

## PUBLICATIONS

(Heinz Müller-Schärer, February 2025)

**By February 2025, Heinz Müller-Schärer authored or co-authored 287 publications in internationally refereed journals with 11357 citations, h-index =51 (31 since 2020; i10-index 156) (google scholar).**

### 2025

Zhang K, Shi, Y, Müller-Schärer H, Huang W. 2025. Spatial mid-domain effect overrides climate, soil properties and microbes on a cosmopolitan non-native plant across elevation. OIKOS, in review.

Ren Z, Ai Y, Müller-Schärer H, Liu J, Yuan X, Xinyi T, Jintao L, Huang W, Sun Y. 2025. Climatic, human induced, and biodiversity factors differently shape the present and future suitable areas of *Bidens pilosa*. Journal of Plant Ecology, in press.

Sun Y, Silvestro D, Mathes GH, van der Heijden, MGA, Müller-Schärer H. 2025. Eco-evolutionary dynamics of plant-soil feedbacks explain the spread potential of a plant invader under climate warming and biocontrol herbivory. Global Change Biology, 31 (3):e70110; doi.org/10.1111/gcb.70110.

Rosche CH, Broennimann O, Novikov A, Mrázová V, Danihelka J, Gastner M, Guisan A, Kožíč K, Müller-Schärer H, Nagy D, Remelgado R, Ronikier M, Selke J, Shiyan N, Suchan T, Thoma A, Zdvořák P, Mráz P. 2025. Herbarium specimens reveal a cryptic invasion of tetraploid *Centaurea stoebe* in Europe. New Phytologist, 245 (1), 392-405; doi: 10.1111/nph.20212.

### 2024

Yan Sun Y, Ren Z-K, Müller-Schärer H, Callaway RM, van Kleunen M, Huang W. 2024. Increasing and fluctuating resource availability enhances invasional meltdown. Ecology, e4387; doi.org/10.1002/ecy.4387.

Qin W, Sun Y, Müller-Schärer H, Huang W. 2024. Responses of non-native and native plant species to fluctuations of water availability in a greenhouse experiment. Ecology and Evolution, 0:e11692; doi.org/10.1002/ece3.11692.

Ruhollah N, Bijani F, Chauhan BS, Mueller-Schaerer H. 2024. Performance of ACCase-Resistant and ACCase-Susceptible Phenotypes of Sterile Oat *Avena sterilis* subsp. *Ludoviciana* (Durieu) Nyman under Drought Conditions in the Greenhouse. Agronomy, 14, 1268. <https://doi.org/10.3390/agronomy14061268>.

Oveisi M, Alizadeh H, Lorestani SA, Esmaili A, Sadeghnejad N, Piri R, Gonzalez-Andujar JL, Müller-Schärer H. 2024. Triangle Area Model (TAM) for predicting germination: An Approach to Enhance Hydrothermal Time Model Applications. Current Plant Biology 39 100356, <https://doi.org/10.1016/j.cpb.2024.100356>.

Müller-Schärer H, Sun Y, Schaffner U. 2024. When a plant invader meets its old enemy abroad: what can be learnt from accidental introductions of biological control agents. Pest Management Science, 80 (1), 19-27; <https://doi.org/10.1002/ps.7390>.

Wang YJ, Liu YY, Chen D, Du D, Müller-Schärer H, Yu FH. 2024. Clonal functional traits favor the invasive success of alien plants into native communities. Ecological Applications, 34 (1), e2756; doi:10.1002/eap.2756.

**2023**

Klötzli J, Suter M, Schaffner U, Müller-Schärer H, Lüscher A. 2023. Synergistic effects of grass competition and insect herbivory on the weed *Rumex obtusifolius* in an inundative biocontrol approach. *Scientific Reports*, 13:18508; <https://doi.org/10.1038/s41598-023-45609-y>

Makra L, Matyasovszky I, Tusnády G, Ziska, LH, Jeremy J, Hess JJ, László G, Nyúl LG, Daniel S, Chapman DS, Coviello L, Gobbi A, Jurman G, Furlanello C, Brunato M, Damialis A, Charalampopoulos A, Müller-Schärer H, Norbert Schneider N, Szabó B, Sümeghy Z, Páldy A, Magyar D, Bergmann K-C, Deák AJ, Mikó E, Thibaudon M, Oliver G, Albertini R, Bonini M, Šikoparija B, Radišić P, Josipović MM, Gehrig R, Severova E, Shalaboda V, Stjepanović B, Ianovici N, Berger U, Seliger AK, Rybníček O, Myszkowska D, Dąbrowska-Zapart K, Majkowska-Wojciechowska B, Weryszko-Chmielewska E, Grewling L, Rapiejko P, Malkiewicz M, Šaulienė I, Prykhodo O, Maleeva A, Rodinkova V, Palamarchuk O, Ščevková J, Bulloc JM 2023. A temporally and spatially explicit, data-driven estimation of airborne ragweed pollen concentrations across Europe. *Science of the Total Environment* 905, 167095; doi.org/10.1016/j.scitotenv.2023.167095.

Šingliarová B, Hojsgaard D, Müller-Schärer Heinz, Mráz Patrik. 2023. The novel expression of clonality following whole genome multiplication compensates for reduced fertility in natural autopolyploids. *Proceedings of the Royal Society B*, 290: 20230389. doi.org/10.6084/m9.figshare.c.6700004.

Augustinus BA, Nussbaum N, Yair Y, Harari A, Yaacoby T, Müller-Schärer H, Schaffner U, Rubin B. 2023. *Epiblema minutana* (Lepidoptera, Tortricidae) in Israel: Promise or Peril? *Management of Biological Invasions* 14, 98-106.

Klötzli J, Suter M, Lüscher A, Müller-Schärer H, Schaffner U. 2023. Competitive interactions affect larval survival of two root-boring weed biological control candidates of *Rumex* spp. *BioControl* 68, 207-220; [doi.org/10.1007/s10526-022-10157-3](https://doi.org/10.1007/s10526-022-10157-3),

**2022**

Moghaddam H, Oveisi M, Mehr MK, Bazrafshan J, Naeimi MH, Kaleibar BP, Müller-Schärer H. 2022. Earlier sowing combined with nitrogen fertilization to adapt to climate change effects on yield of winter wheat in arid environments: Results from a field and modeling study. *European Journal of Agronomy*, 146, 126825, doi.org/10.1016/j.eja.2023.126825.

Rastgordani F, Oveisi M, Mashhadi HR, Naeimi MH, Hosseini NM, Asadian N, Bakhshian A, Müller-Schärer H. 2023. Climate change impact on herbicide efficacy: a model to predict herbicide dose in common bean under different moisture and temperature conditions. *Crop Protection*, 163, 106097, doi.org/10.1016/j.cropro.2022.106097.

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Naderi R, Bijani F, Weyl P, and Mueller-Schaerer H. 2022. Intercropping sweet corn with summer savory to increase weed suppression and yield. *Weed Technology*, 36(4): 544-547. doi:10.1017/wet.2022.54.

Sun Y, Züst T, Silvestro D, Erb M, Bosdorf O, Mateo P, Robert C, Mueller-Schaerer H. 2022. Climate warming can reduce biocontrol efficacy and promote plant invasion due to both genetic and transient metabolomic changes. *Ecology Letters*, 25, 1387-1400.

Sun Y, Müller-Schärer H, Schaffner U. 2022. Fighting neobiota with neobiota: consider it more often and do it more rigorously. *Biological Conservation*, 268 109506; <https://doi.org/10.1016/j.biocon.2022.109506>.

Schaffner U, Müller-Schärer H, Lüscher A. 2022. Integrated weed management in grasslands. In: *Advances in integrated weed management*; Kudsk, P. (ed.), *Advances in integrated weed management*, Burleigh Dodds Science Publishing, Cambridge, UK, <http://dx.doi.org/10.19103/AS.2021.0098.15>.

Augustinus BA, Blum M, Citterio S, Gentili R, Helman D, Nestel D, Schaffner U, Müller-Schärer H, Lensky IM. 2022. Ground-truthing predictions of a demographic model driven by land surface temperatures with a weed biocontrol cage experiment. *Ecological Modelling* 466 1098.

## 2021

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Oveisi M, Ojaghi A, Mashhadi HR, Müller Schärer H, Yazdi KR, Kaleibar BP, Soltani E. 2021. Potential for endozoochorous seed dispersal by sheep and goats: Risk of weed seed transport via animal faeces. *Weed Research*, 61:1–12 (EDITOR'S CHOICE).

Oveisi M, Kaleibar BP, Mashhadi HR, Mueller Schaeerer H, Bagheri A, Amani M, Elahinejad M, Masoumi D. 2021. Bean cultivar mixture allows reduced herbicide dose while maintaining high yield: A step towards more eco-friendly weed management. *European Journal of Agronomy* 122: 126173; [doi.org/10.1016/j.eja.2020.126173](https://doi.org/10.1016/j.eja.2020.126173).

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Sun Y, Beuchat C and Müller-Schärer H. 2020. Is biocontrol efficacy rather driven by the plant or the antagonist genotypes?: a conceptual bioassay approach. *Neobiota*, 63:81-100.

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## 2019

- Bordyne F, Müller-Schärer H, Bouchemousse S. 2019. Isolation of 12 polymorphic tetranucleotide microsatellite markers of the leaf beetle *Ophraella communis*, a promising *Ambrosia* biocontrol agent also in Europe. *Biocontrol Science and Technology*, 0:2, 178-185.
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## 2018

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