

Olga Elizabeth Helmy

Science Delivery Specialist

Aldo Leopold Wilderness Research Institute
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I specialize in creating clear, concise, and accessible science communication materials for broad audiences. In my job at ALWRI, I strive to facilitate understanding and dialogue between scientists, managers, and the general public by combining my academic background and professional experience as a research scientist with practical outreach applications through direct education, graphic design, scientific illustration, writing, and digital-media arts.

EDUCATION

2008-2012 Post-graduate studies, University of Montana Wildlife Biology Program
1999 M.A., Entomology, University of Kansas, Lawrence, Kansas
1996 B.S., Zoology, Southern Illinois University, Carbondale, Illinois

RECENT PROFESSIONAL EXPERIENCE

Science Delivery Specialist 2022-Present
Aldo Leopold Wilderness Research Institute
I facilitate communication between ALWRI research staff and managers-in-the-field, ensuring the results of our research efforts are available to managers across the National Wilderness Preservation System.

Writer and Technical Information Specialist 2020-2022
Fire Effects Information Systems
Rocky Mountain Research Station
Missoula Fire Sciences Laboratory
I conduct literature reviews and write species syntheses about plants and animals that are affected by fire. I combine research, writing and design skills to develop reports and interpretive materials for resource and fire managers, and the public at large.

Highlights:

- Species Review on Saguaro Cactus, available to view on-line at: <https://www.fs.fed.us/database/feis/plants/cactus/cargig/all.html>
- Species Reviews on Yellow Paloverde and Sugar Sumac (*in prep*).
- Poster Presentation, "Fire in the Sonoran Desert", 2021 Association of Fire Ecology

- Conference (November 30, 2021).
- Consultant for in-house interpretive displays.

Founder and Director 2018-2020

Elucidate Science Communication
Missoula, MT

I created content that communicates science, with clear language and graphics, for the benefit of the public. This work entails concept development, writing, graphic design, layout, fine art and photography.

Highlights:

- Writer for [Montana eBird](#), an on-line birding community news blog.
- Creator, graphic design and scientific illustration for [Silixa Engineering](#), [Introduction to Distributed Temperature Sensing](#) manual.
- Creator, *Glacial Lake Missoula* permanent exhibit, [Montana Natural History Center](#)
- Research and background synthesis, writing, for *Montana Fossils* permanent exhibit, [Montana Natural History Center](#)
- Photographer, [spectrUM Discovery Center](#)
- Photographer, [Five Valley's Land Trust](#)
- Social Media Content Creator—writing, photography and videography, for the [University of Montana Wildlife Biology Program](#)
- Creator, *Insects of Palau*, permanent exhibit, [Belau National Museum](#) (Republic of Palau).

Media Artist-in-Residence 2016-2018

spectrUM Discovery Area
Missoula MT

Duties included: Layout and graphic design for museum signage. Drafting social media outreach materials. In-house and event photography for documentation and promotional materials. Video capture and editing. I am proficient with the Adobe Creative Cloud Suite, including Photoshop, Lightroom, CameraRaw, Illustrator, In-Design and Premier Pro.

FOUNDATIONAL PROFESSIONAL EXPERIENCE

University of British Columbia: 2011-2016

- *Science Communication Trainee*, Beaty Biodiversity Museum
- *Research Associate*, Department of Botany
- *Research Greenhouse Technician*, Department of Botany
- *Cultural Studies Contractor*, Amber Ridington Heritage Consulting
- *Field Project Manager*, *Malaysian Borneo Wildlife Ecology*, Department of Zoology

Seasonal and Contract Experience 1999-2011

USA Federal Agencies

- Sequoia and Kings Canyon National Parks, biological and data technician, intern
- Denali National Park and Preserve, data manager and glacial invertebrate technician

- Yellowstone National Park, water quality technician
- Rocky Mountain Research Station:
 - ❖ Missoula Fire Sciences Laboratory, biological technician, fuels photography
 - ❖ Boise Aquatic Sciences Laboratory, biological technician, salmonids
 - ❖ Missoula Forestry Sciences Laboratory, biological technician, mustelids

Universities and NGOs

- The Nature Conservancy, effects of 2004 Indian Ocean tsunami on sea turtle nesting
- Round River Conservation Studies, Instructor, field studies course, Namibia
- California Department of Education, [Environmental Education Network](#) coordinator
- University of Kansas, Kansas Biological Survey, water quality technician
- Field Museum of Natural History, entomology intern

PROFESSIONAL AWARDS

2022 Individual Cash Award, Forest Service

2021 Individual Cash Award, Forest Service

2007 Spot Award Recipient: Forest Service

2003 Star Award Recipient: Forest Service

SCIENTIFIC PUBLICATIONS

- Helmy, O.E. 2021. *Carnegiea gigantea*, saguaro. In: Fire Effects Information System, (Online). U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Missoula Fire Sciences Laboratory (Producer).
www.fs.fed.us/database/feis/plants/cactus/cargig/all.html
- Khwaja, et al.. Author 26 of 67. Pangolins in global camera trap data: Implications for ecological monitoring. *Global Ecology and Conservation*. 2019. *Global Ecology and Conservation*. e00769
<https://www.sciencedirect.com/science/article/pii/S2351989419303105>
- Gardner, P. W. Sastramidjaja, L. Liew, J. Wern, H. Lim, B. Goossens, I. Sapari, E. Meijaard, A. Hearn, J. Ross, D. Macdonald, T. Bohm, P. Kretzschmar, O. Wearn, A. Granados, J.F. Brodie, O.E. Helmy, A. Giordano, and S. Cheyne. In Revision. A status update on the endangered banteng across the island of Borneo. *Oryx*
- Brodie, J.F., J. Mohd-Azlan, A. Granados, H. Bernard, A. Giordano, and O.E. Helmy. 2017. Lowland biotic attrition revisited: body size and variation among climate change 'winners' and 'losers'. *Proceedings of the Royal Society B* 284: 20162335
- Brodie, J.F., O.E. Helmy, J. Mohd-Azlan, A. Granados, H. Bernard, A. Giordano, and E. Zipkin. 2018. Models for assessing local-scale co-abundance of animal species while accounting for differential detectability and varied responses to the environment. *Biotropica* 50: 5-15
- Brodie, J.F., O.E. Helmy, M. Pangau-Adams, G. Ugiek, G. Froese, A. Granados, J. Mohd-Azlan, H. Bernard, A. Giordano, M. Agil, and A. Mustari. 2018. Crossing the (Wallace) Line: local abundance and distribution of mammals across biogeographic barriers. *Biotropica* 50: 116-124
- Eby L.A., O.E. Helmy, L.M. Holsinger, and M.K. Young. 2014. Evidence of Climate-Induced Range Contractions in Bull Trout *Salvelinus confluentus* in a Rocky Mountain Watershed, U.S.A. *PLoS ONE* 9: e98812.
- Brodie, J.F., O.E. Helmy, W. Brockelman, and J. Maron. 2009. Bushmeat poaching reduces the seed dispersal and population growth rate of a mammal-dispersed tree.

Ecological Applications 19: 854-863.

- Brodie, J.F., O.E. Helmy, W. Brockelman, and J. Maron. 2009. Functional differences within a guild of tropical mammalian frugivores. *Ecology* 90: 688-698.
- Brodie, J.F., M. Sanjayan, R. Corea, O.E. Helmy, and C. Amarasiri. 2008. Effects of the 2004 Indian Ocean Tsunami on Sea Turtle Populations in Sri Lanka. *Chelonian Conservation and Biology* 7: 249-251.
- Helmy, O.E. and R. Jander. 2003. Topochemical learning in black carpenter ants (*Camponotus pennsylvanicus*). *Insectes Sociaux* 50: 32-37.

ART, DESIGN, AND PRODUCTION

- Graphic design and scientific illustration for Silixa Engineering, "Introduction to Distributed Temperature Sensing" manual. Available for [on-line viewing](#).
- Video production for University of Montana, Wildlife Biology and spectrUM Discovery Area, 2016-2019. [Sample video](#) available for on-line viewing.
- 2014. *Wildlife of the Ulu Padas*. A poster for environmental education and awareness-raising. Distributed to the Community Council in Long Pasia village, Sabah, Malaysian Borneo.
- 2014. *Wildlife of the Kelabit Highlands*. A poster for environmental education and awareness-raising. Distributed to the Community Council in Bario village, Sarawak, Malaysian Borneo.
- 2009, 24 March 2009. *New York Times Science Section, front page photograph*. Additional photographs in on-line issue of 23 March, 2009.
- 2006. Proceedings of the National Academy of Sciences, USA (vol. 103, no. 44) *Cover photograph*.
- 2006. *Heredity* (2006) 97, 179-191. Insulin signaling and limb-patterning: candidate pathways for the origin and evolutionary diversification of beetle 'horns'. D. J. Emlen, et al. *Photographs*.
- 2005. *Stereo Photo Guide for Estimating Canopy Fuel Characteristics in Conifer Stands*. Joe H. Scott, Elizabeth D. Reinhardt. Photographer, photo-editor.
- 2002. *Nature's Flyers: Birds, Insects, and the Biomechanics of Flight*. Alexander, D. and S. Vogel. 384 pp. Johns Hopkins University Press. ISBN: 0801867568. *Illustrations*.
- 2000. Three dimensional path integration in the house mouse (*Mus domestica*). Bardunias PM, Jander R. *Naturwissenschaften*. 87(12):532-4. *Illustrations*.
- 1998. A new fossil conifer from the Triassic of North America: implications for models of ovulate cone scale evolution. *International Journal of Plant Sciences* 159: 358-366. B.J. Axsmith, T.N. Taylor, and E.L. Taylor. *Illustrations*.
- 1994. Papyrus. The University Honor's Program annual Journal, Southern Illinois University, Carbondale. *Illustration*.