CARLILE POLLOCK PATTERSON.

Superintendent U. S. Coast Survey.

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Carlile Pollock Patterson entered the U.S. Coast Survey in 1838, at the age of 22, as Passed Midshipman, attached to the hydrographic party of Lieut. T. R. Gedney in the Brig Washington, which was engaged in surveying the Sea approaches to New York Harbor. In 1841 he joined, as 2d. Lieut., the U.S. Brig. Boxer, on a cruise in the West Indes, and in 1845 he re-entered the Coast Survey when Prof. Bache was Superintendent. During the summer he was engaged in the office, making reductions of hydrographic surveys, and doing some supplementary surveying in a chartered vessel at the eastern entrance of Long Island Sound in the month of October, after which he took charge of the Schooner Phoenix. loaned by the Navy Department, for hydrographic work in the Gulf of Mexico about Mobile Bay. From this time until June, 1849, Lieut. Patterson spent his winters on the Gulf, surveying Mobile Bay and Mississippi Sound, and making tidal and current During three seasons he had the Schooner Phoenix under his command and, during the last season, the Steamer Walker. During the summer months he was engaged in re-plotting the offshore work of Lieut. Gedney on the coast of Long Island and New Jersey; also in plotting and drawing his own work, and writing a number of interesting reports on tides, currents, hydrographic features of the surveyed regions, which were all printed by Prof. Bache in his Annual Reports. These papers bear evidence of a high degree of zeal and ability, and the seven-hydrographic sheets deposited in the Archives must be classed amongst the very best of the earlier results of the survey. Hence it is not surprising that Prof. Bache should have deeply regretted the loss of the further services of Capt. Patterson to the survey as is evinced in the following paragraph in the Report of 1850:

"Lieut. Carlile P. Patterson, who has so greatly distinguished himself in the hydrography of this section (Sect.VIII) and who has had charge of it from the beginning, was at his own request relieved form duty on the Coast Survey to take charge of one of the mail steamers on the western coast. All the experience he had acquired in the survey, and those excellent qualities which study and experience had matured, were thus lost to the work, happily however, still to be used in an extended sphere for the benefit of the country."

In July, 1850, Capt. Patterson assumed command of the Pacific Mail Steamer "Oregon" and in the Report of 1852 we find in Appendix 49 a letter from as commanding Steamer "Golden Gate", dated Benicia, March 12,1852, giving his views regarding the proper location of a light at the entrance of San Francisco Bay. In September, 1853, he resigned his position as Lieut., U. S. N. and remained on the Pacific Coast until March, 1861. On May 6,1861, he was appointed hydrographic Inspector by Prof. Bache, succeeding Comdr. S. S. Lee and Lieut. Silas Bent who both resigned their commission in the Navy in April, 1861. The energetic prosecution of the war by the Government brought about very peculiar conditions in the hydrographic service of the Coast Survey. Hitherto, all hydrographic surveys had been made by Naval Officers; there always had been

between six and eight hydrographic parties afloat and more than twenty Naval Officers on Coast Survey duty. After the commencement of the war, and especially after the establishment of the blockade, nearly all these officers were recalled for active duty. there were but two Naval Officers left in the service, Lieut. T. S. Phelps and Comdr. B. F. Sands, and in 1863 and 1864 there was but one, Lieut. Phelps with the Steamer "Corwin." this juncture, when the hydrographic service of the survey was threatened with a total collapse- very few of the civil officers having had, a limited experience in hydrographic surveys and handling of the sextant, that those qualities of Capt. Patterson which Prof. Bache prized so highly- his untiring energy and devotion to the service; his eminent talent as an organizer and instructor; his quick conception of men's character and capacity, - came to be of the greatest service in effecting a complete reorganization of of the hydrographic part of the survey in the hands of civilians. The first results were not always satisfactory, but by dint of close watching, and instructing and encouraging faithful workers, the work went on improving step by step, until, after about six or seven years, scarcely anything was left to be desired. of running lines of soundings at random, as was the former practise, they were run parallel at close intervals, with another system of lines at right angles for verification, and for very irregular ground still additional lines until the shape of the bottom was perfectly developed. The same relations which existed between Prof. Bache and Capt. Patterson, those of mutual esteem and confidence, marked the intercourse between the formers successor as Superintendent in 1867. Prof. Pierce, with this difference; that Prof. Pierce, as long as he was in possession of his full mental power, had a great many traits of character in common with Capt. Patterson: he was born to command, had the same zeal, energy and quick perception; but beyond this he had a scientific turn of mind, was fond of study, physical investigations and mastering the minutest detail of the multifarious duties of his office, while Capt. Patterson esteemed and encouraged scientists but he never ventured into their domain; his duty was simply to command, to direct other peoples labor. On the other hand, Prof, Pierce, who was a profound thinker, lacked the advantage which a military or naval training gives to a man who is called upon to stand at the head of an institution like the Coast Survey. He did not care to command, nor to be troubled with the drudgery of the survey, and transferred most of his authority to sub-chiefs. Under his administration, Capt. Patterson was, in all that concerned hydrography, the real superintendent in all but im name. HAnother matter to which he gave his early attention was the construction of seagoing steamers which were expressly designed for the purpose of their employment in the survey; the Hassler, Gedney, Bache and Blake, which all, have done such efficient work on both sides of the continent, were all planned by him, and mostly built under his watchful supervision. To him also is due the inception and the publication of several volumes of the Coast Pilot, which embodies a description of the coast, sailing directions, and the results

of experience gathered in the survey which do not appear upon the charts and have been found very useful. # With all these various occupations on his hands, he found time for the performance of a multitude of offices which here can only be hinted at, such as furnishing information, sitting on several boards for the improvment of harbors, such as Portland and Washington, making surveys of the Delaware Breakwater and the Potomac near Washington. Amongst these occupations, his plans for the improvement of the Harbor of Washington, embodied in a special report, bearing evidence of a close study by a masterly mind, deserves, rather more than any thing else, special mention for the reason that it constituted the basis for the plan of improvement since successfully carried out by the General Government, at the cost of several millions of dollars. ${\mathcal P}$ soon after the close of the war a question loomed up which was destined to give a great deal of concern to Capt. Patterson, viz; - The re-employment of naval officers for Capt. Patterson was not one of those who Coast Survey duty. believed Naval Officers incapable to make as good surveys as civilians, besides there always cexisted a feeling of brotherhood between Capt. Patterson and the Navy Officers, (as subsequently feelingly well stated by Comdr. Chester at a meeting of Assistants and employees in memoriam of Capt. Patterson) and he also was not indifferent to the great saving which, in the way of salaries, pay and rations of officers and men by the Navy Department, might be effected; but he hesitated a long time and delayed the te- inreinstatement for several years from motives of sympathy with those Assistants who had left other branches of the survey, and Capt. Patterson disbecome proficient hydrographic surveyors. played his customary tact and wisdom in the manner in which the transfer of the hydrography to the Navy was effected. selecting, with his keen scrutiny, amongst the numerous applicants, one officer at the time, and the one that gave the best promise of efficient work, he was not, as in anti-bellum days, at once put at the head of a party, but put through a system of drilling and practice and only put in charge of a party after successfully passing the tests and after work had been found for the displaced Assistant, equally remunerative and congenial as that left. this way the whole hydrographic work, excepting some minor inland boat work, was transferred to the Navy, without a jar occuring, in a few years, and it is no disparagement to the credit of the civil assistants to state that the same progress and improvement in hydrographic surveying has been steadily going on since about 1872, or the time the Navy Officers took it in hand, which was inaugurated in 1861, and that the work at present turned in by Naval Officers, is superior to that of civilians twenty years ago.

CAPTAIN PATTERSON

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SUPERINTENDENT.

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When, on February 17, 1874, after the voluntary resignnation of Prof. Pierce, Captain Patterson became Superintendent, everybody about the survey knew instinctively that he was to be a real Superintendent. He at once set to work to introduce some reforms which he deemed absolutely necessary in order to maintain the high standard of excellence which always had been the aim of the Survey. In Hasslers' and Baches' times there were no higher technological schools in this country where scholars could be properly prepared for geodetic surveying, and the Superintendents had to make the best Many of the older assistants had received an shift they could. education such as common schools afford, and could not compete, in stock of knowledge, with a college graduate. One of the first innovations of Capt. Patterson was the condition to admit none but college graduates to the positions of aids in the Survey. time and again, went carefully and scrupulously over the pay-rolls of the whole office force, as well as field force, and conscientiously weighed the service of each individual, and whenever he discovered an obvious discrepancy between service rendered and compensation, he did not hesitate to apply the pruning knife with effect, by either dismissal or reduction of salary. On the other hand, whenever he found a man who did his duty conscientiously and well, he encouraged him in every possible way by increasing his

pay, securing him profitable employment by outside parties,&c. In all these matters he was guided by a sense of duty and, being of a selfreliant nature, he did not consult nor take any body elses advice. The physical condition of the men in the survey was a matter which gave Supt. Patterson scarcely less concern than their mental caliber; he realized the deleterious effect of the hardships of the survey upon the mens health and dreading to have the survey converted into a hospital, he would not appoint any man to a position in the survey until he had satisfactory evidence of physical soundness.

Although the accession to the Superintendency necessitated the appointment of a new hydrographic Inspector, Mr. Patterson kept up his predilection for hydrography, and watched with keen interest the development of the various new devises for sounding purposes which about this time made their appearance and, in keeping with his characteristic quickness in having meritorious inventions introduced in the survey, the English Steamer "Challenger" had not proceeded far on its scientific expedition (1872 to 1876), when the Steamer Blake, a much smaller but equally efficient craft, with an outfit of the most approved sounding apparatus, was, in 1874, under Lieut. Comdr. Sigsbee, actively employed in the exploration of the Gulf of Mexico. This exploration, which it took four years to complete, together with the subsequent explora-

tion of the Carribean Sea and Gulf Stream by Comdr. Bartlett in 1878 to 1882, will forever live in Physical Geography as some of the proudest achievements of the Coast Survey, and for this credit is

in first order due to the indomitable energy and sagacity of Supt. Patterson.

One of the peculiarities of Supt. Patterson was that he would not read any books; all books that were received by him. including those tended as a personal present by authors and publishers were sent unopened to the library. In fact, he had no time to read books; he read and studied men. Whenever he wanted special information upon any subject, he knew just to whom to apply for it and his grasping mind enabled him to get all he desired in a short running conversation. If the information was not ready at hand, it was made the subject of a special study and report. This capacity for work and the rapidity with which he transacted business about this time was simply marvelous; his decisions were always prompt and marked by sound judgement. I remember that then, as at present, the question of the number of soundings to be given on a chart was often discussed, pro and con, when Supt. Patterson struck the right key by saying, -"I don't care how many soundings you put on a chart, provided you find them all necessary to show all the features of the survey".

The new life which Supt. Patterson infused into the survey soon made itself felt in every branch of the work; from the field and the office, better results were obtained, and a greater amount of was turned in than ever before, but in this matter of keeping his forces profitably employed, he experienced towards his latter days a great deal of vexation and disappointment. Congress would appropriate money for the pay of the field force, but insufficient

work

sums for field expenses, and I do not think the Supt. derived much comfort from the Secretary (Hon. John Sherman) to whom he complained about this matter, when he was told not to give himself too much concern about this matter if Congress saw fit to act in this way.

It should be considered that seven hours active brain work a day, and day after day, year after year, uninterrupted by any change or vacation, would be about as much as any human nature could endure, but Supt. Pattersons devotion to the service and his extreme sensitiveness in regard to the weight of responsibility resting on his shoulders, did not recognize any such restriction; not only would he sit in the office for nearly two hours each day until nearly six o'clock when everybody else, except perhaps Prof. Hilgard, had gone, to devote himself undisturbed to business or a conference with the Assistant in charge, but, not yet satisfied, he would take work home for the evening. The files of the Engraving Division attest the fact that Supt. Patterson would take the so-called "Quarterly proofs, which were supposed to be a mere proofs of record, and which hardly ever anybody took the trouble to look at, home with him to examine and criticize them very closely. His pencil remarks show that he was as well an able critic as a man of sound judgement; he would readily recognize what was meritorious and give unstinted praise in the same way that he would But the Superintendent undercondemn slovenly and careless work. took to carry a burden which was beyond the strength of any one man

and there can be but one opinion, that he sacrificed his life and health to what he conceived to be his official duty.

On August 15th, 1881, after a short illness, passed away
Carlile PPollock Patterson, distinguished
as Superintendent of the U.S. Coast and Geodetic Survey. Just
and strict in his official dealings, he was pure in mind, kind in
heart, devoted to his friends and family and of a self sacrificing
disposition, ever happy to be able to be of service to somebody.

Compiled from the records of the Survey and from personal recollections by Mr. A. Lindenkohl, who has been connected with the Survey since 1854.

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