

Sarcophaga nigriventris Meigen, 1826 (Diptera, Sarcophagidae) in the graveyard of snails

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Introduction

The Sarcophagidae or Flesh Flies can be difficult to identify and include species that frequently utilise living or moribund invertebrates. One of these, *Sarcophaga nigriventris* Meigen, 1826, is discussed here and a confirmed Worcestershire breeding record from the snail *Backeljaia gigaxii* (L. Pfeiffer, 1848) (Geomitridae, Helicellinae) is documented with comments on the status of the snail.

Discussion

On 14 September 2024 I collected a few shells of *Backeljaia gigaxii* from the stony surface sediments of a grave at Pershore Cemetery, Worcestershire (52°10'N 02°09'W SO937453 35 m a.s.l.). I maintain some interest in this species given the possibility of its decline in Britain. The shells were tubed and on 7 October 2024 a female sarcophagid fly referable to *Sarcophaga nigriventris* (01 & 02) emerged from the shell. Although widespread in the UK proven host records for *Sarcophaga nigriventris* are infrequent.

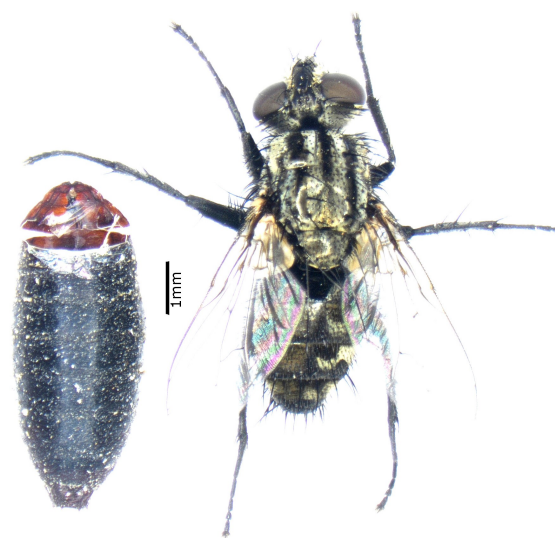


01. *Sarcophaga nigriventris* female *habitus*, bred from *Backeljaia gigaxii*, Pershore Cemetery, Worcestershire, 7 October 2024. PF Whitehead.



02. *Sarcophaga nigriventris* female bred from *Backeljaia gigaxii*, PF Whitehead.

Pershore Cemetery, Worcestershire, 7 October 2024. The pale genal hairs believed to be diagnostic of this species are indicated. Beaver (1972, 1977) undertook considerable research on molluscophagous flies attracted to the snail *Cepaea nemoralis* (Linnaeus, 1758) (Pulmonata, Helicidae) on sand dunes on Anglesey which were found to host 18 species of fly. Most of these overwintered in the pupal stage followed by a number of summer generations which may develop rapidly (03). Beaver (1973) confirmed that the volume of the available food resource and direct competition from other fly larvae within the closed environment of a snail shell combined to influence the size of the emerging flies. This is confirmed here with reference to a single adult *Sarcophaga nigriventris* bred from a trampled scarabaeid beetle *Anomala dubia* (Scopoli, 1763) collected by the writer from foredunes at Hoylake, Cheshire on 14 July 2021. It can be seen from the figure scale bars that the two examples are quite different in size due to the larger mass of the beetle.



03. *Sarcophaga nigriventris* female, *habitus* and puparium, bred from *Anomala dubia*, Hoylake, Cheshire, collected 14 July, larva pupated 18 July, fly emerged 24 July 2021. PF Whitehead.

Evidence implies a decline in numbers of *Backeljaia gigaxii* in Britain but judging the extent of this may require further study. In comparison with the closely related *Xeroplexa intersecta* (Poiret, 1801) *B. gigaxii* is less xerophilous tolerating a wider range of biotopes. It has occurred to the writer amongst fixed shingle on the foreshore at Llanfairfechan, North Wales during 2006 and in numbers around silt settling beds at Aston Mill Gravel Pit,

Kemerton, Worcestershire (52°01'N 02°08'W SO945354 30 m a.s.l.) on 3 October 1982. It seems possible that a decline of *B. gigaxii* may be due in part to changes in traditional land use. Especially significant in this regard was the finding of >1700 shells on 20 March 2021 on what had been a traditional cherry orchard on the edge of the floodplain at Wick, Worcestershire (52°11'N 02°06'W SO9546 23 m a.s.l.), many years previously. At the edges of the field only six live snails could be found some of which were sent to Dr Roy Anderson O.B.E. in Northern Ireland for breeding purposes. Recent records of *B. gigaxii* known to the writer are from Worcestershire pot plant nurseries and from Brean Down on the Somerset coast.

References

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Images

01. *Sarcophaga nigriventris* female *habitus*, bred from *Backeljaia gigaxii*, Pershore Cemetery, Worcestershire, 7 October 2024. PF Whitehead.
02. *Sarcophaga nigriventris* female bred from *Backeljaia gigaxii*, Pershore Cemetery, Worcestershire, 7 October 2024. The pale genal hairs believed to be diagnostic of this species are indicated. PF Whitehead.
03. *Sarcophaga nigriventris* female, *habitus* and puparium, emerged from *Anomala dubia*, Hoylelake, Cheshire, collected 14 July, larva pupated 18 July, fly emerged 24 July 2021. PF Whitehead.