

Supplement to:

An enigmatic neodiapsid reptile from the Middle Triassic of England

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1. Cladistic coding of taxa for Jones analyses:

xread
100 23

Petrolacosaurus

0000000000000000000000001000000100000000?0?0000000?000000001000?0000000?0100000
00000000000000000000

Youngina

010000000000000000000000000000110100000000000001000000?00000001000100?????0?00000001
0000000000000102000

Czatkowiellia

010???101300000000001??0?100?10010????00?0??112????????????0????????????01?000?000
0000000?00??00

Prolacerta

000?11100200000000000?0011000100000011?0?00011100??00100100000?000010012?02110?02
0000000000000102?00

Paliguana

000000000????01?10???????1?0?0?0?0??1??0??
????????????????

Saurosternon

??00011?00?1010?0????000??00000001?00?????????
?????????020??

Kuehneosauridae 000211100301-

11111000?0000100000000001100?00101211?0?1?110001?00?00????100?000000000000000000
0??000

Marmoretta

1?02??00130??00000?101??000100101101?110000?111????????11????????????????00?000?001
00000100000??00

Sophineta

1?001101130000?010???????110?000?0?????10100?001????????????????0?????????00?000?000
011001?000??00

Squamata 111?110?-

?10111011111111211010??2??11?1??110?201?12111121101121111111111113120000?0??0??????1
0?00????0

Gephyrosaurus 110011111201-

00010011110?1100001111011120110000000?010??110111111?11??12?200011010001010121110
002??0

Diphydontosaurus 210011111201-

00010011110?110000011101112??0????????????????????????????????0??110?00010212311100??
??0

Vellberg_Jaw

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1231?1??????0

Eothyris_parkeri [01]1000001100200021?000100010-
00100010001100010101?00000100[23]00?0-
??001100-000100001-
00000?????0?????0?0??1?????00?0000000-
??00
Archaeothyris_florensis 0100121?0??000110??00000120-
001?00?0??11110111?0?010[01]0??03?0?0-
0??0?00111?0??000111??0?0101?????01??001????0?0??????0-?0?0000?1-
00?00????????????????????????????0??00?????-
?00000000000?000000?0?1?0????00?????0010?0?????????00
Ophiacodon_retroversus [01]1?112100000001100000000110-
0010000000111101110000100010030000-
000000011110010000[01]100000101102000100001000001000101100-011000001-
00000010?000??1000000?1000?1200011001-
0?00000000101000010?031000000000011??001000000001??000
Mycterosaurus_longiceps [01]0111110001031010?001011121-
0010101010120111210?11110010120?0??0010111111?00?010?????110?001?000?010?1100?000?0
0000?100-0010000?1-
00000?0?????????000?1?1?????10????10000???0?????????????1??
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Mesenosaurus_romeri [01]01111100011310110001011121-
001010102012011121011111000?03000100010111101000?010?????10?001?00000???110??00
0?0?0001100-001?00000-
0000000000110010?01??0?????02000010000???0?????????????????
?????00
Elliotsmithia_longiceps 0011?11?????????????????121-
001?1110101201111100??1100201[123]?0010??1???
?????????????1?000??-
00000????[012]0?????????????????????0??00??0?0?0000???
?????????00
Aerosaurus_wellesi 000111110010200120102012121-
001011?12022011012002111?0201?01010??1011111100010200000000000110000000111??12001
100001000-000000002-
00000???0?????110000?000010000000000??000?0?0?000000??[12]1?1??00?0?0?10000?0?0
000?0?????00
Varanops_brevirostris [01]00111110010201120102012121-
0010111120220110120?211110201?010100?10?11112000102000100010001200000001010112001
1000010?1010000000?-
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0000?0?????00
Varanodon_agilis [01]00110110012201120112012121-
001011?12022011012?0?11110201[23]01010??101111121001020??0001000110000?00??10?????
11??0010010000000000-
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Archaeovenator_hamiltonensis [01]100111100100010-0102010121-
001000101012010121000111000??[123]?000-
??100001010001010000?01?????????0?0??1?1??10001000000000-101?00001-
00000?0?001?00?0?????01?????000000000-0??000?00?
?0?????????01?100??00?????????001000000100?????00

Captorhinus_aguti 310000011100000101000000010-00010-0-
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00-001011100-00000[01]00?0002---
??0010???0000021?00000??000?0???100000?01???1001000100?0?00000000[01]00???00
Paleothyris_acadiana [01]1000100000000120100000?110-01100-0-
0000000020010011001?011000-
00000000020001000?0?00101101002000000011010000000001000-000000000-
000000001000???000?01???0000010000-
000100?00001000000?0?1??001000100??1001000?00000?000
Petrolacosaurus_kansensis
010001000000001201000000121001100000112100001011101100010111000-
00?011211101100000010111001202000101001000001000000100-
1010000010000000000011000000?010100??0000000000-
000100?0000010001??000101101000?0?100011000000100??000
Araeoscelis_gracilis 010001?0000000020??00000121001000-0-
11000000201100110001111000-
00?021200101100010010111100202000101010000001000001100-
001000002100000???[01]0110010000000????0000010100-
000100000000000010001010110?000100??0001000000100??00
Apsisaurus_witteri
[012]100????????????????????????????????1?02?120???210[01]?1???0[01]0???00?????0111
10100??01?000?0101001100??00??1000????????????????????1?000?????0????
?[01]?0??????0?0?????0??01000?10?1?10?00?101000?00?0?0??02-0-
1????1000?????????00
Coelurosauravus_jaekeli 210010?000001100-??0101?121100110?0?2224-
000201???02200?????101????00?0[01]0?000?0????000?100010200???1[01]11110001?00001110-
001100001000100?????????0?????????????0?000??0?1001[01]00110?100000?0?0?10????010
?111?????001010000?00
Acerosodontosaurus_piveteaui 0100????????[13]11?-
?????11121?????001?[12]231??1[123]?????????????1??1????00?01[01]?00?0?????0????101?10
00001?1?1?????????????0-
?010000?????????????????0?????????????0?00????01????0?0101?01000000?????0????100-
1?000??00?????????00
Youngina_capensis 0100020100001110-
100001?12110111000122221001101000110101101101000?000010000001[01]1010?00001011100
0001111[01]110001100000100-
001000000100000000120100?01010001010100000?000000000000000010000000?111210000100
-1?010100000010100000
Trilophosaurus_buettneri 12001?1200021?00-?00001?120112-
101022100?00???120022210110?102011?1[01]1111101010?0001?00[01]11120111001111[01]11
10111110011-0-
100100001100?01011?3????10100011?11??1210010000[01]000011100010001100001[02]100?101
10100?10011000000101??000
Prolacerta_broomi 1001020001021000-
101001112110[12]110001212300002010001221011111020???121010[01]111?10?1001?00001120
0110011110101011111001100-
1010000011001010010000?00?11101001101100000011010011111000001010110110112?01002-
0-110010010000[12]?????00
Planocephalosaurus_robinsonae 3100010100001100-
??1001?120100110101222300002012022220?????1?2????000000?000010?11?10010100?????001
?110??3101??1000000-101100000100-

Paliguana_whitei

?200010?????????????1?010[01][02]10?01212??000??120??2220?????????????
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?01?????100?10?0?????????00?????0?00?0?00?????????????
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Macrocnemus_bassanii 000002?000021100-???????121112-
1000?21?30000?????2???1???10?????112?0102001012010010001011200??[01]0011100?0001?1
1101?00-
101000001000?01?????0?????????0?????????00?0?000011111110001?1000?21?1120010?2-0-
01[0 1]01011100020[01]11?00

Noteosuchus_colletti
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Eorasaurus_olsoni
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?010???1???10111001???00

Huehucuetzpalli_mixtecus 2200110000011100-??1001[0 1]1001012000002124-0003-
1???122201??111??1?1?0?010?00001[0 1]1?1?1?000100101??11?1110013101011000100-
001000001000-
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31011000

Gephyrosaurus_bridensis 2200010000001110-
??110101101011101002223000020120222220???1112???00000?1000010001
?1?1?0100??[12]?001?????310??11000100- 10110000110011000012000110??0101??0120001
01000000?0000?1010000001?1?112000?0??????10110011?3??11?00

Marmoretta_oxoniensis 2200000000001100-??1101?110112-
1010022230000??1202?221???
0-
101100001100?10?00120?????????????????????0?????????????0000?1010000001?1?11????0?????
?101100?????????11

Sophineta_cracoviensis 2200000000001110-??1001?1100000101002224-
000??12???222???
1011000?1100?00?????0?????????????????????0?????????????0000?1010000001?1?11????0?????
101100?????????00

Fraxinisaura_rozynekae 2100010000001100-
??1101?11010021010022230000??1002?22???
?????????????000100-
101100001100?00?00120?????????????????????0?????????????0000?1010000001?1?11????0?????
?101?00?????????11

Feralisaurus 2100?[12]???? ??[01]?00-
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Icarosaurus_siefkeri
?20001?????????10???20??000102?00?1?0224??003????2222??10?????????1?0001?0100?
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