

T. HAWKINS.

THE BOOK OF THE GREAT SEA-DRAGONS

ICHTHYOSAURI AND PLESIOSAURI.

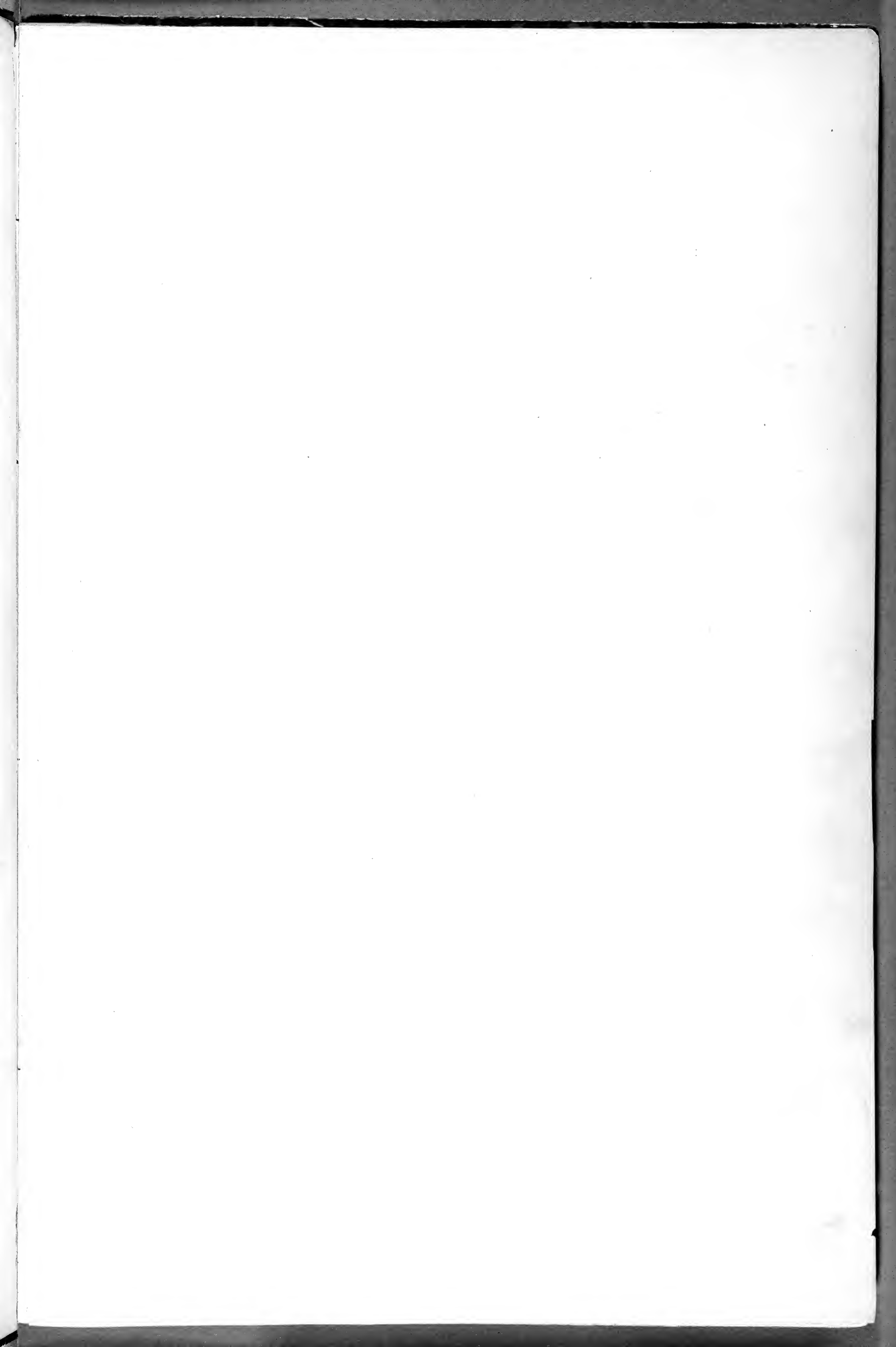
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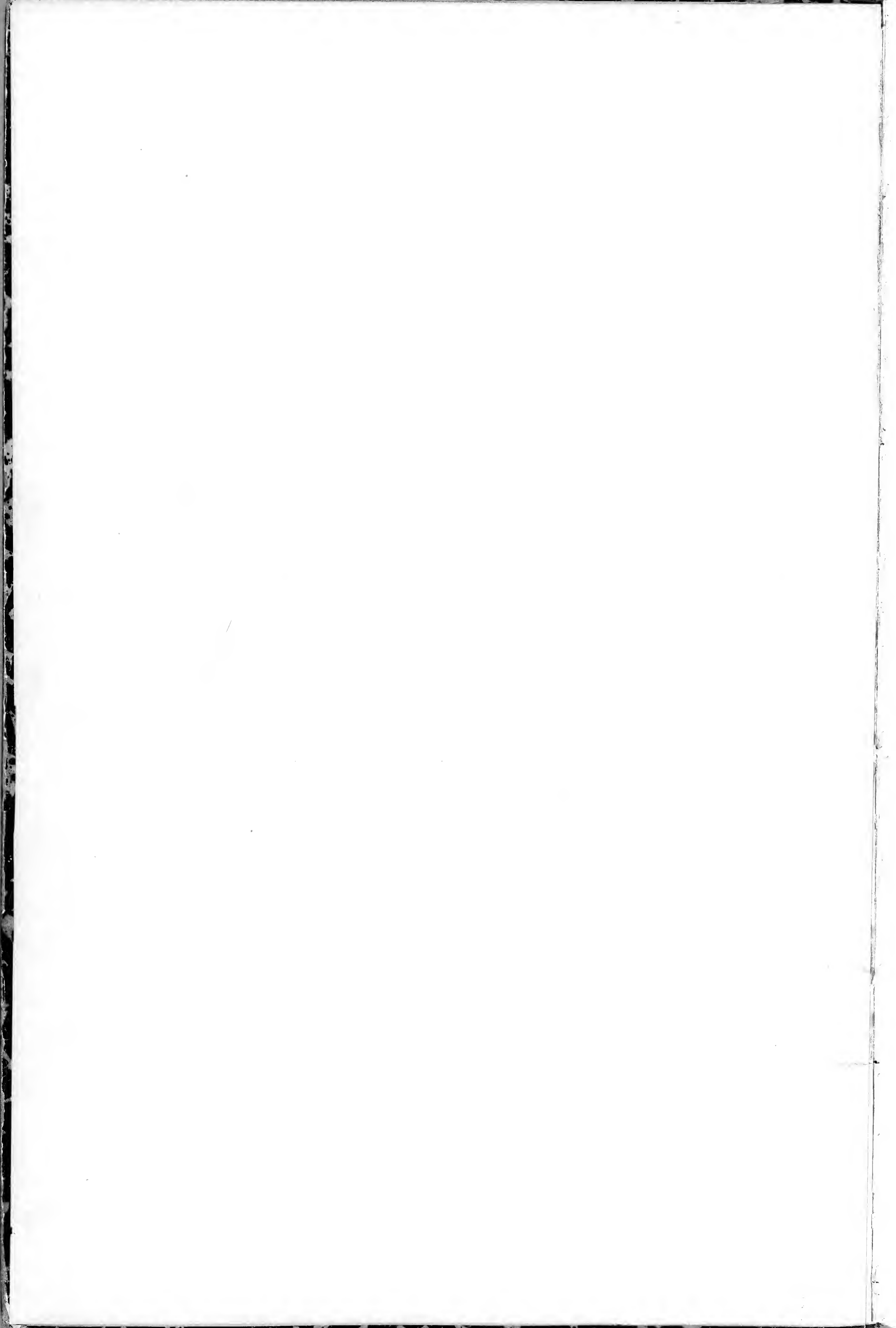
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THE  
BOOK OF THE GREAT SEA-DRAGONS,  
ICHTHYOSAURI AND PLESIOSAURI,

גדלים תנינים

GEDOLIM TANINIM, OF MOSES.

EXTINCT MONSTERS OF THE ANCIENT EARTH.

With Thirty Plates.

COPIED FROM SKELETONS IN THE AUTHOR'S COLLECTION OF FOSSIL ORGANIC REMAINS,

(DEPOSITED IN THE BRITISH MUSEUM.)

BY

THOMAS HAWKINS, ESQ. F.G.S. ETC.

Berosus, the Chaldean, saith, "A Time was when the Universe was darkness and water, wherein certain Animals of frightful and compound forms were generated. There were Serpents and other Creatures with the mixed shapes of one another, of which pictures are kept in the Temple of Belus, at Babylon."

ויאמר אלהים ישרצו חמים שרץ נפש חיח ושף—ויברא אלהים את־חתנינים הגדלים

FROM THE ARCHAIC GENESIS, CAP. I.

LONDON:  
WILLIAM PICKERING.

MDCCCXL  
[1840]

R-H 394 PF



TO THE REV. WILLIAM BUCKLAND, D.D. F.R.S.

CANON OF CHRIST CHURCH, AND READER IN GEOLOGY AND MINERALOGY IN THE UNIVERSITY  
OF OXFORD. INSTIT. REG. SOC. PARIS, CORRESP. ETC. ETC.

MY DEAR SIR,

At eighteen years old, I formed the proud design of obtaining for our Country, a Geological Collection of the Organic Remains of the Ancient Earth, which should rank with the Great Collections, and peradventure excel them.

At twenty, it was my happy fortune to obtain the honourable sanction of your high name and approbation. In my twenty-third year, your alliance helped me to effect the first step towards the end of my ambition, and my early Saurian Remains were deposited in the British Museum.

You have ever since given me a thousand flattering testimonies of Friendship, and tightened all the Chords of that Sentiment, by which man is bound to man.

I regret, that in dedicating this Book of Ichthyosauri and Plesiosauri to yourself, I so faintly respond those affectionate manifestations, and feel how much I remain,

My dear Sir,

Your obliged and devoted Servant,

THOMAS HAWKINS.

Sharpham Park, Somerset,  
March 26th 1840.

## LIST OF PLATES.

ALL THE SAURI, EXCEPT THE SUBJECT OF PLATE IV, ARE DEPOSITED IN THE BRITISH MUSEUM.

It may be proper to state that the Author, having published an Imperial Folio, in 1834, entitled, "Memoirs of Ichthyosauri and Plesiosauri, with twenty-eight Plates," (copied from specimens in his Collection of Fossil Organic Remains,) seized that opportunity to print off some hundreds more than could be required for that work; foreseeing the invaluable uses they render the present one. All Histories, but more especially those of extinct Races, which are arrived at by the slowest degrees, have been improved by supplements, some have subserved their supplements, and as in the present instance, even merged into, and by that means, elevated it into the Real History.

Our Nomenclature has been carefully pruned in the Volume before us; but since the titles attached to certain of the Plates bear some fruit, we leave them there in the old position.

### ICHTHYOSAURI.

#### GENUS OLIGOSTINUS.

- ✓ I. FRONTISPIECE. The Sea-Dragons as they lived. By Martin.
- ✓ II. Dragon from Lyme Regis. Discovered in 1835.
- ✓ III. Huge Dragon from Lyme Regis. 1832.
- ✓ IV. Sternal Remains of a Dragon from Lyme Regis.
- ✓ V. Head of a Dragon from Lyme Regis.
- ✓ VI. Outlines of teeth, and cervical vertebræ with their sub-wedges, of Ichthyosauri.

#### POLYOSTINUS.

- ✓ VII. A perfect Dragon from Lyme Regis. 1833.
- ✓ VIII. Head of a Dragon from a Village near Bristol.
- ✓ IX. Fragment of a Dragon from the village of Street, Somerset.
- ✓ X. Head of an old Dragon from Street.
- ✓ XI. Head, from Street.

#### STRONGYLOSTINUS.

- ✓ XII. Dragon from Street. 1837.
- ✓ XIII. Unique Head of a Dragon from Street.
- ✓ XIV. Parts of Heads.
- ✓ XV. A Slab of Lias Stone with Remains from Keinton, Somerset.
- ✓ XVI. Fragment from Street.

#### PARAMECOSTINUS.

- ✓ XVII. A Dragon from the lias Shale of Street. 1835.
- ✓ XVIII. Head from Street.
- ✓ XIX. Parts of Heads.
- ✓ XX. Dragon, in Stone, from Street. 1836.
- ✓ XXI. Dragon, in Shale, from Street. 1836.
- ✓ XXII. Paddle from Street.
- ✓ XXIII. Remains of a Dragon from Street.

### PLESIOSAURI.

#### GENUS TRITARSOSTINUS.

- ✓ XXIV. Dragon Plesiosaurus, from Street. Discovered in 1831.
- ✓ XXV. Dragon of an unknown Genus from Walton.
- ✓ XXVI. Sternum and other Bones of a giant Plesiosaurus.

#### PENTATARSOSTINUS.

- ✓ XXVII. Dragon from Street. 1834.

#### HEXATARSOSTINUS.

- ✓ XXVIII. Dragon from Street. 1837.
- ✓ XXIX. { Copros of these great Sea-Dragons, Ichthyosauri and Plesiosauri in the Author's Collections, not yet transferred to the British Museum.
- ✓ XXX. }

## CHAPTER I.

CONTENTS:—*Remains of extinct Races inscribed with certain Fragmentary Truths ; The Moderns speculating upon the ancient Earth, as a mere physical theorem, revert to Pagan Philosophies, which these remains protest—Scripture and Tradition insist upon the perfection of Adam—The opinion that the first men were of inferior power confuted by their monuments, the Pillars of Seth, and Cyclopean Ruins ; The Archaic Records the oldest extant, and Sanchoniatho, Berosus, Manetho, and others, quoted in proof—Measured by our Notions of Time, that which is Past stretches out into Eternity—Time reined in by Scripture and History, the Earth too offering proofs of a Beginning and of a Supreme Cause.—The infidel argument, that animals and vegetables started into existence at the same instant, answered.—Of the Light mentioned in Genesis, chap. i. ver. 3, and proofs thereof—The fossil eyes of all extinct animals formed like our own, shewing that they used the same light as ourselves, and, judging from the colossal proportions of the Primitive Flora, it flourished in a heat which animals could not breathe—Succession of Beasts, and of the recent Creation of Man—Of Eden ; Geologists challenged to produce a carnivorous terrestrial animal which could molest it—Astronomy attests the pacific conditions of one (that) epoch of the Globe ; Every region of the Earth exhibits numberless skeletons of contemporaneous herbivorous animals—The Fall ; Attended by all kinds of calamity ; Fierce beasts ; Climatal and other terrible revolutions in the dependent world—Atalantis, Europe, and Africa, the girdle of the world traversed by the historical giants, who built the stupendous monuments before alluded to—The carcasses of the Carnivora proportioned to the Titans they warred upon, and nearly extirpated—The Flood—The Backbones of the Globe broken, from the Poles downward—The Boulders and other drift found over all the Earth in a certain line, show the manner and Universality of the Deluge—The Ark admitted only the domestic Races of Animals—Scripture quoted in proof thereof—Recapitulation.*

IT will have been sufficiently understood by the Dedicatory page of the Present, as well as from a former Memoir of Ichthyosauri and Plesiosauri, published in 1834, that our first intention was limited to the effectuating a vast Collection of the Organized Relics of the Old World, in the British Museum, without reference to this or to that Theory of the Nature of Things, Past, Now, or To Come. To wander across the desert Continents of Time, in search of the bleached Skeletons of extinct Nations ; to evoke from the dust of Oblivion the countless Generations which have passed away from the Earth for ever, were the objects we had originally in view. But Time, emulating that Eternity whence he emerges, seems to have wholly occupied himself in perpetuating the Creatures of his passing Reign, in the stony missals of the Dead. In recovering, therefore, the Effigies of extinguished Races, we have been tempted to secure also the inscriptions which accompanied them, quaint and intricate although they be, and of a style so old, that the appreciation of its Truthfulness and Beauty is almost lost.

It has been so long the Fashion to consider Physical and Moral Evil apart one from the other, that we are in danger of reverting to the Epicurean Philosophy : nor has anything contributed to this more than the study of the Ancient Earth, considered as a mere physical Theorem, by many laborious arguments in which the Moderns toil to the same conclusions which circulated in Pagan Greece and Rome.

But the Awful Wrecks compassing us round about, and restless Eld murmuring ever in our ear, and abhorrent Heaven himself, eclipsed, but not extinguished, protest against the cheerless Spirit of Knowledge, by which all Things are referred to insensate Matter and icy Dream ; and beckon us from the Paradise of Fools, within whose Magic Circle so many Souls have madly staked and lost their all.

1. The Fortunes of Mankind have an Orbit, the perihelion being with Adam, the aphelion with the Flood. Perfect in the Image of his Maker, stored with all Goodness, our ancestral demi-god wielded the Ministers of Power obedient to his unquestioned Will. Such is the Basis of Scripture, and such also is the legitimate deduction of History. But incontinent Liberality deceiving Faith, Reason, empty with the fumes of that same flattery by which we originally fell, cometh of the unhalloved embrace, and finding in the crust of the Earth certain animal Types which ascend in the progress of Time, from the more simple to the complex ; stealing a Sophism from "The Garden" of the Vulgar Greeks, avers that Matter, like "the Nilotic Mud," generated Creatures with the mere dawn of life, which improving upon themselves, at last elicited a man ; a man like to all previous existences, imperfect, rudimental, savage. We care not how much the offensive Thesis is laughed at in the person of grotesque Lamarck ; its essential principles are sedulously upheld by every ancillary that can be impressed covertly in its hollow cause. Here then, beloved Reader, in the first stage, we unmask an assassin which waylays the Doctrines of Sin, and of the Righteousness of God.

The experience, the reputation of all Nations, all Climes challenge, and indignantly denounce any such an opinion. The political and other Sciences in which the ancients so infinitely excelled ourselves ; the Cyclopean Mounds of Antediluvian Masonry, and the Memory of Seth, co-equal with his haught Pillars, bequeathed to latest Posterity : These imperishable Towers, misnamed, in the teeth of Josephus, the Pyramids, and these enduring Walls, vainly christened Pelasgian, were the work of emphatically the sons of Jehovah : Their beginning hid in the hoar of ages, puny men now peer about and around them, and actually correct and square their own imperfect traditionary lore of the Firmament by the Measure

which they afford. The framework of the most sublime Science Extant is borne upon their brawny Shoulders—the Astronomic Quarters, immutable as Themselves; and the incomprehensible, but certain, inevitable, manifest Trinity is embodied at their Apex, and Throned the Supreme Lord of All. These are Axioms in Nature and Morals which, once learned, it seems impossible to forget; but the Noahites, though taught by the terrible Flood, yielded to the same Antagonist Demons, which drowned their fathers in its ruthless waters. However, it remained for Moses, Sanchoniatho, Berossus, Manetho, and a few other authors—of whose Consenting Scripta we know only the unsubstantial but witnessing Echo, to vindicate Truth from the Ignorance and Falsehood which oppressed her. Erudite in all Heathenism, the former was enabled by the Divine Providence to separate from the Chaff the Living Bread by which he sustained the beleaguered Israelites until the Second Adam, re-conquering the long lost Eden, gave of the Tree of Life unto all that will: And the latter were ordained for Heaven in the midst of those Idolatrous Peoples which scorned and madly set it at naught. And now, in these latter Days, Satan, knowing that his Time is at hand, circumventeth with Weapons drawn from his old Armoury, but tipped with a more deadly poison, and concealed within the folds of a more flowing Robe. Shinaar! with the Cherubic Sword, array Thee in the High Testimonies, and smite, smite Dagon upon the Threshold of God.

In like manner, negligent of the Voice of all History, Sacred and Profane; not deigning a glance upon the Archaic Record, the Footsteps of the Most High—implanted on the broad World, are meted with the tiny Pole of Time, and pronounced infinite, reachless, measureless: And the huge Cycles alleged by the Hindoostanee, and Chinese, and negatively implied in The Genesis, shrivel into an indefinite Nothing before the weird talisman by which they are presently determined. Time himself is swallowed up by the Enchanter's Wand, and Matter, metamorphosed into the eternal, behold! the resurrection of the atheistical Lucretius. Thus soaring Icarus falls into the deep sea, where all is sombre blank, and wanders over the mountains of Darkness, stumbling at every mote, sinking into every pit; pitiable in his desolate but unconscious captivity.

But the Earth, though of a perishable fabric, and fading fast away, yet retains the primal texture and coloring with which it came from The Master's Hand. Finitude and End are inscribed upon her Forehead, the Palms, and the Soles of her feet: And throughout all her Limits are scattered Medals, which could come only from the Mint of Mind and the Treasury of the Governing God. Of the beginning, behold, Matter destitute of every Letter foreign to its absolute self, void, dead forged from the labouring Anvil, when Time was called to be. And in the Transition Rocks, the semblance of his first-born day, mute, solitary, and unadorned; Chaos supporting his infant head with Arm fast withering away: Vacuity and Gloom are round about; the Symbols of dull Earth, insensate, lifeless, droop over the vacated and erst but empty Throne of Chaos, dreamy, latent, dawning. Here Nature, and History, and Revelation are at one; Chimborazo, and Andes, and The Alps, Libanus, Brathys, and his Antipodes, and ten thousand fragments torn from their thunder-rifted Crowns, and

hurled over the whole Globe by the exulting Deluge which blotted it out; and all Story of the Antiquic Time by Hennaic Chronicler, and Chaldean, or Priest-King, read in the sight of approving Heaven before the Congregation of Zion; I say, these all agree with, and justify one another, and serve to confound these Images of the Vain, and break them utterly in pieces.

Nathless, the Spirit of the Age, though confessedly baffled, yea, driven from a favourite Fastness, has many subterfuges in reserve; unable longer to gainsay these accumulative facts; in his own esteem a second Archimedes, himself the Lever by which the Foundations of the World shall be moved, like a wretch in hot fever, he rusheth naked upon Death, in conflict with Spectres of his restless crazy brain. Questioning the recorded order of Creation, he classifies the Rocks which contain Organic Remains, and boldly avers, that animal and vegetable life were from the first cotemporaneous, contrary to the Letter of that Sacred Text, by which alone we can arrive at the rationale of Creation. He ransacks whole Continents, and triumphantly points to unnumbered Skeletons disinterred from Strata with a Granitic Base: forgetful that, long after the separation of dry land, an Ocean remained, whose Profound no light could possibly penetrate, by which alone vegetables exist, to which would descend with precipitates the reliquia of every thing dying over its area: and oblivious of the fact, that the Coal Measures of Virginia do actually repose upon Granite, and other inorganic Matter of the same Age. To say nothing of the intrinsic value of the acknowledged Truth, that the Crinoidea and other Marine Corallines, of which some of the earliest fossiliferous Rocks are mainly composed, lived like their yet surviving congeners in the deepest Caverns of the Sea, in places to which vegetation was of course unknown. And the Coal itself, which the Modern Julian seeks, hoping there to find, beside its vegetable component parts, relics of the Creature that had life,—from whence he toils to extort hope, explodes the moment the rash Experimentalist applies his Crucible, and sorely mangles him withal. For no causes now in action, none of the Forces of actual Nature are anything like sufficient for the accumulation of that vast vegetable Fœcula, before which, the aggregative "timber-rafts" of Orinoko, and all the other mighty American Rivers, multiplied twice a thousand, shrink into bagatelle. And mark ye now, O reader, the Times of the Creation were long Periods, of which the first commenced with "light," and the third, or Floral, ended with the same; the "Light" being distinct from that of the Sun, the corollary and consequence should be, and are found in the Elder Coal fields, verily formed of boundless Genera and Species erased from the Book of Life. Certain pious and really orthodox Writers, misled by the frequent apparition of animal remains in Strata immediately subsequent to Granite, forgetful, too, of the perfect Measure of the Word of Jehovah, have curiously taken the visual organs of Trilobites, and of other extinct Crustaceans, in the forlorn chance of finding a constitution there, differing from the one which holds the same Family in the present generation. Their researches vindicate The Text, but in a contrary way their short-sighted and erring Faith would have it; had these fossil eyes contained a rudiment opposed to the light of the Sun, as now exercised, the Key-stone of Scripture were loosened in its place. It is unequivocally written, and the Sacred

Chronicles require no emendator, that the Thing with Life began to be, not before the visible Sun, but a long while after he first shone forth upon and rejoiced our rising Planet. It is impossible to explain certainly this primal Light, but, judging from the gigantic proportions and crowded Population of the co-existent vegetable World, it scarcely admits of a doubt, that it was invested with a degree of Caloric, which no Creature, native, or even as fossil, known to the Adamic System, could possibly endure. And, with respect to the fact, of the occurrence of organic exuviae in certain Coal basins; it argues only the Comparative Continuance of the Old Regime, after the evolvment of Animal life in types and conditions, which, to this day, imperiously require the most intense temperature of the Tropics. Thus again is the Inspired Volume championed by the very Judges to whom Philosophy appeals. The Slimy Marshes of the embryo Earth, rich and overflowing with leafy life, sweltered in genial heat, and "Light" continuous throughout a long nightless Epoch, differing from our own. No creeping thing harboured the illimitable plain; no sound save the low whisperings of the tideless Deep, and of the Brooding Winds, ruffled the lone, the awful Expanse: Above, around, and about the inchoate Paradise, fell the Pall of Soulless, Mortal, Mechanical Matter, irradiate, glowing insensibly, and rounded in glossy dream.

The Thread of the Divine argument, by which only we can safely traverse the Cretan Labyrinth of the Natural World, is henceforth liable to but little interruption, for but few cavil at the Letter of the remaining Mosaical History, seeing that it recognizes the Laws by which we now stand: and the Archives of Earth growing more and more legible, leave the Sceptic no subterfuge but Vanity from the two-edged sword upborne by Revelation. That beasts followed fishes, and that Man is one of the last and most recent creations of all things, is of necessity admitted, the fossil contents of the ascending Strata indisputably substantiating the facts. But, Knowledge, rashly declining the Chart of Heaven, at the commencement of his Travel over the boundless Wastes and Regions of Time, still wanders he knoweth not whither, mistaking one Land for another, and choosing the baby-toys of his own workshop, before the priceless Jewels which lie everywhere at his feet. His Carnality hungereth alway, and the flesh of his lean famishing body is in his, as it was in Sinbad's desperate eye, more precious than all the living diamonds within his reach.

Hence the Chronology with which, negligent of the Elements of Morals, he has been pleased to invest the several Systems of Matter, is as incorrect as a geographical degree, taken without Line or Quadrant. Arguing a hundred kindred Issues from an absurd premise, like Almanasar, he builds up a glittering theory, as easily demolished as the poor visionary's basket of glass. Casting the little plummet of a Child into the Bottomless Gulf of Wisdom, and thinking that her Depths are sounded, he hastens to inscribe a New Testament on triple brass, and palm it upon a dotting world. In despite of every deduction legitimately obtained from the Books of Nature and of God (which point to a large unharvested store in which sickle has been never thrust), Man, it is still persisted, was originally a Savage, and the Biblical Flood Chimerical as Itself. Thus the Hydra multiplies his head, and hopes to escape alive, though compassed with the Artillery of Heaven.

Observe, further, the striking analogy which holds Earth and Heaven, ages after the former perfected, was devised a goodly inheritance unto Man: They ask, "Where was Eden, his habitation?" I demand, "Where was the Monster that could mar it?" Go, O Geology, unto the whole Secondary Series of Hieroglyph Monuments, and bring thence one solitary Image of a Land-born, red-blooded, twain-hearted Terrestrial: Betake thee to the frowning Æningen, and the Red-Sand-stone of Wales, and Connecticut Valley, and to the Weald, and the Stonesfield Slate; to all, all, from the Coal Measures to the Chalk inclusive; examine them all: In exact coincidence with the Inevitable Word, they yield a myriad Molluscs, and impressions of a million gelatinous Monads of Life, and perchance, the sea serpent which devoured them withal. And from the brackish Waters, slowly emerge cold-blooded Amphibia, Batrachus, Saurus, Salamandra, and the insect food of the Dragon-birds which swam both above and below the Billows that nourished and brought them forth: Sharp fanged and murdering Creatures of the Deep abundant. But the prodigious whole betray not one Symbol that we require. Proceed, and search diligently the eloquent Annals of the Older Members of the Great Tertiary Family; there, a million of Land Animals are on the Record, but no mention made of one Land destroyer,—he came not before the Fall of Adam. "Ecce dedi vobis omnem herbam afferentem semen super terram.—Viditque Deus Cuncta, quæ fecerat, et erant valde bona."

And Astronomy, watching at Heaven's Gate, attests that, until after this Jubilant Sabbath of the Globe, it knew no Evil Day, reluctant Geology admitting the same fact. That "in the Beginning" the Earth sprung forth round in all proportion, a fluid Sphere, and was finally moulded and ripened when the dry Land uprose from the fostering Waters: No obliquity of Axis exposed to the alternate Tropic and Chill which now prevail, no sudden Storm, or treacherous tide invaded her peaceful Borders, no malignant Comet propagated Death; but the refreshing Wing of the Spirit of Jehovah showered upon her beautiful head the Oil of Gladness, "the Morning Stars singing together, and the Sons of God shouting for joy." And the Principle of Life, pure from the Elysian Fount, throbbcd through all her Frame, quivering with love: Her Reeds were sturdy trees, her Ferns umbrageous Forests, sheltering and subsisting ten thousand Colossal Mammifers, a fauna that would eat up the present lapsed and sterile World, and strip it utterly bare. The Primal Ocean, held through all his swelling breast with the same Silver Chord, sparkled in the Sun, rocking playfully to and fro, like a young Lion fat with his mother's milk. Nor do the Apocryphal Traditions of Men survive in vain; the Vedas of Brama, the Sybilline Lore of Roma, Javanese, and Indian, and Mexican Story maintain correlative evidence of the great Scriptural Truth, that Man, created perfect in the Image of his Maker, ruled awhile his Temporal Dominions in the fruition of all peace, righteousness, and joy.

Thus come we to that blessed Period, which the Earth and all that inherited it then enjoyed; the Sabbatical Rest, typical of that Future State, in which alone the long banished and pining Spirit of Man shall find his own dear Fatherland. Our eyes are dimmed with tears, whilst contemplating the glorious patrimony about to

be spent; our hearts die within us before the glozing demons intent to howl "Io triumphe" over the lost Islands and shining Shores of a conquered world.

From the now bleak and unapproachable Poles, to the navel of our Parent Earth; from the snows and swamps of Ladoga, to the fervid Sands of Bengal, everywhere, in every Zone, continue unanswerable Memories of this happy, this Golden Age. The harmless Pachydermata, Dinotherium, and his kindred Giants, for which our impoverished and curse-stricken Planet can now find no cradle warm enough, then ranged the whole world. The thermal Earth and Ocean, bathed in light, sustained a thousand Genera of vast Animals and Vegetables, which retreated before the coming Cold to the Equator, and even there, eventually withered and died out in an ungenial and freezing Clime. The fires of our little Sun sufficed them not, the dank Shadows of approaching Doom paralysed, and the leaden Hand of transformed Time speedily swept them into dust and oblivion. The iceberg of Thule, and the Patagonian Wastes, Irak, Arabia Petræa, and the illimitable Savannahs and Prairies of the New World, grave their manifold bones.

2. Primæval Earth, rejoicing in the Benison of God, pales in the pænal fire about to wrap her in ruin, and which shall finally rase her utterly out. "Adam," the Lucifer and Protagonist of Antiquity, doing misprision against Sovereignty, turns the weapons of Loyalty upon his Liege, and plunges them into the Bowels of his Mother Earth. Forsaken of Angels, groaning, she bringeth forth grim Monsters, which ravage her Garden, the Locusts that consume it away. The angry and horrent waters too, loosened, swell into a frightful roar, leap upon a thousand Plains, and greedily swallow them up.

Man, panic stricken, abandons the vast antique Defences and Outworks of Creation to the ruthless Surge, and Leviathan, flying to Himmala the High, the Battlements of the Moon; His Seed overflow The Mountains, and spread over all the Tableland of the World: and the giant Nephilim, born to the Sons of Jehovah, of the Daughters of Eve, haunted by Terror, traverse the menaced Globe, building Stupendous Towers and Citadels whereunto to retreat, when sorely pressed by the anticipated, the inevitable Flood. Atalantis, and Europa, and arid Afric, then made one wide Asian Continent, over the Girdle of which, to this hour, remain the mighty Works of these most mighty men: Sepulchral looking abodes, fit for the gloomy gods, whether in wondering Peruvia, Tuscan Italy, or Araby the Swart. Unhappy Giants! the mountainous Piles are cast prone down, and the Winds there howl the dies iræ to your dolorous ghosts.

And, lo! somnambulist Geology, seizing our trembling arm, and pointing to the dim skull but yesterday brought in a half fossil state from the Caucasian Sewalik, reveals the ashes of an antediluvian, once dipped in the Sin-baptismal Flood. And, at our feet, behold the Carcasses of the cruel Carnivora, that afflicted the impious Adamites; gathered, whether from Austral, or Borean Regions, or the hot wastes of Barbary, or the Pampas of Texas, and Ecuador; no feline of our Time can compare with these Elephantine Tigers, these huge and spectral Bears: there they lie, unconscious of the dædal curse which pounced upon their savage Brood, and blotted the brute Amalek from under Heaven.

And reverend History,—“*Quæ quo propius aberat ab ortu et divina progenie hoc melius ea fortasse, quæ crant vera, cernebat,*”—offers at the Altar of the Temple, the consanguineous Faith of Jew and Gentile, Scythian, and Indian, in the Immutable Creed. And shuddering Nature leads us to that remote Period of violence and Wrong, where, in Company again with speculative Geology, we muse over the Wrecks of Eden, torn, defiled, trampled upon by these once vital things. The all-enjoying denizens of the erst brimful World, invaded by the soundless and sinuous Serpent, flee, they melt away before the Legion of insatiate Fiends that follow in his Train, and are at length in peril of total extirpation: Only here and there, in the most Modern deposits of the Epoch, we detect their fainting trace; whilst the bleached bones of vengeance, strown plentifully to the last, indicate the fulfilment of the Ends for which it was ordained, by an outraged and Retributive Providence.

And now the sad and majestic Drama, Men and Gods battling upon the Theatre of a darkening World, marches to its third and final scene—Death and Perdition evermore.

The Scornor, compelled by the most indubitable evidence, grants the fact of The Deluge, but refers it to Ages infinitely removed from that in which alone the Inspired Historian will have it to be. He also despises the facts of the simultaneous destruction of Man, and the entire submergence of the Earth, insisted upon by all the written and oral Scriptures of every nation under the Sun. Glancing the enormous rocks and boulders of Granite, and other *debris*, outspread over the actual continents in a given certain direction, he charges them to existing Causes, in defiance of the most positive mathematical deduction; and still further, requires an Eternity of Time to place them where they are found. The Noachic Ark he laugheth at, and boldly questions the device thereof, with a sneer at its living contents: He travesties all men, all things, even Jupiter; quenching all light, all glory in his benighted Spirit, dancing inebriate over the Volcanic Abyss of expectant Hades.

Nevertheless, The Word, Reader! The Word abideth sure. The Backbone of the World is broken, and immense fractures running in divergent lines from the Poles to the Equator, verify the Seat of Dislocation. Whether the stiffening Atlas broke down of his own gravity, or sliddered, it matters little, he Fell, the Fountains of the Great Deep were broken up, and he was stifled in the Sea: “*Quia ipse super maria fundavit eum: et super flumina præparavit eum.*” For the subsidence of a mass sufficient to shatter in its descent the Body of the whole Earth, must inevitably have displaced an equivalent measure of Water, and driven it over the rest of the whole Land. Then the dædal Wave leaping from the yelling Abyss, rushed upon the Polar Zones, rending asunder the hardest rocks, and hurling them like sand over the drowning World: And onward rolling with a proportionably diminishing force, at last subdued the far Countree of our lost Forefathers' Home,

“*Omne cum Proteus pecus egit altos  
Viscere Montes;  
Piscium et summa genus hæsit ulmo.*”

Nor wonder we that a vessel of wood did safely ride the Tamed Element which had just extinguished the Globe; for the destructive Forces, seated in the Axes, the farther we proceed from that centre, the less their effect, until

arriving at the extreme limit the waters quietly prevailing the Ark thereupon did float in Halcyon peace. And all History and Tradition harmoniously agree in settling the Heaven-protected Argonaut in precisely that part of the Earth, which first rose from the retreating Ruin. Thus again Nature, and Philosophy, and Fact, and Revelation are at one, so that "he which runneth may read, and a fool therein can hardly err."

Some weak and inconsiderate persons, neglecting the context of the Sacred Word, conjuring around them the many terrestrial Families of our own Earth, take pains to picture a Ship large enow to save their autochthon progenitors: No such thing was ever contemplated except by their own inexcusable folly, it being distinctly implied that Noah took with him those Creatures only which had been domesticated by Man. It was a most gracious condition of the Covenant made with Noah, that his posterity should continue the services of the several beasts which had been subjected to their use by the Antediluvians: Jehovah covenanted upon the Exodus from the Ark with *Them* through all Generations, and the terms of that Covenant plainly infer the existence of other beasts besides, whether in fact or in the Omniscient Intention it imports not.—"Ecce Ego (Deus) statuam pactum meum vobiscum, et cum semine vestro post vos: et ad omnem animam viventem, *quæ est vobiscum*, tam in volucris quam in jumentis, et pecudibus terræ cunctis, *quæ egressa sunt de arca*, et universis bestiis terræ." And which one of all the Tribes friendly unto Man is departed from us? But those with no Covenant, even the pure, unmixed Carnivora, their end cometh:—and then the Millennium.

Thus, beloved, in humble service with Faith and Re-

ligion, have we endeavoured to trace the gorgeous and awful Destinies of the Ante-diluvian Earth.

"In the Beginning," chaotic, void, nascent, shadowy, nerveless, negative; such in the Primary, non-fossiliferous, and purely mechanical Granite, is the interpretation of Nature, and Science, and Reason, and History, and Revelation.

In the instant Coal-Measures, behold, a Vision of the torpid Deep, and the New-born Earth unconscious with Floral Robes.

Then a Vision of Abysmal Waters, swarming with all wondrous creatures of Life, and gelid Swamps with amphibious things, and Dragon Pterodactyles flitting in the hot air with Vampire Wing.

Then Mammoth, and Sivatheria, and a great Company of docile Giants, roaming the Universal Land, crunching the succulent limb of the Forest Tree, or banqueting upon his juicy root: a Vision of peace and rest, pachydermata, and other huge herbivorous animals having with Man undivided dominion over the Euthasian Earth.

Then a Vision of brute Savages haunting Eldritch Caves: of gaunt Lords of wassail, war, blood, and perdition: Blasted Continents, and withering pines, and briars and thorns: Rebellion, Violence, horrors manifold: Prometheus chained, the Vulture, the Liver: The World at the brink of Death.

Apollo transfixing Python, The booming Flood, driving, rolling, roaring, wrenching, wrecking, whelming the accursed Titans in endless destruction.

Righteous Noah saved.

There is our Gage. Blessed are they, O Reader, which keep an Eye fixed upon the Polar Star of God.

## ADDENDA.

*The Creation of the World.—Of Light.—Terrestrial vegetables the most ancient of all organisms—Proofs.—Of Radiation, and the first Conditions of animal Life.—Solar Time only a relative quantity.—The first land animals and birds all herbivorous—Imputed exceptions, remains of an Owl, the Stonesfield Opossum, and Ornithicknites, rejected.—Evil—Carnivorous beasts one of its products—Objection derived from remains of preceding marine carnivora answered by negative and Traditional proofs.—The story of the Titans true.—The Book of Genesis true literally—Jehovah created matter first, then light, and then vernal life, fishes, beasts, and lastly man.—Revolution upon the Earth—Its Cause—Its termination in the Flood, and the destruction of the primal beasts of prey.—The Scriptures the foundation of true Philosophy, and the Cypher both of the abstract and dependant Universe.—The dangerous mechanical propensities of the Age shall be effaced, leaving the Scheme of the Universe in all its massive and enduring grandeur.*

"IN principio creavit Deus cælum, et terram. Terra autem erat inanis et vacua, et tenebræ erant super faciem abyssi." The most ancient of Histories which have come down to our time opens with this sublime attestation of the omnipotence of Jehovah, to question which most manifest fact, the atheistical and licentious Greek was, perhaps, the first amongst men. It were profitless to pursue the Heresy through all the disguises in which the later Epicureans and Gnostics cherished it, and also through the absurd predicates which some of the Continentals have put them in, since we have traced an Epoch in which there was no animal life whatever upon this globe, demonstrating an Act of Power infinitely more stupendous than that which Moses avers, thus reducing his assertion

to a point comparatively so small that it may reasonably be granted in the Presence of an admitted Argument of the same Class, so much more astonishing.

The statement derives, moreover, additional force from the descriptive context, for it is impossible correctly to represent mere Matter in any other shape than a unique, entire, dead, amorphous, and shapeless one; and after all the Revolutions by Chemical and Electro-magnetic Agents, to which our Earth has been subjected, the Primary Granites have all these features in their face.

The Creation of Light too—"Dixitque Deus, fiat lux, et facta est lux"—may be assumed and proved as inevitable, and in the order in which Moses actually announces it.—"Factumque est vespere, et mane, dies unus."

Light being well nigh proved to be soft undulations of ether, or at least a property which cannot possibly exist at rest; if not itself motion, with motion co-relative: Light ordained to act upon Matter *in vacuum*, would necessarily affect, if not Matter, the Conditions previously belonging thereto. The earliest probable effects of Light would be to penetrate, and finally dismember the pure substance exposed to it: that may have been Couchant Caloric, which, at the touch of light would explode in a million fiery gases, and flee nebulous through space: However, that our planet was once actually fused, the Primitive rocks, and the Caverns which riddle them, irrefragably show. And the Laws of Refrigeration would gradually produce the transitionary detritus which composes the upper Crust of the World. Under circumstances of an ardent Clime, and long continuous light, the most vascular Order of Plants would commence the Great Epocha of Life; and as the Ocean must necessarily retain a higher temperature than the land, which would soon follow heat and refrigeration, impatient Nature would seize upon that first, and cover it with a forest of vegetative Giants. The Geysers of Iceland maintain certain plants, in a temperature fatal to any animal whatever, and so credential the claim of the terrestrial Vegetable World to the most ancient Pedigree known. And the enormous Equiseta, Lycopodiaceæ, and other Cryptogamia, and the equally luxuriant Monocotyledons of the Coal Measures, bespeak exactly that System of things to which every fact and argument in Physics bear such happy witness. "Dixit quoque Deus: Fiat firmamentum, in medio aquarum; et dividat aquas ab aquis,—et factum est Vespere et mane, dies secundus.—Dixit vero Deus, congregentur aquæ, quæ sub cælo sunt, in locum unum; et appareat arida.—Et ait: germinet terra herbam virentem, et facientem semen, et lignum pomiferum faciens fructum juxta genus suum, cujus semen in semetipso sit super terram.—Et factum est vespere et mane, dies tertius."

Thus Religion and Philosophy her hand-maid evoking from the dark shadows of Time the Colors in which he first limned, present us with the Original Sketch of the Infant Earth. Here we behold a universal Law of Matter first, then Light, and lastly Life. The Primitive and Allied Rocks, which are the limbs of the great World, witness in either Hemisphere to this universality; And the Colossal Flora of the ensuing Land no less witness the intense Vitality of that Light and Life, in which it so long rejoiced. The progressive Cycles of Innumerable Times, Horology has nothing whatever to do with them: by that little Art we measure our own vain and fleeting moments, which obtain scarcely a notation upon the sun-dial of Jehovah.

SECT. II. Pursuing with Science, Matter subjected to Supernal Light through its early mechanical and organised Conditions, we arrive at precisely those results which the Hebrew Sage enunciated in the Palace of Pharaoh. In what manner that Cosmogony was obtained let Sceptics ask, enough for us that it Squares with the Annals of Time, in every page upon which Philosophy has been privileged to ponder. A molecule of mere earth, it were vain, perhaps, to search for amongst the endless species to which it has sported, but the effects of Light and Motion are portrayed throughout all the globe in Characters which speak a Tongue of their own, and Chronicle a Regime far different from ours. It were but

reasonable to assume, that, whereas things which now are, differ in their intensities from things that have been, a Revolution in Nature occurred by which that Change was brought about. To scan that Change but by the Analogies which everywhere present themselves to us, for whom it was actually accomplished, were to use foreign instruments and a sorry Logic indeed. For nature metamorphoses Effects into Causes from the very beginning to the End. All the threads are disposed in warp and in woof, crossed and knitted fast together by one and the same Contrivance, and the Laws first promulgated by Queenly Nature are active or passive as may be, but never changed. The Pandectæ of Nature then which do and do not tolerate the doctrine of Modern Analogies, are not at variance; and with this fact we proceed to the first Capitulum to which those Analogies are our only key.

The Normal Earth, palled in an Atmosphere surcharged with moisture to opacity, was specially adjusted to the Vegetative Kingdom, the vasty wrecks of which remain to us as Coal. It is also no less evident that the loss of heat by radiation, and the impassibility of precipitated solids would undermine a Population holding by a Tenure like this. The Strata therefore, which follow the Coal-Measures, demonstrate a re-action, slowly but surely accomplishing the Eden in which *our* wondrous Fortunes were to begin. It is hardly to be expected that we shall ever discover the Primal Isle of Earth, and in the nascent state of Geognosy can hope only to generalize, but one terreous vegetative Remain resting upon an inorganic rock substantiates our Text, and the Coal Measures of Virginia, as heretofore stated, afford that important example. We need not observe that the Floral Races lost their torrid vigor consequent with that heat and humidity which especially signalized the advent of Time: The towering Palms and Cacti, which first lifted their glorious heads in a Land all their own, and the egregious Sigillaria, fringing the otherwise lifeless marshes which environed them, may and did survive through the Coming Ages of the populous Deep, and sustained the Fauna of a ripening World. We curiously explore the most ancient Golgotha of the Primitive Flora, and find there not one relic of the Animal Kingdom: but the ascending Archives declare myriads of Cephalopods, Crinities, Trilobites, and Conchifers, creatures with the least sensation, and which would be the very first to start into existence when the Oceanic temperament fell to their necessary point. And the petrified Eyes of Crustaceans remaining to this day in a perfect state, triumphantly show that the same structure and disposition were common to themselves and their remotest descendant, satisfying us that the identical light of the Sun by which we have vision was also the medium of sight to them, and inscribing the moment in which that Sun was first manifest. Hence, coupling supernal Light, excessive heat, and the atmospherical Consequences of both together; it is not too much to say, nor for Philosophy to concede that the Light of the Sun (if it existed then at all, which is doubtful,) could not penetrate that atmosphere, nor subdue that other Light, and that it had no conceivable use upon our Planet before those Creatures were brought forth to whom alone it could be of any the least value, and without which indeed, they could not live. "Dixit autem Deus; fiant luminaria in firmamento cæli.—Et sint in signa et tempora, et dies, et annos.—Et factum est vespere et mane, dies quartus."



Having once recognised the Creature with life, we need not pause upon the seeming exceptions of contemporaneous Piscal Vertebrata, sometimes found with these Primordial Patterns of Marine Being. The System of adjustment abides, although we are as yet unable to refer every Rock to its true Chronological place, and the Marine Bloodhound to his actual Age: And the absence of a True terrestrial Creature from the Earlier Deposits, apart from physiological induction, which gives the affirmative, decides that the Ocean had the priority of a Sentient Race. New Orders of Animals multiply with the Progressive Seas, until Dragons come to Lord it over the teeming Waters, and over also the Libellulæ of the superincumbent Skies. "Dixit etiam Deus; producant aquæ reptile animæ viventis, et volatile super terram sub firmamento cæli.—Et factum est vespere et mane, dies quintus."

II. The Quantity of Time, like the Quadrature of the Circle, is unknown. It is either slow, or quick, or short, or long, according to the ever oscillating mind of a man. True, we take the ordinary measure of the Astral Bodies by which to compute Time, but our notion of it is absolutely indefinite and worthless. Dreaming we often crowd the events of a Century and the immensity of a Universe into the shortest space; and Ephemera born that instant to die, have most likely a sense of duration full and complete as our own. To argue then about Time, were absurd; but the acknowledgment of the Heavenly "light givers" constrains us to ask if thenceforth their appointed mission, they were the only sources from which Animal and Vegetable Life obtained sustentation. The condition of these Kingdoms, long after the appearance of Organs which bespeak sunlight, negatives that hypothesis; the fossil Skeletons of those Sentient and Floral Families, which most demand an exaggerated heat, are alone found, long—long after the revelation of the Sun. The finality of Physics was accomplished by degrees, and the Earth Continued her Career in the Original Cycle of Time, of which the fishes and beasts knew their individual portion by the light of that Sun, which awoke their heart-tides and lulled them too. The ordinary day then of twenty-four hours existed for that New Edition of Things to which it was indispensable, but it is no less certain that the Primal Quantities of Time were meted out, and that our Planet still coursed the veiled Camdeos' of an immense Circle, irrespective of that borrowed lustre of which we speak.

This premise understood, the Volume of Nature, by which we piously hope the better to understand the Oracles of God, increases in interest and intelligibility the farther we examine its contents. It may be conjectured that the pregnant Seas would embrace an equally prolific Earth as soon as ever that came in its turn to an equilibrium, and this we find to be the fact: and the graminivorous and herbivorous birds and beasts of the Earlier Tertiary Period indicate by their size a most propitious Clime, and boundless profusion of food. The pretence upon which all Marine Classes of Animals are referred to a contemporaneous origin, because a bone of a sharp-toothed monster has been detected in a suspicious place, is as little worth as the apocryphal exceptions which here also present themselves, the remains of an Owl, and of one or two other Accipitres: In the former case the overwhelming myriads of lowermost Creatures, and in the latter the countless herbivora, and the Gallinacæ disown these unnatural exceptions. The Stonesfield, so-called, opossum,

upon whose tiny skeleton swings with anticipative groans so many ponderous lies, of all animals affords the very best reasons for resigning it to the Deep; the extrinsic argument is no less decisive, its bed is Marine, and its bony Companions all in a common grave are marine also. Moreover, with respect to the Ornithicknites, and other marks in the New Red Sandstone of America, to refer them to red-blooded Cotemporaneous birds, in the face of protesting nature were vain indeed. In the almost Egyptian darkness which envelopes the nebulous history of a Planet, how can we expect to construe every mutilated Hieroglyph? Refer these specious shadows to the "weoph" —*וֶשֶׁף*, of Genesis, which implies a marine-aerial Creature —traces of an engrafted-by-Evil stock of which are now known as Pterodactyles, and the difficulty vanishes. Even were these "Footmarks" substantiated as those of actual birds, the Rock which preserves them may have been disintegrated and subject to such slight impressions ages beyond the Epoch to which it really belongs.

Thus by self-demonstrated analogies, and the identical exuvia of the first Terrestrial Orders, we ponder upon the very date in which our Mother Earth gave birth to a Mammiferous population, and indignantly reject the intrusive bones of those Satanic Races, which came howling at a later Period, and of a waning Fortune. The march of Things from Chaos through Light, and Life, proceeds from the threshold of Sense to its soul, from the Crawling worm on the Ocean-floor to the Parent of our God-like Race. To strain after arguments in behalf of God's unsullied Creation, were to varnish the Empyrean, and burnish the Sun: Every Condition of right reason, every process of Science, every thing above, below, and in the Depths proclaim the goodness of Jehovah, by whom the Heavens, and the Earth, and all their Host were finished. "Dixit quoque Deus: producat terra animam viventem in genere suo, jumenta, et reptilia, et bestias terræ secundum species suas.—Et ait; faciamus Hominem ad imaginem, et similitudinem nostram; et præsit piscibus maris, et volatilibus cæli, et bestiis, universæque terræ, omnique reptili, quod movetur in terra. Viditque Deus cuncta quæ fecerat; et erant valde bona. Et factum est vespere et mane, dies sextus."

SECT. III. Adorable Elohim—blessed be His Holy Name, made the World, built it for a Throne, and enriched the Sceptre thereof for the Son of Elohim. The King of the World came, with Dominion, and the Roll of his Glory is long. There is, alas! another Register of succeeding Times, penned by terrific Fiends. Clotty horrible, it opens the History of fiendish Brutes, which came by permission, but surely not the Hand of Jehovah. Their unclean carcasses in every quarter of the Globe, suggest a Curse universal, and their ugly bones offer us a Scale by which to calculate the stately Titans upon whom they warred. Here then we fall upon Evil; like Time it is a Property of which we know barely the Effects, and perhaps the most deplorable Consequence of Evil is that very fact. It coverts in fire, air, earth, and in water, pouncing upon us at pleasure, for ever spoiling and laying us waste. We may call it the antithesis of every good, but the definition of Evil was known to man only at the moment of his fall.

"Fertur Prometheus addere, principi  
Limo coactus, particulam undique  
Desectam."

It is enough that Evil reaches above the Clouds, and

for our Argument that Violence is one of his attributes. Let us then track Violence back from our own Iron Age to his Lair, in which he first on Earth lapped his tongue in blood. It may be objected that many murderous monsters ensanguined the Primal Deep, crying havoc, long before the coming of Man, and the revelation of Moral Evil in his person. Now, it is impossible to say that no Race of fallen Intelligences had previously ruled the Ocean, for whose sake, it had been accursed. This opinion was held by the most ancient Nations, and even embodied in descriptive Colors on their Temples. The Holy Scriptures Themselves encourage some such an hypothesis, in that Cain says, "every one that findeth me shall slay me," at a time which it has sorely vexed theologians to furnish with other men. And Genesis pronouncing once that Jehovah blessed the Creatures of the Deep, gives the green herb for food to the beast of the Earth, the fowl of heaven, and every creeping thing upon the earth, and then in this final summation leaves the inhabitants of the Sea entirely out. This expressive silence, the exclamation of Cain, and the Magian Traditions, are sufficiently indicative of an hypothesis, the import of which stands confessed under our notice. So many Sciences as well as Arts have been wholly lost, or we may have traced this fact, and all others in Nature and Ethics, up to its source, and there squared it as certainly with the Eternal Law, as with the Analogies of reason, the induction of Faith, and the belief of Nations.

Passing this, then, we shudder over the old Spectral World, when, armed with poison, fang, and fury, ten thousand hideous monsters slipped from leash, shriek to the Four Winds, and scare peace for ever away. The Malefactor Adamites, gigantic in the Fall, so were the grim Brutes giants which battled with them for blood. These too have their Ancestral bones, in many an Antre vast, and they both together perish, in the wild exultant Flood.

Thus, we demonstrate a fugitive but certain Element, new to our own Creation, if not the very antagonist by which it shall be at last annihilated; the Spirit of Evil, opposed to the existence of all things, not excepting its own Suicidal-self. Its effects upon the first unguarded Sons of Man, gifted as they were with incredible moral and physical energy, must have been awful. To find themselves deposed from Authority as gods, and their falling Empire invaded by frightful Swarms of Venomous Beings, must have torn their hearts with rage and remorse.

" Audax omnia perpeti  
Gens humana ruit per vetitum nefas."

Old Ammon invented not the sublime Story of the Titanides. The First amongst the post-Diluvian Nations, amidst silence and desolation, and the scarcely withdrawn

tokens of God's Wrath, it was related to him by Osiris in the Shadow of the Pillars which Seth graved with now accomplished Prophecies, and the most precious lore of the departed Giants.

Fortified on every side, the Sacred Scriptures stand based upon Everlasting Truth. The personality of Matter, whatever it be, Elohim created it. Light, whatever it be, Elohim next created. Life, whatever it be, created He last. He clothed the World vernaly, gave to it fishes, then beasts, and appointed Man over them all. The heat which forced Ferns into Forests, and crowded them by millions, were fatal to any order of living or extinct creature; under a mitigated Clime, the most nerveless animals would first come forth; they came, and there in the Transition Rocks, the Mollusc Orthaceratite, Spirifer, Producta, Trilobites, and Myriad Radiated Creatures remain. The vertebrata in order followed; at last the Earth was inhabited, and Man appointed Lord over all.

But a change came upon the happy scene. Let the strife of families, the factions of Empire, an armed conflicting world confess the dismal Cause.

Our Race was well nigh extinguished, and the primal Carnivora destroyed quite: behold the wrecks of a Deluge strown innumerable everywhere "quæ caret ora cruore nostro?" and hear the traditions of every People upon Earth, and the Scriptures. Too long has it been agreed to postpone these Holy Books, the Fountain of all true Philosophy. They withdraw the Curtain of Time, and by the Curse of Eve explain the Ruins of the World, revealing the sure footsteps of Jehovah. Through all His glorious works to the topmost, one ceaseless expression of unutterable goodness shines. From fallen Adam to the Flood Satanic fury rules. By this Golden Book of Books we decipher the momentous Fortunes of mankind to Eternity itself: Through Gulfs of molten blood battling with Hell and Death, and at last dashing the kraaken Fiends over the walls of God's wailing Creation, down, down unto the Abyss Tophet. But the Theme belongs to another occasion.

The Slough of Matter in which the moderns splash, subserves a Spectacle of which the world has tired before. The mechanical propensities of our Age vainly essay an argument which has no ground, and is opposed to the immortal instincts and habits of the Soul. The Times will surely come when all gross Theories of Matter shall be devoted to the Flames, and a second Othmar decree for all Nations the everlasting destruction of the instruments by which the Spirit of our Race has been Carnalized and so nearly lost. The Grand Scheme of the matterless illimitable universe shall remain, like an old and massive Temple, or a vast Cathedral, upreared by Colossal Genii, continuous and changeless as Jehovah and co-eternal.

## CHAPTER II.

OF THE GREAT SEA-DRAGONS, ICHTHYOSAURI.

THE Historian of extinct Races of Animals, in the absence of comparison and other ordinary Rules upon which the Memoirs of Living Creatures are founded, not unfrequently confines himself to the merest field of Anatomy, beyond which lie the Provinces of Doubt, which we invade and forage at our peril. And the cold Philosophy of the moderns has been always careful to authenticate only those Works in which the plain Tuscan Style is observed, to the sacrifice of all ornament rhetorical and extrinsic; Nevertheless the most general favorite Authors in Natural History, from Aristotle to Buffon downward, are those of the most enthusiastic disposition, which enliven their writings and fill them with charms. These studied Nature with Genius, pencilling her most beautiful attitudes and colors, changeful and fleeting though they be; disdain to carve and gash her to pieces for the mean sake of counting them when it was done.

There is no subject, perhaps, within the vision of man about which so many fascinating objects revolve as ours, the Chronicle of the great Sea-dragons, which ruled the ridgy Deep, and sunk Empire and Life in the Profundity of pre-Adamic Times. The mere skeleton of a lost Genus, unsightly and incurious though it be apparently, is the precious and sole surviving Symbol of the most recondite Truths, and the Fulcrum of that ponderous Lever by which only we can upheave them from the Abyss of Ages. The bony Outline of an extinct Monster is a faded Cartoon of Nature, by which we study abstractest Beauties, analyze the most subtle Conceptions, and revivify Matter itself. It is also the figure of a Moral Quantity, by which, sublimizing Time, we descry through his agitated Shadows the Elemental Order of Things in Heaven and in the Earth. Hence the vital interest which attaches to fossil Organic remains, and their incalculable value in the Scale of Metaphysics when found. They weigh the World in a balance, authenticate some of the most obscure passages of the antique Faith, and resuscitate Memories which could have otherwise no Resurrection. By the Egyptian Monoliths, the Temple Bel, and the consent of old Græcia, and the Papuan Guinea; by the Round Towers of Ireland, and of India, and the Teuton Creed, we reach the Stones of Memorial of the Flood, whether at Stonehenge, or in Asia, or in America; by the Pyramids of Geezah, the Cyclopean Abodes, and the Carcasses of annihilated Carnivora, we ascend the ante-diluvial Stream of years even to Eden; by these extinct Dragons we navigate the pre-Adamite Seas to their very Margin, and look over the Edge of Matter into Chaos, lifting the Veil of Isis, metamorphosed as gods.

The physical relations which subsisted in the departed Saurian Nations are no less signal than the abstract ones; fitted exclusively for the Sea, which in our time has only a fabulous Serpent, these Taninim prove that the great Principle of Unity established throughout all the Creatures

of the Earth, has had other adaptations than those of Modern date. They perpetuate a Design no longer in use, show a Retractive Power in the Act of blotting out an Amalekite Race, and furnish data by which to estimate the Figures of the most distant Times, through all the Normal Velocities to which the Almighty destined them. With such extraordinary Properties, Palæontologists have been much puzzled to assimilate these fossil Remains with the Classes of actual Beings. Half lizard, and half fish, the name Ichthyosauri expresses the words, but not the Idea which lurks within them. It is therefore only a conventional term, forced upon us by the rash attempt to ally Past and Present Races, living under two such alien Planets.

In our Memoirs it was mete to honour the distinguished Philosophers who commenced the History of these enigmatical Tribes, as far as consisted with the original facts alone in our possession. We therefore continued it under their own Title, and, pursuing the principle upon which it set forth to its just conclusion, coined names for the several skeletons we had acquired. The old specific Cognomina, Tenuirostris, Platyodon, Intermedius, and Communis, were shown to be at variance, and quite inapplicable to the Species meant by them, and others offered instead. These new Names were protested on account of their length: they sinned also against the Greek canon of one subject and one predicate. But since every known Saurian Remain falls into its place under our System, we shall retain it; hoping to obviate all objection by dropping the prepositional *χρη*—paddle, leaving that to be always understood, and translating the Compounds Oligostinus, Polyostinus, Strongylostinus, and Paramcostinus of our memoirs from Specific to Generic terms. My seven perfect Skeletons, and the whole subsidiary Collection happily resolve themselves under these heads; and every other Relic that we have seen but help to confirm the Rule. I appeal to the whole world if it be not better thus to distinguish them rather than by Proper Nouns, which at present mystify and disgrace every horn-book on Natural History. It is true that Linnæus, Latreille, and other worthies named certain Species after the discoverer, or after eminent Persons; but they did so only when the character was absolutely unknown. Could they have foreseen the flagrant abuses to which the example led, that within a century the exception would actually deprecate the Rule, that example would have been so strictly guarded, that there would be now no occasion to deplore a practice so injurious to the dignity of Science, and the Taste of the Age in which we live. I hardly anticipate the immediate abnegation of the jargon by which these Sauri have been hitherto recognized, but am content to abide the ordinary course of events, and even await the Coming Generation for that ingenuousness which may not be found in this.

Further, we propose to restore these Lost Tribes to a Kingdom of their own. Belonging to ages so infinitely removed from ours, squared confessedly, to a Creation for ever past, and formed upon the most latent principles in Nature, with no surviving analogue, their numeral is unknown. The vertebral sub-regna, mammalia, aves, reptilia, et pisces, severally reject them. They are the Jews of Creation, alone in the actual World, and peculiar to the One by-gone.

These unparalleled phenomena demand a Style and Title of their own. Throughout the Greek, and Latin, and all the derivative Languages living, float traditional notices of a supposed Chimæra, under the term Dragon. Backing this word through the more ancient Semitic Tongues, we come at last to its root in the most ancient of all, the blessed Hebrew. There, in the Inspired Annals of Earth, we read of the Gedolim Tananim, the Great Sea-Serpents, the frightful Dragons of Dead Times, the long-lost Ichthyosauri and Plesiosauri, of which we treat.

REGNUM.—Gedolim Tananim.—גדלים תנינים.

SUB-REGNUM.—Ichthyosaurus.—Ιχθυος, et Σαυρος.

GENUS.—Oligostinus.—ολιγος, et οστεον. Paucis ossibus in palmipedibus.

SPECIES I. Dentibus formosis, membrana sclerotica e frustulis perpaucis, palmipedibus crassis. Tab. II. et VI. Fig. 1.

II. Dentibus aduncis et crassis, membrana sclerotica multiplici, palmipedibus levioribus. Tab. III. et V. et VI. Figs. 2. et 3.

The huge Oligostinus of our former Memoirs, Plate III, substantiated the genus of our present theme. Until the discovery of that gigantic Skeleton, the paddles of Ichthyosauri were remarkable for the number of their joints, if, indeed, we except the imperfect Rames of the Strongylostinus deposited in the Bristol Institution by Miss Anning. Prophetic I sought his vast quadrupedal oars, buried countless years under ten thousand tons of shale and stone, passing the bony keel and ribs out of which Time had so entirely shattered the Creature, its ancient Mariner and Occupant. The carcass, there a wreck, was stranded for ever; the oars which erst circumnavigated the round World, lay for ever idle, but their mission was not wholly at an end. Philosophy demanding other attributes beside that of size, whereby to classify things, the Paddles of this huge sea-beast instantly presented themselves. The old misnomer *Platyodon*, framed upon an erroneous measure of the dental bones, which are much broader comparatively in the *Communis* than in the present Genus, gave place to features so entirely new, and it was generally admitted that a better generic Rule than the paddles offered could not be found.

The length of the Names published in the Memoirs alluded to, and the heretical doctrine which maintained them, alone I presume lost the support of that Great Geological Chief, without whose Countenance no clansman should hazard a step beyond his ranks.

In presuming to name Professor Buckland, I avail myself of the opportunity to plead that the objection was but the Purgatory which every New System in some or another Shape is doomed to pass. And it required no little perseverance and good fortune to test and reduce these names to the Classic Rule and Example which, here, now, I submit for my reader's approval.

And in reference to Specific distinctions, these Remains, wrapt in the Grave-clothes of many Ages, come before

us inscribed like the mummies of old Ægyptus, in a language abandoned evermore. The pre-human, like the latter Pharaohs, have perpetuated only the letter of their once dread Persons, in guises of stone. In vain did Belzoni conjecture after the personality of the gorgeous Sarcophagus which bears *his* name; and we as vainly strive after those physiological distinctions by which Natural Philosophy has separated and arranged each in his place the Orders of living creatures; so that, forsaken of the Common Aids, if ever a Scribe be justified in treating a Foreign thing originally, these flinty Images of extinct Tongues present the best occasion. The several Relics which shall chance be found must therefore necessarily fix the name of the party who sets them forth: The golden Signet of Phraah, discovered by Salt, passing to the hand of Mr. Sams, was shown me by that worthy Traveller as "Salt's;" and the Spoils gathered by Miss Anning, resolving themselves into our four Genera, shall still rejoice in that Name to the last. We may Map out the broad Outline of these defunct Races, but the detail must chiefly consist in those accidents of persons by whom they are torn from Oblivion, and bequeathed to the Generations that follow. It will be seen eventually how absurd it were to Latinize the Names of those concerned in the rescue.

We proceed to the Oligostinus in Plate II. The minute description in our Memoirs of Ichthyosauri and Plesiosauri, of the sole Oligostinus then extant, Plate III, renders another anatomical précis here unnecessary, the build of both skeletons of the two plates being as one; they are due also to the same celebrated Lyme, and were discovered by Miss Anning, to whom that celebrity is entirely due.

But there are many characteristic deviations which require Notice, beside the valuable fact that whereas the latter lies abdominally flat in the Lias, the first is seen thrown upon his side. We are thus favoured with a view of the Sclerotica, and a much more striking Contour of the head, in which still lurketh the ghost of a grim and greedy thing. The hyoides are also in their actual place, which was before Conjectural, and the teeth are much better shown.

The position of the Skeleton in Plate III, conceals the form of the Eye, which is so perfect in his Kindred Head of Plate V. The present Oligostinus boasts a no less complete optical shield; but it is composed of fewer pieces than the former, an indubitable evidence of a different Species, and one of the numberless reasons for our republication of some of the plates used in our former work. This unlooked-for means serves to identify the head in the British Museum, published by Sir Everard Home, in the Phil. Trans. 1814, which has an eye framed like that of Plate V. Dr. Buckland remarks in his celebrated "Bridgewater Treatise," that "in living animals these bony plates are fixed in the exterior or sclerotic coat of the eye, and vary its scope of action, by altering the convexity of the Cornea: by their retraction they press forward the front of the eye, and convert it into a microscope; in resuming their position, when the eye is at rest, they convert it into a telescope." Perhaps also, as in the Chameleon, the bodily skin of the Tananim was glazed over part of the sclerotic, leaving an aperture in the centre, directed with the pupil at pleasure to any point, without moving the head, which was so carefully braced to the dorsum and chest, that it could have had but little motion

of its own. By such inductions we revive the habits of Creatures long vanished away, and recolor the ardent Monster fleeing through the expanse of Seas like lightning to his distant prey, with a lust quenchable alone in gore.

The teeth of Plate III, and V, go far to prove them of the same species, while those of Plate II, as clearly signify another. The Striæ are much more numerous, sharp, and defined in the last; and the teeth are as elegant as the others are thick, hooked, and clumsy. A number, common to all the specimens, satisfactorily refers them to one Genus. Vide Plate VI. Figs. 1, 2, 3.

We have now to record a most curious fact relative to the Cervix of Ichthyosauri. It was previously known that the Atlas and Dentatus were joined together by synarthrosis, and that minor differences of shape distinguished them from the other vertebræ. But in 1835 Sir Phillip Grey Egerton, Bart. procured some specimens from Miss Anning, with another remarkable feature. In a "Paper" read soon after, before the Geological Society, it is described as a "sub-vertebral wedge, placed transversely to the smaller diameter," underneath the occiput, Atlas, Axis, and even one or more succeeding bones.

From a skeleton seen by, but alas! impossible for us to save, in the soft pulverulent lias Clay, we subsequently gathered the occipital, the anchylosed Atlas and Axis with their wedges, and the other bones, Plate VI. Fig. 4. The Paddles were also secured, and the black and jetty Jaws which lay there in the sacrificial clay, declared a Strongylostinus: We have also obtained a Strongylostinus from the village of Keinton, in which there are three sub-vertebræ. On the other hand, Fig. 5 represents an Atlas and Axis, belonging to another Genus, the former of which alone has a face for the wedge. Fig. 6 represents an Atlas and Axis, and Fig. 7 the cervical apparatus of a skeleton in my collection copied by Sir Phillip Egerton.

Sir Phillip Egerton therefore conjectured rightly that "modifications in the forms and proportions of the cervical apparatus, would probably be found in animals of different species." In how many varieties they were possessed, it may require several years to ascertain, the region in which they exist being almost always obscured by the overlying Skull, the paddles, and the ribs. It happens thus in the two species, Plate II, and III; but an enormous vertebral column of the Oligostinus, found by Miss Anning in 1835, and deposited in the British Museum, enables us to add that this Genus claims at least one if not more of these sub-vertebral wedges.

The comparative disproportion of the head, and the fragile spine of Ichthyosauri, demanded a number of contrivances by way of balance, of which these sub-vertebræ are one. The conjunction of the Atlas and Axis is followed up in the next three, and in some instances four, five, six, and seven vertebræ by flattened sides to prevent laxation; and the fossæ for the ribs are planted at the anterior margin of the bone itself; so that the rib, projecting with its muscular braces is thrown in all its gravity upon the next anterior vertebra. The spinous apophyses, too, contribute by articular facets locking into one another; and the Sternal apparatus, placed to receive and enlarged to bear the shock of any emergency, still further guard and protect the spine from the chances alluded to.

These sub-vertebral wedges, then, are but one of the many forethoughts by which Nature compensated herself, although in their degree indispensable for the well-

working of the machine, amongst the ruins of which they are found.

Sir Phillip Egerton has the undoubted right of discovery, although the wedges presented themselves to my notice first. In page 31 of the Memoirs before mentioned, the body of the hyoides is described as "a solid disk," which was none but a wedge. The mistake arose from my finding a like bone exactly between the hyoidal appendices in the subject of Plate XVIII; in describing which, page 34, it is remarked that "we were in doubt of the osseous disc, and the two Styloid processes accompanying it, until we found them at the posterior third of the inferior jaws, which situation identifies them as the hyoides." The Tympana too, of the same exact size and shape, only that they are hollow, contributed to the error, which I am happy to correct through the better fortune of Sir Phillip, who has taken so much interest in, and pursued Geology with deserved reputation and success.

Forty-four dorsal vertebræ belong to both skeletons, although they have thicker bodies in that of Plate II. The vertebræ are sunk in pyritaceous matter, impossible to detach; indeed the whole Skeleton was so enveloped in this inconvenient substance, that Miss Anning declared I should be able to do nothing with it. However, six of the long days of June from daybreak until dark were spent by myself and a stone-cutter over the head alone, during which we expended a Magazine of chisels, wore out their steel, broke and flung them away. But the mallet resounded, nor did the fiery sparks follow in vain; not in vain did we both toil with all our skill, and a Zeal which nothing but success could slake. The teeth, the hyoides, the sclerotica, the magnificent skull appeared; the dorsum, the tail, the ribs, the pelvis, the paddles, the, at last grand whole, distinguished by relations significantly its own. The teeth, the vertebræ in shape, and no less the humeri, the femora, and the pelvis; the sclerotic in number, and the *tout ensemble* all together, while the persistence of style in both specimens, consigns them to a common Genus, and even enables us to carry inductions through Sir E. Home's, and the head of our Plate V, of the most interesting kind.

The fragment of Plate IV, is the only example of Scapulæ belonging to this Race of Giants, save a detached joint with the Vertebral Column just quoted, in the British Museum. For this reason the plate is valuable, and I shall carry it on in the Chronicles of the Great Sea-serpents, until I am enabled to present my indulgent reader a better sternal illustration, and posterity the anticipated individual which shall afford it.

Some seven or eight years ago Mr. Bowerbank, of London, of whom I could say many handsome things, but that I fear to offend his remarkable goodness and modesty of disposition, intimated to me the discovery of an immense Ichthyosaurus at Whitby, in Yorkshire, parts of which he had only cursorily seen, but which he imagined might be an acquisition worthy my Collection. Accordingly I started by the mail, for York one winter day, and posted thence to Whitby in an agony of fear lest I should be too late to secure the fancied prize. I found there a load of worthless stone, certes with two or three long, staring, impudent bones of a jaw, a few teeth and vertebræ, and that was all: Had it lain at my feet, in any place whatever, it would have been a nuisance. By what extraordinary legerdemain I know not, nor can I guess any of the parties by whom it was effected, or I should immedi-

ately apply to them for the square of the Circle, the key to the arrow-headed characters of Bactriana, and other such mysteries; but this worthless litter now lies in the British Museum, in a costly Cabinet, daubed with grease and sulphate of lime. I defy the reproach of personality. I know nothing of attending circumstances, whether of error in judgment, or of vanity in a donor, or of mistake in all; but there the thing lies, for which, having spared no time, no money, I would not, nor would any one else, bestow a doit.

With this nameless exception, then, and the head of PLATE V, all the known remains of the Genus *Oligostinus* are due to Miss Anning. They stand thus:

SPECIES I.	{	Oligostinus. Pl. II. . . . . Found by Miss Anning.
		Vertebral Column, alluded to by Sir P. Egerton.
		Geol. Trans. . . . .
		Scapulæ, &c. of Pl. IV. . . . .
II.	{	Oligostinus. Pl. III. . . . .
		Sir Everard Home's Head.
		Vide Phil. Trans. . . . .
		Head. Pl. V. . . . . A person, name unknown

It may be observed that Mr. Johnson, of Bristol, has the Cranium of an *Oligostinus*, which was found by Miss Anning several years ago at Lyme, because it has been the *appui* for many a tale on account of its large eye sockets. It possesses no specific identification whatever.

### CHAPTER III.

GENUS POLYOSTINUS. Πολύστυνον. Multis ossibus in palmipedibus.

SPECIES I. Capite magno, dentibus grandibus ac paucis, pectore solidissimo. Tab. VII. IX. et X.

SPECIES II. Compagis minore et debiliore. Tab. VIII. et XI.

BY a singular fatality the *Communis* of the old names proves the rarest Genus of all. The most incessant enthusiasm of pursuit, for more than ten years, from Lyme Northward through all the Lias Covers in England, has obtained us but one "hark hallo," and the one Conquest that followed it. We described the strenuous effort and the happy fortune by which that difficult animal was secured, in our Memoirs, and republish here the Plate VII, as the trophy of both.

Beside the recorded generic thickness of head, comparative paucity of large dumpy teeth, sternal strength, and above all the paddles; Plate VII, presents a fact, which instead of being accidental to the individual, as at first supposed, belongs to the universal sub-Regnum itself.

We purposely avoided any comparison between the Cervical apparatus of these lost Races and our own contemporary Cetacea, in the last Chapter, that we might illustrate by the most remarkable contrasts the amazing heterodoxy which obtains in the former; drive them from any community whatever from all Creatures of the Adamic and post-diluvian epocha, and reinstate them the more triumphantly in the solitary pre-eminence of Time and of Being, to which they advanced so many substantial claims.

Of the neck,—the anchylosis and other modes by which the preponderating head is balanced with the attenuated spine, finds analogies in many actual whales; so does the tail of these astonishing *Tanimim*, square with the peculiar attribute of that belonging to the Libyan Boa; and was, perhaps, imposed upon the former, as upon the last, for a moral purpose, lest the strong should subdue the weak, and at length extinguish the Pacific Kingdoms of Creation.

The Cunning and cruel Snake, whetting his fangs with poison in treacherous lair, and following with malignant eye the unconscious creature of his lust, moves but at his peril. Beside the Conservative instinct, the victim in which he anticipates Death and a banquet of blood, is

assured of one other chance for life, extorted from the Destroyer himself. The least motion of his voluminous Coils, even a shiver of rage, as the deer, or the dangerous Lion retires, or of fiery hope when he crosses the fatal Circle of the demon in wait, betrays him too soon. The withered tail rattles, and the Hanabashi, cursed with the terrific moral so well understood by the creature to whom Jehovah addresses it, drags it ever behind him with what disappointment, hate, and confusion he may.

Ichthyosauri have a tail with a like condition, modified to the element in which they swam. In the Sea-serpent before us, the lateral spines, called "chevrons," cease from the upper third of the twenty sixth caudal vertebra, and thereafter occupy the inferior facet of the receding bones, nearly to their extremity. The Spinous or neuro-apophyses, also disappear from, about, the thirty-third vertebra behind the one mentioned; a complete revolution in shape occurs also at the same time. The first mentioned and three following vertebræ clongate, square themselves, and contract in size; their articular concavities nearly vanish, and the rim itself occupies half the paries of the bone. The anterior lateral spines which occupy the costal axis of the vertebræ, from the Pelvis backward, scarcely distinguishable from the floating ribs, either in size or form, graduate slowly until they reach the limit before mentioned. At that point the tail really commences, the chevron bones arming it with all the coccygeal attributes from the first. The spinous chord, no longer issuing its wonted filament to processes nowhere found, pursues its paralysed way over the following bones, and then ceases altogether, leaving the last from ten to twenty vertebræ lifeless.

Nor was this condition of the tail without advantage to the party himself; the auditory nerve of the prey he chascd, may have been strung to the warning vibrations of this drooping and finally dead member of the Hellhound in pursuit, as are the ears of living creatures to warn them upon the serpent's track while the declination

in which the tail is always found more surely prove that it was naturally so prehensile, and possessed of a lateral motion peculiarly its own. Of what rudder-like use a settled force and a motive power like this were to the animal they were given, our navies tell. The more the momentum of a vessel agrees with its passivity, the better its sum-total weight of ballast and all harmonizes with her sailing powers, the more perfect she is esteemed, while a perfect command of the helm is indispensable to the safety of the ship.

That Nature which errs only through Ethics, over which the Almighty has placed alone His Holy Name, doubtless fixed all her antagonistical Forces with the most exquisite acumen composing them to the New Law even of Evil itself. The far Otaheitan, to whom an abstract idea were Greek, has carved an oar, to be seen in the British Museum, after the fashion of that of a Sea Saurus, and were our Naval Architects to discover the secret of that proportion which is observable throughout the Creatures of the Deep, soon should we skim the waves as swiftly, as lightly as the primæval Taninim; vast paddles rotatory by steam for fins, merchandize for body, the ship itself for the steering and ballasting tail, and the wit of man, as of God, ruling the whole.

It has been observed before that the Polyostinus is distinguished generally by a bulk swelling at the expense of slenderness. The Oligostinus in all his size, might, à priori, have been expected to stretch out his limbs to an egregious length, wherewith to gather up the waters and rule them at his will; But the Polyostinus retires within himself; his head, his back, his members are all sturdy, fitted to pounce upon his quarry, rather than to speed it from any great distance, and fairly to hunt it down. Amongst the Sauri he stands the strong; none had such stubborn teeth, none such lusty limbs; he was the bull-dog of his fury-kind, black, sullen, and ugly, fierce, gluttonous, and decisive, and a Gorgon terror to every hapless Creature that caught his glassy eye.

Sir Everard Home, and Doctor Buckland spent them-

selves over an imperfect Polyostinus, in 1819, which was the first Ichthyosaurus to disclose its four paddles; and described it in the Philosophical Transactions, with a splendid plate.

I have to express my unfeigned thanks to Professor Owen and Mr. Clift, of the Royal College of Surgeons, in whose magnificent Gallery this Saurian is deposited, for the hospitable manner in which they met my request to examine it, as also John Hunter's other fossil organic Remains.

The invaluable anatomical and physiological Collection of that eminent Man, which has absorbed almost the whole life of Mr. Clift, to whom the preservation of more than half of it is due, is so vast, that it remained for Professor Owen to ascertain more particularly the geological specimens with which it was accompanied to the College.

It cannot but be interesting to our Reader to learn that these Remains amount to quite a Collection, of no ordinary kind, enhanced as it is by the Polyostinus above mentioned.

Thus have a triad of the most accomplished Naturalists of this or any other Age, stamped a value upon the Collection there of a novel kind. It seems that John Hunter was the first of a dynasty of Great men, born to enrich this College beyond every other in Europe. Sir Everard Home succeeded, to whom Professor Buckland, who now reigns, seems while living to have been a second-self. Professor Owen will follow up their high example, inspired no less by the nobility of those Sciences, in the Halls of which he ever breathes, than the impulses of a Genius which both Hemispheres have already hailed.

Résumé.	
SPECIES I.	Polyostinus. Pl. VII. . . . . Found by the Author.
	Fragment. Pl. IX. . . . .
	Jaw. Pl. X. . . . .
II.	Sir Everard Home's. Phil. Trans. . . . . By Miss Anning.
	Head. Pl. VIII. . . . . By the Author.
	Jaw. Pl. XI. . . . .

## CHAPTER IV.

GENUS STRONGYLOSTINUS. *στρογγυλος, et οσσειον.* Rotundis ossibus in palmipedibus.  
 SPECIES I. Rostro crassiore. *Tab. XII.*  
 SPECIES II. Rostro prælongo, et tenuissimo. *Tab. XIII.*

**P**LATE XII, furnishes as yet the most perfect illustration of the Genus heading our present Article. The Strongylostinus which it represents was found in a thick stratum of marl, about eleven feet from the ground, and carelessly torn up by the idle fellow into whose hand it fell. Although terribly shattered, fortunately not one piece of the matrix actually lost its articulation, so that we find it here exactly as Death and Time left it.

The Specimen is the more interesting inasmuch as a part of the dorsum, and nearly the whole of the anterior paddles have been swept away by a force which had not

strength to carry with them the rest of the skeleton. The slightest agitation of the incumbent waters might suffice for this, as the putrefaction of the lungs and the stomach, necessarily preceding that of the less vascular and fluid muscles, decomposed the adjacent cartilages, loosened the bones, and abandoned them to the mercy of the Sea. The more stubborn texture of the head, and caudal extremities, and their comparatively contracted size, their distance too from the gaseous volcano, which blew up and helped to scatter the anterior abdominal framework, successfully resisted that catastrophe.

The existence near the Condyle of the left jaw of a Coralline, which is the only one I have ever seen in the lias of Somerset, proves that this Dragon lay naked of flesh and of everything else a long time upon the Ocean Floor. So that had the sea been but ever so little disturbed after the eruption of the animal gases, the unprotected joints of the remaining carcass must have been removed out of the order in which they stand.

As if also to satisfy us that the sea in which this dragon died was waveless, and windless, and tideless, through a period of Months; or that it was so deep, that the winds and tides, during all that time, failed to probe the bottom, the maxillæ have been pierced and fed upon by some marine ossiphagous insects, whose ravages are palpable to this day.

There are many other parasitic shells heaped upon the surrounding marl, also indicative of the denuded situation of the skeleton for a considerable time. And yet the curious and most rare position of the snout, which rises at an angle of 45°, would seem to deny the fact. But the combinations of vapor generated within side of the belly, and the oscillations of the Sea, are difficult to arrange and harmonize with the presentations of many Sauri; so that we have ceased to speculate upon the forces by which and in what manner this, or that, or the other dragon was broken up, violated, and cast at length away. Reviewing our whole Collection, and the circumstances in which individual parts of it are found upon their stony bier, we are at a loss to say whether the Seas they Emperored were swept by Simoons and Tornado, or left to lull themselves for ever. Perhaps, as the Brahmans tell, the earlier conditions of Matter, before they formed so many complicated alliances, indulged in alternate fits of rage, lashing the Waves into Mountains, and of repose, realizing the slumbers of the dead.

The Paddles of the Strongylostinus mark him in the most decided manner. The first individual, which was obtained by Miss Anning, and deposited in the Bristol Philosophical Institution, although very imperfect, and a still less satisfactory fragment in the British Museum, determined that fact.

The Plate before us represents a far more complete remain than either; and substantiates new Generic pretensions, not only the Paddles, and the egregious snout, but the spine and ribs assuming a form entirely distinct from that of all the other Taninim. Nor is that all; the snout itself thickened comparatively with that of Plate XIII, indicates a different Species, while the pelvis and the posterior paddles, compared with those of Plates XV, and XVI, enhances the fact. As for the beautiful head and the snout of Plate XIV, their teeth seem too heavy to allow them to belong to the genus Strongylostinus, and yet we can refer them to none other with a better grace.

Traversing the whole Physiological Circle of these great Sea-dragons, we cannot avoid speculating upon

the Sexes, impossible though it now be that they should for certain be ascertained. We have measured their brain, recovered their eyes, their ears, their respiratory and digestive Systems, but this escapes us still.

We prove the maximum length of the Oligostinus to have approached one hundred feet, by a precious relic in the British Museum, that it never exceeded twelve feet in the other known genera, and but seldom reached even ten; and by the Crocodile and analogous Sauri make a safe guess at the age of these Taninim; but the identification of sexes with the once sexual condition nearly elude us quite.

We have been haunted by an idea, generated by so subtle a process, and vitalized by inductions so frail, that it is impossible to set them all forth, that the Strongylostinus of our theme is none other than the male Oligostinus. Their paddles are designed alike, and the narrow radius they subscribe in the former comparatively is made up in a great measure by adaptations for an almost inconceivable swiftness: the head is sharpened forth, the chest flattened, the oars lengthened and thinned out, the spine closely locked together, and the hind paddles widened to check, when need be, the arrow-flight of the monster to which they belong.

If Ichthyosauri were oviparous, of which there seems scarcely a doubt, and if their instincts inclined them to the Piscal Races rather than to Reptiles, the impregnation of their ova may have been effected after the manner of Fishes. An amphibious Creature like this would naturally seek the Shallows in which to spawn, and the ovarian vent placed (as we have seen in the Last Chapter) so far posteriorly, aided the intention. The huge Oligostinus may, therefore, have dropped her eggs many feet above the level to which otherwise she could not come, over which the attenuated Strongylostinus easily passed in the act of vitalizing them.

The other co-sized Dragons were fitted to purposes and a speed, sufficient for themselves; and it comes up not one half to that bestowed upon their rival the Strongylostinus. Supposing the Oligostinus his she-mate, the gift at once explains itself, and clears up entirely the Theory upon which our Nomenclature stands.

None other fact, or even suspicion of one, in the whole range of our Sauria-ology, having ever questioned this Theory in the least, and so many reasons being found in favour of the sexual distinctions argued for, I may be permitted to add, that it gathers strength on every side, and approximates to a solution entirely satisfactory to our mind.

SYNOPSIS OF STRONGYLOSTINUS.

SPECIES	I. Strongylostinus.	Pl. XII.	..	Found by the Author.
	II. Head.	Pl. XIII.	.....	.....
		Two Heads.	Pl. XIV.	.....
		Slab.	Pl. XV.	.....
Unknown		Fragment.	Pl. XVI.	.....
Species		Fragment.	Bristol Institution.	Found by Miss Anning.
		Fragment.	Brit. Mus.	.....



## CHAPTER V.

GENUS PARAMECOSTINUS. Παραμηνής, et οστεον. Oblongis ossibus in palmipedibus. Animalium Prisci Orbis Lacertiformium, in Pago Street, Provinciae Somersetensis, cura et opere Thomae Hawkins in lucem prolatorum genus.

- SPECIES I. Vertebris caudae viginti, apophysi spinæ bifida. Tab. XVII.  
 II. Capite adancto, phalangibus palmipedum porrectis. Tab. XX.  
 III. Rostro retuso, osse humeri curto. Tab. XXI.  
 IV. Rostro porrecto. Tab. XXIII.

I NOW beg to present my Reader the most perfect of all the Annals belonging to Ichthyosauri. The labors by which we are enabled to recover and perpetuate them are not unlike those of Sir Humphrey Davy, over the papyri of the long entombed Cities of old Latium. Striving against the destructive weapons of Time, of fire, of earth, of air, and water, with the most delicate tests and a finished acumen, he was enabled to save the Hearts of some Cinerous Rolls of Herculaneum and Pompeii, so marvellously transmitted to these latter Days. In the unequal contest many an invaluable Record, over which the pale Scribe wasted his midnight lamp eighteen hundred years ago, little dreaming of the fate which, alas! awaited them both, faded into Oblivion, with all its vainly coveted, and maybe more precious than ruby page. The rust of Time sometimes neutralizing itself, left a trophy for his antagonist, who often in his turn outdoing himself, surrendered spoils already won.

The same Time which so ruthlessly assails the works and the monuments of man, was inspired with a zeal for the perpetuation of those which belong to the gods, really startling. The Vasty Cycles of Days since the Avatar of Time have been consumed by him but for this end. The Populations of the Old World seem to have lived that Time might solemnize their obsequies, and Stamp the forged Seal of Eternity upon their bones. The acts and Inscriptions of man dissolve into thin air, while the Races eo-temporary with adolescent Time continue for our own and the years that are To Come. To touch the former with a breath is to blot them out, while the last are hermetically soldered down with stone, and confined in the Centres of the Earth: so carefully guarded are they from rude and sacriligious hands, that to unrol the Cereaments which bind them, it requires the most peculiar and subtle Genius of Skill, and fingers tipped each one with a most energetic soul.

But Time has a limit set upon his work; the magnificent Nature he is ever busy to perpetuate in all her rising, heaving, proud, but sinking, and dying forms, and as extremes often meet, so the Papyri and the Taninim have both lost their cases and externals, by the indisposition and contempt of Time on the one side, and his officiousness on the other.

In cutting the hard, intractable limestone from the involved Skeleton, how many muscles, nerves, nay, the

Sensorium in which life couched and subsisted, is destroyed, as effectually as the wisdom and wit of man for ever lost in those lamented Scrolls. True, there continue the traces, the stains of the once living flesh and blood, in the softened and discolored stone; sometimes even the fibres of the more cartilaginous tissues faintly present themselves; and the stomachic fœculæ not unfrequently remain, but the fashion and bodily shape is fled, leaving Moloch naked in all his deformity.

II. The mere indices of these things, because they have a silent moral, are interesting for that very reason. The sublime discloses itself only in the silence of which we speak, when, by the most stupendous Efforts of Intellect, by the revivification of Worlds, by the inhabitation thereof of all the Creatures which the laboring Soul can re-articulate, we stand in a Presence which has not, nor ever shall have one sympathy with ourselves; those Worlds, those antipodal Populations, that Presence passionless, and silent dead; I say the instruments of a few bones verify a Sublimity before which no man can stand unappalled.

The present is so absolutely little when compared with the dread Past, that these Reliquiæ derive an Attribute from that circumstance to our Faculties as absolutely infinite. The sight expires in the distance, our minds are lost in the sweeping landscape, eternity for an horizon, and the god of the scene silence all.

The Philosophic Ancients lived and acted under this impression, carrying it on to the Unknown Future, in which alone they could substantially realize a Personality. And in this mood did they achieve for themselves that Greatness which leave the Moderns pigmies, because we lack the mental dignity by which it was accomplished. For this reason, likewise, have the Moderns, although studious of forms, overlooked the Living Soul of Things, disenchanting Life, and encumbering the Earth with the most uninteresting Automatons imaginable. No Fawn, no Satyr now, no shy Nymph frequents the grove, no Dian courses the resounding hills; all, all is unfrequent, and desolate all. Enthusiasm, without which there can be no sense of Truth, nor of fitness and beauty, seems as extinct as the Sea-Dragons which here inspire it: their strange eloquent Remains bespeak a Chord in our breast, which vibrates only to the Master Touch: the subtle and jealous gods of the vast Promontory of Time start at the well-known sound, They seize, They seize me wholly,

and if the oracle, O Reader, be ambiguous, blame thy Fortune in escaping the Pythonic furor, with its extatic but exhausting delirium, its shiver, and wild excentric fate.

Io. Io. Io.

A long grey Cloud in the far-west, covering many a Rood.  
A Golden Sun Autumnal.  
Golden Islands in the Deep Skies.  
O my voluptuous heart, gushing soft music.  
O life! so profoundly felt.  
Heaven above, around, beneath, Eternal.  
See! in the long grey Cloud a Tanin in the Empyrean Ocean.  
Suns, Systems, Time and Eternity cluster around him.  
Io. Io. Chase him on Wings of the Mighty Spheres.

\* \* \*

Flee away, Time. I follow.  
Both fledged to the same Stroke.  
Across Desert Skies.  
A million years. A million Essays of Wing. Each from one  
Vortice to another.  
O weary Wings, and Space dreary ever.  
Sea-Dragons! Chase them in the Expanse of Heavens.  
Wild Lucifer Spirits our Companions through all Immensity.

The Spirit of Prophecy is not dead. Nor do I consider it at all remarkable, that these waking dreams preceded the discovery of two Taninim, about to be introduced. A subject must be esteemed for its consequences, and who can sum the Legions of thoughts, which these Sea-dragons evoked, and shall yet evoke in our own and many other breasts? Were we to abandon ourselves to all the more occult influences of the mind, it would be elevated to a pitch of sensibility, and an acuteness of perception unspeakable; nor do I shun to avow a habit, which raises one above the mortal conditions of Earth, if indulged in a right Royal Heart. And what, quotha, are the Skeletons which interest us so much, stripped of the habiliments of Eld; or what is Kingly Power without the symbols, or the Heavens themselves without the Dominions which rule them withal.

But we must refer our reader to the Paramecostinus of Plate XVII, which supersedes a former one, (Vide Memoirs,) rejected because the right paddle of the subject it was taken from is improperly reversed. This beautiful Skeleton was found at our neighbouring Street, and the following extracts, copied from my note-book, explain the attendant circumstances.

"1835, June. John Steel announced a fossil, lying in Mogs quarry, in the thick marl, twenty-feet from the surface.

"Proceeding to extricate it, we ascertained that the tail was covered by one of the facets of the quarry, which cannot be removed for some months.

"John Mog, personally, not unlike Æsop, hobbling into the pit, and touching his hat with a useful crutch, requested to speak. "Your Sarvant, Zir, how much be I to have vor the faussil?"

"'You know, John, I always give the master one half, and his man who chances to find it the other.'

"'Very well, Zir.—Thank'ee, Zir.'

"'We must leave the tail here, until we work out the ground.'

"'Yes, Zir.'

"Thursday, Friday, Tuesday. Dissected the Skull and Snout, laying bare an eye deeply sunk in his socket; and identifying it with the Paramecostinus in the British Museum, by the shape and number of the teeth, the well-defined nasal Foramen, and the general outline.

"Wednesday. The Cervix, if indeed Ichthyosauri have any, rather the Atlas, axis, and a few succeeding vertebræ, are in their right place: but the sub-vertebral wedges are overlaid.

"Thursday. Encountered a stubborn group of the marginal rays of the anterior paddles, heretofore thought to be spines of a Cidarid, which I greatly regretted, but was obliged to sacrifice.

"Friday. Developed that beautiful pectoral paddle.

"Monday, Tuesday, to Saturday. The Seventh and five succeeding dorsal vertebræ are twisted round, presenting the spinous fossæ, although luckily the apophyses themselves continue almost in their proper place: the entire twelve are but little distinguished from one another in shape, but they decrease somewhat in size receding from the occiput. The Sternal arch and the whole subsidiary Apparatus is remarkably strong, and perfect.

"July, Tuesday, Wednesday. The anterior long ribs dive right through the matrix, an unusual accident; and the phalanges of the left paddle are dislocated by the superincumbent pressure which occasioned it.

"Saturday, Monday, to Wednesday night. Now then the Spine enlarges, the apophyses spread, the ribs resume their order, and chocolate colored laminæ indicate the once abdominal fluids. The gradually emerging beauty of this Tanin so possesses me, that I shall order my lamp, to enjoy another sight of it before I go to bed.

"Thursday. Fortieth vertebra, forty first, second, third, superb!

"Friday and Saturday. There are the posterior paddles, like all that preceded them, perfect. The Pelvis maintains its articulation, as did the Sternum before it. Here also the spine acquires its maximum long diameter."

The quarry having been at length worked farther back, the journal continues,

"Oct. Friday. An entirely new feature presents itself: the receding caudal Vertebræ disclose double spinous apophyses, mounting the twenty bones anterior to the first break of the tail. No suspicion of any such thing ever occurred to us; no Ichthyosaurus ever indicated such a fact before. All the other individuals known have these spines a little thicker perhaps than any of their relations, but the difference leads to a mere nothing. Here we have bifid spines, for what purpose? to support a fin? Now a fin comprises, besides its erector and compressor muscles, at least a cartilaginous, if not an osseous frame, upon which to exercise them: other more perishable substances than cartilage have left marks behind them in this very marl. In one or two Saurians we have even fancied that their skin, their mere outline of Form were indicated, if not to the eye, to that manual touch with which they certainly came in contact."

In the elaboration of several tails we have been unable to detect the least proof of a fin. Nothing due to our chisel ever advanced pretension to any such member.

The multiplication of these apophyses then was manifestly appointed as a balance, the cushion of flesh which clothed them assisting its consequence, mounted probably by a cuticular fringe, which may have been lengthened and widened out upon the tail, as shown in our frontispiece.

We have remarked the nearly equal size of the first twelve vertebræ of the back. In the several genera, nay, even in all other Species, it will most probably be found, that the so-called neck is more attenuated than that of the

Person now before us. His Cranium is very enlarged, as is also the other fore-part of the Skeleton. His aspect is stiff, fore-right, and heavy, demanding a compensation of some decided sort. These double processes afford it at once, while the whole tail, auxiliary by its just proportions of chevron and other joints, refute the idea of a proper fin, by the equilibrium in which it holds the dependant whole, as well as supersede the necessity of one by the curious rudder-like provision which we have demonstrated in it before.

Here then we have another Ichthyosaurus with a novelty of contrivance peculiarly his own; so marked a difference is itself sufficient to particularize him from all others upon Record. There are individuals which at first blush appear to be the same identical Species, disproved by this very singularity. In truth, it has never occurred to us to find a Saurian undistinguished from any preceding one, either in the number or figure of certain bones. A Species starts forth in every new individual, or at least differences, which belong, no doubt, occasionally to the Scxes themselves, about which we can of course only speculate.

The skeleton before us is altogether unique: he is the longest ever found in Somerset, and lacks not one the least joint: His color remains unchanged by the lapse of many Ages; his Animus survives in his attitude, discoursing most eloquent things. The Profound, the Solitary Seas he haunted, the appetites he accomplished, the brassy Skies he saw, the Soulless World he ruled, the unjoyous Times, the unchecked lusts this dragon knew, crowd their Memories in his ribbed boat, which, tracking the wide Oceans of years, lands them at last on our Modern Shores.

The fleeting Generations of Men shall pass away and be forgotten, while the Lessons which these awful retrospections teach them will continue until the absorption of all Truth by the ONE, innate, adorable Being, the Almighty Lord and Father of us all.

## SECT. II.

SPECIES II. Capite adancto, phalangibus palmipedum porrectis.  
*Tab. XX.*

The Dragon to which we now solicit attention, Plate XX, fulfilled the second Dream of the god: whether Pythius, or the one within us, or whatever god he be, the promise was fulfilled.

It is but the paralysis of a single nerve which shuts us out from the Real World, leaving us at the mercy of the wingless Sciolists, who know not where to find its threshold. If we could recur to our original Selves, we should recover an Innateness identified with the whole Universe of Mind, and Magazines of Processes reaching to the very Limits of all created Intelligencies.

The prepossessions, the instincts of our Soul, are faint and dubious by reason of a disease which many of the later Doctors have sorely misunderstood. They have sought excuses in the Constitution instead of in the Crime of Things; and forgetting they have no Diploma, prescribe, in the old Pagan Formula, only nostrums to a credulous Race.

The Scriptoros of History and of Heaven, which, vindicating Jehoval, set forth the Evil under which Creation groans, are put aside because they belie the Vanities of a Fickle Age. The grand Powers of Thought conferred upon primal Adam, and propagated through his descendants, in their several, but alas! waning degrees, are denied to the Fathers of Nations, and in pretence appropriated by a Posterity of which they are ashamed. Genesis first, because it insists upon the to us super-human proportions of Adam, and the qualifications of the first-born men, in Sciences whose names even are now unknown, no less than in all those lower Mechanical and Material arts about which the Moderns plume themselves so absurdly; and all History is next declined, which, treating of demi-gods, and of their Monuments, refute the vain glory of our degenerate Times.

Utility is the European watchword, while but few know the use of anything whatever in alliance with the higher Interests of Mankind. The most common but invaluable instruments of the Adamities for Communion with the glorious Worlds, from which we are cut so entirely off, are the least valued of any which they have bequeathed. They have rusted so long, that to "The Masses" they are almost irrevocably lost; while the Socrates and his attendant Famulus, which sometimes appear, encounter the scornful finger, and the bitter hemlock of Society at every turn.

The sub-stratum of visible Man conceals ores of Virtues beyond price, which are, nevertheless, overlooked and condemned by the mean Spirit of the present Hour. Those who diligently study and work them out, enrich themselves thereby, while the varieties of "Jaspar, Sapphire, Chalcidony, Emerald, Sardonyx, Sardius, Chrysolite, Beryl, Topaz, Chrysoprasus, Jacinth, and Amethyst, and Pearl, and pure Gold," are each one of them sufficient for him who happily obtains it.

This Tanin then, of which we so caught the projecting Shadows, was found at Street. In the bottom of the quarry eighteen feet deep, in a thick bed of Lias Stone, there it lay long buried and lost. But the Fates brought a workman to the spot, showed him a glimpse of the Dragon, of which they had taken such care, and directed Mercury to our door.

How did the poor man's heart flutter, responsive to mine audible own, when first I saw the tomb in which my Treasure lay hid. Poor simpleton; his quivered harshly to the blow of Dives, ours vibrated to an Angel hand. Would we realize a Picture of a pure Idea and its antipode, there it stood; a storm incited by Ignorance and want, resolving itself into a shower of pelf, on the one hand; a Hurricane of thought, personless and Ideal sweeping joyfully, on the other, originating in one and the same point, the Dragon.

Specifically this Ichthyosaurus differs from any other in our Collection of this Genus, the most on account of his head; while the paddles are distinguished from those of the preceding Skeleton by more elongated phalanges. The tail presents the general Rule in all its force, while the arc it describes is apparently less significant than the break, and sudden twist which mark the Polyostinus of Plate VII.

The space between the Skull and the left paddle preserves traces of an animal matter so remarkable, that I have no doubt the whole abdominal contents were poured forth upon that spot; the moment our chisel came there, it

sunk through several thin laminæ not unlike charred leaves, which we probed with the most intense concern. Curious suspicions of Mammæ began to haunt us. We had hitherto supposed these Sea-dragons oviparous, and now we are tempted to think them mammal. The head here seems enlarged for the maternal dispositions, and if ever Dragon were destroyed in the hey-day of life, this is the one.

The absence of embryo Shapes in the Pelvis of all known Taninim, and of the decisive marks near the Head adverted to, disprove nothing, as none other Skeleton extant proves so vigorous an adulthood, and so sudden a death as the one under our notice. The extremity of the upper snout, or rather the superior maxillaria, have been broken off as against a rock; but whatever the cause of death, it was instant, and whatever the laminæ of which we speak, they are very strange. They also describe an outline singularly suspicious, reaching forward to the nostril, and describing outwardly a semi-circle of several inches. The attitude, if I may so express it, of the monster, is also precisely that one which would project the teats as described; the spongy texture of which, gorged with lactiferous matter at the moment of sepulture, might have a chance of perpetuation in color, and manner herein found.

If these great Sea-Dragons certainly suckled their impy brood, which these appearances incline us to believe, Martin has barely attained, with all his stupendous Powers, the utter hideousness their own. These huge Dragons and their horrid Brood! Well may Berossus have journeyed to Babylon, where their dread Images were pictured on the Temple of Bel, by a Pencil inspired probably by Regal Adam himself.

Thus Egypt not alone boasts a City of magicians with monsters changed into stone, exactly as they were found at the moment the petrific spell fell upon them. Creatures more weird than they, of a more ancient Ansinis are ours. In this Tanin especially, we confront Life everywhere; the head is instinct with life, the eye glowers in his socket, as if in the last agony, the spine twists to and fro, as though the nervous filaments still tortured its extremest parts, one foot digs into the ground, and the lashing tail writhes under the general throes, agitating for Death. His heart-strings were wrenched asunder so quickly, so rudely, that Death failed to stamp his Effigies upon the resisting bones, and so left them there at the bottom of the Seas, lifeless, despite himself, as we behold them here. Peradventure in a conceit, Time thereupon proceeded to mummify this Sea-dragon with more than peculiar Care; his cerecloths he fabricated in the strongest stone, and folded them up over him innumerable, as though expecting some at last recurring Cycle of years, when the wandering Ghost should return again to his inviolate home, and re-enact the life of which it had been before the crimson Stage.

If not only the Pharaohs, but prophetic Time have been careful so much, in that hope of resuscitation in which universal Earth of old did verily comfort herself, how know ye, O lector! that some God Galvani is not at hand to restore all things in accomplishment of the Primæval Philosophy, before which our body, soul, and spirit boweth down evermore. "Blessed and holy is he that hath part in the first Resurrection." Revelations, xx. 6.

## SECT. III.

SPECIES III. *Rostro retuso, osse humeri curto. Tab. XXI.*

Who but Scharf could so portray the naked bones of these Taninim, and seize their metaphysical aspect, so tenuous and shy! With an eye to the outward form, certes, and a sense known only to Genius of artistical dexterity manifested by a stroke, Scharf shall multiply these Sea-Dragons throughout Christendom, and embellish our Chronicles beyond all others. The mere colorist may heed the plates nothing; men who expire with joy before Angelus Bonarota, Rafael, and Titian may scan them without a thought, and condemn them because they perceive not one thought in them. But the metaphysician who sees more in a square than its four sides, and who reasons to infinity with the figures which avail ordinary men only for dullest arithmetic, is above them. True, the Souls of the Masters were attuned to vocalities as lofty, and Ideas as grand as are those of whom we speak, if, indeed they were not of all men the greatest, and their works do follow them.

Lithography, although a humble handmaid, is very useful to the fine arts, and more especially to Science. In geology, above all, she seizes the lithological character of fossil remains, and describes both it and the original themselves in the happiest manner.

Covered with parasitic ostræ and other shells, the Tanin, so beautifully drawn by Scharf in Plate XXI, was disinterred in the same year as was the last Skeleton. It was an extraordinary occurrence finding two Saurians in one year, the average of more than ten years yielding not one annually. And yet some of our most accomplished geologists believe that these Sea-Dragons are as the sand on the Sea-shore. "Est modus in rebus! sunt certi denique fines."

The Street, as are all the neighbouring quarries of lias, commence with a thick bed of external Clay, verging into compact limestone, with marly partings. In the hardest, and most desirable Stratum of marl, sixteen feet deep, lay this magnificent Skeleton. In the act of casting away a picce, the laborer detected a section of the tail, and gave me immediate notice of the fact. The slab was replaced, the Skeleton traced out, the circumjacent lias squared, cut out of the pit, and translated to Sharpham the same day.

The mark I usually strike at first is a pectoral paddle; next day a paddle came forth, attached to its Great Tribe, the Paramocostinus, but demanding a Family Name of its own.

The Scapulæ are in their place, the right humerus, radius, and ulna thrown upward, and all the phalanges scattered round about them. The Skull, filled by many of these dislocated bones, gradually emerges, an obtuse snout appears, both snout and head having a contour differing from all others in my Cabinets. The teeth are almost hidden by the intermaxillary and other bones, the head having fallen almost upon its vertex, so as to show much of its internal order inferiorly. The spine, obscured at first by many overlying ribs, yields; it breaks, but the

spinous apophyses hold on upon one another until the vertebræ, recovering themselves, proceed more orderly toward the natural bend of the tail; there they are irrevocably scattered, one of them being driven two or three inches out of his track; but the tail, nevertheless, proceeds, one bone following the other nearly to the end, when the same disturbing power against which the whole Spine contended with so much difficulty, succeeds in carrying off the Rattle, which is lost for ever.

It is impossible to laud the vertebral Column of this Tanin too much. It lies in ruins, one joint fallen upon another frequent, but the ruin is more impressive than the uprightest shaft. The waters of the Great Deep overturned it lovingly, and the gravid Seas fell lightly over it. Just as the Sculptor leaves his finished work, we find these remains uncrushed, perfect, but overthrown. If the Architect did once build them up, they have been quietly undermined by that interesting Decay, which, stealing the more evanescent Emblems of Time, compunctiously leaves the radicle Beauty behind, and sometimes even a grace passing that which is conjured away.

Another valuable fact belonging to this Dragon is also obtained. Falling down upon his back, we have the abdominal concavity exposed; and the fortunate displacement of certain of the left ribs discloses a body which can only belong to the Viscera themselves: its color is russet black, it covers the internal paries of the right ribs, and gathers itself up upon them into a bag, the size of an infant's hand. But the most precise words avail little to describe it; the moment you look there into the abdomen, you believe you see the stomach collapsed, and a few meagre contents besieging the intestinal canal; these are manifestly so insufficient to his sustentation, that the Dragon at once appears, inane, languidly sinking to the bottom of the Sea, and giving up the famished ghost.

The Solemn Seas themselves hold requiem over his bones, and old Time, warned to the scene, agitates them in his turn. The Profound quivers, accordant with the upper waves, the dead Carcase of the Dragon moves, and there in the presence of Time, and before the Shivering waters, uplifts his hands. Slowly the waters cease vibration, Time throws the Shroud of Oblivion over another of his sacred dragons, "injecta monstris Terra dolet suis;" and the Cycles onward run.

## SECT. IV.

## SPECIES IV. Rostro porrecto. Tab. XXIII.

The thoughtless avidity with which Fashion pursues the minutest distinctions of things, the microscopic eye with which she pries into nature, has filled the world with books of description without an Idea by which they can only deserve to exist. We dive into the Dceps for an animalcule, prick out his tiny heart with the faintest needle, and complacently count up the pulses which fulfil his life of scarcely a moment's duration. The invisible tentacles of a Zoophyte, the feathers of an Ephemera, the ova of a herring, the farina of the most prolific plants, are the favorite objects of study, because they afford the

Times exactly the childish sport which interests them most.

The natural eye of a man, steadily fixed upon a given point, loses its sight; and Savages, as soon as they can count their fingers, in an extasy, proceed to count them over again and again. And so it is with Nations. When the World, having passed away, the final summation of Empires, and their achievements, shall be cast up by the Arithmetic of Jehovah, we shall learn that Peoples have forgotten, nay, lost themselves in the gainless Spirit to which we allude. It may be, it is very well to comprehend and enjoy every thing in its measure; but the Cyclops none the less so understood lesser things, because, forging the thunderbolts of Jupiter, they comprehended a vastness and a grandeur which obtains them Immortality. These were the primitive Giants of Renown, who if they did err, it was like as gods, and as gods were they used too.

The Modern Goths need not wonder that the Latins and Greeks boast only an Aristotle and a Pliny, while every dish and saucer from China, and every Shawl from the looms of Ispahan and India glows with minutest Iris' copied from the Flora of the papilionaceous East. But these have Persepolis and Elephanta, and many other mighty Works, and much Wisdom too, upon which no European has ever safely ventured forth; while we, the Crowned Kings of Men, effect nothing worthy acceptance of the Generations that are to come.

All our most original Essays tend but to a little point; we have admitted a convention which smiles at every thing beyond a certain meridian, and pride ourselves in that Hermaphrodite Reason which Antiquity tolerated but by degrees. A disposition like this leads but to extinction; the Tritchinopoly chains are much esteemed, but the patient Smith who forges them is a Slave. In fact, nothing little in Nature is worth more than an instant's notice, since she has filled all her Kingdoms with Monuments of surpassing Grandeur, which the longest-lived Nations can hope to glimpse barely a half.

Who then can endure to pore over the infinitesimal differences of age, of race, of color, of shape, in which Creatures are found. Will not posterity deem us triflers for the pains taken to record so many minute points, even while we neglect the greater Principles of Things. And all our more elaborate Works on Natural History, will they not pass unheeding by them, seeing that the persons they so laboriously set forth are common to the eyes and understandings of all men.

We coast the Marginal Countries of the Earth industriously, crowding our Log with accounts of the grasses, the herbs, and mosses which fringe their shores; and it is at last come to this, that Naturalists assiduously search after a new thing in vain, since the contraction of our vision has put out of its focus all that is not adjusted to the circumscribed field to which it is so foolishly confined. Hence individuals are ever contending over the last found Helix, or the latest variety of a thing, so that the tulipomania of the last Century luxuriates in another but no less exaggerated a Species, and distracts the domains of Science, in which the Ancients scarcely ever heard, nor would they have tolerated a brawl.

Every tree bleeds under a thousand knives inscribing as many names; every leaf groans expectant of a like fate. The Vandal treads not alone our Cathedrals, he not alone desecrates their Sacred Marble and Shrines with his savage Name; the Realms of Creation are in-

vaded; happy indeed they that the Iconoclast no longer deals with the works of Men's hands, but trifles with the adamantine Monuments of a Divine Power.

The Fashion will come shortly to an end. Then no more shall we stumble over cyphers at every step, nor shall the ear start at unwelcome sounds, nor the wit be insulted by contemptible things, but the Groves of Academus, and the Gymnasia murmur to the converse, or exhibit the athlete of Philosophy, in naked dignity, antique and noble all.

Plate XXIII. In presenting the fourth Species of a Genus we have chanced to find, we therefore make none other boast. It has been seen that Miss Anning previously discovered three several Genera, and was content with the simple fact. America is called not after the finder, and these Taninim have been appropriated in the same way: but Miss Anning nevertheless found them, and the Author, spare the egotism, O Reader, discovered their longitude, and added another Province to the Realm.

Many a Tome, a Language, an Idea, a Sum has he pursued to their last decimal, in quest of that Terra Incognita of Dead Times, that Ultima Thule of the wise Babylonians, Egyptians, Assyrians, and Indians, in the Ocean pre-Adamite; Many Lands traversed, and monsters handled, but to find them strange. The traditionary pictures of the Temple Bel and the actual ones of Misraim, and Ganges, are accounted fabulous because their Cipher is unknown. We have lost the ante-diluvial measure of Time, about which Usher has led us into so many lamentable follies, the Secrets of the Heavens, and the Science of the Inner Man.

But a Star arises out of Jacob, by whose blessed light we cross the Silent Seas of Time, and explore the Solitary Countries of the Past. It is possible even to the Initiated in the Greater Mysteries, to re-vivify the whole Universe that is gone. If it were not a prophanity we could tell thee, beloved reader, of this terrestrial Ball, a startling tale, and of the shining Spheres. Often at midnight, quenching animal Life, we listen to the din of Chaos, the rustle of the living Wind over the Primæval Deep, the whisperings of many Spirits. The Red Man and his Dominions pass, the Vasty Wings of Jupiter upon the Globe Earth quiver, the Dread Anark one enters the Scene, and the Universe darkens. Cowing Visions of mingled Heaven and Hell close with a rainy shroud palling the departed Earth; the "Abomination of Desolation" is revealed, the Grey Mountains bowing down their dripping heads, and the Stars falling to the ground out of Heaven.

Dost thou require proof, behold it here! these Sea-Dragons come from the wonderful Countries we have found, to which the Adamites pointed Heber by the mouth of Noah, and Posterity by the consent of Nations. These are the Great Sea-Dragons, the Gedolim Taninim of Moses, the once gory Monsters of the Primal Seas. If silence, if height and depth illimitable, if Space and Eternity thou canst meet as an Eagle gazes unblanched upon the Sun, unfurl the Pinions of thy Spirit, give it to the Winds of Heaven, and realize an intact, self-sufficient and satiated a Being, fulfilling that Destiny for which our godlike Race was born.

## CHAPTER VI.

OF THE GREAT SEA-DRAGONS—PLESIOSAURI.

WERE it possible to abstract mankind from the habits and artificial conventions of ages, and refer them back to the original Constitution of Man, it is highly probable that we should find nothing positively abhorrent to our feelings throughout all Creation: unless, indeed, some Great Principle, antagonist to the one by whom we are made, had introduced therein objects evoked from an Element hostile and injurious to our own.

For it is impossible to conceive that the Almighty would sow the seeds of Death in a Garden planted for His Pleasure, or deform the Palaces thereof by additions damnatory of the Work itself, and fill them with unclean Races for ever at strife with the Favorite for whom it was especially built. And if we admit the inhabitation of the Seas, long before Adam, by baleful Monsters, and in them a manifest Power allied to Pain and his attendant Horrors, it is easy, nay, reasonable to suppose that the Lord of the Earth himself was to be endowed with a sense of so much Greatness, that he would stand in the midst of them all, inviolate of strength, and unmindful of them as a god.

We may pursue the problem farther, and imagine with a Phidias, an Apollo, and Python destroyed in the passionless Spirit immortalized in his Statue; or with Rafael, Michael the Archangel treading down Satan, with a brow serene and a mind unruffled as the waters of the River of Life.

The perfection of a Creature cannot be predicated if he be conscious of fear. For this, Milton describes Abdiel repelling the contumelious assaults of the Rebel Armies of Heaven, and passing calm and undaunted through them all. It was the Essence of things, through all the Works of Jehovah downward from the loftiest Angels, the only question being where those Works do end.

On the other hand, were it not foreign to our Text, we might speculate upon the intolerable pangs which seize a fallen and lost, or an originally vicious Creature, when placed in apposition with Elements of Good subversive of his very being.

The Ideas then, and the terms used to denote them of things repugnant, are by no means indigenious to the human understanding, but forced upon us by the hapless circumstances in which we are found. And, presuming with the Ancients and the Easterns even of our own day, that besides Jehovah, another Being has been engaged in peopling this Planet, surely no one can object to our calling bitter not sweet, and monsters of surpassing ugliness the hardest Names.

The Mythic Serpents graven of old upon idolatrous altars and Temples, and introduced in the commonest occasions and uses of Life, extorted a Sentiment from

Pagan Nations, grateful only to the Cruel Demon they represented, and by the frequency of this personal manifestation, the Great Enemy of our Race hoped utterly to deaden and kill the Instinctive Love of Beauty which survived the Fall, and finally brutalize the whole Earth. In the earlier Campaigns, Anak had the advantage, the Adamites deserted their Standard, signalized themselves in his wars, and paid, too, the penalty of Treason in those Waters, which the Earth invoked wherewith to cleanse away the impurities with which they had filled her: but a Deluge were insufficient for the renewal of the once spotless Constitution of Man, the post-diluvians were, in their turn, beguiled, if not to so great enormity, into frailties of the above fatal kind, and their dispositions became Evil Continually.

The Life and Immortality which in due Season spring to light, open an entirely new Scene for the Energies of Man: Now laying hold upon Heaven, he fearlessly handleth aspic things, combatting Evil with his own weapons, in that World so well-nigh conquered for his own. Here too he often stumbles upon the wrecks of Victories won over Evil in Times anterior to the Fortunes of Mankind, which it has been the policy of the Old Dragon to conceal from our knowledge to the last; for not alone since Adam have the Two Dread Principles, Osiris and Typhon, battled for Dominion over the Earth; it has been the theatre of many another War, and the bones of these great Sea-dragons, Plesiosauri, are the remains of but one of the vile Colonies from Tophet, which Jehovah visited with Wrath, and swept out of the World in a whirlwind of Fury and Indignation for ever. Each and every of the Kingdoms accursed shall be destroyed in like manner, and the arch-Ruler thereof driven at last to his remaining Citadel in the human heart, be cast out even thence into Perdition everlasting.

The mere ordinary common-places, then, which invest alike all animate and inanimate things, of size, of color, of kind, we again declare our total indifference to them all; when Science bestows more than a passing glance upon them, she forgets the dignity which alone makes her truly worshipful. A hair in a telescope obscures a Star, and in this way the whole Universe may shrink into a Span, and the Past and Future vanish before the momentless Present, while the observer, unconscious of his situation, dreams away, comatous and useless quite, contemplating Effects apart from the latent Principles out of which they come.

These Tananim! we seize them as with a divine furor; more intelligible than the Rosetta Stone, they constitute the only Key to Tongues pregnant with Facts of the most astonishing kind concerning the gods. These Sea-Dragons shall be esteemed for more than bodily Images and Stone:

Not for this do their hateful carcasses survive the Scorpion Soul, torn out of them and punished for ever: Despite the unhappy Power in which they originated they betray a Chapter of the Defeat suffered in their persons, long anterior to the final discomfiture he shall undergo with reference to our own, with so different a result. The Carcasses themselves we dash in the teeth of the Fiends by whom they were articulated and animalized; their inductions afford us a hopeful prestige of the Times when Adrammelek and all his Hosts shall be hurled out of the World unto his place,—“fulmine luridum missos ad arcum,” and the ages renewed, re-commerce afresh, Virgo and the golden Signs.

REGNUM.—Gedolim Taninim.—גדלים תנינים.

SUB-REGNUM.—Plesiosaurus.—Πηλοσιον, et σαυρος.

GENUS.—Pentatarsostinus.—Πεντας ταρσος, et οστειον.  
(Quinque ossibus in talis.) Animalium Lacertiformium in pago Street, cura et opere Thomæ Hawkins in lucem prolatorum genus.  
Tab. XXVII.

If to discover the most signal distinctions which hold amongst Ichthyosauri, it was necessary to enucleate the immense Collection, over which we dwelt with so much satisfaction as the rich reward of a devotion unbounded, an industry untiring, a singleness unshaken, and a good fortune peculiarly our own; how much more indispensable are multiplied spoils of Plesiosauri, which offer us varieties of form remarkable indeed, but infinitely less conspicuous than those of their contemporary monsters.

Endowed with passions of a more subtle kind, and a bodily figure of a more compact and perfect order whereby to accomplish them, the Plesiosauri gathered their Tribes within a Province of their own, proudly repelling the Piscal Races at their side, and arrogated the prerogatives of a higher class in the Scale of Being.

Ichthyosauri ran into every Gender with ease, luxuriating in change, dubious even of the order by which they stood in the midst of the world. The rude spirit of Belial hurried them along in ceaseless lust of blood, brutal immitigable, and insatiate Fiends; with eyes, and ears, and bodies intent upon carnage and gore. From a mechanism like this it is impossible to detach an idea of blind and headlong fury, insensible to danger, and every other sentiment but the bloody one to which appetite confined it, so that of all brutes this was the most brutal and unredeemed.

There are other Faculties which tend to the same fruition, but by a more circuitous path, and elaborate an action, and other Dives' than Belial have tried their black art upon matter with a success commensurate and as cunning. Plesiosauri are their handiwork: if the Old Serpent himself did not shed his own teeth upon the ground, out of which these Sea-Dragons, armed with all the virility of Evil instant sprung. Emulous, Satan seems to have been thrice seized, generating Horrors commanding, and realizing a teeming Spawn fitted for the lowest Abyss of Chaos. Long uncouth limbs, lank bodies, egregious tails, necks ambitious of the most terrible Serpents, and heads crowning them with Kindred guile, behold the Dragon Plesiosaurus confest.

The deformities of body with which they came forth were accompanied by immoral powers of a congenerous and ugly order, and physical dispositions quick to fulfil

them. The Jaws bristling with sharpest teeth, the muscular neck twisting to and fro, not alone were experienced by the victim they impaled; a more fatal agent than either subserved them both: the snaky crest, the fury no longer, but the Jaws remain, over the anterior margin of which did once dart a forked tongue, the gums distilling poison at every pore.

Had the Adamites been formed upon less conservative principles, or had not the Almighty neutralized the deleterious substances which compose these Sea-Dragons, the long march of Ages might not suffice, and their Virus may have guided Death to the recesses even of our own hearts, through the absorbents of the fingers by which we expose their bones.

So concentrated a Horror, we could expect to present scarcely a variety of aspect. The Summit of Arimanes his Creation must come like all other things to a point: Plesiosauri are an order so frightful that the least addition would commit it to the grotesque.

It were vain then to look for lines of generic demarcation as broad as those of Ichthyosauri; may be some Plesiosauri were green, and black, and yellow, like Indian, others spotted and mottled, like African Snakes; some were large, some small, but they all belong to a category with a single point: the Skeletons which remain to us, although they differ from one another, suffice for a Generic but scarcely a special system: and it now becomes our duty to inquire after and record the varieties which have come to our Knowledge, and to award the result to each which may appear its due.

Certain naturalists, struck with the fashion in which Ichthyosauri and Plesiosauri are contrived and put together, influenced, perhaps, by the Pythagorean doctrine of Species, and beguiled by the seemingly endless conformation which holds throughout every individual known, have speculated upon and even entertained a notion that both Regna were related to each other intimately, converging each to the other in a long graduated chain of persons, at last meeting and uniting in the most Cordial brotherhood together.

It was sufficiently shown, we presume, in our memoirs, not certainly by an examination of each side by side, but by the more simple and studious description of each one in his proper place, that any such an hypothesis is wholly untenable. A community of disposition to blood is all that the Taninim had together. It may be also allowed that they were amphibious, but in far differing degrees, the spine, and pensile paddles confining Ichthyosauri entirely to the Sea, while the more thick-set and bony Plesiosauri may have splashed through the Shallows and ooze of the Sea to spawn, or to ambush in the marginal Algæ and Flags, with scarcely an effort. It is impossible to carry resemblance farther; the long crocodile-head of the one fixed immoveably to his back modelled from a fish, his tapering and slender tail, his paddles too made up of circular or pentagonal bones enclosed in cuticular fat, but ill accord with the characteristics of the other. Rather say that the minute viper-head, pivoted upon that astonishing neck, the heavy quadrupedal carcass of the Plesiosaurus, and his thick and labouring tail, his hands, his feet too framed like our own but webbed, present the very antithesis of the former, and deny with one consent any relation whatever. The Giants of either kind sped the waves, and battling, may have reddened them often with mutual blood, demons as they both were:



but the company was not of choice, none other passions but of rage and alien hate possessing them twain.

Moreover, it has been supposed that both Dragons had a rugous, or even a hairy hide, and fins for which no use can be assigned, nor evidence of them found; as though the lank, the ungainly monsters were not yet sufficiently extraordinary, and Nature delighted herself in the absurd.

It were as profitless too to search amongst these Dragons for analogies with living Races. The world has grown testy in her Old Age, and will not brook any such attempt. Where we now freeze half the year, of yore there was a perennial Summer, these Taninim bathing through all their lengthened Generations in tepid Deeps: the constitution of things was unlike the present, as was the Creation of which these Creatures made the dark and trembling side: the Canicular Times were theirs, their god Typhon in his prime, the Storm of God's wrath couching in the clouds afar off.

The Snakes, and uncouth things, and deadly, in our own Earth, and the unclean, may have been imitated from the fragments of these Taninim, over which the besom of Destruction eventually swept, but what boots the posthumous likeness. We know that Crocodiles, and Chelonizæ, and Chameleons, and the Ophisaurian Tribes claim descent from these ancient Races, but the family records are for the most part illegible, and of value only in a general sense. We may pore over them by these modern lights, and, perchance, identify a character here and there, but the Great Book of Dead Times is unique, the later Editions are incomplete, the Court-hand having been altered for another; and these Sea-Dragons remain in their primal State, alone, approached but awful, the wizard Giants of Time, and the wonder of the world.

Thus it is seen that the Remains of Plesiosauri must be looked at for themselves only. Congregating all the known individuals, and testing them by one another, we ventured in our former Book to prefer the tarsus for the required distinctions, and thence identified four several Species. The Rule has so much more comprehensive a basis in Ichthyosauri, that for that reason we may be dissatisfied with it in the present instance. But the choice is imperative. The head, neck, trunk, tail, may and do differ in all the Skeletons, in shape, in size, and in relation, but we can detect in either no mark anyway equal to the one elected, and therefore it must Continue. And, now, the addition of two entire Skeletons to the list of Plesiosauri impose a further necessity. The Duke of Buckingham's, Lord Cole's, that at the British Museum by Miss Anning, and the author's—recorded in our Memoirs, are corrected by these discoveries, and enabled to take precedence another step. They assume a generical Title, and we hasten to record the persons by the discovery of which it is authorized and assured.

First, the Pentatarsostinus of Plate XXVII.

The panygeric of this and all the other Taninim perpetuated by us, is inscribed in golden numbers in our National Archives; it having been pronounced first by Imperial Buckland, and repeated in parliament with acclamation.

The beautiful Remain of Plate XXIV startled and delighted the most eminent Naturalists, so that they exhausted the vocabulary of praise, Conybeare himself setting the example. But the Skeleton before us transcends even that. He has paid no tribute to Time, nor to Death, and malicious Fate has succeeded in spoiling him

only of a few phalanges of the right hand, which may have been pointed at her in defiance, and sacrificed in the act. Of all his Tribe, he only is known: they are sunk in oblivion all, leaving this one Dragon behind them crowned with values of the highest kind, kingly and alone.

We subjoin extracts from Journal, showing the manner in which, and by what a happy chance, he fell into our hand.

“1834. June. Wednesday. My attention was yesterday solicited by a quarrier, to the section of a few small bones at the bottom of Bond's quarry: they appear so little promising, that I passed them by.

“Thursday. A whim possesses me to examine more particularly the bones in Bond's quarry, to which I shall at once go.

“Friday. Instinct, only another word for Intuition, is surer than reason. To my agreeable surprize the section has led to the most interesting result; upon excavating the overlying strata the rudiments of an entire Skeleton faintly presented themselves, through a thick covering of Limestone. With difficulty I have traced the larger bones of a Plesiosaurus, which lies in a bed of lias ten inches thick, and the most compact and crystallized of all the layers.

Saturday. The prize safely delivered up at Sharpham.”

The Journal proceeds.—“The teeth of this Plesiosaurus are exactly like those of all others known, save the gigantic Races, curved superiorly, and sharp, striated upon the external enamel, and perfectly smooth upon the alveolar body, which is hollowed to protect the nascent tooth waiting to usurp its place. The teeth of Ichthyosauri vary to infinity, and for that very reason compel us to forego them as specific marks, or to isolate every fragment with a tooth in it, in a Class by itself. These Dragons, on the contrary, afford but two sorts of teeth, which belong to the Greater and the Less Plesiosauri. There are so many vital differences among the latter Tribes, that it is impossible they could have originated in one common Stock, their teeth then manifestly also fail us in the identification of Species.

The neck of Plate XXVII, curved sinister, presents three-fourths of its circumferential parts in all the order and regularity of Life itself. Except, indeed, where it approaches the Sternum, towards which the right lateral processes of the three vertebræ anterior to it have been thrown.

The great and unknown Race Plesiosaurus, dimly seen through the Perspective of Ages, may well have agitated the Antiquary of Science, in that infrequent Path, across which it flitted before him. It must have been a strange moment for Mr. Conybeare, that wherein, piercing the Shades he descried one of the Eleusinia of Time, so long jealously buried under the Pillars of Matter; a grand Fact unveiled before him! the Skeleton thereof hideous thrice, but the accompanying inductions astonishing and sublime. Mr. Conybeare invoking Homer, called it “*Dolichodeirus*.” What right the original Plesiosaurus, upon which that epithet was conferred, may have to the same, contradistinguished from others, it is impossible to define; the neck and Sternum having been dislocated and scattered. But this much we know, that the neck of these Monsters no more than the teeth, hold the Generic secret. We learn this from the subject of Plate XXVII, and my Lord Cole's beautiful Plesiosaurus; both which have a common number of cervical bones, and signally oppose each other in

every respect beside; Lord Cole's also having six tarsal joints. We have often shuddered upon the precipice of our Generic Hypothesis, but this one fact of comparison places us entirely out of danger from the cervix, as ere now we have escaped the no less trying test of the teeth.

The Sternum remains in all its entirety, composed of three bones, a body and alæ at its side: Plate XXVI contains the drawing of a large Sternal bone, in which the connexion of the two wings with the centre is most carefully shown. Anatomists who value more than metaphysical relations, the coincidences of natural forms, will study the breast and scapular bones of Ichthyosauri and Plesiosauri side by side; the scapulæ, clavicles, and Sternum of both having the same style of mechanism.

It is impossible, hidden as they are under the ribs, the Sternum, and the pelvis, to count decisively the dorsal vertebræ, only four of which, just anterior to the pelvis, discover themselves. The true and the floating ribs maintain their order, while the ventral ones have been slightly displaced, by the explosion, probably, of Animal gases.

Oryctologists have so much exaggerated the length of the neck, at the expense of the carcase and tail of Plesiosauri, that the equipoise of the first and last is a fact they will unwillingly learn, although it certainly may have been assumed from the very first. In Plate XXIV the neck apparently is rather longer than the tail, but such is not the truth, seeing that the latter is imperfect. The caudum of the superb skeleton Plate XXVII is the only entire one extant, the three terminal bones being thrown back upon the preceding vertebræ. And it is difficult to ascertain even here, the exact point where the tail com-

mences, the ischia projecting backward over the bones so as effectually to conceal the vertebra, which succeeded those with which the ilia articulated. The manner of that articulation is fully shown in Plate XXV; so that we can approximate to a correct measure, and prove the neck and tail nearly alike in length. Moreover, the tail, arming its squared solidified vertebræ with heavy spines, reaches the balance of the head and neck together, so that the Creature oscillated upon a fulcrum fixed in his navel. The paddles elongating, or downward, backward, or before, fixed the pivot upon which Plesiosauri swung forward in heat for prey, or wanton flight, or prone down to the nether deeps, their den.

The longest phalangeal series of the anterior extremity amounts to nine, the longest posterior one to ten joints; thus reversing the fact in Lord Cole's specimen, and exceeding, by two joints, the longest toe in the Plesiosaurus of Plate XXIV.

The long, lank, skinny hands, the deathly paddles of Plesiosaurus, or spotted, or livid yellow and pale, upon them fiend-like he fled: his hide, or black or freckled, or russet, his eyes blood-shot fiery, or green, lizard-like; his teeth, his fangs whetted sharp, gloating upon and crunching the gristles of his dying prey: or fleeting through the Expanse of Ocean, or tempting the Profound, or cresting the Upper Waves, preying, or at watch for prey, or lulling himself upon the wide, the universal deep: coming from the Abyss of Ages, the Gog, or the Magog of Pre-Adamite Earth, Giant of Wrath and Battle, behold! the Great Sea-Dragon, the Emperor of Past Worlds, maleficent, terrible, direct, and sublime.

## CHAPTER VII.

GENUS HEXATARSOSTINUS. Ἑξὰς, τάρσος, ἐτ ὀστέον. (Sex ossibus in talis.) Animalium lacertiformium in pago Street, cura et opere Auctoris, in lucem prolatorum genus. Tab. XXVIII.

**T**HE Manes of the Primal Earth, melancholical and extremely tenuous, haunting the solitary wastes and ruins of the World, stalks away alone from the fickle Generations of Man, through the labyrinthian Chambers and oppressive Mists of Ages.

The Antique Spirit of Earth, wrinkled with Time, and of visage, ploughed by Grief and Despair, plunging into abstracted parts, sits for ever upon the centres of things, remote from Vulgar gaze. The mortalities, certes, are sometimes found in the tomb of uncounted Ages, exuvial bones protrude ghastly through the worn out Pall of Matter, or are cast up of the sickening Grave in earthquake pangs, but the stern and terrible Ghost of the Dead worlds is abstraction all, shapeless, and infinitely strange.

The awful Golgotha of Time, we explore, O reader, in no rude mind, and the skeletons of traditionary monsters value for no materialism, but for the moralities they induct, and the secret passages they conceal of the an-

cient of Days, mysterious nature. We rate the Taninim not for their perfect parts anatomical, so much as for the Ideas they subscribe, the Language they perpetuate, and the sublimity which is the text thereof; the gross, the palpable skeletons may satiate the eye and fulfil the desire of a common curiosity, but the last elevate the Soul of Man over the Profound Past, and the endless perspective To Come.

The grand Plesiosaurus of Plate XXVIII lies in a ponderous grave, built up with irregular lamellæ of Lias stone: the carcase seems to have passed through the several stages of corruption unbroken, but the unquiet waters finally sported with and scattered the osseous monster, which erst ruled them, and reluctantly gave him burial. His was a hasty and begrudged obsequy, so the capricious Seas first wrecking him, heaped up the Pall of Cold Matter about his bones with no ceremony nor care. How long and through what vasty Cycles did the Seas

career over him, silent and forgotten quite : what agonies of joy and rage, what mighty throes of being have been, and how often felt throughout the Realm of Seas, since first the Dragon Lorded there, and also since the time of his final death-struggle therein. How many Revolutions of the Universe have passed since this Monster dread ; how many Races have or tramped, or fleeted with wing, or with fin, over his desolate bones.

Dead these illimitable years, and oblivious are the Dragons, they are come to a certain finis, and realize the fact of a machine, contrived for none imaginable End worthy of a god, and cast away by the Inventor, or abandoned for an unknown reason. Generated soon after the advent of Time, and extinguished long before the birth of any Creature cognate of Time, these old Sea-Dragons afford the most comprehensive Index of Eternity known by sheer negations and emblems, so abstract, that the natural Eye of Man entirely fails them, as it also fails him in the solution of the distances of telescopic Suns.

The Works of Jehovah being liable to no such imputation and a like fate, these Dragons verify the action of some other Power in the remotest ages of our Earth.

With this silken thread of Truth we may enter the Caverns of Time, speculate with propriety upon the Moral Mysteries therein concealed, and anatomize them all.

Reverently bowing our faces to the ground we trace the Shadow of Jehovah, the serpent Hanahash, through Sinuous Gulfs of Machiavellian depth. If, indeed, that Fallen Angel did spawn forth the kindred but mortal Dragons, in the bent of his malignant temper, Creative, and lighting up the uncouth animal Frame thereof with a sparkle of that dismal fire which constitutes his very essence, and no less his tearless woe, sent it upon the bloody mission to kill and yet kill on, until the Generations being fulfilled, and the last murderer murdered by Time in his righteous turn, the hellish animus expelled thence, reverted to the Father of its accursed being. Or, if handling inanimate clay, and fashioning it into the hideous shape we recover in these Sea-Dragon bones, Evil then did himself enter therein to possess it, to propagate like monstrosities wherewith to dog, and terrify, and aggrieve the Earthly Dominions ; and conceiving other monsters, horrid Cancer, cramped Urchin, or Polyp with enormous tentacles, or the Dragon with wing glazed skinny for air or for sea, ferocious all, did imbue them with his Legionary Angels, gloating upon one another furies, instant for universal War ; when lo ! the Times being ripe, the Armies gathered together, they fell at one fell swoop of the Incarnate Fiend himself, which, crowning the numberless heap of abhorred bodies at Armageddon, with his own giant one, left Futurity those vast Reservoirs of pitch, and magazines of sulphur and other poisonous salts, fermenting the carcasses of these Anakim cast off.

Or, journeying from black Tartarus, that Old Serpent coming into the light of the blessed Sun, ambushed awhile from fear in the unfurnished and silent chambers of the Ocean-Earth, whilom Jehovah, leaving matter to an inevitable process, omniscient, well knowing the End at the which He overruleth the Prince of darkness, suffered it to pass. I say that Old Serpent ambushing did attract the night of things, the antipodes out of which sprang this savage brood, inspirited with the drunken fumes, the saturnine aura of his abhorrent being.

Python, his Battles in Heaven ended hopelessly, the

Battlements of Heaven so guarded that attempt them when or wherever he may yet still in vain ; Python, banished the Universe he aimed at in Evil day, abandoned to himself throughout Eternity in the Antipodal fiery, or frozen, and blasted One, driven in his frantic course upon the verge of this new world of matter, caught all the antithesis thereof upon the instant.

Through the, to us, long and dreary Revolutions of an Embryo Planet, exposed to all imaginable cometary extremes of drought and deluge, through Earth, Air, Fire, and Water, and all the other numberless anarchical conditions unimaginable, Hanahash rioted. The tragic Colossus, next once to Jehovah, to whom once bowed all but One, rioted through all the interstices of atoms, disguising the dark sides thereof at his will, and ruling them in the mind of a god : Over the chaotic Earth he sent light oblique, through the Deeps turbulence, so that the Elements, wrested to his purpose, nourished the animal spirits of his Sea-Dragons, over-populating the whole world, War and Death reigning over them all without end : The molecular bodies caught in his fatal vortice, arranging themselves in obedience to an imperative Law of mind, resulting in the Taninim we set forth, and other carnivorous automata long since ceased from the Book of life.

The great work of Creation progressing to a point, the Allmighty Ruler could but observe these foreign and aspic things, and the merest comment of the Creator sufficed for their utter evanishment from the Earth : the mere atoms themselves, rejected by Jehovah, remaining alone from the neighboring parts, kept apart from God's Earth evermore.

And here in the latter days, now when the mental powers of the post-diluvians are, perhaps, at the very lowest ebb, at their very aphelion relatively to the Father of Lights, now when all intuition of Truth, either foregone or to Come, all the Faculties of that wisdom prophetic so esteemed by the earlier nations, the decay of which was parallel with Their gradual atrophy, now, when all these Faculties lie torpid in the bosom of our general Race, do these Skeletons of desecrated matter, these Hordes of the Spiritual Attila which ruled in the dark Ages before Adam over the circumfluent Earth, protrude upon our sight, invoking memories which even the dire Conflagration of accomplished Earth shall fail to quench, eternal ever.

As though Evil himself, foreseeing the tragical History of Man, essayed these monsters, anticipating other Furies to be loosened upon us, when subjected to Demons, so that he might the more certainly know how to deform, animalize, and convert mind itself into a capacity of Horror unimaginable and infinite. Upon a Verge so awful we stand aghast : at the feet of the Precipice roar the Black Waters of revolted Times, urging to the Heavens. The Panorama of Ages stretching out into waste and Desolation, nourishing monsters alien both to the Constitution and the Soul of man. Blast shrieking to blast continuous, Providence laughed to scorn, the Fortunes of man abandoned to Fiends.

These Sea-dragons, of them we may treat learnedly by what a wondrous appliance of ribbed joints they compressed air into the lung, by which to sustain themselves a long while when driven to the nether depths. With what a cunning machine of eye they trapped and made use of God's blessed light, with what incarnate guile they accomplished a life abhorred of Jehovah : we may trace the channels of poison which distilled from their livid gums,

the cranial Caverns in which their brutal appetites lurked, and handle and expatiate on teeth nursed from the cradle in blood: But the Theme demands a loftier tone; of ante-human Time, from Nox and Erebus, and of our mighty mother Earth, the fell Autochthones, these Taninim Gedolim invoke the lowermost diapason of the Spheres: Over the eternal infinitude floating, that mortal which haply listens the music of the tremendous Soul of Time, joins involuntary in the mighty Chorus: Alp on Alp uprising, the "unknown Tongue" cometh intuitively upon him, in the which we can alone pronounce and communicate with the Powers of that Universe of which we were born co-gods.

Thus, pondering the long Cycle in the vast backward of Ages, in which coursed these fierce sea-beasts malignant, over whose innumerable Populations a black god pitiless reigned, the Ghost of Chaos guiding us through

the ancient Ossuary of the world, strown thick with the skeletons of these huge Dragons,—we realize an Intellectual Image immeasurably grand and terrible.

From the busy Seas of our own Time, adventurously sailing forth into the Ocean of the Past, out upon the lines of universal waters, stretching into dead Infinitude, no Continent, nor Isle to break the awful expanse, we look.

The Niagaras of Time too, falling each a tremendous Ocean from one System to another, over the Universe from the Lap of hoary Eternity,—we hear them Roar.

Maleficent wings, leathery, carefully glazed and strung in Hell, overshadowing the ugly Aborigines of the watery world, Serpents all,—we behold.

And over them all, and above all, inaccessible to the loftiest flight of the Halcyon Soul, in far immensity, alone, Jehovah, blessed be His Holy Name, whom we worship and adore.

## CONCLUSION.

THE Current of our Argument gliding past more than one "pons asinorum" of the modern School, as contradistinguished from the Ancient Academus, we have ventured to assume the roundness of the primitive Earth, and a universal Climatal Law over its entire circumference, during the greater part of the Epoch to which the Primary and Secondary Rocks belong.

We have also insisted upon the Succession of organized matter, from Vegetables to molluscous Fish through all their kinds, to Reptiles marine, aerial, and aquatic, and appropriated the superior Transitional and the Secondary Rocks for themselves, to the exclusion of any real terrestrial animals whatever.

To prove the roundness of the Globe, in its original chaotic State, requires only the simplest figures and processes of reason, matter being the numerator and denominator both. The generic organic remains too of any given rock on one side of the Earth, are repeated at its antipodes. Mr. Darwin found at the Pass of Puquena, South America, not only Lias, but the gryphites, ostræ, turritellæ, ammonites, and terebratulæ which belong to the Lias under our feet. Commodore Sir. C. Bullen collected at Fernando Po, Accra, and Sierra Leone, fossil organic remains congenerous with those of Lyme Regis. A series of Secondary Limestones Covers a vast Area in South Europe and Asia, the organic Creatures of which existed in the cotemporaneous Ocean which then covered America. The Mosasaurus, of Maestricht, have been found thousands of miles apart, while the petrified Vegetables of Melville's Island, in the Frozen Zone, as triumphantly show that one general thermal temperature pervaded the whole globe.

The conflicting Elements of our own time result in anything but harmonies like these. No causes, after the fashion now in operation could produce these universal Formations, nor sustain the creatures which we find everywhere entombed in their bowels. The old Populations of the Globe were as foreign to those of the present day, as are those, probably, of Saturn, and the conditions of

the Earth they occupied were necessarily no less different from our own.

And with respect to the creative order of Living Things, the priority of Vegetable life is a self-demonstrated fact, no creature being able to exist without vegetables, either by instant assimilation, or through a subsidiary person. The numerous Species too into which the unstratified Rocks are metamorphosed, prove them to have been fused by heat, each one Stratum arranging itself in proportion to the length of its liquidity; and as these constitute the very Foundations of the Globe, it is certain that a degree of heat formerly invested it which no Salamander could breathe. The highest temperature in which any creature on this Earth is known to exist is about 150°, in which some fishes live in the hot springs of the Manillas, while Sonnerat mentions several plants flourishing in a thermal rivulet 174°.

We have paused upon the "Footmarks," in the Red Sandstone, the Stonesfield "Opossum," and the alledged discovery of the bones of terrestrials in secondary Rocks, upon which subjects geologists altogether differ. And since many fervently abet these allegations, which they are, nevertheless, quite unable to maintain, we have no hesitation in repeating that they carry with them no proof of any value whatever, and utterly reject and defy them all.

That Strange Saurus, both bird and reptile, the Pterodactyle, with his long neck, tooth-armed beak, dun membranous wings phalangeal tipped with nails, claims the Sea. His short Coccygis and the peculiar mechanism of the wings, spread by one long digit, while all the other fingers are stunted; his head too so heavy that it must have confined his flights in the air to the merest distance; all these and many other singularities prove the Pterodactyle to have lived chiefly in the sea. Squatting his lean haunches upon rocks outjutting over the black Abysses, or over or under the waters, this monster dragon lived through many weary ages, a sooty Fiend dolorous and Lord of the dead wastes of the briny Sea.

Moreover, it was impossible to avoid the much disputed question of Time and duration, a rock upon which no one has hitherto steered without foundering; and for which the Holy Scriptures have been perverted by the unclean of hand in a way to make us regret their translation into our mother tongue. The incapacity of mankind to comprehend more than one of the thousand angles of Time, viz. that which he faces always in the fear and peril of Death, should, methink, have made us careful how we approached them. The Asiatics generally, and the Hebrews in particular have a much more philosophical Dictionary of Time than the Europeans, who measure Cycles and Epicycles correctly, but dignifying them as Elements in the resolution of Time, they entirely overlook the moral quantities by which the former reach their grand conclusions. The short Circle we run around the Sun is adapted to our limits, but what is that compared to the Cycle of all the worlds. The Seer, standing in the Presence of Jehovah, Chaos and the Beginning of things out-battling before him, penetrated Systems beyond our imagination, and Equations to us unknown. His Periods of Time were reckoned by them, and not the fleeting ones in common use, so that all our Essays after the Chronology of Moses must end in disappointment until we obtain the measures by which he framed it. In distant Ages, when the telescopic Instruments of men's minds shall be better used and known, the centre of Relation to which the Earth really belongs may be found, and the Scriptures understood in a matter about which we can now hardly speculate without impiety.

Natural Religion being confessedly insufficient, at the same time it carries us onward to the last stage but one towards the solution of the grand Argument of pre-human Time and things, we have invoked the Sphynx in the name of God, and decyphered riddles by Revelation. The fashionable doctrine that Evil is infinitely overbalanced by good, and even made to subserve and multiply that good, so that it may be doubted if there be such a thing as Evil after all, is a Sophism which failed the Stoics two thousand years ago, and calculated for an infidel meridian alone. The argument for an eternal succession of Species having been disposed of, we cannot resist the innumerable tendencies which point to the first man as the most perfect of all the works of Jehovah; and History testifies of renowned Sages, Lawgivers, and Mechanicians, the sound of whose wisdom and skill puts that of the moderns to shame; nature herself, sympathizing with mind, then brought forth animals as much larger than their descendants as the Intellect of co-temporary man was nobler than our own. The Banks of Rio Plata have skeletons of an armadillo, Patagonia of a Llama and Rodent, thrice the size of their surviving congeners, and the remains of Pachydermata colossal by the side even of our modern giants, are dispersed over all the world. The huge carnivorous Races found in Caverns and gravel-beds have a second moral from whence it is impossible to escape, and the Earth is filled with uncounted Ruin, but ill-concealed with flowers.

Man too, exiled from the great Continent of the Universe, shackled with ancestral irons, pitiful and naked, exposed to every Tempest, on the brink of Eternity, splashing frequent to Suicides Immortal.—

Or wandering over the Prison-Earth contemplative of a distant and strange Country, our final home, banished thence so long for no treason of our own, ever and anon glimpsing terrible Spectres of Might, our evil Genii.—

Or fleeing from Them in terror, forgetful of the dismal Times, looking back retrospective far over the wintry Ocean, into Pre-adamic Shades, we encounter execrable and dreary things in the abounding Chaos. Through briny clouds incumbent impetuous Monsters gleam phrenetic, livid, or green, or swarthy snakes, quadrupedal and deadly. Wide over the desolate Seas warring Dragons innumerable and hideous, enacting Perdition.—

Whichever Sign of the Vasty Zodiac girdling the World, menacing Images gloomy and alien to the Nature of Man, dare and confront him.

And the Animal, also the Spiritual type of Horror and Woe, from natal Time downward to these our Days, and throughout the Eternal Perspective To come, is Draconic and Reptile.

The mortal Dragon, which first troubled the primal Earth, lurking in the bowels of the Earth, the far Centre, turned from Light instinctive, anticipative.

The Emperor of Dragon Spirits, Orcus, ruleth the nether Depths, coped with black adamant,

“Acherontia Templa, alta, Orci, pallida  
Leti omnubila, obsita tenebris loca.”

The carcasses of the Sea-Dragons are strown over the whole Earth; and thus shall dire thunderbolts which shattered life out of them, fall upon and overthrow the Kindred Legions of Sathanus.

Onward then, to the End of Time, when the Rival Gods shall come to their last Battle, in the other Armageddon, our World being sacked and its ashes scattered to the Winds of Space.

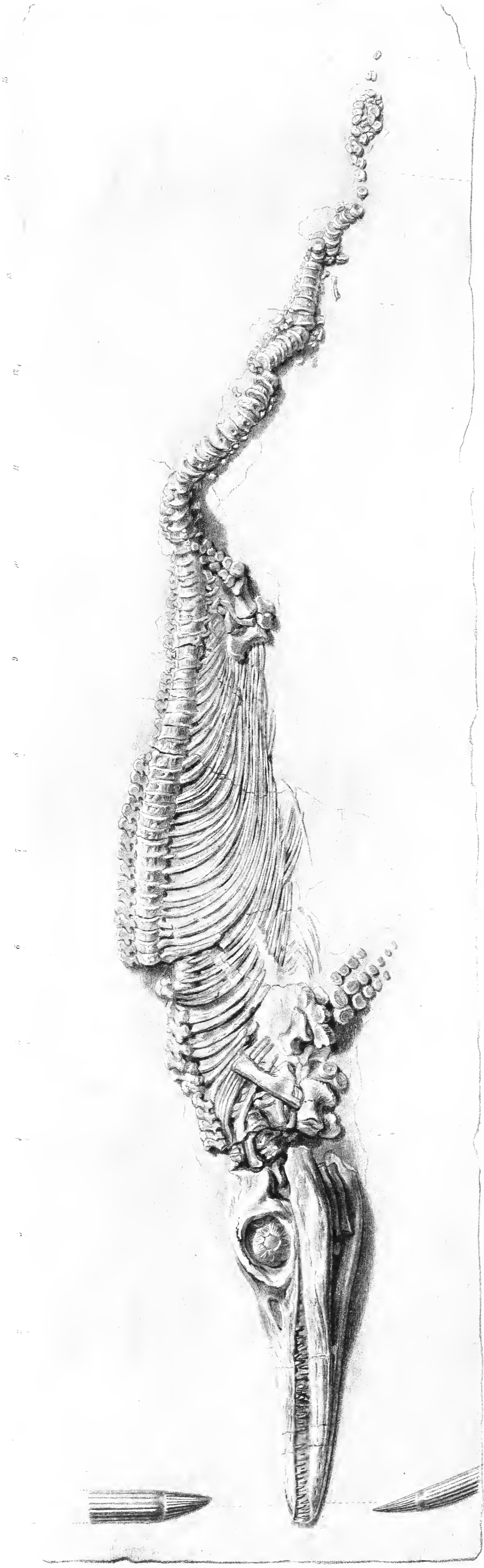
Thy Spirit, O Reader, and mine own shall be there, in that same Battle-field: In Coat of Mail impenetrable by rare inductions from these same Sea-Dragons, and with Weapons of Spoil taken from the Enemy in the Tourney of Earth, there will we muster Host.

The Deluge of Wrath once loosened upon the Earth, shall be let slip again in an Ocean of Fire inextinguishable, and roar responsive to the agonized Legions of the Old Dragon, overwhelmed in His turn.

The baneful Dragons, O Seas, are gone: Fiends, O Earth, have filled thee with the bones of Defeat and Death. Future Angels to whom the Wars and Destructions of Time are unknown, shall seek throughout the limitless Empires of Space their ghastly remains, and finding amongst them the self-same Weapons of which we speak, be curious in remote centenaries to hear anew the Tale of the Dragons.

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G. Scherer, del. et lith.

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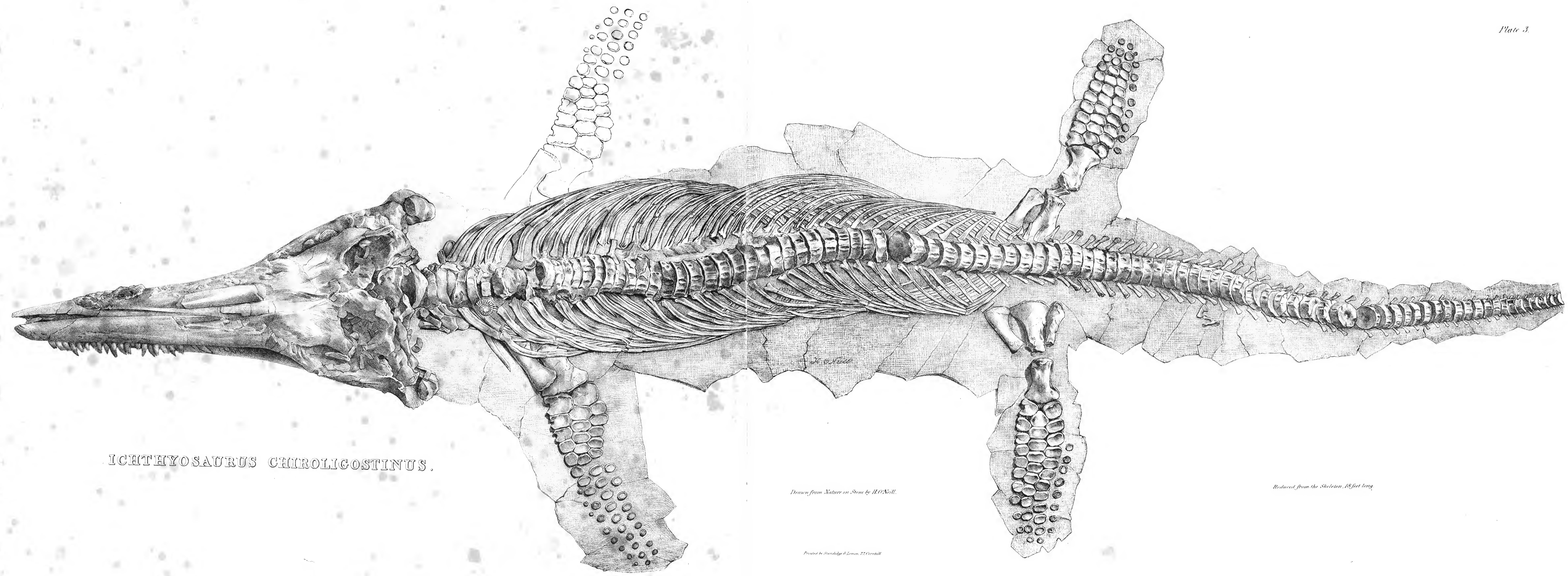


The Vertebrae the natural size.

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ICHTHYOSAURUS CHIROLIGOSTINUS.

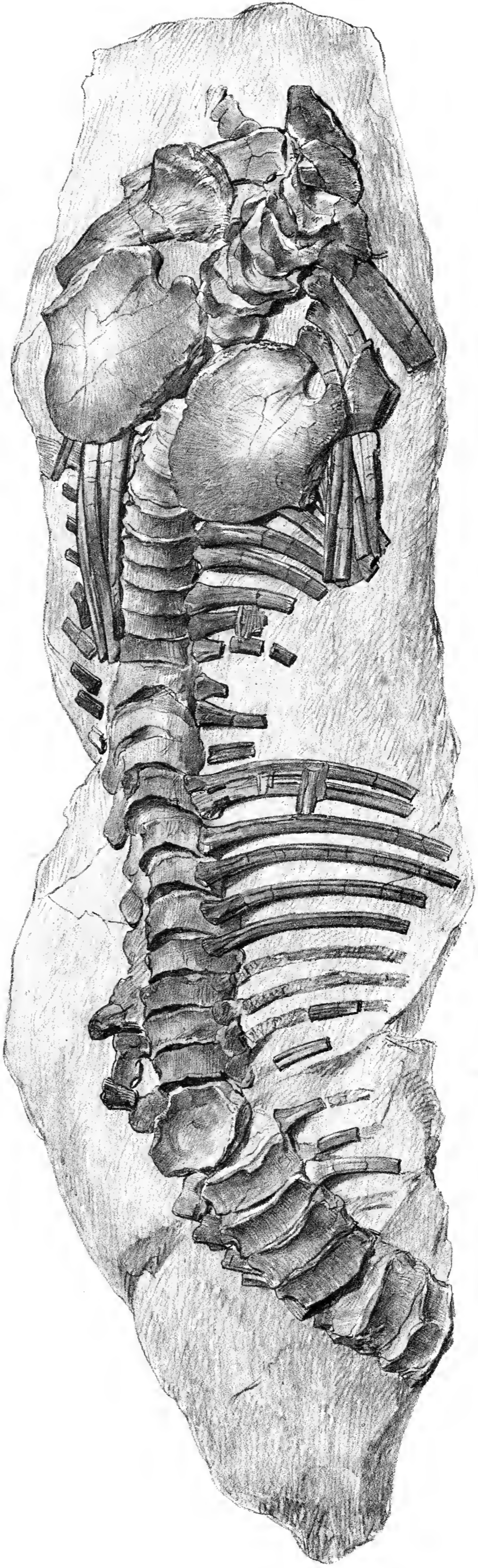
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*Printed by Sandelby & Lemmon, 75, Northill.*

*Restored from the Skeleton, 18 feet long.*

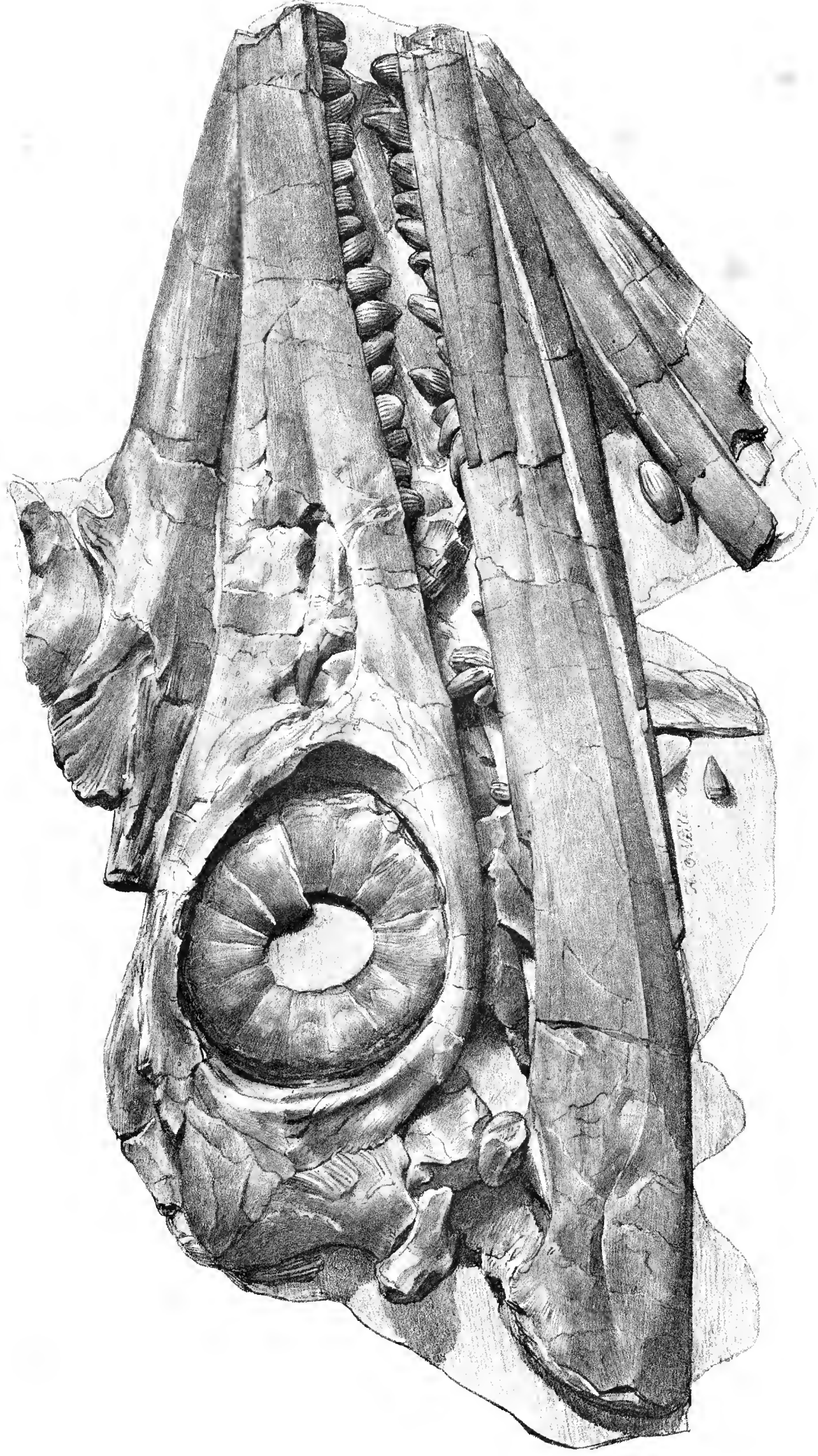
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Plate 4



Standidge & Lemon lith 77. Cornhill.

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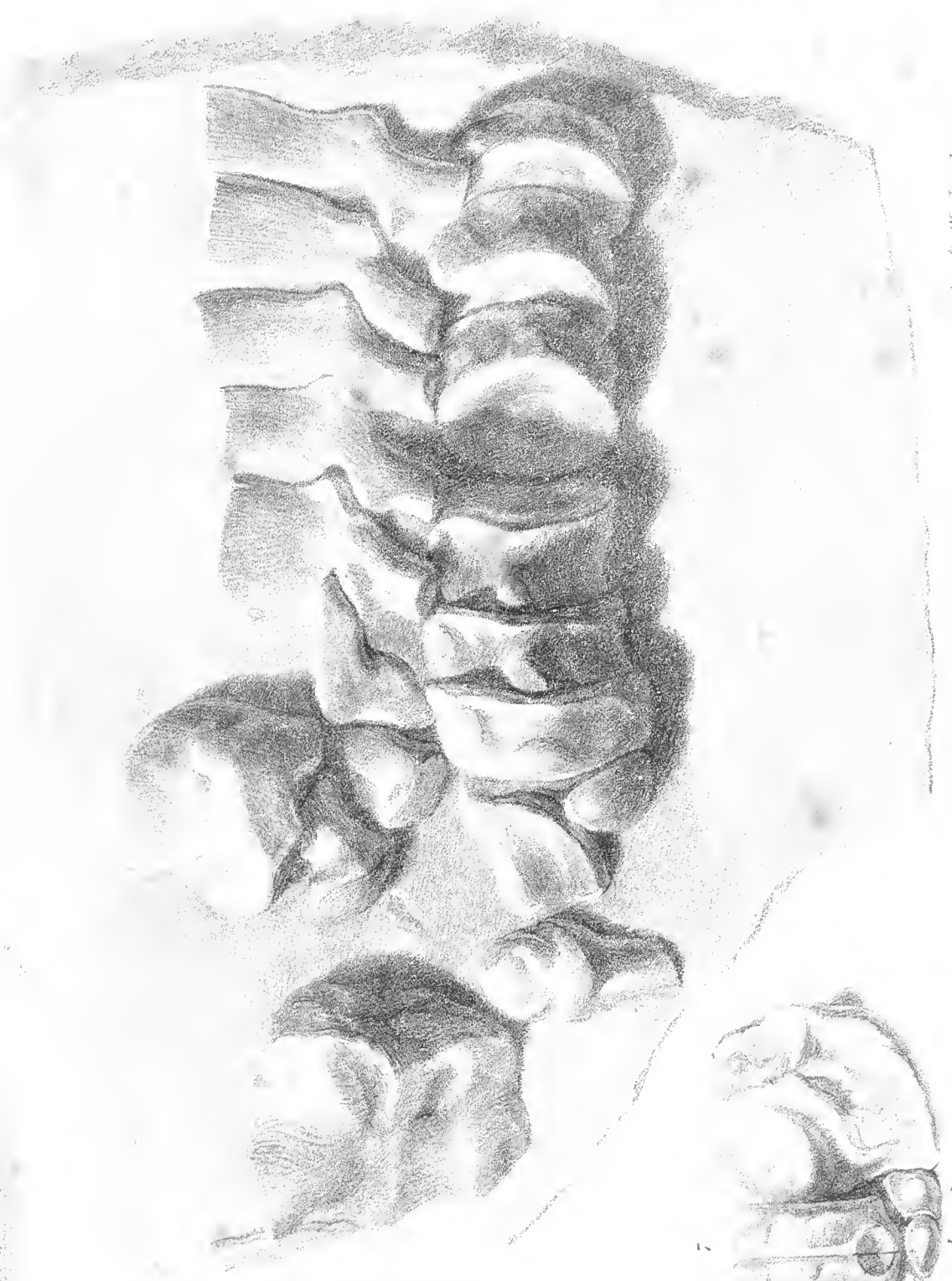
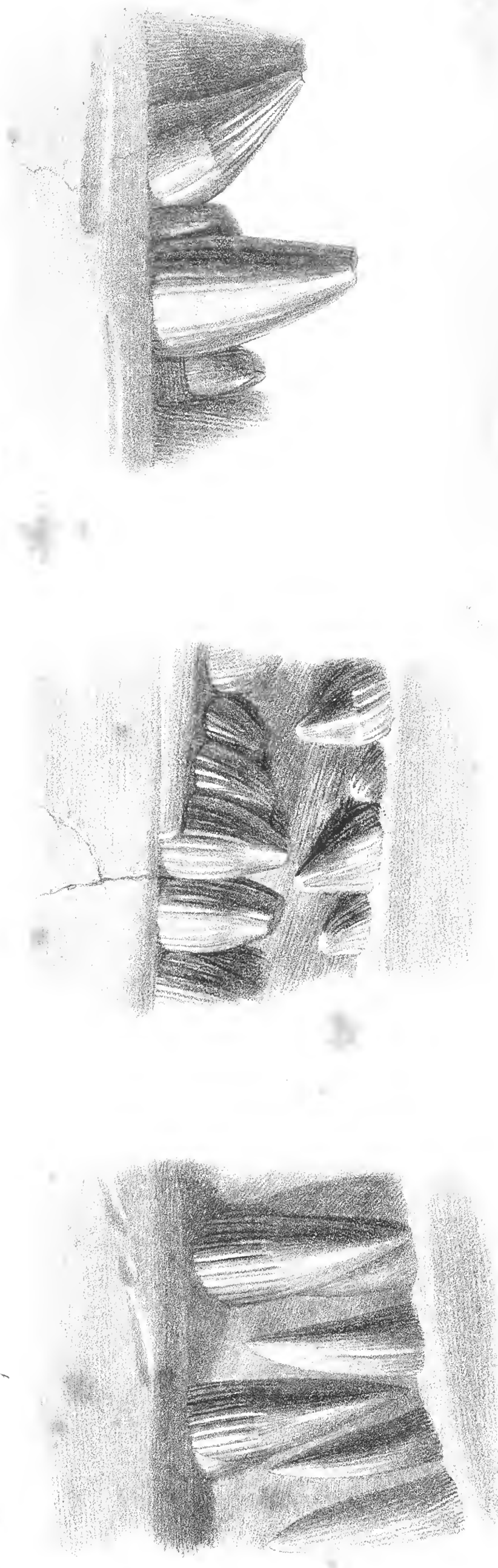


HEAD of CHIROLIGOSTINUS.

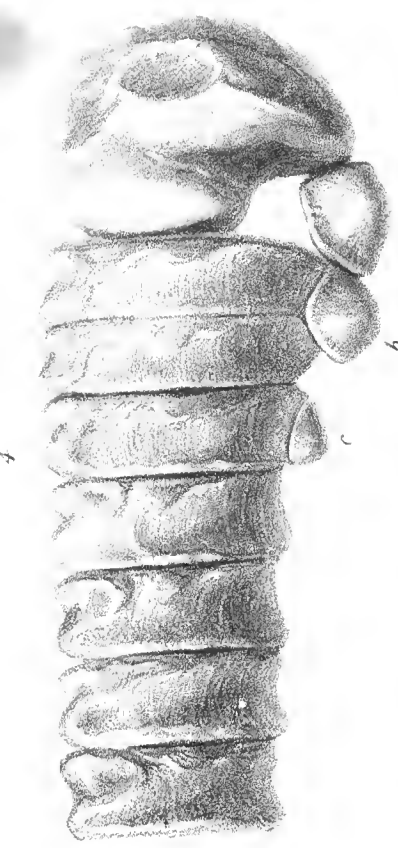
From the fossil remains of 2 feet

Drawn from nature on stone by H. O. Neill.  
Printed by Sandilidge & Deane, 77, Cornhill.

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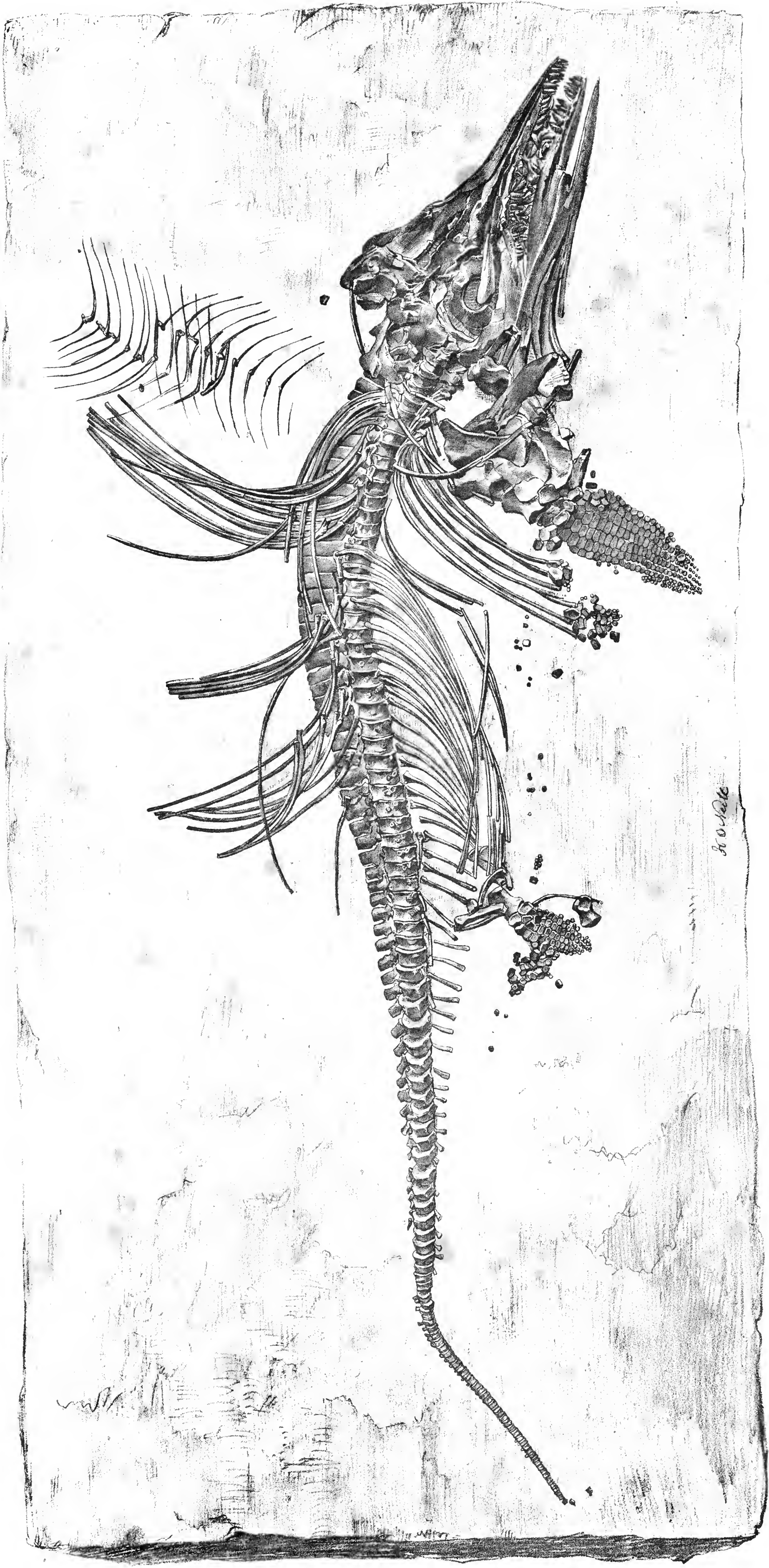
Printed by Stanbridge & Co. London



G. Scharf del et lithog

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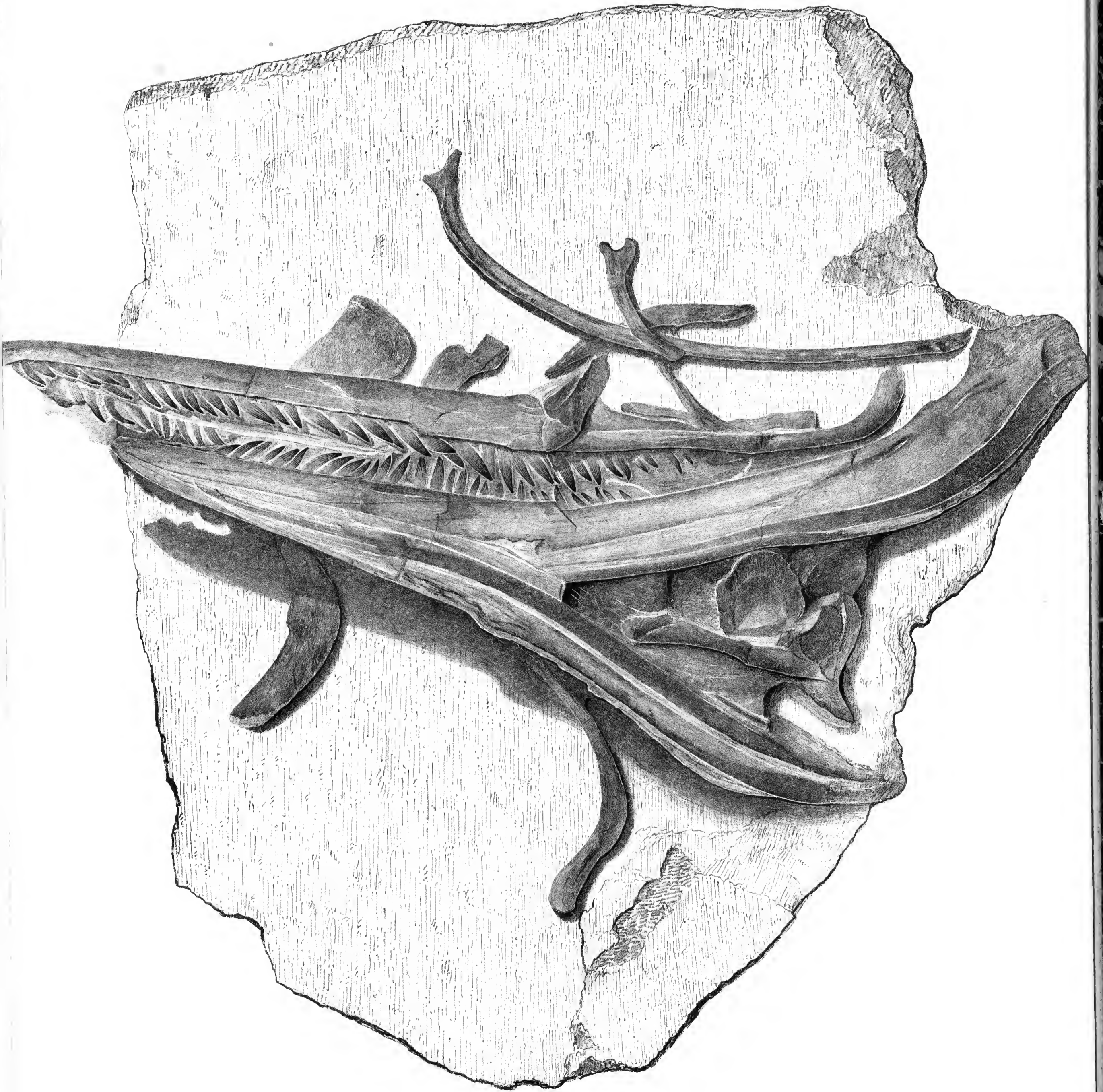


ICHTHYOSAURUS CHEIROPOLYOSTINUS.

From the Fossil Remains of 57 p. 400. see Stone p. 11. C. Wall.

Printed by Sandelby & Co. No. 77, Cornhill.

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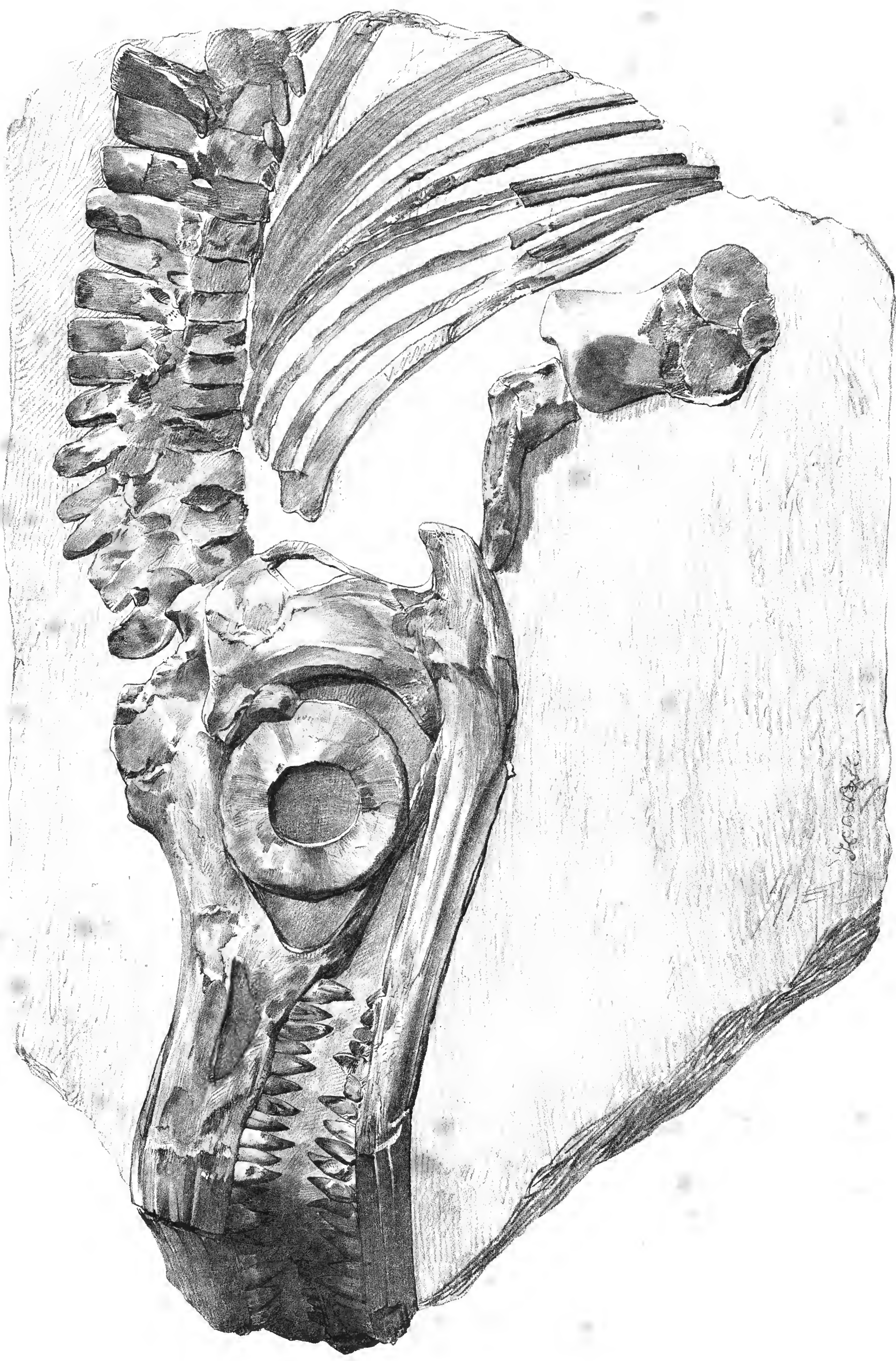


HEAD of CHIROPOLYOSTINUS.

*From Nature on Stout by B.J. Rossiter.  
Printed by Staudage & Lemon 77, Cornhill*

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Plate 9.

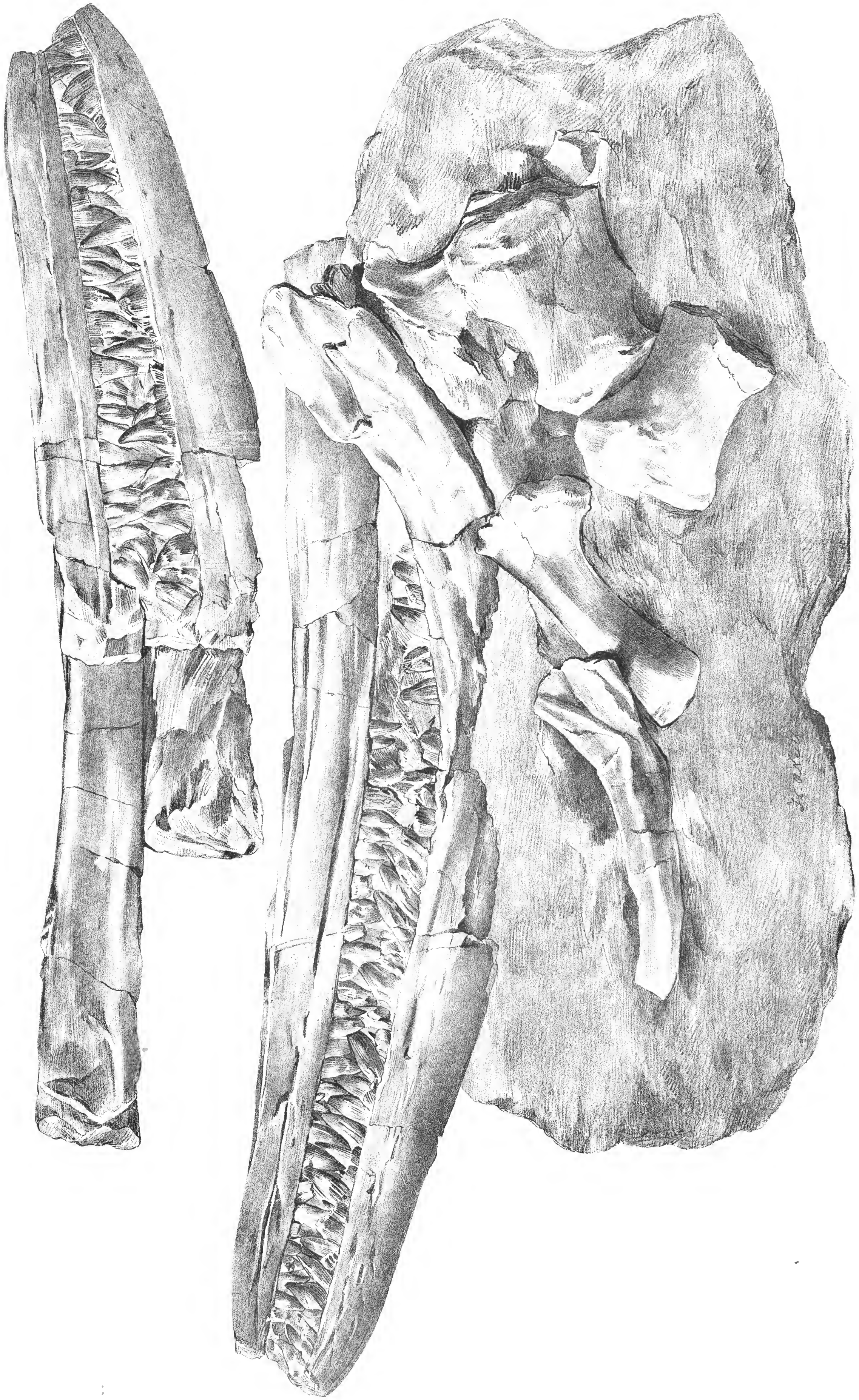


FRAGMENTS of CHIROPOLYOSTINUS.

Drawn from a picture on Stone by H. W. Vill

Printed by Staudigle & Lenson 77 Cornhill.

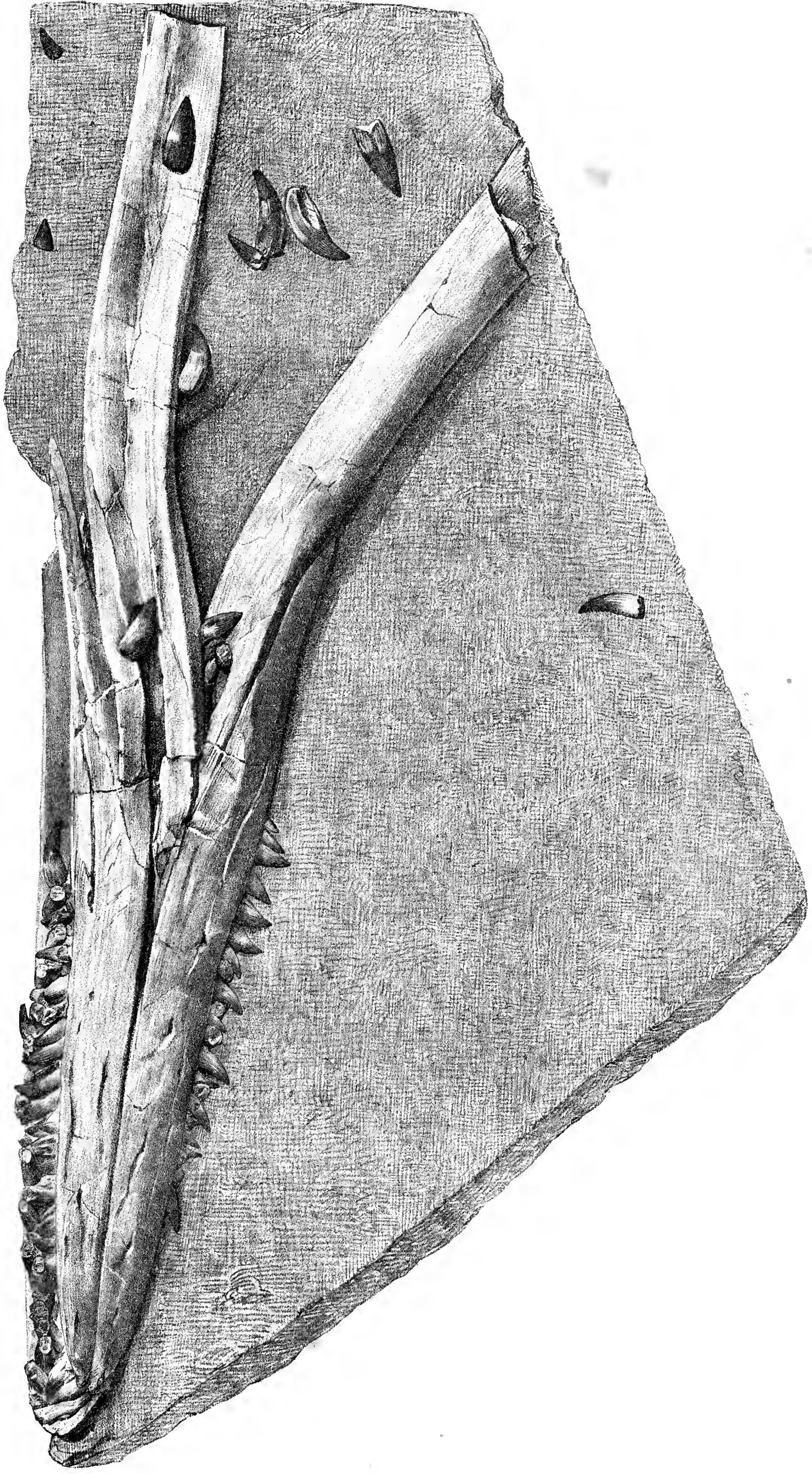
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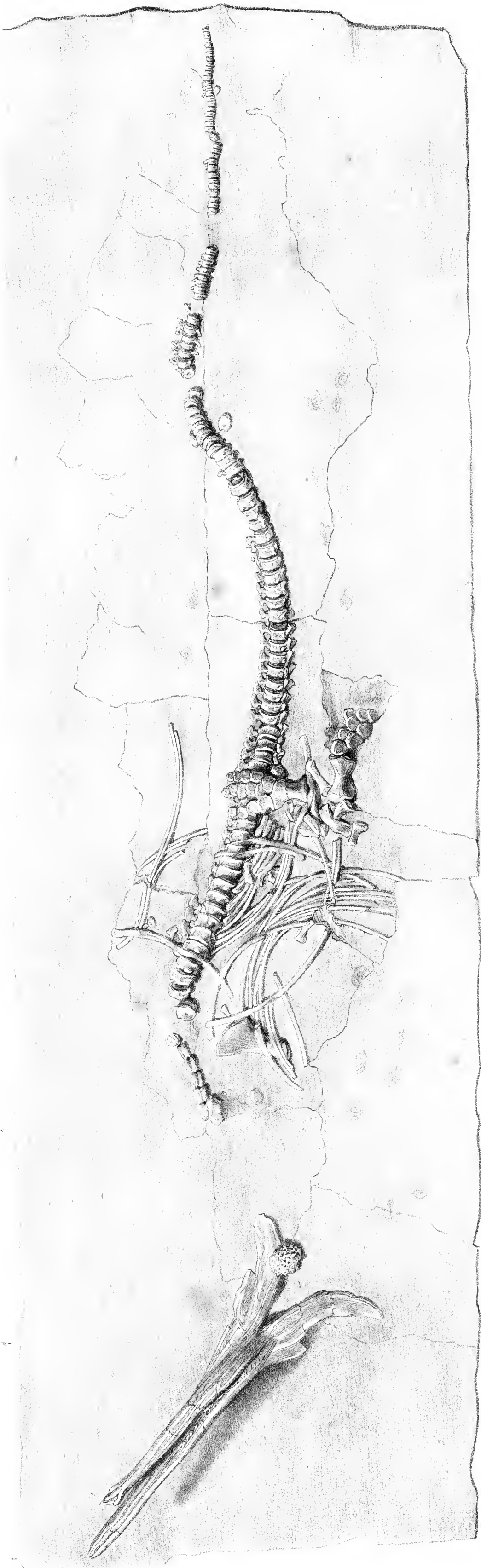
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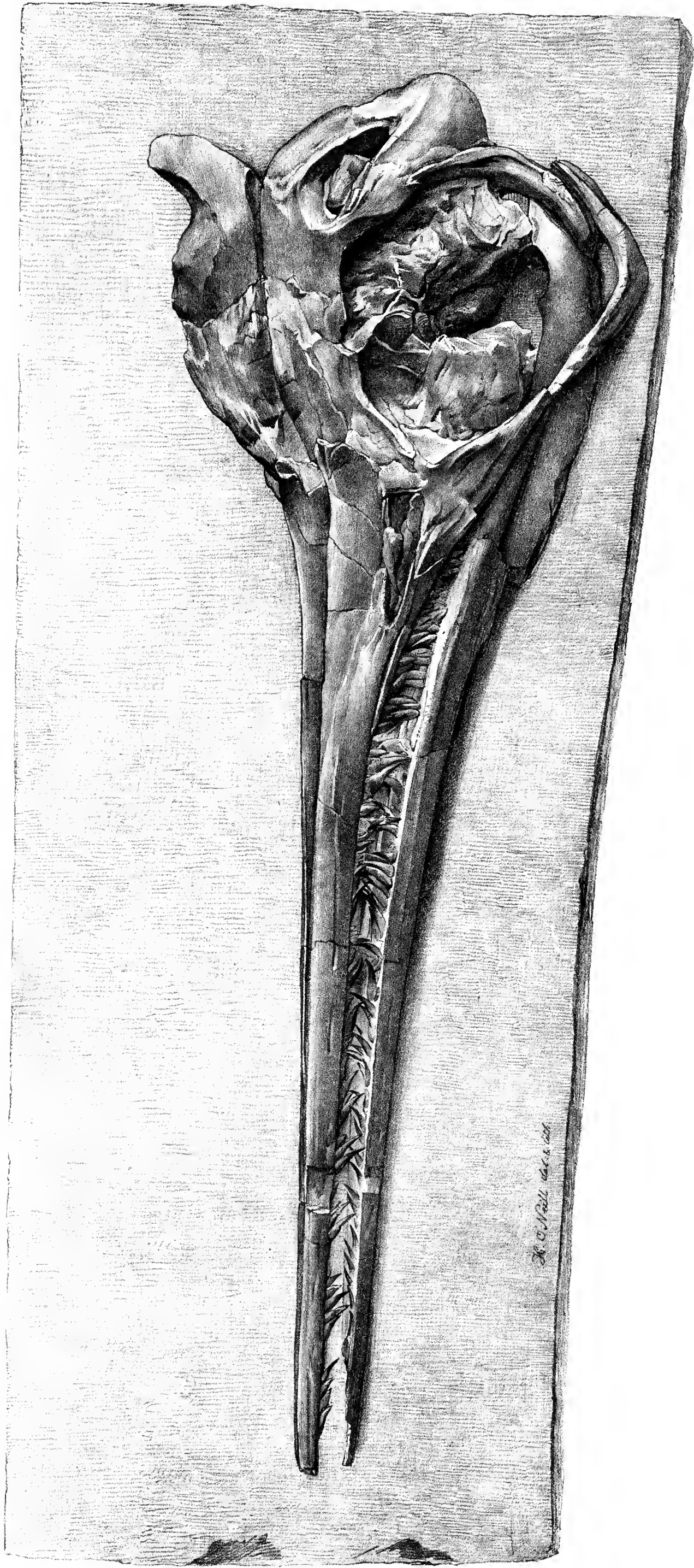


G. Scharf, del. et lithog.

Reduced from the Fossil Remains to 1/3<sup>rd</sup>

Printed by Standage & Co. London

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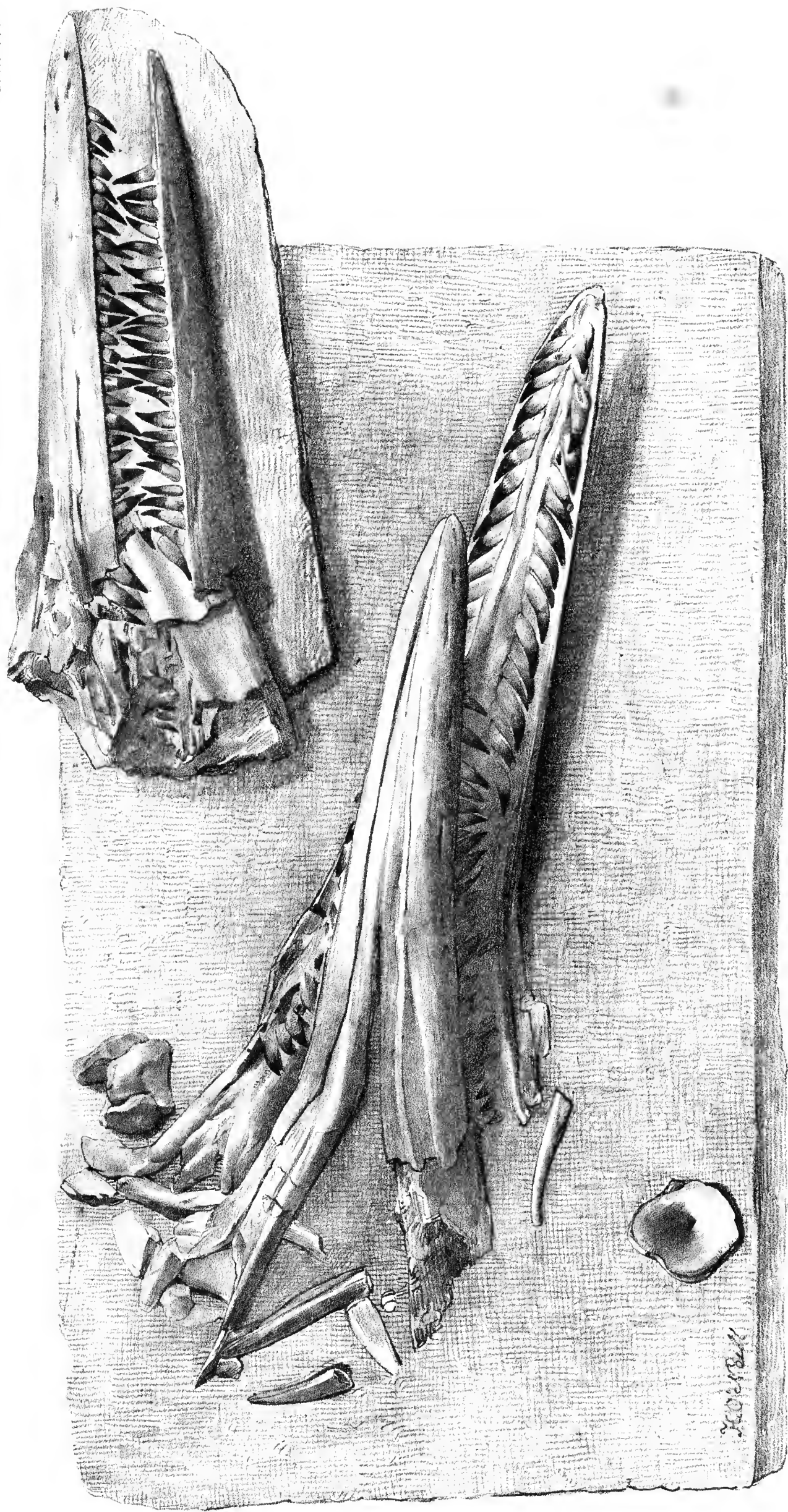
HEAD OF CHIROSTRONGULOSTINUS.

From the fossil remains of *Chirostrongulostinus*.

Engraved by Standring & Lemon, 71, Cornhill

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Plate 64.

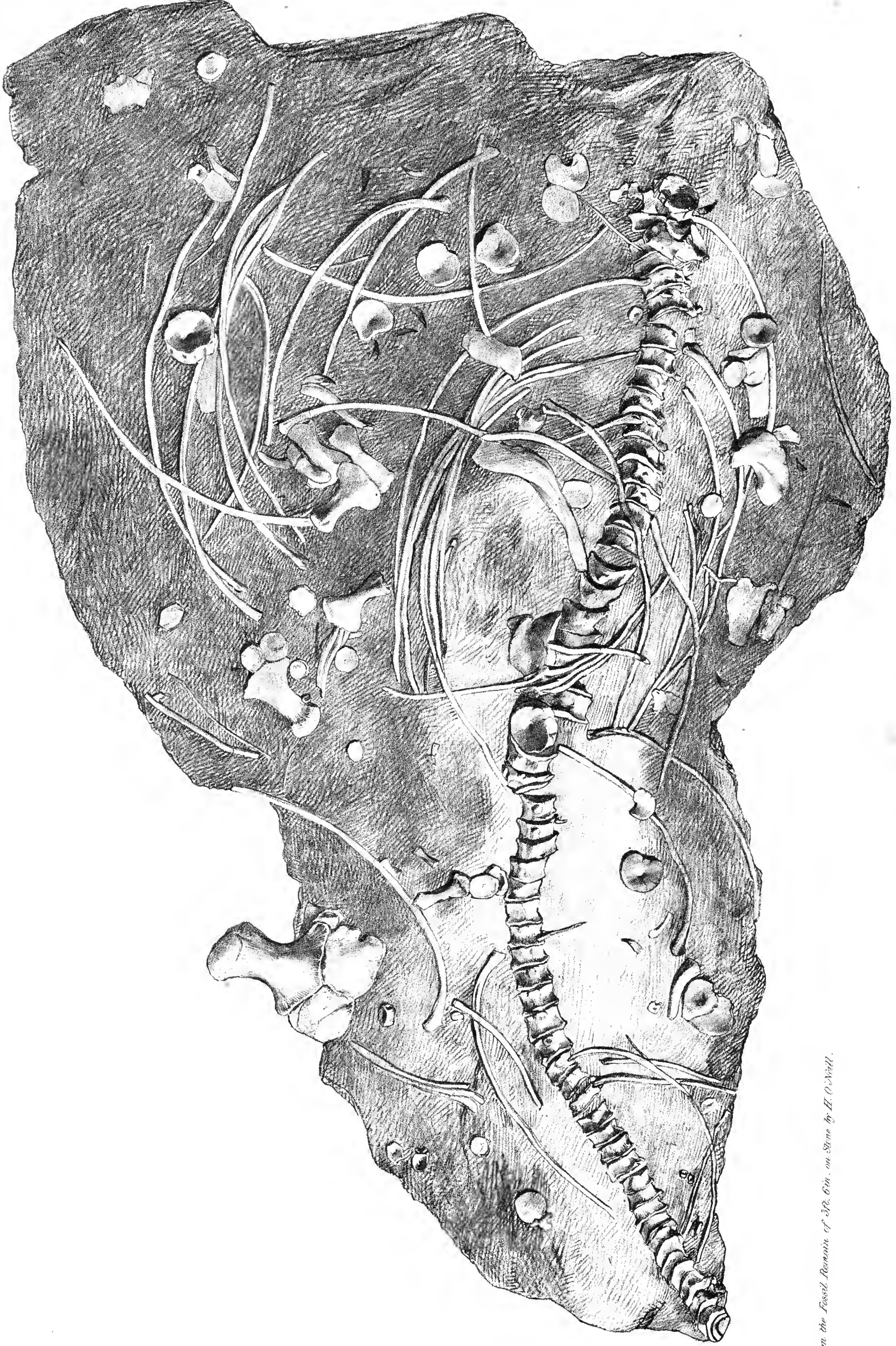


From the fossiliferous strata of the Devonian.

Printed by Stoughton & Linnell, 77, Cornhill.

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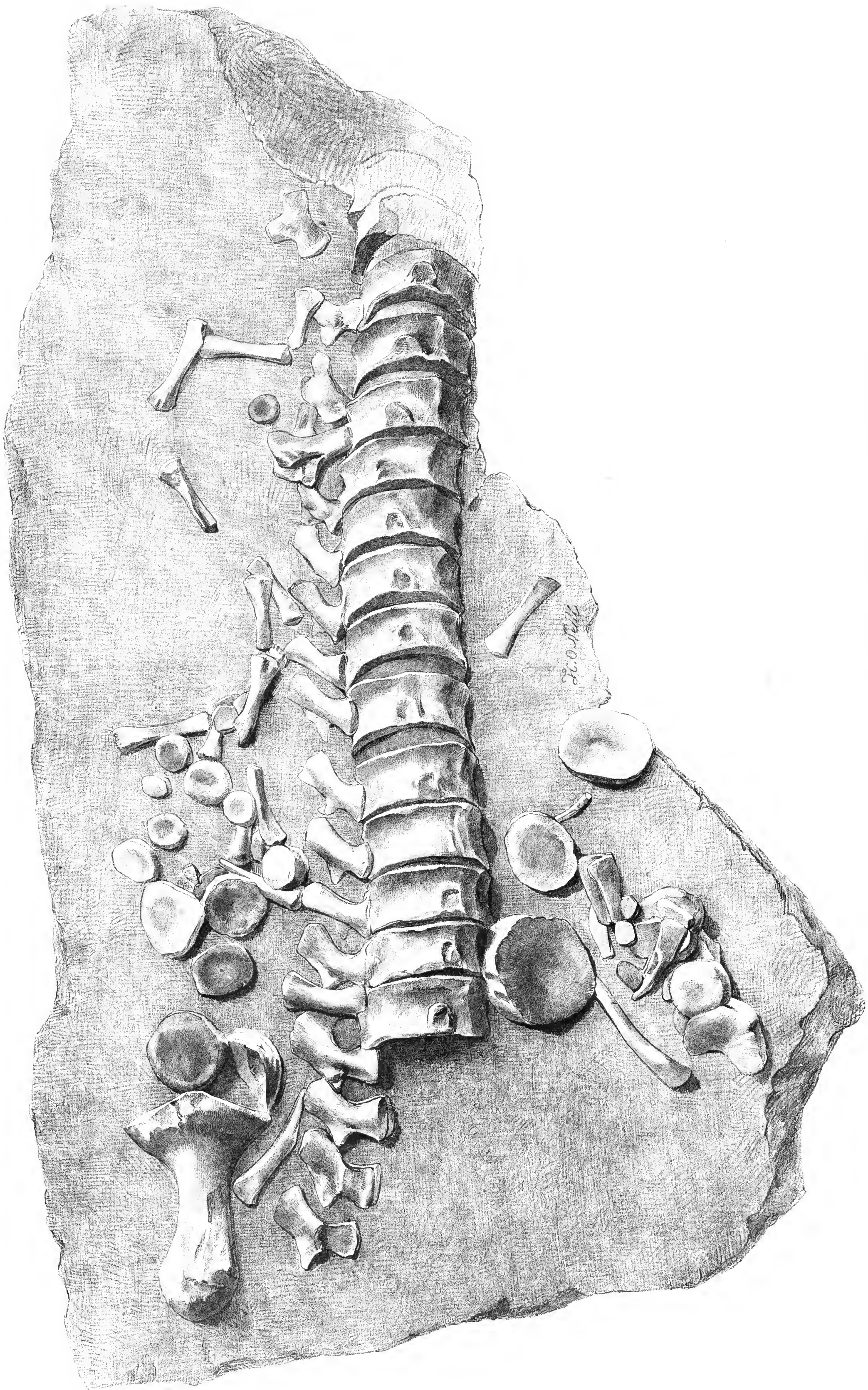




*From the Fossil Remains of Mr. Owen, on Stone by H. DeWitt.*

Printed by Sandridge & Lemon, 77, Cornhill

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FRAGMENT OF CHIROSTRONGULOSTINUS.

Printed by S. S. White, 27, Cornhill.

From the fossil remains, in situ, by H. O. Bell.

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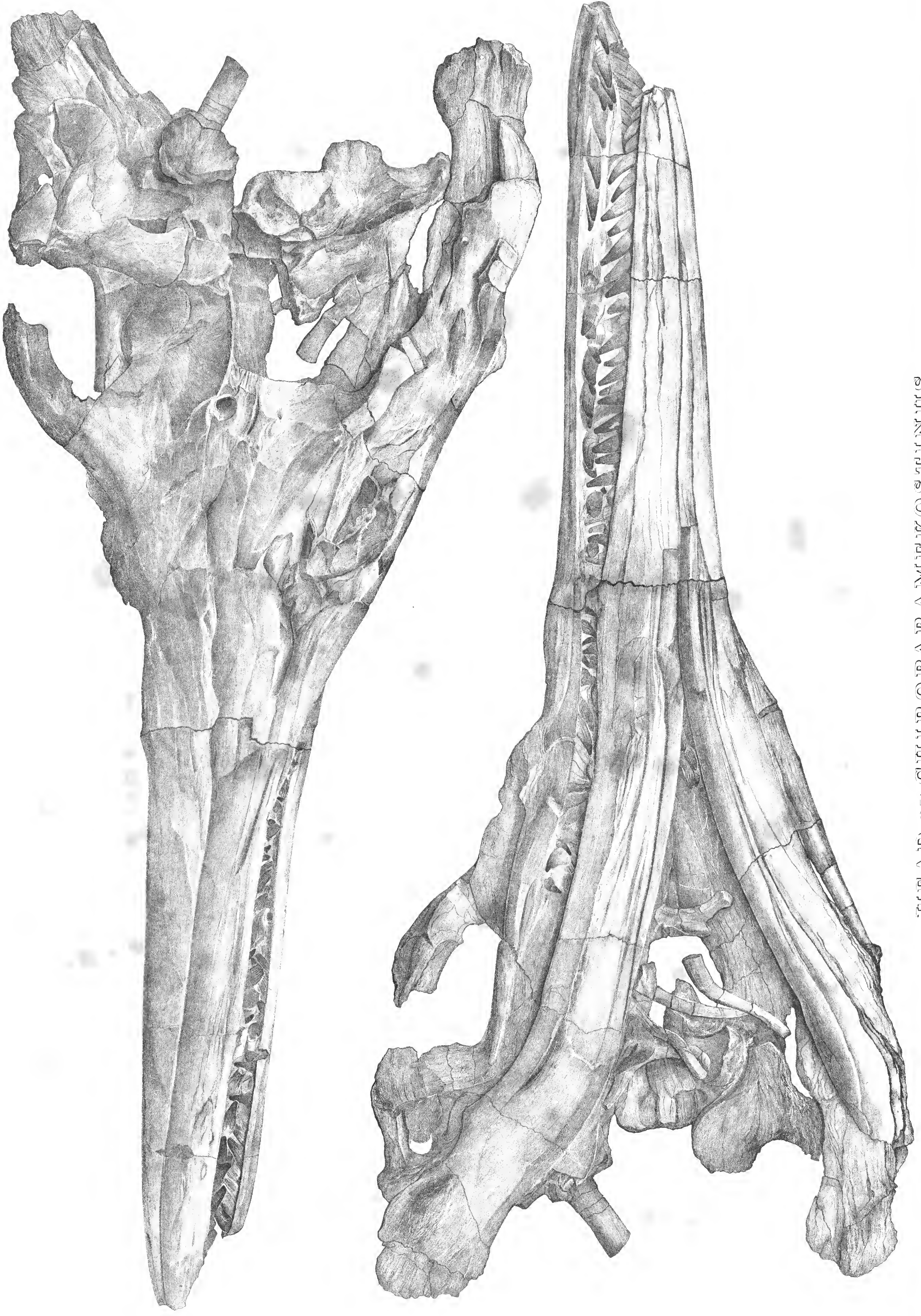


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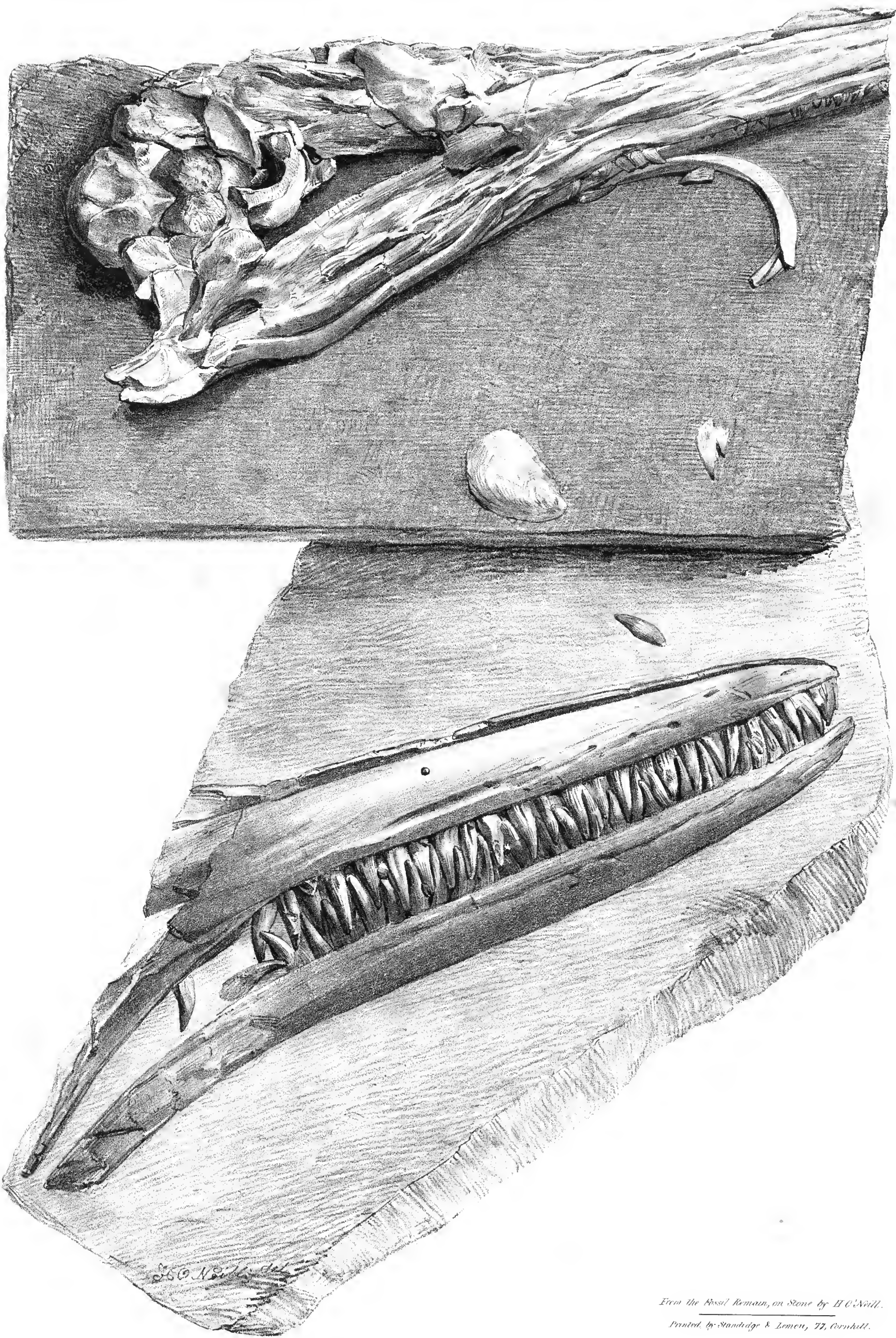
HEAD OF CHIROPARAMEKOSTINUS.

Fig. 13. *Chiroparamekostonus*, sp. nov. *Am. Mus. Nat. Hist.*

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From the fossil Remains, on Stone by H.C. Neill.  
Printed by Standidge & Lomen, 77, Cornhill.

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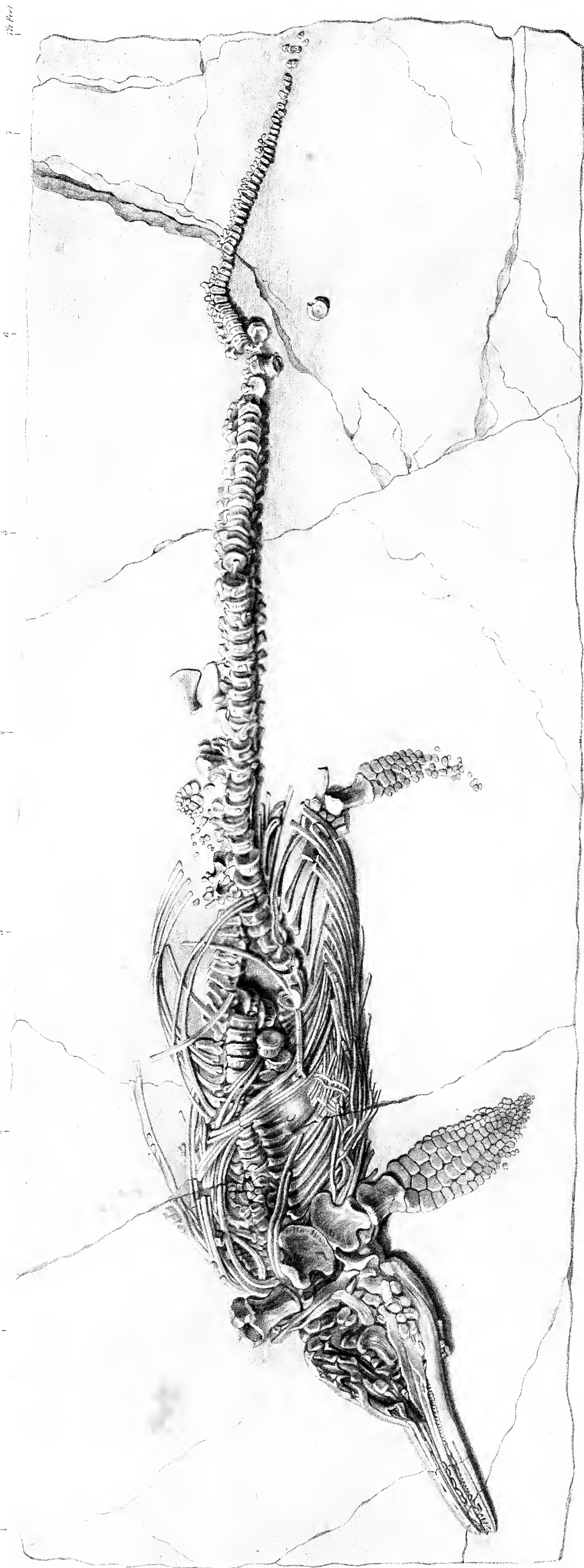


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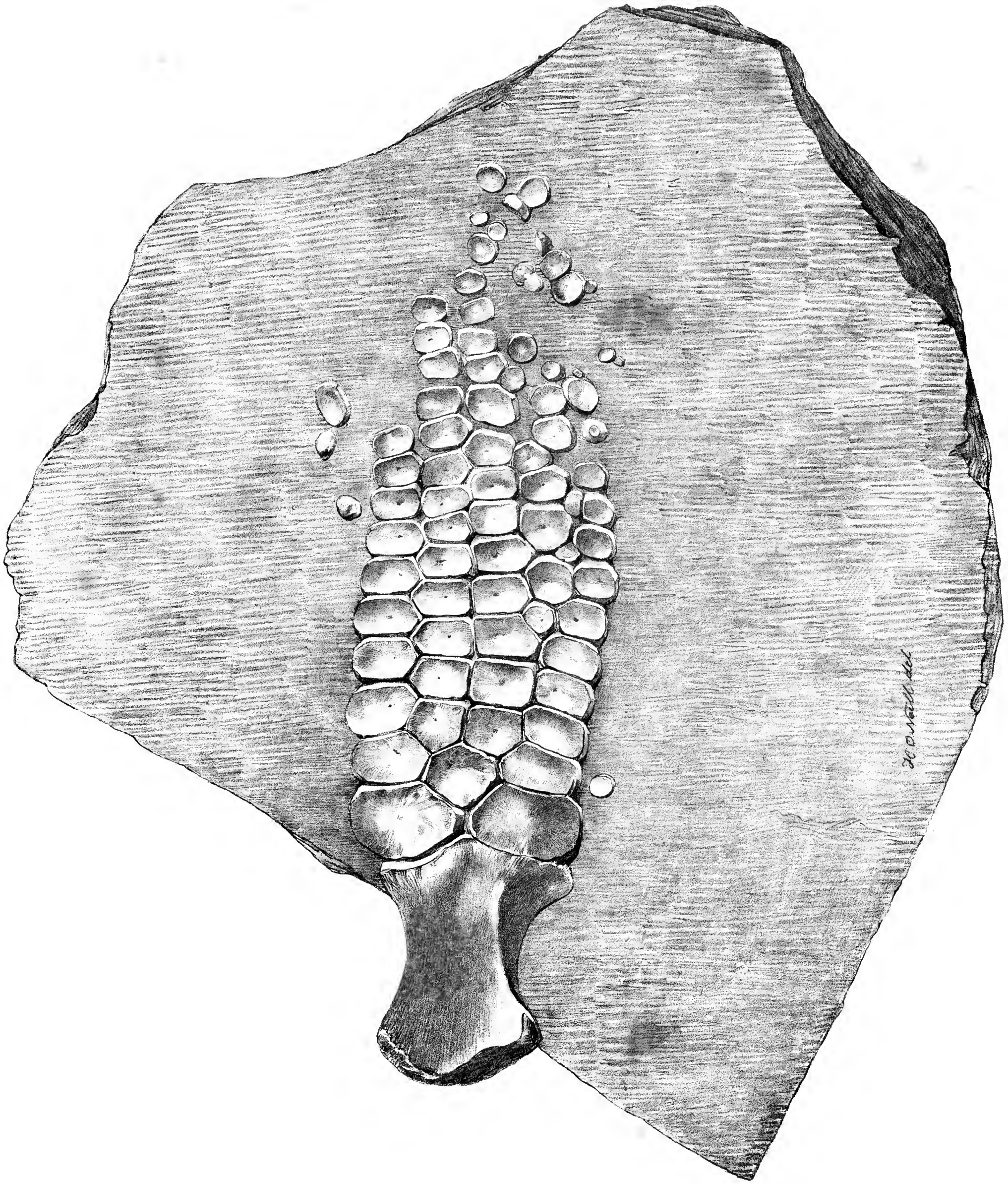


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Printed by Stanbury & Co. London

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G. Schum. del. et lith.

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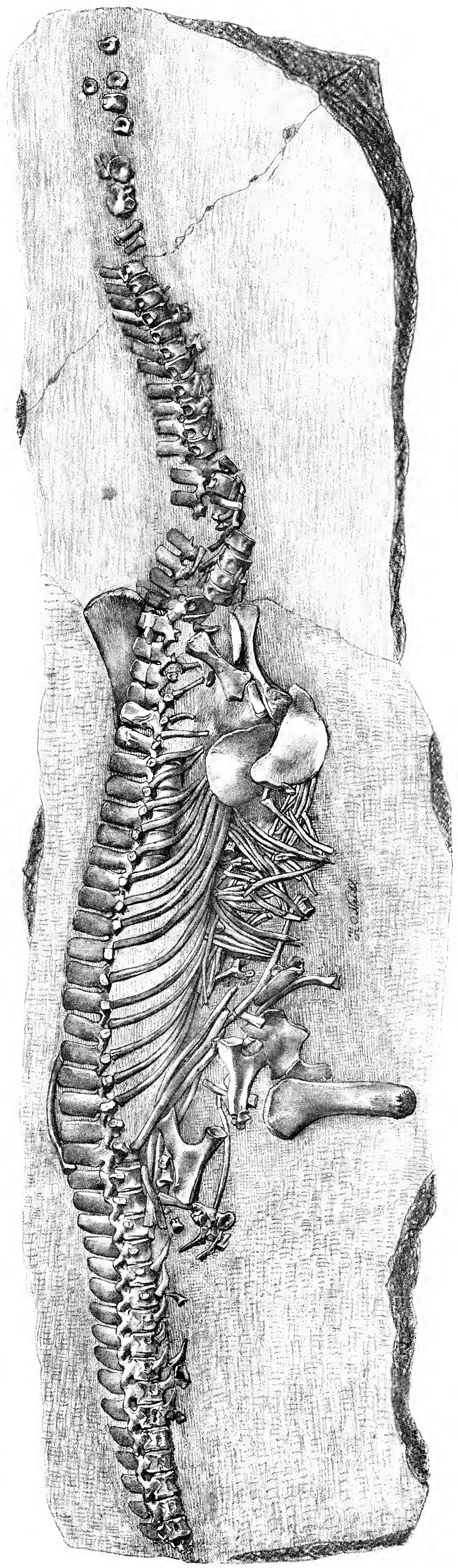


PLESIOSAURUS TRIATARSOSTINUS.

Printed by Stanbridge & Leeman, 27, Drury Lane.

Drawn from nature on stone by H.C. Ashmole.  
Reduced from the skeleton of 1840 No. 10.

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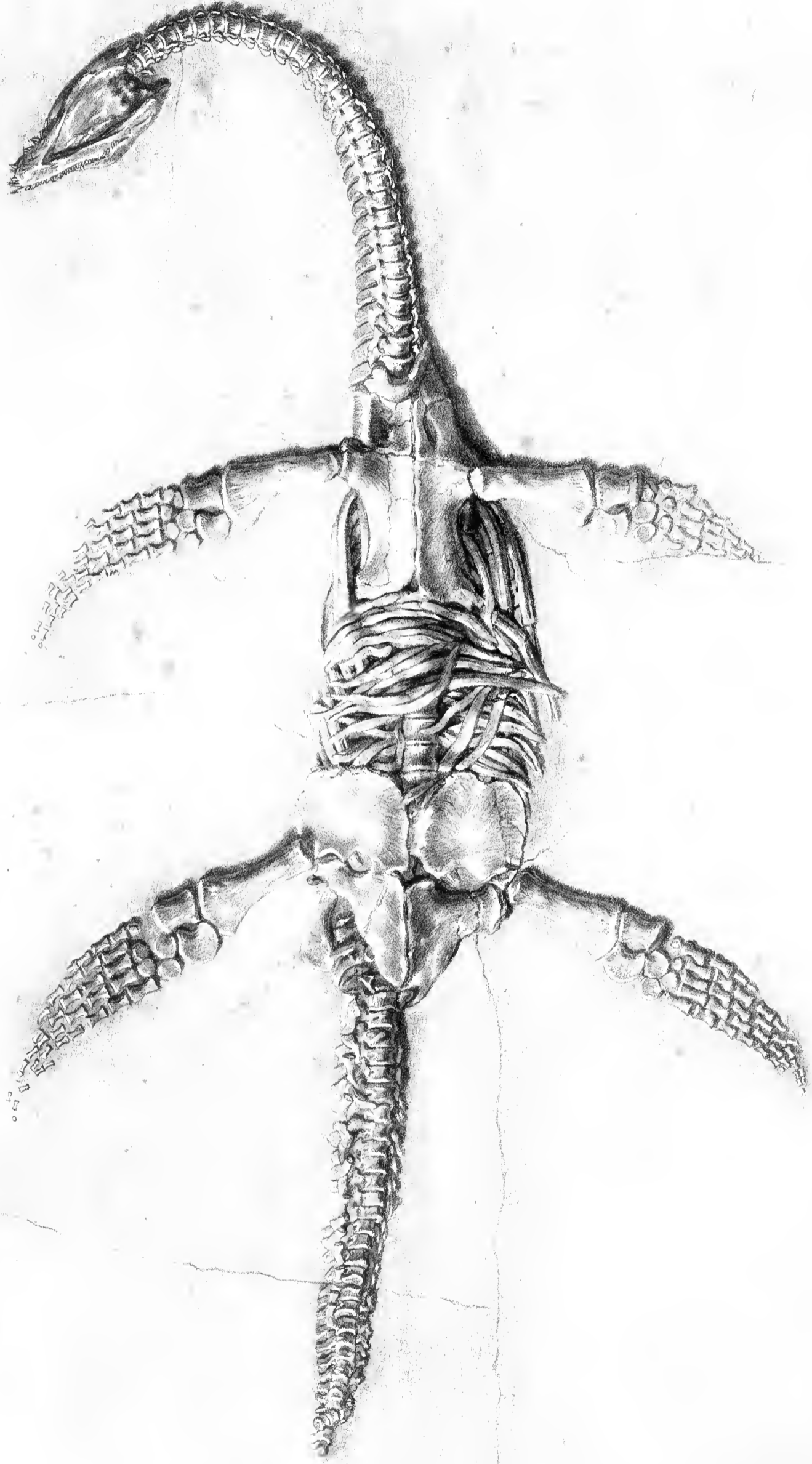
*Human Thorax, viewed on spine by H. C. Wood.  
Reduced from the Atlas Anatomica of Spina.*

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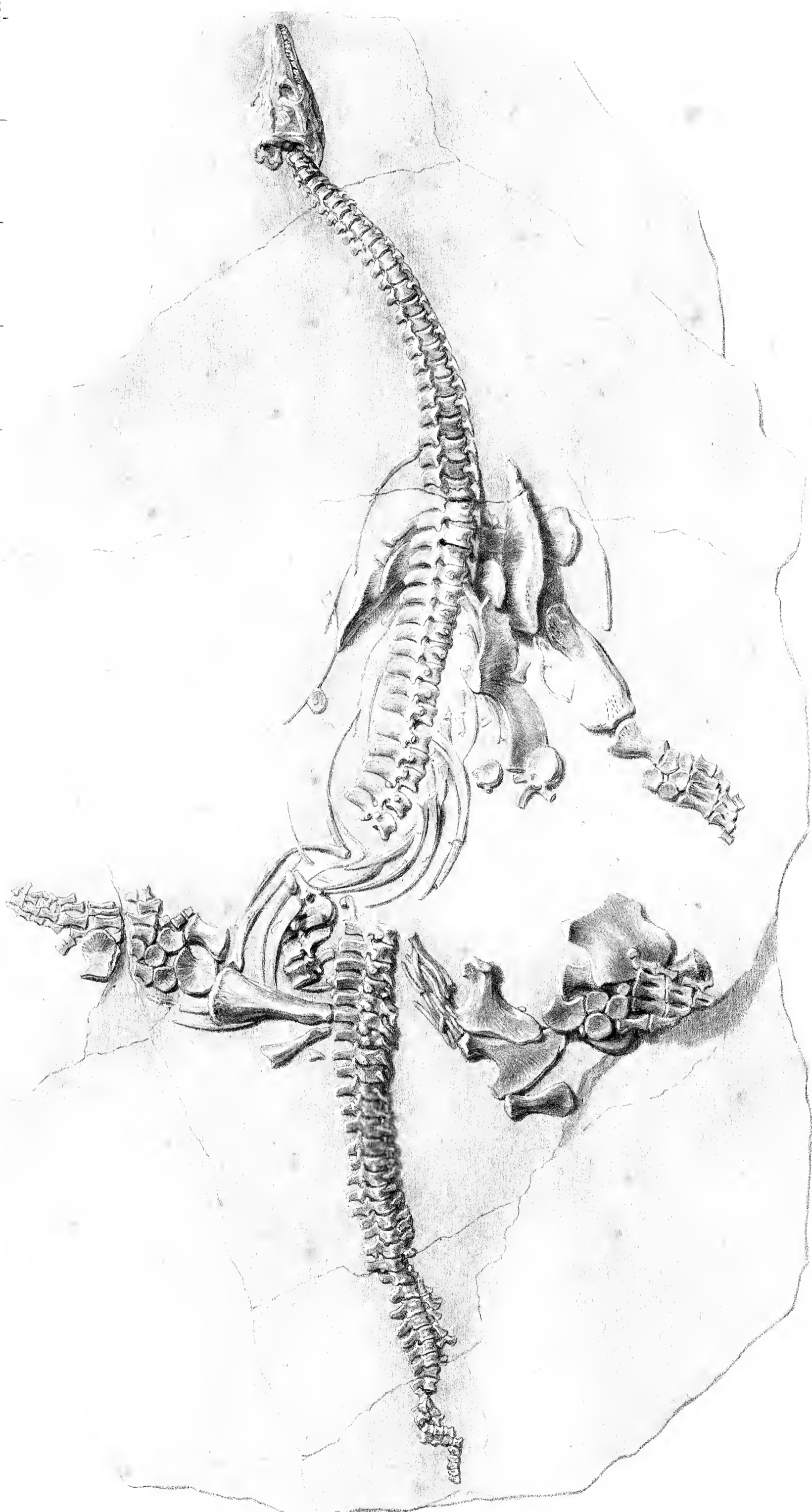


G. Schrank del. et lithogr.

Reduced from the Fossil Remains to 1/10<sup>th</sup>

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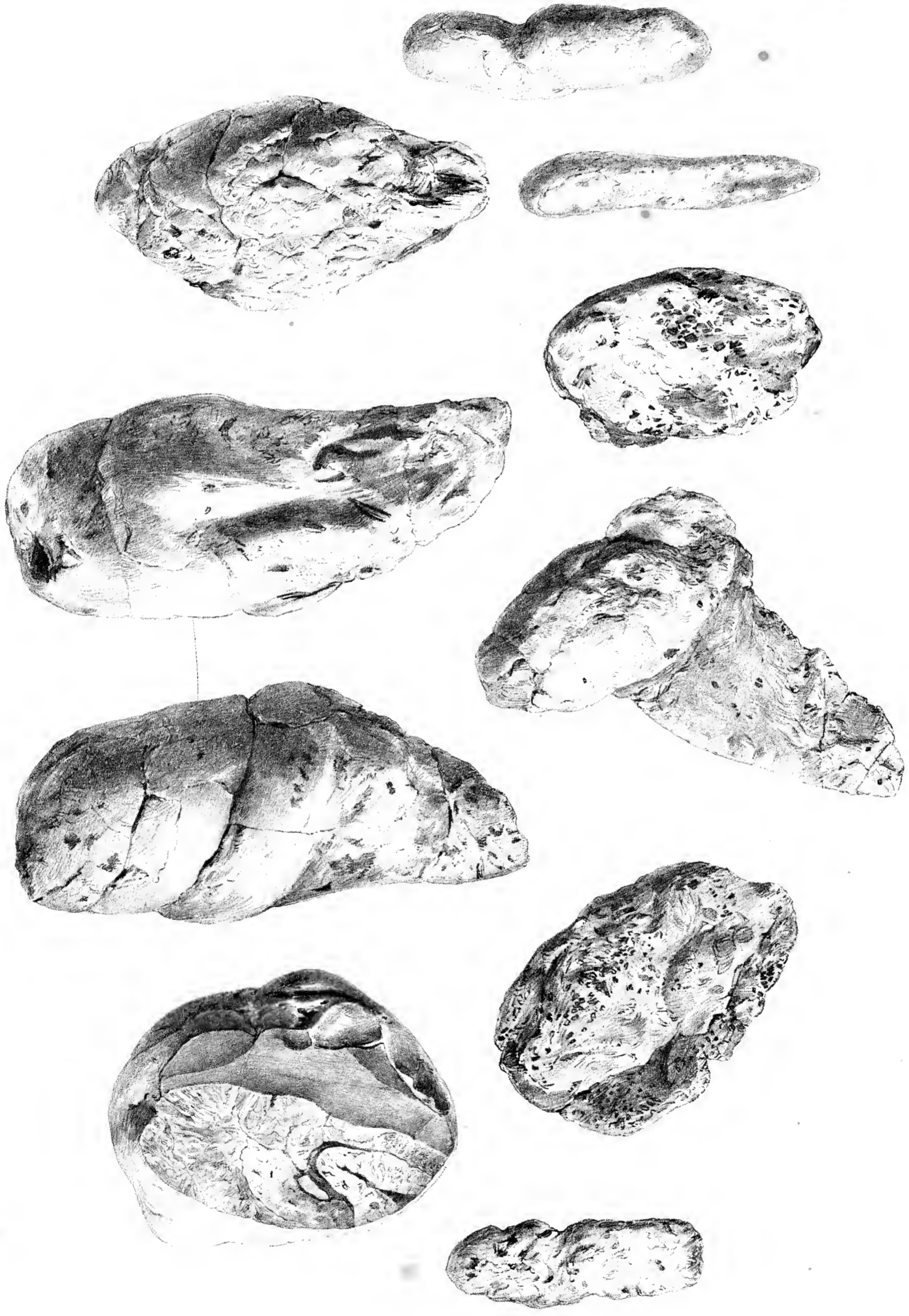


Printed by Stanbridge & Co. London.

G. Schorr del. et sculp.

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Plate 22.

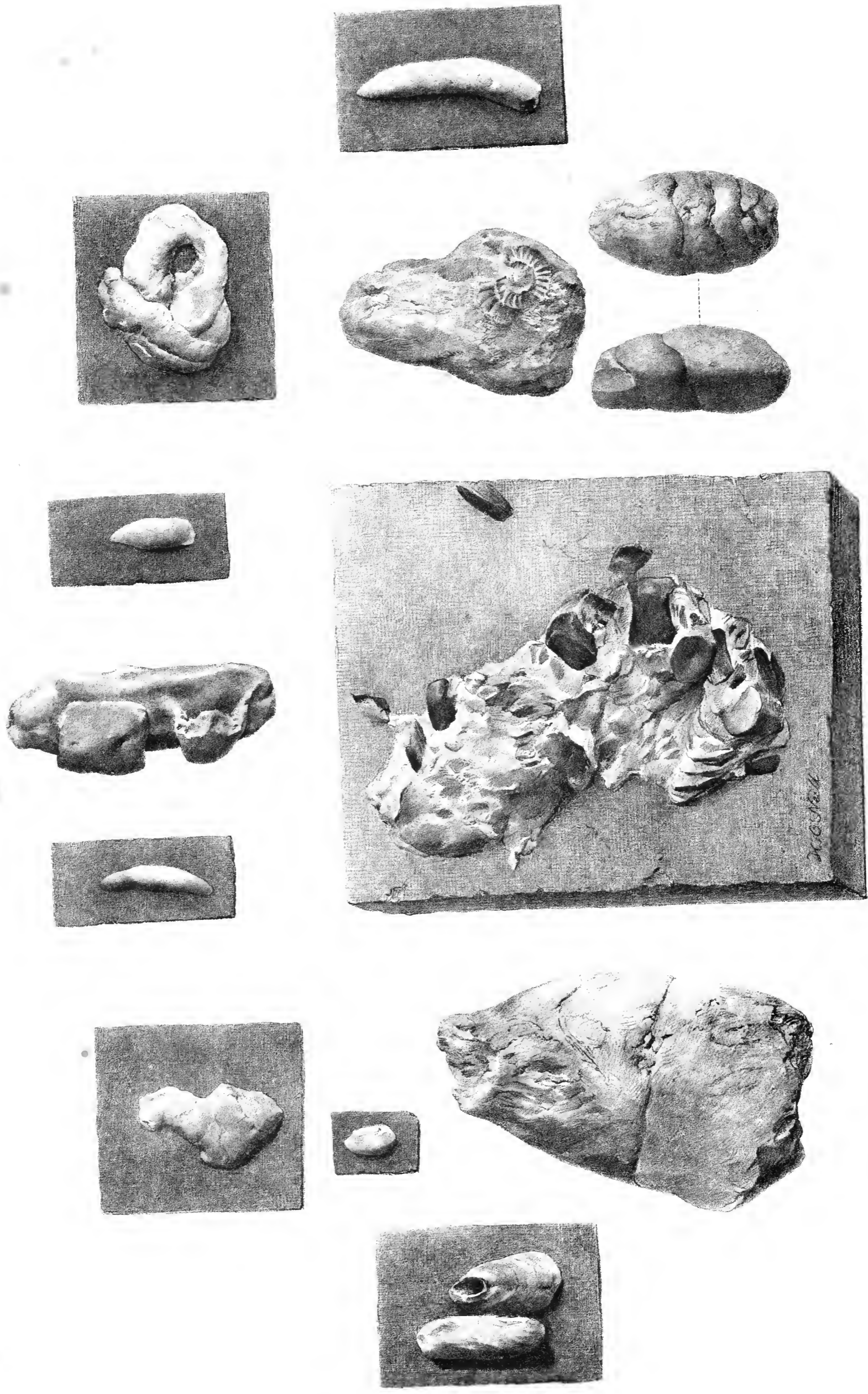


COPROLITES.

Prepared by S. H. Henshaw, U.S. Geol. Surv.

Drawn from nature on stone by H. C. Yell.

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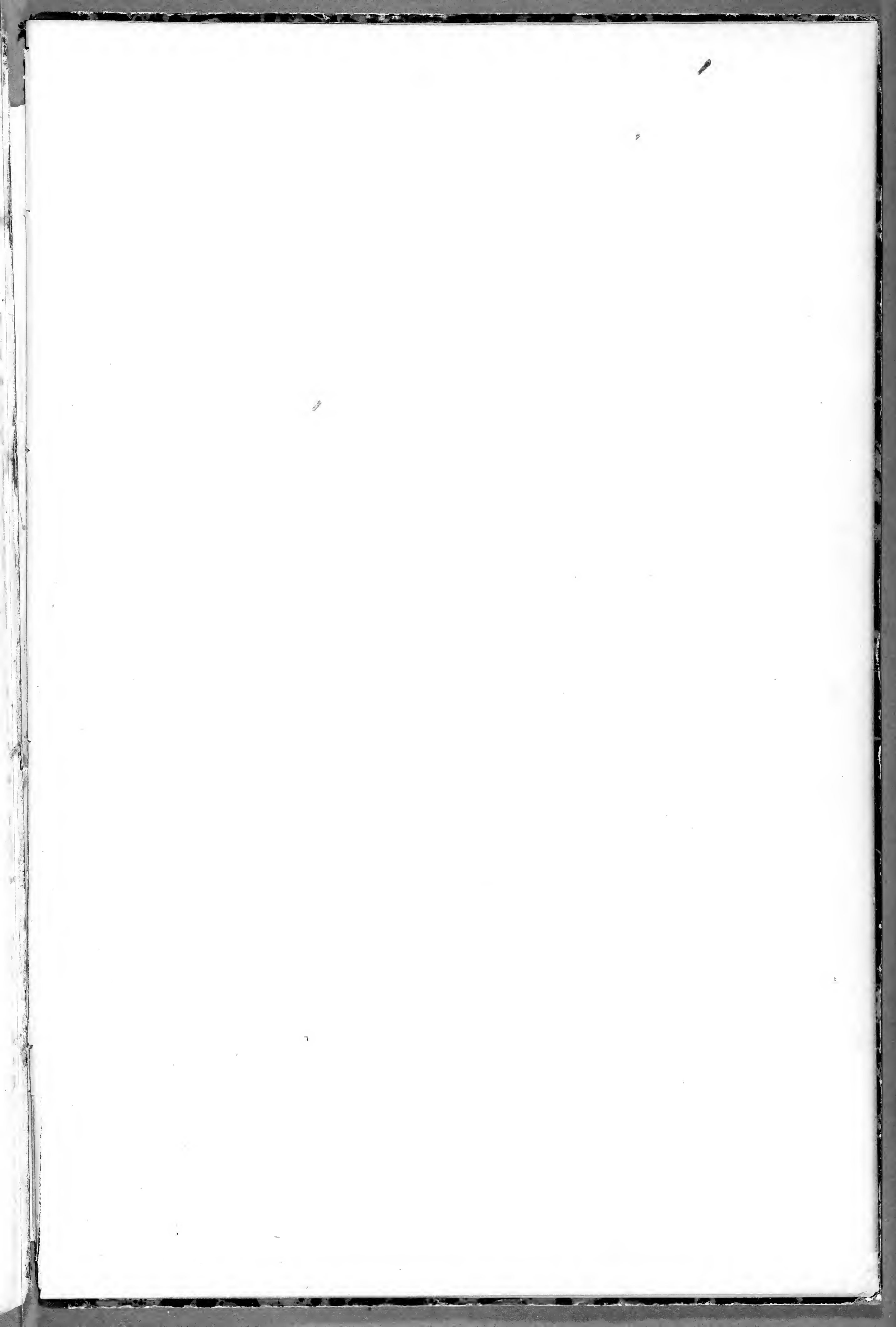
COPROS.

*Drawn from Nature on Stone by H. O.Neil.*

*Printed by Sandridge & Lemen 77Cornhill.*

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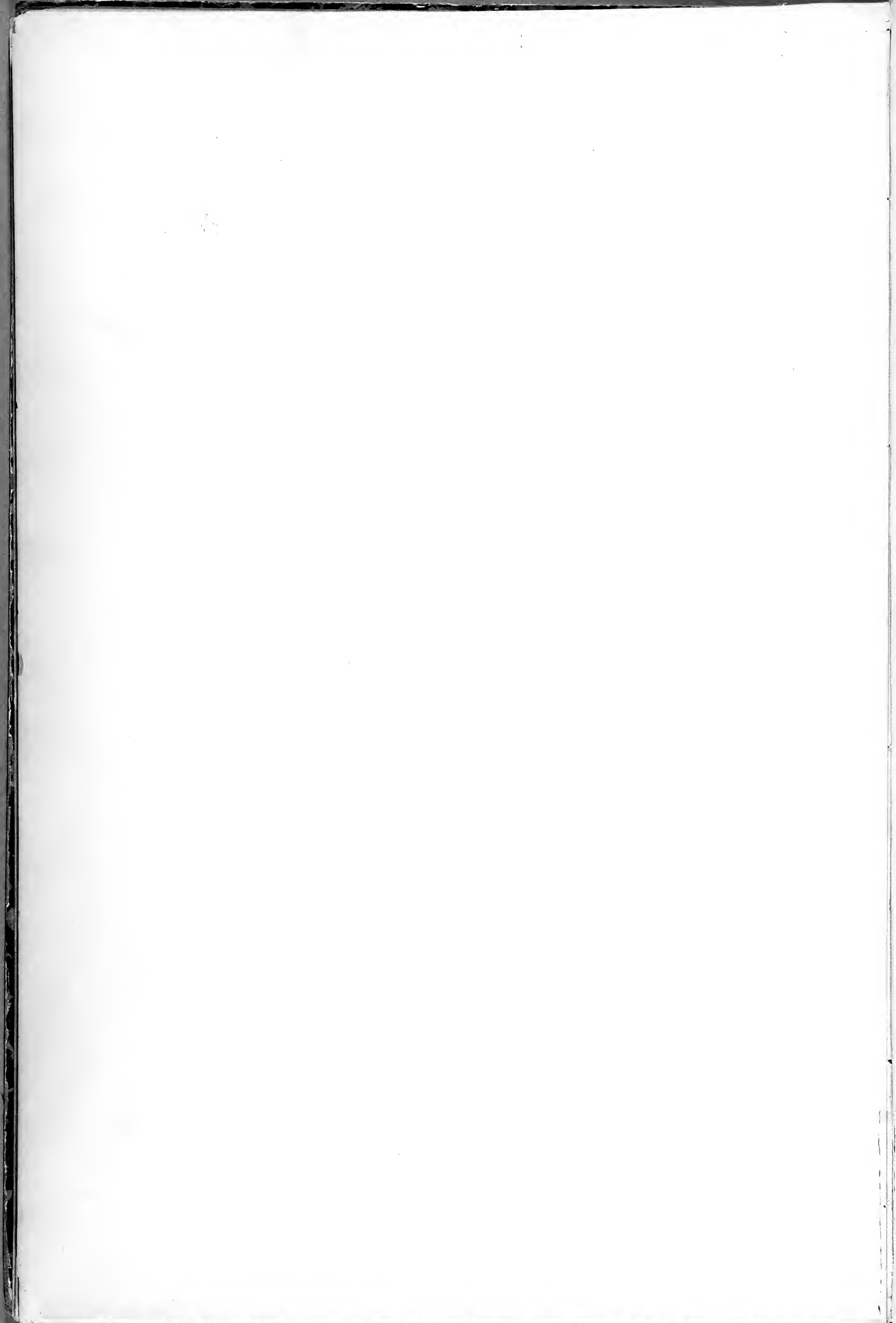




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