

P A U P *
Version 4.0b10 for 32-bit Microsoft Windows
Wed Apr 05 19:47:13 2023

-----NOTICE-----
This is a beta-test version. Please report any crashes,
apparent calculation errors, or other anomalous results.
There are no restrictions on publication of results obtained
with this version, but you should check the WWW site
frequently for bug announcements and/or updated versions.
See the README file on the distribution media for details.

Log file status not changed (still logging to file
"K:\Matrix\Output\HuenesuchusMatrix.paup.log").

Outgroup status changed:
2 taxa transferred to outgroup
Total number of taxa now in outgroup = 2
Number of ingroup taxa = 89

Heuristic search settings:
Optimality criterion = parsimony
Character-status summary:
Of 422 total characters:
19 characters are of type 'ord' (Wagner)
403 characters are of type 'unord'
All characters have equal weight
4 characters are parsimony-uninformative
Number of parsimony-informative characters = 418
Gaps are treated as "missing"
Multistate taxa interpretation depends on "{}" versus "("" designation
Starting tree(s) obtained via stepwise addition
Addition sequence: random
Number of replicates = 100
Starting seed = 1
Number of trees held at each step during stepwise addition = 1
Branch-swapping algorithm: tree-bisection-reconnection (TBR)
Steepest descent option not in effect
No more than 1 tree of score (length) greater than or equal to 1477 will be
saved in each replicate
Initial 'MaxTrees' setting = 100 (will be auto-increased by 100)
Branches collapsed (creating polytomies) if maximum branch length is zero
'MulTrees' option in effect
Keeping only trees compatible with constraint-tree "ANCESTOR"
Trees are unrooted

Heuristic search completed
Total number of rearrangements tried = 1.4988e+010
Score of best tree(s) found = 1476
Number of trees retained = 79380
Time used = 03:02:30.6

Tree-island profile:

Island	Size	First tree	Last tree	Score	First replicate	Times hit
1	79380	1	79380	1476	1	27
2	1	-	-	1477	6	17*
3	1	-	-	1478	5	13*
4	1	-	-	1479	2	9*
5	1	-	-	1480	17	9*
6	1	-	-	1481	25	12*
7	1	-	-	1482	8	10*
8	1	-	-	1483	4	3*

Note(s):

* Multiple hits on islands of unsaved trees may in fact represent
different islands

79380 trees saved to file "K:\Matrix\Output\HuenesuchusMatrix.paup.trees"

Processing TREES block from file
"K:\Matrix\Output\HuenesuchusMatrix.paup.trees":
Keeping: trees from file (replacing trees in memory)

79380 trees read from file
Time used = 3.34 sec
79380 trees now in memory

Lengths and fit measures of trees in memory:

Character-status summary:

Of 422 total characters:

19 characters are of type 'ord' (Wagner)

403 characters are of type 'unord'

All characters have equal weight

4 characters are parsimony-uninformative

Number of parsimony-informative characters = 418

Gaps are treated as "missing"

Multistate taxa interpretation depends on "{" versus "(" designation

("min" values for CI, RI, and RC are minimum-possible character lengths)

Sum of min. possible lengths = 514

Sum of max. possible lengths = 4420

Tree # 1
Length 1476
CI 0.348
RI 0.754
RC 0.262
HI 0.665

Lengths and fit measures of trees in memory:

Character-status summary:

Of 422 total characters:

19 characters are of type 'ord' (Wagner)

403 characters are of type 'unord'

All characters have equal weight

4 characters are parsimony-uninformative

Number of parsimony-informative characters = 418

Gaps are treated as "missing"

Multistate taxa interpreted as uncertainty

Sum of min. possible lengths = 494

Sum of max. possible lengths = 4400

Tree # 1
Length 1456
CI 0.339
RI 0.754
RC 0.256
HI 0.661

Input data matrix:

111111111122222222223333333333444444444455555555556
Taxon/Node 12345678901234567890123456789012345678901234567890

Mesosuchus brown ?1000?0000000?1000000?0000?00?100000?00000000?00000000000100
Prolacerta broom 0000020000?00?0000000?0000?00?100000?0000000000000000000000
Proterosuchus sp 0000030100000000000000?000020001000000000000000000000000000
Archosaurus ross ???03010??
Erythrosuchus af 010002000002000000000000002000000000000?00000000000000000
Vancalevea camp 1100020000100?100000000000?00?000000??0?00100000?00000?0000
Chanaresuchus bo 10000200000001000000000000 (000000000000000010011000000100000
0
1
)
Tropidosuchus ro 10??0?000000000000000?0000 (0000?0000001??0010011000000100000
0
1
)
Euparkeria capen 0100000000?0000000000000020001000000000000000100000000000
Smilosuchus greg ??00030001000110001000000020000000000000000010100000000000
Pseudopalatus pr ??0003000100011000100000002000000000000000010100000000000
Parasuchus hislo ??00030001000110001000000020000000000000?000010100000?000000
Velociraptor mon 101011001000010100000?0000010001?001111?00010001000000010000
Allosaurus fragi 101012001001010?0000010010210001001111100001000100000000000
Dilophosaurus we 10101100?01?0000?00001?000100010?0?0110??100010?000000??
Coelophysis baur 10101100101?0000?0000?01010000010?010110000100010?000001000?
Tawa hallae 10000000101?00000000010?00000001000??110000100010000000000?
Eoraptor lunensi 010001001012000000000?000100000??001111000?100010?00000?0?0?

Orthosuchus stor 00020100001?01?0100000000010???020?00?011?01110011100101???101
Baroqueosuchus h 000201000011001000000?000010010?00000011?011100111??101?0101
Protosuchus rich 000201000011001000000?0000100102000000111011100111?0101?0101

Input data matrix (continued):

1111111111111111111111111111
666666666777777777788888888888999999999900000000011111111112
Taxon/Node 123456789012345678901234567890123456789012345678901234567890

Mesosuchus brown 0000000?0?000000000000000000?00000100000000000000000000000000???00
Prolacerta broom 0000000?0?000000000000000000?0000000000000000000000000000000000000
Proterosuchus sp 00100000?1300000000000000000100010000000000000000000000000000000?00
Archosaurus ross ???
Erythrosuchus af 00100000110100000000000000010001110010000000000000000000000000
Vancleavea campi 0010?000?10000000100000???000001?1?0000000000000000000000000000?
Chanaresuchus bo 00100000010000100000000000010?0?110110000000000000000000000000
Tropidosuchus ro 00100000?100001000000000?001?????011?00?0?0?00000?0?0?????
Euparkeria capen 00100000(1000010000000000000100011101100000000000000000000000000
0
1
)
Smilosuchus greg 0010000001000000100000000001??011?1211000001?0000000000???00
Pseudopalatus pr 00100000010100001000000000?0?01112110000010000000000000000000
Parasuchus hislo 0010000001000000100000000001?01112110000000000000000000000000???0
Velociraptor mon ?010000001310000000000001011100010122110?10000001011?01111???
Allosaurus fragi 0010000011300000000000010111000101221101100000000110011?????
Dilophosaurus we ???0?0011?30000000?000?0???00?0122110110000000?11001100?0?
Coelophysis baur 001000011130001000??0001001100010122110110100000?0100110???00
Tawa hallae ??100001?130000000?00001??110??101221101?000000000000?1?1?00
Eoraptor lunensi ?01000001130001000000001?01????0??21?01?000???0?0?????????
Staurikosaurus p ??
Herrerasaurus is 001000000130001000000001??1??0?10?22?1011000?0000000??1?????
Efrasiasia minor ??
Plateosaurus tro 0010000001300100000000010011000101221100100000000000001100100
Eocursor parvus 001?????????????????????????????????????0?2211001000?0?????????????
Scutellosaurus l ??1????????????0000???0?0????0?????????????????????0?????????1?????
Lesothosaurus di 001000000130000000100001001?0001012211001000000000?00?10???0
Pisanosaurus mer ??
Heterodontosauru 001000000130001000000001011???1012211001110000000100110???0
Lewisuchus admix ???0001??1??000000?00001?011????012211001000000001??110?????
Asilisaurus kong ??????????????????????0?00000?????????????????????????????????
Eucoelophysis ba ??
Sacisaurus agudo ??
Silesaurus opole 00100000?1100010000?0001??10???0102110010000000?01011000100
Lagosuchus talam ??????????????????????????????????????012211000000000?01?01000???
Lagerpeton chana ??
Dromomeron grego ??
Dromomeron romer ??
Eudimorphodon ra ???00?0001000?0?0?0010???
Dimorphodon macr ???0000001?0000????????0???
Dongusuchus efre ??
Yarasuchus decca ??
Teleocrater rhad ??????????????????????0?000?0?????????????????????0000????10?????
Riojasuchus tenu 01100000010000000000000010010?011?2211010000?000000?000?????
Venaticosuchus r ?????????0??000????000?010010?0?0?21101?0???0?????????????
Ornithosuchus wo 0110000001000000000000001001000?????????????????????????????
Stagonolepis rob 1110011??1?001?0000001000001?101??221101000000?0001002?01100
Longosuchus mead ?11??1?1?1??11000?00??0?00?0001?12211010000000000100200?100
Aetosaurus ferra 1110110112000100010?100000????????221?01?000?00000?????????
Revueltosaurus c 00100110112000100000000000010?0112211010000000000?00200???00
Parringtonia gra 011?0000111100200000000????????11102110110000000000002000?0?
Erpetosuchus gra 0010000001110010??100000000????????21?0?0000?00000?????????
Gracilisuchus st 00100110111100100100000?0001????1?(21101?010??0(000???(?????
1
0 0
2 1 1
}
Yonghesuchus san ???001101101000?0?00?00?????????1?(21?01?010?????????????????
1
2
}
Turfanosuchus da 00100010110000100000000?0???0???100211010000000?000002?????0
Ticinosuchus fer ??
Shuvosaurus inex ?0100010??00000000?01100?0010??10122110100100000010000101100
Effigia okeeffea ?01?0010????000000?01100?0010?01012211010010000?0?????101100

Sillosuchus long ????
Lotosaurus adent 001000001100011000000000?
Poposaurus graci ?????
Poposaurus graci ?????
Xilousuchus sapi ?????
Arizonasaurus ba 00100000?100001000000000?
Qianosuchus mixt 00?00000110000100000000000?
Mandasuchus tany ?????
Huenesuchus chin ?????
Stagonosuchus ny ?????
Saurosuchus gali 0010000011?00100000000000100011122110100000100000002001?
Luperosuchus fra ???000?
Sanga Pascoal sp 00100000?100000000?00000?00?0?
Pagosvenator can 0010000000100?01?
Batrachotomus ku 00101000?100001000000000000011001112211010000010100000?001100
Postosuchus kirk 001011001111002001000010?0011?
Polonosuchus sil ???0?100?111002?01000010???1111?
Postosuchus alis ?????
Teratosaurus sue ?????
Rauisuchus tirad ???00?00?1?
Fasolasuchus ten ?????
<CM 73372> ?????
Hesperosuchus ag ??????110110000?
Hesperosuchus ag 001001001111001?01100000?00111?
Dromicosuchus gr 0010?1001111001?0110000?
Sphenosuchus acu 101001001111101101100000000111111221101???01111001101111111
Dibothrosuchus e 101?1?01?
Terrestrisuchus ?01?1?001111000?
Litargosuchus le 0?1?0?001111101?01?0?0?0?
Kayentasuchus wa 1?1????01?
Alligator missis 1011010?
Orthosuchus stor 1011?10?
Baroqueosuchus h 101?01001111101?
Protosuchus rich 101101001?11?0110111000000011001??221110?0?011111011011111?1?

Input data matrix (continued):

Table with 12 columns and multiple rows of taxon names and binary data. The header row contains a sequence of 12 '1's followed by a sequence of 88 '2's. The table lists various taxa such as Mesosuchus brown, Prolacerta broom, and Allosaurus fragi.

Lewisuchus admix 0?10??10??0??0?12??0?00?1?????01000?????????00100000?111110
 Asilisaurus kong ?????????????0?????????????????000110000?????0?1010?1?10??11?0
 Eucoelophysis ba ???
 Sacisaurus agudo ?????????????????121?????????????0?101??????????102001110??1???
 Silesaurus opole 01100?100000100121?0?000110??0011210010000010101001010111110
 Lagosuchus talam 0??00?00????0??1010
 Lagerpeton chana ???
 Dromomeron grego ???
 Dromomeron romer ???
 Eudimorphodon ra ?????????????????101?000?00?110?00?000000?00?0?001?0000?1011???
 Dimorphodon macr ?????????????????1012100?200??0?00?00?00?0??0??1?01?0000?1??1???
 Dongusuchus efre ???
 Yarasuchus decca ???1?0?
 Teleocrater rhad 0?????0????????12?????1?????1?????1?????1?????1?00001??1?00
 Riojasuchus tenu 0??0?0????00121000200110?00?0000001100010001000001111000
 Venaticosuchus r ???0????????????121??2????????00??200000?002??00100000111????
 Ornithosuchus wo ??????0?????00121000200110?00?000000?1000?0001000001111???
 Stagonolepis rob 0??00?01020?0012100001011??000?21101?000?101000010?1111???
 Longosuchus mead 02100?00?02000012100001011??0?002110100000101000010?11110?0
 Aetosaurus ferra 0??0?1?????001210000101110000??21??1?000?101010010?1111???
 Revueltosaurus c 02100?????0?0012100?00011??00000000010000100120000?1111000
 Parringtonia gra 021001011001?0012100000011?--000001101000010001000001011000
 Erpetosuchus gra ?????????????????12100000?????0?00?0?00?0?1?0000000011?1???
 Gracilisuchus st ???0?10????0?001210000001(0??000100000?000?10001000001111?00

0

1

)

Yonghesuchus san ???0????????????1210?00?????????0??01101000?1?00100000101????
 Turfanosuchus da 01100?00?00?0012100?0001?0?000?0000?0?000?1000100000101?0?
 Ticinosuchus fer ?????????????001210?00?0??0?0?00?0??01000001?1?1??
 Shuvosaurus inx 0??00100??0000012100?000110?0??0000100100011??2??0??0??111000
 Effigia okeeffea 0??00?0??0?00012100?000110?0000?0100100011102?????????111???
 Sillosuchus long ???1???
 Lotosaurus adent 01100?00000?00121001000110??0?0110110000102????????????1000
 Poposaurus graci ?????????????????0?????????????????????????????????010?0001??1???
 Poposaurus graci ???
 Xilousuchus sapi 01100?00000?00?12100?????????000001101000??0001000001??1000
 Arizonasaurus ba 01100?00000100012100?000?1????000001101000?10001000001111000
 Qianosuchus mixt ???0?????????0012100?000110?00?00?00?0??0001?001?00?011110?0
 Mandasuchus tany ?????????????????12?????????????????????????????????????1????01??1?00
 Huenesuchus chin ?????????????????0??1?????????????00000????000?10001?00001??1???
 Stagonosuchus ny ??01?0????????????????????
 Saurosuchus gali 0?100100?00????12?0001001111100??0?????????????00?000001111000
 Luperosuchus fra ??????10?????????12?00?100??111?????????????????????1?????11?????
 Sanga Pascoal sp 0??0??0?????0?12100?100111?100?000010??00010001000001111000
 Pagosvenator can ??????0?????????12100?2001111000??0010?????1?0010?0001?????
 Batrachotomus ku 01100100001110012100110111??00000001101000010001000001111000
 Postosuchus kirk 1??01??0??1?00121001101111110000201101000010001000001111???
 Polonosuchus sil ?????????????????12?00?10??111?0012011?1??????001000001111001
 Postosuchus alis ???1?0?????1????????????????111??????11?1?????????010?0001??1001
 Teratosaurus sue ?????????????????12?????????????????????????????????01000001??????
 Raulisuchus tirad ??????????????????100??0?????????????11000??2?0??10000?11110?1
 Fasolasuchus ten ?????????????????012?00?????????0000011?1??0??001000001??1?00
 <CM 73372> ???1???
 Hesperosuchus ag ??????????????0012??0?01?????000020?????????001000001??1000
 Hesperosuchus gr 1????????????????12100?00111110000?20210??00?100010000011110?0
 Dromicosuchus ag ??????????????0012100?00111?00000?02101?00010001000001??1???
 Sphenosuchus acu 121101011111??12100100111??00002021010000?0001000001111?00
 Dibothrosuchus e 1211010111?????12100100111??00?002?0?000010001000001111000
 Terrestrisuchus ???0?0?????001210??00111????000002?0?00001?001000001111??0
 Litargosuchus le ??????10?????00121001000111?000?????2?0?0?0?10?0?000?01?11???
 Kayentasuchus wa ??????0?0?????1?0121001?0?11????000101?????1?0????00?0000?1?????
 Alligator missis 221?00011101?000?101100111?00001000000000100000010?1111000
 Orthosuchus stor 2?????0?????0012100100011110000?202?0?000?1000?0010?11110?0
 Baroqueosuchus h 2?????0?????0?1210010001111000??002101102?10?01000?011110?1
 Protosuchus rich 2??0001??1??001210010001111000??002101102?1000??00001111??1

Input data matrix (continued):

1111111111111111111222
 888888888999999999900000000001111111111222222222233333333333334
 Taxon/Node 123456789012345678901234567890123456789012345678901234567890

 Mesosuchus brown 0?000100000?000000000000000000000000000000010?000000????0??0000

Prolacerta broom	1011000000000000010000000000000000000000000010?000000000000000000
Proterosuchus sp	000000000000000000100000000000000000?000010?000000??0?0?00000
Archosaurus ross	??
Erythrosuchus af	00?00000000?00010000001000000000??0?0100100?0000001?0001001?0
Vancleavea campi	00?001?00?000?0?0000??000000000??0?010010?0000?0?00001000000
Chanaresuchus bo	00000000000000000000000010000000?0??0?0100100?00000000001000000
Tropidosuchus ro	1000000000000?0000000100000000?0??0?0100100?0000000000100??0??
Euparkeria capen	00000000001000001000001000000000010100000?0000000001000000
Smilosuchus greg	00?0000000100001?00000100000010000010100000?001000000000000000
Pseudopalatus pr	00000000001000011000001000000?00010100000?001000000000000000
Parasuchus hislo	00?00000001000011000001000000?00010001000?001000000000000000
Velociraptor mon	????????????0010?0010011111110?111?00101?1101010010011001000
Allosaurus fragi	1010111200000010000000101111111111?0010101001010011011001000
Dilophosaurus we	0111111200000010000000?011101??1?1?11101?1001010011001001000
Coelophysis baur	111111110000010000100?01110101111?01101?0?01010011011001000
Tawa hallae	11111110100001000000010?000?011?1?01101?0??0?1?1?11011001000
Eoraptor lunensi	0?0001?0??0000?020000010?000?0?1?1?01001?0??010011011001000
Staurikosaurus p	????01?00?0??0?000000100?00101???????????????????????????????
Herrerasaurus is	?01001100100001?2000001000001011?1??1?01?????1?1?11011001000
Saturnalia tupin	??0??100000?01?000000?000001001??0?0100100?01010010001101?0?
Efraasia minor	10?001100?0?001000000010000001001?1?01001?0?01010010011101000
Plateosaurus tro	0010011000000010000000100100100001?0100100?01010010011101000
Eocursor parvus	????0?0001????0?010?0?01?1?0?0??0?01101?????1?1?1?0?1001???
Scutellosaurus l	00?00?0?0000?0?000?0?00?00?00?1??1?0?0?0?000000011001000
Lesothosaurus di	00000100000??0?001??0??111?0??1?0??1??011010?0??0?1?100?00000?
Pisanosaurus mer	?0?0??0000?????0??0??0??0??0??0??0??0??0??0??0??0??0??0??0??0???
Heterodontosau	000001000000000?2011?0?011100001?1?01101?0?0101?010011001000
Lewisuchus admix	1?1?0000000000?00000001000000??????11010100101000?00?0?0???
Asilisaurus kong	1010000000000010000000?00001000?????1?01?1001?100000?100??00
Eucoelophysis ba	???
Sacisaurus agudo	???
Silesaurus opole	100000000000010000000?000110000??0?01101010010100000010010?0
Lagosuchus talam	0?0000000000000?0000001000000000??0?01?0?0??0?1?1?0000?1001???
Lagerpeton chana	????????????????????0001000000???????????????????????????????????
Dromomeron grego	???
Dromomeron romer	???
Eudimorphodon ra	1??00000000??0100?00?0??0?0?0100010??????1?1?0?00001100?0?0
Dimorphodon macr	1?1??????000??01000??????????010????0??????101?0??0001100?????
Dongusuchus efre	???
Yarasuchus decca	10?0010000301000210000100?00000?????01?0?0?10??0?0?1?00010100?
Teleocrater rhad	101101000030101??0000?100?0??0?0??0?0?0?0?0?0?0?0?0?1?000101000
Riojasuchus tenu	000000000111000?101000?010010????????100101011?000000001001100
Venaticosuchus r	???
Ornithosuchus wo	??0?0?0001100??0?10100?10?0?0?1?00010100101001000000??00??0?
Stagonolepis rob	????0?000010001110100010000000?001?1011??0?010000000000?????
Longosuchus mead	0000??00001000??01000?000000?0??0?01011?10010000000000001101
Aetosaurus ferra	????????????????????0?0100000??000101?01010010000000000001101
Revueltosaurus c	00000100002000011010001000000000?0101001010010000000000001101
Parringtonia gra	000000000110000?1010001000000000?0101011?10010000000000001000
Erpetosuchus gra	0?0000000010????????????????????????0101010110????0??0?0?00?0???
Gracilisuchus st	1000000000100001100000100000000?????1???????????????????????????
Yonghesuchus san	????????????????1???
Turfanosuchus da	?0????000?1000??10?0001000000?00?????1????????????0000?001???
Ticinosuchus fer	0?0000?000?0?01110000??0000001000??010??0100?00?0000?0011??
Shuvosaurus inex	000000011100????00?111111011??11??0??0??1000?1100000101110?
Effigia okeeffea	00?01?0?1100?01?001111111011?0110??0000??10000110?0?0?101?1?0
Sillosuchus long	10?0???1100000?00011101110??0?????0??0?10000100?????1?????
Lotosaurus adent	000000?00000?11?0101?11?0010????0??0?0100000?010100000000110?
Poposaurus graci	??0??0?00?0010100001110111?00110??0?00?1001?00001000001100
Poposaurus graci	????????????????1??0??0?1??1?0?????????????????????????????????
Xilousuchus sapi	?010010000000110???
Arizonasaurus ba	10?0000000001110010?111000100??000??1001?10010000?????????????
Qianosuchus mixt	1?1000000000?010000?01?00010?10?001010010????0??00000?00?????
Mandasuchus tany	100000000010001?10000?10?000??????0??0??????1?0?0?000???????
Huenesuchus chin	00?0?00000?00??1?00011000000??0001?1?110100100010000?0?0???
Stagonosuchus ny	000000000010001?1?00011000000????????????????????????00010?????
Saurosuchus gali	000000000020001?1000?01000000?????????????????????????????????
Luperosuchus fra	???
Sanga Pascoal sp	0000000000?0001?100???
Pagosvenator can	???
Batrachotomus ku	0000000000200011100001100010010000?01011?1001?00000000001111
Postosuchus kirk	??????000?1?01?0000001000000??0??0?01001110?101000010000111?
Polonosuchus sil	?0?000?000??????????????????????1???????????????????????????????
Postosuchus alis	00000?0000210001000????????????0?0?0??1???1101101000?100001111
Teratosaurus sue	???
Rauisuchus tirad	00?001000000001?000??0??000?010?????101?????1?1?0?????????????

Heterodontosaurus	0??????20?0?101110100?0000200001101??00110?1111000?0??110??
Lewisuchus admix	00011?110010111?01010??000010000010001001?10?????????011001
Asilisaurus kong	000110111010111001010?1100010000010001??1110????????????011001
Eucoelophysis ba	2001??11100001????1????1100010?100????????????????????????????
Sacisaurus agudo	0011101110000110010????100010010110001????????????????????????
Silesaurus opole	2011101110 (001100101?0110001001011000100111011?10?????011001
	0
	1
)
Lagosuchus talam	0000100100101010010?00?000010000000001001010011100001?011001
Lagerpeton chana	110011000100?011010100?0010100?00000000010101111000?1?101001
Dromomeron grego	11001?0101001010010101101111000000000????????????????????1?????
Dromomeron romer	11001100010010?2?101?1101111000000000000101??????????????101001
Eudimorphodon ra	??????0?00???2?1?0?0?0?0?????0????????????????1?00?????01???
Dimorphodon macr	0000?000000000??1010020000000?00?000?00??1??111000?0?0?1???
Dongusuchus efre	10001001000001100100000100????????????????????????????????
Yarasuchus decca	1000100100000110010000010000000000000????????????????????
Teleocrater rhad	100010010000011001000001000000000000000010100????????????
Riojasuchus tenu	1000100100000010010100?0000001?000001011001001000000100000?1
Venaticosuchus r	??
Ornithosuchus wo	1000?00100000110010?00?0?0?0?1000000??1????0?????????????0????
Stagonolepis rob	1000?00000000010010?00?00000????0000??11001001?????????00????
Longosuchus mead	1000100000000001001000000000001000000101100?0010?00??00000?1
Aetosaurus ferra	100010000000000100100?0?00000?10?000010??0??0????????????
Revueltosaurus c	10001000000000010010000000000010000001000001001?00000?00000?1
Parringtonia gra	10001000000000010010000000000010000001000001101?00000?00000-1
Erpetosuchus gra	??
Gracilisuchus st	100010000000?01001?100?0000??000001000??001?00001100000?1
Yonghesuchus san	??
Turfanosuchus da	?0001000000000010010000?000000000000010??101??????????00000??
Ticinosuchus fer	1??0?0?00?0?01001?????0??00?0?0000?000??100100?????000?0?1
Shuvosaurus inex	0100100000001112?1110110000001?000001000101011001001100001?1
Effigia okeeffea	0100?00000011??1110110000001?01000100010101100100110000??1
Sillosuchus long	0??0??00?00?0?1001?0?0??0????????????????????????????????
Lotosaurus adent	??00?000000001100111??0000001?000?0??0000101?????????00000?1
Poposaurus graci	000010000000011001??0010000001?00000?0001010?1001001?00001?1
Poposaurus graci	0000?00000000?1001??
Xilousuchus sapi	??
Arizonasaurus ba	00001000000000110011000100?0????????????????????????????
Qianosuchus mixt	?000?00000000?1001?????000?00?????0?0??00??00110?????????000??
Mandasuchus tany	{00000000000011001?????00?0010000001010101????????????0000101
	0
	1
	}
Huenesuchus chin	10001000000000110010000000000010000001011001001000000?0000001
Stagonosuchus ny	????????????????????????????????100??0?????????001????????????
Saurosuchus gali	?0001000000?0110010100?000000?000000101100?00100000??00001?1
Luperosuchus fra	??
Sanga Pascoal sp	??
Pagosvenator can	??
Batrachotomus ku	0000100000000110011100000000010000001001001001?????????0?1??
Postosuchus kirk	00001000000?0010011100?0000001000000100110110?????????10001?1
Polonosuchus sil	??
Postosuchus alis	?????????????????????????????????0?10?00001001101101001001110001?1
Teratosaurus sue	??
Rauisuchus tirad	????????????????????????????????0000?000?01??????????00000???
Fasolasuchus ten	0000?00000010010011100?0000?????????????0100110?01001110001?1
<CM 73372>	0?00?000000100??1????00??0010000001001101101?01001110001?1
Hesperosuchus ag	000010000001001001??1?00?000100000010??1011010010??1?0001??
Hesperosuchus ag	00001000000100??111?00?0??0??000?01?00101101001001110001?1
Dromicosuchus gr	0000100000110010011100?0000001000000100010110?????????00?1??
Sphenosuchus acu	?????????????????????????????????00100000010????????????????
Dibothrosuchus e	??
Terrestrisuchus	000010100001001001010010000001000000100010?111001001110001?1
Litargosuchus le	??????????????????1??1?0?0?00?????????????001??11?0????????????
Kayentasuchus wa	0?001?11000110100??1????????????????????????????????????
Alligator missis	000010?0001100100101100000001000000100010111 (001001110001?1
	0
	1
)
Orthosuchus stor	00000000000010010010110?000000100000010??0?1110010??10001?1
Baroqueosuchus h	??
Protosuchus rich	0?001000000100100111100000000100?000100010111?0100?010001?1

Input data matrix (continued):

Dromomeron grego ??
 Dromomeron romer ??
 Eudimorphodon ra ??
 Dimorphodon macr ??
 Dongusuchus efre ??
 Yarasuchus decca ??
 Teleocrater rhad 0?
 Riojasuchus tenu ?0
 Venaticosuchus r ??
 Ornithosuchus wo 0?
 Stagonolepis rob 00
 Longosuchus mead ??
 Aetosaurus ferra ?0
 Revueltosaurus c ??
 Parringtonia gra ??
 Erpetosuchus gra ??
 Gracilisuchus st 00
 Yonghesuchus san ??
 Turfanosuchus da ??
 Ticinosuchus fer 0?
 Shuvosaurus inex 00
 Effigia okeeffea 00
 Sillosuchus long 0?
 Lotosaurus adent ??
 Potosaurus graci 00
 Potosaurus graci 00
 Xilousuchus sapi ??
 Arizonasaurus ba ??
 Qianosuchus mixt ??
 Mandasuchus tany 0?
 Huenesuchus chin 11
 Stagonosuchus ny 01
 Saurosuchus gali 00
 Luperosuchus fra ??
 Sanga Pascoal sp ??
 Pagosvenator can ??
 Batrachotomus ku 00
 Postosuchus kirk 00
 Polonosuchus sil ??
 Postosuchus alis ?0
 Teratosaurus sue ??
 Rauisuchus tirad ?0
 Fasolasuchus ten 00
 <CM 73372> ??
 Hesperosuchus ag ??
 Hesperosuchus ag ??
 Dromicosuchus gr ?0
 Sphenosuchus acu ?0
 Dibothrosuchus e ??
 Terrestrisuchus 0?
 Litargosuchus le ??
 Kayentasuchus wa ??
 Alligator missis ?0
 Orthosuchus stor 0?
 Baroqueosuchus h ??
 Protosuchus rich 00

Strict consensus of 79380 trees:

```

                                                    /- Mesosuchus browni
/-----+
|                                               \- Prolacerta broomi
|
|                                               /- Proterosuchus spp.
|/-----+
||                                              \- Archosaurus rossicus
||
|| /----- Erythrosuchus africanus
\+ |
  | /----- Vancleavea campi
  | ||
  | ||                                           /- Chanaresuchus bonapartei
  \-+ | /-----+
      || |                                           \- Tropidosuchus romeri
      || |
      || | /----- Euparkeria capensis
  
```

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\+ ||
| ||
| ||
| ||
| || /-----+
| || |
| || | \--- Parasuchus hislopi
\--+ |
| || | /- Velociraptor mongoliensis
| || | /--+
| || | | \- Allosaurus fragilis
| || | /+
| || | | \--- Dilophosaurus wetherilli
| || | /--+
| || | | \---- Coelophysis bauri
| || | /+
| || | | \----- Tawa hallae
| || | /--+
| || | | \----- Eoraptor lunensis
\+ | /+
| || | | \----- Staurikosaurus pricei
| || | /--+
| || | | \----- Herrerasaurus ischigualastensis
| || | |
| || | /+ | /--- Saturnalia tupiniquim
| || | | |
| || | | \-----+ /- Efraasia minor
| || | | | \--+
| || | | | \- Plateosaurus crossingensis
| || | /--+
| || | | | /--- Eocursor parvus
| || | | | |
| || | | | +--- Scutellosaurus lawleri
| || | | | |
| || | | | \-----+--- Lesothosaurus diagnosticus
| || | | | |
| || | /+ | | /- Pisanosaurus mertii
\--+ | || | \--+
| || | | \- Heterodontosaurus tucki
| || | |
| || | | /----- Lewisuchus admixtus <hypodigma>
| || | | |
| || | | \-----+ /----- Asilisaurus kongwe
| || | /--+ | |
| || | | \-+ /--- Eucoelophysis baldwini
| || | | |
| || | | \+ /- Sacisaurus agudoensis
| || | | \--+
| || | | \- Silesaurus opolensis
| || | /+ |
| || | | \----- Lagosuchus talampayensis
| || | |
| || | | /--- Lagerpeton chanarensis
| || | | |
| || | | \-----+ /- Dromomeron gregorii
| || | | | \--+
| || | | | \- Dromomeron romeri
| || | /-----+
| || | | /- Eudimorphodon ranzii
| || | +-----+
| || | | \- Dimorphodon macronyx
| || | |
| || | | /- Dongusuchus efremovi <PIN 952/15.1>
| || | | |
| || | | \-----+ Yarasuchus deccanensis
| || | | |
| || | | \- Teleocrater rhadinus
| || | |
| || | | /- Riojasuchus tenuisiceps
\+ | /--+
| || | | \- Venaticosuchus rusconii
| || | /-----+
| || | | \--- Ornithosuchus woodwardi
| || | |
| || | | /- Stagonolepis robertsoni
| || | /--+
| || | | \- Longosuchus meadei

```



```

|          | |          | |
|          ||          100/- Sacisaurus agudoensis(32)
|          ||          100
|          ||          \- Silesaurus opolensis(33)
|          100|
|          ||\----- Lagosuchus talampayensis(34)
|          ||
|          |          /-- Lagerpeton chanarensis(35)
|          |          |
|          |\-----100-----+/- Dromomeron gregorii(36)
|          |          100
|          |          \- Dromomeron romeri(37)
|/-----100-----+
||          |          /- Eudimorphodon ranzii(38)
||          +-----100-----+
||          |          \- Dimorphodon macronyx(39)
||          |
||          |          /- Dongusuchus efremovi <PIN 952/15.1>(40)
||          |          |
||          |\-----100-----+ Yarasuchus deccanensis(41)
||          |          |
||          |          \- Teleocrater rhadinus(42)
||          |
||          |          /- Riojasuchus tenuisiceps(43)
100         |          100
|          |          |\- Venaticosuchus rusconii(44)
|/-----100-----+
||          |          \-- Ornithosuchus woodwardi(45)
||          |
||          |          /- Stagonolepis robertsoni(46)
||          |          100
||          |          |\- Longosuchus meadei(47)
||          |          100
||          |          | \-- Aetosaurus ferratus(48)
||          |          100
100         |          |\----- Revueltosaurus callenderi(49)
|/-----100-----+
|          |          | /- Parringtonia gracilis <hypodigma>(50)
|          |          \100+
|          |          \- Erpetosuchus granti(51)
|          |
|          |          /- Gracilisuchus stipanicicorum(52)
|          |          100
|          |          |\- Yonghesuchus sangbiensis(53)
100/-----100-----+
|          |          \-- Turfanosuchus dabanensis(54)
|          |
|          |/----- Ticinosuchus ferox(55)
|          |
|          |          /- Shuvosaurus inexpectatus(56)
|          |          100
100|         |          |\- Effigia okeeffeae(57)
|          |          100
|          |          | \-- Sillosuchus longicervix(58)
|          |          100
|          |          |\----- Lotosaurus adentus(59)
|          |          100
100         |          | /- Poposaurus gracilis <YPM 57100>(60)
|          |          |\100+
|          |          100 \- Poposaurus gracilis <FMNH 357>(61)
|          |          |
|          |          | /- Xilousuchus sapingensis(62)
|/-----100-----+\100--+
|          |          | \- Arizonasaurus babbitti(63)
|          |          |
|          |          \----- Qianosuchus mixtus(64)
|          |
100/----- Mandasuchus tanyauchen(65)
|          |
|          | /- Huenesuchus chiniquensis <hypodigma>(66)
||/-----100-----+
100|         |          \- Stagonosuchus nyassicus(67)
|          |
|          |          /- Saurosuchus galilei(68)
|          |          100
100         |          |\- Luperosuchus fractus(69)

```



```

***** 79380 100.0%
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..... ***** 79380 100.0%
..... ***** 64260 81.0%
..... 52920 66.7%
..... 52920 66.7%
***** 51030 64.3%
..... ***** 50544 63.7%
..... 45900 57.8%
..... ** 44496 56.1%
..... 42660 53.7%
***** 41580 52.4%
..... 39690 50.0%
..... 39690 50.0%
..... ** 34884 43.9%
..... ***** 29160 36.7%
..... 26460 33.3%
..... 26460 33.3%
..... 26460 33.3%
..... 26460 33.3%
..... 26460 33.3%
***** 24570 31.0%
..... 24300 30.6%
..... ***** 20790 26.2%
..... 20340 25.6%
..... 20340 25.6%
..... 20340 25.6%
..... ** 19764 24.9%
..... * ***** 19764 24.9%
..... ** 19224 24.2%
* 17010 21.4%
..... ** ***** 15066 19.0%
..... *** 15066 19.0%
..... * ***** 15066 19.0%
..... * * 15066 19.0%
..... ** 10044 12.7%
..... * ***** 10044 12.7%
..... ***** 9720 12.2%
..... * ***** 9612 12.1%
***** 9450 11.9%
..... 9180 11.6%
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..... 9180 11.6%
..... 9180 11.6%
..... 9180 11.6%
***** 5670 7.1%
* 1890 2.4%
..... ***** 1890 2.4%

```

Consensus tree(s) written to treefile:
K:\Matrix\Output\HuenesuchusMatrix.paup.tre

Processing TREES block from file
"K:\Matrix\Output\HuenesuchusMatrix.paup.tre":
Keeping: trees from file (replacing trees in memory)
2 trees read from file

Time used = 0.00 sec
2 trees now in memory

Tree description:

Unrooted tree(s) rooted using outgroup method

Optimality criterion = parsimony

Character-status summary:

Of 422 total characters:

19 characters are of type 'ord' (Wagner)

403 characters are of type 'unord'

All characters have equal weight

4 characters are parsimony-uninformative

Number of parsimony-informative characters = 418

Gaps are treated as "missing"

Multistate taxa interpretation depends on "{}" versus "()" designation

("min" values for CI, RI, and RC are minimum-possible character lengths)

Character-state optimization: Accelerated transformation (ACCTRAN)

Tree number 1 (rooted using user-specified outgroup)

Tree length = 1502

Consistency index (CI) = 0.3422

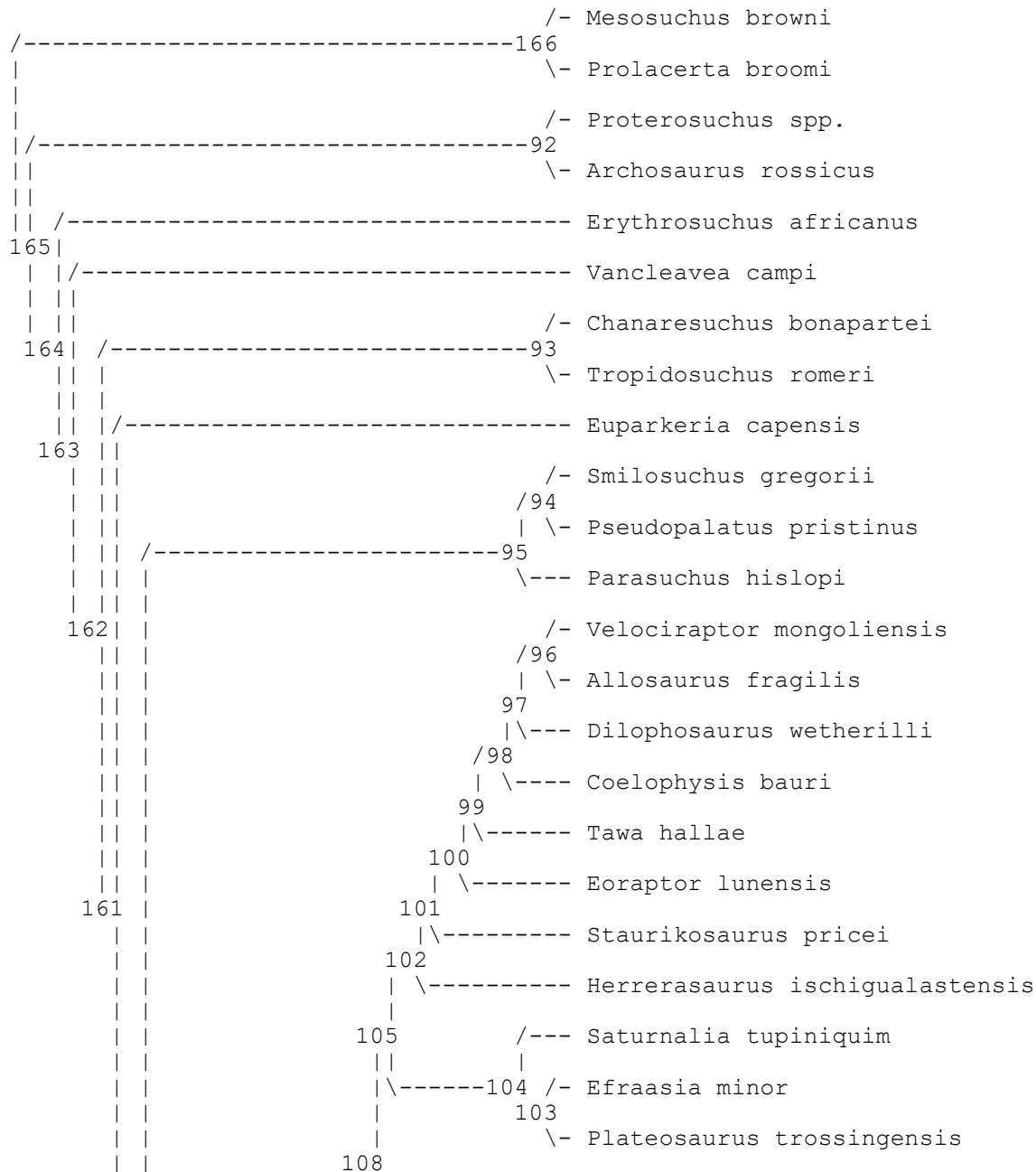
Homoplasy index (HI) = 0.6711

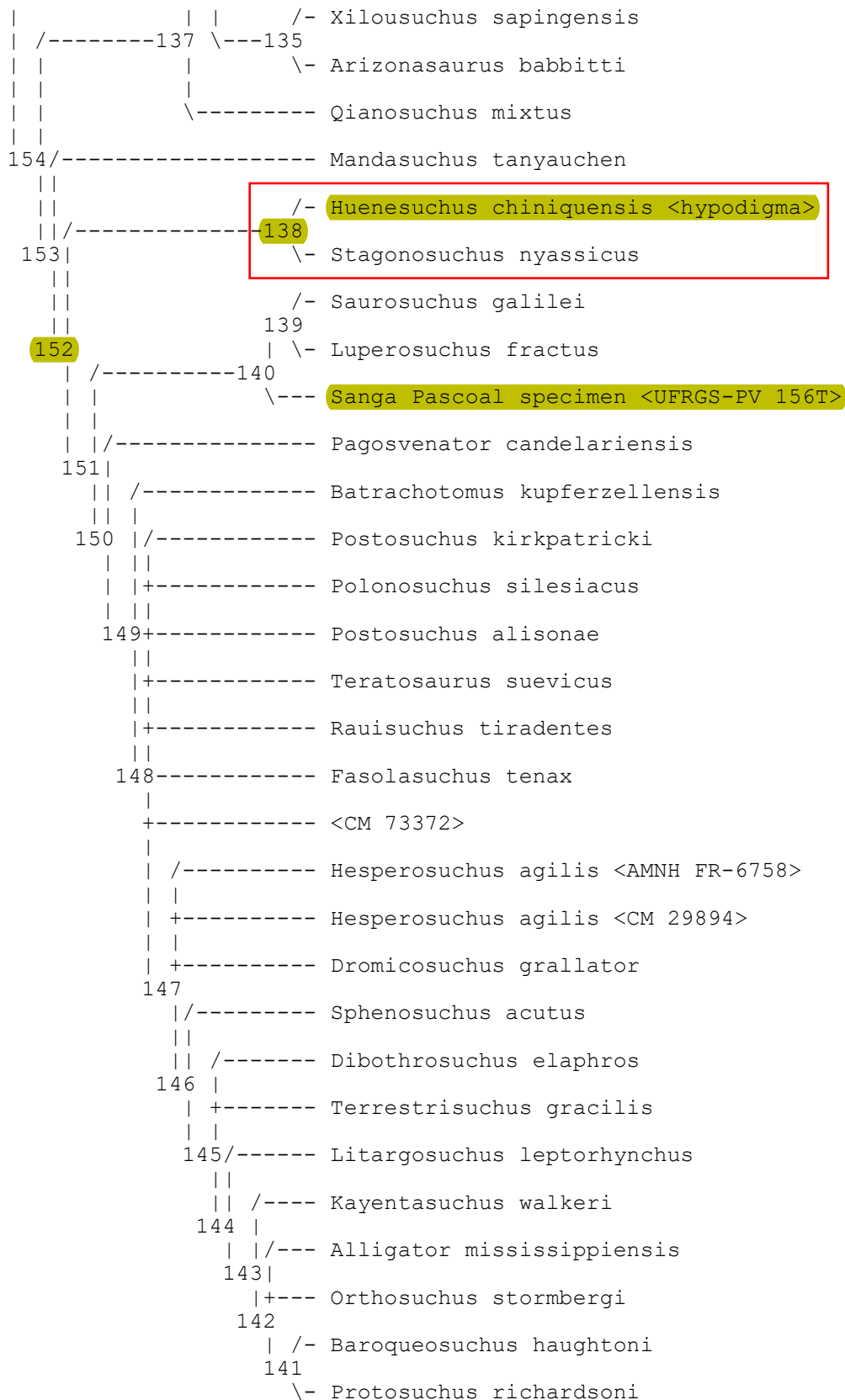
CI excluding uninformative characters = 0.3405

HI excluding uninformative characters = 0.6595

Retention index (RI) = 0.7471

Rescaled consistency index (RC) = 0.2557





Apomorphy lists:

Branch	Character	Steps	CI	Change
node_166 --> Mesosuchus brown	2 (Premaxilla, p)	1	0.083	0 --> 1
	15 (Maxillary te)	1	0.250	0 ==> 1
	58 (Parietals, i)	1	0.333	0 ==> 1
	96 (Parabasisphe)	1	0.500	0 ==> 1
	169 (Extensive p)	1	0.500	0 ==> 1
	176 (Teeth on tr)	1	0.500	0 --> 1
	186 (Epipophyses)	1	0.143	0 ==> 1
node_166 --> Prolacerta broom	126 (Supraoccipi)	1	0.250	1 ==> 0
	146 (Postparieta)	1	0.500	0 ==> 1
	181 (Cervical 3-)	1	0.077	0 ==> 1
	183 (Third cervi)	1	0.143	0 ==> 1
	184 (Anterior to)	1	0.250	0 ==> 1

	197 (Dorsal vert)	1	0.182	0	-->	1
	397 (Metatarsal)	1	0.167	0	-->	1
node_166 --> node_165	63 (Parietal for)	1	1.000	0	==>	1
	70 (Jugal-quadra)	1	1.000	0	==>	1
	88 (Ectopterygoi)	1	1.000	0	==>	1
	92 (Laterospheno)	1	1.000	0	==>	1
	136 (Antorbital)	1	0.500	0	==>	1
	138 (Lateral (=e)	1	0.333	0	==>	1
	142 (Orbit, shap)	1	0.222	0	-->	1
	168 (Tooth, serr)	1	0.250	0	==>	1
	258 (Manual digi)	1	0.375	0	-->	1
node_165 --> node_92	6 (Premaxillary)	1	0.200	2	==>	3
	8 (Premaxilla (N)	1	0.500	0	==>	1
	71 (Jugal, poste)	1	0.429	0	-->	3
	141 (Posttempora)	1	0.250	0	-->	1
	197 (Dorsal vert)	1	0.182	0	-->	1
	345 (Fibula, dis)	1	0.167	1	-->	0
node_165 --> node_164	397 (Metatarsal)	1	0.167	0	-->	1
	2 (Premaxilla, p)	1	0.083	0	-->	1
	31 (Maxilla, ant)	1	0.200	1	==>	0
	93 (Basipterygoi)	1	0.250	0	==>	1
	94 (Prootic, rid)	1	0.500	0	==>	1
	97 (Parabasisphe)	1	1.000	0	==>	1
	137 (Antorbital)	1	1.000	0	-->	1
	145 (Supratempor)	1	1.000	0	==>	1
	150 (Separate os)	1	0.333	1	-->	0
	164 (Dentary, po)	1	1.000	0	==>	1
	174 (Tooth impla)	1	0.500	0	==>	1
	176 (Teeth on tr)	1	0.500	0	-->	1
	203 (Second prim)	1	1.000	0	==>	1
	215 (Interclavic)	1	1.000	0	-->	1
	217 (Scapula, en)	1	0.200	0	==>	1
	220 (Scapula, ac)	1	0.250	0	==>	1
	221 (Scapulocora)	1	0.333	1	==>	0
	260 (Metacarpal)	1	1.000	0	-->	1
	268 (Ilium, ante)	1	0.500	0	-->	1
	346 (Tarsals 1 a)	1	1.000	0	==>	1
	369 (Astragalus-)	1	1.000	0	==>	1
	381 (Centrale (N)	1	1.000	0	==>	1
	393 (Metatarsal)	1	0.500	0	==>	1
node_164 --> Erythrosuchus af	12 (Premaxilla-m)	1	0.300	0	==>	2
	69 (Jugal, anter)	1	0.286	0	-->	1
	72 (Jugal, poste)	1	0.167	0	==>	1
	122 (External fo)	1	0.500	0	==>	1
	126 (Supraoccipi)	1	0.250	1	==>	0
	175 (Palatal tee)	1	0.143	0	==>	1
	196 (Cervical ri)	1	0.200	0	==>	1
	230 (Humerus, ap)	1	0.250	0	==>	1
	235 (Humerus, di)	1	0.250	0	==>	1
	238 (Ulna, dista)	1	0.250	0	==>	1
	251 (Metacarpal)	1	0.200	0	==>	1
	270 (Ilium, orie)	1	0.200	0	==>	1
	314 (Femur, prox)	1	0.167	0	-->	1
	395 (Metatarsal)	1	0.250	0	==>	1
node_164 --> node_163	1 (Premaxilla, a)	1	0.167	0	-->	1
	44 (Postfrontal)	1	0.167	0	-->	1
	96 (Parabasisphe)	1	0.500	0	-->	1
	123 (Parabasisph)	1	1.000	0	-->	1
	140 (External na)	1	0.250	0	-->	1
	142 (Orbit, shap)	1	0.222	1	-->	0
	146 (Postparieta)	1	0.500	0	==>	1
	177 (Postaxial i)	1	0.500	0	==>	1
	234 (Humerus, ec)	1	0.167	0	==>	1
	315 (Femur, ridg)	1	1.000	0	-->	1
	318 (Femur, dist)	1	1.000	0	==>	1
	401 (Osteoderms,)	1	0.250	0	==>	1
node_163 --> Vancleavea campi	11 (Premaxilla-m)	1	0.167	0	==>	1
	15 (Maxillary te)	1	0.250	0	==>	1
	78 (Quadrate, he)	1	0.333	0	==>	1
	138 (Lateral (=e)	1	0.333	1	==>	0
	150 (Separate os)	1	0.333	0	-->	1
	167 (Dentition (	1	0.200	0	==>	1
	186 (Epiphyses)	1	0.143	0	==>	1
	268 (Ilium, ante)	1	0.500	1	-->	0
	363 (Astragalus,)	1	0.143	0	==>	1
	403 (Osteoderms,)	1	0.250	0	-->	1

	405 (Osteoderms,)	1	0.200	0	-->	1
	409 (Ventral car)	1	0.333	0	-->	1
	410 (Dorsal oste)	1	0.200	0	-->	1
	412 (Gastralia (	1	0.400	0	==>	2
	417 (Proximal en)	1	0.667	1	==>	0
node_163 --> node_162	2 (Premaxilla, p)	1	0.083	1	-->	0
	48 (Squamosal, p)	1	0.333	0	==>	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	305 (Femur, femo)	1	0.333	0	==>	1
	343 (Fibula, pro)	1	0.250	0	==>	1
	365 (Astragalus,)	1	1.000	0	==>	1
	377 (Calcaneum,)	1	0.500	0	==>	1
node_162 --> node_93	27 (Maxilla, pos)	1	0.267	2	==>	0
	47 (Quadratojuga)	1	1.000	0	==>	1
	55 (Squamosal, p)	1	0.250	0	==>	1
	338 (Tibia, late)	1	0.500	0	==>	1
	388 (Metatarsal)	1	1.000	0	==>	1
	394 (Metatarsal)	1	0.500	0	==>	1
	399 (Metatarsal)	2	0.300	0	==>	2
node_93 --> Chanaresuchus bo	14 (Maxilla, fac)	1	0.125	0	==>	1
	314 (Femur, prox)	1	0.167	0	==>	1
	410 (Dorsal oste)	1	0.200	0	-->	1
node_93 --> Tropidosuchus ro	39 (Lacrimal, he)	1	0.250	0	==>	1
	181 (Cervical 3-)	1	0.077	0	==>	1
	363 (Astragalus,)	1	0.143	0	==>	1
node_162 --> node_161	1 (Premaxilla, a)	1	0.167	1	-->	0
	44 (Postfrontal)	1	0.167	1	-->	0
	140 (External na)	1	0.250	1	-->	0
	159 (Articular,)	1	0.111	0	==>	1
	191 (Cervical ve)	1	0.250	0	==>	1
	197 (Dorsal vert)	1	0.182	0	==>	1
	220 (Scapula, ac)	1	0.250	1	-->	0
	341 (Fibula, pro)	1	0.143	1	==>	0
	345 (Fibula, dis)	1	0.167	1	==>	0
	360 (Astragalus,)	1	1.000	0	==>	1
	376 (Calcaneum,)	1	0.286	0	==>	1
	402 (Postaxial o)	1	1.000	0	-->	1
node_161 --> Euparkeria capen	2 (Premaxilla, p)	1	0.083	0	-->	1
	6 (Premaxillary)	1	0.200	2	==>	0
	31 (Maxilla, ant)	1	0.200	0	==>	1
	146 (Postparieta)	1	0.500	1	==>	0
	177 (Postaxial i)	1	0.500	1	==>	0
	251 (Metacarpal)	1	0.200	0	==>	1
	404 (Osteoderms,)	1	0.167	0	-->	1
	407 (Presacral o)	1	0.300	0	==>	1
	415 (Premaxilla,)	1	0.125	0	==>	1
node_161 --> node_160	15 (Maxillary te)	1	0.250	0	-->	1
	75 (Jugal, longi)	1	0.118	1	-->	0
	95 (Parabasisphe)	1	0.286	0	-->	1
	96 (Parabasisphe)	1	0.500	1	==>	2
	98 (Parabasisphe)	1	1.000	0	==>	1
	175 (Palatal tee)	1	0.143	0	==>	1
	196 (Cervical ri)	1	0.200	0	-->	1
	368 (Astragalus-)	1	0.667	0	==>	1
	371 (Calcaneum,)	1	0.333	0	==>	1
	374 (Calcaneum,)	1	0.500	0	==>	1
	380 (Calcaneum,)	1	1.000	0	==>	1
	400 (Pedal ungua)	1	0.250	0	-->	2
	411 (Dorsal oste)	1	0.333	0	-->	1
node_160 --> node_95	6 (Premaxillary)	1	0.200	2	==>	3
	10 (Premaxilla,)	1	1.000	0	==>	1
	14 (Maxilla, fac)	1	0.125	0	==>	1
	19 (Maxilla, ant)	1	1.000	0	==>	1
	46 (Quadratojuga)	1	1.000	0	==>	1
	77 (Quadrate, do)	1	1.000	0	==>	1
	139 (External na)	1	1.000	0	==>	1
	140 (External na)	1	0.250	0	-->	1
	150 (Separate os)	1	0.333	0	==>	1
	160 (Dentary-spl)	1	0.250	0	==>	1
	167 (Dentition (	1	0.200	0	==>	1
	210 (Middle caud)	1	0.167	0	-->	1
	226 (Coracoid, a)	1	1.000	0	==>	1
	234 (Humerus, ec)	1	0.167	1	==>	0
	305 (Femur, femo)	1	0.333	1	-->	0
	339 (Fibula, att)	1	0.200	0	==>	1
	352 (Distal tars)	1	0.333	0	-->	1

	378 (Calcaneum,)	1	0.400	0	==>	1
	405 (Osteoderms,)	1	0.200	0	-->	1
node_95 --> node_94	104 (Basitubera)	1	1.000	0	==>	1
	139 (External na)	1	1.000	1	==>	2
	340 (Fibula, att)	1	0.167	0	==>	1
	386 (Metatarsal)	1	1.000	0	==>	1
node_94 --> Pseudopalatus pr	72 (Jugal, poste)	1	0.167	0	==>	1
node_95 --> Parasuchus hislo	217 (Scapula, en)	1	0.200	1	==>	0
	219 (Scapula, te)	1	0.125	0	==>	1
	400 (Pedal ungua)	1	0.250	2	-->	1
node_160 --> node_159	27 (Maxilla, pos)	1	0.267	2	==>	0
	32 (Maxilla, pal)	1	0.667	0	==>	1
	95 (Parabasisphe)	1	0.286	1	-->	2
	118 (Lagenar/coc)	1	1.000	0	==>	1
	122 (External fo)	1	0.500	0	==>	1
	137 (Antorbital)	1	1.000	1	==>	2
	220 (Scapula, ac)	1	0.250	0	-->	1
	222 (Coracoid (N)	1	0.250	0	==>	1
	225 (Coracoid, p)	1	0.333	0	==>	1
	237 (Ulna, later)	1	0.333	0	==>	1
	245 (Longest met)	1	0.333	0	==>	1
	300 (Femur, prox)	1	0.600	0	==>	1
	320 (Femur, medi)	1	0.167	0	-->	1
	353 (Distal tars)	1	0.250	0	-->	1
	366 (Astragalus,)	1	0.333	0	==>	1
	377 (Calcaneum,)	1	0.500	1	-->	2
node_159 --> node_120	44 (Postfrontal)	1	0.167	0	-->	1
	84 (Pterygoid-ec)	1	1.000	0	-->	1
	87 (Ectopterygoi)	1	1.000	0	-->	1
	93 (Basipterygoi)	1	0.250	1	-->	0
	111 (Opisthotic,)	1	0.200	0	-->	1
	114 (Exoccipital)	1	0.500	0	==>	1
	141 (Posttempora)	1	0.250	0	-->	1
	152 (Anterior ha)	1	0.250	0	-->	1
	159 (Articular,)	1	0.111	1	-->	0
	181 (Cervical 3-)	1	0.077	0	-->	1
	183 (Third cervi)	1	0.143	0	==>	1
	191 (Cervical ve)	1	0.250	1	==>	0
	196 (Cervical ri)	1	0.200	1	-->	0
	197 (Dorsal vert)	1	0.182	1	==>	0
	255 (Manual digi)	1	1.000	0	==>	1
	257 (Manual digi)	1	0.500	0	==>	1
	296 (Ischium, ve)	1	0.200	0	-->	1
	299 (Tibia (or f)	1	0.143	0	-->	1
	341 (Fibula, pro)	1	0.143	0	==>	1
	347 (Distal tars)	1	1.000	0	==>	1
	348 (Distal tars)	1	1.000	0	==>	1
	357 (Astragalus,)	1	1.000	0	==>	1
	361 (Astragalus,)	1	1.000	0	==>	1
	363 (Astragalus,)	1	0.143	0	-->	1
	382 (Metatarsus,)	1	0.250	0	==>	1
	400 (Pedal ungua)	1	0.250	2	-->	0
	401 (Osteoderms,)	1	0.250	1	==>	0
	412 (Gastralia (	1	0.400	0	==>	1
node_120 --> node_117	2 (Premaxilla, p)	1	0.083	0	-->	1
	71 (Jugal, poste)	1	0.429	0	-->	1
	158 (Articular,)	1	0.200	0	-->	1
	171 (Tooth crown)	1	0.143	0	-->	1
	179 (Axis, dorsa)	1	0.250	0	-->	1
	181 (Cervical 3-)	1	0.077	1	-->	0
	214 (Interclavic)	1	1.000	0	-->	1
	218 (Scapula, bl)	1	0.333	0	-->	1
	227 (Glenoid, or)	1	0.167	0	-->	1
	256 (Metacarpal)	1	0.250	0	-->	1
	258 (Manual digi)	1	0.375	1	-->	2
	313 (Femur, post)	1	0.250	0	==>	1
	323 (Femur, bone)	1	0.333	0	-->	1
	328 (Tibia, prox)	1	0.750	0	==>	1
	345 (Fibula, dis)	1	0.167	0	-->	1
	374 (Calcaneum,)	1	0.500	1	-->	0
	383 (Longest met)	1	0.200	0	==>	1
	398 (Metatarsal)	1	0.250	0	==>	1
	399 (Metatarsal)	2	0.300	0	==>	2
	415 (Premaxilla,)	1	0.125	0	-->	1
	420 (Ischium, po)	1	0.250	0	-->	1
node_117 --> node_114	274 (Ilium, acet)	1	0.111	0	-->	1

	282 (Pubis, leng)	1	0.167	0	==>	1
	286 (Pubis, prox)	1	0.500	0	==>	1
	287 (Ischium-pub)	1	0.400	0	==>	1
	297 (Ischium, pr)	1	0.500	0	==>	1
	298 (Ischium len)	1	0.200	0	==>	1
	301 (Femur, prox)	1	0.333	1	==>	0
	308 (Femur, ante)	1	0.286	0	==>	1
	311 (Femur, ante)	1	0.222	0	==>	1
	338 (Tibia, late)	1	0.500	0	==>	1
	356 (Astragalus,)	1	1.000	0	==>	1
	363 (Astragalus,)	1	0.143	1	-->	0
node_114 --> node_113	101 (Parabasisph)	1	0.500	0	==>	1
	133 (Auricular r)	1	0.500	0	==>	1
	178 (Atlantal ar)	1	0.500	0	==>	1
	195 (Posterior c)	1	0.167	0	-->	1
	265 (Ilium, cres)	1	0.429	0	==>	2
	273 (Ilium, vent)	1	0.333	0	-->	1
	278 (Pubis, leng)	1	0.200	0	==>	1
	289 (Pubis, medi)	1	0.250	0	-->	1
	291 (Ischium, me)	1	0.286	0	==>	1
	304 (Femur, vent)	1	1.000	0	-->	1
	307 (Femur, dors)	1	0.286	0	==>	1
	314 (Femur, prox)	1	0.167	0	-->	1
	334 (Tibia, post)	1	0.500	0	==>	1
	342 (Fibula, ant)	1	1.000	0	==>	1
	353 (Distal tars)	1	0.250	1	-->	0
	366 (Astragalus,)	1	0.333	1	-->	0
	384 (Metatarsals)	1	1.000	0	==>	1
	391 (Metatarsal)	1	0.200	0	==>	1
	395 (Metatarsal)	1	0.250	0	==>	1
node_113 --> node_108	6 (Premaxillary)	1	0.200	2	-->	0
	9 (Premaxilla, n)	1	0.333	0	-->	1
	71 (Jugal, poste)	1	0.429	1	-->	3
	115 (Exoccipital)	1	0.500	0	==>	1
	144 (Supratempor)	1	0.200	0	==>	1
	168 (Tooth, serr)	1	0.250	1	-->	2
	186 (Epipophyses)	1	0.143	0	==>	1
	212 (Forelimb-hi)	1	0.200	0	==>	1
	222 (Coracoid (N)	1	0.250	1	==>	0
	230 (Humerus, ap)	1	0.250	0	==>	1
	233 (Humerus, pr)	1	0.143	0	==>	1
	241 (Radius, len)	1	0.125	0	==>	1
	273 (Ilium, vent)	1	0.333	1	-->	2
	297 (Ischium, pr)	1	0.500	1	==>	2
	304 (Femur, vent)	1	1.000	1	-->	2
	316 (Femur, four)	1	0.400	0	==>	1
	317 (Fourth troc)	1	0.500	0	==>	1
	323 (Femur, bone)	1	0.333	1	-->	0
	328 (Tibia, prox)	1	0.750	1	==>	2
	336 (Tibia, post)	1	0.250	0	==>	1
	362 (Astragalus,)	1	1.000	0	==>	1
	363 (Astragalus,)	1	0.143	0	-->	1
	373 (Calcaneum,)	1	0.250	0	==>	1
	378 (Calcaneum,)	1	0.400	0	==>	2
node_108 --> node_105	6 (Premaxillary)	1	0.200	0	-->	1
	12 (Premaxilla-m)	1	0.300	0	==>	1
	36 (Nasal (N2011)	1	0.500	0	-->	1
	37 (Nasal (N2011)	1	0.125	0	-->	1
	38 (Lacrimal (N2)	1	0.500	0	==>	1
	39 (Lacrimal, he)	1	0.250	0	-->	1
	111 (Opisthotic,)	1	0.200	1	==>	0
	152 (Anterior ha)	1	0.250	1	-->	0
	165 (Splential, f)	1	1.000	0	==>	1
	187 (Epipophyses)	1	1.000	0	==>	1
	209 (First primo)	1	1.000	0	==>	1
	218 (Scapula, bl)	1	0.333	1	-->	0
	247 (Manual leng)	1	0.667	0	==>	1
	249 (Distal carp)	1	0.333	0	==>	1
	253 (Manual digi)	1	0.500	0	==>	1
	254 (Metacarpal)	1	0.500	0	==>	1
	263 (Manual digi)	1	1.000	0	-->	1
	283 (Pubis, dist)	1	0.200	0	==>	1
	293 (Ischium, cr)	1	0.286	0	==>	2
	299 (Tibia (or f)	1	0.143	1	-->	0
	307 (Femur, dors)	1	0.286	1	-->	2
	322 (Femur, surf)	1	0.333	0	==>	1

	350 (Distal tars)	1	0.500	0	==>	1
	351 (Distal tars)	1	1.000	0	==>	1
	359 (Astragalus,)	1	0.500	0	==>	1
	392 (Metatarsal)	1	0.500	0	-->	1
	399 (Metatarsal)	1	0.300	2	-->	1
node_105 --> node_102	15 (Maxillary te)	1	0.250	1	==>	0
	75 (Jugal, longi)	1	0.118	0	-->	1
	100 (Parabasisph)	1	0.333	0	==>	1
	117 (Vestibule,)	1	0.200	0	-->	1
	158 (Articular,)	1	0.200	1	-->	0
	168 (Tooth, serr)	1	0.250	2	-->	1
	171 (Tooth crown)	1	0.143	1	-->	0
	190 (Cervical ve)	1	0.167	0	-->	1
	211 (Distal caud)	1	0.333	0	==>	1
	213 (Clavicles (	1	1.000	0	-->	1
	231 (Humerus, le)	1	0.333	0	==>	1
	246 (Metacarpals)	1	0.333	0	==>	1
	247 (Manual leng)	1	0.667	1	-->	2
	250 (Extensor pi)	1	0.500	0	==>	1
	261 (Metacarpal)	1	1.000	0	==>	1
	284 (Pubis, expa)	1	0.333	0	==>	1
	323 (Femur, bone)	1	0.333	0	-->	1
	331 (Tibia, late)	1	0.500	0	==>	1
node_102 --> node_101	11 (Premaxilla-m)	1	0.167	0	-->	1
	22 (Maxilla, int)	1	0.200	0	-->	1
	69 (Jugal, anter)	1	0.286	0	-->	1
	182 (Cervical ve)	1	0.500	0	-->	1
	293 (Ischium, cr)	1	0.286	2	==>	1
	299 (Tibia (or f)	1	0.143	0	-->	1
	300 (Femur, prox)	1	0.600	1	-->	2
	307 (Femur, dors)	1	0.286	2	-->	1
	336 (Tibia, post)	1	0.250	1	==>	0
	379 (Calcaneum,)	1	0.500	0	-->	1
	392 (Metatarsal)	1	0.500	1	-->	0
	399 (Metatarsal)	1	0.300	1	-->	2
node_101 --> node_100	205 (Trunk verte)	1	0.200	0	-->	1
	271 (Ilium, dist)	1	0.333	0	==>	1
	272 (Ilium, ridg)	1	0.250	0	==>	1
	277 (Ilium, isch)	1	1.000	0	==>	1
	311 (Femur, ante)	1	0.222	1	==>	0
	314 (Femur, prox)	1	0.167	1	-->	2
node_100 --> node_99	1 (Premaxilla, a)	1	0.167	0	==>	1
	2 (Premaxilla, p)	1	0.083	1	-->	0
	68 (Jugal, anter)	1	0.500	0	==>	1
	75 (Jugal, longi)	1	0.118	1	-->	0
	181 (Cervical 3-)	1	0.077	0	-->	1
	184 (Anterior to)	1	0.250	0	==>	1
	185 (Anterior ce)	1	0.500	0	==>	1
	188 (Cervical ve)	1	0.667	0	==>	1
	218 (Scapula, bl)	1	0.333	0	-->	1
	294 (Ischium, di)	1	0.143	0	-->	1
	295 (Ischium, ob)	1	0.500	0	-->	1
	317 (Fourth troc)	1	0.500	1	==>	0
	332 (Tibia, late)	1	1.000	0	==>	1
	415 (Premaxilla,)	1	0.125	1	-->	0
	421 (Ischium, ve)	1	0.500	0	-->	1
node_99 --> node_98	3 (Premaxilla, p)	1	0.500	0	==>	1
	5 (Premaxilla, p)	1	0.167	0	==>	1
	111 (Opisthotic,)	1	0.200	0	==>	1
	126 (Supraoccipi)	1	0.250	1	-->	0
	129 (Perilymphat)	1	0.333	0	-->	1
	190 (Cervical ve)	1	0.167	1	-->	0
	206 (Caudal vert)	1	0.200	0	==>	1
	207 (Insertion o)	1	0.200	0	==>	1
	248 (Medialmost)	1	1.000	0	==>	1
	264 (Ilium, supr)	1	0.333	0	-->	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	271 (Ilium, dist)	1	0.333	1	==>	2
	276 (Ilium, dors)	1	0.500	0	==>	1
	329 (Tibia, prox)	1	1.000	0	==>	1
	333 (Tibia, late)	1	0.200	0	==>	1
	335 (Tibia, post)	1	0.500	0	==>	1
	336 (Tibia, post)	1	0.250	0	==>	1
	350 (Distal tars)	1	0.500	1	==>	0
	359 (Astragalus,)	1	0.500	1	==>	0
	385 (Metatarsal)	1	1.000	0	==>	1

	389 (Metatarsal)	1	0.500	0	-->	1
node_98 --> node_97	28 (Maxilla, pro)	1	1.000	0	==>	1
	86 (Ectopterygoi)	1	1.000	0	-->	1
	110 (Opisthotic,)	1	0.333	0	==>	1
	131 (Foramen for)	1	0.400	0	==>	2
	142 (Orbit, shap)	1	0.222	0	-->	1
	157 (Articular,)	1	0.143	0	-->	1
	179 (Axis, dorsa)	1	0.250	1	==>	0
	188 (Cervical ve)	1	0.667	1	==>	2
	222 (Coracoid (N)	1	0.250	0	==>	1
	299 (Tibia (or f)	1	0.143	1	==>	0
	308 (Femur, ante)	1	0.286	1	==>	2
	334 (Tibia, post)	1	0.500	1	==>	2
node_97 --> node_96	11 (Premaxilla-m)	1	0.167	1	==>	0
	14 (Maxilla, fac)	1	0.125	0	==>	1
	16 (Maxilla, pos)	1	0.333	0	-->	1
	68 (Jugal, anter)	1	0.500	1	==>	0
	116 (Pneumatizat)	1	0.500	0	-->	1
	182 (Cervical ve)	1	0.500	1	-->	0
	184 (Anterior to)	1	0.250	1	-->	0
	208 (Sacral ribs)	1	0.250	0	==>	1
	217 (Scapula, en)	1	0.200	1	==>	0
	259 (Metacarpal)	1	1.000	0	==>	1
	264 (Ilium, supr)	1	0.333	1	-->	0
	272 (Ilium, ridg)	1	0.250	1	==>	0
	289 (Pubis, medi)	1	0.250	1	==>	2
	305 (Femur, femo)	1	0.333	1	==>	2
	307 (Femur, dors)	1	0.286	1	-->	0
	314 (Femur, prox)	1	0.167	2	==>	0
	356 (Astragalus,)	1	1.000	1	==>	2
	383 (Longest met)	1	0.200	1	==>	0
	389 (Metatarsal)	1	0.500	1	-->	0
node_96 --> Velociraptor mon	12 (Premaxilla-m)	1	0.300	1	==>	0
	56 (Squamosal, v)	1	0.200	0	==>	1
	69 (Jugal, anter)	1	0.286	1	==>	0
	72 (Jugal, poste)	1	0.167	0	==>	1
	108 (Opisthotic,)	1	0.400	0	==>	1
	142 (Orbit, shap)	1	0.222	1	-->	0
	157 (Articular,)	1	0.143	1	-->	0
	200 (Sacral cent)	1	0.250	0	==>	1
	204 (Sacral vert)	1	0.500	0	==>	1
	223 (Coracoid, p)	1	0.500	0	==>	1
	231 (Humerus, le)	1	0.333	1	==>	0
	241 (Radius, len)	1	0.125	1	==>	0
	245 (Longest met)	1	0.333	1	==>	0
	253 (Manual digi)	1	0.500	1	==>	0
	254 (Metacarpal)	1	0.500	1	==>	0
	279 (Pubis, orie)	1	0.333	0	==>	1
	291 (Ischium, me)	1	0.286	1	==>	0
	293 (Ischium, cr)	1	0.286	1	==>	0
	295 (Ischium, ob)	1	0.500	1	==>	0
	302 (Femur, prox)	1	0.250	0	==>	1
	343 (Fibula, pro)	1	0.250	1	==>	0
	370 (Astragalus-)	1	0.200	0	==>	1
node_96 --> Allosaurus fragi	6 (Premaxillary)	1	0.200	1	==>	2
	25 (Maxilla, ant)	1	0.167	0	==>	1
	27 (Maxilla, pos)	1	0.267	0	==>	2
	35 (Nasal, dorso)	1	0.250	0	==>	1
	210 (Middle caud)	1	0.167	0	==>	1
	251 (Metacarpal)	1	0.200	0	==>	1
	284 (Pubis, expa)	1	0.333	1	==>	0
	285 (Pubis, expa)	1	0.500	0	==>	1
	413 (Maxilla wit)	1	0.222	0	==>	1
node_97 --> Dilophosaurus we	117 (Vestibule,)	1	0.200	1	-->	0
	181 (Cervical 3-)	1	0.077	1	==>	0
	216 (Scapula, le)	1	0.250	0	==>	1
	233 (Humerus, pr)	1	0.143	1	==>	0
node_98 --> Coelophysis baur	24 (Maxilla, ant)	1	0.167	0	==>	1
	26 (Maxilla, lat)	1	0.333	0	==>	1
	37 (Nasal (N2011)	1	0.125	1	-->	0
	56 (Squamosal, v)	1	0.200	0	==>	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	103 (Parabasisph)	1	0.200	0	==>	1
	189 (Cervical ve)	1	0.500	0	==>	1
	200 (Sacral cent)	1	0.250	0	==>	1
	258 (Manual digi)	1	0.375	2	==>	3

	275 (Ilium, dors)	1	0.250	0 ==>	1
	307 (Femur, dors)	1	0.286	1 ==>	2
	311 (Femur, ante)	1	0.222	0 ==>	1
	370 (Astragalus-)	1	0.200	0 ==>	1
	416 (Dentary, ra)	1	0.333	0 ==>	1
node_99 --> Tawa hallae	6 (Premaxillary)	1	0.200	1 ==>	0
	241 (Radius, len)	1	0.125	1 ==>	0
	249 (Distal carp)	1	0.333	1 ==>	0
	256 (Metacarpal)	1	0.250	1 -->	0
	274 (Ilium, acet)	1	0.111	1 ==>	0
	305 (Femur, femo)	1	0.333	1 ==>	2
node_100 --> Eoraptor lunensi	12 (Premaxilla-m)	1	0.300	1 ==>	2
	26 (Maxilla, lat)	1	0.333	0 ==>	1
	175 (Palatal tee)	1	0.143	1 ==>	0
	197 (Dorsal vert)	1	0.182	0 ==>	2
	247 (Manual leng)	1	0.667	2 -->	1
	257 (Manual digi)	1	0.500	1 ==>	0
	289 (Pubis, medi)	1	0.250	1 ==>	0
	414 (Nasal, posi)	1	0.167	0 ==>	1
	419 (Ischium, do)	1	0.143	0 ==>	1
node_102 --> Herrerasaurus is	36 (Nasal (N2011)	1	0.500	1 -->	0
	37 (Nasal (N2011)	1	0.125	1 -->	0
	39 (Lacrimal, he)	1	0.250	1 -->	0
	179 (Axis, dorsa)	1	0.250	1 ==>	0
	197 (Dorsal vert)	1	0.182	0 ==>	2
	241 (Radius, len)	1	0.125	1 ==>	0
	256 (Metacarpal)	1	0.250	1 -->	0
	258 (Manual digi)	1	0.375	2 ==>	3
	302 (Femur, prox)	1	0.250	0 ==>	1
	314 (Femur, prox)	1	0.167	1 -->	0
	416 (Dentary, ra)	1	0.333	0 ==>	1
node_105 --> node_104	1 (Premaxilla, a)	1	0.167	0 -->	1
	2 (Premaxilla, p)	1	0.083	1 -->	0
	3 (Premaxilla, p)	1	0.500	0 -->	1
	5 (Premaxilla, p)	1	0.167	0 -->	1
	25 (Maxilla, ant)	1	0.167	0 -->	1
	56 (Squamosal, v)	1	0.200	0 ==>	1
	74 (Jugal, long)	1	0.333	0 -->	1
	131 (Foramen for)	1	0.400	0 -->	2
	135 (Skull lengt)	1	1.000	0 ==>	1
	159 (Articular,)	1	0.111	0 -->	1
	235 (Humerus, di)	1	0.250	0 ==>	1
	251 (Metacarpal)	1	0.200	0 -->	1
	252 (Digit I wit)	1	1.000	0 -->	1
	289 (Pubis, medi)	1	0.250	1 -->	0
	294 (Ischium, di)	1	0.143	0 ==>	1
	335 (Tibia, post)	1	0.500	0 ==>	1
	414 (Nasal, posi)	1	0.167	0 -->	1
	415 (Premaxilla,)	1	0.125	1 -->	0
	420 (Ischium, po)	1	0.250	1 -->	0
node_104 --> Saturnalia tupin	233 (Humerus, pr)	1	0.143	1 ==>	0
	271 (Ilium, dist)	1	0.333	0 ==>	1
	273 (Ilium, vent)	1	0.333	2 ==>	1
	333 (Tibia, late)	1	0.200	0 ==>	1
node_104 --> node_103	311 (Femur, ante)	1	0.222	1 ==>	0
	383 (Longest met)	1	0.200	1 ==>	0
	419 (Ischium, do)	1	0.143	0 ==>	1
node_103 --> Efraasia minor	181 (Cervical 3-)	1	0.077	0 -->	1
	283 (Pubis, dist)	1	0.200	1 ==>	0
node_103 --> Plateosaurus tro	6 (Premaxillary)	1	0.200	1 -->	2
	27 (Maxilla, pos)	1	0.267	0 ==>	1
	152 (Anterior ha)	1	0.250	0 -->	1
	154 (Dentary, do)	1	0.364	0 ==>	1
	170 (Medial or l)	1	0.333	0 ==>	1
	206 (Caudal vert)	1	0.200	0 ==>	1
	212 (Forelimb-hi)	1	0.200	1 ==>	0
node_108 --> node_107	14 (Maxilla, fac)	1	0.125	0 ==>	1
	23 (Maxilla, buc)	1	0.333	0 ==>	1
	41 (Prefrontal (	1	0.500	0 -->	1
	43 (Frontal, ant)	1	0.143	0 -->	1
	147 (Palpebral(s)	1	0.333	0 ==>	1
	151 (Prementary)	1	1.000	0 ==>	1
	161 (Coronoid pr)	1	1.000	0 ==>	1
	162 (Mandibular)	1	0.500	0 -->	2
	170 (Medial or l)	1	0.333	0 ==>	1
	173 (Maxillary a)	1	0.500	0 ==>	1

	179 (Axis, dorsa)	1	0.250	1	-->	0
	183 (Third cervi)	1	0.143	1	==>	0
	195 (Posterior c)	1	0.167	1	-->	0
	199 (Middle dors)	1	0.167	0	==>	1
	205 (Trunk verte)	1	0.200	0	==>	1
	206 (Caudal vert)	1	0.200	0	==>	1
	207 (Insertion o)	1	0.200	0	==>	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	271 (Ilium, dist)	1	0.333	0	==>	1
	279 (Pubis, orie)	1	0.333	0	==>	1
	280 (Pubis, prep)	1	0.500	0	==>	1
	286 (Pubis, prox)	1	0.500	1	==>	0
	308 (Femur, ante)	1	0.286	1	==>	2
	311 (Femur, ante)	1	0.222	1	==>	0
	314 (Femur, prox)	1	0.167	1	-->	0
	334 (Tibia, post)	1	0.500	1	==>	2
	379 (Calcaneum,)	1	0.500	0	==>	1
	412 (Gastralia (	1	0.400	1	-->	2
node_107 --> Eocursor parvus	162 (Mandibular)	1	0.500	2	-->	0
	190 (Cervical ve)	1	0.167	0	==>	1
	274 (Ilium, acet)	1	0.111	1	==>	0
	314 (Femur, prox)	1	0.167	0	==>	1
node_107 --> Scutellosaurus l	43 (Frontal, ant)	1	0.143	1	-->	0
	58 (Parietals, i)	1	0.333	0	==>	1
	59 (Parietals, u)	1	0.286	0	==>	2
	178 (Atlantal ar)	1	0.500	1	==>	0
	199 (Middle dors)	1	0.167	1	==>	0
	212 (Forelimb-hi)	1	0.200	1	==>	0
	225 (Coracoid, p)	1	0.333	1	==>	0
	227 (Glenoid, or)	1	0.167	1	==>	0
	230 (Humerus, ap)	1	0.250	1	==>	0
	275 (Ilium, dors)	1	0.250	0	==>	1
	291 (Ischium, me)	1	0.286	1	==>	0
	383 (Longest met)	1	0.200	1	==>	0
	401 (Osteoderms,)	1	0.250	0	==>	1
node_107 --> Lesothosaurus di	6 (Premaxillary)	1	0.200	0	-->	3
	9 (Premaxilla, n)	1	0.333	1	-->	0
	79 (Quadratojuga)	1	0.250	0	==>	1
	237 (Ulna, later)	1	0.333	1	==>	0
	256 (Metacarpal)	1	0.250	1	-->	0
	419 (Ischium, do)	1	0.143	0	==>	1
node_107 --> node_106	11 (Premaxilla-m)	1	0.167	0	-->	1
	22 (Maxilla, int)	1	0.200	0	-->	1
	59 (Parietals, u)	1	0.286	0	-->	2
	75 (Jugal, longi)	1	0.118	0	-->	1
	102 (Parabasisph)	1	1.000	0	-->	1
	103 (Parabasisph)	1	0.200	0	-->	1
	167 (Dentition (	1	0.200	0	-->	1
	169 (Extensive p)	1	0.500	0	==>	1
	172 (Moderately)	1	0.500	0	==>	1
	197 (Dorsal vert)	1	0.182	0	-->	2
	200 (Sacral cent)	1	0.250	0	-->	1
	246 (Metacarpals)	1	0.333	0	-->	1
	250 (Extensor pi)	1	0.500	0	-->	1
	271 (Ilium, dist)	1	0.333	1	-->	0
	334 (Tibia, post)	1	0.500	2	==>	1
node_106 --> Pisanosaurus mer	279 (Pubis, orie)	1	0.333	1	==>	0
	280 (Pubis, prep)	1	0.500	1	==>	0
	336 (Tibia, post)	1	0.250	1	==>	0
node_106 --> Heterodontosauru	170 (Medial or l)	1	0.333	1	==>	0
	171 (Tooth crown)	1	0.143	1	==>	0
	333 (Tibia, late)	1	0.200	0	==>	1
	343 (Fibula, pro)	1	0.250	1	==>	0
	370 (Astragalus-)	1	0.200	0	==>	1
node_113 --> node_112	56 (Squamosal, v)	1	0.200	0	-->	1
	113 (Exoccipital)	1	1.000	0	==>	1
	127 (Supraoccipi)	1	1.000	0	==>	1
	174 (Tooth impla)	1	0.500	1	-->	0
	181 (Cervical 3-)	1	0.077	0	-->	1
	274 (Ilium, acet)	1	0.111	1	-->	0
	296 (Ischium, ve)	1	0.200	1	-->	0
	400 (Pedal ungua)	1	0.250	0	-->	1
node_112 --> Lewisuchus admix	67 (Postorbital)	1	0.250	0	==>	1
	110 (Opisthotic,)	1	0.333	0	==>	1
	171 (Tooth crown)	1	0.143	1	-->	0
node_112 --> node_111	75 (Jugal, longi)	1	0.118	0	-->	1

	95 (Parabasisphe)	1	0.286	2	-->	0
	155 (Dentary, an)	1	0.250	0	==>	1
	166 (Dentary tee)	1	0.750	0	==>	1
	173 (Maxillary a)	1	0.500	0	==>	1
	208 (Sacral ribs)	1	0.250	0	==>	1
	299 (Tibia (or f)	1	0.143	1	-->	0
	309 (Femur, medi)	1	1.000	0	==>	1
	324 (Femur, dist)	1	0.500	0	==>	1
node_111 --> Asilisaurus kong	152 (Anterior ha)	1	0.250	1	-->	0
	154 (Dentary, do)	1	0.364	0	==>	1
	158 (Articular,)	1	0.200	1	-->	0
	294 (Ischium, di)	1	0.143	0	==>	1
node_111 --> node_110	153 (Dentary, an)	1	0.250	0	-->	1
	183 (Third cervi)	1	0.143	1	-->	0
	207 (Insertion o)	1	0.200	0	-->	1
	271 (Ilium, dist)	1	0.333	0	-->	1
	301 (Femur, prox)	1	0.333	0	-->	2
	311 (Femur, ante)	1	0.222	1	==>	0
	313 (Femur, post)	1	0.250	1	==>	0
	331 (Tibia, late)	1	0.500	0	==>	1
	363 (Astragalus,)	1	0.143	0	-->	1
	373 (Calcaneum,)	1	0.250	0	-->	1
	378 (Calcaneum,)	1	0.400	0	-->	2
node_110 --> node_109	303 (Femur, medi)	1	1.000	0	==>	1
	333 (Tibia, late)	1	0.200	0	==>	1
node_109 --> Sacisaurus agudo	168 (Tooth, serr)	1	0.250	1	==>	2
	172 (Moderately)	1	0.500	0	==>	1
	301 (Femur, prox)	1	0.333	2	-->	0
node_109 --> Silesaurus opole	154 (Dentary, do)	1	0.364	0	==>	2
node_114 --> Ligosuchus talam	183 (Third cervi)	1	0.143	1	==>	0
	345 (Fibula, dis)	1	0.167	1	-->	0
node_117 --> node_116	302 (Femur, prox)	1	0.250	0	==>	1
	306 (Femur, femo)	1	1.000	0	==>	1
	310 (Femur, ante)	1	1.000	0	==>	1
	326 (Femur, cris)	1	1.000	0	==>	1
	355 (Astragalus,)	1	1.000	0	==>	1
	370 (Astragalus-)	1	0.200	0	-->	1
	373 (Calcaneum,)	1	0.250	0	==>	1
	378 (Calcaneum,)	1	0.400	0	==>	2
	393 (Metatarsal)	1	0.500	1	-->	0
node_116 --> Lagerpeton chana	316 (Femur, four)	1	0.400	0	==>	1
node_116 --> node_115	322 (Femur, surf)	1	0.333	0	==>	1
	325 (Femur, ante)	1	1.000	0	==>	1
	327 (Femur, ante)	1	1.000	0	==>	1
node_115 --> Dromomeron grego	308 (Femur, ante)	1	0.286	0	==>	1
node_115 --> Dromomeron romer	316 (Femur, four)	1	0.400	0	==>	2
node_120 --> node_118	1 (Premaxilla, a)	1	0.167	0	==>	1
	5 (Premaxilla, p)	1	0.167	0	-->	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	134 (Skull lengt)	1	1.000	0	==>	1
	167 (Dentition (	1	0.200	0	==>	1
	175 (Palatal tee)	1	0.143	1	-->	0
	196 (Cervical ri)	1	0.200	0	-->	1
	211 (Distal caud)	1	0.333	0	==>	1
	223 (Coracoid, p)	1	0.500	0	==>	1
	233 (Humerus, pr)	1	0.143	0	==>	1
	244 (Pteroid bon)	1	1.000	0	==>	1
	262 (Manual digi)	1	1.000	0	==>	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	274 (Ilium, acet)	1	0.111	0	-->	1
	296 (Ischium, ve)	1	0.200	1	-->	0
	301 (Femur, prox)	1	0.333	1	-->	0
	316 (Femur, four)	1	0.400	0	-->	2
	323 (Femur, bone)	1	0.333	0	-->	2
	353 (Distal tars)	1	0.250	1	-->	0
	370 (Astragalus-)	1	0.200	0	==>	1
	373 (Calcaneum,)	1	0.250	0	==>	1
	387 (Metatarsal)	1	0.500	0	==>	1
	391 (Metatarsal)	1	0.200	0	-->	1
	395 (Metatarsal)	1	0.250	0	-->	1
	397 (Metatarsal)	1	0.167	0	==>	1
node_118 --> Eudimorphodon ra	6 (Premaxillary)	1	0.200	2	==>	1
	82 (Quadrate, an)	1	0.333	0	==>	1
	138 (Lateral (=e)	1	0.333	1	==>	0
	390 (Metatarsal)	1	0.333	0	==>	1

node_118 --> Dimorphodon macr	142 (Orbit, shap)	1	0.222	0 ==>	2
node_120 --> node_119	27 (Maxilla, pos)	1	0.267	0 -->	1
	144 (Supratempor)	1	0.200	0 -->	1
	186 (Epipophyses)	1	0.143	0 ==>	1
	191 (Cervical ve)	1	0.250	0 ==>	3
	193 (Posterior c)	1	0.333	0 ==>	1
	197 (Dorsal vert)	1	0.182	0 -->	2
	198 (Dorsal vert)	1	0.333	0 -->	1
	230 (Humerus, ap)	1	0.250	0 ==>	1
	234 (Humerus, ec)	1	0.167	1 ==>	0
	235 (Humerus, di)	1	0.250	0 ==>	1
	265 (Ilium, cres)	1	0.429	0 ==>	2
	288 (Pubis, pubi)	1	0.500	0 -->	1
	291 (Ischium, me)	1	0.286	0 -->	1
	293 (Ischium, cr)	1	0.286	0 ==>	1
	299 (Tibia (or f)	1	0.143	1 -->	0
	300 (Femur, prox)	1	0.600	1 ==>	0
	308 (Femur, ante)	1	0.286	0 ==>	1
	314 (Femur, prox)	1	0.167	0 ==>	1
	320 (Femur, medi)	1	0.167	1 -->	0
	324 (Femur, dist)	1	0.500	0 ==>	1
	371 (Calcaneum,)	1	0.333	1 ==>	0
	376 (Calcaneum,)	1	0.286	1 ==>	0
	377 (Calcaneum,)	1	0.500	2 -->	1
	419 (Ischium, do)	1	0.143	0 -->	1
node_119 --> Teleocrater rhad	184 (Anterior to)	1	0.250	0 ==>	1
	195 (Posterior c)	1	0.167	0 ==>	1
	413 (Maxilla wit)	1	0.222	0 ==>	1
node_159 --> node_158	15 (Maxillary te)	1	0.250	1 -->	0
	100 (Parabasisph)	1	0.333	0 ==>	1
	117 (Vestibule,)	1	0.200	0 -->	1
	199 (Middle dors)	1	0.167	0 -->	1
	238 (Ulna, dista)	1	0.250	0 ==>	1
	292 (Ischia, dis)	1	0.333	0 -->	1
	330 (Tibia, prox)	1	0.333	0 ==>	1
	337 (Tibia, post)	1	1.000	0 ==>	1
node_158 --> node_122	6 (Premaxillary)	1	0.200	2 ==>	0
	8 (Premaxilla (N)	1	0.500	0 ==>	1
	13 (Premaxilla-m)	1	1.000	0 ==>	1
	33 (Nasal-prefro)	1	1.000	0 ==>	1
	62 (Parietal, po)	1	0.333	0 ==>	1
	85 (Palatine-pte)	1	1.000	0 ==>	1
	142 (Orbit, shap)	1	0.222	0 ==>	2
	160 (Dentary-spl)	1	0.250	0 ==>	1
	190 (Cervical ve)	1	0.167	0 ==>	1
	205 (Trunk verte)	1	0.200	0 -->	1
	210 (Middle caud)	1	0.167	0 -->	1
	278 (Pubis, leng)	1	0.200	0 ==>	1
	282 (Pubis, leng)	1	0.167	0 -->	1
	308 (Femur, ante)	1	0.286	0 ==>	1
	339 (Fibula, att)	1	0.200	0 ==>	1
	340 (Fibula, att)	1	0.167	0 -->	1
	368 (Astragalus-)	1	0.667	1 ==>	2
	407 (Presacral o)	1	0.300	0 -->	1
node_122 --> node_121	30 (Antorbital f)	1	0.167	0 ==>	1
	192 (Middle cerv)	1	0.250	0 -->	1
	208 (Sacral ribs)	1	0.250	0 -->	1
	224 (Coracoid, p)	1	0.333	0 -->	1
	407 (Presacral o)	1	0.300	1 -->	2
	414 (Nasal, posi)	1	0.167	0 -->	1
node_121 --> Riojasuchus tenu	29 (Maxilla, dor)	1	0.167	0 ==>	1
node_121 --> Venaticosuchus r	93 (Basipterygoi)	1	0.250	1 ==>	0
	154 (Dentary, do)	1	0.364	0 ==>	2
	159 (Articular,)	1	0.111	1 ==>	0
	163 (Surangular)	1	0.667	0 ==>	2
node_122 --> Ornithosuchus wo	314 (Femur, prox)	1	0.167	0 ==>	1
	398 (Metatarsal)	1	0.250	0 ==>	1
node_158 --> node_157	45 (Quadratojuga)	1	0.250	0 -->	1
	69 (Jugal, anter)	1	0.286	0 ==>	1
	75 (Jugal, longi)	1	0.118	0 ==>	1
	114 (Exoccipital)	1	0.500	0 ==>	2
	157 (Articular,)	1	0.143	0 -->	1
	234 (Humerus, ec)	1	0.167	1 ==>	0
	320 (Femur, medi)	1	0.167	1 -->	0
	372 (Calcaneum,)	1	0.500	0 -->	1
	376 (Calcaneum,)	1	0.286	1 -->	2

	378 (Calcaneum,)	1	0.400	0	==>	1
node_157 --> node_127	29 (Maxilla, dor)	1	0.167	0	==>	1
	71 (Jugal, poste)	1	0.429	0	-->	1
	122 (External fo)	1	0.500	1	==>	2
	129 (Perilymphat)	1	0.333	0	==>	1
	147 (Palpebral(s)	1	0.333	0	-->	1
	148 (Palpebral(s)	1	1.000	1	-->	0
	156 (Articular (	1	0.222	0	-->	1
	241 (Radius, len)	1	0.125	0	-->	1
	258 (Manual digi)	1	0.375	1	-->	0
	405 (Osteoderms,)	1	0.200	0	-->	1
	406 (Osteoderms,)	1	0.500	0	==>	1
	408 (Anterior ba)	1	0.250	0	-->	1
	409 (Ventral car)	1	0.333	0	==>	1
node_127 --> node_125	15 (Maxillary te)	1	0.250	0	==>	1
	16 (Maxilla, pos)	1	0.333	0	==>	1
	54 (Squamosal, f)	1	0.500	0	==>	1
	66 (Postorbital-)	1	0.333	0	==>	1
	67 (Postorbital)	1	0.250	0	==>	1
	71 (Jugal, poste)	1	0.429	1	-->	2
	111 (Opisthotic,)	1	0.200	0	-->	1
	131 (Foramen for)	1	0.400	0	-->	2
	157 (Articular,)	1	0.143	1	-->	0
	186 (Epipophyses)	1	0.143	0	-->	1
	240 (Radius, dis)	1	0.333	0	==>	1
	292 (Ischia, dis)	1	0.333	1	-->	0
	407 (Presacral o)	1	0.300	0	==>	2
	412 (Gastralia (	1	0.400	0	==>	2
node_125 --> node_124	7 (Premaxilla, t)	1	1.000	0	==>	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	40 (Prefrontal,)	1	0.500	0	-->	1
	61 (Parietals, o)	1	0.333	0	==>	1
	62 (Parietal, po)	1	0.333	0	==>	1
	82 (Quadrate, an)	1	0.333	0	==>	1
	143 (Supratempor)	1	1.000	0	==>	1
	154 (Dentary, do)	1	0.364	0	==>	2
	155 (Dentary, an)	1	0.250	0	==>	1
	158 (Articular,)	1	0.200	0	==>	1
	159 (Articular,)	1	0.111	1	-->	0
	166 (Dentary tee)	1	0.750	0	==>	1
	171 (Tooth crown)	1	0.143	0	==>	1
	195 (Posterior c)	1	0.167	0	-->	1
	270 (Ilium, orie)	1	0.200	0	-->	1
	339 (Fibula, att)	1	0.200	0	-->	1
	340 (Fibula, att)	1	0.167	0	-->	1
	364 (Astragalus,)	1	0.333	0	-->	1
	371 (Calcaneum,)	1	0.333	1	-->	2
	413 (Maxilla wit)	1	0.222	0	==>	1
node_124 --> node_123	74 (Jugal, long)	1	0.333	0	==>	1
	168 (Tooth, serr)	1	0.250	1	==>	0
	219 (Scapula, te)	1	0.125	0	==>	1
node_123 --> Stagonolepis rob	26 (Maxilla, lat)	1	0.333	0	==>	1
	90 (Palatine, fo)	1	0.250	0	==>	1
	251 (Metacarpal)	1	0.200	0	==>	1
node_123 --> Longosuchus mead	5 (Premaxilla, p)	1	0.167	0	==>	1
node_124 --> Aetosaurus ferra	6 (Premaxillary)	1	0.200	2	==>	1
	37 (Nasal (N2011)	1	0.125	0	==>	1
	64 (Quadratojuga)	1	0.500	0	==>	1
	79 (Quadratojuga)	1	0.250	0	==>	1
	416 (Dentary, ra)	1	0.333	0	==>	1
node_125 --> Revueltosaurus c	4 (Premaxilla, p)	1	0.500	0	==>	3
	12 (Premaxilla-m)	1	0.300	0	==>	3
	23 (Maxilla, buc)	1	0.333	0	==>	1
	26 (Maxilla, lat)	1	0.333	0	==>	1
	27 (Maxilla, pos)	1	0.267	0	==>	2
	43 (Frontal, ant)	1	0.143	0	==>	1
	45 (Quadratojuga)	1	0.250	1	-->	0
	156 (Articular (	1	0.222	1	-->	0
	167 (Dentition (	1	0.200	0	==>	1
	168 (Tooth, serr)	1	0.250	1	==>	2
	191 (Cervical ve)	1	0.250	1	==>	2
	415 (Premaxilla,)	1	0.125	0	==>	1
node_127 --> node_126	6 (Premaxillary)	1	0.200	2	==>	1
	17 (Maxilla, den)	1	0.333	0	==>	1
	21 (Maxilla, ven)	1	0.333	0	==>	1

	72 (Jugal, poste)	1	0.167	0	==>	1
	95 (Parabasisphe)	1	0.286	2	-->	0
	101 (Parabasisph)	1	0.500	0	-->	1
	117 (Vestibule,)	1	0.200	1	-->	0
	128 (Pila antoti)	1	0.500	0	-->	1
	132 (Foramen or)	1	0.333	0	-->	1
	219 (Scapula, te)	1	0.125	0	==>	1
	238 (Ulna, dista)	1	0.250	1	-->	0
	245 (Longest met)	1	0.333	1	-->	0
	344 (Fibula, med)	1	0.500	0	-->	1
	368 (Astragalus-)	1	0.667	1	-->	0
	376 (Calcaneum,)	1	0.286	2	-->	1
	400 (Pedal ungua)	1	0.250	2	-->	0
	404 (Osteoderms,)	1	0.167	0	==>	1
node_126 --> Parringtonia gra	4 (Premaxilla, p)	1	0.500	0	==>	3
	23 (Maxilla, buc)	1	0.333	0	==>	1
	26 (Maxilla, lat)	1	0.333	0	==>	1
	31 (Maxilla, ant)	1	0.200	0	==>	1
	42 (Frontal, dor)	1	0.200	0	==>	1
	43 (Frontal, ant)	1	0.143	0	==>	1
	55 (Squamosal, p)	1	0.250	0	==>	1
	62 (Parietal, po)	1	0.333	0	==>	1
	75 (Jugal, longi)	1	0.118	1	==>	2
	175 (Palatal tee)	1	0.143	1	==>	0
	190 (Cervical ve)	1	0.167	0	==>	1
	408 (Anterior ba)	1	0.250	1	-->	0
	413 (Maxilla wit)	1	0.222	0	==>	1
node_126 --> Erpetosuchus gra	27 (Maxilla, pos)	1	0.267	0	==>	2
	30 (Antorbital f)	1	0.167	0	==>	1
	59 (Parietals, u)	1	0.286	0	==>	2
	69 (Jugal, anter)	1	0.286	1	==>	0
	79 (Quadratojuga)	1	0.250	0	==>	1
	168 (Tooth, serr)	1	0.250	1	==>	0
	241 (Radius, len)	1	0.125	1	-->	0
	405 (Osteoderms,)	1	0.200	1	-->	0
	407 (Presacral o)	1	0.300	0	==>	1
node_157 --> node_156	181 (Cervical 3-)	1	0.077	0	-->	1
	199 (Middle dors)	1	0.167	1	-->	0
	258 (Manual digi)	1	0.375	1	-->	2
	287 (Ischium-pub)	1	0.400	0	-->	1
	341 (Fibula, pro)	1	0.143	0	==>	1
	352 (Distal tars)	1	0.333	0	==>	1
	367 (Astragalus,)	1	0.500	0	-->	1
	403 (Osteoderms,)	1	0.250	0	==>	1
	410 (Dorsal oste)	1	0.200	0	==>	1
	411 (Dorsal oste)	1	0.333	1	==>	0
node_156 --> node_129	4 (Premaxilla, p)	1	0.500	0	==>	3
	37 (Nasal (N2011)	1	0.125	0	==>	1
	43 (Frontal, ant)	1	0.143	0	==>	1
	67 (Postorbital)	1	0.250	0	==>	1
	94 (Prootic, rid)	1	0.500	1	-->	0
	153 (Dentary, an)	1	0.250	0	-->	1
	175 (Palatal tee)	1	0.143	1	-->	0
	219 (Scapula, te)	1	0.125	0	-->	1
	282 (Pubis, leng)	1	0.167	0	-->	1
	287 (Ischium-pub)	1	0.400	1	-->	2
	300 (Femur, prox)	1	0.600	1	-->	0
	330 (Tibia, prox)	1	0.333	1	-->	0
	371 (Calcaneum,)	1	0.333	1	-->	2
	372 (Calcaneum,)	1	0.500	1	-->	0
	375 (Calcaneum,)	1	0.333	0	==>	1
	400 (Pedal ungua)	1	0.250	2	-->	0
	404 (Osteoderms,)	1	0.167	0	==>	1
	413 (Maxilla wit)	2	0.222	0	==>	2
	417 (Proximal en)	1	0.667	1	-->	0
node_129 --> node_128	2 (Premaxilla, p)	1	0.083	0	-->	1
	49 (Squamosal (N)	1	0.500	0	-->	1
	55 (Squamosal, p)	1	0.250	0	-->	1
	58 (Parietals, i)	1	0.333	0	-->	1
	66 (Postorbital-)	1	0.333	0	==>	1
	72 (Jugal, poste)	1	0.167	0	==>	1
	78 (Quadrate, he)	1	0.333	0	-->	1
	103 (Parabasisph)	1	0.200	0	==>	1
	320 (Femur, medi)	1	0.167	0	-->	1
node_128 --> Gracilisuchus st	6 (Premaxillary)	1	0.200	2	==>	1
	27 (Maxilla, pos)	1	0.267	0	==>	1

	71 (Jugal, poste)	1	0.429	0	==>	1
	157 (Articular,)	1	0.143	1	-->	0
	175 (Palatal tee)	1	0.143	0	-->	1
	413 (Maxilla wit)	1	0.222	2	-->	1
node_128 --> Yonghesuchus san	12 (Premaxilla-m)	1	0.300	0	==>	1
	75 (Jugal, longi)	1	0.118	1	==>	0
	156 (Articular (	1	0.222	0	==>	1
node_129 --> Turfanosuchus da	42 (Frontal, dor)	1	0.200	0	==>	1
	52 (Squamosal, a)	2	0.286	0	==>	2
	54 (Squamosal, f)	1	0.500	0	==>	1
	95 (Parabasisphe)	1	0.286	2	==>	0
	363 (Astragalus,)	1	0.143	0	==>	1
	366 (Astragalus,)	1	0.333	1	==>	0
node_156 --> node_155	45 (Quadratojuga)	1	0.250	1	-->	0
	132 (Foramen or)	1	0.333	0	-->	1
	141 (Posttempora)	1	0.250	0	-->	1
	195 (Posterior c)	1	0.167	0	==>	1
	202 (Primordial)	1	0.333	0	-->	1
	210 (Middle caud)	1	0.167	0	==>	1
	270 (Ilium, orie)	1	0.200	0	-->	1
	291 (Ischium, me)	1	0.286	0	==>	1
	292 (Ischia, dis)	1	0.333	1	-->	0
	293 (Ischium, cr)	1	0.286	0	-->	1
	294 (Ischium, di)	1	0.143	0	==>	1
	298 (Ischium len)	1	0.200	0	==>	1
	314 (Femur, prox)	1	0.167	0	-->	1
	416 (Dentary, ra)	1	0.333	0	-->	1
node_155 --> Ticinosuchus fer	30 (Antorbital f)	1	0.167	0	==>	1
	181 (Cervical 3-)	1	0.077	1	-->	0
node_155 --> node_154	283 (Pubis, dist)	1	0.200	0	==>	1
	301 (Femur, prox)	1	0.333	1	-->	0
	358 (Articular f)	1	0.250	0	-->	1
	395 (Metatarsal)	1	0.250	0	==>	1
node_154 --> node_137	1 (Premaxilla, a)	1	0.167	0	==>	1
	5 (Premaxilla, p)	1	0.167	0	==>	1
	12 (Premaxilla-m)	1	0.300	0	-->	1
	20 (Maxilla, ant)	1	0.500	0	-->	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	90 (Palatine, fo)	1	0.250	0	-->	1
	95 (Parabasisphe)	1	0.286	2	==>	0
	114 (Exoccipital)	1	0.500	2	-->	0
	156 (Articular (	1	0.222	0	-->	1
	183 (Third cervi)	1	0.143	0	-->	1
	191 (Cervical ve)	1	0.250	1	==>	0
	196 (Cervical ri)	1	0.200	1	==>	0
	197 (Dorsal vert)	1	0.182	1	==>	0
	200 (Sacral cent)	1	0.250	0	-->	1
	207 (Insertion o)	1	0.200	0	==>	1
	212 (Forelimb-hi)	1	0.200	0	-->	1
	265 (Ilium, cres)	1	0.429	0	==>	1
	273 (Ilium, vent)	1	0.333	0	==>	2
	288 (Pubis, pubi)	1	0.500	0	==>	1
	319 (Femur, angl)	1	0.250	0	-->	1
	323 (Femur, bone)	1	0.333	0	-->	1
	345 (Fibula, dis)	1	0.167	0	==>	1
	349 (Distal tars)	1	0.500	0	-->	1
	367 (Astragalus,)	1	0.500	1	-->	0
node_137 --> node_136	12 (Premaxilla-m)	1	0.300	1	-->	2
	201 (Sacral vert)	1	1.000	0	==>	1
	210 (Middle caud)	1	0.167	1	-->	0
	211 (Distal caud)	1	0.333	0	-->	1
	278 (Pubis, leng)	1	0.200	0	-->	1
	282 (Pubis, leng)	1	0.167	0	==>	1
	284 (Pubis, expa)	1	0.333	0	==>	1
	287 (Ischium-pub)	1	0.400	1	-->	2
	289 (Pubis, medi)	1	0.250	0	==>	1
	376 (Calcaneum,)	1	0.286	2	-->	1
	391 (Metatarsal)	1	0.200	0	-->	1
	401 (Osteoderms,)	1	0.250	1	==>	0
node_136 --> node_134	20 (Maxilla, ant)	1	0.500	1	-->	0
	26 (Maxilla, lat)	1	0.333	0	-->	1
	32 (Maxilla, pal)	1	0.667	1	-->	0
	48 (Squamosal, p)	1	0.333	1	-->	0
	56 (Squamosal, v)	1	0.200	0	-->	1
	132 (Foramen or)	1	0.333	1	-->	0

	155 (Dentary, an)	1	0.250	0	-->	1
	157 (Articular,)	1	0.143	1	-->	0
	158 (Articular,)	1	0.200	0	-->	1
	166 (Dentary tee)	1	0.750	0	-->	2
	181 (Cervical 3-)	1	0.077	1	-->	0
	183 (Third cervi)	1	0.143	1	-->	0
	205 (Trunk verte)	1	0.200	0	-->	1
	220 (Scapula, ac)	1	0.250	1	-->	0
	264 (Ilium, supr)	1	0.333	0	==>	1
	266 (Ilium, cres)	1	1.000	0	==>	1
	267 (Ilium, cres)	1	0.500	0	-->	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	270 (Ilium, orie)	1	0.200	1	-->	0
	320 (Femur, medi)	1	0.167	0	-->	1
	400 (Pedal ungua)	1	0.250	2	==>	1
node_134 --> node_132	6 (Premaxillary)	1	0.200	2	==>	4
	18 (Maxilla, den)	1	1.000	0	==>	1
	21 (Maxilla, ven)	1	0.333	0	==>	1
	227 (Glenoid, or)	1	0.167	0	==>	1
	258 (Manual digi)	2	0.375	2	-->	0
	269 (Ilium, ante)	1	0.333	1	-->	2
	274 (Ilium, acet)	1	0.111	0	-->	1
	276 (Ilium, dors)	1	0.500	0	==>	1
	291 (Ischium, me)	1	0.286	1	==>	2
	294 (Ischium, di)	1	0.143	1	==>	0
	302 (Femur, prox)	1	0.250	0	-->	1
	322 (Femur, surf)	1	0.333	0	-->	1
node_132 --> node_131	43 (Frontal, ant)	1	0.143	0	-->	1
	44 (Postfrontal)	1	0.167	0	-->	1
	59 (Parietals, u)	1	0.286	0	-->	2
	67 (Postorbital)	1	0.250	0	-->	1
	75 (Jugal, longi)	1	0.118	1	-->	0
	81 (Quadrate, di)	1	0.500	0	-->	1
	82 (Quadrate, an)	1	0.333	0	-->	1
	93 (Basipterygoi)	1	0.250	1	-->	0
	95 (Parabasisphe)	1	0.286	0	-->	2
	103 (Parabasisph)	1	0.200	0	-->	1
	110 (Opisthotic,)	1	0.333	0	-->	1
	115 (Exoccipital)	1	0.500	0	-->	1
	156 (Articular (	1	0.222	1	-->	0
	159 (Articular,)	1	0.111	1	-->	0
	162 (Mandibular)	1	0.500	0	-->	1
	163 (Surangular)	1	0.667	0	-->	1
	188 (Cervical ve)	1	0.667	0	==>	1
	189 (Cervical ve)	1	0.500	0	==>	1
	208 (Sacral ribs)	1	0.250	0	==>	1
	217 (Scapula, en)	1	0.200	1	==>	0
	225 (Coracoid, p)	1	0.333	1	==>	0
	234 (Humerus, ec)	1	0.167	0	-->	1
	236 (Humerus, pr)	1	1.000	0	==>	1
	390 (Metatarsal)	1	0.333	0	-->	1
node_131 --> node_130	190 (Cervical ve)	1	0.167	0	==>	1
	199 (Middle dors)	1	0.167	0	-->	1
	204 (Sacral vert)	1	0.500	0	==>	1
	228 (Coracoid, d)	1	1.000	0	==>	1
	285 (Pubis, expa)	1	0.500	0	==>	1
	289 (Pubis, medi)	1	0.250	1	==>	2
	290 (Pubis, late)	1	1.000	0	==>	1
	300 (Femur, prox)	1	0.600	1	==>	3
	313 (Femur, post)	1	0.250	0	==>	1
	316 (Femur, four)	1	0.400	0	-->	2
node_130 --> Shuvosaurus inex	48 (Squamosal, p)	1	0.333	0	-->	1
node_130 --> Effigia okeeffea	185 (Anterior ce)	1	0.500	0	==>	1
	333 (Tibia, late)	1	0.200	0	==>	1
node_131 --> Sillosuchus long	181 (Cervical 3-)	1	0.077	0	-->	1
	206 (Caudal vert)	1	0.200	0	==>	1
	272 (Ilium, ridg)	1	0.250	0	==>	1
node_132 --> Lotosaurus adent	5 (Premaxilla, p)	1	0.167	1	==>	0
	24 (Maxilla, ant)	1	0.167	1	==>	0
	31 (Maxilla, ant)	1	0.200	0	==>	1
	74 (Jugal, long)	1	0.333	0	==>	1
	99 (Parabasisphe)	1	0.500	0	==>	1
	194 (Posterior c)	1	0.500	0	==>	1
	198 (Dorsal vert)	1	0.333	0	==>	1
	205 (Trunk verte)	1	0.200	1	-->	0
	212 (Forelimb-hi)	1	0.200	1	-->	0

	222 (Coracoid (N))	1	0.250	1	==>	0
	267 (Ilium, cres)	1	0.500	1	-->	0
	287 (Ischium-pub)	1	0.400	2	==>	1
	341 (Fibula, pro)	1	0.143	1	==>	0
	358 (Articular f)	1	0.250	1	-->	0
	397 (Metatarsal)	1	0.167	0	==>	1
node_134 --> node_133	193 (Posterior c)	1	0.333	0	-->	1
	206 (Caudal vert)	1	0.200	0	-->	1
	231 (Humerus, le)	1	0.333	0	-->	1
	272 (Ilium, ridg)	1	0.250	0	==>	1
	364 (Astragalus,)	1	0.333	0	-->	1
	375 (Calcaneum,)	1	0.333	0	-->	1
	419 (Ischium, do)	1	0.143	0	==>	1
node_136 --> node_135	96 (Parabasisphe)	1	0.500	2	==>	0
	194 (Posterior c)	1	0.500	0	==>	1
	198 (Dorsal vert)	1	0.333	0	-->	1
node_135 --> Xilousuchus sapi	117 (Vestibule,)	1	0.200	1	==>	0
	186 (Epipophyses)	1	0.143	0	==>	1
node_135 --> Arizonasaurus ba	193 (Posterior c)	1	0.333	0	==>	1
node_137 --> Qianosuchus mixt	6 (Premaxillary)	1	0.200	2	==>	3
	14 (Maxilla, fac)	1	0.125	0	==>	1
	27 (Maxilla, pos)	1	0.267	0	==>	1
	343 (Fibula, pro)	1	0.250	1	==>	0
	358 (Articular f)	1	0.250	1	-->	0
	413 (Maxilla wit)	1	0.222	0	==>	1
	414 (Nasal, posi)	1	0.167	0	==>	1
node_154 --> node_153	2 (Premaxilla, p)	1	0.083	0	-->	1
	6 (Premaxillary)	1	0.200	2	-->	1
	29 (Maxilla, dor)	1	0.167	0	-->	1
	52 (Squamosal, a)	1	0.286	0	-->	1
	133 (Auricular r)	1	0.500	0	-->	1
	142 (Orbit, shap)	1	0.222	0	-->	1
	147 (Palpebral(s)	1	0.333	0	-->	1
	239 (Ulna, dista)	1	1.000	0	-->	1
	240 (Radius, dis)	1	0.333	0	-->	1
	339 (Fibula, att)	1	0.200	0	==>	1
	371 (Calcaneum,)	1	0.333	1	==>	2
	397 (Metatarsal)	1	0.167	0	-->	1
node_153 --> Mandasuchus tany	31 (Maxilla, ant)	1	0.200	0	==>	1
	227 (Glenoid, or)	1	0.167	0	==>	1
	305 (Femur, femo)	1	0.333	1	==>	0
	404 (Osteoderms,)	1	0.167	0	==>	1
	410 (Dorsal oste)	1	0.200	1	==>	0
node_153 --> node_152	27 (Maxilla, pos)	1	0.267	0	-->	1
	30 (Antorbital f)	1	0.167	0	-->	1
	181 (Cervical 3-)	1	0.077	1	-->	0
	219 (Scapula, te)	1	0.125	0	-->	1
	278 (Pubis, leng)	1	0.200	0	==>	1
	340 (Fibula, att)	1	0.167	0	==>	1
	341 (Fibula, pro)	1	0.143	1	==>	0
	419 (Ischium, do)	1	0.143	0	==>	1
node_152 --> node_138	159 (Articular,)	1	0.111	1	-->	0
	229 (Coracoid, s)	1	1.000	0	-->	1
	235 (Humerus, di)	1	0.250	0	-->	1
	296 (Ischium, ve)	1	0.200	0	==>	1
	301 (Femur, prox)	1	0.333	0	-->	1
	352 (Distal tars)	1	0.333	1	-->	0
	358 (Articular f)	1	0.250	1	-->	0
	418 (Scapula-cor)	1	1.000	0	-->	1
	422 (Fibula, "lu)	1	1.000	0	==>	1
node_138 --> Huenesuchus chin	421 (Ischium, ve)	1	0.500	0	==>	1
node_138 --> Stagonosuchus ny	298 (Ischium len)	1	0.200	1	==>	0
	328 (Tibia, prox)	1	0.750	0	==>	1
	330 (Tibia, prox)	1	0.333	1	==>	0
node_152 --> node_151	191 (Cervical ve)	1	0.250	1	==>	2
	202 (Primordial)	1	0.333	1	-->	0
	221 (Scapulocora)	1	0.333	0	-->	1
	265 (Ilium, cres)	1	0.429	0	==>	1
	282 (Pubis, leng)	1	0.167	0	-->	1
	320 (Femur, medi)	1	0.167	0	-->	1
	376 (Calcaneum,)	1	0.286	2	-->	1
	420 (Ischium, po)	1	0.250	0	-->	1
node_151 --> node_140	51 (Squamosal (N))	1	0.250	0	==>	1
	75 (Jugal, longi)	1	0.118	1	-->	0
	141 (Posttempora)	1	0.250	1	-->	0
	149 (Palpebral(s)	1	0.333	0	==>	1

	414 (Nasal, posi)	1	0.167	0	==>	1
node_140 --> node_139	42 (Frontal, dor)	1	0.200	0	==>	1
	415 (Premaxilla,)	1	0.125	0	==>	1
node_139 --> Saurosuchus gali	44 (Postfrontal)	1	0.167	0	==>	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	106 (Basioccipit)	1	0.500	0	==>	1
node_139 --> Luperosuchus fra	37 (Nasal (N2011)	1	0.125	0	==>	1
	38 (Lacrima (N2)	1	0.500	0	==>	1
node_140 --> Sanga Pascoal sp	108 (Opisthotic,)	1	0.400	0	==>	1
node_151 --> node_150	40 (Prefrontal,)	1	0.500	0	-->	1
	59 (Parietals, u)	1	0.286	0	==>	1
	89 (Ectopterygoi)	1	1.000	0	-->	1
	106 (Basioccipit)	1	0.500	0	-->	1
	131 (Foramen for)	1	0.400	0	-->	1
	319 (Femur, angl)	1	0.250	0	-->	1
	339 (Fibula, att)	1	0.200	1	-->	0
	349 (Distal tars)	1	0.500	0	-->	1
	354 (Astragalus,)	1	1.000	0	-->	1
	364 (Astragalus,)	1	0.333	0	-->	1
	390 (Metatarsal)	1	0.333	0	-->	1
	399 (Metatarsal)	1	0.300	0	-->	1
	407 (Presacral o)	1	0.300	0	==>	1
	410 (Dorsal oste)	1	0.200	1	-->	0
	411 (Dorsal oste)	1	0.333	0	-->	1
node_150 --> Pagosvenator can	4 (Premaxilla, p)	1	0.500	0	==>	3
	17 (Maxilla, den)	1	0.333	0	==>	1
	21 (Maxilla, ven)	1	0.333	0	==>	1
	52 (Squamosal, a)	1	0.286	1	-->	0
	58 (Parietals, i)	1	0.333	0	==>	1
	69 (Jugal, anter)	1	0.286	1	==>	0
	142 (Orbit, shap)	1	0.222	1	==>	2
	403 (Osteoderms,)	1	0.250	1	==>	0
	415 (Premaxilla,)	1	0.125	0	==>	1
node_150 --> node_149	12 (Premaxilla-m)	1	0.300	0	==>	1
	34 (Nasals, post)	1	0.500	0	==>	1
	35 (Nasal, dorso)	1	0.250	0	==>	1
	37 (Nasal (N2011)	1	0.125	0	==>	1
	42 (Frontal, dor)	1	0.200	0	==>	1
	43 (Frontal, ant)	1	0.143	0	==>	1
	49 (Squamosal (N)	1	0.500	0	==>	1
	108 (Opisthotic,)	1	0.400	0	==>	1
	144 (Supratempor)	1	0.200	0	==>	1
	156 (Articular (	1	0.222	0	==>	1
	404 (Osteoderms,)	1	0.167	0	==>	1
	416 (Dentary, ra)	1	0.333	1	-->	0
node_149 --> Batrachotomus ku	9 (Premaxilla, n)	1	0.333	0	==>	1
	16 (Maxilla, pos)	1	0.333	0	==>	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	27 (Maxilla, pos)	1	0.267	1	==>	0
	29 (Maxilla, dor)	1	0.167	1	==>	0
	51 (Squamosal (N)	1	0.250	0	==>	1
	65 (Postorbital,)	1	0.500	0	==>	1
	202 (Primordial)	1	0.333	0	-->	1
	207 (Insertion o)	1	0.200	0	==>	1
	293 (Ischium, cr)	1	0.286	1	==>	0
	376 (Calcaneum,)	1	0.286	1	-->	2
	414 (Nasal, posi)	1	0.167	0	==>	1
node_149 --> node_148	15 (Maxillary te)	1	0.250	0	==>	1
	22 (Maxilla, int)	1	0.200	0	==>	1
	45 (Quadratojuga)	1	0.250	0	==>	1
	66 (Postorbital-)	1	0.333	0	==>	1
	71 (Jugal, poste)	1	0.429	0	==>	1
	72 (Jugal, poste)	1	0.167	0	==>	1
	75 (Jugal, longi)	1	0.118	1	==>	2
	78 (Quadrate, he)	1	0.333	0	==>	1
	83 (Quadrate, do)	1	0.500	0	-->	1
	90 (Palatine, fo)	1	0.250	0	==>	1
	91 (Palatine, po)	1	0.500	0	==>	1
	103 (Parabasisph)	1	0.200	0	-->	1
	105 (Prootic-opi)	1	1.000	0	==>	1
	111 (Opisthotic,)	1	0.200	0	==>	1
	121 (Eustachian)	1	1.000	0	==>	1
	122 (External fo)	1	0.500	1	-->	2
	125 (Exit of cra)	1	0.667	0	-->	1
	129 (Perilymphat)	1	0.333	0	-->	1

	130 (Perilymphat)	1	1.000	0	-->	1
	149 (Palpebral(s)	1	0.333	0	==>	1
	154 (Dentary, do)	1	0.364	0	==>	2
	180 (Axis, ventr)	1	0.250	0	-->	1
	191 (Cervical ve)	1	0.250	2	-->	0
	197 (Dorsal vert)	1	0.182	1	==>	0
	219 (Scapula, te)	1	0.125	1	-->	0
	224 (Coracoid, p)	1	0.333	0	==>	1
	227 (Glenoid, or)	1	0.167	0	==>	1
	232 (Humerus, pr)	1	0.500	0	==>	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	281 (Pubis, obtu)	1	0.500	0	-->	1
	289 (Pubis, medi)	1	0.250	0	==>	1
	294 (Ischium, di)	1	0.143	1	-->	0
	312 (Femur, prox)	1	1.000	0	==>	1
	314 (Femur, prox)	1	0.167	1	==>	0
	341 (Fibula, pro)	1	0.143	0	==>	1
	344 (Fibula, med)	1	0.500	0	==>	1
	375 (Calcaneum,)	1	0.333	0	==>	1
	400 (Pedal ungua)	1	0.250	2	==>	0
node_148 --> Postosuchus kirk	26 (Maxilla, lat)	1	0.333	0	==>	2
	52 (Squamosal, a)	1	0.286	1	==>	2
	57 (Squamosal, d)	1	0.500	0	==>	1
	65 (Postorbital,)	1	0.500	0	==>	1
	192 (Middle cerv)	1	0.250	0	==>	1
	294 (Ischium, di)	1	0.143	0	-->	1
	391 (Metatarsal)	1	0.200	0	==>	1
node_148 --> Polonosuchus sil	26 (Maxilla, lat)	1	0.333	0	==>	2
	52 (Squamosal, a)	1	0.286	1	==>	2
	57 (Squamosal, d)	1	0.500	0	==>	1
	153 (Dentary, an)	1	0.250	0	==>	1
node_148 --> Postosuchus alis	191 (Cervical ve)	1	0.250	0	-->	2
	192 (Middle cerv)	1	0.250	0	==>	1
node_148 --> Teratosaurus sue	26 (Maxilla, lat)	1	0.333	0	==>	3
node_148 --> Rausisuchus tirad	51 (Squamosal (N)	1	0.250	0	==>	1
	159 (Articular,)	1	0.111	1	==>	0
	163 (Surangular)	1	0.667	0	==>	2
	186 (Epipophyses)	1	0.143	0	==>	1
	219 (Scapula, te)	1	0.125	0	-->	1
	281 (Pubis, obtu)	1	0.500	1	-->	0
	283 (Pubis, dist)	1	0.200	1	==>	0
	340 (Fibula, att)	1	0.167	1	==>	0
	408 (Anterior ba)	1	0.250	0	==>	1
node_148 --> Fasolasuchus ten	14 (Maxilla, fac)	1	0.125	0	==>	1
	29 (Maxilla, dor)	1	0.167	1	==>	0
	35 (Nasal, dorso)	1	0.250	1	==>	0
	154 (Dentary, do)	1	0.364	2	==>	0
	180 (Axis, ventr)	1	0.250	1	-->	0
	191 (Cervical ve)	1	0.250	0	==>	1
	197 (Dorsal vert)	1	0.182	0	==>	1
	240 (Radius, dis)	1	0.333	1	==>	0
	341 (Fibula, pro)	1	0.143	1	==>	0
	420 (Ischium, po)	1	0.250	1	-->	0
node_148 --> <CM 73372>	273 (Ilium, vent)	1	0.333	0	==>	2
	391 (Metatarsal)	1	0.200	0	==>	1
node_148 --> node_147	2 (Premaxilla, p)	1	0.083	1	==>	0
	4 (Premaxilla, p)	1	0.500	0	==>	1
	6 (Premaxillary)	1	0.200	1	==>	2
	11 (Premaxilla-m)	1	0.167	0	==>	1
	14 (Maxilla, fac)	1	0.125	0	==>	1
	22 (Maxilla, int)	1	0.200	1	==>	0
	29 (Maxilla, dor)	1	0.167	1	==>	0
	32 (Maxilla, pal)	1	0.667	1	==>	2
	35 (Nasal, dorso)	1	0.250	1	==>	0
	37 (Nasal (N2011)	1	0.125	1	==>	0
	39 (Lacrimal, he)	1	0.250	0	==>	1
	44 (Postfrontal)	1	0.167	0	==>	1
	52 (Squamosal, a)	1	0.286	1	==>	0
	55 (Squamosal, p)	1	0.250	0	==>	1
	75 (Jugal, longi)	1	0.118	2	==>	1
	76 (Quadrate (N2)	1	1.000	0	==>	1
	79 (Quadratojuga)	1	0.250	0	==>	1
	83 (Quadrate, do)	1	0.500	1	-->	0
	112 (Opisthotic,)	1	1.000	0	-->	1
	114 (Exoccipital)	1	0.500	2	==>	1
	115 (Exoccipital)	1	0.500	0	==>	1

	116 (Pneumatizat)	1	0.500	0	==>	1
	119 (Crista vest)	1	1.000	0	-->	1
	120 (Lagenar/coc)	1	1.000	0	-->	1
	124 (Basipterygo)	1	1.000	0	-->	1
	125 (Exit of cra)	1	0.667	1	-->	0
	128 (Pila antoti)	1	0.500	0	-->	1
	142 (Orbit, shap)	1	0.222	1	==>	0
	149 (Palpebral(s)	1	0.333	1	==>	0
	156 (Articular (	1	0.222	1	==>	2
	180 (Axis, ventr)	1	0.250	1	-->	0
	195 (Posterior c)	1	0.167	1	-->	0
	213 (Clavicles (	1	1.000	0	==>	2
	223 (Coracoid, p)	1	0.500	0	==>	1
	233 (Humerus, pr)	1	0.143	0	-->	1
	234 (Humerus, ec)	1	0.167	0	==>	1
	242 (Proximal ca)	1	1.000	0	==>	1
	249 (Distal carp)	1	0.333	0	==>	1
	274 (Ilium, acet)	1	0.111	0	-->	1
	275 (Ilium, dors)	1	0.250	0	==>	1
	293 (Ischium, cr)	1	0.286	1	-->	0
	297 (Ischium, pr)	2	0.500	0	-->	2
	298 (Ischium len)	1	0.200	1	-->	0
	340 (Fibula, att)	1	0.167	1	==>	0
	396 (Pedal digit)	1	1.000	0	-->	1
	397 (Metatarsal)	1	0.167	1	==>	0
	399 (Metatarsal)	1	0.300	1	-->	2
	415 (Premaxilla,)	1	0.125	0	==>	1
	419 (Ischium, do)	1	0.143	1	-->	0
node_147 --> Hesperosuchus ag	191 (Cervical ve)	1	0.250	0	==>	1
	321 (Femur, dist)	1	0.500	0	==>	1
node_147 --> Dromicosuchus gr	237 (Ulna, later)	1	0.333	1	==>	0
	274 (Ilium, acet)	1	0.111	1	-->	0
	311 (Femur, ante)	1	0.222	0	==>	1
	382 (Metatarsus,)	1	0.250	0	==>	1
node_147 --> node_146	30 (Antorbital f)	1	0.167	1	-->	0
	58 (Parietals, i)	1	0.333	0	==>	1
	59 (Parietals, u)	1	0.286	1	==>	2
	61 (Parietals, o)	1	0.333	0	==>	1
	107 (Basioccipit)	1	0.500	0	==>	1
	233 (Humerus, pr)	1	0.143	1	-->	0
	243 (Ulnare, len)	1	0.333	0	-->	1
	270 (Ilium, orie)	1	0.200	1	-->	0
	273 (Ilium, vent)	1	0.333	0	-->	2
	283 (Pubis, dist)	1	0.200	1	-->	0
	289 (Pubis, medi)	1	0.250	1	-->	0
	307 (Femur, dors)	1	0.286	0	-->	1
	319 (Femur, angl)	1	0.250	1	-->	0
	345 (Fibula, dis)	1	0.167	0	-->	1
	382 (Metatarsus,)	1	0.250	0	==>	1
	398 (Metatarsal)	1	0.250	0	-->	1
node_146 --> Sphenosuchus acu	2 (Premaxilla, p)	1	0.083	0	==>	1
	73 (Jugal, poste)	1	0.333	0	==>	1
node_146 --> node_145	27 (Maxilla, pos)	1	0.267	1	==>	0
	41 (Prefrontal (	1	0.500	0	==>	1
	50 (Squamosal, t)	1	0.333	0	-->	1
	64 (Quadratojuga)	1	0.500	0	-->	1
	90 (Palatine, fo)	1	0.250	1	==>	0
	154 (Dentary, do)	1	0.364	2	==>	0
	216 (Scapula, le)	1	0.250	0	-->	1
node_145 --> Dibothrosuchus e	50 (Squamosal, t)	1	0.333	1	-->	0
	191 (Cervical ve)	1	0.250	0	==>	1
	265 (Ilium, cres)	1	0.429	1	==>	0
	413 (Maxilla wit)	1	0.222	0	==>	1
node_145 --> Terrestrisuchus	75 (Jugal, longi)	1	0.118	1	==>	0
	243 (Ulnare, len)	1	0.333	1	-->	0
	323 (Femur, bone)	1	0.333	0	==>	1
	387 (Metatarsal)	1	0.500	0	==>	1
	399 (Metatarsal)	1	0.300	2	-->	1
node_145 --> node_144	6 (Premaxillary)	1	0.200	2	==>	1
	30 (Antorbital f)	1	0.167	0	-->	1
	34 (Nasals, post)	1	0.500	1	==>	0
	42 (Frontal, dor)	1	0.200	1	==>	0
	59 (Parietals, u)	1	0.286	2	==>	0
	60 (Parietals, p)	1	1.000	0	==>	1
	99 (Parabasisphe)	1	0.500	0	-->	1
	100 (Parabasisph)	1	0.333	1	-->	0

	109 (Opisthotic,)	1	0.500	0	==>	1
	121 (Eustachian)	1	1.000	1	-->	2
	144 (Supratempor)	1	0.200	1	==>	0
	153 (Dentary, an)	1	0.250	0	-->	1
	223 (Coracoid, p)	1	0.500	1	==>	2
	224 (Coracoid, p)	1	0.333	1	==>	0
	278 (Pubis, leng)	1	0.200	1	-->	0
	291 (Ischium, me)	1	0.286	1	==>	0
	296 (Ischium, ve)	1	0.200	0	-->	1
	321 (Femur, dist)	1	0.500	0	==>	1
	404 (Osteoderms,)	1	0.167	1	-->	0
	407 (Presacral o)	1	0.300	1	-->	0
	408 (Anterior ba)	1	0.250	0	-->	1
node_144 --> Litargosuchus le	61 (Parietals, o)	1	0.333	1	==>	0
	73 (Jugal, poste)	1	0.333	0	==>	1
	210 (Middle caud)	1	0.167	1	==>	0
node_144 --> node_143	299 (Tibia (or f)	1	0.143	0	==>	1
	27 (Maxilla, pos)	1	0.267	0	==>	1
	53 (Squamosal, d)	1	1.000	0	==>	1
	80 (Quadrate, bo)	1	1.000	0	-->	1
	126 (Supraoccipi)	1	0.250	1	-->	0
	199 (Middle dors)	1	0.167	0	-->	1
	216 (Scapula, le)	1	0.250	1	-->	0
	227 (Glenoid, or)	1	0.167	1	-->	0
	241 (Radius, len)	1	0.125	0	-->	1
	398 (Metatarsal)	1	0.250	1	-->	0
	405 (Osteoderms,)	1	0.200	0	-->	1
	407 (Presacral o)	1	0.300	0	-->	2
	409 (Ventral car)	1	0.333	0	-->	1
node_143 --> Kayentasuchus wa	2 (Premaxilla, p)	1	0.083	0	==>	1
	51 (Squamosal (N)	1	0.250	0	==>	1
	155 (Dentary, an)	1	0.250	0	==>	1
	160 (Dentary-spl)	1	0.250	0	==>	1
	308 (Femur, ante)	1	0.286	0	==>	1
	313 (Femur, post)	1	0.250	0	==>	1
node_143 --> node_142	4 (Premaxilla, p)	1	0.500	1	==>	2
	91 (Palatine, po)	1	0.500	1	==>	0
	171 (Tooth crown)	1	0.143	0	-->	1
	307 (Femur, dors)	1	0.286	1	-->	0
node_142 --> Alligator missis	6 (Premaxillary)	1	0.200	1	==>	2
	11 (Premaxilla-m)	1	0.167	1	==>	0
	12 (Premaxilla-m)	1	0.300	1	==>	0
	22 (Maxilla, int)	1	0.200	0	==>	1
	50 (Squamosal, t)	1	0.333	1	==>	0
	75 (Jugal, longi)	1	0.118	1	==>	0
	81 (Quadrate, di)	1	0.500	0	==>	1
	107 (Basioccipit)	1	0.500	1	==>	0
	108 (Opisthotic,)	1	0.400	1	==>	0
	109 (Opisthotic,)	1	0.500	1	==>	0
	131 (Foramen for)	1	0.400	1	==>	0
	136 (Antorbital)	1	0.500	1	==>	0
	140 (External na)	1	0.250	0	==>	1
	144 (Supratempor)	1	0.200	0	==>	1
	156 (Articular (	2	0.222	2	==>	0
	157 (Articular,)	1	0.143	1	==>	0
	159 (Articular,)	1	0.111	1	==>	0
	168 (Tooth, serr)	1	0.250	1	==>	0
	191 (Cervical ve)	1	0.250	0	==>	1
	192 (Middle cerv)	1	0.250	0	==>	1
	219 (Scapula, te)	1	0.125	0	==>	1
	221 (Scapulocora)	1	0.333	1	==>	0
	232 (Humerus, pr)	1	0.500	1	==>	0
	233 (Humerus, pr)	1	0.143	0	==>	1
	238 (Ulna, dista)	1	0.250	1	==>	0
	243 (Ulnare, len)	1	0.333	1	-->	0
	265 (Ilium, cres)	1	0.429	1	==>	0
	275 (Ilium, dors)	1	0.250	1	==>	0
	282 (Pubis, leng)	1	0.167	1	==>	0
	298 (Ischium len)	1	0.200	0	==>	1
	311 (Femur, ante)	1	0.222	0	==>	1
	371 (Calcaneum,)	1	0.333	2	==>	1
	377 (Calcaneum,)	1	0.500	2	==>	1
	382 (Metatarsus,)	1	0.250	1	==>	0
	383 (Longest met)	1	0.200	0	==>	1
	394 (Metatarsal)	1	0.500	0	==>	1
	403 (Osteoderms,)	1	0.250	1	==>	0

	406 (Osteoderms,)	1	0.500	0	==>	1
	407 (Presacral o	1	0.300	2	-->	
	(01)					
	412 (Gastralia (	1	0.400	0	==>	1
node_142 -->	Orthosuchus stor	17	0.333	0	==>	1
	154 (Dentary, do)	1	0.364	0	==>	2
	241 (Radius, len)	1	0.125	1	-->	0
	246 (Metacarpals)	1	0.333	0	==>	1
	274 (Ilium, acet)	1	0.111	1	==>	0
	305 (Femur, femo)	1	0.333	1	==>	0
node_142 -->	node_141	14	0.125	1	==>	0
	73 (Jugal, poste)	1	0.333	0	-->	1
	160 (Dentary-spl)	1	0.250	0	==>	1
	162 (Mandibular)	1	0.500	0	==>	2
	171 (Tooth crown)	1	0.143	1	-->	0
	180 (Axis, ventr)	1	0.250	0	==>	1
	216 (Scapula, le)	1	0.250	0	-->	1
	217 (Scapula, en)	1	0.200	1	-->	0
	319 (Femur, angl)	1	0.250	0	-->	1
	353 (Distal tars)	1	0.250	1	-->	0

Tree description:

Unrooted tree(s) rooted using outgroup method

Optimality criterion = parsimony

Character-status summary:

Of 422 total characters:

19 characters are of type 'ord' (Wagner)

403 characters are of type 'unord'

All characters have equal weight

4 characters are parsimony-uninformative

Number of parsimony-informative characters = 418

Gaps are treated as "missing"

Multistate taxa interpretation depends on "{}" versus "()" designation

("min" values for CI, RI, and RC are minimum-possible character lengths)

Character-state optimization: Delayed transformation (DELTRAN)

Tree number 1 (rooted using user-specified outgroup)

Tree length = 1502

Consistency index (CI) = 0.3422

Homoplasy index (HI) = 0.6711

CI excluding uninformative characters = 0.3405

HI excluding uninformative characters = 0.6595

Retention index (RI) = 0.7471

Rescaled consistency index (RC) = 0.2557

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                                     /- Mesosuchus browni
/-----166
|                                     \- Prolacerta broomi
|
|                                     /- Proterosuchus spp.
|/-----92
||                                     \- Archosaurus rossicus
||
|| /----- Erythrosuchus africanus
165|
| | /----- Vancleavea campi
| | |
| | | /- Chanaresuchus bonapartei
164| /-----93
| | | \- Tropidosuchus romeri
| | |
| | | /----- Euparkeria capensis
163| |
| | | /- Smilosuchus gregorii
| | | /94
| | | | \- Pseudopalatus pristinus
| | | /-----95
| | | | \--- Parasuchus hislopi
| | | |
162| | | /- Velociraptor mongoliensis
| | | | /96
| | | | | \- Allosaurus fragilis
| | | | |
| | | | | 97

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|| | |\--- Dilophosaurus wetherilli
|| | /98
|| | | \---- Coelophysis bauri
|| | 99
|| | | \----- Tawa hallae
|| | 100
|| | | \----- Eoraptor lunensis
161 | 101
|| | |\----- Staurikosaurus pricei
|| | 102
|| | | \----- Herrerasaurus ischigualastensis
|| | |
|| | 105 | /--- Saturnalia tupiniquim
|| | | |
|| | | |\-----104 /- Efraasia minor
|| | | | 103
|| | | | \- Plateosaurus troosingsensis
|| | 108
|| | | /--- Eocursor parvus
|| | | |
|| | | +--- Scutellosaurus lawleri
|| | | |
|| | | |\-----107--- Lesothosaurus diagnosticus
|| | 113
|| | | /- Pisanosaurus mertii
160 | 106
|| | | \- Heterodontosaurus tucki
|| | |
|| | | /----- Lewisuchus admixtus <hypodigma>
|| | | |
|| | | |\-----112 /---- Asilisaurus kongwe
|| | 114
|| | | 111 /--- Eucoelophysis baldwini
|| | | |
|| | | 110 /- Sacisaurus agudoensis
|| | | 109
|| | | | \- Silesaurus opolensis
|| | 117 |
|| | | \----- Lagosuchus talampayensis
|| | | |
|| | | | /--- Lagerpeton chanarensis
|| | | | |
|| | | | |\-----116 /- Dromomeron gregorii
|| | | | | 115
|| | | | | \- Dromomeron romeri
|| | | /-----120
|| | | | /- Eudimorphodon ranzii
|| | | | +-----118
|| | | | | \- Dimorphodon macronyx
|| | | | |
|| | | | | /- Dongusuchus efremovi <PIN 952/15.1>
|| | | | | |
|| | | | | \-----119- Yarasuchus deccanensis
|| | | | | |
|| | | | | | \- Teleocrater rhadinus
|| | | | | |
|| | | | | | /- Riojasuchus tenuisiceps
|| | | 159 | | 121
|| | | | | | \- Venaticosuchus rusconii
|| | | | | | |
|| | | | | | | /-----122
|| | | | | | | | \--- Ornithosuchus woodwardi
|| | | | | | | |
|| | | | | | | | /- Stagonolepis robertsoni
|| | | | | | | | |
|| | | | | | | | | 123
|| | | | | | | | | | \- Longosuchus meadei
|| | | | | | | | | | |
|| | | | | | | | | | | 124
|| | | | | | | | | | | | \--- Aetosaurus ferratus
|| | | | 158 | | 125
|| | | | | | | | | | | | | \---- Revueltoosaurus callenderi
|| | | | | | | | | | | | | |
|| | | | | | | | | | | | | | /-----127
|| | | | | | | | | | | | | | | /- Parringtonia gracilis <hypodigma>
|| | | | | | | | | | | | | | | \--126
|| | | | | | | | | | | | | | | | \- Erpetosuchus granti
|| | | | | | | | | | | | | | | |
|| | | | | | | | | | | | | | | | /- Gracilisuchus stipanicicorum
|| | | 128

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|| | \- Yonghesuchus sangbiensis
157 /-----129
| | \--- Turfanosuchus dabanensis
| | /----- Ticinosuchus ferox
| | |
| | | /- Shuvosaurus inexpectatus
| | | 130
156 | | | \- Effigia okeeffeae
| | | 131
| | | | \--- Sillosuchus longicervix
| | | | 132
| | | | | \---- Lotosaurus adentus
| | | | | 134
155 | | | | /- Poposaurus gracilis <YPM 57100>
| | | | | \--133
| | | | | 136 \- Poposaurus gracilis <FMNH 357>
| | | | | |
| | | | | /- Xilousuchus sapingensis
| | | | | \--137 \--135
| | | | | | \- Arizonasaurus babbitti
| | | | | |
| | | | | \----- Qianosuchus mixtus
154 /----- Mandasuchus tanyauchen
| |
| | /----- \- Huenesuchus chiniquensis <hypodigma>
| | | 138
153 | | | \- Stagonosuchus nyassicus
| | |
| | | /- Saurosuchus galilei
| | | 139
152 | | | \- Luperosuchus fractus
| | | /-----140
| | | | \--- Sanga Pascoal specimen <UFRGS-PV 156T>
| | | |
| | | | /----- Pagosvenator candelariensis
151 | | |
| | | | /----- Batrachotomus kupferzellensis
| | | |
150 | | | /----- Postosuchus kirkpatricki
| | | |
| | | | +----- Polonosuchus silesiacus
| | | |
149 +----- Postosuchus alisonae
| | |
| | | +----- Teratosaurus suevicus
| | |
| | | +----- Rausisuchus tiradentes
| | |
148 ----- Fasolasuchus tenax
|
| +----- <CM 73372>
|
| /----- Hesperosuchus agilis <AMNH FR-6758>
| |
| | +----- Hesperosuchus agilis <CM 29894>
| |
| | +----- Dromicosuchus gallator
147
| | /----- Sphenosuchus acutus
| |
| | /----- Dibothrosuchus elaphros
146 |
| | +----- Terrestrisuchus gracilis
| |
145 /----- Litargosuchus leptorhynchus
| |
| | /----- Kayentasuchus walkeri
144 |
| | /--- Alligator mississippiensis
143 |
| | +--- Orthosuchus stormbergi
142
| | /- Baroqueosuchus haughtoni
141

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Apomorphy lists:

Branch	Character	Steps	CI	Change
node_166 --> Mesosuchus brown	2 (Premaxilla, p)	1	0.083	0 --> 1
	15 (Maxillary te)	1	0.250	0 ==> 1
	58 (Parietals, i)	1	0.333	0 ==> 1
	96 (Parabasisphe)	1	0.500	0 ==> 1
	169 (Extensive p)	1	0.500	0 ==> 1
	176 (Teeth on tr)	1	0.500	0 --> 1
	186 (Epiphyses)	1	0.143	0 ==> 1
node_166 --> Prolacerta broom	126 (Supraoccipi)	1	0.250	1 ==> 0
	146 (Postparieta)	1	0.500	0 ==> 1
	181 (Cervical 3-)	1	0.077	0 ==> 1
	183 (Third cervi)	1	0.143	0 ==> 1
	184 (Anterior to)	1	0.250	0 ==> 1
	197 (Dorsal vert)	1	0.182	0 --> 1
	397 (Metatarsal)	1	0.167	0 --> 1
node_166 --> node_165	63 (Parietal for)	1	1.000	0 ==> 1
	70 (Jugal-quadra)	1	1.000	0 ==> 1
	88 (Ectopterygoi)	1	1.000	0 ==> 1
	92 (Laterospheno)	1	1.000	0 ==> 1
	136 (Antorbital)	1	0.500	0 ==> 1
	138 (Lateral (=e)	1	0.333	0 ==> 1
	168 (Tooth, serr)	1	0.250	0 ==> 1
node_165 --> node_92	6 (Premaxillary)	1	0.200	2 ==> 3
	8 (Premaxilla (N)	1	0.500	0 ==> 1
node_92 --> Proterosuchus sp	71 (Jugal, poste)	1	0.429	0 --> 3
	141 (Posttempora)	1	0.250	0 --> 1
	142 (Orbit, shap)	1	0.222	0 --> 1
	197 (Dorsal vert)	1	0.182	0 --> 1
	345 (Fibula, dis)	1	0.167	1 --> 0
	397 (Metatarsal)	1	0.167	0 --> 1
	node_165 --> node_164	31 (Maxilla, ant)	1	0.200	1 ==> 0
93 (Basipterygoi)		1	0.250	0 ==> 1
94 (Prootic, rid)		1	0.500	0 ==> 1
97 (Parabasisphe)		1	1.000	0 ==> 1
137 (Antorbital)		1	1.000	0 --> 1
145 (Supratempor)		1	1.000	0 ==> 1
164 (Dentary, po)		1	1.000	0 ==> 1
174 (Tooth impla)		1	0.500	0 ==> 1
176 (Teeth on tr)		1	0.500	0 --> 1
203 (Second prim)		1	1.000	0 ==> 1
217 (Scapula, en)		1	0.200	0 ==> 1
220 (Scapula, ac)		1	0.250	0 ==> 1
221 (Scapulocora)		1	0.333	1 ==> 0
346 (Tarsals 1 a)		1	1.000	0 ==> 1
369 (Astragalus-)		1	1.000	0 ==> 1
381 (Centrale (N)		1	1.000	0 ==> 1
393 (Metatarsal)		1	0.500	0 ==> 1
node_164 --> Erythrosuchus af	2 (Premaxilla, p)	1	0.083	0 --> 1
	12 (Premaxilla-m)	1	0.300	0 ==> 2
	69 (Jugal, anter)	1	0.286	0 --> 1
	72 (Jugal, poste)	1	0.167	0 ==> 1
	122 (External fo)	1	0.500	0 ==> 1
	126 (Supraoccipi)	1	0.250	1 ==> 0
	142 (Orbit, shap)	1	0.222	0 --> 1
	150 (Separate os)	1	0.333	1 --> 0
	175 (Palatal tee)	1	0.143	0 ==> 1
	196 (Cervical ri)	1	0.200	0 ==> 1
	230 (Humerus, ap)	1	0.250	0 ==> 1
	235 (Humerus, di)	1	0.250	0 ==> 1
	238 (Ulna, dista)	1	0.250	0 ==> 1
	251 (Metacarpal)	1	0.200	0 ==> 1
	268 (Ilium, ante)	1	0.500	0 --> 1
	270 (Ilium, orie)	1	0.200	0 ==> 1
	314 (Femur, prox)	1	0.167	0 --> 1
	395 (Metatarsal)	1	0.250	0 ==> 1
	node_164 --> node_163	146 (Postparieta)	1	0.500	0 ==> 1
177 (Postaxial i)		1	0.500	0 ==> 1
234 (Humerus, ec)		1	0.167	0 ==> 1
260 (Metacarpal)		1	1.000	0 --> 1
318 (Femur, dist)		1	1.000	0 ==> 1
401 (Osteoderms,)		1	0.250	0 ==> 1

node_163 --> Vancleavea campi	1 (Premaxilla, a)	1	0.167	0	-->	1
	2 (Premaxilla, p)	1	0.083	0	-->	1
	11 (Premaxilla-m)	1	0.167	0	==>	1
	15 (Maxillary te)	1	0.250	0	==>	1
	44 (Postfrontal)	1	0.167	0	-->	1
	78 (Quadrate, he)	1	0.333	0	==>	1
	138 (Lateral (=e)	1	0.333	1	==>	0
	140 (External na)	1	0.250	0	-->	1
	167 (Dentition (	1	0.200	0	==>	1
	186 (Epipophyses)	1	0.143	0	==>	1
	363 (Astragalus,)	1	0.143	0	==>	1
	403 (Osteoderms,)	1	0.250	0	-->	1
	405 (Osteoderms,)	1	0.200	0	-->	1
	409 (Ventral car)	1	0.333	0	-->	1
	410 (Dorsal oste)	1	0.200	0	-->	1
	412 (Gastralia (	1	0.400	0	==>	2
	417 (Proximal en)	1	0.667	1	==>	0
node_163 --> node_162	48 (Squamosal, p)	1	0.333	0	==>	1
	96 (Parabasisphe)	1	0.500	0	-->	1
	150 (Separate os)	1	0.333	1	-->	0
	268 (Ilium, ante)	1	0.500	0	-->	1
	305 (Femur, femo)	1	0.333	0	==>	1
	315 (Femur, ridg)	1	1.000	0	-->	1
	343 (Fibula, pro)	1	0.250	0	==>	1
	365 (Astragalus,)	1	1.000	0	==>	1
	377 (Calcaneum,)	1	0.500	0	==>	1
node_162 --> node_93	1 (Premaxilla, a)	1	0.167	0	-->	1
	27 (Maxilla, pos)	1	0.267	2	==>	0
	44 (Postfrontal)	1	0.167	0	-->	1
	47 (Quadratojuga)	1	1.000	0	==>	1
	55 (Squamosal, p)	1	0.250	0	==>	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	140 (External na)	1	0.250	0	-->	1
	338 (Tibia, late)	1	0.500	0	==>	1
	388 (Metatarsal)	1	1.000	0	==>	1
	394 (Metatarsal)	1	0.500	0	==>	1
	399 (Metatarsal)	2	0.300	0	==>	2
node_93 --> Chanaresuchus bo	14 (Maxilla, fac)	1	0.125	0	==>	1
	314 (Femur, prox)	1	0.167	0	==>	1
	410 (Dorsal oste)	1	0.200	0	-->	1
node_93 --> Tropidosuchus ro	39 (Lacrimal, he)	1	0.250	0	==>	1
	181 (Cervical 3-)	1	0.077	0	==>	1
	363 (Astragalus,)	1	0.143	0	==>	1
node_162 --> node_161	123 (Parabasisph)	1	1.000	0	-->	1
	159 (Articular,)	1	0.111	0	==>	1
	191 (Cervical ve)	1	0.250	0	==>	1
	197 (Dorsal vert)	1	0.182	0	==>	1
	215 (Interclavic)	1	1.000	0	-->	1
	341 (Fibula, pro)	1	0.143	1	==>	0
	345 (Fibula, dis)	1	0.167	1	==>	0
	360 (Astragalus,)	1	1.000	0	==>	1
	376 (Calcaneum,)	1	0.286	0	==>	1
	402 (Postaxial o)	1	1.000	0	-->	1
node_161 --> Euparkeria capen	2 (Premaxilla, p)	1	0.083	0	-->	1
	6 (Premaxillary)	1	0.200	2	==>	0
	31 (Maxilla, ant)	1	0.200	0	==>	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	146 (Postparieta)	1	0.500	1	==>	0
	177 (Postaxial i)	1	0.500	1	==>	0
	220 (Scapula, ac)	1	0.250	1	-->	0
	251 (Metacarpal)	1	0.200	0	==>	1
	404 (Osteoderms,)	1	0.167	0	-->	1
	407 (Presacral o)	1	0.300	0	==>	1
	415 (Premaxilla,)	1	0.125	0	==>	1
node_161 --> node_160	96 (Parabasisphe)	1	0.500	1	==>	2
	98 (Parabasisphe)	1	1.000	0	==>	1
	175 (Palatal tee)	1	0.143	0	==>	1
	368 (Astragalus-)	1	0.667	0	==>	1
	371 (Calcaneum,)	1	0.333	0	==>	1
	374 (Calcaneum,)	1	0.500	0	==>	1
	380 (Calcaneum,)	1	1.000	0	==>	1
	411 (Dorsal oste)	1	0.333	0	-->	1
node_160 --> node_95	6 (Premaxillary)	1	0.200	2	==>	3
	10 (Premaxilla,)	1	1.000	0	==>	1
	14 (Maxilla, fac)	1	0.125	0	==>	1
	15 (Maxillary te)	1	0.250	0	-->	1

	19 (Maxilla, ant)	1	1.000	0	==>	1
	46 (Quadratojuga)	1	1.000	0	==>	1
	77 (Quadrate, do)	1	1.000	0	==>	1
	95 (Parabasisphe)	1	0.286	0	-->	1
	139 (External na)	1	1.000	0	==>	1
	140 (External na)	1	0.250	0	-->	1
	150 (Separate os)	1	0.333	0	==>	1
	160 (Dentary-spl)	1	0.250	0	==>	1
	167 (Dentition (	1	0.200	0	==>	1
	196 (Cervical ri)	1	0.200	0	-->	1
	220 (Scapula, ac)	1	0.250	1	-->	0
	226 (Coracoid, a)	1	1.000	0	==>	1
	234 (Humerus, ec)	1	0.167	1	==>	0
	339 (Fibula, att)	1	0.200	0	==>	1
	378 (Calcaneum,)	1	0.400	0	==>	1
node_95 --> node_94	104 (Basitubera)	1	1.000	0	==>	1
	139 (External na)	1	1.000	1	==>	2
	305 (Femur, femo)	1	0.333	1	-->	0
	340 (Fibula, att)	1	0.167	0	==>	1
	386 (Metatarsal)	1	1.000	0	==>	1
	400 (Pedal unguia)	1	0.250	0	-->	2
node_94 --> Smilosuchus greg	210 (Middle caud)	1	0.167	0	-->	1
node_94 --> Pseudopalatus pr	72 (Jugal, poste)	1	0.167	0	==>	1
	352 (Distal tars)	1	0.333	0	-->	1
	405 (Osteoderms,)	1	0.200	0	-->	1
node_95 --> Parasuchus hislo	217 (Scapula, en)	1	0.200	1	==>	0
	219 (Scapula, te)	1	0.125	0	==>	1
	400 (Pedal unguia)	1	0.250	0	-->	1
node_160 --> node_159	27 (Maxilla, pos)	1	0.267	2	==>	0
	32 (Maxilla, pal)	1	0.667	0	==>	1
	95 (Parabasisphe)	1	0.286	0	-->	2
	118 (Lagenar/coc)	1	1.000	0	==>	1
	122 (External fo)	1	0.500	0	==>	1
	137 (Antorbital)	1	1.000	1	==>	2
	222 (Coracoid (N)	1	0.250	0	==>	1
	225 (Coracoid, p)	1	0.333	0	==>	1
	237 (Ulna, later)	1	0.333	0	==>	1
	245 (Longest met)	1	0.333	0	==>	1
	300 (Femur, prox)	1	0.600	0	==>	1
	366 (Astragalus,)	1	0.333	0	==>	1
node_159 --> node_120	114 (Exoccipital)	1	0.500	0	==>	1
	183 (Third cervi)	1	0.143	0	==>	1
	191 (Cervical ve)	1	0.250	1	==>	0
	197 (Dorsal vert)	1	0.182	1	==>	0
	255 (Manual digi)	1	1.000	0	==>	1
	257 (Manual digi)	1	0.500	0	==>	1
	258 (Manual digi)	1	0.375	0	-->	1
	341 (Fibula, pro)	1	0.143	0	==>	1
	347 (Distal tars)	1	1.000	0	==>	1
	348 (Distal tars)	1	1.000	0	==>	1
	357 (Astragalus,)	1	1.000	0	==>	1
	361 (Astragalus,)	1	1.000	0	==>	1
	382 (Metatarsus,)	1	0.250	0	==>	1
	401 (Osteoderms,)	1	0.250	1	==>	0
node_120 --> node_117	412 (Gastralia (	1	0.400	0	==>	1
	296 (Ischium, ve)	1	0.200	0	-->	1
	299 (Tibia (or f)	1	0.143	0	-->	1
	313 (Femur, post)	1	0.250	0	==>	1
	320 (Femur, medi)	1	0.167	0	-->	1
	328 (Tibia, prox)	1	0.750	0	==>	1
	383 (Longest met)	1	0.200	0	==>	1
	398 (Metatarsal)	1	0.250	0	==>	1
	399 (Metatarsal)	2	0.300	0	==>	2
node_117 --> node_114	93 (Basipterygoi)	1	0.250	1	-->	0
	111 (Opisthotic,)	1	0.200	0	-->	1
	179 (Axis, dorsa)	1	0.250	0	-->	1
	227 (Glenoid, or)	1	0.167	0	-->	1
	282 (Pubis, leng)	1	0.167	0	==>	1
	286 (Pubis, prox)	1	0.500	0	==>	1
	287 (Ischium-pub)	1	0.400	0	==>	1
	297 (Ischium, pr)	1	0.500	0	==>	1
	298 (Ischium len)	1	0.200	0	==>	1
	301 (Femur, prox)	1	0.333	1	==>	0
	308 (Femur, ante)	1	0.286	0	==>	1
	311 (Femur, ante)	1	0.222	0	==>	1
	338 (Tibia, late)	1	0.500	0	==>	1

	356 (Astragalus,)	1	1.000	0	==>	1
	374 (Calcaneum,)	1	0.500	1	-->	0
node_114 --> node_113	15 (Maxillary te)	1	0.250	0	-->	1
	84 (Pterygoid-ec)	1	1.000	0	-->	1
	87 (Ectopterygoi)	1	1.000	0	-->	1
	101 (Parabasisph)	1	0.500	0	==>	1
	133 (Auricular r)	1	0.500	0	==>	1
	159 (Articular,)	1	0.111	1	-->	0
	178 (Atlantal ar)	1	0.500	0	==>	1
	265 (Ilium, cres)	1	0.429	0	==>	2
	278 (Pubis, leng)	1	0.200	0	==>	1
	291 (Ischium, me)	1	0.286	0	==>	1
	307 (Femur, dors)	1	0.286	0	==>	1
	334 (Tibia, post)	1	0.500	0	==>	1
	342 (Fibula, ant)	1	1.000	0	==>	1
	345 (Fibula, dis)	1	0.167	0	-->	1
	384 (Metatarsals)	1	1.000	0	==>	1
	391 (Metatarsal)	1	0.200	0	==>	1
	395 (Metatarsal)	1	0.250	0	==>	1
node_113 --> node_108	44 (Postfrontal)	1	0.167	0	-->	1
	71 (Jugal, poste)	1	0.429	0	-->	3
	115 (Exoccipital)	1	0.500	0	==>	1
	141 (Posttempora)	1	0.250	0	-->	1
	144 (Supratempor)	1	0.200	0	==>	1
	186 (Epiphyses)	1	0.143	0	==>	1
	212 (Forelimb-hi)	1	0.200	0	==>	1
	214 (Interclavic)	1	1.000	0	-->	1
	222 (Coracoid (N)	1	0.250	1	==>	0
	230 (Humerus, ap)	1	0.250	0	==>	1
	233 (Humerus, pr)	1	0.143	0	==>	1
	241 (Radius, len)	1	0.125	0	==>	1
	258 (Manual digi)	1	0.375	1	-->	2
	273 (Ilium, vent)	1	0.333	0	-->	2
	274 (Ilium, acet)	1	0.111	0	-->	1
	297 (Ischium, pr)	1	0.500	1	==>	2
	304 (Femur, vent)	1	1.000	0	-->	2
	316 (Femur, four)	1	0.400	0	==>	1
	317 (Fourth troc)	1	0.500	0	==>	1
	328 (Tibia, prox)	1	0.750	1	==>	2
	336 (Tibia, post)	1	0.250	0	==>	1
	362 (Astragalus,)	1	1.000	0	==>	1
	363 (Astragalus,)	1	0.143	0	-->	1
	373 (Calcaneum,)	1	0.250	0	==>	1
	378 (Calcaneum,)	1	0.400	0	==>	2
node_108 --> node_105	9 (Premaxilla, n)	1	0.333	0	-->	1
	12 (Premaxilla-m)	1	0.300	0	==>	1
	38 (Lacrimal (N2)	1	0.500	0	==>	1
	111 (Opisthotic,)	1	0.200	1	==>	0
	165 (Splenic, f)	1	1.000	0	==>	1
	187 (Epiphyses)	1	1.000	0	==>	1
	195 (Posterior c)	1	0.167	0	-->	1
	209 (First primo)	1	1.000	0	==>	1
	247 (Manual leng)	1	0.667	0	==>	1
	249 (Distal carp)	1	0.333	0	==>	1
	253 (Manual digi)	1	0.500	0	==>	1
	254 (Metacarpal)	1	0.500	0	==>	1
	283 (Pubis, dist)	1	0.200	0	==>	1
	293 (Ischium, cr)	1	0.286	0	==>	2
	322 (Femur, surf)	1	0.333	0	==>	1
	350 (Distal tars)	1	0.500	0	==>	1
	351 (Distal tars)	1	1.000	0	==>	1
	359 (Astragalus,)	1	0.500	0	==>	1
node_105 --> node_102	6 (Premaxillary)	1	0.200	2	-->	1
	15 (Maxillary te)	1	0.250	1	==>	0
	100 (Parabasisph)	1	0.333	0	==>	1
	211 (Distal caud)	1	0.333	0	==>	1
	231 (Humerus, le)	1	0.333	0	==>	1
	246 (Metacarpals)	1	0.333	0	==>	1
	250 (Extensor pi)	1	0.500	0	==>	1
	261 (Metacarpal)	1	1.000	0	==>	1
	263 (Manual digi)	1	1.000	0	-->	1
	284 (Pubis, expa)	1	0.333	0	==>	1
	289 (Pubis, medi)	1	0.250	0	-->	1
	331 (Tibia, late)	1	0.500	0	==>	1
node_102 --> node_101	293 (Ischium, cr)	1	0.286	2	==>	1
	336 (Tibia, post)	1	0.250	1	==>	0

node_101 --> node_100	11 (Premaxilla-m)	1	0.167	0	-->	1
	36 (Nasal (N2011))	1	0.500	0	-->	1
	39 (Lacrimal, he)	1	0.250	0	-->	1
	69 (Jugal, anter)	1	0.286	0	-->	1
	271 (Ilium, dist)	1	0.333	0	==>	1
	272 (Ilium, ridg)	1	0.250	0	==>	1
	277 (Ilium, isch)	1	1.000	0	==>	1
	311 (Femur, ante)	1	0.222	1	==>	0
node_100 --> node_99	1 (Premaxilla, a)	1	0.167	0	==>	1
	22 (Maxilla, int)	1	0.200	0	-->	1
	68 (Jugal, anter)	1	0.500	0	==>	1
	181 (Cervical 3-)	1	0.077	0	-->	1
	182 (Cervical ve)	1	0.500	0	-->	1
	184 (Anterior to)	1	0.250	0	==>	1
	185 (Anterior ce)	1	0.500	0	==>	1
	188 (Cervical ve)	1	0.667	0	==>	1
	218 (Scapula, bl)	1	0.333	0	-->	1
	247 (Manual leng)	1	0.667	1	-->	2
	300 (Femur, prox)	1	0.600	1	-->	2
	314 (Femur, prox)	1	0.167	0	-->	2
	317 (Fourth troc)	1	0.500	1	==>	0
	323 (Femur, bone)	1	0.333	0	-->	1
	332 (Tibia, late)	1	1.000	0	==>	1
	379 (Calcaneum,)	1	0.500	0	-->	1
node_99 --> node_98	3 (Premaxilla, p)	1	0.500	0	==>	1
	5 (Premaxilla, p)	1	0.167	0	==>	1
	111 (Opisthotic,)	1	0.200	0	==>	1
	205 (Trunk verte)	1	0.200	0	-->	1
	206 (Caudal vert)	1	0.200	0	==>	1
	207 (Insertion o)	1	0.200	0	==>	1
	213 (Clavicles (	1	1.000	0	-->	1
	248 (Medialmost)	1	1.000	0	==>	1
	256 (Metacarpal)	1	0.250	0	-->	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	271 (Ilium, dist)	1	0.333	1	==>	2
	276 (Ilium, dors)	1	0.500	0	==>	1
	294 (Ischium, di)	1	0.143	0	-->	1
	295 (Ischium, ob)	1	0.500	0	-->	1
	329 (Tibia, prox)	1	1.000	0	==>	1
	333 (Tibia, late)	1	0.200	0	==>	1
	335 (Tibia, post)	1	0.500	0	==>	1
	336 (Tibia, post)	1	0.250	0	==>	1
	350 (Distal tars)	1	0.500	1	==>	0
	359 (Astragalus,)	1	0.500	1	==>	0
	385 (Metatarsal)	1	1.000	0	==>	1
node_98 --> node_97	28 (Maxilla, pro)	1	1.000	0	==>	1
	110 (Opisthotic,)	1	0.333	0	==>	1
	131 (Foramen for)	1	0.400	0	==>	2
	179 (Axis, dorsa)	1	0.250	1	==>	0
	188 (Cervical ve)	1	0.667	1	==>	2
	222 (Coracoid (N)	1	0.250	0	==>	1
	299 (Tibia (or f)	1	0.143	1	==>	0
	308 (Femur, ante)	1	0.286	1	==>	2
	334 (Tibia, post)	1	0.500	1	==>	2
	421 (Ischium, ve)	1	0.500	0	-->	1
node_97 --> node_96	11 (Premaxilla-m)	1	0.167	1	==>	0
	14 (Maxilla, fac)	1	0.125	0	==>	1
	37 (Nasal (N2011))	1	0.125	0	-->	1
	68 (Jugal, anter)	1	0.500	1	==>	0
	86 (Ectopterygoi)	1	1.000	0	-->	1
	208 (Sacral ribs)	1	0.250	0	==>	1
	217 (Scapula, en)	1	0.200	1	==>	0
	259 (Metacarpal)	1	1.000	0	==>	1
	272 (Ilium, ridg)	1	0.250	1	==>	0
	289 (Pubis, medi)	1	0.250	1	==>	2
	305 (Femur, femo)	1	0.333	1	==>	2
	314 (Femur, prox)	1	0.167	2	==>	0
	356 (Astragalus,)	1	1.000	1	==>	2
	383 (Longest met)	1	0.200	1	==>	0
node_96 --> Velociraptor mon	12 (Premaxilla-m)	1	0.300	1	==>	0
	16 (Maxilla, pos)	1	0.333	0	-->	1
	56 (Squamosal, v)	1	0.200	0	==>	1
	69 (Jugal, anter)	1	0.286	1	==>	0
	72 (Jugal, poste)	1	0.167	0	==>	1
	108 (Opisthotic,)	1	0.400	0	==>	1
	116 (Pneumatizat)	1	0.500	0	-->	1

	117 (Vestibule,)	1	0.200	0	-->	1
	200 (Sacral cent)	1	0.250	0	==>	1
	204 (Sacral vert)	1	0.500	0	==>	1
	223 (Coracoid, p)	1	0.500	0	==>	1
	231 (Humerus, le)	1	0.333	1	==>	0
	241 (Radius, len)	1	0.125	1	==>	0
	245 (Longest met)	1	0.333	1	==>	0
	253 (Manual digi)	1	0.500	1	==>	0
	254 (Metacarpal)	1	0.500	1	==>	0
	279 (Pubis, orie)	1	0.333	0	==>	1
	291 (Ischium, me)	1	0.286	1	==>	0
	293 (Ischium, cr)	1	0.286	1	==>	0
	295 (Ischium, ob)	1	0.500	1	==>	0
	302 (Femur, prox)	1	0.250	0	==>	1
	343 (Fibula, pro)	1	0.250	1	==>	0
	370 (Astragalus-)	1	0.200	0	==>	1
node_96 --> Allosaurus fragi	6 (Premaxillary)	1	0.200	1	==>	2
	25 (Maxilla, ant)	1	0.167	0	==>	1
	27 (Maxilla, pos)	1	0.267	0	==>	2
	35 (Nasal, dorso)	1	0.250	0	==>	1
	126 (Supraoccipi)	1	0.250	1	-->	0
	142 (Orbit, shap)	1	0.222	0	-->	1
	157 (Articular,)	1	0.143	0	-->	1
	182 (Cervical ve)	1	0.500	1	-->	0
	184 (Anterior to)	1	0.250	1	-->	0
	210 (Middle caud)	1	0.167	0	==>	1
	251 (Metacarpal)	1	0.200	0	==>	1
	284 (Pubis, expa)	1	0.333	1	==>	0
	285 (Pubis, expa)	1	0.500	0	==>	1
	307 (Femur, dors)	1	0.286	1	-->	0
	413 (Maxilla wit)	1	0.222	0	==>	1
node_97 --> Dilophosaurus we	129 (Perilymphat)	1	0.333	0	-->	1
	142 (Orbit, shap)	1	0.222	0	-->	1
	157 (Articular,)	1	0.143	0	-->	1
	181 (Cervical 3-)	1	0.077	1	==>	0
	216 (Scapula, le)	1	0.250	0	==>	1
	233 (Humerus, pr)	1	0.143	1	==>	0
	264 (Ilium, supr)	1	0.333	0	-->	1
	389 (Metatarsal)	1	0.500	0	-->	1
node_98 --> Coelophysis baur	24 (Maxilla, ant)	1	0.167	0	==>	1
	26 (Maxilla, lat)	1	0.333	0	==>	1
	56 (Squamosal, v)	1	0.200	0	==>	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	103 (Parabasisph)	1	0.200	0	==>	1
	189 (Cervical ve)	1	0.500	0	==>	1
	200 (Sacral cent)	1	0.250	0	==>	1
	258 (Manual digi)	1	0.375	2	==>	3
	264 (Ilium, supr)	1	0.333	0	-->	1
	275 (Ilium, dors)	1	0.250	0	==>	1
	307 (Femur, dors)	1	0.286	1	==>	2
	311 (Femur, ante)	1	0.222	0	==>	1
	370 (Astragalus-)	1	0.200	0	==>	1
	389 (Metatarsal)	1	0.500	0	-->	1
	416 (Dentary, ra)	1	0.333	0	==>	1
node_99 --> Tawa hallae	6 (Premaxillary)	1	0.200	1	==>	0
	117 (Vestibule,)	1	0.200	0	-->	1
	190 (Cervical ve)	1	0.167	0	-->	1
	241 (Radius, len)	1	0.125	1	==>	0
	249 (Distal carp)	1	0.333	1	==>	0
	274 (Ilium, acet)	1	0.111	1	==>	0
	305 (Femur, femo)	1	0.333	1	==>	2
node_100 --> Eoraptor lunensi	2 (Premaxilla, p)	1	0.083	0	-->	1
	12 (Premaxilla-m)	1	0.300	1	==>	2
	26 (Maxilla, lat)	1	0.333	0	==>	1
	37 (Nasal (N2011)	1	0.125	0	-->	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	175 (Palatal tee)	1	0.143	1	==>	0
	197 (Dorsal vert)	1	0.182	0	==>	2
	256 (Metacarpal)	1	0.250	0	-->	1
	257 (Manual digi)	1	0.500	1	==>	0
	289 (Pubis, medi)	1	0.250	1	==>	0
	414 (Nasal, posi)	1	0.167	0	==>	1
	415 (Premaxilla,)	1	0.125	0	-->	1
	419 (Ischium, do)	1	0.143	0	==>	1
	420 (Ischium, po)	1	0.250	0	-->	1
node_101 --> Staurikosaurus p	314 (Femur, prox)	1	0.167	0	-->	1

node_102 --> Herrerasaurus is	2 (Premaxilla, p)	1	0.083	0	-->	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	179 (Axis, dorsa)	1	0.250	1	==>	0
	190 (Cervical ve)	1	0.167	0	-->	1
	197 (Dorsal vert)	1	0.182	0	==>	2
	241 (Radius, len)	1	0.125	1	==>	0
	247 (Manual leng)	1	0.667	1	-->	2
	258 (Manual digi)	1	0.375	2	==>	3
	299 (Tibia (or f)	1	0.143	1	-->	0
	302 (Femur, prox)	1	0.250	0	==>	1
	307 (Femur, dors)	1	0.286	1	-->	2
	392 (Metatarsal)	1	0.500	0	-->	1
	399 (Metatarsal)	1	0.300	2	-->	1
	415 (Premaxilla,)	1	0.125	0	-->	1
	416 (Dentary, ra)	1	0.333	0	==>	1
node_105 --> node_104	39 (Lacrimal, he)	1	0.250	0	-->	1
	56 (Squamosal, v)	1	0.200	0	==>	1
	135 (Skull lengt)	1	1.000	0	==>	1
	168 (Tooth, serr)	1	0.250	1	-->	2
	171 (Tooth crown)	1	0.143	0	-->	1
	235 (Humerus, di)	1	0.250	0	==>	1
	294 (Ischium, di)	1	0.143	0	==>	1
	299 (Tibia (or f)	1	0.143	1	-->	0
	307 (Femur, dors)	1	0.286	1	-->	2
	314 (Femur, prox)	1	0.167	0	-->	1
	335 (Tibia, post)	1	0.500	0	==>	1
	392 (Metatarsal)	1	0.500	0	-->	1
node_104 --> Saturnalia tupin	233 (Humerus, pr)	1	0.143	1	==>	0
	271 (Ilium, dist)	1	0.333	0	==>	1
	273 (Ilium, vent)	1	0.333	2	==>	1
	333 (Tibia, late)	1	0.200	0	==>	1
node_104 --> node_103	3 (Premaxilla, p)	1	0.500	0	-->	1
	5 (Premaxilla, p)	1	0.167	0	-->	1
	74 (Jugal, long)	1	0.333	0	-->	1
	158 (Articular,)	1	0.200	0	-->	1
	251 (Metacarpal)	1	0.200	0	-->	1
	252 (Digit I wit)	1	1.000	0	-->	1
	256 (Metacarpal)	1	0.250	0	-->	1
	311 (Femur, ante)	1	0.222	1	==>	0
	383 (Longest met)	1	0.200	1	==>	0
	399 (Metatarsal)	1	0.300	2	-->	1
	419 (Ischium, do)	1	0.143	0	==>	1
node_103 --> Efraasia minor	6 (Premaxillary)	1	0.200	2	-->	1
	181 (Cervical 3-)	1	0.077	0	-->	1
	283 (Pubis, dist)	1	0.200	1	==>	0
node_103 --> Plateosaurus tro	1 (Premaxilla, a)	1	0.167	0	-->	1
	25 (Maxilla, ant)	1	0.167	0	-->	1
	27 (Maxilla, pos)	1	0.267	0	==>	1
	36 (Nasal (N2011)	1	0.500	0	-->	1
	37 (Nasal (N2011)	1	0.125	0	-->	1
	131 (Foramen for)	1	0.400	0	-->	2
	152 (Anterior ha)	1	0.250	0	-->	1
	154 (Dentary, do)	1	0.364	0	==>	1
	159 (Articular,)	1	0.111	0	-->	1
	170 (Medial or l)	1	0.333	0	==>	1
	206 (Caudal vert)	1	0.200	0	==>	1
	212 (Forelimb-hi)	1	0.200	1	==>	0
	414 (Nasal, posi)	1	0.167	0	-->	1
node_108 --> node_107	2 (Premaxilla, p)	1	0.083	0	-->	1
	14 (Maxilla, fac)	1	0.125	0	==>	1
	23 (Maxilla, buc)	1	0.333	0	==>	1
	147 (Palpebral(s)	1	0.333	0	==>	1
	151 (Prementary)	1	1.000	0	==>	1
	152 (Anterior ha)	1	0.250	0	-->	1
	158 (Articular,)	1	0.200	0	-->	1
	161 (Coronoid pr)	1	1.000	0	==>	1
	168 (Tooth, serr)	1	0.250	1	-->	2
	170 (Medial or l)	1	0.333	0	==>	1
	171 (Tooth crown)	1	0.143	0	-->	1
	173 (Maxillary a)	1	0.500	0	==>	1
	183 (Third cervi)	1	0.143	1	==>	0
	199 (Middle dors)	1	0.167	0	==>	1
	205 (Trunk verte)	1	0.200	0	==>	1
	206 (Caudal vert)	1	0.200	0	==>	1
	207 (Insertion o)	1	0.200	0	==>	1
	218 (Scapula, bl)	1	0.333	0	-->	1

	269 (Ilium, ante)	1	0.333	0	==>	1
	271 (Ilium, dist)	1	0.333	0	==>	1
	279 (Pubis, orie)	1	0.333	0	==>	1
	280 (Pubis, prep)	1	0.500	0	==>	1
	286 (Pubis, prox)	1	0.500	1	==>	0
	308 (Femur, ante)	1	0.286	1	==>	2
	311 (Femur, ante)	1	0.222	1	==>	0
	334 (Tibia, post)	1	0.500	1	==>	2
	379 (Calcaneum,)	1	0.500	0	==>	1
	415 (Premaxilla,)	1	0.125	0	-->	1
node_107 --> Eocursor parvus	190 (Cervical ve)	1	0.167	0	==>	1
	274 (Ilium, acet)	1	0.111	1	==>	0
	314 (Femur, prox)	1	0.167	0	==>	1
node_107 --> Scutellosaurus 1	58 (Parietals, i)	1	0.333	0	==>	1
	59 (Parietals, u)	1	0.286	0	==>	2
	178 (Atlantal ar)	1	0.500	1	==>	0
	199 (Middle dors)	1	0.167	1	==>	0
	212 (Forelimb-hi)	1	0.200	1	==>	0
	225 (Coracoid, p)	1	0.333	1	==>	0
	227 (Glenoid, or)	1	0.167	1	==>	0
	230 (Humerus, ap)	1	0.250	1	==>	0
	275 (Ilium, dors)	1	0.250	0	==>	1
	291 (Ischium, me)	1	0.286	1	==>	0
	383 (Longest met)	1	0.200	1	==>	0
	401 (Osteoderms,)	1	0.250	0	==>	1
node_107 --> Lesothosaurus di	6 (Premaxillary)	1	0.200	2	-->	3
	43 (Frontal, ant)	1	0.143	0	-->	1
	79 (Quadratojuga)	1	0.250	0	==>	1
	162 (Mandibular)	1	0.500	0	-->	2
	237 (Ulna, later)	1	0.333	1	==>	0
	419 (Ischium, do)	1	0.143	0	==>	1
	420 (Ischium, po)	1	0.250	0	-->	1
node_107 --> node_106	162 (Mandibular)	1	0.500	0	-->	2
	169 (Extensive p)	1	0.500	0	==>	1
	172 (Moderately)	1	0.500	0	==>	1
	334 (Tibia, post)	1	0.500	2	==>	1
node_106 --> Pisanosaurus mer	279 (Pubis, orie)	1	0.333	1	==>	0
	280 (Pubis, prep)	1	0.500	1	==>	0
	336 (Tibia, post)	1	0.250	1	==>	0
node_106 --> Heterodontosauru	6 (Premaxillary)	1	0.200	2	-->	0
	9 (Premaxilla, n)	1	0.333	0	-->	1
	11 (Premaxilla-m)	1	0.167	0	-->	1
	22 (Maxilla, int)	1	0.200	0	-->	1
	41 (Prefrontal (	1	0.500	0	-->	1
	43 (Frontal, ant)	1	0.143	0	-->	1
	59 (Parietals, u)	1	0.286	0	-->	2
	75 (Jugal, longi)	1	0.118	0	-->	1
	102 (Parabasisph)	1	1.000	0	-->	1
	103 (Parabasisph)	1	0.200	0	-->	1
	167 (Dentition (	1	0.200	0	-->	1
	170 (Medial or l)	1	0.333	1	==>	0
	171 (Tooth crown)	1	0.143	1	==>	0
	179 (Axis, dorsa)	1	0.250	1	-->	0
	197 (Dorsal vert)	1	0.182	0	-->	2
	200 (Sacral cent)	1	0.250	0	-->	1
	246 (Metacarpals)	1	0.333	0	-->	1
	250 (Extensor pi)	1	0.500	0	-->	1
	256 (Metacarpal)	1	0.250	0	-->	1
	271 (Ilium, dist)	1	0.333	1	-->	0
	333 (Tibia, late)	1	0.200	0	==>	1
	343 (Fibula, pro)	1	0.250	1	==>	0
	370 (Astragalus-)	1	0.200	0	==>	1
	412 (Gastralia (	1	0.400	1	-->	2
node_113 --> node_112	113 (Exoccipital)	1	1.000	0	==>	1
	127 (Supraoccipi)	1	1.000	0	==>	1
	181 (Cervical 3-)	1	0.077	0	-->	1
	218 (Scapula, bl)	1	0.333	0	-->	1
	273 (Ilium, vent)	1	0.333	0	-->	1
	289 (Pubis, medi)	1	0.250	0	-->	1
	304 (Femur, vent)	1	1.000	0	-->	1
	314 (Femur, prox)	1	0.167	0	-->	1
	366 (Astragalus,)	1	0.333	1	-->	0
node_112 --> Lewisuchus admix	67 (Postorbital)	1	0.250	0	==>	1
	110 (Opisthotic,)	1	0.333	0	==>	1
	152 (Anterior ha)	1	0.250	0	-->	1
node_112 --> node_111	155 (Dentary, an)	1	0.250	0	==>	1

	166 (Dentary tee)	1	0.750	0	==>	1
	171 (Tooth crown)	1	0.143	0	-->	1
	173 (Maxillary a)	1	0.500	0	==>	1
	174 (Tooth impla)	1	0.500	1	-->	0
	195 (Posterior c)	1	0.167	0	-->	1
	208 (Sacral ribs)	1	0.250	0	==>	1
	309 (Femur, medi)	1	1.000	0	==>	1
	323 (Femur, bone)	1	0.333	0	-->	1
	324 (Femur, dist)	1	0.500	0	==>	1
	400 (Pedal ungua)	1	0.250	0	-->	1
node_111 --> Asilisaurus kong	154 (Dentary, do)	1	0.364	0	==>	1
	294 (Ischium, di)	1	0.143	0	==>	1
node_111 --> node_110	311 (Femur, ante)	1	0.222	1	==>	0
	313 (Femur, post)	1	0.250	1	==>	0
	331 (Tibia, late)	1	0.500	0	==>	1
node_110 --> Eucoelophysis ba	301 (Femur, prox)	1	0.333	0	-->	2
node_110 --> node_109	153 (Dentary, an)	1	0.250	0	-->	1
	271 (Ilium, dist)	1	0.333	0	-->	1
	303 (Femur, medi)	1	1.000	0	==>	1
	333 (Tibia, late)	1	0.200	0	==>	1
node_109 --> Sacisaurus agudo	168 (Tooth, serr)	1	0.250	1	==>	2
	172 (Moderately)	1	0.500	0	==>	1
node_109 --> Silesaurus opole	56 (Squamosal, v)	1	0.200	0	-->	1
	71 (Jugal, poste)	1	0.429	0	-->	1
	75 (Jugal, longi)	1	0.118	0	-->	1
	95 (Parabasisphe)	1	0.286	2	-->	0
	152 (Anterior ha)	1	0.250	0	-->	1
	154 (Dentary, do)	1	0.364	0	==>	2
	158 (Articular,)	1	0.200	0	-->	1
	183 (Third cervi)	1	0.143	1	-->	0
	207 (Insertion o)	1	0.200	0	-->	1
	296 (Ischium, ve)	1	0.200	1	-->	0
	299 (Tibia (or f)	1	0.143	1	-->	0
	301 (Femur, prox)	1	0.333	0	-->	2
	363 (Astragalus,)	1	0.143	0	-->	1
	373 (Calcaneum,)	1	0.250	0	-->	1
	378 (Calcaneum,)	1	0.400	0	-->	2
node_114 --> Lagosuchus talam	183 (Third cervi)	1	0.143	1	==>	0
	274 (Ilium, acet)	1	0.111	0	-->	1
	353 (Distal tars)	1	0.250	0	-->	1
	377 (Calcaneum,)	1	0.500	1	-->	2
node_117 --> node_116	302 (Femur, prox)	1	0.250	0	==>	1
	306 (Femur, femo)	1	1.000	0	==>	1
	310 (Femur, ante)	1	1.000	0	==>	1
	326 (Femur, cris)	1	1.000	0	==>	1
	355 (Astragalus,)	1	1.000	0	==>	1
	363 (Astragalus,)	1	0.143	0	-->	1
	373 (Calcaneum,)	1	0.250	0	==>	1
	378 (Calcaneum,)	1	0.400	0	==>	2
node_116 --> Lagerpeton chana	316 (Femur, four)	1	0.400	0	==>	1
	345 (Fibula, dis)	1	0.167	0	-->	1
	353 (Distal tars)	1	0.250	0	-->	1
	370 (Astragalus-)	1	0.200	0	-->	1
	393 (Metatarsal)	1	0.500	1	-->	0
node_116 --> node_115	322 (Femur, surf)	1	0.333	0	==>	1
	323 (Femur, bone)	1	0.333	0	-->	1
	325 (Femur, ante)	1	1.000	0	==>	1
	327 (Femur, ante)	1	1.000	0	==>	1
node_115 --> Dromomeron grego	308 (Femur, ante)	1	0.286	0	==>	1
node_115 --> Dromomeron romer	316 (Femur, four)	1	0.400	0	==>	2
node_120 --> node_118	1 (Premaxilla, a)	1	0.167	0	==>	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	134 (Skull lengt)	1	1.000	0	==>	1
	167 (Dentition (	1	0.200	0	==>	1
	181 (Cervical 3-)	1	0.077	0	-->	1
	196 (Cervical ri)	1	0.200	0	-->	1
	211 (Distal caud)	1	0.333	0	==>	1
	223 (Coracoid, p)	1	0.500	0	==>	1
	233 (Humerus, pr)	1	0.143	0	==>	1
	244 (Pteroid bon)	1	1.000	0	==>	1
	262 (Manual digi)	1	1.000	0	==>	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	299 (Tibia (or f)	1	0.143	0	-->	1
	370 (Astragalus-)	1	0.200	0	==>	1
	373 (Calcaneum,)	1	0.250	0	==>	1

	387 (Metatarsal)	1	0.500	0	==>	1
	397 (Metatarsal)	1	0.167	0	==>	1
node_118 --> Eudimorphodon ra	6 (Premaxillary)	1	0.200	2	==>	1
	82 (Quadrate, an)	1	0.333	0	==>	1
	138 (Lateral (=e)	1	0.333	1	==>	0
	175 (Palatal tee)	1	0.143	1	-->	0
	316 (Femur, four)	1	0.400	0	-->	2
	390 (Metatarsal)	1	0.333	0	==>	1
	395 (Metatarsal)	1	0.250	0	-->	1
node_118 --> Dimorphodon macr	5 (Premaxilla, p)	1	0.167	0	-->	1
	142 (Orbit, shap)	1	0.222	0	==>	2
	274 (Ilium, acet)	1	0.111	0	-->	1
	301 (Femur, prox)	1	0.333	1	-->	0
	320 (Femur, medi)	1	0.167	0	-->	1
	323 (Femur, bone)	1	0.333	0	-->	2
	363 (Astragalus,)	1	0.143	0	-->	1
	391 (Metatarsal)	1	0.200	0	-->	1
node_120 --> node_119	181 (Cervical 3-)	1	0.077	0	-->	1
	186 (Epipophyses)	1	0.143	0	==>	1
	191 (Cervical ve)	1	0.250	0	==>	3
	193 (Posterior c)	1	0.333	0	==>	1
	230 (Humerus, ap)	1	0.250	0	==>	1
	234 (Humerus, ec)	1	0.167	1	==>	0
	235 (Humerus, di)	1	0.250	0	==>	1
	265 (Ilium, cres)	1	0.429	0	==>	2
	293 (Ischium, cr)	1	0.286	0	==>	1
	300 (Femur, prox)	1	0.600	1	==>	0
	308 (Femur, ante)	1	0.286	0	==>	1
	314 (Femur, prox)	1	0.167	0	==>	1
	324 (Femur, dist)	1	0.500	0	==>	1
	371 (Calcaneum,)	1	0.333	1	==>	0
	376 (Calcaneum,)	1	0.286	1	==>	0
node_119 --> Yarasuchus decca	197 (Dorsal vert)	1	0.182	0	-->	2
	198 (Dorsal vert)	1	0.333	0	-->	1
	288 (Pubis, pubi)	1	0.500	0	-->	1
node_119 --> Teleocrater rhad	27 (Maxilla, pos)	1	0.267	0	-->	1
	144 (Supratempor)	1	0.200	0	-->	1
	184 (Anterior to)	1	0.250	0	==>	1
	195 (Posterior c)	1	0.167	0	==>	1
	291 (Ischium, me)	1	0.286	0	-->	1
	296 (Ischium, ve)	1	0.200	0	-->	1
	413 (Maxilla wit)	1	0.222	0	==>	1
	419 (Ischium, do)	1	0.143	0	-->	1
node_159 --> node_158	100 (Parabasisph)	1	0.333	0	==>	1
	238 (Ulna, dista)	1	0.250	0	==>	1
	330 (Tibia, prox)	1	0.333	0	==>	1
	337 (Tibia, post)	1	1.000	0	==>	1
	353 (Distal tars)	1	0.250	0	-->	1
	377 (Calcaneum,)	1	0.500	1	-->	2
node_158 --> node_122	6 (Premaxillary)	1	0.200	2	==>	0
	8 (Premaxilla (N)	1	0.500	0	==>	1
	13 (Premaxilla-m)	1	1.000	0	==>	1
	33 (Nasal-prefro)	1	1.000	0	==>	1
	62 (Parietal, po)	1	0.333	0	==>	1
	85 (Palatine-pte)	1	1.000	0	==>	1
	142 (Orbit, shap)	1	0.222	0	==>	2
	160 (Dentary-spl)	1	0.250	0	==>	1
	190 (Cervical ve)	1	0.167	0	==>	1
	199 (Middle dors)	1	0.167	0	-->	1
	278 (Pubis, leng)	1	0.200	0	==>	1
	308 (Femur, ante)	1	0.286	0	==>	1
	339 (Fibula, att)	1	0.200	0	==>	1
	368 (Astragalus-)	1	0.667	1	==>	2
	400 (Pedal ungua)	1	0.250	0	-->	2
node_122 --> node_121	30 (Antorbital f)	1	0.167	0	==>	1
node_121 --> Riojasuchus tenu	29 (Maxilla, dor)	1	0.167	0	==>	1
	192 (Middle cerv)	1	0.250	0	-->	1
	205 (Trunk verte)	1	0.200	0	-->	1
	208 (Sacral ribs)	1	0.250	0	-->	1
	224 (Coracoid, p)	1	0.333	0	-->	1
	320 (Femur, medi)	1	0.167	0	-->	1
	340 (Fibula, att)	1	0.167	0	-->	1
	407 (Presacral o)	1	0.300	0	-->	2
	414 (Nasal, posi)	1	0.167	0	-->	1
node_121 --> Venaticosuchus r	93 (Basipterygoi)	1	0.250	1	==>	0
	154 (Dentary, do)	1	0.364	0	==>	2

	159 (Articular,)	1	0.111	1	==>	0
	163 (Surangular)	1	0.667	0	==>	2
node_122 --> Ornithosuchus wo	210 (Middle caud)	1	0.167	0	-->	1
	282 (Pubis, leng)	1	0.167	0	-->	1
	292 (Ischia, dis)	1	0.333	0	-->	1
	314 (Femur, prox)	1	0.167	0	==>	1
	398 (Metatarsal)	1	0.250	0	==>	1
	407 (Presacral o)	1	0.300	0	-->	1
node_158 --> node_157	69 (Jugal, anter)	1	0.286	0	==>	1
	75 (Jugal, longi)	1	0.118	0	==>	1
	114 (Exoccipital)	1	0.500	0	==>	2
	196 (Cervical ri)	1	0.200	0	-->	1
	234 (Humerus, ec)	1	0.167	1	==>	0
	378 (Calcaneum,)	1	0.400	0	==>	1
node_157 --> node_127	29 (Maxilla, dor)	1	0.167	0	==>	1
	122 (External fo)	1	0.500	1	==>	2
	129 (Perilymphat)	1	0.333	0	==>	1
	199 (Middle dors)	1	0.167	0	-->	1
	372 (Calcaneum,)	1	0.500	0	-->	1
	406 (Osteoderms,)	1	0.500	0	==>	1
	409 (Ventral car)	1	0.333	0	==>	1
node_127 --> node_125	15 (Maxillary te)	1	0.250	0	==>	1
	16 (Maxilla, pos)	1	0.333	0	==>	1
	54 (Squamosal, f)	1	0.500	0	==>	1
	66 (Postorbital-)	1	0.333	0	==>	1
	67 (Postorbital)	1	0.250	0	==>	1
	71 (Jugal, poste)	1	0.429	0	-->	2
	240 (Radius, dis)	1	0.333	0	==>	1
	241 (Radius, len)	1	0.125	0	-->	1
	376 (Calcaneum,)	1	0.286	1	-->	2
	405 (Osteoderms,)	1	0.200	0	-->	1
	407 (Presacral o)	1	0.300	0	==>	2
	408 (Anterior ba)	1	0.250	0	-->	1
	412 (Gastralia (	1	0.400	0	==>	2
node_125 --> node_124	7 (Premaxilla, t)	1	1.000	0	==>	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	45 (Quadratojuga)	1	0.250	0	-->	1
	61 (Parietals, o)	1	0.333	0	==>	1
	62 (Parietal, po)	1	0.333	0	==>	1
	82 (Quadrate, an)	1	0.333	0	==>	1
	143 (Supratempor)	1	1.000	0	==>	1
	154 (Dentary, do)	1	0.364	0	==>	2
	155 (Dentary, an)	1	0.250	0	==>	1
	158 (Articular,)	1	0.200	0	==>	1
	166 (Dentary tee)	1	0.750	0	==>	1
	171 (Tooth crown)	1	0.143	0	==>	1
	400 (Pedal ungua)	1	0.250	0	-->	2
	413 (Maxilla wit)	1	0.222	0	==>	1
node_124 --> node_123	40 (Prefrontal,)	1	0.500	0	-->	1
	74 (Jugal, long)	1	0.333	0	==>	1
	111 (Opisthotic,)	1	0.200	0	-->	1
	131 (Foramen for)	1	0.400	0	-->	2
	156 (Articular (	1	0.222	0	-->	1
	168 (Tooth, serr)	1	0.250	1	==>	0
	219 (Scapula, te)	1	0.125	0	==>	1
	270 (Ilium, orie)	1	0.200	0	-->	1
	339 (Fibula, att)	1	0.200	0	-->	1
	340 (Fibula, att)	1	0.167	0	-->	1
node_123 --> Stagonolepis rob	26 (Maxilla, lat)	1	0.333	0	==>	1
	90 (Palatine, fo)	1	0.250	0	==>	1
	117 (Vestibule,)	1	0.200	0	-->	1
	195 (Posterior c)	1	0.167	0	-->	1
	251 (Metacarpal)	1	0.200	0	==>	1
node_123 --> Longosuchus mead	5 (Premaxilla, p)	1	0.167	0	==>	1
	159 (Articular,)	1	0.111	1	-->	0
	364 (Astragalus,)	1	0.333	0	-->	1
	371 (Calcaneum,)	1	0.333	1	-->	2
node_124 --> Aetosaurus ferra	6 (Premaxillary)	1	0.200	2	==>	1
	37 (Nasal (N2011)	1	0.125	0	==>	1
	64 (Quadratojuga)	1	0.500	0	==>	1
	79 (Quadratojuga)	1	0.250	0	==>	1
	147 (Palpebral(s)	1	0.333	0	-->	1
	148 (Palpebral(s)	1	1.000	1	-->	0
	416 (Dentary, ra)	1	0.333	0	==>	1
node_125 --> Revueltosaurus c	4 (Premaxilla, p)	1	0.500	0	==>	3

	12 (Premaxilla-m)	1	0.300	0 ==>	3
	23 (Maxilla, buc)	1	0.333	0 ==>	1
	26 (Maxilla, lat)	1	0.333	0 ==>	1
	27 (Maxilla, pos)	1	0.267	0 ==>	2
	43 (Frontal, ant)	1	0.143	0 ==>	1
	167 (Dentition (	1	0.200	0 ==>	1
	168 (Tooth, serr)	1	0.250	1 ==>	2
	186 (Epipophyses)	1	0.143	0 -->	1
	191 (Cervical ve)	1	0.250	1 ==>	2
	415 (Premaxilla,)	1	0.125	0 ==>	1
node_127 --> node_126	6 (Premaxillary)	1	0.200	2 ==>	1
	17 (Maxilla, den)	1	0.333	0 ==>	1
	21 (Maxilla, ven)	1	0.333	0 ==>	1
	45 (Quadratojuga)	1	0.250	0 -->	1
	71 (Jugal, poste)	1	0.429	0 -->	1
	72 (Jugal, poste)	1	0.167	0 ==>	1
	219 (Scapula, te)	1	0.125	0 ==>	1
	404 (Osteoderms,)	1	0.167	0 ==>	1
node_126 --> Parringtonia gra	4 (Premaxilla, p)	1	0.500	0 ==>	3
	23 (Maxilla, buc)	1	0.333	0 ==>	1
	26 (Maxilla, lat)	1	0.333	0 ==>	1
	31 (Maxilla, ant)	1	0.200	0 ==>	1
	42 (Frontal, dor)	1	0.200	0 ==>	1
	43 (Frontal, ant)	1	0.143	0 ==>	1
	55 (Squamosal, p)	1	0.250	0 ==>	1
	62 (Parietal, po)	1	0.333	0 ==>	1
	75 (Jugal, longi)	1	0.118	1 ==>	2
	95 (Parabasisphe)	1	0.286	2 -->	0
	101 (Parabasisph)	1	0.500	0 -->	1
	128 (Pila antoti)	1	0.500	0 -->	1
	132 (Foramen or)	1	0.333	0 -->	1
	156 (Articular (	1	0.222	0 -->	1
	157 (Articular,)	1	0.143	0 -->	1
	175 (Palatal tee)	1	0.143	1 ==>	0
	190 (Cervical ve)	1	0.167	0 ==>	1
	238 (Ulna, dista)	1	0.250	1 -->	0
	241 (Radius, len)	1	0.125	0 -->	1
	245 (Longest met)	1	0.333	1 -->	0
	292 (Ischia, dis)	1	0.333	0 -->	1
	344 (Fibula, med)	1	0.500	0 -->	1
	368 (Astragalus-)	1	0.667	1 -->	0
	405 (Osteoderms,)	1	0.200	0 -->	1
	413 (Maxilla wit)	1	0.222	0 ==>	1
node_126 --> Erpetosuchus gra	27 (Maxilla, pos)	1	0.267	0 ==>	2
	30 (Antorbital f)	1	0.167	0 ==>	1
	59 (Parietals, u)	1	0.286	0 ==>	2
	69 (Jugal, anter)	1	0.286	1 ==>	0
	79 (Quadratojuga)	1	0.250	0 ==>	1
	168 (Tooth, serr)	1	0.250	1 ==>	0
	407 (Presacral o)	1	0.300	0 ==>	1
	408 (Anterior ba)	1	0.250	0 -->	1
node_157 --> node_156	341 (Fibula, pro)	1	0.143	0 ==>	1
	352 (Distal tars)	1	0.333	0 ==>	1
	376 (Calcaneum,)	1	0.286	1 -->	2
	403 (Osteoderms,)	1	0.250	0 ==>	1
	410 (Dorsal oste)	1	0.200	0 ==>	1
	411 (Dorsal oste)	1	0.333	1 ==>	0
node_156 --> node_129	4 (Premaxilla, p)	1	0.500	0 ==>	3
	37 (Nasal (N2011)	1	0.125	0 ==>	1
	43 (Frontal, ant)	1	0.143	0 ==>	1
	67 (Postorbital)	1	0.250	0 ==>	1
	375 (Calcaneum,)	1	0.333	0 ==>	1
	404 (Osteoderms,)	1	0.167	0 ==>	1
	413 (Maxilla wit)	1	0.222	0 ==>	1
node_129 --> node_128	45 (Quadratojuga)	1	0.250	0 -->	1
	66 (Postorbital-)	1	0.333	0 ==>	1
	72 (Jugal, poste)	1	0.167	0 ==>	1
	103 (Parabasisph)	1	0.200	0 ==>	1
node_128 --> Gracilisuchus st	2 (Premaxilla, p)	1	0.083	0 -->	1
	6 (Premaxillary)	1	0.200	2 ==>	1
	27 (Maxilla, pos)	1	0.267	0 ==>	1
	49 (Squamosal (N)	1	0.500	0 -->	1
	55 (Squamosal, p)	1	0.250	0 -->	1
	58 (Parietals, i)	1	0.333	0 -->	1
	71 (Jugal, poste)	1	0.429	0 ==>	1
	78 (Quadrate, he)	1	0.333	0 -->	1

	153 (Dentary, an)	1	0.250	0	-->	1
	181 (Cervical 3-)	1	0.077	0	-->	1
	282 (Pubis, leng)	1	0.167	0	-->	1
	287 (Ischium-pub)	1	0.400	0	-->	2
	292 (Ischia, dis)	1	0.333	0	-->	1
	300 (Femur, prox)	1	0.600	1	-->	0
	320 (Femur, medi)	1	0.167	0	-->	1
	367 (Astragalus,)	1	0.500	0	-->	1
	371 (Calcaneum,)	1	0.333	1	-->	2
	417 (Proximal en)	1	0.667	1	-->	0
node_128 --> Yonghesuchus san	12 (Premaxilla-m)	1	0.300	0	==>	1
	75 (Jugal, longi)	1	0.118	1	==>	0
	156 (Articular (	1	0.222	0	==>	1
	157 (Articular,)	1	0.143	0	-->	1
	175 (Palatal tee)	1	0.143	1	-->	0
	413 (Maxilla wit)	1	0.222	1	-->	2
node_129 --> Turfanosuchus da	42 (Frontal, dor)	1	0.200	0	==>	1
	52 (Squamosal, a)	2	0.286	0	==>	2
	54 (Squamosal, f)	1	0.500	0	==>	1
	94 (Prootic, rid)	1	0.500	1	-->	0
	95 (Parabasisphe)	1	0.286	2	==>	0
	175 (Palatal tee)	1	0.143	1	-->	0
	219 (Scapula, te)	1	0.125	0	-->	1
	330 (Tibia, prox)	1	0.333	1	-->	0
	363 (Astragalus,)	1	0.143	0	==>	1
	366 (Astragalus,)	1	0.333	1	==>	0
	413 (Maxilla wit)	1	0.222	1	-->	2
node_156 --> node_155	195 (Posterior c)	1	0.167	0	==>	1
	210 (Middle caud)	1	0.167	0	==>	1
	291 (Ischium, me)	1	0.286	0	==>	1
	294 (Ischium, di)	1	0.143	0	==>	1
	298 (Ischium len)	1	0.200	0	==>	1
	372 (Calcaneum,)	1	0.500	0	-->	1
	400 (Pedal ungua)	1	0.250	0	-->	2
node_155 --> Ticinosuchus fer	30 (Antorbital f)	1	0.167	0	==>	1
node_155 --> node_154	117 (Vestibule,)	1	0.200	0	-->	1
	283 (Pubis, dist)	1	0.200	0	==>	1
	287 (Ischium-pub)	1	0.400	0	-->	1
	293 (Ischium, cr)	1	0.286	0	-->	1
	314 (Femur, prox)	1	0.167	0	-->	1
	395 (Metatarsal)	1	0.250	0	==>	1
	416 (Dentary, ra)	1	0.333	0	-->	1
node_154 --> node_137	1 (Premaxilla, a)	1	0.167	0	==>	1
	5 (Premaxilla, p)	1	0.167	0	==>	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	95 (Parabasisphe)	1	0.286	2	==>	0
	191 (Cervical ve)	1	0.250	1	==>	0
	196 (Cervical ri)	1	0.200	1	==>	0
	197 (Dorsal vert)	1	0.182	1	==>	0
	202 (Primordial)	1	0.333	0	-->	1
	207 (Insertion o)	1	0.200	0	==>	1
	265 (Ilium, cres)	1	0.429	0	==>	1
	273 (Ilium, vent)	1	0.333	0	==>	2
	288 (Pubis, pubi)	1	0.500	0	==>	1
	345 (Fibula, dis)	1	0.167	0	==>	1
node_137 --> node_136	114 (Exoccipital)	1	0.500	2	-->	0
	201 (Sacral vert)	1	1.000	0	==>	1
	282 (Pubis, leng)	1	0.167	0	==>	1
	284 (Pubis, expa)	1	0.333	0	==>	1
	287 (Ischium-pub)	1	0.400	1	-->	2
	289 (Pubis, medi)	1	0.250	0	==>	1
	301 (Femur, prox)	1	0.333	1	-->	0
	319 (Femur, angl)	1	0.250	0	-->	1
	323 (Femur, bone)	1	0.333	0	-->	1
	401 (Osteoderms,)	1	0.250	1	==>	0
node_136 --> node_134	200 (Sacral cent)	1	0.250	0	-->	1
	210 (Middle caud)	1	0.167	1	-->	0
	211 (Distal caud)	1	0.333	0	-->	1
	264 (Ilium, supr)	1	0.333	0	==>	1
	266 (Ilium, cres)	1	1.000	0	==>	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	278 (Pubis, leng)	1	0.200	0	-->	1
	349 (Distal tars)	1	0.500	0	-->	1
	376 (Calcaneum,)	1	0.286	2	-->	1
	400 (Pedal ungua)	1	0.250	2	==>	1

node_134 --> node_132	6 (Premaxillary)	1	0.200	2 ==>	4
	12 (Premaxilla-m)	1	0.300	0 -->	2
	18 (Maxilla, den)	1	1.000	0 ==>	1
	21 (Maxilla, ven)	1	0.333	0 ==>	1
	26 (Maxilla, lat)	1	0.333	0 -->	1
	32 (Maxilla, pal)	1	0.667	1 -->	0
	56 (Squamosal, v)	1	0.200	0 -->	1
	155 (Dentary, an)	1	0.250	0 -->	1
	158 (Articular,)	1	0.200	0 -->	1
	166 (Dentary tee)	1	0.750	0 -->	2
	227 (Glenoid, or)	1	0.167	0 ==>	1
	276 (Ilium, dors)	1	0.500	0 ==>	1
	291 (Ischium, me)	1	0.286	1 ==>	2
	294 (Ischium, di)	1	0.143	1 ==>	0
	320 (Femur, medi)	1	0.167	0 -->	1
node_132 --> node_131	188 (Cervical ve)	1	0.667	0 ==>	1
	189 (Cervical ve)	1	0.500	0 ==>	1
	205 (Trunk verte)	1	0.200	0 -->	1
	208 (Sacral ribs)	1	0.250	0 ==>	1
	217 (Scapula, en)	1	0.200	1 ==>	0
	225 (Coracoid, p)	1	0.333	1 ==>	0
	236 (Humerus, pr)	1	1.000	0 ==>	1
	267 (Ilium, cres)	1	0.500	0 -->	1
	274 (Ilium, acet)	1	0.111	0 -->	1
node_131 --> node_130	43 (Frontal, ant)	1	0.143	0 -->	1
	44 (Postfrontal)	1	0.167	0 -->	1
	59 (Parietals, u)	1	0.286	0 -->	2
	67 (Postorbital)	1	0.250	0 -->	1
	75 (Jugal, longi)	1	0.118	1 -->	0
	81 (Quadrate, di)	1	0.500	0 -->	1
	82 (Quadrate, an)	1	0.333	0 -->	1
	93 (Basipterygoi)	1	0.250	1 -->	0
	95 (Parabasisphe)	1	0.286	0 -->	2
	103 (Parabasisph)	1	0.200	0 -->	1
	115 (Exoccipital)	1	0.500	0 -->	1
	159 (Articular,)	1	0.111	1 -->	0
	162 (Mandibular)	1	0.500	0 -->	1
	163 (Surangular)	1	0.667	0 -->	1
	190 (Cervical ve)	1	0.167	0 ==>	1
	204 (Sacral vert)	1	0.500	0 ==>	1
	212 (Forelimb-hi)	1	0.200	0 -->	1
	228 (Coracoid, d)	1	1.000	0 ==>	1
	234 (Humerus, ec)	1	0.167	0 -->	1
	269 (Ilium, ante)	1	0.333	1 -->	2
	285 (Pubis, expa)	1	0.500	0 ==>	1
	289 (Pubis, medi)	1	0.250	1 ==>	2
	290 (Pubis, late)	1	1.000	0 ==>	1
	300 (Femur, prox)	1	0.600	1 ==>	3
	302 (Femur, prox)	1	0.250	0 -->	1
	313 (Femur, post)	1	0.250	0 ==>	1
	322 (Femur, surf)	1	0.333	0 -->	1
	390 (Metatarsal)	1	0.333	0 -->	1
	391 (Metatarsal)	1	0.200	0 -->	1
node_130 --> Shuvosaurus inex	110 (Opisthotic,)	1	0.333	0 -->	1
	316 (Femur, four)	1	0.400	0 -->	2
	358 (Articular f)	1	0.250	0 -->	1
node_130 --> Effigia okeeffea	48 (Squamosal, p)	1	0.333	1 -->	0
	185 (Anterior ce)	1	0.500	0 ==>	1
	199 (Middle dors)	1	0.167	0 -->	1
	333 (Tibia, late)	1	0.200	0 ==>	1
node_131 --> Sillosuchus long	181 (Cervical 3-)	1	0.077	0 -->	1
	206 (Caudal vert)	1	0.200	0 ==>	1
	272 (Ilium, ridg)	1	0.250	0 ==>	1
node_132 --> Lotosaurus adent	5 (Premaxilla, p)	1	0.167	1 ==>	0
	24 (Maxilla, ant)	1	0.167	1 ==>	0
	31 (Maxilla, ant)	1	0.200	0 ==>	1
	48 (Squamosal, p)	1	0.333	1 -->	0
	74 (Jugal, long)	1	0.333	0 ==>	1
	99 (Parabasisphe)	1	0.500	0 ==>	1
	141 (Posttempora)	1	0.250	0 -->	1
	156 (Articular (	1	0.222	0 -->	1
	194 (Posterior c)	1	0.500	0 ==>	1
	198 (Dorsal vert)	1	0.333	0 ==>	1
	220 (Scapula, ac)	1	0.250	1 -->	0
	222 (Coracoid (N)	1	0.250	1 ==>	0
	287 (Ischium-pub)	1	0.400	2 ==>	1

	341 (Fibula, pro)	1	0.143	1	==> 0
	397 (Metatarsal)	1	0.167	0	==> 1
node_134 --> node_133	267 (Ilium, cres)	1	0.500	0	--> 1
	272 (Ilium, ridg)	1	0.250	0	==> 1
	419 (Ischium, do)	1	0.143	0	==> 1
node_133 --> Poposaurus graci	193 (Posterior c)	1	0.333	0	--> 1
	205 (Trunk verte)	1	0.200	0	--> 1
	206 (Caudal vert)	1	0.200	0	--> 1
	212 (Forelimb-hi)	1	0.200	0	--> 1
	231 (Humerus, le)	1	0.333	0	--> 1
	258 (Manual digi)	2	0.375	0	--> 2
	358 (Articular f)	1	0.250	0	--> 1
	364 (Astragalus,)	1	0.333	0	--> 1
	375 (Calcaneum,)	1	0.333	0	--> 1
node_136 --> node_135	20 (Maxilla, ant)	1	0.500	0	--> 1
	96 (Parabasisphe)	1	0.500	2	==> 0
	156 (Articular (	1	0.222	0	--> 1
	157 (Articular,)	1	0.143	0	--> 1
	194 (Posterior c)	1	0.500	0	==> 1
node_135 --> Xilousuchus sapi	117 (Vestibule,)	1	0.200	1	==> 0
	183 (Third cervi)	1	0.143	0	--> 1
	186 (Epiphyses)	1	0.143	0	==> 1
node_135 --> Arizonasaurus ba	132 (Foramen or)	1	0.333	0	--> 1
	181 (Cervical 3-)	1	0.077	0	--> 1
	193 (Posterior c)	1	0.333	0	==> 1
	198 (Dorsal vert)	1	0.333	0	--> 1
	270 (Ilium, orie)	1	0.200	0	--> 1
node_137 --> Qianosuchus mixt	6 (Premaxillary)	1	0.200	2	==> 3
	12 (Premaxilla-m)	1	0.300	0	--> 1
	14 (Maxilla, fac)	1	0.125	0	==> 1
	20 (Maxilla, ant)	1	0.500	0	--> 1
	27 (Maxilla, pos)	1	0.267	0	==> 1
	90 (Palatine, fo)	1	0.250	0	--> 1
	181 (Cervical 3-)	1	0.077	0	--> 1
	183 (Third cervi)	1	0.143	0	--> 1
	343 (Fibula, pro)	1	0.250	1	==> 0
	413 (Maxilla wit)	1	0.222	0	==> 1
	414 (Nasal, posi)	1	0.167	0	==> 1
node_154 --> node_153	339 (Fibula, att)	1	0.200	0	==> 1
	367 (Astragalus,)	1	0.500	0	--> 1
	371 (Calcaneum,)	1	0.333	1	==> 2
node_153 --> Mandasuchus tany	31 (Maxilla, ant)	1	0.200	0	==> 1
	181 (Cervical 3-)	1	0.077	0	--> 1
	227 (Glenoid, or)	1	0.167	0	==> 1
	305 (Femur, femo)	1	0.333	1	==> 0
	358 (Articular f)	1	0.250	0	--> 1
	404 (Osteoderms,)	1	0.167	0	==> 1
	410 (Dorsal oste)	1	0.200	1	==> 0
node_153 --> node_152	6 (Premaxillary)	1	0.200	2	--> 1
	157 (Articular,)	1	0.143	0	--> 1
	270 (Ilium, orie)	1	0.200	0	--> 1
	278 (Pubis, leng)	1	0.200	0	==> 1
	340 (Fibula, att)	1	0.167	0	==> 1
	341 (Fibula, pro)	1	0.143	1	==> 0
	397 (Metatarsal)	1	0.167	0	--> 1
	419 (Ischium, do)	1	0.143	0	==> 1
node_152 --> node_138	202 (Primordial)	1	0.333	0	--> 1
	296 (Ischium, ve)	1	0.200	0	==> 1
	422 (Fibula, "lu)	1	1.000	0	==> 1
node_138 --> Huenesuchus chin	219 (Scapula, te)	1	0.125	0	--> 1
	229 (Coracoid, s)	1	1.000	0	--> 1
	352 (Distal tars)	1	0.333	1	--> 0
	418 (Scapula-cor)	1	1.000	0	--> 1
	421 (Ischium, ve)	1	0.500	0	==> 1
node_138 --> Stagonosuchus ny	159 (Articular,)	1	0.111	1	--> 0
	235 (Humerus, di)	1	0.250	0	--> 1
	298 (Ischium len)	1	0.200	1	==> 0
	328 (Tibia, prox)	1	0.750	0	==> 1
	330 (Tibia, prox)	1	0.333	1	==> 0
node_152 --> node_151	2 (Premaxilla, p)	1	0.083	0	--> 1
	27 (Maxilla, pos)	1	0.267	0	--> 1
	29 (Maxilla, dor)	1	0.167	0	--> 1
	30 (Antorbital f)	1	0.167	0	--> 1
	142 (Orbit, shap)	1	0.222	0	--> 1
	147 (Palpebral(s)	1	0.333	0	--> 1
	191 (Cervical ve)	1	0.250	1	==> 2

	265 (Ilium, cres)	1	0.429	0	==>	1
	320 (Femur, medi)	1	0.167	0	-->	1
	358 (Articular f)	1	0.250	0	-->	1
node_151 --> node_140	51 (Squamosal (N	1	0.250	0	==>	1
	52 (Squamosal, a)	1	0.286	0	-->	1
	149 (Palpebral(s)	1	0.333	0	==>	1
	414 (Nasal, posi)	1	0.167	0	==>	1
node_140 --> node_139	42 (Frontal, dor)	1	0.200	0	==>	1
	415 (Premaxilla,)	1	0.125	0	==>	1
node_139 --> Saurosuchus gali	44 (Postfrontal)	1	0.167	0	==>	1
	106 (Basioccipit)	1	0.500	0	==>	1
	376 (Calcaneum,)	1	0.286	2	-->	1
node_139 --> Luperosuchus fra	37 (Nasal (N2011)	1	0.125	0	==>	1
	38 (Lacrimonal (N2)	1	0.500	0	==>	1
	75 (Jugal, longi)	1	0.118	1	-->	0
node_140 --> Sanga Pascoal sp	75 (Jugal, longi)	1	0.118	1	-->	0
	108 (Opisthotic,)	1	0.400	0	==>	1
node_151 --> node_150	59 (Parietals, u)	1	0.286	0	==>	1
	407 (Presacral o)	1	0.300	0	==>	1
node_150 --> Pagosvenator can	4 (Premaxilla, p)	1	0.500	0	==>	3
	17 (Maxilla, den)	1	0.333	0	==>	1
	21 (Maxilla, ven)	1	0.333	0	==>	1
	58 (Parietals, i)	1	0.333	0	==>	1
	69 (Jugal, anter)	1	0.286	1	==>	0
	142 (Orbit, shap)	1	0.222	1	==>	2
	403 (Osteoderms,)	1	0.250	1	==>	0
	415 (Premaxilla,)	1	0.125	0	==>	1
node_150 --> node_149	12 (Premaxilla-m)	1	0.300	0	==>	1
	34 (Nasals, post)	1	0.500	0	==>	1
	35 (Nasal, dorso)	1	0.250	0	==>	1
	37 (Nasal (N2011)	1	0.125	0	==>	1
	42 (Frontal, dor)	1	0.200	0	==>	1
	43 (Frontal, ant)	1	0.143	0	==>	1
	49 (Squamosal (N	1	0.500	0	==>	1
	89 (Ectopterygoi)	1	1.000	0	-->	1
	106 (Basioccipit)	1	0.500	0	-->	1
	108 (Opisthotic,)	1	0.400	0	==>	1
	131 (Foramen for)	1	0.400	0	-->	1
	132 (Foramen or)	1	0.333	0	-->	1
	133 (Auricular r)	1	0.500	0	-->	1
	141 (Posttempora)	1	0.250	0	-->	1
	144 (Supratempor)	1	0.200	0	==>	1
	156 (Articular (	1	0.222	0	==>	1
	239 (Ulna, dista)	1	1.000	0	-->	1
	240 (Radius, dis)	1	0.333	0	-->	1
	282 (Pubis, leng)	1	0.167	0	-->	1
	301 (Femur, prox)	1	0.333	1	-->	0
	319 (Femur, angl)	1	0.250	0	-->	1
	339 (Fibula, att)	1	0.200	1	-->	0
	404 (Osteoderms,)	1	0.167	0	==>	1
	410 (Dorsal oste)	1	0.200	1	-->	0
	411 (Dorsal oste)	1	0.333	0	-->	1
node_149 --> Batrachotomus ku	9 (Premaxilla, n)	1	0.333	0	==>	1
	16 (Maxilla, pos)	1	0.333	0	==>	1
	24 (Maxilla, ant)	1	0.167	0	==>	1
	25 (Maxilla, ant)	1	0.167	0	==>	1
	27 (Maxilla, pos)	1	0.267	1	==>	0
	29 (Maxilla, dor)	1	0.167	1	==>	0
	51 (Squamosal (N	1	0.250	0	==>	1
	65 (Postorbital,)	1	0.500	0	==>	1
	202 (Primordial)	1	0.333	0	-->	1
	207 (Insertion o)	1	0.200	0	==>	1
	219 (Scapula, te)	1	0.125	0	-->	1
	293 (Ischium, cr)	1	0.286	1	==>	0
	414 (Nasal, posi)	1	0.167	0	==>	1
	420 (Ischium, po)	1	0.250	0	-->	1
node_149 --> node_148	15 (Maxillary te)	1	0.250	0	==>	1
	22 (Maxilla, int)	1	0.200	0	==>	1
	45 (Quadratojuga)	1	0.250	0	==>	1
	52 (Squamosal, a)	1	0.286	0	-->	1
	66 (Postorbital-)	1	0.333	0	==>	1
	71 (Jugal, poste)	1	0.429	0	==>	1
	72 (Jugal, poste)	1	0.167	0	==>	1
	75 (Jugal, longi)	1	0.118	1	==>	2
	78 (Quadrate, he)	1	0.333	0	==>	1
	90 (Palatine, fo)	1	0.250	0	==>	1

	91 (Palatine, po)	1	0.500	0	==>	1
	105 (Prootic-opi)	1	1.000	0	==>	1
	111 (Opisthotic,)	1	0.200	0	==>	1
	121 (Eustachian)	1	1.000	0	==>	1
	149 (Palpebral(s)	1	0.333	0	==>	1
	154 (Dentary, do)	1	0.364	0	==>	2
	197 (Dorsal vert)	1	0.182	1	==>	0
	221 (Scapulocora)	1	0.333	0	-->	1
	224 (Coracoid, p)	1	0.333	0	==>	1
	227 (Glenoid, or)	1	0.167	0	==>	1
	232 (Humerus, pr)	1	0.500	0	==>	1
	269 (Ilium, ante)	1	0.333	0	==>	1
	289 (Pubis, medi)	1	0.250	0	==>	1
	312 (Femur, prox)	1	1.000	0	==>	1
	314 (Femur, prox)	1	0.167	1	==>	0
	341 (Fibula, pro)	1	0.143	0	==>	1
	344 (Fibula, med)	1	0.500	0	==>	1
	349 (Distal tars)	1	0.500	0	-->	1
	354 (Astragalus,)	1	1.000	0	-->	1
	364 (Astragalus,)	1	0.333	0	-->	1
	375 (Calcaneum,)	1	0.333	0	==>	1
	376 (Calcaneum,)	1	0.286	2	-->	1
	390 (Metatarsal)	1	0.333	0	-->	1
	399 (Metatarsal)	1	0.300	0	-->	1
	400 (Pedal ungua)	1	0.250	2	==>	0
node_148 --> Postosuchus kirk	26 (Maxilla, lat)	1	0.333	0	==>	2
	52 (Squamosal, a)	1	0.286	1	==>	2
	57 (Squamosal, d)	1	0.500	0	==>	1
	65 (Postorbital,)	1	0.500	0	==>	1
	83 (Quadrate, do)	1	0.500	0	-->	1
	125 (Exit of cra)	1	0.667	0	-->	1
	192 (Middle cerv)	1	0.250	0	==>	1
	391 (Metatarsal)	1	0.200	0	==>	1
	420 (Ischium, po)	1	0.250	0	-->	1
node_148 --> Polonosuchus sil	26 (Maxilla, lat)	1	0.333	0	==>	2
	52 (Squamosal, a)	1	0.286	1	==>	2
	57 (Squamosal, d)	1	0.500	0	==>	1
	83 (Quadrate, do)	1	0.500	0	-->	1
	153 (Dentary, an)	1	0.250	0	==>	1
	180 (Axis, ventr)	1	0.250	0	-->	1
node_148 --> Postosuchus alis	125 (Exit of cra)	1	0.667	0	-->	1
	180 (Axis, ventr)	1	0.250	0	-->	1
	192 (Middle cerv)	1	0.250	0	==>	1
node_148 --> Teratosaurus sue	26 (Maxilla, lat)	1	0.333	0	==>	3
node_148 --> Rausisuchus tirad	51 (Squamosal (N)	1	0.250	0	==>	1
	159 (Articular,)	1	0.111	1	==>	0
	163 (Surangular)	1	0.667	0	==>	2
	180 (Axis, ventr)	1	0.250	0	-->	1
	186 (Epiphyses)	1	0.143	0	==>	1
	191 (Cervical ve)	1	0.250	2	-->	0
	219 (Scapula, te)	1	0.125	0	-->	1
	283 (Pubis, dist)	1	0.200	1	==>	0
	340 (Fibula, att)	1	0.167	1	==>	0
	408 (Anterior ba)	1	0.250	0	==>	1
node_148 --> Fasolasuchus ten	14 (Maxilla, fac)	1	0.125	0	==>	1
	29 (Maxilla, dor)	1	0.167	1	==>	0
	35 (Nasal, dorso)	1	0.250	1	==>	0
	154 (Dentary, do)	1	0.364	2	==>	0
	191 (Cervical ve)	1	0.250	2	==>	1
	197 (Dorsal vert)	1	0.182	0	==>	1
	240 (Radius, dis)	1	0.333	1	==>	0
	281 (Pubis, obtu)	1	0.500	0	-->	1
	341 (Fibula, pro)	1	0.143	1	==>	0
node_148 --> <CM 73372>	273 (Ilium, vent)	1	0.333	0	==>	2
	294 (Ischium, di)	1	0.143	1	-->	0
	391 (Metatarsal)	1	0.200	0	==>	1
node_148 --> node_147	2 (Premaxilla, p)	1	0.083	1	==>	0
	4 (Premaxilla, p)	1	0.500	0	==>	1
	6 (Premaxillary)	1	0.200	1	==>	2
	11 (Premaxilla-m)	1	0.167	0	==>	1
	14 (Maxilla, fac)	1	0.125	0	==>	1
	22 (Maxilla, int)	1	0.200	1	==>	0
	29 (Maxilla, dor)	1	0.167	1	==>	0
	32 (Maxilla, pal)	1	0.667	1	==>	2
	35 (Nasal, dorso)	1	0.250	1	==>	0
	37 (Nasal (N2011)	1	0.125	1	==>	0

	39 (Lacrimal, he)	1	0.250	0	==>	1
	40 (Prefrontal,)	1	0.500	0	-->	1
	44 (Postfrontal)	1	0.167	0	==>	1
	52 (Squamosal, a)	1	0.286	1	==>	0
	55 (Squamosal, p)	1	0.250	0	==>	1
	75 (Jugal, longi)	1	0.118	2	==>	1
	76 (Quadrate (N2))	1	1.000	0	==>	1
	79 (Quadratojuga)	1	0.250	0	==>	1
	114 (Exoccipital)	1	0.500	2	==>	1
	115 (Exoccipital)	1	0.500	0	==>	1
	116 (Pneumatizat)	1	0.500	0	==>	1
	142 (Orbit, shap)	1	0.222	1	==>	0
	149 (Palpebral(s))	1	0.333	1	==>	0
	156 (Articular ())	1	0.222	1	==>	2
	191 (Cervical ve)	1	0.250	2	-->	0
	213 (Clavicles ())	1	1.000	0	==>	2
	223 (Coracoid, p)	1	0.500	0	==>	1
	234 (Humerus, ec)	1	0.167	0	==>	1
	242 (Proximal ca)	1	1.000	0	==>	1
	249 (Distal carp)	1	0.333	0	==>	1
	275 (Ilium, dors)	1	0.250	0	==>	1
	281 (Pubis, obtu)	1	0.500	0	-->	1
	340 (Fibula, att)	1	0.167	1	==>	0
	397 (Metatarsal)	1	0.167	1	==>	0
	415 (Premaxilla,)	1	0.125	0	==>	1
	416 (Dentary, ra)	1	0.333	1	-->	0
node_147 --> Hesperosuchus ag	191 (Cervical ve)	1	0.250	0	==>	1
	233 (Humerus, pr)	1	0.143	0	-->	1
	274 (Ilium, acet)	1	0.111	0	-->	1
	321 (Femur, dist)	1	0.500	0	==>	1
	399 (Metatarsal)	1	0.300	1	-->	2
node_147 --> Dromicosuchus gr	233 (Humerus, pr)	1	0.143	0	-->	1
	237 (Ulna, later)	1	0.333	1	==>	0
	311 (Femur, ante)	1	0.222	0	==>	1
	382 (Metatarsus,)	1	0.250	0	==>	1
node_147 --> node_146	58 (Parietals, i)	1	0.333	0	==>	1
	59 (Parietals, u)	1	0.286	1	==>	2
	61 (Parietals, o)	1	0.333	0	==>	1
	107 (Basioccipit)	1	0.500	0	==>	1
	112 (Opisthotic,)	1	1.000	0	-->	1
	119 (Crista vest)	1	1.000	0	-->	1
	120 (Lagenar/coc)	1	1.000	0	-->	1
	122 (External fo)	1	0.500	1	-->	2
	124 (Basipterygo)	1	1.000	0	-->	1
	128 (Pila antoti)	1	0.500	0	-->	1
	129 (Perilymphat)	1	0.333	0	-->	1
	130 (Perilymphat)	1	1.000	0	-->	1
	382 (Metatarsus,)	1	0.250	0	==>	1
node_146 --> Sphenosuchus acu	2 (Premaxilla, p)	1	0.083	0	==>	1
	73 (Jugal, poste)	1	0.333	0	==>	1
node_146 --> node_145	27 (Maxilla, pos)	1	0.267	1	==>	0
	41 (Prefrontal ())	1	0.500	0	==>	1
	90 (Palatine, fo)	1	0.250	1	==>	0
	154 (Dentary, do)	1	0.364	2	==>	0
	195 (Posterior c)	1	0.167	1	-->	0
	270 (Ilium, orie)	1	0.200	1	-->	0
	273 (Ilium, vent)	1	0.333	0	-->	2
	274 (Ilium, acet)	1	0.111	0	-->	1
	283 (Pubis, dist)	1	0.200	1	-->	0
	293 (Ischium, cr)	1	0.286	1	-->	0
	294 (Ischium, di)	1	0.143	1	-->	0
	297 (Ischium, pr)	2	0.500	0	-->	2
	298 (Ischium len)	1	0.200	1	-->	0
	319 (Femur, angl)	1	0.250	1	-->	0
	345 (Fibula, dis)	1	0.167	0	-->	1
	396 (Pedal digit)	1	1.000	0	-->	1
	419 (Ischium, do)	1	0.143	1	-->	0
node_145 --> Dibothrosuchus e	30 (Antorbital f)	1	0.167	1	-->	0
	103 (Parabasisph)	1	0.200	0	-->	1
	191 (Cervical ve)	1	0.250	0	==>	1
	243 (Ulnare, len)	1	0.333	0	-->	1
	265 (Ilium, cres)	1	0.429	1	==>	0
	413 (Maxilla wit)	1	0.222	0	==>	1
node_145 --> Terrestrisuchus	30 (Antorbital f)	1	0.167	1	-->	0
	50 (Squamosal, t)	1	0.333	0	-->	1
	75 (Jugal, longi)	1	0.118	1	==>	0

	216 (Scapula, le)	1	0.250	0	-->	1
	289 (Pubis, medi)	1	0.250	1	-->	0
	307 (Femur, dors)	1	0.286	0	-->	1
	323 (Femur, bone)	1	0.333	0	==>	1
	387 (Metatarsal)	1	0.500	0	==>	1
	398 (Metatarsal)	1	0.250	0	-->	1
node_145 --> node_144	6 (Premaxillary)	1	0.200	2	==>	1
	34 (Nasals, post)	1	0.500	1	==>	0
	42 (Frontal, dor)	1	0.200	1	==>	0
	50 (Squamosal, t)	1	0.333	0	-->	1
	59 (Parietals, u)	1	0.286	2	==>	0
	60 (Parietals, p)	1	1.000	0	==>	1
	109 (Opisthotic,)	1	0.500	0	==>	1
	144 (Supratempor)	1	0.200	1	==>	0
	223 (Coracoid, p)	1	0.500	1	==>	2
	224 (Coracoid, p)	1	0.333	1	==>	0
	291 (Ischium, me)	1	0.286	1	==>	0
	321 (Femur, dist)	1	0.500	0	==>	1
	399 (Metatarsal)	1	0.300	1	-->	2
node_144 --> Litargosuchus le	61 (Parietals, o)	1	0.333	1	==>	0
	73 (Jugal, poste)	1	0.333	0	==>	1
	210 (Middle caud)	1	0.167	1	==>	0
	216 (Scapula, le)	1	0.250	0	-->	1
	299 (Tibia (or f)	1	0.143	0	==>	1
	398 (Metatarsal)	1	0.250	0	-->	1
	407 (Presacral o)	1	0.300	1	-->	0
node_144 --> node_143	27 (Maxilla, pos)	1	0.267	0	==>	1
	53 (Squamosal, d)	1	1.000	0	==>	1
	153 (Dentary, an)	1	0.250	0	-->	1
node_143 --> Kayentasuchus wa	2 (Premaxilla, p)	1	0.083	0	==>	1
	51 (Squamosal (N)	1	0.250	0	==>	1
	155 (Dentary, an)	1	0.250	0	==>	1
	160 (Dentary-spl)	1	0.250	0	==>	1
	307 (Femur, dors)	1	0.286	0	-->	1
	308 (Femur, ante)	1	0.286	0	==>	1
	313 (Femur, post)	1	0.250	0	==>	1
node_143 --> node_142	4 (Premaxilla, p)	1	0.500	1	==>	2
	64 (Quadratojuga)	1	0.500	0	-->	1
	80 (Quadrate, bo)	1	1.000	0	-->	1
	91 (Palatine, po)	1	0.500	1	==>	0
	99 (Parabasisphe)	1	0.500	0	-->	1
	100 (Parabasisph)	1	0.333	1	-->	0
	121 (Eustachian)	1	1.000	1	-->	2
	126 (Supraoccipi)	1	0.250	1	-->	0
	199 (Middle dors)	1	0.167	0	-->	1
	227 (Glenoid, or)	1	0.167	1	-->	0
	278 (Pubis, leng)	1	0.200	1	-->	0
	296 (Ischium, ve)	1	0.200	0	-->	1
	404 (Osteoderms,)	1	0.167	1	-->	0
	405 (Osteoderms,)	1	0.200	0	-->	1
	408 (Anterior ba)	1	0.250	0	-->	1
	409 (Ventral car)	1	0.333	0	-->	1
node_142 --> Alligator missis	6 (Premaxillary)	1	0.200	1	==>	2
	11 (Premaxilla-m)	1	0.167	1	==>	0
	12 (Premaxilla-m)	1	0.300	1	==>	0
	22 (Maxilla, int)	1	0.200	0	==>	1
	50 (Squamosal, t)	1	0.333	1	==>	0
	75 (Jugal, longi)	1	0.118	1	==>	0
	81 (Quadrate, di)	1	0.500	0	==>	1
	107 (Basioccipit)	1	0.500	1	==>	0
	108 (Opisthotic,)	1	0.400	1	==>	0
	109 (Opisthotic,)	1	0.500	1	==>	0
	131 (Foramen for)	1	0.400	1	==>	0
	136 (Antorbital)	1	0.500	1	==>	0
	140 (External na)	1	0.250	0	==>	1
	144 (Supratempor)	1	0.200	0	==>	1
	156 (Articular (	2	0.222	2	==>	0
	157 (Articular,)	1	0.143	1	==>	0
	159 (Articular,)	1	0.111	1	==>	0
	168 (Tooth, serr)	1	0.250	1	==>	0
	171 (Tooth crown)	1	0.143	0	-->	1
	191 (Cervical ve)	1	0.250	0	==>	1
	192 (Middle cerv)	1	0.250	0	==>	1
	219 (Scapula, te)	1	0.125	0	==>	1
	221 (Scapulocora)	1	0.333	1	==>	0
	232 (Humerus, pr)	1	0.500	1	==>	0

	233 (Humerus, pr)	1	0.143	0	==>	1
	238 (Ulna, dista)	1	0.250	1	==>	0
	241 (Radius, len)	1	0.125	0	-->	1
	258 (Manual digi)	2	0.375	0	-->	2
	265 (Ilium, cres)	1	0.429	1	==>	0
	275 (Ilium, dors)	1	0.250	1	==>	0
	282 (Pubis, leng)	1	0.167	1	==>	0
	298 (Ischium len)	1	0.200	0	==>	1
	311 (Femur, ante)	1	0.222	0	==>	1
	371 (Calcaneum,)	1	0.333	2	==>	1
	377 (Calcaneum,)	1	0.500	2	==>	1
	382 (Metatarsus,)	1	0.250	1	==>	0
	383 (Longest met)	1	0.200	0	==>	1
	394 (Metatarsal)	1	0.500	0	==>	1
	403 (Osteoderms,)	1	0.250	1	==>	0
	406 (Osteoderms,)	1	0.500	0	==>	1
	412 (Gastralia (	1	0.400	0	==>	1
node_142 --> Orthosuchus stor	17 (Maxilla, den)	1	0.333	0	==>	1
	154 (Dentary, do)	1	0.364	0	==>	2
	171 (Tooth crown)	1	0.143	0	-->	1
	243 (Ulnare, len)	1	0.333	0	-->	1
	246 (Metacarpals)	1	0.333	0	==>	1
	274 (Ilium, acet)	1	0.111	1	==>	0
	305 (Femur, femo)	1	0.333	1	==>	0
	407 (Presacral o)	1	0.300	1	-->	2
node_142 --> node_141	14 (Maxilla, fac)	1	0.125	1	==>	0
	160 (Dentary-spl)	1	0.250	0	==>	1
	162 (Mandibular)	1	0.500	0	==>	2
	180 (Axis, ventr)	1	0.250	0	==>	1
	407 (Presacral o)	1	0.300	1	-->	2
node_141 --> Baroqueosuchus h	73 (Jugal, poste)	1	0.333	0	-->	1
node_141 --> Protosuchus rich	216 (Scapula, le)	1	0.250	0	-->	1
	217 (Scapula, en)	1	0.200	1	-->	0
	241 (Radius, len)	1	0.125	0	-->	1
	243 (Ulnare, len)	1	0.333	0	-->	1
	319 (Femur, angl)	1	0.250	0	-->	1
	353 (Distal tars)	1	0.250	1	-->	0