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## SUPPLEMENTARY ONLINE MATERIAL FOR

### **Diversity in rhynchocephalian *Clevosaurus* skulls based on CT reconstruction of *C. hudsoni* and *C. cambrica***

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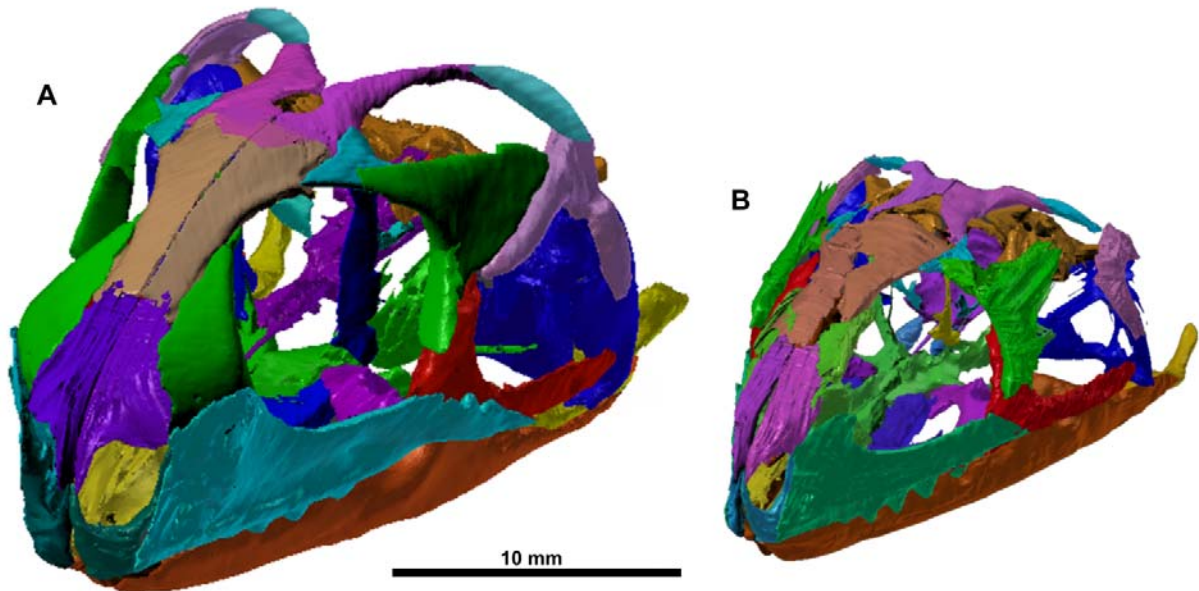
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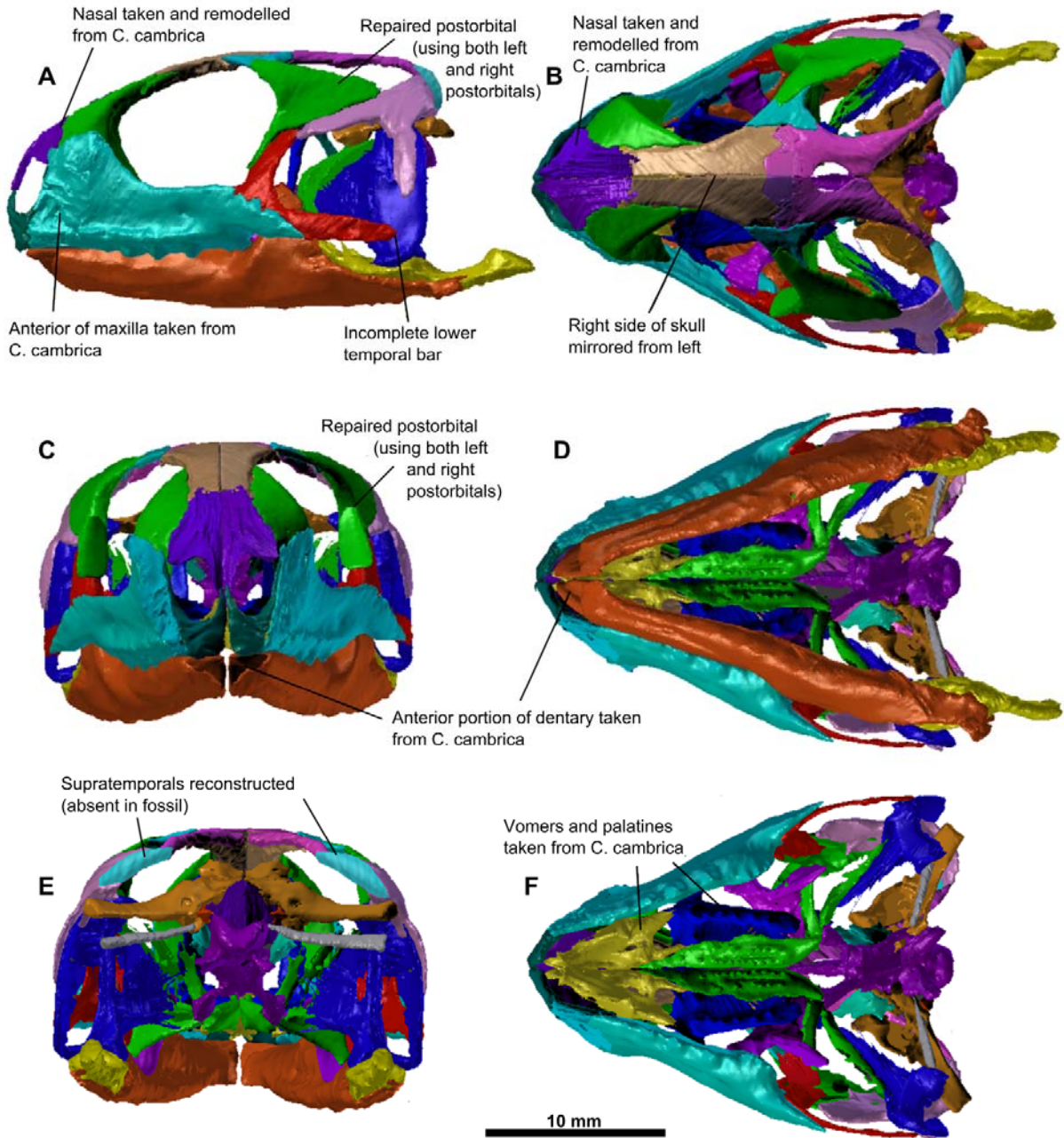
#### **Supplementary Online Material**

- SOM 1.** Three-quarter views of the reassembled skulls of *Clevosaurus hudsoni* (NHMUK PV R36832) and *C. cambrica* (NHMUK PV R37014).
- SOM 2.** The reassembled skull of *Clevosaurus hudsoni* (NHMUK PV R36832).
- SOM 3.** The reassembled skull of *Clevosaurus cambrica* (NHMUK PV R37014).
- SOM 4.** Maxilla of *Clevosaurus hudsoni* from the collection of W.E. Swinton.
- SOM 5.** Palatine of *Clevosaurus hudsoni* from the collection of W.E. Swinton.
- SOM 6.** The reassembled braincases of *Clevosaurus cambrica*, *Clevosaurus hudsoni* and *Sphenodon* in dorsal and ventral views.
- SOM 7.** The reassembled braincases of *Clevosaurus cambrica*, *Clevosaurus hudsoni* and *Sphenodon* in posterior and right lateral views.
- SOM 8.** The change in distribution of mass around the central point of the ultimate tooth for *Clevosaurus cambrica*, *Clevosaurus hudsoni* and *Sphenodon*.
- SOM 9.** Rotating animation of the left forelimb bones, partial pectoral girdle and vertebral column of *Clevosaurus cambrica* in NHMUK PV R37013, in a lateral aspect available at [http://app.pan.pl/SOM/app64-ChambiTrowell\\_etal\\_SOM/SOM\\_9.mpg](http://app.pan.pl/SOM/app64-ChambiTrowell_etal_SOM/SOM_9.mpg)
- SOM 10.** Rotating animation of skull and cervical vertebrae of *Clevosaurus cambrica* in NHMUK PV R37014, in a dorsoventral aspect available at [http://app.pan.pl/SOM/app64-ChambiTrowell\\_etal\\_SOM/SOM\\_10.mpg](http://app.pan.pl/SOM/app64-ChambiTrowell_etal_SOM/SOM_10.mpg)

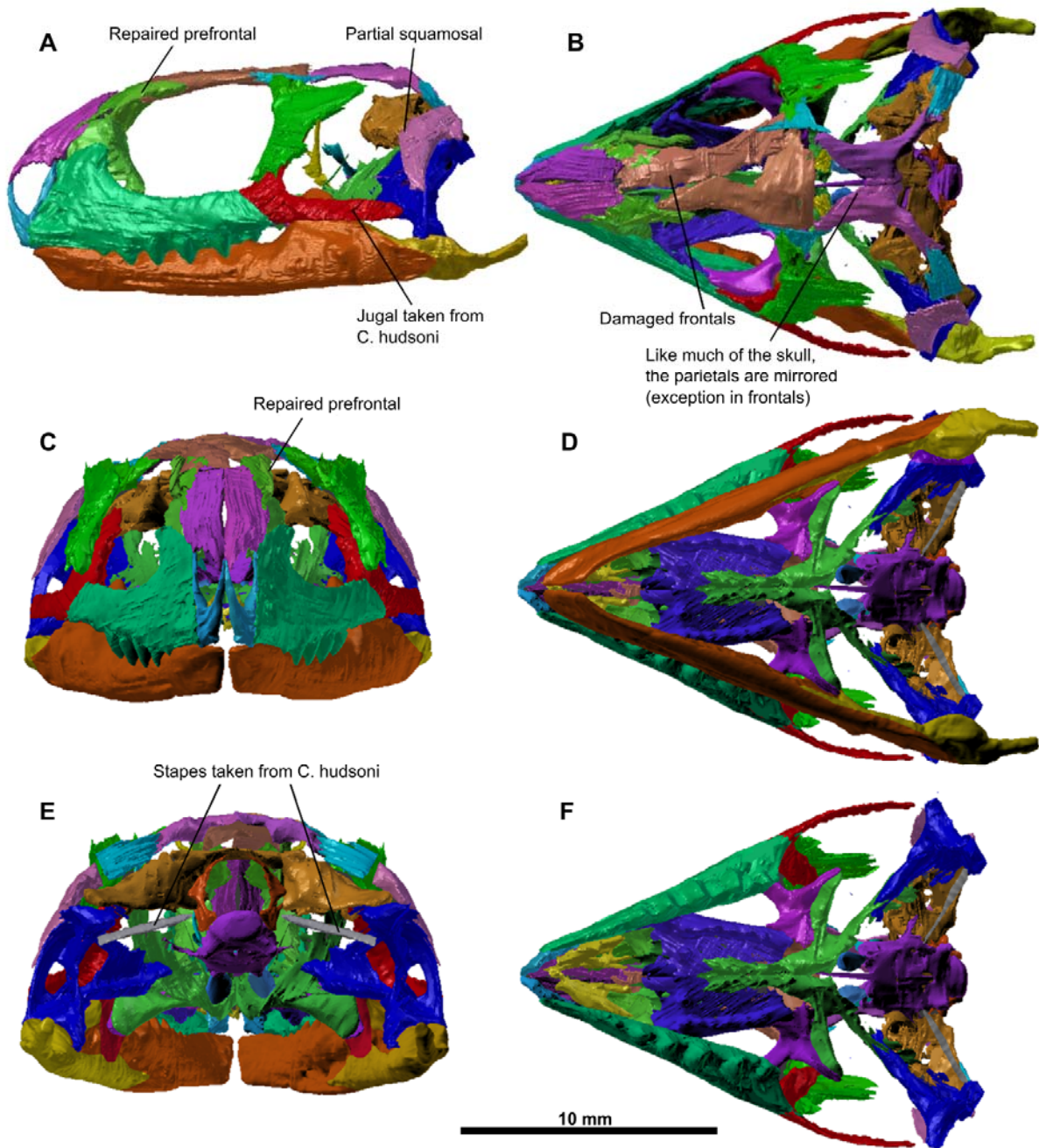
**SOM 1.** Three-quarter views of the reassembled skulls of: A, *Clevosauru. hudsoni* (NHMUK PV R36832); and B, *C. cambrica* (NHMUK PV R37014). Note mirroring of left and right elements, with the exception of the frontals in *C. cambrica*, so that the true sutures between the frontals, nasals and parietals are not shown here.



**SOM 2.** The reassembled skull of *Clevosaurus hudsoni* (NHMUK PV R36832) in, A, lateral; B, dorsal; C, anterior; D, ventral; E, posterior; and F, ventral without mandible. Note that premaxillae, nasals, vomers and palatines taken from *Clevosaurus cambrica* (NHMUK PV R37014) as they are absent in this fossil (NHMUK PV R36832). Also note mirroring of left and right elements.



**SOM 3.** The reassembled skull of *Clevosaurus cambrica* (NHMUK PV R37014) in, A, lateral; B, dorsal; C, anterior; D, ventral; E, posterior; and F, ventral without mandible. Note red jugal has been taken from *Clevosaurus hudsoni* (NHMUK PV R36832) as this bone is absent in this specimen of *C. cambrica*. Also note mirroring of left and right elements. Note the pterygoids anteriorly would have met the vomers, here they appear not to as a result of the anterior of the right pterygoid – used for the reconstruction – been broken and rotated relative to the rest of the pterygoid, so reconstruction focused on the position of the lateral and posterior processes of the pterygoid.



**SOM 4.** Syntype material for *Clevosaurus hudsoni* from the collection of W.E. Swinton, including, A, left maxilla (NHMUK ST R9249); and B, left dentary (NHMUK ST R5939a) in B<sub>1</sub>, medial; B<sub>2</sub>, lateral; and B<sub>3</sub>, dorsal.



**SOM 5.** Syntype material for *Clevosaurus hudsoni* from the collection of W.E. Swinton, including, A, left palatine in ventral view; and B, right dentary (NHMUK ST R5939b) in B<sub>1</sub>, lateral; B<sub>2</sub>, medial; and B<sub>3</sub>, dorsal.

A



B<sub>1</sub>



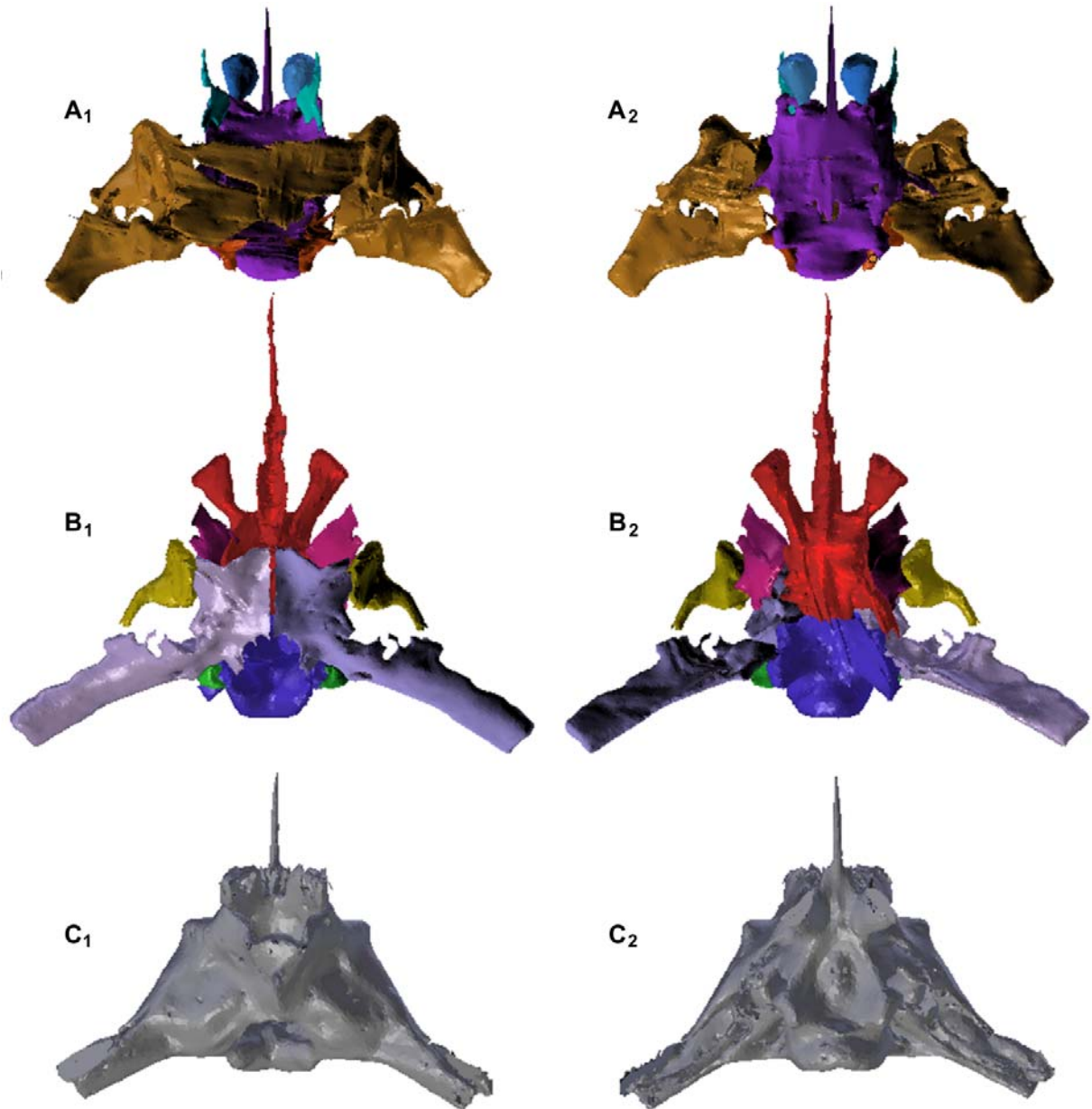
B<sub>2</sub>



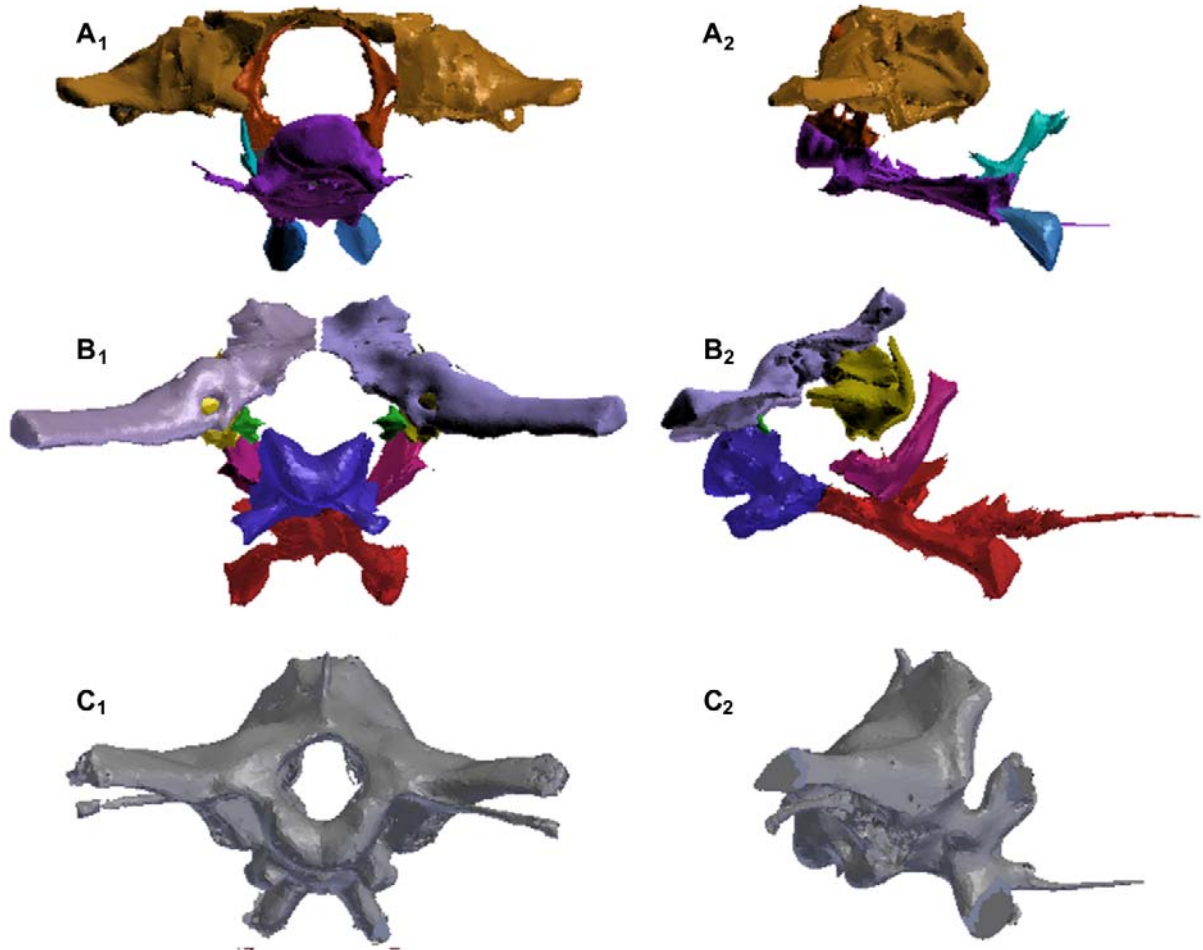
B<sub>3</sub>



**SOM 6.** The reassembled braincases of A, *Clevosaurus cambrica* (NHMUK PV R37014); B, *Clevosaurus hudsoni* (NHMUK PV R36832); and C, *Sphenodon* (Maisano 2001), in dorsal (1) and ventral (2) views. Note mirroring of left and right elements.



**SOM 7.** The braincases of A, *Clevosaurus cambrica* (NHMUK PV R37014); B, *Clevosaurus hudsoni* (NHMUK PV R36832); and C, *Sphenodon* (Maisano 2001), in posterior (1) and right lateral (2) views. Note mirroring of left and right elements for *Clevosaurus*



S.



**SOM 8.** The change in distribution of mass around the central point of the ultimate tooth for *Clevosaurus cambrica* (NHMUK PV R37014), *Clevosaurus hudsoni* (NHMUK PV R36832) and *Sphenodon* (Maisano 2001), measured by dividing  $I_x$  by  $I_y$ .

