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Notes on Some Longicorn Beetles from the Izu Islands and their Related Regions

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伊豆諸島およびその関連地域のカミキリムシ
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In the result of investigation since 1971 by the author and others, several species are added to the cerambyci-list of the Izu Islands. Through examinations of these new members, it appeared that some of them are endemic to these islands and also that a part of these endemic species seem to have close relations to their congeners occurring in the Ryukyu Archipelago, Shikoku and other related regions. In these cases, the previous taxonomic treatments which had been based only on materials from Ryūkyū, Shikoku and other area excepting the Izu Islands sometimes became unreasonable after discovery of these new members, because they have intermediate characters between two or among three known species. Newly found specimens in the lzu lslands belonging to genus *Megopis* (*Spinimegopis*), genus *Allotraeus* (*Nysina*) and some other species groups were obviously in such cases. So, the author could not help reviewing subgenus *Spinimegopis* OHBAYASHI, subgenus *Nysina* GAHAN and some other species groups of every related regions in order to decide taxionomic status of such specimens of the Izu Islands.

In this paper, revisions of such species groups not only of the Izu Islands but also of Shikoku, Ryukyu, Taiwan and other related regions are given including concerning descriptions of new subspecies, as well as some mere new records from the Izu Islands.

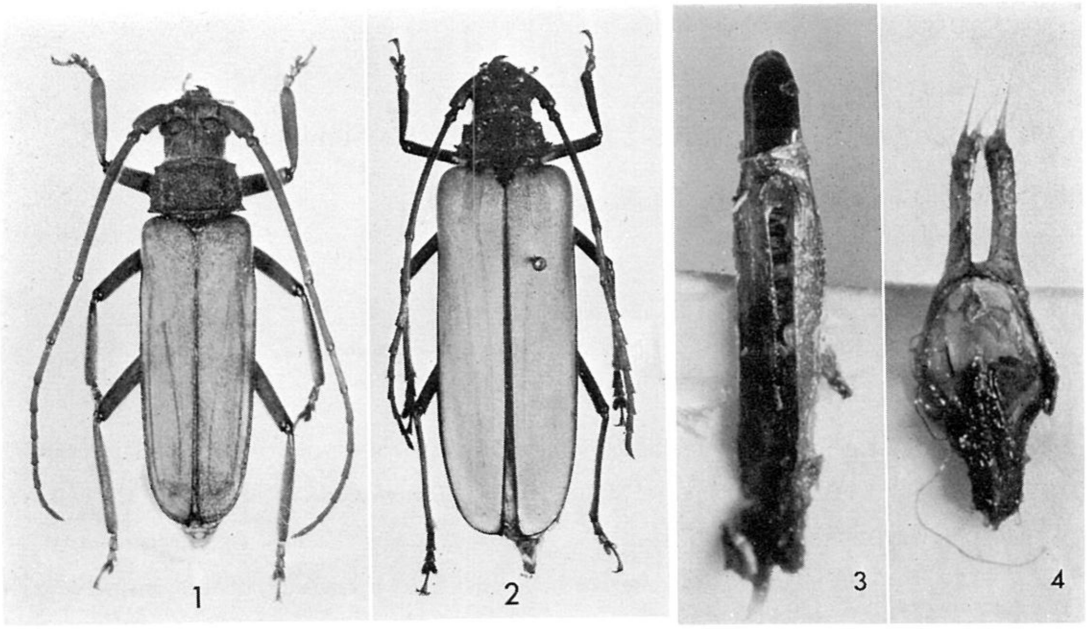
1. *Megopis* (*Spinimegopis*) *formosana* MATSUSHITA stat. nov.

Megopis (*Aegosoma*) *buckleyi formosana* MATSUSHITA, 1933.
(Including next subspecies)
Subsp. *nipponica* MATSUSHITA, 1934 (new combination).
Subsp. *kawazoei* HAYASHI, 1961 (new combination).
Subsp. *ishigakiana* YOSHINAGA et NAKAYAMA, 1972 (new combination).
Subsp. *lanhsuensis* HAYASHI, 1974 (new combination).

Five species belonging to subgenus *Spinimegopis* have been reported from Japan and its adjacent regions. They are *formosana* MATSUSHITA, *nipponica* MATSUSHITA, *kawazoei* HAYASHI, *ishigakiana* YOSHINAGA et NAKAYAMA, and *lanhsuensis* HAYASHI. Recently two new "forms" obviously belonging to this group but being defferent from any of previously described five species were found from Is. Yakushima and Is. Okinawa. These species, five described and two undescribed, having localities in Shikoku, Taiwan and their intermediate subcontinuous areas

namely Kyūshū, Is. Yakushima, Is. Amami-oshima, Is. Okinawa, Is. Ishigakijima and Is. Iriomotejima, had seemed to be subdevided into two groups—two species occurring Is. Yakushima and its northern area make one group and five members found in the areas from Is. Amami-ōshima to Taiwan make another—until a quite new member of this group was discovered from Is. Hachijōjima where is fairly distant from any localties of known congeners. Specimens found in Is. Hachijōjima have intermediate characters between the two groups, more precisely between *nipponica* and *ishigakiana*, and their discoveries make it impossible to subdevide this whole group any further.

At the same time, the result of revision on individual variations of these species, which had been difficult previously by the rarity of each species and became easier by accumulation of materials, indicates that every characters separating each species are not decisive comparing with variations within each species. One of the principal reasons why *nipponica* has been treated as an independent species while *formosana* as subspecies of *buckleyi* is supporsed that the *formosana* has three pairs of spines on pronotum just as *buckleyi* has while *nipponica* has only two pairs (median pair is absent). However, *nipponica* usually has a pair of tubercles just at the place where *formosana* has median pair of spines. Moreover, *yakushimana* subsp. nov. (description of which is given later) from Is. Yakushima is furnished with a pair of quite distinct median spines having about 1/3 to 1/2 length of those of *kawazoei* from Is. Amami-oshima. Some other important points, which Dr. MATSUSHITA pointed in his description to distinguish *nipponica* from *buckleyi formosana*, such as rougher punctations of prothorax, more gradually narrowed apices



Figs. 1-4 *Megopis (Spinimegopis) formosana formosana* **1.** Male **2.** Female **3.** Male genitalia (penis) **4.** Male genitalia (tegmen)

of elytra and shallow concavity of pygidium also appear to be variable though they are useful for some degree. So the author come to a conclusion that every members of this group in those mentioned localities should be treated as one species including several subspecies.

On the other hand, *formosana*, *nipponica* and other members of this group from Japan and its adjacent regions have common characteristics definitely different from those of *buckleyi* GAHAN has. The most conspicuous difference is found on elytral costae which are well developed in *buckleyi* but obsolete or reduced to faint lines in *formosana*, *nipponica*, etc. They also differ from *buckleyi* in lusterless surface of body (luster in *buckleyi*), short and lied pubescence of pronotum (long and rised hair in *buckleyi*), very weakly tuberculate 1st to 4th antennal segments (clearly tuberculate in *buckleyi*). There is no exception nor intermediate population in these respects as well as in some other characters mentioned later and so it is better to give *formosana*, which is the oldest name given to the members of this group, a specific status independent from *buckleyi*.

Specific characters: Head, prothorax, legs reddish brown to blackish brown, elytra yellow or yellowish to reddish brown with very narrow distinct brown border at their outer and sutural edges. Body stout. Head finely or roughly punctured. Antennae about 1.06～1.17 times as long as body in male (0.86～0.92 times in female). Prothorax with close punctures and sometimes with rougher ones at median part, partly covered with yellow pubescence, furnished with three pairs of spines but the median pair sometimes weakened to tubercles or omitted. Scutelum scutiform, about 0.26～0.48 times as long as prothorax. Elytra glabrous, about 2.41 times to 2.83 times as long as wide in male (2.92～3.60 times in female), moderately rounded at side, smoothly or rather suddenly narrowed towards obtusely pointed sutural angle, apices sometimes mucronate sometimes not, with three reduced costae on each elytron which is consisting of slightly pigmented and shiny line yet not elevated at all from surface and disappearing near apex. Pygidium with a sharrow concavity.

***Megopis* (*Spinimegopis*) *formosana formosana* MATSUSHITA stat. nov.** (Figs. 1, 2, 3, 4, 18)

Megopis (*Aegosoma*) *buckleyi formosana* MATSUSHITA, 1933, J. Fac. Agr. Hokkaido Imp. Univ., **34**(2): 163, taf. 1, fig. 1.

Elytra yellowish brown. Ratio of elytral width and length about 1 : 2.83 in male, 1 : 3.60 in female, lateral spines of prothorax well developed, elytra roundly and somewhat suddenly narrowed to apices. In male, antennae clearly longer than body.

This species should be transferred from subgenus *Aegosoma* to subgenus *Spinimegopis*, for in having the lateral spines of prothorax.

Length (excluding mandibles): male, 22.0 mm, female, 32.0～38.5 mm

Width: male, 6.0 mm, female, 9.5～11.5 mm

Distribution: Taiwan

Materials examined—1♂, Lienhwachi (Nantou Hsien), 23. V. 1977, S. IMASAKA leg.; 1♀, Mt Amma, 8. VII. 1973, R. KAO leg.; 1♀, near Hori-sha (Nantou Hsien), 1971, H. NARA coll.; 4♀♀, collected in Taiwan (J. KOMIYA coll.)

***Megopis* (*Spinimegopis*) *formosana nipponica* MATSUSHITA stat. nov.** (Figs. 5, 6, 19)

Megopis (*Aegosoma*) *nipponica* MATSUSHITA, 1934, Trans. nat. Hist. Taiwan, **24**(135): 538-539.

Megopis (*Spinimegopis*) *nipponica*: OHBAYASHI, 1963, Fragmenta Coleopterologica Pars 2 : 7.

Elytra yellowish brown. Ratio of elytral width and length about 1 : 2.67 in male, 1 : 3.14 in female, prothorax with two pairs of spines and a pair of tubercles on lateral sides, elytra gradually and smoothly narrowed to apices, apical angles somewhat dull. In male, antennae a little longer than body, about 1.5 times as long as elytra.

Length (excluding mandibles) male, 29.0～36.5 mm, female, 29.5～39.5 mm

Width: male, 8.0～10.5 mm, female, 8.5～11.5 mm

Distribution: Shikoku (type locality: Ōsugi, Kōchi Pref.), Kyūshū

Materials examined: 1♂, Kuroson, Kochi Pref., 1. VIII. 1973, N. OKUDA leg.; 1♂, Nagaoka-gun, Kochi Pref., 4. VIII. 1972, M. TAKEMURA leg.; Matsuyama city, Ehime Pref. 1♂, 10. VIII. 1974, K. ANNO leg.; 1♂ 2♀♀, 13～15. VIII. 1974, H. FUJITA leg.; 1♀, 14. VIII. 1974, K. MORIYA leg.; 2♂♂ 2♀♀, 7～9. VIII. 1975, J. ITO leg.; 1♂, 12. VIII. 1972, Y. YAMAOKA leg.; 1♀, 13. VIII. 1971, H. KAN leg.; 2♂♂ 2♀♀, 14～15. VIII. 1975, N. OGURA leg.

***Megopis* (*Spinimegopis*) *formosana yakushimana* subsp. nov.** (Figs. 7, 8, 20)

Megopis nipponica: KOJIMA et HAYASHI, 1969, Insects' Life in Japan, **1**: 5 (part.).

Megopis (*Spinimegopis*) *nipponica*: KUSAMA, 1973, "The ecology and distribution list of Japanese Cerambycidae" (In "New guide of collecting insects III"). Tokyo, Uchida-Rōkakuho-Shinsha, p. 5 (part.).

Elytra yellowish to reddish brown. Prothorax with three pairs of spines on lateral sides in female, two pairs of spines and a pair of tubercles on lateral sides in male, ratio of elytral length and width about 1 : 2.61 in male, 1 : 3.03 in female, elytra gradually and smoothly narrowed to apices, apical angles sometimes acute sometimes not. In male, antennae a little longer than body.

This new subspecies is closely allied to *nipponica*, but differs from the latter by following characters: In male; body stout, antennae shorter which about 1.3 times as long as elytra, legs shorter and robuster, prothorax darker. In female: lateral spines of prothorax well developed though not so long as in *kawazoei*, *formosana* etc., body broader and darker.

Length (excluding mandibles): male, 36.5～37.5 mm, female, 33.5～38.5 mm

Width: male, 11.0 mm, female, 10.5～12.5 mm

Distribution: Is. Yakushima (The Ōsumi Islands, Kagoshima Pref.)

Type-series. Holotype: ♂, Nagata, 14. Ⅶ. 1972, T. WATANABE leg.; paratypes: (Yakushima Is.) 1♂, Miyanoura, 21. Ⅶ. 1971, T. HATAYAMA leg.; 1♀, Miyanoura, 19. Ⅶ. 1971, K. KUSAMA leg.; 1♀, Anbō, 19. Ⅶ. 1972, K. SUGINO leg.; 1♀, Shiratani, 27. Ⅶ. 1974, H. FUJITA leg.

***Megopis* (*Spinimegopis*) *formosana kawazoei* HAYASHI stat. nov.** (Figs. 9, 10, 21)

Megopis (*Aegosoma*) *kawazoei* HAYASHI, 1961, Ent. Rev. Jap., **13**(2): 36-37.

Megopis (*Spinimegopis*) *kawazoei*: OHBAYASHI, 1963, Fragmenta Coleopterologica Pars 2 : 7.

Elytra reddish brown. Ratio of elytral width and length about 1 : 2.41 in male, 1 : 3.08 in female, prothorax with three pairs of spines, elytra roundly and somewhat suddenly narrowed to apical angles. In male, antennae clearly longer than body.

This subspecies is closely allied to subsp. *formosana* and different from the latter only in reddish color and shorter elytra. These two separating characters are rich in variety in *kawazoei* as well as in *formosana* and there remains some question how far they are reliable, though they are quite useful on materials the author has examined.

Length (excluding mandibles): male, 34.0～38.5 mm, female, 35.5～41.0 mm

Width: male, 9.5～11.0 mm, female, 10.5～12.0 mm

Distribution: Is. Amami-ōshima (Amami Islands, Kagoshima Pref.)

Materials examined: 1♂, Hatsuno, Is. Amami-ōshima, 17. Ⅶ. 1973, T. SHŌDA leg.; 1♀, Kōfukuji, 3. Ⅶ. 1977, YAMAMOTO leg.; 1♀, Marubatake, 7. Ⅶ. 1976, N. MORISHIMA leg.; 1♀, Yuwan, 13. Ⅶ. 1972, K. SUGINO leg.; 1♂, Nishinakama, 16. Ⅶ. 1979, Y. YAMAOKA leg.; 1♀, Hatsuno, 14. Ⅶ. 1974, Y. YAMAOKA leg.

***Megopis* (*Spinimegopis*) *formosana okinawana* subsp. nov.** (Figs. 11, 12, 22)

Megopis sp., UMEBAYASHI, 1979, Ryūkyū-no-konchū (Insect of Loochoos), (3): 49.

Elytra reddish brown. Ratio of elytral width and length about 1 : 2.32 in male, 1 : 3.05 in female, prothorax with three pairs of spines, elytra roundly and somewhat suddenly narrowed to apices. In male, antennae clearly longer than body.

This new subspecies is closely allied to *kawazoei*, but differs from the latter in larger and stouter body, more reddish color, and more enlarged occiput.

Length (excluding mandibles): male, 42 mm, female, 36 mm

Width: male, 13 mm, female, 11 mm

Distribution: Is. Okinawa, Is. Tokashikijima (Okinawa Islands, Okinawa Pref.)

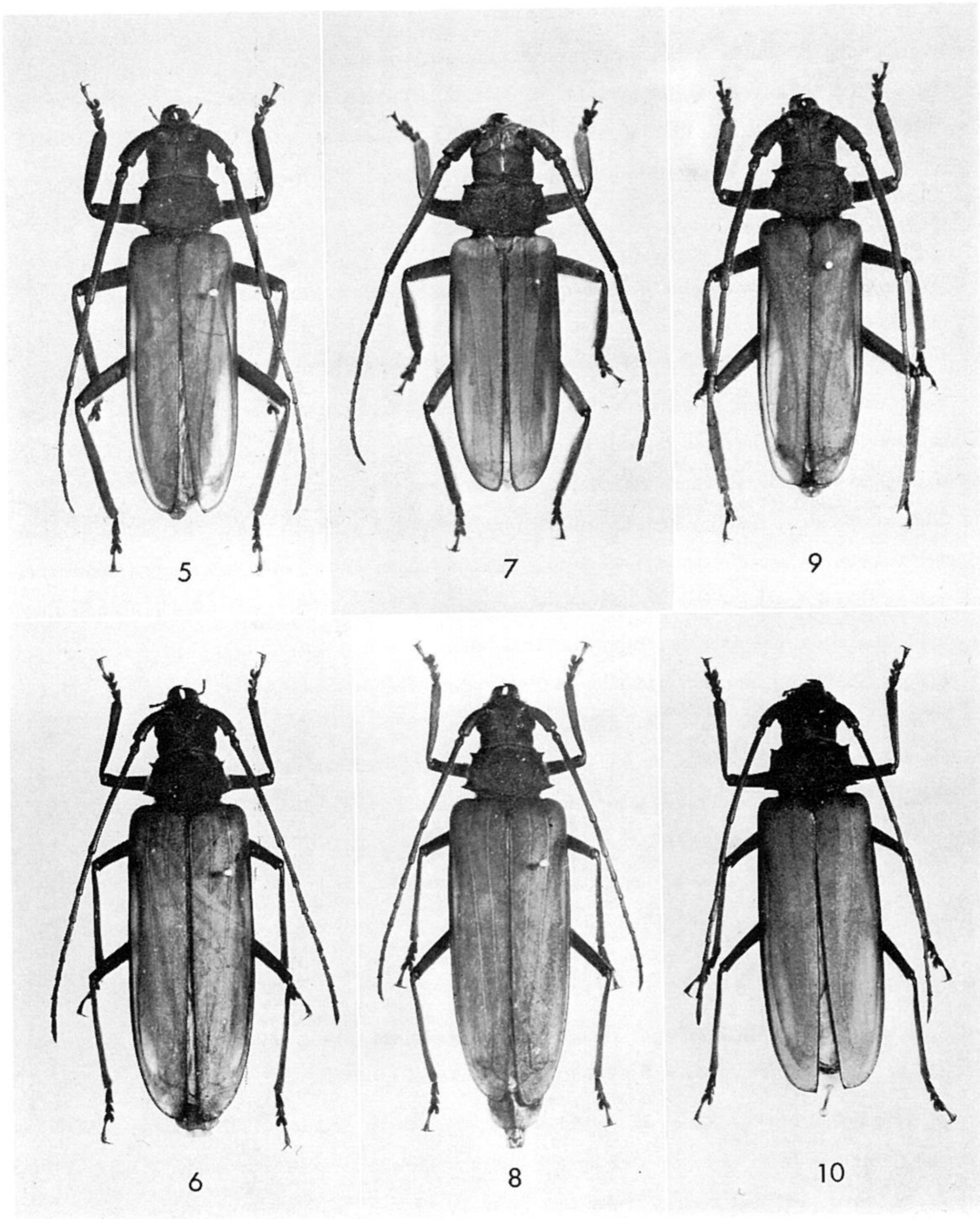


Fig. 5 *Megopis* (*Spinimegopis*) *formosana nipponica* (male) **6**. ditto (female) **7**. *Megopis* (*Spinimegopis*) *formosana yakushimana* subsp. nov. (male, holotype) **8**. ditto (female, paratype) **9**. *Megopis* (*Spinimegopis*) *formosana kawazoei* (male) **10**. ditto (female)

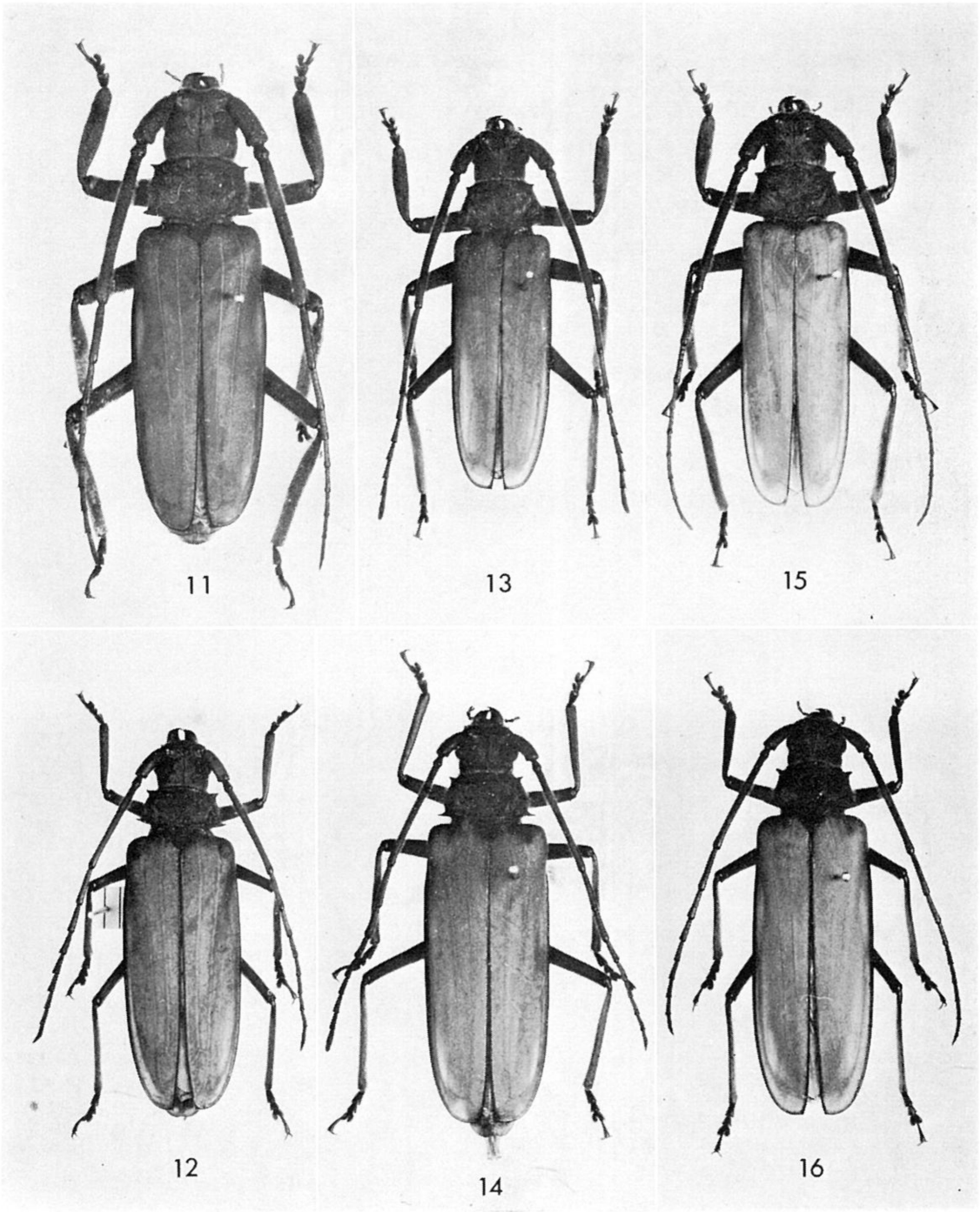
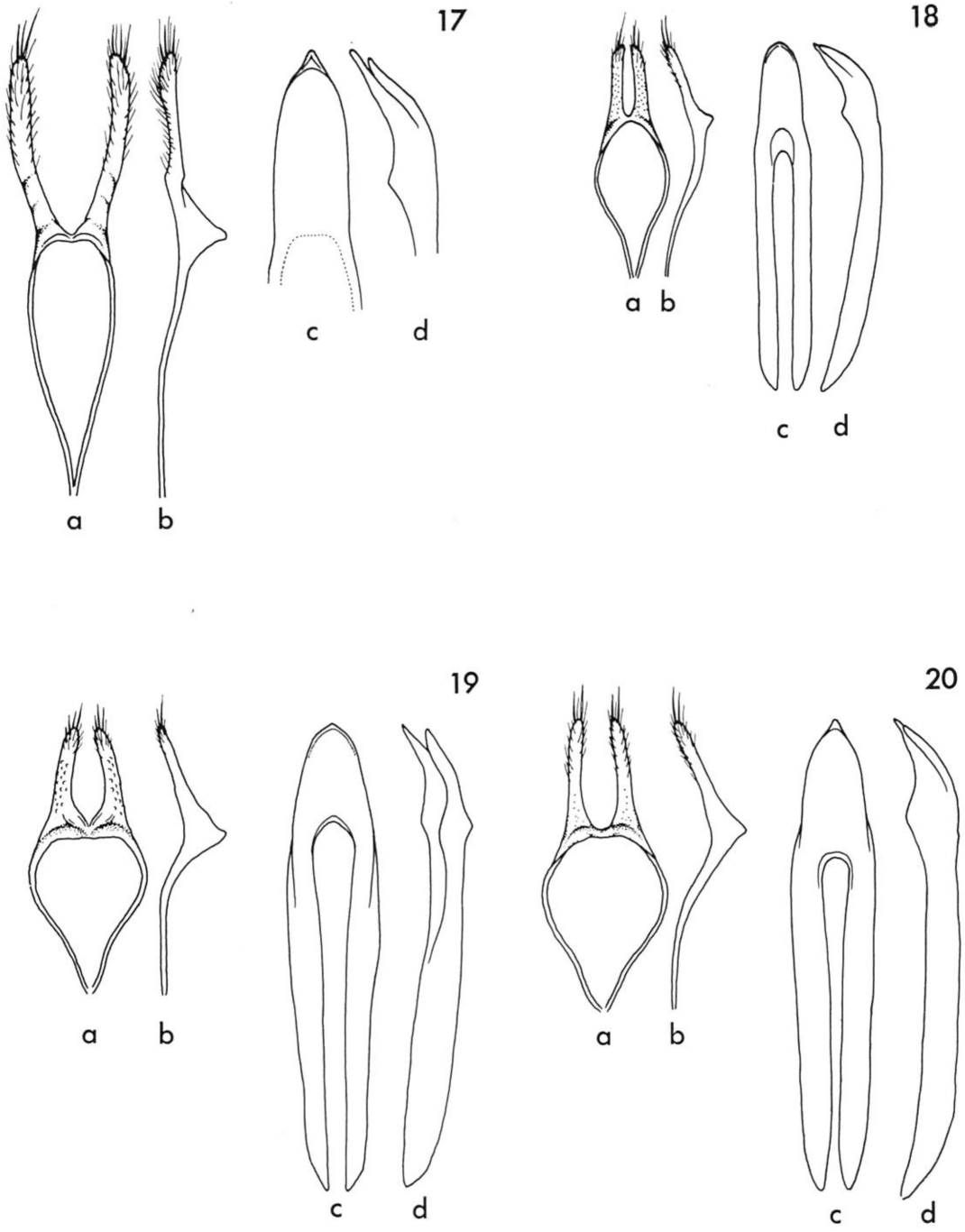
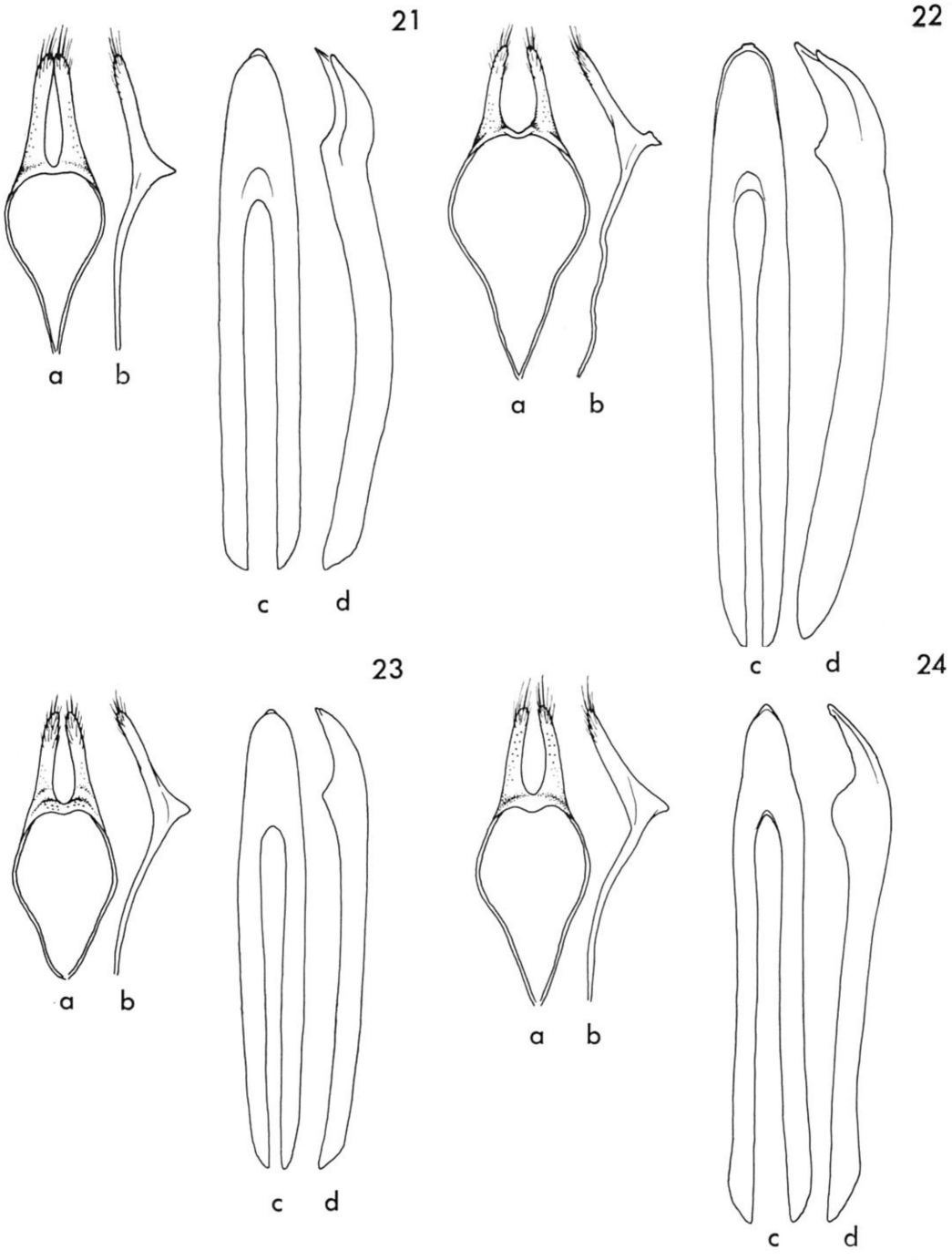


Fig. 11 *Megopis* (*Spinimegopis*) *formosana okinawana* subsp. nov. (male, holotype) **12**. ditto (female, paratype) **13**. *Megopis* (*Spinimegopis*) *formosana ishigakiana* (male) **14**. ditto (female) **15**. *Megopis* (*Spinimegopis*) *formosana hachijoana* subsp. nov. (male, holotype) **16**. ditto (female, paratype)



Figs. 17-24 Male genitalia of subgenus *Spinimegopis*; a. tegmen b. ditto (lateral view) c. penis d. ditto (lateral view) **17**. *Megopis* (*Spinimegopis*) *malasiaca* **18**. *M.* (*S.*) *formosana formosana*



19. *M.* (*S.*) *formosana nipponica* **20**. *M.* (*S.*) *formosana yakushimana* subsp. nov. **21**. *M.* (*S.*) *formosana kawazoei* **22**. *M.* (*S.*) *formosana okinawana* subsp. nov. **23**. *M.* (*S.*) *formosana ishigakiana* **24**. *M.* (*S.*) *formosana hachijoana* subsp. nov.

Type-series. Holotype: ♂, Mt. Yonahadake, Is. Okinawa, 28. VI. 1973, T. KOBAYASHI leg., paratype: 1♀, Hentona, Is. Okinawa, 13. VI. 1977, K. KAWADA leg.

***Megopis* (*Spinimegopis*) *formosana ishigakiana* YOSHINAGA et NAKAYAMA stat. nov.**

(Figs. 13, 14, 23)

Megopis (*Spinimegopis*) *ishigakiana* YOSHINAGA et MAKAYAMA (error to "NAKAYAMA"), 1972, Gensei, **23**: 19.

Megopis (*Spinimegopis*) *buckleyi ishigakiana*: KUSAMA, 1973, "The ecology and distribution list of Japanese Cerambycidae" (In "New guide of collecting insects III"), Tokyo, Uchida-Rōkakuho-Shinsha, p. 6.

Elytra yellowish brown. Ratio of elytral width and length about 1 : 2.46 in male, 1 : 2.98 in female, prothorax with three pairs of spines, elytra roundly and somewhat suddenly narrowed to apices. In male, fore tibiae very broad and more densely pubescent than any other known subspecies.

Length (excluding mandibles): male, 26.5～34.0 mm, female, 30.5～37.5 mm

Width: male, 7.5～10.5 mm, female, 9.5～12.0 mm

Distribution: Is. Ishigakijima, Is. Iriomotejima (Yaeyama Islands, Okinawa Pref.)

Materials examined: Is. Ishigakijima: 2♀♀, Mt. Bannadake, 10. VI. 1976, N. MORISHIMA leg.; 1♂, Mt. Bannadake, 2. VI. 1976, N. MORISHIMA leg.; 1♂, Mt. Bannadake, 7. VI. 1976, N. OGURA leg.; 1♂, Mt. Bannadake, 31. V. 1973, N. KASHIWAI leg.; 1♂, Mt. Bannadake, 11. VI. 1973, T. MIZUNUMA leg.; 1♂, Mt. Bannadake, 23. V. 1974, M. TAKAKUWA leg.; 1♂, Mt. Bannadake, 15. VI. 1972, T. KOBAYASHI leg.; 1♀, Mt. Bannadake, 14. VI. 1969, Y. KUSUI leg.; 2♀♀, Mt. Bannadake, 27～28. V. 1973, K. SUGINO leg.; 2♂♂, Mt. Omotodake, 11. VI. 1974, T. SEINO leg.; Is. Iriomotejima: 1♂, Shirahama, 4. V. 1975, R. YANO leg.; 1♀, Funaura, 2. VII. 1978, A. MIYATA leg.

***Megopis* (*Spinimegopis*) *formosana lanhsuensis* HAYASHI stat. nov.**

Megopis (*Spinimegopis*) *lanhsuensis* HAYASHI, 1974, Bull. Osaka Jonan Women's Jr. Coll., **9**: 2-3.

Elytra yellowish brown. Ratio of elytral width and length about 1 : 2.40 in male (female unknown), prothorax rectangulate at apical corner and sharply so at basal corner, and laterally shortly tuberculate just behind middle.

This subspecies is most closely allied to *ishigakiana* but differs from the latter in having the different development of prothoracic tubercles and discal unevenness.

Length (excluding mandibles): male, 30.0 mm

Width: male, 9.0 mm

Distribution: Lanyū Island (South East Coast of Taiwan)

No material examined.

***Megopis* (*Spinimegopis*) *formosana hachijoana* subsp. nov.** (Figs. 15, 16, 24)

Elytra yellowish brown. Prothorax blackish brown with two pairs of spines and a pair of developed tubercles, ratio of elytral width and length about 1 : 2.57 in male, 1 : 2.92 in female, elytra roundly and somewhat suddenly narrowed to apices.

This new subspecies is closely allied to *ishigakiana* and *nipponica*, and it can be situated taxinomically between the two subspecies in its characters of elytral color, punctuation and prothoracic spines. It differs from *ishigakiana* in rather dull lateral spines of prothorax, slenderer legs (especially on tibiae), and more yellowish elytra. And also differs from *nipponica* in roundly and somewhat suddenly narrowed elytral apices with duller angles, sharper spines and more developed tubercles of prothorax.

Length (excluding mandibles): male, 38.5 mm, female, 36.0～39.0 mm

Width: male, 10.5 mm, female, 10.5～11.5 mm

Distribution: Is. Hachijōjima (Izu Islands, Tokyo Pref.)

Type-series. Holotype: ♂, Sueyoshi, 16. Ⅶ. 1977, H. FUJITA leg., paratypes: same locality as the holotype. 1♀, 17. Ⅶ. 1977, H. FUJITA leg.; 1♀, 22. Ⅶ. 1977, C. YOKOTA leg.

Key to the Subspecies of *Megopis* (*Spinimegopis*) *formosana*

1. Elytra smoothly and gradually narrowed apically 2
1′. Elytra roundly and somewhat suddenly narrowed apically 3
2. Elytra slenderer and yellowish brown; legs longer and slenderer ..... *nipponica*
2′. Elytra broader and yellowish to reddish brown; legs shorter and stouter ..... *yakushimana* subsp. nov.
3. Elytra reddish brown 4
3′. Elytra yellowish brown 5
4. Body slenderer and smaller ..... *kawazoei*
4′. Body broader and larger ..... *okinawana* subsp. nov.
5. Prothorax yellowish brown 6
5′. Prothorax blackish brown ..... *hachijoana* subsp. nov.
6. Ratio of elytral width and length about 1 : 2.8 in male (1 : 3.6 in female); fore tibiae slenderer in male ..... *formosana*
6′. Ratio of elytral width and length about 1 : 2.4 in male (1 : 3.0 in female); fore tibiae stouter in male 7
7. Prothorax strongly irregularly uneven ..... *lanhsuensis*
7′. Prothorax weakly irregularly uneven ..... *ishigakiana*

2. *Allotraeus* (*Nysina*) *insularis* (MITONO)

***Allotraeus* (*Nysina*) *insularis amamiensis* HAYASHI status. nov.**

Allotraeus (*Nysina*) *amamiensis* HAYASHI: 1961, Ent. Rev. Jap., **13**(2): 42.

Body yellowish brown. Elytra about 2.7 times as long as body in male (1.38 times in female), each apex of 3th to 6th joints of antennae furnished with an acute spine.

A. (*N.*) *amamiensis* was described as an independent species by HAYASHI (1961), different from *insularis* by its yellow color of integument, pointed and obliquely truncate elytral apecies and antenal setae furnished on 3th to 7th joints. Through the examination of good series of materials, it becomes clear that these characters are so often variable that none are completely reliable independently to separate *amamiensis* from *insularis* though everyone is useful in some probability. At the same time *insularis yamagamii* subsp. nov., the description of which is given later, has appeared to have somewhat intermediate characters between *amamiensis* and *insularis*. So the author propose to give it a new status.

He also propose to correct *insularis* reported in Is. Okinawa to *amamiensis* after surveying many specimens from that locality because there is almost no difference between them and specimens of the original locality Is. Amami-ōshima.

Length: male, 11.5～15.0 mm, female, 11.5～14.0 mm

Width: male, 2.5～3.5 mm, female, 2.5～3.5 mm

Distribution: Is. Amami-ōshima, Is. Tokunoshima (The Amami Islands, Kagoshima Pref.), Is. Okinawa (The Okinawa Islands, Okinawa Pref.)

Materials examined: 1♂, Yuwan, 14. Ⅵ. 1975, M. FUKAMACHI leg.; 1♂, Yuwan, 20. Ⅵ. 1971, O. IMANISHI leg.; 10♂♂ 10♀♀, Mt. Akatsuchiyama, 22～29. Ⅵ. 1979, K. KAWADA leg.; 11♂♂ 13♀♀, Hatsuno, 10. Ⅵ. 1972, T. MATSUMOTO leg.—collected in Is. Amami-ōshima 5♂♂ 1♀, Oku, 17～18. Ⅴ. 1976, T. OGASAWARA leg.; 1♀, Yona, 17. Ⅵ. 1970, J. KOMIYA leg.; 1♂, Mt. Yonahadake, 24. Ⅴ. 1977, T. OGASAWARA leg.; 1♀, Mt. Yonahadake, 25. Ⅵ. 1974, T. SEINO leg.—collected in Is. Okinawa

***Allotraeus* (*Nysina*) *insularis yamagamii* subsp. nov.** (Figs. 32, 33)

Allotraeus (*Nysina*) sp., TAKAKUWA et FUJITA, 1976, Gekkan-Mushi, (58) 10-15, figs.

Body yellowish brown. Antennae about 1.75 times as long as body in male (1.36 times in female), each apex of 3th to 5th joints furnished with an acute spine. Elytra about 2.9 times as long as basal width, obliqully truncate apically.

This new subspecies is closely allied to nominate subspecies but differs from the latter in shiny surface of body and elongated elytra.

Length: male, 13.5～18.0 mm, female, 10.5～11.0 mm

Width: male, 3.0～4.0 mm, female, 3.0 mm

Distribution: Is. Hachijōjima (Izu Islands, Tokyo Pref.)

Type-series. Holotype: ♂, Sueyoshi, Is. Hachijōjima, 10. Ⅶ. 1975, H. FUJITA leg., paratypes: same locality as the holotype: 7♂♂ 2♀♀, 10～12. Ⅶ. 1975, H. FUJITA & M. TAKAKUWA leg.; 1♀, Nakanogō, 27. Ⅻ. 1972 (collected in a trunk of dead tree), emarged 4. Ⅶ. 1973, A. YAMAGAMI leg.

Key to the Japanese Species of Genus *Allotraeus* (*Nysina*)

1. Body reddish brown; elytra shorter and broader, sparsely punctured ····· *rufescens*
1′. Body yellowish brown ····· 2
2. Elytra shorter and broader ····· *insularis amamiensis*
2′. Elytra longer and slenderer ····· 3
3. Elytra rather densely punctured ····· *insularis insularis*
3′. Elytra rather sparsely punctured ····· *insularis yamagamii* subsp. nov.

3. *Anaglyptus arakawae* KANO

A. arakawae KANO has been known from Izu Islands, Is. Yakushima, Is. Tokunoshima and Is. Amami-ōshima besides its original locality Shikoku (Matsuyama city, Ehime Pref.). It has sometimes been pointed that there are some differences between *arakawae* from the Izu Islands and that from Is. Yakushima, no further investigation has been given to the concern. Comparing many specimens from every known localities to the type specimen, specimens from the Izu Islands quite agree with the type while constant differences are found between the type and specimens from Is. Yakushima or Is. Amami-ōshima.

Anaglyptus arakawae arakawae KANO stat. nov. (Fig. 25)

Anaglyptus arakawae KANO, 1933, Kontyū, **6**(5/6): 276.

Body blackish brown. Having white pubescence on body, elytra markings being rich in individual variation. Body rather smaller (Length: 7.0～9.0mm) than following new subspecies.

Length: male, 7.0～10.5 mm, female, 6.5～10.0 mm

Width: male, 2.5～3.0 mm, female, 2.5～3.5 mm

Distribution: Shikoku (Matsuyama City, Ehime Pref.), Izu Islands (Is. Mikurajima, Is. Hachijōjima)

Materials examined: 1♂, Matsuyama, Iyo Province, Ehime Pref., S. ARAKAWA leg. (The holotype); 1♀, Is. Mikurajima, 7. Ⅵ. 1972, K. SAKAI leg.; 5♂♂ 11♀♀, Is. Mikurajima, 28. Ⅵ.～2. Ⅶ. 1973, H. FUJITA leg.; 59 exs.; Is. Mikurajima, 8～10. Ⅵ. 1974, H. FUJITA leg.; 1♀, Mt. Miharayama, Is. Hachijōjima, 26. Ⅻ. 1972 (collected in a trunk of dead tree), emarged17. Ⅳ. 1973, A. YAMAGAMI leg.

***Anaglyptus arakawae kumagensis* subsp. nov.** (Figs. 26, 27)

Aglaophis colobotheoides: SEKI (nec BATES), Matsumushi (Hokkaido), **3**(2): 88.

Anaglyptus arakawae: HAYASHI (nec KANO), 1956, Ent. Rev. Jap. **7**(1): 15.

Body blackish brown. With white pubescence on body, sparse golden pubescence on prothorax, elytral markings not rich in individual variation. Body larger than in the other subspecies (Length: 9.0～13.0 mm).

This new subspecies is distinguished from the typical one by the following characters: 1) body larger and with white pubescence in stead of yellowish white, 2) prothorax rather sparsely clothed with golden pubescence.

Length: male, 9.0～11.5 mm, female, 11.0～13.0 mm

Width: male, 2.5～3.0 mm, female, 3.0～3.5 mm

Distribution: Is. Yakushima (Ōsumi Islands Kagoshima Pref.)

Type-series. Holotype: ♂, Shiratani, Is. Yakushima, 28. Ⅶ. 1974, H. FUJITA leg., paratypes: same locality as the holotype: 3♂♂ 2♀♀, 27～28. Ⅶ. 1974, H. FUJITA leg.; 4♂♂ 1♀, 23. Ⅶ. 1974, T. SEINO leg.; 3♂♂ 2♀♀, 19～21. Ⅶ. 1973, T. SHIMOMURA leg.; 1♂ 1♀, 19～21. Ⅶ. 1973, K. KAWADA leg.; 1♀, Kusugawa, 25. Ⅲ. 1971 (collected in a trunk of dead tree) emarged 20. Ⅴ. 1972, M. ITO leg.

***Anaglyptus arakawae amamiensis* subsp. nov.** (Figs. 28, 29)

Anaglyptus arakawae: HAYASHI (nec KANO), 1962. Ent. Rev. Jap. **14** (1): 13.

Body blackish brown. With white pubescence on body, white bands of elytra more developed and not rich in individual variation. Prothorax subglabrous, femora short and robust.

This new subspecies is very closely allied to *A. arakawae kumagensis* subsp. nov., but it is distinguished from the latter by more vivid markings of elytra, subglabrous prothorax and shorter and robuster femora.

Length: male, 9.0 mm, female, 8.5～9.5 mm

Width: male, 2.5～3.0 mm, female, 2.5～3.5 mm

Distribution: Is. Amami-ōshima, Is. Tokunoshima (Amami Islands, Kagoshima Pref.)

Type-series. Holotype: ♂, Marubatake, Is. Amami-ōshima 8. Ⅳ. 1973, T. SHIMOMURA leg., paratypes: 1♀, Marubatake, 10. Ⅳ. 1973, T. SHIMOMURA leg.; 1♀, Marubatake, 13. Ⅳ. 1974, H. FUJITA leg.; 1♀, Hatsuno, 13. Ⅳ. 1975, N. OGURA leg.; 1♀, Mikyo, Is. Tokunoshima, 4. Ⅳ. 1974, K. SUGINO leg.

4. *Mesosa* (*Perimesosa*) *hirsuta konishii* HAYASHI (Fig. 34)

Mesosa (*Perimesosa*) *hirsuta konishii* HAYASHI: 1965, Ent. Rev. Jap., **18**(1): 30.

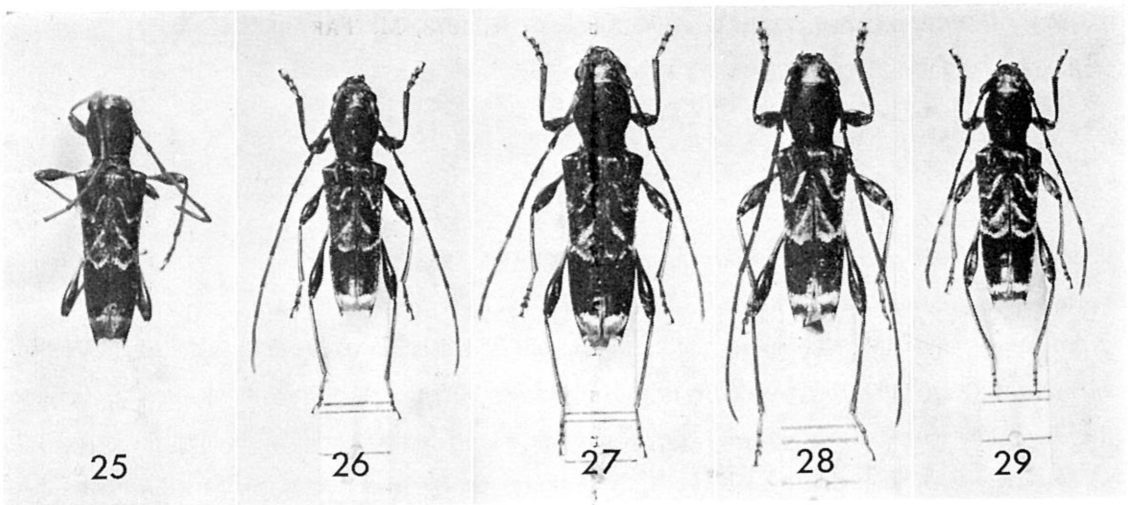


Fig. 25 *Anaglyptus arakawae arakawae* (male, holotype) **26**. *Anaglyptus arakawae kumagensis* subsp. nov. (male, holotype) **27**. ditto (female, paratype) **28**. *Anaglyptus arakawae amamiensis* subsp. nov. (male, holotype) **29**. ditto (female, paratype)

This is the first record from the Izu Islands. *M. (P.) hirsuta konishii* HAYASHI has been only reported from Is. Tsushima (Nagasaki Pref.) up to this time.

Materials examined: 1♀, Tairoike, Is. Miyakejima, 21. Ⅶ. 1974, M. TAKAKUWA leg.; 1♀, Tairoike, Is. Miyakejima, 25. Ⅶ. 1975, H. FUJITA leg.

5. *Graphidessa venata takakuwai* subsp. nov. (Figs. 36, 37)

Graphidessa venata: MIYAHARA (nec BATES), 1971, Gekkan-Mushi, (8): 34.

Body dark reddish brown and densely clothed with yellowish pubescence on head, prothorax, elytra and legs.

This new subspecies is easily distinguished from nominate subspecies by rather dense yellowish white pubescence on body (sparse white pubescence in nominative).

Length: male, 4.5～7.0 mm, female, 5.5～9.0 mm

Width: male, 1.5～2.5 mm, female, 1.5～2.5 mm

Distribution: Is. Kōzushima, Is. Miyakejima, Is. Mikurajima, Is. Hachijojima (Izu Islands, Tokyo Pref.)

Type-series. Holotype: ♂, Is. Mikurajima, 7. Ⅷ. 1973, M. TAKAKUWA leg., paratypes: 1♂ 1♀, Tairoike, Is. Mikurajima, 25. Ⅶ. 1975, H. FUJITA leg.; 9♂♂ 8♀♀, Tairoike, Is. Miyakejima, 8～9. Ⅴ. 1976, H. FUJITA leg.; 2♂♂ 1♀, Kawada, Is. Mikurajima, 28. Ⅵ～1. Ⅶ. 1973, H. FUJITA leg.; 5♂♂ 4♀♀, Sato, Is. Mikurajima, 8～9. Ⅶ. 1974, H. FUJITA leg.; 1♂, Mt. Kurosakitakaosan, Is. Mikurajima, 26. Ⅶ. 1975, H. FUJITA leg.; 1♂ 1♀, Sato, Is. Mikurajima, 30.

Ⅳ. 1974, T. ICHIKAWA leg.; 1♀, Is. Mikurajima, 7. Ⅶ. 1973, M. TAKAKUWA leg., 2♂♂ 2♀♀, Is. Kōzushima, 19～21. Ⅴ. 1973, M. TAKAKUWA leg.

6. *Acalolepta luxuriosa kuro* MAKIHARA (Figs. 30, 31)

Acalolepta luxuriosa kuro MAKIHARA: 1977, Esakia, (10). : 65.

Specimens in Is. Miyakejima, Is. Mikurajima, and Is. Hachijōjima should be included into subsp. *kuro* MAKIHARA (1977) (type locality: Is. Kuroshima, Mishima V., Kagoshima Pref.), because they are quite agree either with description or with materials from original locality.

Materials examined: 1♂ 1♀, Kawada, Is. Mikurajima, 1. Ⅷ. 1972, S. SAITO leg.; 3♀♀, Kawada, Is. Mikurajima, 27～28. Ⅶ. 1975, H. FUJITA leg.; 1♂ 1♀, Miike, Is. Mikurajima, 20～23. Ⅵ. 1975, T. KAMIO leg.; 1♀, Sueyoshi, Is. Hachijōjima, 10. Ⅶ. 1975, H. FUJITA leg.

7. *Penthides rufoflavus* (HAYASHI) (Fig. 35)

Hirakura rufoflava HAYASHI: 1957, Ent. Rev. Jap., **8**(2): 48.

Penthides rufoflavus: KOJIMA et HAYASHI, 1969, Insects' Life in Japan, **1**: 141.

This is the first records from Is. Hachijōjima. There are no difference between materials from this new locality and those from other localities in Japan (Is. Miyakejima, Is. Mikurajima and Is. Amami-ōshima).

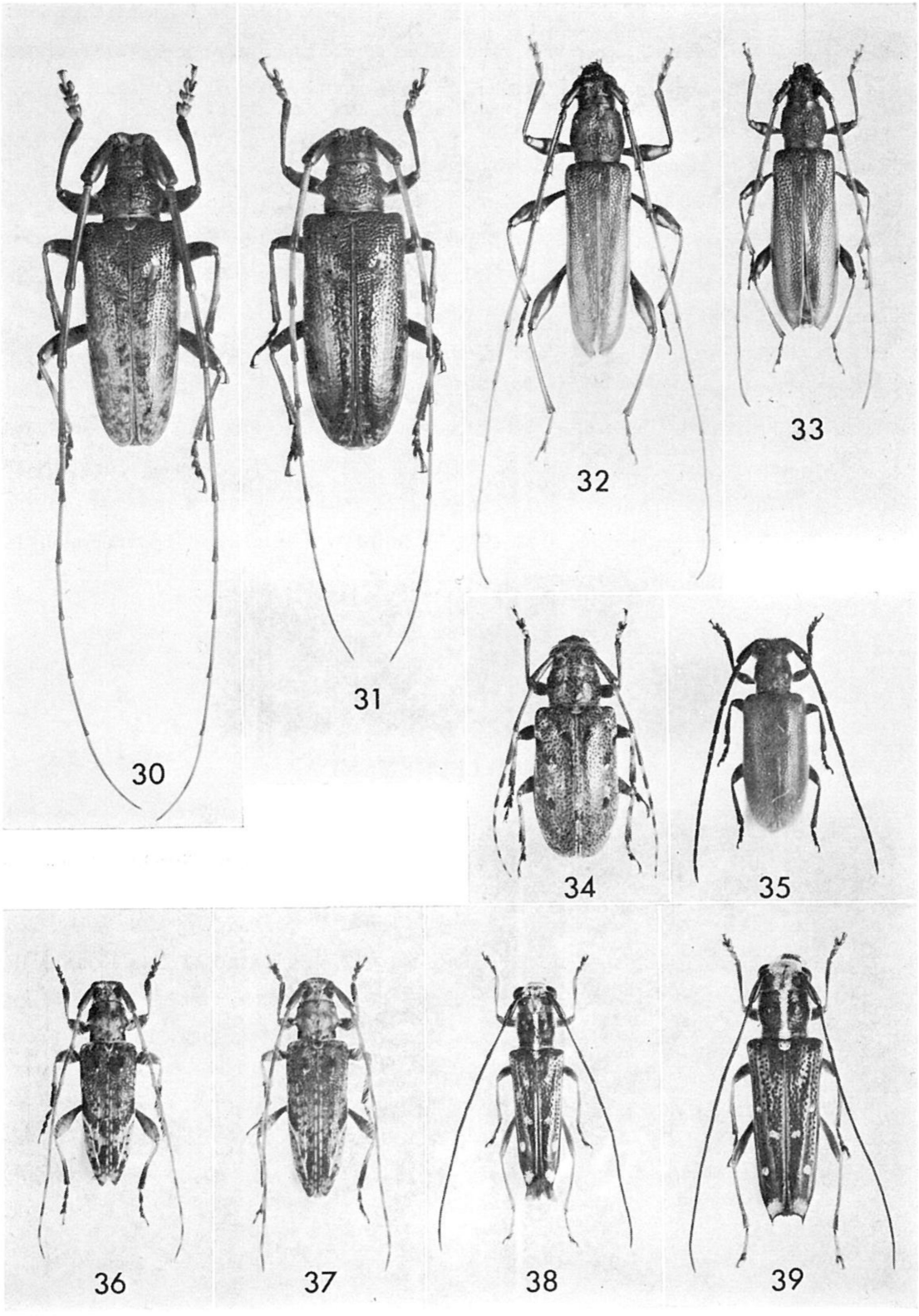
Materials examined: 1♂, Sueyoshi, Is. Hachijōjima, 16. Ⅶ. 1976, H. FUJITA leg.; 7 exs., Sueyoshi, Is. Hachijōjima, 6. Ⅷ. 1978, S. TSUYUKI leg.

8. *Glenea* (*Glenea*) *relicta izuinsulana* subsp. nov. (Figs. 38, 39)

Glenea (*Glenea*) *relicta*: UMEYA (nec PASCOE), 1961, Kontyū, **29**(4): 218.

Body blackish brown. Covered with white pubescence on abdomen, frons, median line of vertex and occiput. Three vivid lines of white pubescence on prothorax, two at each side and the last at center.

Fig. 30 *Acalolepta luxuriosa kuro* (male) **31**. ditto (female) **32**. *Allotraeus* (*Nysina*) *insularis yamagamii* subsp. nov. (male, holotype) **33**. ditto (female, paratype) **34**. *Mesosa hirsuta konishii* (female) **35**. *Penthides rufoflavus* (male) **36**. *Graphidessa venata takakuwai* subsp. nov. (male, holotype) **37**. ditto (female, paratype) **38**. *Glenea* (*Glenea*) *relicta izuinsulana* subsp. nov. (male, holotype) **39**. ditto (female, paratype)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This new subspecies is easily distinguished from typical subspecies by the following characters: 1) white pubescence on head denser and white lines of prothorax more vivid, 2) prothorax sparsely punctured, 3) body shinier and smaller, 4) elytra shorter and rounded in female.

Length: male, 6.5～9.0 mm, female, 7.5～11.5 mm

Width: male, 2.0～2.5 mm, female, 2.5～3.5 mm

Distribution: Is. Miyakejima, Is. Mikurajima, Is. Hachijōjima (Izu Islands, Tokyo Pref.)

Type-series. Holotype: 1♂, Tairoike, Is. Miyakejima, 30. Ⅶ. 1975, H. FUJITA leg., paratypes: 9♂♂, Tairoike, Is. Miyakejima, 30. Ⅶ. 1975, H. FUJITA leg.; 15♂♂ 5♀♀, Tairoike, Is. Miyakejima, 19～20. Ⅶ. 1977, H. FUJITA leg.; 8♂♂ 10♀♀, Kawada, Is. Mikurajima, 28. Ⅵ.～1. Ⅶ. 1973, H. FUJITA leg.; 1♂ 2♀♀, Sato, Is. Mikurajima, 9. Ⅵ. 1974, H. FUJITA leg.; 1♂ 2♀♀, Kawada, Is. Mikurajima, 26～27. Ⅶ. 1975, H. FUJITA leg.; 3♂♂ 1♀, Is. Mikurajima, 11～20. Ⅴ. 1967, Y. KUROSAWA leg.; 6♂♂ 3♀♀, Is. Mikurajima, 7～9. Ⅶ. 1973, M. TAKAKUWA leg.; 1♀, Is. Mikurajima, 7～11. Ⅶ. 1972, K. SAKAI leg., 2♂♂ 1♀, Noboriryū-pass, Is. Hachijōjima, 11. Ⅶ. 1975, H. FUJITA leg.; 1♂ 1♀, Sueyoshi, Is. Hachijōjima, 18. Ⅶ. 1977, H. FUJITA leg.; 1♂, Kashidate, Is. Hachijojima, 8. Ⅶ. 1975, T. ICHIKAWA leg.; 2♂♂ 1♀, Sueyoshi, Is. Hachijōjima, 11. Ⅶ. 1975, M. TAKAKUWA leg.

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All holotypes are deposited in the National Science Museum of Tokyo.

摘　　要

1971年から1980年における伊豆諸島のカミキリの研究を以下にまとめた．伊豆諸島から新しく新亜種を創設するにあたって，トゲウスバカミキリ亜属の１種，トゲヒゲトビイロカミキリ亜属の１種，そしてアラカワシロヘリトラカミキリの計３種については，他の関連地域における近縁種との比較整理を必要としたため，本文ではこれらについても合わせて報告している．

トゲウスバカミキリ亜属（*Spinimegopis*）の種は，従来，日本および台湾からは５種が知られていたが，これらをすべて同一種と考え，それぞれが別亜種関係にあるとした．これらのうちでもっとも古くに命名されたものは，台湾の *formosana*（松下，1933）であるが，この種は今まで北インドを原産地とする同亜属の *M.*（*S.*）*buckleyi* の１亜種として扱われていた．しかし，台湾産の *formosana* とこの *buckleyi* は，今回の研究の結果多くの特徴が異なるまったくの別種であると考えられたため，この *formosana* を *buckleyi* の１亜種から独立種へ昇格させ，他のこの種グループに属する *nipponica*, *kawazoei*, *ishigakiana*, *lanhsuensis* をそれぞれこの *formosana* の別亜種とした．さらに，屋久島，沖縄本島，八丈島から採集されていた本亜属の種についても，この *formosana* の別亜種の関係にあることを認め，それぞれ新亜種として記載した．この *formosana* グループは，現在のところ日本～台湾にかけてのみ分布する種グループで８亜種に区別されるが，各亜種内における個体変異の幅も大きい．以前は *nipponica* と，*kawazoei* などの *nipponica* 以南に分布するグループとは，形態的な差が大きいために別な種群と考えられていたが，今回記載された屋久島産の *yakushimana* subsp. nov. は，*nipponica* と *kawazoei* の中間的な形質を持ち，また *hachijoana* subsp. nov. は，*nipponica* と *ishigakiana* の中間的な形質を持っている．このように各産地の個体群が，その産地内では特定の形質を持っているものの，その特徴が他の産地の個体群と連続的に変化している点から，筆者はこれら８ケ所の産地の個体群を，それぞれ地理的隔離によって生じた別亜種の関係にあると考えた．分布域は下記のように整理される．

M.（*S.*）*formosana nipponica*
　分布：日本（四国，九州）
M.（*S.*）*formosana yakushimana* subsp. nov.
　分布：日本（屋久島）
M.（*S.*）*formosana kawazoei*
　分布：日本（奄美大島）
M.（*S.*）*formosana okinawana* subsp. nov.
　分布：日本（沖縄本島，渡嘉敷島）
M.（*S.*）*formosana ishigakiana*
　分布：日本（石垣島，西表島）
M.（*S.*）*formosana hachijoana* subsp. nov.
　分布：日本（八丈島）
M.（*S.*）*formosana formosana*
　分布：台湾（台湾本土）
M.（*S.*）*formosana lanhsuensis*
　分布：台湾（紅頭嶼）

トゲヒゲトビイロカミキリ亜属（*Nysina*）は，従来日本から，トゲヒゲトビイロ（*rufescens*），アマミトビイロ（*amamiensis*），オキナワトビイロ（*insularis*）の３種が知られていたが，沖縄本島産の *insularis* と呼ばれていた個体群は，アマミトビイロとまったく区別ができないため，*amamiensis* として扱った．また，*amamiensis* そのものも，先島諸島を原産地とする *insularis* に非常に近縁なものであり，*insularis* の別亜種が妥当と考えた．近年，八丈島からこの亜属の１種が発見されたが，これもこの *insularis* グループの別亜種と考えられるものなので，*insularis* の下に新亜種名を与えた．分布は次のとおり．

Allotraeus（*Nysina*）*insularis amamiensis*
　分布：奄美大島，徳之島，沖縄本島
Allotraeus（*Nysina*）*insularis insularis*
　分布：石垣島，西表島
Allotraeus（*Nysina*）*insularis yamagamii* subsp. nov.　分布：八丈島

アラカワシロヘリトラカミキリの伊豆諸島産の個体は，原産地の四国（愛媛県松山）の個体（holotype 標本１頭のみしか知られていない）とまったく同じ形質を持つ一方，屋久島，奄美大島で得られていた本種は，それぞれに異なった特徴を持っているので，これらをおのおのアラカワシロヘリトラの新亜種として記載した．分布は下記のとおり．

Anaglyptus arakawae arakawae
　分布：四国，御蔵島，八丈島
Anaglyptus arakawae kumagensis subsp. nov.
　分布：屋久島
Anaglyptus arakawae amamiensis subsp. nov.
　分布：奄美大島，徳之島

以上の他にこの報文では，伊豆諸島神津島，三宅島，御蔵島，八丈島のクモノスモンサビカミキリを新亜種

takakuwai subsp. nov. として記載し，三宅島，御蔵島，八丈島のシラホシカミキリを新亜種 *izuinsulana* subsp. nov. として記載した．また，キイロアラゲカミキリを八丈島から初記録として報告し，さらに三宅島，御蔵島，八丈島から記録されていたセンノキカミキリを鹿児島県三島村黒島から記載された ssp. *kuro* として扱い，三宅島から記録されていたカタジロゴマカミキリを ssp. *konishii* として扱い報告した．

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