Curriculum Vitae

Dr. Ingo Grass

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Research interests

- Agroecology, ecosystemservices, conservation, socioeconomic-ecological trade-offs

Current position

Since September 2014	**Postdoctoral researcher, University of Göttingen, Agroecology** *Working group*: Prof. Dr. Teja Tscharntke *Topic*: Pollination, biocontrol and biodiversity in a landscape context

Professional experience

August 2011–August 2014	**Research assistant, University of Marburg, Conservation Ecology (including 6 months research stay in South Africa)** *Working group*: Prof. Dr. Nina Farwig *Topic*: Plant-animal mutualisms in human-modified landscapes

Academic education

March 2014	**Doctoral degree at University of Marburg (*summa cum laude*)**
August 2011–March 2014	Doctoral studies at University of Marburg, Conservation Ecology *Working group*: Prof. Dr. Nina Farwig *Thesis*: "Habitat loss and exotic plant invasions disrupt plant–animal mutualisms in a heterogeneous South African landscape"
July 2011	**MSc at University of Marburg (1.3) (including 3 months research stay in South Africa)** *Thesis*: "Forest modification affects pollinator composition but not pollination services in a subtropical heterogeneous landscape"
October 2006–July 2011	Studies in biology at the University of Marburg with majors in animal and community ecology, conservation biology, international nature conservation
October 2005–March 2006	Studies in English and religious education

Grants and major research projects

As principal investigator and grant recipient

2016–2019	**Volkswagen Foundation and Lower Saxonian Ministry for Science and Culture "Diversity turn in Land-use Science"** Subproject "Biodiversity and ecosystemservices of agro-ecologically optimized land use" (with T. Tscharntke)
2016–2019	**DFG-CRC 990 "Ecological and Socioeconomic Functions of Tropical Lowland Rainforest Transformation Systems"** Subproject "Above-ground biodiversity patterns and processes across rainforest transformation landscapes" (with T. Tscharntke)
2019–2022	**DFG-FOR 2432/2 "Social-Ecological Systems in the Indian Rural-Urban Interface"** Subproject "Agricultural biodiversity and associated services across rural-urban landscapes" (with T. Tscharntke, C. Westphal & K. Wiegand)
2016–2019	**DFG-FOR 2432/1 "Social-Ecological Systems in the Indian Rural-Urban Interface"** Subproject "Agricultural biodiversity and associated services across rural-urban landscapes" (with T. Tscharntke & K. Wiegand)
2015–2019	**DFG-RTG 1644 "Scaling Problems in Statistics"** Subproject "Grid-based predictions of biodiversity and ecosystemservices at different spatial scales"
2014	**Marburg University Foundation "Restoration of plant-pollinator communities in agricultural landscapes"**

As associated researcher

2018–2021	**BMBF "South African Limpopo Landscapes Network"** Subproject "Orchards, biodiversity and ecosystemservices"
2014–2017	**BMBF "Limpopo Living Landscapes"** Subproject "Functional biodiversity in agricultural landscapes"

Awards

November 2016 and 2018	Two times awarded with the teaching award for the best course in the Bachelor's degree program in Agricultural Sciences, University of Göttingen
Since 2016	Spokesperson – "Interdisciplinary research focus on socioeconomic-ecological trade-offs of rainforest transformation systems" within CRC-990 EFForTS
August 2013	German Academic Exchange Service (DAAD) Travel Grant
April 2013	Maria Sibylla Merian Award (best talk) by the Society for Tropical Ecology

Academic service

- *Ad-hoc referee for:* Nature, Nature Ecology & Evolution, Ecology Letters, Conservation Letters, Ecology, Journal of Applied Ecology, Global Change Biology, Global Ecology and Biogeography, Proceedings of the Royal Society B, Biological Conservation, Functional Ecology, Oecologia, Agriculture Ecosystems & Environment, Landscape Ecology, Basic and Applied Ecology, PeerJ, PLOS ONE, Biotropica, Ecological Entomology, Apidologie, South African Journal of Botany, Journal of Pest Science, Flora, Insect Conservation and Diversity, Journal of Insect Conservation, Tropical Zoology
- *Reviews of research proposals for:* National Research, Development and Innovation Office Hungary
- *Publons profile:* https://publons.com/author/1191940/ingo-grass#profile

Peer-reviewed journal publications

In press

[34] Escobar-Ramírez S, **Grass I**, Armbrecht I, Tscharntke T (in press) Biological control of the coffee berry borer: main natural enemies, control success, and landscape influence. *Biological Control*

[33] Darras K, Batáry P, Furnas BJ, **Grass I**, Mulyani YA, Tscharntke T (in press) Autonomous sound recording outperforms human observation for sampling birds: a systematic map and user guide. *Ecological Applications*

[32] Weier SM, Linden VMG, **Grass I**, Tscharntke T, Taylor PJ (in press) The use of bat houses as day roosts in macadamia orchards, South Africa. *PeerJ*

2019

[31] Linden VMG, **Grass I**, Joubert E, Tscharntke T, Weier SM, Taylor PJ (2019) Ecosystem services and disservices by birds, bats and monkeys change with macadamia landscape heterogeneity. *Journal of Applied Ecology* doi: 10.1111/1365- 2664.13424

[30] Krishna VV, Darras K, **Grass I**, Mulyani YA, Prawiradilaga DM, Tscharntke T, Qaim M (2019) Wildlife trade and consumer preferences for species rarity: an examination of caged-bird markets in Sumatra. *Environment and Development Economics* 1-22 doi:10.1017/S1355770X19000081

[29] Li K, Tscharntke T, Saintes B, Buchori D, **Grass I** (2019) Critical factors limiting pollination success in oil palm: a systematic review. *Agriculture, Ecosystems & Environment* 280:152–160

[28] Kühnert K, **Grass I**, Waltert M (2019) Sacred groves hold distinct bird assemblages within an Afrotropical savannah. *Global Ecology and Conservation* 18:e00656

[27] **Grass I**, Loos J, Baensch S, Bátary P, Librán-Embid F, Ficiciyan A, Klaus F, Riechers M, Rosa J, Tiede J, Udy K, Westphal C, Wurz A, Tscharntke T (2019) Land-sharing/-sparing connectivity landscapes for ecosystemservices and biodiversity conservation. *People and Nature* https://doi.org/10.1002/pan3.21

[26] Kehoe L, Reis T, Virah-Sawmy M, Balmford A, Kuemmerle T, and 604 signatories incl. **Grass I** (2019) Make EU trade with Brazil sustainable. *Science* 364:341

[25] Weier SM, Moodley Y, Fraser MF, Linden VMG, **Grass I**, Tscharntke T, Taylor PJ (2019) Insect pest consumption by bats in macadamia orchards established by molecular diet analyses. *Global Ecology and Conservation* 18:e00626

[24] Maas B, Heath S, **Grass I**, Cassano C, Classen A, Faria D, Gras P, Williams-Guillén K, Johnson M, Karp DS, Linden V, Martínez-Salinas A, Schmack JM, Kross S (2019) Experimental field exclosure of birds and bats in agricultural systems – methodological insights, potential improvements, and cost-benefit trade-offs. *Basic and Applied Ecology* 35:1–12

[23] Dugger PJ, Blendinger PG, Böhning-Gaese K, Chama L, Correira M, Dehling DM, Emer C, Farwig N, Fricke EC, Galetti M, García D, **Grass I**, Heleno R, Jacomassa FAF, Moraes S, Moran C, Muñoz MC, Neuschulz EL, Nowak L, Piratelli A, Piza MA, Quitián M, Rogers HS, Ruggera RA, Saavedra F, Sánchez MS, Sánchez R, Santillán V, Schabo DG, da Silva FR, Timóteo S, Traveset A, Vollstädt MGR, Schleuning M (2019) Seed-dispersal networks are more specialized in the Neotropics than in the Afrotropics. *Global Ecology and Biogeography* 28:248–261

[22] Castle D, **Grass I**, Westphal C (2019) Fruit quantity and quality of strawberries benefit from enhanced pollinator abundance at hedgerows in agricultural landscapes. *Agriculture, Ecosystems and Environment* 275:14–22

2018

[21] Jauker F, Jauker B, **Grass I**, Steffan-Dewenter I, Wolters V (2018) Partitioning wild bee and hoverfly contributions to plant-pollinator network structure in fragmented habitats. *Ecology* 100:e02569

[20] Paoletti A, Darras K, Jayanto H, **Grass I**, Kusrini MD, Tscharntke T (2018) Amphibian and reptile communities of upland and riparian sites across Indonesian oil palm, rubber and forest. *Global Ecology and Conservation* 16:e00492

[19] **Grass I**, Jauker B, Steffan-Dewenter I, Tscharntke T, Jauker F (2018) Past and potential future effects of habitat fragmentation on structure and stability of plant–pollinator and host–parasitoid networks. *Nature Ecology & Evolution* 2:1408–1417

[18] Weier SM, **Grass I**, Linden VMG, Tscharntke T, Taylor PJ (2018) Natural vegetation and bug abundance promote insectivorous bat activity in macadamia orchards, South Africa. *Biological Conservation* 226:16–23

[17] Taylor PJ, **Grass I**, Alberts AJ, Joubert E, Tscharntke T (2018) Economic value of bat predation services – a review and new estimates from macadamia orchards. *Ecosystem Services* 30:372–381

[16] **Grass I**, Meyer S, Taylor PJ, Foord SH, Hajek P, Tscharntke T (2018) Pollination limitation despite managed honeybees in South African macadamia orchards. *Agriculture, Ecosystems and Environment* 260:11–18

[15] **Grass I,** Bohle V, Tscharntke T, Westphal C (2018) How plant reproductive success is determined by the interplay of antagonists and mutualists. *Ecosphere* 9:e02106

[14] Richter-Beuschel L, **Grass I**, Bögeholz S (2018) How to measure procedural knowledge for solving biodiversity and climate change challenges. *Education Sciences* 8:190

2017

[13] Kelly J, Rahman, A, **Grass I**, Tasirin JS, Waltert M (2017) Avifaunal status updates, range extensions and potential new taxa on the lesser Sangihe and Talaud islands, Indonesia. *Raffles Bulletin of Zoology* 65:482–496

[12] Denmead LH, Darras K, Clough Y, Diaz P, **Grass I**, Hoffmann MP, Nurdiansyah F, Fardiansah R, Tscharntke T (2017) The role of ants, birds and bats for ecosystem functions and yield in oil palm plantations. *Ecology* 98:1945–1956

[11] Wende B, Gossner MM, **Grass I**, Arnstadt T, Hofrichter M, Floren A, Linsenmair KE, Weisser WW, Steffan-Dewenter, I (2017) Trophic level, successional age and trait matching determine specialization of deadwood-based interaction networks of saproxylic beetles. *Proceedings of the Royal Society B* 284:20170198

[10] **Grass I**, Lehmann K, Thies C, Tscharntke T (2017) Insectivorous birds disrupt biological control of cereal aphids. *Ecology* 98:1583–1590

[9] Hudson LN, Newbold T, Contu S, […], **Grass I**, […], Purves DW, Scharlemann JPW, Purvis A (2017) The database of the PREDICTS (Projecting Responses of Ecological Diversity in Changing Terrestrial Systems) Project. *Ecology and Evolution* 7:145–188

2016

[8] Schlinkert H, Westphal C, Clough Y, **Grass I**, Helmerichs J, Tscharntke T (2016) Plant size affects mutualistic and antagonistic interactions and reproductive success across 21 Brassicaceae species. *Ecosphere* 7:e01529

[7] De Palma A, Abrahamczyk S, Aizen MA, […], **Grass I**, […], Westphal C, Yoon HJ, Purvis A (2016) Predicting bee community responses to land-use changes: effects of geographic and taxonomic biases. *Scientific Reports* 6:31153

[6] **Grass I**, Albrecht J, Jauker F, Diekötter T, Warzecha D, Wolters V, Farwig N (2016) Much more than bees – wildflower plantings support highly diverse flower-visitor communities from complex to structurally simple agricultural landscapes. *Agriculture, Ecosystems and Environment* 225:45–53

2015

[5] **Grass I**, Brandl R, Botzat A, Neuschulz EL, Farwig N (2015) Contrasting taxonomic and phylogenetic diversity responses to forest modifications: comparisons of taxa and successive plant life stages in South African scarp forest. *PLoS ONE* 10:e0118722

2014

[4] **Grass I**, Berens DG, Farwig N (2014) Natural habitat loss and exotic plants reduce the functional diversity of flower visitors in a heterogeneous subtropical landscape. *Functional Ecology* 28:1117–1126

[3] **Grass I**, Berens DG, Farwig N (2014) Guild-specific shifts in visitation rates of frugivores with habitat loss and plant invasion. *Oikos* 123:575-582

2013

[2] **Grass I**, Berens DG, Peter F, Farwig N (2013) Additive effects of exotic plant abundance and land-use intensity on plant–pollinator interactions. *Oecologia* 173:913–923

[1] Neuschulz EL, **Grass I**, Botzat A, Johnson SD, Farwig N (2013) Persistence of flower visitors and pollination services of a generalist tree in modified forests. *Austral Ecology* 38:374–382

Book chapters

2019

[1] Loos J, Batáry P, **Grass I**, Westphal C, Baensch S, Bosem Baillod A, Hass A, Rosa J, Tscharntke T (2019) Vulnerability of Ecosystem Services in Farmland Depends on Landscape Management. In: Atlas of Ecosystem Services: Drivers, Risks and Societal Responses (Eds.: Schröter M, Bonn A, Klotz S, Seppelt R, Baessler C). Springer, Cham

Monographs

[1] **Grass I** (2013) Habitat loss and exotic plant invasions disrupt plant–animal mutualisms in a heterogeneous South African landscape. Dissertation, University of Marburg, Marburg

Non peer-reviewed journal publications

[1] Jauker F, Jauker B, **Grass I**, Steffan-Dewenter I, Wolters V (2018) Partitioning wild bee and hoverfly contributions to plant-pollinator network structure in fragmented habitats. *The Bulletin of the Ecological Society of America*. https://doi.org/10.1002/bes2.1504

Honorary positions and memberships

Since January 2017	Member of the Centre of Statistics of the University of Göttingen
Since February 2016	Board member of the administrative board of the DFG-RTG 1644 "Scaling Problems in Statistics" (Postdoc representative)
May 2015–February 2016	Member of the organizing committee of the European Conference of Tropical Ecology by gtö in Göttingen, Germany (23–26th February 2016)
April 2015–March 2018	Member of the scientific advisory board of the Society for Tropical Ecology (gtö)

Active memberships in scientific societies

- Association for Tropical Biology and Conservation (ATBC), Ecological Society of Germany, Austria & Switzerland (GfÖ), Society for Tropical Ecology (GTÖ)