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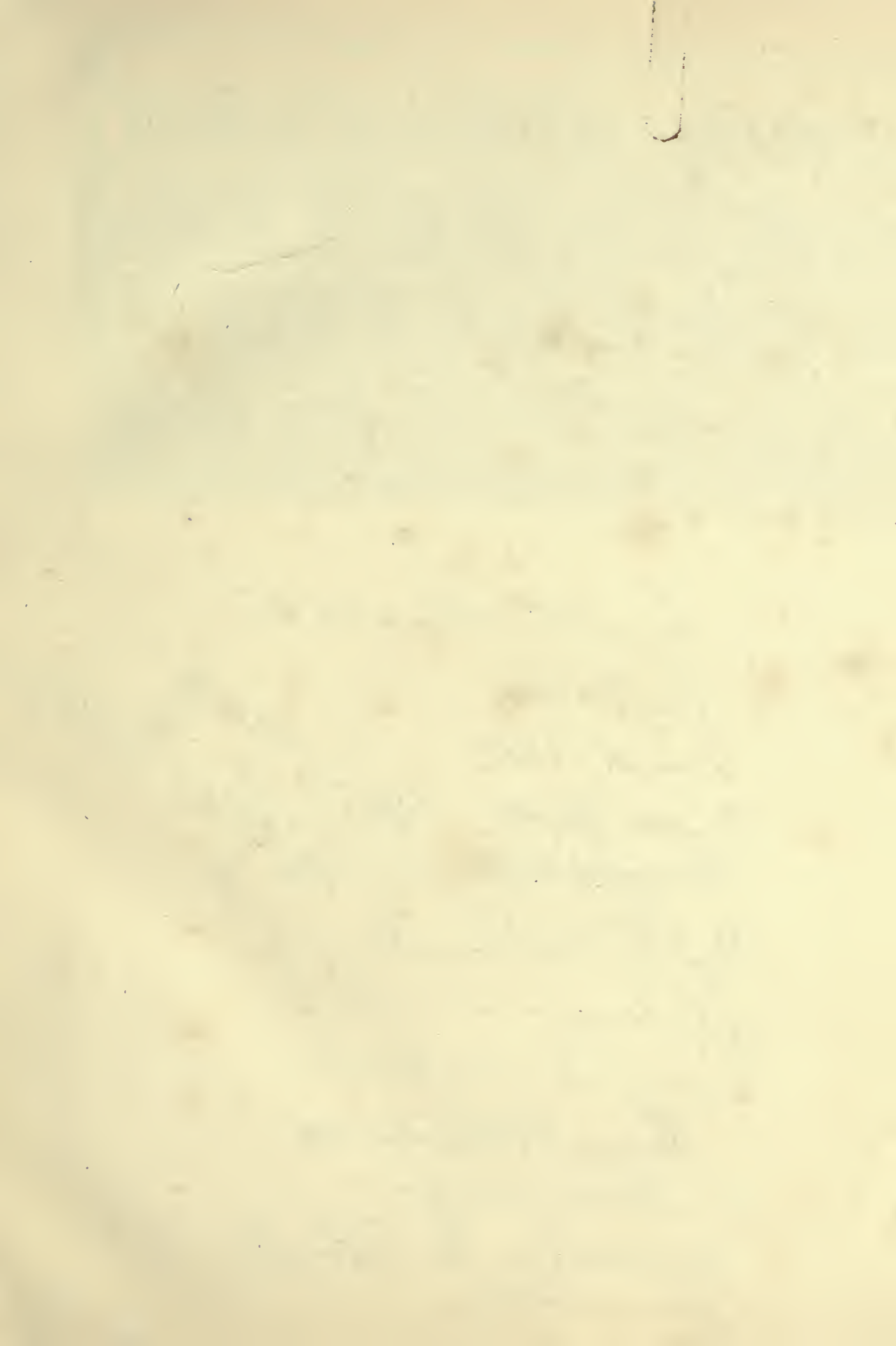
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THE BRITISH
ANTARCTIC
EXPEDITION
1907-1909

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Eric Marshall

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B. Armytage

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THE BRITISH
ANTARCTIC
EXPEDITION
1907-1909

J. W. Edgeworth David
Douglas Mawson



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THE ANTARCTIC BOOK

WINTER QUARTERS

1907-1909

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THE ANTARCTIC BOOK

WINTER QUARTERS

1907-1909



LONDON
WILLIAM HEINEMANN
MCMIX

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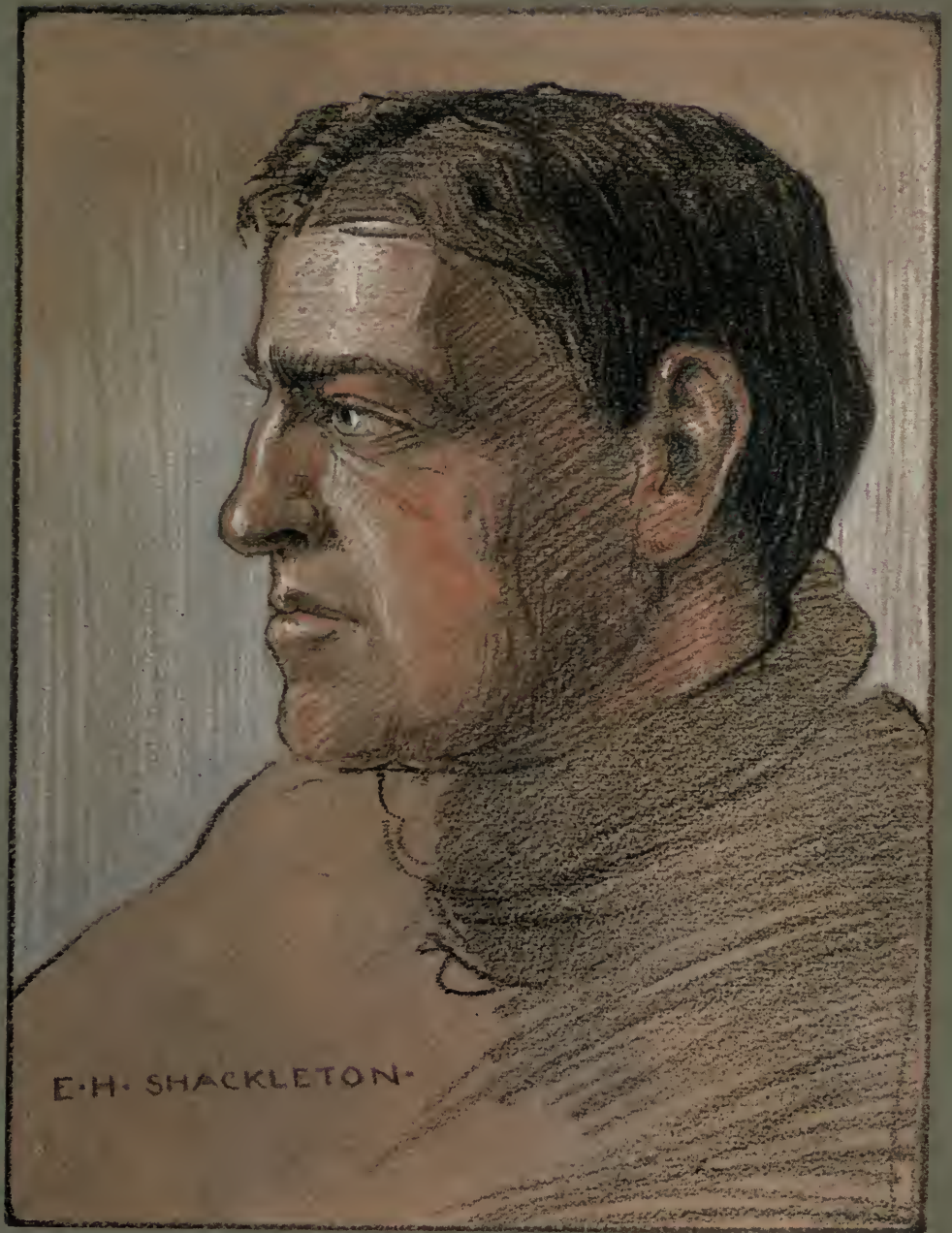
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THE SOUTHERN PARTY

I

E. H. SHACKLETON



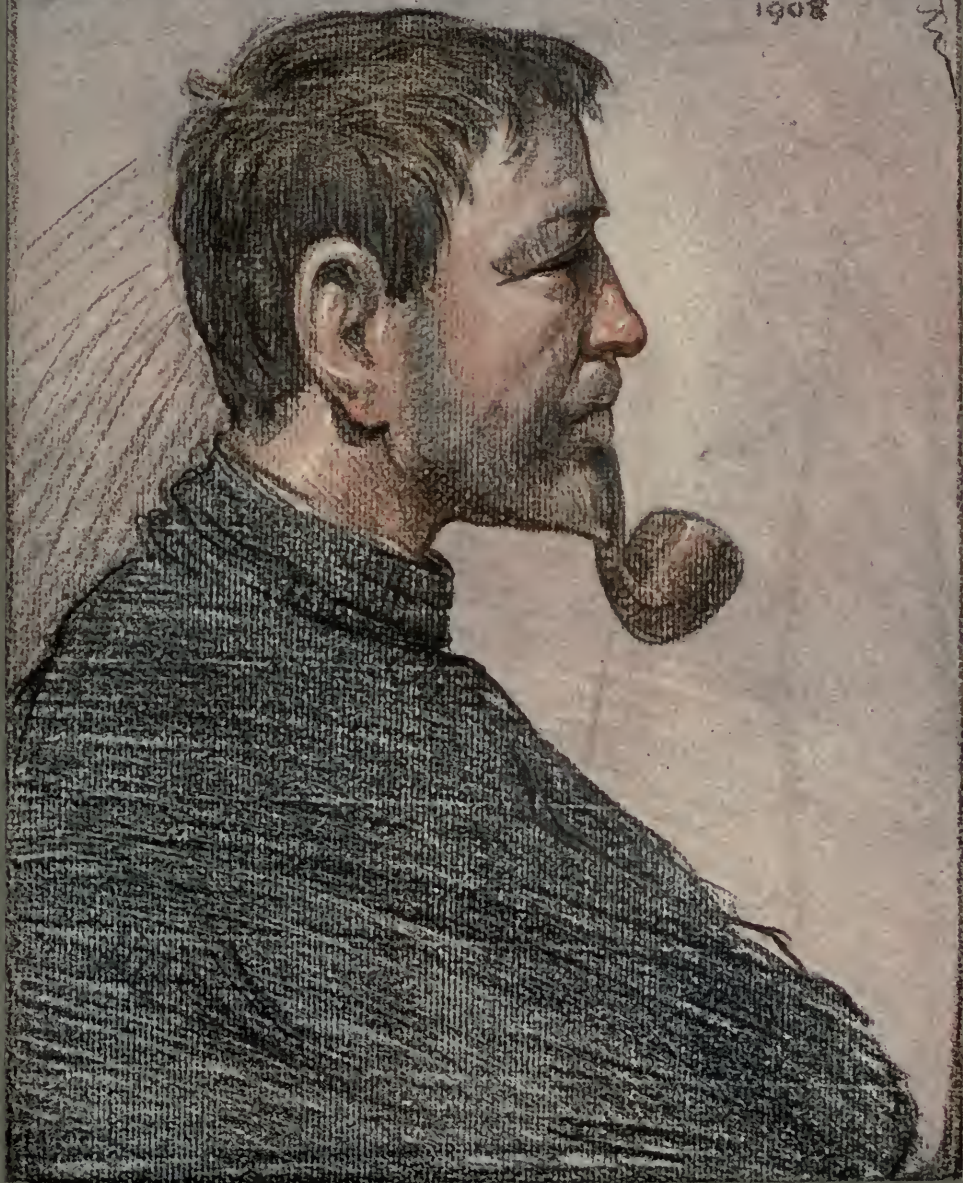
E. H. SHACKLETON

II

JAMESON BOYD ADAMS

JAMESON BOYD ADAMS

1908



III

DR. ERIC MARSHALL



IV

FRANK WILD

c

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EREBUS

BY E. H. SHACKLETON

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George Motz



EREBUS



KEEPER of the Southern Gateway,
grim, rugged, gloomy and grand;
Warden of these wastes uncharted,
as the years sweep on, you stand.
At your head the swinging smoke-cloud; at
your feet the grinding floes;
Racked and seared by the inner fires, gripped
close by the outer snows.
Proud, unconquered and unyielding, whilst the
untold æons passed,
Inviolate through the ages, your ramparts
spurning the blast,
Till men impelled by a strong desire, broke
through your icy bars;
Fierce was the fight to gain that height where
your stern peak dares the stars.

You called your vassals to aid you, and the
leaping blizzard rose,
Driving in furious eddies, blinding, stifling,
cruel snows.

The grasp of the numbing frost clutched hard
at their hands and faces,
And the weird gloom made darker still dim-
seen perilous places.



AURORA AUSTRALIS

BY E. H. SHACKLETON

AURORA AUSTRALIS



THEY, weary, wayworn, and sleep-
less, through the long withering
night,
Grimly clung to your iron sides
till with laggard Dawn came the
light :
Both heart and brain upheld them, till the
long-drawn strain was o'er,
Victors then on your crown they stood and
gazed at the Western Shore ;
The distant glory of that land in broad splen-
dour lay unrolled,
With icefield, cape, and mountain height, flame
rose in a sea of gold.
Oh ! Herald of returning Suns to the waiting
lands below ;
Beacon to their home-seeking feet, far across
the Southern snow ;
In the Northland, in the years to be, pale
Winter's first white sign
Will turn again their thoughts to thee, and the
glamour that is thine.

BATHYBIA
BY D. MAWSON

BATHYBIA



FAINT stirring seemed to be going on about, which gradually made itself felt on my yet somnolent senses. Rising-time was evidently drawing nigh. The uncertainty shortly came to an end when, in harsh tones, the familiar call sounded: "Lash up and stow, lash up and stow; 8.30, and time all hands were up." This announcement, coming as it did from a pair of lungs boasting of an early training in St. Paul's Cathedral, and matured in the Navy, was calculated to wake effectually the profoundest slumberer, but did not prevent me turning over for a final doze. ¶ It hardly seemed any time, however, before we were exerting our best efforts dragging the sledges onwards towards the Southern goal. The drudgery of the journey over the great "sastrugi" ruffled plateau of Victoria Land had now become felt by all. Everlastingly our eyes wandered over the horizon in search of new objects, but as yet nothing greeted our gaze more than had been the bane of our march these last two hundred and fifty miles, since leaving Mount Lister behind. ¶ Why we had ever come to choose our present route to the South—

S.S.W. over the Victoria Land Plateau—seemed impossible of explanation. It was generally believed, however, that the strength of the meteorological element had prevailed in this decision, as it was decidedly a chance to get abundance of high-level data. Some of the more outspoken, irritated by the monotony of the journey, now expressed themselves in no measured terms regarding the alteration of the original plans. More especially had discontent arisen because of the fact that this had entailed the substitution of man-power to the extent of the combined strength of the expedition in place of the ponies. ¶ To-day the march proved more interesting, as scarcely had we got properly under way before the Commander drew our attention to a peculiar appearance in the sky, somewhat to the west of our course. It was like nothing he had had experience of in this latitude during his previous exploration with Captain Scott along the Great Ice Barrier. Resembling open water, it suggested possibilities we had never till now entertained. As the day wore on, the more real did this phenomenon appear, so that every one was fired with a new enthusiasm. The new sledges no longer seemed to offer any resistance, so that we pressed onwards at a brisk pace for two days.





The S.W. middle current wind, so prevalent to the north, had now cut out, and the warmer south-seeking anti-trade came down to the plateau level, helping us onward. Some miles ahead a fog-bank hanging low upon the land obscured the horizon. ¶ On the morning of the third day we felt a crisis was close at hand, as the sky in front contrasted strongly with the uniform ice-blink we were now leaving behind. The temperatures perceptibly rose as we came up to the fog-bank. The tiny particles of ice floating in the air and producing the fog were now so much more abundant that it was impossible for us to see more than about a hundred yards ahead. The increased temperature was due, evidently, to liberation of latent heat set free by separation of the fog particles. ¶ Camp had been pitched and the "hoosh" served, when the hungry Scotchman was interrupted in his occupation of devouring any remaining tit-bits by a shout from without. Inquiring heads appeared from the tents, and amongst the turmoil that ensued could be heard cries of "The Bottomless Pit!" "Gehenna!" A moment later our astonished gaze was greedily devouring the situation. The mist had temporarily rolled back, revealing a steep slope commencing shortly in front of us.

The gradient increased rapidly until lost to sight in the mist, a couple of thousand feet below. We appeared to be standing on the ruin of a huge volcano of unprecedented proportions. The wall on which we stood extended far to the north and south. Even as we watched the cloud-bank rolled yet further back, and a more extended view unfolded to our rapt gaze. The steep gradient, already noted, ended below in a yet steeper slope, almost wall-like, whilst dimly, in the depths below, snowless undulating plains were visible. What a mighty wall guarded the secrets of the abyss! What grandeur beyond anything to be expected! Our very souls were elevated and burned with a desire to penetrate the depths before us: yet how impossible this seemed! How could mortal man scale such a wall as barred our progress? ¶ Whilst our thoughts ran thus, a better view being obtained to the south, we descried a steeply dipping slope leading from the plateau down to the depths below. This was developed in the form of a semi-cone against the face of the wall, and appeared to be of volcanic origin. This volcanic slope was certainly quite scaleable, and we unanimously decided to attempt a descent by it. Many hours afterwards camp was pitched on the

plateau hard by the cone, and all were oblivious of the sounds of revelry occasioned by the snorers. ¶ The following day the fog again enveloped the landscape, and the time was spent making the necessary preparations for the continuance of our journey with packs in place of sledges. The depth of the abyss before us was very great, but difficult at the time for us to judge. Afterwards it proved to be about 30,000 feet, or some 22,000 below sea-level. When at last the mist rose and we were able to proceed, advance proved rapid for the first 12,000 feet, as we could glissade for long stretches at a time; at this level, the temperature having steadily risen during the descent, the ice-cap began to dwindle and a lobed front was met extending amongst great accumulations of morainic material stacked in the form of terraces along the mountain-side. Thaw-water, developed in pools investing the erratic boulders distributed over the ice, trickled away to unite and form crystal-clear streams, soon lost in crevasses, whither they plunged to swell the muddy waters of sub-glacial channels. Camp was pitched at this stage, and we indulged in the usual "hoosh." The air felt quite warm and moist, so much so that instead of immediately after crawling into our sleeping-

bags, some time was spent in surveying the new scene before us. At intervals spouting streams leapt from the glacier faces, and, ploughing deep furrows in the morainic terraces at our feet, continued their downward courses as mountain torrents, till, almost lost in the distance below, they appeared as silver streaks threading their way by winding courses across the undulating plains of Bathybia, as we had unanimously designated this region. Loud booming sounds proceeded upwards periodically from the depths below, occasioned by the precipitation of small avalanches breaking away from the ice-cap above. Our biologist was busy examining lichens which coloured the boulders bright hues. There was abundant evidence of low forms of plant and animal life, though curiously restricted in range. ¶ Affairs had assumed such an interesting pitch that we lost no time in getting under way the following day. Novelties appeared on every hand, until we were in a condition to accept unmoved any new discoveries, however radical. When at last the steep slopes had been negotiated and the undulating plains reached, a much fuller insight into the conditions prevailing in Bathybia had been gleaned. The summer temperature averaged about 70° F., and was evenly toned

by abundance of water vapour and carbon dioxide in the atmosphere. The air was distinctly oppressive on account of its density and moisture, but even this passed unheeded in the general excitement. The plant life had rapidly increased in abundance as lower altitudes were reached. These were chiefly algæ and fungi, though representatives of the mosses, liverworts, and ferns were not wanting. On the plains a dominant red colour pervaded the vegetation, owing to prolific growth of red algæ. The existence of red-coloured plants was of course to be expected, existing as they did in sunlight from which a large proportion of the blue end of the spectrum had been eliminated, in its passage through so great a thickness of atmosphere. Finally the vegetation had already become very rank, and the odours distinctive of some species were not at all pleasant. ¶ However much the plant life interested us, it did not claim our attention so much as less pretentious examples of the animal kingdom. Small crawling, spider-like beasts had been noted close below the glacier zone; since then larger forms had made their appearance, some of which looked distinctly formidable. The biologist had an encounter with one of these large-bodied, short-legged animals, and was

generally regarded as lucky in securing the specimen without harm to himself. It measured a foot in length, and was armed with vicious-looking mandibles. Though not identical with anything we had ever seen before, it much resembled a magnificent tick, and was pronounced as belonging to the mite family. The existence of these great ticks constituted a distinct element of danger, and precautions were taken to guard against possible injury from that quarter. With this object in view we were careful always in future to keep our ice-axes within reach. ¶ Our first camp on the plains was never to be forgotten. Most of the time intended for sleep was spent in ridding ourselves of an almost microscopic species of mite, which infested our camping-ground and invaded our persons. We learnt that a camp in comfort could be expected here only after taking the precaution previously to burn off the vegetation from the site. In this way obnoxious creatures were removed. Already our progress was much impeded by the luxuriance of the vegetation, and as this state of affairs did not show signs of improving, we decided to attempt navigation on a river which lay about three leagues to the north, and appeared to be the main drainage line of this portion of

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Bathybia. ¶ Some time elapsed before this new method of procedure could be put to the test. Raft-building was not without its troubles, as we were unacquainted with the materials available, and consequently their floating qualities had to be determined. At length a structure was completed which rode lightly on the water, and was regarded by the seafarers amongst us as distinctly promising. In its construction we employed the dead trunks of huge fungi of a variety capable of resisting waterlog. Large sheets of fungus several inches in thickness, found growing over the ground in moist localities, furnished an excellent decking; whilst a spyrogyra-like alga was found to answer splendidly as a cord for binding the structure. ¶ Whilst these preparations were in progress several incidents of special interest occurred. One of these came near proving fatal to one who had gained much in favour by rendering signal service as a mountaineer during our descent. Provisions had become alarmingly scarce, and a section of the company decided that members of the scientific staff were much more likely to excel as connoisseurs in the matter of food-stuffs than prove experts in shipbuilding. As the labour of examining the natural products at hand did

not present an arduous aspect, the scientist above referred to came manfully forward and offered his services in this domain. Instructions were issued to the effect that explorations should not be conducted far from camp, and the route proposed to be taken should be clearly defined before setting out. The investigator had been absent on his quest for over two hours, and the commander, becoming anxious, set out in search of the wanderer. The search party had gone hardly a couple of hundred yards into the jungle when they stumbled upon the prone body of the missing man. A giant tick was investigating the carcass, and apparently just about to commence operations on its prize. The obnoxious creature was forthwith despatched, and the body of the martyr reverently taken back to camp. He still breathed heavily, but no wounds could be found on the body. A dread feeling seized us, for, though living things had no terror for us, yet the intangible found us weak. For long the doctor diligently attended, in the uncertainty of the stroke, administering small doses of alcohol from our limited medical store. At last, after twelve hours, success crowned his efforts and the patient regained consciousness. Even now his senses seemed to have lapsed,





and in his delirious ramblings, amongst inarticulate expressions, could be heard, "Yon's the recht stuff, mon, aye it is!". Later on he seemed to come to himself again, as he weakly asked for tea. Indeed so frequent became his cravings for this beverage that one of us was told off specially to keep up the supply. It was not till the evening of the second day that the matter was cleared up. All but the night-watch had retired, when the supposed invalid suddenly stepped briskly from his bed, and made towards the food-bags with a determination boding ill for our now inconsiderable stores. On this occasion the night-watchman proved the value of the institution by quickly alarming the sleepers and averting what might have proved a serious catastrophe. Explanations ensued, and we discovered that the miraculously-healed patient had merely had the good fortune, as he described it, to discover a succulent alga giving abundance of intoxicating fluid. No further explanation was required, as his subsequent behaviour was obvious to every one. ¶ Whilst this drama was being enacted more valuable discoveries were made by others. The senior geologist, in company with a body-guard, had studiously applied his tasting faculties over a wide range of vegetable products,

narrowly averting serious consequences. As a result of his investigations, three varieties were finally selected as good for human sustenance. One of these was a mushroom-type of fungus, the others sweet-tasting algæ. Some of the algæ contained abundance of oil and made perfect kindling. With this material spluttering torches could be made on a moment's notice. We now had abundance of carbohydrate food, but did not feel disposed to try the culinary qualities of the monster ticks.

¶ That day an unusual disturbance took place in the atmospheric conditions, so that, instead of the general calmness which usually existed in this region, we experienced a succession of cold blasts descending the valley walls. This change reminded us again of the conditions under which we existed here in Bathybia: a land where the sun shone red in the morning, pink at noon, and red in the evening. Our eyes accommodated themselves surprisingly rapidly to these new circumstances; possibly owing to previous exercise in the dull pink illumination of modern drawing-rooms. In the jungle the light was exceedingly dim and our exploits had to be conducted with great caution. Although, since the recent discoveries, the food-supply presented no immediate

difficulties, we were loth to remain a winter in these regions, for, though in summer the conditions were bearable, there was no guarantee of their remaining so during the long night of the winter months. As soon, therefore, as the raft was completed, we launched out on our down-stream voyage, intending to make the most of our time collecting facts concerning this wonderful land. Oars of a kind had been fashioned, but were mostly serviceable in poling the craft off weed-banks, the current being quite sufficient to take us along at about two miles per hour. ¶ Many were the suggestions offered for cooking our new food, but finally the amateurs gave over in favour of the chef, who had the power of making tasteless dishes appetising by attaching names. The concoctions usually served up in Bathybia were purées, which, being translated, simply meant fresh-gathered this or that, immersed in pure river-water, and brought to a temperature of 212° F. for an hour or more. ¶ Naturally more attention was now bestowed upon the denizens of the river, and indeed their abundance and variety surprised us. Minute organisms belonging to the Rotifers and Tardigrada abounded, whilst larger species occasionally came into view. We spent many an hour

peering into the waters in search of new finds, and were abundantly rewarded by queer sights. For several days our progress continued thus without serious event. The jungle, however, became alarmingly denser, so that it was now almost arched overhead and presented a gloomy outlook. Unaccountable noises and glimpses of strange forms came to us through the weak light, but unfortunately nearer acquaintance had so far been avoided. Matters did not improve, so that we were soon hastening along beneath a complete covering of dense matted vegetation so effective in blotting out the daylight that, but for the fact that here was the home of phosphorescent fungi, we should have been in utter darkness. This greenish-white luminescent forest seemed weird in the extreme after the red light to which we had been so much accustomed. ¶ Presently our meditations were disturbed by a volley of strong expletives of a nautical character coming from the starboard bow. We were just in time to rescue our comrade from the clutch of a dangerous-looking spider-like monster, several feet in length, that had attempted to board us. Invasions of these monster water-bears, as well as unavoidable affrays with giant species of rotifers, were all too common

during this extraordinary voyage. However, in accordance with the adage which states that necessity is the mother of invention, we soon discovered that these beasts without exception retreated in the face of fire, to which they were entirely unaccustomed. A supply of torches was kept in readiness as weapons in the event of need. By the aid of these, also, a better knowledge of the conditions around us was obtained. The river was now to all intents and purposes a subterranean stream cutting through the accumulated remains of dead sunlight-seeking plants, which still lived only far above, within range of the daylight, at the upper surface of this dense mass of dead and living vegetation. This lower zone through which we now passed was not altogether composed of dead material, but supported abundance of saprophytic types, chiefly fungi and bacteria. No human being could exist long under these trying conditions, so that it was with joy that, after two days, streaks of daylight began to penetrate the tangled mass above. In a comparatively short time clear sky stood above us, and the walls of rank vegetation on either bank slowly dwindled as we proceeded. With the return of daylight our spirits rose. During the same day we witnessed a fight

between a water-bear and a rotifer, both of giant size. Each of these was several feet in length and must have been immensely powerful. The water-bear seized on the rotifer from behind, and had commenced sucking the life-fluid of his victim, when, with surprising alacrity, the captive swung round his free end and seized his adversary in a bunch of tentacles. A furious combat ensued, in which the water-bear, though much mauled, proved victor. We judged, from the action of the rotifer, that something of the nature of an anæsthetic had been injected by his enemy. Definite proof of this was shortly forthcoming in an unexpected manner. One of us, who had been in the habit of daily treating himself to a wash, whether he required it or not, when we floated out into daylight again, hastened to make up for lost time, whilst dangling his legs over the stern and, at the same time, conducting an animated conversation on the relative merits of deer-stalking in the Highlands and in more populous centres. Somebody had just made an unusually fitting sally when, above the ripple of applause, there sounded a wild yell followed by an apprehensive exclamation, "He's got my other toe!" Quick was the word and sharp was the action that followed, else we

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would never have saved the bather from the malicious grasp of a giant water-bear. The beast had already punctured the toe referred to, but was driven off before serious damage was done. It had had time, however, to inject an anæsthetic, as our comrade passed into a comatose state after about one minute, and did not revive for over half an hour. ¶ So accustomed had we now become to our new surroundings that we passed a few days not unpleasantly, drifting down the stream. The vegetation, though luxuriant of its kind, grew much less dense, and we came at length to more or less open country. There plant life was represented by mushroom-like fungi arranged in clumps over the plain. Our artist was in specially good spirits, and, on our mooring alongside the bank, took the opportunity to scramble on to the top of a clump of giant toadstools hard by, intending to size up the sketching possibilities of the neighbourhood. A sharp report shortly afterwards attracted our attention in time to see him executing evolutions in mid-air about fifteen feet above the summit of the toadstools and some thirty feet from the ground. It happened that this particular toadstool was matured and required to burst it only the slight irritation supplied by our comrade in mounting.

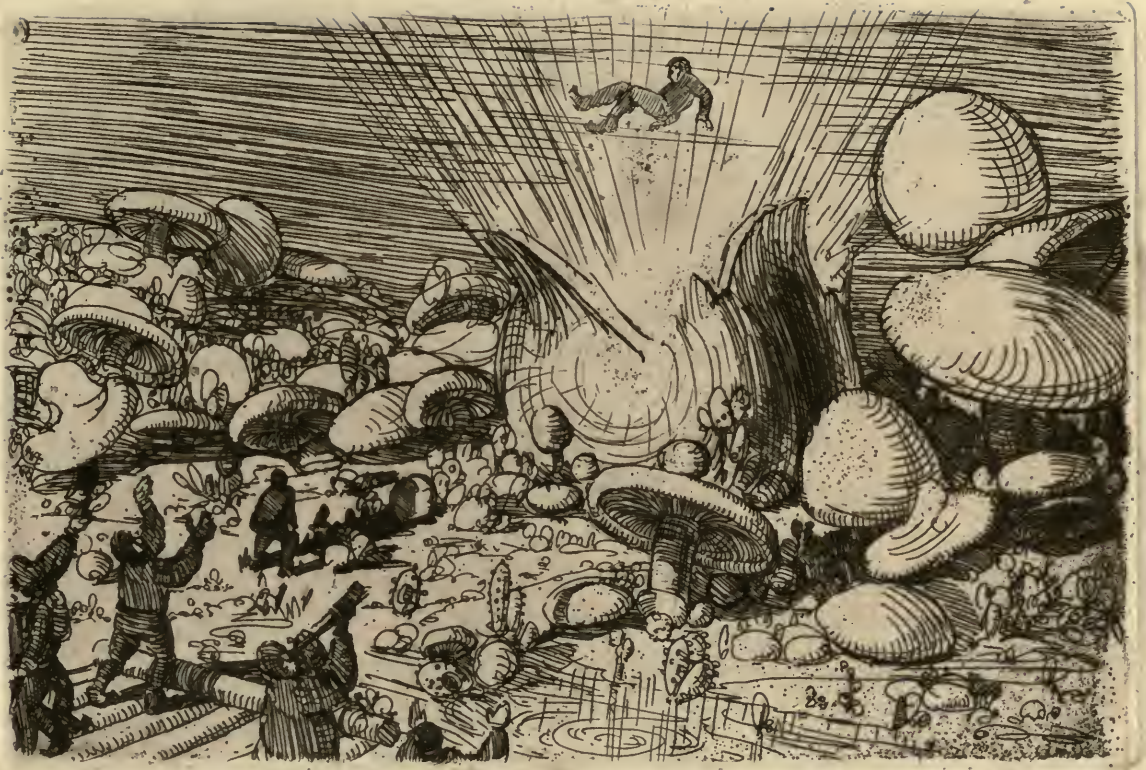
Fortunately the bed was soft to fall back upon, else a serious accident must have resulted. Our ingenious engineer was much struck with this demonstration, and conducted a series of experiments among members of the genus fungi represented in the neighbourhood. As a result he brought to camp some time afterwards a huge flat specimen which, he averred, would make a fine mattress. In kindness of heart the specimen was given to his companion of the afternoon's adventure. Judging by the remarks made by the recipient during his sleep, he must have passed an unusually pleasant night. Indeed the mattress appeared to be still exerting a magic influence close on to the breakfast hour, when several attempts failed to rouse the slumberer. Then up came the ingenious engineer, who, with a prick of an ice-axe in the proper place, fired the mattress, and shot its burden from the depths of sleep into broad daylight via the tent roof. ¶ From this point on the river water became increasingly more brackish, so that we were much exercised in our minds regarding the future source of our water-supply. After traversing several shallow lakes, the matter became critical, and we decided to moor up to the bank. The neighbouring country was almost desert compared with the jungle left

behind. The saline soil supported only stunted vegetation, except for occasional clumps of mushroom-like fungi standing on local elevations of the ground. We were some distance from camp, making a reconnaissance, when a heavy rain-storm commenced. Perfect shelter was obtained beneath the umbrella of the fungi. As time went on, however, and the downpour did not abate, we grew anxious for the safety of our commissariat. Shortly afterwards we might have been seen marching back to camp each sheltered under one of these novel umbrellas. The adjacent country already showed signs of flooding. It was therefore deemed best to pack our gear and remove it to one of the elevations. The waters continued to rise even after the rain ceased, so that our position was again threatened. We were now thoroughly alarmed, and hastily transferred all our possessions to a flotilla of queer crafts, consisting of fifteen large mushroom-shaped fungi set in the floating position, and lashed together with Alpine rope. Hardly had these preparations been completed than the lapping waters swept us off in the strong current. We were eventually carried into a great salt lake. ¶ As the only fresh water available for drinking purposes consisted of that which chanced to have been caught in the bilges

of our crafts, great relief was felt when a steady wind set in, driving us gently before it. Two days later we were fortunate enough to reach the further shore, and, entering the débouchure of a large stream, succeeded in travelling some distance up it with a still favourable wind. Finally, on account of the opposing current, we had to abandon the water and march on land.

¶ One morning, just as most of us were rising, a scampering noise was heard without, accompanied by encouraging shouts of "Hi yah! hi yah! Stick it, boy!" Presently one of our equestrians, who had risen early to take his accustomed morning walk, came riding up, mounted on a new species of a monstrous mite. He pulled rein with a "How's this for a specimen, Mr. Biologist!" "Go to ——!" was the answer, which meant that the scientist was not having any. This portion of our journey proved very wearying, as our daily marches were extended as long as possible. The direction in which we had been travelling, being across the main topographic features of Bathybia, was calculated to yield a maximum of information in a minimum of time. Time, however, was now becoming a serious matter, though new information never failed. Since leaving the great salt basin of the central regions

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our track had consistently risen. The total amount of this elevation now amounted to close on 6000 feet. The jungle was fast becoming too dense to penetrate. Therefore, as a final coup before retracing our steps, we decided to ascend a high volcanic cone lying close by our course. From its summit, some 17,000 feet above, much information might be gained. A summer snow-cap descended for about 4000 feet, whilst a perpetual wreath of smoke curled towards the sky from the summit. It was noon three days later that we made our camp just below the snow-line. The afternoon was spent by most of us in a visit to the summit. Hydrocarbons were escaping from fissures in the ground near the summit, whilst continuous flames played about the crater where the greater heat kept the escaping gases ignited. The rocks were very basic and heavy. Metallic iron occurred in many of the outcrops, and copper fibres were observed in not a few. However interesting these observations were, they did not prevent us drinking in the distant panorama. Far behind were the great salt sea and saline borderlands. Ahead was a sea of jungle spread over gradually rising plains. Beyond, where frigid altitudes were reached, a great snowy plateau carried the picture beyond the

horizon. The whole party was overcome with the immense, wild grandeur of the scene, and when it was time for return we retraced our steps down the snowy slopes in silence. From this reverie we were suddenly awakened by a shout from the foremost, who had come upon the body of a huge animal, about four feet in length, partly buried in the ice. The biologist examined the beast, and reported it to have affinities between the water-bears and the mites, but distinct from anything so far noted in Bathybia. We got to work with our ice-axes and soon had him out. The body being more or less cylindrical, we found no trouble rolling our prize to the camp near by. In the first instance our intention for so doing was merely to astonish our comrades. However, the biologist, seeing the specimen still intact, asked that it might be spared till further investigated. It was the peculiarity of our biologist to save his specimens for examination during the early morning hours. ¶ After supper, it being the eve of our return journey, a general discussion regarding the natural history and physical data so far experienced in Bathybia was instituted. Summarising the various points brought forward as bearing on a scientific elucidation of the

phenomena, the following are worthy of note. Bathybia was a great depression some hundreds of miles across, bounded on the east by a great fault face, but with more gently rising boundaries in other directions. In fact it might be likened to a portion, for example, of the basis of the Pacific Ocean from which the water had been removed. It seemed to us almost certain that the earth's folding and faulting, giving place to this configuration, must have taken place at a period corresponding to a maximum phase of a great ice age, when the Antarctic regions supported an ice-cap of stupendous thickness. The ice must then have played the rôle of rock when the great earth movement referred to occurred. At a later date, as the ice age passed away, ablation, removing the ice strata, exposed the deep basin of Bathybia. The lower portions of this basin, situated below so great a thickness of atmosphere, was blanketed from the great cold of the upper regions. To this end, also, the humidity and increased abundance of carbon dioxide in the atmosphere aided. Although in succeeding times the highlands above were deeply buried under snowfields, this deep plateau-locked basin could keep its floor for the most part unencumbered with water. The atmospheric circulation,

being distinct from that of the outer earth, presented special features. What was most to be remarked with respect to the atmosphere was that it contained a minimum of dust particles; so that, though the air was saturated with moisture, condensation seldom took place, except along the borderlands, where fogs were very prevalent. The great rain-storm, producing the flood we had experienced, was probably due to an unusual disturbance of an anti-cyclonic nature, whereby dust-laden air of the anti-trade belt above had descended, causing sudden condensation. The waters, continually draining into a central basin and there evaporating, led to the production of a residual salt sea. ¶ A knowledge of the strata underlying the basin would have been of the greatest value, but of course exposures were not available. However, a great accumulation of coal-producing matter was presented in the jungle zone. Extinct volcanic activity had been noted along the fault scarp, and specially interesting was the active volcano on which we now stood. The great basicity of the lava, and the fact that it contained metallic elements, and probably also exhalation of hydrocarbons, showed it to be typical of the deeper earth crust. The abun-

dance of plant and animal life, and especially the curious restrictions governing their range, seemed, at first acquaintance, inexplicable. The biologist now drew attention to the fact that all the species represented were but curiously developed forms of types already known to the scientific world. They had suffered but little variation, though many had increased enormously in size. Furthermore, it was known that such species could at one stage or another in their life-history be transferred for great distances by wind agency. Also many, even in adult state, after remaining frozen for long periods, maintained the power of reanimation when thawed out. ¶ In the light of this information, it seemed most reasonable to suppose that the invasion of plant and animal life had come from warmer climes through the agency of the anti-trade winds. ¶ It was just about 2 a.m., when a select few were in the act of brewing their tenth cup of tea since supper, that a movement in one of the sleeping-bags attracted attention. An arm and then a head appeared, followed quickly by the rest of the body. Silently the figure slipped on his boots, and a moment later passed out of the tent with the intention of inspecting his specimen. ¶ Almost immediately a wild commotion rent

the air, and as we burst from the tent a terrifying spectacle met our gaze. The beast we had left frozen a few hours ago had thawed out and come to life, as is the wont of the water-bears when subjected once again to congenial conditions. In this case, however, the term of hibernation had been extended to centuries, so that no doubt in the interval this savage species had become practically extinct. Our comrade was frantically struggling with his specimen, and into the mêlée we threw ourselves. The din grew louder, and slowly but surely out of the confusion rose a voice, which smote clearer upon me: "Rise and shine, you sleepers—8.45, and time for table-down!" ¶ There in the passage was the horrid figure of the night-watchman replacing our washing-up bowl, which had just served him as a breakfast-gong. As I sleepily drew on my clothes, regretful at sacrificing Bathybia for Cape Royds, I meditated how much can happen in Dreamland during a short quarter-hour.

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