Dr. Martin Gericke and Ms. Mandy Wagner Leipzig University 13 Liebigstraße Leipzig, Germany 04103

RE: Update on human crania housed at Leipzig University discrepancy in boxing and mandibles

## Summary

During the initial evaluation, there were discrepancies regarding the mandibles. This addendum is intended to clarify the noted issues with the mandibles and resolve any outstanding issues.

Skull 793 was found to have a mandible labeled 790. Despite the numbering system, I performed an assessment of why mandible 790 does not fit with skull 793. Support for the separation of these two items (793 calvarium and 790 mandible) is in the taphonomy and age of the dentition. The taphonomy of the mandible is different from the calvarium in the following ways: the exterior bone color (darker/lighter gray), yellower tooth roots, darker tooth crowns. This could be an effect of curation – however it is unlikely that they would differ so strongly. Moreover, the age indications are vastly different from each other. In particular, the mandible has lost several molars antemortem as evidenced by the active (on the right) resorption of M1and M2, and complete (left) resorption of all three molars. The third molar on the right has had full loss of the crown and is just the roots. The teeth that are present show extreme and sharp wear – also in unique patterns that is generally the antithesis of the maxilla of 793. The 793 maxilla has virtually no wear on the teeth, all are in good condition and at least one of the third molars is still erupting. Therefore, I would suggest that the number listed on the mandible is from another skull.

Skull 790 when initially opened was found to have a mandible with it, however the writing on the mandible is different. The skulls that are associated with the ones from New Orleans are given a number/27; this mandible was labeled 790/1285. This mandible (790/1285) does not match the skull 790/27 due to the articulation at the temporomandibular joint (it is much wider than skull 790). This mandible was checked with all other calvaria that did not have a mandible but does not appear to articulate correctly with any of the skulls to be repatriated to New Orleans.

Regarding the reassociation of skull 790/27 and mandible 790/27, there is a good rearticulation at the temporomandibular joint between the mandible and maxilla and the dentition aligns. Age assessment was consistent and therefore, the mandible was reassociated with this calvarium.

Finally, a review of the original logbook with any additional notes added to the book are as follows. The skull number and note on whether there was a cranium (skull and mandible) or a calvarium (skull without a mandible) are in the first two columns, then I have added whether that was still the case during analysis. During this exercise, it is noted that there was one reassociation (skull and mandible 790), while there are three crania (793, 806, and 807) missing mandibles. The aforementioned mandible labeled 790/1285 was checked with all individuals missing a mandible and was not reassociated with any.

790 – cranium – with reassociation, correct 791 – calvarium – correct

- 792 cranium correct
  793 cranium missing mandible
  794 cranium correct
- 795 calvarium correct
- 796 cranium correct
- 797 cranium correct
- 798 cranium correct
- 799 cranium correct
- 800-cranium-correct
- 801 cranium correct
- 802 cranium correct
- 803 cranium correct
- 804 cranium correct
- 805 cranium correct
- 806 cranium missing mandible
- $807-cranium-missing\ mandible$
- 808-cranium-correct

Sincerely,

Christine Halling M.S., RPA