Dataset

3D models of three wolf pup skulls related to the publication: Neomorphosis and heterochrony of skull shape in dog domestication

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Abstract
This contribution comprises the 3D models of three wolf pup skulls, which were used for the publication by Geiger et al. 2017 on neomorphosis and heterochrony of skull shape in dog domestication.

Keywords: Canidae, *Canis lupus*, Carnivora

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INTRODUCTION

This contribution comprises the dataset of computed tomography (CT) examinations of three wolf pup skulls (Table 1). The CT protocol included a whole body scan (models not included here) and a separate thin-sliced scan of the head/neck region (Figure 1) of three specimens from the Tierpark Bern – Dählhözli und Bärenpark (protocol CLL). Based on CT data 3D models were calculated. The main publication describes ontogenetic trajectories of cranial shape change in wolves based on these CT scans and further specimens, in comparison with domestic dogs (Geiger et al. 2017).

METHODS

The CT protocol was performed on a 128-slice CT scanner (Somatom Definition Flash, Siemens Medical Solutions, Forchheim, Germany). The protocol included a whole body scan with the following parameters: 120 kVp, 1000-1350 effective mAs using dose modulation technique (CAREdose4D™, Siemens, Forchheim, Germany), Reconstructions were made in an adjusted field-of-view using 0.6 mm slice thickness and a 0.4 mm increment. Reconstructions were made with a hard kernel (H60) and a soft kernel (H31). Additionally, a separate high-resolution scan of the head/neck region was performed using the parameters as follows: 120 kV, 330 mAs. Reconstructions were made with an adjusted field-of-view using 0.4 mm slice thickness and 0.2 mm increment. Reconstructions were made with a hard kernel (U70) for each scan. Afterwards, 3D models were calculated using Avizo (version 6.2.1, FEI Visualization Sciences Group, Berlin, Germany).

Model IDs	Taxon	Description
M3#312_CLL2	*Canis lupus*	Skull
M3#313_CLL4	*Canis lupus*	Skull
M3#314_CLL5	*Canis lupus*	Skull

Table 1. List of models. All models come from the Tierpark Bern - Dählhözli und Bärenpark, Switzerland.

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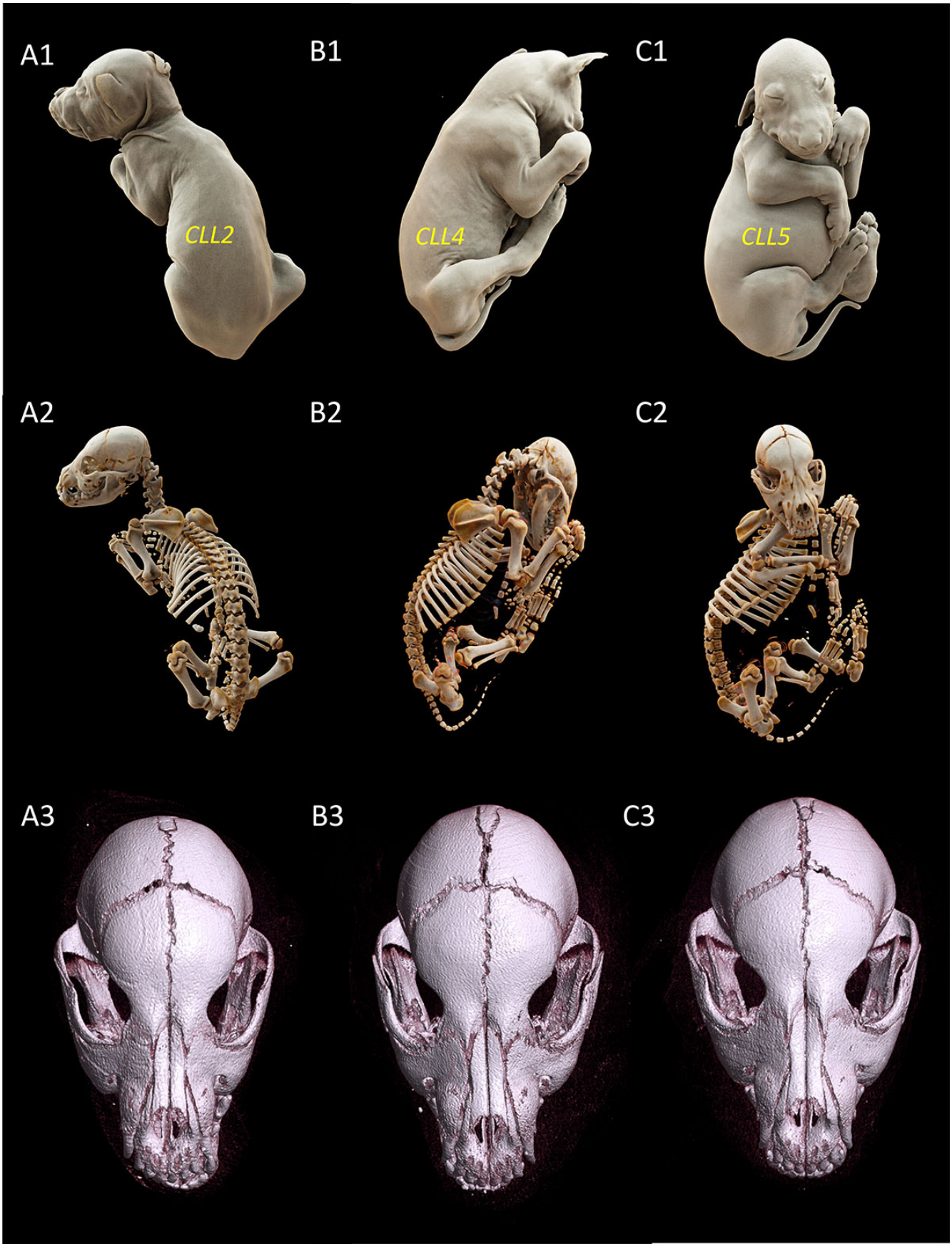

Figure 1. Volume renderings of the wolf pups CLL2, CLL4, and CLL5 (A1-C1) and their skeleton (A2-C2). The pups were partly frozen during the CT scans; thus, an anatomical alignment of the bodies was not possible. Volume renderings of the 0.4 mm CT datasets of each skull CLL2, CLL4, and CLL5 in frontal view (A3-C3).

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