

**European Community Directive
on the Conservation of Natural Habitats
and of Wild Fauna and Flora
(92/43/EEC)**

Supporting documentation for the
Third Report by the United Kingdom under
Article 17

on the implementation of the Directive
from January 2007 to December 2012
Conservation status assessment for

Species:

S4035 - Fisher's estuarine moth (*Gortyna borelii lunata*)

IMPORTANT NOTE – PLEASE READ

- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Natural England** and refers only to the state of the habitat/species in **England** - it does not constitute an assessment for the whole of the UK.
- The Article 17 UK Approach document provides details on how this information has been used and, combined with information supplied by other Statutory Nature Conservation Bodies
- The format of the document is closely aligned to that set out by the European Commission for Member State reporting – as a result, some of the fields are not applicable at a country-level and have deliberately been left blank – in addition, the content of most fields is constrained by the EC reporting categories.

Reporting format on the 'main results of the surveillance under Article 11' for Annex II, IV & V species

<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S4035
	0.2.2 Species scientific name	<i>Gortyna borelii lunata</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Fisher's Estuarine Moth

1.1 Maps

1.1.1 Distribution map		Sensitive	False
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1.1.2 Method used - map	Complete survey/Complete survey or a statistically robust estimate The 10 km sq data for this species will be complete as it is so restricted, and all known colonies are monitored regularly.
1.1.3 Year or period	2006-2011 Adult counts and/ or larval feeding signs have been made at all sites annually during the reporting period. As it is an autumnal species adults counts for 2012 are not yet available.
1.1.4 Additional	False

distribution map	
1.1.5 Range map	

2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	"Essex Biodiversity Project http://www.essexbiodiversity.org.uk"
	Apart from the website listed, data used in this assessment has come from unpublished information via Zoe Ringwood (NE lead advisor on the species).

2.3 Range	
2.3.1 Surface area Range	
2.3.2 Method used Surface area of Range	Complete survey/Complete survey or a statistically robust estimate
	All known colonies of this species in Essex are monitored annually, so data should be complete. Data is not available annually for the Kent colonies (which have only become established since 2001).
2.3.3 Short-term trend Period	2001-2011
	2001-2012 - 2001 is the date when the species was first recorded in Kent.
2.3.4 Short term trend Trend direction	increase
	This is recorded as increasing as there are now two established colonies in Kent, which were not reported on in then last reporting period. It is thought that these colonies have been established since 2001. Excluding the Kent colonies, the Essex range trend would be regarded as stable.
2.3.5 Short-term trend Magnitude	a) Minimum
	b) Maximum
2.3.6 Long-term trend Period	1989-2011
2.3.7 Long-term trend Trend direction	increase
	This is reported as stable. A total of about 24 small areas of coastal habitat (totalling about 2 ha) have been planted up with hog's fennel in Essex since 2004, specifically for this species. To date, the moth has

	been found at 13 of these sites. Some of this has been through an introduction programme but natural colonisation has also played an important part. Over the longer-term this has probably compensated for the habitat losses due to coastal erosion so the direction is best regarded as stable in Essex. N.B. the Kent population has not been included in the long-term assessment of range trend as it has not been established for the whole of the long-term trend period.	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
	d) Method used to set FRR	
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	False
	c) Use of different method (e.g. "Range tool")?	False

2.4 Population**2.4.1 Population size****a) Unit**

estimation (using individuals or agreed exceptions where possible)	The last assessment reported 6 colonies, in Essex only. Now estimated as 9 as the three Kent populations are now included. Two of these Kent colonies are very small but one (Tankerton) is now the second largest in the country. In Essex natural colonisations and small-scale introductions have taken place in areas planted with hog's fennel, adjacent to existing colonies. In addition, there have been two introductions in other areas close by in the past year or two but it is still too early to say whether these will become established so they have not been included here as new colonies.	
	b) Minimum	
	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	number of localities
	b) Minimum	9
	c) Maximum	9
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	Number of separate localities where discrete populations occur
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	
2.4.4 Year or period	2006-2011	
	Counts at the main colonies from 2007-2011 were used. As this is an autumnal species, counts for 2012 are not yet available.	
2.4.5 Method used Population size	Estimate based on partial data with some extrapolation and/or modelling	
	All the Essex populations in Essex are monitored annually.	
2.4.6 Short-term trend Period	2001-2011	
2.4.7 Short-term trend Trend direction	increase	
	At the main site of Skippers Island in Essex, numbers have shown a slight increase over the reporting period, but they have also fluctuated considerably during this period. A few have been reported from the new areas of habitat that have been created over the past two years, but these do not represent new populations and, while this is encouraging, it is too early to say whether they will become permanently established. For these reasons the short-term trend is best regarded as stable.	

2.4.8 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	Estimate based on partial data with some extrapolation and/or modelling	
2.4.10 Long-term trend – Period	1989-2011	
2.4.11 Long-term trend Trend direction	increase	
	This is reported as an increase as a second major population has become established in Kent (since at least 2001 and possibly before). There are now three sites in Kent supporting this species, with the main site (Tankerton) now being the second largest colony in the UK.	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	20
		The Kent population is now estimated to account for up to 20% of the UK population so the % increase range has been given as 15% (min) and 20% (max)
	b) Maximum	25
		The Kent population is now estimated to account for up to 20% of the UK population so the % increase range has been given as 15% (min) and 20% (max)
	c) Confidence interval	
2.4.13 Long term trend Method used	2	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	20

	b) Operator	approximately equal to
	c) FRP is unknown indicated by "true"	False
	d) Method used to set FRP	The favourable reference population has not been estimated previously. To the best of my knowledge, the number of sites occupied in 1994 (when the Regs came into force) was 6. Since then populations have become established in Kent. Some of the largest Essex sites are vulnerable to both sea level rise and sudden catastrophic loss (due to tidal surge) so the foodpland is being planted in more sustainable locations in order to compensate for these expected losses. It is provisionally estimated that 20 sites could be used as the favourable reference population.
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	True
		A second major population has become established in Kent (since at least 2001), now accounting for up to 20% of the UK population; therefore there has been a genuine increase.
	b) Improved knowledge/more accurate data?	False
	c) Use of different method (e.g. "Range tool")?	False

2.5 Habitat for the species

2.5.1 Area estimation

0.02

0.02 km sq is the best estimate of habitat surface area. This is the same as reported last time, with new areas that have been planted up with the larval foodplant in Essex compensating for the estimated losses due to coastal erosion over the reporting period.

There is not thought to be a sufficient amount of habitat in the UK to support a viable population of the species.

2.5.2 Year or period	2010-2010	
2.5.3 Method used Habitat for the species	Complete survey/Complete survey or a statistically robust estimate	
	Areas of hog's fennel (larval foodplant) within the known range were mapped in Kent in 2010. In Essex the areas of hog's fennel are well-known and several small areas of habitat have been created since 2004 to compensate for natural losses due to coastal erosion.	
2.5.4 Quality of the habitat	a) Habitat quality	Good
	b) Assessment method	All coastal areas containing good numbers of hog's fennel plant constitute good quality habitat and these are all known and mapped, with additional areas being created in Essex.
2.5.5 Short-term trend Period	2000-2012	
2.5.6 Short-term trend Trend direction	stable	
	Regarded as stable, with the losses due to coastal erosion at the main site being compensated for during the reporting period by areas that have been planted up in areas less prone to coastal erosion.	
2.5.7 Long-term trend Period		
2.5.8 Long-term trend Trend direction	unknown	
2.5.9 Area of suitable habitat for the species	a) Value in km²	0.02
	0.02 km sq is the best estimate of suitable habitat. This is the same as reported last time, with new areas that have been planted up with the larval foodplant in Essex compensating for the estimated losses due to coastal erosion over the reporting period.	
	b) Absence of data indicated as '0'	
2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	False
	c) Use of different method (e.g. "Range tool")?	False

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2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance M = medium importance L = low importance	
A03: mowing / cutting of grassland	H	
L08: inundation (natural processes)	H	
A04: grazing	M	
D05: Improved access to site	M	
F03: Hunting and collection of wild animals (terrestrial)	M	
G01: Outdoor sports and leisure activities, recreational activities	M	
G05: Other human intrusions and disturbances	M	
J02: human induced changes in hydraulic conditions	M	

The main pressures are losses of habitat through coastal erosion, tidal inundation and managed realignments (and in the long-term sea level rise), and inappropriate management of the habitat (mowing or grazing of the larval food plant at inappropriate times of year). The first of these is a natural phenomenon (or at least one over which we have no control) and managed realignments are an essential part of sustainable coastal management. In Essex, planting of the larval foodplant in less vulnerable areas is happening in order to compensate for this. The Kent sites are not currently considered to be significantly affected by losses due to coastal erosion, inundation etc. Collecting of the adults and access to the sites/walking, trampling over use etc. are also issues, but these are considered to be less significant than those listed as H.

2.6.1 Method used – Pressures	mainly based on expert judgement and other data
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2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance M = medium importance L = low importance	
A03: mowing / cutting of grassland	H	
J02: human induced changes in hydraulic conditions	H	
L08: inundation (natural processes)	H	

A04: grazing	M	
D05: Improved access to site	M	
G01: Outdoor sports and leisure activities, recreational activities	M	
G05: Other human intrusions and disturbances	M	

The main threats are losses of habitat through coastal erosion, tidal inundation and managed realignments (and in the long-term sea level rise), and inappropriate management of the habitat (mowing or grazing of the larval food plant at inappropriate times of year). The first of these is a natural phenomenon (or at least one over which we have no control) and managed realignments are an essential part of sustainable coastal management. In Essex, planting of the larval foodplant in less vulnerable areas is happening in order to compensate for this. The Kent sites are not currently considered to be significantly affected by losses due to coastal erosion, inundation etc. Collecting of the adults and access to the sites/ walking, trampling over use etc. are also issues, but these are considered to be less significant than those listed as H. Inappropriate management (infilling of ponds, ditches etc.) may affect the foodplant in some areas, but is not thought to be a significant threat, compared with those listed as H.

2.7.1 Method used – Threats**expert opinion****2.8 Complementary information****2.8.1 Justification of % thresholds for trends****2.8.2 Other relevant information**

In the last reporting period the Kent population was not reported on as it was considered to have originated from an unauthorised introduction. While this may well have been the case, this has not been proven and in any case the Kent population is now long-standing and well established and forms an important proportion (about 20%) of the total English population. Therefore it has been considered in this report, particularly as the Kent range has been put forward as a candidate Special Area of Conservation, specifically for this species (as has the Essex range).

The Essex range has also been put forward as a cSAC for this species and here work has begun on providing more secure (from tidal inundation and coastal erosion losses) habitat through planting of hog's fennel in appropriate locations. This is going well and the moth has already colonised some of the planted areas (and been re-introduced from captive stock) to others.

For these reasons the conclusions of both the habitat and future prospects have been defined as inadequate but

	improving.
2.8.3 Trans-boundary assessment	

2.9 Conclusions (*assessment of conservation status at end of reporting period*)

Please refer to the United Kingdom assessment for this species.

3 Natura 2000 coverage & conservation measures - Annex II species (*only applies to species listed under Annex II of the Directive*)

3.1 Population		
3.1.1 Population size Estimation of population size included in the SAC network	a) Unit	number of localities
	b) Minimum	9
	c) Maximum	9
3.1.2 Method used	Complete survey/Complete survey or a statistically robust estimate	
3.1.3 Trend of population size within the network (short-term trend)	stable	

3.2 Conservation measures

Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.

3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated
2.1: Maintaining grasslands and other open habitats			Y			M			Y			Y			
6.1: Establish protected areas/sites				Y		H			Y		Y				
7.4: Specific single species or species group management measures				Y		H			Y		Y				