

QUANTIFYING STOAT PRESENCE: Developing sensitive detection cameras for stoats

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Zero Invasive Predators Ltd (ZIP) is developing a new model for predator management whereby rats, possums, and stoats are completely removed from large areas of mainland New Zealand, and then those areas are protected from reinvasion. Stoats are the most difficult of the three to detect at landscape scale. The current best practice tool is tracking tunnels but they are not sensitive enough. Kiwi chicks and other sensitive wildlife have been significantly impacted even when tracking tunnels record no stoats. Motion-activated wildlife cameras show promise as an alternative, but reviewing film is very labour intensive.

Seeking to understand our ability to detect stoats, we released marked and radio-transmitted stoats into ZIP's field development site in the Marlborough Sounds where a number of motion-activated cameras were installed. Time to first detection for each stoat was recorded, and subsequent analysis suggests that all stoats were seen by at least one of the cameras. ZIP, in partnership with Massey University and Grant Ryan, are now working on further improving the sensitivity of the cameras themselves, and developing analytics to automatically filter the footage to highlight frames of interest.