

Figure 50. SSC habitat areas by month for Cartier Island. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

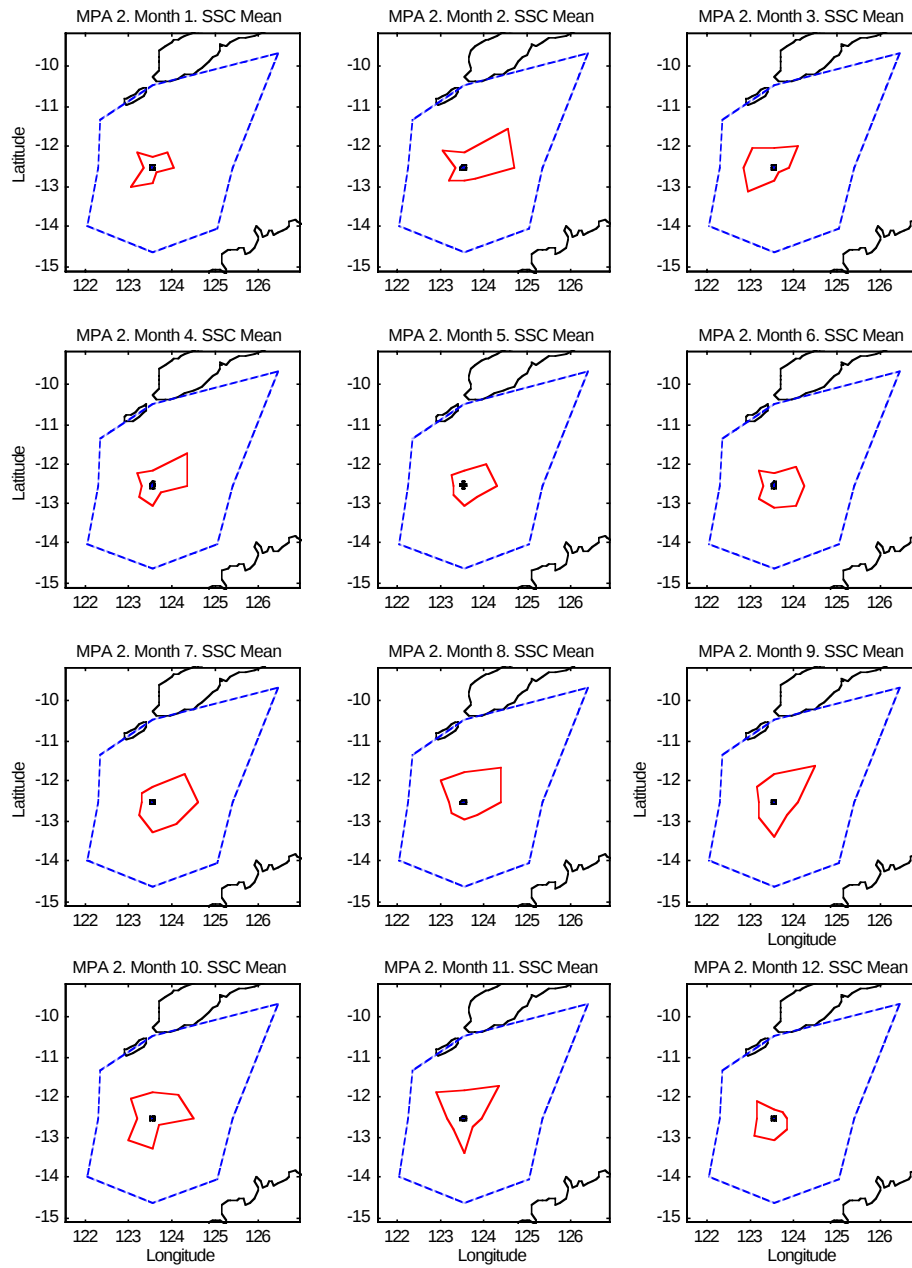


Figure 51. SSC habitat areas by month for Mermaid Reef. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

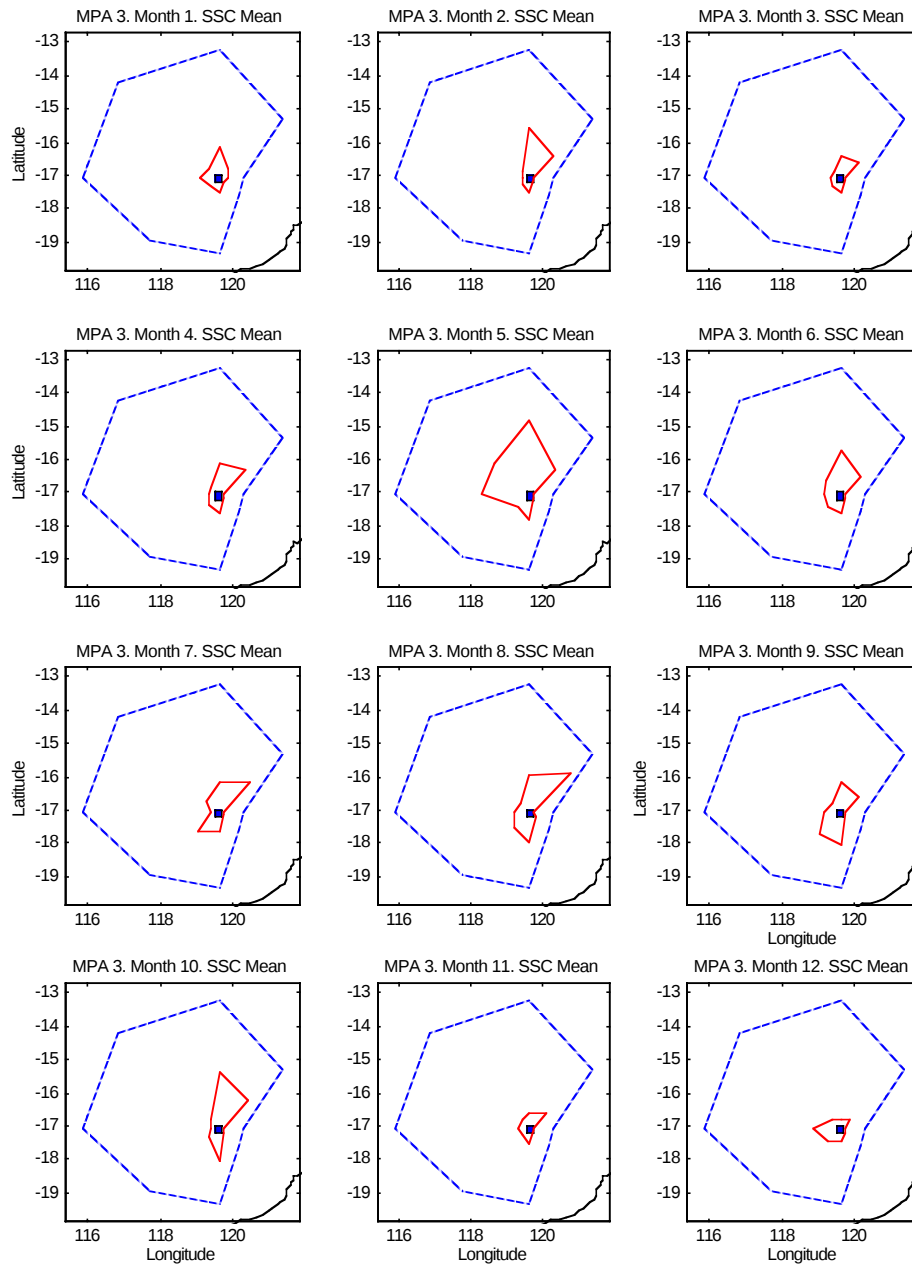


Figure 52. SSC habitat areas by month for Ningaloo. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

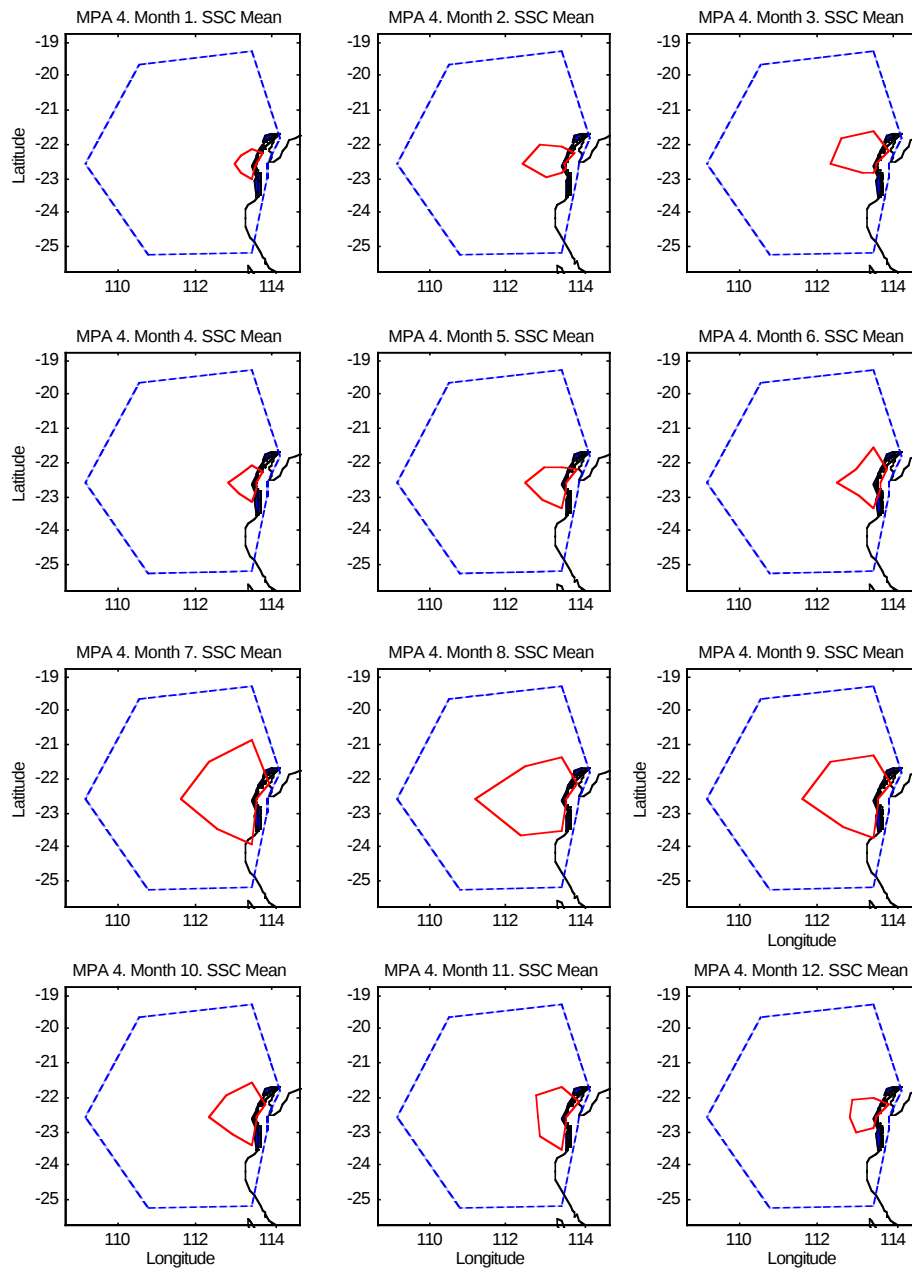


Figure 53. SSC habitat areas by month for Great Australia Bight. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

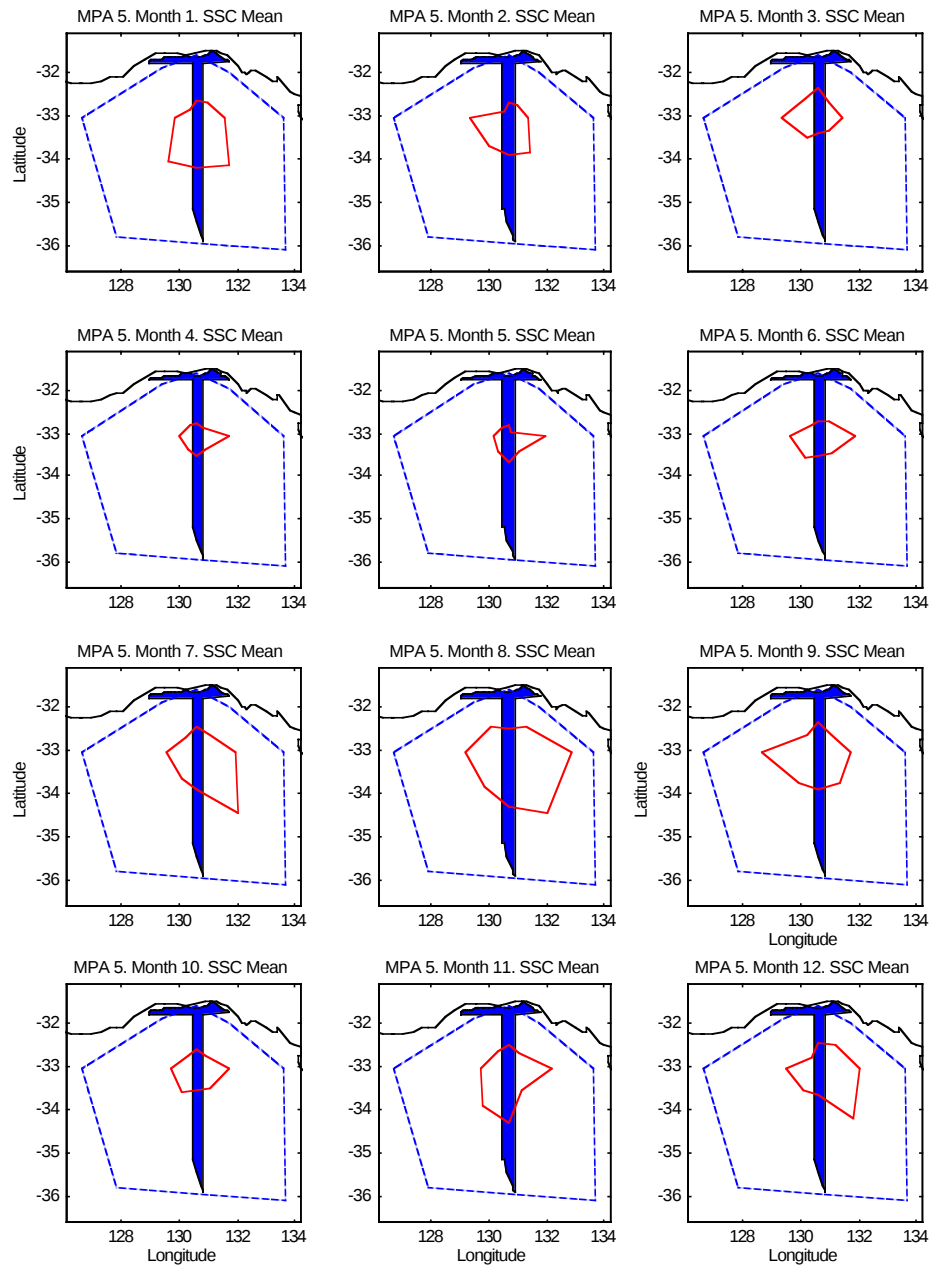


Figure 54. SSC habitat areas by month for Tasmanian Seamounts. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

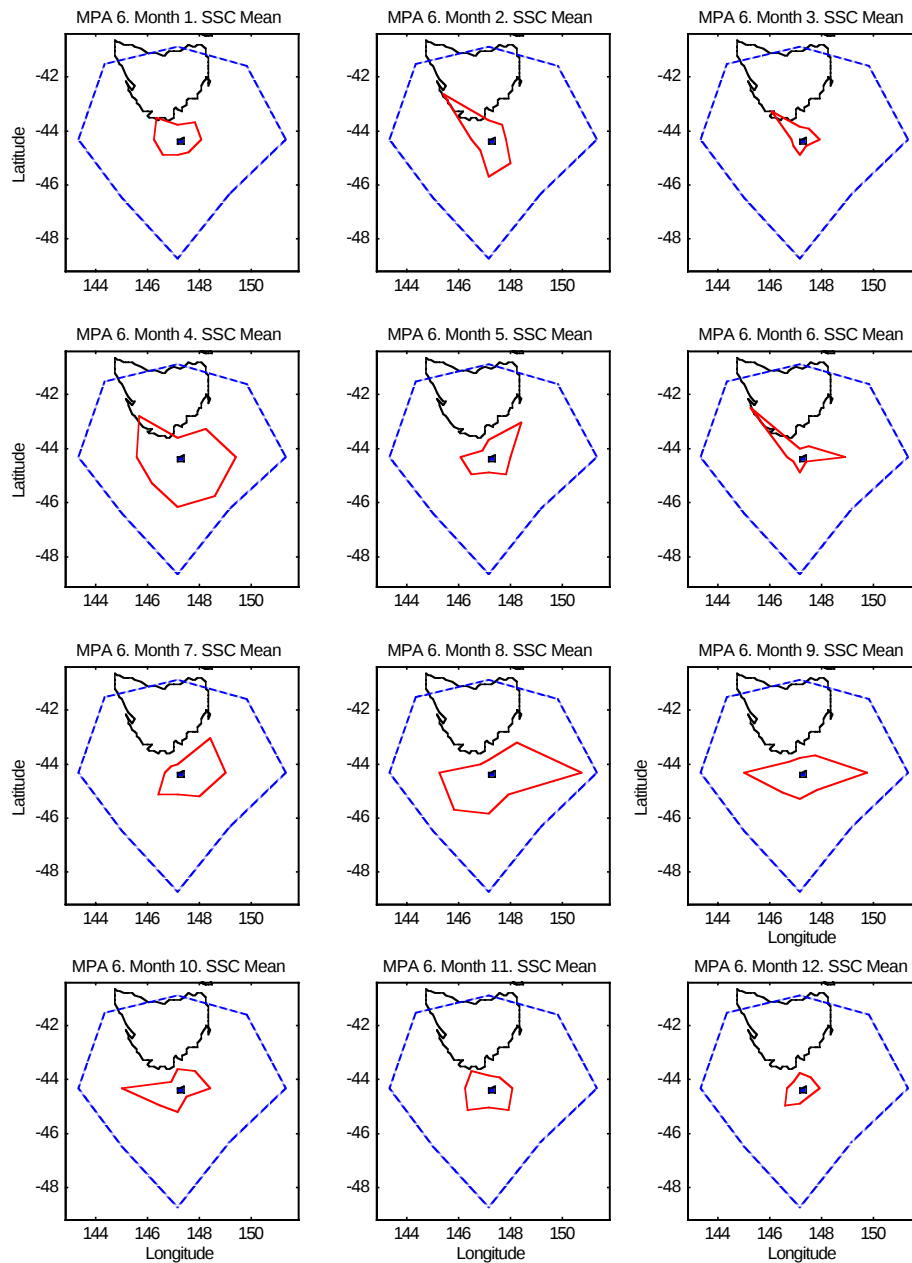


Figure 55. SSC habitat areas by month for Macquarie Island. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

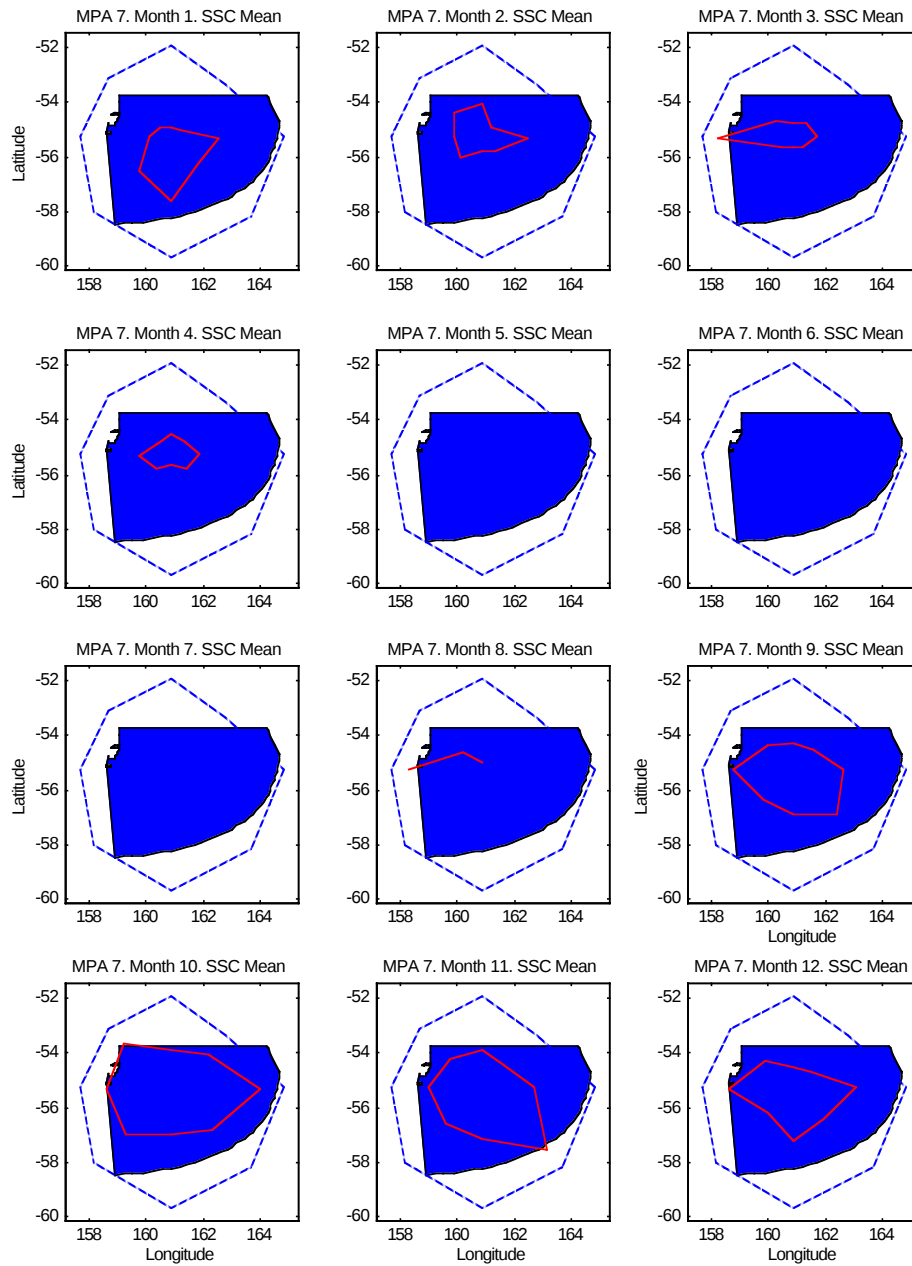


Figure 56. SSC habitat areas by month for Lord Howe Island. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

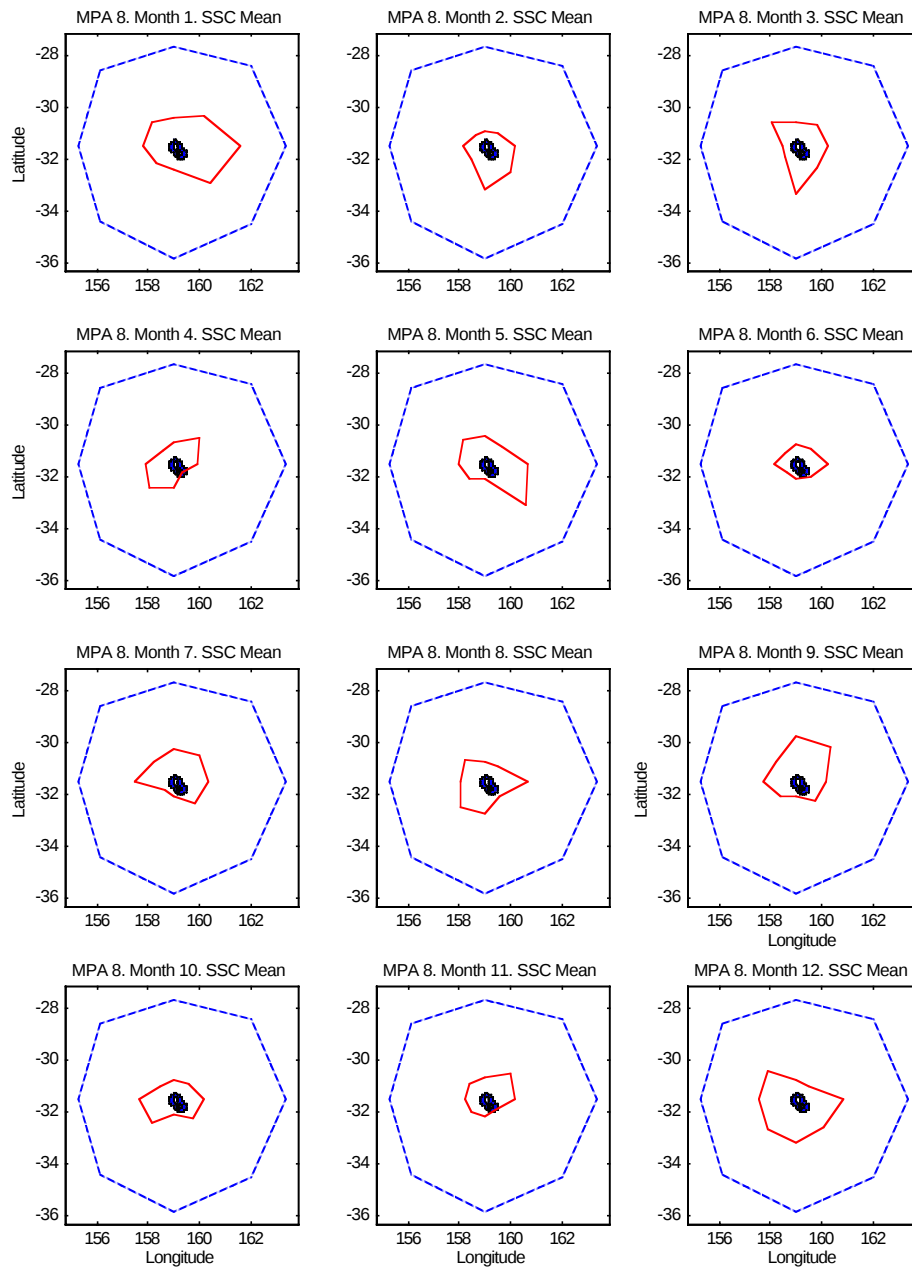


Figure 57. SSC habitat areas by month for Solitary Islands. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

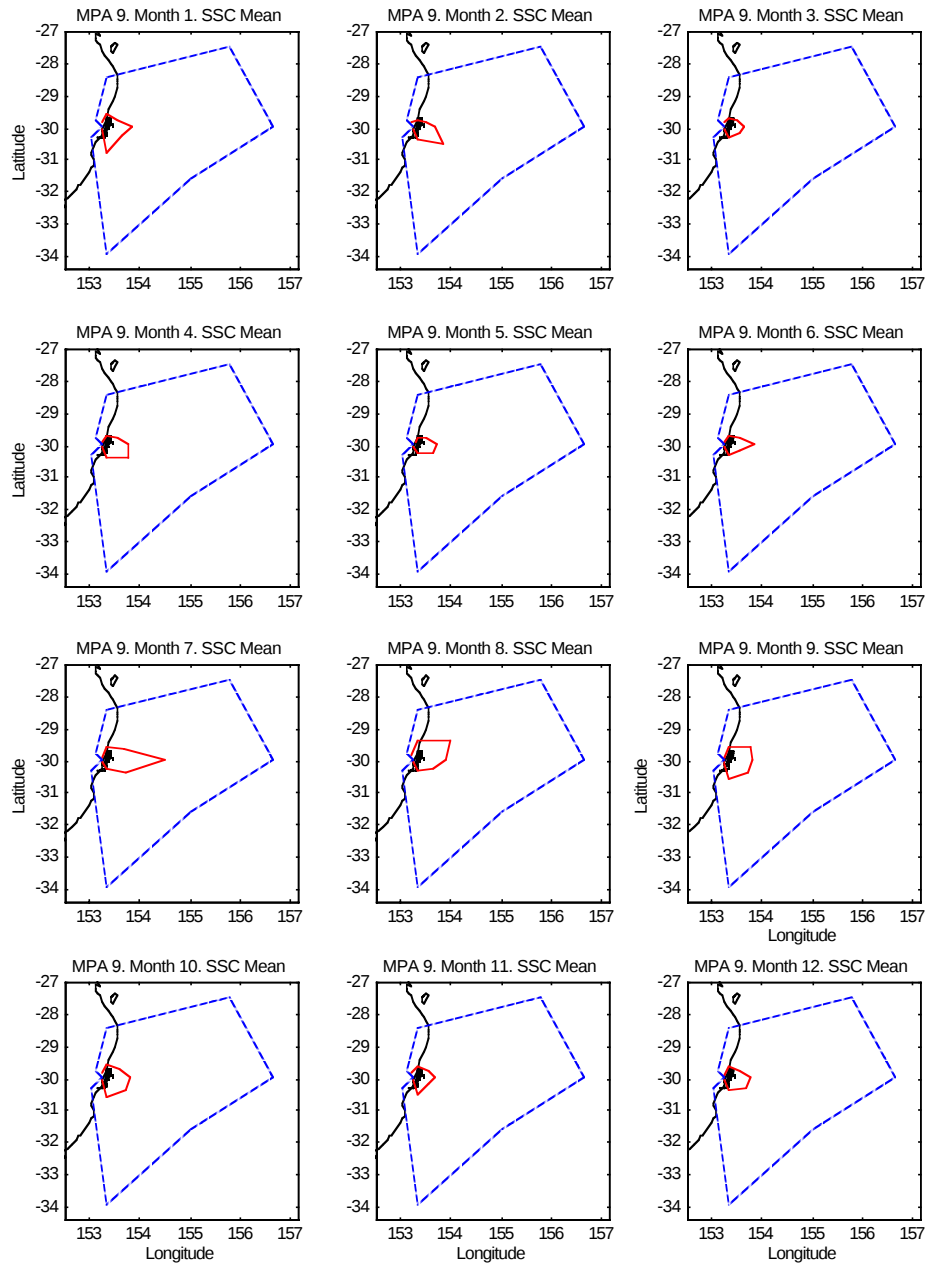


Figure 58. SSC habitat areas by month for Elizabeth and Middleton Reefs. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

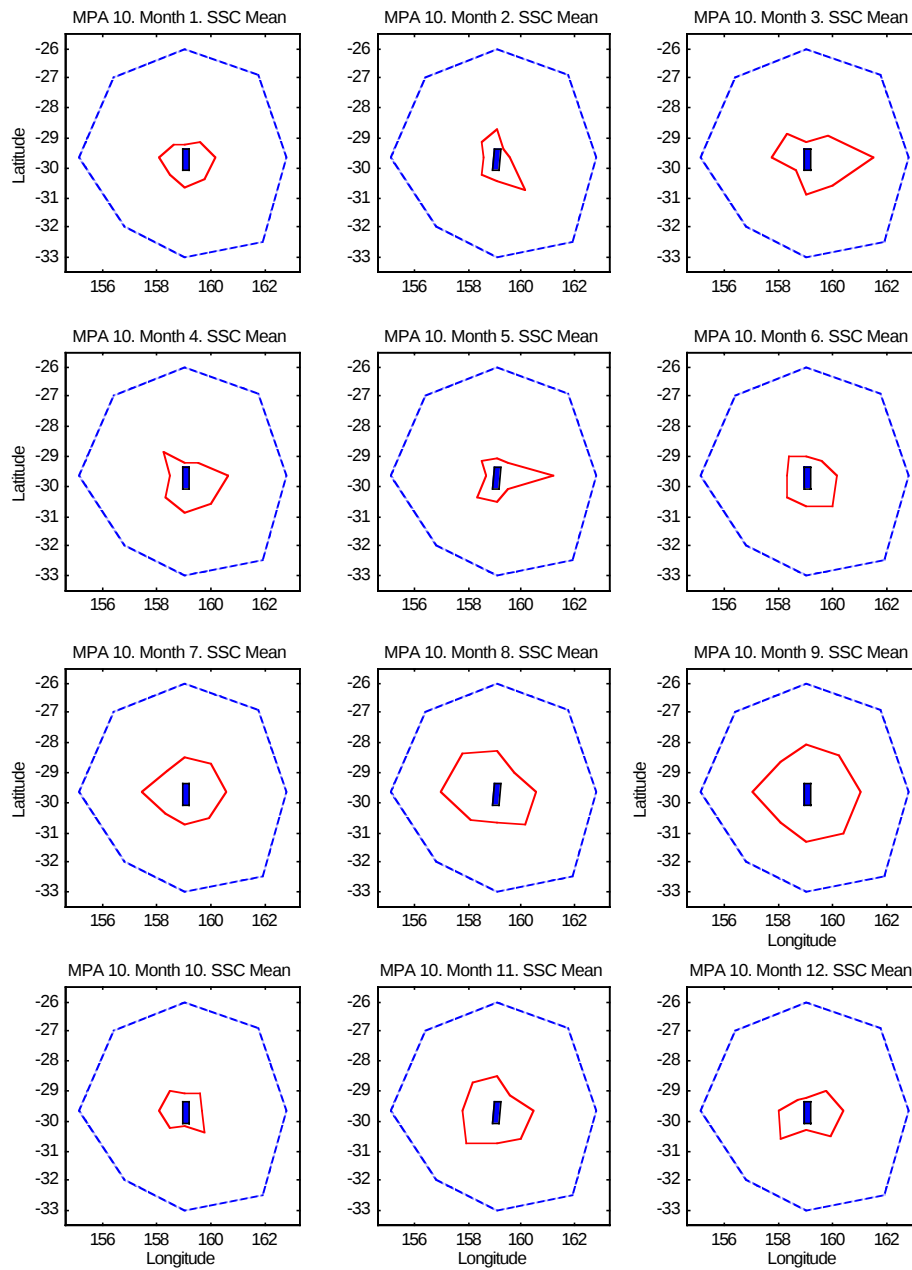


Figure 59. SSC habitat areas by month for Lihou Reef. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

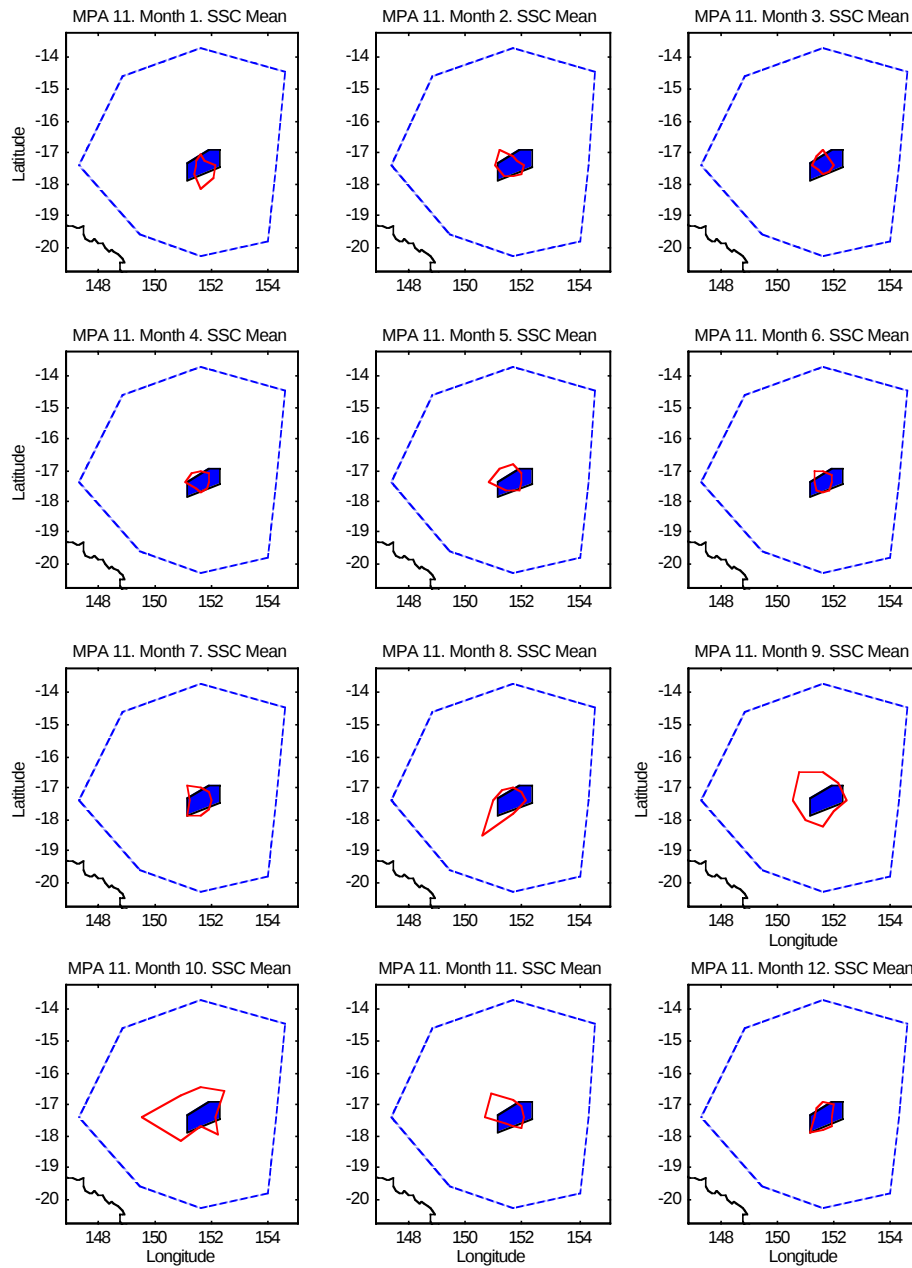


Figure 60. SSC habitat areas by month for Coringa-Herald. The inner solid line is the mean habitat area for the month. The outer dotted line is the maximum extent of the habitat boundary for all dates in each transect direction.

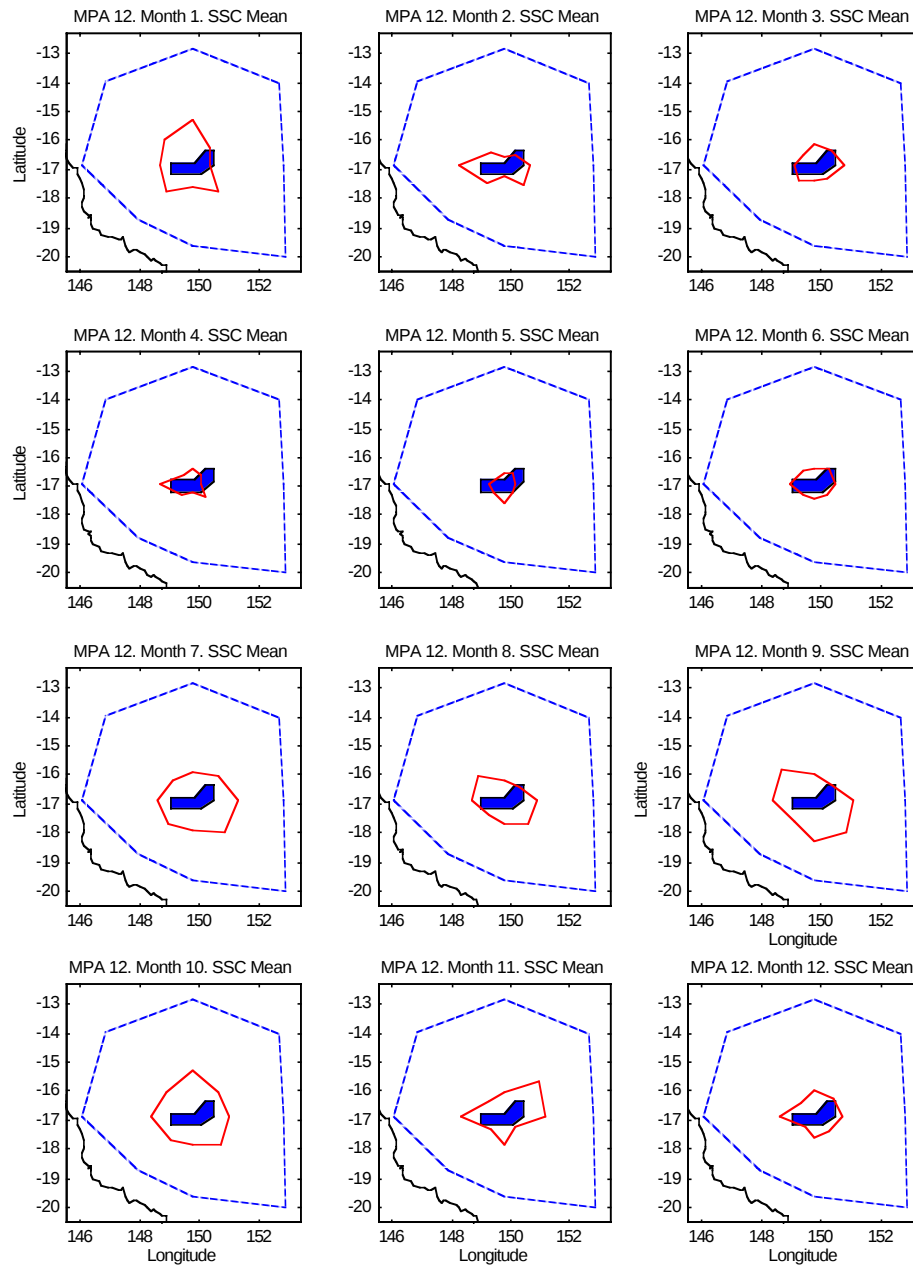


Figure 61. SST habitat areas by month for the MPAs. The upper line is the absolute maximum size if the greatest distance found in each transect is used, the middle line is the maximum found for the month, while the lower line is the mean habitat area for the month.

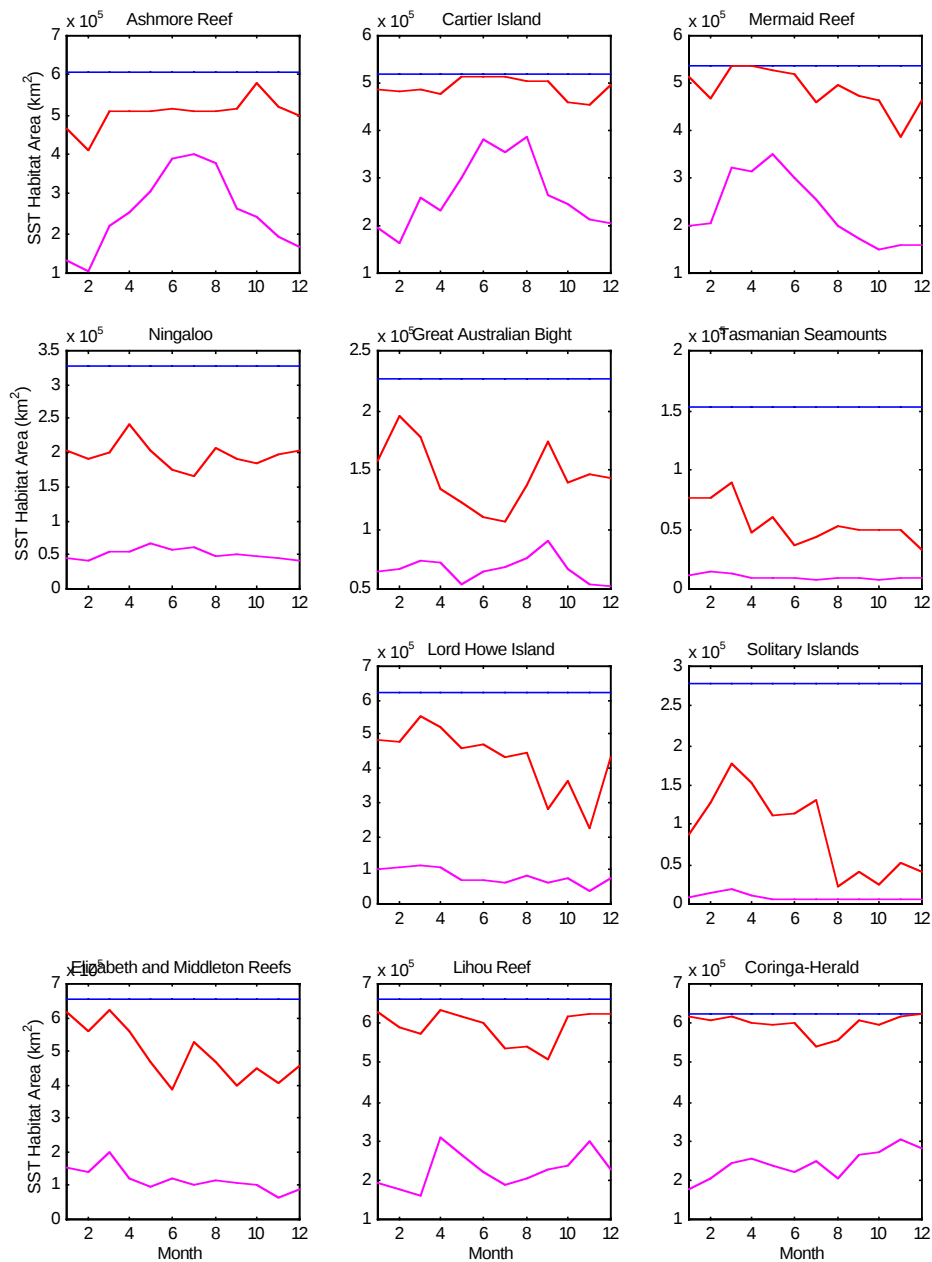


Figure 62. SSC habitat areas by month for the MPAs. The upper line is the absolute maximum size if the greatest distance found in each transect is used, the middle line is the maximum found for the month, while the lower line is the mean habitat area for the month.

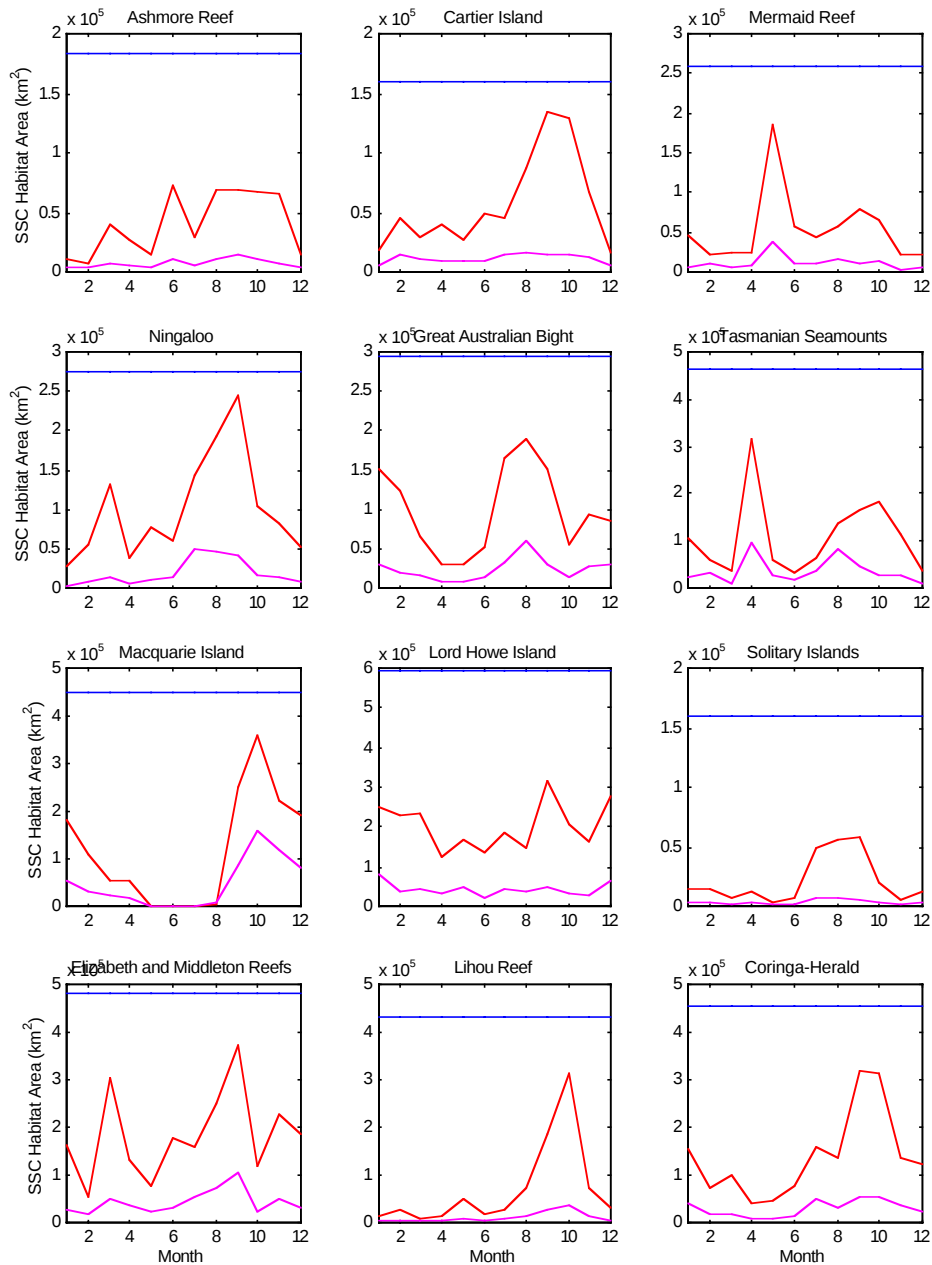


Figure 63. Frequency of mean SST habitats for each MPA by month for all years 1991-1999.

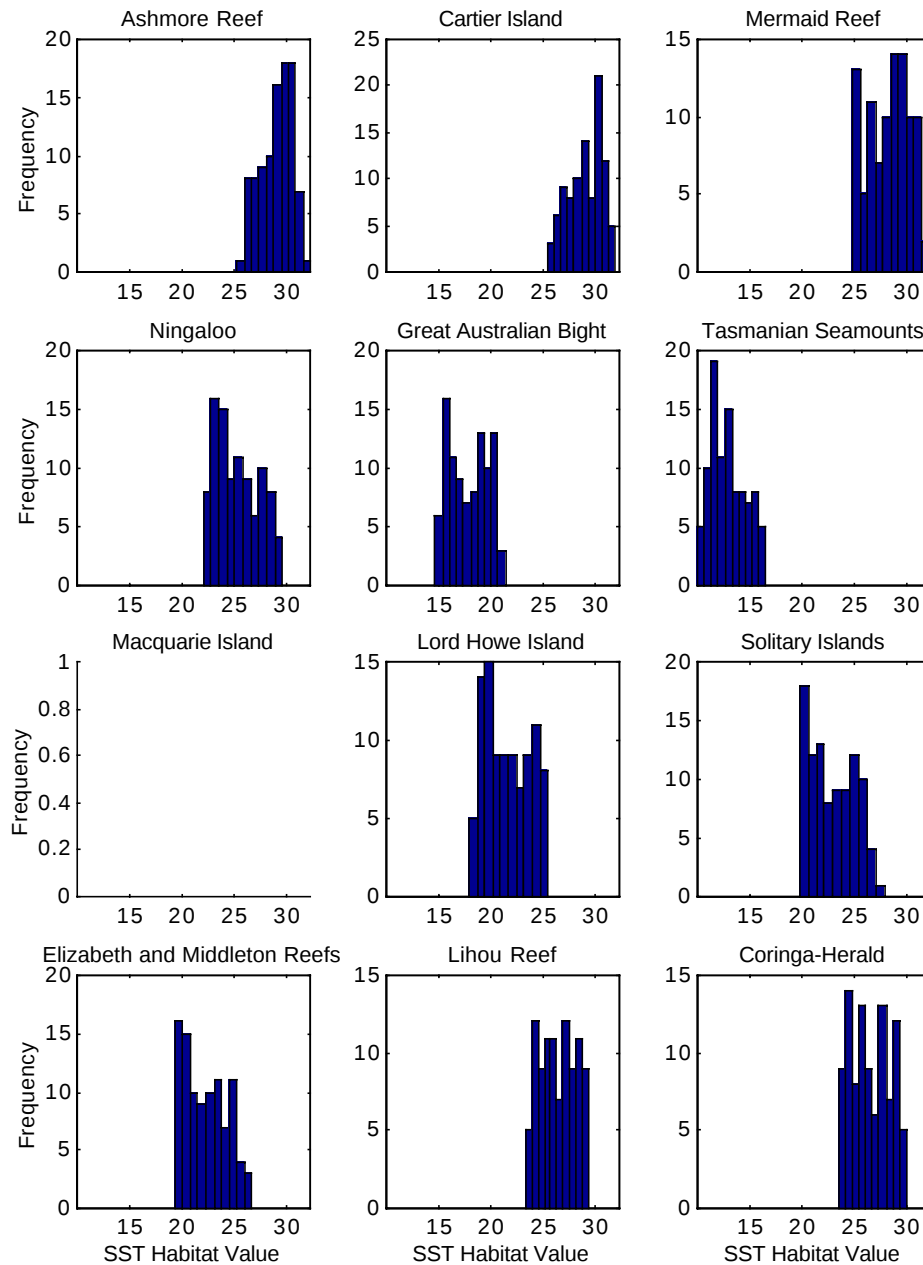


Figure 64. Frequency of mean SSC habitats for each MPA by month for all years 1997-1999.

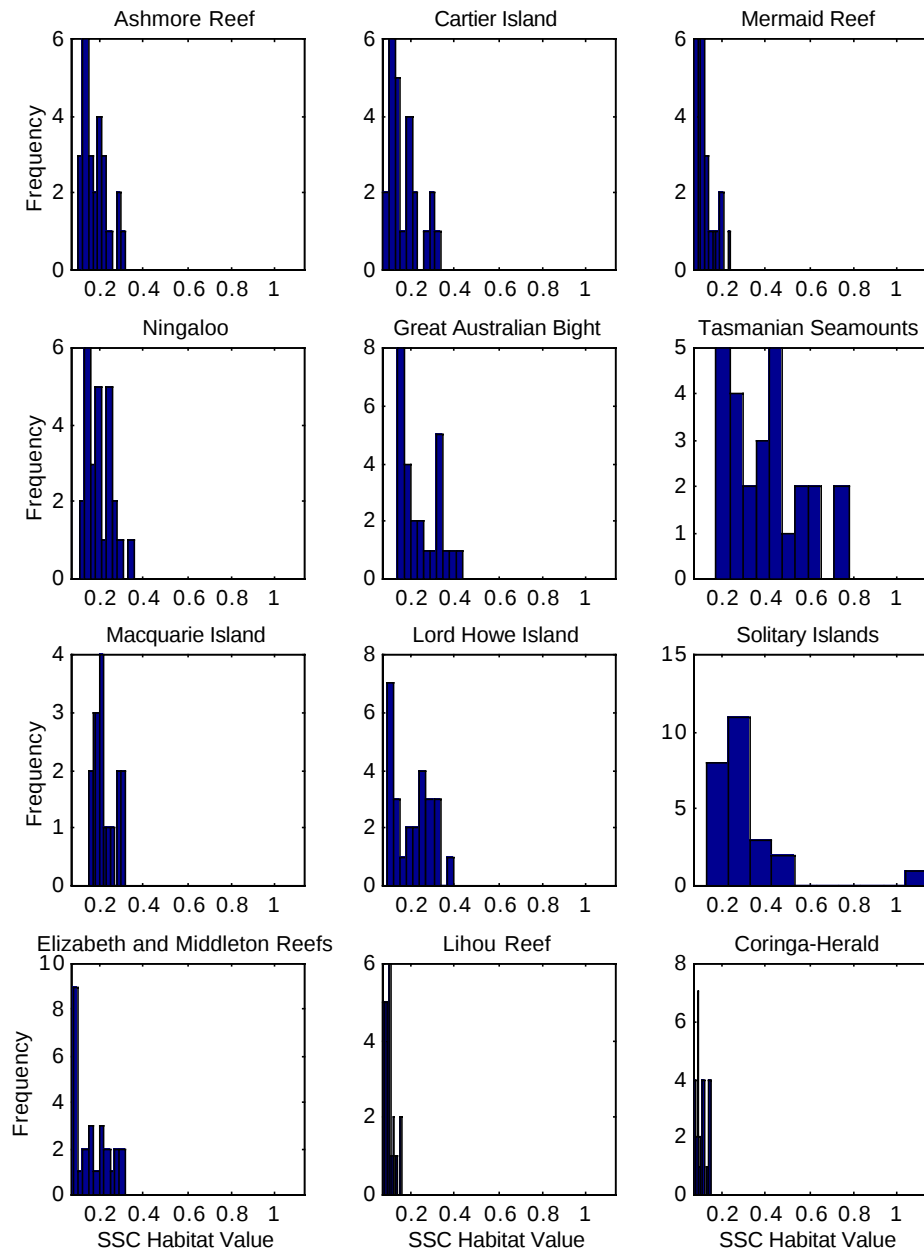


Figure 65. SST habitat area mean values by month, for all years 1991-1999.

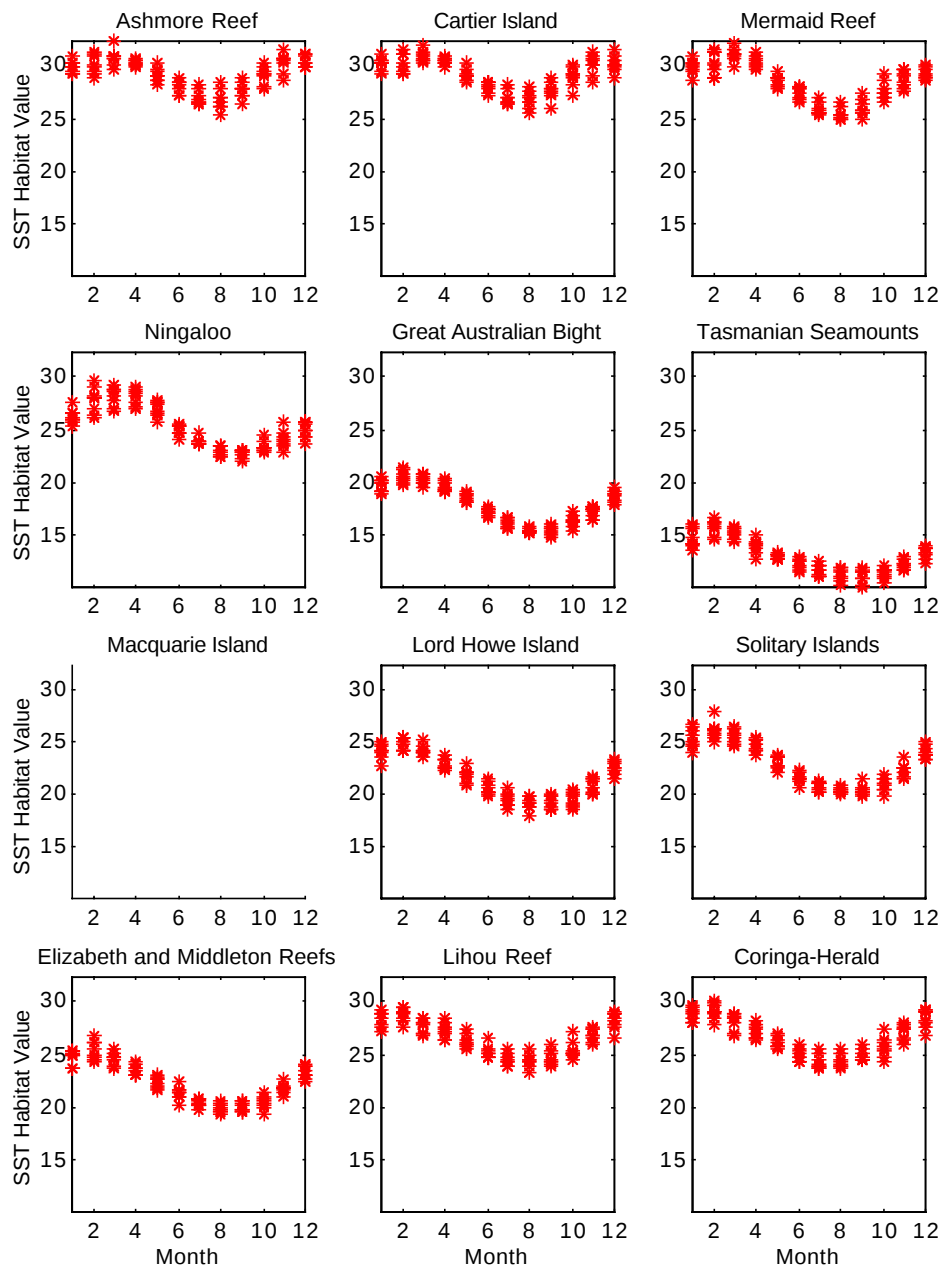


Figure 66. SSC habitat area mean values by month, for all years 1997-1999.

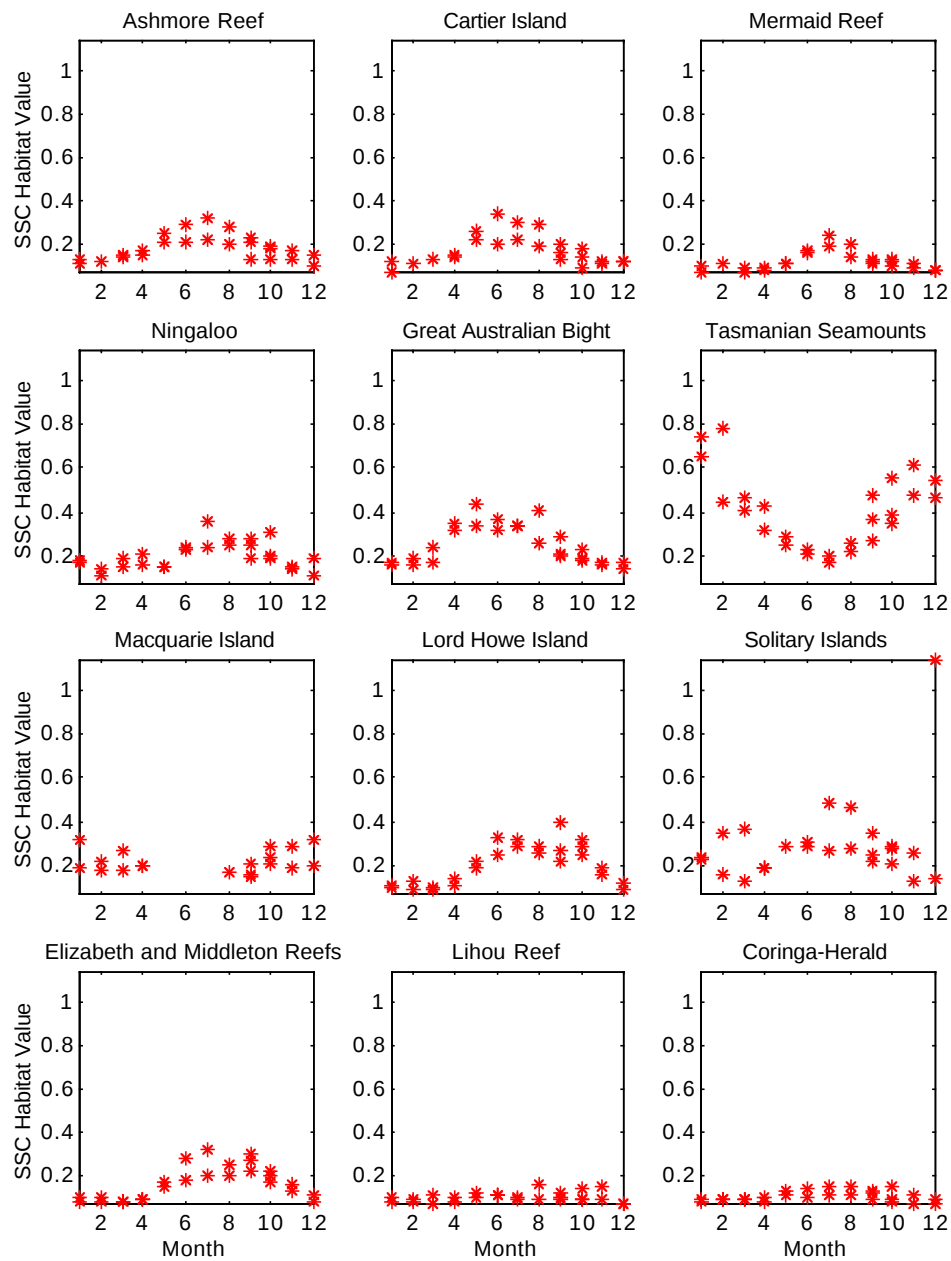


Figure 67. SST habitat areas, cumulative frequency of mean monthly values, 1991-1999.

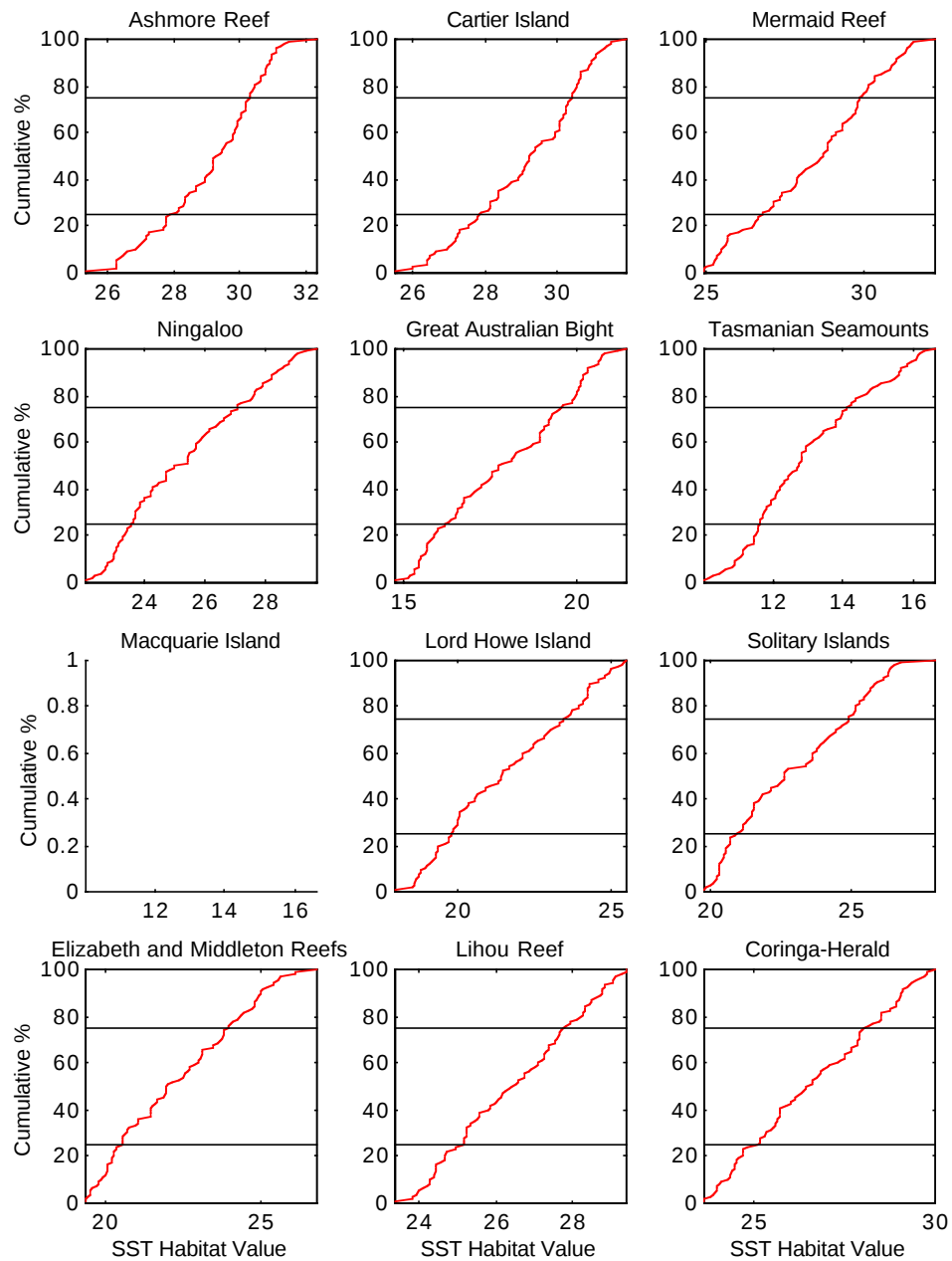


Figure 68. SSC habitat areas, cumulative frequency of mean monthly values, 1997-1999.

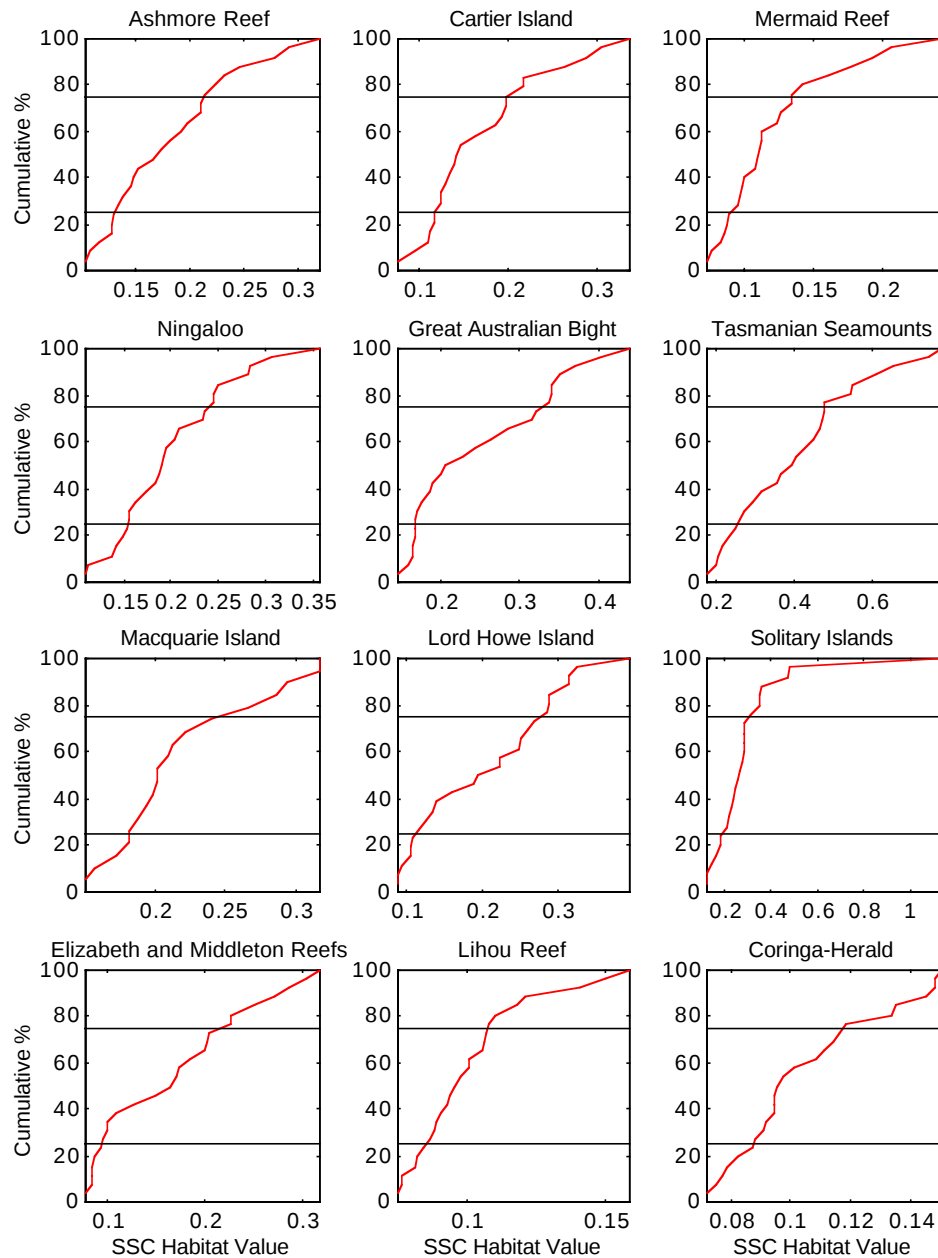


Figure 69. Fraction of the SST habitat area that is covered by the MPA by month. Crosses are the maximum habitat area for each month in each year, while stars are the mean habitat area for each month in each year. The solid lines are the mean for the maximum and mean values by month.

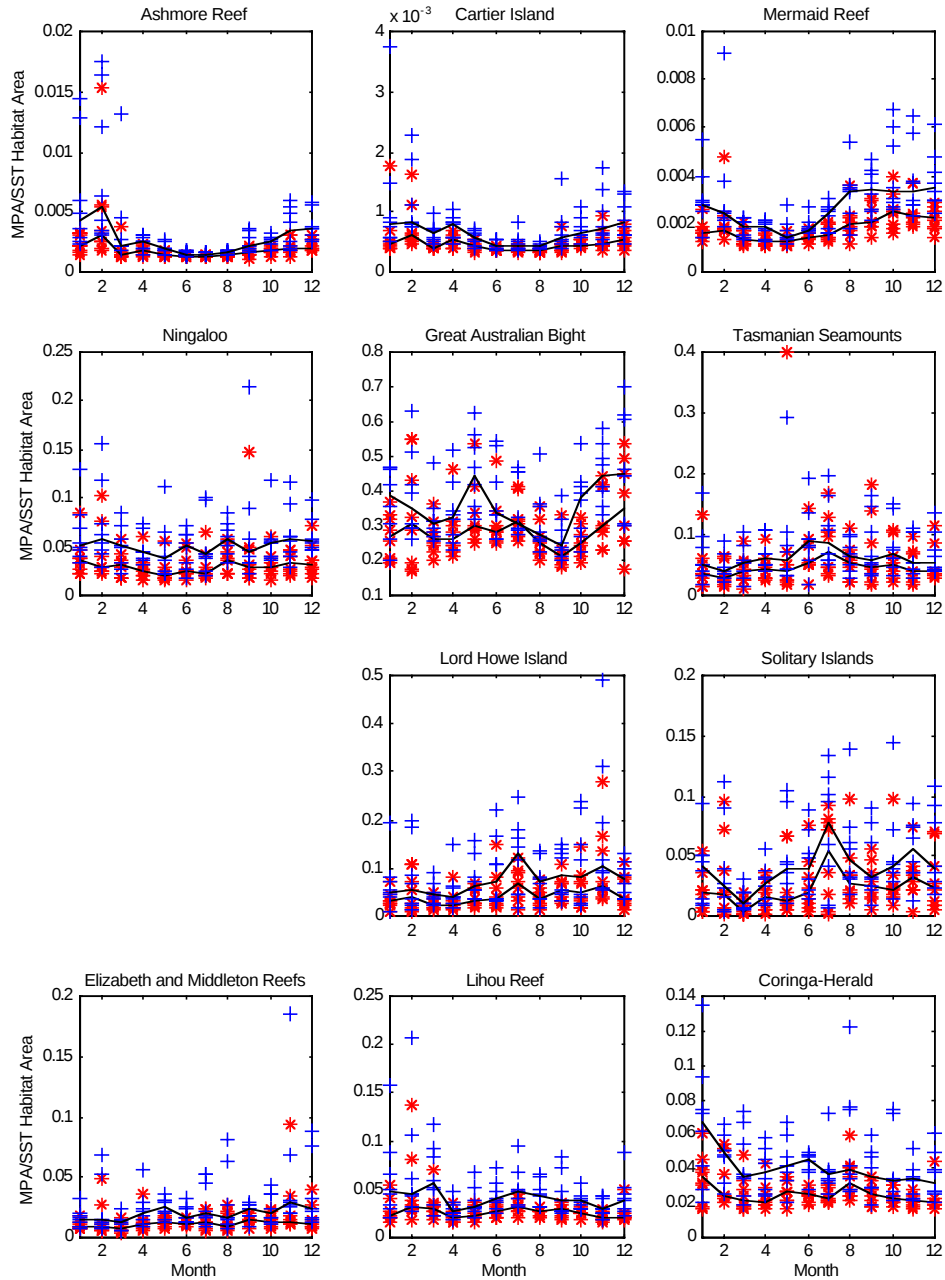


Figure 70. Fraction of the SSC habitat area that is covered by the MPA by month. Crosses are the maximum habitat area for each month in each year, while stars are the mean habitat area for each month in each year. The solid lines are the mean for the maximum and mean values by month.

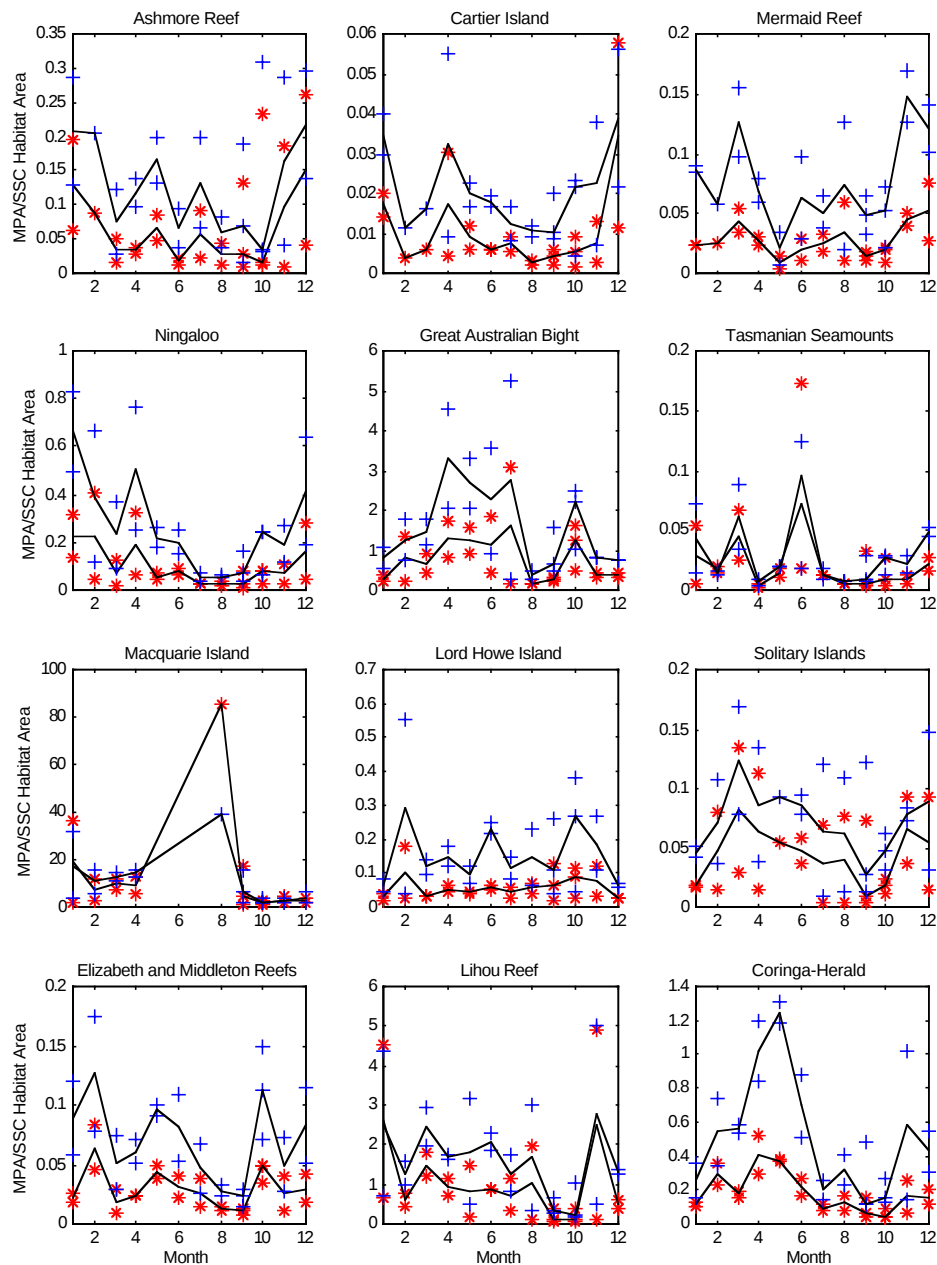


Figure 71. Maximum (dashed outer line) and mean (solid inner line) SST habitat zones by month for all MPAs.

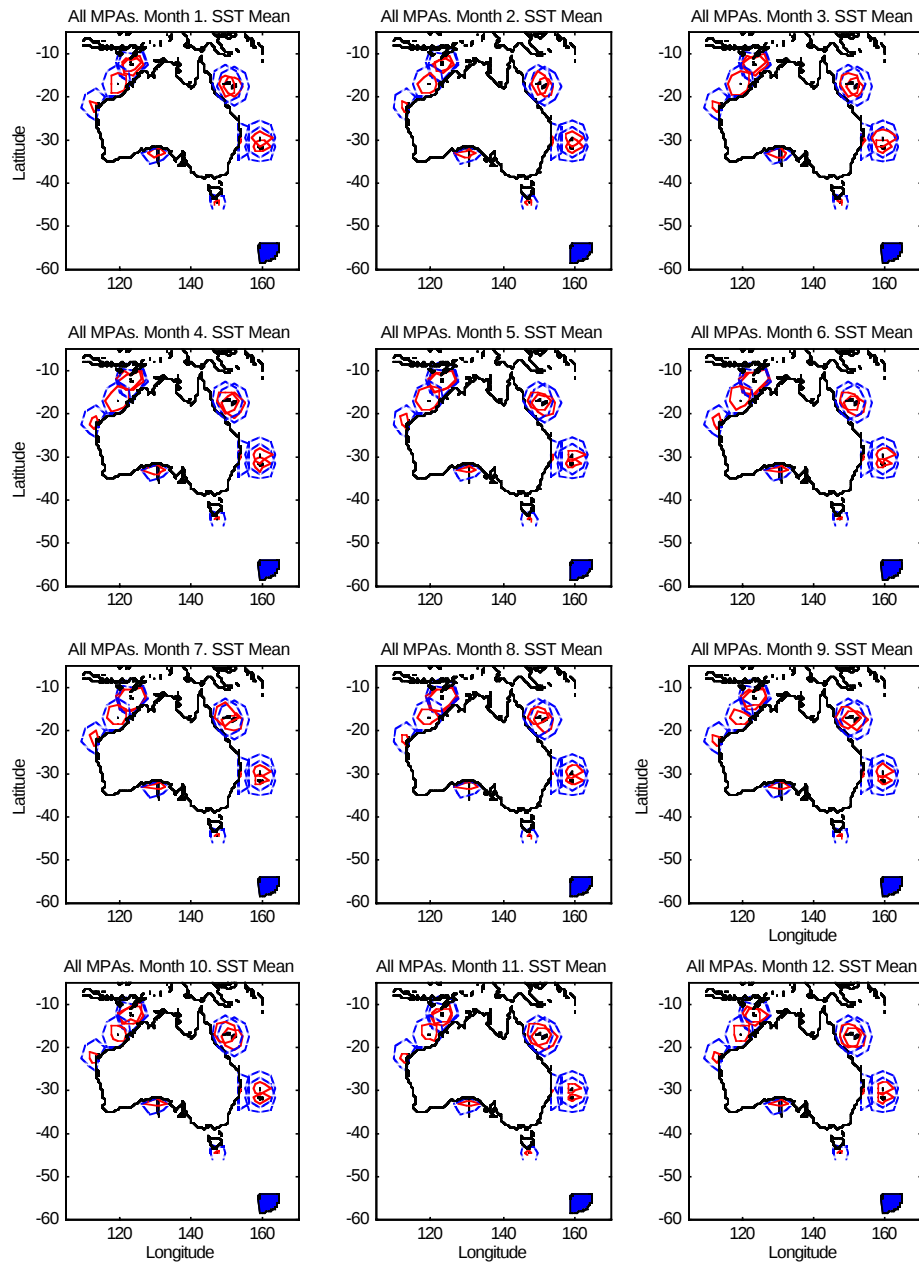


Figure 72. Maximum (dashed outer line) and mean (solid inner line) SSC habitat zones by month for all MPAs.

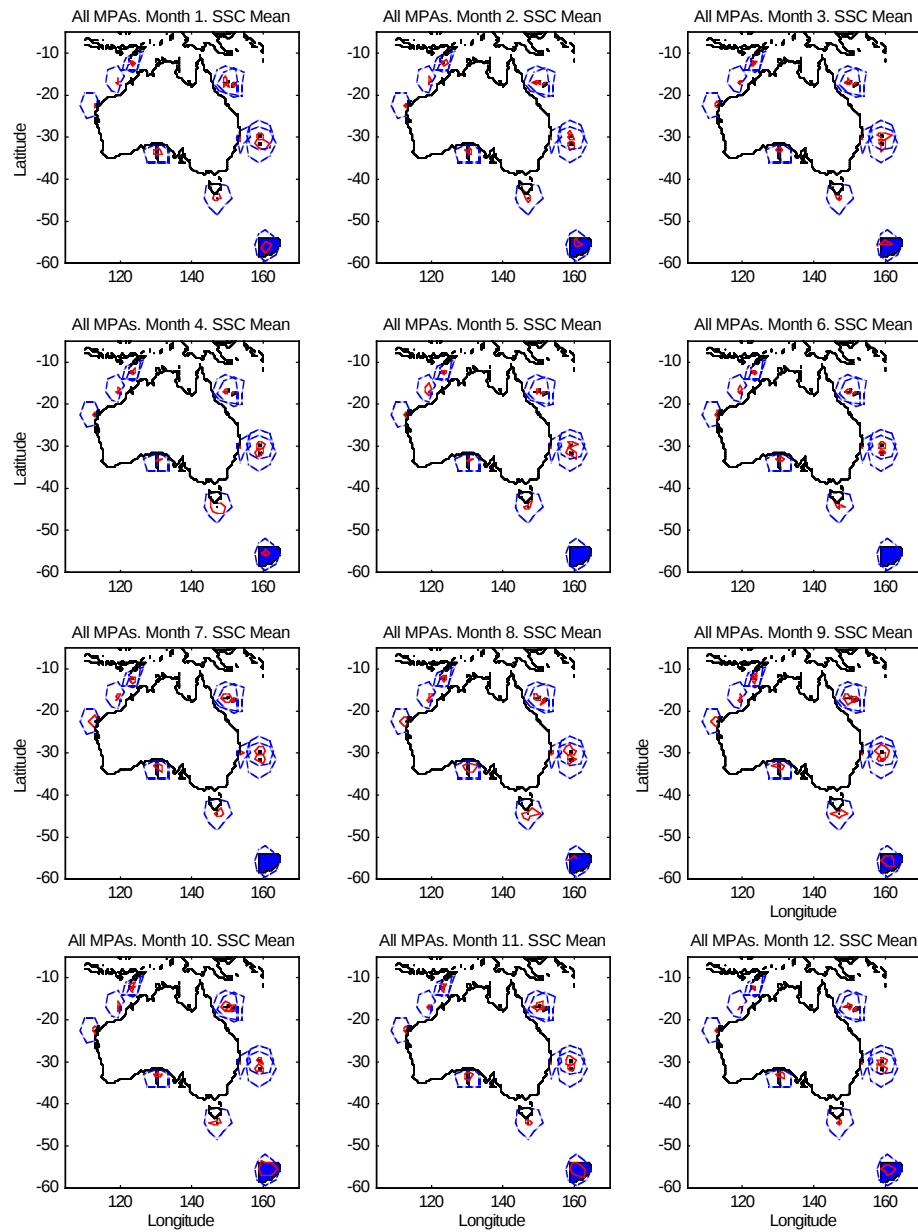


Figure 73. Maximum (outer line) and mean (inner line) SST habitat zones for all months and all MPAs.

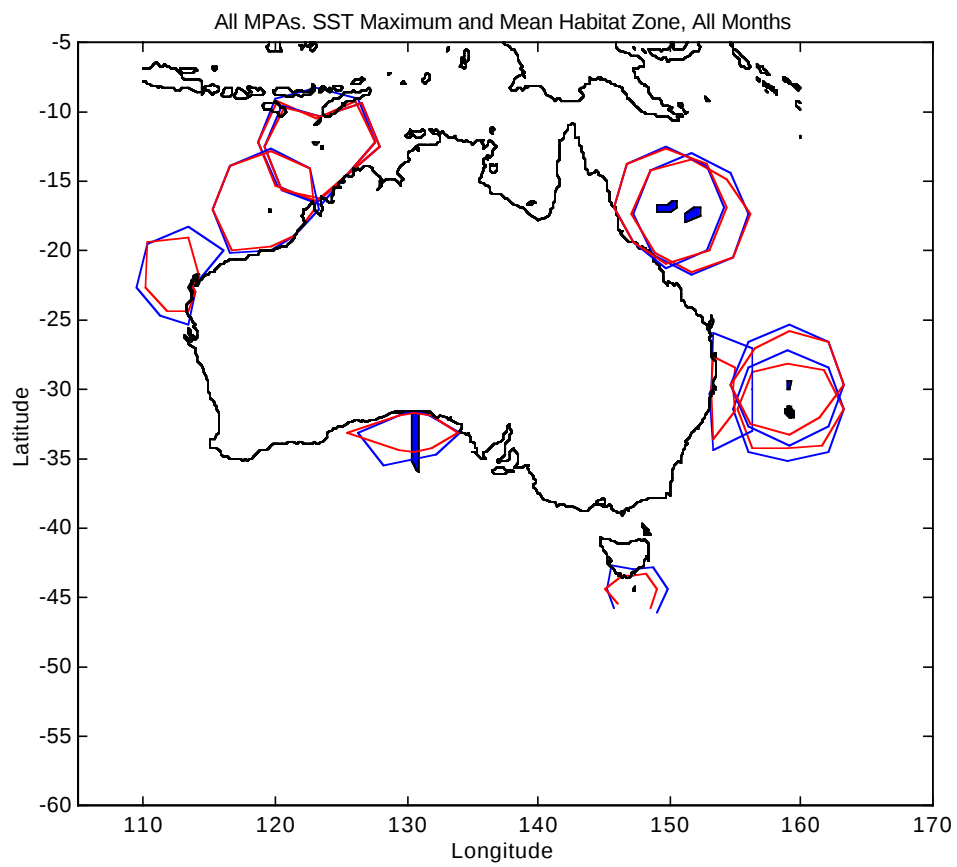


Figure 74. Maximum (outer line) and mean (inner line) SSC habitat zones for all months and all MPAs.

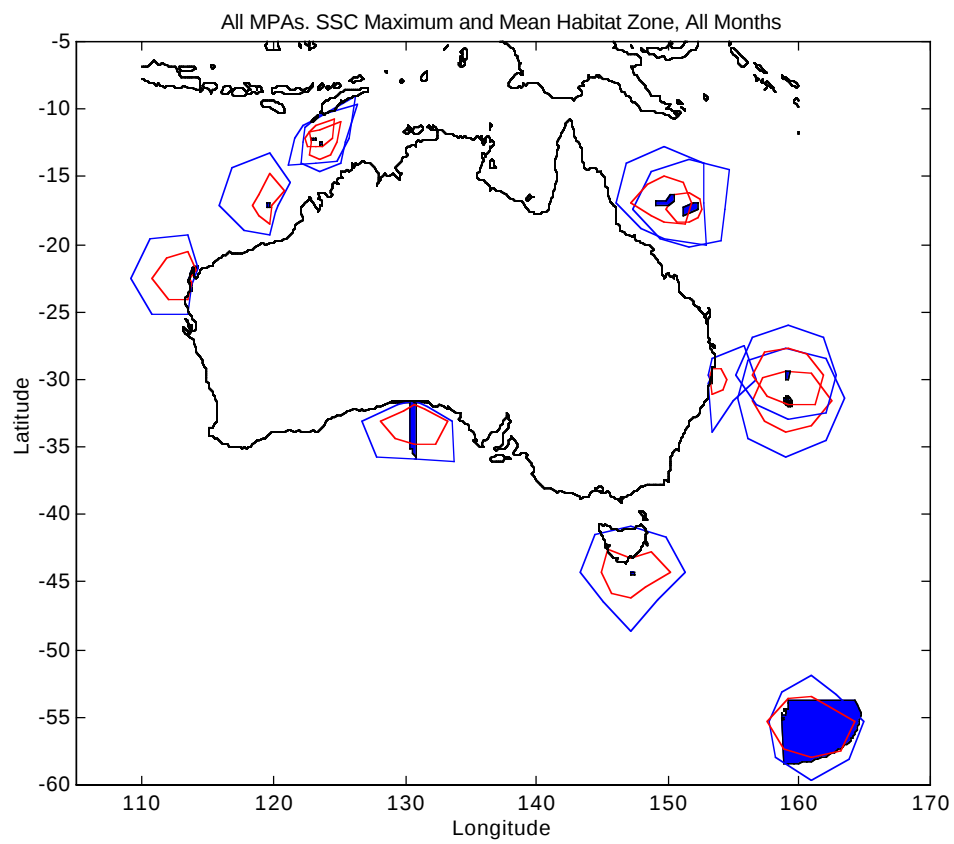


Figure 75. Relationship between the mean size of the habitat areas found for each MPA using the SST and SSC definitions each month. Numbers below the diagonal are those months where the maximum SST habitat was larger than the maximum SSC habitat, and vice versa. Month numbers 1-12 are shown on each panel for each MPA. Each panel refers to a different MPA: 1. Ashmore Reef. 2. Cartier Island. 3. Mermaid Reef. 4. Ningaloo. 5. Great Australian Bight. 6. Tasmanian Seamounts. 7. Macquarie Island. 8. Lord Howe Island. 9. Solitary Islands. 10. Elizabeth and Middleton Reefs. 11. Lihou Reef. 12. Coringa-Herald.

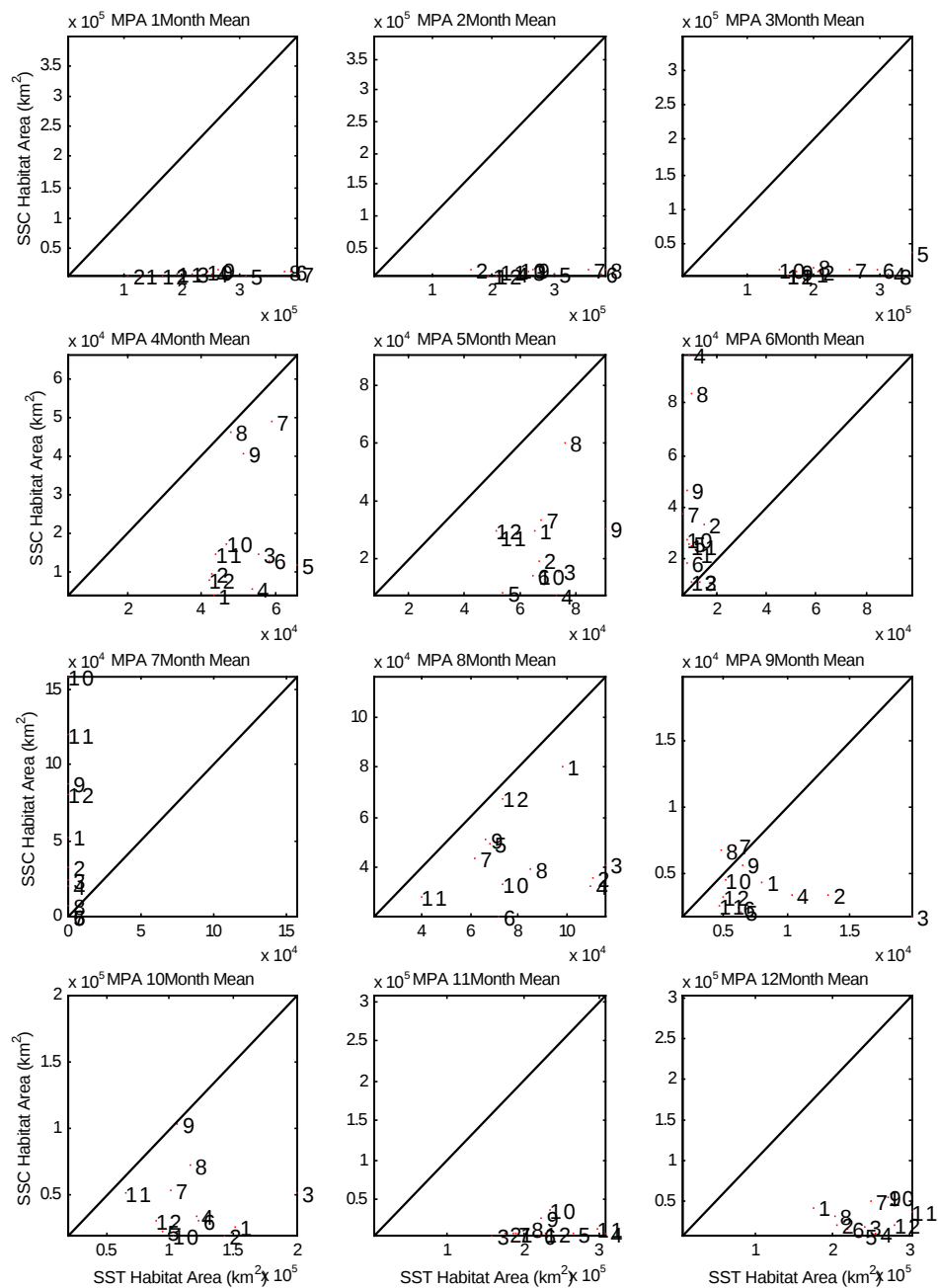


Figure 76. Relationship between the maximum size of the habitat areas found for each MPA using the SST and SSC definitions each month. Numbers below the diagonal are those months where the maximum SST habitat was larger than the maximum SSC habitat, and vice versa. Month numbers 1-12 are shown on each panel for each MPA. Each panel refers to a different MPA: 1. Ashmore Reef. 2. Cartier Island. 3. Mermaid Reef. 4. Ningaloo. 5. Great Australian Bight. 6. Tasmanian Seamounts. 7. Macquarie Island. 8. Lord Howe Island. 9. Solitary Islands. 10. Elizabeth and Middleton Reefs. 11. Lihou Reef. 12. Coringa-Herald.

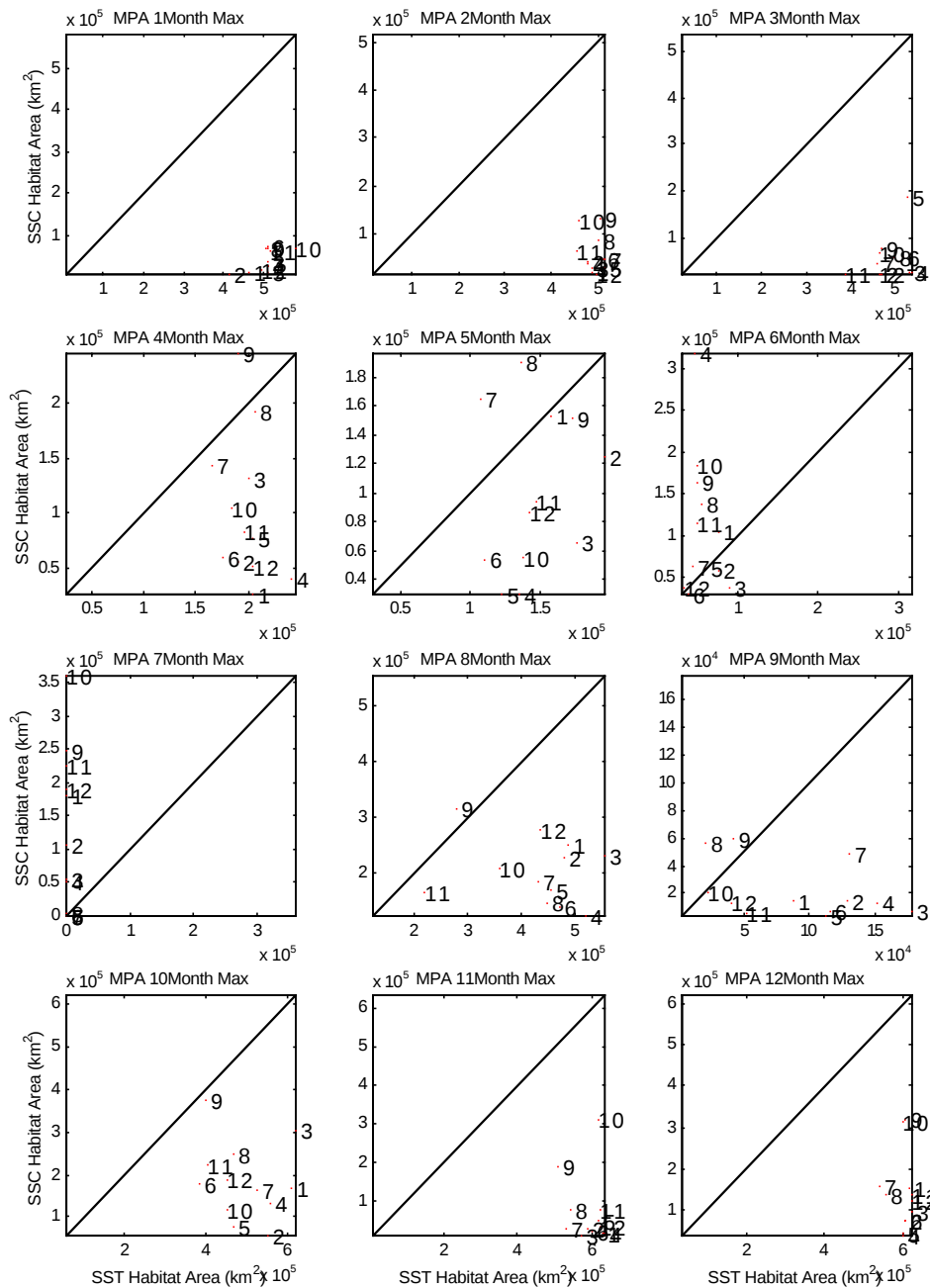


Figure 77. Relationship between the maximum size of the habitat areas found for each MPA using the SST and SSC definitions. Numbers below the diagonal are those MPAs where the maximum SST habitat was larger than the maximum SSC habitat, and vice versa. MPA numbers refer to: 1. Ashmore Reef. 2. Cartier Island. 3. Mermaid Reef. 4. Ningaloo. 5. Great Australian Bight. 6. Tasmanian Seamounts. 7. Macquarie Island. 8. Lord Howe Island. 9. Solitary Islands. 10. Elizabeth and Middleton Reefs. 11. Lihou Reef. 12. Coringa-Herald.

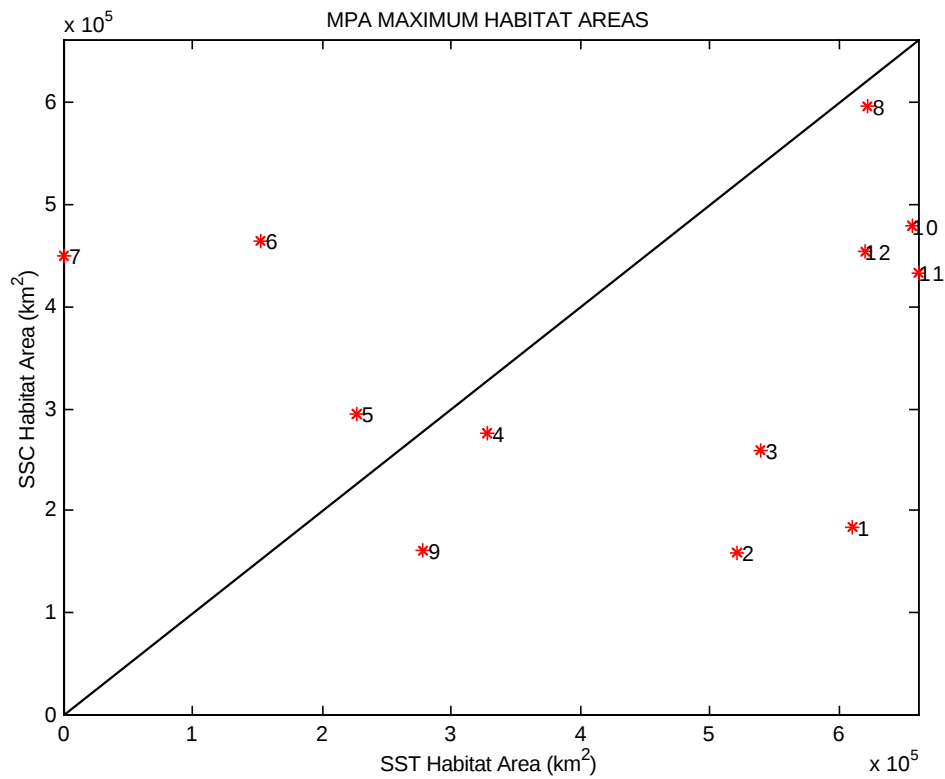


Figure 78. Relationship between monthly SST and SSC values for the habitat area for months in the period 1997-1999. The correlation for each MPA is shown above each panel.

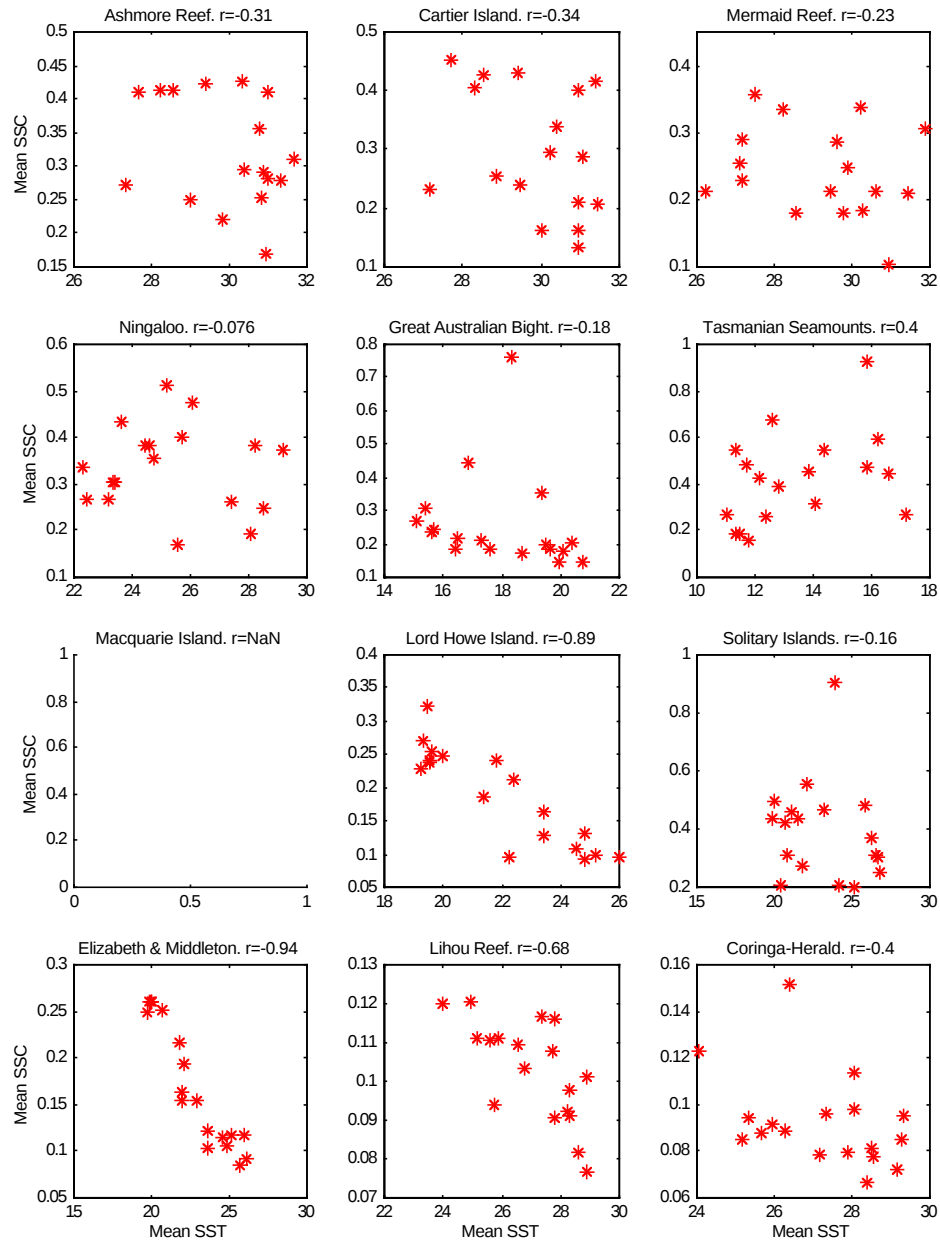


Figure 79. Relationship between monthly SST values for the habitat area and the size of the SST habitat area for months in the period 1991-1999. The correlation for each MPA is shown above each panel.

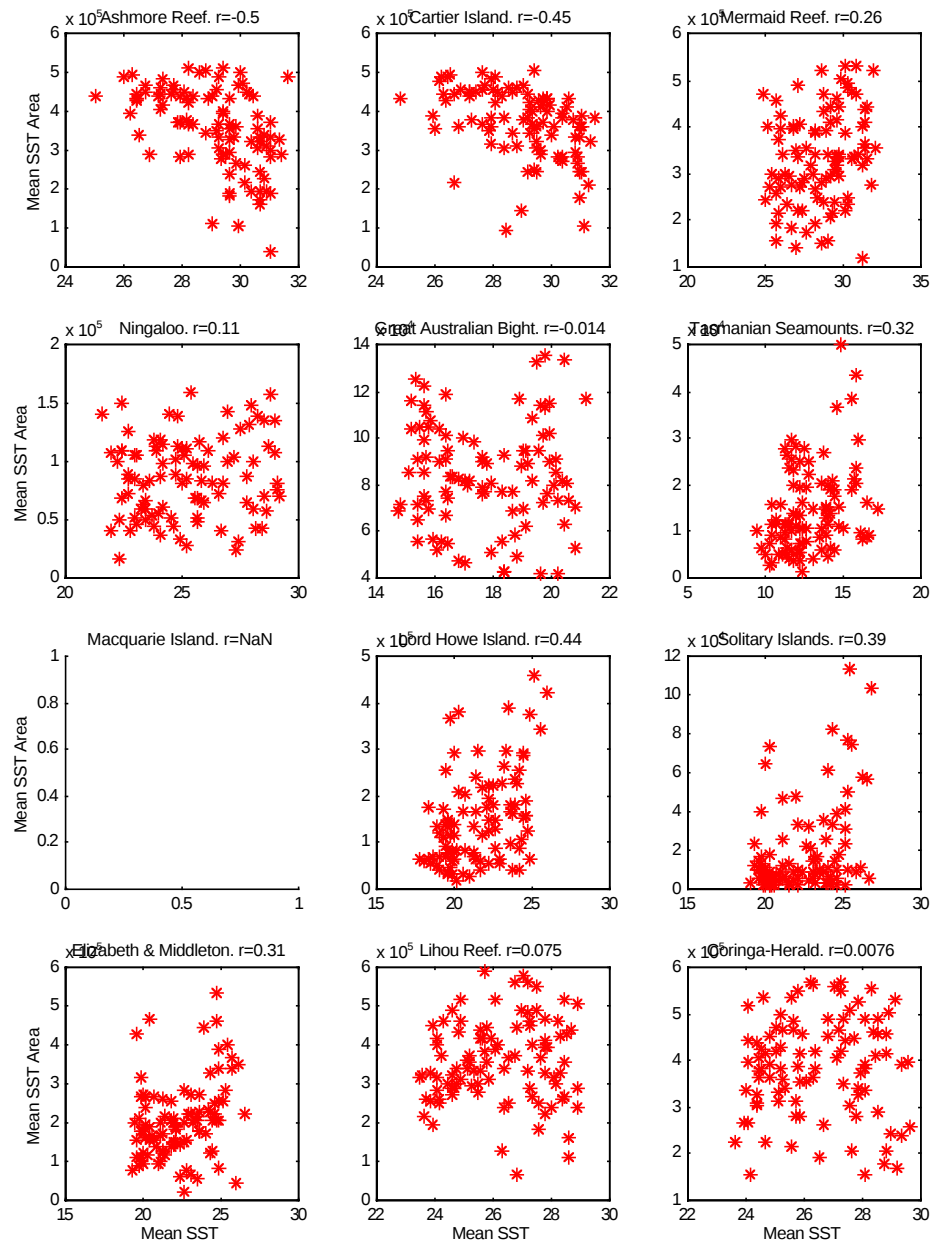


Figure 80. Relationship between monthly SSC values for the habitat area and the size of the SSC habitat area for months in the period 1997-1999. The correlation for each MPA is shown above each panel.

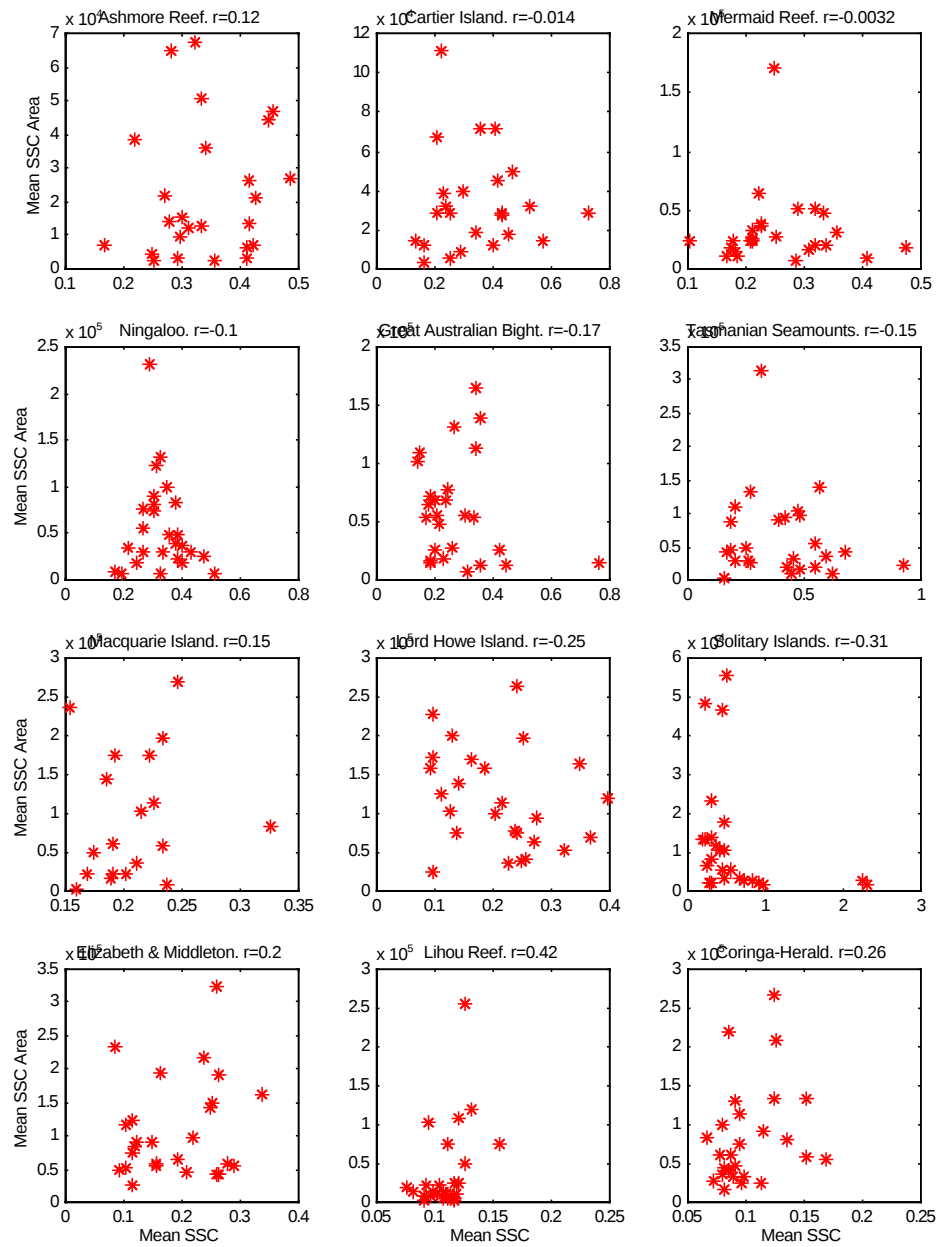


Table 1. Average percentage of the SST and SSC monthly habitat area (defined for each MPA) that is covered by that MPA. The habitat area around each MPA for each month and year was either found using the average or maximum area for the images in each year and month. The average values at the end of the table exclude the Macquarie Island MPA, which is only defined for SSC habitats.

MPA	SSC Maximum (%)	SSC Mean (%)	SST Maximum (%)	SST Mean (%)
Ashmore Reef	6.99	13.10	0.20	0.33
Cartier Island	1.01	2.06	0.05	0.07
Mermaid Reef	2.73	7.47	0.19	0.29
Ningaloo	9.89	25.67	3.43	5.71
Great Australian Bight	77.03	159.05	29.56	37.33
Tasmanian Seamounts	2.28	2.81	5.73	7.31
Macquarie Island	1134.61	1019.00	-	-
Lord Howe Island	5.62	15.51	5.06	8.87
Solitary Islands	4.40	7.21	2.78	4.50
Elizabeth and Middleton Reefs	2.91	7.01	1.41	2.58
Lihou Reef	97.17	155.05	2.83	4.66
Coringa-Herald	17.84	49.82	2.64	4.33
Mean	20.71	40.43	4.90	6.91

Table 2. Mean SST Habitat Area climatology. Area by month (km²). The absolute maximum habitat size and MPA size are shown in the first rows. The minimum habitat area for each MPA is highlighted in italics, the maximum is highlighted and underlined. The overall mean habitat size and rank are given at the base of the table.

	Ashmore Reef	Cartier Island	Mermaid Reef	Ningaloo	Great Australian Bight	Tasmanian Seamounts	Macquarie Island	Lord Howe Island	Solitary Islands	Elizabeth and Middleton Reefs	Lihou Reef	Coringa- Herald
MPA area	599	166	565	2,398	22,968	542	281,146	4,659	197	2,161	8,849	9,269
Max area	609,152	520,139	538,064	327,671	226,698	152,710	n/a	621,541	277,233	656,790	661,173	620,613
Jan	130,718	193,344	198,121	43,616	65,385	11,725	n/a	98,887	8,055	151,326	191,188	175,490
Feb	107,306	163,352	206,022	42,532	66,533	14,634	n/a	110,721	13,295	142,322	175,625	205,334
Mar	219,114	258,792	323,807	55,619	73,607	13,418	n/a	116,157	19,892	200,123	159,673	242,823
Apr	251,537	231,565	315,127	53,851	72,655	9,057	n/a	109,884	10,331	121,008	308,187	255,777
May	309,180	301,726	349,422	65,903	53,524	9,273	n/a	68,660	6,276	94,290	264,749	235,300
Jun	387,857	380,503	299,353	58,470	64,179	8,277	n/a	71,577	6,231	123,004	221,430	220,448
Jul	399,908	356,694	255,377	59,231	67,658	6,439	n/a	62,517	5,820	100,510	185,809	251,156
Aug	379,434	386,137	201,115	48,027	76,163	9,585	n/a	85,504	4,784	115,931	203,431	203,404
Sep	262,258	265,189	174,928	51,504	90,567	8,366	n/a	66,742	6,566	106,140	224,495	265,313
Oct	243,029	245,043	149,099	46,718	67,070	8,171	n/a	73,653	5,148	102,965	235,905	272,532
Nov	192,264	212,457	161,064	44,034	53,379	9,997	n/a	39,752	4,635	65,360	295,506	302,528
Dec	167,921	205,857	160,686	42,438	51,377	9,448	n/a	73,625	4,959	88,489	228,538	280,593
Mean	254,210	266,722	232,843	50,995	66,841	9,866		81,473	7,999	117,622	224,545	242,558
Minimum	107,306	163,352	149,099	42,438	51,377	6,439	0	39,752	4,635	65,360	159,673	175,490
Maximum	399,908	386,137	349,422	65,903	90,567	14,634	0	116,157	19,892	200,123	308,187	302,528
Mean Rank	2	1	4	9	8	10	n/a	7	11	6	5	3

Table 3. Mean SSC Habitat Area climatology. Area by month (km²). The absolute maximum habitat size and MPA size are shown in the first rows. The minimum habitat area for each MPA is highlighted in italics, the maximum is highlighted and underlined. The overall mean habitat size and rank are given at the base of the table.

	Ashmore Reef	Cartier Island	Mermaid Reef	Ningaloo	Great Australian Bight	Tasmanian Seamounts	Macquarie Island	Lord Howe Island	Solitary Islands	Elizabeth and Middleton Reefs	Lihou Reef	Coringa-Herald
MPA area	599	166	565	2,398	22,968	542	281,146	4,659	197	2,161	8,849	9,269
Max area	183,193	159,145	259,565	276,138	295,231	464,177	450,089	596,617	160,122	479,658	433,761	453,342
Jan	3,095	5,160	6,459	3,988	29,963	22,090	52,560	80,446	4,357	25,971	6,198	40,900
Feb	2,902	14,435	9,830	9,620	19,768	33,376	31,996	35,589	3,383	20,137	6,522	19,872
Mar	7,031	10,336	4,783	14,764	15,762	11,149	23,855	41,371	1,780	52,009	3,798	17,368
Apr	5,306	9,739	8,285	5,832	7,787	98,331	19,648	32,186	3,392	34,839	5,217	9,560
May	3,683	8,577	37,129	11,488	8,855	26,303	n/a	49,862	2,134	23,861	7,762	7,346
Jun	10,968	9,445	11,852	12,872	14,378	18,783	n/a	20,605	2,400	31,766	4,441	14,099
Jul	5,390	14,900	11,787	48,615	33,314	37,865	n/a	43,678	7,142	53,770	7,621	50,505
Aug	11,208	16,142	15,353	45,893	60,576	83,678	7,202	39,052	6,851	73,746	12,005	30,823
Sep	13,822	14,979	11,244	40,480	31,048	46,330	87,013	51,733	5,632	102,983	26,654	53,698
Oct	11,580	14,588	14,480	17,498	14,087	28,153	157,887	33,170	4,532	20,937	35,234	55,611
Nov	7,575	13,562	3,915	14,623	27,994	25,383	119,136	28,311	2,592	52,159	11,784	35,676
Dec	3,265	5,878	4,965	7,998	29,660	11,443	80,716	67,715	3,174	31,420	6,589	21,710
Mean	7,152	11,478	11,674	19,472	24,433	36,907	64,446	43,643	3,947	43,633	11,152	29,764
Minimum	2,902	5,160	3,915	3,988	7,787	11,149	7,202	20,605	1,780	20,137	3,798	7,346
Maximum	13,822	16,142	37,129	48,615	60,576	98,331	157,887	80,446	7,142	102,983	35,234	55,611
Mean Rank	11	9	8	7	6	4	1	2	12	3	10	5