

CASE STUDY No. 6: Worthy Park Burial 38

In this activity, you will work through a case study of a single individual who exhibits changes in their skeleton resulting from experience of disease or injury during life.

You will consider the features of the individual (age, sex, and pathology). Taking into account their mortuary and lifeways contexts, you will then assess whether they likely required, and received, health-related care at some stage. Remember that ‘health-related care’ is defined along a continuum spanning ‘hands-on, intensive care’ at one end, and ‘accommodation of difference’ (i.e. adapting environment and expectations to allow participation) at the other.

Note: As in most bioarchaeological research, you may not have all the data you would like in order to be completely confident in your conclusions. Hint: focus on the likely impacts of the skeletal changes (described below) on ability to function independently, and to fully participate, in the specific community setting at that particular time in history.

Read the case study and complete the *Short-Form Index of Care* to the best of your ability. Refer to the Glossary on the final page for brief definitions of unfamiliar terms.

MORTUARY CONTEXT:

- Skeletal remains of Worthy Park Burial 38 were recovered from an early Anglo-Saxon cemetery located near Winchester, in the south of England ([Fig. 1](#)).
- The cemetery served a small nearby settlement, and contained around 300 burials dating to between 450AD and 600AD.

THE INDIVIDUAL

- Burial 38 was male; 45-50 years; stature 1.6m (63”); his skeleton was complete and very well preserved ([Fig. 2](#)).
- He was buried supine, in a grave slightly wider and longer than average for one of his stature. There are no preserved grave goods, but Burial 38’s head rests on a ‘compressed pillow of earth’ (only one other Worthy Park burial has this feature). His funerary treatment broadly fits with the practices of the time – a mix of cremations and supine burials with and without grave goods. There were no major status differences reflected in mortuary contexts.

LIFEWAYS CONTEXT:

- Community: 5-8 families living in separate dwellings in close vicinity and working separate landholdings, but reliant on cooperation to support production. Neighbouring settlements were linked through trading and social activities.
- Landscape: flat, fertile, river valley, sloping upwards towards rolling hills ([Fig. 1](#)).
- Economy: mainly agricultural, with crops comprising mixed cereals and legumes; livestock; and household gardens (fruit trees, poultry and vegetables). Other industries include: textiles, bone working, metal working, (possibly) pottery.
- Health: skeletal evidence of repetitive, physically-demanding labour, work-related trauma. No evidence of significant interpersonal violence. Consistent male/female differences in skeletal morphology suggest gendered occupations.

PATHOLOGY:

Burial 38 was born with congenital upper limb amelia (see Glossary) – in this case, it involved the complete absence of his left arm. His remains display a number of additional pathologies and anomalies, many of which may result from biomechanical changes made to compensate for impacts on balance and mobility from his left upper body condition. These pathologies are mapped in Fig 3, and include:

- Congenital complete absence of all skeletal elements of the left arm.
- Congenital complete absence of the left scapula and clavicle - the ‘shoulder girdle’ – meaning the muscles normally attaching to this region (the left deltoid, pectoralis major, latissimus dorsi, pectoralis minor), and which support the upper spine and torso, would also be absent.
- Severe scoliosis seen in wedging and rotation of vertebrae throughout the spine, and in particular in the mid-thoracic region, with possible implications for ease of breathing. Scoliosis in the lumbar vertebrae may have impinged on the spinal cord, potentially leading to neural weakness and/or pain in one or both legs.
- Enlarged left intervertebral articular facets, particularly in the cervical spine, and enlarged left costovertebral articular facets.
- Asymmetries of rib cage and pelvis, with ossified extensions into the right anterior sacroiliac ligament;
- Osteoarthritic lipping at the right posterior and left inferior acetabular borders.
- A ‘well marked’ exostosis at the right talonavicular ligament attachment site.

YOUR TASK:

On the basis of the information above, fill out the *Short-Form Index of Care*. Keep in mind that more than one condition might be operating to affect Burial 38’s experience, and that individual health conditions may interact to affect overall experience. In summary, here are the questions you will be addressing:

- Based on the skeletal evidence for pathology presented above, what kind of clinical and functional impacts do you think Burial 38 likely experienced?
- Given the lifeways context, could Burial 38 have looked after himself, or was care from others in his community likely needed to help him to manage these impacts?
- If Burial 38 needed care from others, what kind(s) of care do you think might have been required, and who might have provided this care? (Note: people can receive different types of care either at the *same* time (to address different impacts) or at *different* times (as their condition improves or worsens).

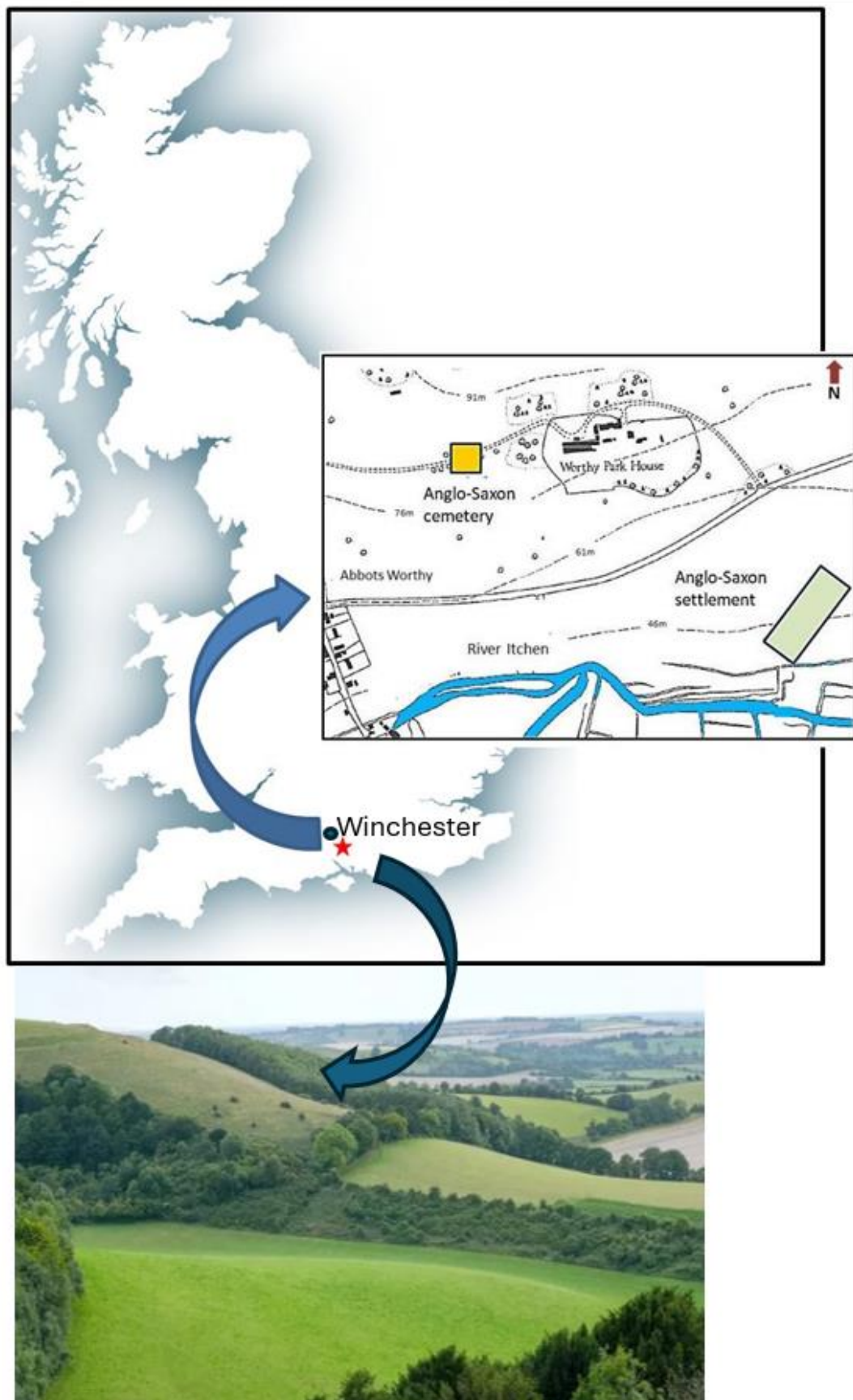


Figure 1: Location of Worthy Park cemetery and settlement (above), and modern agricultural landscape (below). Scale of land use and technologies have changed, but topography and climate for agriculture remain the same.

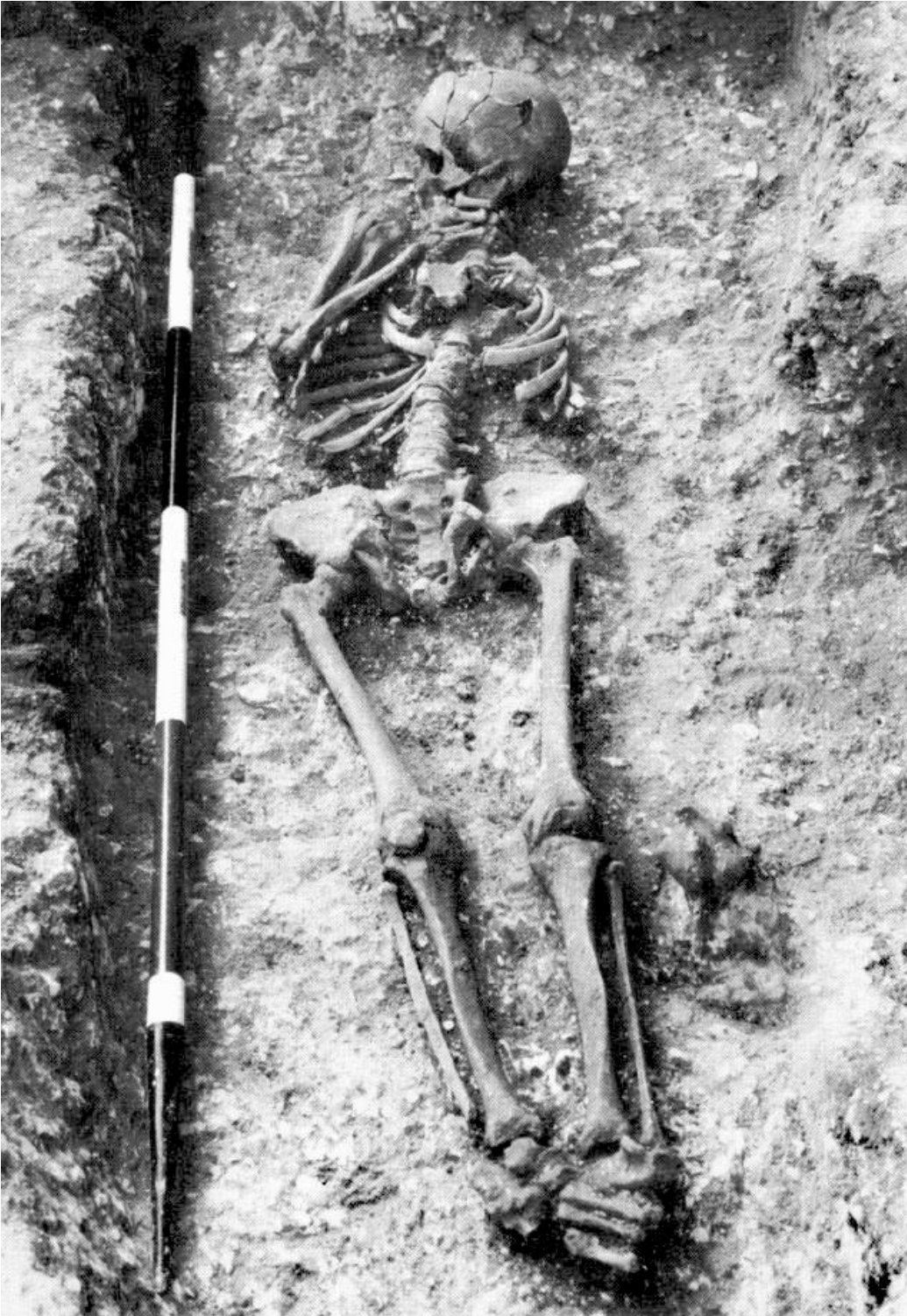


Figure 2: Burial 38 *in situ*

Photograph from Hawkes and Wells (1976:1230)

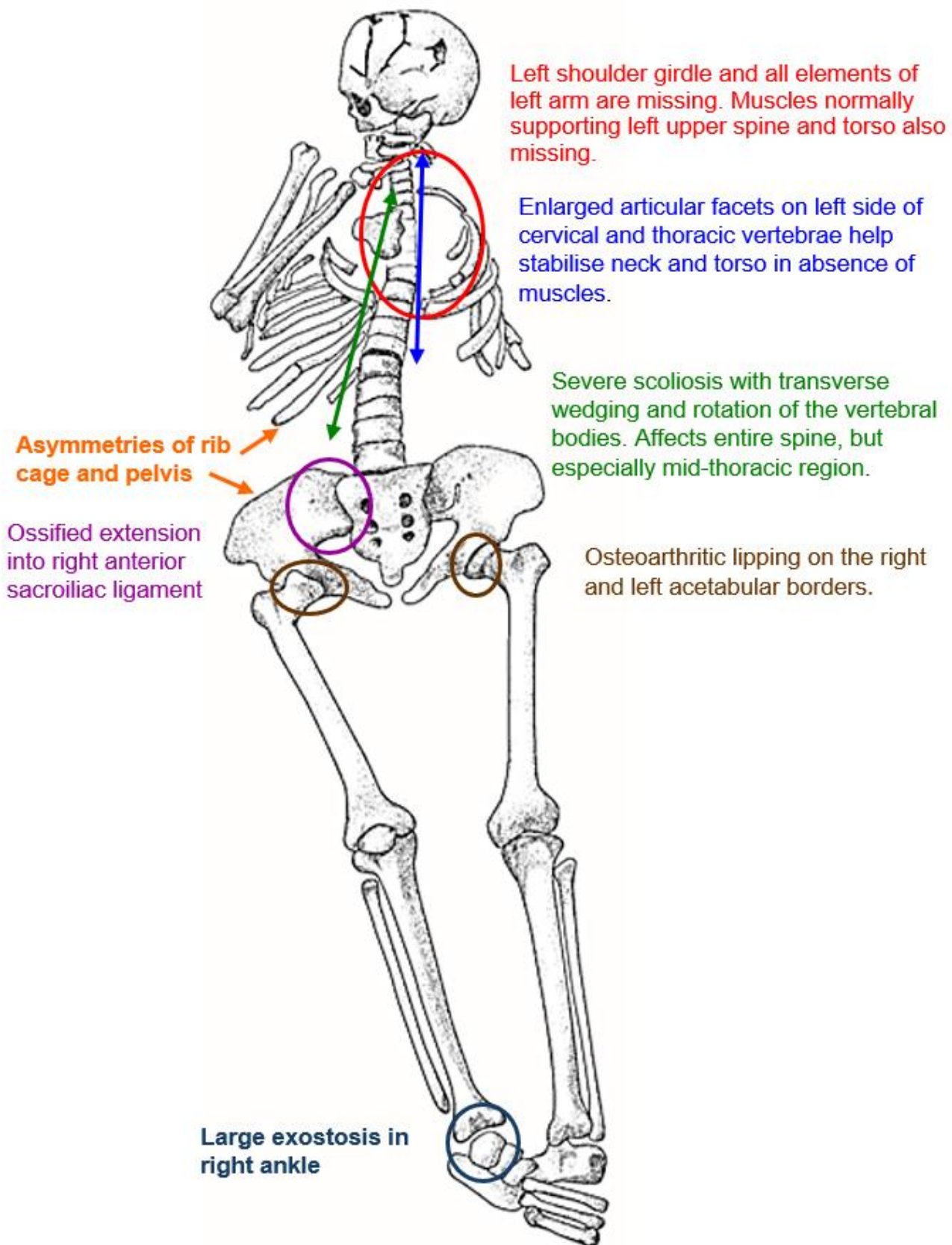


Figure 3: Drawing of Burial 38's remains indicating locations of various pathological features.

Drawing by Geraldine Cave, from *in situ* photograph in Hawkes and Wells (1976:1230)

GLOSSARY: Case Study No. 6 - Worthy Park Burial 38*

* For more detailed definitions refer to your text books or a dictionary.

- **Amelia:** in the medical context, a very rare condition (1.5 per 100,000 live births) in which an individual is born with one or more limbs completely missing. This is the result of a genetic mutation.
- **Costovertebral articular facets:** facets which enable articulation between the head of the rib and the corresponding thoracic vertebra.
- **Congenital:** a congenital disease is one present at, or from, time of birth.
- **Exostosis:** formation of new bone extending outwards from the surface of an existing bone. It can be triggered in response to trauma to, or 'wear and tear' on, the existing bone.
- **Intervertebral articular facets:** the facets on the superior (top) and inferior (bottom) of each vertebra which allow articulation with the corresponding facets of vertebrae above and below.
- **Ossification:** process of bone formation
- **Scoliosis:** a sideways curvature of the spine. Mild scoliosis may be asymptomatic, but severe scoliosis (as in this case) may cause stiffness, pain, fatigue and respiratory problems when undertaking (strenuous) activities.
- **Supine:** in the case of intentional burial, the individual is placed lying flat on their back, face and torso facing upwards.