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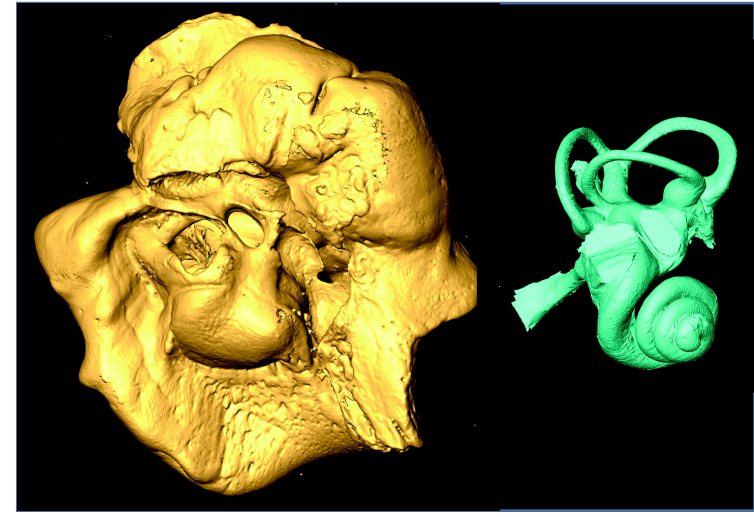
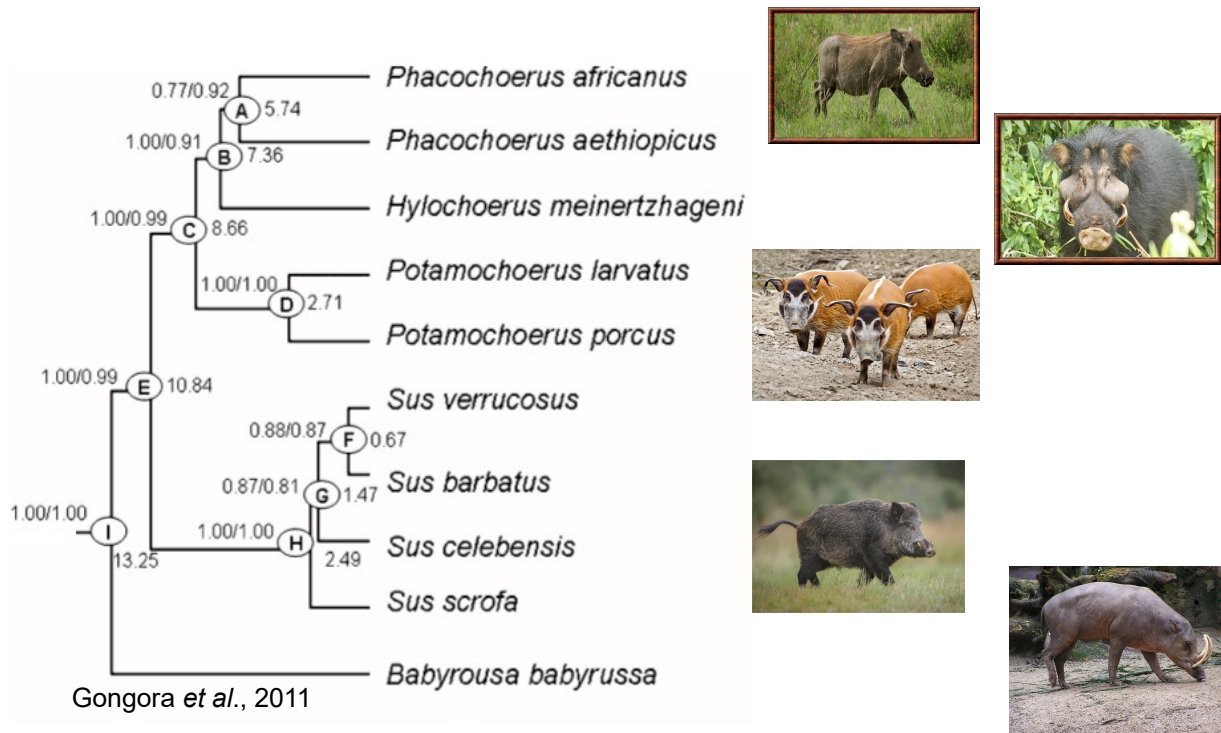
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**Morphological variability of petrous bone
in extant and extinct suids (Mammalia, Artiodactyla):
taxinomic implications of a new morphometric protocol**

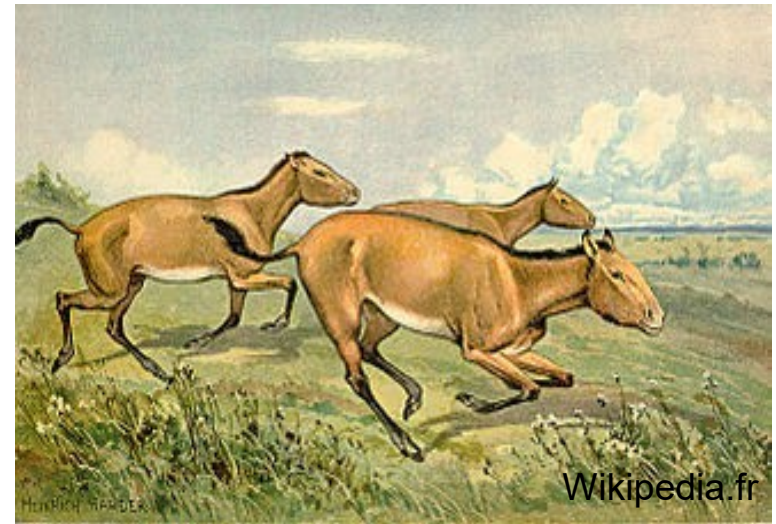
*Baltazart K., Souron A.,
Mennecart B., Guadelli J-L.*



Introduction



Location of the Ahl al Oughlam site

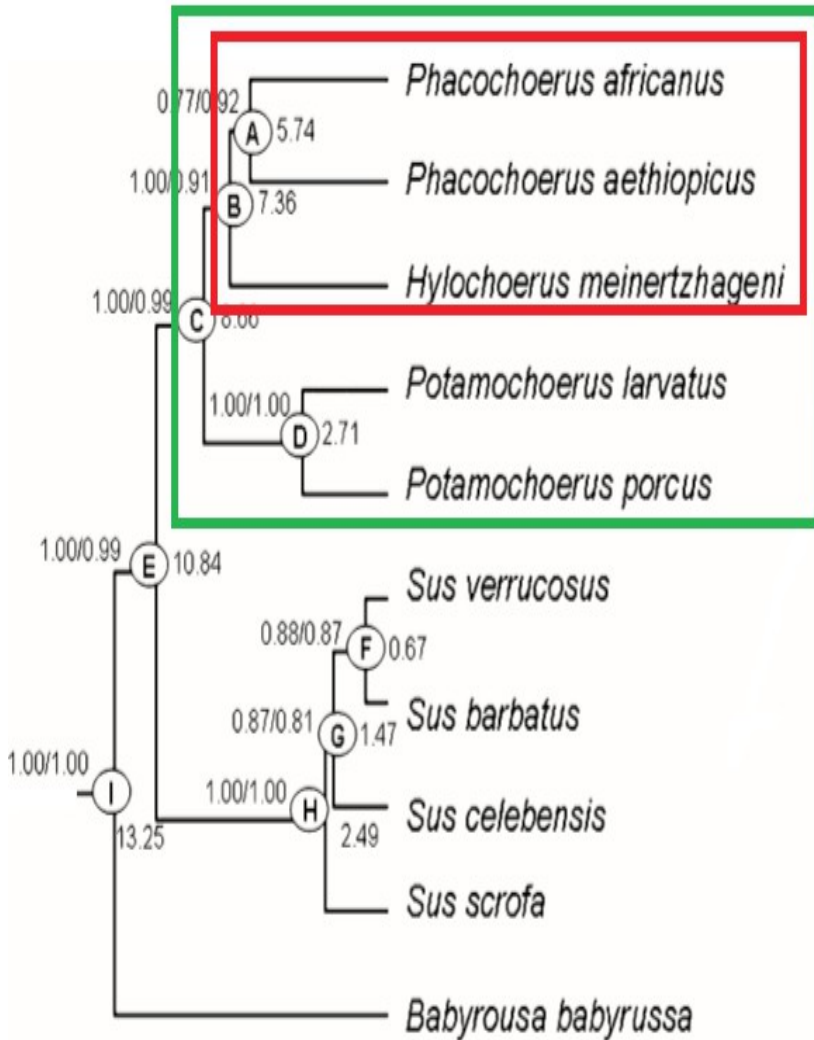


Artist view of genus *Hipparion*



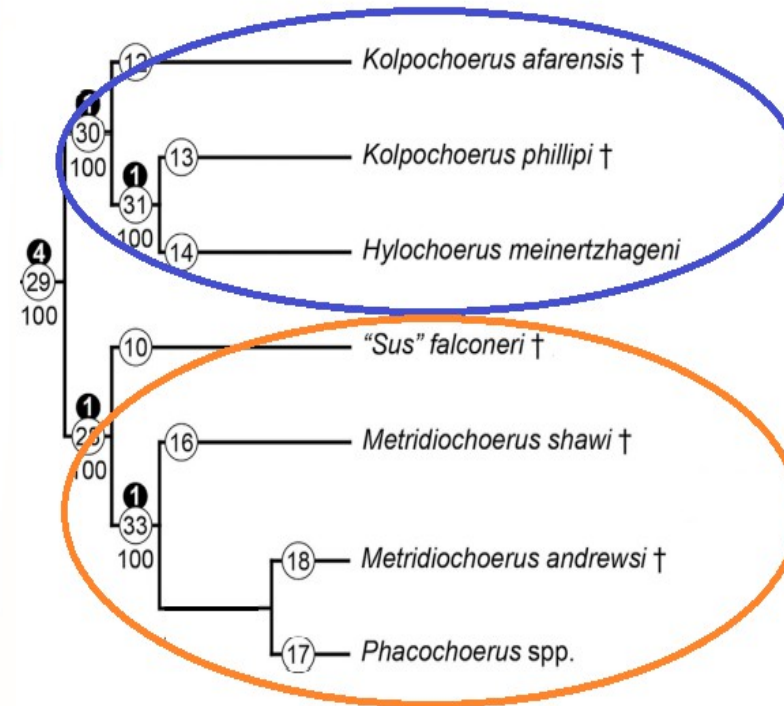
Cranium belonging to the species
« *Kolpochoerus* » *phacochoeroides*.
Photo: Souron

Introduction



Hylochoerus/Phacochoerus clade

Clade of African Suinae



Kolpochoerus clade
 (Geraads, 1993, 2004)

Ahl al Oughlam Suidae ?

Metridiochoerus clade
 (Souron, 2012, 2015 ;
 Cherin *et al.*, 2018)

Molecular tree based on 8 nuclear genes
 and 9 mitochondrial genes (Gongora *et al.*, 2011)

Clades within the African Suinae
 (modified after Cherin *et al.*, 2018)

Material



Sus scrofa



Babyrousa babyrussa



Sus domesticus



Microstonyx erymanthius



Hylochoerus meinertzhageni



Phacochoerus africanus



Potamochoerus porcus



Kolpochoerus phillipi

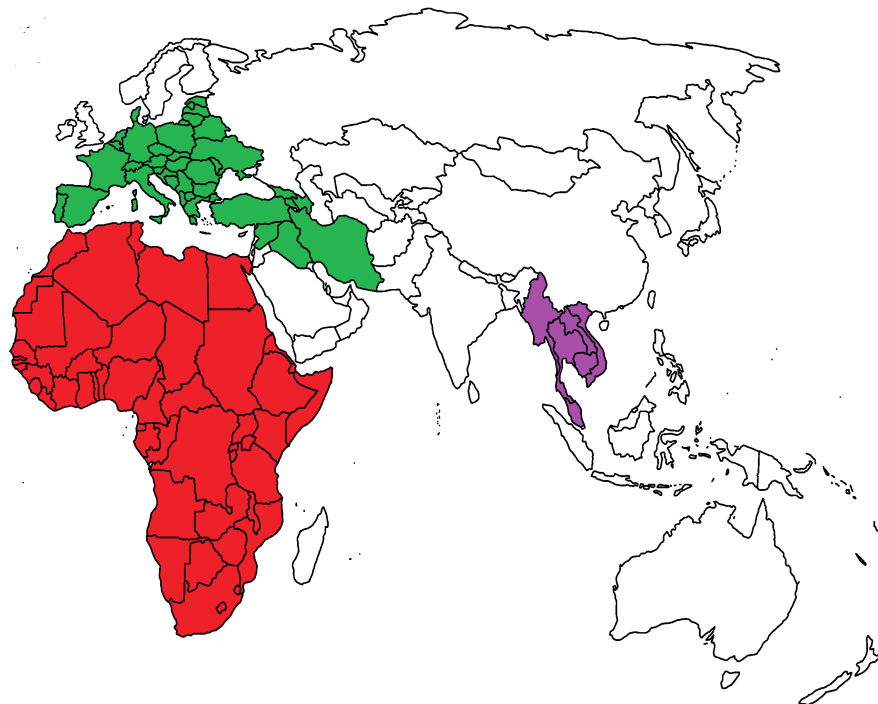


Ahl al Oughlam Suidae

Fossil species: *Kolpochoerus phillipi*, Ahl al Oughlam Suidae and *Microstonyx erymanthius*

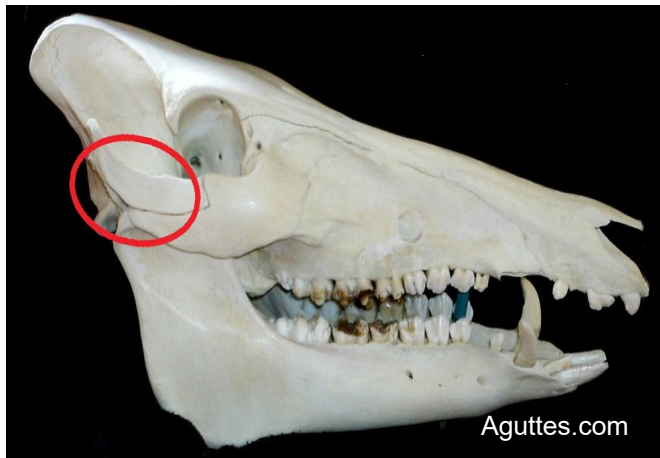
Total number of petrous bones: 86

Taxa represented by more than 20 individuals: *Sus scrofa* and Ahl al Oughlam Suidae

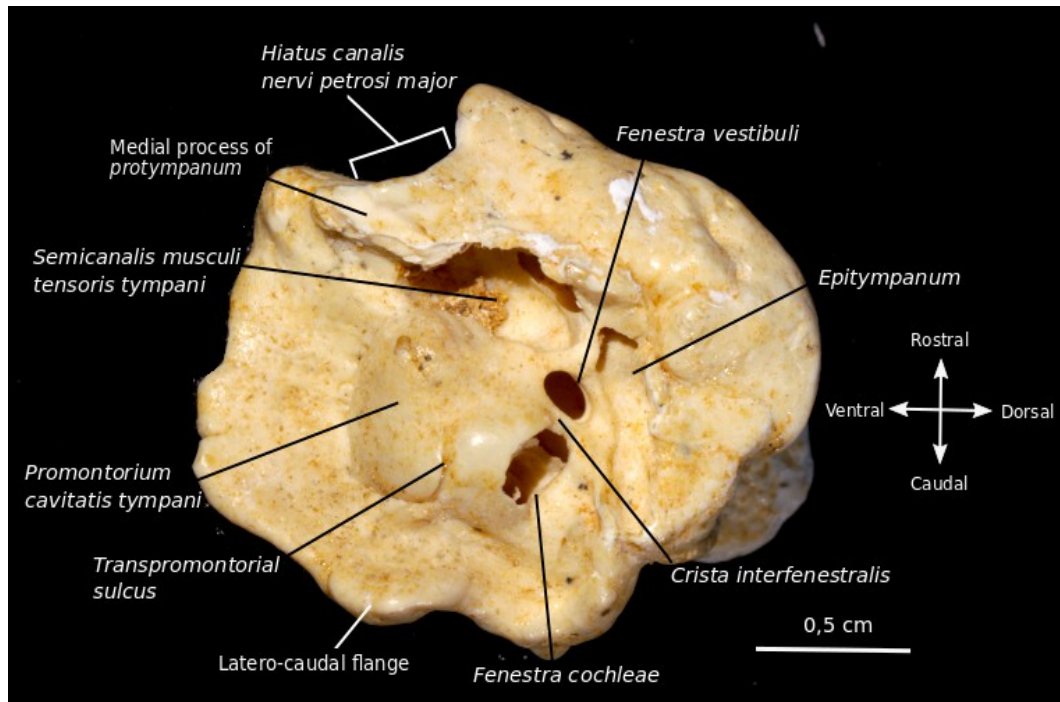
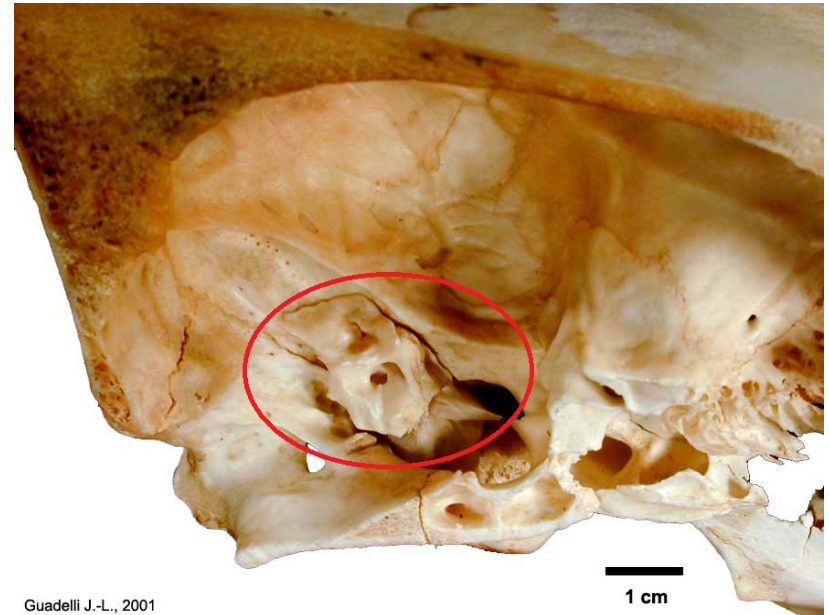


Geographical origin of taxa

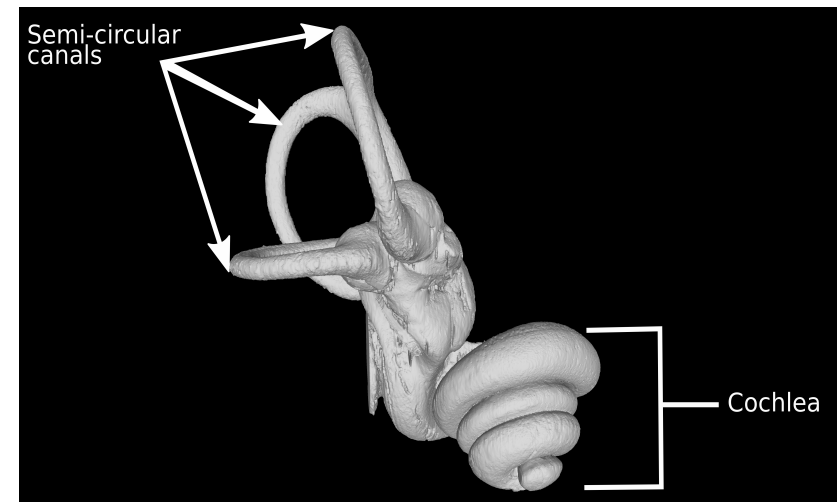
The petrous bone as a biological tool



Petrous bone
in the skull
of a *Sus scrofa*

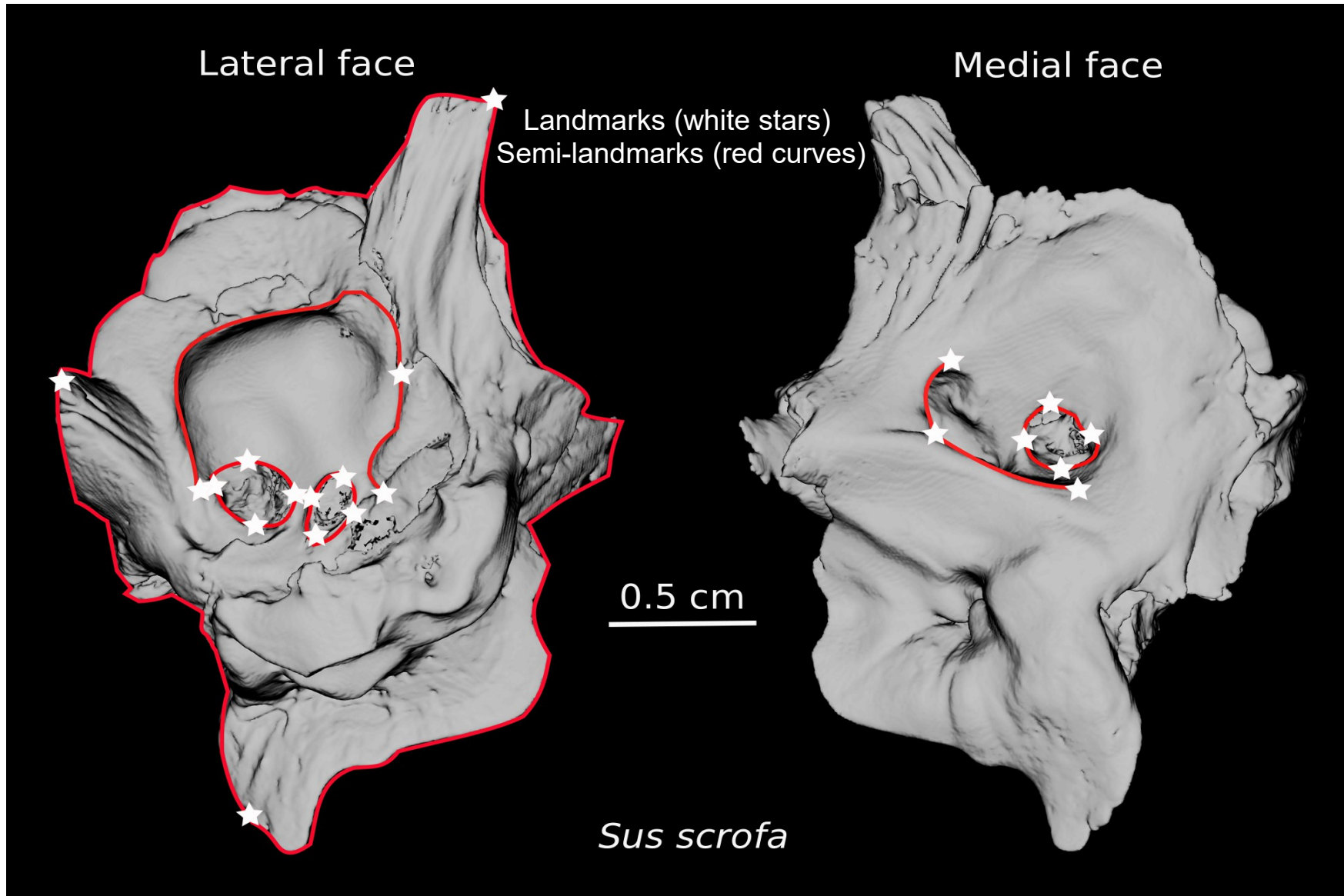


Petrous bone, site of hearing and balance in mammals

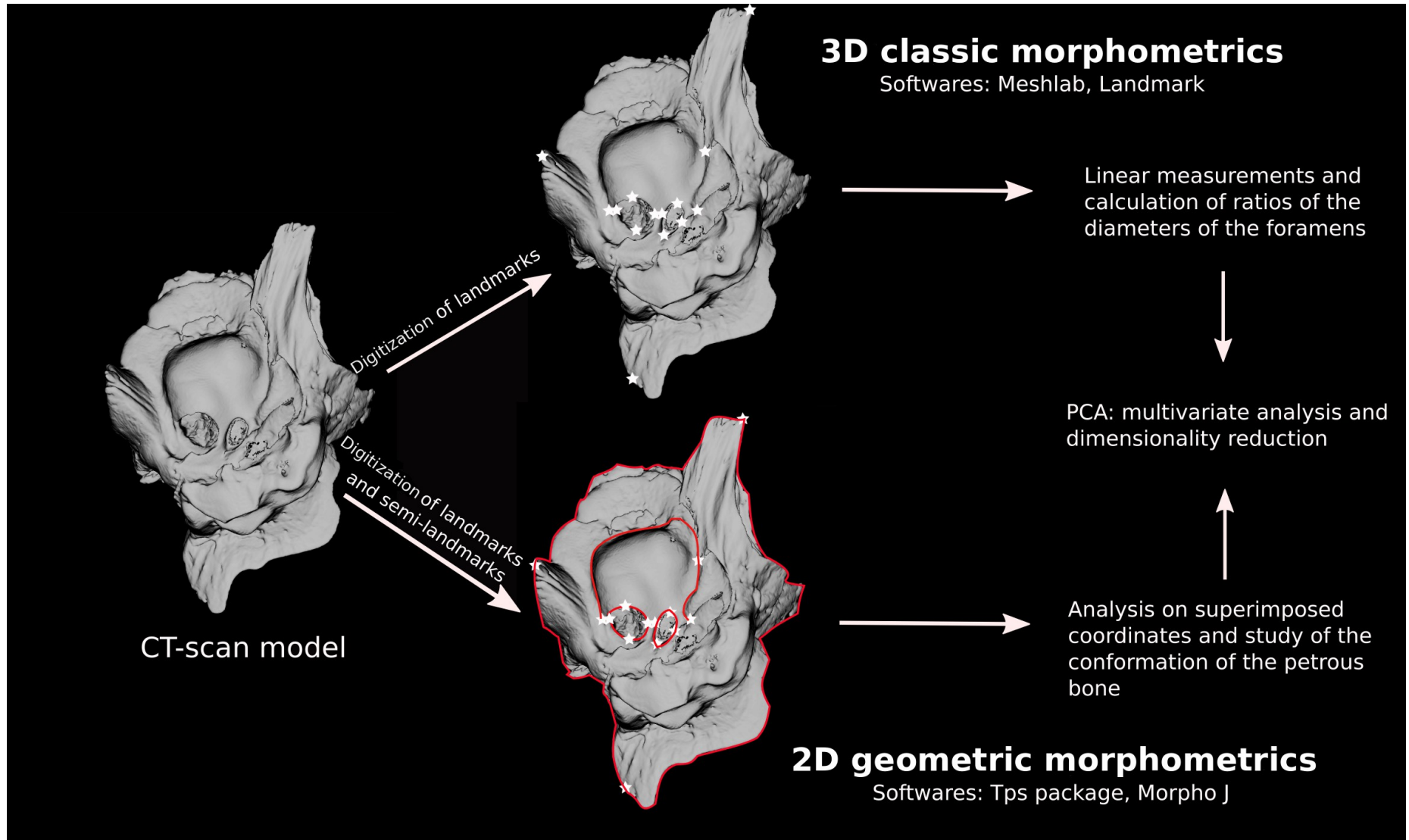


Inner ear of *Sus scrofa*

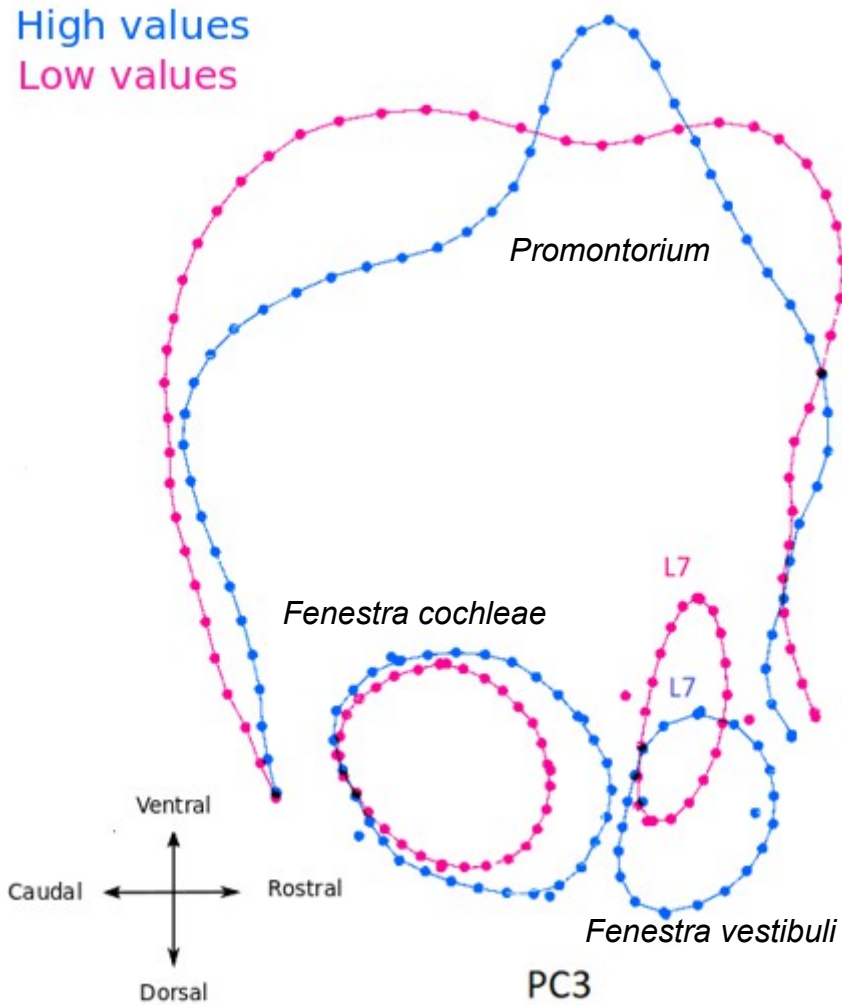
Methods



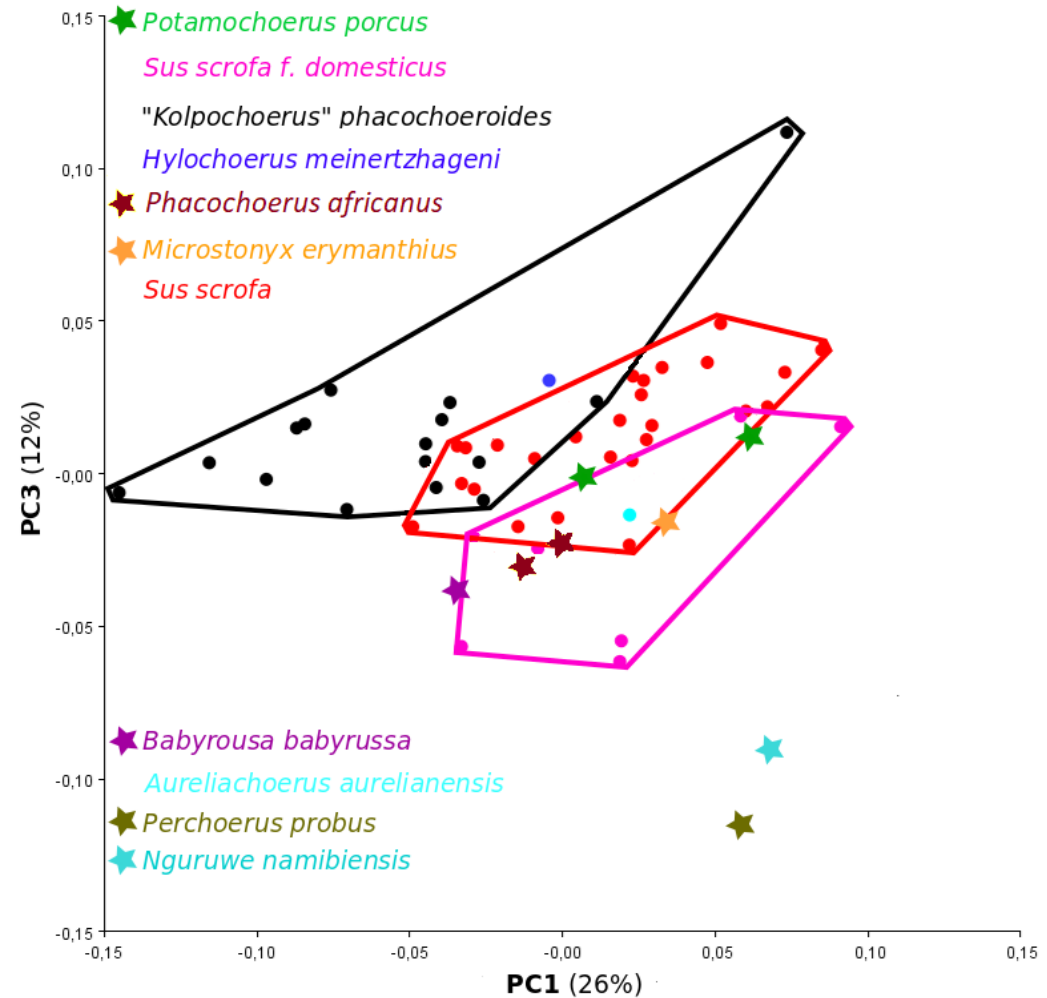
Methods



Results

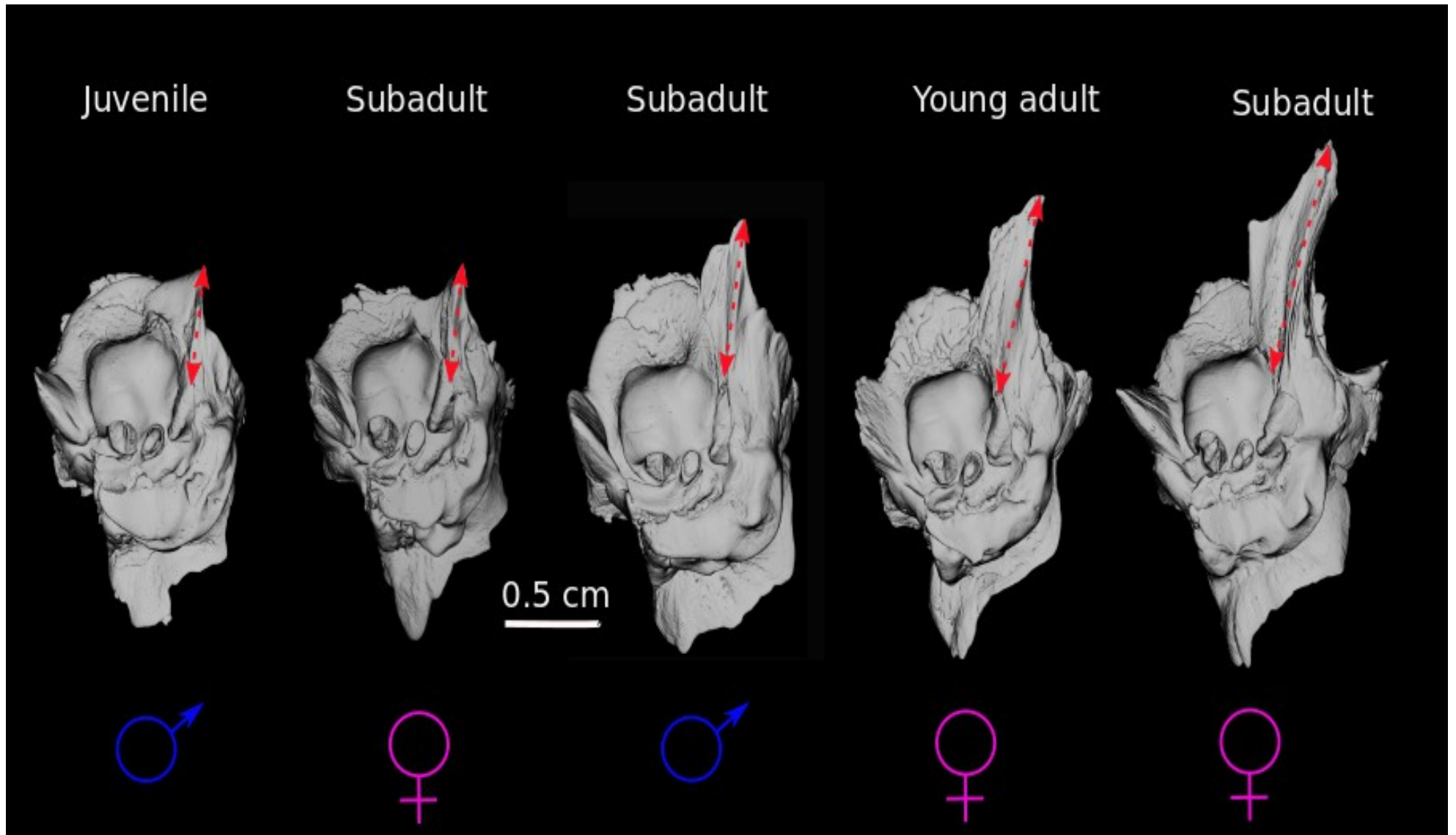


Conformation changes along the PC3 axis



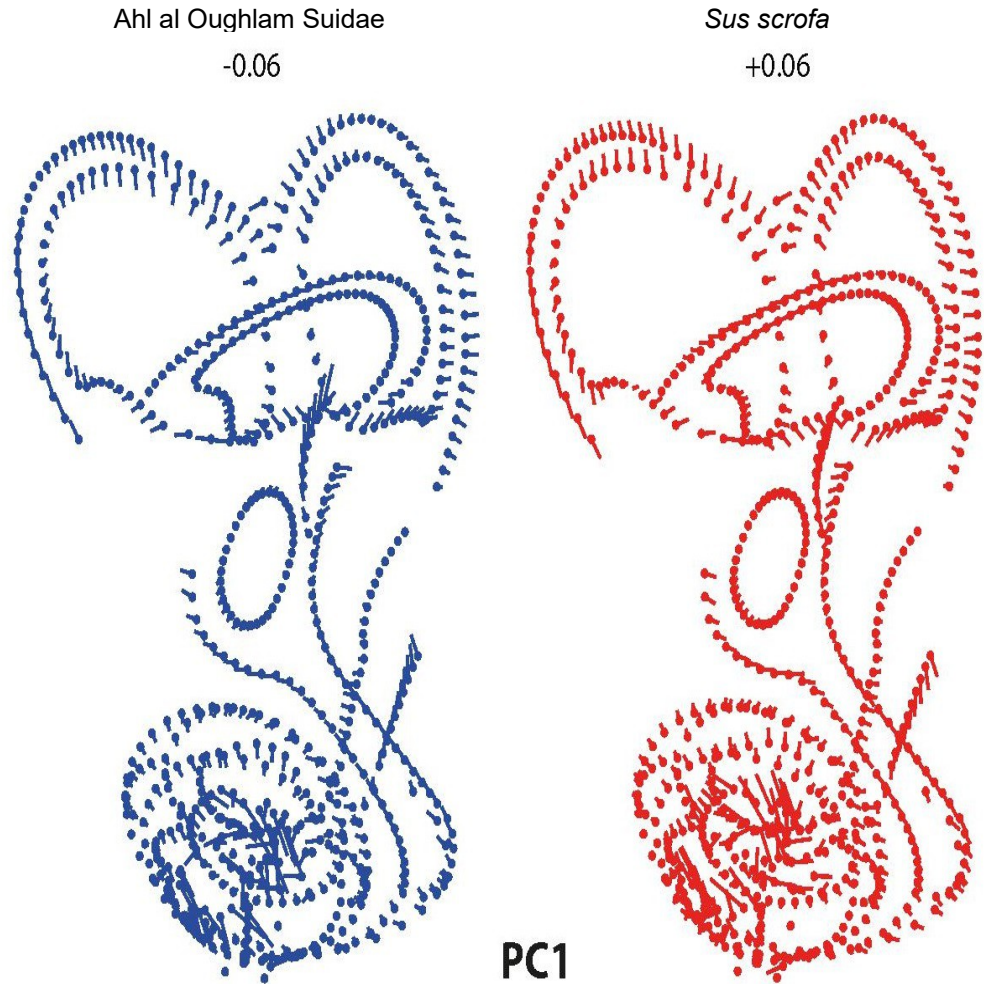
Lateral face conformation space

Discussion

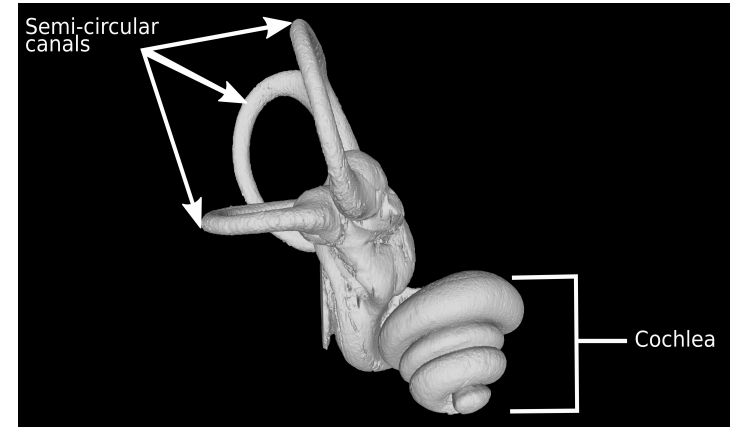


Intraspecific variability of the medial process of the *protympanum* (*Sus scrofa*)

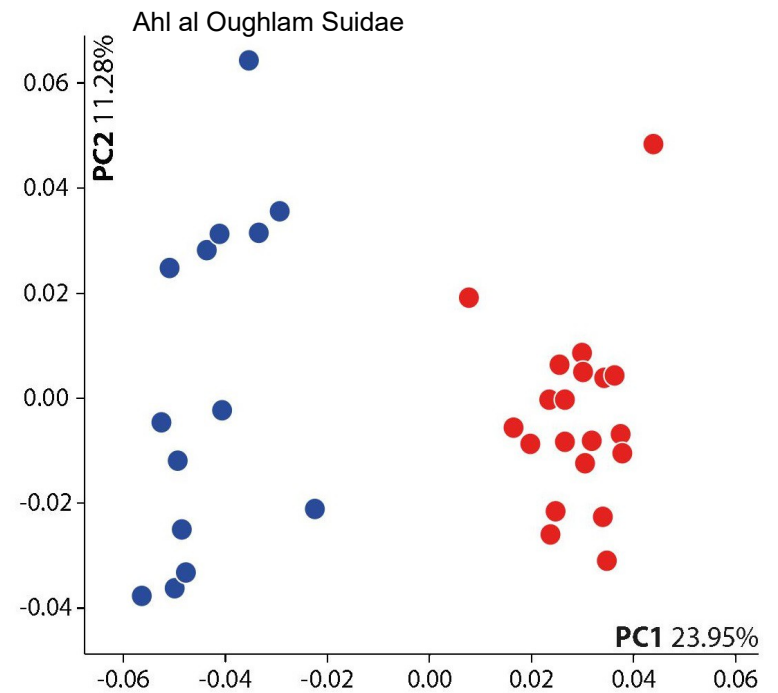
Discussion



Geometric morphometric analysis of inner ear variability
(Mennecart *et al.*, in prep.)

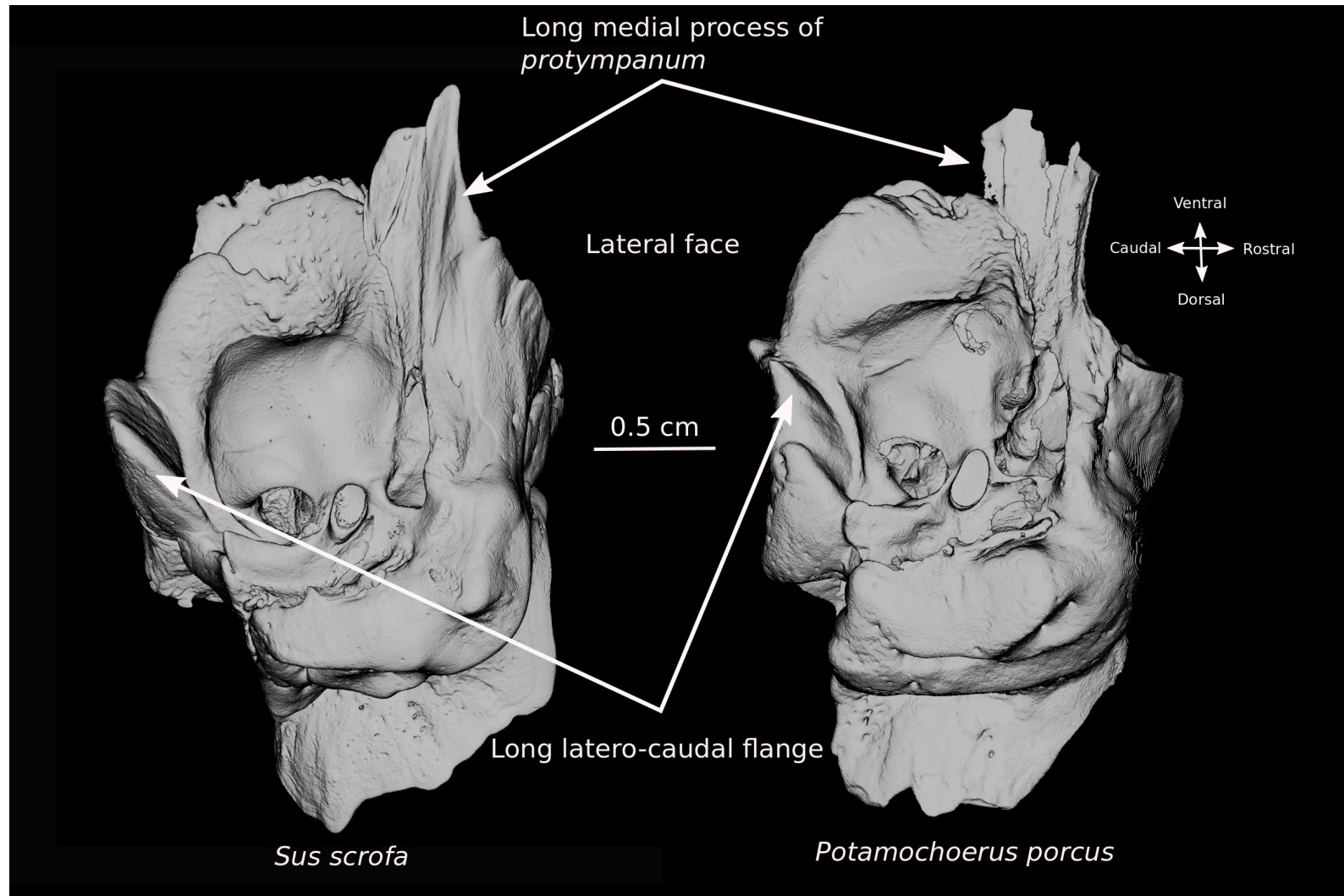


Inner ear of *Sus scrofa*



PCA conformation space of inner ear
(Mennecart *et al.*, in prep.)

Discussion

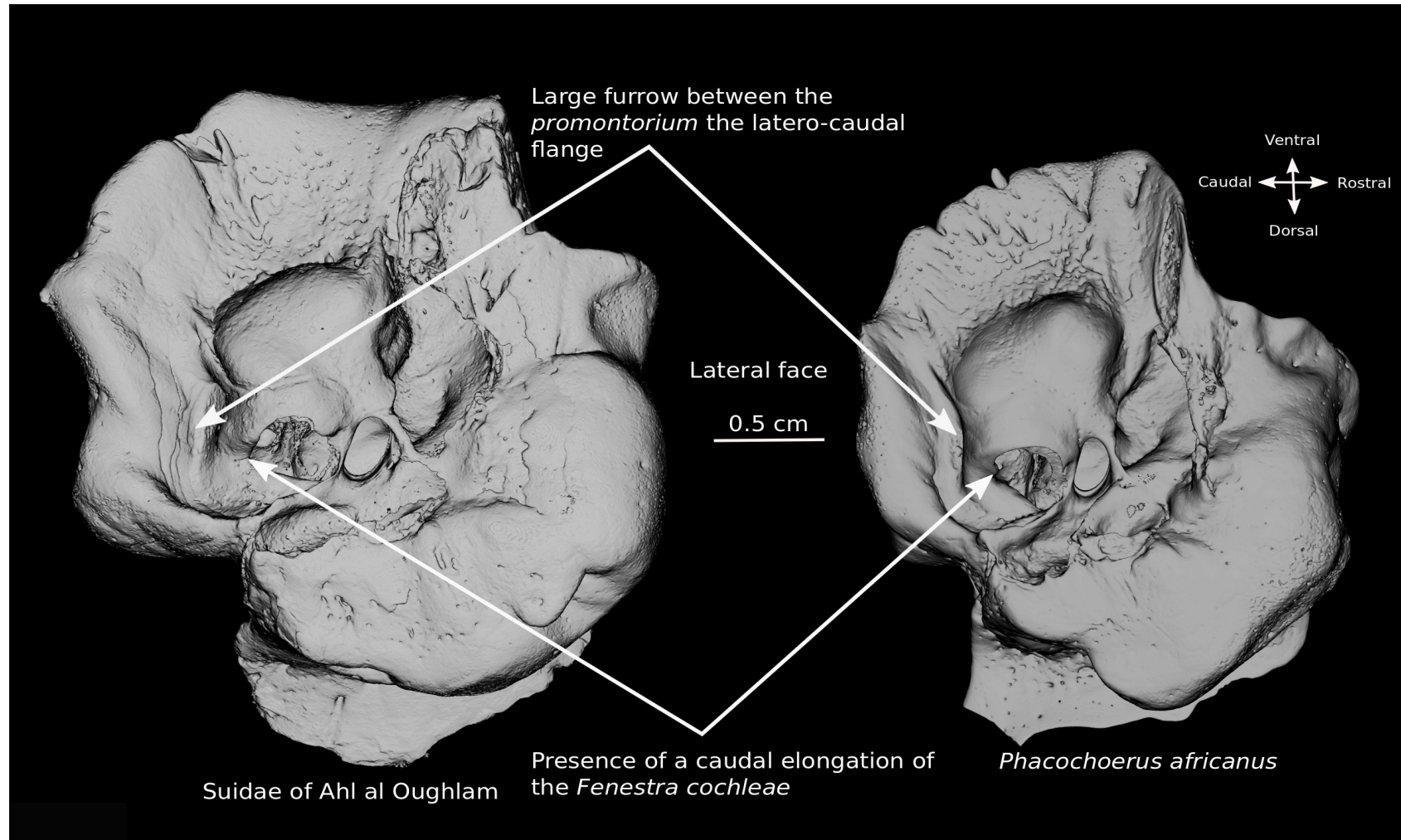


Morphological similarities between the extant genera *Sus* and *Potamochoerus*

Hypothesis 1: retained plesiomorphic characters?

Hypothesis 2: evolutive convergence?

Discussion

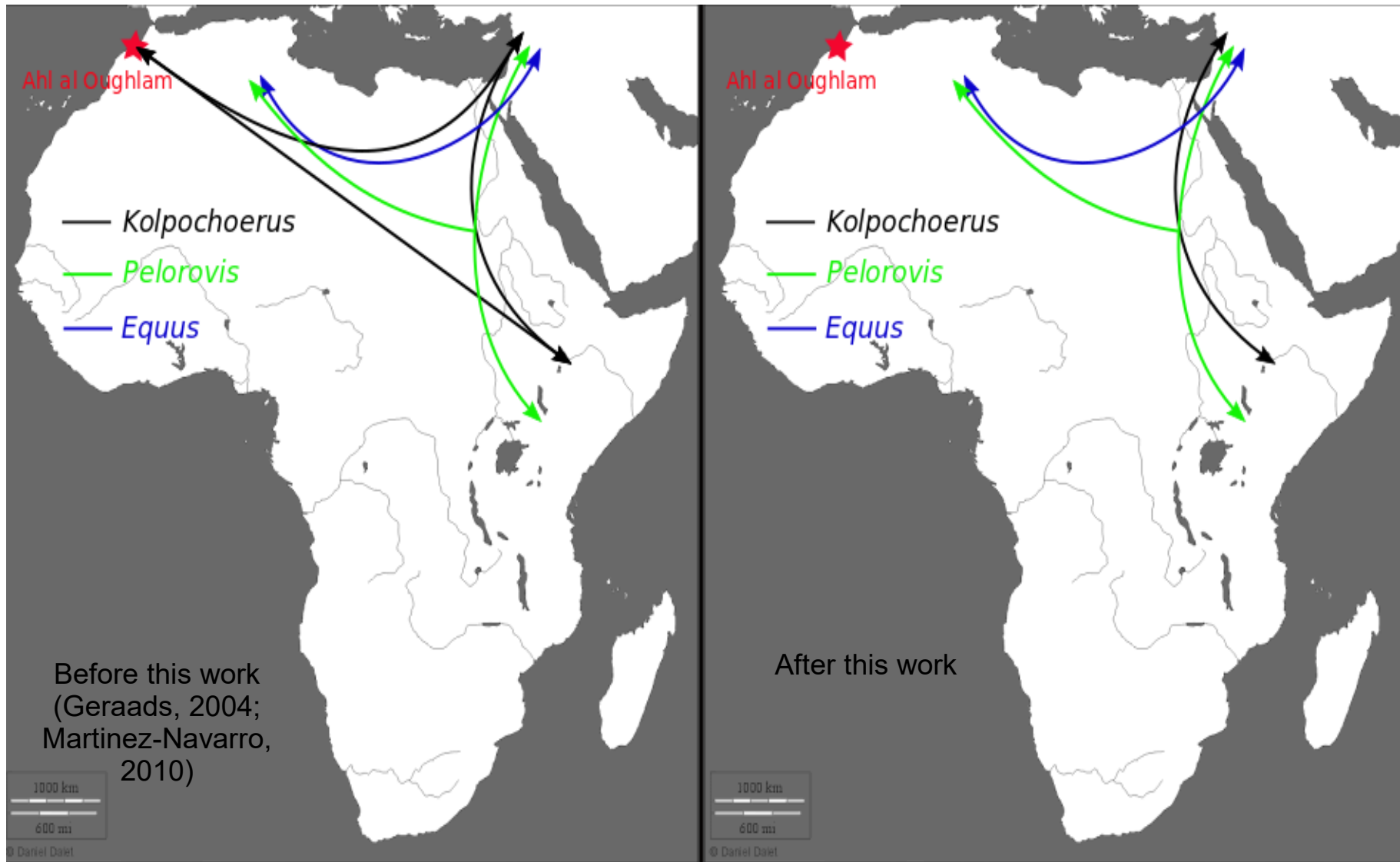


Morphological similarities between the extant *Phacochoerus* and the Suidae found at Ahl al Oughlam

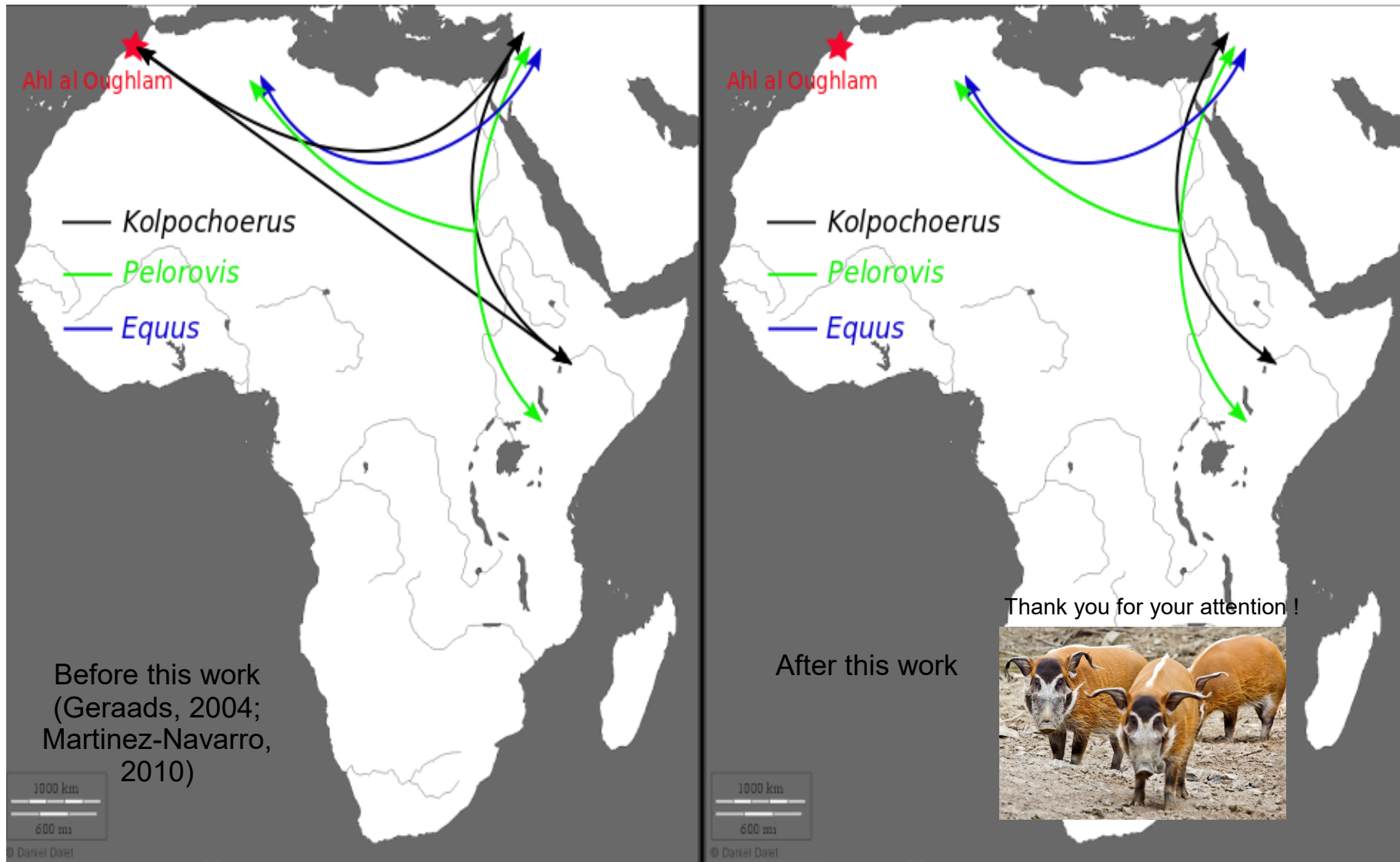
Hypothesis 1: shared apomorphic characters?

Hypothesis 2: evolutive convergence?

Paleobiogeographic hypothesis



Paleobiogeographic hypothesis



Do you have any questions ? Are you looking for a PhD student ?

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