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Table 1. Experimental tools and resulting wear patterns.

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
Palms													
77	*Cocos nucifera* Coconut	sawing stem, spathe	flake	large	straight	2	wrapped	5	c,f	dense, parallel	intensive	well developed	film, tissue, needle-like
79	*Cocos nucifera* Coconut	sawing spathe	flake	large	convex	2	wrapped	15	c,f	dense, parallel	intensive	well developed	tissue, starch
80	*Cocos nucifera* Coconut	whittling/ sawing frond	flake	large	straight	2	wrapped	15	b,c,f	dense, parallel, diagonal	intensive	developed	film, tissue
164	*Cocos nucifera* Coconut	whittling/ midrib	flake	medium	convex	2	wrapped	23	d/c,m	dense, parallel, diagonal	intensive	developed, patchy	film, tissue, starch
87	*Cocos nucifera* Coconut	scraping nutshell	flake	medium	concave	2	hand	30	c,f,s	dense, perpendicular, parallel	intensive	well developed, patchy	film, tissue
160	*Cocos nucifera* Coconut	carving nutshell	flake	large	convex	2	hand	60	b,c,f	dense, diagonal flaked	light, patchy	light, patchy	film, tissue
253	coconut meat	cutting/ slicing	flake	large	convex	2	hand	30	b,d/c,f	isolated, parallel diagonal	very light, patchy	very light, patchy	film, tissue
6	coconut meat	scraping	stemmed, Kombewa	large	convex	1	wrapped	30	b,c,f	few, diagonal, isolated	very light, patchy	very light, patchy	film, tissue, starch
309	coconut meat	scraping/ slicing	flake	small	convex	2	hand	25	b,c,f	few, diagonal, isolated	light	very light, patchy	film, tissue
169	*Metroxylon* spp., sago palm	sawing midrib	flake, Kombewa	large	convex	1	wrapped	5	b,c	dense, parallel	medium	developed	tissue, starch
172	*Metroxylon* spp., sago palm	sawing frond	flake	large	irregular	3	hand	10	c,f,s	dense, parallel	medium	developed patchy	film, tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
167	*Metroxylon* spp., sago palm	sawing frond	flake	large	concave	2	wrapped	15	c,f	dense, parallel	intensive	well developed	tissue
166	*Metroxylon* spp., sago palm	sawing frond	flake	large	convex	2	wrapped	30	b,c,f	dense, parallel	medium	well developed	film, tissue, starch, white
269	*Metroxylon* spp., sago palm	scraping pith	flake	large	irregular	3	hand	30	c,s	dense, perpendicular	intensive	well developed	tissue, needle-like
180	*Metroxylon* spp., sago palm	cutting frond	stemmed, Kombewa	large	convex	2	wood handle	60	b,c,f	dense, parallel	intensive	well developed	tissue, starch
246	*Nypa fruticans* nypa palm	cutting frond	flake	medium	irregular	2	wrapped	10	b,c,f	dense, parallel	intensive	developed, patchy	tissue
247	*Nypa fruticans* nypa palm	sawing frond	stemmed, Kombewa	medium	convex	2	wood handle	15	c,s	dense, parallel	intensive	well developed	tissue
188	*Caryota* sp. black palm	scraping bark	flake	medium	convex	2	wrapped	5	c,f,s	dense, perpendicular	intensive	well developed	film, tissue, starch
223	*Caryota* sp. black palm	scraping stem	flake	medium	convex	2	wrapped	15	c,f,s	rare, perpendicular, patchy	light, patchy	light, patchy	film, tissue
257	*Caryota* sp. black palm	scraping stem	flake	large	irregular	3	hand	45	b,c,s	dense, perpendicular, patchy	intensive, patchy	well developed, patchy	tissue
270	*Caryota* sp. black palm	scraping stem	flake	large	straight	2	hand	45	b,c,s	dense, slightly diagonal	intensive, patchy	well developed, patchy	tissue
187	*Caryota* sp. black palm	sawing stem	flake	medium	concave	2	wrapped	5	b,f,s	dense, parallel	intensive	developed, rough	film, tissue, starch
224	*Caryota* sp. black palm	sawing stem	flake	large	irregular	2	wrapped	15	b,c,f	dense, parallel	intensive, patchy	developed, patchy	tissue, starch
271	*Caryota* sp. black palm	sawing stem	flake	large	straight, irregular	2	hand	60	b,c,f	dense, parallel	intensive	well developed	tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
184	*Caryota* sp. black palm	whittling stem	flake	large	concave	2	hand	5	b,d/c,f,	diagonal. isolated, patchy	light, patchy	light, patchy	tissue
225	*Caryota* sp. black palm	scraping/ whittling sawing stem	flake	large	straight, concave convex	2	wrapped	20	c,m	dense, parallel and isolated perpendicular	light to medium	light to medium	tissue, starch
218	*Caryota* sp. black palm	whittling/ sawing/ scraping stem	flake	large	concave, convex	3	wrapped	30	c,f,s	parallel, diagonal, crossed	intensive	well developed, patchy	tissue, starch
67	*Pandanus* spp. pandanus	piercing leaves	stemmed, flake	medium	convex	1	wood handle	15	d/c,f, snap	parallel, diagonal, crossed	very light	very light	tissue, starch
1	*Pandanus* spp. pandanus	cutting stem, flesh	stemmed, flake	medium	convex	1	wood handle, wrapped	15	b,c,f	diagonal, isolated	very light	very light	film, tissue, starch, needle-like
26	*Pandanus* spp. pandanus	cutting leaves	flake, Kombewa,	large	straight	2	hand	15	b,c,f	dense, parallel, diagonal	very light	very light	film, tissue, starch
2	*Pandanus* spp. pandanus	cutting stem, flesh	stemmed, Kombewa	medium	convex	1	wood handle, hand	30	b,c,f	diagonal, parallel, isolated	light	light	film, tissue, starch
176	*Pandanus* spp. pandanus	cutting leaves	stemmed, flake	medium	convex	1	wood handle, hand	95	b,c,f	dense, parallel, perpendicular, diagonal	light	light	film, tissue, starch, white
20	*Pandanus* spp. pandanus	cutting/ slicing leaves, stem	flake, Kombewa	medium	concave	2	hand	15	b,c,f	parallel, diagonal, crossed	light	light	film, tissue, starch, needle-like
219	*Calamus* spp. rattan, cane	sawing vine, stem	flake	medium	irregular	3	hand	5	b,c,f	dense, parallel	intensive	well developed	tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
177	*Calamus* spp. rattan, cane	sawing vine, stem	flake	medium	irregular	2	hand	30	b,c,f	dense, parallel	intensive	well developed	tissue
159	*Calamus* spp. rattan, cane	cutting stem, skin	flake	medium	irregular	1	hand	5	b,c,f	dense, diagonal, parallel	medium	light	tissue, needle-like
120	*Calamus spp.* rattan, cane	cutting stem, skin	flake	medium	convex	2	hand	15	b,c,f	dense, parallel	medium	developed	tissue, starch
45	*Calamus* spp. rattan, cane	Scraping vine	flake	medium	straight	2	hand	8	b,c,f,s	dense, perpendicular, diagonal	intensive	well developed	tissue
283	non-identified species	cutting midrib (burin)	flake	medium	concave	2	hand	10	c,b,f,	dense, parallel, diagonal	medium	light	tissue
Softwood													
93	*Calophyllum* sp.	sawing/ whittling stem, branch	stemmed, Kombewa	large	irregular	3	wrapped	15	c,m	parallel, diagonal	intensive	well developed	tissue
70	*Octomeles sumatrana* erima	sawing stem, branch	flake, Kombewa	medium	straight	1	hand	5	c,m	parallel, diagonal	medium	developed	tissue
72	*Octomeles sumatrana* erima	sawing stem, branch	flake	medium	straight	2	wrapped	15	b,c,f,	dense, parallel	intensive	well developed	tissue, white
74	*Octomeles sumatrana* erima	sawing stem, branch	flake	large	convex	2	wrapped	30	b,c,f	parallel, isolated, many	medium	developed	tissue, white
65	*Octomeles sumatrana* erima	whittling stem, branch	flake	large	straight	2	wrapped	15	b,d/c,f	few, diagonal	very light	very light	some tissue
62	*Octomeles sumatrana* erima	whittling stem, branch	flake	large	convex	2	wrapped	30	b,d/c,f	diagonal, isolated	light	very light	tissue, white

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
165	*Octomeles sumatrana* erima	sawing/ carving/ gouging stem	core	medium	irregular	3	hand	15	c,f,s,	dense, diagonal	intensive	developed	tissue, starch, white
128	*Octomeles sumatrana* erima	scraping/ sawing stem, branch	stemmed, Kombewa	large	convex	3	wood handle, hand	60	c,m	diagonal, parallel	medium	developed	film, tissue
156	*Hibiscus tiliceus L.*	whittling stem, branch	flake, Kombewa	large	irregular	3	hand	5	b,c,f	dense, diagonal, parallel	medium	developed	film, tissue
44	*Hibiscus tiliceus L.*	whittling stem, branch	flake, Kombewa	large	straight	2	wrapped	15	b,d/c,f	diagonal, isolated	very light	very light	film, tissue
237	*Hibiscus tiliceus L.*	whittling stem, branch	flake	large	irregular	1	wrapped	30	b,c,f	diagonal, parallel	light	light	film, tissue, starch
157	*Hibiscus tiliceus L.*	whittling/ sawing stem	flake	large	concave	2	hand	10	b,d/c,f	diagonal, parallel, isolated	light	very light	film, tissue
234	*Hibiscus tiliceus L.*	carving stem, branch	flake	medium	straight	2	wrapped	25	b,c,f	diagonal, parallel	light	light	film, tissue, starch
95	*Hibiscus tiliceus L.*	carving stem, branch	flake	large	straight	2	hand	30	c,f,s	rare, diagonal, isolated	very light	very light, patchy	film, tissue
47	*Hibiscus tiliceus L.*	engraving stem, branch	flake	medium	irregular	2	wrapped	30	b,d/c,f	rare, diagonal, isolated	very light	none	film, tissue, white
235	*Hibiscus tiliceus L.*	whittling bark	stemmed, flake	large	irregular	1	wood and wrapped	20	b,c,f	diagonal, isolated, patchy	very light	very light	film, tissue
18	*Homalium foetidum* malas	sawing stem, branch	flake	large	convex	2	hand	5	b,c,f	dense, parallel	medium	developed	tissue
32	*Homalium foetidum* malas	sawing stem, branch	flake	large	straight	2	wrapped	15	b,c,f	dense, parallel	intensive	well developed	tissue, starch

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
41	*Homalium foetidum* malas	sawing stem, branch	flake	large	straight	3	wrapped	30	b,c,f	dense, parallel	intensive	well developed	tissue, starch, raphides
38	*Homalium foetidum* malas	carving stem, branch	flake	large	convex	2	wrapped	15	c,f, snap	dense, diagonal, parallel	intensive	developed	tissue, needle-like
239	*Toona ciliata* red cedar	carving stem	flake	large	irregular	3	hand	60	c,f,s	diagonal, parallel, crossed, isolated	medium to intensive	developed, patchy	film, tissue
240	*Toona ciliata* red cedar	carving stem	flake	medium	convex	1	hand	60	b,c,f	dense, diagonal, parallel	medium to intensive	developed,	film, tissue
282	*Ficus* sp. fig	whittling stem	flake	medium	straight	2	hand	10	b,c,f	diagonal, isolated	medium	light	film, tissue
13	Soft wood non-identified species	whittling stem, branch	flake	large	convex	1	wrapped	15	b,c,f	diagonal, isolated, patchy	extremely light	none	film, tissue, starch
268	Soft wood – non-identified species	whittling/ sawing stem	flake	medium	straight	2	hand	10	b,c,f	diagonal, parallel isolated,	light	light	tissue
316	Soft wood – non-identified species	drilling stem	retouched, like stem	small	irregular	3	hand	15	c,f,s	dense, perpendicular	intensive	well developed	tissue, starch
248	Soft wood – non-identified species	smoothing	flake	large	dorsal side with ridges	surface	hand	15	none	dense, parallel	intensive	well developed	tissue
115	Soft wood – non-identified species	sawing/ whittling stem, branch	stemmed, flake	large	convex	3	wrapped	30	b,c,f	diagonal, parallel, isolated, patchy	light to medium, patchy	developed, patchy	tissue, starch
297	Sandalwood	sawing stem, branch	flake	large	irregular	2	hand	45	b,c,f	dense, parallel	intensive	well developed	tissue
Hard wood													
134	*Casuarina* sp. horsetail oak	whittling bark	flake	large	convex	2	wrapped	30	m,c,	diagonal, parallel, isolated	medium	light to developed	film, tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
82	*Pometia pinnata* ton	whittling stem	flake	large	straight	2	hand	5	b,c,f	diagonal, isolated, rare	very light, patchy	developed, patchy	tissue
83	*Pometia pinnata* ton	whittling stem	flake	large	irregular	2	wrapped	15	b,c,f	rare diagonal, isolated, single	very light, patchy	developed, patchy	tissue
60	*Pometia pinnata* ton	whittling stem	flake	large	irregular	2	hand	30	b,c,f	rare diagonal, single	very light, to light, patchy	developed, patchy	tissue, white
301	*Pometia pinnata* ton	scraping stem	flake	medium	concave	2	wrapped	30	c,f,s	dense, perpendicular	intensive	well developed	tissue
75	*Mangifera indica* bush mango	sawing stem, branch	flake	large	convex	2	hand	5	b,c,f	dense, parallel	intensive	well developed	tissue
71	*Mangifera indica* bush mango	sawing stem, branch	flake, Kombewa	large	convex	3	wrapped	15	b,c,f	dense, parallel	intensive	well developed	tissue
303	*Eucalyptus* sp. eucalyptus	sawing stem, (dry)	flake	medium	straight	2	hand	20	c,m	dense, parallel, diagonal	intensive	well developed	tissue
304	*Eucalyptus* sp. eucalyptus	sawing stem, (green)	flake	small	straight	3	hand	20	b,c,f	dense, parallel, diagonal	intensive	well developed	tissue
302	non-identified species	sawing stem, (dry)	flake	medium	convex	3	hand	20	c,m	dense, parallel, diagonal	intensive	well developed	tissue
300	"lipi"	scraping/ whittling sapwood	flake	large	concave	2	wrapped	30	b,c,f	dense, diagonal, flaked, patchy	medium	light	tissue
170	non-identified species	whittling/ cutting stem, branch	flake	large	concave	3	hand	30	b,c,f	diagonal, parallel, isolated, patchy	very light	light, patchy	tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
Non-woody plants													
280	*Bambusa* spp. bamboo	sawing stem	flake	small	convex	1	hand	5	b,c,f	dense, parallel	intensive	well developed	tissue' needle-like
231	*Bambusa* spp. bamboo	sawing stem	flake	large	convex	3	wrapped	15	c,m	dense, parallel	intensive	well developed	tissue
295	*Bambusa* spp. bamboo	sawing stem	flake	large	straight	2	hand	45	b,c,f	dense, parallel	intensive	well developed	tissue
296	*Bambusa* spp. bamboo	sawing stem	stemmed, flake	small	straight	1	bamboo handle	50	b,c,f	dense, parallel	intensive	well developed	tissue
233	*Bambusa* spp. bamboo	whittling stem	flake	large	straight	2	wrapped	15	c,m	dense, diagonal parallel, patchy	medium, patchy	developed, patchy	tissue, needle-like
236	*Bambusa* spp. bamboo	carving stem	flake	large	irregular	2	wrapped	15	b,c,f	dense, parallel	intensive	well developed	tissue
258	*Bambusa* spp. bamboo	scraping stem	flake	large	concave	2	hand	45	c,s	dense, perpendicular, diagonal	intensive	well developed	tissue
141	*Saccharum* spp. sugar cane	cutting/ whittling grass	flake, Kombewa	medium	straight	1	wrapped	5	b,c,f	dense, parallel, isolated	light to medium	light to medium, patchy	tissue
140	*Saccharum* spp. sugar cane	cutting/ whittling grass	flake	large	irregular	2	wrapped	15	b,d/c,f	dense, parallel, some diagonal	intensive	well developed	film, tissue
139	*Saccharum* spp. sugar cane	cutting/ whittling grass	flake	large	irregular	1	wrapped	35	b,c,f	dense, parallel, diagonal	intensive	well developed	film, tissue
105	*Musa* spp. banana	cutting leaves	flake	small	convex	2	hand	5	b,d/c,f	rare, parallel, isolated	very light	none	film, tissue, white
97	*Musa* spp. Banana	cutting leaves, stem	flake	large	irregular	3	wrapped	15	b,c,f	parallel, isolated, few diagonal	light	very light	film, tissue, white

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
106	*Musa* spp. banana	cutting leaves, stem	flake, Kombewa	small	convex	1	hand	15	b,c,f	rare, diagonal	very light	none	film, tissue, white
112	*Musa* spp. banana	cutting leaves, stem	flake, Kombewa	medium	convex	2	wrapped	30	b,c,f	parallel, diagonal, isolated	light	light	film, tissue
100	*Musa* spp. banana	cutting leaves, stem	flake	large	convex	2	wrapped	30	b,c,f	rare, diagonal, few parallel	very light	extremely light	film, tissue, starch, white
178	*Musa* spp. banana	cutting leaves, stem	stemmed, flake	medium	convex	1	wood handle	45	b,c,f	rare, diagonal, parallel, isolated	very light, patchy	very light, patchy	film, tissue
278	*Musa* spp. banana	cutting stem	flake	medium	irregular	1	hand	10	b,d/c,f	rare, diagonal, isolated	very light,	very light, patchy	tissue, starch. needle-like
127	*Musa* spp. banana	Scraping midrib	stemmed, Kombewa	medium	irregular	1	hand	25	b,d/c,f	dense, diagonal, perpendicular	intensive	well developed	film, tissue
116	*Musa* spp. banana	Scraping midrib	flake	large	irregular	2	hand	15	b,c,f	diagonal, perpendicular	intensive	well developed	film, tissue, starch
118	*Asplenium nidus* fern, crow's nest	cutting leaves	flake	large	irregular	3	hand	5	b,d/c,f	relatively dense, diagonal, parallel isolated	light	light	film, tissue, white, white
135	*Asplenium nidus* fern, crow's nest	cutting leaves, stem	flake	medium	convex	1	hand	5	b,c,f	diagonal, patchy	very light to light, patchy	light to developed, patchy	film, tissue, starch, white
136	*Asplenium nidus* fern, crow's nest	cutting leaves, stem	flake	large	convex	2	hand	15	b,d/c,f	dense, diagonal, isolated, patchy	light	light to developed, patchy	film, tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
281	*Asplenium nidus* fern, crow's nest	whittling stem	flake	small	irregular	1	hand	10	b,c,f	diagonal, crossed, isolated	very light	very light, patchy	tissue, starch
104	*Codiaeum variegatum* croton	cutting stem	flake	medium	convex	1	hand	5	b,c,f	diagonal, parallel, crossed, isolated	very light	very light, patchy	film, tissue
108	*Codiaeum variegatum* croton	cutting stem	flake	medium	straight	1	wrapped	15	b,c,f	diagonal, parallel, isolated	light	very light, patchy	film, tissue
107	*Codiaeum variegatum* croton	cutting stem	stemmed, Kombewa	large	convex	2	wrapped	30	b,c,f	diagonal, parallel, shallow	medium, patchy	developed, patchy	film, tissue
5	*Zingiber officinale* ginger	cutting stem	flake	small	irregular	1	hand	5	b,c,f	diagonal, isolated	very light	very light, patchy	film, tissue
12	*Zingiber officinale* ginger	cutting/ slicing stem	flake	medium	straight	2	wrapped	15	b,c,f	dense, parallel	medium	developed	film, tissue, starch, needle-like
217	*Hibiscus manihot* aibika	cutting stem	flake	medium	irregular	2	hand	15	b,d/c,f	parallel, isolated	very light	none	film, tissue, starch, white
36	*Colocasia esculenta* taro	Scraping/ slicing raw tubers	stemmed, Kombewa	large	convex	1	wood handle	5	b,c,f	diagonal, perpendicular, isolated	light to intensive	developed, patchy	film, tissue, starch, needle-like
277	*Colocasia esculenta* taro	slicing raw tubers	flake	large	convex	1	hand	10	b,d/c,f	diagonal, isolated	light	light	film, tissue, starch, needle-like
313	*Colocasia esculenta* taro	cutting raw tubers	flake	small	irregular	1	hand	25	b,c,f	rare, parallel	medium, patchy	developed, patchy	tissue, starch

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
267	*Colocasia esculenta* taro	scraping/ slicing raw tubers	flake	medium	convex	1	hand	10	b,c,f	diagonal, isolated	medium, patchy	light, patchy	tissue, starch
314	*Colocasia esculenta* taro	scraping/ slicing raw tubers	stemmed, Kombewa	medium	convex	3	hand	25	b,c,f	diagonal, isolated	light , patchy	light , patchy	tissue, starch
315	*Colocasia esculenta* taro	slicing roasted tubers	flake	small	straight	2	hand	10	b,d/c,f	diagonal, crossed, isolated	light , patchy	light , patchy	tissue, starch
151	*Colocasia esculenta* taro	scraping roasted tubers	flake	medium	straight	2	hand	15	c,s	diagonal, crossed, isolated	intensive, patchy	developed patchy	charred tissue, starch
149	*Colocasia esculenta* taro	scraping roasted tubers	flake	medium	straight	1	hand	30	b,c,s	perpendicular, diagonal, isolated	light	light , patchy	charred tissue, starch
148	*Colocasia esculenta* taro	scraping roasted tubers	flake	large	irregular	2	hand	30	b,c,f,s	perpendicular, diagonal, crossed, isolated	medium	developed patchy	charred tissue, starch
109	*Colocasia esculenta* taro	cutting taro stem	flake	medium	convex	2	hand	5	b,d/c,f	rare, diagonal, isolated	extremely light, patchy	none	film, tissue, starch, white
102	*Colocasia esculenta* taro	cutting taro leaves	flake	small	convex	1	hand	15	b,d/c,f	rare, diagonal, isolated	very light	none	film, tissue, starch
117	*Colocasia esculenta* taro	chopping taro stem	flake	medium	convex	1	hand	30	b,c,f	rare, diagonal, isolated	none	none	film, tissue, starch, white
310	*Dioscorea esculenta* yam	scraping/ slicing raw tubers	flake	medium	irregular	2	hand	25	b,c,f,s	perpendicular, diagonal	medium	developed patchy	Film, tissue, starch

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
311	*Dioscorea esculenta* yam	scraping/ slicing raw tubers	flake	small	straight	3	hand	10	b,c,f,	diagonal, isolated	light, patchy	light, patchy	tissue
279	*Ipomoea batatas* sweet potato	slicing raw tubers	flake	medium	straight	2	hand	10	b,d/c,f	diagonal, isolated	very light	very light	tissue, starch
312	*Ipomoea batatas* sweet potato	scraping/ slicing raw tubers	flake	small	concave	1	hand	25	c,m	diagonal, parallel, isolated	light, patchy	light, patchy	tissue
Soft elastic material													
76	Parrot fish, *Scaridae*	gutting/ cutting	flake, Kombewa	large	convex	2	wrapped	15	b,c,f	parallel, diagonal, isolated	light to medium, patchy	light to developed, patchy	greasy film, rainbow tissue
263	Salmon fish, *Oncorhynchus gorbuscha*	gutting/ cutting	Flake	medium	convex	2	hand	25	b,c,f	parallel, crossed, isolated	light to medium, patchy	light to developed, patchy	greasy film, rainbow tissue
306	Salmon fish, *Oncorhynchus gorbuscha*	gutting/ cutting	biface	large	convex	2	hand	30	b,d/c,f	diagonal, crossed, isolated	medium, patchy	light to developed, patchy	greasy film, rainbow tissue
305	Salmon fish, *Oncorhynchus gorbuscha*	gutting/ cutting	flake	medium	convex	2	hand	30	b,c,f	diagonal, crossed, isolated	medium, patchy	light to developed, patchy	greasy film, rainbow tissue
308	Wrasse fish, *Labridae*	gutting/ cutting	flake	large	irregular	2	hand	30	b,c,f	diagonal, crossed, isolated	medium, patchy	light to developed, patchy	tissue
307	Wrasse fish, *Labridae*	gutting/ cutting	flake	large	irregular	2	hand	30	b,c,f,s	diagonal, parallel, isolated	medium, patchy	light to developed, patchy	greasy film, rainbow tissue

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
264	Chicken skin	piercing	stemmed, flake	small	straight	1	hand	30	b,d/c,f, few	perpendicular, diagonal, isolated	light to medium	light to developed	greasy film, tissue, blood
265	Chicken skin	cutting	stemmed, flake	small	concave	1	hand	25	b,d/c,f, few	parallel, diagonal, isolated	light to medium	light to developed	greasy film, tissue, blood
266	Chicken skin	cutting/ piercing	flake	small	straight	1	hand	35	b,d/c,f, few	parallel, diagonal, isolated	light to medium	light to developed	greasy film, tissue, blood
55	Human skin	shaving	flake	medium	straight	1	hand	3	b,d/c,f, rare	diagonal, perpendicular, few	very light to light	very light, patchy	greasy film, hair, tissue, blood-like
52	Human skin	shaving	flake	medium	straight	2	hand	3	b,d/c,f, rare	diagonal, few	very light to light	very light, patchy	greasy film, hair, tissue, blood-like
46	Human skin	shaving	flake	large	irregular	2	hand	3	b,d/c,f, rare	diagonal, few	very light to light	very light, patchy	greasy film, hair, tissue, blood-like
319	Human skin	shaving	flake	small	irregular	1	hand	10	b,d/c,f, rare	diagonal, few	very light	extremely light, patchy	greasy film, hair, tissue, blood-like
Hard dense material													
254	Cockle shell, *Katylesia* spp.	sawing	flake	small	irregular	1	hand	5	b,c,f	diagonal, parallel	intensive	well developed	tissue, white

Experiment No.	Type of Worked Material	Mode of Use	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Mode of Hafting	Use Duration in Minutes	Scar Type	Striations, Orientation	Edge Rounding	Polish	Residue Type (before cleaning)
259	Cockle shell, *Katylesia* spp.	sawing	flake	large	irregular	2	hand	15	c,m	dense, diagonal, parallel, flaked, patchy	intensive	well developed, patchy	tissue, white
260	Cockle shell, *Katylesia* spp.	sawing	blade	large	straight	2	hand	2 hours	b,c,s	diagonal, parallel, patchy	intensive	well developed	tissue, white
261	Cockle shell, *Katylesia* spp.	scraping	flake	medium	straight	2	hand	10	b,c,s	perpendicular, dense	intensive	well developed	tissue, white
262	Cockle shell, *Katylesia* spp.	scraping	flake	medium	irregular	2	hand	25	b,c,s	perpendicular, dense	intensive	well developed	tissue, white
256	Cowrie shell, *Cypraeidae* spp.	sawing	blade	large	straight	2	hand	45	c,m	dense, diagonal, parallel, flaked	intensive	well developed	tissue, white
251	Clay	scraping	flake	medium	convex	1	hand	15	b,c,f	perpendicular, diagonal, crossed	intensive	well developed	white, yellow
252	Clay	scraping	flake	medium	irregular	1	hand	15	b,c,f	perpendicular, diagonal, crossed	intensive	well developed	white, yellow

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution.

Table 2. Materials and actions used in experiments.

	Botanical name	Common name	State	Used parts and actions	Number of experiments	Number of analysed experiments
				Palms		
	Cocos nucifera	coconut palm	green	frond, spathe, leaf,		
				shell, meat	20	8
				scraping	5	3
				sawing	6	2
				carving	3	1
				engraving	2	0
				whittling/sawing	3	2
				cutting/slicing	2	1
2	*Metroxylon* spp.	sago palm	green	frond, leaf, pith	10	6
				sawing	5	4
				cutting	2	1
				scraping	2	1
				sawing/whittling	1	1
3	*Nypa fruticans*	nypa palm	green	leaf, midrib	2	2
				cutting leaf,	1	1
				sawing midrib	1	1
4	*Caryota* sp.	black palm	green	stem, midrib of		
				leaf, frond	19	10
				scraping	5	4
				sawing	7	3
				whittling	2	1
				chopping	1	0
				sawing/whittling	1	1
				sawing	1	1
				scraping/planing	2	0
5	*Calamus* spp.	rattan or cane	green	vine, stem	13	4
				cutting	6	2
				sawing	3	2
				sawing/whittling	3	0
				sawing/scraping	1	0
6	*Pandanus* spp.	pandanus	green	leaves, flesh	8	6
				cutting	5	5
				piercing	2	1
				cutting/scraping	1	0
7	Non-identified	palm	green	midrib	1	1
				sawing/scraping	1	1
				Soft wood		
8	*Artocarpus altilus*	breadfruit	green	sap	4	0
9	*Calophyllum* sp.		green	stem, branches	3	1
				sawing/whittling	3	1
10	*Octomeles sumatrana*	Tok Pisin: "erima"	green	stem, branches	12	7
				sawing	3	3
				whittling	3	2
				carving	4	0
				scraping/sawing	1	1
				sawing/carving	1	1
11	*Hibiscus tiliaceuas* L.	cottonwood, hibiscus	green	stem, branches,		
				bark	20	8
				whittling	6	4
				carving	2	2
				engraving	1	1
				cutting	3	0
				sawing	6	0

	Botanical name	Common name	State	Used parts and actions	Number of experiments	Number of analysed experiments
12	*Homalium foetidum*	Tok Pisin: "malas"	half dry and green	stem, branches sawing carving chopping engraving scraping/planing	8 3 1 1 2 1	5 3 1 1 0 0
13	*Toona ciliata* (syn. Cedrela toona)	red cedar	green	stem, branches carving	3 3	2 2
14	*Ficus* sp.	fig	green	branches whittling	1 1	1 1
15	Soft wood	non-identified	green	stem, branches whittling smoothing sawing carving whittling/sawing scraping/planing drilling	14 3 1 3 3 2 1 1	6 2 1 1 0 1 0 1
	Hard wood					
16	*Casuarina* sp.	horsetail oak	green	stem, branches, bark whittling sawing scraping	4 1 2 1	1 1 0 0
17	*Pometia pinnata*	ton, Tok Pisin: "taun"	green	stem, branches whittling scraping	4 3 1	4 3 1
18	*Mangifera indica*	bush mango, Tok Pisin: "wil mango"	green	stem, branches sawing	3 3	2 2
19	*Eucalyptus* sp.	eucalypt	dry and green	stem, branches sawing	2 2	2 2
20	Non-identified	sandalwood	green	branches sawing	1 1	1 1
21	Non-identified	"lipi"	green	branches scraping/whittling	1 1	1 1
22	Non-identified		dry and green	stem, branches sawing sawing/whittling	2 1 1	2 1 1
	Non-woody plants					
23	*Bambusa* spp.	bamboo	green tall grass	stem, leaf sawing whittling scraping carving cutting cutting/whittling	19 8 4 1 3 3 1	7 4 1 1 1 0 0
24	*Saccharum* spp.	sugar cane	green grass	grass cutting/whittling whittling/scraping/ sawing/whittling	6 3 1 2	3 3 0 0
25	*Musa* spp.	banana	green tall herb	leaves, stem, flesh cutting scraping cutting/slicing	14 7 5 2	9 7 2 0
26	*Asplenium nidus*	Crow's Nest Fern	green	stem, leaves cutting whittling splitting	5 3 1 1	4 3 1 0
27	*Codiaeum variegatum*	Tok Pisin: "croton"	green	stem, leaves cutting	5 5	3 3

	Botanical name	Common name	State	Used parts and actions	Number of experiments	Number of analysed experiments
28	*Zingiber officinale*	ginger	green herb	stem, leaves cutting cutting/slicing	7 5 2	2 1 1
29	*Hibiscus manihot*	Tok Pisin: "aibika"	green	stem, leaves cutting	2 2	1 1
30	*Colocasia esculenta*	taro	raw and cooked	tubers, stem, leaves scraping cutting slicing scraping/slicing cutting/slicing	22 5 9 1 5 2	12 4 5 2 2 0
31	*Dioscorea esculenta*	yam	raw and cooked	tubers scraping/slicing	3 3	2 2
32	*Ipomoea batata*	sweet potato	raw	tubers slicing scraping/slicing	2 1 1	2 1 1
			Soft elastic material			
33	Fish: parrot, salmon, wrasses		raw	skin and scales gutting/cutting	6 6	6 6
34	Human skin			shaving	8	4
35	Chicken skin		raw	skin cutting piercing cutting/piercing	3 1 1 1	3 1 1 1
			Hard dense material			
36	Shell: Cowrie *and cockle*			shell sawing scraping	6 4 2	6 4 2
37	Clay		half-dry	scraping	2	2
			Surface preservation after 22 months			
40	Non-used flakes			buried within soil deposits		
41	Used flakes			buried within soil deposits		
	TOTAL				290	154

Table 3. Plant remains recovered from archaeological sites (1–5), modern plants (6) and their uses (7–13).

Plants	Arawe Islands	Mussau Islands	Watom Island	Garua Island, FAO	Present Data, New Britain	Tools/ weapons	Canoes/ rafts	Building house/ shelter	Cordage, barkcloth, textile	Food	Medicine	Ritual, ceremonial, decoration
Aleurites moluccana (candlenut)	•	•			•					•		•
Alstonia spathulata (swamp forest)			•		•		•	•			•	
Annonaceae				•	•					•		•
Bambusa spp. (bamboo)				•	•	•	•	•		•		•
Bruguiera		•			•					•		
Burckella obovate	•	•			•					•		•
Callophyllum inophullum	•				•		•	•			•	•
Canarium indicum	•	•			•		•	•		•	•	
Canarium spp.	•	•	•	•	•		•			•		•
Caryota rumphiana (fishtail palm)				•	•	•		•		•		
Casuarina equisetifolia	•	•			•	•		•			•	•
Cocos nucifera	•	•	•		•	•	•	•	•	•	•	•
Compositae				•	•	•						
Cordia subcordata	•	•			•							
Corynocarpus cribbeanus		•			•							
Cycas circinalis	•	•			•						•	•
Cyperaceae				•	•	•						
Dracontomelondao	•	•			•							•
Dioscorea (yam)				•	•					•		
Ficus spp. (Moraceae)				•	•	•	•	•	•	•	•	•
Heliconia sp.				•	•			•		•		
Heritiera littoralis (wet habitat)			•		•							
Imperata cyclindrica (Poaceae)				•	•			•			•	
Incarpus fagiferus (taitian chestnut)	•	•			•					•		
Metroxlyn sp. (sago palm)	?				•	•		•		•		
Morantaceae				•	•				•	•		
Musa spp. (bananas)				•	•		•	•	•	•	•	•
Nypa fruticans		•	?		•			•		•		
Pandanus sp. (screwpine)	•	•			•	•	•	•	•	•	•	•
Pangium edule	•	•			•							
Panicoideae				•	•							
Poacea				•	•					•	•	•
Pometia pinnata		•			•			•		•		
Spondias dulcis (vi apple)	•	•			•					•		•

Plants	Arawe Islands	Mussau Islands	Watom Island	Garua Island, FAO	Present Data, New Britain	Tools/ weapons	Canoes/ rafts	Building house/ shelter	Cordage, barkcloth, textile	Food	Medicine	Ritual, ceremonial, decoration
Streculia sp.	?				•			•	•	•		•
Terminalia catappa (indian almond)	•	•	•		•					•		
Syzygium				•	•	•			•	•	•	•
Zingiberaceae				•	•					•	•	•
Reference:	1	2	3	4	5	6	7	8	9	10	11	12

(1) Gosden *et al.*, 1989; *(2)* Kirch, 1991, 1997: 203–212; *(3)* Specht, 2003; Spriggs, 1997:79; *(4)* Barton *et al.*, 1998; Kealhofer, 1995; 2003:294–300; *(5–12)* Floyd, 1954; Powell, 1976:106–183; Lentfer, 1995.

Table 4. Radiocarbon dates from the FAO archaeological site (Torrence & Stevenson, 2000; Lentfer & Torrence, 2007; Petrie & Torrence, 2008).

Pit/layer/spit	Material	Lab. number	Radiocarbon date	Calibrated BP	Bayesian modelling date, cal. BP
1000/1000, Layer 6, spit 1	nutshell	NZA 2901	3532±66	3990-3630	3990-3640
1000/1010, Layer 8, spit 2	nutshell	NZA 3738	2439±64	2720-2350	2720-2350
990/990, Layer 8, spit 4	nutshell	NZA 3729	2452±67	2720-2350	2720-2350
1001/999, Layer 11	nutshell	Beta 72139	1100±60	1180-920	1150-910

Table 5. FAO site. Distribution of obsidian artefacts within test pits.

A. Middle Holocene – Layer 6								B. Late Holocene – Layer 8					
Test Pit	TOTAL	Spit 5	Spit 4	Spit 3	Spit 2	Spit 1		Spit 4	Spit 3	Spit 2	Spit 1	TOTAL	Test Pit
1000/1000	358	56	106	6	10	180		4	27	44	33	108	1000/1000
1001/1000	9				7	2			15	9	5	29	1001/1000
1000/999	38			2	36				3	6	7	16	1000/999
1001/999	0								22	4	3	29	1001/999
990/1000	72				24	48				24	13	37	990/1000
980/1000	70			7	8	55			23	16	20	59	980/1000
970/1000	285		27	92	61	105			199	54	32	285	970/1000
1010/1000	6					6					10	10	1010/1000
1000/1010	897		6	17	271	603			12	31	28	71	1000/1010
1000/1020	2					2				6	38	44	1000/1020
1000/990	28				8	20			4	17	26	47	1000/990
989/1020	6				6			14	28	9	10	61	989/1020
989/1010	40				5	35			4	55	78	137	989/1010
990/990	22				7	15		22	43	82	27	174	990/990
990/980	30				3	27				36	10	46	990/980
990/970	3					3			9	22	14	45	990/970
962/990	112				46	66					61	61	962/990
A	27			14	6	7						0	A
B	30				14	16				2	1	3	B
C	8					8			7	17	11	35	C
TOTAL	2043	56	139	138	512	1198		40	396	434	427	1297	TOTAL
%	100	2.7	6.8	6.8	25.1	58.6		3.1	30.5	33.5	32.9	100	%

W-K2 catastrophic event

Table 6. Type of artefacts and wear patterns from 970/1000 test pit, Layer 8 (the late Holocene).

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
312	1	flake	medium	irregular a, b	2	absent	medium pitted	b,c,f	a, b – parallel, dense	medium, intensive, patchy	developed, well developed, patchy	a, b – sawing	siliceous, soft wood, palm, bamboo	d	short	tissue, starch	
2023	1	blade-like flake	medium	straight	3	present	medium	a – b,d/c,f b – b,d/c,f	a – parallel, b – diagonal, dense	a – intensive, b – medium	a,b – developed, patchy	a – sawing, b – whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	
1933	2	flake	medium	a,b – concave	2	present	low pitted	b,c,f,s	perpen-dicular, diagonal, dense	a – intensive, b – medium	a – well developed, b – light	both edges – scraping	siliceous, soft wood, palm, bamboo	d	short	starch, tissue	
324	3	blade-like flake	medium	irregular	2	absent	low pitted	b,c,f,	diagonal, dense	medium	well developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	short, wrapped	white, starch	
328	3	blade-like flake	medium	a – straight, b – convex	2	absent	low pitted	b,c,f	a – diagonal, parallel, b – parallel, dense	medium, intensive, patchy	well developed, patchy	a – whittling/ sawing, b – cutting (burin, carving)	siliceous, soft wood, palm, bamboo	d	short, probably wrapped	tissue, white, starch	
331	3	flake	small	convex	1	absent	low pitted	b,d/c,f	diagonal, dense	slight to medium, patchy	well developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	short	starch	129
333	3	flake	small	convex	2	present	medium pitted	b,d/c,f	dense, parallel, slightly	intensive	well developed	sawing	siliceous, soft wood, palm,	d	short	starch	132

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
									diagonal				bamboo				
336	3	flake	large	a,b,c,d – irregular	2	absent	low to medium pitted	b,c,f, burin spall	a – diagonal, b – parallel, c – diagonal, d – diagonal, parallel, dense	medium to intensive, patchy	well developed, patchy	a – whittling, b – sawing, c – whittling, d – both whittling/ sawing	siliceous, soft wood, palm, bamboo probably processing resinous plants like breadfruit, *Calophyllum*	d	moderate and intensive use in various actions for the same material wrapped, probably in palm leaves	starch, palm (P), 65% palm phytolith (K)	117, 135
1919	3	core	medium	irregular	3	present	low pitted	b,c,s	diagonal, dense	intensive, patchy	well developed	scraping	siliceous, soft wood, palm, bamboo	d	short	tissue	
1946	3	blade-like flake	medium	a,b – straight	2	absent	low pitted	a – b,c,f,s b – b,c,f	a – perpendicular, b – parallel, dense	intensive, patchy	well developed	carving: scraping/ cutting	siliceous, soft wood, palm, bamboo	d	short	starch	134
2028	3	flake, broken during use	medium	straight	2	absent	low pitted	b,c,f	diagonal, dense	intensive	well developed	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue, starch	
2032	3	flake	small	straight	1	present	low pitted	b,c,f	diagonal, parallel, dense	medium, patchy	light, patchy	whittling	siliceous, soft wood, palm, Bamboo	d	short	tissue	
2034	3	flake	small	straight	1	absent	low pitted	b,c,s	perpendicular, dense	medium	light	scraping	siliceous, soft wood, palm,	d	short	tissue, starch	133

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
													bamboo				
2036	3	flake	small	straight	1	present	low pitted	b,c,s	perpen-dicular, dense	medium	light	scraping	siliceous, soft wood, palm, bamboo	d	short	tissue, starch	
2037	3	flake	small	irregular	1	absent	low pitted	b,c,s	diagonal, dense	slight	light	scraping	siliceous, soft wood, palm, bamboo	d	short	tissue, starch	
2040	3	flake	medium	convex	3	present	low pitted	b,c,f,s	perpen-dicular, dense	medium	developed	scraping	siliceous, soft wood, palm, bamboo	d	short	none	
2041	3	flake	small	convex	2	absent	low pitted	b,c,f	diagonal, dense	intensive	well developed	whittling/ carving	siliceous, soft wood, palm, bamboo	p	short	tissue, starch	
Siliceous hard wood and hard palm																	
1922	3	flake	large	concave, a,b,c	3	absent	low pitted	b,c,f,s	a – parallel, dense b,c – perpen-dicular	slight, patchy	developed, patchy	a – sawing, b,c – scraping	siliceous, hard wood, palm	p	short	tissue, rare starch	150
1925	3	flake	large	a – irregular b – straight	a-2 b-3	absent	low pitted	a,b – b,c,f	a,b – parallel, dense	intensive, patchy	well developed, patchy	a,b – sawing	siliceous, hard wood, palm	d	moderate	tissue, starch	149
2027	3	flake	large	irregular	3	present	low pitted	b,c,f	diagonal, parallel, dense	intensive, patchy	well developed, patchy	whittling/ sawing by the same edge	siliceous hard wood, palm	d	short, probably wrapped	tissue, starch	
Non-siliceous soft wood																	
1923	1	flake	small	convex	3	present	low	c,f,s	perpen-	slight	very light	scraping	non-	p	short	tissue	

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
							pitted		dicular, diagonal, Isolated				siliceous, soft wood				
1924	1	flake	large	a – concave, b – straight, c – straight	2	absent	heavy pitted	a – c,f,s, b – b,d/c,f c – b,c,f	a – perpen-dicular, diagonal, b – parallel, c – parallel, diagonal	a – intensive, b – slight, c – slight	a – developed, b,c – very light	carving: a – scraping, b – sawing, c – whittling/ cutting	non-siliceous, soft wood	d	short	tissue, starch	160
2022	1	flake	small	a – straight, b – concave	2	present	medium pitted	a – b,c,f b – b,c,s	a – diagonal, isolated, b – perpen-dicular, diagonal, isolated	a – intensive b – medium	a – developed, b – light	carving: whittling/ cutting, scraping	non-siliceous, soft wood	d	short	tissue	156,158
2024	1	flake	large	a – concave, b – straight	2	present	low pitted	a,b – b,d/c,f	a,b – diagonal, isolated	slight to medium patchy	light to developed, patchy	whittling	non-siliceous, soft wood	d	short	none	
2025	2	flake	medium	concave	2	absent	low pitted	b,d/c,f	diagonal, perpen-dicular, Isolated	slight, patchy	light, patchy	whittling	non-siliceous, soft wood	d	short	tissue, starch	154
2026	2	flake	small	irregular	2	absent	low pitted	b,c,f	diagonal, perpen-dicular, isolated	medium to intensive, patchy	developed, patchy	carving/ whittling	non-siliceous, soft wood	d	moderate	tissue	159
325	3	flake with retouc	large	straight	2	absent	heavy pitted	b,c,f	diagonal, isolated	intensive	developed, patchy	whittling	non-siliceous, soft wood	d	moderate, wrapped	starch (P), palm	

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
		h														phytolith (K)	
326	3	flake	medium	straight	2	absent	low pitted	b,c,f	diagonal, isolated	slight	light	whittling	non-siliceous, soft wood	d	short	white, tissue, starch	124, 153
1936	2	flake	medium	straight	2	absent	medium pitted	b,c,f	diagonal, isolated,	medium	developed	whittling	non-siliceous, soft wood	d	short	none	
1938	3	flake	large	a – irregular, b – convex	2	absent	low pitted	b,c,f	a – diagonal, b – parallel, diagonal, isolated, moderate	slight to intensive, patchy	light to developed, patchy	a – whittling, b – whittling/ sawing	non-siliceous, soft wood	d	moderate	tissue	157,163
1945	3	flake	medium	irregular	2	absent	low pitted	b,c,f	diagonal, isolated, moderate	slight, patchy	very light, patchy	whittling	non-siliceous, soft wood	p	short	tissue	
2033	3	flake	small	concave	1	present	low pitted	b,c,f	parallel, crossed, isolated	slight	very light	whittling/ sawing	non-siliceous, soft wood	p	short	none	155
2038	3	flake	medium	straight	1	present	low pitted	b,d/c,f	diagonal, isolated	slight	light	whittling	non-siliceous, soft wood	d	short	tissue	
Non-siliceous hard wood																	
334	3	flake	medium	a – concave, b – irregular	2	absent	heavy pitted	a – b,c,f,s b – b,c,f	a – perpen-dicular b – parallel	slight to medium, patchy	light to developed, patchy	a – scraping, b – sawing	non-siliceous, hard wood	u	short	starch	125, 174
1942	3	flake	medium	straight	3	present	low pitted	b,c,f,s	diagonal, perpen-dicular,	slight to intensive, patchy	developed, patchy	scraping	non-siliceous, hard wood	d	short	tissue, starch	173

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
									Isolated								
Non-woody plants (tubers)																	
1930	1	flake	large	convex	3	present	low pitted	b,c,f	diagonal, perpen-dicular, isolated	intensive	well developed, merging	scraping/ slicing	non-woody plants (tubers)	d	long-term	starch	182
310	1	flake	large	concave	3	absent	low pitted	b,c,f,s	diagonal, perpen-dicular, isolated	slight to medium, patchy	light, patchy	scraping/ slicing	non-woody plants (tubers)	d	long-term, probably wrapped, bamboo phytolith	starch (P), needle-like, *Diosco-rea* (K)	186
317	1	blade-like flake	medium	a – convex, b – irregular	a, b-1	absent	low pitted	a,b – b,c,f	diagonal, perpen-dicular, parallel, isolated	intensive	developed, patchy, merging	scraping/ slicing, both edges	non-woody plants (tubers)	d	long-term, probably wrapped, arboreal phytolith	starch, probabl y tubers (P)	188
1921	2	flake with retouc h edge rejuv-ination	large	a,b,c,d, irregular	c, d-2, a, b-3	absent	medium pitted	b,c,f,s	all edges diagonal, perpen-dicular, moderate , isolated	medium to intensive, patchy	light to developed, patchy	scraping/ slicing	non-woody plants (tubers)	d	long-term use with edge resharpen - ing	starch, tissue	119A, 187
1926	3	flake	small	concave	3	absent	medium pitted	b,c,f,s	diagonal, isolated	intensive	developed, merging	scraping	non-woody plants (tubers)	p	short	tissue	
2030	3	flake	medium	a – convex, b – concave	a-2 b-3	absent	low pitted	b,c,f,s	both – diagonal, perpen-dicular, isolated	medium	developed, patchy	scraping	non-woody plants (tubers)	d	moderate	starch	
2039	3	flake	small	straight	1	present	low pitted	b,c,f	parallel, diagonal,	slight, patchy	light, patchy	slicing/ peeling	non-woody	d	short	starch	

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
									isolated				plants (tubers)				
Non-woody plants (greens)																	
1929	1	flake	medium	a – convex, b – straight	2	absent	medium pitted	a,b – b.d/c,f	parallel, isolated	medium	light	cutting	non-woody plants (greens)	p	moderate	tissue, starch	190
313	1	flake	large	irregular	3	present	low pitted	b,c,f	diagonal, perpen-dicular, isolated	medium to intensive	developed, merging, patchy	scraping	non-woody plants (greens)	p	moderate, probably wrapped	starch, arboreal phytolith (K)	
470	2	flake	small	convex	1	absent	low pitted	b.d/c,f	diagonal, isolated	medium	light	cutting	non-woody plants (greens)	p	short	starch	192
1941	3	flake	medium	a,c – concave, b – straight	1	absent	low pitted	b.d/c,f	a – diagonal, b,c – parallel, isolated	medium	light	cutting/ slicing	non-woody plants (greens)	d	moderate	tissue	189
2029	3	flake	medium	convex	1	absent	low pitted	b,c,f	parallel, diagonal, isolated, moderate	medium to intensive	developed to well developed	cutting/ slicing	non-woody plants (greens)	d	moderate to long-term	tissue	193
2031	3	flake	small	irregular	1	present	low pitted	b,c,f	diagonal, dense	intensive, patchy	well developed, patchy	cutting/ splitting	non-woody plants (greens)	p	short to moderate	tissue	191
Soft elastic material (skin, fish)																	
469	2	pointed flake	small	irregular, snapped tip	1	absent	low pitted	b,c	parallel to side-edge, diagonal, Isolated	intensive	developed, merging	piercing	soft elastic material (skin)	d	long-term	rainbow residues	207
1934	2	flake	small	straight	2	absent	heavy	c,f,s	none	medium	none	none	possibly	u	none	none	

M# 970	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
							pitted						soft elastic material (skin)				
322	3	pointed flake	small	straight, snapped tip	1	present	low pitted	b,d/c	parallel to side-edge, diagonal, isolated	intensive	developed, merging	piercing	soft elastic material (skin)	d	moderate to long-term	none	205
1939	3	flake	medium	convex	2	present	low pitted	b,d/c,f	parallel, diagonal, isolated	medium	developed, merging	gutting/ cutting	soft elastic material (fish)	d	moderate	blood-like, white	208
1940	3	Kom-bewa flake	medium	irregular	2	absent	medium pitted	b,c,f	parallel, diagonal, isolated	medium	developed, merging	gutting/ cutting	soft elastic material (fish)	d	moderate	blood-like, white, rainbow, tissue	209
2035	3	flake broken during use	meium	straight	2	present	low pitted	b,c,f	diaonal, parallel, isolated	medium	developed, merging	gutting/ cutting	soft elastic material (fish)	d	moderate	white, rainbow	

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*,1998, *(P)* Parr, pers. comm.

Table 7. Type of artefacts and wear patterns from 1000/1000 test pit, Layer 8 (the late Holocene).

M# 1000/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
1916	2	flake	medium	irregular	2	present	low pitted	b,d/c,f	diagonal, parallel, isolated	medium	light	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue, starch (P)	130
1917	2	flake	medium	straight	2	absent	medium pitted	b,c,f	parallel, isolated	intensive	well developed, patchy	sawing	siliceous, soft wood, palm, bamboo	d	short	tissue, starch (P)	131
125	3	flake	small	a,b – straight	1	absent	low pitted	b,c,f	a – perpen-dicular, b – parallel, dense	medium	developed, patchyt	a – scraping b – sawing	siliceous, soft wood, palm, bamboo	p	short	white	126
126	3	flake	small	a – irregular b - convex	1	absent	low pitted	b,c,f,s	diagonal, flaked, dense	intensive, patchy	well developed, patchy	a,b – scraping	siliceous, soft wood, palm, bamboo	d	short	white, starch (P), tissue (P) like Pandan-us	127
1913	3	blade-like flake	medium	irregular	3	absent	low pitted	b,c,f,s	diagonal, dense	intensive, patchy	well developed, patchy	scraping/ whittling	siliceous, soft wood, palm, bamboo	d	short	tissue, starch	128
Non-siliceous soft wood																	
112	1	flake	large	a,b,c – concave	3	present	low pitted	b,c,s	diagonal, perpen-dicular, Isolated	slight to medium	very light to medium	a,b,c – scraping/ whittling	non-siliceous, soft wood	d	short	starch (B), tissue (P), white	

M# 1000/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
113	1	flake	medium	a,b – concave, c – straight	3	absent	low pitted	b,c,s	diagonal, perpen-dicular, isolated	intensive	developed	scraping	non-siliceous, soft wood	d	short	phytolith, palm (P), starch	
118	2	flake	medium	a,b – convex, c – concave	2	absent	low pitted	b,c,f	a,b – parallel, crossed c – diagonal, isolated	medium, intensive	developed, patchy	a,b – whittling/ sawing c – whittling (carving)	non-siliceous, soft wood	d	moderate	white, starch, probably *Canarium* (P)	162
1915	1	flake	large	irregular	3	present	medium pitted	b,c,f	diagonal, isolated	medium	light	whittling	non-siliceous, soft wood	p	short	tissue, starch	
2045	3	flake, broken during use	small	a – straight, b – convex	2	absent	low pitted	b,c,f,s	a – perpen-dicular, b – parallel, fern-like, isolated	medium, b – slight	developed, b – light	a – scraping, b – sawing	non-siliceous, soft wood	d	moderate	tissue, starch	161
Non-siliceous hard wood																	
114	1	flake	medium	a – concave, b,c – convex	2	absent	low pitted	b,c,f	diagonal, c – perpen-dicular, isolated	medium	developed, light, patchy	a,b – sawing, c – scraping	non-siliceous, hard wood	p	short	starch, white	175
1914	3	flake	medium	straight	1	absent	low pitted	b.c,f	diagonal, parallel, isolated	slight	light	cutting/ slicing	non-woody plants (tubers)	d	moderate	tissue, starch (P)	184
2046	3	flake	large	a – concave, b – convex	a-1, b-2	absent	low pitted	b,c,f,s	diagonal, perpen-dicular, crossed	intensive	well developed	a,b – scraping/ slicing	non-woody plants (tubers)	d	long-term, probably wrapped	starch	185

[Footnotes for Table7]. *Edge angle* refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.,* 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.,*1998, *(P)* Parr, pers. comm.

Table 8. Type of artefacts and wear patterns from 980/1000 test pit, Layer 8 (the late Holocene).

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
2107	1	flake	medium	straight	2	present	low pitted	b,c,f	diagonal, dense	medium	developed	whittling/ sawing	siliceous, soft wood, palm, bamboo	d	short	tissue, white	
2108	1	flake broken during use	small	straight	2	present	low pitted	b,c,f	diagonal, dense	intensive	well developed	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	
2110	2	flake broken during use	medium	straight	2	absent	low pitted	b,c,f	parallel, diagonal, dense	intensive	well developed	whittling/ sawing	siliceous, soft wood, palm, bamboo	p	short	tissue	
2111	2	flake	medium	a – convex, b – concave	2	absent	medium pitted	b,c,s	diagonal, perpen-dicular, parallel, dense	intensive	developed	scraping/ sawing	siliceous, soft wood, palm, bamboo	d	short	tissue	
2112	2	flake	medium	convex	3	present	low pitted	b,c,f	parallel, diagonal, dense, few flaked	intensive	light	whittling/ sawing	siliceous, soft wood, palm, bamboo	d	short	tissue	142
2113	2	flake	medium	irregular	2	present	medium pitted	b,c,f	parallel, dense	intensive	developed	sawing	siliceous, soft wood, palm, bamboo	d	short	tissue	

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
2116	3	flake	large	straight	2	present	heavy pitted	b,c,f	diagonal, parallel, isolated	slight	none	whittling/ sawing	siliceous, soft wood, palm, bamboo	u	short	tissue	145
Non-woody plants (tubers)																	
2115	3	flake	small	convex	2	absent	low pitted	b.c,f,s	diagonal, isolated	medium	well developed, patchy	scraping	non-woody plants (tubers)	d	moderate	starch, tissue	
Soft elastic material (skin, fish)																	
2109	1	pointed flake	medium	straight	2	absent	low pitted	b,d/c,f	diagonal, isolated	slight	light	cutting/ piercing	soft elastic material (skin)	d	moderate	blood-like	
Dense, hard material (shell, clay)																	
2114	3	flake, broken during use	large	a,b – irregular	3	absent	heavy pitted	b,c,f,s	parallel, dense	intensive	well developed	sawing	dense, hard material (shell)	p	moderate	white	223

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*,1998, *(P)* Parr, pers. comm.

Table 9. Type of artefacts and wear patterns from 990/1000 test pit, Layer 8 (the late Holocene).

M# 990/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
2144	1	flake	medium	convex	2	present	low pitted	b,c,f	parallel, diagonal, isolated	medium	developed, patchy	cutting/ whittling	siliceous, soft wood, palm, bamboo	d	short	starch	
2140	1	pointed flake	large	irregular	3	absent	low pitted	b,c,f,s	rotational, parallel, dense, flaked	intensive, patchy	developed, patchy	drilling	siliceous, soft wood, palm, bamboo	d	short	tissue, starch	136
Non-silicious soft wood																	
2141	2	flake	medium	irregular	1	present	low pitted	b,c,f	diagonal, isolated	intensive	developed, patchy	whittling	non-siliceous, soft wood	d	short	tissue	
2142	2	flake	small	straight	1	absent	low pitted	b,c,f	diagonal, isolated	slight	very light	whittling	non-siliceous, soft wood	p	short	tissue	
Soft elastic material (skin, fish)																	
2143	2	flake	small	straight	1	absent	low pitted	b,d/c,f	diagonal, isolated	slight to moderate	light to developed	cutting	soft elastic material (skin)	p	moderate	none	

Table 10. Type of artefacts and wear patterns from 1001/999 test pit, Layer 8 (the late Holocene).

M# 1001/999	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
2102	1	flake	large	irregular	2	present	low pitted	b,c,f	diagonal, dense	intensive	well developed	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	
2103	1	flake	medium	straight	3	absent	medium pitted	b,c,f,s	diagonal, perpen-dicular, dense	intensive	developed, patchy	scraping	siliceous, soft wood, palm, bamboo	d	short	tissue	
2106	2	flake	large	a – straight b – convex	a-2, b-3	absent	low pitted	a – b,c,f, b – b,c,f,s	a – diagonal, dense, b – perpen-dicular, diagonal	a – medium, b – intensive	a,b – developed	a – whittling b – scraping	siliceous, soft wood, palm, bamboo	d	short	tissue	
Non-woody plants (tubers)																	
2105	3	flake	small	a,c – concave, b – convex	2	absent	low pitted	b.c,f,s	diagonal, perpen-dicular,	intensive	developed	scraping, 3 edges	non-woody plants (tubers)	d	moderate	starch,	183
Soft elastic material (skin, fish)																	
2104	2	pointed flake	medium	straight	1	absent	low pitted	b,d/c,f	parallel, perpen-dicular, isolated	intensive	developed, merging	piercing	soft elastic material (skin)	d	long-term	red, blood-like	206

Table 11. Type of artefacts and wear patterns from 1000/999 test pit, Layer 8 (the late Holocene).

M# 1000/999	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
2101	3	flake	small	straight	2	present	low pitted	b,c,f,s	diagonal, perpen-dicular, dense	intensive	developed	scraping	siliceous, soft wood, palm, bamboo	d	short	starch	

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*,1998, *(P)* Parr, pers. comm.

Table 12. Type of artefacts and wear patterns from 970/1000 test pit, Layer 6 (the middle Holocene).

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
339	1	flake	large	straight	2	absent	medium to heavy pitted	b,c,f	diagonal, isolated	intensive, patchy	developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	moderate	tissue, starch, (K,P)	
1994	1	flake	large	a – irregular b – convex	2	present	heavy pitted	b,c,f	diagonal, dense	intensive, patchy	developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	144
1997	1	flake	medium	irregular	2	present	medium pitted	b,c,f	diagonal, dense	intensive, patchy	well developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	139
2007	1	blade-like flake	large	straight	2	absent	low to medium pitted	b,c,f,	parallel, diagonal, dense	intensive	well developed	cutting/ whittling	siliceous, soft wood, palm, bamboo	d	moderate	tissue, black residue	
356	2	flake	medium	irregular	2	absent	medium pitted	b,c,f	diagonal, dense	intensive, patchy	well developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	short,	tissue	
2051	2	flake	medium	irregular	2	absent	medium pitted	b,c,f	diagonal, dense	intensive, patchy	well developed, patchy	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	
1965	2	flake	large	concave	2	absent	medium	b,c,f,s	perpen-	intensive,	well	scraping	siliceous,	d	short	tissue	146

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
							pitted		dicular, parallel, dense	patchy	developed, patchy		soft wood, palm, bamboo				
1966	2	flake	large	a – convex, b – irregular, c – convex	2	present	heavy pitted	b,c,f,s	a – diagonal, parallel, b – diagonal, parallel c – diagonal	medium to intensive, patchy	well developed, patchy	a – scraping/ sawing, b – whittling/ sawing, c – whittling	siliceous, soft wood, palm, bamboo	d	short	tissue, white residues	
2010	3	flake, broken tip	small	straight	1	absent	medium pitted	b,d/c,f	parallel, perpen-dicular, dense	intensive	well developed	scraping/ cutting	siliceous, soft wood, palm, Bamboo	d	short	tissue, white	147
2011	3	flake	small	straight	1	present	low pitted	b,c,f	diagonal, dense	medium	developed	whittling	siliceous, soft wood, palm, bamboo	d	short	tissue	
2012	3	blade-like flake	medium	convex	1	present	medium pitted	b,c,f	parallel diagonal, dense	intensive, patchy	developed, patchy	whittling/ sawing	siliceous, soft wood, palm, bamboo	d	short	tissue	
2013	3	flake	small	irregular	1	present	medium to heavy pitted	b,c,f	parallel diagonal, dense	intensive, patchy	well developed, patchy	carving	siliceous, soft wood, palm, bamboo	d	short	tissue	148
2016	4	flake	large	convex	3	absent	medium pitted	b,c,f	parallel, diagonal,	intensive	well developed	whittling/ sawing	siliceous, soft	d	short	tissue, starch	140

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
									dense				wood, palm, bamboo				
Siliceous hard wood and hard palm																	
1979	1	flake	large	irregular	3	absent	low pitted	b,c,f,s	perpen-dicular, dense	intensive, patchy	well developed, patchy	scraping	siliceous, hard wood, palm	d	short	tissue, starch	151
1989	3	flake, broken during use	large	straight	3	present	medium to heavy pitted	b,c,f,s	perpen-dicular, dense	intensive, patchy	developed, patchy	scraping	siliceous, hard wood, palm	d	moderate	tissue	
367	3	stemm-ed tool, flake	large	a – straight, b – concave	3	absent	medium to heavy pitted	a – b,c,f b – b,c,f,s	a – diagonal, b – diagonal, perpen-dicular, dense	intensive, patchy	well developed, patchy	a – whittling b – scraping	siliceous, hard wood, palm	d	moderate, wood hafted	tissue, starch (P)	118
1955	3	flake	medium	concave	3	present	heavy pitted	b,c,f,s	perpen-dicular, parallel dense	intensive, patchy	well developed, patchy	scraping/ sawing	siliceous, hard wood, palm	d	short	tissue	
1976	4	flake	large	a – irregular, b – concave	3	present	medium to heavy pitted	a – b,c,f b – b,c,f,s	a – parallel, diagonal, dense, b – perpen-dicular, dense	intensive, patchy	well developed, patchy	a – whittling/ sawing b – scraping	siliceous, hard wood, palm	d	short	tissue	152
1978	4	flake	large	concave	3	present	heavy pitted	b,c,f,s	parallel, dense	intensive, patchy	developed, patchy	sawing	siliceous, hard wood, palm	d	short	tissue	

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Non-siliceous soft wood																	
1949	2	blade-like flake	large	irregular	2	present	heavy pitted	b,c,f,	parallel isolated	medium	light	sawing	non-siliceous, soft wood	d	short	tissue	
1951	2	flake, broken during use	medium	convex	1	absent	medium pitted	b,c,f	diagonal, dense	intensive, patchy	developed, patchy	Scraping/ sawing	non-siliceous, soft wood	d	short	tissue	170
1952	2	flake, broken during use	small	a,b – straight	2	absent	low to medium pitted	a – b,c,s b – b,c,f	diagonal, perpen-dicular, b – parallel, isolated	slight	light, patchy	a – scraping, b – sawing	non-siliceous, soft wood	d	short	tissue	
1967	2	flake	large	straight	2	absent	medium pitted	b,c,f	diagonal, isolated	slight	light	whittling	non-siliceous, soft wood	d	short	tissue	164
1981	3	flake	large	straight	3	absent	heavy pitted	b,c,f,s	rare diagonal	intensive, patchy	developed, patchy	scraping	non-siliceous, soft wood	p	short	none	
2014	3	flake	large	convex	3	absent	medium to heavy pitted	b,c,f,s	perpen-dicular, isolated	intensive, patchy	well developed, patchy	scraping	non-siliceous, soft wood	d	short	tissue, black residues	168
2015	3	flake	large	a – convex b – concave	a-2 b-1	absent	medium to heavy pitted	b,d/c,f	a – parallel, b – diagonal, isolated	slight	light	a – sawing, b – whittling	non-siliceous, soft wood	d	short	tissue	171

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
363	3	flake	large	convex	2	present	medium pitted	b,c,f,s	diagonal, isolated	slight	very light	scraping	non-siliceous, soft wood	p	short	white	166
366	3	flake	medium	straight	2	absent	medium pitted	b,d/c,f	diagonal, isolated,	slight	light	whittling	non-siliceous, soft wood	d	short	tissue	
1957	3	flake	large	concave	2	absent	medium to heavy pitted	b,c,f	diagonal, isolated	medium	developed, patchy	carving/ cutting like burin	non-siliceous, soft wood	d	moderate	tissue	172
1958	3	flake	medium	irregular	2	present	medium pitted	b,c,s	diagonal, isolated	slight	light	scraping	non-siliceous, soft wood	p	short	tissue	169
1962	3	flake	medium	irregular	1	absent	low pitted	b,c,s	diagonal, isolated	slight	light	scraping	non-siliceous, soft wood	p	short	tissue, white residues	167
1973	4	flake	medium	convex	3	present	medium pitted	b,c,f	diagonal, isolated	intensive, patchy	developed, patchy	whittling	non-siliceous, soft wood	d	short	tissue, starch	120B
2017	4	flake	medium	straight	2	present	heavy pitted	b,d/c,f	diagonal, isolated	slight	very light	whittling	non-siliceous, soft wood	p	short	tissue	165
Non-siliceous hard wood																	
354	2	flake	large	straight	3	present	heavy pitted	b,c,f,s	diagonal, parallel, isolated	slight patchy	very light, patchy	scraping, sawing	non-siliceous, hard wood	p	short	tissue, starch	178

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
1972	4	flake	large	straight	3	present	heavy pitted	b,c,f,s	parallel, diagonal, isolated	medium	developed	cutting (splitting as burin)/ whittling	non-siliceous, hard wood	p	short	tissue	181
1980	1	flake broken during use	medium	convex	3	present	medium pitted	b,c,f,s	diagonal, isolated	intensive, patchy	well developed, patchy	whittling/ sawing	non-siliceous, hard wood	d	short	tissue	180
1983	3	flake	large	irregular	2	present	heavy pitted	b,c,f,s	diagonal, isolated	slight, patchy	very light, patchy	scraping	non-siliceous, hard wood	p	short	tissue, starch	177
Non-woody plants (tubers)																	
1996	1	flake broken during use	medium	convex	2	absent	low pitted	b,c,f,s	perpen-dicular, diagonal, isolated	intensive	developed	scraping	non-woody plants (tubers)	p	moderate	tissue	195
2008	1	flake	large	straight	2	absent	heavy pitted	b,d/c, f,s	perpen-dicular isolated	intensive, patchy	developed, patchy	scraping	non-woody plants (tubers)	p	moderate	tissue, starch	
1953	2	flake	large	convex	2	absent	medium pitted	b,c,f	diagonal, isolated	medium to intensive	developed	cutting/ slicing	non-woody plants (tubers)	d	moderate	tissue	200
359	3	stemm-ed tool, Kom-bewa	medium	convex	1	absent	heavy pitted	b,c,f	diagonal, isolated	intensive, patchy	developed, patchy	scraping/ slicing	non-woody plants (tubers)	d	moderate, wood hafted	tissue, starch	123, 194
361	3	flake	medium	straight	2	present	low pitted	b,d/c,f	diagonal, parallel, isolated	medium	light	cutting/ slicing	non-woody plants (tubers)	d	moderate	tissue, starch (P)	199

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
364	3	flake	medium	straight	2	absent	medium pitted	b,c,f,s	diagonal, perpen-dicular, isolated	medium	light to developed, patchy	scraping	non-woody plants (tubers)	d	moderate, probably wrapped	tissue, starch (P), phytolith (K), white	121, 198
2018	4	flake	medium	concave	3	present	heavy pitted	b,c,f,s	diagonal, perpen-dicular, isolated	medium	developed	scraping/ slicing	non-woody plants (tubers)	d	moderate	starch, tissue	197
2020	4	flake	large	irregular	2	absent	medium pitted	b.c.f	diagonal, parallel, isolated	medium	light	scraping/ slicing	non-woody plants (tubers)	d	moderate	starch, tissue	196
Non-woody plants (greens)																	
1969	1	flake	medium	straight	1	absent	heavy pitted	b,c,f	diagonal, parallel, isolated	slight to medium, patchy	light to developed, patchy	cutting/ slicing	non-woody plants (greens)	d	moderate	tissue, starch	202
1987	1	flake	medium	straight	3	present	low pitted	b,c,f,s	perpen-dicular, diagonal, isolated	medium	light to developed	cutting/ slicing	non-woody plants (greens)	d	moderate	white	203
358	3	flake	medium	straight	1	absent	low to medium pitted	b.d/c,f	diagonal, parallel, crossed, isolated	slight	light	cutting	non-woody plants (greens)	d	moderate	tissue, starch – Pandan-us	201
2019	4	flake broken during use	medium	straight	1	absent	medium to heavy pitted	b.c,f	parallel, diagonal, isolated	medium	light	cutting/ slicing	non-woody plants (greens)	d	moderate	tissue	
2021	3	flake	medium	straight	1	absent	medium pitted	b,c,f	diagonal, isolated	slight	light	cutting/ slicing	non-woody plants (greens)	d	short	none	

M# 970/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Soft elastic material (skin, fish)																	
351	2	flake	large	straight	2	present	low pitted	b,c,f	diagonal/ parallel, isolated	medium	light to developed, patchy	gutting/ cutting	soft elastic material (fish)	d	moderate	rainbow residues	219
1954	2	flake	large	convex	2	present	low pitted	b,c,f	diagonal, parallel, isolated	medium	light to developed, patchy	gutting/ cutting	soft elastic material (fish)	d	moderate	animal tissue, rainbow, black	
2009	2	pointed flake	small	straight	1	present	low pitted	b,d/c,f	diagonal, parallel, isolated	slight	light	piercing	soft elastic material (skin)	d	moderate	charred plant mixed as pigment for tattooing (F, pers com)	210
Dense, hard material (shell, clay)																	
1968	3	flake	large	straight	3	absent	medium pitted	b,c,f,s	perpen-dicular, diagonal, dense	intensive	well developed	scraping	dense, hard material (shell)	d	short	white, coloured	224
1982	3	flake	large	convex	3	present	low pitted	b,c,f,s	diagonal, dense	very intensive	well developed	scraping	dense, hard material (clay)	p	short	white, yellow	225

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*,1998, *(P)* Parr, pers. comm.

Table 13. Type of artefacts and wear patterns from 1000/1000 test pit, Layer 6 (the middle Holocene).

M# 1000/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
128	1	flake	medium	convex	2	absent	heavy pitted	b,c,f	diagonal, parallel, dense, both seen on the same edge	slight to medium, patchy	developed, patchy	whittling/ sawing	siliceous, soft wood, palm, bamboo	d	short	starch	122, 137
1906	1	flake	large	straight	3	absent	heavy pitted	b,c,f	parallel, dense	intensive	light	sawing	siliceous, soft wood, palm, bamboo	d	short	starch (P)	138
Non-siliceous soft wood																	
130	1	flake	large	convex	3	present	low pitted	b,d/c,f,	diagonal, isolated	slight	very light, patchy	whittling	non-siliceous, soft wood	d	short	starch (P)	
1909	1	blade-like flake	large	irregular, pointed	3	absent	medium to heavy pitted	b,c,f,s	diagonal, perpen-dicular to the tip, isolated	intensive, patchy	developed, patchy	cutting, splitting (burin)	non-siliceous, soft wood	d	short,	tissue, starch	
2044	1	flake	small	straight	2	absent	low pitted	b,c,f	parallel, isolated	slight	very light	sawing	non-siliceous, soft wood	p	short	starch	
380	4	flake	large	concave	2	absent	medium pitted	b,d/c,f	diagonal, isolated	slight	very light, patchy	whittling	non-siliceous, softwood	p	short	tissue	

M# 1000/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
1998	4	flake	large	concave	2	absent	medium pitted	b,d/c,f	diagonal, isolated	slight	very light, patchy	whittling	non-siliceous, soft wood	p	short	tissue	
Non-siliceous hard wood																	
1905	1	flake	large	a,c – straight b,d – convex	a,c, d – 3, b – 2	absent	medium pitted	a,c – b,c,f,s, b,d – b,c,f	a,c – diagonal, perpen-dicular, b,d – diagonal, isolated	intensive, patchy	developed, patchy	a,c – scraping, b,d – scraping/ whittling	non-siliceous, hard wood	d	short	tissue starch (P)	179
Non-woody plants (tubers)																	
129	1	flake broken during use	medium	irregular	1	absent	low pitted	b,c,f	diagonal, isolated	medium, patchy	developed, patchy	cutting/ slicing	non-woody plants (tubers)	d	moderate	starch (B)	
1908	1	flake	medium	concave	2	absent	heavy pitted	b,c,f,s	diagonal, isolated	intensive	developed	scraping	non-woody plants (tubers)	p	moderate	starch	
1911	1	flake	medium	straight	2	absent	heavy pitted	b,c,f,s	diagonal, isolated	slight	very light	scraping	non-woody plants (tubers)	p	short	starch (P)	
1912	1	flake	medium	irregular	2	absent	medium pitted	b,c,f,s	perpen-dicular, diagonal Isolated	intensive	developed	scraping/ slicing	non-woody plants (tubers)	d	moderate	starch	
2042	1	flake	medium	irregular	1	present	medium pitted	b,c,f,s	diagonal, parallel, isolated	intensive	well developed, patchy	scraping/ slicing	non-woody plants (tubers)	d	moderate	tissue	

M# 1000/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Non-woody plants (greens)																	
131	1	flake, broken during use	small	straight	2	absent	low pitted	b,d/c,f,	diagonal, isolated	slight to medium, patchy	developed, patchy	cutting/ slicing	non-woody plants (greens)	d	moderate	tissue, starch (B), white	
133	1	flake	medium	convex	2	present	medium pitted	b,d/c,f	diagonal, isolated	slight	none	cutting/ slicing	non-woody plants (greens)	p	short	starch (B)	
Soft elastic material (skin, fish)																	
132	1	pointed flake, broken tip	medium	straight	1	absent	heavy pitted	b,d/c,f	perpen-dicular to the tip, isolated	slight	very light	piercing	soft elastic material (skin)	d	moderate	animal tissue (B,F)	
1782	1	stemm-ed tool, broken tip	small	straight	1	present	medium pitted	b,d/c,f	diagonal	medium	developed, patchy	cutting/ piercing	soft elastic material (skin)	p	moderate, wood handle	starch on hafting part, dark-red, rainbow	212
1907	1	pointed flake	medium	straight	2	absent	medium pitted	b,d/c,f	perpen-dicular to the tip, isolated	medium to intensive	developed, patchy	piercing	soft elastic material (skin)	d	moderate, wrapped	starch, resin	211
135	1	flake	large	irregular	1	absent	medium pitted	b,c,f	parallel, diagonal, isolated	medium	light	gutting/ cutting	soft elastic material (fish)	d	moderate	animal tissue, rainbow residues (P)	218
1903	1	flake	medium	concave, pointed	1	absent	heavy pitted	b,d/c,f	parallel, diagonal, isolated	medium, patchy	developed, patchy	gutting/ cutting	soft elastic material (fish)	p	short	rainbow, red, black	

M# 1000/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
1910	1	flake	large	irregular	1	absent	low to medium pitted	b,c,f	diagonal, parallel, isolated	medium, patchy	developed, patchy	gutting/ cutting	soft elastic material (fish)	d	moderate	rainbow, possible blood (P)	120A, 222
2043	1	flake	medium	a – convex, b – concave	2	absent	medium pitted	b,c,f	parallel, isolated	medium	light	gutting/ cutting	soft elastic material (fish)	d	moderate	rainbow residues	220

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*,1998, *(P)* Parr, pers. comm.

Table 14. Type of artefacts and wear patterns from 980/1000 test pit, Layer 6 (the middle Holocene).

M# 980/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
2118	1	flake	large	a,b – concave, c – straight	2	present	heavy pitted	b,c,f	a,c – parallel, b – diagonal, dense	intensive	well developed	a,c – sawing, b – whittling	siliceous, soft wood, palm, bamboo	d	moderate	tissue	141
2121	1	flake	large	convex	3	present	heavy pitted	b,c,f	diagonal, parallel, dense	medium	light	whittling/ sawing	siliceous, soft wood, palm, bamboo	d	short	tissue	143
Non-siliceous soft wood																	
2120	1	flake	large	convex	2	present	heavy pitted	b,c,f,	diagonal, isolated	slight	none	whittling	non-siliceous, soft wood	p	short	none	
2123	1	flake	large	convex	3	present	low pitted	b,c,f,s	diagonal, isolated	slight, patchy	light, patchy	scraping	non-siliceous, soft wood	d	short,	tissue	
Non-siliceous hard wood																	
2124	1	flake	large	a – straight b – concave	3	present	medium to heavy pitted	b,c,f,s	diagonal, perpen-dicular, dense	intensive, patchy	developed, patchy	a – whittling, b – Scraping	non-siliceous, hard wood	d	short	starch tissue	
Non-woody plants (tubers)																	
2117	1	flake	medium	straight	2	present	low pitted	b,c,f	diagonal, isolated	medium, to intensive, patchy	developed, patchy	scraping	non-woody plants (tubers)	d	short	tissue	
2119	1	flake	large	convex	2	absent	medium pitted	b,c,f	diagonal, isolated	intensive	developed, patchy	slicing	non-woody plants (tubers)	d	moderate	tissue, starch	

M# 980/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Soft elastic material (skin, fish)																	
2122	1	flake	large	convex	1	present	medium pitted	b,d/c,f	diagonal, parallel, isolated	medium, to intensive, patchy	light to developed, patchy	gutting/ cutting	soft elastic material (fish)	d	moderate	blood-like	221
2127	2	pointed flake	medium	straight	1	absent	medium pitted	b,c,f	parallel, diagonal, rotative, isolated	slight	light to very light	piercing/ cutting	soft elastic material (skin)	d	short	rainbow, red film	
2126	2	blade-like flake	medium	straight	1	absent	low pitted	b,d/c,f	parallel, diagonal, isolated	slight to medium, patchy	light, patchy	cutting/ piercing	soft elastic material (skin)	p	short	none	215
2128	2	pointed flake	small	straight	1	present	medium pitted	b,d/c,f	perpen-dicular to the tip, parallel, isolated	slight to medium	light	cutting/ piercing	soft elastic material (skin)	d	short	rainbow, red film	213

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*, 1998, *(P)* Parr, pers. comm.

Table 15. Type of artefacts and wear patterns from 990/1000 test pit, Layer 6 (the middle Holocene).

M# 990/1000	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Siliceous soft wood, palm, bamboo																	
2130	1	flake broken during use	medium	straight	2	absent	medium pitted	b,c,f	parallel, perpen-dicular, dense	intensive, patchy	well developed, patchy	whittling/ sawing,	siliceous, soft wood, palm, bamboo	d	short	tissue	
2132	1	blade-like flake	large	irregular	2	present	medium to heavy pitted	b,c,f,s	perpen-dicular, diagonal, dense	intensive, patchy	well developed, patchy	scraping/ whittling	siliceous, soft wood, palm, bamboo	d	moderate	tissue, starch	
Siliceous hard wood and hard palm																	
2137	1	flake	large	concave	3	absent	heavy pitted	b,c,f	parallel, dense	intensive, patchy	well developed, patchy	sawing	siliceous, hard wood, palm	d	short	white	
2131	2	flake broken during use	large	a,b – convex	3	absent	heavy pitted	b,c,f	parallel, dense	intensive, patchy	well developed, patchy	sawing	siliceous, hard wood, palm	d	short	starch	
2138	2	flake broken during Use	large	a,b – convex	a-2, b-3	absent	heavy pitted	b,c,f	parallel, dense	intensive, patchy	well developed, patchy	sawing	siliceous, hard wood, palm	d	short	tissue	
Non-siliceous soft wood																	
2136	1	flake	large	a,c – concave, b – straight	a,c-2, b-3	absent	low pitted	a,b,c – b,c,f,s	a,c – diagonal, b – perpen-dicular, Isolated	medium, patchy	light, patchy	a,c – whittling b – scraping	non-siliceous soft wood	d	short	tissue	

Non-siliceous hard wood																	
2139	1	flake broken during use	medium	straight	3	absent	medium to heavy pitted	b,c,f,s	diagonal, isolated, flaked	slight, patchy	light, patchy	scraping	non-siliceous hard wood	p	short	none	176
Non-woody plants (greens)																	
2133	1	blade-like flake	large	convex	2	present	low to medium pitted	b,c,f	parallel, isolated	slight	light	cutting/ slicing	non-woody plants (greens)	d	moderate	starch	204
Soft elastic material (skin, fish)																	
1871	1	stemm-ed tool	small	straight	1	absent	medium to heavy pitted	b,d/c,f	parallel	medium	developed	cutting	soft elastic material (skin)	d	moderate	none	
2129	1	pointed flake	medium	straight	1	absent	medium to heavy pitted	b,d/c,f	diagonal, parallel, isolated	medium	developed	cutting/ piercing	soft elastic material (skin)	p	moderate	red residues	214
2134	1	pointed flake	medium	straight	1	absent	medium pitted	b,d/c,f	parallel, diagonal, isolated, a few only	light	very light	scraping/ cutting (shaving)	soft elastic material (skin)	p	short	blood-like, tissue	216
2135	1	flake	small	a – straight b – convex	1	absent	low pitted	b,c,f	diagonal	medium	developed	cutting (shaving)	soft elastic material (skin)	p	moderate	dark red residues	217

Table 16. Type of artefacts and wear patterns from 1000/999 test pit, Layer 6 (the middle Holocene).

M# 1000/999	Spit	Tool Type	Size of Tool	Shape of Edge	Edge Angle	Cortex	Surface Preservation	Scar Type	Striation Orientation	Edge Rounding	Polish	Mode of Use	Contact Material	Confidence	Use-duration, Hafting Pattern	Residue Type	Reference to Plates
Non-woody plants (greens)																	
2100	2	flake	medium	straight	1	absent	medium pitted	b,d/c,f	parallel, diagonal, isolated	medium	developed	cutting	non-woody plants (greens)	p	short	none	

Edge angle refers to the following categories: *(1)* less than 15°; *(2)* between 15° and 55°; and *(3)* more than 55°. *Scar type* refers to the presence of distinct termination types of use-wear scars as follows: *(f)* feather; *(b)* bending; *(s)* step; *(m)* mixed types; *(c)* continuous distribution; and, *(d/c)* discontinuous distribution. Source references abbreviated as follows: *(B)* Barton *et al.*, 1998), *(F)* Fullagar, pers. comm., *(K)* Kealhofer *et al.*, 1998, *(P)* Parr, pers. comm.

Table 17. Distribution of late Holocene tools within test pits.

970/1000				1000/1000				980/1000				990/1000				1001/999				1000/999			
Item No.	M# 970/1000	Spit	Plate No.	Item No.	M# 1000/1000	Spit	Plate No.	Item No.	M# 980/1000	Spit	Plate No.	Item No.	M# 990/1000	Spit	Plate No.	Item No.	M# 1001/1000	Spit	Plate No.	Item No.	M# 1000/999	Spit	Plate No.
Siliceous soft wood, palm, bamboo																							
1	312	1		1	125	3	126	1	2107	1		1	2144	1		1	2102	1		1	2101	3	
2	324	3		2	126	3	127	2	2108	1		2	2140	2	136	2	2106	3					
3	328	3		3	1913	3	128	3	2110	2						3	2103	2					
4	331	3	129	4	1916	2		4	2111	2													
5	333	3	132	5	1917	2		5	2112	2	142												
6	336	3	135					6	2113	2													
7	1919	3						7	2116	3	145												
8	1933	2																					
9	1946	3	134																				
10	2023	1																					
11	2028	3																					
12	2032	3																					
13	2034	3	133																				
14	2036	3																					
15	2037	3																					
16	2040	3																					
17	2041	3																					
Siliceous hard wood and palm																							
18	1922	3	150																				
19	1925	3	149																				
20	2027	3																					
Non-siliceous soft wood																							
21	325	3																					
22	326	3	153																				
23	1923	1																					
24	1924	1	160																				
25	1936	2		7	112	1						3	2141										
26	1938	3	163	8	113	1						4	2142										

970/1000				1000/1000				980/1000				990/1000				1001/999				1000/999			
Item No.	M# 970/1000	Spit	Plate No.	Item No.	M# 1000/1000	Spit	Plate No.	Item No.	M# 980/1000	Spit	Plate No.	Item No.	M# 990/1000	Spit	Plate No.	Item No.	M# 1001/1000	Spit	Plate No.	Item No.	M# 1000/999	Spit	Plate No.
27	1945	3		9	118	2	162																
28	2022	1	158	10	1915	1																	
29	2024	1		11	2045	3	161																
30	2025	2	154																				
31	2026	2	159																				
32	2033	3	155																				
33	2038	3																					
Non-siliceous hard wood																							
34	334	3	198	6	114	1	175																
35	1942	3	199																				
Non-woody plants (tubers)																							
36	310	1	186	12	1914	3	184	8	2115	3						4	2105	3	183				
37	317	1	188	13	2046	3	185																
38	1921	2	187																				
39	1926	3																					
40	1930	1	182																				
41	2030	3																					
42	2039	3																					
Non-woody plants (greens)																							
43	313	1																					
44	470	2	192																				
45	2029	3	193																				
46	2031	3	191																				
47	1929	1	190																				
48	1941	3	189																				
Soft elastic material (skin, fish)																							
49	322	3	205					9	2109	1		5	2143	1		5	2104	2	206				
50	469	2	207																				
51	1939	3	205																				
52	1940	3	209																				
53	2035	3																					
Dense, hard material (shell, clay)																							

970/1000				1000/1000				980/1000				990/1000				1001/999				1000/999			
Item No.	M# 970/1000	Spit	Plate No.	Item No.	M# 1000/1000	Spit	Plate No.	Item No.	M# 980/1000	Spit	Plate No.	Item No.	M# 990/1000	Spit	Plate No.	Item No.	M# 1001/1000	Spit	Plate No.	Item No.	M# 1000/999	Spit	Plate No.
								10	2114	3	223												
Without use-wear																							
54	1934	2																					
Total: 54 tools				Total: 13 tools				Total: 10 tools				Total: 5 tools				Total: 5 tools				Total: 1 tool			

Table 18. Distribution of middle Holocene tools within test pits.

970/1000				1000/1000				980/1000				990/1000				1000/999			
Item No.	M# 970/1000	Spit	Plate No.	Item No.	M# 1000/1000	Spit	Plate No.	Item No.	M# 980/1000	Spit	Plate No.	Item No.	M# 990/1000	Spit	Plate No.	Item No.	M# 1000/999	Spit	Plate No.
Siliceous soft wood, palm, bamboo																			
1	339	1		1	128	1	137	1	2118	1	141	1	2130	1					
2	356	2		2	1906	1	138	2	2121	1	143	2	2132	1					
3	2051	2																	
4	1965	2	146																
5	1966	2																	
6	1994	1	144																
7	1997	1	139																
8	2007	1																	
9	2010	3	147																
10	2011	3																	
11	2012	3																	
12	2013	3	148																
13	2016	4	140																
Siliceous hard wood and palm																			
14	367	3	118									3	2131	2					
15	1955	3										4	2137	1					
16	1976	4	152									5	2138	2					
17	1978	4																	
18	1979	1																	
19	1989	1																	
Non-siliceous soft wood																			
20	363	3	166	3	130	1		3	2120	1		6	2136	1					
21	366	3		4	380	4		4	2123	1									
22	1949	2		5	1909	1													
23	1951	2	170	6	1998	4													
24	1952	2		7	2044	1													
25	1957	3	172																
26	1958	3	169																
27	1962	3	167																

970/1000					1000/1000					980/1000					990/1000					1000/999			
Item No.	M# 970/1000	Spit	Plate No.		Item No.	M# 1000/1000	Spit	Plate No.		Item No.	M# 980/1000	Spit	Plate No.		Item No.	M# 990/1000	Spit	Plate No.		Item No.	M# 1000/999	Spit	Plate No.
28	1967	2	164																				
29	1973	4	120																				
30	1981	3																					
31	2014	3	168																				
32	2015	3	171																				
33	2017	4	165																				
Non-siliceous hard wood																							
34	354	2	178		8	1905	1	179		5	2124	1			7	2139	1	176					
35	1972	4	181																				
36	1980	1	180																				
37	1983	3	177																				
Non-woody plants (tubers)																							
38	359	3	194		9	129	1			6	2117	1											
39	361	3	199		10	1908	1			7	2119	1											
40	364	3	198		11	1911	1																
41	1953	2	223		12	1912	1																
42	1996	1	220		13	2042	1																
43	2008	1																					
44	2018	4	197																				
45	2020	4	196																				
Non-woody plants (greens)																							
46	358	3	201		14	131	1								8	2133	1	204		1	2100	2	
47	1969	1	202		15	133	1																
48	1987	1	203																				
49	2019	4																					
50	2021	4																					
Soft elastic material (skin, fish)																							
51	351	2	219		16	132	1			8	2122	1	221		9	2129	1	214					
52	1954	2			17	135	1	218		9	2126	2	215		10	2134	1	216					
53	2009	2	210		18	1782	1	212		10	2127	2			11	2135	1	217					
					19	1903	1			11	2128	2	213		12	1871	1						
					20	1907	1	211															

970/1000				1000/1000				980/1000				990/1000				1000/999			
Item No.	M# 970/1000	Spit	Plate No.	Item No.	M# 1000/1000	Spit	Plate No.	Item No.	M# 980/1000	Spit	Plate No.	Item No.	M# 990/1000	Spit	Plate No.	Item No.	M# 1000/999	Spit	Plate No.
				21	1910	1	222												
				22	2043	1	220												
Dense, hard material (shell, clay)																			
54	1968	2	224																
55	1982	3	225																
Without use-wear																			
								12	2125	1									
Total: 55 tools				Total: 22 tools				Total: 12 tools				Total: 12 tools				Total: 1 tool			

Table 19. Late Holocene tools: relationship between material worked and the mode of use.

	Contact material and mode of use	Pit 970/1000	Pit 1000/1000	Pit 980/1000	Pit 990/1000	Pit 1001/999	Pit 1000/999	Number of tools used and (%) by contact material		Number of tools used and (%) by mode of use	
1	Siliceous soft wood, palm, bamboo	17	5	7	2	3	1	35	39.8	35	39.8
	scraping	6	1			1	1			9	10.2
	whittling	4	1	1		1				7	8.0
	sawing	2	1	1						4	4.5
	carving	3								3	3.4
	drilling				1					1	1.1
	scraping/sawing		1	1						2	2.3
	scraping/whittling		1			1				2	2.3
	whittling/sawing	2		4						6	6.8
	cutting/whittling				1					1	1.1
2	Siliceous hard wood and hard palm	3						3	3.4	3	3.4
	sawing	1								1	1.1
	scraping/sawing	1								1	1.1
	whittling/sawing	1								1	1.1
3	Non-siliceous soft wood	13	5		2			20	22.7	20	22.7
	scraping	1	1							2	2.3
	whittling	7	1		2					10	11.4
	carving	3	1							4	4.5
	scraping/sawing		1							1	1.1
	scraping/whittling		1							1	1.1
	whittling/ sawing	2								2	2.3
4	Non-siliceous hard wood	2	1					3	3.4	3	3.4
	scraping	1								1	1.1
	scraping/sawing	1	1							2	2.3
5	Non-woody plants	13	2	1				17	19.3	17	19.3
	A. Tubers:	7	2	1		1		11	12.5	11	12.5
	scraping	2		1		1				4	4.5
	scraping/slicing	4	1							5	5.7
	cutting/slicing		1							1	1.1
	cutting/peeling	1								1	1.1
	B. Greens, grasses										

	Contact material and mode of use	Pit 970/1000	Pit 1000/1000	Pit 980/1000	Pit 990/1000	Pit 1001/999	Pit 1000/999	Number of tools used and (%) by contact material		Number of tools used and (%) by mode of use	
	and leaves:	6						6	6.8	6	6.8
	scraping	1								1	1.1
	scraping/slicing	2								2	2.3
	cutting/slicing	2								2	2.3
	cutting/splitting	1								1	1.1
6	Soft elastic material	5		1	1	1		8	9.1	8	9.1
	A. Skin:	2		1	1	1		5	5.7	5	5.7
	piercing	2				1				3	3.4
	cutting				1						1.1
	piercing/cutting			1							1.1
	B. Fish:	3						3	3.4	3	3.4
	gutting/cutting	3								3	3.4
7	Dense hard material			1				1	1.1	1	1.1
	A. Shell							1	1.1	1	1.1
	sawing			1						1	1.1
	B. Clay										
8	No use-wear	1						1	1.1		
	Total number of tools	54	13	10	5	5	1	88		88	
	Total percentage of tools	61.4	14.8	11.4	5.7	5.7	1.1		100.0		100.0

Table 20. Middle Holocene tools: relationship between material worked and the mode of use.

	Contact material and mode of use	Pit 970/1000	Pit 1000/1000	Pit 980/1000	Pit 990/1000	Pit 1000/999	Number of tools used and (%) by contact material		Number of tools used and (%) by mode of use	
1	Siliceous soft wood, palm, bamboo	13	2	2	2		19	18.8	19	18.8
	scraping	1							1	1.0
	whittling	7							7	6.9
	sawing		1						1	1.0
	carving	1							1	1.0
	scraping/whittling				1				1	1.0
	whittling/sawing	2							6	5.9
	cutting/scraping	1							1	1.0
	whittling/sawing/scraping	1							1	1.0
2	Siliceous hard wood and hard palm	6			3		9	8.8	9	8.8
	scraping	2							2	1.9
	sawing	1			3				4	3.9
	scraping/sawing	2							2	1.9
	whittling//sawing/scraping	1							1	1.0
3	Non-siliceous soft wood	14	5	2	1		22	21.6	22	21.6
	scraping	4		1					5	4.9
	whittling	5	3	1					9	8.8
	sawing	1	1						2	1.9
	carving	1	1						2	1.9
	scraping/sawing	1							1	1.0
	scraping/whittling	1	1						2	1.9
	whittling/sawing	1							1	1.0
4	Non-siliceous hard wood	4	1	1	1		7	6.9	7	6.9
	scraping	2			1				3	2.9
	scraping/whittling		1	1					2	1.9
	whittling/sawing	1							1	1.0
	cutting/whittling (burin)	1							1	1.0
5	Non-woody plants	13	7	2	1	1	24	23.5	24	23.5
	A. Tubers:	8	5	2			15	14.7	15	14.7
	scraping	2	3	1					6	5.9
	slicing			1					1	1.0
	scraping/slicing	4	1						5	4.9
	cutting/slicing	2	1						3	2.9

	Contact material and mode of use	Pit 970/1000	Pit 1000/1000	Pit 980/1000	Pit 990/1000	Pit 1000/999	Number of tools used and (%) by contact material		Number of tools used and (%) by mode of use	
	B. Greens, grasses and leaves:	5	2		1	1	9	8.8	9	8.8
	cutting	1			1	1			3	2.9
	cutting/slicing	3	2						5	4.9
	scraping/slicing	1							1	1.0
6	Soft elastic material	3	7	4	3		18	17.6	18	17.6
	A. Skin:	1	3	3	4		11	10.7	11	10.7
	piercing		2						2	1.9
	cutting			1	1				2	1.9
	shaving				2				2	1.9
	piercing/cutting	1	1	2	1				5	4.9
	B. Fish:	2	4	1			7	6.9	7	6.9
	gutting/cutting	2	4	1					7	6.9
7	Dense hard material	2					2	1.9	2	1.9
	A. Shell	1					1	1.0	1	1.0
	scraping	1							1	1.0
	B. Clay	1					1	1.0	1	1.0
	scraping	1							1	1.0
8	No use-wear			1			1	1.0	1	1.0
	Total number of tools	55	22	12	12	1	102		102	
	Total percentage of tools	53.9	21.6	11.8	11.8	1.0		100.0		100.0

Table 21. Late Holocene tools: morphological features and the material worked.

Type and morphological features of artefacts	Worked Material												
	Siliceous soft wood, palm, bamboo	Siliceous hard wood, Palm	Non-siliceous soft wood	Non-siliceous hard wood	Tubers	Greens	Skin	Fish	Shell	Clay	Non-identifi-able	Total (N)	Total (%)
Type of artefact													
flake	26	3	18	3	9	6	5	1			1	72	81.8
flake – broken during use	3		1					1	1			6	6.8
Kombewa flake								1				1	1.1
retouched flake			1	1								2	2.3
blade-like flake	5			1								6	6.8
core	1											1	1.1
TOTAL	35	3	20	3	11	6	5	3	1		1	88	100.0
Size													
large	5	3	6	3	4	1			1			23	26.1
medium	18		8		3	3	2	3				37	42.0
small	12		6		4	2	3				1	28	31.8
TOTAL	35	3	20	3	11	6	5	3	1		1	88	100.0
Shape and number of working edges													
straight	12		5	1	2		4	1			1	26	29.5
irregular	8	1	4			2	1	1				17	19.3
convex	6		1		2	2		1				12	13.6
concave		1	2		2							5	5.7
2 edges	8	1	6	1	4	1			1			22	25.0
3 edges			1			1						2	2.3
4 edges	1		1	1	1							4	4.5
TOTAL	35	3	20	3	11	6	5	3	1		1	88	100.0
Edge angle													
less than 15° – 1	6		4		3	4	3					20	22.7
16° to 55° – 2	22	1	12	2	5	1	2	3			1	49	55.7
over 56° – 3	7	2	4	1	3	1			1			19	21.6
TOTAL	35	3	20	3	11	6	5	3	1		1	88	100.0

Type and morphological features of artefacts	Worked Material												
	Siliceous soft wood, palm, bamboo	Siliceous hard wood, Palm	Non-siliceous soft wood	Non-siliceous hard wood	Tubers	Greens	Skin	Fish	Shell	Clay	Non-identifi-able	Total (N)	Total (%)
Cortex													
"Yes" – present	12	1	8	1	2	2	1	2				29	33
Use-duration													
Short-term	33	2	15	3	2	1						56	63.6
Moderate	2	1	5		4	5	3	3	1			24	27.3
Long-term					5		2					7	8.0
Not identifiable												1	1.1
TOTAL	35	3	20	3	11	6	5	3	1		1	88	100.0

Table 22. Middle Holocene tools: morphological features and the material worked.

Type and morphological features of artefacts	Worked Material												
	Siliceous soft wood, palm, bamboo	Siliceous hard wood, Palm	Non-siliceous soft wood	Non-siliceous hard wood	Tubers	Greens	Skin	Fish	Shell	Clay	Non-identifi-able	Total (N)	Total (%)
Type of artefact													
flake	14	6	18	5	13	6	7	7	1	1		78	76.4
flake – broken during use	2	2	2	2	1	2	1					12	11.8
blade-like flake	3		2			1	1					7	6.9
stemmed tools		1			1		2				1	5	4.9
TOTAL	19	9	22	7	15	9	11	7	1	1	1	102	100.0
Size													
large	10	7	14	5	4	1		5	1	1	1	49	48.0
medium	6	2	6	2	11	7	7	2				43	42.2
small	3		2			1	4					10	9.8
TOTAL	19	9	22	7	15	9	11	7	1	1	1	102	100.0
Shape and number of working edges													
straight	6	1	5	3	5	7	10	1	1			39	38.2
irregular	5	2	4	1	4			2				18	17.6
convex	4		7	1	4	2		2		1		21	20.6
concave	1	3	3		2			1				10	9.8
2 edges	2	3	2	1			1	1				10	9.8
3 edges	1		1									2	2.0
4 edges				1								1	1.0
broken edge											1	1	1.0
TOTAL	19	9	22	7	15	9	11	7	1	1	1	102	100.0
Edge angle													
less than 15° – 1	4		2		3	5	10	3				27	26.5
16° to 55° – 2	12	1	14	1	11	3	1	4				47	46.1
over 56° – 3	3	8	6	6	1	1			1	1		27	26.5
broken edge											1	1	1.0
TOTAL	19	9	22	7	15	9	11	7	1	1	1	102	100.0
Cortex													

Type and morphological features of artefacts	Worked Material												
	Siliceous soft wood, palm, bamboo	Siliceous hard wood, Palm	Non-siliceous soft wood	Non-siliceous hard wood	Tubers	Greens	Skin	Fish	Shell	Clay	Non-identifi-able	Total (N)	Total (%)
"Yes" – present	9	4	8	5	4	3	3	3		1		40	39.2
Use-duration													
Short-term	15	7	21	7	2	2	4	1	1	1		61	59.8
Moderate	4	2	1		13	7	7	6				40	39.2
Not identifiable											1	1	
TOTAL	19	9	22	7	15	9	11	7	1	1	1	102	100.0

Table 23. Number of tools used on different categories of worked material in both middle and late Holocene.

Contact materials	Late Holocene								WK2	Middle Holocene						
	970/1000	1000/1000	980/1000	990/1000	1001/999	1000/999	total tools (N)	Percent - age (%)		970/1000	1000/1000	980/1000	990/1000	1000/999	total tools (N)	Percent - age (%)
Woody plants	35	11	7	4	3	1	61	69.3		37	8	5	7		57	55.9
Silicious soft wood, palm and bamboo	17	5	7	2	3	1	35	39.8		13	2	2	2		19	18.8
Silicious hard wood and hard palm	3						3	3.4		6			3		9	8.8
Non-siliceous soft wood	13	5		2			20	22.7		14	5	2	1		22	21.6
Non-siliceous hard wood	2	1					3	3.4		4	1	1	1		7	6.9
Non-woody plants	13	2	1		1		17	19.3		13	7	2			24	23.5
Tubers	7	2	1		1		11	12.5		8	5	2			15	14.7
Greens, grasses and leaves	6						6	6.8		5	2		1	1	9	8.8
Soft elastic material	5	1		1	1	1	8	9.1		3	7	4	4		18	17.6
Skin	2			1	1	1	5	5.7		1	3	3	4		11	10.8
Fish	3						3	3.4		2	4	1			7	6.9
Dense hard material		1					1	1.1		2					2	2.0
Shell		1					1	1.1		1					1	1.0
Clay										1					1	1.0
Non-identifiable	1						1	1.1				1			1	1.0
Total number of tools	54	13	10	5	5	1	88			55	22	12	12	1	102	
Total – percentage (%)	61.4	14.7	11.4	5.7	5.7	1.1		100		53.9	21.6	11.8	11.8	1.0		100

Table 24. Distribution of tools used in subsistence and craft activities in the middle and late Holocene.

Activities, materials and mode of use	The Late Holocene		The Middle Holocene	
	Total tools (N=87)	Percentage (%)	Total tools (N=101)	Percentage (%)
Subsistence activities	14	16.0	22	21.8
Non-woody plants (tubers)	11	12.6	15	14.9
scraping	4		6	
slicing			1	
scraping/slicing	5		5	
cutting/slicing	1		3	
slicing/peeling	1			
Soft elastic material (fish)	3	3.4	7	6.9
cutting/gutting	3		7	
Domestic Activities	73	84.0	79	78.2
Siliceous soft wood, palm and bamboo	35	40.2	19	18.8
scraping	9		1	
whittling	7		7	
sawing	4		1	
carving	3		1	
drilling	1			
scraping/sawing	2			
scraping/whittling	2		1	
whittling/sawing	6		6	
cutting/whittling	1			
scraping/cutting			1	
whittling/scraping/sawing			1	
Siliceous hard wood and palm	3	3.4	9	8.9
scraping			2	
sawing	1		4	
scraping/sawing	1		2	
whittling/sawing	1		1	
Non-siliceous soft wood	20	23.0	22	21.8
scraping	2		5	
whittling	10		9	
sawing			2	
carving	4		2	
scraping/sawing	1		1	
scraping/whittling	1		2	
whittling/sawing	2		1	
Non-siliceous hard wood	3	3.4	7	6.9
scraping	1		3	
scraping/sawing	2			
scraping/whittling			2	
whittling/sawing			1	
cutting/whittling (burin)			1	
Non-woody plants (greens, grasses and leaves)	6	7.0	9	8.9
scraping	1		3	
cutting	2		5	

Activities, materials and mode of use	The Late Holocene		The Middle Holocene	
	Total tools (N=87)	Percentage (%)	Total tools (N=101)	Percentage (%)
cutting/slicing	2		1	
scraping/slicing	1			
Soft elastic material (skin)	5	5.8	11	10.9
piercing	3		2	
cutting	1		2	
shaving			2	
piercing/cutting	1		5	
Dense hard material (shell)	1		1	1.0
scraping				
sawing				
Dense hard material (clay)			1	1.0
scraping			1	
Total:	87	100	101	100

Table 25. Middle and late Holocene distribution of identified tools within artefact assemblages from test pits.

Test pit and type of material worked by identified tools (middle Holocene)	Spit 1		Spit 2		Spit 3		Spit 4		Spit 5		Total	
	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools
1000/1000	180	20	10	0	6	0	106	2	56	0	358	22
1001/1000	2	0	7	0							9	0
1000/999			36	1	2	0					38	1
990/1000	48	10	24	2							72	12
980/1000	55	9	8	3	7						70	12
970/1000	105	11	61	14	92	20	27	10			285	55
Total:	390	50	146	20	107	20	133	12	56		832	102

Test pit and type of material worked by identified tools (late Holocene)	Spit 1		Spit 2		Spit 3		Spit 4		Total	
	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools	Total number of artefacts	Number of tools
1000/1000	33	4	44	3	27	6	4	0	108	13
1001/1000	5	0	9	0	15	0	0	0	29	0
1000/999	7	0	6	0	3	1	0	0	16	1
1001/999	3	1	4	2	22	2	0	0	29	5
990/1000	13	1	24	4	0	0	0	0	37	5
980/1000	20	3	16	4	23	3	0	0	59	10
970/1000	32	11	54	8	199	35	0	0	285	54
Total:	113	20	157	21	289	47	4	0	563	88

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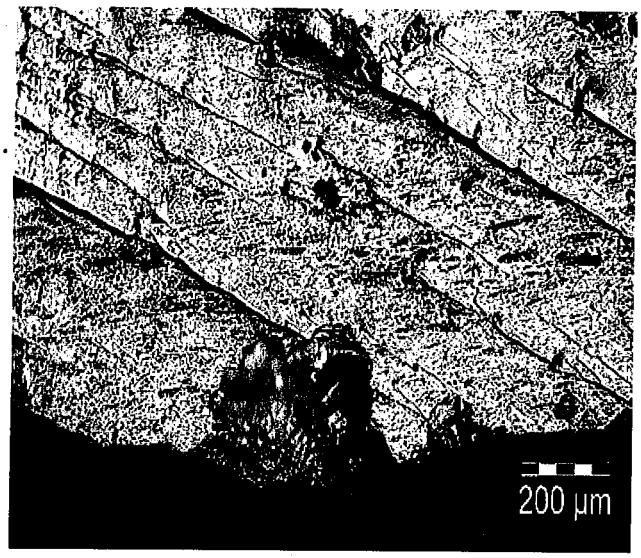
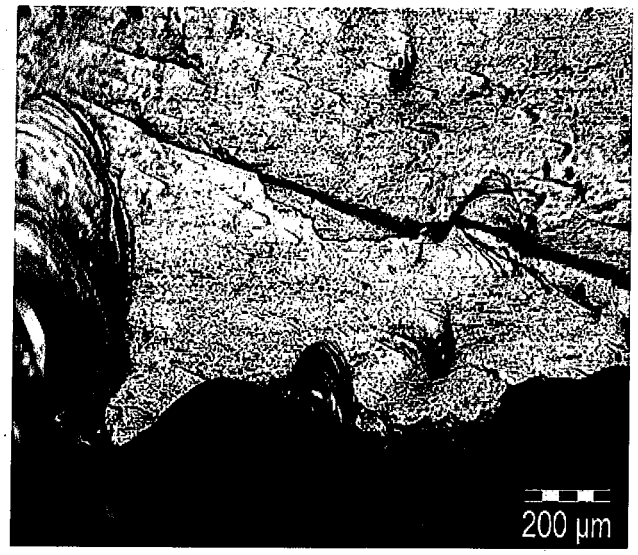
doi:10.3853/j.1835-4211.21.2011.1559

KONONENKO, NINA, 2011. Experimental and archaeological studies of use-wear and residues on obsidian artefacts from Papua New Guinea. *Technical Reports of the Australian Museum, Online* 21: 1–244.

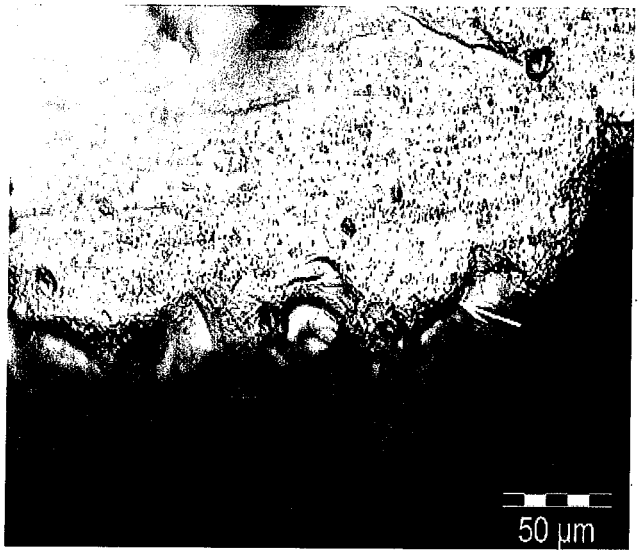
Plates



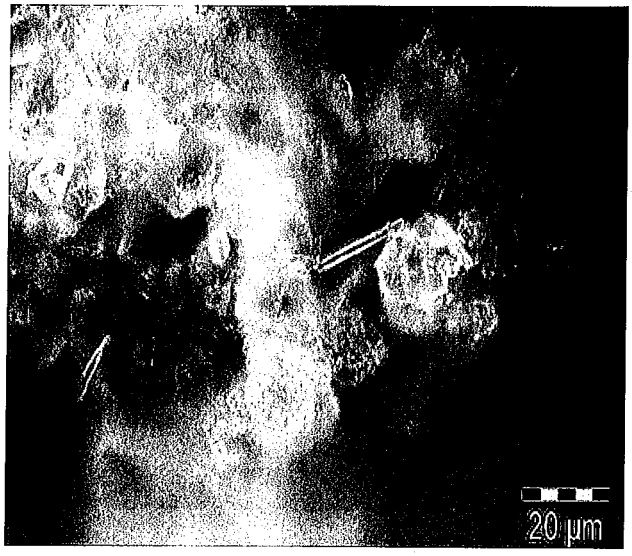
1A



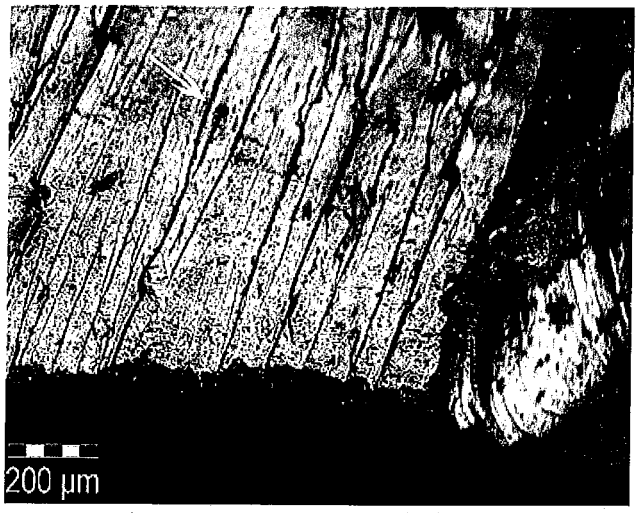
1B



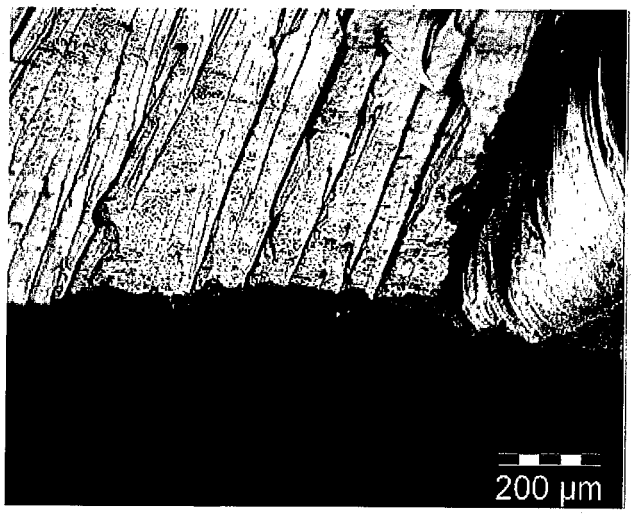
1C



1D

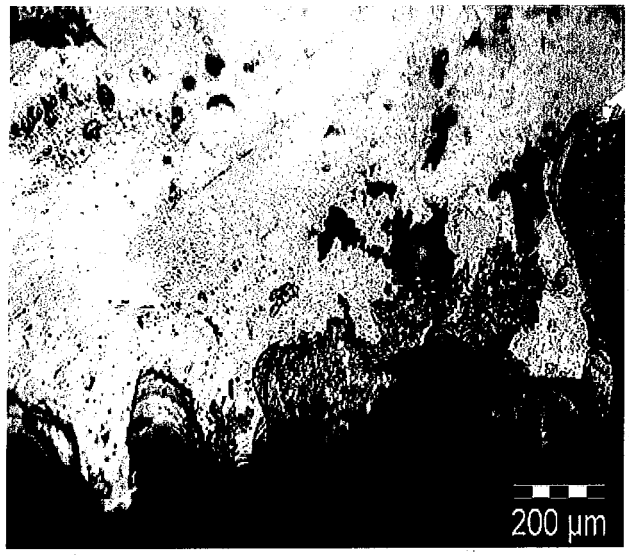


2A

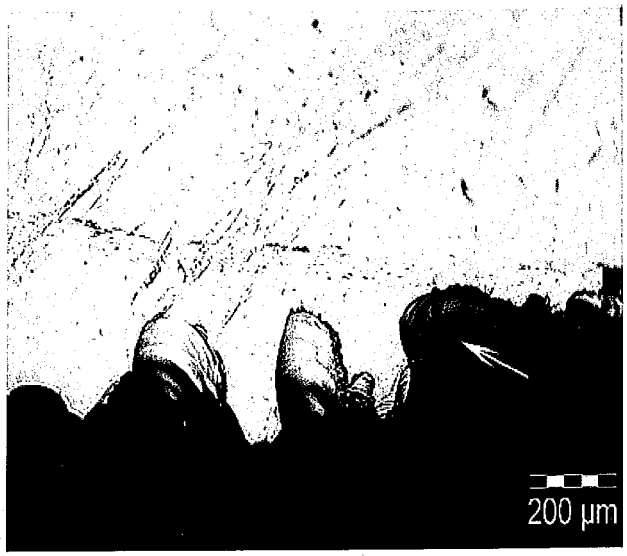


2B

Plates 1–2. 1A–1D Experiment 77. Sawing coconut palm for 5 minutes: *(1A)* before cleaning, *(1B)* after cleaning, *(1C)* polish, *(1D)* residue. The arrow indicates well developed polish. 2A–2B Experiment 79. Sawing coconut palm for 15 minutes: *(2A)* before cleaning, *(2B)* after cleaning. The arrows indicate stress fissure.

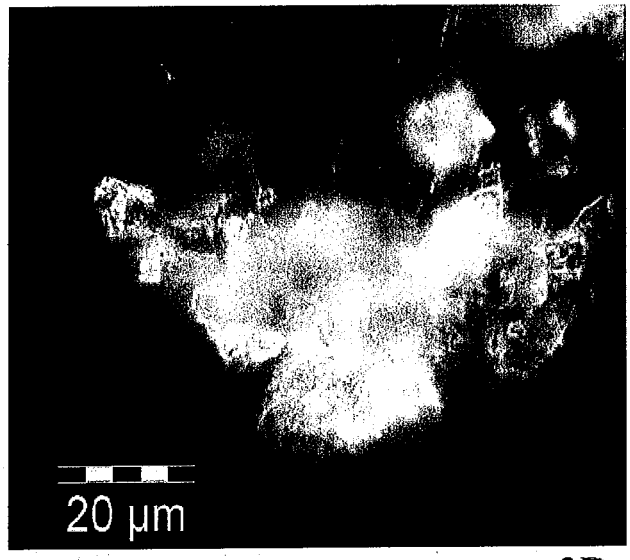


3A

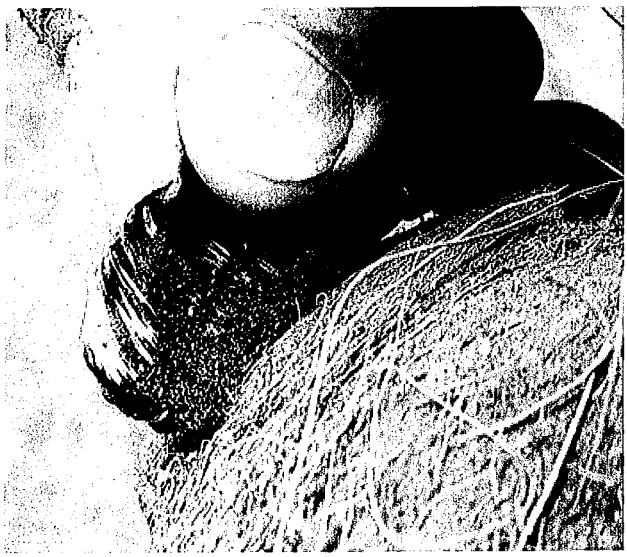


3B

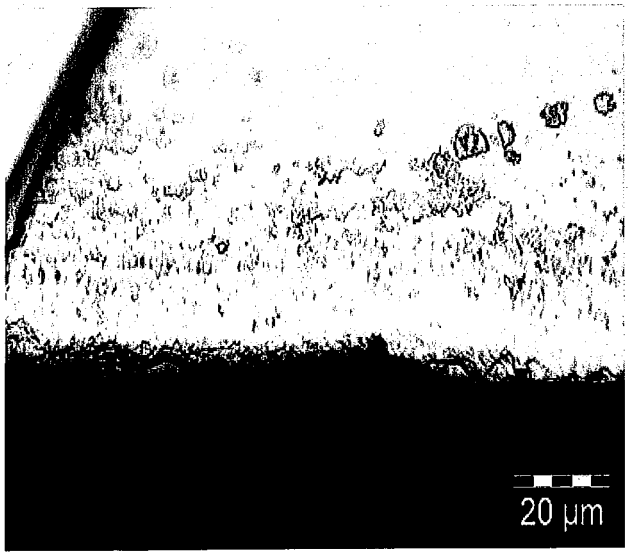
3C



3D

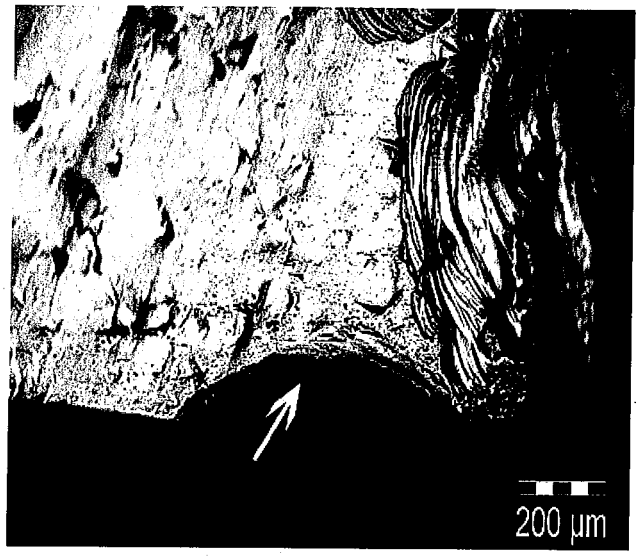


4A



4B

Plates 3–4. 3A–3D Experiment 164. Whittling coconut palm for 23 minutes: *(3A)* before cleaning, *(3B)* after cleaning, *(3C)* scars and striations, *(3D)* starch residue and plant tissue before cleaning. White arrow indicates bending scars and black arrow indicates feather scars. 4A–4B Experiment 87. Scraping coconut shell for 30 minutes: *(4A)* scraping action, *(4B)* polish.



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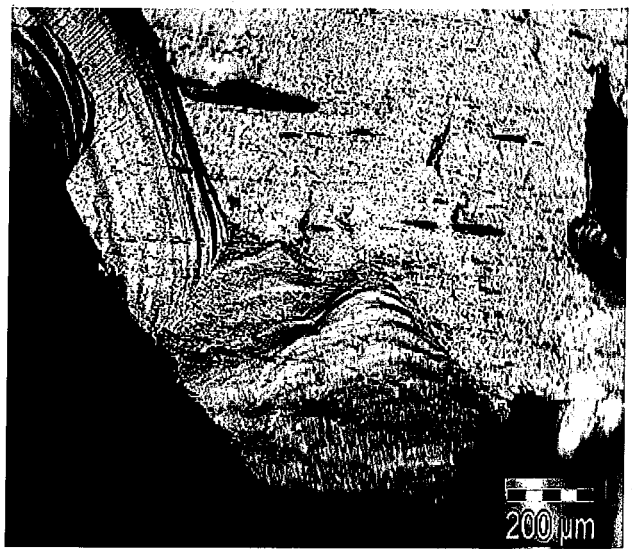

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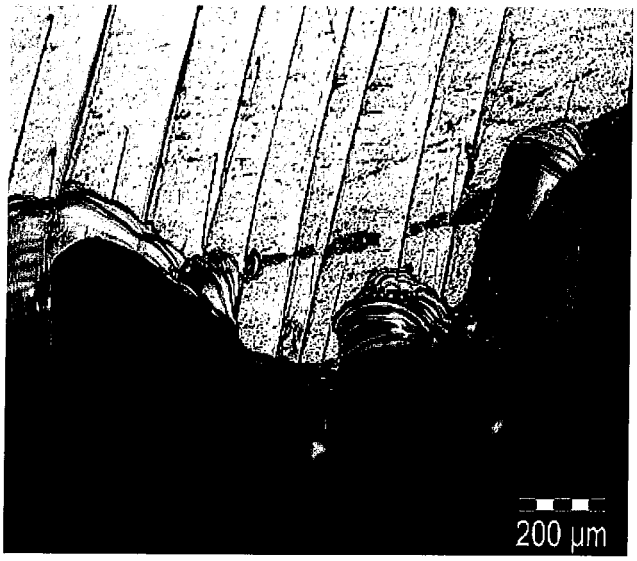

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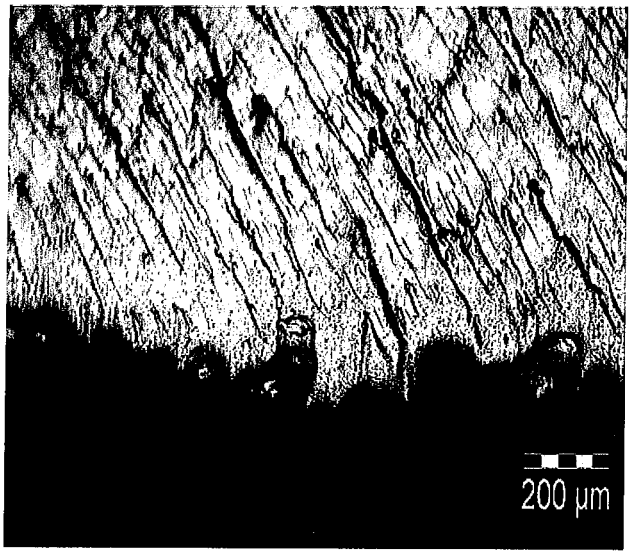
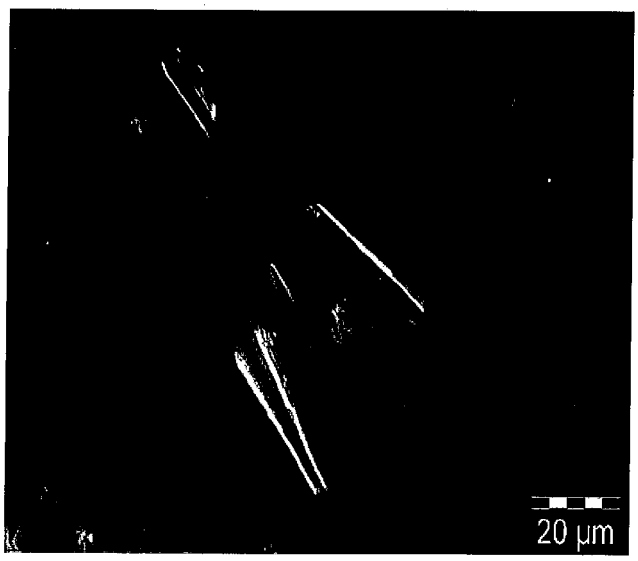
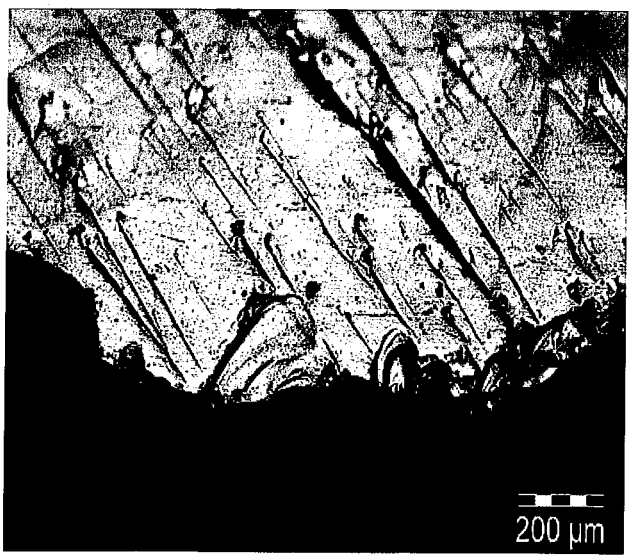


8A

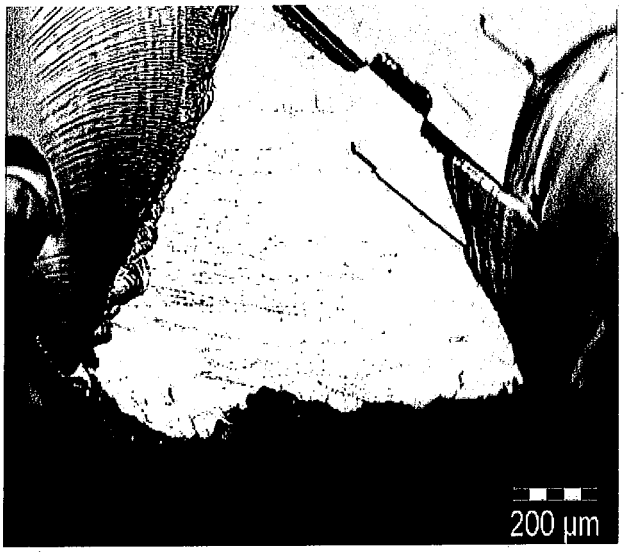


8B

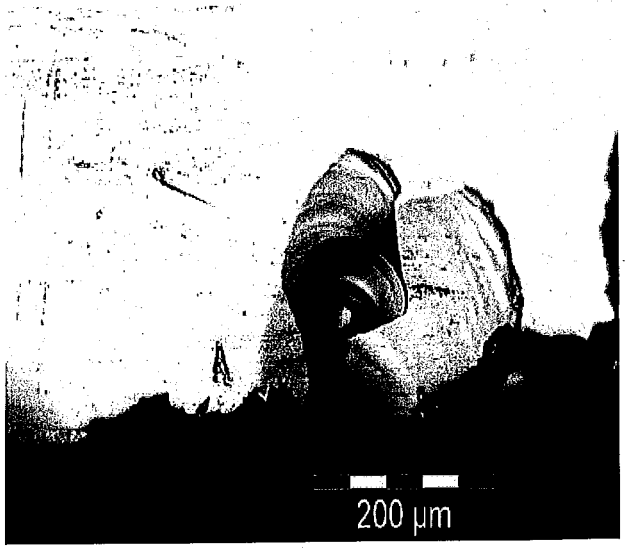


9

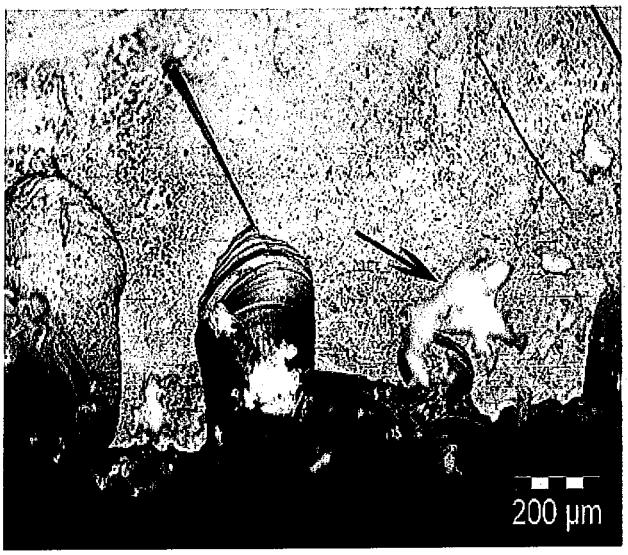
Plates 5–9. *(5)* Experiment 169. Sawing sago palm for 5 minutes. The arrow indicates bending scars. *(6)* Experiment 172. Sawing sago palm for 10 minutes. *(7)* Experiment 166. Sawing sago palm for 30 minutes. 8A–8B Experiment 269. Scraping sago palm for 30 minutes: *(8A)* polish, *(8B)* residue, *(9)* Experiment 180. Cutting sago palm for 1 hour 15 minutes.



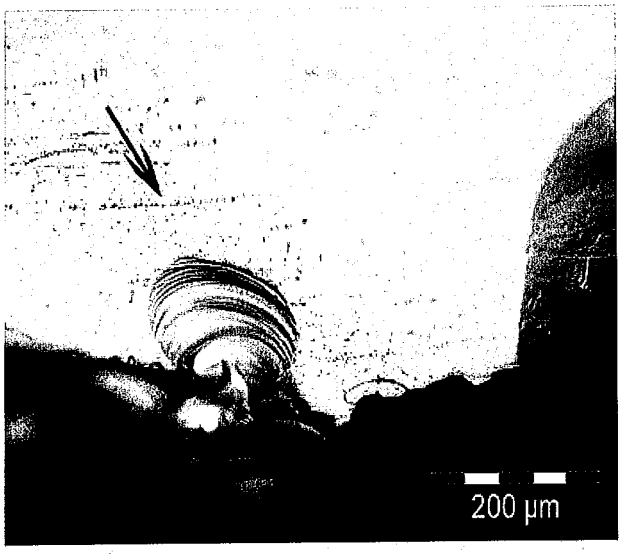
10A



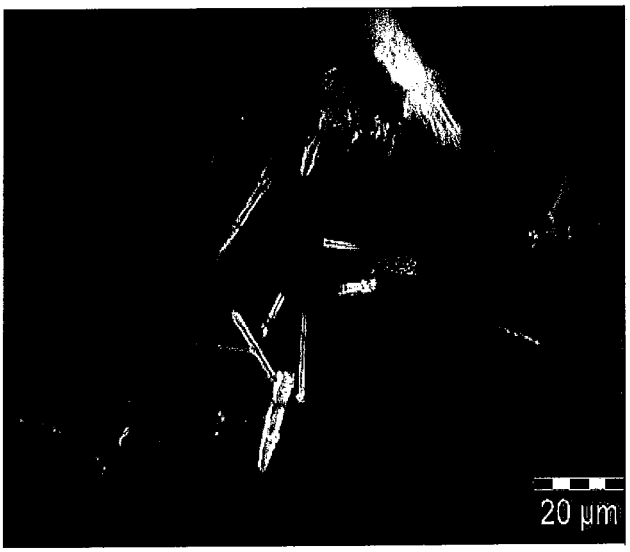
10B



11A



11B



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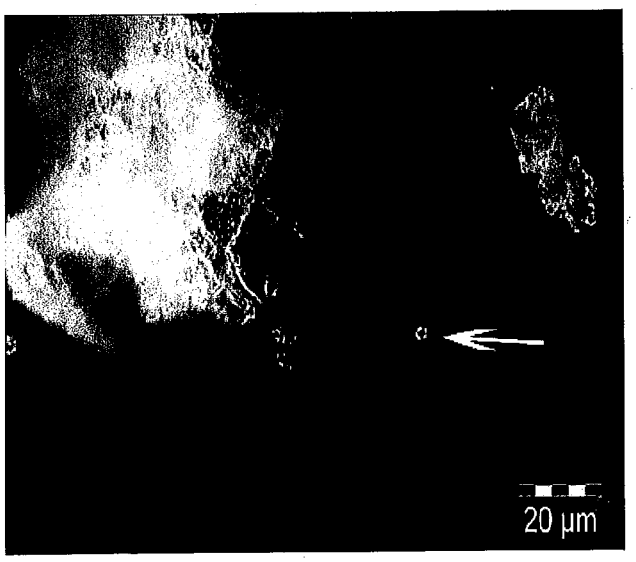
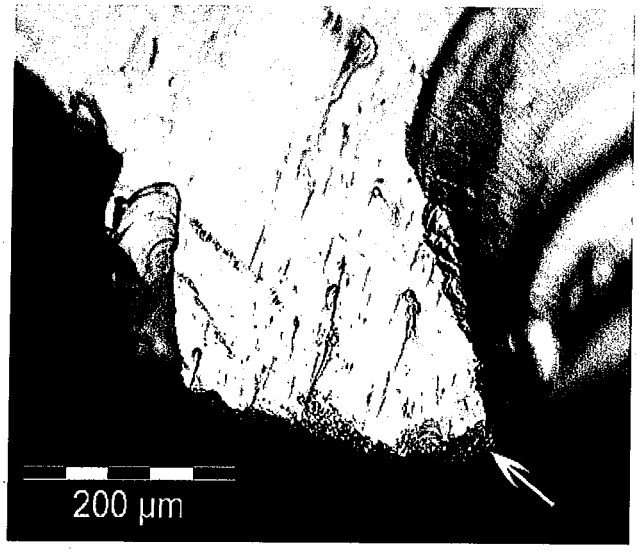


13

Plates 10–13. 10A–10B Experiment 219. Sawing rattan for 5 minutes: *(10A)* scars and striations, *(10B)* scars, striations and polish. 11A–11B Experiment 177. Sawing rattan for 30 minutes: *(11A)* before cleaning, *(11B)* after cleaning. The arrow indicates intermittent striations. *(12)* Experiment 159. Cutting rattan for 5 minutes: plant residues. *(13)* Experiment 120. Cutting rattan for 15 minutes: starch residue.



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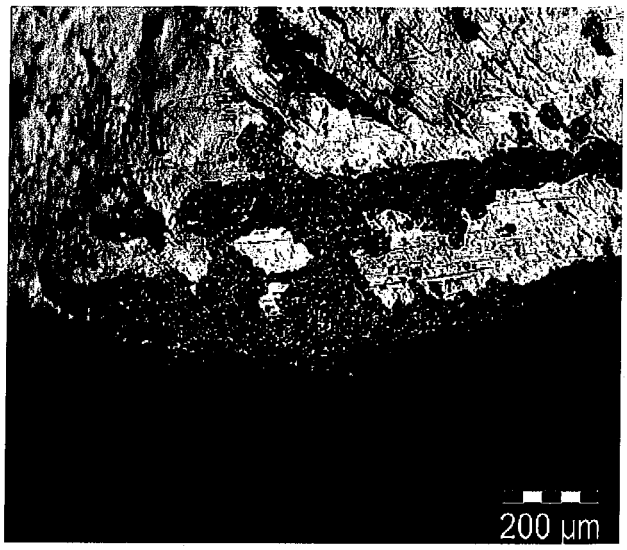
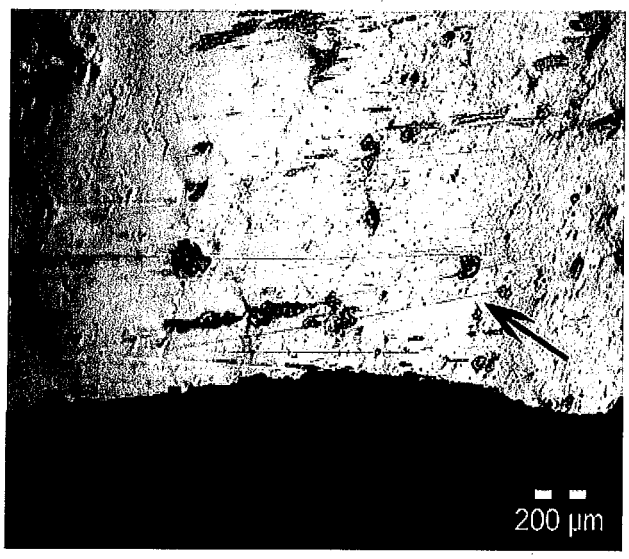
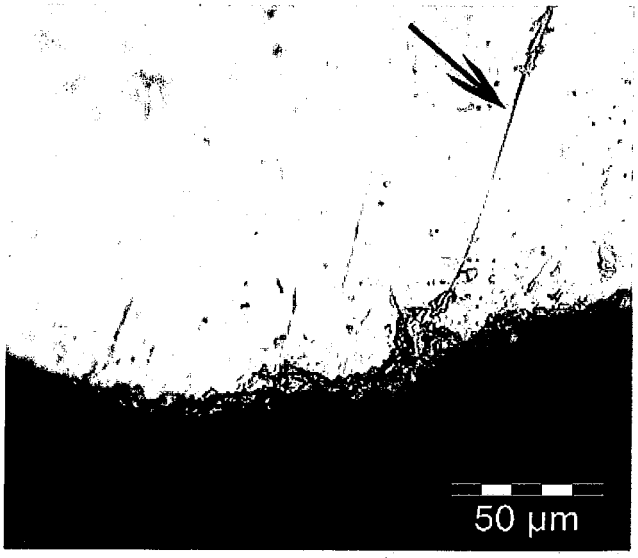


15

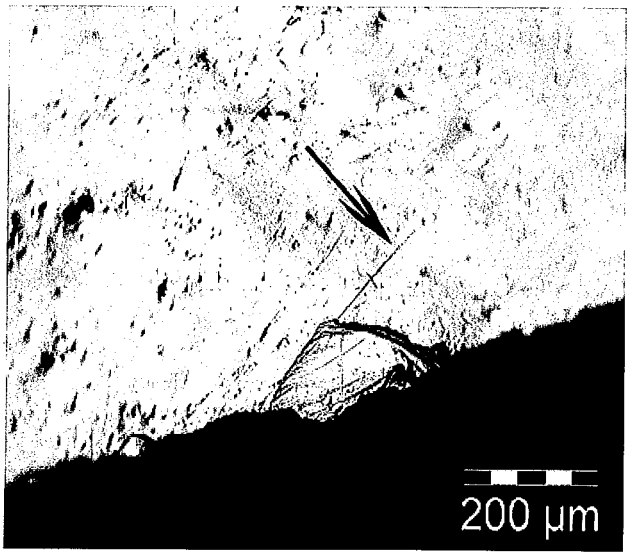
16



17

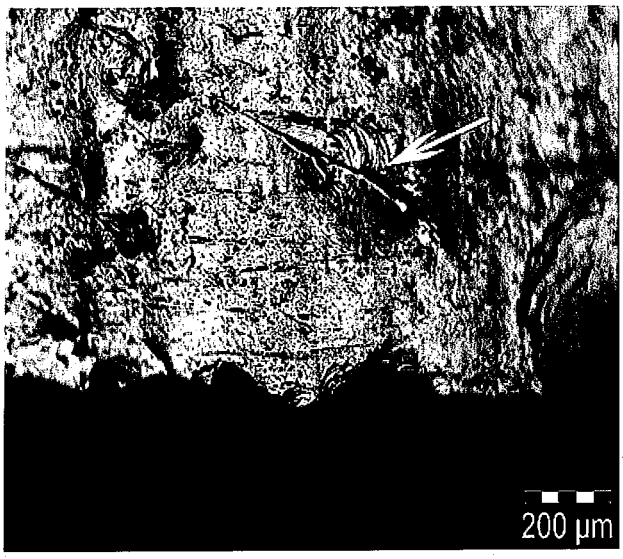


18A

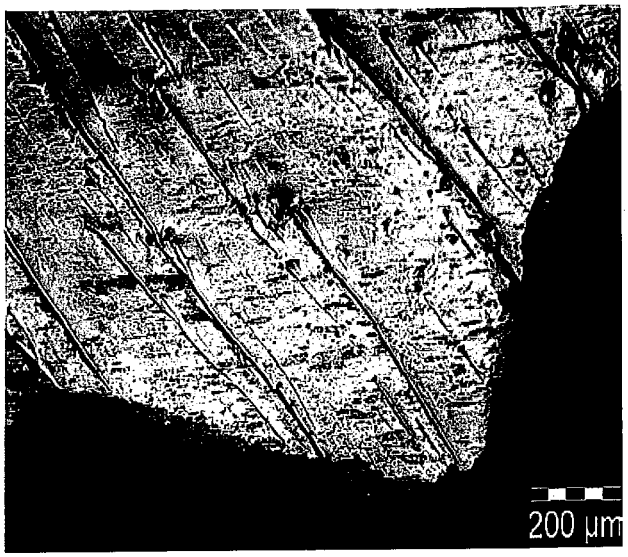


18B

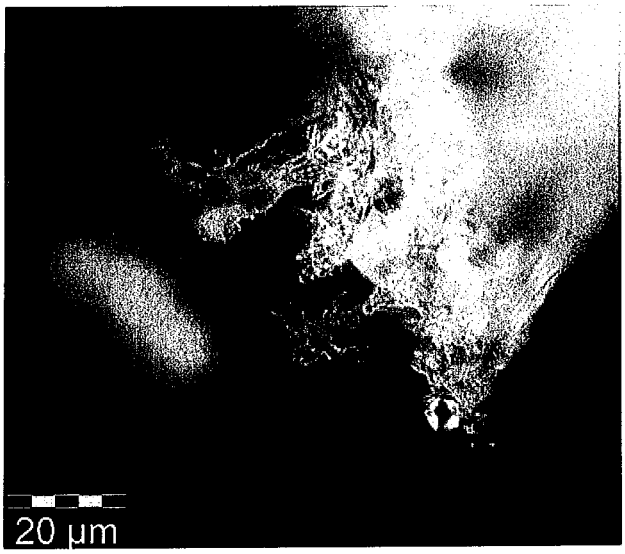
Plates 14–18. *(14)* Experiment 70. Sawing soft wood (erima) for 5 minutes. The arrow indicates developed polish. *(15)* Experiment 72. Sawing soft wood (erima) for 15 minutes. *(16)* Experimental tool in sawing action. *(17)* Experiment 74. Sawing soft wood (erima) for 30 minutes. The arrow indicates sleek striations. 18A–18B Experiment 128. Scraping/sawing soft wood (erima) for 1 hour: *(18A)* polish and striations, scraping action. *(18B)* scars and striations, sawing action. The arrows indicate sleek striations.



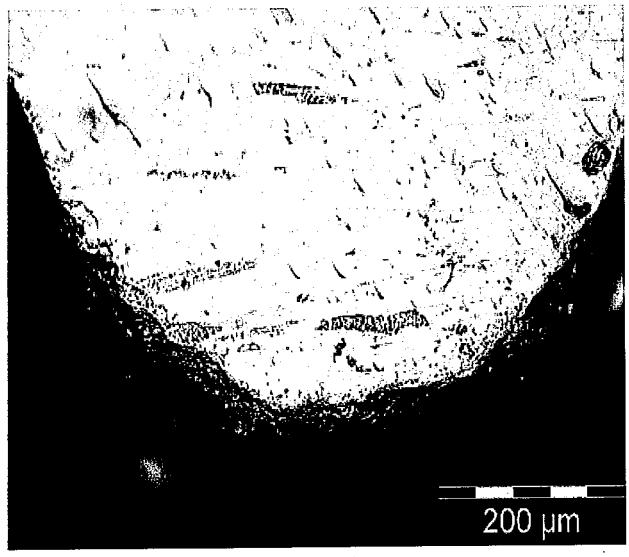
19



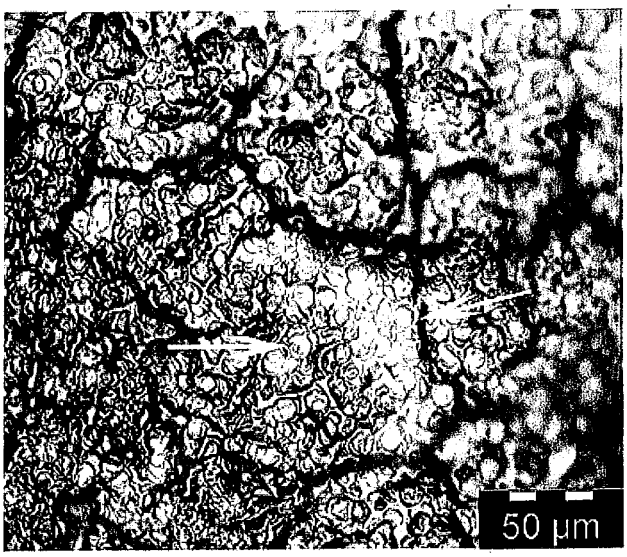
20A



20B



21A



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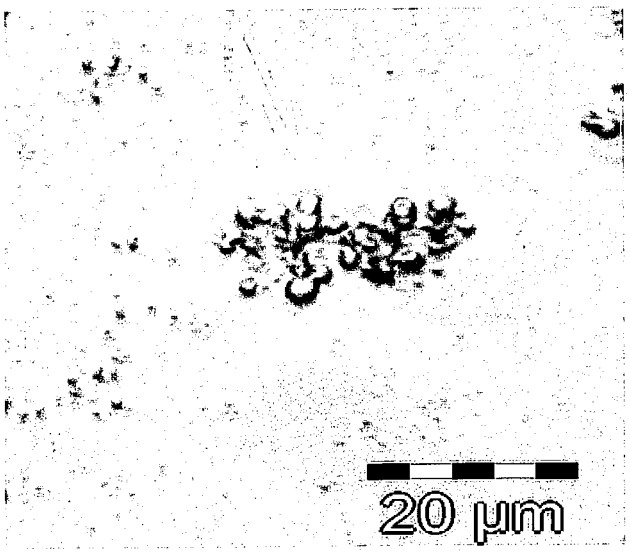

21C

Plates 19–21. *(19)* Experiment 32. Sawing soft wood (malas) for 15 minutes. The arrow indicates crystalline irregularities on the surface of obsidian. 20A–20B Experiment 41. Sawing soft wood (malas) for 30 minutes: *(20A)* edge rounding, polish and striations, *(20B)* plant tissue and starch residues. 21A–21C Experiment 93. Sawing/whittling soft wood (calophyllum) for 15 minutes: *(21A)* edge rounding, polish and striations, *(21B)* blood cells on the tool, *(21C)* extracted blood cells. The arrows indicate human blood cells.