REPTILES & AMPHIBIANS

Predation by a Non-native Cuban Knight Anole (*Anolis equestris*) of a Native Red Corn Snake (*Pantherophis guttatus*) in Miami, Florida USA

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The Cuban Knight Anole (*Anolis equestris*) is a large arboreal lizard native to Cuba that was first introduced to Miami, Florida, in 1952 at the University of Miami campus in Coral Gables (King and Krakauer 1966). Since its introduction, *A. equestris* has become well-established throughout much of southern Florida, particularly in heavily planted suburban areas (Camposano et al. 2008). This species is the largest anole in Florida, with male and female SVLs reaching 190 mm and 160 mm, respectively (Dalrymple 1980). *Anolis equestris* is a diurnal sit-and-wait predator that forages in tree canopies and on tree trunks, with documented activity times for populations in south Florida between mid-morning and late afternoon and ceasing at sunset (Meshaka 2004), although it has been observed active next to lights at night (Stroud and Giery 2013).

Studies of the diet of *A. equestris* in Florida have shown they consume a wide variety of prey, with stomach content analyses determining that insects, particularly Coleoptera, Lepidoptera, and Hymenoptera, make up the majority of their diet; however, they also regularly consume fruit, particularly figs (*Ficus* spp.) and palm fruits (e.g., *Roystonea* spp.), which can comprise over 80% of stomach contents by volume in some individuals (Brach 1977; Dalrymple 1980; Giery et al. 2013, 2017). Although vertebrate prey has been reported, including small lizards, frogs, and birds (Collette 1961; Camposano et al. 2008), quantitative dietary studies suggest vertebrate prey is relatively uncommon, appearing in only 1–2% of stomach samples (Dalrymple 1980; Giery et al. 2013). In Miami, *A. equestris* has been observed preying on a range of lizards, including Puerto Rican Crested Anoles (*A. cristatellus*; Stroud 2013), Hispaniolan Bark Anoles (*A. distichus*; Ljustina and Stroud 2016), American Green Anoles (*A. carolinensis*; JTS, pers. obs.), Cuban Brown Anoles (*A. sagrei*; JTS, pers. obs.), and African House Geckos (*Hemidactylus mabouia*; Thawley et al. 2017). Small vertebrate prey is captured and firmly bitten before consumption, facilitated by the small, conical, blunt teeth of Cuban Knight Anoles (Camposano et al. 2008).

Figure 1. An adult male Cuban Knight Anole (*Anolis equestris*) gapes and reveals a very recently ingested Red Corn Snake (*Pantherophis guttatus*). Photographs by James T. Stroud.

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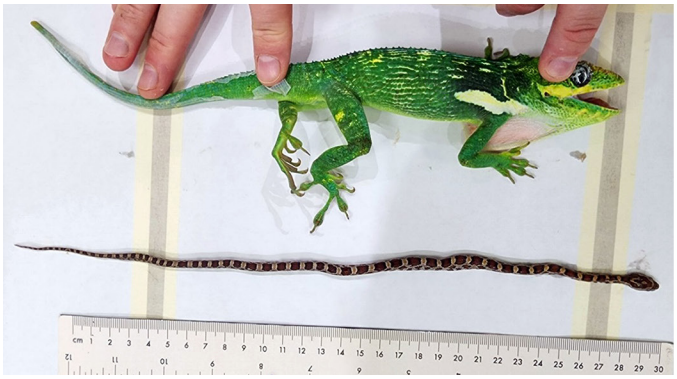

Figure 2. An adult male Cuban Knight Anole (*Anolis equestris*) with a regurgitated Red Corn Snake (*Pantherophis guttatus*). Photograph by James T. Stroud.

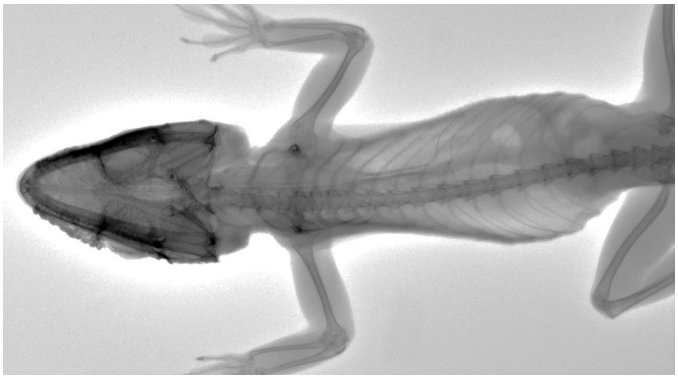

Figure 3. A radiograph of the Cuban Knight Anole (*Anolis equestris*) after regurgitation of the Red Corn Snake (*Pantherophis guttatus*) revealed no other vertebrate prey items in its stomach.

We herein report—to the best of our knowledge—the first documented case of *A. equestris* preying on a snake in Florida. At 2156 h on 10 November 2024, at Fairchild Tropical Botanic Garden in Miami, Florida (25.677, 80.274), we captured an adult male Knight Anole (SVL 150 mm; weight 73.86 g) that was sleeping on a 2-cm wide branch approximately 3 m above the ground. When the lizard was retrieved, the gaping behavior characteristic of captured *A. equestris* revealed a recently consumed Red Corn Snake (*Pantherophis guttatus*) (SVL 320 mm; weight 5.78 g), which was subsequently regurgitated (Figs. 1–2). Regurgitation revealed no digestion of the snake, suggesting that the predation event had occurred very recently. This represents not only the first record of *A. equestris* consuming *P. guttatus*, but also one of the largest vertebrate prey items documented for this species in Florida. A radiograph of the *A. equestris* (Fig. 3) revealed no other vertebrates in its stomach.

Our observation demonstrates that *A. equestris* is capable of subduing and consuming native species of snakes. Although vertebrate prey appears to make up only a small portion of the diet of the Knight Anole, its ability to prey on native species like *P. guttatus* suggests potential impacts on native fauna that warrant further investigation. As *A. equestris* continues to expand its range in Florida (Camposano et al. 2008), interactions with native species may become more frequent. Additional research on the frequency and impact of predation on native vertebrates by this invasive lizard would help assess its ecological effects in Florida.

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