

TABULAR VIEW
OF THE
PRIMARY DIVISIONS OF THE ANIMAL KINGDOM,

INTENDED TO SERVE AS

AN OUTLINE OF AN ELEMENTARY COURSE

OF

RECENT ZOOLOGY
(CAINOZOOLOGY),

OR THE

NATURAL HISTORY OF EXISTING ANIMALS.

BY

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CLR

ETERNITY OF SPECIES.

“THE organs of nutrition and of relation, which we have been hitherto considering, enable the individuals of species, for a limited time, to live, to grow, and to feel; but while myriads of individuals appear and disappear, like passing shadows, in rapid succession, the species, or the typical forms of groups of animals, are still prolonged on the earth. The species, however, like the individuals which compose them, have also their limits of duration.

“The life of animals exhibits a continued series of changes, which occupy so short a period, that we can generally trace their entire order of succession, and perceive the whole chain of their metamorphoses. But the metamorphoses of species proceed so slowly with regard to us, that we can neither perceive their origin, their maturity, nor their decay, and we ascribe to them a kind of perpetuity on the earth.

“A slight inspection of the organic relicts deposited in the crust of the globe shows that the forms of species, and the whole zoology of our planet, have been constantly changing, and that the organic kingdoms, like the surface they inhabit, have been gradually developed from a simpler state to their present condition.

“These slow changes are regulated by the laws which preserve individual forms, and check the transmission, by generation, of modifications suddenly induced.

“Although no animal can exactly produce its like, the progeny are so nearly such, that, for all the purposes of science, we regard their forms as identical with those of the parent, and out of an indefinite series of such generations, and of individuals as nearly resembling them, we frame our organic species, and ascribe them to nature.

“All forms of matter appear to have a capability and a tendency to become organized, as all organic forms tend to higher stages of development, and chemical analysis shows the highest as well as the lowest forms of organic beings to consist of a complicated aggregate of mineral gases and liquids and solids. These organized aggregates once formed from their elements, all possess alike the means of transmitting their forms by generation, which is effected by the separation of a portion of their substance, when their own development is completed.”—GRANT, Lect. on Comp. Anat., Lect. 55th, ‘Lancet,’ 1833–34, vol. ii. p. 1001.

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CONTENTS.

	Page
Dedication	v
Preface	vii
Introduction	1
1. Material Bodies	1
2. Mineral Kingdom	2
3. Vegetable Kingdom	3
4. Animal Kingdom	5
5. Organization of Animals	6
6. Classification of Animals	7
Vertebrated Subkingdom	10
Molluscous Subkingdom	33
Entomoid Subkingdom	42
Helminthoid Subkingdom	56
Radiated Subkingdom	62
Sarcodous Subkingdom	70

DEDICATION.

TO

CHARLES DARWIN, ESQ., M.A., F.R.S.,

F.L.S., F.G.S., ACAD. CÆS. NAT. CUR. SOC., ETC.

Author of various Zoological Works.

DEAR MR. DARWIN,

On public grounds, and as an old fellow-labourer in the same rich field of philosophic inquiry, I avail myself of the opportunity afforded in publishing this brief outline of the primary divisions of the Animal Kingdom, to dedicate these pages to you in testimony of my admiration and approval of your late successful attempt to throw further light on that involved and obscure question, regarded by some inquiring minds as the mystery of mysteries of organic nature, the origin of species by natural law; or, as you have more happily and more definitely expressed the problem, "the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life."

More than fifty years have now elapsed since the 'Zoonomia' of your illustrious ancestor, Dr. Erasmus Darwin, first opened my mind to some of "the laws of organic life," which he so clearly expounded, and so successfully applied to explain the abnormal phenomena of the human body; and nearly forty have already rapidly fled away since you and I were busied in exploring microscopically the delicate structures and the living phenomena of the lowest organisms abounding in the rich fauna of the Frith of Forth.

But while I have been humbly occupied with the gleanings of our fellow-labourers in the cabinets and seminaries of Europe, and reporting the results to my youthful auditors, you have been widely surveying the grand domain

of nature with a learned spirit over the oceans, seas, islands, and continents of the globe, in every latitude and in every clime, nearly from the one pole to the other, and accumulating that rich store of thought and observation which entitles you of all men to aspire to the complete solution of those great, though obscure problems of organic nature, which have so long perplexed philosophers; a labour which you have so successfully commenced, and in which you have already surpassed all your predecessors, from the time of Plato.

Intellectual triumphs like yours, which have been hailed with the assent and applause of all competent unbiassed minds at home and abroad, while they charm away the clouds of mysticism which overhang some parts of our science and of philosophy, and obscure the greatest truths of nature, alone add permanent glories to the annals of our country in the great struggle for intellectual pre-eminence and ascendancy among the nations of the earth. With one fell sweep of the wand of truth, you have now scattered to the winds the pestilential vapours accumulated by "species-mongers" over every step of this ever-varying, ever-charming part of nature's works; and your next movement will dispel the remaining clouds of "mystical supernatural typical intrusions" which still hang on the horizon of the sublime prospect, now opening to the view, of the natural animalization of the orbs of space by the same simple laws which govern the physical and chemical phenomena with such wondrous harmony throughout the rest of the material universe.

I remain, my dear Sir,
 With great respect and regard,
 Yours most truly,
 ROBERT E. GRANT.

2 Euston Grove, Euston Square, London.
 16th May, 1861.