

The skeleton of the manus of *Mylodon darwini* Owen (Tardigrada, Mylodontidae) and its
phylogenetic implications

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Journal of Vertebrate Paleontology

SUPPLEMENTARY DATA 3

COMPARISONS

Myloodonopsis ibseni

Similarities—They include:

- 1) Lunar in dorsal view with medial border, located between the articular facets for radius and magnum, shorter than the border corresponding to the articular facets for the cuneiform and unciform, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 2) Lunar with articular facets for the scaphoid and magnum not connected as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 3) Cuneiform proximodistally longer than dorsopalmarly deep, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 4) Cuneiform mediolaterally wider than dorsopalmarly deep, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 5) Cuneiform with articular surface for ulna elliptical, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 6) Cuneiform with proximal articular facet for ulna concave in one direction, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 7) Cuneiform with proximal border of the dorsal surface not surpassing the articular surface for the ulna dorsally, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 8) Cuneiform with articular surface for the pisiform separated from the articular surface for the ulna as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 9) Cuneiform with distolateral process well developed, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 10) Trapezoid with ratio between the proximodistal length of the dorsal articular surface for the magnum and the maximal mediolateral width of the dorsal surface (0.58 in the left and 0.54 in the right bone) resembling the ratio found in *Myloodonopsis ibseni* (0.55, according to measurements in Cartelle 1980).
- 11) Trapezoid with articular facet for metacarpal III undistinguishable, and correspondingly, metacarpal III without distinguishable facet for trapezoid, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 12) Metacarpal II proportionally less robust than in *Paramyloodon harlani*, as in *Myloodonopsis ibseni*. Condition in the latter two indicated in Cartelle (1980).
- 13) Metacarpal III gracile for a myloodontine (ratio between axioabaxial width at body and bone proximodistal length: 0.29) as in *Myloodonopsis ibseni* (ratio is 0.31 according to measurements in Cartelle, 1980).
- 14) Metacarpal III with two articular facets for the unciform, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 15) Intermediate phalanx of digit II of the manus with ridge in proximal surface mostly covered by the articular facet, as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).

Differences—They include:

- 1) Scaphoid with articular facets for magnum and trapezoid confluent instead of separated as in *Myloodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).

- 2) Lunar with dorsal border of the radial articular facet prominent at the lateral region, instead of flushing with the dorsal surface as in *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 3) Lunar with lateral part of the radial articular surface less convex in mediolateral direction than in *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 4) Cuneiform mediolaterally wider than proximodistally elongate, contrasting with the proximodistally longer than mediolaterally wide condition in *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 5) Trapezoid with articular surface for magnum facing strictly laterally, instead of partially ventrally as in *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 6) Trapezoid and metacarpal III closely placed in the articulated hand, and correspondingly, magnum does not contact the metacarpal II in dorsal view of the articulated hand, contrasting with the condition in *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 7) Trapezium-metacarpal I with a distinct rough protuberance in the proximal region of the metapodial section palmar surface, in contrast with *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 8) Metacarpal II with proximal articular surface triangular instead of quadrangular as in *Myiodonopsis ibseni*. Condition in the latter indicated in Cartelle (1980).
- 9) Metacarpal III with ratio between maximal axioabaxial width and proximodistal length of 0.72 instead of 0.65 as in *Myiodonopsis ibseni*. Condition in the latter obtained from measurements in Cartelle (1980).

Simomylodon uccasamamensis

Similarities—They include:

- 1) Lunar with articular facets for the scaphoid and magnum not connected as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 2) Lunar with articular facets for the scaphoid and magnum almost coplanar, resembling the obtuse condition in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 3) Lunar with articular facets of the magnum and unciform converging at an obtuse angle at the mid-point of the extent of the contact between the articular facets, as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 4) Lunar with articular facet for the unciform transversely wider at its palmar border than in the dorsal, as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 5) Cuneiform with articular surface for ulna elliptical, as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 6) Magnum with proximal articular facets covering a smaller part of the proximal aspect of the bone than in scelidotherines, as in *Simomylodon uccasamamensis*. Condition in scelidotheriines indicated by McDonald (1987); condition in *S. uccasamamensis* indicated by Saint-André et al. (2010).
- 7) Metacarpal II less proportionally axioabaxially compressed than in *Pseudopreoptherium confusum*, as in *Simomylodon uccasamamensis*. Condition in the latter two indicated in Saint-André et al. (2010).

- 8) Metacarpal II with articular facet for metacarpal III not contacting the articular facet for the magnum, as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 9) Metacarpal IV with articular surface for metacarpal III mainly concave at its palmar region, as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).

Differences—They include:

- 1) Scaphoid with articular facets for trapezoid and magnum contiguous, contrasting with the separate condition in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 2) Scaphoid with trapezoidal process stouter in the transverse plane of the hand than in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 3) Lunar with caudal extremity of scaphoid articular facet poorly differentiated, unlike the condition in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 4) Lunar with scaphoid articular facet less arched than in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 5) Cuneiform proximodistal longer than dorsopalmarly deep, in contrast with the relatively thicker element of *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 6) Cuneiform mediolaterally wider than proximodistally elongate, contrasting with the reverse condition in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 7) Trapezoid proximodistally longer than mediolaterally wide, contrasting with the inverse condition in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 8) Trapezoid with articular facet for scaphoid deeper dorsopalmarly than wide mediolaterally, contrasting with the wider than deep proportions of *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 9) Magnum with dorsal part of the articular surface for the lunar mediolaterally sigmoid, with convex medial part and concave lateral part, contrasting with the lack of a concavity on the dorsal portion of the surface mentioned for *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 10) Metacarpal II with articular facet for the trapezium-metacarpal I proximodistally concave, instead of flat to convex as in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 11) Metacarpal II with dorsal exposure of the distal articular surface greater than in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 12) Metacarpal III more gracile (ratio between axioabaxial width at body and bone proximodistal length: 0.29) than in *Simomylodon uccasamamensis* (ratio: 0.34; Saint-André et al., 2010).
- 13) Metacarpal III with single, elongate articular surface for the magnum present at its axial half, contrasting with the two facets present in the same region in *Simomylodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).

- 14) Metacarpal III with ratio between maximal axioabaxial width and proximodistal length of 0.72 instead of 0.63 as in *Simomyodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).
- 15) Metacarpal IV with articular facet for metacarpal V surpassing the palmar surface of the body constriction in palmar direction, contrasting with the non-surpassing facet in *Simomyodon uccasamamensis*. Condition in the latter indicated in Saint-André et al. (2010).

Paramylodon harlani

Similarities—They include:

- 1) Scaphoid with articular facet for trapezium-metacarpal I separated from the trapezoid articular facet, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 2) Scaphoid with only one articular surface for magnum, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 3) Scaphoid with only one articular surface for lunar, and only one articular facet for scaphoid present in lunar, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 4) Scaphoid with magnum facet concave, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 5) Lunar with dorsal surface presenting a medial border, located between the articular facets for radius and magnum, shorter than the border corresponding to the articular facet of the unciform, as in *Paramylodon harlani*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 6) Lunar with proximal articular surface for radius with dorsal border wider than the palmar, as in *Paramylodon harlani* material from Rancho La Brea. Condition in the latter indicated in Stock (1925).
- 7) Lunar with mediolateral convexity in the proximal articular surface for radius less marked than in *Myodonopsis ibseni*, as in *Paramylodon harlani*. Condition in the latter two indicated in Cartelle (1980).
- 8) Lunar with dorsal border of the proximal articular surface for radius prominent relative to the dorsal surface along its extension, as in *Paramylodon harlani*. Condition in the latter indicated in Cartelle (1980).
- 9) Lunar with articular facets for the scaphoid and magnum almost parallel, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 10) Cuneiform mediolaterally wider than proximodistally long, as in *Paramylodon harlani*. Condition in the latter indicated in Robertson (1976).
- 11) Cuneiform with articular surface for the lunar distally and laterally continuous, at a dull edge, with the articular surface for the unciform, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 12) Trapezoid with part of the scaphoid surface located lateral to the ridge inclined relative to the rest of the articular surface, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 13) Trapezoid with dorsal articular surface for the magnum facing directly lateralwards, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925) and Cartelle (1980).

- 14) Trapezoid very close to metacarpal III in dorsal view, as in *Paramylodon harlani*. Condition in the latter indicated in Cartelle (1980).
- 15) Magnum with articular surface for the trapezoid located at a marked prominence, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 16) Magnum with dorsal articular surface for the unciform located at a marked prominence, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 17) Magnum with small articular facet for metacarpal II at the distopalmar quadrant of the medial surface of the bone, as in *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 18) Magnum with articular facet for scaphoid entirely convex in dorsopalmar direction, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 19) Magnum with articular facet for scaphoid wider at its dorsal region, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 20) Magnum with articular surfaces for scaphoid and lunar converging proximally at a moderately marked ridge, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 21) Magnum with proximal articular facets covering a smaller part of the proximal aspect of the bone than in scelidotherines, as in *Paramylodon harlani*. Condition in the latter two indicated in McDonald (1987).
- 22) Magnum with unciform articular facets similar in size, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 23) Magnum with dorsal articular surface for the unciform separated from the lateral articular facet for metacarpal III, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 24) Unciform with proximal process more differentiated, taller and narrower, than in *Pseudopreotherium confusum*, as in *Paramylodon harlani*. Condition in the latter two indicated in Hirschfeld (1985).
- 25) Unciform with articular facet for the lunar sigmoid in dorsopalmar direction, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 26) Unciform with articular surface for the cuneiform more extended dorsopalmarly than in *Pseudopreotherium confusum*, as in *Paramylodon harlani*. Condition in the latter two indicated in Hirschfeld (1985).
- 27) Unciform with cuneiform facet extending into the lateral surface of the proximal process, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 28) Unciform with part of the cuneiform facet placed out of the proximal process less developed than in scelidotherines, as in *Paramylodon harlani*. Condition in the latter two indicated in McDonald (1987).
- 29) Unciform with articular surface for metacarpal V wider palmarly than dorsally, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 30) Unciform with dorsopalmar concavity on articular surface for metacarpal V shallower than in *Pseudopreotherium confusum*, as in *Paramylodon harlani*. Condition in the latter two indicated in Hirschfeld (1985).
- 31) Unciform with lunar facet presenting a palmar extremity wider than the dorsal, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 32) Metacarpal II with palmar bowing, as in *Paramylodon harlani*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).

- 33) Metacarpal II with proximal surface approximately triangular, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 34) Metacarpal II with articular facet for trapezium-metacarpal I not contacting the articular surface for the trapezoid, as in *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 35) Metacarpal II with articular facet for metacarpal III markedly concave, and concurrently, metacarpal III with articular facet for metacarpal II markedly convex, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 36) Metacarpal II with distal articular surface extending upon the dorsal surface, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 37) Metacarpal III with ratio between the maximal axioabaxial proximal width and maximal proximodistal length (0.72) resembling that found in *Paramylodon harlani* (0.73 according to measurements in Stock 1925).
- 38) Metacarpal III with carina in distal articular surface obliquely set, extending from the dorsal and axial region of the distal end to the mid-width of the palmar region, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 39) Metacarpal III with dorsopalmar depth of both ends approximately equal, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 40) Metacarpal IV with articular facet for metacarpal V proximodistally narrow, as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 41) Metacarpal IV with distal articular surface for proximal phalanx of digit IV of the manus convex, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 42) Metacarpal IV with axial offset of distal articular surface slightly developed, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 43) Proximal phalanx of digit IV of the manus with axial part of the distal articular surface greater than the abaxial, as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).

Differences—They include:

- 1) Scaphoid with proximal articular surface a little elevated at its mediopalmar region by a proximal process, contrasting with the condition in *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 2) Scaphoid with dorsal border of articular surface for trapezoid concave at its lateral part, instead of completely convex as in *Paramylodon harlani*. Condition in the latter indicated in Lull (1915).
- 3) Lunar with articular facets for magnum and unciform meeting at 133° at the dorsopalmar mid-depth, instead of meeting at an acute angle as in *Paramylodon harlani*. Condition in the latter indicated in Hirschfeld (1985).
- 4) Lunar with articular surface for unciform relatively wide, contrasting with the narrow facet of *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 5) Cuneiform with proximal articular surface concave in the direction from a dorsolateral point to a medial point, instead of flat as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 6) Cuneiform with articular surface for pisiform separated from articular surface for ulna, contrasting with their confluence in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 7) Cuneiform with elongate distal process at its lateral part, contrasting with its absence in *Paramylodon harlani*. Condition in the latter indicated in Cartelle (1980).

- 8) Pisiform flattened in the dorsopalmar direction (ratio depth/width: 0.67), instead of nodular as in *Paramylodon harlani* (mean ratio is 1.05 according to measurements in Stock, 1925).
- 9) Pisiform with proximomedial surface convex, instead of flat or concave as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 10) Trapezoid with dorsal surface shaped as an irregular pentagon, with elongate and approximately parallel proximolateral and distomedial sides, instead of subtriangular as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 11) Trapezoid with articular surface for metacarpal II approximately as large as the articular surface for the scaphoid, instead of smaller as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 12) Trapezoid with articular surface for metacarpal III not clearly marked, and correspondingly, metacarpal III without distinguishable articular facet for trapezoid, contrasting with the presence of both facets in each of these bones in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 13) Trapezoid with articular surface for the scaphoid kidney-shaped in proximal view, contrasting with the oval shape described in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 14) Magnum with lateral border of articular surface for lunar with strong projection and embayment, instead of straight as in *Paramylodon harlani*. Condition in the latter indicated in Lull (1915).
- 15) Magnum with articular surface for metacarpal II not contacting lateral articular surface for metacarpal III, contrasting with the condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 16) Magnum with facets for trapezoid and metacarpal II in contact, contrasting with the condition present in *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 17) Magnum with palmar region of the lateral articular facet for the metacarpal III set at a clearly obtuse angle (ca. 118°) with the metacarpal II facet, contrasting with the straight angle of *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 18) Magnum with dorsal articular facet for the trapezoid forming a slightly obtuse angle with the medial articular surface for metacarpal III, contrasting with the acute angle of *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 19) Magnum with separation of metacarpal II and palmar trapezoid articular facets from scaphoid, dorsal trapezoid, and medial metacarpal III articular facets not forming a continuous groove, as two ridges connecting articular surfaces interrupt it, contrasting with the condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 20) Unciform with dorsal articular surface for metacarpal III greater than the palmar articular surface for the same bone, whereas it is smaller in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 21) Unciform with metacarpal IV articular surface slightly convex in dorsopalmar direction, contrasting with the surface sinuous in the same direction of *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 22) Trapezium-metacarpal I L-shaped with angle between both arms about 70° , contrasting with the straight angle present in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).

- 23) Trapezium-metacarpal I with distal region of axial articular surface not exposed distally, contrasting with the condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 24) Trapezium-metacarpal I with proximoaxial arm proportionally shorter, relative to the distoabaxial arm, than in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 25) Trapezium-metacarpal I with articular facet for trapezoid, which is lacking in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925) and McDonald (1987).
- 26) Trapezium-metacarpal I with articular surface for the scaphoid axioabaxially concave and slightly convex dorsopalmarly, contrasting with the flat condition of *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 27) Trapezium-metacarpal I with metacarpal II articular surface forming a 77° angle with the scaphoid articular facet, instead of an obtuse angle as in *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 28) Metacarpal II more gracile, judging by the ratio between greatest proximodistal length and dorsopalmar depth, than in *Paramylodon harlani*. Condition in *Myiodon darwinii* indicated by Kraglievich (1934), and condition in *Paramylodon harlani* indicated in Stock (1925).
- 29) Metacarpal II with articular facet for trapezium-metacarpal I not recessed into the shaft as in *Paramylodon harlani*. Condition in the latter indicated in McDonald (1987).
- 30) Metacarpal III much more gracile (ratio between axioabaxial width at body and bone proximodistal length: 0.29) than in *Paramylodon harlani* (ratio: 0.41–0.42). Ratios obtained from measurements in Stock (1925) and Cartelle (1980).
- 31) Metacarpal III with cross-section of shaft shaped like a quarter of a circle, instead of rectangular as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 32) Metacarpal III with facet for metacarpal IV unique, and correspondingly, metacarpal IV with facet for metacarpal III unique, contrasting with the subdivided condition of both facets in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925) and McDonald (1987).
- 33) Metacarpal III with carina of distal articular surface much straighter, and correspondingly, much less dorsally exposed on the dorsal surface than in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 34) Metacarpal IV with articular surface for unciform flatter than in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 35) Metacarpal IV with articular surface for metacarpal III mainly concave at its palmar region, instead of convex as in *Paramylodon harlani*. Condition in the latter indicated in Lull (1915).
- 36) Metacarpal IV with shaft axioabaxially wider than in metacarpal III, instead of narrower as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 37) Metacarpal IV with shaft about as deep dorsopalmarly as in metacarpal III, in contrast with the mean condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 38) Metacarpal IV with longitudinal dorsal buttress in shaft more rounded and less distinctive than in *Paramylodon harlani*. Condition in the latter indicated in Lull (1915).
- 39) Metacarpal IV with axial ridge in shaft more rounded and less distinctive than in *Paramylodon harlani*. Condition in the latter indicated in Lull (1915).

- 40) Proximal phalanx of digit II of the manus dorsopalmarly deeper, relative to axioabaxial width (ratio: 1.34), than in *Paramylodon harlani* (ratio is 1.18 according to measurements in Stock, 1925).
- 41) Proximal phalanx of digit II of the manus with angles between surfaces meeting at the paramedian ridges in the proximal articular surface similar in frontal plane section, contrasting with the asymmetry present in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 42) Proximal phalanx of digit II of the manus with abaxial distal condyle deeper in dorsopalmar direction than the axial distal condyle, contrasting with the shallower condition of the former in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 43) Intermediate phalanx of digit II of the manus with ridge between concavities at the proximal articular surface not wider at its palmar end than at the dorsal end, contrasting with the condition met in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 44) Intermediate phalanx of digit II of the manus with mid-line ridge in the proximal surface mostly covered by articular surface, except at mid-depth, contrasting with the non-articular ridge present in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925) and Cartelle (1980).
- 45) Intermediate phalanx of digit II of the manus with circumference of the abaxial condyle describing about a half circle, and less than the two thirds of a circle found in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 46) Proximal phalanx of digit III of the manus with abaxial distal condyle bearing a conical distal projection, instead of being flattened as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 47) Proximal phalanx of the digit IV of the manus with sulcus facing carina forming an obtuse angle with the articular facet for the axial sesamoid in proximal articular surface, in contrast with the straight angle of *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 48) Proximal phalanx of digit IV of the manus without canal extending from the foramina in the abaxial surface to the dorsal surface, contrasting with the condition present in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 49) Proximal phalanx of the digit IV of the manus with distal articular surface approximately as wide axioabaxially as dorsopalmarly deep, contrasting with the wider than deep condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 50) Proximal phalanx of digit V of the manus approximately as dorsopalmarly deep as axioabaxially wide, contrasting with the deeper than wide condition of *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 51) Proximal phalanx of digit V of the manus with distal articular surface facing directly distalwards and not partially dorsalwards as in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).
- 52) Abaxial sesamoid of digit III of the manus longer relative to its axioabaxial width (ratio 2.01) than in *Paramylodon harlani* (mean ratio is 1.54 according to measurements in Stock 1925).
- 53) Abaxial sesamoid of digit III of the manus is not depressed in dorsopalmar direction, contrasting with the condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).

- 54) Axial sesamoid of digit IV of the manus presents an articular surface for the proximal phalanx of digit IV of the manus, contrasting with the condition in *Paramylodon harlani*. Condition in the latter indicated in Stock (1925).

Glossotherium robustum

Similarities—They include:

- 1) Scaphoid with articular facet for trapezium-metacarpal I separated from the trapezoid articular facet, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 2) Scaphoid with magnum facet concave, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 3) Scaphoid with articular facets for trapezoid and magnum contiguous, as in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 4) Lunar with dorsal surface presenting a medial border, located between the articular facets for radius and magnum, shorter than the border corresponding to the articular facet of the unciform, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842) and Montellano-Ballesteros and Carranza-Castañeda (1986).
- 5) Lunar with proximal articular surface for radius with convexity in the mediolateral direction less marked than in *Mylodopsis ibseni*, as in *Glossotherium robustum*. Condition in the latter two indicated in Cartelle (1980).
- 6) Lunar with dorsal border of the proximal articular surface for radius prominent relative to the dorsal surface along its extension, as in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 7) Lunar with scaphoid articular facet less arched than in *Simomyodon uccasamamensis* as in *Glossotherium robustum*. Condition in the latter two indicated in Saint-André et al. (2010).
- 8) Cuneiform mediolaterally wider than dorsopalmarly deep, as in *Glossotherium robustum*. Condition in the latter indicated in Saint-André et al. (2010).
- 9) Pisiform flattened as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 10) Trapezoid with ratio between the height of the dorsal articular surface for the magnum and the greatest mediolateral width of the dorsal surface (0.54–0.58) resembling the ratio found in *Glossotherium robustum* (ratio is 0.54 according to measurements in Cartelle, 1980).
- 11) Trapezoid with dorsal articular surface for the magnum facing directly lateralwards, as in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 12) Trapezoid close to metacarpal III in dorsal view, and correspondingly, magnum not contacting metacarpal II in dorsal view, as in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 13) Magnum with two articular facets for metacarpal III, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842) and Cartelle (1980).
- 14) Magnum with small articular facet for metacarpal II at the distopalmar quadrant of the medial surface of the bone, as in *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 15) Magnum with proximal articular facets covering a smaller part of the proximal aspect of the bone than in scelidotherines, as in *Glossotherium robustum*. Condition in the latter two indicated in McDonald (1987).

- 16) Unciform with part of the cuneiform facet placed out of the proximal process less developed than in scelidotherines, as in *Glossotherium robustum*. Condition in the latter two indicated in McDonald (1987).
- 17) Trapezium-metacarpal I with a distinct rough protuberance in the proximal region of the metapodial section palmar surface, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 18) Metacarpal II with proximal surface approximately triangular, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 19) Metacarpal II with articular facet for trapezium-metacarpal I not contacting the articular surface for the trapezoid, as in *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 20) Metacarpal II with articular facet for metacarpal III markedly concave, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 21) Metacarpal II with articular facet for metacarpal III not contacting the articular facet for the magnum, as in *Glossotherium robustum*. Condition in the latter indicated in Saint-André et al. (2010).
- 22) Metacarpal III resembling in dorsal view a combination of the letters ‘T’ and ‘Y’, agreeing with the T-like shape of *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 23) Metacarpal III with carina in distal articular surface obliquely set, extending from the dorsal and axial region of the distal end to the mid-width of the palmar region, as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 24) Metacarpal IV with articular surface for metacarpal III mainly concave at its palmar region, as in *Glossotherium robustum*. Condition in the latter indicated in Saint-André et al. (2010).

Differences—They include:

- 1) Scaphoid with proximal articular surface a little elevated at its mediopalmar region by a proximal process, contrasting with the condition in *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 2) Lunar with dorsal border of the unciform facet about as long as the dorsal border of the cuneiform facet, instead of longer as in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 3) Lunar without rugous prominence at the palmar surface, contrasting with the condition present in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 4) Lunar with articular facets for scaphoid and magnum separated, instead of contacting as in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 5) Lunar with palmar part of articular surface for unciform mediolaterally wider than the dorsal part, contrasting with the narrower palmar part of *Glossotherium robustum*. Condition in the latter indicated in Saint-André et al. (2010).
- 6) Lunar with articular facets of the magnum and unciform converging at about 133° at the mid-point of the extent of the contact between the articular facets, contrasting with the acute angle of *Glossotherium robustum*. Condition in the latter indicated in Saint-André et al. (2010).
- 7) Cuneiform with proximal articular surface for ulna concave in oblique direction, from a point lateral and dorsal to another at mid-length in the medial contour, instead of flat as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842) and Cartelle (1980).

- 8) Cuneiform with articular surface for pisiform separated from articular surface for ulna, instead of confluent as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 9) Cuneiform with articular surface for pisiform oval instead of semioval as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 10) Cuneiform with elongate distolateral prominence, contrasting with the lack of the process in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 11) Cuneiform with proximal transverse ridge on the dorsal surface of cuneiform dorsally not exceeding the border of the ulnar articular surface, contrasting with the condition in *Glossotherium robustum*. Condition in the latter indicated in Cartelle (1980).
- 12) Cuneiform with articular surface for metacarpal V facing dorsolaterally, in contrast with the more laterally facing facet of *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 13) Trapezoid C-shaped instead of patella-like as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 14) Trapezoid with articular surface for the scaphoid kidney-shaped in proximal view, contrasting with the semicircular shape described in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 15) Trapezoid with dorsal surface shaped like an irregular pentagon, with elongate proximolateral and distomedial contours, contrasting with the approximately triangular shape of *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 16) Trapezoid with dorsal articular surface for magnum elliptical, except for the truncated distal border, contrasting with the circular facet of *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 17) Magnum with articular facet for metacarpal II meeting at an obtuse angle (ca. 118°) with the palmar region of the lateral articular facet for metacarpal III, contrasting with the 90° angle of *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 18) Magnum with facets for trapezoid and metacarpal II in contact, contrasting with the condition present in *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 19) Unciform with oblong protuberance at the medial region of the dorsal surface much smaller than in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 20) Unciform with dorsal border of the articular facet for the cuneiform very sinuous in dorsal view, contrasting with the straighter border present in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 21) Unciform without rugous canal between the dorsal articular facets for the magnum and metacarpal III, contrasting with the condition in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 22) Trapezium-metacarpal I with angle between both arms of its L-shape about 70°, instead of straight as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 23) Trapezium-metacarpal I with articular facet for trapezoid, which is lacking in *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 24) Trapezium-metacarpal I with metacarpal II articular surface forming a 77° angle with the scaphoid articular facet, instead of a 90° or larger angle as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842) and McDonald (1987).

- 25) Trapezium-metacarpal I with articular surface for the scaphoid axioabaxially concave and slightly convex dorsopalmarly, contrasting with the flat condition of *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 26) Metacarpal II with dorsal surface of the body proximodistally longer than axioabaxially wide, instead of square as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 27) Metacarpal III by far more gracile (ratio between axioabaxial width at body and bone proximodistal length: 0.29) than in *Glossotherium robustum* (ratio is 0.46–0.47 according to measurements in Cartelle, 1980).
- 28) Metacarpal III without marked axial tuberosity present on the body, contrasting with the greater prominence of *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 29) Metacarpal III with ratio between the maximal axioabaxial proximal width and maximal proximodistal length (0.72) much lower than in *Glossotherium robustum* (ratio is 0.78 according to measurements in Cartelle, 1980).
- 30) Metacarpal III with facet for metacarpal IV unique; correspondingly, metacarpal IV presents a single articular surface for metacarpal III, contrasting with the subdivided condition of both facets in *Glossotherium robustum*. Condition in the latter indicated in McDonald (1987).
- 31) Metacarpal IV with articular surface for unciform slightly sigmoid, almost flat, instead of evenly convex as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 32) Metacarpal IV with abaxial tuberosity less developed than in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 33) Proximal phalanx of digit III of the manus without greater protuberance on abaxial side than in proximal phalanx of digit II of the manus, contrasting with the condition in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 34) Proximal phalanx of digit IV of the manus with distal articular surface centered at mid-depth of its dorsopalmar extent, instead of being placed dorsally at the distal surface as in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).
- 35) Proximal phalanx of digit V of the manus approximately as axioabaxially wide as dorsopalmarly deep, in contrast with the oblong proportions of its homologue in *Glossotherium robustum*. Condition in the latter indicated in Owen (1842).

Oreomylodon wegneri

Differences—They include:

- 1) Lunar with angle between dorsal borders of cuneiform and unciform articular facets obtuse, instead of acute as in *Oreomylodon wegneri*. Condition in the latter indicated in Cartelle (1980).

Specimen UF 10922

Similarities—They include:

- 1) Cuneiform transversely wider than proximodistally long, as in the specimen UF 10922. Condition in the latter indicated in Robertson (1976).
- 2) Metacarpal III with ratio between the maximal axioabaxial proximal width and maximal proximodistal length (0.72) resembles that found in the specimen UF 10922 (ratio is 0.72 according to measurements in Robertson, 1976).

- 3) Cuneiform proximodistally longer than dorsopalmarly wide, when measured at the proximal articular surface, as in UF 10922. Condition in the latter indicated in Robertson (1976).

Differences—They include:

- 1) Pisiform dorsopalmarly flattened (ratio depth/width: 0.67), contrasting with the condition in the specimen UF 10922 (ratio is 0.9 according to measurements in Robertson, 1976).

Holotype of *Paramylodon nebrascensis*

Differences—They include:

- 1) Lunar with proximal articular surface for radius with dorsal border wider than the palmar, contrasting with the palmarly expanded condition of the holotype of *Paramylodon nebrascensis*. Condition in the latter indicated in Brown (1903).

Holotype of *Pseudolestodon hexaspondylus*

Similarities—They include:

- 1) Trapezium-metacarpal I with a distinct rough protuberance in the proximal region of the metapodial section palmar surface, as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 2) Metacarpal II with articular facet for metacarpal III markedly concave, as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 3) Proximal phalanx of digit II of the manus markedly dorsopalmarly deeper than axioabaxially wide (ratio between both measures is 1.34), as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter obtained from measurements in Rautenberg (1906).

Differences—They include:

- 1) Scaphoid with medial part of proximal articular surface for radius concave, instead of the entire articular surface being convex as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 2) Scaphoid with single articular surface for the magnum, instead of two as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 3) Lunar with articular facets for magnum and unciform converging at about 133° at the mid-point of the extent of the contact between the articular facets, contrasting with the nearly 90° angle of the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 4) Cuneiform with articular surface for pisiform separated from articular surface for ulna, instead of these being confluent as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 5) Pisiform with palmar surface flat instead of convex as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 6) Metacarpal II with articular facet for trapezium-metacarpal I slightly proximodistally concave, contrasting with the totally flat facet of the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 7) Metacarpal III resembling in dorsal view a combination of the letters ‘T’ and ‘Y’, contrasting with the cube-like shape in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).

- 8) Metacarpal IV with distal articular surface for proximal phalanx convex instead of flat as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 9) Metacarpal IV with cross-section of body quadrangular, in contrast with the cylindrical condition of the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 10) Metacarpal V shaft with dorsal surface as smooth as the palmar, instead of the palmar being smoother as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 11) Proximal phalanx of digit II of the manus without deep pit on palmar surface, contrasting with the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 12) Distal phalanx of digit II of the manus axioabaxially wider than dorsopalmarly deep at mid-length, instead of being deeper than wide as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 13) Proximal phalanx of digit IV of the manus with axial part of distal articular surface greater than the abaxial, instead of both being similarly developed as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 14) Proximal phalanx of digit V of the manus half walnut-shaped instead of croissant-shaped as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 15) Abaxial sesamoid of digit III of the manus approximately prismatic instead of keel-like, as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).
- 16) Abaxial sesamoid of digit III of the manus longer relative to its axioabaxial width (ratio: 2.01) than in the holotype of *Pseudolestodon hexaspondylus* (ratio is 1.5 according to measurements in Rautenberg, 1906).
- 17) Abaxial sesamoid of digit III of the manus almost straight, only slightly curved, instead of bent as in the holotype of *Pseudolestodon hexaspondylus*. Condition in the latter indicated in Rautenberg (1906).

Thinobadistes segnis

Similarities—They include:

- 1) Lunar with dorsal border wider than the palmar in the proximal articular surface for radius, as in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 2) Cuneiform with longest axis of pisiform articular facet extended proximodistally, as in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 3) Metacarpal III resembling in dorsal view a combination of the letters ‘T’ and ‘Y’, agreeing with the Y-like shape of *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).

Differences—They include:

- 1) Scaphoid with only one articular facet for the lunar, and, correlatively, lunar with only one articular facet for the scaphoid, contrasting with the presence of two facets in each bone for contact with the other seen in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).

- 2) Lunar with the articular surface for the unciform greater in area than that of the magnum, contrasting with the lesser size of the former in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 3) Cuneiform with articular facet for ulna concave in oblique direction instead of flat as in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 4) Cuneiform with articular facets for pisiform and ulna separated, contrasting with the confluent condition present in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 5) Pisiform with palmar surface approximately flat, contrasting with the pyramidal surface of *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 6) Pisiform with fossa on distolateral surface, contrasting with its lack in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).
- 7) Trapezium-metacarpal I with well developed axial process, contrasting with the less developed condition in *Thinobadistes segnis*. Condition in the latter indicated in Webb (1989).

Ocnotherium giganteum

Similarities—They include:

- 1) Cuneiform with articular surface for the pisiform separated from the articular surface for the ulna as in *Ocnotherium giganteum*. Condition in the latter indicated in Cartelle (1992).
- 2) Metacarpal III resembling in dorsal view a combination of the letters ‘T’ and ‘Y’, agreeing with the Y-like shape of *Ocnotherium giganteum*. Condition in the latter indicated in Cartelle (1992).

Differences—They include:

- 1) Metacarpal III with axial and abaxial projections of its basis bearing similarly wide tracts of the dorsal surface, contrasting with the wider tract in the abaxial projection in *Ocnotherium giganteum*. Condition in the latter indicated in Cartelle (1992).
- 2) Metacarpal IV body as axioabaxially wide as in metacarpal III, instead of much narrower as in *Ocnotherium giganteum*. Condition in the latter indicated in Cartelle (1992).

Glossotherium garbanii

Similarities—They include:

- 1) Lunar with articular facets for the scaphoid and magnum not connected, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 2) Cuneiform mediolaterally wider than dorsopalmarly deep, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 3) Cuneiform with articular surface for the lunar distally and laterally continuous, at a dull edge, with the articular surface for the unciform, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 4) Trapezoid with dorsal articular surface for the magnum facing directly lateralwards, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 5) Trapezoid with articular facet for metacarpal III undistinguishable, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).

- 6) Trapezoid very close to metacarpal III in dorsal view, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 7) Metacarpal II with distal articular surface extending upon the dorsal surface, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano and Carranza-Castañeda (1981).
- 8) Metacarpal III with carina of distal articular surface not much exposed on the dorsal surface as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano and Carranza-Castañeda (1981) and Montellano-Ballesteros and Carranza-Castañeda (1986).

Differences—They include:

- 1) Lunar with dorsal border of articular facet for the unciform as long as the dorsal border of the articular surface for the cuneiform in dorsal view, instead of shorter as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 2) Lunar in dorsal view with contour located between the articular surfaces for radius and magnum shorter than the contour corresponding to the articular surface for the cuneiform, instead of being longer as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 3) Cuneiform proximodistally longer than dorsopalmarly deep, in contrast with the relatively thicker element of *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 4) Cuneiform with articular surface for pisiform separated from articular surface for ulna instead of confluent as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 5) Cuneiform with elongate distolateral prominence, instead of a short one as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 6) Cuneiform with dorsal surface as rough as the palmar, instead of rougher as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 7) Pisiform dorsopalmarly flattened, contrasting with the condition present in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 8) Trapezoid with articular surface for the scaphoid laterally deflected, contrasting with the condition in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 9) Trapezoid with articular surface for the scaphoid kidney-shaped in proximal view, contrasting with the oval shape of *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 10) Trapezoid with dorsopalmar depth quite greater than mediolateral width, instead of wider than deep as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 11) Trapezoid with ratio between the proximodistal length of the dorsal articular surface for the magnum and the greatest mediolateral width of the dorsal surface (0.54–0.58) lower than in *Glossotherium garbanii* (ratio is 0.71 according to measurements in Montellano-Ballesteros and Carranza-Castañeda, 1986).

- 12) Metacarpal II slightly curved in axial and abaxial views, instead of straight as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 13) Metacarpal III with distal carina oblique, connecting the middle of the palmar border of the distal articular surface to the dorsoaxial corner of the same articular surface, instead of vertical, reaching the middle of the dorsal border of the distal articular surface, as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 14) Metacarpal III with cross-section of the shaft shaped like a quarter of a circle, instead of rectangular as in *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 15) Metacarpal V with cross-section of body quadrangular but not rectangular, in contrast with the rectangular condition of *Glossotherium garbanii*. Condition in the latter indicated in Montellano-Ballesteros and Carranza-Castañeda (1986).
- 16) Proximal phalanx of digit II of the manus markedly dorsopalmarly deeper than axioabaxially wide, by about a fourth (ratio: 1.34), instead of being just slightly deeper as in *Glossotherium garbanii* (ratio is 1.1 according to measurements in Montellano-Ballesteros and Carranza-Castañeda (1986).

Pseudopreotherium confusum

Similarities—They include:

- 1) Metacarpal II with proximal surface approximately triangular, as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 2) Metacarpal III with carina of distal articular surface straight, and correspondingly, nearly unexposed on the dorsal surface, resembling the condition in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).

Differences—They include:

- 1) Scaphoid with articular surface for the magnum not placed upon a dorsal projection, contrasting with the condition in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 2) Scaphoid with articular surface for the magnum concave instead of convex as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 3) Scaphoid with only one articular surface for lunar, and, correspondingly, lunar with only one articular surface for scaphoid, contrasting with the pair of facets on each bone for the other present in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 4) Scaphoid with articular facet for trapezium-metacarpal I not contacting articular facet for trapezoid, contrasting with the condition of *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 5) Scaphoid with dorsal and lateral surfaces forming a nearly 180° angle, instead of a 90° angle as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 6) Lunar with articular facet for radius presenting the dorsal border longer than the palmar, instead of shorter as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).

- 7) Lunar with articular facets for scaphoid and magnum almost parallel, instead of forming a 90° angle as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 8) Lunar with articular facets for magnum and unciform set at a 133° obtuse angle at the middle of their dorsopalmar extension, instead of meeting at a nearly 180° as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 9) Magnum irregular in dorsal view, instead of quadrangular as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 10) Magnum with two distinct articular surfaces for metacarpal III, and correspondingly, metacarpal III with two distinct articular surfaces for magnum, instead of being only one facet for the other bone in each element as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 11) Magnum with articular surface for the scaphoid wider dorsally than palmarly, instead of wider palmarly as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 12) Magnum with dorsal surface sinuous in proximodistal direction, with proximal part concave and distal part convex, instead of flat as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 13) Magnum with articular facet for trapezoid located upon a more prominent projection than in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 14) Magnum with articular facet for unciform located upon a more prominent projection than in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 15) Magnum with articular surface for scaphoid approximately quadrangular, instead of approximately triangular as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 16) Magnum with articular surface for scaphoid completely convex in dorsopalmar direction, without a concave dorsal part as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 17) Magnum with articular surface for scaphoid separated from dorsal articular facet for the trapezoid, instead of contacting it as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 18) Magnum without depression between dorsal articular surface for trapezoid and medial articular surface for metacarpal III, contrasting with its presence in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 19) Magnum with both unciform facets similarly sized, instead of the more proximal one being the larger as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 20) Magnum with dorsal unciform facet not contacting the articular surface for metacarpal III, contrasting with the presence of the contact in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 21) Magnum with articular surfaces for scaphoid and lunar converging proximally at a moderately marked ridge, contrasting with the quite rounded contact present in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 22) Unciform with articular surface for metacarpal IV slightly convex in dorsopalmar direction, instead of presenting a marked concavity in that direction as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).

- 23) Unciform with lunar facet presenting a palmar extremity wider than the dorsal, contrasting with the condition in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 24) Unciform with articular surface for metacarpal V less dorsopalmarly concave at its dorsal part than in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 25) Unciform with articular surface for metacarpal V wider palmarly than dorsally, instead of dorsally wider as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 26) Unciform with proximal prominence more distinctive, taller and narrower, than in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 27) Unciform with lunar articular surface sinuous in dorsopalmar direction, with dorsal concavity and palmar convexity, instead of only convex in that direction as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 28) Unciform with cuneiform articular surface dorsopalmarly more extensive than in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 29) Unciform with articular surface for cuneiform expanding into lateral side of proximal projection, contrasting with the condition present in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 30) Unciform with main planes better fitting the dorsal articular surfaces for magnum and metacarpal III set at an obtuse angle, instead of a right one as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 31) Unciform with notch of medial border of the dorsal surface, at its limit with the dorsal articular surface for metacarpal III, shallow, instead of deep as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 32) Unciform with notch of medial border of the dorsal surface, at its limit with the dorsal articular surface for metacarpal III, rounded, instead of angular as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 33) Metacarpal II with articular facet for metacarpal III markedly concave instead of slightly concave to flat as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 34) Metacarpal II with articular facet for metacarpal III not contacting articular facet for magnum, contrasting with the condition present in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 35) Metacarpal II less axioabaxially compressed than in *Pseudopreotherium confusum*. Condition in the latter indicated in Saint-André et al. (2010).
- 36) Metacarpal III more gracile (ratio between axioabaxial width at body and bone proximodistal length: 0.29) than in *Pseudopreotherium confusum* (ratio is 0.34 according to measurements in Hirschfeld, 1985).
- 37) Metacarpal III with distal carina oblique, connecting the middle of the palmar border of the distal articular surface to the dorsoaxial corner of the same articular surface, instead of vertical, reaching the middle of the dorsal border of the distal articular surface, as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 38) Metacarpal III longer relative to its proximal axioabaxial width (ratio width/length: 0.72) than in *Pseudopreotherium confusum* (ratio is 0.8 according to measurements in Hirschfeld, 1985).

- 39) Metacarpal IV with dorsopalmar depth of both ends approximately equal, contrasting with the deeper distal end present in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 40) Metacarpal IV with articular surface for unciform nearly flat, only slightly sinuous, instead of strongly sinuous as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 41) Metacarpal IV with articular surface for metacarpal V by far dorsopalmarly deeper than proximodistally extended, instead of both dimensions being more similar as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 42) Metacarpal IV with articular surface for metacarpal V approximately triangular, instead of semicircular as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 43) Metacarpal IV with palmar part of articular surface for metacarpal III concave, instead of slightly convex or flat as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 44) Metacarpal IV with axial offset in distal articular surface much reduced, instead of well developed as in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).
- 45) Metacarpal IV with distal extremity less oblong in distal view than in *Pseudopreotherium confusum*. Condition in the latter indicated in Hirschfeld (1985).

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