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(144) Improved key to the species of the *xylophilus* group of the genus *Bursaphelenchus* Fuchs, 1937

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A correct determination of the pine wood nematode becomes more difficult, the more related or similar species are described. In view of the fact that a further spread of the nematode should be considered and continuously new *Bursaphelenchus* species are detected, identification keys must be adjusted accordingly. Since the publication of a dichotome morphological key for species of the *xylophilus* group of the genus *Bursaphelenchus* (Braasch, 2008), several new species of this group have been described. These species are *B. macromucronatus* Gu, Zheng, Braasch & Burgermeister, 2008; *B. populi* Tomalak & Filipiak, 2010; *B. firmae* Kanzaki, Maehara, Aikawa & Matsumoto, 2011; *B. paraluxuriosae* Gu, Wang, Braasch, Burgermeister & Schröder, 2012; *B. koreanus* Gu, Wang & Chen, 2013 and *B. gillanii* Schönfeld, Braasch, Riedel & Gu, 2013. Based on the key published by Braasch (2008) and the revised intrageneric grouping of *Bursaphelenchus* by Braasch *et al.* (2009), an improved dichotome key including in the meantime newly described species is presented. The decision-making is supported by pictorial representation of important features.

Two species found in aspen partially share characters with the *xylophilus* group and are not considered in the key: *B. tryphloei* Tomalak & Filipiak 2011 and *B. masseyi* Tomalak, Worrall & Filipiak, 2013, which can easily be separated from the *xylophilus* group species by spicule morphology, having shorter condylus and rostrum.

Characters useful for identification of *xylophilus* group species are female tail shape (cylindrical, subcylindrical or conoid, round-tailed or digitate, with or without mucro), shape and size of spicules, several measurements and ratios (a, c') and position of excretory pore with a certain variation of the last character.

The recognition of the harmful quarantine pest *B. xylophilus* using morphological characteristics in laboratories of the National Plant Protection Services is facilitated by an adapted and simplified key, which separates species clearly distinguishable from *B. xylophilus* without species identification and includes only two very similar species. Molecular methods are additionally advisable to confirm a morphological diagnosis.