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Research Summary

I am a population biologist with expertise in developmentally informed demography, experimental evolution and ecological modelling. My research integrates theory and empiricism to understand how developmental and behavioural processes shape eco-evolutionary population dynamics in both marine and terrestrial systems. I have pioneered frameworks linking energetics and agency to phenotypic plasticity, with applications from model invertebrates to marine megafauna, including studies on the ecology, behaviour and conservation of species in changing ocean environments. My work has been recognised internationally, and I lead interdisciplinary collaborations spanning marine biology, terrestrial ecology, philosophy and conservation, with applications to biodiversity, conservation and environmental change.

Academic Leadership

I have held strategic leadership roles across research, governance and institutional culture in the Netherlands and the UK. I am committed to inclusive, high-performing academic environments and to leadership that connects research excellence, organisational development and long-term institutional strategy. At the University of Amsterdam, I was elected chair of the Faculty of Science Works Council (2018–2021), representing over 1,500 staff and contributing to faculty-wide policy on research-led teaching, career development and inclusive promotion criteria. I also chaired the Scientific Advisory Council of the Institute for Biodiversity and Ecosystem Dynamics and contributed to the Institute's strategic planning. Since joining Newcastle University in 2022, I have held a series of leadership roles spanning research, people and culture. As Group Lead of the [Modelling, Evidence and Policy group](#) (2023–2026), I led a group of academic staff through a period of strategic development, strengthening research culture, interdisciplinary exchange and REF2029 readiness. As Co-Lead of the [Behaviour Newcastle University Centre of Research Excellence](#), I help build an interdisciplinary research community designed to support major funding, collaboration and external visibility. As Director of Culture and Inclusion, I have led initiatives to embed inclusive governance and psychologically safe working practices across the School, including the development of a structured ED&I sounding-board model and contributions to the University's [Reimagining Leadership project](#).

Academic Appointments

2022 – present **Senior Lecturer**, SNES, Newcastle University, UK
2018 – 2022 **Associate Professor**, University of Amsterdam, NL
2013 – 2018 **MacGillavry Fellowship**, University of Amsterdam, NL
2010 – 2013 **Research Fellow** at Imperial College London & University of Oxford, UK
2008 – 2010 **Rubicon Fellowship** (NWO) – held at Imperial College London, UK
2007 – 2008 **Alexander v Humboldt Fellowship** – held at Max Planck Inst. for Ornithology, G
2005 **Marie Curie Research Trainee Fellowship** – held at University of Exeter, UK

Leadership Appointments

2026 – present **Co-Chair** IUCN Species Survival Commission Mite Specialist Group
2024 – present **Co-Lead** Behaviour Newcastle University Centre of Research Excellence, UK
2024 – present **Director of Culture & Inclusion**, SNES, Newcastle University, UK
2023 – 2026 **Group Lead**, Modelling, Evidence and Policy group, Newcastle University, UK
2022 – 2024 **Co-Director** Centre for Behaviour and Evolution, Newcastle University, UK

Education

- 2022 Senior Fellowship of the Higher Education Academy (SFHEA) (UK)
 2014 University Teaching Qualification for Lecturers (The Netherlands)
 5 Sep 2007 PhD, 'Interference competition and patch choice in foraging shore crabs' (0.8 fte)
 Netherlands Institute for Sea Research & University of Amsterdam, The Netherlands
 2000 BSc + MSc Population Biology, Wageningen University, The Netherlands

Research Achievements

Overview - I have secured £3.93M in competitive fellowships and grants, and contribute to major international collaborations. My outputs include >35 invited talks and 58 (out of 70) first/senior-author peer-reviewed papers, ranking me in the [global top 0.5% of scholars in Population Dynamics](#).

Conceptual innovation and field impact - I have pioneered frameworks linking energetics and agency to phenotypic plasticity, underpinning three first/single-author articles in *Trends in Ecology & Evolution* (IF 17.3) on [eco-evolutionary population dynamics](#) (2013), [conflict and plasticity](#) (2015, F1000 recommended), and [development as a cause of eco-evolutionary dynamics](#) (2022), and an invited article in *Academia Biology* (2026) that advances a development-centred rethink of demography. A core original contribution is a mechanistic population model linking developmental plasticity and demography ([Methods in Ecology & Evolution, 2017](#)), applied to diverse systems including estuarine polychaetes ([InTechOpen, 2025](#)), elasmobranch life histories ([Ecology Letters, 2025a](#)) and species conservation potential ([Ecology & Evolution, 2025](#)).

Recognition and application - My modelling approach has been featured in [Methods in Ecology & Evolution's virtual issue](#) on integrating ecology and evolution, and highlighted by [Journal of Animal Ecology \(2024\)](#) as pioneering in capturing organismal complexity in population responses to environmental change. The [award-winning](#), associated open-access DEBBIES dataset ([Scientific Data, 2024](#)), with [press coverage](#), is enabling global research on life-history variation across ectotherms.

Recent advances - My recent publications apply these frameworks to marine systems, including studies of plasticity in elasmobranch life histories ([Ecology Letters, 2025a](#)) and resilience indicators in estuarine ecosystems ([InTechOpen, 2025](#)). I also contribute to large-scale syntheses on predicting population responses to anthropogenic disturbance ([Ecology Letters, 2025b](#)), bridging empirical ecology, conservation science, and policy-relevant modelling. In my latest invited paper ([Academia Biology, 2026](#)), I identify a "phenotypic gap" between trait measures and life-course trajectories, which forms the basis of my NERC Pushing the Frontiers grant (948k£; 2026-2029), advancing a development-centred rethink of demography.

Fellowships, Honours and Awards

- 2026– **Open Research Champion** (Newcastle University)
 2026 **Nomination Scientific Medal** Zoological Society London
 2025 **Top Cited Article**, *Journal of Animal Ecology* (Wiley), recognising high citation [2024 paper](#)
 2025 **Open Research Award, 2nd place**, for my open research practice (Newcastle University)
 2025 **Newcastle University Nominee, Frontiers Planet Prize** for the paper in [Ecology Letters \(2025\)](#) recognised as breakthrough research addressing multiple planetary boundaries.
 2024 **Top Scholar Recognition** ([ScholarGPS 2024](#)): ranked in the **top 0.5% of scholars worldwide** in the field of Population Dynamics over the past five years, based on publication impact, research quality and scholarly contributions
 2023 **Columbia Sponsored Travel Award** £500
 2017 **Nominated for Lecturer of the Year 2017** (University of Amsterdam)
 2014 **Aspasia Grant Laureate**, awarded by the Dutch Research Council, 100k€
 2014 **VIDI Laureate**, awarded by the Dutch Research Council, 5 years, 800k€
 2013 **MEERVOUD Laureate** awarded by the Dutch Research Council, 4 years, 225k€

- 2013 **MacGillavry Fellowship**, awarded by University of Amsterdam, 5 years, 850k€
 2010 **Nominated among 400 top women-under-38 Dutch talent** by Viva Magazine
 2009 **Dutch Wadden Academy Prize** for best PhD thesis, €5,000
 2008 **Rubicon Fellowship**, awarded by Dutch Research Council, 2 years, 88k€
 2007 **Alexander von Humboldt (AvH) Fellowship**, awarded by AvH Foundation, 1 year, 25k€
 2005 **Marie Curie Research Fellowship**, awarded by Marie Curie Fellowship Assoc., 6 mo, £6,000
 2001 **Poster award**, First European Conference on Behavioural Biology, Münster (Germany)

Grants & Projects

- 2026-29 **NERC Pushing the Frontiers grant**, 3 years, 948k€ (PI)
 2026 **ED&I in governance**, Newcastle University ED&I fund, 6 months, 5£k (PI)
 2026-34 **Co-I (65k€)** on Lot 9.1 *Nature and Climate Analysis* within 1.6M€ **UK RDE Framework**; Fera Science Ltd is lead applicant with Newcastle University (NU) as major subcontractor
 2025- Biogeography, Modelling and Management Tools **Working Group**. British Antarctic Survey.
 2024-26 Co-researcher **Participatory Action Research Group [Reimaging Leadership Project](#)** (NU)
 2024-27 **Co-I [DISCAR](#) international research consortium** (200k€)
 2022 **Co-I** on 1M€ work package within 9M€ awarded to NWA-ORC MetaHealth consortium
 2021 **Travel grant**, €4,011, Amsterdam University Fund (PI)
 2019 **1.5 yr, 0.8 fte, Post Doc position**, 100k€, University of Amsterdam (PI)
 2017 **Marie Curie Fellowship ECOEVOCLIM** 166k€ (**co-supervisor**)
 2015 **Post Doc position, 3-yr, 1 fte**, 185k€, University of Amsterdam (PI)

Invited Talks (last 10 years)

- 2026 ANdinA workshop on predicting ecology – Nerin (Aragon) (S)*
 2025 Symposium – BioShorts 2025 Conference on Ecology, Conservation and Biodiversity (UK)
 2025 Departmental seminar – Bielefeld University (G)
 2025 Seminar – Centre for Biodiversity Analysis, Australian National University (AUS)*
 2025 Symposium keynote speaker at the Congress of the European Society for Evol. Biology (E)
 2025 Symposium – Swiss Federal Institute of Aquatic Science and Technology (CH)
 2024 Seminar – Centre for the Synthesis and Analysis of Biodiversity (F)
 2023 Departmental seminar – Max Planck Institute for Evolutionary Biology (D)
 2023 Symposium keynote speaker at Int. Society for Developmental Psychobiology (NL)
 2022 Keynote speaker Int. Conference on Stickleback Behaviour and Evolution (IS)
 2022 Symposium keynote speaker at the Congress of the European Society for Evol. Biology (CZ)
 2022 Departmental seminar – Dept Biological and Environmental Science, Univ. of Jyväskylä (FN)
 2022 Seminar – Centre for Behaviour and Evolution, Newcastle University (UK)
 2021 Departmental seminar – Department of Philosophy, Ruhr-University Bochum (D)
 2021 Departmental seminar – Department of Biology, Université de Sherbrooke (Canada)
 2021 Departmental seminar – Behavioural Ecology seminar series, LMU München (D)
 2020 Keynote speaker at EVENET eco-evolutionary dynamics symposium (B)
 2019 Symposium keynote speaker at the Congress of the European Society for Evol. Biology* (FN)
 2018 Symposium keynote speaker at Evolution (Joint Congress on Evol. Biology), Montpellier* (F)
 2017 Symposium keynote speaker at the Congress of the European Society for Evol. Biology (NL)
 2017 Dutch Society of Theoretical Biology – mite/modelling mini-session (NL)
 2016 Workshop “Integrating dynamic energy budget into integral projection models” based on my paper in *Methods in Ecology and Evolution*, Netherlands Institute for Sea Research (NL)
 2016 EIS-day Symposium (EIS Kenniscentrum Insecten), Naturalis Leiden (NL)
 2016 Per Brink Symposium, Turku (FIN) (declined due to teaching conflict)

*declined due to care duties

Editorial and Review Service

- **Guest Editor** *Functional Ecology* on Special Feature on Phenotypic Plasticity
- **Associate Editor (4 journals):** *Functional Ecology* (>2018), *Oikos* (>2013), *Entomologia Experimentalis et Applicata* (>2019), and *Journal of Animal Ecology* (2011–2014)
- **Grant Reviewer** for Austrian Science Fund, Earthwatch, ERC H2020, NERC, ESF-FWO, Norway Research Council, NSF, NWO, Swiss National Science Foundation, The Royal Society, Leverhulme
- **Manuscript Reviewer** for >40 journals, incl. Nature, PNAS, Cell, Scientific Reports
- **Invited expert member of the FWO Review College** (2025-2028)
- **Invited member of the European Science Foundation College of Expert Reviewers**
- **NERC Peer Review College Member**

Committee Service and Membership (last 10 years)

- 2026 – present **Co-Chair** IUCN Species Survival Commission Mite Specialist Group
- 2025 – present **Expert** with the [Science Media Centre](#) (independent press office for science)
- 2021 – present Invited member of the **European Science Foundation College of Expert Reviewers**
- 2008 – present **Member** of the British Ecological Society
- 2024 – 2025 **Expert evaluator** MSCA4Ukraine programme - Alexander von Humboldt Foundation
- 2022 – 2025 **SNSF Swiss Postdoctoral Fellowships Selection Committee**
- 2022 **Panel Chair of Grant Selection Committee** Dutch Research Council
- 2023 **Organiser** Ecosystems Science Day at Newcastle University
- 2022 **Member** tenure track midterm evaluation committee University of Amsterdam
- 2021 **Member** steering committee Dutch research community Organisms in the Environment Netherlands Organisation for Scientific Research
- 2021 – 2022 **Elected Member** of the Faculty of Science Works Council (UvA)
- 2020 – 2021 **Member** sounding board evaluation tenure track policy Faculty of Science (UvA)
- 2020 – 2021 Member **Programme Committee** Bachelor Future Planet Studies (UvA)
- 2019 – 2021 Member **Scientific Advisory Council** at the IBED (UvA)
- 2019 **Advisory Appointment Committee** tenure track position theoretical ecology
- 2018 – 2022 **Mentor**, Women in Science, British Ecological Society
- 2018 – 2021 Member **Programme Committee** Bachelor Biology (UvA)
- 2018 – 2021 **Elected Chair** of the Faculty of Science Works Council (UvA)
- 2017 – 2019 **DO-VENI Fellowship Selection Committee** of NWO (3x)
- 2016 – 2022 **Staff member** Production Ecology & Resource Conservation Graduate School (NL)
- 2018 – 2019 **Chair** Scientific Advisory Council at the IBED (UvA)
- 2017 – 2018 **Founding member** and **Treasurer** of ‘De Amsterdamse Academie’: a society active in the Faculty Works Councils of the University of Amsterdam
- 2016 – 2017 **Member** of the core team to revise human resource management for the 2017-2022 strategic plan of the IBED (UvA)
- 2016 – 2017 **Member** of the core team to design the new Master course ‘Future Planet Ecosystem Science’ at the IBED (UvA)

Teaching and Supervision (summary last 10 years)

- 2025 – present **Senior Support Tutor** (biology/zoology undergraduates) (Newcastle University)
- 2023 – present Contributor to Biology and Zoology **curriculum redesign** (Newcastle University)
- 2022 – present **Joint Honours Liaison** Biology – Psychology (Newcastle University)
- 2022 – present **(Co)-supervisor** of four PhD students (Newcastle University)
- 2022 – present Member of six **PhD Progress Review Panels** (Newcastle University)
- 2022 – present Module leader, including course design, and lecturer of two Stage 2 undergraduate modules (Newcastle University)

2007 – present	Supervisor of on average 6 BSs/MSc student projects per year
2022 – 2025	Senior Tutor & Peer Mentor Coordinator (Newcastle University)
2020 – 2022	Member Programme Committee Bachelor Future Planet Studies (UvA)
2018	MSc track design ' Future Planet Ecosystem Science ' at the IBED (UvA)
2018 – 2022	Member Programme Committee Bachelor Biology (University of Amsterdam)
2014 – 2022	(Co)-supervisor 7 PhD students & 3 postdocs; 12 PhD defence committees; Module leader , including course design, and lecturer of six undergraduate modules and postgraduate modules (University of Amsterdam)

Selected Impact, Engagement and Media

- [Press release Lucas et al. 2025](#), covered by [Phys.org](#), [Sciencemag](#), [EurekAlert](#), French [Sciences et Avenir \(interview\)](#). Blog posts at [From Newcastle University blog](#), [Nature Research Communities](#).
- News and Opinion blog post on Evolution at [Springer Nature Research Communities](#), based on Smallegange & Guenther (2025), also posted at the [From Newcastle University blog](#).
- [Press release DEBBIES \(Smallegange & Lucas 2024\)](#), also covered by [Phys.Org](#), [OneGreenPlanet](#). With 'Behind the paper' blog post at [Springer Nature Research Communities](#) (Smallegange & Lucas 2024), at the [From Newcastle University blog](#), and [Press Release](#).
- [Rademaker et al. 2024](#) highlighted in a Research Highlight in *Journal of Animal Ecology* by [Touzot & Paniw \(2024\)](#), with 'Behind the paper' blog post at [Animal Ecology in Focus](#); and [Smallegange et al. \(2017\)](#) highlighted in 2018 *Methods in Ecology and Evolution* Virtual Issue [Integrating Ecology and Evolution](#).
- My work has informed conservation policy, including marine protected area designation for manta rays ([Mozambique, 2016](#)) (see also my [Human Odyssey Podcast](#) (2020)), contributions to the [IUCN Marine Turtle Specialist Group global assessment \(2021\)](#), and is adopted by international research consortia to predict population responses to anthropogenic stressors ([DISCAR](#)).
- Press commentary: But Why? [Penguin behaviour video commentary](#) (2026). Radio New Zealand, CTV News, Canada, CNN '[Human monogamy in mammalian context](#)' (2025). Volkskrant '[WILD IDEE - Ontstaan diersoorten juist sneller buiten de soortenrijke tropen?](#)' (2021)

Selected Publications

Below is a selection of publications demonstrating conceptual innovation, empirical rigour and commitment to open science. For the full list of publications, see *Appendix: Full Publication List*.

(† denotes co-senior author; * indicates corresponding author)

Theoretical & Conceptual Innovation

- Smallegange IM. 2026. [From traits to trajectories: development, agency and a phenotypic gap in demography](#). *Academia Biology* 4(1).
→ Advances a development-centred rethink of demography.
- **Smallegange IM**, & Guenther A. 2025. [A development-centric perspective on pace-of-life syndromes](#). *Evolution Letters* 9: 172–183.
→ Advances theory linking energetics, life-history evolution, and developmental feedbacks.
- **Smallegange IM**. 2022. [Integrating developmental plasticity into eco-evolutionary population dynamics](#). *Trends in Ecology & Evolution* 37: 1095–1105.
→ Solo-authored synthesis reframing development as a causal eco-evolutionary process.

Open Science & Research Infrastructure

- **Smallegange IM**, Lucas S. 2024. [DEBBIES Dataset to study life histories across ectotherms](#). *Scientific Data* 11: 153.
→ An open-access dataset and code package now used internationally to model life-histories.

Linking Development, Demography and Environmental Change

- **Smallegange IM**, Edwards LHA, Attle A. 2025. [Population performance and resilience in polychaetes as environmental indicators of estuarine ecosystems](#). In: Estuaries - Dynamic Ecosystems at the Land-Sea Interface (Ed. Pereira L). Rijeka: InTechOpen.
→ Applies developmentally informed demographic approaches to assess resilience in marine indicator species, providing tools for estuarine ecosystem monitoring and management.
- Rademaker M, van Leeuwen A, **Smallegange IM**. 2024. [Why we cannot always expect life-history strategies to directly inform on sensitivity to environmental change](#). *Journal of Animal Ecology* 93: 348–366. **Top Cited Article**, *Journal of Animal Ecology* (Wiley).
→ Challenges trait-based demographic generalisations using developmentally explicit fish data.
- **Smallegange IM**, Caswell H, Toorians MEM, de Roos AM. 2017. [Mechanistic description of population dynamics using dynamic energy budget theory incorporated into integral projection models](#). *Methods in Ecology and Evolution* 8: 146–154.
→ Introduced a method integrating developmental energetics into demographic modelling.

Tests of the Role of Plasticity in Ecology and Evolution

- Lucas S, Berggren P, Barrowclift E, **Smallegange IM***. 2025. [Changing feeding levels reveal plasticity in elasmobranch life history strategies](#). *Ecology Letters* 28: e70201
→ Reveals previously unrecognised life-history plasticity in sharks, skates and rays, informing conservation strategies.
- Stewart KAS, **Smallegange IM***. 2025. [Developmental plasticity and the evolutionary rescue of a colonising mite](#). *Evolution & Development* 27: e70002.
→ Experimental evidence of developmental plasticity enabling population persistence.
- Deere JA, **Smallegange IM***. 2023. [Individual differences in developmental trajectory leave a male polyphenic signature in bulb mite populations](#). *Peer Community Journal* 3: e117.
→ Demonstrates developmental path dependence and tests competing evolutionary hypotheses.

Appendix: Full Publication List

⁽ⁱ⁾ invited contribution (10x); BSc, MSc and PhD students are underlined;

* corresponding author; § shared first authorship; ** shared senior authorship

- 70 ⁽ⁱ⁾ **Smallegange IM**. 2026. From traits to trajectories: development, agency and a phenotypic gap in demography. *Academia Biology* 4(1). <https://doi.org/10.20935/AcadBiol8162>
- 69 ⁽ⁱ⁾ **Smallegange IM**, Pilakouta N. 2025. Linking the causes and consequences of phenotypic plasticity. *Functional Ecology* 39: 2944-2948.
- 68 Lucas S*, Berggren P, Barrowclift E, **Smallegange IM***. 2025. Changing feeding levels reveal plasticity in elasmobranch life history strategies. *Ecology Letters* 28: e70201
- 67 Speakman CN, Bull S, Cubaynes S, Davis K, Devillard S, Fryxell J, Gallagher CA, McHuron EA, Rastello K, **Smallegange IM**, Salguero-Gómez R, Bonnaud E, Duchamp C, Giraudoux P, Lacombe S, Marneweck C, Schroll L, Tableau A, Ruetter S, Gimenez O. 2025. Understanding and predicting population response to anthropogenic disturbance: Current approaches and novel opportunities. *Ecology Letters* 28: e70198
- 66 ⁽ⁱ⁾ **Smallegange IM**, Edwards LHA, Attle A. 2025. Population performance and resilience in polychaetes as environmental indicators of estuarine ecosystems. In: Estuaries - Dynamic Ecosystems at the Land-Sea Interface (Ed. Pereira L). Rijeka: InTechOpen. DOI: 10.5772/intechopen.1011169
- 65 Stevenson EA, Lucas S, McGowan PJK, **Smallegange IM****, Mair L**. 2025. To what extent can life history strategies inform species conservation potential? *Ecology and Evolution* 15: e71488
- 64 Edwards LHA, **Smallegange IM**. 2025. The role of developmental plasticity in eco-phenotypic population dynamics. *Functional Ecology* 39: 2985-2998
- 63 Stewart KAS, **Smallegange IM***. 2025. Developmental plasticity and the evolutionary rescue of a colonising mite. *Evolution & Development* 27:e70002
- 62 **Smallegange IM**, Guenther A. 2025. A development-centric perspective on pace-of-life syndromes. *Evolution Letters* 9: 172-183.
- 61 Toorians MEM, **Smallegange IM**, Davies TJ. 2024. Host community structure can shape pathogen outbreak dynamics through a phylogenetic dilution effect. *Functional Ecology* 38: 2169-2183.
- 60 **Smallegange IM**, Lucas S. 2024. DEBBIES Dataset to study life histories across ectotherms. *Scientific Data* 11: 153.
- 59 Rademaker M, van Leeuwen A**, **Smallegange IM****. 2024. Why we cannot always expect life history strategies to directly inform on sensitivity to environmental change. *Journal of Animal Ecology* 93: 348-366.
- 58 Eustache KB, van Loon E, Rummer J, Planes S, **Smallegange I**. 2024. Spatial and temporal analysis of juvenile blacktip reef sharks (*Carcharhinus melanopterus*) demographics identifies critical habitats. *Journal of Fish Biology* 104: 92-103.
- 57 Deere JA, **Smallegange IM***. 2023. Individual differences in developmental trajectory leave a male polyphenic signature in bulb mite populations. *Peer Community Journal* 3: e117.
- 56 Rhebergen FT, Stewart KAS, **Smallegange IM***. 2022. Nutrient-dependent allometric plasticity in a male-diphenic mite. *Ecology and Evolution*. 12: e9145
- 55 Zweerus NL, van Wijk M, **Smallegange IM**, Groot AT. 2022. Mating status affects female choice when females are signallers. *Ecology and Evolution* 12: e8864

- 54 **Smallegange IM**. 2022. Integrating developmental plasticity into eco-evolutionary population dynamics. *Trends in Ecology & Evolution* 37:129-137
- 53 Zeeman AN, **Smallegange IM**, Burdfield Steel E, Groot AT, Stewart KA. 2022. Toward an understanding of the chemical ecology of alternative reproductive tactics in the bulb mite (*Rhizoglyphus robini*). *BMC Ecology & Evolution* 22:5.
- 52 Rademaker M, **Smallegange IM**, van Leeuwen A. 2021. Causal links between North Sea fish biomass trends and seabed structure. *Marine Ecology Progress Series* 677: 129-141.
- 51 Domínguez R, Vázquez E, **Smallegange IM**, Woodin SA, Wetthey DS, Peteiro LG, Olabarria C. 2021. Predation risk increases in estuarine bivalves stressed by low salinity. *Marine Biology* 168:132
- 50 Deere JA, van den Berg I, Roth G, **Smallegange IM**. 2021. A modelling exercise to show why population models should incorporate distinct life histories of dispersers. *Population Ecology* 63: 134-144.
- 49 ⁽ⁱ⁾ **Smallegange IM**, Flotats Avilés M, Eustache K. 2020. Unusually paced life history strategies of marine megafauna drive atypical sensitivities to environmental variability. *Frontiers in Marine Science* 7:597492
- 48 ⁽ⁱ⁾ **Smallegange IM**^s, Rhebergen FT^s, Stewart KA. 2019. Cross-level considerations for explaining selection pressures and the maintenance of genetic variation in condition-dependent male morphs. *Current Opinion in Insect Science* 36: 66-73.
- 47 **Smallegange IM**, Berg M. 2019. A functional trait approach to identifying life history patterns in stochastic environments. *Ecology and Evolution* 9: 9350-9361
- 46 van den Beuken TPG, Stockwell L, **Smallegange IM**. 2019. *Et tu*, brother? Kinship and increased nutrition lower cannibalism incidence in male bulb mites. *Animal Behaviour* 152: 45-52
- 45 Stewart KA, Draaijer R, Kolasa MR, **Smallegange IM**. 2019. The role of genetic diversity in the evolution and maintenance of environmentally-cued, male alternative reproductive tactics. *BMC Evolutionary Biology* 19:58
- 44 van den Beuken TPG, Duinmeijer CC, **Smallegange IM**. 2019. Costs of weaponry: unarmed males sire more offspring than armed males in a male-dimorphic mite. *Journal of Evolutionary Biology* 32: 153-162
- 43 ⁽ⁱ⁾ Croll JC, Egas M, **Smallegange**^{*} **IM**. 2019. An eco-evolutionary feedback loop between population dynamics and fighter expression affects the evolution of alternative reproductive tactics. *Journal of Animal Ecology* 88: 11-23.
- 42 van den Beuken TPG, **Smallegange IM**. 2018. Life-history consequences of bidirectional selection for male morph in a male-dimorphic bulb mite. *Experimental and Applied Acarology* 76: 435-452
- 41 van den Beuken TPG, **Smallegange IM**. 2018. Life history consequences of nutritional history in a male dimorphic mite: evidence for a nuptial gift? *Evolutionary Ecology* 32: 411-425
- 40 Stewart KA, van den Beuken TPG, Rhebergen FT, Deere JA, **Smallegange IM**. 2018. Evidence for a third male type in a male-dimorphic model species. *Ecology* 99: 1685-1687
- 39 ⁽ⁱ⁾ **Smallegange IM**, Ens HM. 2018. Trait-based predictions and responses from laboratory mite populations to harvesting in stochastic environments. *Journal of Animal Ecology* 87: 893-905
- 38 ⁽ⁱ⁾ Hamel S, Yoccoz NG, Gaillard J-M, Bassar RD, Bouwhuis S, Caswell H, Douhard M, Gangloff EJ, Gimenez O, Lee PC, **Smallegange IM**, Steiner UK, Vedder O, Vindenes Y. 2018. General conclusion to the special issue Moving forward on individual heterogeneity. *Oikos* 127: 750-756

- 37 ⁽ⁱ⁾ **Smallegange IM**, Fernandes RE, Croll JC. 2018. Population consequences of individual heterogeneity in life histories: overcompensation in response to harvesting of alternative reproductive tactics. *Oikos* 127: 738-749.
- 36 Deere JA, Coulson T, Cubaynes S, **Smallegange IM**. 2017. Unsuccessful dispersal affects life history characteristics of natal populations: The role of dispersal related variation in vital rates. *Ecological Modelling* 366: 37-47.
- 35 **Smallegange IM**, Caswell H, Toorians MEM, de Roos AM. 2017. Mechanistic description of population dynamics using dynamic energy budget theory incorporated into integral projection models. *Methods in Ecology and Evolution* 8: 146-154.
- 34 **Smallegange IM**, van der Ouderaa IBC, Tibiriça Y. 2016. The effect of yearling, juvenile and adult survival on reef manta ray (*Manta alfredi*) demography. *PeerJ* 4:e2370.
- 33 ⁽ⁱ⁾ **Smallegange IM**. 2016. Life History Trade-offs. In: Kliman, R.M. (ed.), *Encyclopedia of Evolutionary Biology*. Vol. 2, pp. 390–393. Oxford: Academic Press.
- 32 Deere JA, Coulson T, **Smallegange IM**. 2015. Life history consequences of the facultative expression of a dispersal life stage in the phoretic bulb mite (*Rhizoglyphus robini*). *PLoS ONE* 10(9): e0136872.
- 31 **Smallegange IM**, Egas, CJM. 2015. Good for the group? Explaining apparent group-level selection. *Trends in Ecology & Evolution* 30: 379-381
- 30 ⁽ⁱ⁾ **Smallegange IM**, Deere JA. 2014. Eco-evolutionary interactions as a consequence of selection on a secondary sexual trait. *Advances in Ecological Research* 50: 145-169.
- 29 Leigh DM, **Smallegange IM**. 2014. Effects of variation in nutrition on male morph development in the bulb mite *Rhizoglyphus robini*. *Experimental and Applied Acarology* 64: 159-170.
- 28 **Smallegange IM**, Deere JA, Coulson T. 2014. Correlative changes in life-history variables in response to environmental change in a model organism. *American Naturalist* 186: 784-797.
- 27 Deere JA, **Smallegange IM**. 2014. Does frequency-dependence determine male morph survival in the bulb mite, *Rhizoglyphus robini*? *Experimental and Applied Acarology* 62: 425-436.
- 26 **Smallegange IM**, Johansson J. 2014. Life history differences favour evolution of male dimorphism in competitive games. *American Naturalist* 183: 188-198.
- 25 **Smallegange IM**, Coulson T. 2013. Towards a general, population-level understanding of eco-evolutionary change. *Trends in Ecology & Evolution* 28: 143-148.
- 24 Johansson J, **Smallegange IM**, Jonzén N. 2012. An eco-evolutionary model for demographic and phenological responses in migratory birds. *Biology* 1: 639-657.
- 23 **Smallegange IM**, Charalambous M, Thorne N. 2012. Fitness trade-offs and the maintenance of alternative male morphs in the bulb mite (*Rhizoglyphus robini*). *Journal of Evolutionary Biology* 25:972-980.
- 22 **Smallegange IM**, Coulson T. 2011. The stochastic demography of two coexisting male morphs. *Ecology* 92:755-764.
- 21 **Smallegange IM**. 2011. Complex environmental effects on the expression of alternative reproductive phenotypes in the bulb mite. *Evolutionary Ecology* 25: 857-873.
- 20 **Smallegange IM**. 2011. Effects of paternal phenotype and environmental variability on age and size at maturity in a male dimorphic mite. *Naturwissenschaften* 98: 339-346.
- 19 Godsall B, **Smallegange IM**. 2011. Assessment games in the mangrove tree-dwelling crab, *Selatium brockii* (De Man, 1887). *Crustaceana* 84: 1697-1718.

- 18 **Smallegange IM**, van der Meer J, Fiedler W. 2011. Population dynamics of three songbird species in a nestbox population in Central Europe show effects of density, climate and competitive interactions. *Ibis* 153: 806-817.
- 17 **Smallegange IM**, van der Meer J, Sabelis MW. 2010. 'Take-away' foraging spatially uncouples predator and prey-attack distributions. *Journal of Animal Ecology* 79: 769-776.
- 16 **Smallegange IM**, van der Meer J. 2010. Testing a stochastic version of the Beddington-DeAngelis functional response in foraging shore crabs. *Marine Biology* 157: 1027-1040.
- 15 **Smallegange IM**, Fiedler W, Köppen U, Geiter O, Barlein F. 2010. Tits on the move: exploring the impact of environmental change on blue tit and great tit migration distance. *Journal of Animal Ecology* 79: 350-357.
- 14 ⁽ⁱ⁾ **Smallegange IM**, Coulson T. 2009. Unifying ecological and evolutionary dynamics through experimental stochastic demography. *Israel Journal of Ecology and Evolution* 55: 199-205.
- 13 **Smallegange IM**, van Noordwijk CGE, van der Meer J, van der Veer HW. 2009. Spatial distribution of shore crab *Carcinus maenas* in an intertidal environment in relation to their morphology, prey availability and competition. *Marine Ecology Progress Series* 392: 143-155.
- 12 **Smallegange IM**, van der Meer J. 2009. The distribution of unequal predators across food patches is not necessarily (semi)truncated. *Behavioral Ecology* 20: 525-534.
- 11 van der Meer J, **Smallegange IM**. 2009. A stochastic version of the Beddington-DeAngelis functional response: modelling interference for a finite number of predators. *Journal of Animal Ecology* 78: 134-142.
- 10 **Smallegange IM**, Hidding B, Eppenga JMA, van der Meer J. 2008. Optimal foraging and risk of claw damage: how flexible are shore crabs in their prey size selectivity? *Journal of Experimental Marine Biology and Ecology* 367: 157-163.
- 9 **Smallegange IM**, Tregenza T. 2008. Local competition between foraging relatives: growth and survival of bruchid beetle larvae. *Journal of Insect Behavior* 21: 375-386.
- 8 **Smallegange IM**, van der Meer J. 2007. Interference from a game theoretical perspective: shore crabs suffer most from equal competitors. *Behavioral Ecology* 18: 215-221.
- 7 **Smallegange IM**, Sabelis MW, van der Meer J. 2007. Assessment games in shore crab fights. *Journal of Experimental Marine Biology and Ecology* 351: 255-266.
- 6 **Smallegange IM**, van der Meer J, Kurvers RHJM. 2006. Disentangling interference competition from exploitative competition in a crab-bivalve system using a novel experimental approach. *Oikos* 113: 157-167.
- 5 **Smallegange IM**, van der Meer J. 2003. Why do shore crabs not prefer the most profitable mussels? *Journal of Animal Ecology* 72: 599-607.
- 4 Riebel K, **Smallegange IM**. 2003. Does zebra finch (*Taeniopygia guttata*) preference for the (familiar) father's song generalize to the songs of unfamiliar brothers? *Journal of Comparative Psychology* 117: 61-66.
- 3 **Smallegange IM**, Brunsting AMH. 2002. Food supply and demand, a simulation model of the functional response of grazing ruminants. *Ecological Modelling* 149: 179-192.
- 2 Riebel K, **Smallegange IM**, Terpstra NJ, Bolhuis JJ. 2002. Sexual equality in zebra finch song preference: evidence for a dissociation between song recognition and production learning. *Proceedings of the Royal Society London B* 269: 729-733.
- 1 Agoramoorthy G, **Smallegange I**, Spruit I, Hsu MJ. 2000. Swimming behaviour among bonnet macaques in Tamil Nadu. *Folia Primatologica* 71: 152-153.

In revision or submission

- **Smallegange IM**, Tava S, Dixon V, Stott I. 2025. Constructing the fast-slow continuum: energetic systems and agency in fishes and reptiles. *Ecology Letters*.
- Dixon V, **Smallegange IM***. 2025. From form to function: Morphology as a proxy for life history and population performance in fish. *Journal of Animal Ecology*.
<https://doi.org/10.1101/2025.11.12.688009>
- Edwards LHA, **Smallegange IM**. Local resource heterogeneity drives density-dependent dispersal expression in a phoretic mite. *Ecology & Evolution*.
<https://doi.org/10.1101/2025.07.29.667385>

Preprints

- Romeijn J, **Smallegange IM***. 2022. Exploring how the fast-slow pace of life continuum and reproductive strategies structure microorganism life history variation. *Preprint*.
<https://doi.org/10.1101/2022.11.28.517963>
- Rhebergen FT, **Smallegange IM**. 2021. Facultative release from developmental constraints through polyphenism promotes adaptively flexible maturation. *Preprint*.
<https://doi.org/10.1101/2021.06.14.448392>
- Rhebergen FT, Wijstma M, **Smallegange IM**. 2021. Size-structured mating niche differentiation in the male-polyphenic mite *Rhizoglyphus robini*. *Preprint*.
<https://doi.org/10.1101/2021.12.24.474119v1>

Popular science

- **Smallegange IM**, Berg MP. 2020. A slow pace of life makes animals more sensitive to unpredictable climate variations. *Amsterdam Science* 11:3
- **Smallegange IM**. 2011. Waddenacademieprijs voor 'afhaalchinees' in de Waddenzee. *De Waddenacademie – KNAW Jaarverslag 2009 & 2010*. p. 52-53 (in Dutch)
- **Smallegange IM**. 2007. Experimenten met Strandkrabben. *Kunst en Wetenschap* (Dec. issue): p. 9-10 (in Dutch)

PhD thesis

Smallegange IM. 2007. Interference competition and patch choice in foraging shore crabs. *PhD thesis*. University of Amsterdam, The Netherlands. ISBN 978-90-7689474-4. 292 pp

Conference abstract

Riebel K, **Smallegange IM**, Terpstra NJ, Bolhuis JJ. 2001. Female and male zebra finch siblings do not differ in their adult preferences for the father's song. *Advances in Ethology* 36:251.