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## **The hundred wonders of the world**

**Clarke, Charles Cowden**

**London, 1820**

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Bituminous and other lakes.

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the water, in the stone trough, or cistern, which receives it, during the time of the well's flowing, is equally uncertain, varying from one inch to nine or ten inches, in the course of a few reciprocations. This spring, like the preceding one, discharges bubbles of air at the time of its flowing.—Near the LAKE OF BOURGET, in Savoy, is a reciprocating spring which rises and falls with a great noise, but not at stated and regular times. After Easter, its ebbings and flowings are frequently perceived six times in an hour; but in dry seasons not more than once or twice. It issues from a rock, and is called *la Fontaine de Merveille*, the marvellous fountain.

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## BITUMINOUS AND OTHER LAKES.

### PITCH LAKE OF TRINIDAD.

NEAR point LA BRAYE, TAR POINT, the name assigned to it on account of its characteristic feature, in the Island of Trinidad, is a Lake which at the first view appears to be an expanse of still water, but which, on a nearer approach, is found to be an extensive plain of mineral pitch, with frequent crevices and chasms filled with water. On its being visited in the autumnal season, the singularity of the scene was so great, that it required some time for the spectators to recover themselves from their surprise, so as to examine it minutely. The surface of the lake was of an ash colour, and not polished or smooth, so as to be slippery, but of such a consistence as to bear any weight. It was not adhesive, although it received in part the impression of the foot, and could be trodden without any tremulous motion, several head of cattle browsing on it in perfect security. In the summer season, however, the surface is much more yielding, and in a state approaching to fluidity, as is evidenced by pieces of wood and other substances, recently thrown in, having been found enveloped in it. Even large branches of trees, which were a foot above the level, had, in some way, become enveloped in the bituminous matter. The interstices, or chasms, are very numerous, ramifying and joining in every

direction; and being filled with water in the wet season, present the only obstacle to walking over the surface. These cavities are in general deep in proportion to their width, and many of them unfathomable: the water they contain is uncontaminated by the pitch, and is the abode of a variety of fishes. The arrangement of the chasms is very singular, the sides invariably shelving from the surface, so as nearly to meet at the bottom, and then bulging out towards each other with a considerable degree of convexity. Several of them have been known to close up entirely, without leaving any mark or seam.

The pitch lake of Trinidad contains many islets covered with grass and shrubs, which are the haunts of birds of the most exquisite plumage. Its precise extent cannot, any more than its depth, be readily ascertained, the line between it and the neighbouring soil not being well defined; but its main body may be estimated at three miles in circumference. It is bounded on the north and west sides by the sea, on the south by a rocky eminence, and on the east by the usual argillaceous soil of the country.

#### MUD LAKE OF JAVA.

THE following details relative to the volcanic springs of boiling mud in Java are extracted from the Penang Gazette.

Having received an extraordinary account of a natural phenomenon in the plains of Grobogna, fifty paals north-east of Solo; a party set off from *Solo* the 25th Sept. 1814, to examine it.—On approaching the dass or village of Kuhoo, they saw between two topes of trees in a plain, an appearance like the surf breaking over rocks with a strong spray falling to leeward. Alighting, they went to the ‘Bluddugs,’ as the Javanese call them. They are situated in the village of Kuhoo, and by Europeans are called by that name. “We found them, says the narrator, to be an elevated plain of mud about two miles in circumference, in the centre of which, immense bodies of soft mud were thrown up to the height of ten to fifteen feet, in the form of large bubbles, which, bursting, emitted great volumes of dense white smoke. These large bubbles, of which there were two, continued throwing up and bursting seven or eight times in a minute; at times they threw up two or three tons of mud. The

party got to leeward of the smoke, and found it to stink like the washings of a gun barrel.—As the bubbles burst, they threw the mud out from the centre, with a pretty loud noise, occasioned by the falling of the mud on that which surrounded it, and of which the plain is composed. It was difficult and dangerous to approach the large bubbles, as the ground was all a quagmire, except where the surface of the mud had become hardened by the sun;—upon this, we approached cautiously to within fifty yards of one of the largest bubbles, or mud-pudding, as it might properly be called, for it was of the consistency of custard-pudding, and was about a hundred yards in diameter:—here and there, where the foot accidentally rested on a spot not sufficiently hardened to bear, it sunk—to the no small distress of the walker.

“ We also got close to a small bubble, (the plain was full of them, of different sizes,) and observed it attentively for some time. It appeared to heave and swell, and, when the internal air had raised it to some height, it burst, and the mud fell down in concentric circles; in which state it remained quiet until a sufficient quantity of air again formed internally to raise and burst another bubble, and this continued at intervals of from about half a minute to two minutes.

“ From various other parts of the pudding round the large bubbles, there were occasionally small quantities of sand shot up like rockets to the height of twenty or thirty feet, unaccompanied by smoke:—this was in parts where the mud was of too stiff a consistency to rise in bubbles. The mud at all the places we came near was cold.

“ The water which drains from the mud is collected by the Javanese, and, being exposed in the hollows of split bamboos to the rays of the sun, deposits crystals of salt. The salt thus made is reserved exclusively for the use of the Emperor of Solo; in dry weather it yields thirty dudgins of 100 cattles each, every month, but, in wet or cloudy weather, less.

“ Next morning we rode two and a half paals to a place in a forest called Ram am, to view a salt lake, a mud hillock, and various boiling pools.

“ The lake was about half a mile in circumference, of a dirty-looking water, boiling up all over in gurgling eddies

but more particularly in the centre, which appeared like a strong spring. The water was quite cold, and tasted bitter, salt, and sour, and had an offensive smell.

About thirty yards from the lake stood the mud-hillock, which was about fifteen feet high from the level of the earth. The diameter of its base was about twenty-five yards, and its top about eight feet—and in form an exact cone. The top is open, and the interior keeps constantly boiling and heaving up like the bluddugs. The hillock is entirely formed of mud which has flowed out of the top. Every rise of the mud was accompanied by a rumbling noise from the bottom of the hillock, which was distinctly heard for some seconds before the bubble burst;—the outside of the hillock was quite firm. We stood on the edge of the opening and sounded it, and found it to be eleven fathoms deep. The mud was more liquid than at the bluddugs, and no smoke was emitted either from the lake, hillock, or pools.

“Close to the foot of the hillock was a small pool of the same water as the lake, which appeared exactly like a pot of water boiling violently;—it was shallow, except in the centre, into which we thrust a stick twelve feet long, but found no bottom. The hole not being perpendicular, we could not sound it without a line.

“About 200 yards from the lake were two very large pools or springs, eight and twelve feet in diameter; they were like the small pool, but boiled more violently and stunk excessively. We could not sound them for the same reason which prevented our sounding the small pool.

“We heard the boiling thirty yards before we came to the pools, resembling the noise of a waterfall. These pools did not overflow—of course the bubbling was occasioned by the rising of air alone. The water of the bluddugs and of the lake is used medicinally by the Javanese.”