

SUPPLEMENTAL DATA

Middle Miocene *Kenyapotamus* (Cetartiodactyla, Hippopotamidae) from Napudet, Turkana  
Basin, Kenya

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Character-taxon matrix used for the phylogenetic analysis. A–D and E–G are polymorphic and variable states, respectively. **Abbreviations:** **A**, (0,1); **B**, (0,2); **C**, (1,2); **D**, (0,1,2); **E**, (0/1); **F**, (0/2); **G**, (2/3).

Taxon

10	20	30	40	50	60	70
80	90	100	110	120	130	140
150	160	164				

*Gujaratia*

```
000-000?12 1001001000 0000000000 0000000010 1100001001 0-00110000 0001001000
00011?1100 0120?00112 0001000100 0000300000 1001101011 100010-020 1001000011
??0100210- -----00 0001
```

*Bunophorus*

```
?????????? ????1000 000000000? 2000000010 1100001011 0-00110000 0001000000
?????????? ????000-- 0010000000 0200300000 1001000011 000010-021 00020?????
?????0???? ???? ?????
```

*Dichobune*

```
000-00??12 ?001001000 0010020000 0000001000 1000000001 0-00010000 1002000000
??????100 0?1?0000-0 0011000000 0001000000 0001010011 020010-020 01020000?1
2010000120 0110010??0 ??02
```

*Homacodon*

```
?????????? ????0 ?????????? ???????10 0100001001 1000010000 1002000000
?????????? 0?10000110 0011000000 0010300000 0000010001 020000-021 01020?????
?????0???? ???? ?????
```

*Gobiohyus*

?????????? ????1000 0000100100 2001001000 1000000011 1000010000 1001001000  
?????????? ?2?010110 0101000000 1001000001 -001010111 020100-021 11110?????  
?????0???? ???? ?????

*Khirtaria*

?????????? ????0000 0000000100 0000101011 1001-01111 1000110200 1000001F0E  
?????????? ???? ????? 0200001010 0001101011 100110-021 10021?????  
?????1???? ???? ?????

*Indohyus*

?????????? ????0??0 00????01?? 0000001011 1000001011 1000010200 1000001200  
?????????? 0?001000-- 0000000110 0200201001 -001101011 100110-021 1?100?????  
?????????? ???? ?????

*Cebochoerus*

000-000?10 ?002010000 0000000001 0000001001 0001010000 0-10010000 0102002000  
???2000100 0020010110 0001000000 0200200100 0001010001 020100-000 1111020121  
?011000020 0000000000 0001

*Choeropotamus*

000-?????? ?002000100 0000010100 0000100001 0000100000 0-00100000 0012000000  
???0????00 0100?00110 0101001000 0100201110 0001100102 01010111?1 1111001001  
0011?10011 1110000100 0002

*Hallebune*

?????????? ????01110 1020000011 ?10?001010 0100001011 1000010000 1001002000  
?????????? 0?21?10110 0100001?00 1210300000 0001110111 000A10-0?1 0E010?????  
??11?0???? ???? ?????

*Amphiragatherium*

????????1? ???2001110 0000000011 2101101101 0000001011 1000011000 1012002000  
????????001 0121010110 0100101100 1210201100 0001110E1C 0001010021 111000?021  
201A?1????? ???????????? ????

*Mixtotherium*

????????12 0000101110 0020000111 -?00001000 1000011011 0-10110001 0102000100  
???01?1000 0?21011110 0100001000 0100200001 -001020002 0201111122 11110?1???  
??11?01110 0000000??0 0002

*Amphimeryx*

0011000110 ?002001110 1020000001 -000001011 0100301001 1201110131 0000000110  
0??2????100 0?21000122 0111000000 2100200001 -000220112 0111011020 1111020001  
211000210- -----00 0002

*Diplobune*

0010000112 1001000110 0000110211 0100001010 0100001011 0-11011122 0000000100  
0212001000 0120111122 0101000000 2100000001 -001020012 0111011120 1110010001  
2001001111 000E000100 0012

*Dacrytherium*

0????00??12 1002000100 0000110201 2100101001 1100000001 0-11010120 0010000100  
0??20?1000 00201110-2 0101100001 0100000001 -001020112 0211011120 11100000?1  
1001?0????? ???????????? ????

*Xiphodon*

?????????? ????1110 1020000211 0100001011 0100001011 0-20010110 0001000110  
????????001 0101111112 0101000000 2100000001 -000220012 0111011022 11111?????  
??01?01111 000100A110 0012

*Paroxacron*

000-000?1? ???2?11110 1020000201 0000001001 1000001001 0-01010120 00000001-1  
????????000 0121011112 0101000100 2101000001 -000020012 0110111120 1112020011  
100000210- -----00 0002

*Merycoidodon*

?????????01 0000100000 0020110111 0010101001 0100-00001 1221010132 00120001??  
00001?0000 1000001122 0100000000 2000200001 -01--20012 02110111?2 1110010??1  
200110????? ??????????? ?????

*Entelodon*

001A000100 0000110100 0000000000 0000001010 1100101101 1000110000 10000000-0  
0000??1100 012010010- 0001000000 12010-0000 0001001010 000010-011 0102020021  
1000011111 10000021?0 0002

*Palaeochoerus*

001B010013 0110200000 000000-000 -000001011 0011000011 0-10011010 0001000000  
0?1021A000 00101000-0 0011011000 2201001110 0001000010 100100-010 11110211?1  
?001?00020 000000A000 0000

*Perchoerus*

001B0?0013 0110200000 00?0??-0?0 ?000001011 0011000010 0-?1?10010 1001000000  
0??02?A100 0?00?000-0 0001001000 2201001000 ?001000011 000100-0?0 11110?11??  
2?11?0????? ??????????? ?????

*Kenyasus*

001B010013 0100210000 000000-000 -000001011 0001200100 0-11110010 1001000000  
01102?0100 0?00?10110 0101001000 2201001100 0101001010 100100-010 11100201?1  
?001001120 0000000100 1000

*Lophiomeryx*

001200??1? ???2001110 0020000101 -000001011 0100301001 1201010130 0002000110 -  
--2?00120 0110001122 0111000000 0100200001 -01--20112 01110111?1 11100010?0  
201110???? ?????????? ????

*Archaeomeryx*

000-?0??1? ?002001110 1020000101 0000001001 0000301001 1201010130 00000001?0  
00010?0120 012E?01102 0100000000 0101200001 -01--10102 02111111?1 11100?1??1  
?011?0???? ?????????? ????

*Siamotherium*

0???00??00 00?0000000 0000000100 0000100101 0000000000 1010010000 1100002000  
00001?0?00 01A01100-0 0001000000 1000210000 1001110101 0001010001 1110000021  
2001010020 0000000100 0002

*Heptacodon*

000-????11 0000100000 0020000100 0000101011 0000000110 1011110001 1000000000  
0?00111000 0110?11110 1100000000 0010101000 1101110102 02010121?2 1110100121  
1001?1???? ?????????? ????

*Anthracotherium chaimanei*

?0100101?? ??????0?00 0000000100 0010101001 0011000110 1010101001 1110001001  
???0110100 0110?11110 11000?0000 0010111010 1101210102 0101011102 11101????E  
???101???? ?????????? ????

*Anthracotherium magnum*

0010010000 0000100000 0000000100 0010101001 0011000110 102010100A 1100002001  
00001?1100 0110111111 1?00000000 0010111010 A101210102 0201011102 1110100101  
2011010020 0000000120 0000

*Myaingtherium*

000-000?0? ?????110000 0000000100 ?000101001 0011000011 1010010000 1000002001  
???????????? ??????10100 1100000000 ?210111000 0001100111 0001010012 11101010?2  
?101?1???? ??????????? ????

*Anthrakeryx tenuis*

000-00001? 1000000100 0000000100 1000000001 0100000110 1010010000 1000002000  
0001G?0100 0100?10??? ?10???0000 0010111000 1001110102 02010110?? 11100?1021  
C11001???? ??????????? ????

*Anthrakeryx thailandicus*

???????????? ??????00000 0000000100 1000100001 0000000110 1210010000 0001002000  
???????????? ????0?10100 0100000000 ?00021E000 1001210102 0101011101 1110011021  
211101???? ??????????? ????

*Microbunodon*

000-000011 1000000100 0010000100 1000000001 0000000110 1211010000 0001002000  
0001311000 0100?11100 0101000000 0100200000 1001210102 0101011101 1110011121  
2111010021 0100000000 0000

*Bothriogenys orientalis*

???????????? ??????00000 1120121100 1010100001 0000010110 1110110001 0102101100  
???????0000 A000?11100 0110100000 00101110?0 0001110102 0101011001 1110001021  
1?1111???? ??????????? ????

*Bothriogenys gorringeri*

E00?001112 0001000000 1100121200 1010100011 0000001A10 122001000C 0111110100  
000???????? ????11101 0100000000 1110C11000 1001110102 0201011101 1110011021  
2110111110 0001102??0 1?10

*Bothriogenys fraasi*

?????????? 0????00000 1020111200 1?10100011 0000000110 1110110001 1001110100  
???20?0000 1000?11101 010000000? 0010111000 1001210102 02010111?1 1110011020  
111011???? ???? ???????

*Bothriogenys andrewsi*

?????????? ???? ?????? ????01 0100001000 1121010012 0001110?00  
?????????? ???? ?????? 0????00?? ?00??1?102 ?2???111?1 ????0?????  
?????1???? ???? ??????

*Brachyodus aequatorialis*

11110?1?1? 0??1000000 1110110200 11A0100011 0100001011 11200000A2 0001111100  
1212000000 E000?11101 0100000001 0111001000 1001210102 0201011101 1111011120  
110111???? ???? ??????

*Brachyodus onoideus*

1111001112 0001000000 0100110200 1010100011 0100001011 1121010112 0000110100  
1212000000 1000?11101 0100000001 0111000000 1001210102 0201011101 111E011120  
1101112020 0001100120 1010

*Brachyodus depereti*

21110?--?? ???1000000 0000110200 1100100011 0100001011 1220010112 0000110100  
????????00? ???0?11110 0100000000 0100000E00 1001210102 02010111?1 1?1?0111?0  
?101?1???? ???? ??????



*Epirigenys*

????0111?? ??????0?00 010111-100 2A11111001 00AA000110 1210001000 0112?1?100  
??????????? ??????11110 0110110001 1010C11010 0101200102 01010110?1 11100?????  
?????10020 0001102110 1110

*Morotochoerus*

??????????? ??????0??? 01????-1?? 2?0E11?111 0111110110 1E10011000 0112102000  
????????????? ???????????? ???????????? A200201100 000110010B 00010100?1 11100?????  
?????1????? ???????????? ????

*Kenyapotamus ternani*

00101????1? ?010200?00 ?12?10-??0 ??????????01 00A11?01A0 1210111000 011?1?2000  
???????????A 0?10?20110 01101?0011 1210201100 A10110110B 0001010002 11110E1102  
0010?1????? ???????????? ????

*Kenyapotamus coryndonae*

?0??12011? 00102?000? 112110-111 21011A1101 00A11101A0 1210111000 0112112000  
???????????1 0?10110110 0110110011 12A020A100 A10110110B 0001010002 11110??1?2  
?0?A?12020 1011100121 101F

*Archaeopotamus*

000-12011- 0010200000 112110-111 2101101101 0011110000 1201A11000 0112112000  
0000310101 0020120110 0110110011 0200200100 A01--0E10D 0001010002 1111021102  
001A11????? ???????????? ????

*Hexaprotodon*

001212011- 0010200000 112110-111 2101101101 0011110000 1C01A11000 A112112000  
0000310A01 0020120110 0110110011 0200200100 A01--0E10D 0001010002 1111021102  
001A111111 1111112121 2111

*Bothriodon*

0010000012 0001000000 1000120100 0000100011 0000000110 1220010012 0001?00110  
0002000100 0100?11110 0101000000 0110011000 0000220112 0101012001 1110011121  
111001???? ?????????? ????

*Aepinacodon*

0?10?0???? ?00100000 1000110100 2001100111 0100001110 1220010112 00011??1??  
0002000100 0100?11100 0111000000 0110000000 0000220112 0101011A?1 1110011121  
101001???? ??????????? ????

*Elomeryx crispus*

0010001012 000100000A 1010100100 1110100001 0000000110 1020010112 10011101EA  
0001110000 0000?11110 0100000000 0110111100 1001220112 0201011101 111002101?  
111111???? ??????????? ????

*Elomeryx borbonicus*

0010001012 0001000001 1010120100 1110100011 0000001A11 1220010112 0002110110  
0001110000 0000?111A0 0100000000 01A0100100 1001220112 0101011102 1110021021  
1111111120 0001100111 1110

*Afromeryx*

F?????????1? ????0100001 1010120100 1?01100011 0100000110 1220010000 00011?0110  
0?0?110001 1000?11110 0100000000 0110000000 101--10112 0201011102 1110021021  
2101110011 0001101110 1111

*Sivameryx*

000-?????11 0?00110001 1010120100 1000100001 0000010110 122001012B 0101110110  
???????00?1 1000?11100 0100000000 0110000000 1001120112 01010111?2 1110021020  
2101?1210- -----11 2110

*Merycopotamus nanus*

000-0???11 0100110001 1010120100 1000101011 0100001011 121A010120 0002110110  
00001?0001 1000111110 0101000000 0100000000 101--20112 0101011112 1110021001  
1101110011 1111112111 11?2

*Merycopotamus dissimilis*

000-0???11 0100210001 1010120100 1000101011 0100001011 1210010120 0002110110  
???0110001 1000111110 0101000000 0100002000 101--20112 0101011112 1110021101  
2001111111 1111112111 2112

*Libycosaurus anisae*

A012100A11 0100210001 1010120100 1000101011 0100001011 1210010120 0002110110  
???020?012 1000?11110 0111000000 0100002000 101--20112 010101111? 1110021020  
2101111111 1111112111 2110

*Libycosaurus bahri*

2012100111 0100210001 1010120100 1000101011 0100001011 1210010120 0002110110  
00102?0012 1000111110 0101000000 0100002000 101--20112 0101011111 1110021120  
21A111210- -----11 2120