PART SECOND.

BIBLIOGRAPHICAL RECORD.

ART. I.—1. Philosophiae Zoologicae. Auctore J. Van der Hoeven. Lugduni Batavorum, apud E. J. Brill, 1864.

Philosophy of Zoology. By J. Van der Hoeven. Leyden: E. J. Brill, 1864.

2. Catalogus Craniorum Diversarum Gentium, quae collegit J. Van der Hoeven. Lugduni Batavorum. E. J. Brill, 1860.

A Catalogue of the Crania of Various Races, collected by J. Van der Hoeven. Leyden: E. J. Brill, 1860.

3. De Vera Anatomes Comparatæ Indole. Oratiuncula ad aperiendas Scholas, quam habuit die xxvi Septembris. J. Van der Hoeven. Lugduni Batavorum et Amstilodami, apud J. H. Gebhard et Socios, 1848.

On the True Bearings of Comparative Anatomy. An Inaugural Address delivered at the Opening of the Academical Session on the 26th of September, by J. Van der Hoeven. Leyden and Amsterdam: Gebhard and Co., 1848.

To the ordinary Englishman it is not a little vexatious to see advertised a work by some such Dane, Swede, or Dutchman as Eschricht, Retzius, or Van der Hoeven, and to recollect that it will remain a sealed book to him till some kindly Dr. Moore or Professor Clark step in and translate it for him. In such times of tantalising prospect, the fifteen years spent in mastering more, or, as we fear, often less perfectly the tongues of ancient Greece and Rome may seem to have been a somewhat prodigal allowance to be assigned out of the sixty years in which man can labour; and it is with a pleasure the more real because now so rare, that we come upon a modern scientific treatise, written in the same language as the Epigrams of Martial, and the Ars Amandi of Ovid. Three works by Professor Van der Hoeven already well known to us by the Cambridge translation of his "Handbook of Zoology"—written in Latin, and suitable
therefore to the Englishman of sound classical education, and bearing the titles of 'Philosophia Zoologica,' of 'De Vera Anatomes Comparatæ Indole,' and of 'Catalogus Craniorum Diversarum Gentium,' we propose to introduce herewith to the notice of our readers.

The 'Philosophia Zoologica' carries us back, by the association of title, nearly sixty years, to the days when a 'Philosophie Zoologique' appeared at Paris, auctore J. B. O. A. Lamarck; and we venture to suggest that the Professor of Leyden, in 1866, intended by the name he chose for his work, to remind us of this now all but wholly forgotten fact in the scientific history of 1809. Be this as it may, the appearance of this work is most opportune in this country at the present juncture when Dr. Carpenter's large work on Comparative Physiology is out of print, and when M. Milne-Edwards' 'Lécons' have just filled up a ninth octavo volume. Professor Huxley's excellent 'Lectures' are professedly and confessedly but one volume of a continuously, as we hope, forthcoming series, and, whilst we are waiting for his advertised 'Manual,' the admirable existing German Handbooks are about as available for the uses of ninety out of every hundred of the ordinary Englishmen already alluded to, as would be the Targum or Zendavesta.

The Latin manual of the Dutch anatomist and zoologist, makes up a moderate-sized octavo of some 400 pages, 190 of which are devoted to anatomy, under the several denominations of general, histological, comparative, and osteological; 80 to general and comparative embryology; 25 to the purely zoological subjects of nomenclature, taxonomy, and description; and 84, concluding and most interesting pages, to the geographical distribution of animals. These are large subjects to be treated of within such narrow limits, and it is only a master-hand which can deal with such subjects becomingly and worthily under such conditions. Such a hand is Professor Van der Hoeven's. Still we find, that with conscientious punctuality he gives the fullest references in his notes to the best authorities, on each of the very many matters which he expounds in his clear and easy Latin text; and the advantages of such bibliographical details we need not dwell upon, to our readers who are familiarised to the use of similar accessories by Dr. Murchison's laudable practice in his 'Treatise on Continued Fevers.'

It is somewhat surprising to find so little mention made of the great question as to the "Origin of Species" in a work with the title of 'Philosophia Zoologica;' and anxious though we were to possess ourselves of Professor Van der Hoeven's views as to Mr. Darwin's doctrines, we had some difficulty in finding a statement of them. But at page 275, where man's
power to render permanent, by domestication and its influences, such varieties as may arise amongst his flocks and herds, and may give promise of being more than ordinarily profitable to him, is discussed, we find a very sufficiently unambiguous hint as to the opinions of our Dutch philosopher. From his words, which we will forthwith proceed to quote, it is plain that Professor Van der Hoeven has resisted the fascination to which his contemporary Schleiden, as well as so many other and younger naturalists have yielded. His words are these:

"Economia seligunt in domesticis animalibus eas, quas ob varios usus aestimant plurimum, et seligendo constantiores faciunt et emendant. Simile quid naturae opus esse vix idoneis argumentis probatur: liatas esse liac ratione ortae. Species longissimo temporis intervallo mutari non nulli affirmant, nostram vero experientiam augustis nimis limitibus circumscriptam esse voluit ut has mutationes videamus. Quid ingens tempori diuturnitas efficie possit, profecto ignoramus, sed id tamen intelligimus breviori intervallo fili quam mutationem fieri debere necessario, quae sit observatione comprobata, ut exinde majorem, quam volunt illi, explicare possimus. E nihil, productione temporis vel millies multiplicato, tamen nihil fit. Cf. Cuvier, Rech. sur les os foss. I. Discours sur les révolutions de la surface du Globe, pp. 62, 63. Scite Decandolle hanc opinionem, quae mutabiles esse species sumitur, et improbabilem et sterilem dixit (Theoria improbable... et inutile, puisque, si elle était vraie, nous devrions, sous peine de ne rien savoir, nous conduire comme si elle était fausse, et étudier, comme aujourd'hui, les formes les plus habituelles des êtres." (Théorie élémentaire de la Botanique. Paris, 1819, p. 196.)

Such, it seems, is the kindliness of Professor Van der Hoeven that he cannot bring himself to pronounce a sentence of strong condemnation with his own lips, and he calls in a French philosopher to perform the painful duty for him. It is noteworthy that he does not avail himself of the somewhat undignified expression of the same opinion which M. Fleurens' works might have furnished him with, albeit he quotes this author on the page immediately preceding. We make bold, however, to suggest to the veteran of Leyden that in the next edition of his admirable 'Philosophia' he make mention of the views put forth on this matter by Schleiden, and by V. Baer in the conclusion to his 'Memoir on the Papuans and Alfontons' in the 'Memoirs of the St. Petersburgh Academy for 1859.' He will recognise in either a worthy compeer; and of the latter he speaks not more gracefully than truly as "Vir de omni disciplina Physiologia meritissimus," at page 135 of this Latin book; and
has written a memoir of him within the present year, we doubt not in equally laudatory, but in, to us, unintelligible Dutch, in the ‘Nederland-Tijdschrift voor Geneeskunde.’ We must here, and now, content ourselves with observing that the Darwinian reading of that ‘mystery of mysteries,’ the origin of species, professes to base itself upon two other main supports, viz., the phenomena of the distribution of species and the existence of rudimentary structures, which are in great measure or altogether independent of the one the validity of which is here impugned. And for the final and summary setting aside of any conclusion, it is necessary to show the inadequacy not merely of one, but of all the lines of evidence upon which it is based.

The chapters on the distribution of species contain a vast amount of most interesting information, collected with an amazing industry from the works of a series of writers, reaching from the days of Buffon down to those of our own distinguished zoologist, Dr. Sclater. Very much of the matter contained in these 84 pages will be as novel as valuable to the English reader. The subject is treated of under two heads, viz., that of Geographical Zoology, which gives a history of the way in which the great classes of the animal world are spread over the globe and of the instances of strict limitation to narrow areæ; and, secondly, that of Zoological Geography, which, as it shows us that the whole of our globe may be mapped out into areæ occupied by complex assemblages—armies, in fact, of all arms, of mutually dependent creatures—may be spoken of, in a word, as being Geography taught by hieroglyphics. Where there is so much to praise, it is doubly ungracious to express dissent; still, we must say that we are surprised to find Professor Van der Hoeven lending at pp. 321, 322 his sanction to the doctrine of the plurality of centres of creation, a doctrine which his words at p. 27 of the Introduction to his ‘Handbook of Zoology’ (English translation) would appear to disclaim. Now, Mr. Mill has taught us not to place too implicit a reliance on the “Law of Parsimony,” albeit Newton placed it first among his “Regulae Philosophandi,” in the beginning of the third book of the ‘Principia;’ but that maxim has yet a legitimate place and power, and the naturalists of the Old World have, we think, done well in following it by disallowing, as most of them have done, in contradistinction to their American compers, a plurality of areæ for the origination of single species. If different, distinct, and distant spots on our earth’s surface had witnessed the coming into being for the first time of a single species in the persons or organisms of different and distinct representations of such single species, surely we should expect to find, or even, let us say, we should find that similar
stations—such, for example, as equatorial islands—would be inhabited by similar and indeed identical animals. The Cave Fauna of Kentucky would be identical with the Cave Fauna of Carniola; degrees of latitude would count for more than continuity of area; and, in one word, station would be but a synonym for habitation. Nature, however, has arranged matters otherwise in fact.

In the second part of the chapters on this subject, that which shows us how the whole of terra firma is divisible into seven distinct areas, each alike occupied by a complex army made up of all animal denominations, we think sufficient prominence is scarcely given to the great principle according to which the spreading of animal, and indeed to a considerable though less extent, of vegetable organisms is more immediately dependent on the relations they hold to other and—those sometimes rival and sometimes not—rival organisms than on any purely physical conditions of heat or cold, latitude or longitude. As no man can live and as no man can die to himself alone, so in the world of brutes no one animal lives or dies without affecting or being affected by the well-being of its fellows in creation. The present distribution alike of plants and animals depends primarily on their "centre of creation"—on the spot, that is, which witnessed their first origination, and on the connection which it has, or in geological times had, with other areas. But of all secondary and now acting causes, mutual inter-dependence is the most potent; and it outweighs, even in the case of vegetables, and more markedly much in the case of animals, the merely physical conditions of cold and heat, dryness and moisture. The grasses of the Cape of Good Hope are dependent for their carriage on the antelopes which feed upon them; the red clover near our towns on the cats which eat the humble bee-destroying field-mouse; the life of the newly-dropped ruminant depends on the parasitic insect's success against the fly, which would else lay eggs in its umbilical scab. And so on in ever-increasing circles of complexity.

It is, however, an insidious task to point out defects, and, like the flies we have just spoken of, to fasten on the single assailable point in a great structure. As it is, we can but find space for a special recommendation of the 100 pages on Comparative Anatomy, and the 80 on General and Comparative Embryology; and we conclude our notice of the book with a general and strong recommendation of it to all who are interested in any part of the wide territory over which Professor Van der Hoeven ranges.

The two other works, the titles of which stand at the head of his article, possess one fault—they make up together not quite
100 pages. They are addressed specially, the one to ethnologists, the other to comparative anatomists; and to persons deserving of these honorable titles it would be superfluous to recommend them in detail.

ART. II.—Sulla Causa specifica del Colera Asiatico, il suo processo patologico e la indicazione curativa che ne risulta. Memoria del Dott. Filippo Pacini.

A Treatise on the specific Cause of Cholera, its Pathology and Cure. By Dr. Filippo Pacini, Professor of Microscopical and Topographical Anatomy to the Medical School of the Institute at Florence, &c. Pp. 62.

The present treatise adopts the view that cholera is attributable to the destructive action of parasites; the development of this opinion is aided by physiological interpretations, which have not yet found their way into print in an extended form, but of which we are now permitted such partial glimpses as seem necessary to the comprehension of the subject. They teach that the veins are the chief instruments of absorption, and that the so-called absorbent vessels are merely adjuvant and complementary, opening by free or expanded orifices into interstitial spaces or lacunae in the web of the tissues, in similar manner to the veins of the invertebrates. In fact, according to the author, lymphatic absorption is a myth, for it is merely by the circulatory impulse that the lymphatics are filled with any superfluity not absorbed by the veins. Dr. Pacini has observed that the operation of the parasites in cholera is primarily on the epithelium and villi, eroding the mucous membrane and laying bare the capillaries. In the general run of cases the epithelium and villi which have been subjected to a destructive process are thrown off during the premonitory diarrhoea, and are discoverable with a little difficulty even in the earliest dejections and vomited fluid, after which only plentiful shreds of mucus are to be met with in the stools; it is otherwise, however, in cases of extraordinary rapidity and urgency, in these the more abundant epithelium and villi are found without difficulty. The essential character of the disease is made to lie in the loss of fluid lymph; it is a true lymphorrhea, not far different from hemorrhage. The want of balance ensues between the processes of absorption and secretion: when once the critical border line is passed—when the scale has fallen on the wrong side, there is nothing to be looked for but death, except from the occurrence of that algid condition in which a blood-stasis forbids any further exudation of fluid. If a lapse of time and the vital powers now allow of