**Supplementary table 1**: collection numbers and origin of dissected specimens from the MCZ collection.

|  |  |  |  |
| --- | --- | --- | --- |
| **Genus** | **Species** | **MCZ number** | **Origin** |
| *Anolis* | *frenatus* | R133833 | Panama |
| *Anolis* | *frenatus* | R133708 | Panama |
| *Anolis* | *frenatus* | R133705 | Panama |
| *Anolis* | *chloris* | R164413 | Ecuador |
| *Anolis* | *chloris* | R166549 | Ecuador |
| *Anolis* | *chloris* | R165273 | Ecuador |
| *Anolis* | *oxylophus* | R92960 | Costa Rica |
| *Anolis* | *oxylophus* | R92957 | Costa Rica |
| *Anolis* | *oxylophus* | R92955 | Costa Rica |
| *Anolis* | *auratus* | R86807 | Panama |
| *Anolis* | *auratus* | R86806 | Panama |
| *Anolis* | *auratus* | R86811 | Panama |
| *Anolis* | *humilis humilis* | R133627 | Panama |
| *Anolis* | *humilis humilis* | R119987 | Panama |
| *Anolis* | *humilis humilis* | R119986 | Panama |
| *Anolis* | *herterodermus* | R139565 | Colombia |
| *Anolis* | *herterodermus* | R139566 | Colombia |
| *Anolis* | *herterodermus* | R139568 | Colombia |
| *Anolis* | *limifrons* | R128924 | Costa Rica |
| *Anolis* | *limifrons* | R128905 | Costa Rica |
| *Anolis* | *limifrons* | R128893 | Costa Rica |
| *Anolis* | *pentaprion* | R80857 | Costa Rica |

**Supplementary table 2**: Abbreviations and names of jaw muscles.

|  |  |
| --- | --- |
| abbreviation | name |
| DM | m. depressor mandibulae |
| CM | m. cervicomandibularis |
| LAO | m. levator anguli oris |
| AMESA | m. adductor mandibulae externus superficialis pars anterior |
| AMESP | m. adductor mandibulae externus superficialis pars posterior |
| AMEM | m. adductor mandibulae externus medialis |
| AMEP | m. adductor mandibulae externus profondus |
| AMP | m. adductor mandibulae posterior |
| PSTS | m. pseudotemporalis pars superficialis |
| PSTP | m. pseudotemporalis pars profondus |
| PTL | m. pterygoideus pars lateralis |
| PTM | m. pterygoideus pars medialis |
| LPT | m. levator pterygoideus |
| PPT | m. protractor pterygoideus |

**Supplementary table 3**: measurements of dissected specimens (mm).

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Species | n | SVL  ± S.D. | headl  ± S.D. | headW  ± S.D. | headh ± S.D. | lower jawl  ± S.D. | tip-quadr  ± S.D. | tip-coron  ± S.D. | opening ± S.D. | closing  ± S.D. |
| **FEMALE** | *A. frenatus* | 1 | 88.89 | 22.67 | 13.85 | 11.45 | 24.59 | 22.07 | 15.35 | 2.52 | 6.72 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. chloris* | 2 | 42.32 | 11.54 | 6.64 | 5.48 | 12.36 | 10.86 | 8.49 | 1.50 | 2.37 |
|  |  | ± 1.61 | ± 0.35 | ± 0.08 | ± 0.00 | ± 0.19 | ± 0.15 | ± 0.28 | ± 0.34 | ± 0.09 |
| *A. oxylophus* | 3 | 47.43 | 13.06 | 7.67 | 6.27 | 13.06 | 12.78 | 10.26 | 0.28 | 2.52 |
|  |  | ± 3.38 | ± 0.51 | ± 0.40 | ± 0.31 | ± 0.96 | ± 0.50 | ± 0.15 | ± 0.54 | ± 0.60 |
| *A. auratus* | 2 | 46.17 | 11.36 | 6.36 | 5.89 | 12.09 | 11.22 | 9.03 | 0.87 | 2.18 |
|  |  | ± 0.04 | ± 0.47 | ± 0.04 | ± 0.30 | ± 0.76 | ± 0.11 | ± 0.14 | ± 0.65 | ± 0.03 |
| *A. humilis* | 3 | 33.79 | 8.26 | 6.24 | 4.64 | 10.70 | 9.80 | 7.72 | 0.90 | 2.09 |
|  |  | ± 0.64 | ± 2.39 | ± 0.24 | ± 0.32 | ± 0.44 | ± 0.37 | ± 0.47 | ± 0.43 | ± 0.25 |
| *A. heterodermus* | 1 | 65.58 | 18.15 | 10.66 | 8.68 | 19.01 | 17.75 | 14.84 | 1.26 | 2.91 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. limifrons* | 1 | 34.78 | 10.87 | 5.67 | 5.32 | 10.70 | 9.54 | 8.43 | 1.16 | 1.11 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. pentaprion* | 1 | 57.49 | 14.22 | 10.76 | 7.50 | 15.80 | 14.60 | 11.22 | 1.20 | 3.38 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. equestris* | 1 | 126.13 | 42.10 | 24.15 | 19.21 | 44.56 | 40.12 | 32.98 | 4.44 | 7.14 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. carolinesis* | 1 | 45.36 | 12.98 | 7.20 | 5.30 | 14.48 | 12.79 | 8.36 | 1.69 | 4.43 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. cristatellus* | 1 | 56.93 | 16.88 | 11.02 | 8.46 | 19.10 | 17.07 | 13.71 | 2.03 | 3.36 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. gundlachi* | 2 | 60.56 | 19.84 | 10.83 | 9.29 | 20.45 | 18.73 | 15.36 | 1.72 | 3.37 |
|  |  | ± 1.88 | ± 0.69 | ± 0.97 | ± 1.02 | ± 0.41 | ± 0.65 | ± 0.58 | ± 0.24 | ± 0.07 |
| *A. pulchellus* | 2 | 43.60 | 14.02 | 6.88 | 6.57 | 15.97 | 14.63 | 12.22 | 1.35 | 2.41 |
|  |  | ± 1.12 | ± 1.48 | ± 0.28 | ± 0.35 | ± 0.08 | ± 0.60 | ± 0.94 | ± 0.52 | ± 0.34 |
| *A. distichus* | 1 | 50.54 | 13.86 | 8.94 | 6.61 | 14.90 | 13.47 | 10.34 | 1.43 | 3.13 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. valencienni* | 1 | 63.00 | 19.61 | 9.47 | 7.42 | 19.98 | 18.59 | 15.91 | 1.39 | 2.68 |
|  |  |  |  |  |  |  |  |  |  |  |
| **MALE** | *A. frenatus* | 2 | 120.83 | 29.42 | 18.01 | 15.69 | 32.16 | 29.48 | 22.46 | 2.68 | 7.02 |
|  |  | ± 14.13 | ± 3.48 | ± 0.60 | ± 1.24 | ± 0.04 | ± 2.10 | ± 0.14 | ± 2.14 | ± 1.96 |
| *A. chloris* | 1 | 13.89 | 15.34 | 7.77 | 7.35 | 15.71 | 14.45 | 11.83 | 1.26 | 2.62 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. auratus* | 1 | 49.17 | 12.47 | 6.16 | 6.21 | 14.71 | 12.34 | 10.18 | 2.37 | 2.16 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. humilis* | 1 | 35.12 | 10.38 | 6.75 | 6.31 | 10.77 | 9.88 | 6.48 | 0.89 | 3.40 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. heterodermus* | 2 | 60.51 | 18.36 | 10.10 | 8.90 | 18.38 | 17.36 | 13.91 | 1.02 | 3.45 |
|  |  | ± 3.48 | ± 1.47 | ± 0.27 | ± 1.15 | ± 2.16 | ± 1.73 | ± 1.21 | ± 0.43 | ± 0.52 |
| *A. limifrons* | 2 | 31.91 | 10.39 | 5.63 | 5.09 | 11.39 | 10.65 | 7.57 | 0.74 | 3.09 |
|  |  | ± 0.83 | ± 0.29 | ± 0.21 | ± 0.18 | ± 0.66 | ± 0.35 | ± 0.97 | ± 0.31 | ± 0.62 |
| *A. equestris* | 3 | 154.30 | 47.27 | 28.50 | 22.50 | 49.44 | 44.36 | 39.15 | 5.08 | 5.20 |
|  |  | ± 7.46 | ± 2.08 | ± 0.32 | ± 0.95 | ± 1.52 | ± 0.79 | ± 0.96 | ± 1.61 | ± 1.72 |
| *A. carolinesis* | 3 | 63.18 | 19.90 | 10.56 | 8.70 | 22.21 | 19.75 | 17.02 | 2.46 | 2.73 |
|  |  | ± 2.28 | ± 1.93 | ± 0.17 | ± 0.14 | ± 1.07 | ± 0.72 | ± 0.24 | ± 0.87 | ± 0.52 |
| *A. cristatellus* | 2 | 64.11 | 18.39 | 11.52 | 9.74 | 20.57 | 18.00 | 15.66 | 2.57 | 2.34 |
|  |  | ± 1.49 | ± 0.68 | ± 0.45 | ± 1.25 | ± 1.39 | ± 0.66 | ± 0.46 | ± 0.74 | ± 1.12 |
| *A. gundlachi* | 1 | 61.55 | 20.55 | 11.77 | 10.46 | 20.62 | 19.11 | 16.64 | 1.51 | 2.47 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. pulchellus* | 1 | 42.93 | 14.03 | 6.55 | 6.19 | 15.44 | 13.78 | 11.90 | 1.66 | 1.88 |
|  |  |  |  |  |  |  |  |  |  |  |
| *A. distichus* | 2 | 50.81 | 13.22 | 8.88 | 7.12 | 14.70 | 12.96 | 10.60 | 1.74 | 2.36 |
|  |  | ± 3.50 | ± 0.01 | ± 0.22 | ± 1.48 | ± 0.96 | ± 0.55 | ± 1.03 | ± 0.41 | ± 0.48 |
| *A. valencienni* | 2 | 70.94 | 21.61 | 10.87 | 8.69 | 22.59 | 20.83 | 16.88 | 1.77 | 3.95 |
|  |  | ± 2.61 | ± 1.61 | ± 0.09 | ± 0.98 | ± 1.44 | ± 0.54 | ± 0.34 | ± 0.90 | ± 0.21 |

SVL, snout vent length; headl, head length; headw, head width; lower jawl, lower jaw length; tip-quadr, tip-quadrate; tip-coron, tip-coronoid; opening, opening-in lever; closing, closing in lever.

**Supplementary table 4**: measurements (mm) and bite force (N) of animals caught in the field.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Species | n | SVL | headl | headW | headh | lower jawl | tip-quadr | tip-coron | opening | closing | bite force |
| ± S.D. | ± S.D. | ± S.D. | ± S.D. | ± S.D. | ± S.D. | ± S.D. | ± S.D. | ± S.D. | ± S.D. |
| **FEMALE** | *A. frenatus* | 3 | 73.88 | 19.96 | 11.5 | 9.53 | 20.45 | 18.73 | 15.66 | 1.72 | 3.08 | 10.51 |
|  |  | ± 3.46 | ± 0.63 | ± 0.85 | ± 0.8 | ± 0.83 | ± 0.54 | ± 0.74 | ± 0.3 | ± 0.21 | ± 0.69 |
| *A. chloris* | 4 | 52.55 | 13.6 | 7.48 | 5.42 | 13.52 | 12.69 | 10.52 | 0.83 | 2.17 | 3.18 |
|  |  | ± 5.9 | ± 0.97 | ± 0.78 | ± 0.56 | ± 1.41 | ± 1.44 | ± 0.99 | ± 0.12 | ± 0.47 | ± 1.38 |
| *A. oxylophus* | 7 | 55.28 | 13.82 | 7.7 | 6.26 | 14 | 12.98 | 10.65 | 1.02 | 2.33 | 4.43 |
|  |  | ± 3.89 | ± 0.7 | ± 0.67 | ± 0.47 | ± 0.86 | ± 0.79 | ± 0.75 | ± 0.14 | ± 0.13 | ± 1.59 |
| *A. auratus* | 22 | 46.03 | 11.81 | 6.13 | 4.85 | 11.89 | 10.93 | 9.03 | 0.95 | 1.91 | 2.87 |
|  |  | ± 1.67 | ± 0.3 | ± 0.24 | ± 0.17 | ± 0.35 | ± 0.35 | ± 0.28 | ± 0.09 | ± 0.16 | ± 0.6 |
| *A. humilis* | 11 | 35.16 | 10.33 | 5.64 | 4.32 | 10.32 | 9.54 | 7.92 | 0.78 | 1.63 | 2.13 |
|  |  | ± 2.55 | ± 0.48 | ± 0.39 | ± 0.46 | ± 0.66 | ± 0.69 | ± 0.73 | ± 0.07 | ± 0.23 | ± 0.70 |
| *A. heterodermus* | 15 | 70.74 | 19.78 | 9.85 | 8.74 | 19.24 | 17.97 | 14.48 | 1.28 | 3.48 | 16.69 |
|  |  | ± 3.9 | ± 1.13 | ± 0.74 | ± 0.6 | ± 1.15 | ± 1.17 | ± 0.97 | ± 0.18 | ± 0.28 | ± 3.54 |
| *A. limifrons* | 23 | 39.24 | 10.89 | 5.56 | 4.24 | 10.64 | 9.9 | 8.42 | 0.74 | 1.48 | ± 1.96 |
|  |  | ± 2.51 | ± 0.63 | ± 0.38 | ± 0.31 | ± 0.58 | ± 0.58 | ± 0.43 | ± 0.12 | ± 0.18 | ± 0.49 |
| *A. pentaprion* | 1 | 46.63 | 13.23 | 7.67 | 5.6 | 12.76 | 11.63 | 9.75 | 1.13 | 1.88 | 3.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| *A. equestris* | 2 | 133.34 | 43.71 | 25.32 | 17.13 | 43.09 | 38.84 | 34.26 | 4.26 | 4.58 | 21.17 |
|  |  | ± 1.5 | ± 1.95 | ± 0.18 | ± 1.61 | ± 1.5 | ± 2.21 | ± 3.04 | ± 0.71 | ± 0.83 | ± 6.92 |
| *A. carolinesis* | 86 | 51.77 | 14.95 | 7.95 | 5.66 | 15.46 | 14.11 | 11.68 | 1.34 | 2.43 | 2.37 |
|  |  | ± 5.25 | ± 1.3 | ± 0.67 | ± 0.47 | ± 1.36 | ± 1.31 | ± 0.96 | ± 0.48 | ± 0.74 | ± 0.59 |
| *A. cristatellus* | 38 | 48.62 | 14.44 | 8.36 | 6.37 | 14.54 | 13.69 | 11.22 | 0.86 | 2.47 | 2.53 |
|  |  | ± 3.17 | ± 0.83 | ± 0.54 | ± 0.45 | ± 1.01 | ± 0.82 | ± 0.9 | ± 0.53 | ± 0.82 | ± 0.74 |
| *A. gundlachi* | 19 | 46.02 | 14.15 | 7.57 | 5.85 | 13.95 | 12.82 | 11.07 | 1.13 | 1.75 | 2.23 |
|  |  | ± 2.43 | ± 0.48 | ± 0.25 | ± 0.32 | ± 0.51 | ± 0.42 | ± 0.34 | ± 0.33 | ± 0.31 | ± 0.43 |
| *A. pulchellus* | 7 | 40.09 | 12.74 | 6.13 | 4.96 | 12.99 | 11.74 | 10.35 | 1.24 | 1.39 | 2.48 |
|  |  | ± 4.21 | ± 2.22 | ± 1.12 | ± 1.06 | ± 2.41 | ± 2.26 | ± 2.11 | ± 0.27 | ± 0.43 | ± 2.22 |
| *A. distichus* | 75 | 41.08 | 11.72 | 7.34 | 5.29 | 11.59 | 10.72 | 9.16 | 0.87 | 1.57 | 1.41 |
|  |  | ± 2.62 | ± 0.61 | ± 0.56 | ± 0.63 | ± 0.73 | ± 0.73 | ± 0.67 | ± 0.25 | ± 0.35 | ± 0.59 |
| *A. valencienni* | 20 | 61.18 | 17.04 | 8.11 | 6.45 | 17.05 | 15.84 | 13.22 | 1.22 | 2.62 | 3.31 |
|  |  | ± 2.82 | ± 0.72 | ± 0.5 | ± 0.4 | ± 0.82 | ± 0.8 | ± 0.56 | ± 0.22 | ± 0.4 | ± 0.78 |
| **MALE** | *A. frenatus* | 2 | 114.62 | 28.84 | 16.36 | 13.36 | 29.72 | 27.43 | 22.78 | 2.3 | 4.65 | 27.29 |
|  |  | ± 26.36 | ± 6.46 | ± 3.81 | ± 3.2 | ± 7.17 | ± 6.33 | ± 5.99 | ± 0.84 | ± 0.34 | ± 15.52 |
| *A. chloris* | 4 | 59.41 | 16.42 | 8.65 | 6.82 | 16.54 | 15.36 | 12.94 | 1.18 | 2.42 | 5.86 |
|  |  | ± 1.26 | ± 0.81 | ± 0.32 | ± 0.24 | ± 0.5 | ± 0.52 | ± 0.35 | ± 0.11 | ± 0.2 | ± 1.18 |
| *A. auratus* | 23 | 43.52 | 11.79 | 5.93 | 4.82 | 11.63 | 10.67 | 8.85 | 0.96 | 1.82 | 2.15 |
|  |  | ± 2.20 | ± 0.52 | ± 0.29 | ± 0.24 | ± 0.55 | ± 0.5 | ± 0.37 | ± 0.11 | ± 0.2 | ± 0.48 |
| *A. humilis* | 30 | 32.73 | 9.99 | 5.54 | 4.27 | 9.83 | 9.1 | 7.72 | 0.72 | 1.39 | 1.77 |
|  |  | ± 1.9 | ± 0.42 | ± 0.33 | ± 0.32 | ± 0.5 | ± 0.49 | ± 0.42 | ± 0.1 | ± 0.12 | ± 0.47 |
| *A. heterodermus* | 6 | 71.34 | 20.97 | 10.56 | 9.3 | 20.4 | 18.94 | 15.36 | 1.46 | 3.58 | 17.57 |
|  |  | ± 3.99 | ± 1.46 | ± 0.84 | ± 0.91 | ± 1.26 | ± 1.27 | ± 0.96 | ± 0.17 | ± 0.37 | ± 4.11 |
| *A. limifrons* | 26 | 37.6 | 10.63 | 5.4 | 4.23 | 10.27 | 9.61 | 8.15 | 0.66 | 1.45 | 1.42 |
|  |  | ± 5.69 | ± 0.51 | ± 0.41 | ± 0.28 | ± 0.55 | ± 0.52 | ± 0.47 | ± 0.18 | ± 0.21 | ± 0.32 |
| *A. equestris* | 10 | 157.35 | 49.3 | 28.89 | 20.94 | 49.75 | 46.47 | 38.62 | 3.29 | 7.85 | 57.62 |
|  |  | ± 15.92 | ± 3.84 | ± 3.12 | ± 2.25 | ± 4.04 | ± 4.18 | ± 3.52 | ± 0.76 | ± 1.51 | ± 30.8 |
| *A. carolinesis* | 184 | 63.75 | 19.11 | 10.18 | 7.17 | 20.3 | 18.56 | 15.17 | 1.74 | 3.39 | 5.18 |
|  |  | ± 5.5 | ± 1.56 | ± 1.09 | ± 0.86 | ± 1.84 | ± 1.71 | ± 1.34 | ± 0.3 | ± 0.92 | ± 1.84 |
| *A. cristatellus* | 52 | 68.57 | 19.82 | 12.01 | 9.19 | 20.22 | 18.85 | 15.25 | 1.37 | 3.59 | 7.53 |
|  |  | ± 4.01 | ± 1.1 | ± 0.86 | ± 0.62 | ± 1.15 | ± 1.06 | ± 1.08 | ± 0.59 | ± 1.1 | ± 1.73 |
| *A. gundlachi* | 28 | 63.25 | 19.8 | 10.44 | 8.6 | 19.92 | 18.34 | 15.39 | 1.59 | 2.94 | 6.65 |
|  |  | ± 4.01 | ± 1.14 | ± 0.8 | ± 0.85 | ± 1.14 | ± 1.11 | ± 0.98 | ± 0.26 | ± 0.61 | ± 1.82 |
| *A. pulchellus* | 36 | 42.13 | 13.43 | 6.3 | 5.36 | 13.68 | 12.56 | 10.69 | 1.12 | 1.87 | 2.52 |
|  |  | ± 3.85 | ± 1.65 | ± 0.9 | ± 0.9 | ± 1.76 | ± 1.62 | ± 1.58 | ± 0.27 | ± 0.78 | ± 1.20 |
| *A. distichus* | 83 | 46.81 | 13.27 | 8.59 | 6.1 | 13.44 | 12.44 | 10.6 | 1 | 1.84 | 2.8 |
|  |  | ± 3.3 | ± 0.93 | ± 0.93 | ± 0.7 | ± 1.15 | ± 1.15 | ± 1.06 | ± 0.25 | ± 0.35 | ± 1.34 |
| *A. valencienni* | 23 | 67.47 | 19.89 | 9.59 | 7.97 | 19.96 | 18.62 | 15.37 | 1.34 | 3.26 | 6.7 |
|  |  | ± 4.72 | ± 1.92 | ± 0.95 | ± 0.99 | ± 1.99 | ± 1.85 | ± 1.63 | ± 0.23 | ± 0.34 | ± 3.10 |

SVL, snout vent length; headl, head length; headw, head width; lower jawl, lower jaw length; tip-quadr, tip-quadrate; tip-coron, tip-coronoid; opening, opening-in lever; closing, closing in lever.

**Supplementary table 5**: Muscle mass (µg).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Species | n | DM  ± S.D. | LAO  ± S.D. | AMESA  ± S.D. | AMESP  ± S.D. | AMEM  ± S.D. | AMEP  ± S.D. | AMP  ± S.D. | PSTS  ± S.D. | PSTP  ± S.D. | PTL  ± S.D. | PTM  ± S.D. | LPT  ± S.D. | PPT  ± S.D. | CM  ± S.D. |
| **FEMALE** | *A. frenatus* | 1 | 6.60 | 0.80 | 29.10 | 7.00 | 15.00 | 2.00 | 2.10 | 5.60 | 4.80 | 9.00 | 5.30 | 0.60 | 1.90 | 5.10 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. chloris* | 2 | 0.85 | 0.10 | 2.00 | 0.40 | 1.20 | 0.30 | 0.15 | 0.50 | 0.30 | 0.80 | 0.40 | 0.10 | 0.10 | 0.10 |
|  |  | ± 0.21 | ± 0.00 | ± 0.42 | ± 0.28 | ± 0.14 | ± 0.00 | ± 0.07 | ± 0.14 | ± 0.00 | ± 0.14 | ± 0.14 | ± 0.00 | ± 0.00 | ± 0.07 |
| *A. oxylophus* | 3 | 1.27 | 0.27 | 4.73 | 0.80 | 3.00 | 0.43 | 0.47 | 1.03 | 0.80 | 2.00 | 1.13 | 0.13 | 0.47 | 0.20 |
|  |  | ± 0.38 | ± 0.15 | ± 0.78 | ± 0.20 | ± 0.72 | ± 0.06 | ± 0.25 | ± 0.15 | ± 0.10 | ± 0.60 | ± 0.45 | ± 0.06 | ± 0.12 | ± 0.15 |
| *A. auratus* | 2 | 0.70 | 0.15 | 3.65 | 0.55 | 1.42 | 0.40 | 0.25 | 0.60 | 0.60 | 1.30 | 0.60 | 0.15 | 0.25 | 0.25 |
|  |  | ± 0.00 | ± 0.07 | ± 0.35 | ± 0.21 | ± 1.67 | ± 0.00 | ± 0.07 | ± 0.28 | ± 0.14 | ± 0.14 | ± 0.00 | ± 0.07 | ± 0.21 | ± 0.07 |
| *A. humilis* | 3 | 0.70 | 0.13 | 1.99 | 0.43 | 2.03 | 0.43 | 0.27 | 0.50 | 0.50 | 0.83 | 0.47 | 0.13 | 0.13 | 0.65 |
|  |  | ± 0.17 | ± 0.06 | ± 1.53 | ± 0.25 | ± 0.38 | ± 0.12 | ± 0.12 | ± 0.10 | ± 0.00 | ± 0.15 | ± 0.12 | ± 0.06 | ± 0.06 | ± 0.59 |
| *A. heterodermus* | 1 | 2.70 | 1.20 | 8.10 | 1.50 | 6.20 | 0.70 | 0.90 | 2.00 | 2.30 | 3.80 | 4.00 | 0.10 | 0.20 | 1.70 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. limifrons* | 1 | 0.50 | 0.10 | 1.90 | 0.30 | 1.20 | 0.20 | 0.30 | 0.10 | 0.30 | 0.40 | 0.30 | 0.10 | 0.10 | 0.20 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. pentaprion* | 1 | 1.10 | 0.10 | 8.00 | 1.20 | 6.00 | 1.20 | 0.50 | 1.80 | 1.50 | 4.50 | 1.20 | 0.50 | 0.50 | 1.90 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. equestris* | 1 | 25.60 | 4.10 | 98.20 | 29.90 | 94.60 | 13.10 | 10.80 | 11.30 | 15.90 | 38.50 | 50.90 | 2.00 | 6.30 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. carolinesis* | 1 | 1.00 | 0.20 | 0.23 | 0.30 | 2.40 | 0.20 | 0.20 | 0.30 | 0.90 | 0.80 | 1.20 | 0.10 | 0.20 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. cristatellus* | 1 | 4.70 | 0.60 | 13.80 | 4.40 | 9.70 | 2.30 | 1.30 | 1.30 | 1.80 | 5.90 | 3.10 | 0.30 | 0.80 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. gundlachi* | 2 | 4.65 | 0.20 | 18.15 | 5.25 | 17.55 | 2.00 | 1.45 | 3.60 | 2.50 | 8.50 | 6.00 | 0.35 | 0.90 |  |
|  |  | ± 1.41 | ± 0.14 | ± 4.45 | ± 2.19 | ± 7.35 | ± 0.78 | ± 0.00 | ± 0.07 | ± 1.77 | ± 6.93 | ± 1.34 | ± 0.07 | ± 0.35 |  |
| *A. pulchellus* | 2 | 2.55 | 0.13 | 5.60 | 1.45 | 5.55 | 0.95 | 0.45 | 2.15 | 0.70 | 3.30 | 2.20 | 0.25 | 1.00 |  |
|  |  | ± 0.07 | ± 0.11 | ± 2.26 | ± 0.64 | ± 0.35 | ± 0.07 | ± 0.35 | ± 0.35 | ± 0.14 | ± 0.28 | ± 1.56 | ± 0.07 | ± 0.57 |  |
| *A. distichus* | 1 | 1.00 | 0.30 | 5.00 | 1.00 | 2.40 | 0.50 | 0.40 | 0.90 | 0.80 | 1.70 | 1.30 | 0.20 | 0.40 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. valencienni* | 1 | 2.10 | 0.20 | 5.50 | 1.70 | 4.60 | 0.60 | 0.50 | 2.00 | 0.50 | 2.90 | 1.90 | 0.40 | 0.70 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MALE** | *A. frenatus* | 2 | 41.85 | 1.60 | 57.70 | 30.70 | 41.10 | 12.00 | 6.55 | 16.30 | 14.35 | 25.30 | 9.70 | 0.85 | 6.80 | 26.10 |
|  |  | ± 11.10 | ± 0.14 | ± 2.55 | ± 16.97 | ± 4.53 | ± 1.56 | ± 2.33 | ± 8.77 | ± 0.35 | ± 3.82 | ± 1.70 | ± 0.07 | ± 0.57 | ± 18.46 |
| *A. chloris* | 1 | 1.70 | 0.20 | 4.80 | 1.10 | 3.30 | 0.50 | 0.60 | 2.00 | 1.00 | 2.40 | 1.40 | 0.20 | 0.40 | 0.40 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. auratus* | 1 | 1.70 | 0.10 | 3.60 | 0.50 | 2.30 | 0.40 | 0.40 | 0.40 | 0.60 | 1.50 | 0.70 | 0.10 | 0.30 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. humilis* | 1 | 0.80 | 0.00 | 2.40 | 0.30 | 1.70 | 0.20 | 0.30 | 0.30 | 0.60 | 0.30 | 0.60 | 0.20 | 0.30 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. heterodermus* | 2 | 2.60 | 0.15 | 9.45 | 1.65 | 10.30 | 2.15 | 0.85 | 3.35 | 1.55 | 3.45 | 3.30 | 0.10 | 0.45 | 1.20 |
|  |  | ± 1.70 | ± 0.07 | ± 3.04 | ± 0.35 | ± 4.53 | ± 0.07 | ± 0.07 | ± 0.49 | ± 0.07 | ± 1.63 | ± 0.42 | ± 0.00 | ± 0.07 | ± 0.42 |
| *A. limifrons* | 2 | 0.30 | 0.10 | 1.85 | 0.30 | 1.40 | 0.10 | 0.30 | 0.20 | 0.40 | 0.30 | 0.15 | 0.10 | 0.10 | 0.10 |
|  |  | ± 0.14 | ± 0.00 | ± 0.21 | ± 0.14 | ± 0.14 | ± 0.00 | ± 0.28 | ± 0.00 | ± 0.14 | ± 0.00 | ± 0.07 | ± 0.00 | ± 0.00 | ± 0.07 |
| *A. equestris* | 3 | 64.33 | 6.10 | 143.97 | 60.70 | 172.43 | 33.23 | 21.50 | 13.63 | 43.83 | 103.57 | 74.57 | 2.50 | 8.47 |  |
|  |  | ± 13.34 | ± 2.25 | ± 63.20 | ± 22.89 | ± 55.06 | ± 0.42 | ± 3.76 | ± 5.10 | ± 9.50 | ± 51.11 | ± 37.65 | ± 0.98 | 5.85 |  |
| *A. carolinesis* | 3 | 7.63 | 0.80 | 18.97 | 4.00 | 11.47 | 2.00 | 2.30 | 3.93 | 3.70 | 11.93 | 6.93 | 0.33 | 0.83 |  |
|  |  | ± 2.23 | ± 0.52 | ± 3.61 | ± 0.61 | ± 2.00 | ± 0.80 | ± 0.30 | ± 0.70 | ± 0.30 | ± 1.36 | ± 2.05 | ± 0.06 | ± 0.67 |  |
| *A. cristatellus* | 2 | 12.65 | 1.00 | 25.40 | 8.30 | 15.80 | 3.65 | 1.95 | 3.70 | 3.70 | 13.55 | 7.80 | 0.90 | 1.40 |  |
|  |  | ± 2.62 | ± 0.14 | ± 1.13 | ± 1.70 | ± 3.54 | ± 0.21 | ± 0.21 | ± 0.71 | ± 0.42 | ± 1.06 | ± 0.57 | ± 0.14 | ± 0.85 |  |
| *A. gundlachi* | 1 | 6.30 | 0.20 | 26.10 | 7.60 | 24.90 | 2.30 | 1.70 | 3.30 | 4.80 | 18.00 | 6.40 | 0.50 | 1.30 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. pulchellus* | 1 | 2.20 | 0.10 | 4.80 | 1.70 | 5.00 | 0.60 | 0.40 | 1.80 | 0.30 | 2.40 | 2.10 | 0.20 | 0.10 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. distichus* | 2 | 2.35 | 0.25 | 6.95 | 2.20 | 3.35 | 0.90 | 0.55 | 1.35 | 0.90 | 3.60 | 1.35 | 0.15 | 0.40 |  |
|  |  | ± 0.49 | ± 0.07 | ± 2.62 | ± 1.41 | ± 1.48 | ± 0.42 | ± 0.21 | ± 0.64 | ± 0.42 | ± 0.00 | ± 0.64 | 0.07 | ± 0.14 |  |
| *A. valencienni* | 2 | 5.50 | 0.50 | 16.10 | 4.95 | 14.90 | 2.05 | 2.15 | 3.65 | 2.45 | 9.40 | 4.15 | 0.35 | 1.00 |  |
|  |  | ± 1.70 | ± 0.14 | ± 1.84 | ± 1.77 | ± 2.26 | ± 0.21 | ± 0.35 | ± 2.19 | ± 0.64 | ± 1.98 | ± 1.77 | ± 0.35 | ± 0.28 |  |

See supplementary table 2 for abbreviations.

**Supplementary table 6**: Fiber length (mm).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Species | n | DM  ± S.D. | LAO  ± S.D. | AMESA  ± S.D. | AMESP  ± S.D. | AMEM  ± S.D. | AMEP  ± S.D. | AMP  ± S.D. | PSTS  ± S.D. | PSTP  ± S.D. | PTL  ± S.D. | PTM  ± S.D. | LPT  ± S.D. | PPT  ± S.D. | CM  ± S.D. |
| **FEMALE** | *A. frenatus* | 1 | 0.525 | 0.291 | 0.414 | 0.285 | 0.314 | 0.373 | 0.237 | 0.385 | 0.286 | 0.251 | 0.179 | 0.176 | 0.261 | 0.654 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. chloris* | 2 | 0.294 | 0.157 | 0.215 | 0.170 | 0.237 | 0.236 | 0.169 | 0.217 | 0.164 | 0.145 | 0.112 | 0.108 | 0.129 | 0.404 |
|  |  | ± 0.104 | ± 0.000 | ± 0.009 | ± 0.024 | ± 0.018 | ± 0.017 | ± 0.024 | ± 0.006 | ± 0.029 | ± 0.009 | ± 0.004 | ± 0.009 | ± 0.007 | ± 0.286 |
| *A. oxylophus* | 3 | 0.421 | 0.206 | 0.293 | 0.199 | 0.311 | 0.333 | 0.192 | 0.295 | 0.221 | 0.176 | 0.135 | 0.127 | 0.152 | 0.445 |
|  |  | ± 0.038 | ± 0.027 | ± 0.023 | ± 0.017 | ± 0.015 | ± 0.027 | ± 0.015 | ± 0.030 | ± 0.018 | ± 0.042 | ± 0.019 | ± 0.009 | ± 0.020 | ± 0.258 |
| *A. auratus* | 2 | 0.330 | 0.171 | 0.228 | 0.137 | 0.267 | 0.228 | 0.124 | 0.230 | 0.168 | 0.144 | 0.088 | 0.125 | 0.118 | 0.310 |
|  |  | ± 0.112 | ± 0.012 | ± 0.008 | ± 0.032 | ± 0.015 | ± 0.014 | ± 0.011 | ± 0.011 | ± 0.009 | ± 0.001 | ± 0.009 | ± 0.020 | ± 0.034 | ± 0.022 |
| *A. humilis* | 3 | 0.346 | 0.197 | 0.240 | 0.184 | 0.247 | 0.269 | 0.154 | 0.215 | 0.195 | 0.138 | 0.117 | 0.116 | 0.133 | 0.413 |
|  |  | ± 0.010 | ± 0.058 | ± 0.041 | ± 0.040 | ± 0.039 | ± 0.014 | ± 0.024 | ± 0.049 | ± 0.027 | ± 0.006 | ± 0.020 | ± 0.017 | ± 0.015 | ± 0.239 |
| *A. heterodermus* | 1 | 0.477 | 0.211 | 0.256 | 0.197 | 0.281 | 0.288 | 0.150 | 0.292 | 0.272 | 0.184 | 0.145 | 0.096 | 0.148 | 0.440 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. limifrons* | 1 | 0.312 | 0.123 | 0.207 | 0.112 | 0.204 | 0.229 | 0.116 | 0.181 | 0.170 | 0.090 | 0.090 | 0.097 | 0.114 | 0.311 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. pentaprion* | 1 | 0.333 | 0.193 | 0.285 | 0.212 | 0.270 | 0.264 | 0.143 | 0.219 | 0.215 | 0.212 | 0.128 | 0.167 | 0.183 | 0.399 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. equestris* | 1 | 1.013 | 0.576 | 0.657 | 0.422 | 0.604 | 0.548 | 0.324 | 0.596 | 0.538 | 0.474 | 0.368 | 0.270 | 0.395 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. carolinesis* | 1 | 0.353 | 0.184 | 0.237 | 0.173 | 0.155 | 0.203 | 0.156 | 0.203 | 0.202 | 0.156 | 0.133 | 0.116 | 0.133 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. cristatellus* | 1 | 0.504 | 0.302 | 0.398 | 0.353 | 0.277 | 0.277 | 0.329 | 0.350 | 0.315 | 0.328 | 0.125 | 0.173 | 0.205 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. gundlachi* | 2 | 0.513 | 0.300 | 0.453 | 0.336 | 0.393 | 0.342 | 0.265 | 0.312 | 0.291 | 0.336 | 0.209 | 0.130 | 0.223 |  |
|  |  | ± 0.0148 | ± 0.163 | ± 0.138 | ± 0.011 | ± 0.018 | ± 0.077 | ± 0.053 | ± 0.020 | ± 0.005 | ± 0.001 | ± 0.053 | ± 0.017 | ± 0.018 |  |
| *A. pulchellus* | 2 | 0.312 | 0.195 | 0.209 | 0.175 | 0.196 | 0.168 | 0.148 | 0.173 | 0.150 | 0.141 | 0.100 | 0.104 | 0.141 |  |
|  |  | ± 0.020 | ± 0.039 | ± 0.006 | ± 0.009 | ± 0.021 | ± 0.028 | ± 0.027 | ± 0.017 | ± 0.001 | ± 0.013 | ± 0.070 | ± 0.003 | ± 0.025 |  |
| *A. distichus* | 1 | 0.391 | 0.177 | 0.276 | 0.191 | 0.226 | 0.225 | 0.192 | 0.216 | 0.150 | 0.164 | 0.134 | 0.118 | 0.143 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. valencienni* | 1 | 0.377 | 0.195 | 0.176 | 0.200 | 0.176 | 0.178 | 0.157 | 0.169 | 0.174 | 0.165 | 0.096 | 0.115 | 0.277 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MALE | *A. frenatus* | 2 | 0.421 | 0.435 | 0.468 | 0.469 | 0.426 | 0.403 | 0.267 | 0.391 | 0.411 | 0.315 | 0.208 | 0.226 | 0.325 | 1.773 |
|  |  | ± 0.176 | ± 0.069 | ± 0.019 | ± 0.027 | ± 0.045 | ± 0.002 | ± 0.032 | ± 0.054 | ± 0.025 | ± 0.022 | ± 0.019 | ± 0.015 | ± 0.040 | ± 1.254 |
| *A. chloris* | 1 | 0.404 | 0.204 | 0.248 | 0.217 | 0.281 | 0.262 | 0.170 | 0.261 | 0.194 | 0.218 | 0.132 | 0.109 | 0.144 | 0.489 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. auratus* | 1 | 0.372 | 0.133 | 0.254 | 0.158 | 0.207 | 0.177 | 0.121 | 0.184 | 0.181 | 0.158 | 0.102 | 0.093 | 0.116 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. humilis* | 1 | 0.003 |  | 0.011 | 0.002 | 0.009 | 0.001 | 0.003 | 0.002 | 0.003 | 0.002 | 0.006 | 0.002 | 0.003 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. heterodermus* | 2 | 0.401 | 0.170 | 0.263 | 0.206 | 0.295 | 0.273 | 0.175 | 0.277 | 0.230 | 0.156 | 0.174 | 0.106 | 0.147 | 0.425 |
|  |  | ± 0.062 | ± 0.035 | ± 0.024 | ± 0.004 | ± 0.017 | ± 0.002 | ± 0.007 | ± 0.009 | ± 0.009 | ± 0.002 | ± 0.010 | ± 0.003 | ± 0.025 | ± 0.050 |
| *A. limifrons* | 2 | 0.254 | 0.110 | 0.172 | 0.133 | 0.179 | 0.205 | 0.105 | 0.156 | 0.111 | 0.101 | 0.091 | 0.095 | 0.091 | 0.235 |
|  |  | ± 0.040 | ± 0.032 | ± 0.030 | ± 0.013 | ± 0.013 | ± 0.010 | ± 0.028 | ± 0.023 | ± 0.016 | ± 0.002 | ± 0.001 | ± 0.004 | ± 0.011 | ± 0.166 |
| *A. equestris* | 3 | 0.988 | 0.432 | 0.609 | 0.501 | 0.500 | 0.422 | 0.327 | 0.529 | 0.485 | 0.396 | 0.337 | 0.289 | 0.388 |  |
|  |  | ± 0.184 | ± 0.094 | ± 0.128 | ± 0.041 | ± 0.116 | ± 0.073 | ± 0.093 | ± 0.085 | ± 0.095 | ± 0.111 | ± 0.141 | ± 0.101 | ± 0.146 |  |
| *A. carolinesis* | 3 | 0.444 | 0.249 | 0.403 | 0.337 | 0.329 | 0.268 | 0.181 | 0.341 | 0.316 | 0.260 | 0.251 | 0.127 | 0.194 |  |
|  |  | ± 0.024 | ± 0.016 | ± 0.060 | ± 0.021 | ± 0.012 | ± 0.040 | ± 0.062 | ± 0.037 | ± 0.069 | ± 0.037 | ± 0.042 | ± 0.019 | ± 0.017 |  |
| *A. cristatellus* | 2 | 0.606 | 0.304 | 0.450 | 0.413 | 0.389 | 0.333 | 0.303 | 0.325 | 0.345 | 0.330 | 0.189 | 0.368 | 0.232 |  |
|  |  | ± 0.0496 | ± 0.038 | ± 0.078 | ± 0.001 | ± 0.010 | ± 0.016 | ± 0.024 | ± 0.032 | ± 0.066 | ± 0.008 | ± 0.007 | ± 0.287 | ± 0.006 |  |
| *A. gundlachi* | 1 | 0.529 | 0.230 | 0.271 | 0.391 | 0.347 | 0.230 | 0.188 | 0.307 | 0.290 | 0.332 | 0.174 | 0.163 | 0.241 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. pulchellus* | 1 | 0.328 | 0.180 | 0.208 | 0.183 | 0.211 | 0.203 | 0.170 | 0.156 | 0.138 | 0.139 | 0.111 | 0.089 | 0.148 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. distichus* | 2 | 0.380 | 0.232 | 0.275 | 0.243 | 0.291 | 0.241 | 0.174 | 0.248 | 0.214 | 0.173 | 0.167 | 0.117 | 0.148 |  |
|  |  | ± 0.0521 | ± 0.027 | ± 0.028 | ± 0.045 | ± 0.017 | ± 0.024 | ± 0.004 | ± 0.032 | ± 0.012 | ± 0.016 | ± 0.008 | ± 0.012 | ± 0.024 |  |
| *A. valencienni* | 2 | 0.437 | 0.260 | 0.365 | 0.287 | 0.278 | 0.276 | 0.196 | 0.244 | 0.249 | 0.251 | 0.177 | 0.093 | 0.208 |  |
|  |  | ± 0.089 | ± 0.006 | ± 0.072 | ± 0.026 | ± 0.009 | ± 0.054 | ± 0.047 | ± 0.019 | ± 0.008 | ± 0.013 | ± 0.017 | ± 0.042 | ± 0.054 |  |

See supplementary table 2 for abbreviations.

**Supplementary table 7:** Physiological cross sectional area (mm2).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Species | n | DM  ± S.D. | LAO  ± S.D. | AMESA  ± S.D. | AMESP  ± S.D. | AMEM  ± S.D. | AMEP  ± S.D. | AMP  ± S.D. | PSTS  ± S.D. | PSTP  ± S.D. | PTL  ± S.D. | PTM  ± S.D. | LPT  ± S.D. | PPT  ± S.D. | CM  ± S.D. |
| FEMALE | *A. frenatus* | 1 | 1.33 | 0.29 | 7.46 | 2.6 | 5.06 | 0.57 | 0.94 | 1.54 | 1.78 | 3.81 | 3.14 | 0.36 | 0.77 | 0.83 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. chloris* | 2 | 0.34 | 0.07 | 0.99 | 0.24 | 0.54 | 0.14 | 0.09 | 0.24 | 0.2 | 0.59 | 0.38 | 0.1 | 0.08 | 0.03 |
|  |  | ± 0.2 |  | ± 0.25 | ± 0.14 | ± 0.1 | ± 0.01 | ± 0.03 | ± 0.06 | ± 0.03 | ± 0.14 | ± 0.12 | ± 0.01 |  | ± 0.02 |
| *A. oxylophus* | 3 | 0.32 | 0.13 | 1.73 | 0.42 | 1.02 | 0.14 | 0.26 | 0.37 | 0.38 | 1.25 | 0.88 | 0.11 | 0.33 | 0.05 |
|  |  | ± 0.06 | ± 0.07 | ± 0.41 | ± 0.08 | ± 0.23 | ± 0.01 | ± 0.14 | ± 0.03 | ± 0.03 | ± 0.44 | ± 0.28 | ± 0.04 | ± 0.11 | ± 0.03 |
| *A. auratus* | 2 | 0.24 | 0.09 | 1.69 | 0.42 | 0.55 | 0.19 | 0.22 | 0.27 | 0.38 | 0.96 | 0.73 | 0.12 | 0.2 | 0.08 |
|  |  | ± 0.08 | ± 0.04 | ± 0.1 | ± 0.07 | ± 0.63 | ± 0.01 | ± 0.08 | ± 0.12 | ± 0.11 | ± 0.1 | ± 0.07 | ± 0.04 | ± 0.13 | ± 0.02 |
| *A. humilis* | 3 | 0.21 | 0.07 | 0.93 | 0.24 | 0.87 | 0.17 | 0.19 | 0.25 | 0.28 | 0.64 | 0.42 | 0.12 | 0.11 | 0.17 |
|  |  | ± 0.05 | ± 0.01 | ± 0.72 | ± 0.1 | ± 0.06 | ± 0.04 | ± 0.09 | ± 0.05 | ± 0.04 | ± 0.14 | ± 0.05 | ± 0.05 | ± 0.06 | ± 0.16 |
| *A. heterodermus* | 1 | 0.6 | 0.6 | 3.36 | 0.81 | 2.34 | 0.26 | 0.64 | 0.73 | 0.9 | 2.19 | 2.93 | 0.11 | 0.14 | 0.41 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. limifrons* | 1 | 0.17 | 0.09 | 0.98 | 0.28 | 0.62 | 0.09 | 0.27 | 0.06 | 0.19 | 0.47 | 0.35 | 0.11 | 0.09 | 0.07 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. pentaprion* | 1 | 0.35 | 0.05 | 2.98 | 0.6 | 2.36 | 0.48 | 0.37 | 0.87 | 0.74 | 2.25 | 0.99 | 0.32 | 0.29 | 0.5 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. equestris* | 1 | 2.68 | 0.75 | 15.86 | 7.5 | 16.61 | 2.53 | 3.54 | 2.01 | 3.13 | 8.62 | 14.66 | 0.78 | 1.69 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. carolinesis* | 1 | 0.3 | 0.12 | 0.1 | 0.18 | 1.64 | 0.1 | 0.14 | 0.16 | 0.47 | 0.54 | 0.95 | 0.09 | 0.16 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. cristatellus* | 1 | 0.99 | 0.21 | 3.67 | 1.32 | 3.71 | 0.88 | 0.42 | 0.39 | 0.61 | 1.9 | 2.62 | 0.18 | 0.41 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. gundlachi* | 2 | 0.96 | 0.07 | 4.24 | 1.7 | 4.7 | 0.62 | 0.58 | 1.24 | 0.91 | 2.68 | 3.31 | 0.28 | 0.43 |  |
|  |  | ± 0.26 | ± 0.07 | ± 4.03 | ± 0.56 | ± 2.46 | ± 0.48 | ± 0.19 | ± 0.05 | ± 0.63 | ± 2.23 | ± 1.4 | ± 0.01 | ± 0.13 |  |
| *A. pulchellus* | 2 | 0.87 | 0.08 | 2.86 | 0.89 | 3.03 | 0.6 | 0.3 | 1.33 | 0.5 | 2.51 | 2.34 | 0.26 | 0.8 |  |
|  |  | ± 0.08 | ± 0.07 | ± 1.24 | ± 0.43 | ± 0.52 | ± 0.06 | ± 0.2 | ± 0.34 | ± 0.1 | ± 0.44 | ± 1.65 | ± 0.08 | ± 0.57 |  |
| *A. distichus* | 1 | 0.27 | 0.18 | 1.92 | 0.56 | 1.12 | 0.24 | 0.22 | 0.44 | 0.56 | 1.1 | 1.03 | 0.18 | 0.3 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. valencienni* | 1 | 0.59 | 0.11 | 3.31 | 0.9 | 2.77 | 0.36 | 0.34 | 1.26 | 0.31 | 1.87 | 2.1 | 0.37 | 0.27 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MALE | *A. frenatus* | 2 | 12.19 | 0.39 | 13.09 | 7.07 | 10.23 | 3.16 | 2.57 | 4.63 | 3.71 | 8.48 | 5 | 0.4 | 2.23 | 1.56 |
|  |  | ± 7.89 | ± 0.03 | ± 1.11 | ± 4.25 | ± 0.05 | ± 0.39 | ± 0.62 | ± 3.02 | ± 0.32 | ± 0.69 | ± 1.33 | ± 0.06 | ± 0.09 | ± 1.1 |
| *A. chloris* | 1 | 0.45 | 0.1 | 2.05 | 0.54 | 1.24 | 0.2 | 0.37 | 0.81 | 0.55 | 1.17 | 1.12 | 0.19 | 0.29 | 0.09 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. auratus* | 1 | 0.48 | 0.08 | 1.5 | 0.34 | 1.18 | 0.24 | 0.35 | 0.23 | 0.35 | 1 | 0.72 | 0.11 | 0.27 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. humilis* | 1 | 0.33 | 0 | 1.11 | 0.15 | 0.87 | 0.11 | 0.28 | 0.16 | 0.33 | 0.24 | 0.56 | 0.19 | 0.29 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. heterodermus* | 2 | 0.73 | 0.09 | 3.89 | 0.85 | 3.66 | 0.84 | 0.52 | 1.28 | 0.72 | 2.34 | 2 | 0.1 | 0.32 | 0.29 |
|  |  | ± 0.56 | ± 0.03 | ± 1.58 | ± 0.17 | ± 1.42 | ± 0.02 | ± 0.06 | ± 0.15 | ± 0.06 | ± 1.08 | ± 0.15 |  |  | ± 0.07 |
| *A. limifrons* | 2 | 0.13 | 0.1 | 1.15 | 0.24 | 0.84 | 0.05 | 0.27 | 0.14 | 0.4 | 0.32 | 0.17 | 0.11 | 0.12 | 0.05 |
|  |  | ± 0.08 | ± 0.03 | ± 0.07 | ± 0.09 | ± 0.14 |  | ± 0.21 | ± 0.02 | ± 0.19 |  | ± 0.08 | ± 0.01 | ± 0.01 | ± 0.03 |
| *A. equestris* | 3 | 6.88 | 1.52 | 24.86 | 12.69 | 35.98 | 8.52 | 7.23 | 2.7 | 9.6 | 26.65 | 24.73 | 1.01 | 2.23 |  |
|  |  | ± 0.13 | ± 0.52 | ± 8.76 | ± 3.98 | ± 3.94 | ± 1.48 | ± 1.51 | ± 0.85 | ± 0.95 | ± 6.25 | ± 15.09 | ± 0.47 | ± 1.03 |  |
| *A. carolinesis* | 3 | 1.81 | 0.35 | 4.97 | 1.26 | 3.69 | 0.77 | 1.46 | 1.22 | 1.29 | 4.89 | 2.89 | 0.28 | 0.44 |  |
|  |  | ± 0.45 | ± 0.24 | ± 0.36 | ± 0.2 | ± 0.61 | ± 0.2 | ± 0.56 | ± 0.1 | ± 0.33 | ± 0.31 | ± 0.38 | ± 0.08 | ± 0.32 |  |
| *A. cristatellus* | 2 | 2.2 | 0.35 | 6.1 | 2.13 | 4.29 | 1.16 | 0.68 | 1.23 | 1.15 | 4.35 | 4.37 | 0.4 | 0.63 |  |
|  |  | ± 0.28 | ± 0.01 | ± 1.33 | ± 0.43 | ± 0.85 | ± 0.12 | ± 0.02 | ± 0.35 | ± 0.09 | ± 0.44 | ± 0.16 | ± 0.35 | ± 0.37 |  |
| *A. gundlachi* | 1 | 1.26 | 0.09 | 10.2 | 2.06 | 7.6 | 1.06 | 0.96 | 1.14 | 1.76 | 5.75 | 3.89 | 0.33 | 0.57 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. pulchellus* | 1 | 0.71 | 0.06 | 2.44 | 0.99 | 2.52 | 0.31 | 0.25 | 1.23 | 0.23 | 1.83 | 2.01 | 0.24 | 0.07 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *A. distichus* | 2 | 0.01 | 0 | 0.03 | 0.01 | 0.01 | 0 | 0 | 0.01 | 0 | 0.02 | 0.01 | 0 | 0 |  |
|  |  | ± 0.05 | ± 0.05 | ± 1.29 | ± 0.45 | ± 0.61 | ± 0.15 | ± 0.12 | ± 0.2 | ± 0.19 | ± 0.21 | ± 0.36 | ± 0.08 | ± 0.15 |  |
| *A. valencienni* | 2 | 0.01 | 0 | 0.05 | 0.02 | 0.06 | 0.01 | 0.01 | 0.02 | 0.01 | 0.04 | 0.02 | 0 | 0.01 |  |
|  |  | ± 0.14 | ± 0.05 | ± 1.48 | ± 0.82 | ± 0.69 | ± 0.24 | ± 0.48 | ± 0.83 | ± 0.3 | ± 0.63 | ± 0.83 | ± 0.25 | ± 0.01 |  |

See supplementary table 2 for abbreviations.