

III. Mittheilungen aus Museen, Instituten etc.

1. Zoological Society of London.

4th December, 1883. — Mr. Philip Crowley, F.Z.S., exhibited and made remarks on an egg of a Bower-bird from Southern New Guinea, supposed to be that of *Chlamydodera cerviniventris*. — Sir Joseph Fayrer, F.Z.S., exhibited a shed Deer-horn, apparently gnawed by other Deer, and made remarks on this subject. — Mr. Sclater exhibited, on the part of Dr. George Bennett, F.Z.S., four skins of a species of Paradise-bird of the genus *Drepanornis*, obtained in the vicinity of Port Moresby in Southern New Guinea. Mr. Sclater considered this form to be only subspecifically different from *D. Albertisi* of North-eastern New Guinea. — Mr. W. Burton, F.Z.S., exhibited a supposed hybrid between a male Blackcock and a hen Pheasant. — Mr. R. Bowdler Sharpe gave descriptions of some new species of Flower-peckers, viz.: — *Dicaeum sulaense*, from the Sula Islands; *D. pulchrius*, from S.E. New Guinea; and *D. Tristrami*, from the Solomon Islands. The author added some critical notes on other species of *Dicaeum* and *Prionochilus*. — Mr. J. B. Sutton read a paper on the diseases of Monkeys dying in the Society's Gardens, on which he gave many interesting details. Mr. Sutton called special attention to the prevalence of the belief that Monkeys in confinement generally die of tuberculosis, and showed that such is not really the case. — Mr. H. O. Forbes, F.Z.S., read a paper describing the peculiar habits of a Spider (*Thomisus decipiens*) as observed by him in Sumatra. — A second paper by Mr. Forbes gave an account of some rare birds from the Moluccas and from Timor Laut. To this the author added the description of a new species of Ground-Thrush from Timor Laut, which he proposed to call *Geocichla Machiki*, in acknowledgment of services rendered to him by Dr. Julius Machik in Sumatra. — A communication was read from Prof. J. von Haast, F.R.S., C.M.Z.S., containing notes on *Ziphius (Epidon) novae-zealandiae*, in continuation of a former paper read before the Society on the same subject. — A second communication from Prof. Haast gave a description of a large Southern Rorqual (*Physalus [Balaenoptera] australis*) which had been washed ashore dead on the New Brighton beach about 5 miles from Christchurch, New Zealand. Prof. Haast was doubtful as to the distinctness of this animal from *Balaenoptera musculus* of the Northern Atlantic. — Mr. G. French Angas, C.M.Z.S., read some notes on the terrestrial Mollusca of Dominica collected during a recent visit to that island. — P. L. Sclater, Secretary.

2. Linnean Society of London.

6th December, 1883. — A large number of Lepidoptera from the district of Georgetown, Colorado, and a few from Missouri were exhibited by Mr. Ernest Jacob who had collected there while engaged in the U. S. A. Geological Survey in the above mentioned districts 1880—81. — Mr. Charles Darwin's Essay »On Instinct« was then read by the Zoological Secretary and an important discussion followed in which Mr. Wallace, Professors Huxley, Allman, Mivart, Foster, Lankester, Mr. Seebohm, Mr. McLachlan and others took part. After detailing sundry facts with reference to the migratory instincts of different animals, Mr. Darwin proceeds to suggest a theory to account for them. This theory is precisely the same

as that which was subsequently and independently enunciated by Mr. Wallace in *Nature* X, p. 459 (1874). Thus, to quote from the essay: »During the long course of ages, let valleys become converted into estuaries and then into wider and wider arms of the sea; and still I can well believe that the impulse (originally due to seeking food), which leads the pinioned goose to scramble northward, would lead our bird over the trackless waters; and that, by the aid of the unknown power by which many animals (and savage men) can retain a true course, it would safely cross the ocean covering the submerged path of its ancient journey.«

The next topic considered is that of instinctive fear. Many facts are given, showing the gradual acquisition of such instinctive fear, or hereditary dread, of man, during the period of human observation. These facts led Mr. Darwin to consider the instinct of feigning death as shown by sundry species of animals when in the presence of danger. Seeing that »death is an unknown state to each living creature«, this seemed to him »a remarkable instinct«, and accordingly he tried a number of experiments upon the subject with insects, which proved that in no one case did the attitude in which the animal »feigned death«, resemble that in which the animal really died; so that the instinct really amounts to nothing else, in the case of insects at all events, than an instinct to remain motionless, and therefore inconspicuous, in the presence of danger. From the facts given with regard to certain vertebrated animals, however, it is doubtful how far this explanation can be applied to them.

A large part of the essay is devoted to »Nidification and Habitation«, with the object of showing, by an accumulation of facts, that the complex instincts of nest-building in birds and of constructing various kinds of habitations by mammals, all probably arose by gradual stages under the directing influence of natural selection.

Among other »miscellaneous remarks« on instincts in general he notes: First the variability of instinct is proved by sundry examples; next the fact of double instincts occurring in the same species; after which, »as there is often much difficulty in imagining how an instinct could first have arisen«, it is thought »worth while to give a few, out of many cases, of occasional and curious habits, which cannot be considered as regular instincts, but which might, according to our views, give rise to such«. Finally, cases of special difficulty are dealt with; these may be classified under the following heads: — 1) Similar instincts in unallied animals; 2) dissimilar instincts in allied animals; 3) instincts apparently detrimental to the species which exhibit them; 4) instincts performed only once during the lifetime of an animal; 5) instincts of a trifling or useless character; 6) special difficulties connected with the instinct of migration; 7) sundry other instincts presenting more or less difficulty to the theory of natural selection.

Mr. Darwin concludes: — »We have in this chapter chiefly considered the instincts of animals under the point of view whether it is possible that they could have been acquired through the means indicated on our theory, or whether, even if the simpler ones could have been thus acquired, others are so complex and wonderful that they must have been specially endowed, and thus overthrow the theory. Bearing in mind the facts given on the acquirement, through the selection of self-originating tricks or modification of instinct, or through training and habit, aided in some slight degree by imita-

tion, of hereditary actions and dispositions in our domesticated animals, and their parallelism (subject to having less time) to the instincts of animals in a state of nature; bearing in mind that in a state of nature instincts do certainly vary in some slight degree; bearing in mind how very generally we find in allied but distinct animals a gradation in the more complex instincts which show that it is at least possible that a complex instinct might have been acquired by successive steps, and which moreover generally indicate, according to our theory, the actual steps by which the instinct has been acquired, inasmuch as we suppose allied instincts to have branched off at different stages of descent from a common ancestor, and therefore to have retained, more or less unaltered, the instincts of the several lineal ancestral forms of any one species; bearing all this in mind, together with the certainty that instincts are as important to an animal as their generally correlated structures, and that in the struggle for life under changing conditions, slight modifications of instinct could hardly fail occasionally to be profitable to individuals, I can see no overwhelming difficulty on our theory. Even in the most marvellous instinct known, that of the cells of the hive-bee, we have seen how a simple instinctive action may lead to results which fill the mind with astonishment.«

»Moreover it seems to me that the very general fact of the gradation of complexity of instincts within the limits of the same group of animals; and likewise the fact of two allied species, placed in two distant parts of the world and surrounded by wholly different conditions of life, still having very much in common in their instincts, supports our theory of descent, for they are explained by it; whereas if we look at each instinct as specially endowed, we can only say that it is so. The imperfections and mistakes of instinct on our theory cease to be surprising; indeed it would be wonderful that far more numerous and flagrant cases could not be detected, if it were not that a species which has failed to become modified and so far perfected in its instincts that it could continue struggling with the co-inhabitants of the same region, would simply add one more to the myriads which have become extinct.«

»It may not be logical, but to my imagination it is far more satisfactory to look at the young cuckoo ejecting its foster-brothers, ants making slaves, the larvae of the Ichneumonidae feeding within the live bodies of their prey, cats playing with mice, otters and cormorants with living fish, not as instincts specially given by the Creator, but as very small parts of one general law leading to the advancement of all organic bodies: — Multiply, Vary, let the strongest Live and the weakest Die.«

IV. Personal-Notizen.

Necrolog.

Am 21. December 1883 starb in Berlin Prof. Carl Bog. Reichert, geb. am 20. Decbr. 1811. Durch seine entwicklungsgeschichtlichen, auch auf Gewebsentwicklung gerichtete Arbeiten gehörte er zu den bedeutendsten, anregendsten und erfolgreichsten Förderern der wissenschaftlichen Neugestaltung der Morphologie.

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Zoologischer Anzeiger](#)

Jahr/Year: 1884

Band/Volume: [7](#)

Autor(en)/Author(s): Anonymous

Artikel/Article: [2. Linnean Society of London 22-24](#)