First records of the ladybird beetle *Sospita vigintiguttata* (Linnaeus, 1758) and the skin beetle *Reesa vespulae* (Milliron, 1939) from Luxembourg (Coleoptera, Coccinellidae and Dermestidae)

Svenja Christian

Musée national d'histoire naturelle, 25, rue Münster, L-2160 Luxembourg (svenja.christian@mnhn.lu)

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Abstract. The first records of the ladybug *Sospita vigintiguttata* (Linnaeus, 1758) and of the skin beetle *Reesa vespulae* (Milliron, 1939) from Luxembourg are presented.

Key words. Coleoptera, Coccinellidae, Dermestidae, *Reesa*, *Sospita*, Luxembourg.

1. Introduction

Ladybird beetles are among the most common and popular insects. *Sospita vigintiguttata* (Linnaeus, 1758) is the only species of its genus occurring in Europe. These ladybirds are surely among the most beautiful beetles of the fauna of Luxembourg. They occur in two different colours depending on their age. When the beetles hatch out of their pupas in June or July, they have a yellowish to light brownish base colour. Individuals found during or after hibernation in winter or spring change it to black. The dots are white to yellowish in both cases. In some of the black individuals the markings may be white in the thorax and yellow on the elytra. The species is mentioned to occur in wetlands, on or near alders, but also on umbellifers and to hibernate in dry leaf litter. The animals reach a size of about 6.5 mm. As most ladybird beetles, they predate mainly on aphids. With the first finding of *S. vigintiguttata* the family of the ladybird beetles comprises 47 species in 28 genera in Luxembourg (Mousset 1976, Schneider & Loomans 2006).

Most skin beetles are not quite popular with people in general. Some are important ravagers in food stocking or cause damages to construction materials. The most important museum pests worldwide belong to the family of the skin beetles. The only species in the genus is *Reesa vespulae* (Milliron, 1939). Since the 1960s, these beetles are recorded in houses in Norway and Finland (Freude et al., 1979). Feeding on dry plant or animal material, they are mostly involved with animal carcasses and mammal, bird or wasp nests (Hong et al. 2014). They most surely can survive outdoors in central Europe. Furthermore, they occasionally cause damages in museum collections. As so far only female specimens have been found, the species is to be considered as parthenogenetic (Bunalski & Przewozny 2009). This circumstance may increase its pest potential. The small beetles of a glossy brownish black colour are about 3 to 4 mm long. On the shoulders of the elytra, they have a lighter, yellowish brown marking (Freude et al. 1979).The species is presently widespread in all Europe and found nearly worldwide (Hong et al. 2014). With the finding of this new species, the family of the skin beetles (Dermestidae) comprises 15 species in 7 genera in Luxembourg.

2. Material and methods

The author detected *Sospita vigintiguttata* by intense scanning of leafs and blossoms,

mainly in the environs of Beaufort in Luxembourg. The single specimen captured was killed with ethyl acetate and prepared for permanent preservation.

Reesa vespulae was a chance discovery. It was found indoors on the window sill of the author's bathroom. It was killed by freezing and mounted.

The author could easily identify both species with the help of a stereomicroscope.

Francesco Vitali (Mnhn) kindly confirmed the identification of both species.

3. Results

Sospita vigintiguttata was caught by hand on the 26th of May 2016 on the underside of a willow leaf at a forest edge in Beaufort (Fig. 1). The black base colour of the specimen proves that it hatched the year before and had overwintered.

Reesa vespulae (Fig. 2) was caught by hand on the 11th of July 2016 in the author's apartment in Wasserbillig.

Table 1 shows the details of the records. The specimens are kept in the invertebrate collections of the National Natural History Museum of Luxembourg (Mnhn).

4. Discussion

Freude et al. (1967) classify *Sospita vigintiguttata* as very rare. Benisch (2017) mentions only 16 records in Germany so far for the ladybird beetle protected in that country. Unfortunately, the species is only little dealt with in the literature and even missing in quite a number of field guides or internet information pages. Due to the rareness of these ladybird beetles and to their often difficultly accessible natural habitat the sparsity of records is well comprehensible (Godeau & Ceryngier 2011). In this regard, the first finding of *S. vigintiguttata* most likely was a fortunate capture.

The monotypic and originally Nearctic genus *Reesa* Beal, 1967 is new to Luxembourg. *Reesa vespulae* is expanding quite successfully its distribution area. This is not surprising bearing in mind that many species of skin beetles have already proved their great ability to conquer new areas (Bunalski & Przewozny 2009). It remains to be seen whether the species is going to build up sustainable populations in Luxembourg. Bearing in mind that is a potential pest, especially in scientific collections, it might be reasonable to monitor its occurrence evolution. As *R. vespulae* is spreading all over the world, it



Fig. 1. Adult of *Sospita vigintiguttata*. Photo: Guy Marson. Scale bar: 1 mm.

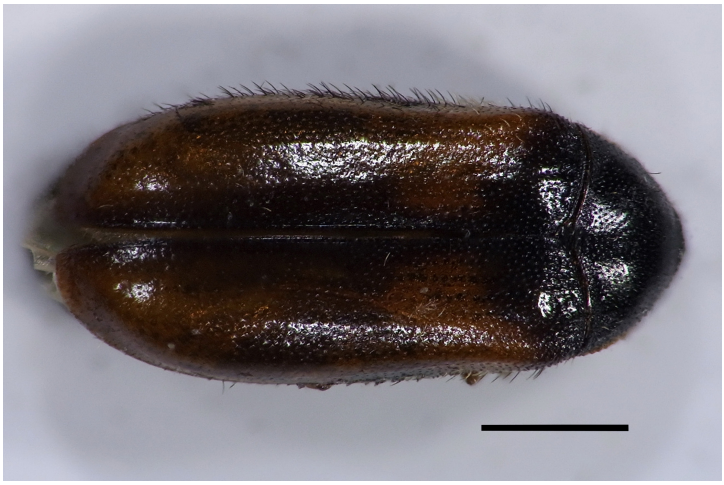


Fig. 2. Adult of *Reesa vespulae*. Photo: Guy Marson. Scale bar: 1 mm.

Table 1. Records of *Reesa vespulae* and *Sospita vigintiguttata* in Luxembourg. All data by the author.

	Reesa vespulae (Milliron, 1939)	*Sospita vigintiguttata* (Linnaeus, 1858)
Date	11.07.2016	26.05.2016
Locality	Wasserbillig	Beaufort
Site	Apartment, window sill	Forest edge, willow leaf
Latitude	49,71542° N	49,84284° N
Longitude	6,49745° E	6,26789° E
Recorder data base (Mnhn)	S. Christian	S. Christian

has so far been the subject of quite a number of published studies (e.g., Hong et al. 2014 and Bunalski & Przewozny 2009). Furthermore, it is already listed in the Delivering Alien Invasive Species Inventory for Europe (DAISE, www.europe-aliens.org).

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Literature

Benisch, C., 2017. Die Käferfauna Deutschlands. www.kerbtier.de (accessed January 2017)

Bunalski, M & M. Przewozny, 2009. First record of *Reesa vespulae* (Milliron, 1939) (Coleoptera: Dermestidae), an introduced species of dermestid beetle in Poland. *Polish Journal of Entomology* 78: 341-345.

Freude, H., K.W. Harde, & G.A. Lohse, 1979. Die Käferfauna Mitteleuropas. Band 6: Diversicornia (Lycidae - Byrrhidae). Spektrum Akademischer Verlag, Krefeld, 367 S.

Freude, H., K.W. Harde, & G.A. Lohse, 1967. Die Käferfauna Mitteleuropas. Band 7: Clavicornia (Ostomidae - Cisdae). (Neuauflage 2009) Spektrum Akademischer Verlag, Krefeld.

Godeau, J.-F. & P., Ceryngier, 2011. Notes on the overwintering of marshy forest ladybirds in Poland and on the colour change in *Sospita vigintiguttata* throughout the winter. *Harmonia* 6: 20-24

Hong, K., M. Kim & D. Park, 2014. Molecular identification of *Reesa vespulae* (Milliron) (Coleoptera: Dermestidae), a newly recorded

species from Korea. *Journal of Asia-Pacific Biodiversity* 7: 305-307.

Mousset, A., 1976. Atlas provisoire des insectes du Grand-Duché de Luxembourg. Coleoptera Cartes 446 à 526 (Coccinellidae, Cisidae, Silphidae, Leptinidae, Pyrochroidae). Publication du Musée d'Histoire Naturelle et de l'Administration des Eaux et Forêts. Luxembourg.

Schneider, N. & A. J. M. Loomans, 2006. Sur la présence au Luxembourg de la coccinelle arlequin *Harmonia axyridis* (Pallas, 1773) (Insecta, Coleoptera, Coccinellidae). *Bull. Soc. Nat. luxemb.* 106: 71-74.