



Human Impact on Taiaroa Head

A Biology Programme for
Secondary Students
at the **Royal Albatross Centre**

Student Work Sheets

2020

Conservation Manager – Enhancement Activity

Enhancement – aspects that improve on nature

1. Use lines to match up the intervention method with the effect of that technique

| Intervention Methods | Effect of those Methods |
|----------------------|-------------------------|
|----------------------|-------------------------|

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|---|---|
| 1. Weed control | |
| 2. Dummy Eggs | a) Technique for identifying individual birds to keep a reliable record of individual life history, presence on the headland, population data and health information. |
| 3. Hand Rearing | b) Device used to ensure the nesting albatross do not die from heat-induced organ failure due to extreme climatic conditions. |
| 4. Rabbit Exclusion | c) Fledglings that land in the harbour and are unable to take off again are returned to headland or taken out to the open ocean where there is more wind. |
| 5. Incubator | d) Action of removing introduced plants that make the headland less suitable for nesting and take off. |
| 6. Supplementary Feeding | e) Object used to keep breeding pairs at the nest after the egg or young chick is removed for weighing, measuring of keeping in incubator for a while. Has a calming effect when presented to nervous or aggressive breeding adults during nest checks. |
| 7. Drug Treatment | f) Used to control access of humans, stock and dogs to the nature reserve. |
| 8. Predator Trapping | g) Used to minimise visual disturbance to nesting birds from people in the observatory |
| 9. Restricted Viewing | h) Lagomorph control to reduce bare patches of ground that attract flies: increase vegetation and nesting material for all seabirds; reduce competition for space with burrowing seabirds and reduce erosion and prey for introduced predators. |
| 10. Supply extra nesting material and shelter | i) Device used to keep eggs safe when high risk of desertion and/or infection. |
| 11. Security Fence | j) Used to treat disease (e.g. Aspergillosis and other infections). |
| 12. Window Tinting | k) Technique used to eliminate threat from feral cats, mustelids (stoats, ferrets), hedgehogs and rats. |
| 13. Leg Banding | l) Action of additional feeding by rangers when one parent goes missing or when the pair is unable to supply the chick with enough food to stay healthy. |
| 14. Manual treatment of eggs and chicks | m) Action where chicks are housed and fed solely by wildlife ranger when both parents die or disappear and no foster pair is available. |
| 15. Nest check and chick weighing | n) Provides vulnerable chicks or eggs with protections from weather extremes. |
| 16. First Flight rescue | o) To reduce disturbance from the viewing public during courtship and egg laying period. |
| 17. Candling | p) Hand remove of maggots on hatchling or very young chicks on their health, parent presence and nesting behaviour. |
| 18. Nest sprinklers | q) A technique to see if an egg is viable. |

- r) Weekly monitoring of eggs and chicks to check on their health, parent presence and nesting behaviour.

1. *Outline any negative aspects to these management techniques*

2. How can the rangers tell if the birds are stressed?

3. Do you think these enhancement techniques should be used to increase the fledging rate of Royal Albatross at Taiaroa Head?

- *Management has increased the fledging rate by ~20%*
- *75% of non-managed offspring survive to 5 years, only 60% of those that are managed survive to 5 years*

Residents of Taiaroa Head

Use the Otago Daily Times Poster to fill out the **Taiaroa Head Population** column. Describe what you see in the various locations to fill out the **Site Features** column and record whether or not a species was viewed. Information for negative and positive human impacts will come from discussions, observations and displays.

Pilot's Beach:

| Species | Status | Taiaroa Head Population | Viewed ? | Site Features <i>Why breed at Taiaroa Head?</i> | Human Impacts – NEGATIVE <i>What do we do that negatively impacts the species?</i> | Human Impacts – POSITIVE <i>What do we do that benefits the species?</i> |
|--|------------------------|-------------------------|----------|--|---|---|
| Blue Penguin <i>Native</i> | At Risk (declining) | | | | | |
| New Zealand Sealion Endemic | Nationally Critical | | | | | |

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| | | | | | | |
|---|----------------------|--|--|--|--|--|
| Fur Seal <i>Native</i> | Least Concern | | | | | |
| Variable Oystercatcher <i>Endemic</i> | At Risk (recovering) | | | | | |

Observatory:

| Species | Status | Taiaroa Head Population | Viewed ? | Site Features <i>Why breed at Taiaroa Head?</i> | Human Impacts – NEGATIVE <i>What do we do that negatively impacts the species?</i> | Human Impacts – POSITIVE <i>What do we do that benefits the species?</i> |
|-------------------------------------|------------------------------------|--------------------------------|-----------------|---|--|--|
| Otago Shag <i>Endemic</i> | Threatened (nationally vulnerable) | | | | | |

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|---|---------------------------------|--|--|--|--|--|
| Northern Royal Albatross <i>Endemic</i> | At Risk (naturally uncommon) | | | | | |
| Sooty Shearwater <i>Native</i> | At Risk (declining) | | | | | |

Signposts

| Species | Status | Taiaroa Head Population | Viewed ? | Site Features <i>Why breed at Taiaroa Head?</i> | Human Impacts – NEGATIVE <i>What do we do that negatively impacts the species?</i> | Human Impacts – POSITIVE <i>What do we do that benefits the species?</i> |
|--|----------------|-------------------------|----------|--|---|---|
| Spotted Shag <i>Native</i> | Not Threatened | | | | | |

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|---|---------------------------------------|--|--|--|--|--|
| Little Shag <i>Native</i> | At Risk (naturally uncommon) | | | | | |
| Royal Spoonbill <i>Native</i> | At Risk (naturally uncommon) | | | | | |
| Red-billed Gull <i>Native</i> | Threatened (nationally vulnerable) | | | | | |
| Black-backed Gull <i>Native</i> | Not Threatened | | | | | |

Protection of Albatross – *What would happen if?*

Protection = aspects that minimise detrimental human impacts

Methods:

1. In groups of 2 or 3 people review the “What would happen if...” scenarios that you have been given. Record them in the first column of the table below and then complete the rest of the table with your ideas.
2. Report your ideas to the class during the discussion

| What would happen if... | Impact | Management Techniques | How can YOU help prevent it happening or help with the management of the situation? |
|-------------------------|--------|-----------------------|---|
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