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UNIVERSITY OF WISCONSIN RADIOCARBON DATES XIII

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Procedures and equipment of the laboratory have been described in previous date lists. Lake cores and marls are treated with acid only, wood, charcoal, and peat samples with dilute NaOH and dilute H_3PO_4 (unless indicated otherwise) before conversion to methane which is used as counting gas.

The dates reported have been calculated with 5568 as the half-life of ^{14}C, 1950 as the reference year. The standard deviation quoted includes only the 1σ of the counting statistics of background, sample, and standard counts. Background methane is prepared from anthracite coal, standard methane from NBS oxalic acid. The $^{13}C/^{12}C$ ratios of the CO_2 samples prepared from this oxalic acid are measured and the activity of the standard methane is corrected for any deviation from -19 ‰ (Craig, 1961). The actual values (compared to the PDB standard) varied from -19.3 to -20.1 ‰ over the past year. The activities of the dated samples for which $\delta^{13}C$ values are listed have been corrected to correspond to a $\delta^{13}C$ value of -25 ‰. Samples are counted at least twice, once in each of two .5L counters at 3 atm pressure for a minimum total of 15,000 counts.

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I. ARCHAEOLOGIC SAMPLES

A. Illinois

WIS-718. Cahokia **1750 ± 55 AD 200**

Charcoal, E-73-88, sycamore, from refuse-storage pit fill, Feature 17 in House 2, rectangular wall trench house of Mississippian tradition in Cahokia, Madison Co, Illinois (38° 47′ 15″ N, 90° 4′ 15″ W). Coll 1973 by M L Gregg, Univ Wisconsin-Milwaukee; subm by D A Baerreis. Sample from 150cm below surface.

B. Iowa

Glenwood series, Kuhl site

(13ML126, 13ML136, 13ML138, 13ML139)

Charcoal from 4 earthlodges of Nebraska aspect, Central Plains tradition, on W slope above bluff overlooking Pony Creek, 3.33km W of Glenwood, Iowa (41° 2′ 49″ N, 95° 47′ 22″ W, 41° 2′ 50″ N, 95° 47′ 24″ W, 41° 2′ 51″ N, 95° 47′ 18″ W, and 41° 2′ 50″ N, 95° 47′ 25″ W, respectively). Excavated 1971-72 by John Hotopp, Iowa City, Iowa; subm by D A Baerreis. Samples id by Dwight Bensend, Ames, Iowa.

WIS-632. Kuhl site (13ML126) **730 ± 55** **AD 1220** $\delta^{13}C = -26.1‰$

Sample 321-634 *(Populus deltoides)* found near floor in square near NE corner of earthlodge.

WIS-633. Kuhl site (13ML126) **985 ± 45** **AD 965** $\delta^{13}C = -27.3‰$

Sample 321-825 (*Quercus rubra*), probable central support post from NE area of earthlodge, mold diam 212mm.

WIS-716. Kuhl site (13ML126) **840 ± 60** **AD 1110** $\delta^{13}C = -26.1‰$

Sample 321-C1 *(Ulmus rubra* or *Celtis occidentalis)* from cache in NE corner of earthlodge.

WIS-697. Kuhl site (13ML136) **875 ± 60** **AD 1075** $\delta^{13}C = -25.7‰$

Sample 336-C7-4 *(Ulmus rubra)* from Cache 7 NW of central hearth.

WIS-702. Kuhl site (13ML136) **690 ± 50** **AD 1260** $\delta^{13}C = -25.8‰$

Sample 336-P1-70 *(Quercus alba)* from wall post in NE corner of earthlodge, mold diam 229mm, depth 811mm.

WIS-699. Kuhl site (13ML136) **865 ± 55** **AD 1085** $\delta^{13}C = -25.5‰$

Sample 336-P1-70. Acid pretreatment only.

WIS-698. Kuhl site (13ML136) **775 ± 55** **AD 1175** $\delta^{13}C = -25.6‰$

Sample 336-B2-2 *(Ulmus americana)* from burned roof beam lying on floor of earthlodge, beam diam 76mm.

WIS-729. Kuhl site (13ML138) **1010 ± 55** **AD 940** $\delta^{13}C = -10.9‰$

Charred corn from Cache 6.

WIS-691. Kuhl site (13ML139) **440 ± 45** **AD 1510** $\delta^{13}C = -25.8‰$

Sample 339-P6-8 *(Ulmus rubra* or *Celtis occidentalis)* from post in SW corner of entryway of earthlodge, mold diam 140mm, depth 464mm.

WIS-701. Kuhl site (13ML139) **850 ± 55** **AD 1100** $\delta^{13}C = -24.1‰$

Sample 339-P19-25 *(Ulmus rubra* or *Celtis occidentalis)* from post in W wall of earthlodge, mold diam 152mm, depth 451mm.

WIS-700. Kuhl site (13ML139) **835 ± 55** **AD 1115** $\delta^{13}C = -25.3‰$

Sample 339-P16-21 *(Ulmus rubra* or *Celtis occidentalis)* from post in NW wall area of earthlodge, mold diam 152mm, depth 738mm.

Glenwood series, Institution grounds (13ML132, 13ML135)

Charcoal from 2 earthlodges of Nebraska aspect of Central Plains tradition, on terrace and on W face of loess ridge S of Glenwood state school overlooking Horse Creek E of Glenwood, Iowa (41° 01′ 51″ N, 95° 43′ 52″ W, and 41° 00′ 49″ N, 95° 43′ 49″ W, respectively). Excavated 1971 by John Hotopp; subm by D A Baerreis. Samples id by Barbara Schulte, Ames, Iowa.

WIS-708. Glenwood site (13ML132) **310 ± 60** **AD 1640** $\delta^{13}C = -25.4‰$

Sample 326-35 *(Ulmus rubra* or *Celtis occidentalis)* from wall post in N wall of earthlodge.

WIS-709. Glenwood site (13ML132) **860 ± 55** **AD 1090** $\delta^{13}C = -25.6‰$

Sample 326-34 *(Ulmus rubra or Celtis occidentalis)* from wall post in NE corner of earthlodge, mold diam 15.3cm.

WIS-710. Glenwood site (13ML132) **360 ± 55** **AD 1590** $\delta^{13}C = -25.5‰$

Sample 326-28 *(Ulmus rubra* or *Celtis occidentalis)* from interior post N of hearth. Mold diam 15.2cm, 25.9cm deep.

975 ± 60

WIS-717. Glenwood site (13ML135) **AD 975**

$\delta^{13}C = -28.4‰$

Sample 335-P8-13 *(Quercus alba)* from roof timber in SW corner of earthlodge, timber diam 12.7cm.

910 ± 60

WIS-719. Glenwood site (13ML135) **AD 1040**

$\delta^{13}C = -26.2‰$

Sample 335-P23-25 *(Ulmus rubra* or *Celtis occidentalis)* from post in W wall, post diam 7.6cm, 18cm deep.

860 ± 60

WIS-713. Glenwood site (13ML135) **AD 1090**

Sample 335-P19-22 *(Ulmus rubra* or *Celtis occidentalis)* from post in N wall, post diam 8.9cm, 27.5cm deep.

760 ± 60

WIS-733. Howard Goodhue site (13PK1) **AD 1190**

Charcoal from Howard Goodhue site, Polk Co, Iowa, Red Rock Archaeol Proj (41° 32′ N, 93° 28′ W). Coll 1965 by R D Gant; subm by D A Baerreis. Sample from Feature 3, subterranean storage pit with orifice 45.7cm below surface. Previous dates on charcoal from same coll packet dated as < 550 BP: GaK-879, and AD 1650 ± 200: SI-357.

Clarkson site series (13WA2)

Charcoal from Clarkson site in Warren Co, Iowa (41° 30′ N, 93° 27′ 30″ W). Coll 1966 by D M Gradwohl, Iowa State Univ, Ames; subm by D A Baerreis. Samples from 2 underground storage pits both of which contained diagnostic Oneota ceramics; Feature 9 also contained sandstone abraders and an eyed bone needle. Wood charcoal id by Barbara Schulte, Iowa State Univ.

650 ± 55

WIS-738. Clarkson site (13WA2) **AD 1300**

Sample 3469, white ash, from Feature 2, refuse pit, N1064.8/W106.1, 42.7 to 100.6cm deep.

660 ± 60

WIS-756. Clarkson site (13WA2) **AD 1290**

$\delta^{13}C = -25.8‰$

Sample 3354, red elm or hackberry, from Feature 2.

705 ± 50

WIS-731. Clarkson site (13WA2) **AD 1245**

Sample 4752, white oak, from Feature 9, refuse pit, N1067/W1068.9, 48.8 to 106.7cm deep.

765 ± 55

WIS-732. Clarkson site (13WA2) **AD 1185**

Sample 4753, ash, from Feature 9.

Mohler Farm site (13MA30)

Charcoal from Mohler Farm site, Oneota site, in Red Rock Reservoir, Marion Co, Iowa (41° 27′ N, 93° 11′ W). Coll 1964 by D M Gradwohl, subm by D A Baerreis.

930 ± 50

WIS-734. Mohler Farm site (13MA30) **AD 1020**

Samples 4045-4047, 4073, and 4161 from Feature 5, subterranean storage pit, orifice .46m below surface. Assoc with shell-tempered ceramics decorated with trailed and punctated designs. Charcoal from this feature was dated at AD 960 ± 80: GaK-698, and AD 1500 ± 200: SI-358.

740 ± 45

WIS-763. Mohler Farm site (13MA30) **AD 1210**

$\delta^{13}C = -25.9‰$

Sample 4377 from Feature 23, subterranean storage pit, orifice .43m below surface. Assoc with shell-tempered ceramics. Previous dates on charcoal from this feature were AD 690 ± 90: GaK-699, and AD 1680 ± 180: SI-359.

13,520 ± 135

WIS-712. Burkholder-Mether site (13HR402) **11,570 BC**

Spruce wood from Burkholder-Mether site, (Logan mastodon site) discovered during bridge construction on Willow R, Harrison Co, Iowa (41° 44′ N, 95° 49′ W). Coll April 1973 by Duane Anderson; subm by D A Baerreis. Wood assoc with lumbar vertebra, humerus, and pelvic fragments of mastodon.

C. Kansas

Coffey site (14PO1)

Charcoal from Coffey site, N end of Tuttle Creek Reservoir in Pottawatomie Co, Kansas (39° 44′ N, 96° 34′ W) excavated by A E Johnson, Univ Kansas, Lawrence, in 1970 to 1972. Site is stratified Archaic site with 5 levels of occupation separated by sterile alluvial deposits. Subm by D A Baerreis.

5155 ± 70

WIS-618. Coffey site (14PO1) **3205 BC**

Charcoal from Zone A in NW portion of site. Zone A was an occupational level 5 to 15cm thick and 2.5m below surface. Basally notched Castroville-like projectile points were present; fauna primarily deer and waterfowl.

5170 ± 70

WIS-623. Coffey site (14PO1) **3220 BC**

Charcoal from Zone A, N508 E500.

5240 ± 70

WIS-624. Coffey site (14PO1) **3290 BC**

Charcoal from N4-5 E8-9, Zone B included a Bulverde-like point, a lanceolate side-notched dart point, and bison as predominant fauna.

Zone B is layer 5 to 10cm thick, 2.75m below surface. Date, 3555 BC, UGa-382, has already been reported from this zone (O'Brien, 1973).

WIS-634. Coffey site (14PO1) **5125 ± 70 / 3175 BC**

Charcoal from Zone B, N504 E502 and N508 E502.

WIS-628. Coffey site (14PO1) **5160 ± 70 / 3210 BC**

Charcoal from N508 E501, Zone B.

WIS-629. Coffey site (14PO1) **5285 ± 70 / 3335 BC**

Charcoal from Zone C, E9 N5. Zone is buried occupational layer 3 to 8cm thick, 2.95m below surface. Projectile points from this layer are lanceolate and resemble Nebo Hill points. Assoc fauna consisted of bison, fish, and deer.

WIS-636. Coffey site (14PO1) **5255 ± 70 / 3305 BC**

Charcoal from Zone C, N510 E505.

WIS-715. Coffey site (14PO1) **6285 ± 145 / 4335 BC**

Charcoal (*Fraxinus* sp) from old river terrace in level below zones, Feature 14, N511 E515.

WIS-711. Coffey site (14PO1) **5355 ± 70 / 3405 BC**

Charcoal (*Celtis* sp and *Carya* sp) from river terrace, N507 E514, stratigraphically deeper than WIS-715 above.

D. Missouri

Mellor site (23CP1)

Excavations at Mellor site at mouth of Lamine R, NW Cooper Co, Missouri (39° 00′ N, 92° 52′ W) undertaken June 1972 by Marvin Kay, Univ Colorado-Boulder, subm by D A Baerreis. Site is representative of Havana tradition in central Missouri. Samples, all from Unit A, were dated to establish chronologic controls for interpreting complex sequence of environmental and cultural data obtained from group of central Missouri Hopewell settlements. Dates agree with others on Central Missouri Hopewell sites.

WIS-696. Mellor site (23CP1) **1765 ± 50 / AD 185**

$\delta^{13}C = -26.2‰$

Charcoal, Sample 133, from Trench 9:7C, hearth area containing early Havana tradition pottery and stone tools 33.5cm below surface. Hearth is within larger pit with matrix of ash and burned clay and is earliest stratigraphic component defined in Trench 9.

1680 ± 45

WIS-703. Mellor site (23CP1) **AD 270**

Sample 293, charred seeds including *Juglans* and *Corylus* sp from Trench 9:7D, within large pit 54.9cm below surface.

1720 ± 50

WIS-707. Mellor site (23CP1) **AD 230**

Sample 306, charred seeds of *Juglans* sp from 9:7C, ashy unconsolidated soil matrix surrounding hearth area at ca 38.1cm below surface.

E. South Dakota

King site (39LM55)

Wood charcoal from site id as Modified Initial Middle Missouri (Lehmer, 1971) in Lyman Co, South Dakota (43° 51.5′ N, 99° 19.5′ W). Coll Aug 1974 by A M Johnson, Univ Missouri-Columbia; subm by D A Baerreis.

830 ± 60

WIS-744. King site (39LM55) **AD 1120**

$\delta^{13}C = -27.1‰$

Sample near rear wall of long rectangular house exposed by wave action.

855 ± 60

WIS-748. King site (39LM55) **AD 1095**

$\delta^{13}C = -25.6‰$

Sample near rear wall of same house as above.

Durkin site (39ST238)

Wood charcoal from site id as Modified Initial Middle Missouri (Lehmer, 1971) in Stanley Co, South Dakota (44° 14.5′ N, 99° 54.3′ W). Coll 1966 by R E Jensen; subm by D A Baerreis.

640 ± 55

WIS-743. Durkin site (39ST238) **AD 1310**

$\delta^{13}C = -26.6‰$

Sample 276 from floor of long rectangular house in Excavation Unit 6.

655 ± 60

WIS-746. Durkin site (39ST238) **AD 1295**

$\delta^{13}C = -27.9‰$

Sample 120 from NE corner of floor of long rectangular house in Excavation Unit 5.

Fay Tolton site (39ST11)

Charcoal from Fay Tolton site, Stanley Co, South Dakota (44° 44′ 50″ N, 100° 41′ 02″ W). Coll July 1957 by D D Hartle, subm by W R Wood, Univ Missouri, Columbia. Site is apparently most N Initial Middle Missouri Village site along Missouri R (Lehmer, 1971).

920 ± 60

WIS-728. Fay Tolton site (39ST11) **AD 1030**

Sample 176, *Salix* twigs from coiled basket, Feature 10, near rear of House 2.

885 ± 50

WIS-722. Fay Tolton site (39ST11) **AD 1065**

Sample 180, apparently *Salix*, from immediate vicinity of basket, Feature 10.

Ketchen site (39ST223)

Charcoal from Modified Initial Middle Missouri (Lehmer, 1971) in Stanley Co, South Dakota (44° 17.5′ N, 100° 04′ W). Coll by D T Jones; subm by D A Baerreis.

830 ± 60

WIS-759. Ketchen site (39ST223) **AD 1120**

Sample 126 from outer portion of Post 14 of long rectangular house, Feature 3, Excavation Unit 2.

725 ± 50

WIS-762. Ketchen site (39ST223) **AD 1225**

Outer rings from juniper wall post of long rectangular house, Sample 157B, Feature 17, Excavation Unit 16.

F. Wisconsin

9405 ± 90

WIS-720. Hixton Quarry site (47JN21) **7455 BC**

Wood charcoal, fragments of *Quercus alba* and *Pinus* sp, from Hixton Quarry site rockshelter in Jackson Co, Wisconsin (44° 25′ N, 90° 57′ W) coll by D F Overstreet, Univ Wisconsin-Waukesha; subm by D A Baerreis. Samples from Level 11, 1.1m and Level 13, 1.3 m below surface, were assoc with large amounts of crude debitage suggestive of quarrying activity. Sample had been sealed off above Level 11 by large rock slab, probably from roof fall.

Richter site

Wood charcoal from Richter site, Washington I., Door Co, Wisconsin (45° 21′ 10″ N, 86° 56′ 00″ W). Coll Aug 1973 by G R Peters, Univ Wisconsin-Milwaukee; subm by D A Baerreis. Site is single component site of a North Bay culture, defined by Mason (1967, 1969) as N Middle Woodland complex. Date, AD 160 (I-888) was reported from Porte des Morts site, multi-component eroding dune site on Door Co, by Mason (1967, 1969).

765 ± 50

WIS-721. Richter site (47DA73) **AD 1185**

Sample from Feature 63, garbage pit 43cm below surface, beneath sheet midden which contained lithic, ceramic, faunal and floral refuse.

2470 ± 65

WIS-725. Richter site (47DA73) **520 BC**

Sample from floor of House II, basin shaped pit house, 55cm from surface, 30cm below plow zone.

Rosenbaum rockshelter (47DA411)

Charcoal from Rosenbaum rockshelter, Late Woodland site in Dane Co, Wisconsin (43° 02′ 32″ N, 89° 47′ 30″ W). Coll 1974 and subm by J B Stoltman, Univ Wisconsin-Madison. Samples were small, treated with acid only. *Comment* (JBS): dates are wholly acceptable, though slightly younger than originally anticipated. They were assumed contemporary with major period of occupancy at Aztalan, ca AD 1100-1250. Taken at face value, dates suggest that Late Woodland elements at Aztalan represent an indigenous tradition in S Wisconsin that, in "pure" form, slightly predates intrusive Mississippian component.

940 ± 55

WIS-749. Rosenbaum rockshelter (47DA411) **AD 1010**

Sample from Feature 2, Sq D3, Levels 2, 3, 4, D4, Level 4, E3, Level 3, and E4, Level 3. Assoc with ceramic vessel of type Aztalan Collared plus 4 small triangular projectile points.

950 ± 50

WIS-760. Rosenbaum rockshelter (47DA411) **AD 1000**

Sample from Feature 2, Square D4, Levels 3 and 4, E3, Level 2.

7470 ± 90

WIS-222. Sanders site I (47WP26) **5520 BC**

Charcoal samples at Sanders site I, Effigy Mound site in Waupaca Co, Wisconsin (44° 16′ N, 88° 51′ W). Coll 1966 by W M Hurley, Univ Toronto; subm by D A Baerreis. Date inadvertently omitted from earlier pub on site (R, 1968, v 10, p 162-163). Date is clearly too early for house with which it is assoc (Hurley, 1975, p 326).

G. Venezuela

Punto Fijo site

Excavations at Punto Fijo, State of Barinas, Venezuela (7° 58′ N, 69° 35′ W) dir by Alberta Zucchi, IVIC, Caracas, Venezuela, Jan 1973; subm by W M Denevan, Univ Wisconsin-Madison. Site is small pre-Columbian village on N bank of Apure R in general region of relic, raised agricultural fields. Originally site seems to have been quite large, but, because of erosive action of river, only small portion of it remains. General area is covered by gallery forest, site is occupied by farm. Dates are related to penetration of Arauquinoid people into W Llanos. Assoc ceramics belong to various phases of Arauquinoid series of central Orinoco region (Denevan and Zucchi, 1975).

WIS-705. Punto Fijo site **2530 ± 50**
580 BC

Charcoal from 25 to 50cm level. Date is inconsistent with others from site.

WIS-764. Punto Fijo site **1065 ± 55**
AD 885
$\delta^{13}C = -27.5‰$

Charcoal from 25 to 50cm level.

WIS-706. Punto Fijo site **1095 ± 55**
AD 855

Charcoal from 50 to 75cm level.

II. GEOLOGIC SAMPLES

A. New York

WIS-727. Belmont Bog **12,545 ± 115**
10,595 BC

Organic clay from Belmont bog, 6.44km E of Belmont, New York (42° 15′ N, 77° 58′ W) coll 1974 by R W Spear; subm by N C Miller and R W Spear, Univ North Carolina. Sample from 4.70 to 4.75m below water surface at bog on Olean drift. Pollen profile including analysis of 2.4m of inorganic sediment below depth of material dated is in preparation.

B. Utah

WIS-742. Cedar Mesa site **7385 ± 80**
5435 BC

Charcoal recovered from soil sample from layer 4 to 4.5m deep in 5m+ column removed from arroyo wall in Kane Wash, Cedar Mesa, W San Juan Co, Utah (37° 31′ N, 109° 56′ W). Molluscan, palynologic, and geologic study of core should aid in analysis of post-Pleistocene climatic history of Cedar Mesa. Coll 1973 and subm by P H Salkin, Univ Wisconsin-Madison.

C. Wisconsin

Kickapoo River System

Previous dates from paleohydrologic study of upper Kickapoo River system were reported (R, 1975, v 17, p 132-133). Sites include Brush Creek, Spring Valley Creek, Kickapoo R, Morris Creek, Cold Spring Valley Creek, Weister Creek, and Warner Creek. Study is concerned with dating material buried at contact between gravel unit and overlying finer sediments, common stratigraphic occurrence in Driftless Area of SW Wisconsin (Knox and Johnson, 1974). Samples seem to date Holocene climate fluctuation and alluvial episodes of floodplains and to be correlated with environmental changes related to climatic shifts. All samples id by R Miller, Forest Prod Lab, Madison, Wisconsin; coll 1974 by W C Johnson; subm by W C Johnson and J C Knox, Univ Wisconsin-Madison.

Kickapoo River site

Wood samples excavated from Kickapoo R channel in Monroe Co, Wisconsin (43° 49′ N, 90° 31′ W and 43° 50′ N, 90° 29′ W) and Vernon Co, Wisconsin (43° 40′ N, 90° 36′ W).

WIS-745. Kickapoo River site — **3600 ± 60** / **1650 BC** / $\delta^{13}C = -27.8‰$

Pinus strobus 175cm deep at contact between gravel unit and overlying finer sediments in Monroe Co channel.

WIS-752. Kickapoo River site — **5455 ± 70** / **3505 BC** / $\delta^{13}C = -27.6‰$

Acer saccharinum or *A negundo*, 265cm deep, from base of left bank in stream channel. Log was at base of gleyed sandy loam unit, overlying gravel. Dates meander migration at head of sixth-order channel, network position where 2 fifth-order channels converge.

WIS-754. Kickapoo River site — **2140 ± 60** / **190 BC** / $\delta^{13}C = -28.2‰$

Ulmus thomasii, ca 275cm deep, in middle of sandy loam unit, left bank of stream channel, Vernon Co.

WIS-761. Kickapoo River site — **1955 ± 60** / **5 BC** / $\delta^{13}C = -25.5‰$

Tsuga canadensis, 310cm deep, near base of gleyed sandy loam unit, 40cm above gravel, same site as above.

Brush Creek

Three wood samples were excavated at various localities on Brush Creek, Vernon Co (43° 43′ N, 90° 36′ W) and Monroe Co (43° 44′ N, 90° 40′ W for WIS-757 and 90° 41′ W for WIS-767).

WIS-758. Brush Creek site — **5735 ± 70** / **3785 BC** / $\delta^{13}C = -27.8‰$

Acer sp from Vernon Co, from log buried at gravel/fine sediment contact.

WIS-757. Brush Creek site — **2940 ± 60** / **990 BC** / $\delta^{13}C = -28.7‰$

Alnus sp, log buried at gravel/fine sediment contact.

WIS-767. Brush Creek site — **2445 ± 60** / **495 BC** / $\delta^{13}C = -28.6‰$

Wood from log in sandy loam unit 145cm from top of right-bank stream exposure. Two dates from this exposure were reported earlier,

WIS-678: 2715 BP, 185 to 200cm deep, and WIS-674: 5055 BP, 225 to 260cm deep (R, 1975, v 17, p 133).

WIS-768. Spring Valley Creek site **1895 ± 50**
AD 55
$\delta^{13}C = -26.4‰$

Quercus sp from base of right bank overlying gravel zone of Spring Valley Creek, Monroe Co (43° 48′ N, 90° 36′ W).

Morris Creek site

Samples from Morris Creek, Monroe Co, Wisconsin (43° 46′ N, 90° 35′ W).

WIS-755. Morris Creek site **2305 ± 60**
355 BC
$\delta^{13}C = -27.5‰$

Bark (*Prunus* sp), 250cm deep, from sandy loam unit overlying gravel.

WIS-765. Morris Creek site **2595 ± 60**
645 BC
$\delta^{13}C = -28.8‰$

Ulmus americana, 227 to 250cm deep, from sandy loam containing organic-rich layers, left bank of stream channel.

WIS-73. Morris Creek site **2525 ± 55**
575 BC

Ulmus americana, 300cm deep, deposited upon gravel unit, left bank of stream channel.

WIS-769. Weister Creek **1190 ± 55**
AD 760
$\delta^{13}C = -27.4‰$

Ulmus rubra in gleyed sandy zone 100cm deep, 5 to 10cm above gravel horizon in base of right bank of Weister Creek, Vernon Co, Wisconsin (43° 39′ N, 90° 42′ W). Coll June 1974 and subm by W C Johnson.

WIS-747. Cold Spring Valley Creek site **1920 ± 60**
AD 30

Sample from log (*Quercus* sp) overlying gravel surface at base of exposure in right bank of Cold Spring Valley Creek, Monroe Co, Wisconsin (43° 52′ N, 90° 28′ W).

Warner Creek site

Samples excavated from right bank of Warner Creek, Vernon Co, Wisconsin (43° 39′ N, 90° 35′ W).

905 ± 60
WIS-751. Warner Creek site **AD 1045**
$\delta^{13}C = -26.3‰$

Bark (*Pinus strobus*), 165cm deep, from middle of peaty unit overlying gravel.

850 ± 55
WIS-766. Warner Creek site **AD 1100**
$\delta^{13}C = -30.2‰$

Log (*Alnus* sp), 6.5cm diam, from base of bank; log overlay gravel 190cm deep.

Hub City Bog site

3m core from meander cut-off which dates from late glacial/early postglacial period of increased runoff (Dury, 1964). Site N of Hub City, Richland Co, Wisconsin (43° 25′ N, 90° 21′ W). Recovered core has peat 2.5m over marl .35m which grades downward into silt and fine sand. Core is 1 of 3 in NW/SE transect through Driftless Area of Wisconsin and will be used in reconstruction of Driftless Area Holocene environments. Coll 1973 and subm by A M Davis, Univ Wisconsin-Madison.

1675 ± 55
WIS-723. Hub City Bog site **AD 275**

Sample from 63 to 68cm layer. High pine and oak percentages, large arboreal pollen (AP), small non-arboreal pollen (NAP) components.

7605 ± 80
WIS-741. Hub City Bog site **5655 BC**

Sample from 154 to 158cm layer. Pollen spectrum has large AP, small NAP components; pine dominant. Acid treatment only.

8285 ± 80
WIS-750. Hub City Bog site **6335 BC**

Sample from 198 to 203cm layer. Large AP, small NAP components, significant elm. Acid treatment only.

8565 ± 85
WIS-730. Hub City Bog site **6615 BC**

Sample from 245 to 250cm layer.

Tamarack Creek site

Core, 3.55m, from peat bog on Tamarack Creek upstream from Late Wisconsin (probably Cary) age terrace backfilled from Mississippi R in Trempealeau Co, Wisconsin (44° 09′ N, 91° 27′ W). Peat, 2.87m, overlay marl .65m which graded downward into silt and fine sand. Pollen spectra and other stratigraphic data will be used in reconstruction of Holocene environments in Driftless Area. Coll 1973 and subm by A M Davis.

WIS-735. Tamarack Creek site **1190 ± 60 AD 760**

Partially humified peat from 78 to 82cm layer of core. High pine percentage in pollen spectrum, AP component high.

WIS-736. Tamarack Creek site **2710 ± 60 760 BC**

Partially humified peat from 158 to 162cm layer. Acid treatment only. Pollen spectrum has high pine percentage and large AP element.

WIS-739. Tamarack Creek site **3355 ± 60 1405 BC**

Partially humified peat from 190 to 194cm layer. Acid treatment only. Pollen spectrum has oak percentage; AP component dominant.

WIS-737. Tamarack Creek site **4410 ± 65 2460 BC**

Partially humified peat from 282 to 286cm layer. Acid treatment only. This sample contains deepest material possible to date. Pollen spectrum has high pine percentage and prominent NAP element.

WIS-740. Hansen Marsh **10,735 ± 105 8785 BC**

$\delta^{13}C = -35.1‰$

Sedge peat, 88 to 95cm layer of 8m core from bog close to Late Woodfordian ice margin in Sauk Co, Wisconsin (43° 26′ N, 89° 40′ W). Peat, 1.53m, overlies brown clay and silt which grades into blue clay and clay/silt varves over outwash (Bachuber, 1966). Coll May 1974 by A M Davis, W C Johnson, and L J Maher; subm by A M Davis. Sample corresponds with *Picea* decline in pollen spectra.

WIS-704. Jefferson site **9065 ± 90 7115 BC**

Rib of mammoth (*Elephas primigenius*) removed from clay sediment of old glacial lake during drag-line operation, June 1972, Jefferson Co, Wisconsin (43° 01′ 20″ N, 88° 45′ 45″ W). Coll and subm by J E Dallman, Univ Wisconsin-Madison.

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