

# North American BioFortean Review

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*Science may set limits to knowledge, but should  
not set limits to imagination.*

—Bertrand Russell

## BioFortean Notes: Zoological Fakes

*Zoological Imposture.*—A female bear, shaven, and dressed as a woman, is now exhibiting in a caravan in the Borough, as a monstrosity of the human species from the deserts of Arabia. The animal is so placed in an arm-chair, and tightly but concealedly strapped to it, so as to assume the appearance of a human figure in a sitting position. The skin of the hands and feet, being closely shaved, is artificially coloured.—J. R., May 15.

From: J. C. Loudon's *The Magazine of Natural History*, Vol. 1, (July 1828), p. 189

### *The Tests by which a real Mermaid may be discovered*

By Conchilla

Sir,

I venture to address you upon a subject which has at various times interested the ingenious, and not a little puzzled philosophers themselves; I mean the tests by which a real mermaid may be discovered; if, indeed, there is such an animal at all. I am led into these reflections by having lately visited one of the principal cities in Holland, in the museum of which I was shown one of these wonderful creatures; of this, from memory, I have made a slight sketch. (*fig. 47.*) It was in a glass case, and about 3 ft. in length.

The face, head, and breast were like those of a monkey of the orang-outang kind; but it had no arms, and, from the middle downwards, it resembled a fish. I asked some questions concerning it and was informed that its inward conformation down to the middle resembled that of a human being; that, like an honest creature, it had its heart in the right place; that its lungs were excellent; and that it was not deficient in brains!

I asked from whence it came, and was told from Japan; and I could not help replying, after I had spent some time in its examination, that, if it had been presented as an artificial instead of a natural curiosity, it would have been worthy of admiration, but that, as it was, I conceived it to be an unworthy imposition. My reasons are deduced from the following considerations:—And to speak, first, as to what concerns the perfection of its lungs; fishes, with the small exception afforded by the cetaceous class, being, according to the best authorities, devoid of hearing, are also denied a voice; for, in creatures who could not converse with each other, this would indeed have been an incongruous superfluity. How, then, came this singular inhabitant of the great deep to be thus wonderfully endowed with organs of which it could never make an use? If, too as it appears from its being so rarely seen, its place is at the bottom of the sea, how could a creature, with a conformation of the lungs resembling our own, live and breathe there, when there is nothing better authenticated, than that the most expert and practised divers are unable to stay at the bottom of the sea more than half an hour? But supposing it, for argument's sake, belonging to the class of fishes to which I have adverted, it is a well attested fact, that they are not able to remain under the water for more than two or three-minutes together, before they rise to its surface, in order to take in a new inspiration; and is it possible that this animal should be so rarely seen, if this were the case? Further, every inhabitant of the waters carries on its motions through them by means of its fins, as birds do theirs through the air by their wings; and, to be entirely equipped, two pair of fins and three single ones appear necessary to the former, though one pair of wings is sufficient for all the wants of the latter. Of these the pectoral fins, which are placed near the gills, act like oars, and serve to impel the animal forward; they likewise keep the head from descending too much into the water, or from being too much above it. The ventral fins are nearer the tail, and seem chiefly useful in balancing the fish in the water;

and of the single fins it may be observed, that the dorsal fin and the anal one, which are on the ridge of the back, serve, in some degree, all these purposes, while the tail answers to all intents the purpose of a rudder. This, as I said before, is the perfect complement of a fish in the way of fins; nevertheless, there are many not, in this way, so perfectly endowed, because some peculiarity in their conformation, would render so great a number of fins superfluous, if not, indeed, retarding to them. For instance, the form of the Muraena, or eel, being so entirely equal, requires little balance either one way or the other, it is, therefore, entirely destitute of ventral fins; and the Gymnôtus (*gymnos*, naked, *notos*, back), or Carapo, having the back broad and flat, would rather be rendered unsteady if it were in possession of a dorsal fin. Some fishes, also, have no tail fin. But what shall we say to a fish of above three feet in length, which has no fin but that; which has, as one may say, a broad chest and a heavy head, without any one contrivance to keep it from being, at all times, lower than any other part of its body? It might, indeed, be inferred, that so extraordinary a creature would live in an extraordinary manner; and certainly no manner could be more extraordinary, than that of living with its head downwards, and its tail in the opposite extreme! But this must be impossible under these points of view; and, I am apt to believe, that if all mermaids were tried by one or other, or all, of these tests, they would be found equally imaginary. Yes, Sir, I cannot help thinking, that in such cases we are not less deceived than our ancestors were, though it may be less agreeably; for their mermaids sang, and combed their sunny locks, and were, besides, extremely personable monsters, while ours are not only altogether mute, but as ugly as can be well conceived. If, then, Mr. Editor, we must be in error, pray give us your potent assistance to fall back into our earlier and more poetical absurdities; but if to come at the truth is a more desirable thing still, and if you find that my communication tends at all to that end, I shall be happy to see among your other contributions this of

Conchilla.

From: J. C. Loudon's *The Magazine of Natural History*, Vol. 1, (July 1828), pp. 106-108.



By V.

Sir,

As it is the duty of every naturalist to guard the public against impositions such as those exposed in your Magazine under the heads *Mermaid* (Vol. 1. p. 106.), and *Zoological Imposture* (Vol. 1. p. 189.), I have to bring under your notice another of a somewhat different description, which, from the uncommon ingenuity with which it is made up, is well calculated to deceive those little conversant with Nature. I allude to the specimen of a Pygmy Bison (*fig. 53. a*), said to have belonged to Count Bournon, and at the time I saw it in possession of a Mr. Murray, a dealer in curiosities, &c., from Hastings, who valued it at forty guineas, as it was supposed to be unique of its kind, being but about 7 or 8 in. high, and every way proportionate and symmetrical, and at the same time quite perfect in horns, coat, and every other part which distinguishes the fully developed *male* Bison. Now, as the animal of which it is the representative is, when full grown and equally perfect, of the stature of the ox, and even acquires such a size as to weight from 1600 to 2900 lbs.; and, as it may be presumed from analogy that the calf, or embryo, of the bison has not any horns, mane, &c., there can be no doubt of the imposture, which may, nevertheless, be fully worth the sum demanded for it, as a most perfect *model* of the bison, and as the summit, of the art of deception. As I took some pains to examine this curiosity, and to consider how so difficult a task had been accomplished, it appeared to me to have been grounded on a well-formed model of wood, very tightly covered, in the first instance, by the skin of a pug-dog of corresponding size, the long hair about the head, hunch, and belly being added with consummate skill from the skin of a young bear, while the horns and hoofs were formed out of the black horn of the buffalo, all, however, so admirably put together, and the *tout ensemble* so elegant, as to stamp the artist as the first of his calling.

I am Sir, &c.  
V.

August, 1828.

From: J. C. Loudon's *The Magazine of Natural History*, Vol. 2, (July 1829), pp. 218-219.



## BioFortean Notes: Odd Plants

### *A Bunch of Odd Plants*

A group of English naturalists and travelers, being asked by the editor of *Conquest* (London) to write on the subject, "The Most Remarkable Plant I Ever Saw," contribute an interesting symposium to that magazine, from which we quote below some of the most noteworthy items. The list is headed by Capt. F. Kingdon Ward, explorer, plant-collector and author, who writes that in the course of several years' wanderings in Asia, he has seen no more remarkable plants than the giant sorrels of Tibet. He goes on:

"In the harsh mountains of Tibet are sorrels which grow 8 feet high. The tiny flowers are hidden beneath large, downwardly pointing, overlapping leaves of a bright sulfur yellow, which cover the tall erect stem from top to bottom. The plant grows on the open alpine moorland, and I shall never forget my first sight of it. There were hundreds growing together; I could see them a mile away, like yellow candle flames against the dark moor. Sometimes you see only one standing by itself; it looks like a porcelain Chinese pagoda swaying in the wind.

"The plant grows at an amazing rate. Occurring only at high altitudes, round about 15,000 feet, it is buried under the snow till June, when it suddenly pushes its way through, and grows several feet in a few weeks. All through the heavy summer rains it continues to expand, till in October the wind and snow cut it down ruthlessly. The Tibetans eat the young leaves, and they make a not unpleasant salad."

Prof. D. Thoday, of University College, Bangor, and formerly of the University of Cape Town, tells of mangrove trees, which are remarkable in many ways. They inhabit the soft mud of tropical and subtropical estuaries, keeping themselves upright by prop roots, which grow obliquely down from trunk or branches; they flourish in sea water, which kills most flowering plants; they possess special breathing organs by which air is supplied to the roots buried in the water-logged mud; their seeds germinate while still on the tree, and form seedlings which are specially adapted for fixing themselves in the mud when they drop. He continues:

"Rising from the mud are the peculiar breathing organs, formed from knee-like bends of the root above the mud. When these structures are uncovered by the tide their spongy tissues allow air within them to communicate freely with the atmosphere."

Dr. Alex Hill, Secretary of the Universities Bureau, and author of "Round the British Empire," contributed the following:

"When in Western Australia, exploring the beautiful caves at Yallingup, I exclaimed to my guide: 'That is not a stalactite, it is wood,' and I pointed to a column as thick as my arm, which reached from the roof to the floor. 'It is the root of a Jarrah (*Eucalyptus marginata*),' he replied. 'We are 90 feet below the surface, and that root is to be seen in the chamber under this, 30 feet lower down.'"

Prof. M. C. Potter, formerly of the University of Durham, tells of the genus *Euphorbia*, with its extraordinarily varied forms and wonderful structural adaptations. He writes:

"The most remarkable species I have seen is that strange leafless form *E. aphylla*. Its clustering rods rise 3 or 4 feet from the bare red soil of the Karroo, where, under a perfectly cloudless sky both day and night, it is exposed to violent extremes of temperature. Its peculiar smooth cylindrical structure exposes a minimum of surface for evaporation of water, and the intense, glistening white color, by diminishing absorption of heat,

affords additional protection from the sun's rays. Its roots penetrate the earth to an enormous depth."

Prof. F. E. Weiss, of the University of Manchester, writes:

"On a visit to the Karroo in 1905, I came across a weird plant which might almost be mistaken at a distance for some new type of beehive. A small, conical growth, some 8 inches in height, it looks as if it were built up of a number of large, greenish fir cones. These apparent cones, however, are thick and stumpy branches set on a main stem, itself fleshy, but concealed by its equally succulent branches.

"The plant is an ally of the common leafy spurges, and is known by the name of *Euphorbia multiceps*, the many-headed spurge. It was discovered by Dr. Marloth and sent by him in 1905 to the famous gardens of Sir Thomas Hanbury at La Mortola."

Capt. H. Hamshaw Thomas, who was in charge of the air survey of Palestine in connection with Lord Allenby's advance, writes as follows:

"In various parts of England the solid rock contains the remains of leaves, stems, seeds, etc., of immense antiquity. Most of these plant remains have been much altered or decomposed since they grow, and were buried in mud which has now become solid rock.

"Some years ago, at Roseberry Topping, in North Yorkshire, I discovered a deposit of the most remarkable mummified leaves. The rock was crowded with thousands of the leaves, which were black or dark brown in color. Their substance seemed so little altered that one could imagine one was digging in a heap of leaves which some gardener had collected but a few months before. One could pick them out and hold them in the hand. The veins could be seen, and microscopical examination showed the outer layers of cells quite clearly.

"These leaves belonged to an extinct type of plant called *Thinnfeldia*. Nobody knows their age, but several recent estimates put it at 50 million years. It is very unlikely that they can be less than 10 million years old."

Martin F. H. Sutton, of a famous Reading firm of seedsmen, writes:

"The leaf of red clover is generally composed of three leaflets. Occasionally individual leaves are seen with more or less than three leaflets, and interesting forms have been met with during breeding work, when it was observed that a specific strain of red clover tended to produce leaves with five, six or seven leaflets.

"Throughout the work (extending over several years) the plants have retained a dark-green, leafy growth, and the extra leaflets remain equal in size to the ordinary trifoliate ones—an important point. The plants themselves are very dense, and produce a heavy yield of leafy fodder in both the first and second cuttings.

"It is obvious that if this remarkable strain of red clover proves as vigorous and adaptable to other parts of the country as it has done under our superintendence here, it is likely to be of very great value to the farming community."

Prof. F. O. Bower, formerly of the University of Glasgow, a leading authority on plant anatomy, especially that of ferns, tells of the remarkable African plant *Welwitschia mirabilis*, which grows on the arid shingles near Delagoa Bay, South Africa. He says:

"Its deeply penetrating root passes upward into a massive, stunted, woody stem, which enlarges into a rugged brown cup, often 2 or 3 feet across. Its margin is fringed with green ribbons, stiff and tough, torn and ragged. These lie on the shingle in irregular curves as they have been left after tossing about in a gale. Within that margin is a wide area covered by brown bark; but it is marked by scars where fruiting branches have

been borne in former years, while the branches of the current year may rise from the edges to a height of a foot or less, bearing either the large pink female cones or the smaller pale male cones.”

Prof. R. H. Yapp, of the University of Birmingham, writes that one of the most remarkable plants he has encountered in its wild state is the Malayan fern. He says:

“I first saw this fern on a jungle-covered mountain ridge some 5,000 feet above sea level in the interior of the Malay Peninsula. It was growing, as it always does, on the branches of trees.

“The fleshy, creeping stems of this curious fern give off numerous branches, which form thick, black, encrusting masses, often several feet in length, completely encircling the branches of its host.

“A system of communicating passages or galleries runs through the entire mass of stems and branches. These galleries are invariably inhabited by colonies of ants, the fern being literally a living ants’ nest. The ant galleries have a definite arrangement. Inside each stem or branch, along almost its entire length, is a continuous central passage or corridor. At intervals side passages are given off to other branches, while overhead are two series of separate cave-like galleries, all built to precisely the same pattern. Each overhead gallery communicates by a short passage with the corridor below.

“This complicated system of galleries is not tunneled out by the ants, but appears naturally in the fleshy tissues of the plant. The ants, however, excavate short entrance passages from the exterior, and so find their way into this ready-made nest. If an inquisitive naturalist interferes with their living house, the ants sally forth and pugnaciously attack the intruder.

“Still more extraordinary cases are known of the close association of plants and ants. Elaborate tho disputed theories have been put forward regarding the interrelations of these strange partners.”

From: Anon. Birds, Beast, and Trees column, *The Literary Digest* for July 3, 1926, pp. 42-44.

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## BioFortean Notes: Singing Earthworms

### *When the Earthworms Sing Together*

There is no creature on earth which most of us regard as being more “dumb,” in both the legitimate and the colloquial sense of that word, than the humble and retiring earthworm. Quite recently, however, a learned German professor, Dr. Mangold, of Freiburg, has announced that these creatures not only have a considerably higher degree of intelligence than they have received credit for, but that they possess voices. They actually are in the habit of uttering slight sounds, and they do this not singly but in series marked by a definite and varying rhythm.

This rhythm is so marked, in fact, that it suggests the possibility that these sounds are employed for purposes of communication. The sounds are of a clicking character, not unlike the snapping of tiny fingers, and can be distinctly heard at a distance of four meters. They resemble the human sound made by the consonant D united with one of the five vowels.

A writer in *Kosmos* (Stuttgart) thus describes the aspiring earthworm’s vocal efforts:

The timbre is frequently not pure. The sounds de, di, and da are often used, the duller sounding do, and du, comparatively seldom. In exceptional cases the sounds uttered resemble those coming from a minute flute or the strokes of a little hammer on a tightly stretched piece of paper. While single sounds are often heard, as a rule they are arranged in entire series of varying numbers. In a single series the sounds are always on the same note and usually of an equal rhythm. But sometimes this is abruptly changed. As a rule the pauses between the separate sounds within the same series are of equal length, but this series may be connected with a second series, often even with a third or a fourth series in which the pauses are either abbreviated or lengthened.

Some of the series recorded by the observer may be represented in the following manner:

1. Di, di, di, di, di, di;
2. Da-da-da-da;
3. Di—di—di, di, di;
4. De—de—de, de—de—de—de—de—de—de—de, de, de, de, de—de, de—de, de;
5. Du, du, du—du—du, du, du, du, du, du, du;
6. Do, do—do—do—do—do.

Upon occasion, we are told, the sounds follow each other in such rapid succession that they form a sort of a trill or buzzing may be represented by the expression drrrrt. And now the great question:

How does the earthworm utter these tones? For the present that remains the little creature’s own secret. For these sounds are uttered only while they are at work in their burrows where they are difficult to observe. However, Professor Mangold has already determined that these snapping sounds are not merely uttered by chance as a result of the animal’s operations, but are voluntary sounds produced by the rhythmical opening and closing of the cavity of the mouth. That they are not connected with the act of eating is evident from the fact that they are heard to proceed from terrariums which are entirely filled with sand and entirely free from humus materials.

But what is the object of the angleworm in uttering these tones? Are they connected with the varying character of the work, now easier and now more difficult? Is it a matter of so-called “self-expression”? Does the worm communicate in this manner with other worms at work in its vicinity, or, finally, are the sounds to be considered as love notes?

Professor Mangold happened upon this remarkable discovery while making a general study of the sensibilities and intelligence of earthworms. For this purpose he

had placed a number of them in an earth-filled enclosure, and he was quite astounded when he heard mysterious sounds proceeding from this quarter. In his own words:

“At first, I was extremely skeptical, but I was finally forced to conclude that earthworms are capable of making definite sounds.”

Of great interest, likewise, are certain other discoveries concerning the habits of earthworms, which are described by Hermann Radestock in the same article. Thus:

According to the latest studies and experiments of Mr. C. Merker of the University of Giessen, the motive which forces the earthworm to ascend from his burrow within the earth to the surface of the ground, water-covered or even snow-covered tho this may be, is not the hitherto tacitly assumed desire for moisture, but the threat of suffocation within the ground when the latter has lost part or all of its oxygen.

The water from rain or snow seeps into the ground slowly, but steadily penetrates into the most minute apertures of the soil and drives out the air therein contained. A certain amount of oxygen is, to be sure, carried down into the earth with the water. The angworm is not afraid of water, and eagerly makes use of this oxygen. But, alas, the amount is small and there are such countless participants in its use! For all the many worms, larvae, fungi, bacteria, and rootlets which inhabit the stratum of humus have need of oxygen to live. All of them suffer privation until the rain has ceased, the water has drained away, and a fresh supply of air can penetrate the crevices of the ground.

Thus, prest hard by the difficulty in breathing the earthworm seeks escape from suffocation. If the ground beneath him, in which he is accustomed to boring and working, is soft enough, he digs downward with feverish eagerness into the lower layers where some oxygen is still left. But when the ground is hard, the worm is not able to dig down fast enough before the water gives him no recourse but to dig upward, no matter whether he finds rain or snow on top of the ground. This explains a remarkable observation which long mystified naturalists—the sudden appearance upon the surface of a layer of snow, 20 centimeters thick of a great quantity of big and little earthworms. The observer, Dr. Svoboda, of Klagenfurt in Kaernten, was puzzled by this, since the skin of these worms is so delicate that they have great need of warmth, and for this reason usually pass the winter sleeping in deep strata of the soil.

But light is an even greater enemy of these little creatures, a torment which they flee whenever possible.

Even in rainy weather the light is strong enough to cripple these tender-skinned, eyeless worms, which are entirely adapted to living in the dark. On dark winter days they are clearly in less danger, but even this feeble amount of illumination can not be long supported. The worms observed by Dr. Svoboda on the surface of the snow had obviously almost reached the limits of their endurance since they were able to crawl about but slowly.

It is evident, therefore, that when the worms are forced to climb above ground in the summer for lack of oxygen, they are quickly affected by the light, which diminishes their strength.

“Happy the worm that finds a puddle in its path!” exclaims the writer, adding:

If the pool is too shallow the worm twists and turns and digs in an effort to trouble the water so as to cut off some of the light.

From: Anon. Birds, Beasts, and Trees. *The Literary Digest* for October 9, 1926. pp. 70-72.

*"Singing" Earthworms*

An article in the *Literary Digest* of October 9, 1926, has been sent to me by Professor Jesse E. Hyde, of Western Reserve University, because he remembered my mentioning the observation of sound-producing earthworms. The article reports, under the heading "When the Earthworms sing Together" the observation of Professor Mangold, of Freiburg, Germany, that "the earthworms possess voices and that they actually are in the habit of uttering slight sounds, and that they do this not singly but in series marked by definite and varying rhythm."

Seeing that the fact that earthworms make noises had not been known before, as I had assumed, I wish to record the observation that also American earthworms produce sound.

It was first pointed out to me by Mrs. Ruedemann about a decade ago, on a sultry May evening, that the earthworms in our garden back of the house could be distinctly heard. Being incredulous at first, I sat quietly on a chair until I also heard an exceedingly fine rasping noise all around me. It was a chorus of almost unbelievably small voices in the dark. To find out whether the little musicians were really earthworms, I got a flashlight and when the voices, after the quiet resulting from the disturbance of walking over the ground, were again in full chorus, turned the light upon a point close to me, from which I was sure a rasping sound arose. The light revealed a large earthworm, partly stretched out of its burrow. I spotted several more afterwards. We two have since heard the singing every year, always on warm spring evenings about and after dusk. Mrs. Ruedemann also heard it last spring about 4 o'clock in the afternoon on a warm May day after a rain, and then she could see the "singing" worms all partly stretched out of their burrows.

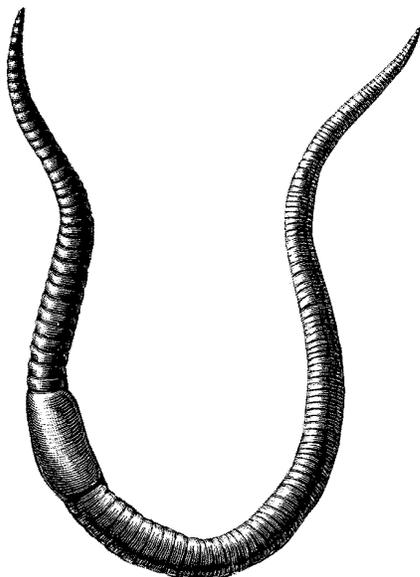
From the rasping character of the sound and the position of the worms I inferred that the noise was made by the drawing of the setae over some hard object at the edge of the burrow, and the time of the year suggested that the concert is connected with the mating season of the worms. Professor Mangold, on the other hand, concludes that the sound is made through the mouth and is more of the character of clicks, which however may "sometimes become so rapid as to form a buzzing noise." These noises were made only in the burrows in his aquarium.

A member of the museum staff, Mr. Jacob Van Deloo, tells me that he heard the sound frequently, when a boy.

Not being aware that this "musical talent" of the earthworms was unknown to naturalists, I failed to catch some of the musicians for identification. Dr. S. C. Bishop, of the New York State Museum, intends to make a study of this, this spring.

Rudolf Ruedemann  
N. Y. State Museum, Albany, N. Y.

From: *Science*, February 11, 1927, Vol. LXV  
(1676), p. 163.




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*In Re "Singing Earthworms"*

Since the publication in 1926 of a popular article entitled "When Earthworms sing Together," (1) quoting Dr. Mangold, of Freiburg, Germany, and which has been previously referred to in these columns (2) considerable publicity has been given the subject by the American press.

For "lo these many days," it has been the writer's custom to keep captive, in numbers as large as one hundred or more, adult specimens of the large cosmopolitan earthworm, *Lumbricus terrestris* Linn. They are kept in a five-gallon earthenware crock in a cool corner of the cellar for use in a pursuit which in some states of the Union is considered immoral or at least illegal when indulged in on Sunday. In the course of my dealings with these worms I have many times heard the sounds recently referred to as "singing" and, although personally fond of music, have failed to notice anything in the least musical about these faint clicking sounds or stridulations, recently termed "song." The singing of insects, for instance, could be considered as symphonic poems when compared with these insignificant rustlings. Previous to the publication of the recent somewhat sensational statements, little attention was paid to them as it had seemed to me that these sounds were probably produced by the movements of the worms in their burrows, possibly by the escape of air between the viscid lining of the burrow and the mucous surface of the worm's body. It is quite evident, however, that this is not the case, because these stridulations have continued after the worms were transferred from the soil to damp sphagnum moss, which is an ideal medium in preparing the worms for the rites to which I have previously alluded. The determination of the manner in which earthworms produce these mysterious sounds is fraught with difficulty because the species with which I have dealt at least is very sensitive to the presence of light intense enough to permit one clearly to observe its actions and movements, when on the surface of the soil. That this sense of light resides in the extreme anterior end of the body is abundantly evident from the fact that the worms instantly withdraw to their burrows when the light from an electric torch is flashed upon them even when but a half inch or less of the "head" end of the body protrudes from the soil. In point of fact, the worms seem most sensitive to the light when this is the case. When the entire body is exposed it often requires as much as fifteen or twenty seconds for the worm to become alarmed at the light. The production of the stridulating sounds, however, is not by any means confined to those individuals at the surface, but may be heard plainly, at least under captive conditions, when no worms are visible.

The anonymous author of the original article, previously cited, refers to the earthworm as "dumb both in a legitimate and colloquial sense," but the story of the earthworm as recorded long ago by Charles Darwin (3) abundantly indicates that these lowly creatures are indeed far from stupid, but apparently possess a seemingly disproportionate degree of intelligence.

W. R. Walton  
Washington, D. C.

1—*Literary Digest*, October 9, 1926.

2—Ruedemann, Rudolph, *Science*, February 11, 1927, p. 163.

3—"Formation of Vegetable Mould through the Action of Earthworms," London, 1881; D. Appleton and Co., New York, 1882.

From: *Science*, June 10, 1927, Vol. LXV (1693), p. 574.

*Birds Attacking Freshly Shorn Sheep*

Mysterious and vicious attacks upon newly shorn or branded sheep in the grazing country of our northwest have at last been traced to the ubiquitous magpies which frequent the sheep ranges in great numbers. For several years the sheepmen have been puzzled by fierce attacks on sheep recently clipped or branded, the wound usually being made directly in the fresh brand mark or in some cut due to the shearing operation. S. Stillman Berry, of Redlands, California, determined to make a personal investigation of the matter and finally ran the culprits down.

It was known that in Australia the Kea parrot had been guilty of similar attacks and, as the magpies were particularly numerous in the bottom lands where the sheep were turned in for pasture after shearing, a close watch was kept and the birds caught in their nefarious work. When these occurrences were first noticed the wounds were not usually serious, but as the practice became more common the birds seemed to acquire great dexterity in inflicting deep and sometimes fatal wounds. It was found that they usually started on animals showing bad shearing cuts. They would perch on the animal's rump and peck and tear at the flesh, the sheep meanwhile standing utterly helpless. With development of the habit the birds became so bold that they would attack uninjured animals, tearing and pecking until they had opened a hole through the thin coating of wool left after the shearing and then into the body cavity in an endeavor to reach the kidneys, which for some reason appear to be particularly delectable to the birds. They were quick to learn the location of these organs in the animal's body and to recognize the ease with which they could claw and tear their way to their objective.

While Mr. Berry notes a considerable number of attacks by the magpies, they extend over a period of several years and he is inclined to believe that they are sporadic and not indicative of a general habit on the part of the bird. Should the habit develop into a general characteristic of the birds, the sheepmen will indeed be confronted by a serious problem.

From: *Science*, April 18, 1924, LIX(1529), supplement p. x.

*The Booming Lizard of Australia*

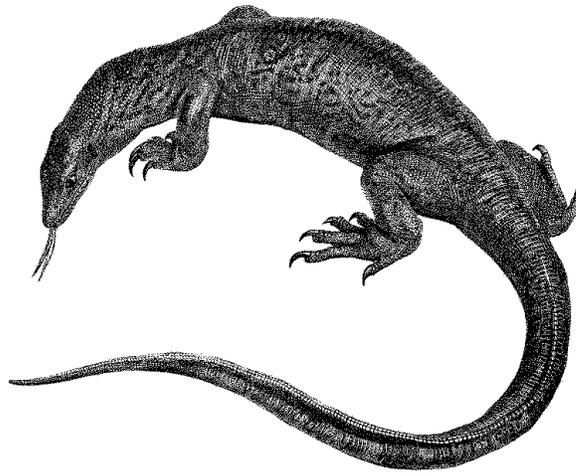
In July, 1913, I was hunting in the Cove's River Ranges with two companions—Andrew and John Duncan, of Megalong. We found a black-and-yellow banded monitor lizard about five feet long concealed in a crevice on the face of a wall. We had no intention of injuring him, but out of mischief Andrew Duncan suggested that we should make him yell. I was sceptical, but both men assured me that the lizard could, and would yell under persuasion. On condition that there should be no cruelty, I consented to a demonstration. They laughed at the idea of cruelty. Andrew picked up a stick and began poking the reptile in the ribs and tickling him under the arm. It stood it for a while, merely squirming closer down in the crevice, then, having had enough of it, blew himself out and emitted a most comically doleful bellow that could be heard several hundred yards away. This he did repeatedly until we had laughed ourselves tired. It was funny, on looking back after we had gone fifty yards, to see the lizard stick his head around the corner to make sure that we had really departed.

I have had for the last four years at my hunting-box on the Naltai river, a tame monitor whom I have called "Joseph" on account of his coat of many colors, and who is the interesting companion of my solitude and incidentally keeps the snakes away. With the above in my mind, I experimented on him. I found him camped under the bench beneath the window, and irritated him with the end of a stick. He did as the other had done—filled himself with wind and then

emitted it in a prolonged bellowing groan. By the way, our “bookbook owl” does much the same thing. He fills himself nearly to bursting in a succession of gasps, and then says “Hoo-hoo hoo” till he has no more breath, then fills up again.

Walter H. Bone  
Linnaean Society of New South Wales, Sydney

From: *Science*, September 17, 1920, Vol. LII(1342), p. 273



### *200-Foot Sea Serpent*

Seen at 3 Bells in Gulf of Mexico—Enormous Rattles on Its Tail

Galveston, June 30.—What is confidently believed to be a sea serpent has been sighted and narrowly inspected by the officers, crew, and fifteen passengers of the steamship *Livingstone* of the Texas-Mexican Line. All of the witnesses made a sworn affidavit to the effect before United States Consular Agent Charles W. Rickland at Frontera, Mexico.

The statement is signed by Capt. G. A. Olsen and the other officers, George Thomas of Denver, Albert Dean of Memphis, H. B. Stoddard of Bryan, Texas, Mrs. Jessie Thornton of Chicago, and eleven other passengers. In substance it declares that at three bells on the evening of June 24, the *Livingstone*, bound from Galveston to Frontera, Mexico, making good weather, and about fifty miles north of Frontera, in the Gulf of Mexico, the serpent was sighted on the port bow.

The ship got within sixty feet of the creature, and for fifteen minutes stood by while all on board viewed the serpent through the glasses. It was apparently sleeping, and was not less than 200 feet long, of about the diameter of a flour barrel in the centre of the body, but was not as round. The head was about six feet long by three feet at the widest part.

The color was dark brown, and near its tail were rings of circles that appeared larger in circumference than the body at that point. As it swam away the tail was erected, and a rattling noise as loud as that made by a gatling gun in action startled the watchers on the *Livingstone*.

From: *New York Times*, July 1, 1908, p. 1.

*An Elephant with Four Tusks*

To the Editor of *Science*: I have thought that the accompanying note with regard to the "elephant with four tusks," and its illustration would be interesting for *Science* to reproduce as an extraordinary record tucked away in a rather remote publication.

Picture and text are taken from "Sudan Notes and Records," Volume 2, number 3, July, 1919, page 231, and the account is there printed in Arabic with the accompanying translation. I am sure this will engage the attention of our many mammalogists and paleontologists.

John M. Clarke

On the 18th May, 1917, I went out shooting in the district of Sheikh Ako Mangara, in the Markaz of Yambio, in the village of Wakila Marbo, on the borders between Tembura and Yambio districts.

I met a herd of elephant which I followed, searching for a good one to shoot. I kept following them until they stopped near a pool of water, where they began to drink and throw mud on themselves. I was in hiding behind a tree about fifteen yards from them looking at them, when I saw an elephant with four tusks as roughly represented in the attached sketch.

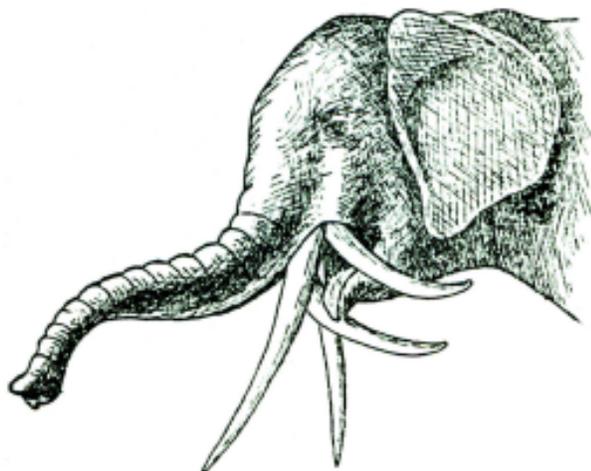
The left tusk was the bigger and had the usual direction, but the direction of the small tusk was downwards and came out from under the big one. It was round, and its thickness was about 2 1/2 inches.

The direction of the right tusk was downwards and the small tusk came out from under it in the usual direction, but it was small like the other one.

I did not know that this elephant was so valuable and for this reason I did not try to shoot it, although the Ombashi and the soldier who were with me told me to shoot it, but I refused. This is all the story.

Abd El-Farag Ali, M.A.  
Yambio, February 17, 1919

From: *Science*, October 24, 1919, L(1295): 395-396.



*The Sea-Serpent*

With this please find an extract from an official report by Capt. Robert Platt, assistant coast and geodetic survey, with accompanying sketch of a 'sea-monster' seen by him near Cape Cod in October, 1878. Captain Platt is a trained observer, whose daily occupation at that time was to record just what he saw, and nothing more or less. I know Captain Platt so well that I have never doubted the existence of such a monster from the time his report was made known to me; and, if others have been sceptical, I hope that recent events have proven the matter beyond question.

[Extract from a report by Capt. Robert Platt, U. S. coast and geodetic survey, to the superintendent; written on board the U. S. coast-survey schooner Drift, Oct. 25, 1878.]

"I would also beg leave to state that Aug. 29, while becalmed off Race Point, Cape Cod, about four hundred yards from the vessel, we saw a sea-monster, or what I suppose has been called a sea-serpent. Its first appearance was that of a very large round spar two or three feet in diameter, from twelve to fifteen feet high, standing upright in the sea, but in a few minutes it made a curve and went down. It was visible about three minutes; the second appearance, about half an hour after the first, the monster came out of the water about twenty-five feet, then extended to about thirty-five or forty feet, and about three feet in diameter; when out about forty feet, it curved and went down, and as it did so a sharp dorsal fin of about fifteen feet in length came up. This fin was connected to this monster, for the whole animal moved off with the same velocity. I looked at it with a good pair of glasses. I could not tell whether it had a mouth or eyes; it was of a brownish color. I enclose to you a rough sketch made by me, and submitted to all on board who saw the animal, and they all agree that it is a fair representation of the animal as it appeared."

B. A. Colonna.  
U. S. coast survey, Sept. 4.

From: *Science*, Sept. 17, 1886, VIII(189): 258.



Curved to  
go under.  
First seen.

Dorsal fin.  
Second seen.  
Curved to  
go under.

## The Newest Humans: The Hobbits of Flores

Dwight G. Smith and Gary Mangiacopra

In September of 2003 a team of paleontologists, paleoanthropologists, and archaeologists unearthed the remains of at least six and possibly seven individuals of a previously unknown and unsuspected miniature human in a cave on the island of Flores, Indonesia. Analysis revealed that the remains represent a new species of humans that was given the scientific name *Homo floresiensis*, which roughly translates as man of flores. Of course, since the diagnosis and naming was based on a female skeleton, the name should really read woman of flores, but perhaps human of flores would be better still.

The discovery of miniature humans three feet tall with grapefruit-sized brains has set the world of science on fire with controversy, speculation, and—most of all—intensive studies that are ongoing. The discovery of these *hobbits*, as they have been nicknamed, has stimulated a multiple number of fields and disciplines including anthropology, archaeology, paleoanthropology, biology, and evolution, to name only the most prominent. Scientists from each of these fields have been busily engaged in analyzing the remains and reports of remains of the fossil specimens. Results have appeared in a number of scientific journals, popular magazine articles, newspaper accounts, and television interviews. Everyone, it seems, has weighed in with an opinion or a study of these exciting fossils. (We detail some of the growing volume of literature on the hobbits in a subsequent article, the literature of hobbits.)

The hobbit discovery has also ignited intense and extensive interest in the field of cryptozoology. Experts in this field are especially intrigued by the fact that the hobbits were alive up to 18,000 years prior and possibly as recently as 12,000 or 13,000 years ago. This time frame places the hobbits well within the span of modern humans which colonized this part of the world about 40,000 to 50,000 years ago.

### Taxonomic Diagnosis of the Hobbit

The taxonomic description of the hobbit, based on fossil remains, is presented in Brown *et al.* (2004) and reads in part as follows:

Order	Primates
Suborder	Anthropoidea
Superfamily	Hominoidea
Family	Hominidae
Tribe	Hominini
Genus	Homo
Species	<i>floresiensis</i>

Note that Brown *et al.*, use an older classification of suborders in the order of primates. The newer classification recognized by most mammalogists subdivides the primates into two suborders; the Strepsirhini which includes the lemurs, galagos, and bushbabies and the Haplorhini, which includes the tarsiers, marmosets, monkeys, great apes, and humans. The hobbits, obviously, are classed within the Suborder Anthropoidea or Suborder Haplorhini, depending on your taxonomic preference.

The hobbits are placed in the Family Hominidae, which also includes the gorilla, chimpanzees, orangutan, and, of course, humans. To complete the classification scheme, the hobbits are in the exclusive genus Homo, which is the genus to which humans, their ancestral relatives (*Homo habilis*, *Homo erectus*, *Homo ergaster*, *Homo antecessor*) as well as their cousins the Neanderthals (*Homo neanderthalensis*) belong.

### The Hobbits in Native Folklore

By all accounts the natives that colonized Flores sometime in the distant past, about 30-50,000 years ago were well aware of these miniature creatures which they called *Ebu Gogo*. The native name can be loosely translated as the “grandmother who eats everything” or perhaps the “gluttonous grandmother.”

Native descriptions of the *Ebu Gogo* suggest that they were miniature human-like or hobbit-like creatures with long, reddish or brownish hair that covered their bodies, long arms and oversized pot bellies. The females were low-breasted, so much so that they were able to sling them over their shoulders and out of the way, or so the stories go. The *Ebu Gogo* were also said to be murmuring creatures, suggesting that they possessed at least the rudiments of speech.

The natives were apparently afraid of these hominid miniatures who frequently stole their crops and were reputed to kill and eat their babies, at least on one occasion. Intriguingly, one tale describes how the native villagers decided to teach the hobbits a lesson. They followed the hobbits back to their hiding cave in the vicinity of Liang Bua—which is also the general area where the hobbit fossils were unearthed.

Natives place the hobbits well within the time frame of the early Dutch explorers which occurred some 300 years ago during the great Age of Discovery. This was a time when the Dutch were leading mariners and their merchants traveled the world in search of merchandise and markets.

### Other Lands, Other Hobbit Tales

The first navigators to reach Australia encountered a race of dark skinned people. They marveled at their thin but well muscled bodies. For lack of a better name, they called these indigenous people the Aborigines and the name stuck. Later archaeological and anthropological studies revealed that the Aborigines were relatively newcomers to the Outback, having arrived some 30-50,000 years prior. They had trekked overland to the island continent during that time in geological history when Southeast Asia, Australia, and much of the East Indies islands were all connected by land bridges. These were to disappear later as the world’s oceans rose in response to the melting of the great glaciers, bringing the Ice Ages to a temporary close and effectively isolating the Aborigines in a magical land of kangaroos, koalas, and others?

Before becoming Westernized, the Aborigines were basically a stone-age people, nomadic hunters and gatherers. In the manner of such peoples everywhere, the Aborigines sought comfort, metaphors, and spirituality in the only world they knew, the world of water, sky and nature. They developed a rich folklore to explain the world around them and their place and circumstance in that world. Their tales were told through oral tradition, their art, music and dance. Because so many Aborigines tales centered on their Dreamworld they were mostly dismissed as fables. However, the discovery of the hobbits of Indonesia suggests that we reconsider Aborigines tales about some of the creatures—especially tales about dangerous hominid-like companions they encountered in their adopted homeland.

Rex Gilroy has studied Aborigines folk tales for some time now and his web site is worth visiting (listed in the references section). A brief survey finds that the Aborigines encountered several different types or races of hairy hominids, great and small. These were given names. The *Yowies* were said to be very hairy men that inhabited rock formations of the eastern mountains. Aborigines believed that another race of hominids called the *Barrmi Birgoo* were centered in the Blue Mountains of New South Wales. These were giant hairy men, taller than a gumtree. Perhaps there is some confusion here, because Yowies were also said to be quite tall, standing well over eight feet in height, although the females were considerably smaller at just under five feet. They had long narrow heads with pendulous breasts. Aborigines of Western Victoria told tales of the *Ngaut-Ngaut* and *Dyirri-Dyirritch*, a blood-sucking hairy hominid that would set traps for the unwary Aborigine which would then be slaughtered and butchered like cattle. Are these various tales the oral tradition of actual encounters with a relic race of *Homo erectus*? The possibility is especially intriguing because they are credited with being able to make fires, manufacturing crude stone tools, having crude language skills, and seeking shelter in caves and other rock formations.

Then we come to the Aborigines tales of the *Waladhegarra* or little hair people who occupied southern coastal areas. These were said to be miniature, human-like creatures in appearance. They were smelly, very hairy creatures that defecated all the time. Apparently stones were their primary weapons of choice, as they would chase away any Aborigine that approached to closely to their caves and rock formations.

Of all of these hominids, the *Waladhegarra* seem compellingly similar to the hobbits of Indonesia. The fact they were renown for “defecating all the time” suggests that they ate all the time, reminiscent of “the grandmother who eats everything.” Furthermore, their haunts, habits, and habitats also suggests a close relationship between the Australian *Waladhegarra* and the hobbits of Indonesia.

If any of these tales are true—and they may very well be—they collectively suggest that the islands and lands of the Pacific Rim may well have harbored remnant or relic populations of *Homo erectus* and perhaps *Australopithecus* until much more recently than had previously been considered.

We confidently predict that the Hobbits discovery will stimulate increased archeological and anthropology interest throughout this extremely important and productive area. The discovery is already proven stimulating to the field of cryptozoology. Perhaps we can hope that scientists will also start to take notice of the work of cryptozoologists as well?

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## A Survey of the Hobbit Literature

Dwight G. Smith and Gary A. Mangiacopra

Call them hobbits, gnomes, elves and so forth. The Hobbits or Little People of Flores have created a huge stir among paleontology circles, in archaeology halls of all the major universities around the world, and in the field of cryptozoology as well. Their discovery has also generated an enormous volume of literature which is still outpouring. Below is a sampling that we have collected as part of our ongoing research about both the science and the cryptozoology of these miniature humans, a.k.a. the hobbits.

### Their Discovery and Analysis

The hobbits, as they are now familiarly called, were discovered during excavations in a cave on the island of Flores, Indonesia. The team was led by Australian paleoanthropologist Mike Morwood and Peter Brown of the University of New England in Armidale, Australia.

The announcement of their discovery was embedded in articles that appeared in several prestigious science journals. The two primary references announcing the fossil discovery and initial analysis are by Morwood and coworkers (2004) and Brown and his coworkers (2004). The 2004 article led by Morwood includes a number of references to his earlier archaeological work and discoveries on Flores that help illuminate the context of the hobbit discovery. The 2004 article by Brown lists 49 references that detail many of the more technical aspects of the discovery. These references also include several that detail key aspects of potential relationships of early hominids and their ecological and morphological adaptations to various habitats.

The hobbit discovery received even greater attention when staff writer Kate Wong wrote an article entitled “The Littlest Humans” which appeared in the February 2005 issue of *Scientific American*, a well respected and popular journal that specializes in popularizing scientific discoveries and scientific information for scientists as well as students of science from all levels and all perspectives.

### Reaction to the Discovery

The discovery and publication of a new species account, *Homo floresiensis* based on the fossil remains generated an enormous amount of controversy in scientific circles (e.g., Hopkin (2004), Dalton (2004)). A typical reaction is revealed in the remark by Chris Stringer, a palaeontologist at the Natural History Museum in London who pointed out in an article at [news@nature.com](http://news@nature.com) (2004) that the hobbit fossil may well rewrite the anthropological textbooks.

The popular media also was quick off the mark to report the fascinating fossil finds and their possible implications. The March 2005 issue of *National Geographic Magazine* produced an excellent account of the hobbits and their presumed habits. The well illustrated article is definitely worth the price of the issue—the illustrations portray with artistic detail, the suspected and suggested appearance of the hobbits and their habitat. They portray—far better than any detailed paragraphs—the life style and ecology of these tiny creatures that we call humans.

George Gee, the editor of *Nature*, led his op-ed piece which appeared in that journal with the intriguing sentence “the discovery of *Homo floresiensis* raises hopes for yeti hunters. . .”. that has already attracted the attention of cryptozoologists. Loren Coleman included the quote in his own article about hobbits, ranking the discovery among the “Top Cryptozoology Stories of 2004.” Coleman completes Gee’s quote “. . .now cryptozoology, the study of such fabulous creatures, can come in from the cold.”

### Intelligent Hobbits or Microcephalic Humans?

Because so much controversy has centered on whether these miniature humans were intelligent or not, Dr. Dean Falk of the University of Florida was awarded a National Geographic Research Grant to work up a virtual endocast of their brain, based on the type specimen of fossil skull labeled LB1. References to her detailed analysis along with online supportive materials can be found at her web site: <http://www.anthro.fsu.edu/people/falk.html>.

The results were presented by Dean Falk and her coworkers in the science journal *Science*. Additional details were provided in the online journal *Sciencexpress*. Both of these articles can be accessed at her web site along with additional materials including a number of newspaper articles that took great delight in describing and interpreting the results for their local readers.

Some of the many newspaper accounts available at Dean Falk's website are from the *New York Times*, *Turkish Weekly*, *Orlando Sentinel* and a Thai newspaper (you will need to be able to read the Thai language for this last). To access these newspaper articles go to Dean Falk's website, then to the FSU Anthropology Home Page (this is the department home page). The home page includes a section on News and Events which you should click into.

Reaction to the possibility of intelligent hobbits appeared in a very wide variety of scientific and popular media. A sampling is provided by Knight (2005), Lahr and Foley (2004).

### **New Literature, New Perspectives**

The intense interest raised by the discovery of the hobbits promises that more and more articles will be forthcoming. Students of science and investigators of the science of cryptozoology as well will undoubtedly want to keep track of the latest developments, controversies, and conclusions raised by these miniature humans. We suggest that you keep checking back to the web sites for *Science*, *Sciencexpress*, *Nature*, and *New Scientist*.

Current concerns among the paleoanthropologists now seem to be focused on answering questions such as how smart these "people" really were and whether more fossil finds may be forthcoming as additional excavation work is slated to occur in other caves of Flores. Another perspective is where the hobbits came from. That is, are they a *Homo erectus* derivative or an extremely specialized and localized variety of *Homo sapiens* or perhaps a relic population of *Australopithecus*?

### **Cryptozoology Magazines and Newsletters.**

Cryptozoologists are also scrambling as they try to see where and how the hobbits dovetail with folklore, legends, and traditions of little people among the native people of the East Indies and elsewhere.

Almost every cryptozoology magazine and newsletter has featured reports that describe the hobbit find. The *Fortean Times* devoted part of a special issue, Number 191 to the hobbits of Indonesia, subtitled "Stunning finds in Indonesia suggest tiny humans survived in isolation until quite recently." Loren Coleman listed the discovery of *Homo floresiensis* as one of the top cryptozoology story of 2004 in the online journal *The Cryptozoologist*. Some of the other important stories in this same issue were about the Bili Ape, the Ghanna Lion, and the Chinese Lake Monster expedition.

### **Introducing Cryptozoologists to Hobbit Science**

Start by reading Kate Wong's article in the February issue of *Scientific American*. A read of Mike Morwood's "Lost World of the Little People" in the *National Geographic* will also provide basic background information.

After these two articles the best source for the very latest information is just at your fingertips—surf the internet. In the literature section below we present a number of internet sites that will prove of interest. Because so much is being written about these creatures we suggest that you start by typing *Homo floresiensis* in your favorite search engine. This will generate several hundred references of all sorts, blogs, online science journals, online information journals, newspaper articles and the like. We tried searching using just "hobbits" but this yielded a confusing mix of hits that included many references to J.R.R. Tolkien's books as well as similar materials which have to be distilled out and away to get to the articles of interest to cryptozoologists.

Although many of these hits will provide interesting reading we suggest that you go to Wikipedia: the Free Online Encyclopedia which has a multipage section on hobbits complete with a number of links. To go to the internet address for Hobbits at Wikipiedia type: [http://en.wikipedia.org/wiki/Homo\\_floresiensis](http://en.wikipedia.org/wiki/Homo_floresiensis). What is especially nice about this site is that the article contains many references to some of the very latest online information about *Homo floresiensis*.

In addition, the site is updated frequently—I last checked the site on 25 April and it had been updated on 23 April. Thus, repeated hits are always worthwhile.

We also suggest a rereading of Bernard Heuvelmans's "The Little Hairy Men" (chapter 16) in his book *On the Track of Unknown Animals*. Following that, read Willey Ley's chapter on little people entitled "The Little People" (chapter 6) in his own version of a classic cryptozoology book *Exotic Zoology*.

Both Ley's and Heuvelman's collections of observations, anecdotal stories, and eyewitness accounts bear interesting comparisons with the real-life version of the Flores hobbit. Could these accounts represent encounters with similar hominids in other parts of the world?

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### Science Journal Web Sites

1. The science journal *Nature* has a web site that provides immediate access to many of the articles listed in the literature section above. The actual web site is [news.nature.com](http://news.nature.com). For search engines at this web site use Flores Man, Homo floresiensis, hobbit, or LB1.

2. Web site for the *Scientific American* Interview with Professor Brown is at the following: ([http://www.sciam.com/print\\_version.cfm](http://www.sciam.com/print_version.cfm). Article ID=00082F87-7D35-117E-BD3583414B7F0000)

3. The popular British journal *New Scientist* is the equivalent of our *Scientific American*. Access this journal at (<http://www.newscientist.com/news/news>)

4. The National Geographic: “Hobbit” Discovered: Tiny Human Ancestor Found in Asia ([http://news.nationalgeographic.com/news/2004/10/1027\\_041027\\_homo-floresiensis.html](http://news.nationalgeographic.com/news/2004/10/1027_041027_homo-floresiensis.html)). Some of the articles and newsbits about hobbits include: “Hobbit” Brains Were Small but Smart at <http://news.nationalgeographic.com>.

5. Science and ScienceOnline. These web sites may be accessed by typing in *Science* magazine or the actual site at (<http://www.sciencemag>), the searching for LB1 or hobbits or *Homo floresiensis*.

### Newspaper Web Sites

News of the hobbit discovery has been and continues to be covered in an amazing number of newspapers, many from around the globe. To access some of the stories go directly to the web sites maintained by these newspapers.

<http://www.timesonline.co.uk> (for the Times)

<http://www.telegraph.co.uk> for the Telegraph News

<http://www.guardian.co.uk> for The Guardian story entitled “bones of contention”

<http://www.washingtonpost.com> for the Washington Post news stories

<http://www.reuters.com/news> for the international news organization Reuters.

### Carl Zimmer’s Web Site

Carl Zimmer is a columnist and science writer for the *New York Times*. He has written several books and also maintains his own personal web site (or blog) that provides very readable accounts and—in some cases—analysis of important current events and discoveries in science. He calls his web site The Corante. To access his article about the analysis of the hobbit’s brain go to: The Hobbit’s Brain by Carl Zimmer ([http://www.corante.com/loom/archives/2005/03/03/the\\_hobbits\\_brain.php](http://www.corante.com/loom/archives/2005/03/03/the_hobbits_brain.php))

### Cryptozoology: Science & Speculation

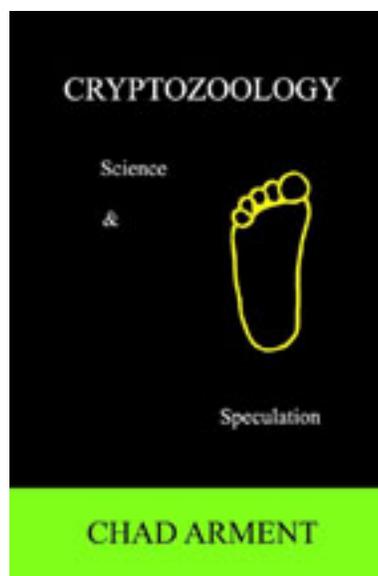
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Review: *Dark Woods*

Jay Kumar  
Berkley Book (Penguin), 2004  
\$5.99  
ISBN 0-425197-07-7

Reviewer: Chad Arment



You don't often see legitimate cryptofiction as a mass-market paperback. Sure, the horror publishers grind out the occasional Bigfoot or lake monster book, but those could just as easily revolve around feisty aliens or deranged hermits. There are horror authors worth reading, but much of the field is just so much dreck with cryptozoological elements masquerading as novelty. Even then, authors tend toward fantasy backgrounds for cryptids, whether mutations or time-travel. That's fine if you are looking for fantasy, (as a fan of authors like Terry Pratchett, Gordon R. Dickson, and Terry Brooks, I firmly believe fantasy has a place) but for most cryptofiction fans, the imagination savors realism.

So, Kumar's novel was a definite treat. The premise of the novel is not new: the logging industry has serious concerns about the ramifications of an unknown primate living in the Pacific Northwest. Serious Bigfoot enthusiasts will also recognize much of the theorized biology of the novel's apes—Kumar has done his homework. The author weaves this speculation into a mild but interesting thriller; it is not properly horror, but does treat the physical threat of a large ape seriously. In fact, it may be a little too clean, if you consider the horrific nature of the attack by chimpanzees on a man in California earlier this year.

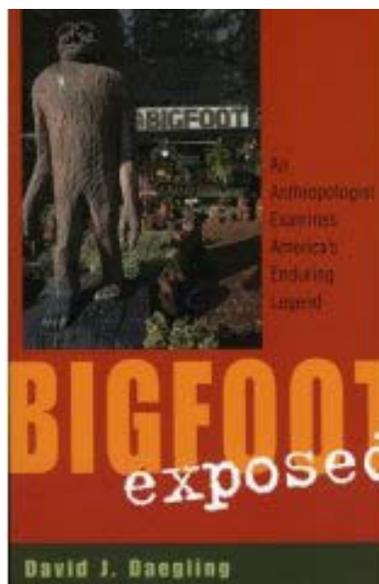
The plotting is well done, more intricate than I expected. The pacing is good, most of the main characters develop over the course of the work, and it is very readable. Kumar clearly enjoys a good story. The only real negative was that the characters get a bit too preachy—a trend I blame on Michael Crichton. I don't care if Kumar wants to extol the virtues of hunting, (I'll take steak over artichokes any day of the week) but he does go a little overboard when he dismisses the vegetarian character's willingness to stand by her principles—after all, the entire novel was set in motion by the principles of his hunter protagonist.

Still, this novel is worth shelf-space for any cryptofiction fan. There aren't many such novels that intertwine biology and speculation, and leave you wishing for more. I hope that Kumar considers another fictional excursion into the realm of mystery animals.

Review: *Bigfoot Exposed: An Anthropologist Examines America's Enduring Legend*

David J. Daegling  
AltaMira, 2004  
ISBN 0-7591-0539-1

Reviewer: Chad Arment



This book presents a skeptical examination of certain purported evidences for Bigfoot. It looks at rehased “classic” Bigfoot tales and a few modern events (notably, Daegling’s interest in the P-G film). The author sets up his hypothesis, “the Bigfoot phenomenon is entirely the product of human manufacture,” whether conscious or subconscious. (Thus setting in motion the chicken-and-the-egg syndrome: did mythology beget Bigfoot, or did Bigfoot beget mythology?)

That sort of hypothesis, of course, is not entirely scientific, as you really can’t test it except on a piecemeal basis. This approach fails on two levels. First, Daegling’s focus is rather superficial, with no detailed treatment of a phenomenon that extends far outside the boundaries of the Pacific Northwest and the Everglades. I do understand that such would require greater expenditure of time, money, and effort. But, in order to reach a valid conclusion regarding the Bigfoot phenomenon as a whole, one must actually investigate more than a few sample areas. To do otherwise places a conclusion within the boundaries of logical fallacy (assuming that what is true of the parts must be true of the whole). Second, Daegling never effectively refutes even the most circumstantial of evidence. So, we’re left with statements like, “the existence of Bigfoot is not impossible but perhaps merely implausible.”

I could go on about how Daegling argues that “human manufacture” hypothesis is a complicated blend of hoaxing and wishful thinking, while at the same time implying that zoological discovery should be simplistic and straight-forward. Or, his idealistic (and incorrect) assertion, that “one DNA sequence could settle the whole matter.” It constantly amazes me that a so-called skeptic has so much faith in humanity’s ability to discern and recognize everything in our environment, that it must just be bad luck (“astonishingly, incomprehensibly bad”) for modern science to miss a significant unknown species. Call me a skeptic (or not), but I don’t have that much faith.

What is most annoying to me, personally, is that I know there are professional primatologists with significant field experience and the educational background to critically evaluate the Bigfoot phenomenon, point out the many inaccuracies in theorizing and supposed evidences within the Bigfoot “advocacy” community, and suggest viable methodologies for acquiring truly confirmative or rejective evidence. (Researchers need to focus on evidence that doesn’t lend itself to, “well, it could be... or not...”) For one potential project, I sent professional primatologists and anthropologists a brief survey regarding the possibility of an unknown primate in North America. The response was less than stellar, but I received one fascinating reply from a professor who had spent time studying the concept. He kindly forwarded copies of a brief correspondence he carried on with the late Dr. Krantz. Far from a believer, he nevertheless had keen insights into what he would expect to see if such a primate existed, and noted some of the biological/ecological problems with the idea of Bigfoot that researchers should consider. He also made suggestions regarding how one might search for evidence. That is the rational approach to a cryptozoological subject that will be necessary to further Bigfoot research. Until then, we’re stuck with a drab exposé of Bigfoot as mythology.

If you just want to balance out your Bigfoot shelf with a book that reflects the perspectives of modern skeptics, this title will fill that need. If you want a current biology-based examination of the Bigfoot phenomenon, both rationally and critically—well, that book hasn’t been written yet.

## Review: The Megalodon Novels

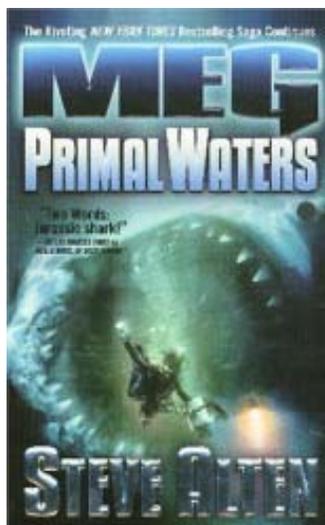
Steve Alten

*Meg* (Doubleday, 1997)

*The Trench* (Kensington, 1999)

*Meg: Primal Waters* (Forge Books, 2004)

Reviewer: Matt Bille



Steve Alten’s novels on the prehistoric shark *Carcharodon megalodon* (“Meg” will do) deserve attention from cryptozoologists because they are, far and away, the best-selling cryptozoologically-themed novels of all time.

*Meg* came out in 1997, followed by *The Trench* and, most recently, *Primal Waters*. All focus mainly on aquanaut/paleontologist Jonas Taylor and his encounters with the presumed-extinct Meg.

Cryptozoologists, always sensitive about how their controversial field is presented even in fiction, are a tough audience. The universally acclaimed cryptozoological novel has yet to appear. (This reviewer’s opinion: Petru Popescu’s *Almost Adam*, with its good characters, well-written action, and highly believable cryptozoology, is the best so far.) Alten is not trying to write fiction for cryptozoologists, but for a mass audience: however, cryptozoologists invariably read novels with one eye on their qualities as novels and the other on the cryptozoological science involved. So it is with cryptozoological reviewers.

I’ll take the novel part first. Novels start with people. In *Meg*, Jonas Taylor seemed more a collection of interesting parts than a believable whole, and he did not change much in *The Trench*. He improved considerably by *Primal Waters*, a novel in which the once seemingly invincible hero had passed sixty and was weighted down with physical, emotional, and financial problems. Likewise, Terry Tanaka, his love interest and then wife, was a two-dimensional spunky heroine in *Meg*, but by *Primal Waters* had become a realistic woman the reader could believe in and care about. Alten’s skill with characters is clearly improving as he goes along. Most of the secondary characters exist mainly to get eaten, so the only thing I’ll mention about them is that evil billionaires and James Bond henchmen have been done way too often.

The characters’ surroundings, home and professional, are described well enough. Alten’s strength, though, is to write fast-moving action, and he knows that. An Alten novel will always deliver more than enough adrenaline to keep domestic stuff from slowing things down. It’s possible to take a thrill ride too far: Jonas’ killing of the Meg in the first book and Terry’s rescue in *The Trench* may not be 100% impossible, but the odds against them happening strain the reader’s credulity. Alten also knows how to use setting and “background action” to keep the reader interested. The life-and-death reality show in *Primal Waters* is fun and very close to believability (a thought which is scarier than any Megalodon). Alten’s setting of a shark attack in the same novel in San Francisco’s baseball-enthusiast-jammed McCovey Cove is another good touch.

To earn the praise of cryptozoologists (assuming the author cares to), a novel must be grounded in fact as much as possible. Reasonable speculation is fine, but Dean Koontz once wrote that you can ask a reader to accept only one implausibility in a novel. In a crypto novel, the implausibility is the existence of the creature, and everything else must be nailed down in the real world to really make it work. Works that start with great promise but dissolve into “you’ve gotta be kidding” territory usually

fail because they add a second implausibility (e.g., the psychic abilities of John Darnton's Neanderthals, or the way Philip Kerr's yetis commune with the local holy man). Believability problems that reduce a reader's enjoyment are irritating even if they have nothing to do with the main creature. In *Meg*, for example, the retired submarine *Nautilus* is put back to sea almost instantly — a process that would have taken years in the real world. In *Primal Waters*, Alten, who surely knows better, inexplicably makes the Arctic-adapted Steller's sea cow at home in tropical waters during a prehistoric flashback. An author may be able to get away with these things in popular adventure novels (as Alten's sales figures prove, he certainly does get away with them), but that's no excuse for doing so.

Now to the good part: the shark. *Meg* is a great villain, and I will admit the possibility that, as a would-be novelist when I'm not writing science or history, I'm a bit jealous that Alten had the idea first.

No one knows what goes on in a shark's head, so Alten's efforts to show things from the shark's viewpoint fall within the author's permitted realm of speculation. The sharks do seem a bit too humanized at times, and they seem to pick their feeding grounds based on dramatic possibilities more than anything else. This approach works anyway because readers are naturally interested in the whale-sized monster's next appearance: what it will do, who will get eaten, and what the humans will try to do about it. Alten writes exciting shark encounters, and he knows that's what his readers want most, so we are never more than a few pages away from the next adrenaline jolt.

In all his books, Alten shows he has done some homework, and he tosses in plenty of background facts (too many, sometimes). Marine life writer Richard Ellis has castigated Alten on a lot of scientific points, and I won't revisit their back-and-forth exchanges on that. What I will say is that some pushing of science is OK in fiction, but too much damages the enjoyment of the cryptozoologist/reader.

Unfortunately, Alten wrote himself into a scientific corner in the first book that he can't get out of. *Meg* postulated a benign environment created in the Marianas trench by hydrothermal vents. We certainly don't know this trench in detail, but an ecosystem supporting an apex predator the size of *Meg* could not just be a scattering of hydrothermal vents. It would have to be a huge, continuous, stable ecosystem, and we know there's no such thing there. Had Alten set his novel in a fictional, unexplored trench, it would have worked, since there are still many seafloor features we know almost nothing about. Alten offers an ingenious if unlikely scenario for how his original *Meg* (a pregnant female) survives the cold water layers on the way up to the surface, and he tries to explain the pressure differential problem, but the latter effort does not work. There's no believable way a huge, complex creature adapted to life seven miles down can swim to the surface and live. From a dramatic point of view, Alten was wise in choosing to tackle this problem only in *Meg* and generally just let it go in the sequels.

It is, no doubt, unfair to put on Alten's shoulders the burden of ensuring zoological and cryptozoological fidelity in books intended mainly to be fun. Cryptozoologists, after all, are maybe half a percent of anyone's readers. And Alten's books are fun. They would just be more fun if readers did not run into any more abyssal-adapted kronosaurs in the pursuit of *Megalodon* thrills. It would be very interesting to see Alten, in the future, move away from *Meg* and apply his improving skills as novelist and researcher to another cryptozoological story line.

Bottom line: if you want enjoyable summer reading (well away from the beach), Alten knows what you want, and he knows how to deliver it. Just don't use his work as a reference for a paper on paleontology, and we will all get along swimmingly.

Matt Bille is an author on cryptozoology, zoology, and other fields of science and history. His next cryptozoology book, *Shadows of Existence*, will be out from Hancock in Fall 2005.

Review: *Monster of God: The Man-Eating Predator  
in the Jungles of History and the Mind*

David Quammen  
W.W.Norton, 2004 (paper-back edition),  
528 pages, \$15.95  
ISBN 0-393-05140-4

Reviewer: Ron Rosenblatt

*Monster of God* is not a book of cryptozoology, although it deals with one of the stranger aspects of the relationship between humans and wildlife, which is the habit of some large predators of killing and eating humans on a fairly routine basis. Many readers may be surprised to know that this sort of thing still goes on in our 21st century world.

Charles Fort paid some attention (Especially in *Lo!*) to cases of predation on livestock (mostly sheep) in Ireland and elsewhere. In most instances, “wolves” were blamed, even though wolves had been extirpated in Britain and Ireland in the 18th century. Sometimes, bodies of other predators, such as jackals, would turn up in areas where “wolves” were supposedly killing sheep. Fort also paid some attention to other mysterious and supposedly dangerous creatures, such as giant black dogs or phantom felines.

Today, we know some of these phantom big cats as the “Exmoor Beast” or “Surrey Puma.” So the subject of wild animal predation on livestock or people is not so far from Fortean cryptozoology. *Monster of God* deals with this subject, and is a suitable book to review for *NABR*. It covers the subject of what Quammen chooses to call “Alpha Predators,” big predators at the top of the “Food Chain,” such as lions, bears, crocodiles, and tigers, all of which are known to kill and eat men, women, and children routinely, and without any particular special provocation or reason.

Quammen makes an admirable attempt to round up just about everything there is to say on this subject, perhaps succeeding too well, as the reader risks being overwhelmed by a flood of excessively detailed facts.

This is particularly true in the chapter dealing with the Gir Forest Lions (*Panthera leo persica*) of India. Quammen drags in every factoid even remotely connected to the subject, until the readers wants to cry out with the child who got a book on alligators as a present, and then remarked, “This book tells me more about alligators than I really want to know.”

Yet in the chapters on the over-populated Brown Bears of Rumania, and the vanishing tigers of the Russian Far East, Quammen tells the reader very little about the animals involved, focusing his attention much more on the people who live in the regions where the bears and tigers are found, “marginalized, rural people,” for whom he claims great concern. Yet the sincerity of this concern later comes under considerable suspicion.

*Monster of God* starts out as a very promising book, but soon starts to go down-hill, when Quammen begins to face the fact that nothing will save these magnificent predators except programs based on giving indigenous people a financial stake in the survival of wildlife through controlled and expensive safari hunting of limited numbers of these animals to provide the revenue needed to save the rest. At this point, Quammen begins to change his attitude. If revenue raised by limited hunting by wealthy sportsmen from Europe and America is the only way to save the “Alpha Predators,” Quammen is not interested. The notion offends his elitist and purist point of view. If this is the only way to do it, Quammen implies, better to let the predators vanish into extinction and, presumably, the indigenous peoples whose material standard of living might otherwise be improved by managing a sport hunting industry.

Quammen refuses to face the fact that without a strong financial incentive to do it, indigenous people just won't be willing to go on sharing their land with dangerous wild animals. Already, poisoning of African lions by cattle-herding groups is becoming a serious problem in some parts of Africa. Some observers now estimate the entire living population of African lions at 16,000 to

30,000 animals, down from 100,000 in 1900. It may already be too late for the African lion, as it is for the Indian tiger.

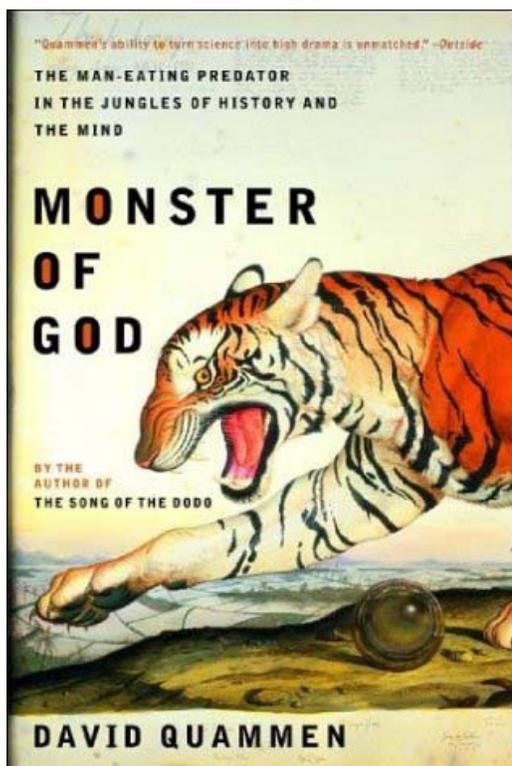
Essentially, Quammen's position is that if he can't have things the way he wants them, he will pick up his marbles and go home. This is not an encouraging attitude for those of us who desperately want to see the great predators survive into the future, even though prospects are not good, to put it bluntly.

Quammen grossly over-estimates the survival prospects for "Alpha Predators" like tigers, lions, bears, and salt-water crocs. He believes they will last as wild animals until 2150, which is preposterous. We shall be lucky if any of them are still alive outside of captivity fifty years from today. (The only possible, and likely, exception to this fate will be the leopard. The leopard's small and inconspicuous size, high intelligence, and superb ability to adapt to almost any environment from deep wilderness to suburbia, suggests strongly that it will be with us for a long time to come.)

On the other hand, Quammen is also wrong when he gloomily predicts a future animal world populated solely by rats and roaches. In fact, numerous species of wildlife have already made the transition from the increasingly unfriendly agribusiness countryside to life in the parks and green spaces of cities. Birds like herons, egrets, and hawks are already established as urban wildlife, as are coyotes, chipmunks, snapping turtles, bullfrogs, largemouth bass, and so forth. These creatures are creating mini-ecologies in cities, not based on remnant wilderness, but on "natural" spaces created by people. Given increasingly widespread attitudes of tolerance and respect for wildlife on the part of city-dwellers, we can expect that the urban scene will be brightened in the future by opportunities for the public to experience and enjoy wild animals.

We will lose the grizzly bears and the tigers, but there will be many small animals, both predator and prey, that will survive into the years to come.

Monster of God is a disappointing book, despite Quammen's genuinely witty and entertaining attempts to lighten up the book's pedantic content and pessimistic attitude. Quammen bitterly rejects proposals for hunting-based management programs for large predators, yet offers no alternatives. The result is a profoundly unsatisfying book, one that promises much, but delivers little.



Skule Skerry

John Buchan

*Who's there, besides foul weather?*

—King Lear.

Mr. Anthony Hurrell was a small man, thin to the point of emaciation, but erect as a ramrod and wiry as a cairn terrier. There was no grey in his hair, and his pale far-sighted eyes had the alertness of youth, but his lean face was so wrinkled by weather that in certain lights it looked almost venerable, and young men, who at first sight had imagined him their contemporary, presently dropped into the “sir” reserved for indisputable seniors. His actual age was, I believe, somewhere in the forties. He had inherited a small property in Northumberland, where he had accumulated a collection of the rarer wildfowl; but much of his life had been spent in places so remote that his friends could with difficulty find them on the map. He had written a dozen ornithological monographs, was joint editor of the chief modern treatise on British birds, and had been the first man to visit the *tundras* of the Yenisei. He spoke little and that with an agreeable hesitation, but his ready smile, his quick interest, and the impression he gave of having a fathomless knowledge of strange modes of life, made him a popular and intriguing figure among his friends. Of his doings in the War he told us nothing; what we knew of them—and they were sensational enough in all conscience—we learned elsewhere. It was Nightingale’s story which drew him from his customary silence. At the dinner following that event he made certain comments on current explanations of the super-normal. “I remember once,” he began, and before we knew he had surprised us by embarking on a tale.

He had scarcely begun before he stopped. “I’m boring you,” he said deprecatingly. “There’s nothing much in the story.... You see, it all happened, so to speak, inside my head.... I don’t want to seem an egotist....”

“Don’t be an ass, Tony,” said Lamancha. “Every adventure takes place chiefly inside the head of somebody. Go on. We’re all attention.”

“It happened a good many years ago,” Hurrell continued, “when I was quite a young man. I wasn’t the cold scientist then that I fancy I am to-day. I took up birds in the first instance chiefly because they fired what imagination I possess. They fascinated me, for they seemed of all created things the nearest to pure spirit—those little beings with a normal temperature of 125°. Think of it. The goldcrest, with a stomach no bigger than a bean, flies across the North Sea! The curlew sandpiper, which breeds so far north that only about three people have ever seen its nest, goes to Tasmania for its holidays! So I always went bird-hunting with a queer sense of expectation and a bit of a tremor, as if I were walking very near the boundaries of the things we are not allowed to know. I felt this especially in the migration season. The small atoms, coming God knows whence and going God knows whither, were sheer mystery—they belonged to a world built in different dimensions from ours. I don’t know what I expected, but I was always waiting for something, as much in a flutter as a girl at her first ball. You must realize that mood of mine to understand what follows.

“One year I went to the Norland Islands for the spring migration. Plenty of people do the same, but I had the notion to do something a little different. I had a theory that migrants go north and south on a fairly narrow road. They have their corridors in the air as clearly defined as a highway, and keep an inherited memory of these corridors, like the stout conservatives they are. So I didn’t go to the Blue Banks or to Noop or to Hermaness or any of the obvious places, where birds might be expected to make their first landfall.

From: *The Runagates Club*, by John Buchan (London, Thomas Nelson & Sons, 1928).

“At that time I was pretty well read in the sagas, and had taught myself Icelandic for the purpose. Now it is written in the Saga of Earl Skuli, which is part of the Jarla Saga or Saga of the Earls, that Skuli, when he was carving out his earldom in the Scots islands, had much to do with a place called the Isle of the Birds. It is mentioned repeatedly, and the saga-man has a lot to say about the amazing multitude of birds there. It couldn't have been an ordinary gullery, for the Northmen saw too many of these to think them worth mentioning. I got it into my head that it must have been one of the alighting places of the migrants, and was probably as busy a spot today as in the eleventh century. The saga said it was near Halmarsness, and that is on the west side of the island of Una, so to Una I decided to go. I fairly got that Isle of Birds on the brain. From the map it might be any one of a dozen skerries under the shadow of Halmarsness.

“I remember that I spent a good many hours in the British Museum before I started, hunting up the scanty records of those parts. I found—I think it was in Adam of Bremen—that a succession of holy men had lived on the isle, and that a chapel had been built there and endowed by Earl Rognvald, which came to an end in the time of Malise of Strathearn. There was a bare mention of the place, but the chronicler had one curious note. ‘*Insula Avium,*’ ran the text, ‘*quæ est ultima insula et proxima Abyssso.*’ I wondered what on earth he meant. The place was not ultimate in any geographical sense, neither the farthest north nor the farthest west of the Norlands. And what was the ‘abyss’? In monkish Latin the word generally means Hell—Bunyan’s Bottomless Pit—and sometimes the grave; but neither meaning seemed to have much to do with an ordinary sea skerry.

“I arrived at Una about eight o’clock in a May evening, having been put across from Voss in a flitboat. It was a quiet evening, the sky without clouds but so pale as to be almost grey, the sea grey also but with a certain iridescence in it, and the low lines of the land a combination of hard greys and umbers, cut into by the harder white of the lighthouse. I can never find words to describe that curious quality of light that you get up in the North. Sometimes it is like looking at the world out of deep water—Farquharson used to call it ‘milky,’ and one saw what he meant. Generally it is a sort of essence of light, cold and pure and distilled, as if it were reflected from snow. There is no colour in it, and it makes thin shadows. Some people find it horribly depressing—Farquharson said it reminded him of a churchyard in the early morning where all his friends were buried—but personally I found it tonic and comforting. But it made me feel very near the edge of the world.

“There was no inn, so I put up at the post office, which was on a causeway between a fresh-water loch and a sea voe, so that from the doorstep you could catch brown trout on one side and sea-trout on the other. Next morning I set off for Halmarsness, which lay five miles to the west over a flat moorland all puddled with tiny lochans. There seemed to be nearly as much water as land. Presently I came to a bigger loch under the lift of ground which was Halmarsness. There was a gap in the ridge through which I looked straight out to the Atlantic, and there, in the middle distance, was what I knew instinctively to be my island.

“It was perhaps a quarter of a mile long, low for the most part, but rising in the north to a grassy knoll beyond the reach of any tides. In parts it wed to a few yards width, and the lower levels often have been awash. But it was an island, not a reef, and I thought I could make out the remains of the monkish cell. I climbed Halmarsness, and there, with nesting skuas swooping angrily about my head, I got a better view. It was certainly my island, for the rest of the archipelago were inconsiderable skerries, and I realized that it might well be a resting-place for migrants, for the mainland cliffs were too thronged with piratical skuas and other jealous fowl to be comfortable for weary travellers.

“I sat for a long time on the headland looking down from the three hundred feet of basalt to the island half a mile off—the last bit of solid earth between me and Greenland. The sea was calm for Norland waters, but there was a snowy edging of surf to the skerries which told of a tide rip. Two miles farther south I could see the entrance to the famous Roost of Una, where, when tide and wind collide, there is a wall like a house, so that a small steamer cannot pass it. The only sign of human habitation was a little grey farm in the lowlands toward the Roost; but the place was full of the evidence of man—a herd of Norland ponies, each tagged with its owner’s name—grazing sheep of the piebald Norland breed—a broken barbed-wire fence that drooped

over the edge of the cliff. I was only an hour's walk from a telegraph office, and a village which got its newspapers not more than three days late. It was a fine spring noon, and in the empty bright land there was scarcely a shadow.... All the same, as I looked down at the island I did not wonder that it had been selected for attention by the saga-man and had been reputed holy. For it had an air of concealing something, though it was as bare as a billiard-table. It was an intruder, an irrelevance in the picture, planted there by some celestial caprice. I decided forthwith to make my camp on it, and the decision, inconsequently enough, seemed to me to be something of a venture.

"That was the view taken by John Ronaldson, when I talked to him after dinner. John was the postmistress's son, more fisherman than crofter, like all Norlanders, a skilful sailor and an adept at the dipping lug, and noted for his knowledge of the western coast. He had difficulty in understanding my plan, and when he identified my island he protested.

"Not Skule Skerry!" he cried. "What would take ye there, man? Ye'll get a' the birds ye want on Halmarsness and a far better bield. Ye'll be blawn away on the skerry, if the wund rises."

"I explained to him my reasons as well as I could, and I answered his fears about a gale by pointing out that the island was sheltered by the cliffs from the prevailing winds, and could be scourged only from the south, south-west, or west, quarters from which the wind rarely blew in May. 'It'll be cauld,' he said, 'and wat.' I pointed out that I had a tent and was accustomed to camping. 'Ye'll starve'—I expounded my proposed methods of commissariat. 'It'll be an ill job getting ye on and off'—but after cross-examination he admitted that ordinarily the tides were not difficult, and that I could get a rowboat to a beach below the farm I had seen—its name was Sgurrae. Yet when I had said all this he still raised objections, till I asked him flatly what was the matter with Skule Skerry.

"'Naebody gangs there,' he said gruffly.

"'Why should they?' I asked. 'I'm only going to watch the birds.'

"But the fact that it was never visited seemed to stick in his throat, and he grumbled out something that surprised me. 'It has an ill name,' he said. But when I pressed him he admitted that there was no record of shipwreck or disaster to account for the ill name. He repeated the words 'Skule Skerry' as if they displeased him. 'Folk dinna gang near it. It has aye had an ill name. My grandfather used to say that the place wasna canny.'

"Now your Norlander has nothing of the Celt in him, and is as different from the Hebridean as a Northumbrian from a Cornishman. They are a fine, upstanding, hard-headed race, almost pure Scandinavian in blood, but they have as little poetry in them as a Manchester Radical. I should have put them down as utterly free from superstition, and, in all my many visits to the islands, I have never yet come across a folk-tale—hardly even a historical legend. Yet here was John Ronaldson, with his weather-beaten face and stiff chin and shrewd blue eyes, declaring that an innocent-looking island 'wasna canny,' and showing the most remarkable disinclination to go near it.

"Of course all this only made me keener. Besides, it was called Skule Skerry, and the name could only come from Earl Skuli; so it was linked up authentically with the oddments of information I had collected in the British Museum—the Jarla Saga and Adam of Bremen and all the rest of it. John finally agreed to take me over next morning in his boat, and I spent the rest of the day in collecting my kit. I had a small tent, and a Wolseley valise and half a dozen rugs, and, since I had brought a big box of tinned stuffs from the Stores, all I needed was flour and meal and some simple groceries. I learned that there was a well on the island, and that I could count on sufficient driftwood for my fire, but to make certain I took a sack of coals and another of peats. So I set off next day in John's boat, ran with the wind through the Roost of Una when the tide was right, tacked up the coast, and came to the skerry early in the afternoon.

"You could see that John hated the place. We ran into a cove on the east side, and he splashed ashore as if he expected to have his landing opposed, looking all the time sharply about him. When he carried my stuff to a hollow under the knoll, which gave a certain amount of shelter, his head was always twisting round. To me the place seemed to be the last word in forgotten peace. The swell lipped gently on the reefs and the little pebbled beaches, and only the babble of gulls from Halmarsness broke the stillness.

“John was clearly anxious to get away, but he did his duty by me. He helped me to get the tent up, found a convenient place for my boxes, pointed out the well and filled my water bucket, and made a zareba of stones to protect my camp on the Atlantic side. We had brought a small dinghy along with us, and this was to be left with me, so that when I wanted I could row across to the beach at Sgurrae. As his last service he fixed an old pail between two boulders on the summit of the knoll, and filled it with oily waste, so that it could be turned into a beacon.

“‘Ye’ll maybe want to come off,’ he said, ‘and the boat will maybe no be there. Kindle your flare, and they’ll see it at Sgurrae and get the word to me, and I’ll come for ye though the Muckle Black Silkie himsel’ was hunkerin’ on the skerry.’

“Then he looked up and sniffed the air. ‘I dinna like the set of the sky,’ he declared. ‘It’s a bad weather-head. There’ll be mair wund than I like in the next four-and-twenty hours.’

“So saying, he hoisted his sail, and presently was a speck on the waters towards the Roost. There was no need for him to hurry, for the tide was now wrong, and before he could pass the Roost he would have three hours to wait on this side of the Mull. But the man, usually so deliberate and imperturbable, had been in a fever to be gone.

“His departure left me in a curious mood of happy loneliness and pleasurable expectation. I was left solitary with the seas and the birds. I laughed to think that I had found a streak of superstition in the granite John. He and his Muckle Black Silkie! I knew the old legend of the North which tells how the Finns, the ghouls that live in the deeps of the ocean, can on occasion don a seal’s skin and come to land to play havoc with mortals. But *diablerie* and this isle of mine were worlds apart. I looked at it as the sun dropped, drowsing in the opal-coloured tides, under a sky in which pale clouds made streamers like a spectral *aurora borealis*, and I thought that I had stumbled upon one of those places where Nature seems to invite one to her secrets. As the light died the sky was flecked as with the roots and branches of some great nebular tree. That would be the ‘weather-head’ of which John Ronaldson had spoken.

“I set my fire going, cooked my supper, and made everything snug for the night. I had been right in my guess about the migrants. It must have been about ten o’clock when they began to arrive—after my fire had died out and I was smoking my last pipe before getting into my sleeping-bag. A host of fieldfares settled gently on the south part of the skerry. A faint light lingered till after midnight, but it was not easy to distinguish the little creatures, for they were aware of my presence and did not alight within a dozen yards of me. But I made out bramblings and buntings and what I thought was the Greenland wheatear; also jack snipe and sanderling; and I believed from their cries that the curlew sandpiper and the whimbrel were there. I went to sleep in a state of high excitement, promising myself a fruitful time on the morrow.

“I slept badly, as one often does one’s first night in the open. Several times I woke with a start, under the impression that I was in a boat rowing swiftly with the tide. And every time I woke I heard the flutter of myriad birds, as if a velvet curtain were being slowly switched along an oak floor. At last I fell into deeper sleep, and when I opened my eyes it was full day.

“The first thing that struck me was that it had got suddenly colder. The sky was stormily red in the east, and masses of woolly clouds were banking in the north. I lit my fire with numbed fingers and hastily made tea. I could see the nimbus of sea-fowl over Halmarsness, but there was only one bird left on my skerry. I was certain from its forked tail that it was a Sabine’s gull, but before I got my glass out it was disappearing into the haze towards the north. The sight cheered and excited me, and I cooked my breakfast in pretty good spirits.

“That was literally the last bird that came near me, barring the ordinary shearwaters and gulls and cormorants that nested round about Halmarsness. (There was not one single nest of any sort on the island. I had heard of that happening before in places which were regular halting-grounds for migrants.) The travellers must have had an inkling of the coming weather and were waiting somewhere well to the south. For about nine o’clock it began to blow. Great God, how it blew! You must go to the Norlands if you want to know what wind can be. It is like being on a mountain-top, for there is no high ground to act as a wind-break. There was no rain, but the surf broke in showers and every foot of the skerry was drenched with it. In a trice Halmarsness was hidden, and I seemed to be in the centre of a maelstrom, choked with scud and buffeted on every side by swirling waters.

“Down came my tent at once. I wrestled with the crazy canvas and got a black eye from the pole, but I managed to drag the ruins into the shelter of the zareba which John had built, and tumble some of the bigger boulders on it. There it lay, flapping like a sick albatross. The water got into my food boxes, and soaked my fuel, as well as every inch of my clothing.... I had looked forward to a peaceful day of watching and meditation, when I could write up my notes; and instead I spent a morning like a Rugger scrum. I might have enjoyed it, if I hadn't been so wet and cold, and could have got a better lunch than some clammy mouthfuls out of a tin. One talks glibly about being 'blown off' a place, generally an idle exaggeration—but that day I came very near the reality. There were times when I had to hang on for dear life to one of the bigger stones to avoid being trundled into the yeasty seas.

“About two o'clock the volume of the storm began to decline, and then for the first time I thought about the boat. With a horrid sinking of the heart I scrambled to the cove where we had beached it. It had been drawn up high and dry, and its painter secured to a substantial boulder. But now there was not a sign of it except a ragged rope-end round the stone. The tide had mounted to its level, and tide and wind had smashed the rotten painter. By this time what was left of it would be tossing in the Roost.

“This was a pretty state of affairs. John was due to visit me next day, but I had a cold twenty-four hours ahead of me. There was of course the flare he had left me, but I was not inclined to use this. It looked like throwing up the sponge and confessing that my expedition had been a farce. I felt miserable, but obstinate, and, since the weather was clearly mending, I determined to put the best face on the business, so I went back to the wreckage of my camp, and tried to tidy up. There was still far too much wind to do anything with the tent, but the worst of the spindrift had ceased, and I was able to put out my bedding and some of my provender to dry. I got a dry jersey out of my pack, and, as I was wearing fisherman's boots and oilskins, I managed to get some slight return of comfort. Also at last I succeeded in lighting a pipe. I found a corner under the knoll which gave me a modicum of shelter, and I settled myself to pass the time with tobacco and my own thoughts.

“About three o'clock the wind died away completely. That I did not like, for a dead lull in the Norlands is often the precursor of a new gale. Indeed, I never remembered a time when some wind did not blow, and I had heard that when such a thing happened people came out of their houses to ask what the matter was. But now we had the deadest sort of calm. The sea was still wild and broken, the tides raced by like a mill-stream, and a brume was gathering which shut out Halmarsness—shut out every prospect except a narrow circuit of grey water. The cessation of the racket of the gale made the place seem uncannily quiet. The present tumult of the sea, in comparison with the noise of the morning, seemed no more than a mutter and an echo.

“As I sat there I became conscious of an odd sensation. I seemed to be more alone, more out off, not only from my fellows but from the habitable earth, than I had ever been before. It was like being in a small boat in mid-Atlantic—but worse, if you understand me, for that would have been loneliness in the midst of a waste which was nevertheless surrounded and traversed by the works of man, whereas now I felt that I was clean outside man's ken. I had come somehow to the edge of that world where life is, and was very close to the world which has only death in it.

“At first I do not think there was much fear in the sensation—chiefly strangeness, but the kind of strangeness which awes without exciting. I tried to shake off the mood, and got up to stretch myself. There was not much room for exercise, and as I moved with stiff legs along the reefs I slipped into the water, so that I got my arms wet. It was cold beyond belief—the very quintessence of deathly Arctic ice, so cold that it seemed to sear and bleach the skin.

“From that moment I date the most unpleasant experience of my life. I became suddenly the prey of a black depression, shot with the red lights of terror. But it was not a numb terror, for my brain was acutely alive.... I had the sense to try to make tea, but my fuel was still too damp, and the best I could do was to pour half the contents of my brandy flask into a cup and swallow the stuff. That did not properly warm my chilled body, but—since I am a very temperate man—it speeded up my thoughts instead of calming them. I felt myself on the brink of a childish panic.

“One thing I thought I saw clearly—the meaning of Skule Skerry. By some alchemy of nature, at which I could only guess, it was on the track by which the North exercised its spell, a cableway for the magnetism of that cruel frozen Uttermoest, which man might penetrate but could never subdue or understand. Though the latitude was only 61°, there were folds and tucks in space, and this isle was the edge of the world. Birds knew it, and the old Northmen, who were primitive beings like the birds, knew it. That was why an inconsiderable skerry had been given the name of a conquering Jarl. The old Church knew it, and had planted a chapel to exorcise the demons of darkness. I wondered what sights the hermit, whose cell had been on the very spot where I was cowering, had seen in the winter dusks.

“It may have been partly the brandy acting on an empty stomach, and partly the extreme cold, but my brain, in spite of my efforts to think rationally, began to run like a dynamo. It is difficult to explain my mood, but I seemed to be two persons—one a reasonable modern man trying to keep sane and scornfully rejecting the fancies which the other, a cast-back to something elemental, was furiously spinning. But it was the second that had the upper hand.... I felt myself loosed from my moorings, a mere waif on uncharted seas. What is the German phrase? *Urdummheit*—Primal Idiocy? That was what was the matter with me. I had fallen out of civilization into the Outlands and was feeling their spell.... I could not think, but I could remember, and what I had read of the Norse voyagers came back to me with horrid persistence. They had known the outland terrors—the Sea Walls at the world’s end, the Curdled Ocean with its strange beasts. Those men did not sail north as we did, in steamers, with modern food and modern instruments, huddled into crews and expeditions. They had gone out almost alone, in brittle galleys, and they had known what we could never know.

“And then, I had a shattering revelation. I had been groping for a word and I suddenly got it. It was Adam of Bremen’s ‘*proxima Abyssa*.’ This island was next door to the Abyss, and the Abyss was that blanched world of the North which was the negation of life.

“That unfortunate recollection was the last straw. I remember that I forced myself to get up and try again to kindle a fire. But the wood was still too damp, and I realized with consternation that I had very few matches left, several boxes having been ruined that morning. As I staggered about I saw the flare which John had left for me, and had almost lit it. But some dregs of manhood prevented me—I could not own defeat in that babyish way—I must wait till John Ronaldson came for me next morning. Instead I had another mouthful of brandy, and tried to eat some of my sodden biscuits. But I could scarcely swallow; the infernal cold, instead of rousing hunger, had given me only a raging thirst.

“I forced myself to sit down again with my face to the land. You see, every moment I was becoming more childish. I had the notion—I cannot call it a thought—that down the avenue from the North something terrible and strange might come. My nervous state must have been pretty bad, for though I was cold and empty and weary I was scarcely conscious of physical discomfort. My heart was fluttering like a scared boy’s; and all the time the other part of me was standing aside and telling me not to be a damned fool.... I think that if I had heard the rustle of a flock of migrants I might have pulled myself together, but not a blessed bird had come near me all the day. I had fallen into a world that killed life, a sort of Valley of the Shadow of Death.

“The brume spoiled the long northern twilight, and presently it was almost dark. At first I thought that this was going to help me, and I got hold of several of my half-dry rugs, and made a sleeping-place. But I could not sleep, even if my teeth had stopped chattering, for a new and perfectly idiotic idea possessed me. It came from a recollection of John Ronaldson’s parting words. What had he said about the Black Silkie—the Finn who came out of the deep and hunkered on this skerry? Raving mania! But on this lost island in the darkening night, with icy tides lapping about me, was any horror beyond belief?

“Still, the sheer idiocy of the idea compelled a reaction. I took hold of my wits with both hands and cursed myself for a fool. I could even reason about my folly. I knew what was wrong with me. I was suffering from *panic*—a physical affection produced by natural causes, explicable, though as yet not fully explained. Two friends of mine had once been afflicted with it: one in a lonely glen in the Jotunheim, so that he ran for ten miles over stony hills till he found a *sæter* and human companionship; the other in a Bavarian forest, where both he and his guide

tore for hours through the thicket till they dropped like logs beside a highroad. This reflection enabled me to take a pull on myself and to think a little ahead. If my troubles were physical then there would be no shame in looking for the speediest cure. Without further delay I must leave this God-forgotten place.

“The flare was all right, for it had been set on the highest point of the island, and John had covered it with a peat. With one of my few remaining matches I lit the oily waste, and a great smoky flame leapt to heaven.

“If the half-dark had been eerie, this sudden brightness was eerier. For a moment the glare gave me confidence, but as I looked at the circle of moving waters evilly lit up all my terrors returned.... How long would it take John to reach me? They would see it at once at Sgurra-voe—they would be on the look-out for it—John would not waste time, for he had tried to dissuade me from coming—an hour—two hours at the most....

”I found I could not take my eyes from the waters. They seemed to flow from the north in a strong stream, black as the heart of the elder ice, irresistible as fate, cruel as hell. There seemed to be uncouth shapes swimming in them, which were more than the flickering shadows from the flare.... Something portentous might at any moment come down that river of death.... Someone....

“And then my knees gave under me and my heart shrank like a pea, for I saw that the someone had come.

“He drew himself heavily out of the sea, wallowed for a second, and then raised his head and, from a distance of five yards, looked me blindly in the face. The flare was fast dying down, but even so at that short range it cast a strong light, and the eyes of the awful being seemed to be dazed by it. I saw a great dark head like a bull’s—an old face wrinkled as if in pain—a gleam of enormous broken teeth—a dripping beard—all formed on other lines than God has made mortal creatures. And on the right of the throat was a huge scarlet gash. The thing seemed to be moaning, and then from it came a sound—whether of anguish or wrath I cannot tell—but it seemed to be the cry of a tortured fiend.

“That was enough for me. I pitched forward in a swoon, hitting my head on a stone, and in that condition three hours later John Ronaldson found me.

“They put me to bed at Sgurra-voe with hot earthenware bottles, and the doctor from Voss next day patched up my head and gave me a sleeping draught. He declared that there was little the matter with me except shock from exposure, and promised to set me on my feet in a week.

“For three days I was as miserable as a man could be, and did my best to work myself into a fever. I had said not a word about my experience, and left my rescuers to believe that my only troubles were cold and hunger, and that I had lit the flare because I had lost the boat. But during these days I was in a critical state. I knew that there was nothing wrong with my body, but I was gravely concerned about my mind.

“For this was my difficulty. If that awful thing was a mere figment of my brain, then I had better be certified at once as a lunatic. No sane man could get into such a state as to see such portents with the certainty with which I had seen that creature come out of the night. If, on the other hand, the thing was a real presence, then I had looked on something outside natural law, and my intellectual world was broken in pieces. I was a scientist, and a scientist cannot admit the supernatural. If with my eyes I had beheld the monster in which Adam of Bremen believed, which holy men had exercised, which even the shrewd Norlanders shuddered at as the Black Silkie, then I must burn my books and revise my creed. I might take to poetry or theosophy, but I would never be much good again at science.

“On the third afternoon I was trying to doze, and with shut eyes fighting off the pictures which tormented my brain. John Ronaldson and the farmer of Sgurra-voe were talking at the kitchen door. The latter asked some question, and John replied:

“‘Aye, it was a wall-ross and nae mistake. It cam ashore at Gloop Ness and Sandy Fraser has gotten the skin of it. It was deid when he found it, but no long deid. The puir beast would drift south on some floe, and it was sair hurt, for Sandy said it had a hole in its throat ye could put your nieve in. There hasna been a wall-ross come to Una since my grandfather’s day.’

“I turned my face to the wall and composed myself to sleep. For now I knew that I was sane, and need not forswear science.”