Express PRA for *Dinoderus minutus* – Interception/Occurrence –

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Revision highlighted in red and italics.

Initiation: Interception of a consignment with wooden packaging material from China by the plant protection service of the Federal State Bremen; the infested material has already been destroyed due to other reasons.

Initiation for the revision: *new risk assessment after occurrence in a zoo in Berlin*

Express PRA	***Dinoderus minutus* (Fabricius, 1775)**		
Phytosanitary risk for Germany **Phytosanitary risk for EU-Member States**	*Since the damage by* Dinoderus minutus *is limited to nonliving plant parts, this plant pest is not subject to plant health regulations. Hence, the categorisation of the phytosanitary risk is not applicable. However, the beetle can cause damage in the area of stored products protection/material protection.*		
Certainty of the assessment	**high** ☐	**medium** ☒	**low** ☐
Conclusion	*So far*, the bamboo borer *Dinoderus minutus* that is cosmopolitan in the tropics *did not occur* in Germany/the EU, *but was currently found on bamboo panelling of plant boxes in the interior of a zoo in Berlin*. So far, it is listed neither in the Annexes of *Regulation (EU) 2019/2072* nor by EPPO. The beetle infests especially bamboo after felling but can also infest other plants after harvest, e.g. sugarcane, manioc and rice. Due to unsuitable climatic conditions, it is assumed that *D. minutus* cannot establish in Germany in the open field. Establishment in southern EU-Member States is *theoretically possible. The infestation of living plants is not expected.* Since the smaller bamboo shot-hole borer exclusively infests plants after harvest, it is a storage pest/material pest. While the beetle has a high potential for damaging bamboo in particular, it apparently prefers freshly felled bamboo. Therefore, it does *not* pose any phytosanitary risk for Germany and other EU-Member States. However, there is uncertainty as to whether there is a risk to stored bamboo that has not been freshly cut or to other stored host plants, or whether temperatures during storage are too low for the beetle. The risk *for storage protection resp. for stored host plants and processed bamboo in* southern EU-Member States is estimated as *higher* due to higher temperatures. *Thus,* Dinoderus minutus *is not classified as a potential quarantine pest, and Article 29 of the Regulation (EU) 2016/2031 does not apply. However, the destruction or de-contamination of the infested material is recommended to prevent severe damage.*		
Preconditions for Express-PRA	Yes, could be a pest, is not listed, so far, it is not established		

Express PRA	*Dinoderus minutus* (Fabricius, 1775)
fulfilled?	in the area covered by the reporting plant protection service.
Taxonomy, common name, synonyms	Coleoptera, Bostrichidae, *Dinoderus*, *Dinoderus minutus* (Fabricius, 1775) Smaller bamboo shot-hole borer *Apate minutus* Fabricius *Dinoderus siculus* Baudi *Dinoderus substriatus* Stephens
EPPO Code	DINDMI
Does a relevant earlier PRA exist?	No
Distribution and biology	China, India, Indonesia, Israel, Japan, Malaysia, Philippines, Sri Lanka, Vietnam, Africa, USA (California and Florida), Cuba, Trinidad and Tobago, Windward Islands, Brazil, Chile, Colombia, Fidschi, Papua New Guinea, Solomon Islands. At CABI (2019) the presence in Germany is noted due to a Chinese publication (Wu et al. 1986), *and also according to Borowski (2007) the beetle is already present* in *Germany*. However, this information could not be further substantiated. *Marggi and Germann (2018) describe the finding in bamboo spillikins in Switzerland.* Gauss (1958) and Münnich (1983) only point out interceptions. *It is not known whether there are more occurrences in Germany than the – presumably eradicated – finding in Berlin zoo.* The species has 3 – 4 (maximum 5) generations per year, larvae and adults can be found throughout the year. The main period for oviposition is in May and June. Eggs are deposited in galleries bored by the adults. One females lays approx. 20 eggs. Larvae emerge after 5 – 8 days, bore further lengthwise into the stem and pupate after approx. 40 days – the cocoons can be found at the end of the galleries. Adults either emerge after 4 days or bore into other parts of the same stem. In general, freshly felled/harvested and young bamboos are likely to be infested. The beetle can persist longer periods of starvation and is resistant against many pesticides. So far, extensive outbreaks of *D. minutus* are not known (CABI, 2019).
Are host plants present in the PRA area? If so, which?	*Bambusa bambos* (*B. arundinacea*) *Bambusa brevifloraLBambusa pervariabilis* *Bambusa polymorpha* *Bambusa textilis* *Bambusa vulgaris* *Dendrocalamus giganteus*

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	Dendrocalamus hamiltonii *Dendrocalamus strictus* *Manihot esculenta* (Maniok) *Oryza sativa* (Reis) *Phyllostachys heteroclada* *Phyllostachys heterocycla* *Phyllostachys pubescens* *Saccharum officinarum* (Zuckerrohr) *Pinus* (CABI, 2019)
Transfer pest consignment →host plant	The likelihood of the transfer of the beetle from infested bamboo to stored bamboo is estimated as rather low. Despite interceptions of living beetles/larvae with packaging material from Asia, so far there is no establishment in the EU. The beetle was often intercepted in the USA and is now established in California and Florida.
Is a vector / further plant for host alternation needed? Which? Distribution?	Not relevant.
Climate in distribution area comparable to PRA area?	It is a tropical/subtropical species hence, establishment in the open field in Germany is unlikely. Establishment possibly in subtropical regions in the EU *cannot be excluded, but not on living plants*.
If no, are host plants present in protected cultivation?	Only harvested/stored host plants are relevant.
Damage to be expected in the PRA area?	Damage especially on stored bamboo would be likely in southern Europe. Obviously, the beetle prefers freshly felled bamboo, *and is found in processed bamboo (e.g. bamboo-spillikins, bamboo panelling).* It is uncertain as to how it would behave in case that only older material is available.
Is an infestation easy to eradicate?	Yes, by destruction of infested material in a storage facility. The economic damage of this measure is likely to correlate with the extent of the infestation.
Remarks	*Uncertainty is assessed as medium because there is no evidence of phytosanitary risk (i. e., infestation and damage to living plants) to date, but overall there is little information available on the beetle.*
Literature	WU, J. F., HUANG, Z. H., LIN, J.P., LU, J. H., 1986. A preliminary study on the bostrichid, *Dinoderus minutus* Fabricius. Journal of Bamboo Research, 5 (1): 112-119.

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	GAUSS, R., 1958. Der Bambusbohrer, *Dinoderus minutus* Fabr., in Deutschland! Anzeiger für Schädlingskunde 31 (5) : 74-75. MARGGI, W., GERMANN, C. (2018) Nachweis von Dinoderus minutus (Fabricius, 1775) in der Schweiz (Coleoptera: Bostrichidae). Entomo Helvetica 11: 157–160. MÜNNICH, H. 1983. Bambusbohrkäfer *Dinoderus minutus* F. (Bostrychidae) in der DDR. Entomologische Nachrichten und Berichte 27: 87. CABI, 2019. Crop protection compendium. Datasheet on *Dinoderus minutus*. http://www.cabi.org/cpc/datasheet/19035. Website accessed on 11-06-2021.