

Profile

Passionate biologist with extensive experience working in carnivore conservation and ecology in Southern Africa.

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Samual Williams

PhD, MRes, BSc (Hons.), FLS, MRSB, CBiol, CSci, AFHEA, Pr.Sci.Nat.

Education

Doctor of Philosophy (PhD) in Biological Anthropology, Durham University - 2012 Thesis title: The impact of land reform in Zimbabwe on the conservation of cheetahs and other large carnivores.

Master of Research (MRes) in Biological Science, University of Manchester - 2004 (Fully funded by BBSRC grant)

Thesis title: Studies of tropical vertebrates: Ecology, behaviour and morphology.

Bachelor of Science with Honours (BSc Hons.) in Biological Science, University of Manchester - 2003 (2:1)

Thesis title: Effect of mirror image stimulation on the behaviour of mandrills (*Mandrillus sphinx*) (awarded a first). Modules included physiology and ecology.

Employment

2020-present: Associate Staff Editor, PeerJ

Working with a leading publisher of open access scientific journals, I help to efficiently publish the world's knowledge.

2012-present: Honorary Research Associate, Durham University, UK

My affiliation with Durham University forms strong links with a leading international research institution.

2017-2019: Postdoctoral research fellow, Department of Zoology, University of Venda, South Africa

Working with Lourens Swanepoel, my research focused on the conservation and ecology of carnivores in Africa, human-wildlife interactions, and the ecosystem services provided by predators.

2011-2016: Research Coordinator, Durham University Primate and Predator Project, South Africa

I managed a field research and conservation project, gaining five years of experience conducting fieldwork on ecology, conservation, and animal behaviour, using the carnivore and primate communities of the Soutpansberg Mountains as a model system.

2006-2009: Cheetah Project Coordinator, Dambari Wildlife Trust, Zimbabwe

I coordinated a project in Zimbabwe to conduct research and community outreach to enhance cheetah conservation.

2005-2006: Research Associate, DanioLabs, Cambridge, UK

I developed skills in histology, microscopy, and animal husbandry using the zebrafish (*Danio rerio*) as a model organism for drug discovery, for a spinoff company from the University of Cambridge.

2003-2006: Field Team Leader, Operation Wallacea, Indonesia & Honduras

I led research teams to study primate behaviour and ecology in several different tropical forest environments. This included teaching students from a diverse array of backgrounds.

Research experience

My research interests focus on carnivores in the Anthropocene, with a mission to determine how carnivores can benefit people (through ecosystem services), and how people can benefit carnivores (through biodiversity conservation).

I have eight years of fieldwork experience on carnivore ecology, biodiversity conservation, and animal behaviour, specialising in methods such as camera trapping, wildlife capture and telemetry, spoor tracking, behavioural sampling, and stakeholder interviews. I am proficient in data analysis in R and the use of geographical information systems.

In addition to sharing my research with the scientific community through publishing journal articles and presenting at academic conferences, I also ensure research impact by engaging with authorities to influence policy makers (for example co-authoring several conservation assessments in The Red List of Mammals of South Africa, Swaziland and Lesotho).

I strive to enhance the public understanding of science by engaging with the members of the public and the media, resulting in my research being covered by international and domestic news outlets such as <u>The Guardian</u>, <u>The Independent</u>, and <u>AFP</u>.

Other information

I am a member of a number of learned societies including:

- Fellow of the Linnean Society of London (FLS)
- Member of Royal Society of Biology (MRSB)
- · Chartered Biologist (CBiol) and Chartered Scientist (CSci)
- Associate Fellow of the Higher Education Academy (AFHEA)
- · registered Professional Natural Scientist (Pr.Sci.Nat) with SACNASP
- Member of the Society for Conservation Biology
- Member of the Southern African Wildlife Management Association
- Member of the Zoological Society of Southern Africa

Recent publications

Williams, K.S., Pitman, R.T., Mann, G.H., Whittington-Jones, G., Comley, J., Williams S.T., Hill, R.A., Balme, G.A., Parker, D.M. (in press) Utilising bycatch camera trap data for broad-scale occupancy and conservation: A case study on brown hyaena (*Parahyaena brunnea*). Oryx.

Constant, N.L., Swanepoel, L., Williams, S.T., Soarimalala, V., Goodman, S.M., Massawe, A.T., Mulungu, L.S., Makundi, R.H., Mdangi, M.E., Taylor, P.J., Belmain, S.R. (2020) A comparative assessment on rodent impacts and cultural perceptions of ecologically based rodent management in three Afro-Malagasy farming regions. Integrative Zoology. doi: <u>10.1111/1749-4877.12447</u>

Ayers, A.M., Allan, A.T.L., Howlett, C., Tordiffe, A.S.W., Williams, K.S., Williams, S.T., Hill, R.A. (2020) Illuminating movement? Nocturnal activity patterns in chacma baboons. Journal of Zoology 310 (4): 287-297. doi: <u>10.1111/jzo.12747</u>

Williams, S.T., Collinson, W., Patterson-Abrolat, C.,Marneweck, D.G, Swanepoel, L.H. (2019) Using road patrol data to identify factors associated with carnivore roadkill counts. PeerJ 7: e6650. doi: <u>10.7717/peerj.6650</u>.

Baauw, A.H., Heyne, H., Williams, K.S., Hill, R.A., Heitkönig, I.M.A., Williams, S.T. (2019) First records of *Hyalomma rufipes* and *Ixodes neitzi* (Acari: Ixodidae) found on large carnivores in South Africa. Ticks and Tick-Borne Diseases 10 (1): 128-131. doi: <u>10.1016/j.ttbdis.2018.08.011</u>.

Loock, D.J.E.*, Williams, S.T.*, Emslie, K.W., Matthews, W.S., Swanepoel, L.H. (2018) High carnivore population density highlights the conservation value of industrialised sites. Scientific Reports 8: 1-9. doi: <u>10.1038/s41598-018-34936-0</u>. * joint lead authors

Williams, S.T., Maree, N., Taylor, P., Belmain, S.R., Keith, M., Swanepoel, L.H. (2018) Predation by small mammalian carnivores in rural agro-ecosystems: An undervalued ecosystem service? Ecosystem Services 30: 362-371. doi: 10.1016/j.ecoser.2017.12.006.

Parchizadeh, J., Shilling, F., Gatta, M., Bencini, R., Qashqaei, A.T., Adibi, M.A., Williams, S.T. (2018) Roads threaten Asiatic cheetahs in Iran. Current Biology 28: R1141–R1142. doi: <u>10.1016/j.cub.2018.09.005</u>.

Williams. K.S., Williams S.T., Fitzgerald L.E., Sheppard E.C., Hill R.A. (2018) Brown hyaena and leopard diets on private land in the Soutpansberg Mountains, South Africa. African Journal of Ecology 56 (4): 1021-1027. doi: <u>10.1111/</u><u>aje.12539</u>.

Williams S.T., Maree N., Taylor P., Belmain S.R., Keith M., Swanepoel L.H. (2018) Camera trap and questionnaire dataset on ecosystem services provided by small carnivores in agro-ecosystems in South Africa. Data in Brief 18: 753–759. doi: <u>10.1016/j.dib.2018.03.071</u>.

Parchizadeh, J., Gatta, M., Bencini, R., Adibi, M., Williams, S.T. (2018). Urgent action required to conserve the Critically Endangered Asiatic cheetah *Acinonyx jubatus venaticus*. Oryx 52 (2): 211-212. doi: <u>10.1017/S0030605318000108</u>.

Parchizadeh J., and Williams S.T. (2018) Waterbirds targeted in Iran's wetlands. Science 359 (6378): 877–878. doi: <u>10.1126/science.aar8560</u>.

Williams, S.T., Williams, K.S., Lewis, B.P., Hill, R.A. (2017) Population dynamics and threats to an apex predator outside protected areas: implications for

carnivore management. Royal Society Open Science 4 (4): 1-10. doi: <u>10.1098/</u> rsos.161090.

Pitman, R.T., Fattebert, J., Williams, S.T., Williams, K.S., Hill, R.A., Hunter, L.T.B., Robinson, H., Power, J., Swanepoel, L., Slotow, R., Balme, G.A. (2017) Cats, connectivity and conservation: Incorporating datasets and integrating scales for wildlife management. Journal of Applied Ecology 54: 1687–1698. doi: 10.1111/1365-2664.12851.

Parchizadeh, J. and Williams, S.T. (2017). Save Iran's cheetah from extinction. Nature 552 (7683): 31. doi: <u>10.1038/d41586-017-08183-8</u>.

Pitman, R., Fattebert, J., Williams, S.T., Williams, K.S., Hill, R., Hunter, L., Slotow, R., Balme, G. (2017) The conservation costs of game ranching. Conservation Letters 10 (4): 403–413. doi: <u>10.1111/conl.12276</u>.

Swanepoel, L.H., Balme, G., Williams, S., Power, R.J., Snyman, A., Gaigher, I., Senekal, C., Martins, Q., Child, M. (2017) A conservation assessment of *Panthera pardus*. In: M.F. Child, L.R., D. Raimondo, E. Do Linh San, J. Selier and H. Davies-Mostert (eds), The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust Johannesburg. doi: <u>10.5281/zenodo.573259</u>.

Ehlers-Smith, Y., Williams, S., Relton, C., Child, M.F. (2017) A conservation assessment of *Cephalophus natalensis*. In: M.F. Child, L.R., D. Raimondo, E. Do Linh San, J. Selier and H. Davies-Mostert (eds), The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust Johannesburg. doi: <u>10.5281/</u><u>zenodo.809075</u>.

Williams, S.T., Williams, K.S., Joubert, C.J., Hill, R.A. (2016) The impact of land reform on the status of large carnivores in Zimbabwe. PeerJ 4: e1537. doi: 10.7717/peerj.1537.