Details for fossil data hand-cleaning based on authors’ expertise.

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# Artiodactyla

# Astrapotheria

# Carnivora

# Cetacea

# Cingulata

# Chiroptera

# Didelphimorphia

# Litopterna

*Archaeohyracotherium mediale* (*Didolodontidae*, coll. nb. 176164, [1]) was synonymised with *Asmithwoodwardia subtrigona* (*Protolipternidae*) by Gelfo (2006)[2].  
*Argyrolambda conidens* was synonimised with *Didolodus multicuspis* [2].  
*Didolodus sp.* (coll. nb. 199563, [3]) was removed as associated to “unidentified *Didolontidae*” in the paper. *Enneoconus parvidens* (coll. nb 176164, [4]) was synonimised with *Ernestokokenia nitida* by Gelfo (2006)[2].

# Microbiotheria

# Notoungulata

# Paucituberculata

# Perissodactyla

*Equus sp.* (coll. nb. 142016, [5]) was set to *Equus (Amerhippus)*. Together with *Equus sp.* (coll. nb. 71275, [6]; coll. nb. 70673, [7]; coll. nb. 92814, [8]), *Equus (Amerhippus)* (coll. nb. 70673, [9]) and *Hippidion sp.* (coll. nb. 70673, [9]), their upper time boundary were set to 0.99 Ma, according to MacFadden (2013) [10].  
*Equus sp.* (coll. nb. 142158 and 142160, [11]) were both set to *Equus (Amerhippus)*.  
*Equus asinus* (coll. nb. 190844, [12]) was removed as introduced by humans.  
*Equus caballus* (coll. nb. 63337, [13]) was set *Equus (Amerhippus) neogeus* by Alberdi and Prado (1992) [14].  
*Equus caballus* (coll. nb. 70704, [9]) time range was set to Holocene.  
*Equus caballus* (coll. nb. 142016, [5]) was set to *Equus (Amerhippus) insulatus*.  
*Equus caballus* (coll. nb. 73842, [15]) time range was set to Pleistocene by [16].  
*Equus santaeelenae* (coll. nb. 144922, 145506, [17]) time ranges were adjusted to Late Pleistocene.  
*Hippidium (Plagiohippus)* (coll. nb. 71304, [18]) name was set to *Hippidion* [14].  
*Hypohippidium humahuaquense* (coll. nb. 210722, [19]) was synonimised with *Hippidion devillei* by [14] *Hippidion sp.* (coll. nb. 73842, [15]; coll. nb. 199157, [20]; coll. nb. 53926, [21], 2 occurrences) time ranges were adjusted to Pleistocene.  
*Tapirus (Tapilarum)* (coll. nb. 53928, [21]) name was shortened to *Tapirus*, and age set to Early Pleistocene.  
*Tapirus tarijensis* (coll. nb. 70673, [9]) lower age boundary was set to 1.06 Ma.

# Pilosa

# Primates

# Proboscidea

# Rodentia

# Sparassodonta

# Xenungulata

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