European and Mediterranean Plant Protection Organization
Organisation Européenne et Méditerranéenne pour la Protection des Plantes

Data sheets on quarantine pests
Fiches informatives sur les organismes de quarantaine

Xylotrechus namanganensis

Identity

Name: *Xylotrechus namanganensis* Heyden
Taxonomic position: *Insecta*: *Coleoptera*: *Cerambycidae*
Common name: Namangan longhorn beetle, willow longhorn beetle (English); Наманганский усач, ивовый усач, Наманганский клит (Russian)
Notes on taxonomy and nomenclature: the species name relates to the Namangan valley of Uzbekistan, which forms an enclave between Kyrgyzstan and Tajikistan
EPPO code: XYLONM
Phytosanitary categorization: EPPO A2 action list no. 328

Hosts

X. namanganensis attacks numerous woody species, including trees planted in city streets and parks (*Celtis australis*, *Elaeagnus angustifolia*, *Platanus* × *hispanica*, *Populus alba*, *Populus nigra*, *Ulmus minor*, *Ulmus pumila*), trees in valley woodlands (*Alnus glutinosa*, *Populus diversifolia* and other *Populus* spp., *Salix alba* and other *Salix* spp.), and various fruit and nut trees (*Juglans regia*, *Malus domestica*, *Morus nigra*, *Prunus armeniaca*, *Prunus avium*, *Prunus dulcis*). Various other genera are also recorded as hosts (*Betula*, *Crataegus*, …) (Pavlovskii & Shtakelberg, 1955; Makhnovskii, 1955, 1966; Romanenko, 1981; Kadyrov, 1988).

Geographical distribution

EPPO region: Kazakhstan, Kyrgyzstan, Tajikistan (potential EPPO member), Turkmenistan (potential EPPO member), Uzbekistan
Asia: Afghanistan, China (Xinjiang), Iran (possibly), Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan (Pavlovskii & Shtakelberg, 1955; Makhnovskii, 1955, 1966; Romanenko, 1981; Kadyrov, 1988; Wang *et al*., 1999)
EU: absent

Biology

X. namanganensis occurs in the mountainous areas of Central Asia. Its flight period is very long. In the valleys, it usually begins in April and lasts till August. In the mountains, it begins in May or June. Beetles are easily detectable because of active movement on the bark. They also feed on nectar of *Apiaceae* (*Ferula*, *Heracleum*, etc.) and sap of host plants. They copulate on flowers and trunks. Females lay eggs in cracks in the bark of trunks and, sometimes, of thick branches. They usually lay several eggs together. Larvae appear 13–16 days later. They enter the bark and make a small hall under the bark, then a longitudinal gallery situated both in bark and sapwood. Larvae of medium age enter deep into the wood and make longitudinal and transverse galleries filled with thin borings. They usually pupate in spring after the second winter, so the life cycle of *X. namanganensis* usually takes two years (Pavlovskii & Shtakelberg, 1955; Makhnovskii, 1955, 1966; Kadyrov, 1988; Wang *et al*., 1999).

Detection and identification

Symptoms

Large emergence holes in trunks and large branches, borings at the basis of infested trees and beetles sitting on flowers and trunks are indications of the presence of the pest. Branch and tree dieback is easily detected by seeing wilting and drying leaves.

Morphology

Eggs/*Larva*/*Pupa*
No information.

Adult

The adult of *X. namanganensis* is brown or almost black, 10–20 mm long, with yellow or ochre legs and antennae (Fig. 1). The elytrae are of a lighter colour, ochre or brown–ochre, at the base. The abdomen is reddish or ochre. Hairs are yellow or grey, whitish or white. Elytrae have several spots of a lighter colour (yellow or white). They are wider in the middle and are equal or wider than the pronotum. The antennae are short, reaching only the first third or the middle of the elytrae in the male, and even shorter in the female. The first segment of the rear tarsus is as long as, or even longer than, all the other segments together (Makhnovskii, 1955, 1966).

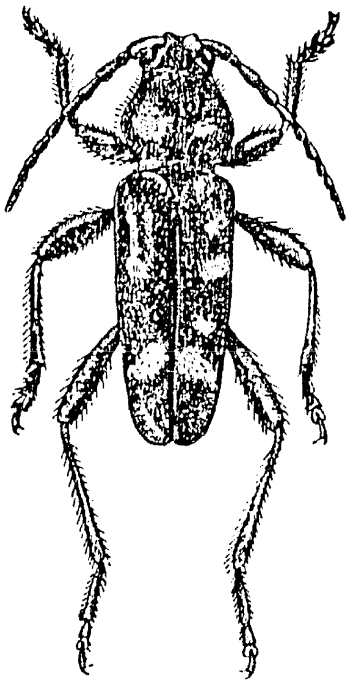

Fig. 1 Adult beetle of Xylotrechus namanganensis (Makhnovskii, 1966).

Parthways for movement

Adults naturally fly actively. Because larvae of *X. namanganensis* may be hidden in the wood and therefore difficult to detect, they may easily be transported with untreated wood or wood packaging moving in trade. The pest may theoretically also be carried on plants for planting, but this is relatively unlikely since the species does not attack the small branches, trunks or root stocks concerned. Adults could be carried as contaminating pests of various commodities.

Pest significance

Economic impact

X. namanganensis is an important pest of forest, ornamental and deciduous fruit trees in the region of its present distribution (mountains of Central Asia), especially of *Populus* and *Salix* spp. in riparian woodlands, *Elaeagnus* spp. in shelterbelts, fruit trees in valleys and ornamental and introduced plants in city plantings. Its major environmental impact is in cities situated in hot dry climatic conditions, where large deciduous trees have a special amenity value and are difficult to replace (Makhnovskii, 1955, 1966). *X. namanganensis* attacks both stressed and healthy trees of different ages as well as cut trees and wood with bark. When a single tree is attacked by a significant number of beetles, it may die within 1 or 2 years. The concentration of the pest is usually very high, 5–10 emergence holes per 10 dm^2 of the bark, and the economic injury level was estimated by Wang *et al*. (1999) as 2 emergence holes per plant. This species prefers to attack mature trees and, even in cases when it does not kill them, infestation results in significant delays for sprouting, advanced leaf shedding, loss of vigour and of wood marketability (because of dense and large galleries made by the larger larvae deep in the wood). The pest is most frequent in the valleys but also occurs up to an altitude of 2600 m (Plavilshchikov, 1940; Arkhangel'skii, 1941; Pavlovskii & Shtakelberg, 1955; Grechkin, 1956; Makhnovskii, 1955, 1966; Matessova *et al*., 1962; Sinadskii, 1963; Yagdyev, 1975; Romanenko, 1981; Krivosheina & Tokgaev, 1985; Kadyrov, 1988; Wang *et al*., 1999).

Control

Major control efforts are undertaken in countries of the present distribution of *X. namanganensis*. Control measures include phytosanitary measures (e.g. surveys in nurseries with burning of infested plants for planting, cutting and burning all infested trees), planting more resistant species and varieties of trees, treatments with chemical and biological insecticides (Makhnovskii, 1955, 1966; Wang *et al*., 1999).

Phytosanitary risk

X. namanganensis is considered as a very serious pest of forest, ornamental and fruit trees in countries where it occurs. In view of the hot dry climatic conditions in its countries of origin and present distribution, it is most likely to establish in Mediterranean countries of the EPPO region where the same species or genera of host plants are present. There is little trade in the wood of the host plants of *X. namanganensis*, so the main phytosanitary risk comes from movement of untreated dunnage and wood packaging.

Phytosanitary measures

X. namanganensis was added in 2004 to the EPPO A2 action list, and endangered EPPO countries are therefore recommended to regulate it as a quarantine pest. Phytosanitary measures for its exclusion could include origin of consignments from a pest-free area. Wood packaging should respect ISPM no. 15 (ICPM, 2003). Plants for planting of host species should be dormant and without leaves or plant debris. International movement of wood of the host plants seems relatively unlikely, but measures in that case could be debarking, plus grub-hole freedom, or kiln drying, or other treatment.

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