KEY TO AMERICAN GENERA OF PASSALIDAE
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1. Anterior angles of clypeus small, hidden below the external tubercles of the frons. Clypeus hidden below frons (fig. 1), if slightly visible then clypeus is mostly vertical. Frons frequently with punctuations (tribe Passalini) …………………………………………..2

1’. Anterior angles of clypeus well developed and visible, when not very visible (some Pseudacanthus), then frontal-clypeal suture is obvious at least in anterior view (figs. 21, 22). Clypeus usually exposed, visible dorsally, at times separated from the frons by a suture (figs. 18, 19 20, 23, 26, 28, 29, 31, 34, 35). When suture not present, the frons-clypeus is smooth, without punctuations (fig.15, 24, 25, 30) (tribe Proculini) …………………………………………………………………………………11

2. Apex of maxillary lacinia unidentate. Antenna with 5 lamellae…………………..3

2’. Apex of maxillary lacinia bidentate. Antenna with 3 lamellae, rarely 4 or 5……..5

3. Anterior border of ligula tridentate (fig. 2). Median Frontal Structure (MFS) of “marginatus” type. Frontal ridges and internal tubercles present, if not, and MFS is “striatopunctatus” type, then central horn reaches anterior border of head …………4

3’. Anterior border of ligula unidentate (fig. 3). MFS of “striatopunctatus” type, central horn does not reach anterior border of head. Frontal ridges and internal tubercles absent. …………………………………………………………….. Passipassalus

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Fig. 1: Head of Passalus (Pertinax) sp.

Fig. 2: Ligula of Paxillus leachi

Fig. 3: Ligula of Passipassalus buhrnheimi
4. Prosternalum pentagonal, with posterior border of pentagon longer than half of the total width of prosternum (fig. 4). Humeral angles of elytra glabrous or pubescent. Anterior femur without marginal groove ventrally on anterior border.

4'. Prosternalum rhomboidal, if appears pentagonal, then posterior border is narrower than half the total width of prosternum (fig. 5). Humeral angles of elytra always glabrous. Anterior femur with marginal groove ventrally on anterior border (Antilles, South America).

5. Anterior tibia wide (fig. 6), with transverse striae on ventral face. Anterior border of labrum concave with an obtuse central projection (fig. 8). Mandible apex bidentate with superior tooth large and inferior tooth small, rarely with the superior tooth divided or, in South America, tridentate; tarsi usually short, less than half the length of the tibia (Arizona to South America).

5'. Anterior tibia narrow (fig. 7). Anterior border of labrum straight, slightly concave or biemarginate (figs. 1, 9). Mandible apex with 3 more or less equal teeth, if 2, then clypeus vertical and easy to see. Tarsi long, length greater than half the length of tibia.

6. Apex of mandibles tridentate. Clypeus below frons, not exposed, difficult to see even from the front (Mexico, Central America, South America and Antilles) …
6’. Apex of mandibles bidentate. Clypeus vertical, exposed, in dorsal view slightly visible but easy to see from the front (Northern Mexico to Nicaragua) (fig. 9)………..
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Fig. 8: Head of *Ptichopus angulatus*

Fig. 9: Head of *Gen nov. 1*

7. Anterior border of head generally straight, without secondary tubercles, with or without a central dip (fig. 1) (Mexico to South America)………..subgenus *Pertinax*

7’. Anterior border of head with 1 or 2 secondary tubercles (figs. 10, 11) or, if without these tubercles, then horn “broken”, with vertical base then bent forward abruptly (fig. 12) ....................................................................................................................... 8

Fig. 10: Head of *Passalus* (Mitrorhinus) *lunaris*

Fig. 11: Head of *Passalus (P.)* sec. “Neleus” *plicatus – lateral view.*

8. Anterior border of head with a single medial secondary tubercle (fig. 10) (South America)............................................................................................subgenus *Mitrorhinus*

8’. Anterior border of head with 2 more or less separated secondary tubercles (fig 11) (Arizona to South America, Antilles).................................subgenus *Passalus* 9

Fig. 12: Horn of *Passalus (P.)* sec. “Neleus” *interstitialis* Esch.
9. Secondary tubercles together, contiguous at base (fig. 13)…………………..……10

9’. Secondary tubercles more or less separated (fig. 11) (Arizona to South America).…………………………………………………………………..……Section “Neleus”

10. Apex of central tubercle (horn) of MFS not free or almost not free (fig. 13) (Guatemala to South America)…………………………………..Section “Phoroneus”

10’. Apex of horn very free; horn with vertical base, then curves forward horizontally (fig. 14) (South America)…………………………………..…………Section “Petrejus”

11. Anterior margin of labrum deeply concave, with a “scooped out” excavation in labrum behind concavity of margin (fig. 15). Frontoclypeal suture absent (slightly present in Verres sp. nov.). Antenna with short lamellae (fig. 16) (Mexico to South America) ……………………………………………………………………….Verres

11’. Anterior margin of labrum straight, slightly concave or convex (figs. 20, 21); if strongly concave, then frontoclypeal suture present…………………………………12
12. Anterior border of clypeus very convex in center; frontoclypeal suture triarqueate and prolonged laterally toward supraocular ridge; frontal ridges absent (fig. 20); meso and metasternon pubescent; body length approximately 30mm (Mexico) … *Undulifer*

12’. Anterior border of clypeus slightly convex in center or with an obvious triangle; fronto; frontoclypeal suture not triarqueate, usually more or less straight; frontal ridges present or absent; meso and metasternon pubescent or not; body length variable……………………………………………………………………………….13

13. Internal tubercles extend forward more or less the same distance as the external tubercles (fig. 21, 22), passing the frontoclypeal suture when it is present……….14

13’. Internal tubercles absent or, if present, don’t extend forward to the level of the external tubercles (fig. 23), not passing the frontoclypeal suture when it is present...15
14. Apex of horn not free, clypeus vertical or almost vertical (45 degrees), body usually flattened, length 20-30mm (fig. 21) (Mexico to Honduras and El Salvador) …………………………………………………………………………………….Vindex

14’ Apex of horn free, clypeus usually horizontal, body rounded, body length 23-46mm (fig. 22) (Mexico to Guatemala) ………………………………………..Pseudacanthus

15. Center of face flat, without central horn, just a tubercle on each side; body small (17-23mm long) (fig. 23) ……………………………………………………………………..Spurius

15’. Center of face with protuberances or horn, body variable in length ………16

Fig. 22: Head of Pseudacanthus subopacus  Fig. 23: Head of Spurius bicorns

16. Body length more than 51mm; frontoclypeal suture absent, anterior border of clypeus thin, antennal lamellae very wide and curved (fig. 17), elytra rounded, wings and eyes reduced………………………………………………………………….Proculus

16’. Body length less than 51mm, if longer, then frontoclypeal suture present (but if poorly defined then antennal lamellae short (fig. 16); frontoclypeal suture present or absent…………………………………………………………………………………….17

17. Frons partially or totally rugose, frontoclypeal suture extends along frontal ridges, frontal ridges present from their junction to internal tubercles (fig. 26) ……
…………………………………………………………………………………………..Chondrocephalus

17’. Frons smooth; if rugose, then frontal ridges absent between internal tubercles and hypothetical ridge juncture point, humeral angles of elytra rounded and eyes reduced………………………………………………………………………………18
18. Frontoclypeal suture not visible or poorly defined. Anterior border of head (clypeus) thin, antennal lamellae short (fig. 16)………………………………………………19

18’. Frontoclypeal suture visible; if not, then wings reduced and humeral angles of elytra rounded and eyes reduced, but without hair or with scarce hairs on anterior corners of metasternon and laterl groove of metasternon narrow…………………………….20

19. Anterior border of pronotum bisinuate (fig. 24). Marginal groove of pronotum laterally and anteriorly wide and deep. Lateral fossae of pronotum poorly marked………………………………………………………………………………..Veturius

19’. Anterior border of pronotum more or less straight (fig. 25). Marginal groove of pronotum laterally narrow and shallow. Lateral fossae of pronotum well marked…………………………………………………………………………………Publius

Fig. 24: Head of Veturius

Fig. 25: Head of Publius agassizi

Fig. 26: Head of Chondrocephalus purulensis Bates

20. Antennal lamellae curved; if straight, then with large horn, frontal ridges absent, clypeus inclined 45 degrees; lateral metasternal groove glabrous and narrow; body length 25-45mm (fig. 27) …………………………………………………………………………………..Ogyges

20’ Antennal lamellae straight…………………………………………………………………………………………………………………………….21
21. Tip of horn free, clypeus swollen in middle (if not, then frons between horn and supraoccipital ridge with many strong punctuations), frontoclypeal suture straight or curved forward, antennas usually with short lamellae (fig. 16), body length 20-40mm (fig. 28)………………………………………………………………………………..Odontotaenius

21’. Tip of horn free or not, clypeus not swollen in middle, frontoclypeal suture straight or curved posteriorly in middle………………………………………………………….22

Fig. 27. Head of Ogyges championi Bates Fig. 28. Head of Odontotaenius striatopunctatus

22. MFS without lateral tubercles, horn large and tip free………………………………………23

22’. MFS with lateral tubercles, without large horn with free tip (if horn is large and tip free, then frontoclypeal suture absent in central sixth (Panama) or clypeus partially granulose)………………………………………………………………………….24

23. Frontoclypeal suture strong, usually curved posteriorly in middle (Mexico-Panama) (fig. 29)…………………………………………………………………………………………Oileus

23’. Frontoclypeal suture absent; if present, then weak and straight and is from Colombia or Ecuador (Costa Rica to Ecuador) (fig. 30) …………………..Pseudoarrox

Fig. 29: Head of Oileus sargi Fig. 30: Head of Pseudoarrox karreni Reyes-Castillo
24. Clypeus at least partially rugose with granulations; eyes reduced; humeral angles of elytra rounded; elytra with normal punctuations; body length 25-32mm (fig. 31) (Guatemala, El Salvador, Honduras)………………………………………Gen. Nov. 2

24’. Clypeus smooth; eyes normal or reduced; humeral angles of elytra normal or rounded, if rounded, then elytra usually with strong punctuations..........................25

Fig. 31: Head of Gen. nov. 2

25. Elytra with strong punctuations, humeral angles rounded, eyes reduced, some with many hairs along elytral sides, frontal ridges and internal tubercles present…..26

25’. Elytra with weak punctuations; humeral angles and eyes variable; if hair present on elytra, then only on humeral angles; frontal ridges and internal tubercles variable... ..........................................................................................................................27

26. Elytral punctuations rectangular, strong; interstriae narrower than striae; humeral angles of elytra glabrous; body length less than 31mm (fig. 32) (Chiapas to Honduras) ...........................................................................................................Xylopassaloides

26’. Elytral punctuations circular; interstriae wider than striae; humeral angles of elytra, and usually elytral sides, with dense, long hair; body length more than 24mm (fig. 33) (north of Isthmus of Tehuantepec) .................................Proculejus

Fig. 32: Head of Xylopassaloides schusteri  Fig. 33: Head of Proculejus brevis
27. Anterior border of clypeus rounded, MFS of “falsus” type, body length 21-33mm (fig. 34) (Mexico to Panama) ……………………………………………………………………Heliscus

27’. Anterior border of clypeus thin, like a razor blade………………………………………28

Fig. 34: Head of Heliscus yucatanus

28. Frontal ridges absent, tip of horn very free, many hairs in fossae at sides of MFS, anterior border of labrum slightly concave (fig. 35) (Chiapas and Guatemala)
………………………………………………………………………………………………………………Coniger

28’. Frontal ridges present and obvious (if absent or not very pronounced, then body length is less than 26mm or anterior border of labrum with a deep V or tip of horn not free)…………………………………………………………………………………………………29

Fig. 35: Head of Coniger ridiculus

29. Frontal ridges usually begin as Y shape in front of horn and are usually curved, not straight; MFS many times with groove between tips of lateral tubercles; central horn with tip not free or slightly free, oriented vertically (fig. 19) ………..Popilius

29’. Frontal ridges usually straight, never with a straight segment before the bifurcation; MFS without groove between lateral tubercles; central horn sometimes with tip very free and extending forward (fig. 18)………………………………………Petrejoides

URL: http://www-museum.unl.edu/research/entomology/Guide/Scarabaeoidea /Passalidae/Passalidae-Key/PassalidaeK.html