



## INTRODUCED SPECIES

# Morelet's Crocodile, *Crocodylus moreletii* (Duméril & Bibron 1851) (Crocodylidae), Another Nonnative Crocodylian Species Introduced to Florida, USA

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Two native crocodylian species occur in the state of Florida, USA: the American Alligator (*Alligator mississippiensis* [Daudin 1802]) and the American Crocodile (*Crocodylus acutus* [Cuvier 1807]). As a consequence of escapes from zoos and the pet trade, four nonnative species of crocodylians have been introduced to Florida since the 1960s: Spectacled Caiman (*Caiman crocodilus* [Linnaeus 1758]), West African Slender-snouted Crocodile (*Mecistops cataphractus* [Cuvier

1825]), Nile Crocodile (*Crocodylus niloticus* Laurenti 1768), and Schneider's Smooth-fronted Caiman (*Paleosuchus trigonatus* [Schneider 1801]; Krysko et al. 2016). Of those nonnative crocodylians, *C. crocodilus* is the only species that has established a breeding population (Ellis 1980; Krysko et al. 2016). Herein we report Morelet's Crocodile (*Crocodylus moreletii* Duméril & Bibron 1851) as the fifth nonnative species of crocodylian introduced to Florida.



**Fig. 1.** Morelet's Crocodile (*Crocodylus moreletii*) (photographic voucher UF-Herpetology 186574) removed from a golf course pond at The Club at Boca Pointe, Palm Beach County, Florida (26.3415263°N, -80.1666088°W) on 31 May 2018. Photograph by Edward F. Metzger III.

On 31 May 2018, we responded to a report of an unusual crocodile in a golf course pond at The Club at Boca Pointe, Palm Beach County, Florida (26.3415263°N, -80.1666088°W; datum WGS84). We captured the crocodile using a snatch hook and noose (see Cherkiss et al. 2004) and identified it as an adult female *C. moreletii* (SVL = 89.5 cm, TL = 180.4 cm) based on the presence of irregular subcaudal scales (Platt and Rainwater 2006; Figs. 1 and 2). It weighed 22.5 kg and appeared healthy. Leroy Nuñez confirmed the identity of the specimen (photographic voucher UF-Herpetology 186574). *Crocodylus moreletii* reaches 3–4 m TL and is found in fresh and brackish water in Mexico, Belize, and Guatemala.

Approximately two years prior to our capture, the same crocodile was reported to wildlife officials but the responder incorrectly identified the animal as a native *C. acutus*. That this crocodile remained in the wild for two years after being reported suggests that *C. moreletii* has the potential to become established in Florida. However, winters 2016–2017 and 2017–2018 were both warmer than normal (National Weather Service 2017, 2018), which may have facilitated this animal's survival. *Crocodylus moreletii* could compete with Florida's native crocodilians for food and space, and might

hybridize with federally threatened *C. acutus* (see Ray et al. 2004; Cedeño Vázquez et al. 2008; Rodriguez et al. 2008). Furthermore, if introduced into natural areas in southern Florida, *C. moreletii* could impede progress toward the Everglades restoration goal of improving native plant and animal species abundance and diversity (USACE SFWMD 1999). Our response and removal highlights the importance of having a dedicated early-detection and rapid-response (EDRR) team trained in identification and safe capture of crocodilians. Behind prevention of new introductions, EDRR is the most feasible and cost-effective means of preventing *C. moreletii* from becoming established in Florida.

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**Fig. 2.** Irregular subcaudal scales used to confirm identification of a Morelet's Crocodile (*Crocodylus moreletii*) (photographic voucher UF-Herpetology 186574). Photograph by Edward F. Metzger III.