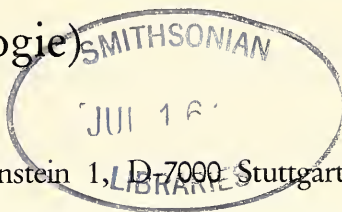


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## The Genus *Pteroloma* Gyllenhal 1827 in Japan (Coleoptera: Agryrtidae)

By Wolfgang Schawaller, Stuttgart

With 5 figures

### Summary

In Japan the genus *Pteroloma* is represented by four species: *Pteroloma rufovittatum* (Nakane 1955) [*miranda* Hlisnikovsky 1963 new synonym], *Pteroloma koebelei* van Dyke 1928 [*gatoi* Nakane 1955 new synonym, ssp. *japonica* Hlisnikovsky 1963 new synonym; *magnifica* Hlisnikovsky 1963 new synonym], *Pteroloma forsstroemi* (Gyllenhal 1810), and *Pteroloma discicolle* Lewis 1893. The proofs for synonymy, all known faunistic data, and a key for these species are given.

### Zusammenfassung

In Japan ist die Gattung *Pteroloma* durch vier Arten vertreten: *Pteroloma rufovittatum* (Nakane 1955) [*miranda* Hlisnikovsky 1963 n.syn.], *Pteroloma koebelei* van Dyke 1928 [*gatoi* Nakane 1955 n.syn., ssp. *japonica* Hlisnikovsky 1963 n.syn.; *magnifica* Hlisnikovsky 1963 n.syn.], *Pteroloma forsstroemi* (Gyllenhal 1810) und *Pteroloma discicolle* Lewis 1893. Die Begründungen der Synonymien, alle bekannten faunistischen Daten und ein Bestimmungsschlüssel dieser Arten werden vorgelegt.

### 1. Introduction

This paper analyses the taxonomic situation of the species of the genus *Pteroloma* and their distribution in Japan. This polymorphic genus is distributed in all the mountainous regions of the northern hemisphere (USA, Mexico, Europe, Himalaya, Central Asia, Japan). No synapomorphic characters which prove its monophyletic origin have yet been worked out. Probably this genus must be divided into a number of natural groups – but this needs a complete phylogenetic study which is not the purpose of the present paper.

In Japan, *Pteroloma* is represented by four species: *Pteroloma rufovittatum* (Nakane 1955) and *Pteroloma koebelei* van Dyke 1928 both with a wider distribution on Honshû, Shikoku, and Kyûshû; *Pteroloma discicolle* Lewis 1893 known only from the type locality in the mountains around Nikko (Tochigi prefecture, Honshû); and *Pteroloma forsstroemi* (Gyllenhal 1810) with its new record for the Japanese fauna on

Hokkaidô. All the other forms from Japan, hitherto described, are synonyms of these species (see list of species).

Not included in this revisionary note is „*Pteroloma*“ *calathoides* Portevin 1905 from Nikko which is synonymous with *Ipelates striatipennis* (Lewis 1893) (NAKANE in litt., comparison of types). Unfortunately this synonymy has not been registered in my *Ipelates*-paper (SCHAWALLER 1983).

## 2. Acknowledgements

First of all I wish to thank Prof. T. NAKANE (Kagoshima) for his various help and the loan of important specimens (collection NAKANE: CN). My friend H. ONO (National Science Museum Tokyo) identified the localities and translated the informations on the labels into a uniform and correct writing. Specimens used for this revision were made available by the following persons and institutions: *BMNH* = British Museum of Natural History London (Dr. M. E. BACCHUS), *BRIO* = Biosystematics Research Institute Ottawa (Dr. A. SMETANA), *CAS* = California Academy of Science San Francisco (Dr. D. H. KAVANAUGH), *CD* = Collection DOSTAL Wien, *MHNG* = Muséum d'Histoire Naturelle Genève (Dr. I. LÖBL), *MNB* = Museum für Naturkunde Berlin (Dr. M. UHLIG), *SMF* = Senckenberg Museum Frankfurt (Dr. R. ZUR STRASSEN), *SMNS* = Staatliches Museum für Naturkunde Stuttgart (author).

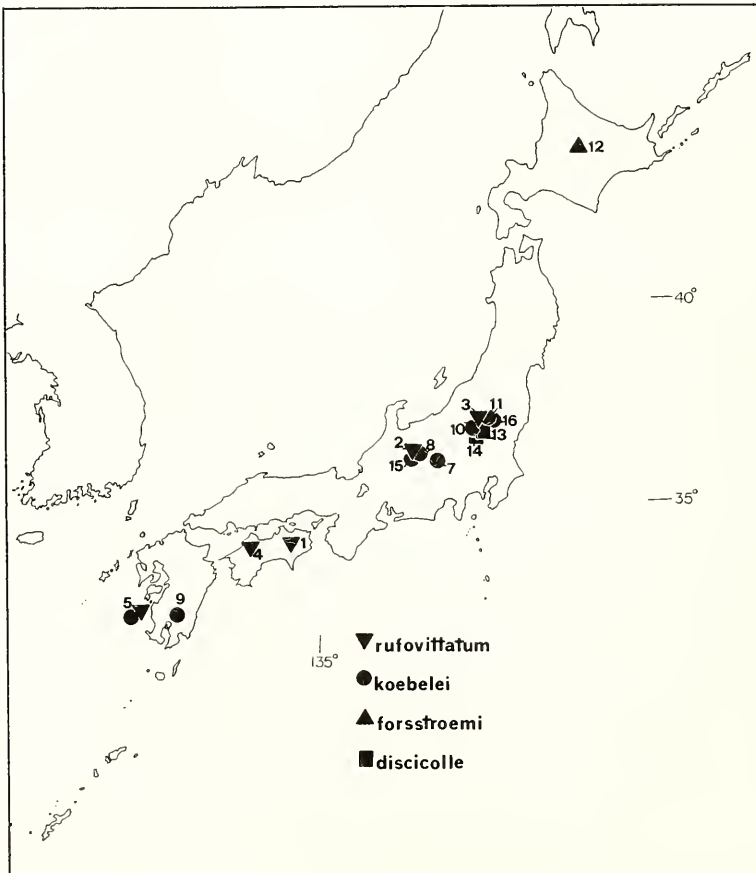


Fig. 1. Localities (numbers see list of species) of the genus *Pteroloma* in Japan. Locality no. 6 not identified and not in the map.

### 3. List of species

#### 3.1. *Pteroloma rufovittatum* (Nakane 1955) (fig. 5)

1963 *Pteroloma miranda* Hlisnikovsky, Ent. Bl. 59: 78 – **New synonym.**

Studied material: Shikoku, Tokushima prefecture, Miyoshi-gun, Mt. Higashi-iyaya-yama (locality 1 in fig. 1), 8.VIII.1961, 1 sp. leg. HIRAI (CN).

Further localities: Honshû, Nagano prefecture, Minami-azumi-gun, Kamikôchi (locality 2), 20.VI.1951, 1 holotype leg. NAKANE (NAKANE 1955). – Honshû, Fukushima prefecture, Minami-azumi-gun, Yunohana-onsen (3), 21.VII.1947, 1 paratype leg. KUROSAWA (NAKANE 1955). – Shikoku, Ehime prefecture, Kamiukena-gun, Omogo (4), 20.V.1952, 1 paratype leg. HISAMATSU (NAKANE 1955). – Kyûshû, Kagoshima prefecture, Satsuma-gun, Koshiki-jima islands, Kami-koshiki-jima island (5), northern mountains, V.1937, 1 sp. leg. FRIEDRICH (HLISNIKOVSKY 1963 sub *miranda*).

Synonymy: I compared one specimen of *rufovittatum* from the NAKANE collection with the description of *miranda* and found no specific differences. The figured *miranda* shows the conspicuous black-yellow elytrae and the circular shape of the body, which are corresponding, and typical characters of *rufovittatum*. This synonymy has already been recognized by NAKANE (in litt.).

#### 3.2. *Pteroloma koebelei* van Dyke 1928 (fig. 2)

1955 *Apteroloma gotoi* Nakane, Scient. Rep. Saikyo Univ. 2: 29 – **New synonym.**

1963 *Pteroloma koebelei* ssp. *japonica* Hlisnikovsky, Ent. Bl. 59: 80 – **New synonym.**

1963 *Pteroloma magnifica* Hlisnikovsky, Ent. Bl. 59: 80 – **New synonym.**

Studied material: „Yumoto“ (not localized), without date, 1 ♀ holotype leg. KOEBELE (CAS). – Honshû, Nagano prefecture, Suwa-gun, Mt. Tateshina-yama (locality 7 in fig. 1), V.1937, 1 paratype leg. FRIEDRICH (MHNG sub ssp. *japonica*). – Honshû, Nagano prefecture, Minami-azumi-gun, Shimashima (8), 21.VII.1942, 1 paratype leg. GOTO (CN sub *gotoi*). – Honshû, Nagano prefecture, Minami-azumi-gun, Kamikôchi (2), 7.–11.VIII.1950, 1 paratype leg. TABUCHI (CN sub *gotoi*). – Honshû, Tochigi prefecture, Nikko, Yumoto (10), 20.VI.1960, 1 sp. leg. NAKANE (CN). – Honshû, Tochigi prefecture, Nikko, between Yumoto and Sannô Tôge (11), 21.VI.1960, 3 sp. leg. NAKANE (CN). – Honshû, Nagano prefecture, Pr. Shiga (15), 1500 m, 23.VII.1980, 8 sp. leg. A. & Z. SMETANA (BRIO, SMNS). – Honshû, Tochigi prefecture, Nikko, N. P. Ryuzu (16), 1400 m, 16.VII.1980, 2 sp. leg. A. & Z. SMETANA (BRIO).

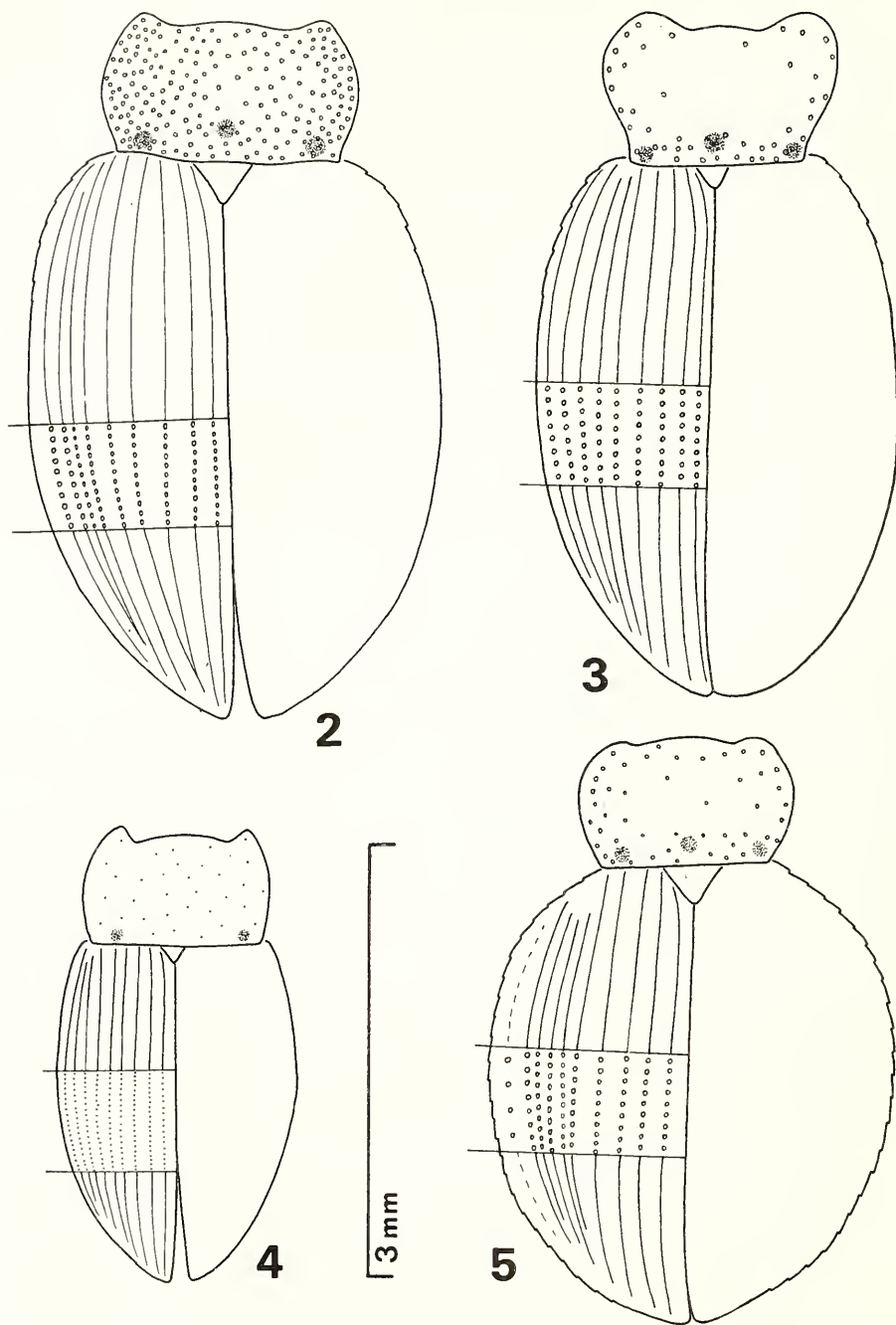
Further localities: Kyûshû, Kagoshima prefecture, Satsuma-gun, Koshiki-jima islands, Kami-koshiki-jima island (5), northern mountains, V.1937, 1 sp. leg. FRIEDRICH (HLISNIKOVSKY 1963 sub *magnifica*). – Kyûshû, Kagoshima prefecture, Aira-gun, Mt. Kirishima-yama (9), V.1937, 1 ♂ holotype, 1 ♀ paratype leg. FRIEDRICH (HLISNIKOVSKY 1963 sub ssp. *japonica*). – Honshû, Nagano prefecture, Suwa-gun, Mt. Tateshina-yama (7), V.1937, 5 sp. leg. FRIEDRICH (HLISNIKOVSKY 1963 sub ssp. *japonica*). – Honshû, Tochigi prefecture, Nikko, Yumoto (10), 25.V.1936, 2 paratypes leg. ASAHINA (NAKANE 1955 sub *gotoi*).

Synonymy: I studied the types of *koebelei* and *gotoi* and found no morphological differences, therefore *koebelei* is the valid name for this species. The descriptions and sketched figures of ssp. *japonica* and *magnifica* show without doubt the synonymy of these names to *koebelei*, and, moreover, a paratype of ssp. *japonica* from the museum in Genève can not be separated by morphological characters from the holotype of *koebelei*.

#### 3.3. *Pteroloma forstroemi* (Gyllenhal 1810) (fig. 3)

1935 *Pteroloma sibiricum* Székessy, Kol. Rdsch. 21: 175 – **New synonym.**

Studied material: Hokkaidô, Mt. Daisetsu-zan (locality 12 in fig. 1), 8.VI.1976, 1 sp. leg. YASUDA (CN). – **New record for Japan!**



Figs. 2–5. Shape of the four Japanese species of *Pteroloma*. — 2.) *Pteroloma koebelci*, ♀ holotype from „Yumoto“; — 3.) *Pteroloma forsstroemi*, ♂ from Mt. Daisetsu-zan; — 4.) *Pteroloma discicolle*, ♂ syntype from Mt. Nantai-san; — 5.) *Pteroloma rufovittatum*, specimen from Mt. Higashi-iyama.

Further localities: Europe, many records (MNB, SMF, SMNS). — Sibiria, Baikal lake, without date, 2 sp. (MNB, SMNS). — Sibiria, headwaters of the Irkut, without date, leg. LEDER (SZÉKESSY 1935 sub *sibiricum*). — Mongolia, Ulan Bator, 7.VIII.1973, 2 sp. (CD). — Sachalin, near Nowoalexandrowsk, Mt. Tschechow, VII.1973, 1 sp. (MNB).

Synonymy: SZÉKESSY (1935) separated *sibiricum* from *forstroemi* only by subtle differences in the male sexual characters. The ♂ genital apparatus within the genus *Pteroloma* is only weakly sclerotized and, moreover, of a very similar construction. Therefore I consider these differences — based only on four old and dry conserved specimens from the last century — not as specific. If specific differences concerning the genital apparatus exist within the genus *Pteroloma* which are useful for taxonomy, these differences could only be studied in new and alcohol-conserved specimens. The material listed here from Japan, Mongolia and Sachalin cannot be separated from European populations by morphological or other taxonomically relevant characters — so *Pteroloma forstroemi* is distributed in an expansive palearctic areal and is not restricted to Europe.

### 3.4. *Pteroloma discicolle* Lewis 1893 (fig. 4)

Studied material: Honshū, Tochigi prefecture, Nikko, summit of Mt. Nantai-san (locality 13 in fig. 1), 20.VIII.1881, 1 syntype leg. LEWIS (BMNH). — Honshū, Tochigi prefecture, Nikko, Lake Chūzenji-ko (14), 19.–24.VIII.1881, 1 syntype leg. LEWIS (BMNH). This locality not cited in the original description, but specimen labeled as syntype.

Remarks: This species shows great affinities to *Garytes coreanus* Mroczkowski 1966 from Corea but there exist probably specific differences (I compared the types of *discicolle* with recently collected *Garytes coreanus* from the Hungarian Zoological Expedition to Corea, Museum Budapest). Not clear, however, is the generic position of these two species. The members of *Pteroloma* are polymorphic and probably not all are of monophyletic origin. Perhaps, the genus *Garytes* is only a synonym or subgenus of *Pteroloma*. This question is not a theme of this short paper, until it is clarified I consider *discicolle* as a member of *Pteroloma*.

## 4. Key to the Japanese *Pteroloma* species

- 1 Head and pronotum dorsally with netlike microsculpture (magnification 50x) and nearly without punctation. Basis of pronotum before scutellum without impression. Border of elytrae smooth from the shoulders up to the tip (fig. 4) ..... *P. discicolle*
- Head and pronotum dorsally smooth, shining and with distinct punctation. Basis of pronotum before scutellum with impression. Border of elytrae dentated at least in the first third behind the shoulders ..... 2
- 2 Both elytrae together form a circle. Border of elytrae dentated nearly up to the tip and broadly developed, external interval of elytrae with additional (10th) row of points. Elytrae with contrasting pattern: first and fifth interval, border and tip yellow, the rest black (fig. 5) ..... *P. rufovittatum*
- Both elytrae together form an oval. Border of elytrae dentated only in the first third, external interval of elytrae not broader than the other intervals and without additional points. Elytrae of uniform black or brown ..... 3
- 3 Maximum breadth of pronotum in the middle, border of pronotum nearly symmetrically bent to basis and tip. Surface of pronotum nearly everywhere with dense or scattered punctation (fig. 2) ..... *P. koebelei*
- Maximum breadth of pronotum in the first third, border of pronotum narrower towards basis, pronotum heart-shaped. Surface of pronotum only at the borders and basis with punctation, middle of pronotum shining and without points (fig. 3) ..... *P. forstroemi*.

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Author's address:

Dr. WOLFGANG SCHAWALLER, Staatliches Museum für Naturkunde Stuttgart (Museum am Löwentor), Rosenstein 1, D-7000 Stuttgart 1.

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