

**Table S2.** Haplogroup frequencies of the modern horse groups studied here (source data for the PCA).

| Name of group | Number of samples | Mitogenome haplogroup frequencies |       |      |       |       |      |      |      |       |       |       |       |       |       |      |      |
|---------------|-------------------|-----------------------------------|-------|------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|------|------|
|               |                   | A                                 | B     | C    | D     | D3    | E    | F    | G    | I     | K     | K3    | X2    | X3    | X4    | X5   | X7   |
| MMP           | 231               | 12.55                             | 6.93  | 0.43 | 9.52  | 4.33  | 0.43 | 3.03 | 1.30 | 3.03  | 20.35 | 6.93  | 17.75 | 11.26 | 0.87  | 0.43 | 0.87 |
| MSP           | 52                | 18.75                             | 6.25  | 0.00 | 8.33  | 12.50 | 0.00 | 0.00 | 0.00 | 2.08  | 10.42 | 8.33  | 20.83 | 19.23 | 0.00  | 0.00 | 0.00 |
| MAUG          | 81                | 6.17                              | 4.94  | 0.00 | 0.00  | 0.00  | 0.00 | 7.41 | 0.00 | 0.00  | 20.99 | 30.86 | 22.22 | 4.94  | 2.47  | 0.00 | 0.00 |
| MAUM          | 29                | 10.34                             | 0.00  | 0.00 | 10.34 | 0.00  | 0.00 | 0.00 | 0.00 | 10.34 | 24.14 | 13.79 | 10.34 | 6.90  | 13.79 | 0.00 | 0.00 |
| MAKM          | 18                | 0.00                              | 22.22 | 0.00 | 0.00  | 0.00  | 0.00 | 5.56 | 0.00 | 0.00  | 11.11 | 11.11 | 38.89 | 0.00  | 11.11 | 0.00 | 0.00 |