

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

QAP 01/03 Issue 2 13/12/1999

P (none)

OxA- none

too poor to submit for dating

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

Acknowledged

### 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: EFD4C135

Name and location of site: Akhshtyr Cave, Sochi region, Krasnodar district

Country: Russia

Latitude: 43° 31.229' N

Longitude: 39° 59.743'E

(Greenwich meridian)

Grid reference (specify grid):

Type of material: charcoal

Any specific identification (please indicate as precisely as possible):

Family:

Genus:

Species:

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

Collector's name: R. A. Housley

Date of excavation: 13 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

- 
- Was the sample (a) sealed in a recognisable horizon
- (b) sealed in a localised feature, e.g. grave or pit
- (c) other
- Is this information known (a) beyond reasonable doubt
- (b) with some possible doubt
- (c) with major doubt
- 

**Certainty of Association**

(please tick one box)

- Full certainty: the sample came from the artefact itself, e.g. wagon wheel, bone pommel of dagger
- 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
- 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
- Reasonable possibility: as above, but the fragments are small and scattered, e.g. 'dark earth' in an occupation layer, charcoal fragments in a grave
- 

**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.
- 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.
- The time difference may amount to centuries, e.g. charcoal from long-lived wood species possibly subject to re-use.
- The nature of the dated organic material is not precisely known, e.g. samples consisting of 'dark earth', 'ash', 'soil'.
- 

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:

General archaeological name, e.g. Mesolithic: Denticulate Mousterian / Middle Palaeolithic

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

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

---

## 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 a hearth that was exposed in section  $\Gamma - B$  within square 99. See attached plan, section drawing and photograph (note that the section drawing relates to section 3 –  $\mathcal{K}$  and is different to the photograph, although the same numbering of the deposits has been used). The hearth lies at the top of layer 4, at the contact with the overlying horizon, layer 3. Both layers contain Middle Palaeolithic (Denticulate Mousterian) tools. The site is complicated because of numerous investigations by different excavators in different years, and at least two sets of numbering have been used to label the layers on the site. We have preferred the earlier nomenclature of Zamyatin. Over 90% of the identifiable fauna is cave bear. Layer 3 contained a spruce-fir (*Picea-Abies*) coniferous fossil pollen assemblage with limited deciduous elements (oak and *Polypodium*). No pollen has been reported from layer 4 but like 3 the fauna suggests woodland.

The area is Carboniferous limestone and so the deposits are highly calcareous. Considerable moisture is indicated by encrustations on the bone.

Optional checklist:

Sector: sample comes from square 99 in section  $\Gamma - B$  on the attached plan

layer, sub-layer: top of layer 4 / below layer 3

feature: dispersed charcoal from hearth

phase of site: Mousterian

---

## 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 EFD4L103 (which was taken from a depth of 99 cm in the section, within the upper part of layer 3) and EFD4L104 (which comes from layer 5, from a depth of 172 cm in the section). Poverty of occupation evidence suggests that the cave saw only brief visits by cave bear hunters. The sample is probably late Mousterian but may be close to, or beyond, the range of radiocarbon.

## 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 ? Damp to wet

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 EFD4L101 – EFD4L104, no lab or date numbers as the samples are currently undergoing OSL analysis

There is one existing U-series date from layer 3a (which overlies layer 3 and the hearth being dated here):  
35 000 ± 2000 BP on a fallen stalagmite (don't know lab no)

There is one radiocarbon age on (?) charcoal from an ash lens in layer 2 (rock exfoliation associated with dry very cold conditions and Upper Palaeolithic industry):  
19 000 ± 500 uncal BP (don't know lab no)

---

## 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.