

Date estimation 3. Comparison of MRCA dating estimates by BEAST using ancient plus modern, and only modern strains.

| Parameters | | | Median MRCA (CI95%) | | | Mutation rate | | Model (Marginal Likelihood ¹) | | | | | |
|------------|--------------------------------|-----------|-----------------------------|-------------------------------|----------------------------|---------------|-------------------|---|----------|----------|-----------------|----------|----------|
| Ragna | Strains ² | Subsample | Para C Lineage (w/o Lomita) | Paratyphi C (including Ragna) | Modern Paratyphi C (crown) | Median | CI 95% | Strict | | | UCLD | | |
| | | | | | | | | Constant | Skyride | BDP-SS | Constant | Skyride | BDP-SS |
| 1200 | Para C Lineage (w/o Lomita) | 1 | 3687 (1744-7286) | 1202 (885-1864) | 480 (264-881) | 1.38E-7 | 5.80E-8 - 2.32E-7 | -6845066 | -6845084 | -6845158 | -6845001 | -6845038 | -6845047 |
| | | 2 | 3861 (2005-6744) | 1288 (928-1979) | 576 (305-978) | 1.24E-7 | 6.05E-8 - 1.98E-7 | -6832249 | -6832264 | -6832331 | -6832246 | -6832279 | -6832293 |
| | Paratyphi C (incl. Ragna) | 1 | - | 1212 (1030-1440) | 482 (380-611) | 1.11E-7 | 8.40E-8 - 1.38E-7 | -6742493 | -6742523 | -6742512 | -6742654 | -6742675 | -6742665 |
| | | 2 | - | 1544 (1233-1949) | 685 (513-924) | 7.79E-8 | 5.35E-8 - 1.00E-7 | -6744367 | -6744389 | -6744389 | -6744563 | -6744571 | -6744562 |
| 1073 | Para C Lineage (w/o Lomita) | 1 | 4066 (1758-8687) | 1370 (1040-2307) | 517 (250-1054) | 1.29E-7 | 4.35E-8 - 2.22E-7 | -6845060 | -6845097 | -6845151 | -6845003 | -6845046 | -6845055 |
| | | 2 | 4258 (2100-7601) | 1437 (1056-2264) | 624 (331-1085) | 1.15E-7 | 5.36E-8 - 1.86E-7 | -6832246 | -6832277 | -6832296 | -6832228 | -6832269 | -6832337 |
| | Paratyphi C (incl. Ragna) | 1 | - | 1274 (1092-1506) | 481 (382-614) | 1.10E-7 | 8.23E-8 - 1.37E-7 | -6742498 | -6742520 | -6742495 | -6742670 | -6742682 | -6742670 |
| | | 2 | - | 1611 (1298-2047) | 688 (512-941) | 7.80E-8 | 5.47E-8 - 1.03E-7 | -6744370 | -6744387 | -6744381 | -6744554 | -6744577 | -6744564 |
| no Ragna | Modern Paratyphi C (w/o Ragna) | 1 | - | - | 484 (384-617) | 1.09E-7 | 8.16E-8 - 1.36E-7 | / | / | / | / | / | / |
| | | 2 | - | - | 681 (507-922) | 7.86E-8 | 5.39E-8 - 1.02E-7 | / | / | / | / | / | / |

NOTE: Bold face indicates the likeliest model for that subsample

¹Strict -- strict clock model. UCLD -- uncorrelated relaxed clock model with an underlying lognormal distribution. Constant -- Constant population size model. Skyride -- Bayesian skyride model. BDP-SS -- General birth-death process model.

²Only genomes whose collection year was known were analysed.