Zenjin-iké, 28-VIII-1982, Y. NISHIKAWA leg. Paratypes: 1 ♀, Zenjin-iké, 28-VIII-1982, S. UÉNO leg.; 5 ♂♂, vicinities of Zenjin-numa, 950-1,000 m alt., 20-VIII-1959, S. UÉNO leg.; 2 ♀♀ (teneral), Yajima-guchi 1,400-1,600 m alt., 20-VIII-1959, S. UÉNO leg.; 3 ♂♂, 4 ♀♀ (incl. 1 teneral ♀), Yajima-guchi 1,220-1,380 m alt., 28-VIII-1982, S. UÉNO & Y. NISHIKAWA leg.; 1 ♀, Ohshimizu, 29-VIII-1982, Y. NISHIKAWA leg.; 1 ♂, Masuda-guchi 1,250 m alt., 29-VIII-1982, S. UÉNO leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Mt. Chôkai-zan, on the borders of Akita and Yamagata Prefectures, at the western side of northeastern Honshu, Northeast Japan. Zenjin-iké (=Zenjin-numa; 1,050 m in altitude) and Yajima-guchi are on the northeastern slope in Akita Prefecture, Ohshimizu (850 m in altitude on Momoyaké-guchi) is on the eastern slope, also in Akita Prefecture, and Masuda-guchi is on the southern slope in Yamagata Prefecture.

Further specimen examined. 1 ♀, Mt. Chôkai-zan, Yunodai-guchi 1,400 m alt., Yuza-chô, Yamagata Pref., 29-VIII-1982, Y. NISHIKAWA leg. (NSMT).

Notes. The single female specimen collected at Hatchô-zaka of Yunodai-guchi, on the southern slope of the volcano, is excluded from the type series because of its exceptional body form. This is an unusually small individual with narrow prothorax, measuring only 5.15 mm in the length of body. The standard ratios of its body parts are: PW/HW 1.37, PW/PL 1.13, PW/PA 1.49, PW/PB 1.38, PB/PA 1.07, EW/PW 1.54, EL/EW 1.60. Most probably, this specimen represents an extreme variant of *T. yoshikoeae*, though exact identification is not possible without examination of male genitalia.

It seems certain that the present species is a member of the *nivalis* lineage in a strict sense in view of the characteristic inner armature of its male genitalia. It is, however, considerably different from the other species of the same lineage²⁾ both in the elytral chaetotaxy and in the configuration of aedeagus. Of these, the former is not definite

2) *Trechiana nivalis* S. UÉNO, 1986, *T. akinobui* S. UÉNO, 1986, *T. abcuma* S. UÉNO, 1992, and two undescribed species.

as will be shown on later pages for the *meridianus* lineage, but the latter is really astonishing. No other trechines belonging to the group of *Trechiana oreas*, both described and undescribed, have such a slender aedeagus as is found in *T. yoshikoeae*, although very slender aedeagi are known in certain anophthalmic forms of the genus. Peculiar genitalic specialization shown by *T. yoshikoeae* is almost incredible, especially because it has taken place on a very recent volcano of the Post-glacial origin, even though the solitary volcano is completely isolated from other high mountains in north-eastern Honshu. This seems to suggest that speciation of *Trechiana* is very rapid under certain conditions and may be completed in less than ten thousand years.

Most specimens of the type series of *T. yoshikoeae* were collected along the climbing route called Yajima-guchi on the northeastern slope of Mt. Chôkai-zan (2,236 m in height at the highest point), above all in the vicinities of the small lake called Zenjin-iké (formerly called Zenjin-numa) at an altitude of 1,050 m. They were found from beneath stones lying or embedded in small gullies running through beech forests. At higher elevations, they occurred in birch shrubberies, but not near the summit that erupted recently. A few specimens were taken on the eastern and southern slopes, but we failed in finding any on the western slope, which also should harbour the same trechine.

This interesting species is named after my wife, Yoshiko, who accompanied me on the 1982 trip to the high mountains of northeastern Honshu.

Trechiana (s. str.) *meridianus* S. UÉNO, sp. nov.

[Japanese name: Mahiru-naga-chibigomimushi]

(Figs. 5-8)

Length: 5.80-6.10 mm (from apical margin of clypeus to apices of elytra).

Closely related to *T. oniceps* S. UÉNO (1989, p. 128, figs. 7-11) localized on the Onikôbé-tôgê and the Hanadaté-tôgê, but readily distinguished from that species by the broader elytra bearing two setiferous dorsal pores on the 5th stria.

Colour as in *T. oniceps*. Head perfectly identical with that of *T. oniceps*; eyes similarly variable, genae four-ninths to five-sevenths as long as eyes; antennae reaching basal three-sevenths of elytra in ♂, basal two-fifths of elytra in ♀. Pronotum usually larger than in *T. oniceps*, cordate, widest at about five-eighths from base, and more strongly contracted towards apex than towards base; PW/HW 1.43-1.53 (M 1.49), PW/PL 1.17-1.24 (M 1.20), PW/PA 1.57-1.69 (M 1.61), PW/PB 1.40-1.52 (M 1.46); sides strongly rounded from front angles to deep ante-basal situation, then more or less divergent towards sharp hind angles, which project postero-laterally; apex more or less narrower than base, PB/PA 1.03-1.16 (M 1.10), the latter nearly straight at middle; sculptures as in *T. oniceps*.

Elytra usually broader than in *T. oniceps*, widest at about four-ninths from bases, with the sides a little more strongly arcuate from behind shoulders to the level of the seventh umbilicate pore and rather abruptly convergent to apices through slight pre-

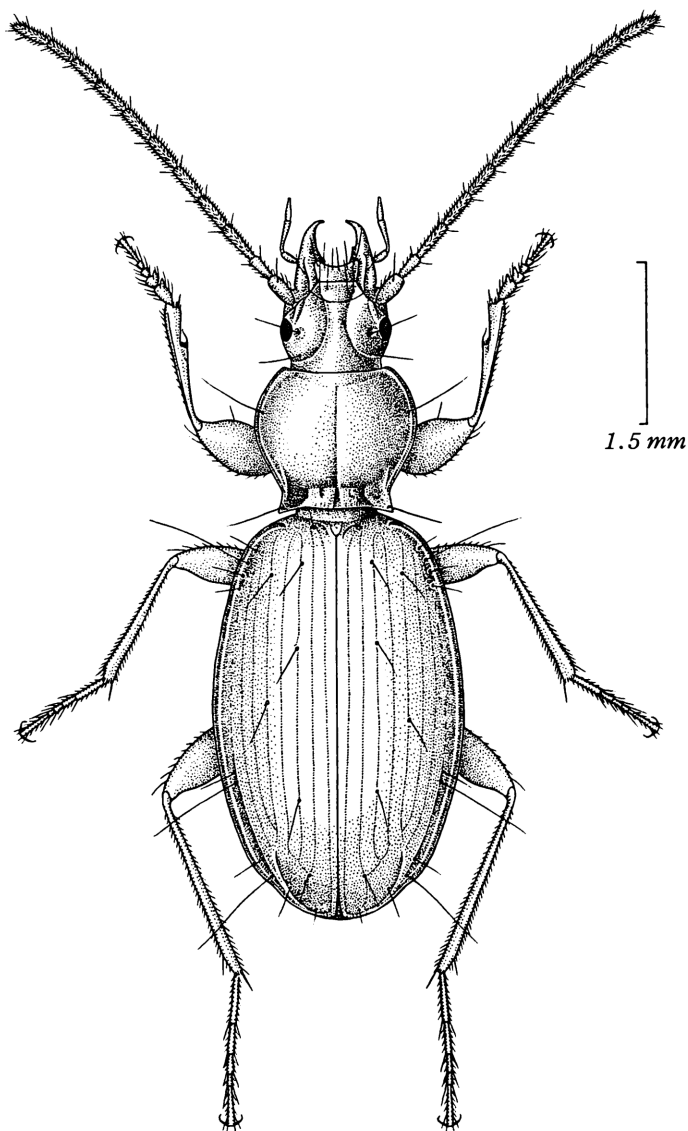


Fig. 5. *Trechiana* (s. str.) *meridianus* S. UÉNO, sp. nov., ♂, from Mt. Ondô-daké of the Mahiru Mountains.

apical emargination, which form a small re-entrant angle at suture; shoulders rounded, with prehumeral borders gently arcuate and usually less oblique than in *T. oniceps*; EW/PW 1.52–1.66 (M 1.59), EL/EW 1.49–1.55 (M 1.52); surface moderately convex especially behind middle; striae more or less deeper than in *T. oniceps*, crenulate, apical striole deeply impressed, rather feebly curved in front, and frequently joining

stria 7 though sometimes joining stria 5; intervals slightly convex on the disc; stria 3 with three setiferous dorsal pores at 1/11–1/8, 1/5–2/5 and 3/5–5/7 from base, respectively; stria 5 with two setiferous dorsal pores at 1/9–1/7 and 4/9–5/9 from base, respectively; preapical pore lying at the apical anastomosis of striae 2 and 3 well behind the level of the terminus of apical striole, and evidently more distant from apex than from suture. Ventral surface and legs as in *T. oniceps*.

Male genital organ heavily sclerotized, similar in many respects to that of *T. oniceps*, but different from the latter in the shape of aedeagal apical lobe and copulatory piece. Aedeagus about three-eighths as long as elytra, tubular, hardly arcuate, highest behind middle, and flattened at apical lobe; basal part fairly large, rather strongly curved ventrad, and deeply emarginate at the sides of basal orifice, with elongate sagittal aileron; viewed dorsally, apical lobe broad at base, narrowed towards apex, which is subtruncated and obtusely denticulate at the middle; viewed laterally, apical lobe very narrow, gradually tapered, and with a small button at the extremity; ventral margin bisinuate in profile. Inner sac armed with a large copulatory piece and three patches of heavily sclerotized teeth; copulatory piece about one-third as long as aedeagus, gutter-shaped and rather lightly twisted, dilated apically and forming a large vertical lamella rounded at the apex, with the right proximal portion heavily sclerotized and vertically produced into a triangular fin; two of the three teeth-patches left lateral, lying one outside the other at the left side of copulatory piece and seemingly united at the proximal ends, internal one dilated towards recurved apex, external one narrow, consisting of an irregular row of teeth and extending to near the apical margin of copulatory piece; right dorsal teeth-patch not large, compact and almost horizontal, lying just inside apical orifice. Styles fairly large, left style obviously larger than the right and provided with five apical setae, right style relatively small and narrow, bearing four apical setae.

Variation in elytral chaetotaxy. Chaetotaxy of elytra is fairly stable in the type population of this species, but one (♂) of the 12 specimens examined is aberrant in lacking the second dorsal pore on the fifth stria and the preapical pore of the right elytron. Rare occurrence of such an aberrancy is of some taxonomic interest, since it may represent an intermediate state between the bisetigerous condition of the external series predominant in the *oreas* and the *meridianus* subgroups and the unisetigerous condition commonly found in the *nivalis* subgroup.

Type series. Holotype: ♂, allotype: ♀, Sawauchi side, 30–VII–1985, S. UÉNO leg. Paratypes: 5 ♂♂, 2 ♀♀, Sawauchi side, 30–VII–1985, S. UÉNO & M. FUJIOKA leg.; 1 ♂, 2 ♀♀, Senhata side, 30–VII–1985, S. UÉNO & M. FUJIOKA leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Mt. Ondô-daké of the Mahiru Mountains, on the borders of Iwaté (Sawauchi-mura) and Akita (Senhata-mura) Prefectures, 820 m in altitude at the Sawauchi side and 870 m in altitude at the Senhata side, at the western side of northeastern Honshu, Northeast Japan.

Further specimens examined. 2 ♂♂, 5 ♀♀ (incl. 2 teneral ♀♀), Mt. Arisu-yama, 870 m alt. on WNW slope, Yuda-chô, Iwaté Pref., 25-VIII-1985, S. UÉNO leg. (NSMT).

Notes. The occurrence of this species on the Mahiru Mountains was preliminarily noticed in the Notes following the description of *T. oniceps* (UÉNO, 1989, p. 132). At the same time, it was pointed out that these trechines could not be placed in any of the subgroups then recognized. However, I refrained from proposing a new subgroup, seeing that *T. oniceps* is not typical of the lineage but exceptional in the chaetotaxy of its elytra. Having properly described the Mahiru species, I now propose the name *meridianus* subgroup for these two and the species to be described on later pages. It is characterized mainly by possession of narrow taeniate teeth-patches either united or seemingly united at the proximal ends and twisted copulatory piece lying at their right side. Most members of the *meridianus* subgroup resemble those of the *oreas* subgroup in their external morphology. They are, however, restricted to non-volcanic old mountains, whereas the members of the *oreas* subgroup occur mainly on recent volcanoes. Beside the species dealt with in the present paper, an isolated species belonging to this subgroup has been known from the southern part of the Kitakami Mountains at the eastern side of northeastern Honshu, or at the southeastern periphery of the distributional range of the *oreas* subgroup. It will be described in a separate paper to be published before long.

The Mahiru Mountains occupy the central part of the Ôu Mountain Range, but are utterly different from the northern and southern parts in being non-volcanic. Mt. Ondô-daké (996 m in height), the type locality of *T. meridianus*, lies near the centre of the mountains only 2.2 km northeast of Mt. Mahiru-daké, and is about 63.5 km distant to the north by east from the Onikôbé-tôgé on the Kamuro Mountains, the type locality of *T. oniceps*. *Trechiana meridianus* was found near the heads of two gullies on both sides of the ridge, from beneath stones embedded in the wet ground. Though located at the opposite sides of the watershed, the two collecting sites are only 300 m apart from each other in a bee-line.

A second locality of the present species is known on Mt. Arisu-yama (1,162 m in height), lying at the southern part of the Mahiru Mountains about 30 km south by east of Mt. Ondô-daké. The actual habitat is a shaded gully near a pass at the northwestern side of the mountain. The specimens from this population (5.25–6.05 mm in the length of body) are somewhat different from the type series in the shape of the pronotum, which is slightly narrower on an average and usually less contracted at the base. Consequently, the sides are a little less strongly arcuate, especially behind the widest part. It is for this reason that the Arisu-yama specimens are excluded from the type series. The standard ratios of their body parts are as follows: PW/HW 1.41–1.46 (M 1.43), PW/PL 1.15–1.20 (M 1.18), PW/PA 1.52–1.63 (M 1.58), PW/PB 1.30–1.43 (M 1.37), PB/PA 1.11–1.17 (M 1.15), EW/PW 1.58–1.67 (M 1.64), EL/EW 1.50–1.53 (M 1.51). They are also different from the type series in relative frequency of the occurrence of chaetotaxially aberrant individuals. Of the seven specimens examined, two females lack one of the dorsal pores on the third elytral stria: one lacks the first(!)

pore on the left elytron, and the other lacks the third pore on the right elytron. However, the external series is very stable, always consisting of two setiferous dorsal pores.

Mt. Arisu-yama is the only known place where a member of the *oreas* subgroup coexists with that of the other lineage. Three different species of trechine beetles, *T. meridianus*, a species of the *oreas* lineage and a *Kurasawatrechus*, were found together in the gully only 2 m wide and about 15 m long. All of them were met from beneath stones embedded in the gully-bed, and though I was unable to distinguish the two *Trechiana* in the field, they might dwell under the same stones. Though non-volcanic, Mt. Arisu-yama is only 5.5 km distant to the northwest from Mt. Yakéishi-daké, a recent volcano inhabited by a member of the *oreas* subgroup. It is therefore not surprising that the latter species could spread northwestwards across the ridge formed by an eruption of the volcano and came into contact with the aboriginal species.

The specific name of this new trechine is given after the name of its native place, the Mahiru Mountains, meaning the midday mountains in Japanese.

Trechiana (s. str.) *pacatus* S. UÉNO, sp. nov.

[Japanese name: Taihei-naga-chibigomimushi]

(Figs. 9–11)

Length: 5.85–6.60 mm (from apical margin of clypeus to apices of elytra).

Closely allied to *T. meridianus* and very similar to the latter in most external features, but the head is larger on an average, with the eyes usually a little smaller and flatter, and the elytra are usually a little longer, more widely depressed on the disc especially in ♂, steeper at the apical declivity, and more shallowly striate; PW/HW 1.39–1.49 (M 1.46), PW/PL 1.17–1.22 (M 1.19), PW/PA 1.52–1.67 (M 1.61), PW/PB 1.39–1.51 (M 1.44), PB/PA 1.04–1.17 (M 1.12), EW/PW 1.50–1.66 (M 1.58), EL/EW 1.51–1.59 (M 1.56).

Male genital organ similar to that of *T. meridianus*, but somewhat smaller, with apical lobe less flattened and bearing less conspicuous terminal button, and with copulatory piece smaller, more strongly twisted and bearing a large quadrangular fin. Aedeagus about one-third as long as elytra, similar to that of *T. meridianus* but more gradually tapered behind apical orifice in lateral view, with thicker apical lobe, whose terminal button is not conspicuous due to thickness of the lobe and sometimes represented by a mere dorsal tubercle. Copulatory piece shorter than in *T. meridianus*, about two-sevenths as long as aedeagus, broader in proximal part, more strongly twisted, and bearing a large quadrangular fin at the right proximal part. Styles as in *T. meridianus*, but the left style usually bears four apical setae.

Variation in elytral chaetotaxy. Of the 14 specimens of the type series, two, or 14.29%, are aberrant in the number of dorsal pores on the *fifth* elytral stria; one male has a third pore on the left elytron at about 2/3 from the base, and one female has a third pore on the right elytron just behind the second pore. In the members of the group of *T. oreas*, the number of dorsal pores of the external series is usually stable as

compared with that of the internal, so that the aberrancy observed in the type population of *T. pacatus* is rather exceptional within the species-group.

Type series. Holotype: ♂, allotype: ♀, Okkesa-mori, 25-VIII-1982, S. UÉNO leg. Paratypes: 3 ♂♂, 3 ♀♀, Okkesa-mori, 25-VIII-1982, S. UÉNO & Y. NISHIKAWA leg.; 1 ♂ (somewhat teneral), Fudô-daki, 25-VIII-1982, Y. NISHIKAWA leg.; 4 ♂♂, 1 ♀, Tsurugi-daké, 25-VIII-1982, S. UÉNO & Y. NISHIKAWA leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

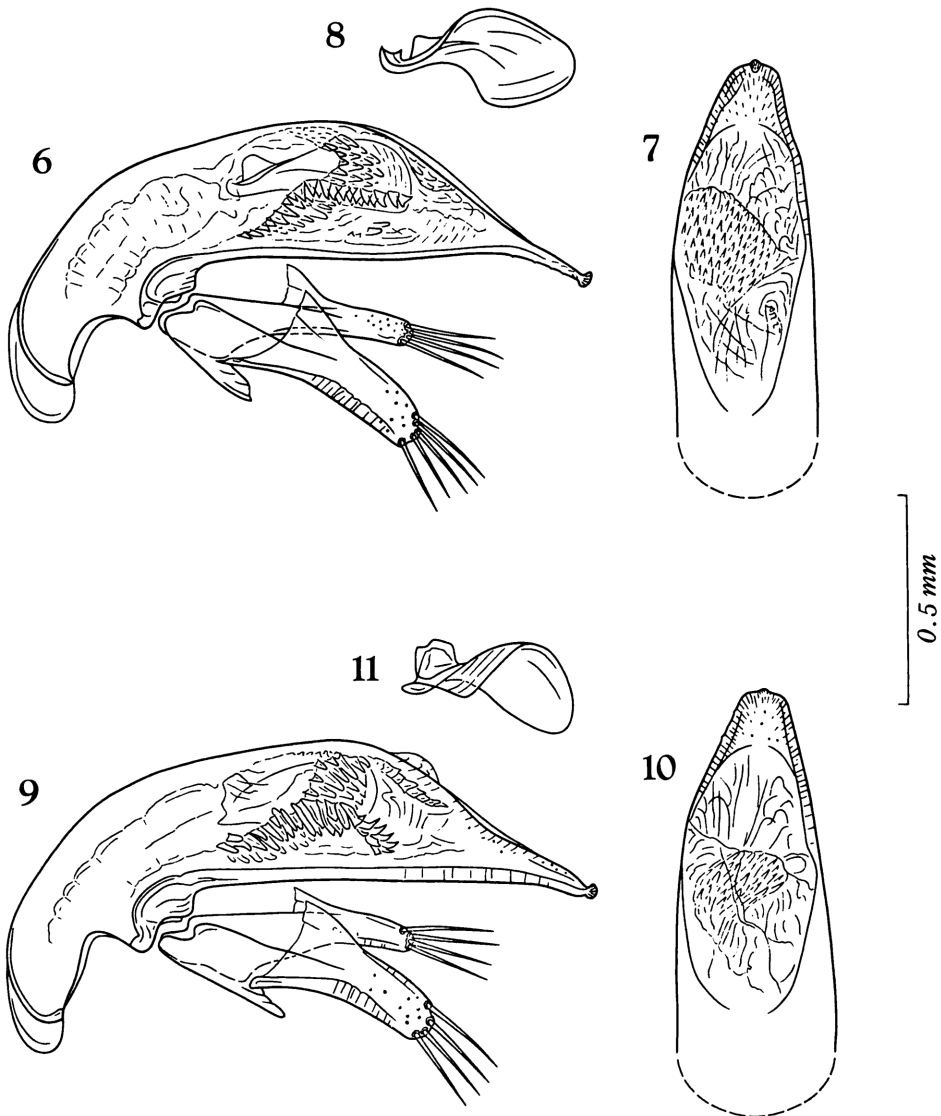
Type locality. Mt. Taihei-zan (310 m in altitude at the southwestern foot of Okkesa-mori, 350 m in altitude near Fudô-daki, and 660–680 m in altitude on the south-southeastern slope of Tsurugi-daké), in Akita-shi of Akita Prefecture, at the western side of northeastern Honshu, Northeast Japan.

Further specimens examined. 2 ♂♂, 1 ♀, Kawakita-rindô, 700 m SW of Oh-taki, 300 m alt., Kawabé-chô, Akita Pref., 26-VIII-1982, Y. NISHIKAWA leg. (NSMT); 2 ♂♂, Mt. Daibutsu-daké, Ohmizubata-zawa, 640 m alt., Nishiki-mura, Akita Pref., 28-VII-1991, N. HIKIDA leg. (NSMT); 1 ♂, Oh-mori Hill, Heiji-zawa, 500 m alt., Ani-chô, Akita Pref., 26-VIII-1982, Y. NISHIKAWA leg. (NSMT).

Notes. Though very closely similar to the Mahiru ones (*T. meridianus*), the Taihei populations are regarded herewith as belonging to a taxon different from the former at the species level. Ordinarily, such subtle differences as are observed between the two should be considered subspecific, but in this particular case, speciation seems to have been completed between the two groups of *Trechiana* populations. They are mutually exclusive beyond all reasonable doubt, being separated by the wide Yokoté Basin with two large rivers flowing through it, the Omono-gawa and its tributary, the Tama-gawa, and by the Tazawa Volcanoes inhabited by a member of the *oreas* subgroup. Of the four known localities of *T. pacatus*, Mt. Daibutsu-daké lying at the eastern part of the Taiheis is the nearest to Mt. Ondô-daké of the Mahirus, but even this is about 40 km distant to the north-northwest from the latter beyond the barriers mentioned above, and the distance itself is larger than that between the two nearest localities of *T. meridianus* and *T. oniceps*.

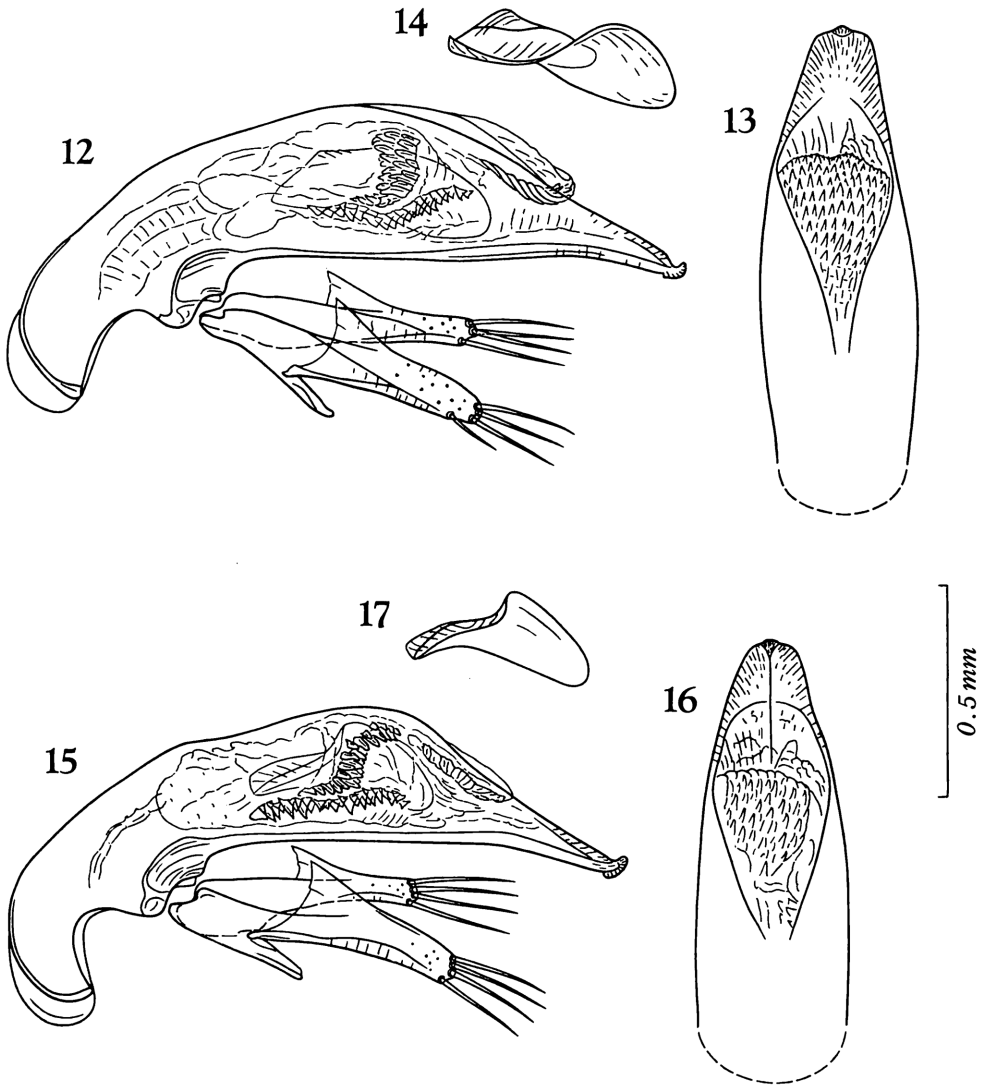
The Taihei Mountains form a range of rather low non-volcanic hills about 1,000 m in height, stretching from east to west at the western side of the Ôu Mountain Range. They are usually regarded as a portion of the so-called Dewa Mountain Range, but this is merely imaginal and meaningless from the zoogeographical viewpoint, since no continuous longitudinal range of mountains exists along the Japan Sea coast in the northern half of the Tôhoku District. *Trechiana pacatus* is restricted to and rather widely distributed over these mountains. The distance from the westernmost known locality, Mt. Taihei-zan, to the easternmost one, Oh-mori Hill, is about 22 km in a bee-line.

On Mt. Taihei-zan (1,171 m in height), the type specimens were collected along the upper course of the Taihei-gawa flowing down the southern slope. They were found from beneath large stones lying in wet shaded places. In a gully near Oh-taki,



Figs. 6-11. Male genitalia of *Trechiana* (s. str.) spp.; left lateral view (6, 9), apical part of aedeagus, dorso-apical view (7, 10), and separated copulatory piece, left lateral view (8, 11). — 6-8. *T. meridianus* S. UÉNO, sp. nov., from Mt. Ondô-daké of the Mahiru Mountains. — 9-11. *T. pacatus* S. UÉNO, sp. nov., from Mt. Taihei-zan (SW foot of Okkesa-mori).

which lies by the Kawakita-rindô on the opposite side of the Sannai-gawa Valley about 10.5 km east-northeast of Okkesa-mori of Mt. Taihei-zan, three specimens of *T. pacatus* were dug out from a colluvium. They are smaller (5.20-5.95 mm in the length



Figs. 12–17. Male genitalia of *Trechiana* (s. str.) spp.; left lateral view (12, 15), apical part of aedeagus, dorso-apical view (13, 16), and separated copulatory piece, left lateral view (14, 17). — 12–14. *T. albidivalis* S. UÉNO, sp. nov., from the Tengu-tôgé of the Shirakami Mountains. — 15–17. *T. triops* S. UÉNO, sp. nov., from the Mitsumenai-gawa Valley at the NW foot of Towada-yama in Ohwani-machi.

of body) than the type series but morphologically agree well with the latter, with the exception of one male, in which the pronotal sides are not divergent posteriorly behind the ante-basal situation but are slightly convergent towards the hind angles. In the

female specimen from this population, the third dorsal pore is lacking on the third stria of the right elytron. The standard ratios of their body parts are: PW/HW 1.43–1.46 in ♂♂, 1.43 in ♀, PW/PL 1.17–1.21 in ♂♂, 1.17 in ♀, PW/PA 1.52–1.58 in ♂♂, 1.57 in ♀, PW/PB 1.39–1.46 in ♂♂, 1.42 in ♀, PB/PA 1.09 in ♂♂, 1.10 in ♀, EW/PW 1.59–1.64 in ♂♂, 1.49 in ♀, EL/EW 1.55–1.58 in ♂♂, 1.59 in ♀.

A third locality of this new species is known near the head of the Ohmizubatazawa on the south-southeastern slope of Mt. Daibutsu-daké (1,167 m in height) about 9 km east of the gully near Oh-taki. The two males known from this population are perfectly identical with the type series, though one of them has a fourth pore on the third stria of the right elytron between the second and third dorsal pores. The standard ratios of their body parts are: PW/HW 1.48–1.50, PW/PL 1.23–1.24, PW/PA 1.61–1.64, PW/PB 1.45–1.47, PB/PA 1.09–1.13, EW/PW 1.52–1.54, EL/EW 1.54–1.55.

Finally, the single male specimen known from near the head of the Heiji-zawa at the southeastern foot of Oh-mori Hill (857 m in height), about 8.2 km distant to the north from Mt. Daibutsu-daké and about 12.5 km distant to the northeast from the gully near Oh-taki, perfectly accords with the type series. It measures 6.35 mm in the length of the body and has the following standard ratios of body parts: PW/HW 1.48, PW/PL 1.21, PW/PA 1.64, PW/PB 1.39, PB/PA 1.18, EW/PW 1.57, EL/EW 1.58. It seems worth noting that Oh-mori Hill is nearer to Mt. Moriyoshi-zan than to Mt. Taihei-zan, only about 10 km distant from the former though separated by the Utsutôgawa Valley and about 22 km distant from the latter. Mt. Moriyoshi-zan is a recent volcano and harbours *Trechiana oreas*.

The specific name *pacatus* is derived from the Taihei Mountains, which mean the peaceful mountains in Japanese.

Trechiana (s. str.) *albidivalis* S. UÉNO, sp. nov.

[Japanese name: Shirakami-naga-chibigomimushi]

(Figs. 12–14, 18)

Length: 5.90–6.75 mm (from apical margin of clypeus to apices of elytra).

Belonging to the *meridianus* lineage and recognized at first sight on the characteristic shape of its pronotum, which is not cordate but rather campanulate, with broad base, very short basal part and small hind angles. Also different from the other species in aedeagal configuration.

Colour variable; specimens from high altitude populations are usually dark, sometimes blackish, and similar to *T. pacatus* in coloration, but those from lower altitude, including the holotype and allotype, are wholly reddish brown with more or less lighter appendages. However, the difference is not definite, dark-coloured individuals also occurring at low places.

Head relatively narrow, narrower than in *T. pacatus*, usually with small flat eyes and gently contracted genae, the latter usually more than three-fourths as long as the former and sometimes equal in length to that, though rarely only two-thirds as long

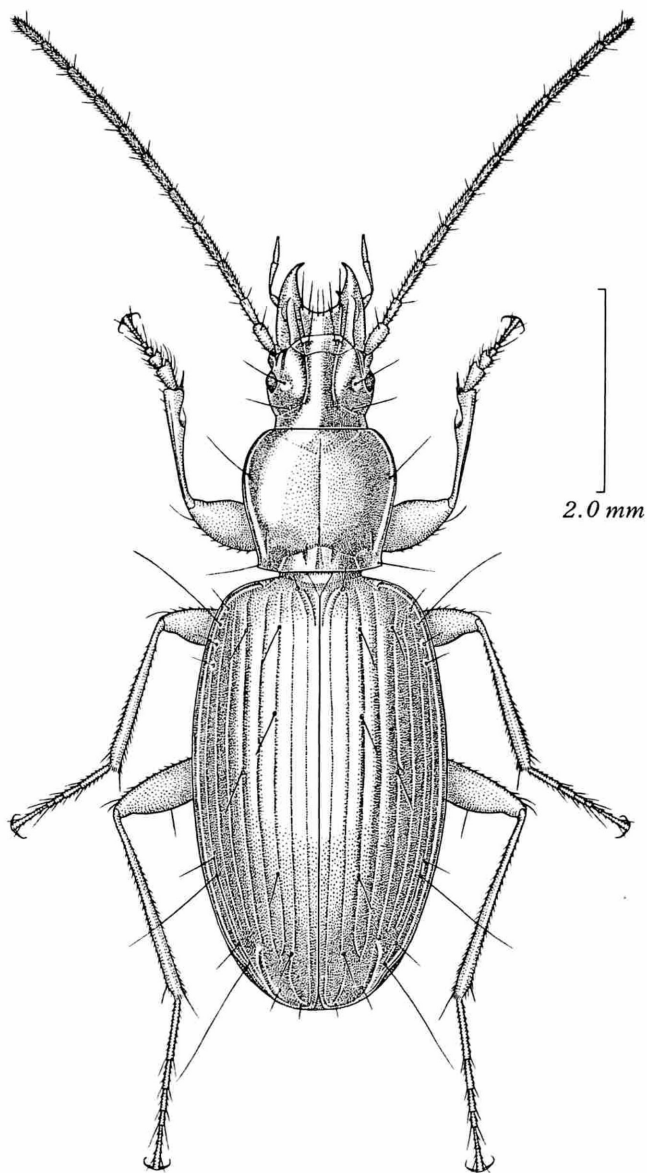


Fig. 18. *Trechiana* (s. str.) *albidivalis* S. UENO, sp. nov., ♂, from the Tengu-tôgê of the Shirakami Mountains.

as eyes; antennae reaching basal three-sevenths to the middle of elytra in ♂, usually a little shorter than that in ♀.

Pronotum usually subcampanulate rather than subcordate, usually widest at about three-fifths from base, and much more gradually narrowed towards base than

towards apex, with very short but broad basal part and small subrectangular hind angles; PW/HW 1.41–1.57 (M 1.47), PW/PL 1.11–1.22 (M 1.16), PW/PA 1.52–1.66 (M 1.60), PW/PB 1.22–1.36 (M 1.28); sides rather widely bordered except near front angles, moderately arcuate in front, very feebly so behind middle in the majority of individuals, very briefly and shallowly sinuate just before hind angles, or at 1/14–1/10 from base, and then slightly divergent towards hind angles in most specimens examined; apex obviously narrower than base, PB/PA 1.14–1.33 (M 1.25), with front angles obtuse and hardly porrect; base straight at middle, either straight or very slightly oblique on each side inside hind angle, which is rectangular or denticulate at the tip or somewhat sharp and is usually directed outwards; surface rather gently convex, more or less depressed on the disc; sculpture as in the other species of the subgroup.

Elytra usually more elongate than in *T. pacatus*, widest at a level between three-sevenths and four-ninths from bases, and obviously more pointed at apices than at bases; EW/PW 1.55–1.71 (M 1.63), EL/EW 1.54–1.65 (M 1.59); shoulders distinct though rounded, with prehumeral borders moderately arcuate and almost perpendicular to the mid-line at the innermost portions; sides rather widely reflexed in basal halves, very feebly arcuate from behind shoulders to the level of the seventh umbilicate pore, each with a shallow preapical emargination; apices rather narrowly and almost conjointly rounded; surface widely depressed in basal three-fifths, with steep marginal declivity; striae deeply impressed, distinctly crenulate in the majority of the specimens examined, apical striole variable though usually short, either joining or almost joining stria 7 in most individuals though sometimes directed to stria 5; intervals slightly convex on the disc; stria 3 with three setiferous dorsal pores at 1/10–1/8, 2/7–2/5 and 3/5–5/7 from base, respectively; stria 5 always with two setiferous dorsal pores at 1/10–1/8 and 2/5–1/2 from base, respectively; preapical pore lying at the apical anastomosis of striae 2 and 3, either at the level of the terminus of apical striole or a little behind that level, and much more distant from apex than from suture.

Legs relatively slender.

Male genital organ similar in basic structure to that of *T. pacatus*, but more elongate and differing from the latter in many minor details. Aedeagus about two-fifths as long as elytra, elongate, tubular, hardly arcuate, and highest at about or a little behind middle, with the dorsal margin gently arcuate in profile; basal part elongate and gently curved ventrad, with fairly large basal orifice whose sides are deeply emarginate; sagittal aileron fairly large; viewed dorsally, apical lobe gradually narrowed towards apex, which is subtruncated and obtusely denticulate at the middle; viewed laterally, apical lobe somewhat curved ventrad and gradually tapered, with the terminal button fairly large, oblique and recurved; ventral margin slightly arcuate behind middle in profile. Inner sac armed with a large copulatory piece and three patches of heavily sclerotized teeth; copulatory piece about one-third as long as aedeagus, twisted from left proximal to right apical, rather heavily sclerotized in proximal part, especially at the right side, but thin and hyaline in rounded apical part; two of the teeth-patches left lateral, lying one outside the other at the left side of copulatory piece and seemingly

united at the proximal ends, internal one rectangularly curved dorsad at middle and dilated towards the dorsal rim of copulatory piece, external one narrow, consisting of an irregular row of teeth, and extending to near the apical margin of copulatory piece; dorso-apical teeth-patch almost horizontal, lying just inside apical orifice. Styles narrow though not particularly long, obviously slenderer than in the other species of the same subgroup, left style a little longer than the right and bearing a narrow ventral projection, each usually provided with four apical setae, which are not particularly long.

Variation in elytral chaetotaxy. Chaetotaxy of the elytra is remarkably stable in this new species. Of the 47 specimens of the type series, only three, or 6.38%, are aberrant in the number of setiferous dorsal pores on the third elytral stria. Two of them, both males from Hitotsu-mori, lack the third pore, one on the right elytron and the other on the left. The third aberrant specimen, a male from Rangan-no-mori, has a fourth pore on the third stria of the left elytron. No aberrancy is observed in the number of dorsal pores of the external series.

Type series. Holotype: ♂, allotype: ♀, Tengu-tôgé (830 m alt.), 25-VI-1986, S. UÉNO leg. Paratypes: 3 ♂♂, Tengu-tôgé (830 m alt.), 25-VI-1986, Y. NISHIKAWA leg.; 1 ♀, Tengu-tôgé (870 m alt.), 2-VII-1989, A. ABE leg.; 1 ♀, Tengu-tôgé (870 m alt.), 9-VII-1989, A. ABE leg.; 4 ♂♂, 3 ♀♀, Hitotsu-mori, 25-VI-1986, S. UÉNO & Y. NISHIKAWA leg.; 1 ♂, 1 ♀, Rangan-no-mori, 16-VII-1989, A. ABE leg.; 1 ♀, Ao-iké, 20-VI-1979, S. MORITA leg.; 2 ♀♀, Ao-iké, 24-VI-1986, S. UÉNO & Y. NISHIKAWA leg.; 3 ♂♂, Shirakami-daké, 29-VII-1992, S. YAMAUCHI leg.; 4 ♂♂, 2 ♀♀, Shirakami-daké, 27-VII-1993, S. YAMAUCHI leg.; 1 ♂, Futatsu-mori, 23-VII-1989, A. ABE leg.; 4 ♂♂, 2 ♀♀, Futatsu-mori, 24-VII-1989, A. ABE leg.; 1 ♂, 1 ♀, Futatsu-mori, 25-VII-1989, A. ABE leg.; 1 ♀, Santa-kayanagaré (750 m alt.), 21-VII-1984, F. SATÔ leg.; 5 ♂♂, 4 ♀♀, Santa-kayanagaré (600 m alt.), 4-VIII-1985, F. SATÔ leg. Several paratypes from Mt. Shirakami-daké and Mt. Futatsu-mori are deposited in the collection of the Aomori Prefectural Museum. All the others including the holotype and allotype are preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Localities of the type specimens. Ao-iké of Jûniko, 240 m in altitude, in Iwasaki-mura, Aomori Pref.; Mt. Shirakami-daké, 1,220 m in altitude, in Iwasaki-mura, Aomori Pref.; Hitotsu-mori, 590 m in altitude at the east-southeastern side, in Fukaura-machi, Aomori Pref.; Tengu-tôgé (type locality!), 830 m and 870 m in altitude at the western side, in Fukaura-machi, Aomori Pref.; Rangan-no-mori, 660 m in altitude on the southern slope, in Ajigasawa-chô, Aomori Pref.; Mt. Futatsu-mori, 880 m in altitude at the heads of the Tomari-zawa, in Ajigasawa-chô, Aomori Pref.; Santa-kayanagaré, 600 m and 750 m in altitude on the west-northwestern slope, in Fujisato-machi, Akita Pref.; all in the western part of the Shirakami Mountains on the borders of Aomori and Akita Prefectures, at the western side of northeastern Honshu, Northeast Japan.

Further specimens examined. 3 ♂♂, 2 ♀♀, Anmon-gawa Valley, Yakeyama,

280 m alt., Nishimeya-mura, Aomori Pref., 25-VI-1986, S. UÉNO & Y. NISHIKAWA leg. (NSMT).

Notes. Though rather variable, this new species can be easily distinguished from the other members of the *meridianus* subgroup by the short broad basal part of the pronotum and the elongate aedeagus. It is widespread in the western part of the Shirakami Mountains, and the actual range may extend eastwards into the central part. Anyway, its distributional range is adjacent to that of *T. oreas* H. W. BATES, since Rangan-no-mori lying at its northeastern periphery is only 13.7 km distant to the southwest from the habitat of *T. oreas* in the Yu-no-sawa at the southwestern side of Mt. Iwaki-san. On the other hand, even the southernmost known locality of *T. albidivalis*, Santa-kayanagaré, is about 70 km distant to the north by west from Tsurugi-daké of Mt. Taihei-zan, and besides, the Shirakami Mountains are separated from the Taiheis by the wide alluvia of the Yoneshiro-gawa and the low hilly area south of the large river.

Of the eight localities of *T. albidivalis* hitherto known, the Tengu-tôgé is selected as the type locality, since it is situated at the centre of the middle altitude habitats of the species. Lying in the Oirasé-gawa drainage, this locality is only 2.8 km east by north of Hitotsu-mori and 4.9 km west of Rangan-no-mori, the latter of which lies in the Akaishi-gawa drainage. Specimens from these localities were dug out from colluvia deposited at the sides of shaded gullies, and therefore, they are not dark-coloured. Ao-iké of the Jûniko Lakes is located at 6.7 km west of Hitotsu-mori and marks the western limit of distribution of *T. albidivalis*. The three known specimens from this locality, all unfortunately females, are slightly different from the specimens of the middle altitude habitats in the narrower base of the pronotum (see Table 1), though otherwise agreeing well with the latter in external morphology. One of the three is dark-coloured like high altitude specimens, but the other two are wholly reddish brown.

The specimens from near the summit of Mt. Shirakami-daké (1,235 m in height), which is 7.3 km apart to the south-southwest from Hitotsu-mori and 6.8 km apart to the south-southeast from Ao-iké of the Jûniko Lakes, are darker in coloration than any of the middle altitude ones, and have relatively sharp hind angles of the pronotum and rather widely rounded apices of the elytra. Those from Mt. Futatsu-mori (1,086 m in height), a peak on the watershed ridge about 11 km southeast of Mt. Shirakami-daké, and those from Santa-kayanagaré, which lies at the southern side of the mountain range about 4.1 km farther in the same direction, resemble the Shirakami-daké specimens, but the head is relatively small on an average (see Table 1) and the elytra are narrowly rounded at the apices as in the specimens from the type population.

Most remarkable is the Anmon-gawa population, whose specimens are larger on an average than any of the others (6.35–6.80 mm in the length of body) and are characterized by the unusually broad basal part of the pronotum (see Table 1), which makes its lateral sides only lightly contracted posteriad and only very slightly sinuate before rectangular hind angles. It is for this reason that the Anmon-gawa specimens are excluded from the type series, although the collecting site is only 6.5 km distant to

Table 1. Geographical variation of standard ratios in *Trechiana* (s. str.) *albidivatis* S. UÉNO, sp. nov., from the Shirakami Mountains. Mean values are shown in parentheses.

Population	PW/HW	PW/PL	PW/PA	PW/PB	PB/PA	EW/PW	EL/EW
Ao-iké	1.41-1.45 (1.43)	1.14-1.20 (1.17)	1.55-1.62 (1.57)	1.33-1.36 (1.34)	1.14-1.22 (1.18)	1.57-1.62 (1.59)	1.60-1.62 (1.61)
Shirakami-daké	1.44-1.49 (1.46)	1.12-1.20 (1.15)	1.59-1.66 (1.62)	1.25-1.34 (1.29)	1.22-1.31 (1.26)	1.60-1.68 (1.65)	1.56-1.62 (1.59)
Hitotsu-mori	1.41-1.49 (1.44)	1.11-1.20 (1.16)	1.56-1.61 (1.59)	1.22-1.34 (1.28)	1.20-1.30 (1.25)	1.56-1.70 (1.63)	1.56-1.65 (1.60)
Tengu-tôgé	1.44-1.47 (1.46)	1.11-1.18 (1.15)	1.60-1.64 (1.62)	1.22-1.29 (1.25)	1.27-1.32 (1.30)	1.60-1.65 (1.62)	1.60-1.65 (1.62)
Rangan-no-mori	1.45-1.48	1.11-1.20	1.52-1.59	1.24-1.26	1.22-1.26	1.63-1.71	1.54-1.60
Futatsu-mori	1.47-1.55 (1.51)	1.14-1.21 (1.16)	1.62-1.64 (1.63)	1.22-1.33 (1.27)	1.22-1.33 (1.28)	1.59-1.70 (1.64)	1.54-1.63 (1.58)
Santa-kayanagaré	1.42-1.57 (1.48)	1.13-1.22 (1.17)	1.57-1.64 (1.59)	1.25-1.33 (1.29)	1.19-1.31 (1.23)	1.55-1.65 (1.61)	1.56-1.61 (1.58)
[Total]	1.41-1.57 (1.47)	1.11-1.22 (1.16)	1.52-1.66 (1.60)	1.22-1.36 (1.28)	1.14-1.33 (1.25)	1.55-1.71 (1.63)	1.54-1.65 (1.59)
Anmon-gawa Valley	1.43-1.49 (1.46)	1.10-1.16 (1.14)	1.55-1.61 (1.59)	1.17-1.23 (1.20)	1.30-1.35 (1.33)	1.60-1.67 (1.64)	1.57-1.61 (1.59)

the south-southeast from Rangan-no-mori. They are wholly reddish brown in coloration, having been dug out from a rather thick colluvium deposited at the side of a shaded gully.

On Mt. Shirakami-daké, this *Trechiana* coexists with *Oroblemus yamauchii* S. UÉNO (1993, p. 180, figs. 1–2) just as in the case of the southeastern slope in the alpine zone of Mt. Iwaki-san, where *T. oreas* dwells in coexistence with *O. caecus*. No other trechine species have been known in the territory of *T. albidivalis*, though certain *Oroblemus* may occur there, most probably in the upper hypogean zone.

The specific name *albidivalis* denotes the Shirakami Mountains, meaning the mountains of white god in Japanese.

Trechiana (s. str.) *triops* S. UÉNO, sp. nov.

[Japanese name: Mitsumé-naga-chibigomimushi]

(Figs. 15–17)

Length: 5.75–6.30 mm (from apical margin of clypeus to apices of elytra).

Closely allied to *T. albidivalis*, but somewhat smaller on an average and intermediate in facies between *T. albidivalis* and *T. pacatus*, mainly due to the intermediate shape of prothorax.

Colour dark brown, partially reddish especially on the dorsum of head, at the lateral parts of pronotum and in the basal area of elytra, shiny, very faintly iridescent on elytra; palpi, apical halves of antennae, venter of hind body, and legs reddish brown to dark reddish brown.

Head as in *T. albidivalis*, with small flat eyes; genae more than four-fifths as long as eyes and sometimes as long as the latter; antennae almost reaching the middle of elytra in ♂, basal two-fifths to four-ninths of elytra in ♀.

Pronotum subcordate though wider at base than in *T. pacatus* and *T. meridianus*, with longer and narrower basal part than in *T. albidivalis*, widest at about two-thirds from base and more strongly contracted towards apex than towards base; PW/HW 1.42–1.52 (M 1.47), PW/PL 1.14–1.22 (M 1.18), PW/PA 1.58–1.67 (M 1.61), PW/PB 1.31–1.42 (M 1.36); sides rather strongly arcuate in front, more gently so behind the widest part, distinctly sinuate at a level between basal eighth and sixth, and then more or less divergent towards hind angles in most specimens examined, rarely subparallel or even slightly convergent posteriad; apex narrower than base, PB/PA 1.14–1.24 (M 1.19), with front angles very obtuse, sometimes almost rounded off; base slightly bisinuate, hind angles usually a little sharp and directed postero-laterad, though sometimes rectangular; surface moderately convex, hardly depressed on the disc; sculpture as in the other species of the subgroup.

Elytra as in *T. albidivalis*, but the shoulders are less salient, with prehumeral borders oblique at the innermost portions and less arcuate, widest at about four-ninths from bases, and almost equally narrowed towards bases and towards apices though more pointed at the latter than at the former; EW/PW 1.56–1.66 (M 1.62), EL/EW

1.54–1.61 (M 1.56); sides more regularly arcuate than in *T. albidivalis*, each with a slight preapical emargination; apices rather narrowly rounded; surface moderately convex, less distinctly depressed on the disc than in *T. albidivalis*, with gentle apical declivity; striation as in *T. albidivalis*, but the apical striole usually joins or almost joins stria 5, only rarely joining stria 7 on one elytron; chaetotaxy as in *T. albidivalis*.

Legs stouter than in *T. albidivalis*.

Male genital organ similar in many respects to that of *T. albidivalis*, but the aedeagus is a little less elongate, highest behind the middle, and contains a smaller, differently shaped copulatory piece. Aedeagus about three-eighths as long as elytra, lightly depressed, hardly arcuate at middle, and highest at about apical two-fifths; basal part elongate, moderately curved ventrad, and deeply emarginate at the sides of basal orifice, with a hyaline sagittal aileron; viewed dorsally, apical lobe rather broad, with the apex subtruncated and very obtusely denticulate at the middle; viewed laterally, apical lobe gradually tapered, with the terminal button fairly large and oblique. Inner armature basically as in *T. albidivalis*, but the copulatory piece is smaller, about three-tenths as long as aedeagus, and less strongly twisted, with the gutter-shaped proximal part almost horizontal; external taeniate teeth-patch composed of an irregular row of triangular teeth of unequal size. Styles not so slender as in *T. albidivalis*, though the left one bears a similarly narrow ventral projection, each style provided with four apical setae.

Variation in elytral chaetotaxy. Both the internal and external series are stable in the number of setiferous dorsal pores, no aberrancy being found in the 12 specimens of the type series.

Type series. Holotype: ♂, allotype: ♀, paratypes: 5 ♂♂, 5 ♀♀, 25–IX–1992, Y. NISHIKAWA leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Towada-yama, 220 m in altitude at the northwestern foot in the Mitsumenai-gawa Valley, in Ohwani-machi of Aomori Prefecture, at the western side of northeastern Honshu, Northeast Japan.

Notes. It was unexpected that a second oculate species of *Trechiana* did exist on the Shirakami Mountains, even though its habitat lies near the eastern edge of the mountain range and is widely distant from the known range of distribution of *T. albidivalis*, which covers the western third of the mountains. Its type locality is about 27 km distant to the east by south from the Anmon-gawa Valley and about 33 km distant to the east by north from Mt. Futatsu-mori, both harbouring *T. albidivalis*. The type specimens of *T. triops* were dug out from a colluvium together with six specimens of *Kurasawatrechus nishikawai* S. UÉNO (1993, p. 182, figs. 3–5), in whose description were given some notes on the habitat of these trechine beetles.

Though differing in facies, *T. triops* seems closer to *T. albidivalis* than to the other species of the *meridianus* lineage. This is indicated by some details of its male genitalia and also by relatively wide base of its pronotum.

The specific name *triops* is derived from the name of the type locality, the Mi-

tsumenai-gawa Valley, which means the valley of the river of three-eyed place in Japanese.

要 約

上野俊一：東北地方北西部の主として非火山に生息するナガチビゴミムシ類。——東北地方北西部の、鳥海山、真昼山地、太平山地および白神山地から、ナガチビゴミムシ属の5有限種を新しく記載し、これらにチョウカイナガチビゴミムシ *Trechiana yoshikoeae*, マヒルナガチビゴミムシ *T. meridianus*, タイヘイナガチビゴミムシ *T. pacatus*, シラカミナガチビゴミムシ *T. albidivalis* およびミツメナガチビゴミムシ *T. triops* という新名を与えた。これらのうち、チョウカイナガチビゴミムシだけは新しい火山に固有の種で、イワキナガチビゴミムシ種群のイイデナガチビゴミムシ亜群に属するきわめて特異なものである。他の4種は非火山性山地のみに分布し、たがいにごく近縁で、おもに新しい火山に分布するイワキナガチビゴミムシ亜群のものに似ている点が多いが、雄の交尾器の歯斑の特異性に基づいて、独自のマヒルナガチビゴミムシ亜群を認めた。神室山地に固有のオニコウペナガチビゴミムシ *T. oniceps* も、この新亜群に含まれる。

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