

### Supporting information to the paper:

Cutts, V., Hanz, D. M., Barajas-Barbosa, M. P., Algar, A. C., Steinbauer, M. J., Irl, S. D. H., Kreft, H., Weigelt, P., Fernández-Palacios, J. M. & Field, R. (2021) Scientific floras can be reliable sources for some trait data in a system with poor coverage in global trait databases. *Journal of Vegetation Science*.

**Appendix S1.** Linear regressions with SLA ( $\text{mm}^2\text{mg}^{-1}$ ) as the response variable and 1/leaf thickness (mm) as the explanatory variable using field data only. Both variables are  $\log_e$  transformed. SE = standard error, df = degrees of freedom.

|                  | df  | Slope $\pm$ SE  | Intercept $\pm$ SE | $r^2$ | $p$    |
|------------------|-----|-----------------|--------------------|-------|--------|
| <b>Intercept</b> | 382 | 0.26 $\pm$ 0.05 | 4.56 $\pm$ 0.07    | 0.07  | <0.001 |
| <b>Tenerife</b>  | 312 | 0.28 $\pm$ 0.04 | 4.62 $\pm$ 0.05    | 0.14  | <0.001 |
| <b>La Palma</b>  | 50  | 0.41 $\pm$ 0.23 | 4.10 $\pm$ 0.32    | 0.06  | 0.09   |

**Appendix S2.** Linear regressions with field-measured leaf area ( $\text{cm}^2$ ) as the response variable and Flora-estimated leaf area ( $\text{cm}^2$ ) as the explanatory variable. Both variables are  $\log_e$  transformed. Leaf type (simple/compound) and leaf shape (broadleaf/needle-like) are included as interaction terms.  $r^2 = 0.87$ ,  $n = 104$ .

|                                     | Estimate | SE   | T values | $p$  |
|-------------------------------------|----------|------|----------|------|
| <b>Intercept</b>                    | -0.74    | 1.23 | -0.60    | 0.55 |
| <b>Leaf area</b>                    | 0.87     | 0.33 | 2.61     | 0.01 |
| <b>Leaf type Simple</b>             | 0.15     | 1.25 | 0.12     | 0.91 |
| <b>Leaf shape Needle</b>            | 0.11     | 0.28 | 0.39     | 0.70 |
| <b>Leaf area: Leaf type Simple</b>  | -0.15    | 0.29 | -0.51    | 0.61 |
| <b>Leaf area: Leaf shape Needle</b> | 0.20     | 0.12 | 1.67     | 0.10 |

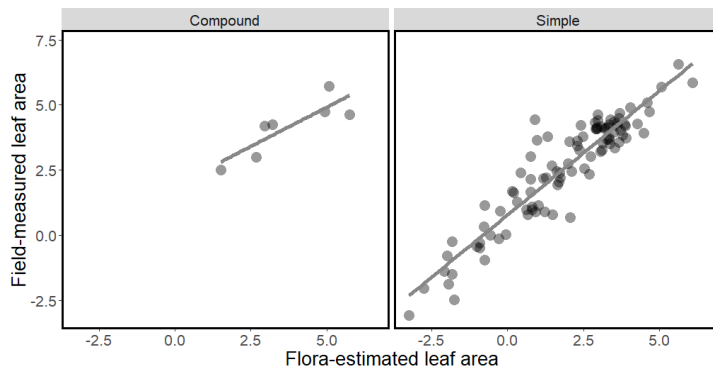
**Appendix S3.** Linear regressions with SLA ( $\text{mm}^2\text{mg}^{-1}$ ) as the response variable and 1/leaf thickness (mm) as the explanatory variable using field data only. Both variables are  $\log_e$  transformed. Leaf type (simple/compound) and leaf shape (broadleaf/needle-like) are included as interaction terms. SE = standard error.  $r^2 = 0.08$ ,  $n = 237$ .

|                                      | <b>Estimate</b> | <b>SE</b> | <b>T values</b> | <b>p</b> |
|--------------------------------------|-----------------|-----------|-----------------|----------|
| <b>Intercept</b>                     | 4.95            | 0.55      | 8.93            | 0.00     |
| <b>SLA(1/Lth)</b>                    | -0.10           | 0.36      | -0.28           | 0.78     |
| <b>Leaf type Simple</b>              | -0.54           | 0.51      | -1.06           | 0.29     |
| <b>Leaf shape Needle</b>             | 0.02            | 0.26      | 0.07            | 0.95     |
| <b>SLA(1/Lth): Leaf type Simple</b>  | 0.26            | 0.30      | 0.86            | 0.39     |
| <b>SLA(1/Lth): Leaf shape Needle</b> | 0.18            | 0.22      | 0.84            | 0.40     |

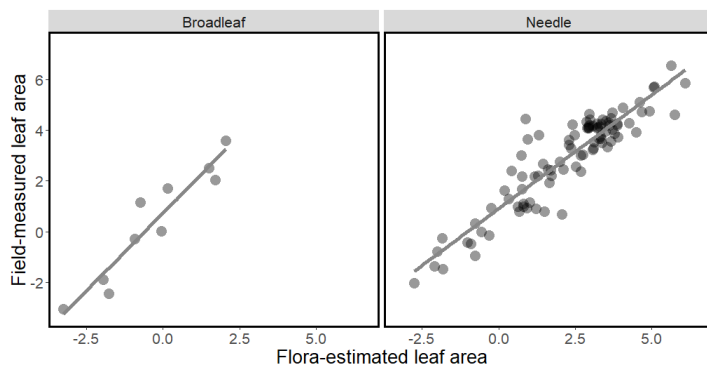
**Appendix S4.** Linear regressions with SLA ( $\text{mm}^2\text{mg}^{-1}$ ) x LDMC ( $\text{mg g}^{-1}$ ) from field data as the response variable and leaf thickness (mm) from Flora data. Both variables are  $\log_e$  transformed. Regressions were carried out for all data and Tenerife separately. We did not have enough samples from La Palma to do a regression. SE = standard error, df = degrees of freedom.

|                 | <b>df</b> | <b>Slope<math>\pm</math>SE</b> | <b>Intercept<math>\pm</math>SE</b> | <b><math>r^2</math></b> | <b>p</b> |
|-----------------|-----------|--------------------------------|------------------------------------|-------------------------|----------|
| <b>All data</b> | 16        | -0.22 $\pm$ 0.59               | 5.11 $\pm$ 0.78                    | 0.01                    | 0.71     |
| <b>Tenerife</b> | 14        | 0.11 $\pm$ 0.14                | 5.68 $\pm$ 0.18                    | 0.04                    | 0.43     |
| <b>La Palma</b> | -         | -                              | -                                  | -                       | -        |

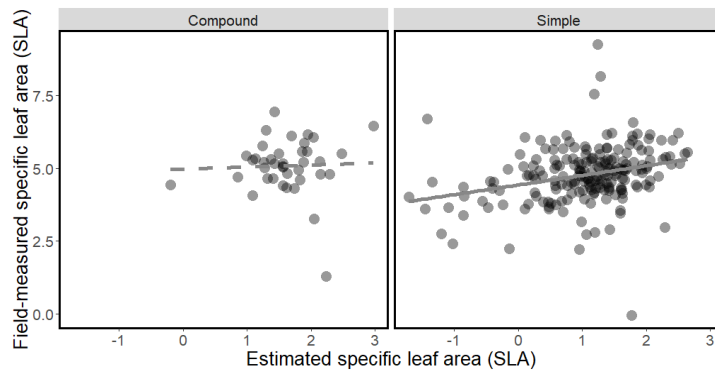
**Appendix S5.** Scatter plots showing field-measured leaf area on the Y-axis and Flora-estimated leaf area on the X-axis for compound leaves and simple leaves. Solid lines indicate a significant relationship.



**Appendix S6.** Scatter plots showing field-measured leaf area on the Y-axis and Flora-estimated leaf area on the X-axis for broad leaves and needle-like leaves. Solid lines indicate a significant relationship.



**Appendix S7.** Scatter plots showing field-measured SLA on the Y-axis and SLA estimated using  $1/Lth$  from field data on the X-axis for compound leaves and simple leaves. Solid lines indicate a significant relationship.



**Appendix S8.** Scatter plots showing field-measured SLA on the Y-axis and SLA estimated using  $1/Lth$  from field data on the X-axis for broad leaves and needle-like leaves. Solid lines indicate a significant relationship.

