

# Understanding the population dynamics of the King Island Scrubtit



**Common name/s:** King Island scrubtit  
**Scientific name:** *Acanthornis magna greeniana*

## CONSERVATION BACKGROUND

The King Island Scrubtit is a subspecific Passerine endemic to King Island in the Bass Strait and is listed as the third most likely Australian bird taxa to go extinct within 20 years. King Island Scrubtit has suffered severe population decline as a consequence of extensive clearing and draining of native vegetation, primarily for agriculture, and are now restricted to small remnants of mature paperbark swamp. Extensive surveys have revealed King Island Scrubtits occur in three discrete and disconnected locations on King Island.

## MANAGEMENT QUESTIONS

1. What are the levels of genetic diversity (genetic health) and the population genetic structure of the remaining wild population?
2. Are subpopulations connected by gene flow/dispersal?
3. Is inbreeding likely to occur, and potentially reduce population viability?
4. What is the effective population size?
5. Can translocation between subpopulations achieve genetic rescue of the population?
6. Is the introduction of genetic diversity from sister taxa (nominate Scrubtit from mainland Tasmania) required for genetic rescue?

## KEY FINDINGS

- Reference genome produced and used to call SNPs for both King Island Scrubtit & nominate Scrubtit from mainland Tasmania.
- Assessment shows populations on King Island are heavily inbred & structurally different between the subpopulations as a result of habitat clearing.
- Work currently underway to complete this analysis & assess what can be done to improve diversity for this species to ensure population viability.