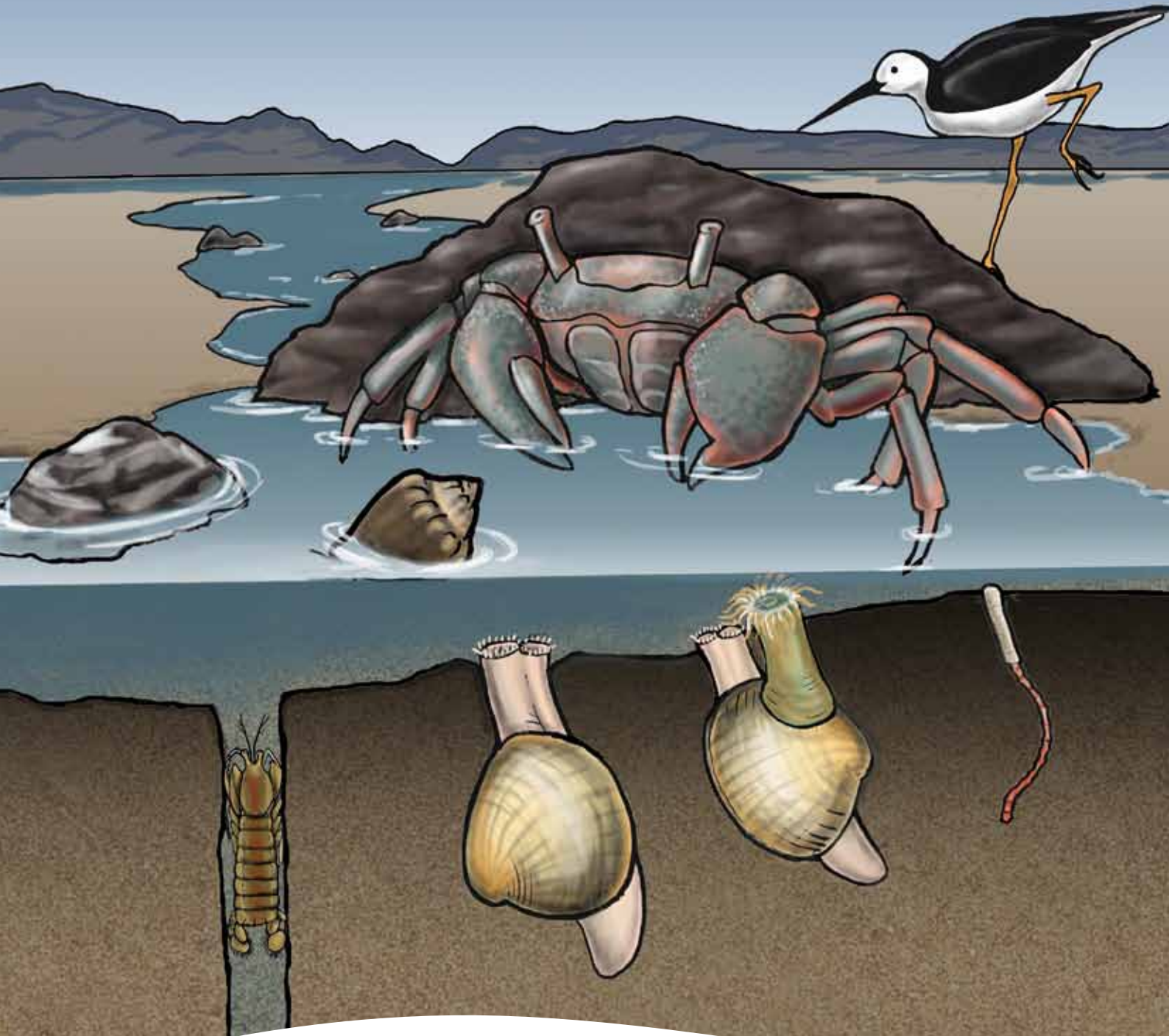


NGĀ KŌRAHA MĀMINGA

HE PUKA MAHI



NGĀ KŌRAHA MĀMINGA

I waihangatia te puka nei e ngā kaimahi o te Whare Mātai Moana o Aotearoa,
ā, nā Melissa Snider rāua ko Tessa Mills ngā whakaahua.
Nā Rangiiria Barclay-Kerr i whakamāori.

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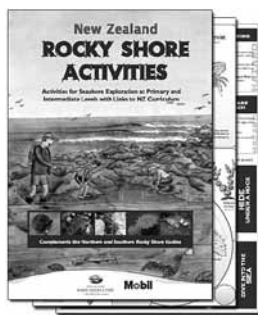
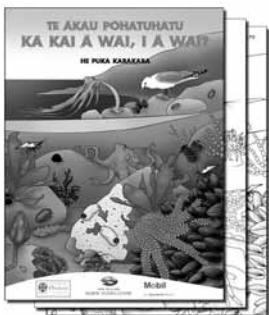
He kōrero mā ngā kaiako me ngā mātua. He puka mahi tēnei e whakaatu ana i ngā kararehe me ngā tipu e noho ana i ngā takutai kōraha o Aotearoa. Mā ngā pikitia e āta whakaahua i ngā wāhi noho o ēnei kararehe, ā, mā ngā tohu e mōhio ai tātou he aha ngā tūmomo kararehe e noho ana i te karetao o te kōraha. Ka kite i ngā tūmomo whakatiki kai, ngā rautaki kai me ngā āhuatanga kohi kai o ia kararehe, me ā rātou rautaki hei karo i ngā kōnihi. He mea akiaki i ngā tamariki ki te whakaahua i ō rātou whakaaro mo ngā pikitia, ā, me whakautu hoki i ngā pātai kei ia whārangi. He kohinga kōrero anō kei te whārangi whakamutunga o te puka mahi nei mō ngā kararehe rerekē. Mā te mahi i tō tatauranga ake mo te takutai moana e kite ai koe i ngā kararehe e noho ana i ngā takutai o tō hau kainga (hono atu ki te whārangi ipurangi o www.mm2.net.nz mō ngā tohutohu). Ko ētehi whakaaro hei kōrerorero mā tātou ko ngā āhuatanga ka panoni i te taiao o ēnei kararehe me te pānga o tēnei ki a rātou. Ka taea e ngā tamariki te waihanganga i tētehi pānui e whakaahua ana i ō rātou whakaaro mo tō tātou taiao.

E whakaae ana kia whakamahia ngā pikitia i te pukapuka nei mo ngā whakaakoranga anakē.

He pūtea tā **Mobil Oil New Zealand Limited** mo ngā kaupapa ā-hāpori e tautoko ana i ngā mahi o te Whare Mātai Moana o Aotearoa nō te tau 2008. He maha ngā tuhinga takutai moana kua tautokona e Mobil, ko ētehi o ēnei tuhinga ko ngā Pukapuka Arataki mo ngā takutai kōraha o te Raki me te Tai Tonga, te puka mahi Ākau Pōhatuhatu, te puka mahi Ākau Pōhatuhatu; ka kai a wai, i a wai me te puka mahi Ngā Kōraha Māminga.

Ka taea e koe te tiki atu i ēnei tuhinga i te ipurangi mo te kore utu, hono atu ki te whārangi ipurangi o www.marine.ac.nz

He kōrero anō mo ngā mahi o Mobil ki te whārangi ipurangi o www.mobil.co.nz



Ka hono atu te Whare Mātai Moana o Aotearoa ki te Te Tari Pūtaiao Taimoana o Te Whare Wānanga o Ōtākou, ka whakaahua rātou i te oranga taimoana o ngā wai o Aotearoa ki te Tonga, ā, ka whakapuaki i ngā mātauranga e hāngai ana ki te taiao taimoana o Aotearoa. Ko te take matua o te kaupapa nei kia matatau ngā tamariki ki ngā āhuatanga o te taiao taimoana. Whakapā atu ki te Whare Mātai Moana o Aotearoa pēnā he pātai anō ā koutou.

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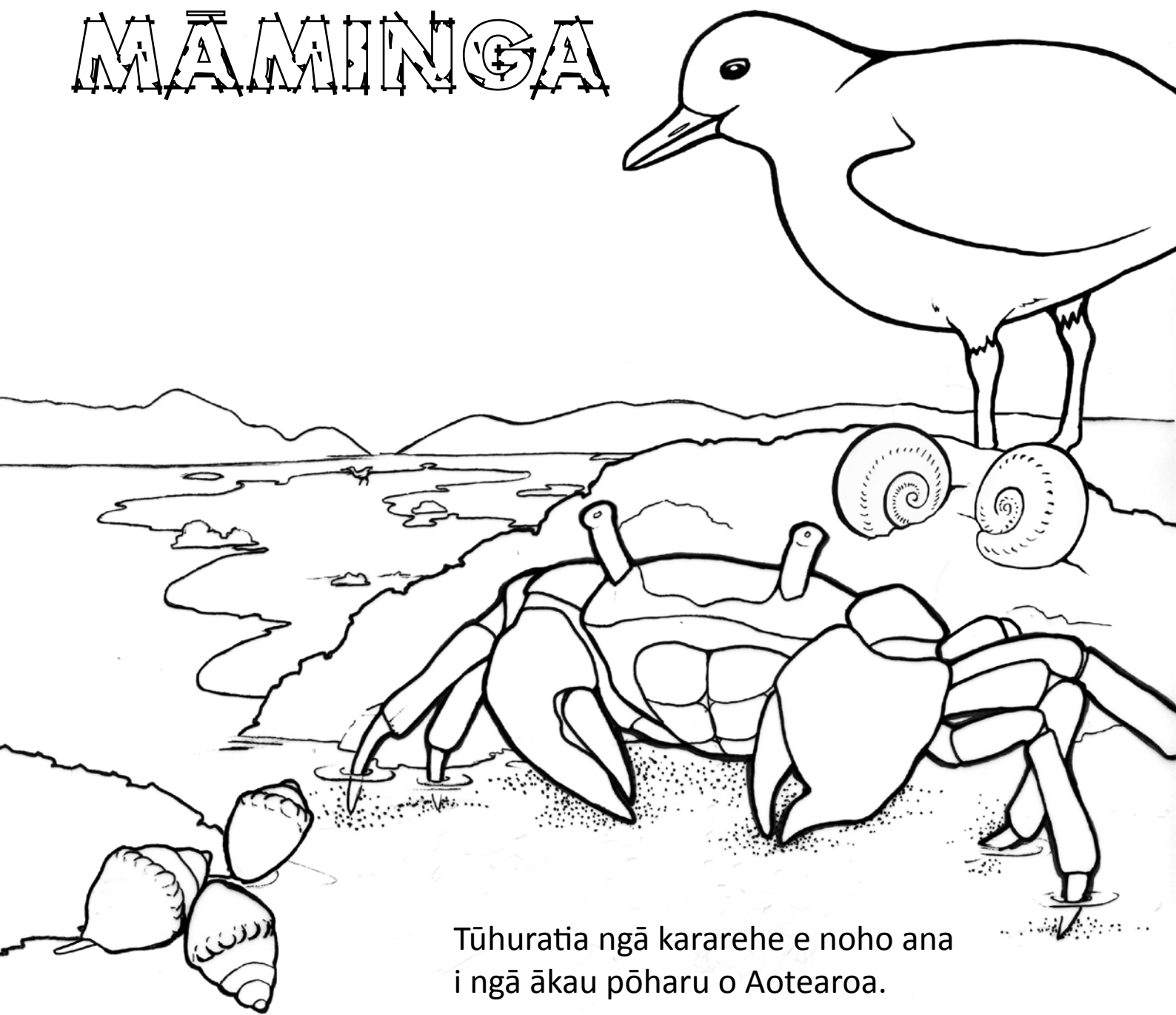
New Zealand Marine Studies Centre

Waea: (03) 479 5826

Ī-mērā: marine-studies@otago.ac.nz

Ipurangi: www.marine.ac.nz

NGĀ KŌRAHA MĀMINGA



Tūhuratia ngā kararehe e noho ana
i ngā ākau pōharu o Aotearoa.

Kohikohia ngā tīwhiri e pā ana ki ngā tūmomo
kararehe e noho ana ki te mata o te kareta, ā
i raro iho anō hoki. Āta rapu i ngā tūmomo kai
ka kaingia e rātou, ā rātou rautaki kahi kai, me
ā rātou rautaki karo kōnihi.

Mahia ngā tūmahi, ā, karakara i ngā pikitia kia
whai mōhiotanga koe mo ētehi o ngā mahi.

www.marine.ac.nz

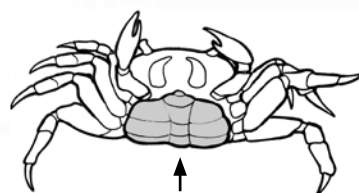


Kia ora! Ko Ruby
ahau, he Tārāpunga
ahau. Awhinatia au te
hīraurau i ngā kōraha
māminga.

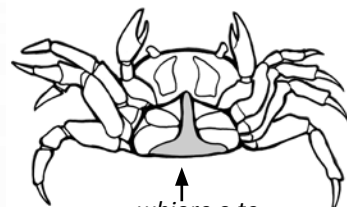
WHANONGA PĀPAKA

Rapua ngā rua pāpaka i te papa kōraharaha.
E hautoki ana te onepū me te paru kua keria e
ngā pāpaka i ngā tomokanga ki ō rātou rua.

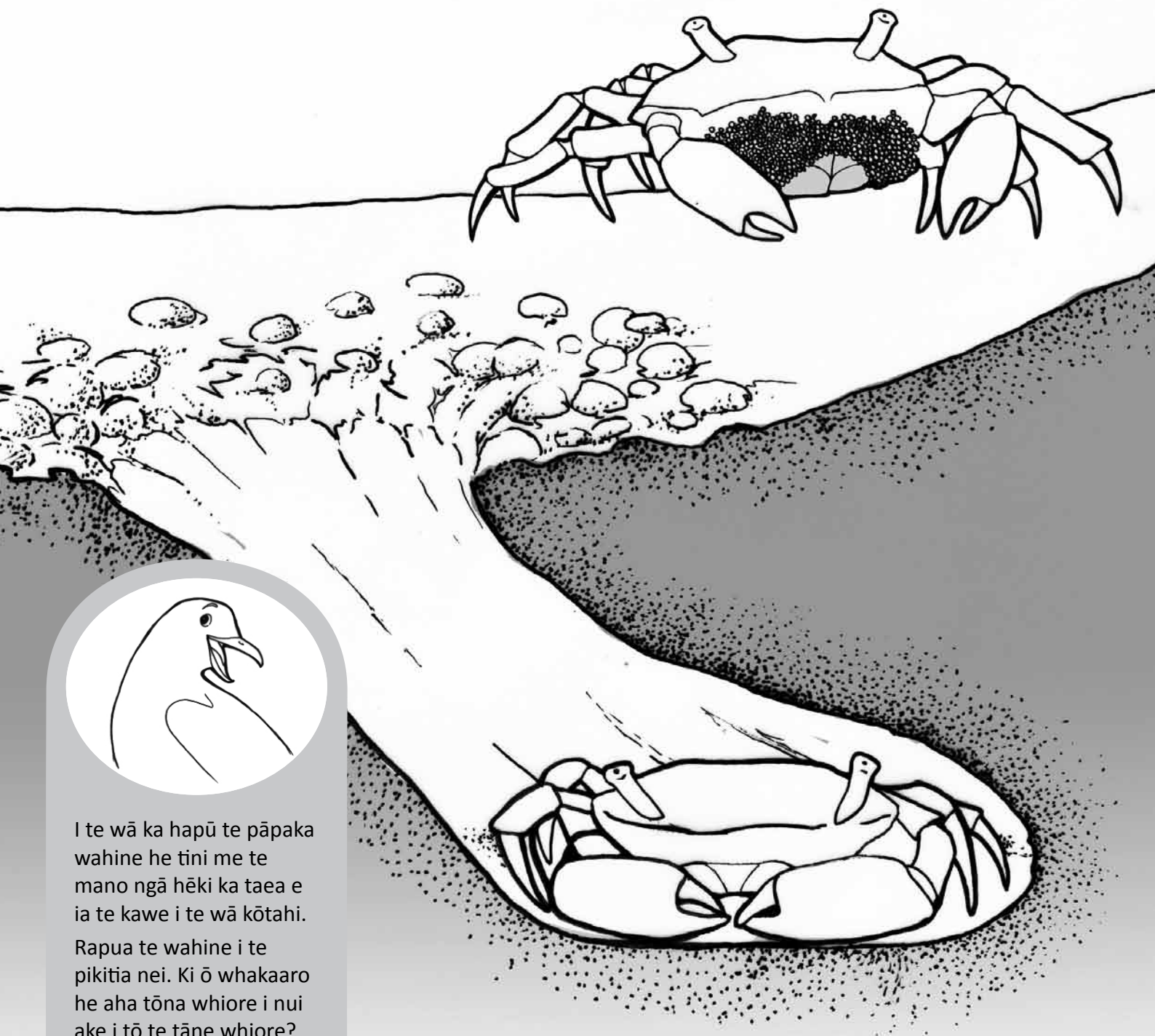
Mā ngā rua ngā pāpaka e ārai, e tiaki mai i ngā
kōnihi, ā, he wāhi mākū mā rātou i te wā ka timu
te tai.



whiore o te
pāpaka wahine



whiore o te
pāpaka tāne

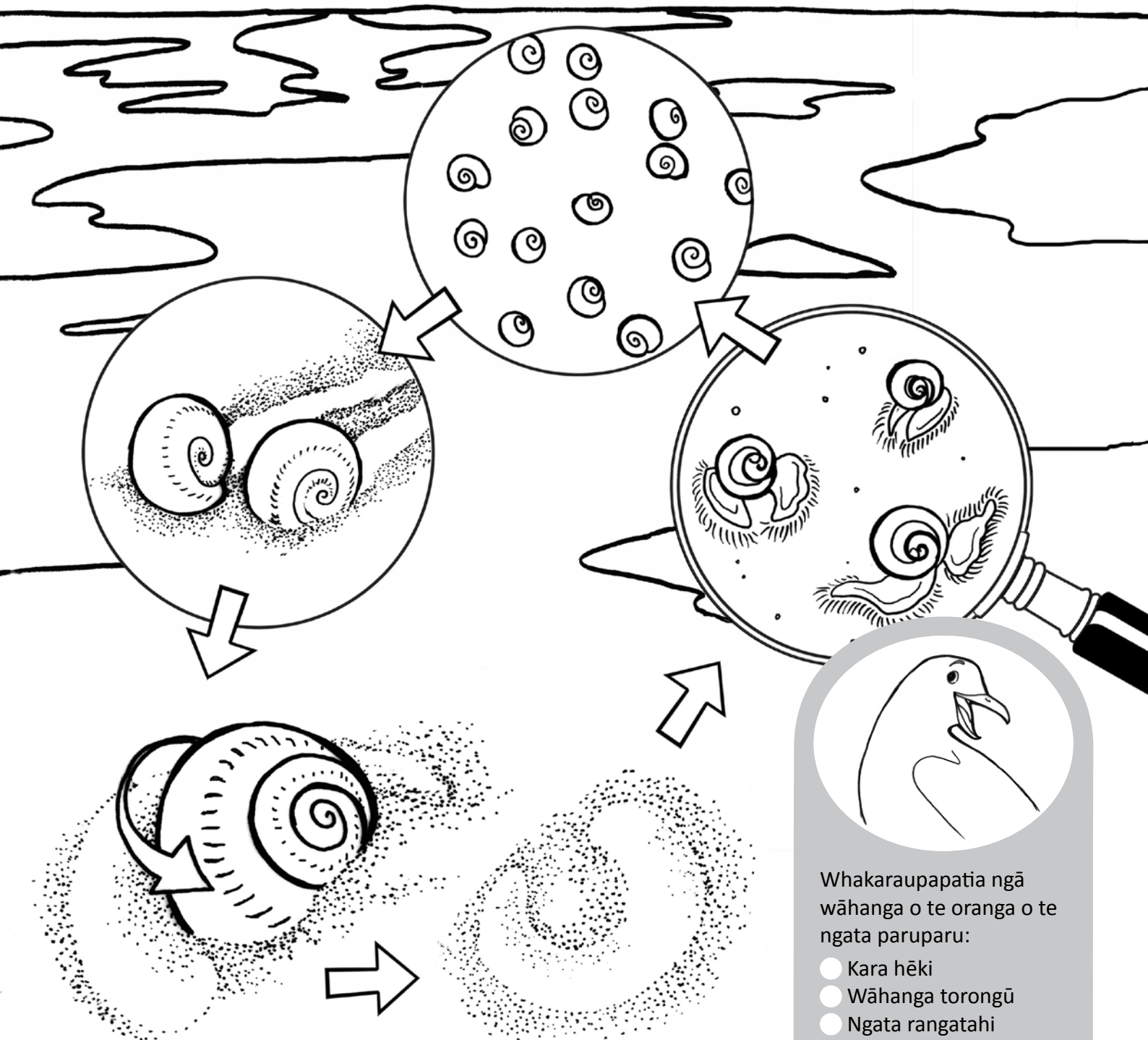


I te wā ka hapū te pāpaka
wahine he tini me te
mano ngā hēki ka taea e
ia te kawē i te wā kōtahi.

Rapua te wahine i te
pikitia nei. Ki ō whakaaro
he aha tōna whiore i nui
ake i tō te tāne whiore?

NGĀ KARA ONEPŪ © TE RAUMATI

Rapua te angaanga o te ngata paruparu. I te ngata e whānau pēpi ana ka huri ia i roto i te onepū, ā, ka waihanga ia i tētehi tūmomo kara i roto i te onepū. I mua i te pakeketanga o ngā ngata, ka noho rātou hei tūmomo torongū e kauhoe haere ana i te wai.

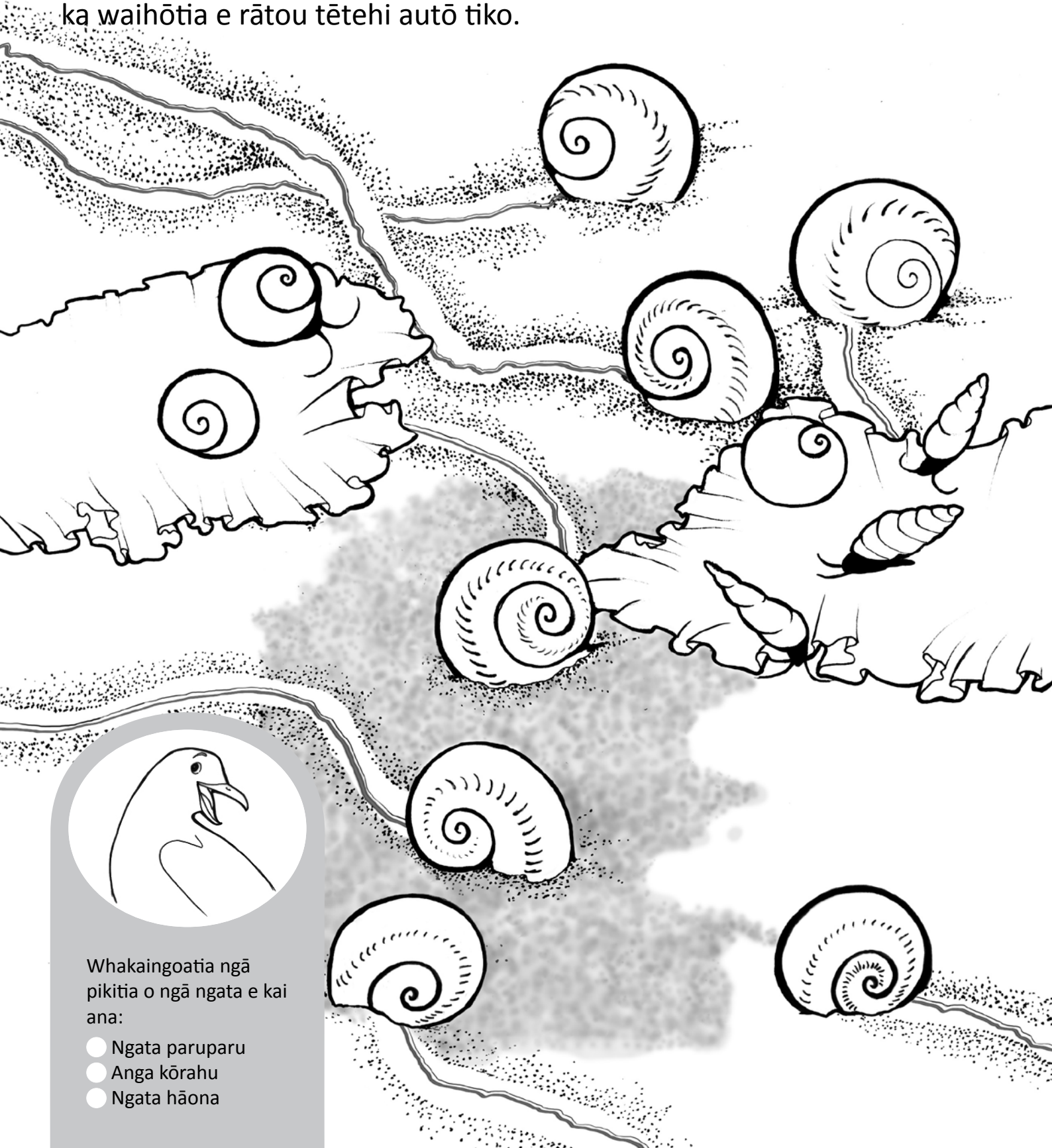


Whakaraupapatia ngā
wāhanga o te ora o te
ngata paruparu:

- Kara hēki
- Wāhanga torongū
- Ngata rangatahi
- Ngata pakeke
- Ngata pakeke e whānau hēki ana

HE AUTŌ TIKO

Tirohia ngā taunakitanga o ngā wāhi kai a te ngata paruparu. Ka kai rātou i ngā tipu merowhetau i te kareta i o te parū, ā, i a rātou e nekeneke haere ana ka waihōtia e rātou tētehi autō tiko.

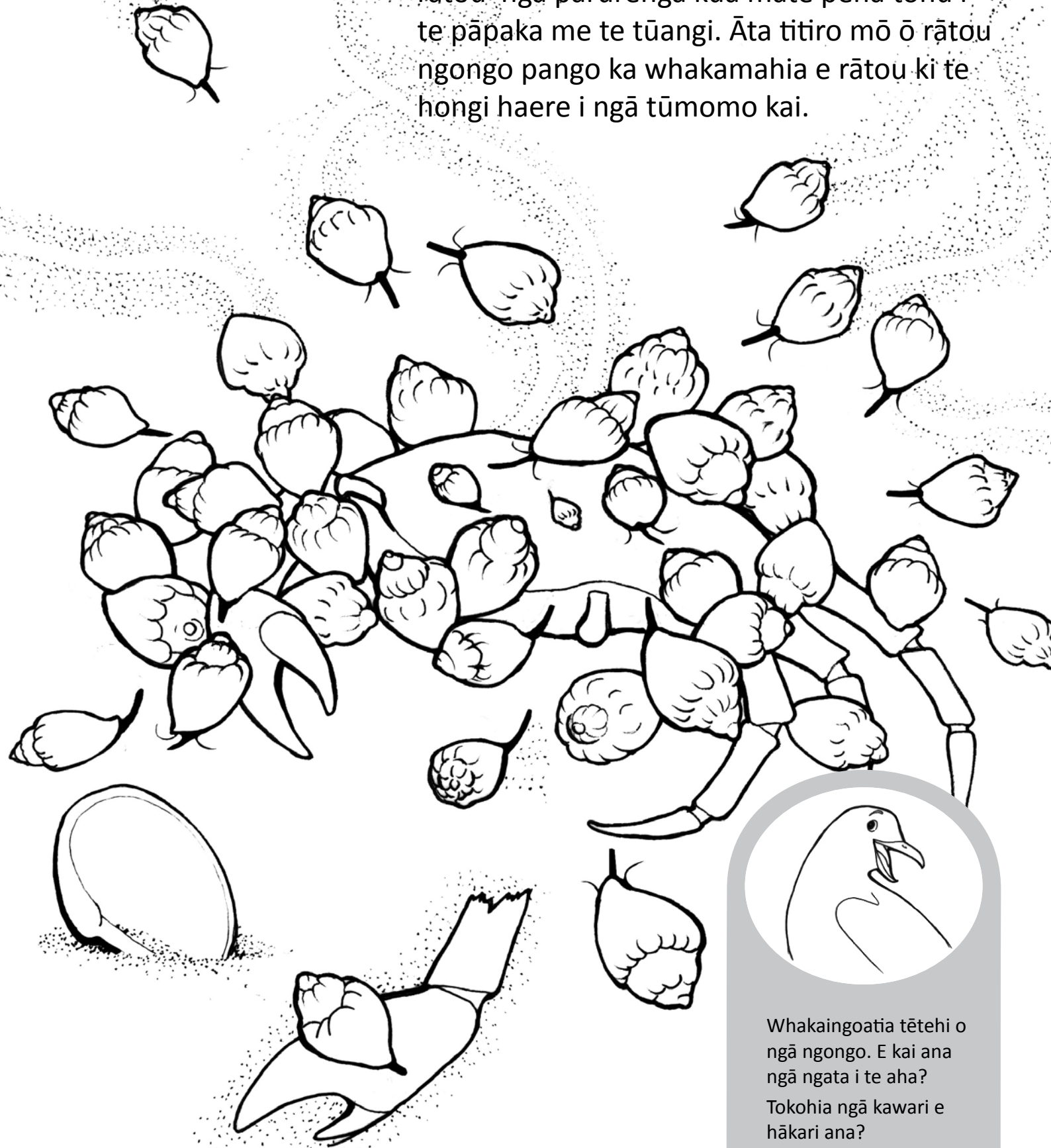


Whakaingoatia ngā pikitia o ngā ngata e kai ana:

- Ngata paruparu
- Anga kōrahu
- Ngata hāona

HE KAI HĀKARI

He kaihamu ngā kawari kōrahu, ka kaingia e rātou ngā pāpurenga kua mate pēnā tonu i te pāpaka me te tūangi. Āta titiro mō ō rātou ngongo pango ka whakamahia e rātou ki te hongī haere i ngā tūmomo kai.

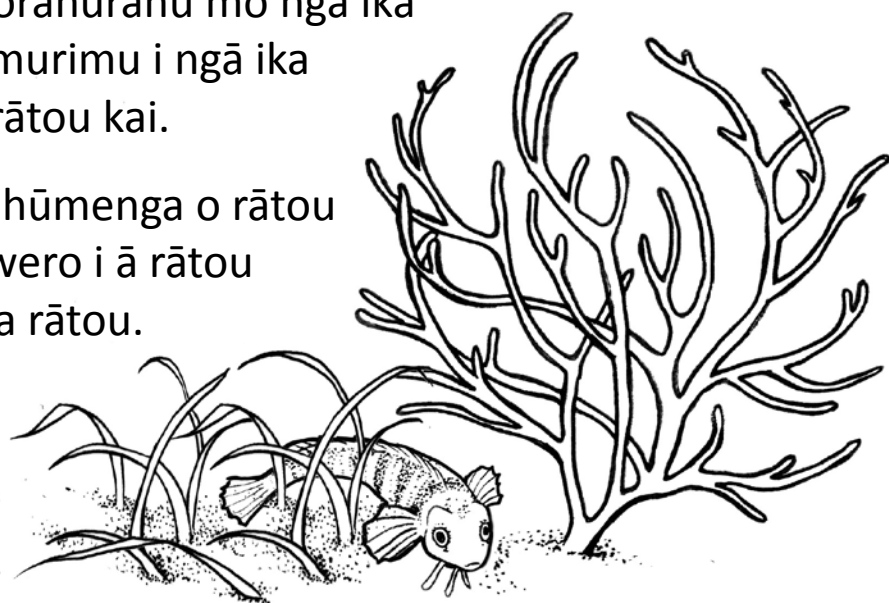


Whakaingoatia tētehi o ngā ngongo. E kai ana ngā ngata i te aha? Tokohia ngā kawari e hākari ana?

NGĀ KŌNIHI MĀNUKAWHAKI

He papa tākoro te papa kōrahurahu mo ngā ika rangatahi. Ka huna ngā rimurimu i ngā ika i a rātou e tatari ana ki ō rātou kai.

Ka whakamahia e ngā ika hūmenga o rātou ngongotua hāpiripiri hei wero i ā rātou pāpurenga kia pararaihatia rātou.



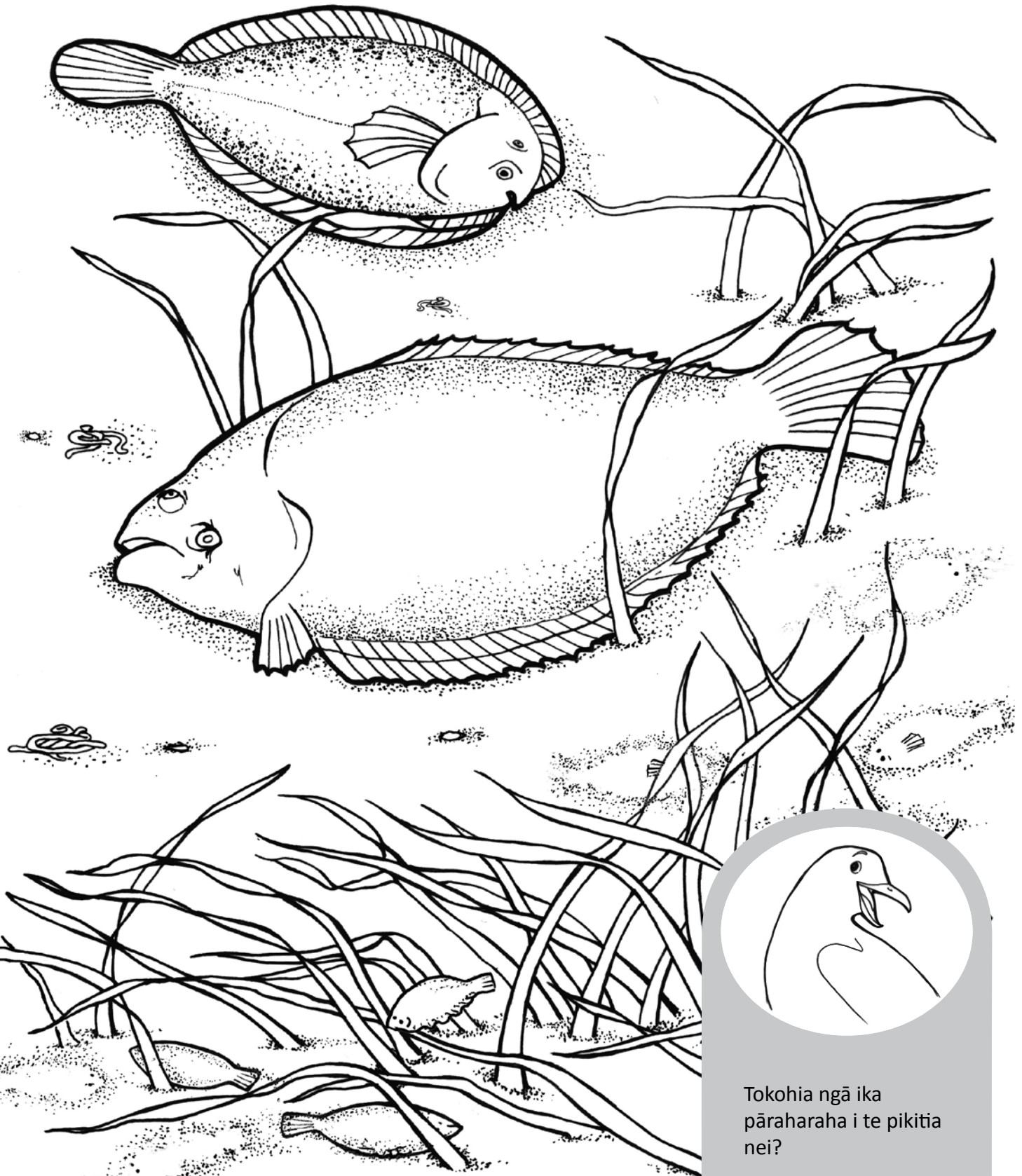
Whakaingoatia ngā kararehe me ngā tipu i te pikitia nei.

I pēhea i riro ai e te ika moamoa i tōna ingoa?

Ka huna ngā ika moamoa i raro iho i te paruparu. Ko tōna waha me ōna karu noa iho ka kitea i a ia e tatari ana ki te hopu i ngā noke o te moana.

NGĀ MĀPUNA KOROPUKU

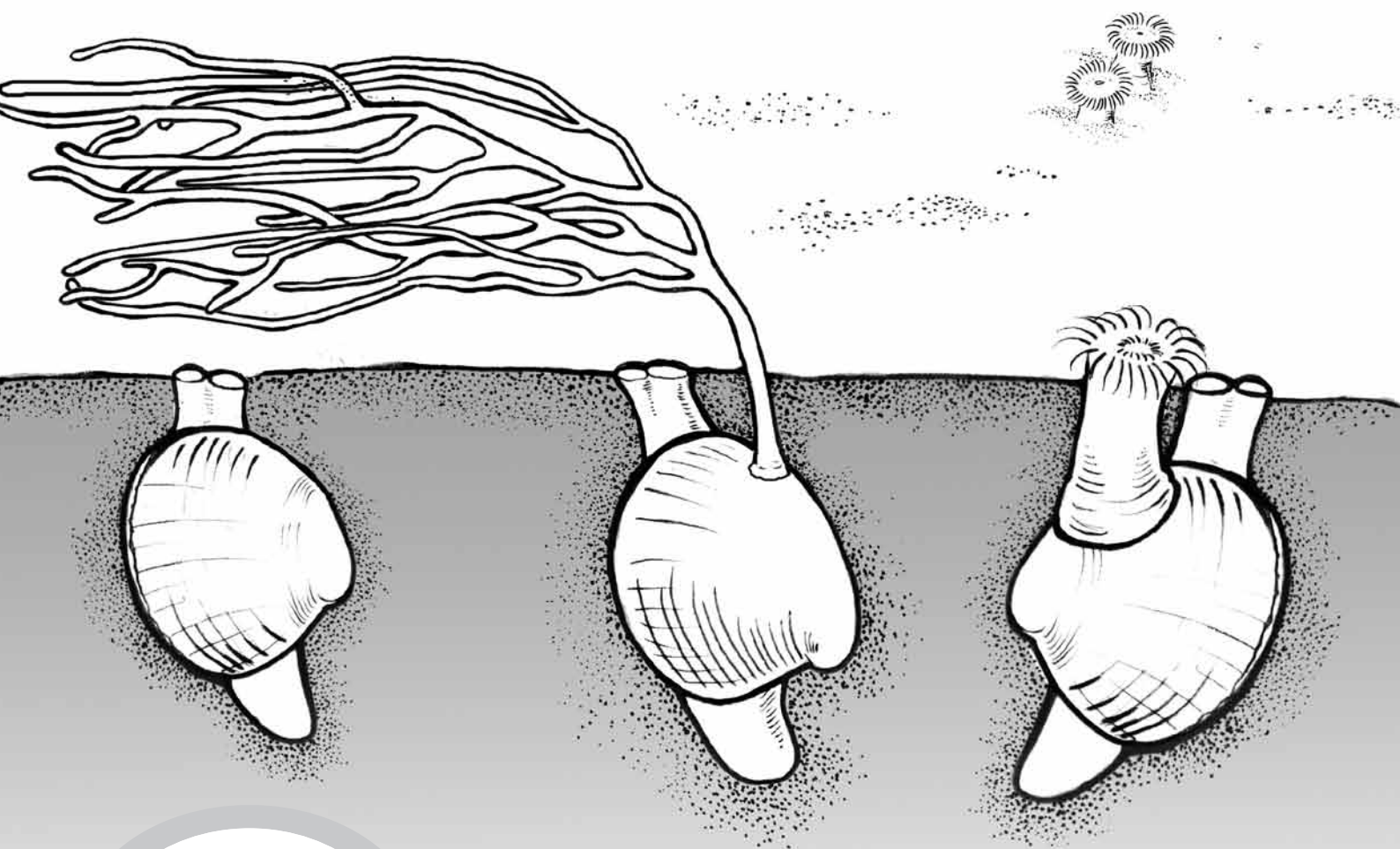
He tino pūkenga te rapu ika pāharaha i te papa kōrehurehu.
Ka panoni rātou i ō rātou tae kia rite tonu ki tērā o te taiao.



Tokohia ngā ika
pāharaha i te pikitia
nei?

KEI RUNGA, KEI RARO

Mā ngā tūmomo oranga i te kareta i o te paruparu
e mōhio ai tātou he aha kē e huna ana ki raro iho.
Ko ngā hūmenga kōrehurehu ka kitea i te kareta he
tohu o te tūangi.



Tāia tētehi tūangi, ā,
whakaingoatia ōna
wāhanga:

- Anga
- Waewae
- Ngongo
- Īnihi

KA KITE Ō KARU I TE AHA

Ko ngā mātaimai pēnā i te pipi me te hanikura ka keri i a rātou anō i raro i te onepū me te paru ki te hohonutanga e tika ana mō a rātou ngongo.

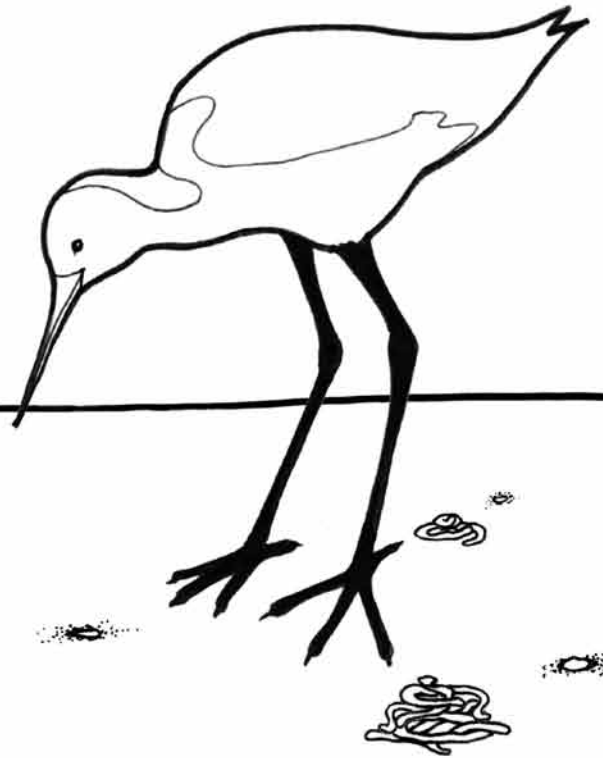
Ka toro atu rātou i ngā ngongo e rua ki te karetai - ko tētehi hei ngongo i te wai me te kai, ā, ko tērā atu hei whiu i ngā maramara.



I te hanikura e kai ana ka waihō ia i tētehi tapuwae ōrite tonu ki tērā o te manu ki te karetai. Porowhitahia ngā tīwhiri e mōhio ai koe i te wāhi noho o te hanikura. Whakaingoatia ngā anga rerekē.

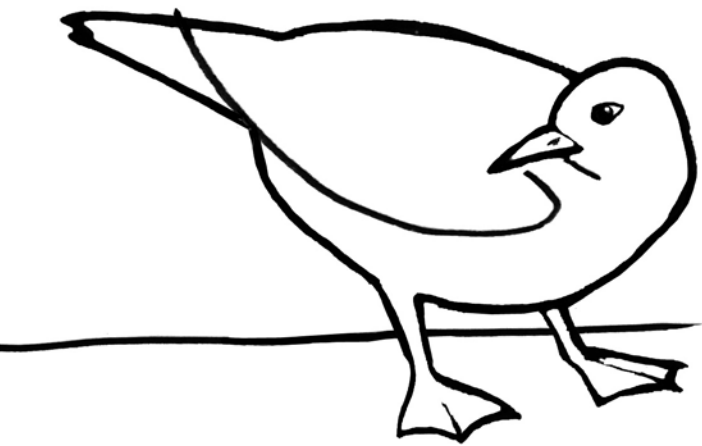
NOKE NEKENEKE

He uaua ka kite i te maha o ngā noke i te takutai moana, hēoi anō ko rātou ērā e huna ana i raro iho i te paru - rapua ngā tīwhiri. Ka mākatia te para kua nikoa e te toke moana i tōna wāhi noho.



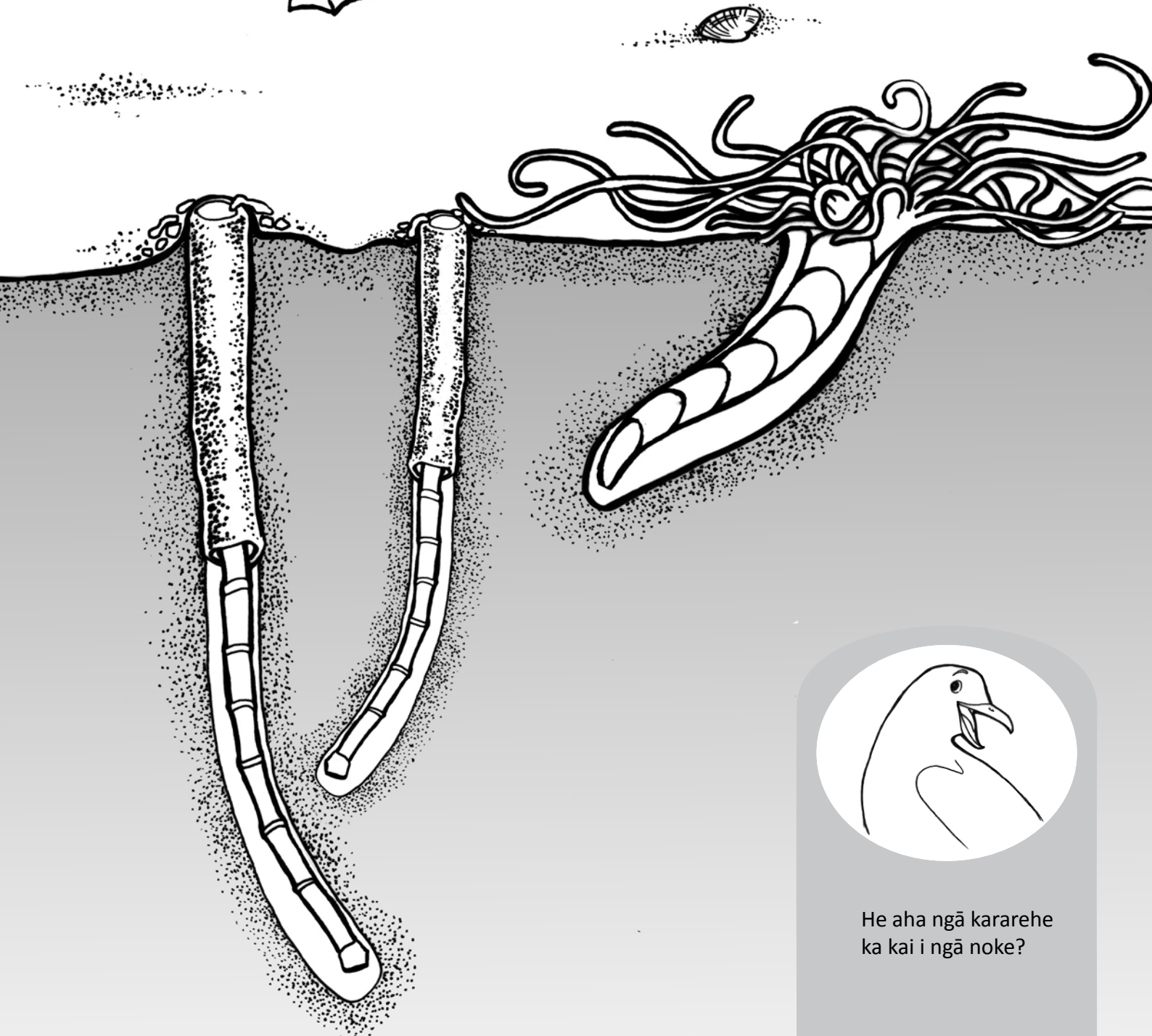
Ko tēhea pito te ūpoko o te toke moana? He aha ai? Whakaingoatia te ūpoko me te whiore o te toke moana.

NGĀ KAI NEKE PARUPARU



Ka kai ngā toke moana īnanga ki raro iho i te paru, ā, ka tiko i te kareta. Ka hāpai te tikoo te toke moana i te hauora o te paruparu.

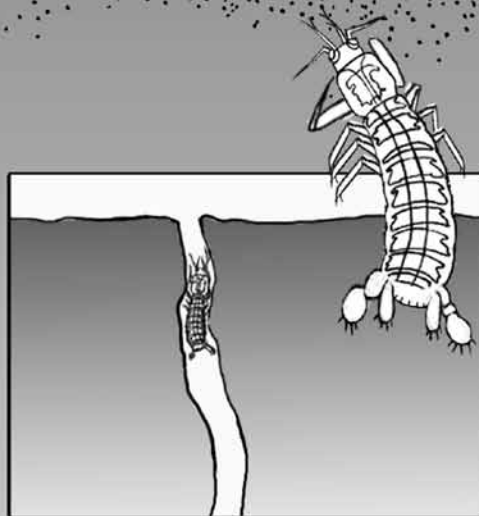
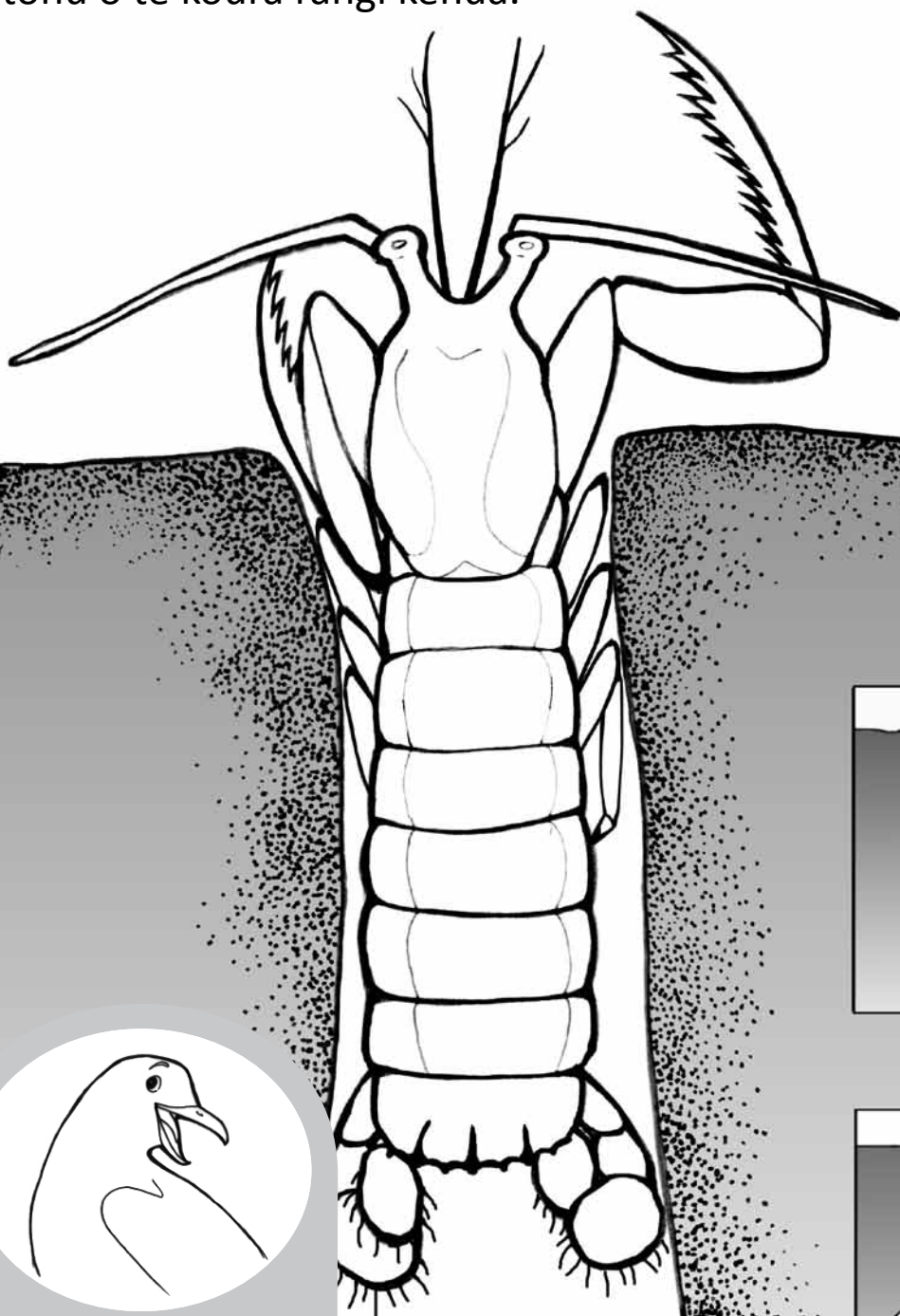
Ka whakamahi ngā noke rimurapa i ō rātou kawekawe ki te kohi i ngā kai rerekē mai i te papa.



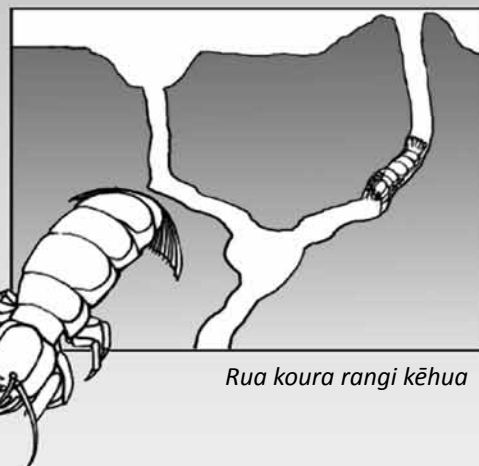
He aha ngā kararehe
ka kai i ngā noke?

NGĀ PUIA PARUPARU

Ka huna ngā koura rangi i roto i te paru i te wā ka timu te tai, ēngari ka kite tonu i ō rātou rua. He mā te rua o te koura rangi nui. Ko te rua anō nei he puia tōna hanga he tohu o te koura rangi kēhua.



Rua koura rangi nui



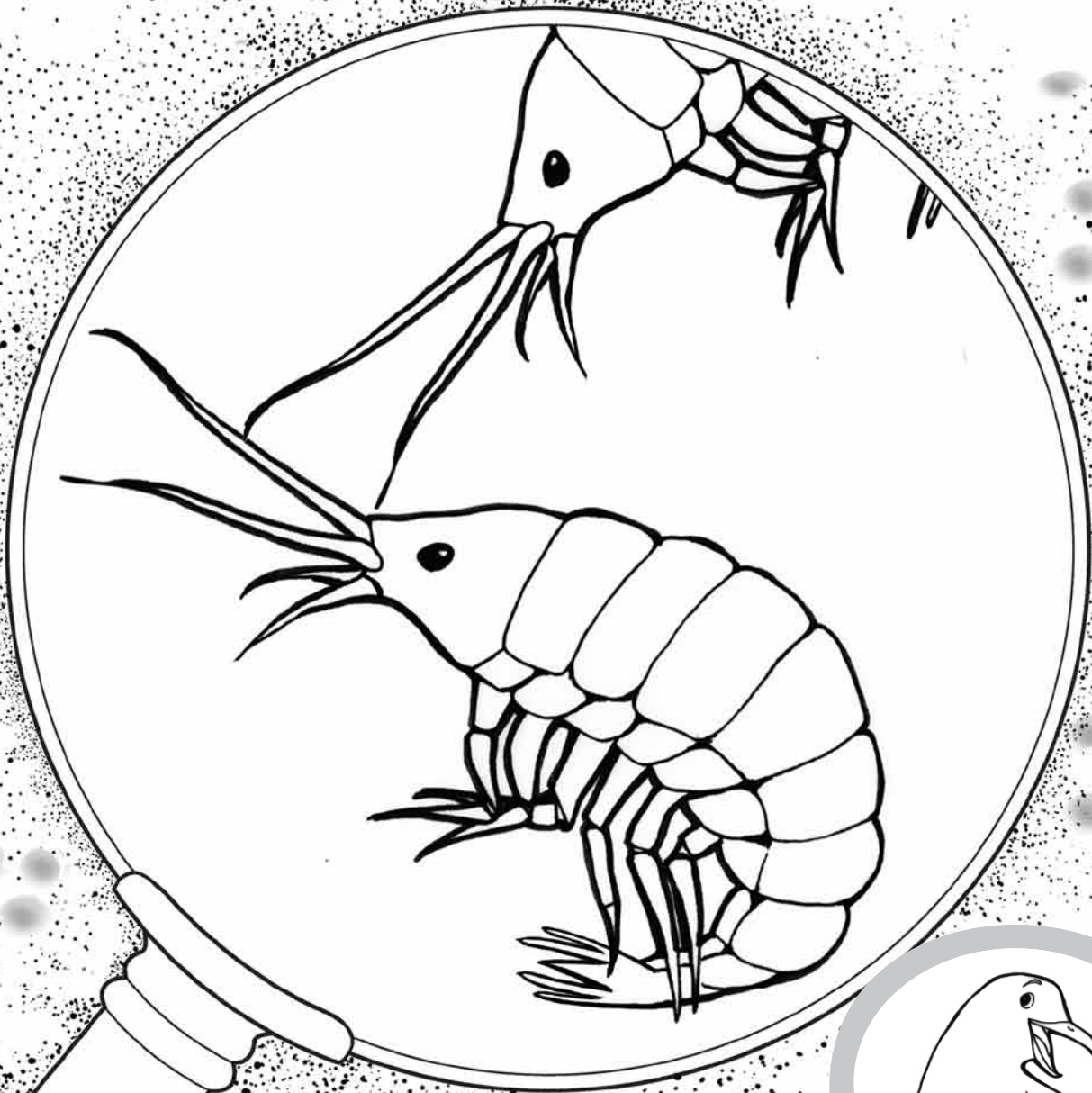
Rua koura rangi kēhua



Ka puta noa ngā koura rangi nui i o rātou rua i te wā ka pari te tai. Whakakara i ngā wāhanga o te koura rangi ka whakamahia e ia ki te hopu i ōna kai.

NGĀ NGĀRARA RUA

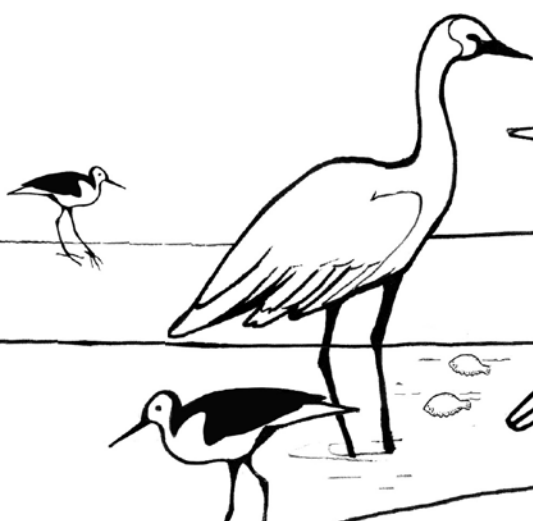
Ko ngā puke paru ka kitea i te moana ngā rua o ngā ngārara pekepeke paru. He whānaunga no te ngārara peke onepū o te takutai onepū, he ōrite te tae o te kiri o te ngārara ki te paruparu e nohoia ana e ia.



Me pēhea koe e hopu i tētehi ngārara pekepeke paru? Kaua e wareware he iti noa te hanga o te ngārara nei.

NGĀ MANUHIRI O TE ĀKAU

Ka whakamahia e ngā manu ngā ākau onepū me ngā ākau paruparu hei papa kai. Tirohia te rahi o a rātou waha, ā, he aha hoki pea ētehi o ngā kai ka kainga e rātou.



Me whakaingoa, me whakakara hoki i ngā manu i te pikitia:

- Wāna pango
- Matuku Tai
- Kōtare
- Tōrea
- Tarāpunga
- Turuturu pourewa

TATAURANGA TAHATAI

Tatauria ngā tipu me ngā kararehe rerekē e noho ana i tō takutai moana.

Aroturukitia ngā rerekētanga o te taiao, o te moana, whakamahia te kaupapa Marine Metre Squared kia whai māramatanga koe mo ngā āhutanga o te taiao: **www.mm2.net.nz**



Kautetia ngā mea rerekē i roto i te tapawhā. (TĪWHIRI: Ēhara i te mea kōtahi anakē te momo o ia mea!)

- ☐ Pāpaka Ana Paruparu
- ☐ Pāpaka Rua Paru
- ☐ Rua Noke
- ☐ Ngata Paruparu
- ☐ Hūmenga Paru
- ☐ Kaware Paruparu
- ☐ Tūangi

HE RĀRANGI INGOA



Pāpaka ana paruparu - Ko ōna karu kei runga i ngā kakau e rua kia kite ia i waho atu o tōna rua. Nā te āhua o tōna anga tē tāea te kite i a ia i te paruparu.



Ngata Hāona - He iti, he tūpuhi, he wheuri hoki tōna tai. Ka kitea te ngata nei i te paru i waenga i ngā kōhatu hoki. Ka kai ia i ngā pūkohu wai.



Ngata Paruparu - Ka kai te ngata nei i te wā ka timu te tai, ā, ka huna i a ia anō i te wā ka pari te tai. Ka kai ia i ngā tipu iti nei e noho ana i te kareta.



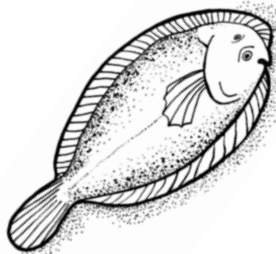
Kawari Paruparu - he kaihamu-hamu tēnei kāwari. Ka huna ia i raro i te paru, ā, ka puta ia ki te kai ki te hongī ia i tētehi mea pirau.



Ngata Paruparu kaimanga - Ka kitea tēnei ngata kaimanga i ngā tahataha o te rimurimu. I te wā ka timu te tai he kuaha pakupaku nei te hanga ka hangaia e te ngata nei ki kore tōna kiri e māroke haere.



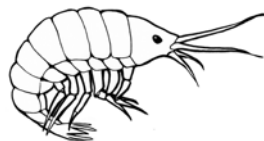
Moamoa - He nui tōna hanga, ka huna ia i raro i te paru rite tonu ki te pātiki. Ka tipu ia ki te 45cm.



Pātiki - Ka noho ngā ika pāharahara i ngā wai papaku, ēngari he uaua ka kite i a ia ki te kore ia e nuku haere. Ka panonitia e ngā pātiki o rātou tai kia ōrite ki te taiao e noho ana a ia. Ka huna rātou i o rātou paihau ki raro i te paru kia kore rātou e kitea e te tangata.



Paihau Toru - Ka kitea ia i ngā puna i te kōraha, ka panoni ia i tōna kiri kia rite tonu tōna āhua ki te taiao.



Ngārara Pekepeke - Ka noho te ngārara pekepeke i raro iho i te kareta, ko tōna kai he rimurimu, he ika pirau rānei. Ka pekepeke haere rātou pēnā rātou ka whakararua e tētehi mea.



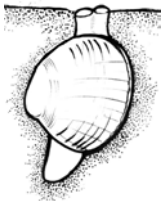
Koura Rangi Kēhua - Ka keri ia i tētehi rua he 60cm te hohonu. Ko te tomokanga he rite tonu ki te puia.



Koura Rangi Nui - Ka keria e ia tētehi rua poutū, ā, ka wehe ia i te rua i te wā ka pari te tai. He whero te ūpoko o te wahine, ā, he kākariki tōna tuara. Ko te tāne he āhua mangu tōna āhua.



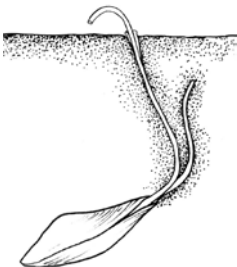
Hūmenga Koraha - He iti tōna hanga, he parauri tōna tai. Ka piri atu ia ki ngā mea māro, pēnā i te tūangi kia kore ia e horoia e te wai.



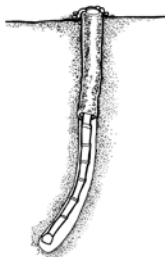
Tūangi - He kai nui tēnei o Aotearoa. Ka rapua te tūangi i raro iho i te onepū i te wā ka timu te tai.



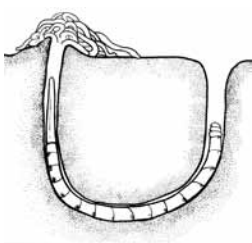
Pipi - Ka kitea te pipi i ngā wāhi oneone. He maeneene tōna anga.



Hanikura - He tapatoru te hanga kia māmā noa tōna totohu i tōna rua. Ko tētehi o ōna ngongo ka ngote i ngā kai, ā, ka waihō i tētehi momo tapuwae i te onepū e rite ana ki tērā o te manu.



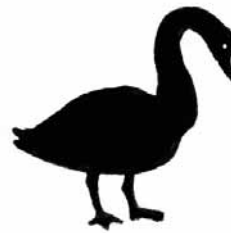
Noke Inanga - He noke itie noho ana i raro i te kareta, ā, kua haumarutia te noke inanga e tētehi momo hupe. Ko te tomokanga o tōna rua he pūhanga paruparu.



Noke nui - He noke mōmona, he parauri tōna tai. Ka takoto pērā ki te hangao te reta U kie tata tonu tōna whiore me tōna ūpoko ki te kareta. Ka mōhiotia tōna oranga na ngā niko paru.



Noke Rimurapa - Ka noho ia ki ngā rua. He rite tōnu tōna hanga ki te pāraoa rimurapa. Ko ōna ngongotua amakē ka kitea, ma ngā ngongotua ōna kai e kōhi.



Wāna Pango - He manu mangu nō Ahitereiria, he whero hoki tōna waha. Ko ōna kai he pātiti moana, he tipu hoki. Ko tōna kōanga he rākau, he pātiti hoki.



Karoro - He maha ngā karoro rerekē i Aotearoa. Ko te karoro waha pango te mea nui rawa, he kōwhai ōna waewae, he mā ōna raukura, ā, he pango ōna parirau. Ko te Tarāpunga te karoro whero, he whero tōna waha me ōna waewae, ā, he kiwikiwi ōna parirau.



Matuku Waitai - Ka kitea tēnei manu i ngā tataha o te waitai, ki reira ia kōhi kai ai. Ko tōna kōanga kei rō rākau.



Kōtare - Ka noho ia ki rō rākau, ki runga rānei i ngā pou kia āta mātaki ia i ngā mea hei kai mōna. Ko tōna kōanga kei rō rākau, kei ngā tahataha o te hiwi rānei.



Tōrea - He pango, he mā hoki ōna tae. He roa tōna waha kia māmā noa tōna kōhi kai.



Turuturu Pourewa - Ka noho ēnei manu ki ngā ngutuawa, ko tōna kōanga he tata ki te wai. Ka kai ia i ngā noke, ngā pipi me ngā tio hoki.

