

LISTENING TO NATURE - A PASSIVE ACOUSTIC APPROACH FOR PROTECTED AREAS MONITORING AND BIODIVERSITY ASSESSMENT

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Passive acoustic monitoring involves recording the natural soundscape of bird and other animal calls using automated field recording devices. These are being adopted widely in New Zealand and other countries but at present, experts and volunteers must personally listen to these recordings to identify and count species. This time consuming stage can be fast-tracked by developing automated methods for analysing sound recordings. Overall, we aim to test if passive acoustic monitoring associated with analyses such as automated identification and acoustic indices can effectively measure bird community composition differences between a protected and an unprotected area.

The field work was performed in The Ark in the Park (Waitakere Ranges Regional Park), a fenced bird community with high level of pest management and in the Fairy Falls, where there is no pest management. Both sites are located at Waitakere Ranges Region, New Zealand. As a result of the conservation efforts in The Ark in The Park bird species such as Whitehead (*Mohoua albicilla*); North Island Robin (*Petroica longipes*); North Island kōkako (*Callaeas wilsoni*); Kaka (*Nestor meridionalis*) can now be seen again at the region. Using sound recordings made at these two sites, we want to identify what acoustic indices are better to study the New Zealand forest soundscape, which special focus on the bird community.



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