



TIRITIRI MATANGI ISLAND

COMMON COASTAL BIRDS - BREEDING SURVEY

Spring-Summer
2019-2020

Survey Report for 2019-2020 breeding season:

Year seven of Survey

Two observers made day visits to the island on 13 occasions between 7th September and 9th January. Most visits concentrated on the south-east coast where both red-billed gull and white fronted-tern formed quite dense colonies. Several counts at each site during the season produced these results:

RED-BILLED GULL favours the South-east coast of Tiritiri Matangi and again colonised the coastal cliffs and inshore rocks below the Fog Horn Shed and northwards towards Fisherman's Bay. The main concentration was around Curl rock and the basal cliff running north below the Rangers Bach Garden. The cliff rising from this line of basal rocks includes a recess difficult to view, but discovery of a new viewing point allowed some visual access. Breeding pairs were estimated **between 310 and 330** in total, comparing favourably with last year's 125 – 140 pairs, but similar to the previous year when around 300 pairs nested.

BLACK BACKED GULL again used its five traditional breeding sites. Twenty-nine pairs were recorded in these areas with at least 5 pairs raising young at each site. A further 6 or 7 pairs were recorded at scattered locations. The success of nesting is difficult to gauge at some sites – the inshore rocks near North-east Bay are now more obscured by shrubbery and the cliff ledges at the end of Pohutukawa Promontory cannot be viewed without descending into the colony and distressing the birds. The total of breeding pairs on the island was **between 30 and 36** this year, a reduction of 9 on last year's count.

PIED SHAG continues to use a large pohutukawa on the northern side of Emergency Landing. Ten nests were observed to be in use with young at various stages of development visible in most. Bill and tail tip sightings suggest incubation in at least 8 nests during the course of survey visits. Breeding activity before and after the visiting period of the survey has yet to be explored. **Breeding pairs numbered 8-10.**

LITTLE SHAG although regularly observed on the island gave **no evidence** of breeding here this year.

REEF HERON There were **no observations** of Reef Heron during survey visits this year.

WHITE FRONTED TERN are later than red-billed gull in selecting their breeding areas on Tiritiri. Three sites on the south-east coast were colonised from around the middle of November: Twin peak rock with its adjacent cliff and the lower cliff face to its south; Bach garden rocks; and Emergency Landing pinnacle rocks. Counts support a total of, at least, **160-180 breeding pairs** over the three sites; a significant contrast to last year when only a small number gathered and breeding seemed to fail.

CASPIAN TERN Detection of a single nest was late due to its location in a rock depression. The appearance of a fledgling in mid-December with an accompanying adult confirmed the **success of one pair** on the Wharf reef. Similarly a pair had raised a single chick in the previous season.

COMMON COASTAL BIRDS - BREEDING SURVEY 2019-2020

Survey Purpose:

The aim is, firstly, to measure trends and fluctuations in the breeding numbers of common coastal seabirds over a period of years and, secondly, to form a fair estimate of breeding pairs in each season. Although a single annual count might indicate trends over a number of seasons, making several counts of colony numbers and isolated nesters during each breeding season gives a range of data from which a fuller picture of breeding numbers can be drawn.

Annual counts commenced in the 2013-14 breeding season. The data recorded for the 2019-20 season is shown below.

Viewing Stations and breeding sites:

Fourteen regular viewing stations are listed below with the main coastal features observed from each, together with a grid reference for these.

Viewing stations are numbered in anti-clockwise direction from Far Seat (1), SE of the Fog Horn Shed, to Little Hobbs Beach (14). Rock areas are indicated on the MAP.

Field observation:

Most sightings are made by scanning cliff faces and off-shore rocks from established the viewing stations using a 20x telescope and 8x binoculars. Other parts of the coast are checked for isolated nesters. Two observers undertake the counting of nesting birds, sometimes visiting the island singly and sometimes together. As the season advances nesting material becomes evident in more exposed locations for gulls but less so for terns. The survey concludes when chicks become mobile and the counting of families loses reliability.

Evaluation of data:

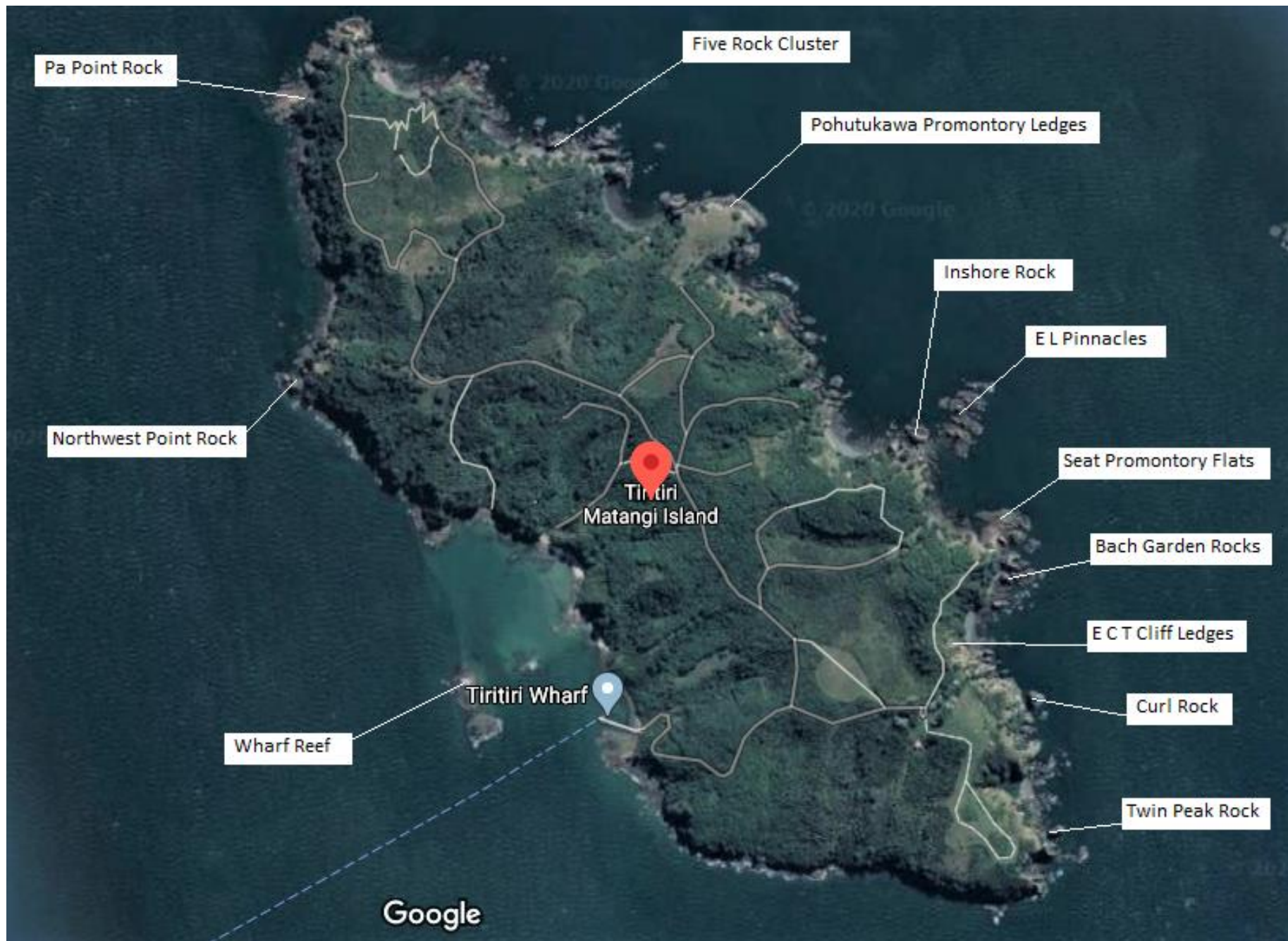
Field notes are entered into the tabular format displayed below. Estimating the numbers breeding has relied upon averaging counts over 2 or 3 visits during the peak period of incubation and hatching, with some adjustment if other counts and apparent trends show significant variance.

Text Notes:

Where 'sitters' are recorded with two numbers (EG: 4+4) the second number will refer to a family group. In a few instances where a count has been made in sections on a single site, the section count and total are shown in the same column cell. Eg: 3 + 2 + 4 = 9. The abbreviation, 'w ch', indicates, 'with chick'. The term, 'sentinel', refers to adults apparently overseeing young which may be out of sight.

Species monitored:

Red billed gull. Black backed gull. White fronted Tern. Caspian Tern. Pied Shag. Little Shag. Reef Heron.



MAIN VIEWING STATIONS and Rock sites *with Grid References:*

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1. FAR SEAT (<i>walk east</i>) - Bay rock to north, Twin Peak rock 608326 – 900405 & cliff 608771 – 910198 to south. | [1A] |
| 2. FOG HORN SHED (<i>slope below</i>) - Curl Rock 605421 – 899821 to north, Twin Peak rock South. | [1] |
| 3. BACH GARDEN (<i>by seat</i>) - Bach Garden rocks 602784 – 899030 to north by Two-seat promontory. | [2] |
| 4. EAST COAST TRACK BEND (<i>path high point</i>) - Cliff edge rocks 604443 – 898339 & Curl Rock to south. | [2A] |
| 5. EAST COAST TRACK DROP – (<i>through bush below high point</i>) - Cliff edge rocks | new |
| 6. TWO SEAT PROMONTORY - Emergency Landing Pinnacles 599125 – 897749 to north, Rock Flats 601889 – 899301 east. | [3] |
| 7. ARCHES OUTCROP - Emergency Landing Pinnacles , north face. | [3:2] |
| 8. EMERGENCY LANDING (<i>rocky shore</i>) - Trees on northern cliff face 600849 – 896945 | [4] |
| 9. POHUTUKAWA PROMONTORY (<i>east from U bend</i>) - Eastern Cliff Ledges 594778 – 891360 | [5] |
| 10. POHUTUKAWA COVE (<i>SE mount by 'rock stack'</i>) - Cliff Ledges northern tip. | [6] |
| 11. NORTH EAST BAY TRACK (<i>slope east of track</i>) - Five Rock Cluster 593342 – 886838 | [7] |
| 12. NORTHERN POINT (through bushes at end of path) - Pa Point Rock 592614 – 879408 | [10] |
| 13. NORTH WEST POINT (<i>zig-zag path from Ridge Road</i>) – Point Rock & Chimney Stone 598490 – 879483 | [9] |
| 14. LITTLE HOBBS BEACH (<i>ice-plant rock</i>) – Wharf Reef 605040 – 884161 | [8] |

Viewing stations re-numbered this year. Earlier years numbering in [brackets].

REPORT COMPILED in February 2020 by Mike Dye & Roy Gosney. The DATA RECORDED during each survey visit to the island is tabulated below.

TIRITIRI MATANGI ISLAND		COMMON COASTAL BREEDING BIRDS				SURVEY DATA 2019 -2020			
SPECIE :	TARĀPUNGA RED BILLED GULL <i>Larus novaehollandiae</i>								
LOCATIONS OF BREEDING BIRDS									
VIEWING SITE : →	FOG HORN SHED - Site 1								
	Curl Rock (to N) <i>36.605538 x 174.899820</i>		Cliff base <small>opposite</small> Curl <i>36.606388 x 174.899676</i>		Twin Peak Rock (to SE) <i>36.607678 x 174.900260</i>		Flat Rock (NW of Twin)		Notes
	Total	Sitting birds	Total	Sitting birds	Total number	Sitting birds	Total number	Sitting birds	
3 October	0	0	0	0	0	0			<i>Mike – Birds present in am gone by pm count</i>
17 October	90	28	46	8	0	0			
25 October	63	38	48	13	0	0			<i>Stiff SW wind, max 14°</i>
7 November	61	43	48	24	7	3	72	52	<i>Nly breeze, sea mist – NEW</i>
13 November	63	58	33	27	8+3 (+ = adj cliff)	3+2	71	50	<i>Mild, sunny, light breeze</i>
22 Novem					6 +adj cliff see Far seat	6	?	50	<i>Sunny, increasing SW wind</i>
7 December	40	36 inc 9 ch grp	27	17 inc 3 ch gp	2 nd fig = adj cliff	11+5	61	41 inc 15 ch gp	<i>Warm, increasing breeze</i>
12 December	65	12sit+21ch gp	32	12 sit + 6 ch grp		7+17		15+17 ch grp	<i>Chicks of varied ages</i>
Average adjust		50		24		20		50	
<i>SUMMARY: Peak counts suggest 144 pairs bred successfully in this location.</i>									
VIEWING SITE	EAST COAST TRACK BEND - Site 2A (i)								

: →									
	Curl Rock (North face)		Far Cliff-edge Rock		Half-way Rock		Near Rock		
	<i>Total number</i>	<i>Sitting birds</i>	<i>Total number</i>	<i>Sitting birds</i>	<i>Total number</i>	<i>Sitting birds</i>	<i>Total number</i>	<i>Sitting birds</i>	
8 September	4	0	22	4	26	5	64	1	Roy
3 October	18	3	42	5	24	6	23	2	Mike – hidden nook with more
10 October	14	?	55	?	26	?	72	?	R&M average
17 October	27	8	70	17	38	9	74	19	Mike
25 October	?	11	42	24	14	9	53	31	Plus Hidden Nook – first count
7 November	17	12	44	27	18	10	46	32	Hidden continues from Half Way
13 November	22	14	39	27	13	10	42	39	
Average adjust		12		27		10		35	

SUMMARY: Peak counts suggest 84 pairs bred successfully in these locations.

VIEWING SITE : →	EAST COAST TRACK DROP - Site 2A (ii)				
	Hidden Nook		Cliff face above Far Rock		
	<i>Total number</i>	<i>Sitting birds</i>	<i>Total number</i>	<i>Sitting birds</i>	
25 October	64	32			Recess between Far & Half way Rocks. Difficult viewing through growth lower along EC track
7 November	70	37			Left end of rock face is Half Way rock, Break in vegetation & dead gull indicate cut off point
13 November		39		26	Cliff not visible from ECT 2A (i)
Average adjust		38		26	

SUMMARY: Part of the cliff base as seen from East Coast Track bend, this section is hidden from that location and was only properly observed in mid-season, at 64 pairs.

VIEWING SITE : →	FAR SEAT VIEW TO FOG HORN BAY - Site 1A				
VIEWING DATE ↓	North east Rock		Cliff face		NOTES
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	
22 Novem			17	17	<i>Cliff below Fog Horn not counted until now</i>
7 December		13	14	6	<i>13 Rear face Twin Peak, 6 below Fog Horn Shed</i>
12 December				8 sitting & 5 w chicks Below Fg Horn	Add - 2 sitting nr WFT on south cliff
Average adjust		13		13	

SUMMARY: December counts indicate 26 pairs bred successfully in these locations.

VIEWING SITE : →	BACH GARDEN - Site 2 <i>36.602911 x 174.899045</i>												
VIEWING DATE ↓	North rock 1		North rock 2		North rock 3		North rock 4		North rock 5		Whole site		Notes
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	
3 October	0	0	0	0	0	0	0	0	0	0	0	0	<i>Mike</i>
17 October	13	4	2	0	1	0	0	0	0	0	16	4	<i>+ 2 on Bay rock</i>
25 October											14	7	<i>Hurried count</i>
7 November											0	0	
13 November											0	0	
7 December											0	0	
Average adjust												5	

SUMMARY: Absence of birds in November indicate earlier counts were of birds prospecting for a breeding site or resting only. None nesting here.

VIEWING SITE : →	SEAT PROMONTORY - Site 3																	
VIEWING DATE ↓	Main Cliff & Thumb rock		EL Pin 1 (Pinnacles)		EL Pin 2		EL Pin 3		EL Pin 4		EL Pin 5		EL Pin 6		Whole site		Notes	
	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting		
3 October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Mike
10 October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	R&M
17 October			0	0	0	0	15	0	0	0	20	2	0	0				M
25 October	0	0	0	0	0	0	25	9	0	0	20	8	0	0				
7 November	0	0	0	0	0	0	0	0	0	0	8	5	0	0				
13 November	2	0	0	0	0	0	0	0	0	0	3	2	0	0				
Average adjust																	0	

SUMMARY: Pin 5 held a small number of birds on both faces of the rock viewed from here and The Arches. Nesting of 5 pairs on Pin 5 is possible but not proven.

	SEAT PROMONTORY - Site 3		
VIEWING DATE ↓	Promontory Flats (rocks below NE cliff face) 36.601554 x 174.898495		
	Total number	Sitting	
3 October	1	0	Mike
10 October	0	0	
17 October	16	0	Pair copulating
25 October	0	0	
7 November	0	0	Circa 60 birds on sea in lee of Remote rock
13 November	0	0	Circa 20 at Remote rock

Average adjust		0	
----------------	--	---	--

SUMMARY: *None bred at this site.*

VIEWING SITE : →	ARCHES OUTCROP - Site 3:2
------------------------	---------------------------

VIEWING DATE ↓	EL Pin (seaward face W) – sequence as viewed inshore to offshore <i>36.599595 x 174.897698</i>
-------------------	---------------------------------------------------------------------------------------------------

	Main Cliff & Thumb rock		Inshore rock		EL pin 1 masking 2		EL pin 4 behind 7		EL pin 3		EL pin 5 masking 6		Whole Site		Notes
	Total	Sitting	Total	Sitting	Total	Sitter	Total	Sitter	Total	Sitter	Total	Sitter	Total	Sitting	
17 October	0	0	0	0	0	0	0	0	9	0	0	0	9	0	
25 October	0	0	0	0	0	0	0	0	21	8	10	5	31	13	
13 November	0	0	0	0	0	0	0	0	0	0	5	3	5	3	
Average adjust															

SUMMARY: *Possible breeding of minimal number included in summary of Seat Promontory.*

VIEWING SITE : →	LITTLE HOBBS BEACH - Site 8
------------------------	-----------------------------

VIEWING DATE ↓	Wharf Bay Rocks	Notes
	Total number	Sitting
3 October	5	0
10 October	12	0

SUMMARY: This site appears unsuitable for red-billed gull nesting purposes.

OVERALL SUMMARY: Red-Billed Gull favours the South-east coast of Tiritiri Matangi. Birds again colonised the coastal cliffs and inshore rocks below the Fog Horn Shed and northwards towards Fisherman's Bay. The main concentration was around Curl rock and the basal cliff running north below the Rangers Bach Garden. Breeding pairs were estimated between 310 and 330, in total, comparing favourably with last year's 125 – 140 pairs, but similar to the previous year when around 300 pairs nested.

TIRITIRI MATANGI ISLAND		COMMON COASTAL BREEDING BIRDS		SURVEY 2019 -2020		
SPECIE :		KARORO BLACK BACKED GULL		Larus dominicanus		
LOCATIONS OF BREEDING BIRDS						
VIEWING SITE : →		FOGHORN SHED - Site 1				
		Curl Rock direction		Twin Peak direction		Notes
		Total number	Sitting	Total number	Sitting	
3 October		2	0	2	0	Mike – Rock in Mouth of Curl Rock & SW Bay shore
17 October				2	0	M
7 November				2	1	Nest in bay opposite Twin Peak rock
13 Novem		0	0	2	1	
22 Novem				1	1	
7 Decem				2	0	
12 Decem				1	0	
Average adjust					1	

VIEWING SITE : →						BACH GARDEN - Site 2					
VIEWING DATE ↓		Rocks East of Seat Prom (adjacent NE prom flat rocks)			Bay Rock						
		<i>Total number</i>				<i>Total</i>	<i>Sitting</i>				
3 October		2		0		2	1	Mike			
17 October						1	0	M			
7 November						1	1				
13 Novem						1	1				
22 Novem						3	2	Second nest on smaller bay rock			
7 December						4	2	As above			
12 Decem						3	0	2 ch w 2 Adult @ Bay Rock + 1 ch w adult on Second rock.			
Average adjust							2				
SUMMARY:											
VIEWING SITE : →			SEAT PROMONTORY - Site 3								
VIEWING DATE ↓		Promontory Rocks (below NE cliff face)				<i>Notes</i>					
		<i>Total number</i>		<i>Sitting</i>							
8 September		17		7 ?		Roy					
3 October		22		0		Mike					
17 October		6+4+3= 13		0		M Counting 3 rocks right to left					

25 October	10	1	<i>Stiff SW wind, Max 14°</i>
7 November	4+2+0 = 6	2	<i>Single nests on Right and Centre flats. Northerly breeze with thick drifts of mist</i>
13 November	10	3+2+1	
Average adjust		5	

SUMMARY:

VIEWING SITE →	ARCHES OUTCROP - Site 3:2			
VIEWING DATE ↓	Main Cliff to NW		Main Cliff to East	
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>

SUMMARY:

VIEWING SITE : →	POHUTUKAWA PROMONTORY - Site 5		
VIEWING DATE ↓	Rocky Point		
	<i>Total number</i>	<i>Sitting</i>	
22 Novem	11	5	<i>Visible nests. Possibly 1 or 2 more below observable area. See Site 6 for north end addition.</i>
8 Decem	12	2	<i>Birds very vocal</i>
Average adjust		5	

SUMMARY:

VIEWING SITE : →	POHUTUKAWA COVE - Site 6														
VIEWING DATE ↓	Lower Cliff Slope N end of Pohutukawa Prom flats				Cove West End Cliff				<i>Notes</i>						
	<i>Total number</i>		<i>Sitting</i>		<i>Total number</i>		<i>Sitting</i>								
22 Novem	3		2		2		1		West nest on dead tree rock						
8 Decem							1								
Average adjust			2				1								
SUMMARY:															
VIEWING SITE : →	NORTH-EAST BAY TRACK - Site 7														
VIEWING DATE ↓	Five Rock Cluster														
	Rock 1 (far Right)		Rock 2		Rock 3		Rock 4 (twin peak)		Rock 5 (in-shore)		Cliff Base		= Whole site		<i>Notes</i>
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	
22 Novem	2	1?	7	3	1	0	1	1	1	?	2	0	14	4/5+	<i>Shrubs obscure</i>
Average adjust														5	
SUMMARY:															

VIEWING SITE : →						PAPAKURA PA POINT - Site 10					
VIEWING DATE ↓		Westerly rock outcrop				Notes					
		<i>Total number</i>		<i>Sitting</i>							
22 Novem		12 +		6		1 nest with exposed old egg away from sitter. 1 nest with 3 chicks					
8 Decem		11		5		2 chicks racing for cover of coprosma					
Average adjust				5							
SUMMARY:											
VIEWING SITE : →		NORTH WEST POINT - Site 9									
VIEWING DATE ↓		Point Rock			Beach chimney-stone			Notes			
		<i>Total number</i>	<i>Sitting</i>		<i>Total number</i>		<i>Sitting</i>				
10 October		4	0		0		0		R&M		
7 November		13	4		1		1		4 sat in dry grass nests + 2 empty nests with birds alongside		
22 Novem		11	6		1		1				
8 December		16	8						Total includes 1 chick at nest and 1 free roaming		
Average adjust				8				1			
SUMMARY:											
ADDITIONAL BLACK-BACK RECORDS											

VIEWING DATE ↓	VIEWING SITE ↓	Observation	Deduction
3 October	Wharf Reef	5	<i>See 7 Dec</i>
10 October	Wharf Reef	8	<i>See 7 Dec</i>
10 October	North of Hobbs	2	
3 Novemb	Wharf Reef	3	<i>See 7 Dec</i>
22 Novem	Wharf Reef	2 present, one possibly sitting	<i>See 7 Dec</i>
22 Novem	Little Hobbs beach rocks	1 nesting on low rock beyond ice plant rock	<i>See 8 Dec</i>
22 Novem	Bay south of Far Seat	1 nesting on rock off cliff base	<i>1 pair nested</i>
7 Decem	Wharf Reef	2 present, 1 on nest	<i>1 breeding pair</i>
7 Decem	Little Hobbs beach rocks	1 nesting on low rock beyond ice plant rock	<i>See 8 Dec</i>
7 Decem	Bay south of Far Seat	1 nesting on rock off cliff base	
8 Decem	Little Hobbs beach rocks	1 nesting on low rock beyond ice plant rock	<i>1 pair nested</i>
Average adjust		2	

SUMMARY: Three isolated nests have been recorded but young were not observed at either the Wharf reef or the Little Hobbs sites, leaving uncertainty about their breeding success.

OVERALL SUMMARY: **Black-backed gull** used five traditional sites for breeding, each with 5 or more pairs raising young. 29 pairs were recorded in these areas and a further 6 or 7 pairs were recorded at scattered locations. The success of nesting is difficult to gauge at some sites – the inshore rocks near North-east Bay are now more obscured by shrub growth and the cliff ledges at the end of Pohutukawa Promontory cannot be viewed without descending into the colony and distressing the birds. Total breeding pairs this year are estimated between 30 and 36, a reduction of 9 on last year's count.

TIRITIRI MATANGI ISLAND	COMMON COASTAL BREEDING BIRDS	SURVEY 2019 -2020
-------------------------	-------------------------------	-------------------

SPECIE :	KĀRUHIRUHI	PIED SHAG	Phalacrocorax varius
----------	-------------------	------------------	----------------------

LOCATIONS OF BREEDING BIRDS

VIEWING SITE : →	SEAT PROMONTORY - Site 3		
	<i>Total number</i>	<i>Sitting</i>	<i>Notes</i>
3 October	22	6	<i>Mike – only 6 nests visible, 3 others possible. 3 nests sitting adults, plus 1 with 2 juv & 1 with 2 chick</i>
17 October	22		<i>M - 8 nests visible with occupants</i>

VIEWING SITE : →	EMERGENCY LANDING - Site 4		
	<i>Total number</i>	<i>Sitting</i>	<i>Notes</i>
8 September	18	8	<i>Roy</i>
10 October	13 +		<i>R&M 10 nests visible (incl. 1 small) - all occupied – tails projecting, some young heads</i>
13 Novemb			<i>10 nests occupied (2 platforms quite small). 1 old nest with single adult standing alongside.</i>
Average adjust		8	

SUMMARY: Pied Shags continue to use a large pohutukawa on the northern side of Emergency Landing. 10 nest were observed to be in use and young at various stages of growth were visible in some. Bill and tail tip sightings suggest incubation in at least 8 nests during the course of survey visits. Breeding activity before and after the visiting period of the survey has yet to be explored. Estimate 8-10 breeding pairs.

OTHER SIGHTINGS			
DATE	LOCATION	OBSERVATION	
10 October	Wharf Reef	10 - perched on rock and shingle	
10 October	Hobbs Beach	3 - perched on tide line	

TIRITIRI MATANGI ISLAND		COMMON COASTAL BREEDING BIRDS		SURVEY 2019 -2020	
SPECIE :	KAWAU PAKA	LITTLE SHAG	Phalacrocorax melanoleucos		
LOCATIONS OF BREEDING BIRDS					
VIEWING SITE :	NORTH-EAST BAY TRACK - <i>Site 7</i>				
	Five Rock Cluster				
	<i>Total number</i>	<i>Sitting</i>	<i>Observation</i>		
Average adjust		0			
VIEWING SITE →	EMERGENCY LANDING - <i>Site 4</i>				
VIEWING DATE ↓	<i>Total number</i>	<i>Sitting</i>	<i>Observation</i>		

SUMMARY: Although Little Shag is regularly observed on the island evidence of breeding here this year is lacking.			
OTHER SIGHTINGS			
DATE	LOCATION	OBSERVATION	
10 October	Hobbs Beach	2 birds on northern end rocks	
7 November	Wharf jetty	3 birds perched on railing	
7 Decem	Fog Horn shed	1 bird flying north over inshore water	
12 Decem	Wharf Jetty	1 bird perched on railing	

TIRITIRI MATANGI ISLAND		COMMON COASTAL BREEDING BIRDS		SURVEY 2019 -2020	
SPECIE :	TĪKĀKA REEF HERON <i>Egretta sacra</i>				
LOCATIONS OF BREEDING BIRDS					
VIEWING SITE : →	NORTH-EAST BAY TRACK - <i>Site 7</i>				
	Five Rock Cluster – Rock 2				
	<i>Observation</i>				
SUMMARY: Reef heron was not observed on the island during survey visits. None believed to have here nested this year.					
OTHER SIGHTINGS					

Date	Location	Observation
17 October	Gulf Harbour approach wall	<i>Single bird flying out towards open water</i>

TIRITIRI MATANGI ISLAND	COMMON COASTAL BREEDING BIRDS	SURVEY 2019 -2020
--------------------------------	--------------------------------------	--------------------------

SPECIE :	TARA	WHITE FRONTED TERN	<i>Sterna striata</i>
----------	-------------	---------------------------	-----------------------

LOCATIONS OF BREEDING BIRDS

VIEWING SITE : →	FOG HORN SHED - Site 1						
------------------	------------------------	--	--	--	--	--	--

VIEWING DATE ↓	Curl Rock (to N)		Cliff Base opposite Rock		Twin Peak Rock (to SE)		Notes
	Total number	Sitting	Total number	Sitting	Total number	Sitting	
13 Novem	0	0	0	0	25+ & 7	7 & 0	<i>Second figure on adjacent cliff</i>
22 Novem					88	43	<i>Flat top = resting area, nests up sides</i>
7 December	0	0	0	0		40+6	<i>6 on adjacent cliff</i>
12 Decem	0	0	0	0	80+	44+10	<i>10 on adj cliff. Maybe more hidden.</i>
22 Decem						42	
9 January	0	0	0	0		22ch+2 sit+ 9juv	<i>9juv off site on sea washed rock with adults</i>
Average adjust						46	

SUMMARY: Consistent counts of 40 plus until January, when some young had fledged, suggests around **45-50 breeding pairs**.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

VIEWING SITE : →	FAR SEAT VIEW TO FOG HORN BAY & TWIN PEAK ROCK - Site 1A														
VIEWING DATE ↓	North East Rock				Cliff Face				Twin Peak Rock				Notes		
	<i>Total number</i>		<i>Sitting</i>		<i>Total number</i>		<i>Sitting</i>		<i>Total number</i>		<i>Sitting</i>				
22 Novem									17		17				<i>On cliff south of Twin. Hard to see.</i>
7 December							3		?		12 +1 on rear face				<i>Plus more behind shrubbery</i>
12 Decem							3				8+				
22 Decem							3				16				
9 January							3 (2 ch+1 sit)		40		1ch				<i>40 flew out below cliff to south</i>
Average adjust							3				14				

SUMMARY: Bird activity south of Twin Peak suggest breeding on the lower cliff below angles of vision. Estimate for both areas **15-20 pairs**.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

VIEWING SITE : →	SEAT PROMONTORY - Site 3														
VIEWING DATE ↓	EL Pin 1		EL Pin 2		EL Pin 3		EL Pin 4		EL Pin 5		EL Cliff Base		Remote Rock		Notes
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	
17 October	0	0	0	0	12	0	0	0	0	0	0	0	120 +		+ 60 on outer Pin 7&8
7 November													c 12		
22 Decem															56
Average adjust		0		0		0		0		0		0			56

SUMMARY: Overlooked until peak of season when **56 birds** were judged to be sitting on nest scrapes.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

VIEWING SITE →	SEAT PROMONTORY - Site 3		
	Promontory Rocks (below NE cliff face)	<i>Notes</i>	
VIEWING DATE ↓	<i>Total number</i>	<i>Sitting</i>	
17 October	360	0	<i>Flock of 300 on outer submergible pins rising together flying north + 60 remaining</i>
13 Novem	0	0	<i>Small number fishing off Remote Rock – circa 20</i>
Average adjust		0	

SUMMARY: None breeding at this site

VIEWING SITE →	ARCHES OUTCROP - Site 3:2																
VIEWING DATE ↓	EL Pin (seaward face W)																
	Main Cliff & Thumb rock		EL Pin 1 (Inshore rock)		EL pin 2		EL pin 3		EL pin 4		EL pin 5		EL pin 6		Whole Site		<i>Notes</i>
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	
13 Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Average adjust		0		0		0		0		0		0		0		0	

SUMMARY: None breeding at this site

VIEWING SITE →	EMERGENCY LANDING - Site 4																
----------------	----------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Promontory Rocks (below NE cliff face)		
VIEWING DATE ↓	<i>Total number</i>	<i>Sitting</i>	
13 Novemb	0	0	

VIEWING SITE : →	BACH GARDEN - Site 2		
------------------------	----------------------	--	--

VIEWING DATE ↓	North Rock 1		North Rock 2		North Rock 3		North Rock 4		North Rock 5		Whole Site		Notes
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	
13 Novemb	0	0	0	0	0	0	0	0	0	0	0	0	
7 December	25	12	6	5	27	18	35	20	0	0	93	55	
12 Decem		17		7		20		24		0		68	
22 Decem												54	
7 January		7+4		2+1		1+6		8+7		0		18+18	<i>Chick+sitter</i>
Average adjust		14		5		12		20		0		51	

SUMMARY: Counts support an estimate of 50-55 pairs.

VIEWING SITE : →	LITTLE HOBBS BEACH - Site 8		
------------------------	-----------------------------	--	--

VIEWING DATE ↓	Wharf Bay Reef		Notes
	<i>Total number</i>	<i>Sitting</i>	
3 October	12 +	0	<i>Resting and fishing</i>
10 October	170 +	0	

13 November	10 +	0	
22 November	4	0	<i>Resting</i>
Average adjust			

SUMMARY: This site appears unsuitable for breeding of white-fronted terns

OVERALL SUMMARY: White-fronted tern leave their selection of breeding areas until around mid November on Tiritiri. Three areas on the south-east coast were colonised this year: Twin peak rock and nearby cliffs; Bach garden rocks and Emergency landing pinnacle rocks. Counts support a total of, at least, **160-180 breeding pairs.**

TIRITIRI MATANGI ISLAND		COMMON COASTAL BREEDING BIRDS		SURVEY 2019 -2020
SPECIE :	TARANUI	CASPIAN TERN	Sterna Caspia	
LOCATIONS OF BREEDING BIRDS				
VIEWING SITE : →	LITTLE HOBBS BEACH - <i>Site 8</i>			
	Total number	Sitting	Notes	
3 October	0	0		
7 November	0	0		
13 Novem	0	0		
22 Novem	1	1	<i>One bird on lower grassed part of reef, settling out of view a couple of times</i>	
12 Decem	2		<i>One adult on lower grassed platform with meandering fledgling</i>	

Average adjust		1	
<p>SUMMARY: Detection of a single nest was late due to its location in a rock depression. The appearance of a fledgling in mid-December with an accompanying adult confirmed the success of one pair on the Wharf reef, just as a pair had raised a single chick in the previous season.</p>			

TIRITIRI MATANGI ISLAND	COMMON COASTAL BREEDING BIRDS	SURVEY 2019 -2020
-------------------------	-------------------------------	-------------------

MISCELLANEOUS RECORDS

SPECIES	LOCATION	DATE	OBSERVATION
Oystercatcher	Wharf Reef	3 Oct	
	Jetty slipway area		
Oystercatcher	Wharf reef	10 Oct	1 bird
	Hobbs Beach		2 birds
	North of Hobbs Beach		2 birds
	North West Point		2 birds
Oystercatcher	Rocks south of Arches	17 Oct	1 bird
Flesh-footed shearwater	East of Low Cliff seat	17 Oct	1 bird flying S, then hawking N & S
Flesh-footed shearwater	Whanapaoroa channel	7 Nov	Single bird flying south
Oystercatcher	Wharf rocks	7 Nov	3 birds – 1 south of jetty & 2 to north
	Seat Promontory		Birds calling below prom
Oystercatcher	Wharf Reef	13 Nov	2 birds present
	Jetty - rocks to south		2 birds present
	Seat Prom rock flats		2 birds present

White-fronted tern	Pohutukawa Promontory	22 Nov	Small numbers flying south close to coast – returning to nesting area?	
Oystercatcher	Jetty rocks to south	12 Dec	2 birds on shingle	