



***François Martel
& Associates***

Forestry, Conservation
and Resource Management
APIA, SAMOA

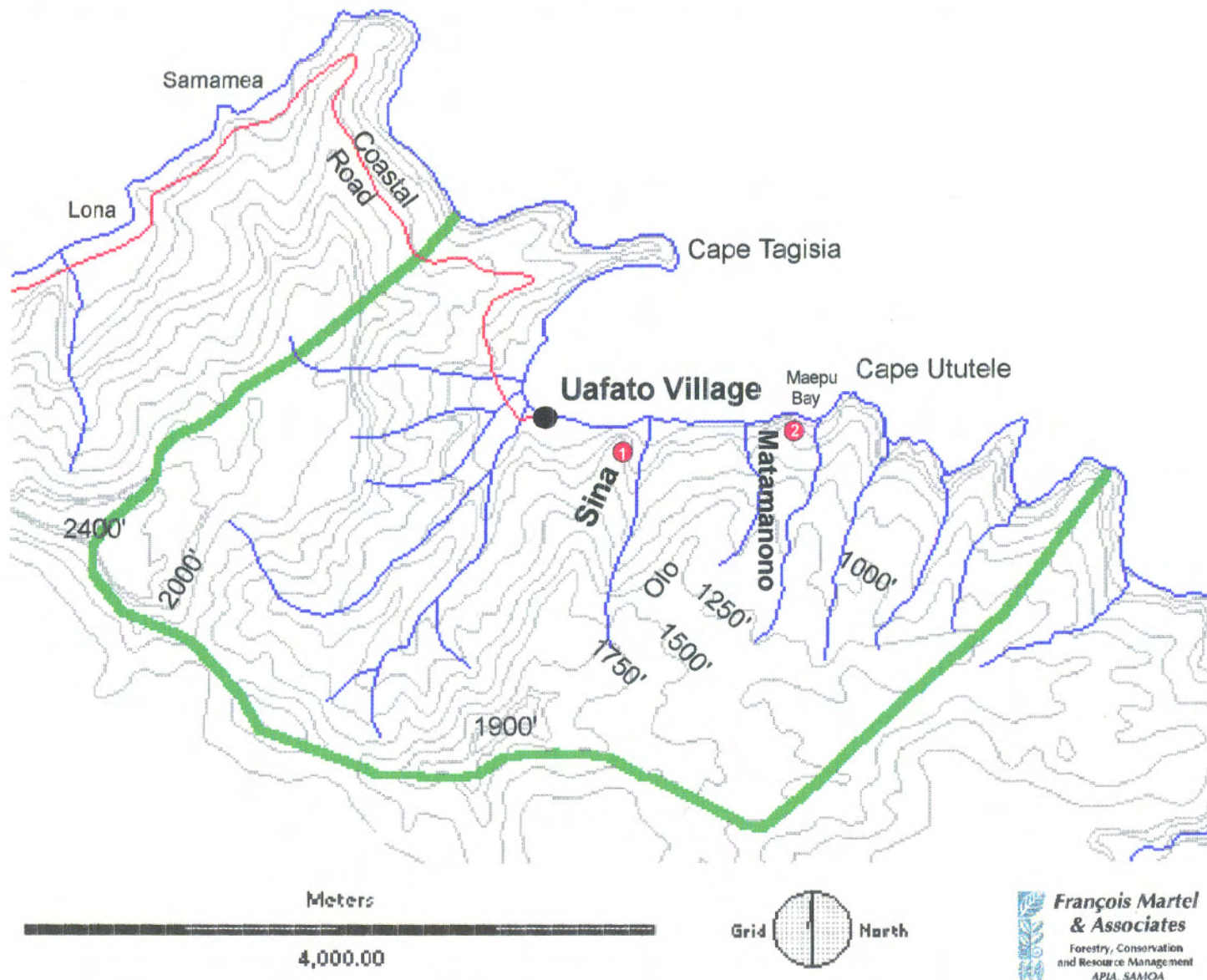
FIELD GUIDE TO THE UAFATO CONSERVATION AREA PERMANENT SAMPLE PLOT UA-01

**François Martel
James Atherton
Dion Ale**

**Francois Martel & Associates,
O Le Siosiomaga Society Inc,
Apia, Samoa**

December 1997

Figure 1. Location of 2 PSPs in Uafato Conservation Area



NB: Approximate CA boundary shown in green, rivers in blue, roads in red, elevations in feet

UAFATO IFILELE SURVEY

Permanent Sample Plots (PSP)

1. Locating and describing the PSP

- Plot size: 50 metres x 25 metres (1,250 m² or 0.125 hectares)
- Quadrat size: 25 metres x 10 metres (250 m²)
- One central stake was cemented at the beginning of the plot
- 4 red corner stakes were posted to form the 1,250 m² plot
- 8 white corner stakes were posted to delineate the 5 quadrat of 250 m²

Material

- Silva Survey Master Compass and Clinometre
- Red vinyl flagging tape
- 1, 1.5" - 1.5 metre Galvanized Pipe (Painted Red/White) for the central location
- 4, 1 square" - 0.75 metre galvanized pipe (painted red) for plot corners.
- 8, 1 square" - 0.75 metre galvanized pipe (painted white) for quadrat corners.
- 1, 3 lb hammer - for stake location;
- 1, 50-metre Kelson measuring tape;
- 1, 30-metre Kelson measuring tape;
- 1, 5 km cotton string for quadrat marking.
- Cement, sand and stream water

2. Tree tagging, measurement and identification - PSP

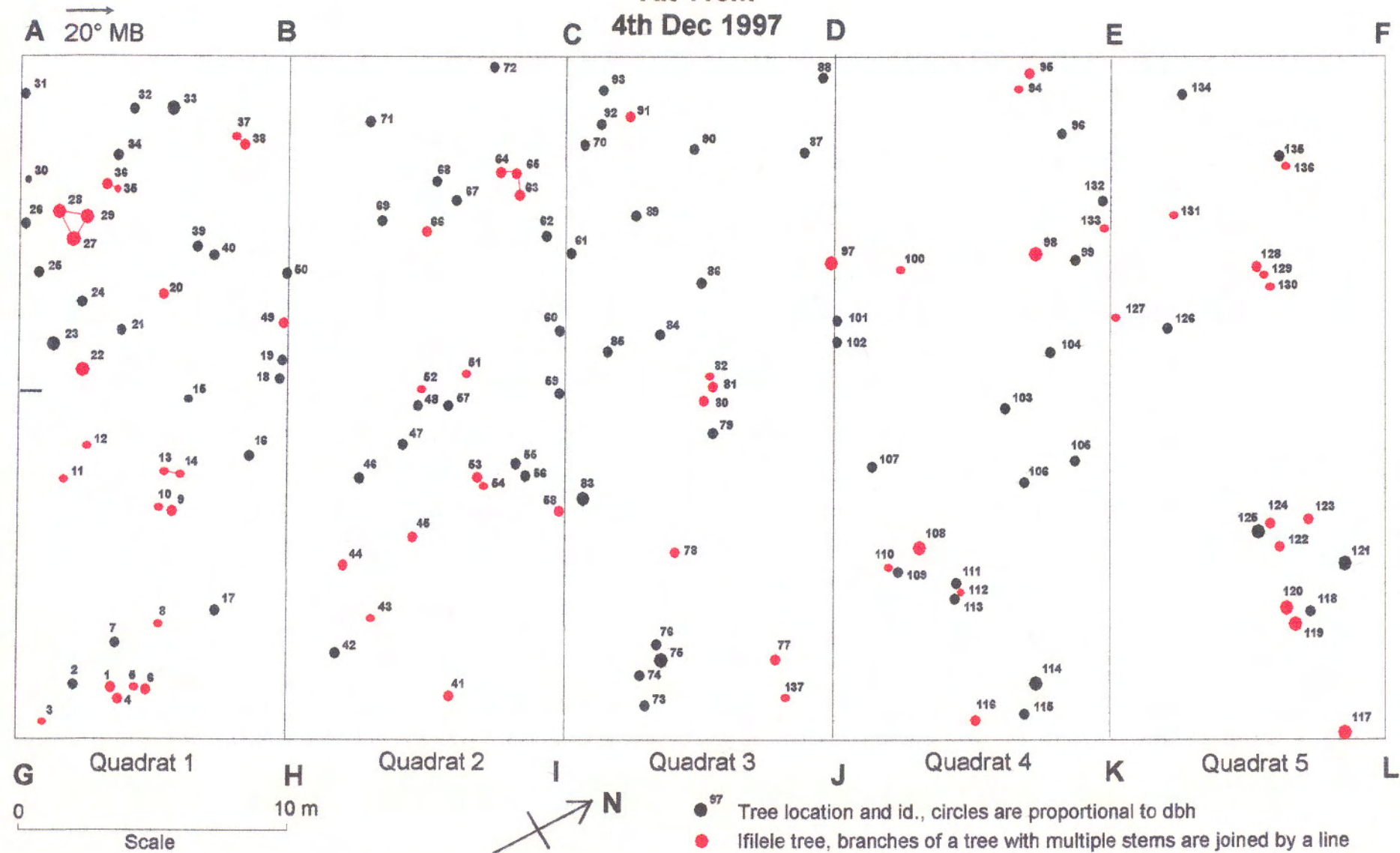
- DBH was measured using a 1.3 metre stake
- DBH measurement line was painted yellow on each tree measured.
- Trees > 10 cm were identified, tagged and measured
- Ifilele > 1 cm were tagged and measured
- Each tree was classified by form and shape (13 type categories) and DBH measured according to type classification.
- All tagged trees were located by measurement of distances from two corner stakes from their quadrat.
- Trees < 6 cm were tagged using yellow electrical cable.
- Distances were corrected for slope or measuring tape levelled in all measurements.

Material

- 1 Silva Survey Master Compass and Clinometre
- 1 Small aluminium 0.5 lb hammer
- Aluminium rectangular tags (numbered)
- 1 Long Nose Plier 8"
- 15 metre length of yellow electrical wire
- 1, 50-metre Kelson measuring tape;
- 1, 30-metre Kelson measuring tape;
- 7" galvanized nails;
- 4 cans of yellow spray paint (326 g net wt.);
- Rite-in-The-Rain Fieldbook with pencils and sharpener

Fig 2

Uafato PSP- 01 Sina Ridge - Uafato Alt 115m



UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-01
LOCATION: SINA RIDGE
QUADRAT 01 - 04 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
01	1	Ifilele	<i>Intsia bijuga</i>	INBI	B	19.10	G	4.00	H	6.70	Nail	
01	2	Olasina	<i>Canthium merrillii</i>	CAME	H	13.70	G	2.85	H	8.10	Nail	
01	3	Ifilele	<i>Intsia bijuga</i>	INBI	B	4.50	G	1.00	H	9.10	Wire	
01	4	Ifilele	<i>Intsia bijuga</i>	INBI	E	19.80	G	4.00	H	6.30	Nail	
01	5	Ifilele	<i>Intsia bijuga</i>	INBI	B	5.10	G	4.70	H	5.90	Wire	
01	6	Ifilele	<i>Intsia bijuga</i>	INBI	B	15.00	G	5.20	H	5.50	Nail	
01	7	Tavai	<i>Rhus taftensis</i>	RHTA	H/E	29.40	G	5.00	H	7.20	Nail	
01	8	Ifilele	<i>Intsia bijuga</i>	INBI	B	5.80	G	6.60	H	6.20	Nail	
01	9	Ifilele	<i>Intsia bijuga</i>	INBI	E	21.10	H	9.50	☒	7.00	Nail	
01	10	Ifilele	<i>Intsia bijuga</i>	INBI	B	6.80	H	9.85	☒	6.40	Nail	
01	11	Ifilele	<i>Intsia bijuga</i>	INBI	B	8.20	H	12.60	☒	3.11	Nail	
01	12	Ifilele	<i>Intsia bijuga</i>	INBI	E	4.50	H	12.90	☒	3.30	Wire	
01	13	Ifilele	<i>Intsia bijuga</i>	INBI	F	8.25	H	11.05	☒	5.85	Nail	Multiple-stem tree branch 1
01	14	Ifilele	<i>Intsia bijuga</i>	INBI	F	7.15	H	10.75	☒	6.20	Nail	Multiple-stem tree branch 2
01	15	Olamea	<i>Randia cochinchinensis</i>	RACO	B	12.60	A	14.15	☒	6.30	Nail	
01	16	Asi	<i>Syzygium inophylloides</i>	SYIN	B	11.75	H	10.50	☒	8.65	Nail	
01	17	Atone	<i>Myristica fatua</i>	MYFA	B	10.60	☒	10.70	H	5.40	Nail	
01	18	Gasu	<i>Palaequium stehlinii</i>	PAST	E	31.00	A	15.20	☒	9.00	Nail	
01	19	Pualulu	<i>Fagraea berteriana</i>	FABE	I	17.95	A	15.15	☒	10.15	Nail	
01	20	Ifilele	<i>Intsia bijuga</i>	INBI	B	15.55	A	10.85	☒	6.70	Nail	
01	21	Olamea	<i>Randia cochinchinensis</i>	RACO	B	13.70	A	10.74	☒	4.50	Nail	
01	22	Ifilele	<i>Intsia bijuga</i>	INBI	B	35.20	A	11.75	☒	2.60	Nail	
01	23	Asi	<i>Syzygium inophylloides</i>	SYIN	B	45.10	A	10.60	☒	2.40	Nail	
01	24	Atone	<i>Myristica spp.</i>	MYSP	B	11.00	A	9.15	☒	4.15	Nail	
01	25	Au'auli	<i>Diospyros samoensis</i>	DISA	B	10.00	A	7.92	B	12.00	Nail	
01	26	Tinamoni	<i>Cinnamomum verum</i>	CIVE	B	11.75	A	6.00	B	12.70	Nail	
01	27	Ifilele	<i>Intsia bijuga</i>	INBI	F	32.75	A	6.90	B	10.35	Nail	Multiple-stem tree branch 1
01	28	Ifilele	<i>Intsia bijuga</i>	INBI	F	36.50	A	5.85	B	10.10	Nail	Multiple-stem tree branch 2
01	29	Ifilele	<i>Intsia bijuga</i>	INBI	F	31.85	A	6.20	B	9.45	Nail	Multiple-stem tree branch 3
01	30	Ifilele	<i>Intsia bijuga</i>	INBI	D	9.20	A	4.64	B	11.20	Nail	
01	31	Toi	<i>Alphitonia zizyphoides</i>	ALZI	A	14.80	A	1.24	B	9.80	Nail	
01	32	Masame	<i>Glochidion ramiflorum</i>	GLRA	B	11.30	A	4.53	B	6.00	Nail	
01	33	Asi	<i>Syzygium inophylloides</i>	SYIN	A	39.25	A	5.90	B	4.50	Nail	
01	34	Gasu	<i>Palaequium stehlinii</i>	PAST	F	10.00	A	5.05	B	7.20	Nail	Multiple-stem with 1 branch < 10cm
01	35	Ifilele	<i>Intsia bijuga</i>	INBI	F	9.70	A	5.84	B	8.00	Nail	Multiple-stem tree branch 1
01	36	Ifilele	<i>Intsia bijuga</i>	INBI	F	16.15	A	5.78	B	8.15	Nail	Multiple-stem tree branch 2
01	37	Ifilele	<i>Intsia bijuga</i>	INBI	F	6.65	A	8.35	B	3.45	Nail	Multiple-stem tree branch 1
01	38	Ifilele	<i>Intsia bijuga</i>	INBI	F	28.05	A	8.74	B	3.45	Nail	Multiple-stem tree branch 2
01	39	Tinamoni	<i>Cinnamomum verum</i>	CIVE	H/E	10.70	A	9.62	B	7.8	Nail	
01	40	Tinamoni	<i>Cinnamomum verum</i>	CIVE	H/E	21.3	A	10.25	B	7.85	Nail	

☒ Plot Central stake

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-01
LOCATION: SINA RIDGE
QUADRAT 02 - 04 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
02	41	Ifilele	<i>Intsia bijuga</i>	INBI	B	11.30	H	6.10	I	4.10	Nail	
02	42	Atone	<i>Myristica fatua</i>	MYFA	B	10.90	H	3.60	I	8.80	Nail	
02	43	Ifilele	<i>Intsia bijuga</i>	INBI	B	7.25	H	5.45	I	8.30	Nail	
02	44	Ifilele	<i>Intsia bijuga</i>	INBI	B	13.65	H	6.70	I	10.10	Nail	
02	45	Ifilele	<i>Intsia bijuga</i>	INBI	B	18.85	H	8.65	I	9.20	Nail	
02	46	Olamea	<i>Randia cochinchinensis</i>	RACO	E	13.70	H	9.90	I	12.10	Nail	
02	47	Ifilele	<i>Intsia bijuga</i>	INBI	B	13.25	H	11.50	I	12.20	Nail	
02	48	Olamea	<i>Randia cochinchinensis</i>	RACO	B	12.80	H	13.10	I	13.30	Nail	
02	49	Ifilele	<i>Intsia bijuga</i>	INBI	B	23.50	B	10.90	I	13.80	Nail	
02	50	Alaa	<i>Planchonella linggensis</i>	PLLI	B	26.15	B	7.70	I	15.60	Nail	
02	51	Ifilele	<i>Intsia bijuga</i>	INBI	B	7.10	H	15.10	I	14.00	Nail	
02	52	Ifilele	<i>Intsia bijuga</i>	INBI	B	4.40	H	13.50	I	13.70	Wire	
02	53	Ifilele	<i>Intsia bijuga</i>	INBI	F	12.10	H	11.90	I	10.10	Nail	Multiple-stem tree branch 1
02	54	Ifilele	<i>Intsia bijuga</i>	INBI	F	8.60	H	11.50	I	9.60	Nail	Multiple-stem tree branch 2
02	55	Asi	<i>Syzygium inophylloides</i>	SYIN	E	22.50	H	13.00	I	10.20	Nail	
02	56	Asi	<i>Syzygium inophylloides</i>	SYIN	B	27.35	H	12.90	I	9.80	Nail	
02	57	Ifiifi	<i>Atuna racemosa</i>	ATRA	B	11.00	H	13.50	I	12.90	Nail	
02	58	Ifilele	<i>Intsia bijuga</i>	INBI	B	19.20	H	13.20	I	8.60	Nail	
02	59	Tinamoni	<i>Cinnamomum verum</i>	CIVE	K	12.50	H	17.10	I	12.70	Nail	On line CI
02	60	Tinamoni	<i>Cinnamomum verum</i>	CIVE	B	13.30	H	18.80	I	14.70	Nail	On line CI
02	61	Alaa	<i>Planchonella linggensis</i>	PLLI	B	16.65	C	7.30	B	12.80	Nail	On line CI
02	62	Olamea	<i>Randia cochinchinensis</i>	RACO	E	19.20	C	6.50	B	11.60	Nail	
02	63	Ifilele	<i>Intsia bijuga</i>	INBI	F	18.40	C	5.10	B	9.70	Nail	Multiple-stem tree branch 1
02	64	Ifilele	<i>Intsia bijuga</i>	INBI	F	22.55	C	4.60	B	8.70	Nail	Multiple-stem tree branch 2
02	65	Ifilele	<i>Intsia bijuga</i>	INBI	F	22.45	C	4.40	B	9.20	Nail	Multiple-stem tree branch 3
02	66	Ifilele	<i>Intsia bijuga</i>	INBI	B	11.10	C	8.05	B	8.85	Nail	
02	67	Atone	<i>Myristica fatua</i>	MYFA	H/E	10.60	C	6.40	B	8.10	Nail	
02	68	Asi	<i>Syzygium inophylloides</i>	SYIN	B	10.20	C	6.38	B	6.95	Nail	
02	69	Au'auli	<i>Diospyros samoensis</i>	DISA	E	15.85	C	8.75	B	6.80	Nail	
02	70	Mafoa	<i>Canarium harveyi</i>	CAHA	B	11.50	C	3.30	B	10.50	Nail	
02	71	Tamanu	<i>Calophyllum neoebudicum</i>	CANE	B	16.10	C	7.55	B	3.65	Nail	
02	72	Alaa	<i>Planchonella linggensis</i>	PLLI	E	15.00	C	2.55	B	7.45	Nail	

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-01
LOCATION: SINA RIDGE
QUADRAT 03 - 05 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
03	73	Tavai	<i>Rhus taitensis</i>	RHTA	E	14.05	I	3.35	J	6.80	Nail	
03	74	Tavai	<i>Rhus taitensis</i>	RHTA	B	17.50	I	3.88	J	7.30	Nail	
03	75	Asi	<i>Syzygium inophylloides</i>	SYIN	E	33.90	I	4.85	J	7.00	Nail	
03	76	Toi	<i>Alphitonia zizyphoides</i>	ALZI	E	15.60	I	4.95	J	7.20	Nail	
03	77	Ifilele	<i>Intsia bijuga</i>	INBI	B	12.45	I	8.55	J	3.50	Nail	
03	78	Ifilele	<i>Intsia bijuga</i>	INBI	B	14.50	I	8.15	J	8.90	Nail	
03	79	Olamea ?	<i>Randia cochinchinensis</i>	RACO	B	10.00	C	14.90	D	14.50	Nail	Check species
03	80	Ifilele	<i>Intsia bijuga</i>	INBI	B	10.50	C	13.70	D	13.40	Nail	
03	81	Ifilele	<i>Intsia bijuga</i>	INBI	B	18.45	C	13.25	D	12.80	Nail	
03	82	Ifilele	<i>Intsia bijuga</i>	INBI	B	6.70	C	12.90	D	12.65	Nail	
03	83	Alaa	<i>Planchonella linggensis</i>	PLLI	H	33.60	C	16.50	D	18.70	Nail	
03	84	Tinamoni	<i>Cinnamomum verum</i>	CIVE	E	12.40	C	10.74	D	12.00	Nail	
03	85	Fau	<i>Hibiscus tiliaceus</i>	HITI	K	10.85	C	10.86	D	13.50	Nail	
03	86	Olamea	<i>Randia cochinchinensis</i>	RACO	B	13.50	C	9.53	D	9.45	Nail	
03	87	Tinamoni	<i>Cinnamomum verum</i>	CIVE	E	12.70	C	9.50	D	3.50	Nail	
03	88	Tinamoni	<i>Cinnamomum verum</i>	CIVE	E	13.90	C	9.60	D	0.70	Nail	
03	89	Olamea	<i>Randia cochinchinensis</i>	RACO	B	10.75	C	6.35	D	9.20	Nail	
03	90	Au'auli	<i>Diospyros samoensis</i>	DISA	E	10.75	C	5.80	D	6.10	Nail	
03	91	Ifilele	<i>Intsia bijuga</i>	INBI	E/B	16.95	C	3.10	D	7.90	Nail	
03	92	Alaa	<i>Planchonella linggensis</i>	CIVE	E	12.50	C	2.75	D	8.90	Nail	
03	93	Asi	<i>Syzygium inophylloides</i>	SYIN	B	16.40	C	1.85	D	8.50	Nail	
03	137	Ifilele	<i>Intsia bijuga</i>	INBI	B	1.90	J	6.50	J	1.65	Wire	Second distance measured 90 deg. on IJ line.

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-01
LOCATION: SINA RIDGE
QUADRAT 04 - 05 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
04	94	Ifielele	<i>Intsia bijuga</i>	INBI	E	9.85	E	3.25	D	6.90	Nail	
04	95	Ifielele	<i>Intsia bijuga</i>	INBI	B	11.00	E	2.77	D	7.25	Nail	
04	96	Masame	<i>Glochidion ramiflorum</i>	GLRA	C/E	24.90	E	3.15	D	8.80	Nail	
04	97	Ifielele	<i>Intsia bijuga</i>	INBI	B	42.65	E	12.80	D	7.60	Nail	Plus-tree (very good form)
04	98	Ifielele	<i>Intsia bijuga</i>	INBI	B	36.10	E	7.55	D	10.20	Nail	
04	99	Gasu	<i>Palaquium stehlinii</i>	PAST	B	23.40	E	7.50	D	11.50	Nail	
04	100	Ifielele	<i>Intsia bijuga</i>	INBI	E	3.10	E	11.41	D	8.25	Wire	
04	101	Alaa	<i>Planchonella linggensis</i>	PLLI	B	17.45	E	13.87	D	9.60	Nail	
04	102	Asi	<i>Syzygium inophylloides</i>	SYIN	B	11.45	E	14.45	D	10.40	Nail	
04	103	Tamanu	<i>Calophyllum neobudicum</i>	CANE	D	18.45	E	13.30	D	14.40	Nail	
04	104	Au'auli	<i>Diospyros samoensis</i>	DISA	G/E	23.50	J	16.40	D	13.40	Nail	
04	105	Tinamoni	<i>Cinnamomum verum</i>	CIVE	E	15.35	J	13.65	K	10.30	Nail	
04	106	Maali	<i>Canarium vitiense</i>	CAVI	B	20.05	J	11.90	K	9.90	Nail	
04	107	Asi	<i>Syzygium inophylloides</i>	SYIN	B	15.90	J	10.20	D	13.10	Nail	
04	108	Ifielele	<i>Intsia bijuga</i>	INBI	B	34.00	J	7.75	K	9.80	Nail	
04	109	Ifielele	<i>Intsia bijuga</i>	INBI	B	12.50	J	6.65	K	9.70	Nail	
04	110	Ifielele	<i>Intsia bijuga</i>	INBI	B	4.05	J	6.70	K	10.00	Wire	
04	111	Gasu	<i>Palaquium stehlinii</i>	PAST	B	24.70	J	7.35	K	7.90	Nail	
04	112	Ifielele	<i>Intsia bijuga</i>	INBI	B	9.10	J	7.20	K	7.50	Nail	
04	113	Asi	<i>Syzygium inophylloides</i>	SYIN	B	11.20	J	7.10	K	7.50	Nail	
04	114	Asi	<i>Syzygium inophylloides</i>	SYIN	B	32.45	J	7.75	K	3.20	Nail	
04	115	Tavai	<i>Rhus taitensis</i>	RHTA	E	28.30	J	7.25	K	3.00	Nail	
04	116	Ifielele	<i>Intsia bijuga</i>	INBI	B	11.55	J	5.35	K	5.00	Nail	

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-01
LOCATION: SINA RIDGE
QUADRAT 05 - 05 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
05	117	Ifilele	<i>Intsia bijuga</i>	INBI	E	40.05	L	1.20	K	8.70	Nail	
05	118	Tinamoni	<i>Cinnamomum verum</i>	CIVE	B	17.55	L	5.20	K	8.90	Nail	
05	119	Ifilele	<i>Intsia bijuga</i>	INBI	E	42.20	L	5.20	K	8.20	Nail	
05	120	Ifilele	<i>Intsia bijuga</i>	INBI	G/K	40.40	L	5.80	K	8.30	Nail	
05	121	Asi	<i>Syzygium inophylloides</i>	SYIN	E	33.90	L	6.40	K	10.80	Nail	
05	122	Ifilele	<i>Intsia bijuga</i>	INBI	B	27.25	L	8.00	K	9.50	Nail	
05	123	Ifilele	<i>Intsia bijuga</i>	INBI	B	21.20	L	8.50	K	10.90	Nail	
05	124	Ifilele	<i>Intsia bijuga</i>	INBI	E	29.60	L	8.90	K	10.00	Nail	
05	125	Alaa	<i>Planchonella linggensis</i>	PLLI	B	32.05	L	8.90	K	9.50	Nail	
05	126	Lopa	<i>Adenanthera pavonina</i>	ADPA	B	13.25	E	10.20	F	12.60	Nail	
05	127	Ifilele	<i>Intsia bijuga</i>	INBI	B	5.15	E	9.40	F	13.50	Wire	
05	128	Ifilele	<i>Intsia bijuga</i>	INBI	B	11.25	E	9.50	F	8.75	Nail	
05	129	Ifilele	<i>Intsia bijuga</i>	INBI	B	8.55	E	9.80	F	8.95	Nail	
05	130	Ifilele	<i>Intsia bijuga</i>	INBI	B	5.10	E	10.40	F	9.30	Wire	
05	131	Ifilele	<i>Intsia bijuga</i>	INBI	B	13.75	E	6.14	F	9.40	Nail	
05	132	Lopa	<i>Adenanthera pavonina</i>	ADPA	B	11.25	E	5.23	F	11.60	Nail	
05	133	Ifilele	<i>Intsia bijuga</i>	INBI	B	6.05	E	6.20	F	11.95	Nail	
05	134	Tamanu	<i>Calophyllum neobudicum</i>	CANE	B	18.55	E	3.30	F	7.50	Nail	
05	135	Gasu	<i>Palaquium stehlinii</i>	PAST	E/K	17.00	E	7.70	F	5.09	Nail	
05	136	Ifilele	<i>Intsia bijuga</i>	INBI	B	5.45	E	7.95	F	5.00	Wire	

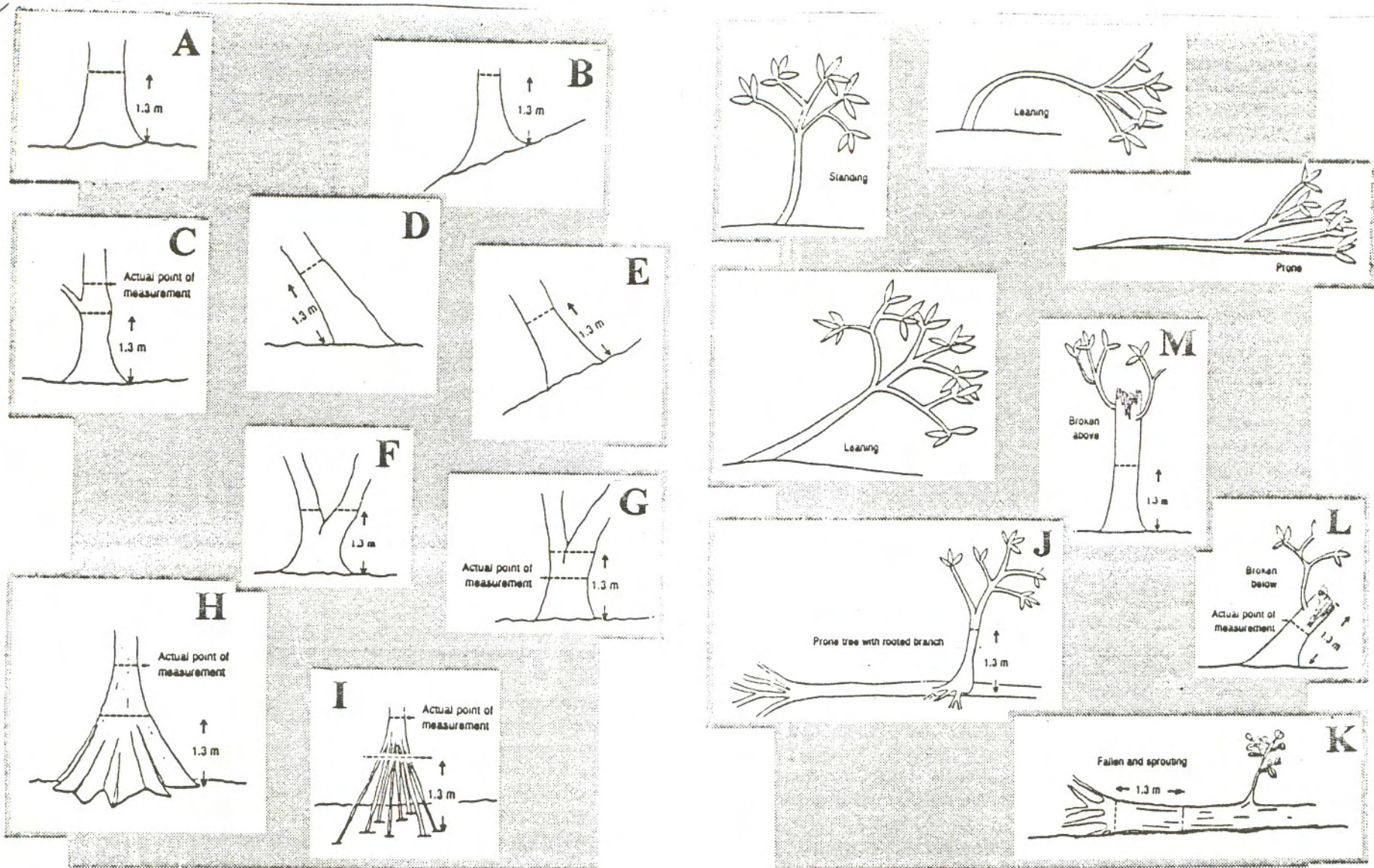
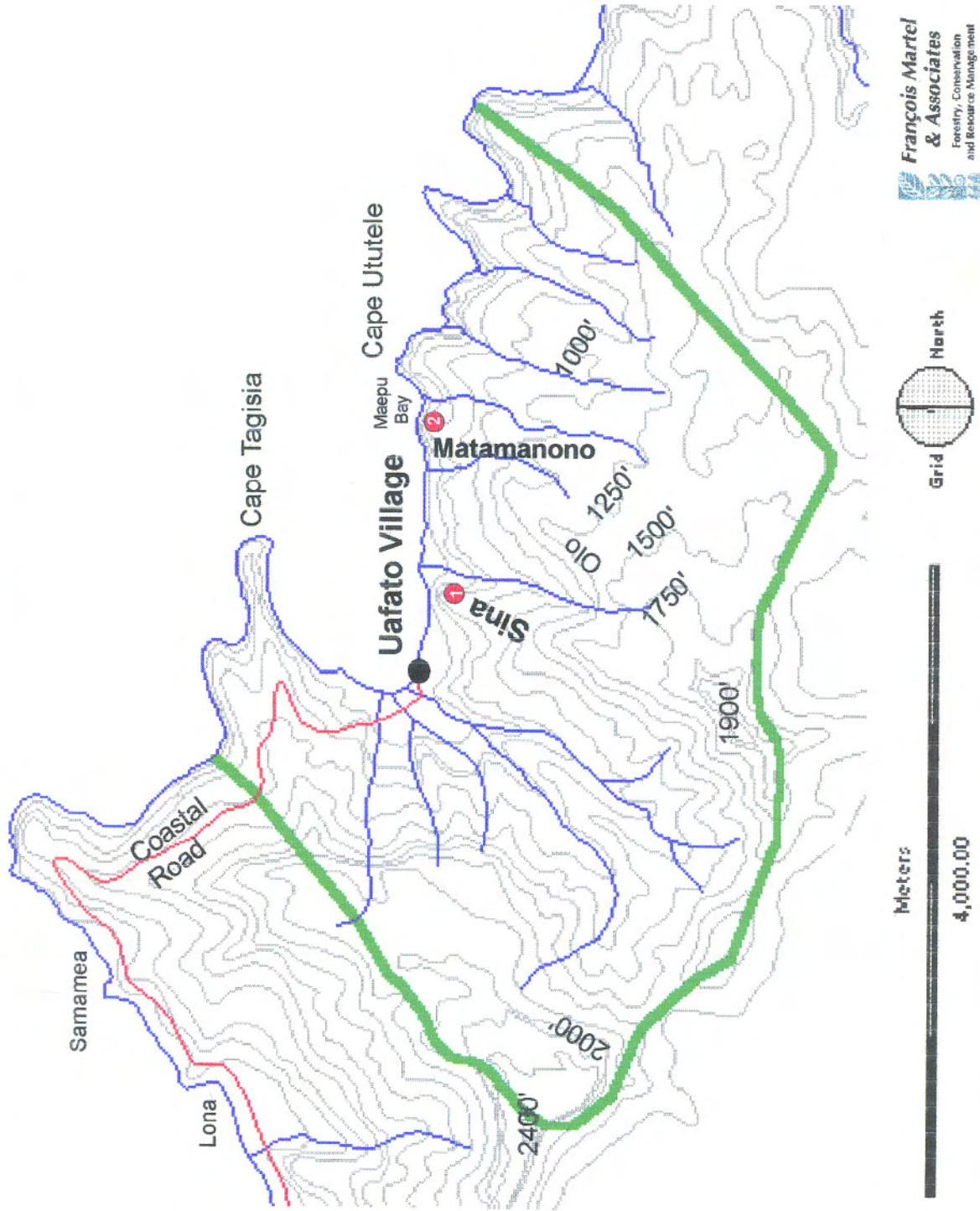


Figure 3 - Classification and methods used for measuring DBH on irregular rainforest trees
 Uafato Ifilele Survey - Permanent Sample Plots
 (Adapted from MAB Digest No.11, 1992)

Figure 1. Location of 2 PSPs in Uafato Conservation Area



NB: Approximate CA boundary shown in green, rivers in blue, roads in red, elevations in feet

UAFATO IFILELE SURVEY

Permanent Sample Plots (PSP)

1. Locating and describing the PSP

- Plot size: 50 metres x 25 metres (1,250 m² or 0.125 hectares)
- Quadrat size: 25 metres x 10 metres (250 m²)
- One central stake was cemented at the beginning of the plot
- 4 red corner stakes were posted to form the 1,250 m² plot
- 8 white corner stakes were posted to delineate the 5 quadrat of 250 m²

Material

- Silva Survey Master Compass and Clinometre
- Red vinyl flagging tape
- 1, 1.5" - 1.5 metre Galvanized Pipe (Painted Red/White) for the central location
- 4, 1 square" - 0.75 metre galvanized pipe (painted red) for plot corners.
- 8, 1 square" - 0.75 metre galvanized pipe (painted white) for quadrat corners.
- 1, 3 lb hammer - for stake location;
- 1, 50-metre Kelson measuring tape;
- 1, 30-metre Kelson measuring tape;
- 1, 5 km cotton string for quadrat marking.
- Cement, sand and stream water

2. Tree tagging, measurement and identification - PSP

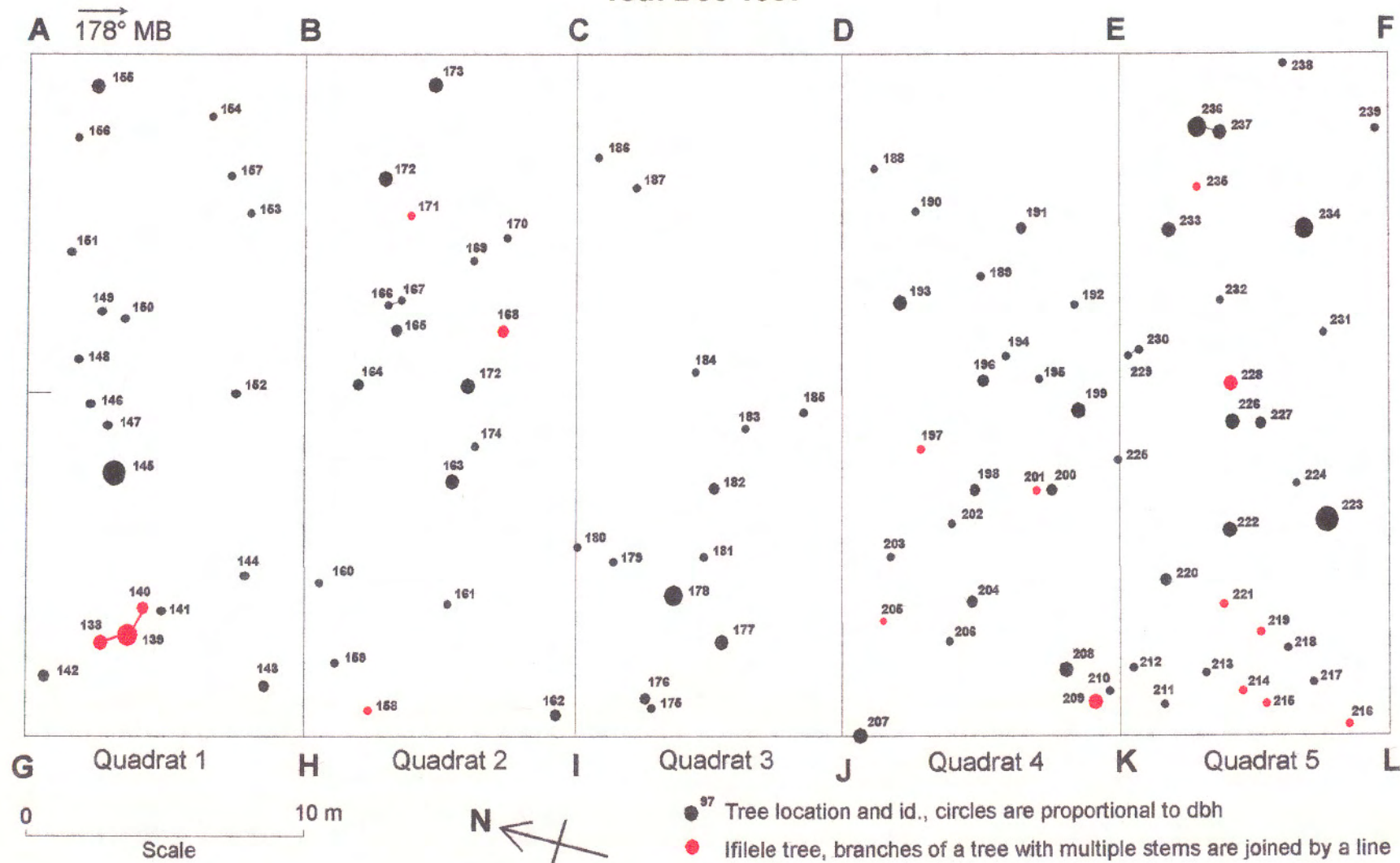
- DBH was measured using a 1.3 metre stake
- DBH measurement line was painted yellow on each tree measured.
- Trees > 10 cm were identified, tagged and measured
- Ifilele > 1 cm were tagged and measured
- Each tree was classified by form and shape (13 type categories) and DBH measured according to type classification.
- All tagged trees were located by measurement of distances from two corner stakes from their quadrat.
- Trees < 6 cm were tagged using yellow electrical cable.
- Distances were corrected for slope or measuring tape levelled in all measurements.

Material

- 1 Silva Survey Master Compass and Clinometre
- 1 Small aluminium 0.5 lb hammer
- Aluminium rectangular tags (numbered)
- 1 Long Nose Plier 8"
- 15 metre length of yellow electrical wire
- 1, 50-metre Kelson measuring tape;
- 1, 30-metre Kelson measuring tape;
- 7" galvanized nails;
- 4 cans of yellow spray paint (326 g net wt.);
- Rite-in-The-Rain Fieldbook with pencils and sharpener

Fig 2

Uafato PSP- 02 Matamanono Ridge - Uafato Alt 125m 15th Dec 1997



UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-02
LOCATION: MATAMANONO RIDGE
QUADRAT 01 - 15 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
01	138	Ifilele	<i>Intsia bijuga</i>	INBI	F/G	57.15	G	4.70	H	8.20	Nail	Multiple-stem tree branch 1
01	139	Ifilele	<i>Intsia bijuga</i>	INBI	F/G	88.65	G	5.50	H	7.60	Nail	Multiple-stem tree branch 2
01	140	Ifilele	<i>Intsia bijuga</i>	INBI	F/G	37.85	G	6.40	H	7.70	Nail	Multiple-stem tree branch 3
01	141	Atone	<i>Myristica fatua</i>	MYFA	D	15.00	G	6.80	H	7.20	Nail	
01	142	Asi	<i>Syzygium inophylloides</i>	SYIN	B	23.50	G	2.40	H	9.90	Nail	
01	143	Asi	<i>Syzygium inophylloides</i>	SYIN	A	29.50	G	8.90	H	2.40	Nail	
01	144	Au'auli	<i>Diospyros samoensis</i>	DISA	B	10.15	G	10.20	H	6.40	Nail	
01	145	Talie	<i>Terminalia catappa</i>	INBI	H/E	106.70	☒	4.00	G	10.50	Nail	
01	146	Gasu	<i>Palaquium stehlinii</i>	PAST	B	12.65	☒	2.20	B	14.70	Nail	
01	147	Atone	<i>Myristica fatua</i>	MYFA	B	13.45	☒	2.80	B	15.20	Nail	
01	148	Au'auli	<i>Diospyros samoensis</i>	DISA	B	10.45	☒	2.50	B	13.00	Nail	
01	149	Maota	<i>Dysoxylum maota</i>	DYMA	B	10.80	☒	4.20	B	11.60	Nail	
01	150	Atone	<i>Myristica fatua</i>	MYFA	F	8.25	☒	11.05	B	5.85	Nail	
01	151	Fagufagu	<i>Meryta macrophylla</i>	MEMA	B	11.25	☒	5.70	B	11.10	Nail	
01	152	Atone	<i>Myristica fatua</i>	MYFA	B	12.35	☒	7.60	B	12.60	Nail	
01	153	Gasu	<i>Palaquium stehlinii</i>	PAST	B	13.55	A	10.00	B	5.90	Nail	
01	154	Asi vai	<i>Syzygium dealatum</i>	SYDE	B	15.35	A	7.20	B	3.70	Nail	
01	155	Ifi	<i>Inocarpus fagifer</i>	INFA	H	56.95	A	2.70	B	7.50	Nail	
01	156	Gasu	<i>Palaquium stehlinii</i>	PAST	B	14.45	A	3.20	B	8.80	Nail	
01	157	Ifi	<i>Inocarpus fagifer</i>	INFA	B	11.15	A	8.60	B	4.90	Nail	

☒ PSP Central stake

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-02
LOCATION: MATAMANONO RIDGE
QUADRAT 02 - 15 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
02	158	Ifilele	<i>Intsia bijuga</i>	INBI	A	16.35	H	2.70	I	7.60	Nail	
02	159	Atone	<i>Myristica fatua</i>	MYFA	A	17.30	H	3.10	I	9.30	Nail	
02	160	Gasu	<i>Palaquium stehlinii</i>	PAST	B	17.25	H	5.90	I	11.10	Nail	
02	161	Alaa ?	<i>Planchonella linggensis</i>	PLLI	B	11.55	H	7.40	I	6.80	Nail	Check species
02	162	Atone	<i>Myristica fatua</i>	MYFA	A	23.90	H	9.90	I	0.90	Nail	
02	163	Au'auli	<i>Diospyros samoensis</i>	DISA	B	41.25	H	11.10	I	10.40	Nail	
02	164	Mafoa	<i>Canarium harveyi</i>	CAHA	B	26.75	B	12.30	C	14.50	Nail	
02	165	Atone	<i>Myristica fatua</i>	MYFA	B	30.75	B	10.60	C	11.90	Nail	
02	166	Ifi	<i>Inocarpus fagifer</i>	INFA	D/F	16.45	B	9.60	C	11.40	Nail	Multiple-stem tree branch 1
02	167	Ifi	<i>Inocarpus fagifer</i>	INFA	D/F	11.45	B	9.60	C	10.90	Nail	Multiple-stem tree branch 2
02	168	Ifilele	<i>Intsia bijuga</i>	INBI	B	38.95	B	12.50	C	10.20	Nail	
02	169	Ifi	<i>Inocarpus fagifer</i>	INFA	B	16.35	B	9.70	C	8.20	Nail	
02	170	Ifi	<i>Inocarpus fagifer</i>	INFA	B	10.25	B	10.20	C	7.00	Nail	
02	171	Ifilele	<i>Intsia bijuga</i>	INBI	B	16.50	B	7.10	C	8.30	Nail	
02	172	Ifi	<i>Inocarpus fagifer</i>	INFA	H	58.10	B	5.40	C	8.10	Nail	
02	173	Ifi	<i>Inocarpus fagifer</i>	INFA	H	43.25	B	5.40	C	5.00	Nail	
02	174	??	??	??	B/M	12.25	H	12.60	C	11.40	Nail	Broken-top - Check species

?? Species unknown: Medium size tree (10 m) with simple alternate leaves glossy green and elliptic with acuminate tip 10-12 cm long, 5 cm wide, petiole 5mm long. Bark is very dark brown with vertical cracks. Bark slash: brown outer, red under (a bit like au'auli but with vertical cracks)

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-02
LOCATION: MATAMANONO RIDGE
QUADRAT 03 - 15 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
03	175	Atone	<i>Myristica fatua</i>	MYFA	A	10.50	I	3.10	J	7.20	Nail	
03	176	Asi toa	<i>Syzygium inophylloides</i>	SYIN	A	23.35	I	3.10	J	7.40	Nail	
03	177	Asi toa	<i>Syzygium inophylloides</i>	SYIN	B	44.25	I	6.60	J	5.60	Nail	
03	178	Maali	<i>Canarium vitiense</i>	CAVI	B	64.40	I	6.30	J	8.10	Nail	
03	179	??	??	??	B	17.55	I	6.70	J	10.70	Nail	Check species - same as tree 02/174
03	180	??	??	??	B	15.25	I	6.90	J	12.10	Nail	Check species - same as tree 02/174
03	181	Atone	<i>Myristica fatua</i>	MYFA	B	14.25	I	8.20	J	8.40	Nail	
03	182	Atone	<i>Myristica fatua</i>	MYFA	B	24.10	I	11.70	J	10.30	Nail	
03	183	??	??	??	B	17.10	I	13.10	J	13.50	Nail	Check species - same as tree 02/174
03	184	Atone	<i>Myristica fatua</i>	MYFA	B	14.85	I	14.20	J	16.30	Nail	
03	185	Alaa	<i>Planchonella linggensis</i>	PLLI	B	16.75	I	14.70	J	13.40	Nail	
03	186	Mosooi	<i>Cananga odorata</i>	CAOD	K	13.25	C	3.80	D	9.80	Nail	
03	187	Ifi	<i>Inocarpus fagifer</i>	INFA	K	12.35	C	5.30	D	9.00	Nail	

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-02
LOCATION: MATAMANONO RIDGE
QUADRAT 04 - 15 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
04	188	Mosooi	<i>Cananga odorata</i>	CAOD	B	11.45	D	4.30	E	9.90	Nail	
04	189	Au'auli	<i>Diospyros samoensis</i>	DISA	F	10.70	D	9.70	E	9.50	Nail	Check quadrat location
04	190	Au'auli	<i>Diospyros samoensis</i>	DISA	F	11.30	D	6.40	E	9.40	Nail	Check quadrat location
04	191	Fanaio	<i>Sterculia fanahio</i>	STFA	B	22.70	D	9.20	E	7.20	Nail	
04	192	??	??	??	B	10.65	D	12.60	E	9.30	Nail	Check species - different then tree 02/174
04	193	Ifi	<i>Inocarpus fagifer</i>	INFA	B	46.60	D	9.40	E	12.00	Nail	
04	194	Ifi	<i>Inocarpus fagifer</i>	INFA	B	13.55	D	12.70	E	11.80	Nail	
04	195	Gasu	<i>Palaquium stehlinii</i>	PAST	B	15.70	J	15.00	K	13.50	Nail	
04	196	Fanaio	<i>Sterculia fanahio</i>	STFA	B	30.45	J	14.20	K	14.00	Nail	
04	197	Ifilele	<i>Intsia bijuga</i>	INBI	B	17.65	J	11.00	K	12.80	Nail	
04	198	Ifi	<i>Inocarpus fagifer</i>	INFA	B	26.05	J	10.30	K	10.40	Nail	
04	199	Maali	<i>Canarium vitiense</i>	CAVI	B	58.05	J	14.80	K	12.00	Nail	
04	200	Tavaii	<i>Rhus taitensis</i>	RHTA	B	25.25	J	11.80	K	9.20	Nail	
04	201	Ifilele	<i>Intsia bijuga</i>	INBI	B	11.00	J	11.70	K	9.40	Nail	
04	202	Ifi	<i>Inocarpus fagifer</i>	INFA	B	19.40	J	8.80	K	9.80	Nail	
04	203	Atone	<i>Myristica fatua</i>	MYFA	B	15.80	J	6.80	K	10.50	Nail	
04	204	Asi toa	<i>Syzygium inophylloides</i>	SYIN	B	32.90	J	6.90	K	7.10	Nail	
04	205	Ifilele	<i>Intsia bijuga</i>	INBI	B	8.35	J	4.50	K	9.50	Nail	
04	206	Au'auli	<i>Diospyros samoensis</i>	DISA	B	10.35	J	5.30	K	6.90	Nail	
04	207	Asi toa	<i>Syzygium inophylloides</i>	SYIN	A	53.20	J	0.40	K	9.60	Nail	
04	208	Asi toa	<i>Syzygium inophylloides</i>	SYIN	B	52.45	J	8.70	K	3.00	Nail	
04	209	Ifilele	<i>Intsia bijuga</i>	INBI	B	45.75	J	9.50	K	1.50	Nail	
04	210	Mafoa	<i>Canarium harveyi</i>	CAHA	B	16.85	J	10.30	K	1.50	Nail	

UAFATO IFILELE SURVEY
PERMANENT SAMPLE PLOT NO. UA-02
LOCATION: MATAMANONO RIDGE
QUADRAT 05 - 15 DEC 1997

Quadrat #	Tree #	Species name		Code	Form Class	DBH (cm)	Quadrat Location				Tag type	Notes
		Samoan	Scientific				Peg #	Distance (m)	Peg #	Distance (m)		
05	211	Mosooi	<i>Cananga odorata</i>	CAOD	A	16.80	K	2.10	L	8.20	Nail	
05	212	Ifi	<i>Inocarpus fagifer</i>	INFA	B	11.65	K	2.50	L	9.70	Nail	
05	213	Ifi	<i>Inocarpus fagifer</i>	INFA	B	14.75	K	4.10	L	7.00	Nail	
05	214	Ifilele	<i>Intsia bijuga</i>	INBI	B	4.80	K	5.00	L	5.50	Wire	
05	215	Ifilele	<i>Intsia bijuga</i>	INBI	B	2.20	K	5.70	L	4.60	Wire	
05	216	Ifilele	<i>Intsia bijuga</i>	INBI	B	6.75	K	8.70	L	1.20	Nail	
05	217	Mafoa	<i>Canarium harveyi</i>	CAHA	B	10.60	K	7.70	L	3.30	Nail	
05	218	Atone	<i>Myristica fatua</i>	MYFA	B	10.85	K	7.10	L	4.70	Nail	
05	219	Ifilele	<i>Intsia bijuga</i>	INBI	B	3.30	K	6.60	L	5.90	Wire	
05	220	Au'auli	<i>Diospyros samoensis</i>	DISA	B	31.10	K	6.00	L	10.00	Nail	
05	221	Ifilele	<i>Intsia bijuga</i>	INBI	B	1.80	K	6.20	L	7.60	Wire	
05	222	Ifi	<i>Inocarpus fagifer</i>	INFA	H	41.55	K	8.70	L	9.40	Nail	
05	223	Maota	<i>Dysoxylum maota</i>	DYMA	H	113.80	K	11.20	L	8.10	Nail	
05	224	Atone	<i>Myristica fatua</i>	MYFA	B	16.90	K	11.50	L	9.70	Nail	
05	225	Ifi	<i>Inocarpus fagifer</i>	INFA	B	11.85	K	10.00	L	14.20	Nail	
05	226	Ifi	<i>Inocarpus fagifer</i>	INFA	H	53.25	K	12.40	L	12.80	Nail	
05	227	Asi toa	<i>Syzygium inophylloides</i>	SYIN	B	21.15	K	12.70	L	12.50	Nail	
05	228	Ifilele	<i>Intsia bijuga</i>	INBI	B	57.70	K	13.60	L	14.10	Nail	
05	229	Atone	<i>Myristica fatua</i>	MYFA	F	11.05	K	13.90	L	16.90	Nail	Multiple-stem tree branch 1
05	230	Atone	<i>Myristica fatua</i>	MYFA	F	12.70	K	14.10	L	16.80	Nail	Multiple-stem tree branch 2
05	231	Atone	<i>Myristica fatua</i>	MYFA	B	14.50	K	16.70	L	14.80	Nail	
05	232	Ifi	<i>Inocarpus fagifer</i>	INFA	B	16.90	E	9.80	F	10.90	Nail	
05	233	Ifi	<i>Inocarpus fagifer</i>	INFA	B	40.55	E	6.70	F	10.30	Nail	
05	234	Ifi	<i>Inocarpus fagifer</i>	INFA	H	63.20	E	9.40	F	7.00	Nail	
05	235	Ifilele	<i>Intsia bijuga</i>	INBI	B	2.05	E	5.70	F	8.40	Wire	Check species - different then tree 02/174
05	236	Maota	<i>Dysoxylum maota</i>	DYMA	F/H	68.70	E	3.60	F	6.70	Nail	Multiple-stem tree branch 1
05	237	Maota	<i>Dysoxylum maota</i>	DYMA	F/H	48.80	E	4.30	F	6.00	Nail	Multiple-stem tree branch 2
05	238	Ifi	<i>Inocarpus fagifer</i>	INFA	B	10.50	E	3.60	F	3.40	Nail	
05	239	Ifi	<i>Inocarpus fagifer</i>	INFA	B	12.00	E	9.20	F	2.40	Nail	

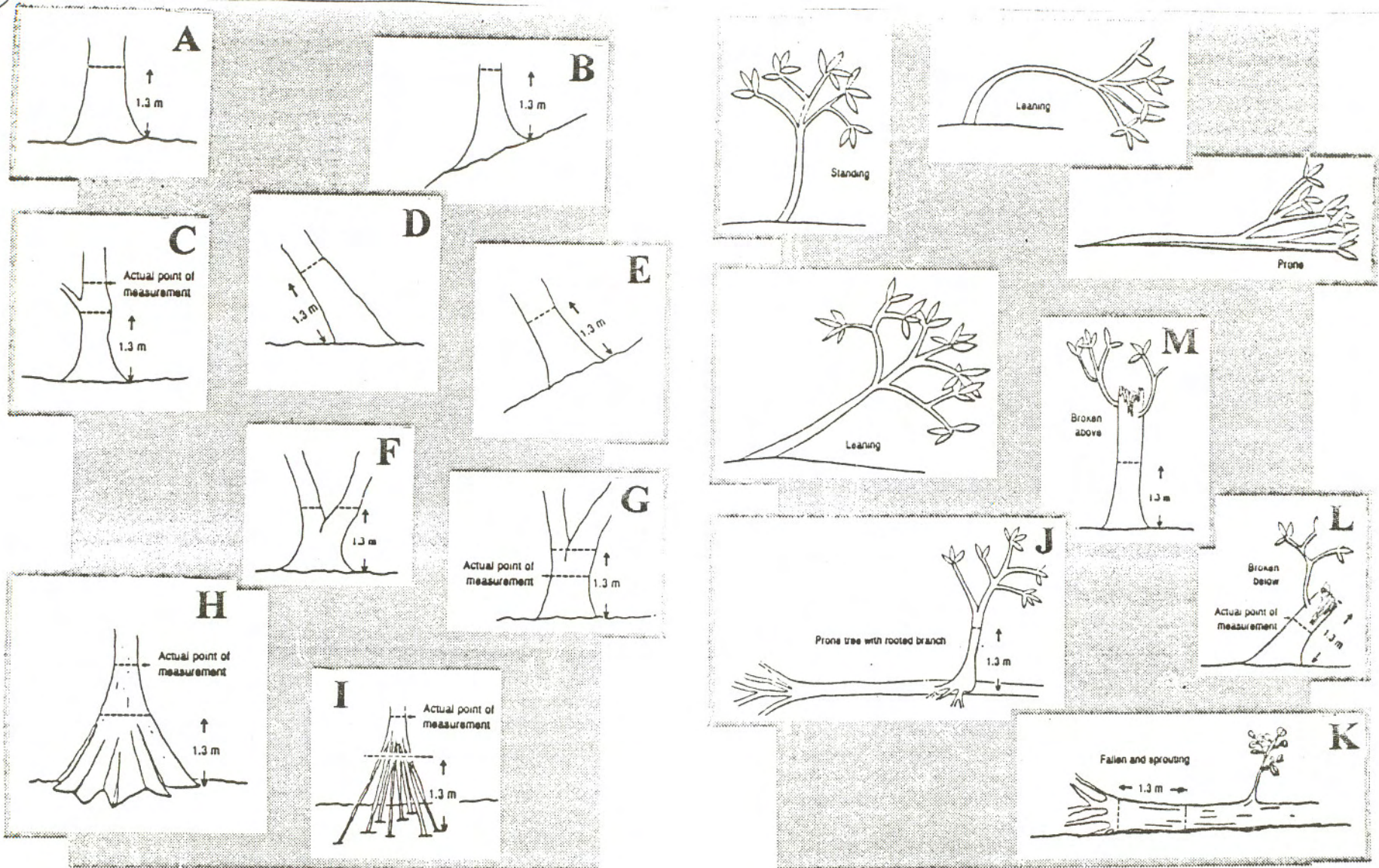


Figure 3 - Classification and methods used for measuring DBH on irregular rainforest trees
 Uafato Ifilele Survey - Permanent Sample Plots
 (Adapted from MAB Digest No.11, 1992)

Appendix 3. Community Survey Questionnaire Form for Carvers

Name of carving group (if any or no of interview)		Date	
No of carvers in group			

1. Ifilele harvest levels

How many trees does your group cut on average every month?		Every year?	
--	--	-------------	--

How many trees do you think the whole village cuts on average every month?		Every year?	
--	--	-------------	--

2. Seasonality of harvest

Is there a 'season' or particular time for cutting trees or are trees cut throughout the year? If there is a season what are the main harvest months?	
---	--

3. Location of harvest

Where does your group harvest ifilele trees? (ie name of ridge or other location)	
---	--

4. Preferred characteristics of harvested trees (ie. type, shape, size or other tree quality)

What are the characteristics you look for in an ifilele tree?	
---	--

5. Attitudes towards the sustainability of the current ifilele harvest

Does your group consider there to be plentiful ifilele in the forest or are you worried that suitable ifilele trees are becoming or will soon become scarce?	
--	--

If you are concerned about current harvest levels what do you suggest should be done to safeguard the ifilele resource?	
---	--

Appendix 4. Results of Community Survey of Carvers

No of carving groups interviewed	9
Estimated no of active carving groups in village	10 or 11
Estimated no of active carvers in village	Approx 40

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
1. No of carvers in group	2	2	4	2	5	6	2	2	3
2. Ifilele harvest levels									
Average no of trees cut by group/ month	n.r.	n.r	n.r	n.r	n.r	n.r	n.r	n.r	n.r
Average no of trees cut by group/year	1-2	n.r	3	3-4	10	2-4	2-4	n.r	>10
Average no of trees cut by village/ month	n.r	10	n.r	n.r	n.r	n.r	n.r	n.r	n.r
Average no of trees cut by village/year	n.r.	~ 100	10	12-13	30	n.r	20	8	80
3. Seasonality of harvest -most important periods or months	No season	White Sunday and Xmas	n.r	White Sunday and Xmas	White Sunday, Xmas, Teuila festival	n.r	n.r	n.r	n.r
4. Where does your group harvest trees?	Tagaila ridge	Fatuia, Gaoa, Malata, Afonina, Tavaloa, Pito ai, Tagaila ridges	Tagaila, Malata and Tavaloa ridges	All ridges near village	Tavaloa and Liuvaa	Gaoa and Tavaloa	Fatuia and Matasina	Malata, Tagaila and Fatuia	Falevao, Gaoa and Lelaua
5. Preferred tree characteristics	>20" DBH	>20" DBH	>25" DBH	>20" DBH	>20" DBH	>30" DBH	<20" DBH	>18" DBH	>12" DBH
6. Is ifilele plentiful in the Uafato forest?	No	No	Yes	Yes	No	n.r	No	Yes	No
7. Suggested action to conserve ifilele	Make better use of branches	Ifilele replanting scheme	n.a	n.a	Control harvest	n.r	Control volume of carvings, Shift to other species, ban harvest for a period of time	n.a	Make better use of tree, shift to other tree species

Key: n.r = no reply, n.a = not applicable

Appendix 5 – Ifilele Timber Inventory Plot Data

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees > 1cm DBH)

Survey: Uafato Conservation Area

Stratum: Ridge Forest

Area: 136.3 ha

[illegible]

Source: Field survey by F. Martel & Associates

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees > 15cm DBH)

Survey: Uafato Conservation Area
Stratum: Ridge Forest
Area: 136.3 ha

Plot No.	Forest Type	Ifilele Trees DBH > 15 cm DBH measurements per tree (cm)																				Total No. of trees	Basal area (cm ²)
C1	R																					0	0.0
C2	R																					0	0.0
C3	R																					0	0.0
C4	R																					0	0.0
C5	R																					0	0.0
C6	R																					0	0.0
D1	R	50	27	19	53	17	29	16	47	59	38	61	61	31	44							14	19,829.9
G1	R																					0	0.0
H1	R	36	26	33	35	18	43	22	34	27	35	43	54	36								13	8,947.7
H2	R	39	25	65	43	33	34	26	46	17	49	21	24									12	12,497.4
H3	R	49	20	43	32	26	22	31	42													8	7,420.5
H4	R	32	19	40	19	28																5	3,249.2
I1	R	69	22																			2	4,048.3
I2	R																					0	0.0
L1	R																					0	0.0
L2	R																					0	0.0
A1	R																					0	0.0
A2	R																					0	0.0
A3	R	62																				0	0.0
A8	R																					1	2,980.2
A9	R																					0	0.0
A10	R																					0	0.0
P1	R																					0	0.0
P2	R																					0	0.0
P3	R																					0	0.0
P8	R																					0	0.0
P9	R																					0	0.0
P10	R																					0	0.0

Total No. of plots: 28
Total area surveyed: 1.4 ha

55 58,973.3

Source: Field survey by F. Martel & Associates

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees > 1cm DBH)

Survey: Uafato Conservation Area

Stratum: Coastal & Valley Forest

Area: 264 ha

Plot No.	Vegetation Type	Seedlings >1cm	Regeneration ifilele DBH > 15 cm DBH measurements per tree (cm)																				Total No. of trees	Basal area (cm2)	
A4	V	0																					0	0.0	
A5	V	0																					0	0.0	
A6	V	0																					0	0.0	
B1	V	0																					0	0.0	
B2	V	0																					0	0.0	
B3	V	0																					0	0.0	
B4	V	0																					0	0.0	
B5	V	0																					0	0.0	
B6*	V	36																					0	0.0	
B7*	V	4	5.2	3.5																			2	30.9	
B8	V	0																					0	0.0	
E1	V	1																					0	0.0	
E2	V	0																					0	0.0	
E3	V	0																					0	0.0	
E4	V	0																					0	0.0	
E6	V	0																					0	0.0	
E7	V	0																					0	0.0	
E8	V	0																					0	0.0	
E9	V	0																					0	0.0	
E10	V	0																					0	0.0	
E11	V	0																					0	0.0	
E12	V	0																					0	0.0	
E13	V	0																					0	0.0	
E14*	V	2	14																				1	158.4	
F1	V	0																					0	0.0	
F2	V	0																					0	0.0	
F3	V	0																					0	0.0	
F4	V	0																					0	0.0	
F6*	V	34	1	1	3.1	1	1	13	1	2.9	3	1.5	1.6	3.1	13	8.8	3	1	1.6	2.3	2	1.5	6.4	3	1.8
F7**	V	0																					23	412.2	
F8**	V	0																					0	0.0	
F9**	V	0																					0	0.0	
F10	V	0																					0	0.0	
F11	V	0																					0	0.0	
F12	V	0																					0	0.0	
F13	V	0																					0	0.0	
F14	V	0																					0	0.0	
J1	V	0																					0	0.0	
M1	V	0																					0	0.0	
M2	V	0																					0	0.0	
M3	V	0	3																				1	7.1	
M4	V	1	6.2																				1	30.2	
M5	V	0																					0	0.0	
M6	V	0																					0	0.0	
M7	V	0																					0	0.0	
M8	V	0																					0	0.0	
P4	V	0																					0	0.0	
P5	V	0																					0	0.0	
P6	V	0																					0	0.0	
P7	V	0																					0	0.0	
Q1	V	0																					0	0.0	
Q2	V	0																					0	0.0	
TOTAL		78																					0	0.0	

*Total No. of plots: 52

*Total area surveyed: 2.6 ha

* Plots located on ridgeland stratum

** Plots surveyed by binocular

Source: Field survey by F. Martel & Associates

28 638.7

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees > 15cm DBH)

Survey: Uafato Conservation Area

Stratum: Coastal & Valley Forest

Area: 264 ha

Plot No.	Vegetation Type	Ifilele Trees DBH > 15 cm DBH measurements per tree (cm)																				Total No. of trees	Basal area (cm ²)
A4	V																					0	0.0
A5	V																					0	0.0
A6	V																					0	0.0
B1	V																					0	0.0
B2	V																					0	0.0
B3	V																					0	0.0
B4	V																					0	0.0
B5	V																					0	0.0
B6*	V		40	41																		2	2,602.8
B7*	V																					0	0.0
B8	V																					0	0.0
E1	V		57																			1	2,551.8
E2	V																					0	0.0
E3	V																					0	0.0
E4	V																					0	0.0
E6	V																					0	0.0
E7	V																					0	0.0
E8	V																					0	0.0
E9	V																					0	0.0
E10	V																					0	0.0
E11	V																					0	0.0
E12	V																					0	0.0
E13	V																					0	0.0
E14*	V																					0	0.0
F1	V																					0	0.0
F2	V																					0	0.0
F3	V																					0	0.0
F4	V																					0	0.0
F6*	V		48	25	40	53	22															5	6,167.7
F7**	V																					0	0.0
F8**	V																					0	0.0
F9**	V																					0	0.0
F10	V																					0	0.0
F11	V																					0	0.0
F12	V																					0	0.0
F13	V																					0	0.0
F14	V																					0	0.0
J1	V																					0	0.0
M1	V																					0	0.0
M2	V																					0	0.0
M3	V																					0	0.0
M4	V																					0	0.0
M5	V																					0	0.0
M6	V																					0	0.0
M7	V																					0	0.0
M8	V																					0	0.0
P4	V																					0	0.0
P5	V																					0	0.0
P6	V																					0	0.0
P7	V																					0	0.0
Q1	V																					0	0.0
Q2	V																					0	0.0

Total No. of plots: 52

Total area surveyed: 2.6 ha

* Plots located on ridgeland stratum ** Plots surveyed by binocular

Source: Field survey by F. Martel & Associates

8 11,322.3

Appendix 6. Ifilele DBH Size Class Analysis

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area									
Stratum: Ridge Forest									
Area: 140 ha			Calculations Seedlings						
Plot No.	Forest Type	Seedlings <1cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR	
C1	R	0							
C2	R	0	0	0	7.25	145	0	0	
C3	R	0							
C4	R	0	0	0	10	200	0	0	
C5	R	0							
C6	R	0							
G1	R	0	0	0	16.25	325	0	0	
D1	R	51							
E14*	R	2							
B6*	R	36							
B7*	R	4	584.9167	23.25	13.75	275	6393.75	10897729	
H1	R	31							
H2	R	6							
H3	R	6							
H4	R	0							
F6*	R	34	250.8	15.4	27.25	545	8393	14762088	
I1	R	11							
I2	R	0	60.5	5.5	8.75	175	962.5	915818.8	
L1	R	1							
L2	R	0	0.5	0.5	9	180	90	8010	
A1	R	0							
A2	R	0							
A3	R	7	16.33333	2.333333	8	160	373.3333	136764.4	
A8	R	0							
A9	R	0							
A10	R	0	0	0	6.75	135	0	0	
P1	R	0							
P2	R	3							
P3	R	0							
P8	R	0							
P9	R	0							
P10	R	0	1.5	0.5	13.25	265	132.5	17158.75	
NS									
TOTAL		192	Total (ha):		120.25	Total (#):		16345	26737569
Total No.of plots:		32				2405		136	4.622658
Total area surveye		1.6							2.150037
					Confidence Limits		+/-		10342
Source: Field survey by F. Martel & Associates									

UAFATO BIODIVERSITY CONSERVATION AREA

Ifile Resource Survey

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140 ha			Calculations Tree 1cm < DBH < 5cm					
Plot No.	Forest Type	file 1-5cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	16						
E14*	R	0						
B6*	R	0						
B7*	R	1	61.58333	4.25	13.75	275	1168.75	1147374
H1	R	4						
H2	R	1						
H3	R	0						
H4	R	1						
F6*	R	18	56.7	4.8	27.25	545	2616	3337362
I1	R	12						
I2	R	0	72	6	8.75	175	1050	1089900
L1	R	3						
L2	R	0	4.5	1.5	9	180	270	72090
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		56	Total (ha):		120.25	Total (#):		5105
Total No. of plots:					2405	42		0.976262
Total area surveyed:					0.98806			
Confidence Limits								+/- 4753

Source: Field survey by F. Martel & Associates

UAFATO BIODIVERSITY CONSERVATION AREA

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140 ha			Calculations Tree 10cm<DBH<15cm					
Plot No.	Forest Type	If file 10-15cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	0						
E14*	R	1						
B6*	R	0						
B7*	R	0	0.25	0.25	13.75	275	68.75	4657.813
H1	R	1						
H2	R	0						
H3	R	1						
H4	R	0						
F6*	R	2	0.7	0.8	27.25	545	436	41202
I1	R	2						
I2	R	0	2	1	8.75	175	175	30275
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		7	Total (ha):		120.25	Total (#):	680	76134.81
Total No.of plots:			2405					0.013163
Total area surveyed:								0.11473
Confidence Limits						+/-		552

Source: Field survey by F. Martel & Associates

filele Resource Survey

Survey: Uafato Conservation Area

Stratum: Ridge Forest

Source: Field survey by F. Martel & Associates

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140 ha			Calculations Tree 20cm<DBH<25cm					
Plot No.	Forest Type	filele 20-25cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	0						
E14*	R	0						
B6*	R	0						
B7*	R	0	0	0	13.75	275	0	0
H1	R	1						
H2	R	2						
H3	R	2						
H4	R	0						
F6*	R	1	0.7	1.2	27.25	545	654	41202
I1	R	1						
I2	R	0	0.5	0.5	8.75	175	87.5	7568.75
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		7	Total (ha):		120.25	Total (#):	742	48770.75
Total No.of plots:			2405					0.008432
Total area surveyed:								0.091826
					Confidence Limits		+/-	442

Source: Field survey by F. Martel & Associates

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140 ha			Calculations Tree 25cm < DBH < 30cm					
Plot No.	Forest Type	filele 25-30cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	2						
E14*	R	0						
B6*	R	0						
B7*	R	0	1	0.5	13.75	275	137.5	18631.25
H1	R	2						
H2	R	2						
H3	R	1						
H4	R	1						
F6*	R	1	0.3	1.4	27.25	545	763	17658
I1	R	0						
I2	R	0	0	0	8.75	175	0	0
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		9	Total (ha):		120.25	Total (#):	901	36289.25
Total No.of plots:								2405
Total area surveyed:								7
								0.006274
								0.079209
Confidence Limits								+/-
								381

Source: Field survey by F. Martel & Associates

FATO BIODIVERSITY CONSERVATION AREA **Filele Resource Survey**

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area

Stratum: Ridge Forest

Area: 140 ha

			Calculations Tree 45cm < DBH < 50cm					
Plot No.	Forest Type	Ifilele 45 – 50cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	1						
E14*	R	0						
B6*	R	0						
B7*	R	0	0.25	0.25	13.75	275	68.75	4657.81%
H1	R	0						
H2	R	2						
H3	R	1						
H4	R	0						
F6*	R	1	0.7	0.8	27.25	545	436	4120
I1	R	0						
I2	R	0	0	0	8.75	175	0	
L1	R	0						
L2	R	0	0	0	9	180	0	
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	
NS		0						
TOTAL		5	Total (ha):		120.25	Total (#):	505	45859
Total No. of plots:						2405	4	0.007
Total area surveyed:								0.089

Confidence Limits +/-

Ifilele Resource Survey

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140 ha			Calculations Tree 50cm<DBH<55cm					
Plot No.	Forest Type	Ifilele 50–55cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	2						
E14*	R	0						
B6*	R	0						
B7*	R	0	1	0.5	13.75	275	137.5	18631.25
H1	R	1						
H2	R	0						
H3	R	0						
H4	R	0						
F6*	R	1	0.3	0.4	27.25	545	218	17658
I1	R	0						
I2	R	0	0	0	8.75	175	0	0
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		4	Total (ha):		120.25	Total (#):	356	36289.25
Total No.of plots:							2405	3
Total area surveyed:								0.006274
								0.079209
						Confidence Limits	+/-	381
Source: Field survey by F. Martel & Associates								

UAFATO BIODIVERSITY CONSERVATION AREA

Ifilele Resource Survey

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140			Calculations Tree 55cm < DBH < 60cm					
Plot No.	Forest Type	Ifilele 55 – 60cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	1						
E14*	R	0						
B6*	R	0						
B7*	R	0	0.25	0.25	13.75	275	68.75	4657.813
H1	R	0						
H2	R	0						
H3	R	0						
H4	R	0						
F6*	R	0	0	0	27.25	545	0	0
I1	R	0						
I2	R	0	0	0	8.75	175	0	0
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		1	Total (ha):		120.25	Total (#):	69	4657.813
Total No.of plots:			2405					0.000805
Total area surveyed:								0.028378
Confidence Limits								+/- 136

Source: Field survey by F. Martel & Associates

Ifilele Resource Survey

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140			Calculations Tree 60cm<DBH<65cm					
Plot No.	Forest Type	Ifilele 60-65cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	2						
E14*	R	0						
B6*	R	0						
B7*	R	0	1	0.5	13.75	275	137.5	18631.25
H1	R	0						
H2	R	0						
H3	R	0						
H4	R	0						
F6*	R	0	0	0	27.25	545	0	0
I1	R	0						
I2	R	0	0	0	8.75	175	0	0
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	1	0.333333	0.333333	8	160	53.33333	2791.111
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		3	Total (ha):		120.25	Total (#):		191
Total No.of plots:								2405
Total area surveyed:								2
								0.003704
								0.060858
Confidence Limits								+/-
								293
Source: Field survey by F. Martel & Associates								

UAFATO BIODIVERSITY CONSERVATION AREA

Plot Data (Ifilele trees – DBH Size Class Analysis)

Survey: Uafato Conservation Area								
Stratum: Ridge Forest								
Area: 140 ha			Calculations Tree 65cm < DBH < 70cm					
Plot No.	Forest Type	lfilele 65 – 70cm	Vars	Total	N (AREA)	Nst (TOTAL)	TOTAL (REG)	STD ERROR
C1	R	0						
C2	R	0	0	0	7.25	145	0	0
C3	R	0						
C4	R	0	0	0	10	200	0	0
C5	R	0						
C6	R	0						
G1	R	0	0	0	16.25	325	0	0
D1	R	0						
E14*	R	0						
B6*	R	0						
B7*	R	0	0	0	13.75	275	0	0
H1	R	0						
H2	R	1						
H3	R	0						
H4	R	0						
F6*	R	0	0.2	0.2	27.25	545	109	11772
I1	R	1						
I2	R	0	0.5	0.5	8.75	175	87.5	7568.75
L1	R	0						
L2	R	0	0	0	9	180	0	0
A1	R	0						
A2	R	0						
A3	R	0	0	0	8	160	0	0
A8	R	0						
A9	R	0						
A10	R	0	0	0	6.75	135	0	0
P1	R	0						
P2	R	0						
P3	R	0						
P8	R	0						
P9	R	0						
P10	R	0	0	0	13.25	265	0	0
NS		0						
TOTAL		2	Total (ha):		120.25	Total (#):		197
Total No.of plots:			2405					2
Total area surveyed:								0.003344
								0.057826
					Confidence Limits		+/-	278
Source: Field survey by F. Martel & Associates								

Appendix 7. Monitoring Form for Ifilele Harvesting

Names of carvers in Carving Group:

- PROCEDURE:**
1. ENTER THE DATE, WHETHER TREE WAS DEAD OR ALIVE AND THE DIAMETER AT BREAST HEIGHT (DBH) IN CM OF ALL IFILELE TREES CUT DOWN BY YOUR CARVING GROUP EACH MONTH. MEASURE THE TREES AS SHOWN IN THE DRAWINGS.
 2. USE THIS FORM FOR THREE MONTHS AND THEN GIVE IT TO THE CASO.

TREE NO.	JANUARY				FEBRUARY				MARCH			
	DATE TREE CUT	TREE DEAD OR ALIVE	TREE DBH (CM)	RIDGE WHERE TREE FOUND	DATE TREE CUT	TREE DEAD OR ALIVE	TREE DBH (CM)	RIDGE WHERE TREE FOUND	DATE TREE CUT	TREE DEAD OR ALIVE	TREE DBH (CM)	RIDGE WHERE TREE FOUND
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

