

Express PRA for *Melittomma sericeum* – Interception –

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Initiation: Interception of the Federal State Brandenburg of American white oak (*Quercus alba*) from the USA (Interception notification on 09-01-2018)

Express- PRA	<i>Melittomma sericeum</i>		
Phytosanitary risk for Germany	high <input checked="" type="checkbox"/>	medium <input type="checkbox"/>	low <input type="checkbox"/>
Phytosanitary risk for EU-Member States	high <input checked="" type="checkbox"/>	medium <input type="checkbox"/>	low <input type="checkbox"/>
Certainty of assessment	high <input type="checkbox"/>	medium <input checked="" type="checkbox"/>	low <input type="checkbox"/>
Conclusion	<p><i>Melittomma sericeum</i> is endemic in the USA and Canada and does not occur in Germany and other EU Member States. So far, it is listed neither in the Annexes of Directive 2000/29/EC nor by EPPO.</p> <p><i>M. sericeum</i> infests edible chestnut (<i>Castanea spp.</i>), American white oak (<i>Quercus alba</i>) and elm (<i>Ulmus</i>).</p> <p>Due to suitable climatic conditions, it is assumed that <i>M. sericeum</i> is able to establish outdoors in Germany. An establishment in Southern European Member States has also to be expected.</p> <p>Due to its high damage potential for edible chestnut, American white oak, and elm <i>M. sericeum</i> presents a considerable phytosanitary risk for Germany and other EU Member States.</p> <p>Based on this risk analysis it is assumed that the pest is able to establish in Germany or another Member State and to cause considerable damage. Thus, measures on the prevention of the introduction of this potential quarantine pest should be met according to § 4a of the Plant Inspection Order and the intercepted consignment must be destroyed accordingly.</p>		
Preconditions for an Express- PRA fulfilled?	Might be a pest, not yet listed and so far, it is not established in the area covered by the reporting plant protection service.		
Taxonomy, trivial name, synonyms	Coleoptera, Lymexylidae (ship-timber beetles), <i>Melittomma sericeum</i> (Harris, 1841); chestnut timberworm		
Does already a relevant earlier PRA exist?	No. Peverieri et al. (2017) indicate a medium risk for edible chestnut in respect to introduction and potential damage, but without justification.		
Distribution and biology	Endemic in the USA and Canada (Peverieri et al. 2017). At the time of edible chestnuts' flowering in the USA, the beetles		

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	<p>fly to visit the host plants. A very high proportion of edible chestnut has been infested by <i>M. sericeum</i>. Before 1957, this species was a major pest that infested 50 to 90 % of the chestnut trees, caused damage to the wood and thus restricted the use. Due to <i>Cryphonectria parasitica</i> the stands of edible chestnut decreased massively and thus <i>M. sericeum</i> became less important. Favoured sites for the oviposition are wounds and fire scars. The larvae feed deep into the core wood. The feeding tunnels are roundish and have a diameter of 0.08 to 0.64 cm – depending on the larval stage. The pupation takes place close to the surface. Also in subsequent years, the wounds are used by the beetle (Craighead, 1950). Dry trees, tree stumps and freshly cut wood are infested, too (Anonymous, 2018). No information is available on the development cycle.</p> <p>The species also infests elms (Wheeler, 1986).</p> <p>Sex dimorphism (Fig. 1 and 2) and typical larva (fig. 3) (Bug Guide, 2018).</p>
Are host plants present in the PRA area? If so, which?	Edible chestnut and elm are widely distributed in Germany and other Member States. In contrast, the American white oak is rarely found as an ornamental in parks in Continental Europe.
Transfer pest consignment → host plant	Endemic edible chestnuts, elms or on American white oaks, possibly also endemic common oaks and sessile oaks might be infested through infested wood via migration of emerged adults.
Is a vector/ further plant needed for host alternation? Which? Distribution?	No
Climate in distribution area comparable to PRA area?	An outdoors establishment is likely. The climatic conditions in the EU are comparable to those in the USA and Canada.
If no, are host plants present in protected cultivation?	Not relevant.
Damage to be expected in the PRA area?	<p>The expected damage in Germany and the other EU-Member States should be comparable to those in the USA. In the USA, 50 to 90 % of the edible chestnut are infested. However, edible chestnut trees are already weakened by other pests, which possibly potentiate the damage. According to Craighead (1950), it is not clear whether also healthy and non-damaged trees might be infested. However, at an infestation rate of 50 to 90 % of edible chestnuts this is to be assumed.</p> <p>Furthermore, the beetle could be a potential vector for the elm dieback, like <i>Scolytus scolytus</i>, as the disease is transmitted</p>

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	mechanically.
Is an infestation easy to eradicate?	Only in the case of early detection, there is a chance for eradication. Eradication might be very difficult to manage in dense stands of host trees.
Remarks	High damage potential on edible chestnut, elm and white oak
Literature	<p>Anonym (2018): <i>Melittomma sericeum</i>. https://wiki.bugwood.org/Melittomma_sericeum</p> <p>Bug Guide (2018): <i>Melittomma sericeum</i>. https://bugguide.net/node/view/896779</p> <p>Craighead, F. C. (1950): Insect Enemies of Eastern Forests. US Department of Agriculture, Miscellaneous Publication No. 657, 679 S.</p> <p>Peverieri, G. S., Binazzi, F. und Roversi, P. F. (2017): Chestnut – Associated Insects Alien to Europe. Redia, 100, S. 103-113.</p> <p>Wheeler, Q. D. (1986): Revision of the genera of Lymexylidae (Coleoptera, Cucujiformia). Bulletin of the AMNH ; v. 183, article 2, 108 S.</p>



Fig. 1: *Melittomma sericeum*, female (Bug Guide, B. Barnd, 2007)



Fig. 2: *Melittomma sericeum*, male (Bug Guide, F. Guamieri, 2009)



Fig. 3: Larva of *Melittomma sericeum* (Bug Guide, M. J. Hatfield, 2014)