

A Distinct Species-complex of *Trechiana notoi* (Coleoptera, Trechinae) Mainly Distributed in the Tajima Area, Central Japan

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Abstract Four new anophthalmic species of the group of *Trechiana oni* are described from the Tajima area and its vicinities in the northern Kinki District, Central Japan, under the names *T. akirakitayamai*, *T. biuncinatus*, *T. falcatus* and *T. foliolatus*. They are closely related to both *T. kameyamai* ASHIDA and *T. soumai* ASHIDA, which were described from the same area in my previous paper (ASHIDA, 2002, pp. 49–56), and are also similar to *T. notoi* UÉNO from the northern tip of Osaka Prefecture, though easily distinguished from these known species by the configuration of the aedeagal tip and the copulatory piece of the male genitalia. Since these species from the Tajima area and *T. notoi* share several peculiar characteristics and they are clearly discriminated from the other members of the *kosugei* complex in which *T. notoi* was included, I propose herewith the establishment of a distinct new species-complex to be named the *notoi* complex.

Introduction

In the previous paper of mine, two anophthalmic species belonging to the group of *Trechiana oni* were described from the Tajima area in the northern part of Hyôgo Prefecture, Central Japan (ASHIDA, 2002). Both the species, *T. kameyamai* ASHIDA (2002, p. 50, figs. 1, 3–6) and *T. soumai* ASHIDA (2002, p. 52, figs. 2, 7–10), share several peculiar characteristics with *T. notoi* S. UÉNO (1981, p. 82, figs. 5–7) recorded from the northern tip of Osaka Prefecture, in spite of a long distance between the two areas. They have the following unique features in common: sexual dimorphism in body size, a large male genitalia with unique modification at the apical tip of aedeagus, and a highly developed copulatory piece in the inner sac; however, their copulatory pieces show great diversity in shape. Further survey in the Tajima area by SOUMA, MORI and other members of the Kansai Trechine Research Group brought a large number of new materials, which are similar to but clearly different from these known species. In this paper, I will describe four new species from this area and will propose the establishment of a distinct species-complex to be named the *notoi* complex, which was formerly included in the *kosugei* complex of the group of *T. oni*. One of the four new specific names will be dedicated to the late Mr. Akira KITAYAMA, who was an active member of the Kansai Trechine Research Group.

The abbreviations used herein are the same as those explained in the previous

paper (ASHIDA, 2002).

Trechiana (s. str.) *akirakitayamai* ASHIDA, sp. nov.

[Japanese name: Kinasaki-mekura-chibigomimushi]

(Figs. 1, 3–6)

Length: 6.05–6.90 mm in ♂, 5.75–6.55 mm in ♀ (from apical margin of clypeus to apices of elytra).

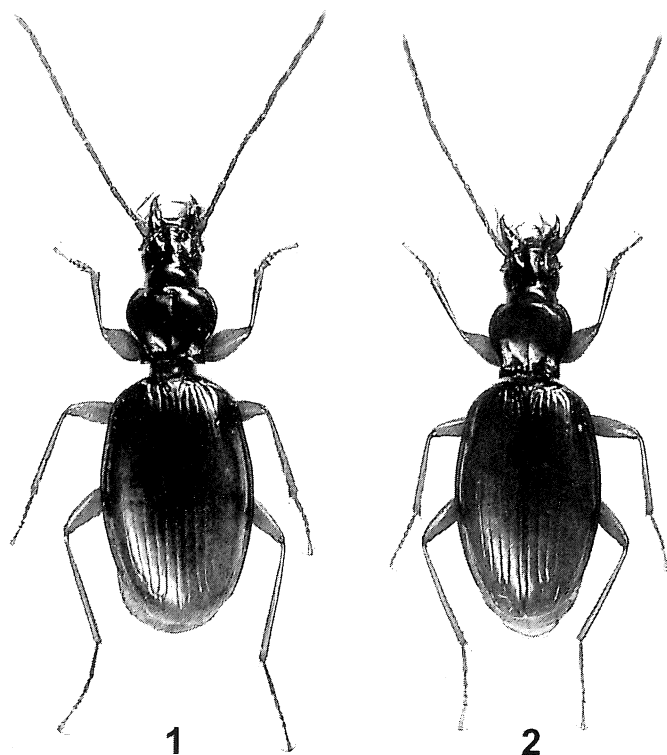
The largest species in the *notoi*-like species on an average and closely related to *T. kameyamai*, but easily discriminated by the less elongate and wider shape of the copulatory piece in the inner sac of aedeagus.

Color reddish brown, with yellowish brown appendages, somewhat lighter than in *T. kameyamai*. Head, antennae, and mouthparts as in *T. kameyamai*. Pronotum exactly similar to *T. kameyamai*; PW/HW 1.38–1.50 (M 1.44), PW/PL 1.12–1.20 (M 1.17), PW/PA 1.42–1.50 (M 1.45), PW/PB 1.32–1.44 (M 1.39), PB/PA 1.00–1.07 (M 1.04); postangular satae present as in *T. kameyamai*. Elytra similar to those of *T. kameyamai*, though somewhat ampler particularly in ♂; EW/PW 1.69–1.76 (M 1.72) in ♂, 1.62–1.67 (M 1.64) in ♀; EL/PL 3.00–3.13 (M 3.08) in ♂, 2.93–3.01 (M 2.98) in ♀; EL/EW 1.53–1.57 (M 1.54); prehumeral borders less oblique than in *T. kameyamai*; sides, striation and chaetotaxy as in *T. kameyamai*; setiferous dorsal pores on stria 5 located at 1/8–1/6 and 3/7–4/7 from base, respectively. Legs as in *T. kameyamai*.

Male genital organ similar to that of *T. kameyamai*. Aedeagus as in *T. kameyamai* except for the apical part, which is modified with a larger plate on the ventral surface and its anterior margin is more deeply emarginate than in *T. kameyamai*. Inner sac covered with poorly sclerotized scales, and armed with a large copulatory piece and two small plates formed by fused teeth; copulatory piece heavily sclerotized, two-fifths as long as aedeagus, spatulate, and weakly rolled ventrad, whose left side is almost straight, right side is sinuate at basal two-thirds, then steeply dilated, strongly projected ventro-laterally at five-sixths from base, and apical part is widely rounded; two plates lying at the right dorsal side of apical orifice, which are a little larger than those of *T. kameyamai* and seemingly fused with each other. Styles as in *T. kameyamai*.

Type series. Holotype: ♂, 27-IV-2002, K. KITAYAMA leg. Allotype: ♀, same data as for the holotype. Paratypes: 5♂♂, 6♀♀, 12-VII-1999, M. MORI leg.; 5♂♂, 6♀♀, 3-VI-2001, A. SOUMA leg.; 5♂♂, 1♀ (incl. teneral 3♂♂), 11-VII-2001, T. KAMEYAMA leg.; 2♀♀, 7-III-2002, T. KAMEYAMA leg.; 4♂♂, 1♀, 11-IV-2002, T. KAMEYAMA leg.; 3♂♂, 2♀♀, 27-IV-2002, K. KITAYAMA leg.; 4♂♂, 6♀♀ (incl. teneral 2♀♀), 26-V-2002, H. ASHIDA leg.; 8♂♂, 3♀♀, 16-VI-2002, Y. SHIMADA & H. ASHIDA leg.; 2♂♂, 2♀♀, 11-VII-2002, T. KAMEYAMA leg.; 1♂, 5♀♀, 17-VIII-2002, Y. OKUDA leg. The holotype and allotype will be preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Type locality. The southwestern slope (alt. 200 m) of Mt. Kuruhi-dake (567 m in height), Kinasaki-chô, Hyôgo Prefecture, Central Japan.



Figs. 1–2. *Trechiana* (s. str.) spp., ♂, dorsal views: *T. akirakitayamai* from Mt. Kuruhi-dake in Kinoshiki-chô (1); *T. biuncinatus* from Mt. Shirasuge-yama in Hidaka-chô (2).

Notes. Mt. Kuruhi-dake lies on the left side of the Maruyama-gawa River and its peak is only 6 km removed from the shore of the Japan Sea. The type locality of the present species is at the source of the Kuruhi-gawa, a small tributary of the Maruyama-gawa, and is only about 5 km northeast of Morimoto, the known locality of *T. kameyamai*. In fact, *T. akirakitayamai* is quite similar to *T. kameyamai*, but clearly discriminated by the different configuration of copulatory piece. The type specimens were dug out from talus in a gully almost covered all over with cryptomeria plantation.

The specific name of this interesting new species is dedicated to the late Mr. Akira KITAYAMA, who unexpectedly passed away on January 21, 2001, at the age of 41. He was an excellent coleopterist, in particular a specialist of dytiscid beetles. He coauthored the monograph “Dytiscoidea of Japan” in 1993 as well as the descriptions of several new species of Dytiscidae with Mr. MORI, who discovered the present new species.

Trechiana (s. str.) *biuncinatus* ASHIDA, sp. nov.

[Japanese name: Kannabe-mekura-chibigomimushi]

(Figs. 2, 7–10)

Length: 6.25–6.80 mm in ♂, 5.95–6.40 mm in ♀ (from apical margin of clypeus to apices of elytra).

Probably related to *T. kameyamai* and *T. akirakitayamai*, and similar to those species in external features, but different in the characteristics of male genital organ: the basal part of aedeagus is more strongly curved ventrad; apical plate under the tip of aedeagus is larger and more distinctly bifid at posterior margin; and the copulatory piece in the inner sac is much less developed.

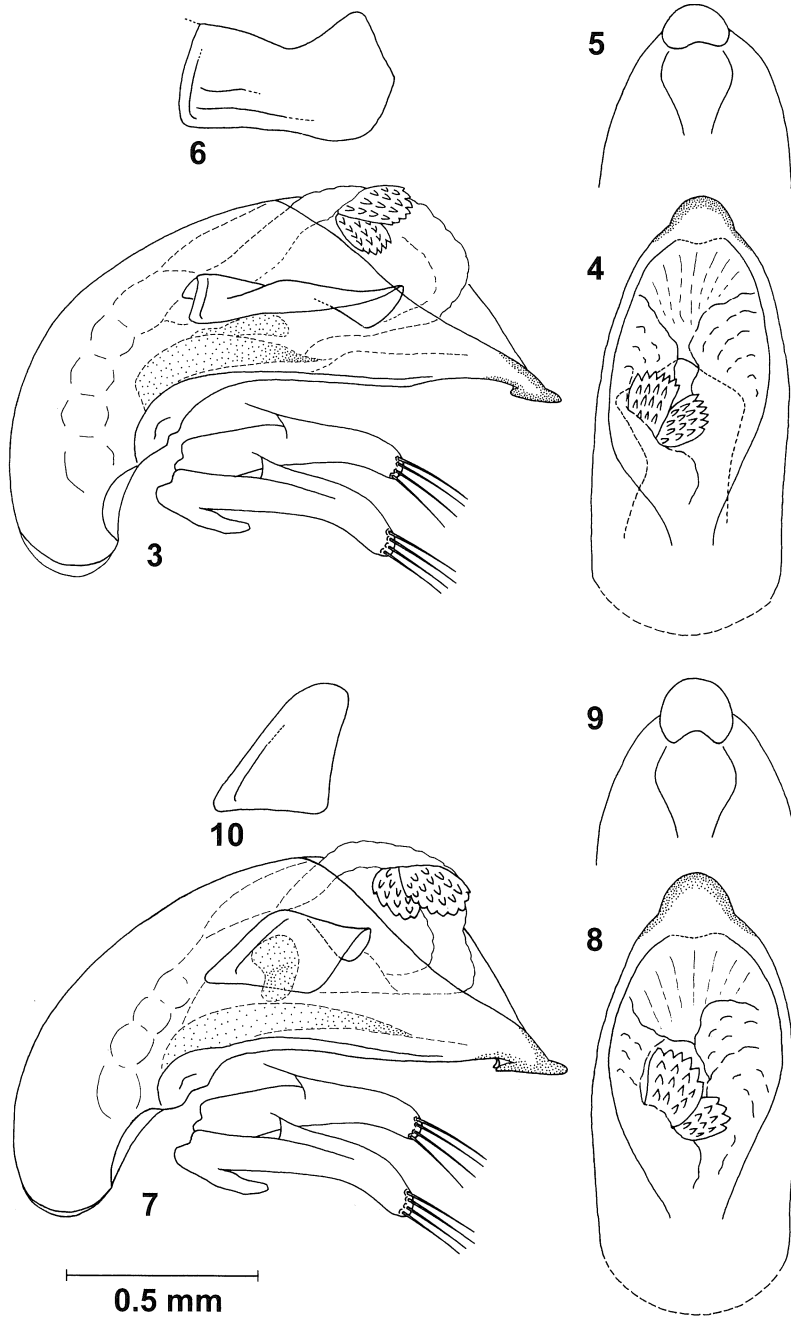
Color more or less lighter than in *T. kameyamai*. Head as in *T. kameyamai*. Pronotum similar to that of *T. kameyamai*, though somewhat narrower; base slightly emarginate and hind angles feebly projected rearwards in some individuals; PW/HW 1.43–1.48 (M 1.46), PW/PL 1.13–1.19 (M 1.16), PW/PA 1.37–1.51 (M 1.44), PW/PB 1.33–1.40 (M 1.37), PB/PA 1.00–1.13 (M 1.05). Elytra more or less narrower than those of *T. kameyamai*; EW/PW 1.68–1.77 (M 1.73) in ♂, 1.58–1.66 (M 1.63) in ♀; EL/PL 3.10–3.27 (M 3.18) in ♂, 2.95–3.15 (M 3.06) in ♀; EL/EW 1.55–1.64 (M 1.60); prehumeral borders less oblique and shoulders more distinct than in *T. kameyamai*; striation and chaetotaxy as in *T. kameyamai*. Legs as in *T. kameyamai*.

Male genital organ basically similar to that of *T. kameyamai*. Aedeagus heavily sclerotized, large, robust, about three-eighths as long as elytra; basal part more strongly curved ventrad than in *T. kameyamai*, with smaller sagittal aileron; apical part provided with much larger plate under the tip than in *T. kameyamai*; apical plate semicircular, as wide as length, with the anterior margin sharply carinate and bifid. Inner sac armed with a copulatory piece and two plates formed by fused teeth; copulatory piece heavily sclerotized, though much shorter than in *T. kameyamai*, two-ninths as long as aedeagus, semitrapezoidal, wider than length, rolled ventrally, its left side being almost straight and fused with membrane, right side projected ventro-laterally and arcuate, and the apical margin slightly turned up; two plates lying close together at the dorsal side of apical orifice, which are the largest of those of the *notoi*-like species. Styles as in *T. kameyamai*.

Type series. Holotype: ♂, 9–VI–2002, H. ASHIDA leg. Allotype: ♀, same data as for the holotype. Paratypes: 3 ♂♂, 1 ♀, 24–IX–2001, A. SOUMA leg.; 1 ♂, 2 ♀♀, 4–V–2002, Y. OKUDA & S. NAKAMURA leg.; 6 ♂♂, 2 ♀♀, 9–VI–2002, H. ASHIDA leg.; 10 ♂♂, 14 ♀♀, 18–VIII–2002, Y. SHIMADA & H. ASHIDA leg. The holotype and allotype will be preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Type locality. The eastern slope (alt. 550 m) of Mt. Shirasuge-yama (896 m in

Figs. 3–10. Male genitalia of *Trechiana* (s. str.) spp.; left lateral view (3, 7), apical part of aedeagus, dorso-apical (4, 8) and ventral (5, 9) views, and separated copulatory piece, dorsal view (6, 10). — 3–6. *T. akirakitayamai* from Mt. Kuruhi-dake. — 7–10. *T. biuncinatus* from Mt. Shirasuge-yama.



height), the Kannabe Valley, Hidaka-chô, Hyôgo Prefecture, Central Japan.

Notes. This remarkable new species probably belongs to the same lineage as *T. kameyamai* and *T. akirakitayamai*, but is decisively different from the latter two and the other members of *notoi*-like species in several features of the male genital organ as described above. The most striking difference is the shape of the copulatory piece, which is less developed than in the others. Though the copulatory piece is the smallest, modification of the aedeagal tip is most specialized. The plate under the tip of the aedeagus is largest of those of the relatives and looks like having two hooks, hence the specific name *biuncinatus*.

The type locality of *T. biuncinatus* is about 9 km west-southwest of Akaganeyama, that of *T. kameyamai*. It is so far the westernmost known locality of the *notoi*-like species, and is 15 km northeast of Akioka, the type locality of *T. hiurai* UENO (1985, pp. 168, 176, figs. 7–8), a member of the *fujitai* complex. The type specimens were found from a gully at the head of the Inanba-gawa River, one of the tributary of the Maruyama-gawa. *Trechiana biuncinatus* dwells under heaps of dead leaves as well as in the deposit of soil and rock debris along the stream in a broadleaved forest.

Trechiana (s. str.) *falcatus* ASHIDA, sp. nov.

[Japanese name: Amadani-mekura-chibigomimushi]

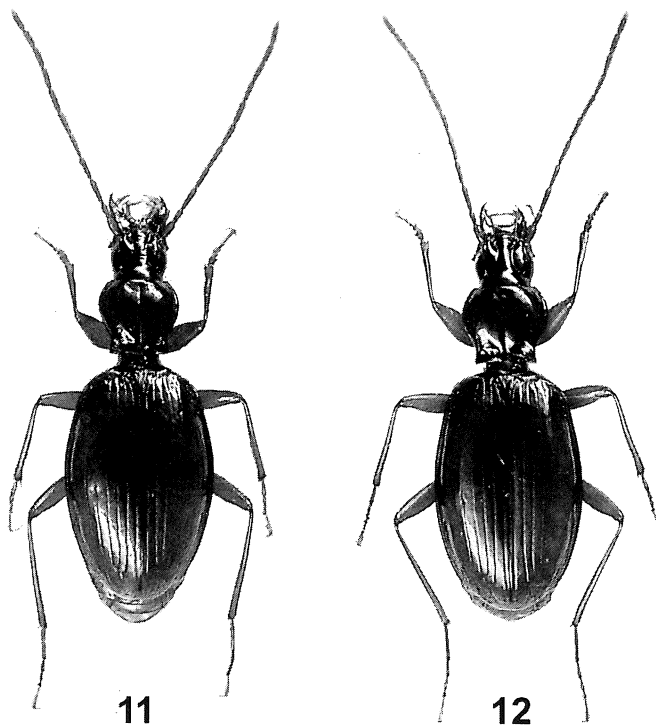
(Figs. 11, 13–16)

Length: 6.15–6.75 mm in ♂, 5.55–6.20 mm in ♀ (from apical margin of clypeus to apices of elytra).

Allied to *T. soumai*, but clearly distinguished from the latter species by the quite different configuration of copulatory piece and aedeagal apical tip.

Color somewhat lighter than in *T. soumai*. Head and pronotum as in *T. soumai*; PW/HW 1.40–1.49 (M 1.43), PW/PL 1.08–1.15 (M 1.11), PW/PA 1.40–1.53 (M 1.45), PW/PB 1.35–1.47 (M 1.39); PB/PA 1.00–1.13 (M 1.05). Elytra similar to those of *T. soumai*, though obviously slenderer than in *T. soumai*; EW/PW 1.76–1.84 (M 1.81) in ♂, 1.68–1.74 (M 1.71) in ♀; EL/PL 3.05–3.21 (M 3.11) in ♂, 2.87–3.00 (M 2.93) in ♀; EL/EW 1.51–1.59 (M 1.55); prehumeral borders more oblique and shoulders less distinct than in *T. soumai*; striation and chaetotaxy as in *T. soumai*. Legs as in *T. soumai*.

Male genital organ large, robust, and heavily sclerotized as in *T. soumai*. Aedeagus closely similar to that of *T. soumai* and somewhat less bent at basal part than in *T. akirakitayamai* and *T. kameyamai*; viewed dorsally, apical tip provided with a larger apical protuberance than that of *T. soumai*; viewed ventrally, apical plate oval, wider than length, and much larger than that of *T. soumai*. Inner sac armed with an elongated copulatory piece, and two teeth-plates; copulatory piece heavily sclerotized, a little less than half as long as aedeagus, sickle-shaped with wide basal part, curved to the right, and gradually narrowed towards apex; two teeth-plates much larger than those of *T. soumai*. Styles as in *T. soumai*.



Figs. 11–12. *Trechiana* (s. str.) spp., ♂, dorsal views: *T. falcatus* from the Amadani-tôge in Tantô-chô (11); *T. foliolatus* from Mt. Imo-yama in Yakuno-chô (12).

Type series. Holotype: ♂, 13-X-2001, A. SOUMA leg. Allotype: ♀, same data as for the holotype. Paratypes: 6♂♂, 14♀♀, 13-X-2001, A. SOUMA leg.; 5♂♂, 2♀♀, 30-III-2002, Y. OKUDA, T. SAITÔ & S. YAMASHITA leg.; 2♀♀, 13-IV-2002, H. ASHIDA leg.; 2♂♂, 3♀♀, 21-IV-2002, S. YAMASHITA leg.; 3♂♂, 2♀♀, 19-V-2002, H. ASHIDA leg.; 3♂♂ (incl. 2 teneral), 9-VI-2002, H. ASHIDA leg. The holotype and allotype will be preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Type locality. The northern side of the Amadani-tôge (alt. 280 m), Tantô-chô, Hyôgo Prefecture, Central Japan.

Notes. It is most unexpected that this remarkable new species was discovered from the spot lying at a distance of only 3.5 km from the Itoi-keikoku Valley, the type locality of *T. soumai*. The two localities are on the opposite sides of the ridge between Mt. Higashi-tokonoo-yama (839 m in height) and Mt. Kanatoko-san (775 m in height). In spite of closeness of the two localities, the copulatory piece of the two forms shows a large difference in shape. The copulatory piece of *T. falcatus* is much more elongated, falcated, and somewhat similar to that of *T. notoi*. However, the relationship be-

tween *T. falcatus* and *T. notoi* may not be direct, because the Amadani-tôge is too far from the known localities of *T. notoi*.

Trechiana falcatus was found from a gully at the head of the Amadani-gawa River, a tributary of the Izushi-gawa, finally flowing together with the Maruyama-gawa. The type specimens were obtained from a soil deposition at the streamside in a cryptomeria plantation. Many of them were dug out from shallower part of the upper hypogean zone and sometimes found under heaps of dead leaves.

Trechiana (s. str.) *foliolatus* ASHIDA, sp. nov.

[Japanese name: Yakuno-mekura-chibigomimushi]

(Figs. 12, 17–20)

Length: 5.95–6.70 mm in ♂, 5.50–6.00 mm in ♀ (from apical margin of clypeus to apices of elytra).

Closely similar to the preceding species though clearly distinguished by the wider shape of copulatory piece.

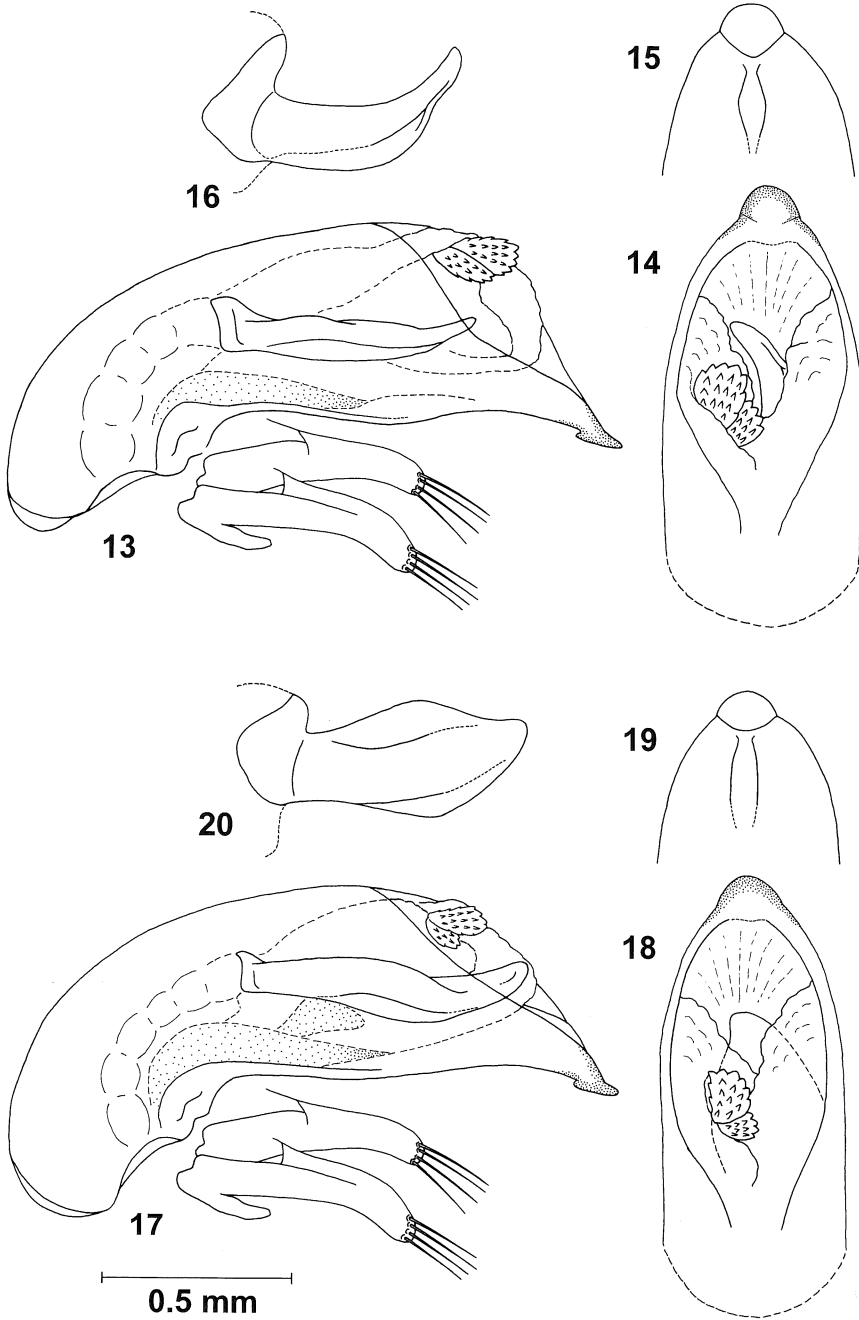
Body closely similar to that of *T. falcatus*, though the elytra are more or less narrower, the shoulders a little more distinct, and striae on elytra shallower than in *T. falcatus*. PW/HW 1.37–1.49 (M 1.44), PW/PL 1.11–1.22 (M 1.15), PW/PA 1.45–1.52 (M 1.47), PW/PB 1.35–1.42 (M 1.39); PB/PA 1.03–1.09 (M 1.05); EW/PW 1.69–1.77 (M 1.75) in ♂, 1.56–1.70 (M 1.64) in ♀; EL/PL 3.10–3.17 (M 3.13) in ♂, 2.84–3.07 (M 2.92) in ♀; EL/EW 1.51–1.63 (M 1.56). Appendages as in *T. falcatus*.

Male genital organ similar to that of *T. falcatus* except for the shape of copulatory piece. Aedeagus as in *T. falcatus* though the basal part is somewhat larger and a little more strongly curved ventrad. Inner armature basically similar to that of *T. falcatus*: scales as in *T. falcatus*; two teeth plates smaller than those of *T. falcatus*, but larger than in *T. soumai*; copulatory piece heavily sclerotized, flat though a little waved, thick in median part, thin in both lateral sides, four-ninths as long as aedeagus, constricted at base, gradually dilated, widest at middle, then narrowed towards apex, its left side being regularly arcuate, right side arcuate at basal three-fourths and slightly emarginate at apical fourth, and the apex is rounded. Styles as in *T. falcatus*.

Type series. Holotype: ♂, 8-X-2001, A. SOUMA leg. Allotype: ♀, same data as for the holotype. Paratypes: 3♂♂, 6♀♀, 8-X-2001, A. SOUMA leg.; 4♂♂, 8♀♀, 12-V-2002, S. YAMASHITA leg.; 12♂♂, 3♀♀, 19-V-2002, H. ASHIDA leg.; 6♂♂, 10♀♀, 1-VI-2002, Y. OKUDA leg.; 5♂♂, 12♀♀, 2-VI-2002, S. NAKAMURA & H. ASHIDA leg. The holotype and allotype will be preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Type locality. The eastern slope (alt. 550 m) of Mt. Imo-yama (731 m in height),

Figs. 13–20. Male genitalia of *Trechiana* (s. str.) spp.; left lateral view (13, 17), apical part of aedeagus, dorso-apical (14, 18) and ventral (15, 19) views, and separated copulatory piece, dorsal view (16, 20).
— 13–16. *T. falcatus* from the Amadani-tôge. — 17–20. *T. foliolatus* from Mt. Imo-yama.



near Imazato, Yakuno-chô, Kyoto Prefecture, Central Japan.

Notes. This new species and *T. falcatus* are close to each other in view of sharing elongated copulatory piece; however, their differentiation doubtless attains to the species level. The specific name of this new species is derived from the leaf-like shape of its copulatory piece. The distance between the type localities of *T. foliolatus* and *T. falcatus* is only 5.5 km. Mt. Imo-yama, the type locality of *T. foliolatus*, is at present the easternmost known locality of the *notoi*-like species from the Tajima area. It is 13 km southwest of Mt. Ôe-yama, the type locality of *T. shuten* UÉNO (1978, p. 294, figs. 1–4), and is 20 km north-northwest of Otogawachi, the type locality of *T. silicicola* UÉNO (1981, p. 79, figs. 1–4), both being the members of the *kosugei* complex.

Trechiamia foliolatus was found from a gully at the head of a small branch of the Maki-gawa River, one of the tributaries of the Yura-gawa. This is so far the only species of the Tajima population from the Yura-gawa drainage in contrast to the preceding species including *T. kameyamai* and *T. soumai*, which are distributed in the drainage of the Maruyama-gawa. The type specimens were dug out from a deposit of the soil along the stream in a broadleaved forest, and frequently found from under heaps of dead leaves.

Discussion

In the previous paper, I described two new species belonging to the group of *T. oni* from the Tajima area (ASHIDA, 2002). They share several peculiar characteristics with *T. notoi*, and are called the *notoi*-like species. Four new members of the *notoi*-like species are described herein from the same area and its vicinities. As was suggested in the previous paper, the *notoi*-like species are clearly distinguishable from the other members of the *kosugei* complex in which *T. notoi* was first included (UÉNO, 1981, 1985). They have a large body, above all in the male, large male genitalia with a hook-like modification on the undersurface of the aedeagal tip, and a highly developed copulatory piece. None of the other members of the *kosugei* complex show a combination of these peculiar features. Besides, there are some difference in habitat preference between the *notoi*-like species and the members of the *kosugei* complex, namely, the former are found from shallower part of colluvia than the latter and frequently found just under the litter layer. The difference between the two species-groups is so remarkable that the *notoi*-like species should be recognized as a distinct complex. Thus, I propose the establishment of the *notoi* complex in the group of *T. oni*.

The main distributional range of the *notoi* complex is doubtless in the Tajima area at the northern part of Hyôgo Prefecture. At the center of Tajima, there is the Toyooka Basin formed by the Maruyama-gawa River flowing from south to north and emptying into the Japan Sea. Three species, *T. akirakitayamai*, *T. kameyamai* and *T. biuncinatus*, occur in the northwestern part of Tajima at the left side of the Maruyama-gawa. All of them may be related to one another because of having relatively large plate on the undersurface of the aedeagal tip, whose anterior margin is significantly emarginate. Of

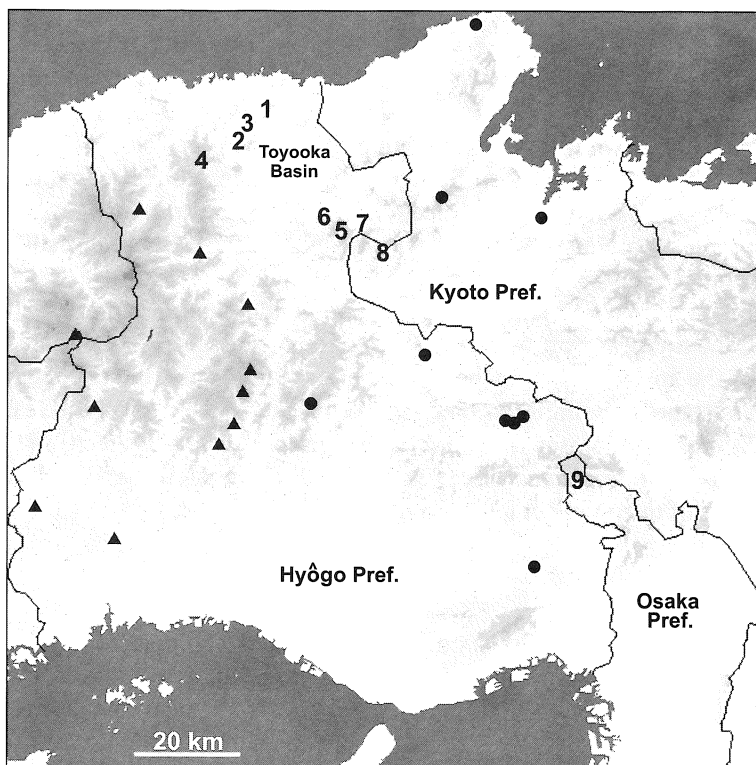


Fig. 21. Map showing the distribution of the *notoi* complex of the group of *Trechiana oni*. — 1, *T. akirakitayamai* (Mt. Kuruhi-dake in Kinosaki-chô); 2, *T. kameyamai* (Akaganeyama in Takeno-chô); 3, *T. kameyamai* (Morimoto in Takeno-chô); 4, *T. biuncinatus* (Mt. Shirasuge-yama in Hidaka-chô); 5, *T. soumai* (Itoi Valley in Wadayama-chô); 6, *T. soumai* (Waya in Izushi-chô); 7, *T. falcatus* (Amadani-tôge in Tantô-chô); 8, *T. foliolatus* (Mt. Imo-yama in Yakuno-chô); 9, *T. notoi* (Yamada in Nose-chô); closed circles, the *kosugei* complex; closed triangles, the *fujitai* complex.

these, *T. akirakitayamai* and *T. kameyamai* are very close relatives, which might have been isolated on lower hills to the west of the Toyooka Basin and became differentiated there. On the other hand, *T. biuncinatus* is rather separated from the other two and seems to be a primitive species in the northwestern populations of the *notoi* complex. This can be inferred from the fact that *T. biuncinatus* has much less developed copulatory piece than the others. The type locality of *T. biuncinatus* is near the distributional range of the *fujitai* complex, whose members usually lack the following features: differentiated copulatory piece, hook-like modification of aedeagal tip, and postangular setae on the pronotal margins. Thus far, no intermediary species is found around there.

The southeastern part of Tajima on the right side of the Maruyama-gawa River harbors three species, *T. soumai*, *T. falcatus* and *T. foliolatus*. The latter two species are closely related to each other judging from elongated copulatory piece, while *T. soumai*

is rather isolated, which has a shorter and smaller one. Furthermore, *T. falcatus* and *T. foliolatus* have a larger plate at the aedeagal tip than *T. soumai*, even though their posterior margins are not emarginate. Hence, *T. soumai* is likely the most primitive species in these three and may have some relationship with *T. biuncinatus*. The easternmost locality of the Tajima populations is Mt. Imo-yama, the type locality of *T. foliolatus*, which is not so far from the distributional range of the *kosugei* complex. Since the *notoi* complex is considered to have been derived from the *kosugei* complex and since both the complexes are directly related to each other, detailed field investigation in the intervening areas is necessary in the future.

The relationship between the Tajima populations and *T. notoi* is still unclear. Tajima and the northern part of Osaka are geographically remote and there are several members of the *kosugei* complex between them. At first sight, the copulatory piece of *T. falcatus* is somewhat similar to that of *T. notoi*, but in view of all the features taken together, *T. falcatus* is closer to *T. foliolatus* than to *T. notoi*. There still remain some large blank areas of *Trechiana* in the eastern and southeastern part of Hyôgo, so that further species of the *notoi* complex would occur in those areas.

Acknowledgment

I thank Messrs. Akinao SOUMA and Masato MORI, who made discoveries of these interesting new species described in this paper, and Messrs. Kenji KITAYAMA, Shun-Ichi YAMASHITA, Yoshihide OKUDA, Takumi SAITÔ, Satoshi NAKAMURA, Takeshi KAMEYAMA and Dr. Yoshimi SHIMADA for their kind help in the course of this study. Cordial thanks are due to Dr. Shun-Ichi UENO of the National Science Museum (Nat. Hist.), Tokyo, for his continuous guidance throughout my studies on the trechine beetles.

I would like to dedicate this paper to the memory of the late Mr. Akira KITAYAMA.

要 約

芦田 久：但馬地方に分布の中心をもつ新たなノトメクラチビゴミムシ系列。—— 兵庫県北部の但馬地方とその近隣地域から発見されたオニメクラチビゴミムシ群に属する地下浅層性メクラチビゴミムシの4新種をそれぞれ以下のように命名，記載した。キノサキメクラチビゴミムシ *Trechiana* (s. str.) *akirakitayamai* ASHIDA, sp. nov. (兵庫県城崎町来日岳)，カンナバメクラチビゴミムシ *T.* (s. str.) *biuncinatus* ASHIDA, sp. nov. (兵庫県日高町白菅山)，アマダニメクラチビゴミムシ *T.* (s. str.) *falcatus* ASHIDA, sp. nov. (兵庫県但東町天谷峠)，ヤクノメクラチビゴミムシ *T.* (s. str.) *foliolatus* ASHIDA, sp. nov. (京都府夜久野町居母山)。これらは同地域から記載されたばかりのタケノメクラチビゴミムシ *T. kameyamai* ASHIDA とイトイメクラチビゴミムシ *T. soumai* ASHIDA に近縁であり，また大阪府北端部から記載されたノトメクラチビゴミムシ *T. notoi* S. UENO に近似するが，雄交尾器中央片の先端部の形状や，内袋中の交尾片の形状の顕著な違いにより容易に識別される。これらの種は従来の分類体系ではオニメクラチビゴミムシ群のコス

ゲメクラチビゴミムシ系に含まれるが、特異な雄交尾器や体の外形の特徴により独立の系列を形成することを認め、オニメクラチビゴミムシ群のなかに新たなノトメクラチビゴミムシ系の設立を提唱した。なお、キノサキメクラチビゴミムシの学名は、2001年1月21日に41才の若さで急逝された、関西チビゴミ研究グループの故北山 昭氏に捧げたものである。

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New Record of *Declinia relict* (Coleoptera, Decliniidae) from Korea

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Declinia relict NIKITSKY, LAWRENCE, KIREJTSHUK et GRATSHEV has been known only from the Far East of Russia (NIKITSKY *et al.*, 1994). Recently I examined one Korean specimen of this species preserved in the collection of the Systematic Entomology, Hokkaido University, Sapporo (SEHU). In this short paper, I will report this species from Korea for the first time.

Specimen examined. 1 ex. (SEHU), Mt. Soraksan (alt. 1,000–1,300 m), S. Korea, 27–V–1982, K. FURUKAWA leg.

This species is very similar to *Declinia versicolor* SAKAI et M. SATÔ known from Japan, and I distinguish it from the latter species by the following characteristics: proportion of elytra slender; apex of elytra rounded; punctate striae of elytra somewhat irregular (LAWRENCE *et al.*, 1995; NIKITSKY *et al.*, 1994; SAKAI & SATÔ, 1996).

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