REPTILES & AMPHIBIANS

An Albino Purple Caecilian (*Gymnopis multiplicata*) from Drake Bay, Osa Peninsula, Costa Rica

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Amphibian coloration is associated with chromatophores, specific epidermal cells categorized by the chemical composition of their granules and their color under white light (Rivera et al. 2001). Color aberrations in amphibians can result from both an increase or a decrease in these pigmented cells (Rivera et al. 2001). Amphibian skin typically houses six types of chromatophores (xantophores, erythrophores, melanophores, leucophores, cyanophores, and iridophores) (Duellman and Trueb 1994), which are distributed variably across the epidermis among species (Pough et al. 2016).

Albinism is characterized by the absence of dark pigmentation and is manifested as white skin and red irises; it is rare in nature due to increased vulnerability to visually oriented predators, although survival rates may be higher in nocturnal or cryptic fossorial species less reliant on camouflage (Sazima and Di-Bernardo 1991; Toledo et al. 2011).

Despite Costa Rica's high herpetofaunal diversity, reported cases of albinism and leucism are infrequent, particularly in caecilians, with only four documented cases of chromatic aberrations in the country (Kubicki and Arias 2017; Chavarria-Villagra and Nuñez-Escalante 2023). The Purple Caecilian (*Gymnopis multiplica*), the largest caecilian in Costa Rica, with total lengths to 70 cm (Solórzano 2014), is the most commonly encountered species throughout the country. It can be found in a wide variety of habitats at elevations from sea level to 1,400 m asl (Leenders 2016).

At 1337 h on 24 March 2023, in Agujitas, Drake Bay, Costa Rica, an albino *G. multiplica* (total length 34.5 cm) (Fig. 1) was discovered as we were digging holes to build a fence. The caecilian was placed in a moist soil-filled plastic container for documentation, measurement, and relocation the following day. To our astonishment, the specimen was a

Figure 1. An albino female Purple Caecilian (*Gymnopis multiplica*) gave birth to three neonates with no chromatic aberrations; two were healthy (left) and one was stillborn (right). Photographs by Raby Nuñez Escalante.

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Figure 2. Portraits of a stillborn Purple Caecilian (*Gymnopis multiplica*); note the dark eye marked with a white line, visible next to the tentacle. Photographs by Raby Nuñez Escalante.

gravid female. She delivered three neonates next day: one (12 cm) healthy, another (11 cm) stillborn (Fig. 2), both born at 1236 h, and a third healthy neonate (11.7 cm) was born later in the day.

To the best of our knowledge this is the first documentated case of albinism in *G. multiplicata,* and the first recorded instance of an albino female successfully birthing three neonates, none of which exhibited any chromatic abnormalities. We concur with Sazima and Di-Bernardo (1991) who suggested that nocturnal and fossorial albino amphibians might have lifespans similar to those of normally pigmented individuals. The female and her neonates were safely released into pristine rainforest after being documented and photographed (Fig. 3).

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Figure 3. An albino female Purple Caecilian (*Gymnopis multiplica*) (left) and two neonates (right) were relocated in pristine forest where conspecifics have been encountered. Photographs by Raby Nuñez Escalante.