

D.—RIVERS FLOWING TO THE SOUTH.—SOUTH ISLAND.

| Rivers.           | Date.                | Average Temperature of |                 |           |             | Average range of Temperature observed. | Remarks.           |
|-------------------|----------------------|------------------------|-----------------|-----------|-------------|----------------------------------------|--------------------|
|                   |                      | Air.                   | Running Stream. | Ebb Tide. | Flood Tide. |                                        |                    |
| <i>Southland—</i> |                      |                        |                 |           |             |                                        |                    |
| Orawia ... ..     | June 5 to 19 ... ..  | 38·5                   | 42·0            | ...       | ...         | 8·0                                    | At Mount Beaumont. |
| Waiau ... ..      | May 1 to June 30 ... | 45·0                   | 46·0            | ...       | ...         | 16·0                                   | At Clifden.        |

F.—SEA, WEST COAST.—NORTH ISLAND.—(SECOND SERIES.)

| Locality.       | Date.              | Average Temperature of |           |             |      | Average range of Temperature observed. | Remarks.                                           |
|-----------------|--------------------|------------------------|-----------|-------------|------|----------------------------------------|----------------------------------------------------|
|                 |                    | Air.                   | Ebb Tide. | Flood Tide. | Sea. |                                        |                                                    |
| Taranaki ... .. | May 1 to 31 ... .. | 53·5                   | 54·5      | 54·5        | 54·5 | 9·0                                    | At the Landing Place, from boats or off the rocks. |

G.—SEA, EAST COAST.—SOUTH ISLAND.

|                    |                      |      |      |      |      |      |                                       |
|--------------------|----------------------|------|------|------|------|------|---------------------------------------|
| <i>Canterbury—</i> |                      |      |      |      |      |      |                                       |
| Akaroa ... ..      | May 1 to June 30 ... | 52·5 | 49·5 | 49·0 | 49·2 | 13·0 | From the Jetty, two chains off shore. |
| <i>Otago—</i>      |                      |      |      |      |      |      |                                       |
| Tairoa's Head ...  | May 1 to June 30 ... | 50·0 | 49·5 | 50·5 | 50·0 | 7·0  | From the Lighthouse Jetty.            |

H.—SEA, WEST COAST.—SOUTH ISLAND.

|                   |                    |      |     |     |      |      |                                               |
|-------------------|--------------------|------|-----|-----|------|------|-----------------------------------------------|
| Jackson's Bay ... | May 9 to 31 ... .. | 48·0 | ... | ... | 49·0 | 18·0 | Open Sea, off the ship's side when at anchor. |
|-------------------|--------------------|------|-----|-----|------|------|-----------------------------------------------|

I.—SEA, FOVEAUX STRAITS.—SOUTH ISLAND.

|                     |                      |      |      |      |      |      |                 |
|---------------------|----------------------|------|------|------|------|------|-----------------|
| New River Heads ... | May 1 to June 30 ... | 46·5 | 49·5 | 48·0 | 48·7 | 14·0 | From the rocks. |
| Dog Island ... ..   | May 4 to June 30 ... | 48·0 | 50·0 | 50·0 | 50·0 | 4·0  | From the rocks. |

*Hawke's Bay Rivers.—Observations taken by the Provincial Engineer ; with Notes.*

1. *The Tutaekuri* rises in the Kaweka Ranges, and after a course of about forty-six miles through high and broken country empties itself into the shallow branch of Hawke's Bay, known as Ahuriri Lake. The river flows the first twenty-five miles over large boulders between precipitous banks, its width not exceeding sixty feet ; thence for eighteen miles over a wide shingle bed, until it becomes sluggish near the mouth, adjoining which are about 500 acres of mud flats, partly uncovered at low water. The depth of the river averages about eighteen inches to within ten miles of its source, when it assumes the character of a mountain gorge. The Tutaekuri is fed from July to October partly by snow water from the Kaiwaka, and the range of its temperature will probably lie between 39° in August near the source, and 64° in February about ten miles from its mouth, where it spreads over a wide shingle bed.
2. *The Tukituki* rises in the Ruahine, and has a course of about sixty-eight miles—the first fourteen in clearing the Ruahine ; ten miles in traversing the Ruatanui Plains ; it then flows for thirty miles through undulating country, until it reaches the southern boundary of the Ahuriri Plains. The Tukituki and its principal tributary the Waipara have in the Ruahine the character of mountain streams, running over boulder beds ; thence flowing to within half mile of its mouth over shingle beds from twenty to forty chains in width, in different streams, having everywhere during the summer a depth of at least two feet. The Tukituki has a shifting bar mouth with seldom less than eighteen inches of water, and approaches close to that of the Ngarurora River. The Tukituki is fed from July to October partly by snow-water from the Ruahine, and the range of its temperature will probably be between 37° in August (at the base of the Ruahine) and 65° in February, about twenty miles above the mouth, where it spreads over a shingle bed half a mile in width.
3. *The Wairoa*, which has a course of about fifty miles, is formed by the confluence of the Wairoa and the Waiau about fourteen miles from the mouth, the Waiau being the larger river. From that confluence the Wairoa is navigable for vessels of seven feet draught, and above it both branches are navigable for canoes for a distance of sixteen miles ; but the navigation is impeded at several places by rapids. The width of the Wairoa, three miles from its mouth, is about 650 feet, and seven miles above it about 250 feet. The course of the two head branches runs between high and partly wooded ranges, for the greater part over beds of boulders. After the confluence, the river flows through rich alluvial flats, between well-defined banks, scarcely ever subject to being flooded. The mouth has a bar with rarely less than five feet of water at ebb tide. The fluctuation in temperature will probably be less in the Wairoa than in any other river of Hawke's Bay, it being less fed by snow water than any other.