

Byrrhus LINNÉ and *Cytilus* ERICHSON (Coleoptera, Byrrhidae)
from Japan and its Adjacent Areas

By

Haruo TAKIZAWA

Biological Research Center, Japan Tobacco and Salt Public Corporation,
Hatano, Kanagawa

and

Takehiko NAKANE

Department of Zoology, National Science Museum, Tokyo

Family Byrrhidae is a comparatively small group, of which members are of small and relatively uniform shape. They have generally no connections with human lives. Due to these facts, very few works have been done on the Japanese Byrrhidae. So far as the Japanese fauna is concerned, LEWIS first reported the occurrence of *Byrrhus kamtschaticus* MOTSCHULSKY in 1889. Since then, 14 species belonging to 5 genera have been enumerated from Japan and its adjacent areas by MATSUMURA (1911), KÔNO (1934), NAKANE (1963, 1964) and FIORI (1967). Among them the genera *Byrrhus* and *Cytilus* are dealt with in the present paper. As the result, the 9 known *Byrrhus*-species are rearranged in 5 species and 2 subspecies, including one new subspecies. The genus *Cytilus* is recorded here for the first time from Japan and Taiwan, and the Taiwanese species is described as new to science.

Before going further, we wish to express our hearty thanks to those whom we owe valuable materials, to Dr. T. KUMATA of Hokkaido University for the loan of material, and to Mr. C. JOHNSON of the Manchester Museum for reading through the manuscript.

Key to the *Byrrhus*-species of Japan and its Adjacent Areas*

1. Larger species, more than 7 mm in length; body long oval, dilated posteriorly, or subparallel-sided near middle of elytra; male aedeagus with median lobe acute or subacutely rounded at apex, when rounded, the apex not downwardly curved. . . . 2
- Smaller species, less than 7 mm in length; body short oval, widest near middle of elytra, thence narrowed to both ends, but in smaller specimens, subparallel-sided for basal half of elytra; male aedeagus with median lobe rounded at apex (Fig. 2, f) *pustulatus* FORSTER
2. Body long oval, subparallel-sided at middle of elytra, thence gradually narrowed

* *Byrrhus kamtschaticus* MOTSCHULSKY, 1860, originally described from Dauria is not included, as the record by LEWIS is seemingly erroneous.

- to apices, in lateral view, highest at middle of elytra and gradually lowered posteriorly; male aedeagus with median lobe and parameres slender (Fig. 2, a).....
*sachalinensis* MATSUMURA
- Body long oval, more or less dilated posteriorly, widest near apical 1/3 of elytra...3
3. Body larger than 9 mm in length; pronotum convex on lateral margins for basal half, with hind angles roundly rectangular; male aedeagus with median lobe bearing a pair of distinct lateral projections before apex (Fig. 1)*ekashii* KÔNO
- Body generally smaller than 8 mm in length; pronotum concave on lateral margins for basal 1/3, or sinuate before hind angles, which are always acute and sometimes produced laterally; median lobe of male aedeagus without projections..... 4
4. Elytra regularly striate; male aedeagus with median lobe round at apex (Fig. 2, d & e)..... 5
- Elytra with 4th and 5th striae connected near basal 1/3; male aedeagus with median lobe more or less slender and subacute at apex (Fig. 2, c)..... 6
5. Body distinctly dilated posteriorly; pronotum less than twice as wide as long; male aedeagus with median lobe constricted and abruptly widened subapically (Fig. 2, c).....*arietinus imafukui* NAKANE
- Body long oval, subparallel-sided for anterior 2/3 of elytra; pronotum about twice as wide as long; male aedeagus with median lobe gradually broadened to just before apex (Fig. 2, d).....*arietinus konoii* ssp. nov.
6. Body strongly dilated posteriorly; dorsum with a distinct median pattern, which is often variegated with reddish-brown and white hairs.....
*fasciatus shinanensis* NAKANE
- Body weakly dilated posteriorly; dorsum with an obscure median pattern, which is sometimes outlined with white hairs.....*fasciatus daisetsuzanus* KÔNO

***Byrrhus pustulatus* FORSTER, 1771**

Byrrhus pustulatus FORSTER, 1771, Nov. Spec. Insect Cent., 1: 13.

Byrrhus miyakei NAKANE, 1963, Fragm. Coleopt., Kyoto, (11): 44. — NAKANE, 1963, Icon. Ins., Japon. Col. Nat. Ed., 2: 140, pl. 70. New synonymy.

Byrrhus osanaii NAKANE, 1963, loc. cit. — NAKANE, 1963, loc. cit. New synonymy.

Body dark brown to black, roundly oval, 1.4–1.6 times as long as wide, widest before middle of elytra; smaller specimens with body oblong and subparallel-sided; dorsum covered with white, reddish brown and black hairs. Pronotum weakly convex on lateral margins in dorsal view, longer than half its width, acutely projected at hind angles; dorsum distinctly and densely punctate. Elytra regularly striate, with interstices finely granulate; median crescent pattern outlined with white or reddish brown hairs; 1st, 4th, 6th and 8th interstices intermittently covered with black hairs; underside granulose. Male aedeagus (Fig. 2, f): median lobe gradually widened apically, widest before semi-circular apex; parameres straightly narrowed to roundly truncate apex, with a distinct lateral notch subapically.

Size: 5.5–6.0 mm in length.

Distribution. Palaearctic Region: Sachalin, Japan (Hokkaido, Honshu, Kyushu).

Specimens examined. Sachalin — 1 ♀ (EHU)*, Toyohara, 8-VII-1924, MURASE leg. Hokkaido — 1 ♂ (NK), Ônuma, 5-VI-1958, K. MASUMOTO leg.; 1 ♂ (TK), Mt. Sengen-dake, Oshima Pen., 6-IX-1970, M. SUWA leg.; 1 ♀ (paratype of *B. daisetsuzanus* KÔNO: NSM: KO), Sôunkyô, 4-VII-1927, H. KÔNO leg.; 1 ♂ (TK), Ohachi (1,900–2,000 m), Mt. Taisetsu-san, 16~23-VII-1975, M. SUWA, M. FURUKAWA, M. KIUCHI & T. SUNOSE leg.; 1 ♀ (NSM: KO), Teshikaga, 6-VII-1937, H. AOKI leg.; 1 ♀ (NK), Rebun-dake, 14-VIII-1966, K. SUGA leg.; 1 ♀ (NSM: KO), Mt. Tokachi-dake (ca. 1,000 m), 1~3-VII-1958, T. SAWAMOTO & H. TAKAHASHI leg. Honshu — 1 ♀ (AB), Jûni-ko, Aomori, 16-VI-1966, A. ABE leg.; 1 ♂ (NK), Takinomata, Aomori, 24-VII-1961, K. KITAYAMA leg.; 1 ♀ (NK), Appi, Iwate, 5-VII-1973, T. OKU leg.; 1 ♂ 1 ♀ (EHU, NSM: KO), Chûsenji, Tochigi, 25-VII-1914, 16-VII-1916, E. GALLOIS leg.; 1 ♂ (holotype of *B. osanaii* NAKANE: NK), Dakesawa, Kamikôchi, Nagano, 21-VII-1951, M. OSANAI leg. Kyushu — 1 ♂ 3 ♀♀, Mt. Kujû-san, Ôita, 6-VIII-1948, 5-VI-1955 (holo- & paratypes of *B. miyakei* NAKANE: NK), 13~15-V-1967 (ca. 1,780 m), H. TAKIZAWA leg. (TK).

Remarks. This species is known to have its body shape rather variable in Europe. In the examined specimens, variety in the body shape is pronounced as in Fig. 5. Specimens from Hokkaido and the northernmost Honshu are generally smaller and with the body subparallel-sided. Those from middle Honshu are larger and roundly oval in outlines. Whilst those from Kyushu are similar to the preceding, except that the body is less round. Notwithstanding the marked differences in the body shape, there is a close linear correlation between the width and the length of body among the 17 examined specimens. Also there is a tendency that the smaller the specimens are, the less convex they become in the body outlines. As the male aedeagi of these 3 forms are indistinguishable, we treat them conspecific at present. Two female specimens from Korea (Mt. Baji, N. Korea, 18-VII-1937, K. SEKI leg. (NK); Koshou, Heihoku, Korea, 15-VIII-1936, S. EGUCHI leg. (NSM: KO)) closely resemble the present species, except that the body is much convex dorsally and the pronotum more weakly punctate. As we have no male specimens at hand, we refrain from referring these Korean specimens to the present species.

Byrrhus sachalinensis MATSUMURA, 1911

Byrrhus sachalinensis MATSUMURA, 1911, J. Coll. Agr. Tohoku Imp. Univ., 4: 117–118 (Sachalin: Galkinowraskoe). — KÔNO, 1934, Ins. Matsum., 8: 129.

Body black, long oval, 1.6 times as long as wide, widest before middle of elytra, gradually narrowed posteriorly, in lateral view highest at middle of elytra and gradually lowered posteriorly; pronotum distinctly wider than twice its length; dorsum weakly

* Abbreviations used for the location of materials are: EHU—Entomological Institute, Hokkaido University, Sapporo; NSM: KO—KÔNO Collection, NSM: KA—KANO Collection, both in National Science Museum, Tokyo; NK—NAKANE's private collection, Tokyo; TK—TAKIZAWA's private collection, Hatano; AB—ABE's private collection, Goshogawara.

punctate, transversely wrinkled anteriorly. Underside granulose. Male aedeagus (Fig. 2, a): median lobe slender, and subacute and curved downwardly at apex; parameres slender, almost reaching the apex of median lobe, roundly truncate at apex, with a slight notch before apex. Dorsum variable in coloration: 1) pronotum with golden-yellowish hairs forming a long oval pattern which is medially extending from base to apex, and two pairs of ring-patterns laterally to the oval one; elytra with sutural, 2nd, 4th, 6th and 8th interstices more or less covered intermittently with black and golden yellow hairs; central portion with a wavy crescent pattern outlined with yellowish white hairs. 2) Elytra with the crescent pattern composed of brick-red hairs. 3) Almost wholly black, with golden-yellow or white hairs reduced.

Size: 7.5–9.0 mm in length.

Distribution. Sachalin, Japan (Hokkaido, Honshu).

Specimens examined. Sachalin — 1 ♀ (holotype: EHU), Galkinowraskoe; 1 ♀ (EHU), Nairo, 10–VIII–1914, ADACHI & ISSHIKI leg.; 11 ♂♂ 7 ♀♀ (EHU, NSM: KO), Horo, 24–VIII–1931, K. TAMANUKI leg., 21–VII–1932, Shimizu, HAGA & H. KÔNO leg.; 1 ♀ (NK), Manui, 25–VII–1941, Y. NISHIJIMA leg.; 2 ♀♀ (NK), Konuma, 4, 24–V–1946, Y. NISHI leg. Hokkaido — 1 ♀ (NK), Mt. Taisetsusan, 12–VII–1965, K. KUSIGEMATI leg.; 1 ♀ (NK), Mt. Ohoko, Oshima Pen., 21–VI–1969, K. NAKAJIMA leg.; 1 ♀ (EHU), Jôzankei, Sapporo, MATSUMURA leg. Honshu — 1 ♂ (TK), Mt. Naebayama (ca. 2,000 m), Niigata, 8~9–VII–1972, H. TAKIZAWA leg.

Remarks. This species is recorded for the first time from Japan (Hokkaido, Honshu).

Byrrhus ekashii KÔNO, 1934

Byrrhus ekashii KÔNO, 1934, Ins. Matsum., 8: 130–131. — NAKANE, 1963, Icon. Ins. Japon. Col. Nat. Ed., 2: 140, pl. 70.

Body oblong oval, dilated posteriorly, 1.6 times as long as wide, widest slightly behind the middle of elytra; color dark brown to black, dorsum variegated with dark brown, yellowish brown and white hairs; pronotum twice as wide as long, feebly convex

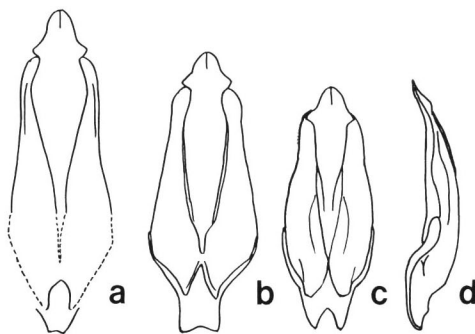


Fig. 1. Male aedeagi of *B. ekashii* Kôno from: a, Sapporo; b, Mt. Poroshiri-dake; c & d, Mt. Petegari-dake (a-c: dorsal view, d: lateral view).

at lateral margins, roundly rectangular at hind angles; dorsum densely punctate. Elytra with white and yellowish brown hairs composing a central crescent pattern, which is sometimes largely reduced; 1st, 2nd, 4th and 6th interstices covered intermittently with dark brownish hairs; dorsum densely punctate and transversely wrinkled basally, regularly striate, except that the striae are more or less cross each other at the median part; sometimes the dorsum is rough with many irregular convexities, and the striae entirely confused at median portion except for sutural and lateral-most areas. Male aedeagus (Fig. 1): median lobe gradually widened to apical 1/3, thence narrowed and distinctly expanded into a pair of lateral projections and narrowed to apex, where it is subacutely produced and upwardly curved; parameres strongly declivitous, with a broad longitudinal hollow, gradually narrowed in basal half, rod-like subapically, thence suddenly narrowed to acute apex.

Size: 9–10 mm in length.

Distribution. Japan (Hokkaido).

Specimens examined. Hokkaido — 2 ♂♂, Sapporo, 7–VI–1924 (holotype: EHU), 2–VI–1926 (paratype: NSM: KO), H. KÔNO leg.; 1 ♂ (NK), Mt. Eniwa-dake (ca. 1,300 m), 14–VI–1964, H. TAKIZAWA leg.; 1 ♀ (NK), Mt. Tokachi-dake, 20–VIII–1954, T. OKU leg.; 2 ♀♀ (TK, EHU), Goshikigahara (1,700–1,800 m) & Ginsendai (1,500 m), Mt. Taisetsu-san, 1~23–VII–1975, M. SUWA, M. FURUKAWA, M. KIUCHI & T. SUNOSE leg.; 1 ♀ (NSM: KO), Sôunkyô, 5–VIII–1937, T. KASHIOKA leg.; 1 ♂ 2 ♀♀ (EHU), Mt. Poroshiri-dake (ca. 1,800–1,900 m), Hidaka, 22–VII–1967, T. KOCHA leg., 1 ♀ (TK), 29–VII–1972, M. KIUCHI leg.; 1 ♂ 1 ♂ (TK), Mt. Petegari-dake, Hidaka, 27–VII–1974, A. ABE leg.

Remarks. This species is very characteristic in the shape of the male aedeagus. Among the male specimens examined, one from Mt. Petegari-dake has a differently shaped aedeagus (Fig. 1): median lobe gradually widened to roundly produced apex, widest at subapical lateral projections; parameres broad and rather horizontal. Although the differences are fairly great between the Sapporo – Eniwa-dake form and the Petegari-dake form, a specimen from Mt. Poroshiri-dake, a nearby summit to Mt. Petegari-dake, shows an intermediate shape of the male aedeagus as shown in Fig. 1. As the *Byrrhus*-species have a poor dispersal activity and are generally restricted to the top of mountains in Japan, such diversification may not be surprising. Until enough materials are accumulated, we tentatively treat them all as local forms of a single species.

Byrrhus arietinus konoi ssp. nov.

Body oblong oval, subparallel-sided, widest before apical 1/3 of elytra; color black; dorsum covered with dark brown to blackish hairs. Pronotum about twice as wide as long, nearly straight and convergent at lateral margins in dorsal view, acutely produced at hind angles; dorsum weakly and densely punctate. Elytra regularly striate with finely granulate interstices, of which 1st, 2nd, 4th, 6th and 8th are very densely covered with blackish hairs. Fifth abdominal sternite finely and sparsely granulose.

Male aedeagus (Fig. 2, d): median lobe gradually broadened to just before apex, where it is broadly rounded and weakly curved upwardly; parameres wide, rather abruptly narrowed at apical half, and very acute at apex with a minute but distinct subapical notch.

Size: 6.5 mm in length.

Distribution. Sachalin

Specimens examined. Sachalin — 1 ♂ (holotype: EHU), Horo, 21–VII–1932, SHIMIZU, HAGA & H. KÔNO leg.

Remarks. This new subspecies is distinguished from the nominate one by the shape of the male aedeagus, of which the parameres are not produced laterally like a hook at the apex. It is named after the late Dr. Hiromichi KÔNO, who was an eminent coleopterist and ethologist.

Byrrhus arietinus imafukui NAKANE, 1963

Byrrhus imafukui NAKANE, 1963, *Fragm. Coleopt.*, Kyoto, (11): 44 (Japan: Mt. Komagatake). — NAKANE, 1963, *Icon. Ins. Japon. Col. Nat. Ed.*, 2: 140, pl. 70.

Body oblong oval, distinctly widened posteriorly, widest before apical 1/3 of elytra; dorsum variegated with white, reddish-brown and dark brown hairs; elytra with a median crescent pattern outlined with white hairs. Pronotum distinctly narrower than twice its length; elytra regularly striate, with median lobe weakly but distinctly constricted and abruptly widened subapically.

Size: 7–7.5 mm in length.

Distribution. Japan (Honshu).

Specimens examined. Honshu — 1 ♂ 1 ♀ (holo- and paratypes of *B. imafukui* NAKANE: NK), Mt. Komagatake, Kiso, 20–VII–1959, S. IMAFUKU leg.

Remarks. These Far-Eastern subspecies are characteristic in the shape of the male parameres, which are only slightly notched before the apex. *Imafukui* is distinguished from *konoï* ssp. nov. by the body form which is distinctly dilated posteriorly, the comparatively longer pronotum, and by the shape of the male aedeagus. Such characters as body proportions are usually more or less variable among individuals from one area and more material is required for clarifying the status of these populations.

Byrrhus fasciatus daisetsuzanus KÔNO, 1934

Byrrhus daisetsuzanus KÔNO, 1934, *Ins. Matsum.*, 8: 120–121 (Hokkaido: Mt. Daisetsusan). — NAKANE, 1963, *Icon. Ins. Japon. Col. Nat. Ed.*, 2: 140, pl. 70.

Body oblong oval, widened posteriorly, widest behind middle of elytra, 1.7 times as long as wide; dorsum reddish brown to black, covered with brownish or dark reddish to black hairs, sometimes variegated with white ones. Head heavily punctate; pronotum densely punctate, irregularly covered with black hairs, distinctly narrower than twice its length, sinuately curved at lateral margins in dorsal view, rather narrowly produced at hind angles, before which the disc is distinctly depressed. Elytra regularly

striate, except for the 4th and 5th which cross each other near basal 1/3, or the 4th and 5th roundly connected each other, leaving a short non-striate area medially; interstices weakly wrinkled; 1st to 9th interstices more or less intermittently covered with black hairs; a median crescent pattern sometimes outlined with white hairs; dorsum with a dark band near apical 1/3, which extends from 1st to 9th interstices, and gradually narrows laterally. Underside more or less brownish, strongly granulose and punctate, covered with yellowish brown hairs. Male aedeagus (Fig. 2, c): median lobe gradually widened apically in basal half, thence narrowed to apex, where it is subacutely pointed and downwardly curved; parameres robust, and gradually narrowed to apex.

Size: 7–7.5 mm in length.

Distribution. Sachalin, Kuriles (Is. Shinshiru), Japan (Hokkaido, N. Honshu).

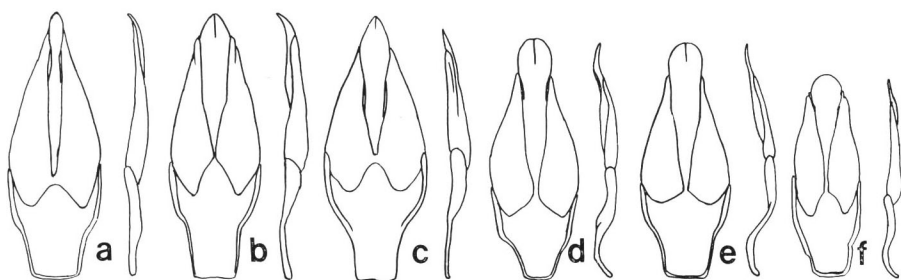


Fig. 2. Male aedeagi (right: dorsal view, left: lateral view) of: a, *B. sachalinensis* MATSUMURA from Horo, Sachalin; b, *B. fasciatus fasciatus* FORSTER from Susten Pass, Helvetia; c, *B. fasciatus daisetsuzanus* KÔNO from Toyotomi, Hokkaido; d, *B. arietinus konoi* ssp. nov. from Horo, Sachalin; e, *B. arietinus imafukui* NAKANE from Mt. Kiso-Komagatake, Honshu; f, *B. pustulatus* from Mt. Taisetsu-san, Hokkaido.

Specimens examined. Sachalin — 1 ♂ (NSM: KA), Ôtomari; 1 ♂ (EHU), Ichinosawa, 10–VII–1934, S. TAKANO & TAMANUKI leg.; 1 ♀ (NSM: KO), Takinosawa, 20–VII–1934. Kuriles — Shinshiru Is., 1 ♂ (NSM: KO), Brovton, 24–VII–1937, Y. SUGIHARA leg. Hokkaido — 1 ♂ (holotype of *B. daisetsuzanus* KÔNO: NSM: KO), Mt. Oakan, 10–VII–1928; 1 ♀ (paratype: NSM: KO), Kurodake, Mt. Taisetsu-san, 5–VII–1924, H. KÔNO leg.; 2 ♀♀ (paratypes: EHU), Teshio, 12–14–VII–1931, IGARASHI leg.; 2 ♂♂ 3 ♀♀ (EHU, NK), Mt. Taisetsu-san, 27–VIII–1960, S. TAKAGI leg., 6–VIII–1954, T. NAKANE leg., 1–VIII–1943, S. ITO leg.; 5 ♂♂ 4 ♀♀ (EHU, NK), Sarobetsu (1–10 m), Toyotomi, 20–21–VI–1961, S. TAKAGI, Y. NISHIJIMA leg.; 1 ♀ (TK), Mt. Soranuma-dake (200–300 m), Sapporo, 12–VI–1968, H. TAKIZAWA leg.; 1 ♂ 4 ♀♀ (TK, NK), Mt. Rishiri-dake (ca. 1,780 m), 3, 7–VIII–1965, H. TAKIZAWA leg., 2–7–VIII–1957; 1 ♀ (NK), Rebun-dake, 13–VIII–1958; 1 ♀ (TK), Mt. Poroshiri-dake, Hidaka, 20–VII–1972, M. KIUCHI leg. Honshu — 1 ♂ (TK), Mt. Iide-san (2,000–2,100 m), Fukushima, 19–23–VII–1967, H. TAKIZAWA leg.; 1 ♂ (TK), Mt. Chôkai-san, Yamagata, 10–VI–1970, M. SUWA leg.; 1 ♀ (TK), Mt. Azuma-san (ca. 2,000 m), Fukushima, 1–VIII–1976, H. TAKIZAWA leg.

Byrrhus fasciatus shinanensis NAKANE, 1963

Byrrhus shinanensis NAKANE, 1963, Fragm. Coleopt., Kyoto, (11): 44 (Japan: Shinanosaka). — NAKANE, 1963, Icon. Ins. Japon. Col. Nat. Ed., 2: 140, pl. 70.

Byrrhus nigrolineatus NAKANE, 1963, loc. cit. (Japan: Kamikôchi). — NAKANE, 1963, loc. cit. New synonymy.

This subspecies is distinguished from *daisetsuzanus* by the dorsum having a distinct median pattern which is often variegated with reddish-brown hairs.

Size: 7.5–8.5 mm in length.

Distribution. Japan (North to Middle Honshu).

Specimens examined. 1 ♂ (holotype of *B. shinanensis* NAKANE: NK), Shinanosaka, 1935; 1 ♂ 2 ♀♀, Kamikôchi, Nagano, VII~VIII-1952, A. MUTO leg. (NK), 25-VII-1945, T. NAKANE leg. (holotype of *B. nigrolineatus* NAKANE: NK), 28-VIII-1962, H. HIGUCHI leg. (TK); 1 ♀ (NK), Tokugô-tôge, Nagano, 5-VII-1963, Y. KISHII leg.; 1 ♀ (NSM: KA), Mt. Tsubakuro-dake, Nagano, 27-VII-1932, 3 ♀♀ (NK), Shibunoyu, Inagoyu in Mt. Yatsugatake, Nagano, 15-VII-1955, T. SHIBATA leg., 3~5-VIII-1973, KINO leg., 27-VII-1974, Y. HASEGAWA leg.; 1 ♀ (TK), Mt. Tateshina-yama (ca. 2,600 m) Nagano, 10-VIII-1975, H. TAKIZAWA leg.; 1 ♀ (NK), Maruike in Shiga-Kôgen, Nagano, 4-VI-1955, M. FUJISAWA leg.; 1 ♀ (TK), Mt. Chausu-dake (ca. 2,200-2,300 m), Shizuoka, 27~29-VII-1970, H. TAKIZAWA leg.; 1 ♀ (NK), Mt. Chôkai, Yamagata, 21~22-VII-1957, T. HORIO leg.

Remarks. The nominate subspecies is known to occur over a wide range of the Palearctic Region, and was recently recorded from the N. Kuriles. Despite of its wide range, *fasciatus* is rather stable in the shape of the male aedeagus. Subspecies *daisetsuzanus* and *shinanensis* are distinguished from the nominate one by the median lobe which is only weakly curved downwards at the apex, and by the elytra, which are not regularly striate at the 4th and 5th striae. The latter character rarely appears in middle European specimens. Specimens from the Kuriles and one out of the 7 from Sachalin have, however, their elytra regularly striate as in the nominate one. We treat them tentatively as belonging to *daisetsuzanus*, until enough materials are ex-

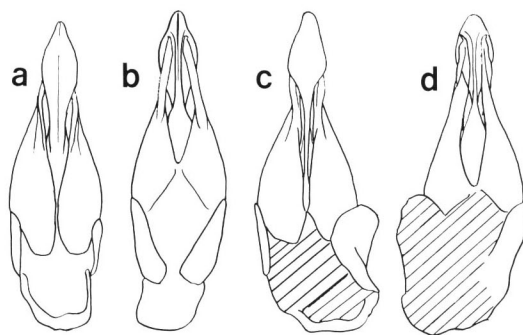


Fig. 3. Male aedeagi (a & c: dorsal view, b & d: ventral view) of: a & b, *Cytilus sericeus* FORSTER from Cakor Pass, Yugoslavia; c & d, *Cytilus kanoi* sp. nov. from Maeyama, Taiwan.

amed. Both subspecies live generally in subalpine areas in Honshu Is., whereas in Hokkaido Is., *daisetsuzanus* is found also at a lowland site.

Cytilus ERICHSON, 1847

Cytilus ERICHSON, 1847, Naturg. Ins. Dtschl., 3: 489 (type-species: *Byrrhus sericeus* FORSTER, 1771). — GANGLBAUER, 1904, Käf. Mitteleuropas, 4: 68. — DALLA TORRE, 1911, Coleopt. Cat. Junk., pars 33: 19.

The genus is distinguished from the genus *Byrrhus* LINNÉ by the following characters: body round, covered with hairs and tomentose, without erect hairs on the dorsum; elytra with distinct striae; middle and hind femora lacking a broad deep furrow on the dorsal side.

Cytilus sericeus (FORSTER, 1771)

Byrrhus sericeus FORSTER, 1771, Nov. Spec. Insect Cent., 1: 16.

Body short oval, broadest at middle of body, in lateral view strongly convex dorsally, highest at basal 3/7 of elytra; head, pronotum and scutellum black with slight brownish tinge; elytra black with brownish tinge, metallic green basally and intero-medially, the green portion faded in various degrees and sometimes wholly disappearing; underside black; legs somewhat brownish; body beneath and head covered with short recumbent white hairs; pronotum with blackish and reddish brown hairs; scutellum with yellowish white or silvery hairs; elytra with interstice weakly reticulate, punctate and lustrous, with striae distinctly embossed against flat interstices; disc wholly variegated with white, black and reddish brown hairs; 2nd, 4th, 6th and 8th interstices covered with black hairs more or less intermittently. Male aedeagus (based on European specimens: Fig. 3, a, b): median lobe rather narrow, subacute and upwardly curved at apex; parameres simple, rod-like on apical half of their length, ending in a small hook.

Size: 4–5 mm in length.

Distribution. Japan (Hokkaido), Sachalin, Europe, North America.

Specimens examined. Sachalin — 1 ♀ (NSM: KO), Horo, 9–VI–1933, Sachalin Central Exp. Sta. Hokkaido — 2 ♀♀ (TK), Mt. Soranuma-dake (ca. 500 m), Sapporo, 12–VI–1968, H. TAKIZAWA leg.; 1 ♀ (TK), Nukabira (ca. 600–700 m), Tokachi, 17–VI–1966, H. TAKIZAWA leg.; 1 ♀ (NK), Sarobetsu (ca. 10 m), Toyotomi, 20–VI–1961, Y. NISHIJIMA leg.; 1 ♀ (TK), Hisago-numa (ca. 1,700 m), Mt. Taisetsu-san, 28–VII–1973, A. ABE leg.; 1 ♀ (NK), Yukomanbetsu, VII–1970, H. HASEGAWA leg.; 1 ♀ (NSM: KO), Japan, H. KÔNO leg.

Remarks. This species is said to be distributed widely in the Palaearctic Region and North America by authors; no reliable record, however, has been made outside Europe and North America. Unfortunately these 7 examined specimens are all females and male genital characters have not been examined of the Japanese population. There are no distinctive characters between the middle European and Japanese specimens, except that the latter are somewhat oblong in the body shape. Specimens were collected on a leaf of *Petasites japonicus* by stream-side at Nukabira, and on shaded

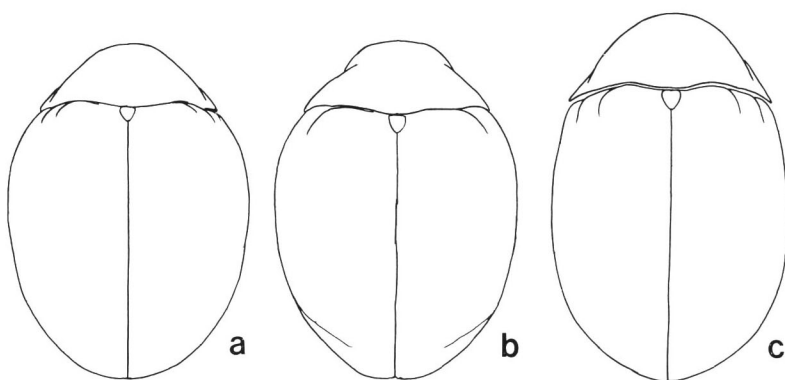


Fig. 4. Dorsal view of: a, *Cytilus sericeus* (♀) from Sierentz, Helvetia; b, ditto from Nukabira, Hokkaido; c, *C. kanoi* sp. nov. (♀) from Mt. Alishan, Taiwan.

sandy ground near a stream at Mt. Soranuma-dake.

Cytilus kanoi sp. nov. (KÔNO in litt.)

Body oblong oval, nearly parallel-sided for basal 1/4 to 1/2 of elytra, in lateral view gently convex dorsally and highest near basal 3/8 of elytra; coloration as in *sericeus*, with brownish appendages. Body covered with dense long hairs; pronotum variegated with white, black and reddish brown hairs, and mediobasally with long reddish brown hairs; elytra variegated with white, black and reddish brown hairs; in well-preserved specimens, interstices fairly covered intermittently with black hairs, which are well-developed and form ring-patterns enclosing patches of white hairs.

Head wholly covered with distinct punctures, with a pair of small obsolete depressions between eyes; pronotum wholly punctate; elytra with interstices weakly convex, and with ill-defined striae; disc largely mat, except for basal part, owing to punctate reticulation of the interstices; 1st, 2nd, 6th interstices and the 4th partially punctate and lustrous below the black hair covering. Underside: thorax heavily granulose; abdomen wholly punctate. Male aedeagus (Fig. 3, c, d): median lobe broad, apically rounded and straight; parameres sinuately expanded on anterior half, ending in a distinct apical hook.

Size: 5–5.5 mm in length.

Distribution. Taiwan.

Specimens examined. Taiwan — 1 ♂ (holotype: NSMT-I-C-No. 46005 in NSM: KO), Hinode, 21-V-1929; 1 ♂ 1 ♀ (NSM: KA), Maeyama, 13-VII-1927, T. KANO leg.; 1 ♂ (NSM: KA), Suigenchi, 5-VIII-1928, T. KANO leg.; 2 ♀♀ (NSM: KA), Mt. Alishan, Nantou Hsien, 20-III-1926, T. KANO leg., 1 ♀ (NSM), 5~6-VII-1965, T. NAKANE leg. (ca. 2,300 m); 1 ♀ (NSM: KA), Hattsûkan, 15-VII-1927, T. KANO leg.; 1 ♀ (NSM: KA), Sankakuho, 25-V-1927, K. KAMIYA leg.

Remarks. This species is distinguished from *sericeus* by the larger body size,

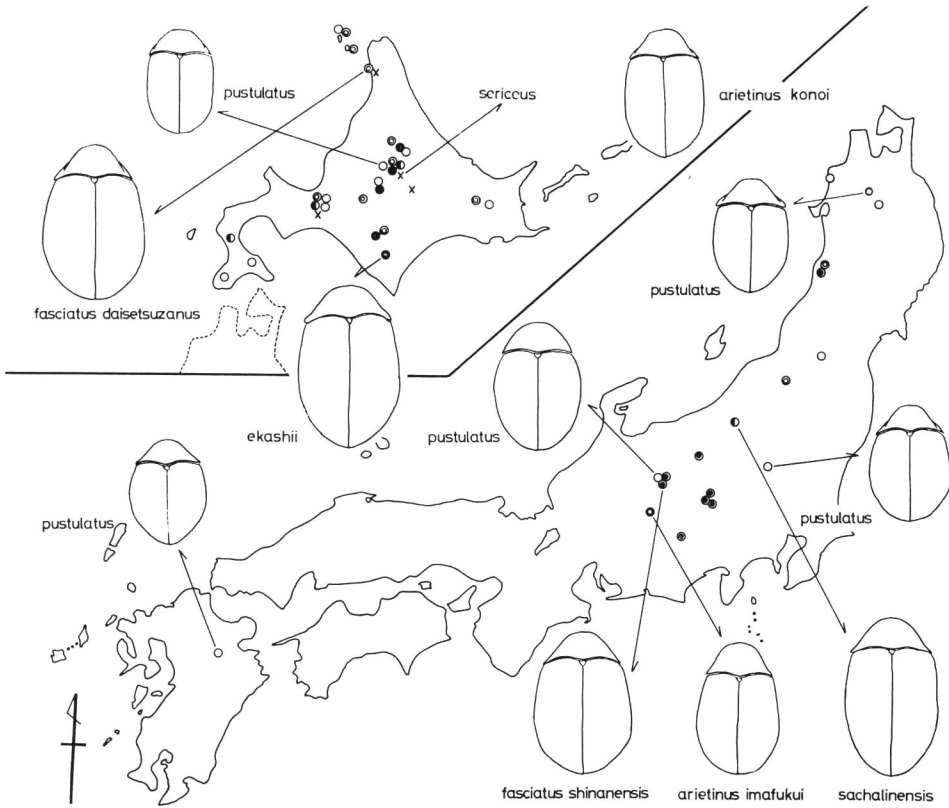


Fig. 5. Distribution of *Byrrhus*- and *Cytilus*-species in Japan. Body outlines are all male ones except for *daisetsuzanus* and *shinanensis*.

oblong shape, obsolete elytral striae and by the hair covering: further the shape of the male aedeagus is quite different, as shown in Fig. 3. This new species is dedicated to the late Dr. Tadao KANO, who was an eminent coleopterist and ethologist, by the late Dr. H. KÔNO.

Selected Literature

- BONADONA, P., 1975. Les *Byrrhus* (sensu lato) de France (Col. Byrrhidae). *L'Entomologiste*, **31**: 193–209.
- DALLA TORRE, K. W. VON, 1911. Byrrhidae. *Coleopterorum Catalogus*, pars 33: 5–38. Berlin, W. Junk.
- ERICHSON, W. F., 1846. Byrrhidae. *Naturg. Ins. Dtschl.*, **3**: 464–499.

