

Supplementary Information**Nitrogen isotope enrichment associated with skull shape variation in the Dwarf little fruit bat *Rhinophylla pumilio***

J. Bubadué, M. Nogueira, I. Lima, A. Peracchi, A.P. Di Beneditto, C. Rezende, L. Monteiro

Appendix S1: *Rhinophylla pumilio* specimens used for morphometric and stable isotopes analyses

Skull in dorsal view (25 specimens): ♀♀ (9) ALP 2420, ALP 2816, ALP 2823, ALP 2824, ALP 3021, ALP 5603, ALP 5638, ALP 9549, ALP 9838; ♂♂ (16) ALP 2419, ALP 2427, ALP 2809, ALP 3014, ALP 3153, ALP 3167, ALP 5605, ALP 9245, ALP 9540, ALP 9554, ALP 9669, ALP 9827, ALP 9828, ALP 10121, ALP 10327, ALP 3233

Skull in ventral view (24 specimens): ♀♀ (8) ALP 2420, ALP 2816, ALP 2823, ALP 2824, ALP 5603, ALP 5638, ALP 9549, ALP 9838; ♂♂ (16) ALP 2419, ALP 2427, ALP 2809, ALP 3014, ALP 3153, ALP 3167, ALP 10108, ALP 5605, ALP 9245, ALP 9540, ALP 9554, ALP 9669, ALP 9827, ALP 9828, ALP 10121, ALP 10327

Skull in lateral view (26 specimens): ♀♀ (9) ALP 2420, ALP 2816, ALP 2823, ALP 2824, ALP 3021, ALP 5603, ALP 5638, ALP 9549, ALP 9838; ♂♂ (17) ALP 2419, ALP 2427, ALP 2809, ALP 3014, ALP 3153, ALP 3167, ALP 10108, ALP 5605, ALP 9245, ALP 9540, ALP 9554, ALP 9669, ALP 9827, ALP 9828, ALP 10121, ALP 10327, ALP 3233

Mandible (25 specimens): ♀♀ (9) ALP 2420, ALP 2816, ALP 2823, ALP 2824, ALP 3021, ALP 5603, ALP 5638, ALP 9549, ALP 9838; ♂♂ (16) ALP 2419, ALP 2427, ALP 2809, ALP 3014, ALP 3153, ALP 3167, ALP 10108, ALP 5605, ALP 9245, ALP 9540, ALP 9554, ALP 9669, ALP 9827, ALP 9828, ALP 10121, ALP 10327

Appendix S2: Specimens used for isotopic ratio comparison in the box-plot (Fig. 2)

Frugivorous: *Artibeus lituratus* ♂(1) ALP 9282; *Carollia perspicillata* ♂(1) ALP 9282; *Chiroderma villosum* ♂(1) ALP 40914, ♂(1) ALP 10333

Nectarivorous: *Anoura geoffroyi* ♀(1) ALP 10746, ♂(1) ALP 10032, Undefined sex (2) ALP 9248, ALP 9250; *Glossophaga soricina* ♀♀ (2) ALP 10041; ALP 10740, ♂♂ (5) ALP 10047, ALP 10737, ALP 10738, ALP 10739, ALP 10741

Omnivorous: *Phyllostomus discolor* ♀♀ (2) ALP 10751; ALP 10753, ♂(1) ALP 10750; *Phyllostomus hastatus* ♀(1) ALP 10754

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Appendix S3 Landmark descriptions in accordance to numbers at Fig. 1 and this document**Figure S4:** Dorsal view of the cranium

Landmarks (* = duplicated at both sides)

- 1 – anteriormost point of the cranium, positioned between incisors
- 2 – anteriormost point of the first incisor*
- 3 – anteriormost point at the base of the canine tooth*
- 4 – anteriormost and external point of the canine tooth*
- 5 – posteriormost point at the base of the canine tooth*
- 6 – inflection between teeth row with the anterior branch of the zygomatic arch*
- 7 – anteriormost point of the orbital fossa*
- 8 – externalmost point of the orbital process*
- 9 – lateralmost point between the braincase and rostrum*
- 10 – inflection between the anterior line of the squamosal with the braincase*
- 11 – posteriormost point of the squamosal*
- 12 – posteriormost point of the cranium
- 13 – sagittal point between the braincase and the rostrum
- 14 – anteriormost point of the roof of the nasal cavity
- 15 – lateralmost point of the nasal cavity*

Semilandmarks (* = duplicated at both sides)

- 10 equidistant points between landmarks 11 and 12*

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Appendix S3 (continued) Landmark descriptions in accordance to numbers at Fig. 1 and this document**Figure S5:** Ventral view of the cranium

Landmarks (* = duplicated at both sides)

- 1 – anteriormost point between incisors
- 2 – anteriormost point at the base of the canine tooth*
- 3 – anteriormost and external point of the second premolar*
- 4 – anteriormost and external point of the first molar*
- 5 – anteriormost and external point of the second molar*
- 6 – posteriormost point of the third molar*
- 7 – anteriormost portion of the orbital fossa*
- 8 – externalmost point of the postorbital process*
- 9 – anteriormost point of the squamosal*
- 10 – posteriormost point of the squamosal*
- 11 – externalmost point of the mastoid process*
- 12 – posteriormost point of the cranium
- 13 – posteriormost point of the occipital condyle*
- 14 – mean point of the anteriormost region of the foramen magnum
- 15 – point at largest constriction of the basisphenoid*
- 16 – medial and posteriormost of the palatine
- 17 – point positioned at the anteriormost extremity of the median palatine suture

Semilandmarks (* = duplicated at both sides)

Eight equidistant points between landmarks 11 and 12*

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Appendix S3 (continued) Landmark descriptions in accordance to numbers at Fig. 1 and this document**Figure S6:** Lateral view of the cranium**Landmarks**

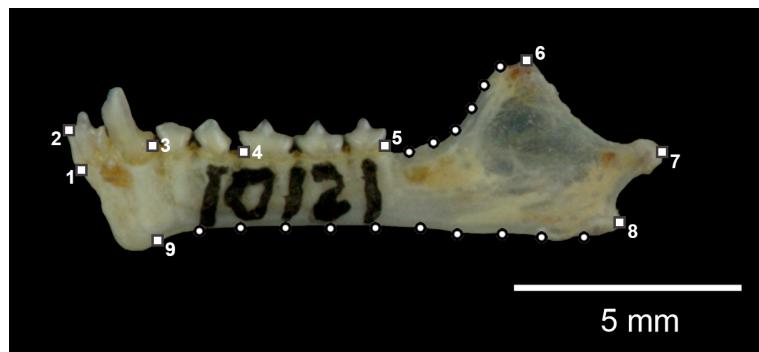
- 1 – anteriormost point of the premaxillae, at the base of the first incisor
- 2 – inflection point between nasal opening and the roof of rostral region
- 3 – inflection point between rostral and braincase regions
- 4 – posteriormost point of the skull
- 5 – posteriormost point of the foramen magnum
- 6 – inflection point between the paroccipital and the foramen magnum
- 7 – posterior point of intersection between the auditory bulla and the mastoid region
- 8 – anteriormost point of intersection between the auditory bulla and the basicranium
- 9 – posteriormost point of the last upper molar at the level of insertion with the maxilla
- 10 – anteriormost point of the last premolar at the level of insertion with the maxilla
- 11 – anteriormost point at the base of the canine tooth
- 12 – tip of the canine tooth
- 13 – tip of the first incisor

Semilandmarks

- Five equidistant points between landmarks 2 and 3
- 15 equidistant points between landmarks 3 and 4

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Appendix S3 (continued) Landmark descriptions in accordance to numbers at Fig. 1 and this document**Figure S7:** Lateral view of the mandible**Landmarks**

- 1 – anteriormost point of the dentary, in the insertion of the inner lower incisors
- 2 – anteriormost and internal point at the tip of the first incisor
- 3 – posteriormost point of the lower canine, at the level of insertion in the dentary bone
- 4 – anteriormost point of the first lower molar, at the level of insertion in the dentary bone
- 5 – posteriormost point of the last lower molar, at the level of insertion in the dentary bone
- 6 – superior tip of the coronoid process
- 7 – posteriormost point of the condylar process
- 8 – posteriormost point of the angular process
- 9 – posteriormost point of the mandibular symphysis

Semilandmarks

- Six equidistant points between landmarks 5 and 6
- 10 equidistant points between landmarks 8 and 9