REPTILES & AMPHIBIANS

Skinks Can Swim! Swimming Behavior of White-spotted Supple Skinks, *Riopa albopunctata* Gray 1846

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The White-spotted Supple Skink (*Riopa albopunctata*) occurs in Bangladesh, Nepal, Maldives, western Malaysia, Vietnam, and the Sunda region, and is widely distributed in India (Gujarat, Madhya Pradesh, Uttarakhand, Uttar Pradesh, Kerala, Bihar, Jharkhand, Andhra Pradesh, Chhattisgarh, Orissa, Assam, and West Bengal; Uetz et al. 2023). In Bangladesh, the White-spotted Supple Skink has been recorded from Chittagong, Dhaka, Dinajpur, Habiganj, Nilphamari, and Rangamati Districts (IUCN Bangladesh 2015). This terrestrial skink inhabits forest floor, grasslands, shrublands, dry open soil without plantations, and often occurs in human-modified habitats (IUCN Bangladesh 2015; Srinivasulu et al. 2021). This skink is more active in the evening and at night, when it feeds on insects (IUCN Bangladesh 2015). Although some aspects of its ecology have been already described, we herein document previously unreported swimming behavior based on observations made in Bangladesh.

At 1145 h on 25 August 2021 (29 °C; relative humidity 86%; wind 10 km/h), during a diurnal herpetofaunal survey adjacent to Porahati Lake at Sonakanda Village, Ruhitpur Union, Kearaniganj Upazila, Dhaka, Bangladesh (23.674944 N, 90.301778 E), we observed an adult White-spotted Supple Skink (SVL 57 mm; tail length 69.5 mm) as it quickly swam across water and moved into Napier Grass (*Pennisetum purpureum*) vegetation (Fig. 1A). The lake was filled with rainwater and was covered with Common Water Hyacinths (*Pontederia crassipes*); adjacent areas were submerged by about 30 cm of water and dominated by Napier Grass. We subsequently noticed another adult (SVL 59 mm; tail length 70.1 mm) swimming on the surface in an open area and then climbing onto a leaf of a Water Primrose (*Ludwigia peploides*) (Fig. 1B). In both instances, the skinks swam with heads elevated above the water, a style of swimming quite similar to that of a snake. They used limbs with a rapid crawling movement and undulations of the body and tail to regulate direction and speed (Fig. 1C). During two hours of observation, the skinks did not swim long distances at any time (maximum 1 m) but changed locations multiple times. We searched the surrounding area

Figure 1. White-spotted Supple Skinks (*Riopa albopunctata*) floating on the surface tension of the water supported by Napier Grass (*Pennisetum purpureum*) blades (A); climbing onto a Water Primrose (*Ludwigia peploides*) leaf (B), and the undulating "S" shape of the lizard's body while swimming (C). Photographs by Sajib Biswas.

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in an effort to determine the reason for swimming and did not find any predators from which the skinks had to escape. We also confirmed that skinks were not induced to swim by our presence. However, near swimming sites, we found an ant colony on floating, stacked jute sticks and noted the presence of insects in the Napier Grass vegetation, either of which might have been a food source for the skinks.

Previous reports on lizard swimming behavior, such as *Anguis fragilis* and *Lacerta agilis*, highlight their ability to swim swiftly and dive into the water to facilitate locomotion and search for prey, such as earthworms or dipteran larvae (Dathe 1971; Gollmann and Gollmann 2008). Zug et al. (2001) provided evidence of the impressive swimming prowess of Basilisk lizards (*Basiliscus* spp.), which use this behavior to effectively regulate their body temperature and elude terrestrial predators. Additionally, some land skinks, like Sandfish Skinks (*Scincus* spp.) and Stub-limbed Burrowing Skinks (*Brachymeles bonitae*), are known to be sand swimmers, moving through loose sand by swimming motions (Smid et al., 2021; Pough et al., 1997).

However, swimming in aquatic habitats appears to be an unusual behavior of terrestrial skinks. In the context of localized flooding, our recent observations propose that White Spotted Supple Skinks (*Riopa albopunctata*) exhibit a proclivity for short-distance swimming, potentially driven by prey pursuit. Furthermore, we hypothesize that this swimming behavior serves diverse purposes, encompassing the avoidance of potential threats and even engaging in thermoregulation as a response to microclimatic fluctuations.

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