



**Supplementary Figure 3.** Variation of species functional originality ratio  $LAV_{iP} / rAV_i$  according to the percentage of urbanization within 1x1km grid cell (grid cell corresponds to the Vigie-flore protocol). One data point represents one species score, including originality values of native and non-native species from all plots across all the years, thus the same species can occur multiple times in different plots. Originality ratio superior to one indicate species that became original at the local scale at least once although they were not at the regional scale. Colors represent a scale of species richness (SR) going from blue as a lower SR (minimum of 3 species) to red as a higher SR (maximum of 50 species). Colored curves represent the estimated trends of an interaction between urbanization and SR for 5 (blue), 25 (salmon) and 40 (red) species retrieved from the mean originality GLMM models.