

2. Surface samples from various localities in the harbour (*viz.*: Prince's Wharf, Herald Island Wharf, Riverhead, etc.) on several occasions during the year. Samples were taken within an hour on either side of low water on the same day. Some samples were also taken from the fresh water stream above Riverhead.

3. Two transects of the harbour, from Bean Rock to Herald Island were made in a small boat. Surface and bottom temperature, salinity and oxygen were determined.

TABLE I.—Monthly Means at Prince's Wharf during 1963.

Component	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Temp (°C)	21.7	22.5	20.8	18.5	15.8	13.9	12.3	12.2	14.2	16.1	17.2	18.9
Salinity (‰)	34.52	34.95	35.14	34.29	34.38	33.15	32.75	33.31	33.28	33.90	34.86	34.85
Oxygen (ml./l.)	4.99	4.79	4.89	5.02	5.31	5.60	5.96	6.03	5.85	5.59	5.52	5.19
Nitrate	0.7	1.0	1.1	2.5	2.1	2.7	1.2	1.0	1.2	0.6	0.4	0.8
Nitrite	0.09	0.10	0.19	0.24	0.24	0.23	0.24	0.19	0.15	0.11	0.09	0.14
Phosphate	0.54	0.58	0.63	0.69	0.58	0.55	0.47	0.46	0.45	0.41	0.40	0.45
Silicate	4.5	6.6	11.6	12.5	9.6	11.9	17.1	13.9	11.8	9.0	10.4	8.1

Nutrients as $\mu\text{g-at./l.}$

TABLE II.—Comparison of air temperatures (Albert Park) and sea surface temperatures (Calliope Dock), 1959–64 inclusive.

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
A	19.8	20.1	18.6	16.4	13.9	12.0	11.3	11.5	13.0	15.0	16.2	18.3
B	0.72			0.84			0.44			0.74		
C	20.9	21.9	20.8	18.8	15.9	13.9	12.6	12.6	13.8	16.0	17.6	18.6
D	0.79			0.96			0.67			0.91		
E	0.55			0.81			0.67			0.65		

- A. Grand monthly means of air temperature (°C).
 B. Standard deviation of monthly anomalies of air temperature.
 C. Grand monthly means of sea surface temperature (°C).
 D. Standard deviation of monthly anomalies of sea surface temperature.
 E. Correlation coefficient between monthly anomalies of sea surface temperatures and of air temperatures.

RESULTS AND DISCUSSION

Data from Prince's Wharf are presented as monthly means in Table I. Weekly oxygen and nutrient figures are plotted in Fig. 3.

There appears to be relatively little regular information on sea temperatures in Auckland Harbour, but it may be worthwhile to calculate grand monthly means from such data as are available. This was done using the monthly means reported by Hounsell (1935), Skerman (1958) and the 1963 data from Prince's Wharf