

THE OLDEST SPECIES OF *DOLICHOTIS* (RODENTIA, HYSTRICOGNATHI) FROM THE
 PLIOCENE OF ARGENTINA: REDESCRIPTION AND TAXONOMIC STATUS OF
ORTHOMYCTERA CHAPALMALENSE

MARÍA CAROLINA MADOZZO-JAÉN, MARÍA ENCARNACIÓN PÉREZ AND CECILIA
 MARCELA DESCHAMPS

Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET). Museo Paleontológico Egidio
 Feruglio (MEF), Av. Fontana 140, U9100 Trelew, Chubut, Argentina. Facultad de Ciencias Naturales e
 Instituto Miguel Lillo, Universidad Nacional de Tucumán (UNT), Miguel Lillo 205, T4000 San Miguel
 de Tucumán, Tucumán, Argentina. cmadozzojaen@mef.org.ar

SUPPLEMENTARY INFORMATION 3

Strict consensus of 6330 MPTs (0 taxa excluded)

```

|--0 Proechimys
| |--1 Cuniculus
|--77| | |--3 Myoprocta
| | |--79---2 Dasyprocta
`--78| | |--5 Asteromys_punctus
| | |--82| |--7 Asteromys_puelche
| | | |--83---6 Asteromys_bolivianus
`--81| | |--4 Neoreomys_australis
| | | |--13 Luantus_propheticus
`--80| | |--12 Luantus_minor
| | | |--11 Luantus_initialis
`--86| | |--10 "Chubutomys"_leucoreios
| | | |--14 Luantus_toldensis
| | | |--9 Chubutomys_navaensis
`--85| | |--8 Chubutomys_simpsoni
| | | |--16 Phanomys_vetulus
`--84| | |--15 Phanomys_mixtus
| | | |--24 Matiamys_elegans
| | | |--23 Schistomys_rollinsii
`--87| | |--22 Schistomys_erro
| | | |--21 Eocardia_robertoi
| | | |--19 Eocardia_excavata
`--88+--18 Eocardia_montana
| |--17 Eocardia_fissa
| |--20 Eocardia_robusta
| | |--25 Microcardiodon_williensis
`--89| | |--26 Guiomys_unica
| | | |--27 "Prodolichotis"_priediana
`--90| | | |--51 G.spixii
| | | | |--112---50 G.musteloides
`--91| | | | |--49 Palaeocavia?_mawka
| | | | | |--111| |--48 Palaeocavia_impar
| | | | |--105| | |--110| |--47 Cavia_cabrerai
| | | | | |--109| |--46 C.aperea
`--92| | | | | |--108| |--45 Cavia_tschudii
| | | | | |--104| |--107---44 Cavia_porcellus
| | | | | |--38 Dolicavia_minuscula
| | | | | |--40 M.australis
| | | | |--103| |--106---39 Microcavia_chapalmalensis
| | | | | |--43 Neocavia_sp
| | | | |--102| |--42 Neocavia_pampeana
`--95| | | | |--101+--41 Neocavia_lozanoi
| | | | | |--37 Orthomyctera_rigens
| | | | |--28 Prodolichotis_prisca
| | | | | |--35 D._intermedia
| | | | |--93| |--34 D._improla
| | | | | |--33 D._major
| | | | |--96+--32 D._platycephala
| | | | |--31 D.salinicola
| | | | |--30 D.patagonum
`--94| | | | |--29 Dolichotis_chapalmalense nov. comb.
| | | | |--55 Cardiomys?_andinus
| | | | |--53 Procardiomys_martinoi
| | | | |--52 K.rupestris
`--100| | | | |--56 Cardiomys_leufuensis
| | | | | |--57 Cardiomys_ameghinorum
    
```

```

| | | ,--63 Xenocardia_diversidens
|--99| | |--62 Caviodon_pozzii
| | |--61 Caviodon_cuyano
|--98| |--60 Caviodon_andalqualensis
| |--59 Caviodon_australis
| |--58 Caviodon_multiplicatus
|--97+--54 Cardiomys_cavinus
| |--36 Allocavia_chasicoense
| | ,--68 Cardiatherium_aff_orientalis
| | |--67 Cardiatherium_calingastaense
| | |--66 Cardiatherium_patagonicum
| | |--65 Cardiatherium_paranense
|--113+--64 Cardiatherium_chasicoense
| | ,--70 Hydrochoeropsis?_wayuu
| | |--69 Hydrochoeropsis_dasseni
| | | ,--76 H.hydrochaeris
|--114+--118---75 Neochoerus
| | ,--74 Phugatherium_dichroplax
|--117| | ,--72 Phugatherium_catacliticum
|--116| | ,--73 Phugatherium_saavedrai
|--115---71 Phugatherium_novum

```

Reduced strict consensus of 6330 MPTs (2 taxa excluded: *D. platycephala* and *D. improla*)

```

,--0 Proechimys
| ,--1 Cuniculus
|--77| | ,--3 Myoprocta
| | |--79---2 Dasyprocta
|--78| | ,--5 Asteromys_punctus
| | ,--82| | ,--7 Asteromys_puelche
| | | |--83---6 Asteromys_bolivianus
|--81| | ,--4 Neoreomys_australis
| | | ,--13 Luantus_propheticus
|--80| | |--12 Luantus_minor
| | | |--11 Luantus_initialis
|--86| | | ,--10 "Chubutomys"_leucoreios
| | | | ,--14 Luantus_toldensis
| | | | |--9 Chubutomys_navaensis
|--85| | | |--8 Chubutomys_simpsoni
| | | | ,--16 Phanomys_vetulus
|--84| | | |--15 Phanomys_mixtus
| | | | ,--24 Matiamys_elegans
| | | | |--23 Schistomys_rollinsii
|--87| | | |--22 Schistomys_erro
| | | | |--21 Eocardia_robertoi
| | | | |--19 Eocardia_excavata
|--88+--18 Eocardia_montana
| | | |--17 Eocardia_fissa
| | | | ,--20 Eocardia_robusta
| | | | | ,--25 Microcardiodon_williensis
|--89| | | | ,--26 Guiomys_unica
| | | | | | ,--27 "Prodolichotis"_pridiana
|--90| | | | | | ,--51 G.spixii
| | | | | | | ,--115---50 G.musteloides
|--91| | | | | | | ,--49 Palaeocavia?_mawka
| | | | | | | | ,--114| | ,--48 Palaeocavia_impar
| | | | | | | | | ,--108| | | |--113| | ,--47 Cavia_cabrera
| | | | | | | | | | |--112| | | ,--46 C.aperea
|--92| | | | | | | | | | |--111| | | ,--45 Cavia_tschudii
| | | | | | | | | | | |--107| | | | ,--110---44 Cavia_porcellus
| | | | | | | | | | | | ,--38 Dolicavia_minuscula
| | | | | | | | | | | | | ,--40 M.australis
| | | | | | | | | | | | | |--106| | | ,--109---39 Microcavia_chapalmalensis
| | | | | | | | | | | | | | ,--43 Neocavia_sp
| | | | | | | | | | | | | | |--105| | | |--42 Neocavia_pampeana
|--95| | | | | | | | | | | | | |--104+--41 Neocavia_lozanoi
| | | | | | | | | | | | | | |--37 Orthomyctera_rigens
| | | | | | | | | | | | | | ,--28 Prodolichotis_prisca
| | | | | | | | | | | | | | | ,--35 D._intermedia
| | | | | | | | | | | | | | | | ,--93| | | ,--99---33 D._major
| | | | | | | | | | | | | | | | |--97| | | ,--29 Dolichotis_chapalmalense nov. comb.
| | | | | | | | | | | | | | | | | |--96| | | ,--31 D.salinicola
| | | | | | | | | | | | | | | | | |--98---30 D.patagonum
|--94| | | | | | | | | | | | | | | | ,--55 Cardiomys?_andinus
| | | | | | | | | | | | | | | | | |--53 Procardiomys_martinoi
| | | | | | | | | | | | | | | | | |--52 K.rupestris
|--103| | | | | | | | | | | | | | | | ,--56 Cardiomys_leufuensis
| | | | | | | | | | | | | | | | | | ,--57 Cardiomys_ameghinorum
| | | | | | | | | | | | | | | | | | | ,--63 Xenocardia_diversidens
|--102| | | | | | | | | | | | | | | | | |--62 Caviodon_pozzii
| | | | | | | | | | | | | | | | | | | |--61 Caviodon_cuyano
|--101| | | | | | | | | | | | | | | | | |--60 Caviodon_andalqualensis
| | | | | | | | | | | | | | | | | | | |--59 Caviodon_australis

```

```

| |--58 Caviodon_multiplicatus
|--100+--54 Cardiomys_cavinus
| |--36 Allocavia_chasicoense
| | |--68 Cardiatherium_aff_orientalis
| | |--67 Cardiatherium_calingastaense
| | |--66 Cardiatherium_patagonicum
| | |--65 Cardiatherium_paranense
|--116+--64 Cardiatherium_chasicoense
| | |--70 Hydrochoeropsis?_wayuu
| | |--69 Hydrochoeropsis_dasseni
| | |--76 H.hydrochaeris
|--117+--121+--75 Neochoerus
| | |--74 Phugatherium_dichroplax
|--120| |--72 Phugatherium_cataclisticum
|--119| |--73 Phugatherium_saavedrai
|--118+--71 Phugatherium_novum

```

Synapomorphies common to 6330 trees (Node numbers refer to nodes in the reduced Strict Consensus)

Node 95: CAVIIDAE

All trees:

- Char. 2: 1 --> 2
- Char. 23: 1 --> 2
- Char. 24: 1 --> 2
- Char. 28: 1 --> 0
- Char. 59: 1 --> 2

Node 93: DOLICHOTINAE

All trees:

- Char. 48: 0 --> 1
- Char. 59: 2 --> 0
- Char. 142: 1 --> 0

Node 97: DOLICHOTIS

All trees:

- Char. 107: 0 --> 1

Node 96: *Dolichotis chapalmalense* nov. comb. + (*D. Patagonum* + *D. salinicola*)

All trees:

- Char. 14: 1 --> 0
- Char. 18: 01 --> 2

Node 98: *D. Patagonum* + *D. salinicola*

All trees:

- Char. 13: 2 --> 0

Node 99: *D. intermedia* + *D. major*

All trees:

- Char. 30: 1 --> 2