INTRODUCTION.

Reptiles form the third great class of vertebrated animals. They are beings provided with lungs, a simple heart, low temperature, slow digestion, and oviparous generation; having neither hair, feathers, nor mammae.

Naturalists have experienced much difficulty in giving an appropriate name to this great class of animals. Linneus, observing some of the most remarkable phenomena in the economy of Reptiles—as their being able to live on land or in water—called them amphibia. The term is inappropriate; for it can be applied but to a very small number; as many never approach the water, and few, like the Sirens, can respire in this element;—breathing with lungs, others must approach its surface for atmospheric air. The respiration of young Batrachia is indeed only in water; but they have gills, and when the animal arrives at its perfect state of development, these disappear, and are succeeded by lungs. An animal, to respire equally well on land or in water, must have both gills and lungs; gills to breathe in the water, as Fishes, and lungs to respire atmospheric air, as Birds and Mammalia. The Sirens of our rice-fields, and the Menobranchi of the great northern lakes, are the only North American Reptiles that have this structure;
and are consequently our only really amphibious animals. However inapplicable
the term amphibia may be to these animals, many writers have followed the
example of the great Swedish naturalist. Brisson* was the first who arranged
them under the name Reptiles;† which term will be adopted in this work as more
indicative of their habits than the word amphibia.

The science which treats of the form, organization, habits, and history of
Reptiles, is named Herpetology;‡ and has been more neglected than all other
branches of Zoology; for the study of Reptiles offers difficulties more numerous
and insurmountable than those presented by any other class of vertebrated
animals. Inhabiting, for the most part, deep and extensive swamps, infected
with malaria, and abounding with diseases during the summer months, when
Reptiles are most numerous, time is wanting to observe their modes of life with
any prospect of success. Regarded, moreover, by most persons as objects of
detestation, represented as venomous, and possessed of the most noxious pro-
perties, few have been hardy enough to study their character and habits.

Though wanting the gracefulness of form of some Mammalia,—though without
the beauty of plumage of some Birds, or the intelligence of others,—though they
lack the brilliancy of colour and wonderful instinct of the insect tribe,—still the
Reptiles offer many striking points of interest to the student of nature. To one
who would trace the chain of organized bodies, their connexion, their relation
with each other, and with the great whole, the study of Herpetology is highly
interesting and important. The Reptiles occupy a prominent place in the scale
of creation. Neither the highest, nor yet the lowest of vertebrated animals, they
fill a space between the Birds and Fishes, and without them a vast link in the
chain of animated beings would be wanting. Elevated above the Fish by the

† Dumeril observes the term had been previously used by Lyonnet. Hist. Nat. des Rept.,
tom. i. p. 2.
‡ From ἁμπετός, a reptile, ἀμφíd, a discourse.
presence of lungs and articulated members, yet inferior to Birds from having cold
blood, a simple heart, and a less degree of sensibility, these animals, by their
multiplied and extremely diversified forms, make the medium of connexion between
beings of the most opposite character. The Testudo connects them with the
inferior Mammalia, as with the Armadillo, on the one hand, while the Siren
approximates them to the cartilaginous Fishes on the other. Serpents form a link
of another series, connecting this class with osseous Fishes, as with the Eel; and
the Flying Lizard connects them with the Birds.* In order to estimate properly
the rank these animals hold in the scale of creation, it is necessary to examine
the general and principal points of their organization—to study the number of
their senses, and their degree of perfection. Without this, we cannot understand
the diversified forms and the shades of life that present themselves in such infinite
variety among them. Their conformation and modes of life are so different—
some being organized for creeping, others for walking, for swimming, and even for
flying, that it would be impossible to generalize their anatomical forms or structure.
We cannot give the structure of one as the type of organization in all the others;
for their variation in shape and figure is attended with modifications of their
internal organs. These differences of structure will be fully described in the
anatomical part of this work; at this time, according to the plan proposed above,
it can only be said that the difference of organization observed in different
species, led Brogniart to arrange them all in four great orders—I. Chelonia. II.
Sauria. III. Ophidia. IV. Batrachia.


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