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Assessment of intestinal parasitic nematode egg remains from excavations at Preachers' Court, Charterhouse, London EC1 (site code: PRR98)

by

John Carrott

Summary

Six small samples of sediment from deposits excavated at Preachers' Court, Charterhouse, London EC1, were submitted for an assessment of their potential for analysis of intestinal parasitic nematode eggs.

All of the samples were examined. Intestinal parasitic nematode eggs were seen in two (possibly three) of the samples—most of these were of Trichuris *but eggs of ?*Ascaris *were also noted from two samples. These eggs indicate the presence of faecal matter within the deposits, but further investigation of the remains (identification of the Trichuris eggs to species) would be required to identify the source of this material.*

KEYWORDS: PREACHERS' COURT; CHARTERHOUSE; LONDON; ASSESSMENT; MICROFOSSILS; INTESTINAL PARASITIC NEMATODE EGGS; *TRICHURIS*; *ASCARIS;* FAECAL MATERIAL

Author's address:

Palaeoecology Research Services
Environmental Archaeology Unit
Department of Biology
University of York
P. O. Box 373
York YO10 5YW

Telephone: (01904) 434487
Answerphone: 433846
Fax: 433850

Prepared for:

Museum of London Archaeology Service
Walker House
87 Queen Victoria Street
London EC4V 4AB

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Introduction

An archaeological excavation was carried out by Museum of London Archaeology Service (MOLAS) at Preachers' Court, Charterhouse, London EC1 (NGR: TQ 3185 8202), during May and June 1998. Thirty-four sediment samples were recovered from the deposits. The samples were assigned to three periods dated as follows:

Period 1: Pre-monastic (13th-14th century)
Period 2: The London Charterhouse (1371-1537 AD)
Period 3: Post-dissolution (to 1614 AD)

Six small sub-samples (representing six separate contexts) were submitted to the EAU for examination for the eggs of intestinal parasitic nematodes.

Methods

Six small samples of sediment ('SPOT' *sensu* Dobney *et al*. 1992) were submitted. All of the samples were examined for the eggs of intestinal parasitic nematodes using the 'squash' technique of Dainton (1992).

Results

The results of the investigations are presented in Context number order by period and summarised in Table 1. Additional notes for the samples containing *Trichuris* eggs are shown in Table 2.

Context information provided by the excavator is given in square brackets.

Although primarily for the detection of intestinal parasitic nematode eggs the 'squash' technique routinely reveals other microfossil remains, where present these have also been noted in Table 1.

Period 1—Pre-monastic (13th-14th century)

Context 302 [Group 8, subgroup 204. Dated 1270-1350. Backfill of a large pit, possibly dug as a quarry, backfill includes domestic refuse and ?cess, presumably from nearby suburban development along St John Street]

Sample 18: Thirteen *Trichuris* eggs and one ?*Ascaris* egg were seen. Most of the *Trichuris* eggs were very pale but all of those retaining one or more of their polar plugs were measurable, as were one-third of those with no polar plugs remaining. Further investigation of this sample would almost certainly allow a statistical identification of the *Trichuris* eggs to species level and hence the identification of their host.

Context 434 [Group 12, subgroup 90: Dated 1230-1300 (?residual pot). Primary ditch fill including some domestic refuse]

Sample 25: No parasite eggs were recorded from this sample.

Period 2—The London Charterhouse (1371-1537 AD)

Context 433 [Group 13, subgroup 91: Dated 1380-1500. Backfill of a pre-monastic boundary ditch which took place early in the monastic sequence. Deposit included food waste and a leather shoe]

Sample 24: No parasite eggs were recorded from this sample.

Context 491: Group 37, subgroup 124: Dated 1480-1550. Fill of a large pit. Multi-function—cess and refuse. Plant and insect remains indicate disposal of animal waste products, spoiled grain etc, lots of 'latrine flies'. Finds include worn out shoes and scraps of cloth]

Sample 26: No parasite eggs were recorded from this sample.

Context 496 [Group 37, subgroup 124: Date and function as Context 491. Primary surviving fill of pit]

Sample 30: Two *Trichuris* eggs were seen in Sample 30 (Context 496). Neither of these had retained either of their polar plugs but one was sufficiently well preserved to be measurable. It is unlikely that further investigation of this sample would yield sufficient measurable eggs to allow a statistical identification to species level, however.

Period 3—Post-dissolution (to 1614 AD)

Context 399 [Group 49, subgroup 157: Dated 1480-1600. Primary fill of brick lined ?cess pit in the reused stone range]

Sample 21: Two possible parasite eggs (?*Ascaris*) were noted from this sample.

Discussion and statement of potential

Three of the examined samples were effectively barren of interpretable microfossil remains.

Intestinal parasitic nematode eggs were seen in two (possibly three) of the samples—most of these were of *Trichuris* but eggs of ?*Ascaris* were also noted from two samples. These eggs indicate the presence of faecal matter within the deposits, but further investigation of the remains (identification of the *Trichuris* eggs to species) would be required to identify the source of this material.

Six slides were examined from Sample 21 (Context 399) but, although two ?*Ascaris* eggs were noted, no microfossils were definitively identified as parasite eggs.

No parasite eggs were noted from Sample 26 (Context 491) although the large pit from which it came has been identified archaeologically as having been used for the disposal of both general refuse and cess. This suggests that the faecal content of the pit's fills may be rather localised.

Recommendations

The parasite eggs from Sample 18 (Context 302) should be investigated further. In particular, sufficient measurements of the *Trichuris* eggs should be made to allow a statistical identification to species level in order to identify the source of the faecal content of the deposit.

Similarly, an attempt should be made to concentrate sufficient measurable *Trichuris* eggs from Sample 30 (Context 496). However, given that only two eggs (one of which was measurable) were seen in this assessment, this may not be possible.
Some further investigation of the sample from Context 399 may give a more definite answer to the question of whether or not the brick lined pit was used as a cess pit.

No further work is recommended on the other three examined samples.

Retention and disposal

Sediment samples for examination for the eggs of intestinal parasitic nematodes from Contexts 302, 399 and 496, as well as any from as yet unexamined contexts, should be retained. Any remaining subsamples for investigation for parasite remains from the other three contexts considered in this report may be discarded.

Archive

All material is currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

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References

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Table 1. Notes on samples examined for intestinal parasitic nematode eggs from Preachers' Court, Charterhouse, London EC1, London.
Key: f – few; i – inorganic; l – a little; m – much; t – trace; s – some

Period	Context	Sample	Context type	Main component	Organic content	*Trichuris*	*Ascaris*	Fungal spores and/or hyphae	diatoms	Notes
1	302	18	Backfill of pit	i	m	13	?1	-	f	-
1	434	25	Primary ditch fill	i	t	-	-	f	-	-
2	433	24	Backfill of boundary ditch	i	t	-	-	f	-	1 live soil nematode seen
2	491	26	Pit fill	i	l	-	-	f	-	1 live soil nematode seen
2	496	30	Primary pit fill	i	s	2	-	s	-	-
3	399	21	Primary fill of brick lined pit	i	l	-	?2	f	-	-

Table 2. Additional notes on samples containing Trichuris *eggs from Preachers' Court, Charterhouse, London EC1, London.*

Context	Sample	No. of *Trichuris* eggs	No. of eggs with 2 polar plugs	No. of eggs with 1 polar plug	No. of eggs with 0 polar plugs	No. of measurable eggs
302	18	13	2	2	9	7
496	30	2	0	0	2	1