



Tropentag, September 20-22, 2017, Bonn

“Future Agriculture:  
Socio-ecological transitions and bio-cultural shifts”

## Contribution of Indigenous Edible Insects to Food Security in Rural and Urban Zimbabwe

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### Abstract

The world's growing population and food securities challenges have necessitated the need for using sustainable natural resources. Consumption of insects is a traditional practice since time immemorial in most developing countries. However, the potential contribution of edible insects to food security in these countries is under threat. Adoption of western food habits, especially in urban areas, has caused a decline in the consumption of edible insects. The study aimed at assessing the potential contribution of edible insects to food security in urban and rural areas. For this purpose, a survey was conducted in three urban towns and five rural districts to determine the current consumption patterns and influencing factors for indigenous edible insects in general, and specifically also on *Eulepida* species and *Henicus whellani* species. The case study was conducted amongst 200 urban and 175 rural respondents. Furthermore, a nutritional analysis of the two insect species sampled from five rural districts was performed. Consumption and nutritional data were used to assess the potential contribution of the insects to food security. Results showed that a greater percentage of rural respondents (89.7%) consume at least one edible insect as compared to urban (80%) respondents. A less than 50% respondents in both the rural and urban areas consume *Eulepida* species and *Henicus whellani*. Frequency of consumption of edible insects in rural areas was significantly higher in rural than in urban areas. Rural respondents (63.9%) consumed insects more than three times a week as compared to 14.5% for urban consumers. With a high protein content of 55% and 68% on dry basis for *Eulepida* species and *Henicus whellani*, respectively, consumption of these insects can contribute to meeting the daily protein requirement. The iron (24.2 – 52.85 mg/100g) and zinc content (10 – 20.85 mg/100g) are high for both *Eulepida* species and *Henicus whellani*, making them also a potential mineral-containing ingredient for use in food enrichment. However, the low insect consumption level in urban areas due to restricted availability limits the actual contribution to food security. This justifies the need to improve edible insects availability, especially in urban areas through developing reliable value chains, insect farming and processing

**Keywords:** Consumption patterns, edible insects, food security, Zimbabwe