

IMASMIM SATI IDAM HOTI

S F Amutuana'i

Faletolu

O MAUI TE WAKA

[22 pages]

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Courtesy Erik Norder - Flickr.

Popular tourist destination when in Arthur's Pass, South Island, New Zealand.

NORWAY

Polynesian society kept tally with refined number system

There are 10 sorts of people, so the old computer programming joke goes: those who understand binary and those who don't.

Now computer scientists will have to expand the scope of the first category to include a pre-industrialised Polynesian civilisation. Long before the world's financial centres traded wealth across continents using ones and zeros, it seems Pacific Islanders were doing likewise – but with canoes rather than fibre-optic cables.

Researchers have found that before the arrival of Europeans, settlers on Mangareva Island developed a counting system, a hybrid of decimal and binary, to keep track of trade routes that spanned the tropics, from Hawaii in the north to Pitcairn Island in the south.

Binary is the system of ones

and zeros that computers use for calculations and memory storage. Envisaged by Gottfried Wilhelm Leibniz in the 18th century, binary differs from decimal counting in that instead of each "column" representing a different power of ten (in the number 1273 the first column represents one lot of a thousand, the second two of a hundred, the third seven of ten and so on), each column represents a different power of two (2, 4, 8, 16, 32 and so on). So 2 is 0010, 4 is 0100, 8 is 1000 and 14 is 1110 (= 8 + 4 + 2). The advantage is that calculations are simpler and, for a computer, can be represented by a series of on and off switches each corresponding to a one or a zero. The disadvantage is that numbers can get very long.

For instance, 1024, which is 2 to the power of 10 or, in

computing, a kilobyte, is 10000000000.

Norwegian scientists studied the records of European explorers in Polynesia and found they documented a number system that combined the best of binary and decimal.

If Mangarevans wanted to record the number of coconuts sent to Tahiti or octopuses presented in tribute to their king, the first 10 digits would be decimal. After that, instead of having 10, 20, 30, 40, they had 10, 20, 40, 80 – called takau (K), paua (P), tataua (T) and varu (V).

So 113 would be VPK3, and 76 would be TPK6.

"Oceanic-speaking societies are renowned for their ancestral interest in numbers," the authors write in the journal *Proceedings of the National Academy of Sciences*. The Times

1	BHAVA	BEING BECOMING CONDITION
2	UPA / TAP	TO MAKE WARM HEAT AFFLICT of an ILLNESS PAIN TORMENTED
3	PHANDATI PHARANA	TO PALPITATE THROB TREMBLE PERVADING SUFFUSED [WITH]
4	SAM-TAN	TO STRETCH ALONG or OVER JOIN UNITE CONTINUOUS
5	BHĀSANA	SPEAKING
6	PIHALA	LIT BURSTING RIPE FRUIT
7	PUTA	TUBE CONTAINER SACK BAG
8	PEMA PEHI	LOVE AFFECTION TO GO ON
9	PĀ VĀ KA PEKKHA	PURE BRIGHT SHINING LOOKING OUT FOR INTENTION
10	PĀ RA	BEYOND OVER ACROSS
11	LIH	LICKING PERCEIVING IN the [EYES]
12	BHATTI	FONDNESS DEVOTION
VEDIC	BHAKTI	
13	BHATTA	SUPPORTED FED REARED
14	BHIKHA	BEEFED FOOD
15	BHIRU	FEAR
16	TARĪA	CARRY ACROSS
17	VASSA ABHI PAVASSA ABHI VASS	RAIN HEAVY RAIN RAIN ON
18	VASSA VĀ RI	RAIN RIVER

Māori Pāli 502	A - PA	BHA VA		SPIRIT of ONE DEAD/SLAVE BEING BECOMING CONDITION NATURE DENOTING STATE OR CONDITION OF
	THĪNAJ-	BHA VO		perhaps best translated as of a WOMAN'S CHARACTER and taking BHAVA as = ATTA-BHAVA STATE of NEED
* Māori	ATTHIKA HIA	WHA - I		FALL IN LOVE HOW MANY HIAKAI = HUNGER BECOMING ACQUIREING THE CHARACTER or APPEARANCE of
		WAH - A - PŪ		ELOQUENT
	U - WHA = U - HA TIKA			FEMALE GENTLE WOMAN JUST FAIR RIGHT CORRECT
		WHĀ	EREERE	MOTHER of ONE'S CHILDREN WIFE
		WA	ERENGA	A CLEARING for a CULTIVATION
* ATA		WHA - I		SHOW KINDNESS BE LIBERAL
		WAI		MEMORY INSTRUCTIONS GIVEN
		WA	HINE	WOMAN WIFE
		WA	IKA - U - ERE	OLD WORN OUT
		WA	NA	SEEDLING BUD SHOOT RAY of SUN
Pāli 503 from		BHA VA NA ²		PRODUCING DWELLING ON SOMETHING
	* BHA	VE TI		PUTTING ONE'S THOUGHTS TO application APPLICATION DEVELOPING BY MEANS of THOUGHT CULTIVATION
		WHA	NA - U	BE BORN [of MIND]
		WA	NA - NEA	KNOWLEDGE of the TOHUNGA
		WA	I	MEMORY INSTRUCTION
		WHĀ		= WHAKA and 'KA = CAUSATIVE PREFIX
		WHAI		LOOK FOR PROCEED TO [THE NEXT IN ORDER]
	TINA NA			PERSON [PRACTISE PERFORM]
	* TINA - KU			INTIMATE KNOWLEDGE PREGNANT
	* KI TE -	WHE - AKO		LEARN EXPERIENCE
	PA	NEO RE		CHILDREN IMMATURE
A TI				offspring [see TI as pers. term SK]
		WA	NA - NEA	THREATENING BEHAVIOR
		WHE - I NU		THIRST
	HI	AKAI		HUNGER [HI INU THIRST]

SK 194
SK 198
P
Cause-
Māori

UPA
UPAV

TAP
TAP A TI
TAP AT
TAP AYA TI

TOWARDS NEAR TO TOGETHER WITH IT
TO MAKE WARM HEAT AFFECT of
ILLNESS PAIN BESICK TORMENTED
INTERIOR HEAT DISEASE
TO IGNITE BURN CONSUME PAIN
(HURT)

TAO PUKU
TAH -U
TAP -A
TAO TU
TAP -A
TAP A E
TAP =U
TAP -A -PA
TAP -A -KI
TAP -A PAHU
TAP -A RA
TAP -A -RU
TAP A RARO
TAP A TU
TAP A TV
TAP -I
TAP -I
TAP -I
TAP -OH
TAP O -RE
TAP OTI
TAP UHI
TAP -U -RI
TAP -UKE
TAP VRU
TA E
TA E RA
TA HATAHA
TA HAE
TA HE
TA HOKA
TA HUMAERO

Cook wrapped in Leaves
Set on fire burn.
P. MUL
WOUNDED
RECITE = 'HEAT TAPAS'
AMBUSH
See.
SIT BROOD of a HEN
FOOD LAID on LEAVES IN AN OVEN
HIDDEN UP
DESIRE
JOIN ADD Eat voraciously
NORTH WIND ie WARM
THATCH COVER IN A ROOF
BEAT STRIKE
apply dressing's to a WOUND
OVEN COOK
patch mend repair ie together with
ABSCESS
appease conciliate
Receptacle for food.
TEND IN SICKNESS
ceremony with SACRED FIRE
Cover with Earth [a fire]
Join add.
Touch of feelings
Sexual Desire
Sleep riverbank
Steal Thief
Menses
Recite ceremonially = TAPAS heart
Sickness disease.

Pāu476	PHA N DA TI		1 TO THROB PALPITATE 2 TO TWITCH TREMBLE MOVE STIR [off fish wriggling on land] TO MAKE THROB THROBBING AGITATION MOVEMENT MOTION
Caus II >	PHA NOĀ PETI PHA N DA NĀ		TRAVEL COME GO RECOIL SPRING BACK KICK REVOLT REBEL RUSH CHARGE IMPEL SPRING of a TRAP BE BORN BE PRODUCED BE BROUGHT FORTH Arrive suddenly FOAM LEFT on BANK'S SHOWING the LIMIT of the
Māōro	WHA NA WHA NA		BE BORN BE PRODUCED BE BROUGHT FORTH Arrive suddenly FOAM LEFT on BANK'S SHOWING the LIMIT of the
	WHA NA U WHA NA UA PAH A		BE BORN BE PRODUCED BE BROUGHT FORTH Arrive suddenly FOAM LEFT on BANK'S SHOWING the LIMIT of the
WHAKA	PĀ H-A PĀ H-A HA PĀ H-A HU PĀ H-A KE PĀ H-A NA HANA PĀ H-A RE PĀ H-E KE PĀ H-I PĀ H-I		Exclamation Astonishment [FRESH SPLIT OPEN BATTERED OLD MAN BLUSH BITTER DISTASTEFUL MENSES Strike Beat irritation of the skin due to eating poisonous fish HAVING the SKIN RUBISED off Be hot of the SUN
> from	PHA RA NA PHA RA TI		1 PERVADEING SUFFUSED [with] QUITE FULL [OF] 2 PERVADEION SUFFUSION THRILL Be produced be brought forth SUN . DAY SAIL Set in motion a body of men SHOAL of FISH COMPANY of AVENGE A DETAIL Parents BURIAL CAVE FILL [NEA-KURU=HARVEST TIME NEA KAU Seat of affection's / feelings / Desire
Māōro	WHA -NA RA RA NEA RA NEA RA NEA		Be produced be brought forth SUN . DAY SAIL Set in motion a body of men SHOAL of FISH COMPANY of AVENGE A DETAIL Parents BURIAL CAVE FILL [NEA-KURU=HARVEST TIME NEA KAU Seat of affection's / feelings / Desire
	WHA RA WHA -O NEA		Be produced be brought forth SUN . DAY SAIL Set in motion a body of men SHOAL of FISH COMPANY of AVENGE A DETAIL Parents BURIAL CAVE FILL [NEA-KURU=HARVEST TIME NEA KAU Seat of affection's / feelings / Desire

SK	SAM-TAN		TO STRETCH ALONG or OVER JOIN UNITE CONTINUOUS
MĀORI	TĀ	NGĀ	TA NET
	Ā TA-	HIRĀ	DAY AFTER TOMMORROW
	A TA		SHADOW [of HUMAN'S] REFLECTION early morning opposed to evening
	A TA-	PŌ	BEFORE DAWN
	A TA-	ITI	EARLY DAWN
	A TA-	HAPARA	TIME of DAWN
	A TA-	TU	JUST AFTER SUNRISE
	A TA-	TUHI	RED GLOW of DAWN
	A TA-	RAU	MOON MOONLIGHT
	A TA-	TA	Small circular net made round a wickerwork frame.
	A TA-	WHĀI	[BĀI-] show kindness be liberal
	TĀN	GA	TA TĀTŪ
WHĀKI	PA TA		ANCIENT TIMES
	PA TA	NGĀ	Small waves ripples covered with spots or pimples
	PA TA	PATAIĀ	WHĀ HEAVY RAIN
	PĀ TA	KI TAKI	BOUNDARY DIVISION a SCREEN or BREAK WIND
	PA TA	TARA	FENCE
	TA	KĀ HI	TRAVERSE LAND TO CLAIM
	TA	KĀI	WRAP ROUND [OWNERSHIP]
	TA	KE	ORIGIN BEGINNING
	TĀM	ĀKĀ	planted cord.
	TĀN	I	COMPLETED IN WEAVING
	TĀN	-E-	KĀHĀ. TIGHT of a CORD
	TĀN	-I-	KŌ ORNAMENTAL BORDER of a MAT
	TĀN	GA	ENGĀE UMBILICAL CORD
	TĀN	GĀ-	NGĀ STRAGGLER'S CAMP FOLLOWER'S
	TĀN	Ā	TĀNGŌ RAIL of a FENCE
PA	TA	TARA	FENCE
	TĀN	Ā	TĀTU LARGE of a FIRE

See	WA	KA-	WACO	ITO	
PAU503	BHĀ	S AN	A	NT	SPEAKING SPEECH
from	BHĀS				
	BHĀ	S A	KA		SPEAKING
	BHĀ	S A	TI-		TO SPEAK TO SAY TO SPEAK
					TO TO CALL
DIR	ABHĀ	S-	ISSAG		
	BHĀ	S-E			
	BHĀ	S-A	NA		SPEAKING SPEECH
from	BHĀ	S			
	BHĀ	SĀ			SPEECH LANGUAGE espec Vernacular
	BHĀ	SI	TA		SPOKEN SAID UTTERED [Speech
					Speech word
	BHĀ	S-I-	TAR		ONE WHO SPEAKS A SPEAKER
MAORI	PĀ				HOLD PERSONAL COMMUNICATION WITH
	TI-	HA	U		confused sound of voices
	WA	U	AHAU	i	ME
			NĀ		LINGEREE
	A WHA-	I			MAYBE PERHAPS [ARCH]
	KA	WA			a class of KARAKIA
			TA	BE	
		HA			Tone of voice tenor of speech.
KAU	WHA	U			RECITE
	WA				ACCUSE
	WHA	NGA			REPEAT after ANOTHER
			KA-U-DE-RUNGA		LORE of the CELESTIAL
ac	WHA-	I KO	RERO		formal speech.
			REOTIAN		whisper
	WAH	-A			VOICE
	WAH	-A	-PŪ		ELOQUENT
	WHA	KA			REPLY TO
	A	HA			WHO? WHAT?
		HE-	A		WHAT PLACE
		HEI	TARA		Accusation
		HI			LEAD A SONG
		HI-	E		SHOUT
		HI-	KA		perform Rite's
		HI-	KO-HIKO		Recite Genealogies
PALI		VA	CO		and VACA
MAORI		TI-	O		CRY CALL

PAU 07 PHA LA
OPVED PHA LA
TO PHA L
[SPHAL]

LIT BURSTING, TO BURST
12 RIFE FRUIT ITD
3 fig fruit Result consequence.
[fruition]

WHA IAO
RA

DAYLIGHT
SUN DAY

WHA I

Becoming acquiring the shape
or character of.

WHA KA

Causative prefix

WHA KI

GATHER FRUIT pluck off

WHA NA U

BE BORN

WHA NOW HANOA

VEGETATION feeling annoyance.

WHA NAOI

Nourish bring up treat

WHA O

Increase in size SWELL

WHA TITIRI

FILL put into a bag.

WHA-U-RA URA

THUNDER.

WHA UPA

BLUSTER

WHA WHA PU

Eat voraciously gulp

PAH-A-IA

EXULTATION

PAH-AU

SPLIT OPEN

PAH-O-AHOA

flourish luxuriantly as vegetation
HERBIFEROUS

PA PAH-U

BURST EXPLODE

PAH-U

BURST INTO FLAMES

PAH-U-NU

BURN FIRE

TA RA

M. VIRILE

RA PAI

RA RA

first pregnancy,
effect Repercussion

Rush in Disorder Stampede

HA RA

EXCESS Beyond a round number

KO WHA-I

RA URAHA

KOWHAI Bursting into Bloom

Yellow flowered tree of Springtime

WHA KA RA RAHA

MAKE ABUNDANT

WHA ERERE

MOTHER of ONE'S CHILDREN

[WIFE]

PAU 465	PU	TT	A-	KA	A LITTLE SON / CHILD
PAU 464	PU	TA		orig meaning	TUBE, CONTAINER HOLLOW POCKET
				1	A CONTAINER TO CARRY FRUIT INTO A POCKET BASKET
				2	BAG/SACK for carrying food. for a journey
					PROVISIONS
	PU	TA-	NA	SA	NOSTRIL
	PU	TA-	PA	KA	SOMETHING COOKED IN A BAG
MAORI	PU	TA			opening hole VAGINA COME COME FORTH COME OUT BE BORN
	PU	TA-	KE		BE CHANGED
PŪ	PU	TA			BLISTER ON THE SKIN
	PŪ	TAI	HU		NOSTRIL
				HĀ	Breathe Breath
	PŪ	TA	IKI		BASKET
	PŪ	TA	NETANE		Cructate after food.
	PŪ	TA-	WA		TESTICLE
	PU	TUTU			Bag [TUTU Berries]
	PU	WAI			Basket for fish
		TA			Net
	PU	RU			prepare fern root in water
	PU	RAKA			Crayfish POT
	PU	NI			SHED of a cover for feathers
	PU	NGA			Basket for belts
		TA	NGA		Netting or Weaving
		TA			Shit
		TA	HORA		Gather fruit off a tree
		TA	HU		COOK FOOD
		TA	HE		Abortion menses
		TAI	AWA		VAGINA
		TA	RINGA		EAR

472 PRAU from CPBSK	PE MA PR I PRE MA			LOVE AFFECTION
MAERI	PE MA - RI PIRI HONGA MA NA WA MA NA VA TA MA - I TI MA TUA		RI RI WA VA	LIKE LOVE KEEPING CLOSE FAITHFUL MIND MIND CHILD PARENT
474 PRAU MAERI	PE HI PA + I PE HI PE H - U PE I PE KA NEA HI KA PE KE HI PA HI KUWAI HI HIKO HI KA HIKA HI KI HI KI RANGI HI KOI TAKA HI WHA KA HI - E HI - AKAI HI - AINU HI - A MOE HI - A] > - WAH - A] > HI - A HI HI HI			imp 2nd Sing of - GO GO ON, said to HORSE. AMBUSH SPEAR DART DRIVE OUT BANISH Branch Road. Capulate LEAP OVER PASS GO BY Source of a Stream BRISK QUICK LINE of DESCENT CONVEY BE UNSETTLED STEP Traverse land to claim ownership SHOUT AT TO DRIVE AWAY HUNGER THIRST SLEEPY Desire HOW MANY Lead a Song Be affected with DIARRHOEA drive urge compell to see
SK				

PAU 455 from MAORI	PĀ PU PU PA PA WĀ WĀ WĀ WĀ PU	VA HA HU WA KA KĀ NA RO HO	KA NA NU KA KĀ NA RO HO	1. ady PURE BRIGHT CLEAR SHINING 2. THE FIRE GLOW → HANA HEAT GLOW FLAME BURN FIRE SMOKE MEDIUM of a GOD take fire be lighted burn. RAY of SUN BURNING COAL'S CLEAR BRIGHT
PAU cp SK from > > > FROM MAORI =	PEK PRE PA+ PEK PEK PEK PA PE PE PA PEK PĀ PE PE PA PEK PĀ PE PE PE PE KĀH KĀH KĀ TI TI TI -HA IK IK IK I I	KHA KSĀ IKS KHA KHA KHA TI IKS HEA WĀHA -I -E-HAWANI -HI HĀ HĀ NEI REK ŌU -U-KURĀ -VA NO HI KA RO HA HA -A -E -A -NE	 NA NA MAUVA DA POM KA RO HA HA A-MAUI A-MAUI A-MAUI NE	LOOKING OUT FOR INTENT UPON from PA+IK'S SEEING-SIGHT LOOK TO BE LOOKED FOR TO BE EXPECTED MIND [DESIRABLE TO BEHOLD REEARD OBSERVE [MAORI PA-IK-E STRIKE] LOOK AT OF WHAT APPEARANCE or SORT LIKE GOOD LOOKING GOOD EXCELLENT A STAR whose appearance marks the 8TH MONTH = RŪHĀ of non IDENTITY different of another KIND DO IN THIS WAY OLD MAN or WOMAN RAINBOW FORM APPEARANCE EYE keeping a direct course just fair LOOK SEE EXAMINE [Right Correct] Look for MILKY WAY HIGH LOFTY FISH VICTIM IN COMPARISON WITH COMPARE MEASURE

SK 903 LI H
 cf MIA DHU - LIH
 LI H - A
 > LE OH RI
 LIH
 > LE LIHA
 SK 903 > LI
 cf ✓ RI
 fut LE TA
 MIAORI TIR - IA - KI
 MIAORI RI HA
 RI E
 RI KO
 RI MU
 WHAKA RI RIKA
 RI KIRIKI
 RI NGATAHI
 RI O
 SK WHAKA RI P -
 WHAKA RI PI
 RE RE HUIA
 WHAKA RE WAI
 WHAKA RE WA
 WHAKA RI KA
 RI NGI
 RI RI
 RI WHIA
 PA RI
 PE RE
 PE RE
 PA RE RA RETIA
 PA RE WHERO
 WHAKA RI PI
 SK LI P
 LI
 MIAORI PI RI HONGA

LICKING PERCEIVING IN the EYES. MILD WIND
 LICKING or BEING LICKED
 (licker, a mild wind
 (late form of RI) LICK UP = DESTROY of ARROW'S
 (CONSTANTLY LICKING)
 TO REMAIN STICKING ALIGHT OR SETTLE ON, HIDE OR COVER DOWN IN
 CLEAR AWAY of CLOUD'S
 NIT
 2
 DAZZLED DIRT FOULNESS
 Seaweed [sea licked]
 DREAM of
 in fragments
 of the edge of a fist
 M. VIRILE wrinkled dried up
 TO Reattached to
 TACK SHIP IN SAILING
 PLEASANT TO the SIGHT
 RAIN HEAVILY [ie licking up]
 Set in Motion
 DREAM of.
 throw in great numbers, showers
 Lie spear darts 100
 BATTLE ie licking up,
 DEFEATED
 FLOW of TIDE flow over
 SAIL da Canoe.
 Arrow Dart
 VIOLENT WIND
 SLAUGHTER IN BATTLE
 TACK SHIP IN SAILING
 BEATTACHED TO fi
 CUNGING TO ACHERING TO
 attached faithful

PAU 497 BHATTI
 *NEOKS BHAKTI
 from BHAJ

WHĀ EREERE
 WĀ HINE
 WHĀ NEAI
 TI RI
 TI A
 PA NGORE
 PAH -I-WI
 PAI
 PAI NEI
 * PA KA U
 PA RA
 PA TA
 PA RUHI
 TI RI

DEVOTION ATTACHMENT FONDNESS

Mother of one's children wife
 wife

feed nourish maintain Rear
 share portion

Mother Stomach
 children

Lean on anyone's shoulder in
 pleasant agreeable [walking]

BELIKED

CWING, i.e. side faction part 150

BLOOD RELATIVE

prepare food.

favourite darling

offering to a God share portion

PAU 496 BHA NGA
 AV BAH HA
 POLSK PIEN
 PIEN KA
 PAU SA NA
 and SA NA

as HEMPEN CLOTH

HEMP

] HEMP

PAU 497 BHA TA
 cp Epic SK BHAR TA
 > BHĀ TĀ - BHACCĀ
 > BHĀ NĀ
 cp Epic SK BHĀ NĀ
 > BHATTA
 Epic SK BHAKTA
 orig pp4 BHĀ JATI
 BHATTI KA
 BHĀ TTA
 WHA NG AI
 TI KA
 TI RI
 WHĀ ERE ERE
 WĀ HINE
 WHĀ NA U
 PA NGURE
 WHAKA PĀ KA NGA
 TA MI
 TA RU NA
 ATI
 PA RA
 PA ENGA
 PĀ H - AO
 PA KA
 PA I
 PA H - UNGA

SUPPORTED FED RETIRED MAINTAINED

BHACCĀ MAINTAINED ARE MY DEPENDANTS
 COLLECTIVELY GOODS WARE'S
 PROPERTY POSSESSIONS

FEEDING FOOD NOURISHMENT MEAL

] WORKING FOR FOOD

FEED NOURISH MAINTAIN REAR
 JUST FAIR RIGHT CORRECT

SHARE PORTION

MOTHER OF ONE'S CHILDREN WIFE

WIFE / TAMAIKI CHILD

family group he born

CHILDREN IMMATURE

YOUNGEST CHILD IN A FAMILY

FEED

Connected by family ties

offspring] descendants

BLOOD RELATIVES

place where things are heaped up.

Catch in a Net wind screen for
 Cook dried provisions [Crape]

Prosperity
 CRUMB

PĀL 1506 BHI KKH A
 CLSK BHAI KS A
 of BHI KS
 = WHI - A
 - HI - A
 - HI - A KAI
 HI - A - INV
 WHI RO
 WHI U
 WHAKA WHI - WHI
 ATA WHAI
 HĀ KĀRI
 HĀ
 HA U P A
 A PI
 Ā PĀ NOĀ
 PI HE
 PĀLI BHIK S
 PIK - I - TURANGA
 PAK - ARA
 PIK - O - KO
 PAK AT ITI
 PIK - O - NI
 PĀK I HI
 PI - N - E - NE
 PI - N - O - HI
 PI - RA NEI
 PI - PIR - I
 PI TAV
 PA KA
 PA RI
 PA K - A PAKA
 PAI
 PAI TU
 PAI - O - RI
 PAI - RU - RI

BEECED FOOD FOOD
 DESIRE
 HUNGER
 THIRST
 UNPRODUCTIVE of POOR SOIL
 SURFETTED SATISFIED with FOOD
 GIVE PRESENT
 BE LIBERAL SHOW KINDNES'
 GIFT PRESENT FEAST
 TASTE FLAVOUR
 EAT
 SUPPLEMENT ANYTHING
 ACO [DEFICIENT]
 UNTIL
 PREPARE FOOD
 COME TO the SUPPORT of ASSIST
 SMACK the LIPS
 HUNGRY
 DEFECTIVE IN FOOD
 PERSISTANT WORRY PERSISTANTLY
 DIE FOR FERN ROOT'S
 BEG
 PLACE HOT STONES ON FOOD
 DESIRE
 WINTER
 Succulent shoot of a plant
 DRIED PROVISIONS' COOD
 ABUNDANCE
 SCRAPS
 GOOD EXCELLENT PROSPERITY
 FERN ROOT WITH COARSE FIBRE'S
 EMACIATED
 SOLICITUDE

PAU	BHI	RU
from	BHI	
MÄOR:	PI	PII
		RU
		RÜ
Note	PI	AU
	PI	ERE
WHAKA	PI	KO
	PI	KOKO
	PI	RO

FEARFUL re having fear AFRAID
 COWARDLY
 Young fighting men in vanguard of
 [an Army]
 ATTACK
 EARTHQUAKE

IRON AXE
 GAPE as a WOUND,
 MURDER of GUESTS
 HUNGER
 Defeated in a game. PUTRID

PIH	NER	RU	A
PIH	A	RO	A
PIH	E		
PIH	I		
PIH	-O-	NGA	
WHI	RO		

FULL of SORES
 IRON HATCHET
 DIRGE
 CUT SPLIT
 PUTRID
 BAD EVIL

PA	RU	
PA	RU	RE

PLUNDER CRUSH

OVERCOME MALTREAT PLUNDER
 [PREY BOOTY

See	RU	A	HINE
	RU	A	KI
	RÜ	A	MOKO
WHAKA	RU	ERUE	
	RU	KI	
	RU	MA	KI
	RU	PE	
	RU	RU	HAV
TA	RU		
	RU	KU	

DOKTOR,
 VOMIT
 Azure of Earthquakes
 TREMBLE SHAKE
 DARK
 DROWN
 SHAKE VIOLENTLY VIOLENCE
 STORMY
 TAWAITI INFLUENZA
 DIVE FOR

Uu3>

TA RA
TĀ Y
TA N
TA VIS HA
TA V°

CARRY ACROSS
TO SPREAD OUT PROCEED
IN A CONTINUOUS STREAM
HEAVEN OCEAN

Pass

TA RA KI NI
TA RA KI TA
TĀ RA KA

STARRY NIGHT
STAR FILLED [MĀORI KI =
See MĀORI KIWA BLINK/STAR FILL

f d
gv =

KA
°KS HA
TA E

STAR EYED
MĀORI KANAPA SHINING/KANOHI EYE
COME GO REACH ARRIVE AT
KIWA BLINK = VARUNAS EYES [SPIES]

TI RA
RĀ

Company of travellers STARS
SAIL [of ORIONS BELT]

PA RĀ WĪHĒNUA
PA RĀ WĒRA
PĀ RĀ RĪKI

FLOOD
SOUTH WIND
SEA DRIFT

PA

PA RĀ TA
PA RĀ

Sea Monster CAUSING THE TIDES
FLOW of the TIDE

TA I
TA I
TA I A PU

THE OTHER SIDE
SEA TIDE WAVE RISE
a STAR IN CLOSE CONJUNCTION
KA MO EYE [WITH THE MOON]

TA I AHO AHO
TA RA

VERY BRIGHT [of the MOON]
Rays of Sun Before Sunrise

TA RĀ TĀ RĀ
TA RĀ PŪA

STAKES of a FENCE
A SEA BIRD

TĀ

TA I
TA RĀO

STUDY THE HEAVENS IN NAVIGATION
a Star in Milky way

TĀ

TA RA RĪKI
TA U
TA U KA PO

LEADER of a FLOCK of PARROTS
alight come to Rest
TWINKLE of a STAR

RA KA
RĀ KA I

UMĀ TOHI MOON on 18 NIGHT MOON = STAR
MOON BEDOCK

KI TA
RA NEI

INTENSELY BRIGHTLY of COLORS
SKY HEAVEN

HA RO VAULT of HEAVEN

			VASSA	RAIN
PĀU				
PĀU	ABHI -			and TOWARDS ABOUT
	ABHI - PA	VASS		RAINDOWN ON POUR DOWN
				HEAVY RAIN. CLOUDBURST
	ABHI - RŪ	PA		HANDSOME
Māori	AWHI			DRAW NEART EMBRACE
"		PA - I		GOOD LOOKING
PĀU	ABHI - - -	VASS		RAIN ON
Māori	PĀ			TOUCH BE CONNECTED WITH
"		WAH - A		MOUTH ENTRANCE
"		WA - I		WATER
		WA - RI		WATERY
122: POLY ICONE -				
TAHITI		VA		A DELUGE A DUMPING
=	HA' A			CAUSATIVE of RAIN
	HA' AVA			THE BRINGING DOWN of a
				that CLEANSED / PUNISHED [DELUGE]
	WAH A PŪ			MOUTH of a RIVER
Māori	A	WA		RIVER
PĀU		VAS SA		RAIN
		VĀ TĀ		WIND; RAIN
Māori		TĀ		WIND
		HA-KI-WA		KIWA DARK
	WAH WA	HA SUEET		[THREATENING of CLOUD:
		HA-NE		WATER
		HA-RURU		ROAR of a STORM
		HA-U		MOISTURE
		WA - I		WATER
		VASSATI [VRS]		RAIN
		HAEMANA		STREAMLET
		VARSATI		* ETRES TO FLOW = MAORI RERE
		VASSIKA		from VASSA RAINY SEASON
		VA HA		BRINGING-CARRYING LEADING
	from	VA H		[Māori WAHA ENTRANCE] HAERE COME
		VĀ RI		RIVER
Pāwābōb		A WA		RIVER [ĀRIA water between 2 SHORE
Māori		RI POI		GO TRAVEL
		PA RI		FLOWING [OF the TIDE only]
		Ā RIA		DEEP POOL IN A RIVER
				[A POOL AT HIGHTIDE]

	PALI Māori		VAS SA					RAIN
			WA HA	PU				MOUTH of a RIVER
		WAI	WA HA					SLEET
			WA HA					BRINGING CARRYING
			WA I					WATER
		Ā	WHA					HEAVY RAIN
		Ā	WHA					RAIN STORM
			WAI VA					RAIN WATER = <u>UA</u> RAIN
			HA	VA VA				RAINY
			WA PUK E					FLOOD
	ABHI	PA	VAS S					RAIN DOWN ON POUR DOWN
								HEAVY RAIN CLOUD BURST
	> ABHI							TOWARDS ABOUT
Māori	AWHI							TOWARDS NEAR BESIDE
PALI	ABHI		VAS S					RAIN ON
		Ā	WHA					RAIN STORM HEAVY RAIN
			VA					A DELUGED RAIN
TAHITI				HA-	WA-I-WAI			WATER
Māori				HA-	NE			WATER
		WAI	WA HA					SLEET
		PA	RA WHE NVA					FLOOD
PALI SK		PĀ						DRINK see PIC/PA 1 TO
Māori		PĀ	KA TO					FLOW
			WHE I					THIRST
			WE					WATER
			WA I					WATER
			RA NEI					WEATHER NEI = NI-DOWN!
			HA	EMANGA	STREAMLET			[away from]
			VA SSA TI					RAIN
			VARSA TI *ERES					
								RETE FLOW
								TIKOTIKO RHOEA
	HE	VA		TI HENGI				LIGHT PASSING SHOWERS
PALI		VĀ	RI					RIVER
Māori	A	WA						RIVER
		WA	HA PU					MOUTH of a RIVER
		Ā	RI-A					DEEP POOL IN a RIVER
	✓		RI RINO					WHIRLPOOL 1 TO
		PA	RI					FLOWING FLOW OVER