**Supplementary Table 1 –** Full study sample with information on each specimen and their accessory cusp scores. Tooth position, site and taxonomy information is given for all specimens in the sample, along with accessory cusp scores. Specimens highlighted in grey are those that are not included in statistical analyses, but are included in the Supplementary Index, these specimens are either antimeres of specimens that are included, or are those where we could not be sure of the cusp assignments.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Specimen** | **Tooth** | **Position basisa** | **Site/Origin** | **Taxonomy** | **Source** | **Scan distinctionb** | **LAC** | **DAC** |
| **Int** | **Med** | **Ent** | **Int** | **Ent** | **Hld** |
| DNH 60B | RM1 | 1 | Drimolen | *P. robustus* | 1 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| DNH 60C | RM2 | 1 | Drimolen | *P. robustus* | 1 | Good | 0 | 0 | 0 | 2 | 0 | 0 |
| DNH 75 | RM3 | 3 | Drimolen | *P. robustus* | 1 | Good | 0 | 0 | 0 | 2 | 0 | 0 |
| SK 1 | LM2 | 2 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 5 | LM2 | 3 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| SK 6 | LM1 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 6 | RM2 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 6 | RM3 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 1 |
| SK 22 | RM3 | 3 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 1 | 0 | 0 | 1 | 0 | 0 |
| SK 23 | LM1 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 23 | LM2 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 23 | LM3 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 25 | LM1 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 25 | RM2 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 3 | 0 | 0 |
| SK 61 | RM1 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| SK 75 | RM3 | 2 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 104 | RM1 | 3 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| SK 828 | LM1 | 3 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 841B | LM3 | 3 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | ? | ? | ? | ? | ? | ? |
| SK 843 | LM1 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| SK 843 | LM2 | 1 | Swartkrans Mb. 1 | *P. robustus* | 2 | Good | 0 | 0 | 0 | 1 | 0 | 1 |
| KNM-ER 6080 | LM1 | 3 | Okote Mb., Koobi Fora | *P. boisei* | 3, 4 | Moderate | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 15930 | LM1 | 1 | KBS Mb., Koobi Fora | *P. boisei* | 5, 6 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| KNM-ER 15930 | LM2 | 1 | KBS Mb., Koobi Fora | *P. boisei* | 5, 6 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| KNM-ER 15930 | LM3 | 1 | KBS Mb., Koobi Fora | *P. boisei* | 5, 6 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 25520 | LM2 | 1 | KBS Mb., Ileret | *P. boisei* | 7 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 25520 | LM3 | 1 | KBS Mb., Ileret | *P. boisei* | 7 | Good | 0 | 1 | 0 | 1 | 1 | 0 |
| A.L. 145-35 | LM1 | 1 | Hadar | *A. afarensis* | 8 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 145-35 | LM2 | 1 | Hadar | *A. afarensis* | 8 | Good | 1 | 0 | 0 | 1 | 0 | 0 |
| A.L. 188-1 | RM2 | 1 | Hadar | *A. afarensis* | 8 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 188-1 | RM3 | 1 | Hadar | *A. afarensis* | 8 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 241-14 | LM2 | 3 | Hadar | *A. afarensis* | 8 | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| A.L. 266-1 | LM1 | 1 | Hadar | *A. afarensis* | 8 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 266-1 | RM2 | 1 | Hadar | *A. afarensis* | 8 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| A.L. 266-1 | RM3 | 1 | Hadar | *A. afarensis* | 8 | Moderate | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 288-1 | RM1 | 1 | Hadar | *A. afarensis* | 9 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 288-1 | RM2 | 1 | Hadar | *A. afarensis* | 9 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 288-1 | RM3 | 1 | Hadar | *A. afarensis* | 9 | Good | 1 | 0 | 0 | 2 | 0 | 0 |
| A.L. 330-5 | RM1 | 1 | Hadar | *A. afarensis* | 10 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 330-5 | RM2 | 1 | Hadar | *A. afarensis* | 10 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 330-5 | RM3 | 1 | Hadar | *A. afarensis* | 10 | Moderate | 1 | 0 | 0 | 1 | 0 | 0 |
| A.L. 330-7 | LM1 | 1 | Hadar | *A. afarensis* | 10 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 333w-1a | LM1 | 1 | Hadar | *A. afarensis* | 8 | Moderate | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 333w-1a | LM2 | 1 | Hadar | *A. afarensis* | 8 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 417-1a | LM1 | 1 | Hadar | *A. afarensis* | 11 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 417-1a | LM2 | 1 | Hadar | *A. afarensis* | 11 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| A.L. 440-1 | LM2 | 1 | Hadar | *A. afarensis* | 10 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| A.L. 443-1 | LM2 | 1 | Hadar | *A. afarensis* | 10 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| Sts 9 | RM1 | 3 | Sterkfontein Mb. 4 | *A. africanus* | 2 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| Sts 59 | LM3 | 3 | Sterkfontein Mb. 4 | *A. africanus* | 12 | Good | 0 | 1 | 1 | 1 | 0 | 0 |
| StW 3 | LM2 | 2 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 1 | 0 | 2 | 0 | 1 |
| StW 145 | RM1 | 2 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 213 | LM2 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 280 | RM3 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 1 | 0 | 1 |
| StW 291 | RM1 | 3 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 308 | RM2 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 309A | RM1 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 412A | RM2 | 2 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| StW 421A | RM1 | 2 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| StW 424 | LM2 | 2 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| StW 491 | LM2 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| StW 491 | LM3 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 2 | 0 | 0 |
| StW 520 | RM3 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 2 |
| StW 529 | LM3 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 1 | 0 | 1 | 0 | 0 |
| StW 537 | LM1 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 537 | LM2 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 537 | LM3 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 0 | 0 | 1 | 0 | 1 |
| StW 560A | RM3 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 1 | 1 | 0 | 2 | 0 | 0 |
| StW 560E | RM2 | 1 | Sterkfontein Mb. 4 | *A. africanus* | 13 | Good | 0 | 1 | 0 | 1 | 0 | 0 |
| TM 1520 | LM3 | 3 | Sterkfontein Mb. 4 | *A. africanus* | 14 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 5431A | RM2 | 1 | Tulu Bor Mb., Koobi Fora | Hominidae gen. et sp. indet. | 3, 4 | Moderate | 1 | 0 | 0 | 0 | 0 | 0 |
| KNM-ER 5431B | LM1 | 1 | Tulu Bor Mb., Koobi Fora | Hominidae gen. et sp. indet. | 3, 4 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 5431C | LM2 | 1 | Tulu Bor Mb., Koobi Fora | Hominidae gen. et sp. indet. | 3, 4 | Good | 1 | 0 | 0 | 0 | 0 | 0 |
| KNM-ER 5431D | RM1 | 1 | Tulu Bor Mb., Koobi Fora | Hominidae gen. et sp. indet. | 3, 4 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| OH 60 | RM3 | 3 | Bed I, Olduvai | Hominidae gen. et sp. indet. | 15 | Good | ? | ? | ? | ? | ? | ? |
| DNH 67 | RM1 | 3 | Drimolen | *Homo* sp. | 1 | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| SK 15 | LM1 | 1 | Swartkrans Mb. 2 | *Homo* sp. | 16, 17 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 15 | RM2 | 1 | Swartkrans Mb. 2 | *Homo* sp. | 16, 17 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| SK 15 | RM3 | 1 | Swartkrans Mb. 2 | *Homo* sp. | 16, 17 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| SK 45 | RM1 | 1 | Swartkrans Mb. 1 | *Homo* sp. | 17, 18 | Good | 0 | 0 | 0 | NA | NA | NA |
| SK 45 | RM2 | 1 | Swartkrans Mb. 1 | *Homo* sp. | 17, 18 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| SKX 258 | LM1 | 3 | Swartkrans Mb. 2 | *Homo* sp. | 17, 19 | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| StW 80 | LM1 | 1 | Sterkfontein Mb. 5 West | *Homo* sp. | 13, 20 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| StW 80 | LM2 | 1 | Sterkfontein Mb. 5 West | *Homo* sp. | 13, 20 | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| StW 80 | LM3 | 1 | Sterkfontein Mb. 5 West | *Homo* sp. | 13, 20 | Good | 1 | 0 | 0 | NA | NA | NA |
| KNM-ER 1480A | RM3 | 3 | KBS Mb., Koobi Fora | *Homo* sp. | 4, 21 | Moderate | 0 | 1 | 0 | 2 | 0 | 0 |
| KNM-ER 1483E | LM2 | 1 | Uppa Burgi Mb., Koobi Fora | *Homo* sp. | 4, 21 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| KNM-ER 1802 | RM1 | 1 | Uppa Burgi Mb., Koobi Fora | *Homo* sp. | 4, 22 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 1802 | LM1 | 1 | Uppa Burgi Mb., Koobi Fora | *Homo* sp. | 4, 22 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 1802 | LM2 | 1 | Uppa Burgi Mb., Koobi Fora | *Homo* sp. | 4, 22 | Moderate | 0 | 0 | 0 | 0 | 0 | 1 |
| KNM-ER 1802 | RM2 | 1 | Uppa Burgi Mb., Koobi Fora | *Homo* sp. | 4, 22 | Moderate | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 2597 | LM2 | 3 | KBS Mb., Koobi Fora | *Homo* sp. | 3, 4 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| KNM-ER 3953 | RM3 | 3 | Uppa Burgi Mb., Koobi Fora | *Homo* sp. | 3, 4 | Good | 1 | 0 | 0 | 1 | 0 | 0 |
| L26-1g | RM1 | 3 | Omo | *Homo* sp. | 6, 23 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 1502 | RM1 | 1 | Uppa Burgi Mb., Koobi Fora | *H. habilis* | 4, 21 | Poor | 1 | 0 | 0 | 0 | 0 | 0 |
| OH 4 | LM3 | 2 | Bed I, Olduvai | *H. habilis* | 15, 24 | Good | 1 | 0 | 0 | 0 | 0 | 1 |
| OH 7 | LM1 | 1 | Bed I, Olduvai | *H. habilis* | 15, 24 | Good | 0 | 2 | 0 | 0 | 0 | 0 |
| OH 7 | RM1 | 1 | Bed I, Olduvai | *H. habilis* | 15, 24 | Good | 0 | 2 | 0 | 0 | 0 | 0 |
| OH 7 | LM2 | 1 | Bed I, Olduvai | *H. habilis* | 15, 24 | Good | 1 | 0 | 0 | 2 | 0 | 0 |
| OH 13 | LM1 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| OH 13 | RM1 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| OH 13 | RM2 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Minimal/ None | NA | NA | NA | NA | NA | NA |
| OH 13 | RM3 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Minimal/ None | NA | NA | NA | NA | NA | NA |
| OH 13 | LM3 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Good | 1 | 0 | 0 | 1 | 1 | 0 |
| OH 16 | RM1 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| OH 16 | RM2 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| OH 16 | LM2 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Moderate | 0 | 0 | 0 | NA | NA | NA |
| OH 16 | RM3 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Moderate | 1 | 0 | 0 | 0 | 0 | 0 |
| OH 16 | LM3 | 1 | Bed II, Olduvai | *H. habilis* | 15, 24 | Moderate | 0 | 0 | 0 | 0 | 0 | 1 |
| OH 27 | RM3 | 3 | Bed I, Olduvai | *H. habilis* | 15 | Moderate | 1 | 0 | 0 | 1 | 0 | 1 |
| OMO 7-69-19 | LM2 | 3 | Shungura Fm., Omo | *H. habilis* | 6, 23 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| OMO 75-69-15 | LM1 | 3 | Shungura Fm., Omo | *H. habilis* | 6, 23 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| OMO 75-69-16 | RM3 | 3 | Shungura Fm., Omo | *H. habilis* | 6, 23 | Moderate | 1 | 0 | 0 | 0 | 0 | 0 |
| KNM-BK 67 | RM1 | 1 | Kapthurin beds, Baringo | African *H. erectus* | 25 | Moderate | NA | NA | NA | 0 | 0 | 0 |
| KNM-BK 67 | LM2 | 1 | Kapthurin beds, Baringo | African *H. erectus* | 25 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| KNM-BK 67 | RM3 | 1 | Kapthurin beds, Baringo | African *H. erectus* | 25 | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 806A | LM3 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Moderate | 0 | 0 | 0 | 0 | 1 | 1 |
| KNM-ER 806B | LM2 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Moderate | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 806C | LM1 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Moderate | 1 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 806D | RM3 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Moderate | 0 | 1 | 0 | 1 | 0 | 0 |
| KNM-ER 992A | RM1 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Poor | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 992A | RM2 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| KNM-ER 992A | RM3 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| KNM-ER 992B | LM1 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Poor | 0 | 1 | 0 | 0 | 0 | 0 |
| KNM-ER 992B | LM2 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Poor | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 992B | LM3 | 1 | Okote Mb., Koobi Fora | African *H. erectus* | 4, 26 | Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| KNM-ER 1507 | LM2 | 1 | KBS Mb., Koobi Fora | African *H. erectus* | 4, 21 | Poor | 0 | 0 | 0 | 1 | 0 | 0 |
| KNM-ER 1808G | RM2 | 1 | KBS Mb., Koobi Fora | African *H. erectus* | 3, 4 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| KNM-ER 1812C | LM3 | 2 | Uppa Burgi Mb., Koobi Fora | African *H. erectus* | 4, 22 | Moderate | 0 | 0 | 0 | 1 | 0 | 0 |
| OH 22 | RM1 | 1 | Beds III/IV, Olduvai | African *H. erectus* | 27 | Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| OH 22 | RM2 | 1 | Beds III/IV, Olduvai | African *H. erectus* | 27 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| Sangiran S1b | RM1 | 1 | Pucangan Fm., Sangiran | Asian *H. erectus* | 28 | Moderate | 0 | 1 | 0 | 0 | 0 | 0 |
| Sangiran S1b | RM2 | 1 | Pucangan Fm., Sangiran | Asian *H. erectus* | 28 | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| Sangiran S1b | RM3 | 1 | Pucangan Fm., Sangiran | Asian *H. erectus* | 28 | Good | 1 | 0 | 0 | 1 | 0 | 0 |
| Sangiran S7-20 | LM2 | 3 | Kabuh Fm., Sangiran | Asian *H. erectus* | 29 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| Sangiran S7-42 | RM2 | 3 | Pucangan Fm., Sangiran | Asian *H. erectus* | 29 | Moderate | 0 | 0 | 0 | 0 | 0 | 0 |
| Sangiran S7-62 | RM1 | 3 | Pucangan Fm., Sangiran | Asian *H. erectus* | 29 | Good | 0 | 1 | 0 | 2 | 0 | 0 |
| Sangiran S7-64 | RM2 | 3 | Pucangan Fm., Sangiran | Asian *H. erectus* | 29 | Good | 1 | 0 | 0 | 1 | 0 | 0 |
| Sangiran S7-65 | RM2 | 3 | Pucangan Fm., Sangiran | Asian *H. erectus* | 29 | Poor | 0 | 1 | 0 | 0 | 0 | 2 |
| Sangiran S7-78 | LM2 | 3 | Pucangan Fm., Sangiran | Asian *H. erectus* | 29 | Moderate | 1 | 1 | 0 | 0 | 0 | 0 |
| SMF-8865 | LM2 | 3 | Sangiran | Asian *H. erectus* | 30 | Good | 0 | 0 | 0 | 1 | 0 | 0 |
| CA 804 | RM1 | 3 | Chinese Apothecary | Asian *H. erectus* | 31 | Good | 0 | 0 | 0 | 0 | 0 | 2 |
| CA 808 | RM2 | 3 | Chinese Apothecary | Asian *H. erectus* | 31 | Good | 0 | 0 | 0 | 0 | 0 | 1 |
| Tighenif 1 | LM2 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| Tighenif 1 | RM2 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 0 | 0 | 0 | 0 | 0 | 0 |
| Tighenif 1 | LM3 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| Tighenif 1 | RM3 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| Tighenif 2 | LM1 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 0 | 1 | 0 | 0 | 0 | 0 |
| Tighenif 2 | LM2 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 1 | 0 | 0 | 0 | 0 | 1 |
| Tighenif 2 | LM3 | 1 | Tighenif | MP *Homo* | 32, 33  | Good | 1 | 0 | 0 | 0 | 0 | 1 |
| a Tooth position basis: 1 = molar in jaw or from associated dentition, 2 = molar position based on morphology and possible association with other teeth, 3 = molar position is best estimation based on morphologyb The level of tissue distinction present in the scan was assessed for each specimen as good, moderate, poor or minimal/none. These categories allow us to assess the likelihood of a small accessory cusp being missed at the enamel dentine junction. Abbreviations: DAC = Distal Accessory Cusp; LAC = Lingual Accessory Cusp; Ent = Entoconid type; Int = Interconulid type; Hld = Hypoconulid type; Med = Metaconid type; MP = Middle-Pleistocene |

**References**

1 Moggi-Cecchi J, Menter C, Boccone S, and Keyser A. 2010. Early hominin dental remains from the Plio-Pleistocene site of Drimolen, South Africa. *Journal of Human Evolution* 58:374-405. DOI: 10.1016/j.jhevol.2010.01.006

2 Robinson JT. 1956. *The Dentition of Australopithecinae.* Pretoria: Transvaal Museum.

3 Leakey R, and Walker AC. 1985. Further hominids from the Plio‐Pleistocene of Koobi Fora, Kenya. *American Journal of Physical Anthropology* 67:135-163. DOI: 10.1002/ajpa.1330670209

4 Wood BA. 1991. *Koobi Fora Research Project: Volume 4. Hominid cranial remains*. Oxford: Clarendon Press.

5 Leakey R, and Walker A. 1988. New *Australopithecus boisei* specimens from east and west Lake Turkana, Kenya. *American Journal of Physical Anthropology* 76:1-24. DOI: 10.1002/ajpa.1330760102

6 Wood B, and Leakey M. 2011. The Omo‐Turkana Basin fossil hominins and their contribution to our understanding of human evolution in Africa. *Evolutionary Anthropology: Issues, News, and Reviews* 20:264-292. DOI: 10.1002/evan.20335

7 Brown B, Brown FH, and Walker A. 2001. New hominids from the Lake Turkana basin, Kenya. Journal of Human Evolution 41:29-44. DOI: 10.1006/jhev.2001.0476

8 Johanson DC, White TD, and Coppens Y. 1982. Dental remains from the Hadar Formation, Ethiopia: 1974–1977 collections. *American Journal of Physical Anthropology* 57:545-603. DOI: 10.1002/ajpa.1330570406

9 Johanson DC, Lovejoy CO, Kimbel WH, White TD, Ward SC, Bush ME, Latimer BM, and Coppens Y. 1982. Morphology of the Pliocene partial hominid skeleton (AL 288‐1) from the Hadar formation, Ethiopia. *American Journal of Physical Anthropology* 57:403-451. DOI: 10.1002/ajpa.1330570403

10 Kimbel WH, and Delezene LK. 2009. “Lucy” redux: A review of research on *Australopithecus afarensis*. *American Journal of Physical Anthropology* 140:2-48. DOI: 10.1002/ajpa.21183

11 Kimbel WH, Johanson DC, and Rak Y. 1994. The first skull and other new discoveries of *Australopithecus afarensis* at Hadar, Ethiopia. *Nature* 368:449.

12 Oakley KP, Campbell BG, Molleson TI, and Museum B. 1977. *Catalogue of Fossil Hominids. Part I: Africa*: London: The British Museum (Natural History).

13 Moggi-Cecchi J, Grine FE, and Tobias PV. 2006. Early hominid dental remains from Members 4 and 5 of the Sterkfontein Formation (1966–1996 excavations): catalogue, individual associations, morphological descriptions and initial metrical analysis. *Journal of Human Evolution* 50:239-328. DOI: 10.1016/j.jhevol.2005.08.012

14 Broom R, and Schepers GWH. 1946. *Plesianthropus transvaalensis*. *Transvaal Museum Memoirs* 2:43-83.

15 Tobias PV. 1991. *The Skulls, Endocasts, and Teeth of Homo habilis: pt. 1-4*: Cambridge: Cambridge University Press.

16 Broom R, and Robinson JT. 1949. A new type of fossil man. *Nature* 164:322-323.

17 Grine FE. 2005. Early *Homo* at Swartkrans, South Africa: a review of the evidence and an evaluation of recently proposed morphs. *South African Journal of Science* 101:43-52.

18 Broom R, and Robinson JT. 1950. Man contemporaneous with the Sawartkrans ape‐man. *American Journal of Physical Anthropology* 8:151-156.

19 Grine FE. 1989. New hominid fossils from the Swartkrans formation (1979-1986 excavations): craniodental specimens. *American Journal of Physical Anthropology* 79:409-449. DOI: 10.1002/ajpa.1330790402

20 Kuman K, and Clarke RJ. 2000. Stratigraphy, artefact industries and hominid associations for Sterkfontein, Member 5. *Journal of Human Evolution* 38:827-847. DOI: 10.1006/jhev.1999.0392

21 Leakey R, and Wood B. 1974. New evidence of the genus *Homo* from East Rudolf, Kenya (IV). *American Journal of Physical Anthropology* 41:237-243. DOI: 10.1002/ajpa.1330410206

22 Day M, Leakey R, Walker A, and Wood B. 1976. New hominids from East Turkana, Kenya. *American Journal of Physical Anthropology* 45:369-435. DOI: 10.1002/ajpa.1330450304

23 Suwa G, White TD, and Howell FC. 1996. Mandibular postcanine dentition from the Shungura Formation, Ethiopia: Crown morphology, taxonomic allocations, and Plio-Pleistocene hominid evolution. *American Journal of Physical Anthropology* 101:247-282. DOI: 10.1002/(SICI)1096-8644(199610)101:2<247::AID-AJPA9>3.0.CO;2-Z

24 Leakey LSB, Tobias PV, and Napier JR. 1964. A New Species of The Genus *Homo* From Olduvai Gorge. *Nature* 202:7-9.

25 Leakey M, Tobias PV, Martyn JE, and Leakey RE. 1970. An Acheulean industry with prepared core technique and the discovery of a contemporary hominid mandible at Lake Baringo, Kenya. *Proceedings of the Prehistoric Society* 35:48-76. DOI: 10.1017/S0079497X00013402

26 Leakey R, and Wood B. 1973. New evidence of the genus *Homo* from East Rudolf, Kenya. II. *American Journal of Physical Anthropology* 39:355-368. DOI: 10.1002/ajpa.1330390304

27 Rightmire GP. 1980. Middle Pleistocene hominids from Olduvai Gorge, Northern Tanzania. *American Journal of Physical Anthropology* 53:225-241. DOI: 10.1002/ajpa.1330530207

28 von Koenigswald GHR. 1940. *Neue Pithecanthropus-Funde 1936-1938: ein Beitrag zur Kenntnis der Praehominiden*. Batavia: Landsdrukkerij.

29 Grine F, and Franzen J. 1994. Fossil hominid teeth from the Sangiran Dome (Java, Indonesia). *Courier Forschungsinstitut Senckenberg* 171:75-103.

30 Zanolli C, Kullmer O, Kelley J, Bacon A-M, Demeter F, Dumoncel J, Fiorenza L, Grine FE, Hublin J-J, and Nguyen AT. 2019. Evidence for increased hominid diversity in the Early to Middle Pleistocene of Indonesia. *Nature ecology & evolution* 3:755-764. DOI: 10.1038/s41559-019-0860-z

31 Smith TM, Houssaye A, Kullmer O, Le Cabec A, Olejniczak AJ, Schrenk F, de Vos J, and Tafforeau P. 2018. Disentangling isolated dental remains of Asian Pleistocene hominins and pongines. *Plos One* 13:e0204737. DOI: 10.1371/journal.pone.0204737

32 Arambourg C. 1954. L’hominien fossile de Ternifine (Algérie). *Comptes rendus hebdomadaires des séances de l'Académie des sciences* 239:893-895.

33 Zanolli C, and Mazurier A. 2013. Endostructural characterization of the *H. heidelbergensis* dental remains from the early Middle Pleistocene site of Tighenif, Algeria. *Comptes Rendus Palevol* 12:293-304. DOI: 10.1016/j.crpv.2013.06.004