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Halyomorpha halys: a new invasive species between woodlands and agro-ecosystems

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The brown marmorated stink bug, Halyomorpha halys (Stål, 1855) (Heteroptera Pentatomidae), is an invasive pest with a rapidly expanding range worldwide. H. halys is highly polyphagous with hundreds reported host plants both in woodland and in agroecosystems. In particular, numerous tree fruits (i.e. peach, nectarine, apple, pear), ornamental and forest plants, vegetables and field crops (i.e. maize, soybean, tomato, pepper) could potentially be heavily attacked. Feeding injury causes deformities, necrotic areas on the surface of fruits, spots on the leaves, seed loss, and possible transmission of secondary infections. It is also a nuisance pest due to its tendency to aggregate inside buildings to overwinter. The first occurrence of H. halys in Italy was recorded during an insect collection for educational purposes in September 2012 in Modena (Northern Italy), in a territory with extensive areas of high value fruit crops. Subsequently, a survey that combined active search and citizen science was initiated and is still ongoing. Data, collected during 2013, indicated established populations in different locations in Emilia Romagna, Lombardy, Piedmont (Northern Italy), and records from 2014 indicate a progressive expansion in the same regions and new nuclei in Veneto and Friuli-Venezia Giulia (Northern Italy), Marche and Lazio (Central Italy). The findings suggest a high risk of damage by H. halys. These data are crucial to establish field monitoring plans and management programs in agricultural crops and woodlots.