Table 1: Sources of species used for the study

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/N | Species | Location | Collector | Coordinates |
| 1 | *A.djalonensis* | Vice Chancellor’s Lodge, Federal University of Agriculture (FUNAAB), Abeokuta, Nigeria | Muhali Jimoh | Lat. 7º12ʹ58.66ʺNLong. 3º26ʹ32.91ʺE |
| 2 | *A. nobilis* | Tejumola Majekodunmi Close, Ibara GRA, Abeokuta, Nigeria | Muhali Jimoh | Lat. 7º07ʹ24.81ʺNLong. 3º21ʹ31.43ʺE |
| 3 | *A.vogelii* | Behind Faculty of Science, University of Lagos (UNILAG), Akoka, Nigeria | Muhali Jimoh | Lat. 6º30ʹ58.92ʺNLong. 3º23ʹ57.32ʺE |

Table 2: Comparative quantitative macromorphological features of *anthocleista*

|  |  |  |
| --- | --- | --- |
| Species | Macromorphological characteristics  | Mean ±SD |
| *Anthocleista djalonensis* Leaf Blade Length (cm) | 15.3 | 17.6 | 14.9 | 16.8 | 18.4 | 16.6 ±1.33 |
|  Leaf Blade Width (cm) | 10.4 | 11.1 | 9.8 | 11.3 | 11.7 | 10.86±0.68 |
|  Petiole Length (cm) | 6.2 | 7.3 | 6.5 | 6.7 | 7.1 | 6.76±0.40 |
| Petiole Base (cm) | 2.2 | 1.8 | 1.6 | 1.9 | 1.7 | 1.84±0.21 |
| *Anthocleista nobilis* Leaf BladeLength (cm) | 23.2 | 29.5 | 30.6 | 38.2 | 45.6 | 33.42±7.73 |
|  Leaf Blade Width (cm) | 12.9 | 15.2 | 16.2 | 22.4 | 18.6 | 17.06±3.23 |
|  Petiole Length (cm) | 14.9 | 14.3 | 12.8 | 13.3 | 12.6 | 13.58±0.88 |
| Petiole Base (cm) | 2.7 | 2.9 | 2.6 | 2.1 | 3.5 | 2.76±0.45 |
| *Anthocleista vogelii* Leaf Blade Length (cm) | 28.7 | 21.2 | 27.4 | 24.3 | 25 | 25.32±2.60 |
|  Leaf Blade Width (cm) | 13.4 | 12.9 | 16 | 18.2 | 17.8 | 15.66±2.18 |
|  Petiole Length (cm) | 0.9 | 0.8 | 0.8 | 0.7 | 1.1 | 0.86±0.14 |
| Petiole Base (cm) | 1.9 | 2.3 | 2.2 | 2 | 2.5 | 2.18±0.21 |

SD= standard deviation

Table 3: Summarized qualitative epidermal and stomatal features of *Anthocleista* species

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | Nature | Stomatal Type | Cell Geometry | Anticlinal Wall  | Trichomes Types |
| Pattern |
| *Anthocleista djalonensis* Adaxial | *Amphistomatic* | Cyclocytic | Polygonal/ Triangular | Straight/Bend | Dendritic/tubular/unbranched/Scale  |
| Abaxial | Cyclocytic | Polygonal | Straight/Bend | Dendritic/tubular/unbranched/Scale  |
| *Anthocleista nobilis* Adaxial | *Amphistomatic* | Anomocytic | Polygonal | Straight/Bend | Dendritic/multicellular glandular |
| Adaxial | Actinocytic | Polygonal | Straight/Bend | Scale/ Dendritic |
| *Anthocleista vogelii* Adaxial | *Epistomatic* | Paracytic | Polygonal | Straight | Dendritic |
| Adaxial | Nil | Polygonal | Straight | Unicellular Glandular |

Table 4: Summarized quantitative leaf epidermal and stomatal characters of the species of *Anthocleista*

|  |  |  |  |
| --- | --- | --- | --- |
|   |   | Stomatal cells | Epidermal cells |
| Species | Surface | Length (µm) Min (Mean±SD) Max | Width (µm) Min (Mean±SD) Max | Stomatal Number Min (Mean±SD) Max | Stomatal Index (%) | Length (µm)Min(Mean±SD) Max | Width(µm)Min(Mean±SD) Max | Cell NumberMin(Mean±SD) Max  |
|
| *Anthocleista djalonensis* | adaxial | 11.0(14.70±2.49)19.0 | 7.0(9.80±2.04)14.0 | 8.0(10.10±1.74)13.0 | 4.56 | 11.0(18.10±3.49)19.0 | 7.0(10.05±1.82)13.0 | 208.0(243.20±16.88)263.0 |
| abaxial | 15.0(16.50±1.24)18.0 | 8.0(9.55±2.46)19.0 | 10.0(13.60±2.88)18.0 | 5.96 | 15.0(16.60±2.68)19.0 | 6.0(8.50±1.57)11.0 | 178.0(214.55±16.66)241.0 |
| *Anthocleista nobilis* | adaxial | 17.0(19.00±1.97)22.0 | 8.0(11.00±1.59)14.0 | 14.0(18.40±2.28)23.0 | 10.14 | 17.0(20.70±3.20)25.0 | 7.0(10.85±2.56)18.0 | 180.0(229.20±22.87)259.0 |
| abaxial | 16.0(19.40±1.57)22.0 | 10.0(12.05±1.15)14.0 | 11.0(13.40±1.85)17.0 | 7.63 | 15.0(21.20±5.40)31.0 | 6.0(9.65±2.06)13.0 | 148.0(185.75±19.86)226.0 |
| *Anthocleista vogelii* | adaxial | 19.0(20.85±1.39)23.0 | 12.0(13.70±1.08)15.0 | 11.0(15.95±1.85)18.0 | 9.05 | 12.0(18.70±3.60)24.0 | 8.0(10.85±1.69)14.0 | 155.0(199.90±31.15)241.0 |
| abaxial | Nil | Nil | Nil | 0 | 15.0(20.80±2.91)24.0 | 8.0(10.45±1.73)13.0 | 218.0(269.00±26.72)304.0 |

SD= standard deviation

Table 5: Quantitative stomatal character of *Anthocleista spp*

|  |  |
| --- | --- |
| Species | STOMATAL CELLS |
| Adaxial Length | Adaxial Width | Abaxial Length | Abaxial Width | Mean Stomatal Number |
| Mean (µm) | SD | Mean (µm) | SD | Mean (µm) | SD | Mean (µm) | SD | Adaxial | Abaxial |
| *Anthocleista djalonensis* | 14.7 | 2.49 | 9.8 | 2.04 | 16.5 | 1.24 | 9.55 | 2.46 | 10.1 | 13.6 |
| *Anthocleista nobilis* | 19 | 1.97 | 11 | 1.59 | 19.4 | 1.57 | 12.05 | 1.15 | 18.4 | 13.4 |
| *Anthocleista vogelii* | 20.85 | 1.39 | 13.7 | 1.08 | 0 | 0 | 0 | 0 | 15.95 | 0 |

SD= Standard Deviation

Table 6: Quantitative leaf epidermal character of *Anthocleista* spp.

|  |  |
| --- | --- |
| Species | Epidermal cells |
| Adaxial Length | Adaxial Width | Abaxial Length | Abaxial Width | Mean Cell Number (X40) |  Thickness |
| Mean (µm) | SD | Mean (µm) | SD | Mean (µm) | SD | Mean (µm) | SD | Adaxial | Abaxial | Mean | SD |
| *Anthocleista djalonensis* | 18.1 | 3.49 | 10.05 | 1.82 | 16.6 | 2.68 | 8.5 | 1.57 | 243.2 | 214.55 | 2.01 | 0.43 |
|
| *Anthocleista nobilis* | 20.7 | 3.2 | 10.85 | 2.56 | 21.2 | 5.4 | 9.65 | 10.06 | 229.2 | 185.75 | 2.37 | 0.62 |
|
| *Anthocleista vogelii* | 18.7 | 3.6 | 10.85 | 1.17 | 20.8 | 2.91 | 10.5 | 1.82 | 199.9 | 260 | 1.88 | 0.44 |

SD= standard deviation

Table 7: Showing Comparative Quantitative Petiole Features

|  |
| --- |
| Comparative Quantitative Petiole Features |
| Species | Vascular bundle | Vascular bundle number | Mean number of vessel elements |
|
| *Anthocleista djalonensis* | Scattered | 36 | 6.4 |
|
| *Anthocleista nobilis*  | Scattered | 36 | 5.4 |
|
| *Anthocleista vogelii* | Scattered | 36 | 5.2 |