



# Marine Metre<sup>2</sup> Rūri Takutai

## TAPĀTAI ONE ME TE PARATAIAO

RĀ	KURA / RŌPŪ			
WAHI	INGOA O NGĀ KAIRŪRI			
WĀ				
TE KĪ O TE TAI	TAI TIMU	TAI WAENGANUI	TAI PARI	
TE HURANGA	TINO HURANGA	HURANGA	HE MARUMARU	PŪAHATANGA

TE KIRI ONE	te whānuitanga/āhua	ŌRAU %
Ākau	te pūkawa	
Toka nui	te upoko	
Toka iti	te ringatahi	
Kirikiri	te māpere	
Onepū	he tātahi	
Parakiwai	he maramara oneone	
Paruparu	he poharu	
Te tapeke	te ōrau katoa = 100%	100 %

### HE AHA NGĀ WHAKAĀHUA MATUA O TE WĀHI?

hei tauira: he toka nui ki te pūhatanga; he waka e noho ana; he ngaru nui; he wai māori i rere mai; he pango te onepū; ka marumaru tēnei wāhi i te ngā puke.

### HE AHA NGĀ TUMOMO TOHU O NGĀ TĀNGATA?

he rāpihi; e kohikohi ana mahinga kai a ngā tāngata; he tohu o ngā motokā; he tohu a ngā kurī; he tāngata i te wai

### PIKITIA

Tuku pikitia o te mīta pūrua me tēnei whārangi i te pikitia kōtahi, kia awhina ai i a koe ā muri ake nei.

MĀ WAI NGĀ TŪMOMO ORANGA I TOHUTOHU I TE KARETAI O TE PARUPARU? TUHIA NGĀ MOMO KAREAI ME NGĀ	HE TOHU ĒNEI I TE KARETAI?
<b>Kōhao</b> – e.g. tēnā pea nō ngā pāpaka, kōura rangi, tuangi, mōwhitiwhiti...	
<b>Tiko nō ngā noke moana</b> - h.t. nō te whānau Maldanidae, ko te momo <i>Abarenicola affinis</i> rānei.	
<b>Tohutohu o te mahi kai</b> - h.t. nō ngā Hanikura me ngā ara pūpū).	
<b>Ētahi atu tūmomo orange</b> - h.t. tuhia te āhua.	

**TE TAUTA O NGĀ KOIORA** (I te mīta pūrua 1m x 1m te ‘quadrat’ rānei)

Tautahi te ingoa o ngā koiora I te wahi me te ōrau o te whānuitanga, o ngā momo tipu moana, āra, me ngā rimurimu, ngā tipu meroiti (diatoms) me ngā otaota. Kaua e tatau ngā karere e mate ana, me tatau I ngā karere koiora...

<b>NGĀ TIPU O TE MOANA</b> tuhia ngā ingoa pūtaiao hoki	<b>ŌRAU O TE WHĀNUITANGA %</b>	<b>TE KATOA O TE ŌRAU %</b>

<b>NGĀ MOMO KARAREHE</b> tuhia ngā ingoa pūtaiao hoki	<b>E HIA NGĀ MOMO ĀHUA</b>	<b>TE TATAU WHAKAMUTUNGA</b>

**TE WHAKAPAPARANGA HĀORA** (te uho 10cm x 10cm)

Tuatahi I te tiki tīpako, me nekeneke i ngā koiora i te kareta i kia waiho I te tatau anō. Mā te kō, ngā uho e karikari, mai i ngā kōkōna o te mīta pūrua. Tikina ngā uho e whā. Inea te roa o te whakapaparanga me te tae e ōrite ana, ki te tae e rerekē ana. Koinei te wahanaga o te ‘Redox Potential Discontinuity’ (RPD), arā, koinei te wahanaga e tangotango ana, e tāpiritanga hoki ana te hāora I te onepū. Koinei te wahanga e pai ana.

<b>TE ROA O TE WHAKAPAPARANGA</b> E hia ngā mm i raro i te kareta?	<b>NAMA O TE UHO</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>TE TATAU KARAREHE I TE UHO</b> tuhia ngā ingoa pūtaiao hoki	<b>NAMA O TE UHO</b>				<b>TATAU KATOA O NGĀ KARAREHE</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<i>(Hei tauira:) Tuangi</i>	4	3	0	6	13

Mehemea kaore e koe tētahi momo koiora e mārāma ana, tuhia te whakaāhua o te mea me te wāhi e noho ana I te tūtiri I runga. Me tuku pikitia me te pāronga ki a mātou, ki te īmera [marinemetresquared@gmail.com](mailto:marinemetresquared@gmail.com)