

# Key to the Genera of New World Pentodontini

by Brett Ratcliffe 2007

(*Parabothynus* Endrödi [1968] = *Heteroconus* Kolbe [1900] from Madagascar [Dechambre 1986])

1. Antenna with 9 segments ..... 2
- 1'. Antenna with 10 segments ..... 3
- 2(1). Head in both sexes with a short horn. Apical region of pronotum declivous. Argentina ..... ***Eremobothynus Ohaus 1910***
- 2'. Head lacking horns, instead with a transverse carina. Apical region of pronotum not declivous. SW United States .....  
..... ***Aphonides Rivers 1889***
- 3(1'). Small species, generally less than 15 mm in length. Head lacking carina, tubercles, or horn (rarely with a trace of tubercles). Pronotum lacking tubercles or fovea. Posterior tibia strongly broadened towards apex ..... 4
- 3'. Larger species, generally greater than 15 mm in length. Head with transverse carina (on subapex of clypeus or frontoclypeal suture), tubercles, or horn. Pronotum usually with tubercles (rarely obsolete in *Aphonus*, *Indieraligus*, *Collagenus*, some *Tomarus*, occasionally *Philoscaptus*) and usually with a fovea or sulcus behind tubercles. Posterior tibia not strongly broadened apically ...  
..... 7
- 4(3). Color black ..... 5
- 4'. Color rufous or reddish yellow ..... 6
- 5(4). Pronotum completely and distinctly punctate. Propygidium lacks stridulatory striae. Southern United States through South America ..... ***Euethiola Bates 1888***
- 5'. Pronotum virtually impunctate. Propygidium with stridulatory striae. African genus with one species introduced into southern Brazil ..... ***Heteronychus Burmeister 1847***
- 6(4). Posterior femur greatly thickened, apex of posterior tibia greatly expanded. Peru ..... ***Pentodina Endrödi 1968***
- 6'. Posterior femur normal, apex of posterior tibia not greatly expanded. Honduras to Brazil and Peru .....  
..... ***Parapucaya (in part) Prell 1934***
- 7(3'). Size large (30–35 mm). Color rufous. Mandibles without teeth on external margin. Male with central horn on head, pronotum with

- a strong bifurcate tubercle or horn. Anterior tibia with a small, basal, fourth tooth. Posterior leg with basal tarsomere very wide. Propygidium without stridulatory striae. Argentina, Brazil, Colombia  
..... **Thronistes Burmeister 1847**
- 7'. Not with above combination of characters ..... 8
- 8(7'). Clypeal apex acute, unidentate ..... 9
- 8'. Clypeal apex bidentate, truncate, or rounded ..... 10
- 9(8). Mandibles large, tridentate. Southern United States, northern Mexico ..... **Oxygrylius Casey 1915**
- 9'. Mandibles smaller, nearly hidden by clypeus, lacking lateral teeth. South America ..... **Oxylygyrus Arrow 1908**
- 10(8'). High, transverse carina present immediately behind apex of clypeus ----- 11
- 10'. Transverse carina absent immediately behind apex of clypeus ...  
..... 12
- 11(10). Transverse carina (usually tridentate) just behind apex of clypeus. Pronotum without tubercles. Size generally less than 17 mm. United States west of the Rocky Mountains .....  
..... **Aphonus LeConte 1856**
- 11'. Transverse carina just behind apex of clypeus entire or bidentate. Pronotum tuberculate or not. Size generally greater than 17 mm. Central and SW United States, Mexico, Guatemala, El Salvador, Nicaragua, Honduras ..... **Orizabus Fairmaire 1878**
- 12(10'). Mandibles only slightly visible from above or hidden under clypeus; outer edge arcuate, not toothed or convexly rounded .. 13
- 12'. Mandibles distinctly visible from above; outer edge toothed or convexly rounded or lobed ..... 17
- 13(12). Clypeus strongly narrowed toward apex, apex narrowly bidentate. Color castaneous to black. Canada to Chile .....  
..... **Tomarus (in part) Erichson 1847**
- 13'. Clypeus not strongly narrowed toward apex, apex broadly truncate. Color fulvous to rufocastaneous ..... 14
- 14(13'). Frontoclypeal suture present, deeply impressed, strongly arcuate either side of middle. Head lacking horns or tubercles. Length 14 mm or less. Honduras to Brazil and Peru .....  
..... **Parapucaya (in part) Prell 1934**
- 14'. Frontoclypeal suture absent. Head with horns, tubercles, or low boss. Length 18 mm or greater ..... 15

- 15(14´). Small horn (males) or tubercle (females) present next to each eye. Apex of pronotum declivous with subapex weakly to strongly bituberculate. Panama, Colombia, Ecuador .....  
..... ***Pucaya Ohaus 1910***
- 15´. Paired horns or tubercles absent. Center of head with, at most, a low boss. Apex of pronotum evenly convex ..... 16
- 16 (15´). Clypeus with apex strongly emarginate, reflexed, apical rim thin. Center of head slightly tumid. Prosternal process long, columnar. SW United States, N. Mexico .....  
..... ***Coscinocephalus Prell 1936***
- 16´. Clypeus with apex broadly parabolic, apical rim strongly thickened (Fig. 2). Center of head with strong, elevated carina, carina complete from side to side. Prosternal process small, rounded. Venezuela ..... ***Collagenus Ratcliffe and Hardy 2005***
- 17(12´). Mandibles entire or lobed on lateral edge ..... 18
- 17´. Mandibles distinctly tridentate (1 apical tooth, 2 lateral teeth) .....  
..... 23
- 18(17). Apex of clypeus narrowly bidentate. Ecuador (Galapagos Islands) ..... ***Neobothynus Prell 1936***
- 18´. Apex of clypeus truncate, acute, or narrowly rounded ..... 19
- 19(18´). Clypeus abruptly constricted at apex; tip elongate, narrowly truncate or rounded. Males with head horn, pronotum with bifurcate horn; females lacking horns. Color piceous (females) to grey-tomentose (males), opaque. Brazil, Argentina .....  
..... ***Diloboderus Reiche 1859***
- 19´. Clypeus regularly acuminate, subtriangular. Horns absent. Color castaneous, shining ..... 20
- 20(19´). Pronotum lacking distinct apical fovea, sulcus, or tubercle or fovea either side of middle; marginal bead absent on base. Scutellum impunctate. Base of pygidium, lateral edge of abdominal sternites and meso- and metatibiae with extremely long, dense setae. Puerto Rico ..... ***Indieraligus Dechambre 1979***
- 20´. Pronotum with distinct apical fovea, sulcus, or tubercle or fovea either side of middle; marginal bead present on base. Scutellum with punctures. Setae present on meso- and metatibiae, pygidium, or sternites but extremely long setae absent ..... 21
- 21(20´). Clypeus strongly convex on dorsal surface. Frontoclypeal suture strongly elevated into a transverse, weakly bituberculate

- ridge. Pronotum with a shallow, ovoid concavity in median half behind subapical tubercle (male) or with subapical rounded swelling (female). Elytron with sutural stria and 3 feebly indicated discal striae. Mexico ..... **Gillaspytes Howden 1980**  
 21'. Clypeus not strongly convex on dorsal surface, either weakly convex in basal half only or weakly concave. Frontoclypeal suture with a transverse tubercle only. Pronotum lacking a shallow, ovoid concavity in median half behind apical margin, instead a median longitudinal sulcus or a shallow fovea either side of middle. Elytron with sutural stria and 4–5 punctate-striate rows on disc ..... 22
- 22(21'). Apex of clypeus narrowly truncate. Tubercle on head entire. Pronotum with shallow fovea either side of disc; subapical sulcus and apical tubercles absent. Metasternum setigerously punctate in anterior half only. Paraguay ..... **Heikeianus Endrödi 1978**
- 22'. Apex of clypeus narrowly rounded. Tubercle on head feebly emarginate. Pronotum without fovea either side of middle; both sexes with a weak, subapical, longitudinal sulcus (weaker in females), and males with an apical, emarginate tubercle. Metasternum completely, setigerously punctate. Panama, Costa Rica ..... **Barutus Ratcliffe 1981**
- 23(17'). Propygidium with stridulatory striae or granules ..... 24
- 23'. Propygidium lacking stridulatory striae or granules ..... 25
- 24(23). Apical segment of maxillary palpus expanded, triangular. South America ..... **Hylobothynus Ohaus 1910**
- 24'. Apical segment of maxillary palpus normal, cylindrical. Mexico through South America ..... **Bothynus Hope 1837**
- 25(23'). Elytron with sparse, minute punctures, appearing smooth. Clypeus on sides constricted at base. Southern Brazil .....  
 ..... **Aceratus Prell 1936**
- 25'. Elytron distinctly punctate or punctate-striate. Clypeus not constricted at base ..... 26
- 26(25'). Body form suboval, stout, strongly convex on dorsum. Surface coarsely punctate-striate. Frontoclypeal carina short, less than 1/3 width of base of clypeus. Pronotum evenly convex or with a trace of an apical tubercle. Argentina, Uruguay, S. Brazil .....  
 ..... **Philoscaptus Bréthes 1919**
- 26'. Body form more elongate, less stout, not strongly convex on dorsum. Surface variably punctate. Frontoclypeal carina long, interrupted at middle or not or replaced by 2 distinct tubercles.

Pronotum with or without apical tubercle and subapical fovea.  
Canada to Chile ..... **Tomarus (in part) Erichson 1847**

Literature cited:

Dechambre, R.-P. 1986. Insectes coléoptères Dynastidae. Faune de Madagascar 65: 1-215.

URL: <http://www-museum.unl.edu/research/entomology/Guide/Scarabaeoidea/Scarabaeidae/Dynastinae/Dynastinae-Tribes/Pentodontini/Pentodontini-Key/PentodontiniK.html>