

## First record of the aesculapian snake (*Zamenis longissimus*) in South Wales

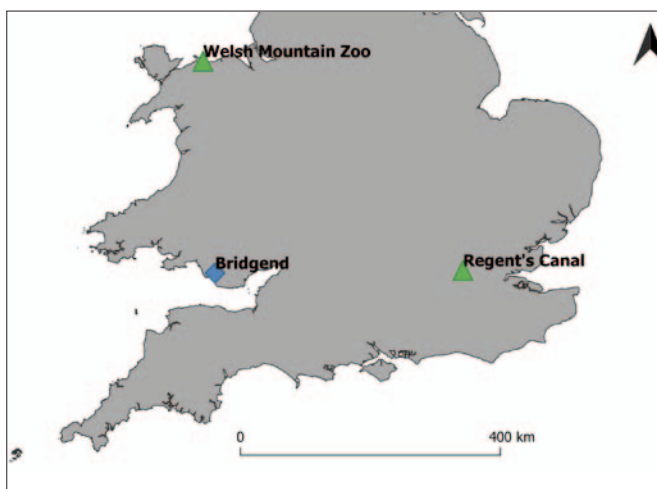
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The aesculapian snake (*Zamenis longissimus*) is a large rat snake found throughout Europe, Turkey, Iran and the Causcas (Arnold & Ovenden, 2002; Gasc et al., 1997) and in Great Britain is an exotic species with a very limited distribution. Adults can grow to 2 m in length and are uniform olive-brown or grey in colour (Arnold & Ovenden, 2002) while juveniles and sub-adults are mottled/blotched and with a yellow or cream crescent-shaped blotch at the sides of the neck, not dissimilar from a grass snake (*Natrix helvetica*). The species is capable of scaling trees and bushes and feeds primarily on small mammals (Arnold & Ovenden, 2002).

Currently two populations are recognised in Britain, one along the banks of the Regent's Canal in London and the other on the site of the Welsh Mountain Zoo in Colwyn Bay, North Wales (Beebee & Griffiths, 2000; Langton et al., 2011). The population within and around the grounds of the Welsh Mountain Zoo has been present since the 1960s (Lever, 2003) whereas the population along the Regent's Canal has only been there since the mid-1980s (Langton et al., 2011). It is probably no coincidence that both populations exist within or near the grounds of zoos. It is likely that the local abundance of prey and egg laying sites, such as compost heaps, allows the snakes to persist. However, we present evidence showing that there is a third viable population in Britain near Bridgend, South Wales (Fig. 1).



**Figure 1.** A map of the southern England and Wales highlighting both the two known populations of *Z. longissimus* (green triangles) and the population described here (blue diamond)

On the 19th September 2016, a family member of a local resident contacted us asking for help with the identification of a snake in his garden. The person in question suspected the snake to be *Z. longissimus* and we were able to confirm the identification from the photos that were submitted (Fig. 2). Following further investigation, it is also evident that the species was also present at nearby allotments. Close by there are several linear features, including a railway line, that may act as a route for dispersal. The species is thought to have been present for 15-20 years (based on information provided to us by residents) although it is unknown how far they have dispersed in that time.



**Figure 2.** Some of the photos sent to us confirming the presence of *Z. longissimus* in Bridgend, South Wales

In Bridgend only a small number of snakes have been seen at a time. Most of these have been sub-adults or adults which suggests successful reproduction even though hatchlings have yet to be seen. As far as we are aware, no structured surveys have been completed to establish the extent of the Bridgend population. So far the snakes seem to have gone largely unnoticed by the local residents of Bridgend, as suggested by the lack of records for the species in the area.

A number of isolated populations exist throughout northern Europe as relics of a past warmer climate and likely due to the activities of humankind (Musilová et al., 2007). *Zamenis longissimus* remains have been found in eastern England providing evidence that they were once

present during the Pleistocene (Holman, 1990; Holman et al., 1994). They became extinct and are now found in the UK as introduced isolated populations such as the one at Bridgend. *Zamenis longissimus* is a fairly popular pet and can be purchased from breeders or dealers. Consequently, the founders of the Bridgend population are likely to have been escaped or released pets. Their origins could be investigated further by comparing DNA samples with those from other populations elsewhere in the species range, including those from the other two UK populations. Over the coming years, surveys are planned in Bridgend to document the species range, size and population structure.

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