**Hypercarnivorous teeth and healed injuries to Canis chihliensis from early Pleistocene Nihewan beds, China, support social hunting for ancestral wolves**

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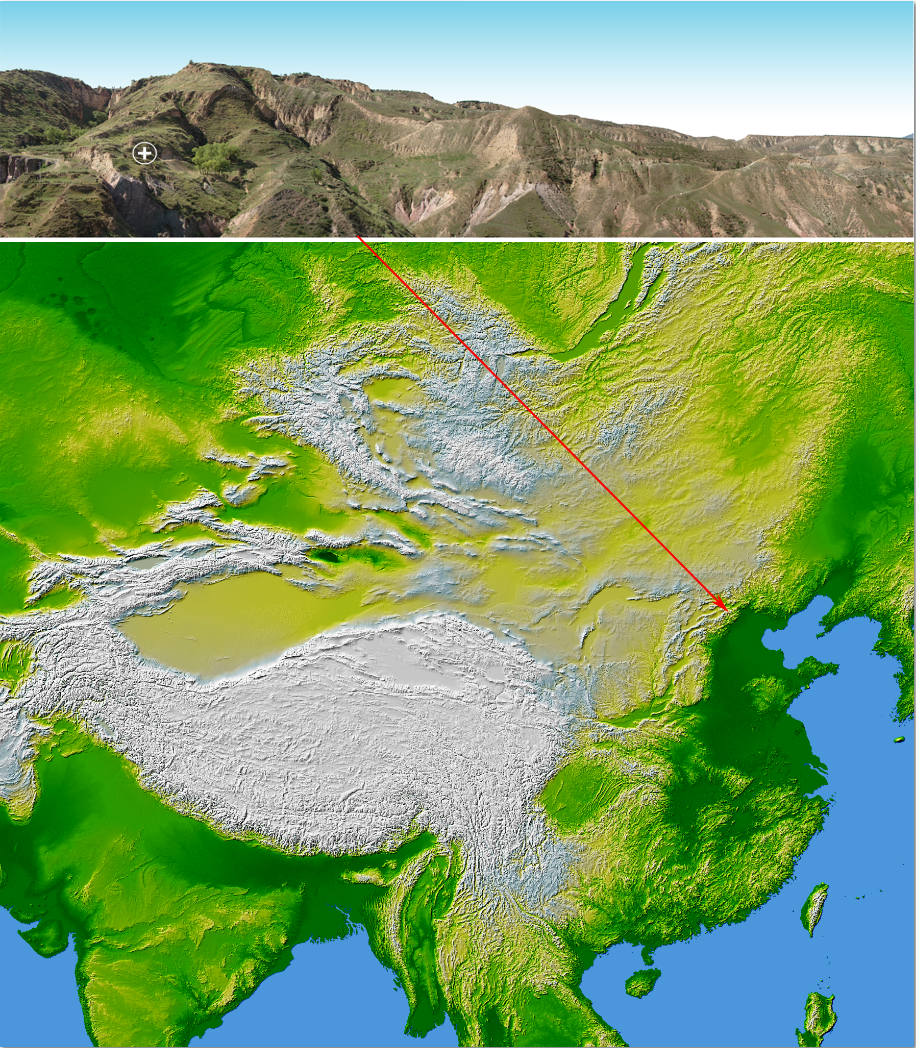
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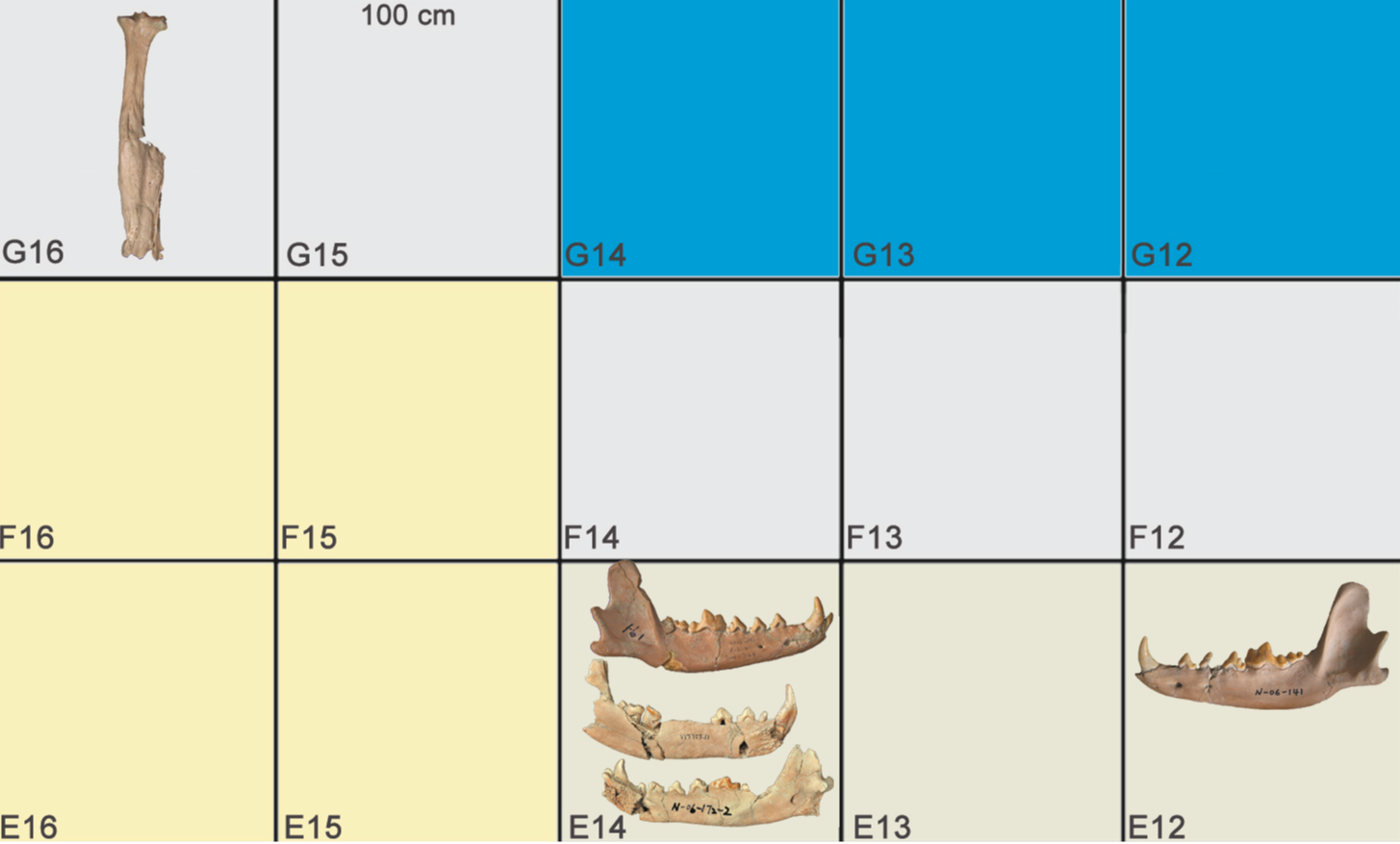
7 Natural History Museum of Los Angeles County, California, USA.

# Supplementary Information

The following are additional figures cited in the main text.



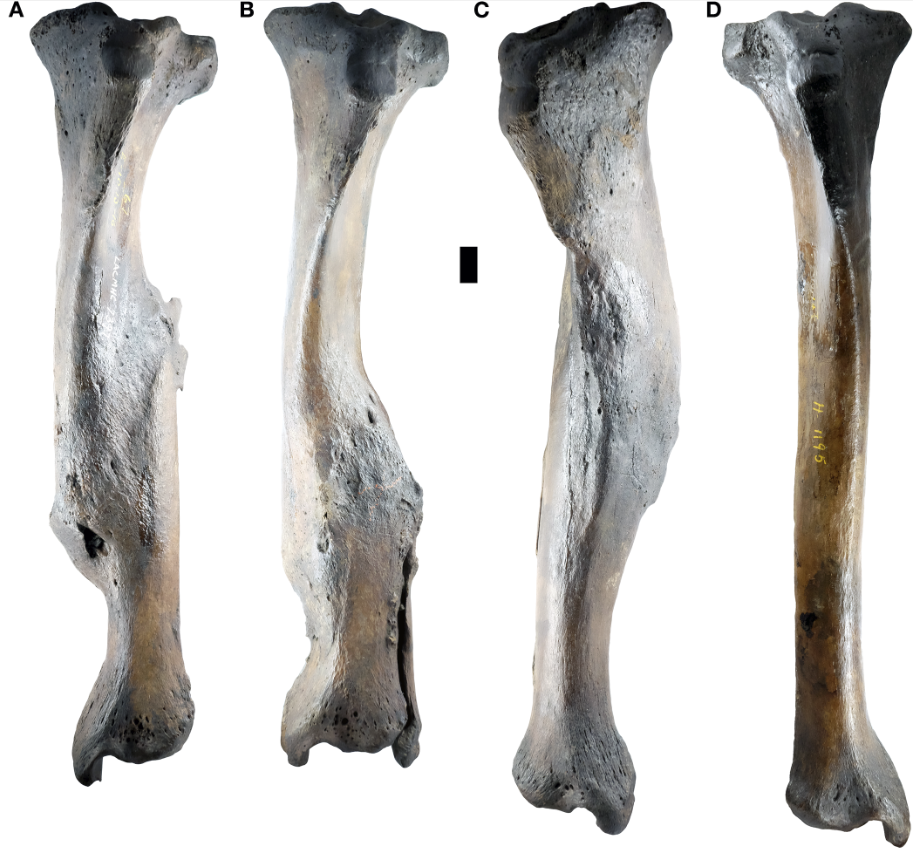
**Figure S1 Photograph of the Shanshenmiaozui Site and map location of the Nihewan Basin.** Topographic image is modified from NASA Earth Observatory (https://earthobservatory.nasa.gov/images/3741/topography-of-the-world).



**Figure S2 Excavation grid (1 x 1 m) with representative *Canis* specimens discussed in this paper.**



**Figure S3 Examples of dentaries of *Canis dirus* from the late Pleistocene Rancho La Brea asphalt seeps bearing abscesses, alveolar resorption, and tooth fracture in the p4-m1 region similar to those in the pathological *C. chihliensis* dentaries.** A1, B1, and C1 lateral views; A2, B2, and C2 occlusal views. Scale bar = 1 cm. A, LACMHC 13262, right dentary with heavy occlusal wear and alveolar abscess with root drainage on the anterior m1, from Pit 4; B, LACMHC 55726, left dentary with heavy occlusal wear, possible abscess around the anterior alveoli of p4 and m1, and m1 fractured anteriorly, from Pit 61/67; C, LACMHC 55730, left dentary with heavy occlusal wear, fractured m1, and alveolar reaction around the roots, also from Pit 61/67.



**Figure S4 Examples of tibiae of *Canis dirus* from the late Pleistocene Rancho La Brea asphalt seeps bearing healed oblique fractures of the mid-shaft with foreshortening of the bone, similar to that in the pathological *C. chihliensis* tibia (Figs. 4, 5).** Scale bar = 1 cm. A, LACMHC 7397, left tibia, from Pit 61/67; B, LACMHC 7396, left tibia with distal fibula attached and involved in the oblique fracture, from Pit 61/67; C, LACMHC 7336, right tibia with fused fibula fragment, from Pit 61/67; D, LACMHC H-1195, non-pathologic right tibia for comparison, no deposit data available.