

# Kāwāroa Reef — Species ID Card

Top 30 species · Te Reo Māori names · Zone & Measure Type

LAMINATE & CLIP

Laminate this card. Print A5, laminate, punch a hole in the top-left corner, and clip to your clipboard or lanyard. Use alongside the A5 booklet.

## INTERTIDAL ZONE PROFILE — KĀWĀROA REEF

|   |   |  |  |   |
|---|---|--|--|---|
| <b>Splash</b><br>Periwinkle<br>Barnacle | <b>High</b><br>Limpet · Chiton<br>Sea Lettuce | <b>Mid</b><br>Mussel · Neptune's<br>Necklace | <b>Low</b><br>Kina · Pāua<br>Triplefin | <b>Sub</b><br>Kelp · Conger<br>Sea Squirt |
|---|---|--|--|---|

## KAIMOANA SPECIES (KĀWĀROA TRC MONITORED)

|   |   |  |  |  |
|---|---|--|--|--|
| Pāua<br><i>Haliotis iris</i>                      | Kina<br><i>Evechinus chloroticus</i>                            | Kūtai<br><i>Perna canaliculus</i>  | Blue Mussel<br><i>Mytilus galloprovincialis</i>                  | Crayfish<br><i>Jasus edwardsii</i>                           |
| <b>Pāua</b><br>Pāua<br>Haliotis iris<br>LIS C KAI | <b>Sea Urchin</b><br>Kina<br>Evechinus chloroticus<br>LIS C KAI | <b>Green-lipped Mussel</b><br>Kūtai / Kuku<br>Perna canaliculus<br>MIL % KAI | <b>Blue Mussel</b><br>Kuku<br>Mytilus galloprovincialis<br>HIM % | <b>Rock Lobster</b><br>Kōura<br>Jasus edwardsii<br>LIS C KAI |

## GASTROPODS & CHITONS

|   |  |  |  |  |
|---|--|--|--|--|
| Limpet<br><i>Cellana</i> spp.                     | Top Shell<br><i>Melagraphia aethiops</i>                     | Cat's Eye Turbo<br><i>smaragdus</i>                  | Snakeskin Chiton<br><i>Sypharochiton</i>                                 | Whelk<br><i>Cominella</i> spp.               |
| <b>Limpet</b><br>Ngākihi<br>Cellana spp.<br>HIM C | <b>Black Top Shell</b><br>—<br>Melagraphia aethiops<br>HIM C | <b>Cat's Eye</b><br>Pūpū<br>Turbo smaragdus<br>MIL C | <b>Snakeskin Chiton</b><br>Kāeo<br>Sypharochiton pelliserpentis<br>HIM C | <b>Whelk</b><br>—<br>Cominella spp.<br>MIL C |

## BARNACLES & CRUSTACEANS

|  |  |  |   |   |
|--|--|--|---|---|
| Columnar Barnacle<br><i>Chamaesiphon</i>                       | Surf Barnacle<br><i>Chamaesiphon</i>                     | Shore Crab<br><i>Cyclograpsus</i>                            | Hermit Crab<br><i>Pagurus</i> spp.                    | Shrimp<br><i>Palaemon affinis</i>                         |
| <b>Columnar Barnacle</b><br>—<br>Chamaesiphon columna<br>HIM % | <b>Surf Barnacle</b><br>—<br>Chamaesiphon brunnea<br>H % | <b>Shore Crab</b><br>Pāpaka<br>Cyclograpsus lavauxi<br>HIM C | <b>Hermit Crab</b><br>Pāpaka<br>Pagurus spp.<br>MIL C | <b>Rock Pool Shrimp</b><br>—<br>Palaemon affinis<br>LIS C |

## ECHINODERMS & OTHER INVERTEBRATES

|   |   |  |   |  |
|---|---|--|---|--|
| Cushion Star<br><i>Patriella regularis</i>                        | Waratah Anemone<br><i>Actinia</i>                         | Sea Squirt<br><i>Corella eumyota</i>                                 | Blue Tube Worm<br><i>Salmacina</i>                    | Coralline Algae<br><i>Corallina</i> spp.               |
| <b>Cushion Star</b><br>Pātangaroa<br>Patriella regularis<br>LIS C | <b>Waratah Anemone</b><br>—<br>Actinia tenebrosa<br>MIL C | <b>Orange-tipped Sea Squirt</b><br>—<br>Corella eumyota<br>LIS % INT | <b>Blue Tube Worm</b><br>—<br>Salmacina spp.<br>LIS % | <b>Coralline Algae</b><br>—<br>Corallina spp.<br>LIS % |

# Kāwaroa Reef — Species ID Card (continued)

Algae · Fish · Birds · Recording codes

SIDE 2

## ALGAE

|   |   |   |   |  |
|---|---|---|---|--|
| <p><i>Neptune's Necklace</i> <i>Hormosira banksii</i></p> <p><b>Neptune's Necklace</b><br/>—<br/><i>Hormosira banksii</i></p> <p><b>MIL</b> %</p> | <p><i>Sea Lettuce</i><i>Ulva lactuca</i></p> <p><b>Sea Lettuce</b><br/><i>Karengo (similar)</i><br/><i>Ulva lactuca</i></p> <p><b>HIM</b> %</p> | <p><i>Kelp</i><i>Ecklonia radiata</i></p> <p><b>Ecklonia Kelp</b><br/><i>Rimurapa</i><br/><i>Ecklonia radiata</i></p> <p><b>S</b> %</p> | <p><i>Carpophyllum</i> <i>Carpophyllum spp.</i></p> <p><b>Bladder Kelp</b><br/>—<br/><i>Carpophyllum spp.</i></p> <p><b>LIS</b> %</p> | <p><i>Red Alga</i><i>Gelidium spp.</i></p> <p><b>Red Alga</b><br/>—<br/><i>Gelidium spp.</i></p> <p><b>LIS</b> %</p> |
|---|---|---|---|--|

## FISH (ROCK POOLS & LOW SHORE)

|  |  |  |  |   |
|--|--|--|--|---|
| <p><i>Common Triplefin</i> <i>Forsterygion lapillum</i></p> <p><b>Common Triplefin</b><br/><i>Tātarakihi</i><br/><i>Forsterygion lapillum</i></p> <p><b>L/S</b> <b>C</b></p> | <p><i>Robust Triplefin</i> <i>Forsterygion gymnotum</i></p> <p><b>Robust Triplefin</b><br/><i>Tātarakihi</i><br/><i>Forsterygion gymnotum</i></p> <p><b>L/S</b> <b>C</b></p> | <p><i>Olive Rockfish</i> <i>Acanthoclinus fuscus</i></p> <p><b>Olive Rockfish</b><br/>—<br/><i>Acanthoclinus fuscus</i></p> <p><b>L/S</b> <b>C</b></p> | <p><i>Mottled Twister</i> <i>Bellapiscis lesleyae</i></p> <p><b>Mottled Twister</b><br/>—<br/><i>Bellapiscis lesleyae</i></p> <p><b>L/S</b> <b>C</b></p> | <p><i>Clingfish</i><i>Diplocrepis puniceus</i></p> <p><b>Red Clingfish</b><br/>—<br/><i>Diplocrepis puniceus</i></p> <p><b>L/S</b> <b>C</b></p> |
|--|--|--|--|---|

## BIRDS (RECORD AT START & END OF SURVEY)

|   |  |  |   |  |
|---|--|--|---|--|
| <p><i>Variable Oystercatcher</i> <i>Haematopus unicolor</i></p> <p><b>Variable Oystercatcher</b><br/><i>Tōrea</i><br/><i>Haematopus unicolor</i></p> <p><b>All</b> <b>C</b></p> | <p><i>Pacific Reef Heron</i> <i>Egretta sacra</i></p> <p><b>Pacific Reef Heron</b><br/><i>Matuku Moana</i><br/><i>Egretta sacra</i></p> <p><b>All</b> <b>C</b></p> | <p><i>Sacred Kingfisher</i> <i>Todiramphus sanctus</i></p> <p><b>Sacred Kingfisher</b><br/><i>Kōtare</i><br/><i>Todiramphus sanctus</i></p> <p><b>All</b> <b>C</b></p> | <p><i>Kelp Gull</i><i>Larus dominicanus</i></p> <p><b>Kelp Gull</b><br/><i>Karoro</i><br/><i>Larus dominicanus</i></p> <p><b>All</b> <b>C</b></p> | <p><i>Little Pied Cormorant</i> <i>Microcarbo melanoleucos</i></p> <p><b>Little Pied Cormorant</b><br/><i>Kāruhiruhi</i><br/><i>Microcarbo melanoleucos</i></p> <p><b>All</b> <b>C</b></p> |
|---|--|--|---|--|

## QUICK CODES

| Code    | Meaning                       | Tag         | Meaning                |
|---------|-------------------------------|-------------|------------------------|
| C       | Count individual animals      | <b>KAI</b>  | TRC Kaimoana monitored |
| %       | Percent cover (algae/sessile) | <b>INT</b>  | Introduced species     |
| H/M/L/S | High/Mid/Low/Sub zone         | <b>Zone</b> | Intertidal zone        |

# Kāwaroa Reef — Kaimoana Tally Sheet

Biannual abundance survey · Mirrors TRC monitoring protocol (since 2009)

HALF-A4 · PRINT & USE

This sheet records kaimoana abundance at Kāwaroa Reef, directly comparable to the Taranaki Regional Council biannual kaimoana survey baseline. Complete this sheet alongside the standard 50m transect survey. Data entry: mauricompass.biz → Rocky Shore Survey → Kaimoana Module.

|                             |                               |
|-----------------------------|-------------------------------|
| Site<br><b>Kāwaroa Reef</b> | Date                          |
| Time                        | Assessor                      |
| Tide Height (m)             | Survey Area (m <sup>2</sup> ) |

| Species  | Te Reo              | Tally Marks (5-bar gate) | Total Count          | Size Notes (S/M/L or mm) |
|--|---------------------|--------------------------|----------------------|--------------------------|
| <b>Pāua</b><br><i>Haliotis iris</i>                    | <i>Pāua</i>         | _____<br>_____           | <input type="text"/> |                          |
| <b>Kina</b><br><i>Evechinus chloroticus</i>            | <i>Kina</i>         | _____<br>_____           | <input type="text"/> |                          |
| <b>Rock Lobster</b><br><i>Jasus edwardsii</i>          | <i>Kōura</i>        | _____<br>_____           | <input type="text"/> |                          |
| <b>Green-lipped Mussel</b><br><i>Perna canaliculus</i> | <i>Kūtai / Kuku</i> | _____<br>_____           | <input type="text"/> | % cover:                 |
| <b>Cat's Eye</b><br><i>Turbo smaragdus</i>             | <i>Pūpū</i>         | _____<br>_____           | <input type="text"/> |                          |
| <b>Limpet</b><br><i>Cellana spp.</i>                   | <i>Ngākahi</i>      | _____<br>_____           | <input type="text"/> |                          |
| <b>Other (specify)</b>                                 |                     | _____<br>_____           | <input type="text"/> |                          |

## KAIMOANA OBSERVATIONS & NOTES

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**TRC Baseline Note:** Kāwaroa Reef kaimoana has been monitored by Taranaki Regional Council since 2009 (twice yearly). Your counts contribute to this long-term dataset. Enter data at mauricompass.biz → Rocky Shore Survey → Kaimoana Module to compare against the TRC baseline.