Community survey of cockles (*Austrovenus stutchburyi*) in Pauatahanui Inlet, Wellington, December 2013

Prepared for the Guardians of Pauatahanui Inlet

May 2014

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NIWA Client Report No:	WLG2014-13
Report date:	February 2014
NIWA Project:	VSJ14301/GOPI COCKLE SURVEY

Pauatahanui Inlet from the Paremata Bridge. Downloaded from http://www.livingwatersdoco.co.nz/images/support_hills.jpg, courtesy of the Pauatahanui Inlet Community Trust.

Contents

Tables

Figures

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Executive summary

The Guardians of Pauatahanui Inlet and community volunteers have carried out eight triennial surveys of cockles in the intertidal zone of Pauatahanui Inlet in Porirua harbour since 1992. These surveys provide an important time-series of data to monitor trends in the abundance and size structure of cockles. They also allow the long-term health of environmental factors in the Inlet that may affect the sustainability of cockle populations to be monitored.

The surveys have used the same design and methods, allowing site, transect and tide level comparisons to be made between surveys. This report summarises the results of the eighth survey which was undertaken in December 2013 as an updated supplement to the 2010 survey report that provided an in-depth context and discussion of previous surveys.

The 2013 survey found an increase in the size of the cockle population from 277 million in 2010 to 336 million in 2013. There has been an 87% increase in cockle population size since the low point in this series of surveys in 1995 (180 million cockles). Cockle numbers are increasing at most of the ten sites sampled: most sites had increasing numbers, a few were static, and medium-term declines were recorded at one site (Seaview Rd).

The numbers of cockles recorded at each site were generally lower at southern sites in the Inlet (Seaview, Brown's Bay, and Duck Creek), and at Camborne in 2013. Changes in cockle numbers between sites and surveys varied. The highest numbers of cockles were generally found at upper and lower mid-tide levels, and the largest sized cockles were found at the low water levels.

The cockles sampled in 2013 generally ranged from 3 mm to 40 mm in length. However, some larger individuals up to 58 mm in length were sampled. The percentages of juveniles (10 mm in length and smaller) in the cockle population had increased markedly from around 1.0% in 1992, to 16.2% in 2013. This percentage has varied between 12.4% and 16.2% since 2004.

The precision of survey estimates has been relatively good since 1998, and the long-term, upward trend in the estimated size of the cockle population is likely to reflect real trends in Pauatahanui Inlet. This positive trend in the cockle population suggests that environmental conditions are likely to be favourable for cockles.

1 Introduction

Estuaries provide a high level of ecosystem services and are highly vulnerable to anthropogenic (man-made) effects. Porirua Harbour, encompassing Pauatahanui Inlet and the Onepoto Arm of Porirua Harbour, comprises the largest estuary in the Wellington region. More information on the importance of estuaries and Pauatahanui Inlet is given in the 2010 cockle survey report (Michael 2011).

Pauatahanui Inlet's ecological significance was recognised early on when a community group founded the Guardians of Pauatahanui Inlet (GOPI) in 1991. Since then, a stakeholder group has been formed to facilitate the conservation and restoration of the harbour. Stakeholders include: the Porirua City Council, the Greater Wellington Regional Council, the Wellington City Council, Ngati Toa, and community groups such as GOPI and Forest and Bird. Pauatahanui Inlet is ranked second for conservation importance in the Wellington region after the Manawatu River (Todd et al. In prep.).

Concerns about ecosystem health, environmental threats, and sustainable development have led to increased efforts to monitor and assess the status of estuarine ecosystem health. Determining estuarine health is difficult as it requires knowledge of the complex ecosystem interactions, and good time-series data. Increasingly, ecological indicators or indicator species are used as simple measures of changes in ecological processes or components of ecosystems. The GOPI surveys of intertidal cockles undertaken by community volunteers provide an important time-series of information for monitoring the health of Pauatahanui Inlet. Significant, long-term decrease in the abundance and size structure of cockles, a keystone species in this intertidal habitat, is likely to represent changes to the ecological structure and probable loss of ecosystem function.

The biology of cockles (*Austrovenus stutchburyi*) was summarised in the 2010 cockle survey report (Michael 2011), and further information is available from the Ministry for Primary Industries website http://www.fish.govt.nz/en-nz/Search/default.htm?l=all&q=cockles and fisheries plenary http://www.mpi.govt.nz/Portals/0/Documents/fish/Fisheries%20Assessment%20Plenary%20-%20May%202013%20-%20Volume%201.pdf. Further, an overview of some of the early surveys of Pauatahanui Inlet (1971 and 1976–1980) is also given in the 2010 cockle survey report (Michael 2011).

1.1 The Guardians of Pauatahanui Inlet cockle surveys

The Guardians of Pauatahanui Inlet and community volunteers have completed eight surveys of the cockle population in the Inlet. NIWA has assisted by analysing the survey data and updating reports containing the summaries of results. All survey reports are available, as downloadable PDFs, on the GOPI website http://www.gopi.org.nz/cockle-survey-2.

The first GOPI intertidal cockle survey was undertaken in 1992 (Figure 1–1), sampling most of the sites sampled by Richardson et al. (1979) in their 1976 survey (Figure 1–2), this time with the assistance of community volunteers, and overseen by NIWA (Grange 1993). That survey found a decrease in the numbers of cockles in the Inlet since 1976, and indicated that there were fewer adults (larger than 10 mm shell length) in the population. The most pronounced decreases were around the south-eastern shores of the Inlet at Brown's Bay adjacent to the early residential development of Whitby (Estcourt & Grange 1976). Differences in population size and cockle density may also have been due to other factors such as heightened natural mortality and differences in the two survey designs.

A second GOPI survey, undertaken in November 1995, sampled the same sites using the same methodology as the 1992 survey, and aimed to further document any changes in the population. Those results indicated that the population decline had continued (Grange et al. 1996). Subsequent surveys, in November 1998 (Grange & Crocker 1999), November 2001 (Grange & Tovey 2002), November 2004 (Horn et al. 2005), November 2007 (Michael 2008) used the same sites and methods as the 1992 and 1995 surveys.

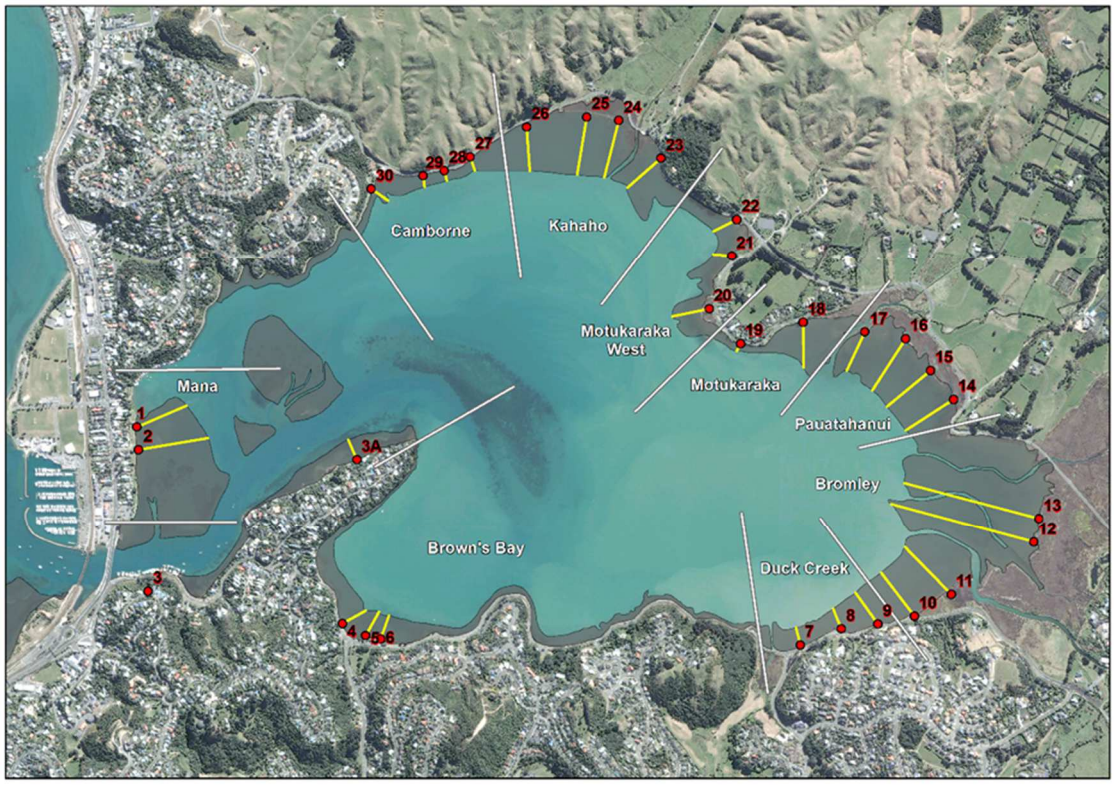

Figure 1-1: Location of the 31 transects in Pauatahanui Inlet sampled for intertidal cockle densities and population size structure by the Guardians of Pauatahanui Inlet (GOPI), 1992–2013.

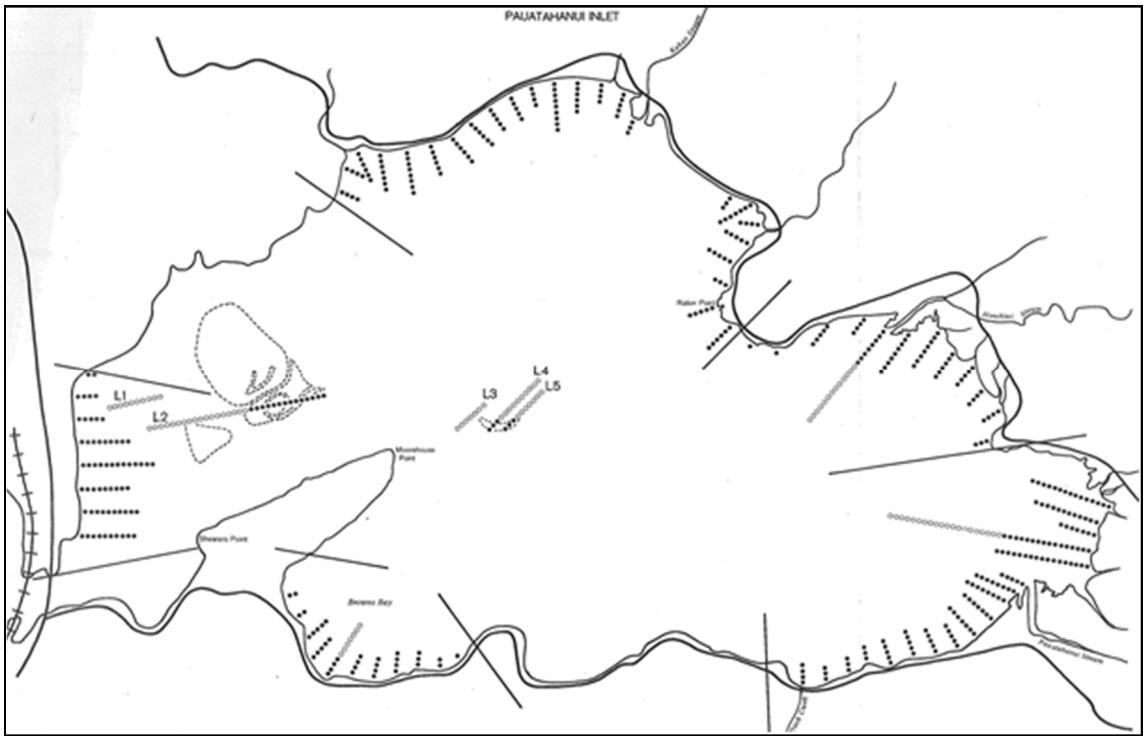

Figure 1-2: 1976 survey stratification of Pauatahanui Environmental Programme (Healy 1980). Pauatahanui Inlet was divided into seven sectors, and intertidal and subtidal zones were sampled in five sectors. Straight lines delineate sectors, filled circles show the location of intertidal transects, and open circle the location of subtidal transects. Figure reproduced from Richardson et al. (1979).

The total population of cockles in Pauatahanui Inlet was estimated to be between 438 and 608 million individuals in 1976, but declined to between 187 and 257 million in 1992, and then to between 146 and 214 million in 1995 (Grange et al. 1996). More recent estimates in 1998 (215–299 million, Grange & Crocker 1999), 2001 (182–238 million, Grange & Tovey 2002), 2004 (194–246 million, Horn et al. 2005), and in 2007 (208–257, Michael 2008) were similar to previous surveys and suggested that the population had stabilised. The last estimate of the cockle population was in 2010 (242–311 million cockles, Michael 2011) was slightly higher than for previous surveys.

The 1998 and 2001 surveys recorded a greater overall abundance of juveniles (10 mm in length and smaller) compared with the 1992 and 1995 surveys and in 2004 twice the abundance of 1998 and 2001 surveys was recorded. The 2007 survey found similar numbers of juvenile cockles to 2004, but an increase in juvenile cockles was found in 2010. If recruitment and mortality remained near long-term mean (average) levels, there was negligible net migration of juveniles to subtidal areas, and growth rates were typically fast, the higher recruitment of juveniles observed in 2010 could support an increase in the adult population by 2013.

This report updates the 2010 cockle survey report with the results of the eighth GOPI cockle survey, completed in December 2013, using the same survey design, sites, and methods as previous surveys. For more information on estuaries, cockles, environmental monitoring, and survey methods see the 2010 report (Michael 2011).

2 Methods

Intertidal surveys of cockles in Pauatahanui Inlet were undertaken by community volunteers in 1992, 1995, 1998, 2001, 2004, 2007, 2010 and for this survey in 2013, sampling the same transects (Figure 1–1) and using similar methods. As surveys are carried out once every three years, team leaders were briefed on the survey and sampling methods immediately prior to the survey, especially on the organisational aspects and potential sampling issues. Each transect was sampled by 4-5 people, one of whom was an experienced team leader. Team leaders offered training of volunteers, and monitored sampling and the recording of data. Volunteers were each provided with sheets that explained the sampling methods and showed the location of sites (Appendices A and B for instruction and sampling sheets), the team leader's check list (Appendix C), and tally sheets to record cockle lengths (Appendix D).

The survey comprised 31 fixed transects (see Figure 1–1). Transects were located using numbered stakes deployed before the survey and transects orientated towards land marks on the opposite shore of the Inlet (see Appendix B for details). The details used to locate each of these transect markers are given in Appendix E. Transects were grouped by site (Table 2–1). Each transect was sampled at four tidal heights (high, upper-mid, lower-mid, and low tides) determined by the number of adult paces from a location marker (see Appendix E) and marked with a stake to provide a reference for sampling. Samples were taken from 3 haphazardly placed quadrats (0.1 m^2), on and about 5 m either side of transects (recorded as A, B, and C), at each tide height.

Table 2-1: The grouping of transects sampled within each site in Pauatahanui Inlet.

Site	Transects	Site	Transects
Mana	1–3	Pauatahanui	14–17
Seaview Road	3a	Motukaraka	18–19
Brown's Bay	4–6	Motukaraka West	20–22
Duck Creek	7–9	Kakaho	23–26
Bromley	10–13	Camborne	27–30

These replicate quadrats were sampled to a depth of about 7 cm and the entire sample was sieved with kitchen colanders using seawater to flush through the sediment. Sieve mesh sizes may have varied with the different sieves used by volunteers, but most were 3–5 mm (John Wells and Neil Bellingham, pers. comm.). Cockles down to 2 mm in length have been retained in all surveys. All live cockles were sorted into containers, measured for length (along the anterior posterior axis) to the nearest millimetre using rulers, and returned to the intertidal seabed. Individual lengths from each sample were tallied and recorded on sampling sheets (Appendix C). For images of these activities see the 2010 cockle survey report (Michael 2011).

2.1 Density and population estimates

Mean (average) cockle densities at each site, transect, and tidal height were estimated from the numbers of cockles recorded in each 0.1 m^2 quadrat sampled and comparisons were made with the previous seven GOPI surveys (1992–2010). The fixed sampling locations have been consistent over time and changes in cockle density can be compared at the spatial scales of site and tidal height.

Previous estimates of the cockle population size in Pauatahanui Inlet used the mean density calculated from the counts of 0.1 m^2 quadrats (up to 372 samples) and scaled to the size of the intertidal area (as if a single stratum) which was assumed to be about 1 km^2 (Richardson et al. 1979) to remain consistent with previous surveys (Method 1). This method is likely to underestimate the variance in the estimate of population size.

Method 1 is also used here for the 2013 survey but we compare it with a second method of estimating population size.

Method 2 is sensitive to transect length and changes in the distribution of cockle density over time. Mean cockle density is estimated from the three quadrats at each tidal height and from the means of each of the four tidal heights to give the mean cockle density for each transect. The transect mean is adjusted (weighted) for the proportion of the total areas it represents; the proportion of the transect length to the combined total length of all transects is used as a proxy for proportion of survey area. The mean population size was estimated by summing the weighted averages from all 31 transects (30 in 2013). The coefficients of variation (C.V.) were estimated as the standard deviation of the unweighted means of all transects (in any one year) divided by the square root of the number of transects (31 transects, but 30 in 2013).

A one-way ANOVA, was used to test for differences between population estimates as the 30–31 transects constitute a relatively large sample. This parametric test is likely to be more sensitive than non-parametric tests such as the Kruskal-Wallis one way analysis of variance on ranks. Multiple comparisons amongst survey estimates were undertaken using the Holm-Sidak test, as this test is considered to have high power to detect differences amongst paired comparisons.

A discussion on the method used to estimate population size and to compare survey estimates is given in the Discussion section 4.1.

2.2 Size structure of cockle populations

Measurements of shell lengths (Figure 2–1) from quadrats were combined to produce estimates of population size structure for tidal heights, transects, and sites. These data were summarised as histograms and Boxplots and compared visually for spatial and temporal differences (e.g. differences between sites for each tidal height).

The size structure of populations was further divided into juvenile (defined as individuals 10 mm or smaller in length), based on Larcombe (1971) and Richardson et al. (1979) and adult groups. The size structures were compared with size structures from previous surveys.

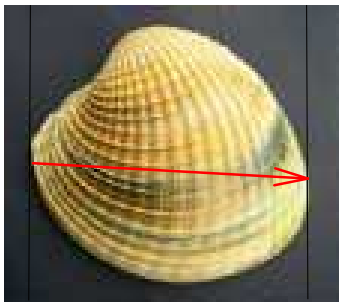

Figure 2-1: Cockle showing the length measurement along the anterior–posterior axis.

3 Results

A total of 360 quadrats were sampled from 30 transects. Transect 30 was not attempted because this area is now a launching place for jet skis and the beach shows relatively high degradation because of the vehicle traffic and would not be comparable to previous years.

Transects 1–9, 13 and 14 and 16–27 were completed on 1st of December. Transects 12 and 15 were begun on 1st of December and completed on 3rd and 4th of December respectively. Transects 10 and 11 were done on 2nd December and 28 and 29 on 4th December.

The beach profile at transect 7 was much altered from 2010. It is was virtually flat in 2013 from just below the high tide debris line to low water and with 2–5 cm of standing water over most of this area at the time of low tide. The shore off the Kakaho Stream mouth was also altered, a considerable sand/mud bank had built up on the western side since 2010 and the stream now flows across the beach in an easterly rather than southerly direction. Transect 23 crosses this diversion.

It is unlikely that some of the shellfish in the 0–8 mm range identified as cockles may be misidentified nutshells, as each of the transects that could reasonably be predicted to have a considerable population of nutshells were done by experienced volunteers who can be relied on to know the difference. The large numbers of cockles 10 mm and smaller in length at transects 14 and 15 and 28 and 29 (where relatively high densities of nutshells occurred on the lower beach previously) most likely represent recruitment events at these locations.

The numbers of cockles sampled in each quadrat in 2013 are given in Appendix F. The total numbers of cockles sampled at each transect between 2007 and 2013 showed no consistent pattern of increase or decline between surveys (Figure 3–1), i.e., increases varied over both space and time. However the overall trend showed a continued increase between 2007 and 2013: 70% of transects sampled more cockles in 2013 than in 2010, and 80% of transects in 2013 sampled more cockles than in 2007. These higher catches are shown in Figure 3–2, 67% of transects sampled more than 400 cockles in 2013 compared with 39% and 30% of transects in 2010 and 2007 respectively.

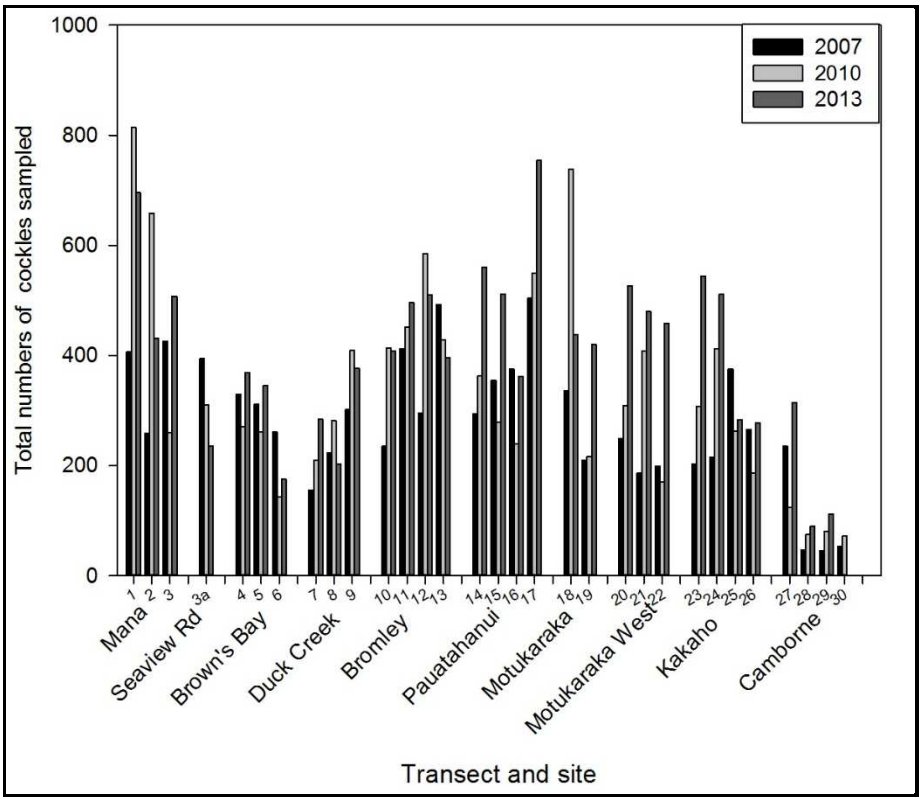

Figure 3-1: The total numbers of cockles sampled by each transect by the 2007, 2010, and 2013 surveys. Transect 30 was not sampled in 2013.

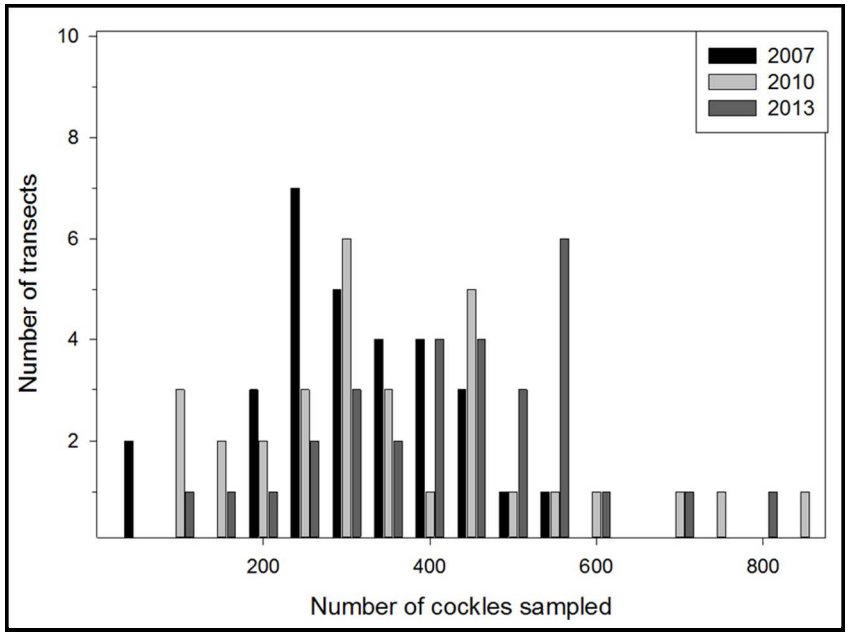

Figure 3-2: A histogram of the numbers of transects and the numbers of cockles sampled in bins of 50 from 0–900. Transect 30 was not sampled in 2013.

3.1 Cockle densities and population size

In 2013, cockle counts recorded in each quadrat ranged from zero to a maximum of 153 per 0.1 m^2 (at transect 17, lower-mid tide, Motukaraka - Horikiri Stream). This is higher than the previous highest densities recorded in 2010 of 150 per 0.1 m^2 (at transect 1, upper-mid tide, Mana), in 2007 (112 per 0.1 m^2 at transect 1, low-mid tide Mana), and in 2004 (95 per 0.1 m^2 at transect 1, upper-mid tide, Mana). No cockles were recorded from less than 2% of quadrats sampled in 2013, fewer than in 2010 (6%) and 2007 (5%). Mean cockle density in 2013 (33.6 per 0.1 m^2, 99% CI 27.1–40.1) was the highest since the GOPI surveys began in 1992, see Table 3–1.

Table 3-1: Densities of cockles in Pauatahanui Inlet and population estimates between 1976 and 2013.

Cockles	1976	1992	1995	1998	2001	2004	2007	2010	2013
Method 1									
No. transects	75	30	30	31	31	31	31	31	30
Max number per quadrat	280	168	191	273	118	95	112	150	153
Total counted	15 633	7 976	6 484	9 264	7 807	8 124	8 653	10 290	12 080
Mean number per quadrat	52.3	22.2	18	25.7	21	22	23.3	27.7	33.6
99% CL on mean	43.8-60.8	18.7-25.7	14.6-21.4	21.5-29.9	18.2-23.8	19.4-24.6	18.5-28.1	20.0-35.4	27.1-40.1
Mean population (millions)	523	222	180	257	210	220	233	277	336
C.V.	NA	NA	NA	0.20	0.18	0.16	0.14	0.17	0.14
Population range (millions)	438-608	187-257	146-214	215-299	182-238	194-246	185-281	200-354	271-401
Method 2									
Mean population (millions)	NA	NA	NA	239	187	180	205	248	279
C.V.	NA	NA	NA	0.11	0.10	0.09	0.07	0.10	0.07
Population range (millions)	NA	NA	NA	165-312	134-238	127-232	160-249	177-319	219-339

Survey estimates of the cockle population size from Method 1 show a continued upward trend (Table 3–1, Figure 3–3). The second estimate of the cockle population size using Method 2 where the mean density of cockles at each transect is scaled (weighted) by transect length (Figure 3–4) showed a similar trend to Method 1 (Table 3–1, Figure 3–3). The coefficients of variation (C.V.s) of the survey estimates have consistently declined from 0.20 in 1998 to 0.14 in 2013 using method 1 and from 0.11 to 0.07 over the same period using method 2 (Table 3–1).

A one-way-ANOVA of the estimates from methods 1 and 2 showed significant differences between survey estimates of population size (P = 0.007, P = <0.001 respectively), and that these tests had good power to detect differences (alpha = 0.050: 0.742 and 1.000 respectively). The results from all pairwise multiple comparison procedures (Holm-Sidak method) undertaken at a significance level of 0.05 are given in Table 3–2. The estimates of cockle population size were significantly higher in 2013 than in 2001, 2004, and 2007 using method 1, and the population size in 2013 was significantly higher than in all other years 1998–2010 using Method 2.

In 2013, the population size of cockles was 87% more than the low point in this series of surveys in 1995 (180 million cockles), and 64.2% of the estimated cockle population size in 1976 (523 million cockles). The precision of the estimates as shown by the 99% confidence intervals (Figure 3–3) varies between surveys (which is expected in a time-series of survey data from populations with relatively patchy distribution).

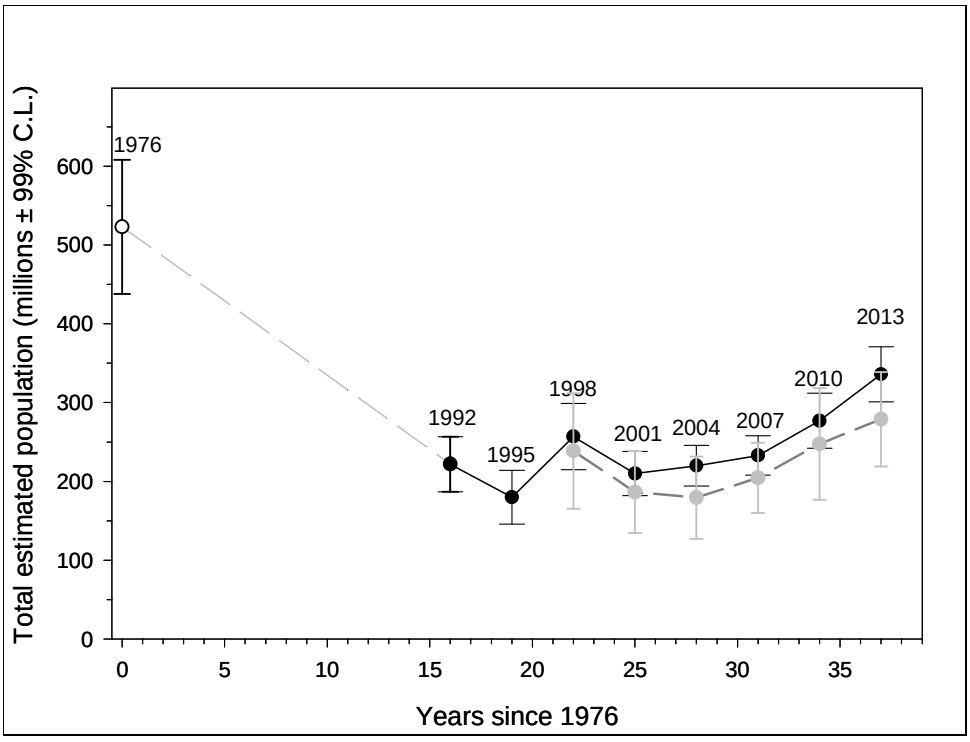

Figure 3-3: Estimates of total cockle population size and 99% confidence intervals for Pauatahanui Inlet, 1976–2013. The initial survey in 1976 (Richardson et al. 1979) used a different survey design, surveys since 1992 carried out by the Guardians of Pauatahanui Inlet have used the same survey design and methods. Estimates using previous method (Method 1) shown in black and estimated using weighting factors for transect length (Method 2) in grey.

Table 3-2: The results from all pairwise multiple comparison procedures (Holm-Sidak method) undertaken for survey estimates 1998 to 2013 using Methods 1 and 2 at a significance level of 0.05.

	Method 1					Method 2			
Comparison	Diff of Means	t	P	P<0.050		Diff of Means	t	P	P<0.050
2013 vs. 2004	**11.76**	**3.512**	**0.008**	**Yes**	**2013 vs 2004**	**9.942**	**10.419**	**<0.001**	**Yes**
2013 vs. 2001	**10.766**	**3.104**	**0.031**	**Yes**	**2013 vs 2001**	**9.24**	**9.35**	**<0.001**	**Yes**
2013 vs. 2007	**10.295**	**3.075**	**0.031**	**Yes**	**2013 vs 2007**	**7.426**	**7.783**	**<0.001**	**Yes**
2013 vs. 1998	7.903	2.36	0.209	No	**2010 vs. 2004**	**6.809**	**7.195**	**<0.001**	**Yes**
2010 vs. 2004	5.865	1.766	0.596	No	**1998 vs. 2004**	**5.899**	**6.234**	**<0.001**	**Yes**
2013 vs. 2010	5.895	1.761	0.566	No	**2010 vs. 2001**	**6.107**	**6.227**	**<0.001**	**Yes**
2010 vs. 2001	4.871	1.415	0.789	No	**1998 vs. 2001**	**5.198**	**5.3**	**<0.001**	**Yes**
2010 vs. 2007	4.4	1.325	0.809	No	**2010 vs. 2007**	**4.294**	**4.537**	**<0.001**	**Yes**
1998 vs. 2004	3.857	1.162	0.863	No	**2013 vs. 1998**	**4.043**	**4.237**	**<0.001**	**Yes**
1998 vs. 2001	2.863	0.832	0.956	No	**1998 vs. 2007**	**3.384**	**3.576**	**0.002**	**Yes**
1998 vs. 2007	2.392	0.72	0.959	No	**2013 vs. 2010**	**3.133**	**3.283**	**0.005**	**Yes**
2010 vs. 1998	2.008	0.605	0.958	No	**2007 vs. 2004**	**2.515**	**2.658**	**0.031**	**Yes**
2007 vs. 2004	1.465	0.441	0.961	No	2007 vs. 2001	1.814	1.849	0.181	No
2001 vs. 2004	0.994	0.289	0.948	No	2010 vs. 1998	0.91	0.961	0.56	No
2007 vs. 2001	0.471	0.137	0.891	No	2001 vs. 2004	0.701	0.715	0.475	No

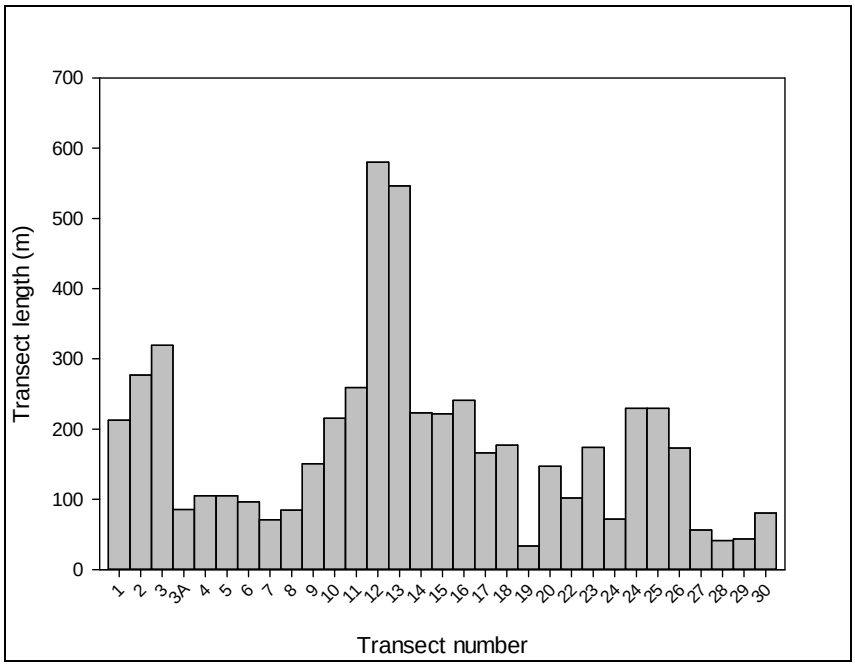

Figure 3-4: Approximate transect lengths estimated from distances between high and low water from a map of the intertidal zone.

3.1.1 Cockle densities by site

The mean numbers of cockles recorded at each site are shown in Figure 3–5, mean densities varied amongst most sites: cockle densities were generally lower at southern sites in the Inlet (Seaview, Brown's Bay, Duck Creek), and at Camborne.

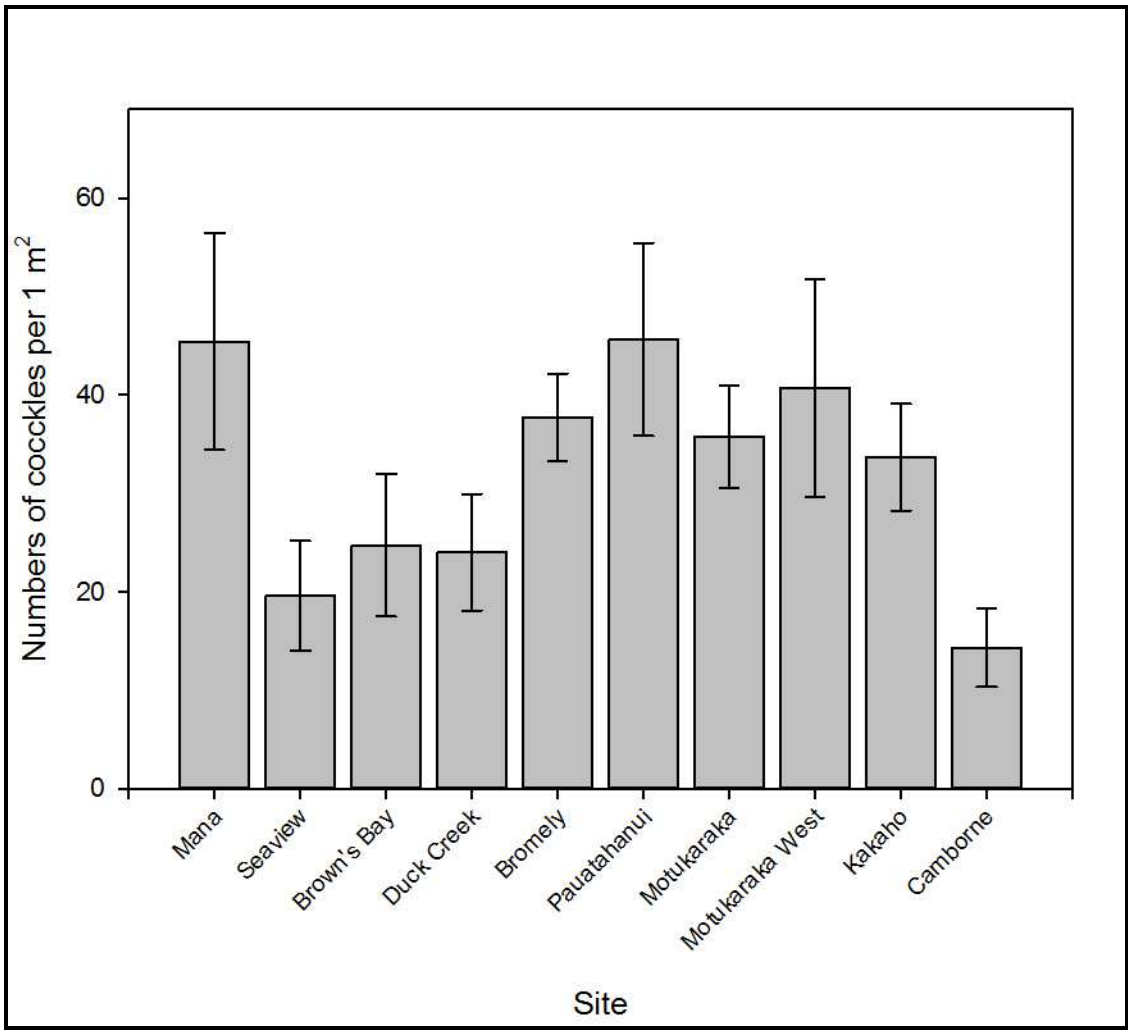

Figure 3-5: Mean densities of cockles (number per 0.1 m^2) with 99% confidence intervals recorded from each site in 2013. Transect 30 was not sampled in 2013.

Mean cockle densities (Figure 3–6) were similar between the 2007, 2010, and 2013 surveys, and although four sites (Brown's Bay, Pauatahanui, Motukaraka West, and Camborne) showed an increase in mean cockle density in 2013 from the two previous surveys these increases were not significant. Seaview showed a slight decline in mean density, but it was not significant from previous years.

A bubble plot of the distribution of mean cockle density by site since 2004 (Figure 3– 7) shows, cockle densities at most sites have increased, but have remained similarly low at Brown's Bay, Duck Creek, and Camborne; and decreased at Seaview.

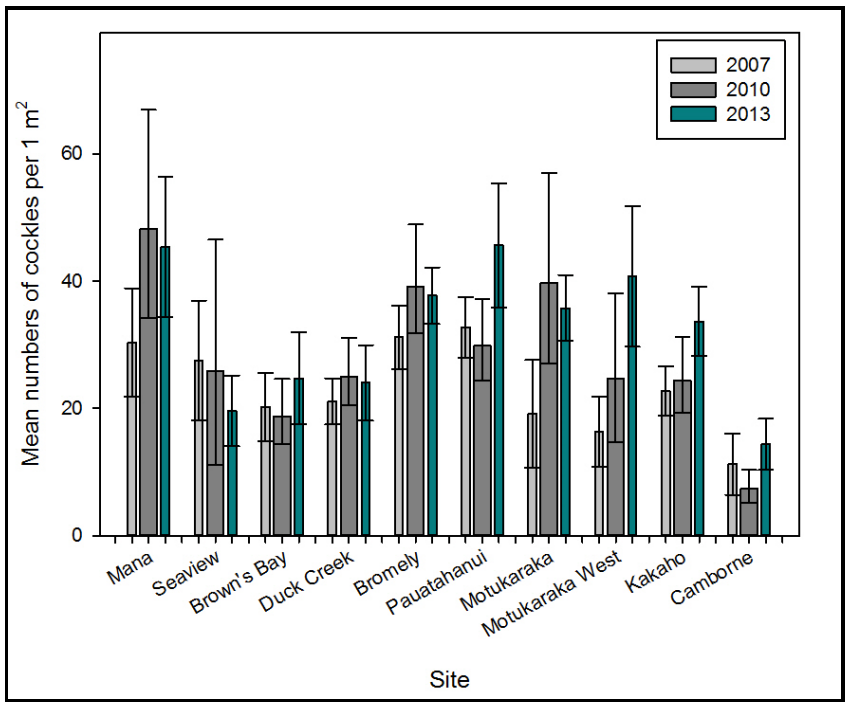

Figure 3-6: Mean densities of cockles (number per 0.1 m^2) with 95% confidence intervals recorded from each site in 2007 (black), 2010 (dark grey), and in 2013 (light grey). Transect 30 was not sampled in 2013.

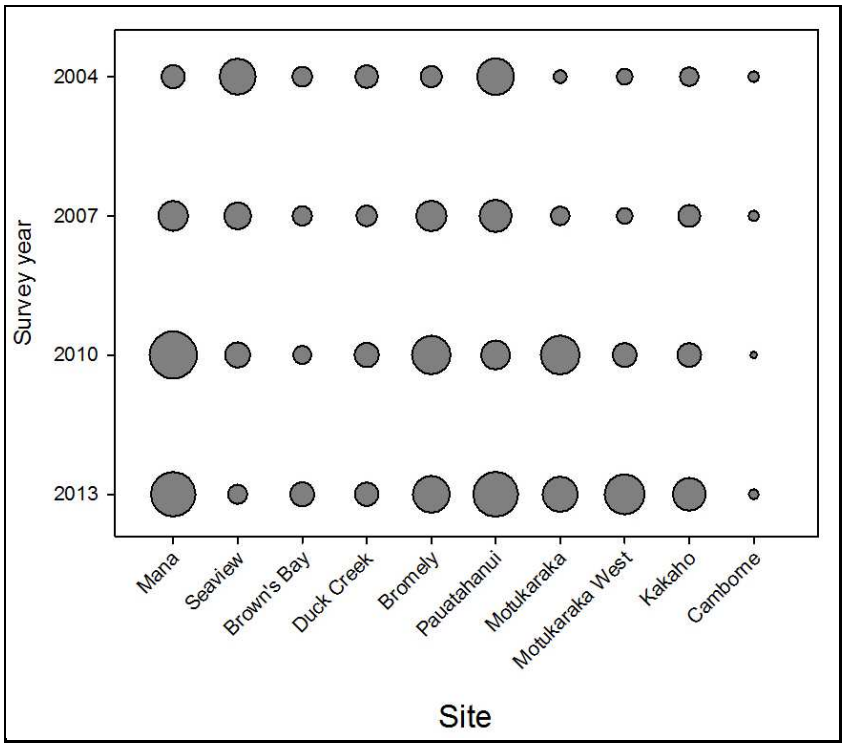

Figure 3-7: Bubble plot representing the changes in the average cockle density at each site between 2004 and 2013.The size of the bubbles scaled to the highest average density of 144 cockles per 0.1 m^2 at Mana in 2010, and the smallest bubble represents 22 cockles per 0.1 m^2 at Camborne in 2010.

3.1.2 Cockle densities by tidal height

The distribution of cockles density by tidal height in 2007, 2010, and 2013 varies considerably within tidal height, and is generally similar between tidal heights (Figure 3–8) i.e., there is no overall difference between tidal heights. The largest numbers of cockles were sampled in the upper and lower mid-tide samples, the highest being 153 cockles in a 0.1 m^2 quadrat (LMT in 2013). There is mostly an upward trend in the mean numbers of cockles per quadrat across all tidal heights and all survey years, probably driven by the large increase in density of cockles in small numbers of quadrats sampled in 2010 and 2013 surveys.

The mean numbers of cockles sampled each survey by site and tidal height (Figure 3–9) also show considerable variation between years and sites, amongst tidal heights. Transects within sites show less variation (Figure 3–10).

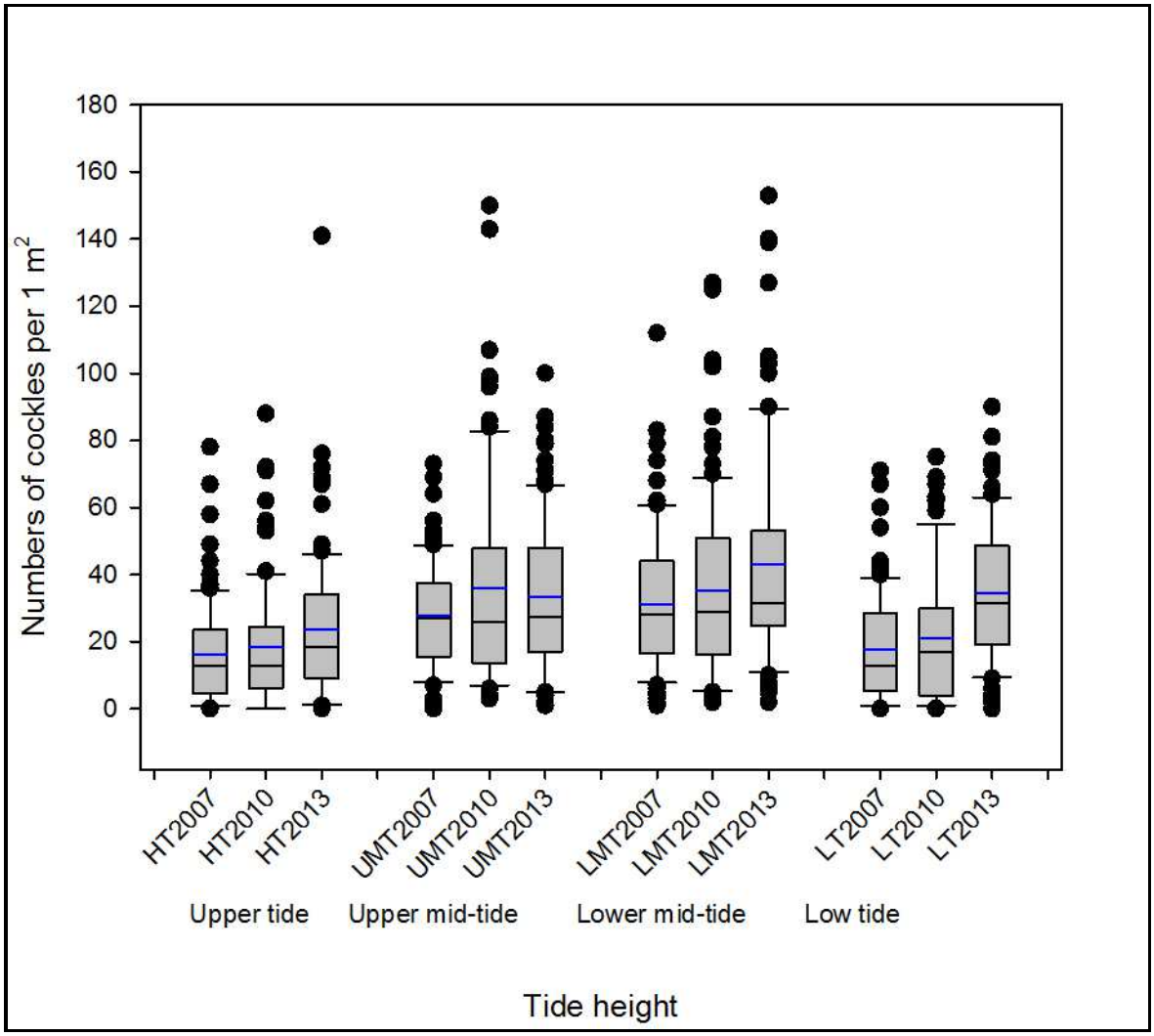

Figure 3-8: Boxplots of the numbers of cockles in 0.1 m^2 quadrats by tidal height. Boxplots show medians (solid horizontal black lines) and means (solid horizontal blue lines), filled boxes represent 25th to 75th percentiles, whiskers at 10th and 90th percentiles, and outliers as filled circles.

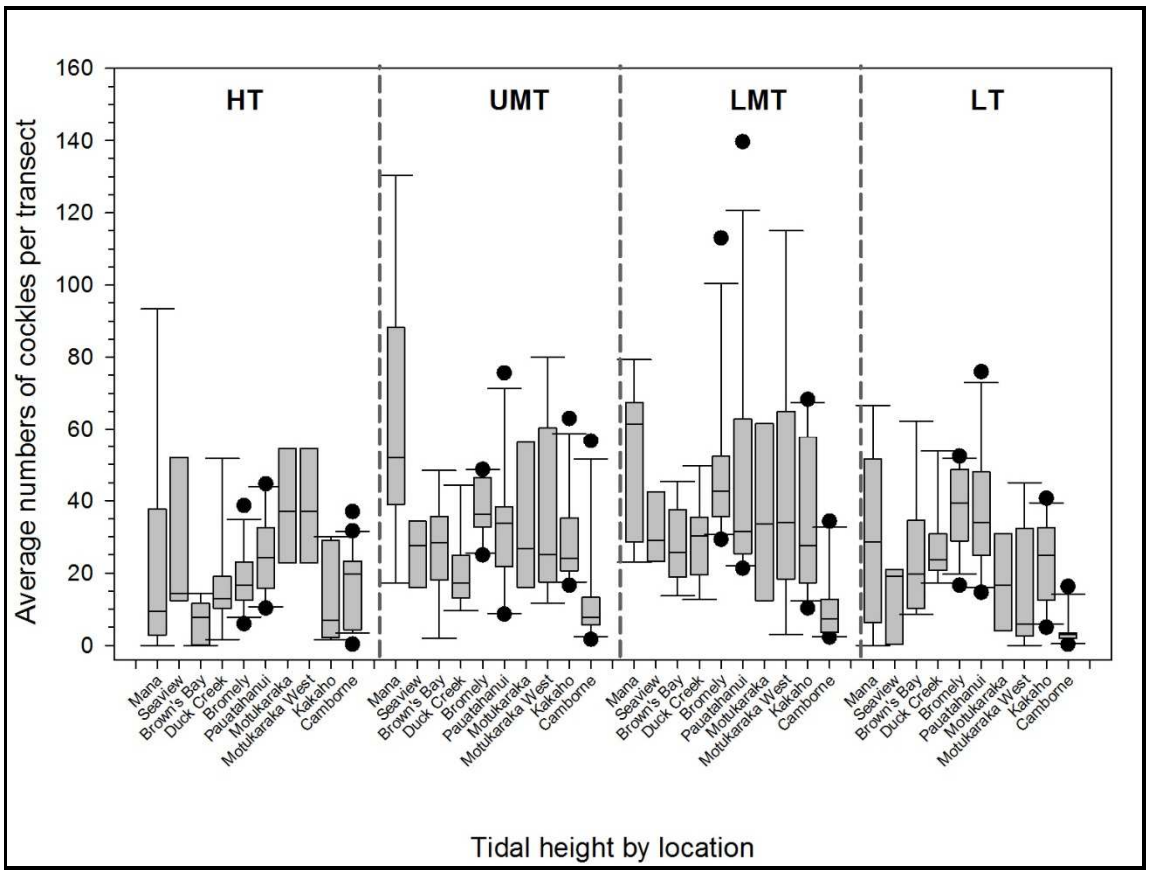

Figure 3-9: The range of mean cockles densities for each tidal height recorded for the 2007, 2010, and 2013 surveys combined by site. HT, high tide; UMT, upper mid-tide; LMT, lower mid-tide; and LT, low tide. Error bars are ± 1 standard error. Transect 30 was not sampled in 2013. Boxplots show medians (solid horizontal black lines), filled boxes represent 25th to 75th percentiles, whiskers at 10th and 90th percentiles, and outliers as filled circles.

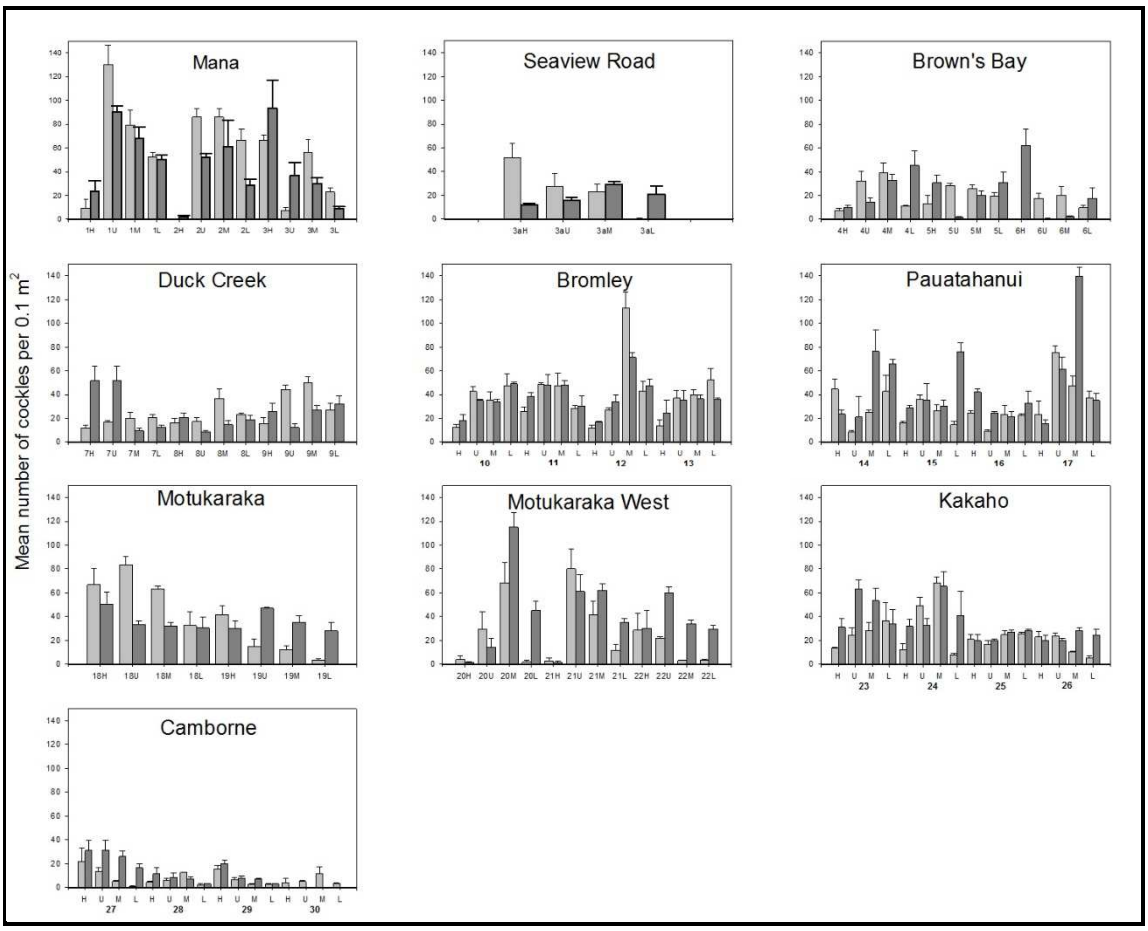

Figure 3-10:Mean densities of cockles (number per 0.1 m^2) with standard errors recorded from each transect at each site, 2010 (grey) and 2013 (dark grey). H = High Tide, U = Upper Mid-tide, M = Lower Mid-tide, and L = Low Tide. Error bars are ± 1 standard error. Transect 30 was not sampled in 2013.

3.2 Cockle size frequencies

Cockles sampled in the intertidal zone of Pauatahanui Inlet between 2007 and 2013 generally ranged in length from 3 mm to 40 mm (Figure 3–11). Some larger individuals up to 58 mm in length were sampled in 2013. The distributions of percentage frequencies (Figure 3–11) do not show clearly separated modes or cohorts to clearly identify the progression of different cockle settlements and age classes. The cumulative percentage frequencies (Figure 3–12) shows similar numbers of small cockles up to 8 mm in length, and proportionately more larger cockles in 2007 than in 2013, and proportionately more larger cockles in 2013 than in 2010 possibly suggesting higher cockle spat settlement and survival in 2010.

The percentage of juvenile cockles in the Pauatahanui Inlet population increased markedly between the 1992 and 2004 surveys (Figure 3–13) from around 1.0% in 1992, to almost 7% in 1998 (Grange & Crocker, 1999). There was little apparent change between the 1998 and 2001 surveys. However, between 2001 and 2004, the percentage of juvenile cockles in the total population more than doubled to 15.9%, then declined to 12.4% in 2007, but increased to 15.7% in 2010 and to 16.2% in 2013. The total population size has increased since 2007, suggesting that recruitment to the Pauatahanui Inlet population has increased and that the mortality of adults or their dispersal to subtidal areas has been minimal since 2007.

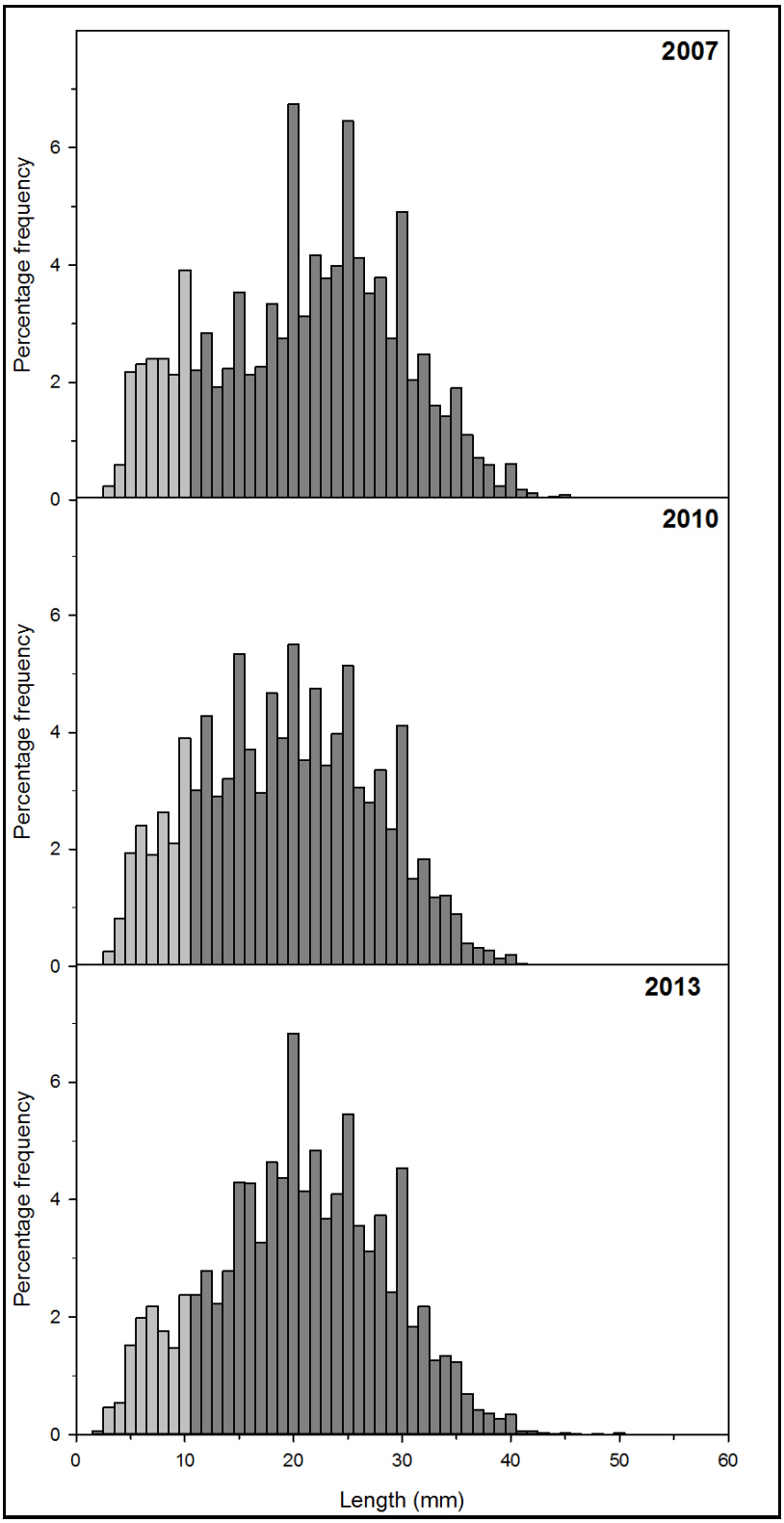

Figure 3-11:Percentage length frequencies of cockles sampled in the intertidal zone of Pauatahanui Inlet in 2007, 2010, and 2013. Juvenile cockles classified as those 10 mm in length and smaller are shown in grey, and adults greater than 10 mm in length shown in dark grey.

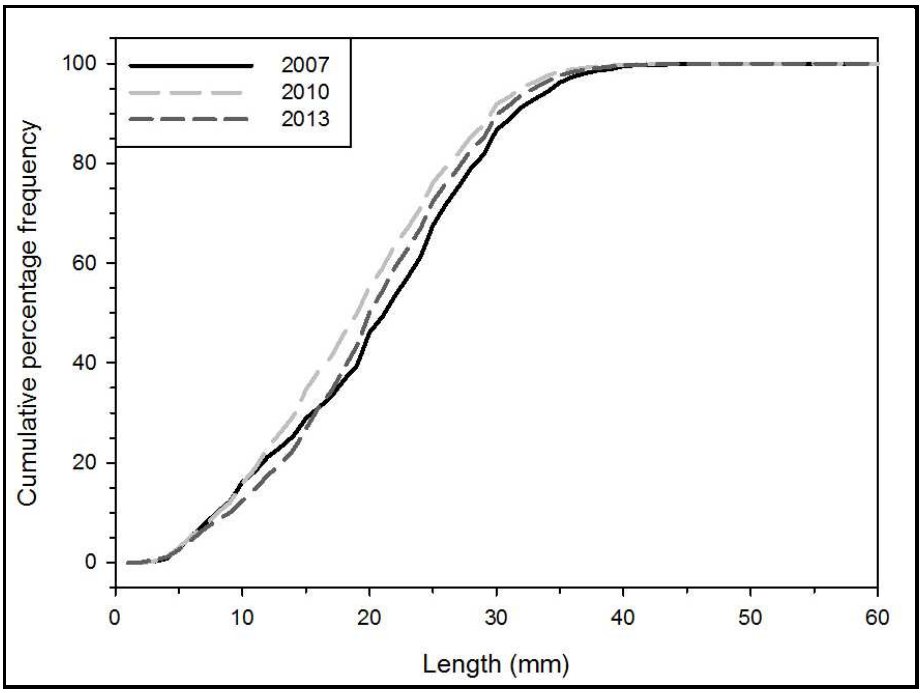

Figure 3-12:The cumulative percentage length frequencies of cockles sampled in the intertidal zone of Pauatahanui Inlet in 2007(solid black line), 2010 (dashed light grey line), and 2013 (dashed dark grey line).

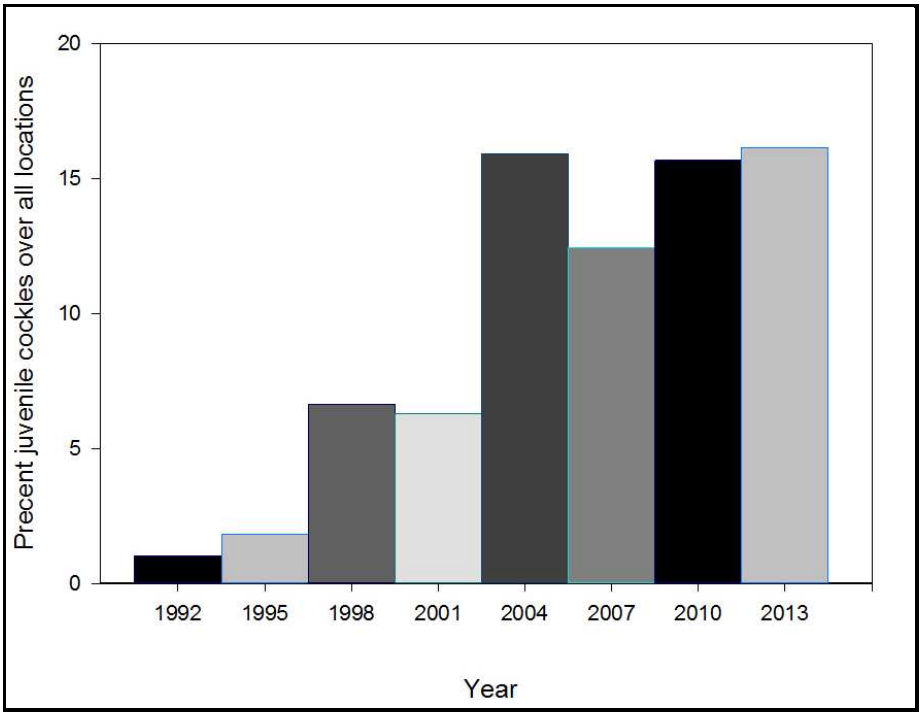

Figure 3-13:Juveniles (10 mm and smaller in length) as a percentage of total cockle population, 1992–2013.

3.2.1 Cockle size frequencies by site

Cockle size frequencies comprised similar size ranges of cockles, but varied in their distributions (Figure 3–14). Most distributions were predominantly unimodal (a single, broad size group). At some sites, especially where sample numbers were relatively low (such as at Seaview and Camborne), there appeared to be several discernable size groups in the distribution (polymodal), which may represent settlement cohorts. The distributions from other sites such as Mana, Pauatahanui, Seaview, and Motukaraka West showed relatively high numbers of small sized cockles suggesting heightened recent recruitment (the settlement and survival of juvenile cockles).

Differences in these cockle size distributions between sites in 2013 are shown as cumulative percentage frequencies (Figure 3–15). The proportions of different sizes were broadly similar except at Seaview where most (~55%) of cockles were greater than 30 mm in length.

Boxplots of the distribution of cockle sizes (lengths) by tidal height and site sampled in December 2013 (Figure 3–16) generally show similarly broad distributions, and the sizes of cockles in the lower mid-tide (LMT) and low tide (LT) quadrats were mostly larger than higher on the beach at high tide (HT) and upper mid-tide (UMT).

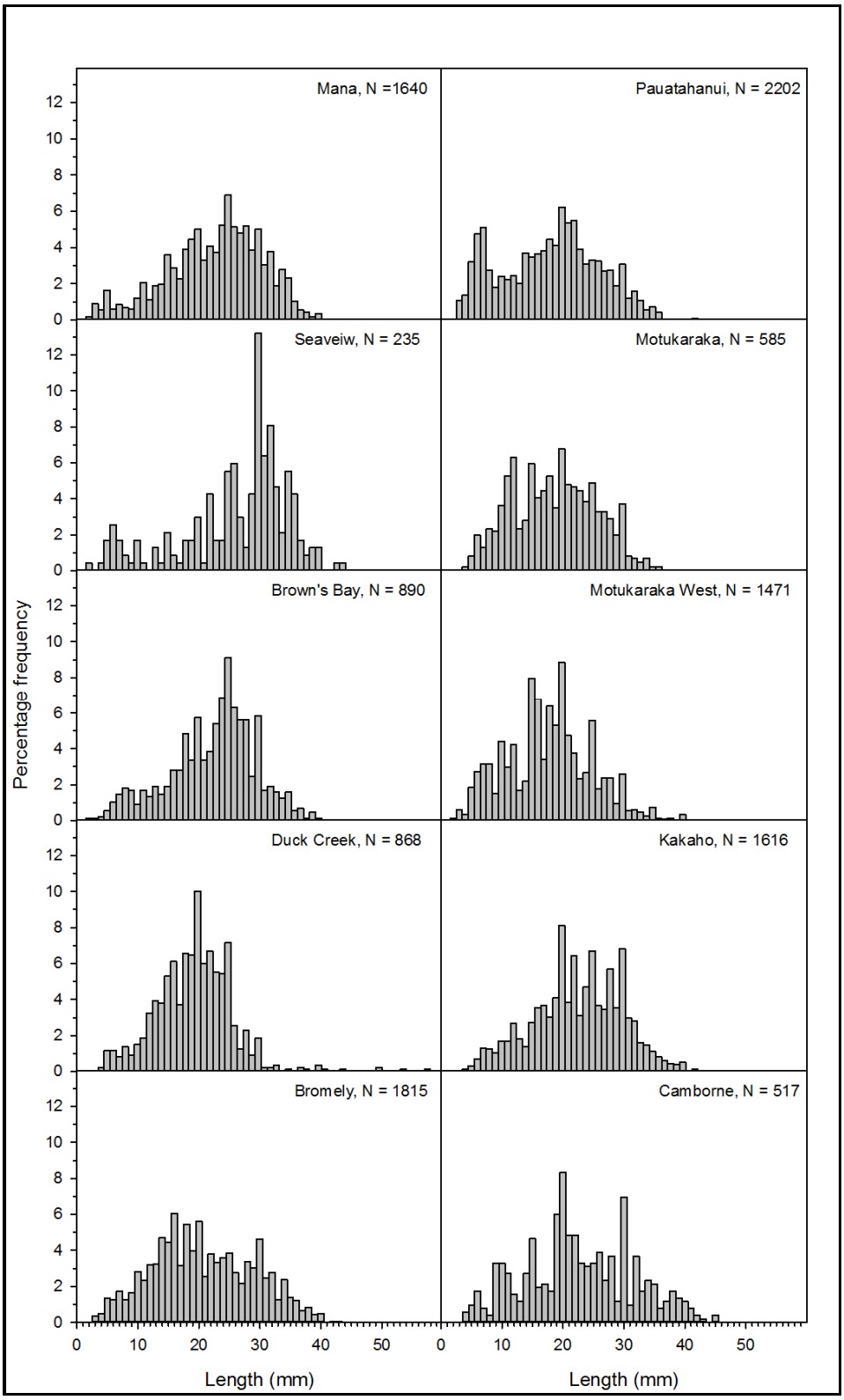

Figure 3-14:Histograms of the size (length) frequency of cockle by sites from the 2013 survey.

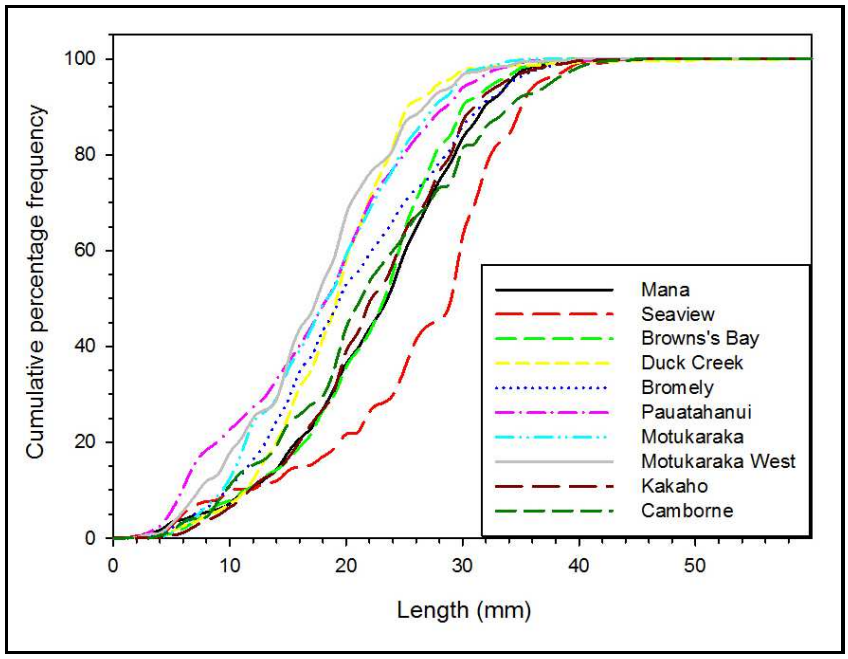

Figure 3-15:Cumulative percentage frequencies of cockle lengths by site sampled in December 2013.

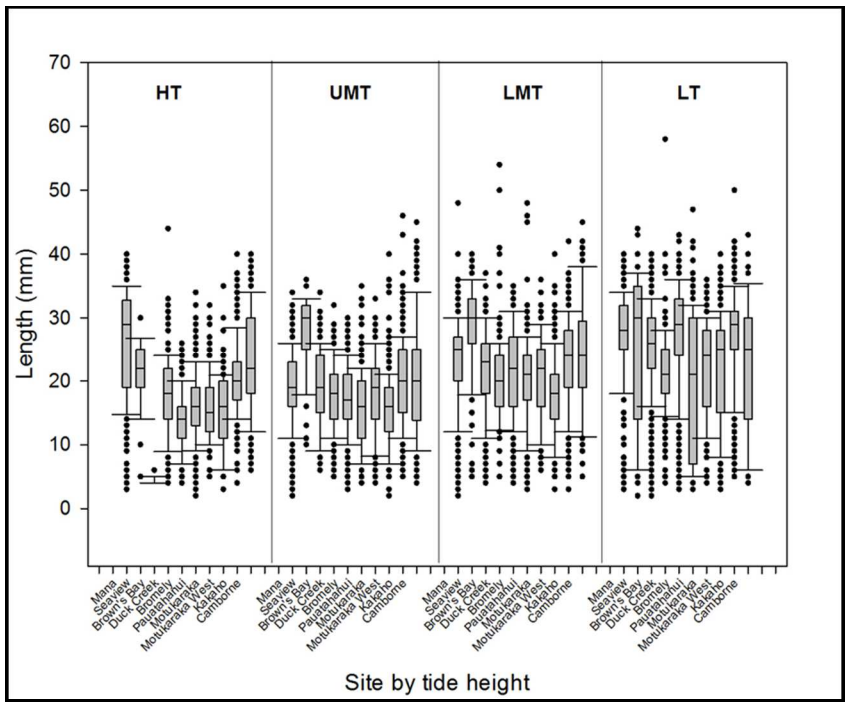

Figure 3-16:Boxplots of the distribution of cockle sizes (lengths) by tidal height and site sampled in December 2013. Transect 30 was not sampled in 2013. Boxplots show medians (solid horizontal black lines), filled boxes represent 25th to 75th percentiles, whiskers at 10th and 90th percentiles, and outliers as filled circles.

4 Discussion

4.1 Survey comparability

In previous surveys, the cockle population size was estimated using the mean density estimated from individual quadrats (0.1 m^2) as independent (random) samples (as if from a single stratum) and scaled to the size of the intertidal area, assumed to be about 1 km^2 (Richardson et al. 1979) (Method 1).

Cockle density can vary considerably over tidal height with the highest cockle densities at mid and lower tide levels, i.e. stratified by tidal height. Therefore the samples taken from each transect cannot be assumed to be a truly random sample from a single area of similar cockle density.

It is more appropriate to average the density for each tidal height, then average all the tidal heights to get a transect mean (Method 2). As the width of the intertidal areas varies around the Inlet, transect length reflects the size of the intertidal area. Transect means therefore need to be adjusted (weighted) for these differences. Transect means are then averaged to get a mean cockle density for the whole inlet that is then scaled up to the estimated area of the intertidal zone in the Inlet. There are no direct measurements of transect length available and best estimates of transect length are used, however, the weighting of transect mean cockle densities has made little difference to the population estimates.

Both Methods 1 and 2 showed a similar upward trend and similar relative cockle densities. The similarity of these results also suggests that there was little variation in the distribution of cockle densities over space and among surveys (over time).

Estimates from Method 1 used 372 survey samples, and this relatively large number of samples was theoretically likely to result in lower estimates of variance and C.V.s than estimates from transect mean densities. However, Method 2 produced lower C.V.s (Table 3–1).

The error associated with the estimated size of the intertidal area in Pauatahanui Inlet and whether the size of the intertidal area has changed over the sequence of surveys is not known. Because mean cockle density is multiplied by the size of the intertidal area, any error in the estimate of the survey area will be proportionally represented in the estimate of cockle population size. The same estimate of the size of the intertidal area (1 km^2) has been used in all previous estimates of population size. This estimate differs from the size of the intertidal area of Pauatahanui Inlet estimated from the interpolation of depth soundings from a report to the Porirua City Council (Anon 2009) and from a map of the Pauatahanui Inlet bathymetry (Irwin 1978), which suggests that the intertidal areas is about 2.13 km^2. Using a larger survey area in the calculation of population size will increase the absolute population size of cockles for each survey, but it will not change the relative trend between surveys.

A one-way ANOVA, was used to test for differences between population estimates as the 30–31 transects constitute a relatively large sample and this parametric test is likely to be more sensitive than non-parametric tests such as the Kruskal-Wallis one way analysis of variance on ranks. Multiple comparisons amongst survey estimates were undertaken using the Holm-Sidak test, as this test is considered to have high power to detect differences amongst paired comparisons. The precision of survey estimates (expressed as a coefficient

of variation or C.V. of the population estimate) since 1998 have been relatively low (see Table 3–1).

GOPI surveys have used the same methods. Errors associated with the misidentification of species and from sampling error generally, are thought to be relatively small and reasonably constant from survey to survey.

The actual low water mark may vary from survey to survey depending on the wind direction and strength that may hold water in the Inlet, the weather (barometric pressure), and the magnitude of spring low tides. Higher numbers of cockles are generally sampled in the mid-tide zones (UMT and LMT) and the level of the low tide may have a relatively small effect on the estimate of population size. Larger sized cockles are generally sampled at the low water level, and a low water level higher (further up the beach) than in previous surveys may slightly under estimate the numbers of large cockles, and vice versa.

4.2 Cockle recruitment

The proportion of juvenile cockles (10 mm in length and smaller) in the total population has increased markedly since 1992 when it was 1%, to 16.2% in 2013. These increases have been in incremental steps and in the last four surveys the percentages of juvenile cockles have been consistently around 12.4 to 16.2%. Anecdotal evidence suggests that these increases reflect changes in the cockle population and not an improvement in the detection of juvenile cockles.

There are many factors that may drive the recruitment strength of cockles in Pauatahanui Inlet; some that may be associated with the health of the Inlet such as levels of fine suspended silt, some that are likely to be driven by climate, and others associated with the ecology of Pauatahanui Inlet such as predation pressure. There are also a number of other unknowns:

1. What proportion of the total Inlet-wide population occurs subtidally, and what contribution the subtidal population makes to the recruitment of juveniles in the intertidal zone.

2. Whether there is any movement of juvenile cockles from the intertidal to the subtidal areas, and vice versa. Hooker (1995) found evidence of movement in pipi (Paphies australis) in the Whangateau Harbour, suggesting that pipis (both juveniles and adults) can move long distances from unsuitable habitats using mucus parachutes. Cummings & Thrush (2004) also considered juvenile pipis and wedge shells (Macomona liliana) to be mobile and found that both species were less likely to establish themselves in areas that had elevated levels of terrestrial (land derived) sediments.

3. Whether cockles still occur on the intertidal areas of the large offshore sand banks in the western half of the Inlet. The sand banks were partially sampled in 1976, but not in the GOPI surveys (for safety reasons with volunteers). The area of these sand banks has increased significantly in the last decade or so,

4.3 Status of the cockle population in Pauatahanui Inlet

The survey design and sampling methods have been consistent since 1992, as has been the upward trend in cockle population size. There has been an 87% increase in cockle population size since the low point in this series of surveys in 1995 (180 million cockles) and increase in the population size has been slow, but steady. The higher proportions of juveniles present in recent surveys would have helped maintain this upwards trend. Cockle numbers are increasing at most of the ten sites sampled: most sites have increasing numbers, a few are static, and medium-term declines have only been recorded at Seaview Rd.

This positive trend in the cockle population size suggests that environmental conditions in Pauatahanui Inlet are likely to be favourable for cockles.

For further discussion, see Michael (2011).

5 Acknowledgements

We thank the volunteers who sampled Pauatahanui Inlet in 2013, ensuring the value of this time-series of data. We thank James Sturman and Pete Notman for their assistance with the GIS and the location figure, and Vonda Cummings for her information on estuaries and cockles, and Reyn Naylor who reviewed this report. We also thank Ken Grange and Peter Horn whose reports provided the foundation for this report series.

The Guardians of Pauatahanui Inlet acknowledge the assistance given to the survey by Greater Wellington Council, both in the field and in the production of this report.

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Appendix A 2013 Sampling instructions hand-out.

2013 Pauatahanui Inlet Cockle Survey

First recognise your cockle!

Length (anterior-posterior axis)

Shell with distinctive pattern of ridges and a prominent recurved 'beak'

Instructions for digging, measuring, tallying

- Assign one person as recorder. Recorder must try to keep hands dry and clean.
- The transect is sampled by 3 quadrats at 4 tidal levels (see your transect sheet)
- Your first task is to mark site of High tide sample site with stake.
- Then walk to water's edge, counting number of ADULT paces. Enter this number on the transect sheet as the distance between High and Low tide sites.
- Divide this distance by three to give you the distance between each sample site. Enter these on the transect sheet. Send someone back to mark the Lower Mid tide site with a pink stake.
- Begin sampling at Low tide site and work up beach to High tide site.
- Take the Low tide samples 5 paces from waters edge.
- At each site quadrat B should be on the transect line and A and C be about 5 paces to the right and left of the line.
- For each quadrat:
  - Drop the quadrat frame randomly (don't choose good places).
  - Dig out the mud and animals inside the frame to a depth of about 7 cm and place in your sieve. Take care not to excavate an area larger or smaller than the quadrat.
  - The best way to sieve is to lower it into water and jig it up and down.
  - Pick out stones and empty shells to make it easier to find live cockles.
  - Take out each live cockle and put it into an ice cream carton.
  - Be careful not to count nut shells as small cockles — see photos.
  - Measure length (see illustration above) of each cockle to the nearest mm. and call the measurement to the recorder.
  - Recorder puts a single tally dash (/) for each cockle beside the correct mm size.
  - Tallies are marked in groups of 5 like this: "~~////~~ //" = 7

Please collect all gear and return to Stout Cottage
Thank you, your help is much appreciated

Appendix B 2013 Transect data sheet

2013 Pauatahanui Inlet Cockle Survey

Transect number 1

Location marker See map	**Mana beach; access by lane beside Stillwater Lodge.** Turn left and walk to a large taupata bush and a clump of Agapanthus about 65 metres north of access lane (pink spot on taupata)
Aim transect towards →	Kakaho Stream mouth; below deforested patch on hillside.
Number of **ADULT** paces from —	
location marker to **high tide** site	**20**
high tide site to **low tide** site	
low tide site to **lower mid tide** site	
lower mid tide site to **upper mid tide** site	
Estimated time of low tide	**3 pm**

RECORD OF COMPLETED QUADRATS

	Date	Tick	Tick	Tick
High tide quadrats		A	B	C
Upper mid tide quadrats		A	B	C
Lower mid tide quadrats		A	B	C
Low tide quadrats		A	B	C

INSTRUCTIONS

- Use pink topped stakes to mark position of each sampling site.
- **Begin by sampling at the low tide site.**
- If sampling area is covered by stones or large green seaweed, lift off gently before digging.
- Follow instructions for sieving out, measuring and recording cockles.
- **Take care not to confuse nutshells and cockles (see photos).**
- Write any comments about this transect at the bottom or on back of this sheet.
- When finished check you have all your gear – especially the quadrats.
- Return all equipment and this sheet to Stout Cottage.

Thank you for your help. We hope you enjoy your day

Appendix C 2013 team leader check list.

GUARDIANS OF PAUATAHANUI INLET COCKLE SURVEY 2013

Checklist for Team Leaders

Before you meet and brief your team --

1. **Read and understand the Sampling Instructions sheet – especially the order in which to do the sampling stations.**

2. **Read and understand the Health & Safety guidelines.**

3. **Check that you have the correct sampling bag for your allotted transect.**

4. **Check that you have the data sheets SPECIFIC TO YOUR ALLOTTED TRANSECT –**
   1 transect location sheet
   1 location map with cockle and nut shell photos
   4 transect data sheets (for recording counts at HT, UMT, LMT and LT)

5. **Check that you have a spade or other suitable digging tool.**

6. **Check that you are fully familiar with the transect location and direction.**

7. **Check that you are fully familiar with any instructions on car parking and access to the shore – this is a health and safety issue.**

Before you head off with your team --

Check that your team know where to park and how to get there safely (instructions are on transect sheet).

Make sure that your team understands the Health & Safety guidelines.

Appendix D 2013 survey tally sheet.

2013 Pauatahanui Inlet Cockle Survey

Transect Number 1

High tide sample

Tally marks (//// //)

Size (mm)	Quadrat A	Size (mm)	Quadrat B	Size (mm)	Quadrat C
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
10		10		10	
11		11		11	
12		12		12	
13		13		13	
14		14		14	
15		15		15	
16		16		16	
17		17		17	
18		18		18	
19		19		19	
20		20		20	
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26		26		26	
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28		28		28	
29		29		29	
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32		32		32	
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37		37		37	
38		38		38	
39		39		39	
40		40		40	
41		41		41	
42		42		42	
43		43		43	
44		44		44	
45		45		45	
46		46		46	
47		47		47	
48		48		48	
49		49		49	
50		50		50	

Appendix E 2013 Pauatahanui Inlet cockle count transect location details.

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
1	Mana	**Mana beach; access by lane beside Stillwater Lodge.** Turn left and walk to a large taupata bush and a clump of Agapanthus about 65 metres north of access lane (pink spot on taupata)	S:41 05 911 E:174 52 252	E2667 131 N6010 344	Kakaho Stream mouth; below deforested patch on hillside.	20
2	Mana	**Mana beach; access by lane beside Stillwater Lodge.** Pink '2' on rock by long line of bushes just south of access lane. Below two pohutakawa trees.	S:41 05 955 E:174 52 258	E2667 135 N6010 250	Southern edge of Motukaraka Point (eastern edge of Gray's Bush)	20
3	Mana	**Mana beach car park just over Paremata Bridge.** Walk north from toilet block to the end of sloping wooden retaining wall to pink spot on rock in front of very large macrocarpa tree.	S:41 06 258 E:174 52 295	E2667 151 N6010 090	2 storey house with 2 green roofs at beach level on Golden Gate	Take HT samples at the pink stake on other side of the deep channel that exists between location marker and this site; **do not cross this channel at this point – it is muddy and could be dangerous – the green sea lettuce weed hides the mud from view.** Go north around the channel until you can cross in shallow water without green weed.
3A	Mana (Golden Gate) (Seaview Road)	**Park at Ivey Bay car park. CROSS ROAD VIA UNDERPASS TO KINDERGARTEN.** Front left corner of boatshed with ramp by house number 37A.	N/A	N/A	Most easterly boatshed on Camborne walkway	0

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
4	Browns Bay	Seawall opposite large brown house at foot of Postgate Drive. A half buried pole (marked with pink spot) about 25 paces west of large storm drain	S:41 06 320 E:174 52841	E2667 847 N6009 562	Houses at Motukaraka Point	10
5	Browns Bay	Rocks marked with pink '5' east of stream outfall	S:41 06 344 E:174 52 910	E2668 038 N6009 515	Kakaho stream mouth; left of Gray's Bush	20
6	Browns Bay	Foot of steps from car park to beach	S:41 06 347 E:174 52 947	E2668 099 N6009 502	Moorhouse Point (end of Golden Gate peninsula)	20
7	Duck Creek	**Park in space by water side traffic lane of SH 58, about 100 metres east of James Cook Drive. Approach via Joseph Banks Drive route (see map).** Walk back along beach **(do not walk alongside road)** to pink '7' on concrete sea wall 50 metres east of junction of James Cook Drive and SH58.	S:41 06340 E:174 54 123	E2669 738 N6009 474	Large white house at right of block of trees on Motukaraka Point. (Transect line immediately to right of rocky reef at mid-beach)	20
8	Duck Creek	**Park in space by water side traffic lane of SH 58, about 100 metres east of James Cook Drive. Approach via Joseph Banks Drive route (see map).** Walk along beach **(do not walk alongside road)** to 2 water culverts in rip rap rock sea wall at entrance to 374 Paremata Rd.	S:41 06 304 E:174 54 240	E2669 908 N6009 535	Long group of pine trees behind houses at Motukaraka Point.	20
9	Duck Creek	**Park in extension of entrance to 374 Paremata Road (SH 58). TAKE CARE IN CROSSING ROAD.** Rip rap rock sea wall just west of entrance to 374. Green paint spot on easternmost rip rap rock	S: 41 06 294 E: 174 54 341	E2670 045 N6009 571	Prominent white house above fields. This house is well to the left of red-roofed house.	25

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
10	Bromley	**Park in space by water side traffic lane of SH 58, about 100 metres east of James Cook Drive. Approach via Joseph Banks Drive route (see map).** Walk along beach **(do not walk alongside road)** to pink '10' on driftwood below Wildlife Reserve sign on SH58.	S:41 06 274 E:174 54 442	E2670 193 N6009 602	Gap between two groups of pine trees on Motukaraka Point	20
11	Bromley	**Park in space by water side traffic lane of SH 58, about 100 metres east of James Cook Drive. Approach via Joseph Banks Drive route (see map).** Walk along beach **(do not walk alongside road)** to pink '11' on driftwood log about 160 paces beyond transect 10 marker.	S:41 06 227 E:174 54 543	E2670 322 N6009 702	Camborne	20
12	Bromley (Pauatahanui)	Pink painted stake about 100 paces south of transect 13 stake.	S: E:	E2670 654 N6009884	Moorhouse Point; twin radio masts	20
13	Bromley (Pauatahanui)	Pink painted stake immediately to left of entry point to beach.	S: E:	E2670 674 N6009 976	Camborne	20
14	Pauatahanui (Ration Point)	**Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point.** Enter shore at this point. Turn right and go to pink stake numbered 14.	S:41 05 814 E:174 54 539	E2670 339 N6010 440	Yellow cliffs at mouth of Duck Creek. Right of large white house on the cliff.	20

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
15	Pauatahanui (Ration Point)	**Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point.** Enter shore at this point. Turn right and go to pink topped stake numbered 15 (about 200 paces from beach entry point. **Keep to edge of shell banks where you can to avoid mud patches.**	S:41 05 755 E:174 54 475	E2670 251 N6010 555	Yellow cliffs at mouth of Duck Creek. Right of large white house on the cliff.	20
16	Pauatahanui (Horikiri Stream)	**Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point.** Enter shore at this point. Turn right and go past location markers for stations 14 and 15 to pink topped stake numbered 16 (about 400 paces from beach entry point). **Keep to edge of shell banks where you can to avoid mud patches.**	S:41 05 690 E:174 54 400	E2670 166 N6010 673	Yellow cliffs at mouth of Duck Creek. Right of large white house on the cliff.	15
17	Motukaraka (Horikiri Stream)	**Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point.** Enter shore at this point. Turn right and walk -along the shell banks – **DO NOT WALK LANDWARD OF SHELL BANK AS THE MUD IS DEEP** – until you reach the Horokiri stream by some large flax bushes (see photo). Location marker is a pink piece of driftwood by these bushes.	S:41 05 673 E:174 54 287	E2669 993 N6010 712	Yellow cliffs at mouth of Duck Creek. Right of large white house on the cliff.	20

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
18	Motukaraka	Rush clumps below blue seat under a very large tree at vehicle turnaround area at east Motukara Point.	S:41 05 655 E:174 54 113	E2669 745 N6010 742	Yellow cliff amongst bush west of Duck Creek (note: do not mistake this for a much larger yellow cliff east of Duck Creek)	30
19	Motukaraka West	Park cars by blue seat next to a tarmac path to beach at east Motukaraka Point. Walk west along beach about 50 metres to a pink spot on remnants of a brick fireplace.	S:41 05 705 E:174 53 941	E2669 505 N6010 669	Bradey Bay (bush filled gully to right of prominent yellowish house).	10
20	Motukaraka West	At seaward edge of grass bank opposite entrance to house number 7 a pink stake marks a path to beach. Location marker a pink spot on driftwood on shell bank at end of path.	S:41 05 631 E:174 53 850	E2669 389 N6010 805	Moorhouse Point (tip of Golden Gate peninsula)	20
21	Motukaraka West	**Park at car park by public toilets.** Find culvert outlet from grass bank in front of toilet block.	S:41 05 519 E:174 53 911	E2669 479 N6011 003	Camborne	15
22	Motukaraka West	**Park at car park by public toilets.** Walk across mud flats to pink painted driftwood beneath a large bush on shell bank on beach opposite garage at entrance to “Barrowside” 325 Grays Road and the yellow/black 55 chevron sign. **TAKE CARE TO AVOID WALKING ON SALT MARSH PLANTS**	S:41 05 442 E:174 53 922	E2669 493 N6011 145	Moorhouse Point (tip of Golden Gate peninsula)	15
23	Kakahao	**Park at Kakaho Bridge. Walk along path through grass alongside stream to beach. Turn left and go round to sea wall.** Location marker is a pink spot on rock wall opposite 283 Grays Road (about 30 metres east of car park)	S:41 05 315 E:174 53 705	E266 9207 N6011 392	Paremata Bridge; Paremata Boating Club buildings; mouth of Inlet.	15

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
24	Kakahao	**Park at Kakaho bridge and cross bridge WITH GREAT CARE. Leave road about 20 metres from bridge and walk through mud flat to shell bank below salt marsh. DO NOT WALK ON SALT MARSH PLANTS.** Walk west along shore to pink topped stake numbered 24 on the shell bank.	S: 41 05 240 E: 174 53 586	E2669 027 N6009 540	Browns Bay	20
25	Kakaho	**Park at Kakaho bridge and cross bridge WITH GREAT CARE.** Leave road at 2nd black on yellow **>** road sign and walk through mud flat to shell bank below salt marsh. **DO NOT WALK ON SALT MARSH PLANTS.** Walk west to pink topped stake number 25 on the shell bank; about 100 paces beyond stake number 24, in line with blue house.	S: 41 05 233 E: 174 53 493	E2668 896 N6011 565	Prominent hill (Mercury Hill) in foreground just east of Browns Bay.	20
26	Kakaho (Camborne)	**Park at Wellington Jet Sport Club at east end of Camborne walkway.** Walk east along beach to drain opposite wooden gate; about 25 metres before you get to a 'wiggly road' sign; dab of pink paint on wall by drain	S: 41 05 254 E: 174 53 327	E2668 664 N6011 535	Bradey Bay (bush filled gully to right of prominent yellowish house).	25
27	Camborne	**Park at Wellington Jet Sport Club at east end of Camborne walkway.** Walk east along beach to a memorial cross by a drain just west of fallen large macrocarpa trees	S: 41 05 324 E: 174 53 172	E 2668 450 N 6011 397	Bradey Bay (bush filled gully to right of prominent yellowish house).	35

No.	Locality	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site
28	Camborne	**Park at Wellington Jet Sport Club at east end of Camborne walkway.** Walk east along beach to set of steps to beach from Grays Road (about 100 paces east of black/white striped poles).	S: 41 05 349 E: 174 53 097	E 2668 342 N 6011 345	Prominent hill (Mercury Hill) in foreground just east of Browns Bay.	15
29	Camborne	**Park at Wellington Jet Sport Club at east end of Camborne walkway.** Walk east along beach to black/white striped pole on beach below similar pole on roadside	S: 41 05 361 E: 174 53 037	E2668 255 N6011 331	Prominent hill (Mercury Hill) in foreground just east of Browns Bay.	15
30	Camborne	**Park at Wellington Jet Sport Club at east end of Camborne walkway.** Black/white striped pole in car park by water ski club house.	S: 41 05 393 E: 174 52 897	E2668 070 N6011 296	Yellow cliffs at mouth of Duck Creek	20

Appendix F **December 2013 survey data, HT, high tide; UMT, upper mid-tide; LMT, lower mid-tide; and LT, low tide, and the three quadrats (A–C)**

	Length	Number of cockles																
	(mm)	HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
Transect		A	B	C	total	A	B	C	total	A	B	C	total	A	B	C	total	Number
1	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	**2**	0	0	0	0	2	0	0	2	0	0	1	1	0	0	0	0	3
1	**3**	4	0	1	5	4	1	0	5	0	1	0	1	0	0	0	0	11
1	**4**	1	0	0	1	3	0	1	4	0	1	0	1	1	0	0	1	7
1	**5**	1	1	1	3	9	0	0	9	0	2	0	2	0	0	1	1	15
1	**6**	1	0	0	1	2	0	0	2	1	0	1	2	0	0	1	1	6
1	**7**	0	1	0	1	1	0	1	2	1	2	1	4	1	0	0	1	8
1	**8**	0	0	0	0	0	3	3	6	0	1	0	1	0	1	0	1	8
1	**9**	0	0	1	1	2	1	1	4	2	0	1	3	0	0	0	0	8
1	**10**	0	0	0	0	4	1	3	8	0	0	2	2	1	1	0	2	12
1	**11**	0	0	2	2	7	2	2	11	1	2	3	6	0	2	0	2	21
1	**12**	0	0	1	1	3	2	3	8	2	1	0	3	0	0	0	0	12
1	**13**	3	0	0	3	5	0	3	8	2	3	1	6	1	1	0	2	19
1	**14**	0	0	1	1	2	5	5	12	3	1	0	4	0	0	0	0	17
1	**15**	8	0	2	10	4	6	6	16	4	2	3	9	0	0	1	1	36
1	**16**	5	1	5	11	5	6	10	21	1	2	2	5	0	0	0	0	37
1	**17**	4	1	3	8	5	8	2	15	0	0	0	0	0	0	1	1	24
1	**18**	3	1	2	6	6	8	7	21	0	0	0	0	1	1	0	2	29
1	**19**	6	1	2	9	7	10	13	30	1	2	1	4	0	0	0	0	43
1	**20**	2	0	1	3	8	10	2	20	5	6	2	13	1	3	0	4	40
1	**21**	0	0	1	1	7	4	4	15	0	3	1	4	0	2	0	2	22
1	**22**	0	1	1	2	4	7	3	14	1	2	4	7	1	0	1	2	25
1	**23**	0	0	0	0	4	4	6	14	10	7	6	23	0	1	0	1	38
1	**24**	1	0	0	1	3	2	2	7	8	6	6	20	2	1	4	7	35
1	**25**	0	0	0	0	1	6	3	10	16	7	7	30	8	5	8	21	61
1	**26**	0	0	0	0	1	0	4	5	9	7	2	18	4	1	10	15	38

		Length	Number of cockles																
	Transect	(mm)	HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
1		**27**	0	0	0	0	0	0	0	0	5	5	2	12	5	5	4	14	26
1		**28**	0	0	0	0	0	1	0	1	1	2	0	3	5	3	6	14	18
1		**29**	0	0	0	0	1	0	0	1	1	5	0	6	2	0	4	6	13
1		**30**	0	0	0	0	0	0	0	0	4	2	2	8	6	4	8	18	26
1		**31**	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	3	4
1		**32**	0	0	0	0	0	0	0	0	0	2	0	2	5	1	2	8	10
1		**33**	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	7	7
1		**34**	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	4	5
1		**35**	0	0	0	0	0	0	0	0	0	0	0	0	2	4	3	9	9
1		**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1		**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**40**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
1		**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**48**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
1		**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1		**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2		**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2		**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2		**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2		**4**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
2		**5**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
2		**6**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
2		**7**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
2		**8**	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
2		**9**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
2		**10**	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	4
2		**11**	0	0	0	0	1	0	0	1	0	3	0	3	0	1	0	1	5
2		**12**	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
2		**13**	0	0	0	0	1	1	1	3	0	1	1	2	0	0	0	0	5
2		**14**	0	0	0	0	2	2	0	4	0	0	1	1	0	1	0	1	6
2		**15**	0	0	1	1	2	3	0	5	0	1	3	4	0	0	0	0	10
2		**16**	0	0	2	2	3	1	1	5	0	0	1	1	0	0	0	0	8
2		**17**	0	0	0	0	4	1	2	7	0	0	1	1	0	0	0	0	8
2		**18**	0	0	0	0	12	7	5	24	0	1	3	4	0	0	0	0	28
2		**19**	0	0	1	1	9	6	4	19	0	1	3	4	0	0	0	0	24
2		**20**	0	0	0	0	9	8	4	21	0	1	4	5	1	1	0	2	28
2		**21**	0	0	1	1	4	7	7	18	0	2	2	4	0	0	0	0	23
2		**22**	0	0	0	0	3	2	7	12	1	4	7	12	3	0	0	3	27
2		**23**	0	0	0	0	1	4	5	10	0	1	4	5	0	0	0	0	15
2		**24**	0	0	0	0	1	2	6	9	1	5	15	21	0	3	1	4	34
2		**25**	0	0	0	0	2	1	2	5	1	5	12	18	1	1	1	3	26
2		**26**	0	0	0	0	1	0	1	2	5	4	14	23	0	2	1	3	28
2		**27**	0	0	0	0	1	0	0	1	3	4	10	17	1	1	3	5	23
2		**28**	0	0	0	0	0	1	3	4	5	7	6	18	3	3	3	9	31
2		**29**	0	0	0	0	0	0	1	1	0	2	1	3	1	0	5	6	10
2		**30**	0	0	0	0	0	0	0	0	2	4	4	10	2	8	0	10	20
2		**31**	0	0	0	0	0	1	0	1	1	1	0	2	3	3	2	8	11
2		**32**	0	0	0	0	0	1	0	1	1	2	4	7	2	7	0	9	17
2		**33**	0	0	0	0	0	0	0	0	0	2	0	2	5	2	1	8	10
2		**34**	0	0	0	0	0	0	0	0	1	1	1	3	0	4	1	5	8

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
2	**35**	0	0	0	0	0	0	0	0	2	0	0	2	5	0	0	5	7
2	**36**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
2	**37**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
2	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**3**	0	0	1	1	0	0	0	0	0	0	0	0	0	1	2	3	4
3	**4**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
3	**5**	0	2	2	4	0	0	0	0	3	0	0	3	1	2	0	3	10
3	**6**	0	1	0	1	0	0	0	0	0	0	0	0	1	1	0	2	3
3	**7**	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
3	**8**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
3	**9**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
3	**10**	1	0	0	1	1	0	0	1	2	0	0	2	0	0	0	0	4
3	**11**	2	0	0	2	0	0	1	1	1	1	2	4	1	0	0	1	8
3	**12**	0	0	0	0	1	0	0	1	1	1	0	2	0	0	0	0	3
3	**13**	0	2	0	2	2	0	0	2	0	2	0	2	0	0	1	1	7

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
3		**14**	0	1	0	1	2	2	1	5	0	1	2	3	0	0	0	0	9
3		**15**	2	4	1	7	0	2	2	4	2	0	0	2	0	0	0	0	13
3		**16**	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
3		**17**	0	0	0	0	0	2	0	2	1	0	2	3	0	0	0	0	5
3		**18**	0	2	0	2	0	2	0	2	1	0	2	3	0	0	0	0	7
3		**19**	1	2	0	3	0	0	1	1	1	0	0	1	0	0	0	0	5
3		**20**	4	0	0	4	1	2	0	3	2	1	2	5	0	0	1	1	13
3		**21**	1	0	0	1	2	3	3	8	0	0	0	0	0	0	0	0	9
3		**22**	2	1	1	4	1	5	2	8	0	0	1	1	0	2	0	2	15
3		**23**	0	0	0	0	1	4	1	6	0	2	0	2	0	0	0	0	8
3		**24**	1	3	1	5	3	4	1	8	1	1	2	4	0	0	0	0	17
3		**25**	0	6	3	9	4	4	1	9	2	1	3	6	0	1	1	2	26
3		**26**	0	1	3	4	3	5	0	8	1	1	2	4	1	0	0	1	17
3		**27**	1	6	5	12	4	6	3	13	1	2	2	5	0	0	0	0	30
3		**28**	3	10	5	18	3	6	1	10	2	5	0	7	0	1	0	1	36
3		**29**	6	9	8	23	2	4	3	9	0	4	1	5	0	1	1	2	39
3		**30**	3	7	12	22	2	3	0	5	1	5	2	8	0	0	1	1	36
3		**31**	5	17	10	32	0	0	0	0	2	1	0	3	0	0	0	0	35
3		**32**	3	20	4	27	1	2	0	3	2	2	0	4	1	0	0	1	35
3		**33**	3	7	1	11	0	0	0	0	0	3	0	3	0	0	0	0	14
3		**34**	10	16	3	29	1	0	0	1	1	2	0	3	0	0	0	0	33
3		**35**	11	5	3	19	0	0	0	0	0	1	0	1	1	0	1	2	22
3		**36**	5	7	2	14	0	0	0	0	0	1	0	1	0	0	0	0	15
3		**37**	2	2	1	5	0	0	0	0	0	0	0	0	0	0	1	1	6
3		**38**	2	3	1	6	0	0	0	0	0	0	0	0	0	0	0	0	6
3		**39**	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
3		**40**	2	1	0	3	0	0	0	0	0	0	0	0	0	0	2	2	5
3		**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3		**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
3	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
3a	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
3a	**5**	0	0	1	1	0	0	0	0	0	0	2	2	0	1	0	1	4
3a	**6**	0	0	0	0	0	0	0	0	0	1	0	1	1	1	3	5	6
3a	**7**	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	3	4
3a	**8**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
3a	**9**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3a	**10**	2	0	0	2	0	0	1	1	1	0	0	1	0	0	0	0	4
3a	**11**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
3a	**12**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**13**	0	0	0	0	0	1	0	1	0	0	1	1	1	0	0	1	3
3a	**14**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3a	**15**	3	0	0	3	0	0	0	0	0	0	1	1	1	0	0	1	5
3a	**16**	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
3a	**17**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
3a	**18**	1	0	0	1	1	0	1	2	0	0	1	1	0	0	0	0	4
3a	**19**	3	0	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
3a	**20**	2	1	2	5	0	0	0	0	0	0	0	0	0	2	0	2	7
3a	**21**	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
3a	**22**	0	3	2	5	0	0	2	2	2	1	0	3	0	0	0	0	10
3a	**23**	0	0	3	3	0	0	0	0	0	0	1	1	0	0	0	0	4
3a	**24**	0	0	1	1	0	1	0	1	0	1	1	2	0	0	0	0	4
3a	**25**	0	3	3	6	1	2	2	5	0	1	1	2	0	0	0	0	13
3a	**26**	0	2	0	2	1	1	1	3	2	2	4	8	0	0	1	1	14
3a	**27**	0	0	0	0	0	0	0	0	2	0	2	4	2	0	1	3	7
3a	**28**	0	0	0	0	0	0	0	0	1	0	2	3	0	0	0	0	3
3a	**29**	0	0	0	0	2	0	0	2	1	2	3	6	1	0	1	2	10
3a	**30**	2	0	1	3	5	2	2	9	3	4	3	10	3	5	1	9	31
3a	**31**	0	0	0	0	4	1	1	6	4	2	0	6	3	0	0	3	15
3a	**32**	0	0	0	0	3	2	2	7	3	2	3	8	4	0	0	4	19
3a	**33**	0	0	0	0	3	0	1	4	3	2	0	5	1	0	1	2	11
3a	**34**	0	0	0	0	0	0	0	0	2	1	1	4	0	0	1	1	5
3a	**35**	0	0	0	0	0	0	1	1	3	1	3	7	3	0	2	5	13
3a	**36**	0	0	0	0	0	1	0	1	1	2	0	3	4	0	2	6	10
3a	**37**	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	3	4
3a	**38**	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
3a	**39**	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	3
3a	**40**	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	2	3
3a	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
3a	**44**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3a	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
4		**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**4**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
4		**5**	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	2	3
4		**6**	0	0	0	0	1	1	0	2	0	0	2	2	0	0	1	1	5
4		**7**	0	0	0	0	2	1	1	4	0	0	4	4	0	0	1	1	9
4		**8**	0	0	0	0	0	2	3	5	2	0	2	4	0	0	0	0	9
4		**9**	1	0	0	1	1	2	4	7	3	0	1	4	1	0	0	1	13
4		**10**	0	0	0	0	1	0	0	1	1	1	3	5	0	0	0	0	6
4		**11**	0	0	0	0	2	1	1	4	0	0	2	2	0	0	0	0	6
4		**12**	2	0	0	2	2	0	0	2	0	1	1	2	0	1	0	1	7
4		**13**	0	0	0	0	1	2	1	4	0	0	3	3	1	0	0	1	8
4		**14**	1	1	0	2	2	2	2	6	1	0	1	2	0	1	0	1	11
4		**15**	0	0	0	0	1	3	3	7	0	1	0	1	0	0	0	0	8
4		**16**	3	0	0	3	3	3	5	11	2	0	1	3	1	0	0	1	18
4		**17**	1	2	0	3	0	2	2	4	1	2	1	4	1	0	0	1	12
4		**18**	0	1	0	1	3	0	4	7	2	3	3	8	1	0	1	2	18
4		**19**	1	4	3	8	3	0	2	5	1	3	1	5	0	1	1	2	20
4		**20**	2	3	1	6	1	0	2	3	0	2	5	7	0	1	0	1	17
4		**21**	0	0	1	1	1	1	1	3	0	1	1	2	0	1	2	3	9
4		**22**	1	1	0	2	2	0	3	5	1	2	2	5	0	1	2	3	15
4		**23**	0	2	1	3	2	0	2	4	0	2	2	4	0	0	0	0	11
4		**24**	0	0	1	1	5	1	0	6	1	1	3	5	2	0	0	2	14
4		**25**	1	1	1	3	1	0	1	2	8	5	2	15	3	1	1	5	25
4		**26**	0	1	1	2	1	1	1	3	3	0	2	5	2	0	3	5	15
4		**27**	0	3	0	3	0	0	1	1	1	1	3	5	2	0	0	2	11
4		**28**	0	1	0	1	1	0	0	1	2	2	4	8	2	1	0	3	13
4		**29**	0	0	0	0	0	0	0	0	1	0	1	2	2	1	0	3	5

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
4		**30**	0	0	0	0	1	0	0	1	6	3	8	17	1	1	5	7	25
4		**31**	0	0	0	0	0	0	0	0	0	0	5	5	1	2	2	5	10
4		**32**	0	0	0	0	0	0	0	0	0	0	3	3	2	1	3	6	9
4		**33**	0	0	0	0	0	0	0	0	0	0	1	1	1	1	4	6	7
4		**34**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	4
4		**35**	0	0	0	0	0	0	0	0	0	0	1	1	3	1	6	10	11
4		**36**	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4	4
4		**37**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	5	5
4		**38**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4		**39**	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
4		**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4		**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**2**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5		**3**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5		**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
5		**5**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
5		**6**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	4
5		**7**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
5		**8**	0	0	0	0	0	0	1	1	0	1	0	1	1	0	2	3	5

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
5		**9**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
5		**10**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
5		**11**	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
5		**12**	0	0	1	1	0	0	0	0	1	0	0	1	1	0	0	1	3
5		**13**	0	0	0	0	1	1	0	2	1	0	0	1	0	0	1	1	4
5		**14**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5		**15**	0	0	0	0	0	1	0	1	1	1	0	2	0	1	0	1	4
5		**16**	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
5		**17**	0	0	0	0	2	2	0	4	0	0	1	1	0	0	2	2	7
5		**18**	0	0	0	0	0	1	1	2	1	5	0	6	4	1	2	7	15
5		**19**	0	0	0	0	1	0	1	2	1	3	0	4	0	2	0	2	8
5		**20**	1	1	0	2	3	1	2	6	0	0	2	2	8	1	2	11	21
5		**21**	0	0	0	0	2	0	0	2	1	6	0	7	0	1	0	1	10
5		**22**	0	0	0	0	3	0	1	4	1	2	1	4	6	0	1	7	15
5		**23**	0	0	0	0	2	0	3	5	3	4	3	10	7	0	0	7	22
5		**24**	0	0	0	0	5	3	6	14	3	4	3	10	2	2	3	7	31
5		**25**	0	0	0	0	1	1	4	6	5	4	1	10	12	6	4	22	38
5		**26**	0	0	0	0	1	0	2	3	3	5	1	9	4	6	8	18	30
5		**27**	0	0	0	0	1	0	0	1	3	6	3	12	7	4	7	18	31
5		**28**	0	0	1	1	0	2	1	3	2	3	1	6	4	6	5	15	25
5		**29**	0	0	0	0	1	0	0	1	1	1	1	3	1	2	3	6	10
5		**30**	0	0	0	0	0	0	0	0	0	0	0	0	14	1	4	19	19
5		**31**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	3	4
5		**32**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	6	6
5		**33**	0	0	0	0	0	0	0	0	0	0	1	1	1	0	4	5	6
5		**34**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	5	5	6
5		**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
5		**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
5		**37**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1

		Length	Number of cockles																
	Transect	(mm)	HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
5		**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
5		**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**1**	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	0	0	0	0	0	0	0	0	0	0	0
6		**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**5**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**7**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
6		**8**	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
6		**9**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
6		**10**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**11**	0	0	0	0	0	0	0	0	3	2	0	5	1	0	0	1	6
6		**12**	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
6		**13**	0	0	0	0	0	0	0	0	1	2	0	3	1	0	1	2	5
6		**14**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
6		**15**	0	0	0	0	0	0	0	0	0	1	0	1	1	2	1	4	5
6		**16**	0	0	0	0	0	0	0	0	1	3	0	4	0	0	1	1	5

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
6		**17**	0	0	0	0	0	0	0	0	1	3	0	4	1	1	0	2	6
6		**18**	0	0	0	0	0	0	0	0	1	2	1	4	3	3	0	6	10
6		**19**	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
6		**20**	0	0	0	0	0	1	0	1	2	2	1	5	3	3	1	7	13
6		**21**	0	0	0	0	0	0	1	1	0	4	0	4	5	1	0	6	11
6		**22**	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
6		**23**	0	0	0	0	0	1	0	1	1	2	0	3	5	5	1	11	15
6		**24**	0	0	0	0	0	1	0	1	1	1	0	2	5	6	2	13	16
6		**25**	0	0	0	0	1	0	0	1	2	3	0	5	4	3	5	12	18
6		**26**	0	0	0	0	0	1	0	1	2	0	0	2	2	5	1	8	11
6		**27**	0	0	0	0	0	0	0	0	2	1	0	3	3	1	1	5	8
6		**28**	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	12	12
6		**29**	0	0	0	0	0	0	0	0	0	0	0	0	6	1	0	7	7
6		**30**	0	0	0	0	0	0	0	0	0	0	0	0	4	1	3	8	8
6		**31**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6		**32**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
6		**33**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
6		**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6		**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6		**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
6		**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		**4**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7		**5**	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7		**6**	1	1	2	4	0	1	0	1	0	0	0	0	0	1	0	1	6
7		**7**	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	2
7		**8**	3	1	1	5	1	0	0	1	0	0	0	0	0	0	0	0	6
7		**9**	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7		**10**	1	3	2	6	0	0	1	1	0	0	0	0	0	0	0	0	7
7		**11**	1	1	1	3	0	1	0	1	0	0	0	0	1	0	0	1	5
7		**12**	3	0	2	5	0	3	0	3	0	0	1	1	0	0	0	0	9
7		**13**	2	3	0	5	0	1	0	1	1	1	1	3	0	3	1	4	13
7		**14**	1	4	2	7	0	0	0	0	0	0	0	0	0	0	0	0	7
7		**15**	1	4	3	8	0	0	0	0	0	0	0	0	0	0	0	0	8
7		**16**	3	4	4	11	0	0	0	0	0	0	0	0	0	0	0	0	11
7		**17**	1	5	3	9	0	0	0	0	0	0	0	0	0	0	0	0	9
7		**18**	1	4	2	7	2	0	0	2	0	0	0	0	1	0	0	1	10
7		**19**	0	10	4	14	0	0	0	0	0	1	0	1	0	0	2	2	17
7		**20**	3	3	1	7	2	2	1	5	3	0	1	4	0	2	2	4	20
7		**21**	6	7	1	14	0	1	0	1	0	2	1	3	1	1	0	2	20
7		**22**	2	7	4	13	0	0	2	2	1	1	0	2	1	1	0	2	19
7		**23**	1	9	1	11	0	1	0	1	1	2	0	3	3	1	2	6	21
7		**24**	3	2	3	8	0	0	1	1	4	1	1	6	2	0	2	4	19

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
7	**25**	1	2	2	5	0	1	3	4	3	2	4	9	7	1	9	17	35
7	**26**	0	0	1	1	0	2	0	2	0	0	0	0	1	2	1	4	7
7	**27**	0	0	0	0	0	0	1	1	2	0	1	3	1	0	2	3	7
7	**28**	0	1	1	2	0	0	1	1	1	1	1	3	2	0	1	3	9
7	**29**	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
7	**30**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	5
7	**31**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7	**32**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**33**	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
7	**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
8		4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8		5	0	0	0	0	1	0	0	1	2	0	0	2	2	0	0	2	5
8		6	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8		7	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
8		8	1	0	0	1	0	2	0	2	0	0	0	0	0	0	1	1	4
8		9	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
8		10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
8		11	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	3
8		12	1	0	1	2	0	0	1	1	0	2	0	2	0	0	1	1	6
8		13	1	0	0	1	3	0	1	4	0	1	0	1	1	0	1	2	8
8		14	1	0	0	1	0	3	0	3	1	0	0	1	2	1	0	3	8
8		15	0	0	1	1	0	1	0	1	2	0	2	4	2	0	0	2	8
8		16	0	0	0	0	0	3	0	3	1	2	0	3	2	2	4	8	14
8		17	1	2	1	4	0	0	1	1	0	5	0	5	1	0	3	4	14
8		18	0	0	2	2	0	2	0	2	3	1	0	4	1	0	0	1	9
8		19	0	0	2	2	2	2	1	5	1	0	3	4	1	2	0	3	14
8		20	0	1	1	2	2	4	1	7	1	1	2	4	3	2	4	9	22
8		21	0	0	2	2	0	1	2	3	2	5	0	7	3	0	3	6	18
8		22	0	0	1	1	1	1	1	3	3	1	0	4	6	2	1	9	17
8		23	1	0	0	1	0	1	1	2	2	1	1	4	3	0	1	4	11
8		24	1	1	0	2	0	0	1	1	1	2	1	4	4	3	0	7	14
8		25	0	0	0	0	0	1	1	2	1	0	1	2	0	0	2	2	6
8		26	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	3
8		27	0	0	0	0	0	0	1	1	0	1	0	1	1	0	1	2	4
8		28	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
8		29	0	1	0	1	0	0	1	1	0	0	0	0	0	0	1	1	3
8		30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8		31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		32	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
8		**33**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**5**	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
9		**6**	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
9		**7**	0	0	1	1	0	0	0	0	1	0	1	2	0	0	0	0	3
9		**8**	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
9		**9**	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	4
9		**10**	0	1	1	2	0	1	0	1	0	0	0	0	1	0	0	1	4
9		**11**	0	0	0	0	0	2	1	3	2	1	1	4	1	0	0	1	8

	Transect	Length (mm)	Number of cockles																
			HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
9		**12**	0	2	0	2	1	2	4	7	2	0	2	4	0	0	0	0	13
9		**13**	0	0	2	2	2	1	2	5	2	1	1	4	1	0	1	2	13
9		**14**	0	0	0	0	3	2	4	9	1	3	2	6	0	2	1	3	18
9		**15**	3	1	2	6	3	9	3	15	3	0	4	7	0	1	0	1	29
9		**16**	1	1	4	6	3	3	0	6	1	2	4	7	4	2	3	9	28
9		**17**	0	0	0	0	1	0	0	1	0	0	2	2	3	1	2	6	9
9		**18**	1	0	2	3	1	2	2	5	5	3	4	12	6	2	9	17	37
9		**19**	0	0	1	1	1	3	1	5	2	2	1	5	5	5	4	14	25
9		**20**	0	0	1	1	4	2	2	8	2	3	6	11	12	5	8	25	45
9		**21**	0	0	0	0	0	0	1	1	2	2	1	5	3	0	5	8	14
9		**22**	0	1	0	1	1	1	1	3	0	2	3	5	6	2	5	13	22
9		**23**	0	1	1	2	0	0	0	0	0	0	2	2	7	3	1	11	15
9		**24**	0	0	1	1	0	1	1	2	1	0	1	2	6	2	1	9	14
9		**25**	0	1	0	1	1	1	2	4	0	1	2	3	5	1	6	12	20
9		**26**	0	0	0	0	0	1	0	1	1	2	2	5	3	0	3	6	12
9		**27**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**28**	0	0	0	0	0	1	1	2	0	0	0	0	2	0	4	6	8
9		**29**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
9		**30**	0	2	0	2	0	0	0	0	0	2	0	2	3	0	3	6	10
9		**31**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
9		**32**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9		**33**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
9		**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**35**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
9		**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**37**	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	2
9		**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
9		**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		**40**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	3

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
9	**41**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
9	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**44**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	**50**	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
9	**54**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
9	**58**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
10	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**4**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
10	**5**	1	1	0	2	0	0	0	0	0	0	2	2	2	2	2	6	10
10	**6**	1	3	0	4	0	0	1	1	0	0	1	1	1	0	1	2	8
10	**7**	2	2	0	4	1	1	0	2	0	1	0	1	0	1	0	1	8
10	**8**	0	1	0	1	0	1	0	1	0	0	0	0	0	1	1	2	4
10	**9**	0	1	1	2	1	1	0	2	0	0	0	0	0	2	2	4	8
10	**10**	0	0	0	0	2	1	0	3	0	0	0	0	1	0	0	1	4
10	**11**	4	2	2	8	2	1	0	3	0	0	0	0	0	0	0	0	11
10	**12**	4	2	0	6	1	0	0	1	0	3	0	3	0	0	1	1	11
10	**13**	2	4	0	6	0	2	0	2	0	0	0	0	1	1	0	2	10
10	**14**	1	3	2	6	1	2	0	3	0	0	0	0	1	0	0	1	10
10	**15**	3	1	2	6	3	3	3	9	0	0	0	0	1	0	1	2	17
10	**16**	2	2	0	4	3	3	7	13	1	0	0	1	0	0	0	0	18
10	**17**	0	0	0	0	2	2	0	4	0	1	0	1	0	0	0	0	5

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
10	**18**	3	0	0	3	1	2	4	7	1	0	0	1	0	1	1	2	13
10	**19**	1	0	1	2	4	5	5	14	0	0	3	3	1	0	0	1	20
10	**20**	0	0	0	0	4	1	3	8	0	1	2	3	0	1	0	1	12
10	**21**	0	0	0	0	2	2	2	6	2	2	1	5	0	0	0	0	11
10	**22**	0	0	0	0	1	2	3	6	0	5	0	5	0	0	0	0	11
10	**23**	0	0	0	0	2	2	1	5	5	4	1	10	0	1	0	1	16
10	**24**	0	0	0	0	2	0	3	5	2	7	2	11	1	0	1	2	18
10	**25**	0	0	0	0	0	3	2	5	5	0	3	8	0	0	0	0	13
10	**26**	0	0	0	0	0	0	0	0	0	0	2	2	0	1	0	1	3
10	**27**	0	0	0	0	0	0	2	2	4	5	0	9	2	3	2	7	18
10	**28**	0	0	0	0	2	0	0	2	1	2	6	9	1	3	2	6	17
10	**29**	0	0	0	0	0	0	0	0	2	2	6	10	5	2	4	11	21
10	**30**	0	0	0	0	0	0	0	0	3	3	2	8	5	5	5	15	23
10	**31**	0	0	0	0	0	0	0	0	2	1	2	5	6	6	4	16	21
10	**32**	0	0	0	0	0	0	0	0	1	0	1	2	5	6	8	19	21
10	**33**	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2	3	4
10	**34**	0	0	0	0	0	0	0	0	0	0	0	0	6	2	2	10	10
10	**35**	0	0	0	0	0	0	0	0	1	0	0	1	2	1	1	4	5
10	**36**	0	0	0	0	0	0	0	0	0	0	0	0	5	1	4	10	10
10	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
10	**38**	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	5
10	**39**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	7	7
10	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
10	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
10	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**4**	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
11	**5**	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
11	**6**	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
11	**7**	1	1	1	3	0	0	1	1	0	1	0	1	0	0	0	0	5
11	**8**	0	1	1	2	1	0	1	2	0	1	1	2	0	0	0	0	6
11	**9**	2	0	3	5	1	0	0	1	0	0	0	0	0	0	0	0	6
11	**10**	3	4	6	13	1	0	2	3	3	0	0	3	1	0	0	1	20
11	**11**	2	5	1	8	0	2	4	6	1	0	0	1	0	0	1	1	16
11	**12**	2	6	6	14	3	0	6	9	0	0	1	1	0	0	0	0	24
11	**13**	3	4	7	14	5	1	4	10	0	0	0	0	0	0	0	0	24
11	**14**	7	6	3	16	4	5	6	15	1	3	1	5	0	0	0	0	36
11	**15**	7	1	5	13	2	3	7	12	0	0	0	0	0	0	0	0	25
11	**16**	3	2	7	12	9	4	5	18	0	1	1	2	0	0	0	0	32
11	**17**	3	1	1	5	6	3	3	12	0	0	0	0	0	0	0	0	17
11	**18**	2	2	1	5	11	3	8	22	3	0	3	6	0	0	0	0	33
11	**19**	1	0	1	2	1	4	4	9	0	0	3	3	0	1	1	2	16
11	**20**	0	0	1	1	3	1	3	7	6	5	2	13	3	0	1	4	25
11	**21**	0	1	0	1	1	2	1	4	2	4	4	10	0	0	1	1	16
11	**22**	0	0	0	0	5	0	1	6	7	12	3	22	1	0	0	1	29
11	**23**	0	0	0	0	0	2	0	2	2	3	1	6	0	0	1	1	9
11	**24**	1	0	0	1	1	0	0	1	4	5	6	15	2	1	0	3	20
11	**25**	0	0	0	0	1	1	0	2	8	4	4	16	1	1	3	5	23

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
11	**26**	0	0	0	0	1	0	0	1	4	2	5	11	1	2	1	4	16
11	**27**	0	0	0	0	0	0	1	1	2	2	0	4	0	0	1	1	6
11	**28**	0	0	0	0	0	0	0	0	2	3	2	7	2	2	4	8	15
11	**29**	0	0	0	0	0	0	0	0	1	2	0	3	1	1	3	5	8
11	**30**	0	0	0	0	0	0	0	0	2	0	1	3	1	4	5	10	13
11	**31**	0	0	0	0	0	0	0	0	0	2	0	2	1	1	2	4	6
11	**32**	0	0	0	0	0	0	0	0	2	0	0	2	2	2	2	6	8
11	**33**	0	0	0	0	0	0	0	0	1	1	1	3	1	0	6	7	10
11	**34**	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	6	6
11	**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
11	**36**	0	0	0	0	0	0	0	0	0	0	0	0	3	1	3	7	7
11	**37**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
11	**38**	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	6	6
11	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
11	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**3**	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
12	**4**	1	0	1	2	0	0	2	2	0	0	0	0	0	0	0	0	4

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
12	**5**	1	2	3	6	0	2	1	3	0	1	0	1	0	0	0	0	10
12	**6**	2	2	0	4	3	2	1	6	2	1	0	3	0	0	0	0	13
12	**7**	1	2	0	3	3	3	1	7	1	1	0	2	0	1	0	1	13
12	**8**	1	1	0	2	1	3	0	4	1	1	0	2	1	0	0	1	9
12	**9**	0	0	0	0	4	2	1	7	2	2	2	6	0	0	1	1	14
12	**10**	1	1	1	3	1	0	1	2	2	2	6	10	2	0	1	3	18
12	**11**	0	0	1	1	1	1	2	4	2	2	2	6	2	0	0	2	13
12	**12**	2	1	0	3	3	1	0	4	6	4	3	13	1	1	0	2	22
12	**13**	0	1	2	3	1	1	3	5	4	4	4	12	0	1	1	2	22
12	**14**	1	2	2	5	2	0	0	2	5	6	8	19	0	1	1	2	28
12	**15**	1	1	0	2	3	6	0	9	4	9	5	18	0	0	1	1	30
12	**16**	4	1	1	6	4	3	1	8	9	7	7	23	0	0	3	3	40
12	**17**	0	1	1	2	6	4	2	12	6	3	4	13	3	0	1	4	31
12	**18**	1	1	0	2	3	3	6	12	7	4	8	19	1	2	0	3	36
12	**19**	2	0	0	2	6	0	1	7	2	4	9	15	0	0	3	3	27
12	**20**	0	1	1	2	1	0	1	2	8	5	8	21	4	7	1	12	37
12	**21**	0	0	0	0	0	2	1	3	1	2	2	5	1	0	0	1	9
12	**22**	0	0	0	0	2	0	0	2	2	0	5	7	4	0	1	5	14
12	**23**	0	0	0	0	0	0	0	0	1	5	5	11	3	0	4	7	18
12	**24**	0	0	0	0	0	0	0	0	0	1	1	2	1	5	4	10	12
12	**25**	0	0	2	2	0	0	0	0	1	1	0	2	2	3	4	9	13
12	**26**	0	0	0	0	0	0	0	0	0	1	0	1	3	3	5	11	12
12	**27**	0	0	0	0	0	0	0	0	1	0	1	2	0	3	5	8	10
12	**28**	0	0	0	0	0	0	0	0	0	0	0	0	5	3	2	10	10
12	**29**	0	0	0	0	0	0	0	0	0	0	0	0	2	2	8	12	12
12	**30**	0	0	0	0	0	0	0	0	1	0	0	1	3	6	5	14	15
12	**31**	0	0	0	0	0	0	0	0	0	0	0	0	3	2	4	9	9
12	**32**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	4
12	**33**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
12	**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
12	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**3**	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4	4
13	**4**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
13	**5**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
13	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**7**	4	0	0	4	0	1	0	1	0	0	0	0	0	0	0	0	5
13	**8**	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	2	4
13	**9**	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
13	**10**	3	2	0	5	1	0	0	1	0	1	0	1	0	1	1	2	9
13	**11**	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
13	**12**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
13	**13**	1	0	1	2	1	0	0	1	0	0	0	0	0	0	0	0	3
13	**14**	5	0	0	5	1	5	0	6	0	0	0	0	0	0	0	0	11
13	**15**	3	0	0	3	0	2	0	2	0	0	1	1	1	0	1	2	8
13	**16**	6	1	2	9	0	6	1	7	0	0	2	2	0	0	0	0	18
13	**17**	2	0	1	3	0	0	0	0	0	0	0	0	1	0	0	1	4
13	**18**	5	2	4	11	0	1	1	2	0	0	0	0	0	3	1	4	17
13	**19**	2	0	0	2	0	3	1	4	1	0	0	1	0	1	0	1	8
13	**20**	3	6	2	11	2	5	6	13	0	2	0	2	2	0	0	2	28
13	**21**	0	0	0	0	2	6	1	9	0	0	0	0	0	0	1	1	10
13	**22**	0	1	0	1	7	3	3	13	0	0	0	0	1	0	0	1	15
13	**23**	2	1	2	5	2	3	3	8	0	2	1	3	0	1	0	1	17
13	**24**	3	0	1	4	0	5	1	6	0	1	2	3	1	0	1	2	15
13	**25**	0	0	1	1	1	2	11	14	1	2	0	3	0	2	1	3	21
13	**26**	3	0	0	3	2	4	2	8	1	4	3	8	0	0	0	0	19
13	**27**	0	0	0	0	0	0	1	1	1	0	1	2	1	1	0	2	5
13	**28**	0	0	0	0	1	1	3	5	4	3	2	9	1	3	1	5	19
13	**29**	0	0	0	0	1	0	0	1	5	4	0	9	0	2	2	4	14
13	**30**	0	0	0	0	0	0	2	2	5	6	7	18	4	4	5	13	33
13	**31**	0	0	0	0	0	0	0	0	4	1	3	8	0	1	0	1	9
13	**32**	0	0	0	0	0	0	0	0	4	8	2	14	1	1	1	3	17
13	**33**	0	0	0	0	0	0	0	0	0	1	2	3	0	1	3	4	7
13	**34**	0	0	0	0	0	0	0	0	9	1	2	12	6	6	2	14	26
13	**35**	0	0	0	0	0	0	0	0	6	3	1	10	4	1	3	8	18
13	**36**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	4
13	**37**	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	8	8
13	**38**	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4	4
13	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
13	**40**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4	4
13	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
13	**42**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
13	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
13	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**3**	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	4	5
14	**4**	0	0	0	0	0	0	0	0	2	1	0	3	3	4	0	7	10
14	**5**	0	0	0	0	0	1	0	1	1	0	0	1	2	5	4	11	13
14	**6**	0	0	0	0	0	0	6	6	6	0	6	12	1	7	7	15	33
14	**7**	1	0	0	1	1	0	1	2	11	2	5	18	2	6	6	14	35
14	**8**	1	0	0	1	0	0	2	2	3	1	4	8	3	3	4	10	21
14	**9**	1	0	0	1	0	0	0	0	2	2	3	7	2	1	0	3	11
14	**10**	1	0	0	1	0	0	0	0	5	0	3	8	3	1	2	6	15
14	**11**	0	0	2	2	0	1	0	1	5	1	0	6	2	0	1	3	12
14	**12**	0	1	1	2	0	1	1	2	0	1	4	5	0	0	3	3	12
14	**13**	6	0	1	7	0	0	1	1	5	0	0	5	1	0	0	1	14
14	**14**	1	21	1	23	0	1	1	2	3	0	0	3	1	0	0	1	29
14	**15**	1	0	2	3	0	0	1	1	4	2	0	6	1	0	1	2	12
14	**16**	1	0	0	1	0	0	4	4	2	1	6	9	2	2	0	4	18
14	**17**	2	0	4	6	0	1	5	6	10	1	8	19	0	4	2	6	37
14	**18**	2	0	2	4	0	0	3	3	14	0	11	25	0	1	0	1	33
14	**19**	0	0	2	2	0	1	3	4	6	2	9	17	0	0	3	3	26
14	**20**	0	0	2	2	0	0	9	9	8	6	6	20	2	0	3	5	36

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
14	**21**	3	1	1	5	0	0	7	7	5	4	5	14	0	0	1	1	27
14	**22**	0	3	2	5	0	0	8	8	4	2	5	11	2	0	0	2	26
14	**23**	0	1	0	1	0	0	2	2	5	7	5	17	0	0	1	1	21
14	**24**	0	3	0	3	0	0	1	1	1	2	2	5	0	0	2	2	11
14	**25**	0	0	0	0	0	0	1	1	0	2	1	3	2	0	1	3	7
14	**26**	0	0	0	0	0	0	0	0	1	2	0	3	1	1	2	4	7
14	**27**	0	1	0	1	0	0	0	0	0	2	0	2	2	0	5	7	10
14	**28**	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	6	6
14	**29**	0	0	0	0	0	0	0	0	0	1	0	1	3	2	3	8	9
14	**30**	0	0	0	0	0	0	0	0	0	0	0	0	5	7	7	19	19
14	**31**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4	4
14	**32**	0	0	0	0	0	0	0	0	0	0	0	0	2	5	3	10	10
14	**33**	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	15	15
14	**34**	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	6	6
14	**35**	0	0	0	0	0	0	0	0	0	0	0	0	4	2	1	7	7
14	**36**	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
14	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
14	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
14	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	17
15	**4**	0	0	0	0	0	0	0	0	0	1	0	1	7	0	1	8	9
15	**5**	0	0	0	0	0	0	0	0	0	1	0	1	0	6	27	33	34
15	**6**	0	1	0	1	0	0	0	0	0	1	3	4	25	5	6	36	41
15	**7**	1	0	0	1	0	0	0	0	0	2	0	2	20	28	1	49	52
15	**8**	0	0	2	2	1	0	0	1	1	1	1	3	0	6	0	6	12
15	**9**	1	0	2	3	1	0	1	2	0	0	0	0	0	0	0	0	5
15	**10**	0	0	2	2	1	0	0	1	0	0	0	0	0	1	0	1	4
15	**11**	2	1	1	4	2	1	0	3	0	0	2	2	0	1	0	1	10
15	**12**	1	0	1	2	1	1	1	3	0	0	1	1	0	0	1	1	7
15	**13**	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
15	**14**	0	3	1	4	0	0	1	1	0	0	0	0	0	0	0	0	5
15	**15**	1	4	1	6	1	1	2	4	0	0	1	1	0	0	0	0	11
15	**16**	1	3	1	5	5	1	1	7	0	0	0	0	0	0	1	1	13
15	**17**	3	0	2	5	3	0	1	4	0	0	0	0	0	0	1	1	10
15	**18**	1	3	2	6	3	0	2	5	3	2	0	5	0	1	1	2	18
15	**19**	8	3	5	16	5	1	1	7	0	0	0	0	1	0	0	1	24
15	**20**	1	2	3	6	4	3	3	10	4	1	0	5	0	1	1	2	23
15	**21**	2	3	2	7	13	4	2	19	1	0	0	1	0	1	0	1	28
15	**22**	3	1	1	5	11	4	3	18	1	5	1	7	1	0	0	1	31
15	**23**	1	3	0	4	4	3	1	8	1	1	0	2	3	0	0	3	17
15	**24**	2	1	0	3	4	2	0	6	1	2	1	4	0	0	0	0	13
15	**25**	0	0	0	0	1	2	0	3	4	1	0	5	0	0	1	1	9
15	**26**	0	0	0	0	1	1	0	2	3	4	4	11	1	1	1	3	16
15	**27**	0	0	0	0	1	0	0	1	4	4	2	10	1	2	2	5	16
15	**28**	0	0	0	0	0	0	0	0	2	2	3	7	2	2	1	5	12

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
15	**29**	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	2	4
15	**30**	0	0	0	0	0	0	0	0	0	6	2	8	2	1	8	11	19
15	**31**	0	0	0	0	0	0	0	0	1	2	1	4	2	2	2	6	10
15	**32**	0	0	0	0	1	0	0	1	0	1	0	1	2	3	8	13	15
15	**33**	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	7	7
15	**34**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
15	**35**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	7	7
15	**36**	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
15	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**45**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
15	**46**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
15	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
15	**48**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
15	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**2**	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
16	**3**	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
16	**4**	0	1	1	2	1	0	0	1	0	0	0	0	0	0	0	0	3
16	**5**	1	2		3	4	0	1	5	0	1	2	3	1	0	0	1	12
16	**6**	3	0		3	2	4	3	9	0	1	1	2	2	1	0	3	17
16	**7**	1	1	1	3	5	2	1	8	1	0	1	2	2	1	1	4	17

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
16	**8**	3	2	1	6	2	4	1	7	0	0	0	0	1	0	3	4	17
16	**9**	2	2	3	7	0	0	0	0	0	2	1	3	0	0	0	0	10
16	**10**	0	4	2	6	1	0	1	2	0	1	1	2	0	0	1	1	11
16	**11**	0	0		0	0	0	1	1	0	0	0	0	0	1	0	1	2
16	**12**	3	0	2	5	2	1	0	3	0	0	1	1	0	0	1	1	10
16	**13**	6	6	4	16	0	1	2	3	0	0	0	0	0	0	0	0	19
16	**14**	5	6	4	15	2	3	4	9	1	0	1	2	0	0	0	0	26
16	**15**	1	6		7	0	0	0	0	0	1	1	2	0	0	0	0	9
16	**16**	3	6	2	11	2	1	1	4	0	0	0	0	0	0	0	0	15
16	**17**	3	0	2	5	0	0	1	1	1	1	0	2	0	0	0	0	8
16	**18**	3	5	3	11	1	0	0	1	0	1	0	1	0	1	0	1	14
16	**19**	0	0	2	2	0	2	2	4	1	2	0	3	0	2	0	2	11
16	**20**	0	3	1	4	0	3	0	3	0	0	2	2	2	0	0	2	11
16	**21**	0	1	2	3	2	0	0	2	0	1	2	3	0	0	1	1	9
16	**22**	0	0	0	0	0	1	2	3	0	1	1	2	0	1	0	1	6
16	**23**	0	0	1	1	0	1	0	1	0	0	0	0	1	0	1	2	4
16	**24**	0	0	0	0	0	0	2	2	0	1	1	2	1	2	1	4	8
16	**25**	0	0	2	2	0	1	0	1	2	1	2	5	3	3	0	6	14
16	**26**	0	0	3	3	2	0	0	2	4	3	1	8	7	4	0	11	24
16	**27**	0	0	1	1	0	0	0	0	0	1	3	4	7	4	0	11	16
16	**28**	0	0	1	1	0	0	0	0	2	3	3	8	5	2	3	10	19
16	**29**	0	0	3	3	1	0	0	1	0	0	3	3	5	0	1	6	13
16	**30**	0	0	1	1	0	0	0	0	0	0	2	2	6	2	2	10	13
16	**31**	0	0	0	0	0	0	0	0	1	0	0	1	4	4	1	9	10
16	**32**	0	0	1	1	0	0	0	0	0	0	0	0	3	0	1	4	5
16	**33**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
16	**34**	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
16	**35**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
16	**36**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
16	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**4**	0	1	0	1	4	0	0	4	2	0	0	2	1	0	0	1	8
17	**5**	0	0	0	0	7	0	0	7	3	0	1	4	0	0	1	1	12
17	**6**	0	0	1	1	2	0	1	3	3	1	0	4	4	2	0	6	14
17	**7**	0	0	0	0	0	2	0	2	2	1	1	4	2	0	1	3	9
17	**8**	0	0	0	0	1	4	0	5	1	1	2	4	1	1	0	2	11
17	**9**	1	0	0	1	5	3	0	8	3	0	2	5	0	0	0	0	14
17	**10**	0	0	1	1	2	9	3	14	3	2	1	6	0	0	1	1	22
17	**11**	0	0	0	0	4	8	10	22	1	2	0	3	0	0	0	0	25
17	**12**	0	1	0	1	3	9	4	16	4	2	1	7	0	0	0	0	24
17	**13**	0	0	1	1	0	1	2	3	2	0	1	3	0	0	0	0	7
17	**14**	0	0	0	0	1	5	9	15	3	0	2	5	1	0	0	1	21
17	**15**	0	3	4	7	3	9	13	25	6	4	1	11	0	0	1	1	44

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
17	**16**	2	1	2	5	4	11	5	20	4	2	3	9	1	0	0	1	35
17	**17**	0	1	4	5	0	6	7	13	3	3	2	8	1	2	1	4	30
17	**18**	4	2	3	9	1	3	4	8	6	3	4	13	0	2	2	4	34
17	**19**	0	0	0	0	0	2	0	2	10	10	4	24	2	0	1	3	29
17	**20**	1	1	1	3	2	3	0	5	18	13	22	53	2	1	1	4	65
17	**21**	1	2	0	3	0	3	1	4	15	14	16	45	3	0	0	3	55
17	**22**	0	0	1	1	2	1	0	3	15	21	17	53	0	1	1	2	59
17	**23**	1	1	0	2	0	0	0	0	9	24	6	39	2	0	0	2	43
17	**24**	0	0	0	0	1	0	0	1	10	9	8	27	1	3	3	7	35
17	**25**	0	1	1	2	0	0	0	0	9	14	13	36	0	2	2	4	42
17	**26**	0	0	0	0	0	0	1	1	1	8	9	18	2	2	1	5	24
17	**27**	0	0	1	1	0	0	0	0	5	3	4	12	1	2	2	5	18
17	**28**	0	2	0	2	0	0	0	0	1	8	4	13	4	3	2	9	24
17	**29**	0	1	0	1	0	0	0	0	0	5	1	6	3	4	2	9	16
17	**30**	0	0	0	0	1	0	0	1	0	2	2	4	8	1	3	12	17
17	**31**	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	3
17	**32**	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	5	5
17	**33**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
17	**34**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
17	**35**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
17	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
17	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
17	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
17	**42**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
17	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
17	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**5**	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
18	**6**	0	1	0	1	0	1	3	4	1	1	0	2	0	1	0	1	8
18	**7**	0	0	0	0	0	2	3	5	1	0	1	2	0	0	0	0	7
18	**8**	0	1	0	1	1	1	1	3	1	0	2	3	1	0	0	1	8
18	**9**	0	0	1	1	0	0	0	0	3	0	1	4	1	0	0	1	6
18	**10**	2	5	0	7	1	0	1	2	0	1	2	3	1	0	0	1	13
18	**11**	10	8	12	30	2	1	0	3	0	0	0	0	2	0	0	2	35
18	**12**	10	4	15	29	2	0	1	3	1	0	0	1	0	0	0	0	33
18	**13**	0	0	6	6	1	2	3	6	0	0	1	1	0	0	0	0	13
18	**14**	0	5	5	10	0	0	0	0	1	0	0	1	1	0	0	1	12
18	**15**	15	3	15	33	3	1	0	4	0	2	1	3	0	0	0	0	40
18	**16**	3	1	0	4	4	0	1	5	0	1	0	1	0	1	4	5	15
18	**17**	0	2	11	13	1	3	0	4	1	2	1	4	2	0	0	2	23
18	**18**	0	0	1	1	2	2	4	8	1	2	1	4	0	0	0	0	13
18	**19**	0	0	0	0	2	4	0	6	0	0	0	0	1	0	0	1	7
18	**20**	5	0	2	7	2	2	3	7	3	2	3	8	2	2	4	8	30
18	**21**	0	2	0	2	4	4	2	10	0	2	4	6	1	0	1	2	20
18	**22**	0	0	1	1	3	1	0	4	2	2	2	6	1	1	0	2	13
18	**23**	3	0	0	3	2	3	0	5	2	3	1	6	1	0	5	6	20

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
18	**24**	0	0	0	0	0	1	0	1	1	1	1	3	4	2	2	8	12
18	**25**	0	0	0	0	2	1	0	3	4	1	4	9	5	2	2	9	21
18	**26**	0	0	0	0	1	0	1	2	1	0	2	3	5	0	3	8	13
18	**27**	1	0	0	1	1	3	0	4	1	4	5	10	1	0	5	6	21
18	**28**	0	0	0	0	0	3	0	3	2	0	1	3	1	2	3	6	12
18	**29**	0	0	0	0	0	0	2	2	0	1	2	3	0	0	3	3	8
18	**30**	0	0	0	0	2	2	0	4	1	2	1	4	1	0	6	7	15
18	**31**	0	0	0	0	0	0	0	0	0	1	0	1	2	0	2	4	5
18	**32**	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	1	3
18	**33**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
18	**34**	0	0	0	0	0	0	0	0	0	0	2	2	2	0	1	3	5
18	**35**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
18	**36**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
18	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
19	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**4**	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	2
19	**5**	0	0	0	0	2	1	1	4	0	0	0	0	1	0	0	1	5
19	**6**	0	4	1	5	0	0	2	2	0	0	1	1	1	0	0	1	9
19	**7**	0	0	0	0	1	0	1	2	2	0	0	2	0	0	0	0	4
19	**8**	0	4	3	7	0	0	2	2	1	2	0	3	0	0	0	0	12
19	**9**	1	0	2	3	4	2	2	8	1	0	1	2	0	0	0	0	13
19	**10**	1	0	0	1	2	2	0	4	1	4	2	7	3	3	0	6	18
19	**11**	0	0	1	1	0	1	0	1	0	4	0	4	2	2	0	4	10
19	**12**	0	1	0	1	0	2	1	3	2	3	1	6	4	4	3	11	21
19	**13**	1	0	0	1	0	0	2	2	0	0	1	1	0	2	1	3	7
19	**14**	0	0	0	0	1	2	2	5	1	0	2	3	3	1	0	4	12
19	**15**	0	0	1	1	6	0	1	7	0	0	0	0	1	0	2	3	11
19	**16**	2	3	1	6	4	2	4	10	0	1	0	1	2	0	1	3	20
19	**17**	2	1	1	4	2	1	4	7	2	1	1	4	0	0	0	0	15
19	**18**	5	5	2	12	4	1	5	10	3	4	2	9	0	1	0	1	32
19	**19**	2	6	2	10	5	3	3	11	0	2	0	2	0	0	0	0	23
19	**20**	0	3	5	8	2	7	4	13	3	2	1	6	0	0	1	1	28
19	**21**	1	0	2	3	5	7	2	14	0	1	1	2	2	0	0	2	21
19	**22**	0	4	2	6	2	4	2	8	1	6	1	8	1	2	2	5	27
19	**23**	1	1	1	3	0	3	5	8	3	3	1	7	0	0	0	0	18
19	**24**	1	1	1	3	2	3	3	8	0	5	3	8	1	0	1	2	21
19	**25**	0	2	2	4	1	1	0	2	6	3	0	9	5	1	0	6	21
19	**26**	0	1	2	3	1	0	0	1	1	3	2	6	2	3	0	5	15
19	**27**	0	0	1	1	0	3	0	3	0	1	0	1	1	1	0	2	7
19	**28**	0	0	0	0	0	0	0	0	1	0	3	4	3	3	3	9	13
19	**29**	0	1	1	2	0	1	2	3	1	0	0	1	1	2	0	3	9
19	**30**	1	1	2	4	1	1	0	2	2	0	3	5	4	2	0	6	17
19	**31**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
19	**32**	0	0	1	1	0	0	0	0	1	0	1	2	0	0	0	0	3
19	**33**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
19	**34**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
19	**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
19	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**5**	0	0	0	0	0	1	0	1	2	2	0	4	1	1	0	2	7
20	**6**	0	0	0	0	0	0	0	0	4	6	2	12	0	0	0	0	12
20	**7**	0	0	0	0	0	0	0	0	2	2	1	5	1	1	1	3	8
20	**8**	0	0	0	0	0	1	0	1	8	0	3	11	0	1	0	1	13
20	**9**	0	0	0	0	0	0	0	0	1	4	2	7	0	1	0	1	8
20	**10**	0	0	0	0	0	1	0	1	7	3	4	14	2	2	4	8	23

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
20	**11**	0	0	0	0	0	1	0	1	2	8	5	15	0	2	1	3	19
20	**12**	0	0	0	0	0	1	2	3	5	3	10	18	1	1	1	3	24
20	**13**	0	0	0	0	0	0	0	0	3	3	2	8	0	0	0	0	8
20	**14**	0	0	0	0	0	0	0	0	4	4	4	12	0	2	0	2	14
20	**15**	0	0	0	0	0	0	1	1	11	11	15	37	3	0	2	5	43
20	**16**	1	0	0	1	0	0	0	0	11	23	9	43	2	0	0	2	46
20	**17**	0	0	0	0	0	0	0	0	3	1	4	8	0	2	0	2	10
20	**18**	1	0	0	1	1	0	2	3	5	18	11	34	0	0	2	2	40
20	**19**	0	0	0	0	0	1	0	1	6	10	8	24	0	2	0	2	27
20	**20**	0	0	0	0	0	0	2	2	12	23	7	42	2	3	1	6	50
20	**21**	0	1	0	1	0	2	3	5	8	10	3	21	0	8	2	10	37
20	**22**	0	0	1	1	1	1	2	4	6	4	6	16	2	5	1	8	29
20	**23**	0	0	0	0	0	0	1	1	1	0	0	1	2	3	0	5	7
20	**24**	0	0	0	0	0	1	2	3	1	1	2	4	2	4	1	7	14
20	**25**	0	0	0	0	0	0	4	4	2	0	2	4	13	8	3	24	32
20	**26**	0	0	0	0	0	1	0	1	0	2	0	2	5	1	2	8	11
20	**27**	0	0	0	0	0	0	1	1	0	2	0	2	4	3	3	10	13
20	**28**	0	0	0	0	0	0	1	1	0	0	0	0	4	1	2	7	8
20	**29**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
20	**30**	0	0	1	1	0	0	3	3	0	0	0	0	6	2	1	9	13
20	**31**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
20	**32**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**33**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
20	**34**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
20	**35**	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	2	4
20	**36**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
20	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
20	**40**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
20	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**3**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
21	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
21	**5**	0	0	0	0	0	1	1	2	1	3	1	5	0	2	0	2	9
21	**6**	0	0	0	0	2	5	4	11	1	3	1	5	1	1	1	3	19
21	**7**	0	0	0	0	2	10	4	16	6	2	3	11	3	0	2	5	32
21	**8**	1	0	0	1	2	2	2	6	3	3	0	6	4	1	3	8	21
21	**9**	0	1	0	1	0	3	1	4	2	0	0	2	1	0	2	3	10
21	**10**	0	0	0	0	1	1	0	2	1	1	1	3	1	0	1	2	7
21	**11**	0	0	0	0	1	0	5	6	1	1	0	2	0	0	1	1	9
21	**12**	0	0	0	0	2	4	3	9	1	3	2	6	0	1	1	2	17
21	**13**	0	0	0	0	1	3	3	7	0	1	2	3	0	3	0	3	13
21	**14**	0	0	0	0	0	1	5	6	0	1	2	3	0	0	0	0	9
21	**15**	0	0	0	0	1	4	4	9	4	1	0	5	0	0	1	1	15
21	**16**	0	0	0	0	3	10	6	19	3	5	3	11	0	0	0	0	30
21	**17**	0	0	0	0	1	5	9	15	3	2	2	7	1	0	0	1	23
21	**18**	0	0	0	0	1	4	11	16	0	5	2	7	0	0	0	0	23

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
21	**19**	1	0	0	1	3	8	8	19	8	4	3	15	0	1	0	1	36
21	**20**	0	0	0	0	1	6	4	11	1	3	6	10	0	0	1	1	22
21	**21**	0	0	0	0	5	2	6	13	2	2	5	9	0	0	0	0	22
21	**22**	0	0	0	0	5	0	1	6	2	1	2	5	0	0	1	1	12
21	**23**	0	1	0	1	1	0	2	3	5	6	4	15	0	2	1	3	22
21	**24**	1	0	0	1	1	0	0	1	4	1	6	11	1	1	2	4	17
21	**25**	0	0	0	0	0	1	0	1	7	1	2	10	0	6	2	8	19
21	**26**	0	0	0	0	0	1	0	1	4	0	1	5	0	1	2	3	9
21	**27**	0	0	0	0	0	0	0	0	7	2	3	12	1	1	3	5	17
21	**28**	0	0	0	0	0	0	0	0	4	2	3	9	1	7	0	8	17
21	**29**	0	0	0	0	0	0	0	0	0	1	2	3	1	2	2	5	8
21	**30**	0	0	0	0	0	0	0	0	1	0	1	2	8	4	2	14	16
21	**31**	0	0	0	0	0	0	0	0	2	0	0	2	1	1	2	4	6
21	**32**	0	0	0	0	0	0	0	0	0	1	0	1	1	3	2	6	7
21	**33**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	5	5
21	**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
21	**35**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
21	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**37**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
21	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
21	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**40**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
21	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
21	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**2**	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
22	**3**	1	3	0	4	2	0	1	3	0	0	0	0	0	1	0	1	8
22	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	4
22	**5**	4	0	1	5	1	1	0	2	0	1	0	1	2	1	0	3	11
22	**6**	3	0	0	3	2	2	0	4	0	0	1	1	1	0	0	1	9
22	**7**	0	0	0	0	0	4	0	4	0	0	1	1	1	0	0	1	6
22	**8**	0	0	0	0	0	5	1	6	0	2	3	5	0	1	0	1	12
22	**9**	0	0	0	0	0	2	0	2	1	0	0	1	0	0	1	1	4
22	**10**	5	3	1	9	9	1	4	14	0	3	2	5	3	1	2	6	34
22	**11**	3	1	2	6	2	1	7	10	0	0	0	0	0	0	0	0	16
22	**12**	4	0	0	4	7	0	6	13	1	0	0	1	1	2	0	3	21
22	**13**	0	0	0	0	0	0	1	1	1	0	1	2	0	0	1	1	4
22	**14**	0	0	0	0	1	6	0	7	0	2	0	2	0	0	0	0	9
22	**15**	10	2	1	13	16	6	17	39	1	3	1	5	1	1	0	2	59
22	**16**	5	0	1	6	5	8	0	13	1	1	0	2	1	0	1	2	23
22	**17**	0	0	0	0	0	8	0	8	2	0	5	7	1	0	0	1	16
22	**18**	10	0	0	10	5	7	3	15	1	0	1	2	0	1	1	2	29
22	**19**	0	0	0	0	0	8	3	11	2	0	1	3	0	1	0	1	15
22	**20**	13	6	6	25	7	3	6	16	1	5	0	6	3	6	2	11	58
22	**21**	0	0	0	0	0	4	1	5	2	0	3	5	0	0	1	1	11
22	**22**	1	1	0	2	1	1	0	2	0	4	2	6	3	1	0	4	14
22	**23**	0	0	0	0	0	0	0	0	1	0	2	3	0	2	0	2	5
22	**24**	0	0	0	0	0	0	0	0	4	2	2	8	0	0	0	0	8
22	**25**	1	0	0	1	1	0	0	1	2	6	2	10	8	5	6	19	31
22	**26**	0	0	0	0	0	0	0	0	3	0	2	5	0	1	0	1	6

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
22	**27**	0	0	0	0	0	0	0	0	1	0	3	4	0	1	0	1	5
22	**28**	0	0	1	1	0	0	0	0	5	0	0	5	0	3	1	4	10
22	**29**	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	5
22	**30**	0	0	0	0	0	1	0	1	0	0	2	2	1	1	4	6	9
22	**31**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**32**	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
22	**33**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
22	**34**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
22	**35**	1	0	0	1	0	0	0	0	0	1	0	1	0	2	2	4	6
22	**36**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
22	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
22	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**40**	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	2	3
22	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**5**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
23	**6**	0	0	0	0	1	0	1	2	1	1	1	3	1	0	0	1	6
23	**7**	1	1	0	2	1	0	0	1	0	3	1	4	0	0	1	1	8
23	**8**	0	0	0	0	1	0	0	1	3	3	2	8	0	0	1	1	10
23	**9**	0	0	0	0	1	0	2	3	1	1	0	2	0	0	0	0	5
23	**10**	0	0	0	0	5	1	1	7	0	4	0	4	0	0	0	0	11
23	**11**	0	1	0	1	5	3	1	9	0	0	0	0	0	0	1	1	11
23	**12**	1	3	0	4	3	2	3	8	1	3	1	5	1	0	0	1	18
23	**13**	1	1	2	4	1	7	1	9	0	1	1	2	1	0	1	2	17
23	**14**	1	1	0	2	4	0	2	6	0	0	1	1	0	0	0	0	9
23	**15**	0	3	2	5	5	5	3	13	3	5	2	10	0	0	0	0	28
23	**16**	0	0	2	2	0	1	7	8	2	5	2	9	0	1	0	1	20
23	**17**	2	5	6	13	2	1	4	7	2	4	0	6	0	0	0	0	26
23	**18**	3	2	3	8	1	0	3	4	0	4	2	6	1	0	1	2	20
23	**19**	0	0	7	7	4	2	3	9	0	2	1	3	0	0	0	0	19
23	**20**	4	1	7	12	8	5	3	16	5	6	7	18	1	2	2	5	51
23	**21**	1	2	3	6	3	4	2	9	0	1	2	3	1	0	0	1	19
23	**22**	0	4	5	9	4	1	2	7	3	7	6	16	0	0	0	0	32
23	**23**	3	1	3	7	5	1	2	8	1	2	6	9	0	2	0	2	26
23	**24**	1	0	3	4	4	2	3	9	2	3	6	11	1	1	0	2	26
23	**25**	2	0	1	3	6	4	8	18	3	6	3	12	2	2	0	4	37
23	**26**	1	0	0	1	2	5	5	12	2	3	3	8	5	1	0	6	27
23	**27**	1	0	1	2	4	2	3	9	2	3	0	5	5	5	1	11	27
23	**28**	0	0	0	0	2	0	1	3	1	1	0	2	4	3	1	8	13
23	**29**	0	0	0	0	0	1	2	3	0	0	0	0	4	4	0	8	11
23	**30**	0	0	0	0	1	0	3	4	3	2	2	7	10	3	1	14	25
23	**31**	0	0	0	0	0	0	1	1	0	0	0	0	3	4	0	7	8
23	**32**	0	0	1	1	0	1	0	1	2	2	0	4	4	3	1	8	14
23	**33**	0	0	0	0	1	0	1	2	0	0	0	0	3	2	0	5	7
23	**34**	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	2	3

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
23	**35**	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	4
23	**36**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
23	**37**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
23	**38**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
23	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**5**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**7**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
24	**8**	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
24	**9**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
24	**10**	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
24	**11**	0	0	0	0	1	2	1	4	0	1	0	1	0	1	0	1	6
24	**12**	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
24	**13**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
24	**14**	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	4
24	**15**	0	0	1	1	3	2	2	7	0	2	0	2	0	1	0	1	11
24	**16**	1	1	1	3	1	6	1	8	1	5	0	6	0	0	0	0	17
24	**17**	0	0	3	3	1	0	0	1	0	0	0	0	0	0	0	0	4
24	**18**	0	5	2	7	2	3	0	5	1	1	2	4	0	0	0	0	16
24	**19**	2	3	11	16	3	3	1	7	0	3	1	4	0	1	0	1	28
24	**20**	5	3	2	10	3	7	5	15	2	6	2	10	0	2	0	2	37
24	**21**	1	2	5	8	6	2	0	8	1	3	2	6	1	0	0	1	23
24	**22**	3	8	6	17	5	2	0	7	6	13	5	24	0	1	0	1	49
24	**23**	0	0	0	0	1	1	1	3	1	0	0	1	0	1	0	1	5
24	**24**	3	1	2	6	1	0	3	4	5	6	2	13	3	2	0	5	28
24	**25**	2	7	2	11	1	5	2	8	6	3	7	16	6	3	0	9	44
24	**26**	1	1	0	2	2	1	0	3	3	2	2	7	6	6	0	12	24
24	**27**	0	0	0	0	0	0	0	0	3	2	1	6	0	1	0	1	7
24	**28**	2	0	0	2	3	1	1	5	7	16	12	35	13	12	0	25	67
24	**29**	0	0	0	0	0	0	0	0	6	5	8	19	10	3	0	13	32
24	**30**	0	1	1	2	0	0	0	0	5	10	5	20	16	10	0	26	48
24	**31**	0	1	1	2	0	0	0	0	3	5	0	8	3	6	0	9	19
24	**32**	0	0	1	1	1	0	0	1	2	2	0	4	1	5	0	6	12
24	**33**	0	1	0	1	0	0	0	0	1	2	0	3	0	0	0	0	4
24	**34**	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	3
24	**35**	0	0	1	1	0	0	1	1	0	1	1	2	0	0	0	0	4
24	**36**	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3	4
24	**37**	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
24	**38**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
24	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**40**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
24	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**42**	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
24	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**5**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
25	**6**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
25	**7**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
25	**8**	0	0	0	0	1	1	1	3	2	0	0	2	1	0	0	1	6
25	**9**	0	0	0	0	0	0	0	0	3	0	1	4	2	0	0	2	6
25	**10**	0	0	0	0	0	3	0	3	1	0	1	2	0	0	0	0	5
25	**11**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
25	**12**	1	0	1	2	1	2	1	4	1	2	0	3	1	2	0	3	12
25	**13**	1	0	0	1	0	2	0	2	1	0	0	1	1	0	0	1	5
25	**14**	0	0	0	0	0	0	0	0	0	3	1	4	0	0	1	1	5
25	**15**	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
25	**16**	2	0	4	6	0	1	0	1	0	1	1	2	1	0	0	1	10
25	**17**	2	1	2	5	2	0	1	3	0	0	0	0	1	0	1	2	10
25	**18**	1	0	2	3	1	1	1	3	0	0	0	0	1	0	0	1	7
25	**19**	0	1	2	3	0	1	2	3	1	2	1	4	1	1	0	2	12
25	**20**	4	1	2	7	6	4	3	13	1	2	1	4	1	1	0	2	26
25	**21**	1	1	2	4	2	0	0	2	2	1	1	4	2	0	0	2	12

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
25	**22**	0	1	0	1	1	1	5	7	0	0	2	2	1	0	0	1	11
25	**23**	1	0	0	1	1	3	0	4	1	2	2	5	0	0	0	0	10
25	**24**	2	1	1	4	1	0	0	1	4	1	1	6	2	1	1	4	15
25	**25**	0	0	0	0	0	0	1	1	2	0	2	4	2	0	2	4	9
25	**26**	0	1	0	1	0	0	1	1	1	1	0	2	0	2	0	2	6
25	**27**	0	0	0	0	1	0	0	1	0	3	3	6	1	2	0	3	10
25	**28**	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	2	3
25	**29**	0	0	0	0	0	0	0	0	0	2	1	3	1	1	1	3	6
25	**30**	1	0	1	2	0	1	1	2	2	3	2	7	3	1	6	10	21
25	**31**	0	0	0	0	0	0	0	0	1	0	2	3	1	2	0	3	6
25	**32**	2	0	0	2	0	0	0	0	3	1	1	5	1	1	0	2	9
25	**33**	3	0	0	3	0	0	0	0	0	1	1	2	1	1	0	2	7
25	**34**	2	1	0	3	0	0	0	0	2	1	0	3	1	3	4	8	14
25	**35**	2	0	0	2	0	0	0	0	0	0	1	1	0	0	1	1	4
25	**36**	2	0	0	2	0	0	0	0	0	0	0	0	0	2	2	4	6
25	**37**	0	0	1	1	1	0	0	1	0	0	0	0	0	1	1	2	4
25	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
25	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	5
25	**40**	2	2	0	4	0	0	0	0	0	0	0	0	0	2	1	3	7
25	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
25	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**43**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
25	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**46**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
25	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
26	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**3**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
26	**4**	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
26	**5**	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
26	**6**	0	1	1	2	0	0	0	0	2	0	0	2	0	0	0	0	4
26	**7**	1	0	3	4	2	0	1	3	3	1	0	4	0	0	0	0	11
26	**8**	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
26	**9**	1	0	0	1	0	0	0	0	1	1	0	2	0	1	1	2	5
26	**10**	0	2	0	2	1	0	0	1	0	1	1	2	1	2	1	4	9
26	**11**	0	1	1	2	1	1	1	3	0	1	0	1	0	2	1	3	9
26	**12**	0	1	0	1	0	2	0	2	1	1	1	3	1	1	2	4	10
26	**13**	0	0	0	0	0	0	2	2	0	1	1	2	1	1	0	2	6
26	**14**	0	0	3	3	0	0	0	0	0	0	1	1	0	0	0	0	4
26	**15**	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
26	**16**	2	0	0	2	2	0	1	3	1	0	1	2	0	0	3	3	10
26	**17**	2	4	7	13	0	0	1	1	1	2	2	5	0	0	0	0	19
26	**18**	1	1	0	2	0	2	0	2	1	0	0	1	0	0	1	1	6
26	**19**	1	1	0	2	3	0	0	3	1	0	0	1	0	0	1	1	7
26	**20**	0	6	3	9	2	0	2	4	0	1	2	3	1	0	0	1	17
26	**21**	3	0	2	5	0	1	0	1	1	0	0	1	1	0	0	1	8
26	**22**	1	0	1	2	0	1	4	5	0	0	0	0	0	4	1	5	12
26	**23**	0	3	1	4	1	1	2	4	0	1	0	1	0	0	0	0	9
26	**24**	0	1	0	1	0	2	0	2	1	1	1	3	0	1	0	1	7
26	**25**	0	0	2	2	4	0	2	6	3	2	1	6	1	1	2	4	18
26	**26**	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
26	**27**	0	0	0	0	1	1	2	4	2	4	2	8	0	0	0	0	12
26	**28**	0	0	0	0	0	0	0	0	1	2	2	5	1	1	2	4	9
26	**29**	0	0	0	0	2	2	1	5	0	0	1	1	0	1	1	2	8

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
26	**30**	0	0	0	0	1	2	1	4	1	3	3	7	0	3	2	5	16
26	**31**	0	0	1	1	0	1	0	1	3	2	2	7	1	3	2	6	15
26	**32**	0	0	0	0	0	0	0	0	1	2	2	5	2	3	0	5	10
26	**33**	0	0	0	0	0	0	0	0	3	0	0	3	1	2	2	5	8
26	**34**	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0	3	4
26	**35**	0	0	0	0	0	0	0	0	1	1	0	2	0	3	1	4	6
26	**36**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
26	**37**	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
26	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
26	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
26	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**4**	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	2	3
27	**5**	0	0	0	0	1	1	0	2	1	1	0	2	0	0	1	1	5
27	**6**	0	2	0	2	3	0	0	3	0	0	0	0	1	1	2	4	9
27	**7**	0	1	0	1	0	1	1	2	0	0	0	0	0	0	0	0	3
27	**8**	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
27	**9**	3	0	0	3	3	2	3	8	1	1	0	2	1	0	3	4	17
27	**10**	4	2	0	6	4	1	2	7	0	1	0	1	2	0	0	2	16
27	**11**	0	2	0	2	3	0	1	4	2	2	1	5	0	0	1	1	12
27	**12**	2	0	0	2	1	3	0	4	0	0	0	0	1	0	0	1	7
27	**13**	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
27	**14**	1	2	0	3	0	2	0	2	0	0	1	1	0	0	1	1	7
27	**15**	3	4	0	7	0	1	4	5	1	3	1	5	0	0	0	0	17
27	**16**	5	1	1	7	0	0	0	0	0	1	1	2	0	0	0	0	9
27	**17**	3	1	0	4	0	1	1	2	2	0	0	2	0	0	1	1	9
27	**18**	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
27	**19**	6	3	3	12	3	6	0	9	1	0	1	2	2	0	0	2	25
27	**20**	7	2	5	14	4	3	3	10	3	1	3	7	0	2	1	3	34
27	**21**	3	3	2	8	3	4	1	8	3	1	2	6	0	0	0	0	22
27	**22**	5	4	1	10	2	2	0	4	3	3	1	7	0	0	0	0	21
27	**23**	2	0	1	3	1	4	1	6	0	2	0	2	0	1	1	2	13
27	**24**	0	0	1	1	2	3	0	5	1	4	2	7	0	2	0	2	15
27	**25**	0	0	0	0	1	3	0	4	3	2	0	5	1	0	0	1	10
27	**26**	0	0	0	0	0	3	0	3	2	2	1	5	3	1	1	5	13
27	**27**	0	0	0	0	0	2	0	2	3	1	1	5	0	0	1	1	8
27	**28**	0	0	2	2	0	0	0	0	3	0	0	3	1	2	0	3	8
27	**29**	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
27	**30**	0	0	1	1	0	0	0	0	1	1	1	3	1	2	5	8	12
27	**31**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
27	**32**	0	0	0	0	0	0	0	0	1	0	1	2	1	0	1	2	4
27	**33**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
27	**34**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**35**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**37**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
27	**38**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**39**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**40**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**41**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**45**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**5**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**7**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
28	**8**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**9**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**10**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**11**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
28	**12**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
28	**13**	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
28	**14**	0	1	0	1	3	1	0	4	0	0	0	0	0	0	0	0	5
28	**15**	0	0	1	1	2	0	0	2	0	0	0	0	1	0	0	1	4
28	**16**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
28	**17**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
28	**18**	0	0	0	0	1	0	1	2	1	0	0	1	0	0	0	0	3
28	**19**	0	1	0	1	0	0	0	0	0	0	1	1	0	0	2	2	4
28	**20**	0	0	0	0	1	0	1	2	2	1	1	4	0	0	0	0	6
28	**21**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
28	**22**	1	0	1	2	0	1	0	1	0	0	0	0	0	0	0	0	3
28	**23**	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
28	**24**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**25**	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
28	**26**	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
28	**27**	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
28	**28**	1	5	0	6	0	0	0	0	0	0	1	1	0	0	0	0	7
28	**29**	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
28	**30**	2	3	0	5	3	0	1	4	0	1	0	1	0	0	0	0	10
28	**31**	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
28	**32**	1	2	0	3	0	1	0	1	0	0	0	0	1	0	0	1	5
28	**33**	1	1	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
28	**34**	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
28	**35**	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
28	**36**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**37**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
28	**38**	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
28	**39**	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	3
28	**40**	0	0	0	0	1	0	0	1	1	0	0	1	0	1	1	2	4
28	**41**	0	0	0	0	0	0	1	1	0	1	1	2	0	0	0	0	3
28	**42**	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
28	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**45**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
28	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**3**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**4**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**5**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**6**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**7**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**8**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**9**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**10**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
29	**11**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
29	**12**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**13**	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
29	**14**	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
29	**15**	0	0	2	2	1	0	0	1	0	0	0	0	0	0	0	0	3
29	**16**	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
29	**17**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
29	**18**	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
29	**19**	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
29	**20**	0	0	0	0	1	1	1	3	0	0	0	0	0	0	0	0	3
29	**21**	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
29	**22**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
29	**23**	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
29	**24**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1

Transect	Length (mm)	Number of cockles																
		HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
29	**25**	0	1	0	1	1	0	0	1	0	1	0	1	1	0	0	1	4
29	**26**	0	3	1	4	0	0	0	0	0	0	0	0	0	1	0	1	5
29	**27**	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
29	**28**	2	1	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
29	**29**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**30**	2	9	1	12	0	0	0	0	0	0	0	0	1	0	0	1	13
29	**31**	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
29	**32**	2	2	0	4	2	0	0	2	0	1	1	2	1	0	1	2	10
29	**33**	3	1	0	4	0	1	0	1	0	0	0	0	0	0	0	0	5
29	**34**	2	2	2	6	1	1	0	2	1	0	0	1	0	0	0	0	9
29	**35**	1	2	1	4	0	0	0	0	1	2	1	4	0	1	1	2	10
29	**36**	1	0	2	3	1	0	0	1	0	0	0	0	0	0	0	0	4
29	**37**	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
29	**38**	0	1	0	1	1	1	2	4	1	0	0	1	1	0	0	1	7
29	**39**	1	0	0	1	0	2	0	2	0	1	0	1	0	0	0	0	4
29	**40**	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
29	**41**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
29	**42**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**43**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
29	**44**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**45**	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
29	**46**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**47**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**48**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**49**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	**50**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0