**S2 File.** Supporting Information for Martinelli et al. “The first *Caipirasuchus* (Mesoeucrocodylia, Notosuchia) from the Late Cretaceous of Minas Gerais, Brazil: new insights on sphagesaurid anatomy and taxonomy”

**The data score for *Caipirasuchus mineirus* is as follow:**

101?00?1020000?11000111111001110110221101100?1?12011?1100??0?0?0311111110100110001?1??1????00?000[12]0001112112??110012?01201101?110100001011[01]11011010111???01000000101000?001100???000010?11100011211100100011?101100000000?000?00?0?11101011000000?00000?000100000???10?000?01?10?1000010??0??00?0001000???0?011?1????0100???0???????01111?00?1000??????00??00?11111?10?0[01]012101211101011011110[01]1111??00111101010000?000000111??????????00?????????1??100

**Bremer values.** Strict consensus cladogram of 133,920 MPTs, with Bremer support values, depicting the phylogenetic relationships of *Caipirasuchus mineirus*, based on the data matrix of Fiorelli et al., (2016).





**Synapomorphies.** Strict consensus cladogram with numbers of the nodes for the list of synapomorphies.

 ÚÄÄ0 Gracilisuchus

 ³ ÚÄÄ2 Dibothrosuchus

 ³ ÚÄÄ114ÁÄÄ1 Terrestrisuchus

ÃÄÄ113´ ³ ÚÄÄ8 KayentaForm

 ³ ³ ÚÄÄ121ÁÄÄ7 Edentosuchus

 ³ ³ ÚÄÄ118´ ÚÄÄ5 Hemiprotosuchus

 ÀÄÄ115´ ³ ÀÄÄ117´ ÚÄÄ4 Protosuchus\_haughtoni

 ³ ³ ÀÄÄ116ÁÄÄ3 Protosuchus\_richardsoni

 ³ ³ ÚÄÄ6 Orthosuchus

 ÀÄÄ119´ ³ ÚÄÄ10 Gobiosuchus

 ³ ³ ÚÄÄ122ÁÄÄ9 Zaraasuchus

 ³ ³ ³ ÚÄÄ17 Fruitachampsa

 ÀÄÄ120´ ³ ÚÄÄ126´ ÚÄÄ14 Zosuchus

 ³ ³ ³ ÀÄÄ125´ ÚÄÄ13 Shantungosuchus

 ³ ³ ³ ÀÄÄ124ÅÄÄ12 Sichuanosuchus\_huidongensis

 ³ ³ ³ ÀÄÄ11 Sichuanosuchus\_shuhanensis

 ÀÄÄ123´ ³ ÚÄÄ16 Hsisosuchus\_chungkingensis

 ³ ³ ÚÄÄ128ÁÄÄ15 Hsisosuchus\_chowi

 ³ ³ ³ ÚÄÄ110 Microsuchus

 ³ ³ ³ ³ ÚÄÄ105 Pholidosaurus

 ³ ³ ³ ³ ³ ÚÄÄ107 Terminonaris

 ÀÄÄ127´ ³ ³ ÚÄÄ195´ ÚÄÄ196ÁÄÄ106 Sarcosuchus

 ³ ³ ³ ³ ÀÄÄ194´ ÚÄÄ102 Sokotosuchus

 ³ ³ ³ ³ ÀÄÄ193´ ÚÄÄ104 Hyposaurus

 ³ ³ ³ ³ ÀÄÄ192ÅÄÄ103 Dyrosaurus

 ³ ³ ³ ÚÄÄ187´ ÀÄÄ101 Rhabdognathus

 ³ ³ ³ ³ ³ ÚÄÄ94 Steneosaurus\_bollensis

 ³ ³ ³ ³ ³ ³ ÚÄÄ93 Pelagosaurus

 ³ ³ ³ ³ ÀÄÄ186´ ³ ÚÄÄ96 M.\_casamequelai

 ³ ³ ³ ³ ÀÄÄ185´ ÃÄÄ95 M.\_superciliousus

 ÀÄÄ129´ ³ ³ ÀÄÄ188´ ÚÄÄ100 D.\_andiniensis

 ³ ³ ³ ³ ÚÄÄ191ÁÄÄ99 D.\_maximus

 ³ ÃÄÄ166´ ÀÄÄ190´ ÚÄÄ98 C.\_suevicus

 ³ ³ ³ ÀÄÄ189ÁÄÄ97 C.\_araucaniensis

 ³ ³ ³ ÚÄÄ74 Alligatorium

 ³ ³ ³ ÚÄÄ164ÁÄÄ73 Theriosuchus

 ³ ³ ³ ³ ÚÄÄ75 Goniopholis\_simus

 ³ ³ ³ ³ ³ ÚÄÄ83 Calsoyasuchus

 ³ ³ ÀÄÄ165´ ÚÄÄ167´ ÚÄÄ171ÁÄÄ78 Sunosuchus

 ³ ³ ³ ³ ÀÄÄ170´ ÚÄÄ77 Eutretauranosuchus

 ³ ³ ³ ³ ÀÄÄ169ÁÄÄ76 Goniopholis\_stovalli

 ³ ³ ÀÄÄ168´ ÚÄÄ82 Glen\_Rose\_Form

 ³ ³ ³ ÚÄÄ175ÁÄÄ80 Bernissartia

 ÀÄÄ136´ ³ ³ ÚÄÄ108 Rugosuchus

 ³ ÀÄÄ174´ ÚÄÄ172ÁÄÄ79 Shamosuchus

 ³ ³ ³ ÚÄÄ81 Hylaeochampsa

 ³ ÀÄÄ173´ ³ ÚÄÄ84 Borealosuchus

 ³ ÀÄÄ176´ ³ ÚÄÄ85 Pristichampsus\_vorax

 ³ ÀÄÄ177´ ³ ÚÄÄ88 Leidyosuchus\_canadensis

 ³ ÀÄÄ178´ ÚÄÄ183´ ÚÄÄ92 Alligator

 ³ ³ ³ ÀÄÄ184ÁÄÄ91 Diplocynodon\_hantoniensis

 ³ ÀÄÄ182´ ÚÄÄ90 Crocodylus

 ³ ³ ÃÄÄ89 Asiatosuchus\_germanicus

 ³ ÀÄÄ181´ ÚÄÄ109 Argochampsa

 ³ ÀÄÄ180´ ÚÄÄ87 Gavialis

 ³ ÀÄÄ179ÁÄÄ86 Eothoracosaurus

 ³ ÚÄÄ64 Anatosuchus

 ³ ÃÄÄ63 A.\_tsangatsangana

 ³ ÚÄÄ133ÅÄÄ62 A.\_wegeneri

 ³ ³ ³ ÚÄÄ61 A.\_buitreraensis

 ³ ³ ÀÄÄ132´ ÚÄÄ59 A.\_gomesii

 ³ ³ ÀÄÄ131´ ÚÄÄ60 A.\_patagonicus

 ³ ÚÄÄ134´ ÀÄÄ130ÁÄÄ18 Uruguaysuchus

 ³ ³ ³ ÚÄÄ72 Stolokrosuchus

 ³ ³ ³ ³ ÚÄÄ71 Kaprosuchus

 ³ ³ ÀÄÄ162´ ÚÄÄ163ÁÄÄ70 Mahajangasuchus

 ³ ³ ³ ³ ÚÄÄ69 Hamadasuchus

 ³ ³ ÀÄÄ161´ ³ ÚÄÄ68 Gasparinisuchus

 ÀÄÄ135´ ÀÄÄ160´ ÃÄÄ67 Lomasuchus

 ³ ÀÄÄ159ÅÄÄ66 Uberabasuchus

 ³ ÀÄÄ65 Montealtosuchus

 ³ ÚÄÄ19 Candidodon

 ³ ³ ÚÄÄ20 Libycosuchus

 ÀÄÄ137´ ³ ÚÄÄ21 Simosuchus

 ³ ³ ³ ÚÄÄ111 Neuquensuchus

 ÀÄÄ138´ ³ ÃÄÄ23 Pakasuchus

 ³ ³ ÃÄÄ22 Malawisuchus

 ÀÄÄ139´ ³ ÚÄÄ39 Morrinhosuchus

 ³ ³ ³ ÚÄÄ112 Llanosuchus

 ³ ³ ³ ÃÄÄ38 Coringasuchus

 ³ ³ ³ ÃÄÄ37 Adamantinasuchus

 ÀÄÄ140´ ÚÄÄ144´ ÃÄÄ36 Yacarerani

 ³ ³ ³ ÃÄÄ31 Armadillosuchus

 ³ ³ ³ ÃÄÄ30 Sphagesaurus

 ³ ³ ÀÄÄ143ÅÄÄ29 Caryonosuchus

 ³ ³ ÃÄÄ28 Labidiosuchus

 ³ ³ ÃÄÄ27 Mariliasuchus

 ³ ³ ÃÄÄ25 Notosuchus

 ÀÄÄ142´ ³ ÚÄÄ35 Caipirasuchus\_mineirus

 ³ ³ ÃÄÄ32 Caipirasuchus\_stenognathus

 ³ ÀÄÄ146´ ÚÄÄ34 Caipirasuchus\_paulistanus

 ³ ÀÄÄ147ÁÄÄ33 Caipirasuchus\_montealtensis

 ³ ÚÄÄ24 Chimaerasuchus

 ³ ³ ÚÄÄ26 Comahuesuchus

 ³ ³ ³ ÚÄÄ58 Pabhwehshi

 ÀÄÄ141´ ³ ÃÄÄ56 Lorosuchus

 ³ ³ ÃÄÄ47 Cynodontosuchus

 ÀÄÄ145´ ÃÄÄ46 Pehuenchesuchus

 ³ ³ ÚÄÄ49 Iberosuchus

 ³ ÃÄÄ154ÁÄÄ48 Bergisuchus

 ³ ³ ÚÄÄ41 Pissarrachampsa

 ÀÄÄ151ÅÄÄ150´ ÚÄÄ45 Stratiotosuchus

 ³ ÀÄÄ149´ ÚÄÄ40 Campinasuchus

 ³ ÀÄÄ148´ ÚÄÄ42 B.\_albertoi

 ³ ÀÄÄ152´ ÚÄÄ44 B.\_salgadoensis

 ³ ÀÄÄ153ÁÄÄ43 B.\_pachecoi

 ³ ÚÄÄ51 Barinasuchus

 ³ ³ ÚÄÄ55 Ayllusuchus

 ÀÄÄ157´ ÚÄÄ155ÁÄÄ50 Bretesuchus

 ³ ³ ÚÄÄ57 Lumbrera\_form

 ÀÄÄ156´ ÃÄÄ54 S.\_querejazus

 ÀÄÄ158ÅÄÄ53 S.\_icaeorhinus

 ÀÄÄ52 S.\_huilensis

Synapomorphies (Node numbers refer to nodes in consensus)

 Gracilisuchus :

 All trees:

 No autapomorphies:

 Terrestrisuchus :

 All trees:

 Char. 432: 0 --> 1

 Dibothrosuchus :

 All trees:

 Char. 14: 0 --> 1

 Char. 78: 0 --> 1

 Char. 89: 0 --> 2

 Protosuchus\_richardsoni :

 All trees:

 Char. 164: 1 --> 0

 Protosuchus\_haughtoni :

 All trees:

 Char. 205: 1 --> 0

 Char. 279: 0 --> 1

 Hemiprotosuchus :

 All trees:

 Char. 32: 0 --> 1

 Orthosuchus :

 All trees:

 Char. 1: 0 --> 1

 Char. 10: 0 --> 1

 Char. 104: 1 --> 2

 Char. 107: 0 --> 4

 Char. 130: 0 --> 1

 Char. 141: 1 --> 0

 Char. 152: 0 --> 1

 Char. 162: 0 --> 1

 Char. 211: 0 --> 1

 Char. 284: 1 --> 0

 Char. 436: 0 --> 1

 Edentosuchus :

 All trees:

 Char. 66: 1 --> 2

 Char. 120: 0 --> 1

 Char. 124: 0 --> 1

 Char. 129: 0 --> 1

 Char. 138: 0 --> 1

 Kayenta\_Form :

 All trees:

 Char. 118: 0 --> 1

 Zaraasuchus :

 All trees:

 Char. 198: 0 --> 1

 Gobiosuchus :

 All trees:

 No autapomorphies:

 Sichuanosuchus\_shuhanensis :

 All trees:

 Char. 21: 0 --> 1

 Char. 144: 1 --> 0

 Sichuanosuchus\_huidongensis :

 All trees:

 Char. 262: 0 --> 1

 Shantungosuchus :

 All trees:

 No autapomorphies:

 Zosuchus :

 All trees:

 Char. 31: 0 --> 1

 Char. 43: 01 --> 2

 Char. 80: 0 --> 1

 Char. 105: 1 --> 2

 Char. 107: 0 --> 3

 Char. 139: 1 --> 0

 Char. 159: 0 --> 1

 Char. 164: 1 --> 0

 Char. 172: 0 --> 1

 Char. 192: 1 --> 0

 Char. 261: 0 --> 1

 Hsisosuchus\_chowi :

 All trees:

 Char. 183: 0 --> 1

 Hsisosuchus\_chungkingensis :

 All trees:

 Char. 206: 0 --> 1

 Fruitachampsa :

 All trees:

 Char. 11: 0 --> 1

 Char. 18: 1 --> 0

 Char. 39: 0 --> 1

 Char. 66: 1 --> 2

 Char. 91: 0 --> 1

 Char. 92: 0 --> 1

 Char. 126: 1 --> 0

 Char. 134: 0 --> 1

 Char. 141: 1 --> 0

 Char. 265: 0 --> 1

 Char. 365: 1 --> 0

 Uruguaysuchus :

 All trees:

 Char. 166: 1 --> 0

 Char. 175: 1 --> 0

 Char. 272: 1 --> 0

 Char. 277: 0 --> 1

 Char. 278: 0 --> 1

 Candidodon :

 All trees:

 Char. 107: 0 --> 1

 Char. 119: 1 --> 0

 Char. 127: 1 --> 0

 Char. 139: 1 --> 0

 Char. 148: 0 --> 1

 Char. 399: 0 --> 1

 Libycosuchus :

 All trees:

 Char. 75: 0 --> 1

 Char. 191: 1 --> 0

 Char. 211: 0 --> 1

 Simosuchus :

 All trees:

 Char. 2: 1 --> 3

 Char. 9: 2 --> 0

 Char. 15: 1 --> 0

 Char. 16: 1 --> 0

 Char. 18: 0 --> 1

 Char. 36: 2 --> 1

 Char. 77: 1 --> 0

 Char. 96: 0 --> 1

 Char. 101: 1 --> 0

 Char. 102: 1 --> 2

 Char. 125: 0 --> 2

 Char. 127: 1 --> 2

 Char. 132: 0 --> 1

 Char. 142: 1 --> 2

 Char. 148: 0 --> 2

 Char. 149: 1 --> 0

 Char. 153: 0 --> 2

 Char. 175: 1 --> 0

 Char. 184: 0 --> 1

 Char. 190: 0 --> 1

 Char. 201: 0 --> 1

 Char. 209: 0 --> 1

 Char. 218: 0 --> 1

 Char. 239: 0 --> 1

 Char. 257: 0 --> 1

 Char. 352: 0 --> 1

 Char. 353: 0 --> 1

 Char. 364: 0 --> 1

 Char. 382: 0 --> 1

 Char. 412: 0 --> 1

 Char. 428: 0 --> 1

 Char. 429: 0 --> 1

 Malawisuchus :

 All trees:

 Char. 8: 0 --> 1

 Char. 107: 03 --> 1

 Char. 139: 1 --> 0

 Char. 144: 1 --> 0

 Char. 277: 0 --> 1

 Pakasuchus :

 All trees:

 Char. 10: 0 --> 1

 Char. 66: 1 --> 2

 Char. 79: 0 --> 1

 Char. 89: 2 --> 1

 Char. 104: 2 --> 1

 Char. 166: 0 --> 1

 Chimaerasuchus :

 All trees:

 Char. 8: 0 --> 1

 Char. 10: 0 --> 1

 Char. 69: 1 --> 0

 Char. 100: 0 --> 1

 Char. 105: 1 --> 3

 Char. 107: 03 --> 4

 Char. 120: 0 --> 1

 Char. 123: 0 --> 1

 Char. 139: 1 --> 0

 Char. 151: 1 --> 0

 Char. 218: 0 --> 12

 Char. 304: 1 --> 0

 Char. 387: 0 --> 2

 Char. 390: 0 --> 1

 Notosuchus :

 All trees:

 Char. 11: 0 --> 1

 Char. 30: 1 --> 0

 Char. 54: 1 --> 0

 Char. 94: 0 --> 1

 Char. 105: 1 --> 0

 Char. 129: 1 --> 0

 Char. 131: 1 --> 0

 Char. 135: 0 --> 1

 Char. 141: 0 --> 1

 Char. 147: 1 --> 0

 Char. 161: 1 --> 0

 Char. 164: 0 --> 1

 Char. 179: 0 --> 1

 Char. 194: 1 --> 0

 Char. 208: 0 --> 1

 Char. 236: 0 --> 1

 Char. 298: 0 --> 1

 Char. 307: 0 --> 1

 Char. 349: 1 --> 0

 Char. 352: 1 --> 0

 Char. 353: 1 --> 0

 Char. 365: 0 --> 1

 Char. 366: 1 --> 0

 Char. 377: 1 --> 0

 Char. 383: 1 --> 0

 Char. 384: 1 --> 0

 Char. 391: 1 --> 0

 Char. 439: 0 --> 1

 Comahuesuchus :

 All trees:

 Char. 2: 1 --> 3

 Char. 80: 0 --> 1

 Char. 118: 1 --> 0

 Char. 125: 0 --> 2

 Char. 126: 1 --> 0

 Char. 166: 0 --> 2

 Char. 182: 0 --> 1

 Char. 229: 0 --> 1

 Char. 230: 0 --> 1

 Char. 261: 0 --> 1

 Char. 439: 0 --> 1

 Mariliasuchus :

 All trees:

 Char. 28: 1 --> 0

 Char. 107: 2 --> 3

 Char. 144: 1 --> 0

 Char. 147: 1 --> 0

 Char. 166: 0 --> 12

 Char. 228: 0 --> 1

 Char. 230: 0 --> 1

 Char. 236: 0 --> 1

 Char. 261: 0 --> 1

 Char. 292: 0 --> 1

 Char. 347: 0 --> 1

 Char. 359: 0 --> 1

 Char. 381: 0 --> 1

 Char. 383: 1 --> 0

 Char. 392: 1 --> 0

 Labidiosuchus :

 All trees:

 Char. 161: 1 --> 0

 Char. 261: 0 --> 1

 Char. 392: 1 --> 0

 Caryonosuchus :

 All trees:

 Char. 105: 1 --> 3

 Char. 134: 1 --> 0

 Char. 363: 0 --> 1

 Char. 380: 1 --> 0

 Sphagesaurus :

 All trees:

 Char. 101: 1 --> 0

 Char. 105: 1 --> 3

 Char. 111: 1 --> 0

 Char. 120: 0 --> 1

 Char. 123: 0 --> 1

 Char. 126: 0 --> 1

 Char. 128: 0 --> 1

 Char. 132: 0 --> 1

 Char. 133: 0 --> 1

 Char. 142: 1 --> 0

 Char. 163: 1 --> 0

 Char. 292: 0 --> 1

 Char. 356: 1 --> 2

 Char. 363: 0 --> 1

 Char. 380: 1 --> 0

 Char. 398: 0 --> 1

 Armadillosuchus :

 All trees:

 Char. 21: 1 --> 0

 Char. 30: 1 --> 0

 Char. 94: 0 --> 1

 Char. 96: 0 --> 1

 Char. 105: 1 --> 3

 Char. 111: 1 --> 0

 Char. 123: 0 --> 1

 Char. 126: 0 --> 1

 Char. 134: 1 --> 0

 Char. 142: 1 --> 0

 Char. 163: 1 --> 0

 Char. 167: 0 --> 1

 Char. 180: 0 --> 1

 Char. 210: 0 --> 1

 Char. 266: 1 --> 0

 Char. 323: 1 --> 0

 Char. 354: 1 --> 0

 Char. 356: 1 --> 2

 Char. 363: 0 --> 1

 Caipirasuchus\_stenognathus :

 All trees:

 Char. 399: 0 --> 1

 Caipirasuchus\_montealtensis :

 All trees:

 Char. 292: 0 --> 1

 Caipirasuchus\_paulistanus :

 All trees:

 Char. 277: 0 --> 1

 Char. 406: 1 --> 0

 Caipirasuchus\_mineirus :

 All trees:

 Char. 131: 1 --> 0

 Char. 169: 1 --> 0

 Char. 406: 1 --> 0

 Yacarerani :

 All trees:

 Char. 21: 1 --> 0

 Char. 28: 1 --> 0

 Char. 73: 1 --> 0

 Char. 90: 1 --> 5

 Char. 120: 0 --> 1

 Char. 225: 1 --> 0

 Char. 230: 0 --> 1

 Char. 261: 0 --> 1

 Char. 270: 1 --> 0

 Char. 277: 0 --> 1

 Char. 296: 0 --> 1

 Char. 301: 1 --> 0

 Char. 332: 0 --> 1

 Char. 347: 0 --> 1

 Char. 356: 1 --> 0

 Char. 359: 0 --> 1

 Char. 364: 0 --> 1

 Char. 382: 0 --> 1

 Char. 384: 1 --> 0

 Char. 385: 1 --> 0

 Char. 390: 0 --> 1

 Char. 404: 0 --> 1

 Char. 412: 0 --> 1

 Char. 428: 0 --> 1

 Char. 429: 0 --> 1

 Adamantinasuchus :

 All trees:

 Char. 121: 1 --> 0

 Char. 129: 1 --> 0

 Char. 215: 0 --> 1

 Char. 225: 1 --> 0

 Char. 228: 0 --> 1

 Char. 230: 0 --> 1

 Char. 261: 0 --> 1

 Char. 364: 0 --> 1

 Char. 365: 0 --> 1

 Char. 384: 1 --> 0

 Char. 385: 1 --> 0

 Char. 390: 0 --> 1

 Coringasuchus :

 All trees:

 Char. 235: 0 --> 2

 Morrinhosuchus :

 All trees:

 No autapomorphies:

 Campinasuchus :

 All trees:

 Char. 65: 1 --> 0

 Char. 154: 0 --> 1

 Char. 184: 0 --> 1

 Char. 192: 0 --> 1

 Char. 256: 1 --> 0

 Char. 283: 1 --> 0

 Pissarrachampsa :

 All trees:

 Char. 164: 1 --> 0

 Char. 192: 0 --> 1

 Char. 227: 2 --> 1

 Char. 236: 0 --> 1

 B.\_albertoi :

 All trees:

 No autapomorphies:

 B.\_pachecoi :

 All trees:

 Char. 73: 0 --> 1

 B.\_salgadoensis :

 All trees:

 No autapomorphies:

 Stratiotosuchus :

 All trees:

 Char. 213: 0 --> 1

 Char. 356: 1 --> 0

 Char. 419: 1 --> 0

 Pehuenchesuchus :

 All trees:

 Char. 79: 1 --> 0

 Char. 119: 0 --> 1

 Cynodontosuchus :

 All trees:

 Char. 128: 0 --> 1

 Char. 360: 0 --> 1

 Char. 405: 0 --> 1

 Char. 409: 0 --> 1

 Bergisuchus :

 All trees:

 No autapomorphies:

 Iberosuchus :

 All trees:

 No autapomorphies:

 Bretesuchus :

 All trees:

 Char. 226: 0 --> 1

 Barinasuchus :

 All trees:

 No autapomorphies:

 S.\_huilensis :

 All trees:

 No autapomorphies:

 S.\_icaeorhinus :

 All trees:

 Char. 395: 0 --> 1

 S.\_querejazus :

 All trees:

 Char. 41: 1 --> 0

 Char. 68: 0 --> 1

 Char. 178: 1 --> 0

 Ayllusuchus :

 All trees:

 No autapomorphies:

 Lorosuchus :

 All trees:

 Char. 2: 0 --> 3

 Char. 5: 0 --> 2

 Char. 8: 2 --> 1

 Char. 24: 1 --> 0

 Char. 41: 1 --> 0

 Char. 65: 1 --> 0

 Char. 76: 1 --> 2

 Char. 102: 2 --> 3

 Char. 119: 0 --> 1

 Char. 134: 1 --> 0

 Char. 141: 0 --> 1

 Char. 155: 0 --> 1

 Char. 159: 0 --> 1

 Char. 161: 0 --> 1

 Char. 225: 2 --> 0

 Char. 265: 0 --> 1

 Char. 285: 0 --> 1

 Char. 367: 1 --> 2

 Char. 398: 1 --> 0

 Char. 406: 1 --> 0

 Lumbrera\_form :

 All trees:

 Char. 120: 0 --> 1

 Pabhwehshi :

 All trees:

 Char. 77: 0 --> 1

 Char. 105: 1 --> 2

 Char. 236: 0 --> 1

 Char. 408: 0 --> 1

 A.\_gomesii :

 All trees:

 Char. 166: 1 --> 2

 Char. 185: 1 --> 0

 A.\_patagonicus :

 All trees:

 No autapomorphies:

 A.\_buitreraensis :

 All trees:

 Char. 22: 1 --> 0

 Char. 164: 0 --> 1

 Char. 197: 0 --> 1

 Char. 292: 0 --> 1

 A.\_wegeneri :

 All trees:

 Char. 21: 0 --> 1

 Char. 119: 1 --> 0

 Char. 211: 0 --> 1

 Char. 225: 0 --> 1

 Char. 264: 1 --> 0

 Char. 318: 0 --> 1

 A.\_tsangatsangana :

 All trees:

 Char. 64: 3 --> 2

 Char. 140: 0 --> 1

 Char. 166: 1 --> 2

 Char. 173: 0 --> 1

 Char. 197: 0 --> 1

 Char. 367: 1 --> 2

 Anatosuchus :

 All trees:

 Char. 2: 1 --> 3

 Char. 21: 0 --> 1

 Char. 127: 1 --> 0

 Char. 139: 1 --> 0

 Char. 166: 1 --> 2

 Char. 170: 1 --> 0

 Char. 184: 0 --> 1

 Char. 185: 1 --> 0

 Char. 234: 0 --> 1

 Char. 239: 0 --> 1

 Char. 406: 0 --> 1

 Montealtosuchus :

 All trees:

 Char. 22: 1 --> 0

 Char. 30: 0 --> 1

 Char. 134: 0 --> 1

 Char. 154: 0 --> 1

 Uberabasuchus :

 All trees:

 Char. 73: 0 --> 1

 Char. 101: 1 --> 0

 Char. 104: 1 --> 2

 Lomasuchus :

 All trees:

 No autapomorphies:

 Gasparinisuchus :

 All trees:

 Char. 72: 0 --> 1

 Hamadasuchus :

 All trees:

 Char. 77: 0 --> 1

 Char. 78: 1 --> 2

 Char. 105: 0 --> 1

 Char. 129: 0 --> 1

 Char. 347: 0 --> 1

 Char. 399: 0 --> 1

 Char. 408: 0 --> 1

 Mahajangasuchus :

 All trees:

 Char. 17: 0 --> 1

 Char. 73: 0 --> 1

 Char. 140: 0 --> 1

 Char. 166: 1 --> 2

 Char. 180: 0 --> 1

 Char. 265: 0 --> 1

 Char. 285: 1 --> 0

 Char. 376: 1 --> 0

 Char. 400: 0 --> 1

 Kaprosuchus :

 All trees:

 Char. 21: 0 --> 1

 Char. 69: 1 --> 0

 Char. 77: 0 --> 1

 Char. 78: 1 --> 2

 Char. 199: 0 --> 1

 Char. 208: 0 --> 1

 Char. 270: 0 --> 1

 Stolokrosuchus :

 All trees:

 Char. 6: 1 --> 0

 Char. 28: 1 --> 0

 Char. 76: 2 --> 3

 Char. 104: 1 --> 0

 Char. 123: 0 --> 1

 Char. 129: 0 --> 1

 Char. 146: 0 --> 1

 Char. 147: 0 --> 1

 Char. 159: 0 --> 1

 Char. 160: 0 --> 1

 Char. 166: 1 --> 2

 Char. 169: 0 --> 1

 Char. 183: 0 --> 1

 Char. 185: 1 --> 0

 Char. 245: 0 --> 1

 Char. 282: 0 --> 1

 Char. 284: 1 --> 0

 Char. 294: 1 --> 2

 Char. 368: 1 --> 0

 Char. 385: 0 --> 1

 Char. 408: 0 --> 1

 Theriosuchus :

 All trees:

 Char. 11: 0 --> 1

 Char. 21: 0 --> 1

 Alligatorium :

 All trees:

 No autapomorphies:

 Goniopholis\_simus :

 All trees:

 Char. 384: 0 --> 1

 Char. 385: 0 --> 1

 Goniopholis\_stovalli :

 All trees:

 Char. 105: 0 --> 1

 Eutretauranosuchus :

 All trees:

 Char. 270: 0 --> 2

 Sunosuchus :

 All trees:

 Char. 10: 0 --> 1

 Char. 267: 0 --> 1

 Char. 275: 0 --> 3

 Shamosuchus :

 All trees:

 Char. 10: 0 --> 1

 Char. 78: 2 --> 1

 Char. 121: 1 --> 0

 Char. 183: 1 --> 0

 Char. 219: 0 --> 1

 Char. 276: 0 --> 1

 Bernissartia :

 All trees:

 Char. 263: 0 --> 1

 Char. 279: 0 --> 1

 Hylaeochampsa :

 All trees:

 Char. 0: 2 --> 0

 Char. 10: 0 --> 1

 Char. 183: 1 --> 2

 Glen\_Rose\_Form :

 All trees:

 Char. 5: 2 --> 0

 Char. 30: 0 --> 1

 Char. 65: 1 --> 0

 Char. 79: 0 --> 1

 Char. 183: 1 --> 0

 Char. 218: 0 --> 2

 Char. 261: 0 --> 2

 Char. 275: 0 --> 1

 Char. 395: 0 --> 1

 Calsoyasuchus :

 All trees:

 Char. 22: 0 --> 2

 Char. 66: 2 --> 1

 Borealosuchus :

 All trees:

 Char. 12: 0 --> 1

 Char. 49: 0 --> 1

 Char. 88: 0 --> 1

 Pristichampsus\_vorax :

 All trees:

 Char. 2: 3 --> 0

 Char. 63: 0 --> 1

 Char. 119: 1 --> 0

 Char. 139: 0 --> 1

 Char. 146: 1 --> 0

 Char. 159: 1 --> 0

 Char. 180: 0 --> 1

 Eothoracosaurus\_mississippiensi :

 All trees:

 Char. 22: 1 --> 0

 Char. 100: 0 --> 1

 Gavialis :

 All trees:

 Char. 1: 0 --> 1

 Char. 8: 1 --> 0

 Char. 13: 0 --> 1

 Char. 255: 0 --> 1

 Char. 265: 0 --> 1

 Char. 279: 0 --> 1

 Leidyosuchus\_canadensis :

 All trees:

 Char. 22: 1 --> 0

 Char. 49: 0 --> 1

 Asiatosuchus\_germanicus :

 All trees:

 Char. 116: 0 --> 1

 Crocodylus :

 All trees:

 Char. 22: 1 --> 2

 Char. 76: 2 --> 0

 Char. 378: 0 --> 1

 Diplocynodon\_hantoniensis :

 All trees:

 Char. 12: 0 --> 1

 Alligator :

 All trees:

 Char. 8: 1 --> 0

 Char. 22: 1 --> 2

 Char. 65: 1 --> 0

 Char. 68: 0 --> 2

 Char. 88: 0 --> 1

 Char. 99: 1 --> 0

 Char. 143: 0 --> 1

 Char. 265: 0 --> 1

 Pelagosaurus :

 All trees:

 Char. 19: 0 --> 1

 Char. 24: 1 --> 0

 Char. 58: 1 --> 0

 Steneosaurus\_bollensis :

 All trees:

 Char. 208: 0 --> 1

 M.\_superciliousus :

 All trees:

 Char. 243: 1 --> 0

 Char. 361: 0 --> 1

 M.\_casamequelai :

 All trees:

 Char. 43: 0 --> 1

 Char. 241: 0 --> 1

 C.\_araucaniensis :

 All trees:

 No autapomorphies:

 C.\_suevicus :

 All trees:

 No autapomorphies:

 D.\_maximus :

 All trees:

 No autapomorphies:

 D.\_andiniensis :

 All trees:

 No autapomorphies:

 Rhabdognathus :

 All trees:

 Char. 263: 1 --> 0

 Sokotosuchus :

 All trees:

 Char. 8: 0 --> 1

 Char. 78: 0 --> 1

 Char. 177: 0 --> 1

 Dyrosaurus :

 All trees:

 Char. 166: 2 --> 0

 Hyposaurus :

 All trees:

 No autapomorphies:

 Pholidosaurus :

 All trees:

 Char. 1: 0 --> 1

 Sarcosuchus :

 All trees:

 Char. 2: 2 --> 3

 Char. 79: 0 --> 1

 Char. 99: 1 --> 0

 Char. 277: 0 --> 1

 Char. 385: 1 --> 0

 Terminonaris :

 All trees:

 No autapomorphies:

 Rugosuchus :

 All trees:

 Char. 94: 1 --> 2

 Char. 127: 1 --> 0

 Char. 256: 0 --> 1

 Char. 279: 0 --> 1

 Char. 385: 0 --> 1

 Argochampsa :

 All trees:

 Char. 24: 1 --> 0

 Char. 35: 0 --> 1

 Char. 67: 1 --> 0

 Char. 182: 1 --> 0

 Char. 233: 1 --> 0

 Char. 256: 0 --> 1

 Microsuchus :

 All trees:

 Char. 115: 1 --> 2

 Char. 339: 0 --> 1

 Char. 438: 0 --> 1

 Neuquensuchus :

 All trees:

 Char. 316: 0 --> 1

 Char. 438: 0 --> 1

 Llanosuchus :

 All trees:

 Char. 161: 1 --> 0

 Char. 179: 0 --> 1

 Char. 235: 0 --> 1

 Char. 383: 1 --> 0

 Char. 391: 1 --> 0

 Node 114 :

 All trees:

 Char. 32: 0 --> 1

 Char. 127: 1 --> 0

 Node 115 :

 All trees:

 No synapomorphies

 Node 116 :

 All trees:

 Char. 16: 0 --> 1

 Char. 134: 0 --> 1

 Char. 211: 0 --> 1

 Node 117 :

 All trees:

 Char. 1: 0 --> 1

 Char. 57: 0 --> 1

 Char. 99: 0 --> 1

 Char. 215: 0 --> 1

 Node 118 :

 All trees:

 Char. 49: 0 --> 1

 Char. 72: 1 --> 2

 Char. 73: 0 --> 1

 Char. 90: 0 --> 12

 Char. 102: 3 --> 0

 Node 119 :

 All trees:

 Char. 0: 0 --> 2

 Char. 15: 0 --> 1

 Char. 18: 0 --> 1

 Char. 23: 0 --> 1

 Char. 29: 0 --> 1

 Char. 44: 0 --> 2

 Char. 46: 0 --> 1

 Char. 50: 0 --> 1

 Char. 54: 0 --> 1

 Char. 66: 0 --> 1

 Char. 67: 0 --> 1

 Char. 77: 0 --> 1

 Char. 81: 0 --> 1

 Char. 94: 0 --> 1

 Char. 98: 0 --> 1

 Char. 121: 1 --> 0

 Char. 195: 0 --> 1

 Char. 196: 0 --> 2

 Char. 203: 0 --> 1

 Char. 204: 0 --> 1

 Char. 251: 0 --> 1

 Char. 328: 0 --> 1

 Node 120 :

 All trees:

 Char. 85: 0 --> 1

 Char. 116: 0 --> 1

 Char. 133: 1 --> 0

 Char. 138: 0 --> 1

 Char. 323: 0 --> 1

 Node 121 :

 All trees:

 Char. 8: 3 --> 2

 Char. 38: 0 --> 1

 Char. 107: 0 --> 2

 Char. 159: 0 --> 1

 Char. 161: 0 --> 1

 Char. 187: 0 --> 1

 Char. 194: 0 --> 1

 Char. 209: 0 --> 1

 Char. 389: 0 --> 1

 Node 122 :

 All trees:

 Char. 0: 2 --> 1

 Char. 31: 0 --> 1

 Char. 74: 0 --> 1

 Char. 96: 0 --> 1

 Char. 205: 1 --> 0

 Char. 213: 0 --> 1

 Char. 214: 0 --> 1

 Char. 215: 0 --> 1

 Char. 216: 0 --> 1

 Char. 218: 0 --> 1

 Char. 219: 0 --> 1

 Char. 220: 0 --> 1

 Char. 221: 0 --> 1

 Char. 222: 0 --> 1

 Char. 223: 0 --> 1

 Node 123 :

 All trees:

 Char. 8: 3 --> 1

 Char. 35: 0 --> 2

 Char. 48: 0 --> 2

 Char. 84: 0 --> 1

 Char. 99: 0 --> 1

 Char. 106: 1 --> 0

 Char. 163: 0 --> 1

 Char. 268: 0 --> 1

 Node 124 :

 All trees:

 Char. 77: 1 --> 0

 Char. 137: 0 --> 1

 Char. 163: 1 --> 0

 Char. 201: 0 --> 1

 Char. 205: 1 --> 0

 Char. 215: 0 --> 1

 Char. 218: 0 --> 1

 Char. 219: 0 --> 1

 Node 125 :

 All trees:

 Char. 142: 1 --> 2

 Char. 200: 0 --> 1

 Char. 210: 0 --> 1

 Node 126 :

 All trees:

 Char. 8: 1 --> 2

 Char. 30: 0 --> 1

 Node 127 :

 All trees:

 Char. 36: 0 --> 12

 Char. 38: 0 --> 1

 Char. 40: 0 --> 1

 Char. 78: 0 --> 1

 Char. 102: 3 --> 0

 Char. 124: 0 --> 1

 Char. 149: 0 --> 1

 Char. 191: 0 --> 1

 Char. 196: 2 --> 1

 Node 128 :

 All trees:

 Char. 15: 1 --> 0

 Char. 101: 1 --> 0

 Char. 106: 0 --> 1

 Char. 127: 1 --> 0

 Node 129 :

 All trees:

 Char. 16: 0 --> 1

 Char. 45: 0 --> 1

 Char. 72: 1 --> 0

 Char. 76: 0 --> 2

 Char. 77: 1 --> 0

 Char. 118: 0 --> 1

 Char. 121: 0 --> 1

 Char. 147: 1 --> 0

 Char. 167: 0 --> 1

 Char. 196: 1 --> 0

 Char. 202: 1 --> 0

 Char. 233: 0 --> 1

 Char. 374: 0 --> 1

 Node 130 :

 All trees:

 Char. 182: 1 --> 0

 Char. 192: 0 --> 1

 Node 131 :

 All trees:

 Char. 30: 0 --> 1

 Char. 224: 2 --> 1

 Node 132 :

 All trees:

 Char. 190: 0 --> 1

 Char. 270: 0 --> 1

 Node 133 :

 All trees:

 Char. 26: 0 --> 1

 Char. 75: 0 --> 1

 Char. 142: 1 --> 2

 Char. 144: 1 --> 0

 Char. 148: 0 --> 1

 Char. 158: 0 --> 1

 Char. 186: 0 --> 1

 Char. 196: 0 --> 1

 Char. 208: 0 --> 1

 Char. 399: 0 --> 1

 Node 134 :

 All trees:

 Char. 25: 0 --> 1

 Char. 272: 0 --> 1

 Char. 283: 0 --> 1

 Char. 294: 0 --> 1

 Char. 306: 0 --> 1

 Char. 335: 0 --> 1

 Char. 337: 0 --> 1

 Char. 339: 0 --> 1

 Char. 436: 0 --> 1

 Node 135 :

 All trees:

 Char. 22: 0 --> 1

 Char. 69: 0 --> 1

 Char. 89: 0 --> 1

 Char. 151: 0 --> 1

 Char. 164: 1 --> 0

 Char. 170: 0 --> 1

 Char. 185: 0 --> 1

 Char. 295: 0 --> 1

 Char. 301: 0 --> 1

 Char. 302: 0 --> 1

 Char. 304: 0 --> 1

 Char. 313: 0 --> 1

 Char. 325: 0 --> 1

 Char. 326: 0 --> 1

 Char. 327: 0 --> 1

 Char. 342: 1 --> 2

 Char. 345: 1 --> 0

 Char. 355: 1 --> 2

 Char. 367: 0 --> 1

 Char. 368: 0 --> 1

 Char. 378: 0 --> 1

 Char. 413: 0 --> 1

 Char. 414: 0 --> 1

 Char. 425: 0 --> 1

 Char. 427: 0 --> 1

 Node 136 :

 All trees:

 Char. 9: 0 --> 2

 Char. 14: 0 --> 1

 Char. 18: 1 --> 0

 Char. 44: 2 --> 1

 Char. 70: 0 --> 1

 Char. 82: 0 --> 1

 Char. 198: 0 --> 1

 Node 137 :

 All trees:

 Char. 77: 0 --> 1

 Char. 102: 0 --> 1

 Char. 169: 0 --> 1

 Char. 225: 0 --> 1

 Node 138 :

 All trees:

 Char. 104: 1 --> 2

 Char. 106: 0 --> 1

 Node 139 :

 All trees:

 Char. 0: 2 --> 1

 Char. 73: 0 --> 1

 Char. 186: 0 --> 1

 Char. 359: 1 --> 0

 Char. 375: 0 --> 1

 Node 140 :

 All trees:

 Char. 105: 0 --> 1

 Char. 140: 0 --> 1

 Char. 167: 1 --> 0

 Char. 192: 1 --> 2

 Char. 194: 0 --> 1

 Char. 305: 0 --> 1

 Char. 365: 1 --> 0

 Node 141 :

 All trees:

 Char. 103: 1 --> 0

 Char. 153: 0 --> 1

 Char. 163: 1 --> 0

 Char. 192: 2 --> 1

 Char. 225: 1 --> 2

 Node 142 :

 All trees:

 Char. 41: 0 --> 1

 Char. 76: 2 --> 1

 Char. 114: 0 --> 1

 Char. 119: 1 --> 2

 Char. 231: 0 --> 1

 Char. 278: 0 --> 1

 Char. 310: 0 --> 1

 Node 143 :

 All trees:

 Char. 136: 0 --> 1

 Char. 383: 0 --> 1

 Node 144 :

 All trees:

 Char. 107: 03 --> 2

 Char. 126: 1 --> 0

 Char. 362: 0 --> 1

 Char. 380: 0 --> 1

 Node 145 :

 All trees:

 Char. 66: 1 --> 2

 Char. 119: 2 --> 0

 Char. 130: 0 --> 1

 Char. 158: 0 --> 2

 Char. 283: 0 --> 1

 Node 146 :

 All trees:

 Char. 126: 0 --> 1

 Char. 144: 1 --> 0

 Char. 208: 0 --> 1

 Char. 225: 1 --> 0

 Char. 350: 0 --> 1

 Char. 363: 0 --> 2

 Char. 364: 0 --> 1

 Char. 382: 0 --> 1

 Char. 398: 0 --> 1

 Char. 411: 0 --> 1

 Node 147 :

 All trees:

 Char. 101: 1 --> 0

 Char. 224: 2 --> 1

 Char. 352: 1 --> 0

 Node 148 :

 All trees:

 Char. 8: 2 --> 3

 Char. 137: 0 --> 1

 Char. 226: 0 --> 1

 Node 149 :

 All trees:

 Char. 353: 0 --> 1

 Char. 400: 1 --> 2

 Node 150 :

 All trees:

 Char. 18: 0 --> 1

 Char. 32: 0 --> 1

 Char. 35: 2 --> 3

 Char. 43: 0 --> 1

 Char. 44: 1 --> 2

 Char. 120: 0 --> 1

 Char. 128: 0 --> 1

 Char. 133: 0 --> 1

 Char. 135: 0 --> 1

 Char. 140: 0 --> 1

 Char. 142: 1 --> 2

 Char. 148: 0 --> 1

 Char. 178: 1 --> 0

 Char. 179: 0 --> 1

 Char. 191: 0 --> 1

 Char. 211: 1 --> 0

 Char. 232: 0 --> 1

 Char. 256: 0 --> 1

 Char. 289: 0 --> 1

 Char. 290: 0 --> 1

 Char. 349: 0 --> 1

 Char. 360: 0 --> 1

 Char. 361: 0 --> 1

 Char. 397: 0 --> 1

 Char. 399: 0 --> 1

 Char. 400: 0 --> 1

 Char. 401: 0 --> 1

 Char. 402: 0 --> 1

 Char. 404: 0 --> 1

 Char. 405: 0 --> 1

 Node 151 :

 All trees:

 Char. 2: 1 --> 0

 Char. 8: 0 --> 2

 Char. 79: 0 --> 1

 Char. 106: 1 --> 0

 Char. 117: 0 --> 1

 Char. 129: 0 --> 1

 Char. 137: 1 --> 0

 Char. 154: 1 --> 0

 Char. 167: 0 --> 1

 Char. 180: 0 --> 1

 Char. 191: 1 --> 0

 Char. 192: 1 --> 0

 Char. 211: 0 --> 1

 Char. 227: 1 --> 2

 Char. 267: 0 --> 1

 Char. 398: 0 --> 1

 Node 152 :

 All trees:

 Char. 398: 1 --> 0

 Node 153 :

 All trees:

 Char. 66: 2 --> 1

 Char. 138: 1 --> 0

 Char. 160: 0 --> 1

 Node 154 :

 All trees:

 Char. 284: 1 --> 2

 Char. 408: 0 --> 1

 Node 155 :

 All trees:

 Char. 287: 0 --> 1

 Node 156 :

 All trees:

 Char. 68: 1 --> 0

 Char. 138: 1 --> 0

 Node 157 :

 All trees:

 Char. 8: 2 --> 1

 Char. 139: 1 --> 2

 Node 158 :

 All trees:

 Char. 212: 0 --> 1

 Char. 213: 0 --> 1

 Char. 282: 0 --> 1

 Node 159 :

 All trees:

 Char. 119: 1 --> 0

 Char. 127: 1 --> 0

 Char. 170: 1 --> 0

 Char. 236: 0 --> 1

 Char. 242: 01 --> 2

 Char. 395: 0 --> 1

 Node 160 :

 All trees:

 Char. 76: 2 --> 1

 Char. 158: 0 --> 3

 Char. 358: 0 --> 1

 Node 161 :

 All trees:

 Char. 163: 1 --> 0

 Char. 191: 1 --> 0

 Char. 211: 0 --> 1

 Char. 226: 0 --> 1

 Char. 285: 0 --> 1

 Node 162 :

 All trees:

 Char. 0: 2 --> 1

 Char. 2: 1 --> 3

 Char. 5: 0 --> 12

 Char. 35: 12 --> 4

 Char. 42: 0 --> 1

 Char. 75: 0 --> 1

 Char. 102: 0 --> 2

 Char. 104: 1 --> 2

 Char. 125: 01 --> 2

 Char. 142: 1 --> 2

 Char. 153: 0 --> 2

 Char. 190: 0 --> 1

 Char. 256: 0 --> 1

 Char. 293: 0 --> 1

 Char. 356: 0 --> 1

 Char. 365: 1 --> 2

 Char. 397: 0 --> 1

 Char. 398: 0 --> 1

 Node 163 :

 All trees:

 Char. 16: 1 --> 0

 Char. 30: 0 --> 1

 Char. 34: 0 --> 1

 Char. 82: 1 --> 0

 Char. 99: 1 --> 0

 Node 164 :

 All trees:

 Char. 2: 2 --> 3

 Char. 25: 0 --> 1

 Char. 80: 0 --> 1

 Char. 143: 1 --> 0

 Char. 177: 0 --> 1

 Char. 182: 0 --> 1

 Char. 263: 1 --> 0

 Node 165 :

 All trees:

 Char. 2: 1 --> 2

 Char. 5: 0 --> 1

 Char. 35: 2 --> 0

 Char. 64: 3 --> 2

 Char. 111: 1 --> 0

 Char. 115: 1 --> 0

 Char. 146: 0 --> 1

 Char. 149: 1 --> 0

 Char. 152: 0 --> 1

 Char. 159: 0 --> 1

 Char. 163: 1 --> 0

 Char. 191: 1 --> 0

 Char. 211: 0 --> 1

 Char. 316: 0 --> 1

 Char. 355: 1 --> 0

 Char. 357: 0 --> 1

 Node 166 :

 All trees:

 Char. 12: 0 --> 1

 Char. 68: 1 --> 2

 Char. 100: 0 --> 1

 Char. 160: 0 --> 1

 Char. 206: 0 --> 1

 Char. 399: 0 --> 1

 Node 167 :

 All trees:

 Char. 5: 1 --> 2

 Char. 55: 0 --> 1

 Char. 66: 1 --> 2

 Char. 78: 1 --> 2

 Char. 104: 1 --> 0

 Char. 168: 0 --> 1

 Char. 172: 0 --> 1

 Char. 277: 0 --> 1

 Node 168 :

 All trees:

 Char. 275: 0 --> 2

 Node 169 :

 All trees:

 Char. 9: 2 --> 1

 Node 170 :

 All trees:

 Char. 6: 1 --> 0

 Char. 78: 2 --> 1

 Node 171 :

 All trees:

 Char. 21: 0 --> 1

 Char. 58: 1 --> 0

 Char. 218: 0 --> 2

 Char. 278: 0 --> 1

 Node 172 :

 All trees:

 Char. 89: 0 --> 1

 Char. 90: 2 --> 3

 Char. 91: 0 --> 1

 Char. 164: 1 --> 0

 Node 173 :

 All trees:

 Char. 42: 0 --> 1

 Char. 68: 1 --> 0

 Char. 93: 0 --> 1

 Char. 95: 2 --> 1

 Char. 96: 0 --> 1

 Node 174 :

 All trees:

 Char. 268: 1 --> 0

 Node 175 :

 All trees:

 Char. 42: 1 --> 2

 Char. 43: 01 --> 2

 Char. 264: 0 --> 1

 Char. 277: 1 --> 0

 Node 176 :

 All trees:

 Char. 267: 0 --> 1

 Node 177 :

 All trees:

 Char. 22: 0 --> 1

 Char. 259: 0 --> 1

 Node 178 :

 All trees:

 Char. 237: 0 --> 1

 Node 179 :

 All trees:

 Char. 2: 3 --> 2

 Char. 12: 0 --> 1

 Char. 19: 0 --> 1

 Char. 56: 0 --> 1

 Char. 78: 2 --> 0

 Char. 161: 1 --> 0

 Char. 177: 1 --> 0

 Char. 242: 0 --> 1

 Char. 266: 1 --> 0

 Char. 269: 1 --> 0

 Char. 359: 1 --> 0

 Node 180 :

 All trees:

 Char. 70: 1 --> 2

 Char. 90: 3 --> 4

 Char. 99: 1 --> 0

 Char. 257: 0 --> 1

 Node 181 :

 All trees:

 Char. 94: 1 --> 2

 Char. 164: 0 --> 1

 Node 182 :

 All trees:

 Char. 3: 0 --> 1

 Char. 263: 0 --> 1

 Char. 277: 0 --> 1

 Char. 294: 0 --> 1

 Node 183 :

 All trees:

 Char. 76: 2 --> 0

 Char. 168: 1 --> 0

 Char. 278: 0 --> 1

 Node 184 :

 All trees:

 Char. 117: 0 --> 1

 Char. 247: 0 --> 1

 Node 185 :

 All trees:

 Char. 13: 0 --> 1

 Char. 15: 1 --> 2

 Char. 16: 1 --> 0

 Char. 23: 1 --> 0

 Char. 29: 1 --> 0

 Char. 32: 0 --> 1

 Char. 45: 1 --> 0

 Char. 46: 1 --> 0

 Char. 48: 2 --> 1

 Char. 59: 0 --> 1

 Char. 64: 1 --> 0

 Char. 67: 1 --> 0

 Char. 83: 1 --> 0

 Char. 85: 2 --> 1

 Char. 165: 0 --> 1

 Char. 174: 0 --> 1

 Char. 178: 0 --> 2

 Char. 196: 0 --> 1

 Char. 205: 1 --> 0

 Char. 227: 0 --> 2

 Char. 243: 0 --> 1

 Char. 248: 0 --> 1

 Char. 266: 1 --> 0

 Char. 324: 0 --> 1

 Node 186 :

 All trees:

 Char. 12: 0 --> 1

 Char. 44: 1 --> 0

 Char. 62: 1 --> 0

 Char. 64: 2 --> 1

 Char. 76: 2 --> 3

 Char. 78: 1 --> 0

 Char. 116: 1 --> 0

 Char. 294: 0 --> 1

 Char. 376: 1 --> 0

 Char. 385: 0 --> 1

 Node 187 :

 All trees:

 Char. 0: 2 --> 0

 Char. 74: 0 --> 1

 Char. 101: 1 --> 0

 Char. 105: 1 --> 2

 Char. 110: 0 --> 1

 Char. 171: 1 --> 0

 Char. 245: 0 --> 1

 Char. 246: 0 --> 1

 Char. 249: 0 --> 1

 Char. 250: 0 --> 1

 Node 188 :

 All trees:

 Char. 65: 1 --> 0

 Node 189 :

 All trees:

 Char. 68: 1 --> 0

 Char. 130: 0 --> 1

 Char. 244: 0 --> 1

 Char. 253: 0 --> 1

 Char. 385: 1 --> 0

 Node 190 :

 All trees:

 Char. 2: 2 --> 1

 Char. 119: 1 --> 0

 Char. 139: 0 --> 1

 Node 191 :

 All trees:

 Char. 251: 1 --> 0

 Node 192 :

 All trees:

 Char. 32: 0 --> 1

 Char. 63: 0 --> 1

 Char. 67: 1 --> 0

 Char. 127: 1 --> 0

 Char. 256: 0 --> 1

 Node 193 :

 All trees:

 Char. 27: 0 --> 1

 Char. 255: 0 --> 1

 Node 194 :

 All trees:

 Char. 5: 1 --> 2

 Char. 35: 0 --> 1

 Char. 42: 0 --> 1

 Char. 55: 0 --> 1

 Char. 66: 1 --> 2

 Char. 237: 0 --> 1

 Node 195 :

 All trees:

 Char. 77: 0 --> 1

 Char. 162: 0 --> 1

 Char. 238: 0 --> 1

 Char. 239: 0 --> 1

 Char. 240: 0 --> 1

 Char. 264: 0 --> 1