

Case Study No. 2: Bioarchaeology of care

Read the information about the individual and examine the images of their skeletal remains below to complete the Short-Form Index of Care form to the best of your ability.

Mortuary Context:

- An individual was recovered from a cemetery site in Man Bac, Northern Vietnam which dates to around 2000BC (Figure 1).
- The cemetery served members of a sedentary community with a predominantly hunter (fisher) and gatherer economy and, at that time, living in an estuarine environment (the sea has since receded).
- The individual was buried flexed (knees pulled up to chest) and in N-S orientation. Standard practice was supine burial (lying on their back) in E-W orientation.
- Two small pottery vessels were recovered (most adults were buried with one or more larger vessels; Figure 2).

Individual MB9:

- Approximately 60% of MB9's skeleton was represented (Figure 3).
- The individual was estimated to be a male of around 25 years at time of death.
- Remaining vertebrae (C1-T3) were fused in a single block, with C1 fused to the base of the skull, and all long bones were extremely gracile (Figures 4-6). The physical evidence suggests MB9 lived with these anomalies for a long time prior to death.

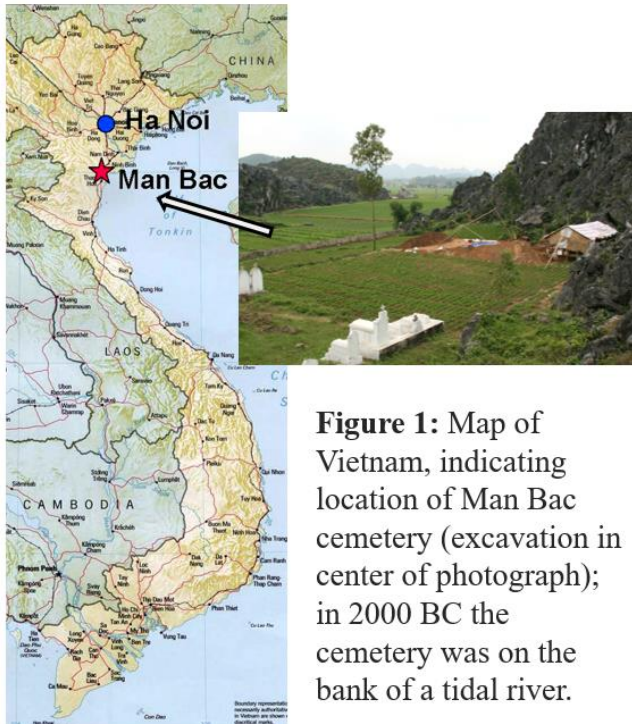


Figure 1: Map of Vietnam, indicating location of Man Bac cemetery (excavation in center of photograph); in 2000 BC the cemetery was on the bank of a tidal river.



Figure 2: MB9 *in situ*. Two pots found with MB9 have been removed.

Evidence of pathology:

- [Figure 3](#) shows MB9's completeness and areas of the skeleton affected by pathological alteration.
- [Figure 4](#) shows gracile left femur and right ulna: note close-up of left femur cortical bone.
- [Figure 5](#) compares MB9 limb morphology with those of other adult males in the cemetery.
- [Figure 6](#) shows vertebral fusion (note C1-C2 angle of fusion, remembering C1 was fused to the base of the skull); vertebrae were discovered in a single block, but damaged during excavation. Vertebral fusion suggests Klippel Feil Syndrome, a congenital condition (i.e. a condition present from around the time of birth); note, however, that KFS does not directly affect limb morphology.

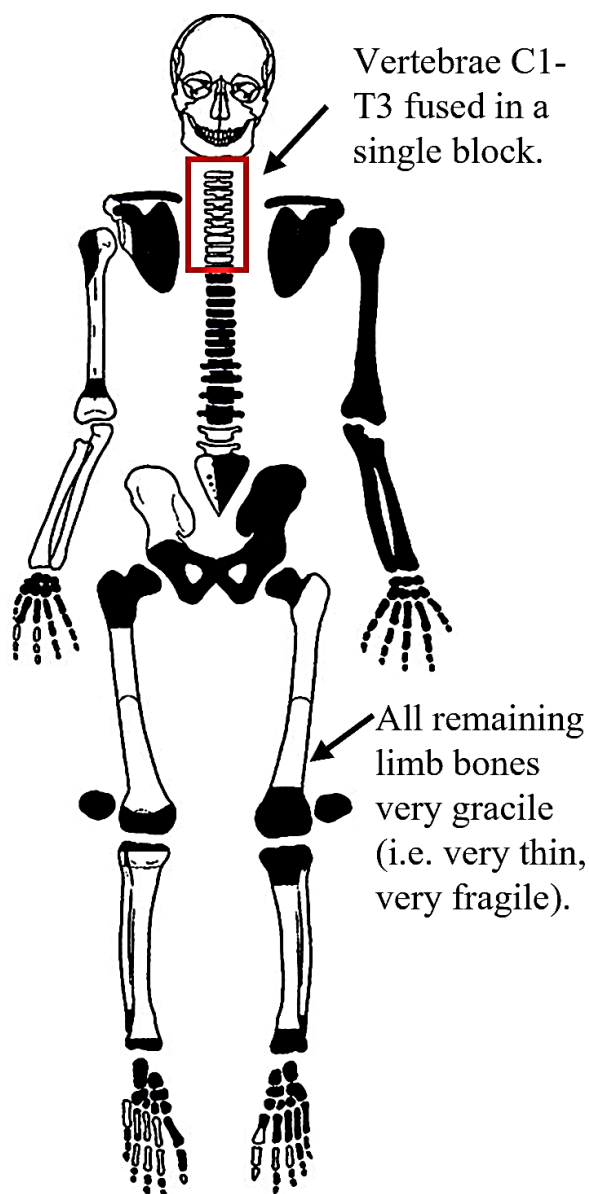


Figure 4: L femur (top), R ulna (bottom) (N.B. femur and ulna are not to exactly same scale)

Figure 3: schematic summarising skeletal preservation (black = missing elements).

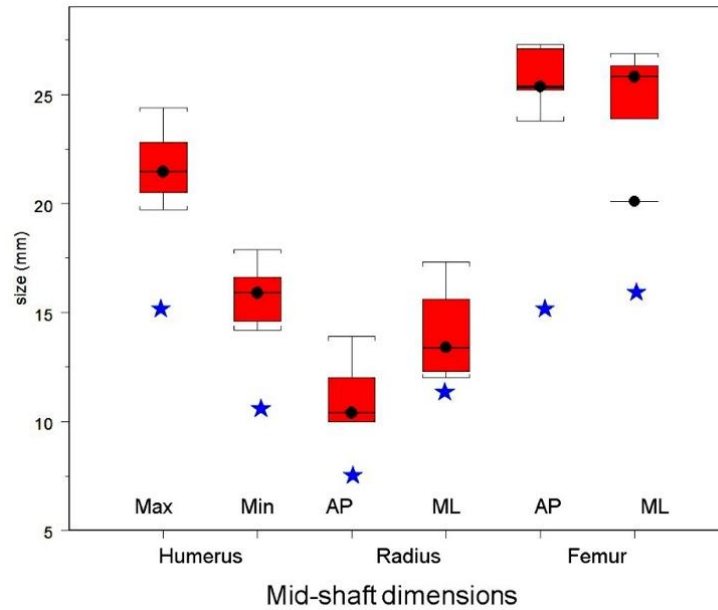
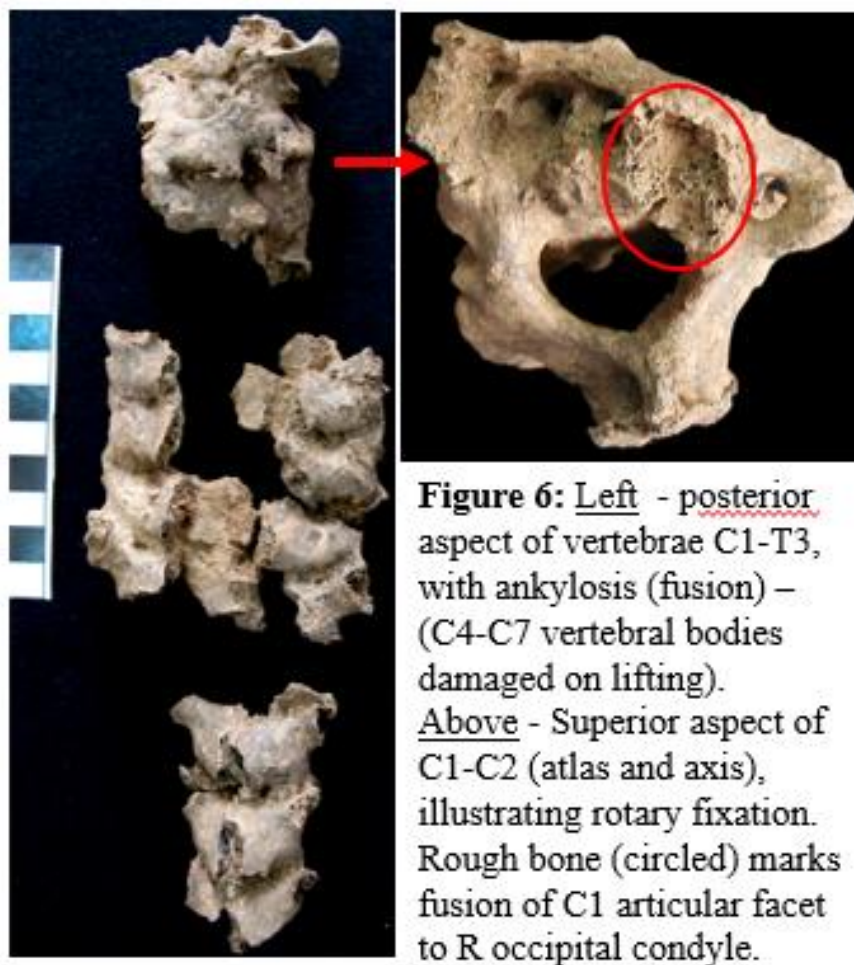


Figure 5: MB9 limb dimensions (blue stars) compared to 6 other Man Bac adults (measurements in millimetres).



Use the information provided about MB9 to fill in the *Short-Form Index of Care*.