DAFM Plant Pest Factsheet

Nysius huttoni
Wheat bug

Fig 1: *Nysius huttoni* adult specimen recovered from Co. Carlow

Pest Characteristics

- **Pest:** *Nysius huttoni*
- **Common name:** Wheat bug
- **Hosts:** The species has a wide host range, though it typically feeds on a weed species in wild habitats. Infestations in crops are usually around field margins and become more noticeable when surrounding weeds have matured and died pushing populations deeper. Notable cultivated hosts in Ireland include wheat (*Triticum aestivum*), oats (*Avena sativa*), barley (*Hordeum vulgare*), *Brassica spp* certain grass and clover species.
- **Invasive risk:** The species was first recorded in Europe in 2002 occurring across Belgium and the Netherlands. The species has since spread into France (2006) and Germany (2017). In 2007 the first records were found in the UK. The first suspected specimen in Ireland was reported in 2023.
- **Entry pathways:** The likely entry route for this species into Ireland is as a hitchhiker on wood packaging materials (WPM) or fruit import packaging. It has often been intercepted on New Zealand apples entering the USA.
- **Impact:** There have been no recorded economic impacts of this species in Europe to date. In New Zealand it is considered an economically important pest of wheat and Mustard crops (*Brassica*) in particularly dry years.
- **Symptoms:** *Nysius huttoni* is a sap-sucking pest. In Brassicas, *N. huttoni* pierces the phloem of seedlings causing cankerous growths that can girdle the stem. This can diminish seedling establishment and vigour. In cereal crops, nymphs and adults feed on developing grains reducing seed quality. Suction traps are commonly used in NZ to monitor population levels

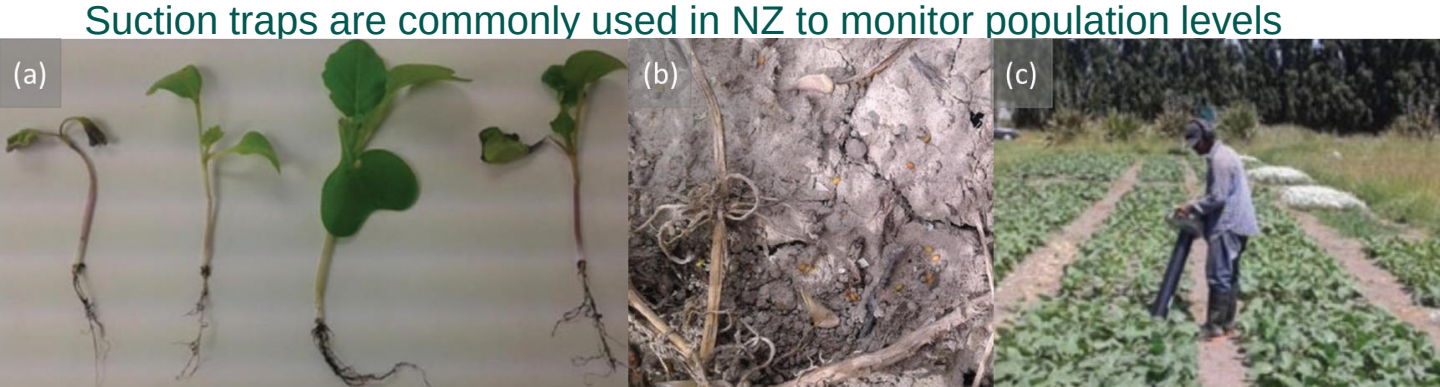

Fig 2: Kale (*Brassica olerocea*) seedlings stunted from *N. huttoni* feeding (a); typical habitat in New Zealand – sparse vegetation and open ground with host seeds for feeding; (c) suction trap monitoring in kale crop

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

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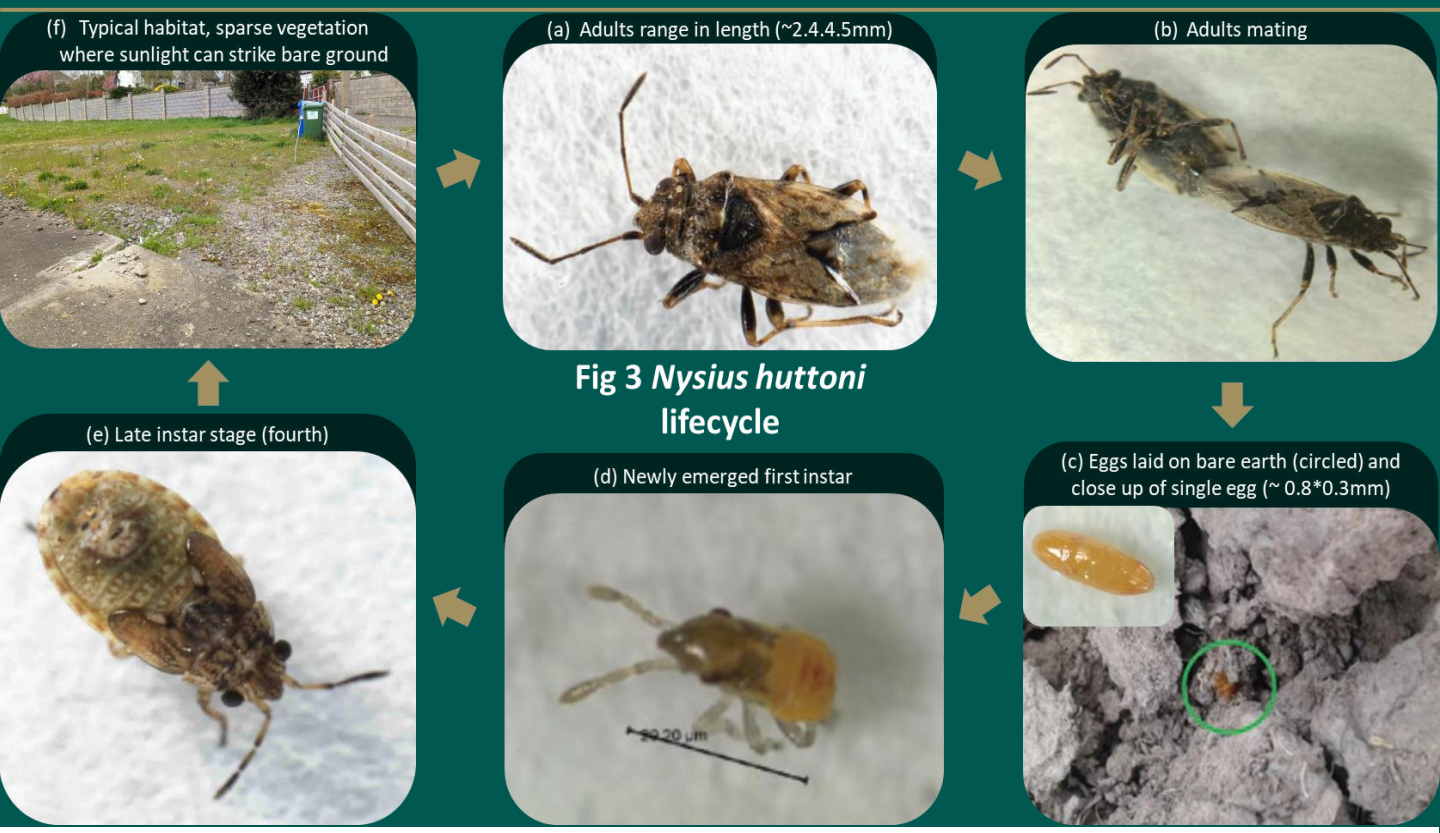

Fig 3 *Nysius huttoni* lifecycle

- **Distribution:** The pest is native to New Zealand and but was introduced to Europe and has spread to several countries including the UK (Fig 4).
- **Dispersal:** The species can have 3 different adult forms, only two of which are capable of flight. Typically the majority of a population consist of the flight forms. Flight appears to be initiated when air temperatures reach at least 27ºC and/or ground temperature reaches 40ºC.
- **Climatic suitability:** The pest has established in the Irish climate. However, it is uncertain how many generations will be produced per year.
- **Lifecycle:** Adults overwinter in sites such as mosses, leaf litter, under stones and bark. In Belgium it has been reported that adults seek out overwintering sites in October and emerge again in March. Mating between adults occurs almost immediately after emergence. Eggs (~0.8*0.3 mm) are initially creamy but turn orange close to hatching, they can be found laid singly or in groups either in soil or on plant parts. The nymphs that emerge from the egg undergo several developmental stages called instars. The number of instar stages is variable, ranging from 2-6, this depends on both temperature and day length. Adults are ~2.5-4.5 mm long and have 3 different body forms depending on wing development (wing polymorphism). The species prefers spare weedy areas where full sunlight directly falls on the ground and seems to avoid damp dense habitats.
- **If suspected:** If you find suspected specimens, please send records to the National Biodiversity Data Centre

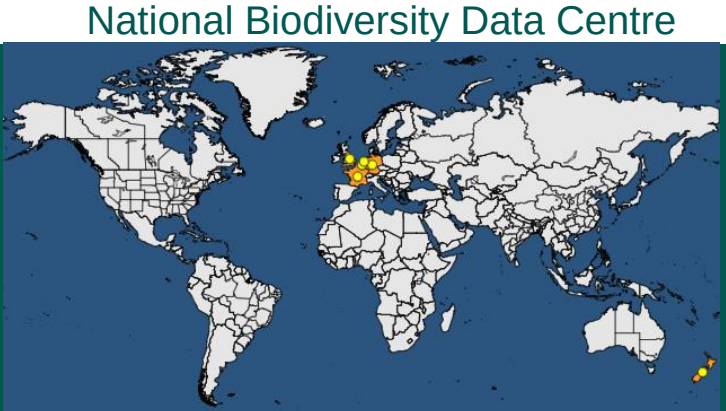

Fig 4: World map of *N. huttoni* distribution taken from the EPPO database (Link)

Photo credits: Fig 1 and Fig 3(f), Ciaran Byrne; Fig 2, Fig 3 (a-e) Dr. Sundar Tiwari, Agriculture and Forestry University, Rampur, Chitwan, Nepal.

An Roinn Talmhaíochta, Bia agus Mara
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