

Ruan van Mazijk, *Curriculum vitae*

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

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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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 LinkedIn  ResearchGate  Mendeley

Education



MSc candidate (UCT) (2018–present), on *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.

BSc Hons in Biological Sciences (UCT) (2017), on *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. Distinction in both majors & the degree as a whole.

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

Publications

Cramer, M.D., van Mazijk, R., Wootton, L.M., Verboom, G.A. (In prep.). Edaphic diversity in a global biodiversity hotspot.

Van Mazijk, R., Cramer, M.D., Verboom, G.A. (In prep.). The role of environmental heterogeneity in determining plant species richness in the Greater Cape Floristic Region & the Southwest Australia Floristic Region. To submit to *Journal of Biogeography*.

Van Mazijk, R., Smythe, L.K., Weideman, E.A., West, A.G. (In press). Isotopic tracing of stormwater in the urban Liesbeek River. *Water SA*, 44(4).

Professional affiliations

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

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

Golden Key International Honour Society (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 (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)

Leadership experience

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

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

- *Evolutionary Biology* (BIO3016S) (2016)
- *Ecology* (BIO3015F) (2016)
- *Life on Land: Plants* (BIO2012S) (2015)

Teaching

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

Tutor for *Study Design & Data Analysis for Scientists* (STA2007F/S/H) (UCT) (2017–present). Convenor: Associate Prof R. Altwegg (UCT).

Assistant tutor for *Bionumeracy* (STA1007S) R practicals (UCT) (2016–present). Convenor: Associate Prof R. Altwegg (UCT).

Hot-seat tutor for *Mathematics for Biology, Earth, and Environmental Sciences* (MAM1004F/S) (UCT) (2015). Convenor: T. van Heerden. Hot-seat organiser: Dr R. Moolman.

Research assistance

Field assistant for sampling *Schoenus* spp. (Cyperaceae) specimens for genome-size analyses and taxonomic study (2018–present), with Dr T.L. Elliott (McGill University). Supervisor: Associate Prof A.M. Muasya (UCT).

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

Field assistant for monitoring *Mimetes* spp. & *Leucospermum* spp. (Proteaceae) populations on the Cape Peninsula (January–February 2017), with L.M. Wootton. Supervisor: Dr J.A. Slingsby (SAEON/SANBI).

Laboratory, field and data processing assistant for legume symbiotic rhizobia culturing and field sampling (December 2015). Supervisors: Dr M. Dlodlu (UCT) and Associate Prof A.M. Muasya (UCT).

Workshop & conference attendance

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

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

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

Attendee at workshop *Spatial Point Process Modelling for Ecological Survey Data with “inlabru”* (11–13 January 2017). Instructors: Prof D.L. Borchers, Dr J.B. Illian (CREEM, St Andrews University), and Dr F. 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) (April 2017).

Miscellaneous

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

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

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

UCT Birding Club member (2016–2017).

Selected to give student feedback for curriculum-restructuring within the Dept. of Biological Sciences (UCT) (August 2016). 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) (May 2016) (Morris et al., 2016. W.H. Freeman & Co., Macmillan Education). Selected by: Dr R. Kelly-Laubscher (UCT).

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 (SEEC)
- res.altwegg@uct.ac.za
- +27 21 650 5750

Prof T.A. Hedderson

- Dept. of Biological Sciences, UCT
- terry.hedderson@uct.ac.za
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