

Supplemental Online Material

Caviomorph taxa used for comparisons in this study.

Genre	Species	Locality and/or Formation (Fm.)	Age	Observed material (original or cast)	Primary references
<i>Tribosphenomys</i>	<i>T. minutus</i>	Nomogen Fm., China	Late Paleocene		Meng and Wyss 2001; Meng et al. 2007a
<i>Archetypomys</i>	<i>A. erlianensis</i>	Huibeoerhe-Nuhetingboerhe (AS-1), (Lower Arshanto Fm.), Inner Mongolia	late Early Eocene		Meng et al. 2007b
<i>Coccyus</i>	<i>C. lingchaensis</i>	Lingcha Fm., Hengdong County, China	Early Eocene	UM (cast)	Li et al. 1989
<i>Reithroparamys</i>	<i>R. delicatissimus</i>	Luman Tongue (Wasatch Fm.), Wyoming, USA	early Early Eocene	UM (cast)	Leidy 1871; Wood 1962
<i>Paratamias</i>	<i>T. disporinus</i>	Shipigou (Hetaoyuan Fm.), China	middle Middle Eocene		Dawson et al. 1984
	<i>T. wilsoni</i>	Huibeoerhe escarpment (IM-1) (Irdin Manha Fm.), Nei Mongol, China	earliest Eocene - earliest Middle Eocene		Dawson et al. 1984
	<i>T. tanitulus</i>	Obayla Fm., Kazakhstan	late Early - Middle Eocene		Dawson et al. 1984
<i>Chapatimys</i>	<i>C. wilsoni</i>	H-GSP 144, Kala Chitta Range (Kuldana Fm.), Pakistan; Upper Subathu Group, India	early Middle Eocene		Hussain et al. 1978
<i>Birbalomys</i>	<i>B. sondbani</i>	H-GSP 144, Kala Chitta Range (Kuldana Fm.), Pakistan; Upper Subathu Group, India	early Middle Eocene	UM (cast)	Hussain et al. 1978
	<i>B. woodi</i>	H-GSP 144, Kala Chitta Range (Kuldana Fm.), Pakistan; Upper Subathu Group, India	early Middle Eocene	UM (cast)	Hussain et al. 1978
<i>Ottomania</i>	<i>O. proevitia</i>	Süngüü, Lesser Caucasus, Turkey	Eocene/Oligocene boundary interval		De Bruijn et al. 2003
<i>Baluchimys</i>	<i>B. krabiense</i>	Bang Mark Lignite Mine, Krabi, Thailand	latest Eocene		Marivaux et al. 2000
	<i>B. baryi</i>	Y-GSP 417, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene		Flynn et al. 1986
	<i>B. ganeshapher</i>	Y-GSP 417, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene		Flynn et al. 1986
	<i>L. derabugtiensis</i>	Y-GSP 417, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene		Flynn et al. 1986
<i>Lindsaya</i>	<i>L. pilbeami</i>	Y-GSP 417, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene		Flynn et al. 1986
<i>Lophibaluchia</i>	<i>H. azrae</i>	Y-GSP 417, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene		Flynn et al. 1986
<i>Hodsahibia</i>	<i>H. gracilis</i>	DBC2, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene	UM (original)	Flynn et al. 1986; Marivaux and Welcomme 2003
	<i>B. gracilis</i>	DBC2, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene		Marivaux and Welcomme 2003
	<i>B. zafarullahi</i>	DBC2, Bugti Hills (Chitarwata Fm.), Balochistan, Pakistan	Early Oligocene	UM (original)	Marivaux et al. 2002
<i>Butimys</i>	<i>T. lavocati</i>	DT-Loc. 2, Bioturbated Unit, Dur Al-Talah, Libya	Late Eocene - Early Oligocene		Jaeger et al. 2010
<i>Talshophomys</i>	<i>T. libycus</i>	DT-Loc. 1, Bioturbated Unit, Dur Al-Talah, Libya	Late Eocene		Jaeger et al. 2010
	"W", <i>attisi</i>	BQ-2 (Birket Qarun Fm.), Fayum Depression, Egypt	early Late Eocene	UM (cast)	Sallam et al. 2009
<i>Protaphomys</i>	<i>P. aegyptensis</i>	BQ-2 (Birket Qarun Fm.), Fayum Depression, Egypt	early Late Eocene	UM (cast)	Sallam et al. 2009
	<i>P. algeriensis</i>	Bir El Ater, Nememicha, Algeria	early Late Eocene	UM (original)	Jaeger et al. 1985
<i>Acritophomys</i>	<i>A. bowri</i>	L-41 (Jebel el Qatrani Fm.), Fayum Depression, Egypt	latest Eocene		Sallam et al. 2012
<i>Birkamys</i>	<i>B. korai</i>	L-41 (lowermost Jebel Qatrani Fm.), Fayum Depression, Egypt; + Dakhla DAK-C2	latest Eocene - earliest Oligocene		
<i>Phiomys</i>	<i>P. hammudai</i>	DT-Loc. 1, Bioturbated Unit, Dur Al-Talah, Libya	Late Eocene	UM (cast)	Jaeger et al. 2010
<i>Metaphomys</i>	<i>M. schaubi</i>	Quarries B, G and E (Jebel Qatrani Fm.), Fayum Depression, Egypt; + Z71, Zallah Oasis, Libya	Early Oligocene	UM (cast)	Wood 1968; Coster et al. 2015
<i>Gaudemus</i>	<i>G. aegypticus</i>	Quarries A&B and E (Jebel Qatrani Fm.), Fayum Depression, Egypt	Early Oligocene		Wood 1968
	<i>G. asilus</i>	L-41 (lowermost Jebel Qatrani Fm.), Fayum Depression, Egypt; + Dakhla DAK-C2	latest Eocene - earliest Oligocene		Sallam et al. 2011
	<i>G. hydreus</i>	L-41 (lowermost Jebel Qatrani Fm.), Fayum Depression, Egypt; + Dakhla DAK-C2	latest Eocene - earliest Oligocene		Sallam et al. 2011
<i>Paraphomys</i>	<i>P. pigotti</i>	Rusinga, Kenya	Early Miocene - late Middle Miocene	UM (original)	Lavocat 1973
<i>Thyonomys</i>	<i>T. swinderianus</i>		Recent	UM (original)	
CAVIOMORPHA					
<i>Cachiyacuy</i>	<i>C. contamanensis</i>	Contamana CTA-27 (Pozo Fm.), Peru	late Middle Eocene	MUSM (original)	Antoine et al. 2012; Boivin et al. 2017a
	<i>C. kumleri</i>	Contamana CTA-27 (Pozo Fm.), Peru	late Middle Eocene	MUSM (original)	Antoine et al. 2012; Boivin et al. 2017a
<i>Canaaimys</i>	<i>C. mequienensis</i>	Contamana CTA-27 (Pozo Fm.), Peru	late Middle Eocene	MUSM (original)	Antoine et al. 2012; Boivin et al. 2017a
<i>Cansaimys</i>	<i>C. sp.</i>	Contamana CTA-47 (Pozo Fm.), Peru	late Middle Eocene	MUSM (original)	Boivin et al. 2017a
<i>Pozomys</i>	<i>P. ucayalensis</i>	Contamana CTA-29 (Pozo Fm.), Peru	late Middle Eocene	MUSM (original)	Boivin et al. 2017a
<i>Eobranisamys</i>	<i>E. javierpradii</i>	Contamana CTA-27 (Pozo Fm.), Peru	late Middle Eocene	MUSM (original)	Antoine et al. 2012; Boivin et al. 2017a
	<i>E. romeropittmanae</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
	<i>E. riverai</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
<i>Eosallamys</i>	<i>E. paulacoutoi</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
	<i>E. simpsoni</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
<i>Eoosipina</i>	<i>E. woodi</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
<i>Eoosachui</i>	<i>E. lavocati</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
<i>Tarapotomys</i>	<i>T. mayensis</i>	TAR-01, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
	<i>T. subandinus</i>	TAR-21, TAR-22, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>cf. Tarapotomys</i>	<i>cf. Tarapotomys</i> sp.	TAR-20, TAR-21, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>aff. Tarapotomys</i>	<i>aff. Tarapotomys</i> sp.	TAR-21, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>Shapajamys</i>	<i>S. labocensis</i>	TAR-01, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>Mayomys</i>	<i>M. confuens</i>	TAR-01, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>Caviomorpha</i> indet. 4 gen. et sp. indet.	sp. indet.	La Cantera (Sarmiento Fm.), Argentina	late Early Oligocene	UM (cast)	Vucetich et al. 2010a
	<i>L. lotuca</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
<i>Palaeosteioromys</i>	<i>P. amazonensis</i>	Contamana CTA-32 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
<i>Plesioesteioromys</i>	<i>P. newelli</i>	Contamana CTA-61 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
<i>Ucayalimys</i>	<i>U. crassidens</i>	Contamana CTA-32 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
Octodontoides					
<i>Leucoccephalos</i>	<i>L. zelliae</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
<i>Eodelphomys</i>	<i>E. almeidacomposi</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell 2004
<i>Selvamys</i>	<i>S. paulus</i>	TAR-22, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>Draconomys</i>	<i>D. verai</i>	La Cantera (Sarmiento Fm.), Argentina	late Early Oligocene	UM (cast)	Vucetich et al. 2010a
<i>Vallehermosomys</i>	<i>V. mazzionii</i>	La Cantera (Sarmiento Fm.), Argentina	late Early Oligocene	UM (cast)	Vucetich et al. 2010a
<i>?Vallehermosomys</i>	<i>?Vallehermosomys merinae</i>	La Cantera (Sarmiento Fm.), Argentina	late Early Oligocene	UM (cast)	Vucetich et al. 2010a
<i>Migraueromys</i>	<i>M. beatus</i>	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	UM (original)	Patterson and Wood 1982
	<i>M. lavocati</i>	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	UM (original)	Pérez et al. 2018
	<i>M. quispae</i>	Cerro Pan de Azúcar (Moquegua Fm.), Peru	Late Oligocene	MUSM (original)	Shockey et al. 2009
<i>Sallamys</i>	<i>S. pascuali</i>	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	MNH-N-Bol, MNHN & UM (original)	Hoffstetter and Lavocat 1970; Lavocat 1976; Patterson and Wood 1982
	<i>S. woodi</i>	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	UM (original)	Pérez et al. 2018
	<i>S. sp.</i>	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	UM (original)	Pérez et al. 2018
<i>?Sallamys</i>	<i>?Sallamys minutus</i>	Fazenda Santa Fé (Tremembé Fm., Brazil)	late Early Oligocene - Late Oligocene	UM (original)	Vucetich and Ribeiro 2003
	<i>?Sallamys</i> sp.	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	UM (original)	Pérez et al. 2018
<i>Lapazomys</i>	<i>L. hartenbergeri</i>	Salla (Salla Beds), Bolivia	late Early Oligocene - Late Oligocene	UM (original)	Pérez et al. 2018
<i>Paulacoutomys</i>	<i>P. paulista</i>	Fazenda Santa Fé (Tremembé Fm.), Brazil	late Early Oligocene - Late Oligocene	MLP (cast)	Vucetich et al. 1993a
<i>Xylechomys</i>	<i>X. obliquus</i>	Laguna de los Machos (Sarmiento Fm.), Argentina	Late Oligocene	MLP (original)	Patterson and Pascual 1968
<i>Platypittamys</i>	<i>P. brachyodon</i>	Scantit Pocket (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Wood 1949; Wood and Patterson 1959
<i>Deseadomys</i>	<i>D. arambourgi</i>	Cabeza Blanca (Sarmiento Fm.) and La Flecha, Argentina	Late Oligocene	MHNN (original)	Wood and Patterson 1959
<i>Ethelomys</i>	<i>E. loomisii</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Wood and Patterson 1959; Vucetich et al. 2015
<i>Loretomys</i>	<i>L. minutus</i>	Contamana CTA-32 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
<i>Acarechomys</i>	<i>A. leucothoe</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015; Arnal et al. 2017
	<i>A. gracilis</i>	Gran Barranca (also collected by Ameghino; Sarmiento Fm.) and Santa Cruz Fm., Argentina	Early Miocene		Ameghino 1902; Vucetich et al. 2010b; Arnal et al. 2017
	<i>A. minutissimus</i>	Pinturas Fm., Santa Cruz and Collón Cura Fm., Argentina; La Venta, Colombia	Early Miocene - Middle Miocene	MLP (original)	Ameghino 1887; Kramarz 2004; Arnal et al. 2017
	<i>A. minutus</i>	Santa Cruz and Collón Cura Fm., Argentina; Quebrada Honda, Bolivia	late Early Miocene - late Middle Miocene	MACN & MLP (original)	Ameghino 1887; Kramarz 2004; Arnal et al. 2017
<i>Galileomys</i>	<i>A. constans</i>	Santa Cruz Fm., Argentina	late Early Miocene	MLP (original)	Ameghino 1887; Arnal et al. 2017
	<i>G. baioi</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
	<i>G. antelucanus</i>	Bryn Gwyn, Gran Barranca (Sarmiento Fm.), Argentina	Early Miocene	MACN & MLP (original)	Vucetich and Kramarz 2003; Vucetich et al. 2010b
	<i>G. eurygnathus</i>	Pinturas Fm. (for the list of localities, see Kramarz, 2004), Argentina	late Early Miocene	MACN (original)	Kramarz 2004
<i>?Protacaremys</i>	<i>?Protacaremys adilos</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
<i>Protacaremys</i>	<i>P. prior</i>	Gran Barranca (also collected by Ameghino; Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Ameghino 1902; Vucetich et al. 2010b
	<i>P. avurucui</i>	Gran Barranca (also collected by Ameghino; Sarmiento Fm.), Argentina	Early Miocene	MLP (original)	Ameghino 1902; Vucetich et al. 2010b
	<i>P. denisae</i>	Localities 1 and 5 of the Cañadón del Tordillo (Collón Cura Fm.), Argentina	Middle Miocene	MLP (original)	Vucetich et al. 1993b
	<i>D. rugipermi</i>	Bryn Gwyn (Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Arnai et al. 2014
<i>Cavioicetus</i>	<i>C. lucasi</i>	Bryn Gwyn and Gran Barranca (Sarmiento Fm.), Paso Córdoba (Chinchinales Fm.) and Cerro Bandera (Cerro Bandera Fm.), Argentina	Early Miocene	MACN (original)	Vucetich and Verzi 1996; Vucetich et al. 2010b
<i>Acaremys</i>	<i>A. murinus</i>	Sarmiento Fm., Pinturas Fm. and Santa Cruz Fm. (for the list of localities, see Arnal and Vucetich, 2015), Argentina	Early Miocene	MACN & MLP (original)	Ameghino 1887; Arnal and Vucetich 2015
<i>Willidewu</i>	<i>W. estepariensis</i>	Paso Córdoba (Chinchinales Fm.) and Bryn Gwyn (Sarmiento Fm.), Argentina	Early Miocene	MLP (original & cast)	Vucetich and Verzi 1991; Vucetich et al. 2010b
<i>Prospaniomys</i>	<i>P. priscus</i>	Gran Barranca, Bryn Gwyn?, Sacanana (also collected by Ameghino; Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Ameghino 1902; Vucetich et al. 2010b
	<i>P. cf. priscus</i>	Pampa de Gran Gan (Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Arnai and Kramarz 2011
	<i>P. sp. 1</i>	Gran Barranca (Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Vucetich et al. 2010b
<i>'Acaremys'</i>	<i>A. preminutus</i>	Bryn Gwyn (Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Bordas 1939; Arnal and Vucetich 2015
<i>Pseudoacaremys</i>	<i>P. kramarzi</i>	Santa Cruz, River Cliffs, La Cueva, Kilik Aik (Santa Cruz Fm.), Argentina	Early Miocene	MACN (original)	Arnai and Vucetich 2015
<i>Prostichomys</i>	<i>P. bowri</i>	Gran Barranca (Sarmiento Fm.) and Pinturas Fm. (for the list of localities, see Kramarz, 2001, 2004), Argentina	Early Miocene	MACN (original)	Kramarz 2001a, 2004; Kramarz et al. 2010
<i>Adelphomys</i>	<i>A. candidus</i>	Lago Cardiel and Gobernador Gregores (Pinturas Fm.) and Santa Cruz Fm., Argentina	Early Miocene	MACN & MLP (original)	Ameghino 1887; Kramarz 2004
<i>Paradelphomys</i>	<i>P. fissus</i>	Gran Branca (Sarmiento Fm.), Argentina	Early Miocene	MLP (original)	Patterson and Pascual 1968; Vucetich et al. 2010b
<i>Protadelphomys</i>	<i>P. latus</i>	Gran Branca, Bryn Gwyn, Sacanana (Sarmiento Fm.), Argentina	Early Miocene	MLP (original)	Ameghino 1902; Vucetich and Bond 1984; Vucetich et al. 1992, 2010b; Vucetich and Verzi 1994
<i>Plesiacaerchomys</i>	<i>P. koenigswaldi</i>	Estancia Cerro San Antonio (Collón Cura Fm.), Argentina	Middle Miocene	MLP (original)	Vucetich and Veyles 2006
<i>Spaniomys</i>	<i>S. modestus</i>	Pinturas Fm. (for the list of localities, see Kramarz, 2004) and Santa Cruz Fm., Argentina	late Early Miocene	MACN & MLP (original)	Ameghino 1887; Kramarz 2004; Kay et al. 2012
	<i>S. riparius</i>	Santa Cruz Fm., Argentina; Pampa Castillo (unnamed Fm.), Chile	late Early Miocene	MACN & MLP (original)	Ameghino 1887, 1894; Flynn et al. 2002
<i>Stichomys</i>	<i>S. regularis</i>	Santa Cruz Fm., Argentina	late Early Miocene	MACN (original)	Ameghino 1887
<i>Sciomy</i>	<i>S. principalis</i>	Santa Cruz Fm., Argentina; Pampa Castillo (unnamed Fm.), Chile	late Early Miocene	MACN & MLP (original)	Ameghino 1887; Arnal and Vucetich 2011; Arnal and Pérez 2013; Flynn et al. 2002
	<i>S. petisensis</i>	El Petiso, Argentina	Middle Miocene		Arnai and Pérez 2013
<i>Ricardomys</i>	<i>R. longidens</i>	La Venta (Villavieja Fm.), Colombia	late Middle Miocene		Walton 1990, 1997
<i>Quebradachondomys</i>	<i>O. potosiensis</i>	Quebrada Honda (unnamed Fm.), Bolivia	late Middle Miocene		Croft et al. 2011
<i>Pithanotomys</i>	<i>P. columnaris</i>	Monte Hermoso Fm., Argentina	Early ?Pliocene	MACN (original)	
<i>Abrocoma</i>	<i>A. bennettii</i>		Recent	MNH-N (original)	
<i>Spalacopus</i>	<i>S. cyanus</i>		Recent	MNH-N (original)	
<i>Oxodon</i>	<i>O. digus</i>		Recent	UM (original)	
<i>Ctenomys</i>	<i>C. boliviensis</i>		Recent	MLP & UM (original)	
<i>Mesocapromys/Mysasteles</i>	<i>Mesocapromys/Mysasteles</i> sp.		Recent	UM (original)	
<i>Euryzygomatomys</i>	<i>E. spinosus</i>		Recent	MLP & MNHN (original)	
<i>Makalata</i>	<i>M. didelphoides</i>		Recent	UM (original)	

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<i>Echimy</i>	<i>E. chrysurus</i>		Recent	UM (original)	
<i>Trichomys</i>	<i>T. apersoides</i>		Recent	MNH-N (original)	
<i>Proechimys</i>	<i>P. cuvieri</i>		Recent	UM (original)	
<i>Myocastor</i>	<i>M. coypus</i>		Recent	UM (original)	
Erethizontoidea					
<i>Epululo</i>	<i>E. wignersi</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell, 2004
<i>Kichisteiromys</i>	<i>K. raimondii</i>	TAR-21, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>Protosteiromys</i>	<i>P. medianus</i>	Cabeza Blanca and La Flecha (Sarmiento Fm.), Argentina	Late Oligocene	MACN & MNHN (original)	Ameghino 1903; Wood and Patterson 1959
	<i>P. asmodeophilus</i>	La Flecha (Sarmiento Fm.), Argentina	Late Oligocene	MNH-N (original)	Wood and Patterson 1959
	<i>P. pattersoni</i>	Salla (Salla Beds), Bolivia	late Early Oligocene – Late Oligocene	MNH-N-Bol, MNHN & UM (original)	Candela 2000; Pérez et al. 2018
<i>Cholamys</i>	<i>C. tetrakphodonta</i>	Salla (Salla Beds), Bolivia	late Early Oligocene – Late Oligocene	UM (original)	Pérez et al. 2018
<i>Hyposteiromys</i>	<i>H. axiculus</i>	Bryn Gwyn and Grand Barranca (also collected by Ameghino, Sarmiento Fm.), Argentina	Early Miocene	MACN (original)	Ameghino 1902; Candela 2000; Candela and Vucetich 2002; Vucetich et al. 2010b
	<i>H. nectus</i>	Gran Barranca (also collected by Ameghino, Sarmiento Fm.), Argentina	Early Miocene	MACN & MLP (original)	Ameghino 1902; Candela 2000; Candela and Vucetich 2002; Vucetich et al. 2010b
<i>Steiromys</i>	<i>S. detentus</i>	Santa Cruz Fm., Argentina	Early Miocene	MACN & MLP (original)	Ameghino 1887; Candela 2000; Candela et al. 2012; Kay et al. 2012
	<i>S. duplicatus</i>	Santa Cruz Fm., Argentina; Pampa Castillo (unnamed Fm.), Chile	Early Miocene	MACN & MLP (original)	Ameghino 1887; Candela 2000; Flynn et al. 2002; Candela et al. 2012; Kay et al. 2012
<i>Parasteiromys</i>	<i>P. uniformis</i>	Southern Cliff of Lake Colhué Huapi (Gran Barranca and also collected by Ameghino; Sarmiento Fm.), Argentina	Early Miocene	MACN & MLP (original)	Ameghino 1903, 1904; Candela 1999, 2000; Vucetich et al. 2010b
	<i>P. friantae</i>	Southern Cliff of Lake Colhué Huapi (Gran Barranca; Sarmiento Fm.), Argentina	Early Miocene	MLP (original)	Candela 1999, 2000; Vucetich et al. 2010b
<i>Eosteiromys</i>	<i>E. homogidens</i>	Bryn Gwyn and Grand Barranca (also collected by Ameghino, Sarmiento Fm.), Argentina	Early Miocene	MACN & MLP (original)	Ameghino 1902; Candela 2000; Vucetich et al. 2010b
<i>?Eosteiromys</i>	<i>?Eosteiromys</i> sp. nov.		Early Miocene		Candela 2002
<i>Branisamyopsis</i>	<i>B. australis</i>	Southern Cliff of Lake Colhué Huapi (Gran Barranca; Sarmiento Fm.), Argentina	Early Miocene	MLP & MNHN (original)	Candela 2000, 2003; Vucetich et al. 2010b
	<i>B. praesigmodens</i>	Pinturas Fm. (for the list of localities, see Kramarz, 2004), Argentina	Early Miocene	MACN (original)	Kramarz 2004
<i>?Neosteirromys</i>	<i>?Neosteirromys</i> <i>tordillense</i>	Cañadon de Tordillo (Colón Cura Fm.), Argentina	Middle Miocene		Vucetich et al. 1993b
<i>Microsteiromys</i>	<i>M. jacobsi</i>	La Venta (Villavieja Fm.), Colombia	late Middle Miocene		Walton 1990, 1997
	cf. <i>Microsteiromys</i> sp.	Madre de Dios MD-57 (unnamed Fm.), Peru	Middle Miocene	MUSM (original)	Antoine et al. 2013
<i>Neosteirromys</i>	<i>N. pattoni</i>	Catamarca Province (Andahualla Fm.), Argentina	late Miocene		Candela 2000, 2004
	<i>N. bombifrons</i>	Andahualla Fm., Argentina	late Miocene	MACN (original)	Candela 2000, 2004
<i>Coendou</i>	<i>C. prehensilis</i>		Recent	MLP & MNHN (original)	Candela 1999
	<i>C. insidiosus</i>		Recent	MLP & MNHN (original)	
<i>Erethizon</i>	<i>E. duratum</i>		Recent	MNH-N (original)	
<i>Chaetomys</i>	<i>C. subspinosus</i>		Recent	MHNG (pictures)	Martin 1994
Chinchilloidea					
<i>Eoicamys</i>	<i>E. ameghinoi</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell 2004
	<i>E. pascuali</i>	Santa Rosa (Yahuarango Fm.), Peru	?Late Eocene / Early Oligocene	INGEMMET (holotype)	Frailey and Campbell 2004
	<i>E. cf. pascuali</i>	TAR-01, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
	<i>E. valverdei</i>	TAR-13, TAR-20–22, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>?Eoicamys</i>	<i>E. parvus</i>	TAR-20–22, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>?Eoicamys</i> sp.		TAR-13, Shapaja (Pozo Fm.), Peru	Early Oligocene	MUSM (original)	Boivin et al. 2018
<i>L. trestes</i>		Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
<i>Scotomys</i>	<i>S. antiquus</i>	Cabeza Blanca and La Flecha (Sarmiento Fm.), Argentina	Late Oligocene		Loomis 1914; Wood and Patterson 1959
<i>Incasmys</i>	<i>I. merrionum</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
	<i>I. bolivianus</i>	Salla (Salla Beds), Bolivia	late Early Oligocene – Late Oligocene	MNH-N-Bol, MNHN & UM (original)	Hoffstetter and Lavocat 1970; Lavocat 1976; Patterson and Wood 1982
<i>Chambiramy</i>	<i>C. shipiborum</i>	Contamana CTA-32 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
	<i>C. sylvaticus</i>	Contamana CTA-61 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
<i>Maquiamys</i>	<i>M. praecursor</i>	Contamana CTA-61 (Chambira Fm.), Peru	Late Oligocene	MUSM (original)	Boivin et al. 2017b
<i>Eoivascacia</i>	<i>E. frassinetti</i>	Tinguiririca Termas del Flaco (Abanico Fm.), Chile	Early Oligocene		Wyss et al. 1993; Bertrand et al. 2012
	<i>E. boliviana</i>	Lacayani (unnamed Fm.), Bolivia	Oligocene - Miocene boundary	MNH-N (original)	Vucetich 1989
	<i>E. australis</i>	Sarmiento Fm., Chichinales Fm. and Cerro Bandera Fm., Argentina (for the list of localities, see Vucetich et al., 2010b)	Early Miocene	MACN (original)	Vucetich 1989; Kramarz 2001b; Vucetich et al. 2010b
<i>Garridomys</i>	<i>G. cumunuguem</i>	near Barda Negra (Cerro Bandera Formation), Argentina	Early Miocene		Kramarz et al. 2013
<i>Soleromys</i>	<i>S. quadrangulatus</i>	Pinturas Fm. (for the list of localities, see Kramarz, 2006), Argentina	late Early Miocene	MACN & MLP (original)	Kramarz 2006
	<i>S. angustus</i>	Santa Cruz Fm., Argentina	late Early Miocene	MACN (original)	Ameghino 1887
	<i>S. osbornianus</i>	Santa Cruz Fm. and Pinturas Fm., Argentina	late Early Miocene	MACN (original)	Ameghino 1894; Kramarz 2006
<i>Perimys</i>	<i>P. intermedius</i>	Pinturas Fm. (for the list of localities, see Kramarz, 2002), Argentina	late Early Miocene		
<i>Drytomys</i>	<i>D. aequatorialis</i>	near the hacienda of Señor Carrasco (near Nabón), Equador; La Venta (Villavieja Fm.), Colombia	late Middle Miocene		Anthony 1922; Fields 1957; Walton 1997; Candela and Nasif 2006
	<i>D. typicus</i>	Ituzaingo Fm., Argentina	Late Miocene		Ameghino 1889; Candela and Nasif 2006
<i>Microscleromys</i>	<i>M. paradoxalis</i>	La Venta (Villavieja Fm.), Colombia	late Middle Miocene		Walton 1990, 1997
	<i>M. cribriphilus</i>	La Venta (Villavieja Fm.), Colombia	late Middle Miocene		Walton 1990, 1997
<i>Potamarchus</i>	<i>P. murinus</i>	Solimoes Fm. (for the list of localities, see Kerber et al., 2016), Brazil	Late Miocene		Kerber et al. 2016
<i>Neopsephala</i>	<i>N. ambrosasetanus</i>	Niterói locality (Solimoes Fm.), Brazil	Late Miocene	UFAC (original)	Kerber et al. 2017
	<i>N. horridula</i>	Talismã and Cachoeira do Bandoiro localities (Solimoes Fm.), Brazil	Late Miocene	UFAC (original)	Kerber et al. 2017
<i>Chinchilla</i>	<i>C. langena</i>		Recent	MLP (original)	
<i>Lagidium</i>	<i>L. viscacia</i>		Recent	MLP & MNHN (original)	
<i>Lagostomus</i>	<i>L. maximus</i>		Recent	MLP & MNHN (original)	
<i>Dinomys</i>	<i>D. branickii</i>		Recent	MNH-N (original)	
Caviioidea					
<i>Andemys</i>	<i>A. temasi</i>	Tinguiririca Termas del Flaco (Abanico Fm.), Chile	Early Oligocene		Bertrand et al. 2012
<i>Chubutomys</i>	<i>C. simpsoni</i>	Cabeza Blanca, La Flecha, and Punta Nava (Sarmiento Fm.) and Cerro Pico Truncado, Argentina	Late Oligocene		Wood and Patterson 1959; Pérez et al. 2012, 2018
	<i>C. navaensis</i>	Punta Nava (Sarmiento Fm.), Argentina	Late Oligocene		Pérez et al. 2012
<i>Branisamys</i>	<i>B. lurbayensis</i>	Salla (Salla Beds), Bolivia	late Early Oligocene – Late Oligocene	MNH-N-Bol, MNHN & UM (original)	Hoffstetter and Lavocat 1970; Lavocat 1976; Patterson and Wood 1982
<i>Australoprocta</i>	<i>A. flegei</i>	Bryn Gwyn, Sacanana (Sarmiento Fm.) and Paso Córdoba (Chichinales Fm.), Argentina	Early Miocene		Kramarz 1998; Vucetich et al. 2010b
<i>Neoreomys</i>	<i>N. pinturensis</i>	Gran Barranca (Sarmiento Fm.) and Carmen Lower and Potezueto Sumich Norte (Pinturas Fm.), Argentina	Early Miocene		Kramarz 2006; Kramarz et al. 2010
	<i>N. australis</i>	Santa Cruz Fm. and Pinturas Fm. (for the list of localities, see Kramarz 2006), Argentina; Pampa Castillo (unnamed Fm.), Chile	late Early Miocene	MACN & MLP (original)	Ameghino 1887; Flynn et al. 2002; Kramarz 2006; Candela et al. 2012; Kay et al. 2012
<i>Luanus</i>	<i>L. propheticus</i>	Pinturas Fm. (for the list of localities, see Kramarz, 2006), Argentina	late Early Miocene		Kramarz 2006
<i>Dasyprocta</i>	<i>D. sp.</i>		Recent	MLP & UM (original)	
<i>Cuniculus</i>	<i>C. paca</i>		Recent	UM (original)	
	<i>C. taczanowski</i>		Recent	UM (original)	
<i>Cavia</i>	<i>C. apera</i>		Recent	MLP (original)	
<i>Galea</i>	<i>G. spixi</i>		Recent	MNH-N (original)	
<i>Dolichotis</i>	<i>D. patagonum</i>		Recent	UM (original)	
<i>Hydrochoerus</i>	<i>H. hydrochaeris</i>		Recent	MLP & MNHN (original)	
Incertae sedis extinct superfamily					
<i>Litodontomys</i>	<i>L. chubutomys</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene		Loomis 1914; Wood and Patterson 1959
<i>Cephalomys</i>	<i>C. arcidens</i>	Cabeza Blanca and La Flecha (Sarmiento Fm.), Argentina	Late Oligocene	MNH-N (original)	Ameghino 1897; Wood and Patterson 1959
	<i>C. plexus</i>	Cabeza Blanca and La Flecha (Sarmiento Fm.), Argentina	Late Oligocene		Ameghino 1897; Wood and Patterson 1959
	<i>C. ceciae</i>	Cabeza Blanca (Sarmiento Fm.), Argentina	Late Oligocene	UM (cast)	Vucetich et al. 2015
<i>Asteromys</i>	<i>A. punctatus</i>	Cabeza Blanca, Laguna de los Machos, and Punta Nava (Sarmiento Fm.), Argentina	Late Oligocene	MACN (original)	Ameghino 1887; Wood and Patterson 1959; Pérez and Vucetich 2012; Pérez et al. 2018
<i>*Asteromys*</i>	<i>*A.* bolivianus</i>	Salla (Salla Beds), Bolivia	late Early Oligocene – Late Oligocene	MNH-N-Bol, MNHN & UM (original)	Lavocat 1976; Patterson and Wood 1982; Pérez et al. 2018
<i>Banderomys</i>	<i>B. leanzai</i>	Cerro Bandera Fm. and La Estrella (Sarmiento Fm.), Argentina	Early Miocene		Kramarz 2005; Busker et al. 2017
<i>Soriomys</i>	<i>S. gaimanensis</i>	Bryn Gwyn (Sarmiento Fm.), Argentina	Early Miocene		Kramarz 2001c; Vucetich et al. 2010b
	<i>S. gerganensis</i>	Pampa de Gan Gan/Sacanana (Sarmiento Fm.), Argentina	Early Miocene		Kramarz 2001c; Vucetich et al. 2010b

Fm., Formation; INGEMMET, Instituto Geológico Minero y Metalúrgico, Lima; MACN, Museo Argentino de Ciencias Naturales, Buenos Aires; MLP, Museo de Ciencias Naturales de La Plata; MUSM, Museo de Historia Natural de la Universidad Nacional Mayor San Marcos, Lima; MNHN-Bol, Museo Nacional de Historia Natural, La Paz, Bolivia; MNHN, Muséum National d'Histoire Naturelle, Paris; UFAC, Laboratorio de Pesquisa Paleontológica, Universidade Federal do Acre; UM, Université de Montpellier.

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