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FIVE NEW SPECIES OF MIRIDAE FROM JAPAN
(Hemiptera, Heteroptera)

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***Bothynotus morimotoi* Miyamoto, sp. nov.**

(Textfigs. 1 & 2)

Size: For ♀ length of body 4.2 mm., width of head with eyes 0.97 mm., basal width of pronotum 1.57 mm. and greatest width ca. 2.4 mm.

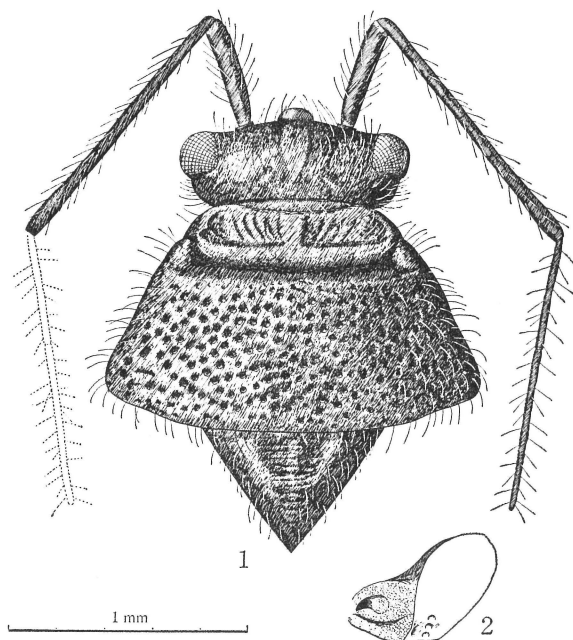
Coloration: Blackish, shining, somewhat tinged with brown and covered with dark hairs. Head blackish, more or less with red tinge, with a pair of black longitudinal fasciae from base of vertex to antennal tubercles; eyes dark reddish brown; antennal base brownish and rostrum dark brown. Pronotum and scutellum blackish with middle of collar, central part of fused calli and anterior corners of posterior lobe slightly brownish. Hemelytra dark chestnut brown, with cuneus blackish and membrane fuscous. Thoracic sterna and lateral parts of basal abdominal ventrites dark reddish brown.

Structure: Oval, densely covered with distinct hairs. Head (Textfig. 1) distinctly short; vertex with a pair of indistinct oblique impressions, width of an eye a little less than $1/3$ as wide as interocular space (.18 : .61)*; antennae longer than half as long as body, 1st segment the thickest, 2nd segment very little broadened near apex and not more than 2.5 times as long as the preceding, 2 apical segments much thinner; ratios of antennal segments: I : II : III+IV = .50 : 1.20 : 1.12 (? .47+? .65). Rostrum reaching near hind margin of mesosternum; lengths of the segments I to IV : .30 : .38 : .25 : .38.

Pronotum (Textfig. 1) shorter than wide (.90 : 1.57), anterior margin concavely curved, lateral margins sinuate, posterior margin convexly sinuate; anterior collar broad, obliquely shrunked with median elevation fused to calli; calli united each other to a transverse elevation which is smooth and has a pair of obliquely impressed lines near hind margin; posterior lobe furnished with distinct punctures; scutellum wider than long, transversely rastrate excepting sides and apex, with a pair of slight

* All measurements are in mm.

impressions in middle of base. Hemelytra short, reaching hind margin of 6th abdominal segment, with the surface irregularly rugose, costal fracture deep; cuneus short, almost as long as wide; membrane abbreviated, pilose, with a narrow membrane cell. Orificial peritreme of metathoracic glands (Textfig. 2) distinct and elevated. Legs moderately stout, femora thicker than eye wide; posterior tibiae a little longer than costal length of corium.



Textfigs. 1 & 2. *Bothynotus morimotoi*, ♀.

1 head, pronotum and scutellum, dorsal view, 2 left metapleuron, showing orificial peritreme of metathoracic gland.

Relative lengths of leg segments:

	Femur	Tibia	Ta 1	Ta 2	Ta 3
Fore leg	1.19	1.38	.23	.15	.23
Middle leg	1.28	1.60	.23	.15	.23
Hind leg	1.62	2.05	.24	.19	.25

Holotype ♀, brachypterous, Mt. Kajigamori, Tosa, 20. viii. 1959, K. Morimoto.

B. morimotoi is related to *pilosus* (Boheman) (Europe) but distinguish-

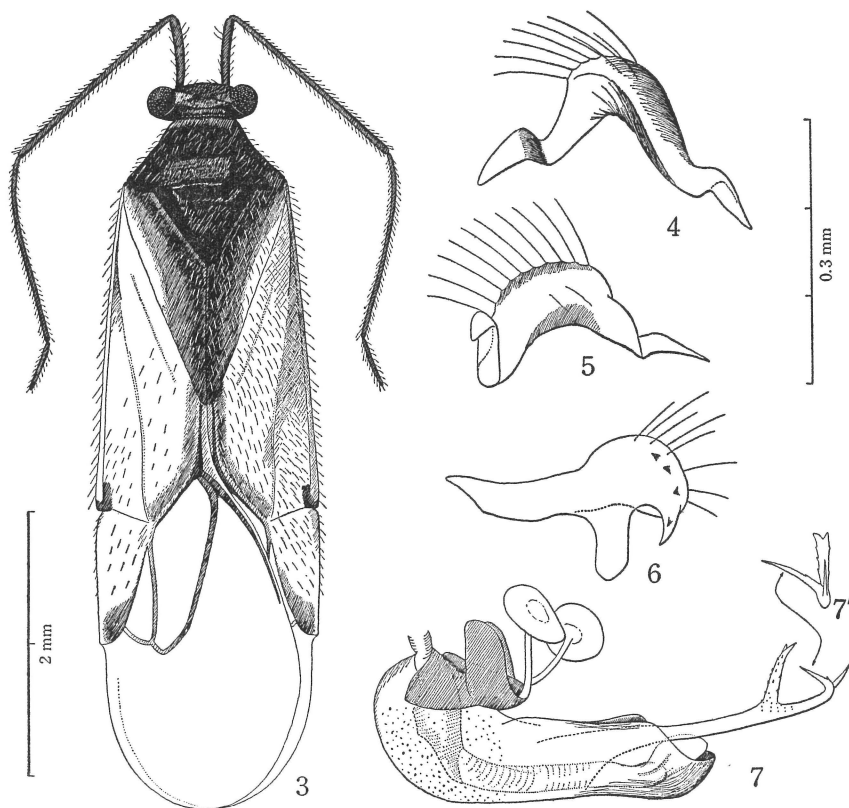
able from the latter by larger body, blackish antennae and legs and a little longer 2nd antennal segment than 2 apical segments combined. From *kiritschenkoi* Lindberg, 1934 (Wladiwostok), besides sexual differences, this is separated in darker hairs on antennae, blackish femora and subequal length of basal tarsal segment to apical tarsal segment.

***Mecomma japonica* Miyamoto, sp. nov.**

(Textfigs. 3—7)

Size: For ♂♂ body length 5.35 mm., head width .83 mm., pronotal width 1.19—1.21 mm. and greatest width across hemelytra 1.73—1.74 mm.

Coloration: Black with pale hemelytra and legs. Head black with a



Textfigs. 3—7. *Mecomma japonica*, ♂.

3 dorsal aspect, legs omitted, 4 & 5 right-hand paramere, in 2 different directions, 6 left-hand paramere, 7 aedeagus, from left side, 7' apical part of vesical process, caudal view.

pale marking inside each eye which is suffused with reddish brown; antennae blackish brown, slightly paler toward apices; rostrum pale with both apices dark. Pronotum and scutellum blackish with a pair of pale obscure markings on exposed part of mesonotum. Hemelytra pale brownish yellow; corium fuscous at apex and along inner margin; clavus dark brown except sutural area; cuneus slightly fuscous at apex; membrane brownish with dark veins. Legs yellowish brown, with coxae and bases of femora paler and apices of tarsi dark. Body beneath blackish brown.

Structure: Body elongate, covered with distinct hairs. Head very short seen from dorsum, interocular space 1.5 times as wide as an eye (.36 : .24). Antennae long but shorter than body long; 1st segment slightly sinuate, 2nd segment somewhat thickened toward apex, less than 3 times as long as the 1st; 3rd segment about 3.5 times as long as the apical; relative lengths of the segments I to IV: .56:1.60:1.52:.43. Rostrum nearly reaching apex of hind coxae; relative lengths of the segments I to IV: .37 : .41 : .37 : .38.

Pronotum distinctly shorter than wide (.50:1.19), wider than head wide (1.19 : .83), with the sides concavely sinuate, hind margin wavyly sinuate; scutellum a little wider than long. Hemelytra long, point of costal fracture a little extending beyond abdominal tip; cuneus long, about 3 times as much as wide (1.04 : .34); membrane broad, with hind apex of larger membrane cell surpassing tip of cuneus. Hind legs long, with tibiae somewhat sinuate and a little longer than costal margin of corium (2.47).

Relative lengths of leg segments:

	Femur	Tibia	Ta 1	Ta 2	Ta 3
Fore leg	1.14	1.45	.14	.24	.25
Middle leg	1.22	1.62	.12	.23	.24
Hind leg	1.85	2.68	.13	.30	.26

Male genital segment short, narrowed behind. Parameres (Textfigs. 4—6) of dissimilar shape; right-hand paramere (Textfigs. 4 & 5) broadest in middle, strongly sinuate, with long bristles; left-hand one (Textfig. 6) thickened toward apex, with an apical claw-like process, a thin median process and with 4 teeth in a curved row near apex. Aedeagus (Textfig. 7) with branched vesical process, the apical branch bifurcate and the subapical branch more or less bilobed at apex.

Holotype ♂, macropterous, Senjo-dake, Shinano, 7. viii. 1961, T. Saigusa and ♂ paratype, the same mountain, at 2,700 m. in height, 23. viii. 1964, S. Miyamoto, genitalia of the latter specimen mounted on the slide.

This species is related to *M. ambulans* (Fallén) (Palearctic) but

different in larger size, relatively broader pronotum, different ratios of antennal segments, shape of cuneus and detail structures of aedeagus and parameres.

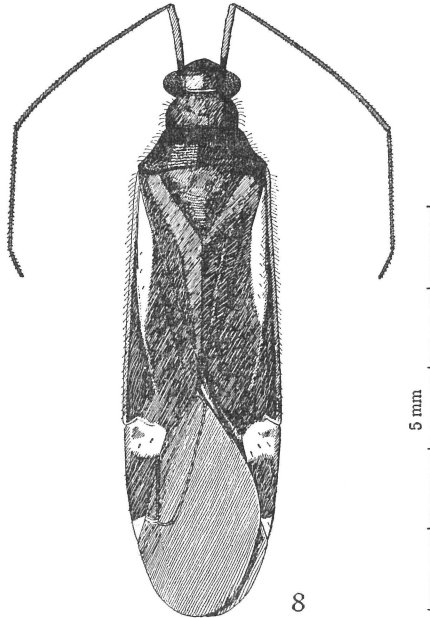
***Dryophilcoris saigusai* Miyamoto, sp. nov.**

(Textfigs. 8—11)

Size: For ♂ body length 6.80 mm., head width with eyes 0.97 mm., basal width of pronotum 1.55 mm, and greatest width, across hemelytra, 2.03 mm.; those for ♀♀ 6.30—6.70 mm. long, 0.94—1.00 mm. wide, 1.60—1.68 mm. wide and 1.90—2.00 mm. wide.

Coloration: Dorsal surface black with yellow markings. Head shining black, base of vertex narrowly yellow or pale, eyes dark brown, central part of face in a female dark red; antennae dark brown except for apical 4/5 of basal segment and extreme base of 2nd segment pale brown; rostrum pale brown with both apices dark. Pronotum grayish black on anterior half and shining black on posterior half, in a female (allotype) with a median longitudinal line and hind margin yellow; exposed part of mesonotum and scutellum grayish black, scutellum of the allotype broadly yellowish excepting base and sides. Hemelytra blackish, somewhat tinged with brown, with paler costal margin, a yellow, apically narrowed, longitudinal fascia on basal half of corium and with yellow base and apex of cuneus; in the allotype outer half of corium yellowish except the costal margin colourless; membrane dark with concolorous veins excepting caudal part whitish. Legs brown or brownish, with basal segments and basal half of femora paler and with tarsi dark brown. Prosternum blackish to brownish; prosternal xiphus, meso- and metasterna grayish brown; orificial peritreme of meta-thoracic glands grayish black or brown; abdominal venter shining dark brown with median part broadly pale, in females much paler. Parameres basally blackish brown, apically pale brown.

Structure: Elongate, subparallel-sided behind humeri, somewhat



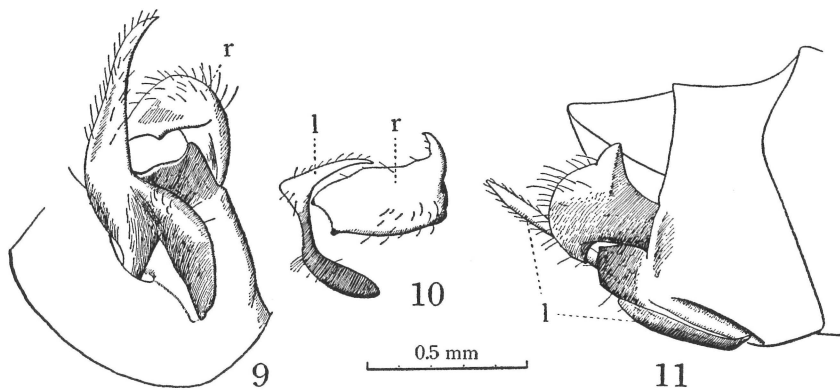
Textfig. 8. *Dryophilcoris saigusai*,
♂, dorsal aspect, legs emitted.

sparingly covered with distinct hairs. Head shorter than wide (.50 : .97), base of vertex distinctly carinate, in front of the carina transversely, shallowly depressed; interocular space about twice as wide as an eye (.47 : .25 in ♂, .48 : .23 in ♀); antennae with 3 apical segments pubescent, 1st segment covered with sparse fine hairs, slightly thicker than the following segment which is very slightly widened toward apex and 3 times as long as 1st, 4th segment very short; ratios of antennal segments I to IV: .82 : 2.50 : 1.50 : .44 in ♂, .75 : 2.20 : 1.21 : .43 in ♀; rostrum almost reaching hind margin of mesosternum; relative lengths of rostral segments I to IV: .40 : .43 : .38 : .44.

Pronotum distinctly shorter than basal width (.90 : 1.55), antero-lateral corners rounded, constricted in middle, with an obtuse lateral carina before the constriction on each side; collar very narrow; calli reaching lateral margins of pronotum, a pair of punctures between calli; posterior lobe of pronotum transversely rastrate; exposed part of mesonotum smooth; scutellum wider than long, transversely rugose. Hemelytra well extending over abdominal tip, point of costal fracture not reaching abdominal tip; cuneus much longer than twice the width in ♂ (1.37 : .52), about twice in ♀; membrane broad. Legs slender and long, furnished with short hairs,

Relative lengths of leg segments:

	Femur	Tibia	Ta 1	Ta 2	Ta 3
Fore leg	1.35	1.78	.15	.18	.23
Middle leg	1.57	2.09	.16	.19	.23
Hind leg	2.14	3.15	.16	.20	.26



Textfigs. 9—11. *Dryophilocoris saigusai*, ♂.

9 left-hand paramere in full view, 10 parameres, caudal view, 11 apical segments of abdomen, from right side; *l* left-hand paramere, *r* right-hand paramere.

all tibiae somewhat sinuate; hind tibiae nearly as long as costal length of corium.

Male genital segment short, with ventral hind margin produced into a quadrate median lobe; both parameres (Textfigs. 9—11) well developed but dissimilarly shaped; right-hand one (Textfigs. 10 & 11) broad, suddenly, inwardly bent before middle, with submedian broad projection and with broadly incised apex; left-hand paramere (Text-figs. 9 & 10) with 2 strong arms, or claw-like sensory lobe and bluntly ended apophysis.

Holotype ♂, Yachi-Onsen, Mts. Hakkoda, Mutsu, 13. vii. 1962, T. Saigusa, allotype ♀ and 2 ♀ paratypes, Mt. Ohginosen, Inaba, 9. vi. 1963, T. Saigusa.

The present species is closed *D. flavoquadrimaculatus* (De Geer) but easily distinguished from it by narrower pale fascia on corium, rounded antero-lateral corners of pronotum, relatively broader anterior half of pronotum to the basal width or head width across eyes and different structure of parameres.

Hallodapus linnavuori Miyamoto, sp. nov.

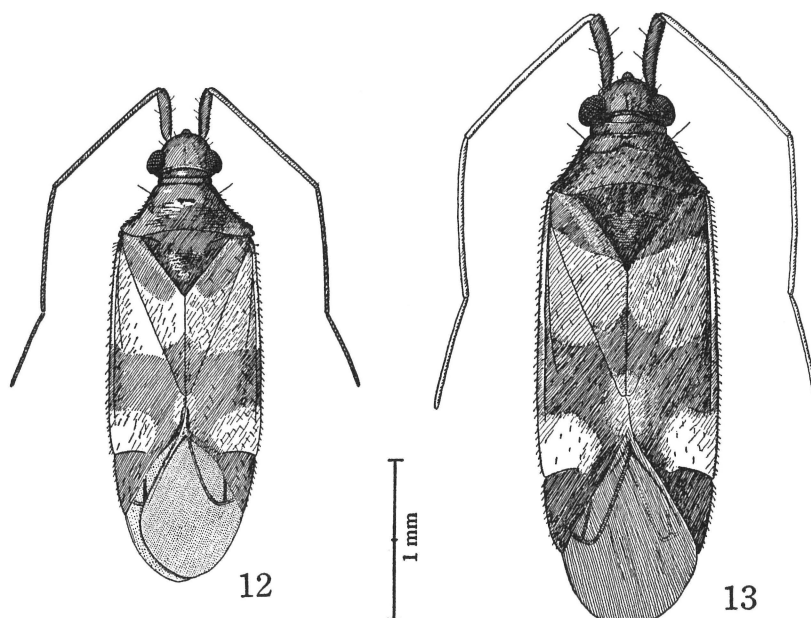
(Textfigs. 12 & 14—16)

Size: For ♂♂ 2.66—2.82 mm. long, 0.80—0.81 mm. wide across humeri and 0.92—0.96 mm. wide across hemelytra; those for ♀ 2.66 mm. long, 0.80 mm. wide and 0.96 mm. wide.

Coloration: Chestnut brown, more or less shining, with pale markings. Head and pronotum slightly paler excepting broad median part of posterior lobe of pronotum; eyes brownish red. 1st antennal segment brownish with a yellow stria on inner side, the stria suffused with red along both margins; 2nd to 4th segments yellowish, very slightly infuscated on apical portions. Rostrum pale brown. Scutellum dark brown. Hemelytra with a whitish broad transverse band behind scutellar apex, the band broader on corium, a whitish broad round marking on extero-posterior corner of corium and with a pale obscure marking on inner corner of corium; cuneus reddish brown; membrane fuscous. Legs yellowish, with femora on apical 2/3 reddish orange. Ventral side brownish, paler on head and thorax and darker on abdomen.

Structure: Elongate, subparallel-sided from humeri to cuneal bases, dorsum covered with pale sparse hairs. Head shorter than wide across eyes (.33 : .52), with a faint median longitudinal sulcus on vertex, with a transverse carina at base of vertex; interocular space a little more than twice as wide as an eye in ♂ (.28 : .12), ca. 3 times in ♀ (.32 : .10); tylus elevated. Antennae a little less (♂) or more (♀) than body length, with 1st segment thick, short and subequal to interocular space; 3rd segment very slightly narrower than 2nd and almost as long as pronotal basal width; relative lengths of the segments I to IV: .33 : .84 : .78 : .50 in ♂, .37 :

.99 : .92 : .52 in ♀. Rostrum extending over apex of hind coxae; ratios of rostral segments I to IV: .35 : .35 : .31 : ca. .26 (♀).



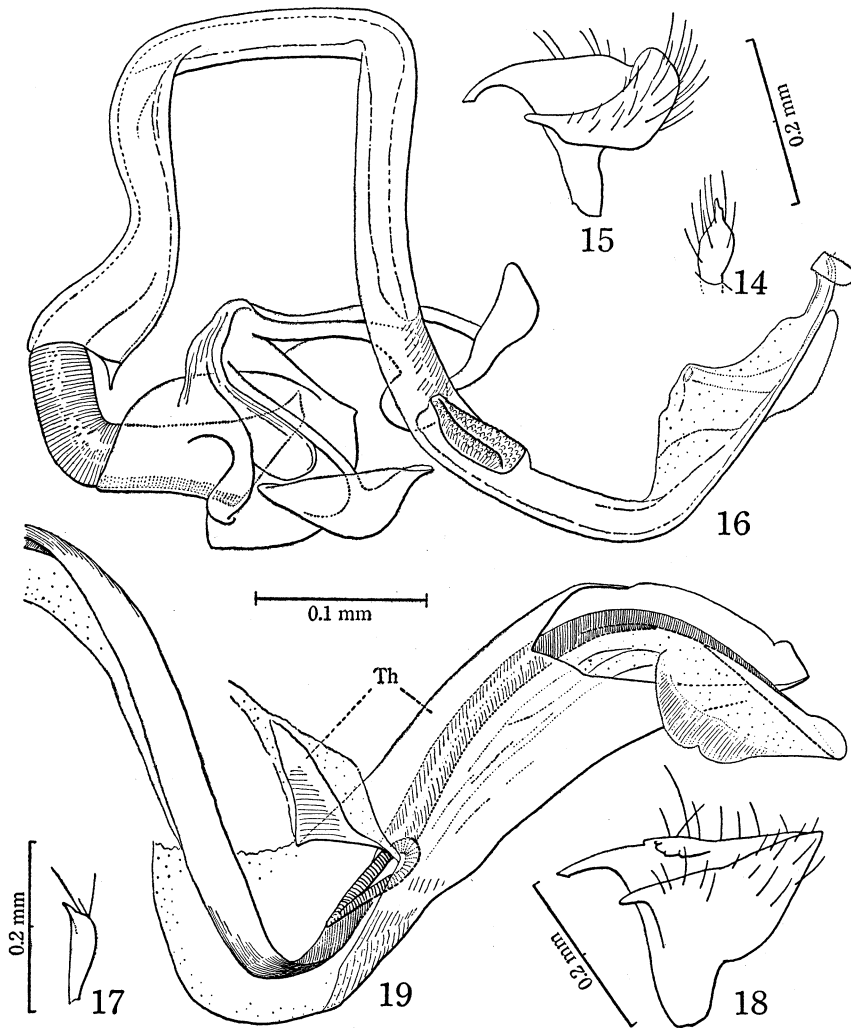
Textfigs. 12 & 13. *Hallodapus linnavuori*, ♂ and *H. kyushuensis*, ♂, legs omitted, dorsal views.

Pronotum ca. 2.5 times as long as basal width (.35 : .81 in ♂, .38 : .87 in ♀), with lateral sides concavely sinuate and distinctly divergent posteriorly, hind margin broadly, concavely sinuate; collar distinct, nearly as wide as base of 2nd antennal segment thick. Mesonotum widely exposed behind pronotal disc; scutellum shorter than wide. Hemelytra surpassing tip of abdomen; corial length subequal to hind tibiae; cuneus 1.5 times as long as wide. Hind legs with 2nd tarsal segment as long as 3rd.

Relative lengths of leg segments (♂):

	Femur	Tibia	Ta 1	Ta 2	Ta 3
Fore leg	.66	.73	.10	.11	.12
Middle leg	.72	.86	.10	.12	.12
Hind leg	.95	1.36	.12	.16	.16

Male genital segment distinctly convergent behind, with the sides slightly sinuate, an obtuse oblique carina and an oblique broad depression



Textfigs. 14—16. *Hallodapus linnavuori*, ♂.

14 right-hand paramere, 15 left-hand paramere, 16 aedeagus, theca omitted, from left side.

Textfigs. 17—19. *H. persimilis*, ♂.

17 right-hand paramere, 18 left hand paramere, 19 apical half of aedeagus, Th theca.

outside the carina on the right; right-hand paramere (Textfig. 14) with oval sensory lobe and narrow apophysis, apex of the latter obliquely truncated; left-hand paramere (Textfig. 15) much larger than the right, with relatively narrow apical portions of the 2 arms. Aedeagus (Textfig. 16) with a narrower apical membranous lobe and a wider subapical membranous lobe, both of which are minutely serrated along margins.

Holotype ♂, 23-25. vi. 1957, allotype ♀, 29. ix. 1956 and paratype ♂, Fukuoka, S. Miyamoto; 1 ♂, Hikosan, Buzen, 700 m. in height, 23-25. viii. 1961, S. Miyamoto, at light; all macropterous.

Linnavuorii related to *persimilis* Poppius, 1915 (Formosa) but easily distinguished from the latter by darker colour, less stiff hairs on dorsum, smaller eyes, slenderer legs and quite different structure of parameres and aedeagus (cf. Textfigs. 17-19). From *fenestratus* Linnavuori, 1961 (Kyushu) it is at once separable by not blackish colour on dorsum and femora, a broad whitish band across hemelytra, broader body, shorter antennae, more distinct transverse carina on vertex, etc.

Hallodapus kyushuensis Miyamoto, sp. nov.

(Textfigs. 13 & 20-22)

Size: For ♂♂ body length 3.52 mm., width across humeri 0.9-1.0 mm. and width across hemelytra 1.16-1.20 mm.; those for ♀ 3.85 mm. long., 1.03 mm. wide and 1.35 mm. wide.

Coloration: Chestnut brown, slightly shining, with pale markings. Head paler on apical portion except for apices of clypeus and juga a little infuscate, with eyes brownish red; 1st segment of antennae reddish brown with a pale yellow stria on inner side, 2nd to apical segments pale yellow; lorae reddish; 1st rostral segment dark brown, following segments pale with apex of distal segment dark. Scutellum darker than on pronotum. Hemelytra with a pale broad transverse band before middle of corium, the band being obscured on the claval commissure, a pale wide round marking on extro-posterior corner of corium and with a pale small marking on intero-posterior corner; cuneus somewhat reddish brown. Legs dark brown on femora, paler on coxae and trochanters, and pale yellow on tibiae and tarsi. Ventral side a little paler than on dorsum and more or less red-tinged.

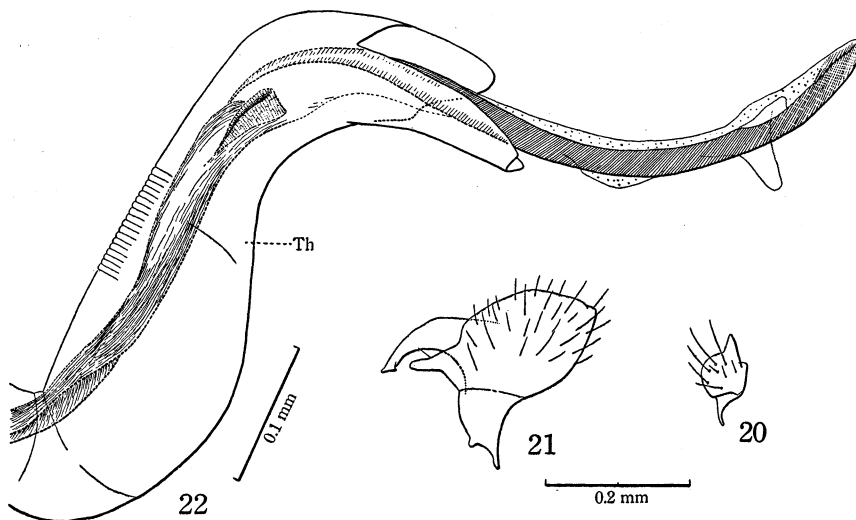
Structure: Elongate, subparallel-sided behind humeri, covered with dark sparse hairs on head and pronotum. Head shorter than wide (.40 : .60), with a feeble median longitudinal sulcus on vertex, with a transverse carina at base of vertex; eyes prominent, ca. $\frac{2}{5}$ times as wide as interocular space in ♂ (.14 : .33) or $\frac{1}{3}$ as wide as interocular space in ♀ (.12 : .36); tylus elevated. Antennae with the basal segment thick, slightly sinuate, shorter than head width, 3rd segment very slightly thinner than the preceding and a little longer than pronotal width but shorter than

2nd; relative lengths of antennal segments I to IV: .48:1.13:1.02:.65 in ♂, .50:1.32:1.12:.73 in ♀. Rostrum nearly reaching apex of posterior coxae; ratios of the segments I to IV: .43:.43:.30:.32.

Pronotum shorter than half as much as pronotal base wide (.40:.90 in ♂, .44:1.03 in ♀) but as much as anterior width of pronotum, lateral margins slightly sinuate and strongly divergent behind, hind margin broadly, concavely sinuate; collar distinct, wider than thickness of 2nd antennal segment. Mesonotum widely exposed behind pronotum; scutellum shorter than wide, with fine transverse rastration. Hemelytra covered with pale suberect hairs (excepting membrane), well surpassing tip of abdomen; costal margin of corium almost as long as hind tibiae; cuneus longer than basal width (.48:.33). Hind legs with 2nd tarsal segment subequal or a little longer than the apical.

Relative lengths of leg segments:

	Femur	Tibia	Ta 1	Ta 2	Ta 3
Fore leg ♂	.92	.93	.10	.12	.16
Middle leg ♂	1.06	1.15	.11	.12	.15
Hind leg ♂	1.24	1.75	.12	.175	.175
Hind leg ♀	1.40	1.97	.10	.24	.20



Textfigs. 20—22. *Hallodapus kyushuensis*, ♂.

20 right-hand paramere, 21 left-hand paramere, 22 apical half of aedeagus.

Male genital segment distinctly narrowed toward end, with an obtuse sinuate longitudinal carina on ventral side; right-hand paramere (Textfig. 20) with round sensory lobe and non-pigmented triangular apophysis; left-hand paramere (Textfig. 21) much larger, the sensory lobe with a short rod-like projection and apophysis with a subtruncate apex. Aedeagus (Textfig. 22) with bifurcate thecal apex, vesica with 2 subapical membranous lobes which are minutely serrated along margins.

Hototype ♂, Inuyamaze, Fukuejima, Goto Islands, off coast of Nagasaki, 5. ix. 1962, S. Miyamoto; allotype ♀, Fukuoka, 10. vii. 1962, T. Shirôzu, at light; paratype ♂, Nogochi near Fukuoka, 11. ix. 1966, S. Miyamoto.

H. kyushuensis is immediately separated from *fenestratus* Linnavuori, 1961 (Kyushu), *persimilis* (Poppius, 1915) (Formosa) and *linnavuori* Miyamoto (Kyushu) in much larger size, quite different coloration and distinct structure of aedeagus.

Location of the types appeared in the present paper is in the collection of Entomological Laboratory, Kyushu University.

Literature

- Carvalho, J. C. M., 1953, A new species of *Bothynotus* from Florida (Hemiptera: Miridae). *Florida Ent.* 36 (4): 161-163, 1 fig.
- Lindberg, H., 1934, Verzeichnis der von R. Malaise in Jahre 1930 bei Vladivostok gesammelten Heteropteren. *Not. Ent.* 14: 1-23, 1 fig., 1 pl.
- Linnavuori, R., 1961, Contributions to the Miridae fauna of the Far East. *Ann. Ent. Fenn.* 27 (4): 155-169, 4 figs.
- Poppius, B., 1915, H. Sauter's Formosa-Ausbeute: Nabidae, Anthocoridae, Termatophylidae, Miridae, Isometopidae und Ceratocombidae (Hemiptera). *Arch. Naturg. A*, 80 (8) (1914): 1-80.
- Wagner, E. et H. H. Weber, 1964, Hétéroptères Miridae. *Faun. France* 67: 1-591, 295 figs.