

DOMINICA'S BOILING LAKE AND ITS BRAVE ENGLISH VICTIM

It is easy enough, now that the Grand Soufriere has slain its thousands and Pelée its tens of thousands, to look back and say: "By such and such a thing they should have taken warning." But to commence, as the lawyers say, "at the place of beginning." There is little doubt that the tragedy at the famous, but seldom visited, Boiling Lake of Dominica, last December, was the first serious muttering of the awakening volcanic fires.

Partly because he was the first victim of this never-to-be-forgotten eruption of 1902, but more especially lest the manner in which a brave man met his fate—foolishly perhaps, but unshrinkingly—should go unrecorded and unnoticed, this tale of one who fearlessly laid down his life for one who was not even a friend, is written.

Wilfred M. Clive was the hero's name, a descendant of the great Lord Clive, who laid the foundation of England's Indian Empire, and nearly related to half a dozen men of haughty name and title, yet in appearance and action simply a quiet, traveling Englishman, exploring in an idle moment the strange, wild, Caribbean Island of Dominica.

A fascinating, beautiful, treacherous island in this same Dominica. The awful molten lava sea, that underlies the thin crust which men call "the solid earth," here seethes beneath so thin a covering that warmed as it was by the very fires of hell, a vegetation has sprung up with an incomparable luxuriance that makes it the most wonderful in the world. So thin indeed is this covering, which is itself merely disintegrated lava, that everywhere streams of boiling sulphurous water break through, milky white, poisoning the orchid-scented air with deadly vapors, while high upon the mountainside the boiling lake, one of Nature's marvels.

It may seem incredible that a wonder like the boiling lake could exist on an island only 23 miles long by 16 broad. For 40 years after discovery, during which time Caribs, Spaniards, French and English had apparently fought over every square inch of it, without the lake being seen or its existence suspected. Yet it was only about 20 years ago that Dr. Nichols found the mysterious little sheet of water. However, any one who has visited Dominica can understand, perhaps, how so wonderful with high mountains, ranges and deep, sunless valleys and so impenetrable are the closely woven forests and green tangle of tropic underbrush covering everything there that the journey across the island consumes two full days' time.

Hearing of this strange lake, lying 2000 feet above the level of the sea, on the flank of Mount Diablot, the highest peak in the West Indies, Mr. Clive determined to visit it straightway.

His last journey. So, on December 20, accompanied by Gerald McDonald and a guide, Clive set out from the town of Roseau for Laudat, which was reached at 2 o'clock in the afternoon. Leaving McDonald behind, Clive began the climb under the guidance of Jean Jules and Mantan Rollin or, as many visitors to Dominica will better remember them, "Wylie" and "Dugruscin."

The scenery grew wilder and more unnatural at every step. A mighty wave of living green swept down upon them from the hills above, fighting for every inch of the narrow path along the precipice. From out the valley beneath them a horde of huge-trunked invaders, waving their green limbs like banners, rushed up to overwhelm them. The air became heavy with the scent of orchids growing on outspreading limbs, a sheer 200 feet above their heads. A soft, unceasing rustling, as thousands of creeping things moved through the underbrush, was drowned at intervals by the hoarse, uncanny cry of the Devil's bird—strange of shape, with long black beak and "feet like ducks' feet, but armed with terrible long claws," black as Erebus, well deserving of the evil name the Caribs had bestowed upon it. Other strange sounds, not so easily accounted for, were heard. In short, the path stretched through an enchanted forest, and Clive, who knows what mysterious dangers for the January traveler.

Jumble, Yoodoo, Obeah, all the superstitions of the Indian and negro, so gaily laughed at the day before, became suddenly very real and possible beliefs. Here and there a break in the solid green wall, where some great tree had hurled itself into the abyss, showed far up on the mountain side, a cloud of fleecy steam rising swiftly, only to melt as swiftly into thin air.

La Petit Soufriere's Crater.

At last the petit Soufriere was reached: a deep basin, some 30 feet across, surrounded by steeply rising hills, green to their summits. It was only 100 feet down, but a half hour of hardest work was needed to accomplish that short descent. Here, as Wylie severed with one clean stroke of his keen-edged machete the last obstructing stem, Clive's stolid English composure could not repress a wondering exclamation at the scene. The naked earth had been painted over by the unseen devil, who gurgled and chuckled in their slimy caves, with countless shades of lurid reds and greens and brilliant sulphurous yellows.

With each fresh bubbling of horrid laughter they exposed out neck masses of boiling, stinking mud. Such was the impression. There could be no doubt of the actual presence of the devil. The negro's theories of the cause of the eruption were quite reasonable. The horrid, half-human tone that rose from each steaming hole was, beyond doubt, that of actual living infernal things. Such was the spell of the enchanted forest, and the terror inspired by the petit Soufriere. Even as he stood, the poisonous vapors had discolored the brass mountings of Clive's camera. It was high time to move on towards the lake. More weary cutting of giant creepers, often five inches thick. More stumbling over jagged rocks and tottering up almost vertical slopes, and then they stood upon the cliffs above the Boiling Lake itself.

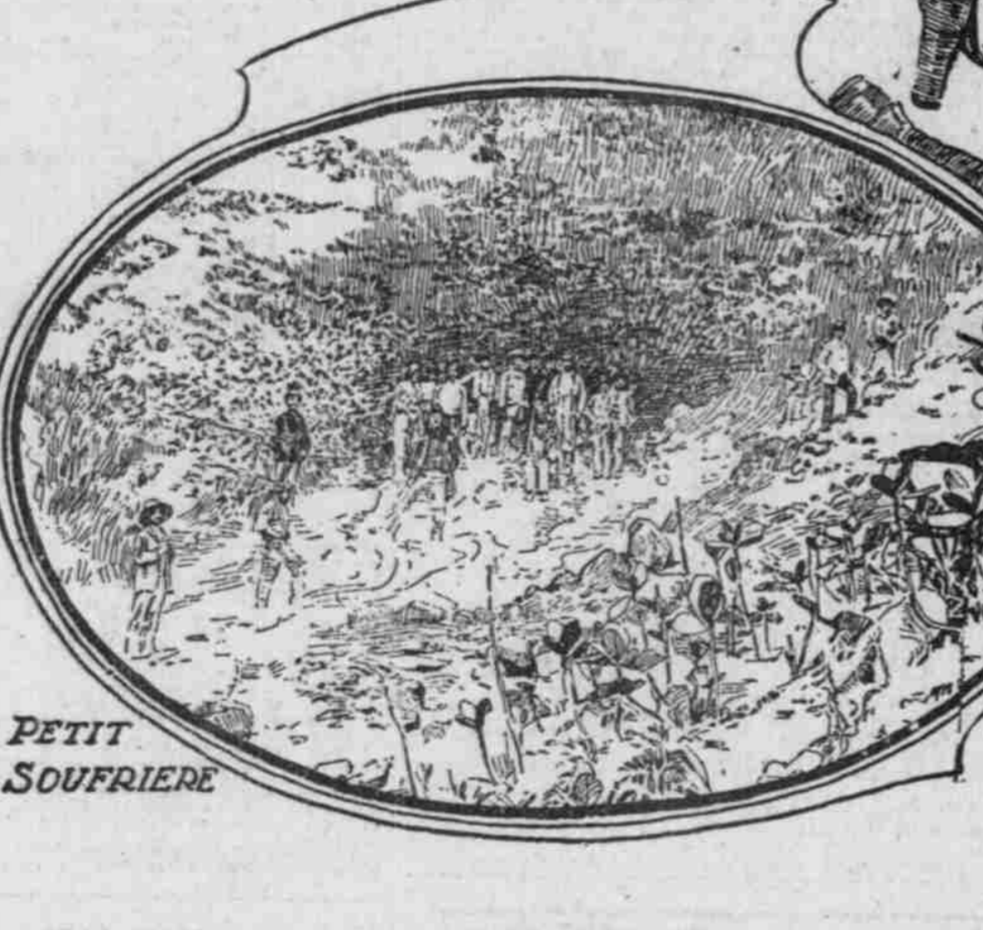
The Boiling Lake.

It was, apparently, the ancient crater of a long-forgotten volcano, seemingly breathing its last painful, expiring breath, as they looked, but which even then may have risen in fierce wrath, for it is this lake whose sudden disappearance, which Pelée witnessed, which threw all Dominica into wild terror.

About 20 feet wide, the encircling walls rose 100 feet from the water. Generally, the lake was covered over with cinders, and its temperature was over 120 degrees, but on this fatal December morning, says the one survivor of the little expedition, the air was clear, although the bubbling of its surface, if anything, was more violent than usual. Wylie, who was an old, experienced guide, was so alarmed at this that he begged Mr. Clive not to go down to the water, but Mr. Clive, not to be deterred by any fancied danger, had already started. At first all went well, though the atmosphere was almost unbearable. Mr. Clive attempted some photographs without success—the one accompanying this article is the only successful one ever taken—after which the guides showed him a little stream tumbling over the cliff, and then lunch was spread. A sudden burst of sunshine induced Clive to return with the guides to the edge of the lake and try another photograph, when they again returned to the waterfall. When lunch was over Clive went down to the shore once more, and scarcely had



ONLY SUCCESSFUL PHOTOGRAPH EVER TAKEN OF THE MYSTERIOUS SHEET OF WATER.



PETIT SOUFRIERE



HOW WILFRED M. CLIVE, DESCENDANT OF LORD CLIVE, LOST HIS LIFE TRYING TO SAVE A NEGRO GUIDE

ROSEAU VALLEY

IN THE HEART OF THE CARIB COUNTRY.

ON THE 7:40 EXPRESS

BY FRANK H. SWEET

AS THE 7:40 train began to pull away from the Alexandria station, an old white-haired negro hurried across the platform and swung himself on the rear car. He was very black and very dusty, and the single occupants of seats looked a little apprehensive as he shuffled diffidently through the car. But he did not offer to sit down. When he reached the opposite end he took hold of a seat to steady himself and gazed around curiously, his big, wondering eyes roving from one face to another with the eager scrutiny of a child.

Evidently he was very tired, for his shoulders began to slope, and every few minutes he shifted his feet as though they hurt him.

At last a young man lowered his newspaper.

"Here is a seat, uncle," he called; "you look tired."

The negro shuffled forward eagerly.

"Yes, sah! 'tank yo', sah!" he said, gratefully, as he sank down. "I's plumb beat. Done walk monfous long way dis yer mawnin'. Yo' see," as the young man folded his paper and slipped it into his pocket, "Marze Henry an' me lib over in Prince George County, an' last week Marze Henry he an' me die. Dat let me by myself."

"I see, and you are going south to look for work."

"No, sah; goin' back home—goin' back to de county." Into his eyes came a look of eager expectation, and he stroked the back of the seat softly, as though it were his old home in far-away Georgia.

"I ain't been dar in mo' 30 year," he went on, slowly, "not sense de Linkum men took we all's niggers. Dar was a whole paise ol' 'em, but dey all done bruk away. Den de Sheriff sol' de plantation, an' dar wa'n' nutten left we all but de Norf. We's bleeged to hab money to lib."

"And you stuck to Marze Henry?"

The old negro looked at him in surprise.

"De body sarbent," he answered simply, "I's de body sarbent, an' Marze Henry he couldn't 'light 'long 'bout me. He's a gen'leman, an' 'pended on bein' tuk car ob. But I's bleeged to be 'way in de daytime case I's a cyarpenter an' allers hab plenty wuk."

"What did Marze Henry do?"

"Marze Henry?" indignantly, "why he's a gen'leman, I tells yo'. He ain't do nutten. He ain't nebbur learn do tings like common wite fo'ks. He hab niggers for dat."

"You don't mean that you have supported him ever since the war?"

The old negro drew himself up with unconscious dignity.

"Yo' goin' talk like dat, I ain't got nutten me' 'splain."

"I beg your pardon," said the young man, hastily, "please go on."

The black face relaxed.

"Yo' ain't know Marze Henry," commiseratingly, "so yo' don't un'stan'. Ob but ain't so bad as yo' tink," and before he got to bed he wuk, I like to know."

A boy came through the car with a

basket of sandwiches. The young man bought two and handed them to his companion. The old negro's eyes glistened.

"'Tank yo' massal 'tank yo', sah!" he said, gratefully. "I didn't hab no breakfast, an' money's too scarce to buy tings on de road. I war 'lowin' to fill up arter I done reach Georgy."

A few minutes later there was a slight ripple through the car. The conductor had entered and was calling for tickets. The young man now produced his and held it in readiness. The negro fumbled anxiously through several pockets, and finally remembered that he had pinned his to his hat lining.

"Done tuk ebry cent I could swape up to buy dat," he said, triumphantly, as he produced it. "But dat's all right. I kin wuk, an' fo'ks don't need money we' den dey's home. Money's for trabblin'."

In the seat behind them was a shabbily dressed woman whose face had an anxious, frightened expression. Crowded on her shoulder she were several bundles, and in her arms was a white-faced, big-eyed baby. When the conductor touched her shoulder she started uneasily.

"Ticket, please."

A red flush of shame spread over the woman's face; then it disappeared, leaving her white and dogged.

The conductor grew stern.

"Very well. If you get off at the next station it will save us the trouble of putting you off," and he turned to the opposite seat.

"The woman's eyes grew big with terror as she sprang up and caught him by the arm."

"Don't do dat, sir! For God's sake, don't put me off!" she implored, hoarsely. "I've got to go. My husband has written for me to come. He's de dyin', but a great eob rose to her white lips, but was resolutely choked back. "I tried to raise money," lowering her voice so the other passengers couldn't hear, "but couldn't. We sold everything we had so he could go south, as the doctor ordered. And now he's de dyin'—oh, my God! my God!" She turned from him and sank weakly into her seat. The conductor shook his head.

"I'm sorry, madam," he said, kindly, "but we have only one rule. Yo' must pay or get off. I don't risk breaking the rules. Ticket, please."

The old negro rose slowly to his feet.

"It's feared yo'll hab to put me too, too," he said humbly. "Hil's monfous hard wuk for pore nigger like me to raise money for ticket."

"Og at de next station," broke in the conductor, harshly. "We'll be there in minute. If it were not so near I'd raise the train and put you off. This poor woman has some excuse, but you—bah!" The young man was about to make a protest, but something in the old negro's face restrained him.

Before the conductor reached the end of the car the speed began to slacken. The old negro rose and turned to his companion.

"Reckon I better be leavin'," he said, "I'll 'tank yo' for dem san'wiches, an' I hope yo'll member me kin'y. Here missy" to the woman, who was gazing stonily from the window, and dropping his ticket into her lap, "here's yo' ticket. I reckon yo' done drap hit. I hope yo'll fin' dat husband ain't so bad as yo' tink," and before he could recover from her bewilderment he had left the car and was shuffling down the platform. The young man half

AMERICAN MACHINERY.

How Germany Has Held Her Own in Iron Manufactures.

SOON after the Franco-Prussia War Mr. Ludwig Loewe, a young and enterprising hardware merchant of Berlin, became impressed with the fact that American sewing machines were finding a large and constantly increasing sale in that country. He compared them with the homemade sewing machines, recognized their superior construction and finish, and determined to see how this was accomplished. He went to America, visited sewing-machine factories and other machine shops, saw the work of automatic machine tools, doing with speed and unerring accuracy the shaping and fitting that had always been done by hand. He bought a complete outfit of American machines and tools, returned to Berlin, and established a factory, which proved the germ and inspiration of a new era in German manufacture.

That original factory has expanded until it includes, under management of the same daring and intelligent innovator, the Union Electrical Works, the vast private arsenal where the Mauser rifle is made by hundreds of thousands for the armies of many countries, and an immense machine shop and foundry of the most modern type, where hundreds of American machine tools—with an Allis engine driving one of the dynamos that generate electrical power for this vast equipment—have been employed during the past four years turning out the instruments of war. The American system of standard types with interchangeable parts is permanently established. The Bergman Electrical Works, of Berlin, is an example of a class of large industrial establishments founded in Germany during the past five years in which not only the machinery and tools are of American make, but the technical directors, many of the foremen, and even some of the workmen are either native or allied American citizens, who learned their handicraft in the United States.

In all but the very latest American novelties—the inventions and improvements of the past three years—the Fatherland has ceased to be an importer and has become an exporter. The troops of German engineers and machinists who spent months at Chicago and in visiting factories and machine shops during the Summer of 1892 brought home not only a practical knowledge of the machinery which was used and exhibited there, but of the products which that machinery was employed to produce.

IN THE FIELD OF SCIENCE

OF the Berlin-Zoesen Electric Railway which was expected to carry trains at a speed of 125 miles an hour, the nearest approach to an official verdict on the trials which has yet been made was a paper read before the "Verrein fur Eisenbahn Kunde" (an association of railway experts), by General Burath Moritz Lochner, an eminent engineer belonging to the Prussian State Railway Administration, and who in the experiments represented the government, which had furnished the stretch of military railway line over which the tests were made. The address is withheld from publication, but in substance it confirms the conclusions of the other experts, and may be summarized as follows:

The line is 27.4 miles in length, was laid with rails of the old Prussian standard, weighing 70.14 pounds per meter (39.27 inches), resting on metal ties. The track had been in use for a number of years, but prior to the experiments it had been put in perfect repair. At ordinary speeds everything worked perfectly, and no trouble was experienced with rails or motor cars. But as a speed of 80 miles was approached and exceeded, new and serious conditions were encountered. The rails and ties both proved too light for such a strain, the track began to give way, and the side swaying of the cars increased seriously. The highest speed attained was 56.4 miles per hour on two occasions, and as a result of the conditions then developed, the experiments were discontinued. The net result being that up to a speed of 21 miles an hour they had been successful and satisfactory. But as the pronounced purpose of the trials had been to make tests of speed up to 125 and 150 miles an hour, the actual result spread a chill of disappointment among electricians in this country.

Improvement in Telegraphy Needed.

The coming of Colonel Clowry to the presidency of the Western Union Telegraph Company and the changes in department heads incident thereto is expected by the electrical profession to bring great changes in the way of betterments to the service.

The conservation of the Western Union management during twenty years, as shown by refusal to adopt inventions, has kept its service far below its proper efficiency.

Dr. Pupin, of Columbia University, whose inventions made long distance telephony possible, recently said: "The Western Union does not spend ten cents a year for improvements, so far as I am concerned, but offers them an improvement is treated like a book agent."

The Electrical World speaks of the present status of telegraphy, referring to the Western Union, as follows: "Only last week the greatest American inventor, whose telegraphic work is but part of his claim to fame, spoke to us in even stronger language of the deadness in telegraphy, and expressed a hope that a change impended. With an unprogressive art, there has inevitably been a stagnant industry, and telegraphy has stood still for years, although it ought to have been as prosperous and expansive as telephony. Much can be done to cheapen telegraphy, so that instead of sending

one message a year, the average American will send 10. Automatic and machine telegraphic systems of the greatest promise, tried and approved, await liberal adoption, when a new crop of business at lower rates can be created, and telegraphy once more come again to its own."

New Battle-Ships.

The most interesting item of expenditure included in the \$71,500,000 asked for by the naval committee of the House is that for new warships.

Provision is made for two first-class battle-ships of the highest type, which are to cost over \$42,200,000 each and are to have a displacement of 16,000 tons; two first-class armored cruisers to cost not over \$4,500,000 and to be of 14,000 tons displacement; and two 1000-ton gunboats, whose combined cost is to be \$2,800,000. The total cost of the six ships thus provided for will be \$52,500,000, of which \$30,000,000 is for armor and armament.

On January 1, 1902, there were in process of construction eight battle-ships, six armored cruisers, nine protected cruisers, four monitors, 15 torpedo-boat destroyers, nine torpedo-boats and seven submarine boats, making a total of 55 ships under construction. The work on them is sadly behind owing to the companies building them having devoted their energies more largely to other than Government contracts. The torpedo-boats to have been completed in 1899; the torpedo-boat destroyers in May, 1900; the monitors in March, 1901; the submarine boats in October, 1901; the three battle-ships Maine, Missouri and Ohio nearly a year ago. From this showing it can be seen that 35 of the 55 vessels are from nine months to three years behind.

A boy came through the car with a