

Fisher's Estuarine Moth

Dr Zoë Ringwood explains how the future of this rare species is being secured through the Higher Level Stewardship Scheme

Background

The Walton Backwaters area of the North Essex coast is the main stronghold for Fisher's Estuarine Moth, one of Britain's rarest and most highly threatened species. The moth inhabits areas of low-lying coastal grassland where Hog's Fennel, its sole larval foodplant, grows. Both Fisher's Estuarine Moth and Hog's Fennel are species of high conservation priority due to their restricted distribution and the threatened nature of the sites where they are found. The key site for both species is Skipper's Island, which is severely threatened by flooding as a consequence of sea level rise and deteriorating sea walls. Certain areas of Hog's Fennel on the island have already been lost to coastal erosion and salt marsh encroachment and complete inundation at some point in the future is inevitable. Consequently, the moth will almost certainly be lost from this site and the remaining sites may be too small to support a sustainable population.

To ensure the long-term future of Fisher's Estuarine Moth in Essex it is essential that secure sites be created away from the dangers of flooding. Extensive research into the life history and habitat requirements of the moth and trials to create secure sites for the species have been conducted to provide the information required to establish a sustainable network of new sites. In April 2006, a two year project commenced to put the information acquired into action on a landscape-scale by developing a programme to enable farmers/landowners to receive support for creating and managing sites for the moth through the Higher Level Stewardship agri-environment scheme. This article will provide an outline of the project and how habitat for the moth will be created through the HLS scheme.

Project objectives

The project aims to set-up a sustainable landscape-scale network of interconnected sites for Fisher's Estuarine Moth that are secure from the threats of flooding. The project will develop a ready-made package for conserving the moth whilst promoting and increasing the take-up of the HLS scheme.

The main project objectives are as follows

1. Develop a programme for the **conservation of Fisher's Estuarine Moth** through the HLS scheme.
2. Set-up a system for **growing and supplying Hog's Fennel plants and seeds**
3. **Promote the project** to potential farmers/landowners/site managers.
4. **Provide advice and assistance** to farmers/landowners/site managers in the take-up and implementation of the programme.
5. Continue and develop **monitoring programmes** at sites created for the moth.
6. **Translocate** the moth to sites where appropriate.

Criteria for the selection of sites

The sites to be considered for the habitat creation programme will be located within the area of the moth's natural range on the north Essex coast, ranging from the southern banks of the River Stour southwards to the northern banks of the River Blackwater, and up to 5 km inland.

In addition, suitable sites must be:

1. secure from any immediate risks of flooding and be situated either behind substantial coastal defences or above the 5 m contour line
2. within a maximum of 4 km of the nearest site supporting Hog's Fennel, to promote movement of the moth between sites and to prevent isolation
3. a minimum of 0.1 ha (1000 m²) in size to ensure it is large enough to support a sustainable population of the moth

What does the moth need to survive?

Fisher's Estuarine Moth requires areas of rough grassland containing Hog's Fennel. The optimum habitat for the moth comprises an abundance of both Hog's Fennel and long, coarse grass species, such as Couch, Cock's-foot and False Oat-grass. At least 25% ground coverage of such grass species are required to fulfil the moth's egg laying requirements. The density of Hog's Fennel across a site is important, it must not be too high, as this will prevent there being the required abundance of grasses for egg laying, or too low, as this will reduce the success of freshly hatched larvae migrating to a Hog's Fennel plant. The most favourable density is one Hog's Fennel plant per m². Hog's Fennel plants must be in at least their third growth year, before they are sufficiently large to fulfil the moth's larval feeding requirements.

Habitat creation

Habitat for Fisher's Estuarine Moth can be created by planting Hog's Fennel seedlings into areas of established grassland which support an abundance of the long coarse grasses the moth requires for egg laying. Alternatively, the moth's habitat can be created from bare ground by drilling an appropriate grass seed mix, followed by either drilling Hog's Fennel seed or planting Hog's Fennel seedlings. To protect the seedlings, all sites must be enclosed by a rabbit-proof fence, together with cattle/sheep fencing where necessary. At sites being created within arable areas, it will be necessary for a buffer area to be created around the perimeter of the site to protect it from farm operations.

Higher Level Stewardship Scheme

The HLS Scheme sets out a wide variety of land management options for target habitats and species in high priority situations and areas. Due to the high conservation status of both Fisher's Estuarine Moth and Hog's Fennel, they qualify as target species and under HLS this enables specific management instructions to be formulated for the establishment and maintenance of sites supporting these species. For land to be eligible for inclusion in HLS, a minimum number of entry points, based on environmental conservation factors, must be scored. The target species status of the moth and its foodplant provides points towards entry into HLS, which will increase the eligibility of farmers/landowners in the take up of the scheme.

Involvement of farmers, landowners and countryside managers

The programme for the conservation of Fisher's Estuarine Moth is currently being marketed to and taken up by farmers, landowners and countryside managers. A total of four landowners have already received HLS agreements that include prescriptions for the creation and management of sites for the moth on their land. The confirmed sites range from field corners on conventionally farmed land to areas of meadow in country parks. These sites will be created during the winter months of 2007 and it is anticipated that several more sites will be confirmed during the period of project funding. Countryside wardens within the project area have been instrumental in publicising, implementing and supporting the project. There is certainly interest and support from conservationists, land managers and the farming community and it is predicted that the programme will be an effective conservation tool for Fisher's Estuarine Moth in the long-term.

Project funding

The two year project is being funded under the England Rural Development Programme (ERDP) by the Department for Environment, Food and Rural Affairs (DEFRA) and the European Agricultural Guidance and Guarantee Fund. Other contributors and supporters are the Environment Agency, Natural England, Writtle College, the Cambridgeshire and Essex branch of Butterfly Conservation and Tendring District Council. This project leads on from work conducted between 2004 and 2006 under the 'Conservation of Fisher's Estuarine Moth in Essex' project, which was funded primarily by the Essex Economic Partnership and East of England Development Agency.

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