

Oxford  
Radiocarbon

Accelerator Unit

Research Laboratory for Archaeology  
6 Keble Road, Oxford OX1 3QJ, England  
Tel: ++44-(0) 1865-273939

P16816

OxA- none

failed – low collagen

$\delta^{13}\text{C}$ = none

Acknowledged

QAP 01/03 Issue 2 13/12/1999

SAMPLE SUBMISSION FORM

Please provide as much information as possible for each sample submitted. It will greatly help us in publishing dates rapidly if we have the full information required for publication.

If you are submitting a series of samples, there is no need to write in repeat information for each one, but please do not overlook specific stratigraphic details (pages 2 & 3).

Suggested name for sample series: EFCHED North East Black Sea Project

Your reference no: EFD4C099

Name and location of site: Malaya Vorontsovskaya, Sochi region, Krasnodar district

Country: Russia

Latitude: 43° 37.765' N

Longitude: 39° 54.738'E

(Greenwich meridian)

Grid reference (specify grid):

Type of material: bone

Any specific identification (please indicate as precisely as possible): cave bear (*Ursus spalaeus*)

Family:

Genus: *Ursus*

Species: *spalaeus*

For bone, type (e.g. femur): metapodial

Collector's name: R. A. Housley

Date of excavation: 10 July 2004

Sender's name: Dr R A Housley

Sender's signature:

Address:

Department of Archaeology, University of Glasgow, Gregory Building, Lilybank Gardens, Glasgow G12 8QQ

Tel: 0141 330 6873

email:

r.housley@archaeology.gla.ac.uk

Submission date: April 2005

Is the sample primarily:

archaeological

geological

other

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Was the sample	(a)	sealed in a recognisable horizon	<input type="checkbox"/>
	(b)	sealed in a localised feature, e.g. grave or pit	<input type="checkbox"/>
	(c)	other	<input type="checkbox"/>
Is this information known	(a)	beyond reasonable doubt	<input type="checkbox"/>
	(b)	with some possible doubt	<input type="checkbox"/>
	(c)	with major doubt	<input type="checkbox"/>

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**Certainty of Association**

(please tick one box)

Full certainty: the sample came from the artefact itself, e.g. wagon wheel, bone pommel of dagger	<input type="checkbox"/>
High probability: there is a direct functional relationship between the sample and archaeological finds, e.g. coffin dates finds in grave, carbonised grain in rubbish pit dates sherds, charcoal dates urn	<input type="checkbox"/>
Probability: the functional relationship is not demonstrable but the quantity of organic material and size of fragments argue in favour or it, e.g. charcoal concentration in a rubbish pit or occupation layer	<input type="checkbox"/>
Reasonable possibility: as above, but the fragments are small and scattered, e.g. 'dark earth' in an occupation layer, charcoal fragments in a grave	<input type="checkbox"/>

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**Sample age in relation to burial / discard** (please tick one box)

Samples are generally **older** than their contexts:

The difference in date is so small as to be negligible (less than 20 years); e.g. twigs, grain, leather, bone, outermost tree rings.	<input type="checkbox"/>
The time difference can amount to several decades (over 20, less than 100 years), e.g. charcoal from short-lived wood species, outermost rings from long-lived wood species, objects which might have a long period of use.	<input type="checkbox"/>
The time difference may amount to centuries, e.g. charcoal from long-lived wood species possibly subject to re-use.	<input type="checkbox"/>
The nature of the dated organic material is not precisely known, e.g. samples consisting of 'dark earth', 'ash', 'soil'.	<input type="checkbox"/>

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Note: the sections above drawn from: Waterbolk, H.T. (1971) *Proc. Prehist. Soc.* 37(2), 15-33

## Named stages

Local archaeological name, e.g. Maglemosian: none

General archaeological name, e.g. Mesolithic: Either 'Denticulate Mousterian' or 'Typical Mousterian' with many denticulates / Middle Palaeolithic

Local geological unit, e.g. Larmudiac Beds: NA

General geological name, e.g. Late Glacial: Late Pleistocene – mostly likely OIS 3

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## Stratigraphic and environmental details: (if none, write 'none')

Please give details of sample locations (including detailed site drawings on a separate sheet), describing horizons and other features relevant to sample position and condition.

Please mention possible contamination, rootlets, intrusions, disturbances, humic acids, carbonates, calcareous or volcanic environment, nearness to water table, nearness to surface, etc.

Sample comes from the mid-lower part of layer 3 (a yellowish-brown loam) and is associated with a Middle Palaeolithic tool assemblage that has been described as either 'Denticulate Mousterian' or 'Typical Mousterian' with many denticulates. Cave bear dominates the faunal assemblage - the only other relatively frequent species is the Caucasian Tur (*Capra caucasica*). Based on cave pollen it is believed that layer 3 corresponds to a cool period associated with an environment characterised by coniferous woodland (*Abies-Picea* and *Pinus*) and sub-alpine meadows.

The area is limestone and so the deposits are highly calcareous. The condition of the bone from this site is very poor.

An alternative to this sample is EFD4C098, which comes from the same part of layer 3 but with a depth of 52 cm.

Optional checklist:

Sector: section approximates to O – P on attached diagram

layer, sub-layer: mid-lower part of layer 3, depth of 53 cm, 105 cm from right hand edge of section

feature

phase of site: Mousterian

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## Sender's comment on submission:

(i.e. comment on what date is intended to demonstrate, designed to hold good regardless of specific results)

This sample is being dated in order to cross-validate OSL samples EFD4L074 (which was taken from a depth of 42.5 cm in the section, within the upper part of layer 3) and EFD4L075 (which comes from the base of layer 3, from a depth of 67 cm in the section). Poverty of occupation evidence suggests that the cave saw only brief visits by cave bear hunters. An age in the 40-55 ka BP range is a possibility.

## Sample collection and treatment

How was the sample collected ? From a cleaned vertical section  
(surface, trench, section, etc.)

How has it been stored ? Polythene bag  
(nature of container, etc.)

Have preservatives, fungicides, etc., been used ? No

If so, please give details of any chemical treatments, identifying chemicals used.  
Not applicable

Was sample wet or dry when collected ? Slightly damp

If wet, how was it dried ? Air dried

Can the entire sample be used for dating ? Yes

Has this or a related sample also been sent to another laboratory ? OSL samples are with SUERC

If so, please give Laboratory and date numbers

SUERC samples EFD4L073 – EFD4L076, no lab or date numbers as the samples are currently undergoing OSL analysis

There are two existing <sup>14</sup>C dates:

- (1) LE-700: 14,100 ± 100 BP, on charcoal from a hearth in layer 1 in section K-L-M
- (2) GR-6031: 35,680 ± 480 BP, on burnt bone from a hearth in layer 3 in section F-R-Z

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## Relevant publications

(In format: Author, initials, year, title, **Journal** (Publisher), volume, pages)

Liubin, V.P., 1989, The Palaeolithic of the Caucasus (in Russian), in *Paleolit Kavkaza I Severnoi Azii* (ed. P.I. Boriskovskii), 7-142, Leningrad: Nauka.

Tchistiakov, D.A., 1996, *Mousterian sites of the North East part of the Black Sea Region* (in Russian), St. Petersburg: Evropeiskiy Dom.