

Brood chambers of a Mud Dauber Wasp *Sceliphron cf. curvatum* (Smith, 1870) (Hymenoptera, Sphecidae), a potential regional colonist, introduced into Wiltshire during 2024.

Paul F. Whitehead, Moor Leys, Little Comberton, Pershore, Worcestershire, WR10 3EH. Email: paulpfw@outlook.com

Introduction

Mud Dauber Wasps of the genus *Sceliphron* are a group of markedly synanthropic spider hunters with an almost global distribution (Van der Vecht, 1968). They construct characteristic mud brood chambers on hard surfaces including vehicles, buildings, steelwork and even domestic furniture and are therefore readily distributed passively.

Asian species have colonised Europe and conversely the Nearctic *Sceliphron caementarium* (Drury, 1773) has crossed the Atlantic Ocean, even turning up in Malta (Cassar & Mifsud, 2020). Although not yet established as a breeding resident in Britain specimens of *S. caementarium* found during 2016 and illustrated on Facebook

(https://www.facebook.com/groups/1590641777855221/posts/1758500201069377/?locale=en_GB) originated from the Seaforth area at the mouth of the Mersey estuary in Lancashire, the site of a major container port. This account describes the passive introduction of abandoned unilocular *Sceliphron* brood chambers *in situ* on furniture imported from France to Wiltshire during April 2024.

Discussion

A wooden chest of drawers sourced from northern France was delivered to a site near Warminster, Wiltshire (ST83) on 1 April 2024 and was found to have a series of very hard cylinders fixed to an innermost angle (01). Images sent to the author indicated that they were 'nest chambers' of *Sceliphron cf. curvatum* (Smith, 1870). *Sceliphron caementarium* constructs multilocular brood chambers and can therefore be ruled out. *Sceliphron curvatum* is assigned to the subgenus *Hensenia* which is also represented in Europe by *Sceliphron deformis* (Smith, 1856). According to Četković *et al.* (2011) *S. deformis* does not occur in France whereas the explosive spread of *S. curvatum* across Europe reached northern France by 2010. The probability therefore is that the Wiltshire brood chambers (01) represent *S. curvatum*. Following restoration of the furniture the detached brood chambers were made available to the author and their study tells an interesting story.



01. Brood chambers or nests of the Mud Dauber Wasp *Sceliphron cf. curvatum* on the internal frame of a chest of drawers, Wiltshire, 1 April 2024.

Close examination of their internal content revealed the remains of unidentifiable provisioned spiders none of which were recently collected. Amongst them was a small breeding population of *Lepinotus patruelis* Pearman, 1931 (Psocoptera, Trogidae). Vacated wasp cocoons were often well preserved (02). One

chamber contained a mummified *Sceliphron* pupa; for reference purposes and ongoing study the head of this specimen is figured here (03). It seems probable that the breeding chambers had been present for a few years because the larva of a moth, probably Noctuidae, *Noctua* sp. had entered an already empty chamber within which it had successfully pupated and emerged (04).



02. Vacated cocoon of the Mud Dauber Wasp *Sceliphron cf. curvatum* in opened brood chamber, Wiltshire, 1 April 2024. P.F. Whitehead.



03. Head of mummified pupa from brood chamber of the Mud Dauber Wasp *Sceliphron cf. curvatum*, Wiltshire, 1 April 2024. P.F. Whitehead.



04. Vacated pupa of a noctuid moth from brood chamber of the Mud Dauber Wasp *Sceliphron cf. curvatum*, Wiltshire, 1 April 2024. Close examination of the associated larval exuvia suggests *Noctua pronuba* (L.). P.F. Whitehead.

Conclusion

The object lesson here stems from the role of humankind both in providing niches not only acceptable to *Sceliphron* but also to a wider range of species associated with it. Had these brood chambers been active the results could have been quite different and *S. curvatum* may have appeared for the first time in Britain. It is perhaps just a matter of time before it becomes established here.

References

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Images

01. Brood chambers or nests of the Mud Dauber Wasp *Sceliphron cf. curvatum* on the internal frame of a chest of drawers, Wiltshire, 1 April 2024.
02. Vacated cocoon of the Mud Dauber Wasp *Sceliphron cf. curvatum* in opened brood chamber, Wiltshire, 1 April 2024. P.F. Whitehead.
03. Head of mummified pupa from brood chamber of the Mud Dauber Wasp *Sceliphron cf. curvatum*, Wiltshire, 1 April 2024. P F. Whitehead.
04. Vacated pupa of a noctuid moth from brood chamber of the Mud Dauber Wasp *Sceliphron cf. curvatum*, Wiltshire, 1 April 2024. Close examination of the associated larval exuvia suggests *Noctua pronuba* (L.). P.F. Whitehead.