

Predictive Puerulus

Name: _____ Date: _____

1. Using a Phases of the Moon chart, write down the date of the full moon for each month and then using that information, predict the puerulus sampling dates.

	Full moon date	Puerulus sampling date/s
May		
June		
July		
August		
September		
October		
November		
December		
January		
February		
March		
April		

2. Using the figures in the table below, graph the data (annual average of puerulus per collector) on graph paper and answer the following questions.

Season	Location: Dongara
1968/69	99
1969/70	24
1970/71	45
1971/72	77
1972/73	43
1973/74	93
1974/75	170
1975/76	108
1976/77	125
1977/78	96
1978/79	192
1979/80	88
1980/81	109
1981/82	93
1982/83	50
1983/84	115
1984/85	222
1985/86	161
1986/87	72
1987/88	73
1988/89	117
1989/90	266
1990/91	159

Season	Location: Dongara
1991/92	103
1992/93	67
1993/94	73
1994/95	113
1995/96	228
1996/97	107
1997/98	84
1998/99	37
1999/00	71
2000/01	174
2001/02	112
2002/03	83
2003/04	128
2004/05	86
2005/06	145
2006/07	42
2007/08	45
2008/09	11
2009/10	24
2010/11	44

3. From the graph, which years would you predict were years

of strong Leeuwin Current?

4. Calculate the long term average and compare to the 2010/11 data. Is the settlement for the 2010/11 season above, below or equal to the long term average?

2010/11 settlement _____

Long term average _____

5. Graph the data in the below table on a separate set of axes. Keeping in mind that the puerulus count corresponds to the catch 3 – 4 years in advance, is there a trend between your two graphs?

Season	Catch (tonnes)
1968/69	8.5056
1969/70	7.285
1970/71	8.4373
1971/72	8.625
1972/73	7.263
1973/74	7.234
1974/75	8.8772
1975/76	8.585809
1976/77	9.218362
1977/78	11.14099
1978/79	12.10453
1979/80	11.02351
1980/81	10.32831
1981/82	11.04969
1982/83	12.8842
1983/84	11.34872
1984/85	9.681549
1985/86	8.166179
1986/87	8.529073
1987/88	12.06614
1988/89	12.31181

Season	Catch (tonnes)
1989/90	10.29847
1990/91	9.220489
1991/92	12.16402
1992/93	12.30342
1993/94	11.03084
1994/95	10.80244
1995/96	9.80028
1996/97	9.90217
1997/98	10.49534
1998/99	13.00871
1999/00	14.53354
2000/01	11.27309
2001/02	8.983276
2002/03	11.41538
2003/04	13.68673
2004/05	12.23612
2005/06	10.32672
2006/07	8.609207
2007/08	8.9216
2008/09	7.593435
2009/10	5.899315