Express – PRA for *Cathaica fasciola* – Interception –

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Initiation: Interception of a stone consignment from China by the Plant Protection Service of Hesse

Express PRA	*Cathaica fasciola* (Draparnaud 1801)		
Phytosanitary risk for Germany	**high** ☒	**medium** ☐	**low** ☐
Phytosanitary risk for EU-Member States	**high** ☒	**medium** ☐	**low** ☐
Certainty of assessment	**high** ☒	**medium** ☐	**low** ☐
Conclusion	*Cathaica fasciola* is endemic in China, Japan and on the Pacific-Island Guam and does not yet occur in Germany and the EU. Up to now it is neither listed in the Annexes of Directive 2000/29/EC nor by EPPO. *C. fasciola* is polyphagous and establishes in various refugia like pasture and infests vegetables, fruits, ornamentals, pasture plants and other cultivated plants. Due to suitable climate conditions it must be assumed that *C. fasciola* is able to establish outdoors in Germany. The establishment in other EU-Member States is also possible. Due to its high damage potential for horticulture and the cultivation of ornamentals and other agricultural crops *C. fasciola* presents a high phytosanitary risk for Germany and other EU-Member States. Furthermore the species is - in the combination with *Conocephalus spp*. which occurs in Europe - an intermediate host for the parasite *Eurytrema pancreaticum* (pancreas fluke) of sheep, goats, pigs, cattle. In single cases also humans were infested. So far, the parasite *E. pancreaticum* is not endemic in Europe and only occurs in Asia and South America. Based on this risk analysis it is assumed that *C. fasciola* is able to establish in Germany or another Member State and to cause considerable damage on cultivated crops and farm animals. Thus measures against the introduction of this potential quarantine pest (with its parasite *E. pancreaticum*) should be taken according to § 4a of the Plant Inspection Order. Accordingly, the intercepted wooden pallets have to be destroyed according to § 4a of the Plant Inspection Order. As a precaution a monitoring in the storing location of the pallets and in the near surroundings is deemed necessary.		
Preconditions for an Express-PRA fulfilled?	It is a non-listed pest and so far, it is not established in the area covered by the reporting Plant Protection Service.		
Taxonomy, trivial name, synonyms	Gastropoda (snail), Bradybaenidae (bradybaenid land snail) Chinese rams horn snail Syn.: *Bradybaena fasciola, Eulota*		

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	fasciola
Does a relevant earlier PRA exist?	No
Distribution and biology	China, Japan and Pacific-Island Guam (insular areas of the USA) (Anonym 2017a); *C. fasciola* is widespread in China and belongs to the seven major species that often are locally abundant (Barker, 2002; Min-Zhao Zhang, 2015).
Are host plants present in the PRA area? If so, which?	The snail species is extremely polyphagous and is present in different habitats; the species feeds on vegetables, fruits, ornamentals, pasture plants and other plants (Min-Zhao Zhang, 2015). In feeding experiments the following plants were suitable: *Salix matsudana, Spinacia oleracea, Solanum nigrum, Saxifraga stolonifera, Sophora japonica, Prunus persica, Salvia splendens, Lactuca sativa var. romana, Saccharina japonica* and *Pharbitis nil* (Zhang Minzhao et al., 2015); Many host plants are present in Germany and the EU.
Transfer pest from consignment →host plant	Yes, in the USA experience is already known from Michigan where *C. fasciola* was introduced but could be eradicated (Robinson, 2015). The snail species is mobile and extremely polyphagous so that it is able to find host plants in the surroundings of the introduction area in a short time.
Is a vector/further plant needed for host alternation? Which? Distribution?	No, but the species is an intermediate host for *Eurytrema pancreaticum*, in combination with a further intermediate host (snails of the genus Conocephalus (Orthoptera, Tettigoniidae) which is wide spread in Europe, Anonymus 2017b). *E. pancreaticum* infests the pancreas of sheep, goats, pigs, cattle and occasionally of humans and is capable to cause damage. *E. pancreaticum* is spread in Asia and South America and does not yet occur in Europe (Anonym 2017a, 2017c; Ishii et al., 1983; Taylor et al., 2016)
Climate in distribution area comparable to PRA area?	Yes, the climate in the distribution area in Asia is comparable.
If no, are host plants present in protected cultivation?	Not relevant.
Expected damage in the PRA area?	Yes. *C. fasciola* is discussed and described as a severe agricultural pest (Chen, 1994; no access to the complete article); In the USA *C. fasciola* is classified as a pest that causes great losses on economical crops; the USDA classifies this species as “actionable” , i.e. that infested consignments have to be fumigated or other eradication measures have to be conducted (Anonym, 2015; Robinson, 2015).

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Is an infestation easy to eradicate?	Yes, in case of early detection; From the US state Michigan experience is known from the year 2008; an eradication in the container harbour in Detroit was successful (Robinson, 2015).
Remarks	*C. fasciola* is a severe agricultural pest and as an intermediate host it also presents a veterinary risk for grazing animals and occasionally also for humans.
Literature	(Anonym 2017a): Discovery Life. http://www.discoverlife.org/mp/20m?kind=Cathaica+fasciola Anonym (2017b): Grasshoppers of Europe. http://www.grasshoppersofeurope.com/linnaeus_ng/app/views/species/nsr_taxon.php?id=2326 Anonym (2017c): EURYTREMA PANCREATICUM, the PANCREAS FLUKE, a flatworm parasitic of SHEEP, GOATS, PIGS. CATTLE and other LIVESTOCK. Biology, prevention and control. http://parasitipedia.net/index.php?option=com_content&view=article&id=2566&Itemid=2848 Anonym (2015): Pennsylvania Department of Agriculture, 2015 Entomology Program Summary. http://www.agriculture.pa.gov/Protect/PlantIndustry/Entomology/Documents/PA%202015%20Activities%20Report%20for%20EPB.pdf Barker, G. M. (2002): Molluscs as crop pests. CABI Publishing, 468 S. Chen, D. N. (1994): Dangerous agricultural pests - some terrestrial molluscs. Plant Quarantine Shanghai **8**, 1, 37-44 https://geoscience.net/research/002/589/002589469.php Ishii Y, Koga M, Fujino T, Higo H, Ishibashi J, Oka K, Saito S. 1983): Human infection with the pancreas fluke, *Eurytrema pancreaticum*. Am. J. Trop. Med. Hyg. 1983 Sep;**32**, 5, 1019-1022. https://www.ncbi.nlm.nih.gov/pubmed/6625056 Robinson, D. G. (2015): Invasive Land Snails and Slugs in North America. https://www.npdn.org/system/files/WPDN%20DGRobinson%202015.pdf Taylor M. A., Coop, R. L., Wall, R. L. (2016): Veterinary Parasitology. Wiley Blackwell. 1032 S. https://books.google.de/books?id=jelbCwAAQBAJ&pg=PA85&lpg=PA85&dq=Bradybaena+fasciola&source=bl&ots=SivTPQE7Xl&sig=ei_gWvgeakQysgehWBFulSjcGb8&hl=de&sa=X&ved=0ahUKEwihtaPsqtLXAhUPZlAKHacoDbIQ6AEISTAI#v=

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