

A Study on the genus *Actenicerus* Kiesenwetter
from Japan and its adjacent area (1)
"Some New Forms of Elateridae in Japan (XIII)"

By

Takashi KISHII

Reprinted from

BULLETIN OF THE HEIAN HIGH SCHOOL

KYOTO, JAPAN

No. 22, July, 1978

A study on the genus *Actenicerus* Kiesenwetter
from Japan and its adjacent area (1)
"Some New Forms of Elateridae in Japan (XIII)"

By
Takashi KISHII

(Biological Laboratory, Heian High School, Kyôto, Japan)

Synopsis Three new species of *Actenicerus* (Subfam. Ctenicerinae) are described with illustrations and photographs as follows: *tsugaru* from the North Japan, *koraiensis* from Korea and *octomaculatus* from the Central Japan. A new revising and redescription of *chokai* Kishii, 1966 with a correcting of the original description are given. An opinion on two local types of *pruinus* Motschulsky, 1860 is expressed. Some notes and a minute description of *aerosus* Lewis, 1879 are given including of some new synonyms.

The present work, in most respects, deals with describing the *Actenicerus* materials gathered from Japan and its adjacent area by many collectors. As the result, during the course of my recent study I could find some new species, and in the present part of this work as the following lines I describe and illustrate 3 new species in this lot, of which two were obtained in Japan and the rest in Korea respectively. Moreover the present paper contains to give an account of some notes concerning the known *Actenicerus* species from Japan.

I wish to express my cordial gratitude to the late Dr. K. Takeuchi in Kyôto City, Dr. K. Baba in Niigata Prefecture, Prof. T. Shirouzu of Kyûshû University and to Mr. K. Shirahata in Sakata City for their courteous helps given during the course of my study. More, I wish also to acknowledge my indebtedness to Messrs. H. Hiramatsu in Wakayama City, H. Ishida of Hyôgo Agricultural College, H. Kadowaki in Shimane Prefecture, K. Masaki in Kyôto City and K. Mizuno in Uji City for their kindness specially in placing the valuable collection at my disposal and in many ways.

***Actenicerus tsugaru* sp. nov.**

(Plate I, figs. 1~7)

Outline: Male 18.0×4.8mm. Robust, a little flattened above as well as below, sub-parallel-sided, more or less opaque all over. Wholly black with reddish brown legs. Pubescence long, dense, recumbent, dusky yellow, forming variable maculae on elytra together with dark brown ones. Type specimen lacking right antennal joints 3~11, left ones 8~11, fore legs, left median tarsus, 5th right mesotarsal segment, and 4th right metatarsal segment and upwards.

Head : Subquadrate, relative ratio of median length to width across eyes 10:16, feebly elevated transversely before eyes, slightly depressed medio-posteriorly. Crests before eyes well-developed, roundly angulated. Punctures very rugose, dense, irregular in size, partly conglutinated each other ; interstices among ones microscopically shagreened perfectly. Apical joint of each maxillary palpus isosceles triangular with rounded antero-external end.

Antennae : Not slender. Relative joint length 1~5 : 19, 7.5, 16, 14, 13.5 and width 8, 6, 7.5, 9, 9 ; basal joint elongate, robust, 2.4 times as long as wide, weakly rounded at inner frontal side ; 2nd obconic, a little longer than wide ; 3rd triangular, slightly slender compared with 4th, twice less than 2nd length and more than self width ; 4th to 7th gently becoming small in outline.

Pronotum : Widest before middle, narrowest at base of each hind angle ; relative ratio of median length to width (not including hind angles) 42 : 36 ; disc evenly convex above having a medio-longitudinal obscure foveolation at posterior half border only. Hind angles divergent outwards distinctly, uncarination conspicuous ; apices elongate, rather acute. Punctures dense, single, irregular in size and density, generally large at anterior border, progressively becoming smaller and denser laterally, decidedly diminishing in density towards medio-posterior margin, usually diffuser and minuter than vertex ones. Interstices among ones minutely shagreened, sometimes partly smooth.

Scutellum : Subvertical, elongate, relative ratio of median length to basal width 12:8.5, tongue-shaped, roundly expanded outwards at rear half, definitely elevated antero-medio-longitudinally. Punctures minute, dense, scabrous.

Elytra : Relative ratio of sutural length to basal width 69 : 28, parallel-sided beyond 2-3rds length, then substraightly converging towards apices. Striation more or less obliterated with fine sparse elongate punctures. Strial interstices rather scabrously punctured, a little convex. General surface subshagreened microscopically.

Other Structures : Propleuron flat ; punctures exceedingly dense, small, even in density, subocellate ; its interstitial space almost smooth. Prosternum broadly shining and impunctate medio-longitudinally between procoxae ; punctures generally sparse, large, gently becoming denser laterally, rather ocellate. Prosternal sutures single, straightened.

Mucro in profile straightly extending posteriorly at outer outline from base beyond middle, then curved inwards slightly and straightly to apex which is not acutely pointed ; each lateral side having a deep longitudinal sulcation at middle only. Mesosternal cavity moderate, not so strongly carinated at sides, parallel-sided, a little concave inwards medially. Metasternal punctures sparser than on propleural ones, single ; its interstices smooth ; medially having a longitudinal fine sulcate line. Genital organ as figured ; apical expansion of each paramere elongate, outer projection small.

Female unknown.

Described from a male holotype, Nogiwa Park in Aburakawa, Aomori City, Aomori Pref. May 20, 1943, T. Kishii leg.

It is similar to *Actenicerus orientalis* (Candèze, 1889) in some structures, though the former may be separated from the latter in having following characteristics : head punctures rugose and large, pronotal ones dense, propleural ones plainly dense and small,

latero-median sulcus of mucro short and not extending apically, pubescence dusky yellow, and male genitalia unlike severally. The last structure is also allied to that of *Actenicerus sjaelandicus* (Müller, 1764) from Europe, but the body outline is conspicuously dissimilar each other (see figs. 8~18). New name "tsugaru" is a common calling of the western provinces in Aomori Prefecture.

Actenicerus koraiensis sp. nov.

(Plate II, figs. 19~29)

Cteniocerus (Actenicerus) sjaelandicus : Heyden (*nec.* Müller, 1764), 1887, Hor. Soc. Ent. Ross., XXI : 256 (Korea), *syn. nov.*

Corymbites (Actenicerus) pruinus : Miwa (*nec.* Motschulsky, 1860), 1934, Fauna Elat. Jap. Emp. : 167, *syn. nov.*

Corymbites pruinus : Mochizuki (*nec.* Motschulsky, 1860), 1936, Trans. Nat. Hist. Soc. Corea, XXI : 37 (Mt. Shyôyôzan in Corea), *syn. nov.*

According to the literatures, Heyden (1887) reported an *Actenicerus*-species from Corea and Mochizuki (1936) also listed *pruinus* from Corea as seen above. These species, I am sure of, may be this new species described here. Generally, in the outline of the Eurasian *Actenicerus* species they are very clearly close each other, specially in the body coloration and elytral maculation. Although their characterized genital organ structures may be easily able to classify respectively.

Outline : Male 16.6×4.8 mm., female 16.2×5.0 mm. Stout distinctly, subcylindrical, subparallel-sided (male) or widest behind elytral middle, then slowly converging straightly ahead as well as back (female). Generally opaque all over. Wholly dusky brownish black, more or less dark at vertex, pronotal disc, scutellum, elytral suture and under surface. Pubescence long, dense, recumbent, reddish brown, forming many obscure maculae on elytra together with whitish ones, except of paratype specimen having no maculae.

Head : Wide, relative ratio of median length to width across eyes 29 : 19.5 (male) or 29 : 18 (female), flattened triangularly before vertex which is a little elevated. Crests before eyes clearly developed. Punctures rugose, dense anteriorly, rather sparse posteriorly, irregular in size ; its interstitial surface subshagreened. Apical joint of each maxillary palpus isosceles triangular with rounded external side.

Antennae : Stout, plainly shorter than combined length of head and prothorax in both sexes. Relative joint length 1~5 : 27, 10, 19, 18, 18 (male) or 27, 10, 19, 16, 15 (female), and width 9.5, 7.5, 11, 12, 12 (male) or 11, 8, 10, 11.5, 11.5 (female) ; basal joint elongate, robust, ca. 2.5 times as long as wide ; 2nd obconic, 1.1 times length as wide as (male) or 1.3 times (female) ; 3rd elongate, triangular, twice less than 2nd length, 1.5 times length as wide as (male) or 1.9 times (female) ; 4th to 10th gently decreasing in measurements ; 11th subrhombic.

Pronotum : Broad, a little longer than width, relative ratio of median length to width 47 : 44 (male) or 47 : 43 (female), simply convex with a fine vestige of medio-longitudinal furrow at rear border only, subparallel-sided beyond middle to base of each angle.

Hind corners slightly divergent outwards, extending elongately backwards with blunt

apices ; carination feeble. Punctures shallow, a little smaller and denser than vertex ones, single, progressively becoming minute and dense laterally ; margin microscopically subshagreened.

Scutellum : Feebly declivous ahead a little longer than width, relative ratio of median length to basal width 15.5 : 14, subflattened at posterior half, slightly convex anteriorly. Punctures dense, very minute, even.

Elytra : Rather broad, relative ratio of sutural length to basal width 66 : 28 (male) or 66 : 29 (female). Striation very fine, partly vanishing with elongate shallow punctures. Interstices almost flattened longitudinally with single dense and small punctures evenly ; ground surface subshagreened.

Other Structures : Propleura flat ; punctures subocellate, larger and denser than pronotal disc ones, irregular in density and size generally with subshagreened interstices. Prosternum shining and impunctate narrowly between procoxae and backwards ; punctures larger and sparser than propleural ones, ocellate ; sutures straight, single. Mucro in profile straightly extending rearwards from base beyond middle, then curved to mesosternal cavity substraightly ; apex of mucro subacutely pointed ; each lateral side having an elongate deep medio-horizontal sulcus extending near apex. Mesosternal cavity moderate, carinated at fore edge only, parallel-sided medially, weakly concave inwards behind middle. Metasternal punctures single, sparser and smaller definitely than propleural ones with subshagreened interstices. Genital organs as figured ; aedeagus with rather elongate expansion at apex of each paramere having a sharp projection which is pointed outwards ; apex of ovipositor broad ; V-shaped plate of bursa copulatrix with many minute tubercular processes only having no crimp irregularities ; spindle-formed plate with stout teeth irregularly.

Described from a male holotype, Sambô in Corea, June 8, 1936, K. Takeuchi leg. ; a female allotype, Suigen in Corea, May 15, 1931, K. Satô leg. ; a female paratype, ditto, May 15, 1935, K. Satô leg.

In the general outline this species is intimately similar to *Actenicerus sjaelandicus* from Europe and *A. pruinosus* from Japan, though their genital organ structures in both sexes are distinctly differentiated severally (see figs. 8~29).

New name "koraiensis" is based on an old name of Corea "Kôrai".

***Actenicerus chokai* (Kishii, 1966), stat. nov.**

(Plate II, figs. 30~37)

Malloea sjaelandica chokai Kishii, 1966, Bull. Heian H. S., 10 : 2, 2 figs. (Mt. Chôkai)

Actenicerus sjaelandicus chokai : Ohira, 1970, Kontyû to Shizen, 5 (9) : 20

According to my latest researching, this *Actenicerus* species described as a subspecies of the European species *sjaelandicus* by the author from Mt. Chôkai-zan in Yamagata Prefecture is an independent species indigenous to the North-eastern Provinces of Japan, and the detailed description is as given under.

Moreover, the specimen of a male paratopotype described originally as ab. form. *horioi* (Plate I, fig. 4 in the description) which has a black and large body, is revised here to

Actenicerus modestus as continuing below.

***Corymbites modestus* Lewis**, 1894, Ann. Mag. Nat. Hist., (6) XIII : 258 (Fukahori and Nikkô)

Actenicerus modestus : Kishii, 1955, AKITU, IV : 19 (Kibune)

Malloea sjaelandica chokai Kishii, ab. form. *horioi* Kishii, 1966, Bull. Heian H. S., 10 : 3, Plate I, fig. 4 (Mt. Chôkai), *syn. nov.*

Outline : Male 16.5~17.0×4.5 mm. Robust, voluminous but not so cylindrical, somewhat depressed above longitudinally near elytral base, parallel-sided, opaque generally with leaden lustre all over. Wholly black with brownish claws and knees (holotype), or plain reddish brown entirely except for dark head and pronotal disc (a male specimen from Niigata Prefecture). Pubescence greyish, not so long, dense, recumbent, forming obscure maculation on elytra together with dark brownish ones.

Head : Broad, relative ratio of median length to width across eyes 42 : 27, vertex widely depressed unevenly, feebly elevated near eyes only. Crests before eyes ill-developed, angular bluntly. Punctures large, subocellate, dense, irregular in size and density, partly conglutinated each other ; margin smooth, not so shagreened. Apical joint of each maxillary palpus triangular with substraight external side, which is shorter clearly than inner edge length.

Antennae : Stout, a little shorter than combined length of head and prothorax (inclusive of hind angle length). Relative joint length 1~5 : 20, 8, 17.5, 18.5, 17 and width 10, 8, 11.5, 12, 12 ; basal joint elongate, not so stout, ca. twice as long as wide ; 2nd obconic, smallest, length subequal to width ; 3rd elongate, triangular, 1.5 times as long as wide, feebly slender compared with 4th ; 4th to 10th gently becoming small ; 11th elongate, rhombic, relative ratio 13 : 4.5.

Pronotum : Parallel-sided medially, relative ratio of median length to width 42 : 38, evenly convex above with a shallow medio-longitudinal furrow at posterior 2-3rds. Hind angles divergent moderately outwards, elongate with short obsolescent unicarination ; apices rather acutely pointed. Punctures single, smaller and sparser than vertex ones, diffused medianly, then becoming very dense and minute laterally ; ground surface sub-smooth or partly subshagreened.

Scutellum : Subquadrate, a little longer than wide, relative ratio of median length to basal width 14.5 : 12, weakly declivous ahead. medio-longitudinally elevated, subparallel-sided with rounded hind apex. Punctures minute, sparse with plainly long dense pubescence all over (holotype) or laterally (a male from Niigata Prefecture).

Elytra : Relative ratio of sutural length to humeral width 66 : 27 (holotype) or 58 : 25 (a male from Niigata Prefecture), parallel-sided from base to 3-5ths length, then gently narrowing roundly to apices ended bluntly. Striation fine, partly obscure with elongate small punctures ; striae interstices flattened above with denser and smaller punctures than pronotal ones, sculptured partly by feeble creases or rather subsmooth.

Other Structures : Propleural punctures denser and minuter than pronotal ones, subocellate, partly confluent mutually. Prosternal punctures sparser and larger than propleural ones having smooth medio-longitudinal area between procoxae narrowly.

Mucro in profile thick, straightened beyond middle at under side, then slightly declivous inwards ; lateral sulcation shallow, extending near apex which is subacutely pointed. Mesosternal groove widest behind anterior end, then scarcely narrowing rearwards ; sides ill-carinated ; horizontal at anterior half, declivous downwards plainly at the rest half. Metasternal punctures single, exceedingly smaller and diffuser than prosternal ones. Aedeagus as figured.

Female unknown.

Specimens examined : Holotype, male, Mt. Chôkai-zan in Yamagata Pref., July 21, 1959, T. Horio leg. ; a male, Kurokawa in Niigata Pref., May 8, 1955, H. Koike leg.

The 2nd specimen from Niigata Prefecture is closely allied to *Actenicerus suzuki* (Miwa, 1928) in the body coloration, though pronotal punctures, mucro profile, male genitalia structures etc. are easily separated respectively (see Plate V, figs. 97~109).

Actenicerus pruinosus Motschulsky, 1860

(Plate III, figs. 38~61)

Actenicerus pruinosus Motschulsky, 1860, Etud. Ent., IX : 9 (Japan)

Corymbites pruinosus : Candèze, 1873, Mém. Soc. Sc. Liège, (2) V : 24 (Kiusiu)

Corymbites (Actenicerus) pruinosus : Schenkling, 1927, in Junk's Col. Cat. Elat., 88 : 368

Malloea pruinosus : Kishii et Ohira, 1956, AKITU, V : 73 (Niigata)

Among the materials of this common species from many localities in Japan, the typical specimen, which is conformable with the original description of Motschulsky and has an elaborate studying done by Dr. Ohira (1971), is always found from the Central and the North-eastern Honshû only in my collection. And, on the other hand, the samples from the South-western Provinces in Japan, as it is a small quantity, have some different points as follows. In some cases, I think, they may be divided in two subspecific groups.

Typical type

Broad, robust, cylindrical.
Pronotal lateral sides a little expanded before middle in male.
Pronotal length ca. 1.2 times as long as wide in male.
Pronotal punctures rather small, sparse and even.
Carination on pronotal hind angles ill-marked.
Elytral interstices transversely scabrous distinctly.
Latero-apical projection of each paramere elongate plainly.
Medio-longitudinal reticulate sculpture of spindle-formed plate of bursa copulatrix broad clearly.

South-western type

Narrow, not so robust, subcylindrical.
Pronotum subparallel-sided.
Pronotal length 1.3 times as long as wide or more in male.
Pronotal punctures comparatively large, dense and uneven.
Carination on pronotal hind angles rather well-marked.
Elytral interstices shagreened evenly, sometimes partly scabrous feebly.
Latero-apical projection of each paramere more or less short.
Medio-longitudinal reticulate sculpture of spindle-formed plate of bursa copulatrix narrow.

Specimens examined

Typical type : Aomori (an ex.), Tochigi (an ex.), Gumma (an ex.), Nagano (2 exs.), Shiga (5 exs.), Kyôto (many exs.), Nara (3 exs.), Wakayama (an ex.) and Hyôgo (22 exs.)

South-western type : Mt. Daisen in Tottori Pref., 2 males and a female ; Is. Oki in Shimane Pref., 4 males and 4 females ; Kôchi City, a male ; Hirao in Fukuoka Pref., 2 males and a female ; Shimousui in ditto, a male and a female ; Wakasugi in ditto, a male ; Tachibana in Saga Pref., a male ; Mt. Takachiho-no-mine in Miyazaki Pref., 2 males ; Sechibaru in Nagasaki Pref., a male.

***Actenicerus aerosus* (Lewis, 1879), comb. nov.**

(Plate IV, figs. 74~86, Plate V, fig. 88)

On the true shape and the accurate place in the classification of "aerosus", up to date, the various reporting and the discussion by many researchers have been done. However, according to my latest studying, this species is undoubtedly available and belongs to the genus *Actenicerus*, and is readjusted as seen under. More, the minute body character is also as given beneath continuously.

***Athous aerosus* Lewis**, 1879, Ent. Monthl. Mag., 16 : 157 (Kii)

Corymbites aerosus : Lewis, 1894, Ann. Mag. Nat. Hist. (6) XIII : 257 (Kii and Chiuzenji)

Corymbites (*Actenicerus*) *pruinus* Motschulsky, var. *minoensis* Miwa, 1934, Fauna Elat. Jap.

Emp. : 116, Pl. VII, f. 29 (Gifu), **syn. nov.**

***Corymbites modestus* Lewis**, 1894, Ann. Mag. Nat. Hist., (6) XIII : 258 (Fukahori and Nikkô)

Corymbites otsukae Miwa, 1928, Ins. Mats., II (3) : 142, Pl. V, fig. 19 (Kiushu), **syn. nov.**

Corymbites (*Actenicerus*) *modestus* : Miwa, 1934, Fauna Elat. Jap. Emp. : 117 (Chiuzenji, Kyoto and Wakayama)

Ctenicera pruinus Motschulsky, var. *minoensis* : Ohira, 1954, Trans. Chûbu Ins. Lov. Assoc., 2 : 6 (Kinkazan)

Actenicerus modestus : Kishii, 1955, AKITU, IV : 19 (Kibune)

Corymbites (*Actenicerus*) *pruinus* Motschulsky, var. *minoensis* : Kishii, 1955, AKITU, IV : 20

Malloea modesta : Kishii et Ohira, 1956, AKITU, V : 73 (Niigata)

Malloea sjaelandica chokai Kishii, ab. form. *horioi* Kishii, 1966, Bull. Heian H. S., 10 : 3, Pl. I, f. 4 (Mt. Chôkai)

Actenicerus aerosus : Baba et Ohira (*nec.* Lewis, 1879), 1973, Trans. Essa Ins. Lov. Assoc., 43 : 6 (Niigata) ; Ohira et Torigai, 1973, Gifu-ken Seibutsu-Kyôiku, 18 : 37 (Abô Pass and Ibuse-dake), **syn. nov.**

***Corymbites* (*Selatosomus*) *kurofunei* Miwa**, 1934, Fauna Elat. Jap. Emp. : 121, Pl. V, f. 21 (Shimoda)

Acteniceromorphus kurofunei : Kishii, 1955, AKITU, IV : 19 (Kibune)

Ctenicera (*Actenicerus*) *aerosa* Ishihara et alt. (*nec.* Lewis, 1879), 1953, Trans. Shikoku Ent. Soc. 3 : 74 (Omogo Val., Jôju, Mt. Ishizuchi and Mt. Marutaki), **syn. nov.**

Acteniceromorphus aerosus : Kishii et Ohira (*nec.* Lewis, 1879), 1956, AKITU, V : 73 (Niigata), **syn. nov.**

Outline : Male 9.5~12.6×2.8~3.0 mm., female 11.5~14.0×3.2~3.4 mm. Conspicuously

slender, elongate, somewhat closely similar to *Acteniceromorphus* species, weakly expanded outwards beyond elytral middle, more or less flattened above as well as below, subshining with clear cupreous lustre all over except for some materials with distinct metallic greenish tint. Wholly black with brownish tibiae and tarsi, and rarely with mostly reddish antennae and legs in female. Pubescence very long, dense, recumbent, whitish, forming few obsolescent elytral maculae together with a few brownish pubescence, frequently covered evenly with whitish ones only without any maculae in male.

Head : Broad, relative ratio of median length to width across eyes 17 : 24.5, almost flat with a shallow concavity behind vertex, feebly declivous ahead before across eyes.

Crests before eyes well-developed roundly. Punctures very large, dense, uneven in density and size, conglutinated each other ; margin smooth ; bottom shallow and broad with clear microscopical shagreened sculpture. Apical joint of each maxillary palpus elongate, axe-formed ; external side rounded, plainly shorter than internal side length.

Antennae : Slender, exceeding to pronotal hind angles by one apical joint or more (male), or clearly shorter than combined length of head and prothorax (female), namely hardly reaching to base of each angle. Relative joint length 1~5 : 21, 7, 17, 19, 19 (male) or 26, 12, 18.5, 19, 17 (female), and width 9, 7.5, 10, 12, 12 (male) or 11, 8.5, 10, 11.5, 12 (female) ; basal joint elongate, robust, cylindrical with rounded fore side ca. 2.3 times length as wide as ; 2nd smallest, obconic, length subequal to width ; 3rd triangular, distinctly smaller than 4th in general measurements, ca. 1.7 times length as wide as (male) or 1.6 times or less (female) ; 4th to 10th conspicuously diminishing in width and slightly in length ; 7th to 10th elongate bell-formed ; 11th elongate, rhombic, ca. 3.5 times length as wide as or more (male) or 2.3 times (female).

Pronotum : Elongate, relative ratio of median length to width 40 : 28~32 (male) or 40 : 33 (female), parallel-sided medially, slightly narrowing near fore angles, evenly convex longitudinally above having a clear broad shallow medio-longitudinal furrow from rear base to near anterior edge, though in a few specimens sometimes more or less obsolescent. Hind angles gently divergent outwards, elongate, well extending backwards with short uncarination which is not so distinct ; apex acutely pointed. Punctures very dense, a little smaller than vertex ones, uneven plainly in size, partly confluent each other, ocellate ; margin minutely shagreened as well as at bottom surface decidedly.

Scutellum : Elongate, subquadrate, relative ratio of median length to basal width 12 : 10, weakly declivous ahead, medio-longitudinally elevated slightly, parallel-sided with rear apex ended roundly as well as fore margin. Punctures very minute, sparse with microscopical shagreened sculpture all over, having long dense hairy pubescence.

Elytra : Relative ratio of sutural length to basal width 50 : 18.5 (male) or 50 : 20 (female) ; parallel-sided beyond 3-5ths length, thence gently converging substraightly to apices. Striation fine with minute elongate punctures. Strial interstices perfectly flattened above longitudinally having many scabrous irregular creases and minute sparse punctures.

Other Structures : Propleural punctures smaller and sparser than pronotal ones clearly, subocellate ; surface smooth. Prosternum narrowly shining and impunctate medio-longitudinally from anterior one-3rd to near apex of mucro ; punctures larger and denser than

propleural ones, ocellate. Prosternal sutures single, weakly sinuate. Mucro in profile elongate, rather thin, curved just between procoxae, then straightly extending near apex which is rather pointed acutely; each lateral side having an elongate medio-longitudinal narrow groove with well-carinated edges at basal 2-3rds length, not so deep. Mesosternal cavity elongate, parallel-sided, ill-carinated at sides, medially concave inwards. Metasternal surface very smooth, shining with minute and distinctly sparse punctures; medio-longitudinal line fine. Genital organs as figured; apical expansion of each paramere rounded, outer projection acute and triangularly pointed outwards; apices of ovipositor thick; spindle-formed plate of bursa copulatrix with few thorn-like projections irregularly; V-shaped plate of bursa copulatrix having many plain crimped irregularities.

Specimens examined: a male, Sugatani in Niigata Pref., May 8, 1954, H. Koike leg.; a male, Kajiyama Spa in Niigata Pref., June 3, 1955, Y. Maruyama leg.; a male, Mt. Amakazari in Niigata Pref., June 25, 1955, K. Baba leg.; a male, Yunoyama Spa, Mié Pref., June 7, 1978, Y. Kishii leg.; a male, Mt. Hira in Shiga Pref., May 27, 1956, K. Tsukamoto leg.; a male, ditto, July 15, 1957, ditto; 121 males and 26 females, Kitayama provinces (Sugi Pass, Hanase Valley, Kibune and Ohmi Valley) in Kyôto Pref., May to July, 1949 to 1975, S. Inoué, H. Ishida, K. Mizuno, K. Tsukamoto and T. Kishii leg.

It is unique in the small slender and flattened body, and generally has no elytral maculae, elongate antennae in the male, conglutinated pronotal punctures, a distinct broad medio-longitudinal furrow of the pronotal disc, flattened and creasy striae interstices of elytra etc.

In some appearances, this species is allied to the small individual of *Actenicerus yamashitai* Ohira (see figs. 62~73 & 87), though the obliterated or vanished elytral maculation and genital organ structures in both sexes are easily separated mutually. More, *Actenicerus modestus* is also related to this species, but the body coloration, the antennal length, pronotal punctures, genitalia etc. are decidedly divided respectively.

***Actenicerus octomaculatus* sp. nov.**

(Plate V, figs. 89~96)

Outline: Male 13.2×3.6 mm. Rather slender, flattened above as well as beneath, elongate, subparallel-sided, subshining with cupreous tint all over. Wholly black with brownish femoral ends, tibiae and tarsi mostly. Pubescence long, dense, suberect, covered all over with yellowish white ones mostly together with brownish ones partly, forming 4 conspicuous pairs of elytral circular maculae by brownish pubescence.

Head: Broad, relative ratio of median length to width across eyes 24:34, hardly convex medially with a pair of feeble foveolations transversely before vertex, then slightly declivous ahead. Crests before eyes elevated roundly, well-carinated. Punctures obviously large, irregularly conglutinated each other, dense but a little diffused ahead, ocellate; margin minutely subshagreened; bottom shallow, scabrous. Apical joint of each maxillary palpus subisocleus triangular with rounded external side.

Antennae: Not so slender, a little longer than combined length of head and prothorax (including hind angles); relative joint length 1~5:21. 8, 15, 18, 18 and width 10, 7, 10,

11, 12 ; basal joint stout, subcylindrical with rounded fore side, ca. 2.1 times length as wide as ; 2nd obconic, smallest, ca. 1.1 times length as wide as ; 3rd elongate triangular, ca. 1.9 times length as 2nd as, 1.5 times as long as wide, a little smaller than 4th ; 4th to 10th clearly diminishing in width progressively ; 6th to 10th elongate bell-formed ; 11th elongate, rhombic, ca. 3.6 times length as wide as.

Pronotum : A little elongate, relative ratio of median length to breadth 50 : 44.5, simply convex above having a broad medio-longitudinal furrow from base to anterior one-third, feebly widened outwards beyond middle, then gently roundly narrowing forwards as well as rearwards to base of hind angle, which is not so elongate, plainly divergent outwards. Carination of each rear corner short, not so obscure. Apex of each hind angle rather acutely pointed posteriorly. Punctures denser and smaller than vertex ones, uneven clearly, subocellate ; margin subsmooth or partly microscopically subshagreened.

Scutellum : Subquadrate, slightly longer than width, relative ratio of median length to basal width 14.5 : 10.5, feebly declivous ahead, having a weak medio-longitudinal elevation, parallel-sided with substraight fore side and rounded rear end. Punctures sparse and small with minute scabrous shagreened sculpture all over, having long dense hairy pubescence.

Elytra : Relative ratio of sutural length to humeral width 50 : 19 ; parallel-sided beyond rear 2-thirds length, then straightly narrowing to apices which are roundly converged. Striation generally obsolescent conspicuously, partly obvious at latero-posterior area, with small elongate and diffused punctures. Strial interstices completely flattened longitudinally having many uneven minute punctures with scabrous shagreened surface.

Other Structures : Propleural punctures smaller and denser than pronotal ones, subocellate, perfectly confluent mutually ; surface subsmooth. Prosternum narrowly shining and impunctate medio-longitudinally near middle to process apex ; punctures very larger and a little sparser than propleural ones, ocellate ; surface smooth. Prosternal sutures a little widened outwards near procoxae as well as anterior ends, single. Mucro in profile elongate, thin, almost straightly extending posteriorly near apex which is bluntly pointed ; each lateral side having a narrow deep elongate medio-horizontal groove extending from under procoxal cavity to near apex. Mesosternal cavity rather spindle-formed, namely widest medially, then roundly and gently converging to rear end and rather suddenly near fore end, strongly curved inwards medianly with well-carinated edge. Metasternal surface smooth with small sparse punctures ; medio-longitudinal line fine. Aedeagus as figured ; apical expansion of each paramere perfectly rounded apically having a small triangular projection laterally which is not so acutely pointed.

Described from a male holotype, Sugi Pass in Kyôto City, Kyôto Pref., May 3, 1959, T. Kishii leg.

Somewhat it is allied to *Actenicerus aerosus*, but the unique and conspicuous elytral maculation and aedeagus features are easily divided from the latter.

Bibliography

- Baba, K. et Kishii, T. (1957) : AKITU, VI : 68
Baba, K. et Ohira, H. (1973) : Trans. Essa Ins. Lov. Assoc., 43 : 6
Candèze, E. (1873) : Mém. Soc. Sc. Liège, (2) V : 24 & 25
..... (1889) : Elat. nouv., IV : 24
Chûjô, M. et Ohira, H. (1965) : Mem. Fac. Lib. Arts & Educ, Kagawa Univ., II, 132 : 14
Heyden, L. von (1887) : Hor. Soc. Ent. Ross., XXI : 256
Ishihara, T. et alt. (1953) : Trans. Shikoku Ent. Soc., 3 : 74
Kadowaki, H. (1975) : Sci. Rep. Shimane Pref. : 2—19
Kishii, T. (1955) : AKITU, IV : 19 & 20 ; (1963), *ibid.*, XI : 10
..... (1958) : Ent. Rev. Japan, IX (1) : 28
..... (1964) : Bull. Heian H. S., 8 : 26 & 27 ; (1966), *ibid.*, 10 : 2 & 3
..... (1966) : Elat. Kyôto, Rep. Biol. Lab., Heian H. S. : 52 & 53
Kishii, T. et Ohira, H. (1956) : AKITU, V : 73
Lewis, G. (1879) : Ent. Month. Mag., 16 : 157
..... (1894) : Ann. Mag. Nat. Hist., (6) XIII : 257 & 258
Miwa, Y. (1928) : Ins. Mats., II (3) : 139—142
..... (1933) : Mushi, VI (2) : 69—73
..... (1933) : Trans. Nat. Hist. Soc. Formosa, XXI : 37
..... (1934) : Fauna Elat. Jap. Emp. : 115—117, 121 & 167
Mochizuki, M. (1936) : Trans. Nat. Hist. Soc. Corea, XXI : 37
Motschulsky, V. (1860) : Etud. Ent., IX : 9
Müller, O. F. (1764) : Fauna Fridr. : 21
Ohira, H. (1954) : Trans. Chûbu Ins. Lov. Assoc., 2 : 6
..... (1968) : Bull. Jap. Ent. Acad., 4 (3) : 10
..... (1970) : Kontyû to Shizen, 5 (9) : 19—21
..... (1971) : Kontyû, 39 (4) : 401
Ohira, H. et Torigai, H. (1971) : Gifu-ken Seibutsu-Kyôiku, 16 : 91 ; (1973), *ibid.*, 18 : 37
Schenkling, S. (1927) : in Junk's Col. Cat., Elat. 88 : 368

Explanation of Plates and Figures

- Total figure : Figs. 1, 12, 13, 19, 20, 34, 39~43, 62, 63, 80~82, 89, 103 & 104.
Male genitalia : Figs. 2, 64, 83 & 90.
Apex of paramere : Figs. 3, 14, 21, 35, 36, 44~51, 65, 66, 84, 85, 91, 105 & 106.
Apex of median lobe : Figs. 4, 15, 22, 37, 52, 53, 67, 86, 92, 107 & 108.
Basal joints of antenna (1st to 5th) : Figs. 5, 10, 26, 32, 59, 70, 76, 93 & 99.
Apical joints of antenna (10th and 11th) : Figs. 11, 27, 30, 58, 71, 77, 96 & 100.
Apical joint of maxillary palpus : Figs. 7, 8, 28, 33, 61, 73, 79, 94 & 98.
Prosternal process in profile : Figs. 6, 9, 29, 31, 60, 72, 78, 95 & 97.
Apex of ovipositor : Figs. 16, 23, 54, 55, 68, 74 & 109.

Sclerotic plate of female bursa copulatrix

Spindle-formed plate (situated at bottom of bursa) : Figs. 18, 24, 56, 57, 69, 75 & 101.

V-shaped plate (situated at upper part of bursa) : Figs. 17, 25, 38, 87, 88 & 102.

Summary

Actenicerus シモフリコメツキ属は世界的に見て、本邦近辺で最も分化が激しいものようで、これ迄にも多くの種や変異の報告がなされてきた。しかし且つてはその相互によく似た体斑や地域的な変異が認められるため、その分類には多くの困難をとめない、Miwa (1934) などは *pruinus* に多くのものを含める見解を示したりもした。

最近になり生殖器構造の比較研究が進み、本邦産種は極めて多くの種個体群からなることが判明してきたのであるが、更に筆者は従来この研究が雄側に限られていたのに対し、雌生殖器構造でも又種間の相異点が多々発見しうることに基き、このグループの再検討を試みたものである。

その中で、今回検討を加え、且つ新知見として発表したものは次の通りである。

Actenicerus tsugaru Kishii, new species

ツガルシモフリコメツキ (新称)

筆者の少年時代に採集した唯一の雄標本に基いたものであり、以後長年の間に触角・脚部の一部に欠失部をもつ不完全な標本であり、以来再度の発見に努めたが残念ながら末見に終り、この機会に一応新名をつけ発表することにしたものである。

一般的には *orientalis* に似るが、体表上の点刻、体毛、生殖器構造等で極めて明瞭に区別できる。雄生殖器構造が幾分大平 (1970) の示した *kiashianus* Miwa に似た点もあるが、Miwa (1928) の外形記載内容とは全く異なる。

Actenicerus koraiensis Kishii, new species

チヨウセンシモフリコメツキ (新称)

この標本も故竹内吉蔵博士等が 1930年代に採集された古いものであり、以後の新しい標本入手に努めたが果されなかったので、矢張りこの機会に発表するものである。

且つて Heyden (1887) や望月 (1936) が記録した朝鮮半島産 *Actenicerus* 種と同一のものと見做され、筆者の研究では上記両者の扱ったように確かに *sjaelandicus* や *pruinus* によく似てはいるが、多くの点で、特に両性生殖器構造で明瞭にこれらとは異なるものであり、別種個体群として取扱われるべき性質のものと考えざるを得ない。但し大陸で *sjaelandicus* と本種との接点がどのあたりなのか、又そのものの特徴がどうなるかはこれからの研究課題である。

Actenicerus chokai (Kishii, 1966), new status

チヨウカイシモフリコメツキ (新称)

筆者 (1966) が *sjaelandicus* の亜種として鳥海山より報じたものであるが、その後、検し得た新潟県産の標本の知見と併せて、独立した種と判断すべきなので、詳細な特徴をつけて示すことにした (原記載は簡単であったのでこれを改める意味で)。

猶、原記載で用いた paratopotype の標本は筆者の明らかな誤同定であり、色彩・体長で誤認したのであるが、*Actenicerus modestus* のやゝ異常な個体と判断されるので今回訂正しておくものである。

***Actenicerus pruinosus* Motschulsky, 1860**

シモフリコメツキ

本邦に広く且つ普通に見られる代表的な本属のコメツキであるが、多くの標本を検すると大別して東北日本型と、西南日本型に分けうるようである。果して別亜種群なのかどうかは今後の課題であるが、一応見解のみ示したものである。

***Actenicerus aerosus* (Lewis, 1879), new combination**

コガタシモフリコメツキ (新称)

本種の正体や所属については原記載以来多くの変遷があるが、石原他 (1953)、筆者 (1956) は *Acteniceromorphus kurofunei* に相当すると考え、又最近では馬場・大平 (1973)、大平・鳥養 (1973) 等により *modestus* と同物であろうという見解が示されている。

筆者はまだ基本標本も、又基本標本産地である紀伊地方の本種を見ていないが、Lewis(1894) が報じたように日光地方にも分布する点と、簡単ではあるが彼 (1879, 1894) の記載によって考慮する時、*modestus* の記載者が彼であることと併せて、矢張り別物と見るのが妥当と思われるものである。

以上の観点で本邦産本属のものを見る時、京都北山地方で特に多数が得られるもので、且つ新潟県まで広く分布しており、極めて小型、上翅の毛斑が殆んどの場合極めて不明瞭、時には全く消失して一見 *Actenicerus* らしくない相貌を呈する種個体群が、*aerosus* であると断ぜざるを得ぬ結論に達したものである。なお、筆者は一時はこのものを *yamashitai* の小型タイプ又は別の新種個体群と見ていた時期もあった。又 Miwa (1928) が *pruinosus* の var. として報じた *kiashianus* は雄で且つ大型 (14mm) であるが、本種の雌個体の一部に似た所がある。*aerosus* は雄で上翅斑は消失傾向が著しいが、雌では明瞭とは云えぬまでも一般に認められ、且つ脚部色彩も明るい赤黄色になり易いようである。

***Actenicerus octomaculatus* Kishii, new species**

ヤツモンシモフリコメツキ (新称)

一頭の雄個体によったものであるが、写真でも判るように極めて明瞭な上翅斑紋と、毛色などで他からの区別は容易である。なお、筆者の研究に多大の援助を与えられている正木清君の見解では *orientalis* と他の何か (*pruinosus* など) との種間雑種ではと見られるのではというのであるが、この点の解明は今後にまきたい。

(1978年3月26日 記)

PLATE I

Actenicerus tsugaru Kishii, sp. nov.

Figs. 1~7. Holotype, male (18.0×4.8mm.) : Nogiwa Park in Aburakawa, Aomori City, Aomori Pref., May 20, 1943, T. Kishii leg. (446)

Actenicerus sjaelandicus sjaelandicus (Müller, 1764)

Figs. 8~10. Male : Heiligenthal in Holstein, North Germany.

Fig. 11. Female : Mts. Liptauer in Berge, Czechoslovakia.

Figs. 12, 14 & 15. Male (12.4×4.0mm.) : Heiligenthal in Holstein, North Germany, May 19, 1952, Plath jr. leg. (1067)

Fig. 13. Female (16.0×5.2mm.) : Mts. Liptauer in Berge, Czechoslovakia, Reitter leg.

Figs. 16 & 18. Female : Ditto (1922)

Fig. 17. Female : Ditto (3346)

PLATE I

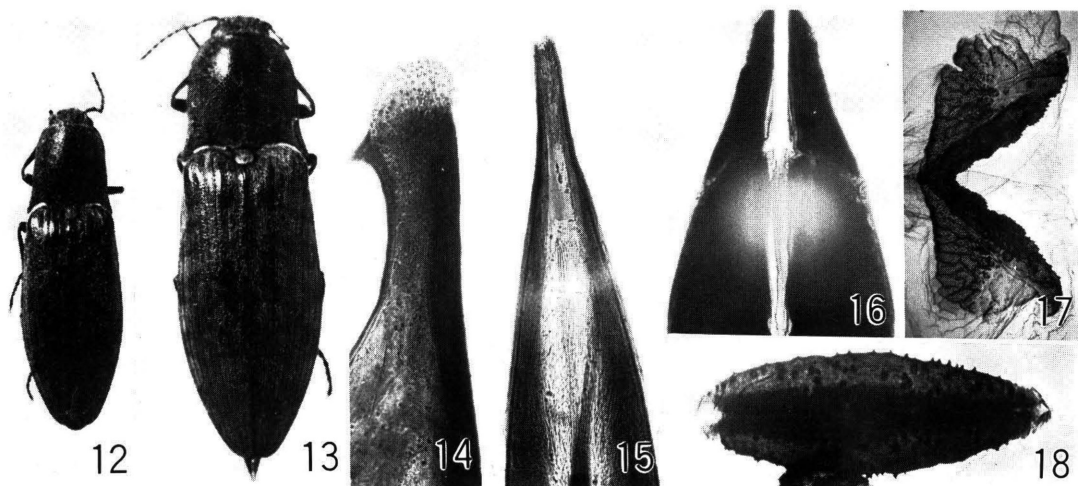
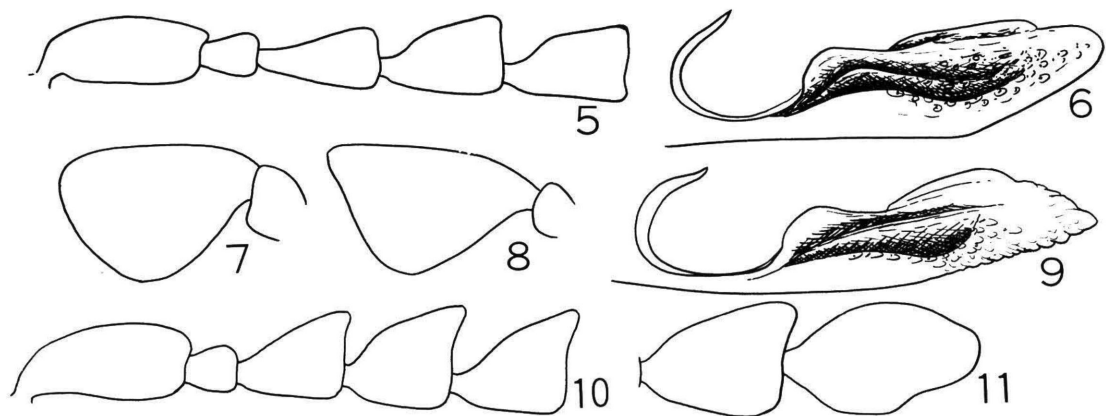
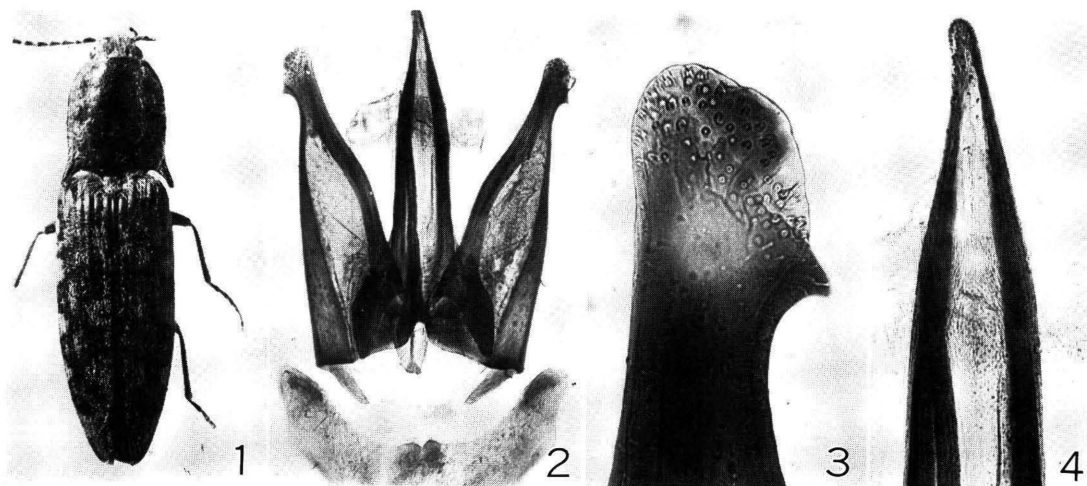


PLATE II

Actenicerus koraiensis Kishii, sp. nov.

Figs. 19, 21 & 22. Holotype, male (16.6×4.8 mm.) : Sambô in Corea, June 8, 1936, K. Takeuchi leg. (457)

Fig. 20. Allotype, female (16.2×5.0 mm.) : Suigen in Corea, May 15, 1931, K. Satô leg. (3248)

Figs. 23~25. Paratype, female : Ditto, May 15, 1935, K. Satô leg. (3339)

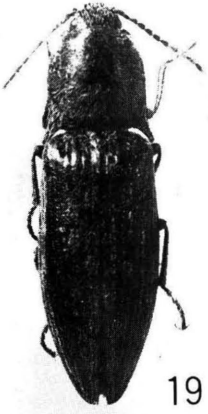
Figs. 26~29. Male : Sambô in Corea.

Actenicerus chokai (Kishii, 1966), stat. nov.

Figs. 30~33, 36 & 37. Holotype, male : Mt. Chôkai-zan in Yamagata Pref., July 21, 1959, T. Horio leg. (3016)

Figs. 34 & 35. Male (15.9×4.6 mm.) : Kurokawa in Niigata Pref. May 8, 1955, H. Koike leg. (3249)

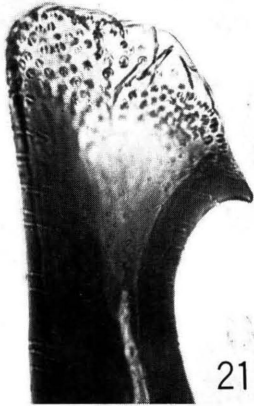
PLATE II



19



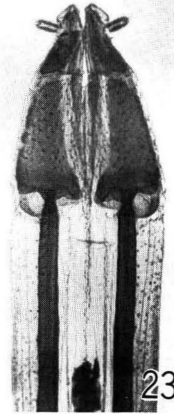
20



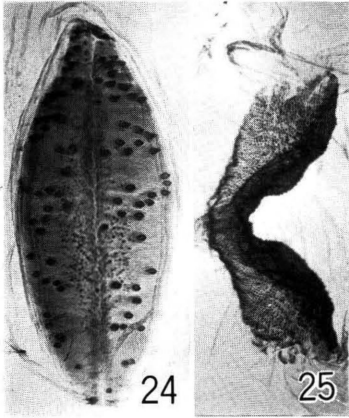
21



22



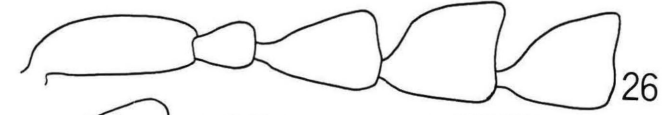
23



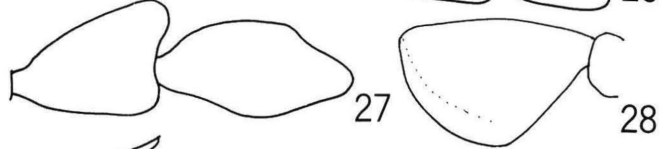
24



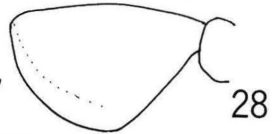
25



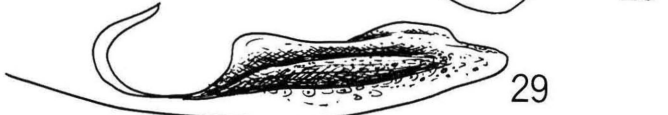
26



27



28



29



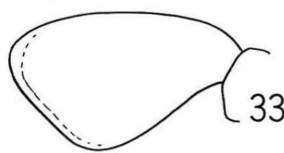
31



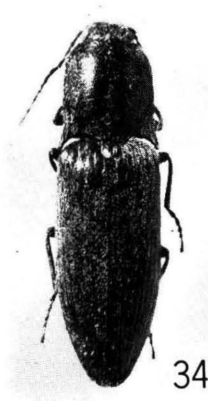
30



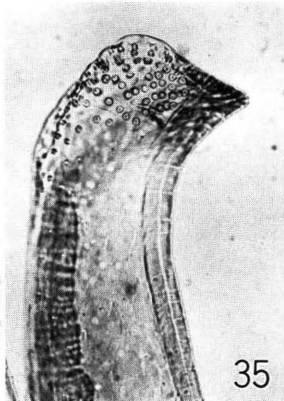
32



33



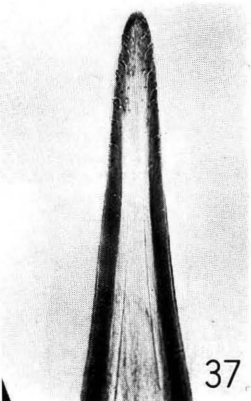
34



35



36



37

PLATE III

Actenicerus pruinosus (Motschulsky, 1860)

North-eastern type : Figs. 38~41, 44~47, 52, 54 & 56.

South-western type : Figs. 42, 43, 48~51, 53, 55 & 57.

Figs. 38 & 56. Female : Arashiyama in Kyôto Pref., April 20, 1956, T. Kishii leg. (3259)

Figs. 39 & 44. Male (13.9×4.0 mm.) : Mt. Norikura in Nagano Pref., May 22, 1976, K. Tsukamoto leg. (3295)

Fig. 40. Male (14.5×4.3 mm.) : Ide Pass near Ôhara, Kyôto Pref., April 30, 1956, T. Kishii leg.

Fig. 41. Female (17.7×5.2 mm) : Arashiyama in Kyôto Pref., May 1, 1956, T. Kishii leg.

Figs. 42 & 49. Male (15.0×4.0 mm.) : Tsuma-mura in Is. Dôgo, Iss. Oki, Shimane Pref., May 5, 1967, H. Kadowaki leg. (3277)

Fig. 43. Female (17.6×5.0 mm.) : Saigô in Is. Dôgo, Iss. Oki, Shimane Pref., June 3, 1965, H. Kadowaki leg.

Figs. 45 & 52. Ashiu Valley in Kyôto Pref., May 18, 1975, K. Mizuno leg. (3221)

Fig. 46. Arashiyama in Kyôto Pref., April 26, 1956, T. Kishii leg. (3261)

Fig. 47. Mt. Ôishi in Wakayama Pref., May 18, 1958, T. Shibata leg. (3297)

Fig. 48. Mt. Daisen in Tottori Pref., May 28, 1968, K. Mizuno leg. (3290)

Fig. 50. Kôchi City in Kôchi Pref., April 29, 1954, Y. Doi leg. (3251)

Figs. 51 & 53. Hirao in Fukuoka Pref., April 26, 1931, T. Shirouzu leg. (3276)

Fig. 54. Arashiyama in Kyôto Pref., April 26, 1956, T. Kishii leg. (3258)

Figs. 55 & 57. Saigô in Is. Dôgo, Iss. Oki, Shimane Pref., June 3, 1965, H. Kadowaki leg. (3280)

Figs. 58~61. Male : Mt. Norikura in Nagano Pref.

PLATE III

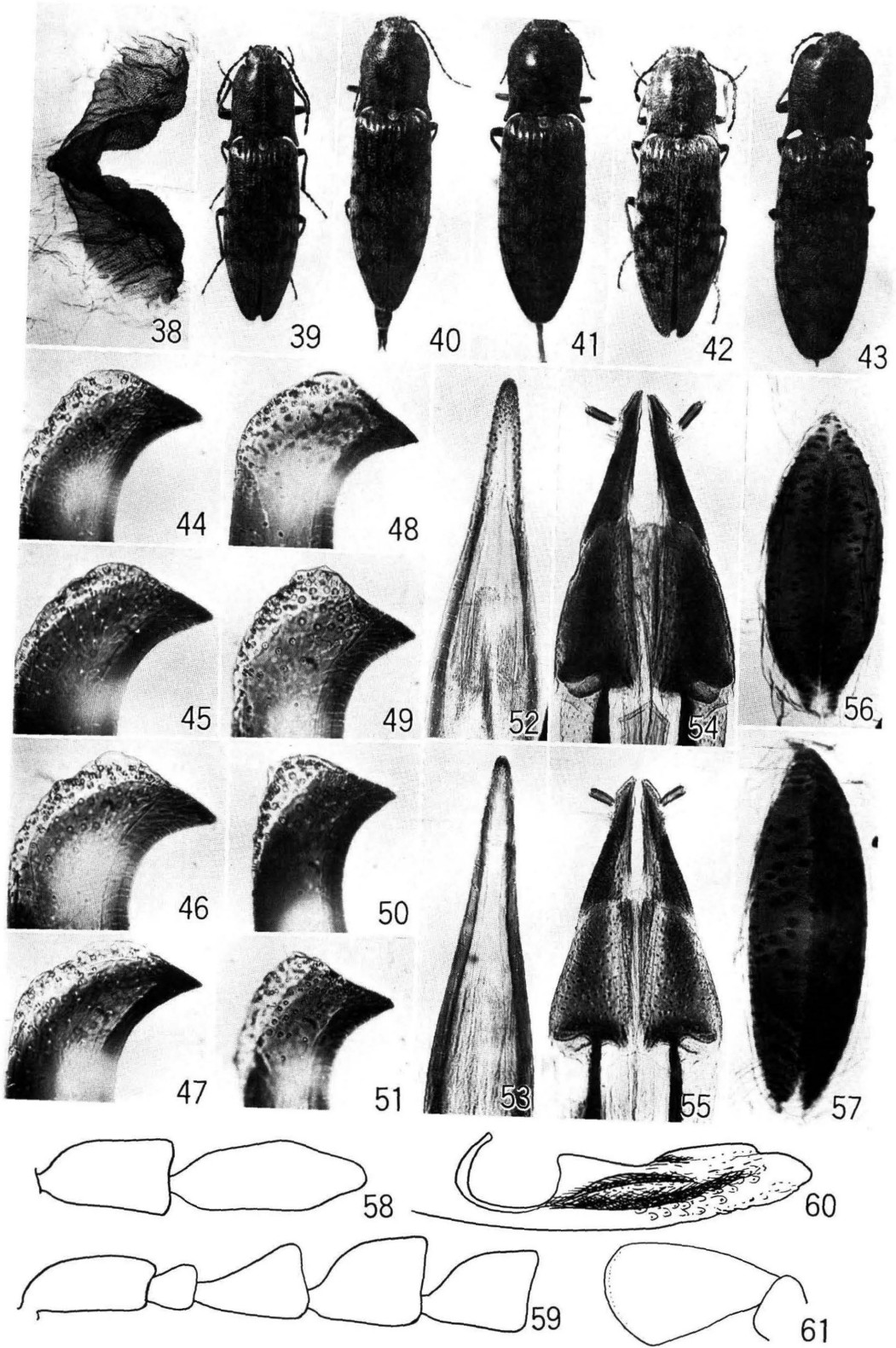


PLATE IV

Actenicerus yamashitai Ohira, 1968

- Fig. 62. Male (14.2×3.8mm.) : Yuri-gun in Akita Pref., May 4, 1964, K. Shirahata leg. (3255)
- Figs. 63 & 68. Female (16.0×5.0 mm.) : Mt. Hakkôda in Aomori Pref., July 21, 1961, S. Kazuoka leg. (3338)
- Fig. 64. Mt. Takadate in Yamagata Pref., May 19, 1961, K. Shirahata leg. (3252)
- Figs. 65 & 67. Mt. Hakkôda in Aomori Pref., July 21, 1961, S. Kazuoka leg. (3254)
- Fig. 66. Mt. Senaka-aburi in Niigata Pref. (1861)
- Fig. 69. Ashiu Valley in Kyôto Pref., 18, 1975, K. Mizuno leg. (3222)
- Figs. 70~73. Male : Mt. Hakkôda in Aomori Pref.

Actenicerus aerosus (Lewis, 1879)

- Fig. 74. Female : Sugi Pass in Kyôto Pref., May 17, 1956, T. Kishii leg. (1920)
- Fig. 75. Female : Ditto, May 5, 1975, K. Mizuno leg. (3224)
- Figs. 76~79. Male : Ditto.
- Fig. 80. Male (10.5×3.3 mm.) : Ditto, May 17, 1956, T. Kishii leg.
- Fig. 81. Male (12.6×3.5 mm.) : Ditto.
- Fig. 82. Female (11.4×3.5 mm.) : Ditto, May 20, 1956, T. Kishii leg.
- Figs. 83 & 86. Male : Ditto, May 5, 1975, K. Mizuno leg. (3235)
- Fig. 84. Male : Serio Valley in Kyôto Pref., June 1, 1952, H. Ishida leg. (435)
- Fig. 85. Male : Sugi Pass in Kyôto Pref., June 1, 1975, K. Mizuno leg. (3226)

PLATE IV

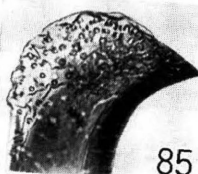
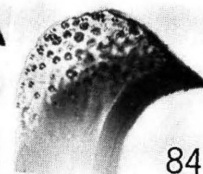
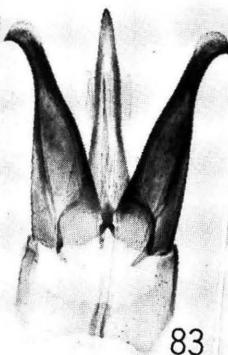
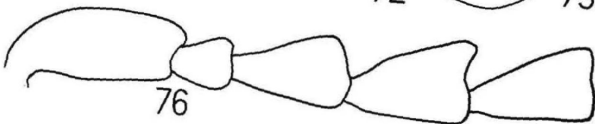
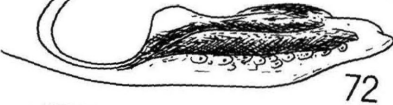
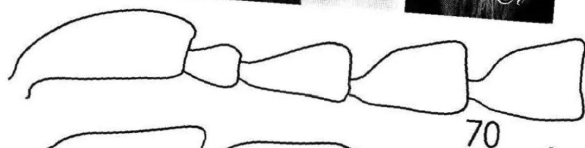
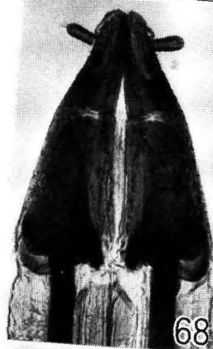
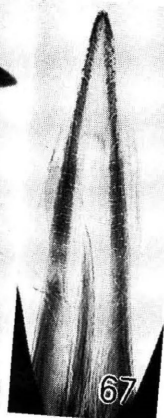
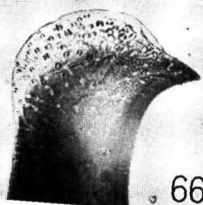
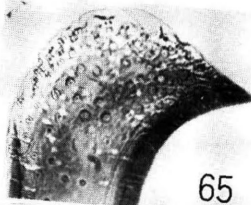
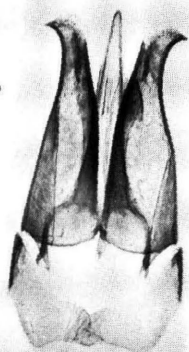


PLATE V

Actenicerus yamashitai Ohira, 1968

Fig. 87. Female : Mt. Yahiko in Niigata Pref., May 8, 1965, Y. Ômori leg. (3340)

Actenicerus aerosus (Lewis, 1879)

Fig. 88. Female : Sugi Pass in Kyôto Pref., May 20, 1956, T. Kishii leg. (3341)

Actenicerus octomaculatus Kishii, sp. nov.

Figs. 89~96. Holotype, male (13.2×3.6 mm.) : Sugi Pass in Kyôto Pref., May 3, 1959, T. Kishii leg. (3334)

Actenicerus suzukii suzukii Miwa, 1928

Figs. 97~100. Male : Arashiyama in Kyôto Pref.,

Fig. 101. Ditto. May 3, 1956, T. Kishii leg. (3342)

Fig. 102. Ditto, May 11, 1956, T. Kishii leg. (3345)

Fig. 103. Male (11.8×3.5 mm.) : Ditto, May 1, 1956, T. Kishii leg.

Fig. 104. Female (13.4×4.2 mm.) : Ditto, May 11, 1956, T. Kishii leg.

Fig. 105. Ditto, May 3, 1956, T. Kishii leg. (1908)

Fig. 107. Ditto, May 1, 1956, T. Kishii leg. (1901)

Fig. 109. Ditto (1912)

Actenicerus suzukii hegurensis (Kishii, 1964)

Figs. 106 & 108. Holotype, male : Is. Hegura-jima in Ishikawa Pref., April 14, 1952, N. Tamu leg. (3250)

PLATE V

