

Supplementary Table S3. Sites that have undergone positive selection in COI along the branches leading to all snakes and that leading to the Alethinophidia, based on the branch-site model of PAML. The probability of a site being under positive selection ($dN/dS > 1$) is based on the posterior probabilities from Bayes empirical Bayes support estimated in PAML. Only sites with posterior probabilities $> 90\%$ are shown. The reference to sites refers to amino acid sites of the cow COI protein.

| Site | Branch | |
|------|--------|----------------|
| | Snakes | Alethinophidia |
| 32 | | 0.96 |
| 35 | | 0.90 |
| 42 | | 0.96 |
| 42 | 0.93 | |
| 50 | | 0.93 |
| 54 | | 0.90 |
| 57 | | 0.93 |
| 73 | 0.92 | |
| 114 | | 0.92 |
| 141 | | 0.90 |
| 178 | | 0.99 |
| 197 | 0.92 | |
| 223 | | 0.95 |
| 256 | | 1.00 |
| 266 | | 1.00 |
| 299 | | 0.92 |
| 301 | | 0.92 |
| 307 | | 0.91 |
| 322 | | 0.91 |
| 328 | 0.98 | 1.00 |
| 335 | | 0.98 |
| 339 | | 1.00 |
| 434 | | 0.91 |
| 443 | | 0.91 |
| 459 | | 0.93 |
| 463 | 0.99 | |
| 472 | | 0.98 |
| 478 | | 0.95 |
| 481 | 0.98 | |
| 486 | | 0.98 |
| 487 | | 1.00 |
| 491 | | 0.92 |
| 505 | 0.93 | |