

# DAFM Plant Pest Factsheet

## *Tomostethus nigritus* Ash sawfly



Fig 1: *Tomostethus nigritus* adult on ash leaf

### Pest Characteristics

- **Pest:** *Tomostethus nigritus*
- **Common name:** Ash sawfly; Black ash sawfly
- **Hosts:** Mostly associated with European ash (*Fraxinus excelsior*) but also known to attack other species such as narrow leafed ash (*F. angustifolia*).
- **Invasive risk:** The pest was first recorded in Northern Ireland in 2016 and in the Republic in 2021. It appears to be spreading throughout the island.
- **Entry pathways:** How the species was initially introduced into Ireland is unknown. It may have been introduced on infested host plants or as a hitchhiker. It is also possible it was introduced via natural flight from the UK further assisted by wind borne dispersal carrying it to Ireland.
- **Impact:** Previously, the species was not associated with causing noticeable impacts in regions where it is long established. However, in recent years there have been an increase in reports of severe defoliation of ash trees across Europe. In Ireland there have been several cases of extremely high larval population densities in the spring which defoliated trees, however, trees typically produce new leaves in the summer and tree mortality is rare.
- **Symptoms:** Early signs of infestation are larval feeding on leaves where only the leaf midribs can be left uneaten. but this does not typically impact the tree when populations are at low levels (Fig 2a). However, when population levels of larvae grow unchecked it can lead to severe defoliation of ash foliage (Fig 2b) When this occurs larvae densities can be readily apparent on and around the base of the tree (Fig 2c & d).



Fig 2: Ash saw fly symptoms: light larval feeding on leaves (a), severe defoliation of tree (b); larvae ascending tree trunk (c) mass of larva at base of tree (d)



# DAFM Plant Pest Factsheet



- **Climatic suitability:** The pest is already widely established in Ireland and produces one generation a year (univoltine).
- **Lifecycle:** The species overwinters as pupa in the soil (Fig 3). Adult emergence is typically between April-May after which they mate and seek out ash leaves to lay eggs. Larvae hatch from eggs and feed on ash leaves undergoing several developmental stages called instars. Each larval instar stage increases in size and can reach up to 2 cm in length. The final larval instar stage migrates to the ground by crawling down the trunks of trees or dropping from the branches to burrow into the soil and produce a pupal stage. The pupa overwinter in soil and adults emerge in the spring. In its native range population sizes are controlled by natural predators and environmental conditions such as flooding which reduces survival of soil-based pupa. However, in newly invaded regions scale outbreaks appear to be more common possibly because of a lack of natural predators.
- **Dispersal:** Adults are capable of flight and appear to be active between April to early May in the UK and Europe. The capacity of flight distances are not characterized but flight behavior has been described as “slow”.
- **Distribution:** The species native range is considered to be Euro-Siberian. In Europe its range spans most of the continent (Fig 4).
- **If suspected:** If you find any suspected symptoms and associated specimens, please submit records to the National Biodiversity Data Centre: <https://maps.biodiversityireland.ie/>



Fig 4: The distribution of *T. nigritus* recorded on the GBIF database ([Link](#))

**Photo credits:** Fig 1 & Fig2(a) Erika Soldi, Trinity College Dublin. Fig 2(b-d) & Fig 3(a-d & e) Fons Verheyde Oostende, Belgium. Fig 3(d) Petr Kapitola, Central Institute for Supervising and Testing in Agriculture, Bugwood.org. Fig 3(f) László Érsek Plant Parasites of Europe ([Link](#))

