

Ētahi kōrero pono whakamīharo 15 e pā ana ki ngā angawaho rongonui o Aotearoa

1. Te pūngāwerewere o Avondale, tō tātou whetū ki Hollywood!
2. Ngā wīwhara: te mea roa rawa me te mea pakupaku rawa o te ao
3. Te ora roa o te wīwhara o Tawhiti Rahi
4. He ngaro-pekapeka e kaha ana te noho tahi, te mahi tahi ki ētahi atu
5. Ngā ngaro patupaiarehe
6. He wāpu kai ngoikura
7. He wāpu whānako
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12. Te pūrēhua 'huke-rau' noho kōwhai: tētahi o ngā pūrēhua pakupaku katoa o te ao
13. Te kutu noho huia: kia mōhio rawatia e ora ana i tōna wā, kua mate-ā-moa kē!
14. Ngā waewae me ngā pūhihi roa rawa
15. Te pūrēhua onge katoa?

1. Te pūngāwerewere o Avondale, tō tātou whetū ki Hollywood!

- I te tau 1989/90, e 374 ngā pūngāwerewere o Avondale i tukuna ki Hollywood ki te whai wāhi atu ki te kiriata **Arachnophobia**, nā Steven Spielberg. Kāore he pānga kino o Delena cancerides ki te tangata, engari weriwere ana tērā te āhua, ā, koinā ia i kōwhiria ai hei "pūngāwerewere kino" mō taua kiriata.
- E 30 mm pea te roa o te tinana, e 200 mm pea te whānui mai i te pito o tētahi waewae ki tētahi.
- Noho tahi ai ngā pūngāwerewere o Avondale ki ō rātou whānau me ō rātou hoa; ko ia anake te pūngāwerewere i Aotearoa e pēnei ana te āhua.

2. Ngā wīwhara: te mea roa rawa me te mea pakupaku rawa o te ao

- He nui ake ngā momo wīwhara, tēnā i ngā momo o ērā atu huinga rauropi huri i te ao; e 50,000 pea ngā momo.
- He āhua 1500 ngā momo e mōhiohia ana i Aotearoa, ā, ko tētahi o ēnei te momo roa rawa atu e mōhiohia ana i te ao, ko tētahi te momo poto rawa atu!
- Ko te momo roa rawa, ko te tūwhaipapa, a *Lasiorynchus barbicornis*, ā, e 80 mm pea te roa.
- Ko te mea pakupaku rawa, e 0.7-0.8 mm noa te roa! He kāpō a *Myrtonymus zelandicus*, ā, noho ai ia ki ngā pīakaaka o ngā rākau māori o te whānau Myrtaceae, pērā i te pōhutukawa, i te kānuka me te mānuka. Kei te 40 henimita whakarunga o te oneone ia e noho ana.

3. Te ora roa o te wīwhara o Tawhiti Rahi

- Arā tētahi wīwhara pakeke o Tawhiti Rahi me Aorangi, a *Hadramphus pittospori*, tērā ka ora mō te 3 tau; ko te nuinga o ngā wīwhara pakeke, kāore e hipa ake i te kotahi tau e ora ana. 16-20 mm te roa o ngā pakeke.
- Kotahi tau ka pau ki ngā tūātipu e 6 o te torongū, i a ia e tipu ana i roto i te momo rākau e kīia ana ko te karo (a *Pittosporum crassifolium*).
- Ka 3 wiki e ngeti ana, kātahi ka puta ake ko te wīwhara pakeke.
- Ko te kaha roa o te pakeke e ora ana, he hanga rerekē mō te wīwhara. Koia pea tētahi take i kaha tāmia ai e ngā hoariri pērā i te kiore ngā hapori o ngā wīwhara rahi e noho whanaunga ana ki tēnei momo.

4 He ngaro-pekapeka e kaha ana te noho tahi, te mahi tahi ki ētahi atu

- He ngaro-pekapeka e kaha ana te noho tahi, te mahi tahi ki ētahi atu.
- Tērā te ngaro-pekapeka parirau kore, ko *Mystacinobia zelandica* te ingoa, ka noho ā-hapori ki ngā paenoho o te pekapeka hiku-poto, ā, me āhua 30° rawa te pāmahana e ora ai ia (me mahana noa ake i te pāmahana o waho).
- Kai ai ngā mea pakeke me ngā torongū i te tūtae pekapeka.

- Mā te rere a te pekapeka e tae atu ai te ngaro-pekapeka ki ētahi atu hapori pekapeka; piki atu ki te 10 ngā ngaro-pekapeka kua kitea i ngā huruhuru o te pekapeka kotahi i a ia e wehe atu ana i tana paenoho ki te kimi kai māna i te pō.
- Kāore tētahi atu momo ngaro (a ngāi Diptera) huri i te ao e kātata ki tēnei mō te kaha o tana noho tahi, mahi tahi ki ērā atu o tana hapori. Inā koa:

- ka noho tahi tonu ngā mātua me ā rātou tamariki;
- ka pītahitahi ngātahi ngā pakeke me ngā torongū;
- ka roa ake ngā toa e ora ana; nāwai ā, ka noho rātou hei reanga tūtei whakaputa oro mō te hapori.

5. Ngā ngaro patupaiarehe

- Ko ngā "ngaro patupaiarehe" ētahi o ngā pepeke moroiti katoa o te ao.
- Kei te āhua 160 ngā momo i Aotearoa, 10% tērā o ngā momo e mōhiotia ana puta i te ao.
- Ehara te ngaro patupaiarehe i te ngaro tūturu (ko ngāi Diptera ērā), engari he wāpu mymarid tino moroiti (nō ngāi Hymenoptera); whakatakoto ai rātou i ā rātou hua ki ngā hua a ētahi atu pepeke.
- Ka tipu haere te kōhungahunga o te mymarid i roto tonu i te hua o tērā pepeke, ina pao mai, kua pakeke.
- Arā ētahi ngaro patupaiarehe he poto ake i te 0.4 mm.

6. He wāpu kai ngoikura

- Kitea ai te wāpu euphorine, a *Dinocampus coccinellae*, i ngā tōpito katoa o te ao. I tae tuatahi mai ki Aotearoa nei i te taenga tuatahitanga mai o te Pākehā ki tēnei whenua.
- Ka whakatakoto te uwaha i te hua kotahi ki te tinana o tētahi ngoikura pakeke.
- Kia pao mai, e whā ngā tūātipu o te torongū, i a ia e kai haere ana i te ngoikura.
- Ka motu i te torongū pakari ngā io matua o ngā waewae o te ngoikura, ā, ka keria he ara mōna e puta ai ia ki te whaiāo.

- Kātahi ka herea tahitia e te torongū ngā waewae o te ngoikura, ā, i raro i a ia, ka huri hei ngeti.
- Riro ana ko te ngoikura me ōna tae mumura hei whakaruru mō te wāpu e huri ana hei ngeti. I tua atu i tērā, whakaputa ai te ngoikura i ētahi wē paitini, he kawa anō, i ana monamona, hei ārai i te hoariri.

7. He wāpu whānako

- E 2 ngā momo wāpu gasteruptionid māori o Aotearoa, e mōhiotia nei he 'wāpu tohu'.
- Ko tā ēnei wāpu, he whakatakoto i ā rātou hua ki runga i ngā hua o te pī tōtahi māori o Aotearoa.
- Kia pao mai te torongū o te wāpu nei i tana hua, ka kai i te hua o te pī, tae atu ki ngā kai kua waiho e te pī uwaha hei kai mā tāna ake kōhungahunga.
- Nā tēnei mahi whānako ā rātou i kīia ai ēnei wāpu he **kleptoparasite**, arā, he 'pirinoa whānako'.

8. He wētā e 71 karamu te taumaha!

- Tērā tētahi uwaha o te wētāpunga o Hauturu, o *Deinacrida heteracantha*, e 71 karamu tōna taumaha; koia te pepeke tino taumaha puta noa i te ao e mōhiotia ana, e tino taea ana ngā inenga te whakapono atu.
- He mea āta whakatipu te wētā nei e te ringa tangata, ā, kāore ia i whakaputa i ana hua i te wā e tika ana – ka puritia kētia ki tana puku.
- 19 karamu te taumaha toharite o tētahi wētāpunga pakeke kore hua, e 43 karamu te taumaha toharite o te uwaha pupuri hua.
- Arā ētahi pītara tērā tonu pea ka taumaha ake i te 71 karamu, pērā i te pītara goliath, engari kāore anō kia āta inea i runga i ngā tikanga tōtika.

9. Ngā pūngāwerewere māori tino rahi, tino pakupaku

- He pūngāwerewere noho ana te pūngāwerewere māori tino rahi, ko *Spelungula cavernicola* te ingoa. E ai ki ngā mōhiotanga, ko Te Tai Tapu me Kawatiri anake ngā rohe e nohoia ana e ia. 130 mm te whānui mai i te pito o tētahi waewae ki tētahi, e 24 mm te roa o te tinana.

- Ko te tarantula goliath, te tarantula kai manu ki ētahi (ko *Therophosa blondi* tana ingoa pūtaiao), koia te pūngāwerewere rahi katoa o te ao. E 250 mm te whānui mai i te pito o tētahi waewae ki tētahi, e 90 mm te roa o te tinana.
- Nō te whānau Mysmenidae te pūngāwerewere iti o Aotearoa, heoi, kāore anō ia kia tapaina ki tētahi ingoa pūtaiao whaimana. He iti ake i te 0.5mm te roa o te tinana o ngā mea pakeke.
- Ko te pūngāwerewere iti katoa o te ao, he pūngāwerewere hanga māwhaiwhai o Hāmoa, ko *Patu marplei* te ingoa, nō te whānau Symphytognathidae. E 0.43 mm noa te roa o te tinana o ngā mea pakeke.

10. Te katipō

- Ki ētahi, he hanga whakamataku te katipō, a *Latrodectus katipo*, i te mea ko ia anake te pūngāwerewere māori ka māuiui te tangata i ana paitini. He whai paitini ngā pūngāwerewere katoa, hei patu kai mā rātou, engari he torutoru noa ngā momo huri i te ao ka raru te tangata i ana paitini.
- Noho ai te katipō ki te tahamoana, ā, tērā te kitea i raro i ngā pakepakeke, e huna ana rānei i ngā pūreirei pātiti e tipu ana i te onepū. Kua āhua korekore haere i ēnei rā, ā, he wāhanga nui hoki o tana ripoinga kua rawekehia e te ringa tangata.
- Ko te uwaha anake ka ngau i te hoariri, ā, ka pērā ia hei tiaki i ana hua, i a ia tonu rānei, kāore e ngau i tētahi mea mō te kore noa iho te take.
- He rite te rahi o te puku porotaka o te uwaha pakeke ki te pī, huawhenua nei. He pango te puku, otirā, he tāhei whero kei te tuarā, ā, kei raro, ko tētahi tauira whero e āhua rite ana ki te 'karaehe-hāora'.

11. Ngā kai a ngā iroiro a te ngaro kahurangi o Aotearoa

- Kai ai te nuinga o ngā iroiro o ngā momo ngaro i ngā kiko kararehe kua pirau.
- Engari he rerekē ngā iroiro o te ngaro kahurangi māori o Aotearoa (a *Calliphora quadrimaculata*), e noho rā ki ngā maunga, i

te mea ka whanake tonu rātou ahakoa e kore pea e kai kiko pirau.

- Arā kē pea tana kai, ko tētahi papanga mākū o ngā pūkoro rau o ngā haumata kua popo!

12. Te pūrēhua 'huke-rau' noho kōwhai: tētahi o ngā pūrēhua pakupaku katoa o te ao

- Ko te pūrēhua huke-rau noho kōwhai o Aotearoa (a *Stigmella sophorae*) tētahi o ngā pūrēhua tino pakupaku o te ao, inā rā, e 2.5-3.5 mm noa te whānui mai i te pito o tētahi parirau ki tētahi.
- Ka oti katoa ngā tūātipu o te torongū moroiti i roto tonu i tētahi o ngā rau iti o te kōwhai. Ka kai haere mai i tētahi pito o te rau ki tētahi, me te huke haere anō i te rau, i kīia ai ia he pūrēhua huke-rau.
- Kātahi ia ka puta ake, ka tuitui i tētahi kahu-āhuru ki te papa, ki tētahi rau rānei, he mea hanga ki te hiraka.
- I te kaha moroiti o te pūrēhua ka puta ake ki te whaiao, me te tere o te kakapa o ana parirau, ka rere ana, he tino uaua te kite i a ia.

13. Te kutu noho huia: kia mōhio rawatia e ora ana i tōna wā, kua mate-ā-moa kē!

Ko ngā tāngata katoa pea o Aotearoa kua rongo i ngā kōrero mō te huia (a *Heteralocha acutirostris*), tērā manu ātaahua i korehāhā i te wāhanga tuatahi o te rautau 20.

Engari i mōhio anō koe he whai kutu motuhake anō te huia (ko *Rallicola extinctus* te ingoa)?

I te matenga ā-moa o te huia, ka pērā anō ko tana pepeke pirinoa.

Kua tangohia ake ētahi tauira o te kutu nei i ētahi kiri huia kua āhua 100 tau e āta puritia ana ki ngā whare taonga o te motu. Kāore e kore, i piri tahi ngā kutu nei ki te huia, me te kai haere i ana huruhuru.

I te mea nō nā noa nei i kitea ai te kutu nei e piri tahi ana ki ngā kiri huia tawhito, kāore anō i kitea tētahi e ora ana.

14. Ngā waewae me ngā pūhihi roa rawa

- Nō te wētā noho ana o Tawhiti Rahi (a *Gymnoplectron giganteum*) ngā waewae me ngā pūhihi roa katoa o ngā pepeke me ngā pūngāwerewere o Aotearoa.

- Mai i te pito o ngā pūhihi ki te pito o ngā waewae o muri, ka eke pea ki te 450 mm te roa. Heoi anō, e 50 mm noa te roa o te tinana.
- Huna ai te wētā nei ki te ana, ki ngā pūkei toka rānei i te awatea, ka pō ana, kua puta ki te kai māna. He pua, he pukoko ana kai.
- Ko Tawhiti Rahi me Aorangi anake ngā wāhi kitea ai te wētā waewae roa nei.

15. Te pūrēhua onge katoa?

- Ko *Titanomis sisyrota* pea te pūrēhua onge katoa i Aotearoa.
- He āhua rahi tonu a *Titanomis*, inā rā, e 55-63 mm te whānui mai i te pito o tētahi parirau ki tētahi.
- Heoi, 10 noa iho o tēnei momo kua kitea, ā, ko te mea whakamutunga, i kitea i te tau 1959, i mau ki ngā rama nui o te Pāpuni o Waipapa.
- Arā ētahi atu pūrēhua he iti ake ngā tauira e mōhiotia ana, engari he pūrēhua tino moroiti ērā, ā, koirā kē pea i tino ruarua ai ngā tauira kua mau.
- I te kaha onge o *Titanomis*, kāore ngā tohunga i te mōhio nō tēhea karangatanga pūrēhua a ia!

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