The commemorative issue of Dr. Masao Hayashi (1920-), one of the organizing members of the Society, who retired from the College in March and accept Professor Emeritus of the Osaka Jonan Women's Junior College in April, 1991.

The Japan Coleopterological Society

昆 蟲 学 評 論

THE ENTOMOLOGICAL REVIEW OF JAPAN

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Publications of MASAO HAYASHI

1944

1. 本邦産ニセハムシハナカミキリ属に就いて（鞘翅目・天牛科）. 関西昆虫学会会報, 14 (1) : 22-29, 3 figs.
2. 天牛分布資料㈠. 昆虫世界, 48 (567) : 6-9.（＋伊賀正汎）

1945

3. 天牛分布資料㈡. 同上, 49 (569) : 7-10.（＋伊賀正汎）

1947

4. *Eupogonius tenuicornis* BATES 九州に産す. 近畿甲虫同好会会報, 1 (1) : 24.
5. 天牛分布資料 ㈢. 同上, 2 (5) : 31-35.（＋江田茂）
6. 東北地方の天牛類㈠. 同上 : 36-38.

1948

7. カミキリムシの話. 宝塚昆虫館報, (44) : 1-17, 4 figs.
8. 日本産ヒゲナガコバネカミキリ属に就いて. 昆虫学評論, 1 (1) : 5-9, pl. 1.

1949

9. フトカミキリ亜科の天牛２種. 近畿甲虫同好会会報, 4 (1) : 1-4, 2 figs.
10. 屋久島産の天牛科甲虫数種に就いて. 宝塚昆虫館報, (61) : 8-9.
11. *Panelus parvulus* WATERHOUSE (1874) (Col.: Scarab.) について. 昆虫学評論, 1 (2) : 28.
12. 日本産ヒゲナガコバネカミキリ属研究追記. 同上 : 29-33.
13. 本州未記録の天牛類. 同上 : 33.

1950

14. A new species and a new subspecies of *Necydalis* from Japan (Col., Ceramb.). Trans. Kansai Ent. Soc., 14 (2) : 14-16, 1 fig.
15. On the genus *Epania* PASCOE from Japan (Col., Ceramb.). Ent. Rev. Japan, 5 (1) : 1-5, 3 figs.
16. *Neosalpinia lepturoides* MATSUSHITA について. 昆虫学評論, 5 (1) : 62-63.
17. A new species of the genus *Xylotrechus* from Japan (Col., Ceramb.). Trans. Kansai Ent. Soc., 15 (2) : 25-27, 1 fig.

1951

18. 四国の天牛類 (1). 宝塚昆虫館報, (78) : 1-14, 2 figs. (中條道夫＋)
19. 日本産クロトラカミキリ及びその近似種 (1). Amateur Entomology, 2 (1) : 1-2.
20. 同上 (2). 同上, 2 (2/3) : 1-3.
21. 同上 (3). 同上, 2 (4) : 1-6, pl.
22. 奈良の天牛類に関する過去の主な業績. 同上 : 24-29.
23. Correction for "On the genus *Epania* PASCOE from Japan". Ent. Rev. Japan, 5 (2) : 72.
24. Studies on Cerambycidae from Japan and its adjacent regions (I). Ibid. : 75-82.

1952

25. 護摩壇山及びその付近の天牛類 (1). 紀州昆虫, 3 (5/6) : 79-88.
26. コブヤハズカミキリ属について (予報). 昆虫学評論, 6 (2) : 15.

1953

27. ホタル. 毎日新聞, 6月7日.
28. 大台・大杉自然科学調査団報告 (昆虫, 鞘翅目). 関西自然科学研究会会誌, 7 : 7-9.
29. 紀伊半島地方の天牛相の検討 (予報). Lupe (北野高校生物研究会), 10 : 43-64, 1 pl.
30. Studies on Cerambycidae from Japan and its adjacent regions (II). Ent. Rev. Japan, 6 (5) : 38-42, pl. 8.

1955

31. 自然の片隅で. 朝日新聞夕刊, 9/2, 6, 9, 12, 17, 18. (6回)
32. 原色日本昆虫図鑑 (上) 甲虫篇. 保育社, 大阪. (中根, 大倉, 阪口, 伊賀, 後藤, 澤田, 上野, 岸井＋) (＋随筆 "えにし")
33. 虫の手帳. 中学生新聞 (毎日), 5/5-12/11. (28回)
34. "砂漠は生きている" 中のカミキリムシ. Atypus, 8 : 26.
35. 原色日本昆虫図鑑 (上) 甲虫篇, 増補改訂版. 保育社, 大阪. (中根, 大倉, 阪口, 伊賀, 後藤, 澤田, 上野, 岸井＋)
36. 野原, 池川, 森林, 山, 海での研究＋大台ケ原山の自然. Nature Study, 1 (3/4) : 3-7, 9.
37. ホタルを殺すな. 同上 : 16.
38. 大阪のジャングル. 朝日新聞大阪版. (4回)
39. "近畿甲虫同好会" 紹介. Nature Study, 1 (5) : 8.
40. 友ケ島の昆虫. 同上, 臨時増刊 (友ケ島の自然) : 16-18, 5 figs. (佐藤納＋)
41. 偶感. Amateur Entomology, 5 (1/2) : 1.
42. 大台ケ原山・大杉谷の甲虫. 大杉谷・大台ケ原山の自然 : 38-59, 2 pls.
43. 悪食？講座号外. Nature Study, 1 (7) : 6.
44. 動物の冬越し "昆虫". 同上, 1 (8) : 4-5. (＋河野洋, 佐藤納)

45. 今年の成果（大台ケ原・高野山・友ケ島）. 同上：6-7.
46. ヤマトシロオビトラカミキリ. 同上：8.
47. 昆虫学評論, Vol. 6 (6-9) 紹介. 同上：8.
48. “友ケ島の昆虫” 訂正. 同上：10.

1956

49. ブドウ害虫駆除に手抜かり. Nature Study, 2 (1)：12.
50. 三月の虫. 同上, 2 (3)：3.（佐藤納＋）
51. 四月の昆虫. 同上, 2 (4)：4, fig.（＋河野洋）
52. Re-examination of Dr. KANO's types on Cerambycidae. Ent. Rev. Japan, 7 (1)：9-10.
53. The Cerambycidae from the Island of Yakushima (Col.). Ibid.：11-15, pl. 3.
54. オオクボカミキリに就て. 昆虫学評論, 7 (1)：21-22, pl. 6.（＋小島圭三）
55. 創刊のことば. ねじればね, (1)：1.
56. タマオシコガネ武庫川に産す?!（紹介）. 同上：2.
57. 小豆島の昆虫. Nature Study, 臨時増刊（続小豆島の自然）：12-17, 3 figs.
58. The Cerambycidae from South Kyushu (Col.). Lupe, 14：61-66, pl. 1.
59. “水辺のロマンス”, トンボの産卵・水棲昆虫の呼吸適応. 毎日新聞.
60. 鳴く虫. 共同通信.
61. 採集標本の整理のしかた（昆虫）. Nature Study, 2 (9)：5.
62. 洞川・稲村ケ岳自然研究会. 同上：10-11, 3 figs.（＋児玉務）
63. ヤマトヒメハナカミキリ. 同上, 2 (11)：6, fig.
64. 北山峡の甲虫類(7). 同上：7-8.
65. 同上(8). 同上, 2 (12)：5.
66. 今年の成果（荒神岳・伯母子岳）. 同上：9, 11.
67. A new species of Melandryidae from Japan (Col.). Ent. Rev. Japan, 7 (2)：37-38, fig.（＋A. KATO）
68. Studies on Cerambycidae from Japan and its adjacent regions (V). Ibid.：39-41, pl. 9.
69. 三重県産の長朽木虫科甲虫. 昆虫学評論, 7 (2)：58-60.
70. 徳島県産カミキリムシ科. 昆虫科学, (4)：9-47, 1 map, 2 pls.（＋溝口・日浦・西岡）
71. Entomological results from the scientific survey of the Tokara Islands, V (Col., Ceramb.). Bull. Osaka Munic. Mus. Nat. Hist., 9：11-22, 2 pls.

1957

72. 冠島産の *Ceresium* 属天牛. あきつ, 6 (1)：26.
73. カエデの花に集まる昆虫(特に甲虫), 1. Nature Study, 3 (4)：10-11, 18 figs.
74. 同上 , 2. 同上, 3 (5)：6-7, 2 figs.
75. Study of *Pidonia*-group (Col., Ceramb.), I. Ent. Rev. Japan, 8 (1)：5-8, pl. 2.

(K. OHBAYASHI +)

76. Studies on Cerambycidae from Japan and its adjacent regions, VII. Akitu, 6 (2) : 37-40, figs. A&B.

77. 信貴・生駒の昆虫(甲虫). Nature Study, 臨時増刊 (信貴・生駒の自然) : 12-15.

78. 今年の成果 (比良山・大島・岩湧山・信貴山・ゴマノ壇山). 同上, 3 (12) : 7.

79. Studies on Cerambycidae from Japan and its adjacent regions, VIII. Ent. Rev. Japan, 8 (2) : 45-48, 3 figs.

80. 日本のかみきりむし(1). 昆虫学評論, 8 (2) : 53-59, pl. 9.

81. 原色日本昆虫図鑑 (上) 甲虫篇. 保育社, 大阪. (3版)

1958

82. 大阪の自然 (8), 動物 II (昆虫). Nature Study, 4 (1) : 4-5, 4 figs. (+大倉・河野・緒方)

83. カスリチビカミキリ. 同上 : 10, fig.

84. A new genus of Lepturinae from Japan (Col., Ceramb.). Ent. Rev. Japan, 9 (1) : 4, fig.

85. 近畿だけに発見される天牛. 新昆虫, 11 (7) : 11, fig.

86. 海辺の砂地の甲虫類. Nature Study, 4 (7/8) : 8-10, 4 figs. (+後藤・澤田・芝田)

87. ナガクチキムシの1珍種, *Melandrya obsoletomaculata* NOMURA. 同上 : 15, fig.

88. カエデの花と天牛類. 昆虫団体研究会大阪支部テキスト, 1 : 1-7, figs.

89. 京都北山, 芹生, 花背峠付近の特長. 同上, 2 : 1-2.

90. 原色日本昆虫図鑑 (上) 甲虫篇. 保育社, 大阪. (4版)

91. Studies on Cerambycidae from Japan and its adjacent regions, IX. Ent. Rev. Japan, 9 (2) : 46-50, 2 figs.

92. 日本のかみきりむし(2). 昆虫学評論, 9 (2) : 58-60, pl. 11.

93. 学名あれこれ. 山桜会報, 2 : 10.

1959

94. いわゆるサビカミキリのなかま(1). Nature Study, 5 (4) : 12-14, 10 figs.

95. 同上(2). 同上, 5 (5) : 6-8, 13 figs.

96. A new species of *Prionus* GEOFFROY from Japan (Col., Ceramb., Prioninae). Ent. Rev. Japan, 10 (1) : 4.

97. A new species of Prionine genus *Olethrius* from South Pacific. Bull. Osaka Munic. Mus. Nat. Hist., 12 : 1-4, 2 figs.

98. 成虫越冬するカミキリムシ. おおさか虫の国, 7 : 2-4.

99. 日本およびその近隣の天牛類の研究(10). 昆虫学評論, 10 (2) : 55-63, pl. 14.

100. 日本のかみきりむし(3). 同上 : 63-70, pl. 15.

101. 新甲虫研究専門誌 "Niponius" (紹介). Nature Study, 5 (12) : 4.

102. キベリコバネジョウカイの大発生. 同上 : 8.

103. 原色日本昆虫図鑑（上）甲虫篇. 保育社, 大阪. (5-7版)
104. A new genus of Lepturinae from Japan, with notes. Ent. Rev. Japan, 11 (1) : 12.
105. Study of *Pidonia*-group (Col., Ceramb.), II. Ibid. : 13-16, pls. 2-3. (K. OHBAYASHI +)
106. 琉球諸島の天牛類(1). 昆虫学評論, 11 (1) : 21-29, pl. 4, text figs. 1-4.
107. 原色日本昆虫図鑑（上）甲虫篇. 保育社, 大阪. (8版, 本文改訂)
108. The study of Lepturinae (Col., Ceramb.). Niponius, 1 (6) : 1-26, 25 figs.
109. An analysis of the Japanese cerambycid fauna with special reference to distribution belts. Pac. Ins., 2 (2) : 123-131, 3 figs.
110. 岩湧山の自然—甲虫—. Nature Study, 6 (8) : 17-19. (後藤, 大倉+)
111. Studies on Melandryidae from Japan, I. Ent. Rev. Japan, 11 (2) : 42-46, pl. 6.
112. オオルリハムシを青山高原にとる. 昆虫学評論, 11 (2) : 70.
113. トガリバホソコバネカミキリ雌の発見. ひらくら, 4 (1/2) : 3-6, figs. (+中根敏勝)
114. The Cerambycidae from Inner Mongolia collected by Prof. K. TSUNEKI. Kontyû, 28 (3) : 187-192, 3 figs.
115. 北海道のヤツボシハナカミキリ. Nature Study, 6 (10) : 9.
116 展覧会パンフレット—甲虫—（解説).
117. Studies on Cerambycidae from Japan and its adjacent regions, XII. Ent. Rev. Japan, 12 (1) : 11-13, pl. 2.

1961

118. Cerambycidae from New Caledonia, Part 1. Bull. Osaka Munic Mus. Nat. Hist., 13 : 7-65, 3 pls.
119. Une nouvelle espèce de *Rhodopina* du Nord des îles Ryukyu (Col., Ceramb., Lamiinae). Ibid. : 67-70, fig.
120. 日本産天牛類仮目録（1）パンフレット. (Cerambycinae, Clytini, 1)
121. 日本未記録のヤマカミキリ類1種. Nature Study, 7 (4) : 10.
122. 日本産天牛類仮目録 (2). (Cerambycinae, Clytini, 2)
123. カミキリ学を進めた人≪カミキリムシ博士≫—町の昆虫学者が学位をとるまで—. 随筆サンケイ, 8 (4) : 45-46.
124. 原色日本昆虫図鑑（上）甲虫篇. 保育社, 大阪. (9版)
125. 日本産天牛類仮目録 (3). (Cerambycinae)
126. 日本およびその近隣の天牛類の研究 (13). 昆虫学評論, 13 (1) : 21-26, pl. 5.
127. 原色日本昆虫図鑑（上）甲虫篇. 保育社, 大阪. (10版, 以降の増版の集録は省略)
128. 洞川ならびに稲村ケ岳の昆虫. 関西自然科学研究会会報, 14 : 2-3.
129. 平倉演習林の甲虫2・3. 同上 : 27.
130. The Cerambycidae of Amami-Ôshima Islands, I. Ent. Rev. Japan, 13 (2) : 35-

46, pls. 9-10.

131. 日本のかみきりむし (4). 昆虫学評論, 13 (2) : 53-60, pls. 11-12.

1962

132. 日本産天牛類仮目録(4). (Cerambycinae).

133. Coleoptera of Southeast Asia, II (Cerambycidae, Cerambycinae, *Perissus laetus* LAMEERE). Nature and Life of Southeast Asia, 2 : 111-113, fig. (M. CHÛJÔ +)

134. The Cerambycidae from Amami-Ôshima Islands, II. Ent. Rev. Japan, 14 (1) : 8-18, pls. 2-3.

135. 日本産天牛類仮目録(5).

136. 初夏の青山高原の昆虫. 関西自然科学研究会資料.

137. 台高山脈 (国見山・明神平) の昆虫. 同上 : 12.

138. 信貴・生駒夏の昆虫. 同上 : 16.

139. 大台ケ原山の昆虫相の特長. 同上.

140. Two new species of Lamiinae from Japan (Col., Ceramb.). Ent. Rev. Japan, 14 (2) : 33-34. (K. OHBAYASHI +)

141. The Cerambycidae from Amami-Ôshima Islands, III. Ibid. : 35-41, pl. 7.

142. トカラキボシカミキリ九州本土に産する. 昆虫学評論, 14 (2) : 66.

143. 日本産天牛類仮目録(6). (Prioninae, Aseminae, Disteniinae)

144. 湯ノ山, 御在所岳の昆虫. 関西自然科学研究会資料.

145. 天牛類の分布からみた近畿地方の昆虫相の特殊性について. 関西自然科学, (15) : 19-24, 1 map.

146. The Cerambycidae of Ryukyu Island, I. Ent. Rev. Japan, 15 (1) : 1-8, pl. 1.

147. 日本のかみきりむし(5). 昆虫学評論, 15 (1) : 25-36, pl. 4.

1963

148. Revision of some Cerambycidae on the basis of the types of the late Drs. KANO and MATSUSHITA, with descriptions of three new species (Col.). Ins. Mats., 25 (2) : 129-136, figs. 1A-D.

149. 紀伊半島の面白さ. 関西自然科学研究会資料.

150. The Cerambycidae of Ryukyu Islands, II. Ent. Rev. Japan, 15 (2) : 50-55, pl. 7.

151. 日本及びその近隣の天牛類の研究(14). 昆虫学評論, 15 (2) : 56-58, pl. 7.

152. 理博阪口浩平氏著「日本産隠翅目総説」1962 (英文, 書評). 同上 : 63-64.

153. ニコライ・ニコラエヴィチ・プラビルスチコフ先生の逝去. ねじればね, 8 (1) : 1-2.

154. こん虫採集のあとしまつ (178・179回). 関西自然科学研究会資料.

155. 洞くつと海岸の昆虫 (180回). 同上.

156. The Cerambycidae of Ryukyu Islands, III. Ent. Rev. Japan, 16 (1) : 10-16, pl. 2.

1964

157. 吉野春の昆虫雑感（189回）. 関西自然科学研究会資料.
158. 若葉と昆虫（190回）香落渓. 同上.
159. 梅雨と昆虫（191回）松尾山. 同上.
160. 盛夏の昆虫（196回）赤目渓谷. 同上.
161. オオサンショウウオ（〃）〃. 同上.
162. 紀伊半島南岸地方の昆虫（199回）. 同上.
163. 日本産天牛類仮目録（7）. 日本産甲虫チェックリスト（17）.
164. Dr. HAAF のアシナガゾウムシ属の研究（紹介）. ねじればね, 9 (1) : 1-2.
165. Dr. HAAF アシナガゾウムシの論文, 訂正・追加. 同上, 9 (2) : 1.
166. Some longicorn beetles from Cambodia (Col., Ceramb.). Ent. Rev. Japan, 17 (2) : 58-61, pl. 4.
167. 八重山群島波照間島の天牛類. 昆虫学評論, 17 (2) : 67-68, 1 fig.（＋野村英世）
168. 日本のかみきりむし（6）. 同上 : 69-76, 2 figs.
169. 輸入木材付着の天牛科甲虫類について―特に北米産種とその加害樹種―. 外材と木材産業（財団法人阪神南洋材検量所）, 4 : 1-11, figs.
170. カリフォルニヤ瞥見. 同上 : 12-14, figs.

1965

171. 箕面山の動物相調査（山地利用調査資料, 5）. 大阪府農林部, 271 pp., pls.（戸澤, 岡田, 河野, 緒方, 大倉, 後藤, 佐藤, 八木沼＋）
172. 枚岡市史第２巻別篇. 第１編自然, 第６章動物, 第７節甲虫類 : 153-154.
173. 春の昆虫（204回）. 関西自然科学研究会資料（9）.
174. 本州中西部日本海岸地方及び若狭湾の小島嶼の昆虫相の概要（205回）. 同上（12）.
175. 枚岡・生駒, 夏の昆虫（208回）. 同上.
176. 洞川・稲村が岳の昆虫（209回）. 同上.
177. 信貴山, 夏の昆虫（210回）. 同上.
178. 河内金剛山の昆虫（212回）. 同上.
179. 日本のかみきりむし（７）. 昆虫学評論, 18 (1) : 26-36, figs.
180. 春日山の昆虫. 奈良の自然 : 45-46.（六月社刊, 小清水卓二ほか著）
181. Records of some longicorn-beetles from Formosa with descriptions of new forms. Spec. Bull. Lep. Soc. Japan, (1) : 105-120.

1966

182. 琉球諸島のカミキリムシ. 高知大学学術研究報告, 14 (9) : 71-104, pl. 1.（小島, 国吉, 渡辺＋）
183. ドミニカ共和国積出しの木材に付着の天牛１種. 神戸植物防疫情報, (424) : 30, figs.
184. 多度・三重北端部の昆虫（219回）. 関西自然科学研究会資料.
185. 中・南米の昆虫相の特長（220回）. 同上.

186. 島・海岸の昆虫（222回）—伊勢イルカ島周辺の自然科学研究会—. 同上.
187. On some longicorn beetles from Taiwan and China with descriptions of six new species (Col., Ceramb.). Bull. Osaka Jonan Women's Jr. Coll., 1 : 1-11, pl. 1.
188. 長谷寺周辺の夜間昆虫採集. 関西自然科学研究会資料.
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190. ホタルの話. 同上.
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1988

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1989

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1990

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1991

Notes on the Chrysomelidae from Taiwan, China, XII.

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In this paper, I describe one new genus and six new species from Taiwan, China. Also, two species names are treated as new synonyms and one species name is resurrected from the junior synonym.

Subfamily **Cryptocephalinae**

Cryptocephalus hemifasciatus Chûjô (Figs. 1-2)

Cryptocephalus hemifasciatus Chûjô, 1934, J. Soc. Tropic. Agr., Taiwan, 6 (3): 516, 524 (Formosa: Musha).

Cryptocephalus minutissimus Chûjô, 1934, J. Soc. Tropic. Agr., Taiwan, 6 (3): 514, 524 (Formosa: Kanetowan). **New synonym.**

Cryptocephalus kesi Chûjô, 1956, Quart. J. Taiwan Mus., 7 (3/4): 213 (new name for *Cryptocephalus minutissimus* Chûjô, nec Germar, 1823).

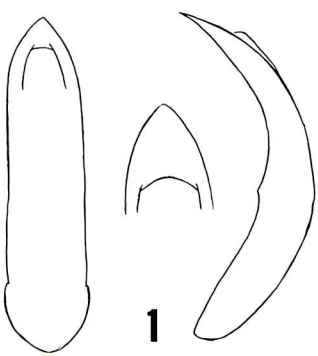

Fig. 1. Male genitalia of *Cryptocephalus hemifasciatus* Chûjô.

Materials examined: Sungkang, Nantou Hsien, 1 ex., 20. viii. 1969; Hohuan Pass, Hohuan Shan, Hualien Hsien, 4 exs., 3. v. 1971, K. Kanmiya; Tayulin, Hualien Hsien, 3 exs., 21. vi. 1976, M. Makihara; Fenchihu, Chiayi Hsien, 7 exs., 27. vi. 1970, Y. Hori; Alishan, Chiayi Hsien, 3 exs., 21-22. vi. 1971, Y. Miyatake; Tungpu Spa, Chiayi Hsien, 1 ex., 21. v. 1981, N. Ito; Mt. Yushan, Chiayi Hsien, 1 ex., 19. v. 1981, N. Ito; Yakou, 2,800 m, Kaohsiung Hsien, 4 exs., 1. viii. 1986, K. Baba; Tiehchih - Pishan Spa, 2,600 m, Taitung Hsien, 3 exs., 3. vi. 1987, K. Baba.

This species seems to be a very variable species on the markings of the dorsal

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surfaces. *Cryptocephalus minutissimus* CHÛJÔ was described by a female specimen.

Fig. 2. Variations of blackish markings on dorsal surfaces of *Cryptocephalus hemifasciatus* CHÛJÔ.

Subfamily **Galerucinae**

Stenoluperus itoi n. sp. (Fig. 3a)

Oblong-oval. General color bluish black, ventral surfaces generally black, antenna dark reddish brown with basal two or three segments reddish brown, legs generally yellowish to reddish brown.

Head with vertex nearly smooth, shining, sparsely impressed by distinct punctures; frontal tubercle distinct, well developed, convex, transverse, contiguous, wider medianly, surface smooth, shining, well separated from behind. Antenna slender, as long as body length; first segment long, robust, somewhat club-shaped; second nearly 2½ times as long as

first; third slightly longer than second and slenderer; fourth 2⅘ times as long as third; fifth slightly shorter than fourth, sixth 1⅕ times as long as fifth; seventh slightly shorter than sixth; eighth subequal to seventh in length and shape; ninth slightly shorter than eighth; tenth subequal to ninth in length and shape; eleventh subequal to tenth in length and its apex pointed; in preapical segment nearly seven times as long as wide. Pronotum transverse, nearly 1⅖ times as wide as long, anterior margin nearly straight, lateral margin slightly rounded and narrowed anteriorly, basal margin sinuate, rounded posteriorly at lateral portion and rounded anteriorly at middle; anterior and posterior corners thickened, slightly produced laterally, each with a setigerous pore; surface convex, without any distinct depression, and subrugosely punctate by strong punctures and interstices of punctures smooth and shining. Scutellum subtriangular, smooth, shining, impunctate. Elytron slightly rounded laterally, gradually widened posteriorly, surface subrugosely punctate by strong punctures and their interstices smooth and shining.

Length: 3.7–4.2 mm.

Holotype: Mt. Yushan, Chiayi Hsien, 19. v. 1981, N. Ito.

Paratopotype: 1 ex., same data as the holotype.

Paratypes: 1 ex., same data as the holotype but 2. viii. 1974, and 1 ex., 8. vi. 1980, N. Ito; Mt. Ali, 1 ex., 15. v. 1968, Y. Hayashi.

This new species resembles *Stenoluperus taiwanus* Kimoto, in having the similar coloration but differs in having the third antennal segment shorter, and pronotum more strongly and closely punctate and without any distinct depression laterally.

Stenoluperus minor n. sp. (Fig. 3b)

Oblong-oval. General color bluish black; ventral surfaces generally black, antenna yellowish brown with four or five apical segments infuscate; legs entirely yellowish brown.

Head with vertex nearly smooth, shining, sparsely impressed by distinct punctures, frontal tubercle distinct, well developed, convex, transverse, contiguous, wider medianly, surface smooth, shining, well separated from behind. Antenna slender, as long as body length; first segment long, robust, somewhat club-shaped; second shortest, nearly ⅓ as long as first; third long, nearly 2⅖ times as long as second; fourth slenderer, nearly 1¼ times as long as third; fifth to tenth subequal to fourth in length and shape; eleventh 1⅕ times as long as tenth; in preapical segment nearly five times as long as wide. Pronotum transverse, nearly 1⅓ times as wide as long, anterior margin nearly straight, lateral margin almost straight and narrowed anteriorly, basal margin rounded posteriorly at lateral portion and almost straight at middle; anterior and posterior

corners thickened, slightly produced laterally, each with a setigerous pore; surface convex, smooth, shining, rather closely impressed by large punctures, and with a pair of feeble depressions laterally. Scutellum subtriangular, smooth, shining, impunctate. Elytron slightly rounded laterally, gradually widened posteriorly, surface subrugosely punctate by strong punctures and their interstices smooth and shining.

Length: 2.7–3.3 mm.

Holotype: Mt. Yushan, Chiayi Hsien, 8. vi. 1980, N. Ito.

Paratopotype: 1 ex., same data as the holotype.

Paratypes: Mt. Yushan, Chiayi Hsien, 1 ex., 2. viii. 1980, Y. Kiyoyama, 3 exs., 19. v. 1981, N. Ito, 1 ex., 20. v. 1981, F. Kimura; Fenchifu, Chiayi Hsien, 1 ex., 29. v. 1981, F. Kimura.

This new species resembles *Stenoluperus itoi* Kimoto, from Taiwan, but differs in being the body length shorter and having antenna robuster and the third segment longer.

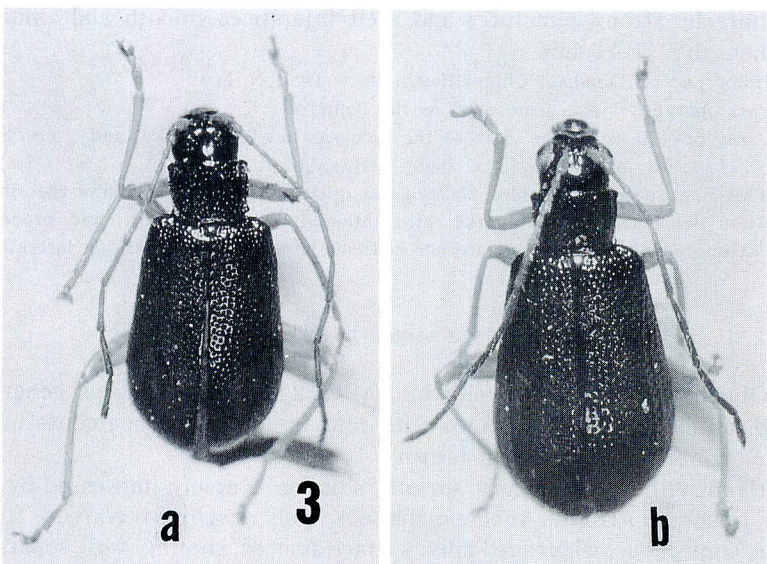

Fig. 3. a, *Stenoluperus itoi* Kimoto, n. sp.; b, *Stenoluperus minor* Kimoto, n. sp.

Key to species of Taiwanese *Stenoluperus*

1 Entirely bluish black 2
— Not entirely bluish black 3
2(1) Antenna with third segment subequal to or slightly longer than second (Weise, 1889; China, Taiwan) ..... *potanini*
— Antenna with third segment much longer than second (Laboissière, 1913; China,

Taiwan, Japan, Korea, E. Siberia)……*nipponensis*
3(1) Abdominal segments yellowish to reddish brown …… 4
— Abdominal segments blackish…… 7
4(3) Legs entirely blackish (CHEN, 1942; China, Taiwan)……*flaviventris*
— Legs pitchy black to yellowish brown …… 5
5(4) Antenna with second and third segments subequal …… 6
— Antenna with third segment much longer than second (GRESSITT et KIMOTO, 1963; China, Taiwan) ……*pallipes*
6(5) Antenna and legs entirely yellowish to reddish brown (TAKIZAWA, 1978; Taiwan) ……*matsumurai*
— Antenna and legs pitchy black (KIMOTO, 1969; Taiwan) ……*esakii*
7(3) Legs entirely yellowish brown …… 8
— Legs with femora infuscate (CHEN, 1942; China, Taiwan) ……*tibialis*
8(7) Antenna with third segment nearly twice as long as second…… 9
— Antenna with third segment slightly longer than second……*itoi* n. sp.
9(8) Antenna slenderer, fourth distinctly longer than length of second and third segments combined (KIMOTO, 1991; Taiwan)…… *taiwanus*
— Antenna robuster, fourth slightly shorter than length of second and third segments combined ……*minor* n. sp.

Doryscus varians (GRESSITT et KIMOTO), resurrected from synonymy

Trichobalya varians GRESSITT et KIMOTO, 1963, Pac. Ins. Mon., 1B: 673, 674 (SE China: Fukien, Kwangtung, Kiangsu); 1965, Pac. Ins., 7 (4): 802 (=*Doryscus testaceous* JACOBY).
Doryscus testaceous: CHÛJÔ, 1962, Phil. J. Sci., 91 (1/2): 17 (Formosa).
Doryscus chujoi TAKIZAWA, 1987, Kontyû, Tokyo, 46 (1): 130 (Formosa). **New synonym.**
Distribution: Taiwan, SE China.

Subfamily **Alticinae**

Neocrepidodera fulva n. sp. (Fig. 4a)

Oblong-oval. Entirely reddish brown.

Head with vertex nearly impunctate, except for a pair of large setigerous punctures situated behind eyes; frontal tubercles distinct, contiguous, subtriangular, smooth, shining, distinctly delimited by a deep furrow posteriorly; inter-antennal space convex, relatively wide; clypeus and labrum sparsely covered with yellowish pubescence. Antenna relatively robust, slightly longer than half length of body; first segment longest, robust, somewhat club-shaped; second shortest, nearly ¾ as long as first; third nearly as long as second and slenderer; fourth subequal to third in length and shape; fifth slightly longer than fourth; sixth subequal to fifth in length and shape; seventh slightly longer than sixth;

eighth to tenth subequal to seventh in length and shape; eleventh nearly 1½ times as long as tenth and its apex pointed; in preapical segment nearly 2⅘ times as long as wide. Pronotum transverse, nearly 1½ times as broad as long, lateral margin nearly straight, distinctly widened anteriorly, anterior margin slightly rounded anteriorly, anterior angle thickened, obliquely truncate, basal margin widely rounded posteriorly; surface convex, sparsely impressed by minute punctures and interstices of punctures smooth and shining, ante-basal transverse impression very deep and delimited by a pair of very deep longitudinal furrows laterally. Scutellum small, semicircular, surface smooth, shining, impunctate. Elytron convex, without any distinct transverse depression subbasally, and with regularly arranged in eleven longitudinal rows of punctures, including a short scutellar row of punctures, and their interstices smooth, shining, nearly impunctate.

Length: 2.0–2.1 mm.

Holotype: Tayulin, Hualien Hsien, 21. vi. 1976, H. MAKIHARA.

Paratopotype: 1 ex., same data as the holotype.

Paratypes: Lushan, Nantou Hsien, 1 ex., 20. vi. 1976, H. MAKIHARA; Yangmingshan, Taipei Hsien, 1 ex., 25. v. 1965, K. MORIMOTO.

This new species somewhat resembles *Neocrepidodera recticollis* JACOBY, from Japan, but differs in having the frontal tubercle of head distinctly delimited posteriorly by a deep furrow, transverse furrow of pronotum more deeply impressed and the longitudinal rows of elytral punctures more strongly impressed.

Argopus miyakei n. sp. (Fig. 4b)

Head generally pitchy black; pronotum entirely black; scutellum brown, elytron yellowish to reddish brown with apical part slightly paler; ventral surfaces generally ochraceous with prothorax pitchy brown; antenna entirely black with ventral surface of first segment brownish; legs generally pitchy black with posterior femora reddish brown.

Head with vertex smooth, shining, impunctate; frontal tubercles distinctly raised, large, contiguous, oblique, subquadrate and their anterior corners inserted between antennal sockets, and limited by a deep groove posteriorly; inter-antennal space elevated, clypeus granulate, with yellowish pubescence, anterior margin with a minute emargination at middle. Antenna slender, a little longer than half length of body, first to third segments sparsely and fourth to eleventh segments closely covered with fine hairs; first segment long, robust, club-shaped; second shortest, nearly ⅖ as long as first; third as long as second but slenderer; fourth slender, nearly twice as long as third; fifth slightly shorter than fourth; sixth subequal to fifth in length and shape; seventh slightly longer than sixth;

eighth to tenth subequal to seventh in length and shape; eleventh 1⅓ times as long as tenth and its apex pointed; in preapical segment nearly three times as long as wide. Pronotum transverse, 1¾ times as wide as long, sides rounded, widest slightly before basal margin, anterior margin generally rounded posteriorly and slightly produced anteriorly at middle, anterior corner thickened; surface convex, rather closely impressed by fine punctures, and their interstices smooth, shining. Scutellum elongate, subtriangular, rounded at apex, surface smooth, shining, impunctate. Elytron strongly convex, surface distinctly impressed by larger and smaller punctures, and larger ones partially arranged in longitudinal rows, humerus slightly raised.

Length: 4.6–5.1 mm.

Holotype: Lishan, Nantou Hsien, 28. vii. 1974, Y. MIYAKE.

Paratopotypes: 3 exs., same data as the holotype.

Paratypes: Lushan, Nantou Hsien, 2 exs., 18. vi. 1980, K. KUZUGAMI.

This new species slightly resembles *Argopus formosanus* CHÛJÔ, in having the anterior margin of clypeus slightly emarginate, but differs in being the body length slightly shorter and having pronotum entirely blackish.

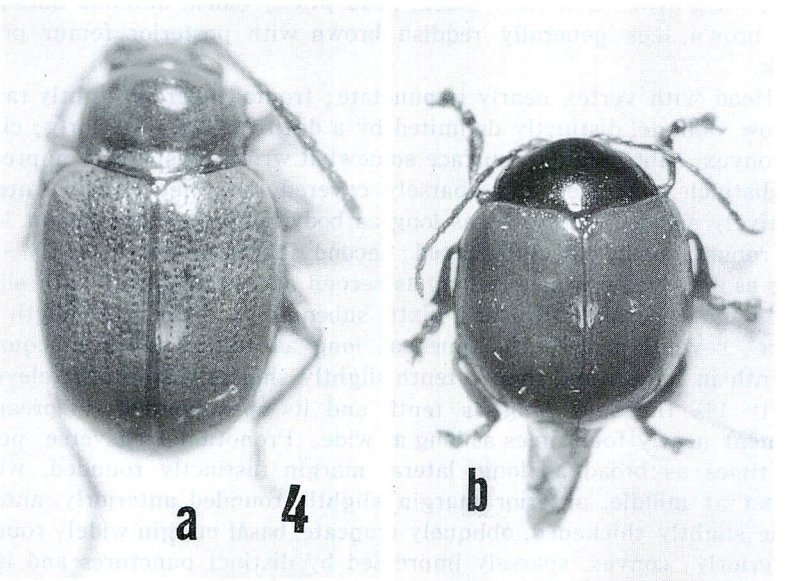

Fig. 4. a, *Neocrepidodera fulva* KIMOTO, n. sp.; b, *Argopus miyakei* KIMOTO, n. sp.

Genus *Taiwanorestia* n. gen.

Body ovate, convex, surface glabrous; frontal tubercle raised, oblique; antenna slender, eleven segmented; pronotum subquadrate, with a distinct subbasal transverse groove which is delimited by a pair of short longitudinal grooves laterally; elytron convex, with regularly arranged in eleven longitudinal rows of punctures; anterior coxal cavity opened posteriorly; prosternum wide, visible from above; mesosternum flat in center; hind femur robust; hind tibia normal, slightly widened towards apex; first hind tarsal segment slightly longer than remainder combined; claws appendiculate.

Type species: *Taiwanorestia nigra* KIMOTO.

This new genus somewhat resembles *Neocrepidodera* HEIKERTINGER, but differs in having the anterior coxal cavity opened posteriorly. Also, this new genus is separable from *Manobia* JACOBY, in having the subbasal transverse groove of pronotum distinctly delimited by a pair of distinct and short longitudinal grooves laterally.

Taiwanorestia nigra n. sp. (Fig. 5a)

Oblong-oval. Generally black, head pitchy black, antenna dark reddish brown, legs generally reddish brown with posterior femur pitchy black.

Head with vertex nearly impunctate; frontal tubercle slightly raised, narrow, oblique, distinctly delimited by a deep furrow posteriorly; clypeus convex, subtriangular, surface somewhat wrinkled, sparsely impressed by distinct punctures and sparsely covered with fine hairs. Antenna relatively slender, nearly 2/3 as long as body length; first segment longest, robust, somewhat club-shaped; second shortest, robust, nearly 2/3 as long as first; third nearly as long as second and slenderer; fourth slightly longer than third, fifth and sixth subequal to fourth in length and shape; seventh nearly 1¼ times as long as sixth; eighth subequal to seventh in length and shape; tenth slightly shorter than ninth; eleventh nearly 1⅖ times as long as tenth and its apex pointed; in preapical segment nearly four times as long as wide. Pronotum transverse, nearly 1⅖ times as broad as long, lateral margin distinctly rounded, widest almost at middle, anterior margin slightly rounded anteriorly, anterior angle slightly thickened, obliquely truncate, basal margin widely rounded posteriorly; convex, sparsely impressed by distinct punctures and interstices of punctures smooth and shining, ante-basal transverse impression distinct, slightly curved posteriorly at middle and delimited by a pair of short but distinct longitudinal furrows laterally. Scutellum small, semicircular, surface smooth, shining, impunctate. Elytron convex, with-

out any distinct transverse depression subbasally, and with regularly arranged in eleven longitudinal rows of punctures, including a short scutellar row of punctures, and their interstices flat, smooth, shining, nearly impunctate.

Length : 2.1 mm.

Holotype : Sungkang, 2,000 m - Tsifeng, 2,300 m, Nantou Hsien, 29. vi. 1965, T. NAKANE.

Paratype : Lushan Spa, 1,200 m, Nantou Hsien, 1 ex., 3. viii. 1990, S. KIMOTO.

This new species somewhat resembles *Orthocrepis nigripes* KIMOTO, from Taiwan, but differs in having elytral punctures regularly arranged in eleven longitudinal rows.

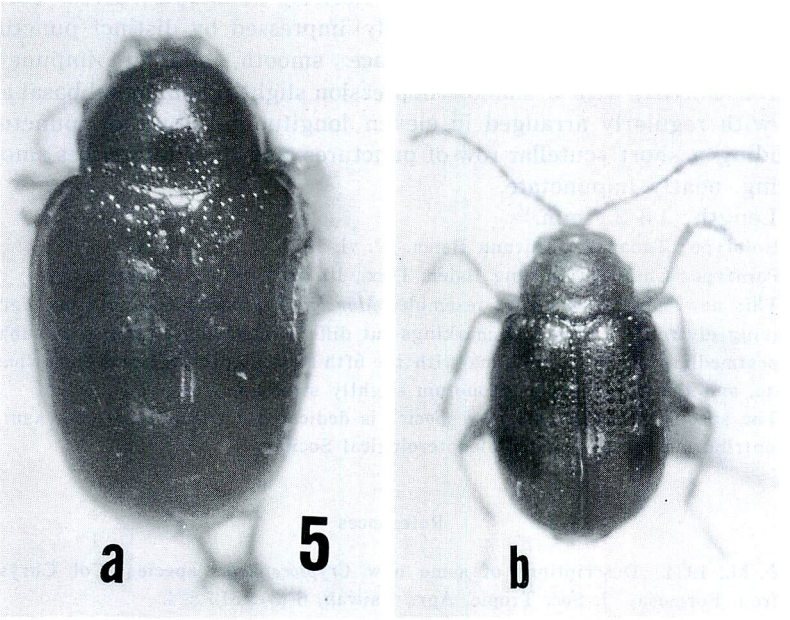

Fig. 5. a, *Taiwanorestia nigra* KIMOTO, n. sp. ; b, *Manobia hayashii* KIMOTO, n. sp.

Manobia hayashii n. sp. (Fig. 5b)

Oval. Generally reddish brown; elytron with subbasal and postmedian markings blackish ; antenna reddish brown with fifth to tenth segments more or less infuscate.

Head with vertex nearly impunctate, and with a pair of short, lateral longitudinal furrows at anterior margin ; frontal tubercles distinct, sub-

triangular, smooth, shining, distinctly delimited from behind by a distinct transverse furrow. Antenna nearly 2/3 as long as body length; first segment robust, club-shaped, longest; second robust, nearly half as long as first; third nearly as long as second and much slenderer; fourth nearly 1⅘ times as long as third; fifth and sixth subequal to fourth in length and shape; seventh subequal to sixth in length and robuster; eighth slightly shorter than seventh; ninth and tenth subequal to eighth in length and shape; eleventh 1⅔ times as long as tenth and its apex pointed; in preapical segment nearly twice as long as wide. Pronotum nearly 1¼ times as broad as long, anterior margin slightly rounded anteriorly, and anterior angle obliquely truncate, basal margin rounded posteriorly and slightly produced posteriorly at middle; dorsal surface convex, smooth and shining, sparsely impressed by distinct punctures. Scutellum small, semicircular, surface smooth, shining, impunctate. Elytron convex, with a shallow depression slightly behind subbasal area, and with regularly arranged in eleven longitudinal rows of punctures, including a short scutellar row of punctures, and their interstices smooth, shining, nearly impunctate.

Length: 1.8-2.1 mm.

Holotype: Tanansha, Taitung Hsien, 17. vi. 1972, Y. KIYOYAMA.

Paratype: Chihpen, Taitung Hsien, 1 ex., 10. viii. 1966, H. KAMIYA.

This new species somewhat resembles *Manobia bimaculata* KIMOTO, from Taiwan, in having elytron with blackish markings but differs in having elytron with subbasal and postmedian markings, antenna with the fifth to the tenth segments somewhat infuscate, and the punctures of pronotum slightly stronger.

The specific name of this new species is dedicated to Dr. MASAO HAYASHI, for his contribution to the Japan Coleopterological Society.

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TAKIZAWA, H., 1978. Notes on Taiwanese Chrysomelidae, I. Kontyû, Tokyo, 46 (1): 123-134.

Notes on the Species of *Nazeris* from Japan, V (Coleoptera, Staphylinidae)

By Tateo Ito

Nazeris wollastoni (Sharp)

Mesunius wollastoni Sharp, 1874, Trans. ent. Soc. Lond.: 68.

Nazeris wollastoni (Sharp): Bernhauer & Schubert, 1912, Col. Catalog., Staphylinidae 3: 212; Adachi, 1939, Nippon no Kochu, 3 (1): 8; Adachi, 1955, J. Toyo Univ., (7): 17; Y. Shibata, 1977, Ann. Bull. Nichidai Sanko, 20: 32.

Nazeris wollastoni (Sharp) is clearly characterized from *Nazeris optatus* (Sharp) and its allied species in having the pronotum without any distinct long erect setae on lateral sides, the 7th abdominal sternite in the male not distinctly depressed along middle and the prosternal carina evanescent apically. The present species is discriminated into the following four subspecies.

Nazeris wollastoni wollastoni (Sharp) (Figs. 1-2)

Body robust, moderate-sized, shiny and black, mandibles, labrum, basal segments of antennae reddish brown, the rest of antennae, maxillary palpi and labial ones, legs pale yellow, maxillary palpi and femora slightly darkened, pubescence on body blackish brown but on mouth parts, antennae and legs yellowish brown. Length: 5.0-5.6 mm.

Head suborbicular, scarcely longer than wide, with punctures almost coarse, close and rather regular in arrangement and size, but a little weak and somewhat fine on narrow subdepressed areas near eyes, interspaces of the punctures smooth and not microsculptured, labrum narrowly and deeply excised in middle, four teeth pointed at tip, inner two teeth thicker and distinctly longer than the outer two, frons slightly depressed, vertex evenly convex and without such a perceptible V-shaped impression as in *N. optatus*, eyes small, each longitudinal diameter less than half length of postgena, which is slightly oblique, a little narrowed behind and then arcuately narrowed toward neck, antennae extending middle of pronotum, all segments distinctly longer than wide, 1st segment thick, cylindrical, as long as the following two segments together, 3rd a little less than

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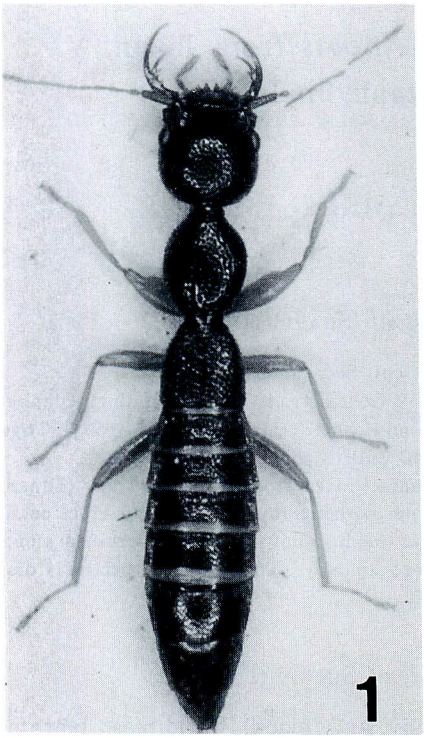


Fig. 1. Holotype of *Nazeris wollastoni wollastoni* (SHARP). (Y. SHIBATA photo.)

twice as long as 2nd, and to 10th decreasing gradually in length, 11th longer than 10th. Ventral surface of head with punctures similar to those on the dorsal one, but more regular, spaces among them nearly even, scarcely or very weakly microsculptured, mentum smooth and shiny, submentum slightly depressed, coarsely and sparsely scabrous.

Pronotum oval, rather wide (ratio of width to length=1 : 1.15), scarcely shorter and narrower than head (1 : 1.18), widest at apical third, wholly arched apically and gradually sublinearly narrowed basally, when viewed from above lateral margins mostly invisible, apical and basal margins visible, disc more coarsely, less closely and less regularly punctate than on head, the punctures becoming a little finer laterally, their arrangement somewhat disturbed by median line, median line is narrow and reaching middle from base, distinctly depressed on each side, and long erect black setae absent on lateral sides. Prosternum medianly carinate, very coarsely, deeply and rugosely punctate except smooth subapical area, the median carina lessened in height toward apex and almost vanishing extremely, each proepipleural process scattered with punctures which are very deep, very coarse, and more than ten in number. Scutellum small, distinctly punctate.

Elytra abbreviate, narrowed basally, width at the widest point near apex, about twice as wide as base and subequal to pronotal width, surface coarsely, a little rugosely undulate and more coarsely, more deeply punctate than on head.

Abdomen slightly enlarged laterally, 6th segment widest and wider than head, basal tergites coarsely and closely punctate and more coarsely, more closely than on apical tergites, punctures on each sternite coarser and deeper than those on the corresponding tergite, those on the apical-

most tergite very fine and obsolete, microsculpture very weakly visible only on two or three apical segments. In the male 7th sternite not depressed along middle, and very widely and shallowly emarginate in middle of apical margin, 8th sternite rather widely and triangularly excised apically, depth of the excision about two-thirds as deep as its subdistal width.

Legs of moderate length, hind femora and their trochanters without any specific characters.

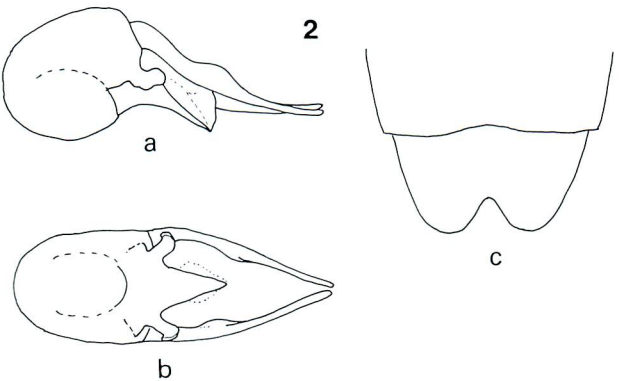


Fig. 2. *Nazeris wollastoni wollastoni* (SHARP).
a: Aedeagus in lateral view; b: Aedeagus in ventral view; c: The outlines of 7th and 8th sternites in ♂.

Aedeagus (Fig. 2) subsymmetrical, consists of three parts, median lobe and a pair of long processes (as apophyses? in *N. optatus*), median lobe trilobed, with a ventral plate equilateral-triangular, well-chitinized, and with two aural lobes small, simple and slightly curled at tip, the long processes forficate, very well-chitinized, projecting forward from dorsal side, passing enough the apex of median lobe, attenuating slightly toward subpointed apices and tumid on each inside, the tumidities callus-like, situated at basal third, directed dorsally and slightly asymmetrical to each other, the right callus a little larger than the left.

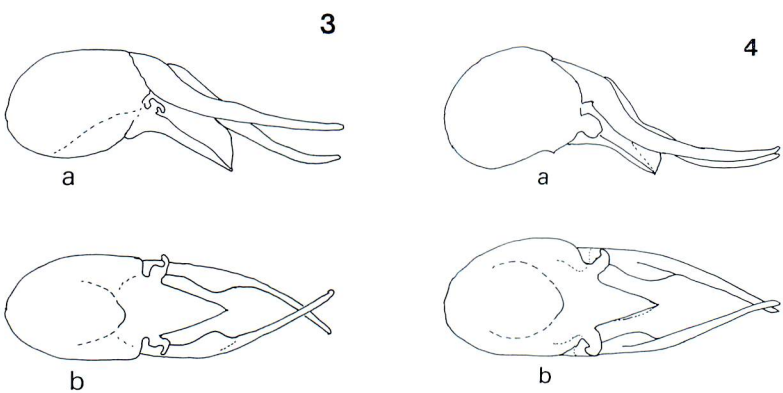
Specimens examined: Hyogo Pref., 36♂♂, 29♀♀, Mt. Mayasan, 15. X. 1983, 4. XI. 1983, 18. III. 1984, 30. III. 1985, 9. XI. 1986, 10. X. 1990 & 30. III. 1991, T. ITO leg., 2♂♂, 1♀, Higashi-Rokko, 4. IV. 1987, T. ITO leg., 2♀♀, Sasayama, 18. IX. 1983, T. ITO leg., 5♂♂, 5♀♀, ditto, 10. VI. 1980, 4. V. 1984, 19. V. 1984 & 16. III. 1986, Y. HAYASHI leg.; Osaka Pref., 1♀, Minoo, 14. V. 1959, T. SHIBATA leg., 1♂, ditto, 30. III. 1960, K. UEDA leg., 7♂♂, 3♀♀, ditto, 10. IX. 1983 & 1. VI. 1991, T. ITO leg., 1♂, Todoromi, 24. V. 1959, T. KAWATSU leg., 28♂♂, 21♀♀, Mt. Myoken, 6. XI. 1984, 28. IV. 1985, 30. VIII. 1986 & 16. V. 1987, T. ITO leg., 4♂♂, 7♀♀, Mt. Kodaiji, 10. X.

1985, T. Ito leg., 47♂♂, 29♀♀, Mt. Kabusanji, 13. IX. 1985, T. Ito leg.; Kyoto Pref., 1♀, Mizuho, 18. IV. 1987, Y. Hayashi leg., 7♂♂, 5♀♀, ditto, 2. VII. & 23. XI. 1989, T. Ito leg., 2♂♂, 3♀♀, Ooyamazaki, 30. IX. 1989, T. Ito leg.

Nazeris wollastoni kyotensis ssp. nov. (Fig. 3)

The present subspecies is separable from the original subspecies in the following points: the aedeagus fairly different in shape, the aural lobes ill-developed and distinctly excised on each outside like a worm-eaten lobe, the calluses of long processes wider, directed internally rather than dorsally, the abdomen with microsculpture clearer, slightly visible on basal segments especially in female, the head more coarsely and closely punctate, the elytra more rugosely undulate and the inner two teeth of labrum frequently less pointed and shorter.

Holotype: ♂, Hanase, Kyoto Pref., 2. X. 1987, T. Ito leg. (T. Shibata coll.). Paratypes: 11♂♂, 9♀♀, same data as holotype; 17♂♂, 13♀♀, Daimonji, Kyoto Pref., 27. III. 1988, 18. VI. 1989 & 7. X. 1989, T. Ito leg.; 12♂♂, 7♀♀, Mt. Hiei, Shiga Pref., 9. XII. 1984, T. Ito leg.; 8♂♂, 4♀♀, Hourai, Shiga Pref., 11. XII. 1983, T. Ito leg.



Figs. 3, 4. 3, *Nazeris wollastoni kyotensis* ssp. nov.; 4, *Nazeris wollastoni harimanus* ssp. nov.
a: Aedeagus in lateral view; b: Aedeagus in ventral view.

Nazeris wollastoni harimanus ssp. nov. (Fig. 4)

The present subspecies differs from the preceding subspecies in having the aural lobes of aedeagus well-developed and not excised anywhere, the calluses of aedeagal long processes wider, more strongly depressed on dorsal side, the body larger and robuster (5.7–6.2 mm), the head and

pronotum more coarsely punctate and the labral teeth usually subpointed; from the original subspecies in having the calluses of long processes differently directed and differently shaped, the body larger, the fore parts of body more closely, more coarsely punctate and the abdominal microsculpture more clearly visible.

Holotype: ♂, Akazai Valley, Hyogo Pref., 15. IX. 1986, T. Ito leg. (T. Shibata coll.). Paratypes: 4♂♂, 5♀♀, ditto, 20. V. & 3. VI. 1979 and 15. IX. 1986, T. Ito leg.

Nazeris wollastoni peninsularis ssp. nov. (Fig. 5)

The present subspecies is easily recognized from the preceding three subspecies by the aedeagus in structure, the larger eyes (each longitudinal diameter nearly as long as a half length of postgenae) and the microsculpture of abdomen in female (the abdominal microsculpture of the female invisible or scarcely visible); from *N. w. kyotensis* by the triangular plate of median lobe narrower and a little arcuately convergent to tip, the calluses of long processes less tumid; from the original subspecies and *N. w. harimanus* by the median triangle more narrowly elongated, a pair of aural lobes more poorly developed and each with a distinct excision.

Holotype: ♂, Mt. Kooya, Wakayama Pref., 1. V. 1985, T. Ito leg. (T. Shibata coll.). Paratypes: 3♂♂, 4♀♀, same data as holotype; 2♂♂, Mts. Oomine, Nara Pref., 1. VI. 1985, T. Ito leg.; 4♂♂, 4♀♀, Mt. Kongo, Osaka Pref., 10. VIII. 1986, T. Ito leg.

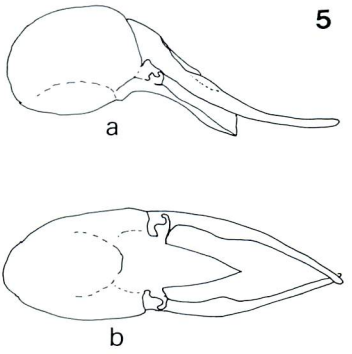


Fig. 5. *Nazeris wollastoni peninsularis* ssp. nov.
a: Aedeagus in lateral view;
b: Aedeagus in ventral view.

Nazeris masaohayashii sp. nov. (Fig. 6)

Body large, robust, a little shiny, black, mandibles, labrum, basal segments of antennae and coxae reddish brown, maxillary and labial palpi, apical segments of antennae and legs sordid yellow (femora somewhat darker), pubescence of body blackish brown but those of mouth parts, antennae and legs yellowish brown. Length: 5.6-6.0 mm.

Head relatively large, subquadrate and nearly as long as wide, coarsely closely punctate, but on frons rather irregularly in arrangement and size, labrum with all teeth subpointed and subequal in height to each

other, frons slightly unevenly depressed, vertex evenly convex and without distinct V-shaped impression, postgenae more than twice as long as longitudinal diameter of eyes, subparallel at sides and widely angulate toward neck, antennae long, passing fully middle of pronotum, 1st segment robust and long, as long as the following two segments together, 2nd scarcely shorter than half of 3rd, and to 10th gradually lessened distally in length, 11th wider and longer than 10th. Ventral surface of head more regularly punctate than on the dorsal one, interspaces of the punctures rather even and with a scarce and aciculate microsculpture, mentum smooth, submentum coarsely scabrous.

Pronotum suboval, longer than wide (1.16 : 1), slightly shorter (1 : 1.05) and narrower (1 : 1.22) than head, without erect long setae near the widest point at apical third, more coarsely but less closely punctate than on head, median line rather wide and long, almost visible from base to apex though slightly disturbed near middle and apex, distinctly depressed on each side of its basal half. Scutellum coarsely and deeply punctate.

Elytra subtriangular, scarcely narrower than pronotum, widest near apex, where twice as wide as base, sides gradually narrowed in apical half and rapidly narrowed basally, surface subdepressed behind scutellum, weakly and not coarsely undulate, coarsely and closely punctate but more or less irregularly in shape. Prosternum clearly carinate along middle, the carina slightly weakened toward apex and invisible near apical margin.

Abdomen expanded laterally, wholly and aciculately microsculptured, coarsely and closely punctate, the punctures having a tendency of becoming gradually finer in size and sparser in density toward apical segments, in the male 7th sternite scarcely emarginate in middle of apical

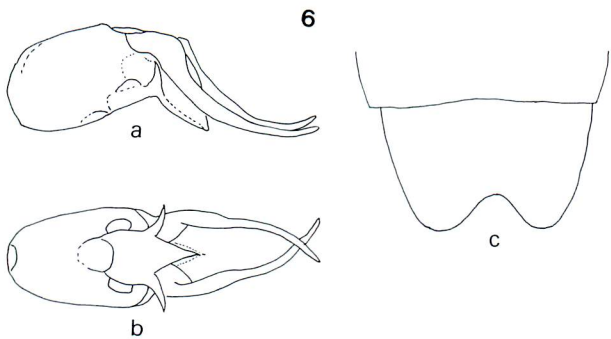


Fig. 6. *Nazeris masaohayashii* sp. nov.
a : Aedeagus in lateral view ; b : Aedeagus in ventral view ; c : The outlines of 7th and 8th sternites in ♂.

margin, 8th very widely and triangularly excised apically, depth of the excision about half of its width.

Aedeagus (Fig. 6) large and slender, dorsally with a pair of long processes, which are well-chitinized, very long, slightly sinuate in middle, produced fully beyond the apex of median lobe, attenuate toward subpointed tip and without callus-like tumidities, median lobe tricuspidate, the apical cusp narrowly triangular and bent ventrally, the lateral cusps antero-externally protuberant and directed dorsally at apices.

Holotype: ♂, Hirogawara, Yamanashi Pref, 9. VII. 1988, T. Ito leg. (T. Shibata coll.). Paratypes: 2♀♀, ditto, 10. VII. 1988, T. Ito leg.; 1♂, 1♀, ditto, 6. VI. 1964, Y. Watanabe leg.; 1♂, 2♀♀, ditto, 11. VI. 1966, Y. Watanabe leg.; 1♂, Gozaishi Spa, Yamanashi Pref., 13. VIII. 1989, T. Ito leg.

The present species is related to *N. wollastoni* (Sharp) in the male secondary sexual feature and the configuration of aedeagus, but can be distinguished from the latter as follows: The aedeagus differently shaped, the processes longer and slenderer, sinuous in middle and without any calluses, the median lobe with lateral cusps instead of aural lobes, the male 8th sternal excision much wider, the abdominal microsculpture wholly distincter, the head wider and the body larger and robuster.

The specific name is dedicated to Dr. Masao Hayashi who is one of the best managing directors of the Japan Coleopterological Society.

Nazeris validus sp. nov. (Fig. 7)

Body robust, large, shiny and black, mandibles, labrum, basal two or three segments of antennae and all coxae reddish brown, the antennal remainings, mouth parts and legs yellowish brown, pubescence of body blackish brown and those of appendices yellowish brown. Length: 5.6–6.2 mm.

Head suborbicular, a little longer than wide (1.03 : 1), coarsely, closely and rather regularly punctate (arrangement of the punctures somewhat irregular on frons), labrum with four subpointed teeth, the inner two teeth slightly longer than the outers, frons shallowly depressed, vertex evenly convex and with an ill-defined, V-shaped and obscure impression, the ends of which terminating in antennal prominences, postgenae more than twice as long as longitudinal diameter of eye, arcuately narrowed to neck, antennae reaching middle of pronotum, 3rd segment nearly twice as long as 2nd. Ventral surface of head with punctures more regularly arranged than on the dorsal one, spaces among them even and not or scarcely microsculptured, mentum smooth, submentum sparsely coarsely scabrous.

Pronotum subovate, longer than wide (1.13 : 1), a little shorter (1 : 1.06), and narrower (1 : 1.18) than head, widest at apical third, from there sides more rapidly and less linearly narrowed apically than basally, disc very

coarsely, closely and more or less irregularly punctate, median line placed in basal half and smooth, distinctly depressed on each side. Scutellum coarsely and closely punctate.

Elytra widely triangular, wider than pronotum and widest before apex, surface weakly and not coarsely undulate, punctures among undulations intermediate in average size as compared with those on head and on pronotum.

Prosternal carina decreasing apically in height and almost vanishing at apex.

Abdomen slightly enlarged laterally, gently divergent to 6th segment and then rather rapidly convergent distally, without microsculpture, with punctures coarse and close, reduced toward apical segments, those on each sternite coarser and deeper than on the corresponding tergite, in the male 7th sternite faintly emarginate in middle of apical margin, 8th very slightly depressed along middle, and widely triangularly excised at apical margin, the depth of the excision a little more than half of its width.

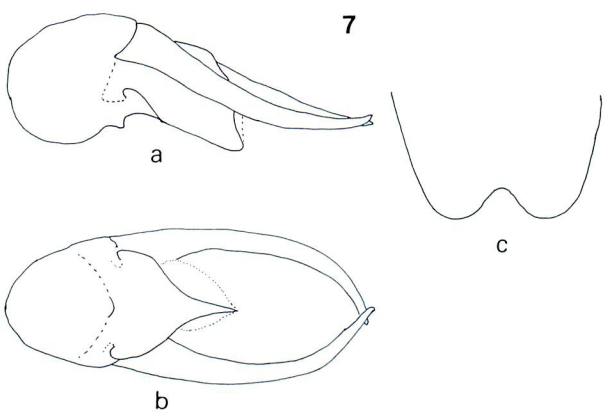


Fig. 7. *Nazeris validus* sp. nov.
a: Aedeagus in lateral view; b: Aedeagus in ventral view; c: The outline of 8th sternite in ♂.

Aedeagus (Fig. 7) robust, symmetrical, apical part of median lobe well-chitinous, subtriangular, with a pair of rudimental aural lobes on its base, from there slightly narrowed, then suddenly and distinctly contracted toward sharply pointed tip, forficate processes very thick and robust, tapering slightly to apex, with neither sinuses nor tumidities.

Holotype: ♂, Daibosatsu, Yamanashi Pref., 7. VII. 1988, T. Ito leg. (T. Shibata

coll.). Paratypes: 20♂♂, 20♀♀, ditto, 6-7. VII. 1988, T. Ito leg.; 5♂♂, 8♀♀, ditto, 26. VI. 1991, T. Ito leg.; 2♂♂, 2♀♀, ditto, 25. V. 1980, Y. Watanabe leg.; 1♂, ditto, 19-20. VIII. 1982, Y. Shibata leg.; 3♂♂, 2♀♀, Keitokuin, Yamanashi Pref., 8. VII. 1988, T. Ito leg.; 7♂♂, near Kurobera, Kofu, Yamanashi Pref., 24. IX. 1986, Y. Shibata leg.; 2♂♂, 4♀♀, Mt. Mitake, Okutama, Tokyo Metr., 5. V. 1967, Y. Shibata leg.; 1♂, 1♀, ditto, 12. VIII. 1990, T. Ito leg.; 1♀, Gozaishi Spa, Yamanashi Pref., 12. VIII. 1989, T. Ito leg.; 1♀, ditto, 12. XII. 1989, K. Hosoda leg.

Specimens examined: 1♂, Daibosatsu, Yamanashi Pref., 6. VII. 1988, T. Ito leg.; 1♂, Gozaishi Spa, Yamanashi Pref., 19. XII. 1989, K. Hosoda leg.; 2♂♂, Shimoaraya, Kanazawa, Ishikawa Pref., 12. X. 1959, Y. Hayashi leg.

Though the new species is similar to *N. wollastoni* (Sharp) in the sexual feature, it is easily separable from the latter by the body robuster and larger, the punctures of body coarser and deeper, the elytra wider, the male 8th sternite more widely excised at apical margin and the aedeagus quite different in shape. And the new species also resembles the preceding species, but it is distinguished by the apical part of median lobe shorter and rather simple, the aural lobes vestigial instead of well-developed, the forficate processes much thicker and robuster, without any sinuations, the microsculpture of abdomen quite invisible, the head narrower, the elytra wider, the male 8th sternite more narrowly excised.

Nazeris nipponicus sp. nov. (Fig. 8)

Head suborbicular, a little longer than wide (1.04 : 1), coarsely, closely and uniformly punctate, but a little finely and sparsely on subdepressed frons, four labral teeth subpointed, the inner teeth scarcely longer than the outer two, vertex evenly convex, obscurely impressed in irregular V-shape, both the ends of impression extending antennal prominences, postgenae as in the preceding species and clearly rounded, antennae passing middle of pronotum, all segments elongate, 1st segment largest, nearly as long as the succeeding two segments together, 2nd smallest, 3rd hardly twice as long as the preceding segments, and to 10th gradually shortened distally, 10th about twice as long as wide, 11th a little longer than 10th. Ventral surface of head more uniformly punctate than on the dorsal one, spaces among the punctures even and with a faint microsculpture, mentum smooth, submentum weakly, somewhat finely scabrous.

Pronotum rather oblong-oval, narrower than long (1 : 1.18), shorter (1 : 1.07) and narrower (1 : 1.22) than head, more coarsely, closely and less uniformly punctate than on head, widest at apical third, thence more gently rounded basally than apically, median line from base to near middle and smooth, distinctly depressed on sides. Scutellum coarsely and deeply punctate.

Elytra narrow, as wide near apex as pronotum, surface weakly and not coarsely undulate, with punctures close, coarse and slightly distorted

by the undulations.

Prosternal carina distinct on basal half, but indistinct on the other half.

Abdomen slightly expanded at sides, 6th segment wider than others and also wider than head, tergites coarsely and closely punctate, the punctures showing a tendency of decreasing in size and density toward apical segment, those on each tergite less coarse and less deep than on the corresponding sternite, and on basal tergites as coarse as on head, in the male 7th sternite weakly emarginate in middle of apical margin, 8th rather narrowly and triangularly excised at apical margin, the excision approximately shaped in a regular triangle.

Aedeagus (Fig. 8) not robust, median lobe distinctly asymmetrical, strongly reduced in thickness toward apex, when viewed laterally the apex like a kind of paper knife, long processes on dorsal side rather slender and attenuate apically, very slightly sinuous in middle, produced just beyond the apex of median lobe, aural lobes well-chitinous, rounded and not curled at apices.

Body length: 5.6–6.0 mm.

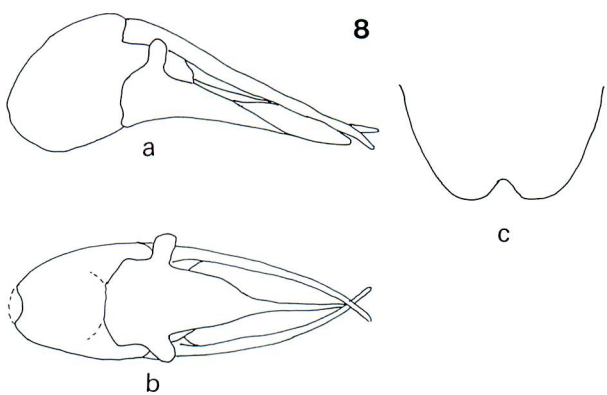


Fig. 8. *Nazeris nipponicus* sp. nov.
a: Aedeagus in lateral view; b: Aedeagus in ventral view; c: The outline of 8th sternite in ♂.

Holotype: ♂, Mt. Sôunzan, Hakone, Kanagawa Pref., 28. III. 1990, T. Ito leg. (T. Shibata coll.). Paratypes: 1♂, 4♀♀, same data as holotype; 2♂♂, 8♀♀, Chisujinotaki, Hakone, Kanagawa Pref., 7. VI. 1970, Y. Shibata leg.; 1♀, ditto, 14. V. 1971, Y. Shibata leg.; 1♂, 2♀♀, Mt. Kamiyama, Hakone, Kanagawa Pref., 26. V. 1975 and 25. V. 1974, Y. Shibata leg.; 1♂, Miyanoshita, Hakone, Kanagawa Pref., 16. IV. 1972, Y. Shibata leg.; 1♀, Manazuru, Kanagawa Pref., 24. IV. 1983, Y. Shibata leg.; 2♂♂, 1♀, Mt. Ooyama, Kanagawa Pref., 20. V. 1971, Y. Shibata leg.; 4♂♂, 2♀♀, ditto,

15. VI. 1974, Y. SHIBATA leg.; 1♂, 1♀, near Ohkura, Tanzawa, Kanagawa Pref., 2. V. 1969 and 2. V. 1971, Y. SHIBATA leg.; 3♀♀, near Bodai, Tanzawa, Kanagawa Pref., 8. VI. 1969, 29. IV. 1970 and 25. IV. 1971, Y. SHIBATA leg.

Specimen examined: 1♂, Manazuru, Kanagawa Pref., 15. X. 1972, Y. HIRANO leg.

The present species also belongs to *wollastoni*-group in the male abdominal sternites and aedeagus, but it is fairly separable from the latters by the following distinctions; from *N. wollastoni* (SHARP) by the forficate processes of aedeagus without distinct calluses, the median excision of the male 8th sternite shallower and narrower, the body larger and robuster, and its punctures much coarser and deeper; from *N. masaohayashii* sp. nov. by the median lobe of aedeagus with a pair of rounded aural lobes instead of lateral cusps, the apical margin of the male 8th sternite much more narrowly excised, the head relatively narrower, and the microsculpture of abdomen invisible; from *N. validus* sp. nov. by the median lobe of aedeagus asymmetrical and much thinner at apex, the aural robes well-developed, the 8th sternite of the male with much narrower excision, and the elytra proportionally narrower.

New Records of Japanese Staphylinid Beetles, II (Coleoptera)

By Tateo Ito

Stenus gestroi stigmatipennis Benick

Stenus stigmatipennis Benick, 1929, Deut. ent. Zeit.: 90.
Stenus submaculatus taiwanensis Puthz, 1968, Ent. Rev. Japan, 20 (1/2): 47.
Stenus gestroi taiwanensis Puthz, 1970, Ibid., 23 (1): 23.
Stenus gestroi stigmatipennis: Puthz, 1981, Fragm. Coleopt., 29/32: 121.

Specimens examined: 7♂♂, 5♀♀, Tungpu Spa, Nantou Hsien, Taiwan, 22. V. 1981, T. Ito leg.; 2♂♂, 3♀♀, Yona, Okinawa-Honto Is., Okinawa Pref., 7. VIII. 1964, T. Ito leg.

Distribution: Japan* (Okinawa-Honto Is.*), Oriental Region.

Remarks: Specimens from Okinawa-Honto Is. were found on the surface of the fallen tree lying in the vicinity of narrow stream, and all of them belong to the variety of having larger elytral spots. The present subspecies is first reported from Japan.

Stenus flavidulus paederinus Champion

Stenus paederinus Champion, 1924, Ent. mon. Mag., 60: 160; Cameron, 1940, Proc. R. ent. Soc. Lond., (B) 9: 87.
Stenus flavidulus paederinus: Puthz, 1967, Deut. ent. Zeit., 14: 143; Rougemont, 1981, Annli. Mus. civ. Stor. nat. Genova, 83: 374; Puthz, 1981, Reichenbachia, 19: 8; Rougemont, 1983, Nat. Hist. Bull. Siam Soc., 31: 53; Naomi, 1990, Elytra, Tokyo, 18 (2): 197.

Specimens examined: 1♀, Okinoerabu Is., Kagoshima Pref., 24. III. 1966, T. Ito leg.; 14♂♂, 14♀♀, Kametsu, Tokunoshima Is., Kagoshima Pref., 29. III. 1966, T. Ito leg.; 1♂ Naze, Amami-Oshima Is., Kagoshima Pref., 15. VI. 1961, T. Shibata leg.; 1♀, Shimmura, Amami-Oshima Is., Kagoshima Pref., 30. III. 1966, T. Ito leg.

Distribution: Japan (Okinawa-Honto Is., Okinoerabu Is.*, Tokunoshima Is.*, Amami-Oshima Is.), Oriental Region.

Remarks: The present subspecies was already recorded from Japan by Naomi (1990). Specimens from Okinoerabu Is. and Amami-Oshima Is. were captured by beating off the trees, and those from Tokunoshima Is. were found under the heaps of refuse leaves in a sugar cane field.

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* Newly recorded.

[Ent. Rev. Japan, Vol. XLVI, No. 2, p. 136, Dec., 1991]

Studies on the Tenebrionidae of SHIBATA Collection Mainly from S.E. Asia, IV. (Coleoptera)

On the genus *Tetraphyllus* LAPORTE DE CASTELNAU et BRULLÉ (II)

By KIYOSHI ANDO

Abstract Seven new tenebrionid species which belong to the genus *Tetraphyllus* are described from Borneo, the Malay Peninsula and Sulawesi. Two of them belong to the *marginicollis* group, and the remainings to the *foveolatus* group. The specific names of the new species are given as follows: *T. quadrinotatus*, *T. hayashii*, *T. nitidulus*, *T. humillimus*, *T. insignis*, *T. sakoi* and *T. iridescens*.

Tetraphyllus quadrinotatus sp. nov.

(Figs. 1-2)

♀. Large and oblong-oval, not strongly convex above; dorsal surface dark brown with an auric-olive tinge, quadrimaculae of elytra (Fig. 1) large and reddish brown, ventral surface, legs, lateral margins of pronotum also reddish brown, antennae reddish brown or blackish; the elytral maculae each isolated, in which the basal macula is pear-shaped, occupying basal third (seemingly occupying almost basal half in dorsal aspect) and between 2nd and 8th intervals, weakly produced behind on 4th stria, slightly narrowed to base and steeply constricted near base, therefore the width of extreme base much narrower than the maximum width (1 : 3); the apical macula subtriangular or subtrapezoidal, occupying from behind middle to apical fourth, situated between 2nd and 8th intervals as the basal macula, but less wide at the maximum width than the latter, anterior margin of the macula weakly and irregularly undulate, strongly emarginate between 3rd and 4th intervals, the undulation somewhat various but the emargination constant, posterior margin ill-defined and apparently rounded.

Head semicircularly rounded in front half, moderately produced forwards drawing in a gentle curve from genae; clypeus twice as wide as long (10 : 20), convex basally, then sloping slightly forwards, irregular-

[Ent. Rev. Japan, Vol. XLVI, No. 2, pp. 137-152, Dec., 1991]

ly and rather densely punctate, clypeal suture clear and very fine, but indistinct laterally; genae depressed, obscurely punctate; frons feebly convex, sparsely and obscurely punctate, interocular space a little wider than clypeal length; eyes convex, inner ocular sulci deep, becoming shallower to front margins of eyes, ending at just half of each genal base; antennae (Fig. 2) relatively short, never touching base of pronotum, five distal segments forming a very loose club, 11th subquadrate, relative length of each segment as follows:— 8.0 : 5.0 : 7.0 : 6.0 : 5.5 : 6.5 : 6.0 : 7.5 : 8.0 : 7.5 : 11.7; terminal segments of maxillary palpi rather strongly produced forwards at intero-apical angles; mentum oval, rounded and strongly bordered at apex, longitudinally convex in middle and excavate on each side, with a few punctures, lateral margins unbordered except apical fourth.

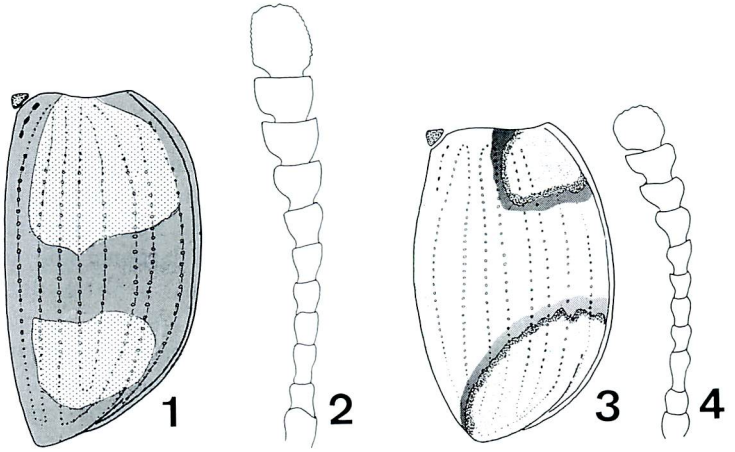
Pronotum subpentagonal, weakly convex, slanting slightly laterad, obscurely, minutely and sparsely punctate; apical margin strongly and fairly emarginate, finely bordered, the border widely interrupted in middle; base rather strongly produced back medially; apical angles subrectangular, whose corners are acutely prominent forwards; basal angles rectangular; lateral margins steeply narrowed in front and sublinearly widened behind from apical third, finely bordered.

Elytra oblong-oval, widest behind middle, not strongly convex, finely and shallowly striate, punctures on the striae rather dense, moderate in size, becoming minuter towards apex, and almost evanescent on apical declivous area, 9th stria overlapping lateral margin; intervals nearly flat, microscopically punctate, 9th interval visible from above, convex ventrad only at humeral portion; epipleuron shallowly excavate inside dorso-humeral convexity of 9th interval, not so flat or slightly convex as the remaining area.

Prosternum between procoxae bisulcate along middle and convex laterally; mesosternal V-shaped ridge moderate in height, with a small protuberant tip below at each inner angle of base; metasternum sparsely and minutely punctate; abdominal segments similarly punctate, convex in middle, scarcely rugose on three basal segments, 1st segment distinctly bicarinate on central portion between metacoxae, the carinae reaching just before apical margin.

Legs short; fore and hind femora projecting slightly beyond lateral margins of pronotum or elytra, so slightly visible from above; tibiae short, slightly incurved, sparsely pubescent near apices of inner sides, middle tibiae distinctly carinate along outer margins; tarsi moderate-sized, hind tarsi nearly as long as fore tibiae, relative length of hind tarsal segments as follows:— 18 : 6 : 7 : 25.

Length: 7.5 mm.; width: 5.0 mm.



Figs. 1-4, 1, 2. *Tetraphyllus quadrinotatus* sp. nov.; 3, 4. *Tetraphyllus hayashii* sp. nov. 1, 3. Right elytron; 2, 4. Antenna.

Holotype: ♀, Kimanis Rd., Sabah, Borneo, 11, V. 1981, M. TAO leg. (in NSMT). Paratypes: 1 ex., Head Quarters, Sabah, Borneo Is., 21. II. 1980, H. ARIMOTO leg. (coll. A. KATO); 1♀, Poling Hot Spring, Sabah, Malaysia (Borneo Is.), 28. IV. 1980, M. & A. SAKAI leg. (in coll. Ehime Univ.)

The new species is peculiar by the noticeable elytral maculae, otherwise somewhat similar in the dorsal pattern to *T. rufoplagiatus* KASZAB, but is distinctly unlike from the latter by much different colour and size of the body, not strongly convex elytra, ecarinate outer margins of the fore and hind tibiae.

The present species must be placed near the *scatebrae* (*Addia*) group in characteristic except the structures of elytral epipleura and the 1st abdominal segment.

Tetraphyllus hayashii sp. nov.

(Figs. 3-4)

♀. Oval; shiny, head and pronotum bluish green, elytra with suture violet and sutural intervals blue-black on olivaceous derma, each elytron with two metallic blue-green patches (a humeral and an apical), wide interspace of these patches tinged with obscure gold, ventral surface, antennae and legs dark reddish brown; the humeral patch subquadrate, rounded at intero-lateral margin and subtruncate at hind margin, reaching basal and lateral margins of elytron, double bordered outside, the neighbouring border brilliant blue and narrow, occupying at most a half width of 5th interval, the more external border purple and wide, occupying at least same width of 5th elytral interval; the apical patch large and transverse, with external double borders, which are

similar in colour to those of the basal one, anteriorly rounded and undulated, posteriorly follow entirely elytral apical patch, reaching extreme suture and linked with the other apical ones, therefore both the apical patches forming a common fascia.

Head transversely subtrapezoidal; clypeus very slightly arcuate at apex, distinctly convex in median two-fourths, unevenly depressed in part medianly, gently subflattened laterally, irregularly and not densely punctate, the punctures moderate in size, becoming somewhat minuter laterad, clypeal suture shallowly impressed; genae flattened and similarly punctate on clypeus laterally, lateral margins a little divergent frontad from before base, thence steeply incurved towards apex; frons slightly convex, gradually declivous forwards, sparsely punctate, the punctures moderate in size, still sparser just behind clypeal suture, interocular space nearly 1.5 times equal in width to clypeal length (20 : 14); eyes moderately convex, without any ocular sulci; vertex flattened, more minutely and densely punctate than on frons; antennae (Fig. 4) elongate, passing enough base of pronotum, five distal segmemts forming a very loose club and moderately dilated towards each apex, 11th short-oval, relative length of 2nd to 11th segments from basal to apical as follows:— 4.7 : 7.0 : 4.3 : 4.5 : 4.5 : 6.0 : 5.0 : 5.0 : 5.5 : 8.0; mentum subcordate, strongly convex, thickly bordered at apex, parenthetically furrowed along each lateral margin.

Pronotum subtrapezoidal, weakly convex, gently aslant laterad and apicad, sparsely and minutely punctate, the punctures clearly impressed and irregular in size, becoming minuter towards both apical and basal margins, obscurer and minuter laterad; apical margin equally and strongly emarginate, finely bordered on each side, the border interrupted in median fourth; apical angles subtriangular and strongly produced frontad, whose corners are slightly rounded and very narrowly bordered; lateral margins slightly arcuate and narrowly bordered, incompletely channeled inside the borders.

Elytra oval, strongly convex, distinctly bordered at sides, with rows of punctures, the punctures sparse and rather regularly arranged, distinctly impressed and becoming much minuter apicad, 9th row widely distant from lateral margin behind base; intervals slightly convex, minutely and sparsely punctate, 9th interval slanting vertically, slightly convex laterad, space between lateral margin and 9th row slightly depressed; epipleuron opposite to metasternum weakly depressed.

Prosternum longitudinally and a little convex in middle and indistinctly bisulcate between procoxae, with a stub at middle of rimmed apex, prosternal process triangular, rounded at its tip; mesosternal V-shaped ridge descendant forwards, with a tubercle at middle of each

descendant slope; principal punctures of metasternum sparse and minute, though obscure and not minute laterally; abdominal segments scarcely punctate, longitudinally and moderately rugose on three basal segments, 1st segment finely bordered on base.

Legs elongate; middle and hind femora just reaching lateral margins of elytra, thereby scarcely visible from above; tibiae slender, ecarinate or unedged, hind tibiae gently depressed in apical halves of both upper and under sides; tarsi simple and more or less elongate, claw-segments of fore tarsi a little shorter than the preceding segments together, relative length of hind tarsal segments from basal to apical as follows:—13.0 : 5.0 : 4.5 : 19.5.

Length: 5.5 mm.; width: 4.0 mm.

Holotype: ♀, Keningau, Sabah, N. Borneo, 14. III. 1989, M. ITOH leg. (in SC).

The new species is somewhat allied to *T. corruscus* (FAIRMAIRE), but is different from the latter in having the elytral epipleura shallowly depressed, also similar to *T. tristis* (GEBIEN) and *T. szekessyi* KASZAB, but in having the 1st abdominal segment not carinate, the frons much wider, the clypeus not flattened and distinctly punctate, the sides of pronotum narrowly bordered.

The specific name is dedicated to Dr. MASAO HAYASHI, who is the most famous Japanese taxonomist of Asian longicorn beetles.

III. *foveolatus* group

Tetraphyllus foveolatus KASZAB, 1977

(Figs. 5-6)

Specimens examined: [Malay Peninsula] 1 ex., Maxwell's Hill, 6. III. 1974, Y. KIYOYAMA leg.; 2 exs., ditto, 17. VI. 1975, Y. KIYOYAMA leg.; 5 exs., ditto, 20. V. 1975, 15. I. 1976 & 31. III. 1978, Y. KIYOYAMA leg.

Tetraphyllus sulcaticollis PIC, 1948

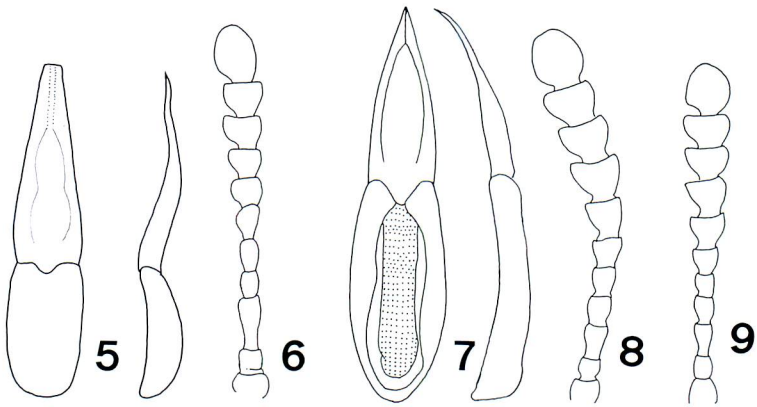
(Figs. 7-8)

Specimens examined: [Malay Peninsula] 2 exs., Leng Gong, 26. V. 1975, Y. KIYOYAMA leg.; 1 ex., Lubok Mandi, Bentong, 26. VI. 1975, Y. KIYOYAMA leg.; 1 ♂, Sungai Dua, Gemas, 19. IV. 1975, Y. KIYOYAMA leg.

Tetraphyllus nitidulus sp. nov.

(Fig. 9)

♀. Oblong-oval, slightly dilated backwards, moderately convex; shining and reddish brown, head and pronotum bluish olivaceous, with vague blue-black tinge in parts, elytra olivaceous except for sutural intervals and marginal area of base aeneous, with each puncture of rows



Figs. 5-9. 5, 6. *Tetraphyllus foveolatus* KASZAB ; 7, 8. *Tetraphyllus sulcaticollis* PIC ; 9. *Tetraphyllus nitidulus* sp. nov.
5, 7. Male genitalia (left : dorsal view, right : lateral view) ; 6, 8, 9. Antenna.

margined by a slight aeneous tinge.

Head obscurely and not densely punctate, quite rounded at apical margin, which is not sinuate laterally ; clypeus transversely and unevenly convex, its suture scarcely visible ; genae obliquely expanded laterally in front of eyes ; frons a little convex, interocular space nearly twice width of clypeal length (2.5 : 1.4) ; eyes convex, inner ocular sulci very fine ; antennae (Fig. 9) moderate in length, passing a little base of pronotum, 1st segment tumid, nearly twice as wide as 3rd, 2nd as long as wide and a little shorter than 3rd, 7th as long as wide, five distal segments densely pubescent, not forming a distinct club, 11th oval, a little longer than wide (9 : 8). Terminal segment of maxillary palpi almost rectitriangular ; mentum subcordate, strongly convex along emarginate apical margin, sloping gradually backwards, surface with a median longitudinal ridge detached from base and surrounded by a deep groove ; gula strongly and roughly rugose just behind apex.

Pronotum very transverse (9.2 : 3.5), not strongly produced onwards on sides ; apical margin distinctly emarginate in a ∪-shape, nearly straight in median third, finely bordered, the border interrupted in middle and the width of unbordered area narrower than that of interocular space ; apical angles obtusely rounded ; lateral margins arcuately narrowed apicad, thinly bordered, and narrowly channeled along inner sides of the borders ; disc a little convex, sparsely and obscurely punctate, still more obscurely on lateral portions.

Elytra oblong, with rows of punctures, the punctures irregular in size and rather close, becoming minuter posteriad, those on 8th row weakly impressed, evanescent forwards from before middle, those on 9th always situated on lateral margin basally; intervals flat, sparsely and very minutely punctate, 9th interval slanting almost vertically and as wide at posthumeral callus as 8th; epipleuron opposite to metasternum shallowly and obliquely depressed inward.

Prosternum longitudinally ridged in middle from apical margin to the end of drop-shaped process, flattened on each side of the ridge between procoxae; V-shaped ridge of mesosternum thickened, with a small tip protrudent downwards at each basal angle; metasternum sparsely and minutely punctate; abdominal segments microscopically punctate, three basal segments longitudinally rugose, 1st segment distinctly bordered on base behind metacoxae, without any carinae.

Legs elongate, outer sides of fore and middle tibiae clearly bi-edged, distinctly flattened between the edges; tarsi slender, not densely pubescent below, claw-segments of hind tarsi nearly 1.5 times as long as 1st.

Length: 5.8 mm.; width: 3.9 mm.

Holotype: ♀, Gap, Malaysia, 13. II. 1974, Y. KIYOYAMA leg. (in SC).

The present species is closely allied to *T. tristis* (GEBIEN), but can be distinguished from the latter in having the different colour of body, the elytral 9th row of punctures overlapping lateral margin basally, the absence of carinae on the 1st abdominal segment, quite different structure of the prosternum in the presence of the median longitudinal ridge reaching apex of prosternal process without any sulci laterally.

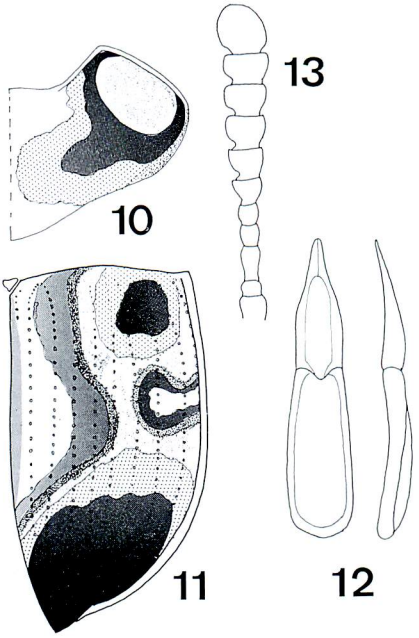
Tetraphyllus humillimus sp. nov.

(Figs. 10-13)

Oval, more or less subparallel-sided, strongly convex; black, head entirely purple or green and/or with purple spots, pronotum green tinged, with a pair of metallic-green spots (Fig. 10); the spot oblong-oval and touching lateral margin, with double borders (purple inwardly and gold outwardly), thickly produced towards middle of pronotum, the remaining area weight-shaped, concavo-concave and blue-black; each elytron consists of four complicated colourful patches (Fig. 11) as follows: a humeral patch forming subquadrate spot, lying almost between 6th and 8th intervals, entirely isolated, purple, sometimes centrally with a metallic-green tinge, surrounded by thick and golden border between 5th and 9th intervals from base to about basal fourth; an apical patch large and fascia-like in apical fourth, coloured as the humeral patch, bordered anteriorly by the same colour as the humeral border, the apical border occupying apical third and lying from side to suture; a latero-median patch trans-

verse, knob-shaped and golden-purple, with double borders, the inner border purple, the outer border metallic-blue and narrow, nearly a half width of the inner purple one; the last patch striped along suture from base to apical third, occupying almost 1st interval basally, expanded externally from elytral middle to 2nd intervals, coloured like knob-shaped patch leaving golden green sutural interval, entirely double bordered laterally, the inner border thick and purple, the external one narrow and metallic-blue, these borders linked with the other elytral ones and forming a pot-shape, the apical patch and its border also linked with the other elytral ones in apical third, space among patches purple-green or green; ventral surface black to dark reddish brown, antennae, lateral margins of pronotum and legs reddish brown.

Head slightly divergent anteriorly, apical margin widely and gently arcuate, without any constrictions between clypeus and genae; clypeus strongly convex, rather densely and roughly punctate, clypeal suture distinct, but obscure laterally; genae with uneven surface, minutely punctate, strongly divergent latero-apically in basal half, slightly reflexed along outer margins; frons convex, sparsely and more minutely punctate than on clypeus, interocular space much wider than clypeal length (20 : 13); eyes strongly convex, obliquely produced forwards, inner ocular sulci deep and distinct; antennae (Fig. 13) short and robust, never reaching base of pronotum, five distal segments forming a loose club, 11th short-oval, more or less directed inward, relative length of antennal segments from basal to apical as follows:—7.0 : 3.0 : 6.5 : 4.5 : 4.5 : 5.0 : 5.9 : 6.4 : 6.0 : 5.8 : 9.2; mentum flat, strongly and longitudinally carinate along middle, lateral margins unbordered, apical margin arcuate forwards and distinctly costate, the costa and the median carina crossing in a shape of catpial T.



Figs. 10–13. *Tetraphyllus humillimus* sp. nov. 10. Right half of pronotum; 11. Right elytron; 12. Male genitalia (left: dorsal view, right: lateral view); 13. Antenna.

Pronotum subpentagonal in ♂, and subtrapezoidal in ♀, more than twice as wide as long (47 : 21), minutely and sparsely punctate; apical margin strongly emarginate, a little produced forwards in middle, narrowly and distinctly bordered, the border widely interrupted in middle, and slightly thickened at the corners of obtuse apical angles; base strongly oblique laterally; basal angles obtuse; lateral margins rather strongly arcuate and narrowed towards apex, thickly bordered, narrowly and shallowly channeled inside the borders.

Elytra oval, strongly convex, with rows of punctures, the punctures almost regular in size and arrangement, though those of 1st and 2nd rows denser than the rest, becoming minuter towards both directions of base and apex, 9th row distant from lateral margin behind base; intervals flat and almost smooth, but microscopically punctate, 9th interval slanting subvertically and wider than 8th; epipleuron opposite to metasternum horizontal, but the level of horizontal position much lower than that of usual species in *marginicollis* group.

Prosternum unevenly flat, longitudinally and shallowly bisulcate between procoxae, the sulci joining each other just before the apex of prosternal process, which is narrow and tongue-shaped, bent inward near apical tip; mesosternum rather shallowly excavate on interspace of mesosternal V-shaped ridge, the ridge thickened, with a protuberant tip directed below at each basal angle; metasternum sparsely and minutely punctate; abdominal segments similarly punctate, three basal segments slightly and longitudinally rugose laterally, 1st segment with a pair of weak carinae on middle portion. Male genitalia as fig. 12.

Legs short; femora not produced beyond lateral margins of pronotum and of elytra, thereby never visible from above, middle femora in the male with recumbent and rather long pubescence along outer edges of hind margins; tibiae scarcely incurved, outer sides of fore tibiae bi-edged, those of middle ones strongly carinate; tarsi moderately shortened, relative length of hind tarsal segments as follows :— 12.0 : 5.5 : 4.5 : 15.0.

Length : 6.2–7.0 mm.; width : 4.2–4.6 mm.

Holotype : ♂, Keningau, Sabah, Borneo, 15. V. 1981, M. Tao leg. (in NSMT). Paratype : 1 ♀, Bunsit nr. Keningau, Sabah, Borneo, 9. V. 1981, M. Tao leg. (MC).

The new species can be easily distinguished from all the known species of this group in having peculiar structure of the mentum (presence of T-shaped costa), the male secondary sexual feature of the middle femora, lower level of horizontal epipleura of the elytra, and different colour and more complicated dorsal pattern of the body.

Tetraphyllus insignis sp. nov.

(Figs. 14-15)

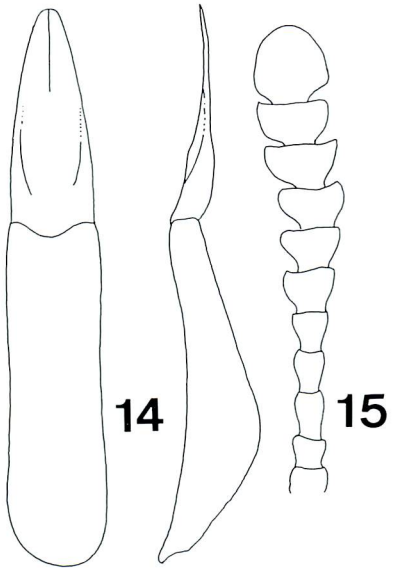
Body large and oval, moderately or strongly convex above; strongly shining, ventral surface, antennae and legs black, head blue or green with violet reflexion (in a few individuals head green-yellow, and blue tinged inside along eyes), pronotum blue, sometimes changing blue into gold by strong reflexion under a certain light, with a large, round and purple spot on each side, the spot bordered by gold, elytra blue to green with a slight golden reflexion, and with four patches (a pair of basal and of apical ones) deeply purple and large, but varied in shape and size, the basal one of these patches round, lying almost basal third and between 2nd and 7th intervals, sometimes enlarged or reduced (in the last case the patch only leaving in a small and arcuate spot on 4th to 6th intervals); the apical patch subtriangular, isolated, occupying almost apical half and between 2nd and 6th intervals, with a short branch from latero-apical corner to 9th interval, rather steeply narrowed backwards, then occupying only between 2nd to 4th intervals before apex, front margin distinctly undulated (in the reduced case the patch oblong and more or less curved outward on 3rd to 6th intervals and branched as the normal one), the remaining areas (sutural intervals, posthumeral areas and narrowly along lateral margin) of elytra blue to violet.

Head transverse, subvertical in natural condition; clypeus transversely convex, slightly emarginate at apex, moderately coarsely and somewhat obscurely punctate, clypeal suture deeply impressed; genae weakly widened laterad before base, then gradually and arcuately narrowed towards apex, minutely and densely punctate; frons convex, interocular space nearly 1.5 times as wide as clypeal length, minutely and sparsely punctate; punctures on vertex minuter and sparser than on frons; eyes strongly convex and obliquely oblong, ocular sulci vestigial; antennae (Fig. 15) short and robust, scarcely reaching base of pronotum, five distal segments forming a loose club and each dilated apically, 11th subtriangularly oval, widest before base, relative length of 2nd to 11th segments as follows:— 4.0 : 9.0 : 5.5 : 5.3 : 6.0 : 7.0 : 7.2 : 7.2 : 7.0 : 12.0; mentum quadrate, unevenly depressed, with an oval convexity in basal half of central portion, apex slightly emarginate, nearly twice as wide as base, apical corners somewhat thickened, produced apicad.

Pronotum pentagonal, rather weakly convex above, more than 2.4 times as wide as long (6.8 : 2.8), strongly produced apicad in both lateral portions, minutely and moderately punctate, the punctures becoming much minuter or vestigial towards both sides; apical margin strongly

emarginate, gently curved laterally and substraight in median third, narrowly bordered along both lateral thirds; base strongly obliquely truncate laterally, the truncature slightly bisinuous; apical angles obtuse and rounded; lateral margins gently arcuate and linearly bordered, scarcely channeled along inner sides of the borders.

Elytra oval, strongly convex, with rows of punctures, the punctures rather large in size and regular in density, becoming minuter apicad and on humeri, 9th row of punctures not reaching lateral margin in basal half; intervals flat, minutely and sparsely punctate, 9th interval slanting subvertically, nearly as wide as 8th behind base, space between 9th row and lateral margin strongly convex near humeral callus; lateral margins distinctly and widely channeled, the channels reaching basal margin a little beyond basal angles as those in the genus *Artactes*; epipleuron opposite to metasternum shallowly concave and descendant inward.



Figs. 14-15. *Tetraphyllus insignis* sp. nov. 14. Male genitalia (left : dorsal view, right : lateral view); 15. Antenna.

Prosternum longitudinally bisulcate between procoxae, prosternal process scarcely produced back of procoxae, bent entirely inward near its apex; mesosternal V-shaped ridge sharp, with a blunt tubercle at each basal edge; metasternum scarcely and obscurely punctate; abdominal segments weakly convex in median third, sparsely and minutely punctate, two basal segments and basal half of 3rd one longitudinally, rather densely rugose, 1st segment distinctly bordered at base, 3rd and 4th ones strongly depressed laterally. Male genitalia as fig. 14.

Legs short; all femora never visible from above; tibiae bi-edged on outer sides and shallowly sulcate between the edges, densely pubescent on each intero-apical portion, fore and hind tibiae slightly incurved; tarsi elongate, claw-segments of fore tarsi a little shorter than the preceding segments together, relative length of hind tarsal segments as follows:—20 : 9 : 8 : 29.

Length : 7.9-8.3 mm.; width : 6.0-6.9 mm.

Holotype: ♂, Crocker Range (alt. 1,400 m), 16 mi. N. W. of Keningau, Sabah, Borneo, 2-26. IV. 1984, S. NAGAI leg. (in NSMT). Paratypes: 4 exs., same locality as for holotype, 2-13. V. 1984 (1 ex.), S. NAGAI leg. (MC); 13-20. V. 1983 (1 ex.), S. NAGAI leg. (MC); 2-26. V. 1984 (1 ex.), S. NAGAI leg. (MC); 13. III. 1983 (1 ex.), S. NAGAI leg. (in coll. Ehime Univ.).

The new species resembles *T. cyaneicollis* FAIRMAIRE and *T. corruscus* FAIRMAIRE, but can be easily distinguished from the latters by the quite different colour of pronotum and of elytra, wider frons, lacking longitudinal median carina of the clypeus in the male, bi-edged outer margin of tibiae and so on.

Tetraphyllus sakoi sp. nov.

(Figs. 16-17)

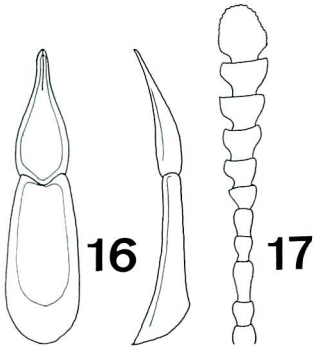
Oblong-oval, less strongly convex above than those of usual species in the genus; shiny, dark brown, ventral surface, antennae and legs reddish brown, head blue to bluish green with violet tinge in part, pronotum similarly coloured and tinged, with a pair of lustrous blue-green oval spots laterally, each elytron obscurely and widely striped by purple tinge, which is gradually changed into golden-green towards lateral and sutural margins, elytral margins (including sutural intervals) narrowly brilliant blue to violet.

Head transverse, weakly arcuate at apex; clypeus slightly convex, scarcely arcuate in middle of apex, minutely and sparsely punctate, clypeal suture fine; genae strongly and arcuately produced laterally, depressed, slightly raised along outer margins, sparsely punctate; frons gently convex and gradually inclined forwards, interocular space nearly twice as wide as clypeal length (20 : 11), more sparsely and minutely punctate than on clypeus; eyes slightly convex, inner ocular sulci short, very finely and somewhat deeply impressed; antennae (Fig. 17) short and slender, not reaching base of pronotum, five distal segments scarcely forming a club and weakly dilated towards each apex, 11th oval, widest before base, relative length of 2nd to 11th segments from basal to apical as follows:— 3.5 : 6.0 : 4.5 : 4.0 : 4.0 : 5.0 : 5.5 : 6.0 : 6.0 : 9.0; mentum pentagonal, nearly as wide as long, strongly convex, and deeply depressed laterally in basal two-thirds.

Pronotum moderately convex, gently descending towards sides, minutely, rather densely and very obscurely punctate, the punctures becoming much minuter and sparser towards sides; apical margin with emargination strong in curve, and very slightly produced at middle, and with border fine and interrupted in middle, the interrupted width nearly as wide as that of interocular space; apical angles slightly produced forwards, rounded and obtuse at the tips; lateral margins slightly arcuate, distinctly and moderately bordered, without inner channels of the borders.

Elytra oblong, scarcely dilated towards middle, more weakly convex than those in usual, punctures of regular rows distinct and very sparse except those on 1st and 2nd rows moderate in thickness, gradually becoming minuter posteriad, and almost evanescent at apical portion, 9th row not reaching lateral margin in basal portion, without any rows of accessory punctures; intervals scarcely convex, sparsely and microscopically punctate, 9th one slanting subvertically, slightly convex laterad, space between lateral margin and 9th row not convex, nearly as wide as 9th interval and wider than 8th interval near base; epipleuron opposite to metasternum moderately descending inward.

Prosternum narrowly rimmed at apex, longitudinally and shallowly bisulcate between procoxae, prosternal process sharply tapering posteriad and rounded at the tip; mesosternal V-shaped ridge with a blunt tip at each basal angle; metasternum smooth; abdominal segments slightly convex, scarcely and very minutely punctate, three basal segments longitudinally and slightly rugose laterally, 1st segment weakly bordered at base, and strongly constricted near middle, where the basal border reaches the apical margin. Male genitalia as fig. 16.



Figs. 16–17. *Tetraphyllus sakoi* sp. nov.
16. Male genitalia (left: dorsal view, right: lateral view); 17. Antenna.

Legs short and not robust; inner sides of middle femora bi-edged, furnished in the male with sparse and long pubescence in apical half along their under edges; tibiae thickened towards each apex, fore tibiae weakly ridged on outer margins, middle and hind tibiae fairly flattened above, and strongly carinate along outer margins; tarsi scarcely dilated, compactly pubescent ventrally, claw-segments of fore tarsi short, nearly as long as two basal segments together, relative length of hind tarsal segments from basal to apical as follows:— 12.5 : 5.0 : 4.5 : 15.5.

Length: 5.0–5.3 mm.; width: 3.5–4.0 mm.

Holotype: ♂, Cameron Hi. (14 mi.), Malaysia, 26. III. 1978, Y. KIYOYAMA leg. (in SC). Paratype: 1 ♀, Gap, Malaysia, 2. IV. 1975, Y. KIYOYAMA leg. (SC).

The new species is very similar to *T. globosus* KASZAB, but is different from the latter in having the absence of accessory punctures of elytral 9th row, and the presence of pubescence of the middle femora in the male and so on.

Tetraphyllus iridescens sp. nov.

(Figs. 18-20)

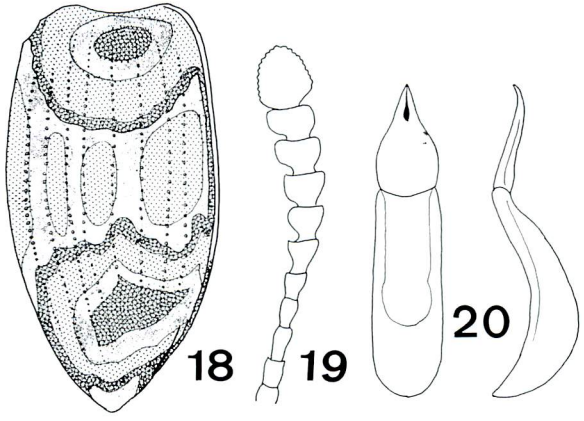
Oval, rather strongly convex; black, ventral surface, antennae and legs dark reddish brown or more blackish, head green-blue, pronotum also green-blue with a vague dark purple tinge, pattern of each elytron tripartite and sharply defined (Fig. 18); the basal part separated into three spots, of which the 1st spot is large, rounded and golden-tinged, occupying basal third and between outer half of 1st interval and lateral margin, slightly and constantly undulate backwards, the 2nd spot smaller, subquadrate, more or less rounded, purple, touching base, and occupying at least between 3rd and 8th intervals, the 3rd spot still smaller, located centrally on the 2nd spot, dark green, shaped like 2nd one but ill-defined, these small two spots forming an ocellate patch, but inner one (the 3rd) sometimes vestigial; the middle part fasciate, purple and including longitudinal three golden spots, occupying almost median third, approaching but never touching lateral margin, the inner part of the fascia linked with the same fascia of the other elytron at postscutellum and behind middle, just forming a common fascia on elytra leaving a sutural stripe, the stripe gold, also shaped in a spindle together with the other elytral one, the longitudinal three golden spots free on the fascia and from each other, in which the inner spot is elongate on 3rd interval, the middle one oblong-elongate on 5th interval, and the outer one oblong, situated between 7th and 9th intervals; the subapical part of three complicated tricoloured patches rather fascia-like, the external patch gold, occupying apical third and between outer half of sutural interval and lateral margin, front margin of the patch irregularly undulate, especially on 6th and 9th intervals, the undulation predominant, hind margin not reaching elytral apex, both sides gradually and roundly narrowed backwards, the median patch purple, forming a pre-historical flint, almost isolate on the external patch, occupying from 2nd stria to or touching only lateral margin, and follows the external patch in shape but the front margin constantly and sharply projected forwards on 5th stria and hooked on 9th interval, and gently emarginate between both the protuberances, the internal patch dark green, entirely isolate, quite as the median patch in shape; apex of each elytron with a purple spot shaped in a small arrowhead; each elytral tripartite pattern bounded wholly by a filiform band, which is dark green tinged as same tinge of the 3rd spot or the internal patch, starting from beside scutellum and limited sharply by three parts, terminating lateral margin of elytral apical third, therefore the filiform band very flexous, and rather formed in a cross together with the other

band on elytra.

Head quadrate and well produced apically, 1.5 times as wide as long, rather densely punctate; clypeus slightly convex, very weakly emarginate at apex, clypeal suture indistinct; genae a little divergent apically from just before base, then angularly rounded and gently narrowed apically, depressed, and slightly reflexed at sides; frons convex, sloping rather steeply forwards, interocular space nearly as wide as clypeal length, strongly depressed behind vertex; eyes moderately convex, ocular sulci very minute, situated only on front margins of eyes; antennae (Fig. 19) elongate, passing clearly base of pronotum, five distal segments forming a loose club, 11th roundly subquadrate, relative length of 2nd to 11th segments as follows:— 3.5 : 5.5 : 4.9 : 5.0 : 5.3 : 5.5 : 5.9 : 5.9 : 5.9 : 11.0; mentum transversely subcordate (13 : 10), unevenly depressed, strongly and thickly bordered on sides.

Pronotum transversely trapezoidal and short, not strongly produced apicad at sides, nearly 2.5 times as wide as long (42 : 17), moderately convex, gradually descendant laterad, obscurely, minutely and rather densely punctate, the punctures minuter on lateral portions than on median ones; apical margin gently emarginate and almost entirely bordered; apical angles rounded and obtuse; lateral margins scarcely produced at apex and base, gently arcuate and strongly, narrowly bordered, finely channeled inside the borders.

Elytra rather oblong-oval, strongly convex, shallowly striate; strial punctures regular in arrangement and rather dense, gradually becoming



Figs. 18-20. *Tetraphyllus iridescens* sp. nov.
18. Right elytron; 19. Antenna; 20. Male genitalia (left: dorsal view, right: lateral view).

minuter towards apex, 9th stria situated on lateral margin; intervals slightly convex, minutely and densely punctate, 9th intervals slanting vertically, nearly twice as wide as 8th near base; epipleuron with surface opposite to metasternum rather steeply descendant inward.

Prosternum densely rugose, longitudinally bisulcate between procoxae (but in the female strongly bordered laterally between procoxae and distinctly depressed along middle, the depression divided into two branches just behind middle, the branches running posteriad along sides of the process), the process triangular, slightly bent inward; mesosternum rather weakly emarginate at interspace of V-shaped ridge, which is depressed weakly in the male and strongly in the female; metasternum sparsely and minutely punctate; abdominal segments similarly punctate, convex in middle. 1st segment entirely bordered on base and slightly, longitudinally rugose along apical margin. Male genitalia as fig. 20.

Legs moderate in size; tibiae weakly carinate along outer margins, fore tibiae convex above and flattened below, middle and hind ones flattened above and weakly convex below; tarsi elongate, claw-segments of fore tarsi a little longer than the preceding segments together, relative length of hind tarsal segments from basal to apical as follows:— 14 : 6 : 4 : 21.

Length : 7.2–7.0 mm.; width : 5.5 mm.

Holotype: ♂, Keningau, Sabah, Borneo, 8. V. 1981, M. TAO leg. (in NSMT). Paratypes: 1 ♀, Toarco Jaya, Rante-Pao, C. Sulawesi, 2. VI. 1984, native collector (MC); 1♂, 1♀, Palopo, Sulawesi, 8. VI. 1982, M. TAO leg. (MC); 1 ex., Rante Pao, Sulawesi, 4. XI. 1985, M. TAO leg. (MC).

The new species somewhat resembles *T. marginicollis* (FAIRMAIRE) and *T. politus* KASZAB, but can be easily distinguished from the latters in having quite different characteristics: the head in structure, the body in colour and the elytral epipleura in build, the elytral epipleura rather steeply descendant inward instead of being almost flat and horizontal in the latters.

(to be continued)

New Coprophagous Lamellicornia from Japan and Formosa, IV (Coleoptera, Scarabaeidae)

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This is the 4th part of the series of the new coprophagous Lamellicornia from Japan and Formosa. Two new species captured from Formosa will be described under the names of *Onthophagus* (s. str.) *hayashii* sp. nov., and *O.* (s. str.) *sakainoi* sp. nov. The body length is supplemented to the previously described species, *Cassolus gotoi* Masumoto, 1986.

Onthophagus (s. str.) *hayashii* sp. nov.

(Fig. 1)

Brownish black, with mouth parts, antennae, gula, tarsi, etc., lighter in colour, hairs on surfaces golden yellow, elytron with a broad brownish yellow band in basal portion, and often with a vague same coloured patch on 3rd interval in apical portion; fore body above moderately shining and slightly bearing metallic lustre, elytra gently shining, ventral surface moderately so, though lateral and posterior portions slightly bearing sericeous lustre. Body ovate and strongly thickened.

Male: Head semicircular and somewhat alutaceous, rather closely punctate, scattered with larger punctures among smaller ones, gradually raised towards posterior portion; clypeus with apex feebly produced and reflexed; fronto-clypeal border slightly convex; genae gently arcuate laterad; vertex armed with conical protuberance.

Pronotum rather transverse, fairly closely punctate, scattered with minute punctures among larger ones, clothed with very short hairs, which become longer and more distinct in lateral and posterior portions; apical margin very slightly bisinuous; base widely arcuate; lateral margins fairly

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strongly produced, with posterior 2/5 very feebly sinuous; front angles subrectangular; hind angles indistinct; disc strongly convex, abruptly declivous in front, the declivity with 3 very shallow grooves, of which the central one connects with the medial groove.

Elytra shallowly punctato-striate, the punctures in striae sparsely set and notching intervals; intervals almost flat and coriaceous, scattered with setiferous, microscopically granular punctures.

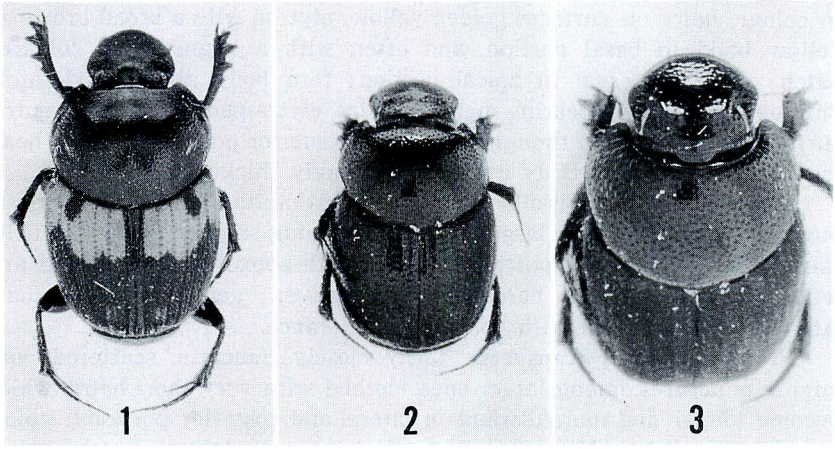
Pygidium gently convex, closely punctate and rather densely haired, with basal border finely ridged.

Protibiae slightly prolonged and gently incurvate, with 4 outer teeth, of which the basal one is rather indistinct. First segment of metatarsus fairly long and about 0.7 times the length of metatibia, a little more than 1.2 times the length of 4 following segments combined, nearly same length as terminal spur of metatibia.

Female: As compared with male, body less strongly convex above; clypeus distinctly rugoso-punctate; fronto-clypeal border ridged, the ridge arcuate forwards; frons finely punctate; vertex armed with rather short, transverse carina; pronotum less distinctly inclined forwards, very faintly impressed along apical margin on each side, with a median groove in posterior 1/5.

Body length: 6.2-8.1 mm.

Holotype: ♂, Yangmingshan, Taipei City, Formosa, 6. IV. 1980, K. MASUMOTO leg. Paratypes: 8 exs., same data as for the holotype; 14 exs., 29. IV. 1977, same locality and collector as for the holotype.



Figs. 1-3. 1. *Onthophagus* (s. str.) *hayashii* sp. nov. (dorsal view, ♂, holotype). 2, 3. *Onthophagus* (s. str.) *sakainoi* sp. nov. (2. Dorsal view, ♀, holotype; 3. Anterior portion).

Notes. This new species somewhat resembles *Onthophagus* (s. str.) *sobrius* BALTHASAR, originally described from Kuatun, Fukien, China, in having a small conical protuberance on the male vertex, but is easily distinguishable from the latter by the elytral colour pattern being quite different and by the shape of the male pronotum. From two other allied species described from Formosa, *O.* (s. str.) *hajimei* MASUMOTO and *O.* (s. str.) *setchan* MASUMOTO, the new species can be discriminated by the colour pattern of the elytra, and by the shape of the male pronotum.

Onthophagus (s. str.) *sakainoi* sp. nov.

(Figs. 2-3)

Piceous, with apical margin of head, legs, etc., brownish black, antennae and mouth parts yellowish brown, hairs on surfaces pale yellow; fore body above strongly shining and bearing somewhat purplish or violet reflexion, elytra moderately shining and feebly bearing bluish lustre, ventral surface moderately shining in middle, gently so in lateral and posterior portions. Body ovate and thickened.

Female: Head rather large, feebly micro-shagreened, coarsely scattered with larger and smaller punctures; clypeus arcuate apicad and gently reflexed along outer margin, slightly truncate in front; fronto-clypeal border gently raised and forming short transverse ridge in middle; genae rather distinctly, roundly produced laterad; frons rather broad, armed with a pair of transverse protuberances on line across front part of each eye; vertex with a low, somewhat triangular protuberance.

Pronotum transverse, very feebly micro-shagreened, rather closely, clearly punctate, sparsely clothed with short hairs; apical margin very widely, feebly emarginate and slightly bisinuous; base widely triangular; lateral margins fairly strongly produced laterad, rounded in anterior half, oblique and very feebly sinuous in posterior half; front angles subrectangular and gently produced forwards; hind angles indistinct; disc strongly, somewhat transversely convex, without any distinct characteristics.

Elytra shallowly punctato-striate, the punctures in striae rather transverse and often conjoined with those in intervals; intervals slightly convex and very feebly micro-shagreened, each with one or two rows of coarse punctures, which bear fine bent hairs.

Pygidium gently convex, scattered with strong punctures, each bears a short hair; basal border finely ridged.

Protibia rather distinctly dilated towards apex, with 4 outer teeth, of which the apical two are large and the basal one is indistinct; apical spur rather slender and bent downwards. First segment of metatarsus about 0.6 times the length of metatibia, nearly same length as 4 follow-

ing segments combined, a little shorter than terminal spur of metatibia.

Body length: 3.3 mm.

Holotype: ♀, Nanshanchi, Nantoushen, Formosa, 1. IV. 1976, H. SAKAINO leg.

Notes. This new species somewhat resembles *Onthophagus* (s. str.) *maleengnaafon* MASUMOTO from Thailand in having a transverse ridge and two protuberances on head, but can be distinguished from the latter by the body more strongly convex, the clypeus not bi-lobate in front and the pronotum more transverse.

Cassolus gotoi MASUMOTO, 1986

Cassolus gotoi MASUMOTO, 1986, Ent. Rev. Japan, 41: 85.

The measurement of the holotype of this species is supplemented below to the original description.

Body length: 6.5 mm.

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BALTHASAR, V., 1963. Monographie der Scarabaeidae und Aphodiidae der palaearktischen und orientalischen Region, Band 2: 1-628, 16 pls. Tscheckoslowakischen Akademie der Wissenschaften, Prag.

MASUMOTO, K., 1986. New coprophagous Lamellicornia from Japan and Formosa, III (Col., Scarabaeidae). Ent. Rev. Japan, 41: 85-87, 3 figs.

—— 1990. Coprophagid-beetles from Northwest Thailand (V). Ibid., 45: 43-51, 7 figs.

Study on Asian Carabidae, III (Coleoptera)

By Noboru Ito

Trichotichnus (*Trichotichnus*) *szekessyi* (Jedlička)

Iridessus Székessyi Jedlička, 1954, Ann. Hist. Nat. Mus. Nat. Hung., 5: 225-226.
Trichotichnus (*Trichotichnus*) *ryukyuensis* Habu, 1969, Ent. Rev. Japan, 22: 7-8; Habu, 1973, Fauna Japonica, Carabid, Harpalini: 234, 246-248.
Trichotichnus (*Trichotichnus*) *szekessyi* (Jedlička): Habu, 1975, Trans. Shikoku Ent. Soc., 12: 71-72.

Examined specimens: [Japan] 2♂♂, Mt. Omoto, Ishigaki Is., 27. VI. 1964, H. Konishi leg., ditto, 19. III. 1965, T. Ito leg. [Taiwan] 1♂, Fenchifu, Chiai Hsien, 25. VI. 1972, Y. Kiyoyama leg.; 1♀, Wushe, Nantou Hsien, 7. IV. 1974, S. Takeda leg.; 2♀♀, Chihpen, Taitung Hsien, 29. IV. 1985, N. Ito leg. [Malaysia] 1♂, Cameron Hi., 24. III. 1975, Y. Kiyoyama leg.; 1♂, Gap, 8. VI. 1975, Y. Kiyoyama leg. [Thailand] 2♂♂, Doi Suthep, Chiang Mai Prov., 30. IV. 1990, N. Ito leg.

Distribution: Japan (Ryukyu), Taiwan, Thailand, Malay Peninsula.

Trichotichnus (*Trichotichnus*) *masaohayashii* sp. nov.

(Figs. 1, 14)

Body oblong-oval, brownish black, shiny, with a weak iridescent lustre on elytra, lateral channels of pronotum and lateral borders of elytra yellowish brown, mandibles reddish brown.

Head small and subtriangular, at least not more than two-thirds times as wide as pronotum, weakly raised longitudinally from vertex to clypeus, not observed any punctures in 80 magnification, labrum trapezoidal, widely rounded and shallowly emarginate at apex, clypeus almost smooth, without any rugosities, and only slightly meshed in part, clypeal suture so vague as to be detected the trace, frontal impressions also weakly marked, but not reduced even near eyes, eyes hemispherically prominent lengthwise and a little more strongly expanded toward interocular space than usual, so inner ridges which are placed above antennal scrobes, are convergent behind to meet frontal impressions, genuine ventral margin of eye scarcely removing from buccal fissure, antennae

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reaching basal fifth of elytra, 2nd joint relatively long, two-fifths shorter than 3rd which is almost equal in length to 4th, mandibles thick, dull at apex, ligula of parallel sides and truncate at apex, paraglossae prolonged only up to ligular apex and free in front from a little behind the apex, mentum relatively narrow, with small epilobes, median tooth fully produced in an isosceles triangle and acute at apex; microsculpture mostly absent, but composed of very faint lines on occiput.

Pronotum transverse, a half wider than long and about three-fourths times as wide as elytra, more or less convex but almost flattened on wide central area, sides clearly arcuate in front and substraight behind from middle, briefly sinuate before base, and weakly reflected on basal area, apex more or less emarginate, base one-fourth wider than apex, weakly bisinuate, and obliquely straight at sides, all margins entirely bordered, apical angles widely rounded, basal angles obtuse and angularly rounded, lateral furrows narrowed in apical area, but gradually widened behind and linked with basal foveae, basal foveae roundedly subquadrate and ill-defined, median line fine and shallow, hardly adjoining to both apex and base, front transverse impression very shallow and obscure, hind one obsolete, disc quite impunctate, sparsely and minutely punctate on basal foveae, the punctures spread only to the furrows and still sparser; microsculpture visible in most part, consisting of mixtures with clear transverse meshes and lines.

Winged. Elytra widely elliptical, subparallel at sides, two-fifths longer than wide, moderately convex, humeral angles slightly protrudent, fully wide and not rounded, apex separately rounded and very gently inclined at sides, striae relatively wide and deep, and finely crenulate, intervals weakly convex and wholly impunctate, more convex laterally and apically, a dorsal setiferous pore on 3rd interval small and situated a little behind middle, scutellary strioles fairly long, marginal series interrupted in middle, composed of 8+(7-11) umbilicate pores; surface clearly microsculptured mostly by transverse lines and partly by transverse meshes.

Metepisterna two-fifths longer than wide, abdomen sparsely ciliate along middle on 2nd to 6th segments, 6th of ♂ quadrisetose along outer margin and widely arcuate at apex of the margin.

Fore tibiae rather clearly sulcate longitudinally on dorsal side, mid tarsi biseriately squamous on ventral side of 1st joint as well as the following three joints, hind tarsi of ♂ as long as the width of head inclusive of eyes, claw-joint bisetose on each ventral margin.

Aedeagus (Fig. 1) regularly, gently curved and weakly twisted to left, with a relatively large basal part, in lateral view apical part slim and steeply narrowed distally before apex, apex thickened and weakly

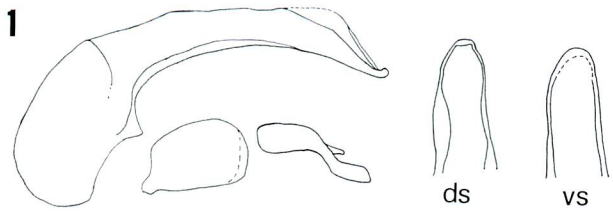


Fig. 1 Male genitalia of *Trichotichnus* (*Trichotichnus*) *masaohayashii* sp. nov. ds: dorsal side; vs: ventral side.

reflected, apical lamella small and transverse, apical orifice very large and occupying large part of dorsal side, ventral side widely depressed along middle and bordered at both sides; left paramere subquadrate and rounded at each corner, right paramere thin and deeply sinuate.

Length: 5.8-6.3 mm. Width: 2.2-2.5 mm.

♀ unknown.

Holotype: ♂, Keningau, Sabah, North Borneo, Malaysia, 10-20. X. 1988, M. ITOH leg. (in T. SHIBATA's coll.). Paratype: 1♂, Crocker Range, North Borneo, Malaysia, 18. IV. 1982, M. YAMAMOTO leg.

The new species can be discriminated from *Trichotichnus* (*Trichotichnus*) *szekessyi* (JEDLIČKA) by the color of body brownish instead of black, the ridges above antennal scrobes convergent behind and not parallel, the sides of pronotum substraightly and not arcuately contracted behind from the middle, the fore tibiae sulcate on the dorsal sides, and the aedeagus slenderer and bearing much slimmer right paramere.

The specific name is dedicated to Dr. MASAO HAYASHI, who is the leading man of study on longicorn beetles and is doing his best for the development of Japan Coleopterological Society as managing director.

Trichotichnus (*Pseudotrichotichnus*) *miyakei* HABU

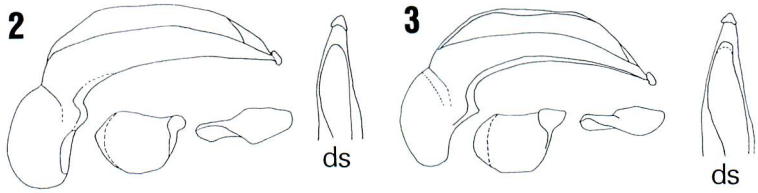
(Figs. 2, 3)

Trichotichnus miyakei HABU, 1980, Ent. Rev. Japan, 34 (1/2): 11-13 (Formosa: Jihyue-tan).

Examined specimens: [Taiwan] 1♂, Lienhwachi, Nantou Hsien, 14. IV. 1973, Y. KIYOYAMA leg.; 1♂, 1♀, Wushe, Nantou Hsien, 10 & 30. IV. 1970, A. RIN leg.; 1♂, Lushan, Nantou Hsien, 22. VI. 1979, K. KUZUGAMI leg.; 1♀, Fenchifu, Chiai Hsien, 29. V. 1970, Y. KIYOYAMA leg. [Malaysia] 2 exs., Cameron Hi., Tanah Rata, 7. IV. 1974 (1♀) and 29. V. 1975 (1♂), Y. KIYOYAMA leg.; 1♀, Maxwell's Hill, 5. III, 1974, Y. KIYOYAMA leg. [Thailand] 1♀, Doi Suthep, Chiang Mai Prov., 30. IV. 1990, N. ITO leg.; 1♀, Mon-Angget, Chiang Mai Prov., 31. V. 1990, K. MASUMOTO leg.

Distribution: Taiwan, Thailand, Malay Peninsula.

Male genitalia: aedeagus robust and substraight at ventral margin (in the Malaysian example gently arcuate), apex knob-shaped and obliquely directed, dorsal



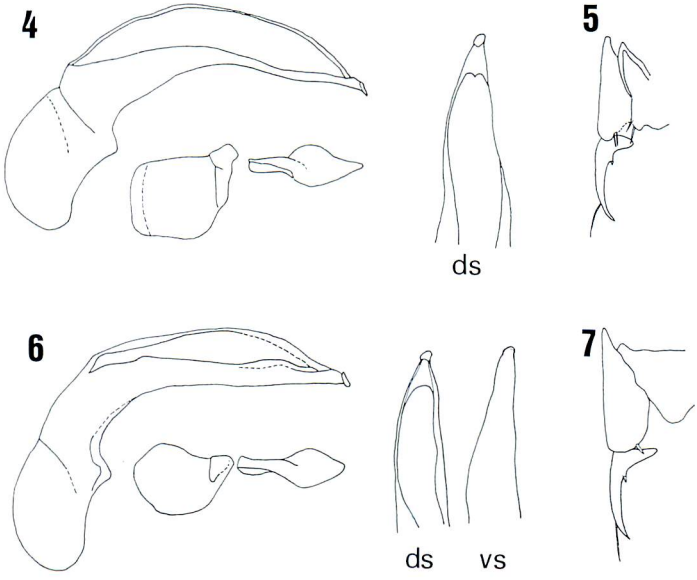
Figs. 2, 3. Male genitalia of *Trichotichnus* (*Pseudotrichotichnus*) *miyakei* HABU. 2, from Taiwan (Wushe); 3, from Malaysia (Cameron Hi.).

side gently curved to left and occupied mostly by apical orifice, apical lamella elongate and a half longer than wide, ventral side longitudinally convex along middle and unbordered at sides; left paramere subquadrate and rounded at every corner, right paramere a little longer than the left.

Trichotichnus (*Pseudotrichotichnus*) *birmanicus* BATES

(Figs. 4, 5, 15)

Trichotichnus birmanicus BATES, 1892, Ann. Mus. Civ. Genova, (2) 12 (32): 342-343; LANDIN, 1956, Ark. för Zool., 8 (3): 456.



Figs. 4-7. Genitalia of *Trichotichnus* spp.
4, Male of *T.* (*P.*) *birmanicus* BATES; 5, Ditto, female;
6, Male of *T.* (*P.*) *horni* SCHAUBERGER; 7, Ditto, female.

Trichotichnus Batesi Csiki, 1932, Col. Cat., Carabidae, Harpalinae IV: 1217; Schauberger, 1935, Ent. Anz., 15: 110.

Examined specimens: 4♂♂, 4♀♀, Doi Suthep, Chiang Mai Prov., Thailand, 30. IV. 1990, N. Ito leg., 1♀, Huai Nam Dang, Chiang Mai Prov., 6. V. 1990, N. Ito leg.

Distribution: North India, Myanmar, Laos, Thailand.

Trichotichnus (*Pseudotrichotichnus*) *horni* Schauberger
(Figs. 6, 7, 16)

Trichotichnus horni Schauberger, 1935, Ent. Anz., 15: 145; Schauberger, 1938, Arb. morph. tax. Ent. Berl.-Dahl., 5 (1): 46-47

Examined specimens: 3♂♂, 3♀♀, Keningau, Sabah, North Borneo, Malaysia, 10-20. X. 1988, M. Itoh leg.

Distribution: Borneo.

Trichotichnus (*Pseudotrichotichnus*) *piceus* sp. nov.
(Figs. 8, 9, 12)

Body thick and oblong, pitchy black, shiny, weakly iridescent on elytra, lateral borders of pronotum dark brown, labrum, palpi, antennae, and legs reddish brown.

Head thick and large, seven-tenths times as wide as pronotum, very sparsely and minutely punctate, labrum subquadrate obtusely notched at apex, clypeal suture clear and fully deep as in general species of this subgenus, frontal impressions also deep as the suture and not shallowed even near eyes, eyes small and weakly convex, one-fifth times as wide as interocular space, tempora more or less swollen and forming a blunt angle with neck-constriction, antennae short and not passing pronotal base, 2nd joint relatively thickened toward apex and fairly long, only one-third shorter than 3rd, which is also thickened, space between genuine ventral margin of eye and buccal fissure wide and bearing very sparse ciliae, ligula a little narrowed in front and truncate or slightly emarginate at apex, just behind which it bears two long setae, paraglossae free in front from a little before middle of ligula and prolonged fully beyond it, mentum deeply emarginate at apex, lateral lobes large, with narrow and triangular epilobes, median tooth fairly produced forward and acute at apex; microsculpture almost invisible in 80 magnification and observed in a weak transverse mesh only near supraorbital setae.

Pronotum subquadrate, rather well convex, even everywhere, without any punctures or when the punctures are present, those are observed only near basal foveae, basal foveae shallowly impressed lengthwise in a short line (in a case the foveae are obsolete), sides narrowed arcuately

in front and straightly behind from the widest point at apical third, apex very shallowly emarginate, base a little wider than apex, substraight, and weakly and brokenly bordered, basal angles obtusely angulate, but blunt at tips, lateral furrows very narrow and running throughout along lateral margins in a fine line, because incline of discal convexity drawn to near lateral margins, both front and hind transverse impressions obsolete or the front one only vaguely visible; microsculpture more or less clear, composed mostly of transverse meshes and partly of transverse lines.

Winged. Elytra oblong-oval and convex, abruptly declivous to sides from 6th intervals and behind from near apical fifth, a half longer than wide and widest at apical two-fifths, basal border shallowly emarginate, humeral angles much wider than rectangular and not rounded, apex separately rounded and not produced behind, striae moderate in depth and rather wide, intervals slightly convex and a little more convex even near apex and sides, quite impunctate, a setiferous pore on 3rd interval situated at a little behind middle and adjoining 2nd stria, scutellary strioles moderately long, marginal series clearly interrupted medianly, consisting of (7-9)+(10-11) umbilicate pores; microsculpture hardly detected in 80 magnification.

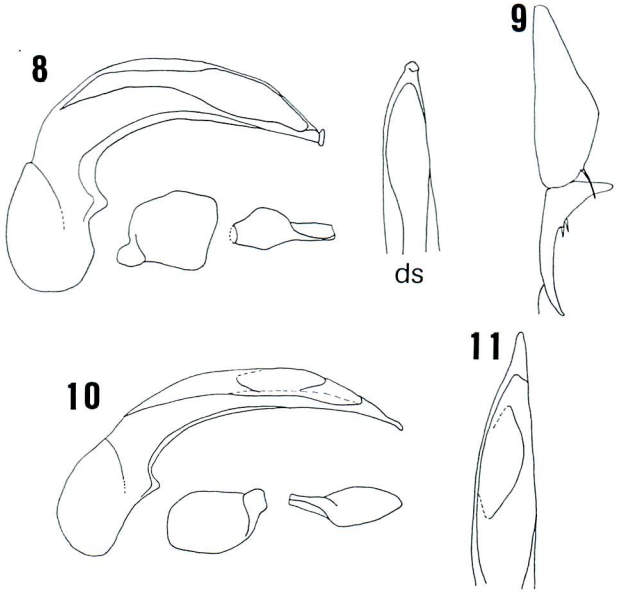
Underside almost impunctate, metepisterna about a half longer than wide, abdomen very sparsely ciliate along middle of 2nd to 6th segments, 6th quadrisetose in both sexes along outer margin, the margin in ♂ truncate or very shallowly emarginate at apex and in ♀ regularly, narrowly arcuate.

Fore tibiae sulcate on dorsal side, the sulcus short, extending from base to basal third or at most to middle as in *Trichotichnus birmanicus* Bates (*T. batesi* Csiki), mid tarsi of ♂ biseriately squamous on ventral side of 2nd to 4th joints, hind tarsi relatively short, in ♂ as long as, and in ♀ one-fourth shorter than the width of head, claw-joint bisetose on each margin of ventral side.

Aedeagus (Fig. 8) somewhat robust and gently curved, weakly twisted to left, in lateral view steeply tapering toward apex, the apex shaped in a thin knob and directed vertically against the aedeagus itself, apical orifice large and occupying the most part of dorsal side, apical lamella small and as long as wide, ventral side weakly convex longitudinally and not bordered at sides, left paramere subquadrate and as long as wide; styluses (Fig. 9) moderately curved outward and sharpened at apex, with a rather long spine at each outer margin, a seta a little behind apex and not long.

Length: 8.5-9.3 mm. Width: 3.2-3.5 mm.

Holotype: ♂, Cameron Hi., Tanah Rata, Malaysia, 7. IV. 1974, Y. Kiyoyama leg.



Figs. 8-11. Genitalia of *Trichotichnus* spp.
8, Male of *T.* (*P.*) *piceus* sp. nov.; 9, Ditto, female;
10, *T.* (*P.*) *fulgidius* sp. nov.; 11, Ditto, dorsal side.

(in T. SHIBATA's coll.). Paratypes: 3♀♀, same data as the holotype; 2♀♀, same locality as the holotype, 27. V. 1975, Y. KIYOYAMA leg.

The new species is similar to *Trichotichnus birmanicus* BATES, but is different from the latter in having the body larger in size, the pronotum not cordate in form and quite impunctate or scarcely punctate only near basal foveae (in *T. birmanicus* the minute punctures widely spread over the basal area except on the middle), and the apex of aedeagus knob-shaped and not simply hooked only below.

Also the new species is closely allied to *Trichotichnus miyakei* HABU, but is distinguished from the latter by the body smaller in size, the punctures on pronotum almost absent even on basal area, the elytral apex not produced behind and fairly widely rounded (not angularly rounded), and the apical knob of aedeagus directed vertically or not obliquely against the aedeagus itself.

Trichotichnus (*Pseudotrichotichnus*) *fulgidius* sp. nov.
(Figs. 10, 11, 13)

The new species is closely allied to the previous new species (*Trichotichnus piceus*), but is distinguished from the latter by the body larger in size, the elytra with a very slightly aeneous reflection, while those of the latter are quite black and without aeneous reflection, the clypeal suture deeper and the hind margin of clypeus very deeply bounded,

the sulci on fore tibiae longer and reaching near apex, the aedeagus distinctly slenderer, slightly thickened at apex and never forming the knob, and the apical orifice bearing a subsclerotized disc.

Length : 10.5 mm. Width : 3.8 mm.

Holotype : ♂, Doi Inthanon, Chiang Mai Prov., Thailand, 2. V. 1990, N. ITO leg. (in T. SHIBATA's coll.).

Harpaloxenus giganteus sp. nov.

(Figs. 17, 18, 19)

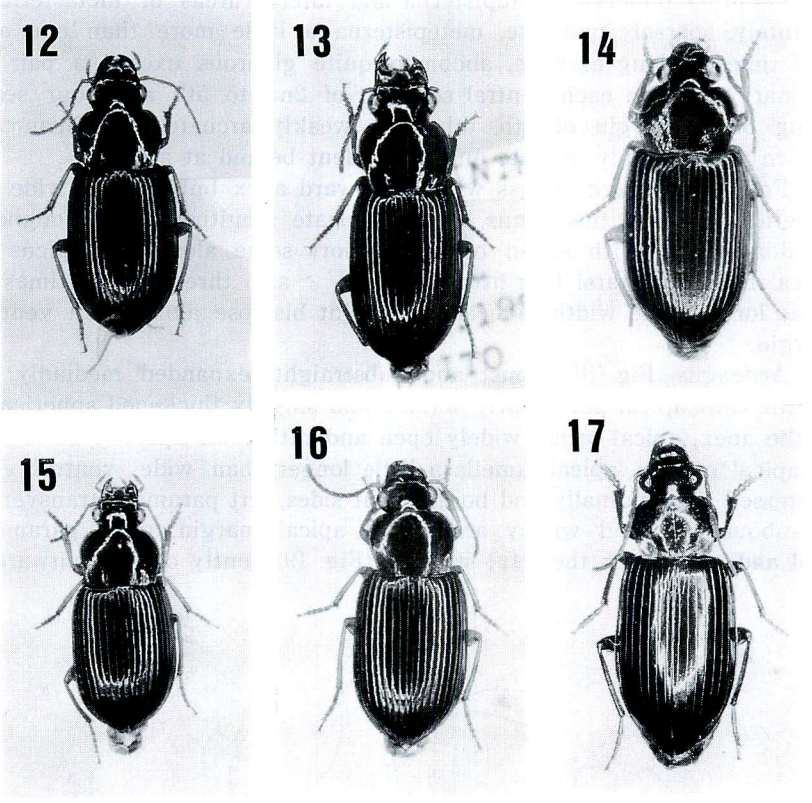
Body robust and squarish at humeri, shiny, black, with a purplish blue reflection on elytra, mandibles, femora, tibiae, and lateral borders of pronotum and of elytra blackish brown, antennae, palpi, and tarsi reddish brown.

Head comparatively wide because of eyes hemispherically prominent, three-fourths times as wide as pronotum, weakly convex, sparsely and minutely punctate (rarely lack of the punctures), clypeus weakly depressed transversely between a pair of lateral long setae, obscurely and longitudinally rugose on the depression and near the setae, clypeal suture clear and not deep, frontal impressions deeply marked and steeply aslant at front sides, and abruptly shallowed near eyes, tempora very short and thin, followed to prolongation of ocular arc, antennae passing elytral base, 3rd joint short, four-fifths times as long as 4th, and a little shorter than twice as long as 2nd, mandibles robust and short, sharpened at apex, buccal fissure and genuine ventral margin of eye clearly separated each other but the space between those very short, ligula gradually narrowed toward apex, the apex strongly incised in a furcation and with a pair of setae behind the furcation, paraglossae free from ligula and prolonged forward a little beyond ligular apex, epilobes of mentum very narrow, median tooth equilaterally triangular, fully produced, and rounded at apex ; microsculpture observed on apical half of clypeus as mixtures with transverse and isodiametric meshes and near supraorbital setae as transverse meshes.

Pronotum cordiform, gently convex, and almost flattened on disc, sides narrowed arcuately in front and straightly behind from middle, and clearly sinuate before base, apex shallowly emarginate and a little narrower than the width of head, base shallowly bisinuate and a little wider than apex, both borders obscure in middle but complete, basal angles subrectangular and angularly rounded, basal foveae ill-defined, large and reaching lateral borders, and longitudinally coarsened in a short line at the bottoms, lateral furrows narrow and only slightly widened even near basal foveae, front transverse impression shallow

and clear, hind transverse one vague, median line fine and not prolonged forward and backward beyond both impressions, disc quite impunctate, but sparse and minute punctures on basal area and near front transverse impression, and coarser and moderate in density punctures on basal foveae and lateral furrows; microsculpture fine and clear, transverse meshes on the most area and transverse lines here and there on disc.

Winged. Elytra oblong-oval, about a half longer than wide and two-fifths wider than pronotum, moderately convex, sides feebly widened straightly to apical two-fifths from basal fifth, then gently narrowed



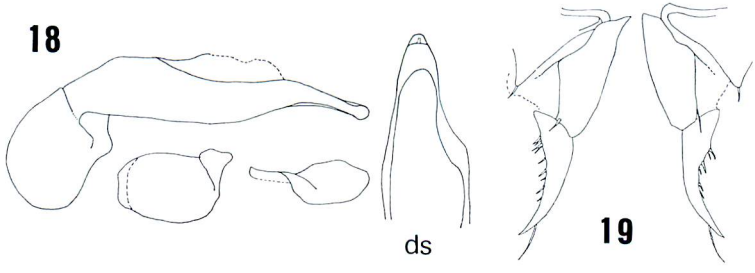
Figs. 11–17. *Trichotichnus* and *Harpaloxenus* spp.
12, *T.* (*P.*) *piceus* sp. nov.; 13, *T.* (*P.*) *fulgidius* sp. nov. 14, *T.* (*T.*) *masaohayashii* sp. nov.; 15, *T.* (*P.*) *birmanicus* BATES; 16, *T.* (*P.*) *horni* SCHAUBERGER; 17, *Harpaloxenus giganteus* sp. nov.

to rather deep apical sinuations, and crossed to each other at apex, sutural angles sharply angulate and edentate, basal border shallowly bisinuate and widely arcuate at humeri, striae shallow and narrow, finely crenulate, intervals flat or very weakly convex, only a little stronger in convexity even near apex, their punctures minute and sparsely spread uniformly, 3rd interval with a small setiferous pore at apical two-fifths along 2nd stria, scutellary strioles fairly long, marginal series divided into two groups, the fore group composed of 10-14 umbilicate pores, the hind one 12-14 pores; microsculpture invisible or hardly visible as very faint transverse lines.

Prosternum, lateral areas of metasternum, and mesepisterna sparsely, obscurely punctate, metepisterna and lateral areas of metasternum minutely, sparsely punctate, metepisterna a little more than one and half times as long as wide, abdomen quite glabrous except a pair of ordinary setae on each ventral segment of 2nd to 5th and four setae along outer margin of 6th, 6th in ♂ weakly arcuate or subtruncate and in ♀ uniformly arcuate and protrudent behind at apex.

Fore tibiae more or less widened toward apex but not so wide as general species in this genus, clearly sulcate longitudinally throughout on dorsal side, with seven or eight short setae along the sulcus in apical half, hind tarsi four-fifths times in ♂ and three-fourths times in ♀ as long as the width of head, claw-joint bisetose along each ventral margin.

Aedeagus (Fig. 18) robust and substraight, expanded medianly, in lateral view apical part gently sinuate and slightly thickened spherically at the apex, apical orifice widely open and rather far apart from rounded apical margin, apical lamella a little longer than wide, ventral side depressed longitudinally and bordered at sides, left paramere transversely subquadrate and widely arcuate at apical margin, right paramere oval and as long as the left; styluses (Fig. 19) gently curved outwardly



Figs. 18-19. Genitalia of *Harpaloxenus giganteus* sp. nov.
18, Male; 19, Female.

and acute at apex, both outer ventral and dorsal margins bearing three to five acute spines, the spines a little various in number on right stylus, left one, ventral or dorsal margin, a long seta on inner margin situated a little behind apex.

Length: 14.0–14.5 mm. Width: 4.5–4.8 mm.

Holotype: ♂, Keningau, Sabah, North Borneo, Malaysia, 10–20. X. 1988, M. ITOH leg. (in T. SHIBATA's coll.). Paratypes: 2♂♂, 1♀, same data as the holotype; 1♂, same locaiity as the holotype, 2. IX. 1988, M. ITOH leg.; 1♀, Gap, Malaysia, 5, IV. 1978, Y. KIYOYAMA leg.

The new species is quite peculiar from the other known species which belong to this genus in having the body much larger in size and a half longer than usual, and the elytra with the purplish blue reflection.

Calathomimus masumotoi sp. nov.

(Figs. 20, 21, 22)

Body oblong-oval, rather flattened, black, shiny, elytra with an iridescent lustre, lateral margins of pronotum and of elytra, legs, and palpi brownish yellow, mandibles and antennae reddish brown.

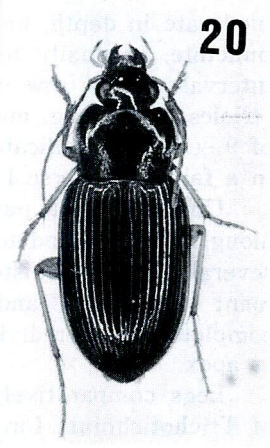


Fig. 20. *Calathomimus masumotoi* sp. nov.

Head small, somewhat narrower than two-thirds times as wide as pronotum, not punctate anywhere, weakly and transversely rugose on vertex, gently convex and not flattened on clypeus, clypeus depressed only along apex, the depression coarsened by clear isodiametric microsculpture, clypeal suture fine and very obscure, frontal impressions divergent behind, moderately deepened near junctions with the suture, rapidly becoming shallower behind, and almost reduced just before eyes, eyes large and rather well convex, tempora short, subarcuately narrowed behind, and forming a blunt angle with neck-constriction, mandibles sharp and long, gently curved inward, antennae slender and reaching basal fifth of elytra, 3rd joint weakly thickened distally, equal in length to 4th, and a little less than twice as long as 2nd, ligula clearly bent outward at both sides and not free from paraglossae up to its truncate apex, paraglossae narrow and subparallel-sided, prolonged in front beyond ligula, epilobes of mentum distinctly widened toward apex and subvertically oblique at inner sides, median tooth weakly prominent and widely triangular, narrowly rounded at apex; microsculpture moderately clear and broken off in places, composed of

transverse meshes.

Pronotum large, transversely subquadrate or subcordate, a half wider than long, weakly convex and flattened on disc, sides arcuate in front and obliquely straight behind from middle or slightly sinuate before base, and more or less reflected on basal area, so basal foveae appear to be deep, apex rather deeply emarginate and one-fifth narrower than base, base substraight or shallowly bisinuate and clearly bordered as well as apex, basal angles obtuse and not rounded, scarcely protuberant laterally at tips, front transverse impression shallow and obscure but a little clearer than the hind one, median line fine, reduced near both the impressions, basal foveae oblong and coarsened in middle, punctures on disc very sparse and minute, those on front transverse impression, lateral furrows, and baso-median area, moderate in density and rather coarse, and those on basal foveae dense and coarse; microsculpture clearly visible, consisting of transverse lines and meshes.

Winged. Elytra elliptical and subparallel or slightly arcuate at sides, slightly convex, a half longer than wide, humeral angles weakly protrudent, very obtuse, and angularly rounded, apex relatively produced behind, edentate and angulate at sutural angles, striae rather wide and moderate in depth, finely crenulate, intervals almost flat and quite impunctate, gradually becoming more convex toward base and apex, 3rd interval with a row of 5–7 setiferous pores along 2nd stria, scutellary strioles fairly long, marginal series subinterrupted in middle, consisting of 9+(10–13) umbilicate pores; microsculpture invisible or scarcely visible in a faint transverse line.

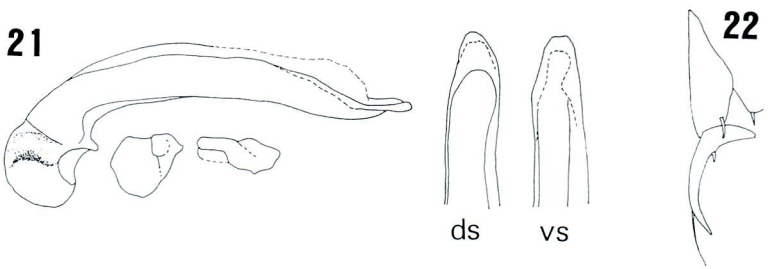
Underside not punctate, very sparsely ciliate on prosternum and along middle of 2nd to 6th ventral segments, especially 6th bearing only several ciliae, metepisterna one-fourth longer than wide, 6th ventral segment bisetose in ♂ and quadrisetose in ♀ along outer margin, the margin completely bordered, in ♂ widely notched, and in ♀ narrowly arcuate at apex.

Legs comparatively long (on comparison of species in other genera of Trichotichnini), fore tibiae clearly sulcate, with several short setae along the sulcus, 1st joint of mid tarsi bisquamulous as the following three joints, hind tarsi fairly long, in ♂ one-fourth longer than and in ♀ one-fifth longer than the width of head, 1st subequal in length to the following two joints together and four times as long as 4th, 5th joint trisetose along each ventral margin.

Aedeagus (Fig. 21) slender and long, slightly twisted to left, in lateral view apical part weakly arcuate and shallowly sinuate before apex, apex slightly thickened and sclerotized, rounded at tip, the sclerosis continuous to apical fourth, apical orifice widely open on dorsal

side, apical lamella as long as wide and arcuate at apical margin, ventral side depressed longitudinally and ridged at sides of the depression, basal part small and depressed from basal bulb toward dorsal side, the depression two-fifths times as wide as the length of basal part, gently curved and gradually removing from suture with apical part, the opposite side to the suture rises steeply from the bottom of the depression (so it seems to be a hump); left paramere small and widely pear-shaped, right paramere also small and a little longer than the left; styluses (Fig. 22) fairly arcuate and pointed at tips, a long seta situated relatively far apart from the tip on inner margin.

Length: 7.5–8.0 mm. Width: 3.0–3.3 mm.



Figs. 21, 22. Genitalia of *Calathomimus masumotoi* sp. nov. 21, Male; 22, Female.

Holotype: ♂, Mon-Angget, Chiang Mai Prov., Thailand, 31. V. 1990, K. MASUMOTO leg. (in T. SHIBATA's coll.). Paratypes: 3♀♀, Doi Suthep, Chiang Mai Prov., Thailand, 30. IV. 1990, N. ITO leg.

The new species closely resembles *Calathomimus shibatai* N. ITO, but is distinguished from the latter by the pronotum straightly contracted behind and not arcuately at sides, with basal angles not rounded, the sutural intervals of elytra black instead of brownish yellow, and the microsculpture on elytra much fainter.

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国際動物命名委員会からのお願い (5)

The following applications were published on June 27, 1991 in Vol. 48, Part 2 of the Bulletin of Zoological Nomenclature. Comment or advice on these applications is invited for publication in the Bulletin and should be sent to the Executive Secretary, I. C. Z. N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, England.

Case No.

2292 *Histoire abrégée des insectes qui se trouvent aux environs de Paris* (GEOFFROY, 1762): proposed conservation of some generic names (Crustacea and Insecta). The GEOFFROY's book was rejected for nomenclatural purposes and placed on the Official Index in 1954 (Opinion 228).
Many of the 59 new generic names proposed by GEOFFROY are in current use and 16 names with authorship from GEOFFROY (1762) have already been conserved and placed on the Official List. The purpose of this application is to conserve the following 23 additional names from GEOFFROY (1762): Hymenoptera: *Diplolepis*, *Eulophus*, *Urocerus*; Lepidoptera: *Pterophorus*; Coleoptera: *Altica*, *Anthrenus*, *Anthribus*, *Bostrichus*, *Cerocoma*, *Copris*, *Crioceris*, *Cryptocephalus*, *Diaperis*, *Galeruca*, *Gyrinus*, *Hydrophilus*, *Notoxus*, *Omalisus*, *Platycerus*, *Prionus*, *Ptilinus*, *Pyrochroa* and *Stenocorus*.

2757 *Rhinapion* BEGUIN-BILLECOCQ, 1905 (Coleoptera): proposed conservation.
The purpose of this application is to conserve the name *Rhinapion* BEGUIN-BILLECOCQ, 1905 for a subgenus of weevils by suppression of the senior homonym *Rhinapion* MOTSCHULSKY.

2738 *Brahmaea* WALKER, 1855 (Lepidoptera): proposed confirmation of *Bombyx certia* FABRICIUS, 1793 as the type species.

The following opinions were published on June 27, 1991 in the Vol. 48, Part 2 of the Bulletin of Zoological Nomenclature.

Opinion No.

1641 *Carcinochelis* FIEBER, 1861 (Heteroptera): *Carcinochelis alutaceus* HANDLIRSCH, 1897 designated as the type species.

1642 *Chlorophanus* SAHLBERG, 1823 (Coleoptera): conserved.

1643 *Ceratopogon puncticollis* BECKER, 1903 (currently *Culicoides puncticollis*; Diptera): given precedence over *Ceratopogon algeriensis* STROBL, 1900.

1644 *Culex stigmatosoma* DYAR, 1907 and *C. thriambus* DYAR, 1921 (Diptera): specific names conserved.

1645 *Musca heraclei* LINNAEUS, 1758 (currently *Eureia heraclei*; Diptera): specific name conserved.

1646 *Coccobius* RATZEBURG, 1852 (Hymenoptera): not suppressed.

Some New Sericid-beetles from Taiwan (Scarabaeidae)

By Hanmei Hirasawa

Abstract In this paper, four species and one subspecies of sericid-beetles, all from Taiwan, are newly described: *Nipponoserica takeuchii* sp. nov., *Pseudosericania makiharai* sp. nov., *Paramaladera masumotoi* sp. nov., *Maladera nomurai* sp. nov. and *Maladera nomurai* subsp. *hayashii* nov. True *Maladera levis* (Frey, 1972) is recorded from Taiwan for the first time.

Nipponoserica takeuchii sp. nov.

(Pl. 9, fig. 1)

Male. Elongate, rather flattened; dorsum rufo-fuscous, head (except for clypeus) blackish, antennae and ventral surface somewhat yellowish; elytra and legs subopaque, ventral surface opaque, remaining portions shining; dorsum glabrous, ventral surface partially and sparsely setaceous. Head densely and somewhat rugosely punctate; clypeus subtrapezoidal, scarcely elevated in middle, apical margin distinctly emarginate and reflexed upwards, with each side rounded; fronto-clypeal border distinctly carinate and gently arcuate backwards with lateral 1/5 widened and impunctate; eyes less than 1/3 times the width of head; each antennal club 2.8 times the length of footstalk. Pronotum transversely subsquare, about 1.8 times as wide as long and widest at the base, densely punctate, with shallow inconspicuous impressions near hind angles; sides very gently rounded, front angles rather acutely angulate, hind ones bluntly so. Scutellum elongate triangular, with a median smooth line. Each elytron with three impunctate costae; each interval with a lower ridge and two grooves, the former sparsely punctate and the latters densely and somewhat rugosely punctate; apical margin finely membranous. Pygidium distinctly convex backwards at distal 1/3, basal half sparsely and coarsely punctate with remaining portion almost impunctate; caudal margin widely margined and fringed with a row of several tawny hairs. Metasternum sparsely bearing tawny hairs in middle. Each abdominal

[Ent. Rev. Japan, Vol. XLVI, No. 2, pp. 171-177, pls. 9-10, Dec., 1991]

sternite with a transverse row of short bristles; hind margin of penultimate sternite widely indented in middle; anal sternite with a longitudinal median sulcus. Protibia bidentate; each protarsal segment feebly tufted beneath near apex; hind margin of mesofemur finely serrate in apical 1/3; hind margin of metafemur serrate in apical 3/4; metatibia gradually widened to apex, with inner margin entirely serrate, outer margin ridged and undulatingly serrate in basal 4/5.

Female. Unknown.

Length: 8.7 mm. Width: 4.3 mm.

Distribution: Taiwan.

Type series. Holotype, ♂, Tenghsi, Kaohsiung Hsien, Taiwan, 14. IV. 1986, W. CHEN leg.

Notes. This new species closely resembles *N. quadrifoliata* KOBAYASHI et NOMURA, 1979, from Taiwan, but can be distinguished from the latter by the following points: The body darker in colour, the elytra and legs subopaque, the scutellum with a median smooth line, the hind margin of metafemur serrate in apical 3/4, the outer margin of metatibia ridged and undulatingly serrate in basal 4/5.

Pseudosericania makiharai sp. nov.

(Pl. 9, fig. 2)

Male. Elongate and flattened; each surface almost fuscous, with head piceous, antennae fulvous; dorsum (except for clypeus), antennae and legs strongly shining, ventral surface and pygidium opaque; each surface almost glabrous. Head sparsely and shallowly punctate; clypeus somewhat transversely subsquare, with dull lustre, impunctate in anterior half, clothed with several long hairs in middle, apical margin gently emarginate and arched upwards at the middle, not reflexed, front angles bluntly angulate, sides almost parallel in posterior halves, abruptly tapering forwards anteriorly; fronto-clypeal suture distinct and gently arcuate backwards, feebly convex in lateral 1/4; frons bearing several erect hairs near eyes; eye slightly more than 1/4 times the width of head; antenna 9-segmented, of which four distals are lamellate and 3.6 times as long as the footstalk. Pronotum distinctly transversely trapezoidal, about twice as wide as long, widest at base, somewhat densely and finely punctate in marginal areas, sparsely so in middle; sides subparallel in basal 2/3, roundly narrowed forwards in apical 1/3, entirely fringed with a row of several long hairs; front angles rectangular; hind ones somewhat rounded. Scutellum longitudinally triangular, sparsely punctate, with a median smooth area; sides feebly bisinuate. Elytra elongate, about 1.5 times as long as wide, widest at apical 2/7, clothed with several erect hairs; costae feebly carinate, sometimes interrupted by punctures;

each sulcus somewhat confluently and sparsely punctate; epipleura sparsely fringed with a row of short bristles; apical margins slightly membranous; apical ends of suture not angulate, bearing some long bristles. Pygidium gently convex backwards, distal half clothed with several hairs. Metasternum irregularly and sparsely clothed with short hairs in middle. Each abdominal sternite transversely bearing a row of long bristles, 2nd and 3rd sternites entirely clothed with very short hairs and irregularly intermixed with long bristles in medial 1/3. Protibia acutely bidentate in outer side; each protarsal segment long and slender, about 7 times as long as wide; hind margin of mesofemur beneath inconspicuously serrate in apical 1/5; hind margin of metafemur beneath finely serrate in apical 3/4, and hind margin above entirely so; metatibia entirely and finely serrate along inner margin, with a submarginal ridge along outer margin very inconspicuously and undulatingly serrate in basal 3/4.

Female. Unknown.

Length: 9.6 mm. Width: 4.6 mm.

Distribution: Taiwan.

Type series. Holotype, ♂, Tayulin, Hualien Hsien, Taiwan, 21. VI. 1976, H. MAKIHARA leg.

Notes. This new species is the second member of the genus *Pseudosericania.* It can be easily distinguished from the type species of the genus, *P. gibiventris* H. KOBAYASHI, 1980, by the following points: The dorsum strongly shining, the clypeus subopaque, the 3rd and 4th abdominal sternites not carinate.

Paramaladera masumotoi sp. nov.

(Pl. 9, fig. 3)

Male. Elongate oval, strongly convex above; each surface rufofuscous, with head (except for clypeus), central portion of pronotum and elytral intervals piceous, antennae fulvous; each surface opaque, with clypeus, antennae, lateral and hind margins of elytra, tibiae and tarsi shining. Head feebly convex above; clypeus trapezoidal and feebly elevated in middle, shallowly and rather sparsely punctate, apical margin slightly emarginate and distinctly reflexed upwards, front angles rounded; frons very feebly and sparsely punctate; each antenna 10-segmented, with club composed of three lamellae and being 2.5 times as long as footstalk. Pronotum subtrapezoidal, about 1.6 times as wide as long, rather sparsely punctate; front and lateral margins sparsely fringed with a row of long hairs; sides gently rounded, front angles rather acutely pointed and hind ones obtusely angulate. Scutellum rather elongate triangular, about 1.3 times as wide as long, densely punctate, with a longitudinal median smooth area. Elytra elliptical, very sparsely clothed

with recumbent short hairs; each interval alternately and feebly carinate, almost impunctate; each sulcus rather densely punctate; epipleura fringed with a row of short hairs. Pygidium rather strongly convex backwards, densely punctate, sparsely clothed with long hairs in median area, more densely so in lateral and caudal margins. Abdominal sternites densely punctate; 1st sternite transversely clothed with a row of short hairs on each side and densely covered with short irregular bristles in median 1/3; 2nd similar to the preceding, but the bristles of median area are rather sparser and longer; 3rd and 4th without median bristles, with hairs in row being longer than those on the precedings; 5th densely covered with long fine hairs. Protibia bidentate; mesofemur with hind margin sinuate in apical 1/3, ventral surface transversely clothed with two rows of hairs, front margin distinctly ridged and sparsely fringed with a row of short hairs; metafemur elliptical, about 2.8 times as long as wide, widest at basal 1/3, hind margin above finely serrate, hind margin beneath sinuate in apical 3/4 and slightly serrate in apical 1/6; metatibia with inner margin serrate in apical 4/7, outer terminal spur 2/3 times as long as 1st segment of metatarsus.

Female. Unknown.

Length: 8.5–10.0 mm. Width: 5.2–5.9 mm.

Distribution: Taiwan.

Type series. Holotype, ♂, Chihnanshan, near Liukuei, Kaohsiung Hsien, Taiwan, 7. VIII. 1986, W. CHEN leg. Paratype, 1♂, Tenghsi, Kaohsiung Hsien, Taiwan, 26. VIII. 1986, W. CHEN leg.

Notes. This new species may be separated from other members of the genus by the following points: The metafemur about 2.8 times as long as wide, widest at basal 1/3, with hind margin beneath sinuate in apical 3/4 and serrate in apical 1/6; the metatibia with inner margin serrate in apical 4/7, bearing outer terminal spur 2/3 times as long as 1st segment of metatarsus. Species of the genus extremely resemble to each other in external aspect. The identification should be dependent on the shape of male genitalia, which is shown large difference.

Maladera levis (FREY), comb. nov.

(Pl. 10, fig. 6)

Serica levis FREY, 1972, Ent. Arb. Mus. Frey, 23: 169, fig. 10,

not *Maladera levis*: NOMURA, 1974, Tôhô Gakuhô, 24: 106, pl. 7, fig. 37.

Hab.: 1♂, Seng Ping, near Liukuei, Kaohsiung Hsien, Taiwan, 22. VI. 1983, W. CHEN leg.; 1 ♂, Feng Kang Shan, 1,500 m alt., near Liukuei, Kaohsiung Hsien, Taiwan, 30. IV. 1986, K. BABA leg.: 1 ♂, Shyk Shan, near Liukuei, Kaohsiung Hsien, Taiwan, 25. IV. 1986, K. BABA leg.; 2♂♂, 1♀, Tenghsi, Kaohsiung Hsien, Taiwan, 13-14. VI. 1983, K. MASUMOTO leg.; 1♂, 2♀♀, ditto, 13. V. 1985, K. MASUMOTO leg.

Distribution: Eastern China: Fukien; Taiwan (New record).

Notes. NOMURA (1974) recorded a species as *Serica levis* FREY from Taiwan, and transferred it to the genus *Maladera* at the same time. Actually the species is not *levis* but a new species, which I hereinafter describe under the name of *nomurai*. Besides, I newly record true *Serica levis* from Taiwan, and transferred to the genus *Maladera*.

Maladera nomurai sp. nov.

(Pl. 10, fig. 4)

Maladera levis: NOMURA, 1974, Tôhô Gakuhô, 24: 106, pl. 7, fig. 37.

Male. Oval and strongly convex above; dorsum fuscous, antennae fulvous, ventral surface rufo-fuscous; almost opaque and glabrous, with clypeus, antennae, tarsi and tibiae shining. Head rather flattened; clypeus transversely subtrapezoidal, about twice as wide as long, feebly convex in middle, somewhat densely punctate and clothed with 2 or 3 erect hairs, front margin feebly emarginate and uniformly reflexed upwards, front angles very gently rounded, sides strongly tapering forwards and almost straight in posterior halves, fronto-clypeal suture indistinct and not carinate; frons sparsely punctate, clothed with a few erect hairs near eyes; eye less than 1/6 times the width of head; antennal club 1.4 times as long as the footstalk. Pronotum transversely trapezoidal, about 1.9 times as wide as long, uniformly, finely and moderately punctate; sides rather straight, sparsely bearing a row of long hairs, front angles acutely produced and hind ones rectangularly rounded. Scutellum rather densely punctate, apex not angulate and impunctate. Elytra with sulci densely punctate, costae feebly elevated and impunctate. Pygidium uniformly convex, rather densely punctate in each side, sparsely so in middle, caudal margin sparsely fringed with a row of short hairs. Each abdominal sternite sparsely bearing a transverse row of short erect bristles. Protibia acutely bidentate; metafemur rather slender, about third as long as wide, subparallel-sided, widest at the middle and almost impunctate, with inconspicuously serrate ridge just behind front margin, hind margin feebly sinuate in apical 2/5; metatibia rather stout, widest at the middle, parallel-sided in apical half, with two spinous transverse ridges on outer margin, inner margin distinctly serrate in basal 4/7, longer terminal spur 4/5 times as long as 1st segment of metatarsus.

Female. Antennal club slightly shorter than footstalk. Abdominal sternites irregularly bearing short erect bristles in medial half.

Length: 9.0–9.2 mm. (♂), 9.0–9.3 mm. (♀). Width: 5.5–5.6 mm. (♂), 5.6–5.8 mm. (♀).

Distribution: Taiwan.

Type series. Holotype, ♂, Nanshanchi, Nantou Hsien, Taiwan, 22. IV. 1977, S.

SAITO leg. Paratypes, 2♀♀, Shitsutou, Nantou Hsien, Taiwan, 13-22. III. 1982, H. HIRASAWA leg.; 1♂, Wulai, Taipei Hsien, Taiwan, 2. VI. 1968, K. TAKAHASHI leg.

Notes. This new species is very similar to *M. levis* (FREY, 1972), from Eastern China and Taiwan, but it can be distinguished from the latter by the following points: The body more distinctly punctate, the male antennal club less than 1.5 times length of footstalk, the left apex of male genitalia not produced and not lobate, the male paramere more strongly undulating and broadly expanding beneath in basal half, the female abdominal sternites irregularly bearing short erect bristles in medial half.

Maladera nomurai hayashii subsp. nov.

(Pl. 10, fig. 5)

Male. This subspecies differs from *M. nomurai nomurai* in the larger body, the 5th abdominal sternite feebly and transversely carinate beneath in medial 1/5 (entirely rounded beneath in the latter), the right apical side of male genitalia (probably a portion of median lobe) shortly prolonged and not reaching the left apex (strongly produced towards distal-inner side and extending beyond the left apex in the latter).

Female. Unknown.

Length: 9.3-10.4 mm. Width: 5.7-6.2 mm.

Distribution: Taiwan.

Type series. Holotype, ♂, Hongshuichi, near Liukuei, Kaohsiung Hsien, Taiwan, 9. VI. 1983, H. HIRASAWA leg. Paratypes, 1 ♂, Hutieku, near Liukuei, Kaohsiung Hsien, Taiwan, 12. VI. 1983, K. MASUMOTO leg.; 1 ♂, Liukuei, Kaohsiung Hsien, Taiwan, 11. V. 1984, W. CHEN leg.

Type depositories. The type series of five new taxa described in the present paper will be entrusted to the National Science Museum (Nat. Hist.), Tokyo, when I finish the series of present papers.

Acknowledgements. I cordially thank Mr. KIMIO MASUMOTO for his constant advice and kind offering of massive materials, the Messrs. HIROSHI MAKIHARA, YUKIO TAKEUCHI and KAORU WADA for their contributions of the specimens, and Mr. HIROKAZU KOBAYASHI for his kind assistance of this study.

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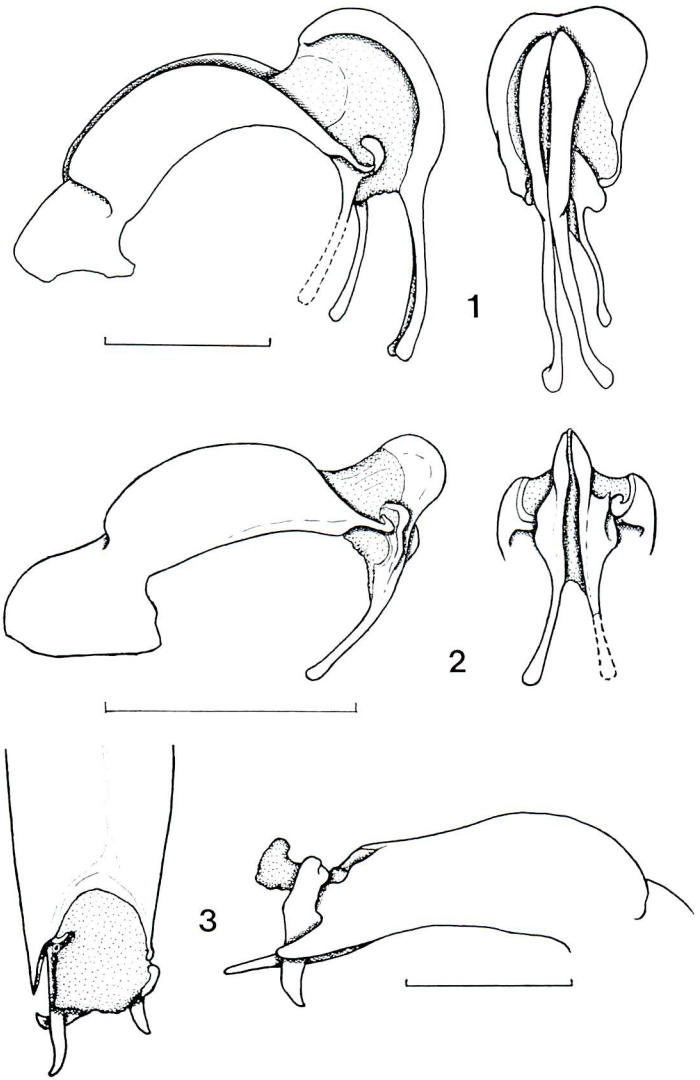
—— 1985. Ditto, III. Ibid., 34 (3/4): 10-15.



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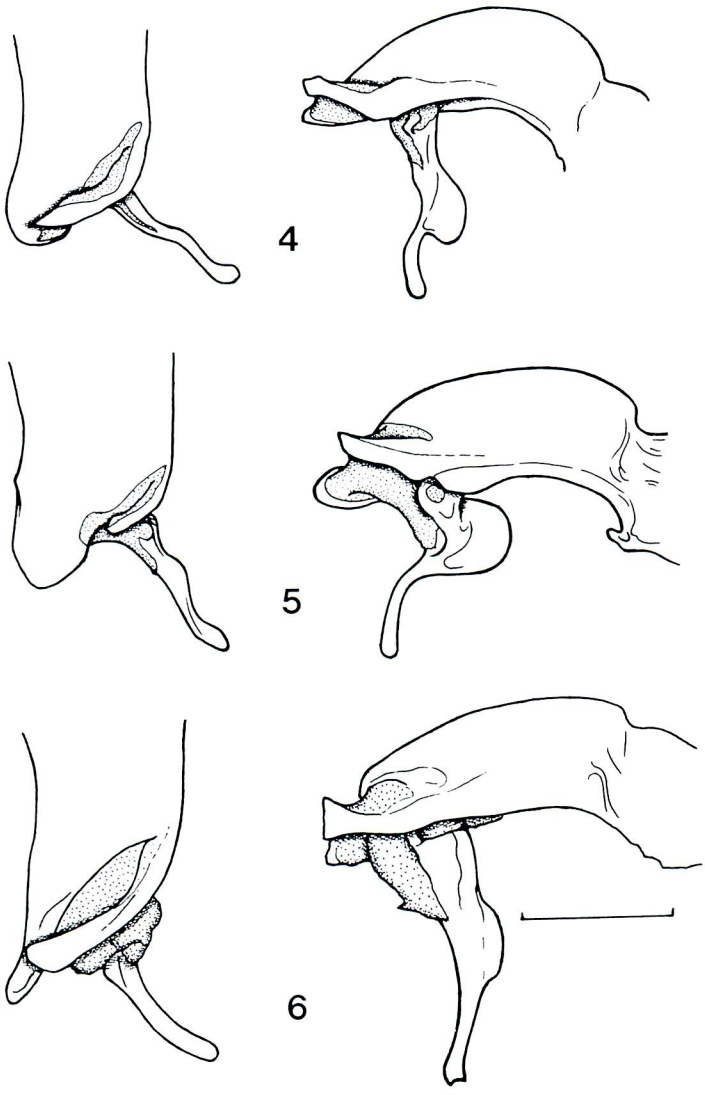


(H. Hirasawa del.)

NOMURA, S., 1974. On the Sericini of Taiwan (Col., Scarabaeidae). Tôhô Gakuhô, 24: 81-115, pls. 5-9.

Explanations of Plates 9-10

Pl. 9, figs. 1-3, & Pl. 10, figs. 4-6. Male genitalia lateral and dorsal views.

1. *Nipponoserica takeuchii* sp. nov.
2. *Pseudosericania makiharai* sp. nov.
3. *Paramaladera masumotoi* sp. nov.
4. *Maladera nomurai nomurai* sp. nov.
5. *M. nomurai hayashii* subsp. nov.
6. *M. levis* (FREY).

(all scales=1 mm).

Studies on Staphylinidae from Japan. III.

By Yasuhiko Hayashi

In this paper I propose to describe a new subspecies of the genus *Agelosus* Sharp and to give some morphological notes on the other species from Japan and its adjacent regions.

I would like to express my sincere gratitude to Mr. T. Shibata for his constant advice, and also to Dr. K. Sawada for his invaluable counsel on my taxonomic research. Hearty thanks are due to Mr. Y. Shibata for his kind help in literature and to Dr. S. Naomi for his courtesy to examine the type specimen of *Agelosus ohkurai unicolor* Naomi.

Notes on the genus *Agelosus* Sharp (Staphylininae, Staphylinini, Staphylinina : *Ocypus*-group)

The genus *Agelosus* Sharp has been placed in the subtribe Xanthopygina Sharp by most researchers only due to the limbic conformation of pronotum (fig. 3). Sharp treated this genus as a member of "*Ocypus*-allies", with difference in conformation among them, and he mentioned that the configuration of pronotal margins of the genus is basically different from that of his Xanthopygine genera and that the mouth organs and other important features show very close relationship to those of "*Ocypus*-allies". I agree with his opinion, and consider that the genus *Agelosus* Sharp should be placed near the genus *Ocypus* Leach or its allies of the Staphylinina because of the resemblance of mouth organs, male genitalia, chaetotaxy of macrosetae (fig. 1) on head, pronotum and elytra.

Agelosus carinatus (Sharp) (Figs. 1-11)

Goerius carinatus Sharp, 1874, Trans. ent. Soc. London, 1874 : 32 (Type locality : Mayasan, Hyogo Pref.).

Agelosus carinatus : Sharp 1889, Annls. Mag. nat. Hist. 6, (3) : 110-111 ; Bernhauer et Schubert, 1914, Coleopt. Cat., (57) : 400 ; Adachi, 1957, J. Toyo Univ., (11) : 180 ; Naomi, 1983, Kontyû, Tokyo, 51 : 583-585 ; Shibata, 1984, Annual Bull. Nichidai Sanko, (22) : 111.

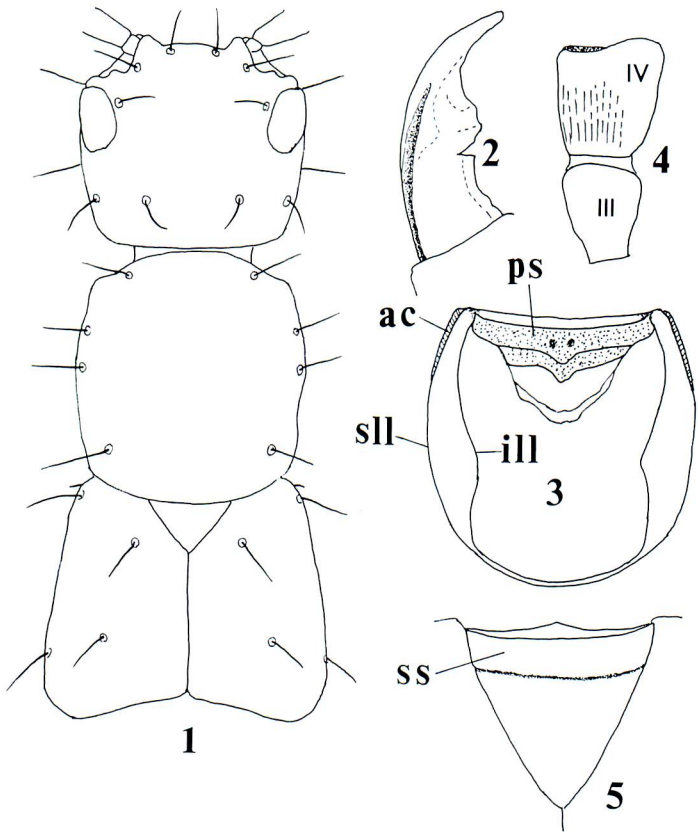
Staphylinus (*Agelosus*) *carinatus* : Müller, 1943, Atti Mus. civ. Stor. nat. Trieste, 15 (5) : 95-97.

Agelosus carinatus brevipennis Naomi (subspecies), 1983, Kontyû, Tokyo, 51 : 585,

〔Ent. Rev. Japan, Vol. XLVI, No. 2, pp. 179-185, Dec., 1991〕

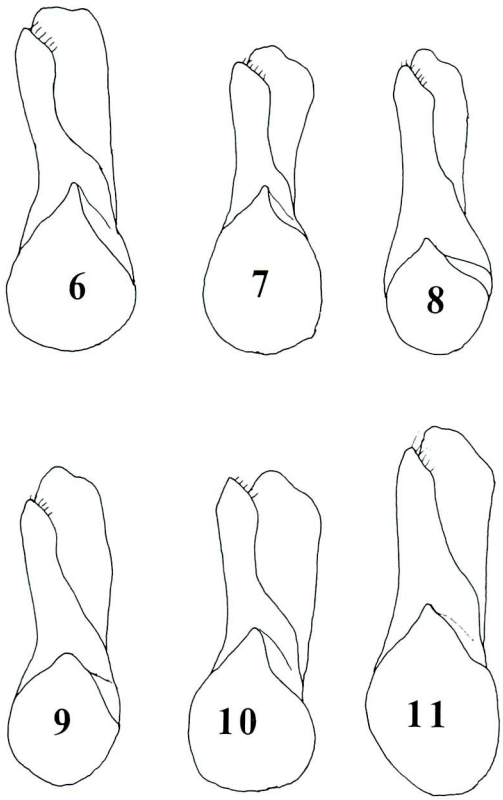
figs. (Localities of the type-series: Mt. Yasuman and Tashirobaru, Nagasaki Pref.; Hiraodai and Mt. Hiko, Fukuoka Pref.; Mt. Sara and Omogokei, Ehime Pref.).

Body very variable in size, 14.6 to 25.3 mm in length. Mandibles (fig. 2) deeply notched inside just behind each tooth; 4th segment of maxillary palpus (fig. 4) strongly thickened apicad, with fine, sparing and longitudinal intermittent sulci on basal half of dorso-lateral surface.



Figs. 1-5. *Agelosus carinatus* (SHARP).
1, Male chaetotaxy of macrosetae (with their sockets) on head, pronotum and elytra (Mt. Amaishi); 2, ♂ right mandible (ditto); 3, ♀ pronotum in ventral view (Mt. Kuragatake); 4, ♂ 3rd and 4th segments of maxillary palpus (Mt. Kooya); 5, ♀ scutellum (Mt. Kuragatake).
ac: apical corner; ps: prosternum; ill: inferior lateral line; sll: superior lateral line; ss: scutellary stage.

Pronotum (fig. 3) with superior lateral line gently incurved toward apex from apical fourth, then hidden by apical corner and linked with apical margin, the apical corner (the area between side margin and superior lateral line), in ventral view, very narrowly subfusiform. Scutellum (fig. 5) obviously and evenly convex in basal fourth, there forming a distinct stage. Elytra rather short, distinctly shorter than pronotum (elytral length measured from apex of the above mentioned scutellary stage to apex of elytral suture); suture more or less loosely fused. Male genitalia (figs. 6-11) rather variable, but the following structure is constant as shown in the figures: apex of penis truncate, parameres inclined to the left, slightly thickened before the apex, subacute at the tip and hardly reaching apex of penis.



Figs. 6-11. Male genitalia in ventral view of *A. carinatus* (SHARP).
6-8, Long-winged type: 6, Mt. Daihi; 7, Ina; 8, Mt. Rausu. 9-11, Short-winged type: 9, Dorogawa; 10, Mt. Katsuragi; 11, Mt. Amaishi.

Agelosus carinatus is divided into 2 types by the following key:

1. Hind wings fully developed, 2.58 to 3.61 times as long as elytra (mostly more than 3 times as long as elytra); elytra a little shorter than pronotum, 0.80 to 0.86 times as long as the latter ..... long-winged type (figs. 6-8)
— Hind wings mal-developed, 1.65 to 2.16 times as long as elytra; elytra much shorter than pronotum, 0.71 to 0.79 times as long as the latter ..... short-winged type (figs. 9-11)

In both the types, venations are distinctly reduced.

Specimens examined: Long-winged type: (Hokkaido) 1♂, 1♀, Mt. Rausu, 12. VII.

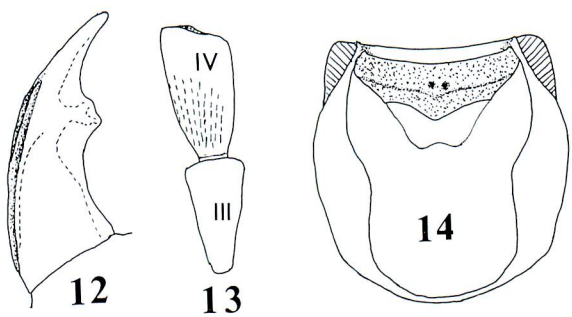
1968, J. KAMEI leg.; 1♂, ditto, 24. VII. 1962, K. UEDA leg.; 1♀, Sounkyo, 10. VII. 1962, K. UEDA leg.; (Yamagata Pref.) 1♀, Hirashimizu, 26. V. 1956, J. KAMEI leg.; (Miyagi Pref.) 2♀♀, Ayashi, Miyagi-cho, 29. IV. 1965, J. KAMEI leg.; (Niigata Pref.) 1♂, Mt. Iide, 13. VIII. 1984, N. ITO leg.; 1♂, Ryozenji Kita, Arai, 9. V. 1982, Y. KUSUI leg.; (Nagano Pref.) 1♂, Ina, 27. VIII. 1961, Y. HAYASHI leg.; (Ishikawa Pref.) 1♂, Mt. Sekido, 10. V. 1964, Y. HAYASHI leg.; 2♀♀, Mt. Kuragatake, 28. V. 1961, Y. HAYASHI leg.; 1♂, Kamiwakamatsu, 1. VI. 1986, S. TAKABA leg.; (Gifu Pref.) Hikagedaira, 15. VII. 1980, T. TANABE leg.; (Shizuoka Pref.) 1♀, Izu, 4. V. 1969, Y. KUSUI leg.; (Kyoto Pref.) 2♀♀, Mt. Daihi, 1. VI. 1958, T. TOMIWA leg.; 1♀, ditto, 26. V. 1962, K. UEDA leg.; 1♂, ditto, 11. VI. 1967, Y. HAYASHI leg.; (Tottori Pref.) 1♀, Mt. Daisen, 14. VI. 1964, N. OHTANI leg.

Short-winged type: (Hyogo Pref.) 1♂, Mt. Amaishi, Tamba, 21. VI. 1990, Y. HAYASHI leg.; (Osaka Pref.) 1♂, Mt. Katsuragi, 29. V. 1983, T. SHIBATA leg.; 1♀, Mt. Iwawaki, 14. IX. 1958, Y. HAMA leg.; 1♀, ditto, 31. V. 1958, T. SHIBATA leg.; 1♀, ditto, 31. XII. 1963, N. ITO leg.; 1♀, Mt. Kongo, 17. VII. 1962, I. HIURA leg.; (Nara Pref.) 1♂, Hase, 3. V. 1958, T. SHIBATA leg.; 1♂, Obako, 27. VI. 1982, T. SHIBATA leg.; 1♂, Dorogawa, 2. VI. 1985, T. ITO leg.; (Wakayama Pref.) 1♂, Mt. Kooya, 12. VIII. 1956, T. SHIBATA leg.; (Mie Pref.) 1♂, Mt. Asama, Futami-cho, 4. XI. 1964, I. HIURA leg.

Agelosus ohkurai HAYASHI (Figs. 12–14)

Agelosus ohkurai HAYASHI, 1978, Ent. Rev. Japan, 31: 29-31, figs. (Localities of the type-series: Fungchiifo, Chiai Hsien, and Sungkang, Nantou Hsien, Taiwan)

This species is considerably different from *A. carinatus* in the following points: mandibles (fig. 12) without notch behind the tooth; last 2 segments of palpi less thickened, rather elongate, 4th segment of maxillary palpus (fig. 13) finely sulcate as in *carinatus*; pronotum (fig. 14) relatively short, as long as elytra, superior lateral line strongly incurved



Figs. 12–14. *Agelosus ohkurai* HAYASHI (Fungchiifo).
12, Female right mandible; 13, ♂ 3rd and 4th segments of maxillary palpus; 14, ♀ pronotum in ventral view.

toward apex from apical fourth, the apical corner, in ventral view, widely subtriangular, and pronotal epipleuron very narrow in the apical portion; elytra considerably long, suture not fused; hind wings fully developed, wide and long, nearly 3.4 times as long as elytra, with well developed venations.

It is important that the present species does not bear any notch on the mandibles.

Specimens examined: holo- and allotypes; 1♀, Fungchiifo, Chiai Hsien, 8. V. 1982, F. KIMURA leg.; 1♀, Sungkang, Nantou Hsien, 8. III. 1970, T. KOBAYASHI leg.

Agelosus unicolor NAOMI, stat. nov. (Figs. 15-17)

Agelosus ohkurai unicolor NAOMI, 1983, Kontyû, Tokyo, 51: 585-586, figs. (Localities of the type-series: Shirazo Pass, Mt. Hakucho, Mt. Kunimi and Mt. Ichifusa, Kumamoto Pref.).

This is a distinct species, though treated by NAOMI as a subspecies of *A. ohkurai* HAYASHI. In *unicolor* the mandibles are distinctly notched inside just behind the tooth, but in *ohkurai* they are not.

Head and pronotum rather opaque, their surface covered with very fine but plain linear microsculpture. Pronotum (fig. 15) with superior lateral line much more strongly incurved than that of *carinatus*, the apical corner, in ventral view, rather wide and subfusiform. Elytra short, 0.74 times as long as pronotum; suture rather tightly fused; hind wings strongly reduced, 1.45 times as long as elytra, with reduced venations.

Specimens examined: 1♂ (paratype), Mt. Hakucho, Kumamoto Pref., 23. V. 1981, K. OHARA leg.

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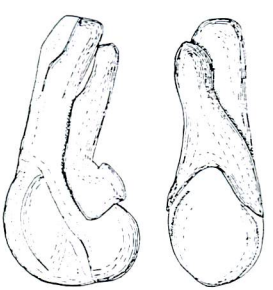

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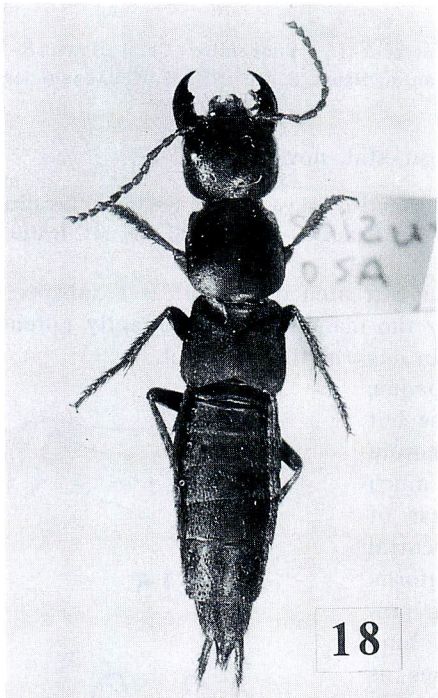
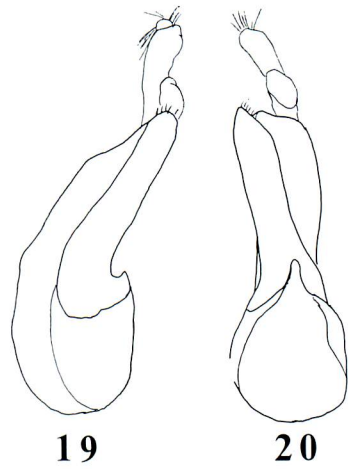
Figs. 15-17. *Agelosus unicolor* NAOMI, ♂, 15, Front part of pronotum (Mt. Hakucho); 16 and 17, Genitalia (after NAOMI, 1983).

Agelosus unicolor masaoi ssp. nov. (Figs. 18-20)

The present new subspecies is different from the nominotypical one in the following points: pubescence on the body darker, blackish (in *unicolor unicolor* the pubescence dark but with distinct brownish tinge); head and pronotum shiny,

without any microsculpture; elytra much shorter, 0.63 times as long as pronotum; hind wings strongly reduced as in *unicolor unicolor*, 1.56 times as long as elytra; penis (figs. 19 and 20) obliquely truncate at apex, parameres rounded at tip in lateral view, more strongly inclined to the left and protruding distinctly beyond penis. Length: 18.8–19.4 mm.





Figs. 18–20. *Agelosus unicolor masaoi* ssp. nov., ♂ (Ashizuri).
18, Habitus; 19, Genitalia in lateral view; 20, Ditto in ventral view.

Holotype: ♂ and paratype: 1♂, Ashizuri, Kochi Pref., 6 and 7. V. 1988, T. Ito leg.

The subspecific name is given after Dr. Masao Hayashi on the occasion of his retirement from the Osaka Jonan Women's Junior College.

Agelosus fraternus (Fairmaire), stat. nov.

Ocypus fraternus Fairmaire, 1891, C. R. Soc. ent. Belg., 35: 191 (Type locality: Tschang-Yang, China); Bernhauer et Schubert, 1914, Coleopt. Cat., (57): 386.
Staphylinus (*Agelosus*) *fraternus*: Müller, 1943, Atti Mus. civ. Stor. nat. Trieste, 15 (5): 95–97.

MÜLLER mentioned in his redescription (1943) of this species that the superior lateral line of pronotum is linked with the inferior lateral line at the top of apical angles (…… Il *fraternus* ha bensi le due linee pleurali fuse all'apice, come nei *Goerius*; ……), but that the mouth organs, the chaetotaxy on the pronotum and form of male genitalia sufficiently show the characteristics of the genus *Agelosus* SHARP (…… Del resto, il *fraternus* condivido col *carinatus* altri caratteri importanti, evidentemente paleogenetici, relativi alla chetotassi del pronoto, alla struttura dei palpi, dell'abdomee dell'edeago ……). Hence the present species should be treated as a member of the genus *Agelosus* SHARP.

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A New Genus and a New Species of Trichiini from Southeastern Asia (Coleoptera, Scarabaeidae)

By Yoshikazu Miyake[1] and Kazuo Iwase[2]

Abstract New taxa and new combinations on the present paper are as follows: *Agnorimus* Y. Miyake et Iwase, gen. nov. (Type-species: *Gnorimus tibialis* Chûjô, 1938); *Agnorimus hayashii* Y. Miyake et Iwase, sp. nov.; *Agnorimus pictus* (Moser, 1901), comb. nov. (*Gnorimus*); *Agnorimus tibialis* (Chûjô, 1938), comb. nov. (*Gnorimus*).

In the present paper, we will propose a new genus and a new species belonging to Trichiini from Oriental Region. The new genus *Agnorimus* is based on two already known species which have been referred to genus *Gnorimus*, 1825 for a long time, and a new species described here from Thailand. The new genus is very similar to the genus *Gnorimus* distributed in Palaearctic Region, in the peculiarly bent middle tibiae and the other appearance. However, as already pointed out by Miyake, 1979[3] & 1989[4], those two genera are distinguishable each other in the characters that mentioned below.

Before going further we wish to express our hearty thanks to Dr. Kazuyoshi Kurosa, Messrs. Masayuki Fujioka, the late Tatsumi Kitano and Kaoru Sakai for their kind help in the literature and the materials. Also special thanks are due to Mr. K. Sakai for taking beautiful photographs.

Agnorimus Y. Miyake et Iwase, gen. nov.

Body elongate oval, strongly convex above and beneath, legs stout, not so long. Clypeus strongly convergent anteriorly, deeply emarginate in front of the middle, protruded on each side, and their apices roundish. Pronotum convex above, less deeply sulcate in the middle, widely ampli-

1) 3-7-201, Nagayama 3-chôme, Tama-shi, Tokyo, 206 Japan.
2) 15-10, Shirasagi 3-chôme, Nakano-ku, Tokyo, 165 Japan.
3) Synopsis for the annual meeting of the Japanese Society of Coleopterology, 1979, Tokyo.
4) Lamellicornia, 1989, 5 : 44.
[Ent. Rev. Japan, Vol. XLVI, No. 2, pp. 187-193, pl. 11, Dec., 1991]

ficate posteriorly and feebly sinuate before hind angles which fairly protruded and the apices not widely rounded, base arched, depressed beneath on each side. Scutellum triangular, lateral sides nearly straight and the apex not widely rounded. First and 3rd intervals of each elytron especially strongly costate, the other odd intervals more or less raised; opaque white markings of elytra mainly situated upon odd intervals. Marginal grooves of elytra vanished near hind angles, therefore, apices of elytra not marginate. Pygidium without distinct excavation and elevation in ♀. Mesosternal process present, distinctly raised between middle coxae. Abdomen not channeled in the middle on both sexes, 1st and 2nd tergal segments confluent in the middle. Front tibia with a terminal spur. Middle tibia strongly curved dorsally near the middle, distinctly distorted inward apically, amplificate and attenuate near the apex in ♂, not strongly curved, gradually thickened apically in ♀. Dorsal surface of hind tibia strongly bent ventrally, and the ventral edge strongly angulate beneath, bearing a tuft of hairs in ♂, moderately curved dorsally in ♀. Basal segment of middle tarsus longer than succeeding three segments combined, proximal two segments flattened, and their dorsal surface with double, longitudinal rows of long hairs in ♂, proximal segment nearly as long as succeeding two segments combined, proximal two segments cylindrical, not flattened, without row of hairs in ♀. Each paramere of ♂ genitalia board-shaped, with a depression or shallow groove on the dorsal surface, and an external tooth near the extremity.

Type-species: *Gnorimus tibialis* CHÛJÔ, 1938.

The new genus is closely similar to *Gnorimus* SERVILLE, 1825, but differs from it in the following table.

Gnorimus	*Agnorimus*
1. Clypeus subquadrate, shallowly emarginate in the middle, and both sides not strongly protrude anteriorly; front margin distinctly marginate.	1. Clypeus strongly narrowed anteriorly and deeply excised in front of the middle, and the either side strongly protruded anteriorly; the front margin not marginate.
2. Mesosternum depressed between middle coxae.	2. Mesosternal process distinctly raised between middle coxae.
3. Scutellum generally semicircular, the apex widely rounded.	3. Scutellum triangular, the apex not widely rounded.
4. Body flat, maximum width/height of body, at centre of metasternum=1.8.	4. Body strongly convex above and beneath, maximum width/height=1.3.
5. Hind tibiae moderately arched dorsally, their ventral surface devoid of projection in ♂.	5. Hind tibiae strongly bent ventrally, their ventral surface markedly protruded beneath in ♂.
6. Pygidium distinctly sulcate before the apex and its both sides markedly	6. Pygidium without deep groove or elevation in ♀.

elevated in ♀.

7. Abdomen distinctly channeled beneath in the middle in ♂.
8. Parameres of ♂ genitalia ship-shaped.

7. Abdomen not channeled beneath in both sexes.
8. Parameres of ♂ genitalia each board-shaped.

Key to the species of the genus *Agnorimus*

1. Elytra with green hue on the 1st and 2nd intervals; mesosternal process not widened anteriorly; pygidium with a small depression before the apex. ..... *A. hayashii* sp. nov.
— Elytra without greenish hue; mesosternal process at least widened anteriorly; pygidium entire without depression in ♀. 2
2. Each elytron with a longitudinal red band; middle tibiae and tarsi with strongly coppery lustre; each abdominal sternite sparsely punctate before the middle; dorsal depression on paramere of ♂ genitalia about two-thirds of its length. ..... *A. pictus* (MOSER)
— Each elytron without red band; middle tibiae and tarsi with greenish lustre; each abdominal sternite rather densely punctate before the middle; dorsal depression on paramere of ♂ genitalia close to the apex. ..... *A. tibialis* (CHÛJÔ)

Agnorimus pictus (MOSER), comb. nov.

(Pl. 11, fig. 3; Text-fig. 3-1)

Gnorimus pictus MOSER, Berliner ent. Zeits., Bd. 46, 1901: 531-532; ARROW, in Junks Coleopt. Catalogue, 1922: 20.

Specimen examined: 1 ♂, Tamdao, Tonkin, N. Viet Nam, 12. VI. 1990, N. KATSURA leg. (in coll. M. FUJIOKA).

Distribution: Viet Nam (Tonkin).

Note: *G. pictus* var. *yunnanus* MOSER, 1908 is similar to *A. tibialis* (CHÛJÔ) on the colouration in the literature, but we have not ever seen the specimen of this form.

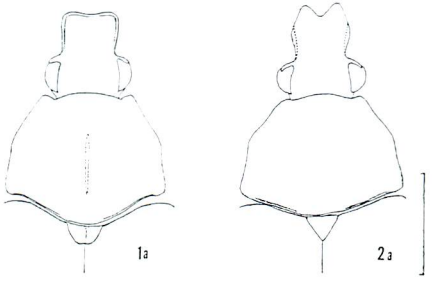

Fig. 1. a: Head, pronotum and scutellum. 1. *Gnorimus nobilis* (LINNÉ); 2. *Agnorimus tibialis* (CHÛJÔ). (Scale: 5 mm)

Agnorimus tibialis (CHÛJÔ), comb. nov.

(Pl. 11, figs. 1 & 2; Text-figs. 1-2a, 2-2b & 2c, 3-2)

Gnorimus tibialis CHÛJÔ, Trans. nat. hist. Soc. Formosa, 1938, 28 (138): 444; MIWA et CHÛJÔ, Cat. coleopt. Jap. 3, Scarabaeidae, 1939: 94; HIRAYAMA, Genshoku Kochu-Zufu, 1940: 51, pl. 22, fig. 4.

Specimens examined: 8♂♂, 3♀♀, Rarasan, N. Taiwan, 15. V. 1974, through Mr.

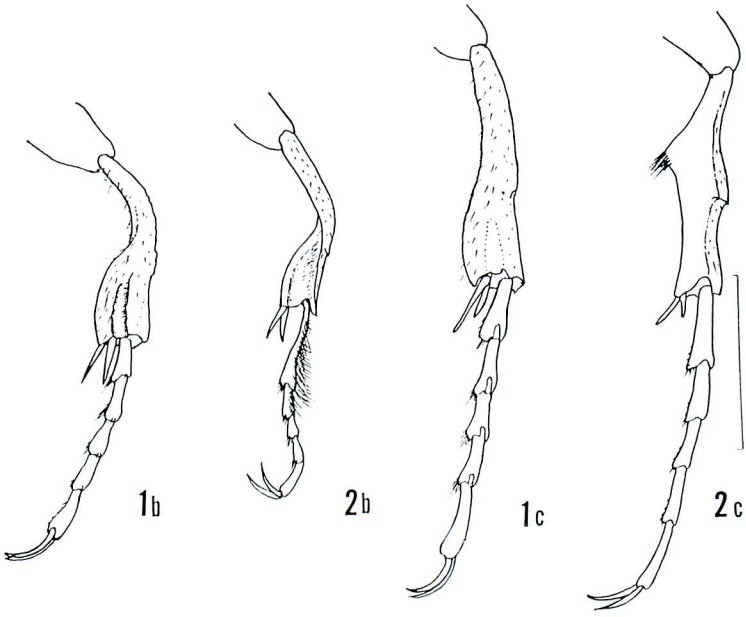

Fig. 2. b: Middle tibiae and tarsi; c: Hind tibiae and tarsi.
1. *Gnorimus nobilis* (LINNÉ); 2. *Agnorimus tibialis* (CHÛJÔ). (Scale: 5 mm)

T. KITANO; 1 ♂, Roroko, Taiwan, through Dr. K. KUROSA.
Distribution: Taiwan.

Agnorimus hayashii Y. MIYAKE et IWASE, sp. nov.

(Pl. 11, fig. 4; Text-fig. 3-3)

Gnorimus pictus MOSER: Y. MIYAKE, Lamellicornia, 1989, 5: 41, fig. 15.

Black, with ventral surface of body, pygidium and legs almost coppery lustre, but frequently, partially suffuced with greenish brilliance strongly on mesosternal process, trochanters, feebly on both sides of breast, tibiae; head, pronotum and scutellum opaque deep green, elytra black, each elytron coloured by a longitudinal red band extending over 5th and 6th intervals; the whole of body decorated with opaque white markings as follows: on pronotum, rather wide marginal band from front angle to beyond basal angle and small spot behind the middle on each side, on each elytron, roundish five small spots on 2nd interval, from base to the apex at intervals, on 4th interval three spots near the middle, on 6th interval one spot near base and small one at the rear, along the lateral

margin, transverse two spots before and behind the middle, roundish ones just behind humerus and near the apex, on pygidium, a large patch except the middle and apical portion; on ventral surface, small spots of metapleura and front and hind surface of procoxae, a marginal band of mesosternum, large patches of meso- and metapleura, front and hind patches on each side of metasternum, small spots of meso- and large patches of metacoxae, transverse spots of hind femora, those patches and spots are frequently reduced or absent.

Body elongate oval, convex, legs less slender. Clypeus scarcely wider than long, widest behind the middle, thence, strongly narrowed anteriorly, disc sparsely, finely punctate in front, coarsely behind, more or less confluently, near the base on each side, with front margin immarginate, deeply excised in the middle, rounded and protruded anteriorly on each side; lateral sides weakly arched. Frons densely, coarsely punctate in front, sparsely, finely behind, more or less rugosely at sides. Eye about one-third as wide as frons between eyes. Antennal footstalk longer than the respective clubs. Pronotum convex, 1.25 times as wide as long, sparsely, finely punctate, lateral sides obtusely angulate behind the middle, almost straight in front, feebly sinuate behind, front angles obtusely rounded but protruded in front, hind angles obtuse but the apices angulate, hind margin weakly recurved, depressed on each side, all margins of pronotum finely marginate, but inconspicuous before scutellum. Scutellum triangular, 1.36 times as wide as long, very finely punctate, lateral sides nearly straight, the apex obtusely angulate. Elytra 1.1 times as long as wide, humeral and apical calli distinct, marginal groove vanished before hind angles, therefore apices immarginate, inner three striae catenate or with horseshoe punctures, the others densely, finely punctate, 1st and 3rd intervals markedly costate, very sparsely, finely punctate, basal portion of 2nd interval and outer humeral areas irregularly punctate, central areas of elytral intervals almost impunctate. Pygidium 1.8 times as wide as long, strongly convex just before the apex, densely, strongly transversely aciculate, bearing several whitish setae near the apex. Metasternum sparsely punctate, and bearing short hairs in the middle, densely, comparatively coarsely, more or less confluently punctate, densely bearing long whitish hairs laterally, 1st to 5th each abdominal sternite sparsely, finely punctate, bearing very fine short setae in the middle, rather coarsely punctate, and the setae becoming longer laterally, 6th sternite, transversely continuously C-shapedly punctate, 7th sternite densely, coarsely aciculate. Front tibia sharply bidentate, and the terminal spur sharp. Proximal segment of middle tarsus much longer than succeeding three segments combined in ♂, longer than two segments combined in ♀. Ventral ridge of hind tibia strongly bent basal

one-third, feebly recurved basal one-fourth in ♀. Paramere of ♂ with a narrow depression near inner margin.

Length: 16.0-18.0 mm.; width: 7.5-8.5 mm.

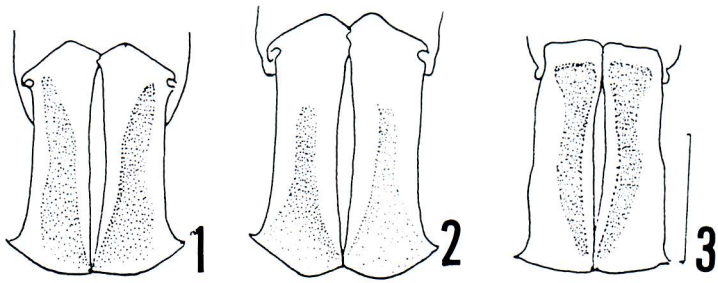

Fig. 3. Parameres of ♂ genitalia in dorsal view.
1. *Agnorimus pictus* (MOSER); 2. *A. tibialis* (CHÛJÔ); 3. *A. hayashii* sp. nov. (Scale: 5 mm)

Holotype: ♂, Doi Pui (1,000-1,500 m), Chieng Mai Prov., N. Thailand, 7. V. 1984, K. AKIYAMA leg. (K. SAKAI coll.). Paratypes: 1♀, near Chang Mai, N. Thailand, 1-30. V. 1989, native collector; 2♀♀, same locality as holotype, 30. V. 1988, native collector; 1♀, Meo Village, Chang Mai, 28. IV. 1981, M. ITO leg. (K. SAKAI coll.); 1♀, Doi Phui, Chang Mai, 4. V. 1984, M. TAKAKUWA leg. (K. SAKAI coll.); 2♀♀, Chang Mai, V. 1988, native collector. The holotype is deposited in the National Science Museum (Nat. Hist.), Tokyo.

Distribution: Thailand.

We would like to dedicate the specific name to Prof. Dr. MASAO HAYASHI who has been striven for the Japan Coleopterological Society, for a long time.

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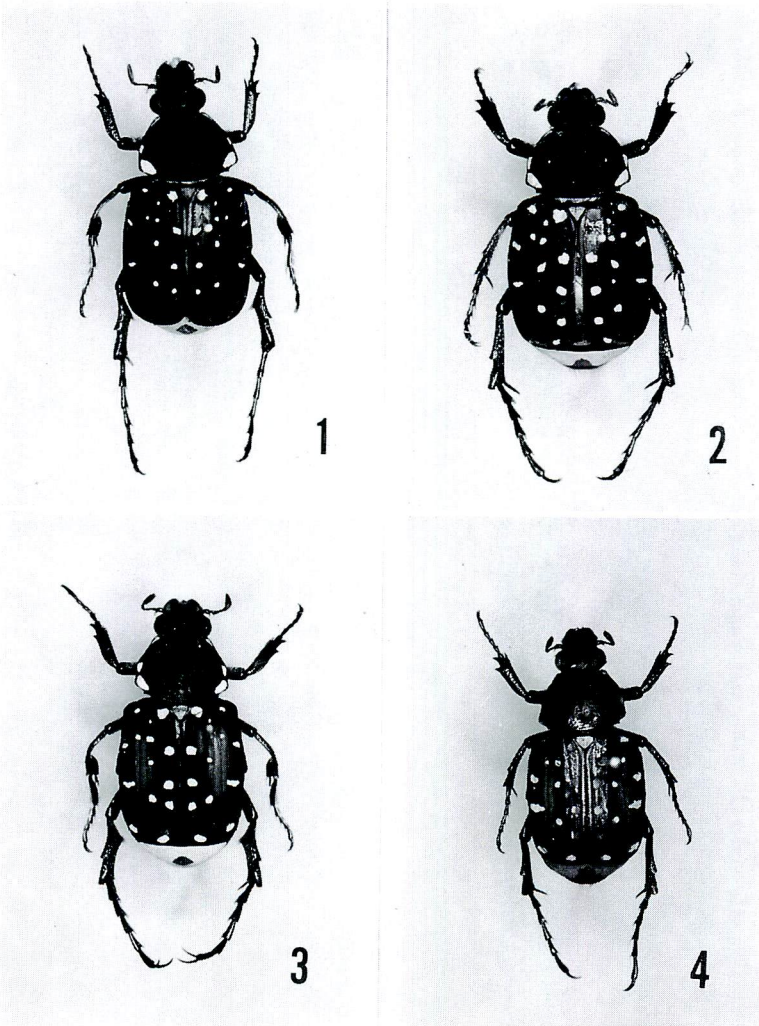


(K. SAKAI photo.)

Explanation of Plate 11.

Pl. 11, figs. 1-4. Dorsal views of *Agnorimus* spp.

1. *Agnorimus tibialis* (CHÛJÔ), ♂, Rarasan, Taiwan.
2. Ditto, ♀.
3. *A. pictus* (MOSER), ♂, Tamdao, N. Viet Nam.
4. *A. hayashii* sp. nov., ♀, near Chang Mai, N. Thailand.

A New Species of *Leiopus* SERVILLE from Japan (Coleoptera, Cerambycidae)

By SHU TAMURA[1] and TAMOTSU TAMURA[1]

Abstract A new cerambycid species, *Leiopus masaoi* sp. nov., is described. It is distinguished from *L. stillatus* (BATES) and *L. montanus* HAYASHI by the color of elytra, punctures of pronotum and shape of male genital organs.

Leiopus masaoi sp. nov. (Pl. 12, figs. 1, 2, 7, & 8)
(Japanese name: Nise-gomadara-momobuto-kamikiri)

Body black; basal halves of the 3rd to 11th antennal segments reddish brown, annulated with whitish grey pubescence; bases of femora and tibiae reddish brown. Body covered with whitish grey pubescence; frons convex, minutely punctured; compound eyes deeply emarginated. Prothorax 1.1-1.3 times broader than long, coarsely punctured, weakly shining, sparsely covered with whitish grey pubescence, uneven on basal half, especially a pair of small protuberances on basal two-fifths, and lateral tubercles directed obliquely backward. Scutellum black and U-shaped, sparsely covered with whitish grey pubescence on the basal area. Elytra about 2.8 times as long as wide, nearly parallel-sided on basal half and then narrowed gently towards apex, covered with whitish grey pubescence, scattered with black small round spots, and large black spots at lateral margins on basal one-fifth, a broad transverse black band covering behind middle to apical two-fifths, occasionally interrupted at elytral suture. Female: 5th sternite nearly as long as 2nd to 4th sternites united, suddenly attenuated cylindrically (and projected from elytra from the end of basal one-third). Femora markedly dilated, clothed with whitish grey pubescence. Median lobe of male genital organs gradually narrowed towards apex, with two slight carinae running longitudinally on the back (fig. 7). Each of lateral lobes dark brown, slender and nearly parallel-sided (fig. 8). Antennae about 1.5 times and 1.3 times as long as body length in male and female, respectively. Body length: 8-11 mm in

[1] 1-32, Miyakojima-kitadôri 2-chôme, Miyakojima-ku, Osaka City, Osaka, 534 Japan.
[Ent. Rev. Japan, Vol. XLVI, No. 2, pp. 195-197, pl. 12, Dec., 1991]

male, 9-11 mm in female (from frons to apices of elytra); width: 2.5-2.8 mm in male, 2.8-3.2 mm in female.

Holotype, ♂, Akiyamago, Nagano Pref., June 17, 1984, M. WAKATSUKI leg. (Dr. MASAO HAYASHI coll.). Paratypes, 1♂, the same locality as holotype, July 14, 1983, M. WAKATSUKI leg.; 1♂ 2♀♀, Kinasa, Nagano Pref., June 10, 1969, H. HAYAKAWA leg.; 1♂, Hinoemata, Fukushima Pref., June 13, 1980, K. AZUMA leg.; 1♀, the same locality as above, June 8, 1975, N. NYUBA leg.; 3♂♂, Mt. Hakusan, Ishikawa Pref., June 18, 1978, July 2, 1978, June 3, 1979, N. NYUBA leg.; 1♂, the same locality as above, June 13, 1982, M. IMURA leg. (all paratypes are in the authors' coll.).

This species is closely allied to *L. stillatus* (BATES), but differs from it by the following key (Table 1), although both species coexist in the type localities. It also discriminates from *L. montanus* HAYASHI by this key.

The specific name is given in honor of Dr. MASAO HAYASHI who is one of the most famous coleopterologists and the manager of the Society. We wish to thank Messrs. M. WAKATSUKI, H. HAYAKAWA, N. NYUBA, M. IMURA and K. AZUMA for providing the materials.

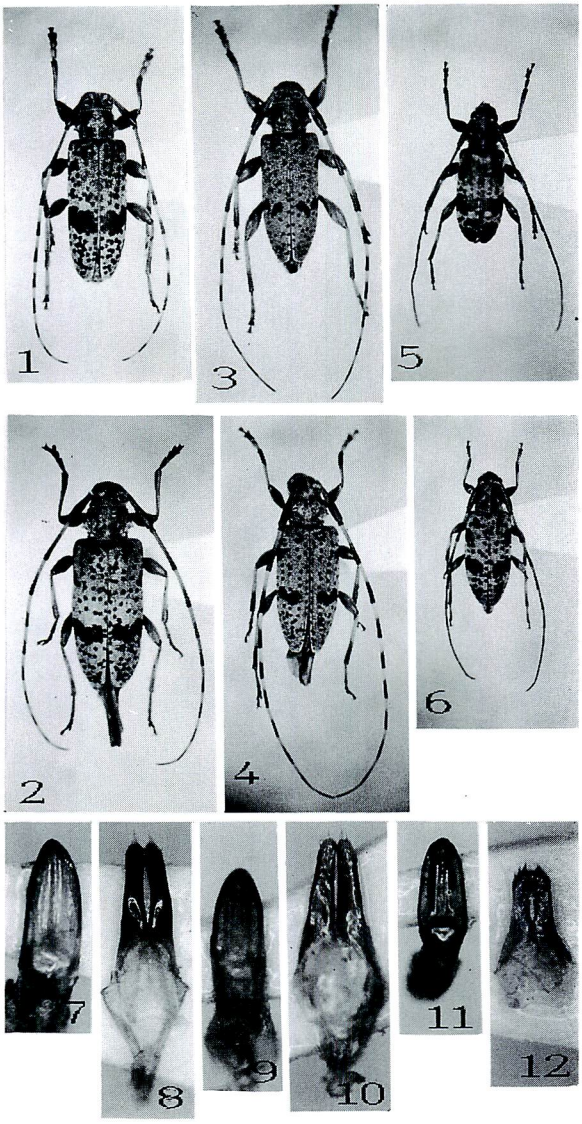
Table 1. Key to four Japanese *Leiopus* spp.

	L. guttatus	*L. masaoi*, *L. stillatus* and *L. montanus*
Antennae	more than 2 times as long as body length.	less than 2 times as long as body length.
Femora	not so dilated.	dilated.

	L. masaoi	*L. stillatus*	*L. montanus*
Color of body pubescence	whitish grey.	greenish grey.	whitish grey or yellowish grey.
Pronotum	uneven on basal half.	uneven on apical half.	almost even.
Female 5th sternite	attenuated cylindrically.	attenuated cylindrically.	not attenuated cylindrically.
Male genital organs			
Lateral lobes	slender, dark brown.	slender, light brown.	not slender, light brown.
Median lobe	sharp apex.	dull apex.	dull apex.

Explanation of Plate 12

Pl. 12, fig. 1. *Leiopus masaoi* sp. nov. (holotype, ♂).
2. Ditto (paratype, ♀).
3. *L. stillatus* (BATES) (♂).
4. Ditto (♀).
5. *L. montanus* HAYASHI (♂).
6. Ditto (♀).



(S. TAMURA photo.)

7. *L. masaoi* sp. nov. (holotype, median lobe).
8. Ditto (holotype, lateral lobes).
9. *L. stillatus* (BATES) (median lobe).
10. Ditto (lateral lobes).
11. *L. montanus* HAYASHI (median lobe).
12. Ditto (lateral lobes).

馬毛島（鹿児島県）のカミキリムシ３種の記録

楠　井　善　久

馬毛島（Magejima）は鹿児島県種子島の西約 12 km に位置する面積 8.56 km² の無人島である．飛蝗の発生等で注目される島であるが，カミキリムシ科の調査はされていないようである．

筆者は1990年７月13日，1991年８月2日と３日の2回この島で採集を行なった．カミキリムシは７月13日のみしか得られず，特別な種はみられなかったが報告しておく．

1. *Megopis sinica* White ウスバカミキリ（1♀）
2. *Chlorophorus quinquefasciatus* (Castelnau et Gory) ヨツスジトラカミキリ（2♂，2♀）
3. *Anoplophora malasiaca* (Thomson) ゴマダラカミキリ（1♀）

A New Sawfly of the Genus *Nesotomostethus* from Japan[1)]

By Teiichi Okutani

Nesotomostethus clemati n. sp.

Female: Length of body, 8 mm; wing length, 8 mm.

Head black and body fulvous. Head sometimes with pale marks on supraclypeal area and vertex; labrum white; basal segments of all palpi fulvous, but apical 2 or 3 segments infuscate; antennae black throughout. Thorax fulvous with following parts black; basal line of scutellum, mesopostnotum and metanotum except cenchri and postscutellum which has a black spot at middle; legs fulvous, but apices of all tibiae and tarsi black. Abdomen fulvous except black sawsheath. Wings smoky but apical 1/3 hyaline; venation and stigmata black, but basal part of costa somewhat yellowish. Pubescence yellowish white, on head under antennal sockets and sternites including sawsheath.

Head seen from above narrower than thorax (ca. 3:4) and rectangular in outline (ca. 7:5). Labrum rounded apically; clypeus trapezoidal and apically truncate; malar space obsolete; supraclypeal area convex and foveae distinct and semicircular in outline; median fovea distinct and oval; lateral foveae rather large, circular in outline and connected with antennal furrows; vertex polished and very sparsely punctate; lateral wall defined; inter- and circum-ocellar furrows distinct; postocellar area well defined, convex and about 2/3 as long as wide. OOL: POL: OCL≒10:5:9. Antennae filiform, and nearly as long as head and thorax combined; relative lengths of the 1st-4th segments, 11.8:30.28; the 4th to 9th segments subequal in length; scape a little shorter than wide (ca. 11:12); pedicel wider than long (ca. 5:4).

Thorax shining, nearly impunctate, all over but scutellum with several punctures; praescutum strongly convex, and sutures deeply sunk; relative lengths of hind tarsal segments, 26:14:11:5:18.

Tergites also shining, polished, impunctate and not pubescent.

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1) Study on Symphyta, XXX.

[Ent. Rev. Japan, Vol. XLVI, No. 2, pp. 199-200, Dec., 1991]

Male: Body length 7 mm; coloration and structure similar to female except genital organs.

Male genitalia and sawsheath were drawn by TOGASHI (1958).

Habitat: Japan (Honshu).

Foodplant: *Clematis apiifolia* DC.

Larva rather thickest; head black and body milky white with greenish yellow tinge on both cephalic and caudal parts and closely allied to another species of the genus, *N. religiosa*.

Types: 2♀♀, 30-v-1955 (including holotype), 1♀, 4-vi-1952, Sasayama, Hyogo Pref., T. OKUTANI leg.; 1♀, 22-v-1944, Yoneyama, Niigata Pref., T. K. leg.; 2♂♂, 14-v-1964, Sasayama, 3♂♂, 24-iv-1964, Kimi-toge, Osaka Pref., T. NAITO leg. I have examined few specimens from Saitama Pref. collected by T. NAMBU this year. The types will be preserved in Entomological Laboratory of Kobe University and National Science Museum.

This species was misidentified with *Monophadinus lewisi* KIRBY, 1882 (=*M. nigriceps* SMITH, 1874) by TAKEUCHI (1952), as the coloration allied to each other.

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摘要：筆者は1970年にルイスアカマルハバチ *Nesotomostethus lewisii* はキイロハバチ *Monophadinus nigriceps* (=*M. japonicus*) の異名同物であることを指摘したが，その後記載されていないので，新種 *N. clemati* として記載した．なお，混乱をさけるため，和名は改称しない．

日本産カミキリムシの生態学的研究（3）

ハナカミキリ亜科3種の蛹の形態

黒　田　祐　一

Ecological Studies of the Cerambycid Beetles in Japan (III)

Morphological Notes on Three Species of Lepturine Pupae

By Yûichi Kuroda

このたび林匡夫教授の大阪城南女子短期大学ご退任及び名誉教授ご就任の記念出版に当たり，心から尊敬と感謝の気持をもって，この報文を捧げる次第です．先生には終戦前から終始変らぬ愛情をもってご助言，ご指導を戴きながら，不肖の弟子で今日に至っていますが，先生の今後のご健康を祈り，また我々のために引続きすばらしい論文を発表されるよう心からお願いする次第です．

本篇には次の3種について報告する．何れも山地において普通に見られる種であるが，＊印のものは族として始めての蛹の記載である．*Japanostrangalia dentatipennis* (Pic) ヒゲジロハナカミキリ；*Strangaliella nymphula* (Bates) ニンフホソハナカミキリ；*Corennys sericata* Bates* キヌツヤハナカミキリ．

Japanostrangalia dentatipennis (Pic) ヒゲジロハナカミキリ

(Pl. 13, figs. 1a-1f)

体は乳白色，ほぼ円柱形で，腹部は尾端に向って細まる．頭部は腹面に向って強く曲がる．頭頂は背面から見え，平滑で，縦に僅かに凹み，左右にそれぞれ2，3本の短毛を生じる．顔面は平滑で，触角基部を取りかこみ5，6本の短毛を生じる．上唇は円味を帯びた台形で，基部に6本の短毛が並び，顎，大腮に1本の短毛を生じる．小顎髭には2本の短毛を生じる．触角は体側にそって下向し，中肢脛節部で湾曲して，鞘翅2/3の所を上向し，前肢跗節の外側を通り，♂は前肢腿節を僅かにこえる．♀はやや短かく前肢脛節で終わる．

前胸背は長さより幅がやや広い円味を帯びた台形を呈し，前縁は盛り上がり，その所に6，7本の短毛を生じる．後縁の左右は膨隆し，3，4本の微毛を生じる．また，後縁中央から側縁に向って逆八字形に左右それぞれ7-10本の剛毛が櫛歯状に前上方に向って生じる．中

〔昆虫学評論，第46巻，第2号，201-203頁，第13-14図版，12月，1991年〕

胸背は平滑で無毛．後胸背は平滑で，小楯板溝は広く，浅い．その両側，後縁から⅓の所にそれぞれ7-9本の短刺毛が横に並ぶ．後肢腿節端は第4腹節後縁近くに達し，鉤爪は第5腹節に達する．各肢腿節端近くに2本の短刺毛を生じ，腿節端¼の所に数本の短毛が疎生する．鉤爪には1本の短刺毛を生じる．鞘翅端は裁断され，僅かに湾入する．

腹部は9節で，第1-6腹節背には正中線の両側に5，6本の刺毛が集合し，肋膜に近く1，2本のやや長い刺毛を生じる．肋膜には1，2本の長い刺毛を生じる．第7，8腹節背では後縁近くに数本の刺毛を生じる．第9腹節背には後縁両側に外上方に向うやや太い鉤状の突起が1対あり，♂の方が♀より太く大きい．腹面では側縁がやや盛り上がり，そこに刺毛の生えた8-12本の鈍突起が並ぶ．腹節腹面には後側縁よりに数本の微毛が疎生する．

体長：♀，10.7 mm．前胸背幅：♀，2.4 mm．

記載に用いた標本は音水渓谷（兵庫県宍粟郡）にて採集した落枯枝から1985年5月4日，及び1987年5月10日に得たものである．

Strangaliella nymphula (Bates) ニンフホソハナカミキリ

(Pl. 13, figs. 2a-2g)

体は尾端に向って細まる円柱形で，乳白色．頭部は腹側に曲がり，背面から僅かに見える．頭頂は平滑で縦に浅く凹み，左右に各2本の刺毛を生じる．顔面は平滑で触角の基部を囲むように各6本の長毛を生じる．上唇基部には6本の短毛を生じる．大腮は滑らかで長短2本の短毛を，小顎髭には1本の短毛と，その傍らに2本の微毛を生じる．触角は前・中肢腿節と鞘翅との間を下向し，鞘翅の⅔の所で腹面に曲がり，上肢跗節の外側を上向し，上肢基部に達する．

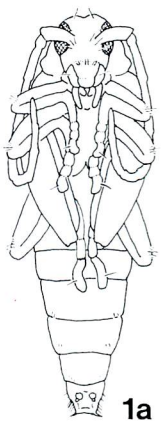
前胸背は円味を帯びた台形で，前縁は盛り上がり，その所に10数本の短毛が並び，その後方及び側面に左右それぞれ2，3本の短毛を生じる．後縁両側はやや膨隆し，4，5本の短毛を生じ，後縁中央から側縁に向ってやや長い毛が左右それぞれ5，6本生じる．中胸小楯板は滑らかで，左右にそれぞれ2本の短毛を生じ，後胸背小楯板溝は浅く，後方⅓の所の左右にやや長い短毛が10数本かたまって生じる．肢は長く，後肢腿節端は第5腹節半ばに達し，その鉤爪は第6腹節前縁を僅かにこえる．各肢腿節端近くにやや太い1本の短刺毛と，その近くに3-5本の短毛を生じる．鉤爪には1本の刺毛を生じる．

第1-6腹節背にはやや後縁に近く，正中線の両側に約9，10本の刺毛が不規則に横に並び，肋膜との間に1，2本の短毛，肋膜に1，2本の刺毛を生じる．第7，8腹節背には数本の刺毛が後縁近くに生じる．第9腹節背には前種と同様に後縁両側に外上方に向う鋭い刺状突起を備える．♂の方が♀より太く大きく，♀には突起の中間部に短毛を生じる．

体長：♂，9.2 mm；♀，8.9 mm．前胸背幅：♂，2.1 mm；♀，1.8 mm．

記載に用いた標本は1986年5月4日赤西渓谷（兵庫県宍粟郡）にて採集したスギ *Cryptomeria japonica* D. Don の枯枝，及び1984年6月3日後山（岡山県英田郡）にて採集した不明樹種の落枯枝から得たものである．

本種については中村（1981）が報告しているが，彼の報文には第9腹節に1対の小さくて



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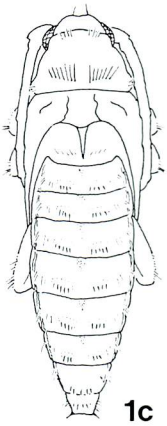

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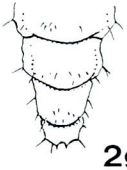
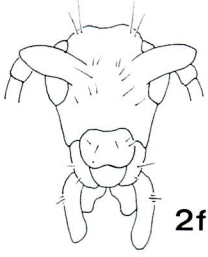
1d

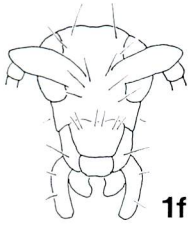
1e



2g



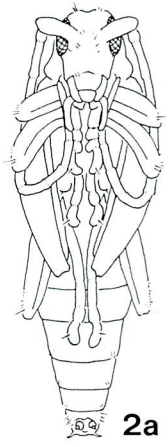
2f



1f

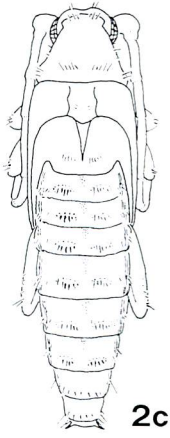
2e

2d



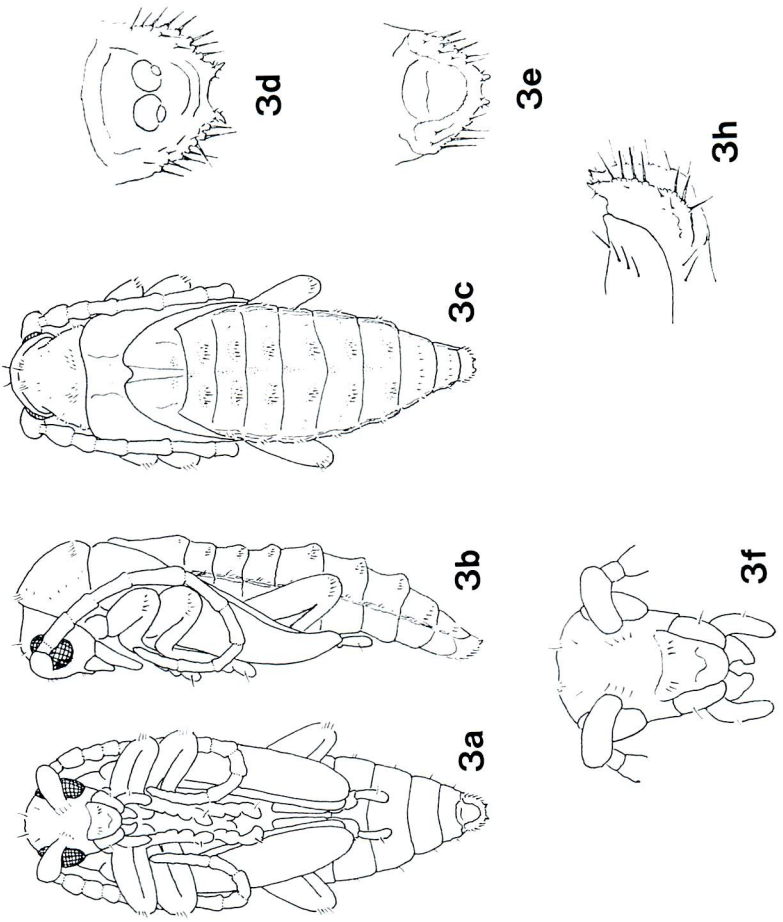
2a

2b



2c

(Y. KURODA del.)



(Y. KURODA del.)

鈍い尾刺があると記載し，その尾刺の形態には詳しくふれていない．附図をみると尾刺は後方に向かい，その間が陥入したようになっている．筆者の確認した標本とはその他の点でも相違しており，中村のは別種と思われる．

Corennys sericata BATES キヌツヤハナカミキリ

(Pl. 14, figs. 3a-3h)

体は前2種とほぼ同形で，乳白色．頭部は腹側に強く曲がり，背面から僅かに見える．頭頂は平滑で円く，縦に浅く凹み，左右に1，2本の短毛と微毛を生じる．顔面は平滑で，触角基部に約4-6本，上唇基部に左右それぞれ3本の短毛を生じる．大腮は滑らかで1本の短毛を，小顎髭に1本の微毛を生じる．触角は太く，各節は明瞭で，前・中肢腿節と鞘翅の間を下向し，♂は鞘翅の約⅔の所で湾曲し，前肢跗節の外側を上向して，前肢脛節に達する．♀は鞘翅の½の所で湾曲し，中肢脛節半ばで終わる．

前胸背はやや釣鐘状で，前縁近くに左右6，7本の短毛が正中線よりに疎生し，後縁に近く16，17本の短毛が横に並ぶ．中胸背は平滑で2，3本の刺毛を生じ，後胸背の小楯板溝は幅広く浅く，その両側後縁近くに左右7，8本の刺毛を生じる．鞘翅端は円く，第5腹節の半ばで終わる．肢はやや扁平で，後肢腿節端は第4腹節後縁を僅かに越え，その鉤爪は第5腹節の半ばに達する．前・中・後肢腿節端にはそれぞれに約7，10，14本の刺毛が，鉤爪には1本の刺毛が生じる．

腹部は9節で，第1-6腹節背には6-10本の大小の短い針状突起が正中線両側，後縁よりに不規則に横に並び，肋膜との間に1，2本，肋膜に1，2本の刺毛を生じる．第7，8腹節背では前・後縁の中間からやや後縁よりに約7，8本の短い針状突起が並ぶ．第9腹節背後縁中央両側に1対の乳頭状隆起あり，その先に鈍い鉤状突起があり，隆起の中間に3個の小突起をもち，その先に短毛を生じる．その部から側縁に向って膨隆し，左右に針状突起をもつ乳頭状の隆起が7，8個並び，その間に刺毛をもった小隆起が数個みられる．腹面は平滑で，毛はない．

体長：♂，11.1-12.7 mm；♀，12.5-15.0 mm. 前胸背幅：♂，2.1-2.3 mm；♀，2.3-2.6 mm.

記載に用いた標本は高鉢山（鳥取県八頭郡）にて1981年4月19日ミズナラ *Quercus mongolica* FISCHER var. *grosseserrata* REHD. の枯株から得た幼虫が4月29日から5月7日にかけ蛹化したものである．

図 版 説 明

a：腹面．b：側面．c：背面．d：♀第9腹節腹面．e：♂第9腹節腹面．f：顔面．g：♂第7-9腹節背（中村原図より部分模写）．h：♂第9腹節側面．

Pl. 13, fig. 1. *Japanostrangalia dentatipennis* (PIC) ヒゲジロハナカミキリ

2. *Strangaliella nymphula* (BATES) ニンフホソハナカミキリ

Pl. 14, fig. 3. *Corennys sericata* BATES キヌツヤハナカミキリ

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Eisai
エーザイ

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