

Distribution of intertidal macrobenthos around Hatakejima Island, 2003

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On May 2-4, 2003, distributions of the intertidal macrobenthos were investigated on Hatakejima Island (33° 42'N, 135° 22' E) in the inner part of Tanabe Bay. It was the 5th survey since 1969 on the south-coast macrobenthic biota of the island, and the 4th survey since 1983 on the entire coast biota (for results of the previous surveys, see Ohgaki et al. [1997] and Ohgaki [2001, 2002]). In the south coast survey, all the intertidal macrobenthos were sought and recorded in 16 rocky-shore plots, and in the entire coast survey, the densities of 86 selected intertidal animal species were estimated in 43 intertidal plots (Fig. 1; for details of the methods, see Ohgaki [1997]). In the present survey on the south coast, search for the algal species was less sufficient than for the other taxa, because of the limited ability of identification of the participants. The results are shown in Tables 1-3.

Participants in the surveys:

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References:

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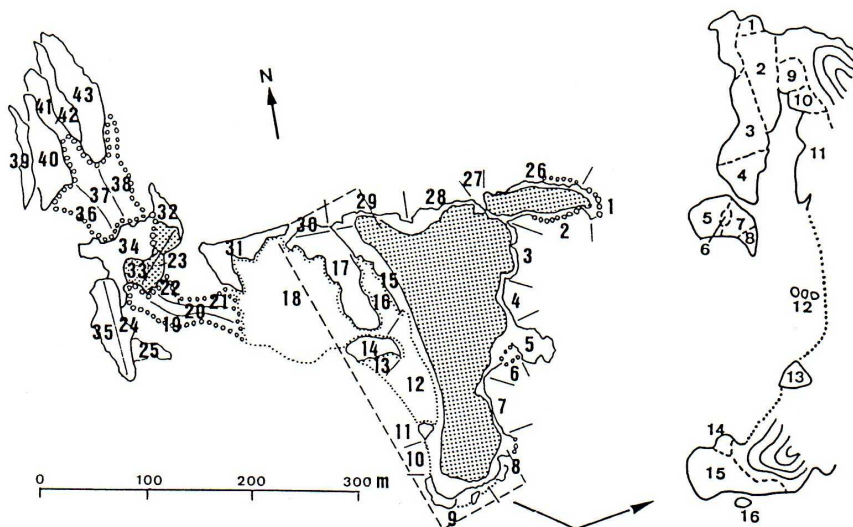


Figure 1. Study area. Left: research plots for the entire coast survey. Areas surrounded by solid lines are rocky shores, by small circles boulder beaches, and by dotted lines sandy beaches or sand-mud flats. The shaded area is land. The rectangle surrounded by broken lines indicates the south-coast survey area. Right: details of research plots for the south coast survey.

Table 1. List of species sought but not found in the entire coast survey on May 2-3, 2003.

[CNIDARIA] *Actinia equina* Linnaeus ウメボシイソギンチャク [BRYOZOA] *Zoobotryon pellucidum* Ehrenberg ホンダワラコケムシ [ANNELIDA] *Eunice aphroditois* (Pallas) オニイソメ [ARTHROPODA] *Tetraclita formosana* Utinomi タイワンクロフジツボ, *Etisus laevimanus* Randall ヒツメガニ, *Ocypode stimpsoni* Ortmann スナガニ [Mollusca] *Monodonta labio* (Linnaeus) オキナワイシダタミ, *Diloma suavis* (Philippi) メクラガイ, *Nerita albicilla* Linnaeus アマオブネ, *Nerita japonica* Dunker アマガイ, *Nodilittorina trochoides* (Gray) イボタマキビ, *Clypeomorus bifasciata* (Sowerby) カヤノミカニモリ, *Japeuthria ferrea* (Reeve) イソニナ, *Saccostrea mordax* (Gould) オハグロガキ, *Modiolus nipponicus* (Oyama) ヒバリガイ, *Mytilus galloprovincialis* Lamarck ムラサキイガイ [ECHINODERMATA] *Asterina pectinifera* Muller et Troschel イトマキヒトデ, *Asterina batheri* Goto スノメイトマキヒトデ, *Coscinasterias acutispina* (Stimpsoni) ヤツデヒトデ, *Tripneustes gratilla* (Linnaeus)

Table 2. Occurrence of selected animal species in the 43 plots along the entire coast of Hatakejima Island on May 2-3, 2003. The maximum density (no./m²) within each plot is shown as one of the following five classes: ① (1), 1 (2-9), 2 (10-99), 3 (100-999), 4 (>1000).

Table 2	Plots	1	2	3	4	5	6	7
CNIDARIA								
1. <i>Haliplanella lineata</i> (Verrill) タテジマイソギンチャク		1	2	1	2	1	2	1
2. <i>Anthopleura japonica</i> Verrill ヨロイソギンチャク								
3. <i>Oulastrea crispata</i> (Lamarck) キクメイシモドキ								①
BRYOZOA								
4. <i>Watersipora subovoidea</i> (D'Orbigny) チゴケムシ		1	2	2	2	3	2	2
ANNELIDA								
5. <i>Pomatoleios kraussi</i> (Baird) ヤッコカンザシ		2	3	3	3	4	3	3
6. <i>Chaetopterus variopedatus</i> (Renier) ツバサゴカイ								
ARTHROPODA								
7. <i>Capitulum mitella</i> (Linnaeus) カメノテ		2	3	3	3	2		1
8. <i>Chthamalus challengerii</i> Hoek イワフジツボ		4	4	4		4	4	4
9. <i>Euraphia pilsbryi</i> (Hiro) オオイワフジツボ								
10. <i>Tetraclita japonica</i> Pilsbry クロフジツボ		3	2	2	2	2	1	
11. <i>Tetraclita squamosa</i> Bruguière ミナミクロフジツボ		2						
12. <i>Balanus amphitrite</i> Darwin タテジマフジツボ						2	2	2
13. <i>Balanus albicostatus</i> Pilsbry シロスジフジツボ		1		2		3	2	3
14. <i>Megabalanus volcano</i> (Pilsbry) オオアカフジツボ		1						
15. <i>Clibanarius virescens</i> (Krauss) イソヨコバサミ		2	2			1	2	1
16. <i>Pagurus filholi</i> (de Man) ホンヤドカリ		2	2	2	1	2	3	3
17. <i>Pagurus dubius</i> (Ortmann) ユビナガホンヤドカリ								
18. <i>Petrolisthes japonicus</i> (de Haan) イソカニダマシ		1	1		1			
19. <i>Leptodius exaratus</i> (H. Milne Edwards) オウギガニ		1	1		1		1	1
20. <i>Pilodius nigrocrinitus</i> Stimpson トゲオウギガニ		①						
21. <i>Pilumnus vespertilio</i> (Fabricius) ケブカガニ					①			
22. <i>Scopimera globosa</i> (de Haan) コメツキガニ								
23. <i>Pachygrapsus crassipes</i> Randall イワガニ				1		1		
24. <i>Hemigrapsus sanguineus</i> (de Haan) イソガニ			1			1		
25. <i>Hemigrapsus penicillatus</i> (de Haan) ケフサイソガニ								
26. <i>Gaetis depressus</i> (de Haan) ヒライソガニ			1			1	1	1
27. <i>Nanosesarma gordonii</i> (Shen) ヒメベンケイガニ		1	1	1	1	1	1	1
MOLLUSCA								
28. <i>Acanthopleura japonica</i> (Lischke) ヒザラガイ		2	2	2	2	1	2	1
29. <i>Acanthochitona achates</i> (Gould) ヒメケハダヒザラガイ								
30. <i>Cellana toreuma</i> (Reeve) ヨメガカサ		1	1			1		
31. <i>Cellana grata</i> (Gould) ベッコウガサ		①				①		

32. <i>Cellana nigrolineata</i> (Reeve) マツバガイ	1	1			1	1	1	1
33. <i>Patelloida saccharina lanx</i> (Reeve) ウノアシ	2	2	1	1	2	2	1	

	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	1			1			1			1			1					
2	2	1		1			1			1								①
3	①								1							1	1	
4	2	1																2
5	4	3		3	3		4			2		3	2	2	2		3	4
6					①						①							
7	3	3		3	2		3			2					2	2	2	
8	4	4	4	4			4	4		4	2	4			4	4	4	4
9							1										1	
10	2	2		1			2			1					2	2	1	2
11															1			
12	3	3	1	2		1	2	2		2	1	1	1			3	3	2
13	3	3	2	3		2	3	3	3	3		3			3	3	3	2
14																		
15	2			1			1			2	1	1				1	1	1
16	3	2		3	3		2	2		2	2	2	3	3	3	2	2	2
17					1	1	1	2	2	1								
18	1			1		1						2	1	2	2	1		
19	1			1		1	1		1			2		1	1	1	1	1
20																		
21									①									①
22					1				1									
23		1																
24	1			1		1		1					1					
25								1										
26	1	2		2		1	1	1	1	1		2	1	1	1	1	1	1
27	1	1		1		1	1		1	1		1	1	1	1	1	1	1
28	2	2		1	1		2			1		1			1	1	1	
29	①											1						
30	1	1		1	1					1		1	①		①		1	1
31																		

32	1	2		1	①		1			1		1	1				1	
33	2	2		2	1		1			1		1	1	1	1	2	2	1

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

32	1	1	1	1	1	1			1	1		①	①	1	1		1	1			
33	2	2	2	1	2	2	2		2	2	1	1	3	3	3	2	2	2			
Table 2 (continued)													Plots		1	2	3	4	5	6	7
34.	<i>Monodonta labio confusa</i> (Tapparone-Canefri)イシダタ												2	1	2	3	2	1			
35.	<i>Turbo cornatus coreensis</i> (Récrúz) スガイ												2	①	2	1	2	2			
36.	<i>Littorina brevicula</i> (Philippi) タマキビ											1	2	2	1	3	3	2			
37.	<i>Nodilittorina radiata</i> (Eydox et Souleyet)アラレタマキ											3	2	3	3	2	1	3			
38.	<i>Planaxis sulcatus</i> (Born) ゴマフニナ																				
39.	<i>Serpulorbis imbricatus</i> (Dunker) オオヘビガイ																				
40.	<i>Batillaria cumingi</i> (Crosse) ホソウミニナ															3	3	2			
41.	<i>Thais clavigera</i> (Küster) イボニシ																				
42.	<i>Siphonaria japonica</i> (Donovan) カラマツガイ											1	2	1	1	2	1	1			
43.	<i>Siphonaria acmaeoides</i> Pilsbry シロカラマツガイ													1							
44.	<i>Siphonaria sirius</i> Pilsbry キクノハナガイ											1						1			
45.	<i>Xenostrobus atratus</i> (Lischke) クログチ												3	4	3	4	4	4			
46.	<i>Septifer virgatus</i> (Wiegmann) ムラサキインコ												①			①					
47.	<i>Hormomya mutabilis</i> (Gould) ヒバリガイモドキ											4	4	4	4	4	4	4			
48.	<i>Crassostrea gigas</i> (Thunberg) マガキ											1	2	3	2	2	2	2			
49.	<i>Saccostrea kegaki</i> (Torigoe et Inaba) ケガキ											3	3	3	3	3	3	3			
ECHINODERMATA																					
50.	<i>Asterina coronata japonica</i> Hayashi トゲイトマキヒトデ												1		1						
51.	<i>Diadema setosum</i> (Leske) ガンガゼ																	①			
52.	<i>Hemicentrotus pulcherrimus</i> (A. Agassiz) バフンウニ																				
53.	<i>Echinostrephus molaris</i> (Blainville) タワシウニ																				
54.	<i>Anthocidaris crassispina</i> (A. Agassiz) ムラサキウニ											1	①	1	1	1	1	1			
55.	<i>Pseudocentrotus depressus</i> (A. Agassiz) アカウニ																				
56.	<i>Echinometra</i> sp. A ツマジロナガウニ																				
57.	<i>Echinometra</i> sp. B ホンナガウニ																				
58.	<i>Mespilia globulus</i> (Linnaeus) コシダカウニ																	①			
59.	<i>Holothuria moebii</i> (Ludwig) テツイロナマコ																				
60.	<i>Holothuria leucospirota</i> Brandt ニセクロナマコ																				
61.	<i>Holothuria pardalis</i> Selenka イソナマコ																				
62.	<i>Afrocucumis africana</i> (Semper) ムラサキグミモドキ																				
63.	<i>Polycheira rufescens</i> (Brandt) ムラサキクルマナマコ																				
HEMICHORDATA																					
64.	<i>Balanoglossus carnosus</i> (Willey) ワダツミギボシムシ																				
UROCHORDATA																					
65.	<i>Styela plicata</i> (Lesueur) シロボヤ												1	1		1	2	1			

	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
34	2	2		2	2		1			2		1	3	2	2	1				
35	2	1		2	2		2	2	2	2	2	2	2	2	1	1				
36	3	1		2												1				
37	3	3		3			3									1	3			
38.				1																
39																				
40					3		2	4	4	3	4			3				3		
41	2	1			①											①				
42	2	2		2	①		2	1		1		2				1	2	1		
43		2		1				1		1		1						2		
44		1					①											1		
45	4	4		4			4	4		4								4	4	
46		①								1									1	
47	4	4		4	4	3	4	4		4	3	4		4	4	4	4	4	4	
48	3	3		2	1		2	1	2	2	1	2	2	1				1	①	
49	3	2			1		2	1	3	3		2	2	2	2	1	2	2		
50												①		①						
51	1									1			1	1				2	1	
52												①								
53																		1	1	
54	1	①		1			①			1		1	1	1				1	2	1
55																				
56													1	1				1	1	
57																				
58													①						①	
59																				
60																			1	
61												1								
62																				
63													1	1						
64											1			1	1					
65	1	1		1		1	1				1									

	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
34	2		2	2	1	1	①	2	3		2	2			2	1		
35			2		1	2	1	1	1		2	1			1	1		
36	1	2	2	1	2			2	1	1					1			
37	3	3	4	3	2			2	2	2					2			
38								3	1						2			
39													①					
40																		
41							1			1				1				
42	1	2	2	2	1	2	2	1	2	1		1	1		1		2	2
43			1				2											1
44			1		1	1				①	1	①	①	1	1	1	2	1
45	2		3	4	4	4	4		4	3				3				3
46	3				2					1				3				
47			4	4	4	4	4	4	4	4			4	4	4	4	4	4
48	2		1	1		2		①	1	1			1					
49	3	2	3	3	3	3	2	1	2	2				3	3	2	3	2
50																		
51			1						①	①	1							
52							①				2		①					
53	2	1	2	2	2	1	1		2	2			1	2	2	2	2	1
54	1	1	1	1	1	1	2		2	2	2	①	1	2	2	2	2	2
55											①							
56			1	1	1	1	1		1	1	1	1	1	2	1	2	1	1
57			1	1	1				1	1				1	1	1	1	1
58							①		①		①		①					
59											1		①					
60											①	1	1		①	1		1
61											1	1	1		1			①
62						①					2	1						
63											2	1						
64																		
65											①							

Table 3. Occurrence of macrobenthic species in the 16 rocky plots in the south-coast survey area of Hatakejima Island on May 4, 2003. The maximum density (no./m²) within each plot is shown as one of the following five classes: ① (1), 1 (2-9), 2 (10-99), 3 (100-999), 4 (>1000).

+ : found but density not evaluated.

Table 3	Plots	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PORIFERA																	
<i>Halichondria okadai</i> (Kadota) クロイソカイメン		+		+	+	+		+	+				+	+		+	+
<i>Halichondria japonica</i> (Kadota) ダイダイイソカイメン		+		+	+	+		+					+	+		+	+
<i>Halichondria panicea</i> (Pallas) ナミイソカイメン													+				
<i>Halichondridae</i> gen. sp. イソカイメン科の1種						+											
CNIDARIA																	
<i>Anthopleura uchidai</i> England ヨロイソギンチャク						1			1	①				1	1	1	1
<i>Anthopleura inornata</i> (Stimpson)		①		1		1								1		1	2
<i>Haliplanella lineata</i> (Verrill) タテジマイソギンチャク		1		1		1									1	2	2
<i>Oulastrea crispata</i> (Lamarck) キクメイシモドキ			1										①				
PLATYHELMINTHES																	
<i>Planocera reticulata</i> (Stimpson) ツノヒラムシ															1		
TENTACULATA																	
<i>Watersipora subovoidea</i> (D'Orbigny) チゴケムシ																	3
ANNELIDA																	
<i>Perinereis nuntia</i> (Savigny) イソゴカイ														①			
<i>Pomatoleios kraussi</i> (Baird) ヤッコカンザシ		4		3	3	2		4	4	3			3	3	2	2	4
Serpulidae. gen. sp. カンザシゴカイ科の1種														2			
ARTHROPODA																	

<i>Capitulum mitella</i> (Linnaeus) カメノテ	3									1	2	3	2	1	3	
<i>Euraphia pilsbryi</i> (Hiro) オオイワフジツボ		3	1	1		①										
Table 3 (continued) Plots	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Chthamalus challengerii</i> Hoek イワフジツボ	4	4	4	4	4	4	4	4	4		4		4	4	4	4
<i>Tetraclita japonica</i> Pilsbry クロフジツボ	3		1		1			1				1	1	2	2	2
<i>Tetraclita squamosa</i> Bruguière ミナミクロフジツボ	1															
<i>Balanus amphitrite</i> Darwin タテジマフジツボ		3	3	3	3	2	3		2	2	2		3	2	3	2
<i>Balanus albicostatus</i> Pilsbry シロスジフジツボ		3		3	3	3	2	2	3	3	3		2	2	2	2
<i>Balanus trigonus</i> Darwin サンカクフジツボ															2	2
<i>Megabalanus volcano</i> (Pilsbry) オオアカフジツボ	2															
<i>Megabalanus rosa</i> (Pilsbry) アカフジツボ	1															1
<i>Ligia exotica</i> Roux フナムシ																1
<i>Palaemon pacificus</i> (Stimpson) イソスジエビ								1								1
<i>Alpheus lobidens</i> de Haan イソテッポウエビ								1				1				
<i>Clibanarius virescens</i> (Krauss) イソヨコバサミ	2							1	1			1	1			1
<i>Pagurus filholi</i> (de Man) ホンヤドカリ	2	2	3	3	2		2	3	2	3		2	2	1	1	1
<i>Pagurus dubius</i> (Ortmann) ユビナガホンヤドカリ										1						
<i>Petrolisthes japonicus</i> (de Haan) イソカニダマシ													1			
<i>Tiarinia cornigera</i> (Latreille) イソクズガニ									1				1		1	
<i>Macromedaeus distinguendus</i> (de Haan) シワオウギガニ													1			
<i>Leptodius exaratus</i> (H. Milne Edwards) オウギガニ	①		①	1		1		1				1	①			
<i>Pilodius nigrocrinitus</i> Stimpson トゲオウギガニ	①															
<i>Eriphia smithi</i> McLeay イボイワオウギガニ	①															①
<i>Pilumnus vespertilio</i> (Fabricius) ケブカガニ	①	①						①	①				①		①	
<i>Pachygrapsus crassipes</i> Randall イワガニ						1								①		1

<i>Acmaeopleura parvula</i> Stimpson ヒメアカイトガニ																				①	
<i>Hemigrapsus sanguineus</i> (de Haan) イソガニ		1	1	1			①		1	1			①	1		①					
Table 3 (continued) Plots	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					
<i>Hemigrapsus penicillatus</i> (de Haan) ケフサイソガニ				1							1									①	
<i>Gaetice depressus</i> (de Haan) ヒライソガニ	1	1	1	1	1	1	1	1		1	1	2	2			1				①	
<i>Nanosesarma gordonii</i> (Shen) ヒメベンケイガニ	1		1	1	1		1	1	1	1		1	1	1	1						2
MOLLUSCA																					
<i>Acanthopleura japonica</i> (Lischke) ヒザラガイ	1		1	1	1		1	1			1			2	1		2	2			
<i>Acanthopleura loochooana</i> (Broderip) & ニシキヒザラガイ																				①	
<i>Onithochiton hirasei</i> Pilsbry ニシキヒザラガイ	①																				
<i>Acanthochitona achates</i> (Gould) ヒメケハダヒザラガイ								1			1		1		①	①					
<i>Acanthochitona defilippi</i> Tapparone-Canefri ケハダヒザラガイ														①							
<i>Cellana toreuma</i> (Reeve) ヨメガカサ	1												1				1				
<i>Cellana grata</i> (Gould) ベッコウガサ	1			①																	
<i>Cellana nigrolineata</i> (Reeve) マツバガイ	1		1				1	1					1	1	1	2					
<i>Patelloida saccharina lanx</i> (Reeve) ウノアシ	2	1	2	1	1		1	1	2				2	2	1	2	1				
<i>Patelloida pigmaea</i> (Dunker) ヒメコザラ					1										1		1				
<i>Nipponacmaea fuscoviridis</i> (Teramachi) クサイロアオガイ			1	①	1			1					1	1	1	1	1				
<i>Haliotis diversicolor aquatilis</i> Reeve トコブシ	①																				
<i>Omphalius nigerrimus</i> (Gmelin) ヒメクボガイ														①							
<i>Tectus pyramis</i> (Born) ギンタカハマ	①																				
<i>Monodonta labio confusa</i> (Tapparone-Canefri) イシダタミ	1		2	2	2			2		1	1	2	2	2	1	2					
<i>Monodonta perplexa perplexa</i> Pilsbry クビレクロヅケ															1						
<i>Turbo cornatus coreensis</i> (Réacruz) スガイ	1	1	2	2	2		2	3	2	2	1	2	2	1							①
<i>Nerita albicilla</i> Linnaeus アマオブネ	①			①			①														

<i>Planaxis sulcatus</i> (Born) ゴマフニナ										1									1
<i>Batillaria cumingi</i> (Crosse) ホソウミニナ		4	4	3			2	2	3	4	4	2							
Table 3 (continued) Plots	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<i>Peasiella habei</i> Reid et Mak コビトウラウズ	2	2			2		2	1	2	1	1	1	2	2	3	3			
<i>Nodilittorina radiata</i> (Eydoux et Souleyet) アラレタマキビ			2		4	3		2	2	3	3		3	4					3
<i>Nodilittorina vidua</i> (Gould) タイワンタマキビ														1					
<i>Nodilittorina trochoides</i> (Gray) イボタマキビ											1								
<i>Littorina brevicula</i> (Philippi) タマキビ						1	1	2	2	2	2	2	2	1					1
<i>Cronia margaritcola</i> (Broderip) ウネレイシガイダマシ					1								1	2					1
<i>Ergalatax contractus</i> (Reeve) ヒメヨウラク			1					1					1						
<i>Morula musiva</i> (Kiener) シマレイシガイダマシ	2		1		1			1	2					2	1		2	1	
<i>Thais clavigera</i> Küster イボニシ	1		1					1								1	1		1
<i>Thais bronni</i> (Dunker) レイシガイ					①			①											
<i>Thais kyteistina</i> (Holten) クリフレイシ					1			①											
<i>Strigatella scutula</i> (Gmelin) ヤタテガイ	①																		
<i>Aplysia oculifera</i> Adams et Reeve															①				
<i>Dendrodoris arborescens</i> (Collingwood) クロシタナシウミウシ				①															
<i>Spurilla chromosoma</i> Cockerell &																①			
<i>Siphonaria japonica</i> (Donovan) カラマツガイ	2	1	1	2	2		1	1	1	1	1	1	1	2	1	2			①
<i>Siphonaria acmaeoides</i> Pilsbry シロカラマツガイ		2	1	1			1		2	2	1	①	2		2				①
<i>Siphonaria sirius</i> Pilsbry キクノハナガイ	①																		
<i>Barbatia virescens</i> (Reeve) カリガネエガイ												1		①	①				
<i>Xenostrobus atratus</i> (Lischke) クログチ	3	4	4	4	4	4	4	2	4	4	3		4	4	4	4			4
<i>Septifer virgatus</i> (Wiegmann) ムラサキインコ	1		①		1														①
<i>Hormomya mutabilis</i> (Gould) ヒバリガイモドキ	4	4	4		4		4	3	3	3		4	4		4	4			4

<i>Pinctada martensii</i> (Dunker) アコヤガイ			①									①					
<i>Crassostrea gigas</i> (Thunberg) マガキ		2	2	1	2		2	1	2	2	1		2	2	3	3	
Table 3 (continued) Plots	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<i>Saccostrea kegaki</i> Torigoe & Inaba ケガキ	3	2	3	1	2		2	1	3	2	1		2	1	2	2	
<i>Chama japonica</i> Lamarck キクザルガイ	1				2						①				①	①	
<i>Claudiconcha japonica</i> (Gould) セミアサリ								1					1	1	1	1	
ECHINODERMATA																	
<i>Asterina coronata japonica</i> Hayashi トゲイトマキヒトデ								①									
<i>Diadema setosum</i> (Leske) ガンガゼ		1								①							
<i>Hemicentrotus pulcherrimus</i> (A. Agassiz) バフンウニ	1												1				
<i>Echinostrephus molaris</i> (Blainville) タワシウニ	2																
<i>Anthocidaris crassispina</i> (A. Agassiz) ムラサキウニ	2	1			1				①			①	①		1		
<i>Pseudocentrotus depressus</i> (A. Agassiz) アカウニ	①																
<i>Echinometra</i> sp. A ツマジロナガウニ	1																
<i>Mespilia globulus</i> (Linnaeus) コシダカウニ	①				①												
<i>Holothuria pardalis</i> Selenka イソナマコ					①												
UROCHORDATA																	
<i>Styela plicata</i> (Lesueur) シロボヤ																1	
<i>Styela canopus</i> Savigny フタスジボヤ													2				
CHLOROPHYTA																	
<i>Ulva pertusa</i> Kjelman アナアオサ	+															+	
<i>Ulva fasciata</i> Delile リボンアオサ										+		+				+	+
<i>Ulva conglobata</i> Kjellman ボタンアオサ	+	+	+	+	+		+	+	+		+		+	+			
<i>Enteromorpha</i> sp. アオノリ属の1種												+					
<i>Cladophora conchopheria</i> Sakai カイゴロモ		+	+	+	+		+	+	+				+	+		+	

PHAEOPHYTA																
<i>Padina arborescens</i> Holmes ウミウチワ	+										+					
Table 3 (continued) Plots	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Petrospongium rugosum</i> Setchel et Gardner シワノカワ	+															
<i>Colpomenia sinuosa</i> (Mertens ex Roth) フクロノリ	+															
<i>Sargassum thunbergii</i> (Mertens ex Roth) ウミトラノオ	+												+			
<i>Sargassum fusiforme</i> Setchell ヒジキ	+															
<i>Sargassum sp.</i> ホンダワラ属の1種	+															
RHODOPHYTA																
<i>Dermonema pulvinatum</i> (Grunow) カモガシラノリ					+									+		+
<i>Amphiroa misakiensis</i> Yendo ヒメカニノテ									+							+
<i>Lithophyllum okamurae</i> Foslie ヒライボ									+							
<i>Corallina pilulifera</i> Postels et Ruprecht ビリヒバ	+	+	+		+											+
<i>Jania adhaerens</i> Lamouroux ヒメモサヅキ		+	+	+	+		+			+	+	+	+	+	+	+
<i>Gelidium divaricatum</i> Martens ヒメテングサ	+		+	+	+		+	+				+	+	+	+	+
<i>Grateloupia filicina</i> (Lamouroux)			+		+		+	+	+		+	+	+		+	