

INVASIVE GREEN IGUANA INTERACTIONS IN A BURROWING OWL COLONY IN FLORIDA

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The Florida Burrowing Owl (*Athene cunicularia floridana*) is a protected “species of special concern” (39 F.A.C.—Florida Wildlife Code) in Florida and typically occurs in treeless, open areas, with well-drained, loose soils amenable for its own construction of burrows of 2-3 m in length (Millsap 1996), or use of burrows excavated by other species such as the gopher tortoise (*Gopherus polyphemus*; Jackson 1989). Burrows are used for both shelter and breeding activities. Most nesting occurs during February-May with eggs (range 2-6, mode = 4) deposited and the young brooded in a nest chamber at the end of the burrow (Millsap 1996). In Florida, Burrowing Owls consume a wide variety of invertebrate and vertebrate prey (Lewis 1973, Hennemann 1980, see extensive literature review in Millsap 1996). Included in this list are the exotic Cuban treefrog (*Osteopilus septentrionalis*) and the exotic brown anole (*Anolis sagrei*).

At a Florida Burrowing Owl colony on the main campus of Florida Atlantic University (FAU) in Boca Raton, Palm Beach County, Florida, we observed interactions between iguanas and owls at a burrow. The site was on the university’s southeastern field, with the “El Rio Canal” bordering the east side, FAU Boulevard on the west, and Glades Road on the south. The green iguana (*Iguana iguana*) is syntopic with the Burrowing Owl at this site. This iguana is a large-bodied neotropical species that is exotic to Florida (Meshaka et al. 2004a). It is primarily but not entirely herbivorous and with a preference for disturbed sites near standing water (Meshaka et al. 2004a, 2004b), and is commonly seen at this location. The age of the green iguana colony is unknown. In Florida, the green iguana is eaten by the domestic dog (*Canis familiaris*; Meshaka et al. 2004a) and Yellow-Crowned Night-Heron (*Nyctanassa violacea*; Engeman et al. in press). Here, we report depredation of juvenile green iguanas by Florida Burrowing Owls.

On 9 June 2003, at 1955, ACM observed a male Florida Burrowing Owl carrying a juvenile green iguana (approx. 12 cm) in its mouth. The owl deposited the iguana carcass at the opening of the burrow. The female owl came up, took the iguana from the male and ran back into the burrow with it. A second occurrence of a green iguana being consumed by a Florida Burrowing Owl was photographed on 19 June 2003 by photographer Michael Turco (Fig. 1). On this occasion, a male owl was feeding green iguanas to his chicks.



Figure 1. A green iguana (*Iguana iguana*) is killed and eaten by a Florida Burrowing Owl (*Athene cunicularia floridana*).

This burrow has been occupied by Florida Burrowing Owls since February 2003, and has been continually monitored by researchers at FAU. There have been no previous documentations of predation on green iguanas by Florida Burrowing Owls. These predation records add a new exotic species to the list of prey for the Florida Burrowing Owl and a third predator to Florida populations of the green iguana.

Although green iguanas provide Florida Burrowing Owls with a nutritious resource in the form of juveniles, we are concerned about negative impacts to Florida Burrowing Owls if the tables are turned, whereby adult green iguanas venture into burrows for shelter, oviposition sites, or even to forage on eggs and hatchlings of Florida Burrowing Owls. Should this happen, no amount of predation on hatchling lizards will compensate for the artificial disruption of Florida Burrowing Owl population dynamics. For this reason, we urge an immediate and aggressive removal program for this lizard that includes removal of non-native foliage upon which it feeds and the trees along the canal on which it rests and feeds.

Our observations are noteworthy because the ecological impacts of green iguanas to native fauna and flora are poorly understood and Florida Burrowing Owls are an imperiled species. Monitoring of this site will be important to development of an understanding of how green iguanas might impact native fauna with expansions of their geographic range in Florida.

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