

ENDOPARASITIC ROTIFERS IN UK EARTHWORMS:

NEW HOST AND LOCALITY RECORDS FOR *ALBERTIA VERMICULUS* DUJARDIN, 1838 AND *BALATRO CALVUS* CLAPERÉDE, 1867
(MONOGONONTA: DICRANOPHORIDAE)

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WHY ROTIFERS IN EARTHWORMS?

- Rotifers are microscopic aquatic invertebrates with a predominantly free-living lifestyle.
- Over 2,000 species of rotifers have been described, of which 16 species are ecto- or endoparasites of oligochaetes and gastropods¹.
- Studies on parasitic rotifers are rare and outdated (the last report on these parasites from the UK was over 60 years ago²).
- Parasitic rotifers are of particular interest in studying evolution and adaptations to parasitism.

HOW & WHERE WE LOOK FOR PARASITIC ROTIFERS

- 289 earthworms were examined for parasitic rotifers by dissection under a binocular microscope.
- Earthworms were collected by digging through topsoil at two sites in Newport (Wales) and near Cudham (London) between March 2023 and February 2024.
- Rotifers were preliminarily identified based on morphological characteristics².

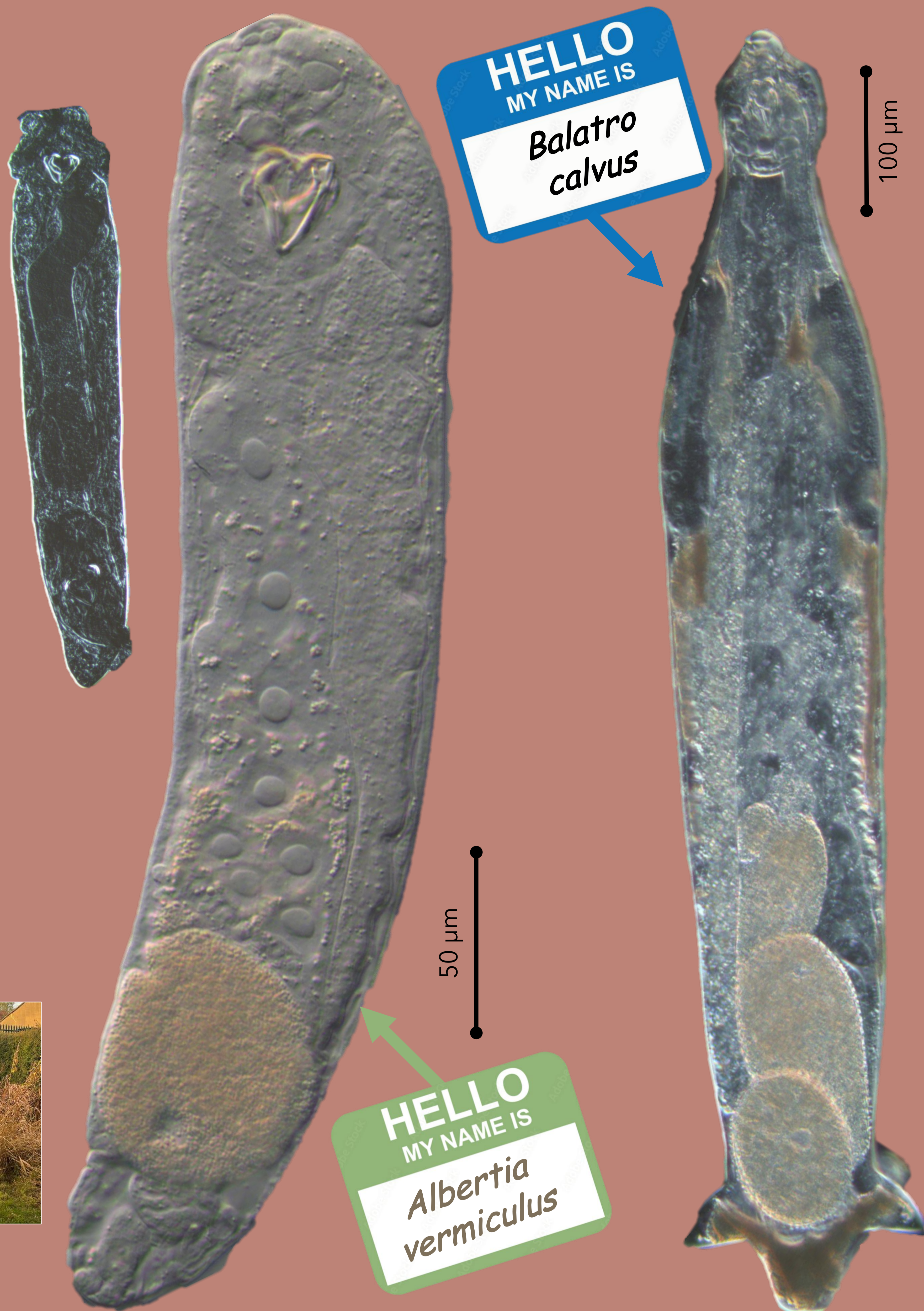


RESULTS

108 specimens of two species of endoparasitic rotifers of the family Dicranophoridae (Monogononta) were collected:

Site:	Newport, Wales	Cudham, London	
No. of examined earthworms	209	80	
Parasitic rotifers	<i>Albertia vermiculus</i> Dujardin 1838	<i>A. vermiculus</i>	<i>Balatro calvus</i> * Claparéde, 1867
Hosts	<i>Aporrectodea longa</i> †	<i>A. Longa</i> †, <i>Aporrectodea caliginosa</i>	<i>Eiseniella tetraedra</i> †
Prevalence	2.9% (n = 6)	5% (n = 4)	7.5% (n = 6)
Mean inf. intensity	5.2	5.8	5.5

*First record in the UK. †New host record.



CONCLUSIONS & NEXT STEPS

- New host and locality records for parasitic rotifers are provided.
- *Albertia vermiculus* has been reported in the intestines of aquatic and terrestrial oligochaetes and terrestrial gastropods in Europe. *Balatro calvus* was previously reported as an endo, and occasionally ectoparasite, of oligochaetes in Europe, South America, and Australia.
- Specimens of both species from different oligochaetes and slugs, especially from the type host and type locality, should be examined morphologically and molecularly to elucidate their diversity, life cycles, transmission, host specificity & pathogenicity.

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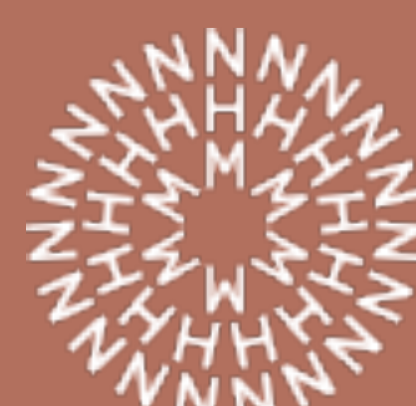
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