

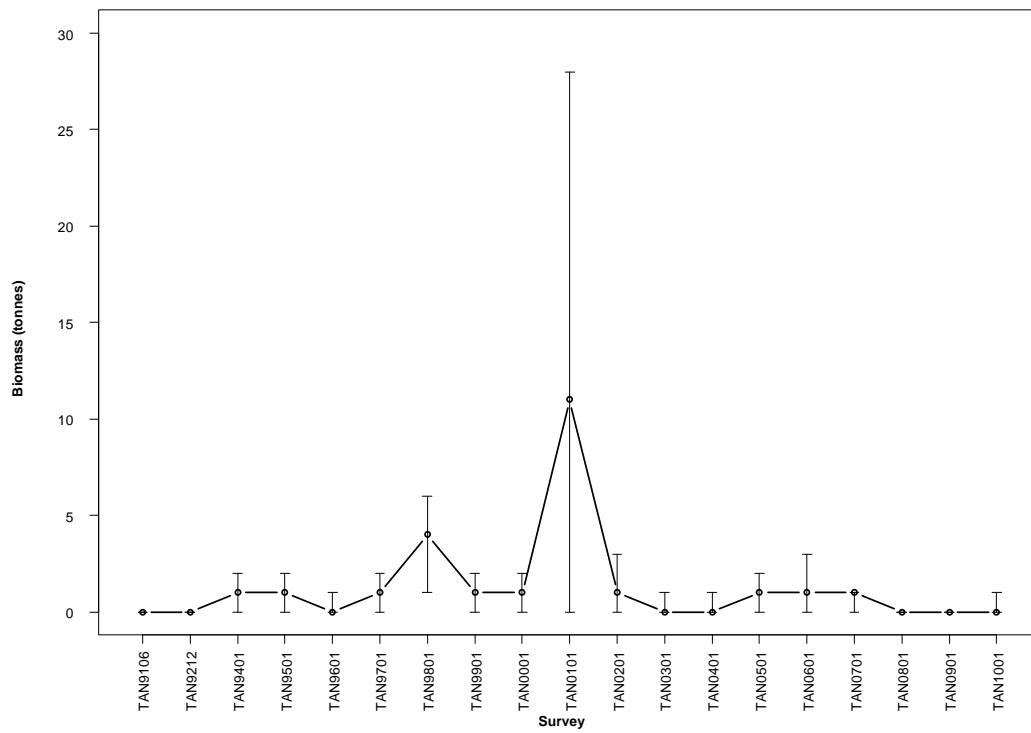


Number of surveys caught 1992–2010 (out of 19):	18
Total catch weight (kg):	10.5
Number measured	0
Length range (mean) (cm, TL)	–
Number weighed	0
Length-weight parameters a, b ( $r^2$ )	–

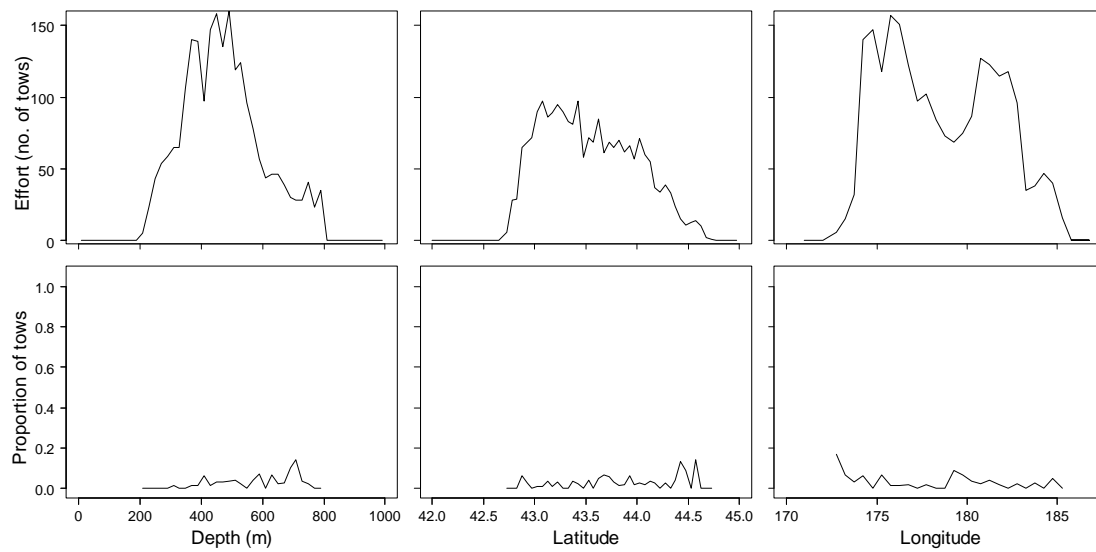
The core survey area and depth range **is** appropriate for this species. Biomass of this species is **poorly** estimated in the core survey area. Biomass has **increased and then decreased** since the start of the time series.

#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	0	72
1993	0	100
1994	1	73
1995	1	60
1996	0	100
1997	1	59
1998	4	35
1999	1	54
2000	1	52
2001	11	80
2002	1	52
2003	0	71
2004	0	80
2005	1	64
2006	1	51
2007	1	80
2008	0	-
2009	0	100
2010	0	100



### Distribution



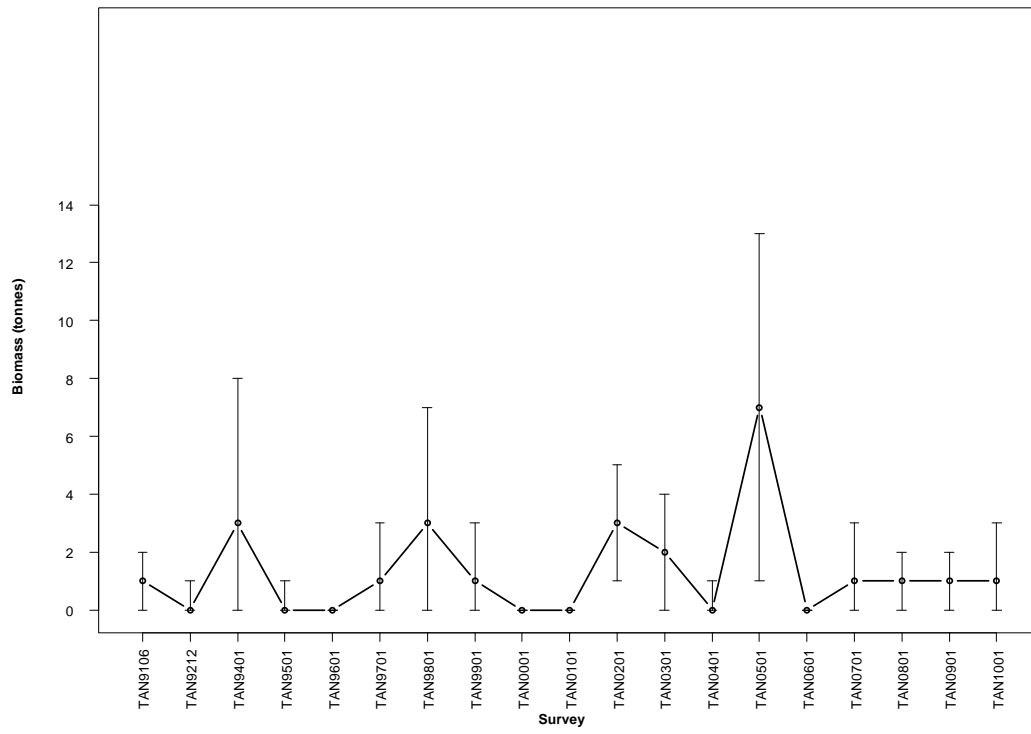


Number of surveys caught 1992–2010 (out of 19):	16
Total catch weight (kg):	19.6
Number measured	9
Length range (mean) (cm, TL)	39–42 (40.2)
Number weighed	8
Length-weight parameters a, b ( $r^2$ )	–

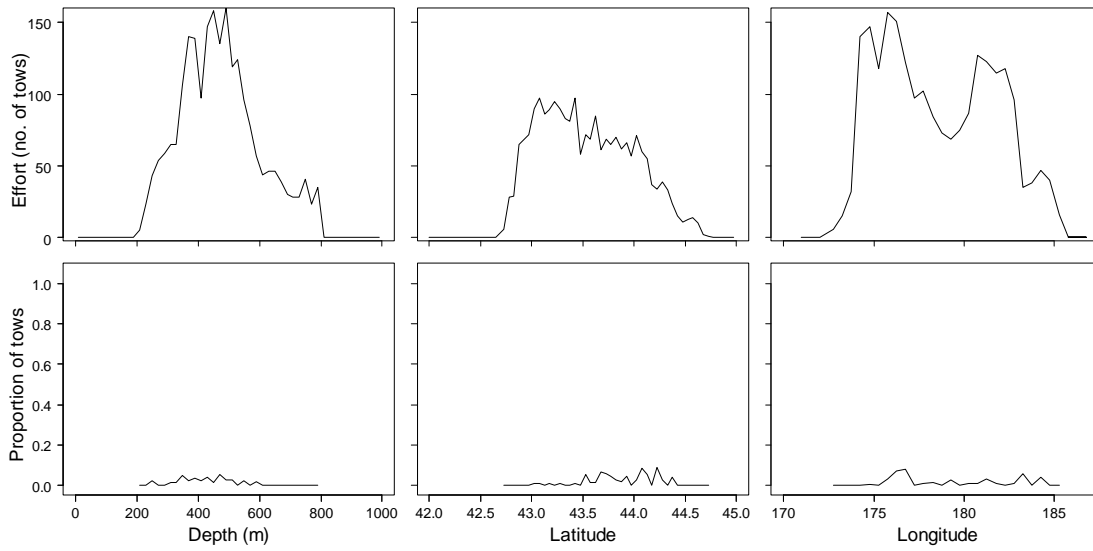
The core survey area and depth range **is** appropriate for this species. Biomass of this species is **poorly** estimated in the core survey area. Biomass **shows no clear trend** since the start of the time series.

#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	1	57
1993	0	100
1994	3	62
1995	0	100
1996	0	-
1997	1	72
1998	3	52
1999	1	100
2000	0	-
2001	0	-
2002	3	40
2003	2	62
2004	0	100
2005	7	45
2006	0	100
2007	1	100
2008	1	88
2009	1	50
2010	1	75



**Distribution**



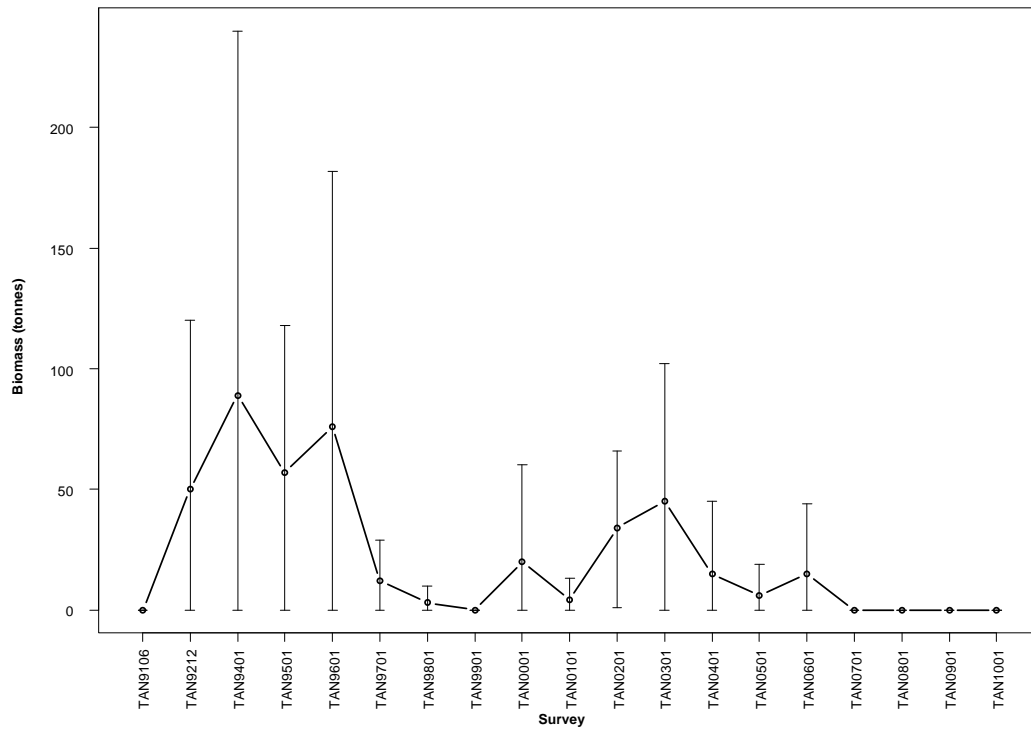


Number of surveys caught 1992–2010 (out of 19):	15
Total catch weight (kg):	286.3
Number measured	0
Length range (mean) (cm)	–
Number weighed	0
Length-weight parameters a, b ( $r^2$ )	–

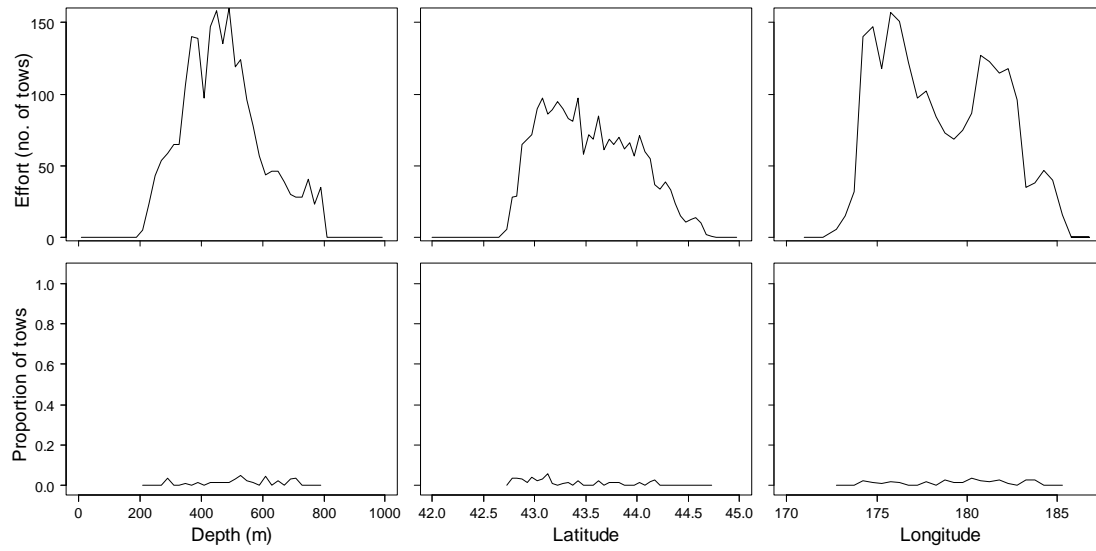
The core survey area and depth range **is not** appropriate for this species. It occurs in midwater. Biomass of this species is **poorly** estimated in the core survey area. Biomass **has decreased** since the start of the time series.

#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	0	-
1993	50	69
1994	89	85
1995	57	54
1996	76	69
1997	12	74
1998	3	100
1999	0	-
2000	20	100
2001	4	100
2002	34	48
2003	45	63
2004	15	100
2005	6	100
2006	15	100
2007	0	-
2008	0	-
2009	0	-
2010	0	-



### Distribution



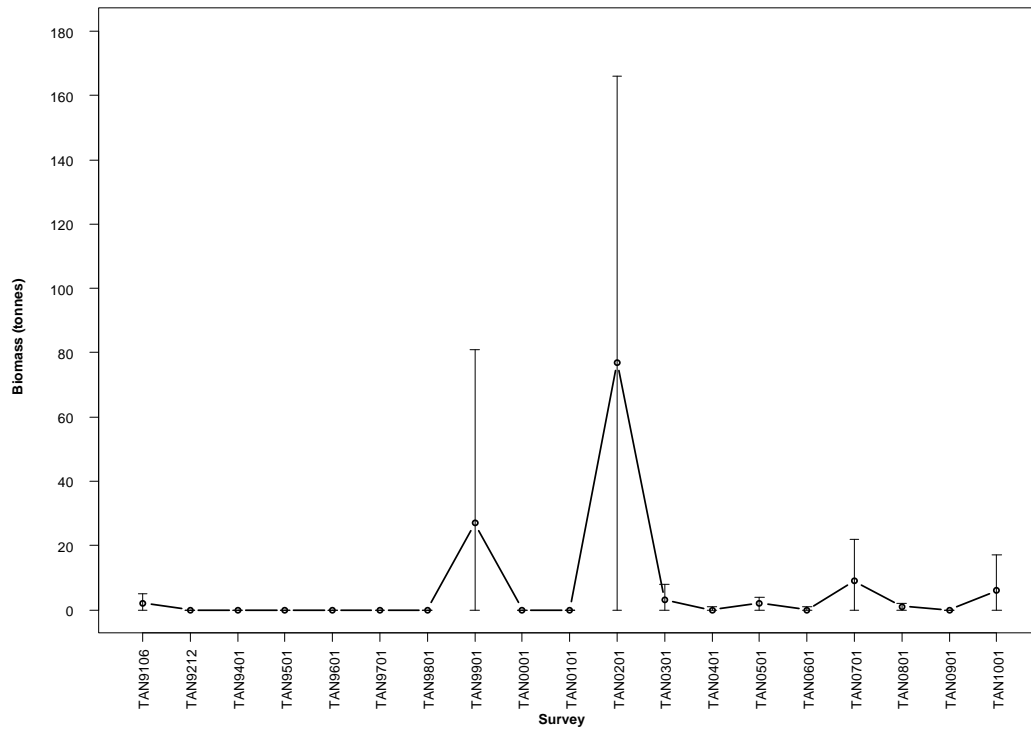


Number of surveys caught 1992–2010 (out of 19):	10
Total catch weight (kg):	53.8
Number measured	0
Length range (mean) (cm)	–
Number weighed	0
Length-weight parameters a, b ( $r^2$ )	–

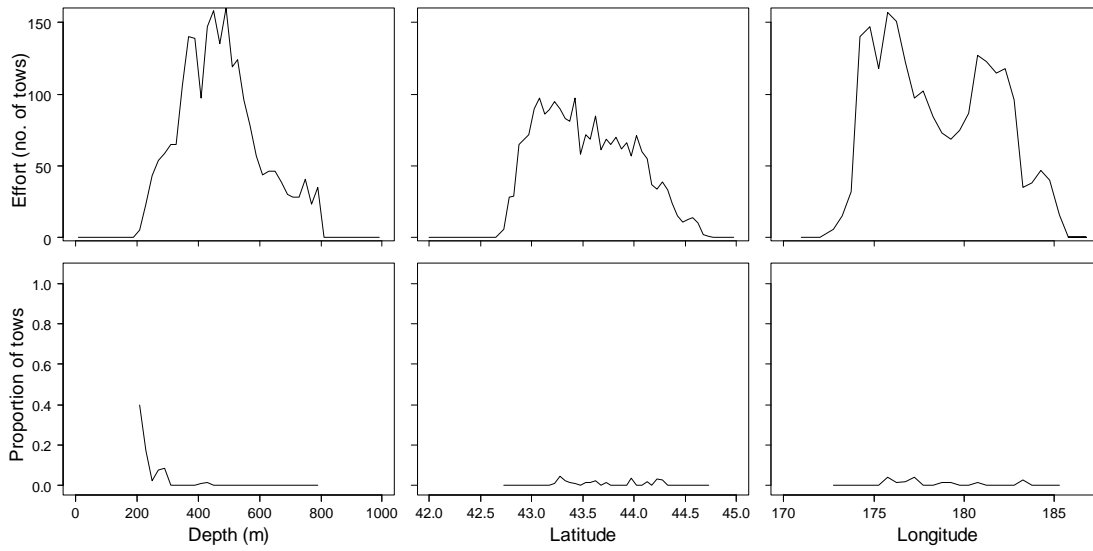
The core survey area and depth range **is not** appropriate for this species. It is found **shallower than 200 m**. Biomass of this species is **poorly** estimated in the core survey area. Biomass **has increased and then decreased** since the start of the time series.

**Relative biomass estimates**

Year	Biomass (t)	cv (%)
1992	2	100
1993	0	-
1994	0	-
1995	0	-
1996	0	-
1997	0	-
1998	0	-
1999	27	98
2000	0	-
2001	0	-
2002	77	58
2003	3	96
2004	0	100
2005	2	64
2006	0	100
2007	9	76
2008	1	71
2009	0	-
2010	6	91



### Distribution







**Coded as ARA**

Number of surveys caught 1992–2010 (out of 19):	3
Total catch weight (kg):	16.8

**Coded as DHO**

Number of surveys caught 1992–2010 (out of 19):	11
Total catch weight (kg):	24.3

**Coded as ECH**

Number of surveys caught 1992–2010 (out of 19):	4
Total catch weight (kg):	114.7

**Coded as ECN**

Number of surveys caught 1992–2010 (out of 19):	5
Total catch weight (kg):	22.2

**Coded as GPA**

Number of surveys caught 1992–2010 (out of 19):	10
Total catch weight (kg):	13.5

**Coded as GRM**

Number of surveys caught 1992–2010 (out of 19):	15
Total catch weight (kg):	673

**Coded as PBU**

Number of surveys caught 1992–2010 (out of 19):	3
Total catch weight (kg):	14.2

**Coded as PMU**

Number of surveys caught 1992–2010 (out of 19):	10
Total catch weight (kg):	152.4

**Coded as SPT**

Number of surveys caught 1992–2010 (out of 19):	10
Total catch weight (kg):	74.5

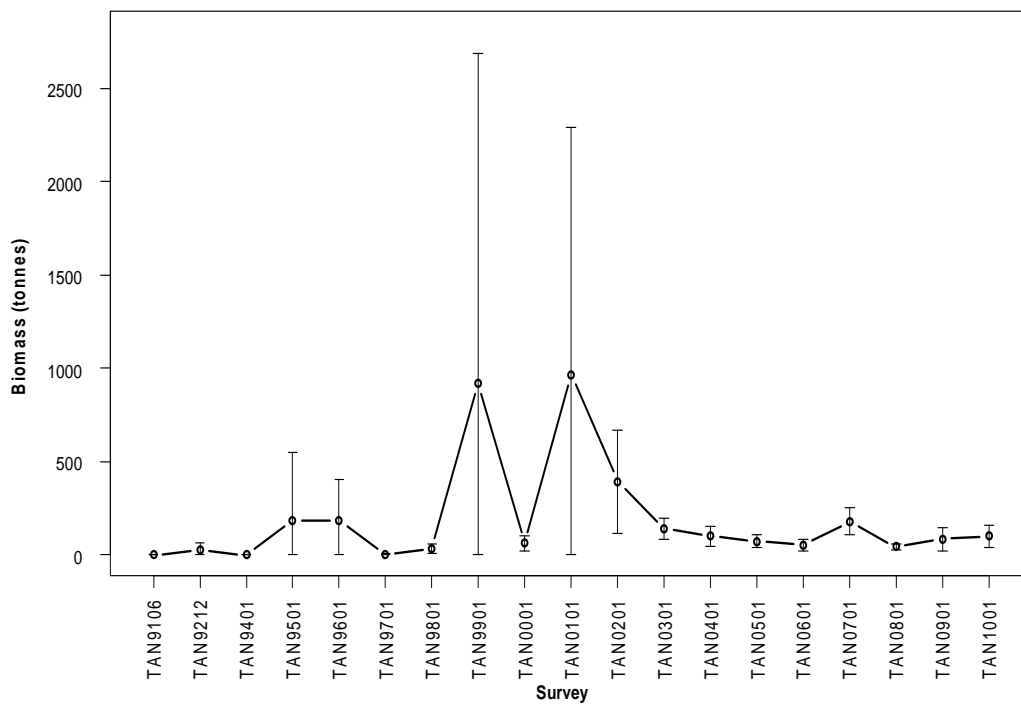
**Coded as TAM**

Number of surveys caught 1992–2010 (out of 19):	13
Total catch weight (kg):	170.2

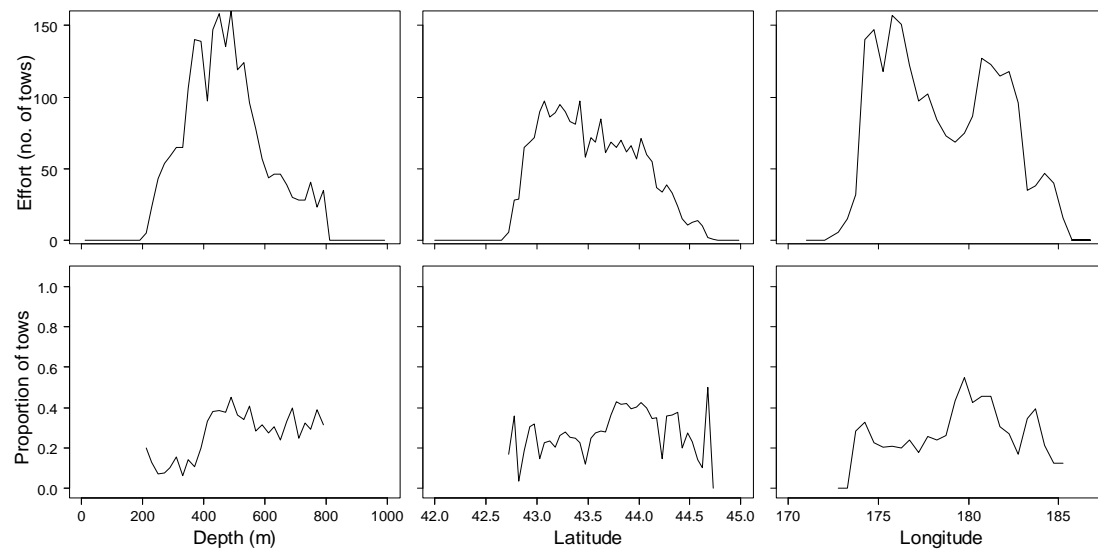
The core survey area and depth range is appropriate for this group. Biomass of this group is **poorly** estimated in the core survey area. Biomass has **increased and then decreased** since the start of the time series.

### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	0	-
1993	30	65
1994	0	-
1995	185	100
1996	183	61
1997	4	54
1998	36	34
1999	923	97
2000	64	32
2001	965	70
2002	393	36
2003	141	21
2004	102	27
2005	75	22
2006	53	28
2007	180	20
2008	44	20
2009	85	38
2010	101	30



## Distribution



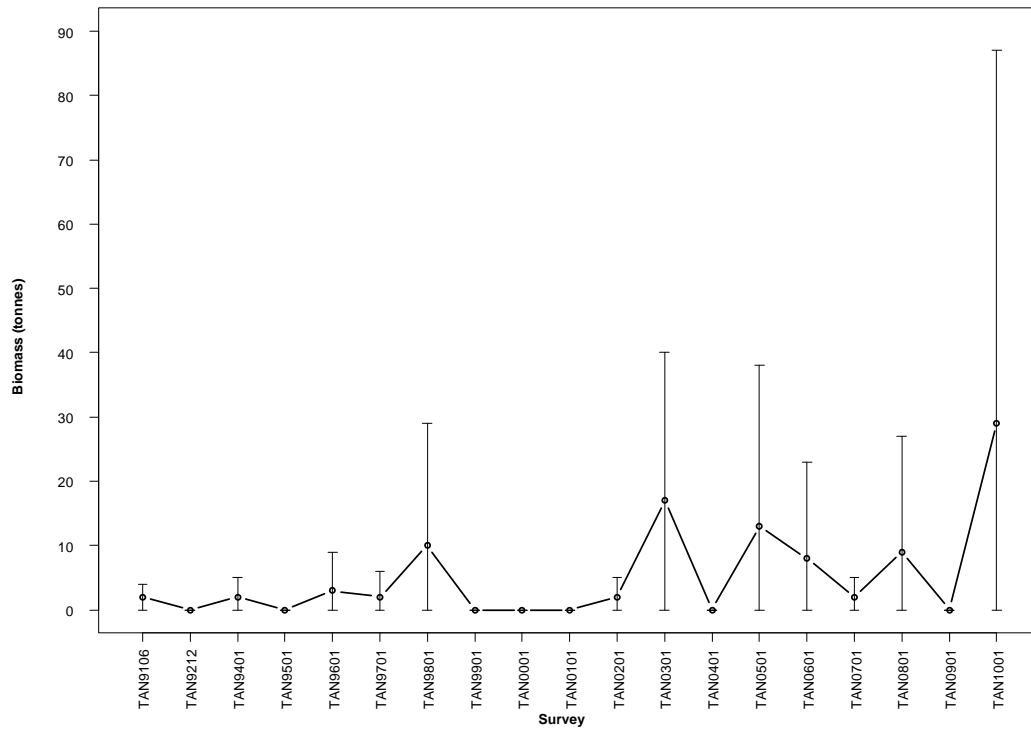


Number of surveys caught 1992–2010 (out of 19):	12
Total catch weight (kg):	66.1
Number measured	41
Length range (mean) (cm, FL)	35–51 (45.2)
Number weighed	14
Length-weight parameters a, b ( $r^2$ )	–

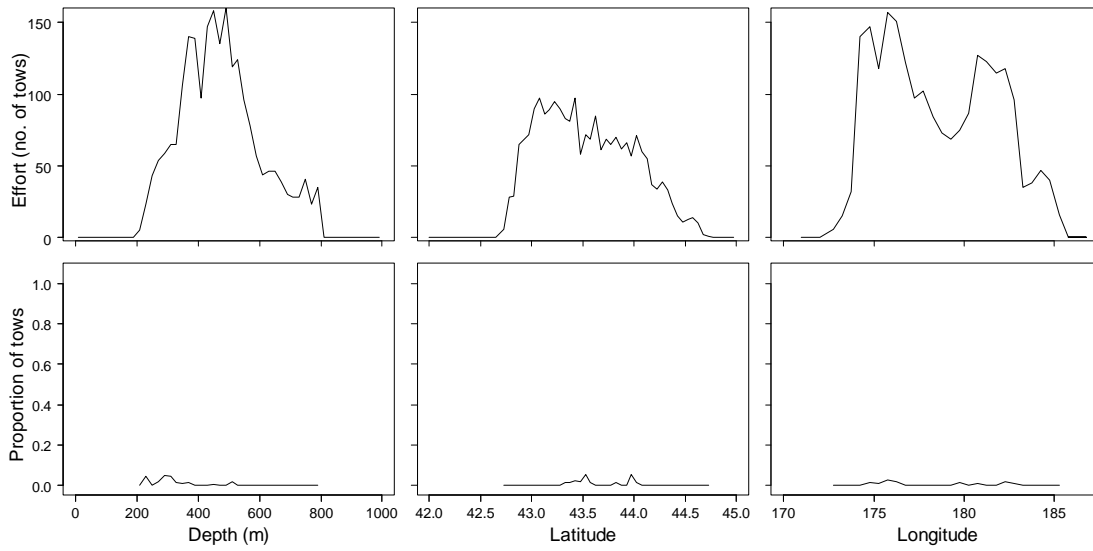
There were **too few fish caught to determine whether the core survey area is appropriate for this species**. Biomass of this species is **poorly** estimated in the core survey area. Biomass **has increased** since the start of the time series.

#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	2	68
1993	0	-
1994	2	85
1995	0	-
1996	3	100
1997	2	100
1998	10	100
1999	0	-
2000	0	-
2001	0	-
2002	2	100
2003	17	66
2004	0	-
2005	13	100
2006	8	100
2007	2	100
2008	9	100
2009	0	-
2010	29	100



### Distribution



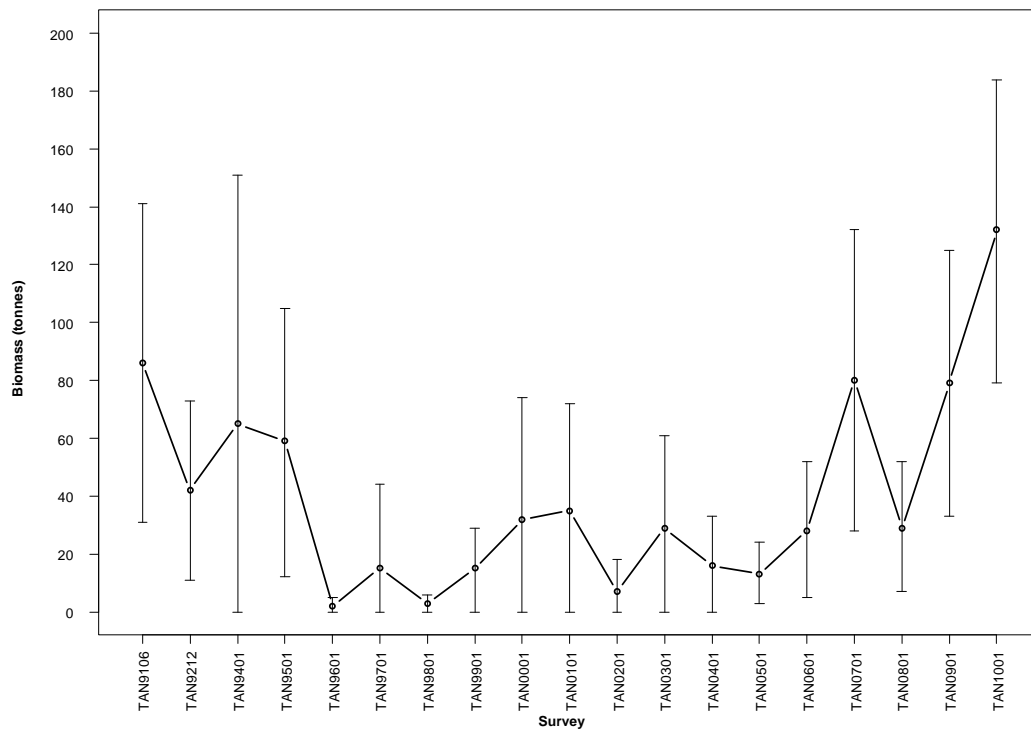


Number of surveys caught 1992–2010 (out of 19):	19
Total catch weight (kg):	550.5
Number measured	1 009
Length range (mean) (cm, FL)	12–66 (24.8)
Number weighed	487
Length-weight parameters a, b (r <sup>2</sup> )	0.014611, 3.029075 (97.58)

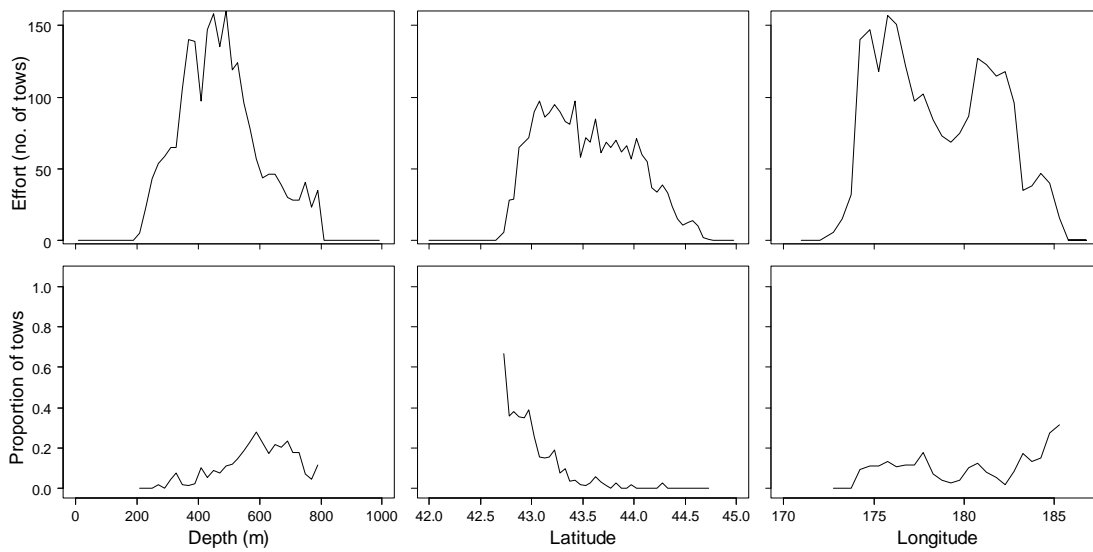
The core survey area and depth range **is not** appropriate for this species. It is found **deeper than 800 m**. Biomass of this species is **poorly** estimated in the core survey area. Biomass has **decreased and then increased** since the start of the time series. Catch rates are highest in the **north**. Length frequencies are usually **unimodal**. Mean length **shows no clear trend** since the start of the time series.

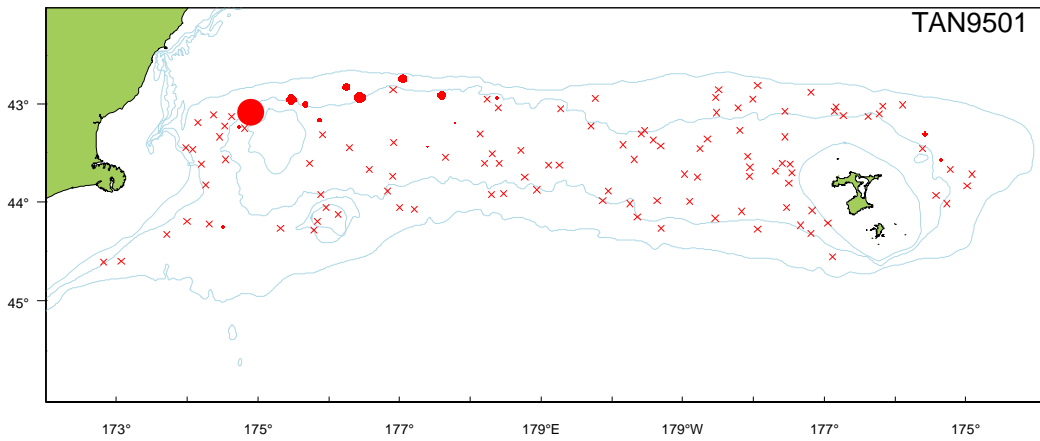
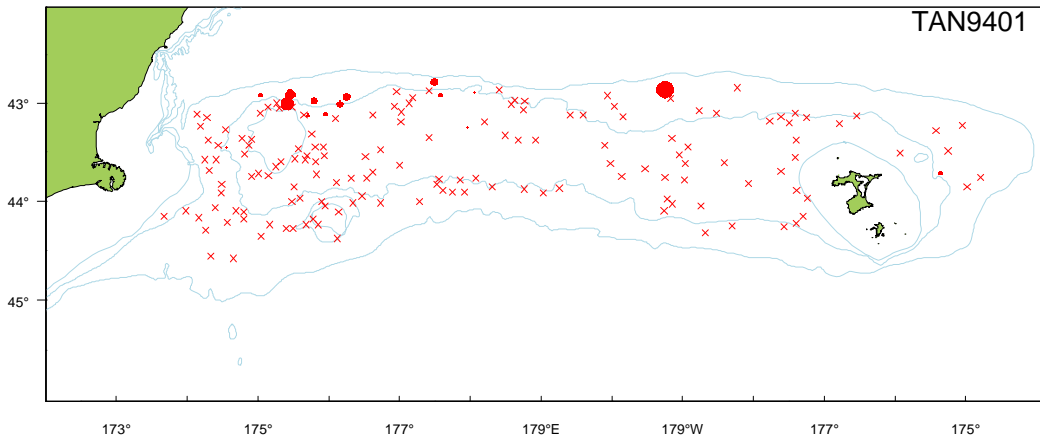
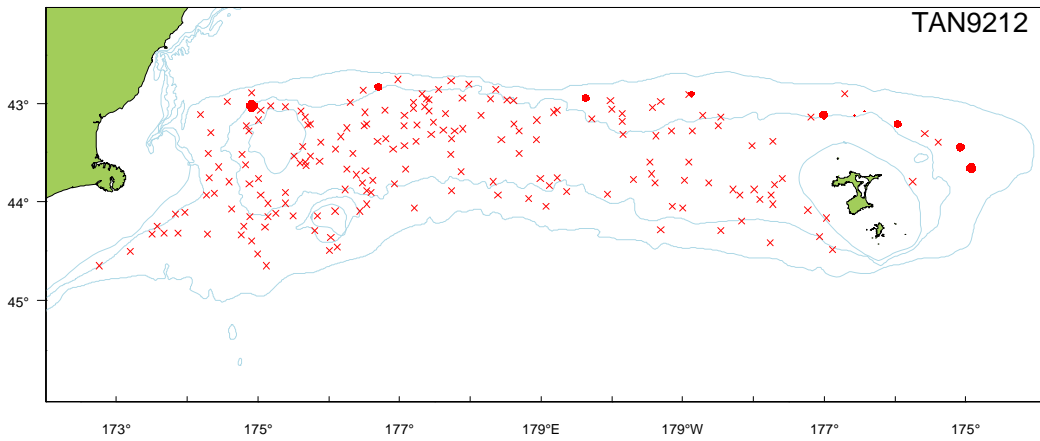
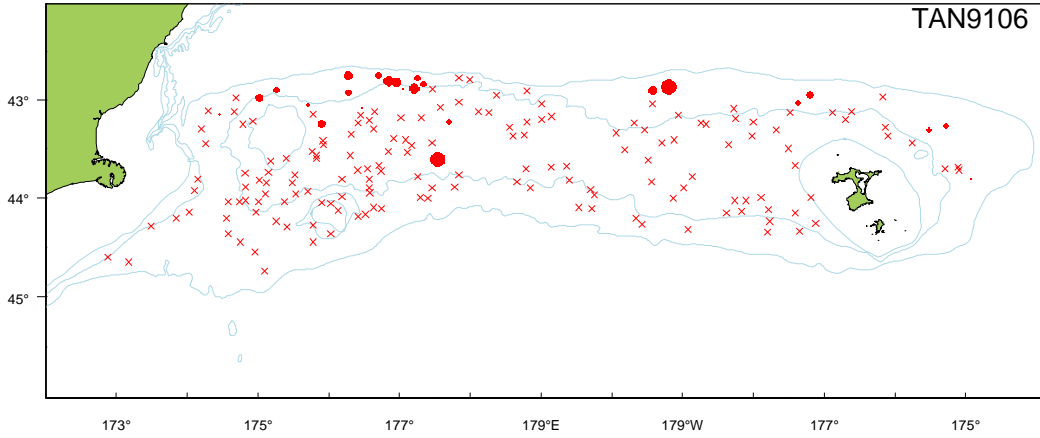
#### Relative biomass estimates and length summary

Year	Biomass (t)	cv (%)	Length (cm)			No. measure d
			Min.	Max.	Mean	
1992	86	32	-	-	-	0
1993	42	37	29	40	36.7	7
1994	65	66	-	-	-	0
1995	59	40	62	62	62.0	1
1996	2	100	30	36	33.0	2
1997	15	100	63	63	63.0	1
1998	3	68	45	45	45.0	1
1999	15	49	19	37	27.7	23
2000	32	64	14	57	27.5	61
2001	35	52	14	66	21.4	65
2002	7	74	63	63	63.0	1
2003	29	54	12	63	22.9	28
2004	16	51	16	56	25.5	22
2005	13	39	14	33	19.8	65
2006	28	41	14	63	21.7	68
2007	80	32	15	41	25.1	119
2008	29	39	15	54	26.4	32
2009	79	29	17	38	24.6	177
2010	132	20	14	39	25.7	272

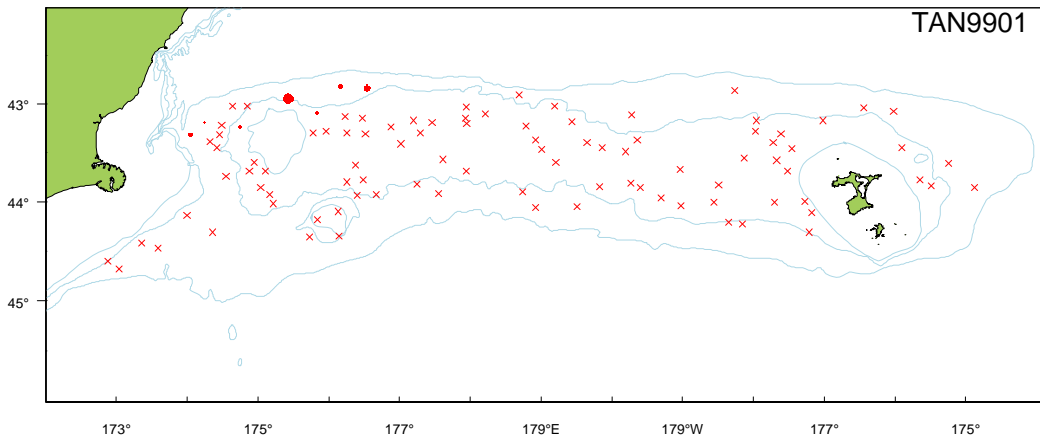
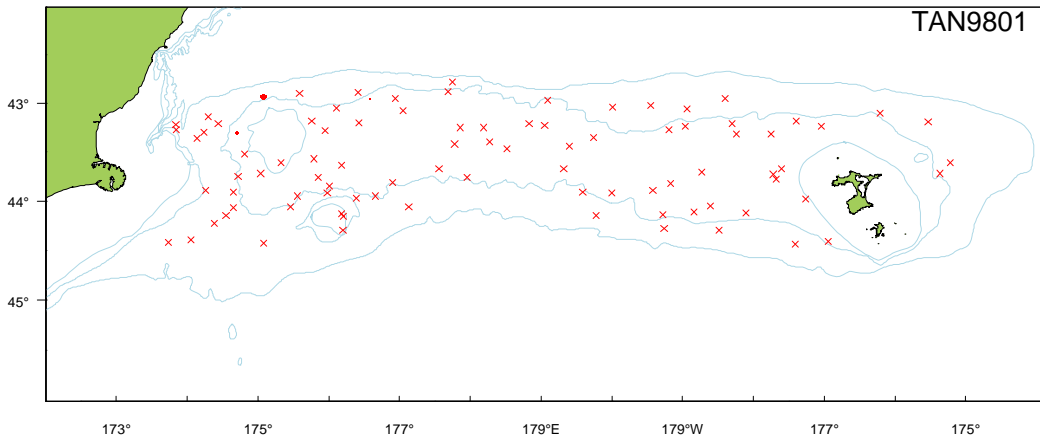
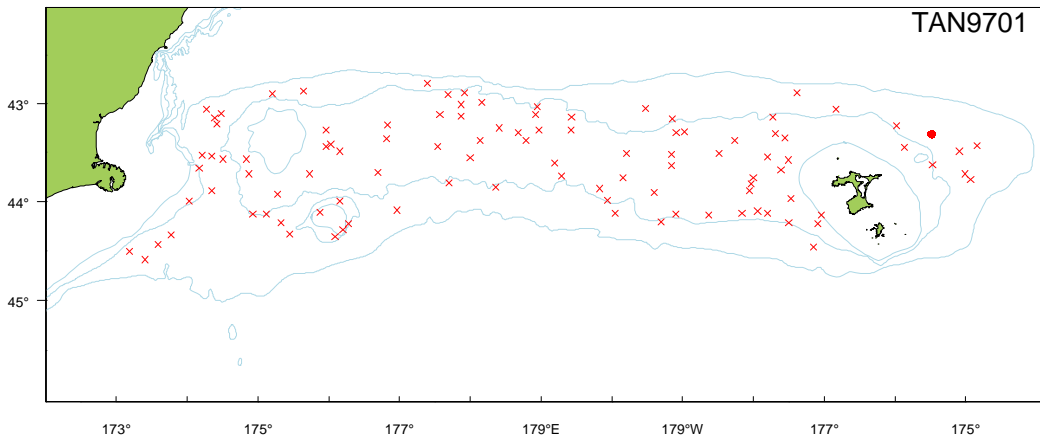
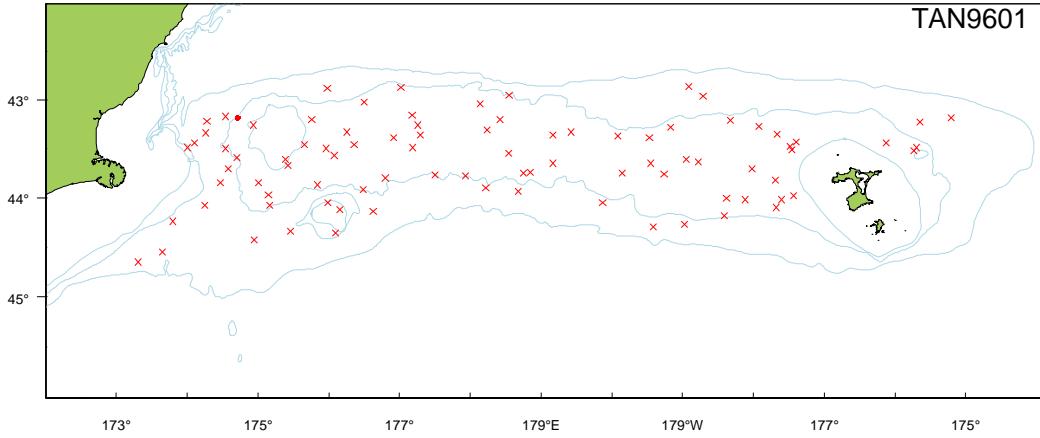


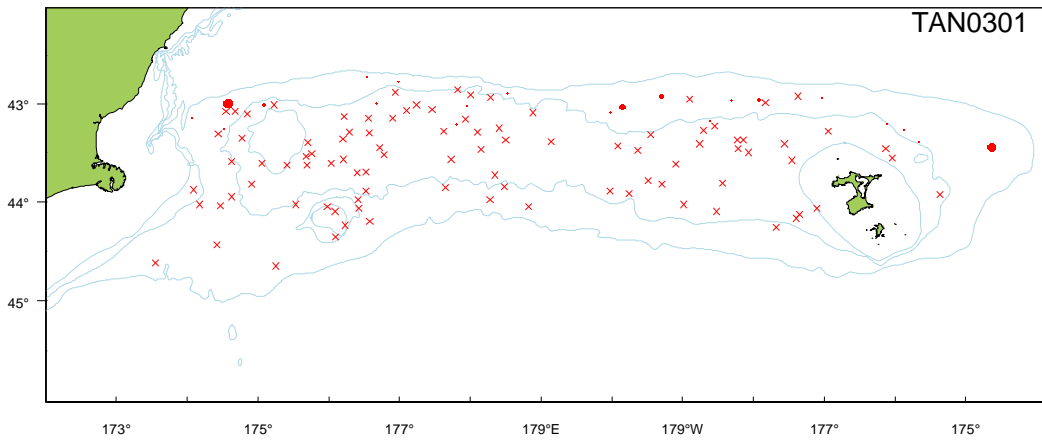
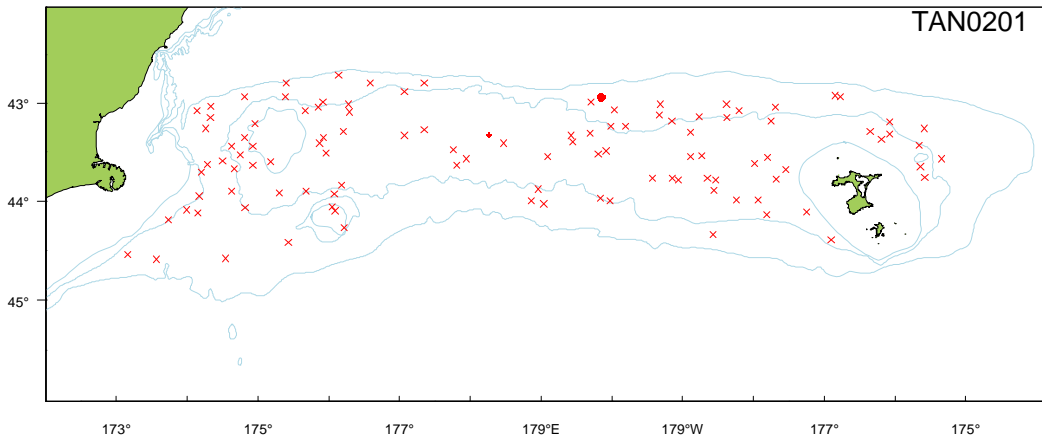
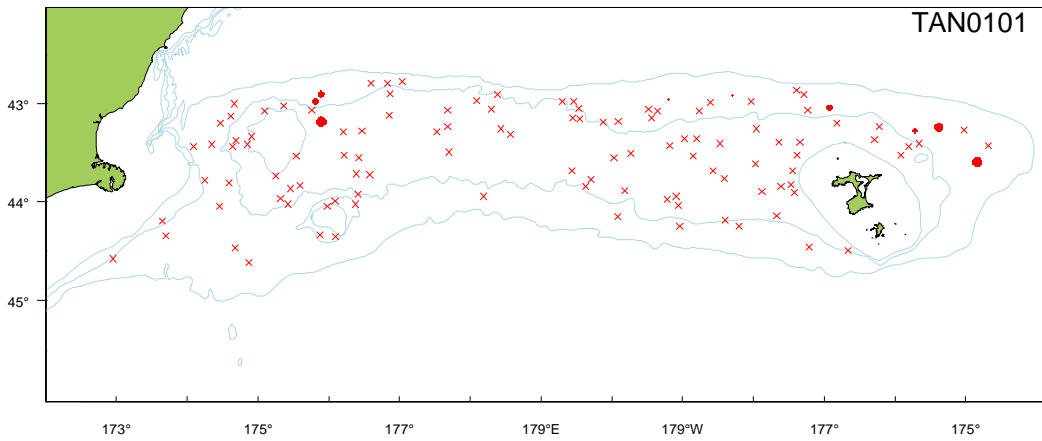
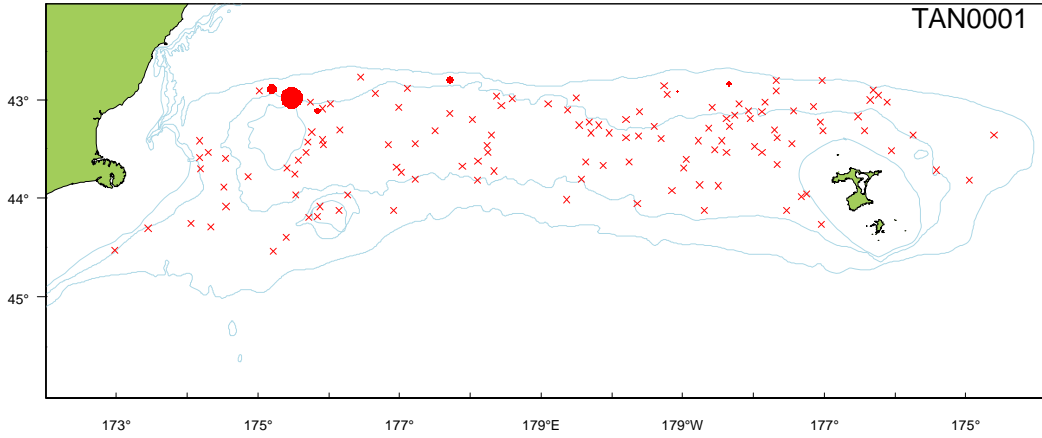
### Distribution

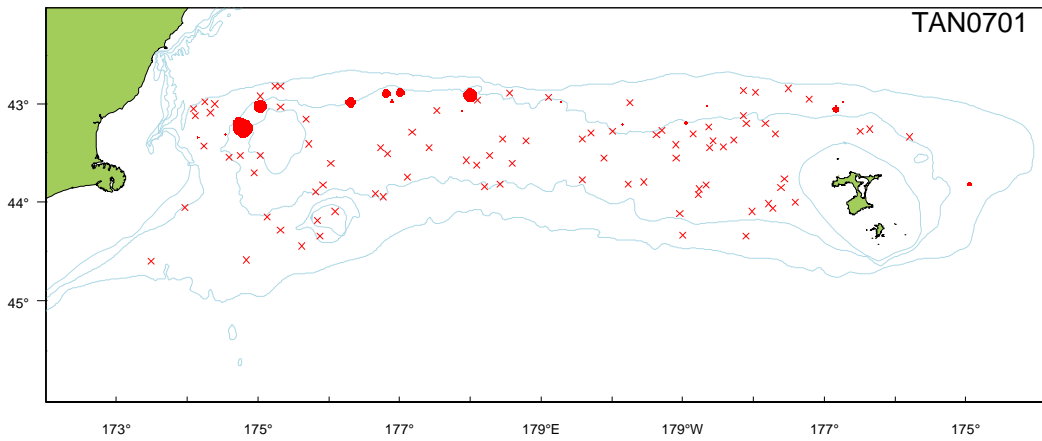
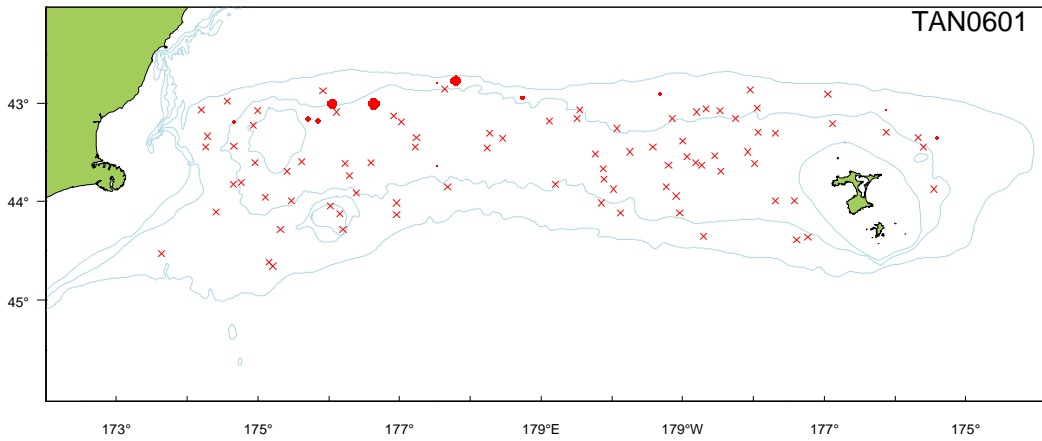
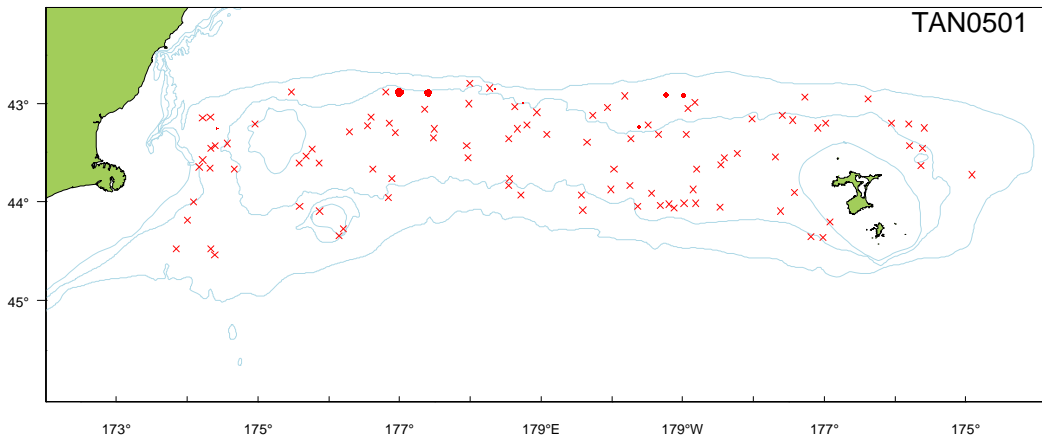
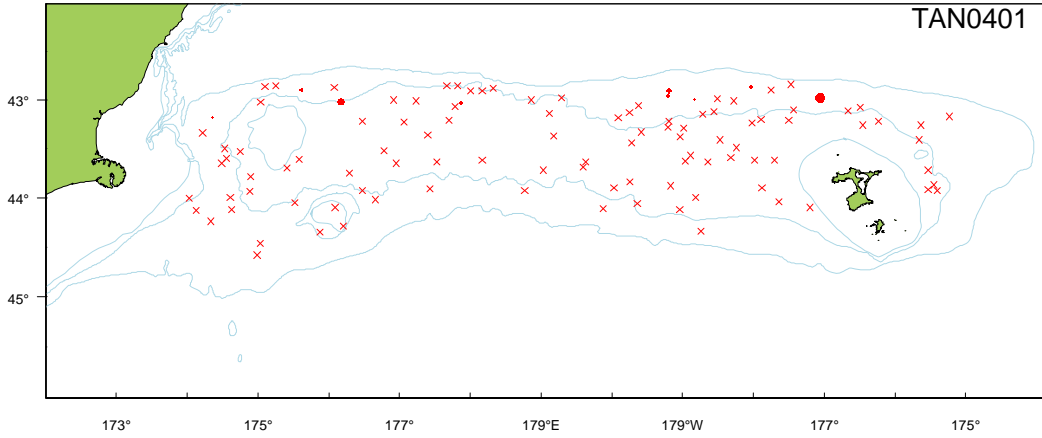


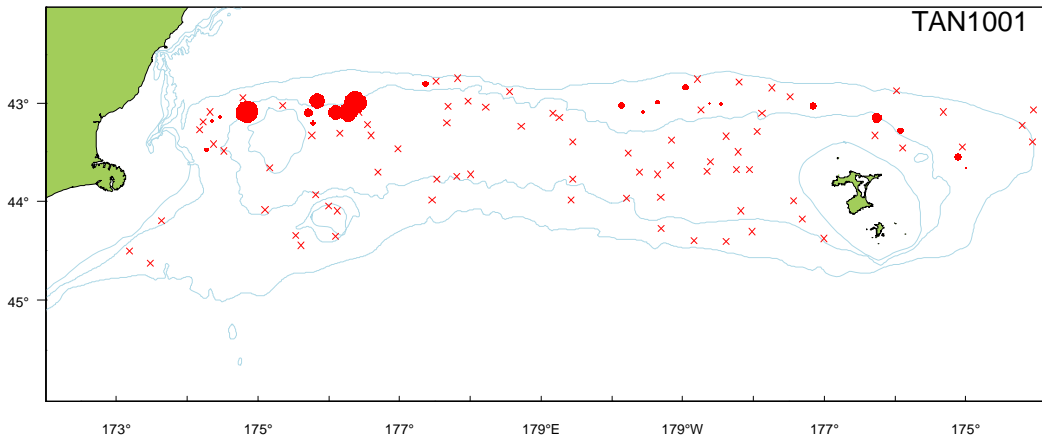
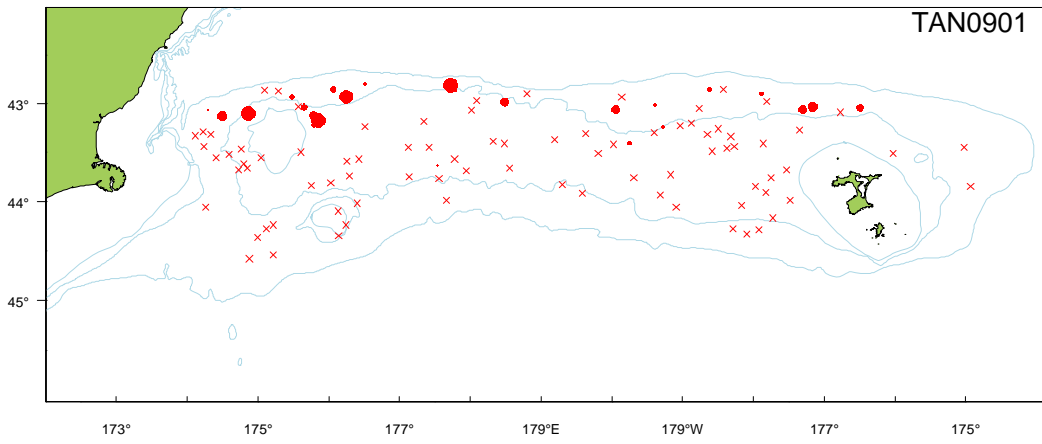
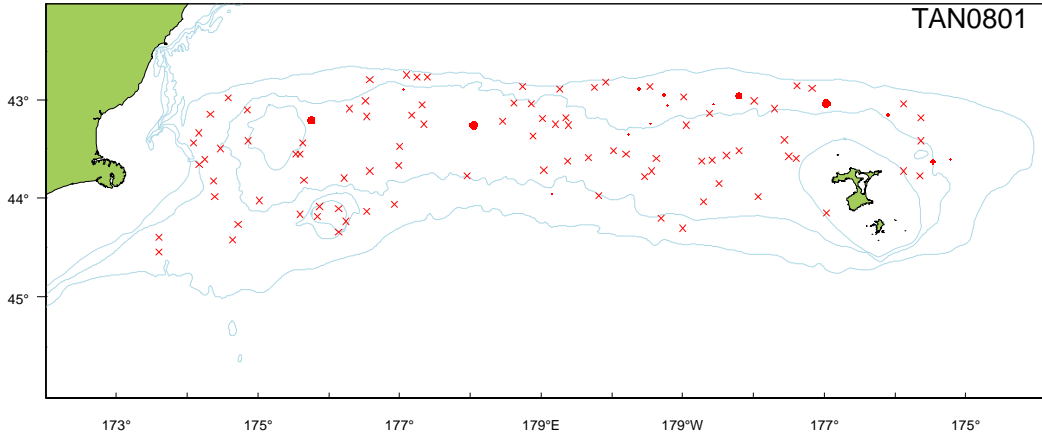




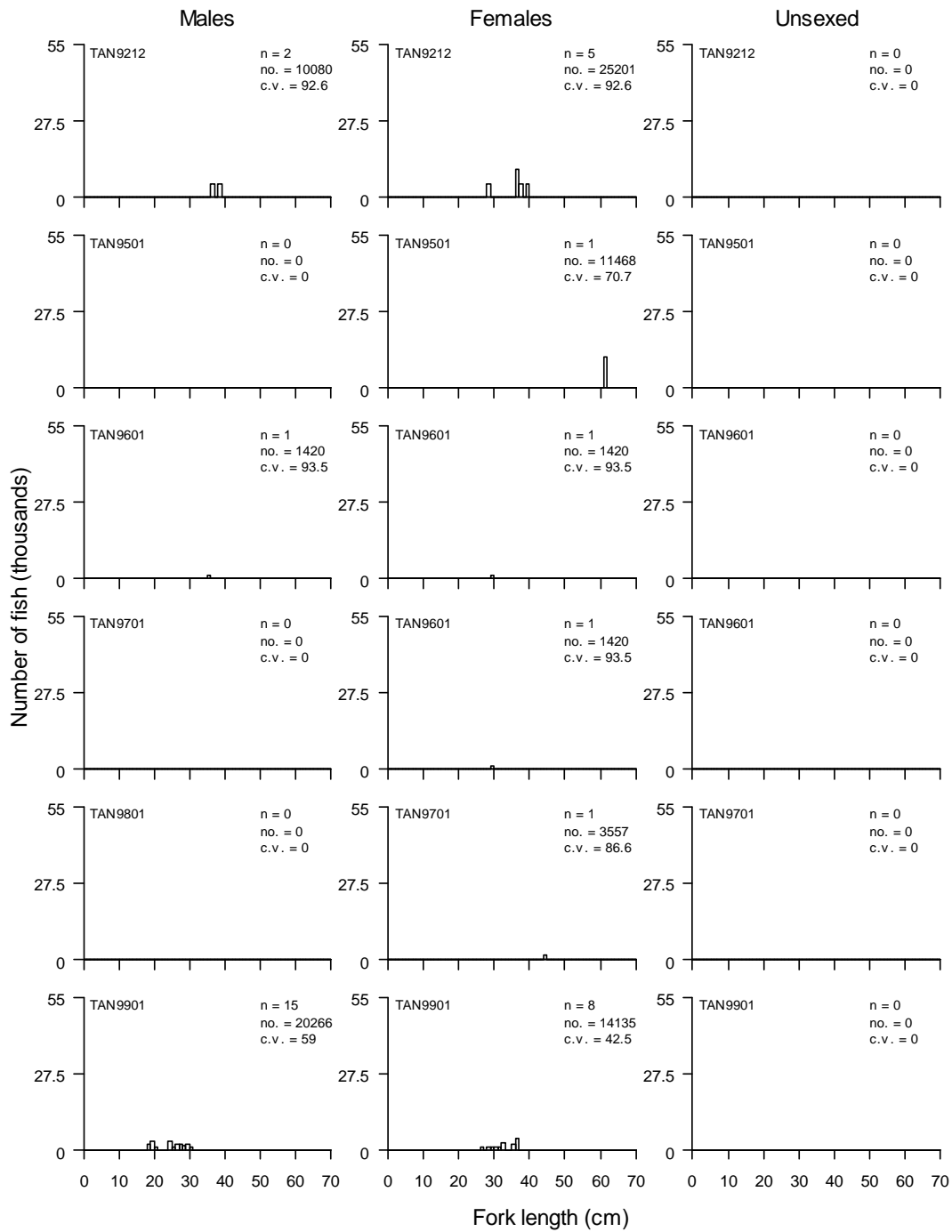


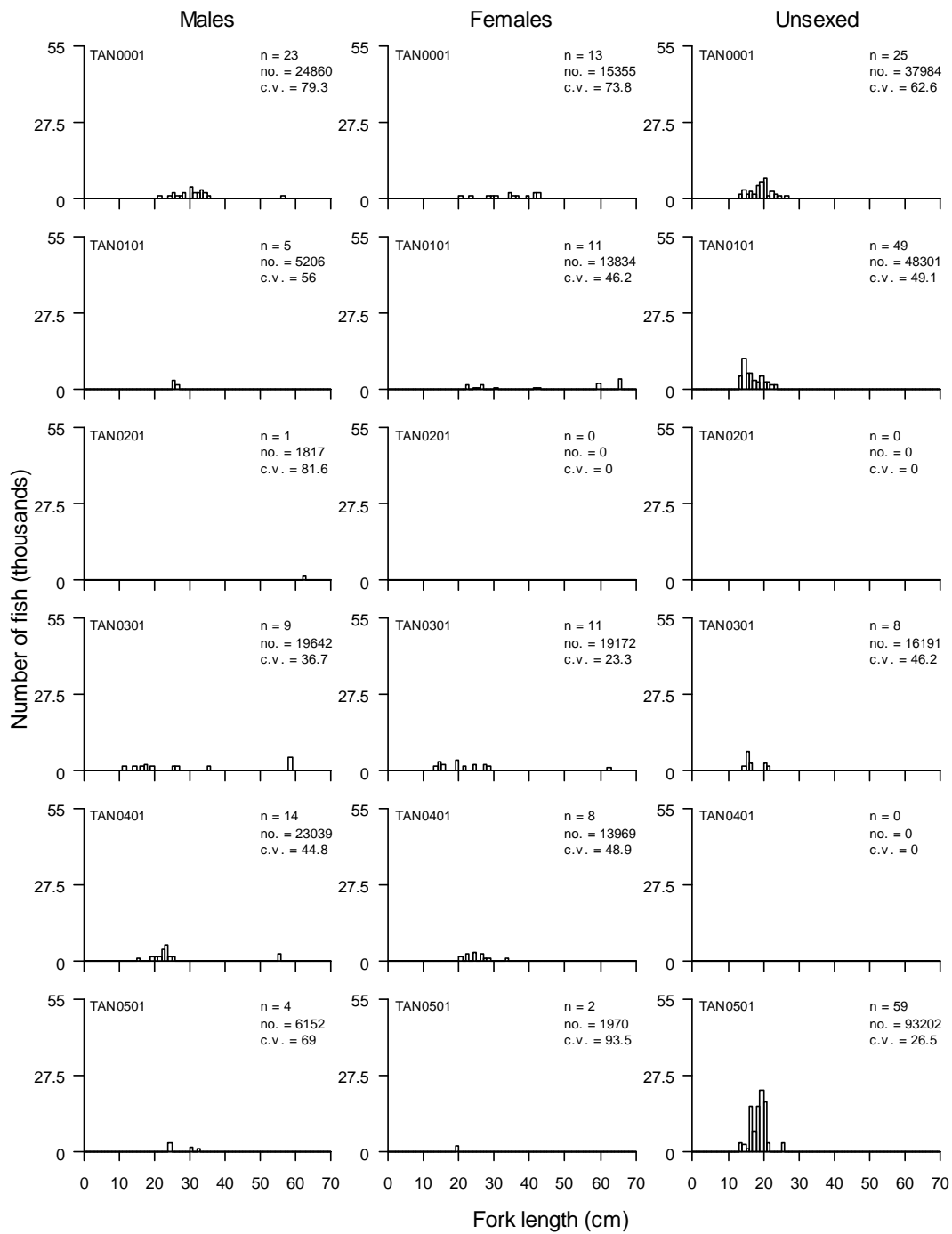


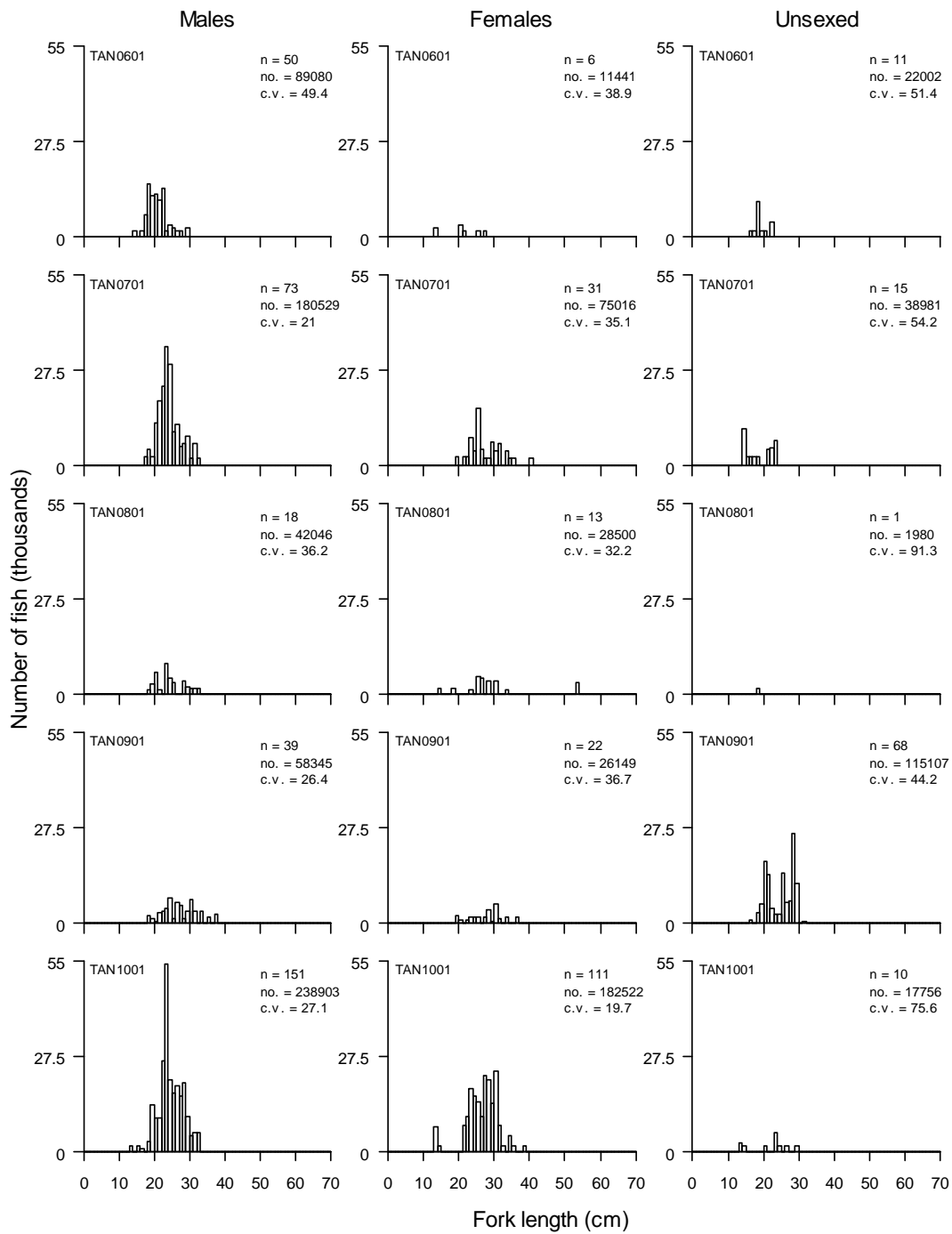




## Length Frequencies









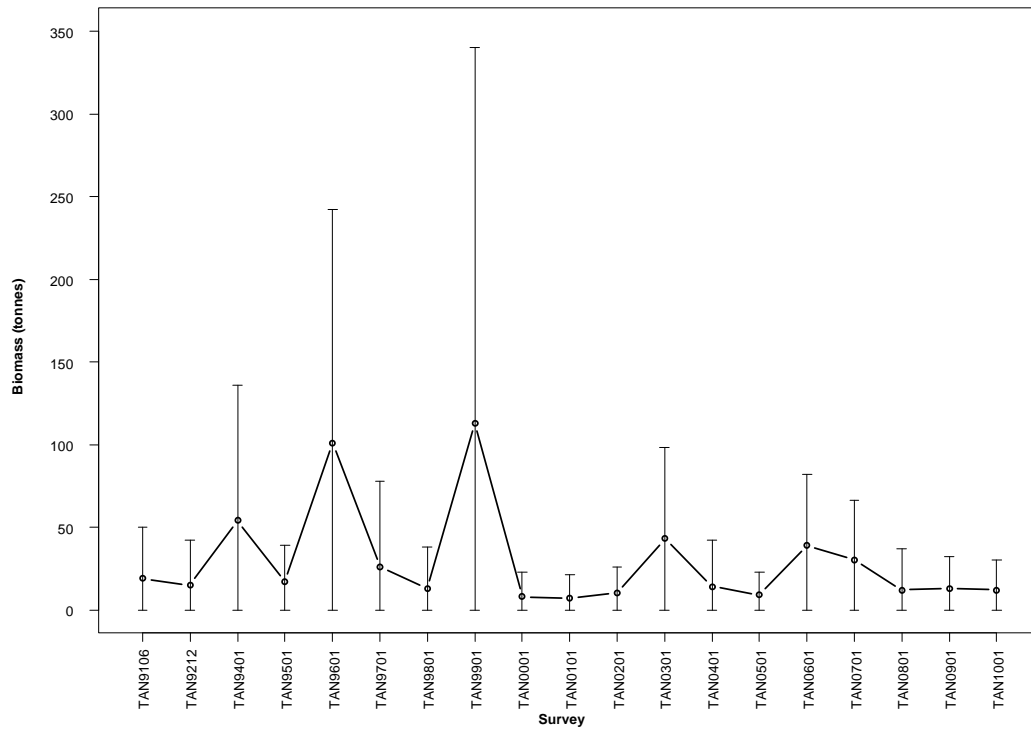
Number of surveys caught 1992–2010 (out of 19):	19
Total catch weight (kg):	310.9
Number measured	2
Length range (mean) (cm)	–
Number weighed	2
Length-weight parameters a, b ( $r^2$ )	–

There were **too few fish caught to determine whether the core survey area is appropriate for this species**. Biomass of this species is **poorly** estimated in the core survey area. Biomass has **decreased** since the start of the time series.

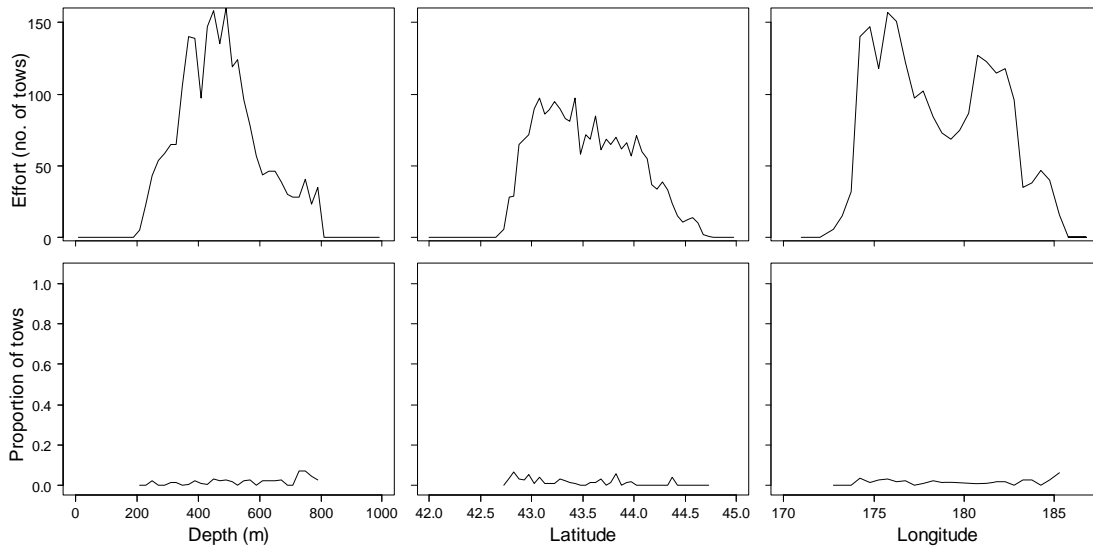
#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	19	84
1993	15	91
1994	54	77
1995	17	64
1996	101	70
1997	26	100
1998	13	100
1999	113	100
2000	8	100
2001	7	100
2002	10	76
2003	43	65
2004	14	100
2005	9	72
2006	39	56
2007	30	60
2008	12	100
2009	13	76
2010	12	78





### Distribution



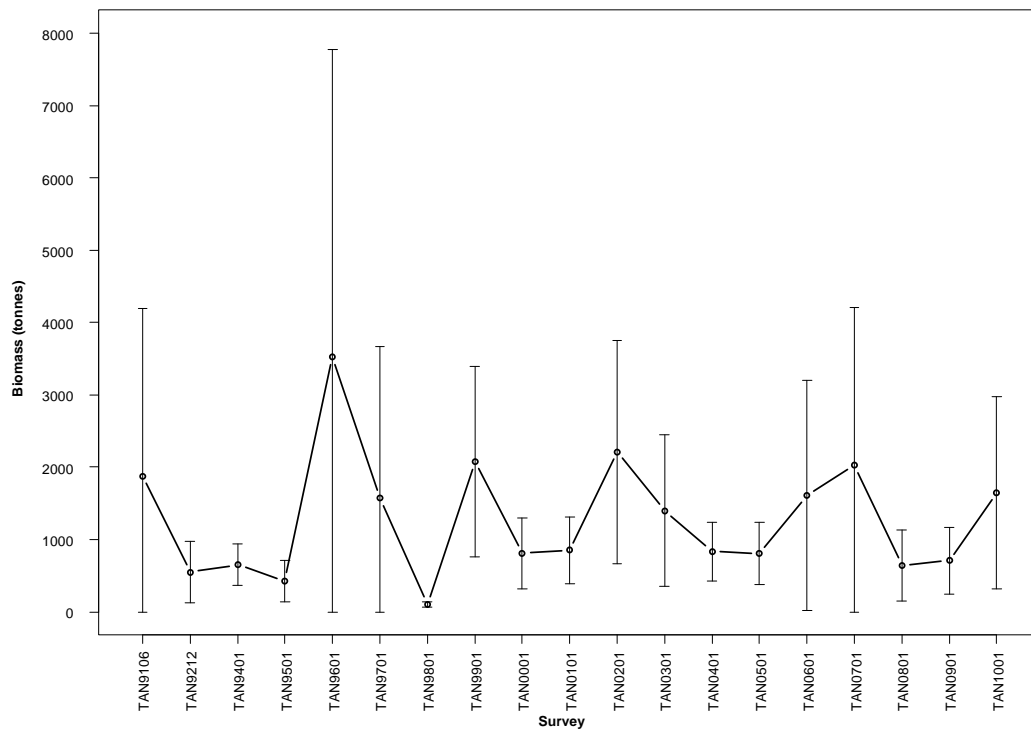


Number of surveys caught 1992–2010 (out of 19):	19
Total catch weight (kg):	9 344.6
Number measured	2 794
Length range (mean) (cm, TL)	19–80 (56.5)
Number weighed	1 205
Length-weight parameters a, b ( $r^2$ )	0.004433, 3.038199 (98.32)

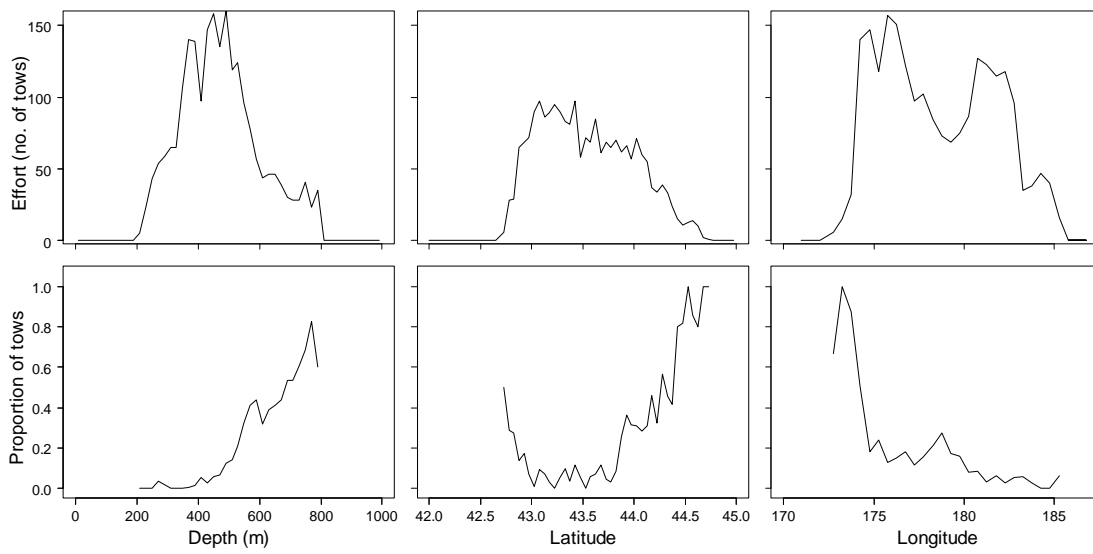
The core survey area and depth range **is not** appropriate for this species. It is found **deeper than 800 m**. Biomass of this species is **moderately well** estimated in the core survey area. Biomass **shows no clear trend** since the start of the time series. Catch rates are highest in the **southwest**. Length frequencies are usually **unimodal with a long left-hand tail**. Mean length **shows no clear trend** since the start of the time series. Gonad stage data indicate that fish **of all stages** are observed in the survey.

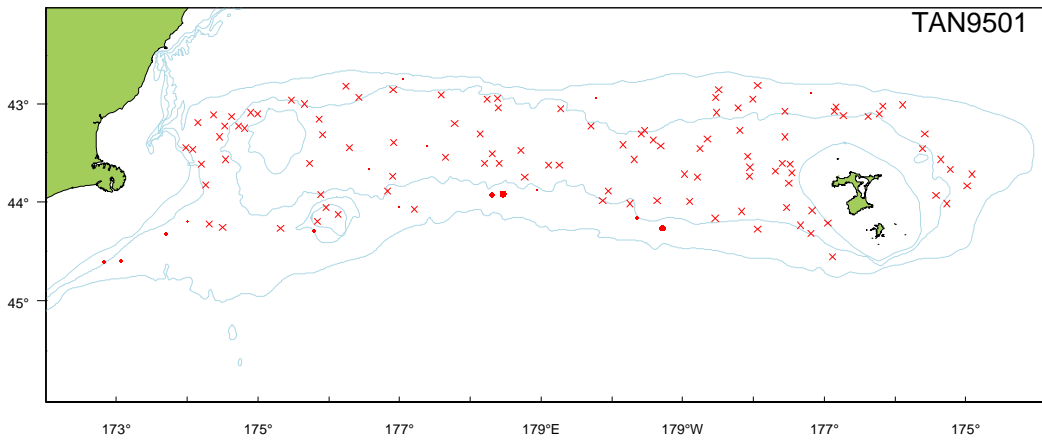
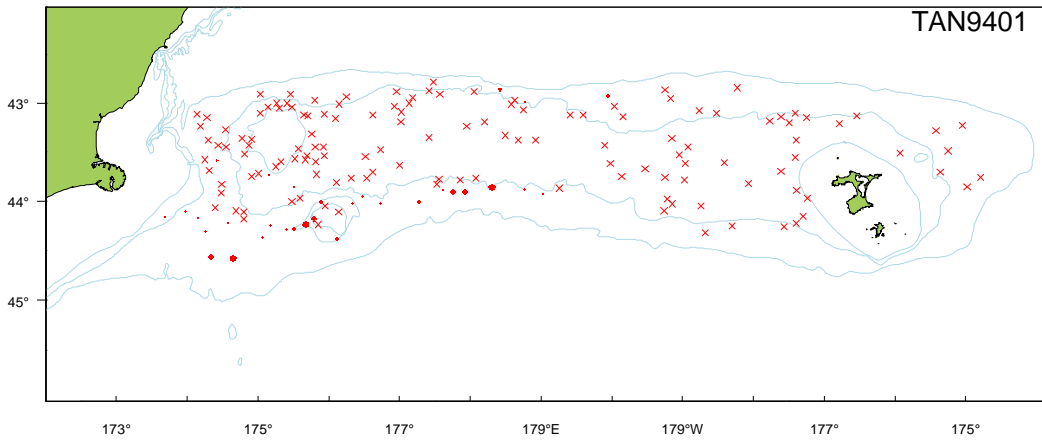
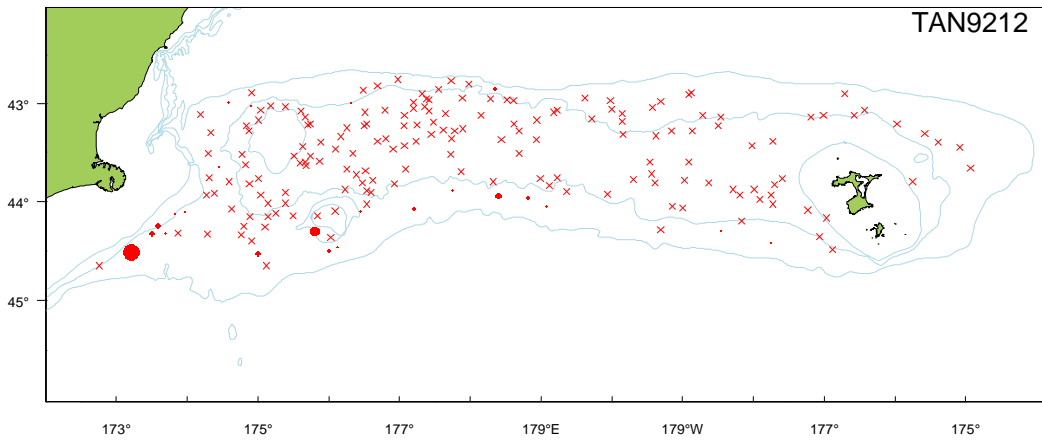
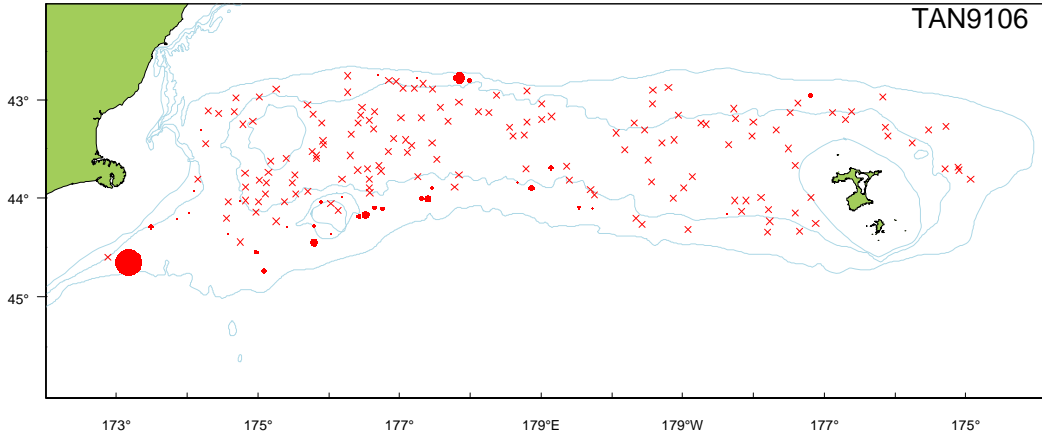
#### Relative biomass estimates and length summary

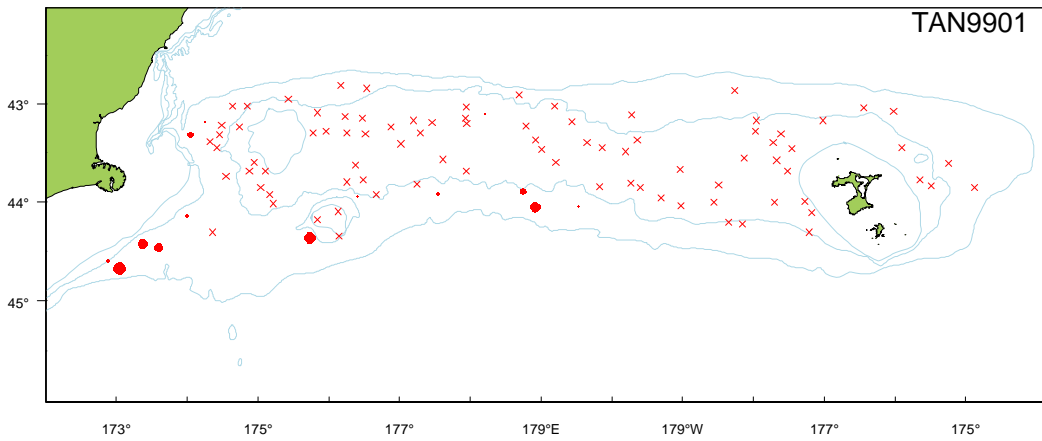
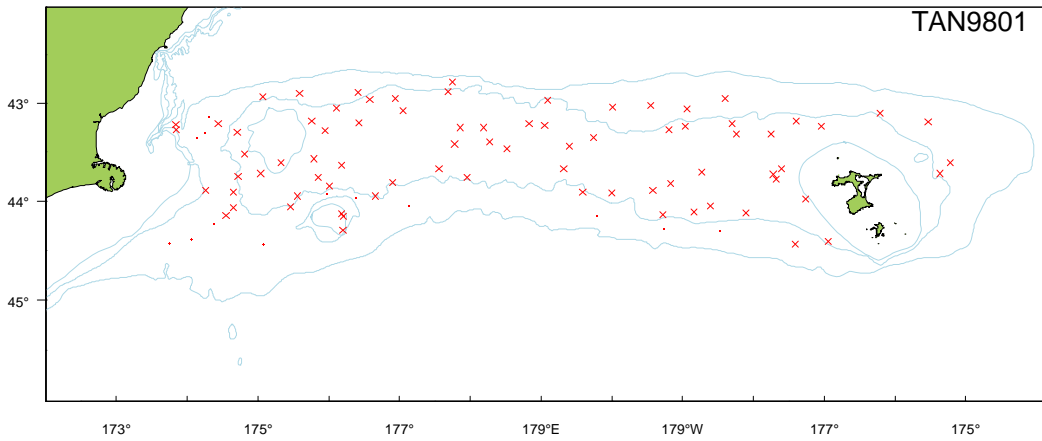
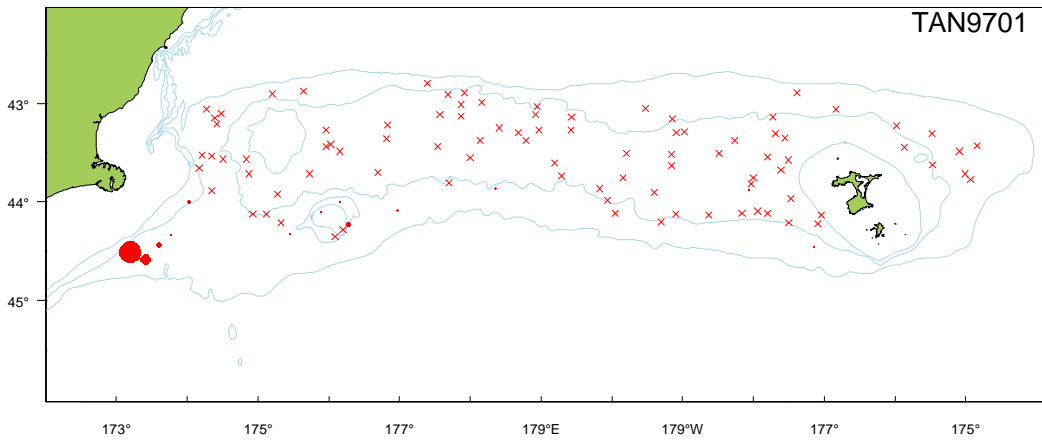
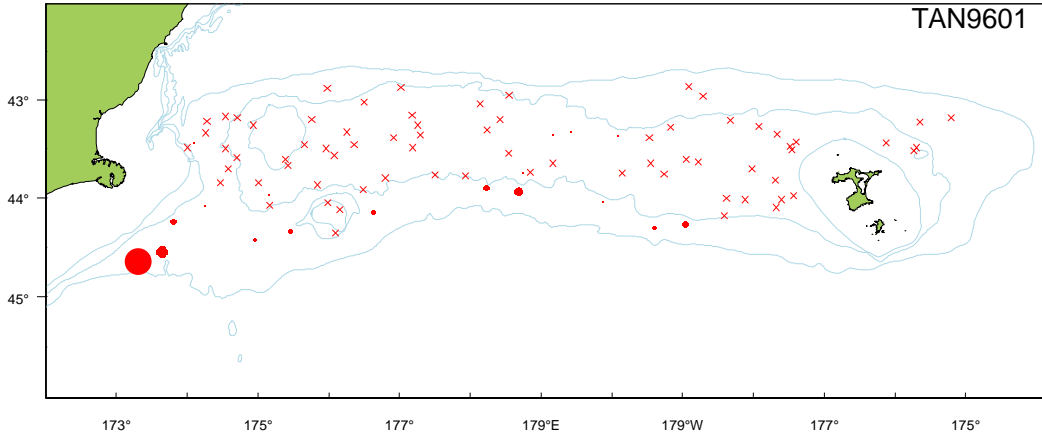
Year	Biomass (t)	cv (%)	Length (cm)			No. measure d
			Min.	Max.	Mean	
1992	1 875	62	-	-	-	0
1993	547	39	-	-	-	0
1994	650	22	-	-	-	0
1995	428	34	-	-	-	0
1996	3 528	60	-	-	-	0
1997	1 575	66	-	-	-	0
1998	105	16	-	-	-	0
1999	2 078	32	-	-	-	0
2000	810	30	-	-	-	0
2001	854	27	-	-	-	0
2002	2 211	35	22	80	57.7	451
2003	1 398	37	19	77	57.7	238
2004	836	24	21	75	56.7	150
2005	809	27	23	78	54.7	192
2006	1 608	49	29	77	59.8	256
2007	2 025	54	22	78	58.7	186
2008	641	38	19	77	50.7	194
2009	708	33	20	75	52.7	163
2010	1 647	40	20	76	56.2	311

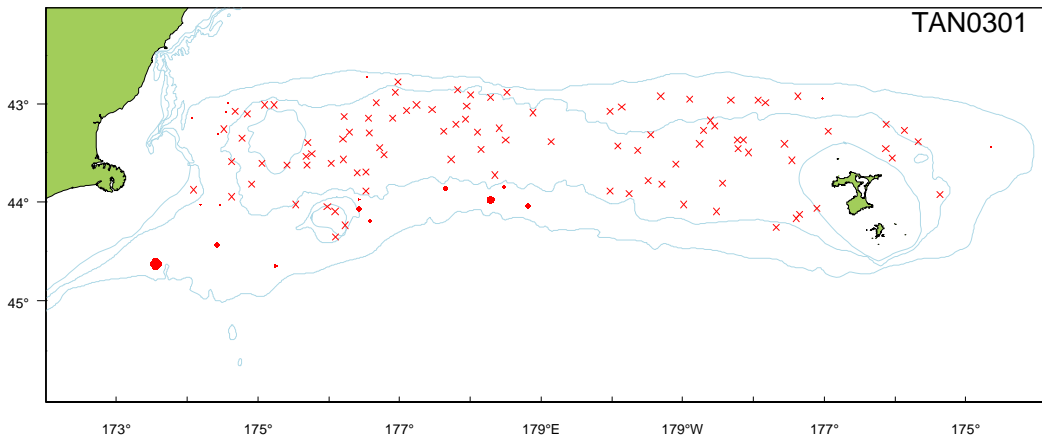
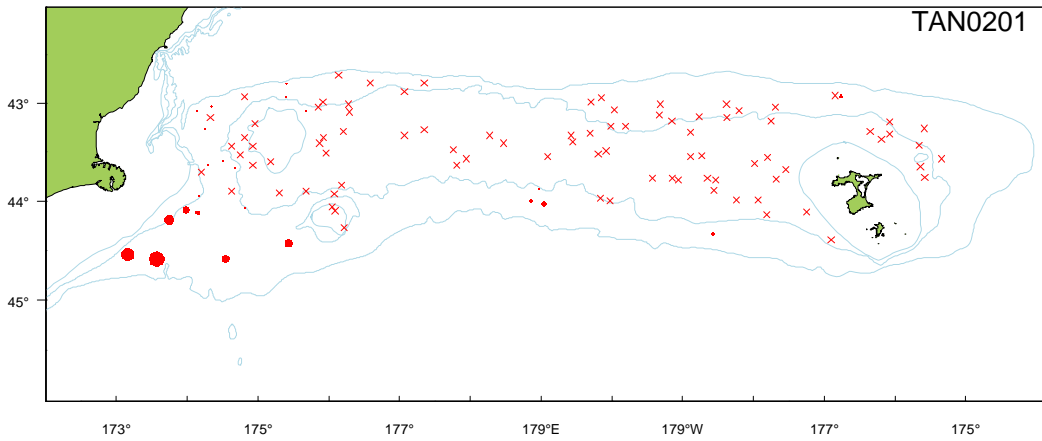
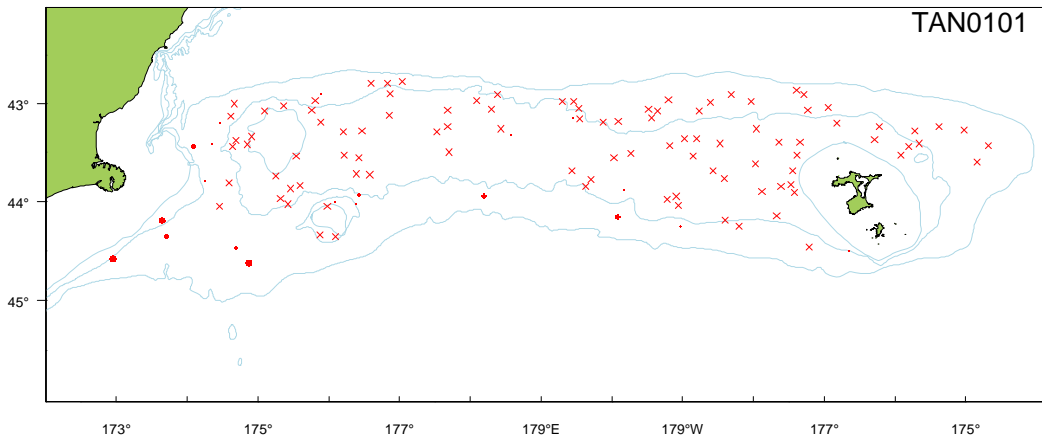
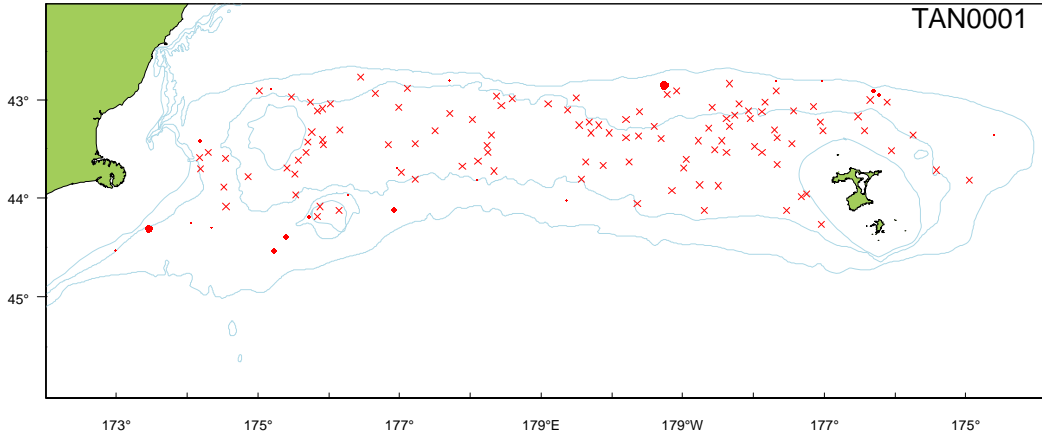


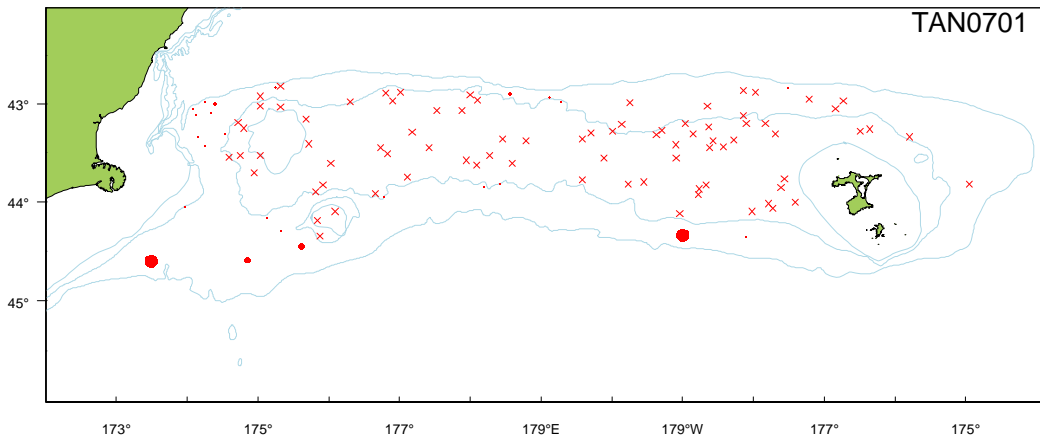
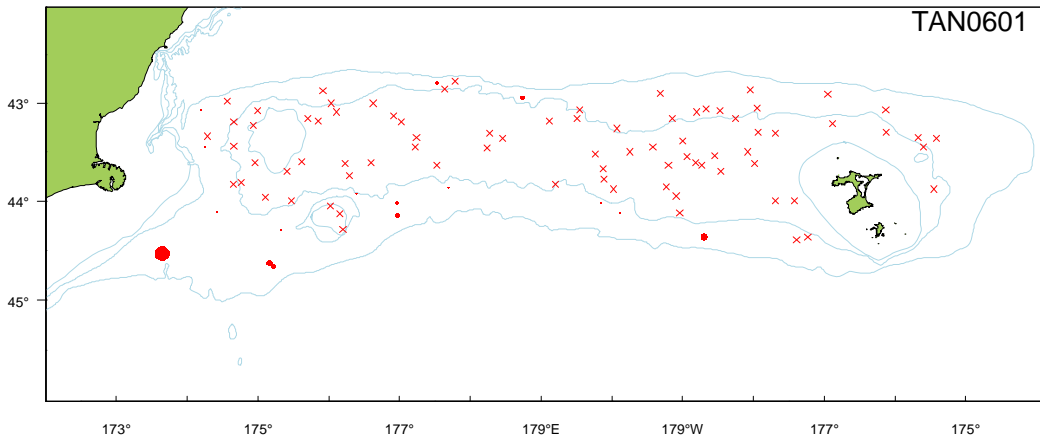
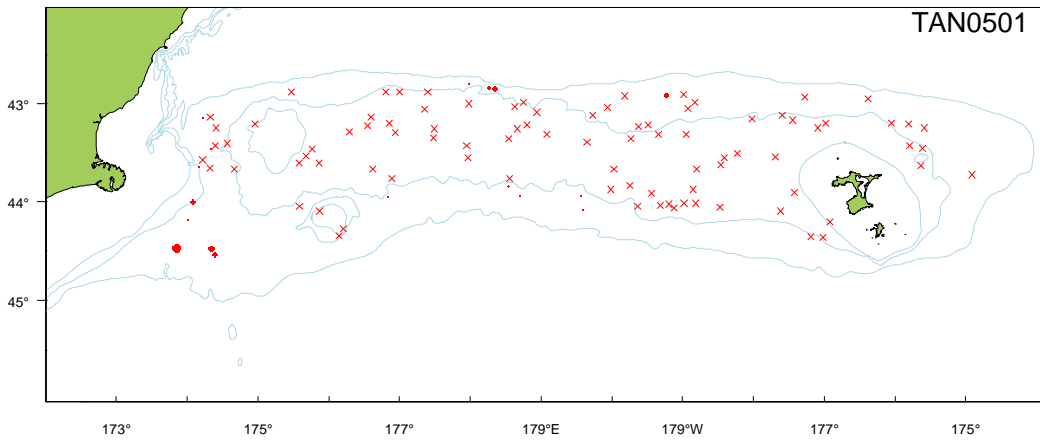
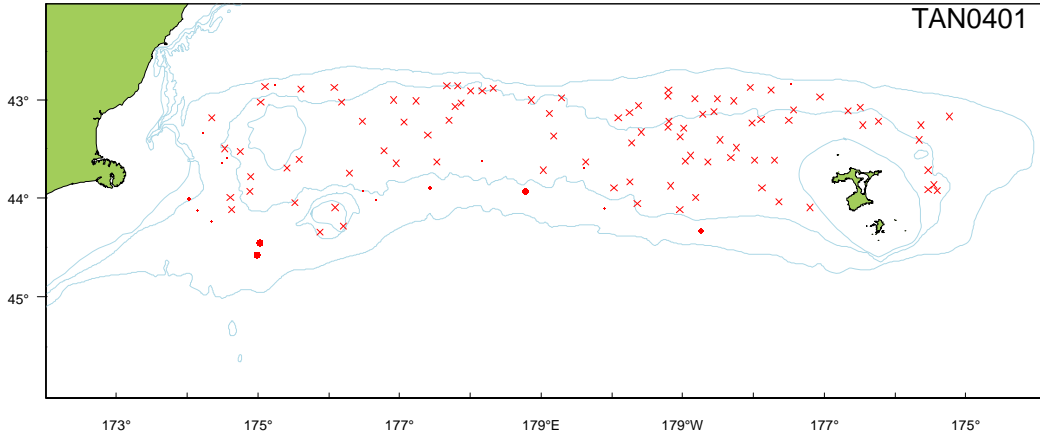
### Distribution

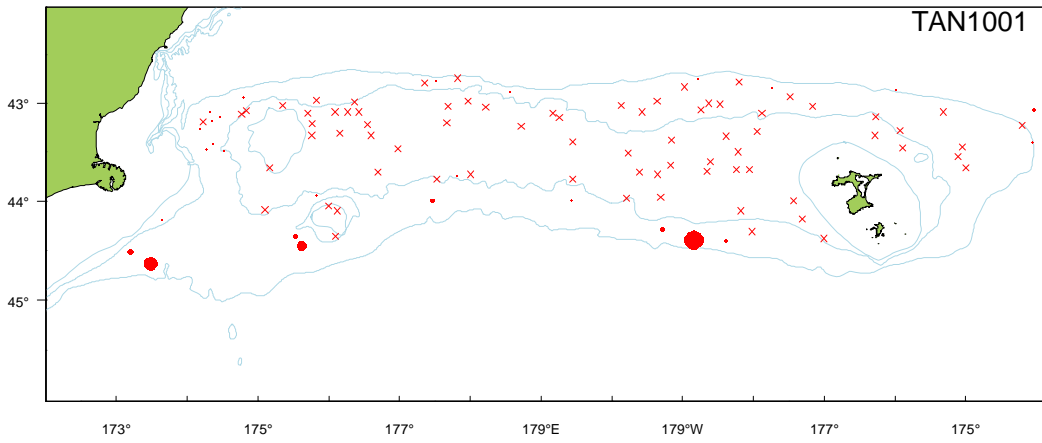
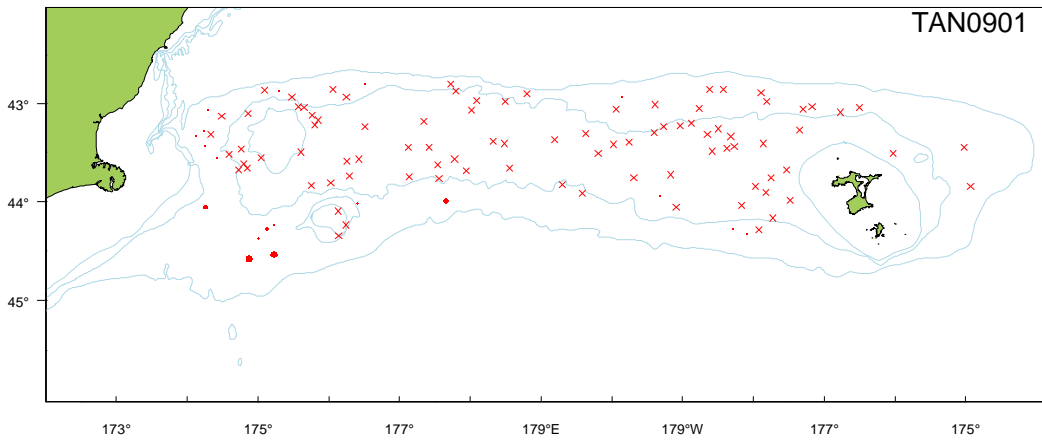
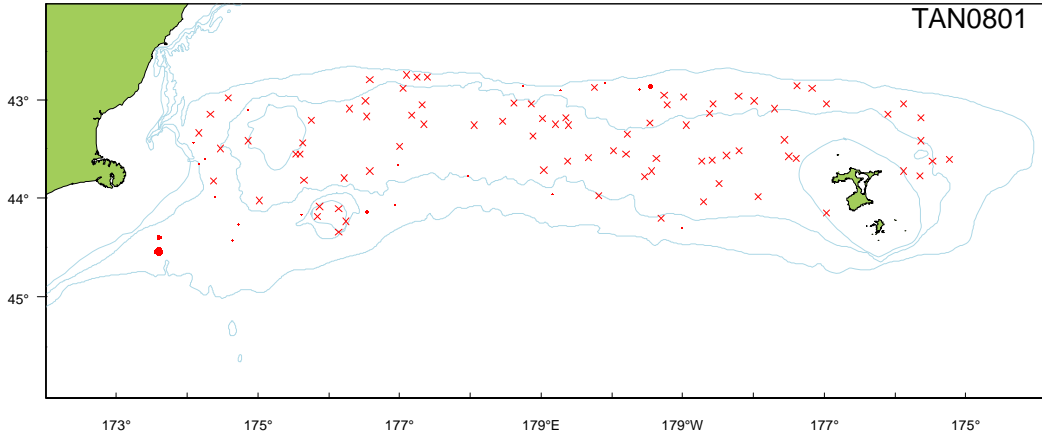






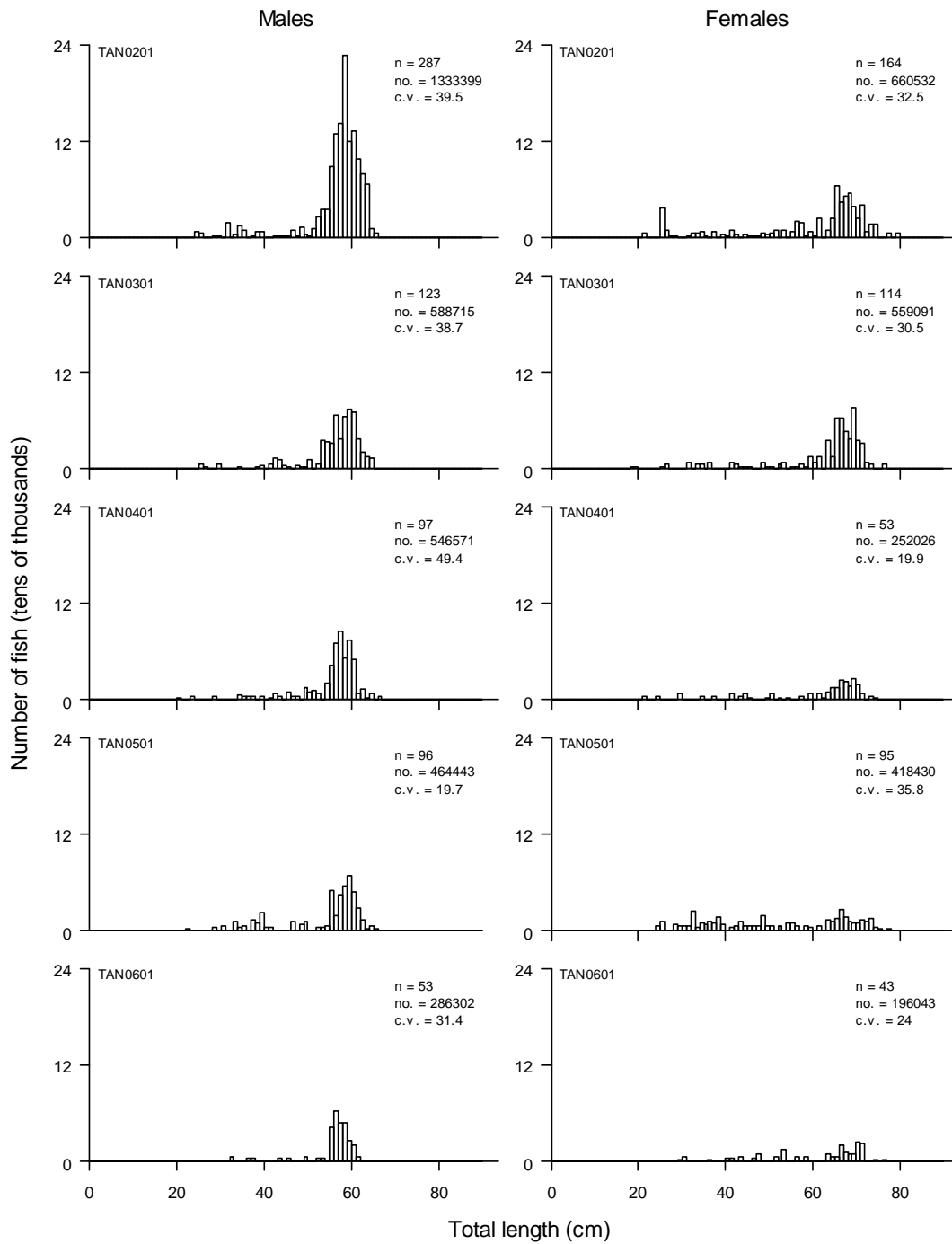


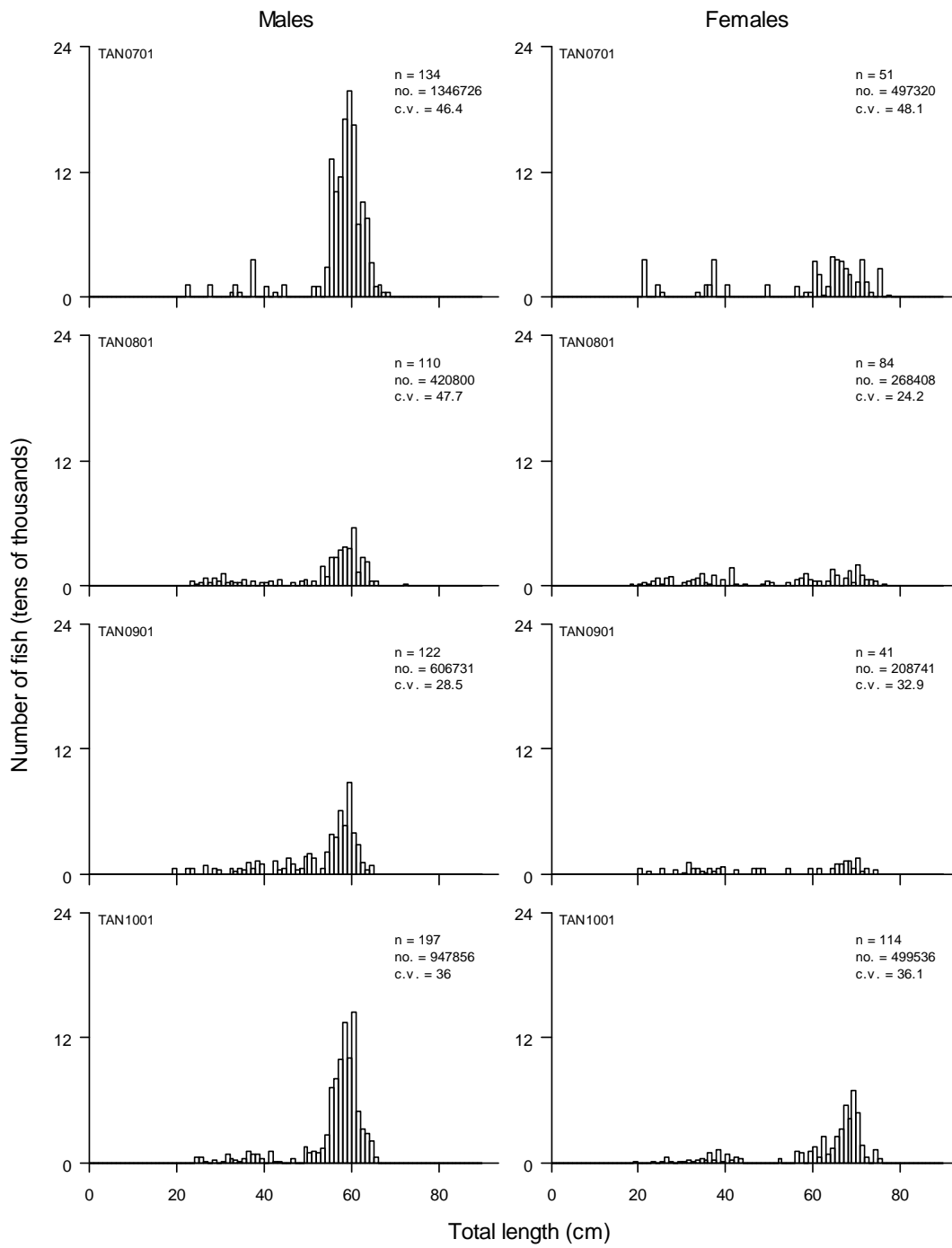






## Length Frequencies





### Gonad Stage Information (Cartilagenous)

#### Males

Year	p_M1	p_M2	p_M3	n_allM
1992	NA	NA	NA	0
1993	NA	NA	NA	0
1994	NA	NA	NA	0
1995	NA	NA	NA	0
1996	NA	NA	NA	0
1997	NA	NA	NA	0
1998	NA	NA	NA	0
1999	NA	NA	NA	0
2000	NA	NA	NA	0
2001	NA	NA	NA	0
2002	NA	NA	NA	0
2003	NA	NA	NA	0
2004	NA	NA	NA	0
2005	NA	NA	NA	0
2006	NA	NA	NA	0
2007	NA	NA	NA	0
2008	NA	NA	NA	0
2009	0.17	0.05	0.78	83
2010	0.24	0.11	0.65	152
ALL	0.22	0.09	0.7	235

#### Females

Year	p_F1	p_F2	p_F3	p_F4	p_F5	p_F6	n_allF
1992	NA	NA	NA	NA	NA	NA	0
1993	NA	NA	NA	NA	NA	NA	0
1994	NA	NA	NA	NA	NA	NA	0
1995	NA	NA	NA	NA	NA	NA	0
1996	NA	NA	NA	NA	NA	NA	0
1997	NA	NA	NA	NA	NA	NA	0
1998	NA	NA	NA	NA	NA	NA	0
1999	NA	NA	NA	NA	NA	NA	0
2000	NA	NA	NA	NA	NA	NA	0
2001	NA	NA	NA	NA	NA	NA	0
2002	NA	NA	NA	NA	NA	NA	0
2003	NA	NA	NA	NA	NA	NA	0
2004	NA	NA	NA	NA	NA	NA	0
2005	NA	NA	NA	NA	NA	NA	0
2006	NA	NA	NA	NA	NA	NA	0
2007	NA	NA	NA	NA	NA	NA	0
2008	NA	NA	NA	NA	NA	NA	0
2009	0.36	0.29	0.14	0.14	0.07	0	14
2010	0.33	0.33	0.13	0.14	0.07	0	98
ALL	0.33	0.32	0.13	0.14	0.07	0	112

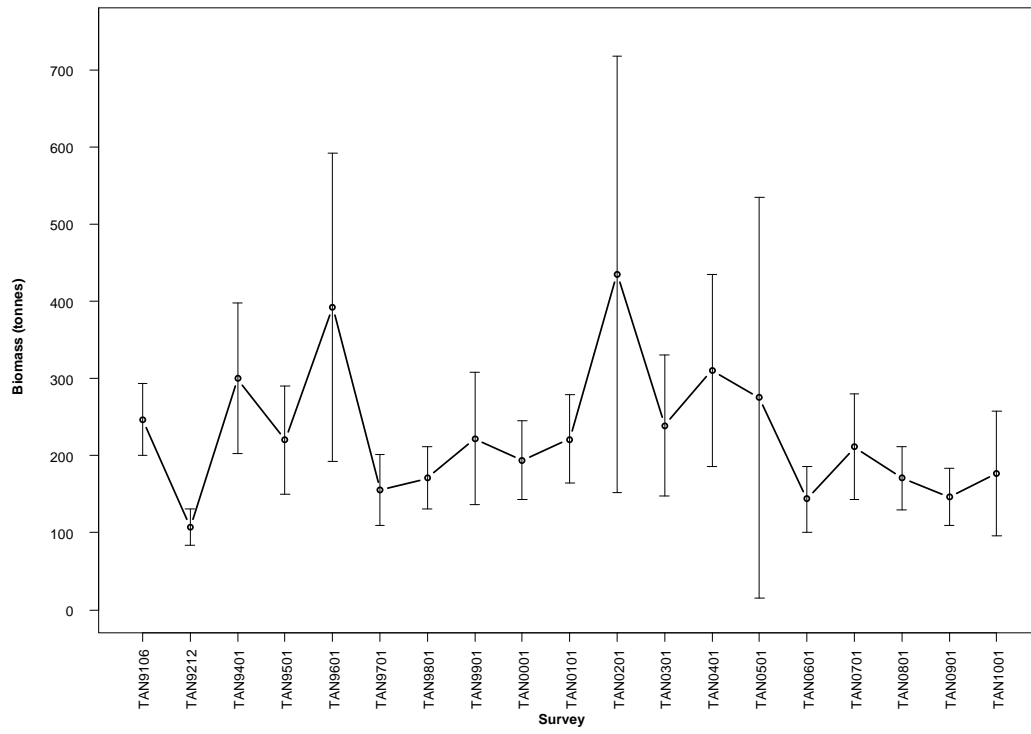


Number of surveys caught 1992–2010 (out of 19):	19
Total catch weight (kg):	2 258.9
Number measured	2 380
Length range (mean) (cm, TL)	12–52 (34.6)
Number weighed	888
Length-weight parameters a, b ( $r^2$ )	0.002163, 3.115604 (95.65)

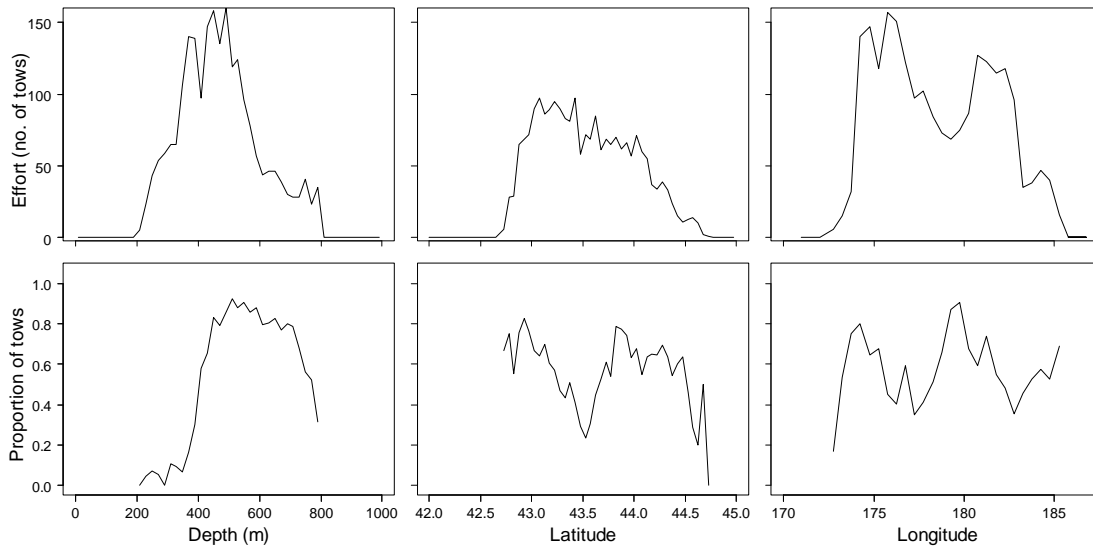
The core survey area and depth range **is** appropriate for this species. Biomass of this species is **very well** estimated in the core survey area. Biomass **shows no clear trend** since the start of the time series. Catch rates are highest in the **south and west**. Length frequencies are usually **multimodal**. Mean length **shows no clear trend** since the start of the time series. Gonad stage data indicate that most fish are **maturing or mature**.

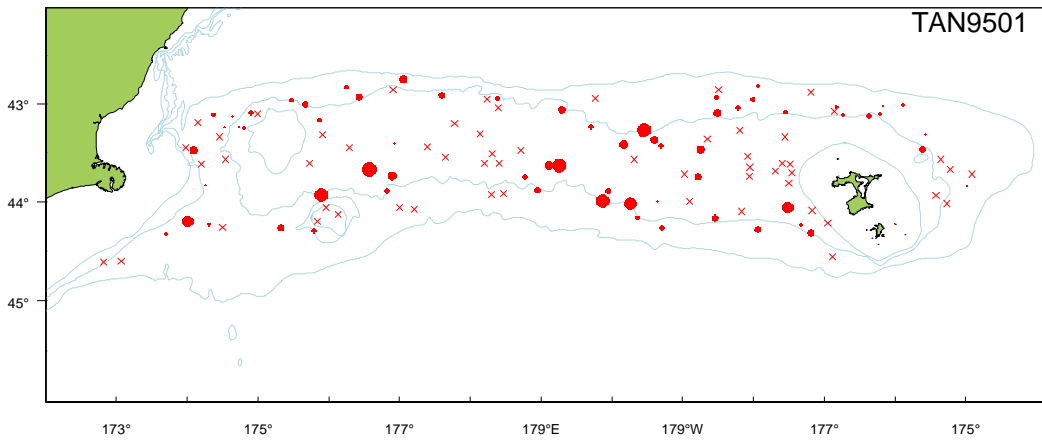
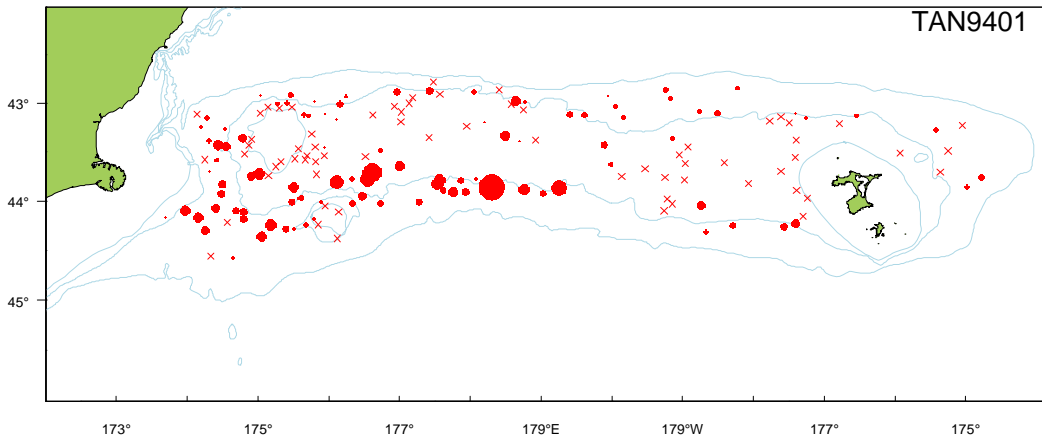
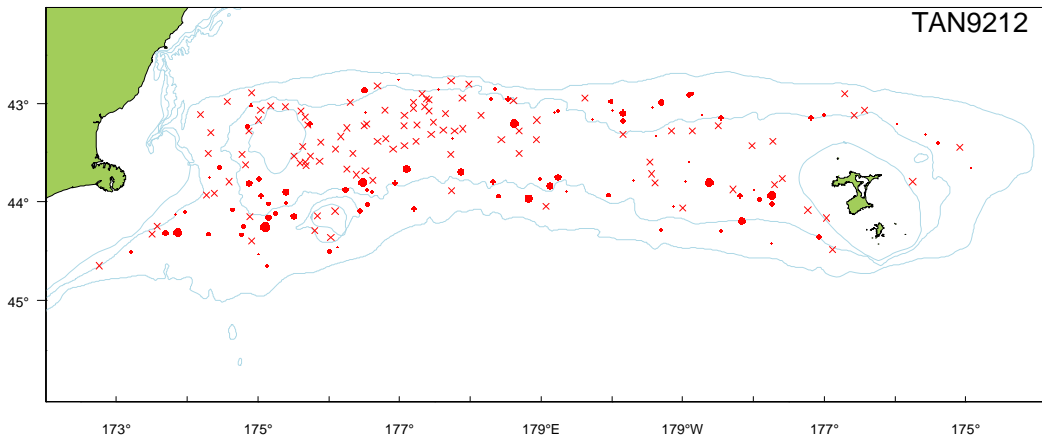
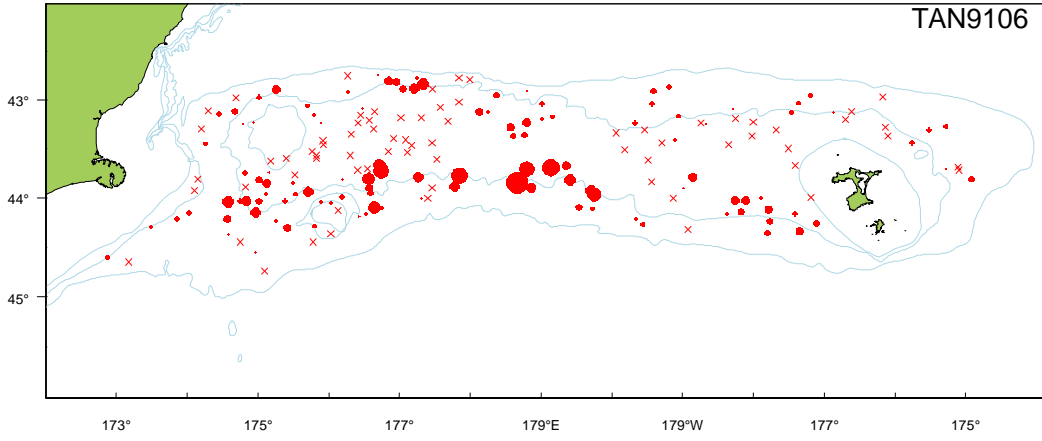
#### Relative biomass estimates and length summary

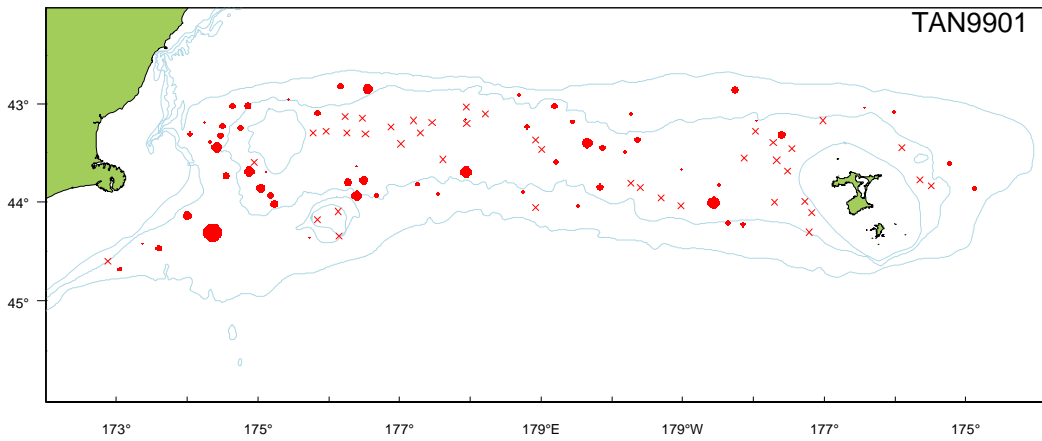
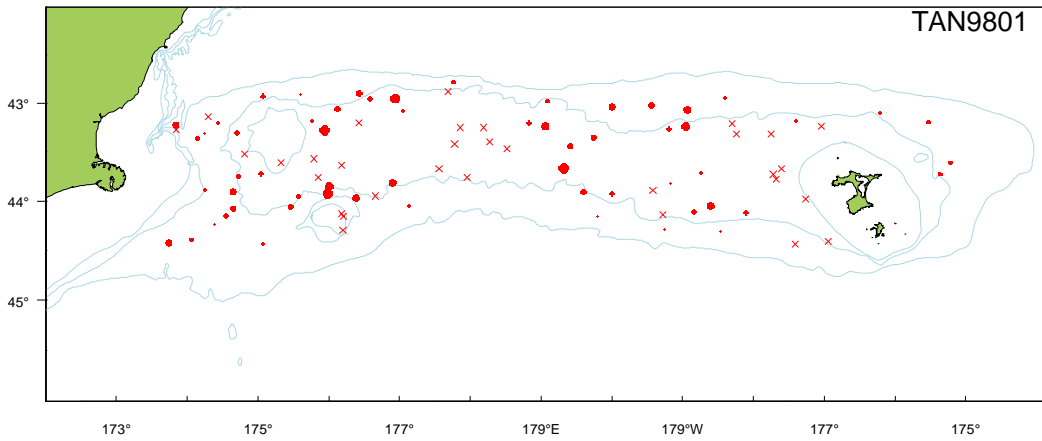
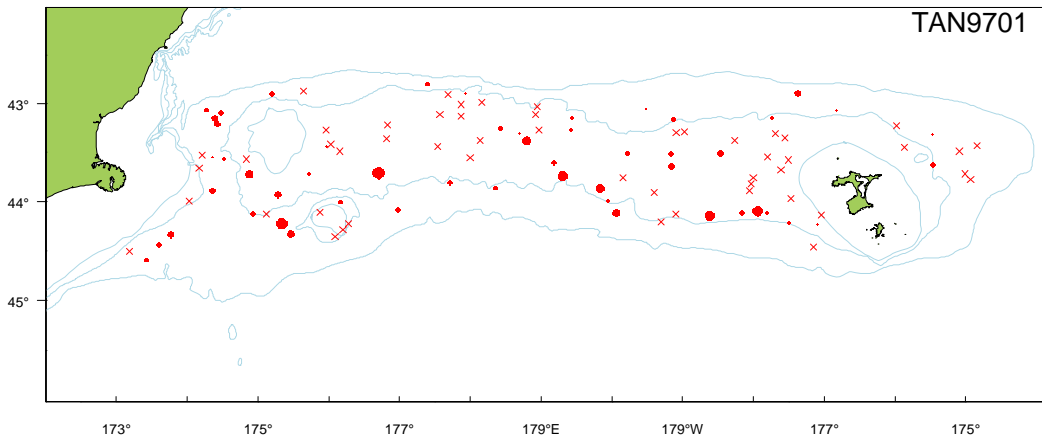
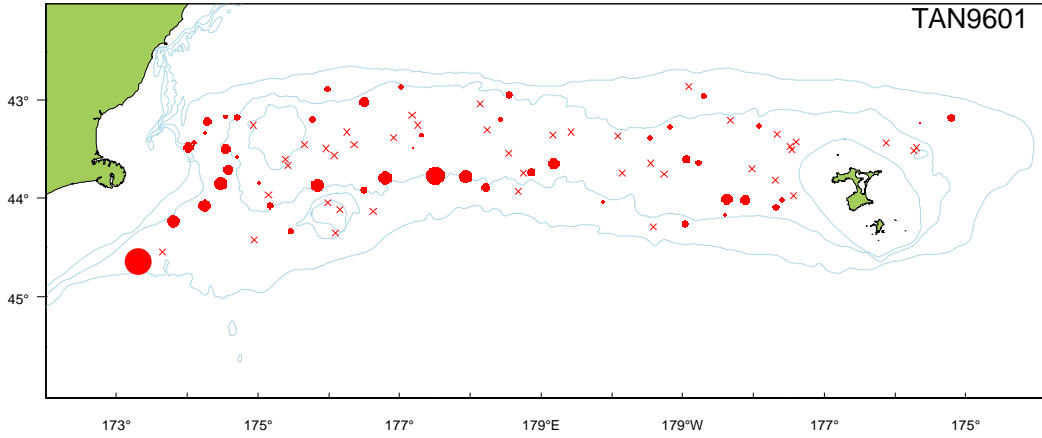
Year	Biomass (t)	cv (%)	Length (cm)			No. measure
			Min.	Max.	Mean	
1992	246	9	-	-	-	0
1993	107	11	-	-	-	0
1994	300	16	-	-	-	0
1995	220	16	-	-	-	0
1996	392	26	-	-	-	0
1997	155	15	-	-	-	0
1998	171	12	31	49	41.3	10
1999	222	19	44	45	44.5	2
2000	194	13	-	-	-	0
2001	221	13	-	-	-	0
2002	435	32	15	50	29.3	368
2003	239	19	15	51	34.1	337
2004	310	20	15	51	38.0	244
2005	275	47	21	52	39.2	162
2006	144	15	23	50	40.1	80
2007	211	16	36	48	43.3	6
2008	171	12	12	50	36.8	235
2009	146	13	15	51	35.0	328
2010	177	23	13	51	32.3	327

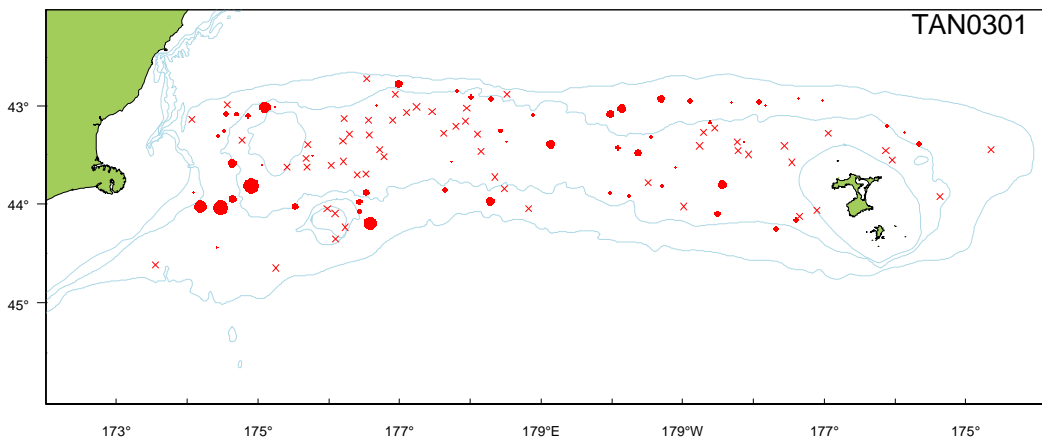
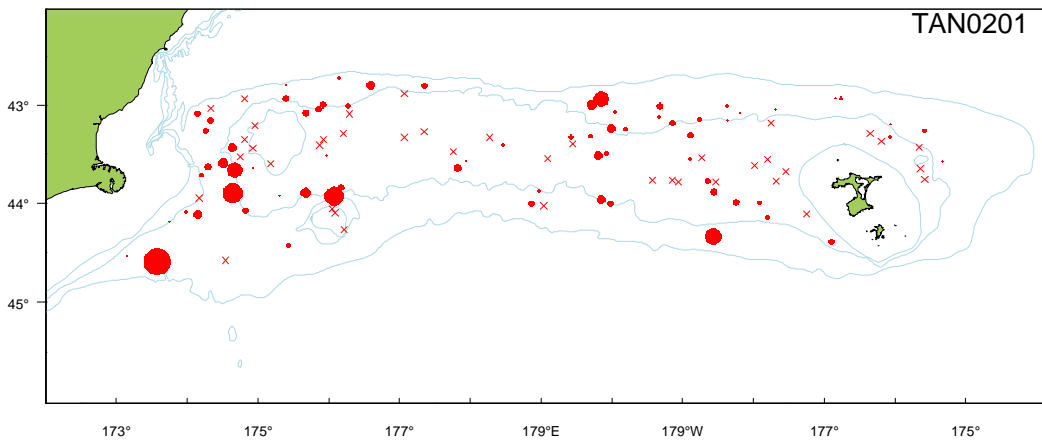
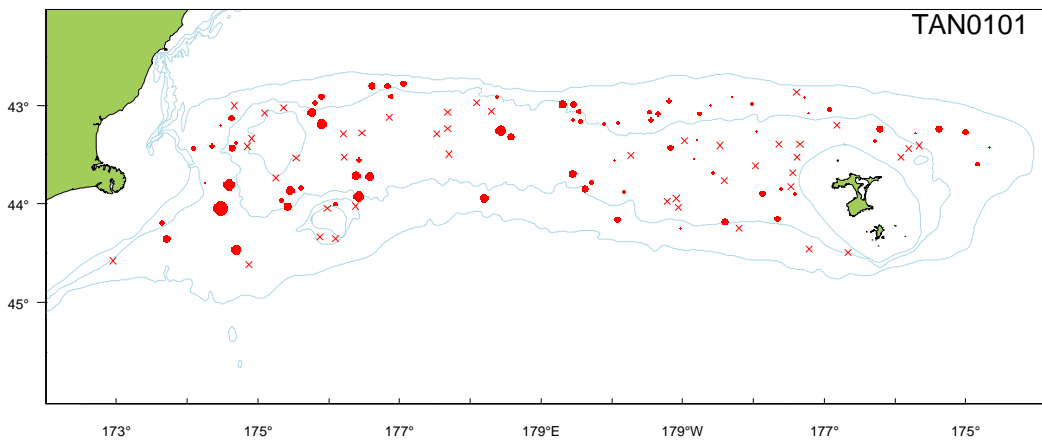
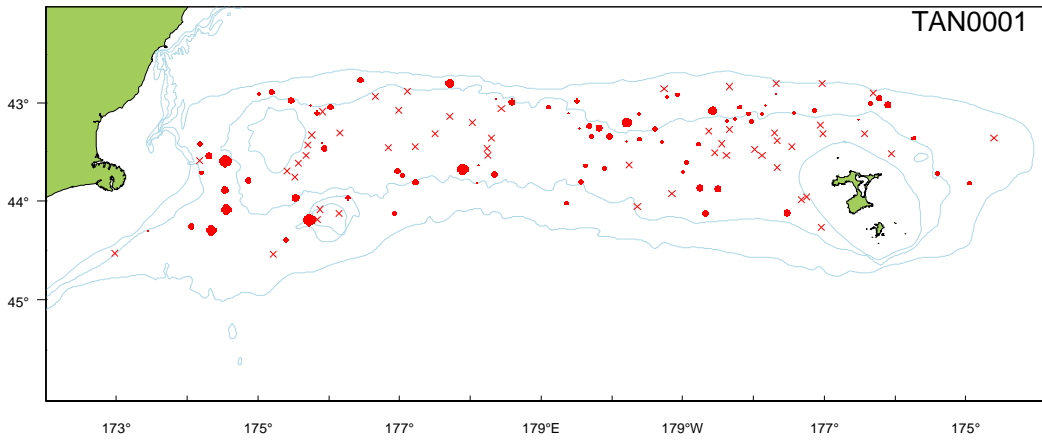


**Distribution**

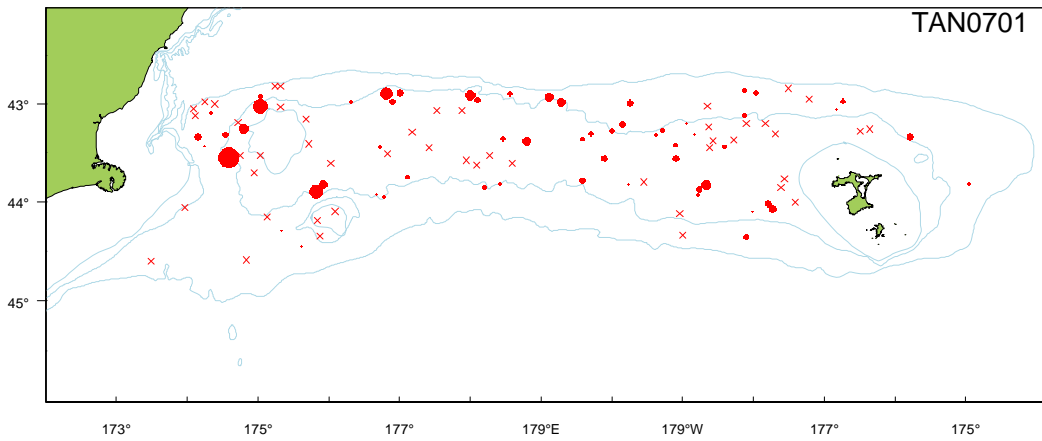
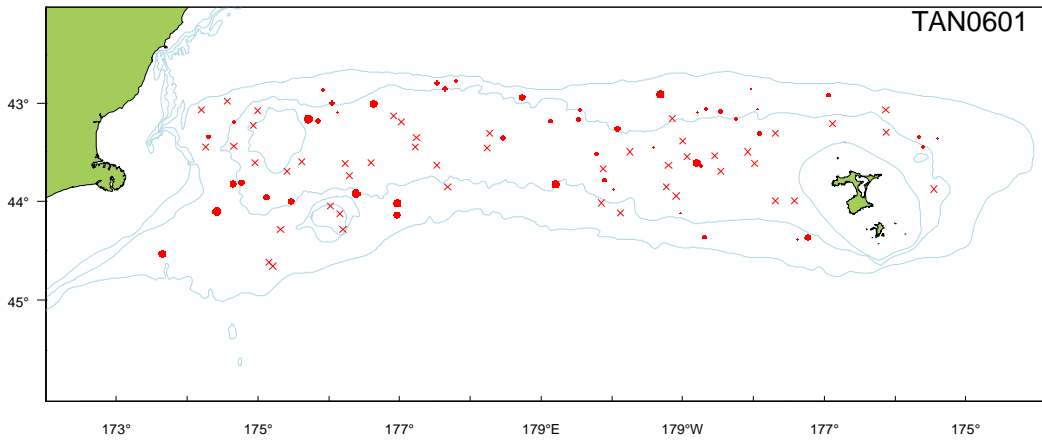
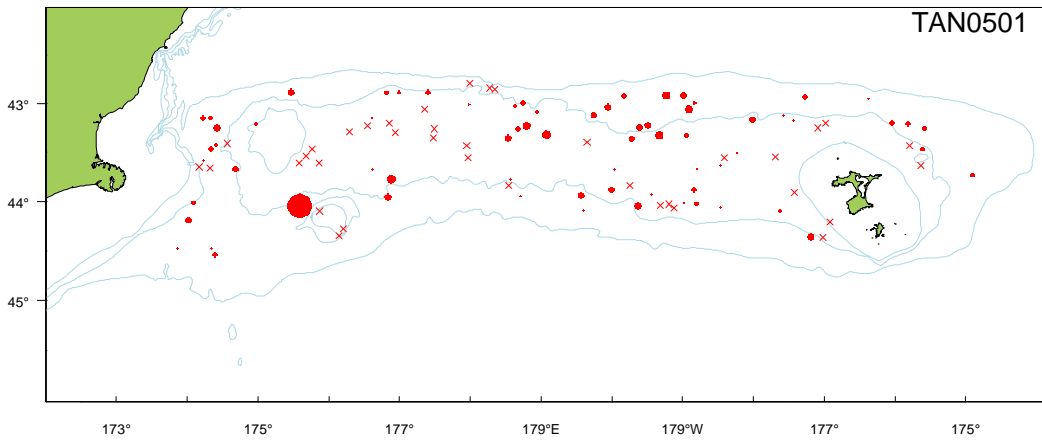
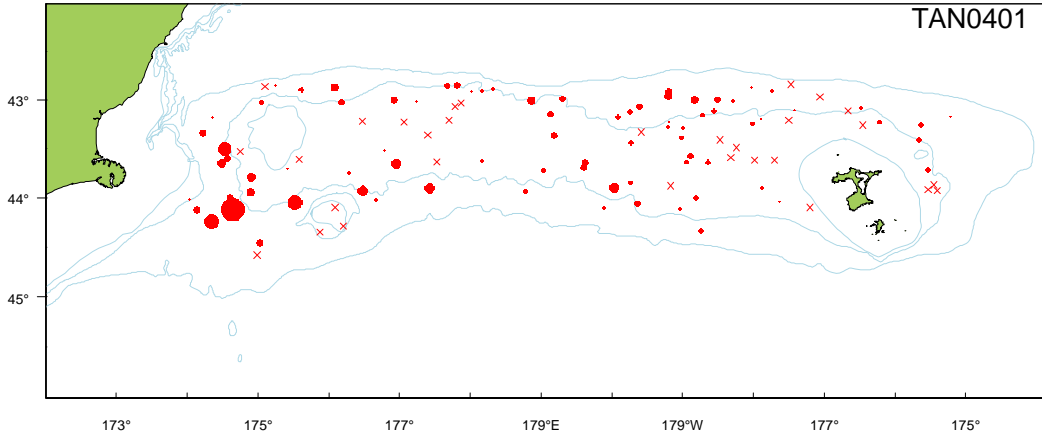


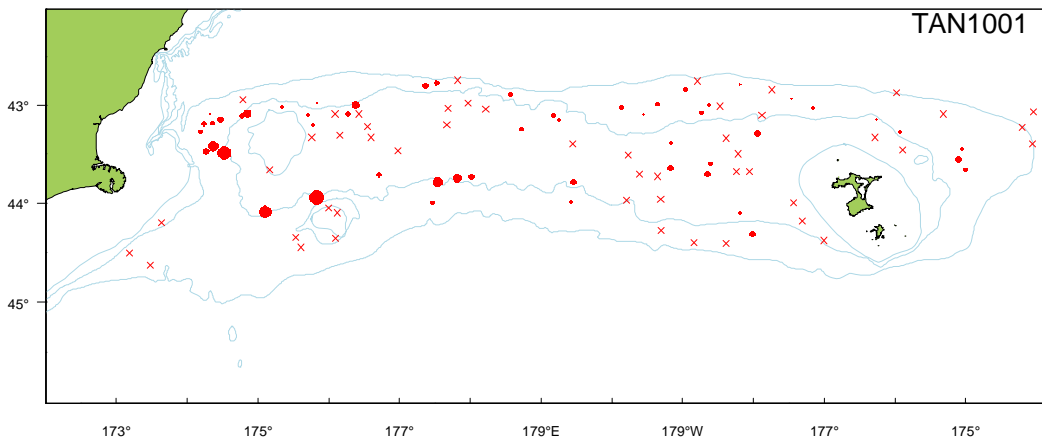
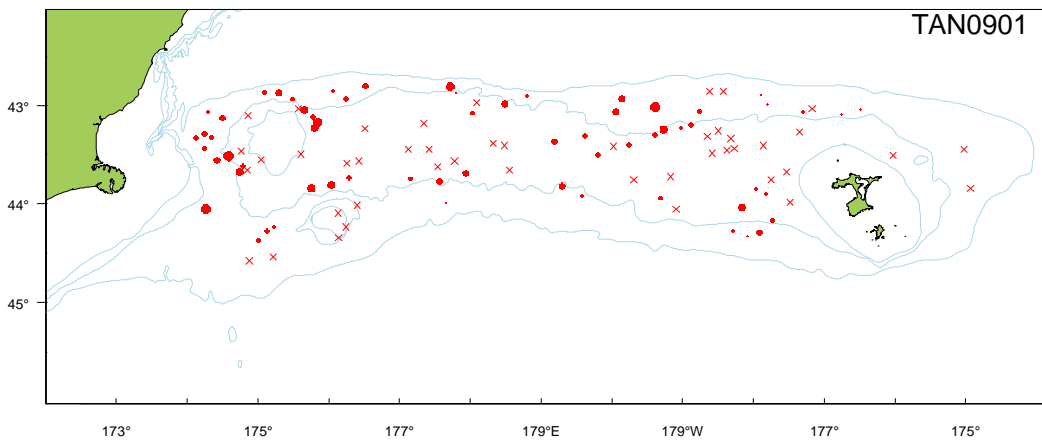
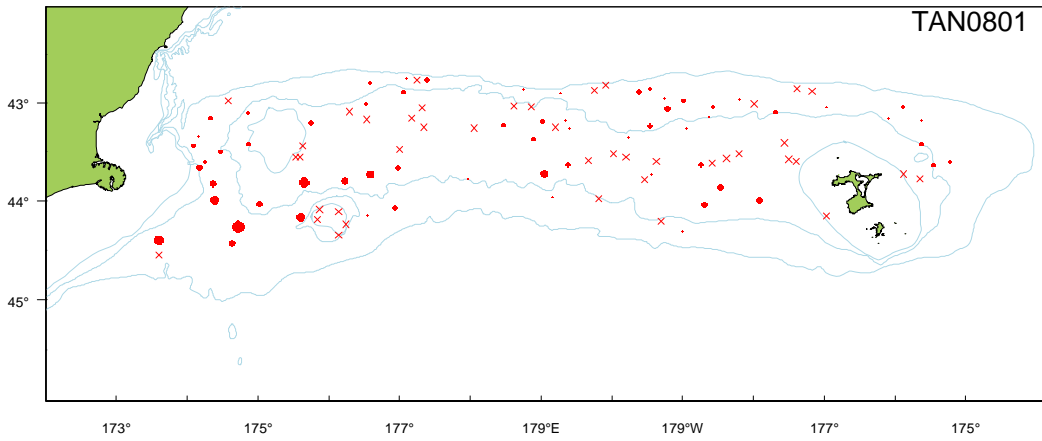




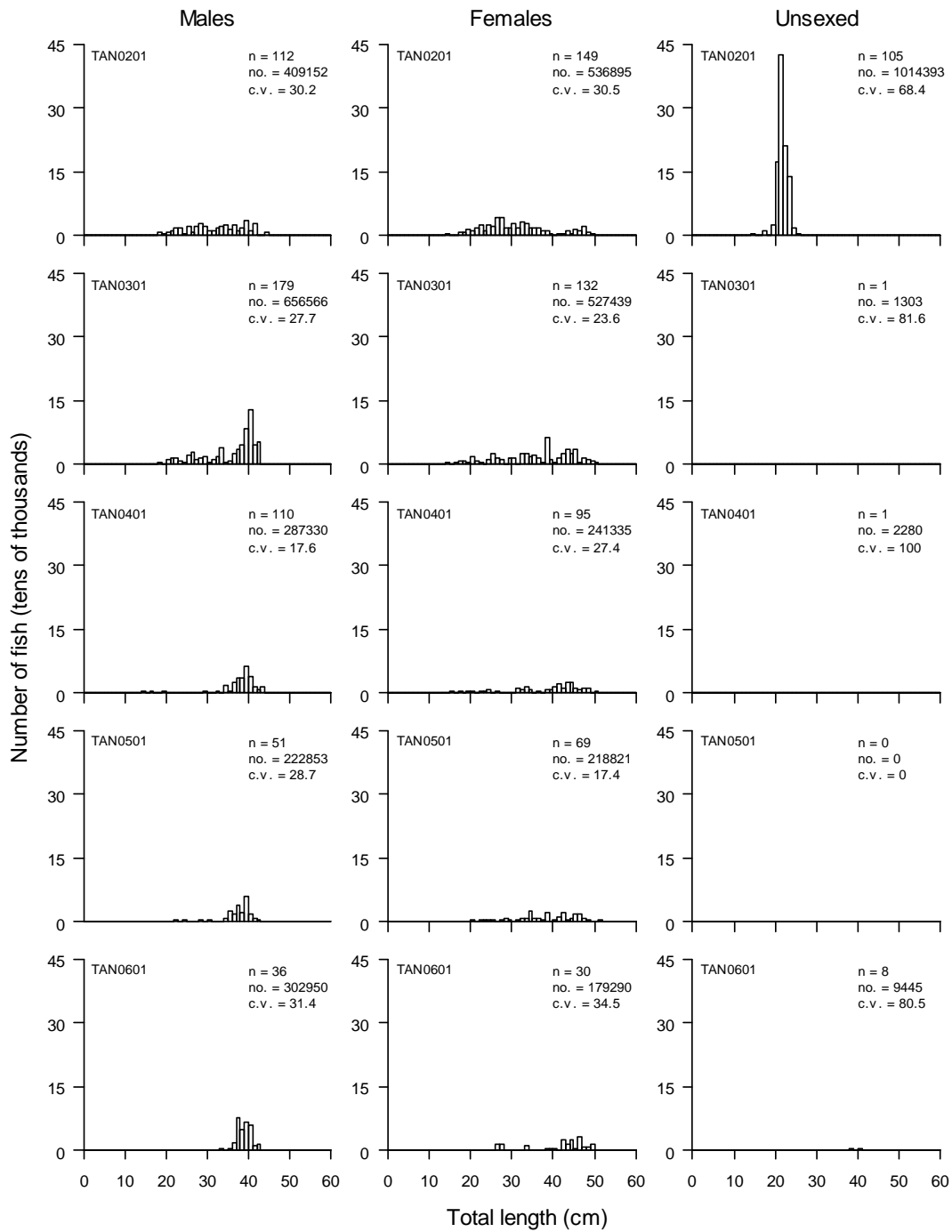


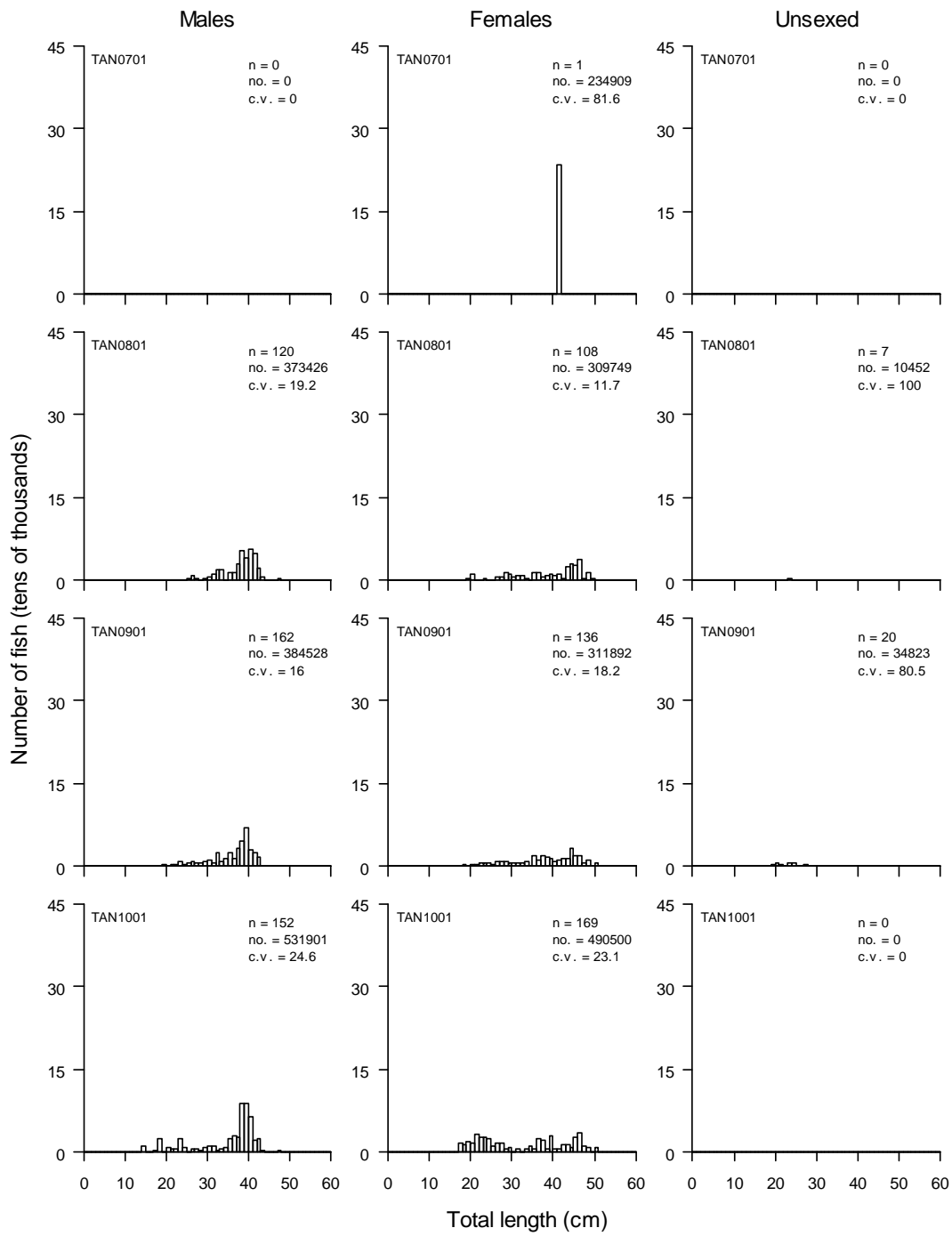






## Length Frequencies





### Gonad Stage Information (Cartilagenous)

#### Males

Year	p_M1	p_M2	p_M3	n_allM
1992	NA	NA	NA	0
1993	NA	NA	NA	0
1994	NA	NA	NA	0
1995	NA	NA	NA	0
1996	NA	NA	NA	0
1997	NA	NA	NA	0
1998	NA	NA	NA	0
1999	NA	NA	NA	0
2000	NA	NA	NA	0
2001	NA	NA	NA	0
2002	NA	NA	NA	0
2003	NA	NA	NA	0
2004	NA	NA	NA	0
2005	NA	NA	NA	0
2006	NA	NA	NA	0
2007	NA	NA	NA	0
2008	NA	NA	NA	0
2009	0.08	0.14	0.78	49
2010	0.09	0.23	0.69	35
ALL	0.08	0.18	0.74	84

#### Females

Year	p_F1	p_F2	p_F3	p_F4	p_F5	p_F6	n_allF
1992	NA	NA	NA	NA	NA	NA	0
1993	NA	NA	NA	NA	NA	NA	0
1994	NA	NA	NA	NA	NA	NA	0
1995	NA	NA	NA	NA	NA	NA	0
1996	NA	NA	NA	NA	NA	NA	0
1997	NA	NA	NA	NA	NA	NA	0
1998	NA	NA	NA	NA	NA	NA	0
1999	NA	NA	NA	NA	NA	NA	0
2000	NA	NA	NA	NA	NA	NA	0
2001	NA	NA	NA	NA	NA	NA	0
2002	NA	NA	NA	NA	NA	NA	0
2003	NA	NA	NA	NA	NA	NA	0
2004	NA	NA	NA	NA	NA	NA	0
2005	NA	NA	NA	NA	NA	NA	0
2006	NA	NA	NA	NA	NA	NA	0
2007	NA	NA	NA	NA	NA	NA	0
2008	NA	NA	NA	NA	NA	NA	0
2009	0.06	0.56	0.31	0	0.06	0	32
2010	0.3	0.47	0.17	0.07	0	0	30
ALL	0.18	0.52	0.24	0.03	0.03	0	62

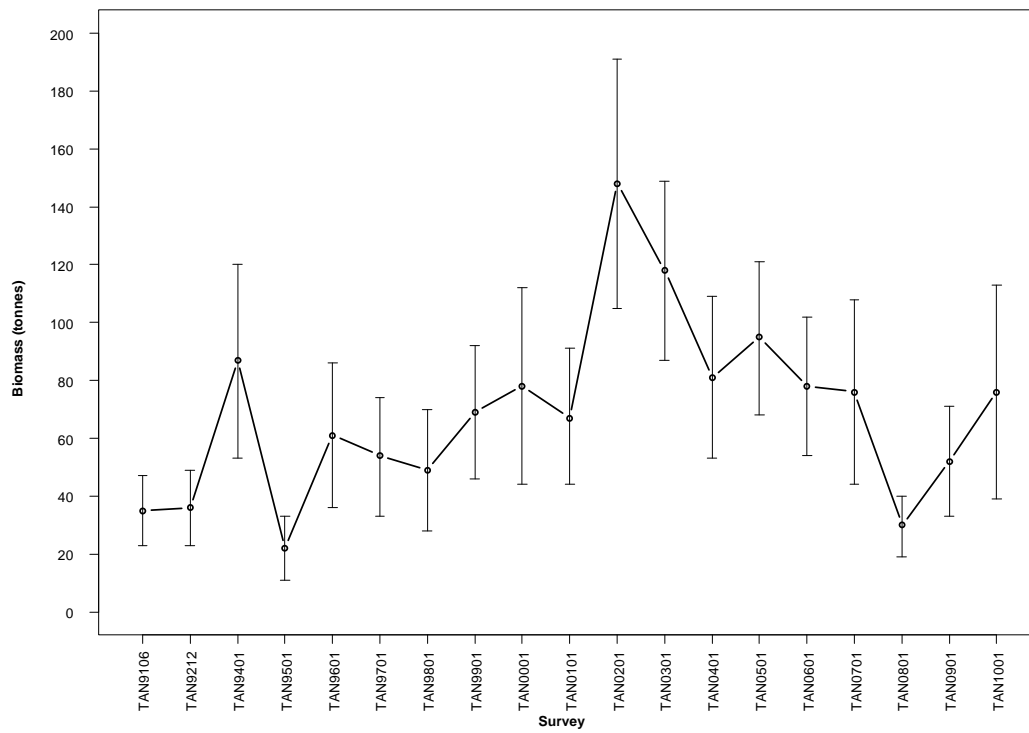


Number of surveys caught 1992–2010 (out of 19):	19
Total catch weight (kg):	740.3
Number measured	17
Length range (mean) (cm, TL)	26–42 (36.3)
Number weighed	5
Length-weight parameters a, b ( $r^2$ )	–

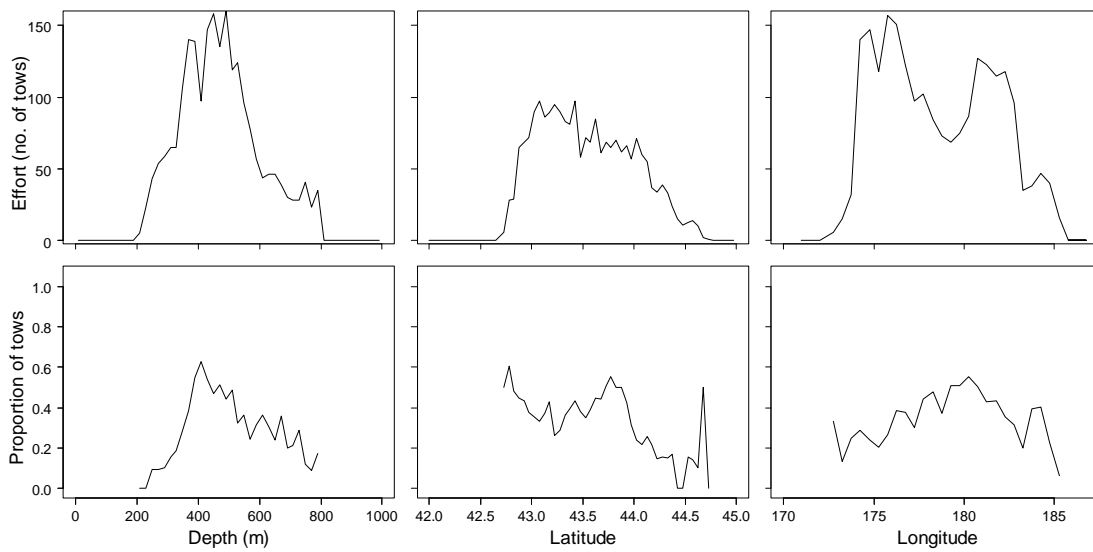
The core survey area and depth range **is** appropriate for this species. Biomass of this species is **very well** estimated in the core survey area. Biomass has **increased** since the start of the time series.

#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	35	17
1993	36	18
1994	87	19
1995	22	25
1996	61	21
1997	54	19
1998	49	22
1999	69	16
2000	78	22
2001	67	17
2002	148	14
2003	118	13
2004	81	17
2005	95	14
2006	78	16
2007	76	21
2008	30	18
2009	52	18
2010	76	24



### Distribution





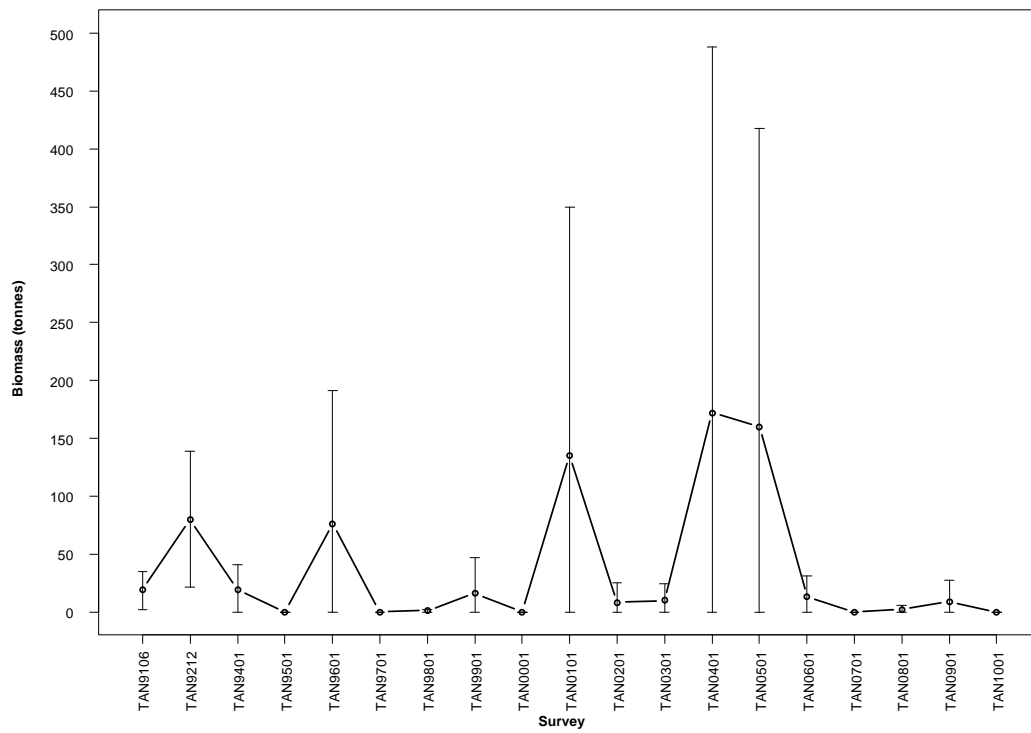
Number of surveys caught 1992–2010 (out of 19):	15
Total catch weight (kg):	609.4
Number measured	359
Length range (mean) (cm, FL)	59–176 (98)
Number weighed	88
Length-weight parameters a, b ( $r^2$ )	–

The core survey area and depth range **is not** appropriate for this species. It is found **shallower than 200 m**. Biomass of this species is **poorly** estimated in the core survey area. Biomass **shows no clear trend** since the start of the time series.

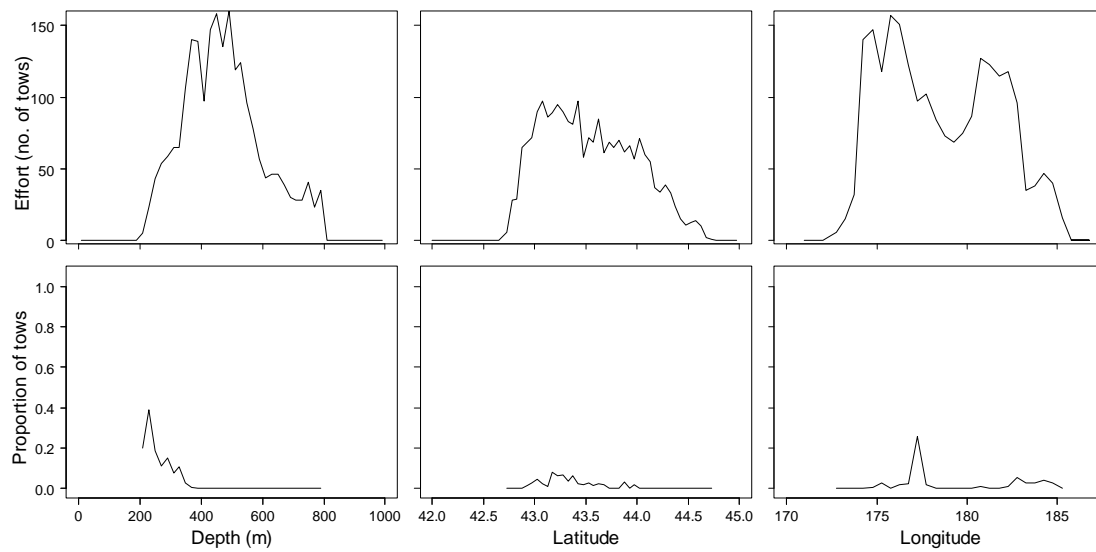
#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	19	44
1993	80	37
1994	19	58
1995	0	-
1996	76	75
1997	0	-
1998	1	100
1999	16	100
2000	0	-
2001	135	80
2002	8	100
2003	10	64
2004	172	92
2005	160	80
2006	13	65
2007	0	-
2008	2	100
2009	9	100
2010	0	-





### Distribution



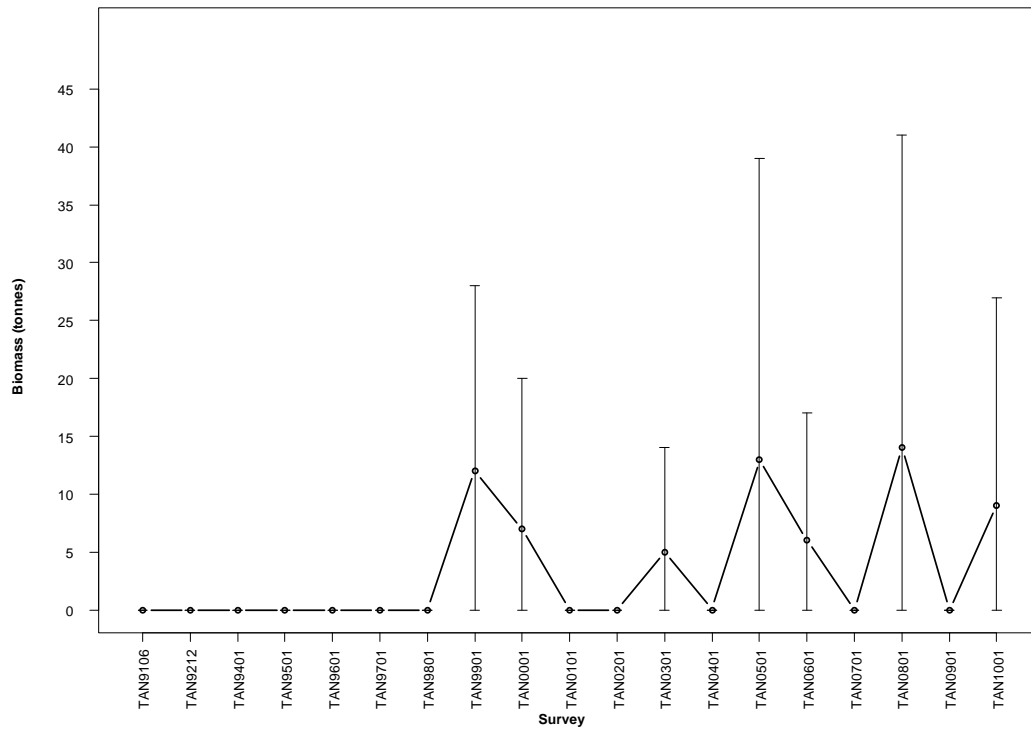


Number of surveys caught 1992–2010 (out of 19):	7
Total catch weight (kg):	61.3
Number measured	2
Length range (mean) (cm, TL)	145–145 (145)
Number weighed	2
Length-weight parameters a, b ( $r^2$ )	–

There were **too few fish caught to determine whether the core survey area is appropriate for this species**. Biomass of this species is **poorly** estimated in the core survey area. Biomass has **increased** since the start of the time series.

#### Relative biomass estimates

Year	Biomass (t)	cv (%)
1992	0	-
1993	0	-
1994	0	-
1995	0	-
1996	0	-
1997	0	-
1998	0	-
1999	12	71
2000	7	100
2001	0	-
2002	0	-
2003	5	100
2004	0	-
2005	13	100
2006	6	100
2007	0	-
2008	14	100
2009	0	-
2010	9	100



### Distribution

