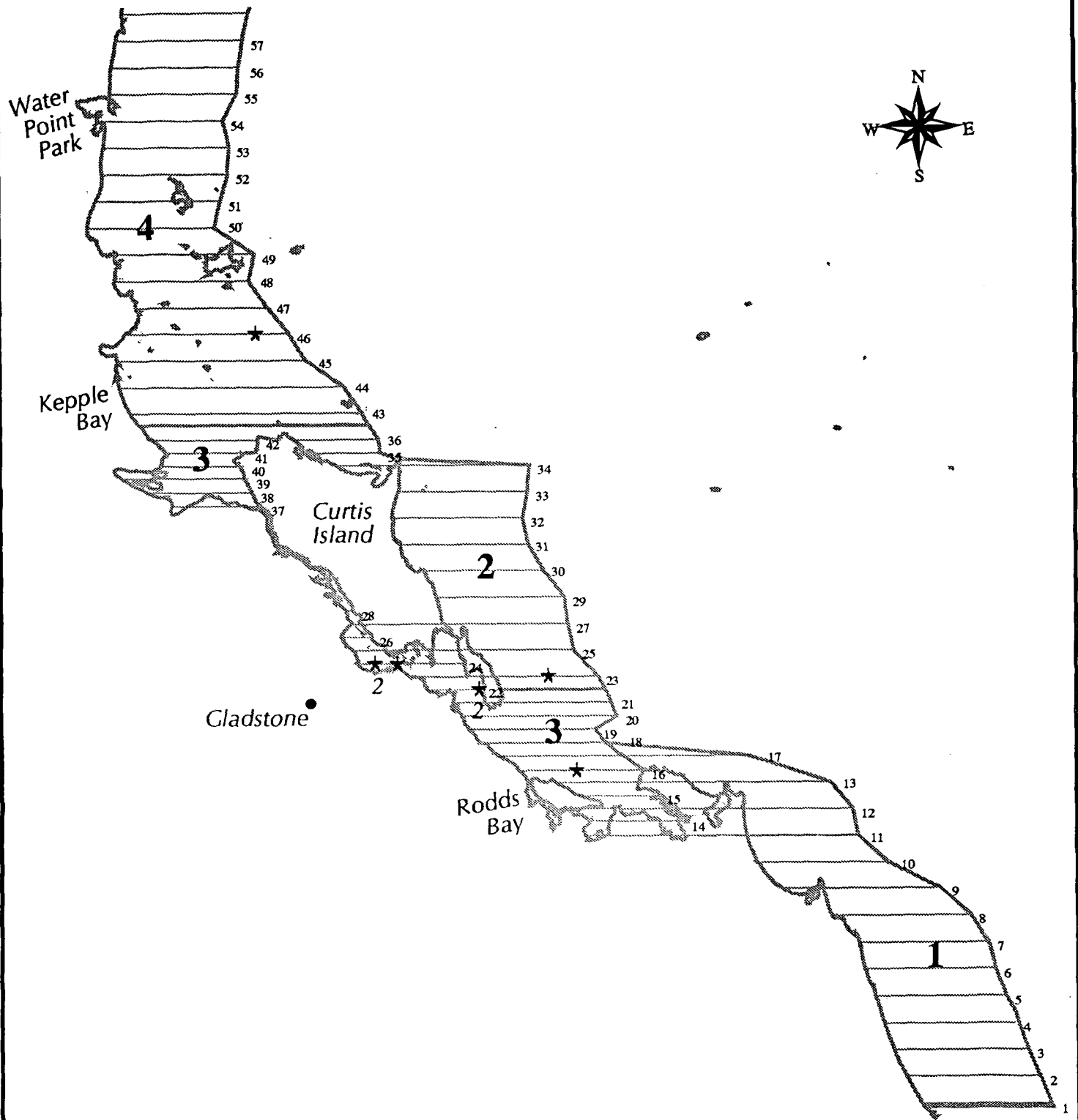
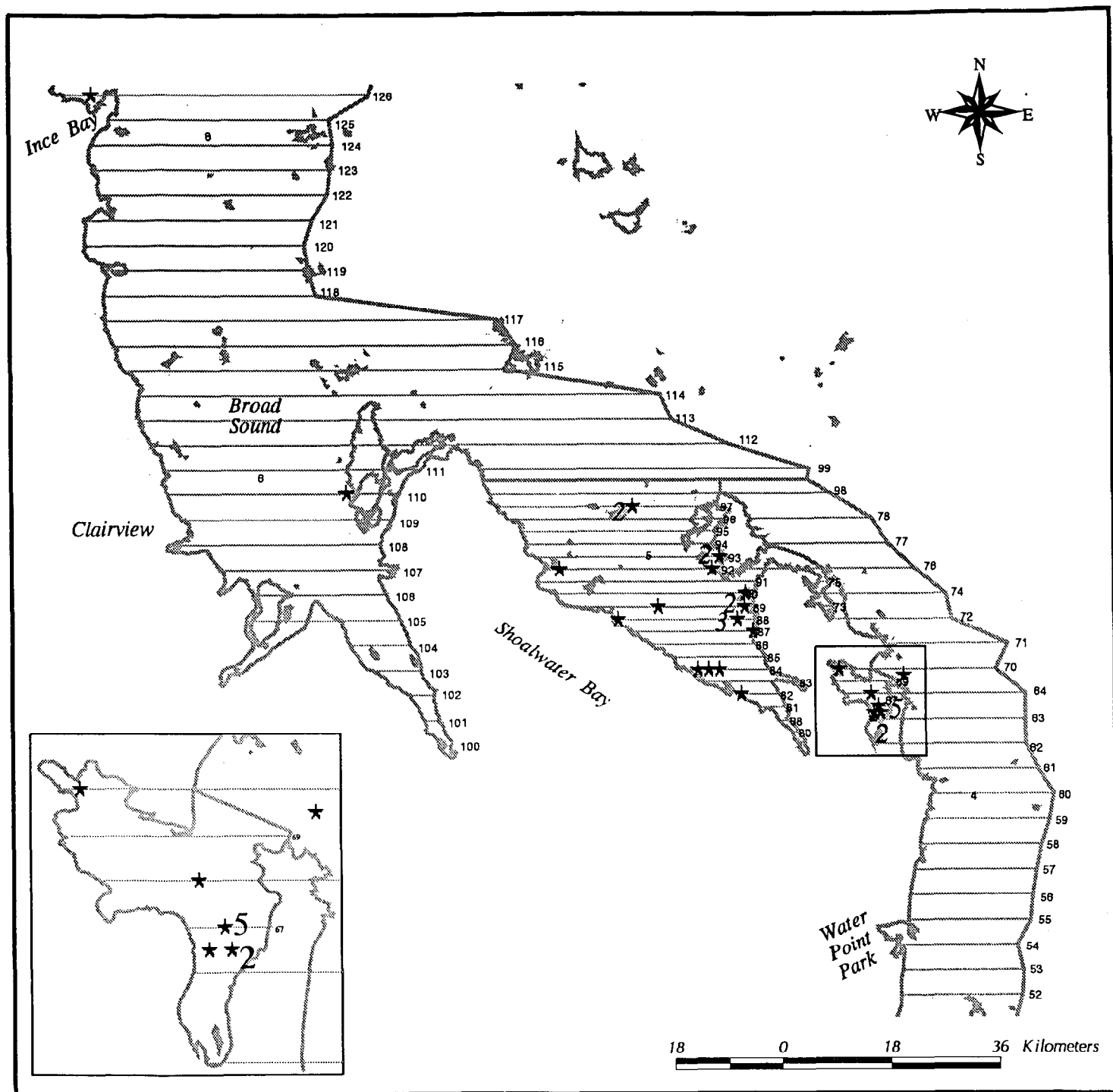


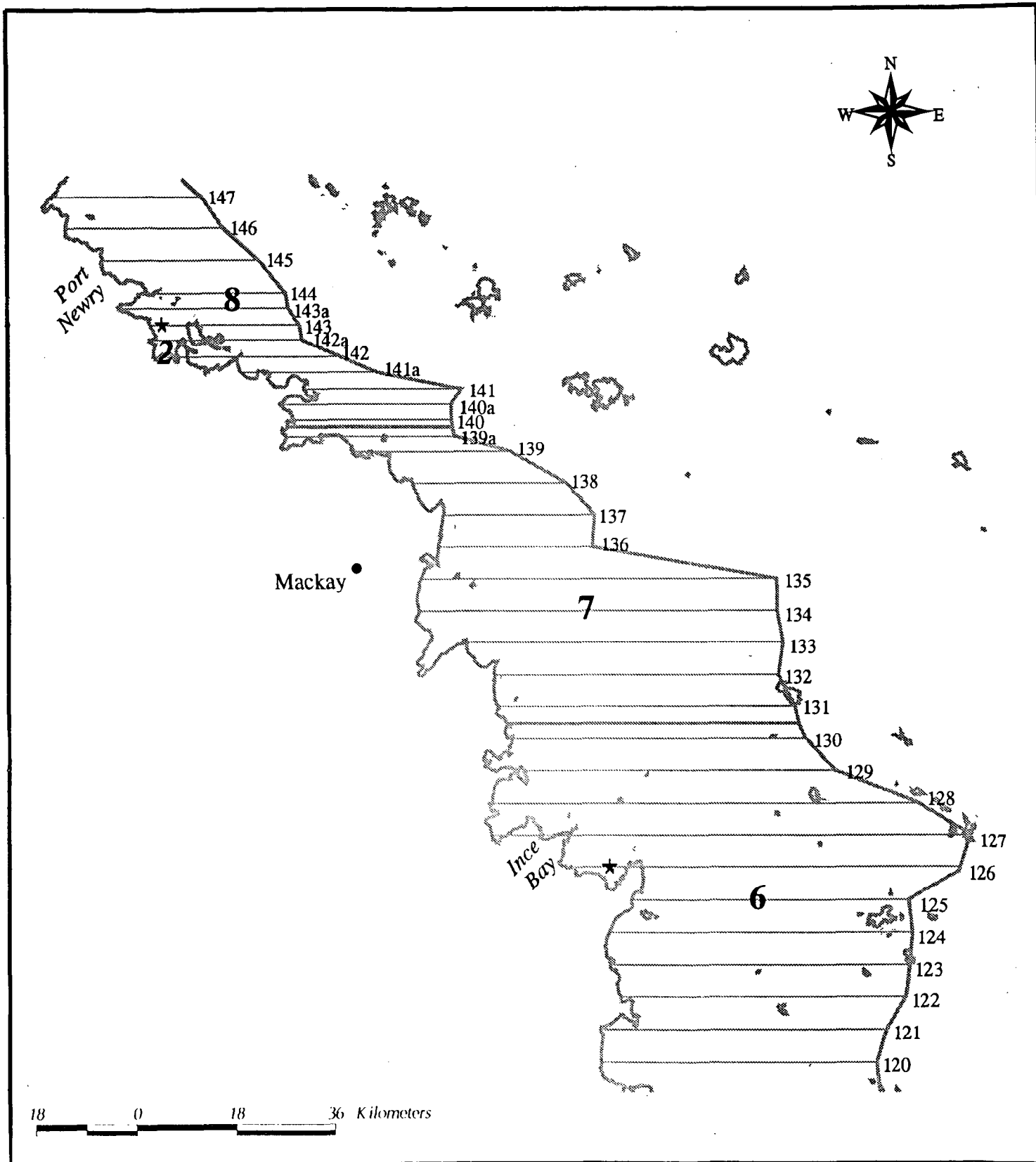
Appendix Figure 1: Survey area from Water Park Point to Rodds Bay (Mackay-Capricorn Section) showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.



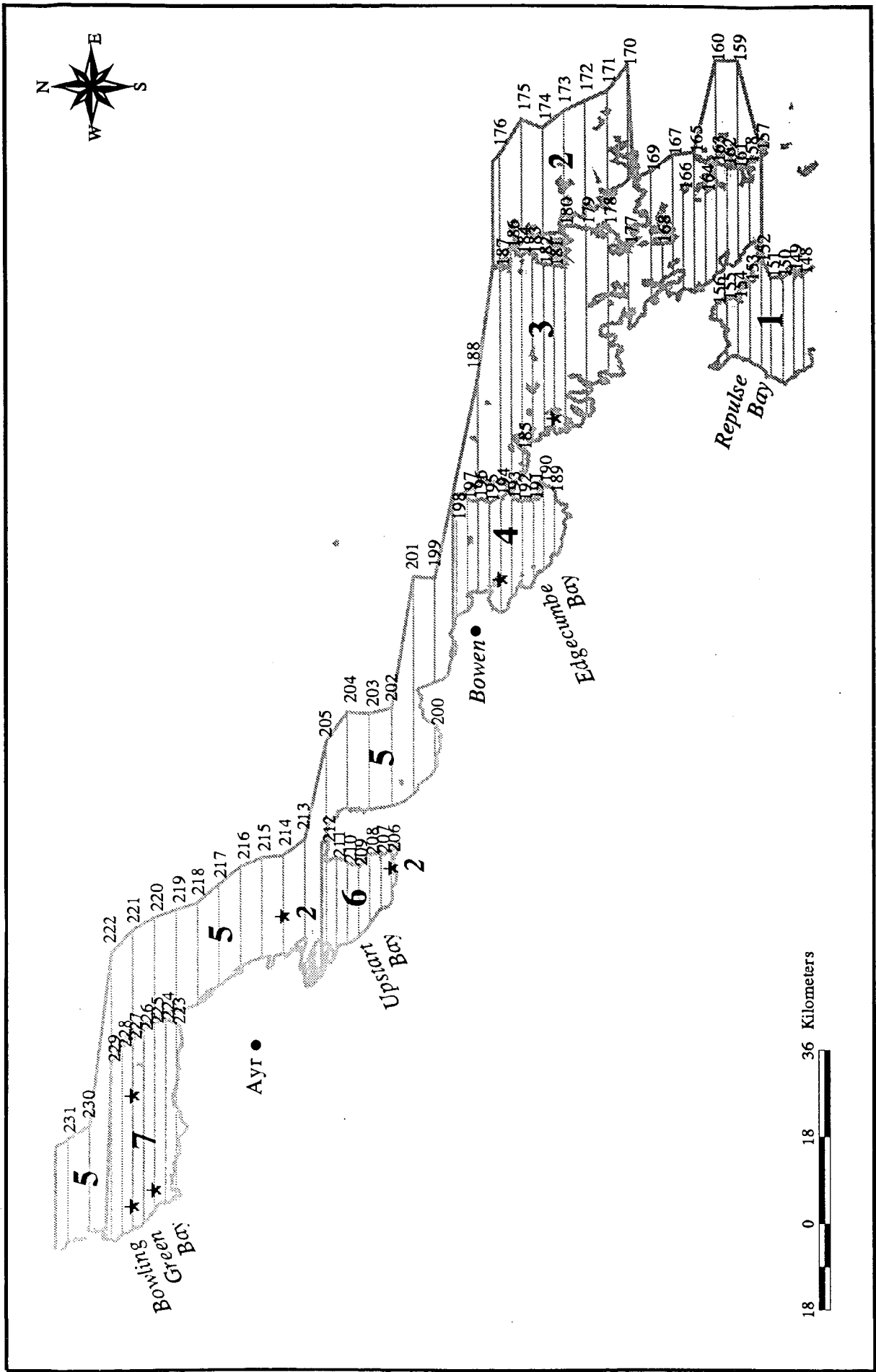
Appendix Figure 2: Survey area from Ince Bay to Water Park Point (Mackay-Capricorn Section) showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.



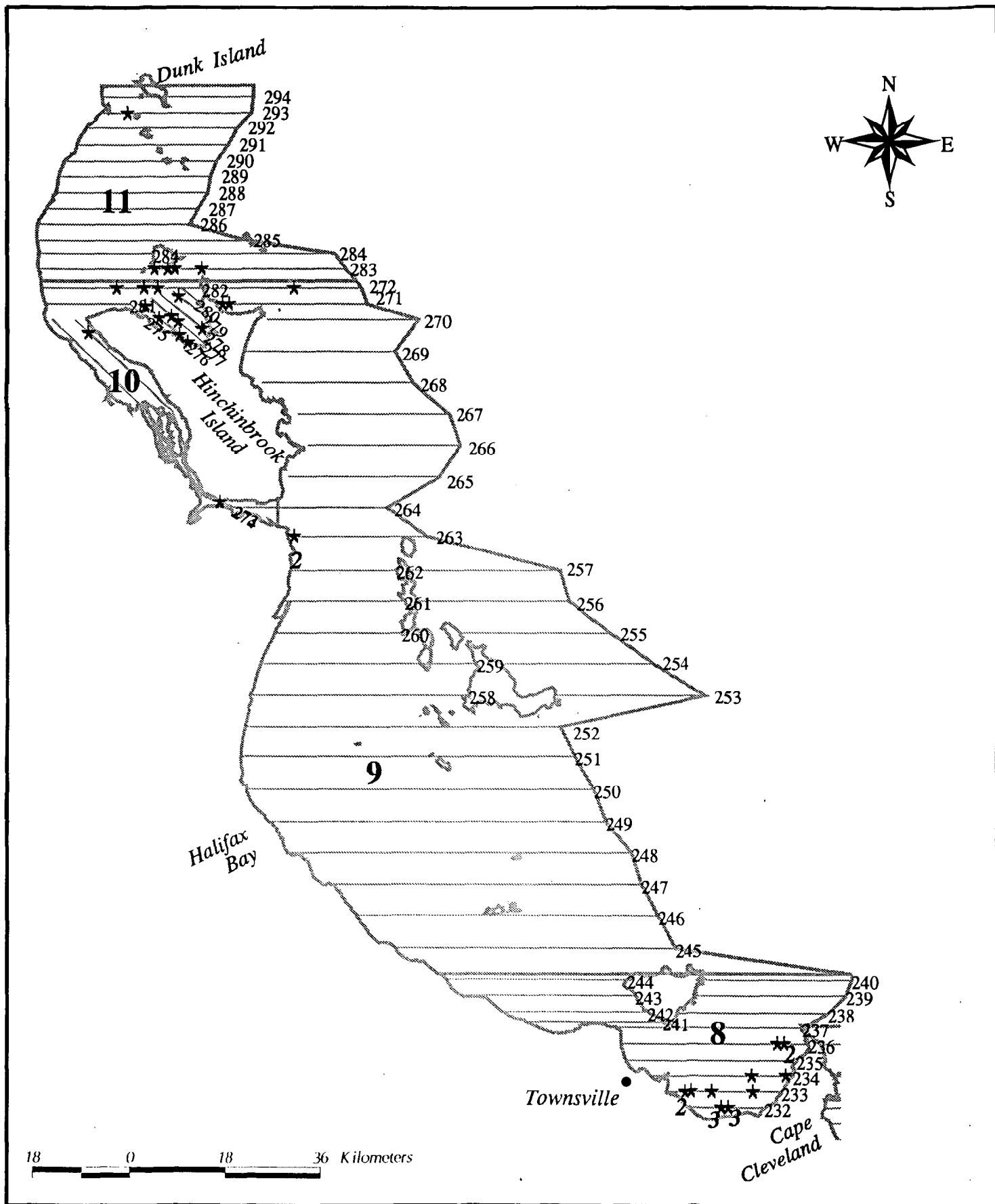
Appendix Figure 3: Survey area from Repulse Bay to Ince Bay (Mackay-Capricorn Section) showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.



Appendix Figure 4: Survey area from Cape Cleveland to Repulse Bay (southern Central Section) showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.

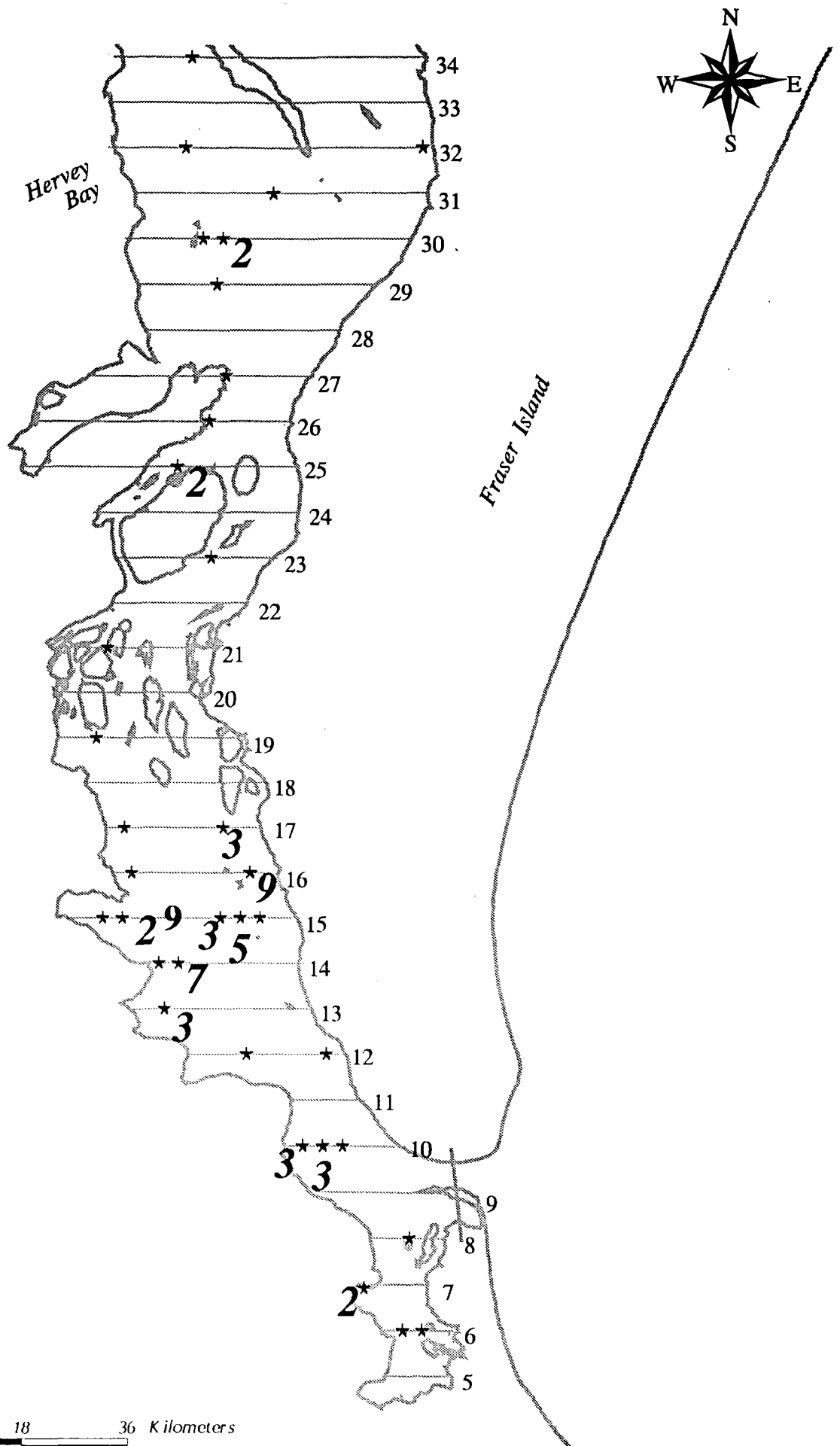


Appendix Figure 5: Survey area from Dunk Island to Cape Cleveland (northern Central Section) showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.



Appendix Figure 6: Survey area of Hervey Bay showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.

Appendix Figure 7: Survey area of the Great Sandy Straits showing the transect numbers and positions of dugong sightings in November 1994. The numbers associated with the sightings do not necessarily reflect the sizes of the actual groupings observed. Unnumbered stars represent a group of 1.



18 0 18 36 Kilometers

Appendix Table 1:

Beaufort sea state and glare for each transect.

The location of transects is indicated in Appendix Figures 1-7

Scale: 0 = no glare
 1 = $0 \leq 25\%$
 2 = $25 \leq 50\%$
 3 = $> 50\%$

Transect	Mode	Min	Max	Mode	North		Glare		South	
					Min	Max	Mode	Min	Max	
SGBR										
1	4	4	4	1	1	2	2	2	2	
2	4	4	4	2	2	2	1	1	1	
3	4	4	4	1	1	2	2	2	2	
4	4	4	4	2	2	3	1	1	2	
5	4	4	4	2	2	2	2	2	2	
6	4	4	4	2	2	3	2	2	2	
7	4	4	4	2	2	2	2	2	2	
8	3	3	4	2	2	3	2	2	2	
9	3	3	4	2	2	2	2	2	2	
10	3	3	3	2	2	2	2	2	2	
11	2	1	2	1	1	1	1	1	1	
12	1	1	2	2	2	2	2	2	2	
13	1	1	1	1	1	2	1	1	1	
14	1	1	2	1	1	1	2	2	2	
15	1	1	1	0	0	0	1	1	1	
16	1	1	3	2	2	2	2	2	2	
17	2	2	3	2	2	2	1	1	2	
18	3	3	3	2	2	3	2	2	2	
19	2	2	3	2	2	2	2	2	3	
20	2	2	3	2	2	3	2	2	2	
21	3	1	3	1	1	2	1	1	1	
22	3	3	3	2	2	2	1	1	1	
23	3	3	3	1	1	1	1	1	1	
24	1	1	1	1	1	2	1	1	1	
25	2	1	3	2	1	2	1	1	2	
26	1	1	1	1	1	1	1	1	1	
27	1	1	3	1	1	1	1	1	2	
28	1	1	1	1	1	1	1	1	1	
29	3	3	3	2	2	2	1	1	1	
30	2	2	3	1	1	1	2	2	2	
31	2	2	3	2	2	2	1	1	2	
32	3	3	3	2	2	2	1	1	1	
33	3	3	3	2	2	2	1	1	1	
34	3	3	3	2	2	2	1	1	1	
35	0	0	0	0	0	1	0	0	1	
36	1	1	1	1	1	1	1	1	1	
37	0	0	0	0	0	0	0	0	0	
38	0	0	0	0	0	0	0	0	0	
39	0	0	0	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	
41	0	0	0	1	1	1	0	0	0	
42	0	0	0	0	0	1	0	0	1	
43	0	0	0	0	0	1	0	0	1	
44	0	0	0	0	0	1	0	0	1	

Transect	Glare								
	Mode	Min	Max	North			South		
				Mode	Min	Max	Mode	Min	Max
45	0	0	2	1	1	1	1	1	1
46	2	1	2	2	1	2	1	1	2
47	1	1	2	1	1	1	0	0	0
48	1	1	3	2	2	2	1	1	1
49	1	1	2	1	1	2	1	1	1
50	2	2	3	2	2	2	1	1	2
51	2	2	3	2	1	2	1	1	2
52	3	3	3	2	2	2	1	1	2
53	1	1	2	2	2	2	1	1	2
54	1	1	1	2	2	3	2	1	2
55	3	3	3	2	2	2	2	2	2
56	2	2	2	2	2	3	2	2	3
57	2	1	3	2	2	3	1	1	3
58	2	2	2	1	1	1	1	1	1
59	3	3	3	2	2	3	2	2	2
60	3	3	3	2	2	2	1	1	2
61	2.5	2.5	2.5	3	2	3	2	2	3
62	1	1	3	1	1	2	1	1	2
63	1	1	3	2	1	2	2	2	2
64	1	1	3	2	2	3	1	1	1
67	1	1	1	1	1	2	0	0	1
68	1	1	1	0	0	0	0	0	0
69	-	-	-	1	1	2	2	2	2
70	2	2	3	2	2	2	1	1	2
71	3	3	3	2	2	2	2	2	2
72	1	1	2	2	2	2	1	1	1
73	1	1	1	1	1	1	1	1	1
74	1	1	3	1	1	2	1	1	2
75	1	1	1	1	1	2	0	0	1
76	3	2	3	1	1	1	2	2	2
77	3	3	3	2	2	2	2	2	2
78	3	3	3	2	2	2	1	1	1
79	-	-	-	-	-	-	-	-	-
80	1	1	1	0	0	0	1	1	1
81	1	1	2	0	0	1	0	0	1
82	2	2	2	1	1	1	1	1	1
83	3	2	3	1	1	1	1	1	1
84	2	2	2	0	0	1	1	1	1
85	1	1	1	0	0	1	0	0	1
86	2	1	2	1	1	1	1	1	1
87	1	1	2	1	0	1	1	1	2
88	1	1	2	1	1	1	1	1	1
89	1	0	1	0	0	1	0	0	1
90	1	1	1	1	0	1	1	1	1
91	0	0	1	1	1	1	1	1	1
92	1	1	3	1	0	1	0	0	1
93	3	1	3	0	0	0	0	0	1
94	2	2	3	1	1	2	0	0	3
95	2	2	2	0	0	1	0	0	1
96	3	1	3	1	1	2	1	0	1
97	3	3	3	0	0	1	0	0	1
98	1	1	3	2	1	2	1	1	2

Transect	Mode	Min	Max	Glare					
				Mode	North Min	Max	Mode	South Min	Max
99	4	4	5	1	1	1	2	2	2
103	1	1	1	0	0	0	1	1	1
104	1	1	1	0	0	0	0	0	0
105	1	1	1	0	0	0	0	0	1
106	1	1	1	0	0	0	0	0	1
107	1	1	1	0	0	1	1	0	1
108	1	1	1	0	0	0	0	0	0
109	0	0	1	0	0	1	1	0	1
110	0	0	1	0	0	1	0	0	0
111	0	0	1	1	0	1	0	0	1
112	4	3	5	1	1	2	2	1	2
113	4	1	4	1	1	1	1	1	2
114	3	3	3	1	1	2	1	1	1
115	1	1	3	1	1	1	1	1	1
116	1	1	3	1	1	2	1	1	1
117	2	1	3	2	1	2	2	1	2
118	2	2	2	2	2	2	1	1	1
119	2	1	3	2	2	2	2	1	2
120	2	2	3	1	1	2	1	1	2
121	2	2	3	2	2	2	2	2	2
122	2	2	3	1	1	2	1	1	2
123	2	2	3	2	2	2	2	2	2
124	2	2	3	1	1	1	1	1	1
125	2	2	4	1	1	2	2	2	2
126	1	1	3	1	1	1	1	1	1
127	1	1	1	1	1	3	2	1	2
128	1	1	2	1	1	2	1	1	2
129	1	1	1	2	1	2	1	1	2
130	1	1	1	1	1	1	0	0	0
131	1	1	1	2	2	2	2	2	2
132	2	1	2	1	1	1	0	0	1
133	1	1	3	2	1	2	2	1	2
134	2	1	3	1	1	1	1	1	2
135	3	2.5	3	1	1	1	2	2	2
136	2	1	2	1	1	1	1	1	1
137	4	4	4	2	2	2	2	2	3
138	4	4	4	1	1	1	2	2	2
139	4	4	4	3	3	3	3	3	3
140	4	4	4	1	1	2	2	2	2
141	3	3	3.4	2	2	3	3	3	3
142	3	3	3	1	1	1	2	2	2
143	3	3	3.5	2	2	2	2	2	2
144	3	3	3	2	2	2	2	2	2
145	3	3	3	2	2	2	2	2	2
146	2	2	2	2	2	2	2	2	2
147	2	2	2	2	2	2	2	2	2
148	1	1	3	0	0	1	1	1	1
149	3	2	3	1	1	1	1	1	1
150	2	2	2	1	1	1	0	0	1
151	3	3	3	2	2	2	2	2	2
152	2	2	3	0	0	1	1	1	2
153	3	3	3	1	1	1	2	2	2

Transect	Glare								
	Mode	Min	Max	North			South		
				Mode	Min	Max	Mode	Min	Max
154	3	1	3	0	0	2	1	1	2
155	2	2	3	1	1	1	1	1	2
156	1	1	1	1	1	1	1	1	1
157	2	2	3	2	1	2	2	1	2
158	1	1	3	0	0	1	1	1	1
159	2	2	2	0	0	2	1	1	2
160	2	1	3	2	2	2	2	2	2
161	1	1	2	0	0	0	1	1	1
162	3	2	3	2	2	2	1	1	2
163	1	1	3	2	1	2	2	2	2
164	1	1	3	2	2	2	1	1	2
165	1	1	3	1	1	2	1	1	2
166	2	1	3	2	2	2	1	1	2
167	3	1	3	2	1	2	1	1	2
168	1	1	3	1	1	2	1	1	2
169	0	0	3	2	0	2	1	1	2
170	1	1	1	1	1	1	1	1	2
171	1	1	1	1	1	2	1	1	2
172	1	1	1	1	0	1	0	0	1
173	1	1	1	1	1	2	1	1	2
174	1	1	1	0	0	1	0	0	1
175	1	1	1	2	1	2	1	1	2
176	1	1	1	1	1	1	1	1	1
177	1	1	1	1	1	2	0	0	2
178	1	1	2	2	1	2	2	1	2
179	1	1	1	2	2	2	1	1	1
180	1	1	2	1	1	2	1	1	1
181	1	1	3	2	2	2	1	1	1
182	1	1	1	1	1	1	1	1	1
183	1	1	3	1	1	2	1	1	1
184	1	1	2	2	2	2	2	2	2
185	1	1	1	2	2	2	2	2	2
186	2	1	3	1	1	2	2	2	2
187	1	1	3	2	2	2	2	1	2
188	1	1	2	1	1	2	1	1	1
189	3	3	3	2	2	2	2	2	2
190	3	3	3	1	1	2	1	1	1
191	3	3	3	2	2	2	2	2	2
192	3	2	3	1	1	1	1	1	1
193	3	3	3	2	2	2	1	1	1
194	1	1	1	1	1	1	1	1	1
195	1	1	1	1	1	1	0	0	1
196	1	1	1	1	1	2	1	1	2
197	1	1	1	1	1	1	1	1	1
198	1	1	1	1	1	2	1	1	2
199	1	1	2	1	1	2	1	1	1
200	1	1	1	1	1	1	0	0	0
201	1	0	2	0	0	2	1	0	2
202	1	1	2	0	0	1	0	0	1
203	4	4	4	3	3	3	2	2	2
204	3	3	3	3	3	3	2	2	3
205	3	3	3	2	2	3	2	2	3

Transect	Mode	Min	Max	Glare					
				Mode	North Min	Max	Mode	South Min	Max
206	3	3	3	2	2	2	2	2	2
207	3	3	3	2	2	2	2	2	2
208	3	3	3	2	2	2	2	2	2
209	2	2	3	2	2	2	2	2	2
210	2	2	3	2	2	2	2	2	2
211	2	2	2	2	2	2	2	2	2
212	2	2	3	1	1	2	2	2	2
213	4	4	4	2	2	2	2	2	3
214	2	2	4	3	3	3	2	2	2
215	3	3	3	3	3	3	2	2	2
216	4	4	4	3	3	3	2	2	2
217	3	3	4	2	2	2	2	2	2
218	3	3	4	3	3	3	2	2	2
219	3	3	4	2	2	3	2	2	3
220	3	3	3	3	3	3	2	2	2
221	3	3	3	2	2	3	2	2	2
222	3	3	3	3	3	3	2	2	2
223	3	3	4	2	2	2	2	1	2
224	3	3	3	2	2	2	2	2	2
225	3	3	4	2	2	2	1	1	1
226	3	2	3	2	2	2	2	2	2
227	3	3	4	2	2	2	2	2	2
228	3	3	3	2	2	2	2	1	2
229	3	3	3	1	1	2	1	1	1
230	3	3	3	2	2	2	2	2	2
231	2	2	3	1	1	1	1	1	1
232	1	1	1	1	1	1	2	2	2
233	2	2	2	2	2	2	1	1	1
234	1	1	1	1	1	1	0	0	1
235	1	1	3	1	0	1	1	1	2
236	1	1	2	1	1	1	1	1	1
237	3	3	4	1	1	3	2	1	2
238	3	3	4	3	3	3	2	2	2
239	4	4	4	2	2	2	2	2	2
240	4	4	4	2	2	2	2	2	2
241	0	0	1	0	0	0	0	0	1
242	0	0	1	0	0	0	0	0	0
243	1	1	1	1	1	1	1	0	1
244	1	1	1	1	1	1	0	0	0
245	1	1	1	1	1	1	0	0	0
246	1	0	1	1	1	1	1	1	1
247	2	2	2	1	0	1	0	0	1
248	1	1	2	1	1	1	1	1	1
249	3	1	4	2	2	3	1	1	2
250	2	1	4	1	1	2	1	1	2
251	3	1	4	2	1	2	1	0	1
252	3	1	3	1	0	2	1	1	2
253	3	3	3	2	2	2	1	1	2
254	1	1	1	1	1	1	1	1	1
255	0	0	1	1	0	1	1	0	1
256	0	0	1	1	1	1	1	1	1
257	1	1	1	0	0	1	0	0	1

Transect	Mode	Min	Max	Mode	Glare		Mode	South	
					North	Max		Min	Max
					Min				
258	2	2	3	1	1	2	1	0	1
259	0	0	0	0	0	1	0	0	1
260	0	0	0	0	0	1	0	0	0
261	0	0	1	0	0	0	0	0	0
262	1	1	1	1	1	1	0	0	0
263	1	1	1	0	0	0	0	0	0
264	1	1	1	0	0	0	0	0	0
265	1	1	2	0	0	0	1	1	1
266	1	1	1	0	0	1	1	1	1
267	1	1	2	0	0	0	1	1	1
268	2	2	2	0	0	0	0	0	0
269	1	1	2	1	1	1	1	0	1
270	1	1	2	0	0	0	0	0	0
271	3	3	3	2	2	2	2	2	2
272	3	3	4	3	3	3	2	2	2
273	2	2	2	2	2	2	2	1	2
274	1	1	3	1	1	1	2	1	3
275	1	1	2	0	0	0	1	1	1
276	1	1	2	2	2	2	2	2	2
277	1	0	1	0	0	0	1	1	1
278	1	1	3	1	1	1	0	0	0
279	1	1	1	0	0	0	1	1	1
280	-	-	-	1	1	1	0	0	0
281	3	3	3	1	1	1	1	1	1
282	3	3	3	2	2	3	2	2	2
283	3	3	4	2	2	3	2	2	2
284	3	2	3	1	1	2	1	1	2
285	1	1	3	2	2	2	2	1	2
286	1	1	3	1	1	2	2	0	2
287	2	2	3	2	2	2	2	0	2
288	3	2	3	1	1	2	1	1	2
289	3	3	3	2	2	3	2	1	2
290	2	2	4	2	1	2	1	1	2
291	3	3	4	2	2	2	2	2	2
292	2	2	3	1	1	2	1	1	2
293	3	2	4	2	2	2	1	1	1
294	3	3	3	1	1	1	1	1	1

ERVEY BAY

5	1	1	1	0	0	0	0	0	0
6	3	3	3	1	1	1	0	0	0
7	2	2	2	2	2	2	0	0	0
8	3	3	3	1	1	1	1	1	1
9	3	3	3	1	1	1	1	1	1
10	-	-	-	1	1	1	1	1	1
11	1	1	1	0	0	0	0	0	0
12	1	1	1	1	1	1	0	0	1
13	1	1	2	0	0	0	1	1	1
14	1	1	2	1	1	1	1	1	1
15	-	-	-	0	0	0	0	0	0
16	2.5	2.5	2.5	1	1	1	1	1	1
17	1	1	1	1	1	2	1	1	1

Transect	Glare								
	Mode	Min	Max	Mode	North Min	Max	Mode	South Min	Max
18	1	1	2	1	1	1	0	0	0
19	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1
21	-	-	-	0	0	0	0	0	0
22	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	0	0	0
24	-	-	-	1	1	1	1	1	1
25	1	1	1	0	0	0	1	1	1
26	2	2	2	1	1	1	1	1	1
27	1	1	2	0	0	1	1	1	1
28	1	1	2.5	1	1	2	1	1	2
29	2	2	2	1	1	1	1	1	1
30	3	3	3	1	1	2	1	1	1
31	2	2	2.5	1	1	1	1	1	1
32	3	2.5	3	1	1	2	1	1	1
33	3	2	3	1	0	1	1	1	1
34	2	1	4	2	2	2	1	1	2
35	2	1	2	1	1	1	1	1	1
36	2.5	2	2.5	2	2	2	2	2	2
37	2	2	2.5	1	1	1	0	0	0
38	3	2.5	3	1	1	1	1	1	2
39	2	2	2.5	2	0	2	1	1	2
40	3	2	3	2	1	2	1	1	1
41	3	1.5	3	1	1	1	1	1	1
42	2	1	3	2	2	2	1	1	1
43	2	2	3	1	1	1	1	1	1
44	2	2	2	1	1	2	1	0	1
45	2	2	2.5	1	1	2	1	1	2
46	2	2	3	2	1	2	2	1	2
47	2	2	2	2	2	2	1	1	2
48	2	1	3	-	-	-	-	-	-
49	2.5	2	2.5	1	0	1	1	1	1
50	2.5	2.5	2.5	1	1	1	1	1	1
51	2	2	2	2	0	2	2	1	2
52	2	2	2	1	1	2	1	1	2
53	2	1	3	2	0	2	2	1	2
54	2	2	2	1	1	1	1	1	1
55	2	2	2	1	1	1	1	1	1
56	2	1.5	2.5	2	2	2	2	2	2
57	2	2	2.5	1	1	1	1	1	1
58	2	2	2.5	1	1	1	2	2	2
59	2	2	2	1	1	1	1	1	1

Appendix

Table 2: Raw data used to calculate correction factors for dugongs for the survey.

(a) Correction for perception bias

Blocks: Lines	No. of groups of dugongs					
	Port			Starboard		
	Mid	Rear	Tandem	Mid	Rear	Tandem
All blocks and lines except transects 294-284 for starboard team and 148-179 for port team ¹	18	11	63	24	23	60

(b) Correction for availability bias

Blocks: lines	No. of dugongs in groups of less than 10		
	Surface	Under	Total
SGBR All blocks and lines	42	108	150
Hervey Bay All blocks and lines	23	155	178

¹transects when trainee observers were being used.

See appendix figures for the location of numbered transects.

