

ホタテガイ増養殖安定化推進事業 ヒトデ類付着予報調査

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目 的

ホタテガイとその捕食者であるヒトデ類は、陸奥湾においてほぼ同じ季節に発生する。このため、ホタテガイの天然採苗を効率的に行うために、ヒトデ類の浮遊幼生の出現密度を調査し、その出現状況から採苗器に付着するヒトデ類の個体数の予測を試みた。なお、本調査は、別報「ホタテガイ天然採苗予報調査」の一環として実施した。

材料と方法

調査は、図1に示す定点において平成26年3月29日から同年6月30日にかけて計14回行った。

ヒトデ類の浮遊幼生を、北原式定量プランクトンネット(網地：NXX13、口径：225mm、採水口面積：0.04m²)を用いて海底の2m上方から海面まで鉛直曳きして採取し、10%ホルマリンで固定した。検体を万能投影機で観察し、体長別、発生段階別に計数した後、海水1m³当たりの密度を求めた。

採苗器への付着数との関係が認められているブラキオラリア期幼生¹⁾の平均出現密度と採苗器1袋当りのヒトデ付着数との関係式から平成26年度における採苗器へのヒトデの付着数を予測した。採苗器への稚ヒトデの付着数は、264, 265ページに記す第2回ホタテガイ等付着稚貝調査の結果を用いた。

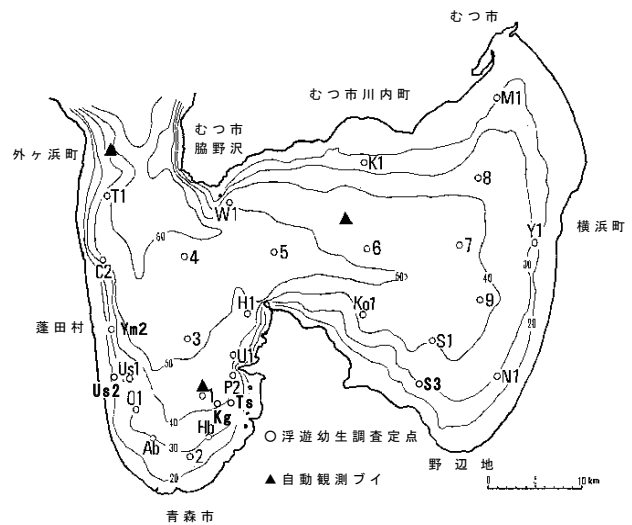


図1. ヒトデ類浮遊幼生調査定点

結果と考察

平成26年度のヒトデ類の浮遊幼生出現状況を図2～3に、各定点の調査結果を付表1～14に、ブラキオラリア期幼生の平均出現密度を付表15に、第2回ホタテガイ等付着稚貝調査結果における採苗器へのヒトデ付着数を付表16に示した。

浮遊幼生は、西湾で調査開始時の3月下旬から既に出現しており、4月下旬と5月中旬にピークが見られ、東湾では4月上旬から出現し、4月下旬と5月中旬にピークが見られた。出現密度の最大値は、全湾平均で12.94個体/m³、西湾平均で13.07個体/m³、東湾平均で18.51個体/m³であった。

発達段階別に見ると、のうはい期幼生は西湾で3月下旬から5月中旬、東湾で4月上旬から5月中旬にかけて、繊毛期幼生は西湾で3月下旬から6月上旬、東湾で4月上旬から5月中旬にかけて、ビピンナリア期幼生は西湾で3月下旬から6月下旬、東湾で4月上旬から6月下旬にかけて、ブラキオラリア期幼生は東湾で6月上旬から6月中旬にかけて出現し、西湾では出現しなかった。平均出現密度は、のうはい期幼生が全湾平均で0.73個体/m³、西湾平均で0.93個体/m³、東湾平均で0.41個体/m³、繊毛期幼生が全湾平均で0.59個体/m³、西湾平均で0.71個体/m³、東湾平均で0.40個体/m³、ビピンナリア期幼生が全湾平均で4.46個体/m³、西湾平均で3.29個体/m³、東湾平均で5.84個体/m³、ブラキオラリア期幼生が全湾平均で0.03個体/m³、西湾平均で0.00個体/m³、東湾平均で0.05個体/m³であった。

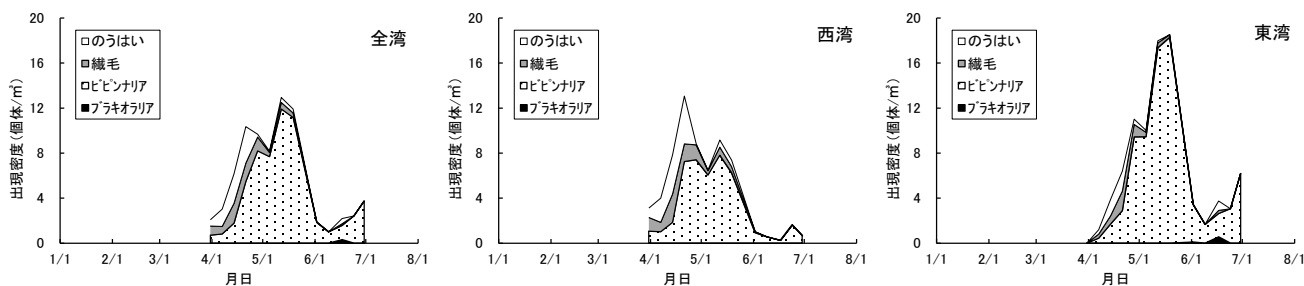


図2. ヒトデ類浮遊幼生の発生段階別の出現状況.

各年のブラキオラリア期幼生の平均出現密度と採苗器へのヒトデの付着数との関係を調べたところ、西湾、東湾、全湾ともに有意な正の相関関係が認められた(図3)ことから、ブラキオラリア期幼生の平均出現密度が高い年は採苗器へのヒトデの付着も多くなることが考えられた。この関係式に基づく平成26年度のヒトデの付着数は、全湾平均で3.14個体/袋、西湾平均で0.00個体/袋、東湾平均で7.52個体/袋と低い値が予測された。第2回ホタテガイ等付着稚貝調査におけるヒトデの付着数は、全湾平均で0.03個体/袋、西湾平均で0.44個体/袋、東湾平均で0.15個体/袋と、概ね予測通りに低い値に留まった。

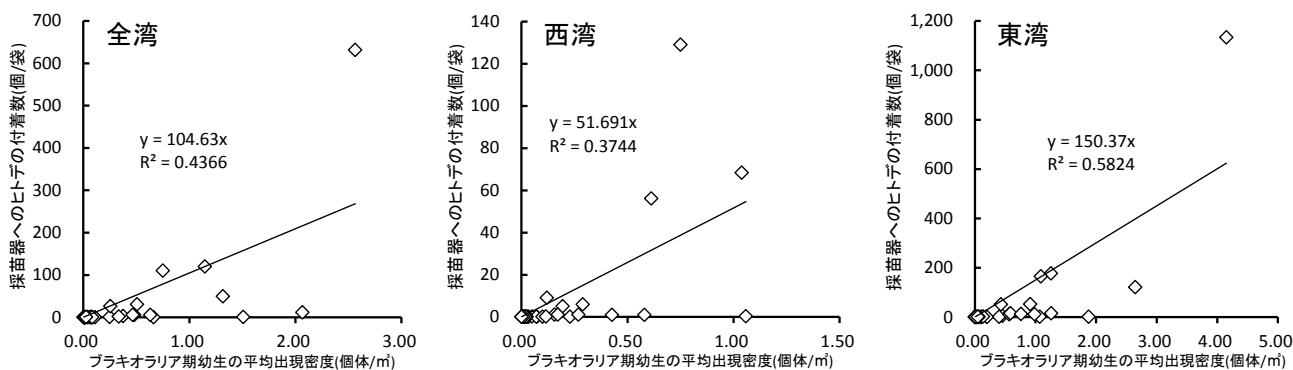


図3. ブラキオラリア期幼生の平均出現密度と採苗器へのヒトデの付着数の関係.

これらのことから、平成26年の採苗器投入から稚貝採取までの期間においては、ヒトデ類によるホタテガイ稚貝の食害は比較的少なかったと考えられた。

謝 辞

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文 献

- 1) 山内弘子・小坂善信・吉田達・鹿内満春 (2007) ほたてがいがい増養殖IT推進事業(ヒトデ類付着予報調査). 青水総研増事業報告書, 36, 127-135.

付表1. 平成26年度 第1回ヒト子類浮遊幼生調査結果

| St. | 月日 | 未満 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | |
|------|------|-----|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-------------------------------|------|-----|----------|----------|------------|
| | | | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア |
| T1 | 3/31 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| C2 | 4/2 | 0.9 | 1.3 | 0.4 | 0.4 | | | | | | | | | | | | | | | 3.1 | 0.4 | 1.8 | 0.9 | |
| Ym2 | 3/31 | | | 1.7 | | | | | | | | | | | | | | | | 1.7 | | | 1.7 | |
| Us2 | 3/31 | 5.9 | 7.1 | | | | | | | | | | | | | | | | | 12.9 | 2.9 | 4.1 | 5.9 | |
| O1 | 4/2 | 5.3 | 5.9 | 2.4 | | | | | | | | | | | | | | | | 13.5 | 4.1 | 5.3 | 4.1 | |
| Ab | 4/2 | 1.2 | 1.2 | 0.6 | | | | | | | | | | | | | | | | 2.9 | 1.2 | 1.2 | 0.6 | |
| Hb | 4/2 | 2.4 | 2.9 | | | | | | | | | | | | | | | | | 5.3 | 1.2 | 4.1 | | |
| Kg | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| Ts | 3/29 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| P2 | 3/29 | 0.6 | 1.3 | | | | | | | | | | | | | | | | | 1.9 | 1.3 | 0.6 | | |
| 1 | 4/1 | 1.2 | 1.2 | | | | | | | | | | | | | | | | | 2.3 | 0.6 | | 1.7 | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 4 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| U1 | 3/30 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| HI | 3/29 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 西湾平均 | | 1.2 | 1.5 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 0.8 | 1.2 | 1.1 | 0.0 |
| Ko1 | 3/31 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| S3 | | | | | | | | | | | | | | | | | | | | | | | | |
| N1 | 3/29 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| Y1 | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | | | | | | | | | | | | | | | | | | | | | | | | |
| K1 | | | | | | | | | | | | | | | | | | | | | | | | |
| W1 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 5 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 6 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 7 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 4/2 | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 東湾平均 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 全湾平均 | | 0.8 | 1.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 0.6 | 0.8 | 0.7 | 0.0 |

付表2. 平成26年度 第2回ヒト子類浮遊幼生調査結果

西湾 15点
東湾 8点

| St. | 月日 | 体 長 別 出 現 数 (個体/m ³) | | | | | | | | | | | | 発 生 段 階 別 出 現 数 (個体/m ³) | | | | | | | | | | |
|------|-----|----------------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|--------------------------------------|------|------|------|------|------|------|----------|----------|------------|-------------|
| | | 400 未満 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビビン ナリア | ブラキオ ラリア |
| T1 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| C2 | 4/8 | 0.4 | 1.3 | | | | | | | | | | | | | | | | 1.8 | | 0.9 | | 0.9 | |
| Ym2 | 4/8 | | 0.8 | 2.5 | | | | | | | | | | | | | | | 3.3 | | 1.7 | | 1.7 | |
| Us2 | 4/8 | 2.9 | 2.4 | | | | | | | | | | | | | | | | 5.3 | 3.5 | 1.2 | | 0.6 | |
| O1 | 4/8 | 10.0 | 4.1 | 0.6 | | | | | | | | | | | | | | | 14.7 | 10.0 | 1.2 | | 3.5 | |
| Ab | 4/8 | 14.1 | 3.5 | 0.6 | | | | | | | | | | | | | | | 18.2 | 11.8 | 4.1 | | 2.4 | |
| Hb | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| Kg | 4/8 | 5.3 | 2.9 | 1.2 | | | | | | | | | | | | | | | 9.4 | 4.1 | 3.5 | | 1.8 | |
| Ts | 4/4 | 0.6 | | | | | | | | | | | | | | | | | 0.6 | 0.6 | | | | |
| P2 | 4/8 | 2.2 | 3.3 | 1.1 | | | | | | | | | | | | | | | 6.7 | 2.2 | | | 4.4 | |
| 1 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 2 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 3 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 4 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| U1 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| HI | | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 西湾平均 | | 2.4 | 1.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 2.1 | 0.8 | 1.0 | 0.0 | |
| Ko1 | 4/6 | 2.5 | 0.8 | 0.8 | | | | | | | | | | | | | | | 4.2 | 2.5 | | | 1.7 | |
| S3 | | | | | | | | | | | | | | | | | | | | | | | | |
| N1 | 4/7 | 1.7 | | | | | | | | | | | | | | | | | 1.7 | | 1.7 | | | |
| Y1 | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | | | | | | | | | | | | | | | | | | | | | | | | |
| K1 | | | | | | | | | | | | | | | | | | | | | | | | |
| W1 | 4/8 | 2.5 | 1.3 | | | | | | | | | | | | | | | | 3.8 | 0.6 | 1.3 | | 1.9 | |
| 5 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 6 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 7 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 8 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 9 | 4/8 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 東湾平均 | | 0.8 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.4 | 0.4 | 0.4 | 0.0 | |
| 全湾平均 | | 1.8 | 0.9 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 1.5 | 0.7 | 0.8 | 0.0 | |

付表3. 平成26年度 第3回ヒト子類浮遊幼生調査結果

西湾 15点
東湾 11点

| St. | 月日 | 体 長 別 出 現 数 (個体/m ³) | | | | | | | | | | | | | | | | | 発 生 段 階 別 出 現 数 (個体/m ³) | | | | | | |
|------|------|----------------------------------|------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|--------------------------------------|------|------|----------|----------|------------|-------------|
| | | 400 未満 | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビビン ナリア | ブラキオ ラリア |
| T1 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| C2 | 4/15 | 0.9 | | | | | | | | | | | | | | | | | | | 0.9 | 0.9 | | | |
| Ym2 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| Us2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| O1 | 4/14 | 17.6 | 20.0 | 0.6 | | | | | | | | | | | | | | | | | 38.2 | 17.6 | 14.7 | 5.9 | |
| Ab | 4/14 | 8.2 | 5.9 | | | | | | | | | | | | | | | | | | 14.1 | 8.2 | 2.4 | 3.5 | |
| Hb | 4/14 | 1.8 | 11.8 | | | | | | | | | | | | | | | | | | 13.5 | 1.8 | 5.9 | 5.9 | |
| Kg | 4/14 | 13.5 | 18.2 | 0.6 | | | | | | | | | | | | | | | | | 32.4 | 13.5 | 12.4 | 6.5 | |
| Ts | 4/13 | 4.4 | 4.4 | 0.6 | | | | | | | | | | | | | | | | | 9.4 | 7.2 | 1.7 | 0.6 | |
| P2 | 4/13 | 0.6 | 3.3 | 1.1 | | | | | | | | | | | | | | | | | 5.0 | 1.7 | | 3.3 | |
| 1 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 2 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 3 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 4 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| U1 | 4/13 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| HI | 4/13 | 2.0 | 1.5 | 0.5 | | | | | | | | | | | | | | | | | 4.0 | 2.0 | | 2.0 | |
| 西湾平均 | | 3.3 | 4.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.8 | 3.5 | 2.5 | 1.8 | 0.0 |
| Ko1 | 4/13 | 0.8 | 2.5 | 1.7 | | | | | | | | | | | | | | | | | 5.0 | 0.8 | | 4.2 | |
| S3 | 4/13 | 10.0 | 3.8 | | | | | | | | | | | | | | | | | | 13.8 | 8.8 | 5.0 | | |
| N1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y1 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| M1 | 4/15 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| K1 | 4/13 | 5.8 | 3.5 | 1.2 | | | | | | | | | | | | | | | | | 10.4 | 5.8 | 1.2 | 3.5 | |
| W1 | 4/13 | 3.8 | 6.9 | 0.6 | | | | | | | | | | | | | | | | | 11.3 | 0.6 | 1.9 | 8.8 | |
| 5 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 6 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 7 | 4/14 | | 2.3 | | | | | | | | | | | | | | | | | | 2.3 | | | 2.3 | |
| 8 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 9 | 4/14 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| 東湾平均 | | 1.8 | 1.7 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 | 1.5 | 0.7 | 1.7 | 0.0 |
| 全湾平均 | | 2.7 | 3.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.2 | 2.6 | 1.8 | 1.8 | 0.0 |

付表4. 平成26年度 第4回ヒト子類浮遊幼生調査結果

西湾 16点
東湾 11点

| St. | 月日 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | | | | | | |
|------|------|-----------------------------|------|-----|-----|-----|-----|-----|------|------|------|------|------|-------------------------------|------|------|------|------|------|------|----------|----------|------------|-------------|
| | | 400 未滿 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア | ブラキオ ラリア |
| T1 | 4/21 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| C2 | 4/21 | | 2.2 | 0.4 | | | | | | | | | | | | | | | 2.7 | | 0.9 | | 1.8 | |
| Ym2 | 4/21 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| Us2 | 4/21 | 2.4 | 7.6 | 1.2 | | | | | | | | | | | | | | | 11.2 | 2.4 | 0.6 | | 8.2 | |
| O1 | 4/21 | 11.2 | 21.8 | 4.1 | | | | | | | | | | | | | | | 37.1 | 11.2 | 3.5 | | 22.4 | |
| Ab | 4/21 | 19.4 | 20.0 | 4.7 | | | | | | | | | | | | | | | 44.1 | 19.4 | 6.5 | | 18.2 | |
| Hb | 4/21 | 5.9 | 21.2 | 6.5 | | | | | | | | | | | | | | | 33.5 | 5.9 | 4.7 | | 22.9 | |
| Kg | 4/21 | 27.6 | 37.6 | 2.9 | | | | | | | | | | | | | | | 68.2 | 27.6 | 7.1 | | 33.5 | |
| Ts | 4/18 | | 1.1 | | | | | | | | | | | | | | | | 1.1 | | 0.6 | | 0.6 | |
| P2 | 4/20 | | 1.7 | 1.1 | | | | | | | | | | | | | | | 2.8 | | | | 2.8 | |
| 1 | 4/18 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 2 | 4/18 | | 1.7 | 0.9 | | | | | | | | | | | | | | | 2.6 | | 0.9 | | 1.7 | |
| 3 | 4/18 | | 1.0 | | | | | | | | | | | | | | | | 1.0 | 0.5 | | | 0.5 | |
| 4 | 4/18 | | 1.0 | | | | | | | | | | | | | | | | 1.0 | 0.5 | | | 0.5 | |
| U1 | 4/20 | | 1.0 | 1.4 | 0.5 | | | | | | | | | | | | | | 2.9 | | | | 2.9 | |
| H1 | 4/18 | 0.5 | 0.5 | | | | | | | | | | | | | | | | 1.0 | 0.5 | | | 0.5 | |
| 西湾平均 | | 4.2 | 7.4 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.1 | 4.2 | 1.6 | | 7.3 | 0.0 |
| Ko1 | 4/20 | 2.5 | 1.7 | 2.5 | 1.7 | | | | | | | | | | | | | | 8.3 | 2.5 | 0.8 | | 5.0 | |
| S3 | 4/20 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| N1 | 4/20 | 15.0 | 1.7 | | | | | | | | | | | | | | | | 16.7 | 10.0 | 6.7 | | | |
| Y1 | 4/21 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| M1 | | | | | | | | | | | | | | | | | | | | | | | | |
| K1 | 4/21 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| W1 | 4/21 | 6.3 | 10.0 | 3.1 | 0.6 | | | | | | | | | | | | | | 20.0 | 0.6 | 3.8 | | 15.6 | |
| 5 | 4/18 | | 0.5 | 1.5 | | | | | | | | | | | | | | | 2.0 | | 0.5 | | 1.5 | |
| 6 | 4/18 | 1.5 | 3.6 | 1.0 | 0.5 | | | | | | | | | | | | | | 6.6 | 1.0 | 3.6 | | 2.0 | |
| 7 | 4/18 | 4.0 | 1.7 | | | | | | | | | | | | | | | | 5.7 | 4.0 | 1.7 | | | |
| 8 | 4/18 | 2.8 | 5.6 | 2.8 | | | | | | | | | | | | | | | 11.1 | 1.4 | 2.1 | | 7.6 | |
| 9 | 4/18 | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| 東湾平均 | | 2.9 | 2.2 | 1.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.4 | 1.8 | 1.7 | | 2.9 | 0.0 |
| 全湾平均 | | 3.7 | 5.3 | 1.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.4 | 3.2 | 1.6 | | 5.5 | 0.0 |

付表5. 平成26年度 第5回ヒト子類浮遊幼生調査結果

西湾 16点
東湾 10点

| St. | 月日 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | | |
|------|------|-----------------------------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-------------------------------|------|------|----------|----------|------------|-------------|
| | | 400 | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア | ブラキオ ラリア |
| T1 | 4/28 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| C2 | 4/28 | | 1.3 | | | | | | | | | | | | | | | | | | 1.3 | | | | 1.3 |
| Ym2 | 4/28 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| Us2 | 4/28 | | | 1.2 | 1.2 | | | | | | | | | | | | | | | | 2.4 | | | | 2.4 |
| O1 | 4/28 | | 16.5 | 10.6 | | | | | | | | | | | | | | | | | 27.1 | | 4.7 | | 22.4 |
| Ab | 4/28 | | 14.7 | 4.7 | 1.2 | | | | | | | | | | | | | | | | 20.6 | | 4.7 | | 15.9 |
| Hb | 4/28 | 0.6 | 13.5 | 3.5 | | | | | | | | | | | | | | | | | 17.6 | 0.6 | 1.8 | | 15.3 |
| Kg | 4/28 | 0.6 | 30.6 | 12.9 | 0.6 | | | | | | | | | | | | | | | | 44.7 | 0.6 | 9.4 | | 34.7 |
| Ts | 4/26 | | 1.1 | 0.6 | | | | | | | | | | | | | | | | | 1.7 | | | | 1.7 |
| P2 | 4/26 | | 2.2 | 1.7 | 0.6 | | | | | | | | | | | | | | | | 4.4 | | | | 4.4 |
| 1 | 4/28 | | 1.2 | 3.5 | | | | | | | | | | | | | | | | | 4.7 | | 0.6 | | 4.1 |
| 2 | 4/28 | | 3.4 | 6.0 | 2.6 | | | | | | | | | | | | | | | | 12.1 | | | | 12.1 |
| 3 | 4/28 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| 4 | 4/28 | | | | 1.0 | | | | | | | | | | | | | | | | 1.0 | | | | 1.0 |
| U1 | 4/27 | 0.5 | 1.0 | 0.5 | 0.5 | | | | | | | | | | | | | | | | 2.4 | 0.5 | | | 1.9 |
| H1 | 4/27 | | 1.0 | 0.5 | | | | | | | | | | | | | | | | | 1.5 | | | | 1.5 |
| 西湾平均 | | 0.1 | 5.5 | 2.9 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.8 | 0.1 | 1.3 | | 7.4 | |
| Ko1 | 4/27 | 0.8 | 4.2 | 5.0 | 0.8 | 0.8 | | | | | | | | | | | | | | | 11.7 | | 0.8 | | 10.8 |
| S3 | 4/27 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| N1 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| Y1 | 4/28 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| M1 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| K1 | 4/28 | 10.6 | 3.5 | | | | | | | | | | | | | | | | | | 14.1 | | 4.7 | | 9.4 |
| W1 | 4/27 | 6.9 | 11.3 | 4.4 | 1.3 | | | | | | | | | | | | | | | | 23.8 | 0.6 | 1.3 | | 21.9 |
| 5 | 4/28 | | 1.5 | 4.9 | 0.5 | | | | | | | | | | | | | | | | 6.9 | 0.5 | | | 6.4 |
| 6 | 4/28 | 1.0 | 11.2 | 8.2 | 1.0 | | | | | | | | | | | | | | | | 21.4 | 1.5 | 1.5 | | 18.4 |
| 7 | 4/28 | | 1.7 | | | | | | | | | | | | | | | | | | 1.7 | | | | 1.7 |
| 8 | 4/28 | 6.3 | 11.1 | 9.0 | 0.7 | | | | | | | | | | | | | | | | 27.1 | 1.4 | 2.8 | | 22.9 |
| 9 | 4/28 | 0.6 | 1.8 | 1.2 | | | | | | | | | | | | | | | | | 3.6 | 0.6 | | | 3.0 |
| 東湾平均 | | 2.6 | 4.6 | 3.3 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.0 | 0.5 | 1.1 | | 9.4 | |
| 全湾平均 | | 1.1 | 5.2 | 3.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 0.2 | 1.2 | | 8.2 | |

付表6. 平成26年度 第6回ヒト子類浮遊幼生調査結果

西湾 12点
東湾 11点

| St. | 月日 | 体 長 別 出 現 数 (個体/m ³) | | | | | | | | | | | | | | | | | 発 生 段 階 別 出 現 数 (個体/m ³) | | | | | | |
|------|-----|----------------------------------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|--------------------------------------|------|------|----------|----------|------------|-------------|
| | | 400 | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア | ブラキオ ラリア |
| T1 | 5/8 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| C2 | 5/7 | 0.4 | 0.4 | 0.4 | 2.2 | 0.4 | | | | | | | | | | | | | | | 3.6 | 0.4 | | 3.1 | |
| Ym2 | 5/7 | | 0.8 | | | | | | | | | | | | | | | | | | 0.8 | | | 0.8 | |
| Us2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| O1 | 5/6 | 0.6 | 6.5 | 8.2 | 2.4 | | | | | | | | | | | | | | | | 17.6 | 0.6 | 1.2 | 15.9 | |
| Ab | 5/6 | | 8.8 | 12.4 | 8.2 | 0.6 | | | | | | | | | | | | | | | 30.0 | 1.8 | | 28.2 | |
| Hb | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kg | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ts | | | | | | | | | | | | | | | | | | | | | | | | | |
| P2 | 5/5 | | 1.1 | 2.2 | 2.2 | | | | | | | | | | | | | | | | 5.6 | 1.1 | | 4.4 | |
| 1 | 5/2 | | 2.3 | 2.9 | | | | | | | | | | | | | | | | | 5.2 | | | 5.2 | |
| 2 | 5/2 | | 0.9 | 5.2 | | | | | | | | | | | | | | | | | 6.0 | | | 6.0 | |
| 3 | 5/2 | | 0.5 | 1.5 | 0.5 | | | | | | | | | | | | | | | | 2.5 | | | 2.5 | |
| 4 | 5/2 | | 1.0 | 1.0 | | | | | | | | | | | | | | | | | 2.0 | | | 2.0 | |
| U1 | 5/5 | | | 0.5 | 1.5 | | | | | | | | | | | | | | | | 2.0 | | | 2.0 | |
| HI | 5/2 | | 0.5 | 1.5 | 0.5 | | | | | | | | | | | | | | | | 2.5 | | | 2.5 | |
| 西湾平均 | | 0.1 | 1.9 | 3.1 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.5 | 0.0 | 0.4 | 6.1 | |
| Ko1 | 5/6 | | 0.8 | 3.3 | 1.7 | 0.8 | | | | | | | | | | | | | | | 6.7 | | | 6.7 | |
| S3 | 5/6 | 1.3 | 7.5 | 3.8 | 6.3 | | | | | | | | | | | | | | | | 18.8 | 1.3 | 3.8 | 13.8 | |
| N1 | 5/7 | | 10.0 | 18.3 | | | | | | | | | | | | | | | | | 28.3 | | | 28.3 | |
| Y1 | 5/7 | | | | | | | | | | | | | | | | | | | | 0.0 | | | 0.0 | |
| M1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1 | 5/7 | | | | | | | | | | | | | | | | | | | | | | | | |
| W1 | 5/6 | 1.9 | 3.1 | 2.5 | 2.5 | | | | | | | | | | | | | | | | 10.0 | 0.6 | 0.6 | 8.8 | |
| 5 | 5/2 | | 1.0 | 5.4 | 1.0 | | | | | | | | | | | | | | | | 7.4 | | | 7.4 | |
| 6 | 5/2 | | 10.7 | 14.8 | 3.1 | | | | | | | | | | | | | | | | 28.6 | | | 28.6 | |
| 7 | 5/2 | | 0.6 | 2.3 | | | | | | | | | | | | | | | | | 2.8 | | | 2.8 | |
| 8 | 5/2 | | 1.4 | 2.8 | | | | | | | | | | | | | | | | | 4.2 | | | 4.2 | |
| 9 | 5/2 | | 1.2 | 1.2 | 0.6 | 0.6 | | | | | | | | | | | | | | | 3.6 | | | 3.6 | |
| 東湾平均 | | 0.3 | 3.3 | 4.9 | 1.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 0.2 | 0.4 | 9.5 | |
| 全湾平均 | | 0.2 | 2.6 | 4.0 | 1.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.2 | 0.1 | 0.4 | 7.7 | |

付表7. 平成26年度 第7回ヒト子類浮遊幼生調査結果

西湾 16点
東湾 12点

| St. | 月日 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | | |
|------|------|-----------------------------|------|------|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|-------------------------------|-----|----------|----------|------------|-------------|-----|
| | | 400 未満 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア | ブラキオ ラリア | |
| T1 | 5/12 | | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| C2 | 5/12 | 1.3 | 0.4 | | 0.4 | 0.9 | | | | | | | | | | | | | | 3.1 | | 0.9 | | 2.2 | |
| Ym2 | 5/12 | | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| Us2 | 5/12 | | 1.2 | | 2.4 | 2.4 | 1.2 | | | | | | | | | | | | | 7.1 | | | 7.1 | | 7.1 |
| O1 | 5/12 | 1.8 | 2.9 | 1.2 | 0.6 | 0.6 | | | | | | | | | | | | | 7.1 | 0.6 | 1.2 | | 5.3 | | |
| Ab | 5/12 | 5.9 | 21.2 | 14.7 | 4.7 | 2.4 | 0.6 | | | | | | | | | | | | 49.4 | 5.9 | 2.9 | | 40.6 | | |
| Hb | 5/12 | 0.6 | 5.9 | 3.5 | 1.2 | | | | | | | | | | | | | | 11.2 | 0.6 | 0.6 | | 10.0 | | |
| Kg | 5/12 | 2.9 | 12.9 | 9.4 | 3.5 | 1.2 | 1.2 | | | | | | | | | | | | 31.2 | 2.9 | 5.9 | | 22.4 | | |
| Ts | 5/9 | | | | | | | | | | | | | | | | | | 0.0 | | | | | | |
| P2 | 5/11 | | 0.6 | 0.6 | 1.1 | 1.1 | | | | | | | | | | | | | 3.3 | | | | 3.3 | | |
| 1 | 5/12 | | 1.2 | 0.6 | 1.2 | | 0.6 | | | | | | | | | | | | 3.5 | | | | 3.5 | | |
| 2 | 5/12 | | 3.4 | 5.2 | 6.0 | 5.2 | 1.7 | 0.9 | | | | | | | | | | | 22.4 | | | | 22.4 | | |
| 3 | 5/12 | | 0.5 | 2.0 | 1.5 | 1.0 | | | | | | | | | | | | | 4.9 | | | | 4.9 | | |
| 4 | 5/12 | | | | | | 1.5 | | | | | | | | | | | | 1.5 | | | | 1.5 | | |
| U1 | 5/11 | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 | | |
| H1 | 5/11 | 1.5 | | | | 0.5 | | | | | | | | | | | | | 2.0 | | | | 2.0 | | |
| 西湾平均 | | 0.9 | 3.1 | 2.3 | 1.4 | 0.9 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.2 | 0.6 | 0.7 | | 7.8 | 0.0 | |
| Ko1 | 5/11 | | 2.5 | 3.0 | 2.0 | 0.5 | | | | | | | | | | | | | 8.0 | | | | 8.0 | | |
| S3 | 5/11 | 1.1 | | | | | | | | | | | | | | | | | 1.1 | | | | 1.1 | | |
| N1 | 5/11 | 3.3 | 6.7 | 5.0 | 11.7 | | | | | | | | | | | | | | 26.7 | 1.7 | 5.0 | | 20.0 | | |
| Y1 | 5/12 | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 | | |
| M1 | 5/12 | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 | | |
| K1 | 5/12 | | 1.2 | | | 1.2 | | | | | | | | | | | | | 2.5 | | | | 2.5 | | |
| W1 | 5/12 | 0.6 | 1.3 | 7.5 | 11.3 | 6.3 | | | | | | | | | | | | 26.9 | 0.6 | | | 26.3 | | | |
| 5 | 5/12 | | 0.5 | 3.9 | 3.4 | 3.4 | 0.5 | | | | | | | | | | | | 11.8 | | | | 11.8 | | |
| 6 | 5/12 | | 0.5 | 8.2 | 4.1 | 0.5 | 0.5 | | | | | | | | | | | | 13.8 | | | | 13.8 | | |
| 7 | 5/12 | | 4.0 | 8.5 | 15.3 | 6.8 | 3.4 | 0.6 | 0.6 | | | | | | | | | | 39.2 | | | | 39.2 | | |
| 8 | 5/12 | 0.7 | 6.9 | 6.9 | 25.0 | 9.7 | 5.6 | | | | | | | | | | | | 54.9 | | | | 54.9 | | |
| 9 | 5/12 | | 1.2 | 7.7 | 14.3 | 4.8 | 3.0 | | | | | | | | | | | | 31.0 | | | | 31.0 | | |
| 東湾平均 | | 0.5 | 2.1 | 4.2 | 7.3 | 2.8 | 1.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.0 | 0.2 | 0.4 | | 17.4 | 0.0 | |
| 全湾平均 | | 0.7 | 2.7 | 3.1 | 3.9 | 1.7 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.9 | 0.4 | 0.6 | | 11.9 | 0.0 | |

付表8. 平成26年度 第8回ヒト子類浮遊幼生調査結果

西湾 16点
東湾 11点

| St. | 月日 | 体 長 別 出 現 数 (個体/m ³) | | | | | | | | | | | | | | | | | 発 生 段 階 別 出 現 数 (個体/m ³) | | | | | | |
|------|------|----------------------------------|-----|-----|-----|------|------|-----|-----|------|------|------|------|------|------|------|------|------|--------------------------------------|------|-----|----------|----------|------------|-------------|
| | | 400 | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビビン ナリア | ブラキオ ラリア |
| T1 | 5/19 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| C2 | 5/19 | | | | 0.4 | | | | | | | | | | | | | | | | 0.4 | | | | |
| Ym2 | 5/19 | | | | 1.7 | | | | | | | | | | | | | | | | 1.7 | | | | |
| Us2 | 5/19 | | | | | 0.6 | | | | | | | | | | | | | | | 1.2 | | | | |
| O1 | 5/19 | 2.9 | 2.9 | 2.9 | 2.9 | 0.6 | | | | | | | | | | | | | | 12.4 | 2.9 | 1.8 | | | |
| Ab | 5/19 | | 2.4 | | | 1.2 | | | | | | | | | | | | | | 3.5 | | | | | |
| Hb | 5/19 | 1.2 | 4.1 | 0.6 | 2.4 | 1.8 | | | | | | | | | | | | | | 10.0 | 1.2 | 1.8 | | | |
| Kg | 5/19 | 0.6 | 3.5 | 2.9 | 1.2 | 0.6 | | | | | | | | | | | | | | 9.4 | 0.6 | 1.2 | | | |
| Ts | 5/18 | 3.9 | 3.3 | 2.2 | | 0.6 | | | | | | | | | | | | | | 10.0 | 2.8 | 1.1 | | | |
| P2 | 5/18 | 7.8 | 1.1 | | | | | | | | | | | | | | | | | 8.9 | | 0.6 | | | |
| 1 | 5/19 | | 3.5 | 2.9 | 2.9 | 1.7 | 1.7 | 1.7 | 1.2 | 0.6 | | | | | | | | | | 16.3 | 1.2 | 0.6 | | | |
| 2 | 5/19 | | 1.7 | 5.2 | 4.3 | 2.6 | 1.7 | 4.3 | 1.7 | | | | | | | | | | | 21.6 | | | | | |
| 3 | 5/19 | | 0.5 | 1.5 | 2.9 | 0.5 | 1.5 | 1.0 | | | | | | | | | | | | 7.8 | | | | | |
| 4 | 5/19 | | 1.0 | 1.5 | 2.0 | 3.4 | 1.0 | 2.5 | 1.0 | | | | | | | | | | | 12.3 | 0.5 | | | | |
| U1 | 5/18 | 1.6 | | | | | | | | | | | | | | | | | | 1.6 | | | | | |
| H1 | 5/18 | 0.5 | | | | | 0.5 | | | | | | | | | | | | | 1.0 | | | | | |
| 西湾平均 | | 1.2 | 1.5 | 1.4 | 1.2 | 0.8 | 0.4 | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.4 | 0.6 | 0.5 | 6.3 | 0.0 | |
| Ko1 | 5/18 | 12.5 | | | | | | | | | | | | | | | | | | 12.5 | | 2.5 | | 10.0 | |
| S3 | 5/18 | | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| N1 | 5/19 | | | | 1.7 | | | | | | | | | | | | | | | 1.7 | | | | 1.7 | |
| Y1 | 5/19 | | | | | | | | | | | | | | | | | | | 0.0 | | | | | |
| M1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1 | 5/20 | | | | 1.2 | 1.2 | 2.4 | | 1.2 | | | | | | | | | | | 5.9 | | | | 5.9 | |
| W1 | 5/18 | | | | | 0.6 | | 0.6 | | | | | | | | | | | | 1.3 | | | | 1.3 | |
| 5 | 5/19 | | | | 1.5 | 1.5 | 5.9 | 3.9 | 2.0 | 1.0 | | | | | | | | | | 15.7 | | | | 15.7 | |
| 6 | 5/19 | | 0.5 | 3.1 | 5.1 | 7.1 | 7.7 | 3.6 | 4.6 | | | | | | | | | | 31.6 | | | | 31.6 | | |
| 7 | 5/19 | | 2.8 | 4.0 | 6.8 | 4.5 | 3.4 | 3.4 | 4.0 | | | | | | | | | | 29.0 | | | | 29.0 | | |
| 8 | 5/19 | | 6.3 | 7.6 | 5.6 | 13.2 | 20.1 | 4.2 | 6.3 | | | | | | | | | | 63.2 | | | | 63.2 | | |
| 9 | 5/19 | | 1.8 | 4.2 | 6.5 | 11.3 | 12.5 | 4.2 | 2.4 | | | | | | | | | | 42.9 | | | | 42.9 | | |
| 東湾平均 | | 1.1 | 1.0 | 2.0 | 2.6 | 4.0 | 4.4 | 1.6 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.5 | 0.0 | 0.2 | 18.3 | 0.0 | | |
| 全湾平均 | | 1.1 | 1.3 | 1.6 | 1.8 | 2.1 | 2.0 | 1.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.9 | 0.3 | 0.4 | 11.2 | 0.0 | | |

付表9. 平成26年度 第9回ヒト子類浮遊幼生調査結果

西湾 11点
東湾 11点

| St. | 月日 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | | |
|------|------|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|-------------------------------|-----|----------|----------|------------|-------------|--|
| | | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア | ブラキオ ラリア | |
| T1 | 5/27 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| C2 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| Ym2 | 5/27 | | | | | | | | | | | | | | | | | | | | 0.0 | | | | |
| Us2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| O1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ab | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hb | 5/27 | | | | 0.6 | | | | | | | | | | | | | | | | 0.6 | | | | |
| Kg | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ts | 5/23 | | | | | | | | | | | | | | | | | | | | | | | | |
| P2 | 5/27 | 1.6 | 2.1 | 2.6 | | 1.2 | 1.2 | 0.6 | | 0.5 | | | | | | | | | | 6.8 | 1.0 | 5.7 | | | |
| 1 | 5/27 | | | | | | | | | | | | | | | | | | | 2.9 | | 2.9 | | | |
| 2 | 5/27 | | | 0.9 | | | | | | | | | | | | | | | | 0.9 | | 0.9 | | | |
| 3 | 5/27 | | | | 1.0 | 0.5 | 1.5 | 1.0 | 1.0 | | | | | | | | | | | 5.4 | | 5.4 | | | |
| 4 | 5/27 | | | 1.5 | 1.0 | 0.5 | 2.0 | 0.5 | 1.0 | 0.5 | 1.0 | | | | | | | | | 7.8 | | 7.8 | | | |
| U1 | 5/23 | 2.5 | 1.5 | 1.0 | | 0.5 | | | | | | | | | | | | | 5.5 | | 5.5 | | | | |
| HI | 5/24 | | | | | | | | | | | | | | | | | | | 0.0 | | 0.0 | | | |
| 西湾平均 | | 0.2 | 0.3 | 0.5 | 0.5 | 0.2 | 0.4 | 0.1 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 0.0 | 0.1 | 2.6 | 0.0 | |
| Ko1 | 5/24 | | 6.7 | 3.3 | | 2.5 | 0.8 | | | 2.5 | 1.7 | | | | | | | | 17.5 | | | | 17.5 | | |
| S3 | 5/25 | | | 1.3 | | | | | | | | | | | | | | | | 1.3 | | | | 1.3 | |
| N1 | 5/26 | | 1.7 | 5.0 | 3.3 | | 1.7 | 1.7 | | | | | | | | | | | 13.3 | | | | 13.3 | | |
| Y1 | 5/26 | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 | | |
| M1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K1 | 5/27 | | | 1.2 | 1.2 | | | | | 1.2 | | | | | | | | | | 3.5 | | | | 3.5 | |
| W1 | 5/28 | | | 0.6 | | 1.3 | 1.3 | 0.6 | 0.6 | 0.6 | 1.3 | 0.6 | 1.3 | | | | | | 8.1 | | | | 8.1 | | |
| 5 | 5/27 | | | 1.5 | 3.9 | 2.5 | 1.5 | 1.5 | 2.0 | 1.0 | 1.0 | | | | | | | | 14.7 | | | | 14.7 | | |
| 6 | 5/27 | | | 1.0 | 1.5 | 3.1 | 2.6 | 1.0 | 2.0 | 1.0 | 1.5 | 1.0 | | | | | | | 14.8 | | | | 14.8 | | |
| 7 | 5/27 | | | 1.7 | 3.4 | 1.7 | 2.8 | 0.6 | 3.4 | 1.7 | 0.6 | | | | | | | | 15.9 | | | | 15.9 | | |
| 8 | 5/27 | | | 2.1 | 3.5 | 0.7 | 3.5 | 2.8 | 3.5 | 0.7 | 0.7 | 0.7 | 0.7 | | | | | | 18.1 | | | | 18.1 | | |
| 9 | 5/27 | | | 1.8 | 3.6 | 2.4 | 2.4 | 1.8 | 0.6 | 0.6 | 1.2 | | | | | | | | 14.9 | | | | 14.9 | | |
| 東湾平均 | | 0.0 | 0.9 | 1.9 | 1.7 | 1.3 | 1.3 | 0.7 | 1.3 | 0.8 | 0.6 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.1 | 0.0 | 0.0 | 11.1 | 0.0 | | |
| 全湾平均 | | 0.1 | 0.6 | 1.2 | 1.1 | 0.8 | 0.8 | 0.4 | 0.7 | 0.5 | 0.4 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.9 | 0.0 | 0.0 | 6.9 | 0.0 | | |

付表12. 平成26年度 第1回ヒトネ類浮遊幼生予備調査結果

| St. | 月日 | 未満 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | | | | | | |
|------|------|-----|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|-------------------------------|-----|------|-----|-----|-----|-----|-----|-----|------|-----|
| | | | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう | はい | 繊維毛 | 幼生 | ナリア | ビピン | ナリア | ブラキオ | ラリア |
| 1 | 6/17 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | | | | | |
| 2 | 6/17 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | | | | | |
| 3 | 6/17 | | | | 0.5 | | | | | | | | | | | | | | | | | 0.5 | | | | | | | | 0.5 |
| 4 | 6/17 | | | | | 0.5 | | | | | | | | | | | | | | | | 0.5 | | | | | | | | 0.5 |
| 西湾平均 | | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 | |
| 5 | 6/17 | | | | 0.5 | | | | | | | | | | | | | | | | | 0.5 | | | | | | | | 0.5 |
| 6 | 6/17 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | | | | | 0.0 |
| 7 | 6/17 | | | | | 1.1 | 0.6 | | | | | | | | | 0.6 | | | | | | 2.3 | | | | | | | | 2.3 |
| 8 | 6/17 | 1.4 | 4.2 | 2.1 | 2.1 | 1.4 | | | | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | | | | | | | | 16.0 | 4.2 | 1.4 | 1.4 | | | | | 7.6 |
| 9 | 6/17 | | | | | | | | | | | | | | | | | | | | | 0.0 | | | | | | | | 2.8 |
| 東湾平均 | | 0.3 | 0.8 | 0.4 | 0.7 | 0.1 | 0.3 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 3.7 | 0.8 | 0.3 | 0.3 | 0.3 | 0.3 | 2.1 | 2.1 | 0.6 | |
| 全湾平均 | | 0.2 | 0.5 | 0.3 | 0.5 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.2 | 2.2 | 0.5 | 0.2 | 0.2 | 0.2 | 1.3 | 1.3 | 0.3 | 0.3 | |

付表13. 平成26年度 第2回ヒトネ類浮遊幼生予備調査結果

| St. | 月日 | 未満 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | | | | | | |
|------|------|-----|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| | | | 400 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう | はい | 繊維毛 | 幼生 | ナリア | ビピン | ナリア | ブラキオ | ラリア |
| 1 | 6/24 | | | | | | | | | | | | | | | | | | | | | 0.6 | | | | | | | | 0.6 |
| 2 | 6/24 | | | | 1.7 | 0.9 | 0.9 | | | | | | | | | | | | | | | 3.4 | | | | | | | | 3.4 |
| 3 | 6/24 | | | | 0.5 | 1.0 | | | | | | | | | | | | | | | | 1.5 | | | | | | | | 1.5 |
| 4 | 6/24 | | | | 0.5 | 0.5 | | | | | | | | | | | | | | | | 1.0 | | | | | | | | 1.0 |
| 西湾平均 | | 0.2 | 0.7 | 0.5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 1.6 | 0.0 | 0.0 | |
| 5 | 6/24 | | | | 0.5 | 0.5 | | | | | | | | | | | | | | | | 1.0 | | | | | | | | 1.0 |
| 6 | 6/24 | | | | 0.5 | 1.0 | | | | | | | | | | | | | | | | 1.5 | | | | | | | | 1.5 |
| 7 | 6/24 | | | | 0.6 | 0.6 | 1.1 | | | | | | | | | | | | | | | 2.3 | | | | | | | | 2.3 |
| 8 | 6/24 | 0.7 | 3.5 | 2.1 | 0.7 | | | | | | | | | | | | | | | | | 6.9 | | | | | | | | 6.9 |
| 9 | 6/24 | | | | 1.2 | 1.8 | | | | | | | 0.6 | | | | | | | | | 3.6 | | | | | | | | 3.6 |
| 東湾平均 | | 0.1 | 0.9 | 1.1 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 3.1 | 0.0 | 0.0 | |
| 全湾平均 | | 0.2 | 0.8 | 0.8 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 2.4 | 0.0 | 0.0 | |

付表14. 平成26年度 第3回ヒト子類浮遊幼生予備調査結果

| St. | 月日 | 体長別出現数 (個体/m ³) | | | | | | | | | | | | | | | | | 発生段階別出現数 (個体/m ³) | | | | | |
|------|------|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|-------------------------------|------|----------|----------|------------|-------------|
| | | 400 未満 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 合計 | のう はい | 纖毛 幼生 | ビピン ナリア | ブラキオ ラリア |
| 1 | 6/30 | | | 0.6 | | | | | 0.6 | | | | | | | | | | | 1.2 | | | | 1.2 |
| 2 | 6/30 | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| 3 | 6/30 | | | | | | | | | | | | | | | | | | | 0.0 | | | | 0.0 |
| 4 | 6/30 | | | | 1.0 | | | | | 0.5 | | | | | | | | | | 1.5 | | | | 1.5 |
| 西湾平均 | | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.7 |
| 5 | 6/30 | | | 0.5 | 1.0 | 1.0 | 0.5 | 0.5 | | | | | | | | | | | | 3.4 | | | | 3.4 |
| 6 | 6/30 | 1.5 | 2.6 | 1.0 | 2.0 | 0.5 | | | | | | | | | | | | | | 7.7 | | | | 7.7 |
| 7 | 6/30 | | | 0.6 | 0.6 | 0.6 | | | | | | | | | | | | | | 1.7 | | | | 1.7 |
| 8 | 6/30 | 0.7 | 0.7 | 2.8 | 4.2 | 1.4 | 0.7 | | | | | | | | | | | | | 10.4 | | | | 10.4 |
| 9 | 6/30 | 0.6 | 0.6 | 1.8 | 2.4 | 1.8 | 0.6 | | | | | | | | | | | | | 7.7 | | | | 7.7 |
| 東湾平均 | | 0.6 | 0.8 | 1.3 | 2.0 | 1.0 | 0.2 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.2 | 0.0 | 0.0 | 0.0 | 6.2 |
| 全湾平均 | | 0.3 | 0.4 | 0.8 | 1.2 | 0.6 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 0.0 | 0.0 | 0.0 | 3.7 |

付表15. 浮遊幼生調査におけるブラキオラリア期幼生の平均出現密度

| 年度 | 平均出現密度 (個体/m ³) | | |
|-----------|-----------------------------|------|------|
| | 西湾 | 東湾 | 全湾 |
| S58 | 0.29 | 1.26 | 2.07 |
| S59 | 0.03 | 0.10 | 0.08 |
| S60 | 0.01 | 0.01 | 0.01 |
| S61 | 0.00 | 0.11 | 0.06 |
| S62 | 0.58 | 0.45 | 0.38 |
| S63 | 0.05 | 0.40 | 0.25 |
| H1 | 1.06 | 1.88 | 1.51 |
| H2 | 1.04 | 1.25 | 1.15 |
| H3 | 0.19 | 0.91 | 0.51 |
| H4 | 0.43 | 0.56 | 0.48 |
| H5 | 0.16 | 0.59 | 0.33 |
| H6 | 0.61 | 1.09 | 0.75 |
| H7 | 0.75 | 4.15 | 2.56 |
| H8 | 0.03 | 0.20 | 0.11 |
| H9 | 0.07 | 0.05 | 0.07 |
| H10 | 0.17 | 2.64 | 1.32 |
| H11 | 0.02 | 0.03 | 0.02 |
| H12 | 0.23 | 1.07 | 0.66 |
| H13 | 0.07 | 0.76 | 0.47 |
| H14 | 0.02 | 0.09 | 0.04 |
| H15 | 0.12 | 0.43 | 0.25 |
| H16 | 0.27 | 0.98 | 0.63 |
| H17 | 0.03 | 0.13 | 0.08 |
| H18 | 0.10 | 0.06 | 0.08 |
| H19 | 0.00 | 0.03 | 0.01 |
| H20 | 0.02 | 0.06 | 0.04 |
| H21 | 0.01 | 0.00 | 0.00 |
| H22 | 0.02 | 0.01 | 0.01 |
| H23 | 0.12 | 0.04 | 0.08 |
| H24 | 0.02 | 0.00 | 0.01 |
| H25 | 0.01 | 0.01 | 0.01 |
| H26 | 0.00 | 0.05 | 0.03 |
| S58-H25平均 | 0.21 | 0.62 | 0.45 |

付表16. 第2回ホタテガイ等付着稚貝調査における採苗器へのヒトデ付着数

| 年度 | 平均付着数 (個/袋) | | |
|-----------|-------------|---------|--------|
| | 西湾平均 | 東湾平均 | 全湾平均 |
| S58 | 5.80 | 14.90 | 11.20 |
| S59 | 0.00 | 0.10 | 0.00 |
| S60 | 0.00 | 0.00 | 0.00 |
| S61 | 0.00 | 0.00 | 0.00 |
| S62 | 0.80 | 4.20 | 2.50 |
| S63 | 0.10 | 0.90 | 0.50 |
| H1 | 0.20 | 0.70 | 0.40 |
| H2 | 68.20 | 176.60 | 119.40 |
| H3 | 5.00 | 52.00 | 30.00 |
| H4 | 0.80 | 11.00 | 5.00 |
| H5 | 1.00 | 15.00 | 1.30 |
| H6 | 56.00 | 164.00 | 110.00 |
| H7 | 129.00 | 1133.00 | 631.00 |
| H8 | 0.00 | 0.00 | 0.00 |
| H9 | 0.00 | 0.00 | 0.00 |
| H10 | 1.00 | 121.00 | 49.00 |
| H11 | 0.00 | 0.00 | 0.00 |
| H12 | 0.00 | 1.00 | 0.00 |
| H13 | 0.00 | 12.00 | 5.00 |
| H14 | 0.00 | 0.00 | 0.00 |
| H15 | 9.00 | 51.00 | 26.00 |
| H16 | 1.00 | 11.00 | 5.00 |
| H17 | 0.00 | 2.00 | 1.00 |
| H18 | 0.00 | 0.00 | 0.00 |
| H19 | 0.00 | 0.00 | 0.00 |
| H20 | 0.10 | 0.40 | 0.20 |
| H21 | 0.00 | 0.00 | 0.00 |
| H22 | 0.00 | 0.00 | 0.00 |
| H23 | 0.06 | 0.00 | 0.00 |
| H24 | 0.00 | 0.00 | 0.00 |
| H25 | 0.00 | 0.00 | 0.00 |
| H26 | 0.03 | 0.44 | 0.15 |
| S58-H25平均 | 8.97 | 57.12 | 32.18 |