

University of Rhode Island DigitalCommons@URI

Natural Resources Science Faculty Publications

Natural Resources Science

2020

Road Mortality Threatens Endemic Species in a National Park in Sulawesi, Indonesia

Ryan M. Healey *University of Rhode Island*, ryan_healey@uri.edu

Jessica R. Atutubo

Mirza Dikari Kusrini

Lesley Howard *University of Rhode Island*, lesley_howard@uri.edu

Felicia Page University of Rhode Island, felicia_woods@uri.edu

See next page for additional authors

Follow this and additional works at: https://digitalcommons.uri.edu/nrs_facpubs

Citation/Publisher Attribution

Ryan M. Healey, Jessica R. Atutubo, Mirza Dikari Kusrini, Lesley Howard, Felicia Page, Noah Hallisey, Nancy E. Karraker. Road Mortality Threatens Endemic Species in a National Park in Sulawesi, Indonesia, *Global Ecology and Conservation*, Volume 24, 2020, e01281, ISSN 2351-9894, https://doi.org/10.1016/j.gecco.2020.e01281.

This Article is brought to you by the University of Rhode Island. It has been accepted for inclusion in Natural Resources Science Faculty Publications by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu. For permission to reuse copyrighted content, contact the author directly.

Road Mortality Threatens Endemic Species in a National Park in Sulawesi, Indonesia

Creative Commons License



This work is licensed under a Creative Commons Attribution 4.0 License.

Authors

Ryan M. Healey, Jessica R. Atutubo, Mirza Dikari Kusrini, Lesley Howard, Felicia Page, Noah Hallisey, and Nancy E. Karraker



cite

Next PDF



Global Ecology and Conservation 24 (2020) e01281



Contents lists available at ScienceDirect

Global Ecology and Conservation





Original Research Article

Road mortality threatens endemic species in a national park in Sulawesi, Indonesia



Ryan M. Healey ^a, Jessica R. Atutubo ^a, Mirza Dikari Kusrini ^b, Lesley Howard ^a, Felicia Page ^a, Noah Hallisey ^a, Nancy E. Karraker ^{a, *}

ARTICLE INFO

Article history: Received 4 May 2020 Received in revised form 15 September Accepted 15 September 2020

Keywords: **Endemic species** Hotspot Indonesia National park Roadkill Road mortality

ABSTRACT

The emerging economy of Indonesia has triggered rapid infrastructure development that threatens ecological communities, including within protected areas. The national parks of Indonesia are renowned for their high levels of biodiversity and endemism, yet the impacts of road development within these parks remains understudied. We conducted road mortality surveys along a 21.8-km section of paved highway that bisects Rawa Aopa Watumohai National Park in Sulawesi, Indonesia from January to April 2018. We documented wildlife carcasses during morning and afternoon surveys and identified hotspots of road mortality for amphibians, reptiles, birds, and mammals. A total of 790 carcasses were observed during 16 surveys, amounting to 2.3 carcasses km⁻¹, one of the highest levels reported for Asia. Wildlife recorded during our surveys represented 40 taxa, of which 15% are endemic to the Wallacea region. We documented two hotspots of road mortality for each major taxonomic group. We propose that mitigation measures be implemented at the largest betanet for amphibians, one everlapping betanet for a









^a Department of Natural Resources Science, University of Rhode Island, Kingston, RI, 02881, USA

^b Department of Forest Conservation and Ecotourism, Institut Pertanian Bogor, Bogor, West Java, 16680, Indonesia