



**Supplementary Figure 1.** Reciprocal transplant experiment of exogamic populations of *Aphidius ervi* (panels a, b, c, d) and comparison with endogamic populations on the same hosts (Sepúlveda et al. 2017a; panels e, f). **Ae:** *A. ervi*; **AP:** *A. pisum*; **SA:** *S. avenae*; **Nh:** Natal host; **N-nh:** non-natal host. **a)** Ae-AP maintained in natal host AP (Ae-AP Nh) and switched to non-natal host SA (Ae-SA N-nh). **b)** Ae-SA *S. avenae* maintained in natal host SA (Ae-SA Nh) and switched to non-natal host AP (Ae-AP N-nh). **c)** Ae-AP maintained in natal host SA (Ae-SA Nh) and Ae-SA switched to non-natal host AP (Ae-AP N-nh). **d)** Ae-AP maintained in natal host AP (Ae-AP Nh) and Ae-SA switched to non-natal host AP (Ae-AP N-nh). **e)** **Ae-AP** (natal host) comparison between exogamic and endogamic (75+ generations) populations. **f)** **Ae-SA** (non-natal host) comparison between exogamic and endogamic (75+ generations) populations.