

**The oil beetle *Meloe (Eurymeloe) rugosus* Marsham, 1802 in the Teme valley at Rochford, Worcestershire.**

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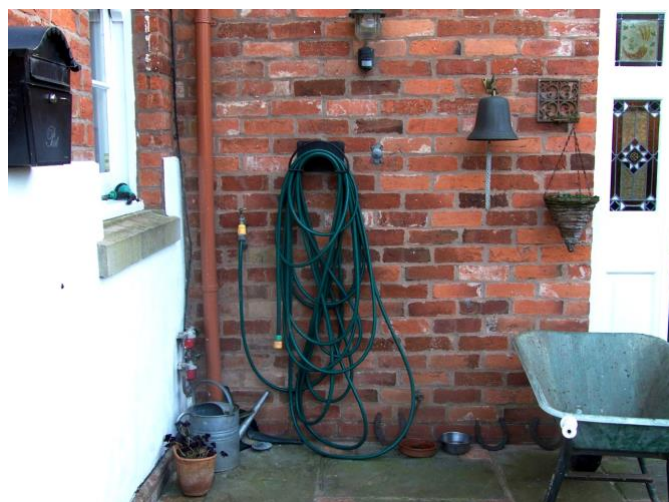
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**Introduction**

For long the oil beetle *Meloe rugosus* Marsham, 1802 (sometimes referred to by British workers as the Rugged Oil Beetle) was regarded as one of the rarer British meloids. The breeding population at Broadway, Worcestershire (Whitehead, 1986, 1989, 1991), no longer extant in its described form, was the first significant finding of the species since records in Oxfordshire and Wiltshire in 1927 and 1976 respectively. The status situation has now changed significantly with further confirmed records from Dorset (Walters 2003, 2013), Somerset, Gloucestershire and Wiltshire (Alexander, 1989; Whitehead, 1999, 2006, 2010). Especially noteworthy was the finding by Mr Alan Brown of a number of *M. rugosus* on acid heathland at Devil's Spittleful near Kidderminster, Worcestershire, by night searching during the autumn of 2009 (Brown, 2011; Whitehead, 2010) thereby moving its known distribution away from the Jurassic escarpment and further to the north. As far as we are aware these remain the most northerly British records. *Meloe rugosus* has also now been observed in Wales (Rabjohns, 2007).

**Recent Worcestershire records of *Meloe rugosus* in the valley of the River Teme**

The finding by CR of *M. rugosus* on her farm at Rochford (SO644673 89m O.D.) in the valley of the River Teme in Worcestershire during October 2013 moves the distribution of the British population of *M. rugosus* somewhat further west and therefore also away from the traditional well-known stronghold of the Jurassic escarpment (Whitehead, 1991, 1999). On 10 January 2015 CR discovered a second specimen in an identical position on a house wall a metre or so above the ground (Fig. 01). Adult *M. rugosus* are active from September to May in Britain but their appearance is weather-related and at times they may be 'sublapidicolous', i.e. in scree or clutter (Bologna, 1994; PFW, personal observation). On the Cotswold Hills *M. rugosus* is known to occur on the high limestone plateau and one found frozen in ice in Worcestershire subsequently survived. These new records from Rochford conform to the understood adult periodicity, but January records are infrequent. During January 2015 the weather was mild but unsettled and a temperature of 17°C was recorded in Devon on the ninth but as the month progressed the weather became more typical.



01.. The black speck on the white house wall is *Meloe rugosus*, Rochford, Worcestershire, 10 January 2015. Rosemary Winnall.

CR has lived at Rochford since 2002 when the key objective of conserving the biology of her farm orchard and grassland was initiated. Flowering plants were encouraged both in the garden and surrounding grassland a prime objective of which was to encourage bees. The prevailing landscape is dissected by the action of watercourses feeding the primary drainage and the flowery grassland at the site slopes towards the south, all of which are known to encourage bees and mining bees, known hosts of *M. rugosus*, in particular. The Devonian Sandstone geology, the sedimentology, topography and building-enhanced variations in microclimate are very similar to that at the Welsh Monmouthshire site (Rabjohns, 2007) although not so exaggerated. There are similarities also with the dissected northern escarpment of the Cotswold hill cuesta in Worcestershire where *M. rugosus* burgeoned in a garden context together with approximately 1000 other species of beetle, more to do with location and situation than horticulture.

The apparent recently increased frequency of *M. rugosus* in Britain is due to a combination of circumstances such as this ability to accept the proximity of human habitation, including the green urban environment of Bath, Somerset (Whitehead, 1999). *Meloe rugosus* is believed to develop in nests of mining bees of the genus *Andrena* (Whitehead, 1991) wherein its larvae consume the pollen stores. The finding of *M. rugosus* by walls at Broadway and now on walls at Rochford may be significant with respect to hosts. Populations may also wax and wane naturally. At the Monmouthshire site Rabjohns (*in litt.*) encountered *M. rugosus* during 2006, 2007 and 2008 but not since and that not for lack of scrutiny. It may well be that as the fortunes of mining bees change so populations of *M. rugosus* wax and wane accordingly.



02. *Meloe rugosus*, gravid female. Rochford, Worcestershire, 10 January 2015. © Rosemary Winnall.



03. *Meloe rugosus*, gravid female. Rochford, Worcestershire, 10 January 2015. © Rosemary Winnall.



04. *Meloe rugosus*, gravid female. Penallt, Monmouthshire, 20 November 2006. © Ian P. Rabjohns.

#### The question of *Meloe mediterraneus* Müller, 1925

Whitehead (1992) referred to the historical presence in Britain of a closely-related species of the subgenus *Eurymeloe* namely *Meloe mediterraneus* Müller, 1925, known from the Southend area of Essex during the 1870s and from Margate in Kent during the early 1900s and overlooked in the collections of the Department of Entomology, BMNH, London. The possibility of *M. mediterraneus* being a post-glacial relict in Britain has also been discussed (Whitehead, 1992). Walters (2013) subsequently demonstrated that *M. mediterraneus* is extant in Britain with the first modern record coming from East Sussex during 2005 followed by others from South Devon during 2006. It is noted that the counties in which *M. mediterraneus* presently occurs in Britain are southern and partially bounded by sea.

These two species of the *rugosus* group are closely similar but can be distinguished with care. According to Ramsay (2002) *M. rugosus* is “matt-greyish black in colour and never shiny” but this is inexact and reference should be made to Bologna (1988, p. 245) viz. “*tegumenti neri lucidi*”. It is *M. mediterraneus* that is matt black and whilst *M. mediterraneus* is unknown in Worcestershire, any *Eurymeloe* should be examined closely with this species in mind. The images selected here by us confirm that adult *M. rugosus* are clearly light-reflective.

#### Conclusion

Two recent findings of adult *M. rugosus* from dissected landscapes at Rochford in the valley of the River Teme in Worcestershire extend the distribution of this species to the west away from its Jurassic escarpment stronghold. The site is not dissimilar to that of the first documented Welsh record from Monmouthshire.

#### Acknowledgments

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#### Images

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