CURRICULUM VITAE

Current position: Postdoctoral Research Fellow, Leibniz Institute for Zoo and Wildlife Research, Alfred-Kowalke-Str 17, 10315 Berlin

Education

Ph.D. (Chancellor's Doctoral Research Medal) — **2015**
University of New England (UNE) — Armidale, Australia
Advisor: Prof. Fritz Geiser
Thesis: "Cardiorespiratory function and metabolism of heterothermic bats"

B.Sc. Research Honours (Zoology) — **2009**
University of Western Australia — Perth, Australia

B.Sc. (Zoology/Conservation Biology) — **2007**
University of Western Australia — Perth, Australia

Research Experience

Alexander von Humboldt Postdoctoral Research Fellow — **Sep 2017-June 2019**
Leibniz Institute for Zoo and Wildlife Research — Berlin, Germany
Advisor: PD Dr Christian Voigt
"Mapping the energetic constraints of urban bats- Heart rate, acceleration and energy expenditure from torpor to flight"

Postdoctoral Research Fellow
Sagol School of Neuroscience/Department of Zoology- Tel Aviv University — **Apr 2016-Aug 2017**
Advisor: Dr Yossi Yovel — Tel Aviv, Israel
"Energetics of flight- Using stable isotopes to validate the heart rate method in free-flying bats"

Research Assistant — **Apr-Jul 2015**
Centre of Excellence for Behavioural and Physiological Ecology UNE — Armidale, Australia
Energetic and thermal responses and foraging of small marsupials to fires. Thermal biology of free-ranging subtropical bats. Cold tolerance and roosting biology of temperate zone bats.

Field Assistant — **Mar 2015**
School of Environmental and Rural Sciences UNE — Boggabri, Australia
Birds and bats as insect pest management on cotton farms.

Field Assistant Internship — **Mar-Jul 2010**
Wild CRU/Edward Grey Institute Oxford University — Oxford, UK
Social networking, migration and disease transfer amongst bats. Breeding biology of tit populations in Wytham Woodland.

Teaching Experience

Associate Lecturer — **2018- Current**
Biology of Bats- Freie Universität — Berlin, Germany
25% lecturer for the graduate course on the Physiological Ecology of bats.

Associate Lecturer — **2017- Current**
Behavioral Ecology- Freie Universität — Berlin, Germany
50% lecturer for the graduate course on Behavioural Ecology.

Invited Lecturer — **2016**
Biology of Desert Bats- Ben Gurion University of the Negev — Sde Boker, Israel
Invited lecture on physiology of hibernation and torpor in bats.

Associate Lecturer (Course Coordinator) — **2013**
Ecological and Comparative Physiology- University of New England — Armidale, Australia

Primary lecturer and course coordinator for final level undergraduate course (ZOOL327). Developed course material, designed and organized intensive research schools for off campus students and weekly laboratory classes for on campus students to illustrate course concepts for the thermal biology section of the two-part course.

Lab Demonstrator/Teaching Assistant **2011-2013**
School of Science and Technology- University of New England Armidale, Australia
Led practical sessions and assessed essays for large classes (100+) first year undergraduate students in the course *Introductory Biology* (BIOL110).

Lab Demonstrator/Teaching Assistant
School of Science and Technology- University of New England **2011-2012**
Taught the laboratory section of second year undergraduate courses *Introductory Physiology I* (PSIO210) and *Introductory Physiology II* (PSIO220). Presented lab demonstrations and tutorials during weekly classes and intensive schools. Assessed laboratory reports and essays for up to 50 students per class each year. Armidale, Australia

Additional Qualifications

Principles of Aseptic Surgery in Small Laboratory Animals **2013**
Boxhill Institute Melbourne, Australia

Awards & Funding

Alexander von Humboldt European Research Stay for Lund University, Sweden (2018)
Alexander von Humboldt Postdoctoral Research Fellowship, Alexander von Humboldt Foundation/Leibniz Institute for Zoo and Wildlife Research, Berlin (2017-2019)
Sagol School of Neusroscience Postdoctoral Research Fellowship, Tel Aviv University (2016-2018)
School of Biology Postdoctoral Research Fellowship, Tel Aviv University (2016)
Chancellor's Medal for Outstanding Graduate Research, University of New England (2015)
Australian Postgraduate Award, University of New England (2011-2014)
PhD Completion Scholarship, University of New England (2014)
Higher Degree Research Fund, School of Environmental and Rural Sciences (2011-2014)
Best Student Presentation Prize, International Bat Research Conference, Costa Rica (2013)
Winner Three Minute Thesis Competition (3MT) and National Finalist (2011/2012)
3MT Travel Fund, School of Environmental and Rural Sciences (2011)

LIST OF PUBLICATIONS

Peer Reviewed:

Hume, T, Geiser, F, Körtner G, **Currie SE** & Stawski, C (2019) Responding to the weather: energy budgeting in a small mammal in the wild Current Zool.

Voigt, CC, Rosner, E, Guglielmo, CG, **Currie SE** (2019) Fatty acid profiles of the European migratory common noctule bat (*Nyctalus noctula*) The Science of Nature.

Currie SE, Méné-Saffrané L, & Fasel N (2019) Valuable carcasses: post-mortem preservation of fatty acid composition in heart tissue. Cons. Physiol. 7(1), doi 10.1093/conphys/coz005

Boukens B, Kristensen D, Filogonio R, Carreira L, Sartori M, **Currie SE**, Abe AS, Joyce W, Conner J, Opthof T, Crossley II D & Jensen B (2018) The electrocardiogram of vertebrates: evolutionary changes from ectothermy to endothermy. Prog. Biophys. Mol. Bio. doi:10.1016/j.pbiomolbio.2018.08.005

Currie SE (2018) No effect of season on the electrocardiogram of long eared bats (*Nyctophilus gouldi*) during torpor. J. Comp. Physio. B. doi:10.1007/s00360-018-1158-1

Voigt CC, **Currie SE,** Fritze M, Roeleke M & Lindecke O (2018) Conservation strategies for bats flying at high altitudes. Bioscience. doi:10.1093/biosci/biy040

Currie SE, Stawski C & Geiser F (2018) Cold-hearted bats- Cardiac function and metabolism during torpor at subzero temperatures in *Chalinolobus gouldii*. J. Exp. Biol. doi:10.1242/jeb.170894

Doty, AC, **Currie, SE**, Stawski, C & Geiser, F (2018) Can bats sense smoke during deep torpor? Physiology & Behavior doi:10.1016/j.physbeh.2017.12.019

Stawksi C, Hume T, Körtner G, **Currie SE**, Nowack J & Geiser F (2017) Post-fire recovery of the behaviour and physiology of a small marsupial. Biol. Lett. doi:10.1098/rsbl.2017.0036

Stawski C, & **Currie, SE** (2016) Effect of roost choice on winter torpor patterns of a free-ranging insectivorous bat. Aus. J. Zool., 64(2), 132-137 doi:10.1071/ZO16030

Doty AC, Stawski C, **Currie SE**, Geiser, F (2016) Black or white? Physiological implications of roost colour and choice in a microbat. J. Therm. Biol., 60, 162-170 doi:10.1016/j.jtherbio.2016.07.015

Currie SE, Körtner G & Geiser F (2015) Measuring subcutaneous temperature and differential rates of rewarming from hibernation and daily torpor in two species of bats. Comp. Biochem. Physiol. A, 190, 26-31.

Currie SE, Noy KB & Geiser F (2015) Passive rewarming from torpor in hibernating bats: minimizing metabolic costs and cardiac demands. Am. J. Physiol. Reg. Integr. Comp. Physiol, 308, R34-R41. doi:10.1152/ajpregu.00341.2014

Currie SE, Körtner G & Geiser F (2014) Heart rate as a predictor of metabolic rate in heterothermic bats. J. Exp. Biol., 217, 1519-1524.

Geiser F, **Currie SE**, O'Shea KA, & Hiebert SM (2014) Torpor and hypothermia: reversed hysteresis of metabolic rate and body temperature. Am. J. Physiol. Reg. Integr. Comp. Physiol, 307, R1324-R1329 doi:10.1152/ajpregu.00214.2014

Works Submitted and Works in Progress

Currie SE, Boonman, A, Troxell, S, Yovel, Y, Voigt CC (in review) The costs and limitations of maximal call intensities in echolocating bats. Proceedings of the Royal Society B.

Tatler, J, **Currie SE**, Casey, P, Scharf, A, Roshier, D, Prowse, TAA (submitted) Accelerometer informed

time-energy budgets reveal the importance of temperature to the activity of a wild, arid zone canid. Journal of Experimental Biology.

Conference Proceedings:

Currie SE (2019) Electrophysiology of bat hearts. Gegenbaur Symposium on Integrative Biology. University of Leiden, The Netherlands. Jan 25 2019.

Currie SE, Yovel, Y (2017) The costs of flight- getting to the heart of the matter. Batsheva de Rothschild Workshop on Linking Mechanics and Physiology in Animal Flyers. Kfar Blum, Israel. March 12-15 2017.

Currie SE, Stawksi C, Geiser F (2016) Cardiac function and metabolism during torpor at subzero temperatures. The 15th International Hibernation Symposium in Las Vegas, USA July 31- August 5 2016. Proceedings p. 23

Currie SE, Körtner G & Geiser F (2015) Cold-hearted bats- Comparison of cardiac function and metabolism during torpor in two species of Australian bats. The 45th North American Symposium of Bat Research in Monterey, USA October 28-31 2015. Proceedings p. 23

Currie SE, Noy K, & Geiser F (2014) Passive rewarming reduces cardiac demands and energy expenditure in bats. The 31st Annual Meeting of The Australian and New Zealand Society for Comparative Physiology and Biochemistry in Armidale, Australia December 4-7 2014. Proceedings p. 27

Currie SE, Körtner G & Geiser F (2014) Heart rate and metabolism in heterothermic bats. The 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation in Kruger National Park, South Africa September 7-12 2014 Proceedings p. 34

Currie SE, Körtner G & Geiser F (2013) Heart rates of subtropical blossom bats (Pteropodidae) during torpor. The 16th International Bat Research Conference and 43rd North American Symposium of Bat Research in San Jose, Costa Rica August 11-16 2013. Proceedings p.26

Currie SE, Körtner G & Geiser F (2013) Cardiac function of heterothermic bats. The 30th Annual Meeting of The Australian and New Zealand Society for Comparative Physiology and Biochemistry in Melbourne, Australia November 26-29 2013. Proceedings p.24

Currie SE, Körtner G & Geiser F (2012) Can heart rate be used as a measure of metabolic rate in torpid bats? The 14th International Hibernation Symposium in Semmering, Austria August 8-14 2012. Proceedings p. 52