

Sediment Report

**Wild Hay Oxbow – Moberley Lake – Jarvis Lake**

Prepared by Erik Schiefer

June 20, 2006

## Moberley Lake

Coring date: June 7, 2006

Water depth: 1.6 m

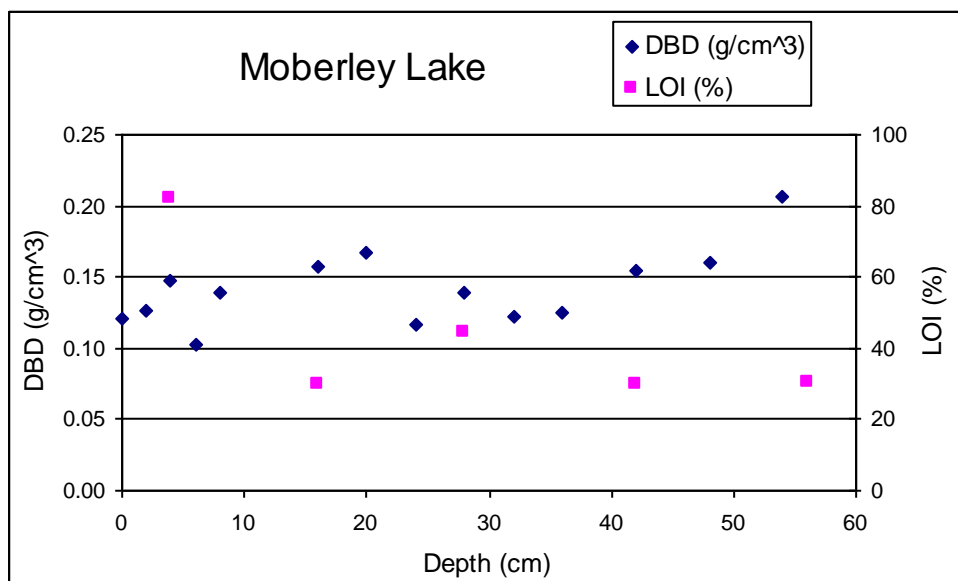
Core length: 56 cm

Coring method: Manually pushed in from surface

Core type: 3' PVC transferred to 2' acrylic

Sampling interval: 2 cm

Dry bulk density (DBD) and loss on ignition (LOI):



Dating: 7 samples, non-linear depth distribution

Notes: Silty sediment with some fibrous organic matter

Very low density sediment with weak increasing trend with depth

LOI indicates very high organic content

0-2 cm sample contains PVC shards from core cutting in field

**Serious concerns about dating success due to severe bioturbation**

- moose tracks observed crossing the lake
- sediments were entirely massive (no sedimentary structures or horizons preserved)

## Wild Hay Oxbow (~50? years old – check air photos)

Coring date: June 8, 2006

Water depth: 1.2 m

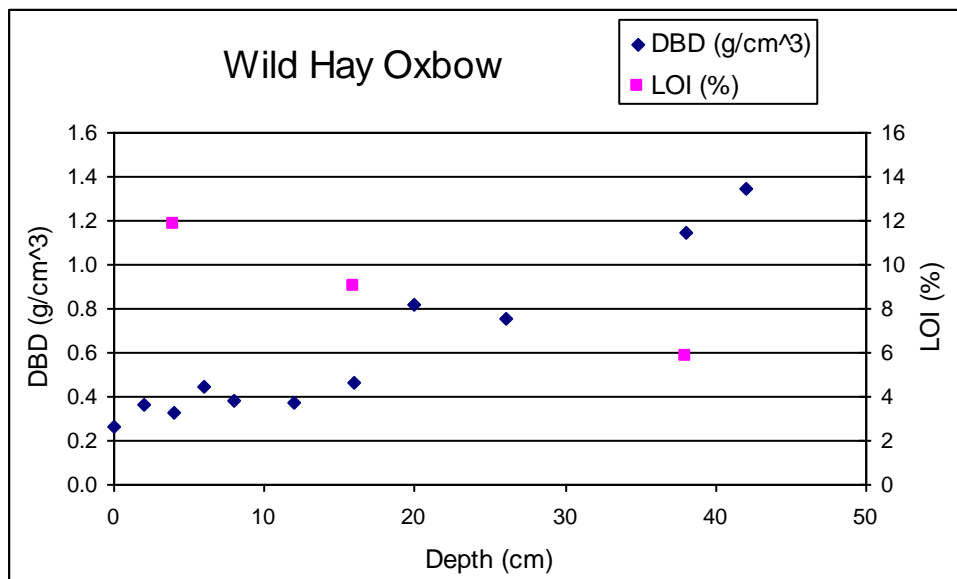
Core length: 45 cm

Coring method: Manually pushed in from surface

Core type: 3' PVC transferred to 2' acrylic

Sampling interval: 2 cm

Dry bulk density (DBD) and loss on ignition (LOI):



Dating: 6 samples, non-linear depth distribution

Notes: Coarse silt and sandy sediment with some coarse organic debris

Moderate density sediment with strong, non-linear increasing trend with depth

LOI suggests low organic content

0-2 cm sample contains PVC shards from core cutting in the field

Large stick in 28-38 cm interval prevented sub-sampling

Increasingly sandy below 38 cm

**Dating potential may be limited due to young (<<150 years old) age of lake**

## Jarvis Lake

Coring date: June 8, 2006

Water depth: 14 m

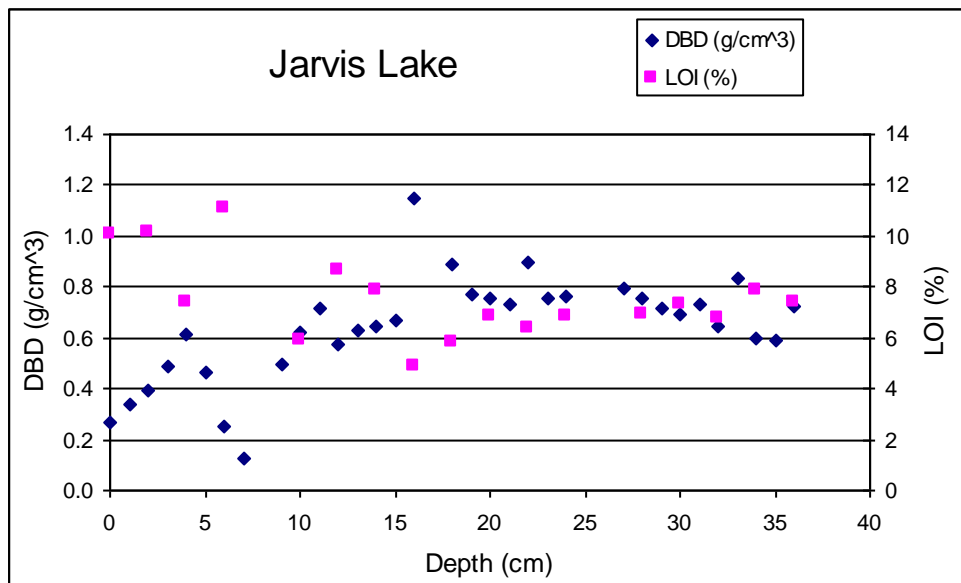
Core length: 37 cm, 34 cm

Coring method: Gravity coring with KB corer

Core type: 3' acrylic split tube, 3' thin wall extruding tube

Sampling interval: 1 cm DBD/LOI, 0.5 cm for dating

Dry bulk density (DBD) and loss on ignition (LOI):



Dating: 20 samples, non-linear depth distribution

Notes: Primarily fine silt and clay sediment with no visible organic debris

Moderate density sediment with decreasing trend with depth to about 20 cm

LOI suggests low organic content

Sub millimeter laminations and coarse centimeter scale beds observed

Some small-scale variations in DBD may correlate with structural changes

- check Rich's sediment core imagery

Strong inverse relation between DBD and LOI:

$$\text{DBD} = -0.123 \text{ LOI} + 1.59, (R^2 = 0.84)$$