

Some New Forms of Elateridae
in Japan (XI)

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In this paper, I want to report on an examination about the geographical variation of two Japanese Elaterid groups.

The one, namely *Silesis musculus* and the resemblers which are distributed widely and abundantly from Hokkaidô including Iss. Reibun-tô and Rishiri-tô to the Loochoos, in the main characteristics of body generally has only some close and delicate differentiae mutually within each population at adjacent regions. Though, according to my present investigation they may be arranged in some groups by the combination of a few external structures and peculiarities of reproductive organs in both sexes as showing below.

And in the other, however all the samples from Japan and the contiguous area have not made a scrutiny into an exact comparative inquiry, I hope in this occasion to add some notes on *Hatermelater bicarinatus* which is mostly captured by light-trap and universally found abundantly in islands.

Now, as the result of this study, I describe and report newly a genus, a species, 5 subspecies and some notes as continuing under.

Subfamily Ampedinae Fleutiaux, 1928

Hatermelater bicarinatus insulanus Kishii, new subspecies

Hatermelater bicarinatus yaku Kishii, new subspecies

Hatermelater bicarinatus heianus Kishii, new subspecies

Subfamily Adrastinae Fleutiaux, 1940

Silesis musculus Candèze, 1873, note on a possibility to divide specimens from Japan proper into 2 subspecies.

Silesis musculus tsushimensis Kishii, new subspecies

Silesis yaku Kishii, new species

Silesis scabripennis Lewis, 1894, note on new distributing record and features.

Okinawana Kishii, new genus

Okinawana hatayamai amami Kishii, new subspecies

Before proceeding further, I wish to acknowledge my hearty thanks to Dr. K. Baba in Niigata, Mr. H. Kadowaki in Shimane, Mr. J. Kitamura in Kyôto, Mr. K. Masaki in Kyôto, Mr. T. Shibata in Ôsaka, Mr. K. Shirahata in Yamagata, Prof. T. Shirouzu of Kyûshû University, Mr. T. Shôji in Ôsaka, Mr. Y. Takakura in Tagawa, Mr. O. Tamura in Ôsaka, Mr. K. Tsukamoto in Kyôto and the members of the Biological Club of Héian High School (in alph. ord.), for their courteous helps given during the process of my researching

study in offering the valuable materials of the snapping-beetles used in this report.

In conclusion, all the specimens containing the types of new forms are preserved in my collection, with some exceptions having a plain depositing place in the following description.

***Hatermelater bicarinatus insulanus* subsp. nov.**

Futo-chairo-kometsuki (Figs. 103~105, 110, 112, 117 & 118)

Ectamenogonus? *bicarinatus* : Kishii (*non* Candèze, 1873), 1961, Bull. Héian H. S., 5 : 41 & 42 (Is. Tsushima & Is. Oki-no-shima).

According to my latest researching, the materials from Is. Oki-no-shima in Kôchi Prefecture and Is. Tsushima in Nagasaki Prefecture of this species : *Elater bicarinatus* Candèze, 1873 (Figs. 101, 102, 111 & 113) —, are a different subspecies as described beneath.

1. Body large, broad, robust, subopaque. Male 9.0~11.5×2.5~3.2 mm., female 10.0~13.5×2.8~4.0 mm. (Nominate subspecies from Japan proper : male 6.8~10.5×1.6~2.6 mm., female 7.5~12.0×2.0~3.4 mm.).
2. More or less dark, generally blackish chestnut entirely.
3. Antennal 2nd joints weakly longer than width as compared with other subspecies.
4. Eyes not so large, vertex broad, distance between eyes to each eye diameter in upper view a little less than 3 times in male, or more than in female.
5. Head punctures dense, very irregular in density, generally with few small single punctures among many large ocellate ones. (in subsp. *bicarinatus* small punctures not so few).
6. Pronotum well convex above, as wide as length in median measurement or scarcely broader, especially distinct in female.
7. Pronotal punctures relatively dense as compared with subsp. *bicarinatus*, but not so in subsp. *shibatai*.
8. Scutellum parallel-sided, not expanded outwards before apex, which is rounded, not bluntly pointed.
9. Paramere apex broadly pointed outwards conspicuously.
10. Basal plate of male genitalia relatively small and not so broad compared with subsp. *bicarinatus*.

Described from a male holo-, a female allotopo-, and 33 male and 34 female isotypes, Is. Oki-no-shima in Kôchi Prefecture, July 24 to August 8, 1960, T. Kishii leg. ; 5 male and 11 female paratypes, Is. Tsushima in Nagasaki Prefecture (Hitakatsu, Izuhara, Kamoize, Mt. Mitake, Nita valley, Sasuna, Sumo & Uchiyama), July 23 to August 13, 1959, T. Kishii leg.

The samples from Is. Yakushima (subsp. *yaku*, described as follows) similar to this new subspecies in the large body and colouration, though the elongate pronotum and male genitalia correspond with the nominal subspecies.

***Hatermelater bicarinatus yaku* subsp. nov.**

Yaku-chairo-kometsuki (Figs. 108, 109 & 120)

Ectamenogonus? *bicarinatus* : Nakane et Kishii (*non* Candèze, 1873), 1958, Sci. Rep. Saikyô Univ. (Nat. Sci. Liv. Sci.), II(5) : 38 (Is. Yakushima).

In the result of making a comparative study among samples from many districts, *bicarinatus* from Is. Yakushima is generally conformable to the true *bicarinatus* in Japan proper in head punctures and pronotal outline, closely resembling to subsp. *insulanus* in the body measurement and colouration, and is not easy to divide severally from subsp. *shibatai* in scutellar shape at apex and elytral interstitial rugosity. Moreover, the general form of paramere apex holds an intermediate type of *bicarinatus* and *shibatai* (Figs. 114~116). Although, they have also some peculiar characteristics as showing below, and accordingly I come to this conclusion that the specimens from Is. Yakushima are endemic and surely a new subspecies.

1. Male 11.0~12.0×3.4 mm., female 11.5~14.0×3.6~4.2 mm.
2. Eyes large, vertex narrow, distance between eyes to each eye diametre in upper view twice or a little more in male, or feebly less than 3 times in female.
3. Scutellum weakly convex medio-longitudinally, bluntly pointed at apex.
4. Paramere apex triangularly pointed outwards, not broad.

Described from a male holotype, Kuromi in Is. Yakushima, August 4, 1972, O. Tamura leg. ; a female allotype, Kosugidani in Is. Yakushima, July 25, 1966, Y. Hama leg. ; a female paratype, Ambou in Is. Yakushima, July 24, 1950, T. Shirouzu leg. (in coll. Kyûshû Univ.) ; 2 female paratypes, Issô valley & Kusukawa valley in Is. Yakushima, August 1 to 3, 1957, K. Tsukamoto leg. ; a female paratype, Ambou in Is. Yakushima, August 4, 1957, T. Shôji leg. ; a male paratype, ditto, August 5, 1957, T. Kishii leg. ; a male paratype, Miyanoura in Is. Yakushima, July 8, 1961, K. Uéda leg. ; a male paratype, Kosugidani in Is. Yakushima, August 1, 1968, H. Nara leg.

Further, only one male example (Fig. 108) from Is. Tane-ga-shima (Anjyô, August 7, 1965, H. Konishi leg.) is here, having similar structures to subsp. *yaku*. It may well determine so, however refrain for the present by reason the sample is too scant.

***Hatermelater bicarinatus heianus* subsp. nov.**

Erabu-chairo-kometsuki (Figs. 106, 107 & 119)

Ectamenogonus? *bicarinatus* : Kishii (*non* Candèze, 1873), 1964, Bull. Héian H. S., 8 : 19 (Is. Kuchi-no-erabu-jima).

The samples from Is. Kuchi-no-erabu-jima as well as from Is. Yakushima also have some intermediate characteristics compared with other subspecies. Perhaps, this is too an indigenous subspecies to the island, and the different points are given as under.

1. General outline similar to subsp. *shibatai*, but a little broader, male larger than female : male 9.2~10.5×2.4~3.4 mm., female 8.0~8.2×2.0~2.2 mm.
2. Colouration paler than subsp. *bicarinatus* generally.

3. Eyes not so large, distance between eyes to each eye diametre in upper view a little more than twice in male, or ca. 2.5 times in female.
4. Pronotal punctures the sparsest among all the subspecies.
5. Scutellum similar to subsp. *yaku* wholly.
6. Elytral interstitial rugosity almost alike to subsp. *shibatai*.
7. Paramere taking near the situation of subsp. *insulanus* in the form of blunt outer projection.

Described from a male holo-, a female allotope-, 2 male iso-, and a female isotype, Is. Oki-no-erabu-jima in Kagoshima Prefecture, July 29 to August 13, 1963, T. Kishii leg.

Note on *Silesis musculus* Candèze

(Figs. 201~210, 301~310, 401~406, 409 & 410)

Silesis musculus Candèze, 1873, Mém. Soc. Roy. Sc. Liège, (2) V : 31 (Japon).

Silesis crocatus Candèze, 1893, Elat. nouv., V : 68 (Yezo).

Silesis musculus var. *flavipennis* Lewis, 1894, Ann. Mag. Nat. Hist., (6) XIII : 315 (Naka-sendô).

Silesis harmandi Fleutiaux, 1900, Bull. Mus. Hist. Nat. Paris : 358 (Japon).

Silesis musculus var. *flavicollis* Fleutiaux, 1902, Bull. Mus. Hist. Nat. Paris, VIII : 23 (Yéso).

In this common *Silesis*-beetle distributing widely and abundantly from Hokkaidô to Kyûshû and the appendant islands, according to the latest researching by many samples, I believe firmly, they may be certainly divided 2 types in some structures and the habitats. The one has generally definitely coloured body (in most specimens entirely black except reddish antennae and legs, with rarely brownish hind angles of prothorax and elytral bases, sometimes with bright reddish brown elytra : *flavipennis* Lewis, or in few cases pronotum and elytra bright reddish brown : *crocatus* Candèze and *flavicollis* Fleutiaux), less divergent pronotal hind apices, clearly broad handle-like base of each sclerotic plate (in bursa copulatrix of female internal reproductive organ : omitted in the following parts), and in most respects is found in the northern district of Japan and the mountainous region generally (Hokkaidô & Honshû). The other has always obscurely or ill-definedly coloured body (mostly brownish black with more or less reddish margins of pronotum, scutellum and elytral bases, sometimes wholly dark reddish brown), plainly divergent pronotal hind angles, narrow handle-like base of each sclerotic plate, and is mainly collected from the southern warm district (Shikoku & Kyûshû).

Maybe, I think, the latter is the true *musculus* in the well-coinciding with original description and type-locality. And, the former, I consider it so that is actually separating severally in subspecific category from the latter (maybe *crocatus* are valid as subspecific name).

Moreover, hitherto the specimens from Is. Tsushima and Is. Yakushima also have been determined to *musculus*, though they have mutually some important different points as follow as.

***Silesis musculus tsushimensis* subsp. nov.**

Tsushima-kuchibuto-kometsuki (Figs. 211, 212, 311 & 411)

Silesis musculus : Kishii (*non* Candèze, 1873), 1961, Bull. Héian H. S., 5 : 48, 2 figs. (Is. Tsushima).

It may be separable from the nominate subspecies by the combination of following structures.

1. Male 7.4×2.2 mm., female 8.5×2.4 mm., stout, broad, very convex longitudinally.
2. Concolorous to the west-southern type of *musculus*.
3. Antennal 2nd joint larger than 3rd in general outline ; 3rd smallest.
4. Pronotum subequal length to median width.
5. Pronotal disc well-definedly convex dome-likely before middle.
6. Pronotal lateral outline in upper view distinctly expanded outwards behind anterior angles, then slightly narrowing medianly, a little sinuous at base of each rear corner which is feebly divergent outwards.
7. Elytral interstitial surfaces obviously rugose by traverse creases.
8. Sclerotic plate rather narrow at handle-like base, broad at apical expansion.

Described from a male holotype, Tsutsu in Is. Tsushima, May 25, 1957, K. Baba leg. ; a female allotype, Sasu pass in Is. Tsushima, July 22 to 28, 1959, T. Kishii leg.

***Silesis yaku* sp. nov.**

Yaku-kuchibuto-kometsuki (Figs. 215, 216, 312, 313 & 412)

Silesis musculus : Kishii (*non* Candèze, 1873), 1959, Bull. Héian H. S., : 18 (Is. Yakushima).

Silesis musculus : Chûjô (*non* Candèze 1873), 1973, Sci. Rep. Kagawa Univ. (Educ.), II (218) : 28 (Is. Yakushima).

In the outline, this new *Silesis* is allied to *S. musculus*, though especially the straight pronotal lateral sides in upper view and longitudinally elevated scutellum of this new species are clear dividing points.

Outline : Male 7.0~8.2×2.0~2.4 mm., female 7.2~9.5×2.2~2.6 mm. Robust, elliptic, subcylindrical, parallel-sided, subshining. Black with more or less reddish brown mouth parts, antennae, pronotal anterior border narrowly, prothoracic hind angles broadly, scutellum mostly, elytral bases narrowly, under surface of prothorax and mesothorax mostly, rear border of metacoxal plates, lateral margins of abdominal segments and legs. A male and 4 female individuals are paler than typical specimens generally, viz. prothorax almost reddish brown exclusive of a little darker pronotal disc, and mostly more or less brownish metathorax and abdomen. Pubescence golden-yellow or subtawny, semirecumbent, dense, rather short.

Head : Broad, well convex, distinctly declivous forwards, medio-longitudinally impressed at vertex clearly. Punctures very dense, uneven in size and density conspicuously, subocellate ; interstices smooth. Frontal margin well-limitedly definite by medio-traverse

carination and oblique carina at upper edge of each antennal sulcus, having a distinct shallow concavation along these carinae. Antennal sulcus very large, broad, deep, with shagreen-like surface. Eyes large, spherical, but not prominent outwards from anterior angles of prothorax.

Antennae : Hardly equal to combined length of head and pronotum in male, or surely shorter in female. Basal joints longest, cylindrical, sinuous distinctly, about 4 times as long as wide ; 2nd triangular, 1.5 times longer than width, smallest ; 3rd similar to 2nd in shape, but a little longer ; 4th feebly longer than 3rd ; 4th to 10th ill-serrated, subequal length mutually, slightly diminishing in width ; 11th rhombic, weakly longer than 10th.

Pronotum : Subtrapezoidal, a little longer than width, well convex above ; lateral sides in upper view slightly narrowing ahead from hind angles, substraight behind anterior angles to rear ones, not divergent outwards. Hind angle short, slightly projecting backwards, with an acute unication extending near half length of pronotum or slightly over. Lateral edge in profile suddenly sinuate downwards before hind angle, then sinuously extending ahead, finally reaching at under side of eye. Punctures finer, even and sparser than on vertex, single, progressively sparser posteriorly ; interspaces smooth. Basal sulci distinct, thin, longitudinal, long, feebly carinate at outer edges.

Scutellum : Tongue-shaped, obliquely inclined ahead, plainly elevated medio-longitudinally, especially at anterior half visible, not depressed entirely ; fore margin slightly rounded ; posterior end bluntly pointed. Punctures very minute, sparse, single, even.

Elytra : More than 2.5 times as long as basal width, well convex longitudinally, subparallel-sided at basal one-fifth, then gently converging posteriorly ; apex minutely pointed. Striation distinct with deep elongate punctures, of which size is not so large. Interstitial surfaces perfectly flattened, having very fine dense punctures, not rugose transversely.

Under Parts : Propleura punctured distinctly with fine sparse punctures exclusive of elongate shagreen-like area at medio-outer side ; interstices smooth ; hind margin substraight. Prosternum broad, well convex medio-longitudinally ; sutures broad, double, having irregular rows by some minute punctures at basal half. Mucro elongate, outer end of apical notch bluntly tridentate ; concavation of notch small, but not shallow ; apex elongate ; having a pair of short longitudinal carinae obscurely before procoxae. Mesosternal cavity elongate, with many minute teeth at outer edge ; hind end rounded. End of mesosternum truncate between mesocoxal cavities, which are rounded posteriorly without carination extending on metasternum. The 5th abdominal segment sharply pointed backwards medianly, not rounded.

Reproductive Organ : Male genitalia broad-type, especially apex of each paramere distinctly enlarging outwards. Penis similar to *musculus*. Sclerotic plate also *musculus*-type, though handle-like base conspicuously broad, small tubercles on apical expansion plainly scarce.

Described from a male holotype, Miyanouura in Is. Yakushima, July 16, 1968, T. Hata-yama leg. ; a female allotype, Kosugidani in Is. Yakushima, July 9, 1963, H. Konishi leg. ; a male paratype, ditto, July 23, 1950, T. Shirouzu leg. (in coll. Kyûshû Univ.) ; a male paratype, Issô valley in Is. Yakushima, August 1, 1957, S. Inoué leg. ; a female paratype.

Kosugidani in Is. Yakushima, August 7, 1957, T. Shôji leg. ; 2 female paratypes, ditto, July 23, 1966, Y. Hama leg. ; a female paratype, Miyanoura in Is. Yakushima, July 16, 1968, H. Nomura leg. ; a female paratype, Kosugidani in Is. Yakushima, July 21, 1968, Y. Maéda leg. ; a male and a female paratype, Miyanoura in Is. Yakushima, July 27 to 29, 1974, K. Sugino leg. ; a female paratype, ditto, July 28, 1974, T. Mikage leg. Some paratypes are in coll. Mr. K. Masaki.

Note on *Silesis scabripennis* Lewis

(Figs. 213, 214, 314, 315, 407 & 408)

Silesis scabripennis Lewis, 1894, Ann. Mag. Nat. Hist., (6) XIII : 315 (Yuyama).

Silesis scabripennis : Miwa, 1934, Fauna Elat. Japan : 138 (Mt. Takao).

Lately, I received some interesting *Silesis* examples from Mt. Chôkai in Yamagata Prefecture through the courtesy of Mr. K. Shirahata and from Is. Oki in Shimane Prefecture collected by Mr. H. Kadowaki. These *Silesis*, as a result of my researching, undoubtedly belong to Lewis' species showing above.

It is somewhat similar to the narrow brownish black sample of *Silesis musculus*, although the general characteristics are perfectly agreeable with the original description, and they may be severally divided by the following points of this rare species.

1. Male 6.5~7.0×1.8 mm., female 9.0×2.0 mm.
2. Clearly elliptic, distinctly narrower than *musculus* in male, subcylindrical in female.
3. More shining on head and pronotal disc than *musculus*, elytra subopaque.
4. Wholly dark chestnut brown to black with paler antennae, pronotal anterior margin, scutellar posterior half and legs in male. Elytra more or less dark reddish brown in female. Although usually darker and more dusky than the reddish brown examples of *musculus*.
5. Pubescence tawny, not greyish yellow.
6. Vertex punctures surely uneven in size and density, plainly sparse behind summit.
7. Antennal 2nd joint voluminous, cylindrical, clearly larger than 3rd. In *musculus* both of them subequal.
8. Pronotal punctures simple, distinctly finer, sparser and evener than those of *musculus*, in special the size very small and the interstices among punctures very broader (ca. twice or more) than diametre. In *musculus* large-sized, somewhat subocellate, obviously dense, interstices among ones subequal or a little wider than diametre.
9. Scutellar hind apex completely rounded, not bluntly pointed as *musculus*.
10. Elytral interstitial surfaces clearly rugose by traverse creases, though in *musculus* sometimes very rugose.
11. Mesosternal cavity between mesocoxae straight at lateral sides, not expanded underwards roundly (in *musculus* clearly rounded).
12. Metasternal punctures plainly sparser and finer than those of *musculus*.
13. Penis clearly expanded outwards beyond middle (in *musculus* not expanded generally).

14. Sclerotic plates with even large-sized tubercles on apical expansion, in *musculus* generally uneven in size and density.

Examined specimens : a male and a female, Mt. Chōkai in Yamagata Prefecture, August 7, 1960, K. Shirahata leg. ; 2 females, Mt. Daimanji in Is. Oki of Shimane Prefecture, August 4, 1974, H. Kadowaki leg.

Mr. K. Matsuda (1963), Dr. H. Ohira (1964) and Mr. H. Matsunami et al. (1974) reported this species under the genus *Glyphonyx* from Kyūshū district. Still, I believe Lewis' example from Yuyama in Kyūshū is *Silesis*-species by means of the easiness to classify both genera.

***Okinawana* gen. nov.** (Subfamily Adrastinae)

It may separate from the resembling genera by the combination of continuous structures.

Genotype : *Silesis hatayamai* Kishii, 1975, Bull. Héian H. S., 19 : 6 & 7, 4 figs, (Is. Oki-nawa-hontō & Is. Toku-no-shima).

1. Frontal margin U-shaped, well-defined.
2. Antennal 2nd and 3rd joints small, both combined length subequal to 4th.
3. Pronotal carina at hind corner not extending over half of lateral length.
4. Propleura simply punctured all over, having no shagreen-like area anywhere.
5. Propleural hind margin rounded near apex.
6. Prosternal sutures broad, double, straight entirely.
7. Mucro strongly emarginate large at apex.
8. Outer end of apical notch of mucro simply pointed backwards, not tridentate as *Silesis*.
9. Metasternum strongly and deeply hollowed behind mesosternal cavity.
10. Metasternum with a clear short longitudinal carina behind each mesocoxal cavity.
11. The 5th abdominal segment rounded apically, not pointed as *Silesis*.
12. The 4th tarsal joint dilated.
13. Teeth of claws long and many : 5 to 7.
14. Penis narrowly sclerotic apically, sharply pointed.
15. Sclerotic plate having many long prickles as well as a bur of chestnut (in *Silesis* having always elongate handle-like base, see figs. 401~412, 506, 507, 513~516).

New generic name is based on "*Okinawa*" meaning Loochoo Archipelago in Japanese, and is feminine.

***Okinawana hatayamai amami* subsp. nov.**

Amami-tsuya-kuchibuto-kometsuki (Figs. 121, 507 & 512)

In the general outline and colouration this new subspecific *Okinawana*-species is closely allied to the small sample of *Silesis shirozui*, although in the generic structures both may be easily divided mutually. More, it is distinguishable from the nominate subspecies : *Silesis hatayamai* Kishii, 1975 —, by the following points.

1. Male 7.2×1.8 mm., slender, elliptic, parallel-sided, subcylindrical.
2. Chestnut brown to black with pale antennae, pronotal margins, scutellum, elytral bases and suture, under parts and legs.
3. Prosternal sutures glabrous with few punctures at each base (only 2 in holotype, in nominal subspecies generally having a row of many punctures).
4. Metasternal carina behind each mesocoxal cavity plainly short.
5. Penis sharply pointed apically.

Described from a male holotype, Hatsuno in Is. Amami-Ōshima, June 27, 1973, T. Kita leg.

In the original description of *hatayamai*, I described a female paratype from Is. Tokuno-shima (erroneously recorded as male,) but it may be this new subspecies or other subspecies. The accurate judgment, I want to make public after the examination by many samples from these islands.

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Resumé

我が国の自然が、亜寒帯から亜熱帯にわたり長くのび、地形は極めて複雑で、且つ多くの附属島嶼をかかえ、又大きな寒暖両海流に洗われ、更に大海洋と大陸にはさまれるという立地条件は、他にその例を見ないとも云えよう。その為棲息する生物に長い時代にわたって極めて多様、且つ大きな影響が与えられてきたであろう事は、今更論をまたぬものである。これらの自然環境の複雑さのため、同一群に属しながら極めて古いタイプのものから、最近になって分化しつつあるものが共存しているのも、或は当然と考えられるが、これは叩頭虫科甲虫でも同様のようである。

今回の研究で取り上げた2つのグループ、*Silesis* 属と *Haternelater* 属はその後者、つまり多分に近代になってから分化しつつあるもののようにみられる。最近の本科甲虫類の研究が、極めて詳細な点まで充分に論ぜられるようになったため、従来差異に気付かぬまま同物視されてきたものでも、精査検討の結果、かなりの重要な相異点が見出され、その分類位置の決定が正しく再検討されつつあるが、上記両属においても、筆者の今回の研究では、そのような問題点が多々発見されたので、これ迄に判明した分をまとめ発表するものである。

まず *Haternelater bicarinatus* では、雄外生殖器の形状に地域の変異がかなり判然と発見され、平行して外部一般形態にも若干の相異点があるため、あらためて3亜種を新設した。而し、まだトカラ列島、沖縄本島以南あたりのものを充分検討する時間がなかったが、矢張り従来の知見と異なる点が見出されているので、これらの決定は次の機会にまちたい。

又、*Silesis* 属では、本邦に最も普通に産する種類で、*S. musculus* と称されているものの真の個体群は四国・九州本土に分布するものに限定すべきもののように、本州以北のものは個体群として異なる形質を備えているように見做される。と同時に対馬・屋久島等のものは更に判然りと別の種個体群と見られ、これらを独立せしめる事にしたものである。ただ本州のものすべてが果して真の *musculus* にすべて入らぬかどうかは、更に多くの標本を検査する必要があるので、この決定は今回は見送る事にした。又従来正体不明とも云い得た *Silesis scabripennis* と信じ得る標本を入手したので、この特長等も併記した。

更に、前回¹⁾ *Silesis* 属として報じた新種 *S. hatayamai* は今回の邦産 *Silesis* 属研究の結果、かなり異質なものであり、特に雌内生殖器官の構造ではそれが特に判然りと認められたので、今回新属 *Okinawana* として創設することにした。同時に奄美大島産の唯一頭のこの属の標本が、*hatayamai* の別亜種と認定された。

猶、末尾ではあるが、今回の研究に当り用いられた極めて多くの貴重な標本を、快く提供された多くの同好諸氏には、筆者の深い謝意を表するものである。

(1976年9月2日提出)

註1. Kishii, T., 1975 : Bull. Héian H. S., 19 : 6 & 7, 4 figs.

Plate I

Figs. 101~109 & 121 : Total figure.

Figs. 110~112 : Total figure of male genitalia, preparation mounted into Berlese's medium.

Figs. 113~120 : Apex of paramere, ditto.

Hatermelater bicarinatus bicarinatus Candèze, 1873

Fig. 101. Male, Daigakuji in Kyôto, August 14, 1973, 8.8 mm.

Fig. 102. Female, ditto, August 23, 1973, 11.4 mm.

Fig. 111. Is. Kammuri-jima in Kyôto, August 9, 1951.

Fig. 113. Ditto.

Hatermelater bicarinatus insulanus Kishii, *subsp. nov.*

Fig. 103. Holotype, male, Is. Oki-no-shima in Kôchi, July to August, 1960, 10.6 mm.

Fig. 104. Paratype, male, Sasuna in Is. Tsushima, August 1 to 7, 1959, 9.6 mm.

Fig. 105. Paratype, female, ditto, 14.0 mm.

Fig. 110. Ditto.

Fig. 112. Isotype, Is. Oki-no-shima in Kôchi, July to August, 1960.

Fig. 117. Ditto.

Fig. 118. Paratype, Sasuna in Is. Tsushima, August 1 to 7, 1959.

Hatermelater bicarinatus heianus Kishii, *subsp. nov.*

Fig. 106. Holotype, male, Is. Kuchi-no-erabu-jima, July to August, 1963, 9.6 mm.

Fig. 107. Allotopotype, female, ditto, 8.5 mm.

Fig. 119. Isotype.

Hatermelater bicarinatus yaku Kishii, *subsp. nov.*

Fig. 108. Paratype, male, Anjô in Is. Tane-ga-shima, August 7, 1965, 11.2 mm.

Fig. 109. Allotype, female, Kosugi-dani in Is. Yakushima, July 25, 1966, 12.0 mm.

Fig. 120. Paratype, ditto, August 1, 1968.

Hatermelater bicarinatus shibatai Ohira, 1968

Fig. 114. Is. Naka-no-shima in Iss. Tokara, July 14, 1973.

Fig. 115. Hatsuno in Is. Amami-ohshima, July 4, 1963.

Fig. 116. Mikyô in Is. Toku-no-shima, July to August, 1965.

Okinawana hatayamai amami Kishii, *gen. et subsp. nov.*

Fig. 121. Holotype, male, Hatsuno in Is. Amami-ohshima, June 27, 1973, 7.4 mm.

Plate I

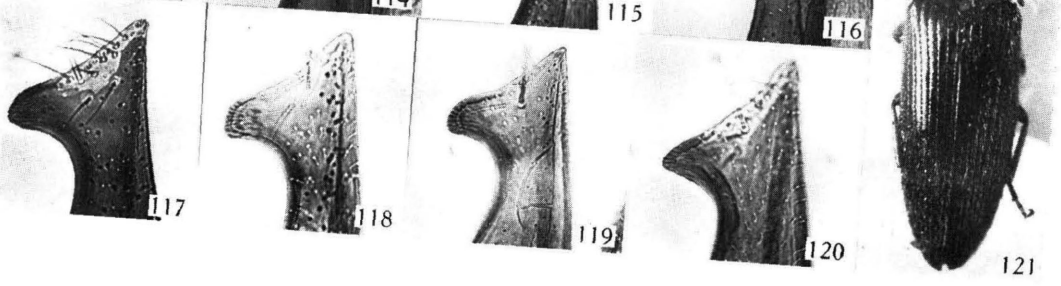
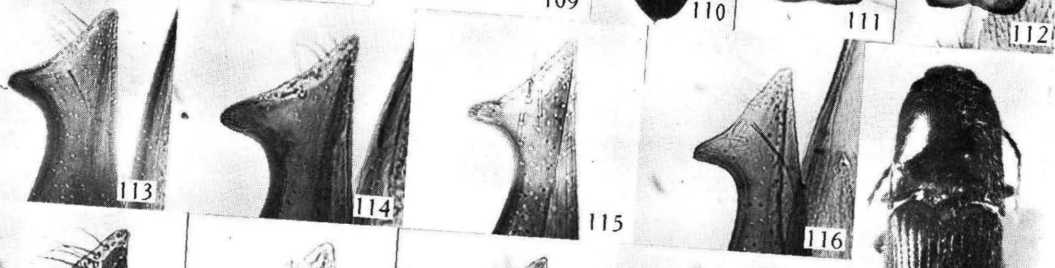
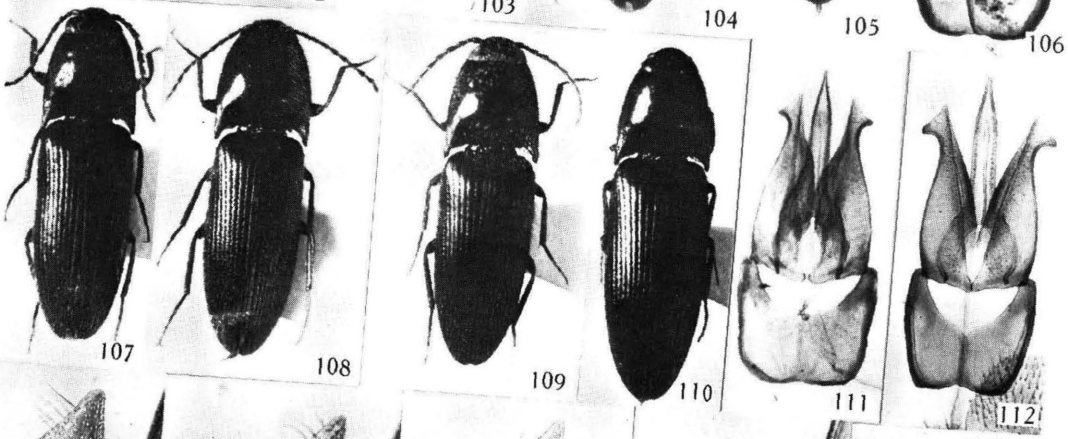
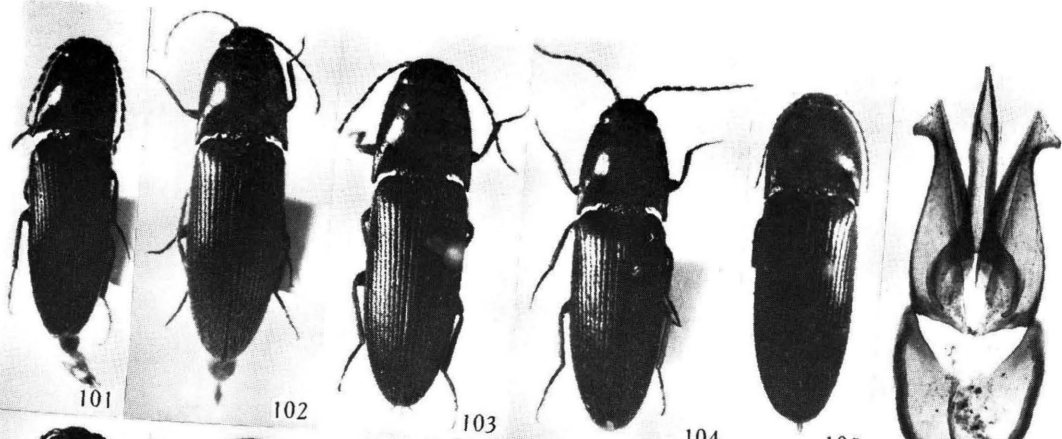


Plate II

Silesis musculus musculus Candèze, 1873

- Fig. 201.** Female, Is. Rishiri-tô in Hokkaidô, August 6, 1958, 8.6 mm.
Fig. 202. Male, Nopporo in Hokkaidô, July 11, 1972, 7.6 mm.
Fig. 203. Male, Towada in Aomori, July 31, 1952, 7.2 mm.
Fig. 204. Male, Kurokawa in Niigata, July 24, 1956, 8.0 mm.
Fig. 205. Female, Nukumi pass in Gifu, August 11, 1956, 8.4 mm.
Fig. 206. Female, Mt. Ontake in Nagano, July 25, 1973, 8.6 mm.
Fig. 207. Male, Mt. Ohdai-ga-hara in Nara, August 1, 1967, 7.8 mm
Fig. 208. Female, Kashiwagi in Nara, July 20, 1953, 9.0 mm.
Fig. 209. Male, Mt. Hiko-san in Fukuoka, July 15, 1958, 8.2 mm.
Fig. 210. Female, ditto, 8.6 mm.

Silesis musculus tsushimensis Kishii, *subsp. nov.*

- Fig. 211. Holotype,** male, Tsutsu in Is. Tsushima, May 25, 1957, 8.0 mm.
Fig. 212. Allotype, female, Sasu pass in Is. Tsushima, July 22 to 28, 1959,
8.6 mm.

Silesis scabripennis Lewis, 1894

- Fig. 213.** Male, Mt. Chôkai in Yamagata, August 7, 1960, 7.5 mm.
Fig. 214. Female, Mt. Daimanji-san in Is. Dôgo, Shimane, August 4, 1974,
8.6 mm.

Silesis yaku Kishii, *sp. nov.*

- Fig. 215. Holotype,** male, Miyanoura in Is. Yakushima, July 16, 1968,
8.6 mm.
Fig. 216. Allotype, female, Kosugidani in Is. Yakushima, July 9, 1963,
9.2 mm.

Plate II

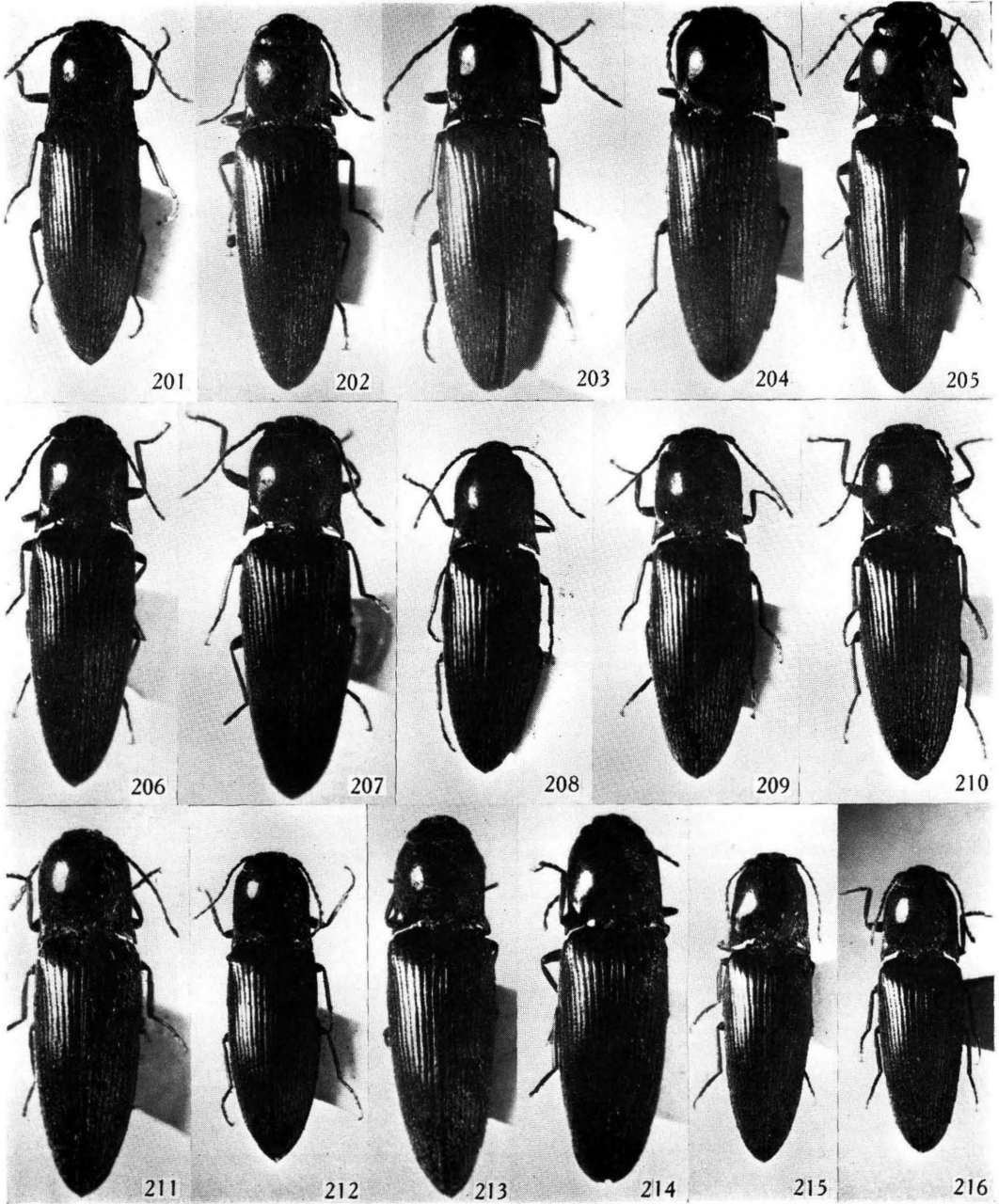


Plate III

Figs. 301, 302, 304~308, 310, 311, 313 & 315 : Apex of male genitalia, preparation mounted into Berlese's medium.

Figs. 303, 309, 312 & 314 : Total figure of male genitalia, ditto.

Silesis musculus musculus Candèze, 1873

Fig. 301. Is. Rishiri-tô in Hokkaidô, August 6, 1958.

Fig. 302. Towada in Aomori, July 30, 1952.

Fig. 303. Maruike in Nagano, July 25, 1953.

Fig. 304. Kamikôchi in Nagano, July 24, 1951.

Fig. 305. Sanjiro in Nagano, July 9, 1973.

Fig. 306. Hanase valley in Kyôto, July 2, 1961.

Fig. 307. Mt. Ohdai-ga-hara in Nara, August 1, 1967.

Fig. 308. Mt. Kaji-ga-mori in Kôchi, July 22, 1959.

Fig. 309. Mt. Kujyû in Ôita, July 22, 1933.

Fig. 310. Ditto.

Silesis musculus tsushimensis Kishii, *subsp. nov.*

Fig. 311. Holotype, Tsutsu in Is. Tsushima, May 25, 1957.

Silesis yaku Kishii, *sp. nov.*

Fig. 312. Holotype, Miyanoura in Is. Yakushima, July 16, 1968,

Fig. 313. Ditto.

Silesis scabripennis Lewis, 1894

Fig. 314. Mt. Chôkai in Yamagata, August 7, 1960.

Fig. 315. Ditto.

Plate III

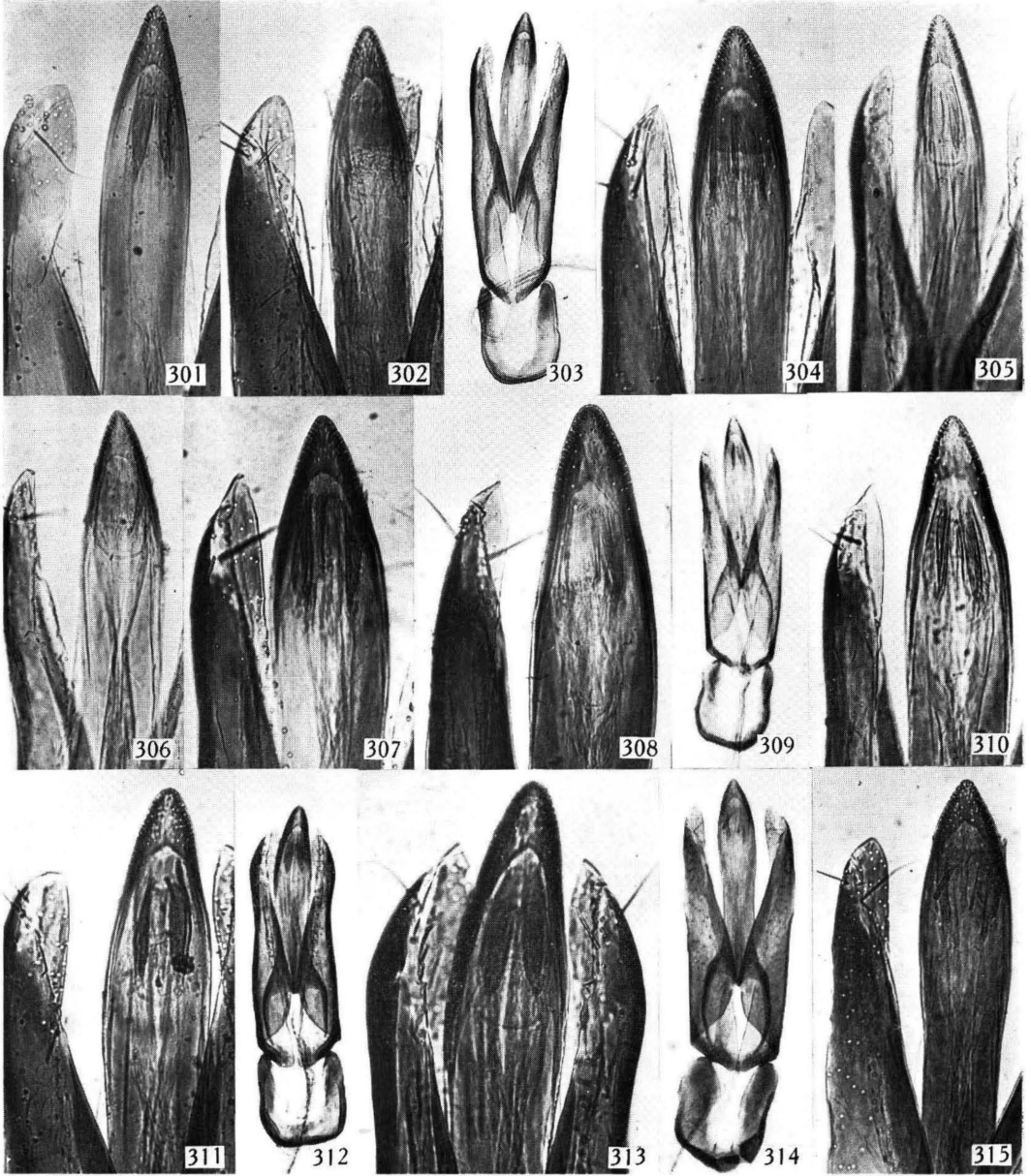


Plate IV

All the figures are "sclerotic plates" preparation mounted into Berlese's medium.

Silesis musculus musculus Candèze, 1873

- Fig. 401. Is. Rishiri-tô in Hokkaidô, July 30, 1958.
- Fig. 402. Mt. Daisetsu in Hokkaidô, July 18, 1952.
- Fig. 403. Towada in Aomori, July 30, 1952.
- Fig. 404. Sanjiro in Nagano, July 9, 1973.
- Fig. 405. Hanase valley in Kyôto, August 3, 1966.
- Fig. 406. Mt. Daisen in Tottori, July 16, 1950.
- Fig. 409. Mt. Tsurugi-san in Tokushima, July 30, 1973.
- Fig. 410. Mt. Hiko-san in Fukuoka, July 15, 1958.

Silesis scabripennis Lewis, 1894

- Fig. 407. Mt. Chôkai in Yamagata, August 7, 1960.
- Fig. 408. Mt. Daimanji-san in Is. Dôgo, Shimane, August 4, 1974.

Silesis musculus tsushimensis Kishii, *subsp. nov.*

- Fig. 411. Allotype, Sasu pass in Is. Tsushima, July 22 to 28, 1959.

Silesis yaku Kishii, *sp. nov.*

- Fig. 412. Allotype, Kosugidani in Is. Yakushima, July 9, 1963.

Plate IV

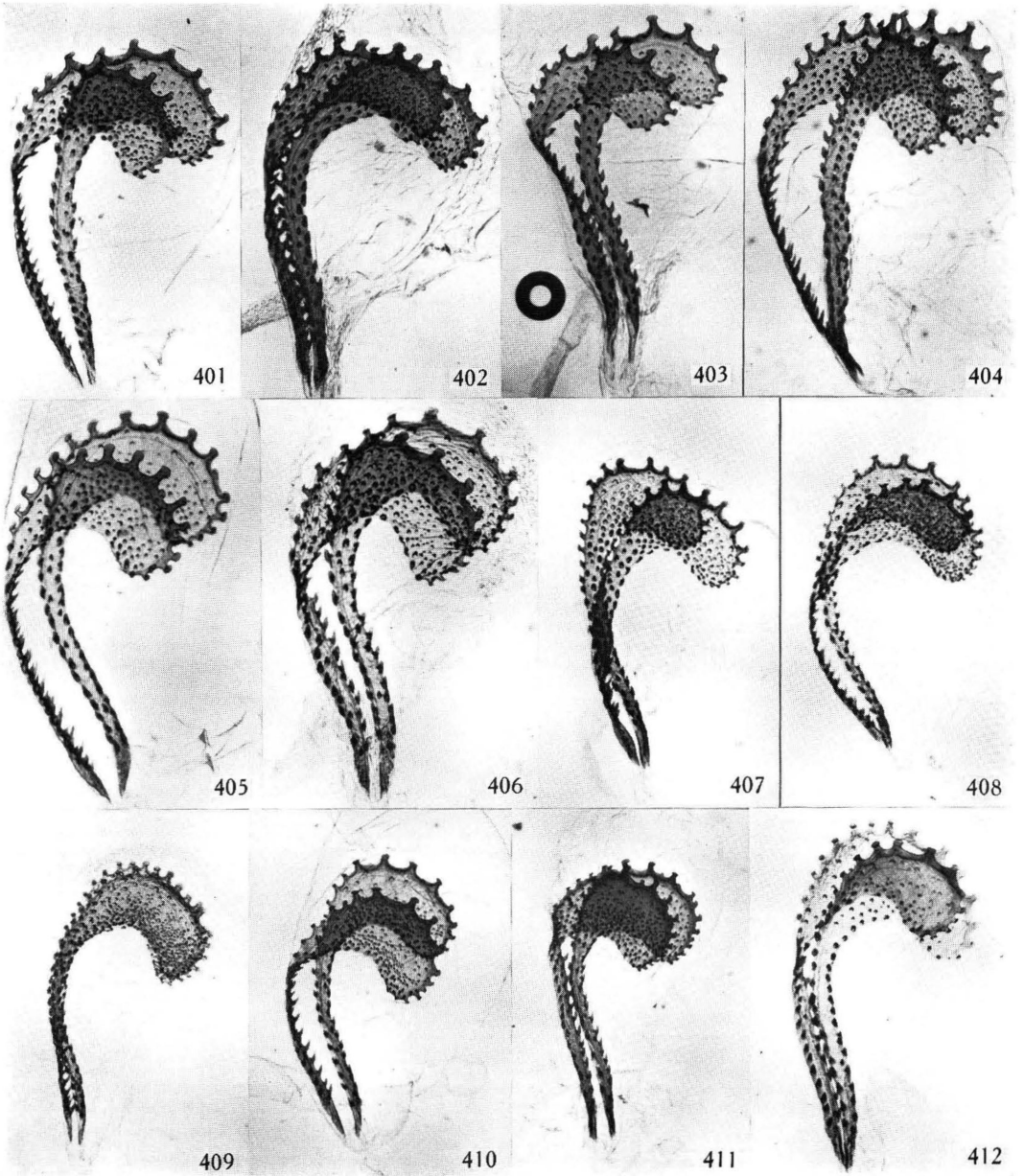


Plate V

Figs. 501~504 & 506 : Total figure of male genitalia, preparation mounted into Berlese's medium.

Figs. 505, 507, 513~516 : Sclerotic plates, ditto.

Figs. 508~512 : Apex of male genitalia, ditto.

Silesis shirozui Kishii, 1959

Fig. 501. **Isotype**, Shin-mura in Is. Amami-ohshima, July 22, 1955.

Fig. 508. Ditto.

Fig. 513. Shin-mura in Is. Amami-ohshime, July 7, 1961.

Silesis okinawensis seinoi Kishii, 1976

Fig. 502. **Isotype**, Is. Naka-no-shima in Iss. Tokara, July 14, 1973.

Fig. 515. **Paratype**, ditto, July 8, 1974.

Silesis okinawensis okinawensis Miwa, 1928

Fig. 503. Ôyama in Is. Oki-no-erabu-jima, June 30, 1974.

Fig. 509. Ditto.

Fig. 514. Shuri in Is. Okinawa-hontô, June 5, 1963.

Silesis sauteri Miwa, 1928

Fig. 504. Taihoku in Formosa, May 14, 1922.

Fig. 510. Ditto.

Fig. 516. Horisha in Formosa, May 5, 1922.

Okinawana hatayamai hatayamai Kishii, 1975, *gen. et comb. nov.*

Fig. 505. **Isotype**, Mt. Yonaha in Is. Okinawa-hontô, June 26, 1973.

Fig. 506. **Isotype**, ditto, June 29, 1973.

Fig. 511. Ditto.

Okinawana hatayamai amami Kishii, *subsp. nov.*

Fig. 507. (?) Mikyô in Is. Toku-no-shima, July to August, 1965.

Fig. 512. **Holotype**, Hatsuno in Is. Amami-ohshima, June 27, 1973.

Plate V

