

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 Kusriani

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 Kusriani, 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 for free and open access by the Natural Resources Science at DigitalCommons@URI. 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@etal.uri.edu.

Authors

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



< Previous PDF

Next PDF >

Global Ecology and Conservation 24 (2020) e01281



Contents lists available at ScienceDirect

Global Ecology and Conservation

journal homepage: <http://www.elsevier.com/locate/gecco>



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 Kusriani ^b, Lesley Howard ^a, Felicia Page ^a, Noah Hallisey ^a, Nancy E. Karraker ^{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

ARTICLE INFO

Article history:

Received 4 May 2020

Received in revised form 15 September 2020

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 hotspot for amphibians, one overlapping hotspot for am-

