

Cameras candidly capture bushmeat mammals for locally based wildlife monitoring

August 26 2022



Use of camera traps for locally-based wildlife monitoring. Credit: KyotoU CAAS/Yoh Izumori

Bushmeat is not a vegan term but a commodity in crisis. With the decline of wildlife due to commercial overexploitation in the world's tropical rainforests, the bushmeat crisis is impacting biodiversity and the livelihoods of local populations.

While community participatory-based wildlife monitoring of wildlife by local people can be a solution, the challenge has been in finding indicators—biostatistical information—that accurately and easily estimate the total biomass of mammals targeted for bushmeat hunting abundance of bushmeat biomass.

Now, Projet Coméca, consisting of a team of researchers from Kyoto University and Cameroon, has conducted camera trap surveys in the rainforests of southeast Cameroon to predict the total biomass of large rodents and duikers, the local African forest ungulates.

"We're willing to work together empowering the locals to establish a system with the technology to take the initiative to monitor wildlife bushmeat abundance by themselves, leading to sustainable bushmeat wildlife management," says lead author Shun Hongo.

After setting up [camera traps](#) at three sites in a local forest to record videos of five target mammals, the team used the random encounter and staying time model, or REST, a [statistical model](#) to estimate spatial variation in each species' population density and corresponding the total biomass.

The research team subsequently compared the relationships between the total biomass and six indicators, which had previously been proposed by different bushmeat researchers. Based on that data, six candidate indicators were extracted, enabling the researchers to compare the relationships between the biomass totals and corresponding indicators.

Two of these—the ratio of red duikers to blue duikers, and the ratio of all duikers to rodents—were deemed promising as they showed positive linear correlations with total bushmeat biomass.

"Our indicators appear to be important variables tools for sustainable management of bushmeat hunting food resources," the author adds. "Since forest ungulates and large rodents are widely distributed in rainforests worldwide, other communities in [tropical areas](#) may also be able to apply similar indicators for their local wildlife areas management."

The paper, "Predicting [bushmeat](#) biomass from species composition captured by camera traps: implications for locally-based [wildlife](#) monitoring," appeared on August 26, 2022 in the *Journal of Applied Ecology*.

More information: Shun Hongo et al, Predicting bushmeat biomass from species composition captured by camera traps: Implications for locally based wildlife monitoring, *Journal of Applied Ecology* (2022). [DOI: 10.1111/1365-2664.14257](https://doi.org/10.1111/1365-2664.14257)

Provided by Kyoto University

Citation: Cameras candidly capture bushmeat mammals for locally based wildlife monitoring (2022, August 26) retrieved 24 April 2024 from <https://phys.org/news/2022-08-cameras-candidly-capture-bushmeat-mammals.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.