DAFM Plant Pest Factsheet

Enigmadiplosis agapanthi
Agapanthus Gall Midge

Fig 1: Damaged Agapanthus flowers and buds caused by *E. agapanthi* in Co. Dublin

Pest Characteristics

- **Pest:** *Enigmadiplosis agapanthi*
- **Common name:** Agapanthus Gall Midge
- **Hosts:** Plants from the *Agapanthus* genus are the only known hosts of the gall midge species *E. agapanthi.* Cecidomyiids (gall midges) are in the main restricted to a single host plant species or genus.
- **Invasive Risk:** *Enigmadiplosis agapanthi* is a species relatively new to science, first described in 2016 following reports of damaged *Agapanthus* in England. *Enigmadiplosis agapanthi* is likely native to South Africa (this is the native range of its host *Agapanthus*). Highlighting its potential invasiveness, the midge is now widely distributed in in southern England with isolated cases further north. A first Irish finding of *E. agapanthi* was identified from a garden in Dublin in 2021.
- **Entry Pathways:** As a popular ornamental plant, trade of *Agapanthus* is likely the main pathway of spread**.** Entry pathways include *Agapanthus* plants for planting and *Agapanthus* cut flowers.
- **Impact:** The severity of the larval damage can range from a couple of buds failing to complete collapse of the flower head.
- **Symptoms:** Disformed and discoloured flower buds are the most common and easily observed symptoms of *E. agapanthi* as in Fig 1. Potential infestation can be checked by opening the buds or other stages of the flower head development and looking for the presence of the yellow larvae Fig 2 (b) and (c).

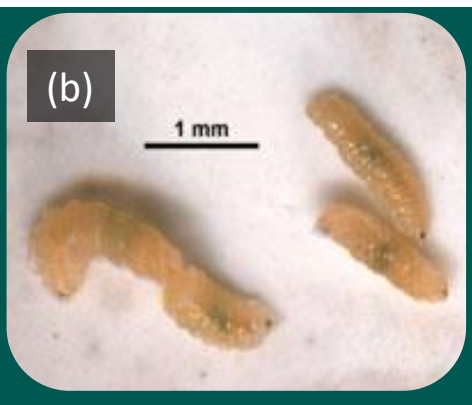

Fig 2: (a) Healthy *Agapanthus* (b) Larvae are yellow and 1–3mm (c) Presence of larvae indicating infestation

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

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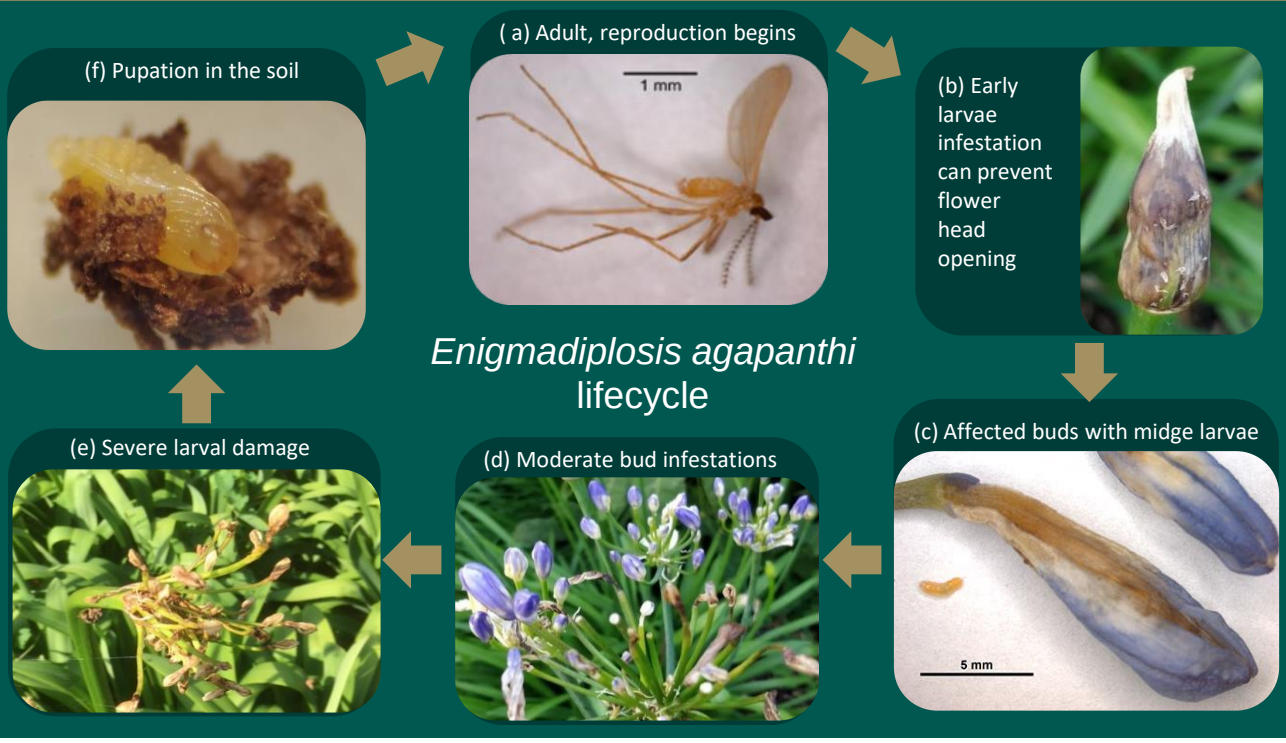

Enigmadiplosis agapanthi lifecycle

- **Lifecycle:** The adult gall midge is small (<5mm), mating and oviposition (egg-laying) behaviour is of yet poorly understood. Larvae of *E. agapanthi* develop inside the flower head or inside individual flower buds. In summer, larvae reach full development in approximately two weeks, after which they drop to the soil to pupate and begin another lifecycle. Active larvae can be found consistently throughout the flowering period, there are multiple overlapping generations.
- **Adaptability:** As *E. agapanthi* has successful overwintered as far north as West Yorkshire this would indicate that Irelands climate is also favourable. *Agapanthus* is not a native plant to Ireland, however it is abundant, it is a popular ornamental garden plant with some Irish nurseries breeding and marketing new *Agapanthus* varieties.
- **Dispersal:** Adult gall midges are generally weak fliers, however, wind can cause them to be dispersed over long distances.
- **Distribution:** Likely native to South Africa, *E. agapanthi* is established in England. Reports also exist from France. It is possible the species may be more widely distributed, there are few official records of the pest (Fig 3).
- **If suspected:** If you find symptoms or signs of *E. agapanthi* please submit images to DAFM at: plantpestreport@agriculture.gov.ie

Photo credits: Figure 2(b) & Lifecycle (a),(b),(c), (d) and (f) © RHS/ Hayley Jones & Julie Lin; Figures 2(a) © https://gardenerspath.com; Figure 1, 2 (c) and Lifecyle (e) © DAFM

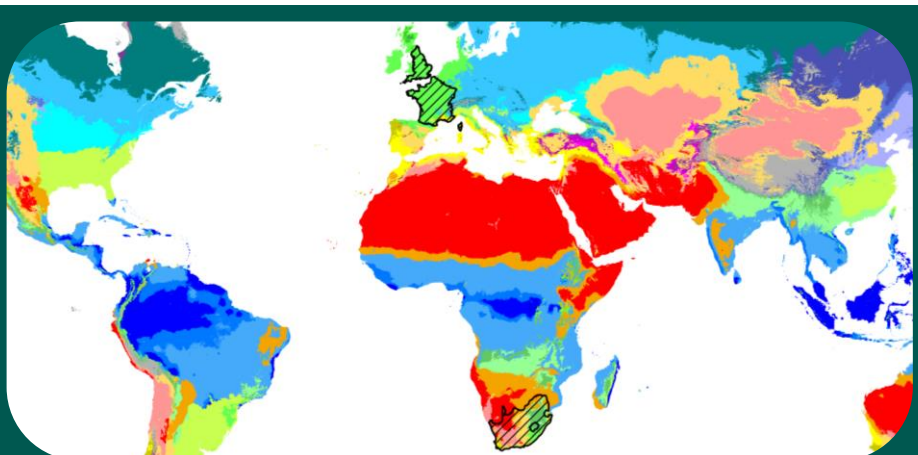

Fig 3: Known world distribution of *E. agapanthi* (cross hatched areas) overlaid on regional climate classifications

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