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## Harvesting and consumption of the giant African bullfrog, a delicacy in northern Namibia

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## INTRODUCTION

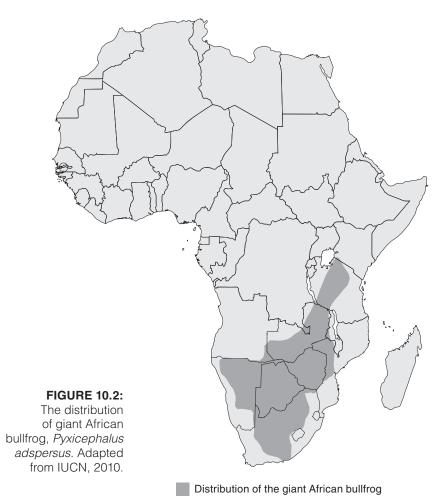
Namibia covers an area of approximately 800,000 square kilometres and has a human population of about 2.1 million. This gives an average density of about 2.6 people per square kilometre. Most of the people of Namibia belong to one of five main ethnic groups of African origin: the Aawambo, Ovaherero, Kavango, Caprivian, and Damara and Nama peoples.

The diet of ethnic Namibians comprises a variety of foods such as millet, sorghum, maize, sweet potatoes, groundnuts and fruits. Millet and maize are staple foods. Fruits are mainly wild and indigenous. Staple foods in northern Namibia are generally accompanied with indigenous vegetables, beef, lamb, mutton or fish. Giant African bullfrogs – locally known as *efuma* (sing.) or *omafuma* (pl.) – form a delicacy, especially during the rainy season (Figure 10.1). The Aawambo are not alone in appreciating these frogs (*Pyxicephalus adspersus*) as a delicacy. Reports exist of others also eating it within Namibia as well as elsewhere in southern Africa. For example, the Nsenga people in the eastern Luangwa Valley (Eastern Province, Zambia) also consume whole bullfrogs, which they locally call *kanyama kaliye fupa* – the animal without bones.

The giant African bullfrog is distributed widely throughout southern and eastern Africa (Figure 10.2) and found in areas of Namibia, Angola, Botswana, South Africa, Zimbabwe, Zambia, Mozambique, Malawi, Tanzania and Kenya (Channing, 1991; Conradie, Branch, Braack, & Manson, 2010; IUCN, 2011). It is reported to occur in the central and northern areas of Namibia (Channing 1991; Griffin, 1997) and is found in considerable numbers on the northern plains, especially during the early rain season.



FIGURE 10.1: The giant African bullfrog, Pyxicephalus adspersus. (© Graham Alexander.)



The frogs begin their lives as eggs, which are laid in the shallow waters of *oshanas* (shallow, seasonal, interconnected water channels found in central northern Namibia) as well as in ponds, pools, swamps and streams or rivers with slow-moving water. The eggs hatch into tadpoles and after a month or so, they metamorphose into froglets. During the rainy season, the frogs appear in various sizes: the sub-juveniles and the juveniles are locally known as *ukadhinahanya* (small ones) and the adults as namuhogelela (big ones). The frogs take about eight years to reach sexual maturity (Yetman, Mokonoto & Ferguson, 2012) and if they are not killed by predators, such as snakes or humans, they can live in close proximity to water or in aestivation (Loveridge & Withers, 1981; Yetman & Ferguson, 2011), to a ripe age of about forty years (Yetman et al., 2012). It is understood that they aestivate for much of the year and come to the surface after the first rains to breed.

The aim of this study was to record background information about the human consumption of frogs in localities of northern Namibia. Although it is clear that giant African bullfrogs are a delicacy and contribute to the pet trade industry, published information for setting up policies on their sustainable use and conservation is still scarce (IUCN, 2010). Here we compare harvesting and consumption practices of community members at different sites in northern Namibia, and how they prevent and treat the harmful side effects of eating frogs. We also discuss similarities in local practices in different areas and conclude by highlighting information gaps and recommending areas for future research.

## MATERIALS AND METHODS

This study is based on interviews with local people, coupled with direct observations with the most recent in November 2011. We interviewed people about the consumption of the giant African bullfrog (Pyxicephalus adspersus), in three localities of central northern Namibia (Oshakati-Ongwediva, Okahao and Okambebe–Okalongo). The Oshakati–Ongwediva and Okahao groups represented areas with urban influence, which are accessible along tarmac roads. The Okambebe-Okalongo group represented areas with little urban influence and are only accessible along gravel roads; interviews were conducted at a number of villages located between these two villages. All information was openly recorded on a questionnaire with the consent of the interviewees. In each locality, two groups of people were independently interviewed.