A valued rodent (*Rattus exulans*) population assessed for cultural harvest

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Kiore (Pacific rat, *Rattus exulans*) arrived in New Zealand with Ngatiwai, a Maori tribal group in northern New Zealand, and as such are culturally important in Ngatiwai histories and traditions. Kiore are a bioindicator, a traditional source of skins for cloaks, and one of many traditional foods. However, ecological and social contexts for this species have changed dramatically over the last 150 years. Once common, kiore are now restricted in their numbers and range, and widely regarded as pests in New Zealand. To safeguard cultural access to kiore, tribal environmental managers seek to understand and monitor the abundance and health of remaining kiore populations. To assist, we assessed body condition, reproductive status, and parasite and disease loads of kiore on one of the few remaining island populations within the Ngatiwai tribal area. We also compared detection devices to determine device suitability for ongoing monitoring of relative abundance. Of 16 kiore caught, body condition was similar to that recorded in studies on other New Zealand islands. Inflammation of the liver and/or bile ducts was present in 38% of captured kiore, attributed to the common nematode parasite *Capillaria hepatica*. People harvesting kiore can take precautions to prevent transfer of this parasite to humans. Subcutaneous fat levels were moderate, and lower in diseased individuals, especially females. Capture rate in live-traps was 19.3 kiore per 100 trap-nights, higher than in snap-traps (1.4). A one-night kiore tracking rate in inked footprint tunnels was 25%, and a one-night camera-capture index was 44%. Because live-trapping had a relatively high capture rate, permits inspection of animal condition using traditional and other methods, and enables release of juveniles and non-targets, it appears to be the most useful method for ongoing abundance assessment.
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