

AN ANNOTATED CHECKLIST OF GENUS *PACHYRHYNCHUS* (COLEOPTERA: CURCULIONIDAE: PACHYRHYNCHINI)

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Pachyrhynchus is a genus from subfamily entiminae of which 145 species are known so far. Checklist prepared including its synonyms and different subspecies indicate that this genus is predominantly tropical with most of the species known from the Oriental region: Philippines (135 species or 93%), Indonesia (6 species or 4%), Japan (3 species) and Taiwan (1 species and two subspecies).

Key words: *Pachyrhynchus*, checklist, synonyms, distribution, Philippines.

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INTRODUCTION

Subfamily Entiminae or broad nosed weevils are one of the largest groups of the family Curculionidae and are distributed throughout the world mostly in tropics with 55 tribes, 1340 genera (Nikolai et al. 2006) and more than 12,000 species (Alonso-Zarazaga & Lyal 1999), in addition, number of new taxon increases rapidly.

During past seven years, number of species from genus *Pachyrhynchus* has increased from 104 to 145 (41 new species) new species described by several local and foreign scientists (Cabras & Rukmane 2016, Rukmane & Barševskis 2016, Barševskis 2016, Bollino et al. 2017, Chen & Lin 2017), which is almost 1/3 of number of all species in genus. Taxonomic studies are imminent and as a prelude to such studies an annotated checklist had been prepared. The checklist reveals that it is well known in Oriental region, with predomination in Philippines (93%) and

few species distributed in Indonesia (4%) and Japan (3%).

Review of literature reveals lapses in the descriptions justifying a substantial taxonomic study. The present contribution enlists the 19 species with type locality "Philippines" with no more details. As species from genus *Pachyrhynchus* are highly endemic, and tend to inhabit one particular island, it is necessary to evaluate such cases with ample ecological studies.

RESULTS

Genus *Pachyrhynchus* Germar, 1824

- = *Sphaerogaster* Latreile, 1825
- = *Somatodes* Schoenherr, 1823
- = *Sphaerogaster* Latreile, 1825
- = *Sphaerogaster* Sturm, 1826
- = *Sphaerogaster* Berthold, 1827

= *Pachirhinus* Latreile, 1828
 = *Pochyrhynchus* Laporte, 1840
 = *Pachyrhynchus* Desmarest, 1842
 = *Pachyrhincus* Desmarest, 1842
 = *Pachyrrhynchus* Gemminger & Harold, 1871

**Type species – *Pachyrhynchus moniliferus*
 Germar, 1824**

1. *P. absurdus* Schultze, 1919 [Philippines, Bucas]
 2. *P. amabilis* Schultze, 1922 [Philippines, Mindanao]
 3. *P. anitchchenkoi* Rukmane & Barševskis, 2016 [Philippines, Mindanao]
 4. *P. annelifer* Heller, 1912 [Philippines, Luzon]
 5. *P. annulatus* Chevrolat, 1881 [Philippines, Luzon]
 = *annulatus* Behrens, 1887
 6. *P. antonkozlovii* Rukmane & Barševskis, 2016 [Philippines, Mindanao]
 7. *P. apicatus* Schultze, 1922 [Philippines, Polillo]
 8. *P. apocyrtoides* Schultze, 1922 [Philippines, Mindanao]
 9. *P. apoensis* Yoshitake, 2012 [Philippines, Mindanao]
 = *pseudoapoensis* Rukmane & Barševskis, 2016
 10. *P. ardentius* Schultze, 1919 [Philippines, Siargao]
 11. *P. argus* Pascoe, 1873 [Philippines, Luzon]
 12. *P. atrocyaneus* Schultze, 1922 [Philippines, Mindanao]
 13. *P. banglas* Bollino, Sandel & Rukmane, 2017 [Philippines, Mindanao]
 14. *P. baluganus* Schultze, 1924 [Philippines, Luzon]
 15. *P. barsevskisii* Rukmane, 2016 [Philippines, Luzon]
 16. *P. basilanus* Heller, 1923 [Philippines, Basilan]
 17. *P. benguetanus* Schultze, 1924 [Philippines, Luzon]
 18. *P. bucasanus* Schultze, 1922 [Philippines, Bucas]
 ssp. *ornatus* Schultze, 1934 [Philippines, Samar]
 19. *P. cabrasae* Rukmane & Barševskis, 2016 [Philippines, Mindanao]

20. *P. caeruleovittatus* Yoshitake, 2012 [Philippines, Mindanao]
 21. *P. cagayanus* Heller, 1929 [Philippines, Luzon]
 22. *P. chamissoi* Schultze, 1922 [Philippines, Mindanao]
 23. *P. chlorites* Chevrolat, 1881 [Philippines]
 = *rutilans* Behrens, 1887
 ssp. *insularis* Kano, 1929 [Philippines]
 24. *P. cingulatus* Pascoe, 1873 [Indonesia, Morotai]
 25. *P. circulatus* Heller, 1912 [Philippines, Catanduanes]
 26. *P. conformis* Yoshitake, 2017 [Philippines, Samar]
 27. *P. confusus* Schultze, 1923 [Philippines]
 28. *P. congestus* Pascoe, 1873 [Philippines, Luzon]
 = *luteoguttatus* Chevrolat, 1841
 ssp. *caerulans* Kraatz, 1888 [Philippines, Luzon]
 ssp. *immarginatus* Kraatz, 1888 [Philippines, Luzon]
 ssp. *ocellatus* Schultze, 1924 [Philippines, Luzon]
 ssp. *pavonius* Heller, 1921 [Philippines, Luzon]
 29. *P. consobrinus* Schultze, 1922 [Philippines, Luzon]
 30. *P. corpulentus* Schultze, 1922 [Philippines, Mindanao]
 31. *P. croesus* Oberthur, 1879 [Indonesia, Sanghir]
 32. *P. cruciatus* Schultze, 1923 [Philippines, Luzon]
 33. *P. cumingi* Waterhouse, 1841 [Philippines]
 ssp. *boholensis* Schultze, 1924 [Philippines, Bohol]
 34. *P. davaoensis* Schultze, 1934 [Philippines, Mindanao]
 35. *P. decussatus* Waterhouse, 1841 [Philippines, Catanduanes]
 36. *P. disgestus* Heller, 1929 [Philippines, Luzon]
 37. *P. dohrni* Behrens, 1887 [Philippines, Luzon]
 38. *P. domino* Rukmane, 2016 [Philippines, Mindoro]
 39. *P. dubiosus* Schultze, 1922 [Philippines, Luzon]
 40. *P. elegans* Waterhouse, 1842 [Philippines, Samar]
 = *eos* Heller, 1924

41. *P. elenae* Rukmane, 2016 [Philippines, Mindanao]
 42. *P. esperanza* Bollino, Sandel & Rukmane, 2017 [Philippines, Mindanao]
 43. *P. eques* Heller, 1912 [Philippines, Luzon]
 44. *P. equester* Heller, 1929 [Philippines, Luzon]
 45. *P. erichsoni* Waterhouse, 1841 [Philippines] = *chrysocompsus* Heller, 1912
 ssp. *eschscholtzi* Waterhouse, 1841 [Philippines, Luzon]
 46. *P. erosus* Schultze, 1920 [Philippines, Luzon]
 47. *P. felipeae* Rukmane & Cabras, 2018 [Philippines, Panay]
 48. *P. forsteni* Snellen van Vollenhoven, 1864 [Indonesia, Molucas]
 49. *P. franciscoi* Rukmane & Cabras, 2018 [Philippines, Panay]
 50. *P. galeraensis* Schultze, 1934 [Philippines, Mindoro]
 51. *P. gemmatus* Waterhouse, 1841 [Philippines] = *atratus* Heller, 1912
 ssp. *purpureus* Kraatz, 1888 [Philippines, Luzon]
 52. *P. gilvomaculatus* Yoshitake, 2017 [Philippines, Mindanao]
 53. *P. gloriosus* Faust, 1895 [Philippines, Luzon]
 ssp. *abbreviatus* Schultze, 1922 [Philippines, Luzon]
 54. *P. halconensis* Schultze, 1922 [Philippines, Mindoro]
 55. *P. helleri* Kuntzen, 1914 [Philippines, Luzon]
 56. *P. hirokii* Yoshitake, 2012 [Philippines, Mindanao]
 57. *P. igorota* Schultze, 1917 [Philippines, Luzon]
 58. *P. inclytus* Schultze, 1924 [Philippines, Luzon]
 = *apicalis* Kraatz, 1888
 = *modestior* Behrens, 1887
 = *transversatus* Heller, 1921
 59. *P. infernalis* Fairmaire, 1897 [Japan, Ryukyu] = *niger* Sakaguchi, 1927
 60. *P. ilgas* Rukmane, 2017 [Philippines, Samar]
 61. *P. jitanasaius* Chen & Lin, 2017 [Taiwan, Green]
 62. *P. jugifer* Waterhouse, 1841 [Philippines]
 63. *P. kraslavae* Rukmane & Barševskis, 2016 [Philippines, Mindanao]
 64. *P. lacunosus* Heller, 1912 [Philippines]
 65. *P. latifasciatus* Waterhouse, 1842 [Philippines, Samar]
 66. *P. layroni* Rukmane & Cabras [Philippines, Panay]
 67. *P. libucanus* Schultze, 1923 [Philippines, Libucan]
 68. *P. loheri* Schultze, 1917 [Philippines, Luzon]
 69. *P. lorquini* Chevrolat, 1881 [Philippines] = *flavomaculatus* Kraatz, 1888
 = *flavopunctatus* Kraatz, 1888
 70. *P. lubanganus* Bollino & Sandel, 2015 [Philippines, Lubang]
 71. *P. marinduquensis* Rukmane & Barševskis, 2016 [Philippines, Marinduque]
 72. *P. masatoshii* Yoshitake et Yap, 2018 [Philippines, Luzon]
 73. *P. miltoni* Cabras & Rukmane, 2016 [Philippines, Mindanao]
 74. *P. mohagani* Bollino & Sandel, 2015 [Philippines, Lubang]
 75. *P. mollendorffi* Heller, 1898 [Philippines, Panay]
 ssp. *marinduquanus* Rukmane & Cabras, 2018 [Philippines, Marinduque]
 76. *P. moniliferus* Germar, 1824 [Philippines, Luzon]
 = *confinis* Chevrolat, 1841
 = *monilifer* Germar, 1871
 ssp. *abranus* Heller, 1934 [Philippines, Luzon]
 ssp. *chevrolati* Eydoux & Souleyet, 1839 [Philippines]
 ssp. *stellulifer* Heller, 1912 [Philippines]
 77. *P. morio* Heller, 1912 [Philippines, Luzon]
 78. *P. morotainensis* Snellen van Vollenhoven, 1864 [Indonesia, Morotai]
 = *waterhousei* Faust, 1895
 79. *P. multipunctatus* Waterhouse, 1841 [Philippines]
 = *auroguttatus* Chevrolat, 1881
 80. *P. naokii* Yoshitake, 2012 [Philippines, Mindanao]
 81. *P. negrosensis* Schultze, 1924 [Philippines, Negros]
 82. *P. neoabsurdus* Rukmane, 2017 [Philippines, Mindanao]
 83. *P. niisatoi* Yoshitake, 2017 [Philippines, Luzon]
 84. *P. nitcisii* Rukmane & Barševskis, 2016 [Philippines, Mindanao]
 85. *P. nobilis* Heller, 1912 [Philippines]
 ssp. *yamianus* Kano, 1929 [Taiwan]

86. *P. notocruciatus* Yoshitake, 2017 [Philippines, Mindanao]
87. *P. ohbayashii* Yoshitake, 2017 [Indonesia, Biak]
88. *P. occidentalis* Rukmane, 2017 [Philippines, Mindanao]
89. *P. ochroplagiatus* Heller, 1912 [Philippines, Luzon]
- ssp. *multiplagiatus* Schultze, 1924 [Philippines, Luzon]
90. *P. orbifer* Waterhouse, 1841 [Philippines, Luzon]
- = *alboguttatus* Chevrolat, 1841
- = *chlorilineatus* Waterhouse, 1841
- = *fahrei* Schoenherr, 1845
- = *fimbriatus* Chevrolat, 1841
- = *globulipennis* Chevrolat, 1841
- = *pretiosus* Chevrolat, 1841
- = *scintilans* Chevrolat, 1841
- ssp. *ardens* Chevrolat, 1841 [Philippines, Luzon]
- ssp. *azureus* Schultze, 1922 [Philippines, Luzon]
- ssp. *circulifer* Chevrolat, 1841 [Philippines]
- ssp. *gemmans* Chevrolat, 1841 [Philippines, Luzon]
- ssp. *inornatus* Waterhouse, 1841 [Philippines]
- ssp. *murinus* Heller, 1934 [Philippines, Luzon]
- ssp. *striatamaculatus* Yoshitake, 2017 [Philippines, Luzon]
91. *P. orientalis* Rukmane, 2017 [Philippines, Mindanao]
92. *P. perpulcher* Waterhouse, 1841 [Philippines]
93. *P. phaleratus* Waterhouse, 1841 [Philippines]
94. *P. pinorum* Pascoe, 1873 [Philippines, Luzon]
- = *dimidiatus* Heller, 1912
- ssp. *transversalis* Heller, 1912 [Philippines]
95. *P. postpubescens* Schultze, 1922 [Philippines, Mindanao]
- ssp. *confluens* Janczyk, 1959 [Philippines, Mindanao]
96. *P. pseudamabilis* Yoshitake, 2012 [Philippines, Mindanao]
97. *P. pseudhalconensis* Rukmane, 2016 [Philippines, Mindoro]
98. *P. pseudoproteus* Schultze, 1922 [Philippines, Luzon]
99. *P. psittacinus* Heller, 1912 [Philippines, Luzon]
100. *P. psitaculus* Heller, 1921 [Philippines, Luzon]
101. *P. pulchellus* Behrens, 1887 [Philippines] = *bakeri* Heller, 1921
- = *modestioroides* Schultze, 1922
102. *P. rebus* Rukmane, 2016 [Philippines, Luzon]
103. *P. regius* Schultze, 1922 [Philippines, Leyte] ssp. *boronganus* Schultze, 1934 [Philippines, Samar]
104. *P. reicherti* Schultze, 1929 [Philippines, Mindanao]
105. *P. reticulatus* Waterhouse, 1841 [Philippines, Luzon]
106. *P. rizali* Schultze, 1934 [Philippines, Luzon]
107. *P. roseomaculatus* Waterhouse, 1841 [Philippines]
108. *P. rufopunctatus* Waterhouse, 1842 [Philippines]
109. *P. rugicollis* Waterhouse, 1841 [Philippines] ssp. *aurinius* Heller, 1921 [Philippines, Luzon]
110. *P. rukmaneeae* Barševskis, 2016 [Philippines, Marinduque]
- = *takakuwai* Yoshitake, 2016
- ssp. *paucisignatus* Yoshitake, 2018 [Philippines, Marinduque]
111. *P. sakaii* Yoshitake, 2017 [Philippines, Samar]
112. *P. samarensis* Schultze, 1923 [Philippines, Samar]
113. *P. sanchezi* Heller, 1912 [Philippines, Luzon]
114. *P. sarcitis* Behrens, 1887 [Philippines] ssp. *kotoensis* Kano, 1930 [Japan, Lanyu]
115. *P. schoenherri* Waterhouse, 1841 [Philippines]
116. *P. schultzei* Schultze, 1917 [Philippines, Luzon]
117. *P. semiignitus* Schultze, 1922 [Philippines, Luzon]
118. *P. semperi* Heller, 1912 [Philippines]
119. *P. septentrionalis* Yoshitake, 2017 [Philippines, Luzon]
120. *P. shavrinii* Rukmane & Barševskis, 2016 [Philippines, Samar]
121. *P. signaticollis* Schultze, 1922 [Philippines, Mindanao]
- = *transversarius* Heller, 1923
122. *P. signatus* Schultze, 1919 [Philippines, Siargao]

123. *P. smaragdinus* Behrens, 1887 [Philippines]
= *carnosus* Kraatz, 1888
= *purpurascens* Kraatz, 1888
124. *P. sonani* Kano, 1930 [Japan, Lanyu]
125. *P. speciosus* Waterhouse, 1841 [Philippines, Mindanao]
126. *P. sphaericollaris* Schultze, 1923 [Philippines, Luzon]
127. *P. sphenomorphoides* Yoshitake, 2012 [Philippines, Basilan]
128. *P. stellio* Heller, 1912 [Philippines, Luzon]
129. *P. striatus* Waterhouse, 1841 [Philippines]
130. *P. subamabilis* Yoshitake, 2012 [Philippines, Mindanao]
131. *P. sulphureomaculatus* Schultze, 1922 [Philippines, Mindanao]
132. *P. sumptuosus* Schultze, 1917 [Philippines, Luzon]
133. *P. sumptuosoides* Yoshitake, 2017 [Philippines, Luzon]
134. *P. tadauchii* Yoshitake, 2012 [Philippines, Mindanao]
135. *P. taylori* Schultze, 1922 [Philippines, Luzon]
ssp. *metalescens* Schultze, 1924 [Philippines, Luzon]
136. *P. tiko* Rukmane, 2016 [Philippines, Mindanao]
137. *P. tilikinesis* Bollino & Sandel, 2015 [Philippines, Lubang]
138. *P. tobafolius* Kano, 1929 [Japan, Lanyu]
139. *P. tristis* Heller, 1912 [Philippines, Luzon]
140. *P. valainisii* Rukmane & Barševskis, 2016 [Philippines, Mindoro]
141. *P. venustus* Waterhouse, 1841 [Philippines]
= *aureomaculatus* Kraatz, 1888
= *virgatus* Schultze, 1919
ssp. *insulanus* Schultze, 1919 [Philippines, Siargao, Bucas]
142. *P. viridans* Heller, 1912 [Philippines, Calayan]
143. *P. viridis* Chevrolat, 1879 [Indonesia, Dorey]
144. *P. zamboanganus* Yoshitake, 2012 [Philippines, Mindanao]
145. *P. zebra* Schultze, 1917 [Philippines, Luzon]

REFERENCES

- Barševskis A. 2016. New species of *Pachyrhynchus* Germar, 1824 and *Macrocyrtus* Heller, 1912 (Coleoptera: Curculionidae) from the Marinduque island (Philippines) as a new example of mimetic species pair. *Baltic Journal of Coleopterology*, 16 (1): 1-6.
- Bollino M., Sandel F. 2015. Three new species of the genus *Pachyrhynchus* Germar, 1824 from Lubang Island (Philippines) (Curculionidae: Entiminae: Pachyrhynchini). *Munis Entomology & Zoology*, 22: 392-401.
- Bollino M., Sandel F., Rukmane A. 2017. New species of the genus *Pachyrhynchus* Germar, 1823 (Coleoptera: Curculionidae) from Mindanao, Philippines. *Baltic Journal of Coleopterology*, 17(2): 189 – 204.
- Cabras A., Rukmane A. 2016. A new species of *Pachyrhynchus* Germar, 1824 (Coleoptera: Curculionidae: Entiminae). *Acta Biologica Universitatis Daugavpilisensis*, 16(1): 123-127.
- Chen Y. T., Tseng H. Y., Yeng M. L., Su Y. C., Huang W. S., Lin C. P. 2017 Integrated species delimitation and conservation implications of an endangered weevil *Pachyrhynchus sonani* (Coleoptera: Curculionidae) in Green and Orchid Islands of Taiwan: Integrative species delimitation of *P. sonanti*. *Systematic Entomology*, 42(4): 798-813.
- Chevrolat L.A.A. 1881. Diagnoses de Curculionides exotiques. *Le Naturaliste*, 1(62): 494-495.
- Cuming H., Waterhouse, G.R. 1845. VI. Descriptions of some new Coleopterous Insects from the Philippine Islands. *Ecological Entomology*, 4(1): 36-45.

- Germar E. F. 1824. Insectorum species novae aut minus cognitae, descriptionibus illustratae. *Halaë, Journal of Coleopterology Heldelii et filii*, 24(1): 624 – 626.
- Heller K. M. 1912. Neuheiten aus Herrn Rv Bennigsen's Sammlung von Coleopteren aus den deutschen Kolonien. Curculionidae: Pachyrrhynchinae. *Entomologische Mitteilungen*, 1(10): 309-310.
- Heller K. M. 1922. New Philippine Coleoptera. *Philippine Journal of Science*, 19(5): 523-627.
- Heller K. M. 1923. Neue malayische, meist philippinische Bockkafer und ein neuer Russelkafer. *Tijds. Voor Entomol*, 66: 33 – 48.
- Kano T. 1929b. Description of three new species of Curculionidae of the genus Pachyrrhynchus Germar from the island of Botel Tobago. *Kontyu* 3: 237 – 238.
- Rukmane A., Barševskis A. 2016. Nine new species of the genus Pachyrrhynchus Germar, 1824 (Coleoptera: Curculionidae) from the Philippines. *Baltic Journal of Coleopterology*, 16(1): 77-96.
- Schultze W. 1919. Seventh contribution to the Coleoptera fauna of the Philippines. *Phillipine Journal of Science*, 15: 545 – 561.
- Schultze W. 1922. Neuner beitrage zur Coleoptera – Fauna der Philippinen. *Deutsche Entomol. Zeit*, 36 – 45.
- Schultze W. 1923. A monograph of the pachyrrhynchid group of the Brachyderinae, Curculionidae: part 1. *The Philippine Journal of Science*, 23: 609-673.
- Schultze W. 1923. Thirteenth contribution to the Coleoptera fauna of the Philippines. *Philippine Journal of Science*, 23: 311 – 339.
- Schultze W. 1924. A monograph of the Pachyrrhynchid group of the Brachyderinae Curculionida: Part 3. The genera Eupachyrrhynchus, Macrocyrtus, Eumacrocyrtus, Apocyrtus, Proapocyrtus, Pseudapocyrtus, Nothapocyrtus, and Exnothapocyrtus. *Philippine Journal of Science*, 25: 359 – 390.
- Schultze W. 1934. Thirteenth contribution to the Coleoptera fauna of the Philippines. *Philippine Journal of Science*, 5: 311 – 337.
- Tseng H. Y., Huang W. S., Jeng M. L., Villanueva R. J. T., Nuneza O. M., Lin C. P. 2017. Complex inter – island colonization and peripatric founder speciation promote diversification of flightless Pachyrrhynchus weevils in the Taiwan – Luzon volcanic belt. *Journal of Biogeography*, 1-12.
- Waterhouse G. R. 1843. Descriptions of the species of the curculionideous genus Pachyrrhynchus, Sch., collected by H. Cuming, Esq., in the Philippine islands. *Transactions of the Royal Entomological Society of London*, 3: 310 – 327.

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