

Identification of Protected Corals Progress Report

RFP: 4650 INT2015-03 IDENTIFICATION AND STORAGE OF COLD-WATER CORALS
31 July 2018

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Project: DOC16307 - INT2015-03

Specific objectives

In Schedule 1 the specific objectives in Contract INT2015-03 are:

1. To determine, through examination of returned cold-water coral specimens and photos, the taxon, and where possible the provenance of cold-water corals killed in New Zealand fisheries (for returned dead specimens).
2. To collect sub-samples of all protected cold-water coral specimens for genetic analysis in future.

There are several milestones for this project, here we report on Milestone 7 which is to produce a "Summary of identified corals, and photographs assessed for the three-month period 1 October 2017 - 31 December 2017." Deliverable due 31 July 2018.

Milestone 7

This Progress report for Milestone 7 includes:

1. Appendix A: Spreadsheet summary output from NIWA Invertebrate Collection (NIC) *Specify* Database *niwainvert*; updated with revised identifications of 206 specimen lots identified between October 2017 and 30 June 2018.
2. Appendix B: Spreadsheet output summary from the Ministry for Primary Industries (MPI), Centralised Observer database *COD*; updated with revised identifications of specimens identified between October 2017 and 30 June 2018.
3. Appendix C: Spreadsheet summary of digital images; updated with new identifications of specimens photographed between July 2015 to June 2016, July 2017 to October 2017, and October 2017 to 31 December 2017; and revised identifications of specimens photographed between July 2015 to June 2016 and July 2017 to October 2017.

4. A summary description of protected coral fauna recently identified from physical specimens and images. This summary includes a description of the corals caught on a research trawl survey, and a summary of specimens examined by visiting coral experts, Marcelo Kitihara, Universidade de São Paulo, and Stephen Cairns, Smithsonian Institution. Highlights from the expert taxonomists identifications are included, as well as a summary of golden coral and plexaurid identifications, which were *gratis* to the project.

Description of protected coral fauna

Physical specimens

The NIWA Invertebrate Collection (NIC) Specify Database *niwainvert* extract provided in this Progress Report (Appendix A), includes identifications of physical specimens carried out by the coral experts visiting the NIC in January and March 2018. To ensure recently collected protected coral identifications as well as the historical Observer and research trawl survey specimen identifications were included, the extract (n= 206) encompasses the period from 1 July 2017–30 June 2018.

During the reporting period 1 October 2017-31 December 2017 NIWA received and processed ten Observer collected protected coral specimens. These specimens were identified by experts in March 2018 and are summarised in the *niwainvert* extract, except for one gorgonian and two black corals, which will be given to experts for identification in the 18/19 financial year.

Only one historical observer sample was identified during this reporting period by Dennis Opresko (Smithsonian Institution), a black coral *Lillipathes cf. ritamariae*. This specimen is included in a paper in preparation. Dennis currently believes this to be a new species *Lillipathes* n. sp. close to *Lillipathes ritamariae* but is awaiting confirmation from other genetic results.

The *niwainvert* summary extract was provided for uploading into MPI’s Centralised Observer database COD. NIWA manages this database for MPI and COD is regularly updated with revised identifications when corals are returned from sea (Tracey & Mills 2016). The COD extract summary is provided in Appendix B (see also Tables 1 and 2). The observer samples for update in COD included:

- 24 records where the initial identification matched a catch species and the expert identification differed were updated.
- 21 records in *COD* catch did not require updating as the MPI species code recorded was the same as the expert identification MPI code.
- 88 new records were added to (inserted into) the catch tables. New records occur when no data was entered by the observer and this usually occurs with the historical samples or when more than one species is associated with a coral record (e.g., a coral associate).
- 0 samples could not be used due to missing or invalid trip number/tow numbers or lack of available catch effort data recorded in *COD*.

Table 1. Summary of protected coral samples by Fisheries Management Area (FMA).

Area	Description	Count of Samples
SOE	South-East (FMA4)	21
SUB	Sub-Antarctic (FMA6)	17

SOU	Southland (FMA5)	13
CET	Challenger Plateau, beyond EEZ (ET)	13
WANB	Wanganella Bank (ET)	11
AKW	Auckland West (FMA9)	11
AKE	Auckland East (FMA1)	8
HOWE	Lord Howe Rise (ET)	8
TMAR	Tasmanian Ridge (ET)	6
CEE	Central East (FMA2)	4
KER	Kermadec (FMA10)	3
SOI	Southern Offshore Islands (SQU6T)	3
SEC	South-East Coast (FMA3)	2

Table 2. Summary of protected samples by target fishery.

Target Fishery (common name)	MPI code	Fishing method	Count of tows
Orange roughy	ORH	TWL	64
Oreos	OEO	TWL	15
Smooth oreo	SSO	TWL	8
Patagonian toothfish	PTO	BLL	6
Scampi	SCI	TWL	5
Hoki	HOK	TWL	4
Black oreo	BOE	TWL	4
Cardinalfish	CDL	TWL	3
Tarakihi	TAR	TWL	3
Bass groper	BAS	BLL	3
Alfonsino & long-finned beryx	BYX	TWL	2
Alfonsino	BYS	TWL	2
Hake	HAK	TWL	1

Specimen Images

During the reporting period 1 October 2017–31 December 2017, NIWA received 17 images, 12 of which were photographed outside of New Zealand’s Exclusive Economic Zone (EEZ), therefore only the remaining five images were identified and processed (Appendix C). Three of the five images were of protected corals *Goniocorella dumosa* and *Desmophyllum dianthus*, and the remaining two were of several Bryozoa species. None of the five images contained a label showing trip or tow information in the image, but their provenance data was still able to be determined using MPI photographic logs, and/or the ‘Benthic Materials’ form. Trip number alone was sufficient to be able to determine whether fishing was conducted within New Zealand’s EEZ, and an initial screen of the images using the trip number to determine their general provenance was done before processing began to ensure High Sea images were not processed.

During Marcelo Kitihara’s (Universidade de São Paulo) and Stephen Cairns’ (Smithsonian Institution) visit to NIWA in March 2018, the opportunity was taken to show them previously unidentified

specimen photos for identification, and for them to confirm or revise identifications already made by NIWA staff (Macpherson et al 2018). They were able to contribute an additional 53 new identifications from unidentified Year 1 images and the beginning of Year 2 images (three of this count were non-corals); and revise 31 identifications from Year 1 images and the beginning of Year 2 images (Table 3; Appendix C).

Table 3: Summary of the number of new and revised identifications of photographed corals.

Reporting period	New identifications	Revised identifications
Year 1 (July 2015–June 2016)	40	23
Year 2 (July 2017–October 2017)	13	8
Year 2 (October 2017–December 2017)	5	
Total	59	31

VME Hotspots Chatham Rise TAN1801

Key protected coral megafauna were sampled during a recent research trawl survey on the Chatham Rise (O’Driscoll 2018). The samples were returned for confirmation of onboard identification. The samples came from randomly allocated stations that produced high by-catch of vulnerable marine ecosystem (VME) indicator taxa. We describe samples from three of these stations and some of their associated taxa. The following coral bycatch summary was prepared at sea as part of the MPI voyage report. It is important to include coral bycatch information from research trawl surveys but as a secondary priority to the observer collected specimens for this project.

At station 25, the protected species sampled and identified included: bubblegum octocoral (*Paragorgia* spp); a small amount of dead coral matrix (*Madrepora oculata*) with numerous associates including the glass sponge *Farrea*; cup coral (*Desmophyllum dianthus*); gorgonian octocorals including the primnoid *Narella*). Non-protected Cnidaria also taken as by-catch in this tow included two species of soft corals (*Anthothela* and *Telesto* or *Rhodelinda* – the runner-like form whose identification is to be confirmed) and non-calcified hydroids.

At station 48, colonies of the reef-forming stony coral *Goniocorella dumosa* (Fig. 1); sea fan octocorals – several plexaurid colonies with ophiuroids attached and the primnoid *Thouarella* spp; stylasterid hydrocoral *Errina* the base of which was colonised by numerous epizoanths, were sampled in the trawl. The remaining fauna were primarily associates, these were hydroids; stony cups corals (*Desmophyllum* and *Caryophyllia*) attached to *G. dumosa*; squat lobsters and brittle stars (ophiuroids).



Figure 1: (left image) Reef-forming stony coral *Goniocorella dumosa* with live regions and pink polyps, a plexaurid branch and cup coral attached (see left side of colony); (right image) Vivid pink *Errina* hydrocoral with the colonising epizoanthid anemone clustered at the base. (Image: Emma Jones, NIWA from O’Driscoll (2018)).

At station 129, numerous colonies of the whip-like bamboo corals assumed to be *Keratoisis* sp., were sampled (Fig. 2). Several of the whips had lateral branching toward the tips. Associates included juvenile Gorgon’s head basket-star (*Gorgonocephalus* spp); brittle stars (ophiuroids); snake-stars and anemones. The vivid red two-lined seapen *Disticoptilum gracile* was also sampled (n=~5-6) and colonised by brittle stars and anemones.



Figure 2: Bamboo coral whip-like colonies assumed to be *Keratoisis* sp. (Image: Emma Jones, NIWA)

Visiting experts

New identifications for New Zealand’s key protected coral fauna Primnoidea octocorals and Scleractinia stony corals are described. Funding for the international taxonomic experts, Drs Stephen Cairns (Smithsonian Institute) and Marcelo Kitahara (Universidade de São Paulo) to visit the NIC in Wellington to identify specimens covering their flights and accommodation, was provided in part by DOC16307. Funding was also provided by the MBIE SSIF NIC project COBR1803 and ANT201702 (Steve Parker).

The coral specimens identified were by-catch samples and images collected by Government Observers and by researchers on trawl surveys. When time allowed, additional biodiversity survey coral samples were also identified. In total about 1400 samples lots were examined and the NIC *Specify* database *niwainvert* records were updated. At least 5 undescribed species and about 23 new records for the New Zealand region were found. These identifications will improve our deep-sea regional datasets, be used for new regional habitat modelling projects, including those for vulnerable ecosystems, and support taxonomic and molecular investigations.

From the visit Dr Cairns will prepare a NIWA Memoir on the abundant primnoid *Thouarella*. His examination of our *Thouarella* collection revealed that most of the samples thought to be *Thouarella* are actually *Metafannyella*, particularly *Metafannyella chathamensis*, or *Dasystenella* or *Fanellia histocladus*, and that the remaining *Thouarella* samples could be split into 10–12 morphotypes. This will be an outstanding output and Stephen’s 5th Memoir on the region’s corals. Dr Kitahara will use

coral tissue samples for his global phylogenetic study of shallow and deep water scleractinians and from his recent work for The French National Museum of Natural History, he was able to confirm that our branching stony coral, *Oculina virgosa* (Fig. 3), is now not endemic to our region but found in other parts of the Pacific.



Figure 3: Stony branching coral *Oculina virgosa* previously thought to be an endemic New Zealand species, taken during an Auckland Museum Three Kings expedition. (Image: Ian Skipworth).

Visiting expert – golden corals

The NIC hosted Candice Untiedt, a PhD student based in Tasmania at CSIRO for three weeks, (8–25 January 2018). The visit from Candice was part of an informal Australia-New Zealand Deepsea collaboration (ANZDeep) that has a key activity to improve our knowledge of the regions' deep-sea corals, with funding from CSIRO. Candice is studying the taxonomy and ecology of the Chrysogorgiidae, (golden corals). Thirty-three samples were from observed commercial trips (n = 29) and research surveys (n = 4) and were able to be included as outputs for this project.

Candice discovered at least 10 species amongst the specimens, many of which are new and undescribed taxa. Candice took subsamples of coral polyps from these specimens for further analysis, including genetic sequencing, so we look forward to hearing more from her when she is able to confirm the diversity of this group in our region.

Plexauridae review

Jaret Bilewitch, a NIWA Molecular Technician and expert in octocoral taxonomy, was funded by a MBIE SSIF Enhancing Collections project to review and summarise the diversity and taxonomic status of members of the plexaurid octocoral family that are present in the NIC. All representative genera were studied and documented, with further grouping into morpho-species to assist with any future efforts to describe material to species-level. One new genus and species were discovered and the NIC has enough material to provide a full description of these with future funding. Jaret's identifications have provided updates for three observer collected specimens included in the extracts.

Acknowledgements

Our thanks to the coral experts that provided identifications for this project, Steve Parker for additional funding to support visitors, and the NIWA Invertebrate Collection project and team for providing curatorial support and final data extracts for the specimens.

References

- O'Driscoll, R.L. (2018). Voyage Report TAN1801: Chatham Rise trawl survey. Voyage Report to the Ministry for Primary Industries for Research Project MDT2017-02. 19 p.
- Macpherson, D., Thomas, H., Tracey, D. (2018). Identification of Protected Corals. Progress Report prepared by NIWA for the Conservation Services Programme, Department of Conservation. INT2015-03. NIWA Client Report 2018033WN. 23 p.

Appendices

Appendix A: Spreadsheet summary output from NIWA Invertebrate Collection (NIC) *Specify* Database *niwainvert*; updated with revised identifications of 206 specimen lots identified between October 2017 and 30 June 2018.

TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Sample count	Date	Latitude	Longitude	Depth 1	Depth 2	Observer
SEX0901	8	104183			Cnidaria	Anthozoa	Alcyonacea	Acanthogorgiidae	<i>Acanthogorgia</i>		Cairns, Stephen	13/03/2018	1	23/06/1999	-31.32067	172.6392	810		
TAN9812	84	9638			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Cairns, Stephen	20/03/2018	1	25/10/1998	-44.54617	-178.5172	1045		
TAN9812	25	9745			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Cairns, Stephen	22/03/2018	1	07/10/1998	-44.38517	-178.1567	805		
1241	21	3907			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	20/06/1999	-35.66166687	165.9799957	773		
2704	40	42524	60		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	09/10/2008	-34.75	171.6			
2571	179	42619	67		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	23/03/2008	-49.95	163.7917	775	960	
2571	162	42635	60		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	2	20/03/2008	-49.99167	163.8383	866	1007	
3077	18	61964	638		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	23/02/2010	-49.933333	163.783333	822		
3077	19	61965	639		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	23/02/2010	-49.933333	163.816667	835		
3235	23	69540	1264		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	05/12/2010	-42.875	177.628333	465	437	
3594	48	75904	2250		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	27/10/2010	-49.933333	163.783333	814		
1171	46	126376			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	30/11/1998	-48.551	164.9505	940	1180	
1624	43	126377			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	24/03/2002	-34.80667	169.8417	650	1187	
1171	30	126378			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	28/11/1998	-48.03416	166.1013	937		
1239	4	126406			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	18/06/1999	-35.995	166.0117	932		
1343	25	126407			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	08/04/2000	-37.14500046	177.2883301	700		
SMT9501	27	126363			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>		Untiedt, Candice	01/2018	1	25/06/1995	-36.5	176.515	956		
3252	4	69537	1261		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>chryseis</i>	Untiedt, Candice	01/2018	1	29/12/2010	-34.035	168.126667	944	954	
1674	21	92531			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>chryseis</i>	Untiedt, Candice	01/2018	1	19/07/2002	-34.805	169.8533333	800	1107	
3246	5	121481	1273		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>curvata</i>	Untiedt, Candice	01/2018	1	24/12/2010	-33.616667	167.785	1104	959	
TAN9911	29	126381			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>elegans</i>	Untiedt, Candice	01/2018	1	08/09/1999	-42.32666779	170.4406738	504		
3155	11	65905	1058	CHR	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>geniculata</i>	Untiedt, Candice	01/2018	1	10/07/2010	-34.441667	174.176667	918	1077	
3252	6	69533	1257		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>rigida</i>	Untiedt, Candice	01/2018	1	29/12/2010	-34.038333	168.125	912	997	
2889	46	126382			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>rigida</i>	Untiedt, Candice	01/2018	1	03/07/2009	-33.546667	167.745	691	920	
2232	1	42523			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (branches)	Untiedt, Candice	01/2018	1	06/03/2006	-33.69833	167.8567	647	815	
2889	46	65595	122		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (branches)	Untiedt, Candice	01/2018	1	03/07/2009	-33.546667	167.745	691	920	
3136	46	88585	2595		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (branches)	Untiedt, Candice	01/2018	1	15/06/2010	-34.028333	167.521667	746	938	
1674	32	126367			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (branches)	Untiedt, Candice	01/2018	1	21/07/2002	-34.5	168.7333333	874	1030	
1024	39-40	20637			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (rods bottlebrush)	Untiedt, Candice	01/2018	1	30/07/1997	-30.02499962	177.3666699	910	1048	
1152	45	126370			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (rods bottlebrush)	Untiedt, Candice	01/2018	1	19/09/1998	-34.05149841	162.5841675	694		
SMT0001	15	126374			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (rods bottlebrush)	Untiedt, Candice	01/2018	1	17/06/2000	-36.16933441	176.7389984	933	940	
1124	65	126402			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (scales only)	Untiedt, Candice	01/2018	1	13/08/1998	-37.13433075	177.2845001	648		
TAN9506	76	126396			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. (scales only)	Untiedt, Candice	01/2018	1	18/05/1995	-37.94766617	179.0469971	980	1300	
1171	49	126371			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	sp. scales only	Untiedt, Candice	01/2018	1	01/12/1998	-49.11817	164.3003	948		
1624	43	91311			Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>stellata</i>	Untiedt, Candice	01/2018	1	24/03/2002	-34.80667	169.8417	650	1187	
3246	5	69549	1273		Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	<i>Chrysogorgia</i>	<i>tetrasticha</i>	Untiedt, Candice	01/2018	1	24/12/2010	-33.616667	167.785	1104	959	

TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Sample count	Date	Latitude	Longitude	Depth 1	Depth 2	Observer
4837	31	106596	3686	ISI	Cnidaria	Anthozoa	Alcyonacea	Isididae	<i>Keratoisis</i>		Tracey, Di	10/03/2018	1	29/01/2017	-51.59	161.381667	1062	1132	
4837	14	106593	3683	PAB	Cnidaria	Anthozoa	Alcyonacea	Paragorgiidae	<i>Paragorgia</i>		Cairns, Stephen	10/03/2018	1	21/01/2017	-51.666667	161.37	1001	1381	
1099	12	28185			Cnidaria	Anthozoa	Alcyonacea	Plexauridae	<i>Paracis</i>	<i>squamata</i>	Bilewitch, Jaret	30/06/2018	1	05/04/1998	-32.18167	-179.07	128		
1099	12	28171			Cnidaria	Anthozoa	Alcyonacea	Plexauridae	<i>Paracis</i>	<i>squamata</i>	Bilewitch, Jaret	30/06/2018	1	05/04/1998	-32.18167	-179.07	128		
3933	6	88638	2702		Cnidaria	Anthozoa	Alcyonacea	Plexauridae	<i>Placogorgia</i>		Bilewitch, Jaret	30/06/2018	1	08/11/2013	-32.741667	167.541667	232	194	
TAN9713	28	11312			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Callozostron</i>	<i>acanthodes</i>	Cairns, Stephen	22/03/2018	1	02/12/1997	-45.03816605	179.7996674	1000	1020	
2718	31	65928	1081		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>		Cairns, Stephen	20/03/2018	1	14/11/2008	-49.788333	175.885	855	1032	
TAN9812	31	9615			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>		Cairns, Stephen	21/03/2018	1	09/10/1998	-44.576	-177.8315	978		
TAN9812	85	9632			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>		Cairns, Stephen	16/03/2018	1	25/10/1998	-44.8083	-178.5162	940	956	
TAN9812	15	9634			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>		Cairns, Stephen	21/03/2018	1	02/10/1998	-44.20667	179.0592	959		
TAN9812	25	9750			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>		Cairns, Stephen	20/03/2018	1	07/10/1998	-44.38517	-178.1567	805		
TAN9812	31	9616			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>	<i>acanthina</i>	Cairns, Stephen	22/03/2018	1	09/10/1998	-44.576	-177.8315	978		
AEX0101	25	11322			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Dasystenella</i>	<i>acanthina</i>	Cairns, Stephen	22/03/2018	1	22/10/2001	-44.578	-177.2345	826		
1171	46	9612			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>		Cairns, Stephen	12/03/2018	1	30/11/1998	-48.551	164.9505	940	1180	
TAN9812	72	9636			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>		Cairns, Stephen	23/03/2018	1	20/10/1998	-44.63366667	-176.976	848	898	
SMT9501	27	9680			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>		Cairns, Stephen	16/03/2018	1	25/06/1995	-36.5	176.515	956		
1054	25	9623			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	23/03/2018	1	24/11/1997	-43.06683	176.918	368	351	
1054	25	9684			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	24/11/1997	-43.06683	176.918	368	351	
2101	128	42554			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	21/03/2018	1	14/06/2005	-42.73333	-177.4	1107	1123	
2551	68	42623	2		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	13/03/2018	1	17/12/2007	-44.20833	-174.445	1202	1302	
3004	80	66288	487		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	22/03/2018	1	01/12/2009	-44.623333	-177.403333	891		
3004	35	66290	511		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	22/03/2018	1	24/11/2009	-44.533333	-177.85	911		
KAH0108	21	9626			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	04/09/2001	-43.121	175.819	467		
KAH0108	21	9627			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	13/03/2018	1	04/09/2001	-43.121	175.819	467		
KAH0108	21	9628			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	04/09/2001	-43.121	175.819	467		
AEX0101	80	9629			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	01/11/2001	-44.73533333	-176.8136667	753		
KAH0109	22	9630			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	30/10/2001	-43.137	175.8372	441		
TAN9812	86	9637			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	23/03/2018	1	25/10/1998	-44.43033	-178.5218	868		
TAN9812	85	9640			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	21/03/2018	1	25/10/1998	-44.8083	-178.5162	940	956	
KAH0108	21	9641			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	23/03/2018	1	04/09/2001	-43.121	175.819	467		
KAH0108	22	9642			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	21/03/2018	1	04/09/2001	-43.19967	175.712	399		
TAN0101	73	9644			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	22/03/2018	1	11/01/2001	-43.69	179.437	463		
TAN9812	87	9675			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	21/03/2018	1	26/10/1998	-44.43	-178.6155	843		
SMT9801	17	9688			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	19/06/1998	-36.53633	176.5107	899		
TAN9812	47	9764			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	16/03/2018	1	12/10/1998	-44.58367	-177.4563	850		
KAH0001	66	9766			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	16/03/2018	1	18/02/2000	-36.216333	176.212	343	336	
TAN9511	44	11758			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	23/03/2018	1	12/10/1995	-44.20999008	178.861603	1004	1007	
TAN0301	9	25504			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	21/03/2018	1	30/12/2003	-43.0635	177.4626667	320	325	
TAN0401	67	25508			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	22/03/2018	1	12/01/2004	-43.93016815	178.7660065	613	610	
TAN1101	98	70523			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	22/03/2018	1	22/01/2011	-43.81283333	178.4593333	450	490	

TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Sample count	Date	Latitude	Longitude	Depth 1	Depth 2	Observer
TAN1401	5	91991			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	14/03/2018	1	03/01/2014	-42.88066667	176.3663333	524		
AEX1601	OP14	113820		COB	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	<i>chathamensis</i>	Cairns, Stephen	16/03/2018	1	21/06/2016	-42.79833333	-177.83	806	915	
TAN1003	169	76704			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	sp. B	Cairns, Stephen	16/03/2018	1	07/04/2010	-40.63466667	177.0746667	875		
TAN1003	40	76760			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	sp. B	Cairns, Stephen	22/03/2018	1	23/03/2010	-39.96333333	178.2795	1288		
TAN1003	22	76766			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	sp. B	Cairns, Stephen	21/03/2018	1	21/03/2010	-40.01866667	178.0666667	820		
TAN1003	24	76767			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	sp. B	Cairns, Stephen	22/03/2018	1	22/03/2010	-40.0905	178.1891667	744		
TAN1003	45	91293			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Metafannyella</i>	sp. B	Cairns, Stephen	16/03/2018	1	24/03/2010	-39.78416667	178.3636667	830		
3933	21	127353	2692		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Mirostenella</i>		Cairns, Stephen	10/03/2018	1	11/11/2013	-33.41	167.598333	312	383	S. Towns
KAH9915	49	127412			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Mirostenella</i>		Cairns, Stephen	21/03/2018	1	23/10/1999	-34.74499893	172.6263275	117		
2699	17	47926	6		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Narella</i>		Cairns, Stephen	14/03/2018	1	02/10/2008	-44.463333	-174.89	1008	1087	
2232	2	47733			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Narella</i>	<i>hypocalyx</i>	Cairns, Stephen	13/03/2018	1	06/03/2006	-33.69666667	167.8283333	646	909	
TAN1801	25	126870	52	NAR	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Narella</i>	<i>hypocalyx</i>	Cairns, Stephen	13/03/2018	1	11/01/2018	-42.4541	-178.003	865	893	
1153	40	9749			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Parastenella</i>		Cairns, Stephen	21/03/2018	1	08/09/1999	-47.51733	148.667	1004		
1152	1	9691			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Parastenella</i>	<i>spinosa</i>	Cairns, Stephen	13/03/2018	1	01/09/1998	-47.13467	148.7173	1046		
1137	6	9692			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Parastenella</i>	<i>spinosa</i>	Cairns, Stephen	13/03/2018	1	08/08/1998	-47.46683	148.9013	1024		
1153	52	9695			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Parastenella</i>	<i>spinosa</i>	Cairns, Stephen	22/03/2018	1	10/09/1998	-47.6515	147.4505	965		
4837	31	106592	3682	UNI	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Parastenella</i>	<i>spinosa</i>	Cairns, Stephen	10/03/2018	1	29/01/2017	-51.59	161.381667	1062	1132	
1184	73	14677			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Plumarella</i>		Cairns, Stephen	23/03/2018	1	19/01/1999	-44.68433	-175.0848	1050		
4837	5	106594	3684	PMN	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Primnoa</i>	<i>notialis</i>	Cairns, Stephen	10/03/2018	1	18/01/2017	-51.585	161.3	1364	1650	
4837	5	106595	3685	PMN	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Primnoa</i>	<i>notialis</i>	Cairns, Stephen	10/03/2018	1	18/01/2017	-51.585	161.3	1364	1650	
TAN9506	83	15499			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>		Cairns, Stephen	03/2018	1	19/05/1995	-37.53616714	179.3529968	943	1145	
1124	58	9618			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	06/08/1998	-37.06767	176.7008	1011		
1099	9	9619			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	02/04/1998	-34.28167	179.67	609	875	
1164	2	9621			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	30/09/1998	-37.301	167.3668	755		
1674	32	9622			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	19/03/2018	1	21/07/2002	-34.5	168.7333333	874	1030	
1223	133	9712			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	19/03/2018	1	08/06/1999	-37.3133316	167.3399963	839	929	
1243	7	9741			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	20/06/1999	-37.345	168.035	760		
1357	111	9763			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	16/06/2000	-37.20333481	167.3516693	800	800	
1357	107	9772			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	15/06/2000	-37.2266655	167.3416595	1061	1102	
3177	65	65953	1130		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	19/03/2018	1	08/09/2010	-35.433333	165.335	932	959	
2894	130	66283	43		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	19/03/2018	1	25/07/2009	-35.433333	165.316667	906	975	
2886	13	66284	124		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	15/03/2018	1	23/06/2009	-33.683333	167.733333	907	926	
3235	20	69576	1307		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	<i>hilgendorfi</i>	Cairns, Stephen	16/03/2018	1	04/12/2010	-43.158333	179.37	444	455	
1171	76	9611			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	04/12/1998	-50.0345	165.9503	850		
1171	24	9674			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	27/11/1998	-48.01666667	166.1	940	1180	
1171	12	9713			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	25/11/1998	-48.0335	166.1002	935		
1171	30	9714			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	28/11/1998	-48.03416	166.1013	937		
1171	25	9716			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	27/11/1998	-48.01666667	166.0833333	980		
1171	12	9717			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	25/11/1998	-48.0335	166.1002	935		
1171	12	9718			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	25/11/1998	-48.0335	166.1002	935		

TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Sample count	Date	Latitude	Longitude	Depth 1	Depth 2	Observer
1171	22	9725			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	27/11/1998	-48.0015	166.0847	943		
1171	46	11323			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	30/11/1998	-48.551	164.9505	940	1180	
2571	187	42610	68		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	24/03/2008	-50.32833	163.3917	957	967	
3750	90	87073	2535		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	02/06/2013	-46.828333	169.89	442	617	
TAN9812	3	9635			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	29/09/1998	-44.23033	178.4408	1090		
TAN9812	39	9751			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	11/10/1998	-44.70233	-177.2985	1100		
TAN0414	66	25515			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	16/12/2004	-48.85749817	166.5341644	389	443	
TAN0414	67	25518			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	16/12/2004	-48.93766667	166.5871667	467	503	
TAN1412	85	98603	132		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	12/2014	-48.5683	-166.4347	394		
TAN0219	75	104273			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-1	Cairns, Stephen	03/2018	1	10/12/2002	-48.86316667	166.5526667	380	434	
1171	76	9609			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-3	Cairns, Stephen	03/2018	1	04/12/1998	-50.0345	165.9503	850		
2718	245	66110	911		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-3	Cairns, Stephen	03/2018	1	10/12/2008	-48.383333	175.263333	948	1026	
2571	147	42611	37		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-6	Cairns, Stephen	03/2018	1	18/03/2008	-50.055	163.806667	934	1012	
KAH0108	22	9643			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 1-8	Cairns, Stephen	03/2018	1	04/09/2001	-43.19967	175.712	399		
1124	58	9679			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 2-2	Cairns, Stephen	03/2018	1	06/08/1998	-37.06767	176.7008	1011		
2253	23	47784			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 2-2	Cairns, Stephen	03/2018	1	30/05/2006	-42.735	-177.66	1166	1092	
2699	132	42522	46		Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 2-4	Cairns, Stephen	03/2018	2	19/10/2008	-42.733333	-177.7	1129	996	
KAH0001	63	9681			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 2-4	Cairns, Stephen	03/2018	1	17/02/2000	-36.23350143	176.2016602	340	340	
KAH9915	92	128290			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 2-4	Cairns, Stephen	03/2018	1	30/10/1999	-35.0083313	172.5303345	167		
1227	52	127359			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Thouarella</i>	sp. 2-6	Cairns, Stephen	16/03/2018	1	14/05/1999	-54.06167	171.6617	1315		
2494	86	42538			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Tokoprymno</i>		Cairns, Stephen	22/03/2018	1	14/09/2007	-48.3	172.716667	968	1026	
AEX9901	11	127416			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	<i>Tokoprymno</i>	<i>maia</i>	Cairns, Stephen	21/03/2018	1	24/06/1999	-42.6435	-179.9913	1270		
3883	55	88617	2665		Cnidaria	Anthozoa	Antipatharia	Schizopathidae	<i>Lillipathes</i>	<i>cf. ritamariae</i>	Opresko, Dennis	26/09/2017	1	20/10/2013	-34.181667	162.661667	478	685	
5220	11	125127	3747	MOC	Cnidaria	Anthozoa	Scleractinia				Kitahara, Marcelo	23/03/2018	1	12/01/2018	-37.328333	168.048333			K.WAL
2955	34	66453	828		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>		Kitahara, Marcelo	03/2018	1	08/10/2009	-44.466667	-174.89	1040	1048	
4359	80	95153	3150		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>		Kitahara, Marcelo	03/2018	6	04/05/2015	-36.966667	176.233333			
2626	132	41871	1		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	1	13/06/2008	-42.75	-179.9833333	749	1112	
1171	12	46869			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	7	25/11/1998	-48.0335	166.1002	935		
1171	32	46890			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	2	28/11/1998	-48.03416	166.0682	1079		
2551	55	47951	3		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	1	15/12/2007	-44.49666667	-174.8216667	1283	1393	
2895	56	65621	24		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	19/03/2018	2	10/07/2009	-42.843333	-176.918333	689	772	
2862	113	66457	842		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	1	07/06/2009	-42.766667	-177.251667	965	1018	
2862	160	66461	846		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	1	15/06/2009	-42.763333	-176.943333	1069	1074	
1239	4	104195			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	19/03/2018	1	18/06/1999	-35.995	166.0117	932		
1355	2	127490			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	1	01/05/2000	-34.79999924	169.8333282	770		
AEX9901	69	46860			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>diomedea</i>	Kitahara, Marcelo	03/2018	2	04/07/1999	-42.72516667	-179.9205	1055	1110	
2534	25	46493			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	1	15/11/2007	-39.63166667	177.83			
3185	60	65997	1215		Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	2	02/10/2010	-40.566667	176.883333			
TAN0101	8	46861			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	1	30/12/2000	-43.05716705	178.2983398	341		
KAH0109	22	46862			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	2	30/10/2001	-43.137	175.8372	441		

TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Sample count	Date	Latitude	Longitude	Depth 1	Depth 2	Observer
TAN0301	51	103316			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	2	06/01/200 3	-43.9335	-175.3746667	232	208	
TAN0401	72	103322			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	2	13/01/200 8	-43.5159884	176.7814941	261	246	
TAN1801	48	126915	164	CAY	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	1	15/01/201 8	-43.5362	-175.2164	243	243	
KAH9801	40	127343			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	1	25/01/199 8	-37.01282883	176.2109985	202		
KAH9801	35	127418			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	1	24/01/199 8	-36.87749863	176.2467041	200		
KAH9801	29	127482			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Caryophyllia</i>	<i>profunda</i>	Kitahara, Marcelo	03/2018	2	23/01/199 8	-37.01066971	176.272995	410		
TAN0301	11	127467			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Crispatotrac hus</i>		Kitahara, Marcelo	03/2018	1	30/12/200 2	-43.21233333	177.8021667	294	315	
5117	16	106578	3671	CSB	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Desmophyll um</i>	<i>dianthus</i>	Cairns, Stephen	10/03/2018	1	02/09/201 7	-40.668333	177.013333	228	564	
TAN1801	25	126894	53	DDI	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Desmophyll um</i>	<i>dianthus</i>	Kitahara, Marcelo	03/2018	1	11/01/201 8	-42.4541	-178.003	865	893	
TAN1801	13	126923	37	DDI	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Desmophyll um</i>	<i>dianthus</i>	Kitahara, Marcelo	03/2018	2	09/01/201 8	-43.323	-179.429	424	416	
TAN1801	14	126927	44	DDI	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Desmophyll um</i>	<i>dianthus</i>	Kitahara, Marcelo	03/2018	4	09/01/201 8	-43.2926	-179.3722	433	455	
TAN0301	51	127290			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Desmophyll um</i>	<i>dianthus</i>	Kitahara, Marcelo	03/2018	1	06/01/200 3	-43.9335	-175.3746667	232	208	
X542	X542	127340			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Desmophyll um</i>	<i>dianthus</i>	Kitahara, Marcelo	03/2018	3	15/07/199 4	-42.7765	-177.2651667	987	996	
5117	16	106575	3663	CSB	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Goniocorell a</i>	<i>dumosa</i>	Kitahara, Marcelo	20/03/2018	1	02/09/201 7	-40.668333	177.013333	228	564	
2474	19	127348			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Goniocorell a</i>	<i>dumosa</i>	Kitahara, Marcelo	03/2018	1	30/07/200 7	-34.816667	169.855	780	1154	
TAN1801	13	126926	38	GDU	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Goniocorell a</i>	<i>dumosa</i>	Kitahara, Marcelo	03/2018	1	09/01/201 8	-43.323	-179.429	424	416	
TAN1801	14	126929	43	GDU	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Goniocorell a</i>	<i>dumosa</i>	Kitahara, Marcelo	03/2018	1	09/01/201 8	-43.2926	-179.3722	433	455	
2955	33	66445	272		Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Labyrinthoc yathus</i>	<i>langae</i>	Kitahara, Marcelo	03/2018	1	08/10/200 9	-44.465	-174.895	1006	1081	
1571	43	89139			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Labyrinthoc yathus</i>	<i>langae</i>	Kitahara, Marcelo	03/2018	1	19/10/200 1	-42.775	-179.99333	885	1067	
2720	2	81718			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Paraconotro chus</i>	<i>antarcticus</i>	Kitahara, Marcelo	19/03/2018	1	02/11/200 8	-43.4833	174.1833			
1153	45	127421			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Solenasmill a</i>	<i>variabilis</i>	Kitahara, Marcelo	03/2018	1	09/09/199 8	-47.51767	148.5513	998		
1137	12	127426			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Solenasmill a</i>	<i>variabilis</i>	Kitahara, Marcelo	03/2018	1	13/08/199 8	-47.4515	148.8835	1012		
5220	25	125128	3748	STP	Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Stephanocy athus</i>	<i>platypus</i>	Kitahara, Marcelo	03/2018	1	20/01/201 8	-37.426667	167.185			K.WAL
KAH9801	34	77139			Cnidaria	Anthozoa	Scleractinia	Caryophyllid ae	<i>Stephanocy athus</i>	<i>spiniger</i>	Kitahara, Marcelo	03/2018	1	24/01/199 8	-36.92832947	176.2492065	247		
5004	27	106562	3574	SIA	Cnidaria	Anthozoa	Scleractinia	Dendrophylli idae	<i>Enalopsam mia</i>	<i>rostrata</i>	Cairns, Stephen	13/03/2018	1	06/06/201 7	-37.406667	168.193333	921	928	
3239	11	65988	1204		Cnidaria	Anthozoa	Scleractinia	Dendrophylli idae	<i>Enalopsam mia</i>	<i>rostrata</i>	Kitahara, Marcelo	03/2018	1	26/11/201 0	-37.498333	167.786667	885	871	
5049	62	106569	3614	ERO	Cnidaria	Anthozoa	Scleractinia	Dendrophylli idae	<i>Enalopsam mia</i>	<i>rostrata</i>	Kitahara, Marcelo	13/03/2018	1	17/07/201 7	-35.42	165.331667	797	896	
5220	11	125132	3752	ERO	Cnidaria	Anthozoa	Scleractinia	Dendrophylli idae	<i>Enalopsam mia</i>	<i>rostrata</i>	Kitahara, Marcelo	23/03/2018	1	12/01/201 8	-37.328333	168.048333			K.WAL
TAN9406	254(X487)	81285			Cnidaria	Anthozoa	Scleractinia	Dendrophylli idae	<i>Enalopsam mia</i>	<i>rostrata</i>	Kitahara, Marcelo	03/2018	1	04/07/199 4	-42.73933411	-179.6744995	817	817	
TAN0709	23	33770			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>apertum</i>	Kitahara, Marcelo	03/2018	1	09/07/200 7	-42.81366667	-175.3426667	1214	1196	
TAN0408	6	127331			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>apertum</i>	Kitahara, Marcelo	03/2018	1	10/07/200 4	-42.8018341	-175.4753265	1160	1162	
2617	12	47950			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	17/04/200 8	-44.25	-178.3	560	515	
4822	19	106504	3492	COF	Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	19/10/201 6	-50.85	167.666667			
TAN0401	7	25487			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	5	29/12/200 3	-43.14033508	179.1241608	425	426	
TAN0219	32	41461			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	02/12/200 2	-54.139	167.9691667	970	979	
TAN0801	47	45321			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	06/01/200 8	-43.04383333	-175.8796667	707	713	
TAN0801	37	45322			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	03/01/200 8	-44.226	-179.1285	484	492	
TAN0601	71	65125			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	2	10/01/200 6	-43.83283234	179.1889954	486	479	
TAN1801	91	126887	308	COF	Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	24/01/201 8	-42.5548	174.5054	745	743	
KAH9801	35	127419			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxi</i>	Kitahara, Marcelo	03/2018	1	24/01/199 8	-36.87749863	176.2467041	200		

TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Sample count	Date	Latitude	Longitude	Depth 1	Depth 2	Observer
TAND041	9	127427			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxii</i>	Kitahara, Marcelo	03/2018	1	29/12/2003	-43.3706665	179.1849976	414	414	
TAND041	23	127430			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxii</i>	Kitahara, Marcelo	03/2018	1	01/01/2004	-43.6378326	-178.6425018	440	422	
KAH9801	40	127469			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>knoxii</i>	Kitahara, Marcelo	03/2018	5	25/01/1998	-37.01282883	176.2109985	202		
5220	24	125136	3756	COF	Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>lowekeyesi</i>	Kitahara, Marcelo	03/2018	1	19/01/2018	-37.23	167.251667			K.WAL
1630	23	127804			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>lowekeyesi</i>	Kitahara, Marcelo	03/2018	1	24/03/2002	-37.45500183	168.238327	953		
TAND0709	6	33751			Cnidaria	Anthozoa	Scleractinia	Flabellidae	<i>Flabellum</i>	<i>messum</i>	Kitahara, Marcelo	03/2018	1	07/07/2007	-42.87966667	-176.459	838	844	
4917	6	119690	3525		Cnidaria	Anthozoa	Scleractinia	Guyniidae	<i>Stenocyathus</i>	<i>vermiformis</i>	Kitahara, Marcelo	03/2018	1	28/01/2017	-35.631667	175.798333			
2232	2	127310			Cnidaria	Anthozoa	Scleractinia	Guyniidae	<i>Stenocyathus</i>	<i>vermiformis</i>	Kitahara, Marcelo	03/2018	1	06/03/2006	-33.69666667	167.8283333	646	909	
2474	19	43990			Cnidaria	Anthozoa	Scleractinia	Oculinidae	<i>Madrepora</i>	<i>oculata</i>	Kitahara, Marcelo	03/2018	2	30/07/2007	-34.816667	169.855	780	1154	
5220	23	125134	3754	CRE	Cnidaria	Anthozoa	Scleractinia	Oculinidae	<i>Oculina</i>	<i>virgosa</i>	Kitahara, Marcelo	23/03/2018	1	19/01/2018	-37.431667	167.968333			

Appendix B: Spreadsheet summary output from the MPI Centralised Observer database (COD) updated with revised identifications of specimens identified between October 2017 and 30 June 2018.

trip_number	station_number	target_species	event_start_date	start_obs_fm	trunc_start_latitude	trunc_start_longitude	start_seabed_depth	event_end_date	end_obs_fm	trunc_end_latitude	trunc_end_longitude	end_seabed_depth	expert_species	expert_scientific	phylum_name	class_name	order_name	family_name	genus_name	species_name	determiner	determine_date	sample_count
2955	34	ORH	8/10/2009	SOE	-44.4	185.1		8/10/2009	SOE	-44.4	185.1	1179	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia		Kitahara, Marcelo	Mar-18	1
2551	55	ORH	15/12/2007	SOE	-44.4	185.1	1392	15/12/2007	SOE	-44.4	185.1	1302	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedea	Kitahara, Marcelo	Mar-18	1
3136	46	ORH	15/06/2010	WANB	-34	167.5	887	15/06/2010	WANB	-34	167.5	1008	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (branches)	Untiedt, Candice	Jan-18	1
2474	19	ORH	30/07/2007	AKW	-34.8	169.8	780	30/07/2007	AKW	-34.8	169.8	1154	GDU	Goniocorella dumosa	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Kitahara, Marcelo	Mar-18	1
2474	19	ORH	30/07/2007	AKW	-34.8	169.8	780	30/07/2007	AKW	-34.8	169.8	1154	MOC	Madrepora oculata	Cnidaria	Anthozoa	Scleractinia	Oculinidae	Madrepora	oculata	Kitahara, Marcelo	Mar-18	2
3750	90	HOK	2/06/2013	SEC	-46.8	169.8	430	2/06/2013	SEC	-46.6	170.2	616	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1153	40	ORH	8/09/1998	TMAR	-47.5	148.6	1004		TMAR	-47.5	148.6	1068	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Parastenella		Cairns, Stephen	21/03/2018	1
1152	1	ORH	1/09/1998	TMAR	-47.1	148.7	1046		TMAR	-47.1	148.7	1077	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Parastenella	spinosa	Cairns, Stephen	13/03/2018	1
3246	5	ORH	24/12/2010	WANB	-33.6	167.7	1087	24/12/2010	WANB	-33.6	167.8	1017	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	curvata	Untiedt, Candice	Jan-18	1
3246	5	ORH	24/12/2010	WANB	-33.6	167.7	1087	24/12/2010	WANB	-33.6	167.8	1017	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	tetrasticha	Untiedt, Candice	Jan-18	1
1099	9	ORH	2/04/1998	KER	-34.2	179.6	609		KER	-34.2	179.6	875	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1
1239	4	ORH	18/06/1999	HOWE	-35.9	166	932		HOWE	-35.9	166	1030	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedea	Kitahara, Marcelo	19/03/2018	1
1624	43	ORH	24/03/2002	AKW	-34.8	169.8	650		AKW	-34.8	169.8	1187	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
1239	4	ORH	18/06/1999	HOWE	-35.9	166	932		HOWE	-35.9	166	1030	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
1674	21	ORH	19/07/2002	AKW	-34.8	169.8	800		AKW	-34.8	169.8	1107	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	chryseis	Untiedt, Candice	Jan-18	1
1624	43	ORH	24/03/2002	AKW	-34.8	169.8	650		AKW	-34.8	169.8	1187	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	stellata	Untiedt, Candice	Jan-18	1
2101	128	ORH	14/06/2005	SOE	-42.7	182.6	1107		SOE	-42.7	182.7	1123	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Metafannyella	chathamensis	Cairns, Stephen	21/03/2018	1
1171	12	OEO	25/11/1998	SOU	-48	166.1	935		SOU	-48	166	1043	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1171	12	OEO	25/11/1998	SOU	-48	166.1	935		SOU	-48	166	1043	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1171	12	OEO	25/11/1998	SOU	-48	166.1	935		SOU	-48	166	1043	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
2699	132	ORH	19/10/2008	SOE	-42.7	182.3		19/10/2008	SOE	-42.7	182	983	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 2-4	Cairns, Stephen	Mar-18	2
1171	12	OEO	25/11/1998	SOU	-48	166.1	935		SOU	-48	166	1043	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedea	Kitahara, Marcelo	Mar-18	7
2232	2	CDL	6/03/2006	WANB	-33.6	167.8	646		WANB	-33.7	167.8	909	NAR	Narella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Narella	hypsoalalyx	Cairns, Stephen	13/03/2018	1
1054	25	SCI	24/11/1997	SOE	-43	176.9	368		SOE	-42.9	177.1	351	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Metafannyella	chathamensis	Cairns, Stephen	23/03/2018	1

trip_number	station_number	target_species	event_start_date	start_obs_fm	trunc_start_altitude	trunc_start_longitude	start_seabed_depth	event_end_date	end_obs_fm	trunc_end_altitude	trunc_end_longitude	end_seabed_depth	expert_species	expert_scientific	phylum_name	class_name	order_name	family_name	genus_name	species_name	determiner	determine_date	sample_count
1054	25	SCI	24/11/1997	SOE	-43	176.9	368		SOE	-42.9	177.1	351	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Metafannyella	chathamensis	Cairns, Stephen	14/03/2018	1
2232	2	CDL	6/03/2006	WANB	-33.6	167.8	646		WANB	-33.7	167.8	909	SIA	Scleractinia	Cnidaria	Anthozoa	Scleractinia	Guyniidae	Stenocyathus	vermiformis	Kitahara, Marcelo	Mar-18	1
3252	6	ORH	29/12/2010	AKW	-34	168.1	983	29/12/2010	AKW	-34	168.1	869	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	rigida	Untiedt, Candice	Jan-18	1
2571	147	SSO	18/03/2008	SUB	-50	163.8	1140	18/03/2008	SUB	-50	163.8	1183	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	sp. 1-6	Cairns, Stephen	Mar-18	1
1137	6	ORH	8/08/1998	TMAR	-47.4	148.9	1024		TMAR	-47.4	148.9	1095	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Parastenella	spinosa	Cairns, Stephen	13/03/2018	1
2571	187	SSO	24/03/2008	SUB	-50.3	163.3	1160	24/03/2008	SUB	-50.3	163.3		THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
5117	16	BYX	2/09/2017	CEE	-40.6	177	322	2/09/2017	CEE	-40.6	176.9	570	DDI	Desmophyllum dianthus	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Cairns, Stephen	10/03/2018	1
5117	16	BYX	2/09/2017	CEE	-40.6	177	322	2/09/2017	CEE	-40.6	176.9	570	GDU	Goniocorella dumosa	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Kitahara, Marcelo	20/03/2018	1
3594	48	SSO	27/10/2012	SUB	-49.9	163.7	814	27/10/2012	SUB	-49.9	163.7		CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
3252	4	ORH	29/12/2010	AKW	-34	168.1	1000	29/12/2010	AKW	-34	168.1	984	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	chryseis	Untiedt, Candice	Jan-18	1
2889	46	ORH	3/07/2009	WANB	-33.5	167.7	932	3/07/2009	WANB	-33.5	167.7	886	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	rigida	Untiedt, Candice	Jan-18	1
2889	46	ORH	3/07/2009	WANB	-33.5	167.7	932	3/07/2009	WANB	-33.5	167.7	886	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (branches)	Untiedt, Candice	Jan-18	1
2704	40	ORH	9/10/2008	AKW	-34.7	171.6	1085	9/10/2008	AKW	-34.7	171.6	1085	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
2862	160	ORH	15/06/2009	SOE	-42.7	183	1060	15/06/2009	SOE	-42.7	182.7		CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedea	Kitahara, Marcelo	Mar-18	1
2571	179	SSO	23/03/2008	SUB	-49.9	163.7	971	23/03/2008	SUB	-49.9	163.7	994	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
2718	31	BOE	14/11/2008	SUB	-49.7	175.8	1065	14/11/2008	SUB	-49.7	175.8	1032	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Dasystenella		Cairns, Stephen	20/03/2018	1
1227	52	PTO	14/05/1999	SUB	-54	171.6	1315	14/05/1999	SUB	-54	171.7	1315	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	sp. 2-6	Cairns, Stephen	16/03/2018	1
1171	32	OEO	28/11/1998	SOU	-48	166	936		SOU	-48	166	1149	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedea	Kitahara, Marcelo	Mar-18	2
2720	2	HAK	2/11/2008	SEC	-43.4	174.1	544	2/11/2008	SEC	-43.4	174.1	580	STP	Stephanocyathus platypus	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Paraconotrachus	antarcticus	Kitahara, Marcelo	19/03/2018	1
5220	23	ORH	19/01/2018	CET	-37.4	167.9	950	19/01/2018	CET	-37.1	167.3	1001	OVI	Oculina virgosa	Cnidaria	Anthozoa	Scleractinia	Oculinidae	Oculina	virgosa	Kitahara, Marcelo	23/03/2018	1
3177	65	ORH	8/09/2010	HOWE	-35.4	165.3	975	8/09/2010	HOWE	-35.4	165.3	979	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	hilgendorfi	Cairns, Stephen	19/03/2018	1
1343	25	ORH	8/04/2000	AKE	-37.1	177.2	700		AKE	-37.1	177.2	816	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
2551	68	ORH	17/12/2007	SOE	-44.2	185.5	1427	17/12/2007	SOE	-44.2	185.4	1420	PRI	Primnoidea	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Metafannyella	chathamensis	Cairns, Stephen	13/03/2018	1
4837	31	PTO	29/01/2017	SUB	-51.5	161.3	1062	30/01/2017	SUB	-51.6	161.2	1132	BOO	Keratoisis spp.	Cnidaria	Anthozoa	Alcyonacea	Isidiidae	Keratoisis		Tracey, Di	10/03/2018	1
2862	113	ORH	7/06/2009	SOE	-42.7	182.7	1020	7/06/2009	SOE	-42.7	182.7	1046	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedea	Kitahara, Marcelo	Mar-18	1
4837	31	PTO	29/01/2017	SUB	-51.5	161.3	1062	30/01/2017	SUB	-51.6	161.2	1132	PRI	Primnoidea	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Parastenella	spinosa	Cairns, Stephen	10/03/2018	1

trip_number	station_number	target_species	event_start_date	start_obs_fma	trunc_start_latitude	trunc_start_longitude	start_seabed_depth	event_end_date	end_obs_fma	trunc_end_latitude	trunc_end_longitude	end_seabed_depth	expert_species	expert_scientific	phylum_name	class_name	order_name	family_name	genus_name	species_name	determiner	determine_date	sample_count
2955	33	ORH	8/10/2009	SOE	-44.4	185.1	1170	8/10/2009	SOE	-44.4	185.1	1243	STP	Stephanocyathus platypus	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Labyrinthocyathus	langae	Kitahara, Marcelo	Mar-18	1
3883	55	BYS	20/10/2013	HOWE	-34.1	162.6	710	20/10/2013	HOWE	-34.1	162.6	709	LIL	Lillipathes spp.	Cnidaria	Anthozoa	Antipatharia	Schizopathidae	Lillipathes	cf. ritamariae	Opreko, Dennis	26/09/2017	1
2626	132	ORH	13/06/2008	SOE	-42.7	180		13/06/2008	SOE	-42.7	180		CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedae	Kitahara, Marcelo	Mar-18	1
4837	5	PTO	18/01/2017	SUB	-51.5	161.3	1364	18/01/2017	SUB	-51.5	161.3	1650	PMN	Primnoa spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Primnoa	notialis	Cairns, Stephen	10/03/2018	1
4837	5	PTO	18/01/2017	SUB	-51.5	161.3	1364	18/01/2017	SUB	-51.5	161.3	1650	PMN	Primnoa spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Primnoa	notialis	Cairns, Stephen	10/03/2018	1
1171	22	OEO	27/11/1998	SOU	-48	166	943		SOU	-48	166	1177	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1571	43	ORH	19/10/2001	SOE	-42.7	180	885		SOE	-42.7	180	1067	STP	Stephanocyathus platypus	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Labyrinthocyathus	langae	Kitahara, Marcelo	Mar-18	1
4917	6	BAS	28/01/2017	AKE	-35.6	175.7		29/01/2017	AKE	-35.6	175.9		SIA	Scleractinia	Cnidaria	Anthozoa	Scleractinia	Guyoniidae	Stenocyathus	vermiformis	Kitahara, Marcelo	Mar-18	1
1674	32	ORH	21/07/2002	AKW	-34.5	168.7	874		AKW	-34.4	168.7	1030	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorffi	Cairns, Stephen	19/03/2018	1
3239	11	ORH	26/11/2010	CET	-37.4	167.7	878	26/11/2010	CET	-37.5	168	864	ERO	Enallopsammia rostrata	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Kitahara, Marcelo	Mar-18	1
1674	32	ORH	21/07/2002	AKW	-34.5	168.7	874		AKW	-34.4	168.7	1030	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (branches)	Untiedt, Candice	Jan-18	1
1630	23	ORH	24/03/2002	CET	-37.4	168.2	953		CET	-37.4	168.4	992	COF	Flabellum spp.	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	lowekeyesi	Kitahara, Marcelo	Mar-18	1
5220	25	ORH	20/01/2018	CET	-37.4	167.1	976	21/01/2018	CET	-37.2	167.2	1026	STP	Stephanocyathus platypus	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Kitahara, Marcelo	Mar-18	1
1184	73	ORH	19/01/1999	SOE	-44.7	182.9	684		SOE	-44.6	182.9	1050	PLL	Plumarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Plumarella		Cairns, Stephen	23/03/2018	1
1137	12	OEO	13/08/1998	TMAR	-47.4	148.8	1012		TMAR	-47.4	148.8	1058	SVA	Solenosmilia variabilis	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Solenosmilia	variabilis	Kitahara, Marcelo	Mar-18	1
3077	18	BOE	23/02/2010	SUB	-49.9	163.7		23/02/2010	SUB	-49.9	163.7		CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
3235	20	HOK	4/12/2010	SOE	-43.1	179.3	439	4/12/2010	SOE	-42.9	178.5	457	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorffi	Cairns, Stephen	16/03/2018	1
1171	76	ORH	4/12/1998	SOI	-50	165.9	850		SOI	-50	165.9	960	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1171	76	ORH	4/12/1998	SOI	-50	165.9	850		SOI	-50	165.9	960	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-3	Cairns, Stephen	Mar-18	1
2894	130	ORH	25/07/2009	HOWE	-35.4	165.3	969	25/07/2009	HOWE	-35.4	165.3	989	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorffi	Cairns, Stephen	19/03/2018	1
4837	14	PTO	21/01/2017	SUB	-51.6	161.3	1001	21/01/2017	SUB	-51.5	161.4	1381	PAB	Paragorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Paragorgiidae	Paragorgia		Cairns, Stephen	10/03/2018	1
1171	25	OEO	27/11/1998	SOU	-48	166.1	935		SOU	-48	166.1	970	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
2718	245	BOE	10/12/2008	SUB	-48.3	175.2		11/12/2008	SUB	-48.3	175.3	1046	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-3	Cairns, Stephen	Mar-18	1
3185	60	SCI	2/10/2010	CEE	-40.5	176.8	370	2/10/2010	CEE	-40.8	176.6	346	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	profunda	Kitahara, Marcelo	Mar-18	2
1024	39	ORH	30/07/1997	AKE	-37	177.3	915		AKE	-37	177.3	977	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (rods bottlebrush)	Untiedt, Candice	Jan-18	1
1152	45	BYS	19/09/1998	HOWE	-34	162.5	518		HOWE	-34	162.5	694	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (rods bottlebrush)	Untiedt, Candice	Jan-18	1

trip_number	station_number	target_species	event_start_date	start_obs_fma	trunc_start_altitude	trunc_start_longitude	start_seabed_depth	event_end_date	end_obs_fma	trunc_end_altitude	trunc_end_longitude	end_seabed_depth	expert_species	expert_scientific	phylum_name	class_name	order_name	family_name	genus_name	species_name	determiner	determine_date	sample_count
3155	11	ORH	10/07/2010	AKE	-34.4	174.1	1091	10/07/2010	AKE	-34.4	174.1	1232	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	geniculata	Untiedt, Candice	Jan-18	1
2699	17	ORH	2/10/2008	SOE	-44.4	185.1	1125	2/10/2008	SOE	-44.4	185.1	1276	NAR	Narella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Narella		Cairns, Stephen	14/03/2018	1
3235	23	HOK	5/12/2010	SOE	-42.8	177.6	467	6/12/2010	SOE	-42.9	178.3	440	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
3933	21	BAS	11/11/2013	WANB	-33.4	167.5	312	11/11/2013	WANB	-33.4	167.6	383	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Mirostenella		Cairns, Stephen	10/03/2018	1
1124	58	ORH	6/08/1998	AKE	-37.1	176.5	843		AKE	-37	176.7	1011	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1
1124	58	ORH	6/08/1998	AKE	-37.1	176.5	843		AKE	-37	176.7	1011	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 2-2	Cairns, Stephen	Mar-18	1
2617	12	HOK	17/04/2008	SOE	-44.2	181.7	560	17/04/2008	SOE	-44.2	182.2	517	COF	Flabellum spp.	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	knoxi	Kitahara, Marcelo	Mar-18	1
2232	1	ORH	6/03/2006	WANB	-33.6	167.8	647		WANB	-33.6	167.8	815	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (branches)	Untiedt, Candice	Jan-18	1
3933	6	BAS	8/11/2013	WANB	-32.7	167.5	232	8/11/2013	WANB	-32.7	167.5	194	PLE	Plexauridae	Cnidaria	Anthozoa	Alcyonacea	Plexauridae	Pliacogorgia		Bilewitch, Jaret	30/06/2018	1
2253	23	ORH	30/05/2006	SOE	-42.7	182.3	1166		SOE	-42.7	182.1	1092	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 2-2	Cairns, Stephen	Mar-18	1
3004	35	SSO	24/11/2009	SOE	-44.5	182.1		24/11/2009	SOE	-44.5	182.1		PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Metafannyella	chathamensis	Cairns, Stephen	22/03/2018	1
1153	45	ORH	9/09/1998	TMAR	-47.5	148.5	998		TMAR	-47.5	148.5	1068	SVA	Solenosmilia variabilis	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Solenosmilia	variabilis	Kitahara, Marcelo	Mar-18	1
1223	133	ORH	8/06/1999	CET	-37.3	167.3	839		CET	-37.3	167.3	929	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	19/03/2018	1
1171	24	OEO	27/11/1998	SOU	-48	166.1	930		SOU	-48	166.1	1130	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1171	30	OEO	28/11/1998	SOU	-48	166.1	937		SOU	-48	166.1	1064	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1171	30	OEO	28/11/1998	SOU	-48	166.1	937		SOU	-48	166.1	1064	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
1243	7	ORH	20/06/1999	CET	-37.3	168	760		CET	-37.3	168	808	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1
5220	11	ORH	12/01/2018	CET	-37.3	168	790	12/01/2018	CET	-37.3	168	920	SIA	Scleractinia	Cnidaria	Anthozoa	Scleractinia				Kitahara, Marcelo	23/03/2018	1
5004	27	ORH	6/06/2017	CET	-37.4	168.1	921	6/06/2017	CET	-37.3	168.2	928	ERO	Enallopsammia rostrata	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Cairns, Stephen	13/03/2018	1
5220	11	ORH	12/01/2018	CET	-37.3	168	790	12/01/2018	CET	-37.3	168	920	ERO	Enallopsammia rostrata	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Kitahara, Marcelo	23/03/2018	1
1171	46	OEO	30/11/1998	SOU	-48.5	164.9	1054		SOU	-48.5	164.9	1253	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	sp. 1-1	Cairns, Stephen	Mar-18	1
1241	21	ORH	20/06/1999	HOWE	-35.6	165.9	773		HOWE	-35.6	165.9	1079	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
1171	46	OEO	30/11/1998	SOU	-48.5	164.9	1054		SOU	-48.5	164.9	1253	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
1171	46	OEO	30/11/1998	SOU	-48.5	164.9	1054		SOU	-48.5	164.9	1253	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Metafannyella		Cairns, Stephen	12/03/2018	1
4359	80	TAR	4/05/2015	AKE	-36.9	176.2	271	4/05/2015	AKE	-37.1	176.1	282	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia		Kitahara, Marcelo	Mar-18	6
1164	2	CDL	30/09/1998	CET	-37.3	167.3	780		CET	-37.3	167.3	871	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1

trip_number	station_number	target_species	event_start_date	start_obs_fm	trunc_start_latitude	trunc_start_longitude	start_seabed_depth	event_end_date	end_obs_fm	trunc_end_latitude	trunc_end_longitude	end_seabed_depth	expert_species	expert_scientific	phylum_name	class_name	order_name	family_name	genus_name	species_name	determiner	determine_date	sample_count
5049	62	ORH	17/07/2017	HOWE	-35.4	165.3	930	17/07/2017	HOWE	-35.4	165.3	896	ERO	Enallopsammia rostrata	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Kitahara, Marcelo	13/03/2018	1
1355	2	ORH	1/05/2000	AKW	-34.8	169.8	770		AKW	-34.8	169.8	1100	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedaeae	Kitahara, Marcelo	Mar-18	1
1357	111	ORH	16/06/2000	CET	-37.2	167.3	800		CET	-37.2	167.3	800	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1
1153	52	ORH	10/09/1998	TMAR	-47.6	147.4	965		TMAR	-47.6	147.4	1045	PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Parastenella	spinosa	Cairns, Stephen	22/03/2018	1
1357	107	ORH	15/06/2000	CET	-37.2	167.3	1061		CET	-37.2	167.3	1102	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1
4822	19	SCI	19/10/2016	SOI	-50.8	167.6	503	19/10/2016	SOI	-50.9	167.3	482	COF	Flabellum spp.	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	knoxi	Kitahara, Marcelo	Mar-18	1
3077	19	BOE	23/02/2010	SUB	-49.9	163.8		23/02/2010	SUB	-49.9	163.8		CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	1
2494	86	SSO	14/09/2007	SUB	-48.3	172.7		14/09/2007	SUB	-48.3	172.7		PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Tokoprymno		Cairns, Stephen	22/03/2018	1
5220	24	ORH	19/01/2018	CET	-37.2	167.2	1010	20/01/2018	CET	-37.4	167.1	983	COF	Flabellum spp.	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	lowekeyesi	Kitahara, Marcelo	Mar-18	1
2895	56	ORH	10/07/2009	SOE	-42.8	183	894	10/07/2009	SOE	-42.8	183	858	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	diomedaeae	Kitahara, Marcelo	19/03/2018	2
1099	12	TAR	5/04/1998	KER	-32.1	180.9	128		KER	-32.1	180.9	260	PLE	Plexauridae	Cnidaria	Anthozoa	Alcyonacea	Plexauridae	Paracis	squamata	Bilewitch, Jaret	30/06/2018	1
1099	12	TAR	5/04/1998	KER	-32.1	180.9	128		KER	-32.1	180.9	260	PLE	Plexauridae	Cnidaria	Anthozoa	Alcyonacea	Plexauridae	Paracis	squamata	Bilewitch, Jaret	30/06/2018	1
1124	65	ORH	13/08/1998	AKE	-37.1	177.2	614		AKE	-37.1	177.2	648	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. (scales only)	Untiedt, Candice	Jan-18	1
1171	49	OEO	1/12/1998	SUB	-49.1	164.3	948		SUB	-49.1	164.2	1126	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia	sp. scales only	Untiedt, Candice	Jan-18	1
3004	80	SSO	1/12/2009	SOE	-44.6	182.5	896	1/12/2009	SOE	-44.5	182.4		PRI	Primnoidae	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Metafannyella	chathamensis	Cairns, Stephen	22/03/2018	1
2886	13	ORH	23/06/2009	WANB	-33.6	167.7	899	23/06/2009	WANB	-33.7	167.7	1080	THO	Thouarella spp.	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella	hilgendorfi	Cairns, Stephen	15/03/2018	1
2534	25	SCI	15/11/2007	CEE	-39.6	177.8	349	15/11/2007	CEE	-39.6	177.8	340	CAY	Caryophyllia spp.	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Caryophyllia	profunda	Kitahara, Marcelo	Mar-18	1
2571	162	SSO	20/03/2008	SUB	-49.9	163.8	1192	20/03/2008	SUB	-49.9	163.8	1171	CHR	Chrysogorgia spp.	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Untiedt, Candice	Jan-18	2

Appendix C: Spreadsheet summary of digital images; updated with new identifications of specimens photographed between July 2015 to June 2016, July 2017 to October 2017, and October 2017 to 31 December 2017; and revised identifications of specimens photographed between July 2015 to June 2016 and July 2017 to October 2017.

Reporting year	TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Target species	Start FMA	Fishing method	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Event start	Start latitude	Start longitude	Start depth	End depth	Observer	Image title	Image timestamp	Image rating
1 (Jul 2015 - Jun 2016)	4465	31				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Calyptrophora	inornata	Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	605	870		TRIP4465_031_Narella_Chrysogorgia_Calyptrophora-inornata.JPG	10/08/2015 18:39	4
1 (Jul 2015 - Jun 2016)	4465	31				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Chrysogorgiidae	Chrysogorgia		Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	605	870		TRIP4465_031_Narella_Chrysogorgia_Calyptrophora-inornata.JPG	10/08/2015 18:39	4
1 (Jul 2015 - Jun 2016)	4465	31				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Narella		Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	605	870		TRIP4465_031_Narella_Chrysogorgia_Calyptrophora-inornata.JPG	10/08/2015 18:39	4
1 (Jul 2015 - Jun 2016)	4476	20				ORH	CET	TWL	Cnidaria	Anthozoa	Pennatulacea				Stephen Cairns	22/03/2018	22/08/2015	-37.4	168.7	1023	984		TRIP4476_020_Pennatulacea.JPG	22/08/2015 20:50	3
1 (Jul 2015 - Jun 2016)	4476	23				ORH	CET	TWL	Cnidaria	Anthozoa	Pennatulacea				Stephen Cairns	22/03/2018	23/08/2015	-37.5	169.2	975	954		TRIP4476_023_Pennatulacea_a.JPG	24/08/2015 8:44	3
1 (Jul 2015 - Jun 2016)	4476	23				ORH	CET	TWL	Cnidaria	Anthozoa	Pennatulacea				Stephen Cairns	22/03/2018	23/08/2015	-37.5	169.2	975	954		TRIP4476_023_Pennatulacea_b.JPG	24/08/2015 8:44	3
1 (Jul 2015 - Jun 2016)	4502	6				HOK	SOE	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum		Marcelo Kitahara	22/03/2018	10/09/2015	-43	179.1	500	502		TRIP4502_006_Flabellum.JPG	10/09/2015 19:00	3
1 (Jul 2015 - Jun 2016)	4502	21				LIN	SOE	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018	18/09/2015	-43.9	182.6	357	342		TRIP4502_021_Flabellum_Desmophyllum-dianthus.JPG	19/09/2015 6:00	3
1 (Jul 2015 - Jun 2016)	4502	21				LIN	SOE	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum		Marcelo Kitahara	22/03/2018	18/09/2015	-43.9	182.6	357	342		TRIP4502_021_Flabellum_Desmophyllum-dianthus.JPG	19/09/2015 6:00	3
1 (Jul 2015 - Jun 2016)	4502	24				LIN	SOE	TWL							Marcelo Kitahara	22/03/2018	20/09/2015	-43.9	182.3	408	382		TRIP4502_024_Porifera_Actinaria.JPG	20/09/2015 17:51	4
1 (Jul 2015 - Jun 2016)	4502	24				LIN	SOE	TWL	Cnidaria	Anthozoa	Actinaria				Marcelo Kitahara	22/03/2018	20/09/2015	-43.9	182.3	408	382		TRIP4502_024_Porifera_Actinaria.JPG	20/09/2015 17:51	4
1 (Jul 2015 - Jun 2016)	4512								Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018							TRIP4512_Stephanocyathus-platypus.JPG	17/09/2015 0:21	3
1 (Jul 2015 - Jun 2016)	4521	30				SWA	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	knoxi	Marcelo Kitahara	22/03/2018	1/11/2015	-44.6	172.5	366	361		TRIP4521_030_Flabellum-knoxi.JPG	2/11/2015 6:27	3
1 (Jul 2015 - Jun 2016)	4525	173				ORH	SOE	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018	3/01/2016	-44.4	185.1	1287			TRIP4525_173_Desmophyllum-dianthus.JPG	3/01/2016 17:31	1
1 (Jul 2015 - Jun 2016)	4525	211				ORH	SOE	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Solenosmilia	variabilis	Marcelo Kitahara	22/03/2018	9/01/2016	-44.6	184.8	1004			TRIP4525_211_Solenosmilia-variabilis.JPG	9/01/2016 11:39	2
1 (Jul 2015 - Jun 2016)	4528	24				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	26/10/2015	-37.6	168.9	937	1000		TRIP4528_024_Stephanocyathus-platypus.JPG	26/10/2015 20:50	3
1 (Jul 2015 - Jun 2016)	4528	56				ORH	WAN B	TWL	Cnidaria	Anthozoa	Scleractinia	Oculinidae	Madrepora	oculata	Marcelo Kitahara	22/03/2018	6/11/2015	-33.6	167.8	650	1040		TRIP4528_056_Madrepora-oculata.JPG	6/11/2015 15:10	3
1 (Jul 2015 - Jun 2016)	4533	53				SWA	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	knoxi	Marcelo Kitahara	22/03/2018	28/11/2015	-44.6	172.7	386	326		TRIP4533_053_Flabellum-knoxi.JPG	29/11/2015 9:16	3
1 (Jul 2015 - Jun 2016)	4540	13				LIN	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Javania		Marcelo Kitahara	22/03/2018	12/11/2015	-46.8	165.7	584	441		TRIP4540_013_Javania.JPG	12/11/2015 17:52	3
1 (Jul 2015 - Jun 2016)	4546	2				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	15/11/2015	-37.6	169.6	966	1082	L. Ettema	TRIP4546_002_Stephanocyathus-platypus.JPG	16/11/2015 0:48	2
1 (Jul 2015 - Jun 2016)	4546	14				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Marcelo Kitahara	22/03/2018	26/11/2015	-37.3	168	958	994	L. Ettema	TRIP4546_014_Enallopsammia-rostrata_a.JPG	26/11/2015 19:02	3
1 (Jul 2015 - Jun 2016)	4546	14				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Marcelo Kitahara	22/03/2018	26/11/2015	-37.3	168	958	994	L. Ettema	TRIP4546_014_Enallopsammia-rostrata_b.JPG	26/11/2015 19:02	3
1 (Jul 2015 - Jun 2016)	4546	39				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Marcelo Kitahara	22/03/2018	1/12/2015	-37.3	167.4	977	981	L. Ettema	TRIP4546_039_Enallopsammia-rostrata_a.JPG	1/12/2015 21:26	3
1 (Jul 2015 - Jun 2016)	4546	39				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae	Enallopsammia	rostrata	Marcelo Kitahara	22/03/2018	1/12/2015	-37.3	167.4	977	981	L. Ettema	TRIP4546_039_Enallopsammia-rostrata_b.JPG	1/12/2015 21:26	3
1 (Jul 2015 - Jun 2016)	4546	65				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	6/12/2015	-37.2	167	986	986	L. Ettema	TRIP4546_065_Stephanocyathus-platypus.JPG	7/12/2015 10:04	4
1 (Jul 2015 - Jun 2016)	4595	10				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	22/01/2016	-37.4	169.2	1028	1026		TRIP4595_010_Stephanocyathus-platypus.JPG	22/01/2016 16:10	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Desmophyllum-dianthus.JPG	19/02/2016 21:57	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Goniocorella-dumosa_a.JPG	19/02/2016 22:03	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Goniocorella-dumosa_a.JPG	19/02/2016 21:58	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Goniocorella-dumosa_c.JPG	19/02/2016 22:00	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Goniocorella-dumosa_d.JPG	19/02/2016 22:03	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Goniocorella-dumosa_b.JPG	19/02/2016 22:03	3
1 (Jul 2015 - Jun 2016)	4615	33				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	19/02/2016	-49	166.7	457	449		TRIP4615_033_Goniocorella-dumosa_b.JPG	19/02/2016 21:58	4
1 (Jul 2015 - Jun 2016)	4618	56				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	25/03/2016	-37.2	167.2	973	1000		TRIP4618_056_Stephanocyathus-platypus.JPG	25/03/2016 11:35	3

Reporting year	TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Target species	Start FMA	Fishing method	Phylum	Class	Order	Family	Genus	Species	Determiner	Determined Date	Event start	Start latitude	Start longitude	Start depth	End depth	Observer	Image title	Image timestamp	Image rating
1 (Jul 2015 - Jun 2016)	4638	6				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	1/03/2016 15:36	-49	166.7	480	465		TRIP4638_006_Goniocorella-dumosa_a.JPG	1/03/2016 21:05	3
1 (Jul 2015 - Jun 2016)	4638	6				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	1/03/2016 15:36	-49	166.7	480	465		TRIP4638_006_Goniocorella-dumosa_b.JPG	1/03/2016 21:05	3
1 (Jul 2015 - Jun 2016)	4638	6				HAK	SUB	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	1/03/2016 15:36	-49	166.7	480	465		TRIP4638_006_Goniocorella-dumosa_c.JPG	1/03/2016 21:05	3
1 (Jul 2015 - Jun 2016)	4642	69				TRE	AKW	TWL	Cnidaria	Anthozoa	Scleractinia	Fiabellidae	Monomyces		Marcelo Kitahara	22/03/2018	1/05/2016 16:31	-37.2	174.2	92	106		TRIP4642_069_Monomyces.JPG	1/05/2016 20:57	3
1 (Jul 2015 - Jun 2016)	4676	130				GDU	HOK	SEC	TWL	Cnidaria	Hydrozoa	Leptothecata	Zygophylacidae	Cryptolaria	Marcelo Kitahara	22/03/2018	13/05/2016 15:03	-43.1	173.7		510	J. Morton	TRIP4676_130_Goniocorella-dumosa_Cryptolaria_b.JPG	13/05/2016 20:06	3
1 (Jul 2015 - Jun 2016)	4676	130				GDU	HOK	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	Marcelo Kitahara	22/03/2018	13/05/2016 15:03	-43.1	173.7		510	J. Morton	TRIP4676_130_Goniocorella-dumosa_a.JPG	13/05/2016 20:06	3
1 (Jul 2015 - Jun 2016)	4676	130				GDU	HOK	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	Marcelo Kitahara	22/03/2018	13/05/2016 15:03	-43.1	173.7		510	J. Morton	TRIP4676_130_Goniocorella-dumosa_Cryptolaria_b.JPG	13/05/2016 20:06	3
1 (Jul 2015 - Jun 2016)	4706	12				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	11/06/2016 1:20	-37.5	168.4	970	1001	L. Boy	TRIP4706_012_Stephanocyathus-platypus_a.JPG	11/06/2016 14:37	2
1 (Jul 2015 - Jun 2016)	4706	12				ORH	CET	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Stephanocyathus	platypus	Marcelo Kitahara	22/03/2018	11/06/2016 1:20	-37.5	168.4	970	1001	L. Boy	TRIP4706_012_Stephanocyathus-platypus_b.JPG	11/06/2016 14:37	2
1 (Jul 2015 - Jun 2016)	4708	69				HOK	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018	14/06/2016 7:05	-43.6	174.5	523	522		TRIP4708_069_Desmophyllum-dianthus_a.JPG	14/06/2016 16:33	3
1 (Jul 2015 - Jun 2016)	4708	69				HOK	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018	14/06/2016 7:05	-43.6	174.5	523	522		TRIP4708_069_Desmophyllum-dianthus_b.JPG	14/06/2016 16:34	3
1 (Jul 2015 - Jun 2016)	4708	113				WWA	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	25/06/2016 9:45	-43.4	174.7	387	380		TRIP4708_113_Goniocorella-dumosa_a.JPG	25/06/2016 15:33	3
1 (Jul 2015 - Jun 2016)	4708	113				WWA	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018	25/06/2016 9:45	-43.4	174.7	387	380		TRIP4708_113_Goniocorella-dumosa_b.JPG	25/06/2016 15:33	3
2 (Jul - Oct 2017)	5018	58				THO	ORH	CET	TWL	Cnidaria	Alcyonacea	Primnoidae	Narella	hyposcalyx	Stephen Cairns	23/03/2018	17/06/2017 11:37	-37.3	168	1000	1037		TRIP5018_058_Narella-hyposcalyx_Thouarella-or-Metafannella.JPG	17/06/2017 12:56	2
2 (Jul - Oct 2017)	5018	58				THO	ORH	CET	TWL	Cnidaria	Alcyonacea	Primnoidae	Thouarella or Metafannella		Stephen Cairns	23/03/2018	17/06/2017 11:37	-37.3	168	1000	1037		TRIP5018_058_Narella-hyposcalyx_Thouarella-or-Metafannella.JPG	17/06/2017 12:56	2
2 (Jul - Oct 2017)	5018	65				GOC	ORH	CET	TWL	Cnidaria	Alcyonacea	Primnoidae	Calyptrophora	inornata	Stephen Cairns	23/03/2018	19/06/2017 6:23	-37.3	168	959	977		TRIP5018_065_Calyptrophora-inornata.JPG	19/06/2017 7:27	1
2 (Jul - Oct 2017)	5049	45				UNI	ORH	LOUR	TWL	Cnidaria	Alcyonacea	Primnoidae	Thouarella		Stephen Cairns	22/03/2018	5/07/2017 5:59	-41.4	195.7			D. Ger	TRIP5049_045_Thouarella_a.JPG	5/07/2017 7:50	1
2 (Jul - Oct 2017)	5049	45				UNI	ORH	LOUR	TWL	Cnidaria	Alcyonacea	Primnoidae	Thouarella		Stephen Cairns	22/03/2018	5/07/2017 5:59	-41.4	195.7			D. Ger	TRIP5049_045_Thouarella_b.JPG	5/07/2017 7:51	1
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018							TRIP5117_Desmophyllum-dianthus.JPG	2/09/2017 18:12	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018							TRIP5117_Goniocorella-dumosa_a.JPG	2/09/2017 18:11	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018							TRIP5117_Goniocorella-dumosa_b.JPG	2/09/2017 18:11	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018							TRIP5117_Goniocorella-dumosa_c.JPG	2/09/2017 18:11	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018							TRIP5117_Goniocorella-dumosa_d.JPG	2/09/2017 20:37	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Marcelo Kitahara	22/03/2018							TRIP5117_Goniocorella-dumosa_e.JPG	2/09/2017 20:37	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Alcyonacea	Plexauridae			Diana Macpherson	12/07/2018							TRIP5117_Thouarella_Plexauridae.JPG	2/09/2017 18:12	4
2 (Jul - Oct 2017)	5117					BYS LIN			Cnidaria	Anthozoa	Alcyonacea	Primnoidae	Thouarella		Stephen Cairns	22/03/2018							TRIP5117_Thouarella_Plexauridae.JPG	2/09/2017 18:12	4
2 (Jul - Oct 2017)	5118	56				CLG	TAR	AKW	TWL	Cnidaria	Alcyonacea	Primnoidae	Metafannella	ventilabrum	Stephen Cairns	22/03/2018	14/09/2017 17:35	-34	172.6	118	109		TRIP5118_056_Metafannella-ventilabrum_a.JPG	14/09/2017 21:25	1
2 (Jul - Oct 2017)	5118	56				CLG	TAR	AKW	TWL	Cnidaria	Alcyonacea	Primnoidae	Metafannella	ventilabrum	Stephen Cairns	22/03/2018	14/09/2017 17:35	-34	172.6	118	109		TRIP5118_056_Metafannella-ventilabrum_b.JPG	14/09/2017 21:27	3
2 (Oct - Dec 2017)	5145	48				SQU	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Di Tracey	13/07/2018	2/11/2017 14:50	-48.7	166.5	359	376		TRIP5145_048_Goniocorella-dumosa_Desmophyllum-dianthus_a.JPG	3/11/2017 7:48	3
2 (Oct - Dec 2017)	5145	48				SQU	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Desmophyllum	dianthus	Di Tracey	13/07/2018	2/11/2017 14:50	-48.7	166.5	359	376		TRIP5145_048_Goniocorella-dumosa_Desmophyllum-dianthus_b.JPG	3/11/2017 7:49	3
2 (Oct - Dec 2017)	5145	48				SQU	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Di Tracey	13/07/2018	2/11/2017 14:50	-48.7	166.5	359	376		TRIP5145_048_Goniocorella-dumosa_Desmophyllum-dianthus_a.JPG	3/11/2017 7:48	3
2 (Oct - Dec 2017)	5145	48				SQU	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Di Tracey	13/07/2018	2/11/2017 14:50	-48.7	166.5	359	376		TRIP5145_048_Goniocorella-dumosa_Desmophyllum-dianthus_b.JPG	3/11/2017 7:49	3
2 (Oct - Dec 2017)	5162	18				LIN	SEC	BLL	Cnidaria	Anthozoa	Scleractinia	Caryophylliidae	Goniocorella	dumosa	Di Tracey	13/07/2018	25/10/2017 3:42	-42.9	175.5	571	392		TRIP5162_018_Goniocorella-dumosa_a.JPG	26/10/2017 13:30	3
2 (Oct - Dec 2017)	5167	19				SPO	SEC	SN	Bryozoa	Gymnolae mata	Chelostomata	Escharinidae	Hippomenella	vellicata	Dennis Gordon	16/07/2018	18/11/2017 10:57	-45.6	171.1				TRIP5167_019_Hippomenella-vellicata.JPG	18/11/2017 9:52	4
2 (Oct - Dec 2017)	5167	23				SPO	SEC	SN	Bryozoa	Gymnolae mata	Chelostomata	Cellariidae	Cellaria		Dennis Gordon	16/07/2018	22/11/2017 11:00	-45.6	171.1				TRIP5167_023_Cinctipora-elegans_Cellaria.JPG	20/11/2017 6:25	4
2 (Oct - Dec 2017)	5167	23				SPO	SEC	SN	Bryozoa	Stenolaemata	Cyclostomatida	Cinctiporidae	Cinctipora	elegans	Dennis Gordon	16/07/2018	22/11/2017 11:00	-45.6	171.1				TRIP5167_023_Cinctipora-elegans_Cellaria.JPG	20/11/2017 6:25	4

Reporting year	TRIP	Tow	NIWA Cat. No.	OSD No.	Initial OBS ID	Target species	Start FMA	Fishing method	Phylum	Class	Order	Revised family	Revised genus	Revised species	Determiner	Determined Date	Event start	Start latitude	Start longitude	Start depth	End depth	Observer	Updated image title	Image timestamp	Image rating	
1 (Jul 2015 - Jun 2016)	4436	29			STP	HOK	CHA	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	Caryophyllidae	ambrosia	Marcelo Kitahara	22/03/2018	5/07/2015	-41.9	170.2	696	631		TRIP4436_029_Caryophyllia-ambrosia.JPG	6/07/2015 6:53	2	
1 (Jul 2015 - Jun 2016)	4436	40			CAY	HOK	CHA	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	Caryophyllidae	ambrosia	Marcelo Kitahara	22/03/2018	11/07/2015	-41.1	170.8	488	488		TRIP4436_040_Caryophyllia-ambrosia.JPG	11/07/2015 16:05	2	
1 (Jul 2015 - Jun 2016)	4440	11				ORH	SOU	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Callorgia	dichotoma	Stephen Cairns	22/03/2018	7/07/2015	-47.3	165.8				TRIP4440_011_Callorgia-dichotoma.JPG	7/07/2015 6:08	4	
1 (Jul 2015 - Jun 2016)	4440	13				ORH	SOU	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Callorgia	dichotoma	Stephen Cairns	22/03/2018	8/07/2015	-47.3	165.8				TRIP4440_013_Callorgia-dichotoma-Hydrozoa.JPG	9/07/2015 14:41	3	
1 (Jul 2015 - Jun 2016)	4440	34				ORH	SOE	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Metafannyella	chathamensis	Stephen Cairns	22/03/2018	21/07/2015	-42.8	182.1		1044		TRIP4440_034_Metafannyella-chathamensis_b.JPG	21/07/2015 17:37	3	
1 (Jul 2015 - Jun 2016)	4440	34				ORH	SOE	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Metafannyella	chathamensis	Stephen Cairns	22/03/2018	21/07/2015	-42.8	182.1		1044		TRIP4440_034_Metafannyella-chathamensis_a.JPG	21/07/2015 17:37	3	
1 (Jul 2015 - Jun 2016)	4442	16				LIN	CHA	BLL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Callorgia	gilberti	Stephen Cairns	22/03/2018	10/07/2015	-40.7	171.4	286	336		TRIP4442_016_Callorgia-gilberti_b.JPG	11/07/2015 13:38	3	
1 (Jul 2015 - Jun 2016)	4442	16				LIN	CHA	BLL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Callorgia	gilberti	Stephen Cairns	22/03/2018	10/07/2015	-40.7	171.4	286	336		TRIP4442_016_Callorgia-gilberti_a.JPG	11/07/2015 13:38	3	
1 (Jul 2015 - Jun 2016)	4459	32	95180	3202	SIA	WWA	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	spp.	Marcelo Kitahara	22/03/2018	30/07/2015	-48.7	166.4	503		G. Dyer	TRIP4459_032_Corallium_Flabellum-spp_NIWA95179_NIWA95180_a.JPG	30/07/2015 20:35	3	
1 (Jul 2015 - Jun 2016)	4459	32	95180	3202	SIA	WWA	SOU	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	spp.	Marcelo Kitahara	22/03/2018	30/07/2015	-48.7	166.4	503		G. Dyer	TRIP4459_032_Corallium_Flabellum-spp_NIWA95179_NIWA95180_b.JPG	30/07/2015 20:53	3	
1 (Jul 2015 - Jun 2016)	4465	29				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Callorgia		Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	588	941		TRIP4465_029_Callorgia_b.JPG	10/08/2015 12:13	3	
1 (Jul 2015 - Jun 2016)	4465	29				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Callorgia		Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	588	941		TRIP4465_029_Callorgia_a.JPG	10/08/2015 12:13	3	
1 (Jul 2015 - Jun 2016)	4465	29				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	1-1 hicksoni	Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	588	941		TRIP4465_029_Thouarella-1-1-hicksoni.JPG	10/08/2015 12:13	3	
1 (Jul 2015 - Jun 2016)	4465	31				BYX	AKW	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Calyptrophora	inornata	Stephen Cairns	22/03/2018	10/08/2015	-34.6	168.9	605	870		TRIP4465_031_Calyptrophora-inornata.JPG	10/08/2015 18:39	3	
1 (Jul 2015 - Jun 2016)	4512	48				ORH	CET	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella sub genus '2' or Metafannyella sp. B		Stephen Cairns	22/03/2018	9/10/2015	-37.2	167.2	650			TRIP4512_048_Thouarella-or-Metafannyella_a.JPG	9/10/2015 17:43	4	
1 (Jul 2015 - Jun 2016)	4512	48				ORH	CET	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella sub genus '2' or Metafannyella sp. B		Stephen Cairns	22/03/2018	9/10/2015	-37.2	167.2	650			TRIP4512_048_Thouarella-or-Metafannyella_b.JPG	9/10/2015 17:43	3	
1 (Jul 2015 - Jun 2016)	4589								Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Calyptrophora	?niwa	Stephen Cairns	22/03/2018							TRIP4589_Calyptrophora-niwa_1.JPG	17/01/2016 11:05	3	
1 (Jul 2015 - Jun 2016)	4589								Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Calyptrophora	?niwa	Stephen Cairns	22/03/2018							TRIP4589_Calyptrophora-niwa_2.JPG	24/01/2016 1:05	3	
1 (Jul 2015 - Jun 2016)	4638	5				SWA	SOU	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella sub genus '1'		Stephen Cairns	22/03/2018	1/03/2016	-48.8	166.4	450	345		no change	1/03/2016 13:10	3	
1 (Jul 2015 - Jun 2016)	4676	19				COB	ORH	CET	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	?hilgendorfi	Stephen Cairns	22/03/2018	20/04/2016	-39.7	167.2	1100	1050	J. Morton	TRIP4676_019_Thouarella-hilgendorfi_a.JPG	20/04/2016 19:58	2
1 (Jul 2015 - Jun 2016)	4676	19				ORH	CET	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella	?hilgendorfi	Stephen Cairns	22/03/2018	20/04/2016	-39.7	167.2	1100	1050	J. Morton	TRIP4676_019_Thouarella-hilgendorfi_b.JPG	20/04/2016 20:00	2	
1 (Jul 2015 - Jun 2016)	4676	129				COF	HOK	SEC	TWL	Cnidaria	Scleractinia	Flabellidae	Flabellum	knoxi	Marcelo Kitahara	22/03/2018	13/05/2016	-42.9	173.7		477	J. Morton	TRIP4676_129_Flabellum-knoxi.JPG	13/05/2016 19:43	2	
1 (Jul 2015 - Jun 2016)	4702								Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella sub genus '2' or Metafannyella		Stephen Cairns	22/03/2018							TRIP4702_Thouarella-or-Metafannyella.JPG	20/05/2016 20:46	3	
1 (Jul 2015 - Jun 2016)	4717	32	106476	3395	COF	SQU	SEC	TWL	Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	spp.	Marcelo Kitahara	22/03/2018	15/06/2016	-44.6	172.6	323	338	C. Reich	TRIP4717_032_Flabellum_NIWA106476.JPG	15/06/2016 21:32	1	
2 (Jul - Oct 2017)	5054	53				CAY	SCI	SOE	TWL	Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	profunda	Marcelo Kitahara	22/03/2018	21/07/2017	-42.9	177.2	386	311	J. Hou	TRIP5054_053_Caryophyllia-profunda.JPG	21/07/2017 19:47	1	
2 (Jul - Oct 2017)	5097					ORH			Cnidaria	Anthozoa	Scleractinia	Caryophyllidae	Desmophyllum	dianthus	Marcelo Kitahara	22/03/2018						W. Din	TRIP5097_Desmophyllum-dianthus.JPG	13/08/2017 3:56	4	
2 (Jul - Oct 2017)	5062					ORH			Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	messum	Marcelo Kitahara	22/03/2018							TRIP5062_Flabellum-messum_a.JPG	17/07/2017 14:08	4	
2 (Jul - Oct 2017)	5062					ORH			Cnidaria	Anthozoa	Scleractinia	Flabellidae	Flabellum	messum	Marcelo Kitahara	22/03/2018							TRIP5062_Flabellum-messum_b.JPG	17/07/2017 14:01	4	
2 (Jul - Oct 2017)	5018	57				GOC	ORH	CET	TWL	Cnidaria	Alcyonacea	Primnoidea	Calyptrophora	cucullata	Stephen Cairns	22/03/2018	17/06/2017	-37.3	168	1077	1090		TRIP5018_057_Calyptrophora-cucullata.JPG	17/06/2017 10:25	1	
2 (Jul - Oct 2017)	5097					ORH			Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Narella	?studerii	Stephen Cairns	22/03/2018						W. Din	TRIP5097_Narella-studerii.JPG	30/08/2017 6:38	4	
2 (Jul - Oct 2017)	5130					ORH	ET		Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Paracalyptrophora	hawaiiensis	Stephen Cairns	22/03/2018							TRIP5130_Paracalyptrophora-hawaiiensis.JPG	25/09/2017 1:54	3	
2 (Jul - Oct 2017)	5073	30				THO	LIN	SUB	TWL	Cnidaria	Anthozoa	Alcyonacea	Primnoidea	Thouarella or Metafannyella	Stephen Cairns	22/03/2018	29/07/2017	-49	166.6	520	600	Acon	TRIP5073_030_Thouarella-or-Metafannyella.JPG	30/07/2017 7:30	1	