

Martine Kos, Tibor Bukovinszky, Patrick P. J. Mulder and T. Martijn Bezemer. 2014. Disentangling above- and belowground neighbor effects on the growth, chemistry and arthropod community on a focal plant. *Ecology*

Appendix A. Figures of the experimental unit, biomass and arthropod abundance of neighboring plants, chemistry of focal plants, PCA diagram of arthropod communities, and SEMs for each individual neighboring species.

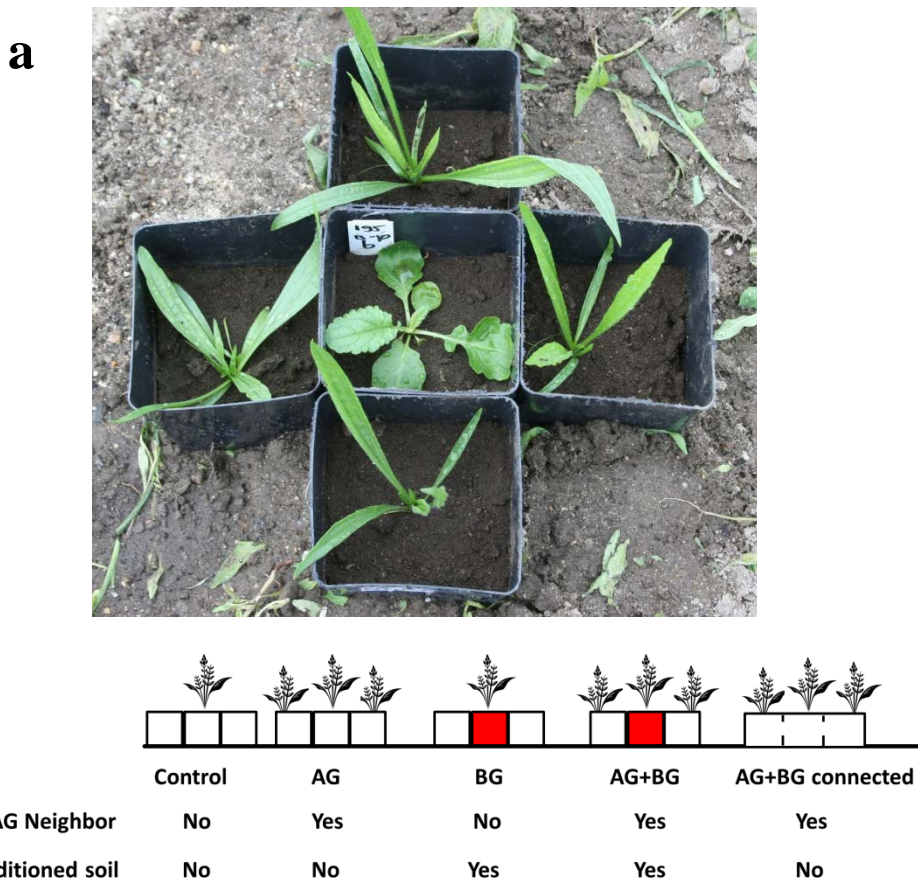


FIG. A1. Example of an experimental unit (a) and a schematic side-view of the five treatments used in the common garden experiment (b). Photograph by Martine Kos.

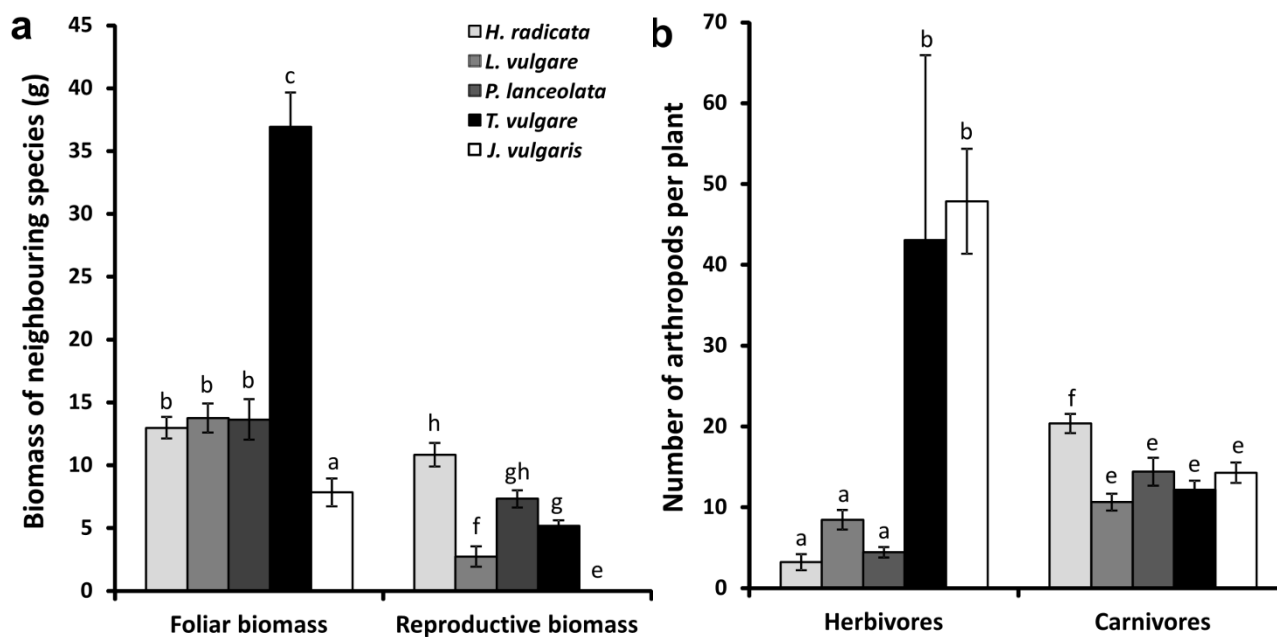


FIG. A2. Foliar and reproductive biomass of neighboring plant species (a) and total number of herbivores and carnivores on neighboring plants (b) (mean \pm SE per plant). Neighboring species are *H. radicata*, *L. vulgare*, *T. vulgare*, *P. lanceolata* and *J. vulgaris*. Different letters within a variable indicate significant differences among the neighboring plant species, based on Tukey multiple comparison tests.

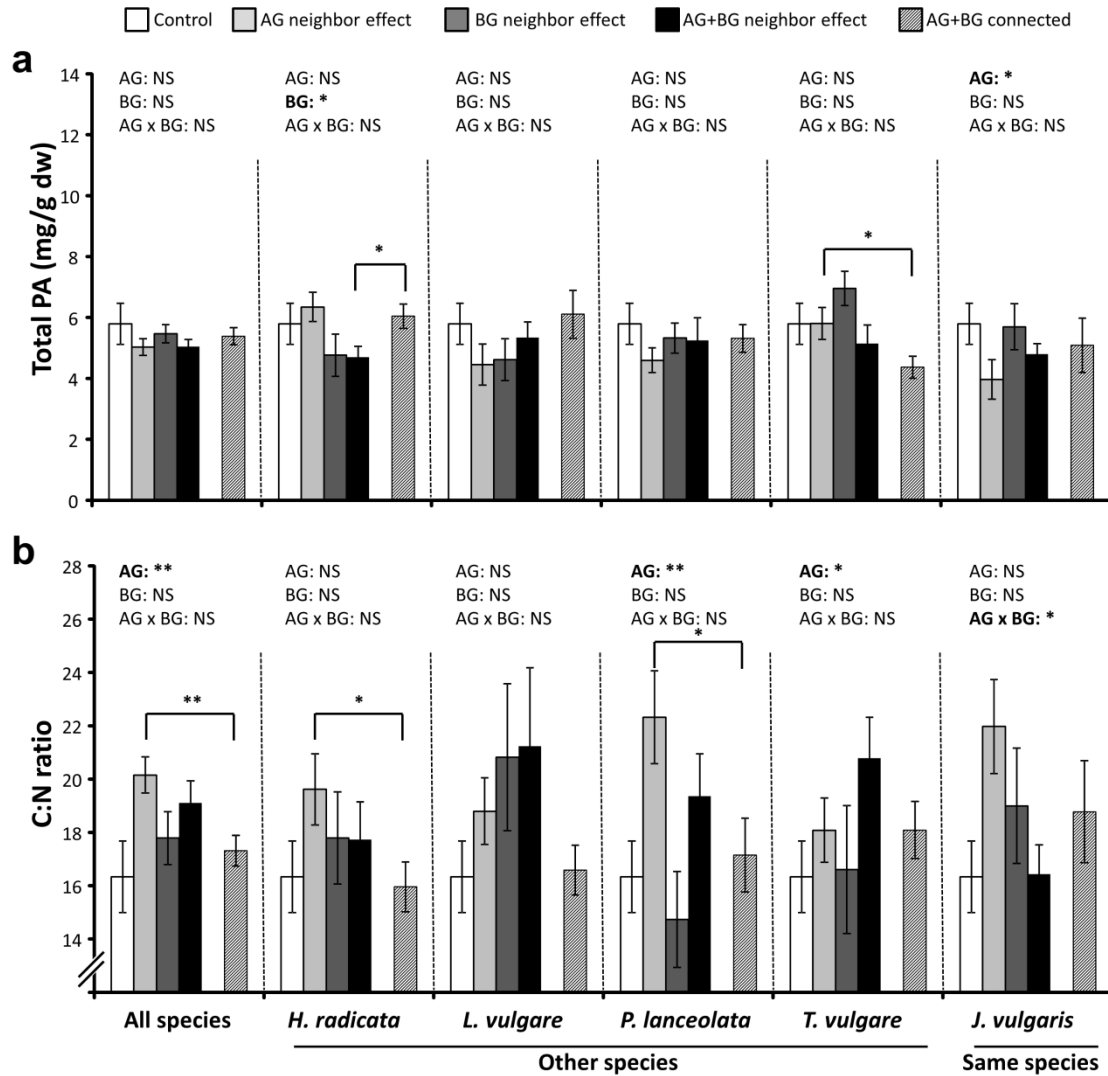


FIG. A3. Total PA concentration in foliar tissue (a) and foliar C:N ratio (b) of focal *J. vulgaris* plants. Focal plants were growing either in control soil without a neighbor (Control), surrounded by neighboring plants (AG neighbor effect), growing in soil conditioned by a neighboring plant (BG neighbor effect), both surrounded by neighboring plants and growing in conditioned soil (AG+BG neighbor effect), or surrounded by neighboring plants and growing in control soil in connected (open) pots (AG+BG connected). Data are shown for all neighboring species combined, and separately for each neighboring species. The main AG and BG neighbor effects and the interaction were tested with ANOVA; the ‘AG+BG connected’ treatment was not included in this analysis. *** $P < 0.001$, ** $P < 0.01$, * $P < 0.05$. NS, non-significant. The difference between the ‘AG+BG connected’ and ‘AG’ treatment and between the ‘AG+BG connected’ and ‘AG+BG’ treatment were tested separately with a t-test; the absence of asterisks denotes no significant difference.

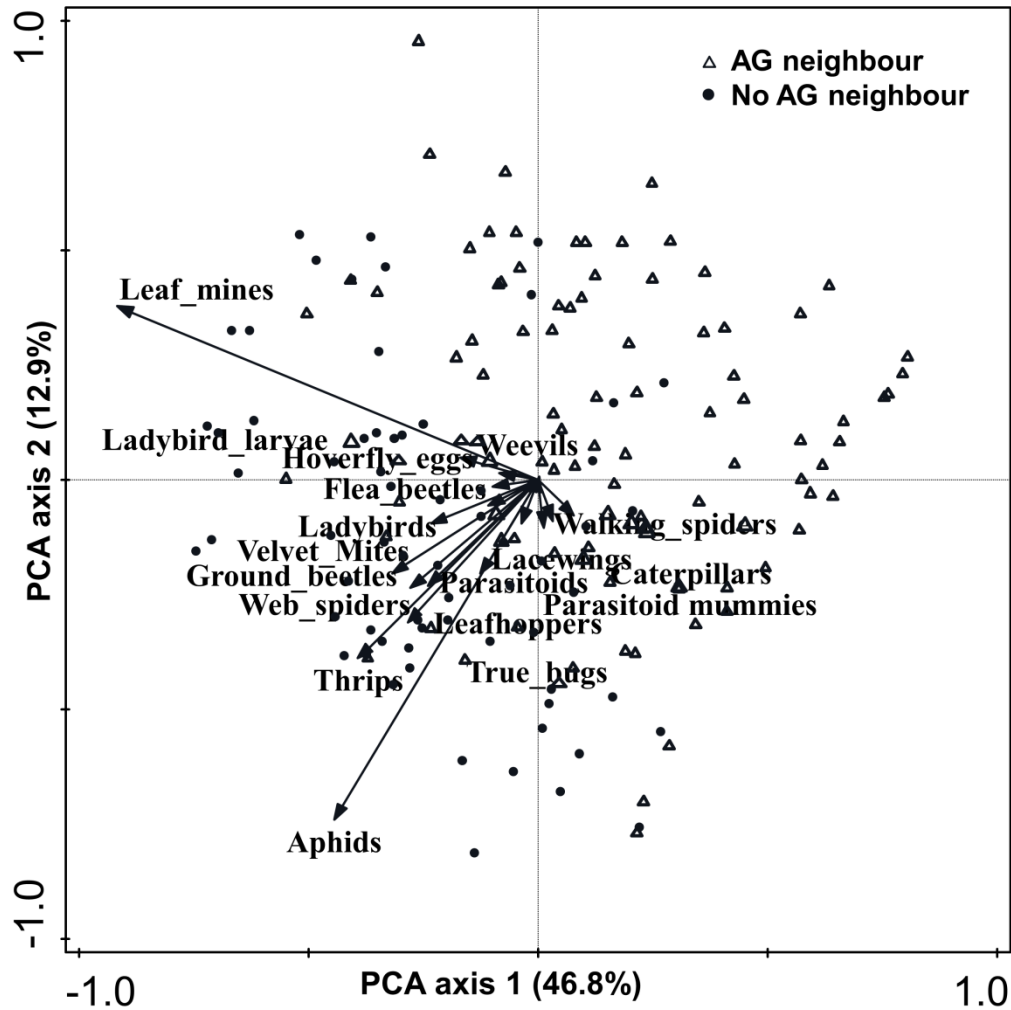
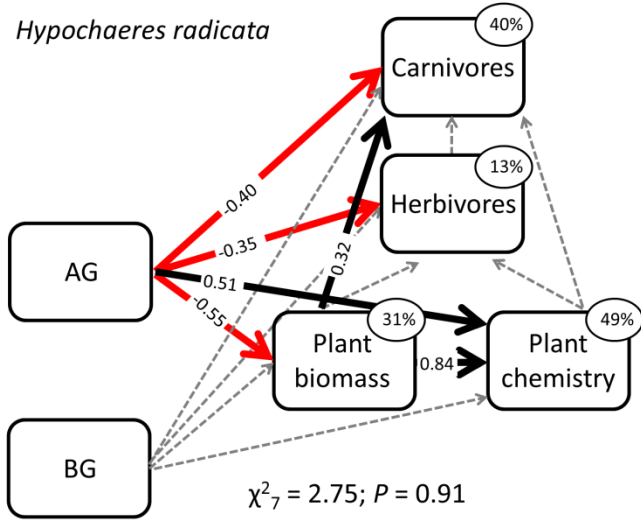
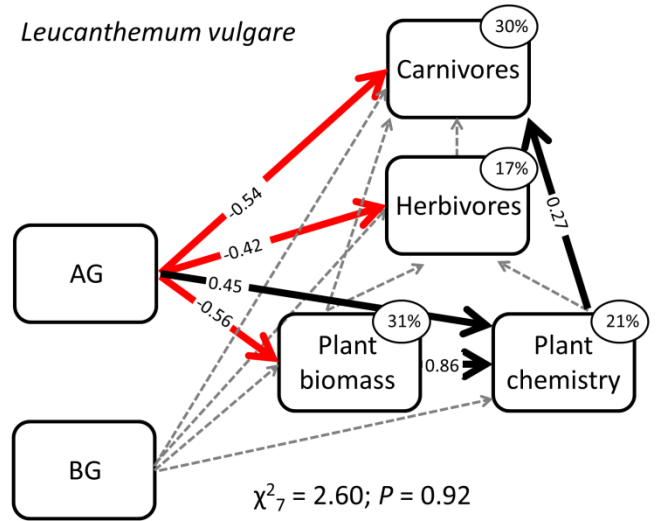


FIG. A4. Ordination diagram of Principal Component Analysis (PCA) of the arthropod community composition on *J. vulgaris* plants with or without an aboveground (AG) neighbor present. Percentages of total explained variation by PCA axes are given in parentheses.

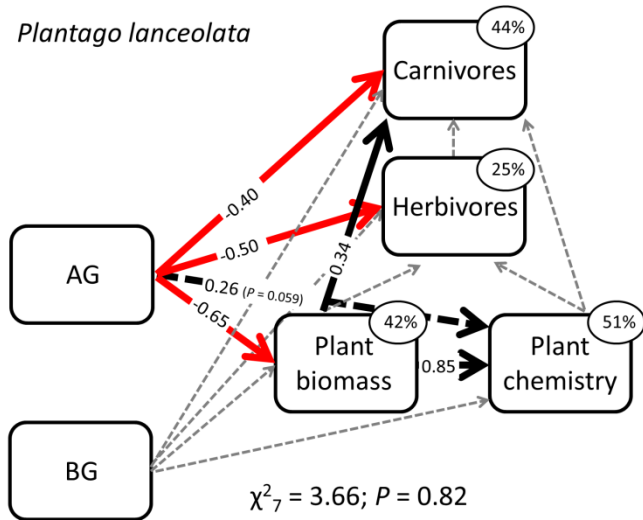
Hypochaeris radicata



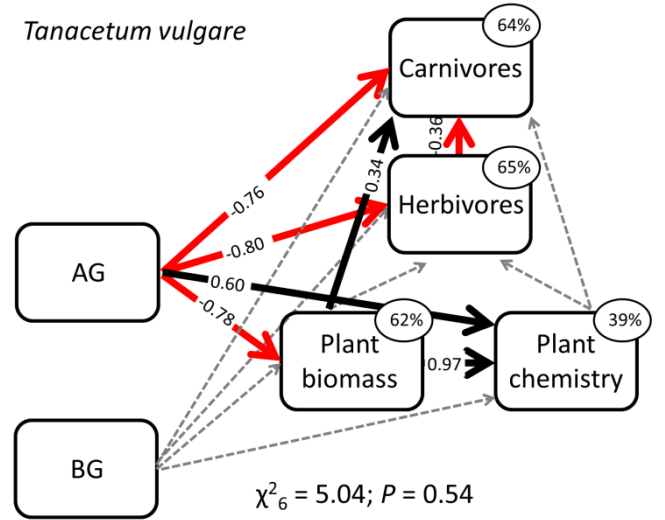
Leucanthemum vulgare



Plantago lanceolata



Tanacetum vulgare



Jacobaea vulgaris

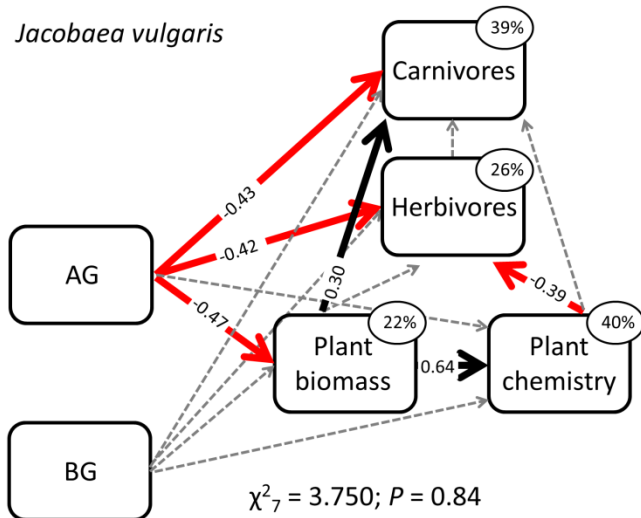


FIG. A5. Structural Equation Models of the relationships between aboveground neighboring plants (AG), belowground neighboring plants (BG), biomass and chemistry of the focal *J. vulgaris* plant and herbivore and carnivore abundance on the focal plant. SEMs were modelled for each individual neighboring species separately. Plant chemistry is represented by the sample scores on the first axis of a Principle Component Analysis on foliar plant chemistry. Solid arrows depict significant effects ($P < 0.05$), dashed arrows show non-significant effects. Standardized path coefficients are provided for significant paths (black = positive relationship, red = negative relationship). Percentages indicate the variance explained by the model for each endogenous explanatory variable.