

Table S1 Analytical parameters of leaf anatomical structure in six dominant species during different seasons

| Month | Species        | LT                   | USCT             | UET                | LET                | PTT                | STT                  | SAFVB            | DSVB                | SASVB            | DBAVB                 | SL                 | SW                 | AS                   | SD                   | AP               |
|-------|----------------|----------------------|------------------|--------------------|--------------------|--------------------|----------------------|------------------|---------------------|------------------|-----------------------|--------------------|--------------------|----------------------|----------------------|------------------|
| Jun.  | H. reticulata  | 173.27±23.7<br>6ABa  | 2.40±0.2<br>1ABa | 21.40±1.54<br>ABa  | 11.59±0.86<br>BCa  | 32.79±4.90<br>Ba   | 108.77±19.8<br>2ABa  | 0.17±0.0<br>8ABa | 121.09±37.<br>00ABa | 0.01±0.0<br>1ABa | 393.16±83.8<br>7Aa    | 34.54±2.80<br>Aa   | 30.91±2.99<br>8Aa  | 45.87±139.18<br>Aa   | 163.55±15.2<br>0ABa  | 0.15±0.0<br>2ABa |
|       | V. mangachapoi | 132.66±3.42<br>Ba    | 3.27±1.1<br>1ABa | 14.26±1.59<br>Ba   | 10.41±1.04<br>Ca   | 26.78±2.32<br>Ba   | 79.63±2.92<br>BCa    | 0.20±0.0<br>8ABa | 96.12±5.43<br>ABa   | 0.01±0.0<br>0ABa | 202.90±42.1<br>8ABa   | 30.55±2.36<br>ABa  | 26.31±2.78<br>5Aa  | 14.48±133.76<br>ABa  | 201.61±52.9<br>3ABa  | 0.17±0.0<br>6Aa  |
|       | D. chunii      | 147.22±3.08<br>Ba    | 3.88±1.4<br>1ABa | 24.97±2.59<br>ABa  | 16.75±1.45<br>ABa  | 37.91±4.95<br>ABa  | 60.38±2.75<br>BCa    | 0.08±0.0<br>2Ba  | 73.04±14.1<br>2Bb   | 0.00±0.0<br>0Ba  | 195.78±35.3<br>1ABb   | 32.08±1.22<br>Ca   | 25.32±2.5<br>8Aa   | 433.62±22.51<br>Cb   | 153.62±18.8<br>2ABa  | 0.07±0.0<br>1Ba  |
|       | A. tectorius   | 241.04±28.4<br>1Aa   | 2.63±0.6<br>6ABa | 11.40±1.84<br>Ba   | 11.39±1.23<br>BCa  | 41.31±12.5<br>0ABa | 173.17±17.9<br>3Aa   | 0.67±0.4<br>3Aab | 187.29±38.<br>03Aa  | 0.03±0.0<br>1Aa  | 264.27±73.7<br>5ABa   | 25.37±1.36<br>ABab | 25.97±3.06<br>4Aa  | 19.59±107.23<br>ABa  | 105.35±17.5<br>2Ba   | 0.06±0.0<br>1Ba  |
|       | P. khasiana    | 171.85±17.1<br>6ABa  | 1.76±0.5<br>7Ba  | 31.34±2.16<br>Aa   | 13.10±0.42<br>ABCa | 77.06±13.3<br>4Aa  | 39.68±10.84<br>Ca    | 0.14±0.0<br>4ABa | 113.12±5.6<br>9ABa  | 0.01±0.0<br>0ABa | 138.26±34.1<br>6Ba    | 24.78±2.92<br>ABa  | 27.40±0.7<br>5Aa   | 633.28±82.73<br>ABa  | 347.23±36.5<br>2Aa   | 0.22±0.0<br>1Aa  |
|       | U. sanyaensis  | 230.53±19.8<br>3Aa   | 3.56±0.3<br>3Aa  | 33.16±2.36<br>Aa   | 23.90±4.31<br>Aa   | 36.98±4.35<br>ABa  | 44.40±13.40<br>BCa   | 0.16±0.0<br>4ABa | 97.21±16.1<br>7ABa  | 0.01±0.0<br>0ABa | 252.27±60.2<br>2ABa   | 31.32±2.65<br>ABa  | 30.03±1.28<br>7Aa  | 78.66±149.64<br>ABa  | 113.35±26.1<br>8Ba   | 0.10±0.0<br>2ABa |
| Sep.  | H. reticulata  | 172.39±14.3<br>6ABCa | 3.32±1.7<br>0Aa  | 18.66±2.92<br>ABCa | 10.99±1.15<br>Ba   | 26.33±2.31<br>Ba   | 109.17±10.0<br>5ABa  | 0.13±0.0<br>7Ba  | 122.59±35.<br>50ABa | 0.01±0.0<br>1ABa | 238.72±105.3<br>85ABa | 30.14±2.33<br>Aa   | 24.74±2.3<br>7Aa   | 718.55±73.03<br>Aa   | 170.72±41.6<br>4ABCa | 0.12±0.0<br>2ABa |
|       | V. mangachapoi | 139.96±9.00<br>BCa   | 3.01±0.2<br>1Aa  | 17.12±4.15<br>BCa  | 12.65±2.50<br>Ba   | 29.11±6.61<br>Ba   | 78.62±12.83<br>ABCa  | 0.14±0.0<br>9ABa | 94.81±17.5<br>8ABa  | 0.01±0.0<br>0ABa | 348.32±154.2<br>87ABa | 27.65±2.08<br>ABa  | 24.71±1.9<br>6Aa   | 666.31±78.58<br>ABab | 203.81±37.6<br>6ABa  | 0.13±0.0<br>2Ba  |
|       | D. chunii      | 181.98±59.5<br>3ABCa | 3.80±1.0<br>2Aa  | 21.14±5.15<br>ABCa | 15.92±2.23<br>ABa  | 33.81±8.98<br>ABa  | 108.29±74.3<br>1ABCa | 0.38±0.3<br>8ABa | 99.66±49.7<br>7Bb   | 0.01±0.0<br>1Ba  | 368.96±37.1<br>6Aa    | 23.04±2.15<br>Ba   | 25.75±2.3<br>1Aa   | 535.23±65.05<br>Cab  | 142.31±26.3<br>3ABCa | 0.08±0.0<br>2Ba  |
|       | A. tectorius   | 242.80±63.5<br>9Aa   | 2.53±1.0<br>2Aa  | 14.67±5.62<br>Ca   | 12.39±1.57<br>ABa  | 31.11±14.1<br>0Ba  | 171.48±75.7<br>5Aa   | 1.12±0.7<br>9Aa  | 162.82±56.<br>26Aa  | 0.03±0.0<br>2Aa  | 274.55±78.2<br>0ABa   | 223.48±1.32<br>Bab | 23.85±2.0<br>0Aa   | 560.21±69.89<br>ABCa | 147.55±83.0<br>1BCa  | 0.08±0.0<br>4Ba  |
|       | P. khasiana    | 156.30±33.9<br>3Ca   | 3.18±0.9<br>8Aa  | 27.12±2.42<br>ABa  | 13.74±5.04<br>ABb  | 60.36±18.5<br>6Aa  | 36.60±16.75<br>Ca    | 0.09±0.0<br>2Ba  | 108.31±9.9<br>1ABa  | 0.01±0.0<br>0ABa | 185.02±17.7<br>3Ba    | 27.81±4.43<br>ABa  | 27.75±1.56<br>5Aa  | 604.53±143.38<br>Ba  | 292.90±97.0<br>6Aa   | 0.17±0.0<br>5Aa  |
|       | U. sanyaensis  | 240.16±24.7<br>7ABa  | 4.04±1.6<br>7Aa  | 30.23±3.96<br>Aa   | 20.13±3.75<br>Aa   | 33.75±4.10<br>ABa  | 73.43±47.86<br>BCa   | 0.17±0.0<br>4ABa | 110.35±46.<br>63ABa | 0.01±0.0<br>1ABa | 268.26±75.4<br>2ABa   | 430.12±3.04<br>ABa | 27.95±2.17<br>0Aab | 15.79±126.60<br>ABCa | 124.38±44.3<br>1Ca   | 0.09±0.0<br>6Ba  |

|      |              |             |          |            |              |            |             |            |            |          |             |             |            |               |             |          |
|------|--------------|-------------|----------|------------|--------------|------------|-------------|------------|------------|----------|-------------|-------------|------------|---------------|-------------|----------|
| Dec. | H.           | 177.84±40.1 | 2.71±0.3 | 22.81±2.39 | 12.09±1.43   | 29.68±1.76 | 108.50±30.1 | 0.22±0.0   | 106.05±41. | 0.01±0.0 | 338.70±58.3 | 333.36±2.28 | 28.16±2.0  | 814.85±94.11  | 156.65±29.0 | 0.13±0.0 |
|      | reticulata   | 5ABa        | 6Aa      | ABa        | Ba           | BCa        | 6ABa        | 7Aa        | 67Aa       | 1Aa      | 4Aa         | Aa          | 3Aa        | Aa            | 1ABa        | 4Aa      |
|      | V.           | 142.72±11.2 | 3.14±0.5 | 16.23±1.89 | 11.30±1.02   | 28.49±2.03 | 85.71±10.67 | 0.15±0.0   | 87.57±16.6 | 0.01±0.0 | 217.67±44.6 | 26.01±1.67  | 24.62±1.9  | 595.85±36.12  | 209.88±30.6 | 0.12±0.0 |
|      | mangacha poi | 9Ba         | 4Aa      | Ba         | Ba           | BCa        | ABCa        | 3Aa        | 2Aa        | 0Aa      | 3ABa        | ABa         | 1Aa        | ABb           | 7ABa        | 1Aa      |
|      | D. chunii    | 157.82±19.6 | 3.22±0.6 | 23.72±1.76 | 15.97±2.17   | 39.12±7.38 | 75.16±8.74  | A 0.16±0.0 | 113.10±15. | 0.01±0.0 | 293.03±65.6 | 23.52±2.32  | 25.21±1.8  | 486.97±74.77  | 163.55±28.1 | 0.08±0.0 |
|      |              | 4ABa        | 9Aa      | ABa        | ABa          | ABa        | BCa         | 6Aa        | 17Aa       | 0Aa      | 3Aab        | Ba          | 1Aa        | Bab           | 3ABa        | 1ABa     |
|      | A.           | 201.29±26.9 | 2.72±0.8 | 9.97±1.91  | B 12.07±1.06 | 24.84±1.43 | 139.79±30.1 | 0.19±0.1   | 116.49±28. | 0.01±0.0 | 262.00±37.1 | 21.90±2.20  | 23.01±1.2  | 453.23±64.98  | 97.91±23.19 | 0.04±0.0 |
|      | tectorius    | 4Aa         | 9Aa      | a          | Ba           | Ca         | 0Aa         | 1Ab        | 56Aa       | 1Aa      | 9ABa        | Bb          | 3Aa        | Ba            | Ba          | 1Ba      |
|      | P.           | 162.92±13.4 | 2.78±0.4 | 30.92±2.64 | 14.50±0.89   | 66.01±4.43 | 48.91±10.10 | 0.08±0.0   | 114.39±25. | 0.01±0.0 | 127.20±25.1 | 22.37±3.45  | 27.99±3.75 | 554.53±155.51 | 327.09±50.3 | 0.18±0.0 |
|      | khasiana     | 4ABa        | 1Aa      | Aa         | ABa          | Aa         | BCa         | 3Aa        | 46Aa       | 1Aa      | 8Ba         | Ba          | 8Aa        | ABa           | 7Aa         | 5Aa      |
|      | U.           | 222.25±34.1 | 3.64±0.6 | 29.49±1.27 | 22.55±2.84   | 40.04±5.00 | 29.89±10.80 | 0.16±0.0   | 100.84±28. | 0.01±0.0 | 193.69±57.3 | 27.43±2.08  | 26.47±1.2  | 626.88±53.94  | 108.94±18.8 | 0.07±0.0 |
|      | sanyaensis   | 4Aa         | 9Aa      | Aa         | Aa           | ABa        | Ca          | 5Aa        | 97Aa       | 1Aa      | 8ABa        | ABa         | 4Ab        | ABb           | 9Ba         | 1ABa     |
| Mar. | H.           | 166.87±21.2 | 2.82±0.3 | 20.33±2.23 | 12.22±1.13   | 25.89±1.46 | 107.89±17.9 | 0.16±0.0   | 125.95±21. | 0.01±0.0 | 255.89±51.3 | 32.58±1.59  | 28.77±1.9  | 786.62±105.90 | 157.48±26.3 | 0.13±0.0 |
|      | reticulata   | 7ABCa       | 9Aa      | ABCa       | BCa          | Ba         | 3ABa        | 2ABa       | 53Aa       | 1Aa      | 3ABa        | Aa          | 4Aa        | Aa            | 7ABCa       | 3ABa     |
|      | V.           | 144.29±25.9 | 4.68±0.4 | 14.38±1.68 | 11.89±1.62   | 26.49±3.75 | 90.13±18.04 | 0.16±0.0   | 99.77±20.6 | 0.01±0.0 | 166.37±24.4 | 26.45±1.35  | 25.99±1.8  | 606.46±29.30  | 207.12±26.4 | 0.13±0.0 |
|      | mangacha poi | 4Ca         | 7Aa      | BCa        | BCa          | Ba         | ABCa        | 5ABa       | 0Aa        | 1Aa      | 4ABa        | ABa         | 3Aa        | ABab          | 0ABa        | 2ABa     |
|      | D. chunii    | 164.20±11.2 | 4.59±1.2 | 25.31±1.42 | 18.08±1.30   | 40.22±3.73 | 77.83±8.26  | A 0.16±0.1 | 104.75±17. | 0.01±0.0 | 291.79±45.0 | 24.75±0.74  | 28.17±1.8  | 578.87±38.46  | 163.27±32.5 | 0.10±0.0 |
|      |              | 9ABCa       | 1Aa      | ABa        | ABa          | ABa        | BCa         | 6Ba        | 11Aab      | 0Aa      | 3Aab        | Ba          | 7Aa        | ABa           | 7ABCa       | 2ABa     |
|      | A.           | 217.68±44.5 | 3.68±1.0 | 9.48±1.69  | 10.97±1.79   | 28.25±5.92 | 163.35±38.0 | 0.45±0.1   | 127.61±36. | 0.02±0.0 | 293.03±21.5 | 26.33±1.69  | 25.21±1.6  | 607.70±61.72  | 92.39±24.06 | 0.06±0.0 |
|      | tectorius    | 8ABa        | 9Aa      | Ca         | Ca           | Ba         | 9Aa         | 5Aab       | 19Aa       | 1Aa      | 5Aa         | ABa         | 3Aa        | ABa           | Ca          | 1Ba      |
|      | P.           | 158.37±14.2 | 2.80±1.1 | 26.95±2.54 | 15.33±1.02   | 64.61±6.44 | 45.90±14.69 | 0.10±0.0   | 99.25±9.76 | 0.01±0.0 | 140.01±17.9 | 23.19±1.28  | 27.86±0.8  | 560.29±43.32  | 335.92±32.4 | 0.19±0.0 |
|      | khasiana     | 4BCa        | 0Aa      | ABa        | ABCa         | Aa         | BCa         | 5Ba        | Aa         | 0Aa      | 2Ba         | Ba          | 7Aa        | Ba            | 2Aa         | 3Aa      |
|      | U.           | 238.62±19.9 | 4.09±0.5 | 31.37±2.87 | 25.94±1.29   | 42.35±6.42 | 42.75±8.76  | C 0.24±0.0 | 94.96±20.7 | 0.01±0.0 | 198.73±43.7 | 29.89±1.58  | 28.67±2.1  | 694.66±48.10  | 101.49±9.00 | 0.07±0.0 |
|      | sanyaensis   | 4Aa         | 9Aa      | Aa         | Aa           | ABa        | a           | 6ABa       | 9Aa        | 1Aa      | 1ABa        | ABa         | 5Aab       | Aab           | BCa         | 1Ba      |