

**Supplementary material to:** Odes EJ, et al. [S Afr J Sci. 2017;113\(1/2\), Art. #2016-0143, 7 pages.](https://doi.org/10.17159/sajs.2017/20160143)

**How to cite:** Odes EJ, Parkinson AH, Randolph-Quinney PS, Zipfel B, Jakata K, Bonney H, et al. Osteopathology and insect traces in the *Australopithecus africanus* skeleton StW 431 [supplementary material]. S Afr J Sci. 2017;113(1/2), Art. #2016-0143, 5 pages. <http://dx.doi.org/10.17159/sajs.2017/20160143/suppl>

**Supplementary table 1:** List of modern non-pathological and pathological human vertebral specimens; fossils with purported insect damage; and modern proven radiological and clinical examples of brucellosis

Skeletal specimen	Element	Skeletal pathology	Fossils with purported insect traces similar in shape to StW 431	Fossil anatomical element (with purported modification)	Reference collection
<b>Modern human specimens with pathology<sup>a</sup></b>					
A 2972, A 7790, X0095, AD 6059 A3387, A0204, A2746  A1945  X 0088  X 0421	Lumbar/thoracic vertebrae	Osteophytes/parrot beak feature  Schmorl's nodes  Superior endplate erosion  Compression superior endplate			Raymond A. Dart Human Skeletal and Teaching Collections (Wits)
					Table continues...

**Modern human specimens with no pathology<sup>b</sup>**

<p>A 2721, X 0490, AD 5810, X 0469, A 2415, X 0167, A 1600, X 0080, X 0285, A 2463, A 1605, A 1611, AD 7262, 6616, X 0293, A 2131, A 1623, A 2184, A 2463, X 0474, A 2737, A 1804, A 152, X 0520, X 0528, X 0468, AD 5971, A 2372, X 0527, X 0528, X 0296, X 0045, A 3405, A 2601, A 271, A 2095, A 2983, A 3284, X 0529, 5090, X 0528, A 3231, X 0525, A 282, X 0165, X 0165, A 2746, A 3053, A 1646, A 3206, A 2170, X 0490, X 0531, A 2655, X 0087, A 2983, X 0531, A 1623, A 2974, A2983, A 2597, A 1623, A 3387, X 0525, X 0530, X 0192, X 0528</p>	<p>Lumbar/thoracic vertebrae</p>	<p>No pathology observed</p>			<p>Raymond A. Dart Human Skeletal and Teaching Collections (Wits)</p>
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**Modern human proven radiological and clinical examples of brucellar disease<sup>c</sup>**

<p>Brucellar spondylitis<sup>1-5</sup> (focal and diffuse), osteoarticular complications associated with brucellosis (sacroiliitis, monoarthritis, oligoarthritis, peripheral arthritis)<sup>20-23</sup>  Brucellar spondylodiscitis<sup>15-16,19</sup></p>	<p>Lumbar/thoracic/sacral vertebrae</p>	<p>Erosions of vertebral endplates (including anterior superior erosions); sclerosis of vertebral endplates; spinal osteomyelitis of neighbouring discs; loss of disc space; 'parrot beak' osteophyte formation; degenerative disc disease; paravertebral abscesses <small>1-18</small></p>			
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Fossil faunal and non-human primate and experimental specimens <sup>d</sup>					
16697-39			Ovoid pit	Bison metacarpal	West and Hasiotis <sup>24</sup>
16275-39			Large ovoid pit	Bison phalanx I	West and Hasiotis <sup>24</sup>
16585-39			Large ovoid pit	Bison astragalus	West and Hasiotis <sup>24</sup>
CD 13301			Large circular pit	Hyaenid 2nd phalanx	Cooper's Cave collection, Phillip Tobias Hominin Laboratory (PTHL)
CD 5288			Small pits	Primate lumbar vertebra	PTHL
CD 036			Small pits (lateral)	Bovid lumbar vertebra	PTHL
LACMHC 140712			Dermeestid damage. (Fig. 1C) <sup>21</sup> small and medium dermeestid pits overlapped by tenebrionid quarry	Bison left proximal sesamoid	Holden et al. <sup>25</sup>
Experimental specimen			Dermeestid damage, Fig. 2A <sup>21</sup>	Chicken distal right tarsometatarsus	Holden et al. <sup>25</sup>
LACMHC Z1835			Dermeestid damage. Fig. 2B <sup>21</sup>	camel proximal sesamoid, showing dermeestid pit walls	Holden et al. <sup>25</sup>

<sup>a</sup>pathological; <sup>b</sup>non-pathological; <sup>c</sup>fossil and experimental specimens; <sup>d</sup>radiological/clinical examples of brucellosis

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