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SYDNEY UNIVERSITY NATURAL RADIOCARBON MEASUREMENTS III

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This list describes samples dated in this laboratory between November 1972 and December 1974.

Experimental procedures and age calculations are performed by scintillation counting of benzene as previously described (Gillespie and Temple, 1972; 1973) using the group mean values for $\delta^{13}C$ suggested by Polach (1969) to correct measured $\delta^{14}C$ values for isotopic fractionation. Sample preparation is as described by Gillespie, Polach and Temple (1972). Ages are based on the Libby value of 5570 years for the half-life of ^{14}C.

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Interlaboratory cross checks and duplicates

Lab no.	SUA date	Other no.	Other date	Ref
SUA-4/3	590 ± 70	R2553/2	675 ± 40	Rafter (pers commun)
SUA-5/3	1090 ± 60	R2671/1	1045 ± 40	Rafter (pers commun)
SUA-14/6	21,400 ± 500	ANU-918	23,290 ± 560	Polach (pers commun)

SAMPLE DESCRIPTIONS

I. ARCHAEOLOGIC SAMPLES

A. Australia

Hooka Point series

Samples coll by J P White, Dept Anthropol, Univ Sydney, and R J Lampert, Dept Prehistory, Research School of Pacific Studies, Australian Natl Univ, Canberra, from lakeside aboriginal midden, Hooka Point, Lake Illawarra NSW (34° 30′ S, 150° 51′ E).

SUA-66/1. AM 19/1 — **2920 ± 90 (970 BC)**

Shell (largely *Anadara trapezia*) from 10cm depth.

SUA-109/1. AM 28/1 — **1440 ± 95 (AD 510)**

Carbonized wood, depth 30cm.

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3480 ± 90
SUA-66/2. AM 19/2 **1530 BC**
Shell as above, depth 43cm.

3240 ± 85
SUA-66/3. AM 19/3 **1290 BC**
Shell as above, depth 65 to 75cm.

3675 ± 85
SUA-66/4. AM 19/4 **1725 BC**
Shell as above, depth 80cm.

3495 ± 85
SUA-180. AM 18/3 **1545 BC**
Shell as above, depth 95 to 100cm.

2735 ± 100
SUA-109/2. AM 28/4 **785 BC**
Carbonized wood, depth 105 to 110cm. *Comment* (JPW): site completely reworked by natural agencies (Emmerson, 1973; Hughes & Sullivan, 1974). Thus determinations cannot be related to phases of human occupation. Report filed with NSW Dept Natl Parks & Wildlife Service. Sample code refers to sq m number and excavation unit.

Richmond River series

Samples coll 1972 by G N Bailey, Dept Archaeol, Cambridge Univ, from area of Richmond R, NSW.

Chiciba Creek (28° 51′ S, 153° 34′ 36″ E)

Site was a partially destroyed shell mound on S bank of creek containing mostly oyster shells (*Crassostrea commercialis*), also stone artifacts and bone remains of fish and small marsupials. Samples were obtained from excavation of a trench 1 m^2 × 2m deep.

880 ± 85
SUA-122. C10 L1S1 **AD 1070**
Fragments of wood charcoal from ca 160cm above base of mound.

1410 ± 100
SUA-123. C11 L4S1 **AD 540**
Fragments of wood charcoal from ca 85cm above base of mound.

1700 ± 90
SUA-124. C12 L6S5 **AD 250**
Dispersed fragments of wood charcoal from ca 6cm above base of mound. Site was in use by aborigines ca AD 1850 (Ainsworth, 1922) shortly before replacement of traditional subsistence patterns by European exploitation. Date is approximate *terminus ante quem* for cessation of shell accumulation.

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North Creek (28° 51′ 12″ S, 153° 34′ 36″ E)

Mound of oyster shells on E bank of creek just N of road bridge. Site now almost completely destroyed. Bone remains and stone artifacts reported in 19th century with original dimensions of mound (Statham, 1892).

SUA-125. C-21 **1350 ± 130 AD 600**

Dispersed fragments of charcoal coll through depth ca 60cm of deposit, representing base of mound.

Embley River series

Samples coll by G N Bailey, Dept Archaeol, Cambridge Univ, from Kwamter, Weipa, Queensland (12° 44′ S, 141° 55′ 42″ E). A large shell mound behind mangroves on S bank of Embley R near its junction with Hey R, containing mostly cockle shells (*Anadara granosa*), also stone and bone artifacts and bone remains of fish and small marsupials. Samples were obtained from excavation of trench 1 $m^2 \times 3m$ deep.

SUA-147. Weipa Spit-2 **710 ± 100 AD 1240**

Wood charcoal from 265cm above base of mound.

SUA-148. Weipa Spit-13 **855 ± 80 AD 1095**

Wood charcoal from 150cm above base of mound.

SUA-149. Weipa Spit-20 **1180 ± 80 AD 770**

Wood charcoal from 5cm above base of mound.

General Comment (GNB): earlier excavation of same site (Wright, 1971) yielded ^{14}C dates as follows:

I-1737. Provenance near top of mound, and 235 ± 110 BP

I-1738. Provenance at base of mound 810 ± 65 BP

All samples in above 2 series were coll as part of study into prehistoric economies assoc with their formation. The Richmond R dates were pub with preliminary interpretation by Bailey (1975). Both series date accumulation rate of midden deposit and earliest human occupation in each area.

Blue Mountains series

Samples coll Aug-Oct 1972 by E Stockton, St Patricks Coll, Manly, NSW, 2095 Australia, as part of study of aboriginal occupation of Blue Mts area of NSW.

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Samples from a rock shelter on King's Tableland, Wentworth Falls, NSW (33° 44′ S, 150° 22′ E).

SUA-155. Blue Mts 5 — **965 ± 75** / **AD 985**

Charcoal from Level 5, 23 to 25cm below surface.

SUA-156. Blue Mts 13 — **<200** / **Modern**

Charcoal from Level 13, 61 to 66cm below surface.

SUA-229. Blue Mts 15 — **1110 ± 80** / **AD 840**

Charcoal from Level 15, 71 to 76cm below surface.

SUA-157. Blue Mts 16 — **1060 ± 115** / **AD 890**

Charcoal from Level 16, 76 to 84cm below surface.

SUA-194. Blue Mts 19 — **14,500 ± 580** / **12,550 BC**

Charcoal from Level 19, 100 to 110cm below surface.

SUA-158. Blue Mts 21 — **22,300 ± 1900** / **20,350 BC**

Charcoal from Level 21, 120 to 130cm below surface. Sparse artifactual material consists of predominantly quartz primary flakes with naturally sharp edges and points.

General Comment (ES): Levels 1-16 assoc with Bondaian artifacts, Levels 19-21 with Capertian, possibly pre-Capertian, artifact material. Sharp stratigraphic differences between the 2 units, corroborated by the dates, suggests truncation of deposit somewhere between 14,000 and 1000 BP. Erosion by flowing water is not improbable (Stockton & Holland, 1974).

Samples from a large rock shelter on Springwood Creek (33° 40′ S, 150° 35′ E).

See also SUA-17, 18, R, 1972, v 14, p 416.

SUA-204. Wa II 20cm — **595 ± 85** / **AD 1355**

Charcoal from depth 20cm, Phase II, Level 5.

SUA-205. Wa 90-95 — **7420 ± 140** / **5470 BC**

Charcoal from depth 90 to 100cm, Phase VI.

SUA-206. Wa 140 — **7440 ± 140** / **5490 BC**

Charcoal from depth 112 to 120cm, Phase VI.

SUA-285. W130-140 — **8565 ± 430** / **6615 BC**

Charcoal from depth 130 to 140cm, Phase VI.

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Other dates in this series, SUA-15-18, have been pub (Gillespie, Polach, & Temple, 1972).

General Comments: (ES) samples from depth 36 to 44cm and above were assoc with Bondaian artifacts, 68 to 76cm and below with Capertian.

Like other Blue Mts sites, this one shows a marked break in aboriginal occupation between Bondaian and Capertian periods, suggesting deteriorating climate in intervening period.

East Alligator River series

Samples coll 1972 and 1973 by H Allen and J Kamminga, Univ Auckland, Univ Sydney, respectively, during archaeol survey of Alligator R Environmental Fact-Finding Study. Rock shelters test excavated were located along the escarpment of rock outliers near E Alligator R in W Arnhem Land.

SUA-163. Ngarradj Warde Djobkeng B-1/1 **545 ± 90** **AD 1405**

Charcoal underlying sterile sand at topmost layer at Ngarradj Warde Djobkeng (12° 30′ S, 132° 57′ E) indicates that site was not intensively occupied during recent prehistoric times.

SUA-164. Ngarradj Warde Djobkeng B-1/5 **3450 ± 125** **1500 BC**

Charcoal from 75cm below surface dates base of shell midden at site. Upper midden layers assoc with fragments of edge-ground axes, rectangular scraper/adzes, stone points, shell artifacts, and bone points.

SUA-225. Ngarradj Warde Djobkeng B-1/7, 8 **3990 ± 195** **2040 BC**

Charcoal from sandy horizon beneath midden zone at depth interval 115 to 125cm. Preserved bone in horizon suggests a different exploitative pattern than that practiced later at the site. A fragment of cremated human cranium was directly assoc with dated charcoal.

SUA-165. Ngarradj Warde Djobkeng B-1/10 **8690 ± 125** **6740 BC**

Charcoal from middle of lowest horizon excavated at above site 175cm depth. This sandy, organically sterile layer contained a ground-edge axe, utilized and retouched flakes, and pieces of ocher, for which this determination gives a median age.

SUA-263. Malakunanja II DJAW-3/4 **450 ± 80** **AD 1500**

Charcoal from a burial pit excavated into top of midden at this site, located along edge of Djawumba massif (12° 29′ S, 132° 53′ E). Pit contained cremated remains of a single human.

SUA-264. Malakunanja II DJAW-3/7, 8 **6355 ± 250** **4405 BC**

Charcoal from base of midden deposit at depth 65 to 68cm in above site. Midden is rich in bone and estuarine shell.

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18,040 ± 300

SUA-265. Malakunanja II DJAW-3/19 **16,090 BC**

Charcoal from depth interval 188 to 215cm provides earliest evidence of human occupation at above site and is assoc with heavy mortars, the earliest known occurrence of these artifacts in Australia.

Nourlangie Rock series

Samples coll Nov 1972 by H Allen, from rock shelters with occupation deposit, at Nourlangie Rock, W Arnhem Land.

755 ± 125

SUA-161. Nangalu-uru NOU-6/3 **AD 1195**

Charcoal from Nangalu-uru (12° 52′ S, 132° 53′ E), from depth 20cm assoc with utilized flakes and scrapers typical of recent prehistoric phase.

<200

SUA-226. Burial cave NOU-1/2 **Modern**

Charcoal from burial cave (12° 54′ S, 132° 48′ E), from midden deposit assoc with scrapers, utilized flakes, and bifacial and unifacial points.

8625 ± 550

SUA-162. Burial cave NOU-1/7 **6675 BC**

Charcoal from depth 80cm assoc with earliest stone tools found in test excavation at this site.

Deaf Adder Gorge series

Samples coll June 1973 by J Kamminga, Dept Anthropol, Univ Sydney, from rock shelters in Deaf Adder Gorge, W Arnhem Land.

2130 ± 55

SUA-243. Leichhardt site DA-1/9 **180 BC**

Charcoal from Spit 9 at depth interval of 40 to 45cm in test trench at Leichhardt site, a well known aboriginal art site (13° 02′ S, 132° 59′ E). Spit is midway within occupational deposit at site and its date suggests that deposit is undisturbed.

5045 ± 125

SUA-244. Leichhardt site DA-1/14-16 **3095 BC**

Charcoal from spits at 70 to 90cm depth. Earliest evidence of occupation at site. Date of stone technology recovered here corresponds with other dated 'Upper Phase' industries in W Arnhem Land.

3070 ± 85

SUA-235. Lindner site DA-4/9 **1120 BC**

Charcoal from spit at depth interval 40 to 45cm in test excavation at this site (13° 05′ S, 132° 55′ 30″ E). Dates earliest bifacial and unifacial stone points in excavation.

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13,195 ± 175

SUA-236. Lindner site DA-4/24, 25 **11,145 BC**

Charcoal from 2 spits at depth 125 to 130cm. Dates oldest small rectangular scraper/adzes in excavation, surprisingly early for artifact type considered more typical of later period.

19,975 ± 365

SUA-237. Lindner site DA-4/32-35 **18,025 BC**

Charcoal from basal levels of occupational sediment assoc with quartz scalar cores and a quartzite horsehoof core (Kamminga & Allen, 1973).

Swansea Channel series

These 2 samples coll by L K Dyall, Univ Newcastle, from an aboriginal midden (33° 6′ S, 151° 40′ E) 13m above shoreline of channel between Lake Macquarie and the Pacific Ocean. Midden is adjacent to both estuarine and headland ecology and contains extensive faunal remains of an economy based on fishing and collecting shellfish, but appreciably augmented by hunting. Stone and bone implements were manufactured on site, also used as a burial site.

1965 ± 85

SUA-238. Swanch-2 **15 BC**

Charcoal from compacted shell surface. Date is consistent with reports of European burning of these middens to obtain lime in 19th century. More recent material was dug away.

7870 ± 115

SUA-150. Swanch-1 **5920 BC**

Charcoal from lowest occupation, 44 to 49cm depth, some 10cm below intensive occupation layer. This earliest occupation, evidenced by a thin scatter of stone flakes and burned bone in gravelly sand is very early for a coastal midden.

Devil's Lair series

Samples coll by C E Dortch, D Merrilees *et al* as part of continuing studies of aboriginal occupation of a small limestone cave in extreme SW Western Australia (34° 09′ S, 115° 04′ E). Previous dates reported by Dortch and Merrilees (1973).

325 ± 85

SUA-342. **AD 1625**

Charcoal from Trench 7b uppermost of major stratigraphic units. Date consistent with field observation that this unit very young. No assoc artifacts or faunal remains.

6490 ± 145

SUA-364. **4540 BC**

Charcoal from Trench 7c from sandy pocket between 2 crystalline flowstones near top of sediment. Artifacts and animal remains are also present.

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Northcliffe samples

SUA-379. KS-2 **6780 ± 120** **4830 BC**

Date is based on charcoal from a 10cm artificial layer in lower part of leached or pallid zone of podsolized sands partly overlying a formation of silcrete on a farm W of Northcliffe, WA (34° 35′ S, 116° 03′ E). Site was a silcrete quarry and factory where geometric microliths were manufactured in quantity. SUA-379, from depth 85 to 95cm below datum, and ANU-1131, 3080 ± 75 yr BP, from depth 50cm below datum, bracket a stone industrial sequence containing geometric microliths, blades, bladelets, and quantities of flakes, chips, and fragments almost all of which are made of local silcrete. The lowermost geometric microlith occurs 1 to 3cm above uppermost charcoal sampled for SUA-379. Pollen samples from same position as ANU-1131 and from below SUA-379 contain pollen grains of *Eucalyptus diversicolor, E calophylla,* and *E marginata,* species which are presently dominant in the area.

II. GEOLOGIC SAMPLES

A. Australia

Southeastern Tasmania

Samples coll by E A Colhoun, Dept Geog, Univ Tasmania.

Pipeclay Lagoon

(42° 55′ S, 147° 34′ E)

SUA-151. No. 1 **25,380 ± 640** **24,430 BC**

Dark brown organic rich marine clay from 31 to 36cm above present HWST.

SUA-152. No. 2 **20,250 ± 360** **18,300 BC**

As above, 39 to 44cm above present HWST.

SUA-153. No. 3 **19,810 ± 360** **17,860 BC**

As above, 52 to 56cm above present HWST.

SUA-153/2. **21,900 ± 440** **19,950 BC**

General Comment (EAC): 1st 3 samples were from beds of highly humified to moderately humified organic sandy clay in eroded cliff sec on SE side of Lagoon. Clay is underlain by marine sandy clays of presumed last Interglacial age and overlain by strongly podsolized aeolian sands. 1st 3 assays suggest that organic sediments were deposited at base of a deflation hollow formed ca 25,000 to 20,000 yr BP during last Glacial Stage.

Macquarie Island

Samples coll by E A Colhoun and A Goede, Nov, 1972 on Macquarie I (54° 38′ S, 158° 55′ E).

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SUA-178. Macquarie Island-1 **2070 ± 80**
120 BC

Peat with numerous plant debris from Green Gorge, Macquarie I.

SUA-179. Macquarie Island-3 **2165 ± 80**
215 BC

Peat from Bauer Bay, Macquarie I. in stream valley 400m N of ANARE hut.

Comment (EAC): these 2 samples are from base of peat overlying highest marine sediments found at Green Gorge and Bauer Bay. Results suggest that tectonic elev exposed extensive marine terrace of Macquarie I mainly during last 2000 yr. Rate of uplift > 1.5m/1000 yr and < 4.5m/1000 yr (Colhoun and Goede, 1974).

Point Waylen series

Samples coll by G W Kendrick, West Australian Mus from Point Waylen, WA (31° 1′ 3″ S, 115° 48′ 35″ E).

SUA-339. **4500 ± 100**
2550 BC

Shell (*Circe sulcata* sp) 20 to 30cm below surface in pale brown quartz sand with abundant mollusk shells.

SUA-340. **5440 ± 110**
3490 BC

As above, 60 to 70cm below surface.

SUA-341. **5940 ± 110**
3990 BC

Shell (*Sanguinolaria biradiata*) 100 to 120cm below surface in dark gray mud with abundant mollusk shells.

General Comment (GWK): dates confirm Middle Holocene age of emergent sediment marginal to Swan R. Sequence shows abrupt transition from shallow basin to marginal sand-sill facies in a sheltered marine embayment of approx normal salinity, in contrast to modern hydrologic condition of estuary. Youngest dated sample came from 10 to 20cm above mean sea level and top of shell bed lies 5cm above.

Northcliffe sample

SUA-343. **8335 ± 130**
6385 BC

Wood from tree stump apparently *in situ* on ocean beach near mean sea level on S coast of Western Australia W of Northcliffe (34° 38′ S, 115° 52′ E). Coll by N Marchant, D Merrilees *et al*, W A Mus, and still under study by N M and D M (Dortch and Merrilees, 1973).

King River series

Samples coll by B G Thom, Dept Biogeog & Geomorphol, Australian Natl Univ below a high-tidal flat on the King R near Wyndham, Western Australia (15° 25′ S, 128° 05′ E).

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6720 ± 110
4770 BC

SUA-30B. T1

Organic mud assoc with SUA-30A (Gillespie and Temple, 1973). *Comment* (BGT): samples date buried organic surface 3 to 4m below present surface. Age was cross-checked by ANU-1091, 6200 ± 260, on wooden fragments from another site. Sea level at this time in this high-tide range was probably 2 to 3m below present (Thom and Chappell, 1975).

Gold Coast series

Samples coll by B G Thom from below sea level off Gold Coast, Queensland (28° 05′ S, 153° 15′ E).

980 ± 80
AD 970

SUA-105. Palm Beach Reef 3

Shell fragments.

10,560 ± 160
8610 BC

SUA-106. ETA 20 4/6

Peat. *Comment* (BGT): SUA-105 reflects relatively modern production of carbonate at least to water depths of 12 to 13m. SUA-106 represents fresh water (?) peat under a veneer of sand. Sea level must have been below −26m when peat was deposited (Thom and Chappell, 1975).

Port Stephens-Myall Lakes series

Samples coll by B G Thom, from below the Outer Barrier in the Newcastle Bight embayment, New South Wales.

9000 ± 230
7050 BC

SUA-104. T3-T4

Mixed shell fragments coll by L Bennett from Stockton, New South Wales (32° 52′ S, 151° 49′ E).

5820 ± 115
3870 BC

SUA-248. 53-10

Mixed shell and sand fragments from Anna Bay near Newcastle, New South Wales (32° 47′ S, 152° 04′ E).

>29,000

SUA-249. 53-27

Mixed shell and sand fragments from above location.

16,280 ± 360
14,330 BC

SUA-253. 52-13

Mixed shell and sand fragments from above location.

2300 ± 100
350 BC

SUA-251. D1

Charcoal from Eurunderee near Seal Rocks, New South Wales (32° 29′ S, 152° 23′ E).

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SUA-252. 57-7 **7265 ± 250 / 5315 BC**
Organic fibers from above location.

SUA-246. 50-13 **>36,000**
Organic clay from Salamander Bay near Newcastle, New South Wales (32° 45′ S, 152° 06′ E).

SUA-247. 52-4 **>34,000**
Peat from Anna Bay, near Newcastle, New South Wales (32° 45′ S, 152° 07′ E).

SUA-250. 55-11 **>32,000**
Organic sand from Eurunderee, near Seal Rocks, New South Wales (32° 29′ S, 152° 23′ E).

SUA-254. B1 **>39,000**
Shells (*Anadara* sp) from Largs, near Maitland, New South Wales (32° 45′ S, 151° 33′ E).

General Comment (BGT): SUA-104 dates transgressive facies of Outer Barrier; shells were probably living on sea line close to time of deposition. But SUA-253, from the same facies, reflects either landward transport of biogenic carbonate with the marine transgression and/or incorporation of eroded Inner Barrier shells during the transgression. SUA-249 is date on Inner Barrier near shore; shelly sands probably assoc with last Interglacial period, ca 120,000 BP. SUA-251, -252 dates are maximum of transgressive dune sheets with buried soils containing organic material. Samples SUA-246, -247, -250 represent organic-rich materials recovered by drilling below well-podsolized surfaces; dating "beyond the range" of ^{14}C, thus, establishes antiquity of assoc deposits. Background age for SUA-254 confirms earlier dating by Thom (1965).

B. West Irian

Mt Carstensz (Jaya) series

Samples coll Jan 1972 from Yellow Valley, 4250m alt near Mt Carstensz, Irian Jaya, Western New Guinea (4° 05′ S, 137° 09′ E) by J Peterson and G Hope, Biogeog Dept, Australian Natl Univ.

SUA-19. CGE-1 **2470 ± 80 / 520 BC**
Peat from above deformed lake sediments and beneath till.

SUA-20/1. CGE-2 **1400 ± 80 / AD 550**
Peaty soil from same site, including rootlets.

SUA-20/2. CGE-2 **2930 ± 100 / 980 BC**
As above, organic fines only.

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1520 ± 105
AD 430

SUA-177. CGE-11
Lake sediment containing organic matter.

2440 ± 85
490 BC

SUA-216. CARS-P3
Peat.

1335 ± 80
AD 615

SUA-217. CARS-P5
Wood fragments from buried peaty soil.

General Comment (GSH): above dates from organic matter buried beneath neoglacial tills and reflect glacier retreat above 4250m. Minor ice advances predate SUA-20/2, occur twice between SUA-19 and -177 and again after -217. One of best-dated neoglacial ice advance sequences in the world.

Discovery Valley series

Coll by J P and G H from Ijomba Core, Discovery Valley, alt 3580m (4° 02′ S, 137° 13′ E).

13,850 ± 260
11,900 BC

SUA-107. CGE-5
Algal gyttja deposited in fresh water.

6450 ± 100
4500 BC

SUA-108. CGE-6
As above.

General Comment (GSH): 2 samples are from a pollen-analyzed core of sediments from a moraine-dammed lake. SUA-107 gives minimal deglaciation from Pleistocene ice advances, while SUA-108 records arrival of shallow water phase preceding in-filling. Oldest minimal glaciation date for New Guinea. Pollen analysis from SUA-107 horizon records conditions similar to present.

Aghawagon Valley series

Coll by J P and G H from Erztberg Mines, Aghawagon Valley, alt 3620 m (4° 04′ S, 137° 07′ E).

11,330 ± 150
9380 BC

SUA-29A. CGE-4A
Woody fragments from peat between weathered bedrock and glacial till.

11,820 ± 150
9870 BC

SUA-29B. CGE-4B
Fine organic mud from above sample.

13,260 ± 195
11,310 BC

SUA-174A. CGE-8A
Algal gyttja buried under till.

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SUA-175. CGE-9 **11,810 ± 250 / 9860 BC**

Organic soil buried under 5 to 10m till.

SUA-176A. CGE-10A **5830 ± 540 / 3880 BC**

Wood (twigs, stem, and bark) from above, buried under 4m barren till.

SUA-176B. CGE-10B **7510 ± 110 / 5560 BC**

Peat assoc with above sample.

General Comment (GSH): dates mark retreat of Pleistocene ice above site, with readvance after SUA-174A and again after -29A and -175. Sequence records fluctuations in Pleistocene ice retreat for 1st time in New Guinea, but general age for retreat accords with dates elsewhere in New Guinea and tropics. SUA-176A is wood in a mudslide; age is minimum for return to present conditions.

SUA-173. CGE-7 **3745 ± 95 / 1795 BC**

Wood enclosed in a large till-like valley deposit, thus providing maximum age for mudflow, Aghawagon Valley, alt 1820m (4° 07′ S, 137° 05′ E).

SUA-28A. CGE-3 **10,100 ± 130 / 8150 BC**

NaOH-insoluble portion of wood from log overridden by till, Aghawagon Valley, alt 1705m (4° 08′ S, 137° 05′ E).

SUA-28B. CGE-3 **10,540 ± 130 / 8590 BC**

NaOH-soluble (humic acid) fraction of above. *Comment*: 2 samples were from wood crushed beneath till-like deposit; date is maximum for either a mudflow or till deposition. Pollen analysis indicates cooler conditions than, or similar to present. Refs to dates and relevant comparable dates in New Guinea included in Hope and Peterson (1975).

Errata:

Devils Lair series, R, 1973, v 15, p 567-568. Depths given refer to an arbitrary mark on a vertical cave wall, not to a "surface datum."

Description on SUA-101 should read: 201-212cm, base of "first orange brown earthy layer". Omitted sample:

SUA-33. Devil's Lair C **19,250 ± 900 / 17,300 BC**

From Trench 5, 222cm below a thin flowstone, in "light earthy layer". From a triangular layer of ca 30cm side, assoc with a bone point. For SUA-32 ,Trench no. (2) was omitted.

General Comment contains phrase: "considerably old", which did not originate from D.M.

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