

# Consumption of putrescent carrion by a free-ranging western Montpellier snake *Malpolon monspessulanus*

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Snakes can be endangered by live prey that struggles and retaliates, but scavenging on dead prey can minimise such risks (Bonnet et al., 2010; Kornilev et al., 2023). A wide range of snake species accept dead prey, both in captivity and under natural conditions (Shivik & Clark, 1997; DeVault & Krochmal, 2002; Glaudas & Alexander, 2017; Deso et al., 2022; Oliveira et al., 2023) and mass prey mortality can even trigger intensive scavenging episodes (Ayres, 2012). A potential disadvantage of scavenging is that the bacterial proliferation in decaying carcasses produces toxins that are avoided by most predators, except those with specific adaptations (Ortiz & Smith, 1994). There are few reports of snakes successfully feeding on substantially putrefied carcasses but examples are a *Micrurus frontalis* that began but eventually failed to swallow a rotten pitviper (Marques et al., 2017), *Agkistrodon piscivorous* eating dry fish carcasses abandoned by birds (Lillywhite & McCleary, 2008), and a large female *Natrix helvetica* captured in the field (western France, WGS84 46.011/0.590, May 1998) that due to handling stress regurgitated a 40 g vole covered with ~0.5 cm long maggots, the vole was likely eaten one day after its death (XB, pers.obs).

Free-ranging western Montpellier snakes *Malpolon m. monspessulanus* have been observed scavenging and accepting chicken thighs, but all these food items were fresh (Ventura, 2012; Weitzmann & Pretus, 2018; Deso et al., 2022). Here, we provide evidence of consumption of rotting carrion during a field experiment in south-eastern France (WGS84 44.033/4.878). On 17 July 2022, we placed bait in locations where snakes have been frequently observed and these were monitored with a camera trap (Num'Axes Trail Camera PIE 1023; Deso et al., 2022). One bait, a 50 g unfrozen rat placed at 09:30 h and exposed to the sun, was detected by an adult male snake 29 hours later (BHS video, 2023) during which time the hot weather in the study area (air temperature max. 38 °C, min. 23 °C) would have resulted in advanced decomposition. The snake tongue-flicked the rat and then consumed it. The snake was observed later digesting the prey with no ill effects. This observation indicates the western Montpellier snake will scavenge putrescent carrion.

BHS video (2023). Montpellier snake *Malpolon m. monspessulanus* feeding on carrion. <https://youtu.be/blyYNxO4BdE>.

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