

Data Sheets on Quarantine Pests

Ips duplicatus

IDENTITY

Name: *Ips duplicatus* (Sahlberg)

Synonyms: *Bostrichus duplicatus* Sahlberg
Tomicus rectangulus Ferrari
Tomicus judeichi Kirsch
Tomicus infucatus Eichhoff

Taxonomic position: Insecta: Coleoptera: Scolytidae

Common names: Northern bark beetle (English)
Nordischer Fichtenborkenkäfer (German)
Dobbelt-tannet barkbille (Norwegian)

Bayer computer code: IPSXDU

EU Annex designation: II/B

HOSTS

Picea abies is the main host in the EPPO region. Other species of *Picea* and also of *Pinus* may serve as hosts in other regions. In eastern Siberia, *Larix* is the preferred host.

GEOGRAPHICAL DISTRIBUTION

EPPO region: Austria, Belgium, Czech Republic, Estonia, Finland, France (unconfirmed), Germany, Hungary, Kazakhstan, Latvia, Lithuania, Norway, Poland, Romania, Russia (northern Russia, central Russia, Siberia), Slovakia, Sweden, Ukraine, Yugoslavia.

Asia: Japan (Honshu), Kazakhstan, Russia (Siberia).

EU: Present.

BIOLOGY

There is one annual generation. Flight takes place in May. The species is polygamous and the males initiate gallery construction and produce an aggregation pheromone consisting of ipsdienol (Bakke, 1975) and E-myrcenol. The new generation emerges in late July or August and hibernates in the forest duff. The speed of brood development corresponds to that of *I. typographus* (Schlyter *et al.*, 1987). *I. duplicatus*, a smaller species attacking the same hosts, is a poor competitor with *I. typographus*, and is generally confined to the tops of trees (Schlyter & Anderbrant, 1993).

DETECTION AND IDENTIFICATION

Symptoms

Galleries are usually found in standing trees, rather than logs, and in the upper part of trees where the bark is relatively thin and where *I. typographus* has colonized the lower section.

Larger branches can also be used for reproduction. Each gallery has two to four longitudinal female egg galleries, half of them in each direction.

Morphology

Beetles are 3-4 mm in length, dark-brown, with four spines at each side of the elytral declivity. The second and third spines arise from a tumescence which forms an arcuate ridge between them. This is most distinct in the male where the third spine is the largest and is capitate (Balachowsky, 1949; Grüne, 1979).

MEANS OF MOVEMENT AND DISPERSAL

Laboratory experiments have shown that adult *Ips* spp. can fly continuously for several hours. In the field, however, flight has only been observed to take place over limited distances and then usually downwind. Beetles have been found in the stomach of trout in lakes 35 km from the nearest spruce forest, probably carried by the wind (Nilssen, 1978). Dispersal over longer distances depends on transportation under the bark of logs.

PEST SIGNIFICANCE

Economic impact

I. duplicatus is hardly of any significance as a pest. Compared with *I. typographus*, a pest of the same hosts (EPPO/CABI, 1996), it is hardly mentioned in the scientific literature. Because it occurs together with *I. typographus*, it may contribute to the killing of trees during outbreaks of the latter.

Control

Control measures are never used against this species.

Phytosanitary risk

I. duplicatus is not considered to be a quarantine pest by EPPO or any other regional plant protection organization. It is not a primary pest and has hardly been recorded as of any significance as a secondary pest. The islands of Great Britain and Ireland are the principal areas where *Picea* spp. are widely planted and *Ips* spp. like *I. typographus* and *I. duplicatus* are absent and not likely to enter by natural spread. Though there does seem to be justification for such areas to be protected by phytosanitary measures against *I. typographus* (EPPO/CABI, 1996), this is much more doubtful for *I. duplicatus* which has hardly been reported as a pest anywhere that it occurs.

PHYTOSANITARY MEASURES

If it is judged necessary to take phytosanitary measures against *I. duplicatus*, those taken against *I. typographus* would be effective.

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