

SELF-FERTILISING OBSERVED IN THE INVASIVE IBERIAN SLUG *ARION LUSITANICUS*, MABILLE 1868

The Iberian slug *Arion lusitanicus* Mabilie 1868, has over the last couple of decades spread across the European mainland and has become a major agricultural and horticultural pest. One of the reasons for its success is its capability to mass reproduce. One individual can lay up to 400 eggs during its lifetime, commonly one season¹.

To further add to the bad reputation of the slugs, it is common knowledge among gardeners that they can self-fertilise, ie a single slug introduced to a new habitat is enough to start a colony. The ability of the arionids to self-fertilise was observed in *Arion ater rufa* (probably what we today call *A. rufus*) in laboratory conditions already in the 19th century². Grimm³, on the other hand, found no evidence for self-fertilisation in *A. lusitanicus* from Austria.

Our new observations prove however that also *A. lusitanicus* can self-fertilise. In our laboratory two individuals have laid egg clutches of 21 and 14 eggs, respectively, which have resulted in 20 hatched slugs. Some weeks past the egg-laying, the two adults were dissected and from internal morphology determined to be pure *A. lusitanicus*⁴.

The parents were hatched in the laboratory from eggs collected in the Rya forest of Hisingen Island, Göteborg, Sweden. These specimens were separated from other individuals as juveniles, and have been reared in separate containers for approximately three months. During this period one of the slugs has once before laid an egg clutch, but with no hatching success.

The now observed hatching coincide with the reproduction pattern of *Arion lusitanicus* held in laboratory conditions some 13 years ago (von Proschwitz pers obs). In the summer of 1991 three individual *A. lusitanicus* were hatched from eggs and raised separately. They laid a total of 531 eggs of which 64 hatched. Two years later, one individual raised alone laid 127 eggs with hatching success in 21 cases.

We hereby conclude that the *Arion lusitanicus* has self-fertilising capability. How common it is, what triggers it and the genetic aspects, such as inbreeding depression, are some of many issues that needs further investigation. The fecundity to self fertilized eggs compared to cross fertilized, also needs further study.

¹von Proschwitz T 1995 *Göteborgs Naturhistoriska Museum Årstryck* 1995: 51-59.

²Wotton FW 1892 *Jour. of Conch.* VII: 158-167.

³Grimm B 2001 *Abstract, World Congress of Malacology Vienna, Austria 2001*: 133.

⁴von Proschwitz T 1989 *Göteborgs Naturhistoriska Museum Årstryck* 1989: 43-53.

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