

Invertebrate Status Reviews

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STATUS REVIEWS

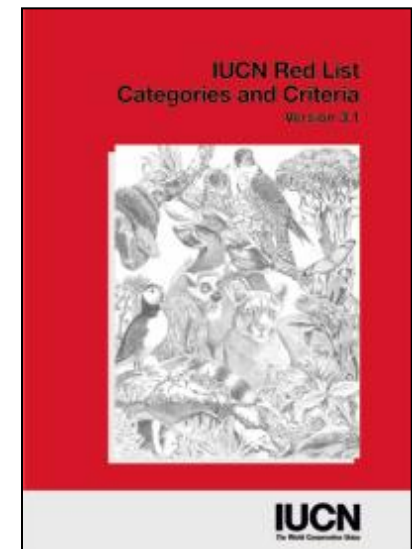


Up-to-date Status Reviews are
critical to invertebrate
conservation

STATUS REVIEWS: What is the point?

Up-to-date conservation status for species underpins everything I do.

1. Site quality based on presence of threatened and rare species (SSSI notifications and monitoring, development casework).
2. Flags up new species that may require resourcing.
3. Could be used for reporting on English/UK state of nature – Red List Index



What are in Invertebrate Status Reviews?

- Each encompasses a named taxonomic group e.g. ground beetles (Carabidae)



- Covers Great Britain: England, Scotland and Wales

- Based on agency su

Name	Bembidion punctulatum
Location	Grimsthorpe Park
Grid reference	SK200100
Data	13/05/2013
Recorder	S Perry
Determiner	K Alexander

What do they analyse?

<p>1 Threat of regional extinction (IUCN guidance)</p>	<p>Extinct (EX) Critically Endangered (CE) Endangered (EN) Vulnerable (VU) Near Threatened (NT) Least Concern (LC) Not Applicable (NA) non-natives etc</p>
<p>2 Great Britain Rarity Status</p>	<p>Nationally Rare (16-100 hectads) Nationally Scarce (1-15 hectads)</p>

Also in a review:

- Status Sheets for species (IUCN Threatened Status)
- Lists non-native/migrant species
- Indicates presence in Scotland, England or Wales

1 IUCN Threat Categories



RE	Regionally Extinct	
CR(PE)	Critically Endangered (Presumed Extinct)	'Red Listed'
CR	Critically Endangered	'Red Listed'
EN	Endangered	'Red Listed'
VU	Vulnerable	'Red Listed'
NT	Near Threatened	
LC	Least Concern	
NA	Not Applicable	

1 Some Problems when assessing threat

- IUCN uses tetrad as opposed to hectad as a standard 'dot on a map'. Calculation of Area of Occupancy requires tetrads.
- Difficulties arise due to limited recording and lack of data on population levels.
- Invertebrate habitat decline difficult (not!) measured.



1 Threat Status: IUCN Criteria for invertebrates



Criteria	
A Population reduction	Butterflies and a few others
B Geographic range	Most invertebrates
C Small population size and decline	Butterflies and a few others
D Very small or restricted population	Most invertebrates
E Quantitative Analysis	na

1 Using Criteria B: Geographic range

IUCN Threat Status	Area of Occupancy (AoO)	And satisfy 2 of the following...		
		Locations	Decline	Fluctuations
Critically Endangered	>10km ²	1	Continued decline	Extreme fluctuations
Endangered	>500km ²	2-5		
Vulnerable	>2,000km ²	6-10		
Near Threatened	Close to 2,000km ²	11-15		

1 Threat Status: Example of IUCN Criteria

Cryptocephalus decemmaculatus **Ten-spotted pot beetle** **Endangered**

Known from three historic sites; now lost from Chartley Moss in the last couple of decades. Scottish population at one site is uncertain and now only confirmed at Wybunbury Moss.



AOO estimated at 8km²

Number of locations = 2

Declining in AoO and number of locations



2 GB Rarity Status

No. of Hectads recorded from	Rarity Status
1-15	Nationally Rare (NR)
16-100	Nationally Scarce (NS)



Cryptocephalus coryli.
5 hectads = NR



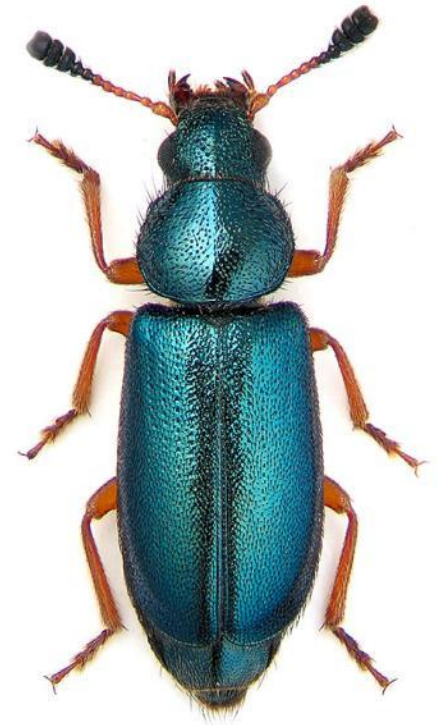
Osypia bipunctata.
18 hectads = NS



Cantharis pellucida
529 hectads = no status

2 GB Rarity Status: Under-Recording

- Reliant on expert opinion of author, his peers and the agency staff
- E.g. *Necrobia violacea* Present in 50 hectads.
- 'A Cosmopolitan species of carrion and meat products - despite lack of records it is more than likely to be well distributed and not nationally scarce (NS – i.e. in over 100 hectads)'



Summary Info from Leaf beetle review

1 IUCN Threat Status

Of the 283 leaf beetles species in Great Britain:

- 3 extinct (1%)
- 42 'red listed': CR, EN, VU (14.5%)
- 18 non-native (6%)



2 Great Britain Rarity Status:

44 Nationally Rare

66 Nationally Scarce

Current Position - May 2016



Completed reviews 2008-2015	In prep by Natural England	To Do
Dragonflies 2008 (by BDS) Butterflies 2010 (by BC) Water Beetles 2010 (ind) Soldier Beetles 2013 Darkling Beetles 2013 Molluscs 2014 (by NRW) Hoverflies 2014 (ind) Leaf Beetles 2014 Grasshoppers 2015 Stoneflies 2015 Woodlice 2015 Centipedes/Millipedes 2015 Water bugs 2015 Ground Beetles 2016 Mayflies 2016 Caddis flies 2016 Shield Bugs 2016	Dolly flies Soldier flies Spiders (by NRW) Craneflies Plant bugs Plant hoppers Macro-moths Scarab Beetles Rove Beetles Clown Beetles Weevils	c. 2k beetles c. 3k flies c. 600 bees / wasps c. 500 sawflies c. 500 plant bugs c. 1.5k micro-moths c. 500 odds and sods <i>Also non-inverts</i> Mammals, herps, birds, plants, lichens, mushrooms.

Pros of undertaking a Status Review



Taxa	Starting Records	Current Records
Scarab beetles	16,000	43,000
Weevils	>5,000?	207,000
Plant bugs	40,000	140,000
Rove beetles	>50,000?	435,000



British Wildlife Paper (August 2016)



Of the 3,770 reviewed...

395 (11%)	Under some threat of extinction <ul style="list-style-type: none">• Vulnerable• Endangered• Critically Endangered
1,486 (39%)	Nationally Scarce / Rare
£50-100	Per species



British Wildlife Paper (August 2016)

Number of macro-invertebrates in GB	37,000
Number that are reviewable	14,000
Number reviewed (Feb 2016)	3,770
Number reviewed (mid 2017)	7,000
Number reviewed (2020)	14,000





- These reviews would not be possible without the support and tireless work of the recording community
- Thanks for listening
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