

THE  
VICTORIA FALLS  
ZAMBESI RIVER

SKETCHED ON THE SPOT

BY

T. BAINES. F.R.G.S.





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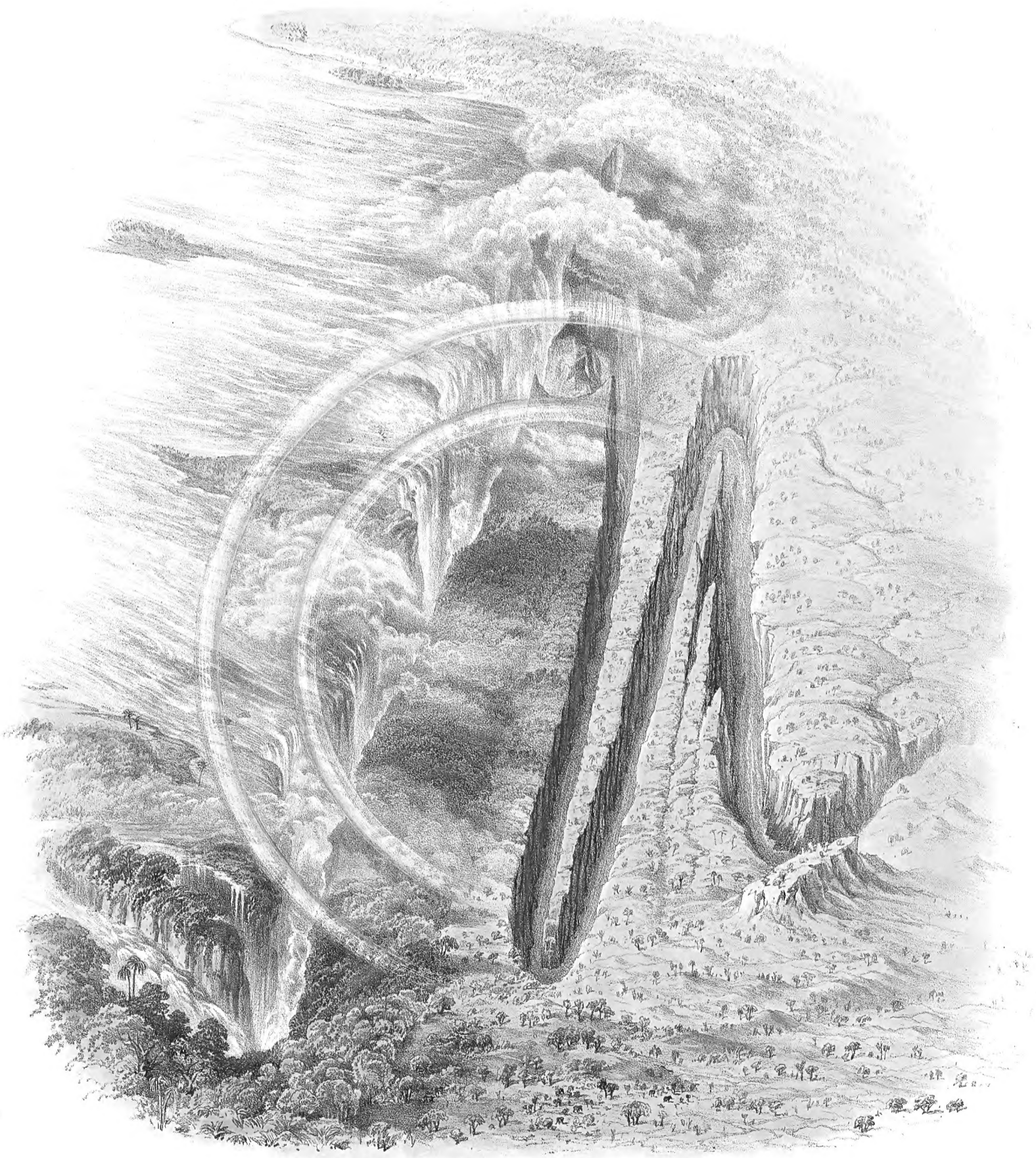


DEDICATED BY EXPRESSES FREDERICK TO THE  
FELLOWS OF THE ROYAL GEOGRAPHICAL SOCIETY

VII  
ZAMBESI RIVER

(DURING THE JOURNEY OF J. CHAPMAN & T. BAINES)

BY T. BAINES, ESQ.



BIRDS EYE VIEW OF THE VICTORIA FALLS FROM THE WEST.

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THE  
MOSI-O-A-TUNYA\* (SMOKE-SOUNDING), OR VICTORIA FALLS,  
ZAMBESI RIVER.

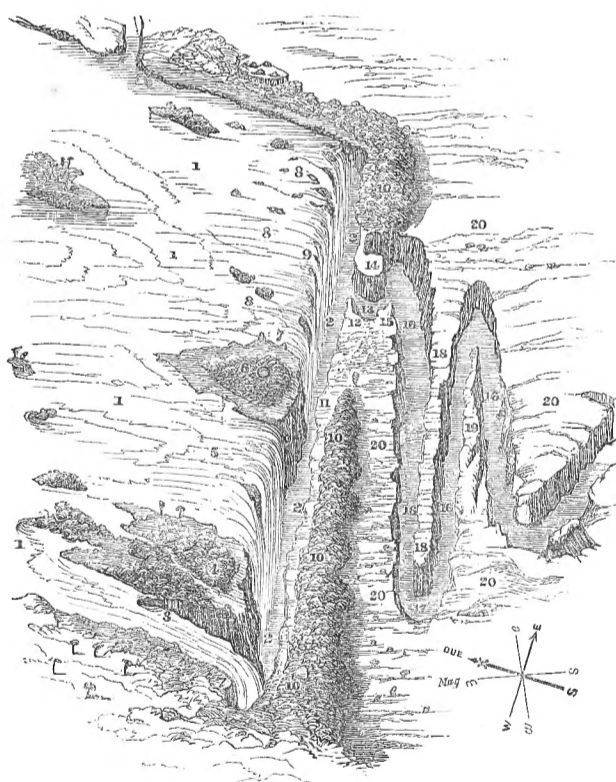


THE popular idea of Africa has long been that its interior was a vast desert. The traditions of inland waters were discredited, and in 1849 Lake Ngami † was erased from our maps, at the time it was being discovered in the very place native report had assigned to it.

Nevertheless, those who held communication with the half-caste traders, or had access to the early Portuguese records, knew that extensive lakes and river systems were to be found there.

In Ogilby's *Africa*, published in 1670, the map shows two great lakes nearly corresponding with the Victoria and Albert Nyanzas, with branches of the Nile flowing from them, and the Zambesi is given nearly in its true position, though the Manice or Rio de Spirito Santo is erroneously connected with it. The *Atlas Geographus*, in 1714, less correctly even than the earlier record, describes the Lake Zambre as the common source of the Nile, the Cuama (or Zambesi), the Manice, and the Zaire or Congo, on which are "cascades in the middle of its channel falling from rocks with a noise that may be heard two or three leagues off."

1. The Upper Zambesi River, 1,900 yards wide.
2. The Chasm of the Falls. Length, 1,900 yards; breadth at Garden Island, 75 yards; ditto at widest parts, 100 to 130 yards; depth, 400 feet.
3. The Leaping-Water or Western Cataract.
4. Three-Rill Island and the Chasm of the Three Rills.
5. The Great Western or Main Fall.
6. Garden Island.
7. Zanjueelah's Cove.
8. Eastern Falls.
9. Centre Rock Fall.



10. Wet Forest.
11. The Buffaloes' Cliff.
12. The West Headland.
13. The Outlet.
14. The East Headland, with the narrow neck connecting it with the Eastern Cliffs.
15. Buffalo Point.
16. Narrow Gorge of the Lower River.
17. The Tarn.
18. The Tarn Promontory.
19. The Profile Cliffs.
20. Mimosas and dry Vegetation.

PLAN OR BIRD'S-EYE VIEW OF THE VICTORIA FALLS.  
(View No. 1.)

It has for some time been known that within the southern tropic, and nearly equidistant between the eastern and western coasts, the course of the great river Zambesi was interrupted by similar falls; and in 1852 or 1853 my long-known and highly-esteemed friend Mr. James Chapman, who crossed the continent of Africa in those years, had engaged a canoe, and was embarking for a visit to the Falls, when the crew were

recalled by Sekelētu, their chief, and he was obliged to forego the honour of being their discoverer. In 1855 they were seen by Dr. Livingstone, who was then preparing for his journey to the east coast, and was the first to bring them to the notice of the British public.

Various branches of the Zambesi appear to rise not far from the west coast, and flow through a country so level that

\* This name may be pronounced nearly as Mōsi-wa-tunya.

† If the pronunciation of this should occasion any difficulty, it will be near enough to drop the g, and call it Nāmi.

they give off, as well as receive, other streams, of which it seems probable that the Okovango river, discovered in 1859 by that enterprising traveller and naturalist Mr. C. J. Andersson, is one of the principal, till the river reaches nearly the centre of the continent.

Here the Falls are formed by a deep narrow chasm cleft across the broad bed of the river, which, plunging 400 feet into the abyss, escapes by another cleft joining the first at nearly three-fourths from its western end, and prolonged in abrupt zigzags and redoublings for many miles, engulfing the narrow lower river far below the surface, occasionally spreading out and again contracting; traces of the fissure appearing, as it seems to me, nearly to the Indian Ocean, or more than 800 miles away.

Above the Falls, where the river is nearly on a level with the surrounding country, rich tropical vegetation abounds, and long reaches are descended on rafts or navigated in canoes, almost the only difficulty being occasioned by the thick growth of reeds in the shallower portions.

Below them no continuous navigation is possible for eighty or a hundred miles; but beyond this long open reaches alternate with occasional rapids and narrow gorges, the most dangerous being those of Chicōva and Kabrabása, in which my friend Dr. Kirk, when descending the river, very narrowly escaped drowning.

In presenting to the public the accompanying views of these magnificent Falls, I presume not to compete with the works of those who have so beautifully illustrated more accessible countries. In the far interior of Africa, an artist must leave behind him every convenience, and becoming in turn smith, carpenter, tailor, and shoemaker, bullock-driver, and astronomical observer, must obtain his sketches and finish his pictures as he can, trusting that any want of artistic finish may be compensated by the faithfulness inseparable from working as much as possible in the actual presence of nature.

It is also difficult in the description to avoid some little repetition of my journal already published,\* and I ought to acknowledge the courtesy of Messrs. Longman, who have kindly consented to my making use of such parts as may be required.

Returning to Cape Town after leaving the Zambesi Expedition in 1859, I found refuge with my steadfast friend Logier, by whose kindness I was enabled to devote all I could accumulate by my art to the purpose of my equipment for another journey. Here I again met Mr. Chapman, who was at that time preparing for an expedition to the interior; and we agreed to attempt the passage from Walvisch Bay on the west coast of Africa, to the mouth of the Zambesi on the east. For this purpose, I built with my own hands two boats of copper, to be used either like the South-sea canoes, with a deck between them, or singly, should it be found necessary to separate them. The difficulty of carriage, however, caused by the fearful ravages of infectious lung-sickness among my companion's oxen, and the consequent opposition of the various tribes to our passage, as well as the impossibility of procuring other wagons at any price I could afford to pay, obliged me to leave eight out of the twelve sections at the village of Mr. C. J. Andersson, at Otjimbengue.

For sixty miles from the sea our path lay through shifting sand and arid desert; but the oxen found refreshment from the scanty herbage in the deep ravine of the Swakop River,† where, rolling its immense leaves over the dry sand, I found that mar-

\* *Travels in South-western Africa.* Longman & Co. 1864.

† Or Schwagoup, a native word indicating fatness. Not Zwartkap.

‡ In reference to these plants, I received the thanks of my eminent and lamented friend, the late Sir Wm. Jackson Hooker, who writes:—

“The plant is one that has given me uncommon pleasure, inasmuch as, old a botanist as I am, I never saw it before, nor has more than one person ever done so—that person is Dr. Welwitsch, a German botanist, long resident at Loando.

“I am greatly obliged for the flowers of the Aloe, which appear to be those of an entirely new species.

“I thank you much for the photograph of the curious lily; we are confident

vellous plant the *Welwitschia mirabilis*, the first sketch and specimen of which ever seen in England I had the honour of sending home. Nor is the country just beyond more destitute of interest; for there, midst rugged hills of disintegrated granite, I sketched the gigantic aloe, the circumference of whose trunk is nearly twelve feet, while its spreading crown of leaves, adorned with countless spikes of yellow flowers, attains a height of more than twenty-five.

Still farther on, near the wells of Koobie, in the Bushman country, Chapman brought to my notice a little bulb, the bud of which, exploding after sunset, presented a bell-shaped flower of the most delicate and semi-transparent white, diffusing its gently refreshing odour at intervals throughout the night, and withering before the heat of the next day.‡

Passing south of Lake Ngami and hugging the reedy banks of the Bō-tlét-lé River as long as possible, we struck more northerly across the elevated desert, where for nearly two hundred miles not a drop of running water meets our view, and the cattle drink at scanty rain-pools scattered few and far between in clay or limestone hollows.

Suddenly emerging from the forest of Mōpánies, the dry foliage of which so long has limited our view, a blue horizon appears before us, and standing at an elevation of 3,500 feet, we cast our glance over a seemingly illimitable valley, where the brown and fire-scathed ridges beneath our feet give place to others, passing through every shade of sombre green and greyish purple, dark forest alternating with grassy sward, till they are lost in the ethereal blue of the far-off horizon, while from every hollow gushes forth some bubbling rill to send its waters to the great Zambesi.

Large herds of buffalo frequent the swamps and forests, the rhinoceros wanders in the solitude of the mimosa-glades, and here we found the magnificent sable antelope, and numerous specimens of a full-striped quagga,§ which had first been shot by my friend upon the table-land behind us, and which, if not a new species, seems at least an intermediate variety between Burchell's and the true zebra. Here also the deadly-winged cattle-pest—the *tsetse*—forced us to adopt other means for the continuance of our journey.

Crossing the Daká and Matiëtsie, and leaving our vehicles on the Onyati, or Buffalo River, near the wagon of an ambassador sent by Sichelê to demand from Sekelétu the restoration of the goods plundered from the ill-fated mission-party of Messrs. Price and Helmore, we discarded everything that could not be carried on the shoulders of a few Makálaka, and commenced our march across the tsetse-stricken hill of red sand, scantily clothed with mopánies and other varieties of the *Bauhinia*, perking their leaves in pairs edge upward, defying the sun to scorch or the traveller to find shelter beneath them.

We halted on the northern slope, beneath a spreading mōchicheerie; and while watching the red glare of our fire thrown high into the dim recesses of the foliage, heard, stealing through the stillness of the night, a low murmuring like the sighing of the ocean before a gale, rising and swelling gradually into the deep-toned, monotonous roar of a continuous surf for ever breaking on some iron-bound coast.

On Wednesday, July 23rd, 1862, we were in motion soon after sunrise; and had barely proceeded half-a-mile when Barry discovered the smoke, and seeking a little opening through the trees, we saw the water of the broad Zambesi, glancing like a mirror beyond a long perspective of hill and valley, while from below it clouds of spray and mist, more than

it is a new species, which will consequently be described in the forthcoming ‘*Flora of Tropical Africa.*’”

§ May 20th, 1862.—Chapman shot a quagga at a distance; and on his return remarked, “The quaggas here are not like those of Vaal River; they have stripes on their legs.” “Then,” said I, “if they are not zebras, they must be new; for only two quaggas are described, and their legs are white.”

I am glad to see (*Annals of Natural History*, September, 1865) that Mr. E. L. Layard, of the Cape Museum, proposes to call it *Equus Chapmanni*, and I sincerely trust the name may be allowed to stand.



a mile in extent, rose from the chasm into which the water fell. The central five or six of these were the largest; but in all we counted ten, rising more like the cloud of spray thrown up by a cannon-ball than in a strictly columnar form. A light easterly wind just swayed their soft, vapoury tops; the sun, still low, shed its softened light over the sides exposed to it; the warm, grey hills beyond faded gradually into the distance; and the deep valley before us, winding for six miles between us and the falls, showed every form of rough brown rock and every tint of green or autumnal foliage; presenting to the eye, long wearied of sere and yellow mopánic-leaves, dry rocks, burnt grass, and desolated country, the most lovely *coup-d'œil* the soul of artist could imagine. Willingly would I have feasted my eye upon this distant vision for the day; but our weary, thirsty men were heavy-laden and pressing on for water.

And now was to come before our view another portion of the panorama, to the hungry native of far more interest than all the cataracts the world can boast. We had refreshed ourselves at the Masôé, a little stream flowing over a rocky bed, and started with fresh vigour on our way, when our guide whistled. A halt was made, and every eye turned in the direction indicated: a black rhinoceros (Boriélé, the fiercer of the two varieties) was standing not far upon our right, and by his uneasy gestures it was evident he had caught sight of us at the same moment. Keeping back as well as we could our excited followers, Chapman and I crept to within fifty yards, and fired with deadly aim into his shoulder. He stumbled, badly wounded, but stood at bay a hundred yards further, viciously snuffing the air with elevated nose; a couple more shots brought him down again with a broken shoulder; and bleeding profusely from the lung, he darted away through the thicket at a pace we could not cope with. We ran till out of breath when the spoor was plain, or sought its course in devious windings when it was not; we crossed the little river, and, about four miles back, caught sight of him again; but the rush of the three men who had kept up with us put him to flight; and we returned, leaving two to follow silently and find an opportunity of despatching him.

We broiled a bit of elephant flesh on the embers, and took the path again, winding wherever soft red sand could be found among the rocky hillocks. Pebbles and crystals of quartz, red, white, and green (though the latter does not test like copper), agate, coarse red jasper, and black scoriæ, looking as if they had been cast from a furnace, lay about the hills. The deep narrow chasm of the lower river, doubling in abrupt zig-zags in the broad valley, enriched with every kind of foliage, had now become more decided in its character; steep cliffs enclosed the narrow stream on either side, the deep shadows of the precipices contrasting with the plateaux above, whose yellow surfaces showed like fields of ripened corn. Immediately beyond was the belt of dark fresh green forest fringing the ravine of the Victoria, and from behind this rose the white vaporous spray clouds, from which the Falls derive their name of Mosi-o-a-tunya (or smoke that sounds), screening as with a misty veil their now darkened southern face, beyond which a long vista of the broad, palmy, island-studded upper river glittered like silver in the sunlight, the banks showing in warm and soft grey tints the detail of their features, and the mountains melting faint and blue into the distance.

The increasing thickness of the forest, as we approached the better-watered country of the upper river, shut out from our view the transient beauty of the scene; and, turning north, amid tall mōchicheerie and ana trees, varied by funereal-looking motsōuries; date-palms, the wild and almost inedible variety, with their graceful drooping foliage; low fan palms offering in contrast their pointed leaves; baobabs, those giants of the forest (some times one hundred feet in girth); and tall palmyras towering over all, the path brought us to the westward of the falls and about a mile from their nearest point.

We camped down under a shady tree, took two or three Makálakas to carry gun and sketch-book, and walked down to make sure of a preliminary view and settle the plan of future operations. (View No. 2.)

The moistened atmosphere to leeward of the spray cloud, the rich green sward becoming momentarily more damp till every footprint of elephant, hippopotamus, or buffalo, was filled with fine clear water, marked our near approach; and crossing with sodden shoes the rotting stumps and half-fallen trees that obstructed our view, we stood at once fronting the southern face of the magnificent Victoria Falls.

At the western angle, or just opposite to us, and at the beginning of the ravine, a body of water fifty or sixty yards wide comes down like a boiling rapid over the broken rocks; the steepness of the incline, while it diminishes by a few feet the height of the actual fall, forming a channel for the reception of a greater volume of water, and allowing it to rush forward with so much violence as to break up the whole into a fleecy, snow-white, irregularly seething torrent, with its lighter particles glittering and flashing like myriads of diamonds in the sunlight, before it takes its final leap sheer out from the edge of the precipice into the abyss below. (View No. 3.)

Then interposed a mass of cliff, smooth almost as a wall, and certainly as perpendicular, its base projecting like a buttress, its summit crowned by grass and forest kept over dark and green by the spreading mist, and its dark-purple front (deepened almost to blackness in the shadow by the northern sun) broken by a deep chasm through which poured three smaller rills, that might have been accounted grand had they not been dwarfed by the mighty mass beside them.

A hundred yards more east commenced the first grand vista of the Fall, comprising in one view near half a mile of cataract stretching in magnificent perspective from the Three-Rill Cliff to the western side of Garden Island.

The cliff was here of its original height, and the edge being apparently unworn, the height of the fall was greater, while the depth of water flowing over it was less; beside this, from the absence of any material slope like that in the channel of the Leaping-Water, the stream did not gather way, but flowed calmly and majestically onward.

Shallows and ledges of rock caused rapids and miniature cascades, but these only partially broke the repose of the deep blue surface; till reaching the cantle of its course, the mighty change took place. Wherever an inequality of the rock formed a hollow to conduct a mass of water, there fell, sweeping more or less outward in direct proportion to its strength and volume, a jet more or less green and translucent for the first few yards, but quickly breaking into masses from which the lighter particles, detached in their descent, formed comet or rocket like trains of spray and vapour, till the whole, before reaching the abyss, was transformed into a broken snow-white fleecy stream, bearing but little resemblance to actual liquid water, and reminding me more of the descriptions of the Staubbach, in the Alps, than anything else.

The river was at its lowest, and the sheet of water broken by projecting rocks; but I suppose it never can present the smooth unvaried regularity which the only representation hitherto given would indicate. Here and there masses of rock jutted out, their tops forming small islands, breaking the uniformity of the line, and their fronts interposing broad faces of dark rock, on either side of which trickled down shallow rills too weak to jet out in curves like the others. Some of these never even reached the bottom in a visible form, being either distributed over the rock, or dispersed by the wind that always eddies upward from the gulf.

Now stand, and look through the dim and misty perspective till it loses itself in the cloud of spray to the east! How shall words convey ideas which the pencil even of Turner must fail to represent? Stiff and formal columns of smoke there are none; the eastern breeze has blended all in one. Think

nothing of the drizzling mist, but tell me if heart of man ever conceived anything more gorgeous than those two lovely rainbows, so brilliant that the eye shrinks from looking on them, which, rising from the abyss, deep as the solar rays can penetrate it, overarch spray, rock and forest, till, at the highest point, they fail to find refracting moisture to complete the arch.

Eastward Ho! Still eastward, through mud, wild date-palms, grassy swamps, and vine-tangled forests with ever-dripping leaves, scene after scene of surpassing grandeur presenting itself, till the imagination is bewildered and embarrassed by so much magnificence. Now we pass the central, or as we suppose it, Garden Island, dividing the fall into two great masses, and interposing its breadth of bare projecting precipice. Its extent as yet we cannot tell, for its farther end is lost in spray. In some places the forest reaches quite to the verge, the trees appearing as if the keen wind blowing upward from the gulf had shorn off their over-hanging branches level with the cliff. Here and there are broad intervals of dark purple rock, wet and slippery with gelatinous weeds. I approach the edge, and look with awe into the troubled narrow stream beneath. The influence of the water rushing down, eternally downward, seems to meet a response within me, and kneeling down, I rest one hand upon the edge to look further; but now comes my little Bush-boy to rescue me from the supposed danger, nor will he be satisfied till we have removed from the verge.

Again our progress is checked, and our attention called from the glories of inanimate nature to the necessity of guarding against other emergencies of the wilds. The open sky beyond shows that we have nearly reached the termination of the forest, when Chapman stops suddenly. I see nothing yet, but the poised rifle and attitude of precaution show that something more than ordinary is before us. I step backward, round the corner of a bush, and there within seventy yards are a hundred buffaloes; fortunately to windward of us. We fire into them, and they charge wildly round to leeward, seeking to sniff our wind. If they gain this, their next charge will be directly at us. Bullet after bullet stops and heads them off, and though they see us plainly, they cannot determine on a direct charge without another effort to get to leeward and ascertain our quality by the scent. At length they turn and rush toward the Fall, crushing through palm brake and rotten timber till, at full speed, they gain the rocky headland, and we hold our breath in momentary terror lest they should rush over. Now they halt on the very edge, their dark massive forms stand out in bold relief against the misty clouds, and again, as the bullets tell upon them, they take refuge in the palm brake, the wounded lagging in the covert as they go. (View No. 6.)

One with bleeding jaws charges directly at us, forcing us in turn to take shelter behind the stoutest trees, and presently my little fellow calls my attention to one standing, crippled, between the feathery leaves of a palm and a diagonally stunted tree. As I prepare to fire, he rises to charge, and I take cover till I estimate his remaining strength, returning to deliver my fire when his fruitless effort is over, the Bushman immediately climbing the tree and throwing his assegai from the branches, while a Makálaka, carrying an empty musket, begs hard for a charge and a bullet, which is refused only because we have none to fit the bore.

Still there are others badly wounded in the brake—invisible, though we can hear them bellowing within ten yards, and extreme caution is necessary in approaching so dangerous a beast. Chapman, as the more experienced hunter, now takes the lead, and I follow closely to support him. Peering closely through the openings of the arching leaves, at length he sees the feet, and firing shot after shot where he thinks the body ought to be, retreats to cover after every discharge. After a

while all is silent, and leaving the animals to die, we secure part of the flesh of our first victim, and hasten to cheer the hearts of our party with tidings of the glorious feast awaiting them.

A second encounter in the more open country, with the herd retreating from the Falls, and reinforced by a much larger body coming down to enjoy the spray-shower, resulted in the death of a fine cow, making a total of six killed during the day, beside the rhinoceros, which can hardly escape the keen-eyed natives, who watch the hovering of the vultures, and seldom think it necessary to trouble us with information of game that dies at a distance from our camp.

A couple of fine men, bearing the large heavy spears used on the river, arrived soon after, having been sent by Mōshotláni, the petty chief of the ferry, to learn the object of our visit. Chapman answered that, knowing the wish of Sekelétu to engage in commerce with white men, he had brought up a few goods for preliminary traffic; but as land-carriage was long and tedious, and the loss of cattle by lung-sickness and tsetse-fly heavy, he wished to hire ten men for such pay as might be agreed upon, to assist us in building a boat, near Sinamánès, to navigate the river down to Tete, whence goods could be brought up at prices more nearly in accordance with their original cost.

The death of the unfortunate missionaries was a delicate subject for persons situated as we were to touch upon; for we cannot exonerate the chief from having hastened their death by harsh treatment and neglect, if not, as native testimony assures us, by actual poison. Certainly he plundered the survivors, and insulted them by disinterring and brutally mutilating the corpses of their dearest relatives.

In answer to an allusion on the subject, we told them it had been reported in Cape Town that Sekelétu had poisoned them, and that the people were grieved and indignant at the cruel deed; but we were private men, and had no authority to speak on so serious a subject, which had better be left to be discussed between the chief and such persons as might be delegated by our own Government.

At night I observed stars which gave the latitude of the Falls as 17° 55' 4" south.

Thursday, July 24th.—Wakened about daybreak by the never varying, unceasing roar of the cataract, we saw the dull, gray spray cloud rising in irregular columns, and spreading its dark form against the eastern sky, differing from smoke only in that it did not rise or fall beyond a certain limit, and did not drift away, but remained overhanging the spot from which it rose, its spreading palm-like top just swayed and altered by the gentle south-east breeze. I watched with interest as the sun rose about 30° on one side of it, but was somewhat disappointed in the effects I had anticipated. No play of brilliant colours took place on its illuminated edge, nor did it show more transparency or light and shade than a diffused cloud of steam under the same circumstances. Its angular height, measured with the sextant, varied from 5° 50' to 7° 48', which, estimating our distance at one mile, gave, with 90 feet for the height of the trees and 350\* for the depth of the fall, nearly 1,200 feet as the actual height to which the spray rises from the bottom of the chasm. This is, of course, only an approximation; and it must be remembered that the height and apparent volume are greatly diminished as the heat of the day comes on, while during the coolness of the early morning we thought it rose higher. In the wet season, when the flood rises six feet or more, it must be truly magnificent; and, in fact, Chapman has since seen it from a hill more than 50 miles distant. (View No. 2.)

Shifting the camp to the ferry landing, about a mile higher up, I returned along the bank of the river, with my young friend Edward Barry, getting peep after peep at the water as from a swiftly-flowing stream it grew into a rapid, rushing with

\* I am told that Sir Richard Glyn, who has since measured it, could not reach the bottom with a line of 400 feet.



accelerated violence as the slope increased; till, at length, we stood over the very edge of the westernmost channel, and, looking down on the broken foaming mass tossing in wild confusion beneath our feet, could see, still further down, the troubled water in the deep chasm making its way toward the east, and as the clouds of misty spray swayed and opened, could catch glimpses of the remoter falls nearly as far as Garden Island. Edward seemed rapt in wonder, and was ready to declare that nothing could be more grand; but when a hundred yards more brought us round the western end of the chasm, and face to face with the white and foaming mass of the Leaping-Water, with its minuter particles glittering like flakes of silver in the morning sun, he could not find words to express his feelings.

We passed the scene of our battle with the buffaloes, where clusters of wild date-palm shot up their slender stems and graceful feathery leaves to a height of thirty or forty feet; while others, shorter in the stem, spread their leafy crowns so as to form a dense and almost impenetrable jungle in the recesses of the swamp.

The forest now terminated abruptly; and, determined to see the end of the Falls this time, we walked on through swampy grass, till we were stopped by a deep fissure—not at the end: for we could still see waterfalls melting into obscure mist more than a quarter of a mile beyond; but, as I suppose, nearly three-fourths from the western end. Impressed with ideas founded on Dr. Livingstone's picture and description, we thought at first that this must be one of the rivers we had seen on Wednesday; but a glance from the precipitous headland at the narrow stream far down in the gorge beneath us showed that it was the outlet of the Zambesi itself, and that the waters of the cataract were flowing *from the east end*, as well as the west, to escape by it. I did not like at the moment to decide that no outlet could exist at the extremity of the fall; but it was evident that, if there were, only a small portion of water could flow through it, and I subsequently found there was none.

The stream was of that sombre green that indicates great depth, the moderate rapid formed in the narrow turn below the entrance rolling in that smooth glassy swell almost destitute of foam, which seems so gentle, and proves so overpowering when one tries to stem it. I could not at that time tell of the impediments that existed further down, but it seemed to me that, if that swell could be surmounted, a stout crew might pull a whale boat right into the chasm, and even skirt the base of the fall for a short distance to east and west, before the rapids and shallows stopped them.

Saturday, 26th.—Chapman and I spent the day in photographing and sketching the chasm from the brink of the rock overhanging the rapid of the Leaping-Water at its western end. The view here was magnificent, though the volumes of spray and mist projected from the foot of the fall, and, rebounding from the opposite cliff, compressed into rolling clouds such as might arise if the broadsides of a fleet were discharged in the same limits, hid from us all but a small portion of the nearest actual fall. Still, in the space kept clear by the interposition of the dark sombre wall of Three Rill Island, we could see far below us the troubled eddying stream, dark green, and of glassy smoothness in the deep pool; or white and foaming as it encountered the numberless rocks and shallows in its way; seeking as it were to escape by the only channel open to it from the rush and turmoil it had passed. At this, which may be called the beginning of the chasm, the rock of Three Rill Island on the north or upper side projects at its base like a huge buttress, and heaps of great fallen masses still further narrow the watercourse; but there is no corresponding indentation in the lower part of the opposite cliff, which, on the contrary, has two or three horizontal ledges, showing that more of the upper than of the lower part must have fallen off; we therefore think that a wedge-shaped mass, widest at the top,

must either have given way in the form of débris at the time of the disruption, or have been then so shaken and fractured as to be washed down gradually afterwards. The west end of the great chasm falls back about fifty yards, and the sloping channel of the Leaping-Water, and the chasm of the Three Rills beyond it, have also contributed their fragments to the heap at the bottom of the cliffs, forming several marked shallows across the lower stream; and from the general appearance we concluded that if the fissure at its western end has ever been any great depth beneath the surface of the lower waters, the broken rocks have so far filled it up that it must now be comparatively shallow.

The slope already mentioned in the Leaping-Water channel, carrying off a deeper stream, causes it gradually to become a foaming angry rapid, till, with the impetus it has acquired, the water, broken and glittering like a shower of living diamonds in the sunlight, leaps clear away from the edge, and shoots diagonally downward in masses which may be likened to the nuclei of comets, leaving long vapoury trains in their rear, while the Three Rills—which, if not contrasted with this mighty fall, would be themselves called cataracts—find their way through rock and forest on the top, and gushing down as perpendicularly as the jutting irregularities allow, fill their hollow with an indefinite grey mist, which nothing but a vertical sun at another period of the year can illuminate. (View No. 4.)

The wind, the waving foliage, the drifting spray, and, above all, the impossibility of catching the details of the rushing water, were sore trials to the photographer, and, to say truth, not much less was the artist made to feel the incompetency of his power to give even a faint idea of the grandeur of the scene before him. Still it seemed not quite impossible till the declining sun caused the rainbow to rise from beneath his feet, and gradually to span the entire picture, drawing its tints, more beautiful than in England's clouded climate one can even dream of, over rock, spray-cloud, waterfall, and forest. Then indeed the combined effect of wild and sombre magnificence in the eternal cliffs, the life-like motion of the leaping or the inert declension of the falling waters, the inimitable softness of the misty cloud veiling the distant precipices, the vivid yet blended tints of the dense forest, and, above all, the surpassing loveliness of the brilliant bow, could not but impress him with a deep sense of the nothingness of human art in the presence of this mighty work of the Creator.

Monday and Tuesday, July 28th and 29th.—I repaired to Buffalo Point, the promontory in the first bend of the outlet, and sketched as carefully as possible the portion of the eastern falls visible through the dark portals. On my left appeared the precipice from the very peak of which Barry and I had first looked down upon the scene, and from which, about two-thirds of its height, a thin wall of black cliff jutted out; still further encroaching on the narrow opening, and on my right, was the eastern headland, crowned with forest trees and date-palms, and broken more than half-way down into rugged slopes, on which rank grass and hardy bushes seemed to struggle for a foothold, while the dark rocks at its base formed a convex line which looked as if it might again be fitted into the opposite hollow; beyond this, a small bay, wooded almost down to the cliffs upon its beach, receded so far that the headland stood out in bold relief, connected, as it seemed, only by a narrow promontory with the eastern shore. Subsequently, I spent another day, making a careful study in oil colours of one of the small cataracts in this scene (which, for the sake of distinction, we called Centre-rock Fall); and though my picture looked poor enough in the actual presence of the Falls, it seemed much more satisfactory when seen at our bivouac, more than a mile away. (View No. 7.)

On one of these occasions, Bill, one of our Damara boys, without any orders from me, had boiled the kettle, cooked me a mess of beans, and, with a bit of heavy cake brought from the camp, set out a nice little picnic tiffin under the shadow of a tree, an agreeable variation in the day's work I had never

thought of before, probably for want of some one careful enough to do it. Poor Bill seems to have more appreciation of beauty than I have observed in any of his country people. As soon as he overcame the nervousness of first looking over the edge, he laughed and clapped his hands with childish glee at the rushing waters; and when I sent him into the mist to see the rainbow, he not only stayed some time, but called Roode Baatjie also to admire it. While I was taking angles, as far as objects could be seen through the spray cloud, I sent them both to try and find a path to the bottom; but they did not succeed. We saw a pair of beautiful birds, in form and size like toucans (probably hornbills), but of a deep blue or purple, with the ends of the quill feathers white, forming, when the wings were spread, a transverse line right across.

The grey ghostly forms of the baboons glided as usual among rocks and forest; but so cautious were they and wary, that, though we should have been glad of one for supper, I could barely obtain a passing glimpse of these grotesque caricatures of the lion.

The 30th and 31st were occupied in sketching the Great Western and Garden Island Falls, stretching in long perspective into the misty distance, and broken by the dividing rock and other prominences. Choosing a point opposite the broad face of Three Rill Cliff, where, of course, no spray arose, I sat, till the east wind drove that of the falls just named upon me, and forced me to retreat; for though an artist may work in wet shirt or shoes, he cannot work with wet paper, and, perhaps, it is as well for his health that it should be so. The wet forest, however, with its vine-tangled and fern-clad trees, afforded numberless scenes well worthy of separate study, and among them I soon selected one suitable for my purpose: a trunk had fallen down, but had been partially supported by others, and before decay had quite destroyed it, some of its younger shoots had struggled up again into the light, and now, increasing into fine young trees, had sent down roots, lacing round the old and rotting trunk, from a height of twelve or fifteen feet, to seek for moisture in the earth. (View No. 5.)

Friday, August 1st.—I climbed a tree near the western side, in hope of obtaining a general view of the Falls; but could not, on account of the dense foliage of others taller and more inaccessible before me. I therefore turned south-east by south, about 500 yards, toward the angle of the lower river; and stationing myself above the deep green tarn formed in its abrupt bend, could see up the stream, on my left, right into the first bend of the outlet, nearly a mile distant, with the "smoke of the Falls" visible beyond the dense line of forest, and about the same distance down it on my right, the course of the two portions being straight and parallel, their most distant points forming, from the spot on which I stood, an angle of only twelve degrees. The water is here, as elsewhere, inaccessible, from the height and steepness of the red and yellowish grey precipices that enclose it. The cliff that divides the two portions of the stream must be nearly a mile in length, more than 300 feet in height, and, as I subsequently ascertained, only 115 yards wide at its base; at its point it seems much narrower, and is probably twice as high as it is wide.

I remained till nearly sunset, and, as in all the views I have taken, found that the magnificence of the principal features so dwarfs everything else, as rocks, trees, &c., which in common subjects would occupy large portions of the picture, that I can hardly bring my pencil to a point fine enough to represent them; still, unless these accessories are minutely and distinctly painted, the vastness of the whole is much invalidated.

I begin to believe that no man but an artist can appreciate these wonderful Falls, and not even he till he strives patiently day by day to study and represent them.

One great hindrance, when removed from the influence of the spray-cloud, is the annoyance caused to the painter by the

incessant persecution of the tsetse. At the moment when one requires the greatest steadiness and delicacy of hand, a dozen of these little pests take advantage of his stillness, and simultaneously plunge their preparatory lancets into the neck, wrists, and tenderest parts of the body, one or more cunning fellows actually selecting the places where the lines of fortune radiate or cross, with a skill in palmistry that would do honour to an experienced gipsy.

August 2nd.—Moliti, one of the old head-men, brought over a basket of milk for me, and I crossed to the eastern side in his canoe. We passed at least three large islands, well wooded, with groves of tall palms towering above the ordinary trees; the glassy surface of the broad river giving back their forms so perfectly, that it was hard to tell where reality ended and reflection began. Moshotlani, the petty chief of the ferry, and Madzekazi, who had known me in Tete, were sitting under the shadow of their principal hut, which in form is cylindrical, like those of the Bechuanas, or not much unlike a rifle-bullet set up on end. Fortunately for me, the chief wished me to cut him a jacket, spreading before me for that purpose a length of four cotton handkerchiefs, the price for which they usually sell a slave to the Mambari; and consenting to do this, I made it the ground of a request that he would give me a canoe to go down to the Falls next day.

Being advised not to tempt the rapids in our present skiff, I landed below the side-creek, and walked the rest of the way. The boatman proved rather an expert cicerone; he brought me first to the rocks over which the eastern rapid flows, before allowing me a perspective view from the end of the chasm. About one-fourth of the whole cataract seemed to be on the east side of the outlet; and the hollow in which the first bend of the lower river runs came round so close to the face of the cliff that it seemed a wonder another outlet had not broken through, a hundred and fifty yards nearer to the eastern end. (View No. 9.)

Here the bed of the river seems to have preserved its original height; and the water, consequently more shallow than on the western side, is broken into numberless rills, forming falls of various magnitude, some on a grand scale, but the majority mere threads compared with the mighty rapid that forms the Leaping-Water at the other extremity.

The view along the face of the Falls was limited only by the body of vapour filling the chasm; and the rocks here, not being drenched with spray, were covered with a drier vegetation, among which the scarlet triple spikes and reddish-green leaves of the aloe, springing from the cliffs, or drooping chandelier-like from the black face of the rock, formed an important and interesting feature. The dark-blue hornbills flew among the trees, while little honey-birds hovered like brilliant gems over the flowers. The natural inference from this marked difference is, that the east wind must prevail during the greater portion of the year, and that these rocks must be permanently to windward of the spray-cloud. Two or three waterbucks were seen as we returned; but it is a mere chance to hit them as they dart through the thick bush.

We reached the village before sundown; and a hut was assigned me with Madzekazi, where, while I cut out a pair of trousers for the chief, half-a-dozen of the Makololo, who had known me in Tete, gladly busied themselves in making a fire and doing other little offices for me.

August 4th.—I halted on the bank of the broad blue upper river, studded with islands to the very edge of the Falls, with the forest-clad cliffs beyond, and the clouds of smoke rising from the (to us invisible) chasm, wanting only a few ships upon the surface, or batteries upon the islands, to make it the very picture of a naval engagement. While admiring the scene I saw the head of a hippopotamus rising suddenly from the depths of a quiet reach. Now, the act of breathing subjects the 'potamus to the chance of a shot about his ears, and so well is he aware of this, that unless he feels perfectly secure, he



merely snorts loudly in the act of rising, ejects the condensed breath, like the blowing of a porpoise, from each nostril, and sinks again to his refuge so quickly that the sharpest eye and steadiest hand may fail to strike him. I hit one behind the ear so effectually, that my guide at once proposed to ask the chief for a canoe to look for the body in the morning. I wanted to go upon the edge of the chasm opposite the Falls, so as to complete my view of the whole front, but he led me by a path past that to the beginning of the long promontory I had sketched the other day as dividing the waters of the Tarn bend. I was now nearly opposite Buffalo point, from which I had previously sketched the Falls through the outlet, and I found the distance from this bend of the river to the next, across that narrow slip of cliff, only 115 yards, though its course in the interval must have been a couple of miles. The next promontory seemed even more narrow at its extremity, and certainly more picturesque than the first—in fact, if one may compare great things with small, the tall thin cliffs, showing their rich red and yellow tints in the declining sunlight looked rather like profile scenes in a gigantic theatre, than real and solid rocks. (View No. 11.)

August 5th.—I again shaped my course for the Falls, determined this time to penetrate the dense forest on the southern cliff, and stand face to face with the eastern portion of the cataract as I had already done with the western. For two or three hundred yards the ground was dry, the prevalent wind driving the spray from it, and the tall, narrow, aloe-like *Moghôtsé* leaf, of which cord is made, reared its thorny points like bayonets, three feet long, set upright in the ground in a most objectionable manner.

The ground sloped suddenly, and my guide quietly but decidedly sat down upon the bank. All I could see below was thick dark foliage and blackened trunks, but I tried it, and finding a practicable descent, called my bushman to follow, and proceeded through the now wet and dripping covert along the neck formed by the thickly wooded hollow I had noticed from Buffalo Point. The ground became lower and narrower as we advanced, the rank grass concealing the treacherous inequalities of the rocks beneath. At length the forest ceased, the grass covered slopes dipped and contracted suddenly, till a narrow wall of black rock, perfect on the side next the Falls, where it still presented a precipice of 300 feet, but broken into rough blocks toward the hollow on the south, formed the sole connecting link between the eastern cliffs and the headland of the outlet. Possibly I might have crossed it, but I was already drenched with spray, and nothing in the way of art could have been gained by pushing still farther into the cloud. My paper was already soaked, and my folio going to pieces, although I held it above my head, face downward, during the few minutes I spent in making a hasty outline, and my bushman had already received permission to retire to a drier part. I made another sketch of a portion of the eastern Falls as I returned, but both are very imperfect, and the pictures made from them are much indebted to memory. (View No. 10.)

The old boatman of the rapids, named Zanjueelah, had quite a collection of hippopotamus and other skulls, and, taking his formidable spear, he led us to the narrow skiff, the only one I believe that goes quite to the Falls. He paddled across, that Chapman might take his gun as well as I, and we glided swiftly down the river, winding as the current swept round the islands, or ran in rapids and races over the rocks. In many places the shallows extended nearly across the channel, and in shooting through some, although we drew only seven or eight inches of water, we grounded repeatedly, and I caught myself involuntarily saying, "Keep her end on to the stream;" but old Zanjueelah knew the importance of this as well as I, and standing in the bows with his pole, while his mate did the same astern, he guided the shallow, narrow craft, actually balancing and preserving her equilibrium by the mere

pressure of his feet as she rushed down each successive rapid. As we passed the end of one island a hippopotamus, or perhaps more than one, disturbed in some peaceful dream, launched down the bank, and plunged into the water just astern. Others appeared in the smooth water on our left where I had fired at them on previous days, but we did not think it advisable to take the old man's attention from the course of his boat with another rapid immediately ahead, and therefore left the sea-cows in peace till our return. (View No. 8.)

The edge of the Fall was now visible, and the sun, beginning to decline, imbued the eastern cloud of spray with the prismatic colours, not in a complete bow, but in a segment so short as to show no visible curve, and so broad as to leave no portion of the cloud untinted by its delicately brilliant hues, which sometimes, when jets of vapour, leaving large intervals between, shoot upwards through the arch, assume the appearance of lambent, flickering fire. About ninety yards from the edge of the cataract our course was suddenly and skilfully changed, and we shot into smooth water on the eastern side of Garden Island, where, sticking the boat ashore without fastening of any kind, we walked over rocks bare up to the high-water line, and through the tangled little forest, to the Doctor's garden. We found that a hippopotamus had recently entered the enclosure, and could not recognize any plants among the rank vegetation which the moisture had caused to spring up.

There was only one good view from the island—that toward the east, but it was magnificent; the central portion of the perpendicular cliff projects so as to form the narrowest portion of the fissure, which is here about 75 yards in breadth, but the eastern side slopes suddenly away, so as to increase the breadth to 130 or 140, and to throw backward those falls that are nearest to the eye, and allow those beyond them to be seen in beautiful perspective to the eastern extremity of the chasm.

The front of the cliff slopes down so as to be somewhat lower, but a mere trifle in comparison with the vast depth still below it; and here one may stand on the very edge, as on a pier of solid masonry, and look not only into the dim intricacies of the mist-hidden distances—spanned over by a rainbow, glorious in its brilliant loveliness, and forming, but for the small segment cut out by the shadow of the rock he stands on, a perfect circle, surrounded by another with reversed colours, fainter and more indefinite as it approaches the thinner spaces in the mist;—but he may peer down into the very abyss beneath him, see his own shadow on the troubled eddying waters four hundred feet below, and speculate, if he so pleases, whether geological ages were required to accumulate the heap of *débris* which has fallen from the receding portion of the cliff; or whether, as we think, the mass crumbled down at once in the convulsion of nature which formed the chasm.

Requesting his friend to measure angles and such like tedious but necessary details, the artist endeavours, however humbly and imperfectly, to reproduce the glorious scene. It is in vain. Hardly has half an outline been completed, when the prudent Charon of the rapids warns him again and again that paddling up the stream is a long work, and that it is not a road for men to travel in the dark. Reluctantly he closes his work, and obeys the summons.

The water is baled from our somewhat leaky little skiff; and now comes the struggle up the rushing waters, in which perhaps a man, who to some extent knows and can appreciate the nature of the various dangers, feels more when reduced to sit as a helpless useless passenger, than one who is totally inexperienced. But he, too, can understand and glory in the skill and courage of the veteran who commands the boat. See him now, standing erect and fearless in the narrow bow, as the water dances round her; observe how firmly, yet with what rapidity, he poles her against the current in the shallows; how quickly he catches up his paddle in deeper water; how carefully he guides her across the smoother parts, his unerring eye watching, before he

enters them, the curls of the various eddies; and with what judgment he shoots, end on, into the exact place where it is just possible for her to ascend the successive rapids, jumping out at the proper moment to force her up the steep incline, and in again as soon as she is in the level waters.

And now, nearly half a mile of distance from the verge has placed us in comparative safety; and the hippopotami are appearing in the still water near the rocks above us. He sheers his boat so as to give us a chance; but the wary animals snort and dive too quickly. He runs her higher up into the shallows, and, landing there—if standing mid-leg deep on a submerged rock may be so called—we wait their reappearance. My bullet strikes the water close by the head of the first, and enters between eye and ear; while Chapman's, just grazing and raising a jet of spray, so close by the next that one would think it impossible to miss, goes ricocheting away over the surface, till it passes the edge of the Falls, and loses itself in the chasm.

The remainder of the passage is long and tedious; but both danger and difficulty diminish as we advance, and before sunset we are at our bivouac, where, promising Zanjueelah an adequate reward, we enter into a conditional arrangement to be taken to-morrow to an island where the hippopotami are likely to come ashore at night.

During our stay here, at every possible opportunity, we had taken measurements and observations for determining the geographical features of the Fall. We commenced by measuring a base-line at the western end of the chasm, and triangulating with sextant and compass as far into the spray-cloud as we could, without losing sight of our landmarks. The rest was measured on independent base-lines, or estimated by firing rifle-bullets, with the sights elevated for the necessary range, or, when that was impracticable, by careful pacing. We had no line long enough for actual sounding; and it was difficult to take angles with great accuracy, for want of sufficiently definite points at top and bottom. But comparing our estimate with the depth obtained by Livingstone, *i. e.* 310 feet, when his line rested on a heap of rocks and did not reach the bottom, we thought 350 feet a tolerable approximation, but that of course will give way to Sir R. Glyn's measured depth of more than 400 feet; its length is from 1,800 to 2,000 yards; its breadth opposite Garden Island, the narrowest part, 70 yards, and in the widest from 100 to 130 yards. The fissure by which the lower river escapes seems nearly three-fourths of the distance from the western end; and the width between the enclosing precipices cannot be more than 80 yards. The river must be much narrower; but in no place is it possible, so far as we know, to descend to the water. About 150 yards to the south of the outlet it turns suddenly to the right, makes a straight course to 500 or 700 yards south-east from the western end of the Falls, then doubles back on itself, so that the two parts of the stream are separated only by the Tarn promontory—a cliff one mile long, more than 300 feet high, and only 115 yards wide at its base; the next turn rounds the thin, wedge-shaped promontory of the Profile cliffs; and turning again to the south-east it receives a small tributary, the Masôé, which, in wet seasons, must form a

beautiful cascade, and continues its course till it is lost to sight among the hills.

The difference in the appearance of the country is most marked and striking. The broad river above the Falls is bordered by palms and luxuriant tropical vegetation; while along the lower river, deep sunk in its narrow chasm, the country is dry and arid, except where fields of maize or millet are cultivated along the tributary streams, or, when in the rainy season, its barrenness is changed to fertility and verdure.

To venture an opinion on the geology of this cleft would be beyond the province of an artist, but the impression on our minds was that nothing but volcanic agency could have produced it. The edges are sharp and well defined; the opposite sides correspond so as to suggest the idea of parts broken from each other, and all the rocks we find upon the surface seem igneous.

During our return journey through Namáqua land, I was much struck with the wild disruption and upheaval of the strata, and I was informed that at the mission-station of Beer-sheba, the cattle graze on a large plain, in an extinct crater. Slight earthquakes also are by no means uncommon, and we experienced several shocks during a few months' residence in Otjimbengue.\*

We were unable to trace the intermediate course of the river, being obliged to rejoin our wagons, and take them from Dáká to Boana, between the Maticiesie and Luisi rivers; whence I started afoot with a troop of Damaras, and hired Makalakas, carrying tools, &c., for the rebuilding of the deficient portions of the boat near the island of Molómo-e-a-tólo (mouth of a koodoo), in the junction of the Luisi River, sixty or seventy miles in a direct line from the Falls, but more than double that by the road we had to travel.

I cleared, and built my house on a small limestone elevation, 200 feet in height, in latitude 18° 4' 56", and naming it Logier Hill, after my much esteemed friend in Cape Town, commenced cutting trees, sawing them into planks, and building midships to the copper bows and sterns. Chapman soon joined me; and after a trip down the river to Sinamáné's to ascertain that there was no insurmountable impediment to navigation, he formed a hunting-camp between my station and the wagons, to supply meat to both. The various inevitable difficulties we combated and overcame as they arose, and had every hope of having our boat ready to descend the river with the coming flood, when the difficulty of procuring food, owing to the migration of the wild animals to the rain pools now filling in the desert, reducing me for ten days to a diet of buffalo hide and water, and the prostration of all the native servants, as well as my fellow-traveller himself, by fever, obliged me to abandon my work and return to him, that we might save the lives of the people by bringing them from the unhealthy swamps of the Zambesi to the purer air of the elevated desert. Our exhausted resources, the death of some of our followers by illness, and the murder of others by a marauding party of Matabili, prevented our renewing the journey; but we believe, nevertheless, that with more adequate supplies it is quite possible to carry out the plan that has now been temporarily frustrated, and only hope that before long we may again be in a condition to attempt it.

\* On the 8th of September, during the late meeting of the British Association in Birmingham, Dr. Kirk, after giving the most gratifying testimony to the truthfulness of my paintings, stated his belief that at one time the country was occupied by a vast lake, and that the present chasm of the Falls and fissure of the lower river had been formed by an earthquake. He considered the cliffs basaltic, and had attempted to descend the chasm where it was somewhat broken at the eastern end; but the skeleton of a rock-frequenting antelope warned him to desist.

He thought the rise during the floods must be nearly 16 feet. The smaller rocks upon the edge must then be entirely submerged, and the depth of water poured over the Falls must then equal that of Niagara; and he concurred in the opinion expressed by many persons who have seen the American cataract, that the Victoria is the grander of the two.

On this point I am inclined to agree with Dr. Kirk; but the decision must be left to future travellers. The African Falls are doubtless more extensive, and more than double the height, besides which the wondrous altitude of the spray-cloud, the brilliancy of the rainbow, and the gorgeous tropical scenery combine all the elements of beauty and magnificence; but if I may judge from a set of stereographs shown me in Capetown, the massive sheet of water pouring unbroken over the cliffs of the Niagara, the possibility of passing between the rock and the liquid screen, or of obtaining a view of the full front of the Fall from the lower river, and, above all, the strange and fantastic forms of the frozen spray, and the immense icicles, like pillars in some vast cathedral, give to the American Falls so utterly different a character that each seems unapproachable in its own peculiar style, and it would be almost invidious to institute a comparison between them.



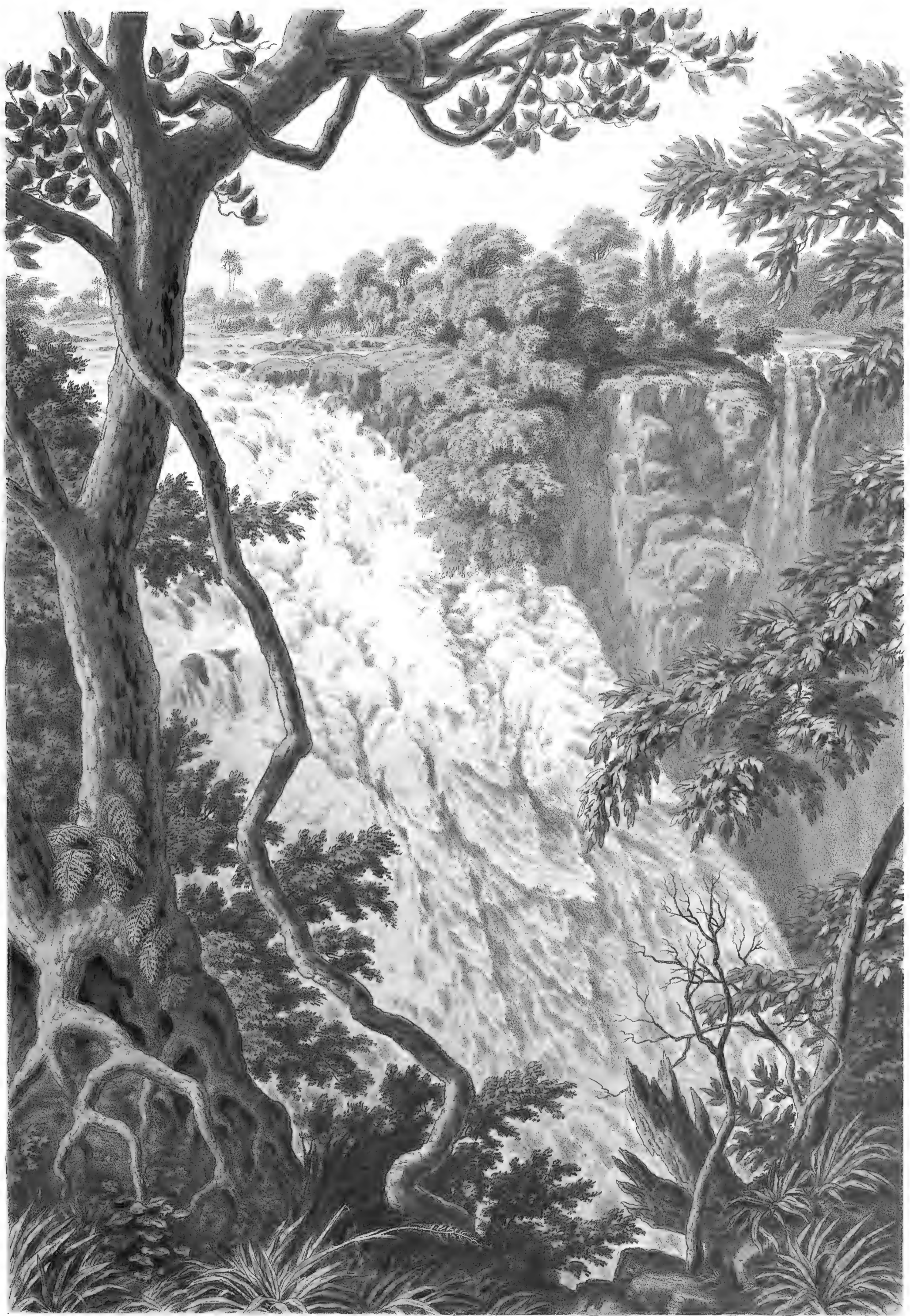


LONDON: PUBLISHED BY CURRIER AND IVEY, 15, NASSAU ST. W. 1857.

24 THE HEAVENS BY STONERFIELD, WITH THE "SPIRIT OF STONERFIELD" REISSUES BY STONERFIELD







Baines del. T. Fisher lith.

THE GREAT CANAL OF THE GREAT BRITAIN AND IRELAND CANAL COMPANY





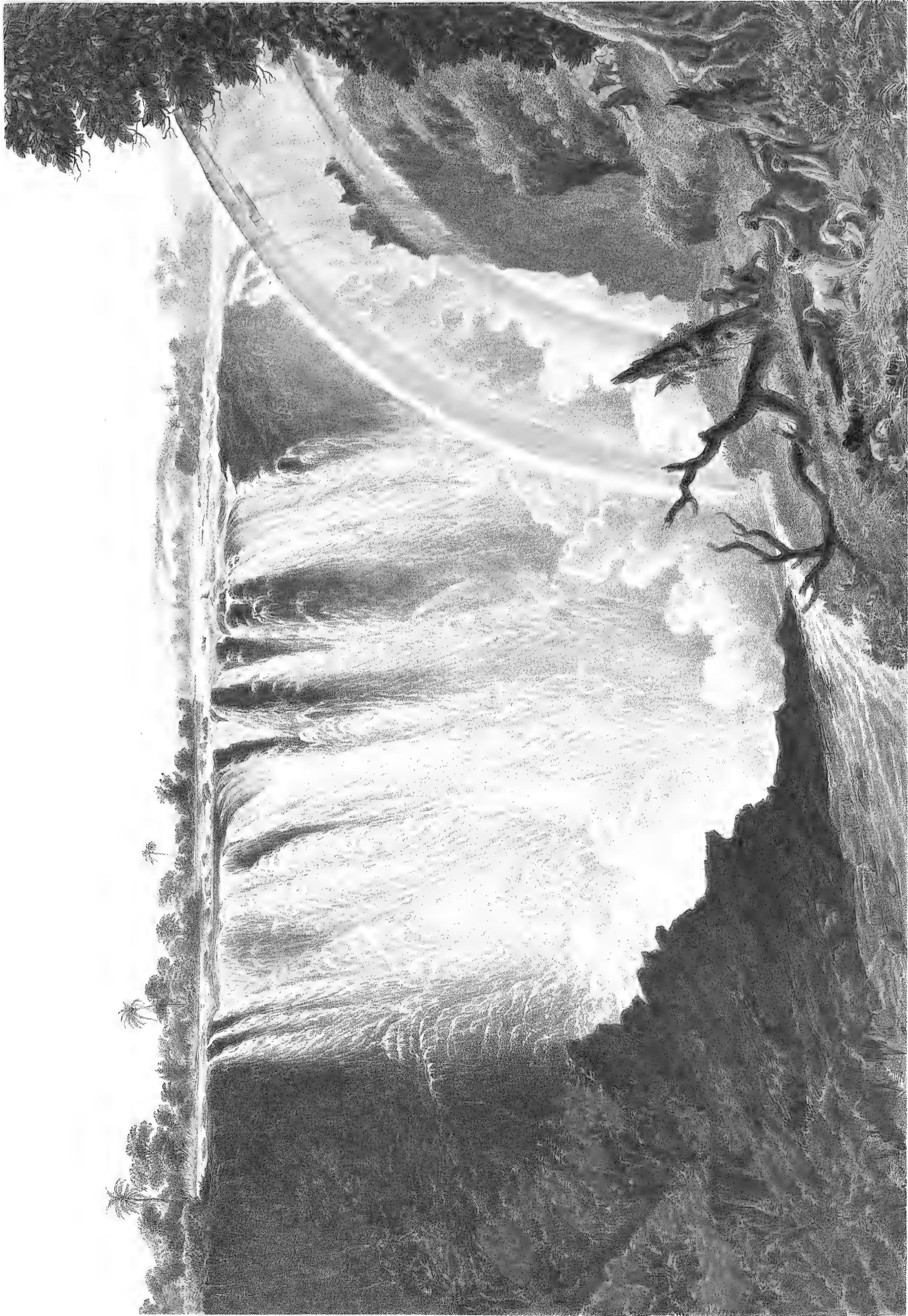


Fig. 1. A view of the interior of the island of Oahu, showing the mountains and the bay of Honolulu.

THE ENGRAVER'S NAME IS AT THE BOTTOM OF THE PAGE.







T. Beines del. — F. M. Bryson. lith.

London: Published by J. and W. Hatch, 48, Strand, near the Theatre; and by J. and W. Hatch, 10, Pall Mall.

THE MOUNTAINS OF WESTERN GREENLAND

(from three miles off to Greenland Is.)

Days of the month.





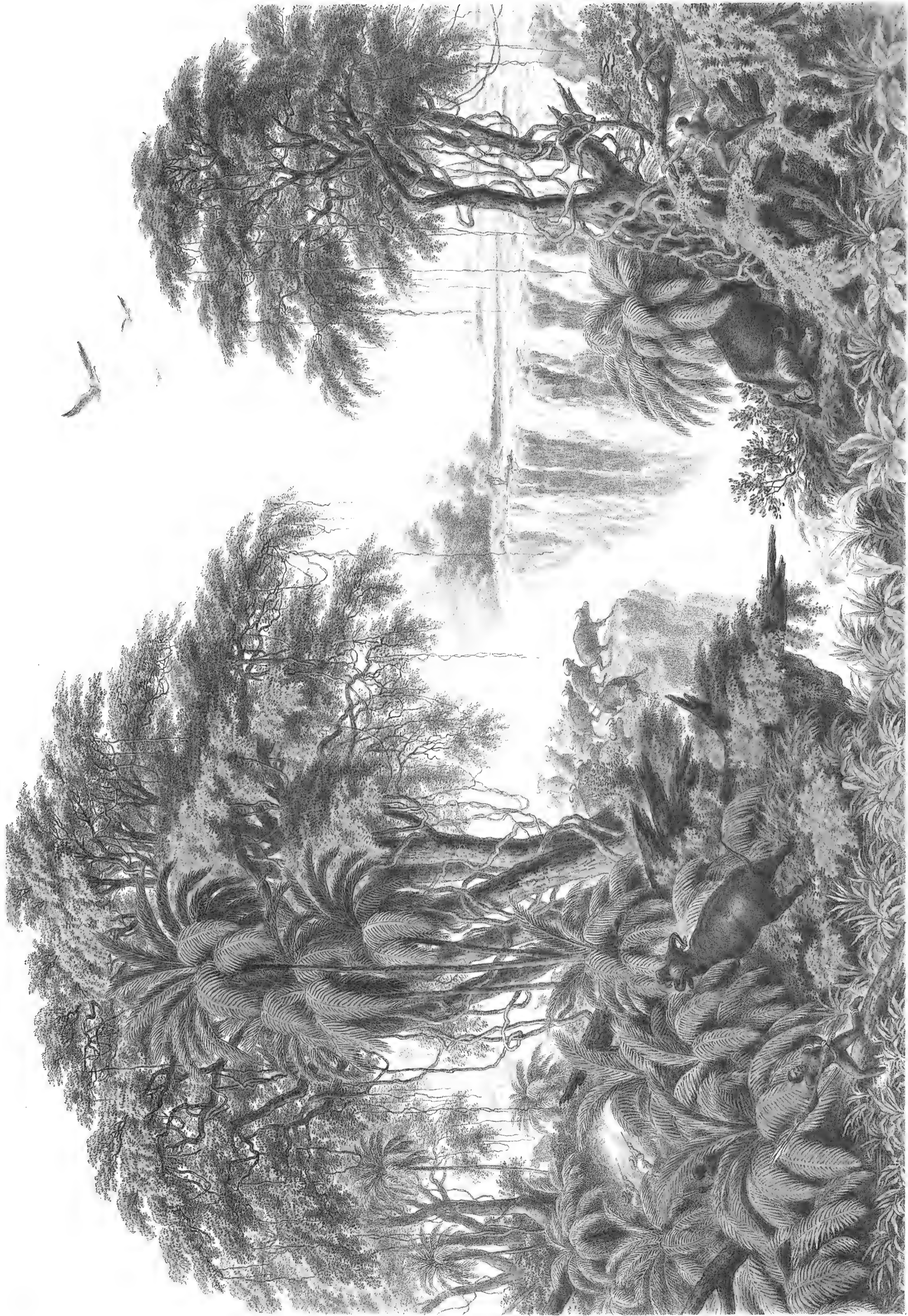


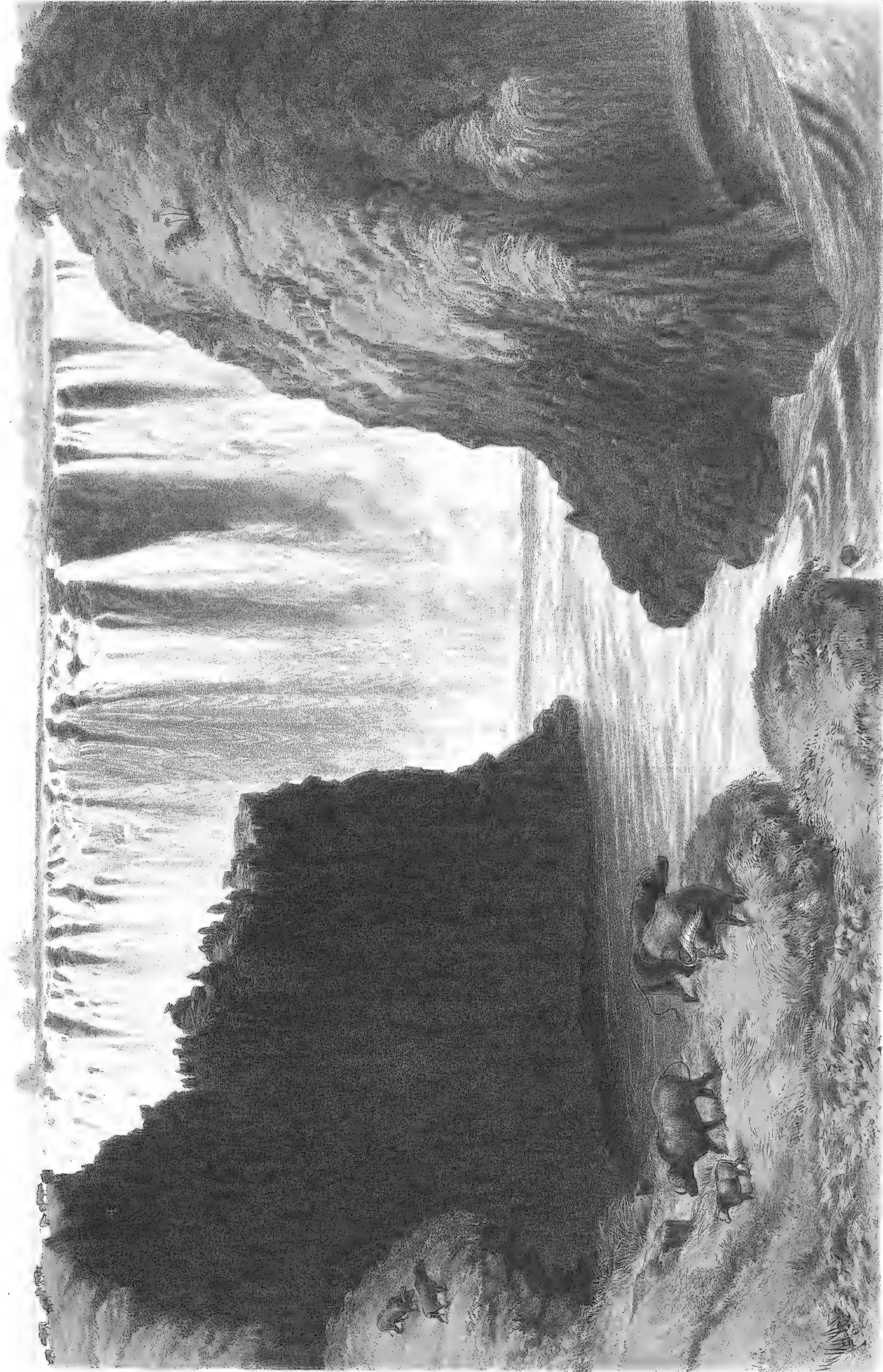
Illustration of a tropical jungle scene.

Illustration of a tropical jungle scene.

Illustration of a tropical jungle scene.







T. Baines del. F. Jones sculp.

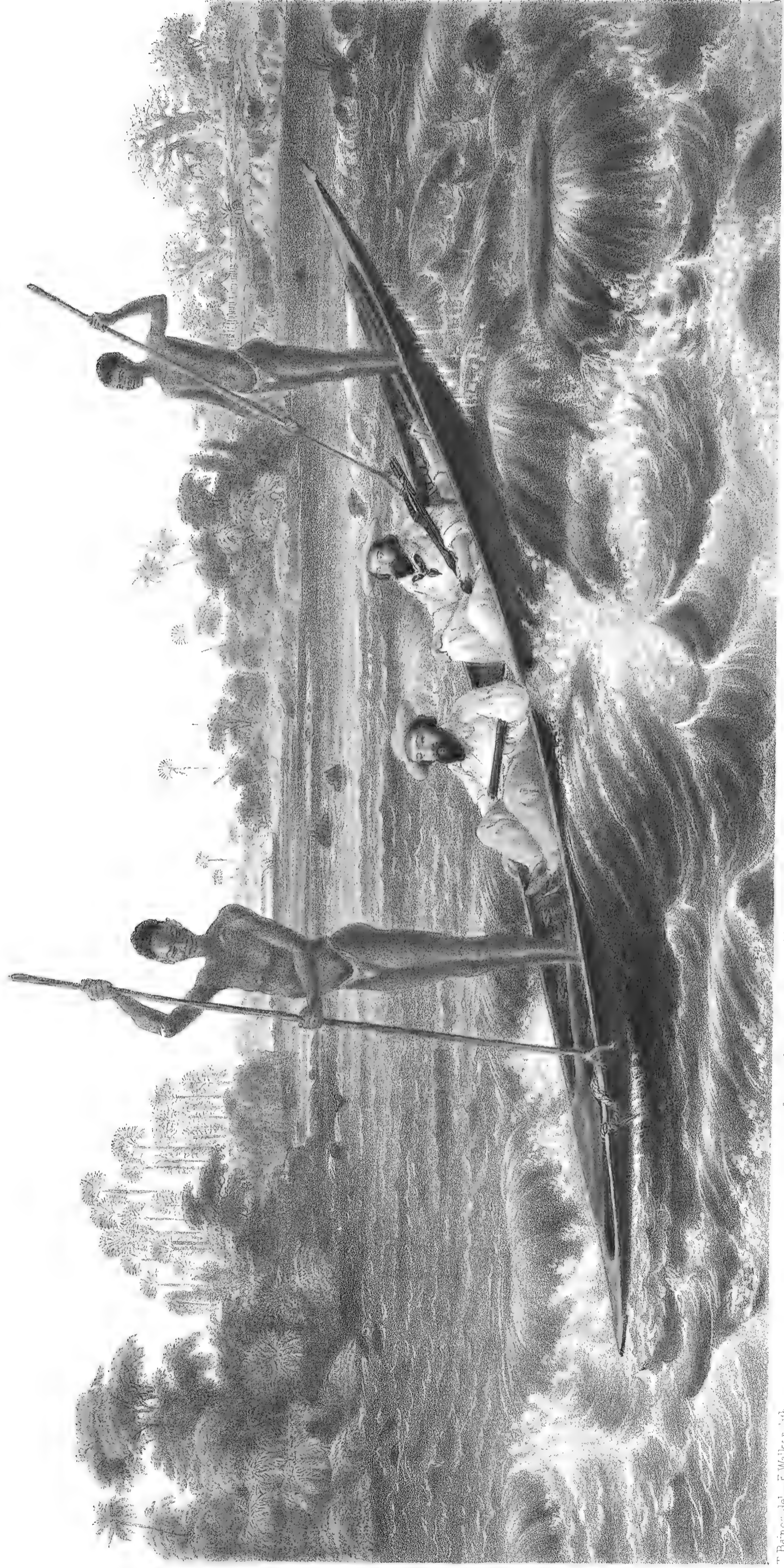
London: Published October 4th 1843 by Day & Son, 25, Abchurch Lane. No. 149.

7 - CENTRE ROCK FALLS, AND THE EASTERN CASCADES.

(Seen through the valley of the river.)







F. Walker del.

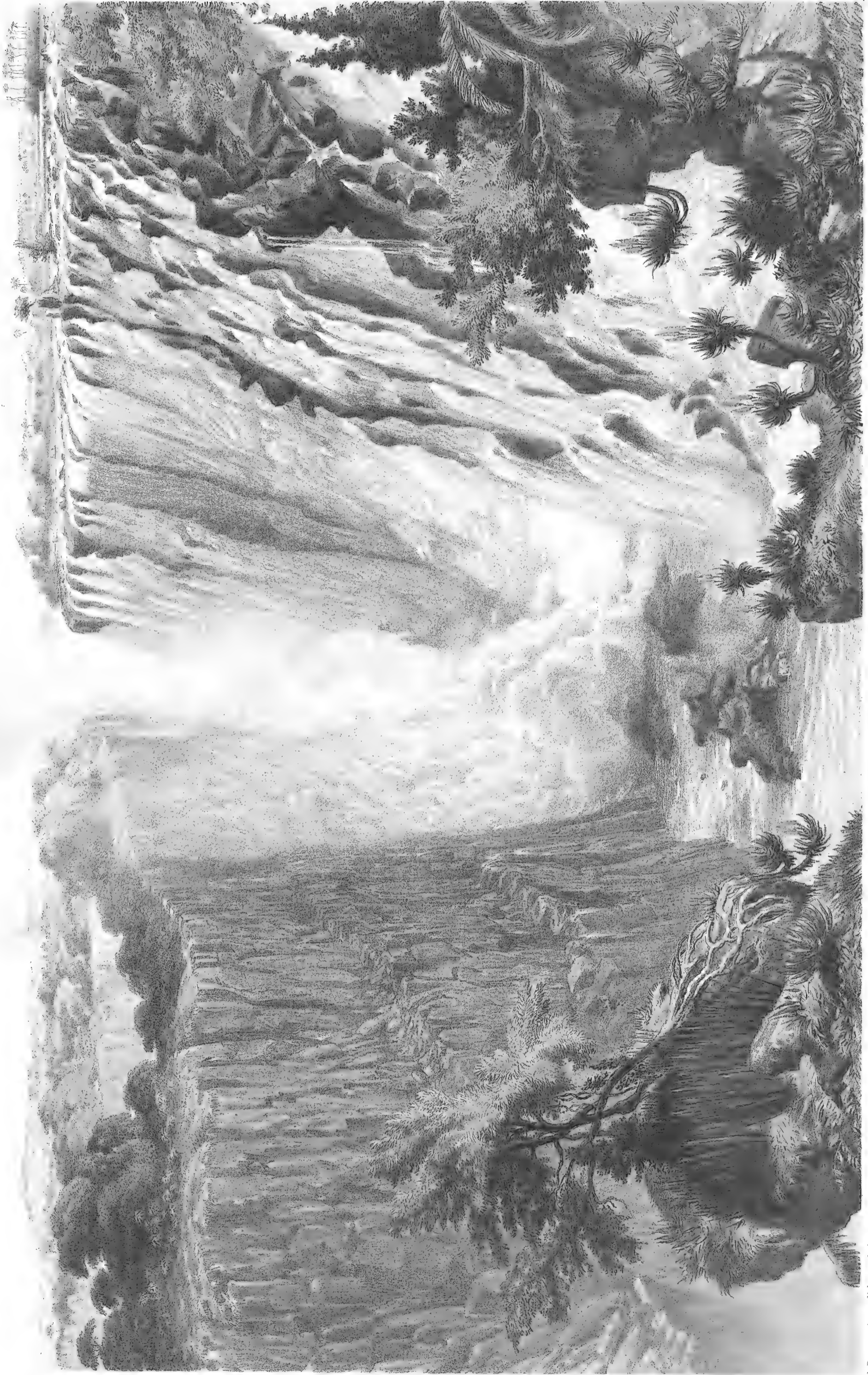
Engraved and published by Fry & Son (Limited), London, and by Messrs. Colver, in France.

Day's Journey.

THE JOURNAL OF THE EXPEDITION TO THE MOUNTAINS OF THE MOON, IN THE YEAR 1850.







L. Jones del. - F. Jones lith.

London, Published from the Library of the Trustees of the British Museum, by D. Colclough, Librarian, at No. 7, Strand, W.C.

De Witt, Linnæus, L.

9 - THE FALLS FROM THE EAST END OF THE GREAT TO GREAT ISLAND





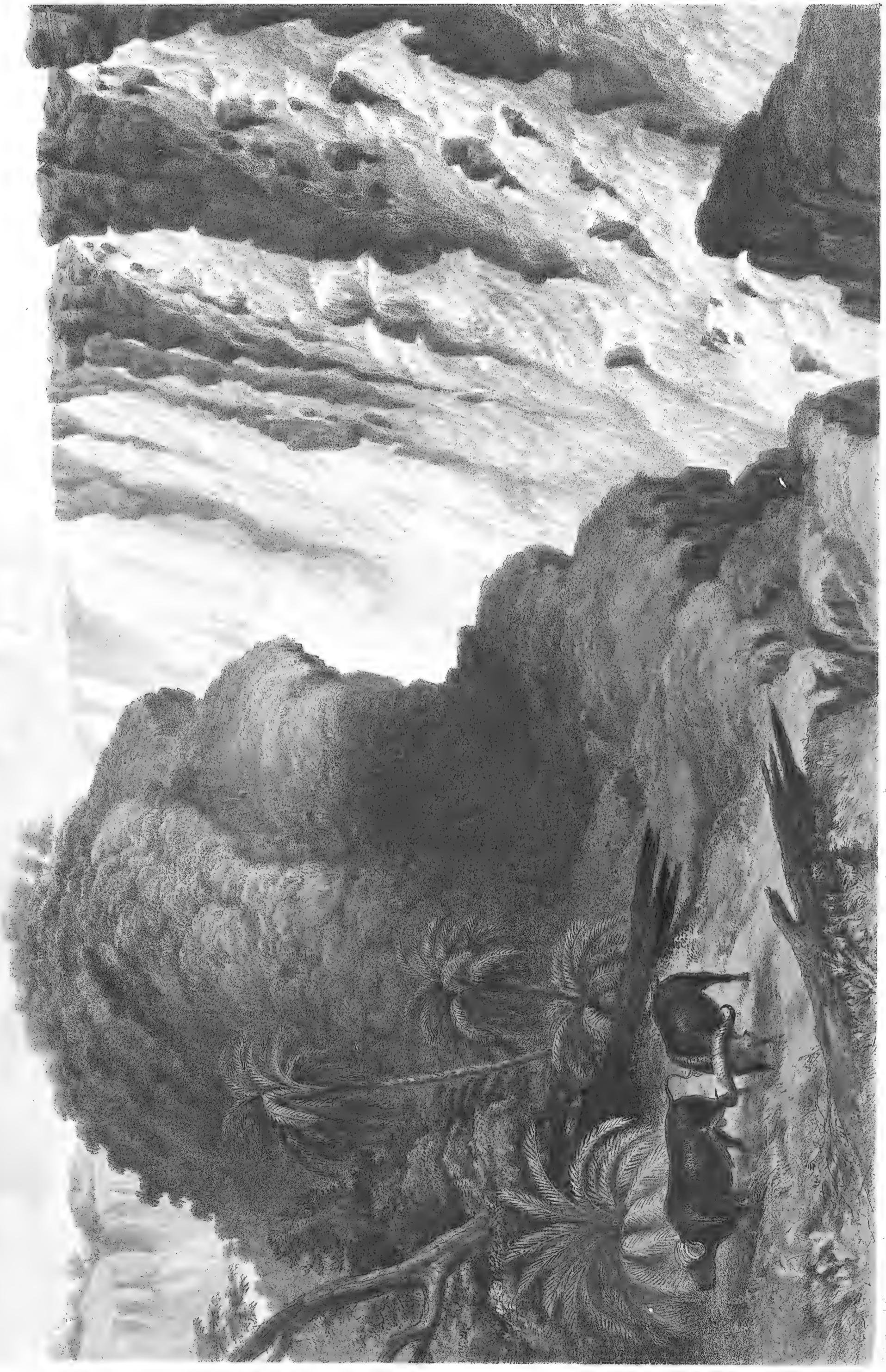
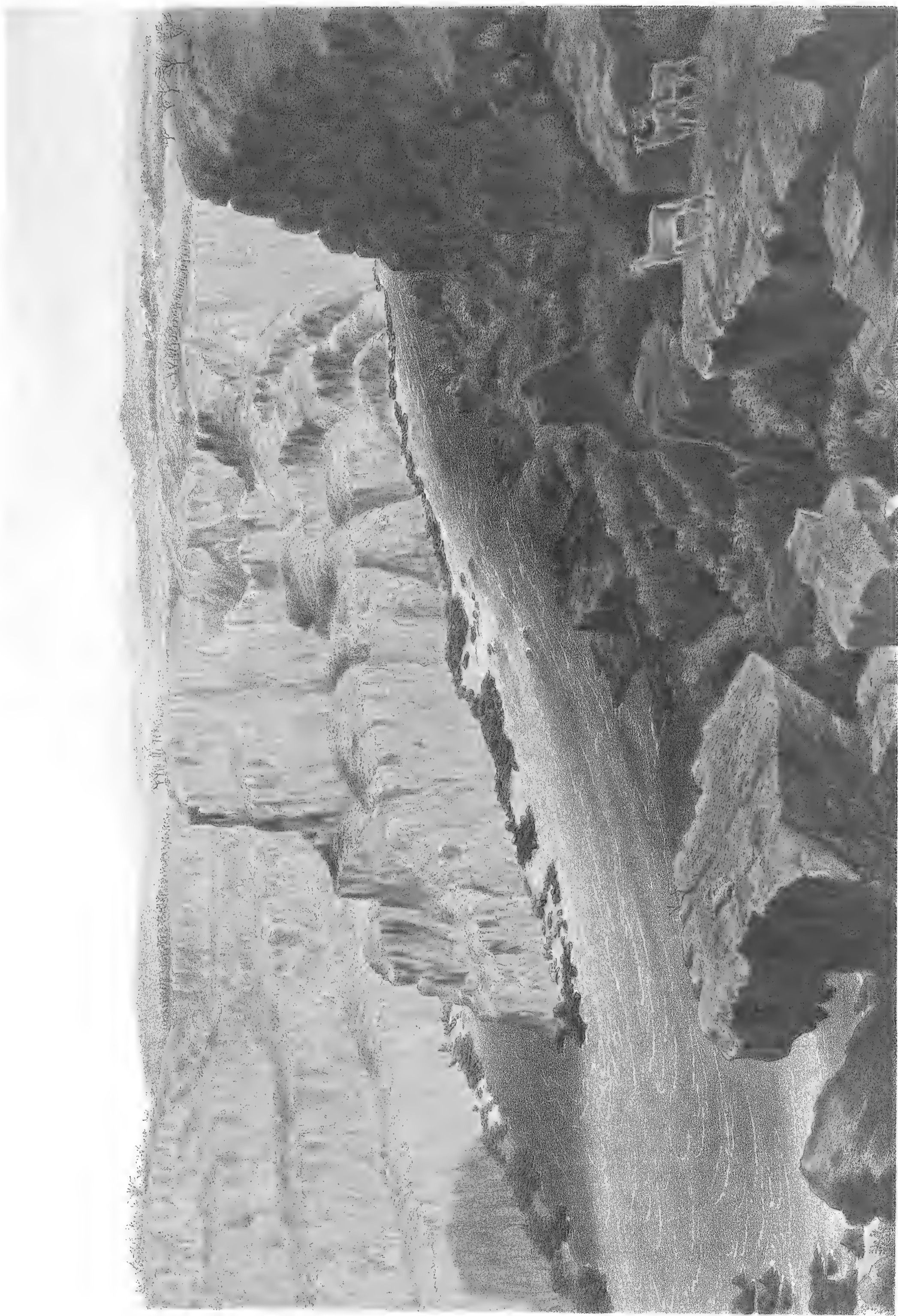


Fig. 1. THE GREAT WALL OF CHINA. (See page 100.)

1854







London, published by Day & Son, 15, Abchurch Lane, London, E.C. 4, England. Price 1/6. The engraving is by J. E. Walker, Esq.

THE GREAT BRITAIN AND IRELAND PATENT OFFICE, 25, ABCHURCH LANE, LONDON, E.C. 4.





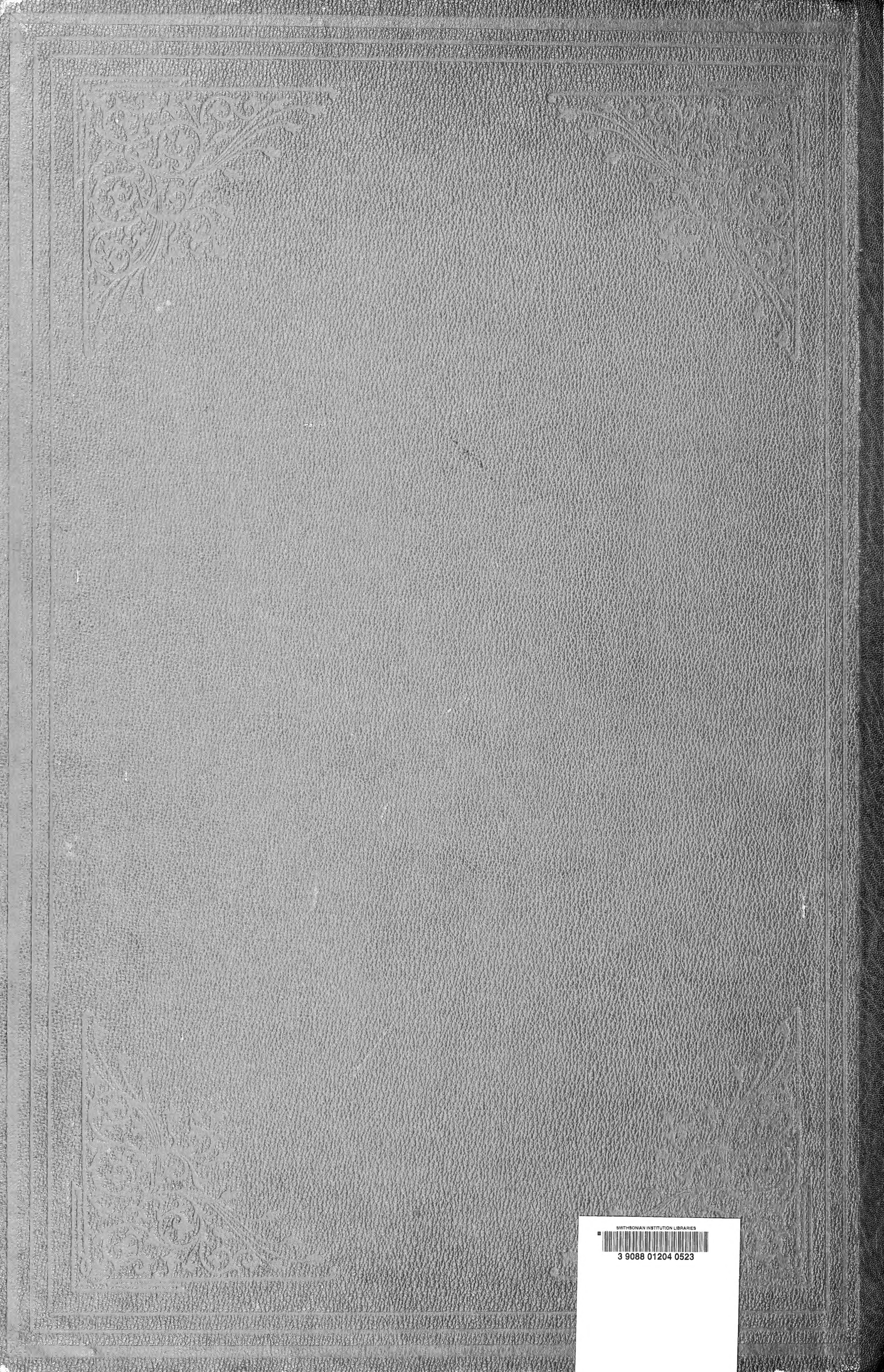












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