



Towards sustainable harvesting of African edible bush-cricket (*Ruspolia differens*) for enhancing food security and rural livelihoods in East Africa

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The need for nutritious and protein-rich food

sources is growing especially in developing countries. *Ruspolia differens* is among the most consumed edible insects in East Africa where its consumption has multiple health, environmental, economic and social benefits for the rural communities. It is harvested at night with strong lights and the yield per light-harvesting station can be up to 800–1000 kg per night. However, there are widespread reports of declines in harvest yields in recent years. The aim of this project is to improve understanding of *R. differens* harvesting effort, yield, and source populations, and to develop a sustainable management and conservation plan for *R. differens*. The project is carried out as a collaboration between the University of Eastern Finland (UEF), Gulu University (Uganda), and Makerere University (Uganda). Our Ugandan partners conduct the field work in Uganda and have a central role in stakeholder interaction.

This project will increase awareness and disseminate knowledge of this important natural resource to local communities and provide tools for local natural resource managers and administrators. Ensuring the sustainable use of this natural resource in the foreseeable future will produce long-term benefits to human health and nutrition, and promote the livelihoods of people who gather *R. differens* for their home-consumption as well as to the light-harvesting community (harvesters, small-scale entrepreneurs, wholesalers and retailers).



Main publications:

Malinga GM, Acur A, Ocen P, Holm S, Rutaro K, Ochaya S, Kinyuru JN, Eilenberg J, Roos N, Valtonen A, Nyeko P, Roininen H (2022). Growth and reproductive performance of edible grasshopper (*Ruspolia differens*) on different artificial diets. *Journal of Economic Entomology* 115: 724-730.

Sorjonen J, Lehtovaara VJ, Immonen J, Karhapää M, Valtonen A, Roininen H (2020). Growth performance and feed conversion of *Ruspolia differens* on plant based by-product diets. *Entomologia Experimentalis et Applicata* 168: 460-471.

Lehtovaara VJ, Roininen H, Valtonen A (2018). Optimal temperature for rearing the edible *Ruspolia differens* (Orthoptera: Tettigoniidae). *Journal of Economic Entomology* 111: 2652-2659.

Valtonen A, Malinga GM, Junes P, Opoke R, Lehtovaara VJ, Nyeko P, Roininen H (2018). The edible katydid *Ruspolia differens* is a selective feeder on the inflorescences and leaves of grass species. *Entomologia Experimentalis et Applicata* 166: 592-602.

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