TWO NEW SPECIES OF CROSSOCERUS FOUND IN JAPAN (SPHECOIDEA CRABRONIDAE)

By K. TSUNEKI

The material used in the presnet paper was collected by Mr. T. Murota in the eastern montanic region of Fukui Prefecture and sent to me for study.

1. CROSSOCERUS (BLEPHARIPUS) ETIZENENSIS SP. NOV.

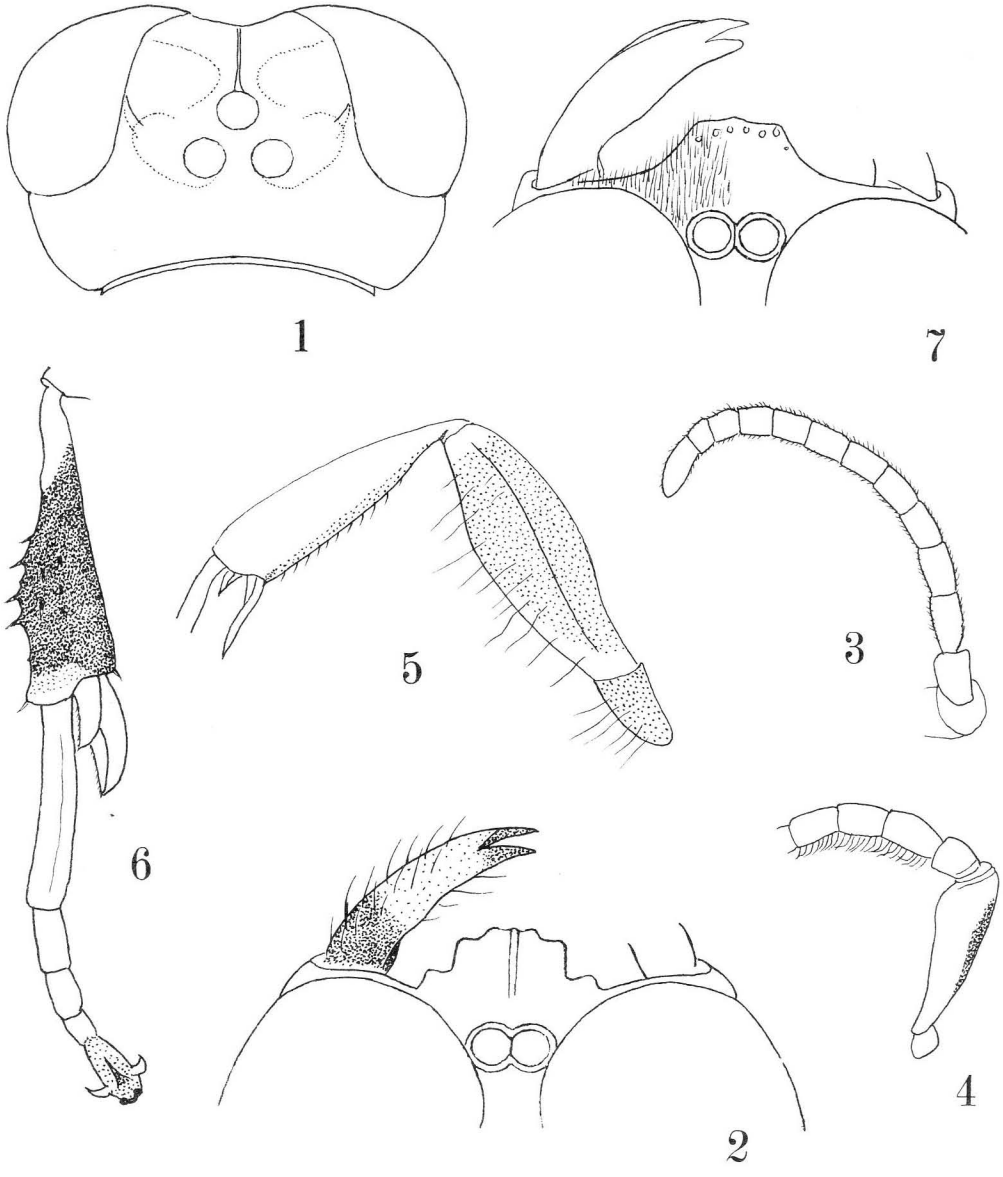
♂. Closely resembles nikkoensis Tsuneki, 1955 (Kontyu, 23: 22-34) in form of head from above and in front, in structure of pronotum, area cordata on propodeum, G1 and hind leg (cf. Figs. 1, 2, 5 of that paper), but differs from this in colour of mandible, A1, humeral tubercle, tegula, legs, basal plates of fore wing and in structure of antenna, clypeus, precoxal tooth of mesopleuron and hind tibial spurs.

It is also considerably similar to barbipes Dahlbom in having hair-fringed flagellomeres (Fig. 4), long pubescent for trochanter and femur (Fig. 5) and general other characters; but separable therefrom by that A13 not obliquely truncate at apex (Fig. 3), pubescence on femur sparser and on tibia shorter and half appressed (do.) and basal plate of fore wing and humeral tubercle adorned with yellow.

Length 5.5 mm. Black, without aeneous lustre on head and thorax; yellow are A1 except dorsal brownish patch, A2 beneath, humeral tubercles entirely, a spot on the transparent tegula, posterior part of basal plate of fore wing, apex of hind femur, outer side wholly of fore tibia, that of basal half of mid and hind tibiae, all spurs and all T1-4 (T5 with claws slightly dusky); mandible on apical 2/3 pale reddish b own except dark teeth; light yellowish brown are apices of coxae, bases of all femora and apices and underside broadly of fore and mid femora (on mid femur dorsal stripe alone black); wings hyaline, stigma, costa and subcosta black, rest of veins dark brown.

Pubescence silbery, on clypeus, temples and sides of thorax dense and appressed, on GT6 slightly long, half erected, moderately close and pale brownish and on GT7 similar, but sparse and slightly stiff; antennal flagellum fringed beneath with long whitish pubescence.

Measured values of head from above (Fig. 1) and in front same as in nikkoensis, but ocelli in more complete equilateral triangle and slightly larger than in this species, OOD:Od:POD:OCD=7:5:3.5:9 (in holotype of nikkoensis 8:3.5:7:11), micropunctures on vertex more distinct and closer, frontal impressions similar, medio-apical produced part of clypeus (Fig. 2) distinctly different in form (cf. Fig. 7 in nikkoensis), mandible bidentate at apex (Fig. 2), with inner margin very feebly rounded out before middle (do.); antenna with A3 twice as long as aW, thence gradually shorter apically, but almost unchabge in width till A10, ultimate joint about bW>2, flattened beneath, but not obliquely truncate at apex (Fig. 3). Pronotum broadly rounded at anterior margin, medianly minutely incised, in frontal view medianly broadly, highly and laterally narrowly, less highly raised, with interspaces roundly depressed and medianly without carina, but laterally bluntly carinated, in dorsal view mid-lateral depressed areas transversely finely furrowed till lateral margin behind the carinated corners, thus in oblique dorsal view pronotum appears transversely constricted across middle, the furrow between pronotum and scutum fine and deep, admedian groove of scutum short, fine and shallow, but well defined, scuto-scutellar furrow broad and deep, V-shaped in cross section, with bottom strongly crenate, furrows before and behind metanotum very minutely foveolate, area cordata on propodeum completely enclosed with crenated furrow, basal and median furrows also strongly crenate, posterior declivity laterally carinate, carina accompanied inside with a furrow, surface medianly deeply, triangularly excavated till round elevation around fossa of gastral muscle; on mesopleuron precoxal tooth very feeble at anterior end of precoxal carina (as in nikkoensis); GT1 with bW, aW, median L =10,25, 31, not nodose at apex, with lateral margins gently rounded; hind femur flattened or slightly hollowed at inner side and beneath; following tibia considerably clavate, right one with tarsus in frontal view: Fig. 6, notice markedly enlarged spur! (this is in oblique view, if seen perpendicularly much broader lobiform bearing a mid lib). In fore wing radial cell with a large accessory cell which is not completely closed at apex, since faint abscissa 3 of rad-



ius turns posteriorly before reaching wing margin, L of abscissae 1,2,3(if straightly reached apical margin) and crossing basal vein of accessory cell =10,15,16,7, while L:W of stigma =20:4.5, abscissae 1,2 of cubitus within cubital cell and intercubitus 1 = 17,12,7, nervulus by its own length (=4) antefurcal.

Upper frons with piliferous micropunctules, well defined, with PIS 1-3 times Pd, on vertex punctules much finer, feebler and sparser, punctules on scutum as on upper frons, but much closer, PIS mostly = Pd, but posteriorly somewhat weaker and sparser, on mesopleuron at hypoepimeral area as on upper frons, at episternum as on posterior portion of scutum, at epimeral area as on vertex, metapleuron and side of propodeum smooth and polished; on propodeum area cordata smooth and polished, posterior declivity practically impunctate, well shining, though with very thin pubescence; GT1 impunctate, 2-7 closely and feebly micropunctulate.

♀, unknown.

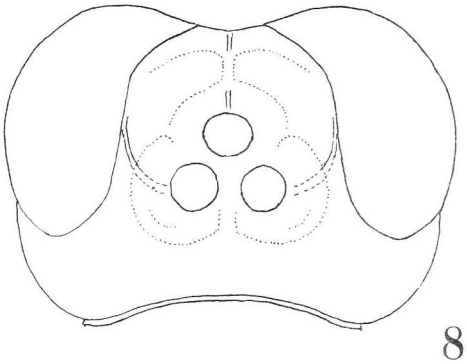
Holotype: ♂, Fukui Prefecture, Natasho-mura, Mushidani, 19.VIII.1987, T. Murota

Crossocerus (Blephariпus) murotai sp. nov.

The two examples (♀♀) here trated were first considered to be the opposite sex of the preceding species, because one of which had been collected with the holotype ♂ of the preceding species at the same locality and on the same day and the other at the same locality some days later, and, moreover, they were very similar in characters except those that were considered sexual: Head from above thicker, subquadrate (Fig. 8, cf. Fig. 1), flagellomeres of antenna simple, without fringe of hairs beneath, mandible tridentate at apex (Fig. 9, cf. Fig. 2), clypeus different in form of apical margin (Fig. 9, cf. 2) and colour of legs. However, in the course of detailed comparison it comes to mind that the difference in the structure of clypeus is, if sexual, quite strange and exceptional. In the general rule in this group the structural pattern of clypeus between the opposite sexes of the same species is same and in the appearance only slightly complicate in the female and somewhat simpler in the male. While, here, fundamental pattern of both can hardly be considered same (Figs. 2 and 9) and, moreover, more complicate in the male - reverse to the general rule. Final determination as to whether they belong to different species, or to different exes of a same species must be done by the biological study of them, especially of the female. But at the present state of our knowledge it seems better to deal with them as two species different from each other.

♀. Length 5.5-6.0 mm. Much more resembles nikkoensis than in the preceding species in completely black clypeus and thoax, in the form of clypeus (cf. Fig. 10, in nikkoensis ♀), but here mandible and legs much brighter in colour and ocelli in a complete equilateral triangle (Fig. 8), each much larger and closer together (in nikkoensis slightly broader than in equilateral and each smaller and far apart from each other). It is also somewhat similar to barbipes, but can be separated from this by the presence of precoxal tooth of mesopleuron, by the smooth and shining upper frons and vertex and by the completely enclosed area cordata on propodeum.

Black; mandible nearly wholly (in paratype, hereafter given within parenthesis at apical 2/3) light brown, clypeus at apical punctured area brown (dark brown); yellow are: A1 at base beneath and apex (do., but broader and + apex of A2), base and apex of mid tibia, base of hind tibia, T1-2 of fore and mid legs and base of hind T1 (do.); dirty yellow: outer side of fore and mid tibiae, broadly including greater part of front and rear sides and T3,4 of mid and hind legs (do., but fore tibia at base and apex much brighter); light brown to brown: apices of coxae and of trochanters, bases of femora, tibial spurs and claws of T5 (do.); humeral tubercle slightly brownish at posterior margin and tegula translucent brown and basal plates of wing dark brown; wings hyaline, stigma and veins dark brown to brown. Hairs white, but much sparser than in the preceding species, on clypeus silvery, but median raised area broadly without hair in both specimens.



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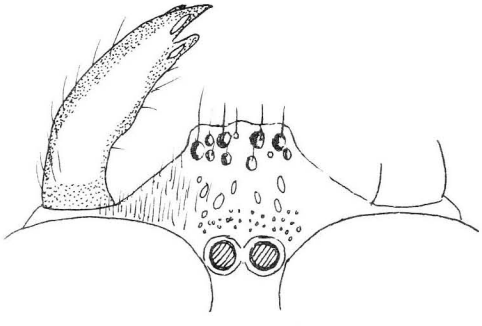

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Head from above: Fig. 8; OOD:Od:POD:OCD= 6:5:3:11 (in nikkoensis =8:3.5:6.5:11), micropunctures on upper frons and vertex stronger and more distinct than in etizenensis; clypeus and mandible: Fig. 9; antenna with L of A1,3, 4,5,8,11,12=18,5,4,3.5,3,3,5, A3 with aW and bW = 2.5 and 2, W at A8=3.5, bW of A12=2.5.

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Precoxal carina of mesopleuron distinct and at its anterior end strongly toothed, the tooth more marked than in etizenensis; enclosing groove of area cordata on propodeum minutely crenate (without crenae), posterior declivity on posterior portion transversely, strongly rugoso-striate; pygidial area elongate triangular, minutely rounded at apex, with surface gutterwise excavated and well shining, lateral carinae gently outcurved. As to structure of pronotum and Gl and wing venation similar to those of the preceding species.

♂, unknown.

Holotype: ♀, Fukui Prefecture, Natashô-mura, Mushidani, 19.VIII.1989, T. Murota leg. (Coll. Tsuneki).
Paratype: 1 ♀, same locality, 29.VIII.1989, T. Murota (Coll. Murota).

C O R R I G E N D A

I. H o m o n y m y:

1. Trypoxylon nasutum Tsuneki, 1979 (nec 1974):

   Trypoxylon varipes nasutum Tsuneki, 1974, Ann. Hist. Nat. Mus. Nat. Hung., 66: 365 (♀, North Korea).
   Trypoxylon nasutum Tsuneki, 1979, SPJHA, 9: 37 (♀, Malaya) ——→

   Trypoxylon minahime Tsuneki, nom. nov.

2. Trypoxylon venustum Tsuneki, 1979 (nec 1977):

   Trypoxylon venustum Tsuneki, SPJHA, 2: 8 (♂, Taiwan).
   Trypoxylon venustum Tsuneki, Ibid., 9: 63 (♂, Laos) ——→

   Trypoxylon bolouense Tsuneki, nom. nov.

3. Trypoxylon rufiventre Tsuneki, 1990 (nec 1976):

   Trypoxylon rufiventre Tsuneki, 1976, Steenstrupia, 4: 81 (Philippine: Tawitawi).
   Trypoxylon rufiventre Tsuneki, 1990, SPJHA, 36: 85 (♀ ♀, Okinawa) ——→

   Trypoxylon katsuuense Tsuneki, nom. nov.

(Thanks to Dr. Antropov, Moscow, who kindly pointed out the third homonymy)

II. M i s p r i n t:

1. Jezonogonalos marujamanae sp. nov., Tsuneki, 1991, SPJHA, 37: 32.

   The specific name of this species should be read as marujamae. The fact that it is misprinted is clear, as in the key (p. 3) and index (p. 68) it is correctly printed as marujamae.

PRESERVATION OF THE TERANISHI'S COLLECTION OF THE TRIGONALIDAE

The Teranishi's collection of the Trigonalidae, including all of the genotypes, holotypes and paratypes of the genera and species described by him or by me which had been kept in my laboratory was recently sent to the Osaka Museum of Natural History, Nagai Park, Higashi-Sumiyoshi-Ku, Osaka, 546 Japan, for forever preservation, as Osaka is the native place of the later Mr. Teranishi.
