

Supplementary Material:

Calving intervals, long-range movements and site fidelity of southern right whales (*Eubalaena australis*) in south-eastern Australia

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Table S1

Details of all sightings for whales matched between the South-eastern Australia Southern Right Whale Catalogue (SEA SRW PIC) and the Australasian Right Whale Photo Identification Catalogue (ARWPIC). Latitudes and longitudes are approximate and were estimated from mapped locations. SEA: south-eastern Australian region, SWA: south-western Australian region, A: adult, C: cow, W: within-season movement in a westerly direction, E: within-season movement in an easterly direction. *record from the Department of Environment, Land, Water and Planning Barwon South West Southern Right Whale Sightings Database, not SEA SRW PIC. **record from the Head of Bight (*Eubalaena*) catalogue, not ARWPIC.

Identification number	Sighting number	Date	Location	Region	Latitude	Longitude	Sex and age class	Within-season movement
SE9401	1	12/09/1989	Other Australian Exclusive Economic Zone	NA	NA	NA	Calf	
	2	10/08/1994	Entrance to Sydney Harbour	SEA	-33.84	151.31	A	
	3	11/09/1995	Israelite Bay	SWA	-33.62	123.91	A	
	4	15/08/1998	Israelite Bay	SWA	-33.62	123.91	C	
	5	06/10/1998	Cape Arid area	SWA	-34.03	123.12	C	W
	6	25/10/2001	Cape Arid area	SWA	-34.03	123.12	C	
	7	26/10/2001	Cape Arid area	SWA	-34.03	123.12	A	
	8	26/07/2005	Israelite Bay	SWA	-33.62	123.91	A	
	9	08/10/2005	Israelite Bay	SWA	-33.62	123.91	C	
	10	09/10/2005	Israelite Bay	SWA	-33.62	123.91	A	
SE9501	1	23/09/1995	Apollo Bay	SEA	-38.74	143.686	A	
	2	01/08/2003	Childers Cove	SEA	-38.51	142.69	A	
	3	09/10/2005	Israelite Bay	SWA	-33.62	123.91	C	
SE9502	1	23/09/1995	Main Beach, Apollo Bay	SEA	-38.74	143.69	A	
	2	09/09/2000	Israelite Bay	SWA	-33.62	123.91	C	
	3	07/08/2003	Israelite Bay	SWA	-33.62	123.91	C	
	4	08/08/2003	Israelite Bay	SWA	-33.62	123.91	A	
	5	16/09/2003	Israelite Bay	SWA	-33.62	123.91	A	
	6	18/08/2008	Cape Arid area	SWA	-34.03	123.12	C	
SE9901	1*	01/07/1985–30/08/1985	Logans Beach, Platform	SEA	-38.42	142.52	C	
	2*	10/07/1988–25/08/1988	Logans Beach, Platform	SEA	-38.42	142.52	C	
	3*	11/06/1990–06/08/1990	Logans Beach, Platform	SEA	-38.42	142.52	C	
	4*	26/07/1993–26/08/1993	Logans Beach, Platform	SEA	-38.42	142.52	C	
	5*	21/06/1996–22/09/1996	Logans Beach, Platform	SEA	-38.42	142.52	C	
	6	24/06/1996	Logans Beach, Platform	SEA	-38.42	142.52	C	
	7	17/08/1996	Logans Beach, Platform	SEA	-38.42	142.52	C	
	8	22/09/1996	Logans Beach, Platform	SEA	-38.42	142.52	C	
	9*	19/07/1997–30/07/1997	Logans Beach, Platform	SEA	-38.42	142.52	A	
	10*	07/06/1999–30/09/1999	Logans Beach, Platform	SEA	-38.42	142.52	C	
	11	01/08/1999	Logans Beach, Platform	SEA	-38.42	142.52	C	
	12*	30/05/2002–14/09/2002	Logans Beach, Platform	SEA	-38.42	142.52	C	
	13	21/08/2005	Head of Bight	SWA	-31.48	131.11	A	
	14**	20/08/2007	Head of Bight	SWA	-31.48	131.11	C	
	15	12/08/2010	Head of Bight	SWA	-31.48	131.11	C	
	16**	20/08/2013	Head of Bight	SWA	-31.48	131.11	C	
	17**	25/7/2017–11/09/2017	Head of Bight	SWA	-31.48	131.11	C	
SE0210	1	06/08/2002	Wanda Beach	SEA	-34.04	151.17	A	
	2	27/07/2005	Israelite Bay	SWA	-33.62	123.91	A	
SE0401	1	16/09/2003	Hopetoun area	SWA	-33.98	120.15	A	
	2	08/08/2004	Logans Beach, Platform	SEA	-38.42	142.52	A	
	3	22/08/2005	Twilight Cove-Eucla	SWA	-32.04	128.98	A	
	4	19/08/2008	Yalata coast	SWA	-31.8	131.59	A	

Identification number	Sighting number	Date	Location	Region	Latitude	Longitude	Sex and age class	Within-season movement
SE0501	1	10/10/2000	Baxter Cliffs	SWA	-31.66	129.2	A	
	2	30/08/2004	Hopetoun area	SWA	-33.98	120.15	A	
	3	24/06/2005	Cape Nelson Lighthouse	SEA	-38.43	141.53	A	
	4	21/08/2005	Head of Bight	SWA	-31.48	131.11	A	W
	5	27/09/2006	Israelite Bay	SWA	-33.62	123.91	A	
	6	10/08/2010	Doubtful Island Bay	SWA	-34.34	119.55	C	
	7	14/08/2010	Doubtful Island Bay	SWA	-34.34	119.55	C	
SE0507	1	08/08/2003	Israelite Bay	SWA	-33.6214	123.9145	Calf	
	2	05/07/2005	Frederick Henry Bay	SEA	-42.8519	147.5813	A	
	3	25/08/2011	Doubtful Island Bay	SWA	-34.3384	119.5497	A	
SE0513	1	05/07/2005	Frederick Henry Bay	SEA	-42.9575	147.547	A	
	2	08/09/2009	Head of Bight	SWA	-31.4773	131.1123	A	
	3	12/08/2010	Israelite Bay	SWA	-33.6214	123.9145	A	
SE0514	1	27/09/2002	C. Arid area	SWA	-34.0332	123.1207	A	
	2	05/07/2005	Frederick Henry Bay	SEA	-42.8451	147.5829	A	
	3	11/07/2005	Frederick Henry Bay	SEA	-42.9575	147.547	A	
	4	28/09/2006	Israelite Bay	SWA	-33.6214	123.9145	A	
SE0804	1	13/08/1998	Walpole-Denmark	SWA	-35.09	117.07	A	
	2	27/05/2008	Portland Bay	SEA	-38.32	141.67	A	
SE0805	1	26/09/1993	Head of Bight	SWA	-31.48	131.11	A	
	2	15/08/1998	Cape Arid Area	SWA	-34.03	123.12	A	
	3	10/09/2000	Head of Bight	SWA	-31.48	131.11	C	
	4	07/08/2003	Twilight Cove-Eucla	SWA	-32.04	128.98	A	
	5	31/07/2008	Port Fairy Bay	SEA	-38.37	142.26	A	
	6	01/08/2008	Portland Bay	SEA	-38.32	141.67	C	W
SE0911	1	27/07/2005	Israelite Bay	SWA	-33.62	123.91	A	
	2	18/08/2008	Israelite Bay	SWA	-33.62	123.91	A	
	3	13/08/2009	Port Fairy Bay	SEA	-38.37	142.26	A	
	1	08/09/2009	Baxter Cliffs	SWA	-31.66	129.2	A	
	2	09/09/2009	Baxter Cliffs	SWA	-31.66	129.2	A	
	3	01/07/2011	Logans Beach, Platform	SEA	-38.42	142.52	A	
SE1101	1	08/09/2009	Baxter Cliffs	SWA	-31.6601	129.1982	A	
	2	09/09/2009	Baxter Cliffs	SWA	-31.6601	129.1982	A	
	3	01/07/2011	Logans Beach, Platform	SEA	-38.417	142.517	A	
SE1103	1	01/09/2007	Twilight Cove-Eucla	SWA	-32.04	128.98	C	
	2	07/09/2009	Israelite Bay	SWA	-33.62	123.91	C	
	3	01/07/2011	Logans Beach, Platform	SEA	-38.42	142.52	A	
SE1104	1	03/08/2007	Hopetoun area	SWA	-33.98	120.15	A	
	2	04/08/2007	Hopetoun area	SWA	-33.98	120.15	A	
	3	28/09/2007	Hopetoun area	SWA	-33.98	120.15	A	
	4	15/07/2011	Wilson Promontory Lighthouse	SEA	-39.06	146.48	A	
SE1112	1	28/09/1990	Hopetoun Area	SWA	-33.98	120.15	C	
	2	24/08/2011	Cape Bridgewater	SEA	-38.41	141.41	A	
SE1114	1	28/09/2007	Hopetoun Area	SWA	-33.98	120.15	A	
	2	07/09/2009	Cape Arid Area	SWA	-34.03	123.12	A	
	3	27/07/2011	Codrington	SWA	-38.3	141.95	A	
SE1207	1	27/07/2005	Israelite Bay	SWA	-33.62	123.91	C	
	2	08/10/2005	Israelite Bay	SWA	-33.62	123.91	C	
	3	07/09/2009	Israelite Bay	SWA	-33.62	123.91	C	
	4	09/09/2009	Israelite Bay	SWA	-33.62	123.91	C	
	5	24/07/2012	Swan Lake	SEA	-38.23	141.29	A	
SE1209	1	18/08/2002	Baxter Cliffs	SWA	-31.66	129.2	A	
	2	01/09/2004	Twilight Cove-Eucla	SWA	-32.04	128.98	A	
	3	21/08/2005	Head of Bight	SWA	-31.48	131.11	A	
	4	02/09/2007	Head of Bight	SWA	-31.48	131.11	A	
	5	18/08/2008	Israelite Bay	SWA	-33.62	123.91	A	
	6	24/07/2012	Port Fairy Bay	SEA	-38.37	142.26	A	
	7	03/08/2012	Rutledge's Cutting	SEA	-38.35	142.37	A	E
SE1216	1	07/09/2009	Cape Arid Area	SWA	-34.03	123.12	A	
	2	03/08/2012	Rutledge's Cutting	SEA	-38.35	142.37	A	
	3	12/08/2012	Port Fairy Bay	SEA	-38.37	142.26	A	W
	4	15/08/2012	Port Fairy Bay	SEA	-38.37	142.26	A	
SE1218	1	25/10/2001	Hopetoun area	SWA	-33.98	120.15	A	
	2	26/10/2001	Doubtful Island Bay	SWA	-34.34	119.55	A	
	3	29/09/2007	Israelite Bay	SWA	-33.62	123.91	A	
	4	03/08/2012	Rutledge's Cutting	SEA	-38.35	142.37	A	
	5	15/08/2012	Port Fairy Bay	SEA	-38.37	142.26	A	W
	6	02/09/2012	Port Fairy Bay	SEA	-38.37	142.26	A	
	7	11/09/2012	Port Fairy Bay	SEA	-38.37	142.26	A	

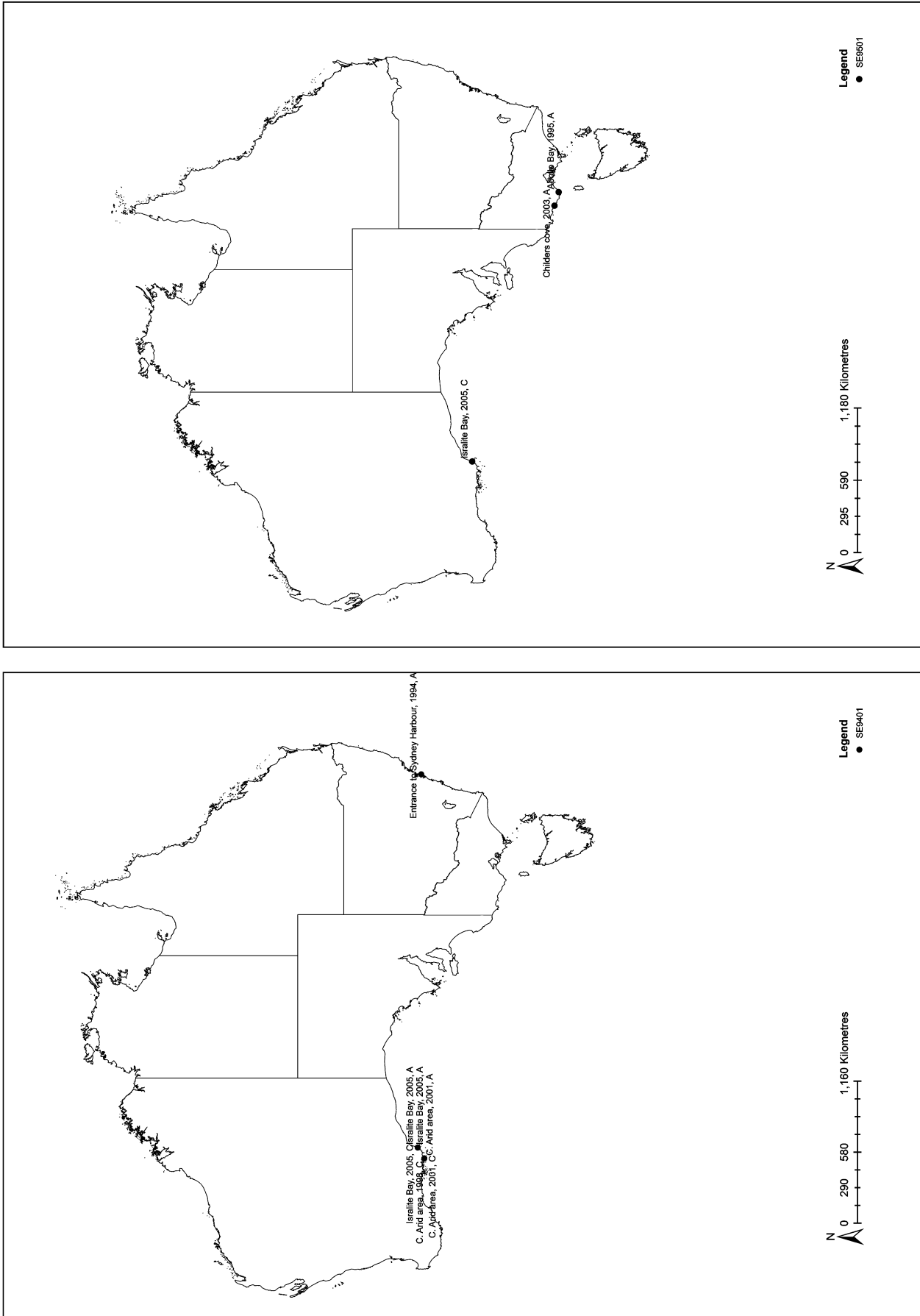


Fig. S1. Maps showing the approximate locations of individual female southern right whales (i.e. whales accompanied by a calf on at least one sighting event) matched between the South-eastern Australia Southern Right Whale Photo Identification Catalogue and the Australasian Right Whale Photo Identification Catalogue. Labels refer to the location of the sighting. Age and sex class at time of sighting where A: adult (not accompanied by a calf), C: cow (accompanied by a calf) and U: unknown.

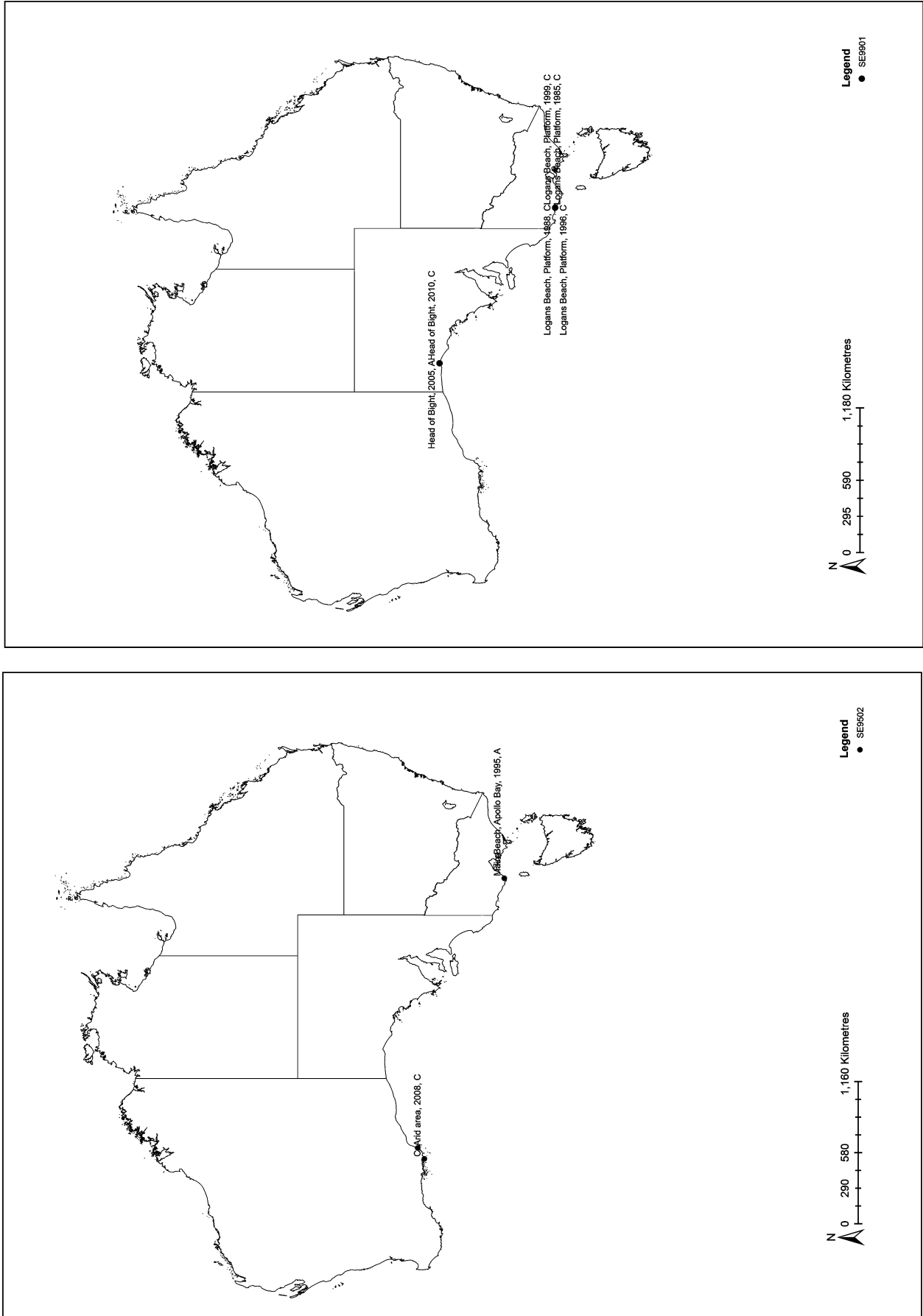


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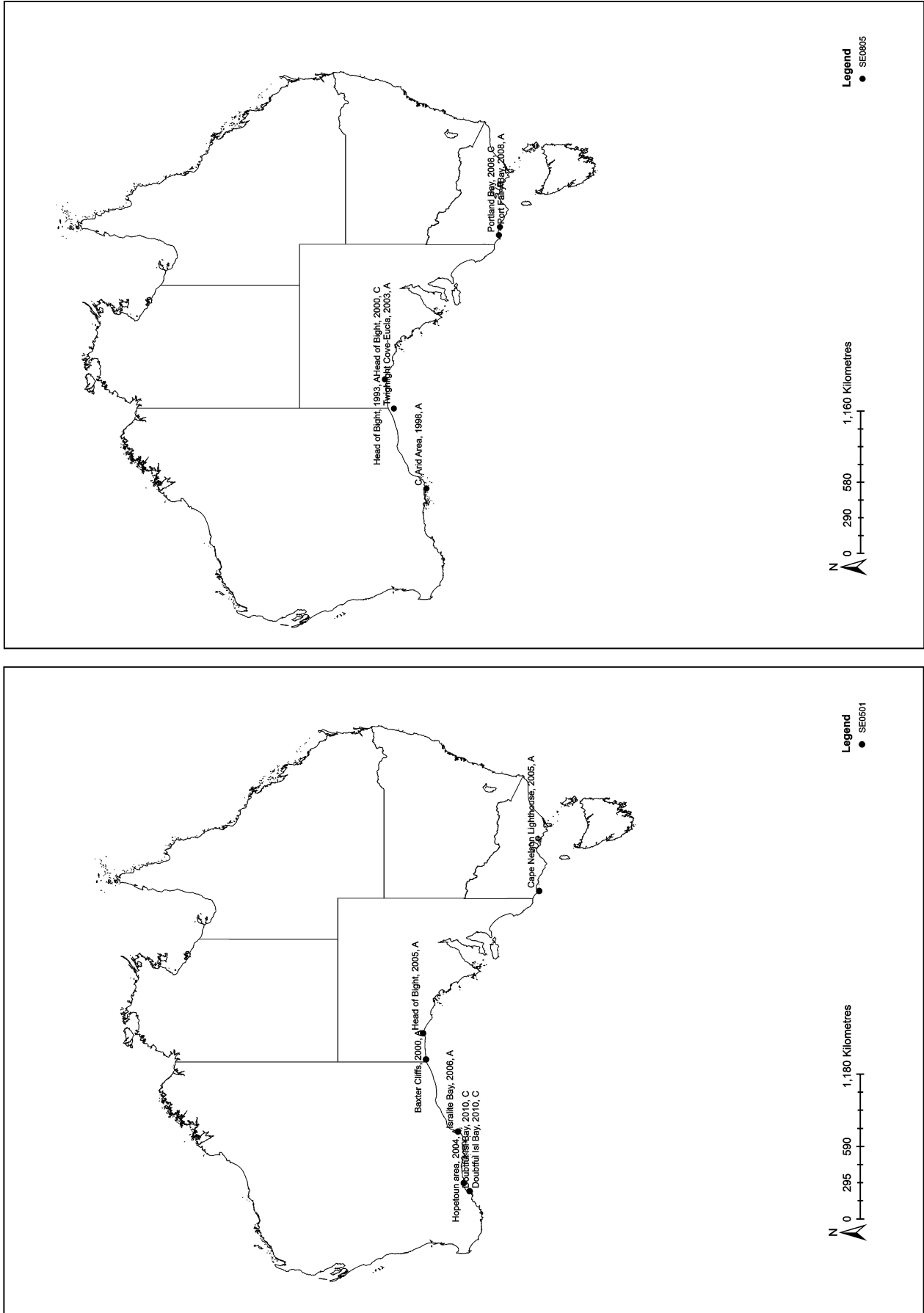


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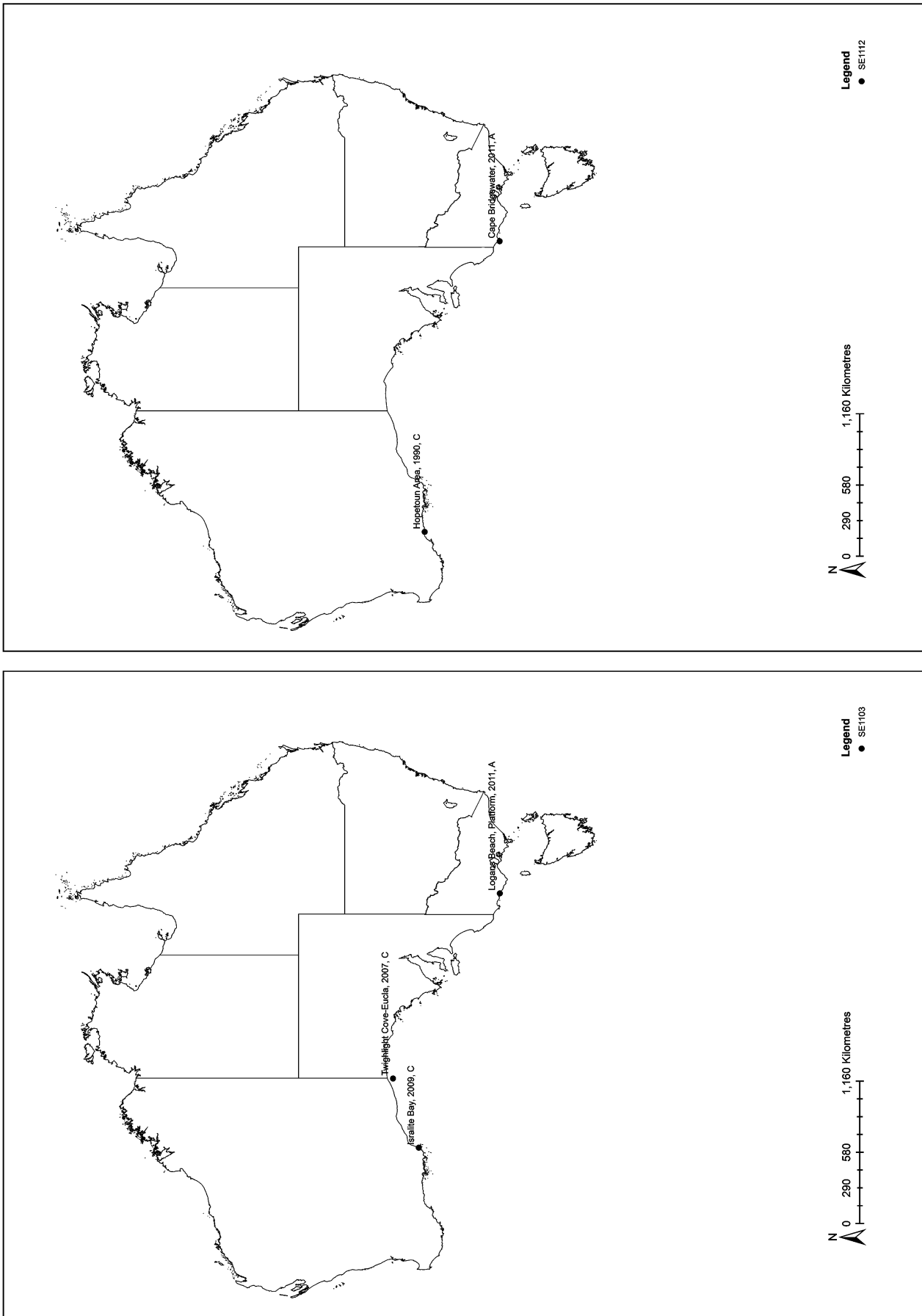


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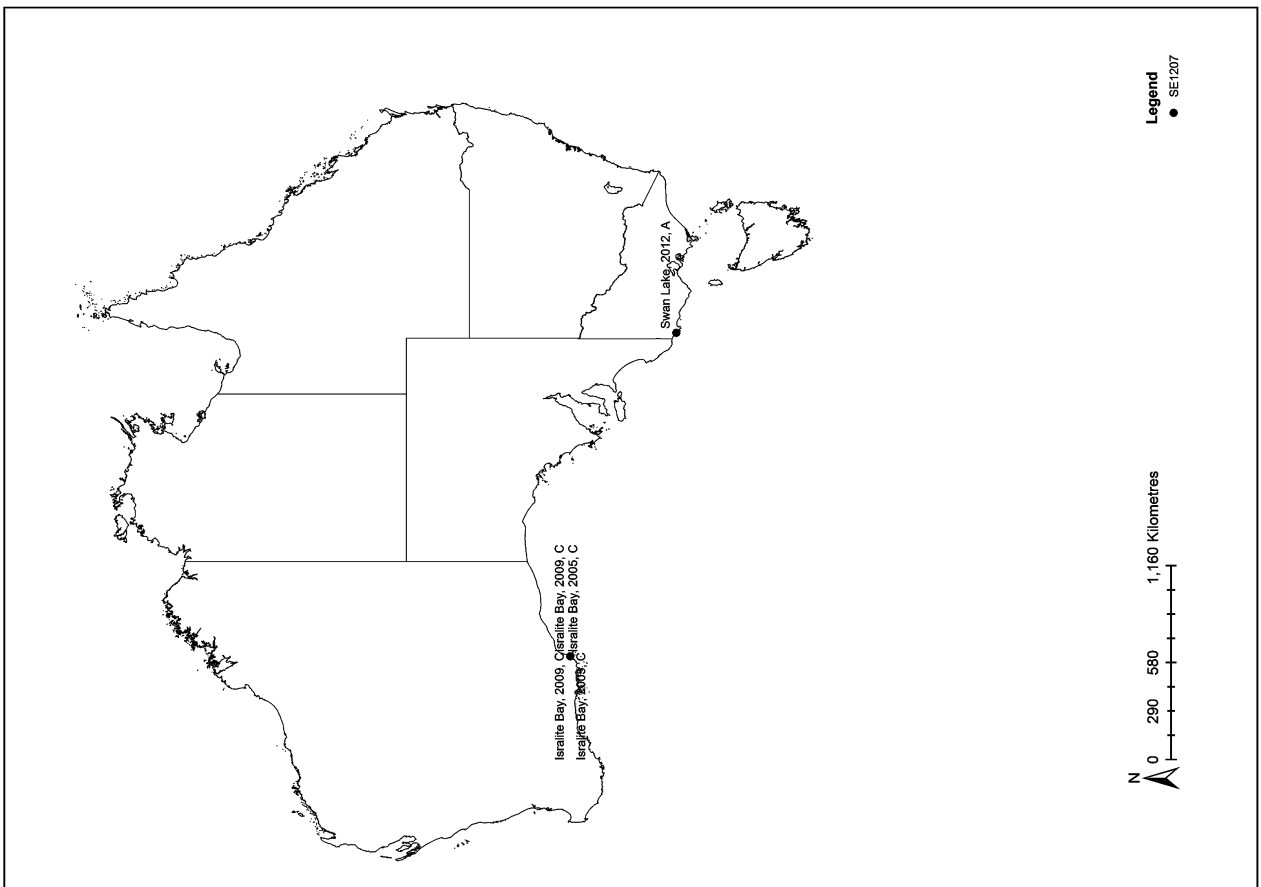


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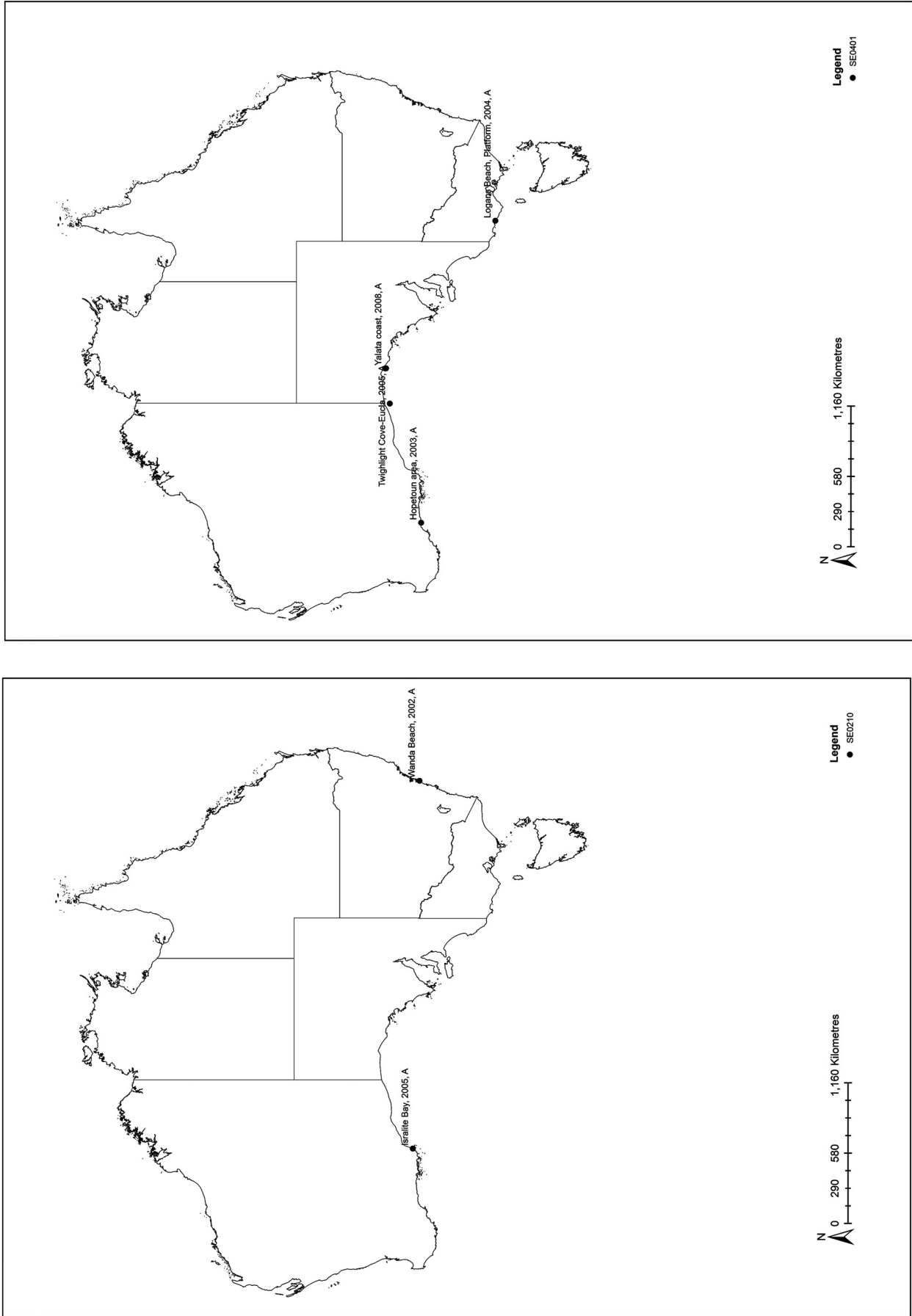


Fig. S2. Maps showing the approximate locations of individual adult southern right whales of unknown sex (i.e. not observed with a calf on any sighting event) matched between the South-eastern Australia Southern Right Whale Catalogue and the Australasian Right Whale Photo Identification Catalogue. Labels refer to the location of the sighting. Age and sex class at time of sighting where A: adult (not accompanied by a calf), C: cow (accompanied by calf) and U: unknown.

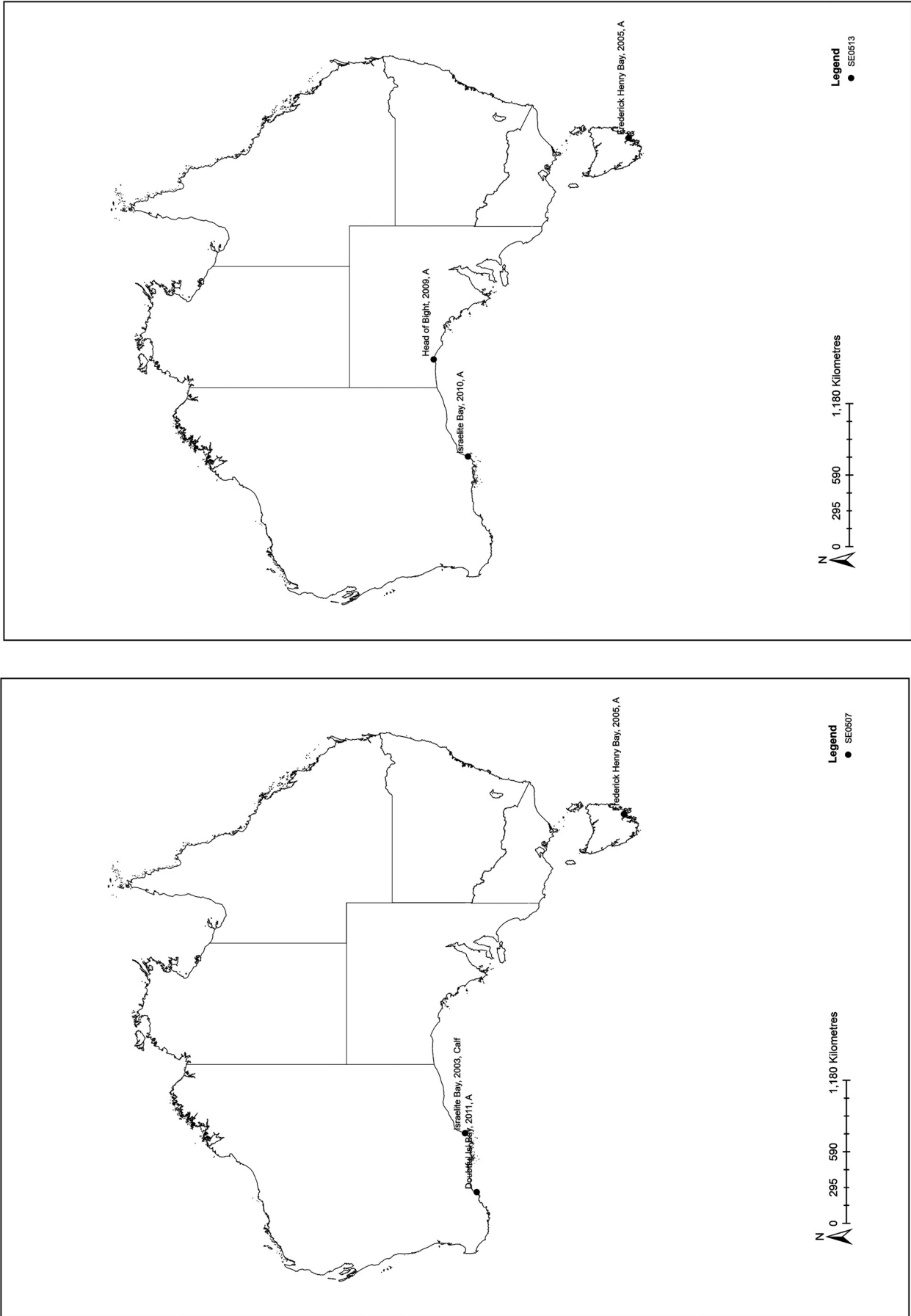


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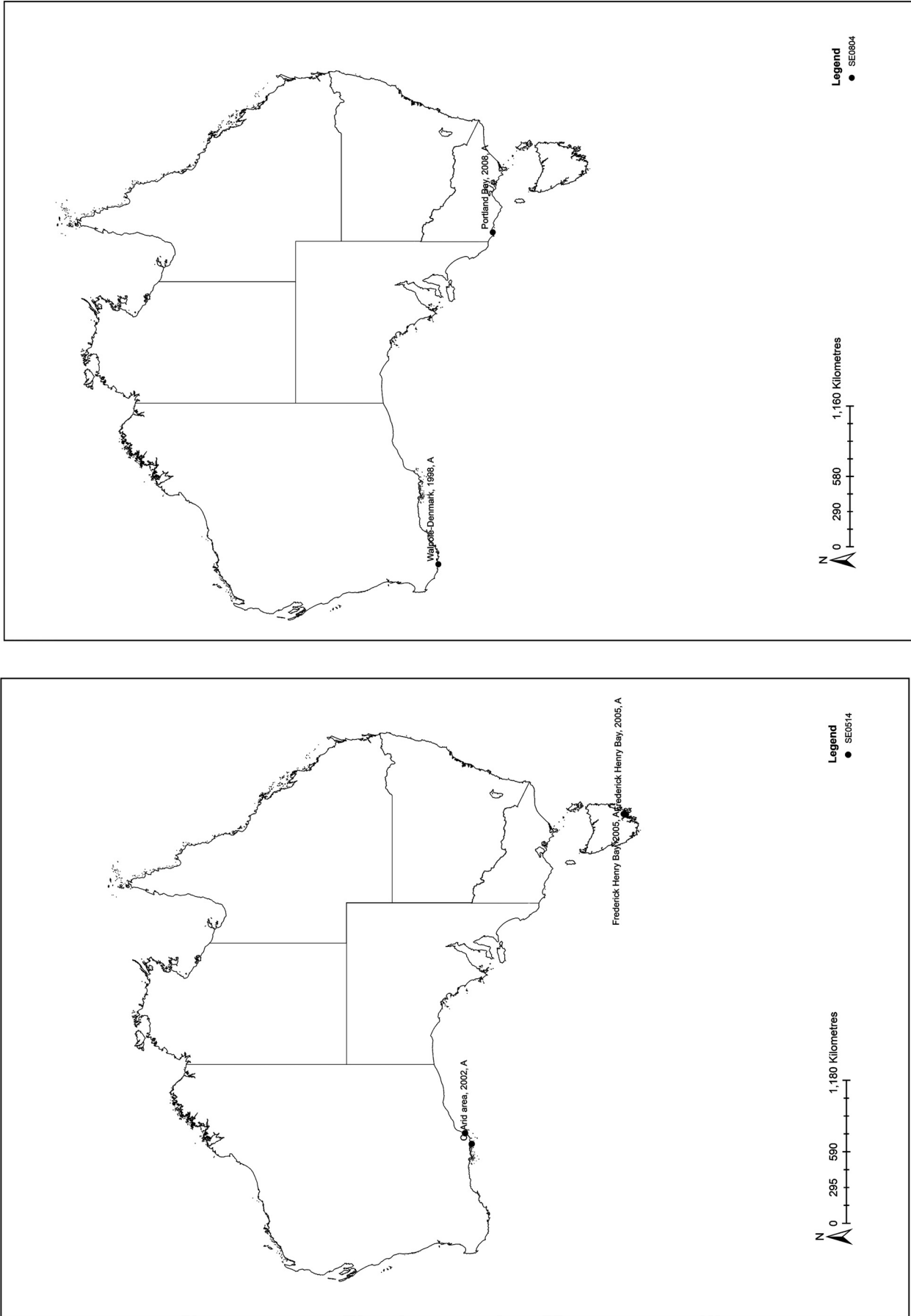


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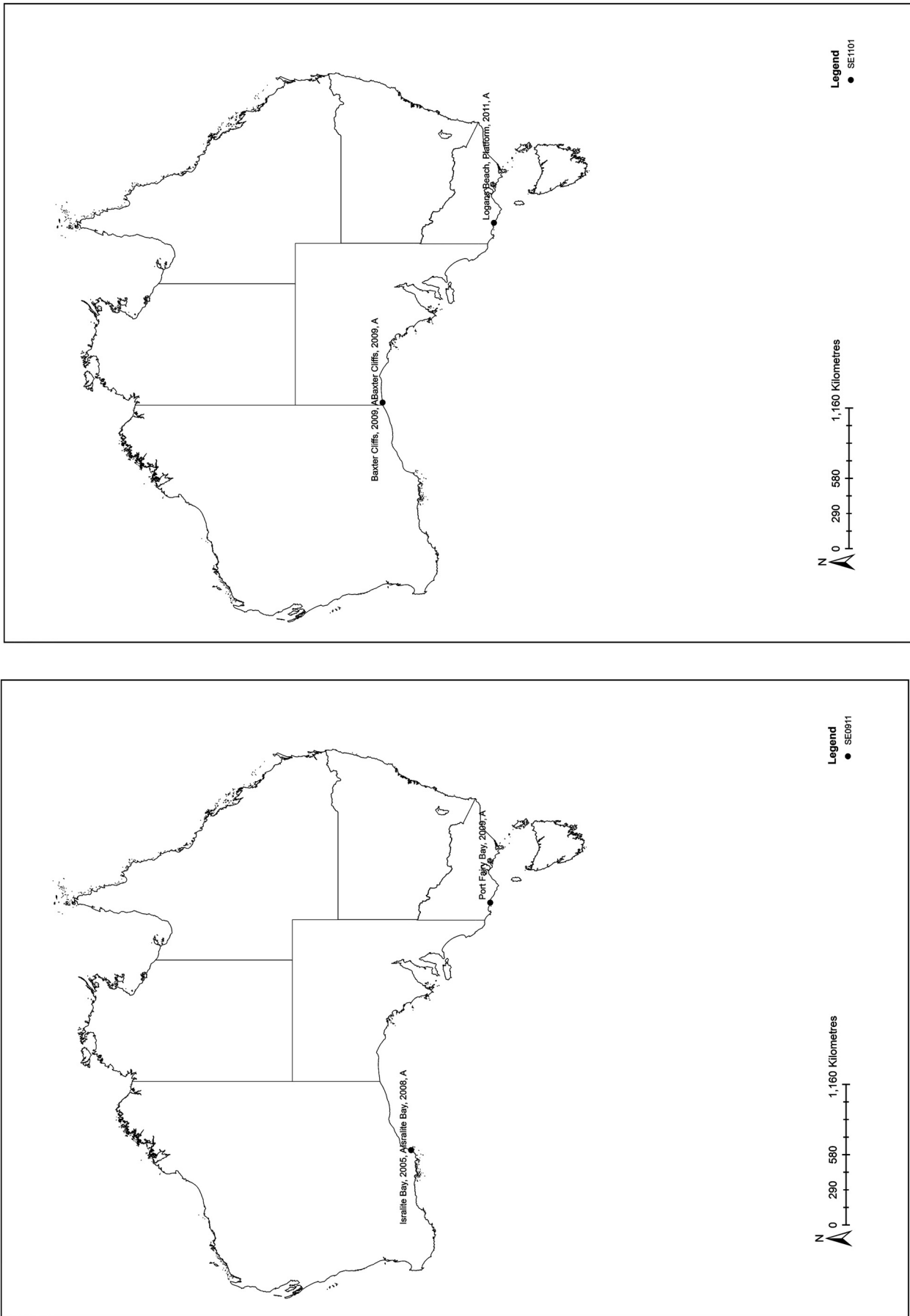


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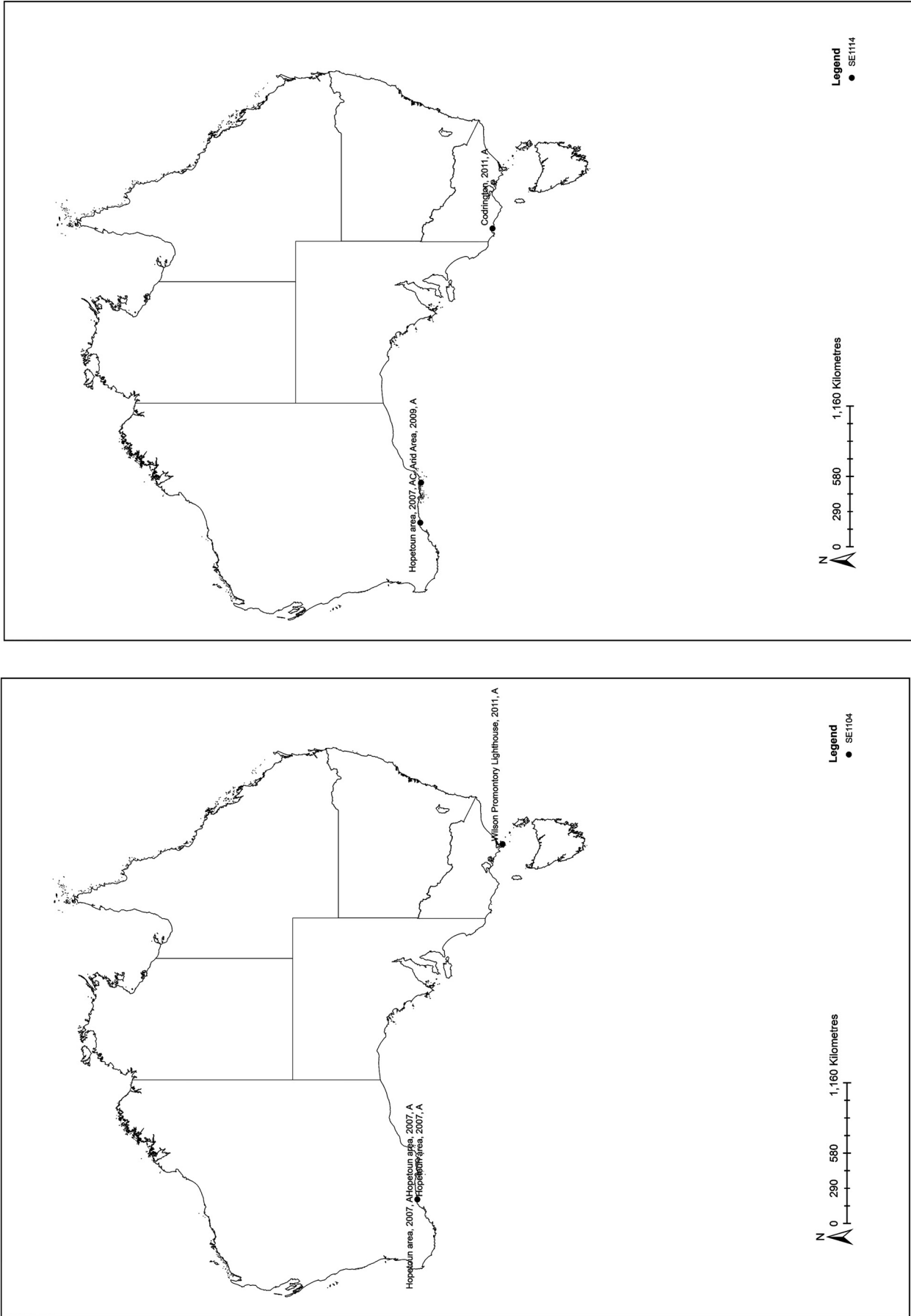


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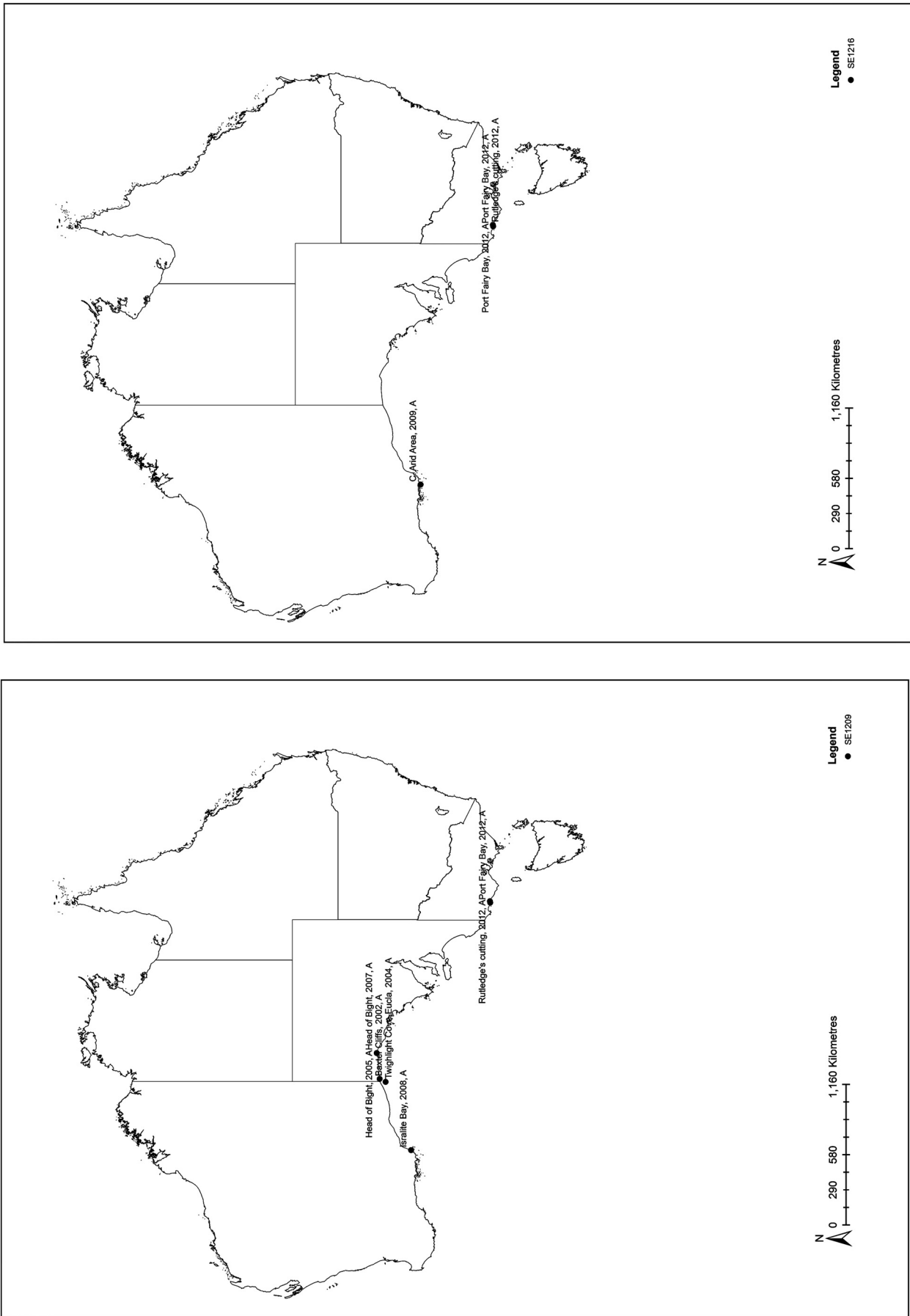


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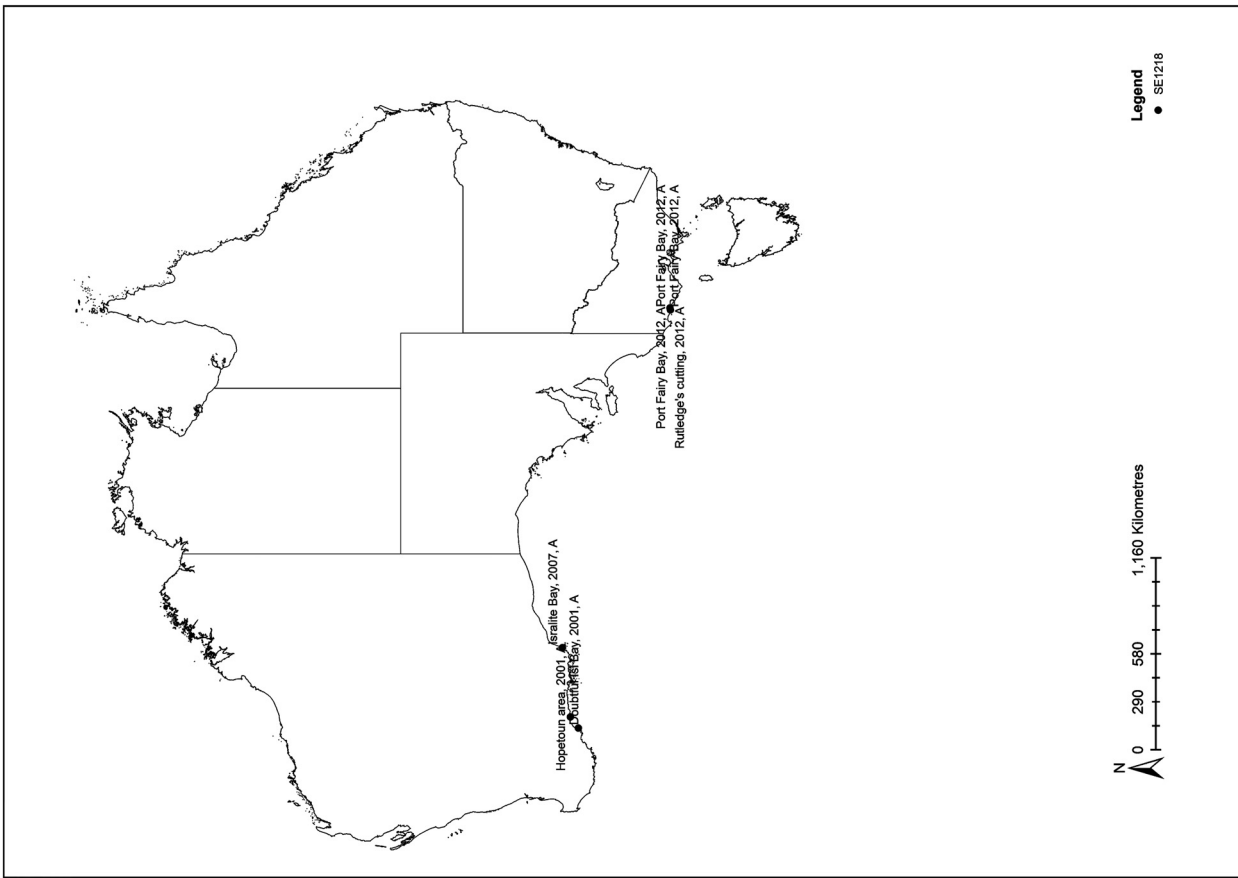


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