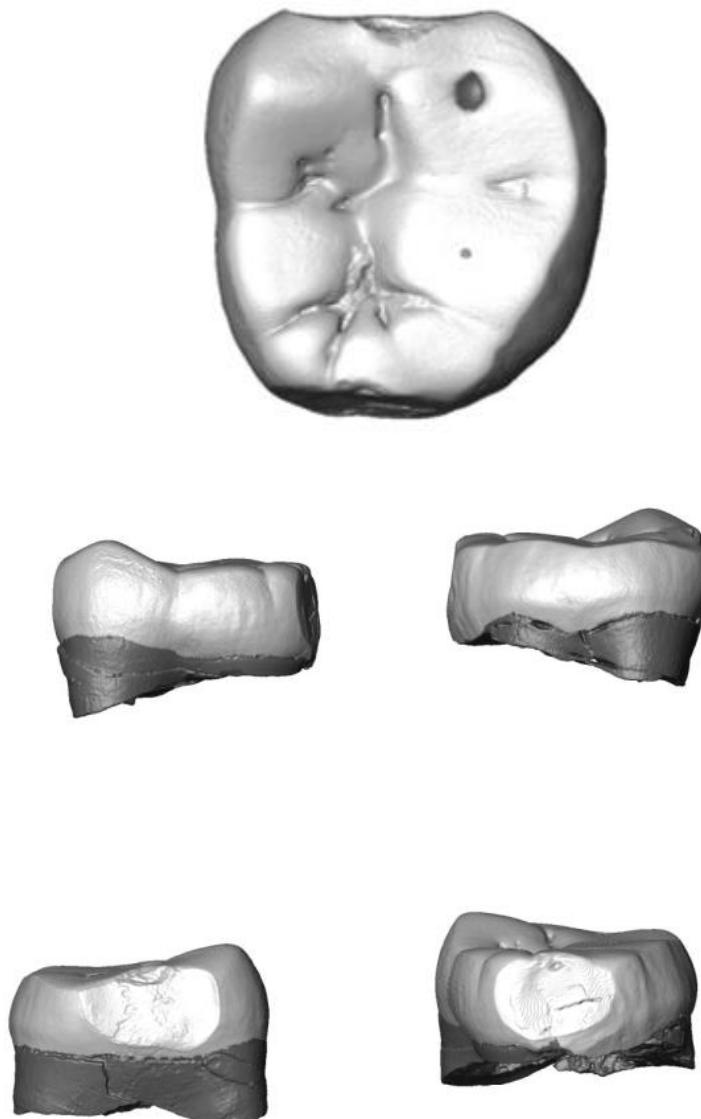
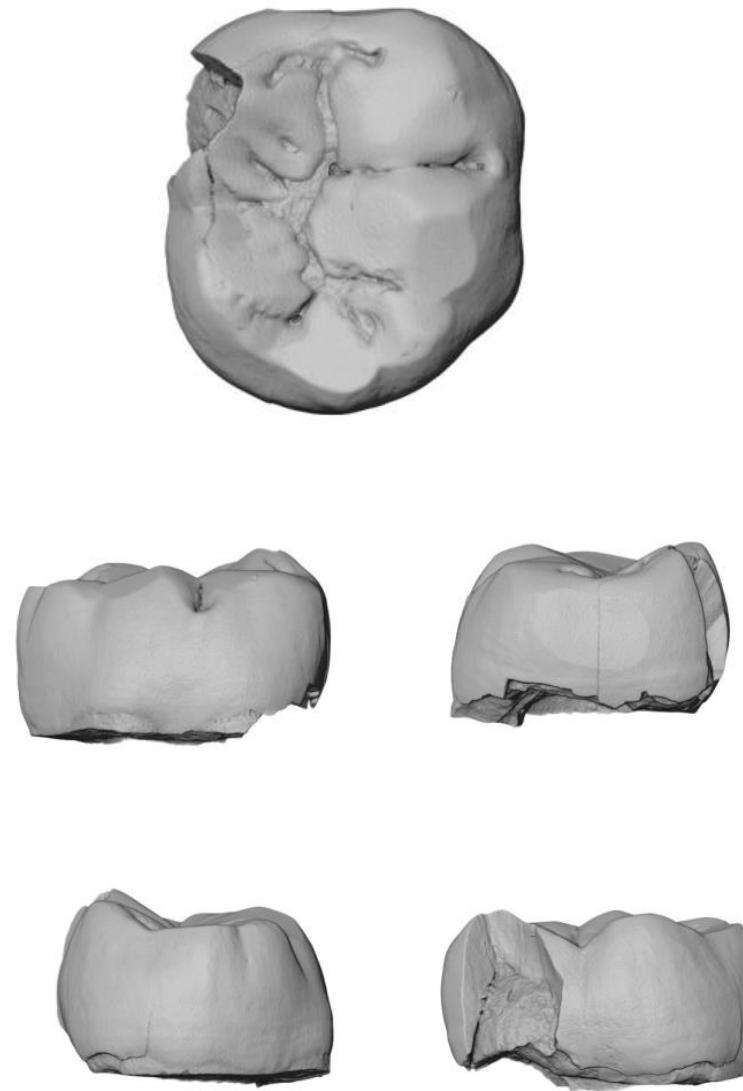


Lower dentition

UW105-002a LRM(2?)

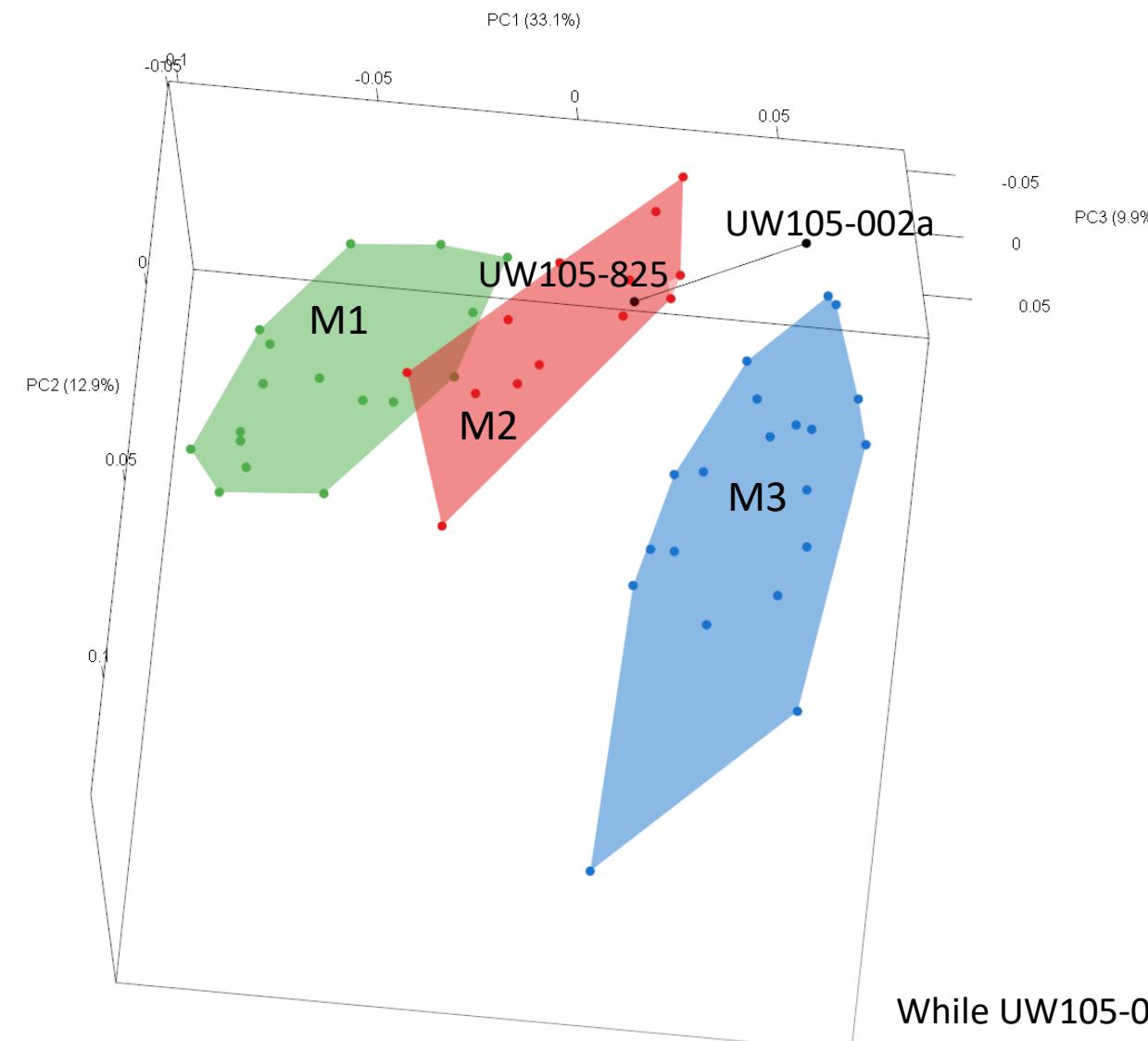


UW105-825 LRM(2?)

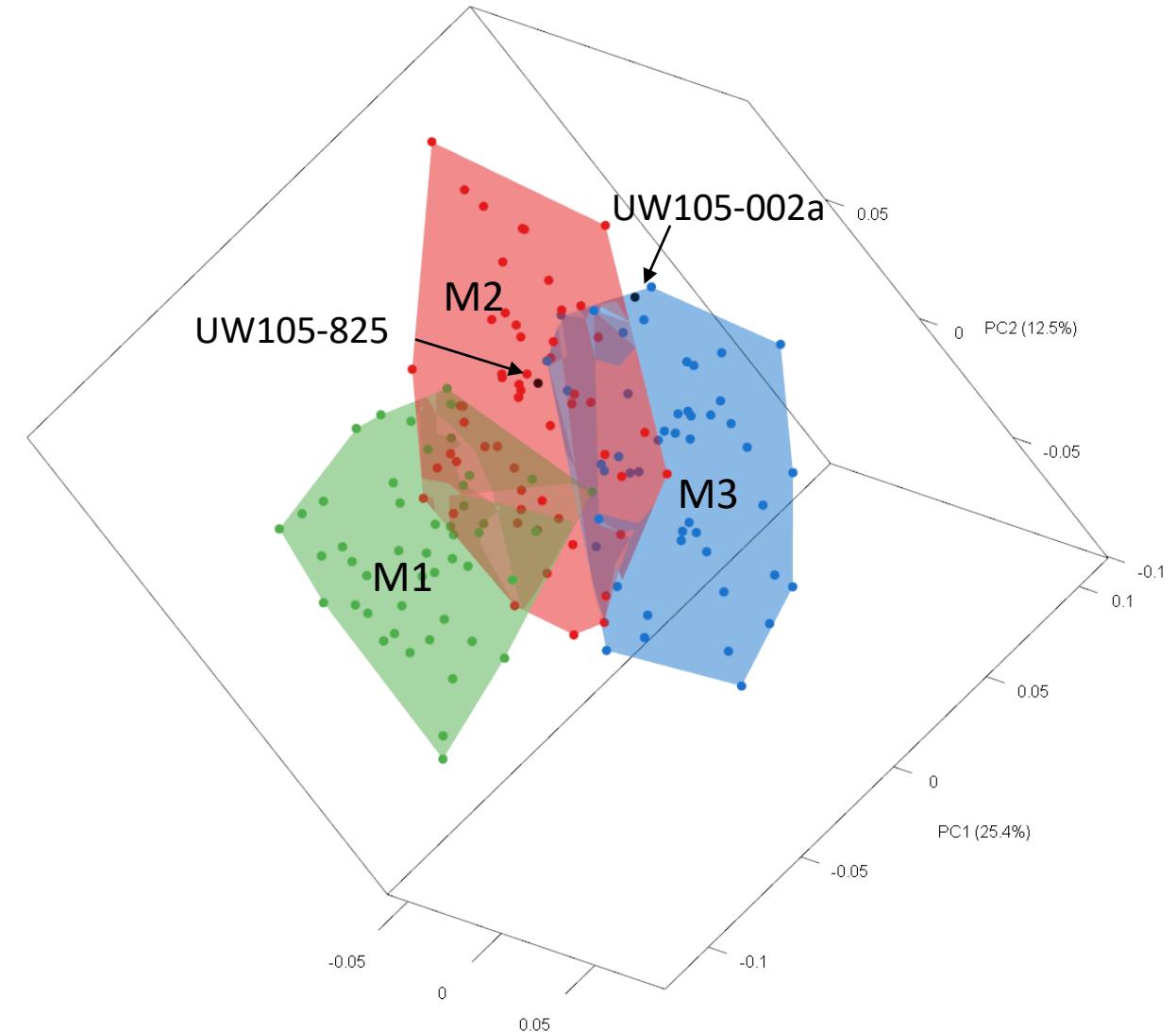


UW105-002a and UW105-825 EDJ ridge and cervix – tooth type assessment.

Shape PCA EDJ ridge + cervix. Only *P. robustus*

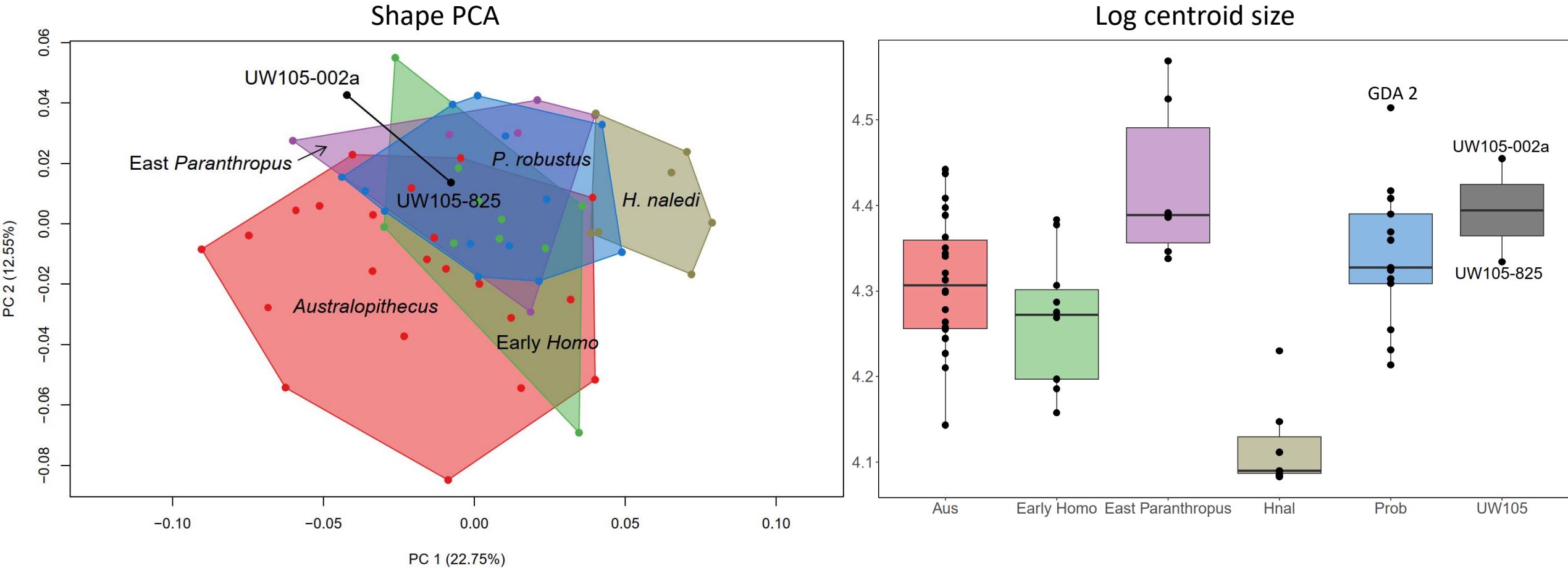


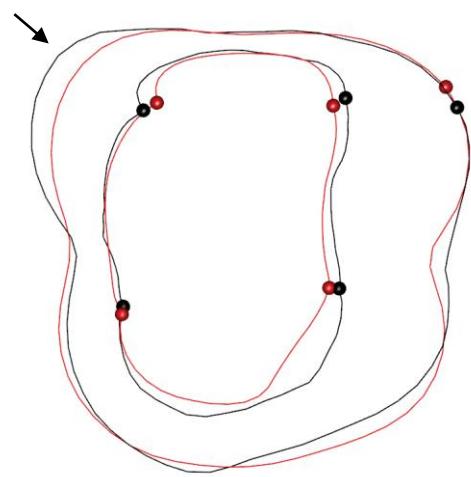
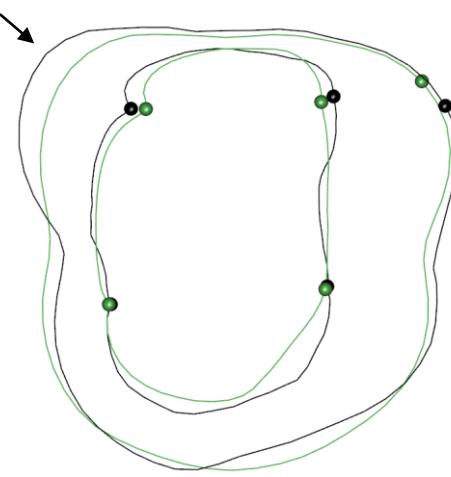
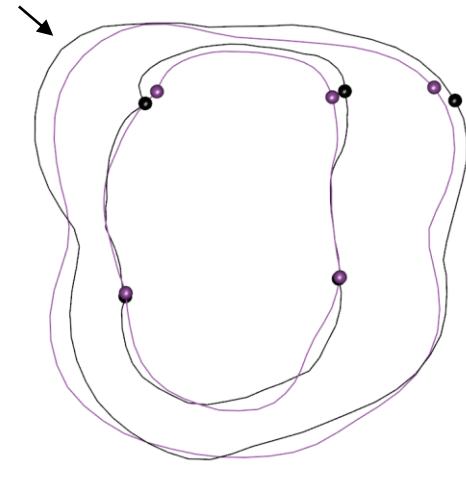
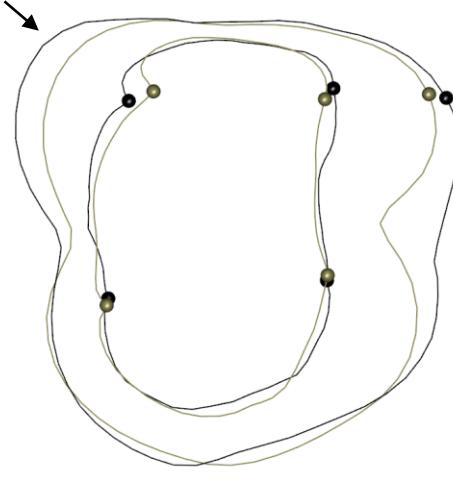
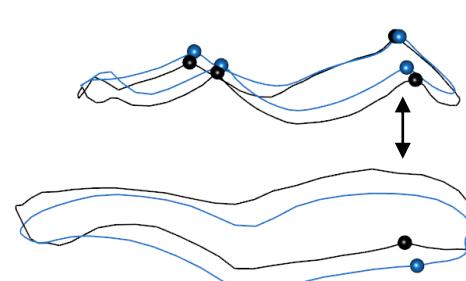
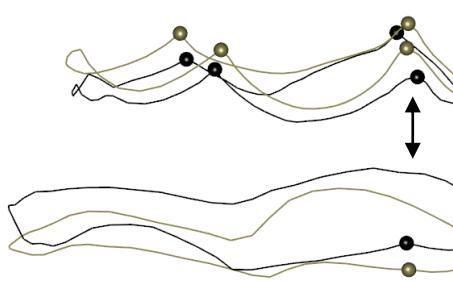
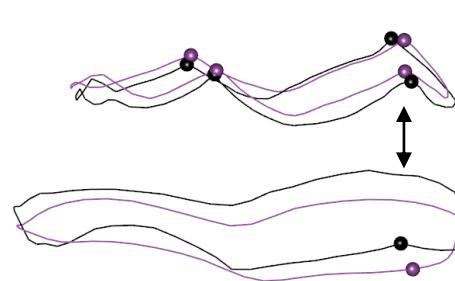
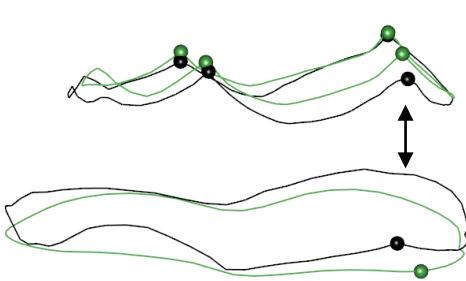
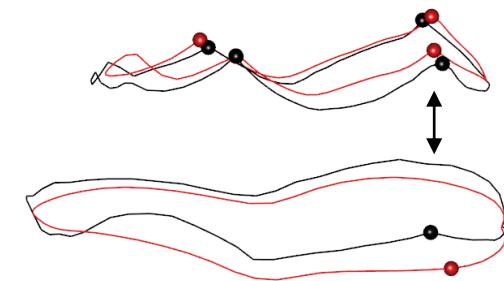
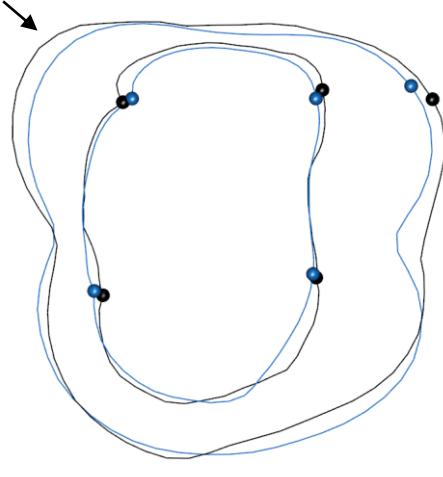
Shape PCA EDJ ridge + cervix. Whole sample



While UW105-002a plots near the M3s it is highly unlikely to be an M3 due to the presence of a large distal interproximal wear facet. Therefore, in subsequent analyses it will be treated as an M2.

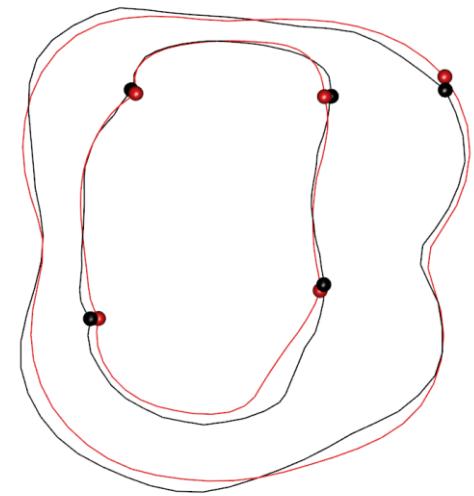
UW105-002a and UW105-825 EDJ ridge and cervix analysis – Taxonomic assessment as LM2



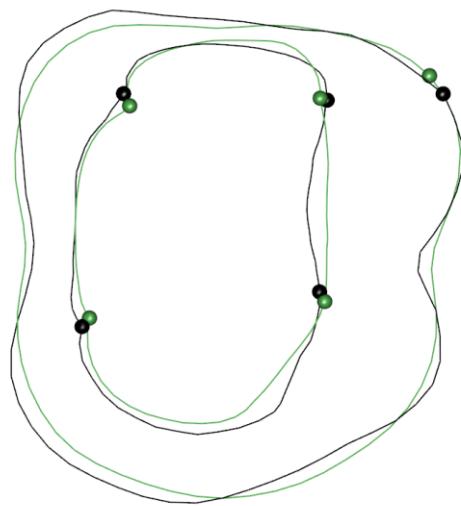
UW105-002a vs. *Australopithecus*UW105-002a vs. *Early Homo*UW105-002a vs. *East Paranthropus*UW105-002a vs. *H. naledi*UW105-002a vs. *P. robustus*

The pronounced lingual projection of the mesiolingual corner of the cervix and the low dentine body height separate UW105-002a from the comparative sample. Its large size also places it at the very upper range of *P. robustus*, with only the Gondolin (GDA2) molar being larger.

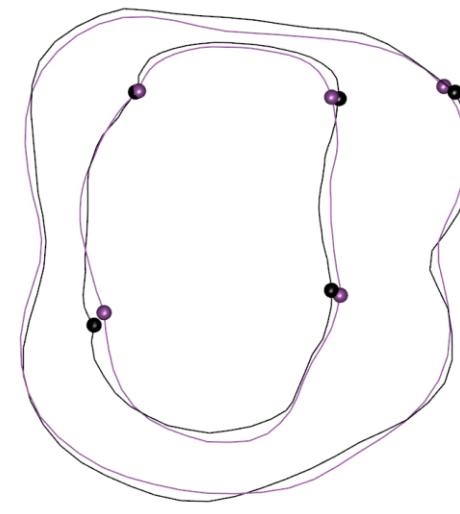
UW105-825 vs. *Australopithecus*



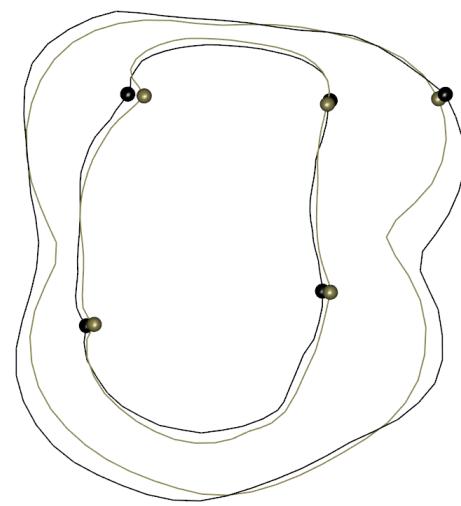
UW105-825 vs. *Early Homo*



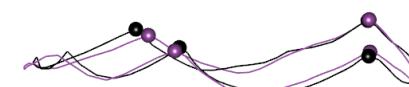
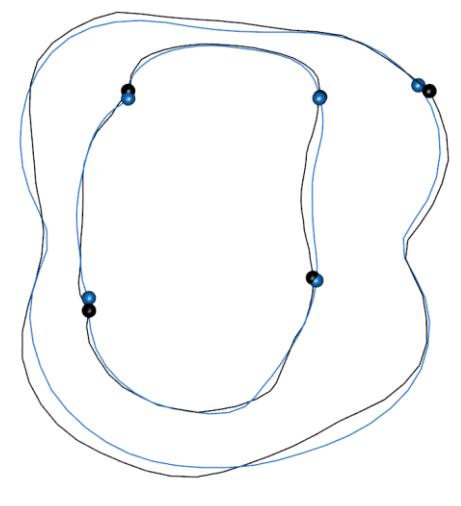
UW105-825 vs. *East Paranthropus*



UW105-825 vs. *H. naledi*

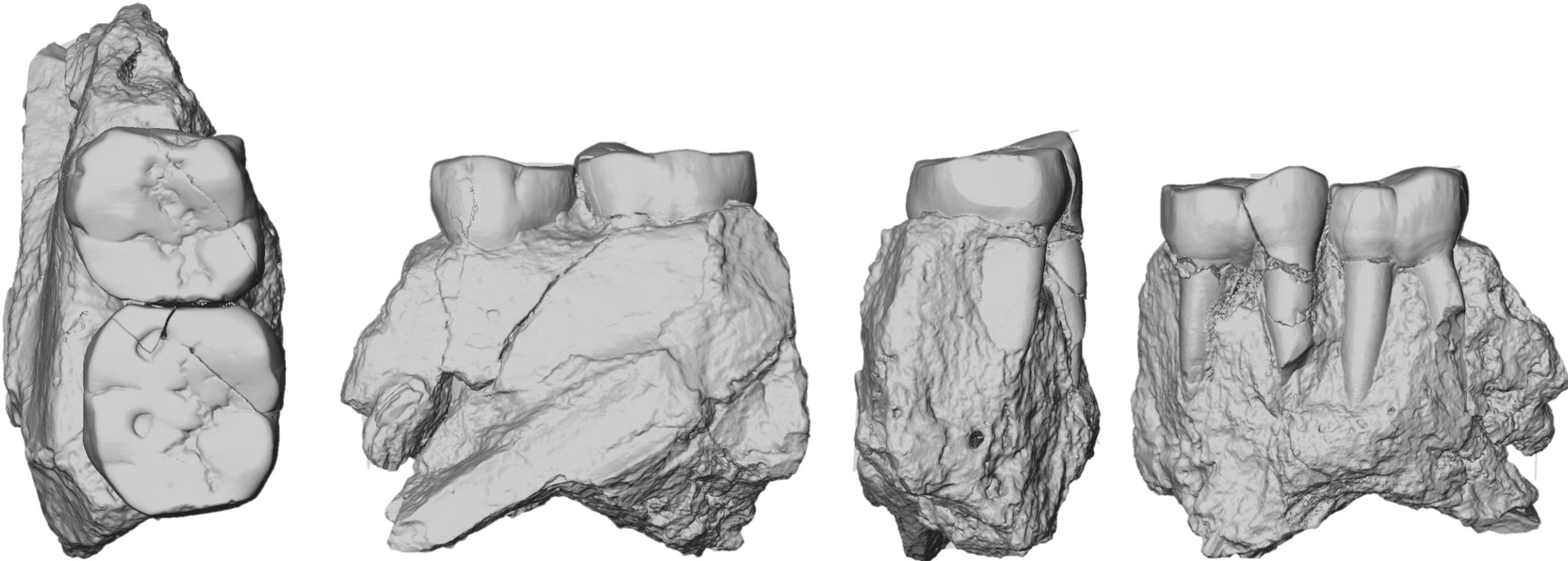


UW105-825 vs. *P. robustus*



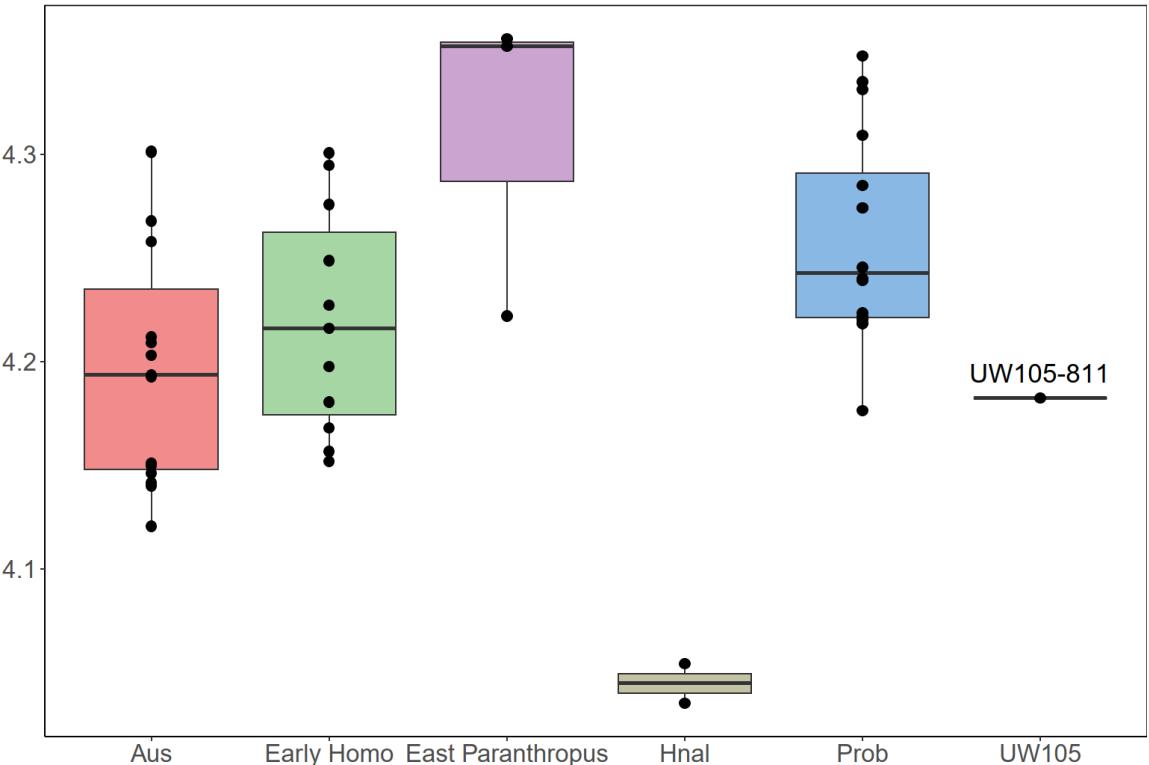
The overall EDJ ridge and cervix morphology and size align UW105-825 closest with *P. robustus*.

UW105-811 LLP4-LLM1

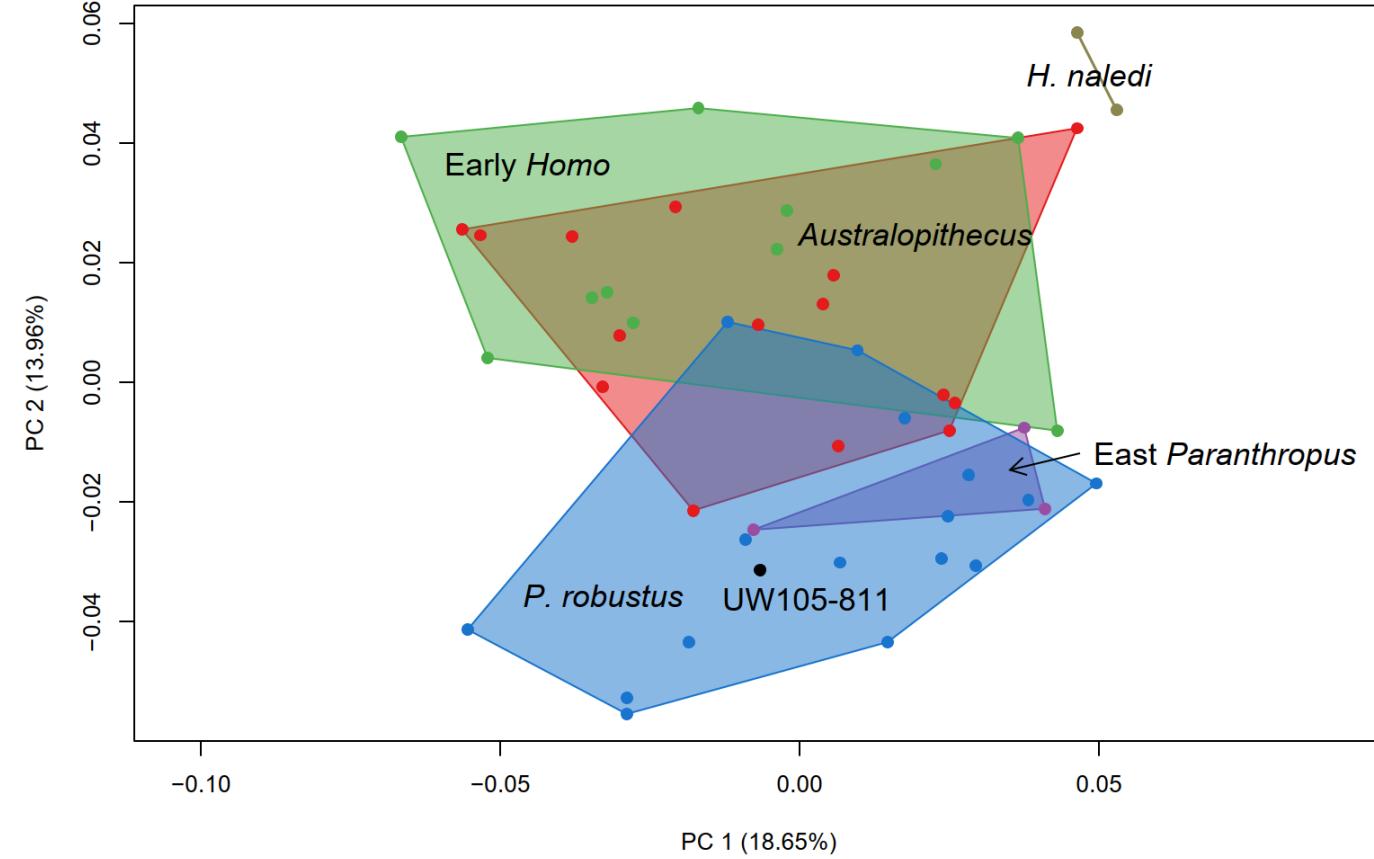


UW105-811 EDJ ridge (dropped landmarks) and cervix analysis – Taxonomic assessment LM1

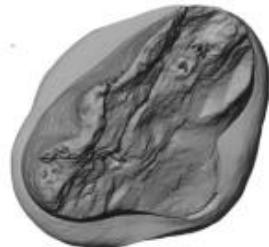
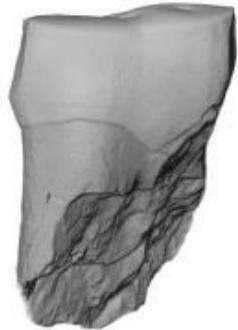
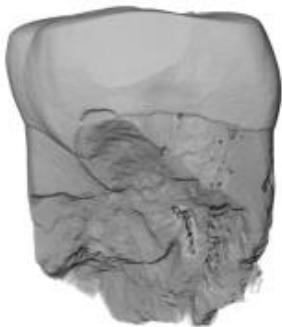
Log centroid sizes



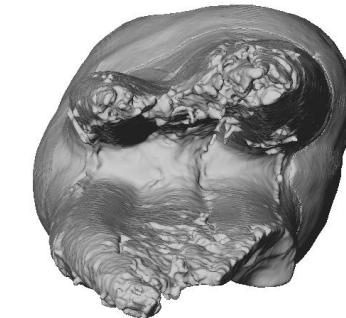
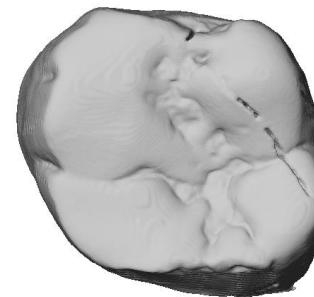
Shape PCA. EDJ ridge (dropped landmarks) + cervix



UW105-240 LLP(3/4)?

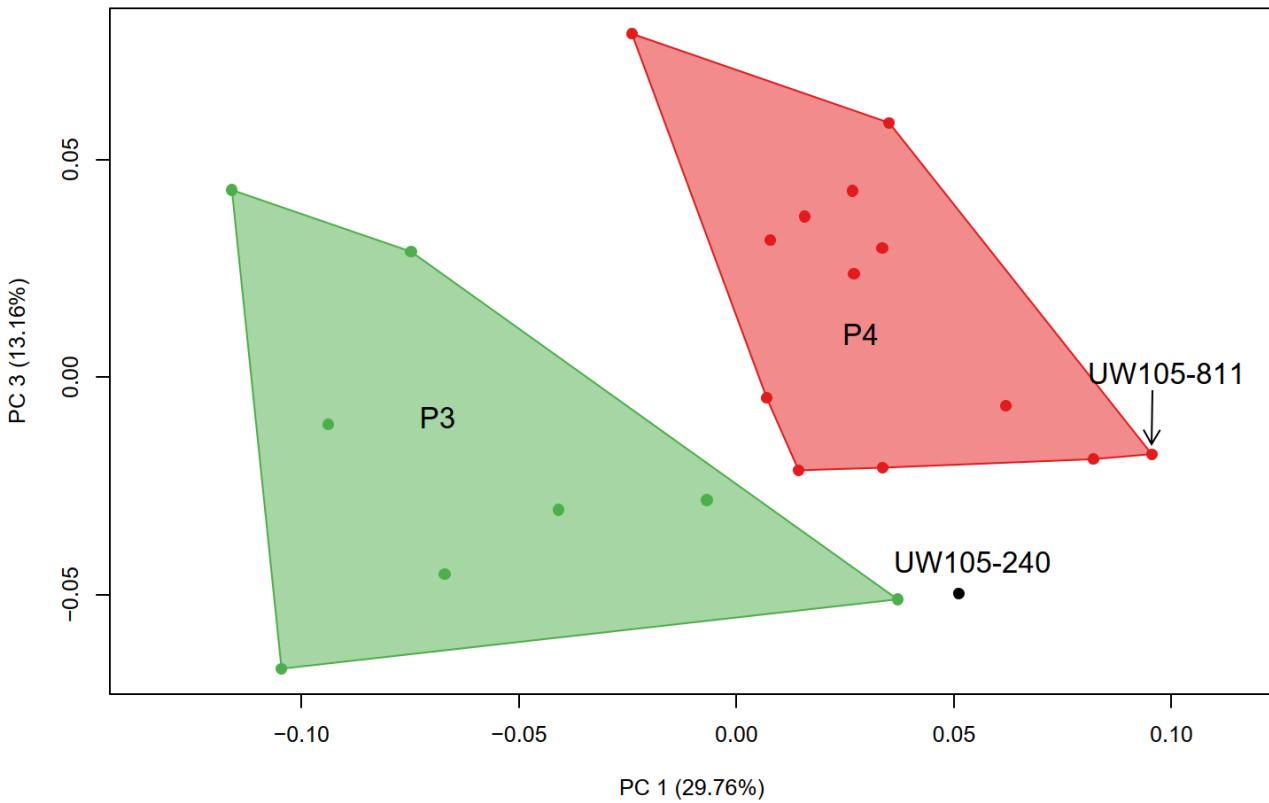


UW105-811 (LLP4)

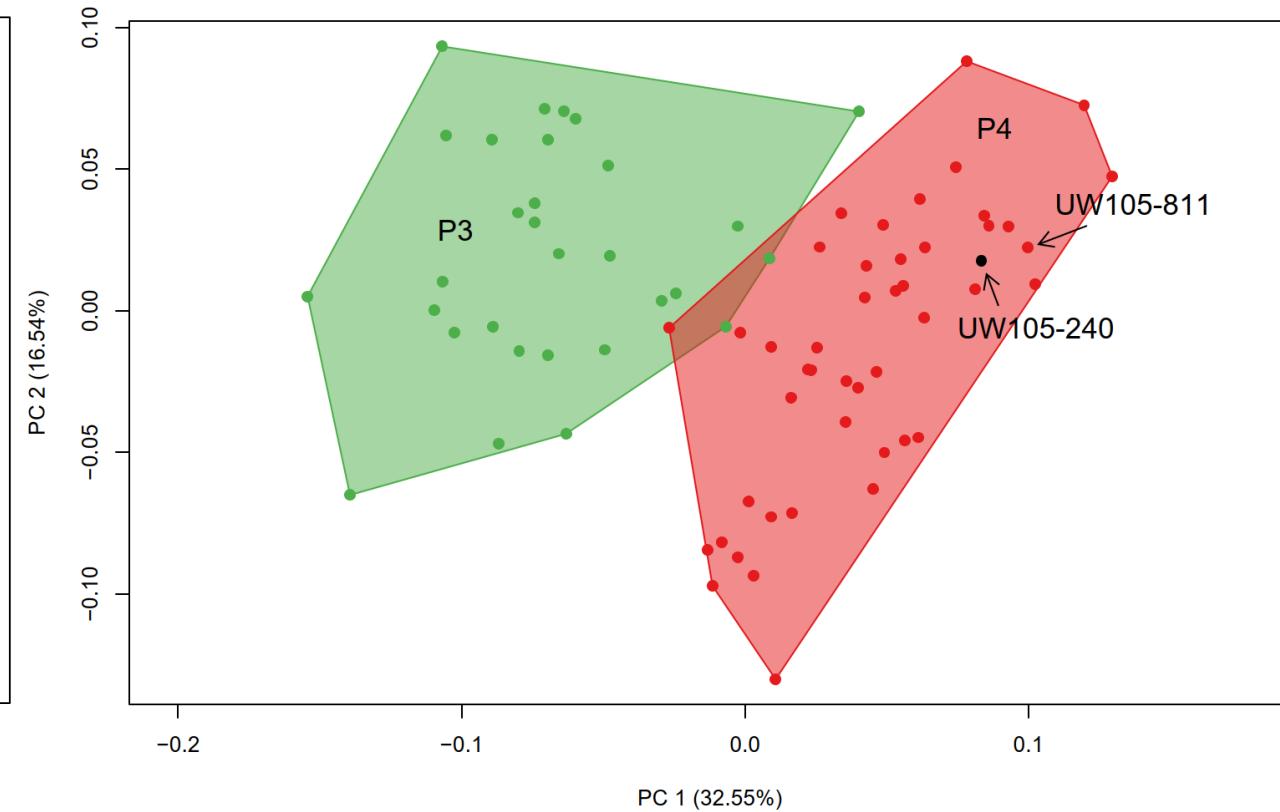


UW105-240 LLP(3/4)? Tooth type classification results.

Shape PCA EDJ ridge + cervix. Only *P. robustus* + UW105-811



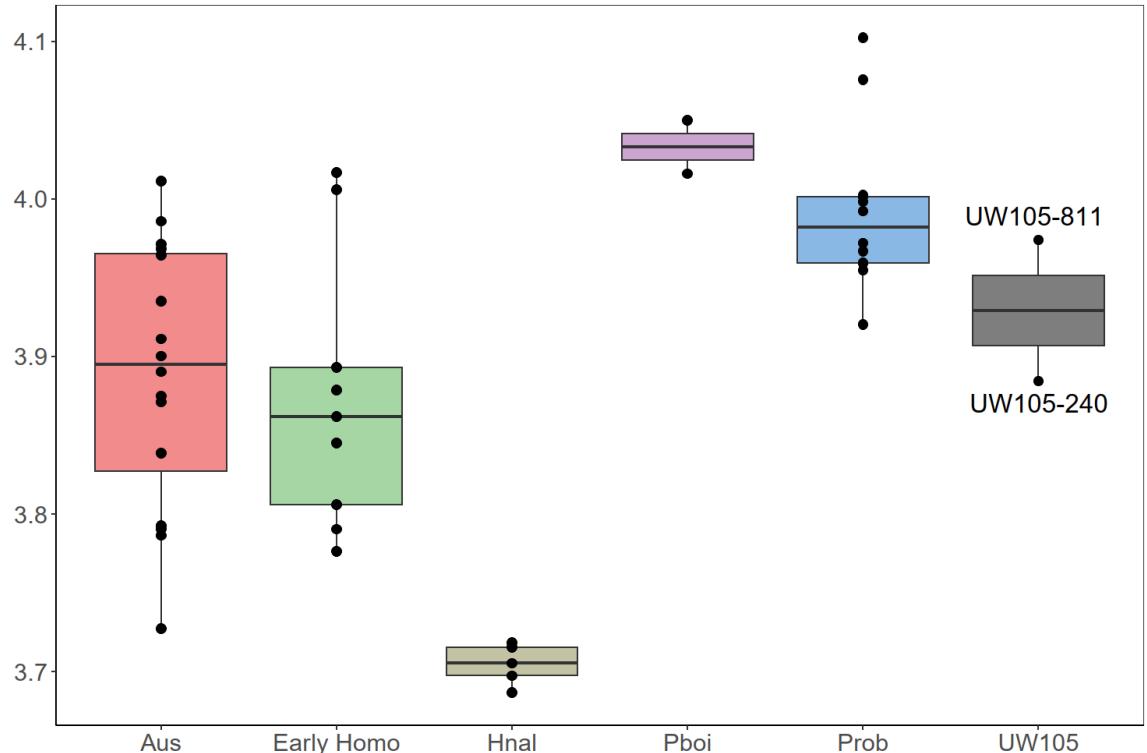
Shape PCA EDJ ridge + cervix. Whole sample



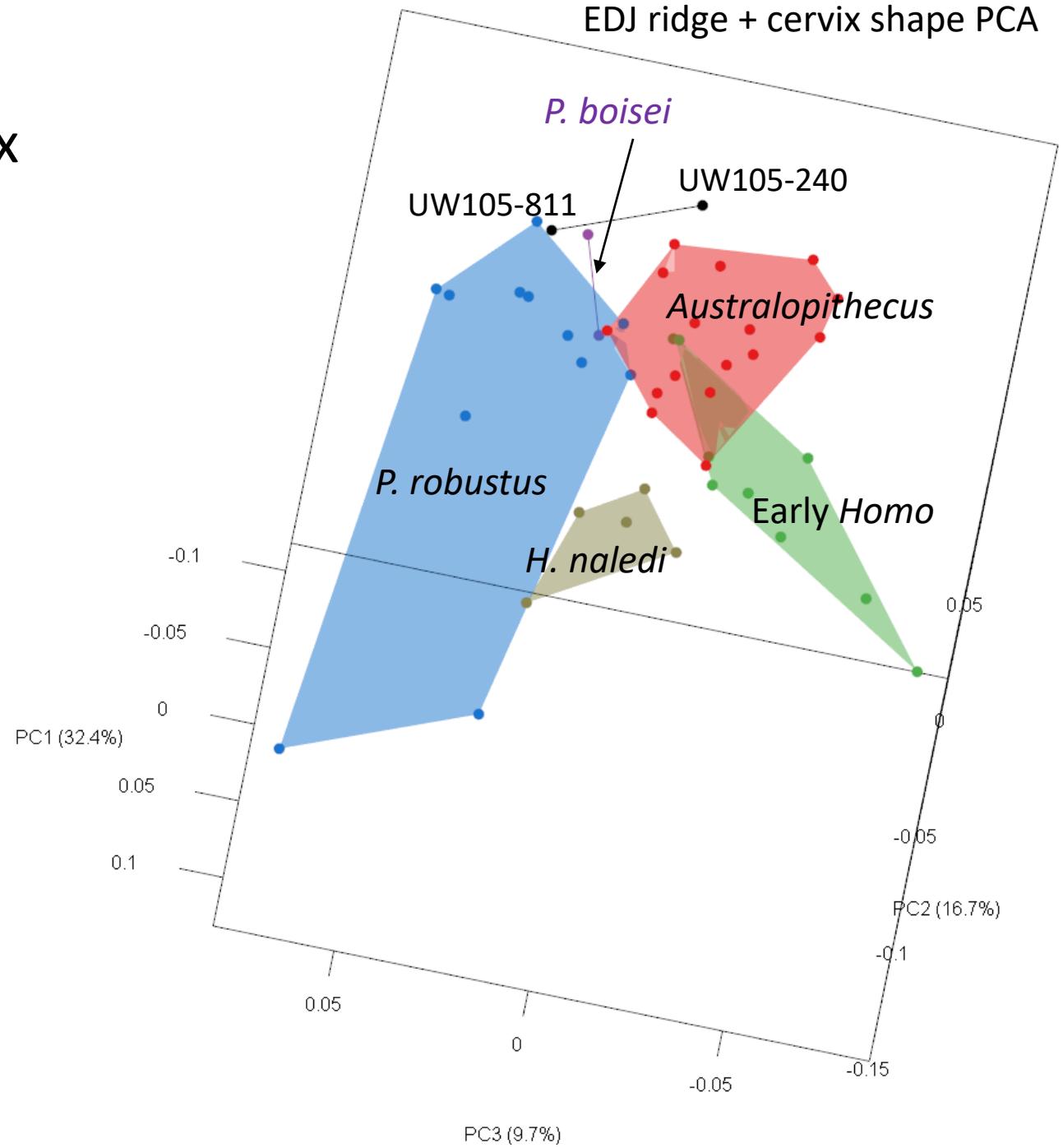
UW105-240 treated as LLP4

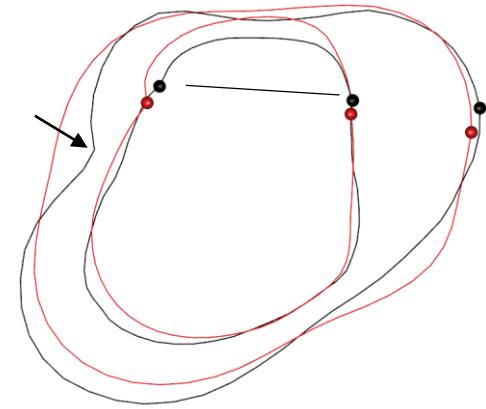
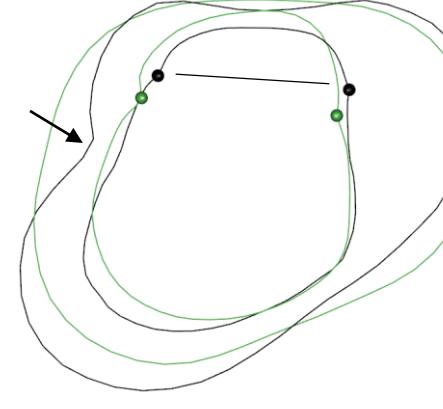
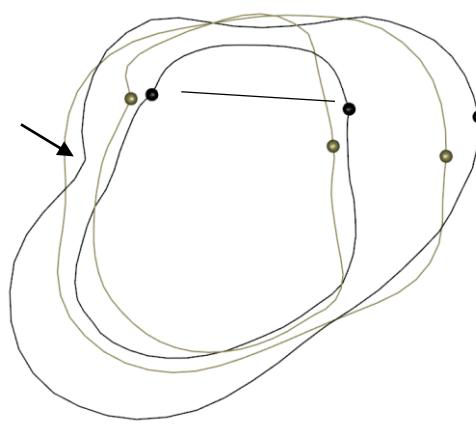
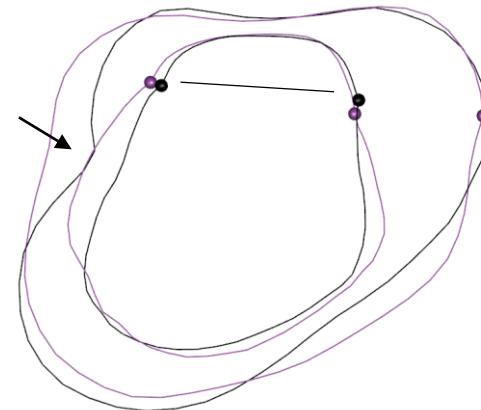
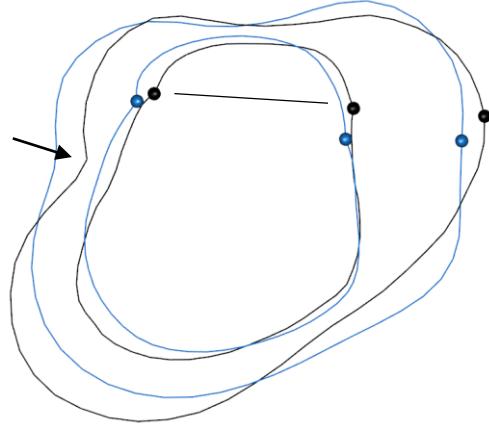
Taxonomic analysis. EDJ ridge + cervix

Log centroid sizes



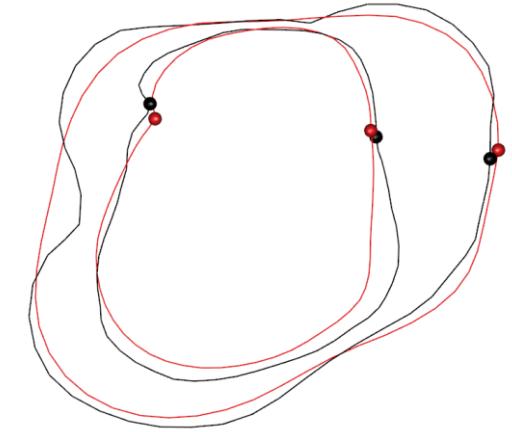
EDJ ridge + cervix shape PCA



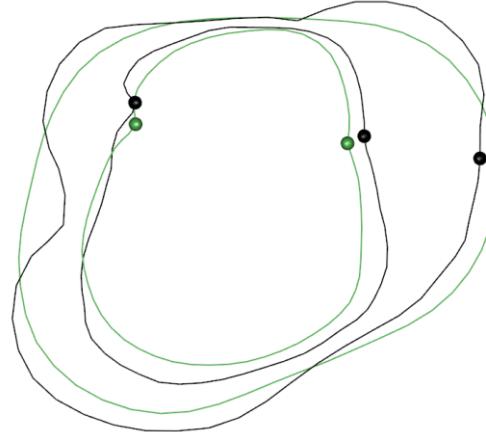
UW105-240 vs. *Australopithecus*UW105-240 vs. *Early Homo*UW105-240 vs. *H. naledi*UW105-240 vs. *East Paranthropus*UW105-240 vs. *P. robustus*

The large talonid and the notch on the lingual aspect of the cervix resemble the condition in *Paranthropus*, however the horizontally aligned dentine horns, a narrower EDJ ridge, and smaller size separate the tooth from it.

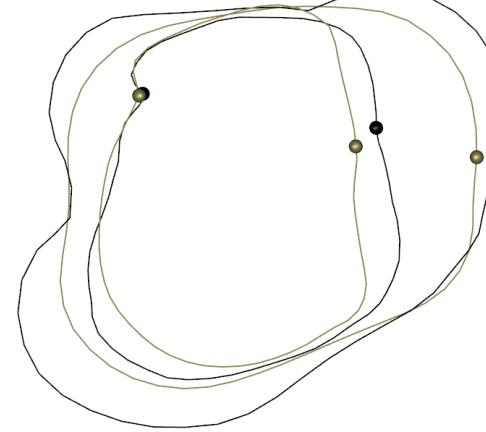
UW105-811 vs. *Australopithecus*



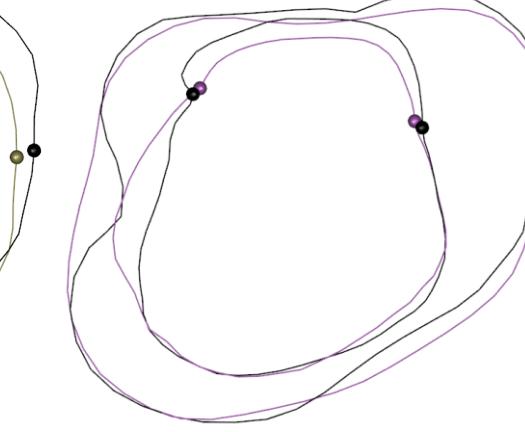
UW105-811 vs. *Early Homo*



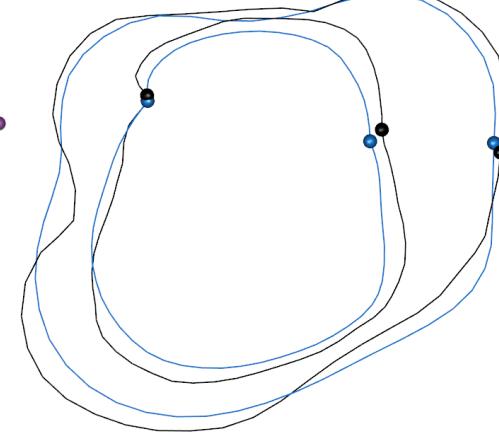
UW105-811 vs. *H. naledi*



UW105-811 vs. *East Paranthropus*

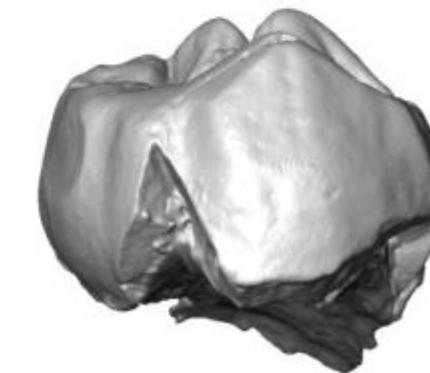
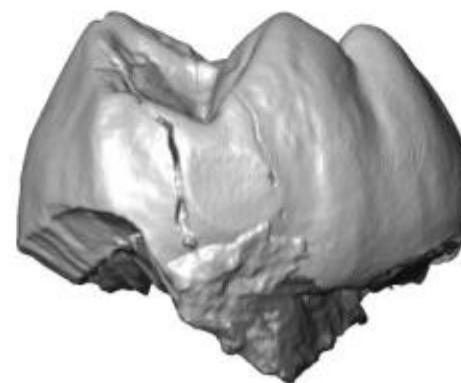
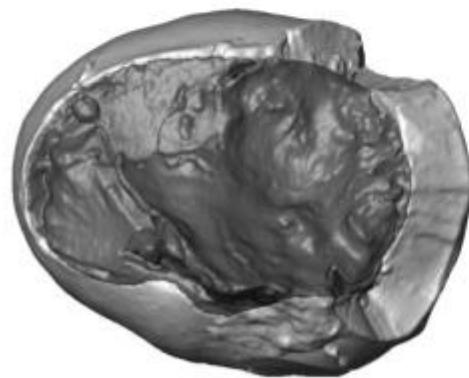
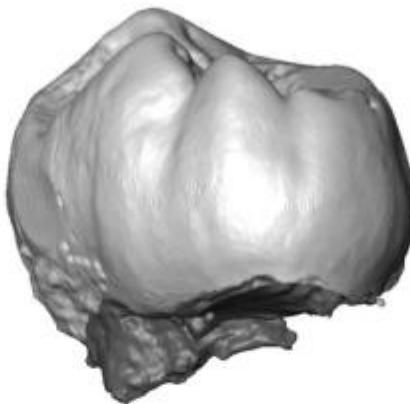
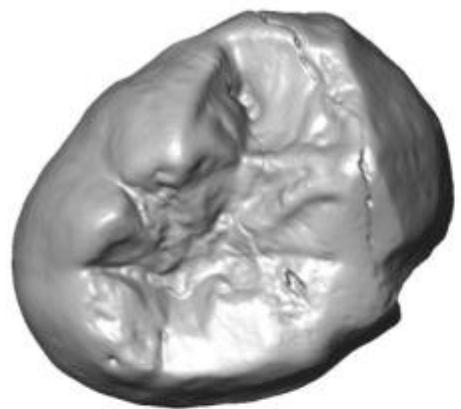


UW105-811 vs. *P. robustus*



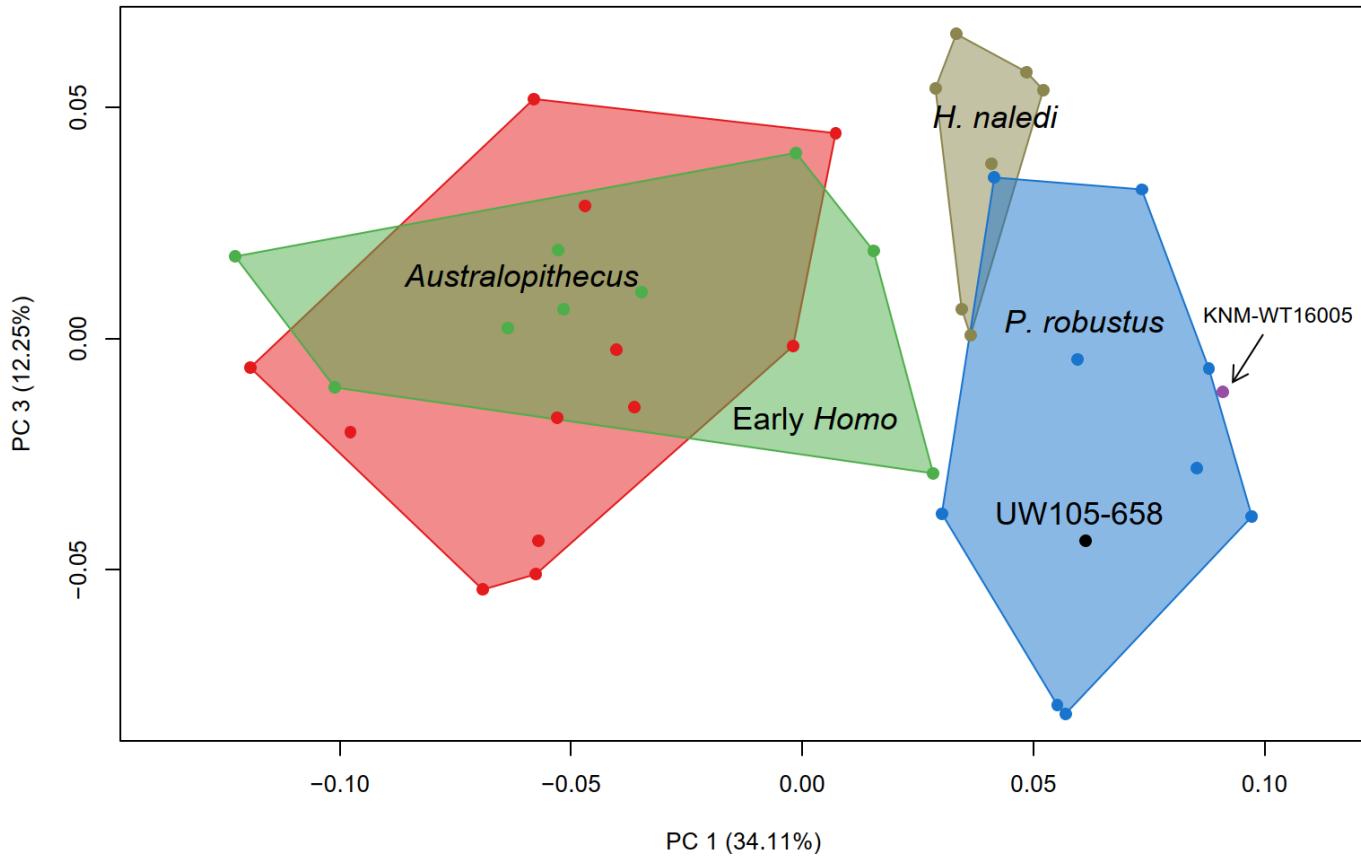
The overall EDJ ridge and cervix morphology and size align UW105-811 closest with *P. robustus*.

UW105-658 (LRP3)

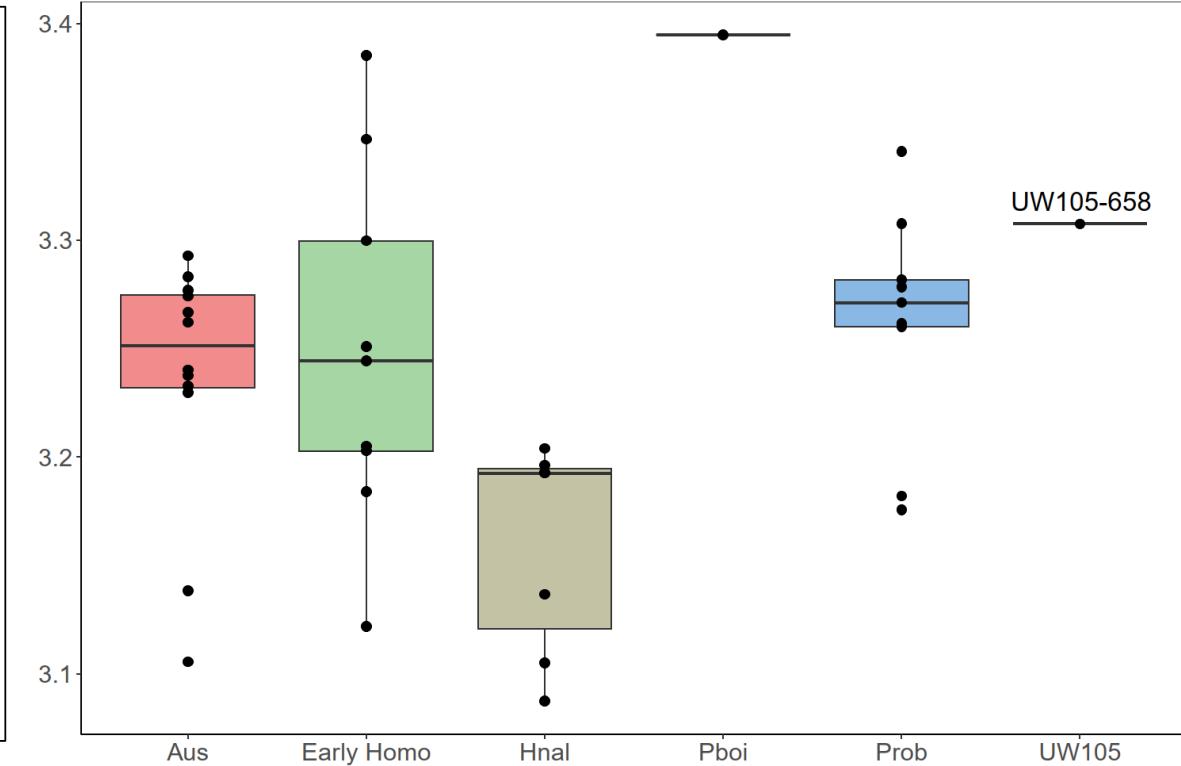


UW105-658 (LRP3)

Shape PCA. EDJ ridge only

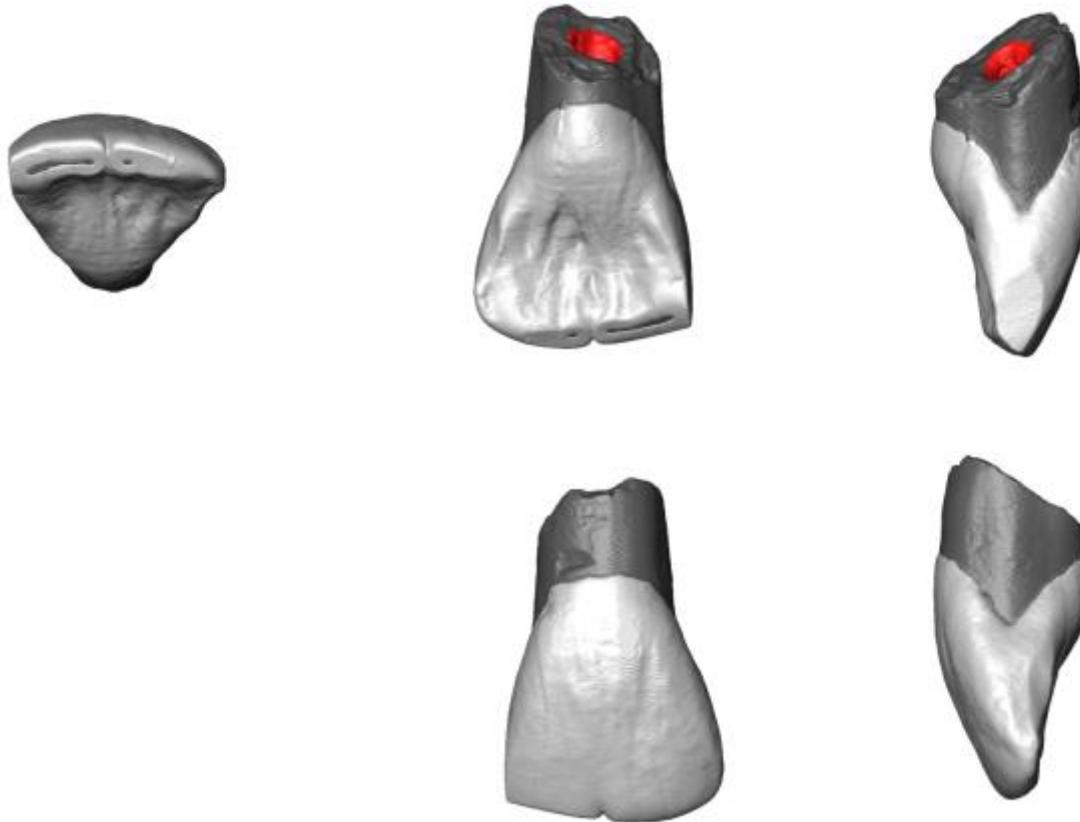


Log centroid sizes



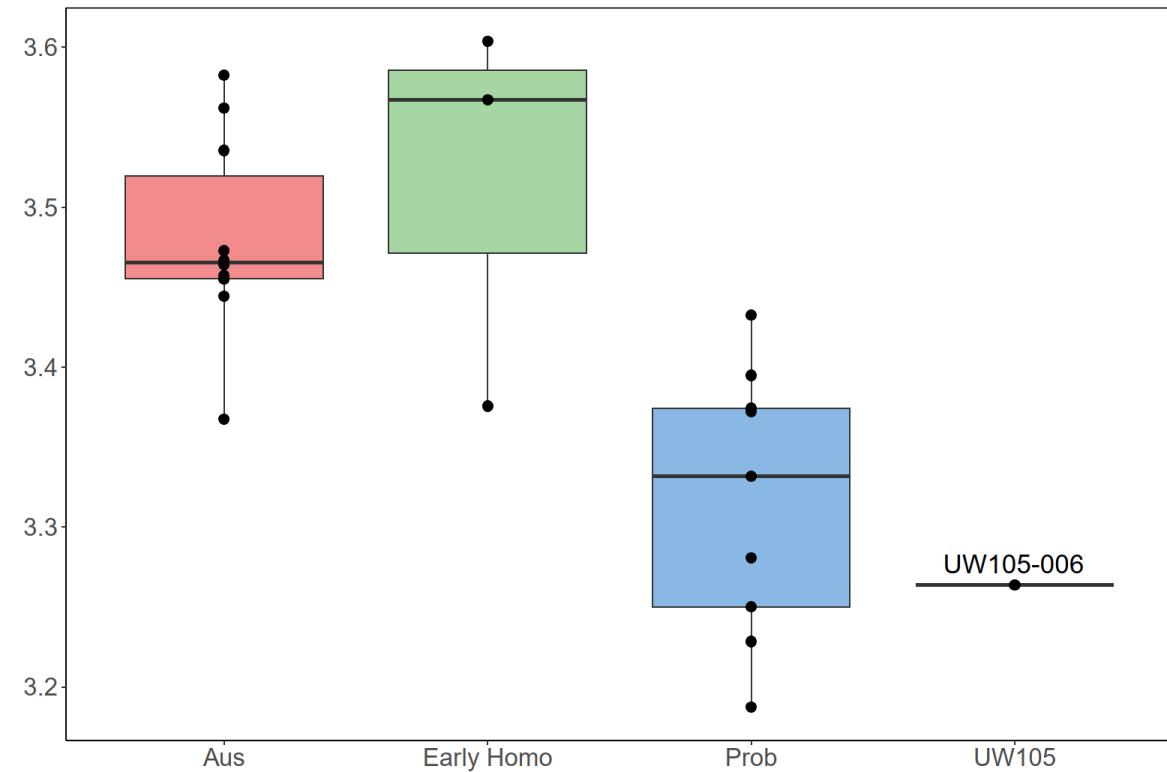
Upper dentition

UW105-006 ULI1

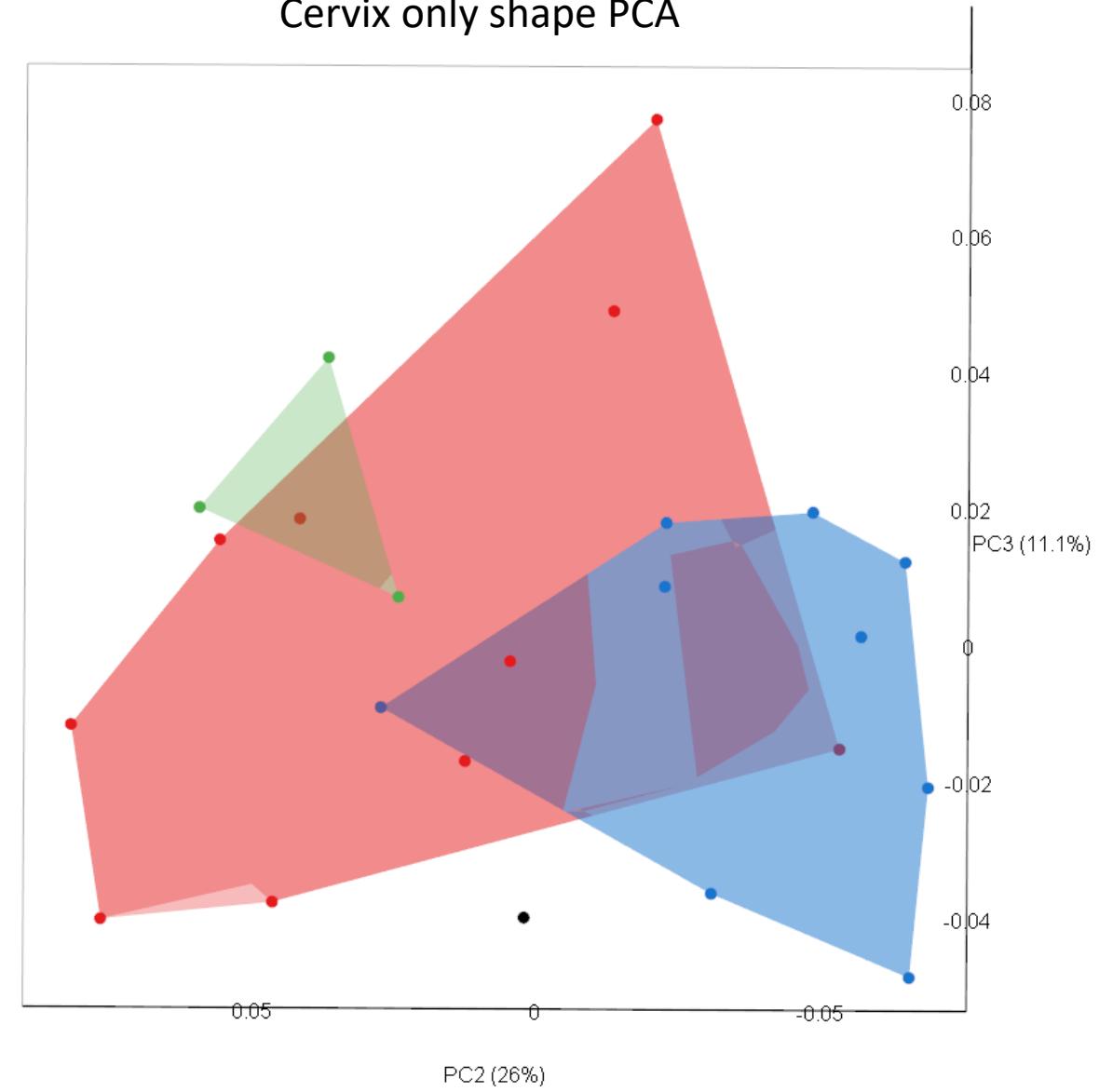


UW105-006 ULI1. Taxonomic assessment

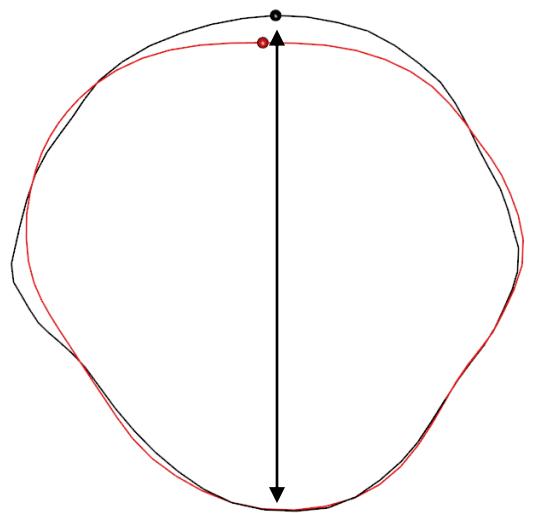
Log centroid sizes



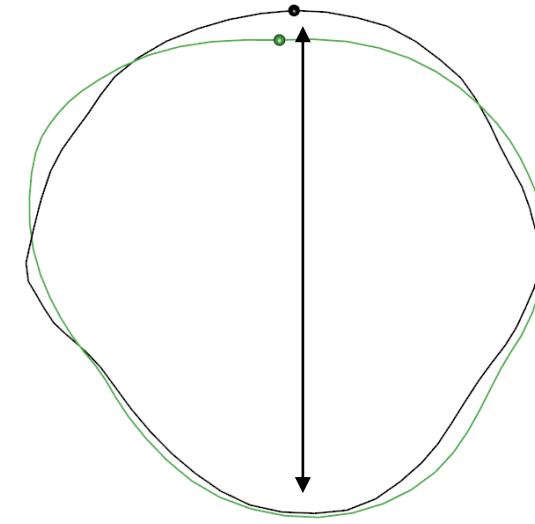
Cervix only shape PCA



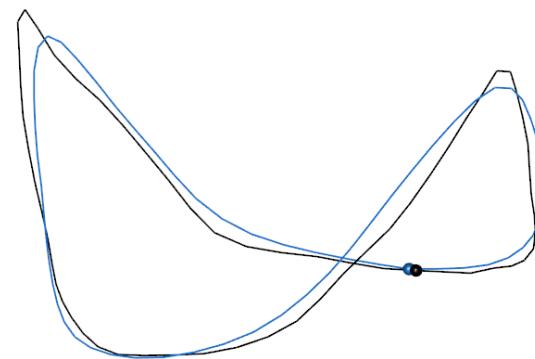
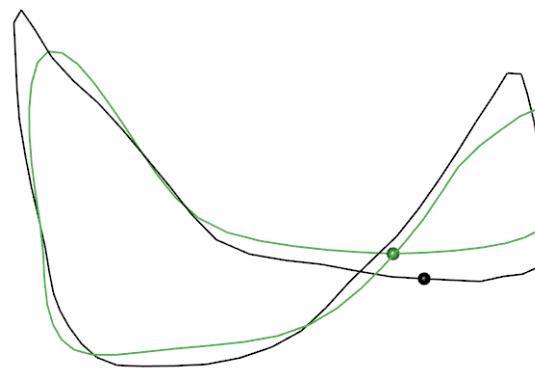
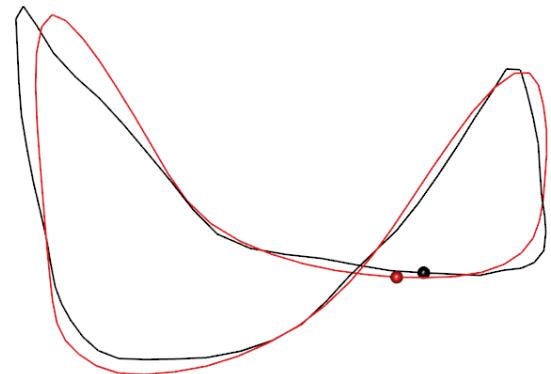
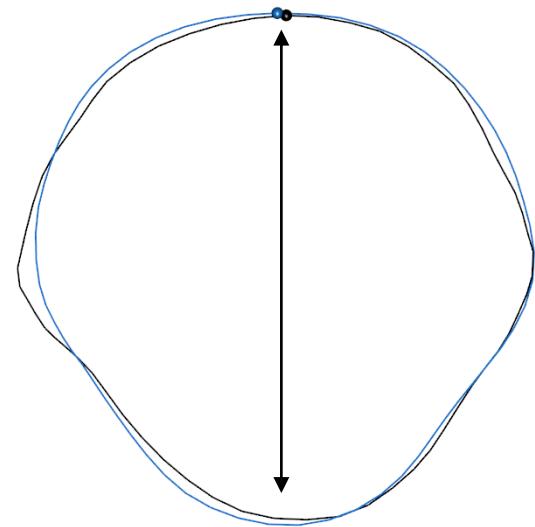
UW105-006 vs. *Australopithecus*



UW105-006 vs. *Early Homo*

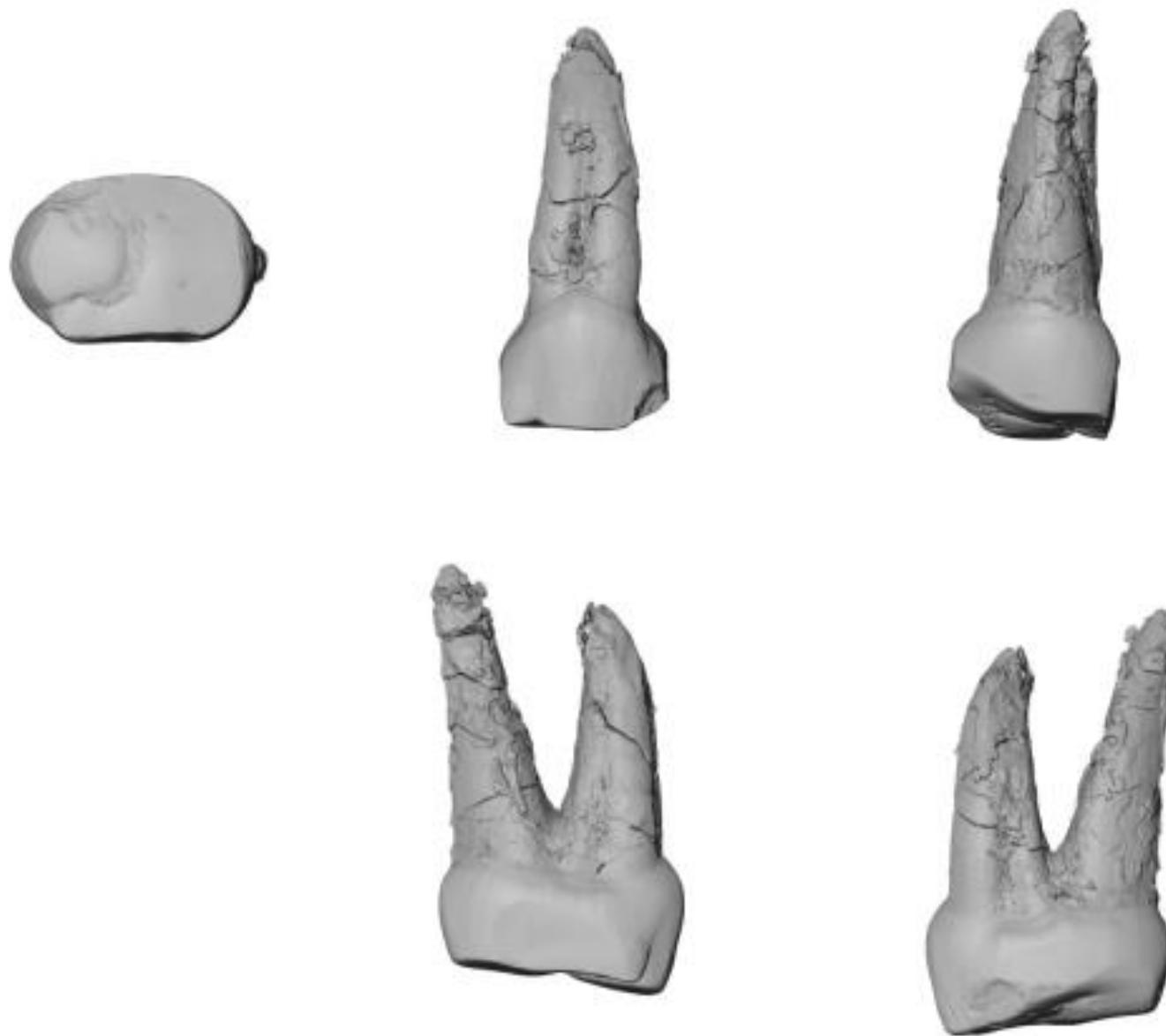


UW105-006 vs. *P. robustus*



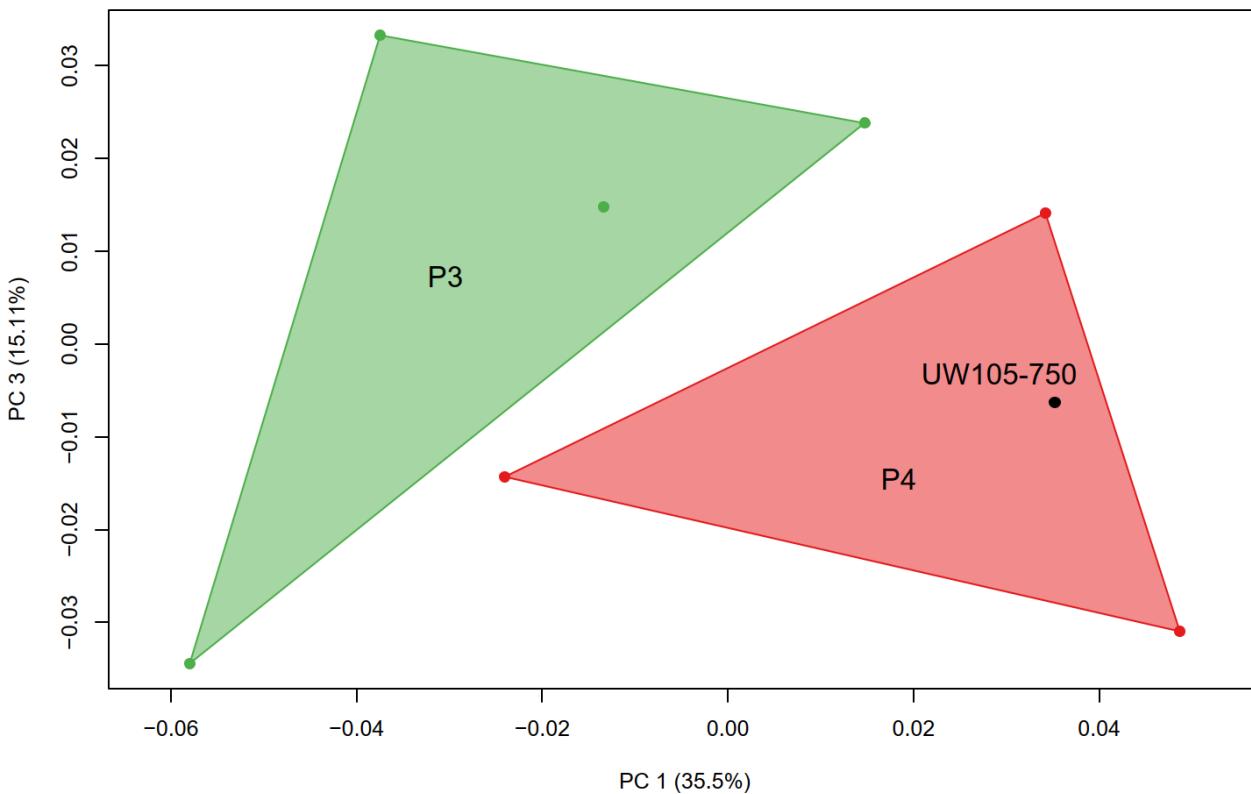
The buccolingual expansion of the cervix and the overall size align UW105-006 closely with *P. robustus*.

UW105-750 URP(3/4)?

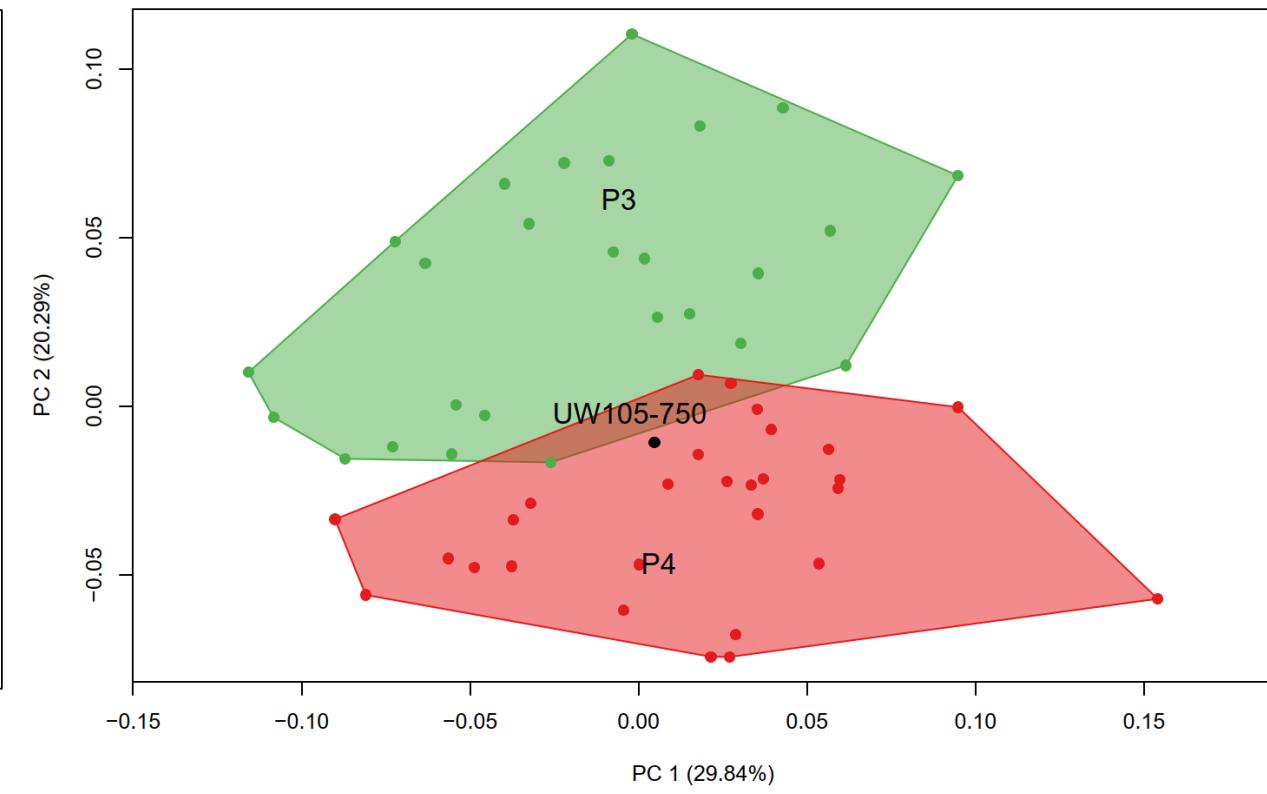


UW105-750. Tooth type classification.

Shape PCA EDJ ridge + cervix. Only *P. robustus*



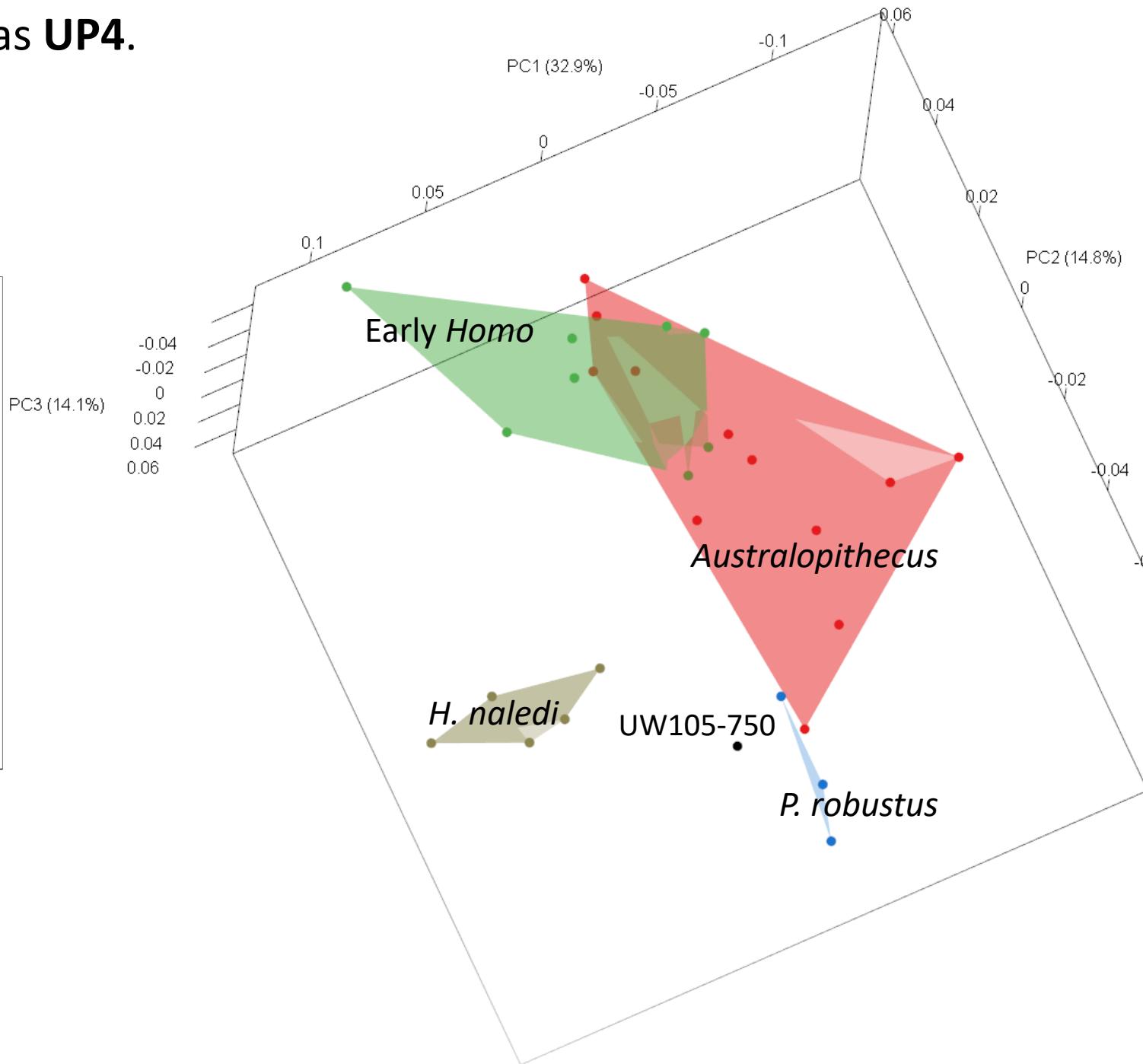
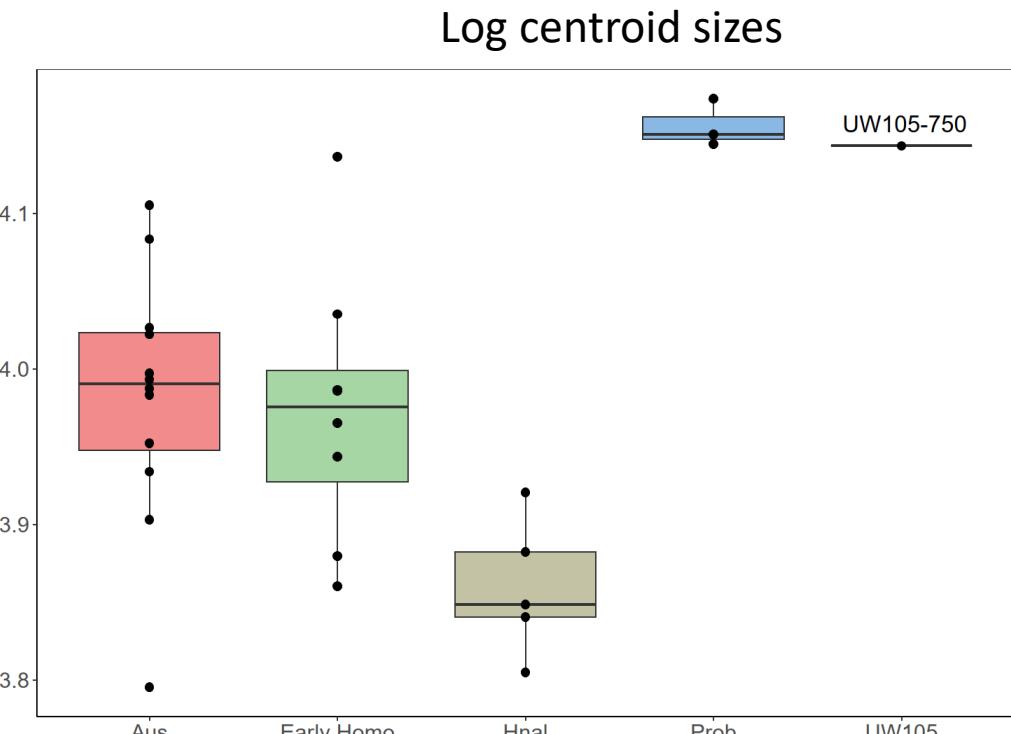
Shape PCA EDJ ridge + cervix. Whole sample



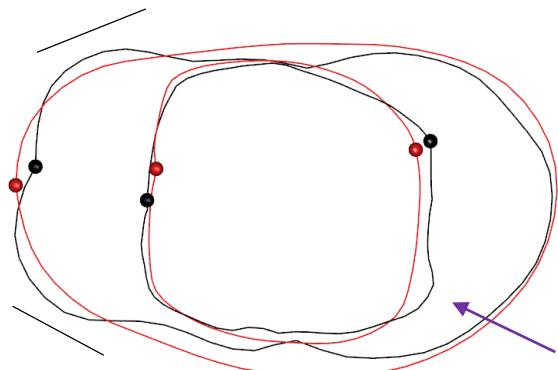
CVA results

Specimen	Sample	P3	P4
UW105-750	All specimens	20%	80%
	Only <i>P. robustus</i>		100%

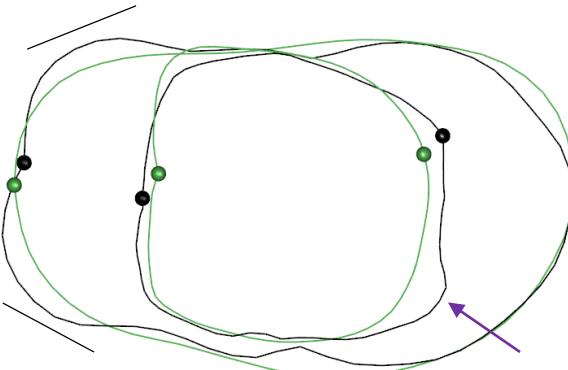
UW105-750. Taxonomic assessment as UP4.



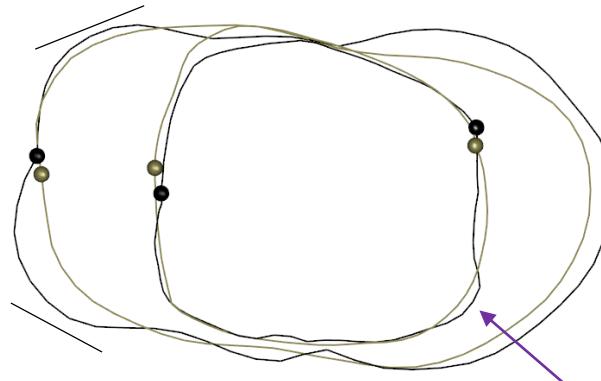
UW105-750 vs. *Australopithecus*



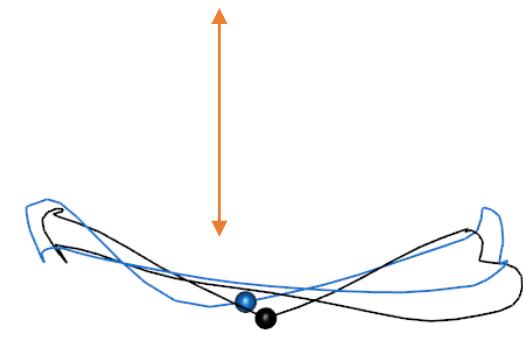
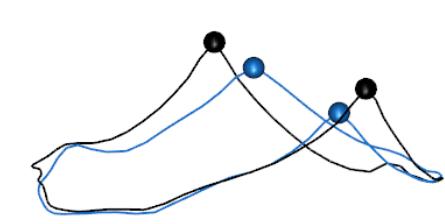
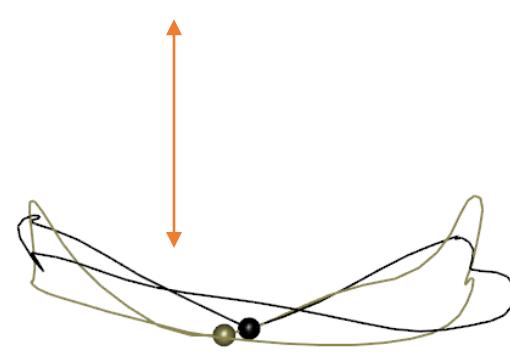
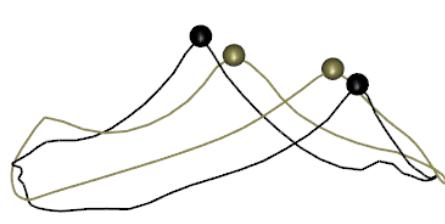
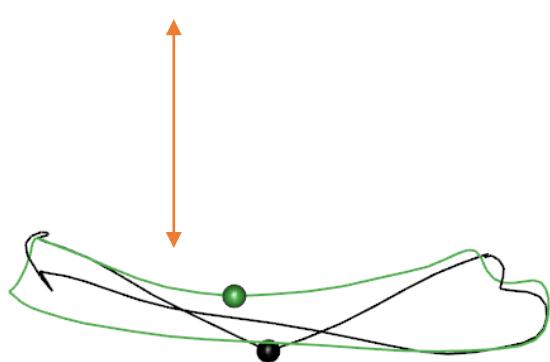
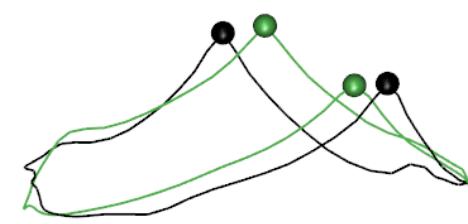
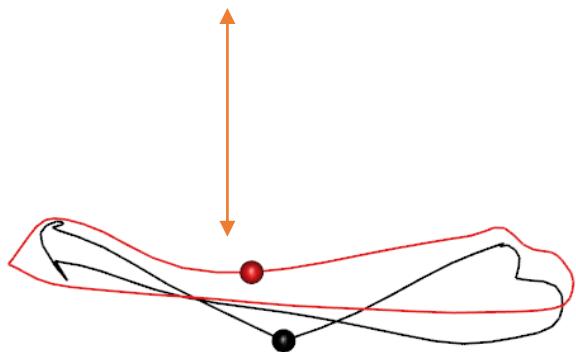
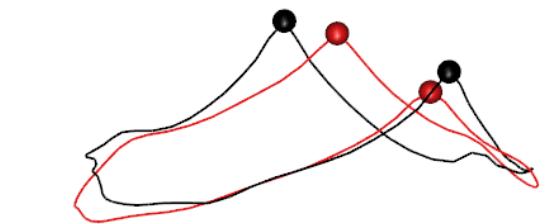
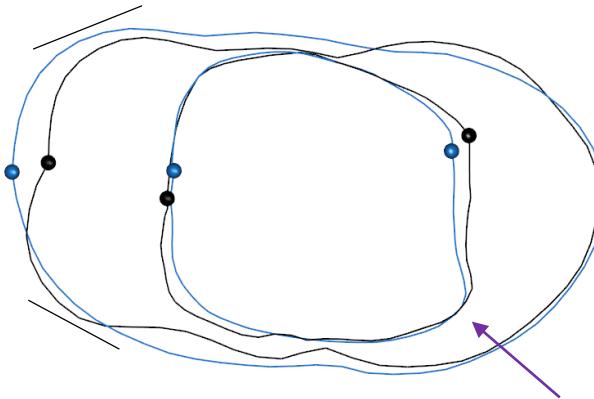
UW105-750 vs. *Early Homo*



UW105-750 vs. *H. naledi*

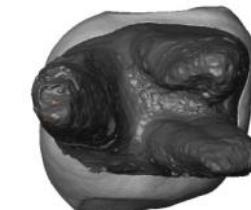
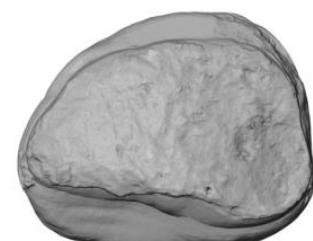
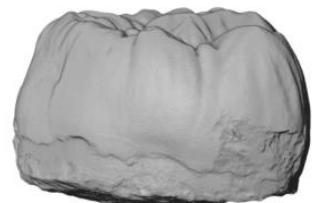


UW105-750 vs. *P. robustus*



A disto-lingually expanded EDJ ridge, low dentine body height, and mesio-distally expanded cervix align UW105-750 closest with *P. robustus*.

UW105-676 URM

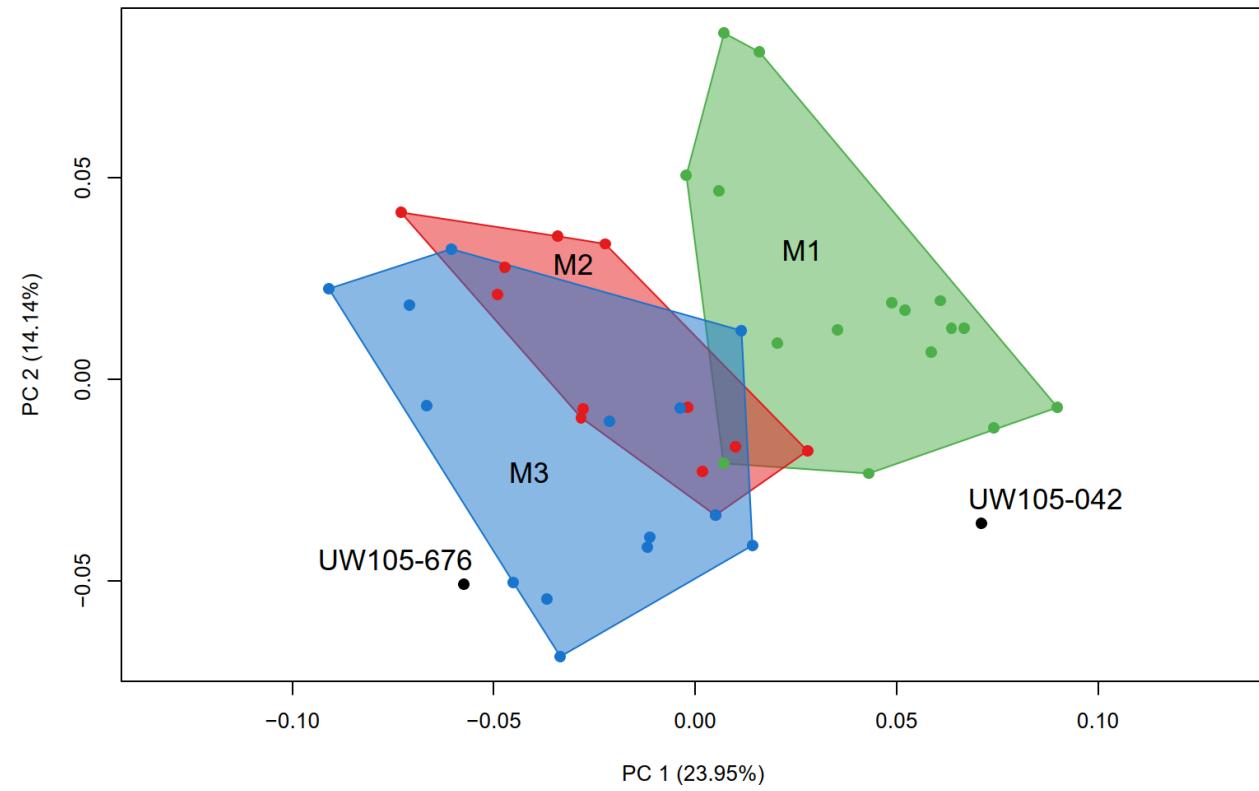


UW105-042 URM

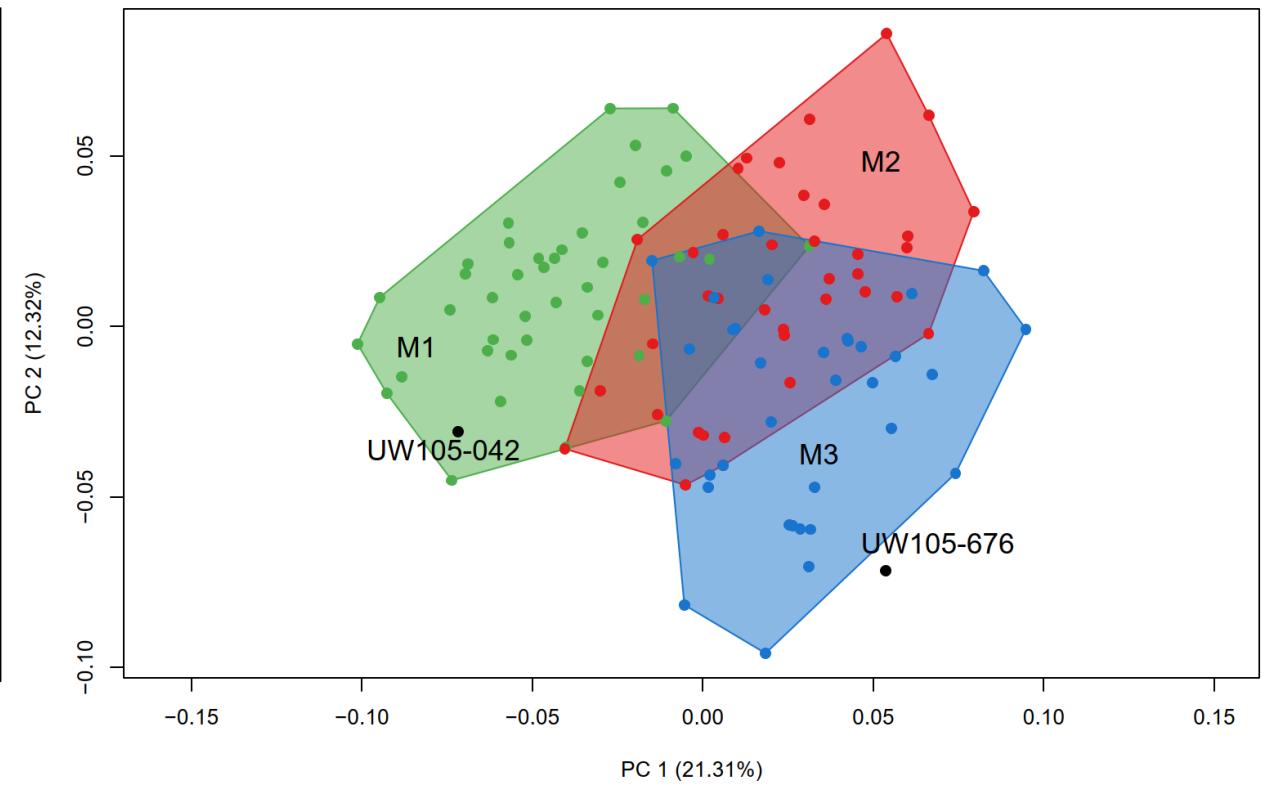


UW105-676 and UW105-042. Tooth type classification.

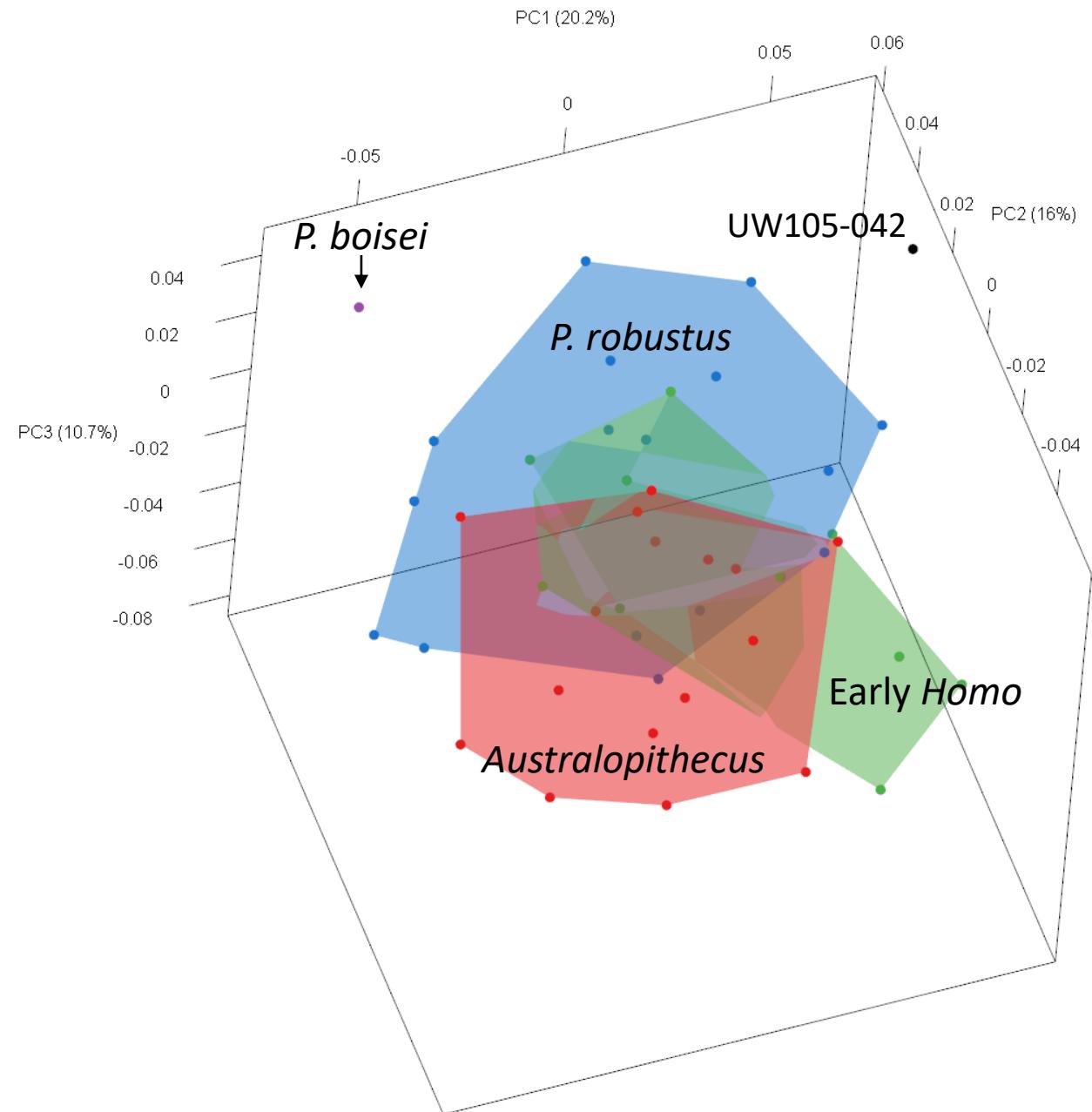
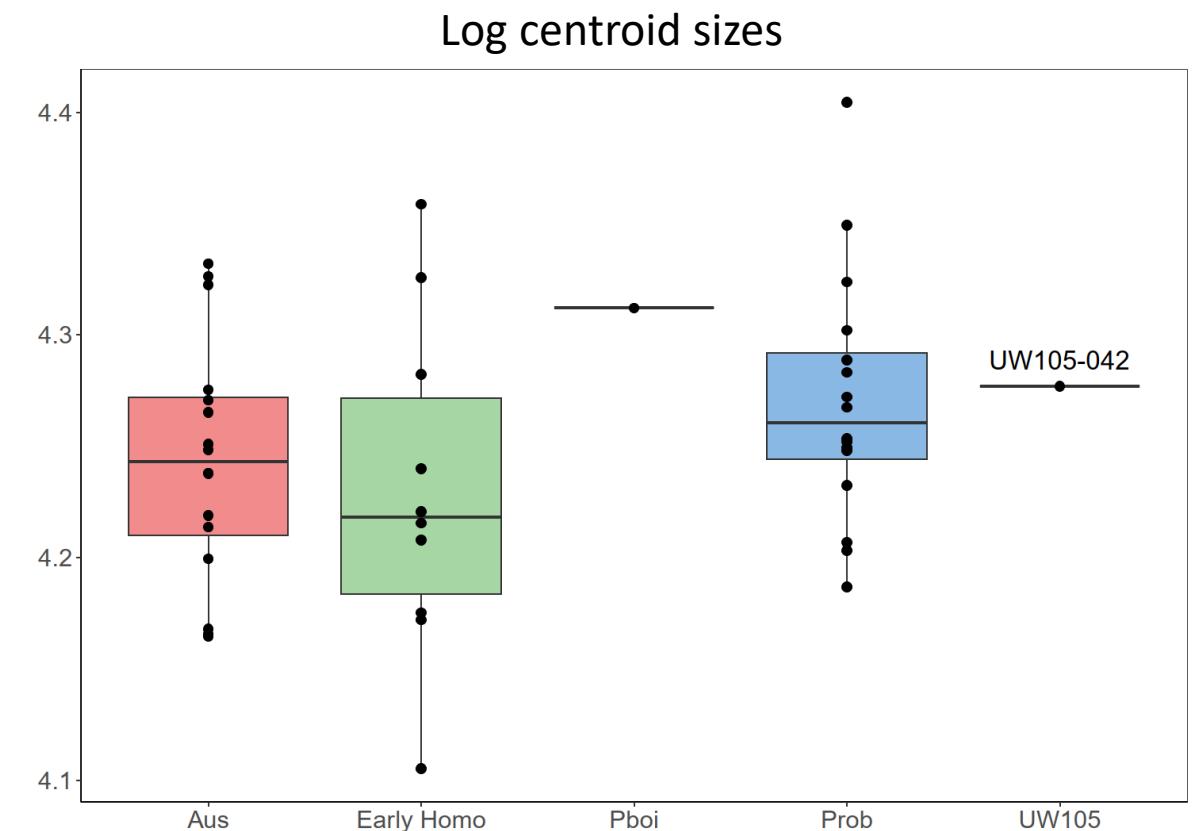
Shape PCA EDJ ridge + cervix. Only *P. robustus*



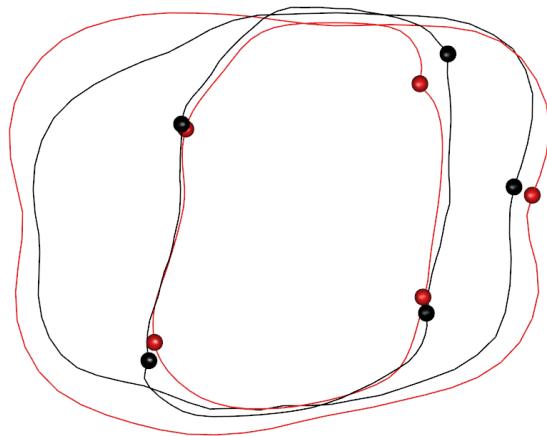
Shape PCA EDJ ridge + cervix. Whole sample



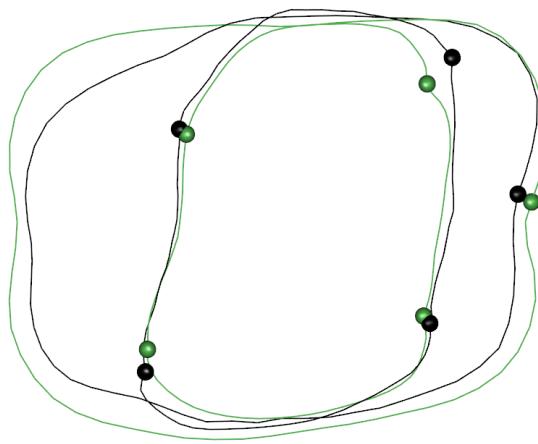
UW105-042. Taxonomic assessment as **UM1**.



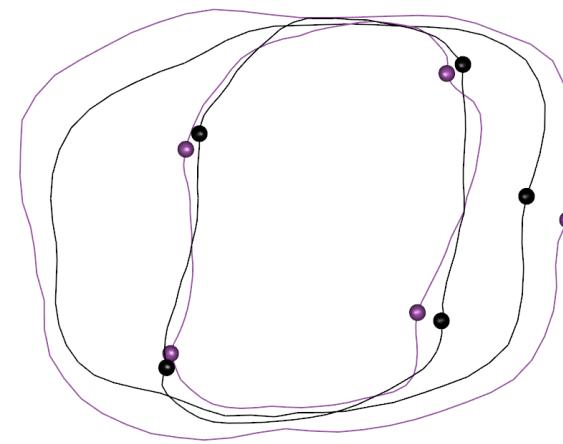
UW105-072 vs. *Australopithecus*



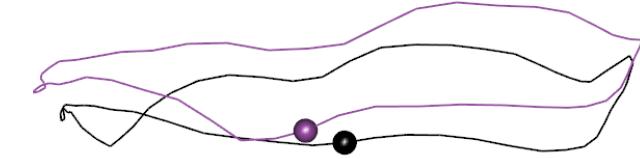
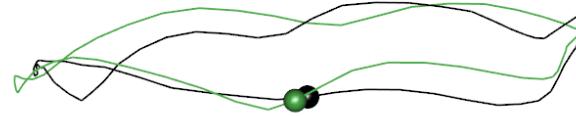
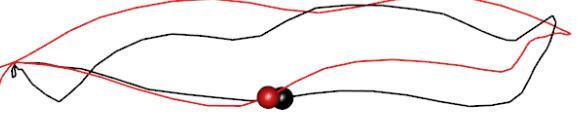
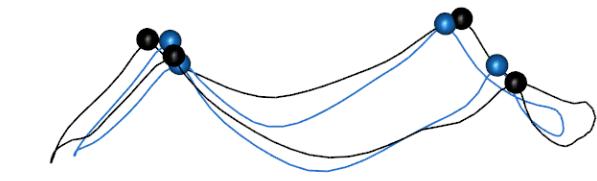
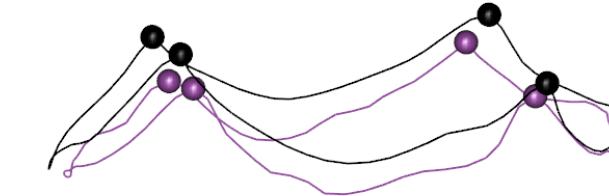
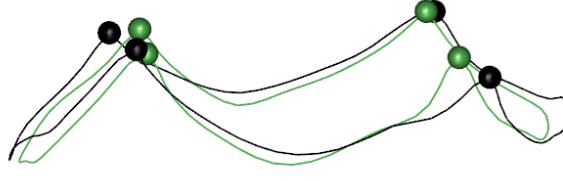
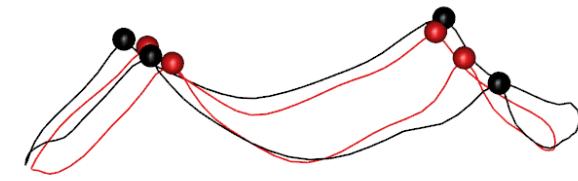
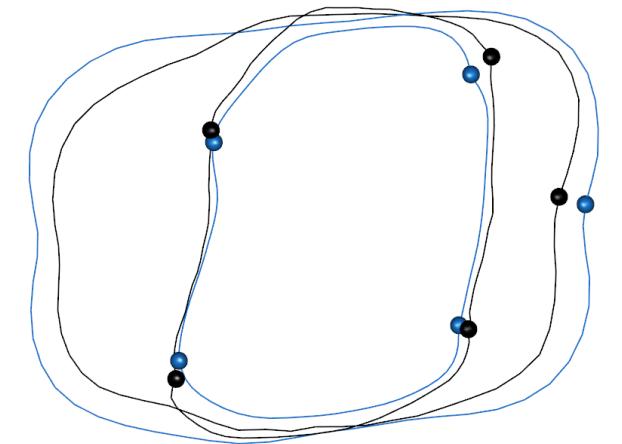
UW105-042 vs. Early *Homo*



UW105-042 vs. *P. boisei*



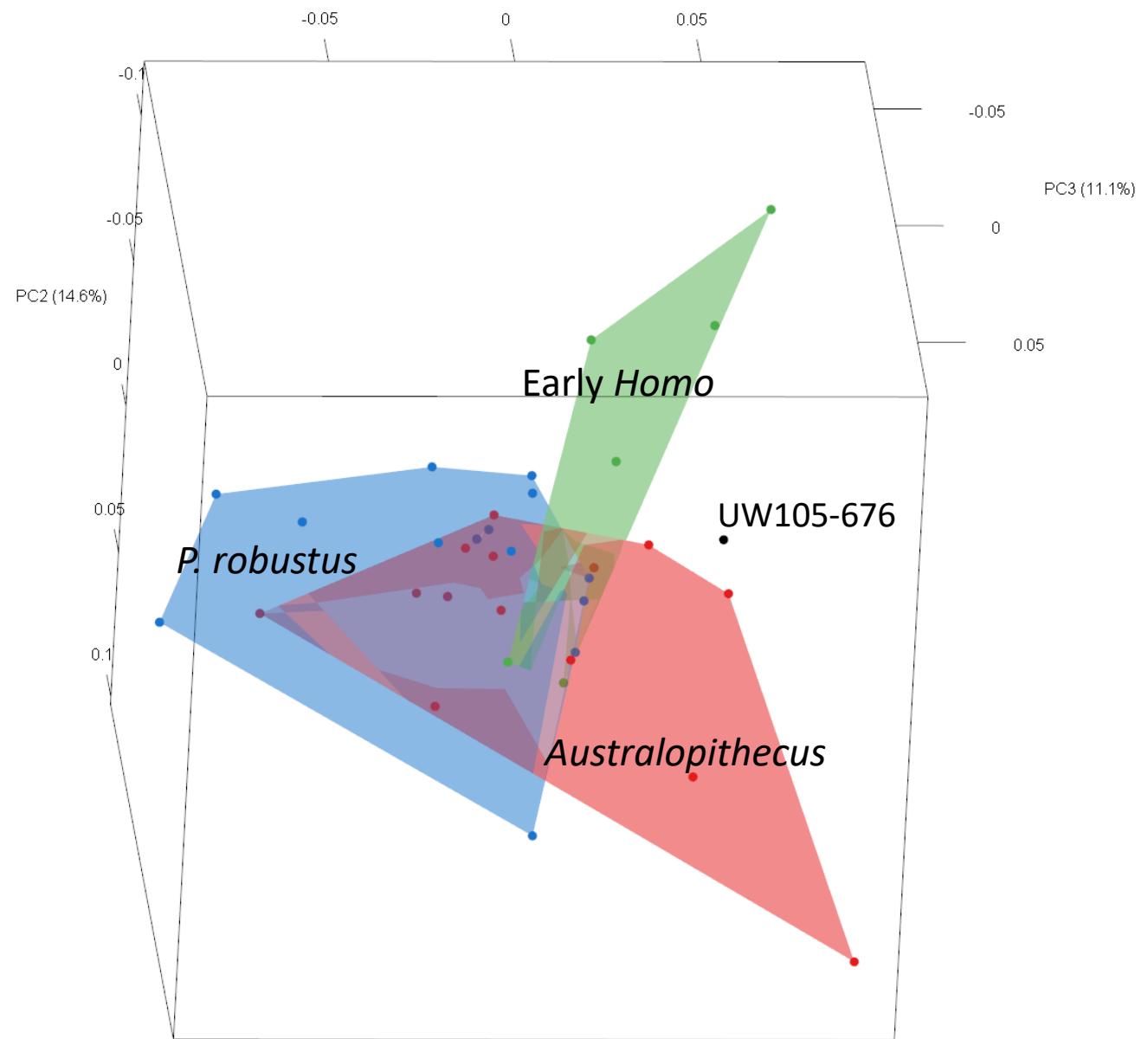
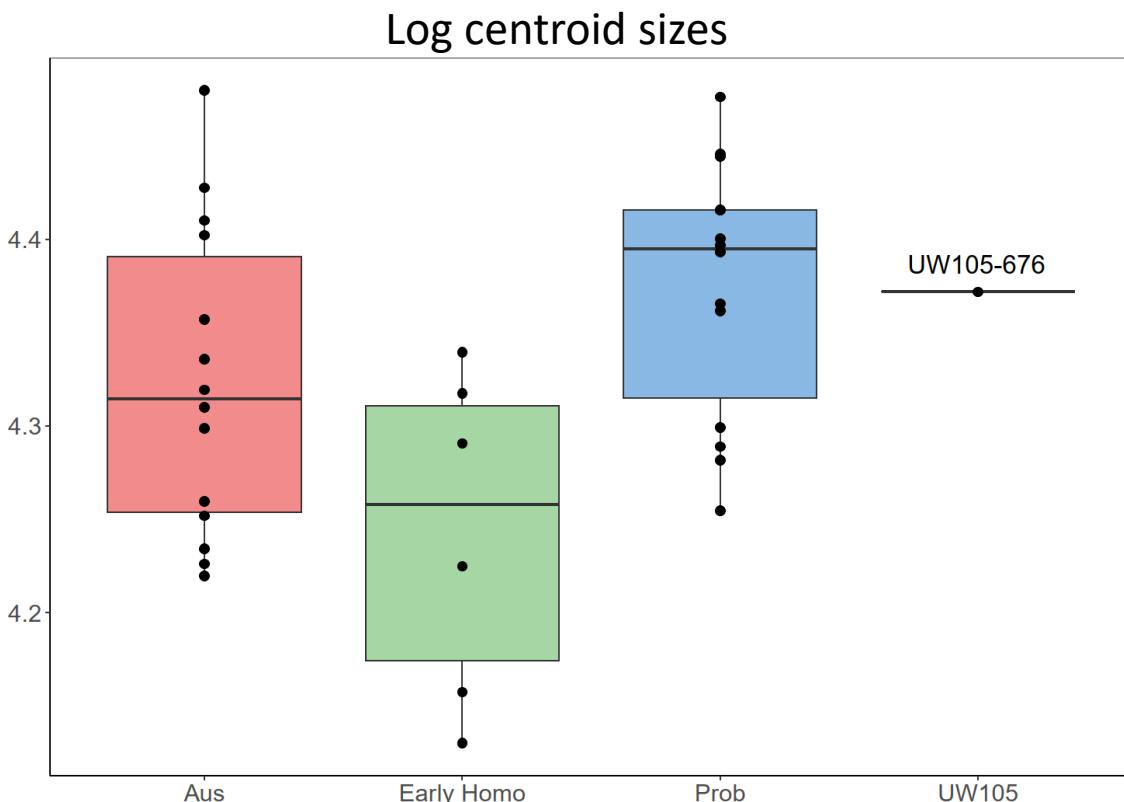
UW105-042 vs. *P. robustus*



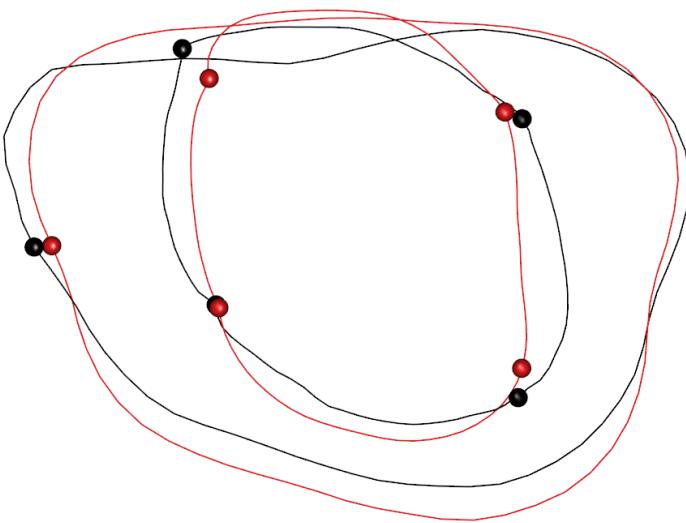
UW105-042 has a cervix that is much smaller compared to the size of the EDJ ridge than in any of the comparative taxa.

UW105-676. Taxonomic assessment as **UM3**.

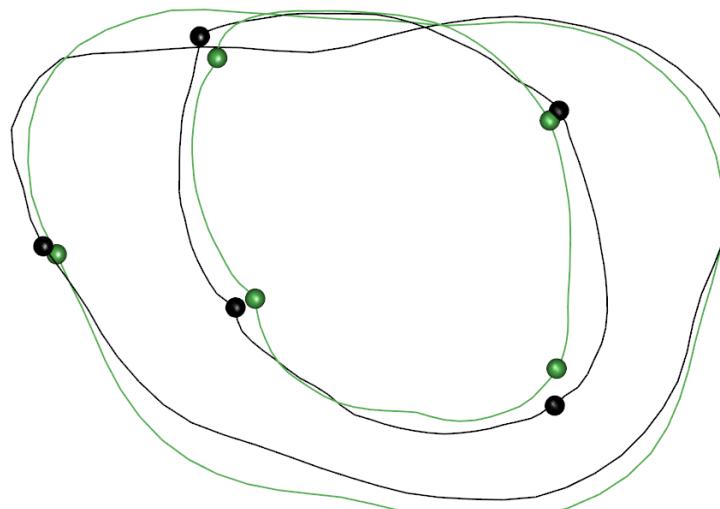
Shape PCA EDJ ridge + cervix.



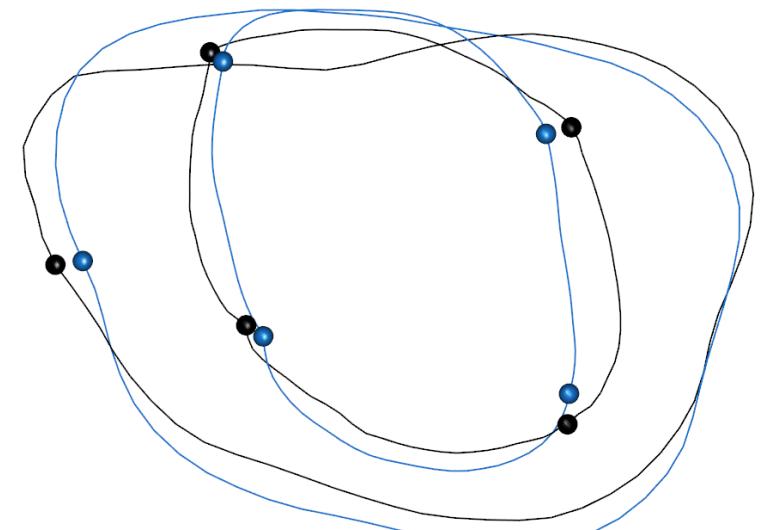
UW105-676 vs. *Australopithecus*



UW105-676 vs. Early *Homo*

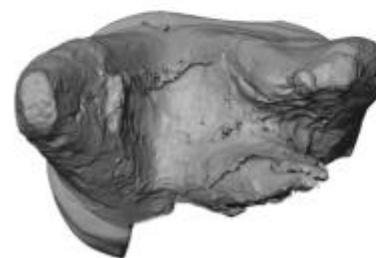
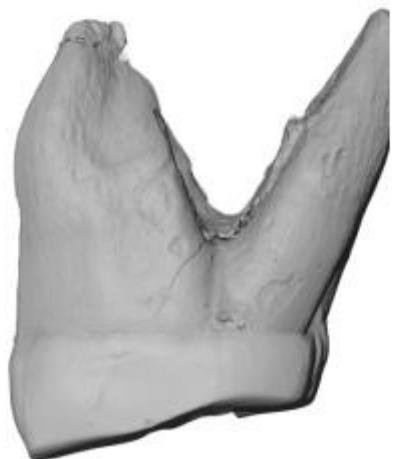
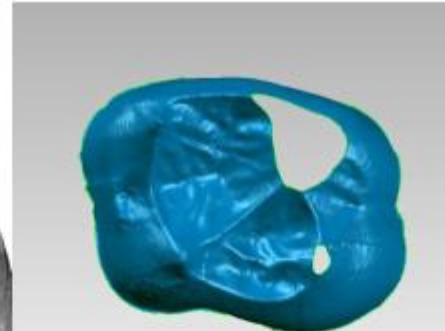
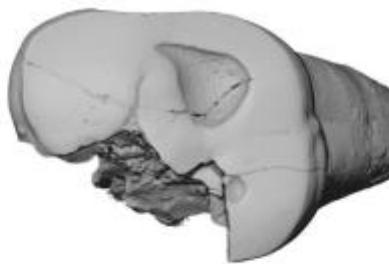
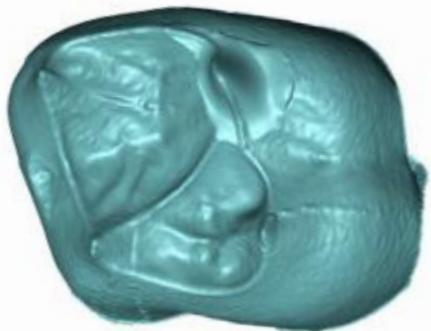


UW105-676 vs. *P. robustus*



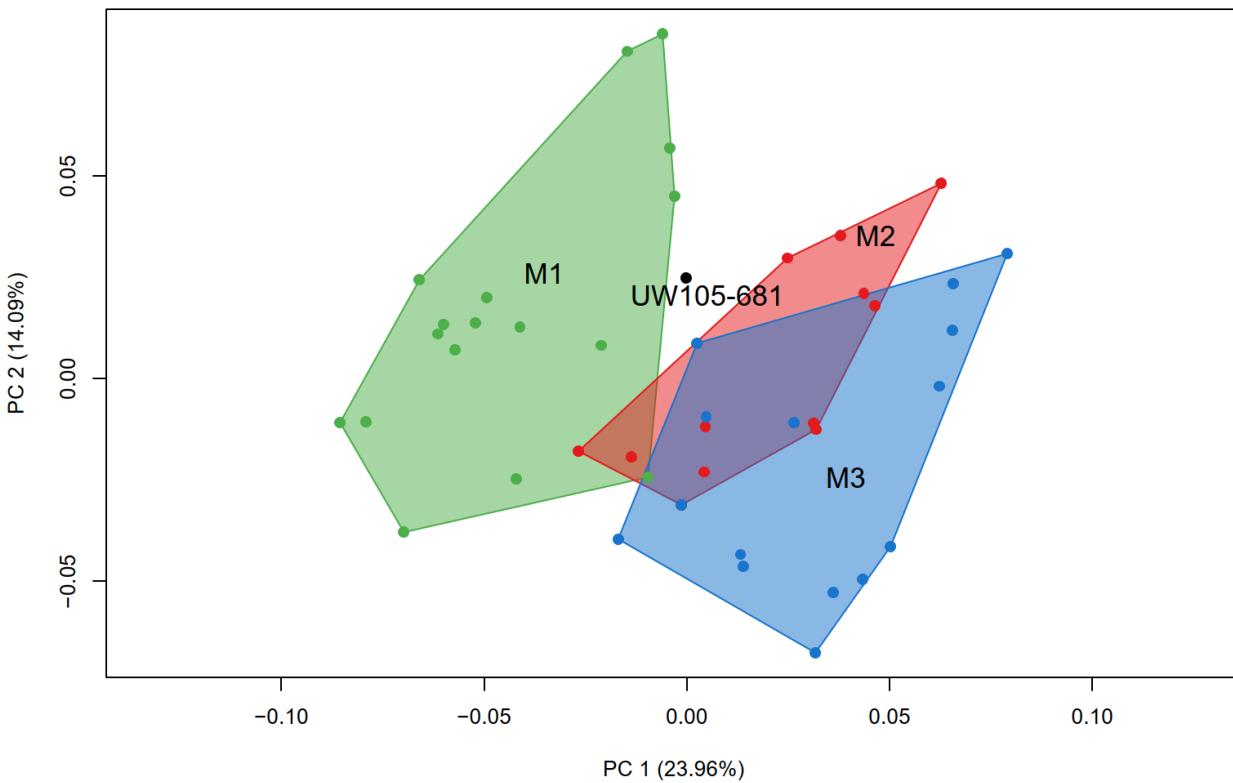
UW105-676 has a cervix that is mesially wider than *Paranthropus* and has a broader EDJ ridge that aligns it more with Early *Homo*.

UW105-681 URM

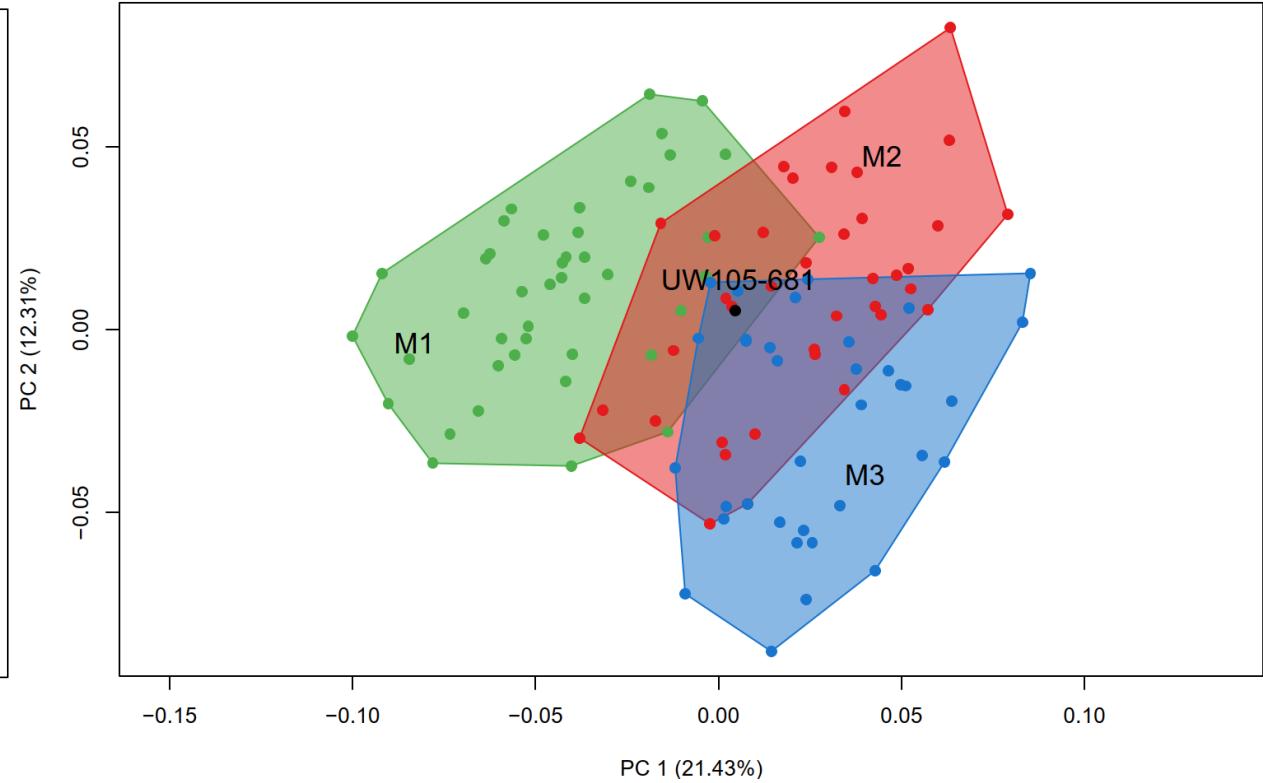


UW105-681. Tooth type classification.

Shape PCA EDJ ridge (dropped landmarks) + cervix. Only *P. robustus*



Shape PCA EDJ ridge (dropped landmarks) + cervix. Whole sample

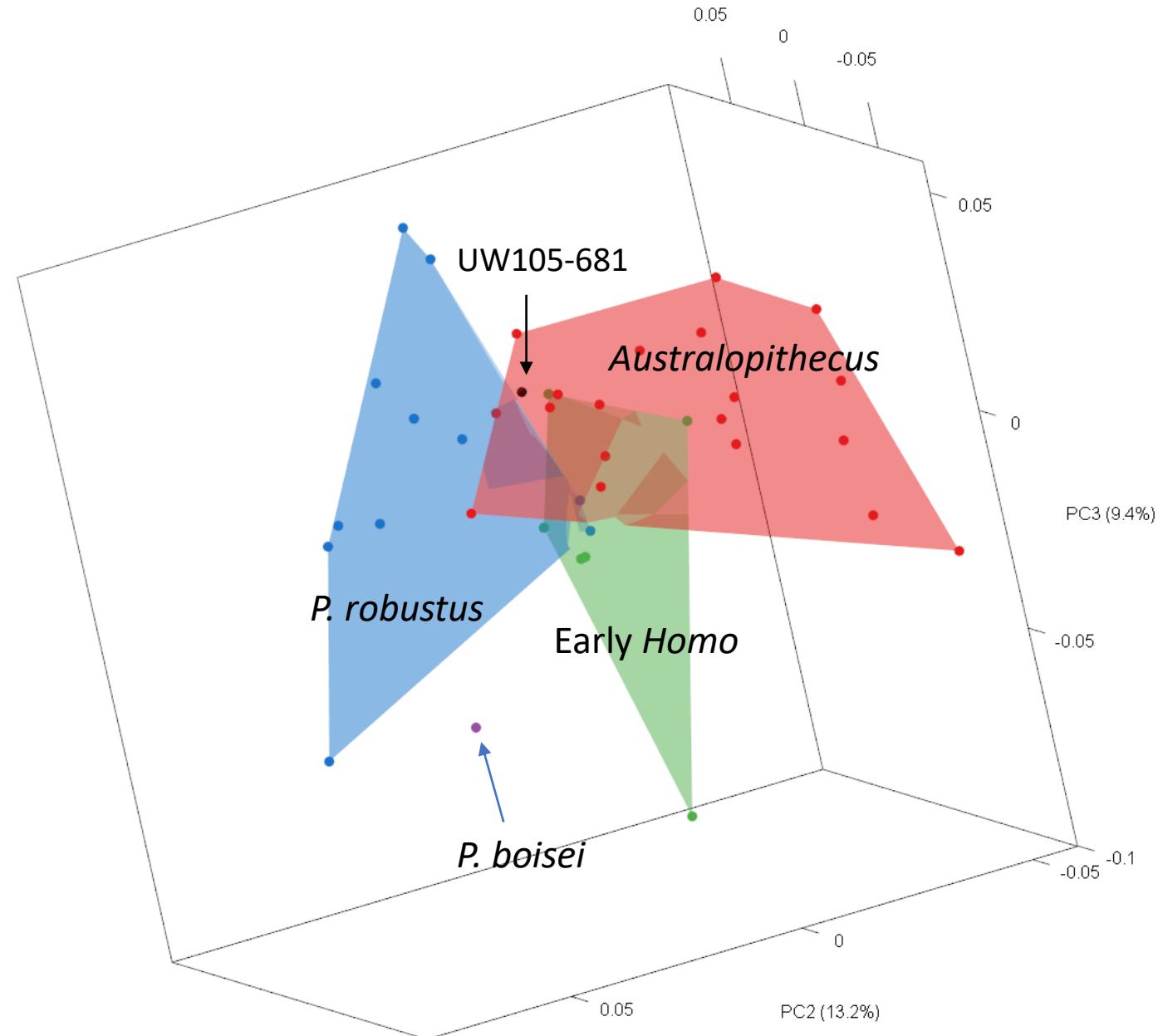
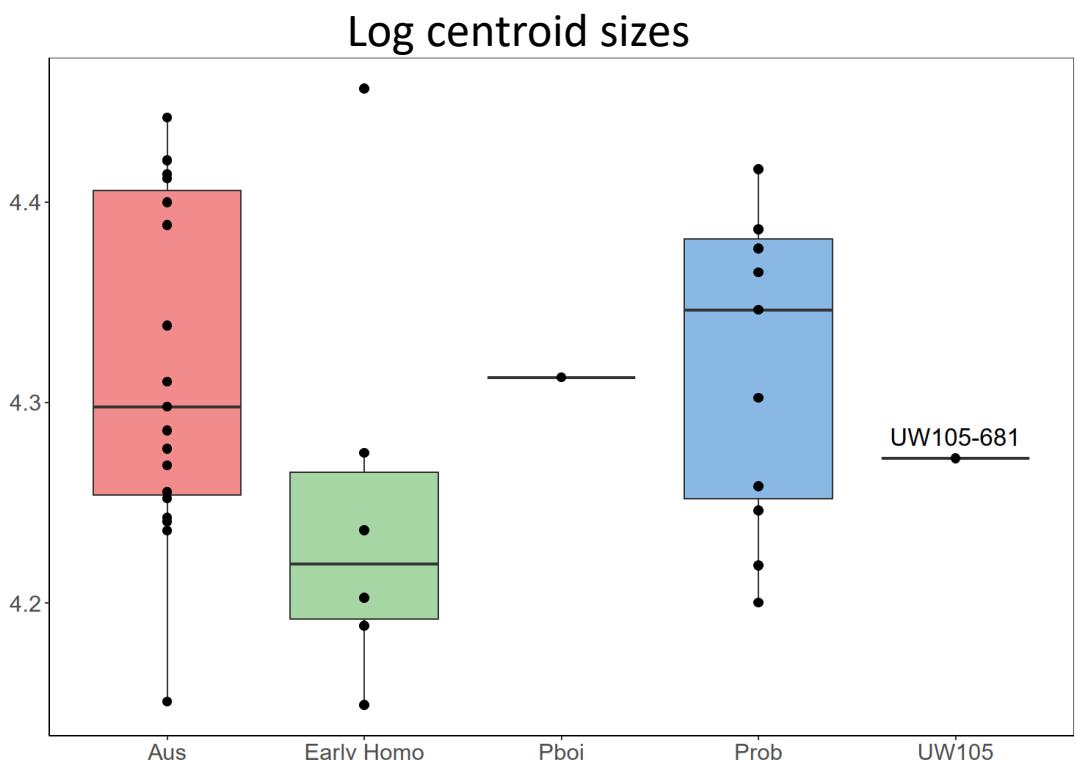


CVA results

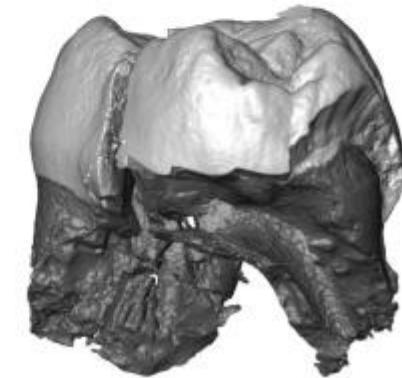
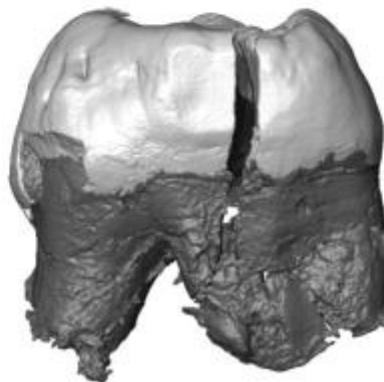
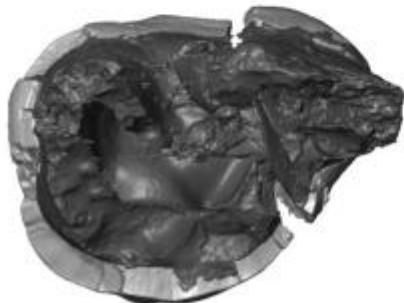
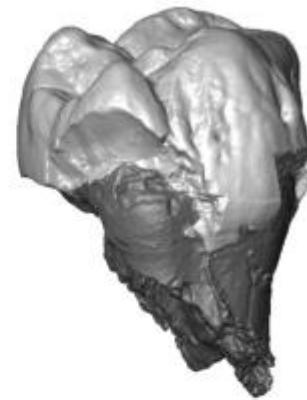
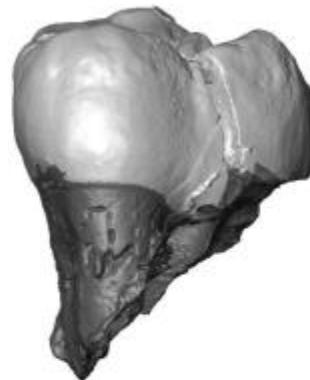
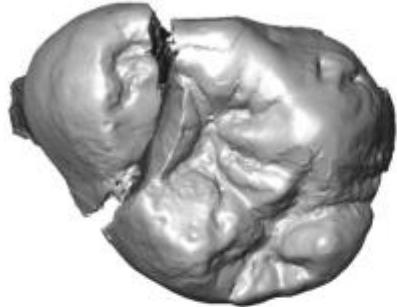
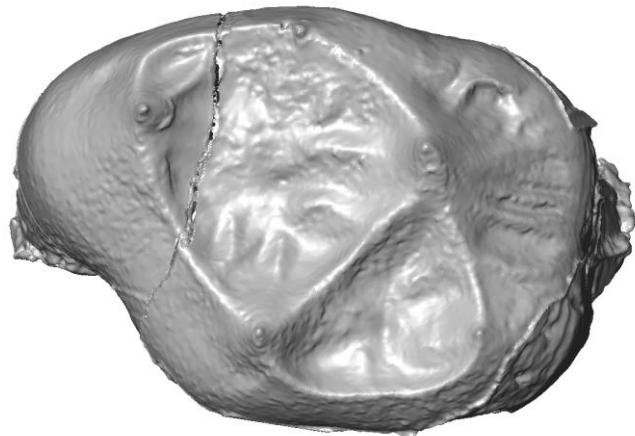
Specimen	Sample	M1	M2
UW105-681	All specimens	16.67%	83.33%
	Only <i>P. robustus</i>		100%

UW105-681. Taxonomic assessment as UM2.

Shape PCA EDJ ridge (dropped landmarks) + cervix.

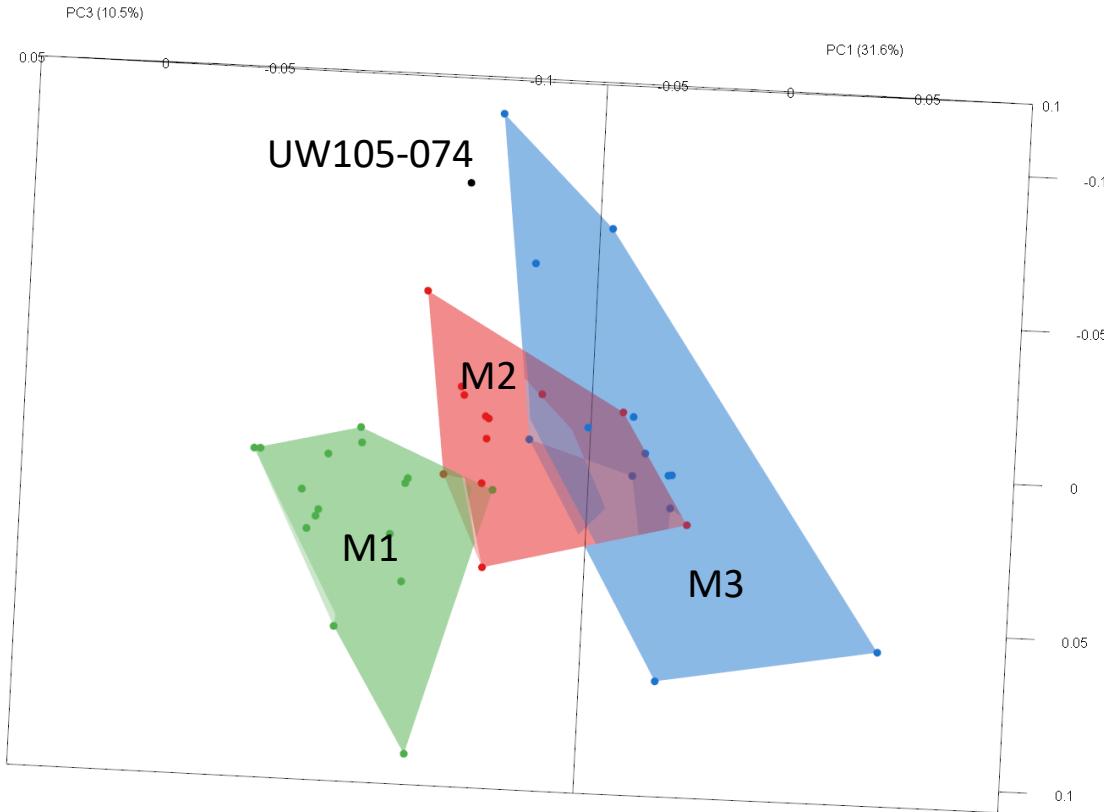


UW105-074 URM(2/3)?

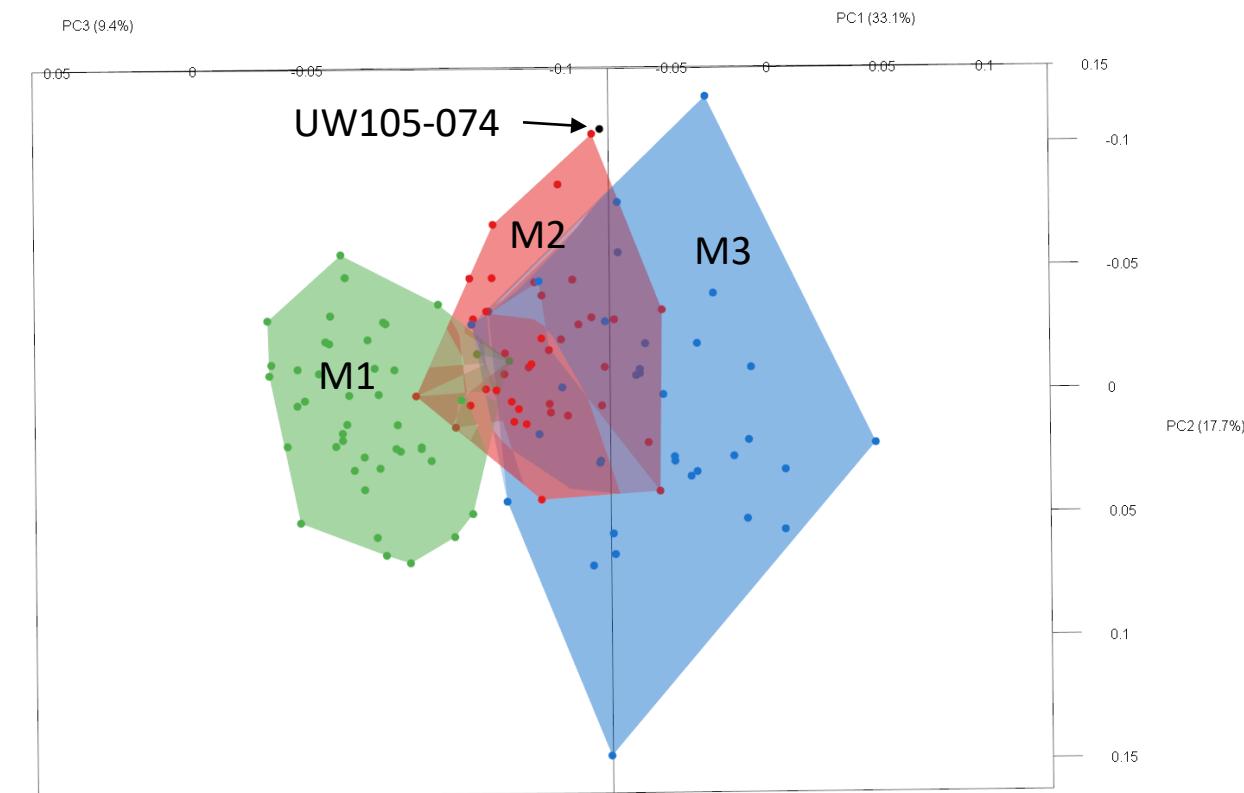


UW105-074 Tooth type classification.

Shape PCA EDJ ridge only. Only *P. robustus*



Shape PCA EDJ ridge only. Whole sample

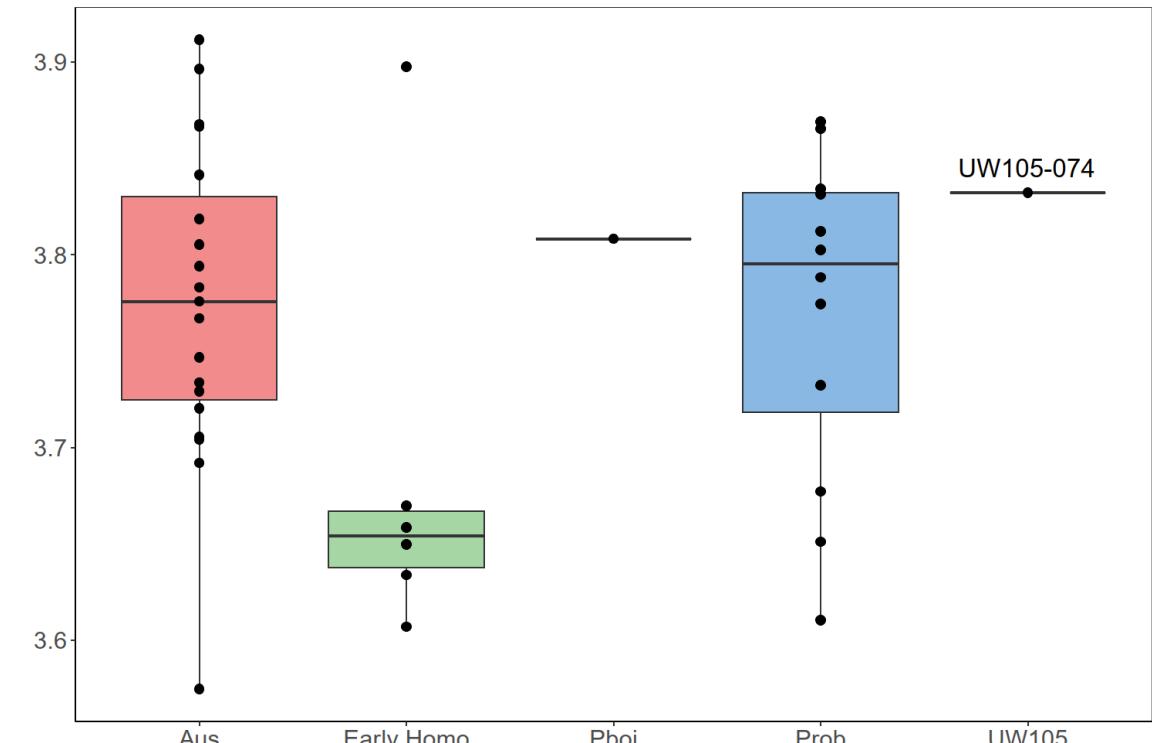


CVA results

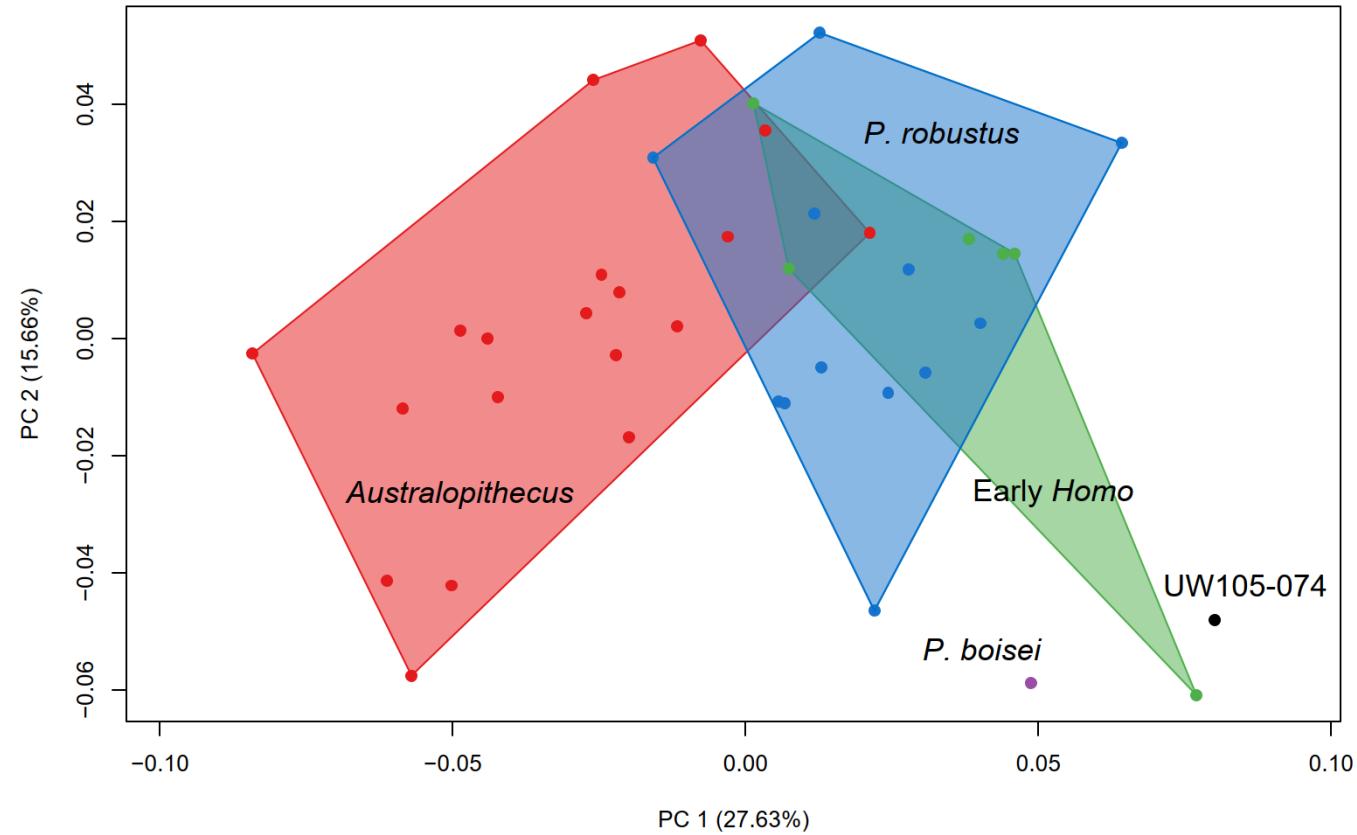
Specimen	Sample	M2	M3
UW105-074	All specimens	100%	
	Only <i>P. robustus</i>	57.14%	42.86%

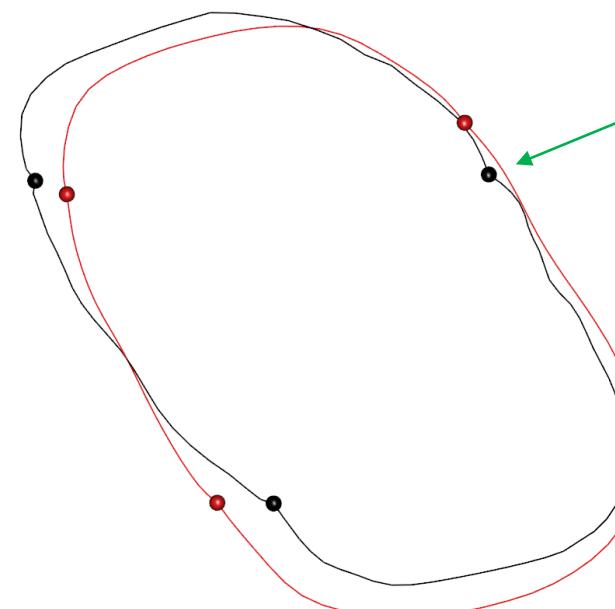
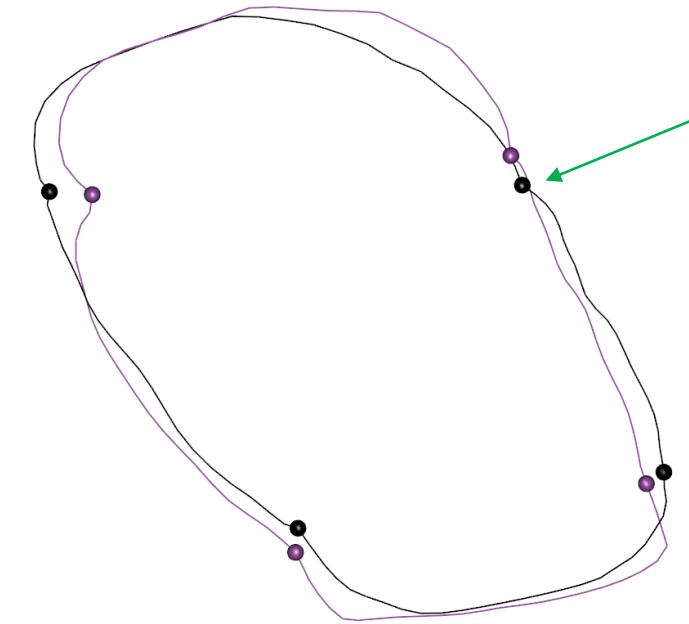
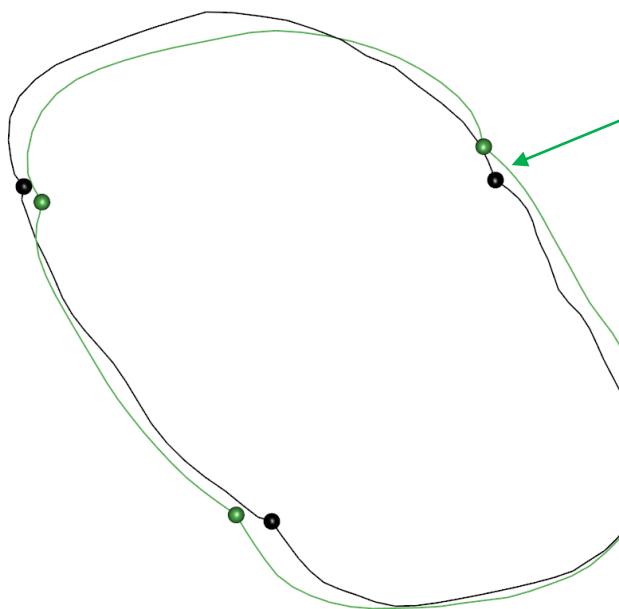
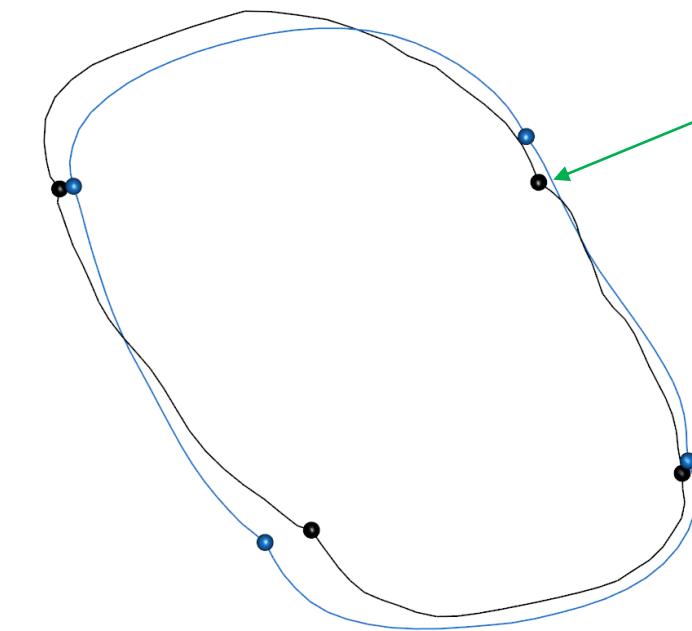
UW105-074 taxonomic assessment as **UM2**.

Log centroid size



Shape PCA EDJ ridge only

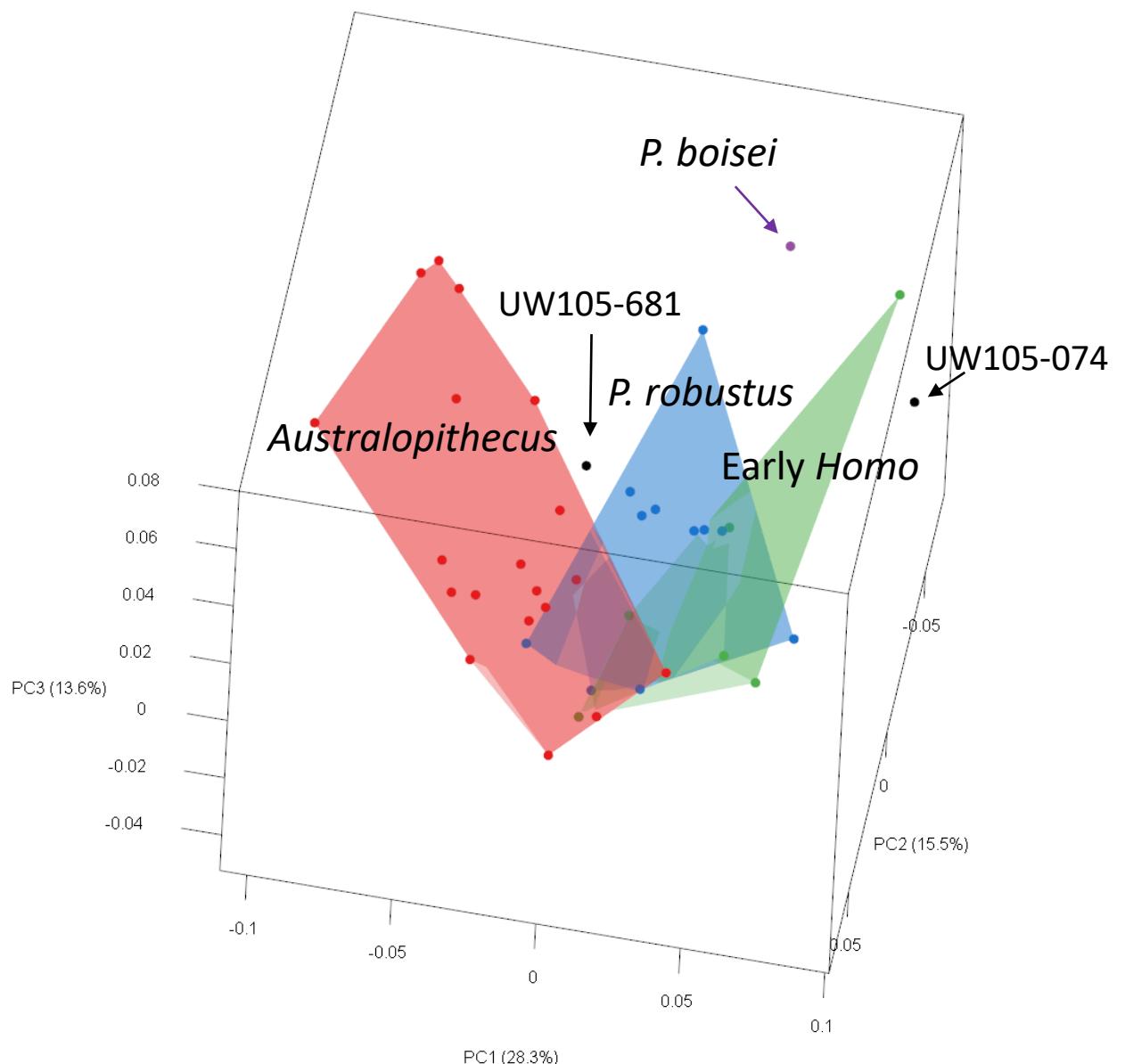
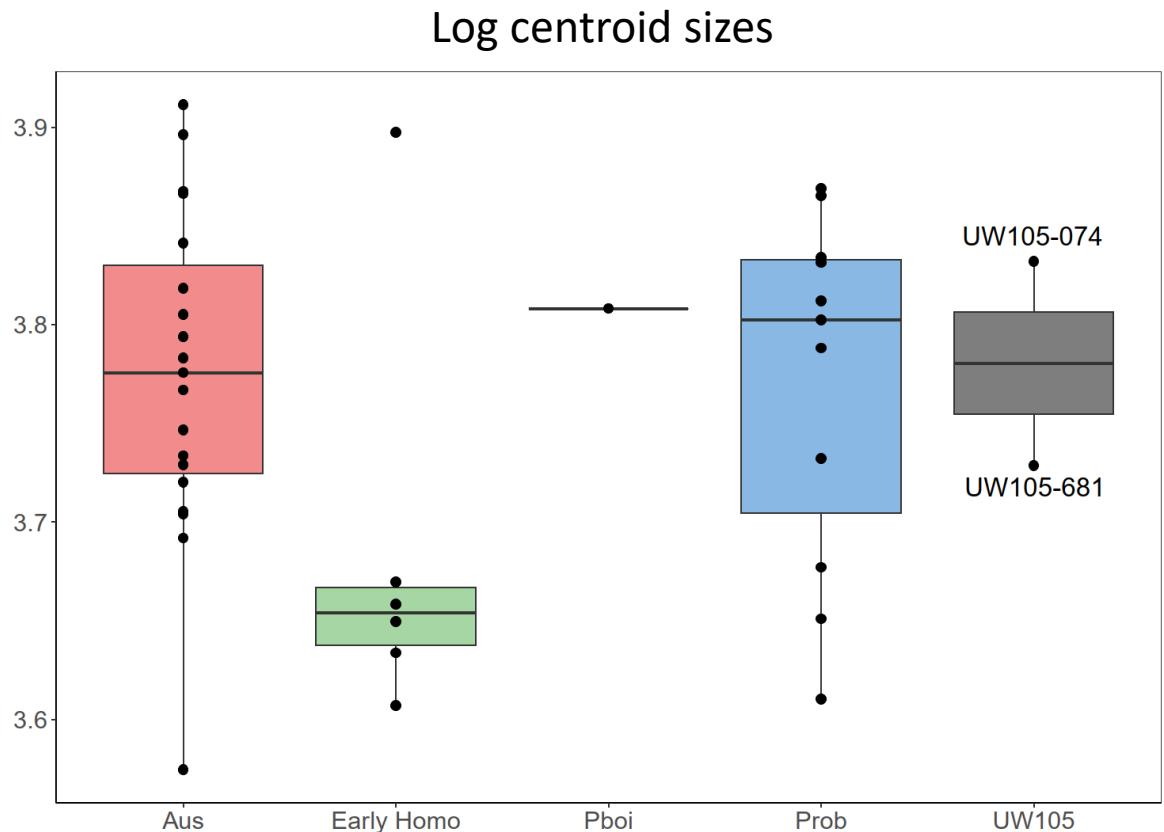


UW105-074 vs. *Australopithecus*UW105-074 vs. *P. boisei*UW105-074 vs. Early *Homo*UW105-074 vs. *P. robustus*

The **protocone** in UW 105-074 is more distally placed relative to the paracone and the distal moiety of the EDJ ridge is overall narrower than in *P. robustus*, but similar to the condition in Early *Homo* and *P. boisei* (KNM-WT 17400).

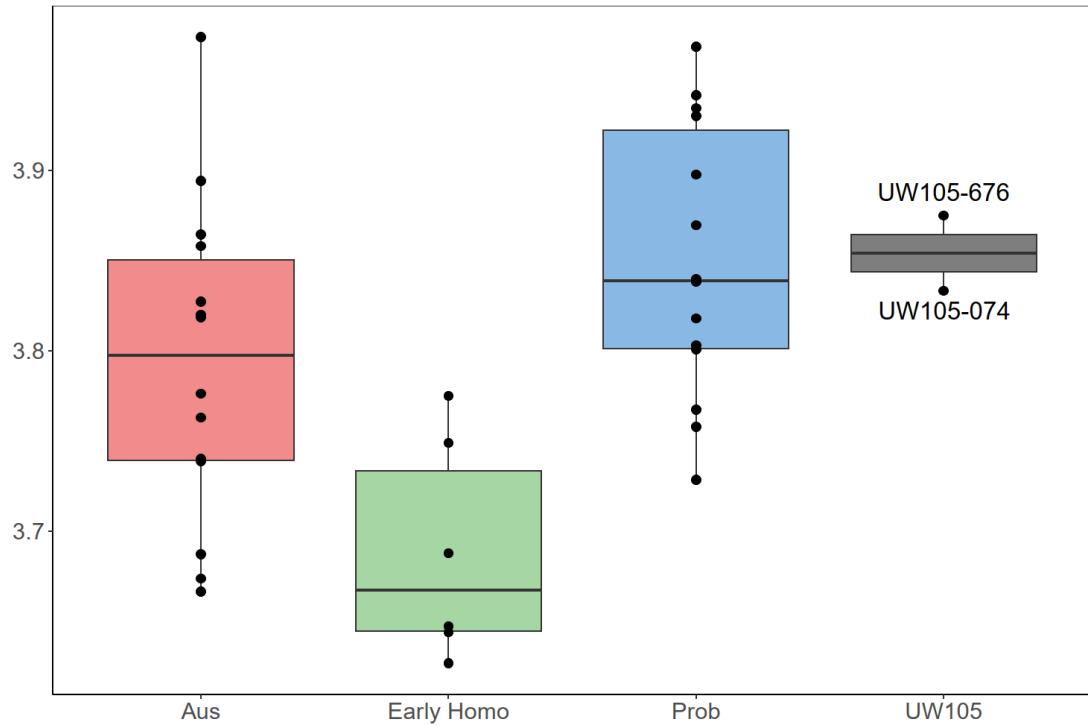
UW105-074 and UW105-681 as UM2s

EDJ ridge only (dropped landmarked) shape PCA

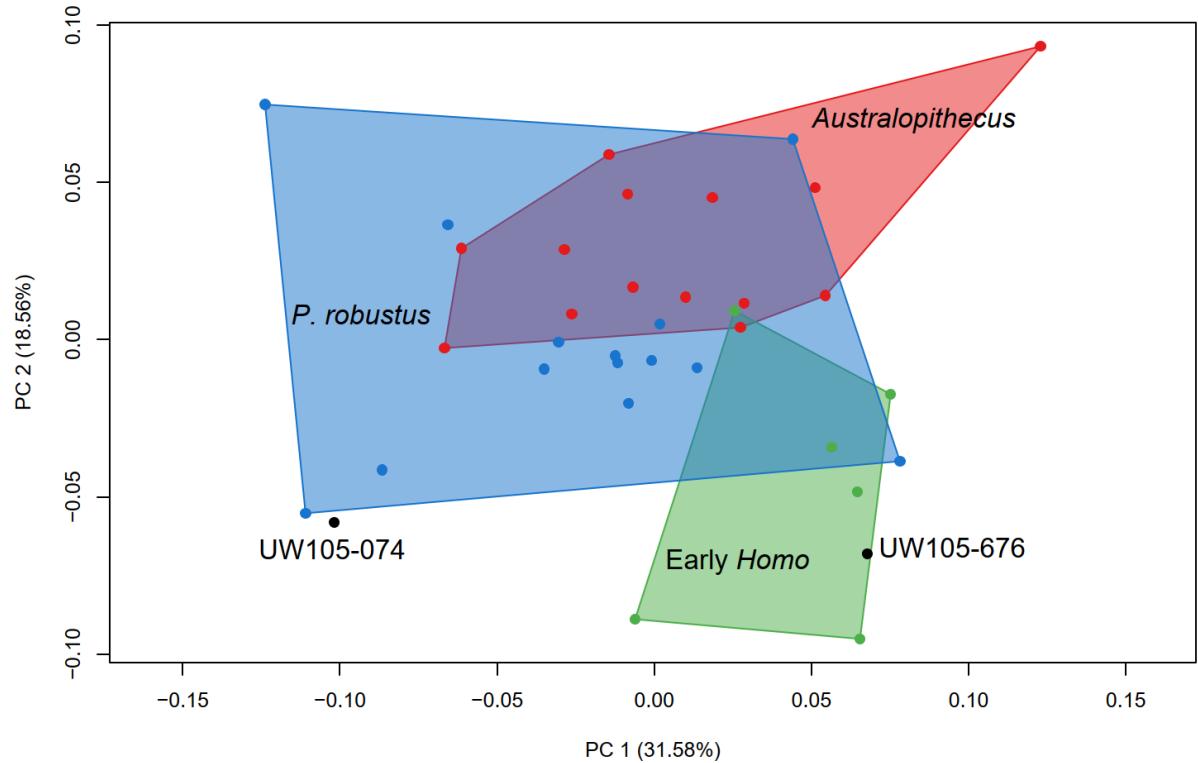


UW105-074 and UW105-676 taxonomic assessment as UM3s.

Log centroid size

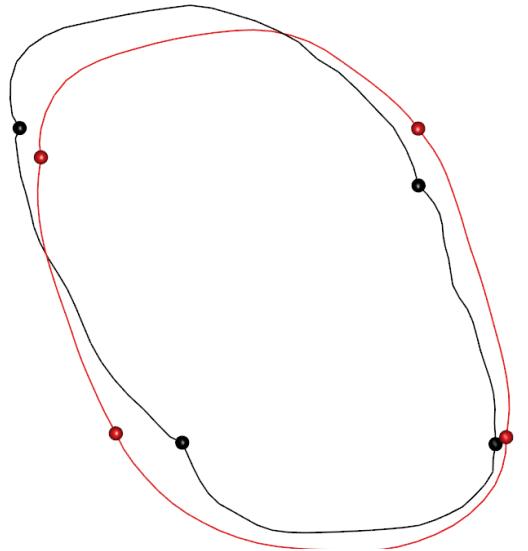


Shape PCA EDJ ridge only

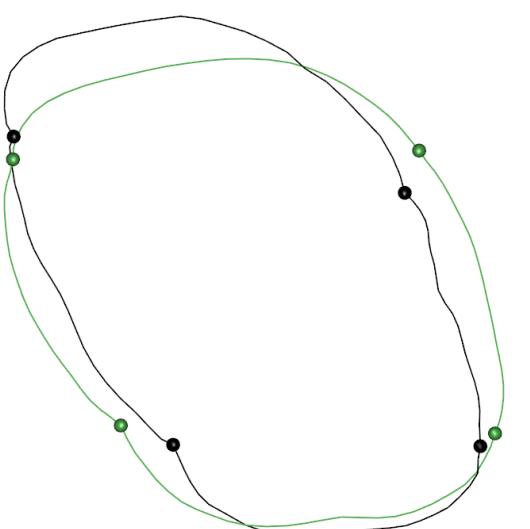


If UW105-074 is treated as an UM3 it is most similar in EDJ shape to *P. robustus*, specifically in its mesiodistal elongation and the buccolingual narrowing. UW105-676 remains distinct from *Australopithecus* and *P. robustus*. It's of note to mention that UM3s tend to be quite variable.

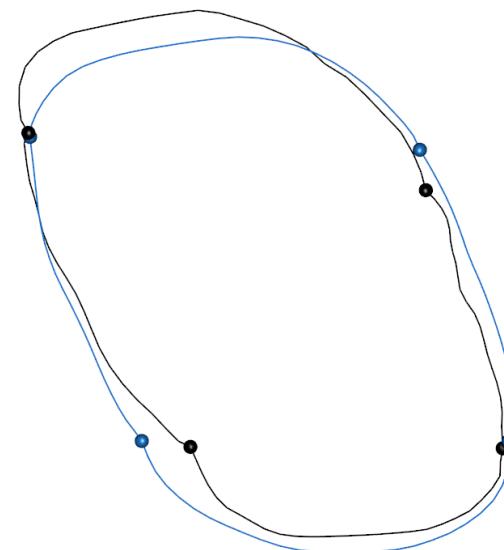
UW105-074/676 vs. *Australopithecus*



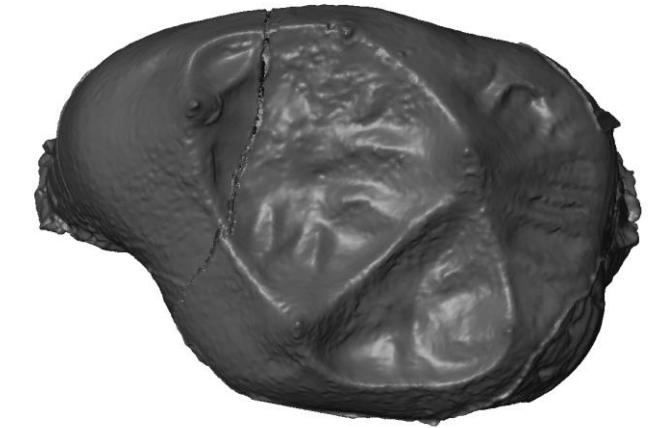
UW105-074/676 vs. Early *Homo*



UW105-074/676 vs. *P. robustus*



UW105-074



UW105-676

