

Ruan van Mazijk, *Curriculum vitae*

MSc candidate, Dept. of Biological Sciences, University of Cape Town

2018-07-19

I am curiosity driven, interested in plant and animal phylogenetics and systematics, community ecology, plant ecophysiology, and the effects of climate change on the world's biota. I enjoy applying numerically and statistically grounded methods in these fields. My long-term goals are careers in research, academia, and teaching.

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 Twitter and  GitHub (@ruanmazijk)

 LinkedIn,  ResearchGate and  Mendeley

Current positions



MSc candidate (Dept. of Biological Sciences, University of Cape Town) (2018–present). Dissertation title: The effects of genome size on plant hydraulic ecophysiology, habitat, and phenology in Cape Schoenoid sedges (Cyperaceae: Schoeneae). Principle supervisor: Associate Prof A.M. Muasya. Co-supervisors: Associate Prof G.A. Verboom and Associate Prof A.G. West.

Tutor for Study Design & Data Analysis for Scientists (STA2007F/S/H) (UCT) (2017–present).

Assistant tutor for Bionumeracy (STA1007S) R practicals (UCT) (2016–present).

Education

BSc Hons in Biological Sciences (UCT) (2017). Project title: The role of environmental heterogeneity in determining plant species richness in the Greater Cape Floristic Region and the Southwest Australia Floristic Region. Supervisors: Associate Prof M.D. Cramer and Associate Prof G.A. Verboom. Graduated with distinction.

BSc (UCT) (2016). Majors: Ecology & Evolution, Applied Biology. Graduated with distinction in both majors and the degree as a whole.

National Senior Certificate (Fairmont High School, Durbanville, South Africa) (2013). Bachelor's Pass with honours and 6 distinctions.

Publications

The role of environmental heterogeneity in determining plant species richness in the Greater Cape Floristic Region and the Southwest Australia Floristic Region (In preparation), with Associate Prof M.D. Cramer and Associate Prof G.A. Verboom.

Isotopic analysis of Liesbeeck River stream-water during a high-intensity winter-rainfall event, in order to ascertain the water's source (In review), with L.K. Smythe, E. Weideman, and Associate Prof A.G. West.

Professional affiliations

South African Association of Botanists (SAAB) member (2017–present).

Southern African Society for Systematic Biology (SASSB) (2018–present).

Golden Key International Honour Society member (2015–present).

Funding & awards

Scholarships & bursaries

South African Association of Botanists (SAAB) MSc Student Bursary (inaugural recipient) (R20,000 p.a.) (2018, 2019).

Dorothy Cameron Scholarship (R20,000 p.a.) (2018).

UCT Masters Research Scholarship (R25,000 p.a.) (2018).

DST-NRF Innovation Honours Scholarship (R60,000 p.a.) (2017).

South African Association of Botanists (SAAB) Honours Scholarship (R10,000 p.a.) (2017).

UCT Science Faculty Scholarship (R15,000 p.a.) (2015, 2016).

Awards & honours

Dick & Dorothy Borchers Prize (R1,000 p.a.) (UCT) (2015) for the highest standard in second year Biological Sciences.

Dean's Merit List (UCT) (2014–2016).

Class Medals (top of the class) for five Biological Sciences undergraduate courses at UCT (2014–2016). Namely:

- Evolutionary Biology (BIO3016S) (2016)
- Life on Land: Plants (BIO2012S) (2015)
- Life on Land: Animals (BIO2011S) (2015)
- Life in the Sea (BIO2013F) (2015)
- Biological Diversity (BIO1004S) (2014)

Other academic activities

Prior tutorial & leadership experience

Open Day volunteer for the Dept. of Biological Sciences (UCT) (2017-04-22, 2018-04-21)

Departmental Representative for the Dept. of Biological Sciences (UCT) (2016).

Class Representative for three Biological Sciences undergraduate courses at UCT (2015–2016). Namely:

- Evolutionary Biology (BIO3016S) (2016)
- Ecology (BIO3015F) (2016)

- Life on Land: Plants (BIO2012S) (2015)

Selected to give student feedback for curriculum-restructuring within the Dept. of Biological Sciences (UCT) (2016-08). Related to roles as Class/Dept. Representative—see above. Selected by: Associate Prof A.G. West (UCT).

Selected to give student feedback for *Biology: How Life Works* (2nd edition) (2016-05) (Morris et al., 2016. W.H. Freeman & Co., Macmillan Education). Selected by: Dr R. Kelly-Laubscher (UCT).

Hot-seat tutor for Mathematics for Biology, Earth, and Environmental Sciences (MAM1004F/S) (UCT) (2015).

Research assistance

Assessing the current available data for the soils of the Greater Cape Floristic Region (2016-06–present), with L. Wootton. Part of “Biodiversity and Environmental Change in the Cape Floristic Region” Supervisor: Associate Prof M.D. Cramer (UCT).

Monitoring *Mimetes* spp. & *Leucospermum* spp. populations on the Cape Peninsula (2017-01–02), with L. Wootton. Supervisor: Dr J. Slingsby (SAEON/SANBI).

Legume symbiotic rhizobia culturing and field sampling (2015-12). Supervisors: M. Dlodlu (UCT) and Associate Prof A.M. Muasya (UCT).

Workshop & conference attendance

Assistant tutor for short course *SEEC-ACCESS Introduction to statistical modelling and data analysis* (2018-07-18–20). Organiser: Associate Prof R. Altwegg (UCT).

Presenter at *Pint of Science Cape Town* (2018-05-16). I presented hypotheses concerning the role of genome size in plant water use and ecology. pintofsciencesa.wixsite.com

Attendee at *satRday Cape Town* (2018-03-17). capetown2018.satrdays.org

Presenter at workshop *Biodiversity and Environmental Change in the Cape Floristic Region* (2017-01-24). Organiser: Associate Prof L. Gillson (UCT). I presented a progress report on “Development of soil atlas for the Greater Cape Floristic Region”, with L. Wootton.

Attendee at workshop *Spatial Point Process Modelling for Ecological Survey Data, with “inlabru”* (2017-01-11–13). Instructors: David Borchers, Janine Illian (CREEM, St Andrews University), and Fabian Bachl (University of Edinburgh).

Skills

Extended experience with:

- Apple macOS
- MS Windows, MS Office
- R, RStudio, RMarkdown, “tidyverse” packages
- Git, GitHub

Fluent in both English and Afrikaans.

Animal Ethics Course certified by South African Veterinary Council (part of BSc Hons general coursework) (2017-04).

Miscellaneous

Botanical Society of South Africa (BotSoc) member (2017–present).

UCT Birding Club member (2016–2017).

UCT Wine & Culture Society member (2016–present).

Cape Wine Ambassador qualification (2016). Conferred by: Clive Torr.

UCT Biological Society member (2015).

Two Oceans Aquarium *Young Biologist* Volunteer (2013–2014).

References

Associate Prof R. Altwegg, Dept. of Statistical Sciences, UCT. Head of Centre for Statistics in Ecology, the Environment and Conservation. +27 21 650 5750, res.altwegg@uct.ac.za.

Prof T.A. Hedderson, Dept. of Biological Sciences, UCT. +27 21 650 4037, terry.hedderson@uct.ac.za.