### ****"Equus conversidens" group****

The type upper cheek teeth of *E. conversidens* Owen 1869 figured correctly by Hibbard (1955) are so close in morphology to those usually referred to *E.* *semiplicatus* (Fig.1) that one may wonder if they do not belong to the same species. Since there are no associated lower cheek teeth or limb bones it would seem safer to leave this type alone and deal with better documented fossils referrable to "E. conversidens" but with another name. I think, however, that when a name is so widely used, it is rather confusing to abandon it completely. I shall refer to "E. conversidens" poorly documented fossils (like isolated cheek teeth or series) and try to be more precise when the material is better, in particular when there are good reasons to suppose that they belong to *Amerhippus* rather than *Equus*.

### ****"Equus conversidens"****

*E. conversidens* Owen 1869
The type comes from Naphta mine, Tepeyac Mountain, near Guadelupe (Mooser & Dalquest, 1975, p.791).
Compared to other "E. conversidens" upper cheek teeth series, the type is rather small (Fig.2). Unfortunately there are no metapodials associated with the type.
Detailed data on the Fig.2 histograms may be found in the Appendix (Fig.A1 to A4).

First I shall address one of the best documented fossils i.e. "*E. conversidens* *leoni*" Chester Stock 1953 from San Josecito Cave (Southern Nuevo Leon, Mexico). I propose to refer to it rather as *Amerhippus leoni*. Some other fossils for which there is evidence that they belong to *Amerhippus* will be referred to as *A*. cf. *leoni*.

### *****Amerhippus leoni* and *A. cf. leoni*****

1. Skull
Photographs of the type skull (Fig.3,4) were kindly provided by Arroyo Cabrales and Johnson from an unfortunately unpublished article. Although not perfectly preserved, the type cranium, another one, and two fragments (Table 1) provide enough information to draw a Simpson’s diagram (Fig.5). On the same diagram are plotted the measurements taken on photographs published by Azzaroli (1998) of a skull from Baranca del Muerto, Mexico, and the measurements of the best preserved cranium from Papago Springs (Table 1, Fig.6,7). The Papago Springs specimen and that of Baranca are smaller but do not seem very different in proportions. On most dispersion diagrams (not illustrated here) used to characterize Amerhippines [Amerhippus and Caballines : Cranial differences](https://vera-eisenmann.com/ecrire/?exec=article&id_article=1848) the proportions are similar enough to justify the attribution to *Amerhippus*. I refer the equids of Baranca del Muerto and Papago Springs to *A. cf. leoni*.

2. Upper cheek teeth (Fig.8)
They are not very different from those referred to *E. semiplicatus* (Fig.1), although in general smaller and with shorter protocones.
Those of Baranca del Muerto (Fig.9) and Papago Springs are very similar (Fig.10).

3. Lower cheek teeth (Fig.11)
One P2 has a pli protostylid, an Amerhippine character. The premolars resemble those of some extant zebras : pointed metastylid, rounded metaconid. The molars have shallow vestibular grooves, pointed metastylids, and U-shaped lingual grooves but without the lingual angulation of the metaconid characteristic of Caballines (Fig.12). Plis caballinid are absent or poorly developed ; protoconids and hypoconids have more rounded vestibular walls than usual in Caballines.
I refer the lower cheek teeth of Papago Springs illustrated on Fig.10 to *A. cf. leoni.*

4. Lower incisors (Fig.13)
As usual in *Amerhippus*, they have no cups.

5. Limb bones (see data at [San Josecito, mesures](https://vera-eisenmann.com/ecrire/?exec=rubrique&id_rubrique=679)) 
 Although smaller, the third metacarpals are surprisingly similar to those of *A. occidentalis* from Rancho La Brea (Fig.14). The single MC of Papago Springs published by Skinner (1942) is even smaller. The MT differ more from *A. occidentalis* (Fig.15). 
 The first phalanges Ph1 anterior and posterior resemble some extant Asses (Fig.16). 
 Proportions of limb bones (Fig.17) are similar to *A. occidentalis*, to the extant *E. zebra*, and to what is known of the Papago Springs equid.

### ****"Equus conversidens" from Cedazo****

 Upper cheek teeth (Fig.18)
Several specimens figured by Mooser (1959) and Mooser & Dalquest (1975) can be refered to "E. conversidens". 
 Lower cheek teeth (Fig.19)
Since there are none associated to the type, their reference is based on resemblances with *A. leoni* (Fig.11). 
 Metapodials (Fig.20)
The same is true for the MC and MT.

### ****Other "Equus conversidens"****

1. *E. nevadanus* Hay 1927, Pl.II-Fig.2
The type upper cheek teeth (Fig.21) resemble some from Cedazo.
The metacarpal is slenderer than in *A. leoni* ; there is one MC from the Irvingtonian locality V 3604 (at Berkeley) very similar (Fig.22). The MT is compatible with *A. leoni*.

2. Burnet Cave, New Mexico, ca 25 Ka
Thanks to Dr Ted Daeschler and Mario Pichardo, I had access to photographs of the fossils represented on Fig.23 and 24.
The teeth are similar to "E. conversidens" although rather large. The metapodials are, however, much slenderer (Fig.25) so that there seems to be a discrepancy between teeth and metapodials (Fig.2). The MC is smaller but similat to *E. nevadanus*.

3. Slaton, Texas
Dalquest & Hugues (1965) and Dalquest (1967) published figures and data of the fossils. The lower cheek teeth (Fig.26) are like other "E. conversidens". Some MT and Ph1 also (Fig.27, 28).

4. Blackwater Draw and Scharbauer (Quinn, 1957, Pl.III). 
 Blacwater’s Ph1 are compatible with a small *A. leoni* (Fig.29 and 30). 
 Scharbauer teeth (Fig.31) also.

5. Dry Cave (Harris & Porter 1980)
All data were kindly communicated by A.H. Harris. 
 Several cheek teeth may be referred to "E. conversidens" (Fig.32, Fig.33). 
 The symphyses are compatible with *A. leoni* (Fig.34). 
 One MC may belong to "E. conversidens" ; two other are more like *E. nevadanus* and the specimen from Burnet Cave (fig.35). 
 Several Ph1 may be referred to "E. conversidens" or *A. leoni* (Fig.36).

6. Valsequillo, Mexico (Pichardo, 2004)
The lower cheek teeth series (Fig.37) may be referred to "E. conversidens".

7. Cripple Creek, Alaska
There is a fragmentary cranium of small size (Fig.38) that may possibly belong to a small "E. conversidens" (Fig.5). The protocone is short on the P3 but long on the molars (Fig.39).

### *****Amerhippus sp*., Natural Tra****p

This species will be dealt in detail in the article on Natural Trap.
On the whole, it resembles A. leoni.

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