Observations of the West African rainbow lizard, *Agama picticauda* Peters, 1877, from Ghana feeding on bread

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Feeding ecology is directly linked to survival and fitness and consequently shapes the life history of organisms. The choice of prey can influence interactions among species, prey composition and abundance, and ultimately the transfer of energy and matter within ecosystems (de Ruiter et al., 2005). Consequently, knowledge of the dietary niche and trophic patterns of organisms is important for understanding their ecological interactions and the factors that promote coexistence of species at the community level (e.g., Pianka, 1974; Brown and Gillooly, 2003). Although many reptiles and most amphibians are generalized insectivores (e.g., Parmelee, 1999; Van Damme, 1999), recent studies suggest that species living within human habitations are opportunistic feeders and include non-insect food in their diets. For example, Weterings (2017) reported that the insectivorous gecko *Hemidactylusplatyurus* fed on rice, cucumber, and egg in garbage bins. Additionally, the anthropophilic and insectivorous gecko *Gehyra mutilata* has been reported to feed on nectar from flowers (Tanalog and Hughes, 2017), while the insectivorous *Gekko monarchus* was observed feeding on white bread on a kitchen table (Weterings and Weterings, 2018).

The West African rainbow lizard *Agama picticauda* Peters, 1877 is now considered as distinct from *A. agama* (Linnaeus, 1758) and recognized as a common and widespread lizard in sub-Saharan West Africa (Wagner et al., 2009; Leaché et al., 2014; Leaché et al., 2017). Its geographic distribution widely overlaps with human habitations (Yeboah, 1982; Luiselli et al., 2011; Akani et al., 2013). Previous studies have shown that this species is a generalist insectivore, preying mainly on spiders, grasshoppers, beetles, ants and termites, butterflies and moths, and flies (Harris, 1964; Anibaldi et al., 1998; Akani et al., 2013). Secondarily, they also consume other types of invertebrates, small vertebrates, and even plant materials (Chapman and Chapman, 1964; Yeboah, 1982). Studies have also shown that animals in urban areas opportunistically consume anthropogenic food items due to their ease of access, relative abundance, high caloric energy levels, and ease of digestion (Murray et al., 2015; Reher et al., 2016; Cronk and Pillay, 2018). Here, we present the first documented record of *A. picticauda* feeding on anthropogenic, processed food.

On 5 July 2018, between 1150 and 1200 h, we observed a dominant male *A. picticauda* (identified by its blueish body, orange head, and tricoloured tail) feeding on white bread (Fig. 1) in an open area with hedges, ornamental plants, and a small pile of concrete slabs behind an office building at the University of Ghana, Legon-Accra (5.654°N, 0.188°W; elevation 106 m) (Fig. 2). This sighting confirms that this species is

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![Figure 1: Dominant male *Agama picticauda* feeding on white bread. Photograph by Benjamin Y. Ofori.](image)
an opportunistic forager, and that opportunistic feeding behaviour might be more widespread in synurbic lizards (Francis and Chadwick, 2012) than previously thought.

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References


