

**A New Species of the Genus *Platycerus* GEOFFROY
from Central Japan (Lucanidae)**

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中央日本におけるルリクワガタ属の1新種

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Since Mr. George LEWIS first described *Platycerus delicatulus* from Japan in 1883, it had been believed to be a unique representative of the genus *Platycerus* GEOFFROY in Japan for eighty-six years. But in 1969, Dr. Yoshihiko KUROSAWA pointed out that *Platycerus delicatulus* LEWIS consisted of two independent species, one of which was evidently a new species and named *Platycerus acuticollis* Y. KUROSAWA. During subsequent thirteen years from 1969 to 1981, these two species, *Platycerus delicatulus* and *P. acuticollis*, have been collected or recorded from various places in Japan and their distributional range has become fairly well clarified.

In autumn of 1981, however, the authors found another form of *Platycerus* from central Japan and noticed that the Japanese inhabitants of the genus contain three separate species, the third is an evident new species. The authors describe it in the following lines.

***Platycerus kawadai* sp. nov.**

(Japanese name: Hosotsuya-ruri-kuwagata)

Platycerus delicatulus: TAKAKUWA (nec LEWIS), 1981, Researchment of insect fauna of Kanagawa Prefecture: 385-387.

Male. Body above glossy with fine midnight-blue tint; body beneath, mandibles and antennae black; legs yellowish brown excepting apical part of femora and apical and basal parts of tibiae more or less blackish, and tarsi and claws reddish brown to blackish brown.

Head rather small, distinctly narrower than pronotum, 1.48 times as broad as long, strongly attenuated towards base; surface very strongly shiny, rather sparsely and finely punctured, and sparsely with long erect pale yellowish hairs on lateral parts; frons not so strongly depressed, with a pair of longitudinal elevations above antennal insertions, which are a little oblique and become obsolete on the inside of eyes. Mandibles rather small, 0.74 times as long as head; inner aspects

vertical, under edge with four or five teeth; some of which are bicuspid, the upper edges strongly incurved near base, with a bicuspid subquadrate tooth at base; apices strongly incurved, acute at their tip. Antennae normal, with first segment slightly shorter than the remainder, second about as long as broad, each of third to sixth more or less broader than long, seventh to tenth distinctly comb-shaped.

Pronotum wider than head, 1.43 times as broad as long, slightly rounded at sides, widest behind middle; anterior angles projecting forward; posterior angles slightly squarished but obtuse, not angulate; posterior margin gently arched: surface smooth, clothed with fine punctures which are denser than in head, but sparse at median and lateral parts, with a few pale yellow erect hairs on anterior part of sides. Scutellum semicircular, smooth, without any distinct punctures, but with a few golden hairs on basal area.

Elytra wider than pronotum, 2.26 times as long as broad, widest at the apical one-third, then gradually attenuated towards apex; disk broadly depressed before middle on each side of raised suture and bearing two fine longitudinal striae along middle of each elytron; surface smooth, moderately covered with punctures which are partly transversely connected with each other by very fine striations.

Body beneath except for mandibles rather shiny, and covered with small punctures on head, prosternum and abdomen, the punctation confluent near base of mandibles, and the surface settled with short pale yellow hairs all over.

Legs normal, with eighteen to twenty denticulations at outside of anterior tibiae (the apical two large); all tarsi, apical half of anterior tibiae, apical two-thirds of four hinder tibiae sparsely clothed with rather long pale golden hairs.

Female. Body above with greenish bronzy tint; body beneath black except for dark reddish brown abdomen.

Head smaller than in male, 1.38 times as broad as long; elevations on both side of frons less conspicuous than in male; sides rather parallel, slightly converged towards base. Mandibles also smaller than in male, 0.38 times as long as head; under edge of inner side with a pair of small teeth. Antennae more compact than in male; first segment about as long as the remainder.

Pronotum with sides more arcuate than in male, more strongly attenuate anteriorly.

Elytra 2.06 times as long as wide, widest behind middle, at anterior three-fifths.

Variation. *Platycerus kawadai* sp. nov. slightly varies in the shape of body and in the punctation of body surface. In the male it bears normally glossy midnight-blue tint, which is sometimes somewhat greenish, and in the female it has usually greenish bronzy tint but sometimes with a slight aeneous or bluish tinge. Several colour variations can be seen at anterior tibiae which are yellowish brown to blackish brown in both sexes.

At present, this species has a few local variations as far as the authors examined many

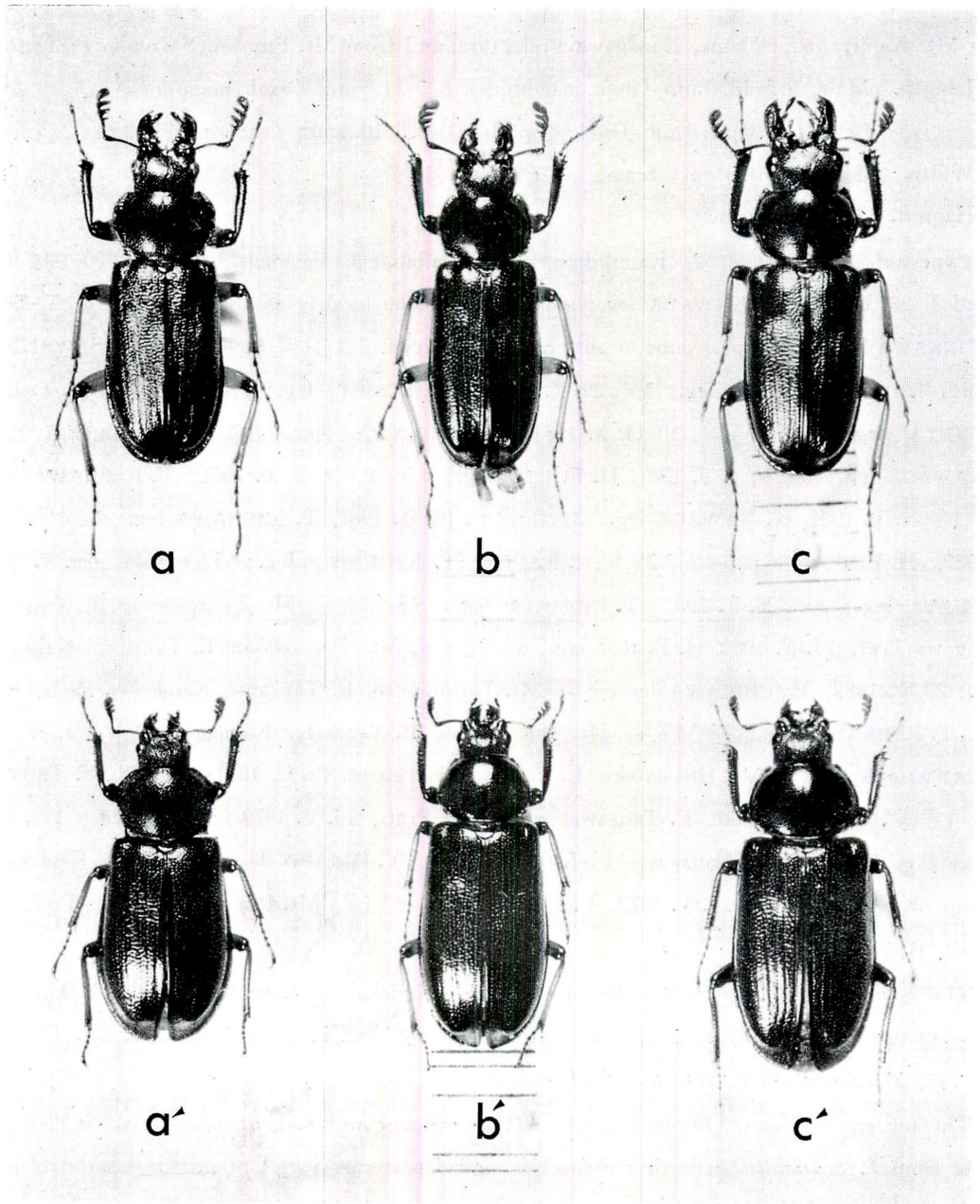


Fig. 1 *Platycerus* spp. (a-c, a'-c'; all specimens collected from Kamihikawa-rindo, Daibosatsu, Yamanashi Pref.)

- a. *P. acuticollis*, male a'. ditto, female
b. *P. karwadae* sp. nov., male (holotype) b'. ditto, female (allotype)
c. *P. delicatulus*, male c'. ditto, female

specimens from Kamihikawa-rindo, Daibosatsu, Yamanashi Prefecture, from Mt. Tanzawasan, E. Tanzawa, Kanagawa Prefecture, from Mt. Hirugatake, E. Tanzawa, Kanagawa Prefecture, from Mt. Kamiyama, Hakone, Kanagawa Prefecture, and from Mt. Fujisan, Shizuoka Prefecture.

Length. Male, 9.5-13.0mm (incl. mandibles), 8.5-11.5mm (excl. mandibles)

Female, 9.0-11.0mm (incl. mandibles), 8.5-10.5mm (excl. mandibles)

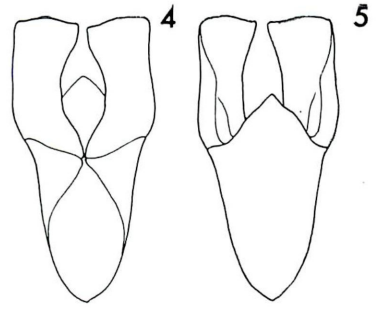
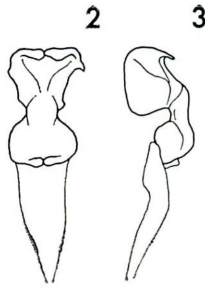
Width. Male, 3.0-4.0mm; female, 3.0-3.5mm

Habitat. Japan (Honshu)

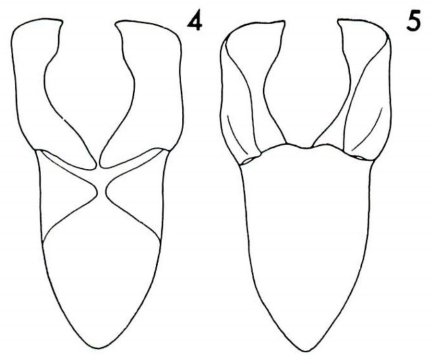
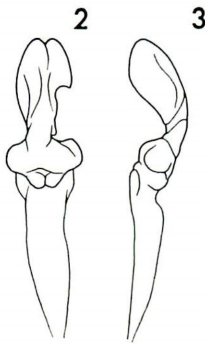
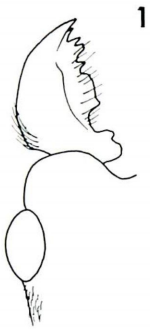
Type-series. Holotype, ♂, Kamihikawa-rindo, Daibosatsu, Yamanashi Pref. (1300-1400 m in altitude), 28. VI. 1981, K. KAWADA leg.; allotype, ♀, same locality as the holotype, 11. X. 1981, T. ICHIKAWA leg.; paratypes, same locality as the holotype, 2♂♂1♀, 6. VI. 1981, M. SAWAI leg.; 1♀, 16. VI. 1981, M. SAWAI leg.; 1♀, 29. VI. 1981, T. KINOSHITA leg.; 2♂♂5♀♀, 10-11. X. 1981, H. FUJITA leg.; 6♂♂5♀♀, 10-11. X. 1981, T. ICHIKAWA leg.; 3♂♂3♀♀, 10-11. X. 1981, K. KAWADA leg.; 3♂♂, 4. XI. 1981, H. FUJITA leg.; 4♂♂2♀♀, 4. XI. 1981, T. ICHIKAWA leg.; 3♂♂1♀, 4. XI. 1981, K. KAWADA leg.; 2♂♂8♀♀, 16. XII. 1981, T. ICHIKAWA leg.; 1♂4♀♀, 4. IV. 1982, H. FUJITA leg.; 4♂♂2♀♀, 4. IV. 1982, T. ICHIKAWA leg.; 5♂♂8♀♀, 26. IV. 1982, H. FUJITA leg.; 1♀, 26. IV. 1982, T. INOMATA leg.; 9♂♂5♀♀, Mt. Tanzawasan, E. Tanzawa, Kanagawa Pref., 27. IV. 1982, H. FUJITA leg.; 8♂♂6♀♀, Mt. Tanzawasan, E. Tanzawa, Kanagawa Pref., 27. IV. 1982, T. ICHIKAWA leg.; 1♀, Mt. Tanzawasan, E. Tanzawa, Kanagawa Pref., 9. V. 1982, T. ICHIKAWA leg.; 2♂♂4♀♀, Mt. Tanzawasan, E. Tanzawa, Kanagawa Pref., 9. V. 1982, K. KAWADA leg.; 1♀, Mt. Hirugatake, E. Tanzawa, Kanagawa Pref., 16-17. VI. 1979, S. TSUYUKI leg.; 1♂1♀, Mt. Hirugatake, E. Tanzawa, Kanagawa Pref., 16. VI. 1979, M. ITÔ leg.; 1♂, Mt. Hirugatake, E. Tanzawa, Kanagawa Pref., 16. VI. 1979, Y. HIRANO leg.; 1♂, Mt. Kamiyama, Hakone, Kanagawa Pref., 27. V. 1973, Y. HIRANO leg.; 1♂1♀, Mt. Fujisan, Shizuoka Pref., 22. V. 1982, H. FUJITA leg.

The holotype and allotype are deposited in the National Science Museum of Tokyo, and paratypes are in the British Museum (Natural History) and in the collection of Dr. Takehiko NAKANE, Mr. Kazuyuki KAWADA and of authors.

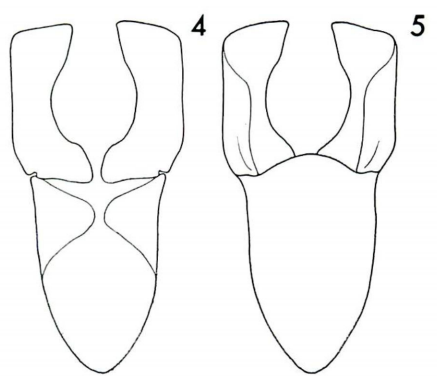
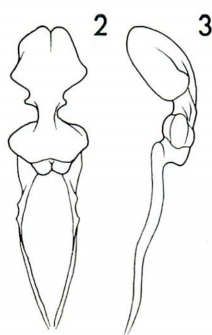
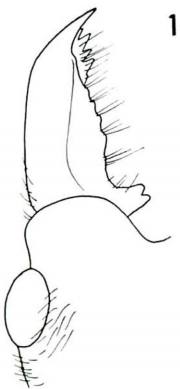
The present species is closely related to *P. delicatulus* and *P. acuticollis*. But it distinctly differs from *P. acuticollis* in having obtusely rounded posterior angles of pronotum, and from *P. delicatulus* in the following points: 1) surface very strongly shiny, 2) mandibles smaller; inner aspect nearly vertical; each outer side deeply emarginate before base (fig. 2), 3) pronotum and head smaller, 4) pronotum less transverse narrower than base of elytra, 5) elytra slenderer, with sides more clearly expanding posteriorly, 6) elytral punctures never confluent and surface without microreticulation, 7) body relatively smaller, 8) body above more deeply bluish in the male as compared with that of *P. delicatulus* in which it is greenish blue; greenish bronzy in the female, but that of *P. delicatulus* is blue, black or bronzy, 9) male genitalic form (fig. 2).



a. *Platycerus acuticollis* Y. KUROSAWA



b. *Platycerus kawadai* sp. nov.



c. *Platycerus delicatulus* LEWIS

Fig. 2 Male mandible and male genitalia of *Platycerus* spp.

a. *P. acuticollis* b. *P. kawadai* sp. nov. c. *P. delicatulus*

1. mandible 2. median lobe (ventral view) 3. ditto (lateral view) 4. lateral lobes (dorsal view)
5. ditto (ventral view)



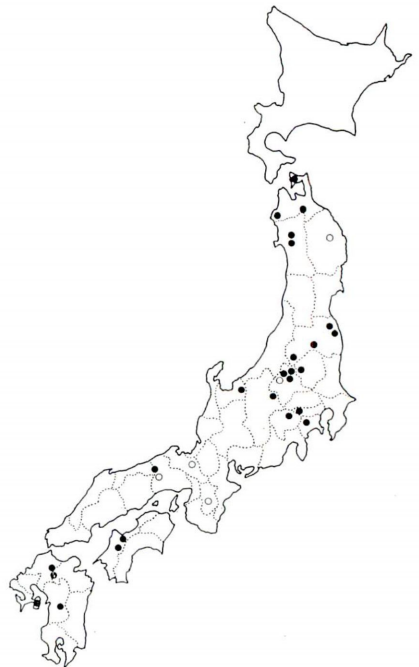
a. *Platycerus acuticollis* Y. KUROSAWA

Fig. 3 Distribution-maps of
Platycerus spp.

- a. *P. acuticollis*
- b. *P. kawadai* sp. nov.
- c. *P. delicatulus*



b. *Platycerus kawadai* sp. nov.



c. *Platycerus delicatulus* LEWIS

The larva lives in the decayed trunk or moist dead branch of broadleaf tree, and pupate in the host tree during autumn to next spring, and the adult appears in June.

For the preparation of this paper, the authors examined 189♂♂ 172♀♀ of *P. delicatulus* and 214♂♂ 131♀♀ of *P. acuticollis* from various place besides 61♂♂ 64♀♀ of *P. kawadai* sp. nov. The localities where the authors have been able to confirm directly are marked with ● on the map in fig. 3 and those recorded by KUROSAWA (1969) and others after him are marked with ○.

These three species, *P. delicatulus*, *P. acuticollis* and *P. kawadai* sp. nov., inhabit almost same area of Kamihikawa-rindo, Daibosatsu, Yamanashi Pref. and Mt. Tanzawasan, E. Tanzawa, Kanagawa Pref.

A pair of examples of the three species were sent to the British Museum (Natural History) through Prof. T. NAKANE and kindly compared with the lectotype and type series of *P. delicatulus* preserved in that museum by Mr. M.E. BACCHUS. The authors were able to examine the holotype and many paratypes of *P. acuticollis* in the National Science Museum of Tokyo by kind permission of Dr. Y. KUROSAWA.

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摘 要

G. LEWIS が 1883 年に *Platycerus delicatulus* (ルリクワガタ) を日本から記載して以来 86 年間、日本における *Platycerus* 属のクワガタは唯 1 種とされていたが、1969 年に黒沢良彦博士は従来 1 種とされていた *P. delicatulus* が実は 2 種類を含んでいることを発見され、G. LEWIS の記載したものとは異なるもう 1 種を、新種 *P. acuticollis*, Y. KUROSAWA (コルリクワガタ) として記載された。その後の 1969 年から 1981 年の 13 年間、日本には *P. delicatulus* および *P. acuticollis* の 2 種のルリクワガタ属の種が産するとされて、国内における両種の分布記録も整理されてきた。しかし、筆者らは 1981 年の秋になって、これら 2 種とは明らかに異なる第 3 番目のルリクワガタ属の 1 種を、中央日本より発見したので、新種 *Platycerus kawadai* sp. nov. として記載した。

P. kawadai sp. nov. は、前胸背の後縁角が円いことで *P. acuticollis* (前胸背の後縁角が突出する) と容易に区別することができる。*P. delicatulus* とは非常によく似るが、小形で光沢が強く(点刻が融合しない)、頭部と前胸が小さく細い、上翅基部が前胸より明らかに幅広い、大腿が小さくその形が異なる、などの点で区別できる。*P. delicatulus* は、♂では体の上面が緑がかかった青色なのに対し、*P. kawadai* sp. nov. は紺色。また同じく *P. delicatulus* は、♀は体の上面が銅色、黒色、紺色のいずれかなのに対し、*P. kawadai* sp. nov. では緑がかかった銅色である。

P. kawadai sp. nov. は、前胸背の後縁角が円い点では *P. delicatulus* と同じなため、大英博物館(自然史部門、昆虫)の M.E. BACCHUS 氏を通じて同館所蔵の *P. delicatulus* の lectotype 標本を調べていただいたが、lectotype に指定されている標本は今回の新種 *P. kawadai* sp. nov. ではなく、*P. delicatulus* そのものであった。

この記載にあたって、189♂♂172♀♀ の *P. delicatulus*, 214♂♂131♀♀ の *P. acuticollis*, 61♂♂64♀♀ の *P. kawadai* sp. nov. を検したが、山梨県大菩薩上日川林道および神奈川県丹沢山では 3 種の *Platycerus* が混生していることが確認された。これら 3 種の分布については、Fig. 3 に示したが、●印が筆者らが直接標本を検した産地、○印が黒沢良彦(1969)以降の文献による *P. delicatulus* と *P. acuticollis* の産地である。

P. kawadai sp. nov. は一見して光沢がきわめて強く、また体型が他の 2 種に比べて細いことから、和名は“ホツツヤルリクワガタ”としたい。

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