

THE MISSOURI LEVIATHAN

BY

Richard Own

and

William Clift

Handwritten unpublished manuscript
given to Dr. G.G. Simpson in 1927
by C.D.Sherborn

These amusing notes, partly by William
Clift, partly by Richard Owen, & partly
in a hand unknown to me, given me
by Sherborn, London, 1927.

The whole has not been published.
I gave a brief account of it in
Nat. Hist. - "Misconstructing a Mastodon"
W.H.

Mifousium

The Missouri Leviathan

We are not disposed to place the most implicit confidence in anything that comes from our American friends. They deal too much in the marvellous, and speculating on the good natured credulity of the English they often narrate bus strange stories, and exhibit for our amusement still stranger animals. a person of the name of Koch has recently imported from America the fossil remains of a gigantic Animal, between whose legs, it is said, the mammoth, and even the mighty — Inuanodon, may have strutted with ease. Since the arrival of this huge Skeleton, it has attracted the attention of the curious and Scientific. Anxious of ascertaining the truth of the statements made with regard to the Missouri Leviathan we yesterday paid it a visit. It is certainly the largest Skeleton we ever saw. Mr. Koch represents that he discovered it in 1838 in Gasconade County, Missouri, on the shores of the Bourbois river. It was found imbedded 20 feet beneath the surface of the earth. The Skeleton measures 20 feet in length, and 15 in height. In consequence of its being much larger than the fossil remains of any animal yet seen many supposed it was not genuine, and that instead of being one entire Skeleton it was composed of the bones of many animals. We are not surprised at this notion, for the very clumsy and unscientific manner in which the bones are articulated would naturally suggest such an idea. We are by no means prepared to pronounce positively that all the bones that constitute the Skeleton exhibited naturally belong to it. We do not, however, think that the proprietor is practising a wilful deception on the public. It is possible that he discovered in the neighbourhood of the large bones some which might have belonged to another animal. We understand that the curiosity has attracted the notice

of some of our first comparative anatomists, and although they are, as yet, unable to say what species it belongs to, they have no doubt as to its being the genuine fossil relic of some gigantic animal of other days.

This is so far satisfactory. Professor Owen, we are informed will shortly bring the subject before the Geological Society.

In the vicinity of the skeleton Mr. Koch discovered an arrowhead of rose-coloured flint, resembling those used by the American Indians, but of a larger size. If this arrow be the production of human agency it will overturn the generally received notion entertained by geologists, that the antediluvian animals existed and became extinct prior to the creation of man. This is a point, however, for geologists to settle. we merely state what we saw.

The animal is supposed to be aquatic in its nature. This we should have inferred from the anatomical structure of its neck.

From the Times Newspaper

31 December 1841—

These sheets by Richard
Owen

I beg to submit the following Report on the
Collection of Fossil Remains, from the Tertiary
strata of the Miocene, now exhibiting at
the Egyptian Hall. - The principal of
which viz. the skeleton of the large quad-
ruped, public curiosity has been excited
in consequence of the enormous bulk and
strange ^{proportions} collocation of the crural bone
apophyses, and from its claims to be
regarded as a monodactyl, ^{aquatic species} if not the
Leviathan, set forth in the descriptions which
^{have been} published by the Proprietor.

The comparative anatomist at once
detects that the unusual size of the
animal depends upon the unnatural
manner in which the parts of the
skeleton are associated. The vertebral
column is twisted two or three feet above
the base of the scapula, it is lengthened
out by interposed plates exappiating the
intervertebral substances, and also by some
superadded and extrinsic vertebrae. The
sacrum is raised above the corresponding
articular surfaces of the opercum -
and then are carried back beyond the
tail, so as to lengthen ~~them~~ to the utmost
the distance between the fore and hind
legs. The transverse position of the two of
the ribs as clavicles, and the horizontally
diverging larks, the inversion of some of
the long bones of the extremities, and the
radiation of the toes, complete the anomalous
and improving character of the Miocene
of St. Koch. The structure of the scapula

and the form of the articular surfaces at the lower end of the humerus forbidding rotation of the fore-arm proved that a clavicle could form no part of the organization of the animal in question, and Mr. Swen expressed his participation at the promptness with which, when the correspondence of the supposed clavicles of the Missourium, with the first pair of ribs of the Mastodon, was pointed out to Mr. Koch, he had restored them to their proper position. It was too much to expect however that a thorough reform in the juxtaposition of the rest of the skeleton, which would necessarily involve considerable expense could be undertaken by the present proprietor, who was dependent upon the visits of the curious for remuneration for the great outlay which the disinterment, and carriage of his collection of fossil remains to this country had already occasioned.

The next question was the actual species of animal to which the skeleton was to be referred.

The observations on the bones of the anterior extremity, which disproved the existence of clavicles, at the same time established the place of the animal in the great primary group of "Amphibia": the enormous teeth of the upper jaw show it to have belonged to the Perospondylic group of Pachyderms: and the molar teeth

prove

prove it to be identical with the Tetacanthodon or Mastodon

Prof. Brown subsequently proved that these genera were identical; but he went on to show, that the indications unerringly given by the molar teeth of the skeleton were confirmed by a comparison of all the other bones with those of the Mastodon giganteum which are either preserved in the museums of this country, or have been described by Cuvier and other Naturalists. No ~~specimen~~^{specimen} of the Mastodon has hitherto been obtained in which the outer table of the skull, and extensive cancellated structure which separates it from the inner one has not been destroyed: the skull of the present skeleton is in the same mutilated condition -

These sheets by William
Clift, Owens' father-in-
law.

January 20. 1842.
Copy. of a Manuscript Letter To Petty Vaughan Esq (1.)
N^o. 70. Fenchurch Street. London. Rec^d. Dec^r. 14. 1841.
Sent to M^r. Owen. Philadelphia, 20th Nov. 1841.

" My dear Sir

" May I trouble you on a Subject, which, however, I
" presume you will feel interest in. By this time the Bones of the
" Misourium are arrived amongst you:—they have made much
" noise in this part of the world, for there has been a consi-
" derable "shaking amongst them, which is not yet intirely
" stilled. I had repeated opportunity to examine them, and
" have been induced to give a drawing of them in the "Farmers"
" Cabinet"; two copies of which I send, requesting you to keep
" one, and give the other to M^r. Koch, charging him with the
" Carriage of the Parcel. (!) You will no doubt find out
" the Truth and publish it, and I shall indeed be much obliged
" if you will acquaint me with it. I have taken up the Idea that
" the Animal was of the Tortoise Tribe, and is, therefore, im-
" properly erected in its present shape. I trouble you with my
" notion, that you might have an opportunity of testing it
" by actual comparison: to me the thing is clearly so; but
" the bones having been removed before I could ascertain the cor-
" rectness of an opinion, the very mention of which would now
" appear preposterous without the means of an examination, I
" am under the necessity of requesting you to be so good as to ascer-
" tain for me the value of such surmise. And first, I would
" call your attention, particularly, to the bones of the Elbow-
" joint, and say, if the leg were to be carried out so as to
" form a junction, the point marked A with the point marked
" B. whether the feet would not be spread out so as to bring the
" breast down to the ground? Then again, the front of
" the bone of the Arm at the Elbow-joint shews, by its smooth-
" ness caused by friction, that it must always have been carried
" in a bent or angular position, like the fore-leg of the Tortoise.
" I consider that M^r. Koch has been treated most illiberally,
" but he will experience justice from your hands; and whatever
" may

" may be the opinion of the People in England, it will have
 " great weight here. One thing appears plain, the bones are
 " not those of the Mastodon, which M^r Koch has the means
 " of proving by comparison most satisfactorily, I presume.
 " — He has other Fossil and Geological remains which will,
 " no doubt interest you highly, particularly the Vertebra of a
 " Human Subject of Gigantic proportions.

" I inclose, also, a small sample of Sugar made from
 " the Corn-stalk, which is found to contain 1000 per acre:
 " The ears of corn are extracted while in Embryo, and the
 " Stalks are crushed in the common mode, the liquor crys-
 " tallizing very freely without the least difficulty. A Louisiana
 " Planter who has seen the Samples of Sugar and Molasses
 " is of opinion that the Corn might possibly supercede the
 " Cane in that part of the Country where early or late Frosts
 " so often destroy their hopes of a Crop. You will perceive
 " the Grains are good and are Sweet: — the two requisites
 " to form good Sugar. It seems also likely to take the
 " place of Beet for Sugar, which however, is found to be
 " of the most important service in the feeding of Stock of
 " all kinds; — an invaluable resource to the American
 " Stock-Breeder, and Dairy-man.

" [" I have ventured to send you a late number of the
 " Farmer's Cabinet, in which I found myself bound to place
 " the character of your most excellent and enviable Uncle
 " in a proper point of view; the article is in answer to a
 " person who laid it down as an axiom that no man
 " would plant for posterity if he had not a hope that he
 " would enjoy the benefit ~~of it~~ in person. Your Uncle is
 " a living proof to the contrary, and so I endeavoured to
 " shew him. I need not say the Portrait is striking, and has
 " received the testimony of every one who has ever, — and
 " who has not? — known the Original, whom God preserve
 " for many years. " I beg

" I beg you to present my best respects to your Uncle, and
 " accept the grateful and respectful remembrance of,

" Dear Sir, with perfect esteem

" Your much obliged Servant

" James Pedder

" P.S. M^r Vaughan comes regularly to Church and appears as
 " well in health as I have ever known him.
 " I could not inclose the Sugar — shall send some other time"

" The Missourium.

- " After minute investigation, and repeated opportunity for
 " examination of the Skeleton of the Missourium, I have been
 " led to conclude that the animal was a Monster of the
 " Tortoise Tribe" (!) "32 feet long and correspondent
 " width, with the power of withdrawing its head within
 " its shell; the tusks then forming a mail of defence
 " around its edge to ward off obstructions.
- " 1st The small size, and form of the head, disproportionate
 " to a Beast, (of) the height and size exhibited.
 - " 2nd The shortness of the Neck; so short as to cause the belief
 " that some of the Vertebrae were wanting.
 - " 3rd The order of the Neck-bones; the longer placed first,
 " giving the power of withdrawing the head suddenly,
 " and at a jerk, as it were.
 - " 4th The Ribs, so small, short, and widely spread, with so little
 " curve, and withall so weak, and placed edgewise to the
 " body" (!) "or half reversed, by no means calculated
 " to give strength" (!) "and support to a four-footed
 " animal, 15 feet in height
 - " 5th The arched back or spine, exactly the Shape of the Tortoise" (!)
 - " 6th The short and flat tail: That of the Tortoise likewise.
 - " 7th The Pelvis, too small for a Viviparous animal: The
 " Tortoise

" Tortoise is oviparous.

" 8th The feet armed with Claws. Those of the
 " Tortoise also; — too weak and small in their
 " articulations for the support of the body; the
 " weight of whose bones is near 3000 lbs —
 " Their position also, being like those of the
 " Tortoise, turned outwards; and in all pro-
 " - bability, partially webbed.

" 9th And thus the elongation of the Heel is accounted
 " for, as well as the knee-joint of the Hind-leg;
 " and the power of grasping.

" 10th The Clavicles, which are also found in the Tortoise.

" 11th The formation of the under-jaw, — in appearance
 " too short for the upper jaw and snout of an ani-
 " - mal of such stupendous weight and size.

" 12th The size of the Teeth, to appearance much too small
 " for an animal as he appeared on exhibition

" 13th The character — like the Tortoise, amphibious, with
 " solid bones, or those without marrow.

" 14th The formation of the joints of the legs, particularly
 " the joints of the fore-legs, which on close examina-
 " - tion, are found to indicate that they were always carried
 " bent, at, what might be termed the elbow-joint,
 " forming an acute angle at that point, and in such
 " a direction outward, that the feet when in their
 " natural position, would be so wide apart, as to —
 " bring the breast to the ground.

" 15th With this view, the difficulty which has been felt
 " with regard to the position of the Tusks, more properly
 " Horns, is done away; they always having been car-
 " - ried near the Earth, and resting upon it, at the will
 " of the animal.

" 16th The covering, both above and below, having been of
 " shell, must have soon decayed in the Earth, and thus
 " none

" none of the bones of the breast were found so intire
 " as to admit of removal.

" 17th In The Ancient Asiatic Mythology, the Earth is sup-
 " -posed to rest on the back of an enormous Tortoise, - from
 " whence came the Idea, if not from a knowledge or
 " hearsay of an Animal of the Monstrous proportions here
 " exhibited? In Evans's Geography, mention is made
 " of this Tradition, and an Engraving is affixed to the Title-
 " -page of the first Volume, where the Earth, on Mercator's
 " projection, is made to rest on the back of an Elephant,
 " standing on the back of a Tortoise; both Animals
 " being Emblematic of Strength.

" In accordance with these Views the inclosed Drawing has
 " been made, and it is submitted to the Examination and Con-
 " sideration of the with
 " deference and respect by

Their obedient Servant

James Pedder..

" Philadelphia,

20 November 1841. " *

" To Petty Vaughan Esq.
 " No. 70. Fenchurch Street,
 " London.

(" 8. " Ship-letter, Dec. 13. 1841. Liverpool."
 (" Rec. London Dec. 14. 1841.)

[* Can it be possible that Jonathan Pedder has racked
 his brains, and wasted his Time, (and Time means Dollars
 in America) in concocting this beautiful and philosophical
 View of his subject, in sober sadness? or does he imagine
 that his friend and father John Bull's gullet and gulli-
 bility are so capacious and accommodating as to swallow
 the World, the Elephant and the Tortoise? By way of
 opening a passage for receiving fifty miles, or so, of Sea-
Serpent.?]

Turn over

(B. Mr. James Pedder is the Editor of "The Farmer's Cabinet"
 Published Monthly by Kimber and Sharplefs, No. 50. North Fourth Street
 Philadelphia.) W.C.

Extract from "The Farmers' Cabinet, and
"American Herd-Book." Vol. VI. N^o. 4. (^{Whole} N^o. 82.)

11th Month. (Nov^r. 15. 1841.)

(Page 121.) "The Missouri Leviathan.

" We succeeded one day previous to the closing of
" the exhibition of the Missouri Leviathan, in obtaining a correct
" drawing of that wonderful work of the Almighty, which with
" the engraving of the same, has been expressly executed for our
" pages; thus placing upon record a faithful representation
" of that gigantic result of the labours of the Geologist,
" before its final departure for a foreign land. It is
" exceedingly to be regretted that the glorious Specimen is
" not retained in the country which gave it birth, but
" the next best thing we have secured to our Readers, by
" perpetuating in our work a perfectly correct delineation
" of its wonderful anatomy. A front view of the Monster
" has been given, as it shows more strikingly than any other
" could do, the peculiar conformation of its parts, forming,
" as it were, two arches of stupendous magnitude, with
" which nothing that has hitherto been discovered can at all
" compare for grandeur and magnificence. We are witnesses
" to the faithful delineation of the enormous skeleton
" as it appeared on exhibition, and cannot but feel pleasure
" in being instrumental in preserving the remembrance of it
" by a Drawing made on the Spot.

" Subjoined are some interesting particulars extracted
" from a pamphlet published by the discoverer and proprietor
" of these noble relics, M^r. Albert Koch, who will, we trust,
" be successful in obtaining that regard and consideration
" in a foreign country which are so justly due to his inde-
" fatigable zeal and perseverance in a pursuit to which he
" has devoted himself for many years; and may he return
" to make still further discoveries in the exciting and all-
" - absorbing pursuits of Geology and natural Science". Editor.

(7.) (p. 122.) "Description of the Missouri Leviathan.

" Together with its supposed Habits, and Indian Tradi-
"- tions concerning the location from whence it was
" exhumed.

By Albert Koch.

(Then follows a reprint of M.^r Koch's Sixpenny Pam-
-phlet, I think word for word. — the Title of which is

" Description of the Missouriium, or Missouri Leviathan;

" together with its supposed habits; — and Indian Tradi-

"- tions concerning the location from whence it was ex-

"- humed : Also comparisons of the Whale Crocodile and

" Missouriium with the Leviathan; as described in the

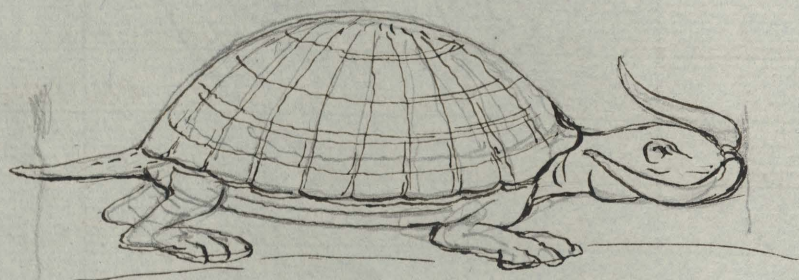
" 41st Chapter of the Book of Job. By Albert Koch.

" Louisville, Ky. — Prentice & Weisinger Printers

" 1841. — (On the Cover) "Second Edition,

" enlarged."

NB. The figure given in a Wood Cut, by Munford and
Brother, in page 121., preceding the account given
by the Editor is very tolerably accurate, and
gives a very satisfactory Idea of the Skeleton;
which the wretched figure given by M.^r Koch
on the Cover of his Pamphlet does not. —
W.C.



Copy of a Pencil sketch on M.^r Pedder's Letter
to illustrate his Idea of what the Missouriium
might have been like.

W.C.