

"THE LYDIA" Technology Expedition to the Aleutian Islands

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April 13, 1907 .- On this date the writer left Boston for San Francisco, arriving Thursday morning, April 18. On the 20th of April he left for Seattle by the Shasta route, arriving there April 22. During the following month the various members of the scientific party convened in Seattle at the Hotel Lincoln, where headquarters were established. After an examination of all the shipping in or near Seattle for a fortnight, I bought the schooner "Lydia," 39 tons gross, 37 tons net, 62.6 feet long, 20-feet beam, 7.0 feet deep. The "Lydia" was built by Matthew Turner at Benicia in California in 1880 for the sea-otter trade on the coast of Alaska. and she was first used in that service near Kodiak. Carl Guntert, from whom the vessel was bought for the Technology Expedition, agreed to serve as sailing master for the voyage. Mr. Guntert shipped on April 29 and engaged sailors; but within a week he announced his determination not to go with the expedition, and it became necessary to prolong a delay already too great, owing to alterations, repairs, and preparations, and to set about a systematic search for a captain. Thanks to the kind assistance of Captain Rhodes, of the Coast and Geodetic Survey, the services of Captain George Seeley, of Seattle, were finally secured, and, as the event proved, no better officer could have been found. The success of the voyage was largely due to his careful navigation and thorough knowledge of seacraft, no less than to his wise selection of a competent crew and an efficient mate.

The "Lydia" was unprovided with auxiliary power, and it was not found

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possible to buy or charter a satisfactory auxiliary schooner suitable to the purpose of a cruise in the Aleutian Islands. The schooners used in Puget Sound and on the inside passage to southeastern Alaska are commonly converted into power boats, and are no longer seaworthy sailing craft for ocean voyages. Accordingly, after it was decided that the expedition should trust mainly to a sailing-vessel, it seemed best to carry on deck a launch, equipped with as powerful an engine as possible. For this purpose a 23-foot life-boat was bought, a 7 horse-power standard engine was installed in this boat, and cradles were built to hold the launch on the forward port deck of the "Lydia." This launch proved serviceable in the harbors and bays of the islands for purposes of local exploration. The throat-halyards of the fore and main rigging were used to float and ship the launch. She proved unwieldy for rapid handling, the engine being somewhat too heavy for the hull in which it was set up. This condition subjected the launch to undue strain while she was being lifted over the bulwarks, and made it impossible to use her in many places where a lighter boat could be put overboard with facility. The "Lydia" was equipped with two fisherman's dories, and, on the whole, these are the most seaworthy and reliable tenders a sailing craft can have in Alaskan waters.

The weeks spent in Seattle were actively employed in collecting stores, instruments, charts, books, fishing-tackle, ammunition, ship chandlery, fuel, bedding, clothing, tools, camp kit, articles for trade, and the multifarious impedimenta of a long voyage. The delay became so long and the voyage by sailing-vessel promised to be so slow with the prevailing head-winds that I decided we could not hope to go north by the coast route, but would have to head straight across the North Pacific westward to Unimak Pass, making that the starting-point for scientific work among the The original plan contemplated heading from Unalaska westislands. ward on the north side of the Aleutian chain to Attu, and making that extreme western island of the American possessions the starting-point of a cruise eastward through the islands, with the prevailing west wind then favorable. This might have been accomplished if the start from Seattle could have been made early in April; but the late start defeated this plan, and made it necessary to begin work as soon as the islands were reached, and cruise slowly westward.

The original scientific party consisted of myself, geologist; Professor H. V. Gummere, of the Drexel Institute, Philadelphia, magnetician and astronomer; Professor A. S. Eakle, of the University of California, mineralogist; Dr. Edwin C. Van Dyke, of San Francisco, physician, entomol-



CAPTAIN GEORGE SEELEY, SAILING MASTER OF THE "LYDIA"



EAKLE

VAN DYKE Myers

GUMMERE Sweeny

JAGGAR

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ogist, and botanical collector; Mr. Desaix B. Myers, of Philadelphia, and Mr. H. P. Sweeny, of Stroudsburg, Penn., of the class of 1908, M. I. T., assistants in geology and mineralogy. The party in Seattle was joined by Mr. Francis T. Colby, of Boston, accompanied by Mr. John Cody, a Canadian trapper and woodsman. Mr. Colby was interested in the larger mammals of Alaska, and with Cody he accompanied the expedition as far as Unalaska. The two then proceeded to the peninsula in search of big game, and Mr. Colby afterwards sent in some valuable notes on occurrences of coal on the Alaskan Peninsula and other observations of interest. Mr. Cody, on the voyage north, proved of the greatest service to the expedition, as he was by trade a carpenter, and he built many fixtures for the schooner and launch which were useful throughout the voyage. All the members of the party worked vigorously during the days of preparation in Seattle, and I take this opportunity of expressing my gratitude to one and all for their painstaking labors during many trying days of vexatious disappointment and delay.

The "Lydia" was at length fitted for sea. Thanks to the prompt work of Mr. Hibbs, naval constructor of the Moran Shipbuilding Company, a new galley and toilet were built on deck forward of the after-cabin; extra berths were built into the port side of the hold abaft the mainmast and in the forehold for the extra members of the scientific party and for the ship's officers respectively. The after-berths were connected by an open doorway with the cabin. On the opposite (starboard) side of the vessel a room was partitioned off to hold cabin luggage and camp kit. Eight berths were provided in the cabin, three in the forehold, a berth was built in the galley for the cook, and the forecastle accommodated the four seamen. The ship's company numbered fifteen at the start,—captain, mate, cook, four seamen, and eight of the scientific party. Twice during the two weeks preceding the start there were desertions on the part of members of the crew, the last desertion being on Sunday night, May 19, the very eve of departure. The "Lydia" sailed under a yacht's license.

Monday, May 20.—At 4.24 P.M. Captain Seeley cast off from the buoy in Seattle Harbor, and for a mile the vessel was towed by a gasoline launch until clear of the shipping. Then we made sail, flying the ensign over the M. I. T. pennant. The wind fell to a dead calm in the night.

May 21.—The ship lay off Ballard in the morning, not far from the city. With light head-winds she tacked to Port Townsend and rounded the point separating the inner sound from Juan de Fuca Strait. In the night we lay off Protection Island. May 22.—With a glassy calm in the morning no progress whatever was made. The sea life was swarming,—medusæ, large and small, tunicates, fish, birds, and porpoises. The water was warm, and several members of the party went in swimming. A brisk westerly wind sprang up about 4 P.M., and in a very short time the "Lydia" was pounding into a choppy sea off Race Rocks, with her rigging dangerously loose. This test, before going to sea, proved a valuable one, as it gave us a chance to put in and overhaul the ship before making the open ocean.

May 23.—We made harbor at Port Angeles and went ashore. The extra mainsail was shipped back to Seattle by packet, to be altered to fit the ship, and an order was sent for a shipment of cordage and blocks necessary for repairs and renovation of weak rigging. Messrs. Colby and Cody went into the mountains to the south-west for a short trip.

May 24.—An extra able seaman, to make up our complement of four, arrived from the sailors' union in Seattle. I decided, in view of the prospect of a week's further delay at Port Angeles, to take the scientific party ashore and make an experimental camping trip, in order to try out the light tents and knapsacks and find out what would be needed and what would be superfluous in the barren grassy wastes of the Aleutian Islands. About 4 P.M. the party went ashore to the east of Port Angeles in a dory. We landed at the mouth of Morse's Creek and pitched camp amid gigantic Douglas firs on the ranch of Mr. Hemme, who received us hospitably. The camp ground was on green grass by a cold stream, with a fine view of the snowy Olympic Range up a valley to the south. Tyee salmon were running in the stream. The wind blew strong from the west. The party consisted of Gummere, Eakle, Van Dyke, Myers, Sweeny, and the writer. We used a Sibley tepee tent of paraffined silk, and each man carried a Rücksack with a share of the provisions. The latter were distributed in small duck sacks, and carefully weighed on a basis of rations for a specified time. The food supplies of the expedition were of two types, those requiring cookery and those which could be eaten without heating. Among the former were the usual staples,-flour, rice, tea, coffee, cereals, bacon, evaporated eggs, evaporated fruit and evaporated potatoes: among the latter the chief were California figs, "force," "grape-nuts," dried (chipped) beef, boiled ham, hardtack, seeded raisins, evaporated cream, cheese, butter in tins, tinned meats, sardines, and marmalade. The cooking devices were also of two kinds,-the "Primus" oil stove for cooking in tents where firewood is wanting, and a sheet-iron folding box stove for either tent or the open where firewood (usually drift logs) was available. The

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"Primus" was found invaluable, both for warmth and cooking, '1 the raw climate and woodless lands of the Aleutians. The camping equipment was supplied by Abercrombie & Fitch, of New York.

Saturday, May 25.—We left the tent as our main camp and took light packs for a march into the timber up Morse's Creek. The windfalls of enormous trunks made the travelling extremely arduous and slow. On a deserted ranch three or four miles up the valley, known as "Spencer's," we made an impromptu open-air camp without shelter. In the stream bed appeared outcrops of upright or slightly contorted shales striking E.N.E. The night was cold. No cooking except tea was attempted on this trip, and the various forms of ready cooked food were found palatable and satisfying.

May 26.—We discovered a trail which led out from this ranch in the woods to the westward, and at about the distance of a mile came into a highway leading southward towards the Olympic Range. We cached our packs by this road, and then tramped southward into the mountainous foothills, reaching an elevation of 1,200 feet above sea-level. The timber is heavy over the whole country, with some cleared farm lands near the roads. The mountain ranches appear prosperous and well kept. We walked six and a half miles, lost Dr. Van Dyke at the luncheon hour, he having been diverted from our route by the allurements of beetles. He returned to us, however, in good season, on the West Fork of Morse's Creek, where we rested in a valley, looking up at near snowy mountain peaks. We returned by the road northward to the tent at sea-level. The weather was hot.

May 27.—The wind blew hard from the north, making the long pull by dory back to the schooner too severe a task to attempt. The party remained in the vicinity of the camp, practising salmon-spearing with a huge five-pronged spear belonging to our landlord, and doing some troutfishing. The trout were small. The dory was moved to a more convenient location near the camp, in order to be ready for an early start. Some members of the party did a little target practice, in order to adjust the sights on rifles.

May 28.—The party broke camp early and shipped the outfit on the dory. Myers and Jaggar rowed the latter back to the "Lydia," the others walking west along the beach to Port Angeles. At the ship it was found that Cody and Colby had returned on Sunday, and Mr. Colby had driven a nail into the sole of his foot. From this injury, however, he promptly recovered. The work of renovating the schooner was finished, and at noon the refitted

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mainsail arrived at Port Angeles by the packet. After a trip ashore to take off the pedestrians, the captain set sail, and at 4.30 P.M., with a westerly head-wind, the "Lydia" beat out into the strait and started on her long voyage. There was some sea and some *mal-de-mer*, but during the night the wind failed.

May 29 to June 26.-The long voyage west was uneventful. The bobstay carried away twice, and head-winds prevailed. The vessel was unceasingly followed by a barnyard of "goonies," black albatrosses. Their aëroplane evolutions and squabbles over refuse from the ship were an endless source of amusement. On June 6 a giant kelp was picked up, like a big whip 43 feet long. It was covered with goose barnacles, worm-like crustaceans, and algæ. The "Lydia" proved tight in heavy weather. On Sundays service was held in the cabin at 10 A.M., the officer of the deck usually attending. Whales and porpoises were seen from time to time, and one fur seal appeared, far out in the Pacific. On June 14 the "Lydia" made 162 knots in twenty-four hours, with a south wind. This was the only fast time, however. On the 15th Mr. Frank Seeley, the mate, had a narrow escape on the after-end of the main boom. He was standing on the foot-rope, which parted, and he caught himself with his arm around the boom. The first ship sighted was on June 17, off Kodiak. On June 22 a hard blow from the north made it necessary to eat meals off the floor. The ship was heeled well over. In an effort to manage a cup of tea and a plate of dinner on the windward, or upslope, locker, I lost my grip, slid across the cabin into the dishes, wrecked my plate, and poured the cup of tea down my neck. This was a common diversion. The occupations of the scientific party during the voyage were various,-overhauling outfit, preparing food in sacks for the land trips, reading, writing letters home, and painting various articles in need of paint. The captain is an artist, and in his "cabin" in the forehold has a picture of the "Lydia" painted on the forward bulkhead. Above are the words "God bless our Home," and underneath "No cussin aloud." The last is an adaptation from one of the "regulations" promulgated before the ship left port.

June 27.—At 5 A.M. the island Tigalda was sighted after twenty-nine and one-half days at sea. The day opened fine, but the wind fell. On the banks south of Unimak Pass the cook caught two big codfish. There are many gulls, puffins, and brown "whale birds" about; and one small seal, probably a fur seal, was seen. At I P.M. a strong north-west wind sprang up, and the "Lydia" tacked up against it into the broad Unimak Pass between Ugámak and the snow-clad heights of Pogromnoi Volcano



MAP OF UNALASKA AND AD JACENT ISLANDS