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Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

O. H. Pittman

Superintendent.

State: *Alaska*

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Acc. No. *2612*

DESCRIPTIVE REPORT.

Topographic Sheet No. *2612*

LOCALITY:

Prince William Sound

Knichenhook entrance

(Northern Part)

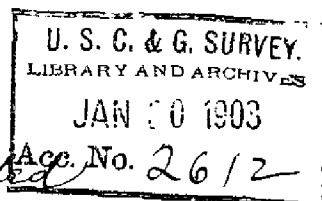
1902

CHIEF OF PARTY:

A. Westdahl, Asst.



JAN 30 1903. 02444



Descriptive Report

to accompany topographic sheet entitled

Treasury Department
U. S. Coast and Geodetic Survey
O. H. Tittman, Superintendent

Topography
Eastern Entrance
to
Prince William Sound
Alaska

Ketchikan Part

Executed by H. F. Flynn, Assistant
and R. J. Christman, Draughtsman
Franklin McArthur

J. Westdahl, Asst. Commanding

1902

Scale 40,000

The Office furnished a projection on scale 20,000 to reach from Johnstone Point southward to include Port Etches and Cape Hinckinbrook. It was found, however, that the shoreline would run almost off the sheet in places and generally run so close to the edge as to make it inconvenient for use in the field. Another objection to its use was that Johnstone Δ was the only triangulation

point upon it except some peaks not clearly recognizable and hence unavailable for orientation. It was also deemed expedient, owing to the configuration of the shore and the density of the timber out to the very edge of the bluffs, to so lay out the sheet as to include upon it also the opposite shore of Montague Island and Knowles Head Δ , which point and Johnstone Δ was the base adopted for the triangulation, and which could be used also for orientation of the plane-table so that work could be begun without waiting for new points. Two projections on scale of 40,000 were therefore gotten, ready and plane-table work upon this one begun as soon as the scheme of triangulation was matured and signals erected. A small schooner was chartered to house a topographical party and the work placed in charge of Assist. Flynn with Mr. Christman to accompany him for instruction. Mr. Flynn surveyed the shoreline from Johnstone Δ to within three miles of Bear Cape. Mr. Christman was then placed in charge of the sub-party in the schooner and finished the sheet. As soon as computed the triangulation points were added to the sheet.

Some sketching of contours was attempted but it was soon seen that it would take up too much time



Bear Cape

Port Etches

*View of the Northern and Southern ridges of
Hinchinbrook Island*

to continue it, and the intervals of weather fit for topographic work were too few and far between to waste. From the plane-table stations on the beaches on the rocky, precipitous bluffs nothing could be seen of the country on account of the timber, and from the other side no details could be distinguished. A general view of the back country and the mountain ridges could be had only from the ship in passing. On clear days these ridges would appear comparatively smooth and regular; on cloudy days the summits would be covered and the peculiar light from the overhanging clouds brought out the details of projecting spurs and semi-circular, glacier-carved valleys with startling distinctness, showing at the same time the utter hopelessness of attempting to sketch contours in this complicated mass.

Winchinkbrook Island consists of two main ridges running approximately north-northeast and south-southwest (mag.) parallel to each other. The northernmost ridge is a continuation of Hawkins Island, and it rises again above the sea in the southern ridge of Montague Island. The southern ridge lies on the continuation of the mountains forming the east side of Orca Inlet, broken down where this inlet discharges its waters into the sea. The depression between these main ridges forms Orca Inlet.



Johnstone Point

Part of Southern ridge

Bear Cape

Axial view of Northern ridge of Hinchinbrook Island

on the northeast and Port Etches at the southwest extremity. It is obstructed by low hills at the head of Port Etches but the highest point of the watershed between it and the bight making in from Hawkins Island Cut-off is probably not over one hundred feet, and may be much less, above the sea. From the wharf at Ocea one may on a clear day see Montague Island through this low divide.

Seen broad on their main ridges of Hinchinbrook Island seem fairly regular but with serrated outlines. Examined more closely, and particularly in the direction of their axes from a distance, these apparently sharp and narrow ridges broaden and show a confusion of peaks and depressions between them. The southern main ridge, for instance, has upon it a number of peaks which can be seen in Port Etches but not from off the outside coast, and vice versa. When the triangulation party ascended the southwestern extremity of this ridge to search for a station from which Etches Δ , Point Steel Δ , and Hinchinbrook Δ could be seen they found up these broad depressions full of lakes and ridges between them, as if the ridge itself had been carved by glacial action in general north and south directions in some period subsequent to the original upheaval of the mountains, and that the residuary glaciers had afterwards formed the present U-shaped valleys.

between the spurs.

From the northern ridge of Hinchinbrook Island project long spurs which are gradually depressed into a low table-land. At Johnstone Point this is about three miles wide, undulating, and bordering the sound in rocky, precipitous bluffs from fifty to eighty feet above high water, interspersed by short stretches of sand and gravel beaches at the head of slight indentations. Behind these beaches, and with an outlet through them, are found shallow lagoons extending considerable distances towards the high ridge, with fresh water lakes still further back at higher elevations and fed by perpetual streams issuing from under retreating glaciers away up under the rims of semicircular hollows in the mountains. From Johnstone Point where it is broadest this bordering low table-land gradually narrows and disappears altogether at Bear Cape, where the northern ridge comes directly to the sea.

The bluffs here consist of shale, with the strata thrown up in a perpendicular position. The rocks are very friable so that the bluffs are constantly wearing away from the action of frost forcing the strata apart as they are filled with water during the summer months. Roots of growing trees also contribute to this action. The high ridges are composed of igneous rock, (basalt apparently



Cone O Point

Squirt O Point

Zaikof Point

Zaikof Bay
Skip O Point

Axial view of Zaikof Point and Southern ridge of Montague I.

when studied with a binocular when exposed above the glaciers.) The timber line reaches up about one thousand feet above the sea, and above this appear seemingly open, green slopes but really consisting of brush higher than a mans head, compact and tough so as to be almost impenetrable. Above this brush the ground is bare and steep, consisting of crumbling volcanic debris to the tops of the hills through which project outcroppings of the before mentioned igneous rock.

The part of Montague Island included on this sheet is not mountainous. Laikof Point slopes down gently from the high, broken ridges forming the southeast part of this island. It is densely wooded and of smooth appearance from a distance, but this is deceptive. Owing to the almost perpendicular disposition of the underlying strata this vegetation covers a very rugged surface. At the head of Laikof Bay is a comparatively low divide said to be about two and a half miles wide between it and the head of Port Chalmers. It is said to be a gradual rise to a height of perhaps one hundred feet forming the watershed between them, and I have been informed the natives sometimes carry their kyaks across here. The same is true of the head of Rocky Bay where there is a divide of about the same height between it and a

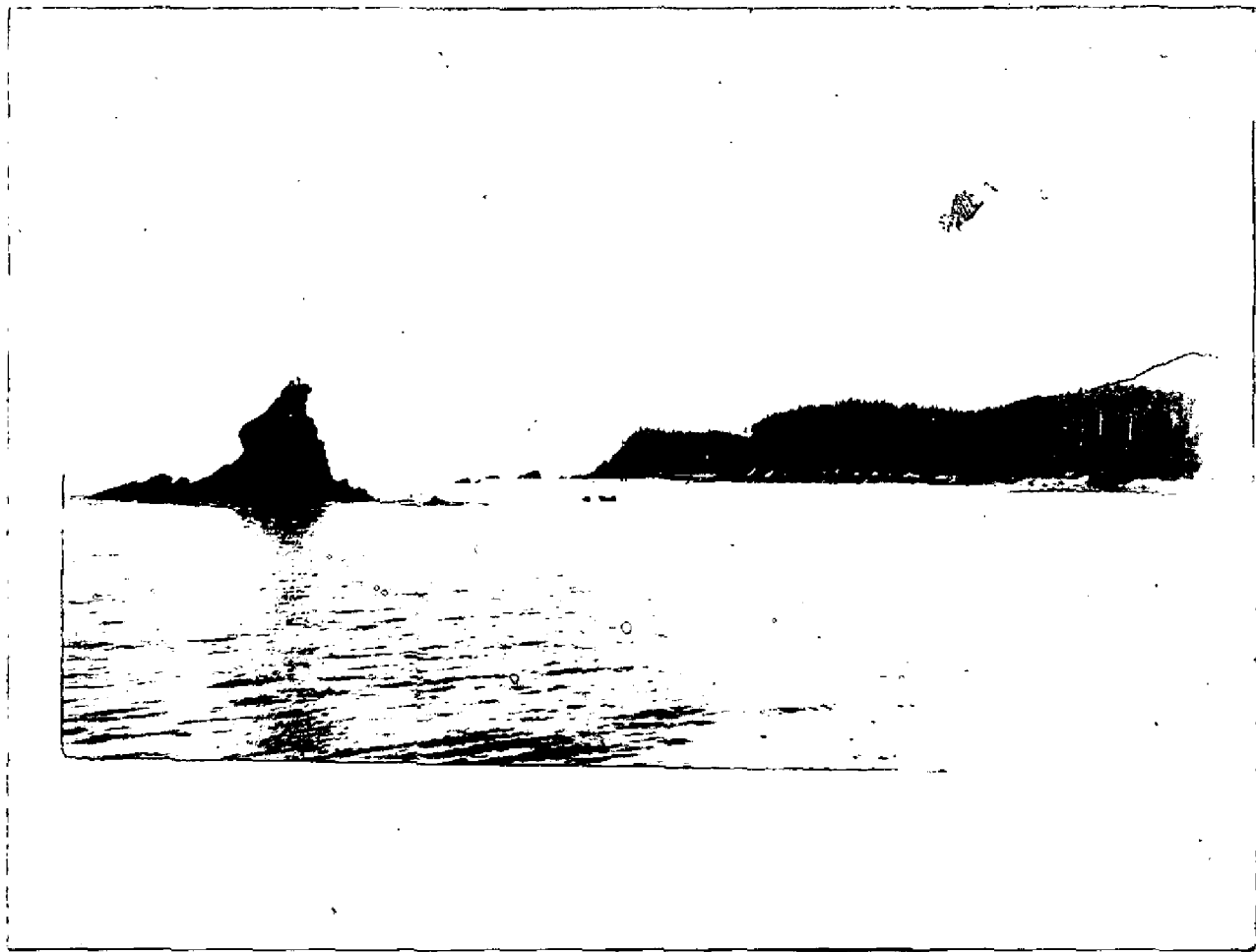


Zaikof Point *Schooner Rock* *Middle Point* *Montague Point*
(very faint)

*View of Zaikof, Middle, and Montague Points,
Montague Island*

bay on the northwest side of the island. Middle Point appears like a table land rising very gradually to an elevation less than one thousand feet, apparently, over the sea and covered all over with dense timber. This is true also of Montague Point. The bordering bluffs are about fifty feet high and of the same general conformation as those of Hinchinbrook Island already described. The northwestern extension of Montague Island, therefore, from the direction of Gavina Point has the appearance of two wooded islands, so much so that the northwestern one of them was mistaken for Green Island, and named Greenland Peak (?) in the triangulation of Assistant Ritten party. It is probably identical with Peak B of our triangulation of 1902.

A peculiar feature of the beaches in front of the openings of valleys on both Hinchinbrook and Montague Islands is what appear like posts standing in the part of the beach washed by waves which we at first believed to be parts of native structures. A close examination shows these to be stumps of trees, from one hundred to two hundred years old, grown there. This seems to point to some seismic disturbance in recent years which may have caused the low lands, at least, to sink, thereby admitting salt water to the roots of these trees.



Schooner Rock,

Squirt O Point

View of Schooner Rock and Zaikof Point from Northward.

For further information regarding the region surveyed
on this sheet I beg leave to refer to the description report
of the hydrographic sheet of the Eastern Entrance to Prince
William Sound.

Respectfully submitted
Ferdinand Westdahl
Assist. C. & G. Survey
Comdg. "Star. McArthur"

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Photo of Sept. 26/12 Neg. 193

Gravelly Millium Sand
junction of Estuary (Northern Slut)

Alaska

4. N. 20° 40' E. 1/4 3. 1/4 1/4

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