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

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the species:

S6199 - Jersey tiger moth (*Euplagia quadripunctaria*)

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this species, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the species are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species).
- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK**
1.2 Species code	**6199**
1.3 Species scientific name	**Euplagia quadripunctaria**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Jersey tiger moth

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2012-2017
2.3 Distribution map	Yes
2.4 Distribution map Method used	Complete survey or a statistically robust estimate
2.5 Additional maps	No

3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?	No	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

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3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

Atlantic (ATL)

4.2 Sources of information

Fox, R., Parsons, M.S., Chapman, J.W., Woiwod, I.P., Warren, M.S. & Brooks, D.R. (2013). The State of Britain's Larger Moths 2013. Butterfly Conservation and Rothamsted Research, Wareham, Dorset, UK.
UK moths - http://ukmoths.org.uk/species/euplagia-quadripunctaria/adult/
NBN Atlas - https://species.nbnatlas.org/species/NBNSYS0000006153

5. Range

5.1 Surface area (km²) 38129

5.2 Short-term trend Period 2013-2018

5.3 Short-term trend Direction Increasing (+)

5.4 Short-term trend Magnitude a) Minimum b) Maximum

5.5 Short-term trend Method used Complete survey or a statistically robust estimate

5.6 Long-term trend Period

5.7 Long-term trend Direction

5.8 Long-term trend Magnitude a) Minimum b) Maximum

5.9 Long-term trend Method used

5.10 Favourable reference range

a) Area (km²) 20854

b) Operator

c) Unknown

d) Method The FRR is the same as in 2013. The value is considered to be large enough to support a viable population and no

		lower than the range estimate when the Habitats Directive came into force in the UK. For further information see the 2019 Article 17 UK Approach document.
5.11 Change and reason for change in surface area of range	Genuine change	
	The change is mainly due to:	Genuine change
5.12 Additional information	The current range surface area is above the FRR and is increasing by more than 1% per year.	

6. Population

6.1 Year or period	2012-2017	
6.2 Population size (in reporting unit)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	1200
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit	
	b) Minimum	
	c) Maximum	
	d) Best single value	
6.5 Type of estimate		
6.6 Population size Method used	Complete survey or a statistically robust estimate	
6.7 Short-term trend Period	2012-2017	
6.8 Short-term trend Direction	Increasing (+)	
6.9 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.10 Short-term trend Method used	Complete survey or a statistically robust estimate	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.14 Long-term trend Method used		
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	a) Population size	1200 with unit number of map 1x1 km grid cells (grids1x1)
	b) Operator	
	c) Unknown	
	d) Method	The FRP has changed since 2013. The new value is considered to be large enough to support a viable

population and no less than the population estimate when the Habitats Directive came into force in the UK. The FRP has been set as the current population best single value in 1x1km squares rather than number of 10km squares as in 2013. For further information see the 2019 Article 17 UK Approach document.

6.16 Change and reason for change in population size	Genuine change
	The change is mainly due to: Genuine change
6.17 Additional information	The species is expanding its population very rapidly. It is now very widespread across southern England and is continuing to spread north. It has recently established colonies in south-east Wales.

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)?	Yes
	b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	
7.2 Sufficiency of area and quality of occupied habitat Method used	Complete survey or a statistically robust estimate	
7.3 Short-term trend Period	2012-2017	
7.4 Short-term trend Direction	Stable (0)	
7.5 Short-term trend Method used	Complete survey or a statistically robust estimate	
7.6 Long-term trend Period		
7.7 Long-term trend Direction		
7.8 Long-term trend Method used		
7.9 Additional information	The Habitat for the species is reported as stable, whereas the range and population are increasing. This is because the species is rapidly expanding its range and population northwards, presumably in response to climate change. It is quite broad in its habitat usage (which includes parks & gardens in suburban areas) and so it is expanding its range to occupy habitat already present, rather than responding to an increase in available habitat.	

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
No pressures (Xxp)	

Threat	Ranking
No threats (Xxt)	

8.2 Sources of information	
8.3 Additional information	This species is undergoing a quite rapid increase in range and population, probably due to climate change. It is expected to prosper in the short and

long-term and is not facing any pressures or threats at present.

9. Conservation measures

9.1 Status of measures	a) Are measures needed?	No
	b) Indicate the status of measures	
9.2 Main purpose of the measures taken		
9.3 Location of the measures taken		
9.4 Response to the measures		
9.5 List of main conservation measures		
9.6 Additional information	Due to the lack of pressures and threats for this rapidly increasing species, no conservation measures are currently required.	

10. Future prospects

10.1 Future prospects of parameters	a) Range	Good
	b) Population	Good
	c) Habitat of the species	Good
10.2 Additional information	Future trend of Range is Very Positive - increasing >1% (more than one percent) per year on average; Future trend of Population is Very Positive - increasing >1% (more than one percent) per year on average; and Future trend of Habitat for the species is Overall stable. The reason for the future trend in habitat (10.1 c i) being stable and the future trends in population (10.1 b i) and range (10.1 a i) being very positive is that the species is expanding its range and increasing its popuation to use available habitat in new areas, but the amount of habitat itself is not changing. For further information on how future trends inform the Future Prospects conclusion see the 2019 Article 17 UK Approach document.	

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Favourable (FV)
11.3. Habitat for the species	Favourable (FV)
11.4. Future prospects	Favourable (FV)
11.5 Overall assessment of Conservation Status	Favourable (FV)
11.6 Overall trend in Conservation Status	Improving (+)
11.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status

No change

The change is mainly due to:

11.8 Additional information	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is increasing; and (ii) the current Range surface area is more than the Favourable Reference Range. Conclusion on Population reached because: (i) the short-term trend direction in Population size is increasing; and (ii) the current Population size is not less than the Favourable Reference Population. Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is sufficiently large for the long-term survival of the species; and (iii) the short-term trend in area of habitat is stable. Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Population are good; and (iii) the Future prospects for Habitat for the species are good. Overall assessment of Conservation Status is Favourable because all of the conclusions are Favourable. Overall trend in Conservation Status is based on the combination of the short-term trends for Range – improving, Population – improving, and Habitat for the species – stable. Overall assessment of Conservation Status has not changed since 2013. Overall Trend in Conservation Status was not specified in 2013, but from information available it would have been Improving, so there has been no change.

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	1340
	c) Maximum	1500
	d) Best single value	1500
12.2 Type of estimate		Best estimate
12.3 Population size inside the network Method used		Complete survey or a statistically robust estimate
12.4 Short-term trend of population size within the network Direction		Increasing (+)
12.5 Short-term trend of population size within the network Method used		Complete survey or a statistically robust estimate
12.6 Additional information		Although, there are a lot of data for this species, it appears to be increasing so

rapidly that the best estimate is probably an underestimate.

13. Complementary information

13.1 Justification of % thresholds for trends

13.2 Trans-boundary assessment

13.3 Other relevant Information

Distribution Map

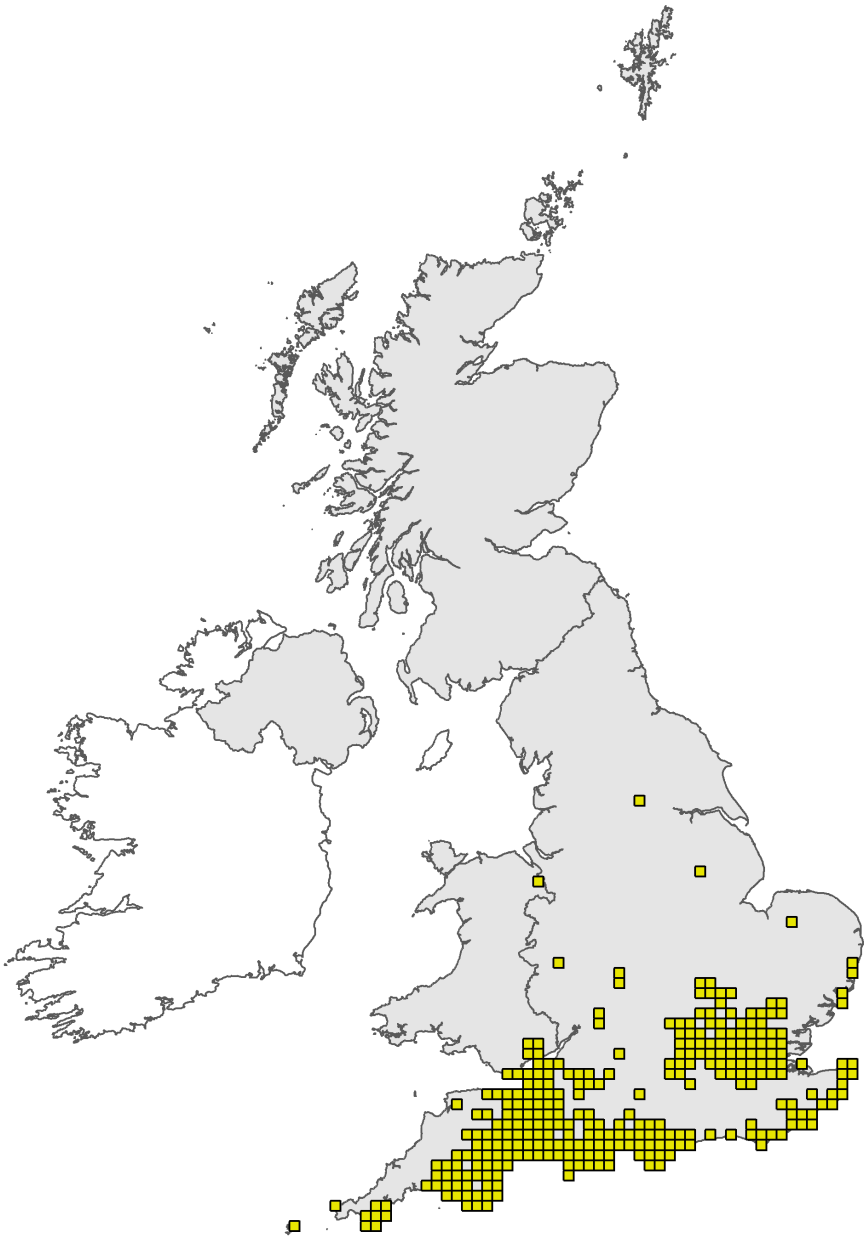

Figure 1: UK distribution map for S6199 - Jersey tiger moth (*Euplagia quadripunctaria*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.

Range Map

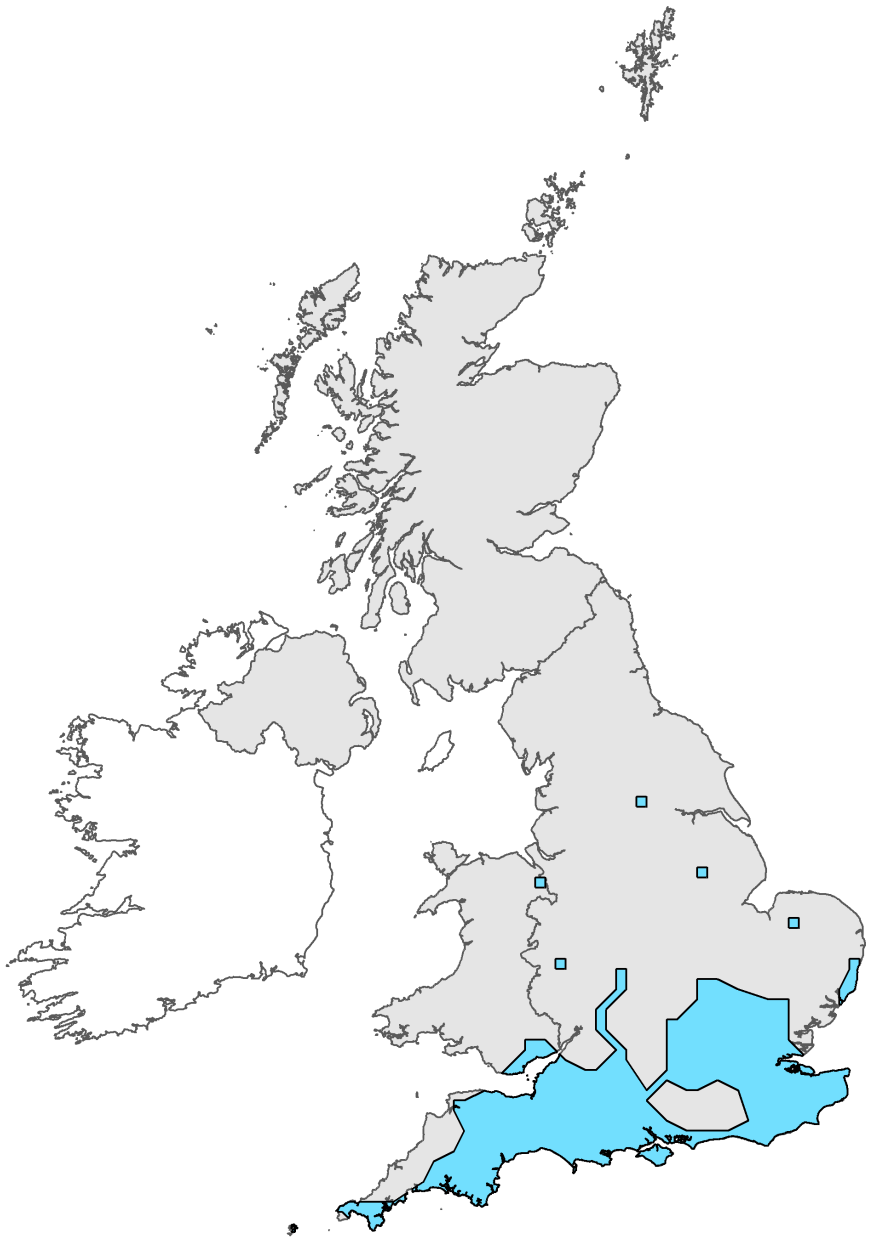

Figure 2: UK range map for S6199 - Jersey tiger moth (*Euplagia quadripunctaria*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 20km. For further details see the 2019 Article 17 UK Approach document.

Explanatory Notes

Species name: Euplagia quadripunctaria (6199) Region code: ATL

Field label	Note
5.10 Favourable reference range	It is difficult to set an FRR for a species which is expanding its range so rapidly. The species is now very widespread in Devon, Dorset, Somerset and Isle of Wight, plus the London & home counties area, has established itself firmly in Hampshire, Sussex & Kent, and is continuing to spread north. In fact, it has recently established colonies in SE Wales.