Express PRA for *Chrysobothris femorata* – Interception –

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Inititation: Interception of stems of black walnut from the USA by the Plant Protection Service of Hamburg

Express-Risk Analysis (PRA)	*Chrysobothris femorata* Olivier		
Phytosanitary risk for Germany	**high** ☒	**medium** ☐	**low** ☐
Phytosanitary risk for EU-Member States	**high** ☒	**medium** ☐	**low** ☐
Certainty of assessment	**high** ☐	**medium** ☒	**low** ☐
Conclusion	The buprestid *Chrysobothris femorata* which is endemic in Northern America does not yet occur in Germany and the EU. Up to now it is neither listed in the Annexes of Dir. 2000/29/EC nor by the EPPO. *Chrysobothris femorata* infests various deciduous trees, amongst others apple tree, birch, elm, linden, maple, willow, black walnut. It can be assumed that *C. femorata* is able to establish outdoors in Germany due to appropriate climate conditions. An establishment in other Member States is also possible. Due to its high damage potential for many species of deciduous trees *C. femorata* presents a considerable phytosanitary risk for Germany and other EU-Member States. Based on this risk analysis it can be assumed that the pest is able to establish in Germany or another Member State and to cause considerable damage. Thus preventive measures against the risk of introduction of this potential quarantine pest should be taken according to § 4a of the Plant Inspection Order. According to § 4a of the Plant Inspection Order the intercepted consignment must be destroyed, treated or rejected.		
Preconditions for an Express-PRA fulfilled?	The beetle is a pest. It is not listed by the EU and has thus far not been found in the area covered by the reporting plant protection service.		
Taxonomy, trivial name, synonyms	Coleoptera, Buprestidae, *Chrysobothris femorata* Olivier Flatheaded Appletree Borer		
Does a relevant earlier PRA exist?	No		

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Distribution and biology	The beetle is endemic in Northern America and widespread there. There is one generation per year. Eggs are deposited under the bark or into shakes in the bark. Larvae feed on the phloem and the sapwood of stems and twigs and hibernate in the feeding tunnels which might be very long. Adults emerge from May on. They feed on the leaves. Often the beetle infests freshly planted healthy trees as well as trees that are weakened by drought, defoliation or infestation.
Are host plants present in the PRA-region? If so, which?	The beetle is polyphagous and infests various deciduous trees, amongst others apple tree, birch, elm, linden, maple, willow, black walnut. Host plants of the beetle are widely distributed in the EU.
Transfer pest from consignment →host plant	After having emerged adult beetles are capable to infest deciduous trees in the surroundings.
Is a vector needed resp. further plant for host alternation? Which? Distribution?	Not relevant
Climate in distribution area comparable to PRA area?	Yes. The beetle is present from continental Northern America to Canada. The climate is comparable with the climate throughout in Europe.
If no, are host plants present in protected cultivation?	Not relevant
Damage to be expected in the PRA area?	Presumably on deciduous trees in the entire EU. Especially young and freshly planted as well as weak trees are at risk. In certain circumstances the trees might die. In case that the trees survived the infestation they were no longer marketable.
Is an infestation easy to eradicate?	An early detection is difficult because a great part of the life cycle of the beetle occurs within the tree. In the case of early detection and immediate application of measures (felling of infested and surrounding trees) an eradication might be successful.
Remarks	There was no absolute certainty that *C. femorata* was concerned. Thus a risk analysis for *C. rugosiceps* was requested simultaneously. However, this species is closely related with *C. femorata*, and literature on this beetle is merely available. Thus it is assumed that results of the risk analysis are transferable for this species, at least in respect to the general risk potential.

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	In Japan, *Chrysobothris femorata* is listed as a quarantine pest.
Literature	IPM of Midwest Landscapes, Pests of Trees and Shrubs, Flatheaded apple tree borer. http://cues.cfans.umn.edu/old/Web/135FlatheadedAppletreeBorer.pdf (accessed on 13-10-2017). Hansen, J.A., Hale, F.A., Klingeman W. E. (2009). Identifying the flatheaded appletree borer (*Chrysobothris femorata*) and other buprestid beetle species in Tennessee. University Tennessee Extension Service Pub. SP503-I, Knoxville. p. 1– 6. Hansen, J., Moulton, J. K., Klingeman, W. E., Oliver, J. B., Windham, M. T., Trigiano, R. N., Reding, M. E. (2015). Molecular systematics of the *Chrysobothris femorata* species group (Coleoptera: Buprestidae). Annals of the Entomological Society of America 108: 950–963. Weber, B. C., Anderson, R. L. Anderson, Hoffard, W.H. (1992). How to diagnose black walnut damage. Boring insects. USDA Forest Service, General Tech. Report NC-57, North Central Forest Experimental Station, St. Paul, MN https://www.na.fs.fed.us/spfo/pubs/howtos/ht_walnut/boring.htm (accessed on 13-10-2017)