Table S1. Partitions and models of sequence evolution used in the Maximum Likelihood (ML) and Bayesian Analysis (BI).

Partitions Sites (#) ML BI

P1 CYTB 1st, 16s (866) GTR+I+G GTR+G

P2 CYTB 2nd (370) GTR+G HKY+I+G

P3 CYTB 3rd (370) GTR+G GTR+G

P4 RAG1 1st, RAG1 2nd, RAG1 3rd (884) GTR+G HKY+G

Table S2. Uncorrected p-distances of sequences used in this study for *cytb* gene

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.no. | Species | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| **1** | *Ahaetulla nasuta* cf. *isabellina* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** | *Ahaetulla anomala* | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** | *Ahaetulla fasciolata* | 0.15 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | *Ahaetulla fronticincta* | 0.12 | 0.12 | 0.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | *Ahaetulla fronticincta* | 0.12 | 0.12 | 0.16 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | *Ahaetulla laudankia* sp. nov. | 0.09 | 0.09 | 0.16 | 0.11 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | *Ahaetulla mycterizans* | 0.13 | 0.13 | 0.10 | 0.14 | 0.14 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | *Ahaetulla nasuta* (Sri Lanka) | 0.09 | 0.10 | 0.14 | 0.11 | 0.12 | 0.09 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | *Ahaetulla nasuta* (Lao) | 0.11 | 0.11 | 0.15 | 0.12 | 0.12 | 0.08 | 0.14 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | *Ahaetulla prasina* | 0.15 | 0.15 | 0.09 | 0.16 | 0.16 | 0.15 | 0.09 | 0.15 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | *Ahaetulla prasina* (Philippines) | 0.15 | 0.14 | 0.11 | 0.15 | 0.15 | 0.15 | 0.08 | 0.14 | 0.16 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12** | *Ahaetulla pulverulenta* (Sri Lanka) | 0.05 | 0.05 | 0.14 | 0.12 | 0.11 | 0.09 | 0.13 | 0.09 | 0.10 | 0.15 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13** | *Chrysopelea ornata* | 0.19 | 0.19 | 0.18 | 0.17 | 0.17 | 0.18 | 0.19 | 0.20 | 0.19 | 0.18 | 0.18 | 0.2 |  |  |  |  |  |  |  |  |  |  |  |  |
| **14** | *Chrysopelea paradisi* | 0.18 | 0.18 | 0.17 | 0.19 | 0.19 | 0.20 | 0.17 | 0.18 | 0.18 | 0.18 | 0.17 | 0.16 | 0.1 |  |  |  |  |  |  |  |  |  |  |  |
| **15** | *Chrysopelea pelias* | 0.18 | 0.18 | 0.19 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.19 | 0.18 | 0.17 | 0.16 | 0.1 |  |  |  |  |  |  |  |  |  |  |
| **16** | *Chrysopelea taprobanica* | 0.15 | 0.15 | 0.17 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.15 | 0.17 | 0.18 | 0.2 |  |  |  |  |  |  |  |  |  |
| **17** | *Dendrelaphis cyanochloris* | 0.17 | 0.17 | 0.18 | 0.17 | 0.17 | 0.16 | 0.16 | 0.17 | 0.17 | 0.18 | 0.17 | 0.17 | 0.18 | 0.17 | 0.18 | 0.2 |  |  |  |  |  |  |  |  |
| **18** | *Dendrelaphis formosus* | 0.19 | 0.19 | 0.20 | 0.19 | 0.19 | 0.20 | 0.19 | 0.19 | 0.19 | 0.20 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.2 |  |  |  |  |  |  |  |
| **19** | *Dendrelaphis fuliginosus* | 0.19 | 0.19 | 0.20 | 0.19 | 0.19 | 0.19 | 0.19 | 0.20 | 0.19 | 0.19 | 0.20 | 0.19 | 0.20 | 0.19 | 0.19 | 0.18 | 0.17 | 0.2 |  |  |  |  |  |  |
| **20** | *Dendrelaphis haasi* | 0.17 | 0.17 | 0.18 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.18 | 0.17 | 0.16 | 0.18 | 0.16 | 0.16 | 0.16 | 0.14 | 0.15 | 0.2 |  |  |  |  |  |
| **21** | *Dendrelaphis marenae* | 0.17 | 0.17 | 0.18 | 0.17 | 0.17 | 0.16 | 0.16 | 0.17 | 0.17 | 0.18 | 0.16 | 0.16 | 0.18 | 0.18 | 0.17 | 0.16 | 0.14 | 0.15 | 0.18 | 0.1 |  |  |  |  |
| **22** | *Dendrelaphis pictus* | 0.16 | 0.16 | 0.17 | 0.16 | 0.16 | 0.15 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.15 | 0.19 | 0.17 | 0.17 | 0.17 | 0.13 | 0.17 | 0.17 | 0.13 | 0.1 |  |  |  |
| **23** | *Dendrelaphis striatus* | 0.16 | 0.16 | 0.20 | 0.15 | 0.16 | 0.17 | 0.17 | 0.18 | 0.16 | 0.18 | 0.19 | 0.16 | 0.17 | 0.17 | 0.16 | 0.16 | 0.12 | 0.17 | 0.18 | 0.16 | 0.2 | 0.16 |  |  |
| **24** | *Dendrelaphis subocularis* | 0.18 | 0.17 | 0.19 | 0.17 | 0.17 | 0.19 | 0.18 | 0.19 | 0.20 | 0.20 | 0.21 | 0.18 | 0.20 | 0.21 | 0.19 | 0.17 | 0.18 | 0.16 | 0.18 | 0.17 | 0.2 | 0.17 | 0.17 |  |
| **25** | *Dryophiops philippina* | 0.18 | 0.18 | 0.19 | 0.19 | 0.19 | 0.19 | 0.18 | 0.19 | 0.20 | 0.20 | 0.19 | 0.17 | 0.19 | 0.19 | 0.18 | 0.19 | 0.18 | 0.19 | 0.20 | 0.18 | 0.18 | 0.18 | 0.19 | 0.18 |

Table S3. Uncorrected p-distances of sequences used in this study for *16s* gene

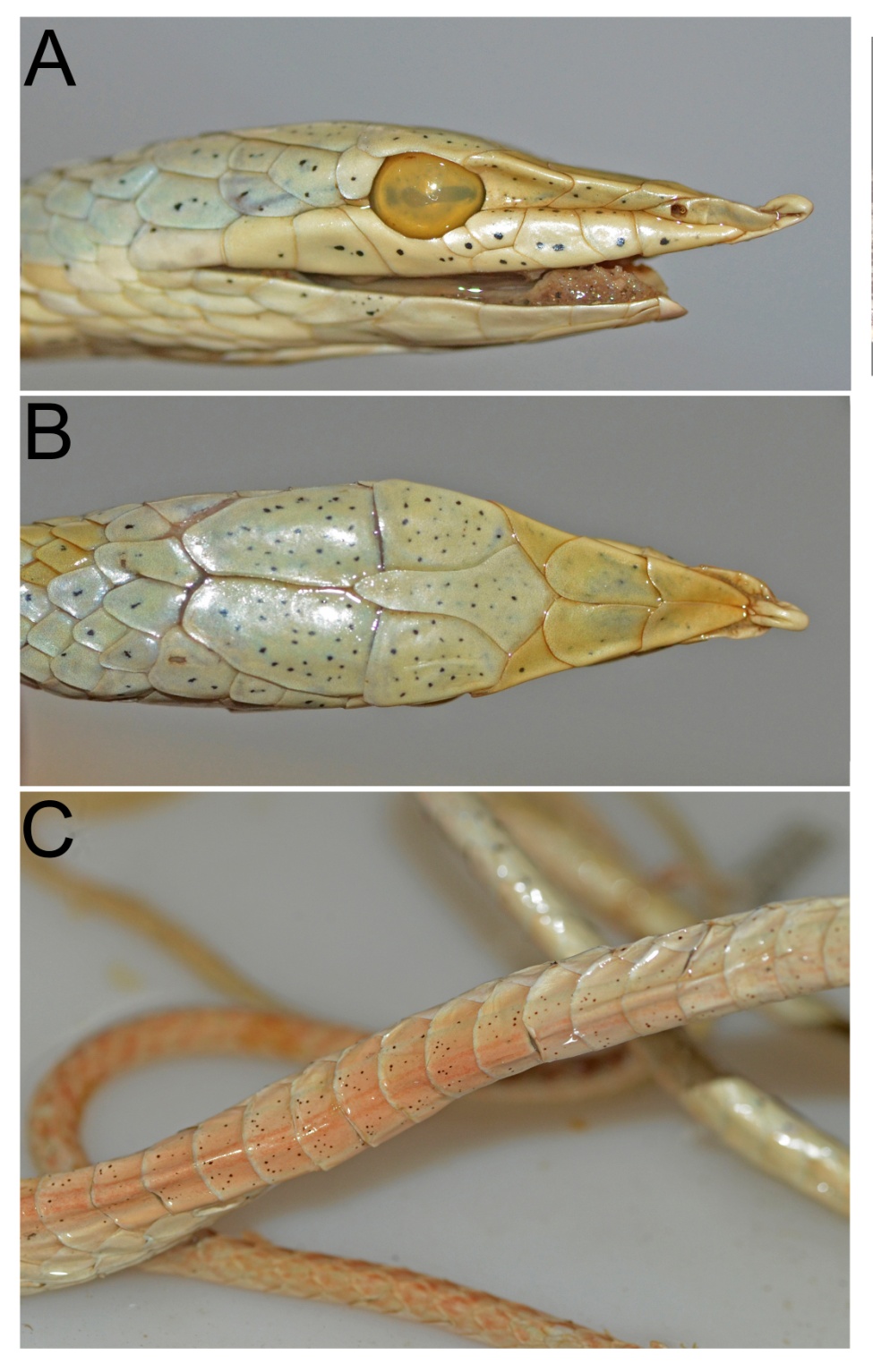
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.no. | Species | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** |
| **1** | *Ahaetulla nasuta* cf. *isabellina* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** | *Ahaetulla anomala* | 0.01 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** | *Ahaetulla fasciolata* | 0.05 | 0.05 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** | *Ahaetulla fronticincta* | 0.03 | 0.03 | 0.04 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** | *Ahaetulla laudankia* sp. nov. | 0.04 | 0.03 | 0.05 | 0.03 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** | *Ahaetulla mycterizans* | 0.04 | 0.04 | 0.02 | 0.04 | 0.06 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** | *Ahaetulla nasuta* (Lao) | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 | 0.05 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** | *Ahaetulla prasina* (Philippines) | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.01 | 0.04 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** | *Ahaetulla pulverulenta* (Sri Lanka) | 0.03 | 0.02 | 0.04 | 0.03 | 0.04 | 0.04 | 0.03 | 0.04 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** | *Chrysopelea ornata* | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 |  |  |  |  |  |  |  |  |  |  |  |  |
| **11** | *Chrysopelea pelias* | 0.08 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.04 |  |  |  |  |  |  |  |  |  |  |  |
| **12** | *Chrysopelea taprobanica* | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.06 | 0.07 | 0.08 | 0.04 | 0.05 |  |  |  |  |  |  |  |  |  |  |
| **13** | *Dendrelaphis cyanochloris* | 0.07 | 0.07 | 0.06 | 0.06 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 |  |  |  |  |  |  |  |  |  |
| **14** | *Dendrelaphis formosus* | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 | 0.08 | 0.07 | 0.06 |  |  |  |  |  |  |  |  |
| **15** | *Dendrelaphis fuliginosus* | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.07 | 0.05 | 0.05 |  |  |  |  |  |  |  |
| **16** | *Dendrelaphis haasi* | 0.07 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.07 | 0.06 | 0.06 | 0.05 |  |  |  |  |  |  |
| **17** | *Dendrelaphis marenae* | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 | 0.07 | 0.08 | 0.07 | 0.08 | 0.07 | 0.05 | 0.06 | 0.05 | 0.03 |  |  |  |  |  |
| **18** | *Dendrelaphis ngansonensis* | 0.07 | 0.07 | 0.06 | 0.07 | 0.06 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 | 0.01 | 0.05 | 0.05 | 0.06 | 0.05 |  |  |  |  |
| **19** | *Dendrelaphis pictus* | 0.08 | 0.08 | 0.07 | 0.07 | 0.08 | 0.06 | 0.07 | 0.07 | 0.08 | 0.08 | 0.09 | 0.07 | 0.06 | 0.06 | 0.06 | 0.06 | 0.05 | 0.05 |  |  |  |
| **20** | *Dendrelaphis striatus* | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.07 | 0.04 | 0.06 | 0.06 | 0.06 | 0.05 | 0.04 | 0.05 |  |  |
| **21** | *Dendrelaphis subocularis* | 0.10 | 0.10 | 0.08 | 0.09 | 0.09 | 0.09 | 0.08 | 0.09 | 0.10 | 0.09 | 0.08 | 0.08 | 0.06 | 0.07 | 0.08 | 0.09 | 0.08 | 0.06 | 0.07 | 0.06 |  |
| **22** | *Dryophiops philippina* | 0.07 | 0.07 | 0.06 | 0.07 | 0.06 | 0.06 | 0.05 | 0.06 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.06 | 0.08 | 0.07 | 0.06 | 0.07 | 0.06 | 0.07 |

Table S4. Scalation data for *Ahaetulla nasuta* sensu lato. NA=data not available. \* Tail damaged

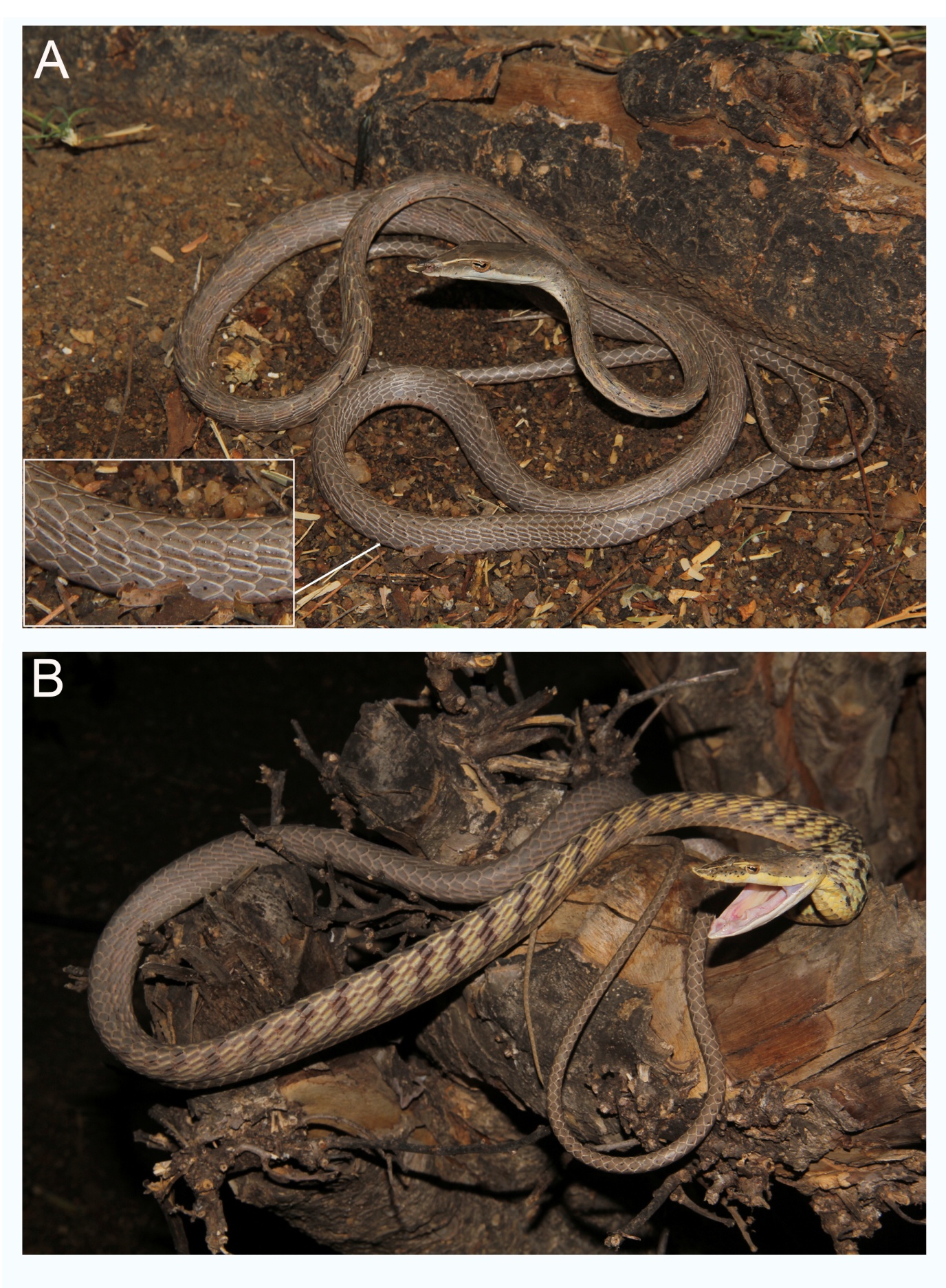
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| s.no | Country | voucher | Sex | Ventrals | Subcaudals | body colour in preservation | Source |
| 1 | Myanmar | CAS- 208442 | M | 194 | 161 | green | current study |
| 2 | Myanmar | CAS-215752 | M | 210 | 173 | green | current study |
| 3 | Myanmar | CAS-246998 | M | 192 | \* | green | current study |
| 4 | Myanmar | CAS- 204856 | M | 196 | 163 | green | current study |
| 5 | Myanmar | BMNH 91.11.26.42 | M | 200 | 158 | green | current study |
| 6 | Myanmar | CAS- 214102 | F | 207 | 161 | green | current study |
| 7 | Thailand | BMNH 1956.1.12.99 | M | 194 | 153 | brown | current study |
| 8 | Thailand | NA | NA | 202 | 163 | NA | Taylor & Elbel 1958. |
| 9 | Thailand | BMNH 1977.1997 | F | 197 | 142 | green | current study |
| 10 | Thailand | IRSNB 16995 | ? | 188 | 152 | NA | Pauwels et al. 2009 |
| 11 | Vietnam | BMNH 1920.1.20.2655 | M | 192 | 163 | green | current study |
| 12 | Sri Lanka | CAS- 12771 | F | 180 | 155 | green | current study |
| 13 | Sri Lanka | CAS 16909 | M | 181 | 169 | green | current study |
| 14 | Sri Lanka | BMNH 1933.12.6.18 | M | 176 | 175 | green | current study |
| 15 | Sri Lanka | BMNH 1912-2171 | F | 172 | 124\* | brown | current study |
| 16 | Sri Lanka | BMNH 1912-2173 | F | 168 | 138 | brown | current study |
| 17 | Sri Lanka | BMNH 1920.5.6.5 | F | 184 | 166 | green | current study |
| 18 | Sri Lanka | NA | NA | 182 | 154 | NA | Taylor, E H (1953) |
| 19 | Sri Lanka | BMNH 97.20.20.5 | F | 177 | 149 | green | current study |
| 20 | India | ZSI-CZRC-6548 | F | 181 | 146 | green | current study |
| 21 | India | BNHS 3028 | F | 176 | 152 | brown | current study |
| 22 | India | ZSI-WGRS- 8394 | ? | 176 | 139 | green | current study |
| 23 | India | ZSI-WGRC-IR/V/22 | ? | 178 | 142 | green | current study |
| 24 | India | ZSI-WGRC-IR/V/43 | F | 171 | 149 | brown | current study |
| 25 | India | SNT-16 | M | 175 | 159 | brown | current study |
| 26 | India | BMNH OE-LS-2018-11 | F | 180 | 148 | green | current study |
| 27 | India | FMNH 217689-93 | ? | 179-185 | 147-168 | NA | Inger et al. 1984 |
| 28 | India | NA | NA | 185 | 177 | NA | Constable, J D(1949) |
| 29 | India | BMNH 69.8.28.85 | F | 181 | 152 | green | current study |

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| --- |
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Supp. Figure 1. *Ahaetulla laudankia* sp.nov. (ZSI 8425) from near Mount Abu, Rajasthan state, India. A. lateral, B. dorsal and C. ventral coloration and pattern.Image not to scale.



Supp. Figure 2. Supp. Figure 2. *Ahaetulla* cf. *isabellina* from low land Tamil Nadu state, Tirunelveli District. A. Male (ZSI-CZRC-6405) showing typical coloration (inset image showing keels on the dorsum). B. female (ZSI-CZRC-6576) from the same locality showing bands in threat display



Supp. Figure 3. *Ahaetulla nasuta* (FMNH 255023) collected from Mounlapamok District, Laos.



Supp. Figure 4. Dorsal head coloration of *Ahaetulla nasuta* sensu lato from South Asia and SE Asia. Note majority of the SE Asian individuals are green in color.

