Port Marlborough
Marlborough Environment Awards 2025

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Judges' Report

CATEGORY:
Marine

Marine Farming Association Inc. – Kawau Pateketeke/ King Shag Research Project

INTERVIEWED	Ned Wells & Jonathan Large
DATE	9 December 2024
JUDGES	Phil Bradfield (Coordinating Judge), Eric Jorgensen, and Oliver Wade

INTRODUCTION

For many years, limited knowledge of the Marlborough endemic King shag hampered understanding of its ecological needs, particularly its interactions with the aquaculture industry. In 2018, the Marine Farming Association (MFA) established the King Shag Working Group, comprising representatives from the aquaculture industry, the Ministry for Primary Industries (MPI), iwi, the Marlborough District Council (MDC), and the Department of Conservation (DOC). The working group's primary aim was to guide and coordinate science-based research on King shag populations and their ecology.

In 2019, MFA partnered with Seaford Innovations Limited and other industry members to fund a comprehensive research programme. This three-year project included chick banding, GPS tracking of adult birds, and extensive fieldwork to study the foraging ecology, survival, breeding biology, and disturbance behaviours of King shags. The research was conducted under the leadership of local bird ecologist Mike Bell, with the findings summarised in a 98-page report (attached to the application).

GENERAL INFORMATION

During the three-year study, researchers banded King shags, attached GPS tracking devices, and spent extensive hours in the field recording data. The project was supported by the aquaculture industry, which provided transport and logistical support to access the remote King shag colony locations.

Location and Stakeholders

The research programme spanned three years and covered the ten main King shag colonies, primarily in the outer Marlborough Sounds. The King Shag Working Group, formed in 2018, includes representatives from the aquaculture industry, the Ministry for Primary Industries, iwi, the Marlborough District Council, and the Department of Conservation. The project was led by local ecologist Mike Bell, with input from a team of scientists.

History/Background

Prior to this study, our understanding of King shag ecology was limited, which often led to precautionary approaches in environmental decision-making. Due to insufficient ecological data, resource consent applications for aquaculture were sometimes declined, with concerns about potential impacts on King shag populations. This research now provides a more informed perspective on the species and its interactions with the aquaculture industry, offering valuable data to shape future decision-making processes.

Current Activities

Following the completion of the primary research phase, the aquaculture industry funded an additional three years of banding and population surveys to continue monitoring King shag populations and gather further insights into their ecology.

MAIN ISSUE OR CHALLENGE

A primary anthropogenic challenge for the King shag is frequent disturbance, occurring on average once every two days. Repeated disturbance can significantly affect productivity and individual fitness, impacting both nestlings and breeding adults, ultimately leading to population declines. The study observed that boats approaching King shags or their colonies caused escape behaviours, such as taking flight or swimming away, which contributes to this disturbance.

The research found that disturbance was most prevalent from Friday to Sunday, aligning with increased recreational boating, particularly fishing activities. This suggests that recreational fishing in Te Tauihu-o-te-waka (Marlborough Sounds) is the primary source of disturbance for King shags, while aquaculture activity remains relatively quieter during this time.

This research has been widely shared by the MFA to educate both recreational users and the aquaculture industry about the impact of human activities on King shags in the Marlborough Sounds.

SOLUTION

The MFA's King Shag Project has made significant contributions to understanding King shag biology and ecology. By generating new insights into this rare species, the project has played a key role in advancing knowledge about King shags and their conservation needs. Additionally, it has provided an opportunity for the aquaculture industry to demonstrate its commitment to environmental stewardship, biodiversity, and sustainability.

The initiative has fostered collaboration among marine farmers, environmentalists, and researchers, strengthening relationships within the industry and creating benefits for both the environment and business operations. The research findings are informing more sustainable practices and decision-making, ensuring that marine farming can coexist with local wildlife and contribute to the long-term viability of both ecosystems and the industry.

THE JUDGES WERE IMPRESSED BY

- The collaborative efforts of the working group to develop a research programme focused on understanding and conserving the King shag.
- The aquaculture industry's commitment to funding this challenging and comprehensive research project. Despite the potential benefits to the industry, the industry demonstrated dedication to scientific inquiry and environmental responsibility.
- The strong governance and resources dedicated to this research, with input from a highly qualified and diverse group of stakeholders.
- The clear passion of the aquaculture industry for the conservation of King shags, with their evolution from "chief villain" to "King shag champion."

PROBLEMS AND HOW THEY HAVE BEEN TACKLED

One of the greatest challenges of this project was the difficulty in studying such a shy and wary species. The research team had to carefully determine the optimal times and methods for approaching remote colonies, especially for capturing birds to band and attach GPS tracking devices. Over time, they developed effective techniques for conducting these activities, with much of the work carried out during the early hours of the morning.

SUMMARY

The judges were impressed with how stakeholders came together to support this important research on a previously understudied endemic species of Marlborough. The collaborative approach of the MFA and its partners, including the aquaculture industry, demonstrates a strong commitment to King shag conservation. This project has provided valuable insights into King shag ecology, dispelling prior misconceptions about the impact of aquaculture and fostering a positive relationship between the industry and conservation efforts.

SUGGESTIONS

1. The formation of a multi-stakeholder group, possibly a King Shag Foundation, to continue the progress made in understanding this unique Marlborough endemic bird species.
2. Although this research has been groundbreaking in terms of knowledge acquisition, it is now crucial to translate these findings into actionable conservation outcomes for the species.
3. Conservation efforts could include ongoing advocacy and educational campaigns to inform marine space users about the fragility of local species and ecosystems. Additionally, practical conservation tools, such as creating permanent floating platforms for King shags and enhancing suitable roosting and nesting habitats through vegetation removal, should be considered.