FIRST RECORD OF *LEPTINARIA LAMELLATA* (POTIEZ & MICHAUD) AS A GREENHOUSE SPECIES IN EUROPE

The Subulinid land snail *Leptinaria lamellata* (Potiez & Michaud, 1835) [= *L. unilamellata* (d'Orbigny, 1835) (nomen nudum), *L. unilamellata* (d'Orbigny, 1837) cf¹] is native to tropical South America, and extends at least from Brazil, Bolivia, Peru and Venezuela northwards through the Central American states to Mexico^{2,3}. By the help of man it has become widely spread on the Greater and Lesser Antilles^{1,4,5,6} and it has also been introduced to French Polynesia⁷. It thrives in the ground litter and is often found under rotten logs⁶. The species may occur in large numbers in introduced sites and in some cases it might be difficult to distinguish its native occurrences from introduced.

In the spring 2015 J. Roth (Linköping, Sweden) drew my attention to two specimens (both living when collected) of a rather small snail, collected in the rainforest house of the Public Science Centre Universeum, Göteborg, province of Västergötland, W. Sweden [57°41'44.18"N 11°59'20.67"E] by F. Persson (Göteborg) in the autumn 2014. J. Roth identified them as Leptinaria lamellata, a determination that I could confirm⁸. The species has so far not been reported from Sweden or from Europe. This record made me look through once more my collected material from Universeum in 2004⁹ and among the juveniles of Subulina octona (Bruguière) I found one specimen (living when collected) of L. lamellata. Either a small population of the species has lived in the hothouse during the years 2004-2014, or there have been two separate introductions – quite possible as tropical plants have been continuously imported since the Universeum was opened in 2001. The rainforest house was thoroughly converted in early 2016 and the once rich fauna of introduced species such as: Allopeas clavulinum (Potiez & Michaud), Subulina octona (Bruguiére), Afropunctum semineum (Moretlet), Hawaiia minuscula (Binney), Zonitoides arboreus (Say) and Ambigolimax valentianus (Férrussac) has become much impoverished. At a search in Marsh 2017 neither living animals nor shells of L. lamellata could be found, possibly the species is now lost.

L. lamellata is able to reproduce by self-fertilization, is ovo-viviparous and can reproduce

before the shell has reached its final size^{10,11}. One or more of these characteristics are common among land-snail species, which are able to establish themselves in the artificial, highly disturbed pseudo tropical habitats in hot-houses – e.g. other Subulinids, *Afropunctum semineum* (Morelet). Further occurrences of *L. lamellata* in the greenhouse milieu are to be expected.

References

- ¹Delannoye R, Charles L, Pointier J–P & Massemin D 2015 *Mollusques continentaux de la Martinique*. Biotope, Mèze: Muséum national d'Histoire naturelle, Paris, 328 pp.
- ²Massemin D, Lamy D, Pointier J–P & Gargominy O 2009 *Coquillages et escargots de Guyane*, Mèze: Muséum national d'Histoire naturelle, Paris, 456 pp.
- ³Simone L R L 2006 Land and Freshwater Molluscs of Brazil: an illustrated inventory of the Brazilian Malacofauna, including neighbour regions of the South America, respect to the terrestrial and freshwater Ecosystems. EGB, Fapesp. Sao Paulo. 390 pp.
- ⁴Espinosa J & Ortea J 1999 Moluscos terrestres del archipiélago Cubano Avicennia, suplemento 2: 1–137.
- ⁵Rosenberg G & Muratov I V 2006 Status Report on the Terrestrial Molluscs of Jamaica *Proceedings of the Academy of Natural Sciences of Philadelphia* **155**: 117–161.
- ⁶Robinson D G, Hovestadt A, Fields A & Breure A S H 2009 The land Mollusca of Dominica (Lesser Antilles), with notes on some enigmatic or rare species. *Zoologische Mededelingen* **83** (6): 615–650.
- ⁷Soubeyran Y 2008 *Espèces exotiques envahissantes dans les collectivités francaises d'outre-mer. Etat de lieux et recommamdations.* Collection Planète Nature. Comité francais de l'IUCN, Paris. 202 pp.
- ⁸von Proschwitz T 2016 Faunistical news from the Göteborg Natural History Museum 2015 – snails, slugs and mussels – with some notes on *Leptinaria unilamellata* (d'Orbigny) – a land snail species new to Sweden. – Göteborgs Naturhistoriska Museum Årstryck 2016: 33–51.
- ⁹von Proschwitz T 2005 Faunistiskt nytt 2004 snäckor, sniglar och musslor inklusive något om kinesisk skivsnäcka *Gyraulus chinensis* (Dunker) och amerikansk tropiksylsnäcka *Subulina octona* (Bruguière) – två för Sverige nya, människospridda snäckarter. – *Göteborgs Naturhistoriska Museum* Årstryck **2005**: 35–61.
- ¹⁰Calógeras Dutra A V 1988 Aspectos da ecologia e da reproducao de *Leptinaria unilamellata* (d'Orbigny,

536 TV PROSCHWITZ

1835) (Gastropoda, Subulinidae). *Revista Brasilera de Zoologia* **5** (4): 581–591. ¹¹de Medeiros Carvalho C, Pinheiro da Silva J, Furtado

¹¹de Medeiros Carvalho C, Pinheiro da Silva J, Furtado Mendonca L, de Almeida Bessa E C & d'Avila S. 2009 Life history strategy of *Leptinaria unilamellata* (d'Orbigny, 1835) (Mollusca, Pulmonata, Subulinidae). *Invertebrate Reproduction and Development* 53 (4): 211–222. Ted von Proschwitz Göteborg Natural History Museum Box 7283 402 35 Göteborg Sweden ted.v.proschwitz@vgregion.se