

Human or Non-Human Origin Determination

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Human or Non-Human Origin Determination

1 INTRODUCTION

This document describes guidelines for determining whether skeletal remains originate from a human or non-human (other animal) source.

2 SCOPE

This document applies to Anthropology Examiners in the Trace Evidence Unit (TEU).

3 EQUIPMENT

- General laboratory supplies
- Human and non-human skeletal reference casts
- Human and non-human skeletal reference material (e.g., museum collections)
- Personal protective equipment (e.g., lab coat, gloves, eye protection)

4 PROCEDURE

- ANTHRO-300: Forensic Anthropological Examinations will be followed.
- The determination of whether skeletal material is human or non-human in origin may involve the techniques described below. In some cases, one of the following techniques may be sufficient, while others may require the use of multiple techniques to reach a conclusion.
- Observations supporting conclusions will be recorded in the case notes.
- Skeletal material may be classified as:
 - Human – exhibits known characteristics of human skeletal material to the exclusion of other reasonable possibilities
 - Consistent with human – exhibits characteristics similar to human skeletal material
 - Nonhuman or excluded as human – does not exhibit characteristics of human skeletal material or exhibits characteristics of non-human material
 - Inconclusive or undetermined – lacks sufficient characteristics to make a determination

4.1 Visual Examination

- Visual examination involves the assessment of the skeletal material with the unaided eye to assess morphology, looking for features or landmarks that are characteristic of human or non-human species.
- The determination of whether material is human or non-human can usually be achieved by visual examination if the specimens are sufficiently large and in good condition, using the examiner's professional training and knowledge of human and non-human osteology.

4.2 Metric Examination

- Metric examination involves taking measurements of the skeletal material.

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- B. Measurements may be compared to known data to determine whether it is within the known range of size variation of human or non-human skeletons.

4.3 Comparison to Exemplars

- A. The skeletal material may be compared to information or data from published literature and/or skeletal exemplars.
- B. Exemplars may include skeletal reference casts or skeletal reference material.

4.4 Bone Histomorphology

- A. The microscopic structure of the skeletal material may be analyzed following ANTHRO-301: Bone Histomorphology.

5 LIMITATIONS

The conclusions that can be reached regarding human or non-human origin are dependent on the condition and completeness of the skeletal remains. Result based on fragmentary or poorly preserved material may be inconclusive.

6 SAFETY

- While working with physical evidence, laboratory personnel will wear at least the minimum appropriate protective attire (e.g., laboratory coat, eye protection, protective gloves).
- Universal precautions will be followed.
- Exposure to physical, biological, and chemical hazards may be associated with the examination techniques performed. Safety procedures related to specific materials, instruments, or equipment will be followed. Refer to the [FBI Laboratory Safety Manual](#) for guidance.

7 REFERENCES

ANSI/ASB Standard 150. Standard for Determination of Medicolegal Significance from Skeletal Remains in Forensic Anthropology (current version)

ANTHRO-300: Forensic Anthropological Examinations (current version)

ANTHRO-301: Bone Histomorphology (current version)

FBI Laboratory Safety Manual (current version)

8 REVISION HISTORY

Revision	Issued	Changes
02	02/10/2020	'Sample Selection' removed from Section 4 title. Added reference to non-human osteology to Section 5.1.1. Changed 'forensic anthropologist' to 'Anthropology Examiner' in Scope.
03	01/28/2022	Added classification language to conform with ANSI/ASB Standard and ASSTR. Replaced SWGANTH reference with ANSI/ASB. Formatting and language changes to conform to new template.
04	03/15/2024	Minor administrative edits.