Harmonia axyridis (Pallas), harlequin ladybird (Coccinellidae, Coleoptera)

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Polyphagous predatory ladybird, 5–8 mm long, variable in colour pattern (yellow to orange to black) with a variable number of spots (0–21). Highly dispersive, flying readily between host plants during breeding periods, migrates over long distances in Asia and America. 20–50 eggs produced per day, 1,000–4,000 in their lifetime; adults typically live for a year, reproducing for 3 months; generally bivoltine but can produce 4 generations per year in favourable conditions.

Native habitat (EUNIS code): G: Woodland, forest habitats and other wooded land. In the invaded area it occupies the same range of habitats as well as G3: Coniferous woodland, G5: Lines of trees, small anthropogenic woodlands, recently felled woodland, early-stage woodland and coppice, I: Regularly or recently cultivated agricultural, horticultural and domestic habitats, I1: Arable land and market gardens, I2: Cultivated areas of gardens and parks, J1: Buildings of cities, towns and villages. The wide native range in Asia shows that it can reproduce in both warm and cool climates and it is well adapted to temperature extremes. Native range: Central and E Asia. Known introduced range: America, South Africa, Egypt, Europe. Increasing trend.

Introduced intentionally as a biocontrol agent for aphids and unintentionally in horticultural/ornamental material. Causes reduction in biodiversity of other aphidophages and non-pest insects by resource competition, intraguild predation and direct intra-specific competition. They are also a pest of orchard crops (apples and pears) because as aphids become scarce in autumn the beetles feed on soft fruit causing blemishing and an associated reduction in the market value. Their tendency to aggregate in clusters of grapes prior to harvest makes them difficult to separate from the fruit and so are sometimes processed during wine making. The alkaloids contained within these beetles adversely affect the taste of the vintage. The beetle's propensity to swarm and its large aggregations formed in buildings during the winter are regarded as a nuisance. Economic impact derives from the wine industry, reduction in fruit quality and management measures required in domestic dwellings.

Stopping its use as a biocontrol agent and ensuring that fruit and cut flower imports are free from the ladybird will reduce introduction events. Invasion into households can be limited by covering entrances with fine mesh. Adults and late instar larvae can be removed from unwanted locations manually, e.g., using a vacuum cleaner. Light traps can attract adults but the efficiency of these is not yet quantified. Chemical control in field situations such as orchards and vineyards is not applicable because of the impact of insecticides on other aphidophages and beneficial insects.