Supplementary Fig. 1. *Salix kitaibeliana* in population Vyšné Žabie pleso tarn (population T1) with a distinctly orthotropic habit of growth.

Supplementary Fig. 2. *Salix retusa* and *Salix serpyllifolia* growing together on gravel of lateral moraine of the Rhone Glacier (population A11).

Supplementary Fig. 3. Xeric form of *Salix retusa* s.s. on slopes of the Corno Grande in Apennine Mountains (population Ap1). It is noteworthy that bigger leaves develop on longer shoots (bottom left).
Supplementary Fig. 4. *Salix retusa* on slopes of Bisaurín Mountain in the Western Pyrenees (population P2)

Supplementary Fig. 5. Distribution of leaf blade length values in defined groups of populations of *Salix retusa* agg. The middle line represents the median; the upper and lower hinges of the box indicate the interquartile range values (25th and 75th percentiles); the whiskers indicate the highest and lowest values (not outliers or extreme values)

Supplementary Fig. 6. Distribution of leaf blade perimeter values in defined groups of populations of *Salix retusa* agg
Supplementary Fig. 7. Distribution of angle of leaf blade basis values in defined groups of populations of *Salix retusa* agg.

Supplementary Fig. 8. Distribution of leaf blade length/width ratio values in defined groups of populations of *Salix retusa* agg.