

**SCIENTIFIC PUBLICATIONS OF MICHAEL TRAUOGOTT**  
(CURRENT STATE FEBRUARY 2015)

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**Peer-reviewed papers in journals indexed by ISI (Web of Knowledge)**

Accepted & published papers

1. Kitz F., Steinwandter M., **Traugott M.** & Seeber J. (2015): Increased decomposer diversity accelerates and potentially stabilises litter decomposition. *Soil Biology & Biochemistry*, in press.
2. Sint D., Thurner I., Kaufmann R. & **Traugott M.** (2015): Sparing spiders: faeces as a non-invasive source of DNA, *Frontiers in Zoology*. in press.
3. Roubinet E., Straub C.S., Jonsson T., Staudacher K., **Traugott M.**, Ekbohm B. & Jonsson M. (2015): Additive effects of predator diversity on pest control caused by few interactions among predator species. *Ecological Entomology*, in press.
4. **Traugott M.**, Benefer C.M., Blackshaw R.P., van Herk W.G. & Vernon R.S. (2015): Biology, Ecology and Control of Elaterid Beetles in Agricultural Land. *Annual Review of Entomology* 60, 313-334.
5. Sint D., Niederklapfer B., Kaufmann R. & **Traugott M.** (2014): Group-specific multiplex PCR detection systems for the identification of flying insect prey. *PlosOne*, 9(12): e115501. doi:10.1371/journal.pone.0115501.
6. Raso L., Sint D., Rief A., Kaufmann R. & **Traugott M.** (2014): Molecular identification of adult and juvenile linyphiid and theridiid spiders in Alpine glacier foreland communities. *PlosOne*, 9(7): e101755. doi:10.1371/journal.pone.0101755.
7. Raso L., Sint D., Mayer R., Plangg S., Recheis T., Brunner S., Kaufmann R. & **Traugott M.** (2014): Intraguild Predation in Pioneer Predator Communities of Alpine Glacier Forelands. *Molecular Ecology* 23, 3744-3754.
8. Wallinger C., Staudacher K., Schallhart N., Mitterrutzner E., Steiner E.-M., Juen A. & **Traugott M.** (2014): How generalist herbivores exploit belowground plant diversity in temperate grasslands. *Molecular Ecology* 23, 3826-3837.
9. Eitzinger B., Unger E. M., **Traugott M.** & Scheu S. (2014): Effects of prey quality and predator body size on prey DNA detection success in a centipede predator. *Molecular Ecology* 23, 3767-3776.
10. Gomez-Polo P., **Traugott M.**, Alomar O., Castañé C., Rojo S. & Agustí N. (2014): Identification of the most common predatory hoverflies of Mediterranean vegetable crops and their parasitism by multiplex PCR. *Journal of Pest Science* 87, 371–378.
11. **Traugott M.**, Kamenova S., Ruess L., Seeber J. & Plantegenest M. (2013): Empirically characterising trophic networks: what emerging DNA-based methods, stable isotope and fatty acid analyses can offer. *Advances in Ecological Research* 49, 177-224.
12. Staudacher K., Schallhart N., Thalinger B., Wallinger C., Juen A. & **Traugott M.** (2013): Plant diversity affects behaviour of generalist root herbivores, reduces crop damage and enhances crop yield. *Ecological Applications* 23, 1135-1145.
13. Balmer O., Pfiffner L., Schied J., Willareth M., Leimgruber A., Luka H. & **Traugott M.** (2013): Non-crop flowering plants restore top-down herbivore control in agricultural fields. *Ecology and Evolution* 3, 2634-2646.

14. Waldner T., Sint D., Juen A. & Traugott M. (2013): The effect of predator identity on post-feeding prey DNA detection success in soil-dwelling macro-invertebrates. *Soil Biology & Biochemistry* 63, 116-123.
15. Staudacher K., Schallhart N., Pitterl P., Wallinger C., Brunner N., Kromp B., Landl M., Glauning J. & Traugott M. (2013): Occurrence of *Agriotes* wireworms in Austrian agricultural land. *Journal of Pest Science* 86, 33-39.
16. Eitzinger B., Micic A., Körner M., Traugott M. & Scheu S. (2013): Unveiling soil food web links: New PCR assays for detection of prey DNA in the gut of soil arthropod predators. *Soil Biology & Biochemistry* 57, 943-945.
17. Wallinger C., Staudacher K., Schallhart N., Peter E., Dresch P., Juen A. & Traugott M. (2013): The effect of plant identity and the level of plant decay on molecular gut content analysis in a herbivorous soil insect. *Molecular Ecology Resources* 13, 75–83.
18. Schallhart N., Tusch M.J., Wallinger C., Staudacher K. & Traugott M. (2012): Effects of plant identity and diversity on the dietary choice of a soil-living insect herbivore. *Ecology* 93, 2650-2657.
19. Sint D., Raso L. & Traugott M. (2012): Advances in multiplex PCR: balancing primer efficiencies and improving detection success. *Methods in Ecology and Evolution* 3, 898–905.
20. Seeber J., Rief A., Richter A., Traugott M. & Bahn M. (2012): Drought-induced reduction in uptake of recently photosynthesized carbon by springtails and mites in alpine grassland. *Soil Biology & Biochemistry* 55, 37-39.
21. Waldner T. & Traugott M. (2012): DNA-based analysis of regurgitates: a non-invasive approach to examine the diet of invertebrate consumers. *Molecular Ecology Resources* 12, 669–675.
22. Traugott M., Bell J.R., Raso L., Sint D. & Symondson W.O.C. (2012): Generalist predators disrupt parasitoid aphid control by direct and coincidental intraguild predation. *Bulletin of Entomological Research* 102, 239–247.
23. Wallinger C., Juen A., Staudacher K., Schallhart N., Mitternutzner E., Steiner E.-M., Thalinger B. & Traugott M. (2012): Rapid Plant Identification Using Species- and Group-Specific Primers Targeting Chloroplast DNA. *PlosOne* 7(1), e29473. doi:10.1371/journal.pone.0029473.
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26. Eitzinger B. & Traugott M. (2011): Which prey sustains cold-adapted invertebrate generalist predators in arable land? Examining prey choices by molecular gut content analysis. *Journal of Applied Ecology* 48, 591-599.
27. Sint D., Raso L., Kaufmann R. & Traugott M. (2011): Optimizing methods for PCR-based analysis of predation. *Molecular Ecology Resources* 11, 795-801.
28. Schallhart N., Tusch M.J., Staudacher K., Wallinger C. & Traugott M. (2011): Stable isotope analysis reveals whether soil-living elaterid larvae move between agricultural crops. *Soil Biology & Biochemistry* 43, 1612-1614.
29. Oehm J., Juen A., Nagiller K., Neuhauser S. & Traugott M. (2011): Molecular scatology: how to improve prey DNA detection success in avian faeces? *Molecular Ecology Resources* 11, 620–628.

30. Staudacher K., Wallinger C., Schallhart N. & Traugott M. (2011): Detecting ingested plant DNA in soil-living insect larvae. *Soil Biology & Biochemistry* 43, 346-350.
31. Staudacher K., Pitterl P., Furlan L., Cate P.C. & Traugott M. (2011): PCR-based species identification of *Agriotes* larvae. *Bulletin of Entomological Research* 101, 201-210.
32. Seeber J., Rief A., Seeber G.U.H., Meyer E., Traugott M. (2010): Molecular identification of detritivorous soil invertebrates from their faecal pellets. *Soil Biology & Biochemistry* 42, 1263-1267.
33. Schallhart N., Wallinger C., Juen A. & Traugott M. (2009): Dispersal abilities of adult click beetles in arable land revealed by analysis of carbon stable isotopes. *Agricultural and Forest Entomology* 11, 333-339.
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35. Seeber J., Langel R., Meyer E. & Traugott M. (2009): Dwarf shrub litter as food source for macrodecomposers in alpine pastureland. *Applied Soil Ecology* 41, 178-184.
36. Pfiffner L., Luka H., Schlatter C., Juen A. & Traugott M. (2009): Impact of wildflower strips on biological control of cabbage lepidopterans. *Agriculture, Ecosystems & Environment*, 129, 310–314.
37. Traugott M., Bell J.R., Broad G.R., Powell W., van Veen F.J.F., Vollhardt I.M.G. & Symondson W.O.C. (2008): Endoparasitism in cereal aphids: molecular analysis of a whole parasitoid community. *Molecular Ecology* 17, 3928–3938.
38. Bell J.R., Traugott M., Sunderland K.D., Skirvin D.J., Mead A., Kravar-Garde L., Reynolds K., Fenlon J. & W.O.C. Symondson (2008): Beneficial links for the control of aphids: the effects of compost applications on predators and prey. *Journal of Applied Ecology* 45, 1266–1273.
39. King R.A., Read D.S., Traugott M. & Symondson W.O.C. (2008): Molecular analysis of predation: a review of best practice for DNA-based approaches. *Molecular Ecology* 17, 947–963.
40. Traugott M. & Symondson W.O.C. (2008): Molecular analysis of predation on parasitized hosts. *Bulletin of Entomological Research* 98, 223-231.
41. von Berg K., Traugott M., Symondson W.O.C. & Scheu S. (2008): The effects of temperature on detection of prey DNA in two species of carabid beetle. *Bulletin of Entomological Research* 98, 263-269.
42. von Berg K., Traugott M., Symondson W.O.C. & Scheu S. (2008): Impact of abiotic factors on predator-prey interactions: DNA-based gut content analysis in a microcosm experiment. *Bulletin of Entomological Research* 98, 257-261.
43. Traugott M., Schallhart N., Kaufmann R. & Juen A. (2008): The feeding ecology of elaterid larvae in Central European arable land: new perspectives based on naturally occurring stable isotopes. *Soil Biology & Biochemistry* 40, 342–349.
44. Juen A. & Traugott M. (2007): Revealing species-specific trophic links in below-ground invertebrate communities: The predator guild of scarab larvae identified by diagnostic PCR. *Molecular Ecology* 16, 1545–1557.
45. Traugott M., Pazmandi C., Kaufmann R. & Juen A. (2007): Evaluating  $^{15}\text{N}/^{14}\text{N}$  and  $^{13}\text{C}/^{12}\text{C}$  isotope ratio analysis to investigate trophic relationships of elaterid larvae (Coleoptera: Elateridae). *Soil Biology & Biochemistry* 39, 1023-1030.

46. **Traugott M.**, Zangerl P., Juen A., Schallhart N. & Pfiffner L. (2006): Detecting key parasitoids of lepidopteran pests by multiplex PCR. *Biological Control* 39, 39-46.
47. Juen A. & **Traugott M.** (2006): Amplification facilitators and multiplex PCR: tools to overcome PCR-inhibition in DNA-gut content analysis of soil-living invertebrates. *Soil Biology & Biochemistry* 38, 1872-1879.
48. **Traugott M.** (2006): Habitat use and activity patterns of larval and adult *Cantharis* beetles in arable land. *European Journal of Soil Biology* 42, 82-88.
49. Admassu B., Juen A. & **Traugott M.** (2006): Earthworm primers for DNA-based gut content analysis and their cross-reactivity in a multi-species system. *Soil Biology & Biochemistry* 38, 1308-1315.
50. Juen A. & **Traugott M.** (2005): Detecting predation and scavenging by DNA gut-content analysis: a case study using a soil insect predator-prey system. *Oecologia* 142, 344-352.
51. **Traugott M.**, Weissteiner S. & Strasser H. (2005): Effects of the entomopathogenic fungus *Beauveria brongniartii* for the non-target predator *Poecilus versicolor* (Coleoptera: Carabidae). *Biological Control* 33, 107-112.
52. Juen A. & **Traugott M.** (2004): Spatial distribution of epigeic predators in a small field related to season and the surrounding cropping. *Agriculture, Ecosystems & Environment* 103, 613-620.
53. **Traugott M.** (2003): The prey spectrum of larval and adult *Cantharis* species in arable land: An electrophoretic approach. *Pedobiologia* 47, 161-169.
54. Juen A., Steinberger K.H. & **Traugott M.** (2003): Seasonal change in species composition and size distribution of epigeic predators in a small field. *Entomologia Generalis* 26, 259-275.
55. **Traugott M.** (2002): Dispersal power, home range and habitat preference of cantharid larvae (Coleoptera: Cantharidae) in arable land. *European Journal of Soil Biology* 38, 79-83.
56. **Traugott M.** (2002): The histerid beetle coenosis (Coleoptera: Histeridae) of an organic potato field: Seasonal dynamics, age class composition, life cycles and spatial distribution. *Biological Agriculture & Horticulture* 19, 365-376.
57. **Traugott M.** (1998): Larval and adult species composition, phenology and life cycles of carabid beetles (Coleoptera: Carabidae) in an organic potato field. *European Journal of Soil Biology* 34, 189-197.

## Papers in other scientific journals

1. Zahn A., Juen A., **Traugott M.** & Lang A. (2007): Low density cattle grazing enhances arthropod diversity of abandoned wetland. *Applied Ecology and Environmental Research* 5, 73-86.
2. Freier B., Schorling M., Moll E., **Traugott M.**, Juen A. & Volkmar C. (2005): Results of a 4-year plant survey and pitfall trapping in Bt-maize and conventional maize fields regarding the occurrence of selected arthropod taxa. *IOBC/wprs Bulletin* 27, 79-84.
3. Volkmar C., **Traugott M.**, Juen A. & Freier B. (2005): Spider Communities in Bt-maize and not genetically modified maize field. *IOBC/wprs Bulletin* 27, 165-170.
4. Weissteiner S, Strasser H. & **Traugott M.** (2005): Risk assessment of *Beauveria brongniartii* for three carabid beetles. *IOBC/wprs Bulletin* 28, 93-96.
5. Brunner N., Kromp B., Meindl P., Pázmándi C. & **Traugott M.** (2005): Evaluation of different sampling techniques for wireworms (Coleoptera, Elateridae) in arable land. *IOBC/wprs Bulletin* 28, 117-122.

6. Pázmándi C. & Traugott M. (2005): A stable isotope analysis of wireworms puts new light on their dietary choices in arable land. *IOBC/wprs Bulletin* 28, 127-132.
7. Traugott M. (2000): Morphological distinction of the larvae of *Cantharis fusca* (L.) and *C. livida* (L.) (Coleoptera: Cantharidae) and notes on their biology. *Entomologische Blätter für Biologie und Systematik der Käfer* 96, 46-56.
8. Traugott M. (2000): Morphological characters of the larvae of *Cantharis rustica* (Fallen). *Entomologische Nachrichten und Berichte* 44, 221-223.
9. Traugott M. (2000): Artenspektrum und Lebenszyklen von Aaskäfern (Coleoptera: Silphidae) in einer organisch-biologischen Kartoffel-Einsaatkultur. *Mitteilungen der Deutschen Gesellschaft für allgemeine und angewandte Entomologie* 12, 401-404.
10. Traugott M. (1999): Lebenszyklen von *Silpha obscura* (L.) und *Silpha tristis* (Ill.) in einer organisch-biologischen Kartoffel-Einsaatkultur bei Aldrans (Nordtirol, Österreich). *Ber. nat.-med. Verein Innsbruck* 86, 245-249.