



2017 RESEARCH BIBLIOGRAPHY



Journal articles

Banks, A.C., Hunt, S.E., Gorroño, J., Scanlon, T., Woolliams, E.R. & Fox, N.P. 2017. A comparison of validation and vicarious calibration of high and medium resolution satellite-borne sensors using RadCalNet. *Proceedings SPIE 10423, Sensors, Systems, and Next-Generation Satellites XXI*, 104231A; doi:10.1117/12.2278528

Becker, F. S., Tolley, K. A., Measey, G. J. & Altwegg, R. 2017. Extreme climate-induced life-history plasticity in an amphibian. *American Naturalist* (In press).

Becker, F. S. & Hopkins, R.W. 2017. The rediscovery of a lost frog: *Arthroleptis troglodytes* Poynton, 1963. *African Zoology* 52,3: 183-187, doi:10.1080/15627020.2017.1370982

Cohen-Zada, A.L., Maman, S. & Blumberg, D.G. 2017. Earth aeolian wind streaks: Comparison to wind data from models and stations. *Journal of Geophysical Research: Planets* 122: 1119–1137, doi:10.1002/2016JE005242.

Curtis, B.A. 2017. The status of *Faidherbia albida* trees in the Hoanib River, Namibia. *Namibian Journal of Environment* 1-A: 77-91.

Dansie, A.P.& Wiggs, G.F.S., Thomas, D.S.G. 2017. Iron and nutrient content of wind-erodible sediment in the ephemeral river valleys of Namibia. *Geomorphology* 290: 335–346.

Dansie, A.P., Wiggs, G.F.S., Thomas, D.S.G. & Munkittrick, K.R. 2017 Spatial variability of ocean fertilising nutrients in the dust-emitting ephemeral river catchments of Namibia. *Earth Surface Processes and Landforms* doi:10.1002/esp.4207

Duan, S.-B., Li, Z-L., Cheng, J.& Leng, P. 2017. Cross-satellite comparison of operational land surface temperature products derived from MODIS and ASTER data over bare soil surfaces. *ISPRS Journal of Photogrammetry and Remote Sensing* 126: 1–10.

Ehlmann, B.L. *et al.* 2017. Chemistry, Mineralogy, and Grain Properties at Namib and High Dunes, Bagnold Dune Field, Gale Crater, Mars: A Synthesis of Curiosity Rover Observations. *Journal of Geophysical Research.* **(This is the Gobabeb dune area on Mars, not Earth!)**

Eifler, M.A. Marchand, R., Eifler, D.A. & Malela, K.2017. Habitat Use and Activity Patterns in the Nocturnal Gecko, *Chondrodactylus turneri*. *Herpetologica* 73(1): 43–47.

Evans, J.S., Eifler, D.A. & Eifler, M.A. 2017. Sand-diving as an escape tactic in the lizard *Meroles anchietae*. *Journal of Arid Environments* 140: 1–5.

Gunnigle, E., Frossard, A., Ramond, J.-B., Guerrero, L., Seely, M. & Cowan, D.A. 2017. Diel-scale temporal dynamics recorded for bacterial groups in Namib Desert soil. *Nature Scientific Reports* 7, 40189 doi:10.1038/srep40189

Hesse, U., van Heusden, P., Kirby, B.M., Olonade, I, van Zyl, L.J.& Trindade, M. 2017. Virome Assembly and Annotation: A Surprise in the Namib Desert. *Frontiers in Microbiology* 8:13. doi: 10.3389/fmicb.2017.00013

Hinchcliffe, G., Bolland-Breen, B. Cowan, D.A., Doshi, A., Gillman, L.N., Maggs-Kolling, G., de los Ríos-Murillo, A. & Pointing, S.B. 2017. Advanced photogrammetry to assesslichen colonisation in the hyper-arid Namib Desert. *Frontiers in Microbiology* 8, 2083 doi:10.3389/fmicb.2017.02083

Hofman, M. & Seckmeyer, G. 2017. A New Model for Estimating the Diffuse Fraction of Solar Irradiance for Photovoltaic System Simulations. *Energies* 2017, 10(2), 248; doi:10.3390/en10020248

Ileka, H., Zongwe, D. & Reuther, K. 2017. Rural Electrification with Hybrid Mini-Grids: Finding an Efficient and Durable Ownership Model. In: Zongwe, D.P. & Dausab, Y. (eds). *The Law Reform and Development Commission of Namibia at 25: A Quarter Century of Social Carpentry*.

Jiménez, C., Prigent, C., Ermida, S.L. & Moncet, J.-L. 2017. Inversion of AMSR-E observations for land surface temperature estimation: 1. Methodology and evaluation with station temperature. *Journal of Geophysical Research* 122(6): 3330–3347.

Johnson, R.M., Ramond, J.-B., Gunnigle, E., Seely, M. & Cowan, D.A. 2017. Namib Desert edaphic bacterial, fungal and archaeal communities assemble through deterministic processes but are influenced by different abiotic parameters. *Extremophiles* 21(2): 381–392.

Kaseke, K.F., Tian, C., Wang, L., Seely, M., Vogt, R., Wassenaar, T., & Mushi, R. 2017. Fog Spatial Distributions over the Central Namib Desert - An Isotope Approach. *Aerosol and Air Quality Research*, doi:10.4209/aaqr.2017.01.0062

Kaseke, K.F., Wang, L. & Seely, M.K. 2017. Nonrainfall water origins and formation mechanisms. *Science Advances* 3(3), e1603131; doi:10.1126/sciadv.1603131

Kirchhof, S., Hetem, R. S., Lease, H. M., Miles, D., Mitchell, D., Müller, J., Rödel, M.-O., Sinervo, B., Wassenaar, T. & Murray, I. W. 2017. Thermoregulatory behaviour and high thermal preference buffer impact of climate change in a Namib Desert lizard. *Ecosphere* 8(12):e02033. 10.1002/ecs2.2033

Kirchhof, S., Penner, J., Rödel, M.-O. & Müller, J. 2017. Resolution of the types, diagnostic features, and distribution of two easily confused Sand Lizards, *Pedioplanis laticeps* (Smith, 1845) and *P. burchelli* (Duméril & Bibron, 1839) (Squamata: Lacertidae). *Zootaxa* 4318(1): 82–109, doi.org/10.11646/zootaxa.4318.1.3

Krug, J.H.A. 2017. Tree water potentials supporting an explanation for the occurrence of *Vachellia erioloba* in the Namib Desert (Namibia). *Forest Ecosystems* DOI 10.1186/s40663-017-0107-x

Krüger, G.H.J., Jordaan, A., Tiedt, L.R., Strasser, R.J., Kilbourn Louw, M. & Berner, J.M. 2017. Opportunistic survival strategy of *Welwitschia mirabilis*: recent anatomical and ecophysiological studies elucidating stomatal behaviour and photosynthetic potential. *Botany* 95: 1109–1123, doi.org/10.1139/cjb-2017-0095

Le, P.T., Makhalyane, T.P., Guerrero, L.D., Vikram, S., Van de Peer, Y. & Cowan, D.A. 2016. Comparative Metagenomic Analysis Reveals Mechanisms for Stress Response in Hypoliths from Extreme Hyperarid Deserts. *Genome Biology and Evolution* 8(9): 2737–2747.

Liptak, J., Keppel-Aleks, G. & Lindsay, K. 2017. Drivers of multi-century trends in the atmospheric CO₂ mean annual cycle in a prognostic ESM. *Biogeosciences* 14: 1383–1401.

Maggs-Kölling, G., Marais, E., Sherman, C., Doniger, T., Rentao, L. & Steinberger, Y. 2017. Profiling a soil free-living nematode community in an extreme desert ecosystem in Namibia. *Applied Soil Ecology* (submitted).

Meygret, A., Blanchet, G., Mounier, F. & Buil, C. 2017. The stars: an absolute radiometric reference for the on-orbit calibration of PLEIADES-HR satellites. *Proceedings SPIE* 10402, *Earth Observing Systems XXII*, 1040228 doi:10.1117/12.2272745

Ramond J-B., Baxter, J., Maggs-Kölling, G., Martínez-Alvarez, L., Read, D.A., León-Sobrino, C., Van der Walt, A.J. & Cowan, D.A. 2017. Microbial ecology of the Namib Desert. In: Rampelotto, P.H. (ed.), *Model ecosystems in extreme environments*. 25pp (Submitted).

Ravi, S., Wang, L., Kaseke, K.F., Buynevich, I.V. & Marais, E. 2017. Ecohydrological interactions within “fairy circles” in the Namib Desert: Revisiting the self-organization hypothesis. *Journal of Geophysical Research* 122 (2): 405–414.

Rowell, A., Thomas, D., Bailey, R., Stone, A., Garzanti, E. & Padoan, M. 2017. Controls on sand ramp formation in southern Namibia. *Earth Surface Processes and Landforms* doi: 10.1002/esp.4159

Scarino, B.R., Minnis, P., Chee, T., Bedka, K.M. & Yost, C.R. 2017. Global clear-sky surface skin temperature from multiple satellites using a single-channel algorithm with angular anisotropy corrections. *Atmospheric Measurement Techniques* 10: 351–371.

Scola, V., Ramond, J.B., Frossard, A., Zablocki, O., Adriaenssens, E.M., Johnson, R.M., Seely, M. & Cowan, D.A. 2017. Namib Desert Soil Microbial Community Diversity, Assembly, and Function Along a Natural Xeric Gradient. *Microbial Ecology* doi:10.1007/s00248-017-1009-8

Scott, L., Gil-Romera, G., Marais, E. & Brook, G.A. 2017. Pollen in fossil hyrax dung from Marine Isotope Stages 2 and 3 reveals past environments in Namibia. *Quaternary International* doi:10.1016/j.quaint.2017.06.054

Siepker, E.B.J.& Harms, T.M. 2017. On the potential value of interval deficient wind data. *Journal of Wind Engineering and Industrial Aerodynamics* 165, 100-114 doi.org/10.1016/j.jweia.2017.03.006

Vogt, R. 2017. Basic and other measurements of radiation at station Gobabeb (2017-03). Meteorology Climatology Remote Sensing, Dep. Umweltwissenschaften, Universität Basel, PANGAEA, doi:10.1594/PANGAEA.874803.

Von Holdt, J.R. & Eckhardt, F.D. 2017. Dust activity and surface sediment characteristics of the dustiest river in southern Africa: the Kuiseb River, Central Namib. *South African Geographical Journal*; doi:10.1080/03736245.2017.1339627

Von Holdt, J.R., Eckhardt, F.D. & Wiggs, G.F.S. 2017. Landsat identifies aeolian dust emission dynamics at the landform scale. *Remote Sensing of Environment* 198, 229–243; doi.org/10.1016/j.rse.2017.06.010

Wang, L., Kaseke, K.F.& Seely, M.K. 2017. Effects of non-rainfall water inputs on ecosystem functions. *WIREs Water* 2017, 4:e1179. doi: 10.1002/wat2.1179

Zablocki, O., Adriaenssens, E.M., Frossard, A., Seely, M., Ramond, J.-B. & Cowan, D. 2017. Metaviromes of Extracellular Soil Viruses along a Namib Desert Aridity Gradient. *Genome Announcements* 5(2) e01470-16; doi:10.1128/genomeA.01470-16

Zhou, J., Zhang, X., Zhan, W., Götsche, F.-M., Liu, S., Olesen, F.-S., Hu, W. & Dai, F. 2017. A Thermal Sampling Depth Correction Method for Land Surface Temperature Estimation from Satellite Passive Microwave Observation over Barren Land. *IEEE Transactions on Geoscience and Remote Sensing* doi:10.1109/TGRS.2017.2698828

Theses

Gerber, M. 2017. *Determining strategies of Acanthosicyos horridus (!nara) to exploit alternative atmospheric moisture sources in the hyper-arid Namib Desert*. M.Sc. Thesis (Environmental Sciences), North-West University. (Submitted, October 2017)

Gottlieb, T. R. 2017. *The contribution of fog to the moisture and nutritional supply of Arthraerua leubnitziae in the central Namib Desert, Namibia*. M.Sc. Thesis (Environmental and Geographical Sciences), University of Cape Town. (Submitted, November 2017)

Iiyambo, N.K. 2017. *Ecological niche partitioning and resource utilization in sympatric lacertid lizards; Meroles anchietae and M. cuneirostris of the Namib Desert, Namibia*. M.Sc. Thesis (Zoology), University of Pretoria (Submitted, December 2017).

Kirchhof, S. 2017. *Spatial and temporal diversity dynamics in Southern African lacertid lizard populations under climate change*. Ph.D. Dissertation, Humboldt University of Berlin, Berlin.

Leufen, L. 2017. *Die Meteorologie der namibischen Küste – Untersuchungen auf Grundlage eines Messtransektes*. Bachelor Thesis, Karlsruhe.

Li, B. 2017. *The impact of rainfall and non-rainfall on soil moisture dynamics in the Namib Desert*. M.Sc Thesis (Hydrology), Indianapolis University-Purdue University, Indianapolis.

Marks, T. 2017. *Bedtime for the Middle Stone Age: Land use, foraging strategies, and stone tool technology at the end of the Pleistocene in the Namib Desert, Namibia*. Ph.D. Dissertation (Anthropology), University of Iowa.

Morgan, B.E. 2017. *The ephemeral river as a linear oasis: remote sensing analysis of riparian vegetation in the Namib Desert*. B.A. Hons. (Geography) Thesis, Dartmouth College.

Uushona, E. 2017. *A phytochemical investigation of Namib Desert endemic Acanthosicyos horridus (!nara)*. M.Sc. Thesis (Biochemistry), University of Stellenbosch.