

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/326000033>

The Upper Limb of Homo naledi: New material from the Lesedi Chamber, Rising Star System, South Africa

Conference Paper · June 2018

CITATIONS
0

READS
90

6 authors, including:



Elen Feuerriegel
University of Washington Seattle

28 PUBLICATIONS 174 CITATIONS

SEE PROFILE



Jean-Luc Voisin
French National Centre for Scientific Research

77 PUBLICATIONS 340 CITATIONS

SEE PROFILE

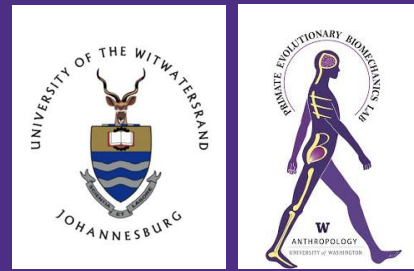
Some of the authors of this publication are also working on these related projects:



EMG of the upper limb in Oldowan stone tool manufacture [View project](#)



Gladysvale excavation [View project](#)

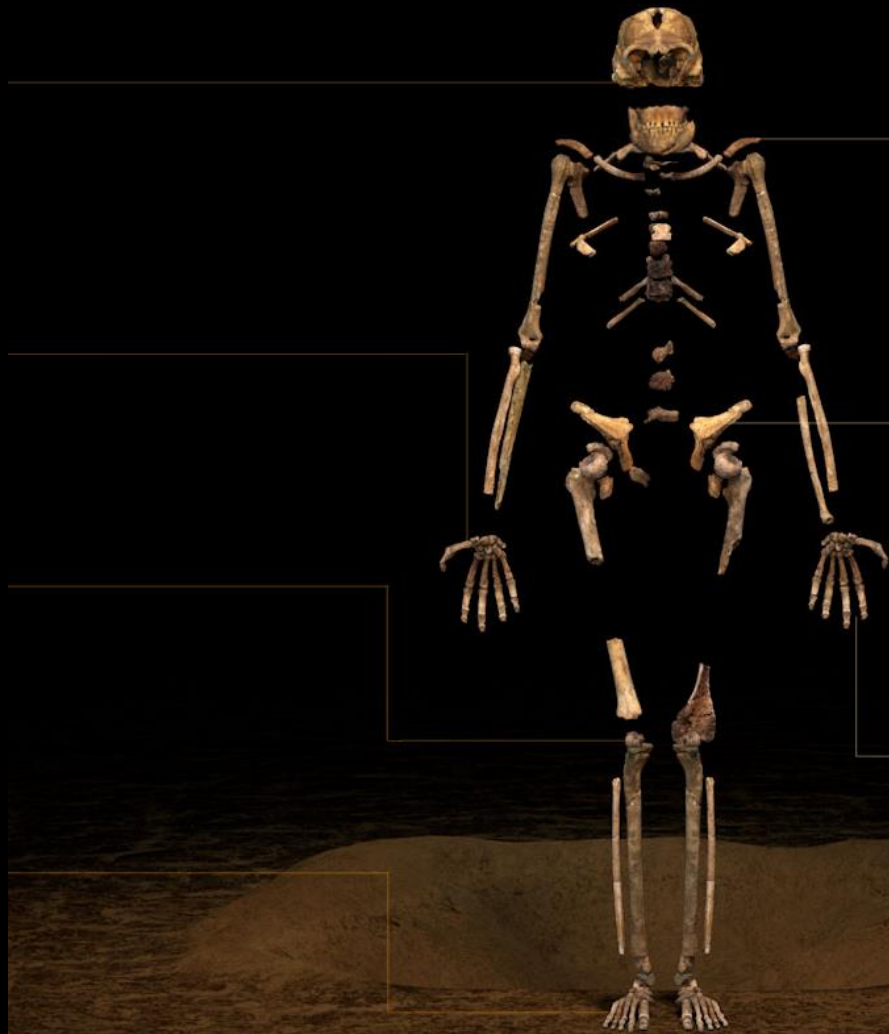


The Upper Limb of *Homo naledi*:

New material from the Lesedi Chamber, Rising Star System, South Africa

Elen M. Feuerriegel^{1,2}, Jean-Luc Voisin³, Steven E. Churchill⁴, Peter Schmid^{2,5}, John Hawks^{2,6}, Lee R. Berger²

¹ Primate Evolutionary Biomechanics Laboratory, Department of Anthropology, Box 353100, University of Washington, Seattle, WA 98195-3100 USA. ² Evolutionary Studies Institute and Centre for Excellence in PalaeoSciences, University of the Witwatersrand, Private Bag 3, Wits 2050, South Africa. ³ Unité d'Anthropologie bioculturelle, Droit, Éthique & Santé (ADÉS), UMR 7268, Université d'Aix-Marseille-EFS-CNRS, 13344 Marseille, France. ⁴ Department of Evolutionary Anthropology, Box 90383, Duke University, Durham, NC 27708 USA. ⁵ Anthropological Institute and Museum, University of Zürich, Winterthurerstr. 190, CH-8057 Zürich, Switzerland. ⁶ Department of Anthropology, University of Wisconsin-Madison, Madison, WI 53593 USA.



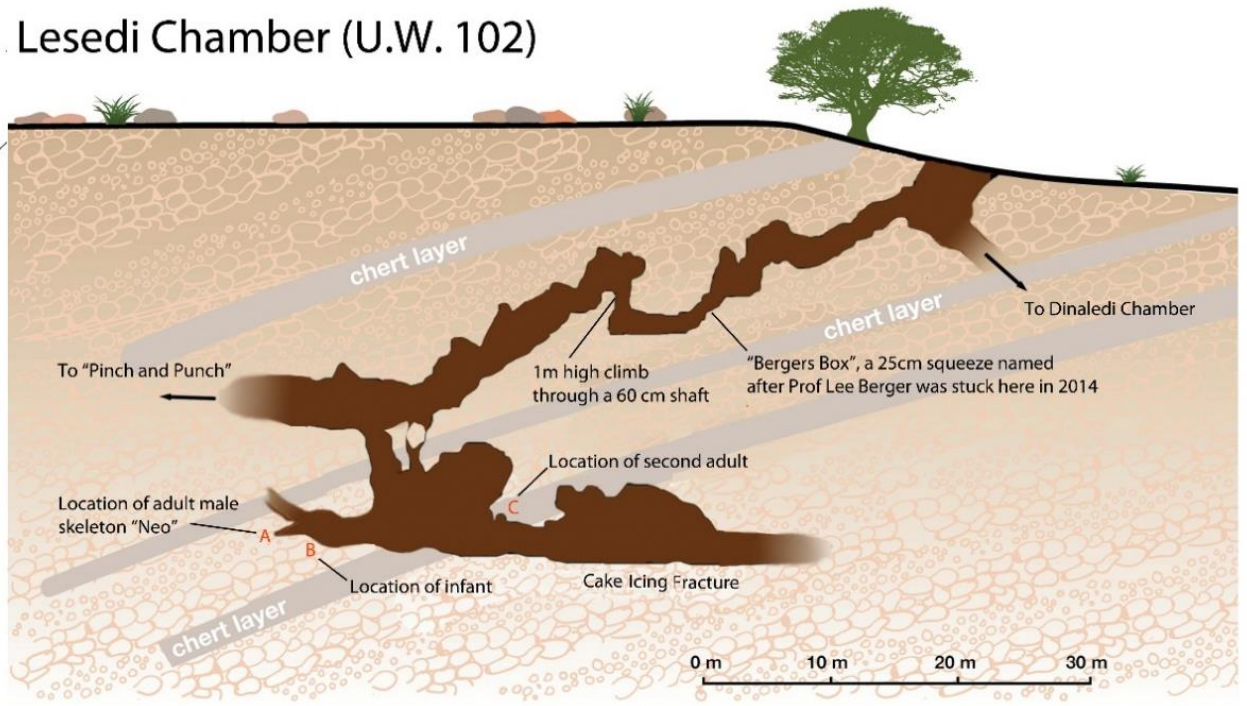
Primitive shoulders

H. naledi's shoulders are positioned in a way that would have helped with climbing and hanging.

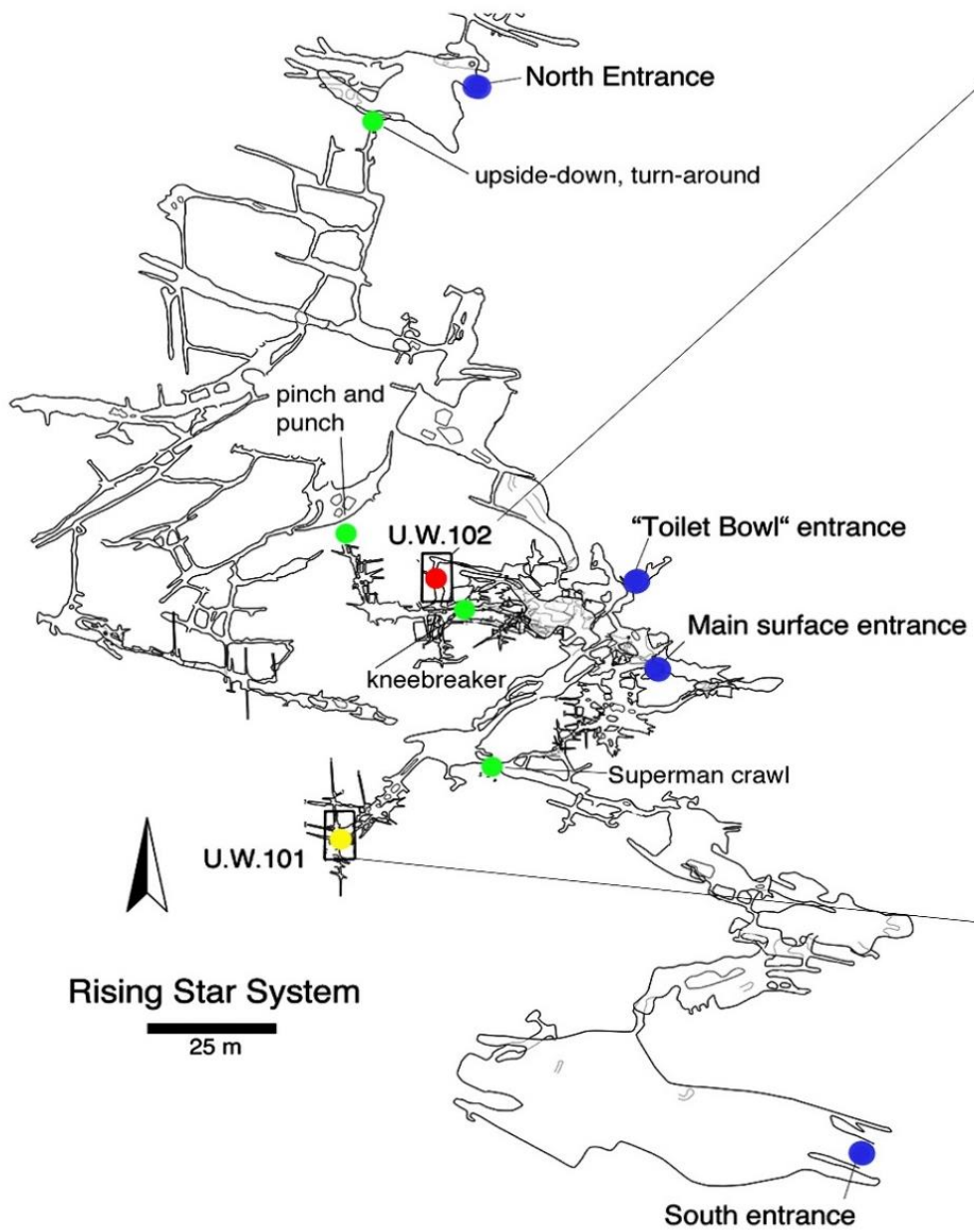
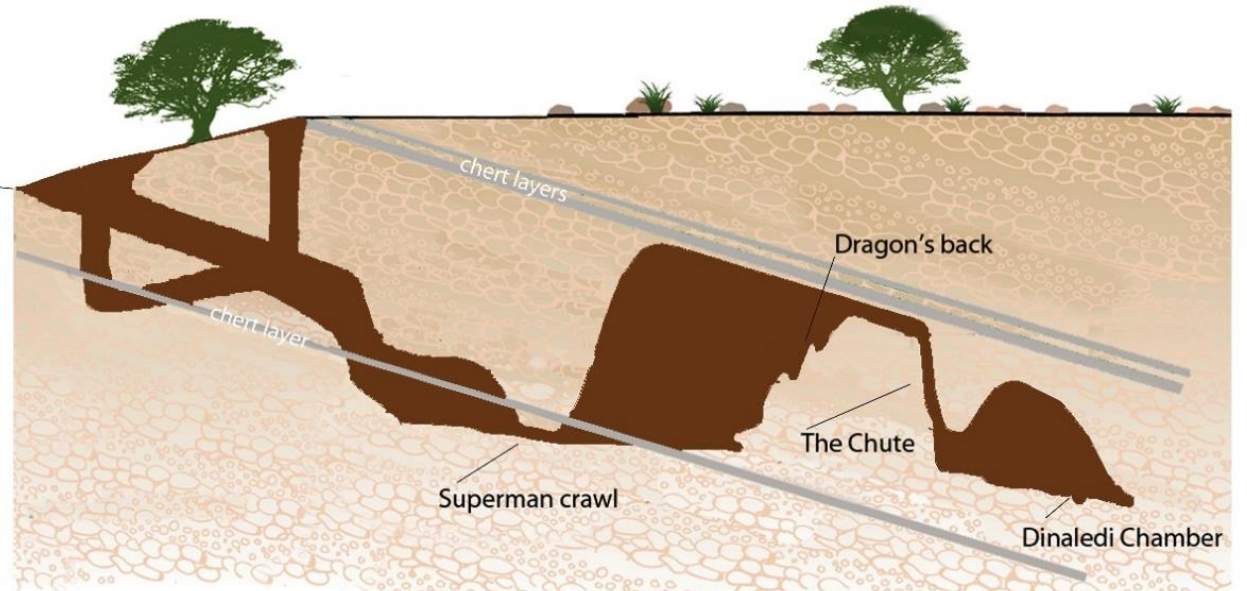
Curved fingers

Long, curved fingers, useful for climbing in trees, could be a trait retained from a more apelike ancestor.

Lesedi Chamber (U.W. 102)



Dinaledi Chamber (U.W. 101)





LES₁
("Neo")

Site 102a

U.W. 102-021
clavicle



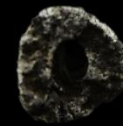
2 cm



5 cm

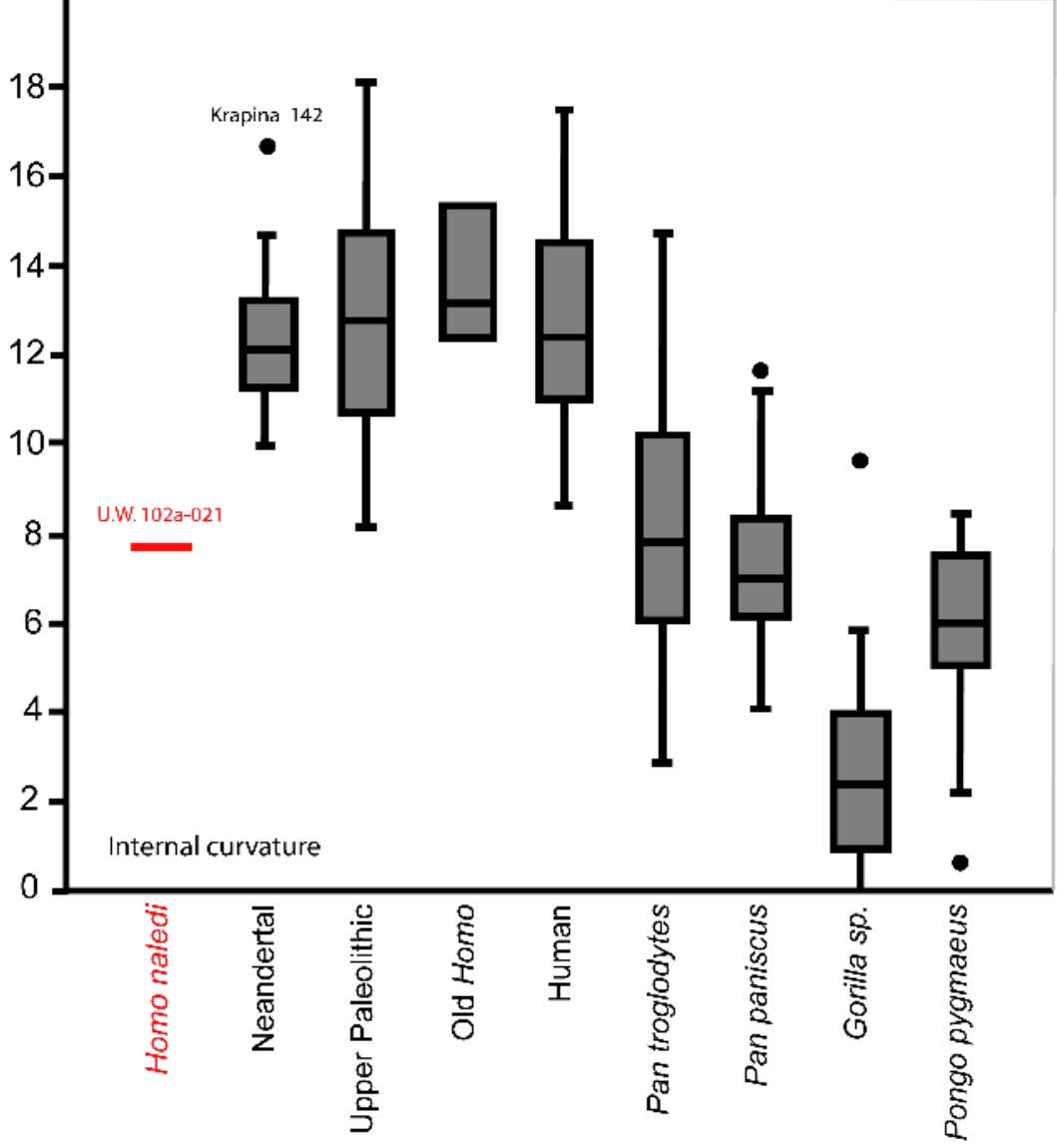
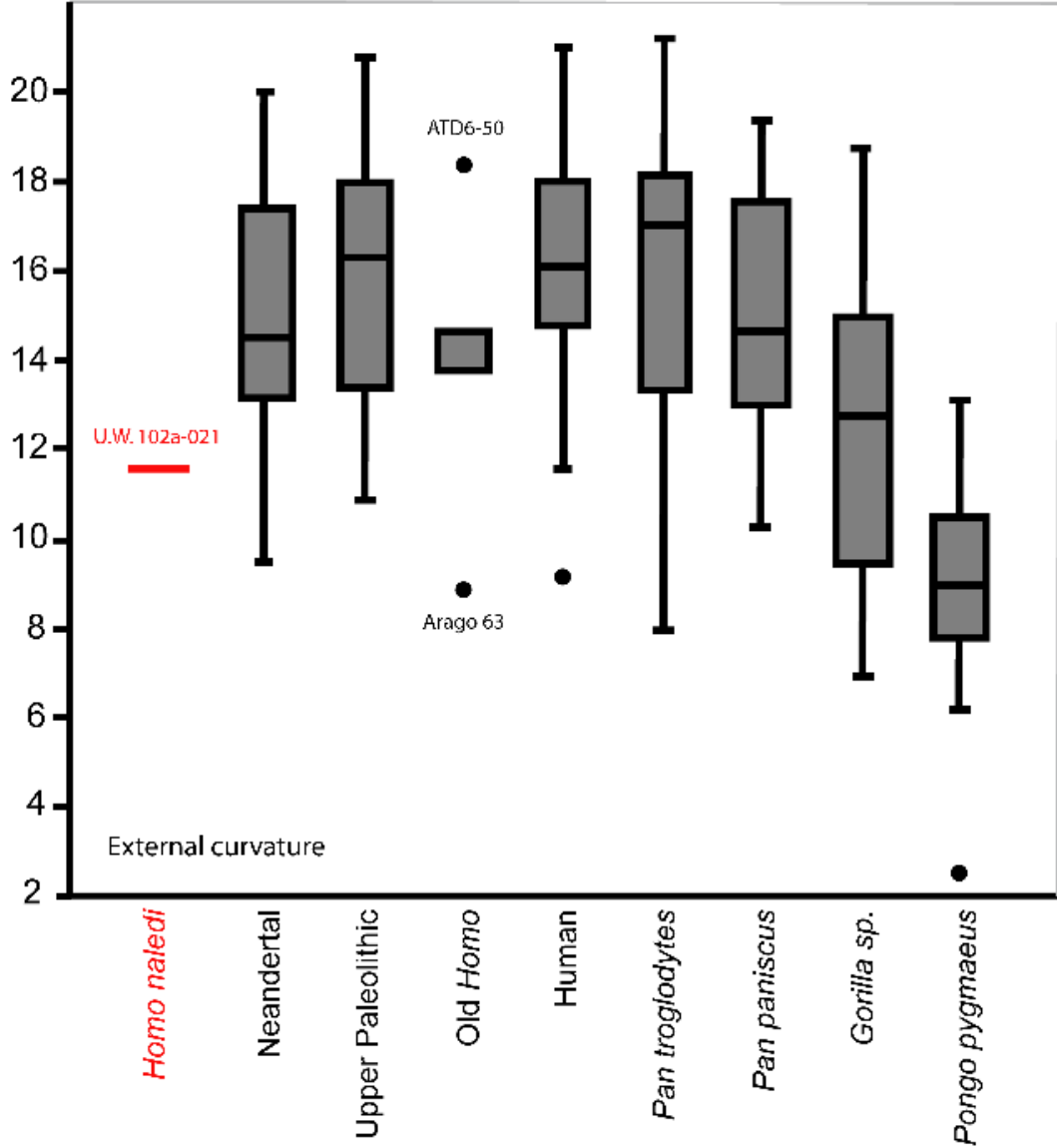
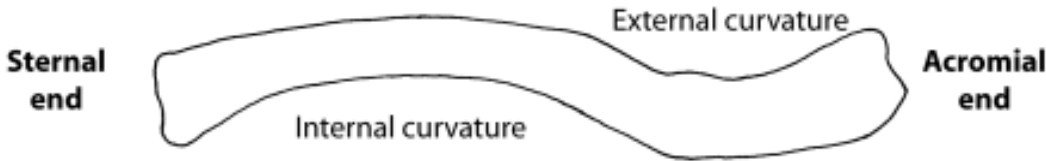
U.W. 102-257
proximal humerus

U.W. 102-015 ulna

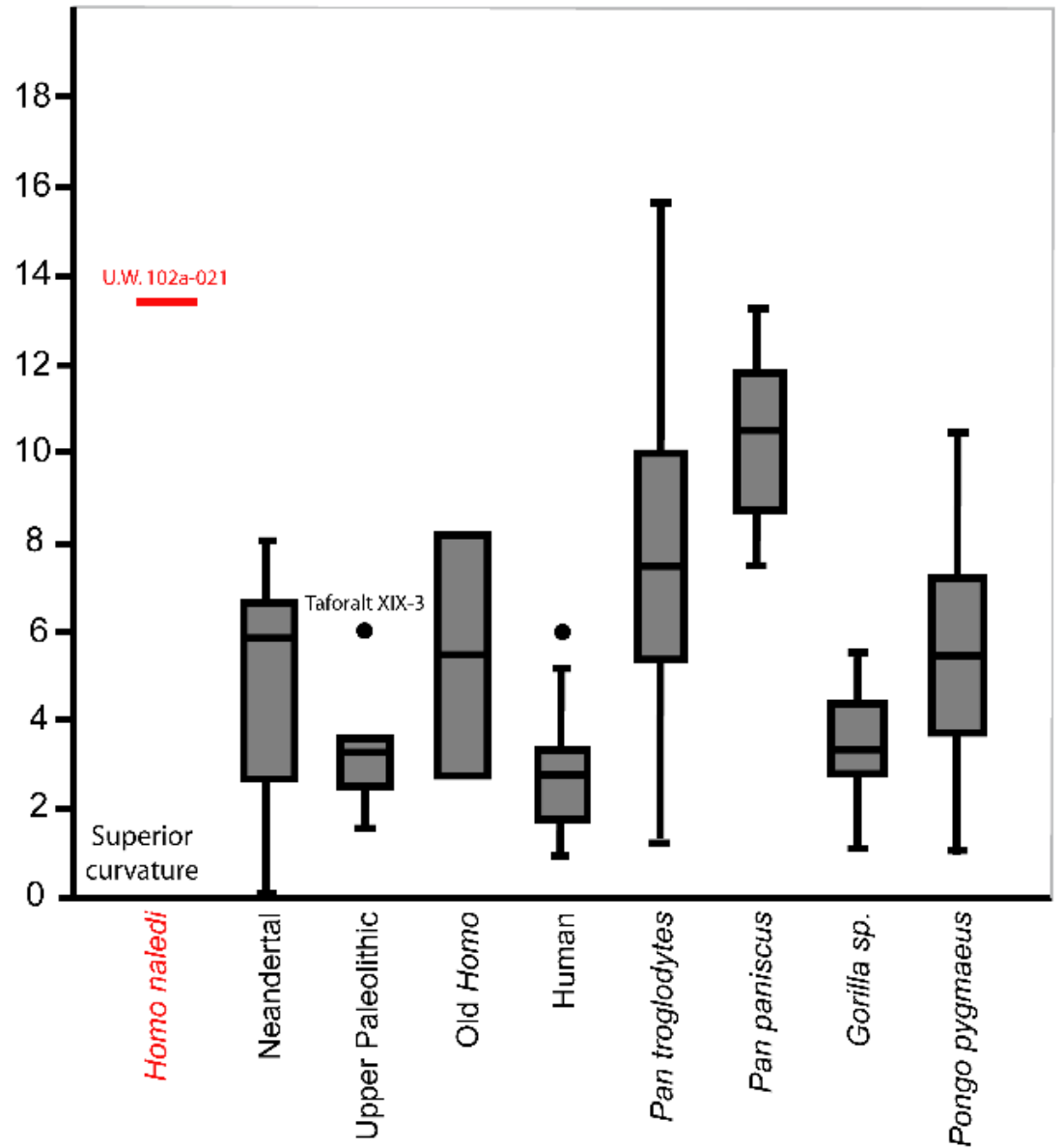
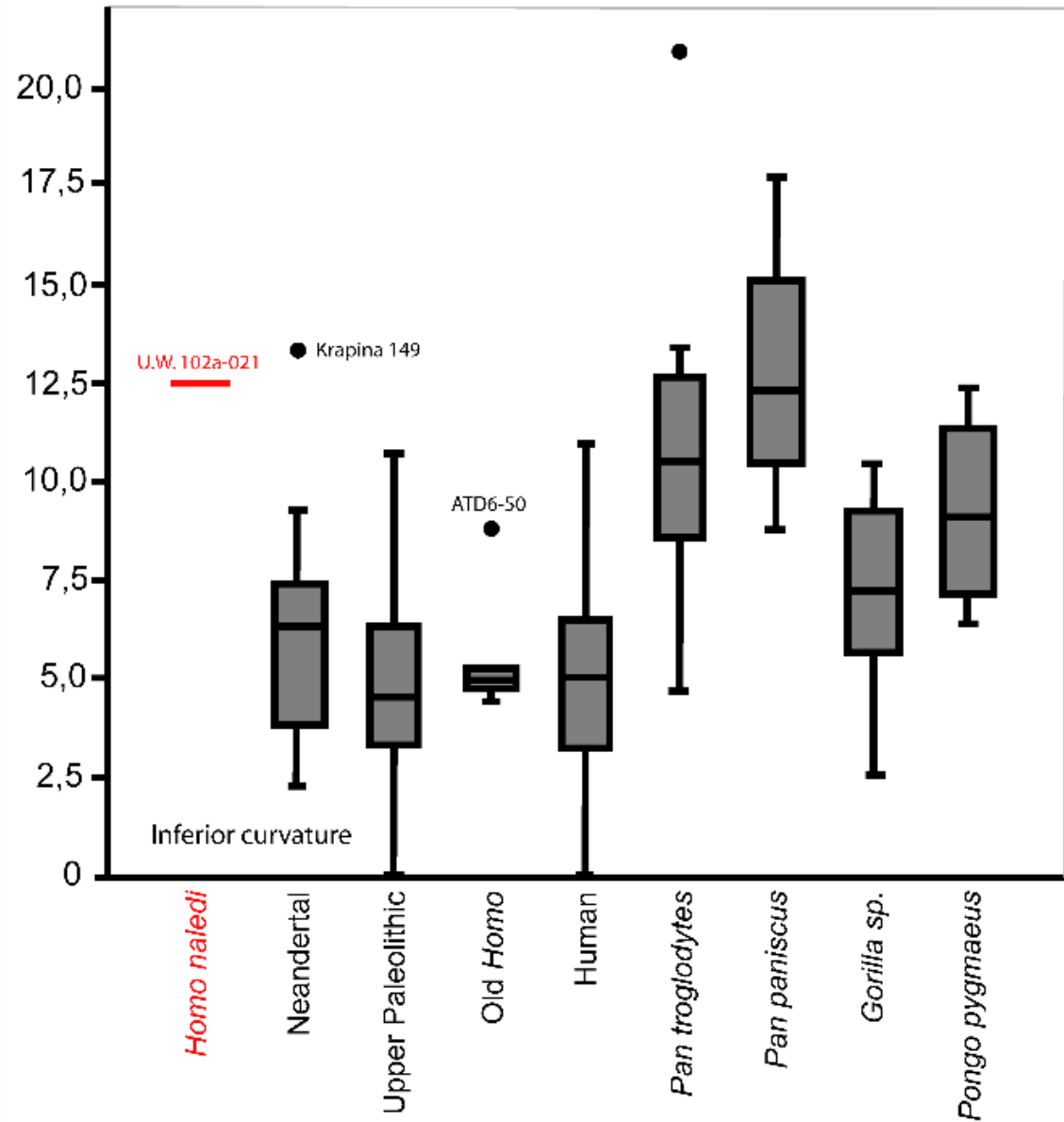
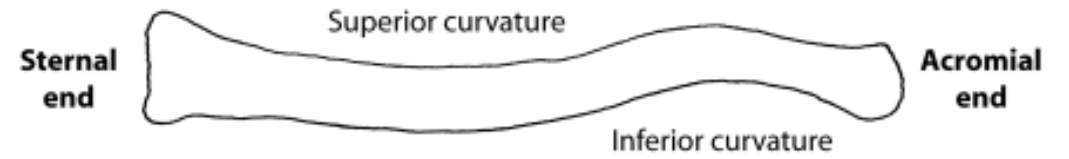


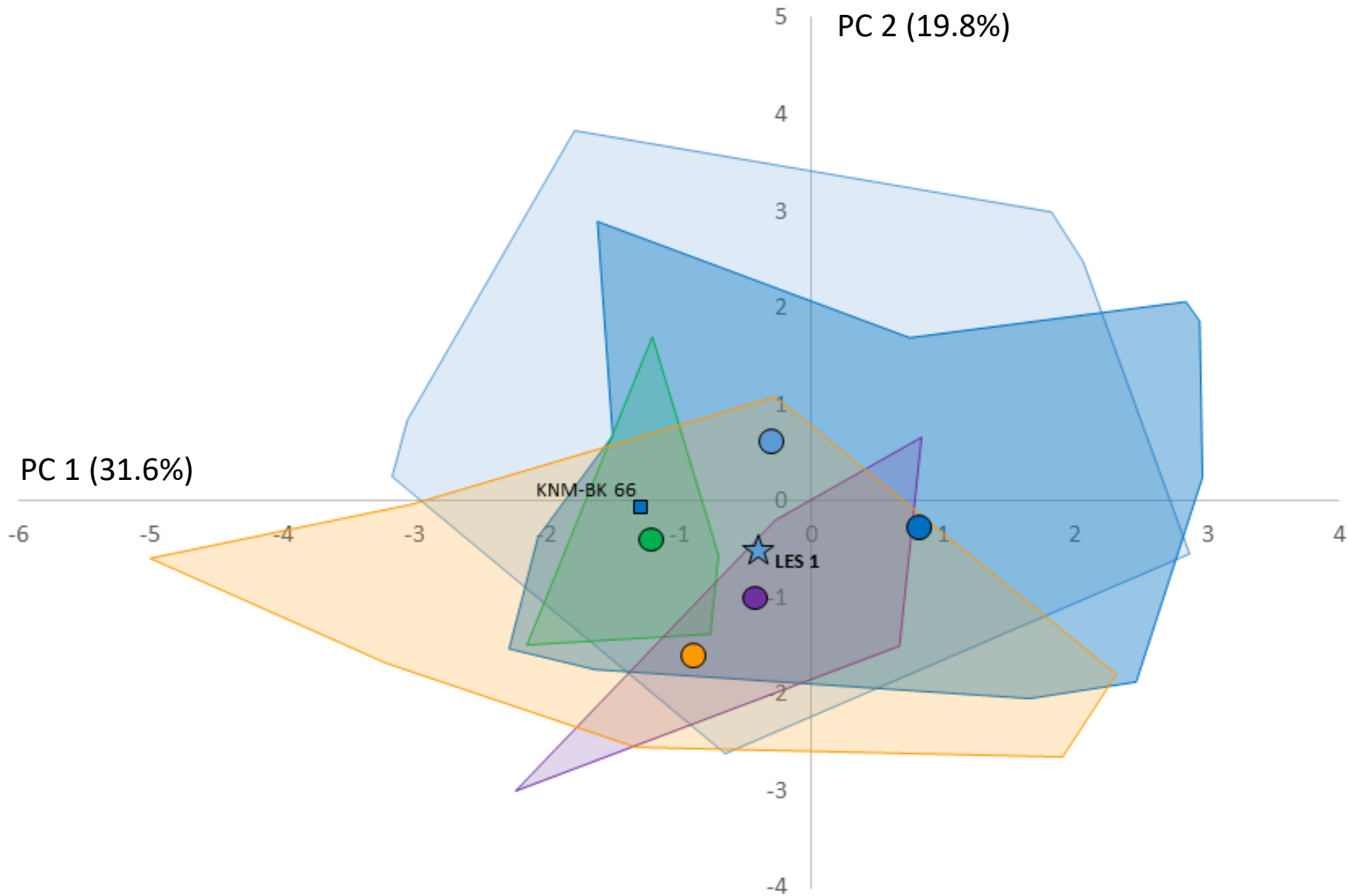
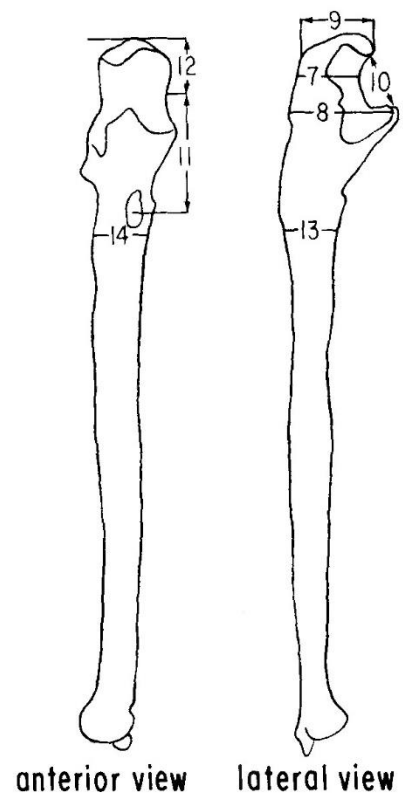
2 cm

Superior view

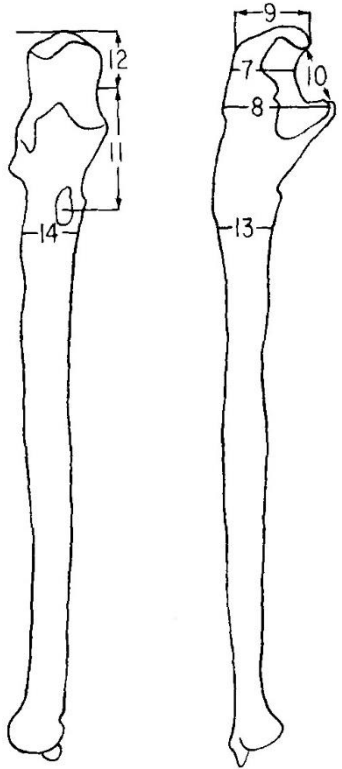


Posterior view

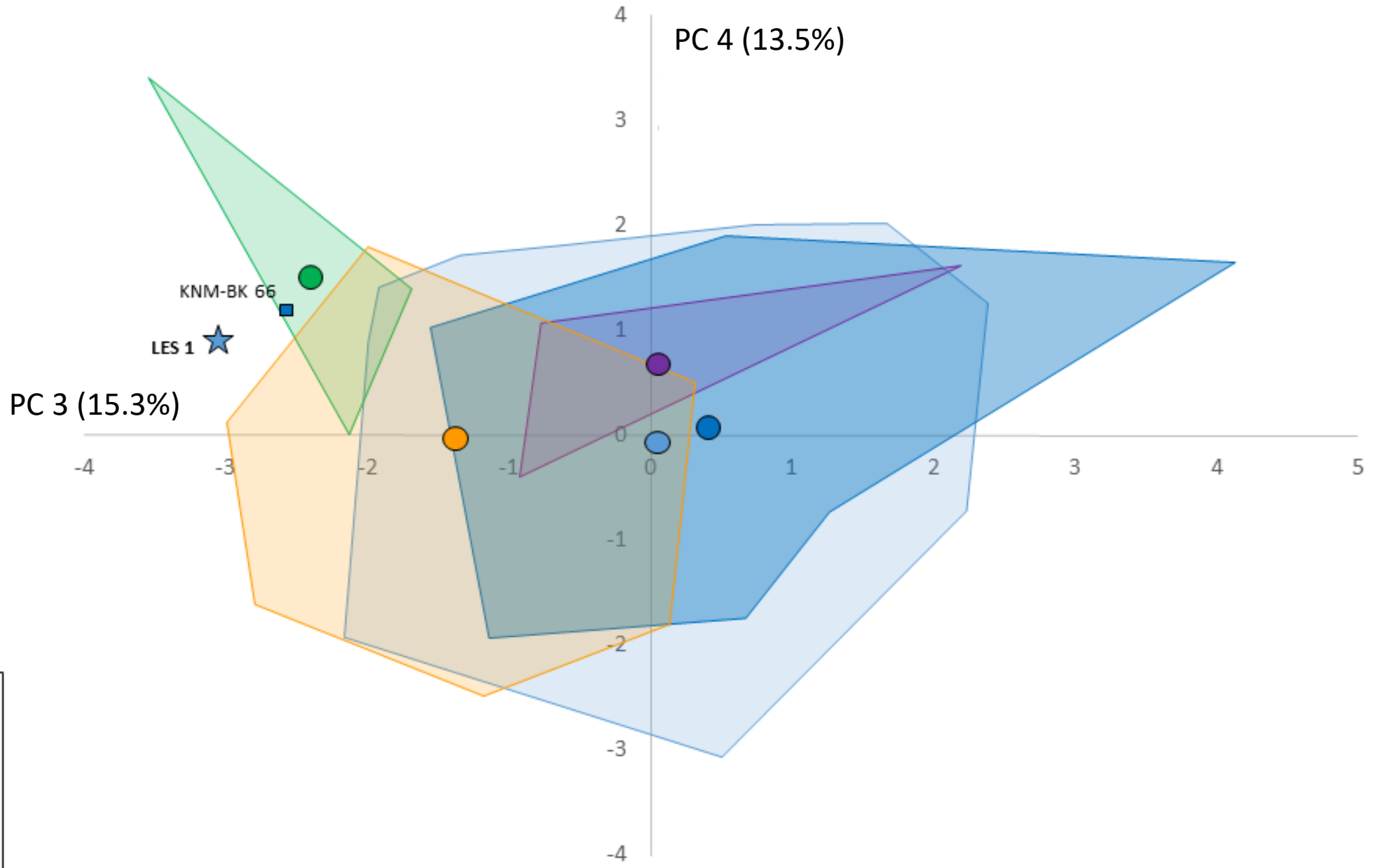




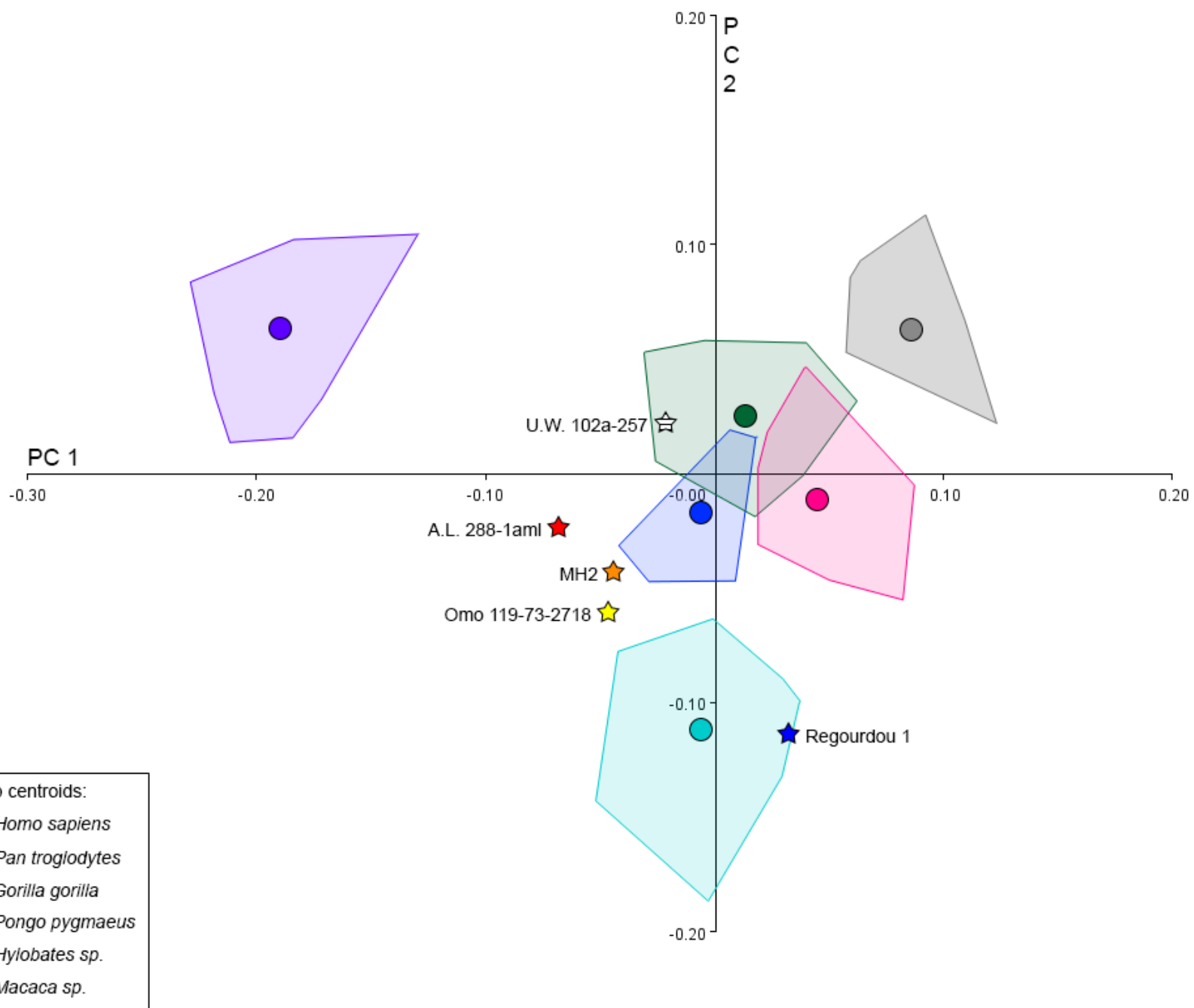
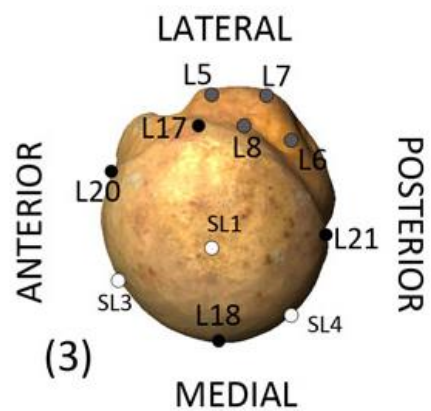
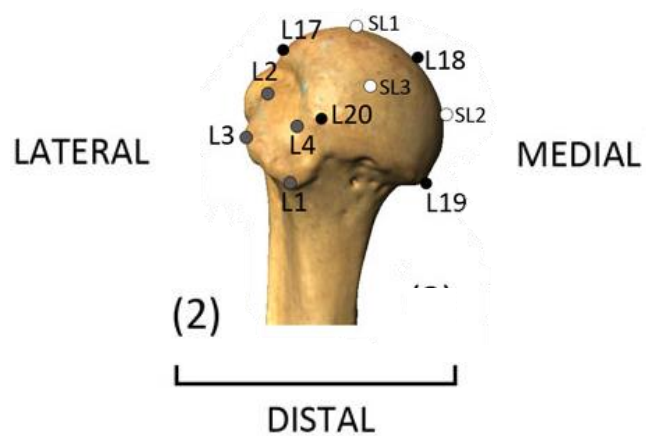
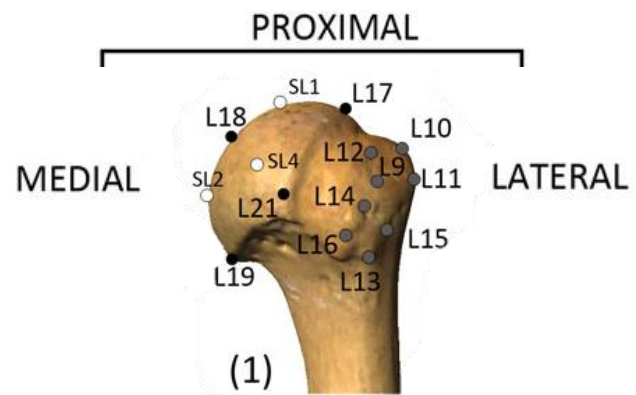
- Group centroids:
- Australopiths
 - Neandertals
 - Early moderns
 - UP moderns
 - Recent moderns



anterior view lateral view



- Group centroids:
- Australopiths
 - Neandertals
 - Early moderns
 - UP moderns
 - Recent moderns



Discussion and Conclusions:

- Clavicle and proximal humerus of *H. naledi* speak to a more ape-like shoulder configuration
- *H. naledi* proximal ulna overall very similar to the KNM-BK 66 ulna from Baringo
- Provisional results reinforce previous interpretations of *H. naledi* upper limb as adapted to climbing behaviours

Thank you



- All the taxonomy and geology papers are open-access with *eLife*: <https://elifesciences.org/>
- 3D surface scans of the fossil material are free to download at MorphoSource: http://morphosource.org/Detail/ProjectDetail/Show/project_id/124