NIWA
Taihoro Nukurangi

Community survey of cockles (*Austrovenus stutchburyi*) in Pauatahanui Inlet, Wellington, November 2010

Prepared for Guardians of Pauatahanui Inlet

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Photo credit here as follows:<<Pauatahanui Inlet looking east from Motukaraka Point.

[Keith Michael, NIWA]

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1. Executive summary

Since 1992, the Guardians of Pauatahanui Inlet (GOPI) with the assistance of other community volunteers have undertaken seven November surveys of the cockle populations in Pauatahanui Inlet. These surveys sampled a representative selection of sites initially surveyed in 1976 (Richardson et al. 1979) by the New Zealand Oceanographic Institute. This report, which is considered to be a living document, updates the series of surveys with information from the eighth survey which was completed in 2010. The report retains the same data summaries and figures as previous reports, and provides a context for the survey, more detailed methods, and additional information in the discussion of the changes observed and their implications for ecosystem health. The GOPI series of cockle surveys is possibly the longest running and most comprehensive undertaken by community volunteers in New Zealand and provides an important data series for monitoring the cockle populations and environmental changes in Pauatahanui Inlet.

The intertidal cockle population size of Pauatahanui Inlet has been relatively stable over the time series of GOPI surveys. The mean population size in 2010 was the highest since 1992 at 277 million cockles (99% CI 242–311million), increasing from 233 million cockles in 2007. Cockle densities in Pauatahanui Inlet show high temporal and spatial variability. The mean cockle density estimated in 2010 was about 53% of that in 1976 (27.7 per 0.1 m^2). Some differences in mean population estimates between surveys may be because of the patchy distribution of cockles. The proportion of juvenile cockles in Pauatahanui Inlet has increased since 2007; juvenile cockles (10 mm and less in length) represent 16% of the total population in 2010, compared with 12% and 16% in 2007 and 2004 respectively. There has been a reduction of cockles larger than 35 mm over the same period.

Patterns in the distribution of cockle densities in 2010, both down and across the shore are spatially variable and the distributions at most sites are similar to 2007. There has been a marked reduction of cockle density at Seaview Road, at mid and lower tide levels.

Cockles are robust, keystone species of sheltered coastal habitats and are an indicator species of ecosystem health. The relatively stable population size of cockles between 1992 and 2010, and the relatively high proportion of juveniles in recent surveys suggest that the intertidal habitats of Pauatahanui have not changed greatly over this period.

2. Introduction

Estuaries are partly enclosed coastal areas that form transition zones between freshwater and coastal environments, and these areas are some of the most productive and important terrestrial and marine ecosystems. The inflow of both seawater and freshwater provides high levels of nutrients in both the water column and sediment, making estuaries among the most productive natural habitats in the world. These ecosystems provide a disproportionately high level of ecosystem services for the relatively small size of the areas in which they occur, but are highly vulnerable to anthropogenic (man-made) effects. These effects include changes in land use that change freshwater flows, increase fine sediment loads, and introduce pollutants that reduce water quality and may be toxic to plants and animals.

In New Zealand, as elsewhere in the world, there is a growing awareness of the value of estuaries, their vulnerability, and the need to protect them. The Department of Conservation's (DOC) Conservation Management Strategy (Department of Conservation 1996) identified estuaries as a priority for conservation management in New Zealand. Pauatahanui Inlet and the Onepoto Arm of Porirua Harbour comprise the largest estuary in the Wellington region. Pauatahanui Inlet's ecological significance was recognised early on when a community group founded the Guardians of Pauatahanui Inlet (GOPI) in 1991. GOPI, along with a number of partners with interests in the conservation of Pauatahanui Inlet (Porirua City and the Greater Wellington Regional councils, Ngati Toa, and community groups) documented a community vision for the inlet (Pauatahanui Inlet Action Plan: Towards Integrated Management) in 2000, and in 2002 the Pauatahanui Inlet Community Trust (PICT) was established to facilitate the implementation of this plan. In 2010, the Porirua Harbour and Catchment Community Trust (PHACCT) was established, to extend advocacy for sustainable management to the whole of Porirua Harbour (Pauatahanui Inlet and the Onepoto Arm) via the inclusion of representatives from Wellington City Council and community groups from the whole catchment. The conservation value of Pauatahanui Inlet was also recognised by DOC when it ranked the conservation importance of 52 estuaries in the Wellington region based on their biodiversity value, conservation value, cultural value, restoration potential, and physical risk (Todd et al., DOC, In prep.). Pauatahanui Inlet ranked second to the Manawatu estuary (based on the Manawatu's higher risk), and Duck Creek and the Onepoto Arm ranked medium-high (18th and 21st respectively).

Two recent reports (Todd et al, DOC, In prep., Blaschke et al. 2010) have highlighted the importance of both marine and terrestrial ecosystems of Pauatahanui Inlet. A number of research projects have studied the marine ecology and biology of Porirua Harbour. Most studies have focused on individual fauna components (e.g. copepods, cockles, or rig), rather than attempting an overall assessment of the marine fauna and resources of the harbour. Many of these are summarised by Blaschke et al. (2010).

Determining estuarine health is difficult as it requires knowledge of the functioning of complex ecosystems that may be difficult or impossible to characterise, and monitoring of specific functions is also difficult and costly. Concerns about ecosystem health, environmental threats, and sustainable development have led to increased efforts to monitor and assess the status of and trends in ecosystem health. Increasingly, ecological indicators or indicator species are used as simple measures of changes in ecological processes or

components of ecosystems. However, indicators must provide information relevant to specific questions about estuary health and guidelines have been developed for the selection and evaluation of ecological indicators (Jackson et al. Eds, 2000) that include logistical feasibility and cost effectiveness, enabling time series data to be established to monitor trends.

The GOPI surveys of intertidal cockles (*Austrovenus stutchburyi*) undertaken by community volunteers provides an important time series of information for monitoring the health of Pauatahanui Inlet. Significant and 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.

2.1 Biology

Summaries of the biology of cockles, New Zealand cockle fisheries, and the status of commercial cockle stocks are given on the Ministry of Fisheries website under COC sustainability (http://fs.fish.govt.nz/Page.aspx?pk=7&tk=37&sc=COC). A summary of these data is included below.

The cockle, *Austrovenus stutchburyi*, formerly known as *Chione stutchburyi*, is a shallow-burrowing suspension feeder of the family Veneridae. It is found in soft mud to fine sand on protected beaches and enclosed shores around the North and South Islands, Stewart Island and the Chatham Islands (Morton & Miller, 1968). Suspension feeders such as cockles tend to be more abundant in sediments with a larger grain size. They are also common in eelgrass (e.g., Zostera sp.), which often co-occurs with sand flats.

Cockles are found intertidally from the high water neap tide mark to the lowest part of the shore; and may occur subtidally to depths of 20 m in some areas. Cockles were found in high densities in subtidal areas of Pauatahanui Inlet by Richardson et al. (1979). Larcombe (1971) suggested that the upper limit is found where submergence is only 3.5 hours per day. *A. stutchburyi* is often a dominant species, and densities as high as 4 500/m^2 have been reported from some areas.

The sexes are separate and the sex ratio is usually close to 1:1. Maturity appears to be primarily a function of size rather than age, with sexual maturity occurring at a size of about 18 mm shell length. Cockles are broadcast spawners, releasing eggs and sperm into the water. Fertilisation is subject to chance; generally high densities of spawning cockles are required for successful spawning. Spawning extends over spring and summer, and fertilisation is followed by a planktonic larval stage lasting about 3 weeks. Significant depression of larval settlement has been recorded for areas of otherwise suitable substrate from which all live cockles have been removed. This suggests the presence of some conditioning factor or biochemical settlement cue.

Interannual recruitment in cockles varies considerably and extensive movement of juveniles and smaller animals has been documented, but individuals greater than 25 mm shell length remain largely sessile, moving only in response to disturbance.

Growth in cockles varies between individuals, with size, seasonally and annually, and between locations. Small cockles grow faster than large cockles. Growth is fastest during

spring and summer. Growth is slower in the higher tidal ranges where cockles are covered for much shorter periods than in lower tide ranges, reducing their opportunity to feed. In areas where cockles occur in high densities, competition for food may reduce growth. Significant increases in growth rates have been observed for individuals remaining in areas where densities have been reduced by simulated harvesting. Cockles on Snake Bank (Whangarei Harbour) have high growth rates reaching a size of about 30 mm in length in about 2 years, while experiments on growth in Waitati, Purakanui, and Papanui Inlets, and in Otago Harbour did not find significant growth over one year, but Breen et al. (1999) suggested that it was unlikely that average growth is really as slow as the results indicated, and that there may be high inter annual variability in growth.

Given that cockles recruit to the spawning biomass at about 18 mm shell length, but do not recruit to commercial or non-commercial fisheries until closer to 30 mm shell length, there is some protection for the stock against egg overfishing, however, this generality should be treated with caution, because large cockles seem to be required to stimulate the settlement of spat.

Natural mortality of cockles can be high, 17–37% of the population per annum. Birds are a major predator on cockles (up to about 23 mm shell length); however, they appear to have little impact on cockle abundance. Other predators include crabs and whelks. Cockles are also killed after being smothered by sediments from either terrestrial sources (Escourt & Grange, 1976), movement during storms, or by strong tides.

2.2 Some early surveys of Pauatahanui Inlet

Larcombe (1971) undertook some sampling of cockles in Pauatahanui to estimate size structure and growth in a broad study of the ecology, population dynamics, and energetics of some soft-shore molluscs. The first systematic sampling of the cockles in the Inlet was undertaken in 1976 by the then New Zealand Oceanographic Institute, DSIR, as part of the wider Pauatahanui Environmental Programme (Healy 1980). Pauatahanui Inlet was divided into seven sectors, and intertidal and subtidal zones were sampled in five sectors (Figure 1). These results were published by Richardson et al. (1979).

2.3 The Guardians of Pauatahanui Inlet cockle surveys

The Guardians of Pauatahanui Inlet are a community group of residents concerned about the ecological health of the Inlet. Because of that concern, they have completed several surveys of the cockle (*A. stutchburyi*) population throughout the Inlet, in collaboration with NIWA.

The first GOPI intertidal cockle survey, using most of the same sites as the 1976 survey, was undertaken in 1992, this time with the assistance of community volunteers, and overseen by NIWA (Grange 1993). That survey showed a significant 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. A third 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), and November 2004 (Horn et al. 2005) used the same sites and methods as the 1992 and 1995 surveys.

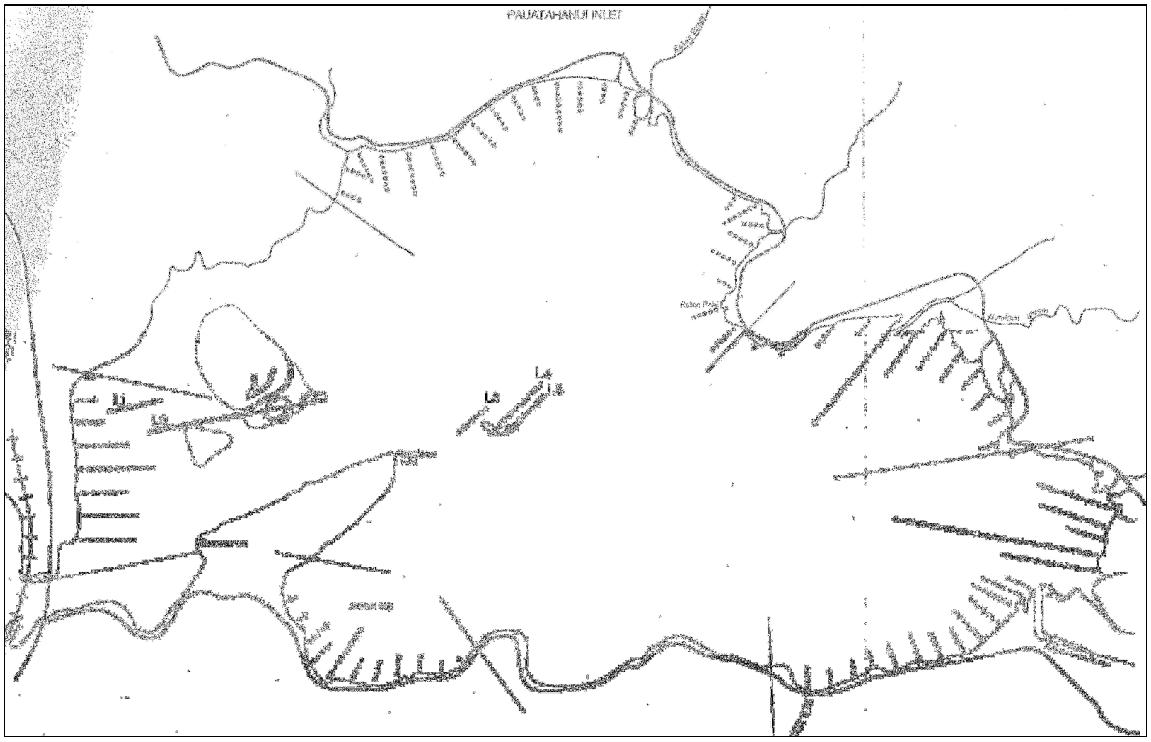

Figure 1: 1976 survey stratification of Pauatahanui Environmental Programme (Healy 1980). Pauatahanui Inlet was divided into seven sectors, and intertidal and subtidal zones sampled in five sectors. Straight lines delineate sectors, filled circles show the location of intertidal transects, and open circle the location of subtidal transects. Figure 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 between146 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), and 2004 (194–246 million, Horn et al. 2005) indicated that the population had stabilised. The last estimate of the cockle population in 2007 (208–257, Michael 2008) was similar to previous surveys.

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

This report presents the results of the eighth survey, completed during November 2010, using the same survey design, sites, and methods as previous surveys.

3. Methods

Intertidal surveys of cockles in Pauatahanui Inlet were undertaken by community volunteers in 1992, 1995, 1998, 2001, 2004, 2007,and for this survey in 2010, sampling the same transects (Figure 2) 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 problems of sampling. Each transect was sampled by 4-5 people, one of whom was an experienced team leader (Figure 3). Team leaders offered training of volunteers, and monitored sampling and data recording. Volunteers were each provided with sheets that explained the sampling methods and showed the location of sites (Appendices 1 and 2 for instruction and sampling sheets), the team leader's check list (Appendix 3), and tally sheets to record cockle lengths (Appendix 4).

The survey comprised 31 fixed transects (Figure 2). 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 2 for details). The details used to locate each of these transect markers are given in Appendix 5. Transects were grouped by site (Table 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 5) and marked with a stake to provide a reference for sampling. Samples were taken from 3 haphazardly placed quadrats, on and about 5 m either side of transects (recorded as A, B, and C), at each tide height.

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

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

Replicate quadrats of 0.1 m^2 were sampled to a depth of about 7 cm (Figure 4) and the entire sample was sieved with kitchen colanders (Figure 5) using seawater to flush the sediment through. Sieve mesh sizes may have varied with the volunteers, but most were reported to be 3–5 mm (John Wells and Neil Bellingham, pers. comm.). Cockles down to 2 mm in length could be retained. All live cockles were sorted into containers (Figures 6 and 7), measured for length (along the anterior–posterior axis) to the nearest millimetre using rulers (Figure 8),

and returned to the substrate. Individual lengths from each sample were tallied and recorded on sampling sheets (Appendix 3).

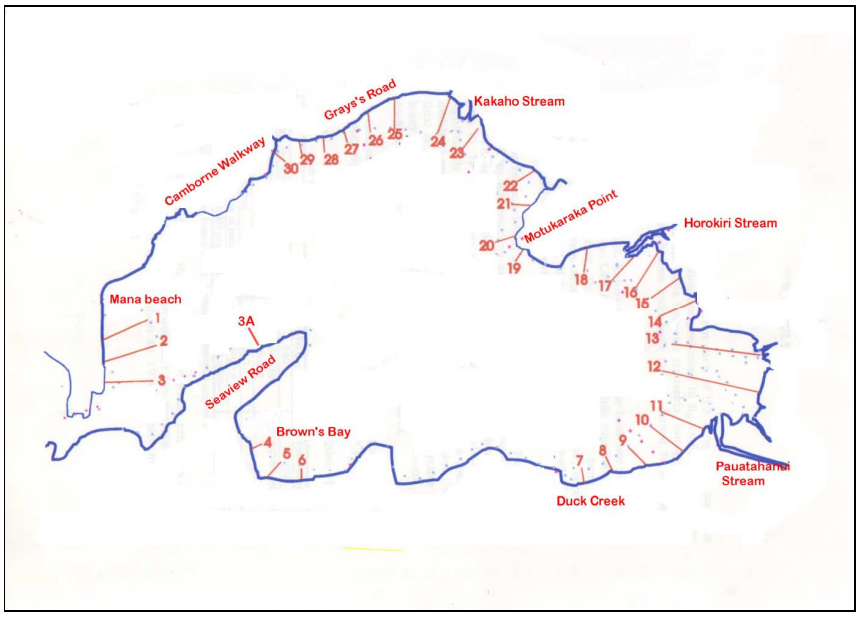

Figure 2: Location of the 31 transects in Pauatahanui Inlet sampled for intertidal cockle densities and population size structure, November 2010 (image courtesy GOPI).

Figure 3: Community volunteers sampling cockles (image courtesy of Don Petersen, GOPI).

Figure 4: Spades were used to excavate the 0.1 m^2 quadrats (image courtesy of Don Petersen, GOPI).

Figure 5: Samples were sieved through colanders with the aid of seawater (image courtesy of Don Petersen, GOPI).

Figure 6: All live cockles were removed from samples (image courtesy of Don Petersen, GOPI).

Figure 7: Cockles from each sample were kept in separate containers (image courtesy of Don Petersen, GOPI).

Figure 8: Cockles were measured for length to the nearest millimetre (image courtesy of Don Petersen, GOPI).

3.1 Density and population estimates

Mean cockle densities at each site, transect, and tidal height were calculated from the numbers recorded in each 0.1 m^2 quadrat and comparisons were made with the previous seven surveys (1976–2007). The population size was estimated using the mean density from all samples combined and scaled to the size of the intertidal area, assumed to be about 1 km^2 (Richardson et al. 1979). The error associated with this estimate of survey area and whether the area has changed over the sequence of surveys is not known, but this is unlikely to affect the estimate of total population size because the sampling locations have been consistent over time. The same estimate of survey area has been used in all previous estimates of population size.

3.2 Size structure of cockle populations

Measurements of shell lengths from replicate quadrats were combined to produce estimates of population size structure for tidal heights, transect, and sites. These data were summarised as histograms and compared visually for different scales of sampling (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, and these data were compared with previous surveys.

4. Results

A total of 372 quadrats were sampled from 31 transects, 25 transects on 21st of November, 1 on the 22nd of November, 2 on the 23rd of November, and the final 3 on the 24th of November 2010.

4.1 Cockle densities

In 2010, cockle counts recorded in each quadrat ranged from zero, to a maximum of 150 per 0.1 m^2 (at transect 1, upper-mid tide, Mana). This is higher than in the previous highest densities recorded 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 6% of the quadrats sampled in 2010, similar to 5% in 2007. Mean cockle density in 2010 was the highest since 1992 (27.7 per 0.1 m^2, 99% CI 24.2–31.1), see Table 2.

Table 2: Densities of cockles in Pauatahanui Inlet and population estimates between 1976 and 2010.

	1976	1992	1995	1998	2001	2004	2007	2010
Max number per quadrat	280	168	191	273	118	95	112	150
Total counted	15 633	7 976	6 484	9 264	7 807	8 124	8 653	10 290
Mean number per quadrat	52.3	22.2	18.0	25.7	21.0	22.0	23.3	27.7
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	20.8-25.7	24.2–31.1
Mean population (millions)	523	222	180	257	210	220	233	277
Population range(millions)	438-608	187-257	146-214	215-299	182-238	194-246	208-257	242–311

The mean numbers of cockles recorded at each site are shown in Figure 9. The highest mean density (mean of the 3 quadrats) at any one tide level in 2010 was recorded at upper mid-tide of transect 1 at Mana (130 per 0.1 m^2).This is higher than either 2007 or 2004 where the highest densities were found at transect 17, lower mid-tide, Pauatahanui (68 per 0.1 m^2) and upper mid-tide, Mana (87 per 0.1 m^2) respectively. Of the 124 tidal levels sampled, mean density increased by more than 10% on the 2004 densities at 58% of tidal levels in 2007, but only 20% of those 2004 sites continued to increase in 2010; cockle density increased at 48% of tidal levels between 2007 and 2010 showing spatial and temporal variation in cockle densities. Cockle densities also varied considerably among and within transects, and between sites. Generally, mean density increased between 2007 and 2010 at Mana, Motukaraka, and Motukaraka West, and decreased at Seaview Road. All other sites were similar between these years.

The total numbers of cockles collected at each transect (Figure 10) show some similar trends to the mean numbers per tide level (Figure 9). Of the 31 transects sampled, cockle numbers increased by more than 10% on the 2004 numbers at 52% of transects in 2007, but only 10% of those 2004 sites continued to increase in 2010; cockle numbers increased by more than 10% at 52% of transects between 2007 and 2010. Total cockle numbers varied considerably among transects, and this pattern of variation was similar to that for mean cockle density; the same sites increased, decreased, or remained the similar.

The temporal variation in the distribution of the total numbers cockles sampled between years is shown in Figure 11; four transects had higher total counts than in 2007 and three transects recorded less than 200 cockles in 2010 compared with one transect in 2007.

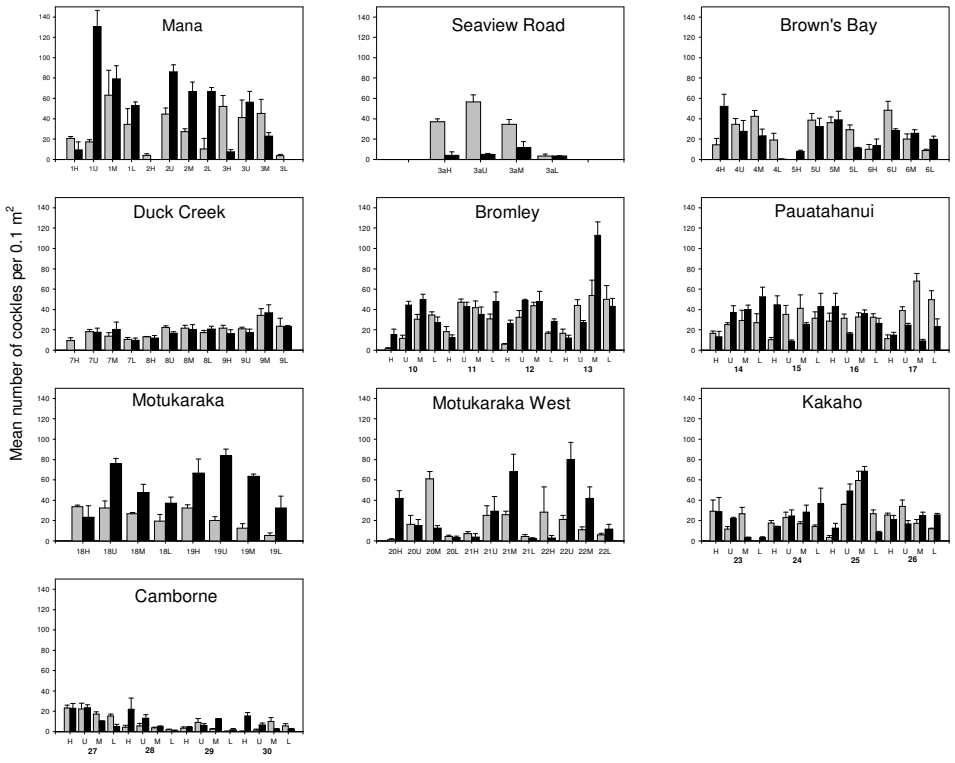

Figure 9: Mean densities of cockles (number per 0.1 m^2) recorded from each transect at each site, 2007 (grey) and 2010 (black). H = High Tide, U = Upper Mid-tide, M = Lower Mid-tide, and L = Low Tide. Error bars are ± 1 standard error.

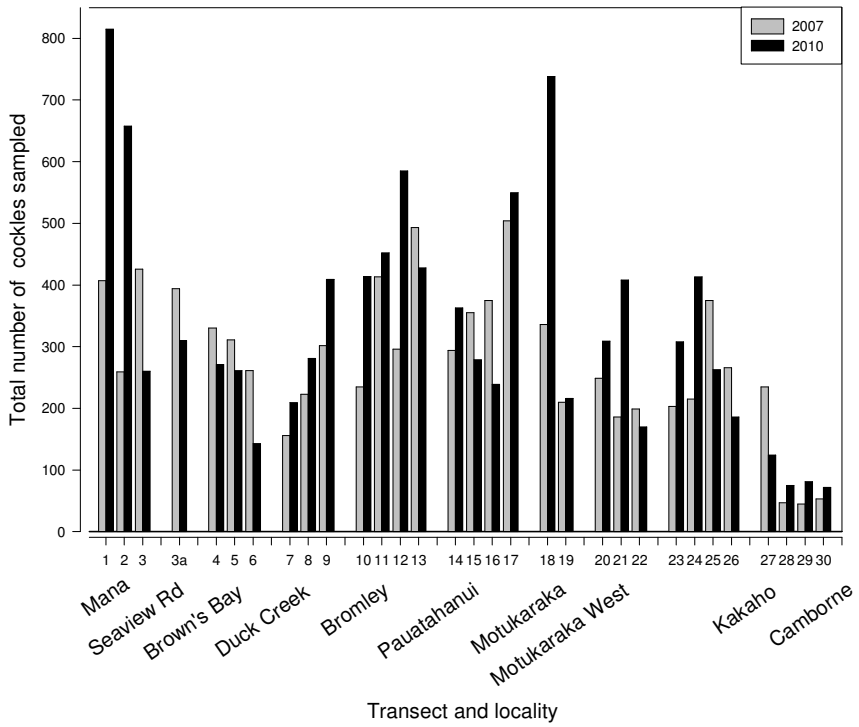

Figure 10: Total numbers of cockles collected down each transect at each site, November 2007 (grey) and November 2010 (black).

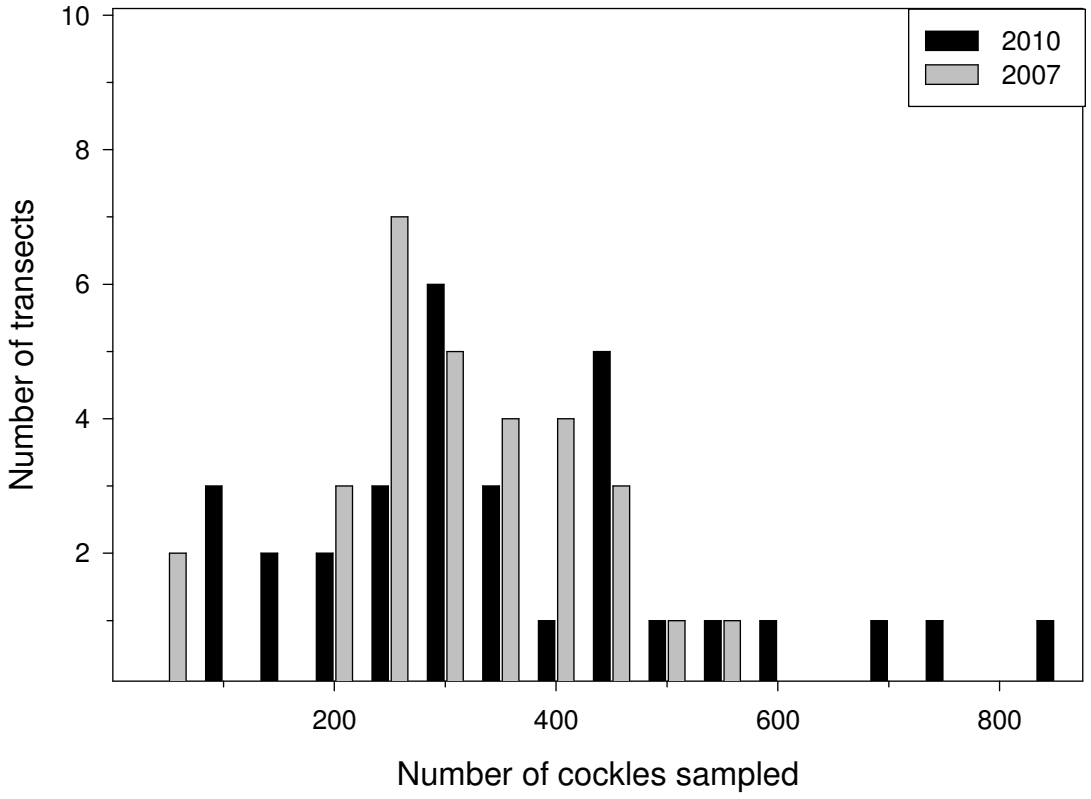

Figure 11: Cockle numbers per transect for the 2007 (grey) and 2010 (black) surveys.

The patterns of distribution between tidal heights varied within years, but six sites (Mana, Seaview, Browns Bay, Motukaraka, Motukaraka West, and and Kokaho) had higher densities at lower tide levels in 2010 than in 2007 (Figure 12). At some sites, densities were greatest in 2010 at high and upper mid tide (e.g., Motukaraka, and Seaview Road), but the highest densities at most sites were around mid tide. When all results are combined, the highest mean densities of cockles occurred at upper and lower mid-tidal sites (approximately 28 and 31 per 0.1 m^2, respectively) (Figure 13). High tidal sites supported a mean of 16 cockles per 0.1 m^2 and low tidal sites supported about 18 cockles per 0.1 m^2. These results are very similar to those from the 2001 and 2004 surveys, but in contrast to the highest densities recorded at lower mid tidal sites in 1998 and low tidal sites in 1995.

The estimate of the total population size in the Inlet was calculated from the mean densities of cockles for all quadrats (Table 1), as in previous surveys, and assuming a total intertidal area of 1 km^2 (Richardson et al. 1979, Healy 1980). The maximum number of cockles recorded per quadrat (150) is the highest since 1998, and the total number of cockles counted in 2010 the highest since 1976 (Table 2).

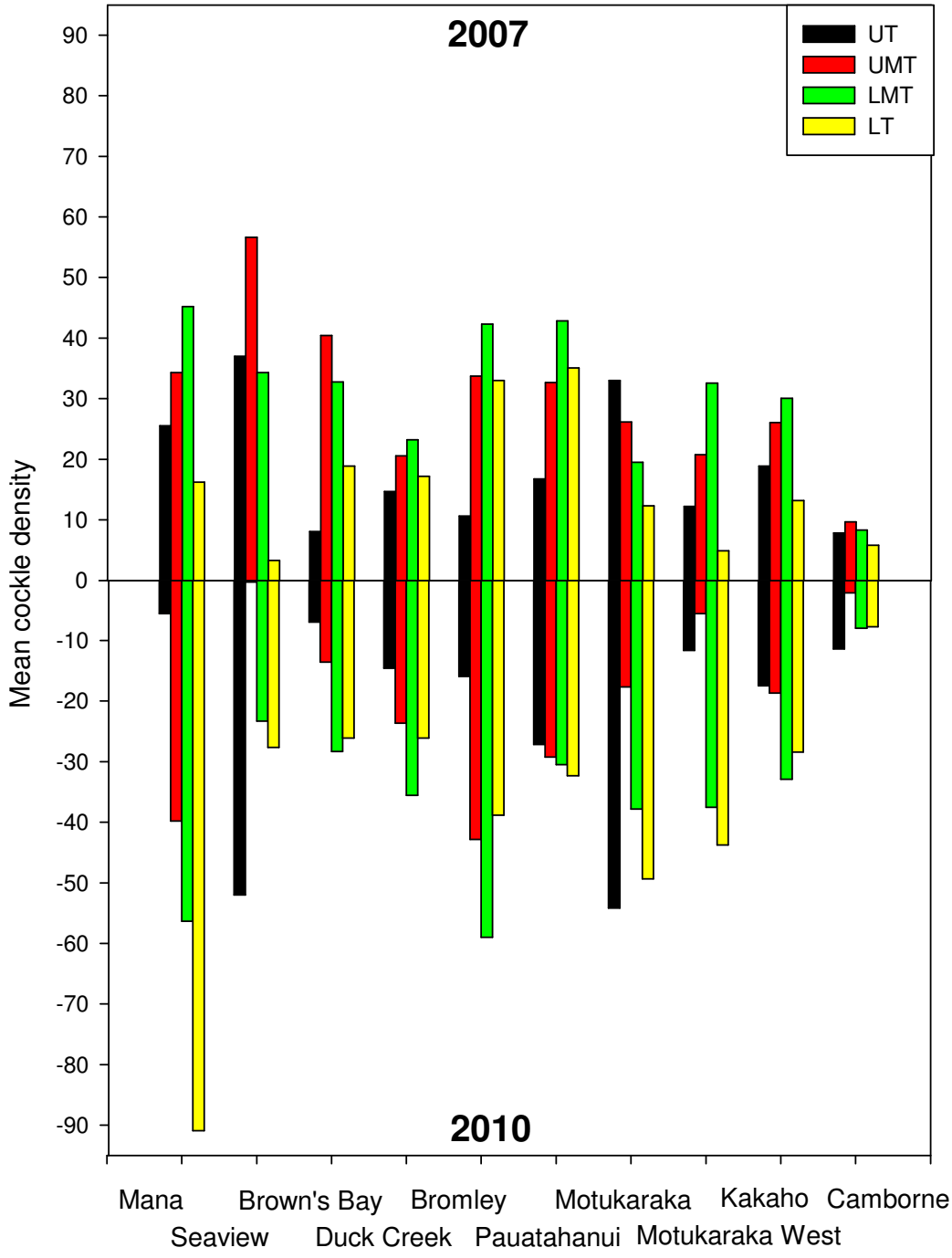

Figure 12: Mean cockle number at each tidal height and site, November 2007 (upper) and 2010 (lower).

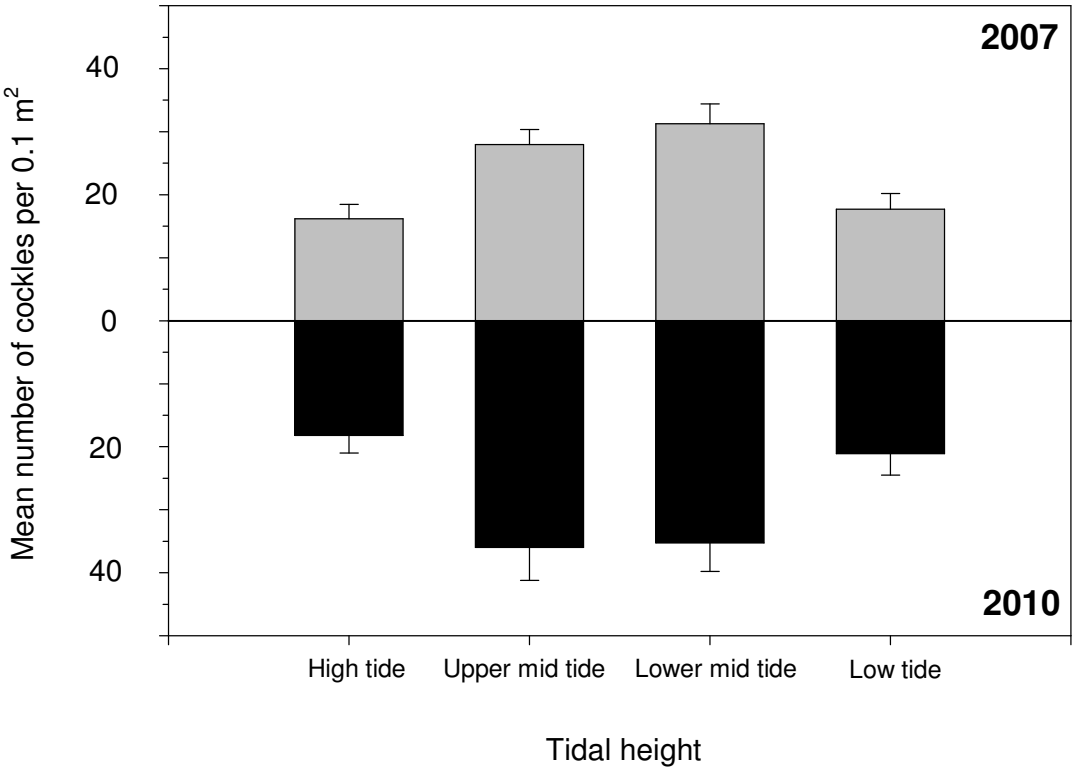

Figure 13: Mean densities of cockles at each tidal height, all sites combined, 2007 (upper, grey) and 2010 (lower, black). Error bars are ± 1 standard error.

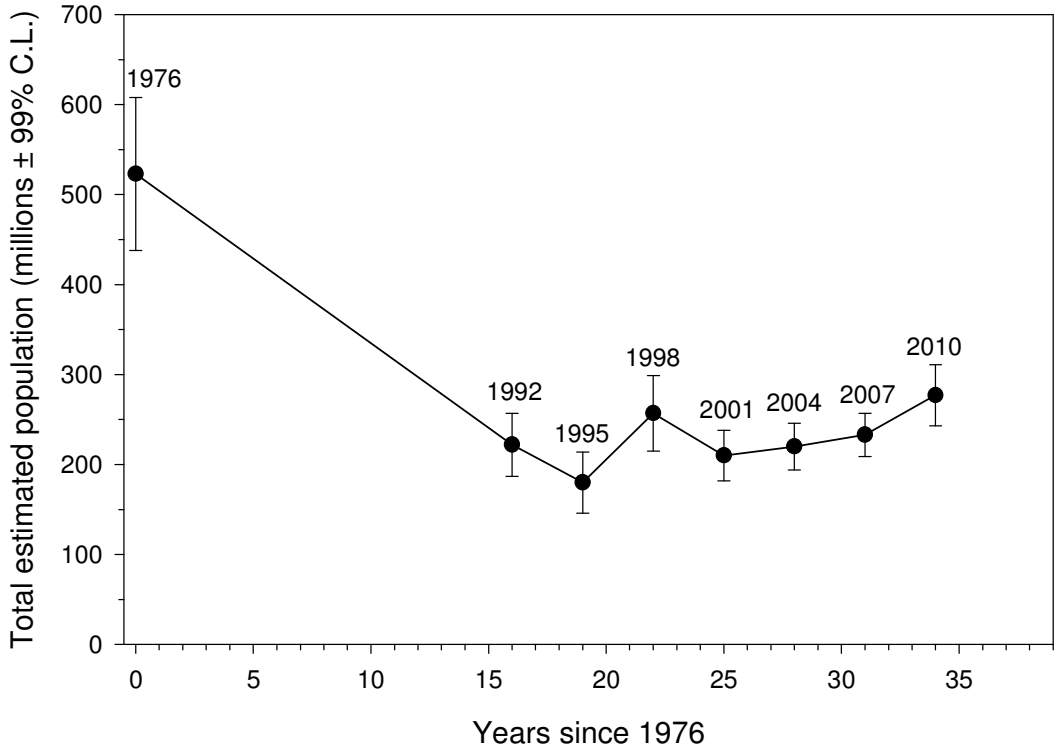

Figure 14: Trend in total cockle population within Pauatahanui Inlet, 1976–2010.

The mean population size of cockles in Pauatahanui in 2010 was higher than all surveys since 1992, and 53% of that originally estimated in 1976 (Figure 14). However, there is not a significant difference in population estimates since 1992. The precision of the estimates varies between surveys (which is expected in a time series of survey data from populations with patchy distribution). On the basis of absolute numbers, the population of cockles in the Pauatahanui Inlet has been relatively static since at least 1992.

Mean densities were considerably higher at most transects in 1976 (Mana transects were not sampled then) and most have varied around a lower, long term average since (Figure 15). Recent trends show increases in mean densities at most transects, no trend at Kakaho transects, and decreases at Brown's Bay and Pauatahanui (Figure 15). Mean densities have been low at Camborne, but increased slightly in 2010.

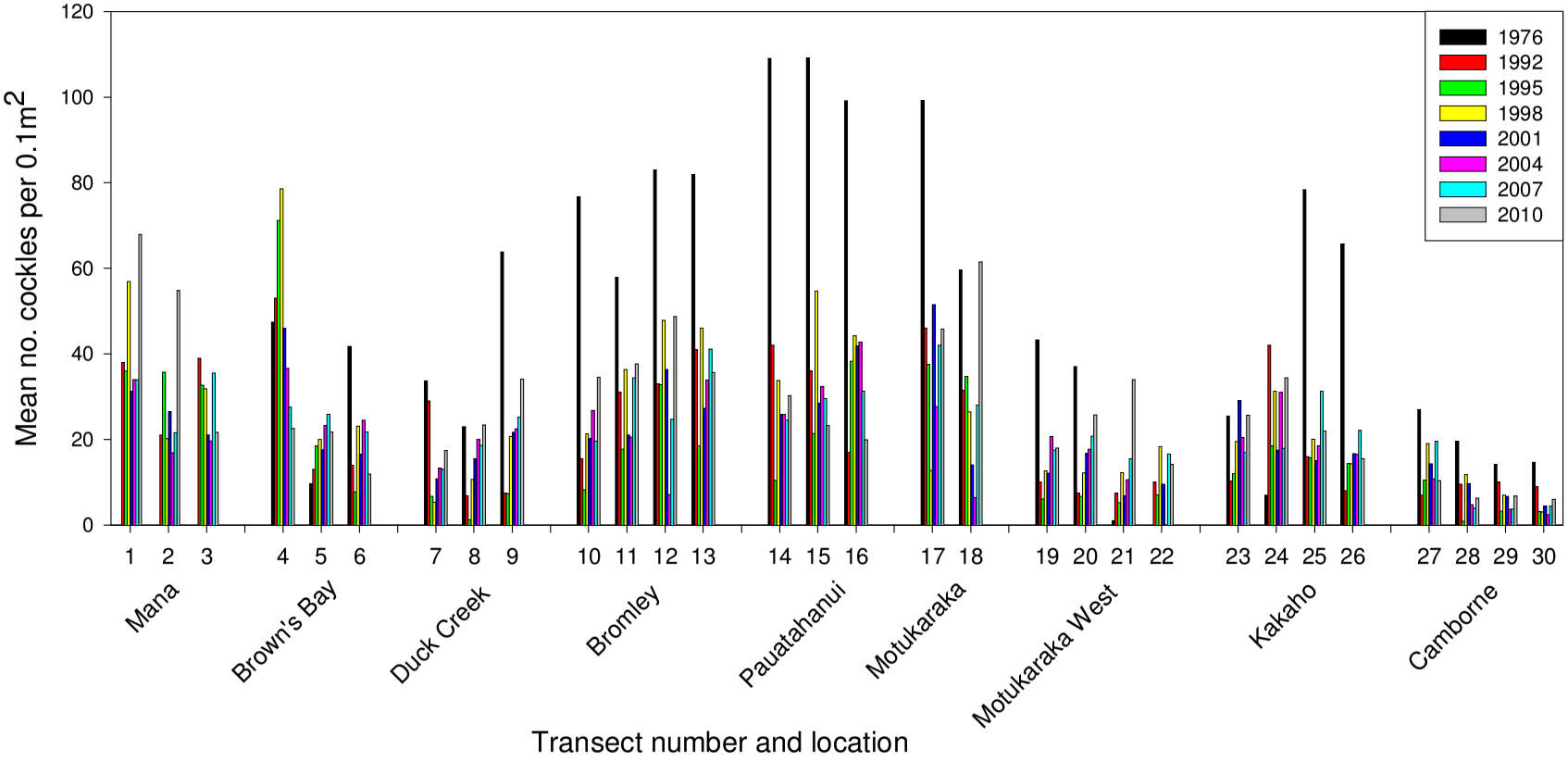

Figure 15: Mean number of cockles recorded at each site over the eight surveys, 1976–2010. Mana sites were not sampled in 1976.

4.2 Cockle Size Frequencies

Histograms of the size frequencies of cockles at all sites by tidal height are presented in Appendix 6.

4.2.1 High Tide

Most high tide sites showed similar size frequency distributions to the 2007 survey. These distributions were unimodal, but varied in structure from flat to well defined modes (Figure A5.1). The most abundant size of cockles in 2010 ranged between 15 and 35 mm at most sites compared to 10 and 30 mm in 2007. These distributions show an increase in larger sized cockles from 2007, but no significant, recent recruitment (settlement and survival of cockles), except at Bromley where there were higher numbers of 5–10 mm cockles than in 2007. Large cockles (greater than 35 mm in length) were scarce at all sites in 2010.

4.2.2 Upper-mid Tide

Most upper mid-tide sites in 2007 and 2010 had unimodal distributions, and structures with flat to well defined modes, but most showed a shift in size structure suggesting some growth between surveys (Figure A5.2). Mana and Camborne size distributions were similar between surveys, but cockles were more abundant in 2010 at Mana. Most other sites showed an upward shift in modes of 5–10 mm in length between 2007 and 2010.

The broad size modes in the Mana, Motukaraka, and Motukaraka West frequencies suggest that recruitment to these sites is higher than most other sites. The size frequency modes at Brown's Bay had increased from 2007, suggesting that cockles sampled in the previous survey had grown. At Browns Bay, Camborne, and Seaview Road, fewer small cockles appear to have recruited compared with 2007. All other sites were similar.

4.2.3 Lower-mid Tide

Size distributions at mid-tide sites vary from well defined unimodal distributions to flat unimodal distributions (5–40 mm), and multimodal distributions (Figure A5.3). Several sites (Mana, Brown's Bay, Bromely, Motokaraka, and Motokaraka West) had broadly similar distributions in 2010 to 2007, but the modes were smaller, suggesting mortality or migration of larger cockles and increased recruitment of smaller cockles. These sites also had higher numbers of cockles than in 2007.

The Seaview Road distribution was bimodal in 2007 and unimodal in 2010, where the mode was between 25 and 40 mm. There appears to have been little recruitment over the last couple of years. The size distributions were similar at Pauatahanui, Kakaho, Camborne, and Duck creek between 2007 and 2010, but there were fewer cockles of all sizes at Pauatahanui and Camborne in 2010. There were more small cockles at Duck Creek in 2010. Some sites had small numbers of cockles over 35 mm in length.

4.2.4 Low Tide

Size frequency distributions at low tide levels showed marked variations between sites and years (Figure A5.4). Low numbers of cockles were sampled at low tide sites in 2010 at Seaview Road, Brown's Bay, Motukaraka West, and Camborne; these sites have declined since 2004. A single cockle was sampled at Seaview Road. There were fewer small and intermediate sized cockles at Brown's Bay in 2010 than there were in 2007. Motukaraka West and Camborne had very few cockles between 10 mm and 40 mm in length compared to 2007. The Pauatahanui and Kakaho size distributions were bimodal in 2007 and unimodal in 2010 with larger cockles 30–35 mm well represented in 2010, but smaller cockles 5-30 mm poorly represented compared to 2007.Motukaraka showed the opposite trend were small cockles were well represented and larger cockles virtually absent in 2010 compared to 2007.

4.3 All tidal sites combined

The mean sizes of all cockles recorded at each site and tidal height for 2007 and 2010 are shown in Table 2. Generally, there is a trend of increasing mean size down the shore at all sites in 2010 except for minor deviations at Seaview Road, Motukaraka, and Camborne. The general trend is similar to that observed in 2007. The sites with the largest mean sizes of cockles were low tide sites at Mana, Pauatahanui, Motukaraka West, Brown's Bay and Kakaho. Mean sizes were larger in 2010 than in 2007 at Mana, Pauatahanui, and Motukaraka West; similar at Brown's Bay, Kakakho, and Camborne, and smaller at Seaview Road, Duck Creek, Bromley,and Motukaraka.

The mean sizes of cockles measured at each site and tidal height in 2007 and 2010 are presented in Figure 16. Overall mean sizes at high tide in 2007 and 2010 were similar (17.3 mm and 17.9 mm respectively). Mean sizes were larger in at upper-mid tide in 2007 (18.5 mm) than in 2010 (17.0 mm). At lower mid-tide sites, the mean size was larger in 2007 (22.7 mm) than in 2010 (20.0 mm). At low tide sites, the mean size was larger in 2010 (25.5 mm) than it was in 2007 (23.9).

Table 2: Mean lengths (mm) of cockles and 95% confidence intervals in brackets for each tidal height at each site, November 2007 and 2010. HT, high tide; UMT, upper-mid tide; LMT, lower-mid tide; and LT, low tide.

	Mean length (95%CI) 2007			
site	HT	UMT	LMT	LT
Mana	20.6 (20.1-21.0)	20.7 (20.3-21.1)	24.9 (24.6-25.3)	16.8 (15.7-18.0)
Seaview Road	18.9 (18.4-19.3)	20.7 (20.1-21.2)	27.2 (26.4-28.0)	31.1 (27.7-34.5)
Brown's Bay	17.7 (17.0-18.5)	16.2 (15.9-16.6)	25.5 (25.0-25.9)	29.4 (28.7-30.1)
Duck Creek	18.6 (18.1-19.2)	19.0 (18.4-19.6)	23.9 (23.3-24.4)	28.0 (27.3-28.7)
Bromley	15.7 (15.2-16.2)	16.2 (15.9-16.5)	21.6 (21.3-22.0)	28.9 (28.5-29.3)
Pauatahanui	14.5 (14.1-14.8)	15.5 (15.2-15.9)	17.9 (17.6-18.2)	23.6 (23.2-23.9)
Motukaraka	15.9 (15.5-16.3)	22.0 (21.5-22.5)	25.3 (24.6-26.1)	22.6 (21.5-23.7)
Motukaraka West	11.3 (10.7-11.8)	19.6 (19.1-20.1)	21.9 (21.5-22.3)	22.2 (20.6-23.8)
Kakaho	18.6 (18.1-19.1)	21.5 (21.1-21.9)	23.9 (23.4-24.3)	26.4 (25.6-27.2)
Camborne	20.8 (20.0-12.5)	20.2 (19.4-21.1)	22.5 (21.6-23.3)	21.4 (20.0-22.7)

	Mean length (95%CI) 2010			
site	HT	UMT	LMT	LT
Mana	19.4 (18.1-20.7)	16.8 (16.6-17.1)	20.2 (19.8-20.5)	25.2(24.8-25.7)
Seaview Road	18.8 (18.5-19.2)	22.7 (22.2-23.2)	27.1 (26.2-28.0)	22
Brown's Bay	17.1 (16.5-17.7)	18.1 (17.7-18.6)	23.6 (23.2-24.1)	29.0 (28.1-29.9)
Duck Creek	18.4 (17.8-18.9)	16.2 (15.7-16.8)	20.1 (19.5-20.6)	23.8 (23.2-24.5)
Bromley	16.4 (15.8-16.9)	14.8 (14.5-15.0)	17.1 (16.9-17.4)	21.9 (21.5-22.3)
Pauatahanui	15.0 (14.7-15.2)	13.8 (13.4-14.1)	18.9 (18.4-19.3)	25.4 (25.0-25.8)
Motukaraka	20.7 (20.3-21.0)	18.4 (18.0-18.8)	19.0 (18.6-19.4)	12.5 (12.0-13.1)
Motukaraka West	15.7 (15.3-16.2)	16.6 (16.2-17.0)	18.3 (18.0-18.7)	25.5 (24.2-26.8)
Kakaho	16.1 (15.8-16.4)	20.9 (20.6-21.2)	23.7 (23.3-24.1)	26.4 25.9-26.9)
Camborne	23.5 (23.0-24.1)	21.5 (20.6-22.4)	21.2 (20.4-22.0)	21.2 (19.6-22.8)

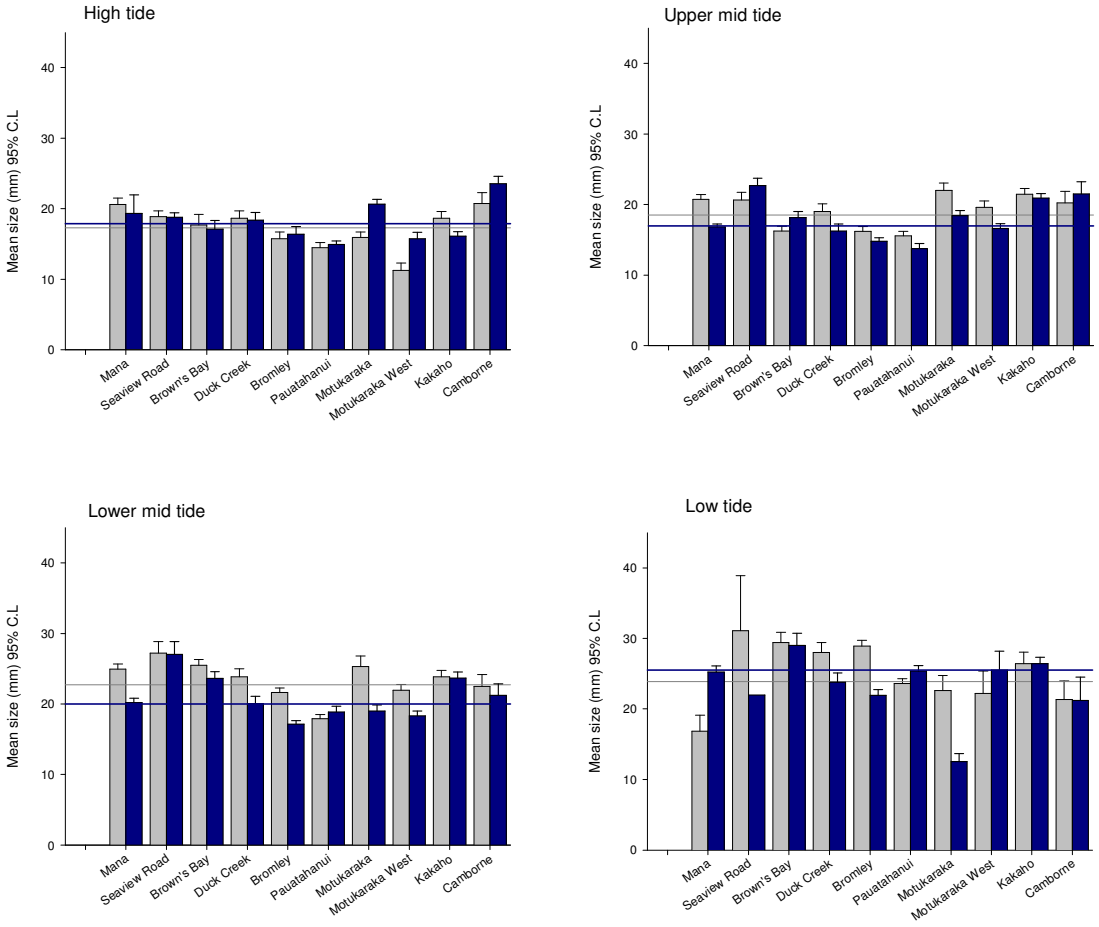

Figure 16: Mean sizes (mm + 95% confidence limits) of cockles at each site and tidal height, November 2010 (blue bars) and November 2007 (grey bars). Horizontal lines represent the overall mean value for that tidal height in 2007 (grey lines) and in 2010 (blue lines).

Figure 17 presents the numbers of adult cockles (> 10 mm shell length) that were recorded at each site between 1992 and 2010. Total adult cockle numbers in 2010 were higher in six of the 10 sites than recent years and similar at the remaining four locations. Increasing trends in abundance in recent years were recorded at Mana, Duck Creek, Bromley, Motukaraka, and Motukaraka West, and Kakaho.

Figure 18 presents the numbers of juveniles recorded at all sites between 1992 and 2010. Numbers of juveniles were low at all sites in 1992 and 1995, but markedly higher at most sites in 1998 and 2001; and much higher at most sites 2004, 2007, and 2010. The abundance of juveniles in 2010 was much higher at Mana, Duck Creek, Bromley, and Motukaraka West than it has been in recent years. At Seaview Road, the abundance of juvenile cockles in 2010 was much lower than in recent years, and at all other sites the abundance of juvenile cockles was similar to recent years.

These data show variable recruitment, both spatially and temporally, to the Pauatahanui Inlet survey sites, but recruitment in 2010 was generally high.

The percentage of juvenile cockles in the Pauatahanui Inlet population increased markedly between the 1995 and 1998 surveys (Figure 19). This increase, coupled with a decrease in adults at most sites, meant that the proportion of juveniles in the total population within Pauatahanui Inlet rose from around 1% 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, partly because of a slight decrease in adult numbers, but, primarily because of a large increase in juvenile numbers. The percentage of juvenile cockles declined from the high of 16% in 2004 to 12% in 2007, but increased to 16% in 2010. 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.

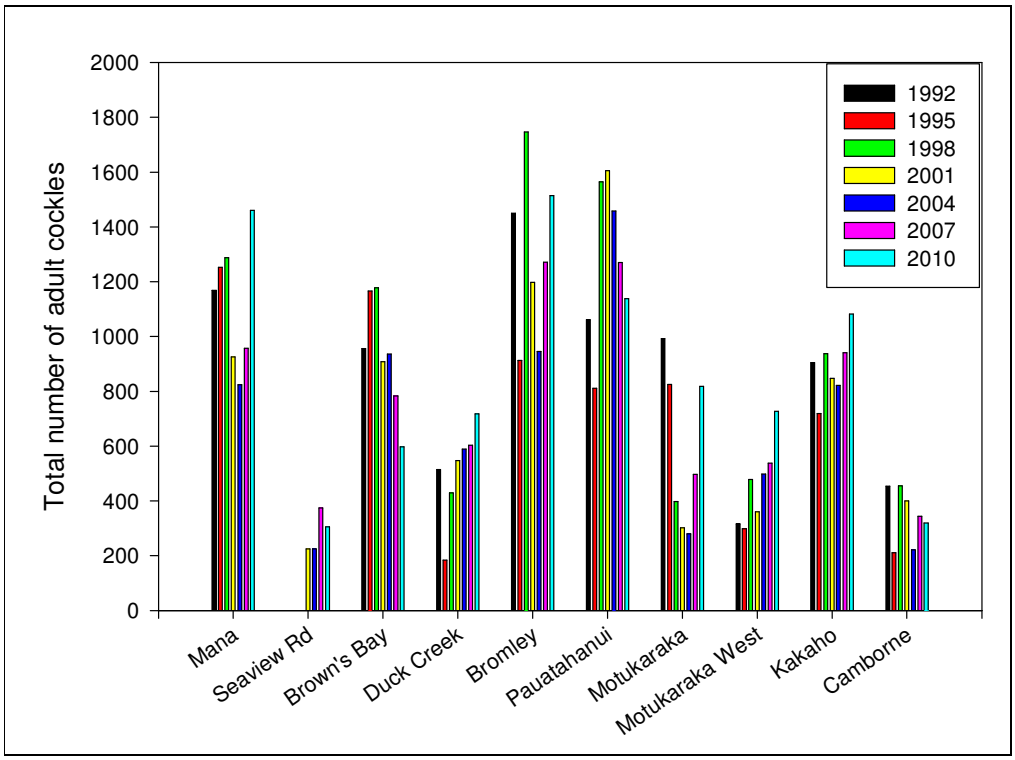

Figure 17: Total number of adult cockles (> 10 mm) collected at each site, 1992–2010.

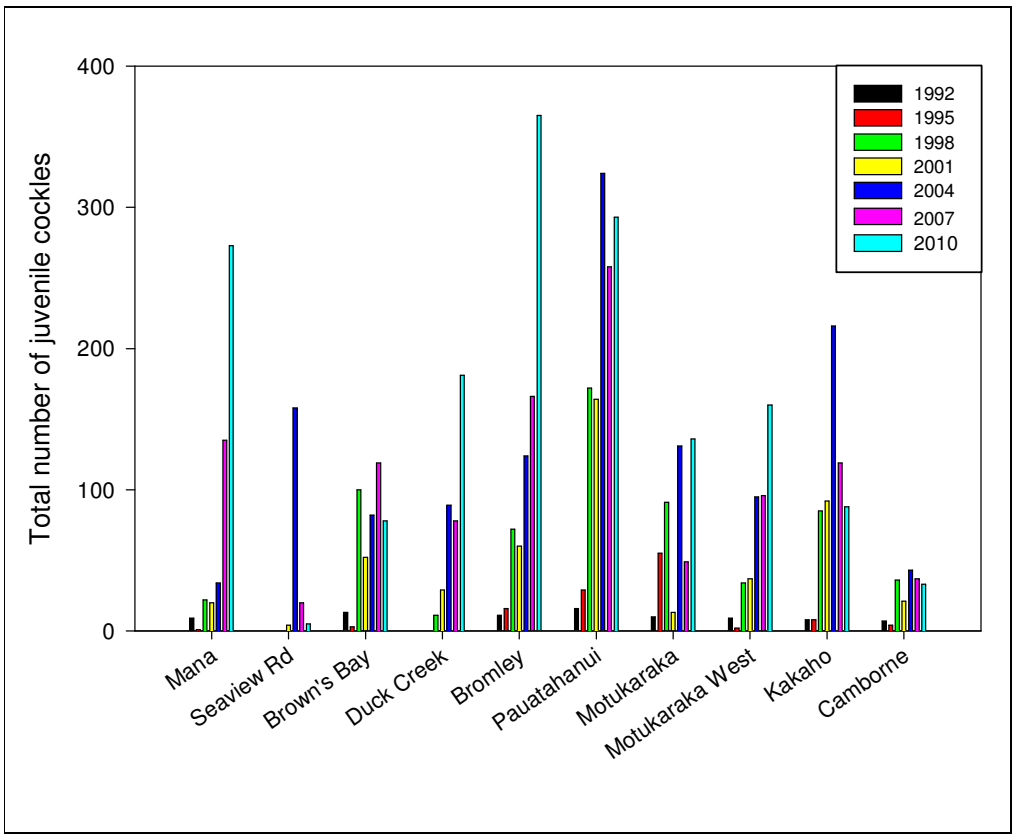

Figure 18: Numbers of juvenile cockles (< 10 mm shell length) recorded at all sites, 1992–2010.

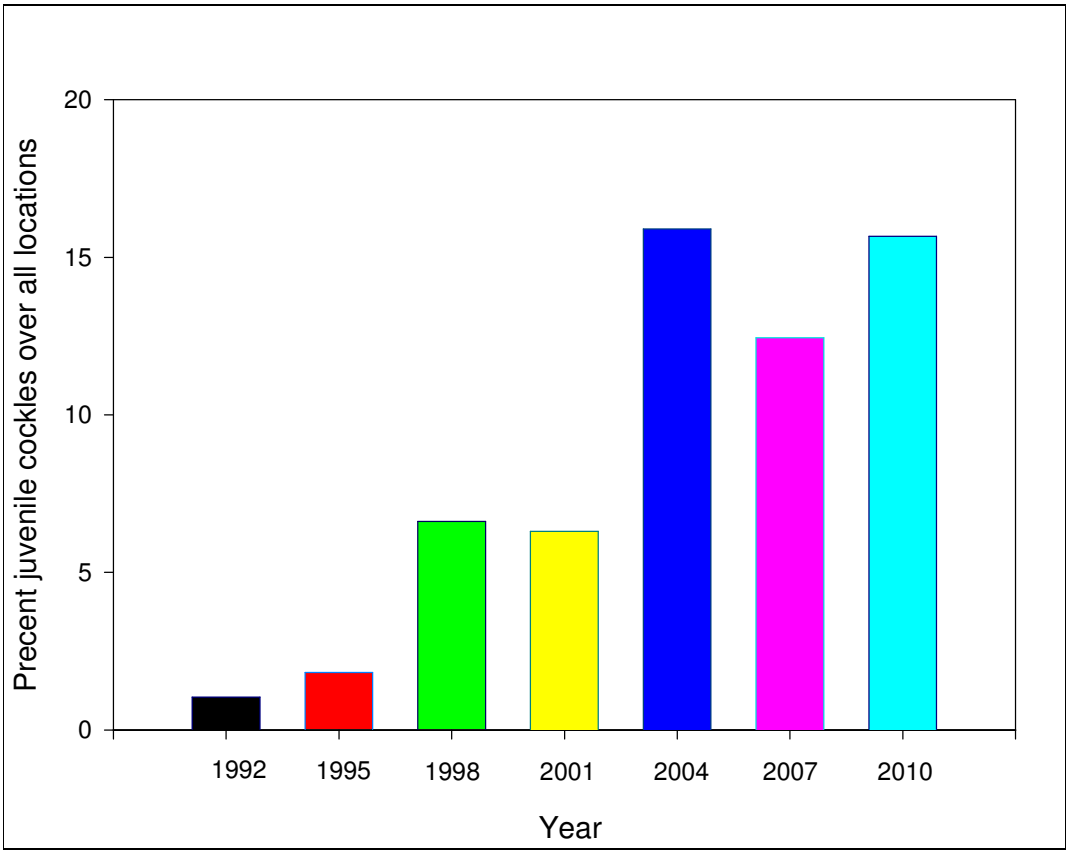

Figure 19: Juveniles (<10 mm) as a percentage of total cockle population, 1992–2010.

5. Discussion

The intertidal cockle population size of Pauatahanui Inlet has been relatively stable since 1992, although the populations have fluctuated at some sites. The 2010 survey shows a continued upward trend in mean estimates of population size (all sized cockles). The mean density of cockles in Pauatahanui in 2010 was higher than in all surveys since 1992 (27.7 per 0.1 m^2), and 53% of the population size estimated in 1976. The uncertainty around these estimates, expressed as 99% confidence intervals, show that there is no significant difference in the estimates of population size since 1992. Richardson et al. (1979) estimated that the mean density of cockles in 1976 was 58 per 0.1 m^2 (99% confidence intervals of 49–67 mm). They also estimated that the maximum density was 280 per 0.1 m^2; consisting mainly of adult cockles greater than 10 mm in length. In 2010, the maximum count was 150 per 0.1 m^2; 75% of which were adult size. Richardson's estimate differs slightly from that reported in Horn et al. 2005 (probably a re-estimate of the original data). Estimates of population size have been made assuming an intertidal area of 1 km^2 since 1976. If the size of the intertidal area has varied over time, these changes will affect the utility of comparisons of population size, but not comparisons of density estimates. Further, the sampling efficiency of volunteers may vary, both between transects within surveys and between surveys (years).

Cockle densities in Pauatahanui Inlet show high variability, both down the shore and geographically. The patterns of cockle distribution are very similar to previous surveys. Horn et al. (2005) reported that some transects in Camborne were affected by clay deposition, due to the temporary inefficiency of silt traps constructed on a subdivision behind the site (J. Wells, pers. comm.). Cockle densities at Camborne transects between 1976 and 2010 have been relatively low and variable, and it is difficult to detect any significant decline. It is not known whether silt levels may be affecting populations in this area.

There has been a shift in the size structure of cockles between 2007 and 2010 (Figure 20). The increase in total population size is driven mainly by the recruitment of juveniles, and the proportion of cockles larger than 35 mm is lower in 2010 compared to that in 2007. Most of the larger cockles have been lost from mid and low tidal samples. The recruitment of juveniles also varies between sites. Mean sizes are larger at mid and low tide sites. These areas are covered by the tide for longer periods than high and upper-mid tide areas, providing longer feeding opportunities, and therefore more energy for growth and survival.

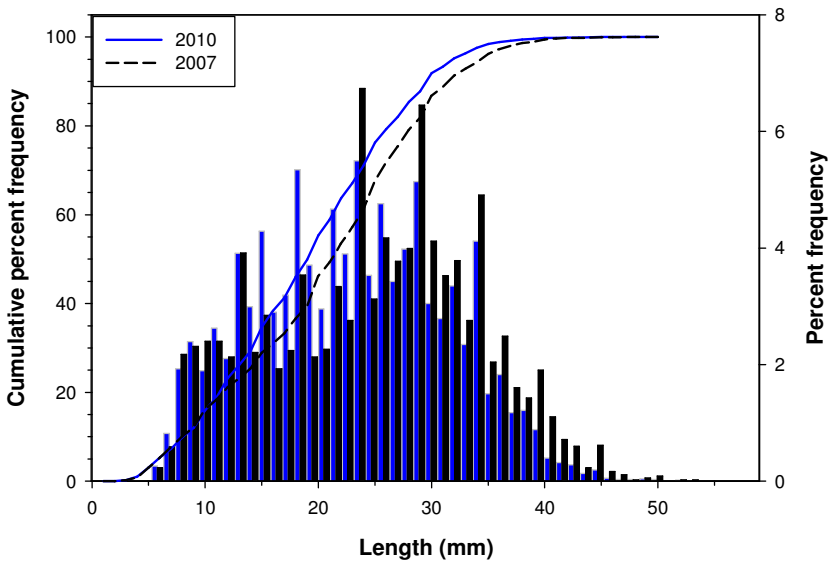

Figure 20: Histogram of the percentage frequency of cockle lengths (mm) for 2007 (black bars) and 2010 (blue bars) and curves of the cumulative percent frequency for 2007 (black dashed line) and 2010 (blue solid line).

Cockles occur in both intertidal and sub tidal areas of Pauatahanui Inlet and can attain higher densities in sub tidal areas; a maximum of 389 per 0.1 m^2 was reported by Richardson et al. (1979). Cockles are assumed to be a sessile species, but both adults and juveniles have the ability to disperse from unfavourable habitats. Adults can use their foot to crawl from the substrate, and were able to make themselves positively buoyant, and be dispersed by tidal and wind driven currents (Hayward 1995). Newly settled cockles remain on the sediment surface until they find suitable habitat, and juvenile cockles can move in and out of the substrate, influenced by habitat changes including bioturbation by other fauna (Mouritsen 2004). These size groups can also be dispersed by currents, which may influence

recruitment patterns (Lundquist et al. 2006). Interactions between cockles in intertidal and adjacent subtidal areas are poorly understood and are likely to be site specific.

Shellfish populations in general, show temporal variability in population size driven by biological, ecological, climatic, and environmental factors. Some hand gathering of cockles occurs in Pauatahanui Inlet. There are no data to quantify the level of harvest and fishing could contribute to the reduction of large sized cockles in the intertidal population. Non-commercial harvesting on Auckland beaches has reduced cockle stocks to low levels (Hartill et al. 2005), but the effects of harvesting on Pauatahanui stocks is unknown.

In addition to harvest pressure, predation and disease may also cause mortality that contributes to population changes. Whelks are known predators of cockles, and the whelks *Lepsiella scobina* and *Cominella adspersa* preferentially attacked small cockles in laboratory trials (Stewart & Cresse 2004). Changes to cockle habitat may cause cockles to leave the substrate, exposing them to predation from birds, fishes, and other epibenthic predators (Stewart & Cresse 2004). These predators, especially birds, are also the primary hosts for non-lethal diseases affecting the function of the foot and infected cockles may be unable to burrow making them more vulnerable to predation (Mouritsen 2002). Prolonged exposure to low salinity water reduces the growth and condition of cockles (Marsden 2004), and under some conditions may cause mass mortality, especially in high intertidal areas (Tallis et al. 2004).

The 1992 to 2010 estimates of cockle population size in Pauatahanui Inlet show a relatively stable trend after a marked decrease in 1992 from the historical high cockle densities in 1976. The changes are unlikely to be totally due to differences in sampling between the 1976 surveys and the 1992–2010 surveys, suggesting that there may have been a shift in intertidal cockle habitat or carrying capacity of the survey area between 1976 and 1992. Degradation of coastal habitats can result in the loss of shellfish stocks such as cockles (Cummings et al. 2007). Norkko et al. (2006) showed rare storm events that temporarily increased turbidity and sedimentation in estuaries do not significantly affect bivalves such as cockles, but that continued sediment input (from terrestrial sources), leading to infilling and increased muddiness of estuaries, has a significant negative effect on bivalve physiology. Further, sedimentation is an important structuring force in intertidal estuarine macrofaunal communities (see Norkko et al. 2006), influencing the density and distribution of cockles through movement and mortality. Escourt and Grange (1976) documented the mortality of juvenile cockles at Brown's Bay in 1976 after heavy rains deposited a smothering layer of silt over the intertidal area.

Multiple species measures are often better indicators of ecological health than single species measures. Cockles are hardier than most intertidal species and they are an accessible species for community groups to monitor. Lohrer et al. (2010) investigated changes in ecosystem function with disturbance and recovery by measuring the effects of removing benthic fauna on primary production and nutrient release in a controlled experiment. Production was highest in plots dominated by large bivalves (mainly cockles). These plots showed the largest decline in functioning immediately after disturbance and had the most persistent treatment–control differences during recovery, probably because the large bivalves remained at low abundance during the experiment. Shellfish and cockles in this case, provide a good indicator of the health of Pauatahanui the environment. Changes in the

macrofaunal community structure, mainly the numbers, size, and distribution of cockles may reflect changes in the intertidal habitat, possibly from sediment inflows associated with terrestrial activities such as modified land use for residential building. Further, filter feeding bivalves such as cockles also accumulate heavy metals (Peake et al. 2006), bacteria, and viruses, and are good indicators of water quality. This community programme provides a long time-series of data on the distribution, size structure, and density of cockles in Pauatahanui Inlet. The relatively stable population size of cockles between 1992 and 2010, and the relatively high proportion of juveniles in recent surveys suggests that the intertidal habitats of Pauatahanui have not changed greatly over this period.

6. Acknowledgments

I thank the volunteers who sampled Pauatahanui Inlet in 2010, ensuring the value of this time-series of data. John Wells organised the sampling effort and I am grateful to him for also providing the data in spreadsheet form, sourcing images, providing sampling details, and comments on the report. I thank Don Petersen for the use of his images of sampling, Vonda Cummings for her information on estuaries and cockles, and Reyn Naylor who reviewed this report. I also thank Ken Grange and Peter Horn whose reports provided the foundation for this report.

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Appendices

7.1 Appendix 1: The Guardians of Pauatahanui Inlet cockle survey instruction sheet, 2010.

2010 Pauatahanui Inlet Cockle Survey

First recognise your cockle!

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)
- At each tide level quadrats A, B, C should be about 5 paces apart.
- 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 approximately 7 cm and place in your sieve.
  - 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 every live cockle and put it into an ice cream carton.
  - Be careful not to count nut shells as small cockles — see photos on back of transect location sheet.
  - Measure width 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 2: The Guardians of Pauatahanui Inlet cockle survey transects location and labelling sheet, 2010.

2010 Pauatahanui Inlet Cockle Survey

Transect number 9

Location marker (Map overleaf)	**Park in space by northern lane of SH 58, about 30-50 metres west of house entrance with two palm trees. FROM PAUATAHANUI VILLAGE DRIVE PAST THESE TREES TURN INTO JAMES COOK DRIVE AND U-TURN WHERE SAFE.** Rip rap rock sea wall just west of entrance to 374 Paremata Rd. Pink paint spot on easternmost rip rap rock
Aim transect towards ?	Large white house at Motukaraka Point.
Number of **ADULT** paces from —	
location marker to high tide site	**25**
high tide site to upper mid tide site	**55**
upper mid tide site to lower mid tide site	**70**
lower mid tide site to lowtide site	**50-80**
Estimated time of lowtide	**4.40 pm**

RECORD OF COMPLETED QUADRATS

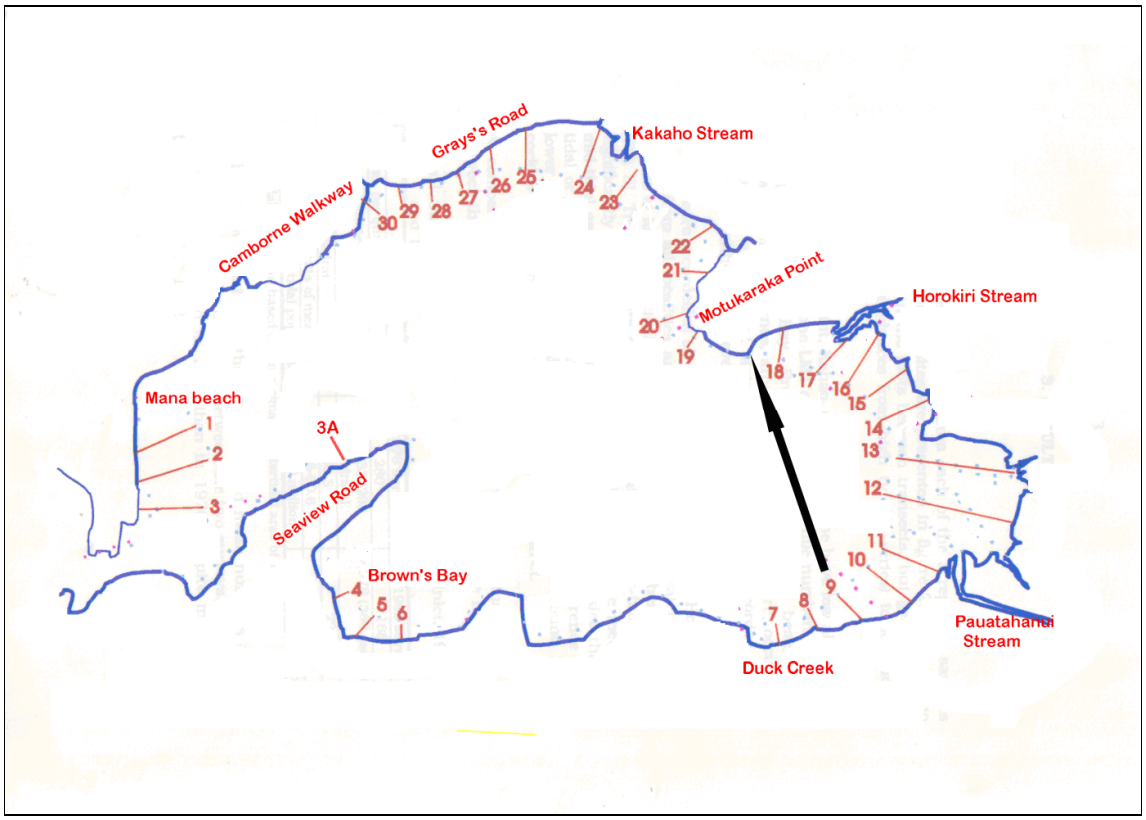
	Date	Tick	Tick	Tick
High tide quadrats		A	B	C
Upper midtide quadrats		A	B	C
Lower midtide quadrats		A	B	C
Lowtide quadrats		A	B	C

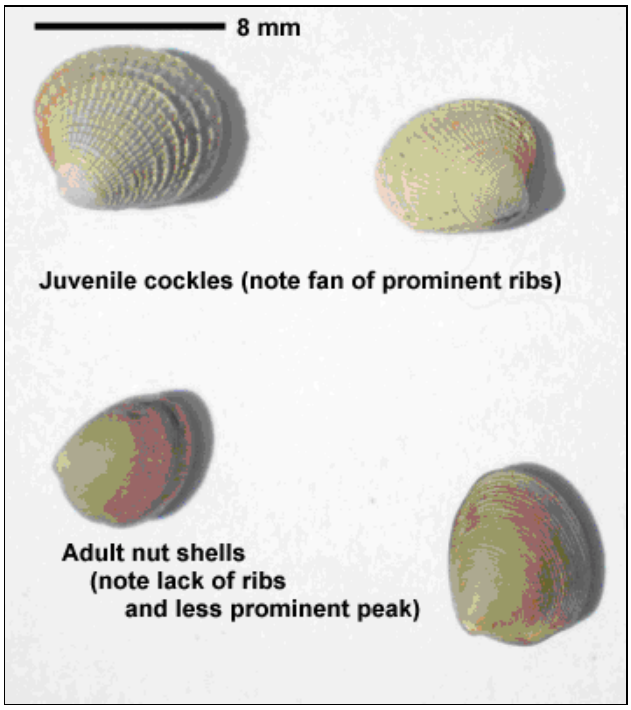
INSTRUCTIONS

- Use stakes to mark position of each sampling site.
- Arrange your work so you are working at lowtide level when the tide is low.
- Do not attempt to sample if standing water at the site is deeper than about 1 cm.
- If sampling area is covered by large green seaweed, lift it off gently before digging.
- Follow instructions for sieving out, measuring and recording cockles.
- Take care not to confuse nutshells and cockles (see photos on back of this sheet).
- Write any comments about this transect at the bottom 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 2: Continued.





Appendix 3: Team leader checklist.

GUARDIANS OF PAUATAHANUI INLET COCKLE SURVEY 2010

Checklist for Team Leaders

Before you meet and brief your team --

1. Read and understand the Sampling Instructions sheet.

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

3. Check that the sampling bag contains –
   - 1 quadrat square
   - 3 small marker stakes
   - 1 sieve
   - 3 ice cream cartons
   - 1 ruler
   - 1 clipboard with pen attached
   - 1 set of data sheets SPECIFIC TO YOUR ALLOTTED TRANSECT comprising –
     - 1 transect location sheet
     - 4 transect data sheets (for recording counts at HT, UMT, LMT and LT)
   - 1 rubber band (to keep data sheets from flying away)
   - 1 transparent plastic bag (to cover clipboard if raining)
   - 1 2B pencil (use in place of pen if data sheets become damp)
   - 1 cloth (to allow recorder to keep hands dry)

4. Check that you have a bucket and a spade or other digging tool.

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

6. 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 --

1. Obtain contact details from team members and fill out the form.

2. Check that your team know where to park.

Appendix 4: The Guardians of Pauatahanui Inlet survey cockle lengths tally sheet, 2010.

2010 Pauatahanui Inlet Cockle Survey				Transect Number 4	
				Low 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	
21		21		21	
22		22		22	
23		23		23	
24		24		24	
25		25		25	
26		26		26	
27		27		27	
28		28		28	
29		29		29	
30		30		30	
31		31		31	
32		32		32	
33		33		33	
34		34		34	
35		35		35	
36		36		36	
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 5: Descriptions of markers used to locate each survey transects in Pauatahanui Inlet

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
1	Mana	Mana beach; access by lane beside Stillwater Lodge. Large taupata bush and a clump of Agapanthus about 20 metres north of access lane.	S:41 05 911 E:174 52 252	E2667 131 N6010 344	Kakaho Stream	20	80	80	80-100
2	Mana	Mana beach; access by lane beside Stillwater Lodge. 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	Via a red striped channel marker cone on pole to southern edge of Motukaraka Point (eastern edge of Gray's Bush)	20	100	100	100-130
3	Mana	Mana beach car park just over Paremata Bridge. Marked stake at northern end of sloping wooden retaining wall in front of toilet block; in front of very large macrocarpa tree.	S:41 06 258 E:174 52 295	E2667 151 N6010 090	Radio mast on Golden Gate peninsula (above prominent 2 storey house at beach level with 2 green roofs)	35	110	110	90-110

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
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.			Most easterly boatshed on Camborne walkway at Camborne	0	25	25	30-50
4	Browns Bay	Seawall opposite large brown house at foot of Postgate Drive. A half buried pole about 25 paces west of large storm drain	S:41 06 320 E:174 52841	E2667 847 N6009 562	Houses at Motukaraka Point	10	45	45	50-60
5	Browns Bay	Foot of western steps from car park to beach.	S:41 06 344 E:174 52 910	E2668 038 N6009 515	Kakaho Stream mouth	20	45	45	40-60
6	Browns Bay	Foot of eastern 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	30	30	20-30
7	Duck Creek	Park in space by northern lane of SH 58, about 30-50 metres west of house entrance with two palm trees. FROM PAUATAHANUI VILLAGE DRIVE PAST THESE TREES AND U-TURN AT JAMES COOK DRIVE. Pink paint spot 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 Motukaraka Point	20	40	60	40-60

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
8	Duck Creek	Park in space by northern lane of SH 58, about 30-50 metres west of house entrance with two palm trees. FROM PAUATAHANUI VILLAGE PASS THESE TREES AND U-TURN AT JAMES COOK DRIVE. Rip rap rock wall about 30 metres west of twin palm trees. Green paint spot on rocks.	S:41 06 304 E:174 54 240	E2669 908 N6009 535	Large white house at Motukaraka Point	20	40	40	40-70
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	Large white house at Motukaraka Point	25	55	70	50-80
10	Bromley	Park at entrance to 400 Paremata Rd. TAKE EXTREME CARE IN CROSSING ROAD Green painted driftwood below Wildlife Reserve sign on SH58.	S:41 06 274 E:174 54 442	E2670 193 N6009 602	Motukaraka Point	20	75	75	75-100

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
11	Bromley	Park at entrance to 400 Paremata Rd. TAKE EXTREME CARE IN CROSSING ROAD Green paint on large log about 160 paces from transect 10 marker.	S:41 06 227 E:174 54 543	E2670 322 N6009 702	Waterski Club at east end of Camborne Walkway	20	60	60	50-70
12	Bromley (Pauatahanui)	Stake about 90 paces north of drain from direction of large white house on edge of reserve	S: E:	E2670 654 N6009884	Moorhouse Point	20	130	130	100-150
13	Bromley (Pauatahanui)	Stake at edge of saltmarsh by drain from direction of Rushes Restaurant	S: E:	E2670 674 N6009 976	Camborne	20	130	130	100-150
14	Pauatahanui (Ration Point)	Park either side of Horokiri bridge (sign “Horokiri Estuary Restoration Project”) and walk back to Ration Point on formed pathway. Enter shore at this point and go west to green topped stake numbered 14	S:41 05 814 E:174 54 539	E2670 339 N6010 440	Long red roofed house just to right of apex of hill above Bradey’s Point	20	30	50	40-70

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
15	Pauatahanui (Ration Point)	Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point on formed pathway. Enter shore at this point and go west to green topped stake numbered 14 and on about 180 paces to green topped stake numbered 15.	S:41 05 755 E:174 54 475	E2670 251 N6010 555	Long red roofed house just to right of apex of hill above Bradey's Point	20	50	50	40-60
16	Pauatahanui (Horikiri Stream)	Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point on formed pathway. Enter shore at this point and go west to green topped stake numbered 14 and on about 180 paces to green topped stake numbered 15 and on about another 180 paces to green topped stake numbered 16.	S:41 05 690 E:174 54 400	E2670 166 N6010 673	Bradey's Point	20	50	70	50-70

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
17	Motukaraka (Horikiri Stream)	Park either side of Horokiri bridge (sign "Horokiri Estuary Restoration Project") and walk back to Ration Point on formed pathway. Enter shore at this point and go west past green topped stakes numbered 14 and 15 and on to green topped stake numbered 16. Number 17 is a pink topped stake about a further 250 paces west. Take the direct line along the shell banks – DO NOT WALK LANDWARD OF SHELL BANK as mud is deep there.	S:41 05 673 E:174 54 287	E2669 993 N6010 712	Yellow cliffs at mouth of Duck Creek	20	40	40	40-60
18	Motukaraka	Pink topped stake on beach below very large tree at car turnaround at Motukaraka Point	S:41 05 655 E:174 54 113	E2669 745 N6010 742	2 red roofed houses behind mouth of Duck Creek	30	70	70	60-80
19	Motukaraka West	Concrete rubble at base of low cliff below easternmost power pole on Motukaraka Point	S:41 05 705 E:174 53 941	E2669 505 N6010 669	Brandon subdivision (prominent yellowish house).	10	15	15	10-20

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
20	Motukaraka West	At seaward edge of grass bank opposite entrance to house number 7 is a square iron plate in the ground marked "survey mark". Take the track from this point seawards to the shell bank. Start point marked by a small cairn of stones and a pink topped stake.	S:41 05 631 E:174 53 850	E2669 389 N6010 805	Moorhouse Point (tip of Golden Gate peninsula – house with several ball-topped turrets)	20	25	25	25-30
21	Motukaraka West	Picnic table in front of toilet block	S:41 05 519 E:174 53 911	E2669 479 N6011 003	Waterski Club at eastern end of Camborne walkway	20	35	35	35-45
22	Motukaraka West	Park at car park by public toilets. Green topped stake on shell bank on beach opposite garage at entrance to "Barrowside" 325 Grays Road and the yellow/black 55 chevron sign. CROSS MUD FLAT WITH CARE NOT TO WALK ON SALT MARSH PLANTS	S:41 05 442 E:174 53 922	E2669 493 N6011 145	Moorhouse Point (tip of Golden Gate peninsula – house with several ball-topped turrets)	20	35	50	15-30
23	Kakahao	Park at Kakaho Bridge. Pink spot marker on rock wall opposite 283 Grays Road (just east of car park)	S:41 05 315 E:174 53 705	E266 9207 N6011 392	Paremata Bridge; Paremata Boating Club buildings.	15	70	75	65-75

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
24	Kakahao	Park at Kakaho bridge and cross bridge WITH GREAT CARE. Enter beach 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 green topped stake number 24	S: 41 05 240 E: 174 53 586	E2669 027 N6009 540	Browns Bay	20	80	80	80-90
25	Kakaho	Park at Kakaho bridge and cross bridge WITH GREAT CARE. Enter beach 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 to green topped stake number 25 on beach near rushes; about 100 paces beyond stake number 24.	S: 41 05 233 E: 174 53 493	E2668 896 N6011 565	Flat topped hill (with 2 vertical track scars) just east of Browns Bay	20	65	65	65-75

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
26	Kakaho (Camborne)	Park at Water Ski Club at east end of Camborne walkway. Walk east along beach to drain opposite wooden gate; about 25 metres west of 'wiggly road' sign; small dab of green paint on wall by drain	S: 41 05 254 E: 174 53 327	E2668 664 N6011 535	2 houses at sea level below Brandon subdivision (prominent yellowish house)	25	60	60	50-65
27	Camborne	Park at Water Ski Club at east end of Camborne walkway. Walk east along beach to drain just west of fallen large macrocarpa trees; marked by green paint on piece of broken sea wall	S: 41 05 324 E: 174 53 172	E 2668 450 N 6011 397	2 houses at sea level below Brandon subdivision (prominent yellowish house)	30	30	30	30-40
28	Camborne	Park at Water Ski Club at east end of Camborne walkway. Walk east along beach to set of steps to beach from Grays Road (about 100 paces west of pair of black/white striped poles).	S: 41 05 349 E: 174 53 097	E 2668 342 N 6011 345	Flat-topped hill (with 2 vertical track scars) just east of Browns Bay.	15	10	10	10-15

Appendix 5: Continued.

No.	site	Start marker description	Start Lat/long	Start NZ-map grid	Aim towards	Paces to high tide site	Paces from high tide to upper midtide site	Paces from upper to lower midtide site	Paces from lower midtide to low tide site
29	Camborne	Park at Water Ski 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	Flat-topped hill (with 2 vertical track scars) just east of Browns Bay.	15	10	10	10-25
30	Camborne	Park at Water Ski Club at east end of Camborne walkway. Black/white striped pole in car park by water ski club house, eastern end of Camborne Walkway.	S: 41 05 393 E: 174 52 897	E2668 070 N6011 296	Yellow cliffs at mouth of Duck Creek	20	20	20	15-30

Appendix 6: Size-frequency histograms from each sampling site and tidal height, 2007 and 2010.

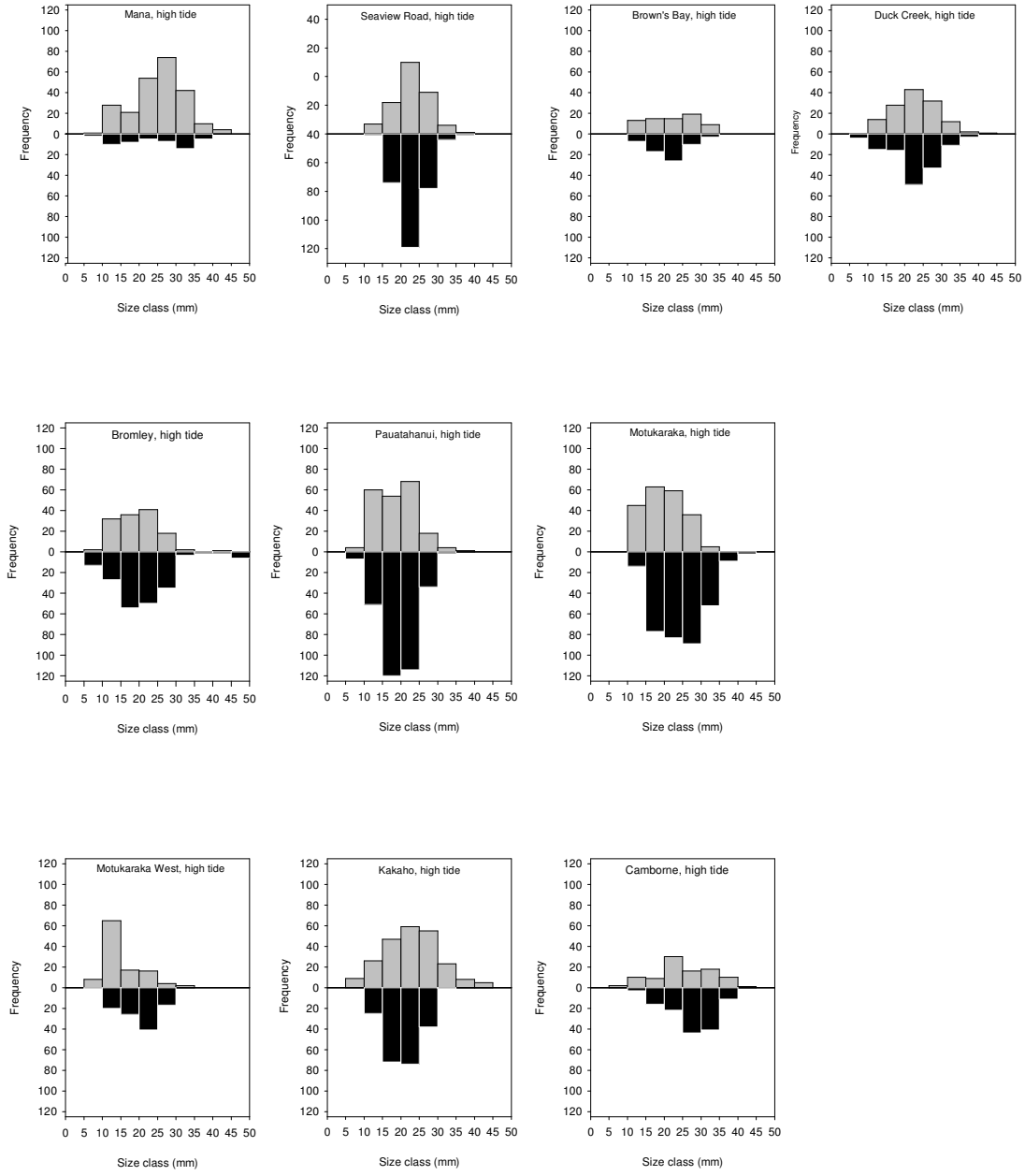


Figure A5.1: Size-frequency histograms from each sampling site at high tide, 2007 (upper in grey) and 2010 (lower in black).

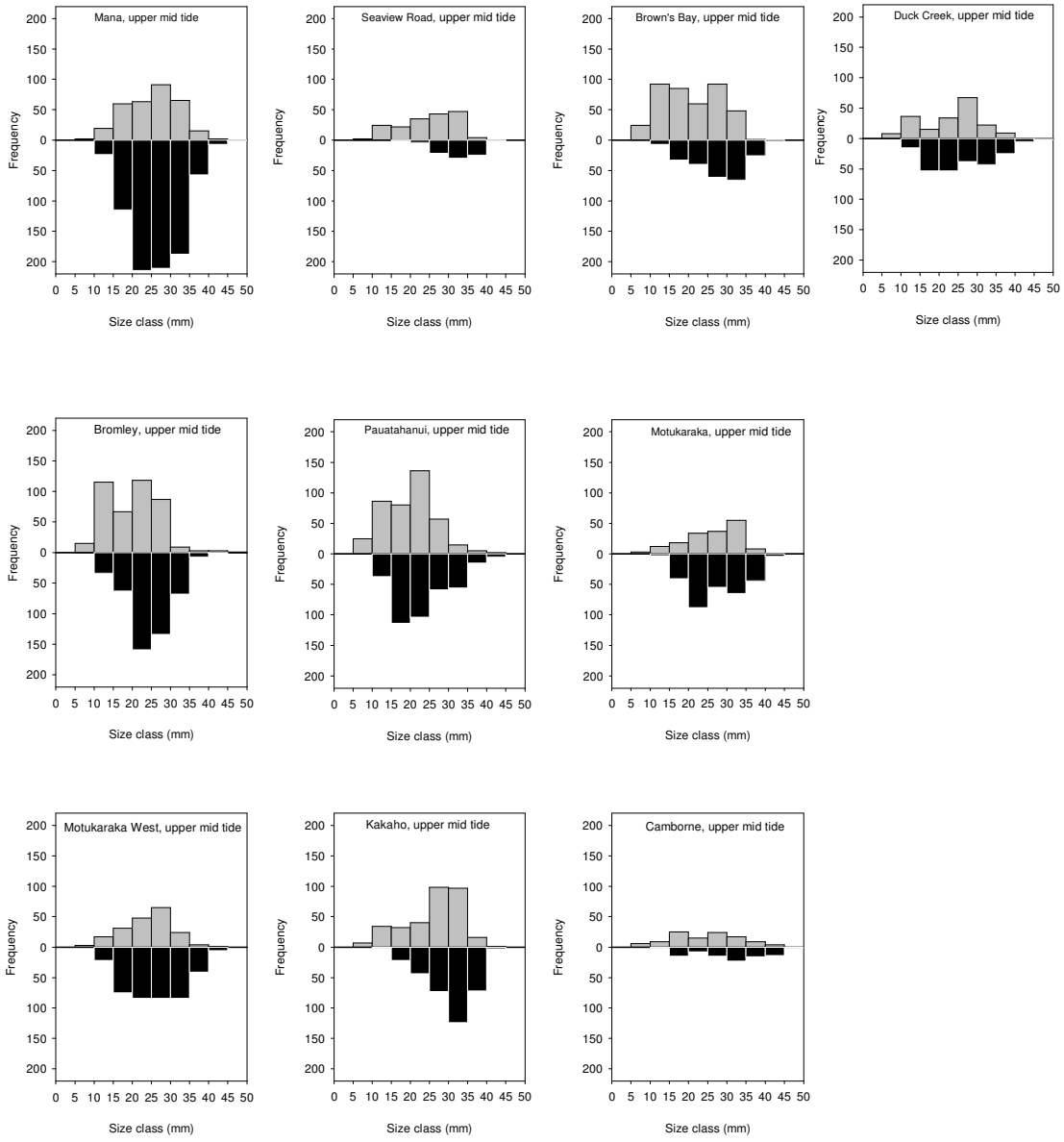


Figure A5.2: Size-frequency histograms from each sampling site at upper-mid tide, 2007 (upper in grey) and 2010 (lower in black). .

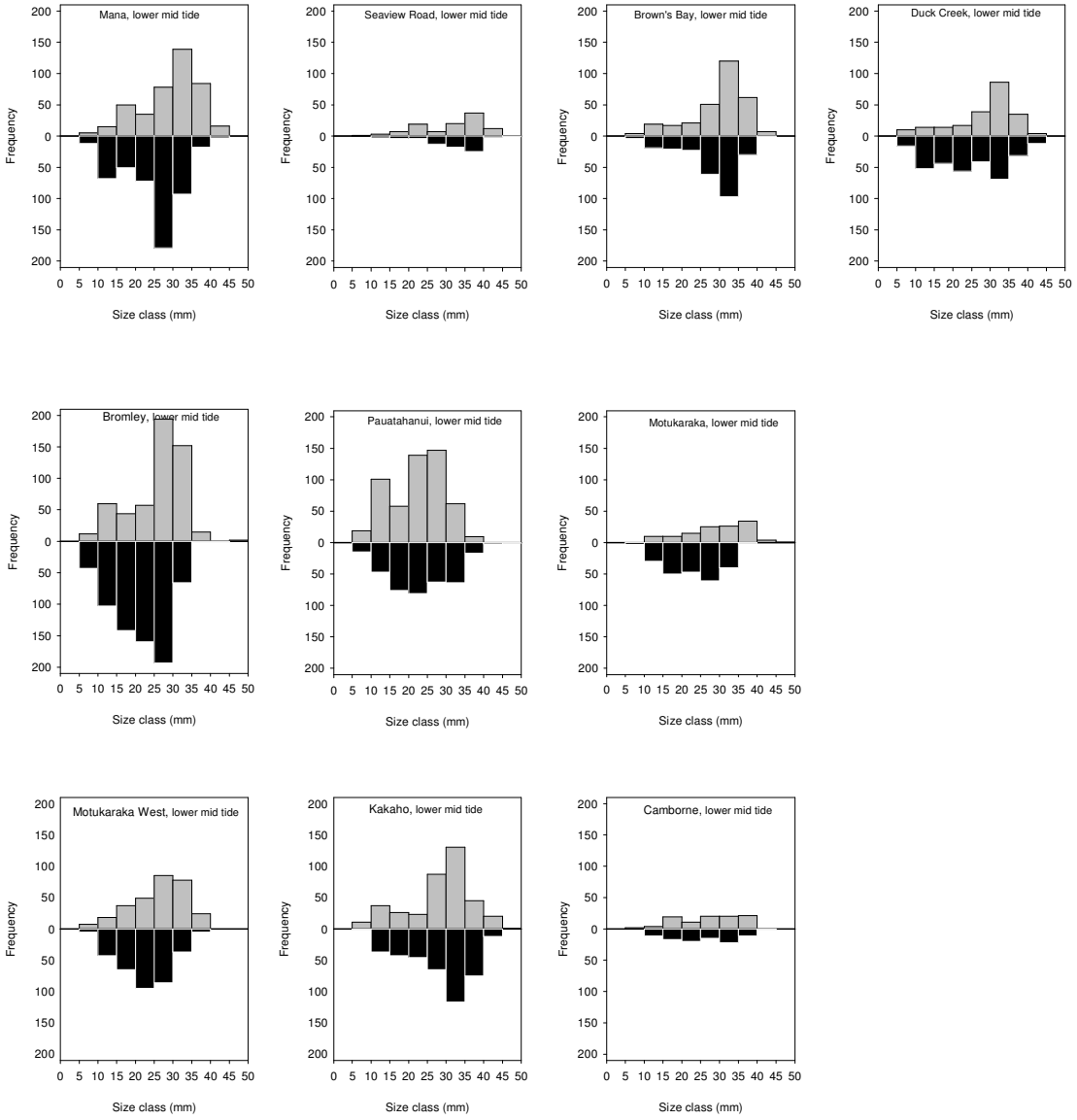


Figure A5.3: Size-frequency histograms from each sampling site at lower-mid tide, 2007 (upper in grey) and 2010 (lower in black).

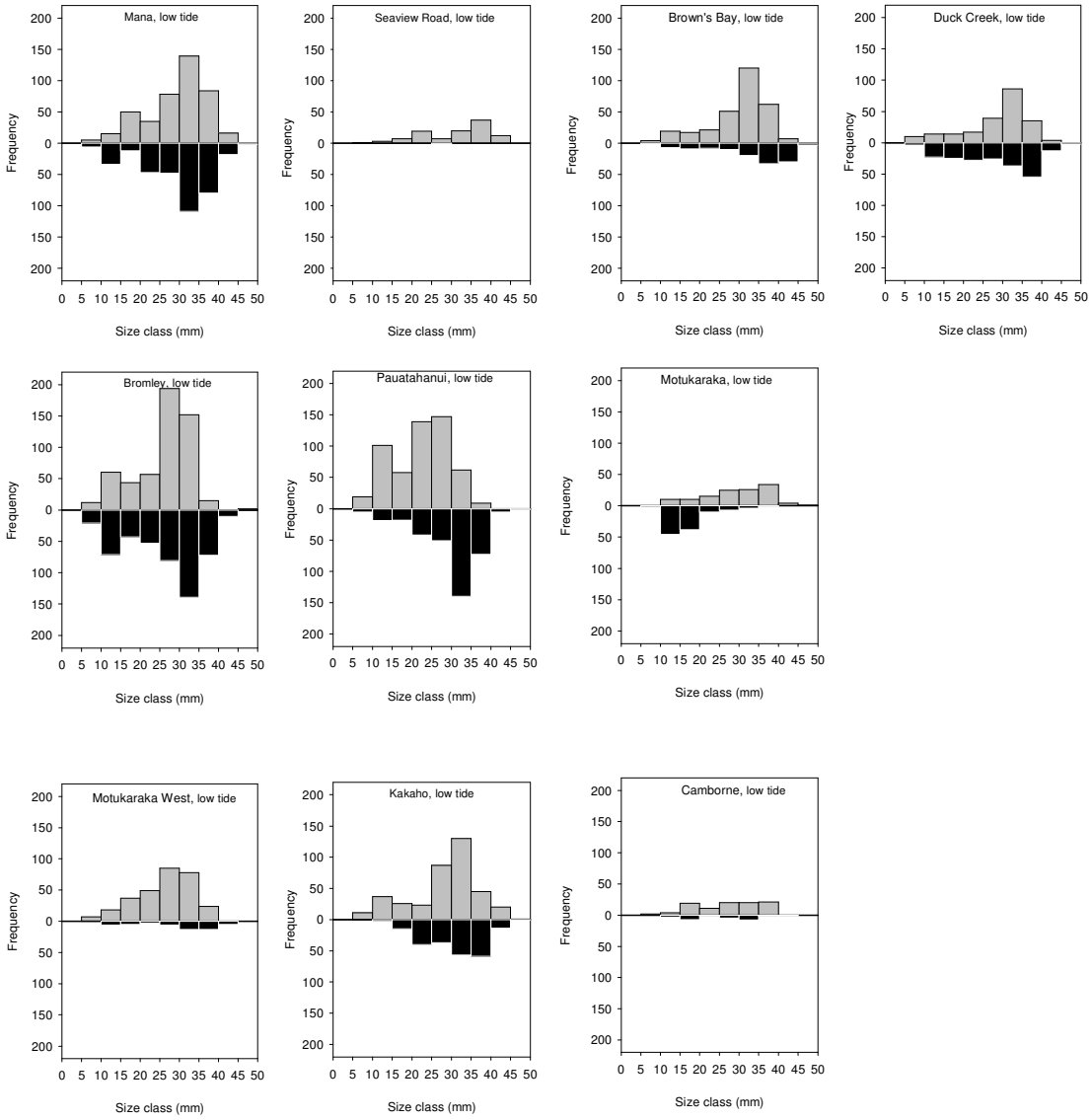


Figure A5.4: Size-frequency histograms from each sampling site at low tide, 2007 (upper in grey) and 2010 (lower in black).

Appendix 7: Raw data

2010 Pauatahanui Inlet Cockle Survey, Transect 1.

Size	Number of cockles																
(mm)	HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
	A	B	C	total	A	B	C	total	A	B	C	total	A	B	C	total	Number
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4	0	0	0	0	3	1	0	4	0	0	1	1	0	0	0	0	5
5	0	0	1	1	2	3	5	10	2	3	4	9	0	1	0	1	21
6	0	0	5	5	5	4	3	12	2	7	2	11	1	1	0	2	30
7	0	0	1	1	2	5	4	11	1	7	3	11	0	1	0	1	24
8	0	0	1	1	6	4	8	18	3	4	7	14	0	1	2	3	36
9	0	0	0	0	6	2	5	13	4	8	5	17	1	0	4	5	35
10	1	0	1	2	6	13	12	31	1	7	4	12	1	2	3	6	51
11	0	0	0	0	9	8	12	29	1	2	2	5	0	1	0	1	35
12	1	0	2	3	11	14	20	45	0	2	3	5	1	0	0	1	54
13	0	0	1	1	6	11	9	26	2	4	1	7	1	0	0	1	35
14	0	0	2	2	5	17	8	30	2	1	1	4	2	0	0	2	38
15	0	0	2	2	3	3	7	13	3	2	0	5	0	0	0	0	20
16	0	0	1	1	5	7	6	18	1	0	2	3	4	0	1	5	27
17	0	0	0	0	5	8	6	19	1	2	0	3	0	1	1	2	24
18	0	0	0	0	2	4	4	10	2	5	2	9	1	1	0	2	21
19	0	0	1	1	3	5	7	15	5	3	0	8	2	1	1	4	28
20	1	0	1	2	3	7	4	14	4	7	4	15	2	2	2	6	37
21	0	0	1	1	7	8	10	25	9	4	4	17	1	2	0	3	46
22	0	0	2	2	4	12	9	25	5	12	3	20	1	1	0	2	49
23	0	0	0	0	1	3	4	8	6	5	7	18	2	0	0	2	28
24	0	0	0	0	2	2	4	8	5	11	3	19	1	4	1	6	33
25	0	0	0	0	1	1	3	5	3	3	0	6	1	1	1	3	14
26	0	0	1	1	1	0	0	1	2	2	1	5	1	2	4	7	14
27	0	0	1	1	0	0	0	0	1	0	1	2	2	2	0	4	7
28	0	0	0	0	0	0	0	0	3	1	1	5	0	1	0	1	6
29	0	0	0	0	0	1	0	1	2	2	0	4	2	5	3	10	15
30	0	0	0	0	0	0	0	0	0	0	0	0	1	2	7	10	10
31	0	0	0	0	0	0	0	0	0	0	0	0	2	4	3	9	9
32	0	0	0	0	0	0	0	0	1	0	0	1	3	1	7	11	12
33	0	0	0	0	0	0	0	0	0	0	0	0	4	1	7	12	12
34	0	0	0	0	0	0	0	0	0	0	0	0	3	8	1	12	12
35	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	9	9
36	0	0	0	0	0	0	0	0	1	0	0	1	2	0	3	5	6
37	0	0	0	0	0	0	0	0	1	0	0	1	1	2	0	3	4
38	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2

2010 Pauatahanui Inlet Cockle Survey, Transect 1 continued.

Size	Number of cockles																
(mm)	HT			HT	UMT			UMT	LMT			LMT	LT			LT	Total
	A	B	C	total	A	B	C	total	A	B	C	total	A	B	C	total	Number
39	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
40	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
42	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	25	28	98	143	150	391	73	104	61	238	46	53	59	158	815

2010 Pauatahanui Inlet Cockle Survey, Transect 2.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
4	0	0	0	**0**	0	0	3	**3**	0	0	0	**0**	0	0	0	**0**	**3**
5	0	0	0	**0**	0	1	1	**2**	1	0	0	**1**	0	4	1	**5**	**8**
6	0	0	0	**0**	0	0	3	**3**	1	0	0	**1**	0	4	2	**6**	**10**
7	0	0	0	**0**	0	0	3	**3**	0	0	0	**0**	0	1	1	**2**	**5**
8	0	0	0	**0**	0	0	3	**3**	1	0	0	**1**	1	1	0	**2**	**6**
9	0	0	0	**0**	3	2	2	**7**	0	1	0	**1**	0	3	1	**4**	**12**
10	0	0	0	**0**	1	1	0	**2**	1	0	0	**1**	1	1	1	**3**	**6**
11	0	0	0	**0**	4	4	3	**11**	1	2	1	**4**	0	1	0	**1**	**16**
12	0	0	0	**0**	2	3	1	**6**	2	2	1	**5**	0	0	0	**0**	**11**
13	0	0	0	**0**	3	3	1	**7**	4	0	0	**4**	2	0	0	**2**	**13**
14	0	0	0	**0**	3	1	10	**14**	2	1	2	**5**	1	2	0	**3**	**22**
15	0	0	0	**0**	5	6	5	**16**	3	2	0	**5**	0	1	0	**1**	**22**
16	0	0	0	**0**	1	6	1	**8**	3	0	0	**3**	0	2	1	**3**	**14**
17	0	0	0	**0**	1	4	6	**11**	2	1	1	**4**	2	1	0	**3**	**18**
18	0	0	0	**0**	12	16	5	**33**	4	1	0	**5**	0	3	3	**6**	**44**
19	0	0	0	**0**	13	9	6	**28**	3	3	4	**10**	3	3	1	**7**	**45**
20	0	0	0	**0**	9	6	8	**23**	3	2	3	**8**	4	2	3	**9**	**40**
21	0	0	0	**0**	5	10	5	**20**	5	6	3	**14**	2	2	1	**5**	**39**
22	0	0	0	**0**	3	14	10	**27**	8	8	6	**22**	0	1	2	**3**	**52**
23	0	0	0	**0**	3	5	4	**12**	1	12	5	**18**	1	2	4	**7**	**37**
24	0	0	0	**0**	2	3	4	**9**	8	1	3	**12**	2	1	3	**6**	**27**
25	0	0	0	**0**	0	3	0	**3**	5	2	7	**14**	6	2	3	**11**	**28**
26	0	0	0	**0**	2	1	0	**3**	1	2	1	**4**	2	1	4	**7**	**14**
27	0	0	0	**0**	1	1	0	**2**	1	2	10	**13**	4	8	3	**15**	**30**
28	0	0	0	**0**	2	0	0	**2**	3	0	8	**11**	6	5	5	**16**	**29**
29	0	0	0	**0**	0	0	0	**0**	8	0	7	**15**	6	7	7	**20**	**35**
30	0	0	0	**0**	0	0	0	**0**	7	0	1	**8**	8	6	5	**19**	**27**
31	0	0	0	**0**	0	0	0	**0**	2	1	3	**6**	3	2	3	**8**	**14**
32	0	0	0	**0**	0	0	0	**0**	1	0	3	**4**	4	4	3	**11**	**15**
33	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	0	1	2	**3**	**4**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	2	2	0	**4**	**4**
35	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**	**1**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	**1**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	1	2	**4**	**4**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 2 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	**1**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	**1**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**0**	**0**	**0**	**0**	**75**	**99**	**84**	**258**	**81**	**49**	**70**	**200**	**62**	**75**	**63**	**200**	**658**

2010 Pauatahanui Inlet Cockle Survey, Transect 3.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 3.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**11**	**3**	**8**	**22**	**73**	**37**	**59**	**169**	**28**	**24**	**17**	**69**	**0**	**0**	**0**	**0**	**260**

2010 Pauatahanui Inlet Cockle Survey **Transect 3A**

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

2010 Pauatahanui Inlet Cockle Survey **Transect 3A**

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	0	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	0	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	0	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	0	**0**
Total	**54**	**72**	**30**	**156**	**16**	**18**	**49**	**83**	**16**	**36**	**18**	**70**	**1**	**0**	**0**	**1**	**310**

2010 Pauatahanui Inlet Cockle Survey, Transect 4.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 4 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**	**1**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**5**	**9**	**9**	**23**	**16**	**40**	**41**	**97**	**27**	**35**	**55**	**117**	**12**	**12**	**10**	**34**	**271**

2010 Pauatahanui Inlet Cockle Survey, Transect 5.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
4	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
5	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
6	0	0	0	**0**	0	1	0	**1**	1	1	1	**3**	0	0	0	**0**	**4**
7	0	1	0	**1**	0	2	0	**2**	0	2	1	**3**	0	0	1	**1**	**7**
8	0	0	0	**0**	1	1	0	**2**	0	1	0	**1**	0	2	1	**3**	**6**
9	0	0	0	**0**	2	1	2	**5**	0	0	0	**0**	0	0	2	**2**	**7**
10	0	3	2	**5**	1	0	0	**1**	0	1	0	**1**	0	0	0	**0**	**7**
11	0	1	1	**2**	1	1	3	**5**	0	0	0	**0**	1	0	2	**3**	**10**
12	0	3	0	**3**	0	1	2	**3**	0	1	3	**4**	1	0	2	**3**	**13**
13	0	2	1	**3**	3	1	0	**4**	0	0	0	**0**	0	0	0	**0**	**7**
14	0	3	1	**4**	1	0	0	**1**	0	2	0	**2**	0	0	0	**0**	**7**
15	0	1	0	**1**	1	1	1	**3**	0	0	1	**1**	1	0	0	**1**	**6**
16	0	1	2	**3**	1	0	2	**3**	0	1	1	**2**	0	1	0	**1**	**9**
17	0	0	3	**3**	1	1	2	**4**	1	1	1	**3**	1	0	0	**1**	**11**
18	0	1	1	**2**	2	5	0	**7**	0	1	0	**1**	1	0	0	**1**	**11**
19	0	2	3	**5**	2	3	1	**6**	0	0	1	**1**	3	0	1	**4**	**16**
20	0	0	3	**3**	0	2	1	**3**	1	2	2	**5**	0	0	0	**0**	**11**
21	0	1	0	**1**	1	0	0	**1**	0	1	2	**3**	0	0	0	**0**	**5**
22	0	1	0	**1**	2	1	0	**3**	1	1	2	**4**	1	0	0	**1**	**9**
23	0	1	0	**1**	3	4	3	**10**	3	0	1	**4**	0	2	1	**3**	**18**
24	0	0	1	**1**	1	1	2	**4**	2	4	2	**8**	2	1	0	**3**	**16**
25	0	0	0	**0**	0	2	2	**4**	1	0	2	**3**	0	0	1	**1**	**8**
26	0	0	1	**1**	0	0	3	**3**	0	1	1	**2**	2	1	1	**4**	**10**
27	0	0	0	**0**	1	0	2	**3**	1	1	0	**2**	0	0	1	**1**	**6**
28	0	0	0	**0**	1	0	1	**2**	2	4	5	**11**	2	0	0	**2**	**15**
29	0	0	0	**0**	0	0	2	**2**	1	3	1	**5**	0	0	2	**2**	**9**
30	0	0	0	**0**	0	0	1	**1**	3	1	1	**5**	1	3	2	**6**	**12**
31	0	0	0	**0**	0	0	1	**1**	1	0	1	**2**	0	1	3	**4**	**7**
32	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	2	1	4	**7**	**7**
33	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	1	2	0	**3**	**4**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
35	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	0	1	**2**	**2**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 5 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**0**	**21**	**19**	**40**	**25**	**29**	**31**	**85**	**19**	**29**	**29**	**77**	**20**	**14**	**25**	**59**	**261**

2010 Pauatahanui Inlet Cockle Survey, Transect 6.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 6 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**0**	**0**	**0**	**0**	**10**	**19**	**24**	**53**	**32**	**22**	**7**	**61**	**12**	**12**	**5**	**29**	**143**

2010 Pauatahanui Inlet Cockle Survey, Transect 7.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 7 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**12**	**8**	**16**	**36**	**17**	**19**	**14**	**50**	**13**	**29**	**19**	**61**	**17**	**19**	**26**	**62**	**209**

2010 Pauatahanui Inlet Cockle Survey, Transect 8.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 8 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**11**	**19**	**9**	**39**	**11**	**19**	**22**	**52**	**24**	**51**	**35**	**110**	**25**	**22**	**23**	**70**	**271**

2010 Pauatahanui Inlet Cockle Survey, Transect 9.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 9 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**26**	**11**	**9**	**46**	**44**	**38**	**51**	**133**	**60**	**42**	**47**	**149**	**33**	**16**	**32**	**81**	**409**

2010 Pauatahanui Inlet Cockle Survey, Transect 10.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 10 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**16**	**7**	**14**	**37**	**47**	**47**	**34**	**128**	**24**	**34**	**48**	**106**	**38**	**67**	**38**	**143**	**414**

2010 Pauatahanui Inlet Cockle Survey, Transect 11.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 11 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**21**	**33**	**24**	**78**	**50**	**46**	**50**	**146**	**44**	**32**	**67**	**143**	**27**	**25**	**33**	**85**	**452**

2010 Pauatahanui Inlet Cockle Survey, Transect 12.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	1	0	**1**	0	0	0	**0**	4	0	0	**4**	0	0	0	**0**	**5**
4	0	1	0	**1**	0	0	0	**0**	6	0	0	**6**	0	0	0	**0**	**7**
5	2	1	0	**3**	0	2	1	**3**	4	4	0	**8**	0	0	0	**0**	**14**
6	0	0	0	**0**	0	0	0	**0**	3	4	0	**7**	0	0	0	**0**	**7**
7	0	0	0	**0**	0	1	0	**1**	1	1	0	**2**	3	0	0	**3**	**6**
8	1	0	0	**1**	2	1	0	**3**	5	3	5	**13**	0	0	0	**0**	**17**
9	1	0	1	**2**	0	0	1	**1**	8	0	9	**17**	0	0	0	**0**	**20**
10	0	1	1	**2**	1	2	1	**4**	5	1	17	**23**	2	0	1	**3**	**32**
11	3	2	1	**6**	1	0	3	**4**	9	7	12	**28**	0	1	0	**1**	**39**
12	1	0	0	**1**	4	2	1	**7**	6	5	6	**17**	0	3	0	**3**	**28**
13	0	0	0	**0**	1	1	2	**4**	3	2	8	**13**	0	1	2	**3**	**20**
14	2	0	1	**3**	1	3	1	**5**	5	4	7	**16**	3	1	1	**5**	**29**
15	0	1	0	**1**	1	4	3	**8**	5	2	9	**16**	0	1	2	**3**	**28**
16	2	0	0	**2**	2	1	6	**9**	6	5	9	**20**	2	4	0	**6**	**37**
17	0	1	0	**1**	0	3	2	**5**	6	5	5	**16**	1	2	0	**3**	**25**
18	1	0	0	**1**	4	1	1	**6**	8	4	5	**17**	1	2	1	**4**	**28**
19	2	0	1	**3**	3	2	5	**10**	6	8	5	**19**	1	0	4	**5**	**37**
20	1	1	1	**3**	1	1	0	**2**	5	4	3	**12**	2	2	4	**8**	**25**
21	0	2	1	**3**	1	0	0	**1**	3	4	6	**13**	0	0	1	**1**	**18**
22	0	0	0	**0**	0	2	3	**5**	3	4	7	**14**	0	2	2	**4**	**23**
23	0	2	0	**2**	0	0	0	**0**	2	8	2	**12**	0	1	1	**2**	**16**
24	0	0	0	**0**	0	1	0	**1**	9	4	2	**15**	0	0	3	**3**	**19**
25	0	0	0	**0**	0	0	0	**0**	6	4	4	**14**	1	1	5	**7**	**21**
26	0	0	0	**0**	0	0	0	**0**	3	1	3	**7**	2	0	1	**3**	**10**
27	0	0	0	**0**	0	1	0	**1**	1	3	0	**4**	2	4	4	**10**	**15**
28	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**	2	3	5	**10**	**12**
29	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	1	6	2	**9**	**10**
30	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**	3	3	5	**11**	**13**
31	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	0	4	3	**7**	**8**
32	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	3	5	**9**	**9**
33	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	2	2	**5**	**5**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
35	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	**1**
38	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**	**1**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 12.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**16**	**13**	**7**	**36**	**23**	**28**	**30**	**81**	**127**	**87**	**125**	**339**	**28**	**46**	**55**	**129**	**585**

2010 Pauatahanui Inlet Cockle Survey, Transect 13.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 13.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**8**	**24**	**8**	**40**	**45**	**42**	**24**	**111**	**47**	**41**	**32**	**120**	**69**	**52**	**36**	**157**	**428**

2010 Pauatahanui Inlet Cockle Survey, Transect 14.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
4	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
5	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	2	0	0	**2**	**3**
6	0	2	0	**2**	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**	**3**
7	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	**1**
8	1	3	0	**4**	0	0	1	**1**	0	0	0	**0**	0	0	1	**1**	**6**
9	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	0	0	1	**1**	**2**
10	6	2	2	**10**	0	0	0	**0**	2	1	1	**4**	0	1	2	**3**	**17**
11	5	1	4	**10**	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	**11**
12	2	7	5	**14**	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	**15**
13	0	1	1	**2**	0	0	0	**0**	0	0	14	**14**	1	1	0	**2**	**18**
14	0	8	1	**9**	0	0	0	**0**	4	0	1	**5**	0	1	0	**1**	**15**
15	5	16	4	**25**	0	1	1	**2**	1	2	1	**4**	1	0	0	**1**	**32**
16	6	8	3	**17**	0	0	1	**1**	0	2	1	**3**	0	0	0	**0**	**21**
17	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**1**
18	6	8	2	**16**	2	0	1	**3**	4	3	1	**8**	1	20	0	**21**	**48**
19	2	2	1	**5**	0	0	0	**0**	3	1	0	**4**	0	1	0	**1**	**10**
20	2	3	4	**9**	1	0	1	**2**	1	1	1	**3**	1	1	0	**2**	**16**
21	2	1	1	**4**	0	2	1	**3**	0	2	0	**2**	1	0	0	**1**	**10**
22	0	0	4	**4**	1	0	0	**1**	0	1	1	**2**	0	0	0	**0**	**7**
23	0	0	0	**0**	0	0	0	**0**	1	1	0	**2**	0	1	2	**3**	**5**
24	0	0	1	**1**	1	0	1	**2**	5	3	0	**8**	1	0	0	**1**	**12**
25	0	0	0	**0**	1	2	0	**3**	2	1	1	**4**	2	3	1	**6**	**13**
26	0	0	1	**1**	0	1	1	**2**	1	3	0	**4**	3	4	1	**8**	**15**
27	0	0	0	**0**	0	0	1	**1**	2	0	0	**2**	3	0	0	**3**	**6**
28	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**	5	5	1	**11**	**12**
29	0	0	0	**0**	1	0	0	**1**	1	0	0	**1**	12	2	2	**16**	**18**
30	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	10	0	0	**10**	**11**
31	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	1	2	1	**4**	**5**
32	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**	3	3	0	**6**	**7**
33	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	3	1	1	**5**	**5**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	8	1	1	**10**	**10**
35	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	3	1	2	**6**	**6**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**	**1**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	**1**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 14 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	38	62	34	134	8	7	11	26	29	22	24	75	62	49	17	128	363

2010 Pauatahanui Inlet Cockle Survey,, Transect 15.

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

2010 Pauatahanui Inlet Cockle Survey,, Transect 15 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**14**	**18**	**16**	**48**	**36**	**42**	**30**	**108**	**32**	**16**	**31**	**79**	**16**	**9**	**19**	**44**	**279**

2010 Pauatahanui Inlet Cockle Survey, Transect 16.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 16 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**23**	**23**	**28**	**74**	**7**	**8**	**12**	**27**	**22**	**11**	**37**	**70**	**21**	**23**	**24**	**68**	**239**

2010 Pauatahanui Inlet Cockle Survey, Transect 17.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	2	1	0	**3**	0	0	0	**0**	**3**
4	1	0	0	**1**	4	0	1	**5**	1	1	0	**2**	1	0	0	**1**	**9**
5	1	0	4	**5**	15	1	6	**22**	0	1	0	**1**	2	0	0	**2**	**30**
6	2	0	0	**2**	4	2	5	**11**	1	0	0	**1**	3	0	0	**3**	**17**
7	0	0	1	**1**	4	6	6	**16**	3	1	1	**5**	1	0	1	**2**	**24**
8	0	0	3	**3**	9	9	1	**19**	4	3	0	**7**	0	1	0	**1**	**30**
9	0	0	0	**0**	1	5	5	**11**	1	0	2	**3**	0	0	0	**0**	**14**
10	5	0	6	**11**	6	11	11	**28**	5	2	2	**9**	3	1	0	**4**	**52**
11	3	0	3	**6**	6	9	8	**23**	1	2	2	**5**	0	1	0	**1**	**35**
12	5	0	3	**8**	6	7	7	**20**	2	0	2	**4**	0	0	1	**1**	**33**
13	2	0	0	**2**	4	5	9	**18**	1	2	2	**5**	1	1	0	**2**	**27**
14	1	0	1	**2**	4	0	6	**10**	0	2	5	**7**	0	1	1	**2**	**21**
15	6	2	2	**10**	0	4	5	**9**	6	17	5	**28**	1	1	0	**2**	**49**
16	7	0	1	**8**	4	1	10	**15**	10	3	2	**15**	0	1	1	**2**	**40**
17	2	0	0	**2**	2	1	0	**3**	3	3	0	**6**	0	0	0	**0**	**11**
18	1	0	3	**4**	2	1	0	**3**	2	3	2	**7**	0	3	4	**7**	**21**
19	2	0	0	**2**	2	2	2	**6**	2	1	1	**4**	1	0	1	**2**	**14**
20	1	0	2	**3**	0	0	2	**2**	6	7	3	**16**	0	2	0	**2**	**23**
21	0	0	0	**0**	0	0	0	**0**	0	5	0	**5**	0	1	1	**2**	**7**
22	0	0	0	**0**	1	1	0	**2**	3	1	1	**5**	1	0	0	**1**	**8**
23	0	0	0	**0**	0	0	1	**1**	1	0	0	**1**	4	3	1	**8**	**10**
24	0	0	0	**0**	0	0	1	**1**	1	0	0	**1**	4	7	2	**13**	**15**
25	0	0	0	**0**	0	0	0	**0**	0	1	1	**2**	2	2	4	**8**	**10**
26	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	5	4	6	**15**	**15**
27	0	0	0	**0**	0	2	0	**2**	0	0	0	**0**	5	5	2	**12**	**14**
28	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	7	2	1	**10**	**10**
29	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	2	1	0	**3**	**3**
30	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	4	1	0	**5**	**5**
31	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
32	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
33	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
35	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 17 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**39**	**2**	**29**	**70**	**74**	**67**	**86**	**227**	**55**	**56**	**31**	**142**	**47**	**38**	**26**	**111**	**550**

2010 Pauatahanui Inlet Cockle Survey, Transect 18.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
4	0	0	0	**0**	2	1	0	**3**	0	0	1	**1**	0	0	2	**2**	**6**
5	0	0	0	**0**	0	0	0	**0**	0	1	1	**2**	0	0	0	**0**	**2**
6	0	0	0	**0**	0	2	0	**2**	3	0	2	**5**	1	2	5	**8**	**15**
7	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	3	**4**	**4**
8	1	0	0	**1**	6	2	3	**11**	8	2	4	**14**	6	0	9	**15**	**41**
9	0	0	0	**0**	0	3	1	**4**	0	2	0	**2**	2	3	6	**11**	**17**
10	6	0	5	**11**	9	5	6	**20**	2	0	3	**5**	3	1	3	**7**	**43**
11	2	0	0	**2**	2	3	9	**14**	0	0	0	**0**	4	1	1	**6**	**22**
12	7	2	5	**14**	5	13	5	**23**	5	1	2	**8**	5	1	5	**11**	**56**
13	0	0	0	**0**	0	0	0	**0**	5	0	0	**5**	0	1	7	**8**	**13**
14	0	0	0	**0**	0	2	0	**2**	2	6	1	**9**	0	0	3	**3**	**14**
15	16	8	12	**36**	11	18	13	**42**	4	8	9	**21**	1	0	5	**6**	**105**
16	0	0	0	**0**	1	0	1	**2**	0	2	1	**3**	1	0	1	**2**	**7**
17	0	0	0	**0**	0	0	1	**1**	0	3	0	**3**	1	1	2	**4**	**8**
18	2	4	0	**6**	4	3	5	**12**	4	7	1	**12**	0	0	2	**2**	**32**
19	0	0	0	**0**	0	1	0	**1**	5	1	0	**6**	0	0	1	**1**	**8**
20	13	12	12	**37**	9	8	13	**30**	0	0	11	**11**	1	0	0	**1**	**79**
21	0	0	0	**0**	1	0	1	**2**	0	2	4	**6**	0	2	0	**2**	**10**
22	3	0	2	**5**	4	4	5	**13**	3	5	5	**13**	0	3	0	**3**	**34**
23	0	0	0	**0**	0	0	1	**1**	5	0	0	**5**	0	0	0	**0**	**6**
24	0	0	1	**1**	1	0	2	**3**	2	2	2	**6**	0	0	0	**0**	**10**
25	9	5	16	**30**	11	12	7	**30**	2	5	14	**21**	0	1	0	**1**	**82**
26	3	0	0	**3**	3	2	0	**5**	1	5	1	**7**	0	0	0	**0**	**15**
27	3	2	0	**5**	0	2	1	**3**	3	0	1	**4**	0	0	0	**0**	**12**
28	3	1	4	**8**	1	8	4	**13**	5	5	2	**12**	0	0	0	**0**	**33**
29	0	0	0	**0**	0	1	0	**1**	5	0	0	**5**	0	0	0	**0**	**6**
30	13	6	11	**30**	3	5	3	**11**	0	2	2	**4**	0	0	0	**0**	**45**
31	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
32	5	1	0	**6**	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**	**7**
33	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
35	1	0	2	**3**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**3**
36	1	0	0	**1**	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	0	0	**0**	**0**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
39	0	0	1	**1**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**1**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 18 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**88**	**41**	**71**	**200**	**74**	**96**	**81**	**251**	**64**	**59**	**67**	**190**	**25**	**17**	**55**	**97**	**738**

2010 Pauatahanui Inlet Cockle Survey, Transect 19.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 19 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**39**	**56**	**30**	**125**	**13**	**6**	**26**	**45**	**7**	**16**	**14**	**37**	**6**	**2**	**1**	**9**	**216**

2010 Pauatahanui Inlet Cockle Survey, Transect 20.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
4	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
5	0	0	0	**0**	0	0	0	**0**	0	3	1	**4**	0	0	0	**0**	**4**
6	0	0	0	**0**	0	0	0	**0**	1	2	2	**5**	0	0	0	**0**	**5**
7	0	0	0	**0**	0	0	0	**0**	1	2	1	**4**	0	0	0	**0**	**4**
8	0	0	0	**0**	0	1	2	**3**	1	1	5	**7**	0	0	0	**0**	**10**
9	0	0	0	**0**	0	0	2	**2**	1	2	2	**5**	0	0	0	**0**	**7**
10	1	0	0	**1**	0	1	1	**2**	1	2	2	**5**	0	1	2	**3**	**11**
11	0	0	0	**0**	0	2	3	**5**	2	6	1	**9**	0	0	0	**0**	**14**
12	0	0	0	**0**	0	1	2	**3**	1	1	4	**6**	0	0	1	**1**	**10**
13	0	0	0	**0**	0	1	2	**3**	3	3	6	**12**	0	0	0	**0**	**15**
14	1	0	0	**1**	0	1	3	**4**	2	3	6	**11**	0	0	0	**0**	**16**
15	0	0	0	**0**	0	2	1	**3**	1	2	7	**10**	0	0	0	**0**	**13**
16	1	0	0	**1**	0	1	0	**1**	3	3	4	**10**	0	0	0	**0**	**12**
17	0	0	0	**0**	0	4	0	**4**	4	3	10	**17**	0	0	0	**0**	**21**
18	1	0	0	**1**	0	3	4	**7**	4	0	4	**8**	0	0	0	**0**	**16**
19	0	0	0	**0**	0	6	1	**7**	8	4	5	**17**	0	0	0	**0**	**24**
20	1	0	0	**1**	1	7	0	**8**	4	5	7	**16**	0	0	0	**0**	**25**
21	0	0	0	**0**	0	5	0	**5**	3	2	5	**10**	0	0	0	**0**	**15**
22	3	0	0	**3**	0	5	3	**8**	1	1	7	**9**	0	0	0	**0**	**20**
23	0	0	0	**0**	0	2	1	**3**	6	3	6	**15**	0	0	0	**0**	**18**
24	0	0	0	**0**	0	1	0	**1**	1	2	9	**12**	0	0	0	**0**	**13**
25	3	0	0	**3**	2	7	2	**11**	3	0	4	**7**	0	0	0	**0**	**21**
26	0	0	0	**0**	0	2	1	**3**	0	0	2	**2**	0	0	0	**0**	**5**
27	0	0	0	**0**	0	1	0	**1**	0	1	2	**3**	0	0	0	**0**	**4**
28	0	0	0	**0**	0	1	2	**3**	0	0	0	**0**	0	0	0	**0**	**3**
29	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
30	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	**1**
31	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
32	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
33	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
34	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
35	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**	**1**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 20 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**11**	**0**	**0**	**11**	**4**	**54**	**30**	**88**	**51**	**51**	**102**	**204**	**0**	**2**	**4**	**6**	**309**

2010 Pauatahanui Inlet Cockle Survey, Transect 21.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 21 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**0**	**0**	**8**	**8**	**49**	**84**	**107**	**240**	**29**	**64**	**32**	**125**	**20**	**4**	**11**	**35**	**408**

2010 Pauatahanui Inlet Cockle Survey, Transect 22.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 22.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**53**	**28**	**5**	**86**	**24**	**20**	**22**	**66**	**4**	**3**	**2**	**9**	**3**	**1**	**5**	**9**	**170**

2010 Pauatahanui Inlet Cockle Survey, Transect 23.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 23 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**15**	**13**	**13**	**41**	**36**	**15**	**22**	**73**	**22**	**21**	**42**	**85**	**23**	**19**	**67**	**109**	**308**

2010 Pauatahanui Inlet Cockle Survey, Transect 24.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 24 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**8**	**7**	**22**	**37**	**39**	**46**	**62**	**147**	**62**	**78**	**65**	**205**	**6**	**8**	**10**	**24**	**413**

2010 Pauatahanui Inlet Cockle Survey, Transect 25.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 25 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**24**	**26**	**13**	**63**	**21**	**10**	**19**	**50**	**26**	**30**	**18**	**74**	**27**	**27**	**22**	**76**	**263**

2010 Pauatahanui Inlet Cockle Survey, Transect 26.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 26 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**15**	**31**	**23**	**69**	**21**	**21**	**29**	**71**	**10**	**10**	**11**	**31**	**8**	**6**	**1**	**15**	**186**

2010 Pauatahanui Inlet Cockle Survey, Transect 27.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
1	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
2	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
3	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
4	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
5	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
6	0	0	0	**0**	1	1	1	**3**	0	0	0	**0**	0	0	0	**0**	**3**
7	0	0	0	**0**	0	0	2	**2**	0	0	0	**0**	0	0	0	**0**	**2**
8	0	0	0	**0**	0	1	1	**2**	0	0	0	**0**	0	0	0	**0**	**2**
9	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
10	0	0	0	**0**	1	1	2	**4**	0	0	0	**0**	0	0	0	**0**	**4**
11	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	**1**
12	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
13	1	0	2	**3**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**3**
14	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
15	1	0	3	**4**	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	**5**
16	1	0	3	**4**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**4**
17	0	0	3	**3**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**3**
18	2	0	0	**2**	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**	**3**
19	0	0	1	**1**	0	2	1	**3**	0	0	0	**0**	0	0	0	**0**	**4**
20	1	0	1	**2**	0	0	1	**1**	1	0	0	**1**	0	0	0	**0**	**4**
21	3	0	0	**3**	0	0	1	**1**	0	1	0	**1**	0	0	0	**0**	**5**
22	2	0	1	**3**	0	1	1	**2**	0	0	1	**1**	0	0	0	**0**	**6**
23	1	0	2	**3**	1	1	0	**2**	0	0	0	**0**	0	0	0	**0**	**5**
24	3	0	4	**7**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**7**
25	4	1	9	**14**	1	1	0	**2**	1	0	0	**1**	0	0	0	**0**	**17**
26	1	0	1	**2**	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	**3**
27	1	0	3	**4**	0	2	0	**2**	0	0	0	**0**	0	0	0	**0**	**6**
28	0	0	4	**4**	1	1	1	**3**	0	0	0	**0**	0	1	1	**2**	**9**
29	1	1	1	**3**	0	1	0	**1**	2	1	0	**3**	0	0	0	**0**	**7**
30	0	0	3	**3**	3	0	0	**3**	0	1	0	**1**	0	0	0	**0**	**7**
31	0	0	0	**0**	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
32	0	1	0	**1**	0	1	0	**1**	1	0	1	**2**	0	0	0	**0**	**4**
33	0	0	0	**0**	0	3	0	**3**	0	1	0	**1**	0	0	0	**0**	**4**
34	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
35	0	0	0	**0**	0	2	0	**2**	0	0	0	**0**	0	0	0	**0**	**2**
36	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
37	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
38	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
39	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
40	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**	**1**
41	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
42	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
43	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
44	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
45	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
46	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**

2010 Pauatahanui Inlet Cockle Survey, Transect 27.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**22**	**3**	**41**	**66**	**9**	**20**	**11**	**40**	**6**	**5**	**4**	**15**	**0**	**1**	**2**	**3**	**124**

2010 Pauatahanui Inlet Cockle Survey, Transect 28.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 28continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**5**	**3**	**5**	**13**	**9**	**3**	**6**	**18**	**12**	**13**	**13**	**38**	**2**	**4**	**0**	**6**	**75**

2010 Pauatahanui Inlet Cockle Survey, Transect 29.

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

2010 Pauatahanui Inlet Cockle Survey, Transect 29 continued.

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**22**	**11**	**13**	**46**	**8**	**3**	**9**	**20**	**3**	**3**	**2**	**8**	**4**	**2**	**1**	**7**	**81**

2010 Pauatahanui Inlet Cockle Survey, Transect 30

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

2010 Pauatahanui Inlet Cockle Survey, Transect 30

Size	Number of cockles																
(mm)	**HT**			**HT**	**UMT**			**UMT**	**LMT**			**LMT**	**LT**			**LT**	**Total**
	A	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**A**	**B**	**C**	**total**	**Number**
47	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
48	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
49	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
50	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Total	**11**	**1**	**0**	**12**	**6**	**6**	**3**	**15**	**22**	**11**	**2**	**35**	**3**	**4**	**3**	**10**	**72**