



http://app.pan.pl/SOM/app64-Sole_etal_SOM.pdf

SUPPLEMENTARY ONLINE MATERIAL FOR

A large hyaenodont from the Lutetian of Switzerland expands the body mass range of the European mammalian predators during the Eocene

Floréal Solé and Bastien Mennecart

Published in *Acta Palaeontologica Polonica* 2019 64 (2): 275-290.
<https://doi.org/10.4202/app.00581.2018>

Supplementary Online Material

SOM 1. List of all the taxa and specimens added to the matrix of Borths and Stevens (2017), along with information on age and locality data.

SOM 2. List of the modifications to the matrix of Borths and Stevens (2017)

SOM 3. Descriptions of characters and character states used in the phylogenetic analysis.

SOM 4. Input file for the Bayesian phylogenetic analysis, formatted for MrBayes.

SOM 5. ‘Allcompat’ summary tree formatted for FigTree.

SOM 6. Estimations of the Relative Blade Length (RBL) and Relative Premolar Size (RPS) values with indications of the specimens used;

available at http://app.pan.pl/SOM/app64-Sole_etal_SOM/SOM_6.xlsx

SOM 7. Estimations of the body mass of selected hyaenodonts, oxyaenids, and mesonychids;

available at http://app.pan.pl/SOM/app64-Sole_etal_SOM/SOM_7.xlsx

SOM 1. List of all the taxa and specimens added to the matrix of Borths & Stevens (2017), along with information on age and locality data.

Matthodon menui

Formation: Sables à Unios et Térédines *sensu stricto*

Locality: Chavot, Monthelon, Cuis, Mancy and Grauves

Geological Age: MP10

Absolute Age: 51–48.6 Ma

Country: France

Citation: Solé et al., 2014

Specimens observed: MNHN.F.1939-586 (Holotype), left mandible with M_3 and roots of M_2 and distal root of M_1 ; MNHN.F.Cui14838, LP₄; MNHN.F.CHO14799, right mandible with canine, P_2 to M_2 , and alveolus of P_1 ; T.S. 914, right maxillary with P^3 and P^4 ; T.S. 374, right mandible with complete P_2 - P_4 , and M_3 , fragmentary M_1 and M_2 , and alveolus of P_1 ; MNHN.F.Ma 14832, RP₄; MNHN.F.L-68-GR, left mandible with M_1 and alveoli of P_2 to P_4 and M_2 ; MNHN.F.L-58-Ma, RM².

Paracynohyaenodon magnus

Formation: Quercy

Locality: Robiac and Le Bretou

Geological Age: MP16

Absolute Age: 51–48.6 Ma

Country: France

Specimens observed: BRT 939 (Holotype), right maxillary bearing P^4 to M^2 ; RBN 5434, maxillaries bearing right P^1 to P^4 , and alveoli of the canines and left P^1 to P^3 ; Rbn-NM 1018, right P^4 ; right mandible bearing M_1 to M_3 ; LAV 1310, left maxillary bearing P^3 to M^2 ; LAV 1312, left maxillary bearing M^2 and M^3 ; BRT 936, right mandible bearing P_2 to M_2 ; RBN 5434, right mandible bearing the canine, and P_1 to P_4 and left mandible bearing M_2 and M_3 ; LAV 1314, right mandible bearing P_4 to M_2 .

Citation: Lange-Badré 1979; Crochet, 1991

Paracynohyaenodon schlosseri

Formation: Quercy

Locality: Robiac, Le Bretou, Lavergne, La Bouffie, Les Pradigues, Les Clapiès

Geological Age: MP16-MP17a

Absolute Age: 40–33.9 Ma

Country: France

Specimens observed: Qu B 393 (Holotype), right mandible bearing M₁ to M₃; LAV 1310, left maxillary bearing P³ to M²; LAV 1312, left maxillary bearing M² and M³; Ma Pq 60, right mandible bearing P₁ to M₃; MNHN.F.QU8539, right mandible bearing P₄ and M₁; PLV 117, left mandible bearing P₃ to M₂.

Citation: Lange-Badré 1979; Crochet, 1991.

Cartierodon egerkingensis

Formation: Karst fillings in an aberrant siderolitic facies

Locality: Egerkingen γ

Geological Age: MP13? (possibly MP14)

Absolute Age: 48.6-40.4 Ma

Country: Switzerland

Specimens observed: NMB.Em.11, right mandible bearing p2, p3, p4 and the trigonid of m1, and the alveoli of p1; NMB.Ee.126a, Lp1; NMB.Eh.550, left maxillary bearing P2 and distal root of P1; NMB.Ek.42, RDP4; NMB.En.78, RP2; NMB.En.80, LP3; NMB.En.85, RP4; NMB.En.86, RM2; NMB.En.87, RM2; NMB.En.88, LM; NMB.En.90, RM2; NMB.En.91, Rp2; NMB.En.92, Rp2; NMB.En.93, Rp3; NMB.En.94, Lp3; NMB.En.95, Lp3; NMB.En.96, Lp4; NMB.En.97, Rp4; NMB.En.98, Rm3; NMB.En.99, left mandible bearing m2 and the trigonid of the m3; NMB.En.100, Lm3; NMB.En.134, Rp4; NMB.En.152, Lm3; NMB.En.153, LP3; NMB.En.154, LM1; NMB.En.155, Rdp4; NMB.En.156, Rm2; NMB.En.213, Rdp3; NMB.En.215, Rm1; NMB.En.216, Rm2; NMB.En.217a, Lm2.

Prodiissopsalis eocaenicus

Formation: Karst fillings in an aberrant siderolitic facies

Locality: Geiseltal-Untere-Mittelkohle, Geiseltal-Obere Mittelkohle, Egerkingen γ

Geological Age: MP12-MP13? (possibly MP14)

Absolute Age: 48.6-40.4 Ma

Countries: Germany, Switzerland

Specimens observed: Leo III-394; skull bearing the right P1-P4 and M1-M3, left P3-P4 and M1-M3, and the alveoli of the I2, I3, and canines; XXXV-327, left mandible bearing canine, p3-p4 and m1-m3; XXXVI-255, right mandible bearing p3-p4 and m1-m3.

Citation: Van Valen, 1965 ; Lange-Badré & Haubold 1990

REFERENCES

- Borths, M.R. and Stevens, N.J. 2017. Taxonomic affinities of the enigmatic *Prionogale breviceps*, early Miocene, Kenya. *Historical Biology* online: 1–10. doi: 10.1080/08912963.2017.1393075
- Crochet, J.-Y., Godinot, M., Hartenberger, J.-L., Rémy, J. A., Sigé, B. and Sudre, J. 1988. Découverte dans le bassin de Saint-Martin-de-Londres (Hérault, Sud de la France) d'un gisement à vertébrés continentaux d'âge Eocène moyen. *Courier Forschungsinstitut Senckenberg* 107: 419–434.
- Lange-Badré, B. 1979. Les Créodontes (Mammalia) d'Europe occidentale de l'Eocène supérieur à l'Oligocène supérieur. *Mémoires du Muséum National d'Histoire Naturelle* 42: 1–249.
- Lange-Badré, B. and Haubold, H. 1990. Les créodontes (mammifères) du gisement de Geiseltal (Eocène moyen, RDA). *Geobios* 23: 607–637. doi: 10.1016/0016-6995(90)80028-E
- Solé, F., Falconnet, J. and Laurent, Y. 2014. New proviverrines (Hyaenodontida) from the early Eocene of Europe; phylogeny and ecological evolution of the Proviverrinae. *Zoological Journal of the Linnean Society* 171: 878–917. doi: 10.1111/zoj.12155
- Van Valen, L. 1965. Some european Proviverrini (Mammalia, Deltatheridia). *Palaeontology* 844: 638–665.

SOM 2. List of the modifications to the matrix of Borths & Stevens (2017)

Character: previous coding → new coding

Allopteronodon torvidus

13: 1 → 0
15: 0 → 1
23: 0 → 1
60: ? → 0

Boritia duffaudi

14: 0 → 1
19: 0 → 1
28: 1 → 0
33: 0 → 1

Cynohyaenodon cayluxi

23: 0 → 1
79: 0 → 1
82: 1 → 2
97: 1 → 0

Cynohyaenodon trux

82: 1 → 2
97: 1 → 0

Eurotherium theriodis

6: ? → 1
17: 1 → 0
28: 1 → 0
53: 1 → 0
54: 1 → 0
86: 1 → 0
87: 1 → 0

Eurotherium matthesi

28: 1 → 0
53: 1 → 0
54: 1 → 0
86: 1 → 0
87: 1 → 0

Galecyon morloi

Characters 18 to 26 are coded ‘?’ because no P₄ is known for this species (see Zack 2011)

Leonhardtina gracilis

19: 0 → 1
39: 1 → 0

Lesmesodon spp

38: 0 → 1

Matthodon tritens

53: 1 → 0
56: 1 → 0

Morlodon vellerei

10: 0 → 1
15: 0 → 1
19: 0 → 1

23: 0 → 1	33: 0 → 1
38: 0 → 1	
41: 0 → 1	<i>Proviverra typica</i>
73: 0 → ?	10: 0 → 1
74: 0 → ?	15: 0 → 1
75: 0 → ?	19: 0 → 1
79: 0 → 1	23: 0 → 1
86: 1 → 0	40: 0 → 1
	94: 0 → 2
<i>Oxyaenoidens bicuspидens</i>	97: 1 → 0
9: 1 → 0	
56: 1 → 0	<i>Quercytherium simplicidens</i>
	33: 0 → 1
<i>Oxyaenoidens lindgreni</i>	35: 0 → 2
33: 0 → 1	56: 1 → 0
	86: 1 → 0
<i>Parvagula palulae</i>	87: 1 → 0
38: ? → 0	106: 0 → 1
<i>Preregidens langebadreeae</i>	<i>Quercytherium tenebrosum</i>
10: 0 → 1	33: 0 → 1
25: 0 → 2	86: 1 → 0
28: 1 → 0	87: 1 → 0

REFERENCES

- Borths, M.R. and Stevens, N.J. 2017. Taxonomic affinities of the enigmatic *Prionogale breviceps*, early Miocene, Kenya. *Historical Biology* online: 1–10. doi: 10.1080/08912963.2017.1393075
- Zack, S.P. 2011. New species of the rare early Eocene creodont *Galecyon* and the radiation of the early Hyaenodontidae. *Journal of Paleontology*, **85**, 315–336. doi:10.1666/10-093.1

SOM 3. Descriptions of characters and character states used in the phylogenetic analysis.

The characters are from Borths & Stevens (2017) without modification. Only the characters 151 to 155 are not included in the present analysis.

Lower Dentition

Deciduous Lower Dentition

- 1) dP₃ paraconid height: paraconid indistinct (0); paraconid present lower than talonid (1); paraconid present and taller than talonid (2).
- 2) dP₄ paraconid height: lower than half protoconid height (0); half protoconid height or taller (1).
- 3) dP₄ metaconid height: lower than half paraconid height (0); half paraconid height or taller (1); metaconid absent (2). (compare with Bastl et al. 2014; Character 12)
- 4) dP₄ talonid basin cusps: Entoconid and hypoconid present (0); Only hypoconid present (1). (compare with Bastl et al. 2014; Character 13)
- 5) dP₄ talonid length proportion: More than 1/3 length of entire tooth (0); less than 1/3 length of entire tooth (1).

Adult Lower Dentition

- 6) First mental foramen position: inferior to P₁ (0); inferior to P₂ (1). (Solé et al., 2014; Character 0)
- 7) Second mental foramen position: inferior to P₃ (0); inferior to P₄ (1). (Solé et al., 2014; Character 1)
- 8) P₁: present (0); absent (1). (Solé et al., 2014; Character 2)
- 9) P₁ root number: two roots (0); one root (1). (Polly, 1996; Character 13; Zack, 2011; Character 2; Solé et al., 2014; Character 2)
- 10) P₂ talonid mesiodistal length: absent to short (0); elongate with distinct inflection separating postprotocristid from talonid (1). (modified Polly, 1996; Character 3; Egi et al., 2005; Character 34; Solé et al., 2014; Character 5)
- 11) P₂ to P₃ relative mesiodistal length: P₂ shorter than P₃ (0); P₂ as long or longer than P₃ (1). (Egi et al., 2005; Character 29; Solé et al., 2014; Character 6)

- 12) P₃ inclination: perpendicular to horizontal ramus, tooth forms isosceles triangle in buccal view (0); tooth inclines distally, preprotocristid mesially convex (1).
- 13) P₃ buccolingual width relative to mesiodistal length: width 33% of length (0); width 50% of length (1); width more than 50% of length (2).
- 14) P₃ paraconid morphology: absent or small (0); developed with distinct postparacristid (1). (modified Polly, 1996; Character 6; Egi et al., 2005; Character 35; Solé et al., 2014; Character 7)
- 15) P₃ talonid mesiodistal length: short, cusp-like (0); long, distinct inflection separating postprotocristid from talonid (1). (modified Polly, 1996; Character 4; Egi et al., 2005; Character 37; Solé et al., 2014; Character 8)
- 16) P₃ entoconid: absent (0); present (1). (Solé et al., 2014; Character 9)
- 17) P₃ to P₄ relative mesiodistal length: P₃ shorter than P₄ (0); P₃ as long or longer than P₄ (1). (Egi et al., 2005; Character 31; Solé et al., 2014; Character 10)
- 18) P₄ inclination: perpendicular to horizontal ramus, tooth forms isosceles triangle in buccal view (0); tooth inclines distally, preprotocristid mesially convex (1).
- 19) P₄ paraconid morphology: present but poorly developed (0); paraconid well-developed (1); paraconid indistinct to absent (2). (modified Polly, 1996; Character 7; Solé et al., 2014; Character 11)
- 20) P₄ metaconid: absent (0); present, usually weakly developed or ridge-like (1). (modified Solé et al., 2014; Character 12)
- 21) P₄ entoconid: absent (0); present (1). (Solé et al., 2014; Character 14)
- 22) P₄ hypoconid height: short, less than 33% of protoconid height (0); tall, more than 33% protoconid height (1). (modified Solé et al., 2014; Character 16)
- 23) P₄ talonid basin: buccolingually compressed and shallow (0); buccolingually wide and deep (1); absent (2).
- 24) P₄ precingulid and postcingulid: absent (0); present (1). (modified Solé et al., 2014; Character 18)
- 25) P₄ relative height: mesiodistally longer than height (0); mesiodistally shorter than height (1); mesiodistal length and height subequal (2).
- 26) P₄ height relative to molars: shorter than all molars (0); taller than M₁ only (1); taller than M₂ (2).
- 27) P₅ presence: present (0); absent (1).

- 28) M₁ and M₂ entoconid morphology: well developed or bulbous (0); crestiform with visible apex (1); undifferentiated entocristid (2). (modified Zack, 2011; Charcter 23; Solé et al., 2014; Character 27)
- 29) M₁ and M₂ talonid depth: deep (0); shallow (1). (modified Zack, 2011; Character 25; Solé et al., 2014; Character 29)
- 30) M₂ entocristid in lingual view: parallels hypocristid (0); present, stops before metaconid (lower than hypocristid) (1); weak ridge or absent (2).
- 31) M₃ entocristid: parallels hypocristid (0); present, stops before metaconid (lower than hypocristid) (1); weak ridge or absent (2).
- 32) M₁ and M₂ talonid buccolingual width: narrow, less than 80% width of trigonid (0); wide, greater than 80% trigonid (1). (modified Solé et al., 2014; Character 28)
- 33) M₁ mesiodistal length relative to M₂: M₁ length subequal or longer than M₂ (0); M₁ length less than M₂ (1). (modified Zack, 2011; Character 26; Solé et al., 2014; Character 31)
- 34) M₁–M₃ trigonid height relative to talonid: trigonid tall on all molars, talonid less than 50% of trigonid height (0); trigonid low on all molars, talonid more than 50% of trigonid height (1); trigonid low on M₁ and M₂ (2). (modified Solé et al., 2014; Character 32)
- 35) M₃ postprotocristid distal trend in buccal view: slopes mesial to distal (0); perpendicular to alveolus (1); slopes distal to mesial (overhangs talonid) (2).
- 36) M₂ cristid obliqua orientation relative to mesiodistal axis: lingual to buccal trend (0); parallel to mesiodistal axis (1); buccal to lingual trend (2). (compare to Zack, 2011; Character 21)
- 37) M₂ and M₃ paraconid position relative to protoconid, angle defined relative to mesiodistal axis of mandible: directly mesial to protoconid, 15 degrees (0); slightly lingual paraconid, 15.1 to 45 degree angle (1); strong lingual position, 45.1 to 60 degrees (2). *Ordered*
- 38) M₃ postparacristid mesial to distal trend: steep slope to preprotocristid (“V” shaped acute angle) (0); shallow slope to preprotocristid (forms right angle with preprotocristid) (1); forms obtuse angle with preprotocristid (2). *Ordered*
- 39) M₂ and M₃ paraconid height relative to protoconid: paraconid significantly shorter than protoconid (0); paraconid slightly shorter than protoconid (1); paraconid and protoconid subequal in height (2).
- 40) M₃ postparacristid to premetacristid in lingual view: postparacristid shorter than premetacristid (0); postparacristid subequal to premetacristid (1); postparacristid longer than premetacristid (2).

- 41) M₃ postparacristid length to preprotocristid in buccal view (carnassial blade proportions): postparacristid much shorter than preprotocristid (30%) (0); postparacristid half-length of preprotocristid (1); postparacristid more than half preprotocristid length (2); subequal lengths (3).
- 42) M₂ and M₃ metaconid expression: connate and connects to paraconid base (0); connate, separated from paraconid (1); fold or ridge (2); absent (3). *Ordered*
- 43) M₁ metaconid: taller than paraconid (0); subequal to paraconid (1); shorter than paraconid or absent (2). *Ordered* (compare to Polly, 1996; Character 18)
- 44) M₂ metaconid: taller than paraconid (0); subequal to paraconid (1); shorter than paraconid or absent (2). *Ordered* (compare to Polly, 1996; Character 18)
- 45) M₃ metaconid: taller than paraconid (0); subequal to paraconid (1); shorter than paraconid or absent (2). *Ordered* (compare to Polly, 1996; Character 19)
- 46) M₂ mesiodistal length to M₃ length: M₂ shorter than M₃ (0); M₂ subequal to M₃ (1); M₂ longer than M₃ (2); M₃ absent (3). *Ordered* (compare to Zack, 2011; Character 30)
- 47) M₂ talonid mesiodistal length (% of total mesiodistal length): >40% (0); 40% to 30% (1); 29% to 21% (2); <20% (3). *Ordered*
- 48) M₃ talonid mesiodistal length (% of total mesiodistal length): >40% (0); 40% to 30% (1); 29% to 21% (2); <20% (3). *Ordered*
- 49) M₃ talonid: present, bears hypoconid and hypoconulid (0); present, only one distinct cusp (1); absent (2). *Ordered*
- 50) M₂ buccal talonid margin: steep slope distal to mesial (0); shallow slope distal to mesial (1); parallel to alveolus (2); slopes mesial to distal (3). *Ordered*
- 51) M₃ buccal talonid margin angle from highest point to lowest: steep slope distal to mesial (0); shallow slope distal to mesial (1); parallel to alveolus (2); slopes mesial to distal (3). *Ordered*
- 52) M₁–M₃ ectocingulid: weakly expressed to absent (0); distinct (1). (modified Solé et al., 2014; Character 34)
- 53) M₁–M₃ postcingulid: absent (0); present (1). (modified Solé et al., 2014; Character 35)
- 54) M₁–M₃ ectocingulid to postcingulid connection: separated (0); fused (1). (modified Solé et al., 2014; Character 36)
- 55) M₃ talonid buccolingual width relative to M₂ talonid width: equal (0); narrower (1).
- 56) Mandible inflection anterior to angular process (Solé et al., 2015): present (0); absent (1).
- 57) Angular process morphology: distinct process with medial inflection (0); gently curved process in line with mandibular corpus (1); ventral inflection (2).

- 58) Mandibular condyle position: superior to M₃ alveolus (0); directly distal to M₃ alveolus (1); inferior to M₃ alveolus (2).
- 59) Coronoid process shape: tall, anterior and posterior slopes similar (0); tall, posterior slope concave (1); low, rounded (2).
- 60) Anterior coronoid angle relative to horizontal ramus: near vertical, 90 to 100 degrees (0); slight posterior inclination, 100 to 110 degrees (1); strong posterior inclination, greater than 110 degrees (2).
- 61) Masseteric fossa depth: deeply excavated with strong anterior angle, inferior margin well-defined (0); rounded anterior margin, little inferior definition (1); deep fossa but poorly defined inferior margin (2).

Upper Dentition

Deciduous Upper Dentition

- 62) dP₃ parastyle mesiodistal length: more than half metastyle length (0); less than half metastyle length (1).
- 63) dP₃ metacone-paracone fusion: metacone distinct cusp (premetacrista slopes to metacone apex; See *Pterodon dasyurooides*) (0); metacone fused to paracone (premetacrista subhorizontal; See *Apterodon*) (1).
- 64) dP₃ paracone morphology: pre- and postparacrista similar in slope (apex isosceles triangle in buccal view) (0); preparacrista distally inclined (apex closer to right triangle in buccal view) (1).
- 65) dP₃ metastyle notch: Small inflection between postmetacrista and metastyle (0); deep notch between postmetacrista and metastyle (1).
- 66) dP₃ Protocone prominence: mesiodistal length shorter than buccolingual width (narrow) (0); mesiodistal length equal to or longer than buccolingual width (wide) (1). (modified from Bastl et al. 2014; Character 2)
- 67) dP₃ lingual cingulum: present (distinct lingual connection between parastyle and protocone) (0); absent (faint or no connection between parastyle and protocone) (1). (modified from Bastl et al. 2014; Character 4)
- 68) dP₄ main cusp height: paracone taller than metacone (0); Paracone subequal to metacone (1); Paracone shorter than metacone (2). *Ordered* (Modified from Bastl et al., 2014; Character 6)
- 69) dP₄ protocone orientation: Protocone projects mesially to parastyle margin (0); Protocone projects lingually and does not align with parastyle (1).

70) dP₄ ectoflexus: Deep and distinct inflection between metacone and metastyle (0); Indistinct or shallow inflection between metacone and metastyle (1).

Adult Upper Dentition

71) Upper incisor count: 3 or more (0); 2 or fewer (1).

72) Lateral-most upper incisor: incisiform, similar to mesial incisor (0); caniniform (1).

73) P₃ lobe of the protocone: absent (0); present but small (1); protocone well-developed, individuated (2). (modified Polly, 1996; Charcter 9; Egi et al., 2005; Character 4; Solé et al., 2014; Character 39)

74) P₃ root number: two roots (0); three roots (1). (Solé et al., 2014; Character 40)

75) P₃ contact with P₄ parastyle: P₃ contacts or aligned with P₄ parastyle (0); P₃ framed by P₄ parastyle (1).

76) P₄ parastyle: distinct (0); very reduced to absent (1). (modified Egi et al., 2005; Character 8; Zack, 2011; Character 34; Solé et al., 2014; Character 41)

77) P₄ protocone alignment: transversely aligned with paracone (0); mesially shifted relative to paracone (1). (Zack, 2011; Character 36; Solé et al., 2014; Character 42)

78) P₄ protocone morphology: bulbous and distinct from paracone (0); weak separation from paracone, shelf to cingulum-like (1). (modified Polly, 1996; Character 10; Egi et al., 2005; Character 6/7; Solé et al., 2014; Character 43)

79) P₄ metastylar blade (=postmetacrista): short (0); elongate (1). (modified Egi et al., 2005; Character 9; Zack, 2011; Character 35; Solé et al., 2014; Character 45)

80) P₄ metastyle contact with M₁: P₄ metastyle braced buccally by M₁ parastyle (0); P₄ metastyle contacts mesial aspect of M₁ parastyle (1).

81) M₁ and M₂ metastyle blade curvature: straight with carnassial notch (0); postmetacrista arcuate, no carnassial notch (1). (Zack, 2011; Character 42; Solé et al., 2014; Character 46)

82) M₁ and M₂ metastyle blade length: short, carnassial blade shorter than postmetacrista (0); intermediate, subequal to slightly longer than postmetacrista (1); elongate, greater than 1.5x length of postmetacrista (2). *Ordered* (Egi et al., 2005; Character 21; Solé et al., 2014; Character 47)

83) M₁ mesiodistal length relative to M₂: M₁ subequal or longer than M₂ (0); M₁ shorter than M₂ (1). (modified Solé et al., 2014; Character 50)

84) M₁ and M₂ premetaconule crista: present (0); absent (1). (modified Solé et al., 2014; Character 51)

- 85) M₁ and M₂ conules: metaconule and paraconule present (0); only paraconule present (1); metaconule and paraconule absent (2) (modified Solé et al., 2014; Character 53)
- 86) M₁ and M₂ precingulum and postcingulum: absent (0); present (1). (modified from Polly, 1996; Character 20; Egi et al., 2005; Character 26; Solé et al., 2014; Character 54)
- 87) M₁ and M₂ precingulum and postcingulum connection: separated (0); fused lingually (1). (Solé et al., 2014; Character 55)
- 88) M₁ and M₂ protocone morphology: Triangular, mesial and distal margins angled (0); parallel mesial and distal margins (1). (modified Egi et al., 2005; Character 14)
- 89) M₁ and M₂ protocone position relative to paracone and metacone: centered (0); mesially shifted (1). (modified Egi et al., 2005; Character 15; Solé et al., 2014; Character 56)
- 90) M₁ and M₂ metacone mesiodistal length relative to paracone: shorter (0); subequal (1); longer (2). (modified Egi et al., 2005; Character 12)
- 91) M₁ and M₂ metacone coronal cross section: circular (0); ovoid, slightly compressed buccolingually (1); ellipsoid, strong buccolingual compression (2).
- 92) M₂ paracone compression: conical, rounded base (0); ovoid (slight buccolingual compression) (1); ellipsoid (strong buccolingual compression) (2).
- 93) M₁ and M₂ paracone and metacone separation: separated to base (0); fused between base and half of height (1); almost completely fused (2). *Ordered* (modified Polly, 1996; Character 28; Egi et al., 2005; Character 10; Zack, 2011; Character 40)
- 94) M₁ and M₂ paracone height: paracone taller than metacone (0); paracone as tall as metacone (1); paracone shorter than metacone (2). *Ordered* (modified Egi et al., 2005; Character 11; Zack, 2011; Character 41; Solé et al., 2014; Character 48)
- 95) M₁ and M₂ protocone height: shorter than paracone/metacone separation (0); same height as paracone/metacone separation (1); subequal to paracone/metacone apices (2). (compare to Zack, 2011; Character 49)
- 96) M₂ parastyle: absent (0); present and shelf-like (1); present and distinct cusp (2). (modified Egi et al., 2005; Character 19)
- 97) M₁ parastyle compared to M₂: M₁ parastyle relatively shorter than M₂ parastyle (0); parastyle on M₁ and M₂ similar (1).
- 98) M₁ and M₂ buccal cingulum: absent (0); weak ridge along metastyle base (1); prominent shelf forms shallow basin between metastyle and cingulum (2). (modified Egi et al., 2005; Character 16/17)
- 99) M₂ ectoflexus: strong, strong indentation (0); weak, slight curve (1); absent, straight (2). (modified Egi et al., 2005; Character 18)

100) Ectoflexus depth on M₁ and M₂: M₁ ectoflexus shallower than M₂ (0); same relative depth between M₁ and M₂ (1); M₂ lacks metastyle (no ectoflexus) (2). *Ordered* (compare to Zack, 2011; Character 52)

101) M₃ metacone: present (0); absent (1). (modified Polly, 1996; Character 15; Zack, 2011; Character 53; Solé et al., 2014; Character 58)

Cranial Characters

102) Nuchal crest morphology: medial to lateral trend from apex to mastoid (0); dorsolateral margin tapers medially with thin connection to exoccipital (1); lateral margins trend medially, very weak ridge connects to exoccipital (2). *Ordered* (modified Polly, 1996; Character 35)

103) Facial wing of the lacrimal: extensive (larger than orbit diameter) (0); moderate (slightly longer than orbit diameter) (1); reduced (shorter than orbit diameter) (2). (modified Polly, 1996; Character 36)

104) Foramen rotundum size: slightly larger than foramen ovale (0); much larger than foramen ovale (1). (Polly, 1996; Character 39)

105) Palatal rugosity or torus at distal margin of palate: well-expressed (0); smooth (1).

106) Zygomatic arch contact: short contact between zygomatic and squamosal (0); extensive contact between zygomatic and squamo0sal (1).

107) Superior squamosal morphology: superior and inferior margins parallel (0); torsion along superior margin (1).

108) Foramen ovale orientation: anterior orientation (0); palatal orientation (1).

109) Exoccipital condyle position: tall, lateral placement around foramen magnum (0); ventral placement around foramen magnum (1).

110) Notch between occipital condyles: ring-like with no rostral excavation (0); rounded indentation with condyles meeting medially below foramen magnum (1); deep excavation with occipital “processes” following notch (2).

111) Postmandibular process: vertical orientation (0); strong anterior curvature (1).

112) Posterior orbital process: present, strong expression (0); present, weak with frontal “peaked” (1); absent (2).

113) Frontal furrow: absent or indistinct (0); present and well-defined (1).

114) Palatine and pterygoid medial contact: parallel posterior to palatine torus (0); palatinates trend medially or partially fuse (1); fused entire extent of palatinates (2).

115) Pterygoid size: broad, ventral projection anteriorly extensive (0); short anterior extent, trends medially (1).

- 116) Frontoparietal suture in dorsal view: steep constriction (0); gentle curvature (1).
- 117) Lateral expansion of the mastoid process (Solé et al., 2015): projects to midpoint of mandibular fossa (0); projects beyond mandibular fossa (1).
- 118) Mastoid/paroccipital process: short tubercle (0); well-defined, prong-like process (1).
- 119) Process at maxilla/jugal suture (Solé et al., 2015): present (0); absent (1).
- 120) Squamosal constriction in dorsal view: present, squamosal does not extend laterally (0); absent, squamosal expanded laterally (1).
- 121) Squamosal ventral projection: same transverse plane as petrosal (0); ventral to petrosal (1).
- 122) Posterior braincase: broad lateral expansion (0); narrow (1).
- 123) Subarcuate fossa morphology (Polly, 1996): cup-shaped (see *Pterodon*) (0); shallow and horseshoe-shaped (see *Hyaenodon*) (1).
- 124) Bridge of the stylomastoid foramen primitivum: absent or slender (0); robust (1); roofed over with secondary stylomastoid foramen (2). (Polly, 1996; Character 40)
- 125) Mastoid sinus lateral to foramen stylomastoid primitivum: absent (0); present (1). (Polly, 1996; Character 41)
- 126) Ridge of bone dividing posterior petrosal sinus from foramen stylomastoid primitivum (Polly, 1996): present (0); reduced to absent (1). (Polly, 1996; Character 42)
- 127) Posterior petrosal sinus: absent (0); small (1); greatly inflated (2). (Polly, 1996; character 43)

Postcrania

Humerus

- 128) Humerus cross-section above brachial flange: triangular (0); rounded (1). (Polly, 1996; Character 44)
- 129) Brachial flange expression: medium (0); enlarged (1); reduced (2). (Polly, 1996; Character 47)
- 130) Entepicondylar foramen: present, rounded (0); present, elongate (1); absent (2). 131
Medial epicondyle: large (bulbous) (0); reduced (elongate) (1).
- 132) Capitulum morphology: rounded, clearly separated (0); cylindrical (1).
- 133) Greater tubercle of the humerus: prominent, taller than humeral head (0); subequal to height of humeral head (1).

Ulna

- 134) Proximal trochlear notch orientation: lateral position on shaft (0); medial position on shaft (1).
- 135) Radial notch orientation: curved and faces laterally (0); flattened and faces anteriorly (1). (Polly, 1996; Character 47)
- 136) Olecranon process length: longer than trochlear notch (0); subequal or shorter than trochlear notch (1).
- 137) Olecranon process orientation: projects medially (0); projects ventrally (1).

Femur

- 138) Third trochanter of femur: large (0); small (1). (modified Polly, 1996; Character 50)

Astragalus

- 139) Astragalar foramen: large (0); reduced (0). (Polly, 1996; Character 51)
- 140) Astragalar condyles divided by: shallow depression (0); well-defined fossa or groove (1)
- 141) Astragalar condyle orientation: oblique relative to astragalar neck (0); parallel to astragalar neck (1).
- 142) Astragalar head relative to condyles: horizontal orientation (0); slight vertical orientation (1). (Polly, 1996; Character 53)
- 143) Sustentacular facet connection to astragalar head: clearly separated from astragalar head (0); grades into articulation of astragalar head (1).
- 144) Sustentacular facet position on astragalar neck: plantar astragalar neck (0); medial astragalar neck (1).

Calcaneum

- 145) Peroneal tubercle: distinct and separated from cuboid facet (0); part of a flange that grades to cuboid facet (1).
- 146) Cuboid facet inclination: perpendicular to calcaneal neck (0); plantar inclination (1).
- 147) Calcaneal neck trend: dorsal and plantar margins parallel (0); tapers proximally to calcaneal tuberosity (1).
- 148) Astragalar facet angle: oblique orientation to calcaneal neck (0); parallels calcaneal neck (1). (modified Polly, 1996; Character 58)

Prionogalidae Characters

149) M₁ postmetacrista to metastyle angle: Angle less than 130 degrees (0); Angle between 131 and 144 degrees (1); Angle greater than 145 degrees (2).

150) M₁ protocone lingual projection, measured as the ratio of the protocone buccolingual length divided by the length of the bases of the paracone and metacone: long, ratio greater than 0.9 (0); intermediate, ratio between 0.9 and 0.61 (1); short, ratio less than 0.6 (2).

REFERENCES

- Bastl, K., Nagel, D. and Peigné, S. 2014. Milk tooth morphology of small-sized *Hyaenodon* (Hyaenodontidae, Mammalia) from the European Oligocene—evidence of a *Hyaenodon* lineage in Europe. *Palaeontographica, Abt A: Palaeozoology–Stratigraphy*, **303**, 61–84. doi: 10.1127/pala/303/2014/61
- Borths, M. R. and Stevens, N. J. 2017. Taxonomic affinities of the enigmatic *Prionogale breviceps*, early Miocene, Kenya. *Historical Biology*, online, 1–10. doi: 10.1080/08912963.2017.1393075
- Egi, N., Holroyd, P. A., Tsubamoto, T., Soe, A. N., Takai, M. and Ciochon, R. L. 2005. Proviverrine hyaenodontids (Creodonta: Mammalia) from the Eocene of Myanmar and a phylogenetic analysis of the proviverrines from the para-Tethys area. *Journal of Systematic Palaeontology*, **3**, 337–358.
- Polly, P. D. 1996. The skeleton of *Gazinocyon vulpeculus* gen. et comb. nov. and the cladistic relationships of Hyaenodontidae (Eutheria, Mammalia). *Journal of Vertebrate Paleontology*, **16**, 303–319.
- Solé, F., Lhuillier, J., Adaci, M., Bensalah, M., Mahboubi, M. and Tabuce, R. 2014. The hyaenodontidans from the Gour Lazib area (?early Eocene, Algeria): implications concerning the systematics and the origin of the Hyainailourinae and Teratodontinae. *Journal of Systematic Paleontology*, **12**, 303–322.
doi:10.1080/14772019.2013.795196.
- Solé, F., Amson, E., Borths, M., Vidalenc, D., Morlo, M. and Bastl, K. 2015. A new large hyainailourine from the Bartonian of Europe and its bearings on the evolution and ecology of massive hyaenodonts (Mammalia). *PLOS ONE* **10**(10):e0141941. doi: 10.1371/journal.pone.0141941
- Zack, S.P. 2011. New species of the rare early Eocene creodont *Galecyon* and the radiation of the early Hyaenodontidae. *Journal of Paleontology*, **85**, 315–336. doi:10.1666/10-093.1

SOM 4. Input file for the Bayesian phylogenetic analysis, formatted for MrBayes.

This file is the input code used to perform the analysis that includes 18 ordered characters (listed after “ctype ordered” near the end of the file). It also lists all parameters input into MrBayes, including clock rate, burn-in period, and number of replications. Copy this input material into a .TXT document and change the file extension to .NEX to run in MrBayes. With the MrBayes window open, type in the command “input” then the file name of the ordered tip-dating analysis file to perform the analysis and associated output files (after Supplementary File 2 of Borths & Stevens, 2017).

REFERENCES

BORTHS, M. R. and STEVENS, N. J. 2017c. Taxonomic affinities of the enigmatic
Prionogale breviceps, early Miocene, Kenya. *Historical Biology*, **online**, 1–10. doi:
10.1080/08912963.2017.1393075.

#NEXUS

BEGIN DATA;

DIMENSIONS NTAX=90 NCHAR=150;

FORMAT DATATYPE = STANDARD GAP = - MISSING = ? SYMBOLS = " 0 1 2 3";

MATRIX

Maelestes_gobiensis

Altacreodus

?????(01)(01)0(01)0011000010(01)(01)00021101001000020000000010000000?0??0112?????????0
?(01)(01)000101000001000100001112000???10

Akhnatenavus_leptognathus

Akhnatenavus_nefertiticyon

?????00011110100020000121121?2010011?02232220331?001??1??12?????????00?01010011
12111112020020110121??1?0??11101?01101????????????????????????????12

Allopteron_torvidus

?????0000110011101010110010000110001102100111102211?1????0?????????000001011021
101101110120202000?1?0?????10101?????0?????????????????????????11

Anasinopa_spp

2000000000002010000011101110011110010123022200101010?111121000010201??10?010010
11100?0121012110111???01

Apterodon_gaudryi

?????????01200001200001021111?0110110020212211?02?111?????11?????????????????0010
20?011101011?111???21

Apterodon_langebadrae

?????000100110100120001102111101100100202?2210102111111??1?????????00000001
001101110101111112?????01?????????00200100001000001111121

Apterodon_macrognathus

00210000100110000110000102121111000100203222111211111112110001001101100101000
01110?011001011110112010110011202011111010101200100000?0?000001111121

Arfia_gingerichi

?????????11000011000000110011112101101100010000111111?????????????10?0100?111
00110121001111110???01

Arfia_shoshoniensis

?????0001001100001100000011001111200110010?1000001011110?????????10001001111
001101210021101210?????????????0001?????0000?000021

Arfia_opisthotoma

?????000100020000010000001100011200110?0?100000111111?????????10001001111
0011012100211?12?0?????????????????000101?????0000?0000??

Boualitomus

?????111?00100100110100021110001000100??0?1?11001100?1000?02?????????????????????
???

Boritia_duffaudi

?????0000?111110110111020100001100011012001011101100?1??0112?????????????????????
???

Brychotherium_ephalmos

1100000000102?0000101101211211110001112212220110110101??1011??????01?1?0?0100101
1000?01221110102111?1?0?????1?1?????1?????????????????????????????????11

Buhakia_moghraensis

?1010?001?????????????????1211?110?11?1??222??2??0?00?????????????????????????????????
???

Cynohaenodon_cayluxi

?????0000010211101101101100001102012012001111101110?0001112?????????1000101102
1100?01220120201110010010012000100001000?1001?????????????????11

Cynohaenodon_trux

200000001111101?012010(01)111100001000011012001111101110?0001110?????????11??10??
021100?012211101011???11

Dissopsis_pyroclasticus

?????000100?2000001011100211011112012123122221312210?10?????000010201??1001100101
11?0?112211201?12?1???21

Eoproviverra

?????????????????????10011110001000000000??0000?1?????????????????01?000
?011100012?200???00

Eurotherium_matthesi

?????100011111111010110110011110100112210110110121001001110?????????01100101102
11000012211202011010200?011200100?01??0?00?????????10010000020

Eurotherium_theriodis

?????10001112111011011011001111010011221?110210221001????10?????????11001011021
1?00012211212?11?0200?01120111001?001?0?0000111?????????????????

Furodon

2????0001?1?????0100110001120010101011230?2200100010?1111?02?????????????0?02?1
00?111221011?11?0???01

Galecyon_chronius

?????000100110101100010021120001000010020011221001110?1011122?????????1001101100
000110111010021111?????????????10?????????????????????????21

Galecyon_mordax

?????0001111101011(01)00100201?100100001002010?220101110?10???12?????????????????
0?0110111?1002?11???

Galecyon_morlo

?????????????????110001000010010011121101110?1?????????????0101?00?00
11011101002?11???11

Galecyon_peregrinus

?????0????110101(01)2001000011000100001002000122100110101?????????????????????????

Gazinocyon_whiteae

????0001100?00?10000011011100011000100?1001?1000111101??0112?????????0001101002001101111100111110?1?????????????????112???11000101101111010

Glibzegdouia

?????????????????????????101?1110010122011200?01?10?0?????????????????0111???0110001?1?21?????????????????????????????????????0?

Hemipsalodon

????0001?01100001000101021212201001100223?2202210000?111??12?????????0110010011021120?01020200201102??0?100??111010011010101?????????????????22

Hyaenodon_ErgiliynDzo

????0001111101001200101221212?01021022223?2203313300?122220?????????1010000011021120?012222001021?020100112001210010010?21??02?111??1?????????22

Hyaenodon_minor

1????0001110011011200101021212?0102102222322203320310?1022220?????????011000011021120?012222001021?0201?011200121001?00012112?????????111010000022

Hyaenodon_exiguus

112110000?0?????112001012212122010210222322203322300?1?????111011011??11000011021120?012222001021?0?01?011201121??1????12112?????????????????22

Hyaenodon_neimongoliensis

?????00?111101001000100021212?0102102222322203320300?1?????????????????00110021120?0122220(01)1021?????????????????????????????????22

Hyainailouros_sulzeri

?????001?0110100020000022121220?00211122322203311300?1????21?????????11??0000021120?1112020021011?????????????????????00110?1101??0101111112

Indohyaenodon

?????0001?0??00000001001??11011110011002101?2010011111011?????????11001011011?11101102??0202100?1?????0????1?????????0010?????000011

Isohyaenodon_pilgrimi

?????0001111000011000121121120101211123322203311210?1112121?????????1111?02?120??112?20?2?11?????????????????????????????????22

Kerberos

?????0100?1120100100010102121201011102232220321100?111012?????????01100000002
1120?11112001?110120001100111101?11101?????????????????0000111122

Koholia

???1?????????????????????1011?0211?0?
11112002??1???22

Kyawdawia

?????0?01?0?0000001001011200111011102202?201001111011??11?????????0?00010100011
11110101111202110????????????001??1?????????????01

Leakitherium_hiwegi

??????001012010112001012?12122010021112332220321101011??11101110000?????0111?02
112111122120021111?2?????????????1?????????????00011??122

Lesmesodon

?00000000?????????????100001000?110?000?00????10?0001?21100??2?010?????????011?
?????11102?20200?02??0????10?????000?????????1??1?????????0????

Leonhardtina_gracilis

?????0000101111111010100?1000011010110220?221110111110?1112?????????(01)0?0101?
0210011012221202010000?????????11?????????1?????????000000000001

Limnocyon_verus

?????0000010100000000001201100?110?01?0??000?31??1?110?001002?????????0010001011010
00100101110110212?02?000012101100100001????0110010000011010000010

Masrasersector_aegypticum

?????0?????10101?????????1101111001?1??0222100011??10???01????????????????????????
???

Masrasersector_ligabuei

?????????????0?????????????1??10?111230??2??00?110?????????????????????????01?1?10
?121?1112?2???11

Matthodon_tritens

?????10011012111011010100110121100220212212121220111001001122?????????10?????????
?????????????????01?????????????011?1?????????????????????

Megistotherium

?????????????0200101211212?01002111233?22033?1?00?????????????11?10?0??00?1??
??1?????????1??200?1100111120100010101011?21?1?????010011?????

Metapterodon

?????111?0002000001010001121??0100111023322212321300?1????1?????????0011110021
120?11110200211211??0?????????????????????????????????????10

Metasinopa_spp

?1000000101010001010101101011001112302222120111101?11101110?11?????????01
10010012121211?10???02

Mlanyama_sugu

?????0?0011120001?????????121120?002121?33?2202310110?????????????????????????
???

Morlodon

?????000010011100010101001100?11000110?1000?1?00?00?????????????????010110111
00011110220202000???00

Orienspterodon_dahkoensis

?????00011001010012011102111011110011102232220220111101????1?????????0001000021
??0??111?2002?11???00

Oxyaenoides_bicuspidens

?????000010111100100110001121110102102021322212211010?1022120?????????0?????020
110?0122012020100?????????????????0011?1????0?????010022

Oxyaenoides_lindgreni

?????0000??10110010011000?1210001021010213?22122111001????2?????????????????02??
????122012?1?11???2?

Paratritemnodon

?????0001?001000110010010111000110111012302?21010111101???11?????????00?10100011
101001111101201101???01

Paroxyaena_sp

?????00??????002001010112122011011122322201311200?1????12111110001?2?000000021
11(01)00122110010110??110?????120101??1?01?????????????????????11

Parvagula_palulae

?????000011?1?1010101010001000100?0100??00??2??0??00??00102?????????????????????
???

Preregidens_langebadrae

?????000010?????0110?0102110000110101202111122110000?1????1?????????????????????
???

Prolimnocyon_atavus

?????000001010000000001120100111100010021001221201011010???12?????????01001010
001101010111102121?????????????????110000110010000?00?00000010

Prolimnocyon_chowi

?????????????????????????100111100010?2100?22110111101????1????????????????01?00
11012101111?21??10

Propterodon_tongi

?????000011111110000101021212201021022222220331000?1????10????????????????????
???

Propterodon_morrisi

?????000111110111000101221212201021021221120221100?102110????????00?001021
100?0122?22000121????????????????1????????????????????21

Proviverra

?????00001100111010101111000011000110120000110111101001?02?????????0000100101
1100?011100212020002?0??12?101?1????0?????0????????????????????01

Prototomus_minimus

?00000001?1?????100000000010000110001102200002000111101?????????????0001?010
00110011?101202100???10

Prototomus_phobos

?????0001100101000000000101001111000110110002000111(01)01000101?????0?10010101
0111010112211012121001111?????????????0000001?0?10100??000??

Pterodon_africanus

?????00010012000112000010112122010011012232220221100?11?1012?????????1000001002
11?11?112020021110?2?????1?????????02010000000000001011011

Pterodon_phiomensis

?????0001011200001201001011212201001111232221331100?1??2012?????????????????????
???

Pyrocyon_strenuus

?????00001002010000000001011100110101001100111100010?100??12?????????1?0000101101
1101011121100201100???10

Quasiapterodon

?????0000110101010011101120111000110020222211011111011?11?????????1000110000
1001101010101111001???12

Quercytherium_simplicidens

?????000001?201010001011021000011020120230?11110111110???10?????????0010000020
0000112101202?10?0021010112020000011100?10?????????????????????????????

Quercytherium_tenebrosum

?????0000010200010201010221000011020121220?(12)211201110?1????10?????????000100000
20000011210120101111???11

Sinopa_grangeri

?????000110010100010000111100011000110220000211011110100001?????????301001(01)001
011101101111011102100110110012101000011101?00001211011100?1?1??00011

Sinopa_jilinia

?????????1001?100?????????110001100111022000200011111001001?????????????????????????
???

Teratodon

?????000001020001?101010??110111100111230?2200001110??1??21?????????21010001011
1?1001101012102000??00

Tinerhodon

?????????001000011110002210001?010200??000010000000?0?????????????????0?????
???

Tritemnodon_agilis

?????000110100100110000111121001101110021110212201110?0110112?????????001001010102
111100111120020110011?0?0?11?11?101?01?100?001001000010000?000000

Pterodon_dasyurooides

?????0(01)01110201000101100011122010011102232202201100?111112011110???111000010
0021120?1111020020110120001?001110100100101011?????????????111112

Hyaenodon_horridus

012110000111001011200100121212?010210222322203320300?102222001100110110110100110
21120?012222001021?02010011200121001001012112120110011111100000022

Masrasersector_nananubis

21000000000101010100000110011011110011123022100001110?0010001010101101??100000010
1110101121112120211011?011?010111?0011?01?100?00000?????????????11

Thinocyon

?????0000010100000000001001100?110?11?0?0?30??1?10??020002?????????10001011010
0011012111110212?02?00001210?10100100010??000100100000?00100000002

Lahimia

?????111?????????????????????1111010001002102221100100?10?????????????????????????????
???

Prionogale

?1210?????????????????1202?002?20?1??322??3??3?00????112201?011001?????????12?12
0?11221022??1???01

Namasector

?1211?????????????????????1212?000?21?1??322??3??3?00??1??2?011011001?????????12?12
0?11221021???11

Pakakali

??011101?0????????????1?????
???

Thereutherium

?????0001000101001100101021212?000?21?0??322??2??3?00??011122?????????1000001101010
120?01020200112?2?0210001??02000111?00011101?????????????????????12

Matthodon_menui

?????1101101201?011010111112111011021221212(12)220110001?????????????0000100?0
2?1100012112202?100???1

Paracynohyaenodon_spp

?????0000010211000101011011000011010120120?1101101110010?????????00001000021
10000121012021110???11

Cartierodon_egerkingensis

1??011100101211(01)1110101001100111020010221110221220001?????????01??11?0100?
021?????22122?10?21???

Prodissopsalis_eocaenicus

??????1101012111110101001100111010011221?110211220001001110?????????1(01)001011
1211(01)0001221120201100???

;

END;

constraint root = 1-; ;

constraint ingroup = 2-; ;

constraint Hyaenodata = Akhnatenavus_leptognathus

Akhnatenavus_nefertiticyon Allopterodon_torvidus Anasinopa_spp

Apterodon_gaudryi Apterodon_langebadrae Apterodon_macrognathus

Arfia_gingerichi Arfia_shoshoniensis Arfia_opisthotoma Boualitomus

Boritia_duffaudi Brycotherium_ephalmos Buhakia_moghraensis

Cynohaenodon_trux Cynohaenodon_cayluxi Dissopsalis_pyroclasticus

Eoproviverra Eurotherium_matthesi Eurotherium_theriodis Furodon

Galecyon_chronius Galecyon_mordax Galecyon_morloi Galecyon_peregrinus

Gazinocyon_whiteae Glibzegdouia Hemipsalodon Hyaenodon_horridus

Hyaenodon_ErgiliyDzo Hyaenodon_minor Hyaenodon_exiguus

Hyaenodon_neimongoliensis Hyainailouros_sulzeri Indohyaenodon
Isohyaenodon_pilgrimi Kerberos Koholia Kyawdawia Lahimia
Leakitherium_hiwegi Lesmesodon Limnocyon_verus Leonhardtina_gracilis
Masrasersector_aegypticum Masrasersector_ligabuei Matthodon_tritens
Megistotherium Metapterodon Metasinopa_spp Morlodon
Orienspterodon_dahkoensis Oxyaenoides_bicuspidens
Oxyaenoides_lindgreni Paratritemnodon Paroxyaena_sp Parvagula_palulae
Preregidens_langebadrae Prolimnocyon_atavus Prolimnocyon_chowi
Propterozon_tongi Propterozon_morrisi Proviverra Protomus_minimus
Protomus_phobos Pterodon_africanus Pterodon_dasyuroides
Pterodon_phiomensis Pyrocyon_strenuus Quasiapterodon
Quercytherium_simplicidens Quercytherium_tenebrosum Sinopa_grangeri
Sinopa_jilinia Teratodon Thinocyon Tritemnodon_agilis
Masrasersector_nananubis Pakakali Mlanyama_sugu Prionogale Namasector
Thereutherium Matthodon_menui Paracynohyaenodon_spp Cartierodon_egerkingensis
Prodissopsalis_eocaenicus;
calibrate Maelestes_gobiensis=Uniform(71,75)
Altacreodus=Uniform(65,70)
Tinerhodon=Uniform(55.8,56.5)
Akhnatenavus_leptognathus=Uniform(33.7,33.9)
Akhnatenavus_nefertiticyon=Uniform(33.9,35)
Allopterozon_torvidus=Uniform(42.6,42.8)
Anasinopa_spp=Uniform(15,17.8)
Apterodon_gaudryi=Uniform(30.9,32.6)
Apterodon_langebadrae=Uniform(31,39.6)
Apterodon_macrognathus=Uniform(33.7,33.9)
Arfia_gingerichi=Uniform(55.4,55.6)
Arfia_shoshoniensis=Uniform(53,55)
Arfia_opisthotoma=Uniform(53,55)
Boualitomus=Uniform(54,55.8)
Boritia_duffaudi=Uniform(51,54)

Brychotherium_ephalmos=Uniform(33.9,35)
Buhakia_moghraensis=Uniform(16.8,18)
Cynohyaenodon_trux=Uniform(34,48)
Cynohyaenodon_cayluxi=Uniform(34,48)
Dissopsalis_pyroclasticus=Uniform(9,15)
Eoproviverra=Uniform(48.6,55.8)
Eurotherium_matthesi=Uniform(40.4,48.6)
Eurotherium_theriodis=Uniform(40.4,48.6)
Eurodon=Uniform(45.7,49.3)
Galecyon_chronius=Uniform(50.3,53)
Galecyon_mordax=Uniform(53,55.4)
Galecyon_morloii=Uniform(55.4,55.6)
Galecyon_peregrinus=Uniform(53,55.4)
Gazinocyon_whiteae=Uniform(50.3,53)
Glibzegdouia=Uniform(45.7,49.3)
Hemipsalodon=Uniform(37.8,41.2)
Hyaenodon_horridus=Uniform(33.3,38)
Hyaenodon_Ergiliyndzo=Uniform(32,34)
Hyaenodon_minor=Uniform(33.9,37.2)
Hyaenodon_exiguus=Uniform(33.9,37.2)
Hyaenodon_neimongoliensis=Uniform(23,33.9)
Hyainailouros_sulzeri=Uniform(15,18)
Indohyaenodon=Uniform(54,55)
Isohyaenodon_pilgrimi=Uniform(15,20)
Kerberos=Uniform(37.2,40.4)
Koholia=Uniform(51,51.8)
Kyawdawia=Uniform(36.7,40.1)
Lahimia=Uniform(59.2,61.6)
Leakitherium_hiwegi=Uniform(15,17.8)
Lesmesodon=Uniform(40.4,48.6)
Limnocyon_verus=Uniform(46.2,50.3)

Leonhardtina_gracilis=Uniform(40.4,48.6)
Masraserector_aegypticum=Uniform(30.6,31)
Matthodon_tritens=Uniform(40.4,48.6)
Megistotherium=Uniform(14,19)
Metapterodon=Uniform(15,20)
Metasinopa_spp=Uniform(30,33)
Morlodon=Uniform(48.6,55.8)
Orienspterodon_dahkoensis=Uniform(39,42)
Oxyaenoides_bicuspidens=Uniform(40.4,48.6)
Oxyaenoides_lindgreni=Uniform(48.6,51)
Paratritemnodon=Uniform(44.5,49)
Paroxyaena_sp=Uniform(37.2,40.4)
Parvagula_palulae=Uniform(47.8,56)
Preregidens_langebadrae=Uniform(48.6,55.8)
Prolimnocyon_atavus=Uniform(50,53)
Prolimnocyon_chowi=Uniform(55.3,57)
Propterozon_tongi=Uniform(43,46)
Propterozon_morrisi=Uniform(43,46)
Proviverra=Uniform(41,46)
Prototomus_minimus=Uniform(48.6,55.8)
Prototomus_phobos=Uniform(46,55)
Pterodon_africanus=Uniform(33.7,33.9)
Pterodon_dasyuroides=Uniform(33.9,37.2)
Pterodon_phiomensis=Uniform(33.7,33.9)
Pyrocyon_strenuus=Uniform(50.3,55.8)
Quasiapterodon=Uniform(29.2,30)
Quercytherium_simplicidens=Uniform(33.9,37.2)
Quercytherium_tenebrosum=Uniform(33.9,40)
Sinopa_grangeri=Uniform(46.2,50.3)
Sinopa_jilinia=Uniform(40.4,46.2)
Teratodon=Uniform(15,20)

Thinocyon=Uniform(46.2,50.3)
Tritemnodon_agilis=Uniform(46.2,50.3)
Masrasersector_nananubis=Uniform(33.9,35)
Pakakali=Fixed(25)
Mlanyama_sugu=Uniform(20,24)
Prionogale=Uniform(19,20)
Namasersector=Uniform(19,21)
Thereutherium=Uniform(33.9,37.2)
Matthodon_menui=Uniform(48.6,51)
Paracynohyaenodon_spp=Uniform(33.9,40)
Cartierodon_egerkingensis=Uniform(40.4,48.6)
Prodissopsalis_eocaenicus=Uniform(40.4,48.6);
calibrate root=uniform(75,100);
calibrate Hyaenodata=uniform(62,80);
prset brlenspr=clock:uniform;
prset clockvarpr=igr;
prset igrvarpr=exp(3);
prset clockratepr = normal(0.01,0.007);
prset topologypr = constraints (root,ingroup,Hyaenodata);
prset nodeagepr = calibrated;
lset coding=variable rates=gamma;
unlink statefreq=(all) revmat=(all) shape=(all) pinvar=(all);
ctype ordered: 37 38 42 43 44 45 46 47 48 49 50 51 68 82 93 94 100
102;
prset applyto=(all) ratepr=variable;
mcmc ngen=20000000 relburnin=yes burninfrac=0.25 printfreq=1000
samplefreq=1000 nchains=4 temp=0.02 savebrlens=yes;
mcmc;
sump;
sumt contype=allcompat;

SOM 5. ‘Allcompat’ summary tree formatted for FigTree.

The following method follows the one proposed by Borths & Stevens (2017) in the Supplementary File 3.

This file contains the tree and all summary tree statistics output as part of the summary tree file inferred from the analysis performed in MrBayes. Copy the code below into a .TXT editor and save the file with a .TRE file extension to open the tree in tree-viewing software such as FigTree. Node and branch statistics will be displayed with their associated portion of the tree. Note that “node ages” and “age_median” display the same values and represent the divergence dates illustrated in Supplementary Figure 1 and in manuscript Figure 3, though these dates must be adjusted. MrBayes presents divergence dates with reference to the youngest taxon in the analysis.

To adjust the age estimates to an absolute timescale rather than an internal hyaenodont timescale, subtract the age (mean or median) listed for the fixed taxon (*Pakakali*) from 25 (the fixed age used for *Pakakali*) and add the result to each age. For example, to calculate the median date of the divergence of *Prionogale* from *Namasector*: calculate the difference between the fixed age of *Pakakali* (25 Ma) from the age of *Pakakali* on the tree (13.61 Ma) which is 11.39 Ma. Add 11.39 Ma to the age of the node that unites Prionogalidae (12.82 + 11.39) to get the estimated, absolute divergence date between *Prionogale* and *Namasector* (24.21 Ma).

To calculate evolutionary rate of change select “ratelgrBrlens_mean” or “ratelgrBrlens_median.” These display the relative rate of evolutionary change for the tree. To convert the relative evolutionary rate into absolute evolutionary rate (% change/site/Ma), multiply the “ratelgrBrlens” value by the mean or median clockrate ouput in the .pstat file from MrBayes. In the case of the ordered analysis, the median clockrate is 0.007547 and the mean clockrate is 0.01022. Multiply the “ratelgrBrlens” by the clockrate value then multiply by 100 to express absolute % change/site/Ma. For example, to calculate the median % change/site/Ma for the branch supporting Prionogalidae: $1.14 * 0.007547 * 100 = 0.86\%$ change/site/Ma.

REFERENCES

BORTHS, M. R. and STEVENS, N. J. 2017c. Taxonomic affinities of the enigmatic
Prionogale breviceps, early Miocene, Kenya. *Historical Biology*, **online**, 1–10. doi:
10.1080/08912963.2017.1393075

```
#NEXUS
[ID: 3537903625]
begin taxa;
dimensions ntax=90;
taxlabels
    Maelestes_gobiensis
    Altacreodus
    Akhnatenavus_leptognathus
    Akhnatenavus_nefertiticyon
    Allopterodon_torvidus
    Anasinopa_spp
    Apterodon_gaudryi
    Apterodon_langebadrae
    Apterodon_macrognathus
    Arfia_gingerichi
    Arfia_shoshoniensis
    Arfia_opisthotoma
    Boualitomus
    Boritia_duffaudi
    Brychotherium_ephalmos
    Buhakia_moghraensis
    Cynohyaenodon_cayluxi
    Cynohyaenodon_trux
    Dissopsalis_pyroclasticus
    Eoproviverra
    Eurotherium_matthesi
    Eurotherium_theriodis
    Furodon
    Galecyon_chronius
```

Galecyon_mordax
Galecyon_morlo
Galecyon_peregrinus
Gazinocyon_whiteae
Glibzegdouia
Hemipsalodon
Hyaenodon_ErgiliynDzo
Hyaenodon_minor
Hyaenodon_exiguus
Hyaenodon_neimongoliensis
Hyainailouros_sulzeri
Indohyaenodon
Isohyaenodon_pilgrimi
Kerberos
Koholia
Kyawdawia
Leakitherium_hiwegi
Lesmesodon
Leonhardtina_gracilis
Limnocyon_verus
Masrasersector_aegypticum
Masrasersector_ligabuei
Matthodon_tritens
Megistotherium
Metapterodon
Metasinopa_spp
Mlanyama_sugu
Morlodon
Orienspterodon_dahkoensis
Oxyaenoides_bicuspidens
Oxyaenoides_lindgreni
Paratitemnodon
Paroxyaena_sp
Parvagula_palulae
Preregidens_langebadrae

Prolimnocyon_atavus
Prolimnocyon_chowi
Propterodon_tongi
Propterodon_morrisi
Proviverra
Protomus_minimus
Protomus_phobos
Pterodon_africanus
Pterodon_phiomensis
Pyrocyon_strenuus
Quasiapterodon
Quercytherium_simplicidens
Quercytherium_tenebrosum
Sinopa_grangeri
Sinopa_jilinia
Teratodon
Tinerhodon
Tritemnodon_agilis
Pterodon_dasyuroides
Hyaenodon_horridus
Masraserector_nananubis
Thinocyon
Lahimia
Prionogale
Namasector
Pakakali
Thereutherium
Matthodon_menui
Paracynohyaenodon_spp
Cartierodon_egerkingensis
Prodissopsalis_eocaenicus
;
end;
begin trees;
translate

1 *Maelestes_gobiensis*,
2 *Altacreodus*,
3 *Akhnatenavus_leptognathus*,
4 *Akhnatenavus_nefertiticyon*,
5 *Allopterodon_torvidus*,
6 *Anasinopa_spp*,
7 *Apterodon_gaudryi*,
8 *Apterodon_langebadrae*,
9 *Apterodon_macrognathus*,
10 *Arfia_gingerichi*,
11 *Arfia_shoshoniensis*,
12 *Arfia_opisthotoma*,
13 *Boualitomus*,
14 *Boritia_duffaudi*,
15 *Brychotherium_ephalmos*,
16 *Buhakia_moghraensis*,
17 *Cynohyaenodon_cayluxi*,
18 *Cynohyaenodon_trux*,
19 *Dissopsalis_pyroclasticus*,
20 *Eoproviverra*,
21 *Eurotherium_matthesi*,
22 *Eurotherium_theriodis*,
23 *Eurodon*,
24 *Galecyon_chronius*,
25 *Galecyon_mordax*,
26 *Galecyon_morloi*,
27 *Galecyon_peregrinus*,
28 *Gazinocyon_whiteae*,
29 *Glibzegdouia*,
30 *Hemipsalodon*,
31 *Hyaenodon_ErgiliynDzo*,
32 *Hyaenodon_minor*,
33 *Hyaenodon_exiguus*,
34 *Hyaenodon_neimongoliensis*,
35 *Hyainailouros_sulzeri*,

36 Indohyaenodon,
37 Isohyaenodon_pilgrimi,
38 Kerberos,
39 Koholia,
40 Kyawdawia,
41 Leakitherium_hiwegi,
42 Lesmesodon,
43 Leonhardtina_gracilis,
44 Limnocyon_verus,
45 Masrasersector_aegypticum,
46 Masrasersector_ligabuei,
47 Matthodon_tritens,
48 Megistotherium,
49 Metapterodon,
50 Metasinopa_spp,
51 Mlanyama_sugu,
52 Morlodon,
53 Orienspterodon_dahkoensis,
54 Oxyaenoides_bicuspidens,
55 Oxyaenoides_lindgreni,
56 Paratritemnodon,
57 Paroxyaena_sp,
58 Parvagula_palulae,
59 Preregidens_langebadrae,
60 Prolimnocyon_atavus,
61 Prolimnocyon_chowi,
62 Propterodon_tongi,
63 Propterodon_morrisi,
64 Proviverra,
65 Protomus_minimus,
66 Protomus_phobos,
67 Pterodon_africanus,
68 Pterodon_phiomensis,
69 Pyrocyon_strenuus,
70 Quasiapterodon,

71 Quercytherium_simplicidens,
72 Quercytherium_tenebrosum,
73 Sinopa_grangeri,
74 Sinopa_jilinia,
75 Teratodon,
76 Tinerodon,
77 Tritemnodon_agilis,
78 Pterodon_dasyuroides,
79 Hyaenodon_horridus,
80 Masrsector_nananubis,
81 Thinocyon,
82 Lahimia,
83 Prionogale,
84 Namasector,
85 Pakakali,
86 Thereutherium,
87 Matthodon_menui,
88 Paracynohyaenodon_spp,
89 Cartierodon_egerkingensis,
90 Prodissopsalis_eocaenicus
;
tree con_all_compat = [&R]
(1[&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=7.36532395e-001,height_median=5.23981893e-001,height_95%HPD={1.62121981e-005,1.84101293e+000},age_mean=7.30730694e+001,age_median=7.31069606e+001,age_95%HPD={7.12250628e+001,7.49979093e+001}]:8.577961e+000[&length_mean=9.62641269e-002,length_median=5.10432500e-002,length_95%HPD={1.70252800e-007,3.12971900e-001},effectivebrlenlgrBrlens_mean=0.075187,effectivebrlenlgrBrlens_median=0.036537,effectivebrlenlgrBrlens_95%HPD={0.000000,0.252990},rateIgrBrlens_mean=0.863860,rateIgrBrlens_median=0.753560,rateIgrBrlens_95%HPD={0.059849,1.845849}],((2[&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=6.83155081e-001,height_median=4.86570803e-001,height_95%HPD={1.52843364e-005,1.70831396e+000},age_mean=6.77457037e+001,age_median=6.78470667e+001,age_95%HPD={6.77457037e+001,6.78470667e+001}]);

{6.53432318e+001,6.99997434e+001}]:3.546096e+000[&length_mean=4.96115338e-
 002,length_median=1.80847400e-002,length_95%HPD={7.01970900e-008,1.96893100e-
 001},effectivebrlenIgrBrlens_mean=0.027664,effectivebrlenIgrBrlens_median=0.006469,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.118586},rateIgrBrlens_mean=0.623061,rateIgrBrlens_median=0.47
 5098,rateIgrBrlens_95%HPD={0.000001,1.627636}],76[&prob=1.00000000e+000,prob_stddev=0.000
 00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
 sd="100+-0",height_mean=5.65930395e-001,height_median=4.03908698e-
 001,height_95%HPD={1.23915784e-
 005,1.41417340e+000},age_mean=5.61529284e+001,age_median=5.61537772e+001,age_95%HPD=
 {5.58339230e+001,5.64971649e+001}]:1.523939e+001[&length_mean=1.68014064e-
 001,length_median=1.14252200e-001,length_95%HPD={3.26985300e-006,4.65682200e-
 001},effectivebrlenIgrBrlens_mean=0.119943,effectivebrlenIgrBrlens_median=0.074447,effectivebrle
 nlgrBrlens_95%HPD={0.000001,0.367411},rateIgrBrlens_mean=0.718854,rateIgrBrlens_median=0.68
 5209,rateIgrBrlens_95%HPD={0.294385,1.248251}]) [&prob=8.09746017e-
 001,prob_stddev=1.73465299e-002,prob_range={7.97480168e-001,8.22011866e-
 001},prob(percent)="81",prob+sd="81+-2",height_mean=7.34947295e-
 001,height_median=5.47973596e-001,height_95%HPD={1.63868594e-
 005,1.80121739e+000},age_mean=7.19412605e+001,age_median=7.13931624e+001,age_95%HPD=
 {6.60645001e+001,7.84260876e+001}]:6.907580e+000[&length_mean=7.61404117e-
 002,length_median=3.41409200e-002,length_95%HPD={1.39184900e-008,2.72289300e-
 001},effectivebrlenIgrBrlens_mean=0.045005,effectivebrlenIgrBrlens_median=0.014717,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.178623},rateIgrBrlens_mean=0.626564,rateIgrBrlens_median=0.51
 9470,rateIgrBrlens_95%HPD={0.000001,1.432589}],(((((((((3[&prob=1.00000000e+000,prob_stdde
 v=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
 sd="100+-0",height_mean=3.40652535e-001,height_median=2.43075712e-
 001,height_95%HPD={7.43279688e-006,8.51368690e-
 001},age_mean=3.37992133e+001,age_median=3.37989979e+001,age_95%HPD={3.37014204e+001
 ,3.38909577e+001}]:3.127598e+000[&length_mean=3.49637060e-
 002,length_median=1.90946800e-002,length_95%HPD={3.34629100e-007,1.18135000e-
 001},effectivebrlenIgrBrlens_mean=0.039723,effectivebrlenIgrBrlens_median=0.019457,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.139401},rateIgrBrlens_mean=1.402346,rateIgrBrlens_median=1.10
 4874,rateIgrBrlens_95%HPD={0.000013,3.447125}],4[&prob=1.00000000e+000,prob_stddev=0.0000
 0000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
 sd="100+-0",height_mean=3.47283290e-001,height_median=2.48058277e-
 001,height_95%HPD={7.63431998e-006,8.67197798e-

001},age_mean=3.44566660e+001,age_median=3.44589397e+001,age_95%HPD={3.39517961e+001
,3.49920590e+001}]:2.467656e+000[&length_mean=2.84792335e-
002,length_median=1.29031600e-002,length_95%HPD={9.97915500e-008,1.04590700e-
001},effectivebrlenlgrBrlens_mean=0.016241,effectivebrlenlgrBrlens_median=0.003808,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.071691},rateIgrBrlens_mean=0.672731,rateIgrBrlens_median=0.45
4133,rateIgrBrlens_95%HPD={0.000001,1.898596}])][&prob=9.57636158e-
001,prob_stddev=4.71373096e-005,prob_range={9.57602826e-001,9.57669489e-
001},prob(percent)="96",prob+-sd="96+-0",height_mean=3.75372799e-
001,height_median=2.65403286e-001,height_95%HPD={7.92949618e-006,9.38130349e-
001},age_mean=3.72125917e+001,age_median=3.69265962e+001,age_95%HPD={3.44511512e+001
,4.05920204e+001}]:6.730939e+000[&length_mean=5.54060395e-
002,length_median=2.91272800e-002,length_95%HPD={1.30192200e-007,1.83531900e-
001},effectivebrlenlgrBrlens_mean=0.063748,effectivebrlenlgrBrlens_median=0.035735,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.204939},rateIgrBrlens_mean=1.402078,rateIgrBrlens_median=1.11
9673,rateIgrBrlens_95%HPD={0.111512,3.231548}],((16[&prob=1.00000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=1.75365527e-001,height_median=1.25333367e-
001,height_95%HPD={3.82013918e-006,4.38832470e-
001},age_mean=1.73998019e+001,age_median=1.73974814e+001,age_95%HPD={1.68113834e+001
,1.79499257e+001}]:1.516991e+001[&length_mean=1.77342126e-
001,length_median=1.06959200e-001,length_95%HPD={1.21517300e-006,5.33414300e-
001},effectivebrlenlgrBrlens_mean=0.179303,effectivebrlenlgrBrlens_median=0.102553,effectivebrle
nlgrBrlens_95%HPD={0.000001,0.579867},rateIgrBrlens_mean=1.077001,rateIgrBrlens_median=0.98
6067,rateIgrBrlens_95%HPD={0.349631,1.939874}],(((35[&prob=1.00000000e+000,prob_stddev=0.0
0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=1.65802867e-001,height_median=1.18864717e-
001,height_95%HPD={3.31795118e-006,4.17195594e-
001},age_mean=1.64586523e+001,age_median=1.64387456e+001,age_95%HPD={1.50001027e+001
,1.78277474e+001}]:7.343831e+000[&length_mean=9.15768410e-
002,length_median=5.28428900e-002,length_95%HPD={7.51625600e-007,2.91187600e-
001},effectivebrlenlgrBrlens_mean=0.088385,effectivebrlenlgrBrlens_median=0.053059,effectivebrle
nlgrBrlens_95%HPD={0.000001,0.270507},rateIgrBrlens_mean=1.124307,rateIgrBrlens_median=0.94
8521,rateIgrBrlens_95%HPD={0.288603,2.285491}],37[&prob=1.00000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=1.75772109e-001,height_median=1.24185194e-

001,height_95%HPD={3.74458577e-006,4.48038390e-001},age_mean=1.74226814e+001,age_median=1.73633798e+001,age_95%HPD={1.50015963e+001,1.97181557e+001}]:6.419197e+000[&length_mean=7.56666436e-002,length_median=4.36957500e-002,length_95%HPD={7.13894800e-007,2.40067400e-001},effectivebrlenlgrBrlens_mean=0.071924,effectivebrlenlgrBrlens_median=0.038513,effectivebrlenlgrBrlens_95%HPD={0.000000,0.232819},rateLgrBrlens_mean=1.084680,rateLgrBrlens_median=0.910253,rateLgrBrlens_95%HPD={0.146601,2.309475}])][&prob=4.48803413e-001,prob_stddev=9.89883501e-004,prob_range={4.48103460e-001,4.49503366e-001},prob(percent)="45",prob+sd="45+-0",height_mean=2.44714535e-001,height_median=1.75699943e-001,height_95%HPD={5.59786977e-006,6.23774830e-001},age_mean=2.39424350e+001,age_median=2.37825763e+001,age_95%HPD={1.88766662e+001,2.97545671e+001}]:3.547608e+000[&length_mean=4.23348540e-002,length_median=1.89046900e-002,length_95%HPD={9.69828700e-008,1.57034100e-001},effectivebrlenlgrBrlens_mean=0.036624,effectivebrlenlgrBrlens_median=0.013210,effectivebrlenlgrBrlens_95%HPD={0.000000,0.140296},rateLgrBrlens_mean=1.081295,rateLgrBrlens_median=0.781728,rateLgrBrlens_95%HPD={0.000001,2.814465}),(41[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=1.65342656e-001,height_median=1.18045406e-001,height_95%HPD={3.65972648e-006,4.16131378e-001},age_mean=1.63974191e+001,age_median=1.63887000e+001,age_95%HPD={1.50566813e+001,1.77110760e+001}]:5.776028e+000[&length_mean=7.96968683e-002,length_median=4.43771400e-002,length_95%HPD={2.24731500e-007,2.60894500e-001},effectivebrlenlgrBrlens_mean=0.062086,effectivebrlenlgrBrlens_median=0.033831,effectivebrlenlgrBrlens_95%HPD={0.000000,0.201627},rateLgrBrlens_mean=0.932843,rateLgrBrlens_median=0.767125,rateLgrBrlens_95%HPD={0.148213,2.085234}],48[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=1.70708387e-001,height_median=1.22045063e-001,height_95%HPD={3.69373077e-006,4.34645750e-001},age_mean=1.69307024e+001,age_median=1.71164180e+001,age_95%HPD={1.44384741e+001,1.89991023e+001}]:5.048310e+000[&length_mean=6.67511296e-002,length_median=3.39537700e-002,length_95%HPD={1.32611200e-007,2.27313600e-001},effectivebrlenlgrBrlens_mean=0.033555,effectivebrlenlgrBrlens_median=0.013821,effectivebrlenlgrBrlens_95%HPD={0.000000,0.126061},rateLgrBrlens_mean=0.556524,rateLgrBrlens_median=0.458759,rateLgrBrlens_95%HPD={0.000001,1.279949}])][&prob=5.66128925e-001,prob_stddev=3.62957284e-003,prob_range={5.63562429e-001,5.68695420e-001}

001},prob(percent)="57",prob+sd="57+-0",height_mean=2.27066274e-
001,height_median=1.57362111e-001,height_95%HPD={6.35248390e-006,5.88259110e-
001},age_mean=2.24192758e+001,age_median=2.21647277e+001,age_95%HPD={1.73841384e+001
,2.79956825e+001}]:5.165457e+000[&length_mean=5.06321200e-
002,length_median=2.06164600e-002,length_95%HPD={5.91893100e-008,1.88527300e-
001},effectivebrlenlgrBrlens_mean=0.025630,effectivebrlenlgrBrlens_median=0.006127,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.110569},rategrBrlens_mean=0.537189,rategrBrlens_median=0.41
8137,rategrBrlens_95%HPD={0.000001,1.368979}])][&prob=3.68275448e-
001,prob_stddev=3.53529822e-003,prob_range={3.65775615e-001,3.70775282e-
001},prob(percent)="37",prob+sd="37+-0",height_mean=2.74680463e-
001,height_median=1.74722543e-001,height_95%HPD={6.60557448e-006,7.01826261e-
001},age_mean=2.74193644e+001,age_median=2.73301847e+001,age_95%HPD={2.22315469e+001
,3.27327936e+001}]:3.113703e+000[&length_mean=4.86726741e-
002,length_median=1.69797400e-002,length_95%HPD={2.74290300e-008,2.03624800e-
001},effectivebrlenlgrBrlens_mean=0.031092,effectivebrlenlgrBrlens_median=0.005984,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.146513},rategrBrlens_mean=0.660012,rategrBrlens_median=0.51
0020,rategrBrlens_95%HPD={0.000001,1.687938}],51[&prob=1.00000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=2.19231554e-001,height_median=1.55551120e-
001,height_95%HPD={4.78693048e-006,5.52675590e-
001},age_mean=2.17545915e+001,age_median=2.16362177e+001,age_95%HPD={2.00002835e+001
,2.37040725e+001}]:8.807670e+000[&length_mean=6.65859515e-
002,length_median=3.30396700e-002,length_95%HPD={4.99259300e-008,2.30198200e-
001},effectivebrlenlgrBrlens_mean=0.088239,effectivebrlenlgrBrlens_median=0.045422,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.297878},rategrBrlens_mean=1.689518,rategrBrlens_median=1.30
9290,rategrBrlens_95%HPD={0.000001,3.869489}])][&prob=6.95253650e-
001,prob_stddev=2.96965050e-003,prob_range={6.93153790e-001,6.97353510e-
001},prob(percent)="70",prob+sd="70+-0",height_mean=3.14138934e-
001,height_median=2.33944000e-001,height_95%HPD={7.50555090e-006,7.78774130e-
001},age_mean=3.06256682e+001,age_median=3.04438874e+001,age_95%HPD={2.51391527e+001
,3.63997081e+001}]:2.123508e+000[&length_mean=8.69884302e-
002,length_median=4.72500900e-002,length_95%HPD={5.04207800e-008,2.81934700e-
001},effectivebrlenlgrBrlens_mean=0.066607,effectivebrlenlgrBrlens_median=0.033774,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.222387},rategrBrlens_mean=0.852589,rategrBrlens_median=0.73
1779,rategrBrlens_95%HPD={0.000002,1.752617}])][&prob=2.12085861e-

001,prob_stddev=3.44102360e-003,prob_range={2.09652690e-001,2.14519032e-001},prob(percent)="21",prob+sd="21+-0",height_mean=3.18722485e-001,height_median=1.72995363e-001,height_95%HPD={7.93378110e-006,8.62318638e-001},age_mean=3.30405915e+001,age_median=3.25673952e+001,age_95%HPD={2.70795138e+001,4.05041127e+001}]:1.021098e+001[&length_mean=6.39442336e-002,length_median=2.11997100e-002,length_95%HPD={1.66326600e-007,2.39010400e-001},effectivebrlenlgrBrlens_mean=0.046035,effectivebrlenlgrBrlens_median=0.010721,effectivebrlenlgrBrlens_95%HPD={0.000000,0.184344},rategrBrlens_mean=0.754417,rategrBrlens_median=0.650134,rategrBrlens_95%HPD={0.000001,1.723755}],(57[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.87311328e-001,height_median=2.76855709e-001,height_95%HPD={8.17439038e-006,9.68404130e-001},age_mean=3.84151216e+001,age_median=3.82606893e+001,age_95%HPD={3.72000165e+001,4.00406478e+001}]:3.379708e+000[&length_mean=4.34567569e-002,length_median=2.33403200e-002,length_95%HPD={8.01087900e-008,1.47951400e-001},effectivebrlenlgrBrlens_mean=0.104010,effectivebrlenlgrBrlens_median=0.063745,effectivebrlenlgrBrlens_95%HPD={0.000000,0.304857},rategrBrlens_mean=3.357965,rategrBrlens_median=2.466530,rategrBrlens_95%HPD={0.510857,8.454404}],(67[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.40657639e-001,height_median=2.42827467e-001,height_95%HPD={7.40283128e-006,8.51334034e-001},age_mean=3.38000804e+001,age_median=3.38002848e+001,age_95%HPD={3.37031791e+001,3.38929955e+001}]:4.119387e+000[&length_mean=5.07046780e-002,length_median=2.36376700e-002,length_95%HPD={1.17353600e-007,1.76095400e-001},effectivebrlenlgrBrlens_mean=0.039722,effectivebrlenlgrBrlens_median=0.015515,effectivebrlenlgrBrlens_95%HPD={0.000000,0.144053},rategrBrlens_mean=0.897648,rategrBrlens_median=0.733853,rategrBrlens_95%HPD={0.000001,2.088232}],68[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.40661906e-001,height_median=2.42849186e-001,height_95%HPD={7.41692248e-006,8.51170252e-001},age_mean=3.37996806e+001,age_median=3.37993766e+001,age_95%HPD={3.37087019e+001,3.38982331e+001}]:4.120295e+000[&length_mean=3.97024673e-002,length_median=1.55955200e-002,length_95%HPD={1.17284800e-008,1.48165200e-001},effectivebrlenlgrBrlens_mean=0.033558,effectivebrlenlgrBrlens_median=0.008699,effectivebrlenlgrBrlens_95%HPD={0.000000,0.135587},rategrBrlens_mean=0.943795,rategrBrlens_median=0.72

3814,rateIgrBrlens_95%HPD={0.000001,2.452088}][&prob=2.76814879e-001,prob_stddev=1.53196256e-002,prob_range={2.65982268e-001,2.87647490e-001},prob(percent)="28",prob+sd="28+-2",height_mean=3.84861912e-001,height_median=2.74400748e-001,height_95%HPD={1.00685211e-005,9.66047955e-001},age_mean=3.80820297e+001,age_median=3.79196716e+001,age_95%HPD={3.47989939e+001,4.18507260e+001}]:3.720726e+000[&length_mean=3.29677826e-002,length_median=1.37006800e-002,length_95%HPD={4.38595900e-008,1.27955300e-001},effectivebrlenIgrBrlens_mean=0.025418,effectivebrlenIgrBrlens_median=0.005746,effectivebrlenIgrBrlens_95%HPD={0.000000,0.110727},rateIgrBrlens_mean=0.856750,rateIgrBrlens_median=0.630851,rateIgrBrlens_95%HPD={0.000001,2.439392}][&prob=9.73935071e-002,prob_stddev=1.06530320e-002,prob_range={8.98606760e-002,1.04926338e-001},prob(percent)="10",prob+sd="10+-1",height_mean=4.11710360e-001,height_median=2.86572576e-001,height_95%HPD={1.19376881e-005,1.04808800e+000},age_mean=4.18177667e+001,age_median=4.16403974e+001,age_95%HPD={3.85039430e+001,4.56341752e+001}]:1.137979e+000[&length_mean=2.15537255e-002,length_median=7.36335300e-003,length_95%HPD={5.09850000e-008,8.96294200e-002},effectivebrlenIgrBrlens_mean=0.024740,effectivebrlenIgrBrlens_median=0.005133,effectivebrlenIgrBrlens_95%HPD={0.000000,0.102627},rateIgrBrlens_mean=1.595585,rateIgrBrlens_median=0.997925,rateIgrBrlens_95%HPD={0.000001,4.628254}][&prob=8.05946270e-002,prob_stddev=4.05380862e-003,prob_range={7.77281515e-002,8.34611026e-002},prob(percent)="8",prob+sd="8+-0",height_mean=4.49036230e-001,height_median=3.41481677e-001,height_95%HPD={1.23233446e-005,1.05969193e+000},age_mean=4.29567459e+001,age_median=4.27783763e+001,age_95%HPD={3.92981447e+001,4.67759665e+001}]:8.791585e-001[&length_mean=2.11788192e-002,length_median=9.00824000e-003,length_95%HPD={5.79766500e-008,8.08525700e-002},effectivebrlenIgrBrlens_mean=0.017077,effectivebrlenIgrBrlens_median=0.004572,effectivebrlenIgrBrlens_95%HPD={0.000000,0.072605},rateIgrBrlens_mean=1.142329,rateIgrBrlens_median=0.688389,rateIgrBrlens_95%HPD={0.000001,3.327770}][&prob=8.03279781e-002,prob_stddev=4.33663248e-003,prob_range={7.72615159e-002,8.33944404e-002},prob(percent)="8",prob+sd="8+-0",height_mean=4.59788613e-001,height_median=3.29122141e-001,height_95%HPD={1.64534229e-005,1.09502666e+000},age_mean=4.37733924e+001,age_median=4.36575348e+001,age_95%HPD={4.02516196e+001,4.75894196e+001}]:9.598081e-001[&length_mean=2.04854250e-002,length_median=8.11915000e-003,length_95%HPD={1.03860300e-007,7.64009200e-002},effectivebrlenIgrBrlens_mean=0.023917,effectivebrlenIgrBrlens_median=0.006539,effectivebr

nlgrBrlens_95%HPD={0.000000,0.096912},rateIgrBrlens_mean=1.535661,rateIgrBrlens_median=0.999504,rateIgrBrlens_95%HPD={0.000001,4.563133}],[49[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)='100',prob+-sd="100+-0",height_mean=1.75972479e-001,height_median=1.24603673e-001,height_95%HPD={3.53818368e-006,4.48560040e-001},age_mean=1.74689134e+001,age_median=1.74533055e+001,age_95%HPD={1.50000561e+001,1.97442232e+001}]:2.151526e+001[&length_mean=1.88357690e-001,length_median=1.17314300e-001,length_95%HPD={1.48541300e-006,5.44437300e-001},effectivebrlenIgrBrlens_mean=0.198157,effectivebrlenIgrBrlens_median=0.121581,effectivebrle nlgrBrlens_95%HPD={0.000001,0.574748},rateIgrBrlens_mean=1.098796,rateIgrBrlens_median=1.025253,rateIgrBrlens_95%HPD={0.451002,1.872113}],78[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)='100',prob+-sd="100+-0",height_mean=3.60278265e-001,height_median=2.57648727e-001,height_95%HPD={8.06821068e-006,9.01394327e-001},age_mean=3.57550899e+001,age_median=3.58550991e+001,age_95%HPD={3.41219201e+001,3.71999390e+001}]:3.113463e+000[&length_mean=7.89699386e-002,length_median=3.60877100e-002,length_95%HPD={8.34619300e-008,2.67610700e-001},effectivebrlenIgrBrlens_mean=0.042846,effectivebrlenIgrBrlens_median=0.016944,effectivebrle nlgrBrlens_95%HPD={0.000000,0.154963},rateIgrBrlens_mean=0.622460,rateIgrBrlens_median=0.518856,rateIgrBrlens_95%HPD={0.000001,1.402315}]]&prob=2.58349443e-001,prob_stddev=3.29961167e-004,prob_range={2.58116126e-001,2.58582761e-001},prob(percent)='26',prob+-sd="26+-0",height_mean=4.20515856e-001,height_median=3.34840900e-001,height_95%HPD={9.35879968e-006,1.00356502e+000},age_mean=3.94056018e+001,age_median=3.89685617e+001,age_95%HPD={3.48432223e+001,4.49393976e+001}]:5.648781e+000[&length_mean=6.31304098e-002,length_median=3.21000300e-002,length_95%HPD={5.62017200e-008,2.13027400e-001},effectivebrlenIgrBrlens_mean=0.038337,effectivebrlenIgrBrlens_median=0.015494,effectivebrle nlgrBrlens_95%HPD={0.000000,0.136593},rateIgrBrlens_mean=0.710955,rateIgrBrlens_median=0.576285,rateIgrBrlens_95%HPD={0.000001,1.618331}]]&prob=6.94287048e-002,prob_stddev=4.38376979e-003,prob_range={6.63289114e-002,7.25284981e-002},prob(percent)='7',prob+-sd="7+-0",height_mean=4.31249565e-001,height_median=2.48047110e-001,height_95%HPD={1.32350974e-005,1.12279669e+000},age_mean=4.47850571e+001,age_median=4.46173430e+001,age_95%HPD={4.10270855e+001,4.89563906e+001}]:2.528091e+000[&length_mean=1.82046612e-002,length_median=6.39916800e-003,length_95%HPD={6.30293500e-008,7.44061500e-002},

002},effectivebrlenIgrBrlens_mean=0.015359,effectivebrlenIgrBrlens_median=0.003155,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.066249},rateIgrBrlens_mean=1.186522,rateIgrBrlens_median=0.76
2600,rateIgrBrlens_95%HPD={0.000002,3.422705}),(30[&prob=1.0000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=3.96261645e-001,height_median=2.83226211e-
001,height_95%HPD={8.56692688e-006,9.90829115e-
001},age_mean=3.93130207e+001,age_median=3.92231416e+001,age_95%HPD={3.78000127e+001
,4.09583551e+001}):4.423376e+000[&length_mean=4.96536921e-
002,length_median=2.60676100e-002,length_95%HPD={8.28504400e-008,1.66190100e-
001},effectivebrlenIgrBrlens_mean=0.069904,effectivebrlenIgrBrlens_median=0.039387,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.213936},rateIgrBrlens_mean=1.761774,rateIgrBrlens_median=1.38
9647,rateIgrBrlens_95%HPD={0.000001,3.859123}]),38[&prob=1.0000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=3.91046964e-001,height_median=2.78954352e-
001,height_95%HPD={8.53989668e-006,9.78827270e-
001},age_mean=3.88027378e+001,age_median=3.88056698e+001,age_95%HPD={3.73630991e+001
,4.03954320e+001}):4.840848e+000[&length_mean=5.69909715e-
002,length_median=3.20097900e-002,length_95%HPD={1.50525700e-007,1.80812000e-
001},effectivebrlenIgrBrlens_mean=0.057797,effectivebrlenIgrBrlens_median=0.033522,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.177115},rateIgrBrlens_mean=1.198104,rateIgrBrlens_median=1.01
6064,rateIgrBrlens_95%HPD={0.286481,2.596789})][&prob=2.74981668e-
001,prob_stddev=1.24442497e-002,prob_range={2.66182255e-001,2.83781081e-
001},prob(percent)="27",prob+sd="27+-1",height_mean=4.58149242e-
001,height_median=3.58025111e-001,height_95%HPD={1.22885497e-
005,1.10399877e+000},age_mean=4.38668381e+001,age_median=4.36465177e+001,age_95%HPD=
{4.01779595e+001,4.77536541e+001}):3.498916e+000[&length_mean=2.10550578e-
002,length_median=8.94065400e-003,length_95%HPD={5.01188900e-008,8.12694100e-
002},effectivebrlenIgrBrlens_mean=0.014340,effectivebrlenIgrBrlens_median=0.002984,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.064173},rateIgrBrlens_mean=0.891242,rateIgrBrlens_median=0.51
0357,rateIgrBrlens_95%HPD={0.000001,3.001302})][&prob=5.15932271e-
001,prob_stddev=3.41745495e-002,prob_range={4.91767216e-001,5.40097327e-
001},prob(percent)="52",prob+sd="52+-3",height_mean=4.77563336e-
001,height_median=3.28064019e-001,height_95%HPD={1.33140803e-
005,1.18780776e+000},age_mean=4.73817782e+001,age_median=4.71454338e+001,age_95%HPD=
{4.32739660e+001,5.19669037e+001}):3.134247e+000[&length_mean=3.99802938e-

002,length_median=1.87222800e-002,length_95%HPD={1.39291400e-007,1.44364400e-001},effectivebrlenlgrBrlens_mean=0.082597,effectivebrlenlgrBrlens_median=0.041693,effectivebrlenlgrBrlens_95%HPD={0.000000,0.277279},rategrBrlens_mean=2.802037,rategrBrlens_median=2.015876,rategrBrlens_95%HPD={0.000003,7.129091}],53[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.09259502e-001,height_median=2.91141802e-001,height_95%HPD={8.55552958e-006,1.02290981e+000},age_mean=4.06147489e+001,age_median=4.06790973e+001,age_95%HPD={3.91894025e+001,4.19997901e+001}]:9.600584e+000[&length_mean=1.05459282e-001,length_median=6.24756500e-002,length_95%HPD={1.59923600e-007,3.13294000e-001},effectivebrlenlgrBrlens_mean=0.093848,effectivebrlenlgrBrlens_median=0.049000,effectivebrlenlgrBrlens_95%HPD={0.000000,0.310298},rategrBrlens_mean=0.980427,rategrBrlens_median=0.842552,rategrBrlens_95%HPD={0.154397,2.009135}][&prob=3.51509899e-001,prob_stddev=2.45114010e-002,prob_range={3.34177721e-001,3.68842077e-001},prob(percent)="35",prob+sd="35+-2",height_mean=5.08161593e-001,height_median=3.50182034e-001,height_95%HPD={1.33553626e-005,1.26720912e+000},age_mean=5.04743267e+001,age_median=5.02796811e+001,age_95%HPD={4.57570459e+001,5.61260634e+001}]:2.800601e+000[&length_mean=3.60269068e-002,length_median=1.50529700e-002,length_95%HPD={3.11999100e-008,1.37100900e-001},effectivebrlenlgrBrlens_mean=0.062175,effectivebrlenlgrBrlens_median=0.021252,effectivebrlenlgrBrlens_95%HPD={0.000000,0.243654},rategrBrlens_mean=2.301391,rategrBrlens_median=1.596261,rategrBrlens_95%HPD={0.000001,6.339235}],((7[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.20169660e-001,height_median=2.28500233e-001,height_95%HPD={6.80298078e-006,7.99588724e-001},age_mean=3.17624320e+001,age_median=3.17691047e+001,age_95%HPD={3.09887851e+001,3.25990075e+001}]:4.488666e+000[&length_mean=4.92131403e-002,length_median=2.65645900e-002,length_95%HPD={1.05145400e-007,1.66477500e-001},effectivebrlenlgrBrlens_mean=0.037330,effectivebrlenlgrBrlens_median=0.017144,effectivebrlenlgrBrlens_95%HPD={0.000000,0.131396},rategrBrlens_mean=0.908934,rategrBrlens_median=0.712244,rategrBrlens_95%HPD={0.000002,2.263035}],8[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.41610767e-001,height_median=2.43715129e-001,height_95%HPD={7.87402320e-006,8.57286686e-001},age_mean=3.38973748e+001,age_median=3.34509193e+001,age_95%HPD={3.10001122e+001

,3.81298007e+001}]:2.806851e+000[&length_mean=2.79015777e-002,length_median=1.20315700e-002,length_95%HPD={3.13091700e-008,1.02868400e-001},effectivebrlenIgrBrlens_mean=0.021541,effectivebrlenIgrBrlens_median=0.007464,effectivebrlenIgrBrlens_95%HPD={0.000000,0.082779},rateIgrBrlens_mean=1.046439,rateIgrBrlens_median=0.699631,rateIgrBrlens_95%HPD={0.000001,3.073839}])[&prob=9.61235918e-001,prob_stddev=4.94941751e-003,prob_range={9.57736151e-001,9.64735684e-001},prob(percent)="96",prob+-sd="96+-0",height_mean=3.69206563e-001,height_median=2.63802444e-001,height_95%HPD={9.07910578e-006,9.24825720e-001},age_mean=3.65112081e+001,age_median=3.62577705e+001,age_95%HPD={3.25057740e+001,4.11038154e+001}]:3.620847e+000[&length_mean=4.16005603e-002,length_median=1.98771200e-002,length_95%HPD={9.64457300e-008,1.48305800e-001},effectivebrlenIgrBrlens_mean=0.036597,effectivebrlenIgrBrlens_median=0.017303,effectivebrlenIgrBrlens_95%HPD={0.000000,0.128815},rateIgrBrlens_mean=1.176818,rateIgrBrlens_median=0.859611,rateIgrBrlens_95%HPD={0.000002,2.972663}],9[&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=3.40653673e-001,height_median=2.42966448e-001,height_95%HPD={7.41098008e-006,8.51159700e-001},age_mean=3.37995507e+001,age_median=3.37992739e+001,age_95%HPD={3.37005771e+001,3.38902803e+001}]:6.079344e+000[&length_mean=6.56618361e-002,length_median=3.74285700e-002,length_95%HPD={3.04595500e-007,2.07310300e-001},effectivebrlenIgrBrlens_mean=0.061173,effectivebrlenIgrBrlens_median=0.035296,effectivebrlenIgrBrlens_95%HPD={0.000000,0.191772},rateIgrBrlens_mean=1.082012,rateIgrBrlens_median=0.927489,rateIgrBrlens_95%HPD={0.189377,2.274341}])[&prob=7.37317512e-001,prob_stddev=1.28684855e-002,prob_range={7.28218119e-001,7.46416906e-001},prob(percent)="74",prob+-sd="74+-1",height_mean=4.08191860e-001,height_median=2.92358288e-001,height_95%HPD={9.57371008e-006,1.01081001e+000},age_mean=4.01233966e+001,age_median=3.98786175e+001,age_95%HPD={3.54278993e+001,4.52244940e+001}]:3.706293e+000[&length_mean=4.62897956e-002,length_median=2.00323500e-002,length_95%HPD={1.56352300e-008,1.72717800e-001},effectivebrlenIgrBrlens_mean=0.048960,effectivebrlenIgrBrlens_median=0.017478,effectivebrlenIgrBrlens_95%HPD={0.000000,0.186233},rateIgrBrlens_mean=1.317525,rateIgrBrlens_median=0.956610,rateIgrBrlens_95%HPD={0.000001,3.398821}],70[&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=2.98378222e-001,height_median=2.12803018e-001,height_95%HPD={6.45349738e-006,7.45746280e-001}

001},age_mean=2.96063359e+001,age_median=2.96104941e+001,age_95%HPD={2.92318132e+001
,2.99897403e+001}]:1.397442e+001[&length_mean=1.38167888e-
001,length_median=8.66753300e-002,length_95%HPD={5.64738300e-007,3.99999900e-
001},effectivebrlenlgrBrlens_mean=0.127631,effectivebrlenlgrBrlens_median=0.076971,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.376869},rateIgrBrlens_mean=0.981504,rateIgrBrlens_median=0.90
9938,rateIgrBrlens_95%HPD={0.342850,1.894032}])][&prob=9.44203720e-
001,prob_stddev=4.05380862e-003,prob_range={9.41337244e-001,9.47070195e-
001},prob(percent)="94",prob+-sd="94+-0",height_mean=4.43869196e-
001,height_median=3.12691009e-001,height_95%HPD={9.96931938e-
006,1.10947760e+000},age_mean=4.40099574e+001,age_median=4.35849101e+001,age_95%HPD=
{3.74282235e+001,5.11476522e+001}]:9.495372e+000[&length_mean=9.95203538e-
002,length_median=5.50838500e-002,length_95%HPD={3.79510700e-007,3.16783200e-
001},effectivebrlenlgrBrlens_mean=0.108938,effectivebrlenlgrBrlens_median=0.056726,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.361336},rateIgrBrlens_mean=1.264829,rateIgrBrlens_median=1.06
0913,rateIgrBrlens_95%HPD={0.121685,2.690002}])][&prob=3.78474768e-
001,prob_stddev=4.47804441e-003,prob_range={3.75308313e-001,3.81641224e-
001},prob(percent)="38",prob+-sd="38+-0",height_mean=5.29042695e-
001,height_median=3.36978464e-001,height_95%HPD={1.38902077e-
005,1.35685134e+000},age_mean=5.34296502e+001,age_median=5.30802817e+001,age_95%HPD=
{4.74959829e+001,5.98167236e+001}]:5.771704e+000[&length_mean=4.80911923e-
002,length_median=2.13011800e-002,length_95%HPD={4.13508900e-008,1.76808800e-
001},effectivebrlenlgrBrlens_mean=0.097114,effectivebrlenlgrBrlens_median=0.039610,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.350291},rateIgrBrlens_mean=2.514581,rateIgrBrlens_median=1.88
1436,rateIgrBrlens_95%HPD={0.000001,6.375529}],((((((6[&prob=1.00000000e+000,prob_stddev=0.
00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=1.65996788e-001,height_median=1.18507435e-
001,height_95%HPD={3.66499300e-006,4.17342730e-
001},age_mean=1.64754612e+001,age_median=1.65243173e+001,age_95%HPD={1.51618112e+001
,1.77986233e+001}]:8.184100e+000[&length_mean=9.48641777e-
002,length_median=4.43986700e-002,length_95%HPD={1.62985900e-008,3.23565100e-
001},effectivebrlenlgrBrlens_mean=0.058175,effectivebrlenlgrBrlens_median=0.025329,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.210897},rateIgrBrlens_mean=0.714806,rateIgrBrlens_median=0.59
5777,rateIgrBrlens_95%HPD={0.000001,1.529890}],19[&prob=1.00000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=1.17266521e-001,height_median=8.16171600e-

002,height_95%HPD={2.83023480e-006,3.10199600e-001},age_mean=1.16186897e+001,age_median=1.14426000e+001,age_95%HPD={9.00045104e+000,1.45360734e+001}]:1.326582e+001[&length_mean=1.46219634e-001,length_median=9.00976500e-002,length_95%HPD={1.71450300e-006,4.41319700e-001},effectivebrlenlgrBrlens_mean=0.188070,effectivebrlenlgrBrlens_median=0.119255,effectivebrlenlgrBrlens_95%HPD={0.000002,0.535996},rateLgrBrlens_mean=1.404821,rateLgrBrlens_median=1.271106,rateLgrBrlens_95%HPD={0.553756,2.538392}])][&prob=7.97113526e-001,prob_stddev=1.52253510e-002,prob_range={7.86347577e-001,8.07879475e-001},prob(percent)="80",prob+-sd="80+-2",height_mean=2.60437807e-001,height_median=1.88529941e-001,height_95%HPD={5.18565100e-006,6.76354830e-001},age_mean=2.51081510e+001,age_median=2.47084171e+001,age_95%HPD={1.68494732e+001,3.39392041e+001}]:5.771545e+000[&length_mean=1.02322157e-001,length_median=4.97057000e-002,length_95%HPD={7.79950400e-008,3.61590500e-001},effectivebrlenlgrBrlens_mean=0.073292,effectivebrlenlgrBrlens_median=0.034780,effectivebrlenlgrBrlens_95%HPD={0.000000,0.258797},rateLgrBrlens_mean=0.857153,rateLgrBrlens_median=0.694309,rateLgrBrlens_95%HPD={0.000001,1.909018}],(46[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=0.00000000e+000,height_median=0.00000000e+000,height_95%HPD={0.00000000e+000,0.00000000e+000},age_mean=0.00000000e+000,age_median=0.00000000e+000,age_95%HPD={0.00000000e+000,0.00000000e+000}]:2.528384e+001[&length_mean=2.92559848e-001,length_median=1.99478100e-001,length_95%HPD={5.93670800e-006,7.71890100e-001},effectivebrlenlgrBrlens_mean=0.149355,effectivebrlenlgrBrlens_median=0.090549,effectivebrlenlgrBrlens_95%HPD={0.000002,0.461939},rateLgrBrlens_mean=0.514534,rateLgrBrlens_median=0.493134,rateLgrBrlens_95%HPD={0.159319,0.883879}],75[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=1.76464867e-001,height_median=1.24997160e-001,height_95%HPD={3.69869468e-006,4.47974090e-001},age_mean=1.75065111e+001,age_median=1.75239503e+001,age_95%HPD={1.50359299e+001,1.97763285e+001}]:7.759890e+000[&length_mean=1.56378103e-001,length_median=7.71951900e-002,length_95%HPD={7.48521300e-007,5.42980900e-001},effectivebrlenlgrBrlens_mean=0.130495,effectivebrlenlgrBrlens_median=0.073678,effectivebrlenlgrBrlens_95%HPD={0.000000,0.406996},rateLgrBrlens_mean=1.032428,rateLgrBrlens_median=0.882066,rateLgrBrlens_95%HPD={0.218296,2.068811}])][&prob=2.83414439e-001,prob_stddev=4.66659365e-003,prob_range={2.80114659e-001,2.86714219e-001}

001},prob(percent)="28",prob+sd="28+-0",height_mean=2.48267368e-
001,height_median=1.52029600e-001,height_95%HPD={5.93670800e-006,6.83218300e-
001},age_mean=2.54512964e+001,age_median=2.52838400e+001,age_95%HPD={1.73181567e+001
,3.30020788e+001}]:5.196122e+000[&length_mean=6.98016131e-
002,length_median=2.31098000e-002,length_95%HPD={8.34840800e-008,2.75812100e-
001},effectivebrlenlgrBrlens_mean=0.040230,effectivebrlenlgrBrlens_median=0.008525,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.180159},rategrBrlens_mean=0.585354,rategrBrlens_median=0.48
6801,rategrBrlens_95%HPD={0.000001,1.365770})][&prob=2.81347910e-
001,prob_stddev=9.47459923e-003,prob_range={2.74648357e-001,2.88047464e-
001},prob(percent)="28",prob+sd="28+-1",height_mean=2.99420819e-
001,height_median=1.74371100e-001,height_95%HPD={8.31852580e-006,8.16223200e-
001},age_mean=3.07611803e+001,age_median=3.04799623e+001,age_95%HPD={2.38993529e+001
,3.81088795e+001}]:8.799960e+000[&length_mean=6.38371552e-
002,length_median=2.36469900e-002,length_95%HPD={7.16392300e-008,2.48887700e-
001},effectivebrlenlgrBrlens_mean=0.031087,effectivebrlenlgrBrlens_median=0.008377,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.132851},rategrBrlens_mean=0.528666,rategrBrlens_median=0.42
3771,rategrBrlens_95%HPD={0.000001,1.259664}),(45[&prob=1.00000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=3.10418971e-001,height_median=2.21131113e-
001,height_95%HPD={6.77057700e-006,7.75318509e-
001},age_mean=3.07985831e+001,age_median=3.07968034e+001,age_95%HPD={3.06017155e+001
,3.09813617e+001}]:5.408386e+000[&length_mean=3.57463435e-
002,length_median=1.16103400e-002,length_95%HPD={5.07449100e-008,1.46372900e-
001},effectivebrlenlgrBrlens_mean=0.024733,effectivebrlenlgrBrlens_median=0.003777,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.114283},rategrBrlens_mean=0.766450,rategrBrlens_median=0.52
5444,rategrBrlens_95%HPD={0.000001,2.170952}]),80[&prob=1.00000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=3.46746523e-001,height_median=2.47877613e-
001,height_95%HPD={7.59018475e-006,8.67062700e-
001},age_mean=3.44052465e+001,age_median=3.43839734e+001,age_95%HPD={3.39002359e+001
,3.49277840e+001}]:1.821216e+000[&length_mean=2.65249209e-
002,length_median=1.00368200e-002,length_95%HPD={3.30435700e-008,1.05621000e-
001},effectivebrlenlgrBrlens_mean=0.026568,effectivebrlenlgrBrlens_median=0.007579,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.110194},rategrBrlens_mean=1.403933,rategrBrlens_median=0.91
4681,rategrBrlens_95%HPD={0.000001,4.102641})][&prob=1.95586961e-

001,prob_stddev=3.29961167e-003,prob_range={1.93253783e-001,1.97920139e-001},prob(percent)="20",prob+sd="20+-0",height_mean=3.78180563e-001,height_median=2.68092080e-001,height_95%HPD={9.90030090e-006,9.32725180e-001},age_mean=3.65443327e+001,age_median=3.62051895e+001,age_95%HPD={3.41433070e+001,3.98657594e+001}]:3.074733e+000[&length_mean=3.47903033e-002,length_median=1.20414200e-002,length_95%HPD={1.73690100e-008,1.44891400e-001},effectivebrlenlgrBrlens_mean=0.038786,effectivebrlenlgrBrlens_median=0.008539,effectivebrlenlgrBrlens_95%HPD={0.000000,0.164169},rategrBrlens_mean=1.410505,rategrBrlens_median=0.966792,rategrBrlens_95%HPD={0.000001,4.020426}]):[&prob=4.72835144e-001,prob_stddev=8.48471573e-003,prob_range={4.66835544e-001,4.78834744e-001},prob(percent)="47",prob+sd="47+-1",height_mean=3.92490076e-001,height_median=2.52244079e-001,height_95%HPD={1.06149800e-005,1.01847193e+000},age_mean=3.97365070e+001,age_median=3.92799221e+001,age_95%HPD={3.47112678e+001,4.56061135e+001}]:4.995584e+000[&length_mean=5.78035163e-002,length_median=2.38029500e-002,length_95%HPD={4.02852400e-008,2.17845800e-001},effectivebrlenlgrBrlens_mean=0.045452,effectivebrlenlgrBrlens_median=0.016071,effectivebrlenlgrBrlens_95%HPD={0.000000,0.183734},rategrBrlens_mean=0.921928,rategrBrlens_median=0.726338,rategrBrlens_95%HPD={0.000001,2.189086}],15[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.47016997e-001,height_median=2.47653400e-001,height_95%HPD={7.61546800e-006,8.67287900e-001},age_mean=3.44326067e+001,age_median=3.44233587e+001,age_95%HPD={3.39000327e+001,3.49387424e+001}]:9.852147e+000[&length_mean=1.01844934e-001,length_median=4.96289700e-002,length_95%HPD={2.12770900e-007,3.52299000e-001},effectivebrlenlgrBrlens_mean=0.132913,effectivebrlenlgrBrlens_median=0.072289,effectivebrlenlgrBrlens_95%HPD={0.000000,0.411517},rategrBrlens_mean=1.590046,rategrBrlens_median=1.302097,rategrBrlens_95%HPD={0.000001,3.389802}]):[&prob=4.24805013e-001,prob_stddev=4.19522055e-003,prob_range={4.21838544e-001,4.27771482e-001},prob(percent)="42",prob+sd="42+-0",height_mean=4.49995770e-001,height_median=3.16537547e-001,height_95%HPD={1.16002631e-005,1.14244403e+000},age_mean=4.46196651e+001,age_median=4.42755059e+001,age_95%HPD={3.87041932e+001,5.17513456e+001}]:3.354531e-001[&length_mean=6.64357332e-002,length_median=2.64073300e-002,length_95%HPD={6.44566800e-008,2.48810500e-001},effectivebrlenlgrBrlens_mean=0.060080,effectivebrlenlgrBrlens_median=0.019654,effectivebrlenlgrBrlens_95%HPD={0.000000,0.235269},rategrBrlens_mean=1.086170,rategrBrlens_median=0.82

2073,rateIgrBrlens_95%HPD={0.000001,2.612285}],85[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=2.51968212e-001,height_median=1.79651657e-001,height_95%HPD={5.48417648e-006,6.29664085e-001},age_mean=2.50000000e+001,age_median=2.50000000e+001,age_95%HPD={2.49999892e+001,2.50000110e+001}]:1.961096e+001[&length_mean=1.12637316e-001,length_median=3.94170900e-002,length_95%HPD={4.90215600e-008,4.56344800e-001},effectivebrlenIgrBrlens_mean=0.111550,effectivebrlenIgrBrlens_median=0.029506,effectivebrlenIgrBrlens_95%HPD={0.000000,0.478771},rateIgrBrlens_mean=1.013245,rateIgrBrlens_median=0.886956,rateIgrBrlens_95%HPD={0.000001,2.139959}])[&prob=2.05319645e-001,prob_stddev=1.10301304e-002,prob_range={1.97520165e-001,2.13119125e-001},prob(percent)="21",prob+-sd="21+-1",height_mean=4.36737083e-001,height_median=2.60699030e-001,height_95%HPD={1.10325228e-005,1.13697608e+000},age_mean=4.49123611e+001,age_median=4.46109590e+001,age_95%HPD={3.85927018e+001,5.17495168e+001}]:1.145093e+001[&length_mean=6.26997906e-002,length_median=2.38039400e-002,length_95%HPD={1.42203000e-007,2.41940800e-001},effectivebrlenIgrBrlens_mean=0.055706,effectivebrlenIgrBrlens_median=0.017168,effectivebrlenIgrBrlens_95%HPD={0.000000,0.223015},rateIgrBrlens_mean=1.038877,rateIgrBrlens_median=0.814786,rateIgrBrlens_95%HPD={0.000001,2.604168}]),(23[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=4.76348969e-001,height_median=3.39323347e-001,height_95%HPD={1.05669867e-005,1.19095013e+000},age_mean=4.72652252e+001,age_median=4.71634649e+001,age_95%HPD={4.57000006e+001,4.90230912e+001}]:8.306287e+000[&length_mean=8.75573611e-002,length_median=4.64725200e-002,length_95%HPD={1.78615400e-007,2.79390400e-001},effectivebrlenIgrBrlens_mean=0.156813,effectivebrlenIgrBrlens_median=0.098954,effectivebrlenIgrBrlens_95%HPD={0.000001,0.464048},rateIgrBrlens_mean=2.238644,rateIgrBrlens_median=1.792691,rateIgrBrlens_95%HPD={0.528446,4.905137}]),(40[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=3.89060099e-001,height_median=2.78213973e-001,height_95%HPD={8.47052048e-006,9.74184720e-001},age_mean=3.86079215e+001,age_median=3.86945547e+001,age_95%HPD={3.69574671e+001,4.00999504e+001}]:1.246189e+001[&length_mean=1.28978151e-001,length_median=7.73827900e-002,length_95%HPD={4.64960100e-007,3.82582300e-001},effectivebrlenIgrBrlens_mean=0.092529,effectivebrlenIgrBrlens_median=0.055429,effectivebrle

nlgrBrlens_95%HPD={0.000000,0.278187},rateIgrBrlens_mean=0.768757,rateIgrBrlens_median=0.693767,rateIgrBrlens_95%HPD={0.212789,1.482009}],[50[&prob=1.0000000e+000,prob_stddev=0.000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)='100',prob+sd="100+-0",height_mean=3.18334054e-001,height_median=2.27517890e-001,height_95%HPD={6.67214668e-006,7.97676294e-001},age_mean=3.15833640e+001,age_median=3.16256764e+001,age_95%HPD={3.01763144e+001,3.29972964e+001}]:1.656878e+001[&length_mean=1.57834880e-001,length_median=1.00108000e-001,length_95%HPD={6.98738200e-008,4.41830500e-001},effectivebrlenIgrBrlens_mean=0.136621,effectivebrlenIgrBrlens_median=0.081007,effectivebrle nlgrBrlens_95%HPD={0.000000,0.398719},rateIgrBrlens_mean=0.896724,rateIgrBrlens_median=0.837149,rateIgrBrlens_95%HPD={0.379937,1.543537}],56[&prob=1.0000000e+000,prob_stddev=0.000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)='100',prob+sd="100+-0",height_mean=4.70399017e-001,height_median=3.34996427e-001,height_95%HPD={9.85457188e-006,1.17925512e+000},age_mean=4.66704599e+001,age_median=4.66260208e+001,age_95%HPD={4.45002394e+001,4.87524098e+001}]:1.568431e+000[&length_mean=3.11553001e-002,length_median=1.02809800e-002,length_95%HPD={1.74521700e-008,1.32135500e-001},effectivebrlenIgrBrlens_mean=0.019200,effectivebrlenIgrBrlens_median=0.002325,effectivebrle nlgrBrlens_95%HPD={0.000000,0.093878},rateIgrBrlens_mean=0.689382,rateIgrBrlens_median=0.437008,rateIgrBrlens_95%HPD={0.000001,2.078084}]]][&prob=4.51069929e-001,prob_stddev=2.07875535e-002,prob_range={4.36370909e-001,4.65768949e-001},prob(percent)='45',prob+sd="45+-2",height_mean=4.85760568e-001,height_median=3.57508373e-001,height_95%HPD={1.01631687e-005,1.20990059e+000},age_mean=4.83939897e+001,age_median=4.81944516e+001,age_95%HPD={4.48664460e+001,5.23286235e+001}]:2.961993e+000[&length_mean=4.73820284e-002,length_median=1.92921800e-002,length_95%HPD={5.91769900e-008,1.76390400e-001},effectivebrlenIgrBrlens_mean=0.038001,effectivebrlenIgrBrlens_median=0.012985,effectivebrle nlgrBrlens_95%HPD={0.000000,0.143618},rateIgrBrlens_mean=1.040959,rateIgrBrlens_median=0.737367,rateIgrBrlens_95%HPD={0.000001,2.735461}]]][&prob=4.45936938e-001,prob_stddev=9.28604999e-003,prob_range={4.39370709e-001,4.52503166e-001},prob(percent)='45',prob+sd="45+-1",height_mean=5.17798025e-001,height_median=3.68873800e-001,height_95%HPD={1.35904555e-005,1.28838748e+000},age_mean=5.15688444e+001,age_median=5.11564442e+001,age_95%HPD={4.60945933e+001,5.77736662e+001}]:4.313308e+000[&length_mean=6.29736060e-002,length_median=2.71801200e-002,length_95%HPD={6.52789300e-008,2.24764800e-001}

001},effectivebrlenIgrBrlens_mean=0.046303,effectivebrlenIgrBrlens_median=0.013962,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.185072},rateIgrBrlens_mean=0.785744,rateIgrBrlens_median=0.65
0096,rateIgrBrlens_95%HPD={0.000001,1.830782}]}[&prob=2.14919005e-
001,prob_stddev=9.61601116e-003,prob_range={2.08119459e-001,2.21718552e-
001},prob(percent)="21",prob+sd="21+-1",height_mean=5.51915419e-
001,height_median=3.68151433e-001,height_95%HPD={1.48669331e-
005,1.39521672e+000},age_mean=5.57583439e+001,age_median=5.54697523e+001,age_95%HPD=
{4.97198127e+001,6.18235408e+001}]:5.921357e-001[&length_mean=4.30991064e-
002,length_median=1.51165300e-002,length_95%HPD={1.00727600e-007,1.69703300e-
001},effectivebrlenIgrBrlens_mean=0.041402,effectivebrlenIgrBrlens_median=0.009403,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.174556},rateIgrBrlens_mean=1.136046,rateIgrBrlens_median=0.85
7375,rateIgrBrlens_95%HPD={0.000001,2.814618}]}[&prob=7.89947337e-
002,prob_stddev=2.73396396e-003,prob_range={7.70615292e-002,8.09279381e-
002},prob(percent)="8",prob+sd="8+-0",height_mean=6.07085743e-
001,height_median=4.80161663e-001,height_95%HPD={1.65501696e-
005,1.43889585e+000},age_mean=5.63858496e+001,age_median=5.60618880e+001,age_95%HPD=
{5.03765134e+001,6.25009863e+001}]:2.790098e+000[&length_mean=4.31941868e-
002,length_median=2.24886000e-002,length_95%HPD={1.38872700e-007,1.52200800e-
001},effectivebrlenIgrBrlens_mean=0.047144,effectivebrlenIgrBrlens_median=0.017631,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.187166},rateIgrBrlens_mean=1.245709,rateIgrBrlens_median=0.96
3777,rateIgrBrlens_95%HPD={0.000001,3.120997}]}[&prob=1.12925805e-
001,prob_stddev=6.88204720e-003,prob_range={1.08059463e-001,1.17792147e-
001},prob(percent)="11",prob+sd="11+-1",height_mean=5.85566171e-
001,height_median=3.97474703e-001,height_95%HPD={1.92803058e-
005,1.51060071e+000},age_mean=5.89545093e+001,age_median=5.88519857e+001,age_95%HPD=
{5.32395541e+001,6.55089718e+001}]:4.222921e+000[&length_mean=3.71368431e-
002,length_median=1.79895300e-002,length_95%HPD={2.53654800e-007,1.32721500e-
001},effectivebrlenIgrBrlens_mean=0.079023,effectivebrlenIgrBrlens_median=0.039567,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.273491},rateIgrBrlens_mean=2.895616,rateIgrBrlens_median=2.07
7458,rateIgrBrlens_95%HPD={0.000002,6.742297}],(29[&prob=1.0000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=4.77095534e-001,height_median=3.40488215e-
001,height_95%HPD={1.02960402e-
005,1.19314179e+000},age_mean=4.73453234e+001,age_median=4.72688721e+001,age_95%HPD=
{4.57001527e+001,4.90690060e+001}]:1.022528e+001[&length_mean=7.48923411e-

002,length_median=3.23670400e-002,length_95%HPD={1.36304400e-008,2.77338700e-001},effectivebrlenlgrBrlens_mean=0.098992,effectivebrlenlgrBrlens_median=0.043498,effectivebrlenlgrBrlens_95%HPD={0.000000,0.357476},rategrBrlens_mean=1.679680,rategrBrlens_median=1.297838,rategrBrlens_95%HPD={0.000001,3.849121}],36[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.49310347e-001,height_median=3.92376750e-001,height_95%HPD={1.19803481e-005,1.37237438e+000},age_mean=5.45025970e+001,age_median=5.45023128e+001,age_95%HPD={5.40484773e+001,5.49983044e+001}]:2.991839e+000[&length_mean=6.67335156e-002,length_median=2.67764000e-002,length_95%HPD={4.79617900e-008,2.33236200e-001},effectivebrlenlgrBrlens_mean=0.061579,effectivebrlenlgrBrlens_median=0.017829,effectivebrlenlgrBrlens_95%HPD={0.000000,0.239768},rategrBrlens_mean=0.959493,rategrBrlens_median=0.838595,rategrBrlens_95%HPD={0.000001,2.108820}]] [&prob=3.19312046e-001,prob_stddev=1.13129543e-003,prob_range={3.18512099e-001,3.20111993e-001},prob(percent)="32",prob+sd="32+-0",height_mean=5.82880659e-001,height_median=4.09050864e-001,height_95%HPD={1.53351762e-005,1.47862649e+000},age_mean=5.79133488e+001,age_median=5.74941520e+001,age_95%HPD={5.42444549e+001,6.25002098e+001}]:5.580755e+000[&length_mean=5.44946872e-002,length_median=2.77770400e-002,length_95%HPD={6.42941000e-008,1.85178300e-001},effectivebrlenlgrBrlens_mean=0.065112,effectivebrlenlgrBrlens_median=0.032652,effectivebrlenlgrBrlens_95%HPD={0.000000,0.230919},rategrBrlens_mean=1.435348,rategrBrlens_median=1.164050,rategrBrlens_95%HPD={0.000001,3.050220}]] [&prob=1.30424638e-001,prob_stddev=8.01334263e-004,prob_range={1.29858009e-001,1.30991267e-001},prob(percent)="13",prob+sd="13+-0",height_mean=6.41277246e-001,height_median=4.51351097e-001,height_95%HPD={2.07984987e-005,1.58201855e+000},age_mean=6.32059213e+001,age_median=6.30749068e+001,age_95%HPD={5.83376067e+001,6.84851601e+001}]:1.614755e+000[&length_mean=2.24474222e-002,length_median=9.19141400e-003,length_95%HPD={1.28252800e-007,8.83398500e-002},effectivebrlenlgrBrlens_mean=0.051693,effectivebrlenlgrBrlens_median=0.012250,effectivebrlenlgrBrlens_95%HPD={0.000000,0.216998},rategrBrlens_mean=2.976530,rategrBrlens_median=1.923638,rategrBrlens_95%HPD={0.000001,10.324350}],(39[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.17976660e-001,height_median=3.69662646e-001,height_95%HPD={1.12795768e-005,1.29442177e+000},age_mean=5.13901724e+001,age_median=5.13871669e+001,age_95%HPD=

{5.10000790e+001,5.17576384e+001}]:4.972975e+000[&length_mean=4.86016391e-
 002,length_median=1.79634600e-002,length_95%HPD={1.60174900e-008,1.91990400e-
 001},effectivebrlenlgrBrlens_mean=0.063819,effectivebrlenlgrBrlens_median=0.017258,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.264942},rateIgrBrlens_mean=1.554778,rateIgrBrlens_median=1.14
 9813,rateIgrBrlens_95%HPD={0.000001,4.262827}],77[&prob=1.0000000e+000,prob_stddev=0.000
 00000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
 sd="100+-0",height_mean=4.88545304e-001,height_median=3.48478431e-
 001,height_95%HPD={1.04376661e-
 005,1.22244757e+000},age_mean=4.84860026e+001,age_median=4.85936637e+001,age_95%HPD=
 {4.64894502e+001,5.02988962e+001}]:7.766478e+000[&length_mean=1.17701668e-
 001,length_median=6.80887100e-002,length_95%HPD={5.93093500e-007,3.67016700e-
 001},effectivebrlenlgrBrlens_mean=0.099395,effectivebrlenlgrBrlens_median=0.046891,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.343436},rateIgrBrlens_mean=0.850523,rateIgrBrlens_median=0.80
 1001,rateIgrBrlens_95%HPD={0.160722,1.619092}]) [&prob=4.21838544e-
 001,prob_stddev=3.95953401e-003,prob_range={4.19038731e-001,4.24638357e-
 001},prob(percent)="42",prob+sd="42+-0",height_mean=5.53681700e-
 001,height_median=3.46202457e-001,height_95%HPD={1.63064251e-
 005,1.42832418e+000},age_mean=5.67169810e+001,age_median=5.63601422e+001,age_95%HPD=
 {5.19067699e+001,6.23919506e+001}]:8.329520e+000[&length_mean=6.78832902e-
 002,length_median=2.88633000e-002,length_95%HPD={1.18897900e-007,2.36529800e-
 001},effectivebrlenlgrBrlens_mean=0.078976,effectivebrlenlgrBrlens_median=0.030402,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.283690},rateIgrBrlens_mean=1.296160,rateIgrBrlens_median=1.10
 9246,rateIgrBrlens_95%HPD={0.000001,2.718174}]) [&prob=4.55869609e-
 001,prob_stddev=1.30570348e-002,prob_range={4.46636891e-001,4.65102327e-
 001},prob(percent)="46",prob+sd="46+-1",height_mean=6.60495716e-
 001,height_median=4.63182550e-001,height_95%HPD={1.36564533e-
 005,1.62535013e+000},age_mean=6.49027601e+001,age_median=6.46896617e+001,age_95%HPD=
 {5.97882839e+001,7.06684601e+001}]:3.213608e+000[&length_mean=2.47567761e-
 002,length_median=1.11055200e-002,length_95%HPD={3.02190100e-008,9.15929700e-
 002},effectivebrlenlgrBrlens_mean=0.074211,effectivebrlenlgrBrlens_median=0.036431,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.253932},rateIgrBrlens_mean=4.502979,rateIgrBrlens_median=3.01
 4348,rateIgrBrlens_95%HPD={0.000001,13.205164}],((13[&prob=1.0000000e+000,prob_stddev=0.0
 000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
 sd="100+-0",height_mean=5.54049732e-001,height_median=3.95728280e-
 001,height_95%HPD={1.20711928e-

001,height_95%HPD={1.21530479e-005,1.39778390e+000},age_mean=5.54997000e+001,age_median=5.54990332e+001,age_95%HPD={5.54070675e+001,5.55969472e+001}]:2.466972e+000[&length_mean=3.75981823e-002,length_median=1.83975100e-002,length_95%HPD={1.35444300e-007,1.33388300e-001},effectivebrlenlgrBrlens_mean=0.031160,effectivebrlenlgrBrlens_median=0.014454,effectivebrlenlgrBrlens_95%HPD={0.000000,0.112403},rategrBrlens_mean=1.083466,rategrBrlens_median=0.785770,rategrBrlens_95%HPD={0.009043,2.731116}])[&prob=3.77008199e-001,prob_stddev=3.91239670e-003,prob_range={3.74241717e-001,3.79774682e-001},prob(percent)="38",prob+sd="38+-0",height_mean=5.91265756e-001,height_median=4.38657969e-001,height_95%HPD={1.25235221e-005,1.45001911e+000},age_mean=5.82130778e+001,age_median=5.79660049e+001,age_95%HPD={5.57024148e+001,6.13017082e+001}]:1.472177e+000[&length_mean=2.35961409e-002,length_median=9.51488800e-003,length_95%HPD={2.73531900e-008,9.09757400e-002},effectivebrlenlgrBrlens_mean=0.016134,effectivebrlenlgrBrlens_median=0.002964,effectivebrlenlgrBrlens_95%HPD={0.000000,0.072502},rategrBrlens_mean=0.886506,rategrBrlens_median=0.525181,rategrBrlens_95%HPD={0.000001,2.672614}],25[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.46846328e-001,height_median=3.90514641e-001,height_95%HPD={1.20532388e-005,1.36640949e+000},age_mean=5.42515920e+001,age_median=5.42744879e+001,age_95%HPD={5.31419822e+001,5.53998964e+001}]:5.163694e+000[&length_mean=4.98883545e-002,length_median=2.76856700e-002,length_95%HPD={6.50214800e-008,1.60984200e-001},effectivebrlenlgrBrlens_mean=0.041875,effectivebrlenlgrBrlens_median=0.022325,effectivebrlenlgrBrlens_95%HPD={0.000000,0.139489},rategrBrlens_mean=1.001776,rategrBrlens_median=0.806597,rategrBrlens_95%HPD={0.117679,2.302413}])[&prob=2.60482634e-001,prob_stddev=2.40400279e-003,prob_range={2.58782748e-001,2.62182521e-001},prob(percent)="26",prob+sd="26+-0",height_mean=6.03705728e-001,height_median=4.47570602e-001,height_95%HPD={1.32588928e-005,1.48783830e+000},age_mean=5.96729633e+001,age_median=5.94381816e+001,age_95%HPD={5.64168264e+001,6.33702299e+001}]:1.536021e+000[&length_mean=1.96051592e-002,length_median=7.23088400e-003,length_95%HPD={6.87820900e-008,7.96698700e-002},effectivebrlenlgrBrlens_mean=0.014649,effectivebrlenlgrBrlens_median=0.001440,effectivebrlenlgrBrlens_95%HPD={0.000000,0.074287},rategrBrlens_mean=0.866609,rategrBrlens_median=0.447318,rategrBrlens_95%HPD={0.000001,2.881077}],27[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.46846328e-001,height_median=3.90514641e-001,height_95%HPD={1.20532388e-005,1.36640949e+000},age_mean=5.42515920e+001,age_median=5.42744879e+001,age_95%HPD={5.31419822e+001,5.53998964e+001}]:5.163694e+000[&length_mean=4.98883545e-002,length_median=2.76856700e-002,length_95%HPD={6.50214800e-008,1.60984200e-001},effectivebrlenlgrBrlens_mean=0.041875,effectivebrlenlgrBrlens_median=0.022325,effectivebrlenlgrBrlens_95%HPD={0.000000,0.139489},rategrBrlens_mean=1.001776,rategrBrlens_median=0.806597,rategrBrlens_95%HPD={0.117679,2.302413}])

sd="100+-0",height_mean=5.46245998e-001,height_median=3.89969461e-001,height_95%HPD={1.16840401e-005,1.36527436e+000},age_mean=5.42063484e+001,age_median=5.42062857e+001,age_95%HPD={5.31016869e+001,5.53742487e+001}]:6.767917e+000[&length_mean=5.44491593e-002,length_median=3.05689500e-002,length_95%HPD={2.83885200e-007,1.75538500e-001},effectivebrlenlgrBrlens_mean=0.052127,effectivebrlenlgrBrlens_median=0.027875,effectivebrlenlgrBrlens_95%HPD={0.000000,0.174311},ratelgrBrlens_mean=1.161093,rategrBrlens_median=0.935285,rategrBrlens_95%HPD={0.081278,2.659553}])][&prob=9.48003466e-001,prob_stddev=2.16831624e-003,prob_range={9.46470235e-001,9.49536698e-001},prob(percent)="95",prob+-sd="95+-0",height_mean=6.10979770e-001,height_median=4.29048749e-001,height_95%HPD={1.33426821e-005,1.52451310e+000},age_mean=6.12243928e+001,age_median=6.09742022e+001,age_95%HPD={5.74891035e+001,6.56055420e+001}]:4.788740e+000[&length_mean=4.95097429e-002,length_median=2.46836500e-002,length_95%HPD={5.75943700e-008,1.67299500e-001},effectivebrlenlgrBrlens_mean=0.071587,effectivebrlenlgrBrlens_median=0.038795,effectivebrlenlgrBrlens_95%HPD={0.000000,0.230376},ratelgrBrlens_mean=1.923825,rategrBrlens_median=1.449514,rategrBrlens_95%HPD={0.235081,4.685112}],(28[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=5.20959011e-001,height_median=3.71201897e-001,height_95%HPD={1.11646944e-005,1.30186995e+000},age_mean=5.16848928e+001,age_median=5.16959407e+001,age_95%HPD={5.04411597e+001,5.29897760e+001}]:1.114915e+001[&length_mean=1.31570325e-001,length_median=8.29399100e-002,length_95%HPD={1.59940700e-006,3.62165900e-001},effectivebrlenlgrBrlens_mean=0.150488,effectivebrlenlgrBrlens_median=0.094674,effectivebrlenlgrBrlens_95%HPD={0.000002,0.435699},ratelgrBrlens_mean=1.186693,rategrBrlens_median=1.128520,rategrBrlens_95%HPD={0.537847,1.963206}],69[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=5.37601207e-001,height_median=3.84108536e-001,height_95%HPD={1.16838148e-005,1.35007464e+000},age_mean=5.33313586e+001,age_median=5.34559148e+001,age_95%HPD={5.06834073e+001,5.57995717e+001}]:9.389181e+000[&length_mean=1.19725227e-001,length_median=7.23422200e-002,length_95%HPD={3.59780600e-007,3.43218600e-001},effectivebrlenlgrBrlens_mean=0.115941,effectivebrlenlgrBrlens_median=0.069850,effectivebrlenlgrBrlens_95%HPD={0.000000,0.348989},ratelgrBrlens_mean=1.040423,rategrBrlens_median=0.942172,rategrBrlens_95%HPD={0.414503,1.893976}])][&prob=3.67808813e-001]

001,prob_stddev=4.00667132e-003,prob_range={3.64975668e-001,3.70641957e-001},prob(percent)="37",prob+sd="37+-0",height_mean=6.18272942e-001,height_median=4.00417718e-001,height_95%HPD={1.71910585e-005,1.57281067e+000},age_mean=6.28989195e+001,age_median=6.28450956e+001,age_95%HPD={5.68505487e+001,6.91068572e+001}]:2.917847e+000[&length_mean=3.66042812e-002,length_median=1.29498900e-002,length_95%HPD={3.32116600e-008,1.46733400e-001},effectivebrlenlgrBrlens_mean=0.032263,effectivebrlenlgrBrlens_median=0.005984,effectivebrlenlgrBrlens_95%HPD={0.000000,0.146456},ratelgrBrlens_mean=0.988431,rateIgrBrlens_median=0.712444,rateIgrBrlens_95%HPD={0.000001,2.731666}]):[&prob=1.74788347e-001,prob_stddev=1.13129543e-003,prob_range={1.73988401e-001,1.75588294e-001},prob(percent)="17",prob+sd="17+-0",height_mean=6.40654863e-001,height_median=4.21781483e-001,height_95%HPD={2.18909104e-005,1.63093039e+000},age_mean=6.59229624e+001,age_median=6.57629427e+001,age_95%HPD={6.14091923e+001,7.12707200e+001}]:1.356508e+000[&length_mean=1.55973560e-002,length_median=5.40866700e-003,length_95%HPD={3.81727100e-008,6.39233700e-002},effectivebrlenlgrBrlens_mean=0.013442,effectivebrlenlgrBrlens_median=0.000833,effectivebrlenlgrBrlens_95%HPD={0.000000,0.071699},ratelgrBrlens_mean=0.941080,rateIgrBrlens_median=0.388504,rateIgrBrlens_95%HPD={0.000001,3.347662}]):[&prob=9.58269449e-002,prob_stddev=2.68682665e-003,prob_range={9.39270715e-002,9.77268182e-002},prob(percent)="10",prob+sd="10+-0",height_mean=6.76637900e-001,height_median=5.09270916e-001,height_95%HPD={2.06509473e-005,1.64020671e+000},age_mean=6.73270607e+001,age_median=6.71194505e+001,age_95%HPD={6.28932079e+001,7.21376689e+001}]:7.838193e-001[&length_mean=1.04751694e-002,length_median=3.60784700e-003,length_95%HPD={2.82452800e-008,4.27081500e-002},effectivebrlenlgrBrlens_mean=0.013362,effectivebrlenlgrBrlens_median=0.000340,effectivebrlenlgrBrlens_95%HPD={0.000000,0.077937},ratelgrBrlens_mean=1.419815,rateIgrBrlens_median=0.380418,rateIgrBrlens_95%HPD={0.000001,6.000180}]):[&prob=1.80954603e-001,prob_stddev=8.06047994e-003,prob_range={1.75254983e-001,1.86654223e-001},prob(percent)="18",prob+sd="18+-1",height_mean=6.72144010e-001,height_median=4.60777895e-001,height_95%HPD={1.88229363e-005,1.67528739e+000},age_mean=6.80726210e+001,age_median=6.79032698e+001,age_95%HPD={6.32928385e+001,7.29650254e+001}]:3.882985e-001[&length_mean=8.94383012e-003,length_median=3.60911400e-003,length_95%HPD={4.57225600e-008,3.37330100e-002},effectivebrlenlgrBrlens_mean=0.032833,effectivebrlenlgrBrlens_median=0.007663,effectivebrlenlgrBrlens_95%HPD={0.000000,0.140936},ratelgrBrlens_mean=5.661519,rateIgrBrlens_median=3.35

7215,rateIgrBrlens_95%HPD={0.000001,18.730135}],(((5[&prob=1.0000000e+000,prob_stddev=0.0
0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=4.30369685e-001,height_median=3.07016114e-
001,height_95%HPD={9.35664427e-
006,1.07521104e+000},age_mean=4.27008132e+001,age_median=4.27009859e+001,age_95%HPD=
{4.26078569e+001,4.27971538e+001}]:9.221474e+000[&length_mean=9.12097511e-
002,length_median=5.22640900e-002,length_95%HPD={7.44449700e-007,2.92857600e-
001},effectivebrlenIgrBrlens_mean=0.057856,effectivebrlenIgrBrlens_median=0.032240,effectivebrle
nIgrBrlens_95%HPD={0.000000,0.184108},rateIgrBrlens_mean=0.733231,rateIgrBrlens_median=0.63
2006,rateIgrBrlens_95%HPD={0.132731,1.563846}]),(42[&prob=1.0000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=4.47567450e-001,height_median=3.17270611e-
001,height_95%HPD={9.55924527e-
006,1.12558208e+000},age_mean=4.44350489e+001,age_median=4.43721921e+001,age_95%HPD=
{4.04930375e+001,4.82716567e+001}]:3.161394e+000[&length_mean=6.39438164e-
002,length_median=3.18336500e-002,length_95%HPD={3.63363600e-008,2.27935900e-
001},effectivebrlenIgrBrlens_mean=0.057972,effectivebrlenIgrBrlens_median=0.029075,effectivebrle
nIgrBrlens_95%HPD={0.000000,0.197691},rateIgrBrlens_mean=1.241790,rateIgrBrlens_median=0.91
4139,rateIgrBrlens_95%HPD={0.000034,3.053533}]),64[&prob=1.0000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=4.41796808e-001,height_median=3.14027313e-
001,height_95%HPD={9.74158227e-
006,1.10941198e+000},age_mean=4.38513220e+001,age_median=4.39934708e+001,age_95%HPD=
{4.14230306e+001,4.59995987e+001}]:3.540116e+000[&length_mean=5.34767127e-
002,length_median=2.26245800e-002,length_95%HPD={6.25505600e-008,1.95740000e-
001},effectivebrlenIgrBrlens_mean=0.033831,effectivebrlenIgrBrlens_median=0.009696,effectivebrle
nIgrBrlens_95%HPD={0.000000,0.132490},rateIgrBrlens_mean=0.687074,rateIgrBrlens_median=0.56
0363,rateIgrBrlens_95%HPD={0.000001,1.719477}])][&prob=5.22331845e-
001,prob_stddev=5.04369213e-003,prob_range={5.18765416e-001,5.25898273e-
001},prob(percent)="52",prob+-sd="52+-1",height_mean=4.80398287e-
001,height_median=3.35351006e-001,height_95%HPD={1.11175973e-
005,1.21867414e+000},age_mean=4.79039485e+001,age_median=4.75335863e+001,age_95%HPD=
{4.33583497e+001,5.34605824e+001}]:4.388874e+000[&length_mean=4.86385487e-
002,length_median=2.17884000e-002,length_95%HPD={8.30658400e-008,1.75097300e-
001},effectivebrlenIgrBrlens_mean=0.038670,effectivebrlenIgrBrlens_median=0.015894,effectivebrle

nlgrBrlens_95%HPD={0.000000,0.141643},rateIgrBrlens_mean=1.019312,rateIgrBrlens_median=0.76
6037,rateIgrBrlens_95%HPD={0.000001,2.570852}][&prob=6.06026265e-
001,prob_stddev=1.31984467e-002,prob_range={5.96693554e-001,6.15358976e-
001},prob(percent)="61",prob+sd="61+-1",height_mean=5.13871974e-
001,height_median=3.33112842e-001,height_95%HPD={1.34173223e-
005,1.33024513e+000},age_mean=5.22853013e+001,age_median=5.19224601e+001,age_95%HPD=
{4.64408290e+001,5.90997756e+001}]:7.217858e+000[&length_mean=6.71565205e-
002,length_median=3.02168200e-002,length_95%HPD={1.03858000e-007,2.44102900e-
001},effectivebrlenIgrBrlens_mean=0.038925,effectivebrlenIgrBrlens_median=0.013303,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.152687},rateIgrBrlens_mean=0.637944,rateIgrBrlens_median=0.52
5746,rateIgrBrlens_95%HPD={0.000002,1.457146}],(52[&prob=1.0000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=5.25719388e-001,height_median=3.76588949e-
001,height_95%HPD={1.17875609e-
005,1.31971898e+000},age_mean=5.21528746e+001,age_median=5.21256407e+001,age_95%HPD=
{4.89223291e+001,5.57359313e+001}]:3.578389e+000[&length_mean=5.07976015e-
002,length_median=2.13591100e-002,length_95%HPD={4.25430300e-008,1.88861200e-
001},effectivebrlenIgrBrlens_mean=0.044817,effectivebrlenIgrBrlens_median=0.015335,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.172308},rateIgrBrlens_mean=1.116442,rateIgrBrlens_median=0.81
0242,rateIgrBrlens_95%HPD={0.000001,2.871163}],58[&prob=1.0000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=5.16567247e-001,height_median=3.70367202e-
001,height_95%HPD={1.12478719e-
005,1.29502059e+000},age_mean=5.12672564e+001,age_median=5.09775315e+001,age_95%HPD=
{4.78000181e+001,5.53449926e+001}]:4.726498e+000[&length_mean=5.45195106e-
002,length_median=2.31562300e-002,length_95%HPD={3.98175100e-008,2.09106700e-
001},effectivebrlenIgrBrlens_mean=0.059937,effectivebrlenIgrBrlens_median=0.024295,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.224984},rateIgrBrlens_mean=1.420110,rateIgrBrlens_median=1.05
5285,rateIgrBrlens_95%HPD={0.000001,3.480278}][&prob=4.13572429e-
001,prob_stddev=1.60266853e-003,prob_range={4.12439171e-001,4.14705686e-
001},prob(percent)="41",prob+sd="41+-0",height_mean=5.52735091e-
001,height_median=3.69775075e-001,height_95%HPD={1.30203419e-
005,1.40599801e+000},age_mean=5.59319210e+001,age_median=5.57040298e+001,age_95%HPD=
{5.04982250e+001,6.20609662e+001}]:3.436289e+000[&length_mean=3.87780788e-
002,length_median=1.43846900e-002,length_95%HPD={1.38800500e-008,1.53974800e-

001},effectivebrlenIgrBrlens_mean=0.042864,effectivebrlenIgrBrlens_median=0.013106,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.171579},rateIgrBrlens_mean=1.508230,rateIgrBrlens_median=1.03
0305,rateIgrBrlens_95%HPD={0.000001,4.023446}])&prob=6.00759949e-
001,prob_stddev=8.29616649e-003,prob_range={5.94893674e-001,6.06626225e-
001},prob(percent)="60",prob+sd="60+-1",height_mean=6.01742546e-
001,height_median=4.32016631e-001,height_95%HPD={1.35247233e-
005,1.48805719e+000},age_mean=5.93103007e+001,age_median=5.91403185e+001,age_95%HPD=
{5.28273334e+001,6.56451057e+001}]:6.190091e+000[&length_mean=4.63527734e-
002,length_median=2.13919600e-002,length_95%HPD={1.70503200e-007,1.64302200e-
001},effectivebrlenIgrBrlens_mean=0.045107,effectivebrlenIgrBrlens_median=0.015308,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.171987},rateIgrBrlens_mean=1.179855,rateIgrBrlens_median=0.88
4067,rateIgrBrlens_95%HPD={0.000001,3.067465}],((14[&prob=1.00000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=5.29358826e-001,height_median=3.77852617e-
001,height_95%HPD={1.14740679e-
005,1.32372798e+000},age_mean=5.25145320e+001,age_median=5.25198123e+001,age_95%HPD=
{5.11538097e+001,5.39921573e+001}]:5.572960e+000[&length_mean=6.48631532e-
002,length_median=3.24586600e-002,length_95%HPD={3.11273600e-007,2.19066800e-
001},effectivebrlenIgrBrlens_mean=0.063540,effectivebrlenIgrBrlens_median=0.035328,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.204560},rateIgrBrlens_mean=1.242629,rateIgrBrlens_median=0.96
5848,rateIgrBrlens_95%HPD={0.155981,2.905537}],((17[&prob=1.00000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=4.54778221e-001,height_median=3.21995070e-
001,height_95%HPD={1.04495072e-
005,1.14382444e+000},age_mean=4.51361171e+001,age_median=4.56413997e+001,age_95%HPD=
{4.06504560e+001,4.79997915e+001}]:2.394741e+000[&length_mean=3.07532663e-
002,length_median=9.93767800e-003,length_95%HPD={1.87076600e-008,1.27392200e-
001},effectivebrlenIgrBrlens_mean=0.010182,effectivebrlenIgrBrlens_median=0.001215,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.050419},rateIgrBrlens_mean=0.367019,rateIgrBrlens_median=0.22
7511,rateIgrBrlens_95%HPD={0.000001,1.121376}],((71[&prob=1.00000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
sd="100+-0",height_mean=3.57881098e-001,height_median=2.54959678e-
001,height_95%HPD={8.07722487e-006,8.95726569e-
001},age_mean=3.55204468e+001,age_median=3.55081079e+001,age_95%HPD={3.39091660e+001
,3.70183497e+001}]:3.525892e+000[&length_mean=3.74330092e-

002,length_median=2.01658300e-002,length_95%HPD={2.46581900e-008,1.24547000e-001},effectivebrlenlgrBrlens_mean=0.030943,effectivebrlenlgrBrlens_median=0.013331,effectivebrlenlgrBrlens_95%HPD={0.000000,0.111425},rategrBrlens_mean=1.000214,rategrBrlens_median=0.780146,rategrBrlens_95%HPD={0.000001,2.520058}],72[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.60610961e-001,height_median=2.57077297e-001,height_95%HPD={7.95472487e-006,9.02676870e-001},age_mean=3.57936510e+001,age_median=3.54990994e+001,age_95%HPD={3.39000283e+001,3.86113649e+001}]:3.534901e+000[&length_mean=3.46984360e-002,length_median=1.86832900e-002,length_95%HPD={1.41355400e-007,1.15670400e-001},effectivebrlenlgrBrlens_mean=0.053171,effectivebrlenlgrBrlens_median=0.030416,effectivebrlenlgrBrlens_95%HPD={0.000000,0.165929},rategrBrlens_mean=2.088631,rategrBrlens_median=1.524857,rategrBrlens_95%HPD={0.249476,5.194240}][&prob=9.98266782e-001,prob_stddev=0.00000000e+000,prob_range={9.98266782e-001,9.98266782e-001},prob(percent)="100",prob+sd="100+-0",height_mean=3.95536444e-001,height_median=2.81502683e-001,height_95%HPD={9.93268187e-006,9.88786580e-001},age_mean=3.91835262e+001,age_median=3.90340002e+001,age_95%HPD={3.59024513e+001,4.27137553e+001}]:4.080812e+000[&length_mean=4.25899467e-002,length_median=2.21388700e-002,length_95%HPD={2.00095700e-007,1.41894800e-001},effectivebrlenlgrBrlens_mean=0.082740,effectivebrlenlgrBrlens_median=0.050556,effectivebrlenlgrBrlens_95%HPD={0.000000,0.250540},rategrBrlens_mean=2.524957,rategrBrlens_median=1.946717,rategrBrlens_95%HPD={0.458159,5.786895}],88[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=3.83556040e-001,height_median=2.74600149e-001,height_95%HPD={8.56469887e-006,9.64293680e-001},age_mean=3.80931960e+001,age_median=3.84735314e+001,age_95%HPD={3.50417436e+001,3.99998496e+001}]:4.641280e+000[&length_mean=5.33555516e-002,length_median=2.71644400e-002,length_95%HPD={3.42968200e-008,1.77079500e-001},effectivebrlenlgrBrlens_mean=0.022951,effectivebrlenlgrBrlens_median=0.008254,effectivebrlenlgrBrlens_95%HPD={0.000000,0.088085},rategrBrlens_mean=0.457228,rategrBrlens_median=0.379413,rategrBrlens_95%HPD={0.000001,1.050476}][&prob=9.79834678e-001,prob_stddev=2.87537589e-003,prob_range={9.77801480e-001,9.81867875e-001},prob(percent)="98",prob+sd="98+-0",height_mean=4.35980583e-001,height_median=3.07602358e-001,height_95%HPD={1.10019512e-005,1.09091588e+000},age_mean=4.32953302e+001,age_median=4.31148117e+001,age_95%HPD=

{3.92432102e+001,4.78264688e+001}]:4.921329e+000[&length_mean=5.05534820e-
 002,length_median=2.66312500e-002,length_95%HPD={6.90329100e-008,1.69219100e-
 001},effectivebrlenlgrBrlens_mean=0.050462,effectivebrlenlgrBrlens_median=0.029219,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.160712},rateigrBrlens_mean=1.240940,rateigrBrlens_median=0.98
 5926,rateigrBrlens_95%HPD={0.159892,2.867471}])[&prob=8.99006733e-
 001,prob_stddev=7.25914568e-003,prob_range={8.93873742e-001,9.04139724e-
 001},prob(percent)="90",prob+-sd="90+-1",height_mean=4.89996577e-
 001,height_median=3.53514588e-001,height_95%HPD={1.15653422e-
 005,1.21452203e+000},age_mean=4.81968892e+001,age_median=4.80361410e+001,age_95%HPD=
 {4.33803509e+001,5.33791199e+001}]:5.098851e+000[&length_mean=6.74932042e-
 002,length_median=3.55548300e-002,length_95%HPD={5.64639600e-008,2.30834700e-
 001},effectivebrlenlgrBrlens_mean=0.041835,effectivebrlenlgrBrlens_median=0.020880,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.141852},rateigrBrlens_mean=0.748619,rateigrBrlens_median=0.60
 6699,rateigrBrlens_95%HPD={0.000001,1.673634}],18[&prob=1.00000000e+000,prob_stddev=0.000
 00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-
 sd="100+-0",height_mean=4.39393127e-001,height_median=3.11749715e-
 001,height_95%HPD={9.29028317e-
 006,1.11986914e+000},age_mean=4.35863360e+001,age_median=4.43936329e+001,age_95%HPD=
 {3.67477042e+001,4.79996981e+001}]:8.741359e+000[&length_mean=1.07314667e-
 001,length_median=6.33957700e-002,length_95%HPD={1.33495400e-006,3.34064900e-
 001},effectivebrlenlgrBrlens_mean=0.084274,effectivebrlenlgrBrlens_median=0.051356,effectivebrle
 nlgrBrlens_95%HPD={0.000001,0.250219},rateigrBrlens_mean=0.900248,rateigrBrlens_median=0.78
 3521,rateigrBrlens_95%HPD={0.274996,1.789072}])[&prob=7.52116526e-
 001,prob_stddev=1.04173454e-002,prob_range={7.44750350e-001,7.59482701e-
 001},prob(percent)="75",prob+-sd="75+-1",height_mean=5.30769317e-
 001,height_median=3.55971895e-001,height_95%HPD={1.21732792e-
 005,1.34335546e+000},age_mean=5.33150863e+001,age_median=5.31349920e+001,age_95%HPD=
 {4.64986676e+001,6.01152923e+001}]:4.957780e+000[&length_mean=5.76521187e-
 002,length_median=2.25770100e-002,length_95%HPD={5.26761600e-008,2.15979700e-
 001},effectivebrlenlgrBrlens_mean=0.030059,effectivebrlenlgrBrlens_median=0.007837,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.127356},rateigrBrlens_mean=0.551666,rateigrBrlens_median=0.45
 7777,rateigrBrlens_95%HPD={0.000001,1.309777}])[&prob=5.12465836e-
 001,prob_stddev=3.81812208e-003,prob_range={5.09766016e-001,5.15165656e-
 001},prob(percent)="51",prob+-sd="51+-0",height_mean=6.02562447e-
 001,height_median=4.50711088e-001,height_95%HPD={1.22952328e-

005,1.46167715e+000},age_mean=5.83012389e+001,age_median=5.80927720e+001,age_95%HPD={5.33099516e+001,6.35868951e+001}]:5.446752e+000[&length_mean=3.80527173e-002,length_median=1.75677400e-002,length_95%HPD={3.79677700e-008,1.37797400e-001},effectivebrlenlgrBrlens_mean=0.020564,effectivebrlenlgrBrlens_median=0.006686,effectivebrlenlgrBrlens_95%HPD={0.000000,0.084231},rateLgrBrlens_mean=0.644770,rateLgrBrlens_median=0.451507,rateLgrBrlens_95%HPD={0.000001,1.736262}],(((21[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.61346035e-001,height_median=3.30071325e-001,height_95%HPD={9.33497487e-006,1.16519212e+000},age_mean=4.57688775e+001,age_median=4.61843928e+001,age_95%HPD={4.16685556e+001,4.85993466e+001}]:5.823521e+000[&length_mean=5.03703436e-002,length_median=2.45195000e-002,length_95%HPD={1.15476800e-007,1.73202800e-001},effectivebrlenlgrBrlens_mean=0.025774,effectivebrlenlgrBrlens_median=0.011337,effectivebrlenlgrBrlens_95%HPD={0.000000,0.091785},rateLgrBrlens_mean=0.658688,rateLgrBrlens_median=0.489792,rateLgrBrlens_95%HPD={0.000001,1.594678}],(22[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.58972833e-001,height_median=3.28354784e-001,height_95%HPD={1.04067934e-005,1.15731985e+000},age_mean=4.55729380e+001,age_median=4.59067446e+001,age_95%HPD={4.16733560e+001,4.85992343e+001}]:3.562569e+000[&length_mean=4.21386906e-002,length_median=1.94871500e-002,length_95%HPD={9.57233300e-008,1.49458900e-001},effectivebrlenlgrBrlens_mean=0.022328,effectivebrlenlgrBrlens_median=0.009548,effectivebrlenlgrBrlens_95%HPD={0.000000,0.081546},rateLgrBrlens_mean=0.674334,rateLgrBrlens_median=0.493431,rateLgrBrlens_95%HPD={0.000001,1.714929}],(89[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.35162615e-001,height_median=3.10712133e-001,height_95%HPD={9.58156167e-006,1.09245849e+000},age_mean=4.32131742e+001,age_median=4.28675005e+001,age_95%HPD={4.04000982e+001,4.70013453e+001}]:4.700019e+000[&length_mean=4.61207337e-002,length_median=2.43645500e-002,length_95%HPD={1.78011000e-007,1.53388300e-001},effectivebrlenlgrBrlens_mean=0.059853,effectivebrlenlgrBrlens_median=0.036119,effectivebrlenlgrBrlens_95%HPD={0.000000,0.183613},rateLgrBrlens_mean=1.740642,rateLgrBrlens_median=1.287712,rateLgrBrlens_95%HPD={0.294682,4.277435}],90[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.48806639e-001,height_median=3.20354397e-006]

001,height_95%HPD={9.53388367e-006,1.12910740e+000},age_mean=4.45518479e+001,age_median=4.45533510e+001,age_95%HPD={4.08189757e+001,4.83785112e+001}]:3.014169e+000[&length_mean=3.21023251e-002,length_median=1.46128200e-002,length_95%HPD={7.14444300e-008,1.16352400e-001},effectivebrlenlgrBrlens_mean=0.016958,effectivebrlenlgrBrlens_median=0.006721,effectivebrlenlgrBrlens_95%HPD={0.000000,0.064904},rateLgrBrlens_mean=0.693054,rateLgrBrlens_median=0.486153,rateLgrBrlens_95%HPD={0.000001,1.872352}]):[&prob=9.64369042e-001,prob_stddev=2.12117893e-003,prob_range={9.62869142e-001,9.65868942e-001},prob(percent)="96",prob+sd="96+0",height_mean=4.80997088e-001,height_median=3.41265402e-001,height_95%HPD={1.10866028e-005,1.19938518e+000},age_mean=4.76333912e+001,age_median=4.75675199e+001,age_95%HPD={4.30770527e+001,5.19882766e+001}]:1.901793e+000[&length_mean=3.39682061e-002,length_median=1.53606000e-002,length_95%HPD={5.94640400e-008,1.21692900e-001},effectivebrlenlgrBrlens_mean=0.031568,effectivebrlenlgrBrlens_median=0.016025,effectivebrlenlgrBrlens_95%HPD={0.000000,0.107693},rateLgrBrlens_mean=1.387441,rateLgrBrlens_median=0.922012,rateLgrBrlens_95%HPD={0.000001,3.817561}]):[&prob=4.77534831e-001,prob_stddev=6.83490989e-003,prob_range={4.72701820e-001,4.82367842e-001},prob(percent)="48",prob+sd="48+1",height_mean=5.00448150e-001,height_median=3.46180445e-001,height_95%HPD={1.23955308e-005,1.25565144e+000},age_mean=4.96204696e+001,age_median=4.94693132e+001,age_95%HPD={4.56254327e+001,5.41392321e+001}]:2.538600e+000[&length_mean=2.50422586e-002,length_median=9.60973400e-003,length_95%HPD={3.13534700e-008,9.68366000e-002},effectivebrlenlgrBrlens_mean=0.015873,effectivebrlenlgrBrlens_median=0.004556,effectivebrlenlgrBrlens_95%HPD={0.000000,0.065211},rateLgrBrlens_mean=0.911273,rateLgrBrlens_median=0.569812,rateLgrBrlens_95%HPD={0.000001,2.802185}]):[&prob=9.83667755e-001,prob_stddev=2.16831624e-003,prob_range={9.82134524e-001,9.85200987e-001},prob(percent)="98",prob+sd="98+0",height_mean=5.28185638e-001,height_median=3.74753332e-001,height_95%HPD={1.21862599e-005,1.31644192e+000},age_mean=5.22617265e+001,age_median=5.20079135e+001,age_95%HPD={4.78259507e+001,5.74695694e+001}]:8.060467e+000[&length_mean=7.67294496e-002,length_median=4.48929900e-002,length_95%HPD={1.55111300e-007,2.38250700e-001},effectivebrlenlgrBrlens_mean=0.059840,effectivebrlenlgrBrlens_median=0.030141,effectivebrlenlgrBrlens_95%HPD={0.000000,0.202833},rateLgrBrlens_mean=0.852639,rateLgrBrlens_median=0.739478,rateLgrBrlens_95%HPD={0.063379,1.786812}],((((((31[&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-

sd="100+-0",height_mean=3.32904282e-001,height_median=2.37876745e-001,height_95%HPD={7.44087195e-006,8.32062120e-001},age_mean=3.30326034e+001,age_median=3.30524666e+001,age_95%HPD={3.21086422e+001,3.39993633e+001}]:4.490426e+000[&length_mean=4.37392865e-002,length_median=2.10253700e-002,length_95%HPD={5.86348300e-008,1.47445000e-001},effectivebrlenlgrBrlens_mean=0.027460,effectivebrlenlgrBrlens_median=0.009880,effectivebrlenlgrBrlens_95%HPD={0.000000,0.098754},ratelgrBrlens_mean=0.686200,ratelgrBrlens_median=0.578763,ratelgrBrlens_95%HPD={0.000001,1.563139}],33[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=3.56988191e-001,height_median=2.54889175e-001,height_95%HPD={8.02242015e-006,8.94335435e-001},age_mean=3.54116217e+001,age_median=3.53406700e+001,age_95%HPD={3.39002191e+001,3.69791093e+001}]:2.202222e+000[&length_mean=2.67633640e-002,length_median=1.18660500e-002,length_95%HPD={3.16261100e-008,9.86435400e-002},effectivebrlenlgrBrlens_mean=0.017061,effectivebrlenlgrBrlens_median=0.006048,effectivebrlenlgrBrlens_95%HPD={0.000000,0.066782},ratelgrBrlens_mean=0.886014,ratelgrBrlens_median=0.587267,ratelgrBrlens_95%HPD={0.000001,2.449086}])][&prob=6.26524898e-001,prob_stddev=3.67199642e-002,prob_range={6.00559963e-001,6.52489834e-001},prob(percent)="63",prob+-sd="63+-4",height_mean=3.74755532e-001,height_median=2.70755595e-001,height_95%HPD={9.94731283e-006,9.32072209e-001},age_mean=3.77006293e+001,age_median=3.75428925e+001,age_95%HPD={3.47918584e+001,4.09401267e+001}]:3.482752e+000[&length_mean=2.72183125e-002,length_median=1.22547500e-002,length_95%HPD={4.57035000e-008,9.87249400e-002},effectivebrlenlgrBrlens_mean=0.018304,effectivebrlenlgrBrlens_median=0.006480,effectivebrlenlgrBrlens_95%HPD={0.000000,0.071286},ratelgrBrlens_mean=0.928949,ratelgrBrlens_median=0.605592,ratelgrBrlens_95%HPD={0.000001,2.731555}],(32[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=3.58060608e-001,height_median=2.55665005e-001,height_95%HPD={7.52810535e-006,8.95937691e-001},age_mean=3.55388431e+001,age_median=3.55272593e+001,age_95%HPD={3.39302900e+001,3.70583353e+001}]:3.413908e+000[&length_mean=3.53201078e-002,length_median=1.84984300e-002,length_95%HPD={2.80540400e-008,1.20474300e-001},effectivebrlenlgrBrlens_mean=0.023373,effectivebrlenlgrBrlens_median=0.012177,effectivebrlenlgrBrlens_95%HPD={0.000000,0.079471},ratelgrBrlens_mean=0.887304,ratelgrBrlens_median=0.658694,ratelgrBrlens_95%HPD={0.000020,2.197127}],(34[&prob=1.00000000e+000,prob_stddev=0.00

000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=3.06458843e-001,height_median=2.18275868e-001,height_95%HPD={7.09547025e-006,7.84511875e-001},age_mean=3.03946863e+001,age_median=3.09388280e+001,age_95%HPD={2.51437125e+001,3.38993617e+001}]:6.164450e+000[&length_mean=7.26669702e-002,length_median=3.99822400e-002,length_95%HPD={5.83246200e-008,2.34431400e-001},effectivebrlenlgrBrlens_mean=0.044442,effectivebrlenlgrBrlens_median=0.022644,effectivebrlenlgrBrlens_95%HPD={0.000000,0.146970},ratelgrBrlens_mean=0.667006,rategrBrlens_median=0.579060,rategrBrlens_95%HPD={0.000002,1.333203}],79[&prob=1.0000000e+000,prob_stddev=0.000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=3.54262389e-001,height_median=2.53064553e-001,height_95%HPD={7.97959885e-006,8.88207090e-001},age_mean=3.51649583e+001,age_median=3.49711879e+001,age_95%HPD={3.33004078e+001,3.74915496e+001}]:2.132090e+000[&length_mean=2.81786769e-002,length_median=1.25785000e-002,length_95%HPD={1.98826900e-008,1.01961800e-001},effectivebrlenlgrBrlens_mean=0.023591,effectivebrlenlgrBrlens_median=0.009915,effectivebrlenlgrBrlens_95%HPD={0.000000,0.084659},ratelgrBrlens_mean=1.132328,rategrBrlens_median=0.803194,rategrBrlens_95%HPD={0.000001,3.092776}][&prob=4.59769349e-001,prob_stddev=1.90434731e-002,prob_range={4.46303580e-001,4.73235118e-001},prob(percent)="46",prob+-sd="46+-2",height_mean=3.76941533e-001,height_median=2.74146980e-001,height_95%HPD={9.69003991e-006,9.37190413e-001},age_mean=3.72221160e+001,age_median=3.71032780e+001,age_95%HPD={3.41383784e+001,4.03492191e+001}]:1.837890e+000[&length_mean=2.08951279e-002,length_median=8.50204400e-003,length_95%HPD={4.88741100e-008,7.94778600e-002},effectivebrlenlgrBrlens_mean=0.012440,effectivebrlenlgrBrlens_median=0.002174,effectivebrlenlgrBrlens_95%HPD={0.000000,0.057269},ratelgrBrlens_mean=0.755391,rategrBrlens_median=0.460173,rategrBrlens_95%HPD={0.000001,2.357967}][&prob=5.28464769e-001,prob_stddev=1.46597033e-002,prob_range={5.18098793e-001,5.38830745e-001},prob(percent)="53",prob+-sd="53+-1",height_mean=3.98760222e-001,height_median=2.97673283e-001,height_95%HPD={8.45620235e-006,9.82853285e-001},age_mean=3.90586406e+001,age_median=3.89411677e+001,age_95%HPD={3.61333363e+001,4.21769081e+001}]:2.084476e+000[&length_mean=2.16464297e-002,length_median=9.17658200e-003,length_95%HPD={2.89293500e-008,8.09293400e-002},effectivebrlenlgrBrlens_mean=0.014648,effectivebrlenlgrBrlens_median=0.003914,effectivebrlenlgrBrlens_95%HPD={0.000000,0.060713},rategrBrlens_mean=0.992487,rategrBrlens_median=0.57

3775,rateIgrBrlens_95%HPD={0.000001,2.977961}][&prob=5.84361043e-001,prob_stddev=1.10301304e-002,prob_range={5.76561563e-001,5.92160523e-001},prob(percent)="58",prob+sd="58+-1",height_mean=4.09681500e-001,height_median=2.95218837e-001,height_95%HPD={9.80143695e-006,1.01584255e+000},age_mean=4.11591628e+001,age_median=4.10256440e+001,age_95%HPD={3.78049529e+001,4.47155755e+001}]:5.869118e+000[&length_mean=6.43382513e-002,length_median=3.81915700e-002,length_95%HPD={5.36100300e-008,2.03413900e-001},effectivebrlenIgrBrlens_mean=0.104554,effectivebrlenIgrBrlens_median=0.057318,effectivebrlenIgrBrlens_95%HPD={0.000000,0.329826},rateIgrBrlens_mean=1.800536,rateIgrBrlens_median=1.548385,rateIgrBrlens_95%HPD={0.000001,3.787419}],62[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.48387754e-001,height_median=3.20262395e-001,height_95%HPD={9.58171775e-006,1.12037987e+000},age_mean=4.44915233e+001,age_median=4.44819587e+001,age_95%HPD={4.30276005e+001,4.58601013e+001}]:2.412803e+000[&length_mean=3.35537507e-002,length_median=1.42222700e-002,length_95%HPD={1.23432300e-008,1.23931500e-001},effectivebrlenIgrBrlens_mean=0.026366,effectivebrlenIgrBrlens_median=0.006890,effectivebrlenIgrBrlens_95%HPD={0.000000,0.112782},rateIgrBrlens_mean=0.904081,rateIgrBrlens_median=0.651868,rateIgrBrlens_95%HPD={0.000001,2.438535}][&prob=2.87180855e-001,prob_stddev=5.84502639e-003,prob_range={2.83047797e-001,2.91313912e-001},prob(percent)="29",prob+sd="29+-1",height_mean=4.68164844e-001,height_median=3.37347544e-001,height_95%HPD={1.20269724e-005,1.15709228e+000},age_mean=4.71936772e+001,age_median=4.68947616e+001,age_95%HPD={4.38604937e+001,5.09764176e+001}]:2.935139e+000[&length_mean=2.96120992e-002,length_median=1.23101000e-002,length_95%HPD={6.87591700e-008,1.10751400e-001},effectivebrlenIgrBrlens_mean=0.039303,effectivebrlenIgrBrlens_median=0.011366,effectivebrlenIgrBrlens_95%HPD={0.000000,0.161266},rateIgrBrlens_mean=1.616907,rateIgrBrlens_median=1.122141,rateIgrBrlens_95%HPD={0.000001,4.454551}],63[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.47803919e-001,height_median=3.19819279e-001,height_95%HPD={9.48976445e-006,1.11875359e+000},age_mean=4.44340760e+001,age_median=4.44007226e+001,age_95%HPD={4.30001104e+001,4.58233960e+001}]:5.429178e+000[&length_mean=5.12830697e-002,length_median=2.83741600e-002,length_95%HPD={2.95513200e-007,1.66055500e-001},effectivebrlenIgrBrlens_mean=0.060168,effectivebrlenIgrBrlens_median=0.031264,effectivebr

nlgrBrlens_95%HPD={0.000000,0.197304},rateIgrBrlens_mean=1.505133,rateIgrBrlens_median=1.138201,rateIgrBrlens_95%HPD={0.000002,3.875917}][&prob=3.82441171e-001,prob_stddev=5.65647715e-003,prob_range={3.78441437e-001,3.86440904e-001},prob(percent)="38",prob+sd="38+-1",height_mean=4.95012341e-001,height_median=3.54311551e-001,height_95%HPD={1.28682212e-005,1.22481179e+000},age_mean=5.00641795e+001,age_median=4.98299007e+001,age_95%HPD={4.60075595e+001,5.43266100e+001}]:1.557517e+000[&length_mean=4.79524221e-002,length_median=2.25466500e-002,length_95%HPD={1.55208800e-007,1.65201100e-001},effectivebrlenIgrBrlens_mean=0.088695,effectivebrlenIgrBrlens_median=0.036797,effectivebrle nlgrBrlens_95%HPD={0.000000,0.314228},rateIgrBrlens_mean=2.278237,rateIgrBrlens_median=1.732617,rateIgrBrlens_95%HPD={0.000001,5.565973}],((83[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=1.96409922e-001,height_median=1.40238143e-001,height_95%HPD={4.25650035e-006,4.90863980e-001},age_mean=1.94849241e+001,age_median=1.94781968e+001,age_95%HPD={1.90000083e+001,1.99445596e+001}]:4.654311e+000[&length_mean=5.14262955e-002,length_median=2.73490800e-002,length_95%HPD={3.07028200e-007,1.75436500e-001},effectivebrlenIgrBrlens_mean=0.060618,effectivebrlenIgrBrlens_median=0.032507,effectivebrle nlgrBrlens_95%HPD={0.000000,0.202711},rateIgrBrlens_mean=1.480559,rateIgrBrlens_median=1.158279,rateIgrBrlens_95%HPD={0.113114,3.585718}],84[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=2.01869764e-001,height_median=1.43941260e-001,height_95%HPD={4.43437165e-006,5.06174500e-001},age_mean=2.00244662e+001,age_median=2.00372323e+001,age_95%HPD={1.91014465e+001,2.09989762e+001}]:4.095276e+000[&length_mean=4.59841735e-002,length_median=2.21365700e-002,length_95%HPD={1.12952300e-007,1.64321000e-001},effectivebrlenIgrBrlens_mean=0.030955,effectivebrlenIgrBrlens_median=0.009292,effectivebrle nlgrBrlens_95%HPD={0.000000,0.126162},rateIgrBrlens_mean=0.747646,rateIgrBrlens_median=0.572556,rateIgrBrlens_95%HPD={0.000001,1.925873}])][&prob=9.97833478e-001,prob_stddev=4.71373096e-005,prob_range={9.97800147e-001,9.97866809e-001},prob(percent)="100",prob+sd="100+-0",height_mean=2.47650586e-001,height_median=1.73811355e-001,height_95%HPD={5.12595785e-006,6.30832437e-001},age_mean=2.45488882e+001,age_median=2.41325081e+001,age_95%HPD={2.02328156e+001,2.95255124e+001}]:1.757856e+001[&length_mean=1.51699278e-001,length_median=9.79654100e-002,length_95%HPD={4.45415900e-007,4.51788900e-001}

001},effectivebrlenIgrBrlens_mean=0.202124,effectivebrlenIgrBrlens_median=0.121889,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.618212},rateIgrBrlens_mean=1.429151,rateIgrBrlens_median=1.30
2777,rateIgrBrlens_95%HPD={0.413012,2.589133}],86[&prob=1.0000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=3.56440632e-001,height_median=2.53081426e-
001,height_95%HPD={7.44263075e-006,8.92792078e-
001},age_mean=3.53601505e+001,age_median=3.52768629e+001,age_95%HPD={3.38999988e+001
,3.69698828e+001}]:6.434203e+000[&length_mean=1.12788972e-
001,length_median=5.05653200e-002,length_95%HPD={7.95919700e-008,4.02786300e-
001},effectivebrlenIgrBrlens_mean=0.212875,effectivebrlenIgrBrlens_median=0.093610,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.755821},rateIgrBrlens_mean=2.221493,rateIgrBrlens_median=1.83
2501,rateIgrBrlens_95%HPD={0.000001,4.553064}][&prob=5.10465969e-
001,prob_stddev=3.79455342e-002,prob_range={4.83634424e-001,5.37297513e-
001},prob(percent)="51",prob+sd="51+-4",height_mean=4.15633864e-
001,height_median=2.99446831e-001,height_95%HPD={7.76051885e-
006,1.03152957e+000},age_mean=4.19678809e+001,age_median=4.17110658e+001,age_95%HPD=
{3.53225707e+001,4.85684144e+001}]:9.676352e+000[&length_mean=8.63108794e-
002,length_median=4.75499500e-002,length_95%HPD={1.96117100e-007,2.81449400e-
001},effectivebrlenIgrBrlens_mean=0.162799,effectivebrlenIgrBrlens_median=0.088913,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.528907},rateIgrBrlens_mean=2.252295,rateIgrBrlens_median=1.83
7259,rateIgrBrlens_95%HPD={0.461250,5.141080}][&prob=2.79048063e-
001,prob_stddev=1.25385244e-002,prob_range={2.70181988e-001,2.87914139e-
001},prob(percent)="28",prob+sd="28+-1",height_mean=5.04727708e-
001,height_median=3.46801220e-001,height_95%HPD={1.17414155e-
005,1.27421955e+000},age_mean=5.16007627e+001,age_median=5.13874181e+001,age_95%HPD=
{4.68866044e+001,5.65198355e+001}]:3.836022e+000[&length_mean=3.51257825e-
002,length_median=1.51063400e-002,length_95%HPD={4.94662500e-008,1.27806500e-
001},effectivebrlenIgrBrlens_mean=0.084275,effectivebrlenIgrBrlens_median=0.033772,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.302587},rateIgrBrlens_mean=3.062021,rateIgrBrlens_median=2.27
6460,rateIgrBrlens_95%HPD={0.000001,7.992305}],(54[&prob=1.0000000e+000,prob_stddev=0.00
000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=4.61610810e-001,height_median=3.29279698e-
001,height_95%HPD={1.04926225e-
005,1.16324322e+000},age_mean=4.58338162e+001,age_median=4.62748463e+001,age_95%HPD=
{4.17620046e+001,4.85993467e+001}]:5.122878e+000[&length_mean=5.64474609e-

002,length_median=3.02546300e-002,length_95%HPD={6.32251600e-008,1.85311900e-001},effectivebrlenlgrBrlens_mean=0.035701,effectivebrlenlgrBrlens_median=0.013719,effectivebrlenlgrBrlens_95%HPD={0.000000,0.134748},rategrBrlens_mean=0.684615,rategrBrlens_median=0.572658,rategrBrlens_95%HPD={0.000001,1.548470}],55[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.99328868e-001,height_median=3.55778403e-001,height_95%HPD={1.08452905e-005,1.24740724e+000},age_mean=4.95467365e+001,age_median=4.94341099e+001,age_95%HPD={4.86000317e+001,5.07654241e+001}]:1.963614e+000[&length_mean=2.19861374e-002,length_median=9.06408100e-003,length_95%HPD={2.72019100e-008,8.37584700e-002},effectivebrlenlgrBrlens_mean=0.030406,effectivebrlenlgrBrlens_median=0.009669,effectivebrlenlgrBrlens_95%HPD={0.000000,0.118849},rategrBrlens_mean=2.018965,rategrBrlens_median=1.273293,rategrBrlens_95%HPD={0.000001,6.114973}][&prob=6.45556963e-001,prob_stddev=2.30972817e-002,prob_range={6.29224718e-001,6.61889207e-001},prob(percent)="65",prob+sd="65+-2",height_mean=5.19474429e-001,height_median=3.72231483e-001,height_95%HPD={1.18751925e-005,1.29877947e+000},age_mean=5.16090603e+001,age_median=5.13977243e+001,age_95%HPD={4.90084441e+001,5.44382056e+001}]:3.825716e+000[&length_mean=3.15775153e-002,length_median=1.31147200e-002,length_95%HPD={1.18967500e-008,1.19244500e-001},effectivebrlenlgrBrlens_mean=0.053490,effectivebrlenlgrBrlens_median=0.014792,effectivebrlenlgrBrlens_95%HPD={0.000000,0.216989},rategrBrlens_mean=2.211078,rategrBrlens_median=1.461376,rategrBrlens_95%HPD={0.000001,6.379972}][&prob=6.48756750e-001,prob_stddev=9.42746192e-004,prob_range={6.48090127e-001,6.49423372e-001},prob(percent)="65",prob+sd="65+-0",height_mean=5.64427011e-001,height_median=4.13636140e-001,height_95%HPD={1.31189085e-005,1.37408287e+000},age_mean=5.54520760e+001,age_median=5.52234402e+001,age_95%HPD={5.10228805e+001,6.00761826e+001}]:2.612672e+000[&length_mean=3.02282439e-002,length_median=1.49145800e-002,length_95%HPD={1.58186100e-007,1.07798600e-001},effectivebrlenlgrBrlens_mean=0.121276,effectivebrlenlgrBrlens_median=0.073540,effectivebrlenlgrBrlens_95%HPD={0.000000,0.377520},rategrBrlens_mean=6.405131,rategrBrlens_median=4.341861,rategrBrlens_95%HPD={0.809664,18.241308}],(47[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.64801302e-001,height_median=3.31885867e-001,height_95%HPD={9.42558287e-006,1.16812582e+000},age_mean=4.61203680e+001,age_median=4.66254930e+001,age_95%HPD=

{4.20355502e+001,4.85999445e+001}]:7.052992e+000[&length_mean=8.30867177e-
 002,length_median=4.90821100e-002,length_95%HPD={7.72943700e-008,2.54172300e-
 001},effectivebrlenlgrBrlens_mean=0.046575,effectivebrlenlgrBrlens_median=0.023477,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.159840},ratelgrBrlens_mean=0.585118,ratelgrBrlens_median=0.52
 8696,ratelgrBrlens_95%HPD={0.082695,1.205416}],87[&prob=1.00000000e+000,prob_stddev=0.000
 00000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+
 sd="100+-0",height_mean=5.00577271e-001,height_median=3.56950838e-
 001,height_95%HPD={1.06739260e-
 005,1.25023873e+000},age_mean=4.96780629e+001,age_median=4.96188311e+001,age_95%HPD=
 {4.86000386e+001,5.08341766e+001}]:4.059654e+000[&length_mean=4.77255286e-
 002,length_median=2.28356400e-002,length_95%HPD={8.84101200e-008,1.64083200e-
 001},effectivebrlenlgrBrlens_mean=0.062701,effectivebrlenlgrBrlens_median=0.035694,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.201156},ratelgrBrlens_mean=1.779155,ratelgrBrlens_median=1.31
 8188,ratelgrBrlens_95%HPD={0.238592,4.356457}][&prob=8.76374908e-
 001,prob_stddev=1.08415812e-003,prob_range={8.75608293e-001,8.77141524e-
 001},prob(percent)="88",prob+sd="88+-0",height_mean=5.44453328e-
 001,height_median=3.83242878e-001,height_95%HPD={1.36863964e-
 005,1.35327197e+000},age_mean=5.39755002e+001,age_median=5.36784849e+001,age_95%HPD=
 {5.01100432e+001,5.87702566e+001}]:4.157627e+000[&length_mean=4.22863560e-
 002,length_median=1.73869900e-002,length_95%HPD={7.08924300e-008,1.55908800e-
 001},effectivebrlenlgrBrlens_mean=0.039531,effectivebrlenlgrBrlens_median=0.008419,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.176712},ratelgrBrlens_mean=0.969714,ratelgrBrlens_median=0.71
 9947,ratelgrBrlens_95%HPD={0.000001,2.605312}][&prob=5.44530365e-
 001,prob_stddev=5.32651598e-003,prob_range={5.40763949e-001,5.48296780e-
 001},prob(percent)="54",prob+sd="54+-1",height_mean=5.87897751e-
 001,height_median=4.22243203e-001,height_95%HPD={1.37722249e-
 005,1.43995753e+000},age_mean=5.79817941e+001,age_median=5.78361123e+001,age_95%HPD=
 {5.33933265e+001,6.30140752e+001}]:2.232268e+000[&length_mean=2.28893026e-
 002,length_median=1.05512400e-002,length_95%HPD={6.48444300e-008,8.34145500e-
 002},effectivebrlenlgrBrlens_mean=0.073583,effectivebrlenlgrBrlens_median=0.038902,effectivebrle
 nlgrBrlens_95%HPD={0.000000,0.243254},ratelgrBrlens_mean=5.051148,ratelgrBrlens_median=3.25
 4320,ratelgrBrlens_95%HPD={0.000090,14.446229}][&prob=5.99560029e-
 001,prob_stddev=6.50494872e-003,prob_range={5.94960336e-001,6.04159723e-
 001},prob(percent)="60",prob+sd="60+-1",height_mean=6.14811716e-
 001,height_median=4.50862388e-001,height_95%HPD={1.39516429e-

005,1.49412901e+000},age_mean=6.02619856e+001,age_median=6.00683806e+001,age_95%HPD={5.52424712e+001,6.59612015e+001}]:2.126064e+000[&length_mean=2.47478345e-002,length_median=1.21818000e-002,length_95%HPD={5.14462000e-008,9.06278900e-002},effectivebrlenlgrBrlens_mean=0.075786,effectivebrlenlgrBrlens_median=0.043296,effectivebrlenlgrBrlens_95%HPD={0.000000,0.243540},ratelgrBrlens_mean=4.575452,ratelgrBrlens_median=3.123845,ratelgrBrlens_95%HPD={0.000002,12.811505}),(43[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.64610726e-001,height_median=3.31831058e-001,height_95%HPD={1.05002356e-005,1.16888782e+000},age_mean=4.61094501e+001,age_median=4.66279833e+001,age_95%HPD={4.19403131e+001,4.85998409e+001}]:1.179215e+001[&length_mean=1.37098875e-001,length_median=8.52702800e-002,length_95%HPD={1.88249100e-006,3.89393800e-001},effectivebrlenlgrBrlens_mean=0.078382,effectivebrlenlgrBrlens_median=0.044694,effectivebrlenlgrBrlens_95%HPD={0.000000,0.240541},ratelgrBrlens_mean=0.592065,ratelgrBrlens_median=0.550743,ratelgrBrlens_95%HPD={0.172529,1.040873}],59[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.24473070e-001,height_median=3.73913389e-001,height_95%HPD={1.15389389e-005,1.31379442e+000},age_mean=5.20393065e+001,age_median=5.19595863e+001,age_95%HPD={4.86003716e+001,5.53677691e+001}]:6.460546e+000[&length_mean=8.94063725e-002,length_median=5.00174800e-002,length_95%HPD={2.20003200e-007,2.85344300e-001},effectivebrlenlgrBrlens_mean=0.114317,effectivebrlenlgrBrlens_median=0.067711,effectivebrlenlgrBrlens_95%HPD={0.000000,0.356365},ratelgrBrlens_mean=1.546799,ratelgrBrlens_median=1.273759,ratelgrBrlens_95%HPD={0.364009,3.252108}]]][&prob=3.41977202e-001,prob_stddev=7.16487106e-003,prob_range={3.36910873e-001,3.47043530e-001},prob(percent)="34",prob+sd="34+-1",height_mean=5.77169896e-001,height_median=4.07120023e-001,height_95%HPD={1.56228200e-005,1.44330489e+000},age_mean=5.85025818e+001,age_median=5.84201325e+001,age_95%HPD={5.18736699e+001,6.44698933e+001}]:3.774312e+000[&length_mean=3.79505326e-002,length_median=1.42156800e-002,length_95%HPD={9.47709900e-008,1.49124100e-001},effectivebrlenlgrBrlens_mean=0.022004,effectivebrlenlgrBrlens_median=0.004338,effectivebrlenlgrBrlens_95%HPD={0.000000,0.100433},ratelgrBrlens_mean=0.626491,ratelgrBrlens_median=0.453964,ratelgrBrlens_95%HPD={0.000001,1.704025}]]][&prob=1.25458303e-001,prob_stddev=6.41067410e-003,prob_range={1.20925272e-001,1.29991334e-001},prob(percent)="13",prob+sd="13+-1",height_mean=6.22564051e-001},

001,height_median=4.40432163e-001,height_95%HPD={1.77698346e-005,1.53406494e+000},age_mean=6.23368939e+001,age_median=6.21944442e+001,age_95%HPD={5.72492160e+001,6.78771736e+001}]:1.345080e+000[&length_mean=1.45606968e-002,length_median=5.86834900e-003,length_95%HPD={5.59638500e-008,5.62627300e-002},effectivebrlenlgrBrlens_mean=0.019993,effectivebrlenlgrBrlens_median=0.003564,effectivebrlenlgrBrlens_95%HPD={0.000000,0.090485},rategrBrlens_mean=1.823805,rategrBrlens_median=1.027804,rategrBrlens_95%HPD={0.000001,6.032431}][&prob=2.35484301e-001,prob_stddev=4.66659365e-003,prob_range={2.32184521e-001,2.38784081e-001},prob(percent)="24",prob+sd="24+0",height_mean=6.41199594e-001,height_median=4.60517205e-001,height_95%HPD={1.40874374e-005,1.56288027e+000},age_mean=6.37316223e+001,age_median=6.35395239e+001,age_95%HPD={5.88007436e+001,6.89417510e+001}]:1.790886e+000[&length_mean=1.96571461e-002,length_median=8.77308100e-003,length_95%HPD={9.12454300e-008,7.36631500e-002},effectivebrlenlgrBrlens_mean=0.043823,effectivebrlenlgrBrlens_median=0.016692,effectivebrlenlgrBrlens_95%HPD={0.000000,0.160849},rategrBrlens_mean=3.264302,rategrBrlens_median=2.115431,rategrBrlens_95%HPD={0.000001,9.437614}][&prob=4.78834744e-001,prob_stddev=1.05587573e-002,prob_range={4.71368575e-001,4.86300913e-001},prob(percent)="48",prob+sd="48+1",height_mean=6.73707483e-001,height_median=4.94178836e-001,height_95%HPD={1.45512993e-005,1.62671106e+000},age_mean=6.55043879e+001,age_median=6.53304097e+001,age_95%HPD={6.03432832e+001,7.08387267e+001}]:2.961159e+000[&length_mean=2.60992172e-002,length_median=1.26479400e-002,length_95%HPD={9.81470900e-008,9.33135400e-002},effectivebrlenlgrBrlens_mean=0.081473,effectivebrlenlgrBrlens_median=0.046771,effectivebrlenlgrBrlens_95%HPD={0.000000,0.254346},rategrBrlens_mean=4.796477,rategrBrlens_median=3.298380,rategrBrlens_95%HPD={0.000002,12.835167}][&prob=3.23945070e-001,prob_stddev=1.46125660e-003,prob_range={3.22911806e-001,3.24978335e-001},prob(percent)="32",prob+sd="32+0",height_mean=7.09685460e-001,height_median=5.19341734e-001,height_95%HPD={1.51867242e-005,1.71702899e+000},age_mean=6.84925274e+001,age_median=6.82915683e+001,age_95%HPD={6.34014028e+001,7.36311517e+001}]:6.529473e-001[&length_mean=7.16528556e-003,length_median=2.97699100e-003,length_95%HPD={1.85626800e-008,2.72599400e-002},effectivebrlenlgrBrlens_mean=0.041270,effectivebrlenlgrBrlens_median=0.014829,effectivebrlenlgrBrlens_95%HPD={0.000000,0.156081},rategrBrlens_mean=9.418267,rategrBrlens_median=5.642557,rategrBrlens_95%HPD={0.000001,31.981122}],(((10[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-

sd="100+-0",height_mean=5.59370102e-001,height_median=3.98687704e-001,height_95%HPD={1.21890440e-005,1.39797475e+000},age_mean=5.55001526e+001,age_median=5.55001680e+001,age_95%HPD={5.54096540e+001,5.55994962e+001}]:3.544627e+000[&length_mean=3.68954086e-002,length_median=1.90555500e-002,length_95%HPD={9.66558800e-008,1.25000900e-001},effectivebrlenlgrBrlens_mean=0.030796,effectivebrlenlgrBrlens_median=0.012691,effectivebrlenlgrBrlens_95%HPD={0.000000,0.114095},ratelgrBrlens_mean=1.077453,rategrBrlens_median=0.755534,rategrBrlens_95%HPD={0.000001,2.999129}],(11[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=5.45025742e-001,height_median=3.90289705e-001,height_95%HPD={1.19936116e-005,1.36083418e+000},age_mean=5.40774750e+001,age_median=5.41205313e+001,age_95%HPD={5.31336359e+001,5.49985315e+001}]:2.082752e+000[&length_mean=2.57918843e-002,length_median=1.20440200e-002,length_95%HPD={7.15637400e-008,9.17010900e-002},effectivebrlenlgrBrlens_mean=0.010834,effectivebrlenlgrBrlens_median=0.002624,effectivebrlenlgrBrlens_95%HPD={0.000000,0.046971},ratelgrBrlens_mean=0.487251,rategrBrlens_median=0.333662,rategrBrlens_95%HPD={0.000001,1.375520}],12[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=5.43485487e-001,height_median=3.87693484e-001,height_95%HPD={1.18496717e-005,1.35730639e+000},age_mean=5.39164686e+001,age_median=5.38797181e+001,age_95%HPD={5.30000070e+001,5.48660493e+001}]:2.323565e+000[&length_mean=2.90008202e-002,length_median=1.42143000e-002,length_95%HPD={1.22167400e-007,1.03057200e-001},effectivebrlenlgrBrlens_mean=0.027664,effectivebrlenlgrBrlens_median=0.014829,effectivebrlenlgrBrlens_95%HPD={0.000000,0.090754},ratelgrBrlens_mean=1.395290,rategrBrlens_median=1.008974,rategrBrlens_95%HPD={0.000574,3.367772}])][&prob=8.81074595e-001,prob_stddev=6.97632182e-003,prob_range={8.76141591e-001,8.86007599e-001},prob(percent)="88",prob+-sd="88+-1",height_mean=5.65851961e-001,height_median=3.96678106e-001,height_95%HPD={1.22993883e-005,1.41932416e+000},age_mean=5.64003048e+001,age_median=5.62032833e+001,age_95%HPD={5.41006949e+001,5.91448071e+001}]:2.841512e+000[&length_mean=2.90613829e-002,length_median=1.37188300e-002,length_95%HPD={4.26568000e-008,1.02728400e-001},effectivebrlenlgrBrlens_mean=0.028267,effectivebrlenlgrBrlens_median=0.011934,effectivebrlenlgrBrlens_95%HPD={0.000000,0.105148},ratelgrBrlens_mean=1.300736,rategrBrlens_median=0.914684,rategrBrlens_95%HPD={0.000001,3.511809}])][&prob=9.97533498e-001]

001,prob_stddev=2.82823858e-004,prob_range={9.97333511e-001,9.97733484e-001},prob(percent)="100",prob+sd="100+-0",height_mean=5.98635988e-001,height_median=4.25568505e-001,height_95%HPD={1.31185622e-005,1.48901355e+000},age_mean=5.92927593e+001,age_median=5.90447953e+001,age_95%HPD={5.60784865e+001,6.29923125e+001}]:5.700435e+000[&length_mean=6.63072632e-002,length_median=3.60923500e-002,length_95%HPD={1.49711400e-007,2.14264900e-001},effectivebrlenlgrBrlens_mean=0.117076,effectivebrlenlgrBrlens_median=0.068879,effectivebrlenlgrBrlens_95%HPD={0.000000,0.357907},ratelgrBrlens_mean=2.241788,rateIgrBrlens_median=1.802430,rateIgrBrlens_95%HPD={0.506830,4.807534}],(((44[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.87664889e-001,height_median=3.48177201e-001,height_95%HPD={1.02867877e-005,1.21862728e+000},age_mean=4.83816859e+001,age_median=4.84415881e+001,age_95%HPD={4.64692482e+001,5.02995879e+001}]:3.857878e+000[&length_mean=4.42537905e-002,length_median=2.20551400e-002,length_95%HPD={7.31123600e-008,1.53374300e-001},effectivebrlenlgrBrlens_mean=0.029664,effectivebrlenlgrBrlens_median=0.012872,effectivebrlenlgrBrlens_95%HPD={0.000000,0.105816},ratelgrBrlens_mean=0.812883,rateIgrBrlens_median=0.637030,rateIgrBrlens_95%HPD={0.000001,1.912187}],81[&prob=1.00000000e+000,prob_stddev=0.0000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.84742435e-001,height_median=3.46515884e-001,height_95%HPD={1.05342630e-005,1.21272411e+000},age_mean=4.80852916e+001,age_median=4.80066267e+001,age_95%HPD={4.62000472e+001,5.00350932e+001}]:4.292840e+000[&length_mean=4.74524223e-002,length_median=2.58238800e-002,length_95%HPD={1.89560100e-007,1.58172800e-001},effectivebrlenlgrBrlens_mean=0.052452,effectivebrlenlgrBrlens_median=0.031751,effectivebrlenlgrBrlens_95%HPD={0.000000,0.160896},ratelgrBrlens_mean=1.444031,rateIgrBrlens_median=1.133234,rateIgrBrlens_95%HPD={0.174799,3.371185}])][&prob=9.84734351e-001,prob_stddev=7.54196953e-004,prob_range={9.84201053e-001,9.85267649e-001},prob(percent)="98",prob+sd="98+-0",height_mean=5.29909126e-001,height_median=3.75836705e-001,height_95%HPD={1.10506079e-005,1.32539552e+000},age_mean=5.26157030e+001,age_median=5.22994663e+001,age_95%HPD={4.84946979e+001,5.72846119e+001}]:2.761001e+000[&length_mean=4.52959595e-002,length_median=2.34934200e-002,length_95%HPD={4.84888300e-008,1.56393700e-001},effectivebrlenlgrBrlens_mean=0.040675,effectivebrlenlgrBrlens_median=0.021207,effectivebrlenlgrBrlens_95%HPD={0.000000,0.134829},ratelgrBrlens_mean=1.161271,rateIgrBrlens_median=0.90

3953,rateIgrBrlens_95%HPD={0.000001,2.851213}],60[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=5.21134984e-001,height_median=3.71806929e-001,height_95%HPD={1.14288619e-005,1.30318254e+000},age_mean=5.17177384e+001,age_median=5.18102650e+001,age_95%HPD={5.02415770e+001,5.29999860e+001}]:3.250202e+000[&length_mean=4.56538064e-002,length_median=2.32875700e-002,length_95%HPD={5.14262600e-008,1.46239600e-001},effectivebrlenIgrBrlens_mean=0.022936,effectivebrlenIgrBrlens_median=0.008234,effectivebrlenIgrBrlens_95%HPD={0.000000,0.086439},rateIgrBrlens_mean=0.522432,rateIgrBrlens_median=0.447967,rateIgrBrlens_95%HPD={0.000001,1.174605}])[&prob=5.45763616e-001,prob_stddev=2.84709350e-002,prob_range={5.25631625e-001,5.65895607e-001},prob(percent)="55",prob+-sd="55+-3",height_mean=5.46318569e-001,height_median=3.61507459e-001,height_95%HPD={1.26510269e-005,1.40758064e+000},age_mean=5.51481866e+001,age_median=5.50604675e+001,age_95%HPD={5.17239131e+001,5.85336056e+001}]:3.411325e+000[&length_mean=3.03062782e-002,length_median=1.29140400e-002,length_95%HPD={2.70970100e-008,1.12971100e-001},effectivebrlenIgrBrlens_mean=0.022969,effectivebrlenIgrBrlens_median=0.005452,effectivebrlenIgrBrlens_95%HPD={0.000000,0.097701},rateIgrBrlens_mean=0.872450,rateIgrBrlens_median=0.639315,rateIgrBrlens_95%HPD={0.000001,2.348706}],61[&prob=1.00000000e+000,prob_stddev=0.000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-0",height_mean=5.65618856e-001,height_median=4.03969318e-001,height_95%HPD={1.22962164e-005,1.41330904e+000},age_mean=5.61316026e+001,age_median=5.61207972e+001,age_95%HPD={5.53182575e+001,5.69307780e+001}]:2.350995e+000[&length_mean=1.71801798e-002,length_median=5.99087400e-003,length_95%HPD={1.60467400e-008,7.19444700e-002},effectivebrlenIgrBrlens_mean=0.006710,effectivebrlenIgrBrlens_median=0.000420,effectivebrlenIgrBrlens_95%HPD={0.000000,0.036516},rateIgrBrlens_mean=0.445364,rateIgrBrlens_median=0.180997,rateIgrBrlens_95%HPD={0.000001,1.612724}])[&prob=9.90233984e-001,prob_stddev=3.62957284e-003,prob_range={9.87667489e-001,9.92800480e-001},prob(percent)="99",prob+-sd="99+-0",height_mean=5.95397405e-001,height_median=4.26972237e-001,height_95%HPD={1.32442993e-005,1.47983995e+000},age_mean=5.88580567e+001,age_median=5.84717926e+001,age_95%HPD={5.57384742e+001,6.27943645e+001}]:6.273438e+000[&length_mean=7.29241344e-002,length_median=4.00292900e-002,length_95%HPD={1.76719200e-007,2.28671200e-001},effectivebrlenIgrBrlens_mean=0.097704,effectivebrlenIgrBrlens_median=0.055482,effectivebr

nlgrBrlens_95%HPD={0.000000,0.306310},rateIgrBrlens_mean=1.582294,rateIgrBrlens_median=1.307057,rateIgrBrlens_95%HPD={0.235053,3.178523}][&prob=3.45143657e-001,prob_stddev=9.00322613e-003,prob_range={3.38777415e-001,3.51509899e-001},prob(percent)="35",prob+sd="35+-1",height_mean=6.41983643e-001,height_median=4.24020642e-001,height_95%HPD={1.81803353e-005,1.63192948e+000},age_mean=6.49066427e+001,age_median=6.47452306e+001,age_95%HPD={5.98166328e+001,6.99761117e+001}]:2.614009e+000[&length_mean=2.71223130e-002,length_median=1.07984600e-002,length_95%HPD={5.22877600e-008,1.01968300e-001},effectivebrlenIgrBrlens_mean=0.039830,effectivebrlenIgrBrlens_median=0.012586,effectivebrle nlgrBrlens_95%HPD={0.000000,0.155751},rateIgrBrlens_mean=2.006047,rateIgrBrlens_median=1.376809,rateIgrBrlens_95%HPD={0.000001,5.717338}](65[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.34301319e-001,height_median=3.82229914e-001,height_95%HPD={1.08871732e-005,1.34195701e+000},age_mean=5.30363638e+001,age_median=5.33806693e+001,age_95%HPD={4.93886875e+001,5.57997243e+001}]:7.955982e+000[&length_mean=7.64944974e-002,length_median=3.93306700e-002,length_95%HPD={1.25888800e-007,2.56747700e-001},effectivebrlenIgrBrlens_mean=0.050933,effectivebrlenIgrBrlens_median=0.024819,effectivebrle nlgrBrlens_95%HPD={0.000000,0.177629},rateIgrBrlens_mean=0.788975,rateIgrBrlens_median=0.645797,rateIgrBrlens_95%HPD={0.000001,1.764734}](66[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.11905547e-001,height_median=3.66414238e-001,height_95%HPD={1.20069318e-005,1.28776030e+000},age_mean=5.08196094e+001,age_median=5.09523252e+001,age_95%HPD={4.66166566e+001,5.49993930e+001}]:7.203303e+000[&length_mean=9.61808735e-002,length_median=5.44568200e-002,length_95%HPD={6.65726500e-007,3.02830000e-001},effectivebrlenIgrBrlens_mean=0.096898,effectivebrlenIgrBrlens_median=0.058606,effectivebrle nlgrBrlens_95%HPD={0.000000,0.293630},rateIgrBrlens_mean=1.159815,rateIgrBrlens_median=1.010830,rateIgrBrlens_95%HPD={0.309148,2.313009}](73[&prob=1.0000000e+000,prob_stddev=0.0000000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=4.83024008e-001,height_median=3.45203533e-001,height_95%HPD={1.08798875e-005,1.20625022e+000},age_mean=4.79106715e+001,age_median=4.77544708e+001,age_95%HPD={4.62000338e+001,4.99507505e+001}]:3.843716e+000[&length_mean=4.38432351e-002,length_median=2.00106800e-002,length_95%HPD={2.29743700e-008,1.58693700e-001}

001},effectivebrlenIgrBrlens_mean=0.054926,effectivebrlenIgrBrlens_median=0.025441,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.191147},rateIgrBrlens_mean=1.758222,rateIgrBrlens_median=1.26
4342,rateIgrBrlens_95%HPD={0.000001,4.280818}],74[&prob=1.0000000e+000,prob_stddev=0.000
00000e+000,prob_range={1.0000000e+000,1.0000000e+000},prob(percent)="100",prob+-
sd="100+-0",height_mean=4.44335108e-001,height_median=3.17876702e-
001,height_95%HPD={9.90242536e-
006,1.11401706e+000},age_mean=4.40981462e+001,age_median=4.44176048e+001,age_95%HPD=
{4.11128626e+001,4.61998717e+001}]:7.180582e+000[&length_mean=8.15572743e-
002,length_median=4.94899400e-002,length_95%HPD={8.55940500e-007,2.50639300e-
001},effectivebrlenIgrBrlens_mean=0.047198,effectivebrlenIgrBrlens_median=0.023089,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.167652},rateIgrBrlens_mean=0.610212,rateIgrBrlens_median=0.54
0485,rateIgrBrlens_95%HPD={0.058796,1.306687}])[&prob=9.59936004e-
001,prob_stddev=3.11106243e-003,prob_range={9.57736151e-001,9.62135858e-
001},prob(percent)="96",prob+sd="96+-0",height_mean=5.21647815e-
001,height_median=3.65404112e-001,height_95%HPD={1.18786304e-
005,1.30710834e+000},age_mean=5.18997291e+001,age_median=5.15981865e+001,age_95%HPD=
{4.74711985e+001,5.70232559e+001}]:6.557442e+000[&length_mean=7.55563349e-
002,length_median=3.96870100e-002,length_95%HPD={7.11088700e-008,2.53517700e-
001},effectivebrlenIgrBrlens_mean=0.077045,effectivebrlenIgrBrlens_median=0.038822,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.261224},rateIgrBrlens_mean=1.192179,rateIgrBrlens_median=0.98
5141,rateIgrBrlens_95%HPD={0.000001,2.495023}])[&prob=3.99706686e-
001,prob_stddev=1.22557005e-002,prob_range={3.91040597e-001,4.08372775e-
001},prob(percent)="40",prob+sd="40+-1",height_mean=5.86401857e-
001,height_median=4.04430140e-001,height_95%HPD={1.50609337e-
005,1.46848300e+000},age_mean=5.83190463e+001,age_median=5.81556287e+001,age_95%HPD=
{5.20990749e+001,6.46156293e+001}]:3.181023e+000[&length_mean=3.85717737e-
002,length_median=1.43676100e-002,length_95%HPD={3.51224200e-008,1.54585800e-
001},effectivebrlenIgrBrlens_mean=0.035571,effectivebrlenIgrBrlens_median=0.008263,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.151273},rateIgrBrlens_mean=1.093045,rateIgrBrlens_median=0.78
2556,rateIgrBrlens_95%HPD={0.000001,2.946600}])[&prob=7.72815146e-
001,prob_stddev=3.95953401e-003,prob_range={7.70015332e-001,7.75614959e-
001},prob(percent)="77",prob+sd="77+-0",height_mean=6.21648344e-
001,height_median=4.35766476e-001,height_95%HPD={1.61208364e-
005,1.54712468e+000},age_mean=6.15496281e+001,age_median=6.13366512e+001,age_95%HPD=
{5.52990018e+001,6.77640031e+001}]:6.022588e+000[&length_mean=5.81059770e-

002,length_median=2.85623100e-002,length_95%HPD={5.21929700e-008,1.98976700e-001},effectivebrlenlgrBrlens_mean=0.056624,effectivebrlenlgrBrlens_median=0.023915,effectivebrlenlgrBrlens_95%HPD={0.000000,0.205318},rategrBrlens_mean=1.152005,rategrBrlens_median=0.923317,rategrBrlens_95%HPD={0.000001,2.592845}][&prob=1.15625625e-001,prob_stddev=3.53529822e-003,prob_range={1.13125792e-001,1.18125458e-001},prob(percent)="12",prob+sd="12+-0",height_mean=6.50144743e-001,height_median=4.17519652e-001,height_95%HPD={1.86146960e-005,1.67198949e+000},age_mean=6.75261825e+001,age_median=6.73592392e+001,age_95%HPD={6.27801893e+001,7.30021508e+001}]:1.585276e+000[&length_mean=1.23610908e-002,length_median=4.44207800e-003,length_95%HPD={1.36423100e-008,5.07142000e-002},effectivebrlenlgrBrlens_mean=0.009373,effectivebrlenlgrBrlens_median=0.000403,effectivebrlenlgrBrlens_95%HPD={0.000000,0.049024},rategrBrlens_mean=0.878143,rategrBrlens_median=0.340056,rategrBrlens_95%HPD={0.000001,3.322495}][&prob=2.34151057e-001,prob_stddev=1.83835507e-003,prob_range={2.32851143e-001,2.35450970e-001},prob(percent)="23",prob+sd="23+-0",height_mean=6.82162957e-001,height_median=4.41257665e-001,height_95%HPD={1.81407075e-005,1.71332668e+000},age_mean=6.92696351e+001,age_median=6.89445156e+001,age_95%HPD={6.36665325e+001,7.43994520e+001}]:3.510818e-001[&length_mean=6.26156792e-003,length_median=2.49704300e-003,length_95%HPD={1.82664800e-008,2.44862800e-002},effectivebrlenlgrBrlens_mean=0.083920,effectivebrlenlgrBrlens_median=0.030823,effectivebrlenlgrBrlens_95%HPD={0.000000,0.301362},rategrBrlens_mean=20.397508,rategrBrlens_median=14.357833,rategrBrlens_95%HPD={0.000001,62.291227}],20[&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=5.29621437e-001,height_median=3.78026791e-001,height_95%HPD={1.09205078e-005,1.32997399e+000},age_mean=5.25595458e+001,age_median=5.27413112e+001,age_95%HPD={4.90374362e+001,5.57978215e+001}]:1.655429e+001[&length_mean=1.38262485e-001,length_median=8.30954200e-002,length_95%HPD={4.83874400e-007,4.02571700e-001},effectivebrlenlgrBrlens_mean=0.147420,effectivebrlenlgrBrlens_median=0.086353,effectivebrlenlgrBrlens_95%HPD={0.000001,0.458227},rategrBrlens_mean=1.195891,rategrBrlens_median=1.047411,rategrBrlens_95%HPD={0.232945,2.366975}][&prob=1.00000000e+000,prob_stddev=0.00000000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+sd="100+-0",height_mean=7.04349545e-001,height_median=4.98682389e-001,height_95%HPD={1.54755900e-005,1.73040032e+000},age_mean=6.95412695e+001,age_median=6.92955974e+001,age_95%HPD={

```

{6.40561420e+001,7.48538790e+001}]:9.005145e+000[&length_mean=8.84470901e-
002,length_median=5.06025300e-002,length_95%HPD={2.86220800e-007,2.88834600e-
001},effectivebrlenlgrBrlens_mean=0.167857,effectivebrlenlgrBrlens_median=0.097953,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.526726},rateIgrBrlens_mean=2.259410,rateIgrBrlens_median=1.85
3453,rateIgrBrlens_95%HPD={0.380746,4.909171}][&prob=1.00000000e+000,prob_stddev=0.00000
000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-"
0",height_mean=7.97223229e-001,height_median=5.64674462e-
001,height_95%HPD={1.71346440e-
005,1.97270623e+000},age_mean=7.87713107e+001,age_median=7.83007421e+001,age_95%HPD=
{7.08367872e+001,8.75694294e+001}]:3.384179e+000[&length_mean=3.55732927e-
002,length_median=1.27664900e-002,length_95%HPD={1.39345100e-008,1.43609700e-
001},effectivebrlenlgrBrlens_mean=0.028180,effectivebrlenlgrBrlens_median=0.004808,effectivebrle
nlgrBrlens_95%HPD={0.000000,0.131055},rateIgrBrlens_mean=0.931262,rateIgrBrlens_median=0.60
2805,rateIgrBrlens_95%HPD={0.000001,2.621074}][&prob=1.00000000e+000,prob_stddev=0.00000
000e+000,prob_range={1.00000000e+000,1.00000000e+000},prob(percent)="100",prob+-sd="100+-"
0",height_mean=8.32796522e-001,height_median=5.88772655e-
001,height_95%HPD={1.80832091e-
005,2.05981219e+000},age_mean=8.23525405e+001,age_median=8.16849212e+001,age_95%HPD=
{7.50014519e+001,9.07745864e+001}][&length_mean=0.00000000e+000,length_median=0.0000000
0e+000,length_95%HPD={0.00000000e+000,0.00000000e+000},effectivebrlenlgrBrlens_mean=1.00
000,effectivebrlenlgrBrlens_median=1.000000,effectivebrlenlgrBrlens_95%HPD={1.000000,1.000000
},rateIgrBrlens_mean=
1.#IND00,rateIgrBrlens_median=1.#INF00,rateIgrBrlens_95%HPD={1.#INF00,1.#INF00}];
end;

```