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# Age data of orange roughy (*Hoplostethus atlanticus*) from the Lord Howe Rise in 1989, 1990, 1992, 1993, 2013, and 2015

New Zealand Fisheries Assessment Report 2021/46

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## EXECUTIVE SUMMARY

Saunders, R.J.<sup>1</sup>; Spong, K.<sup>1</sup>; Ó Maolagáin, C.<sup>1</sup> (2021). Age data of orange roughy (*Hoplostethus atlanticus*) from the Lord Howe Rise in 1989, 1990, 1992, 1993, 2013, and 2015.

*New Zealand Fisheries Assessment Report 2021/46. 20 p.*

This report describes the age data from samples of the commercial catch of orange roughy (*Hoplostethus atlanticus*) taken from the Lord Howe Rise (outside New Zealand's Exclusive Economic Zone) in 1989, 1990, 1992, 1993, 2013, and 2015. Estimated age at maturity, based on the timing of formation of the transition zone, was 27 years for both sexes. Age estimates ranged from 19 to 133 years.

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## 1. INTRODUCTION

This report fulfils the reporting requirements relating to orange roughy (*Hoplostethus atlanticus*) for Objective 2 of Project MID2020-01, “Routine age determination of middle depth and deepwater species from commercial fisheries and resource surveys” and was funded by Fisheries New Zealand. The objective was to prepare and age otoliths of orange roughy sampled from the Lord Howe Rise region, to the west of New Zealand (Figure 1), from the years 1989, 1990, 1992, 1993, 2013, and 2015. This region is outside the New Zealand Exclusive Economic Zone (EEZ) and the orange roughy fishery is managed by the South Pacific Regional Fisheries Management Organisation (SPRFMO). Orange roughy from Lord Howe Rise are considered to be a separate stock from those landed in other SPRFMO management areas (Clark et al. 2016).

A protocol for ageing orange roughy was developed during an international workshop in 2007, and a formal documentation of this protocol was produced by Horn et al. (2016). The growth of juvenile orange roughy has been validated by examining the otolith marginal increment type and by length frequency analysis (Mace et al. 1990). Andrews et al. (2009) applied a lead-radium dating method to orange roughy and showed a reasonable correlation of the growth-zone counts to the expected lead-radium growth curve. This work provided support for both a centenarian life span for orange roughy and for the age estimation procedures using thin otolith sectioning (Horn et al. 2016).

The aim of the work was to generate a set of age data from samples collected in 1989, 1990, 1992, 1993, 2013, and 2015 by New Zealand’s Scientific Observer Programme. These are the first substantial sets of age data produced for orange roughy from this area.

## 2. METHODS

All fish catch data and otoliths used in this analysis were collected by Fisheries New Zealand observers aboard commercial fishing trawlers. Observers are directed to extract otoliths from a random sub-sample of fish. The number of otoliths collected from each tow has varied over the period of the observer programme but, for the tows used in this work, ranged from 1 to 40 with an average of 11. Otoliths were selected for preparation from samples collected during fishing that occurred from June to July on Lord Howe Rise, specifically the South Lord Howe Rise Bottom Trawl Management Area (Figure 1). All available otoliths from this area and time period were used in the analysis as directed by Fisheries New Zealand (see Cordue 2020) (Table 1).

Orange roughy otoliths were prepared using the method described by Horn et al. (2016). One whole otolith from each of the selected fish was individually embedded in resin and cured in an oven. A thin section was cut along a line from the primordium (otolith nucleus region) through the most uniform (and usually the longest) posterior-dorsal axis using a sectioning saw with dual diamond-impregnated wafering blades separated by a 380 µm spacer. The section was mounted on a glass microscope slide under a glass cover slip. When collected, some otoliths had been damaged such that the tips of the posterior-dorsal axes were missing on both otoliths. In some situations, however, it was possible to take sub-optimal, but complete, sections at other locations on the posterior-dorsal axis. For some sampled fish, both otoliths were too damaged or incomplete, and consequently neither otolith was prepared.

All otoliths were read once by one reader using the otolith interpretation and reading protocols described in the ageing methodology document (Horn et al. 2016). In addition, a reference set of 100 otoliths were read to provide estimates of precision and bias.

The data produced include counts of zones from the primordium to the transition zone (TZ), the zone that is considered to mark the onset of orange roughy maturity (Francis & Horn 1997), and from the TZ to the otolith margin, and readability codes for those readings provided on a 5-stage readability scale. Otolith data with a readability code of 5 (i.e., unreadable) for either the pre- or post-TZ readings were excluded. The presence of a TZ was identified, ideally, by the following three criteria: a clear reduction

in zone width, a marked change in the optical density of the otolith from dark to light, and a change in curvature of the posterior arm of the otolith (Horn et al. 2016). The TZs were classified using a 4-stage scale, i.e.:

- 0, not yet formed (or observed),
- 1, clear and unambiguous with all three criteria met,
- 2, a gradual transition with at least two criteria met,
- 3, a gradual transition with none or one of the criteria met.

For TZ classification 3, only a total age was recorded by the reader because the likely location of the TZ was undefined.

## 2.1 Data presentation

Unscaled age frequency distributions by sex were made using one-year and five-year bins. Summary statistics were calculated by sex for total age and age to the TZ when one was recorded.

## 3. RESULTS

Results from interpretation of the reference set indicated good precision with a CV of 6.8%. There was slight bias in interpretation relative to the reference set with average under-ageing of 1.4 years.

The number of otoliths available varied by year with greater numbers available in later years than in the earlier years (Table 1). Some of the available otoliths were unsuitable for preparation due to damage (40 of 783). In addition, many otoliths selected for preparation based on their presence in the Scientific Observer Programme (SOP) database were not able to be prepared. For example, there were 102 empty otolith envelopes, 63 missing otolith envelopes, and 35 otolith envelopes with otoliths present but no data recorded on the envelope. This significantly compromised the number of available otoliths, particularly in the earlier years (Table 1).

There were two unreadable otoliths (readability code 5). Age estimates ranged from 19 to 133 years (Table 2). Median age at the transition zone (i.e., age at maturity, see Francis & Horn 1997) was 27 for both males and females but varied widely (Table 3). There were few data available for the earlier years but reasonable age structure information for 2013 and 2015 (Figures 2, 3, & 4). The bulk of fish were aged between 25 and 55 with very few fish over 80. Raw age data are provided in Appendix A.

## 4. DISCUSSION

Age data were produced for orange roughy from commercial fishery samples from the Lord Howe Rise region. The estimates of precision and bias for the age data were well within acceptable limits for orange roughy (see Horn et al. 2016). These data constitute the first available substantial collection of age information for orange roughy in the area. However, the disparity between the otoliths listed in the SOP database and what was available to be prepared compromised the amount of information available for the earlier years. In contrast, more recent collections (2013 and 2015) are comparatively complete and provide useful age information.

The estimated age at maturity of 27 years, based on age at transition zone formation, corresponded well with those for other New Zealand mainland stocks (26–29 years, Horn et al. 2016; 27 years, Saunders et al. 2021) but was slightly lower than that observed for another stock outside the New Zealand EEZ, at the central Louisville Ridge, at 31 years (Horn & Ó Maolagáin 2019).

## 5. ACKNOWLEDGMENTS

We thank Jeremy McKenzie (NIWA) for reviewing the manuscript. This work was funded by Fisheries New Zealand under project MID2020-01 and by the Australian Department of Agriculture and Water under project SEA202012.

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## 7. TABLES AND FIGURES

**Table 1: Numbers of sectioned otoliths from the selected months with total number of otoliths that were available for sectioning. \*This excludes missing and broken otoliths.**

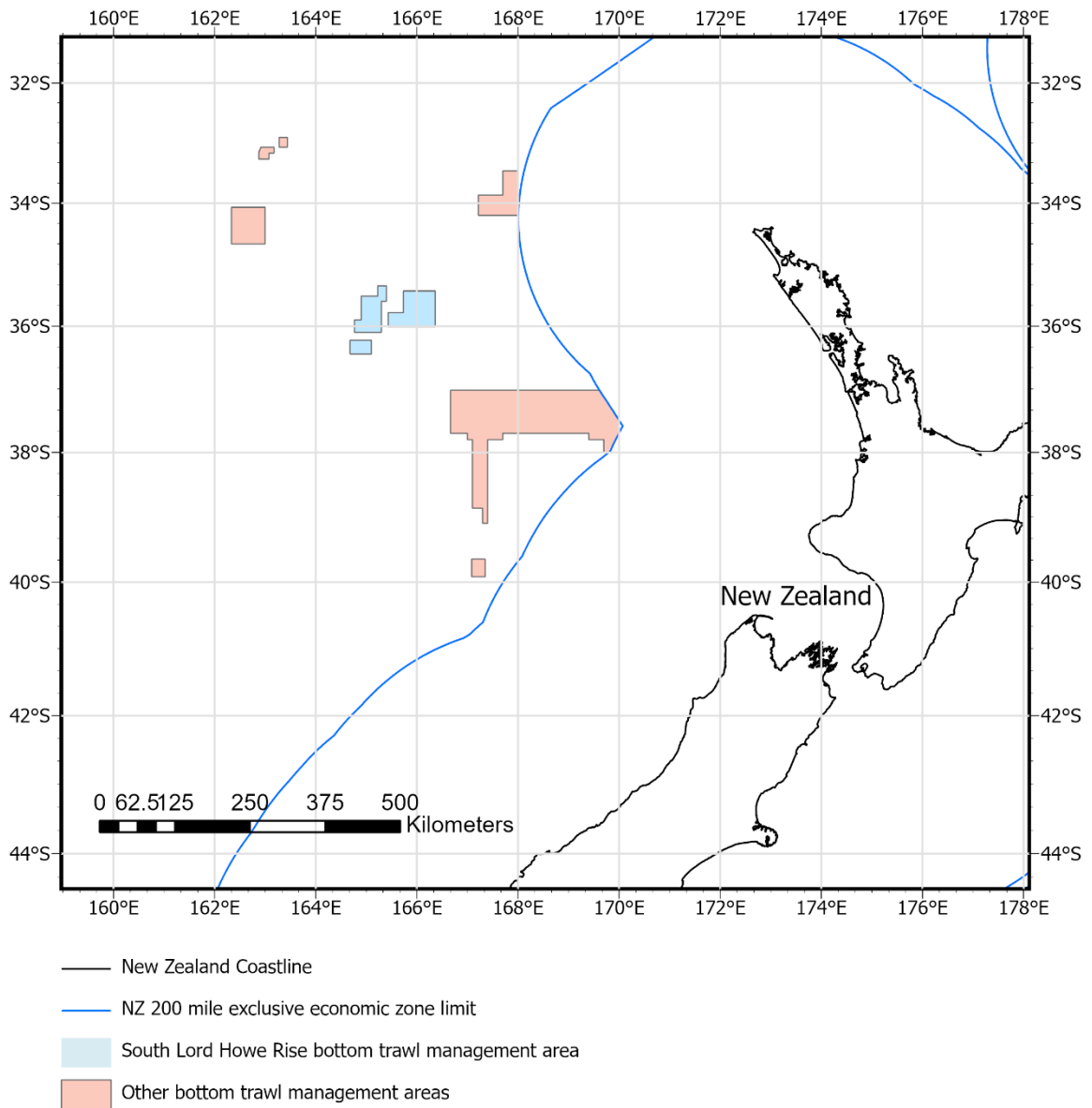
Year	June	July	Total	Total available for sectioning*
1989	65	38	103	58
1990	–	66	66	19
1992	70	45	115	12
1993	–	50	50	13
2013	121	120	241	229
2015	179	29	208	204

**Table 2: Summary of the age data (age in years).**

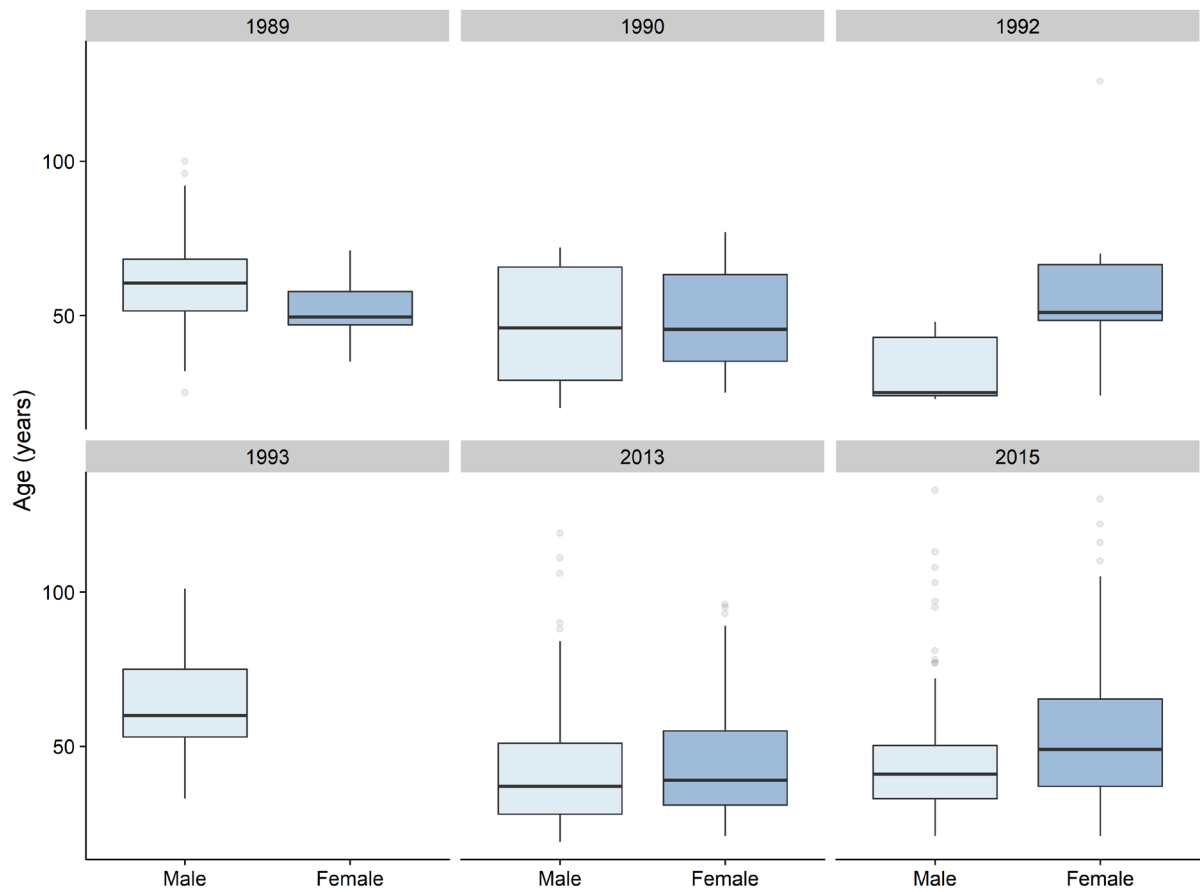
Year	Sex	Median age	Mean age	Age range	Number aged
<b>1989</b>	Male	60.5	60.2	25–100	40
	Female	49.5	51.5	35–71	18
<b>1990</b>	Male	46	47.3	20–72	12
	Female	45.5	49.0	25–77	7
<b>1992</b>	Male	25	32.6	23–48	5
	Female	51	61.6	24–126	7
<b>1993</b>	Male	60	62.8	33–101	13
	Female	–	–	–	0
<b>2013</b>	Male	37	43.0	19–119	94
	Female	39	44.4	21–96	135
<b>2015</b>	Male	41	46.1	21–133	112
	Female	49	54.3	21–130	92

**Table 3: Summary statistics of age at the transition zone (when present) for males and females for all years. N = number of otoliths aged with transition zones (i.e., those with a transition zone readability score (TZR) of 1 or 2).**

27	26.6	3.28	19	36	161
27	27.7	3.94	20	38	152



**Figure 1: Location of the South Lord Howe Rise Bottom Trawl Management Area. Other bottom trawl management areas are the remaining South Pacific Regional Fisheries Management Organisation bottom trawl management areas.**



**Figure 2: Box and whisker plot of age of orange roughy from Lord Howe Rise by sex and year.**

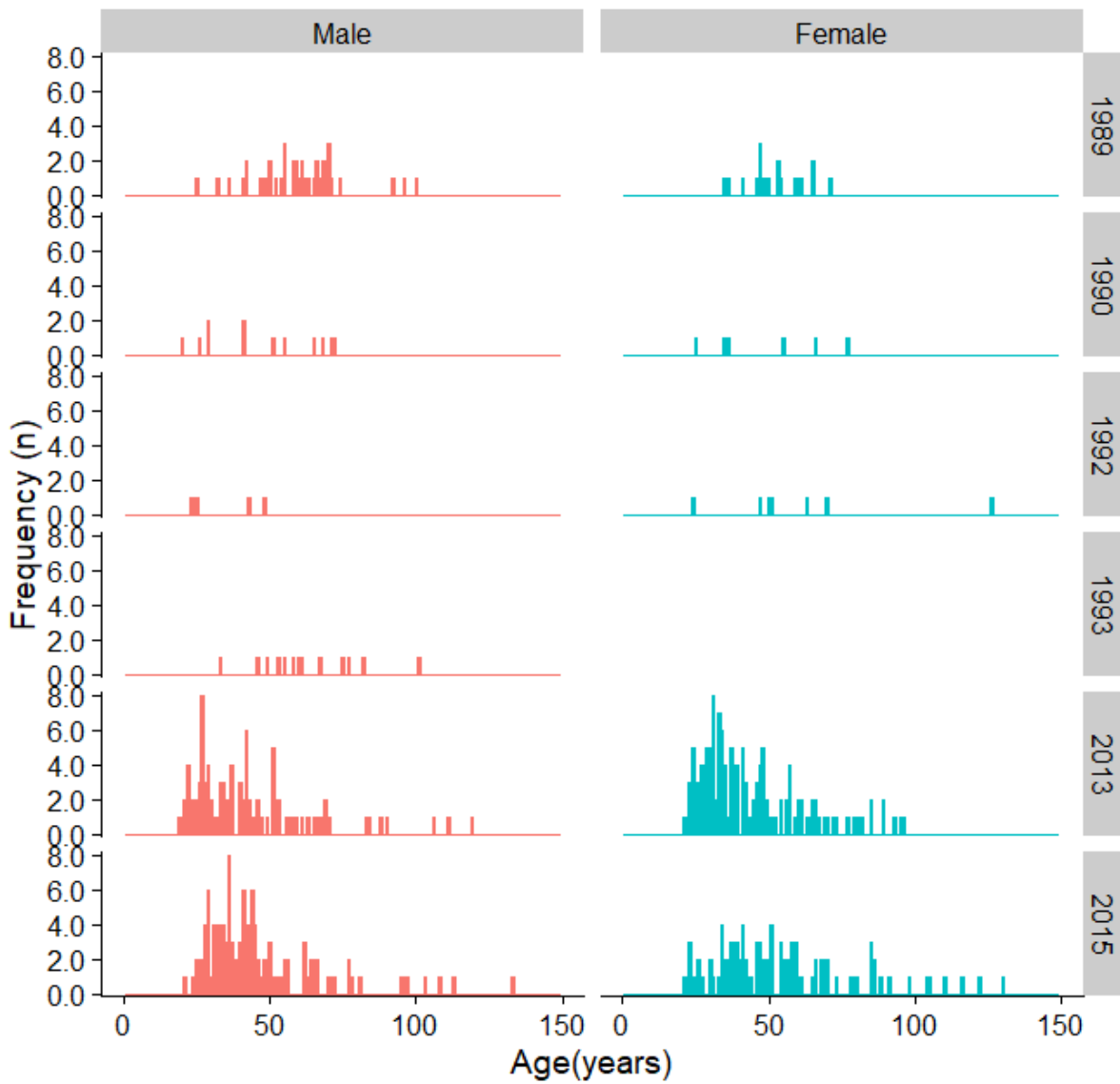
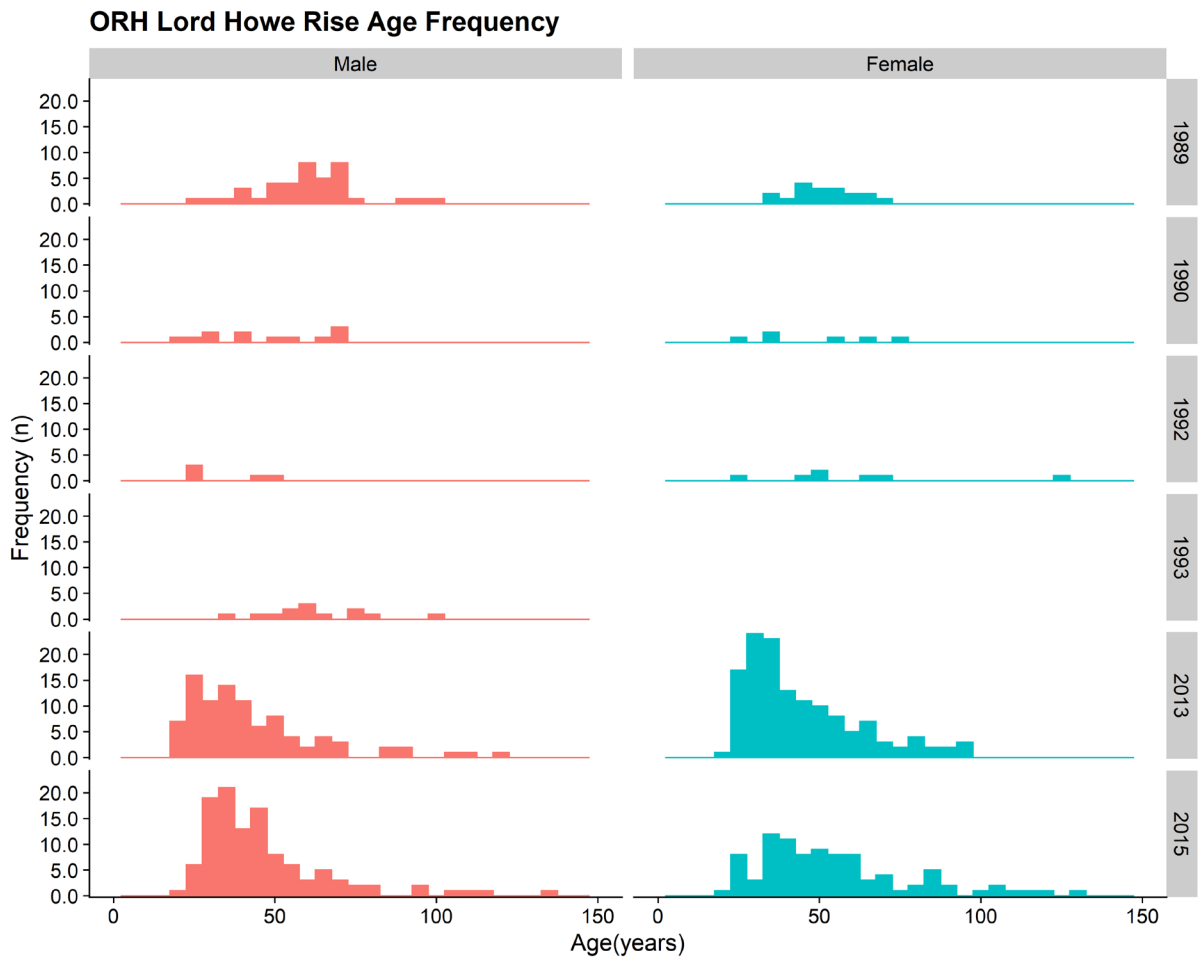


Figure 3: Unscaled age-frequency distributions by sex of the observed catch of orange roughy from Lord Howe Rise in 1989, 1990, 1992, 1993, 2013, and 2015 in 1-year bins.



**Figure 4:** Unscaled age-frequency distributions by sex of the observed catch for orange roughy Lord Howe Rise in 1989, 1990, 1992, 1993, 2013, and 2015 in 5-year bins.

## APPENDIX A: AGE DATA

**Table A1: Data from all successfully aged otolith preparations. prep, preparation number; lgth, fish standard length (cm); sex, where 1 = male and 2 = female; 0-TZ, zone count from nucleus to TZ (or total zone count if TZR = 3); R1, readability of 0-TZ; TZR, transition zone classification; TZ-E, zone count from TZ to otolith edge; R2, readability of TZ-E; Total, fish age; axis, indicates where otolith section axis was sub-optimal (LA)—none were sub-optimal in these data; date, capture date.**

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
1	356	17	4	32	1	23	3	2	38	3	61		25/06/1989
2	356	17	6	33	1	26	3	1	43	4	69		25/06/1989
3	356	17	7	37	1	29	3	2	33	3	62		25/06/1989
4	356	17	8	36	1	32	3	3			32		25/06/1989
5	356	17	13	31	1	25	3	0			25		25/06/1989
6	356	17	14	34	2	26	3	2	9	3	35		25/06/1989
7	356	17	15	33	1	30	3	2	36	4	66		25/06/1989
8	356	17	17	40	2	29	3	2	12	3	41		25/06/1989
9	356	17	19	34	2	33	3	2	15	4	48		25/06/1989
10	356	17	20	37	1	27	3	2	43	4	70		25/06/1989
11	356	17	21	37	2	22	4	2	31	3	53		25/06/1989
12	356	17	23	38	1	21	3	1	44	3	65		25/06/1989
13	356	17	27	40	1	34	3	2	21	4	55		25/06/1989
14	356	17	28	35	1	50	3	3			50		25/06/1989
15	356	17	30	36	1	28	3	2	30	4	58		25/06/1989
16	356	17	31	35	2	27	3	2	23	3	50		25/06/1989
17	356	17	33	38	2	46	4	3			46		25/06/1989
18	356	17	39	31	1	25	3	2	35	4	60		25/06/1989
19	356	17	40	38	2	30	4	2	24	3	54		25/06/1989
20	356	21	1	35	1	28	3	2	46	3	74		26/06/1989
21	356	21	2	35	1	26	3	2	37	3	63		26/06/1989
22	356	21	3	33	1	24	3	2	18	3	42		26/06/1989
23	356	21	5	37	1	28	3	2	38	3	66		26/06/1989
24	356	21	7	38	1	32	4	2	64	3	96		26/06/1989
25	356	26	3	34	1	30	3	2	41	3	71		27/06/1989
26	356	26	5	38	1	25	4	2	42	4	67		27/06/1989
27	356	26	7	39	2	29	4	2	18	3	47		27/06/1989
28	370	38	2	36	1	25	3	2	17	4	42		23/07/1989
29	370	38	4	35	1	47	4	3			47		23/07/1989
30	370	38	5	35	1	55	4	3			55		23/07/1989
31	370	38	6	36	1	24	4	2	17	4	41		23/07/1989
32	370	38	7	38	1	28	4	2	64	4	92		23/07/1989
33	370	38	9	38	1	32	4	2	27	4	59		23/07/1989
34	370	45	1	33	2	24	4	2	12	3	36		24/07/1989
35	370	45	2	37	1	29	4	2	23	4	52		24/07/1989
36	370	45	5	32	1	23	3	2	36	4	59		24/07/1989
37	370	45	6	35	1	21	3	2	37	4	58		24/07/1989
38	370	45	7	31	1	24	3	1	12	3	36		24/07/1989
39	373	3	2	38	2	26	3	2	39	3	65		30/06/1989
40	373	3	3	32	1	29	3	1	40	4	69		30/06/1989
41	373	3	6	36	1	29	3	2	71	3	100		30/06/1989
42	373	3	7	37	2	25	3	2	28	3	53		30/06/1989
43	373	3	9	36	2	29	3	2	36	4	65		30/06/1989
44	373	3	10	36	2	33	3	2	28	4	61		30/06/1989
45	373	8	3	35	1	30	3	2	38	3	68		1/07/1989
46	373	8	4	32	1	25	3	2	45	4	70		1/07/1989

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
47	373	8	6	34	2	30	3	2	17	3	47		1/07/1989
48	373	8	8	40	1	68	3	3			68		1/07/1989
49	373	8	9	34	1	28	3	2	26	4	54		1/07/1989
50	373	8	10	38	2	26	3	2	45	4	71		1/07/1989
51	373	15	1	40	2	30	3	2	29	3	59		2/07/1989
52	373	15	2	39	2	27	3	2	20	4	47		2/07/1989
53	373	15	3	34	1	28	4	2	20	4	48		2/07/1989
54	373	15	4	35	2	33	4	2	16	4	49		2/07/1989
55	373	15	6	36	1	27	3	1	23	4	50		2/07/1989
56	373	15	7	37	1	29	3	2	26	4	55		2/07/1989
57	373	15	9	36	1	22	3	1	48	4	70		2/07/1989
58	373	15	10	33	1	23	3	2	38	4	61		2/07/1989
59	436	19	8	28	2	25	3	0			25		22/07/1990
60	436	26	3	26	1	26	3	0			26		31/07/1990
61	436	26	7	27	2	29	4	2	7	3	36		31/07/1990
62	443	9	2	32	1	24	4	2	17	4	41		22/07/1990
63	443	9	4	34	1	28	3	2	23	3	51		22/07/1990
64	443	9	5	40	2	24	2	1	53	4	77		22/07/1990
65	443	9	8	27	1	26	4	2	15	2	41		22/07/1990
66	443	9	10	30	1	20	3	0			20		22/07/1990
67	443	15	1	34	1	24	3	2	48	2	72		23/07/1990
68	443	15	2	36	2	55	4	3			55		23/07/1990
69	443	15	3	28	1	29	3	3			29		23/07/1990
70	443	15	4	38	2	28	3	2	7	3	35		23/07/1990
71	443	15	6	36	2		5				0		23/07/1990
72	443	15	10	28	1	29	3	3			29		23/07/1990
73	443	19	2	35	1	27	3	2	38	3	65		24/07/1990
74	443	19	6	39	2	29	3	2	37	4	66		24/07/1990
75	443	19	10	35	1	24	3	2	44	3	68		24/07/1990
76	443	27	3	32	1	25	3	2	46	3	71		26/07/1990
77	443	27	7	32	1	23	4	2	32	3	55		26/07/1990
78	536	8	3	41	2	30	4	2	17	4	47		25/06/1992
79	536	12	1	45	2	34	3	2	92	4	126		27/06/1992
80	536	12	6	25	1	25	3	0			25		27/06/1992
81	536	12	7	27	2	24	3	0			24		27/06/1992
82	543	4	1	37	1	25	3	2	23	3	48		5/07/1992
83	543	4	3	38	2	27	3	1	24	3	51		5/07/1992
84	543	4	4	42	2	33	3	2	37	4	70		5/07/1992
85	543	5	1	38	2	28	3	2	35	4	63		6/07/1992
86	543	10	2	43	2	26	3	2	24	4	50		15/07/1992
87	543	13	2	29	1	24	3	0			24		16/07/1992
88	543	13	4	24	1	23	3	0			23		16/07/1992
89	543	15	1	36	1	25	3	2	18	4	43		17/07/1992
90	608	353	1	39	1	26	3	2	29	4	55		5/07/1993
91	608	353	4	38	1	28	3	2	32	4	60		5/07/1993
92	608	353	8	40	1	29	3	2	53	4	82		5/07/1993
93	608	367	1	40	1	31	4	2	46	3	77		7/07/1993
94	608	367	5	38	1	28	3	2	39	4	67		7/07/1993
95	608	372	2	37	1	27	3	2	19	4	46		8/07/1993
96	608	372	5	36	1	25	4	2	33	4	58		8/07/1993
97	608	372	8	34	1	33	3	3			33		8/07/1993
98	608	424	2	40	1	101	4	3			101		14/07/1993
99	608	424	3	36	1	34	3	2	27	3	61		14/07/1993

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
100	608	424	4	40	1	24	3	2	29	3	53		14/07/1993
101	608	424	5	40	1	31	3	2	44	4	75		14/07/1993
102	608	424	8	36	1	26	3	2	23	4	49		14/07/1993
103	3771	48	1	38	2	85	3	3			85		29/06/2013
104	3771	48	2	28	2	25	3	0			25		29/06/2013
105	3771	48	3	36	2	24	3	2	43	3	67		29/06/2013
106	3771	48	4	27	2	30	3	0			30		29/06/2013
107	3771	48	5	38	2	39	3	3			39		29/06/2013
108	3771	48	6	31	2	29	3	0			29		29/06/2013
109	3771	48	7	36	1	26	3	2	31	4	57		29/06/2013
110	3771	48	8	30	2	24	3	2	10	2	34		29/06/2013
111	3771	48	9	37	2	57	4	3			57		29/06/2013
112	3771	48	10	32	1	22	4	0			22		29/06/2013
113	3771	48	11	34	2	29	3	0			29		29/06/2013
114	3771	48	12	29	1	27	4	3			27		29/06/2013
115	3771	48	13	27	1	27	3	0			27		29/06/2013
116	3771	48	14	27	1	22	3	0			22		29/06/2013
117	3771	48	15	35	2	25	3	0			25		29/06/2013
118	3771	48	16	28	2	35	3	3			35		29/06/2013
119	3771	48	17	37	2	27	3	2	68	4	95		29/06/2013
120	3771	48	18	31	2	22	3	2	8	4	30		29/06/2013
121	3771	48	19	35	2	30	3	2	18	4	48		29/06/2013
122	3771	48	20	33	2	27	3	0			27		29/06/2013
123	3771	51	1	34	1	29	4	2	12	4	41		29/06/2013
124	3771	51	2	32	2	22	3	2	11	4	33		29/06/2013
125	3771	51	3	36	2	25	3	2	8	3	33		29/06/2013
126	3771	51	4	28	2	23	3	0			23		29/06/2013
127	3771	51	5	31	2	37	3	3			37		29/06/2013
128	3771	51	6	33	2	39	3	0			39		29/06/2013
129	3771	51	8	39	2	96	4	3			96		29/06/2013
130	3771	51	9	38	2	24	4	2	33	4	57		29/06/2013
131	3771	51	10	34	1	28	3	2	24	3	52		29/06/2013
132	3771	51	11	31	2	30	3	3			30		29/06/2013
133	3771	51	12	37	2	36	3	2	12	4	48		29/06/2013
134	3771	51	13	32	1	25	3	0			25		29/06/2013
135	3771	51	14	38	2	26	3	2	34	4	60		29/06/2013
136	3771	51	15	34	2	26	3	2	22	4	48		29/06/2013
137	3771	51	16	36	2	22	3	2	29	4	51		29/06/2013
138	3771	51	17	31	2	26	3	0			26		29/06/2013
139	3771	51	18	32	2	21	3	0			21		29/06/2013
140	3771	51	19	30	2	28	4	0			28		29/06/2013
141	3771	51	20	29	1	27	3	0			27		29/06/2013
142	3771	55	1	36	2	42	3	3			42		30/06/2013
143	3771	55	2	33	1	33	3	2	9	4	42		30/06/2013
144	3771	55	3	37	2	33	3	2	4	4	37		30/06/2013
145	3771	55	4	39	1	24	3	2	18	4	42		30/06/2013
146	3771	55	5	29	1	29	3	0			29		30/06/2013
147	3771	55	6	37	2	37	4	2	12	4	49		30/06/2013
148	3771	55	7	32	2	32	3	3			32		30/06/2013
149	3771	55	8	27	1	24	3	2	10	3	34		30/06/2013
150	3771	55	9	35	1	29	3	2	11	3	40		30/06/2013
151	3771	55	10	37	2	30	3	2	63	3	93		30/06/2013
152	3771	55	11	33	2	24	3	0			24		30/06/2013



prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
153	3771	55	12	26	1	21	3	0			21		30/06/2013
154	3771	55	13	29	2	24	3	0			24		30/06/2013
155	3771	55	14	34	2	21	3	2	16	4	37		30/06/2013
156	3771	55	15	25	1	26	3	0			26		30/06/2013
157	3771	55	16	38	2	27	3	2	21	4	48		30/06/2013
158	3771	55	17	26	2	23	3	2	8	4	31		30/06/2013
159	3771	55	18	34	2	27	3	2	14	3	41		30/06/2013
160	3771	55	20	30	1	25	3	2	7	3	32		30/06/2013
161	3771	59	1	34	2	25	4	2	29	4	54		30/06/2013
162	3771	59	2	36	2	32	3	2	14	4	46		30/06/2013
163	3771	59	3	33	1	25	3	2	12	3	37		30/06/2013
164	3771	59	4	26	1	27	3	0			27		30/06/2013
165	3771	59	5	42	2	25	3	2	64	4	89		30/06/2013
166	3771	59	6	29	1	27	3	0			27		30/06/2013
167	3771	59	7	35	2	24	2	1	10	2	34		30/06/2013
168	3771	59	8	31	2	24	3	2	15	4	39		30/06/2013
169	3771	59	9	32	2	29	3	2	14	3	43		30/06/2013
170	3771	59	10	33	2	22	3	2	25	3	47		30/06/2013
171	3771	59	11	33	1	31	3	2	36	4	67		30/06/2013
172	3771	59	12	27	1	28	3	0			28		30/06/2013
173	3771	59	13	34	1	27	3	2	8	2	35		30/06/2013
174	3771	59	14	35	2	25	3	2	48	3	73		30/06/2013
175	3771	59	15	28	1	26	3	0			26		30/06/2013
176	3771	59	16	36	2	27	3	2	58	4	85		30/06/2013
177	3771	59	17	31	1	26	3	2	5	4	31		30/06/2013
178	3771	59	18	30	1	27	2	2	3	3	30		30/06/2013
179	3771	59	19	34	2	30	3	2	16	4	46		30/06/2013
180	3771	59	20	37	2	24	3	2	18	4	42		30/06/2013
181	3771	71	1	34	1	53	3	3			53		8/07/2013
182	3771	71	2	34	1	25	3	2	21	4	46		8/07/2013
183	3771	71	3	40	2	61	4	3			61		8/07/2013
184	3771	71	4	36	2	26	3	2	19	4	45		8/07/2013
185	3771	71	5	30	1	42	3	3			42		8/07/2013
186	3771	71	6	36	2	32	3	2	49	3	81		8/07/2013
187	3771	71	7	33	1	25	3	2	11	4	36		8/07/2013
188	3771	71	8	38	2	33	4	2	49	3	82		8/07/2013
189	3771	71	9	35	2	23	3	2	26	3	49		8/07/2013
190	3771	71	10	31	1	23	3	2	14	4	37		8/07/2013
191	3771	71	11	35	1	24	3	2	10	3	34		8/07/2013
192	3771	71	12	27	1	25	4	0			25		8/07/2013
193	3771	71	13	34	2	27	3	2	7	3	34		8/07/2013
194	3771	71	14	37	2	25	3	2	20	3	45		8/07/2013
195	3771	71	15	37	1	27	4	2	63	4	90		8/07/2013
196	3771	71	16	32	1	24	3	2	16	3	40		8/07/2013
197	3771	71	17	34	1	41	4	0			41		8/07/2013
198	3771	71	18	32	1	24	3	0			24		8/07/2013
199	3771	71	19	37	2	42	3	3			42		8/07/2013
200	3771	71	20	37	2	32	4	2	38	4	70		8/07/2013
201	3771	82	1	32	2	34	3	2	55	4	89		9/07/2013
202	3771	82	2	32	2	29	3	3			29		9/07/2013
203	3771	82	3	32	2	21	2	2	25	4	46		9/07/2013
204	3771	82	4	36	2	34	3	2	23	4	57		9/07/2013
205	3771	82	5	37	2	32	3	2	31	3	63		9/07/2013

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
206	3771	82	6	31	1	33	3	3			33		9/07/2013
207	3771	82	7	31	1	43	3	3			43		9/07/2013
208	3771	82	8	40	2	27	3	2	39	4	66		9/07/2013
209	3771	82	9	36	2	23	4	2	33	4	56		9/07/2013
210	3771	82	10	30	1	19	3	2	10	3	29		9/07/2013
211	3771	82	11	34	2	32	3	3			32		9/07/2013
212	3771	82	12	28	1	26	3	0			26		9/07/2013
213	3771	82	13	36	2	39	3	3			39		9/07/2013
214	3771	82	14	34	2	27	3	0			27		9/07/2013
215	3771	82	15	34	2	35	3	3			35		9/07/2013
216	3771	82	16	29	2	24	4	0			24		9/07/2013
217	3771	82	17	35	1	25	3	2	28	4	53		9/07/2013
218	3771	82	18	38	2	41	3	3			41		9/07/2013
219	3771	82	19	37	2	29	3	2	18	4	47		9/07/2013
220	3771	82	20	34	2	28	4	3			28		9/07/2013
221	3771	89	62	30	1	24	3	0			24		11/07/2013
222	3771	89	63	28	1	30	3	0			30		11/07/2013
223	3771	89	64	33	2	31	3	3			31		11/07/2013
224	3771	89	65	29	2	31	3	3			31		11/07/2013
225	3771	89	66	27	1	29	3	0			29		11/07/2013
226	3771	89	67	27	1	21	4	0			21		11/07/2013
227	3771	89	68	36	2	41	3	3			41		11/07/2013
228	3771	89	69	25	1	23	4	0			23		11/07/2013
229	3771	89	70	36	2	24	3	2	9	3	33		11/07/2013
230	3771	89	71	34	2	27	3	2	27	3	54		11/07/2013
231	3771	89	72	29	1	27	3	0			27		11/07/2013
232	3771	89	73	29	1	27	3	0			27		11/07/2013
233	3771	89	74	37	2	37	3	3			37		11/07/2013
234	3771	89	75	29	1	28	3	0			28		11/07/2013
235	3771	89	76	31	2	31	3	0			31		11/07/2013
236	3771	89	77	30	2	29	3	0			29		11/07/2013
237	3771	89	78	25	1	19	3	0			19		11/07/2013
238	3771	89	80	31	1	27	3	0			27		11/07/2013
239	3771	89	81	27	2	28	3	0			28		11/07/2013
240	3787	34	2	36	1	25	3	2	17	4	42		28/06/2013
241	3787	34	3	37	2	23	4	2	12	4	35		28/06/2013
242	3787	34	4	35	2	29	4	3			29		28/06/2013
243	3787	34	5	39	2	31	3	2	21	4	52		28/06/2013
244	3787	34	6	33	1	24	3	2	16	3	40		28/06/2013
245	3787	34	7	35	1	29	3	2	13	4	42		28/06/2013
246	3787	34	8	32	1	33	3	3			33		28/06/2013
247	3787	34	9	36	2	29	3	2	15	4	44		28/06/2013
248	3787	34	10	33	1	33	4	3			33		28/06/2013
249	3787	37	1	34	1	34	3	3			34		28/06/2013
250	3787	37	2	33	2	25	3	2	8	3	33		28/06/2013
251	3787	37	3	33	1	28	3	0			28		28/06/2013
252	3787	37	4	43	2	33	3	3			33		28/06/2013
253	3787	37	5	41	2	23	3	2	34	3	57		28/06/2013
254	3787	37	7	37	2	27	4	2	20	4	47		28/06/2013
255	3787	37	8	37	2	31	3	0			31		28/06/2013
256	3787	37	9	34	1	27	3	2	9	4	36		28/06/2013
257	3787	37	10	27	1	22	3	0			22		28/06/2013
258	3787	37	11	34	1	22	3	2	61	4	83		28/06/2013

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
259	3787	37	13	38	2	35	3	2	13	4	48		28/06/2013
260	3787	37	14	34	2	31	3	3			31		28/06/2013
261	3787	37	15	36	2	60	4	3			60		28/06/2013
262	3787	48	1	37	2	30	3	2	7	4	37		30/06/2013
263	3787	48	2	29	2	24	3	0			24		30/06/2013
264	3787	48	3	32	2	24	3	2	7	4	31		30/06/2013
265	3787	48	4	32	2	27	3	2	8	4	35		30/06/2013
266	3787	48	5	36	2	23	4	2	57	4	80		30/06/2013
267	3787	48	6	41	2	34	4	3			34		30/06/2013
268	3787	48	8	33	2	33	3	3			33		30/06/2013
269	3787	48	9	38	2	56	3	3			56		30/06/2013
270	3787	48	10	29	2	23	3	0			23		30/06/2013
271	3787	48	11	34	2	27	3	0			27		30/06/2013
272	3787	48	12	34	2	34	3	3			34		30/06/2013
273	3787	48	13	31	2	28	4	3			28		30/06/2013
274	3787	48	14	36	2	24	3	0			24		30/06/2013
275	3787	48	15	33	2	27	4	3			27		30/06/2013
276	3787	48	16	37	2	25	3	2	25	4	50		30/06/2013
277	3793	68	1	38	2	27	4	2	42	4	69		10/07/2013
278	3793	68	2	32	2	26	3	0			26		10/07/2013
279	3793	68	3	41	2	30	4	2	49	4	79		10/07/2013
280	3793	68	4	29	1	22	3	0			22		10/07/2013
281	3793	68	5	37	2	27	4	2	50	4	77		10/07/2013
282	3793	68	6	39	2	47	3	3			47		10/07/2013
283	3793	68	7	30	1	29	4	3			29		10/07/2013
284	3793	68	8	38	2	26	3	1	39	3	65		10/07/2013
285	3793	68	9	30	2	33	3	3			33		10/07/2013
286	3793	68	10	36	2	25	3	2	9	3	34		10/07/2013
287	3793	68	11	30	2	30	3	0			30		10/07/2013
288	3793	68	12	32	2	31	3	3			31		10/07/2013
289	3793	68	13	36	2	24	3	2	37	4	61		10/07/2013
290	3793	68	14	37	2	26	3	2	46	4	72		10/07/2013
291	3793	68	15	28	2	23	3	0			23		10/07/2013
292	3793	68	16	31	2	30	3	3			30		10/07/2013
293	3793	68	17	33	2	41	3	3			41		10/07/2013
294	3793	68	18	36	2	30	3	2	35	4	65		10/07/2013
295	3793	94	1	40	1	56	3	3			56		15/07/2013
296	3793	94	2	35	1	24	3	2	64	4	88		15/07/2013
297	3793	94	3	34	1	23	3	2	14	3	37		15/07/2013
298	3793	94	4	34	1	42	4	3			42		15/07/2013
299	3793	94	5	41	1	46	3	3			46		15/07/2013
300	3793	94	6	35	1	25	3	2	24	3	49		15/07/2013
301	3793	94	7	38	1	27	3	2	92	4	119		15/07/2013
302	3793	94	8	37	1	37	3	3			37		15/07/2013
303	3793	94	9	38	1	51	4	3			51		15/07/2013
304	3793	94	10	36	2	38	2	3			38		15/07/2013
305	3793	94	11	38	1	47	3	3			47		15/07/2013
306	3793	94	12	39	1	26	3	2	43	3	69		15/07/2013
307	3793	94	13	40	2	20	3	2	21	3	41		15/07/2013
308	3793	94	14	37	1	29	4	2	22	3	51		15/07/2013
309	3793	94	15	42	1		5				0		15/07/2013
310	3793	94	16	44	2	35	3	2	29	3	64		15/07/2013
311	3793	94	17	43	1	26	3	2	26	4	52		15/07/2013

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
312	3793	112	1	38	1	27	3	2	34	4	61		17/07/2013
313	3793	112	2	41	1	21	3	2	90	4	111		17/07/2013
314	3793	112	3	40	1	32	4	2	31	4	63		17/07/2013
315	3793	112	5	39	1	31	3	2	39	4	70		17/07/2013
316	3793	112	6	36	1	51	4	3			51		17/07/2013
317	3793	112	7	36	1	23	4	2	28	4	51		17/07/2013
318	3793	112	8	35	1	31	4	2	12	3	43		17/07/2013
319	3793	112	9	42	1	32	4	2	74	4	106		17/07/2013
320	3793	112	10	40	1	25	3	2	41	4	66		17/07/2013
321	3793	112	12	39	1	24	3	2	35	3	59		17/07/2013
322	3793	112	14	39	1	84	4	3			84		17/07/2013
323	3793	112	15	38	2	28	3	2	8	3	36		17/07/2013
324	3793	112	16	40	1	28	3	2	41	4	69		17/07/2013
325	3793	112	17	43	1	35	4	2	30	4	65		17/07/2013
326	3793	112	18	38	2	29	4	2	30	4	59		17/07/2013
327	3812	8	1	36	1	29	3	2	22	4	51		9/07/2013
328	3812	8	2	30	1	35	4	3			35		9/07/2013
329	3812	8	3	34	1	44	4	3			44		9/07/2013
330	3812	8	5	30	2	26	2	0			26		9/07/2013
331	3812	8	6	43	2	24	3	2	42	4	66		9/07/2013
332	4410	7	1	35	1	31	3	3			31		10/06/2015
333	4410	7	2	25	2	23	3	0			23		10/06/2015
334	4410	7	3	32	2	34	4	3			34		10/06/2015
335	4410	7	4	29	1	36	4	3			36		10/06/2015
336	4410	7	5	32	1	50	4	3			50		10/06/2015
337	4410	7	6	30	1	29	3	3			29		10/06/2015
338	4410	7	7	33	1	32	4	3			32		10/06/2015
339	4410	7	8	32	1	27	3	2	14	4	41		10/06/2015
340	4410	7	9	30	1	26	4	3			26		10/06/2015
341	4410	31	2	35	2	33	4	3			33		14/06/2015
342	4410	31	3	40	2	27	3	2	58	3	85		14/06/2015
343	4410	31	4	41	2	46	4	3			46		14/06/2015
344	4410	31	5	34	2	26	4	3			26		14/06/2015
345	4410	34	1	33	1	32	3	2	19	3	51		15/06/2015
346	4410	34	2	34	1	34	4	3			34		15/06/2015
347	4410	34	3	29	1	36	3	3			36		15/06/2015
348	4410	34	4	37	2	41	4	3			41		15/06/2015
349	4410	34	5	37	2	24	3	2	19	3	43		15/06/2015
350	4410	34	6	35	2	30	4	3			30		15/06/2015
351	4410	34	7	39	1	27	3	2	68	3	95		15/06/2015
352	4410	34	8	36	1	40	3	3			40		15/06/2015
353	4410	34	9	38	1	27	3	2	19	4	46		15/06/2015
354	4410	34	10	36	2	42	4	3			42		15/06/2015
355	4410	34	11	42	2	37	4	2	73	4	110		15/06/2015
356	4410	34	12	28	1	31	3	3			31		15/06/2015
357	4410	34	13	38	1	28	3	2	34	4	62		15/06/2015
358	4410	34	14	33	1	27	4	2	11	4	38		15/06/2015
359	4410	34	15	45	2	58	4	3			58		15/06/2015
360	4410	34	16	29	1	25	3	0			25		15/06/2015
361	4410	34	17	32	1	28	3	0			28		15/06/2015
362	4410	34	18	34	1	43	4	3			43		15/06/2015
363	4410	34	19	31	1	25	3	0			25		15/06/2015
364	4410	34	20	39	1	32	4	3			32		15/06/2015

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
365	4410	53	1	39	2	30	3	2	48	4	78		26/06/2015
366	4410	53	2	41	2	46	4	3			46		26/06/2015
367	4410	53	4	33	1	34	3	3			34		26/06/2015
368	4410	53	5	34	1	26	3	2	14	4	40		26/06/2015
369	4410	53	6	38	2	42	3	3			42		26/06/2015
370	4410	53	7	35	1	27	3	2	17	4	44		26/06/2015
371	4410	53	8	34	1	36	4	2	17	3	53		26/06/2015
372	4410	53	9	36	1	33	4	2	29	3	62		26/06/2015
373	4410	53	10	36	2	27	3	2	24	3	51		26/06/2015
374	4410	57	1	43	1	26	3	2	36	4	62		26/06/2015
375	4410	57	2	36	1	20	2	2	34	3	54		26/06/2015
376	4410	57	3	38	1	23	3	2	54	4	77		26/06/2015
377	4410	57	4	41	1	22	3	2	28	3	50		26/06/2015
378	4410	57	5	36	1	28	3	2	22	3	50		26/06/2015
379	4410	69	2	35	1	41	4	3			41		28/06/2015
380	4410	69	3	35	1	27	4	2	12	3	39		28/06/2015
381	4410	69	4	45	2	20	4	2	78	3	98		28/06/2015
382	4410	69	5	41	1	24	3	2	89	4	113		28/06/2015
383	4410	69	6	41	2	31	3	2	25	4	56		28/06/2015
384	4410	69	7	36	1	23	3	2	21	3	44		28/06/2015
385	4410	69	8	44	2	31	4	2	74	4	105		28/06/2015
386	4410	69	9	42	2	31	3	2	73	3	104		28/06/2015
387	4410	69	10	43	1	26	3	2	30	4	56		28/06/2015
388	4410	69	11	35	2	25	3	2	23	4	48		28/06/2015
389	4410	69	12	45	2	26	4	2	33	3	59		28/06/2015
390	4410	69	13	44	1	24	3	2	79	4	103		28/06/2015
391	4410	69	14	36	1	23	4	2	22	4	45		28/06/2015
392	4410	69	15	44	2	25	3	2	91	4	116		28/06/2015
393	4410	69	16	39	1	26	3	2	38	3	64		28/06/2015
394	4410	69	17	38	1	49	4	3			49		28/06/2015
395	4410	69	18	45	2	24	4	2	67	4	91		28/06/2015
396	4410	69	19	35	1	36	4	3			36		28/06/2015
397	4410	69	20	44	1	26	3	2	71	4	97		28/06/2015
398	4410	77	1	36	2	51	4	3			51		29/06/2015
399	4410	77	2	33	1	33	4	0			33		29/06/2015
400	4410	77	3	38	2	30	4	2	9	4	39		29/06/2015
401	4410	77	4	29	2	23	4	0			23		29/06/2015
402	4410	77	5	33	1	26	3	2	19	3	45		29/06/2015
403	4410	77	6	33	1	24	3	2	12	4	36		29/06/2015
404	4410	77	7	38	2	34	3	3			34		29/06/2015
405	4410	77	8	43	2	50	3	3			50		29/06/2015
406	4410	77	9	40	2	27	4	2	24	4	51		29/06/2015
407	4410	77	10	37	1	35	3	2	14	3	49		29/06/2015
408	4410	77	11	36	2	26	3	2	10	4	36		29/06/2015
409	4410	77	12	34	1	35	3	3			35		29/06/2015
410	4410	77	13	28	2	25	3	1	10	2	35		29/06/2015
411	4410	77	14	34	1	24	3	2	23	4	47		29/06/2015
412	4410	77	15	28	1	20	3	2	10	2	30		29/06/2015
413	4410	77	16	34	1	21	3	2	12	4	33		29/06/2015
414	4410	77	17	36	2	31	3	3			31		29/06/2015
415	4410	77	18	29	2	23	3	2	11	3	34		29/06/2015
416	4410	77	19	34	1	36	4	3			36		29/06/2015
417	4410	77	20	29	1	29	3	3			29		29/06/2015

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
418	4410	80	1	40	2	54	3	3			54		30/06/2015
419	4410	80	2	33	1	29	4	3			29		30/06/2015
420	4410	80	3	37	2	49	4	3			49		30/06/2015
421	4410	80	4	37	1	25	3	2	12	4	37		30/06/2015
422	4410	80	5	36	2	34	4	2	13	4	47		30/06/2015
423	4410	80	6	31	1	39	4	3			39		30/06/2015
424	4410	80	7	39	2	26	3	2	15	3	41		30/06/2015
425	4410	80	8	35	1	48	4	3			48		30/06/2015
426	4410	80	9	36	1	21	3	2	14	3	35		30/06/2015
427	4410	80	10	31	1	32	4	3			32		30/06/2015
428	4410	90	1	39	1	30	3	2	33	3	63		2/07/2015
429	4410	90	2	37	1	29	3	2	15	4	44		2/07/2015
430	4410	90	3	37	1	55	3	3			55		2/07/2015
431	4410	90	4	43	1	39	4	3	69	3	108		2/07/2015
432	4410	90	5	44	2	32	4	3	33	4	65		2/07/2015
433	4410	90	6	46	2	25	4	2	60	3	85		2/07/2015
434	4410	90	7	43	2	32	4	2	90	4	122		2/07/2015
435	4410	90	8	38	1	28	3	2	38	4	66		2/07/2015
436	4410	90	9	36	1	27	3	2	13	4	40		2/07/2015
437	4410	90	10	40	2	38	4	2	9	4	47		2/07/2015
438	4410	90	11	40	1	30	3	2	13	3	43		2/07/2015
439	4410	90	12	37	1	24	3	2	13	4	37		2/07/2015
440	4410	90	13	36	1	22	4	3	9	3	31		2/07/2015
441	4410	90	14	40	2	34	4	3	26	4	60		2/07/2015
442	4410	90	15	40	1	27	4	2	11	3	38		2/07/2015
443	4410	90	16	34	1	43	4	3			43		2/07/2015
444	4410	90	17	41	2	54	4	3			54		2/07/2015
445	4410	90	18	35	1	31	3	2	10	4	41		2/07/2015
446	4410	90	19	41	2	24	4	2	27	3	51		2/07/2015
447	4410	90	20	44	2	22	4	2	37	3	59		2/07/2015
448	4410	96	1	47	2	34	4	2	51	4	85		3/07/2015
449	4410	96	2	44	2	37	4	3	29	4	66		3/07/2015
450	4410	96	3	37	1	28	3	2	49	4	77		3/07/2015
451	4410	96	4	41	1	64	4	3			64		3/07/2015
452	4410	96	5	40	1	43	4	3			43		3/07/2015
453	4410	96	6	40	1	27	3	2	54	4	81		3/07/2015
454	4410	96	7	41	1	28	3	2	27	3	55		3/07/2015
455	4410	96	8	38	2	28	3	2	21	3	49		3/07/2015
456	4410	96	9	37	2	35	4	3			35		3/07/2015
457	4411	57	1	42	2	31	3	2	35	3	66		25/06/2015
458	4411	57	2	34	1	27	3	2	106	4	133		25/06/2015
459	4411	57	3	29	1	29	3	3			29		25/06/2015
460	4411	57	4	40	1	29	3	2	49	3	78		25/06/2015
461	4411	57	5	34	1	36	3	3			36		25/06/2015
462	4411	57	7	32	1	46	4	3			46		25/06/2015
463	4411	57	8	31	1	28	3	0			28		25/06/2015
464	4411	57	9	30	1	35	3	3			35		25/06/2015
465	4411	57	10	29	1	28	3	0			28		25/06/2015
466	4411	57	11	35	1	28	3	2	44	4	72		25/06/2015
467	4411	57	12	33	1	32	4	3			32		25/06/2015
468	4411	57	13	33	1	32	3	2	9	4	41		25/06/2015
469	4411	57	14	32	1	32	4	2	24	3	56		25/06/2015
470	4411	57	15	31	1	26	3	2	11	4	37		25/06/2015

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
471	4411	57	16	34	1	27	3	2	17	4	44		25/06/2015
472	4411	57	17	30	1	21	3	2	20	4	41		25/06/2015
473	4411	57	18	33	1	29	3	2	19	4	48		25/06/2015
474	4411	57	19	32	1	26	3	2	18	3	44		25/06/2015
475	4411	57	20	28	1	23	3	2	11	4	34		25/06/2015
476	4411	61	1	42	2	25	3	2	14	3	39		26/06/2015
477	4411	61	2	35	1	34	3	3			34		26/06/2015
478	4411	61	3	32	2	22	3	2	8	3	30		26/06/2015
479	4411	61	4	35	2	37	3	3			37		26/06/2015
480	4411	61	5	38	2	35	3	2	53	3	88		26/06/2015
481	4411	61	6	34	2	30	3	2	7	3	37		26/06/2015
482	4411	61	7	40	2	30	3	2	25	3	55		26/06/2015
483	4411	61	8	36	2	48	3	3			48		26/06/2015
484	4411	61	9	36	2	41	4	3			41		26/06/2015
485	4411	61	10	39	2	36	3	2	25	3	61		26/06/2015
486	4411	61	11	38	2	25	3	2	31	3	56		26/06/2015
487	4411	61	12	40	2	36	3	2	34	4	70		26/06/2015
488	4411	61	13	42	2	58	3	3			58		26/06/2015
489	4411	61	14	36	2	24	3	2	17	4	41		26/06/2015
490	4411	61	15	33	1	24	3	2	12	3	36		26/06/2015
491	4411	61	16	37	2	29	3	2	51	3	80		26/06/2015
492	4411	61	17	27	1	27	4	3			27		26/06/2015
493	4411	61	18	34	2	26	3	0			26		26/06/2015
494	4411	61	19	33	1	23	3	2	21	4	44		26/06/2015
495	4411	61	20	25	1	24	2	0			24		26/06/2015
496	4411	64	1	38	2	28	3	2	27	3	55		26/06/2015
497	4411	64	2	37	2	32	3	2	14	3	46		26/06/2015
498	4411	64	3	36	2	27	3	2	10	4	37		26/06/2015
499	4411	64	4	39	2	24	3	2	35	4	59		26/06/2015
500	4411	64	5	33	2	31	3	2	13	4	44		26/06/2015
501	4411	64	6	35	1	31	3	2	35	4	66		26/06/2015
502	4411	64	7	40	2	28	4	2	58	4	86		26/06/2015
503	4411	64	8	26	1	28	3	0			28		26/06/2015
504	4411	64	9	42	2	57	3	3			57		26/06/2015
505	4411	64	10	28	1	27	3	0			27		26/06/2015
506	4411	64	11	35	1	41	3	3			41		26/06/2015
507	4411	64	12	33	1	24	3	2	21	3	45		26/06/2015
508	4411	64	13	31	1	31	3	2	5	3	36		26/06/2015
509	4411	64	14	33	2	25	3	0			25		26/06/2015
510	4411	64	15	34	2	24	3	2	16	3	40		26/06/2015
511	4411	64	16	33	2	34	3	3			34		26/06/2015
512	4411	64	17	28	1	29	3	0			29		26/06/2015
513	4411	64	18	31	1	33	3	3			33		26/06/2015
514	4411	64	19	33	2	24	3	0			24		26/06/2015
515	4411	64	20	32	1	30	3	2	41	3	71		26/06/2015
516	4411	74	1	35	2	31	3	2	39	3	70		29/06/2015
517	4411	74	2	38	2	73	4	3			73		29/06/2015
518	4411	74	3	39	2	32	3	2	36	3	68		29/06/2015
519	4411	74	4	34	2	36	3	3			36		29/06/2015
520	4411	74	5	29	1	21	3	0			21		29/06/2015
521	4411	74	6	36	2	39	3	3			39		29/06/2015
522	4411	74	7	34	2	27	3	0			27		29/06/2015
523	4411	74	8	37	1	24	3	2	46	3	70		29/06/2015

prep	trip	tow	fish_no	lgth	sex	0-TZ	R1	TZR	TZ-E	R2	Total	axis	date
524	4411	74	9	31	1	31	3	0			31		29/06/2015
525	4411	74	10	37	2	29	3	2	29	3	58		29/06/2015
526	4411	74	11	38	2	29	3	2	18	3	47		29/06/2015
527	4411	74	12	32	2	23	4	0			23		29/06/2015
528	4411	74	13	34	2	21	2	0			21		29/06/2015
529	4411	74	14	34	1	28	3	2	17	3	45		29/06/2015
530	4411	74	15	43	2	29	4	2	57	4	86		29/06/2015
531	4411	74	16	36	2	28	3	2	12	3	40		29/06/2015
532	4411	74	17	36	2	24	3	2	30	4	54		29/06/2015
533	4411	74	18	36	2	29	3	2	39	3	68		29/06/2015
534	4411	74	19	38	2	32	3	2	98	4	130		29/06/2015
535	4411	74	20	30	1	29	3	0			29		29/06/2015