Express-PRA for *Glaucias subpunctatus* – Interception –

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Initiation: Interception in Lower Saxony of Bonsai (*Pinus parviflora*, *Pinus thunbergii*, *Enkianthus perulatus*, *Ilex crenata* and *Taxus cuspidata*) from Japan.

Express-PRA	***Glaucias subpunctatus* (Walker, 1867)**		
Phytosanitary risk for Germany	**high** ☐	**mittel – niedrig** ☒	
Phytosanitary risk for EU MS	**high – medium** ☒		**low** ☐
Certainty of assessment	**high** ☐	**medium** ☒	**low** ☐
Conclusion	The stink bug *Glaucias subpunctatus*, native to Japan, China, Korea, Taiwan, and Indonesia, has not yet been recorded in Germany or elsewhere in the EU. So far, it is neither listed in the annexes to Regulation (EU) 2019/2072 nor by EPPO. *Glaucias subpunctatus* infests a wide variety of plant species and causes massive damage in Japan to the fruit of, for example, citrus, peaches, pears, and persimmons. To complete its life cycle, *G. subpunctatus* seems to be dependent on *Chamaecyparis obtusa* and *Cryptomeria japonica.* There is uncertainty whether *G. subpunctatus* would also be able to complete its life cycle on other plant species. Indications suggest this could be possible. It cannot be excluded that *G. subpunctatus* could establish in the open field, at least in warmer regions of Germany, due to suitable climatic conditions; establishment in other, particularly more southerly, EU Member States is highly likely with regard to climate. Due to its high damage potential for fruits from various families, *G. subpunctatus* poses a significant risk to Germany and other EU Member States. On the basis of this risk analysis, it is assumed that *G. subpunctatus* could become established in Germany or another Member State and cause significant damage. Measures should therefore be taken to prevent the introduction of this potential quarantine pest in accordance with Article 29 of Regulation (EU) 2016/2031. The intercepted consignment must therefore be destroyed, treated or rejected in accordance with Article 29 of Regulation (EU) 2016/2031.		

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	Any evidence or findings of *G. subpunctatus* in Germany and other EU Member States must be reported to the relevant authority; that is, plant protection services must report to the Julius Kühn-Institute, whilst private individuals, businesses or other organisations must report to the plant protection service in their (federal) state. Further information can be found at https://pflanzengesundheit.julius-kuehn.de/meldepflicht-fuer-neue-schadorganismen.html.
Preconditions for an Express PRA fulfilled?	Yes, the bug is known to be a pest, is not listed, and has not yet become established in the EU.
Taxonomy, common name, synonyms	Heteroptera, Pentatomidae, *Glaucias*, *Glaucias subpunctatus* (Walker, 1867). Synonyms: *Pentatoma subpunctata* Walker 1867, *Rhaphigaster melanosticticus* Vollenhoven, 1868, *Zangis subpunctata* Distant 1900, *Zangis melanosticta* Stal 1876 (Schouteden, 1908, Kirkaldy, 1909, Rider et al., 2002).
EPPO Code	GLAUSU
Does a relevant earlier PRA exist?	No.
Biology	The bugs feed on the juice (or the juice from the seeds inside the fruit) of citrus fruits, peaches, pears, persimmons and other fruits (Tsunashima and Itoyama, 2018, Rural Culture Association Japan, 2020) as well as on the cones of *Chamaecyparis obtusa* and *Cryptomeria japonica*. *Glaucias subpunctatus* usually has one generation per year; depending on weather conditions, two or even three generations may occur (Tsunashima et al., 2017). The adults overwinter on the underside of leaves or in overlapping areas of various evergreen tree species. In years with a high abundance of overwintering insects, early-ripening fruit such as plum and loquat (*Eriobotrya japonica*) is also damaged (Rural Culture Association Japan, 2020). The adults have a body length of 14–17 mm. They are bright green and highly glossy. The thorax and forewings have small black spots. Due to the gloss and colour of their antennae, they are easily distinguished from other stink bugs found in Japan (Rural Culture Association Japan, 2020, Furihata and Kishimoto, 2023).
Geographical distribution, infested areas	The stink bug is found on Honshu, Shikoku, Kyushu, the Ryukyu Islands, in China (Fujian, Guangdong, Guangxi,

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	Hunan, Yunnan), Taiwan, Korea and, according to older literature, also in Indonesia (Java, Sulawesi, Sumatra) (Kirkaldy, 1909, Krikken et al., 1981, Yasunaga et al., 1993, Rider et al., 2002, Rural Culture Association Japan, 2020). *Glaucias subpunctatus* is one of the dominant fruit-feeding bugs in Japan (Honda et al., 2025). The species is mainly found west of the Kanto region, but in recent years, findings have also been reported from the Tohoku region (Iwate and Fukushima prefectures; Furihata and Kishimoto, 2023). It possibly overwinters in the south-eastern part of Fukushima Prefecture (Sato-Miura et al., 2024). It is uncertain whether the bug can immediately become a pest in northern Japan, but as its habitat is expected to expand due to climate change, its population status should be monitored, according to Furihata and Kishimoto (2023). Originally, the bugs were found only sporadically in forests in Japan. However, with the nationwide afforestation of *Chamaecyparis obtusa* and *Cryptomeria japonica* from the 1980s onwards, their population exploded (Itoyama, 2024).
Is the pest a vector?	Other members of the Pentatomidae family, such as *Halyomorpha halys*, can transmit pathogens (Shiozawa und Tsuchizaki, 1992); however, this is not known to be the case with *G. subpunctatus*.
Is a vector/ further plant needed for host alternation? Which? Distribution?	Apparently, the bug relies on only a few plant species for its development from egg to adult stage, but other plants can also serve as feeding plants (see host plants). The nymphs have so far been found mainly on Hinoki cypress (Hinoki, *Chamaecyparis obtusa*) and Japanese cedar (Sugi, *Cryptomeria japonica*). According to Uchida et al. (1975), in natural environments, eggs were discovered only on these two tree species, however, no further information on oviposition sites is available. Nymphs have also been found occasionally on *Triadica sebifera* and *Ilex rotunda* (Honda et al., 2025, with reference to further sources). Tsunashima and Itoyama (2018) investigated the bug's development from nymph to adult stage on mature capsules of *T. sebifera*. All nymphs after the second instar were able to develop to adulthood and survived. However, a large proportion of the nymphs in the second instar died. This high mortality rate could be due to the hard seed coat of *T. sebifera*, which is too tough for the nymphs until the second larval stage. When using a fruit as a food plant, it is apparently important

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	that the stylets of the larvae can reach the seeds inside the fruit (Tsunashima and Itoyama, 2018). Honda et al. (2025) suggest that the bug can adapt to new host plants for reproduction. In laboratory experiments, larvae were also able to develop to adulthood on American dogwood (*Cornus florida*, syn. *Benthamidia florida*) and *Cornus macrophylla* (Honda and Itoyama, 2013; Kinoshita et al., 2025). It was also observed that some female bugs reared on dogwood fruits, continuously feeding on them, laid eggs within 30 days of hatching (Honda and Itoyama, 2013).
Host plants	Strictly speaking, only *Chamaecyparis obtusa* and *Cryptomeria japonica* are definitively known host plants of *G. subpunctatus*, as the complete development from egg to larva can take place on these two plants (see also Tsunashima and Itoyama, 2018). In Japan, the bug overwinters (entering reproductive diapause, Itoyama, 2026, personal communication) on *Citrus sinensis*, *C. unshiu*, *Castanopsis* spp., *Chamaecyparis obtusa*, *Cryptomeria japonica*, *Podocarpus macrophyllus*, *Lithocarpus edulis*, *Acacia melanoxylon*, *Myrica rubra (*syn. *Morella rubra)*, and *Juniperus chinensis*. Before entering the reproductive phase, adults have also been found on *Prunus cerasus*, *Morus* spp. and *Paulownia tomentosa* (Uchida et al., 1975, Kiritani, 2007, Rural Culture Association, Japan, 2020, Honda et al., 2025 with reference to further sources). Other plants on which the adults are found include peaches, plums, pears, persimmons, and other fruits. The next generation of adults is then found in late summer or autumn, for example, on *Triadica sebifera* and *Ligustrum japonicum* (Rural Culture Association Japan, 2020, Itoyama, 2024, Honda et al. 2025).
Presence of the host plants in Germany	Pears, plums, and other fruits are widespread in Germany and are grown commercially. *Ilex aquifolium* (a species closely related to *I. rotunda* and *I. crenata*) is the only native holly species in Europe and is widespread in parks as well as in (semi-) natural habitats. Hinoki and Sugi are neophytes in Germany and are also planted as garden and park trees. *Triadica sebifera* is found in botanical gardens.
Presence of the host plants in the EU Member States	Oranges, peaches, pears, plums, and other fruits are widespread in the EU and are grown commercially; most of the other host plants are grown as ornamental plants. For *Ilex* spp., Hinoki, Sugi and *Triadica sebifera*, see above. *Triadica sebifera* has been classified by the EPPO as a high

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	risk to biodiversity in the Mediterranean and Black Sea regions (EPPO, 2018). Sugi is commercially cultivated in the Azores (Pavao et al., 2024). Experimental plantations also exist in France (Dubois, 1995).
Symptoms	Puncture holes in fruit caused by sap-sucking.
Transfer pest from consignment to host plant	As *G. subpunctatus* is polyphagous and the adults are good fliers, it is possible for them to be transferred from the consignment to host plants. Furthermore, the species overwinters in the adult stage. Although mainly dead adults were found in the interception mentioned above, one specimen was still alive, suggesting that it is apparently possible for adults to survive during transport. Eggs and larvae could also be introduced via *Cryptomeria japonica*. Although a phytosanitary certificate is required for this species (though eggs could at least be overlooked), there is no import ban into the EU. The risk of introduction via *Chamaecyparis obtusa* bonsai is lower, as these are subject to a three-month post-import quarantine upon entry. In Australia, according to the Australian Department of Agriculture (2019), several consignments containing live specimens of *G. subpunctatus* were intercepted between 2017 and 2019.
Climate in distribution area comparable to climate in Germany?	*Glaucias subpunctatus* is found primarily in subtropical and warm temperate zones; in Japan, it is mainly found in southern regions, but has now also become established significantly further north in temperate zones (Honda et al. 2025). The climate in the areas where the stink bug occurs corresponds primarily to the Köppen-Geiger climate zones Cfa (hot, humid summers, averaging above 22°C, and mild winters) and Dfa (hot summers, averaging above 22°C in the warmest month, cold winters, average temperature below -3°C, in the coldest month, though this might already be too cold for the bug (Itoyama, 2026, personal communication), and sufficient precipitation throughout the year). The predominant climate in Germany is the Cfb climate (warm temperate, year-round humid oceanic climate), whilst a Dfb climate (summer-warm, humid continental climate) prevails in some regions (MacLeod and Korycinska, 2019; Beck et al., 2023).

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Climate in distribution area comparable to climate in EU Member States?	For information on the climate in the present range, see above. The predominant climate in the EU is the Cfb climate, but Cfa and Dfa climates are also found (MacLeod and Korycinska, 2019; Beck et al., 2023).
If no, are host plants present in protected cultivation?	Not relevant.
Known damage in infested areas	*Glaucias subpunctatus* is an economically significant pest in Japan. Its feeding activity causes severe damage to the fruit of the host plants, leading to significant yield losses. Significant damage to fruit crops in particular in south-western parts of Japan. Due to climate change, damage is expected to increase further (Kiritani, 2007; Honda et al., 2025). Like *Halyomorpha halys*, *G. punctatus* can also cause nuisance in urban areas (Honda et al., 2025). In Korea, where no significant changes in land use have taken place, there are no notable problems with *G. subpunctatus* (Kiritani, 2007). Interestingly, there appear to be no significant problems with *H. halys* in Korea either. The species generally achieves only a relatively low population density and has less economic significance, which is likely due to different abiotic conditions and native antagonists (Kho et al., 2024).
Expected damage in Germany?	Damage is likely to be limited, as the climatic conditions are only partially suitable.
Expected damage in EU Member States?	Damage is highly likely. The bug's feeding activity could cause severe damage to the fruits of the host plants, leading to significant yield losses.
Relevance for organic farming	Comparable to *Halyomorpha halys*. There are various control methods that could be used in organic farming (pheromones, natural enemies, such as *Trissolcus japonicus*, Matsuo et al., 2016), but these are not suitable for achieving complete eradication.
Is an infestation easy to eradicate?	Swiping is recommended for detecting an infestation (Honda et al., 2025). The pheromone of the stink bug *Plautia stali* (methyl (E,E,Z)-2,4,6-decatrienoate, MDT) also attracts *G. subpunctatus* (Weber et al., 2014).

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	As the occurrence of these stink bugs in orchards is difficult to predict, spraying with long-lasting synthetic pyrethroids or neonicotinoids is effective. However, this should be done with caution, as synthetic pyrethroids can encourage the occurrence of other pests such as spider mites (Rural Culture Association Japan, 2020).
Bemerkungen	It is uncertain whether the bug can complete its life cycle on plant species other than *Chamaecyparis obtusa*, *Cryptomeria japonica*, and the laboratory-studied species *Triadica sebifera*, *Ilex rotunda*, *Cornus florida*, and *C. macrophylla*. The probability is increased by the fact that these species belong to very different plant families or subfamilies: *Chamaecyparis*: Cupressaceae, Cupressoideae; *Cryptomeria*: Cupressoideae, Taxodioideae; *Triadica*: Euphorbiaceae; *Ilex*: Aquifoliaceae; *Cornus*: Cornaceae. To date, the bug has mainly been found in warm temperate to subtropical climates, but it is feared that it may adapt to other climates. On this subject, a quote from Wermelinger et al. (2008) on *Halyomorpha halys*: "Whether this bug will also cause problems in horticulture in Switzerland or in Europe cannot be predicted at this point. The annual average temperatures, and, even more relevant, the average summer temperatures are clearly higher in the countries of origin and in the region of the US introduction than in Central Europe. In any case, current global warming will certainly encourage the spread of H. halys populations. Warmer winters are likely to reduce winter mortality by an estimated 13% for every degree of warming […]. In particularly warm years and regions, *H. halys* may also become a significant nuisance in homes." *Halyomorpha halys* has now been recorded throughout Europe, with the exception of Scandinavia and the Baltic states (EPPO, 2025).
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Abbildungen

Abbildung 1. *Glaucias subpunctatus*, adult. (Foto: ©Landwirtschaftskammer Niedersachsen)

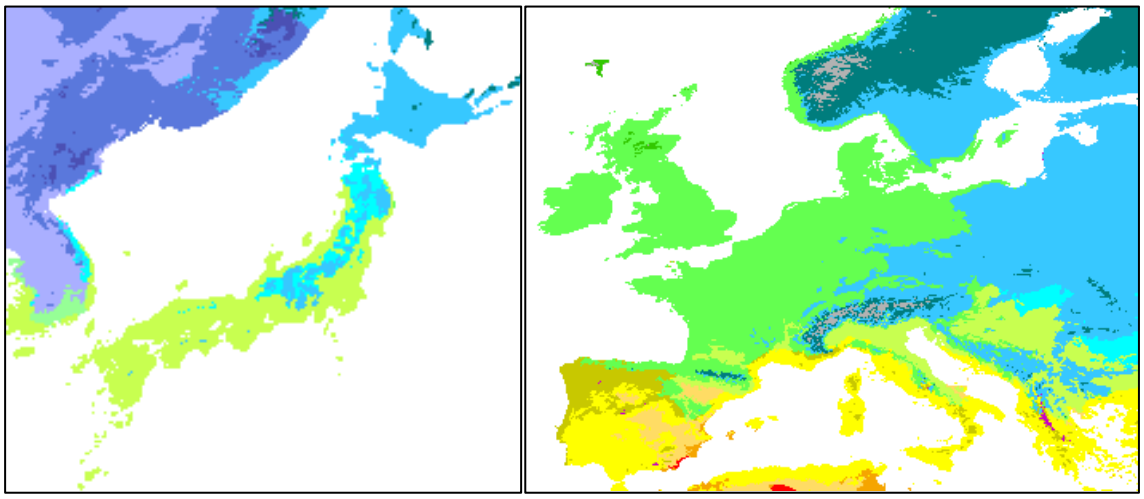

Abbildung 2. Köppen-Geiger-Klimazonen in Japan und Europa (Beck et al., 2023). Hellgrün: Cfa, mittelgrün: Cfb, hellblau: Dfa, mittelblau: Dfb.