

**Deciduous dentition and dental eruption of Hyainailouroidea (Hyaenodonta, “Creodonta,”
Placentalia, Mammalia)**

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In Palaeontologia Electronica

APPENDIX 4.

Input file for the Bayesian phylogenetic analysis, formatted for MrBayes

(mrbayes.sourceforge.net)

#NEXUS

BEGIN DATA;

DIMENSIONS NTAX=84 NCHAR=148;

FORMAT DATATYPE = STANDARD GAP = - MISSING = ? SYMBOLS = " 0

1 2 3";

MATRIX

Eomaia ?????(0

1)00000010000000000000000001001020000000010002200?0000000?????????
000?00(0 1)0?000000?0010?00?2?20?001???????20?????10?0?????????????
1???1??001000

Maelestes_gobiensis ?????

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00(0 1)0?0000010000000012020000??1?0?12020?0?0010??????
101111????????????

Altacreodus ?????(0 1)(0 1)0(0 1)0011000010(0

1)(0 1)00021101001000020000000010000000?0??0112????????????(0 1)(0
1)000101000001000100001112000?????????????????????????????????????
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Akhnatenavus_leptognathus ?????0001?

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12???
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Akhnatenavus_nefertiticyon ?????000111110100020000121121?

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01101????????????????????

Allopteronodon_torvidus ?????

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Anasinopa_spp_

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Apteronodon_gaudryi ??????????01200001200001021111?

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111??

Apteronodon_langebadae ?????

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Apteronodon_macrognathus

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Arfia_gingerichi ??????????

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Arfia_shoshoniensis ?????

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Arfia_opisthotoma ?????
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Boualitomus ?????111?
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02??
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Boritia_duffaudi ?????0000?
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Brychotherium_ephalmos 1100000000102?
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Buhakia_moghraensis ?1010?001????????????????1211?
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Cynohyaenodon_cayluxi ?????
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Cynohyaenodon_trux 200000001111101?012010(0
1)111100001000011012001111101110?0001110????????????11??10??011100?
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Dissopsalis_pyroclasticus ?????000100?
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Eurotherium_matthesi ?????
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Eurotherium_theriodis ?????
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Furodon 2????0001?1????
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Galecyon_chronius ?????
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Galecyon_mordax ?????0001111101011(0 1)00100201?
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Galecyon_morloi ??????????????
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Gazinocyon_vulpeculus ?????0001100?00?
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Glibzegdouia ?????????????????????????????101?
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21???
Hemipsalodon ?????0001?
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Hyaenodon_ErgiliynDzo ?????0001111101001200101221212?
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Hyaenodon_minor 1????0001110011011200101021212?
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Hyaenodon_exiguus 112110000?0?????
1120010122121220102102222322203322300?1????111011011??
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12112?????????????????
Hyaenodon_neimongoliensis ?????00?111101001000100021212?
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Hyainailouros_sulzeri ??????001?0110100020000022121220?
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Indohyaenodon ?????0001?0??00000001001??
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0202100?1????????0????1????????????0010????0000
Isohyaenodon_pilgrimi ?????
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Kerberos ?????0100?
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Koholia ??
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Kyawdawia ??????0?01?0??
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Lahimia ??????111?????????????????????????
11110100010021022211100100?
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Leakitherium_hiwegi ???????001012010112001012?
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Lesmesodon ?00000000????????????????????
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Limnocyon_verus ??????0000010100000000001201100?
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Leonhardtina_gracilis ??????00001011111110010100?
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01??
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Masrasector_ligabuei ??????????????0?????????????????1??
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Masrasector_nananubis
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100?00000????????????????

Matthodon_tritens ?????
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Megistotherium ??????????????????0200101211212?
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Metapterodon ??????111?00020000010100001121??
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Metasinopa_spp_ ?
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Mlanyama_sugu ?????0?0011120001????????121120?
002121?33?
2202310110??
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Morlodon ?????0000000110000001000011000?
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Oxyaenoides_bicuspidens ?????
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Oxyaenoides_lindgreni ?????0000??10110010011000?
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Pakakali_ ?????????????????????????????????????
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Paratritemnodon ?????0001?
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Paroxyaena_sp ??????00?????
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01????????????????????????
Parvagula_palulae ?????000011?1?
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000102??
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Preregidens_langebadae ?????000000?????0110?
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Prolimnocyon_atavus ?????
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Prolimnocyon_chowi ?????????????????????
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0011012101111?21????????????????????????????????????
Propterodon_tongi ?????
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Propterodon_morrisi ?????
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Proviverra ?????
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0????????????????????

Prototomus_minimus ?00000001?1?????
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Prototomus_phobos ?????
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10100???000

Pterodon_africanus ?????
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100000100211?11?112020021110?2?????????1????????????????????
020100000000000010110

Pterodon_dasyuroides ?????0(0
1)0111020100010110001111220100111022322202201100?111112011110???
1110000100021120?1111020020110120001?
00111010100100101011?????????????????????1111

Pterodon_phiomensis ?????
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2012??
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Pyrocyon_strenuus ?????
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Quasiapterodon ?????
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Quercytherium_simplicidens ?????000001?
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Quercytherium_tenebrosum ?????
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Sinopa_grangeri ?????
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Sinopa_jilinia          ?????????1001?100?????????
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Teratodon               ?????000001020001?101010??
1101111100111230?2200001110??1???21????????????210100010111?
1001101012102000????????????????????????????????????????????????
Thinocyon               ?????0000010100000000001001100?
110?11?0??0?0?30??1?10??020002????????????100010110100011012111110212?
02?00001210?10100100010??000100100000?001000000
Tinerhodon             ?????????00100001111100022100001?
010200??000010000000?0????????????????????????????
0????????????????????????????????????????????????????????????????
Tritemnodon_agilis     ?????
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001001000010000??0000

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    ctype ordered: 37 38 42 43 44 45 46 47 48 49 51 68 82 93 94
100 102;
    prset applyto=(all) ratepr=variable;
    mcmcp ngen= 50000000 relburnin=yes burninfrac=0.25
printfreq=1000 samplefreq=1000 nchains=4 savebrlens=yes;
    mcmc;
    sumt ctype=allcompat;
end;

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