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Two fangs good, a hundred legs better: juvenile viper devoured by an adult centipede it had ingested

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On May 14th 2013, on the island of Golem Grad (Prespa Lake, FYR of Macedonia: 40′52″ N, 20′59″ E) a juvenile female nose-horned viper (*Vipera ammodytes*) was found dead, with head of a *Scolopendra cingulata* (according to Lewis, 2010) protruding through the body wall of its lower abdomen, app. 3.5 cm above the cloaca (Fig. 1a & 1b). The viper's total length was 20.3 cm (snout-to-vent length 18.3 cm; width: with prey 10.4 mm, without prey 9 mm), while that of the centipede was 15.4 cm (body width 10.1 mm) (Fig. 1c). Unexpectedly, the mass of the prey was greater than that of the predator: the viper weighed 4.2 g and the centipede 4.8 g. In short, the prey constituted 84% of the predator's trunk length, 112% of its body width, and 114% of the snake's body weight. A subsequent dissection revealed the absence of the snake's visceral organs (i.e. we found that only the snake's body wall remained – the entire volume of its body was occupied by the centipede), which led us to suppose that the prey caused chemical or mechanical damage to the predator's digestive organs.

Nose-horned vipers usually feed on small mammals, lizards, other snakes, amphibians and birds (e.g. Luiselli 1996). An ontogenetic shift in diet composition has been described in this species – where adults feed predominantly on mammals, amphibians and occasionally on birds, while the primary food resource of juveniles are lizards and *Scolopendra* sp. (Beschkov 1977, Luiselli 1996, Бешков and Нанев 2002). On Golem Grad Island, adult vipers feed on lizards, dice snakes, and small rabbits, while juveniles consume lizards and *S. cingulata* (unpublished data).

Numerous snakes and other animal species often feed on potentially dangerous prey (e.g. Willson and Hopkins 2011, Šukalo et al. 2013), and there are reports of snakes being killed (e.g. suffocated) by oversized prey (e.g. Cavalcanti et al. 2012, Oliveira Nogueira et al. 2013). However, some predatory animals (including certain snake species) have proven to be capable of learning to avoid unsuitable/deadly prey (e.g. Drummond and Garcia 1995, Greenlees et al. 2010). Juvenile vipers from Golem Grad have been observed to consume *Scolopendra* sp., but in this case we assume the young snake gravely underestimated the size and strength of the centipede, which itself is known as a ferocious predator (e.g. Dugon and Arthur 2012). In general, this invertebrate is extremely tough: it is very hard to kill a full-grown *Scolopendra* (personal observation). Therefore, we cannot dismiss the possibility that the snake had swallowed the centipede alive, and that, paradoxically, the prey has eaten its way through the snake, almost reaching its freedom.

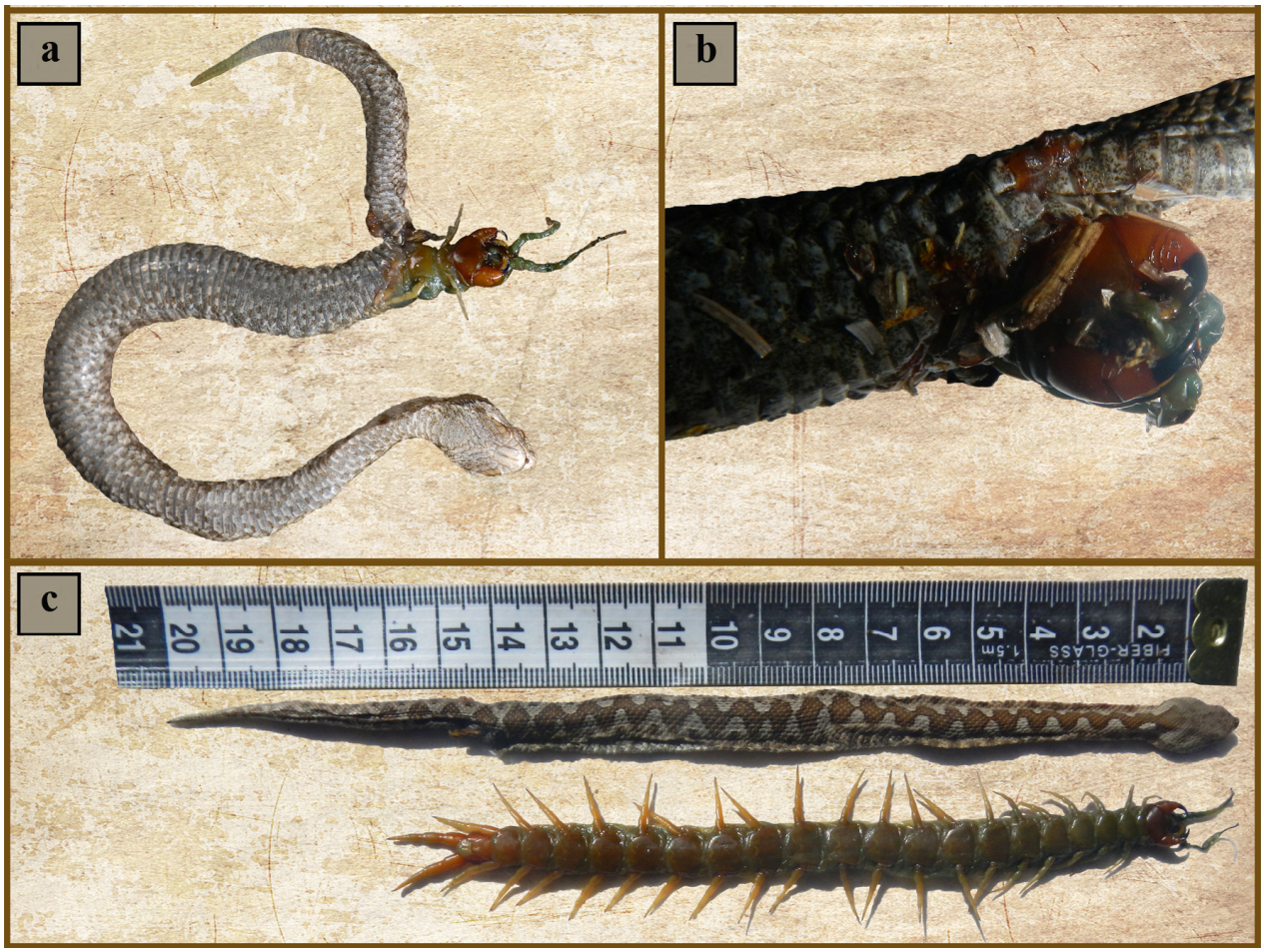

Figure 1. **A** Head of *S. cingulata* protruding out of the lower abdomen of the snake. **B** Ventral side of dead *V. ammodytes* with *S. cingulata* protruding from its lower abdomen. **C** *V. ammodytes* and *S. cingulata* next to a measuring tape.

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