

HISTORY
OF THE
BERWICKSHIRE
NATURALISTS' CLUB.

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“MARE ET TELLUS, ET, QUOD TEGIT OMNIA, CŒLUM.”

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Memoir of Dr. T. C. Jerdon. By Sir WALTER ELLIOT,
K.C.S.I., F.L.S., Wolfelee.

WHEN the Club met at Cockburnspath in July last year, I had the satisfaction of proposing a member, whose scientific reputation would have added to the credit of the Club, while his biological knowledge would, I hoped, have enriched the pages of its Proceedings. These expectations were not destined to be realised. Elected at the annual meeting in September following, he died within nine months afterwards on the 12th of last June (1872).

Thomas Caverhill Jerdon, eldest son of the late Archibald Jerdon, of Bonjedward, was born on the 12th October, 1811, at Biddick House, in the county of Durham, where his mother was on a visit to her own family. His father, although not a scientific naturalist, was a diligent observer, and early imbued his sons (of whom the younger still ranks as one of the most active botanists of the Club) with habits of observation ; thus implanting the germs of those pursuits which they afterwards prosecuted with such success.

He was educated first at Bishopton Grove, near Ripon, and subsequently at Bawtry, near Doncaster, where, and in the neighbourhood, the late Dr. P. Inchbald for many years conducted a school of some reputation in its day. In 1828, he entered the University of Edinburgh as a literary student, attending among other classes, Professor Jameson's lectures on natural history. On the 23rd June, 1829, he joined the Plinian Society*, an association of young naturalists who made occasional excursions during the session, meeting afterwards to discuss the results of their observations. In 1829-30, he matriculated as a medical student, and during that and the two following sessions attended the classes connected with the profession he had chosen. Repairing to London in 1834, he prosecuted his medical studies for upwards of a twelvemonth, until he obtained an assistant-surgeonship in the East India Company's service, on the establishment of Fort St. George. His appointment bears the date of 11th September, 1835, and he soon after sailed for India, arriving at Madras on the 21st February, 1836.

* A notice of this Society was given by Mr. Hardy in the President's Address of 1868 (Proc., v., 404), in which he refers for details to the "Life of the Rev. John Baird," its founder, and also one of the originators of the Berwickshire Club; and also to Professor Balfour's "Memoir of Dr. Coldstream." See too, Trans. Botanical Soc., Edinburgh, Vol. xi., p. 16.

A considerable force was at that time engaged in quelling disturbances in the Ganjam district, about half-way between Madras and Calcutta. The troops had suffered severely from fever and dysentery in the mountainous tracts to which the insurgents had retired, and a large number of medical officers were attached to the troops in consequence. As soon, therefore, as Jerdon had passed the probationary course in the General Hospital, to which all new comers are subjected, he was despatched to the scene of operations. He had thus an opportunity of seeing a part of the country difficult of access and rarely visited ; and he did not neglect it, as his notices of the birds of the Eastern Ghauts subsequently showed. At the conclusion of the operations in Goomsoor, he was posted to the 2nd Light Cavalry on the 1st March, 1837. He joined the regiment at Trichinopoly, and marched with it to Jahnah, in the Dekhan. Cavalry regiments have generally two medical officers attached to them. He was thus enabled to make frequent excursions into different parts of the Table Land, and to accumulate materials for "A Catalogue of the Birds of the Peninsula of India," which appeared in successive numbers of the Madras Journal of Literature and Science, in 1839-40. The preface states that

"Until a very few years ago, we did not possess a single collective account of the birds of this vast country. In 1831, a catalogue of birds collected on the banks of the Ganges and in the Vindhian range of mountains, was published by Major Franklin in the Proceedings of the Zoological Society of London. This comprised 156 species, of which more than twenty were described for the first time. . . . In 1832, a catalogue of birds collected by Colonel Sykes in the Bombay Presidency was published in the same work. In this are enumerated 236 species.

. . . . During the short period I have been in this country, I have been fortunate enough to add a considerable number of species to the Indian fauna. . . . The total number of my catalogue is nearly 390*, which, however, includes ten of those of Sykes not hitherto obtained by me, and nearly as many more obtained by Mr. Walter Elliot, M.C.S., who has kindly placed his valuable notes on the birds procured by him at my disposal ; by which, in addition to the new species added, I have been able to elucidate several doubtful points, to add some most interesting information on various birds, and to give the correct native names of most of the species enumerated by him."

After passing about four years with his regiment, he

* Enlarged to 420 by a supplement.

obtained leave of absence to visit the Nilagiri Hills, where he was married in July, 1841. Six months afterwards he was appointed Civil Surgeon of Nellore, but did not join that station till the middle of the following year, having in the meantime been placed in charge of the Government Dispensary at Madras.

The wilder parts of the country between Madras and Nellore are occupied by the Yanádis, a remarkable aboriginal tribe, of semi-nomadic habits, subsisting on the spontaneous produce of the jungles, and possessing in consequence a minute acquaintance with the forms of animal and vegetable life around them. By their means Dr. Jerdon discovered many new species, particularly of Batrachian and other reptiles. To these he made large additions in after years, including many new snakes, and subsequently embodied them in a "Catalogue of Reptiles inhabiting Southern India," which was published in the Journal of the Asiatic Society of Bengal, in 1853. But it was professedly only "a brief and imperfect résumé" prepared from "his drawings, and of which detailed accounts would be drawn up as soon as he should again have access to his collection." Several years later (in 1870) he transmitted a farther paper to the same periodical entitled, "Notes on Indian Erpetology," in which he stated that "as some time would elapse before his work on the reptiles of India could be published, he thought it advisable to lay before the Society a short account of some recent discoveries," referring at the same time to the loss of the collections on which he had founded his former catalogue, but which he was in the course of replacing by fresh specimens.

The favor with which his Catalogue of Birds had been received, led him to commence a farther work on the same subject during his residence at Nellore, under the title of "Illustrations of Indian Ornithology," consisting of fifty colored figures of new or little-known species, with ample descriptions. The first number appeared at Madras in 1843, in two sizes, octavo and quarto, but the whole was not completed till 1847. The plates are remarkably well executed, and the figures depicted with much accuracy and spirit, some of them having been contributed by an amateur friend*. He contemplated the issue of a second series to complete a

* Mr. S. N. Ward, Madras Civil Service. The foliage and foregrounds were added by the late Captain S. Best, Madras Engineers.

“Century of Birds,” but the difficulty of superintending the execution of the plates at a distance from the Presidency, and other obstacles, frustrated this design.

In addition to his zoological pursuits, he now began to occupy himself with botany, and acquired a very competent acquaintance with the Indian flora. But he never published any of the novelties he discovered, preferring to communicate them to those more directly engaged in botanical pursuits. One of them is thus described by Dr. Robert Wight, “I am indebted to Mr. Jerdon for this interesting little plant (*Jerdonia indica*, R. W.), which, as forming the type of a new genus, I have much pleasure in dedicating to the discoverer; an honour well merited by his extensive researches in all branches of organic natural history. Though botany is the last to which he has given his attention, it has already reaped considerable advantage from his energetic application to the study of plants.”*

When he had been about two years at Nellore, he was transferred to the Presidency as Garrison Assistant-Surgeon of Fort St. George, on the 25th October, 1844. Here he entered on a new field. I had made a large collection of the fish of the Bay of Bengal, and when he acted at the Government Dispensary in 1842, we identified about three hundred species† of these by means of the “*Histoire des Poissons*, of Cuvier and Valenciennes, and Russell’s Coromandel Fishes.” He now added considerably to the list, and at the same time prosecuted his search after the less known fresh-water kinds, frequenting tanks and streams. A list of the latter, comprising 354 species, of which nearly one-third were new, was printed in the Madras Journal in 1848; followed in 1851, by a paper entitled “*Ichthyological Gleanings*,” which, though somewhat meagre and imperfect, enumerated 420 salt-water species. About this time, also, he communicated to the same journal a “*Catalogue of the species of Ants found in South India*,” many of which were new, “with the view,” as he stated, “rather of stimulating others to record their observations, than under a sense of the value or completeness of the remarks contained in it,” but which, nevertheless, affords the best descriptive account of this interesting family yet published.

* Wight, *Icones Plant.*, Ind. Or., Vol. iii., No. 1352.

† Most of these are now deposited in the Museum of the Archaeological Society of Hawick.

When he had been about three and a half years at the Presidency, he applied for a medical charge in the western side of the Presidency, and was appointed Civil Surgeon of Tellicherry, on the 12th February, 1847. Here for nearly four years he investigated the fauna and flora of the great tropical forests that clothe the Malabar coast, abounding in forms peculiar to a region essentially different from the arid plains of the central table land, and even from those of the eastern jungles, which descend to the shores of the Bay of Bengal.

The prospect of attaining to the rank of surgeon, which would involve his return to military duty, induced him to resign his civil charge on the 3rd June, 1851. His promotion took place on the 29th February, 1852, and he was appointed to the 4th Light Cavalry, then in the Sagor and Nerbudda territory, with which he served during the mutiny of the Bengal army, where he saw some active service. Peace having been restored, he went to Darjeeling on sick leave for a twelvemonth, and made himself acquainted with many new forms peculiar to the Himalayan range. He then got himself appointed to a regiment in Burma (the 11th Native Infantry), and joining *via* Calcutta, lost no time in exploring this new field.

He had for some time projected the publication of a series of handbooks, or monographs of Indian zoology, and when passing through Calcutta he sought and obtained the patronage of Lord Canning to this undertaking, for the exercise of which a favorable opportunity soon afterwards offered. A mission to Tibet had been projected by the Government of India, to be conducted by Captain E. Smythe, and Jerdon was summoned from Burma in August of the same year to accompany it in the capacity of naturalist. The plan was frustrated by the difficulty of obtaining passports from Pekin, to enable the party to cross the Chinese frontier; and meantime his services having been transferred permanently to the Government of India, Lord Canning was enabled to place him on special duty, for the publication of his proposed Manuals of the Vertebrata of India. He began with his favorite subject, Ornithology; the first volume of which, under the title of the "Birds of India," was published in Calcutta in 1862, followed by the second, in two parts, at intervals during 1863.

In these volumes are described 1,008 species (equal to the

number comprised in the avi-fauna of Europe), spread over an area extending from the watershed of the Himalayas on the north to Cape Comorin on the south, and from the Indus on the west to the Teesta and Brahmapootra rivers on the east, with brief notices of families and tribes not found in India, to serve as a compendium for naturalists scattered over that vast country, cut off, as they are, from books of reference and the means of investigating new forms.

Meantime the author, who had already "traversed and re-traversed the length and breadth of the continent of India," with the exception of its north-western portion, availed himself of the sanction given him to prosecute his researches in any quarter. During the next five or six years he visited the Punjab, Cashmere, all the hill stations of the great northern range, and explored the valley of the Sutlej, penetrating as far as Chini. The volume of *Mammalia* did not appear until 1867, although it had been printed the year before at the Roorkee press. It contains descriptions of 247 species, but is confessedly imperfect in some of its minuter details.

On the completion of this volume, he repaired to Darjeeling, where he occupied himself with the Manuals of Reptiles and Fish during the greater part of 1867-68. On the 28th February of the latter year he retired from the service; and having sent part of the MS. of the Reptiles to the press, he visited Assam and the Khasi Hills. Whilst at Gowahatty he was prostrated by a severe attack of fever, from which he never entirely recovered. As soon as he was convalescent he hastened to Calcutta, and soon after returned to England, where he arrived in June, 1870. His health continued to be very precarious. The first winter was passed at Torquay, the next at Mentone; but he never rallied, and died at Norwood, on the 12th June, 1872.

The following is a complete list of his writings, as far as I have been able to ascertain:—

1. Catalogue of the Birds of the Peninsula of India, 8vo. Madras: J. B. Pharaoh, 1839, pp. 203; having previously appeared at intervals in the Madras Journal of Lit. and Sc., Vols. xi., xii., and xiii.

2. Illustrations of Indian Ornithology, containing fifty figures, chiefly from the South of India; 8vo. and 4to. Madras: Printed by P. R. Hunt, 1847. Not paged.

3. On the Fresh-water Fishes of South India.—Madras Jour. of Lit. and Sc., Vol. xv., pp. 139 and 302. 1848.

4. A Catalogue of the Species of Ants found in South India.—Madras Jour. of Lit. and Sc., Vol. xvii., p. 103. 1851.
5. Ichthyological Gleanings in Madras.—Madras Jour. of Lit. and Sc., Vol. xvii., p. 128. 1851.
6. Catalogue of Reptiles inhabiting the Peninsula of India.—Journal Asiatic Soc. of Bengal, Vol. xxii., pp. 462 and 522. 1853.
7. The Birds of India; 2 Vols. in 3, 8vo. Calcutta: Vols. i. and ii., Mil. Asylum Press; Vol. iii., Wyman and Co. 1862-4.
8. Notice of some New Species of Birds from Upper Burmah.—Ibis, 1862, p. 19-23.
9. The Mammals of India, 8vo. Roorkee: Printed for the author by the Thomason College Press, 1867, pp. 319, with Appendix, pp. xv.
10. On *Phoenicopterus rubidus*.—Ibis, 1869, p. 230.
11. Notes on Indian Herpetology.—Proceedings Asiatic Soc. Bengal, 1870, p. 66.
12. On some New Species of Birds from the North-East Frontier.—Ibis, 1870, p. 59.
13. On two Species of *Phasianidæ*.—Ibis, 1870, p. 147.
14. Supplementary Notes to the Birds of India.—Ibis, 1871, pp. 234 and 335-336.
15. Ditto.—Ibis, 1872, pp. 1-22, 114-139, and 297-310.

The above bears testimony to his industry, and to the wide range of his biological pursuits. His favorite branch was ornithology, and being a keen sportsman, he pursued his researches as much in the field as in the house. Of a spare active form, with an imperturbable good temper, he cared neither for fatigue nor privations in his wanderings; and being gifted with the power of rapid and accurate discrimination, he could detect at a glance peculiarities of form or habit indicative of a difference of species, even in birds on the wing. If he had recorded his observations methodically as they were made, he would have accumulated a store of facts of the highest value. Instead of this, it was his practice merely to figure every species, both those captured by himself and those already depicted by others, for which purpose he generally retained the services of a native draughtsman; or, on emergencies, made rough tinted or pencil sketches himself. On these, which were of uniform octavo size, he noted a few particulars of measurement, habitat, &c., and trusted to a retentive memory for details. But such materials were insufficient for that exact definition of characters on which a genus or a species can be recognised and accepted. Hence his lists are often found to be

defective because prepared from the figures alone, when his type specimens were out of reach, or when, owing to the movements entailed by duty and the desire to visit new scenes, combined with habitual carelessness, they had been lost or destroyed. This defect is conspicuous in the little known department of Erpetology, at which he worked zealously, and certainly discovered many new species, some of which have been described Dr. J. E. Grey, Mr. Blyth, and Dr. Stolickza, as well as by himself. Yet not more than three or four are quoted on his sole authority in Gunther's Indian Reptiles, and the few occasions on which Dr. Gunther does mention him, are only to point out the unrecognizable character of his descriptions*.

The third of the series of Manuals, that of Reptiles, would probably have repaired many of these faults. It has been printed, and the sheets were sent home after his death, but their ultimate disposal has not been determined yet. The materials for the concluding volume of the series, the Fish, are believed to have been in a state of forwardness, but what has become of them I am not aware.

It was his fond wish to have brought out new and improved editions of these works, which were to include Assam, the Khasi Hills, Cachar, Sylhet, Tipperah, Chittagong, Burma, and Ceylon. His contributions to the Ibis were preparatory to this object; and he contemplated great improvements in the second of the series, especially with regard to the micro-mammals, still involved in much confusion, to be cleared up only by patient and careful comparison of specimens. Unfortunately, much of his varied knowledge of facts has died with him, and he has left little among his papers to compensate for the loss.

Although he did not live to complete his great design, he accomplished enough to be of incalculable value to the lovers of natural history scattered over the length and breadth of that vast country in which he laboured so zealously himself.

* He was especially successful in obtaining a great number of new Batrachians. One curious species was found on the Nilagiri Hills, from its habit of uttering a peculiar metallic note, like repeated blows of a small hammer, which long eluded detection. It was generally supposed to be a bird which neither Jerdon nor any one else could discover. At last the patient watch of an old Shikari in my service was rewarded by tracing the note of the "Tinkler," as it was called, to a small burrowing frog which appears as *Limnodytes tinniens*, n.s. (Jour. As. Soc. Ben., xxii., 573) in his Catalogue, and again as *Ixalis tinniens* in his Notes (Proceedings As. Soc. Ben., 1870, p. 85); but is not even mentioned by Gunther.

I well remember the difficulties with which the young zoologist formerly had to contend, from want of books and type specimens for reference and comparison. Now it is the object of every sportsman, even, to get a copy of "Jerdon's Birds" and "Jerdon's Mammals," and their influence is seen in the intelligent and intelligible notices appearing in the Field and other periodicals. Works of greater pretension and more accurate detail have been given to the public, but in a form and at a cost beyond the reach of ordinary students. To no one is Indian science so deeply indebted as to Dr. Jerdon, not for his discoveries, considerable as they were, but for enabling others to follow his steps. It is earnestly to be hoped that the two remaining Manuals may yet appear, and that improved editions may be given of those already published.

Like many other men of genius, he was deficient in habits of order and method, and was especially careless in his private affairs. His whole thoughts were concentrated on his favourite pursuits, to the neglect of the commonplace but necessary requirements of domestic and pecuniary claims*. The consequence was that, although always in receipt of good allowances, he was continually harassed by the demands of creditors, and at his death his estate was found to be insolvent.

[Since the foregoing was written, his valuable collection of drawings has been brought to the hammer from time to time and dispersed. On the 14th January, 1873, twelve cases containing "many thousand coloured illustrations of birds," were sold by Sotheby, Wilkinson, and Hodge, and purchased by Lord Lilford. On the 24th May following, a few skins of birds and mammals were sold by J. C. Stevens, 38, King Street; and still later, on the 21st March, 1874, the Indian and Asiatic drawings, comprising eleven lots of mammals, birds, fish, crustacea, molluscs, insects, arachnida, fossil-vertebrata, phenogamous and cryptogamous plants, were disposed of to various parties, some of them, as the fish which were knocked down at £136, fetching large prices.]

* Many characteristic anecdotes, illustrative of his improvidence, are current among his friends, such as his cleverly talking over an English bailiff sent from Madras to Tellicherry to arrest him, and sending him back *re infecta*, but the bearer of a fine live specimen of a rare monkey (*Presbytis Johnii*)! On another occasion when summoned professionally by a French lady at Mahé, he met the French governor, also a keen naturalist, at the entrance to the town, who carried him off to see some novelties, which so absorbed him that he returned home late at night, never having seen his patient and wholly oblivious of the purpose for which he had come!