

Predation of the Mongolia racerunner *Eremias argus* by bull-headed shrike *Lanius bucephalus* and frog-eating rat snake *Oocatochus rufodorsatus* in South Korea

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The Mongolia racerunner *Eremias argus*, which is considered to be endangered in South Korea (Song et al., 2013), is a small lacertid with a distribution encompassing the Korean Peninsula, Russia, China and Mongolia (Orlova et al., 2019). This lizard exhibits a preference for riverine and coastal sandy habitats (Cho & Son, 2024) where it employs crypsis to avoid detection by predators (Hahn, 1960), but it also demonstrates swift locomotion across sandy substrates to evade capture. Despite multiple studies examining the diet of the Mongolia racerunner, there are hardly any reports of its predation by other species.

On 30 September 2019 at 12:00 h, we attached a transmitter (0.35 g, BD-2X, Hologhil Systems Ltd, Canada) to 15 lizards and then released them on the coastal sand dune (36.412547 °N, 126.6375686 °E, WGS 84, 9 m a.s.l.) in Taean Province, the Republic of Korea. However, we lost the signal from one lizard at 15:00 h, which was the next tracking time. Then, at 12:00 h on 1 October, we found the



Figure 1. An impaled Mongolia racerunner, probably predated by a bull-headed shrike

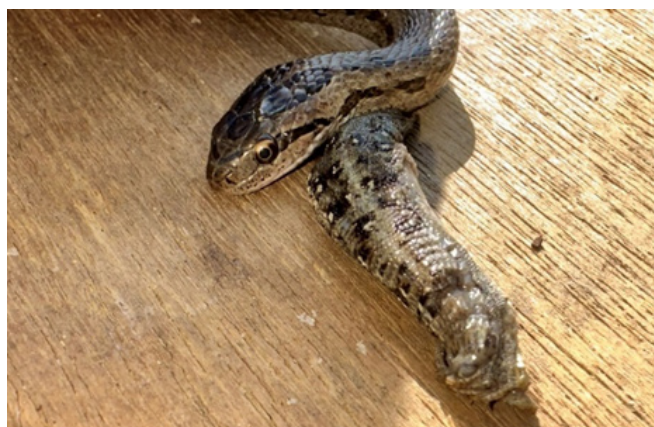


Figure 2. The partially digested remains of a Mongolia racerunner disgorged from a frog-eating rat snake

lizard 187 m from its release point impaled on a chocolate vine *Akebia quinata*, still alive but barely moving (Fig. 1). Although the predation event was not directly observed, a bull-headed shrike *Lanius bucephalus*, a species known for impaling its prey, was observed in the vicinity. It is therefore reasonable to infer that this species was the predator in this instance.

A second predation case was recorded on 16 May 2024 during a population study of Mongolia racerunners. A frog-eating rat snake *Oocatochus rufodorsatus* was found in the Baramarye sand dune, a Special Protection Area designated by the Korean government for Mongolia racerunners (36.412190 °N, 126.379265 °E, 1 m a.s.l.). When we palpated the snake's abdomen to retrieve its stomach contents, the partially digested remains of a Mongolia racerunner were disgorged (Fig. 2). *Oocatochus rufodorsatus* primarily inhabits freshwater environments, such as paddy fields and reservoirs, where it feeds on amphibians and fish (Heo et al., 2014). However, it has not previously been documented feeding on reptiles.

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