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# Predation of *Pelobates fuscus* (LAURENTI, 1768) by the Kingfisher *Alcedo atthis* (LINNAEUS, 1758)

The Kingfisher *Alcedo atthis* (LINNAEUS, 1758) is known to prey on young frogs of the genus *Rana* (CRAMP 1985) and occasionally on amphibian larvae (GÉROUDET 1998), but the latter author does neither indicate species nor genus of the amphibians concerned. NÖLLERT (1990) lists 25 species of bird (however not the Kingfisher) known to consume the Common Spadefoot *Pelobates fuscus* (LAURENTI, 1768) and mentions that *Pelobates* is the second most common amphibian genus after *Rana* in the prey of birds in Europe. Here we report our observation of a Kingfisher predating on a *Pelobates fuscus* larva.

On August 20, 2004, we witnessed a kingfisher diving in a pond where a little more than a hundred Spadefoot larvae (about 7 cm long) had been counted before. The Kingfisher was seen with a big tadpole in his bill after a dive from a low perch. The pond is located near a forest edge in the county of Geiswasser, in Haut-Rhin (Alsace, France). It is 27 m long, six m wide, and bordered by trees. Amphibians in this pond were surveyed in the course of a LIFE (L'instrument financier pour l'environnement) program aiming toward restoring lotic habitats along the Rhine floodplain, and *P. fuscus* tadpoles have been clearly identified.

The tadpoles of *P. fuscus*, which can grow as big as 80-100 mm in length, graze the water surface in an almost vertical position (NÖLLERT 1990). Therefore, they can constitute a favorite prey for Kingfishers, which prefer to catch easily visible prey that stays near the water surface (CRAMP 1985). The feeding on *Pelobates* tadpoles should nonetheless be classified as occasional for the Kingfisher, which prefers to feed on fishes caught along running water (CRAMP 1985) although it also uses small lentic habitats such as ponds for fishing (GÉROUDET 1998). *Pelobates fuscus* is the most declining amphibian in France (DUBOIS 1998; EGGERT & GUYÉTANT 2002), and the number of sites housing it is quite small. The Common Spadefoot occurs in less than five ponds in the north of Haut-Rhin, where our observation was made.

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## Electrocution of reptiles

Electric strands set at a height of 150 mm above ground level on a farm in southern Namibia (28°34'S; 19°11'E - Warmbad area) to deny predators such as Black-backed Jackal (*Canis mesomelas*) access to camps and killing domestic stock, have resulted in the death of various reptiles. Since the instalment of this electronic strand, three Rock Monitor [*Varanus albigularis* (DAUDIN, 1802)] and one Bushmanland Tent Tortoise [*Psammobates tentorius verroxii* (A. SMITH, 1839)] individuals have been electrocuted. The three adult Rock Monitor individuals were electrocuted whilst passing through diamond mesh and then coming into contact with the electric strand transmitting about 9000 volts in 1 second pulses. It would seem that they could not pass through the diamond mesh fast enough before succumbing to the electric shocks. Female Bushmanland Tent Tortoises have an approximate size of between 400-500 g compared to males with an approximate size of 150 g, making them more prone to electrocution due to their relatively larger size. The electrocuted Bushmanland Tent Tortoise individual came into contact with the electric strand and then supposedly retracted after the initial shock and eventually succumbed after repeated shocks. An unverified report of a Cape Cobra *Naja nivea* LINNAEUS, 1758 being electrocuted was also received from a neighbouring farmer.

According to BOYCOTT & BOURQUIN (2000), Leopard Tortoises [*Geochelone pardalis* (BELL, 1828)] individuals have previously been documented as being electrocuted by electric strands less than 200 mm above ground level. Flap-neck Chameleon [*Chamaeleo dilepis* LEACH, 1819] have also been known to be electrocuted in residential gardens in Windhoek, Namibia, whilst attempting to negotiate electric security fences (ADANK pers. comm., ROTH pers. comm.). These urban security fences usually transmit up to 6000-8000 volts although the amperage is low (< 1 ampere).

Farmers in Namibia have a constant battle with predators, resulting in this extreme electronic measure to deny access to predators, but unfortunately with the added consequences of electrocuting smaller wildlife. Most animals that come into contact with the electric strands retreat abruptly only resulting in a painful shock. Reptiles, on the other hand, may be more prone to electrocution. BOYCOTT & BOURQUIN (2000) suggest increasing the height of such electronic strands to 250 mm and operational surges every 30 minutes – i.e. 30 minutes on and 30 minutes off, to protect reptiles. Thus far reptile mortalities have only been observed within one kilometer from the transformer – i.e. where the electrical current is strongest (9000 volts) – and it is thus suggested that this area be checked more regularly or the electric strand be lifted slightly to accommodate potential victims. The effect that such electric predator control measures may have on the reptile fauna is disturbing and should be monitored closely.

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KEY WORDS: Reptilia: Testudinidae: *Psammobates tentorius verroxii*, Squamata: Sauria: *Varanus albigularis*, electrocution, conservation, threat, Namibia

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