

Probable fire ant predation on a broadhead skink, *Plestiodon laticeps*

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The conservation community has long recognized the problems and potential impacts of introduced invasive species (Meshaka, 2011). We are rapidly accumulating evidence that invasive species often compete with and aggressively exclude native species, but much of this evidence consists of correlative deductions. Here, we report on a direct observation of probable predation by *Solenopsis invicta* (Red Fire Ant) on *Plestiodon laticeps* (Broadhead Skink).

Plestiodon laticeps is a moderately sized skink common to forests and fields in the south-eastern United States. *Solenopsis invicta* is the most widely distributed of four species of *Solenopsis* found in the United States, two of which represent introductions (<http://ipmworld.umn.edu/chapters/lockley.htm>, last visited on 11 May 2006). This ant may suppress regional herpetofauna populations via competition (Hook and Porter, 1990; Wojcik et al., 2001) and predation (Mount, 1981). There are reports of aggression and predation by *Solenopsis invicta* on lizards (*Hemidactylus turcicus*, McCallum and McCallum, 2006), snakes (Wojcik et al., 2001), turtles (Montgomery, 1996; Moulis, 1997; Buhlmann and Coffman, 2001; Parris, Lamont and Carthy, 2002;) and *Aspidoscelis sexlineatus* nests (Mount, Trauth and Mason, 1981; Donaldson, Price and Morse, 1994). Aggression by *S. invicta* was also reported on *Alligator mississippiensis* (Allen et al., 1997; Reagan, Ertel and Wright, 2000), *Caretta caretta* (Allen et al., 2001), and on *Gopherus polyphemus* (Wetterer and Moore, 2005). These observations indicate that *S. invicta* attacks, and sometimes preys upon amphibians and reptiles. Our observation adds to this accumulating record.

At about 11.15 h on the 21st of June 2006 along HWY 2, about ½ mile east of its junction with US 71 near Hosston in Caddo Parrish, Louisiana (32.89374° N, 93.87196° W, datum: NAD27, elevation not available) a partial carcass of a male *P. laticeps* (SVL = 67.4 mm, Tail Length = 10 mm [the broken off portion was not found], Skull Width = 12.8 mm, Skull Length = 17.2 mm) was recovered from under a 1 x 3 m piece of corrugated tin. The specimen was partially buried in an active large, approximately 0.66 m diameter ant mound inhabited by *S. invicta*. Much the original body form remained as a mummified shell composed of the relatively intact skin, scales, and skeletal elements (Fig. 1). The time since the animal's death was sufficiently recent for the scales to retain the body patterns and red colour, albeit faded, which were diagnostic of a male.

Although the *P. laticeps* specimen may have succumbed to some other form of mortality, its immediate proximity to a large, active colony of *S. invicta* strongly implies that the ants caused its death. No evidence of predator attacks beyond the absence of a tail was evident. In fact, the kinds of wounds present on the mummified carcass suggests invasion of the body by *S. invicta*. Generally, most fire ant induced mortality of reptiles is restricted to small juvenile animals (See previous citations above). However, our observation suggests that *S. invicta* can prey on larger, adult reptiles. It further suggests that the ecological repercussions of the *S. invicta* invasion may be more far-reaching than previously suspected. For example, many reptile populations that are of conservation concern and occur sympatrically with *S. invicta* (e.g. *Phrynosoma cornutum*, *Drymarchon corais*, *Pituophis ruthveni*) may be susceptible to competition and predation by this invasive exotic organism. Conventional wisdom previously held that *S. invicta* impacted reptile populations largely via egg predation and irritation from ant bites and stings. Consequently, this wisdom may require revision. This specimen (MLM 4) is in MLM's teaching-research collection.

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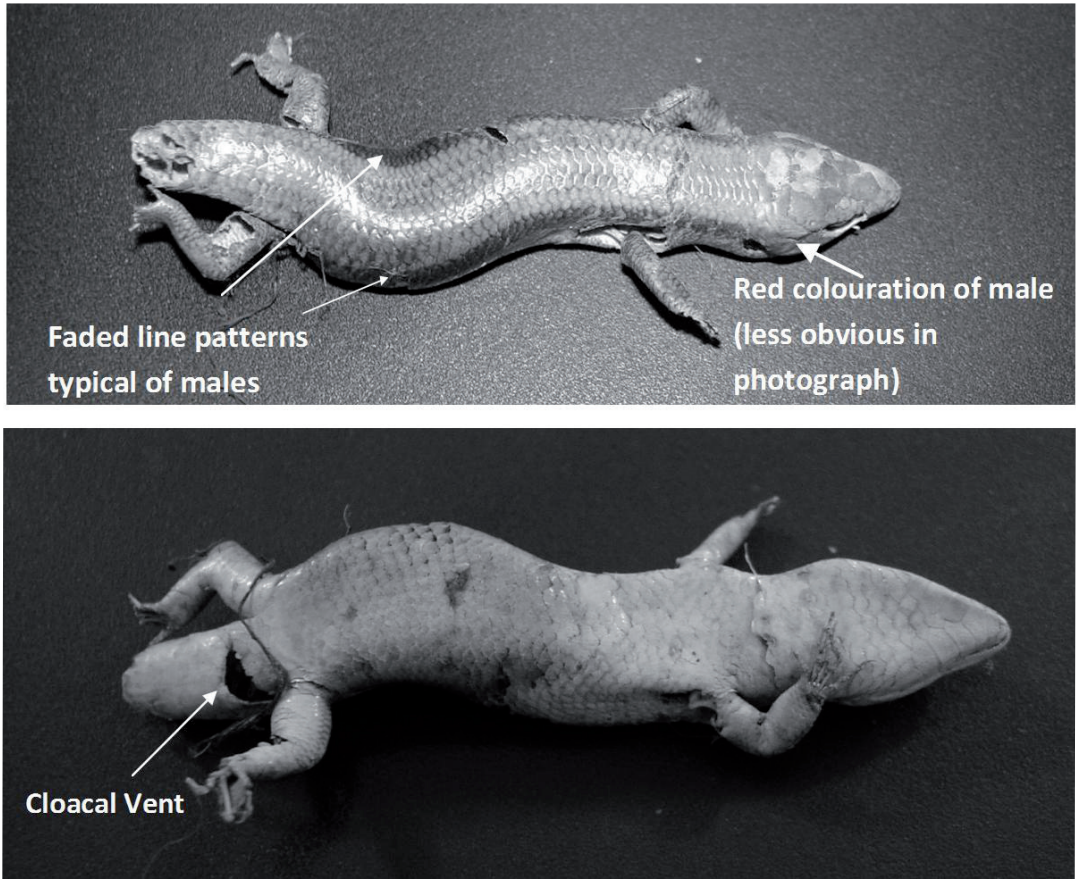


Figure 1. A mummified, eviscerated Broad Head Skink (*Plestiodon laticeps*) that was recovered from a Red Fire Ant (*Solenopsis invicta*) colony in Caddo Parish, Louisiana.

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