

RADIOCARBON DATES ON PALEOLANDSLIDES NEAR OTTAWA CANADA
RADIOCARBON DATES, CALIBRATED CALENDER DATES, LATITUDE AND LONGITUDE, AND FULL SITE AND MATERIAL DESCRIPTIONS

Further information to accompany Table 1 in Aylsworth, J.M., Lawrence, D.E., and Guertin, J., "Did two massive earthquakes in the Holocene induce widespread landsliding and near-surface deformation in part of the Ottawa Valley, Canada?" (manuscript G16308A)

Sample Site	Latitude	Longitude	C14 ID#	C14 Date (yr B.P.)*	Calibrated calender year**		Material	Enclosing material	Depth m	Collection method	Site description
					C14 intercept	2 sigma error range					
1	45 24' 50"	75 16' 45"	Beta-127245	4570+/-70	3345	3510-3410, 3395-3045	isolated bits of sticks & bark	from 6" black organic layer (well rotted wood pieces) within distorted landslide debris of layered sand, clay and organics	0.36	Livingstone sediment core	pond on landslide within scar area
2a	45 27' 40"	75 15' 40"	Beta-90880	4470+/-80	3250, 3100	2900-3360	wood piece	at top of contorted debris of clay & organics with wood; overlain by (lake) fibrous peat; from same core as site 2b	1.30	Livingstone sediment core	large pond on landslide surface & dammed against valley wall by landslide tongue
2b	45 27' 40"	75 15' 40"	Beta-90881	3050+/-70	1315	1440-1115, 1100-1070	wood piece	in 40 cm of debris of contorted clay & organics with wood: lies between 2 layers of (lake) fibrous peat; from same core as site 2a	0.80	Livingstone sediment core	large pond on landslide surface & dammed against valley wall by landslide tongue
3	45 26' 30"	75 13' 20"	Beta-122473	4590+/-40	3350	3490-3455, 3375-3310, 3230-3120	good sized wood piece	in sandy clay	0.57	Livingstone sediment core	on landslide, pond contained between well-defined ridges in chaotic, cross & intersect pattern, standing water between many ridges
4	45 29' 40"	75 11' 20"	Beta-122475	2760+/-50	900	1005-815	2 twigs and org.	in sand with many small sticks	0.60	Livingstone sediment core	on landslide, pond contained between well-defined & undisturbed landslide ridges in wooded area

5	45 32' 30"	75 14' 30"	Beta-127281	5130+/-60	3960	4035-3785	large wood piece, cored through log, position within log unknown	in clay, from near bottom of landslide debris	4.50	drill core	gently sloping landslide tongue
6	45 31' 15"	75 16' 00"	Beta-127284	4440+/-80	3070	3355-2895	outer rings of large log (hemlock)	from landslide debris: mixed red and grey clay, sand and silt, some thixotropic	?	excavated by farmer	landslide tongue. Log dug out by farmer during excavation of new manure lagoon.
7a	45 30' 00"	75 12' 10"	Beta-127243	4450+/-70	3085	3350-2905	single stick	entire core is mixed red and grey clay and sand layers, some very contorted, some mixed, lots of organic bits	3.00	drill core	gently sloping landslide tongue, near toe
7b	45 30' 00"	75 12' 10"	Beta-127244	4570+/-70	3345	3510-3410, 3395-3045	2 small sticks	from 1/2 inch layer of organic, black muck with some distinct sticks at bottom of same core. -may be original floodplain surface as is underlain by very dense gritty dark grey layer with stones (-till?)	5.33	drill core	gently sloping landslide tongue, near toe
8	45 29' 00"	75 11' 30"	Beta-122472	4520+/-50	3320, 3220, 3180, 3165, 3130	3360-3035	collection of small wood bits	in sand which is under thick organic layer	0.45	Livingstone sediment core	on landslide near headscarp, pond contained between well-defined landslide ridges
9	45 28' 30"	75 07' 45"	Beta-127282	4540+/-90	3335	3510-2920	wood piece	from very clayey organic layer with some larger wood bits; layer is surrounded by dense red & grey clay bands	4.65	drill core	landslide tongue near toe
10	45 31' 30"	75 00' 40"	Beta-127283	4530+/-60	3325	3370-3030	wood pieces from single log, 23cm long, saturated and very soft	from buried organic layer of black peat with numerous logs; overlain by 1 m of clay	1.00	ditch section	On sloping landslide tongue. Drainage ditch exposed several 100 m of buried organic layer with logs

11a	45 30' 50"	75 00' 10"	Beta-122477	4450+/-50	3085	3340-2920	large seed and small organic bits	in soft grey clay--lots of grass incorporated at top, some sections crumbly, sand, red clay and organic mixed in (no banding)	0.37	Livingstone sediment core	on landslide, pond contained between well-defined landslide ridges, standing water between many ridges
11b	45 30' 50"	75 00' 10"	Beta-122478	4700+/-50	3505, 3425, 3390	3630-3355	mixed organic, lg sample, seed	black organic, abrupt contacts both top and bottom; overlain by (LV17-03) clay mixture, underlain by sand	0.49	Livingstone sediment core	same core as site 11a. Note: Beta-122477 probably a better date of failure
12	45 31' 30"	74 57' 00"	Beta-122471	1870+/-40	AD 135	AD 70-245	minute grassy pieces	in very soft grey clay, crumbly (i.e. disturbed) with organic strands; core is layered grey and red clay with some sand and silt.	0.42	Livingstone sediment core	on landslide; pond one of many between quite pronounced NNW/SSE ridges -pond cored was dammed at the S end by a beaver dam; sample taken 20m from dam
13	45 30' 50"	74 56' 15"	Beta-127242	4820+/-70	3640	3735-3495, 3590-3525	single piece of wood	in buried 8cm organic layer in clay landslide debris, near base of toe	1.88	drill core	on landslide tongue, 150' from edge of toe
14	45 32' 10"	75 09' 30"	Beta-122474	4470+/-50	3095	3345-2925	bark and wood, shattered, originally one piece	in sand	0.42	Livingstone sediment core	on landslide surface near headscarp, pond between well defined ridges
15	45° 31' 00"	75° 25' 00"	GSC-1922	4620+/-80	3360	3505-3415, 3385-3300	wood			stream exposure	from GSC Radiocarbon Database

*Beta = 1sigma error range; GSC = 2 sigma error range

**calibrated dates are BC except for Beta-122471