



**Figure S4** Principal Component Analysis of genetic variation in 34 plants of *Silene latifolia*. Females are colored red, males blue. The exact locations of sampling are given in [Muyle \*et al.\* \(2021\)](#). Leuk144-3\_father, SL\_SWI\_Engadin, SL\_SWI\_Leuk, SL\_SWI\_Verzasca, SL\_CH\_GRIS\_9, SL\_CH\_TIC\_8, SL\_GR2\_2, SL\_GR2\_7, SL\_TI1\_2, SL\_TI1\_3, SL\_VS2\_1 and SL\_VS2\_5 are from Switzerland; SL\_AUST and SL\_AUST\_11 from Austria; SL\_BUL and SL\_BUL\_3 from Bulgaria; SL\_FRA\_Orsay, SL\_FRA\_Pyr, SL\_FRA3\_1 and SL\_FZ2\_10 from France; SL\_IT\_1, SL\_IT\_2 and SL\_IT2\_4 from Italy; SL\_POL and SL\_POL\_7 from Poland; SL\_PORT and SL\_Port\_11 from Portugal; SL\_ROM and SL\_ROM\_3 from Romania; SL\_RUS\_F and SL\_RUS7 from Russia; SL\_SPAN and SL\_SPAN\_1 from Spain; and SL\_MONT\_9 from Montenegro. The central cluster, used as a subsample to test SDpop, extends from SL\_FRA\_Pyr (lower left) to SL\_IT\_1 (upper right), excluding one female SL\_IT\_2.

## Literature Cited

Muyle, A., H. Martin, N. Zemp, M. Mollion, S. Gallina, *et al.*, 2021 Dioecy is associated with high genetic diversity and adaptation rates in the plant genus *Silene*. *Mol. Biol. Evol.* **38**: 805–818.