

(A) = Åpen, kan bestilles fra Universitetet i Stavanger / Arkeologisk museum
(B) = Begrenset distribusjon
(C) = Kan ikke utleveres



Vedartsbestemmelse av
trekull fra Gunnarshaug,
gnr. 143, bnr.,6, Karmøy
kommune,

Jon Erik Amundsen

AM saksnummer: 2012/08
Journalnummer:

Dato: 04.11.2012
Sidetall:
Opplag:

Oppdragsgiver: AM

Stikkord: vedartsbestemmelse, treverk, trekull,
radiokarbondatering, ¹⁴C

Versjon: 04.11.2012



Universitetet
i Stavanger

Arkeologisk museum

Oppdragsrapport 2012/xx
Universitetet i Stavanger,
Arkeologisk museum,
Avdeling for fornminnevern

Utgiver:
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Arkeologisk museum
4002 STAVANGER
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Stavanger 2012

Vedartsbestemmelse av trekull fra Gunnarshaug, gnr., 143, bnr.,6, Karmøy kommune,

Jon Erik Amundsen



Vedartsbestemmelse av trekull fra Gunnarshaug

Nat.vit nr: 2012/ 08

Jon Amundsen

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Innledning

Prøvene

Vedartsbestemmelse er gjort på totalt tre forkullede prøver av treverk.

Treverkets forfatning

Trekullprøvene er av varierende størrelse og kvalitet. De fleste fragmentene i de to første prøvene er av god størrelse. Fragmentene ble snittet med skalpell og deretter vurdert med hjelp fra mikroskop.

Instrumenter benyttet til analyse

Til bestemmelse av trekullet er det benyttet Zeiss pålysmikroskop. Digitalt fotoutstyr har ikke vært benyttet til analysen.

Resultater

Gunnarshaug			
prøve id	informasjon om prøven	art.	vekt mg.
2012/08-1	Få og små biter trekull, noe forurenset av mineralpartikler.	løvtre, kortlivet trevirke.	33,5
2012/08-3		løvtre, or?	73,3
2012/08-4		løvtre, or	52,0

Litteratur og kilder

Hather, Jon G., 2000, *The identification of the Northern European wood*, Archetype Publications.

Mork, Elias, 1966, *Vedanatomy 2. Opplag*, Tanum.

Schewingruber, Fritz H, 1978, *Holz-anatomie*, Zurgher AG.

Stemsrud, Kristian Dagfinn, 1988, *Treverkets oppbygning Vedanatomy*, Universitetsforlaget.

Referansemateriale.

Tidsforbruk på analyse og rapport, 2 timer og 30 minutter.

Jon Erik S. Amundsen



*Consistent Accuracy . . .
. . . Delivered On-time*

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December 28, 2012

Ms. Sara Westling
Universitet i Stavanger
Arkeologisk Museum
Peder Klows gate 30 A
Stavanger, 4036 Norway

RE: Radiocarbon Dating Results For Samples 2012/08-01, 2012/08-03

Dear Ms. Westling:

Enclosed are the radiocarbon dating results for two samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses proceeded normally. As usual, the method of analysis is listed on the report with the results and calibration data is provided where applicable.

As always, no students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analyses. We analyzed them with the combined attention of our entire professional staff.

If you have specific questions about the analyses, please contact us. We are always available to answer your questions.

The cost of analysis was previously invoiced. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

Digital signature on file



BETA ANALYTIC INC.

DR. M.A. TAMERS and MR. D.G. HOOD

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REPORT OF RADIOCARBON DATING ANALYSES

Ms. Sara Westling

Report Date: 12/28/2012

Universitet i Stavanger

Material Received: 12/4/2012

Sample Data	Measured Radiocarbon Age	¹³ C/ ¹² C Ratio	Conventional Radiocarbon Age(*)
Beta - 337257 SAMPLE : 2012/08-01 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 1680 to 1520 (Cal BP 3640 to 3470)	3330 +/- 30 BP	-25.5 o/oo	3320 +/- 30 BP
Beta - 337258 SAMPLE : 2012/08-03 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 1430 to 1260 (Cal BP 3380 to 3210) AND Cal BC 1230 to 1220 (Cal BP 3180 to 3170)	3090 +/- 40 BP	-26.0 o/oo	3070 +/- 40 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the ¹⁴C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby ¹⁴C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured ¹³C/¹²C ratios (delta ¹³C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta ¹³C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta ¹³C, the ratio and the Conventional Radiocarbon Age will be followed by "**". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.5:lab. mult=1)

Laboratory number: Beta-337257

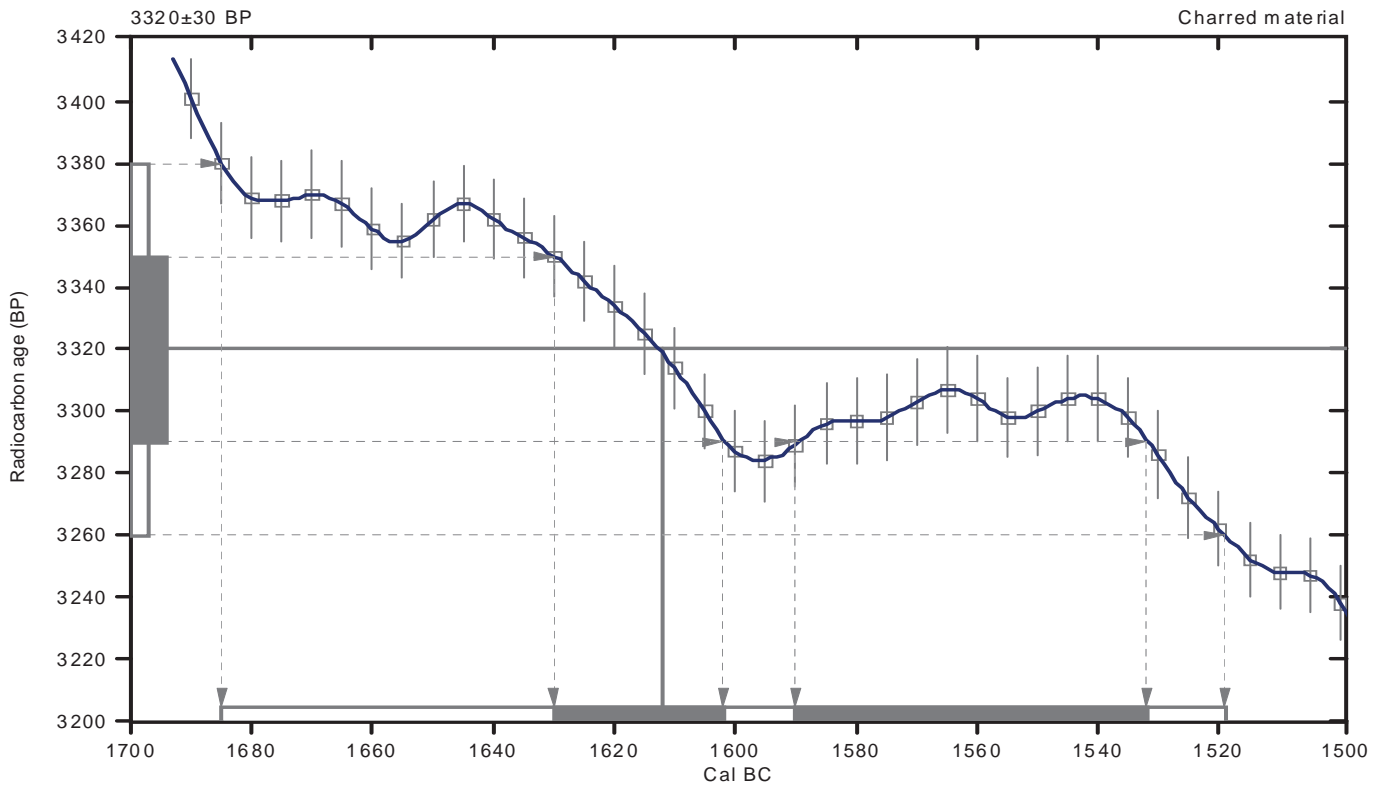
Conventional radiocarbon age: 3320±30 BP

**2 Sigma calibrated result: Cal BC 1680 to 1520 (Cal BP 3640 to 3470)
(95% probability)**

Intercept data

Intercept of radiocarbon age
with calibration curve: Cal BC 1610 (Cal BP 3560)

1 Sigma calibrated results: Cal BC 1630 to 1600 (Cal BP 3580 to 3550) and
(68% probability) Cal BC 1590 to 1530 (Cal BP 3540 to 3480)



References:

Database used

INTCAL09

References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26:lab. mult=1)

Laboratory number: Beta-337258

Conventional radiocarbon age: 3070±40 BP

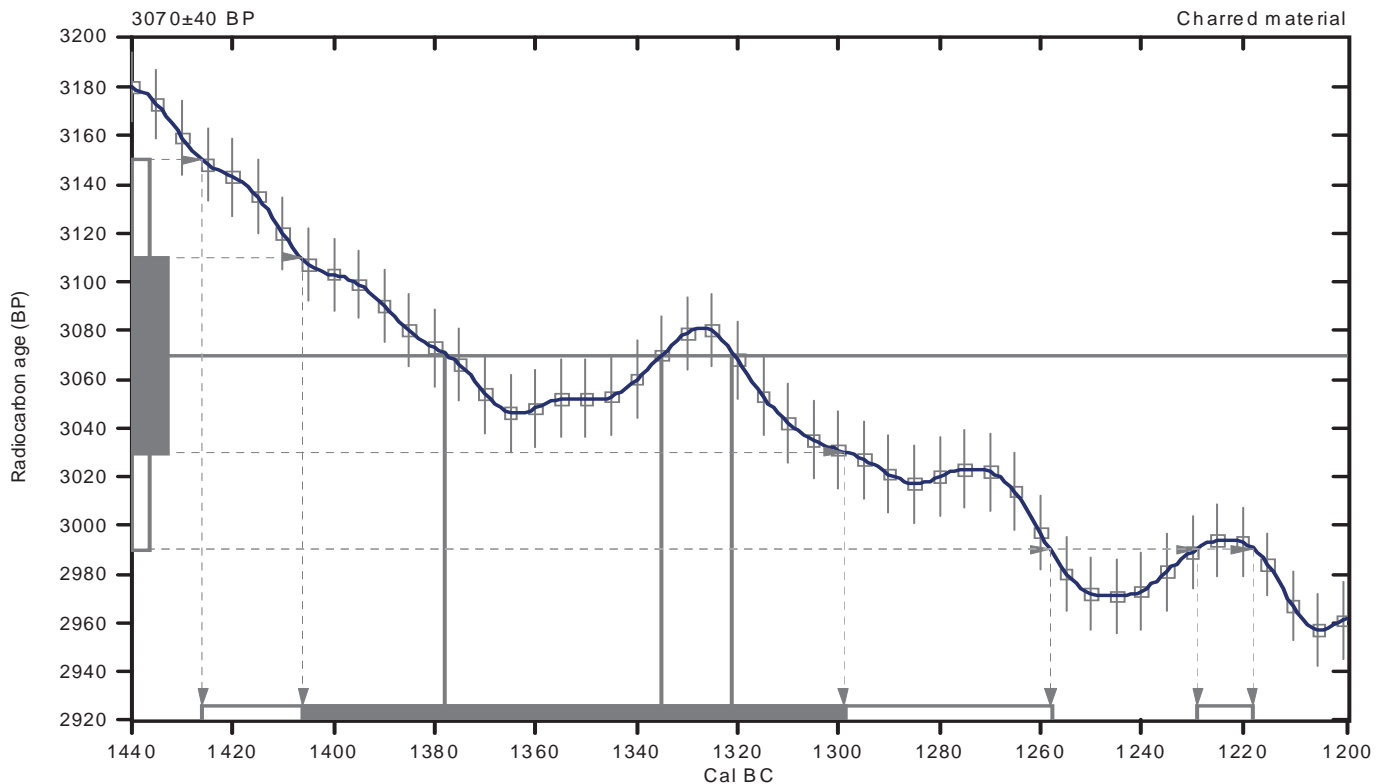
**2 Sigma calibrated results: Cal BC 1430 to 1260 (Cal BP 3380 to 3210) and
(95% probability) Cal BC 1230 to 1220 (Cal BP 3180 to 3170)**

Intercept data

Intercepts of radiocarbon age
with calibration curve:

Cal BC 1380 (Cal BP 3330) and
Cal BC 1340 (Cal BP 3280) and
Cal BC 1320 (Cal BP 3270)

1 Sigma calibrated result: Cal BC 1410 to 1300 (Cal BP 3360 to 3250)
(68% probability)



References:

Database used
INTCAL09

References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):1-244, Oeschger, et al., 1975, *Tellus* 27: 168-192

Mathematics used for calibration scenario

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