

E tauheke ana te kāinga o te inanga

Ehara te 'whitebait' i te momo kotahi, engari ia he karangatanga Pākehā mō ngā punua ika taketake e rima (te nuinga he inanga). Ināianei kua uaua haere te kitea o te inanga i Aotearoa. Ko tētahi take, kua mimiti haere ngā tino wāhi e ora ai, e hua ai: kua whakatahangia te wai, kua whakahoutia ngā manga, ā, kua whakaaetia kia kai ngā kararehe ki ngā pareparenga o ngā manga. Hei whakapiki ake i te tataunga o te inanga kei te whakatū taiapa me te whakatō tupu tūturu ngā kaipupuri whenua me ngā hapori i te taha tonu o ngā manga.

Te tino wāhi hei whakawhānau hua

Whakawhānau ai te inanga i ōna hua ki roto i te mātotoru o te otaota i ngā tapa o te manga. I pēnei kia tupu ai ngā tōene o te hua i te mātao, te haukū me te pōuri. Tōna tikanga, ka tukuna ngā hua i te wāhi e tūtaki ai te wai māori ki te wai tai, ā, i te tai huki tonu (i muri tata mai o Ōturu) i te ngahuru. Whakawhānautia ai ngā hua i te wā ka eke te wai ki tōna tino teitei.

Te hanga kāinga hōu mō ngā hua inanga

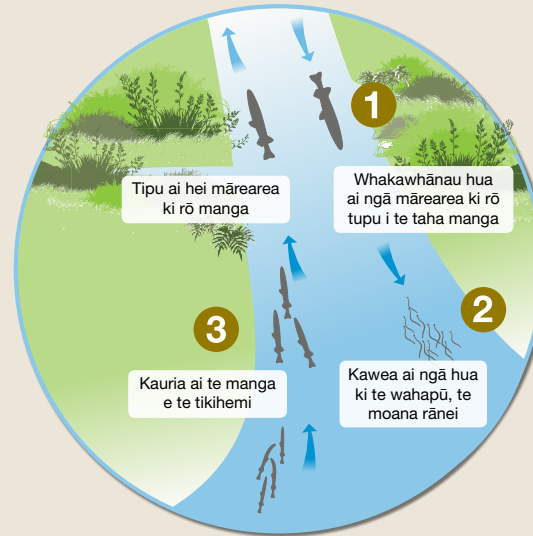
E ai ki ngā rangahau he tino kāinga taupua te mōkihi tākakau mō te whakawhānau inanga mena kua pakaru, kua tūkinotia rānei. E tautuhi ana ngā hua ka whakawhānautia ki runga mōkihi i ngā tino kāinga mō tēnei mahi, nā reira koirā hoki ngā tino wāhi hei tiri tupu tūturu.

Nō te whanau Galaxiidae te inanga (i huaina ai ki te ingoa o te Mangōroa) nā ōna ira ātaahua ki runga i ō rātou kiri.



Ka eke ki te 10 cm te roa o te inanga pakeke (mārearea).
Whakaahua: Sjaan Bowie

HE TERENGA KI TE MOANA, Ā, HOKI MAI ANŌ



1 Ngahuru

Ka heke haere ngā mārearea i te manga kia rongo rawa i te waitai. Whakawhānau ai ngā uwaha i ā rātou hua ki roto i ngā tupu kei ngā wāhi teitei o ngā pareparenga i te tai huki. Kātahi ka whakakikiri ngā toa i ngā hua e piri ana ki ngā tātā o ngā pātiti kei runga iti ake o te papa.

2 Te pito mutunga o ngahuru

E 28 rā i muri mai, ā, i te tai huki e whai ana, ka whānau mai ngā punua (e 7mm pea te roa). Hei reira ka

tere atu ai i te timunga o te tai. Ka pau te takurua ki te moana, he kai kōurarangi te mahi.

3 Kōanga

Ka 5cm te roa ināianei, ka hoki whakarunga ake i te awa ngā tikihehi. Ka mau ētahi o ēnei i te hunga hao inanga. Engari ngā mea kāore e mau, ka tae ki te wai māori, ā, ka 10cm atu anō pea te tipu i te kōanga me te raumati. Ka toru tau e ora ana te inanga, heoi, te nuinga ko tōna kotahi tau anake.

Ētahi atu mōhiotanga

- Mōkihi tākakau, inanga, ki runga ipurangi a DOC: www.doc.govt.nz/inanga-straw-bales
- He Rauemi Whitebait Connection: www.whitebaitconnection.co.nz
- Te Whare Wānanga o Waitaha: www.inangaconservation.nz
- Te manawa o ō tātou Wahapū: www.doc.govt.nz/estuaries

He mea whakaputa e:
Department of Conservation
Whare Kaupapa Atawhai /
Conservation House
PO Box 10420
Wellington 6143
New Zealand
November 2018

Whakatikatika me te hoahoa:
Rōpū Tā, DOC Tari ā-Motu

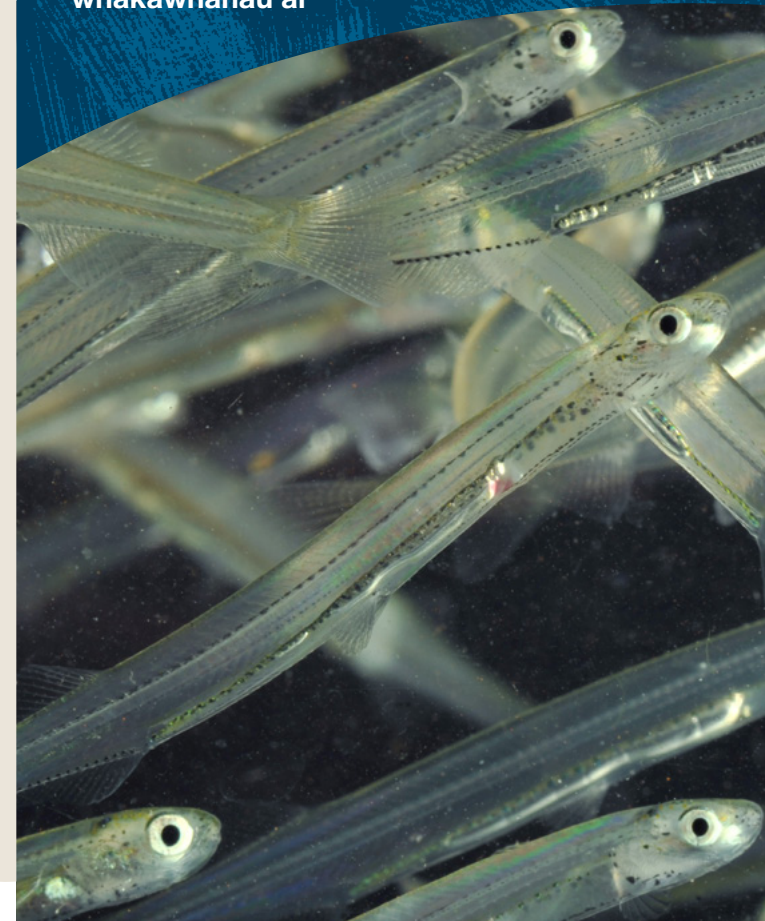
He mea waihanga tēnei tānga e te pepa nō ngā ngahere tua rākau i raro i te ture, ā, he mea whakahou, he ngaio hoki te whakahaere o te ngahere.

New Zealand Government

Whakaahua: Mike Hickford, nā tētahi kē rānei

Te Tiaki inanga Care for inanga

Whakamahia he mōkihi tākakau kia mōhiotia ki whea te inanga whakawhānau ai



Department of Conservation
Te Papa Atawhai

Waterways
Centre for Freshwater Management

TE WĀNANGA O RAUKAWA
e kore au e ngaro, he kākano i rua mai i Pāngiātea

MARINE ECOLOGY RESEARCH GROUP
UNIVERSITY OF CANTERBURY, NZ

Ngā tohutohu

TE PAE 1: *I mua o tō haerenga atu*

I mua o tō haerenga atu ki tētehi awa, tētehi manga rānei, rapua nō wai te whenua e rere rā taua wai, ā, me rapu whakaaetanga i a rātou kia wātea koe ki te haere atu ki reira whakatakoto mōkihi tākakau ai i tōna taha. Kei reira pea, kei tōu takiwā he rōpū Taiao e mahi ana – Kia mōhiotia ai, tirohia ā mātou paetukutuku nei, iNaturalistNZ me Our Estuaries. Kia haumarua i a koe e mahi ana i ngā awa me ngā manga. Kia tika ngā kākahu, tirohia ngā matapae huarere, te wātaka mō ngā tai, ā, kauparengia ngā wāhi he tūpoupou ngā pareparenga, he tere rānei te rere o te wai. Pānuitia ngā mōhiotanga mō te haumarua me te whakaaetanga, me rapu kōrero hoki mō te inanga mā te ipurangi, arā, ngā kāinga e tika ana me ngā wāhi whakawhānau (kei tua o te whārangi nei ngā hononga).

TE PAE 2: *Rapua ngā wāhi tōtika*

Kōwhiti kau ana te marama i waenga i te whakapaunga o Hānuere me te tūmatanga o Hune, rapua te wāhi e tūtaki ai te wai tai ki te wai māori e rere iho ana i te manga. Anei ētahi tohu hei āwhina:

- Haere ki te manga i te tai pari o ngahuru (tirohia te kauwhata mō te tai me te marama). Tirohia pēhea ake te rerenga o te tai ki uta rawa me te taumata o te mārewatanga ake o te wai.
- Mā tētehi taputapu ine wai tai hoki hei āwhina atu (e tohu ana tēnei i te wāhi e huri ai te wai tai ki te wai māori).

TE PAE 3: *Rapua ngā hua inanga*

Ka timu te tai, hoki atu ki ngā wāhi tino taumarumarua i kite rā koe i te pae 2. Tūturi, whakawehea ngā tātā wīwī, ka āta titiro iho ai ki ngā pakiaka e tohu rā i te tai pari. He hua pīataata moroiti e 1.2mm te whānui. Me āta titiro mārire kia kitea ngā hua inanga.

Ina kitea e koe he maha ngā hua inanga i te tātā wīwī, e tohu ana he wāhi tōtika tēnei mō te whakawhānau hua. Kōwhiria ngā wāhi e pātata ana mō ngā mōkihi tākakau, e tūrukiruki ana ngā otaota, ā, he kore, he iti rānei ngā hua ka kitea.



He haki e whakaatu ana i ngā wāhi i kitea ai ngā hua i te 'tai huki' i runga i te parenga.

TE PAE 4: *Hoatu he mōkihi tākakau ki te taha o te awa, o te manga rānei*

Me tōpū te hora i ngā mōkihi kia rua, kia toru rānei e tāwhana ana i te tohu tai pari. Kia tangatanga noa te hora nā te mea ka whakawhānautia te nuinga o ngā hua i ngā āputa kei waenga o ngā mōkihi. E 5cm te whānui pai mō ngā āputa. Me he rakiraki kei reira, ūhia ngā mōkihi ki te papanga kōpare rā, hāunga te taha e anga atu ana ki te awa. Hamahamangia kia rua ngā waratā ki roto i ia mōkihi kia kore ai e pōteretere atu. He haumarua te whakamahi i te mōkihi tākakau, ā, e kore e tūkinotia te mataora o te manga.

Kia auau te haere ki te tiroiro i ngā mōkihi tākakau. Me āta kōpare ngā hua i a koe e tiroiro ana – hei āwhina atu, he taputapu pai te hamarara. E rua wiki i muri mai o te whānautanga mai o ngā hua, ka kitea ngā karu, arā, ngā ira pango e rua i roto i ngā hua. Whakaahuangia ngā hua i ia huringa, me tuhi hoki te wāhi ki runga mahere, ki te GPS rānei. Hopukina tāu e kite ai i iNaturalistNZ.

Ka nui haere te whakawhānautia o ngā hua puta noa i a ngahuru.

Ka tae ki Matariki (kei waenga pū o Hune) kua whānau mai te nuinga o ngā hua, ā, kua wehe atu ngā punua i te manga. He wā pai kia unuhia ake, ā, kia whakawairākaitia ngā mōkihi tākakau – engari puritia te kōpare me ngā waratā mō te tau e heke mai ana.



Ngā hua i whakawhānautia ai i ngā taha roto o te mōkihi.



Te whai kia mau pai ngā mōkihi tākakau.

Reka ana ngā purapura ki a mātou, nā reira kaua e horahia he hei, he mōkihi tākakau he purapura hoki ki te pito o ngā tātā. Me e pēnei ana, e hika, ka tīhaeaengia e mātou ngā mōkihi kia kitea ai ngā purapura.

He wā pai Te Aranga ki te rapu hēki tiakarete me ngā hua inanga!



TE PAE 5: *Me whakatō mō te inanga*

Ka kite pea koe he nui ake ngā hua ka whakawhānautia ki runga i ētahi mōkihi tākakau i ō ētahi atu. Kei te wāhi tino tika ēnei mōkihi. Me mātua taiapa ēnei tū wāhi hei ārai atu i ngā kararehe kai noa, ā, me tiritiri taua wāhi ki ngā pātiti taketake, te harakeke me te toetoe.



Te taiapa i tētahi wāhi pai hei whakatō tupu tūturu.



Ngā tupu kua whakaoratia i te awa o Avon/te wahapū o Ōtakaro. Whakaahua: Shane Orchard

Kia haumarua tō mahi haere i te taha awa. Kia tika ngā kākahu, kia aro ki te huarere me ngā tai.

Ngā taputapu me whakarite:

- Kia rima mōkihi tākakau, neke atu rānei i te 5
- he waratā (waratah)
- he papanga kōpare
- he hama
- he mahere, he GPS rānei
- he kāmera
- he mita ine wai tai (kei a koe).

