

Rare Beetles and Bugs of the Midvale Ridge

Recently recorded Red Data Book and Notable Species from the Calcareous Grass-heaths

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Background

During the 1990s English Nature published the Natural Area Profiles, in which England was divided into areas based on geological and ecological factors. The Midvale Ridge Natural Area Profile was published in 1997. The area runs from roughly south-west to north-east and spans three counties, Wiltshire, Oxfordshire and Buckinghamshire. In Oxfordshire the Area occurs in both vice-county 22 (the part of Berkshire which became part of Oxfordshire in 1974) and vice-county 23 (the 'old' Oxfordshire).

General Description

The Midvale Ridge is mainly composed of Corallian rocks, mostly limestones and sands laid down some 155 million years ago in the warm seas of the Jurassic period. In addition there are some small patches of sands of the Lower Greensand, Wealden and Portlandian ages. The sands give rise to the Calcareous Grass-heath habitat, characterised by being warm and free-draining, and home to a number of rare animals and plants which are nationally scarce. The Brecklands of East Anglia have a similar fauna and flora. Breckland is not a habitat but the result of an agricultural practice of cultivating the land when crop prices were high and leaving it fallow when prices were low. Arkell in 1947, when writing about the Midvale sands says:

“the leached sands of the Lower Calcareous Grit produce a soil so light and hungry as to be hardly worth cultivating.”

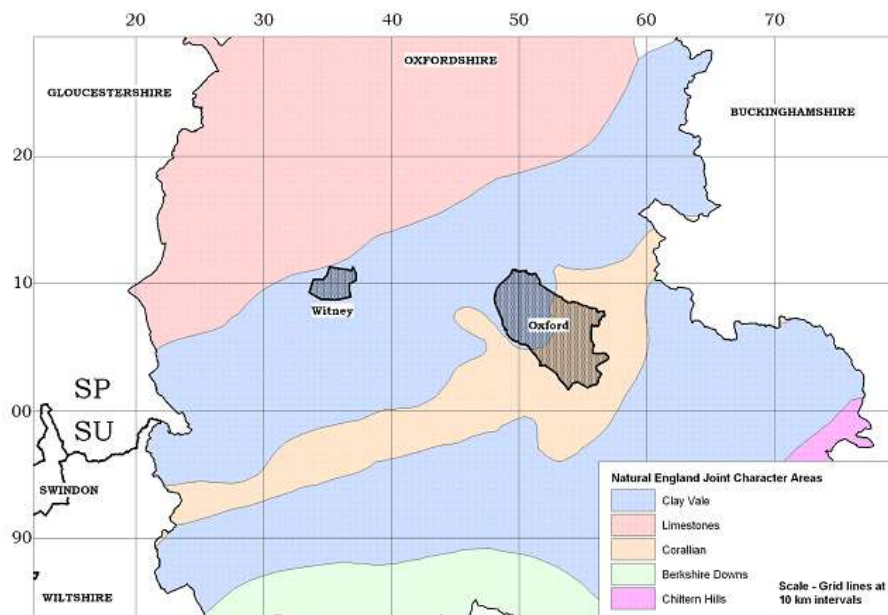


Figure 1: Midvale Ridge Geology - mapping by Thames Valley Environmental Records Centre

The sands are mainly calcareous, but in places have been leached to a neutral or even an acidic pH. The Calcareous Grass-heath lands have been known to entomologists since the early 1890s when J.J. Walker and others collected beetles, especially from Tubney, where the sands were dug by hand, before so much of the land was afforested with conifers. Recently, there has been a considerable amount of recording of beetles which has proved that many of the rare species of beetle have survived despite changes in land use of the Midvale Ridge. A full review of old and recent records of the rare beetles from the Midvale Ridge is given in Denton and Campbell, in press.

The true bugs, Heteroptera, were not recorded as often or in such quantities as the beetles, but in recent years have proved to be of great interest. This group of insects appears to have been undergoing many changes in distribution and some species are undoubtedly colonists of the Oxfordshire Calcareous Grass-heaths. Only those species of beetles and bugs associated with the ground and herb layers have been included. The 10km squares and number of sites are given here in the following table.

Note that:

RDB1 means Red Data Book species, endangered

RDB2 means Red Data Book species, vulnerable

RDB3 means Red Data Book species, rare

RDBK means Potential Red Data Book Species

Na means Nationally Scarce Species (occurring in <30 10 km squares)

Nb means Nationally Notable species (occurring in 31-100 10 km squares)

Coleoptera (beetles)

Species	Status	10km Squares	Number of Sites/Records
<i>Amara consularis</i>	Nb	SU49	3
<i>Amara equestris</i>	Nb	SU49	1
<i>Amara fulva</i>	Nb	SU49	2
<i>Harpalus azureus</i>	Nb	SU39	1
<i>Harpalus schaubergianus</i>	Nb	SU39	1
<i>Harpalus smargadinus</i>	Nb	SU39 SU49 SP50	119 records
<i>Panagaeus bipustulatus</i>	Nb	SU39 SU49 SU50	7
<i>Conthophilus punctatis</i>	RDBK	SU49	3
<i>Medon castaneus</i>	RDB1	SU49	1
<i>Ocypus fortunatarum</i>	Nb	SU49 SP50	4
<i>Ocypus fuscatus</i>	Nb	SU49	3
<i>Ocypus ophthalmicus</i>	Na	SU49	4
<i>Aleochara nificornis</i>	Nb	SP40	1
<i>Aphodius distinctus</i>	Nb	SU49 SP40	3
<i>Hippodamia variegata</i>	Nb	SU39 SU49 SP50	9
<i>Orthocerus clavicornis</i>	Nb	SU49	1
<i>Crypticus quisquilaris</i>	Nb	SU49	4
<i>Meloe rugosus</i>	RDB3	SU39 SU49 SP40	4
<i>Podagrica fuscicornis</i>	Nb	SU39 SU49	4
<i>Longitarsus anchusae</i>	Nb	SU49	1
<i>Longitarsus dorsalis</i>	Nb	SU39 SU49 SP50	51 records
<i>Apion dissimile</i>	Nb	SU49 SP50	21 records

<i>Apion schoenterri</i>	Na	SU49	1
<i>Trachyploeus asperatus</i>	Nb	SU49	1
<i>Strophosoma faber</i>	Nb	SU49	5
<i>Otiorhynchus raucus</i>	Nb	SU29 SU39	2
<i>Cneorhinus plumbeus</i>	Nb	SP50	1
<i>Gronops lunatus</i>	Nb	SU40 SU49	2
<i>Stenocarus umbrinus</i>	Nb	SU49	2
<i>Ceutorhynchus pilosellus</i>	RDB2	SU49	1
<i>Centorhynchys geographicus</i>	Nb	SU39 SU49	45 records
<i>Zachades exiguous</i>	Nb	SU49	3
<i>Tychius tibialis</i>	Na	SU49	1

Heteroptera (true bugs)

Species	Status	10km Squares	Number of sites
<i>Legnotus picipes</i>	Nb	SU39	1
<i>Gonocerus acuteangulatus</i>	RDB1	SU49	1
<i>Spathocera dahlmanni</i>	Na	SU49	1
<i>Rhopalus rufus</i>	RDB3	SU29 SU49	6
<i>Stictopleurus abutilons</i>	Extinct	SU49	5
<i>Graptopeltus lynceus</i>	Nb	SU29 SU49	7
<i>Megalonotus antennatus</i>	Nb	SU49	1
<i>Megalonotus dilatus</i>	Nb	SU49	1
<i>Megalonotus praetextatus</i>	Nb	SU39 SU49	8
<i>Catoplatus fabricii</i>	Nb	SU49	2
<i>Placochilus seladonicus</i>	RDBK	SU49	1

Amongst the bugs are examples of considerable change in distribution. *Gonocerus acuteangulatus* was previously known only from Box Hill in Surrey but has recently started to spread. It is associated with Box as indeed it was at its Oxfordshire site. *Stictopleurus abutilons* was considered to be extinct, but has recently been found in several southern counties. Some species recorded in the past have not been recorded at all in recent years.

Summary

Thirty-three species of beetle and ten species of bug of Red Data Book and Notable status associated with Calcareous Grass-heath have been recorded since 1985

Status	Beetles	Bugs
RDB1	1	1
RDB2	1	0
RDB3	1	1
RDBK	1	1
Na	3	1
Nb	26	6
Total	33	10

Details of all records are held by the Thames Valley Environmental Records Centre.

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References

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