

Table S1: Data of 73 stomata in a 662 $\mu\text{m} \times 444 \mu\text{m}$ micrograph of *Magnolia denudata*

| Code | <i>L</i> (μm) | <i>W</i> (μm) | <i>A</i> (μm^2) | Code | <i>L</i> (μm) | <i>W</i> (μm) | <i>A</i> (μm^2) |
|------|----------------------------|----------------------------|------------------------------|------|----------------------------|----------------------------|------------------------------|
| 1 | 28.28 | 23.172 | 530.8 | 38 | 24.554 | 19.74 | 392.6 |
| 2 | 34.276 | 19.055 | 529.03 | 39 | 31.953 | 20.811 | 538.63 |
| 3 | 38.394 | 19.318 | 600.77 | 40 | 31.236 | 19.181 | 485.3 |
| 4 | 35.746 | 21.279 | 616.12 | 41 | 34.688 | 20.449 | 574.56 |
| 5 | 34.268 | 19.872 | 551.59 | 42 | 30.622 | 21.981 | 545.21 |
| 6 | 34.122 | 22.494 | 621.71 | 43 | 31.337 | 20.159 | 511.7 |
| 7 | 31.576 | 20.514 | 524.68 | 44 | 35.281 | 21.726 | 620.88 |
| 8 | 30.675 | 19.125 | 475.19 | 45 | 29.184 | 19.055 | 450.44 |
| 9 | 32.792 | 23.102 | 613.62 | 46 | 29.732 | 20.086 | 483.73 |
| 10 | 29.725 | 22.767 | 548.17 | 47 | 30.738 | 18.804 | 468.18 |
| 11 | 31.149 | 21.876 | 551.95 | 48 | 27.989 | 19.486 | 441.77 |
| 12 | 31.632 | 22.458 | 575.42 | 49 | 29.729 | 19.872 | 478.53 |
| 13 | 29.218 | 22.223 | 525.94 | 50 | 30.266 | 23.204 | 568.86 |
| 14 | 34.479 | 20.363 | 568.7 | 51 | 31.331 | 18.716 | 474.98 |
| 15 | 32.905 | 25.04 | 667.39 | 52 | 28.954 | 21.535 | 505.05 |
| 16 | 29.38 | 18.373 | 437.24 | 53 | 30.949 | 21.224 | 532.06 |
| 17 | 32.023 | 21.876 | 567.43 | 54 | 30.937 | 20.394 | 511.05 |
| 18 | 32.289 | 22.386 | 585.49 | 55 | 27.239 | 20.218 | 446.08 |
| 19 | 29.493 | 21.929 | 523.87 | 56 | 29.508 | 19.542 | 467.08 |
| 20 | 30.169 | 19.814 | 484.19 | 57 | 31.387 | 18.949 | 481.75 |
| 21 | 35.348 | 19.244 | 550.99 | 58 | 29.182 | 18.26 | 431.62 |
| 22 | 30.334 | 17.741 | 435.91 | 59 | 30.915 | 18.502 | 463.31 |
| 23 | 32.919 | 22.745 | 606.48 | 60 | 31.49 | 19.414 | 495.19 |
| 24 | 32.053 | 21.504 | 558.31 | 61 | 30.283 | 17.403 | 426.88 |
| 25 | 32.628 | 21.745 | 574.69 | 62 | 32.473 | 23.728 | 624.12 |
| 26 | 33.095 | 21 | 562.95 | 63 | 28.656 | 18.32 | 425.23 |
| 27 | 32.023 | 18.63 | 483.24 | 64 | 31.377 | 19.814 | 503.58 |
| 28 | 32.622 | 23.073 | 609.68 | 65 | 28.243 | 23.032 | 526.9 |
| 29 | 29.96 | 17.801 | 431.99 | 66 | 27.611 | 20.121 | 450 |
| 30 | 30.05 | 20.618 | 501.85 | 67 | 30.196 | 21.233 | 519.33 |
| 31 | 32.006 | 21.929 | 568.51 | 68 | 30.248 | 22.03 | 539.75 |
| 32 | 36.443 | 24.186 | 713.94 | 69 | 32.244 | 21.44 | 559.96 |
| 33 | 29.085 | 19.76 | 465.52 | 70 | 30.912 | 23.202 | 580.95 |
| 34 | 31.186 | 18.257 | 461.18 | 71 | 30.283 | 18.537 | 454.7 |
| 35 | 29.892 | 20.589 | 498.51 | 72 | 33.038 | 22.057 | 590.26 |
| 36 | 30.357 | 22.908 | 563.29 | 73 | 34.054 | 24.48 | 675.25 |
| 37 | 32.684 | 21.523 | 569.8 | --- | --- | --- | --- |

Here, Code is used to distinguish the stomata in the micrograph; *L* is the stomatal length; *W* is the stomatal width; *A* is the stomatal area. *L* and *W* were directly measured using the ImageJ software (<https://imagej.nih.gov/ij/index.html>), and *A* was estimated by $0.811 LW$.

Table S2: Data of 23 leaves of a bamboo (*Shibataea chinensis*) culm

| Code | <i>L</i> (cm) | <i>W</i> (cm) | <i>A</i> (cm²) | <i>M</i> (g) |
|-------------|----------------------|----------------------|----------------------------------|---------------------|
| 1 | 9.2422 | 2.3573 | 14.393 | 0.0739 |
| 2 | 8.8166 | 2.3726 | 14.0038 | 0.0722 |
| 3 | 8.8125 | 2.2608 | 13.2518 | 0.0704 |
| 4 | 7.2952 | 1.9698 | 9.4756 | 0.0496 |
| 5 | 9.1899 | 2.4244 | 14.4798 | 0.0767 |
| 6 | 7.8789 | 2.1444 | 11.4676 | 0.0605 |
| 7 | 8.6271 | 2.3033 | 13.0908 | 0.0666 |
| 8 | 8.3805 | 2.2916 | 12.8387 | 0.0654 |
| 9 | 8.3993 | 2.2499 | 12.4354 | 0.0651 |
| 10 | 8.8667 | 2.3739 | 13.6233 | 0.0683 |
| 11 | 6.182 | 1.8562 | 8.1809 | 0.0443 |
| 12 | 8.8526 | 2.3543 | 13.0876 | 0.0674 |
| 13 | 8.5496 | 2.2392 | 12.1307 | 0.0632 |
| 14 | 7.5679 | 2.0657 | 10.5301 | 0.0552 |
| 15 | 5.4265 | 1.4736 | 5.3243 | 0.0265 |
| 16 | 7.3797 | 2.1017 | 9.2872 | 0.0445 |
| 17 | 9.0953 | 2.4314 | 14.2814 | 0.0754 |
| 18 | 5.8774 | 1.6614 | 6.7573 | 0.0351 |
| 19 | 8.618 | 2.3389 | 12.8118 | 0.0667 |
| 20 | 5.7607 | 1.555 | 5.794 | 0.0284 |
| 21 | 5.0085 | 1.4609 | 4.8703 | 0.0226 |
| 22 | 7.4859 | 2.1218 | 9.3174 | 0.044 |
| 23 | 8.4843 | 2.1721 | 11.8542 | 0.0579 |

Here, Code is used to distinguish the leaves on the culm; *L* is the leaf lamina length; *W* is the lamina width; *A* is the lamina area; *M* is the lamina dry mass.

Table S3: Data of nine tepals of a *Magnolia* × *soulangeana* flower

| Code | <i>L</i> (cm) | <i>W</i> (cm) | <i>A</i> (cm²) |
|-------------|----------------------|----------------------|----------------------------------|
| 1 | 10.8897 | 5.9268 | 44.8063 |
| 2 | 10.2013 | 5.4033 | 39.2375 |
| 3 | 10.2173 | 5.4787 | 36.7549 |
| 4 | 10.1231 | 4.8926 | 35.7832 |
| 5 | 10.6943 | 6.0076 | 43.4086 |
| 6 | 9.7913 | 5.0407 | 33.5312 |
| 7 | 9.0225 | 4.7393 | 31.4119 |
| 8 | 9.8859 | 4.7727 | 34.3423 |
| 9 | 10.4168 | 5.8714 | 42.8008 |

Here, Code is used to distinguish the tepals on the flower; *L* is the tepal length; *W* is the tepal width; *A* is the tepal area.

Table S4: Volume data of 35 fruits of an individual *Cucumis melo* var. *agrestis* plant

| Code | Volume (cm³) | Code | Volume (cm³) |
|-------------|--------------------------------|-------------|--------------------------------|
| 1 | 7.5 | 19 | 11.3 |
| 2 | 7.8 | 20 | 9.3 |
| 3 | 5.9 | 21 | 11 |
| 4 | 6.4 | 22 | 8.3 |
| 5 | 10 | 23 | 4.1 |
| 6 | 9.2 | 24 | 9.9 |
| 7 | 8 | 25 | 7.5 |
| 8 | 6.8 | 26 | 5 |
| 9 | 5.1 | 27 | 4 |
| 10 | 1.7 | 28 | 5.5 |
| 11 | 4.8 | 29 | 5 |
| 12 | 6.1 | 30 | 3.5 |
| 13 | 7 | 31 | 3.9 |
| 14 | 5.2 | 32 | 3 |
| 15 | 6.5 | 33 | 2.9 |
| 16 | 8.3 | 34 | 1.9 |
| 17 | 8 | 35 | 1 |
| 18 | 6.3 | --- | --- |

Here, Code is used to distinguish the fruits on the plant; Volume is the volume of each fruit using a graduated cylinder with a 3 cm diameter.

Table S5: Length data of 144 seedheads of *Setaria viridis* in a 1 m × 1 m quadrat

| Length (cm) | | | | | |
|-------------|----|----|----|----|-----|
| 35 | 35 | 42 | 28 | 58 | 32 |
| 43 | 38 | 27 | 46 | 16 | 10 |
| 45 | 60 | 31 | 40 | 59 | 24 |
| 26 | 49 | 12 | 26 | 24 | 25 |
| 70 | 52 | 13 | 39 | 29 | 31 |
| 65 | 78 | 14 | 29 | 47 | 12 |
| 21 | 42 | 65 | 38 | 36 | 10 |
| 20 | 37 | 17 | 52 | 30 | 28 |
| 45 | 35 | 34 | 17 | 20 | 16 |
| 36 | 44 | 39 | 37 | 38 | 29 |
| 14 | 37 | 20 | 39 | 44 | 75 |
| 45 | 18 | 18 | 49 | 43 | 48 |
| 27 | 12 | 33 | 39 | 54 | 74 |
| 37 | 34 | 45 | 10 | 52 | 20 |
| 25 | 40 | 29 | 37 | 47 | 24 |
| 30 | 47 | 13 | 28 | 38 | 15 |
| 40 | 52 | 17 | 24 | 35 | 20 |
| 40 | 39 | 27 | 47 | 62 | 55 |
| 54 | 28 | 36 | 69 | 65 | 91 |
| 45 | 46 | 16 | 18 | 47 | --- |
| 97 | 94 | 12 | 12 | 25 | --- |
| 50 | 64 | 26 | 17 | 20 | --- |
| 50 | 59 | 25 | 32 | 65 | --- |
| 70 | 39 | 30 | 12 | 75 | --- |
| 42 | 30 | 26 | 27 | 28 | --- |

Here, the study area is located in a field of Baima Experiment Station of Nanjing Forestry University (119° 07'42"E, 31° 37'55" N) in September, 2015. The seedheads of *S. viridis* in the 15 m × 15 m study area were measured, and the study area was divided into 125 quadrats of 1 m × 1 m.

Table S6: Breast height diameter data of 81 trees with DBH ≥ 1 cm in a 50 m \times 50 m quadrat of a temperate forest

| Scientific Name | DBH (cm) | Scientific Name | DBH (cm) | Scientific Name | DBH (cm) |
|---|----------|-------------------------------|----------|---------------------------|----------|
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 3.4 | <i>Fraxinus rhynchophylla</i> | 7.6 | <i>Pinus tabuliformis</i> | 11.5 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 3.9 | <i>Quercus mongolica</i> | 2.7 | <i>Pinus tabuliformis</i> | 12.3 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 4.3 | <i>Quercus mongolica</i> | 4.5 | <i>Pinus tabuliformis</i> | 12.6 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 4.3 | <i>Quercus mongolica</i> | 5.6 | <i>Pinus tabuliformis</i> | 12.7 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 4.5 | <i>Armeniaca sibirica</i> | 3.7 | <i>Pinus tabuliformis</i> | 13 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 4.7 | <i>Armeniaca sibirica</i> | 7.1 | <i>Pinus tabuliformis</i> | 13.3 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 6.6 | <i>Pinus tabuliformis</i> | 3.8 | <i>Pinus tabuliformis</i> | 13.3 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 6.9 | <i>Pinus tabuliformis</i> | 4.2 | <i>Pinus tabuliformis</i> | 13.7 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 7 | <i>Pinus tabuliformis</i> | 4.8 | <i>Pinus tabuliformis</i> | 13.7 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 7.9 | <i>Pinus tabuliformis</i> | 5.7 | <i>Pinus tabuliformis</i> | 14.1 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 8.6 | <i>Pinus tabuliformis</i> | 6.1 | <i>Pinus tabuliformis</i> | 14.6 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 8.6 | <i>Pinus tabuliformis</i> | 6.1 | <i>Pinus tabuliformis</i> | 14.9 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 9 | <i>Pinus tabuliformis</i> | 6.2 | <i>Pinus tabuliformis</i> | 15 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 9.8 | <i>Pinus tabuliformis</i> | 6.3 | <i>Pinus tabuliformis</i> | 15.6 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 9.9 | <i>Pinus tabuliformis</i> | 7.7 | <i>Pinus tabuliformis</i> | 15.6 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 10.2 | <i>Pinus tabuliformis</i> | 7.7 | <i>Pinus tabuliformis</i> | 16.1 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 10.3 | <i>Pinus tabuliformis</i> | 8 | <i>Pinus tabuliformis</i> | 16.6 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 12.1 | <i>Pinus tabuliformis</i> | 8.4 | <i>Pinus tabuliformis</i> | 16.7 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 13 | <i>Pinus tabuliformis</i> | 8.4 | <i>Pinus tabuliformis</i> | 17.4 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 13.6 | <i>Pinus tabuliformis</i> | 9.1 | <i>Pinus tabuliformis</i> | 17.7 |
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 16 | <i>Pinus tabuliformis</i> | 9.5 | <i>Pinus tabuliformis</i> | 20.6 |

| | | | | | |
|--|------|---------------------------|------|-------------------------------------|------|
| <i>Syringa reticulata</i> var. <i>amurensis</i> | 17 | <i>Pinus tabuliformis</i> | 10.2 | <i>Pinus</i> <i>tabuliformis</i> | 22.5 |
| <i>Syringa pekinensis</i> | 12.1 | <i>Pinus tabuliformis</i> | 10.2 | <i>Ulmus pumila</i> | 3.5 |
| <i>Fraxinus rhynchophylla</i> | 2.7 | <i>Pinus tabuliformis</i> | 10.3 | <i>Ulmus pumila</i> | 4 |
| <i>Fraxinus rhynchophylla</i> | 4.9 | <i>Pinus tabuliformis</i> | 10.8 | <i>Ulmus pumila</i> | 4 |
| <i>Fraxinus rhynchophylla</i> | 5.4 | <i>Pinus tabuliformis</i> | 10.9 | <i>Ulmus pumila</i> | 5.7 |
| <i>Fraxinus rhynchophylla</i> | 6.4 | <i>Pinus tabuliformis</i> | 11 | <i>Ulmus pumila</i> | 7.9 |