

Odoardo Beccari.

BY I. H. BURKILL AND J. C. MOULTON.

At the age of seventy-seven, on October 26th, 1920, Odoardo Beccari, the great naturalist and traveller, died unexpectedly of heart failure in Florence.

Beccari obtained a degree in the Natural Sciences at the University of Bologna in 1864; and immediately after that met in Genoa the Marquis Giacomo Doria, already a traveller of note: there they planned together the first of Beccari's four journeys to the wonderful East,—Beccari the botanist, and Doria the zoologist. The preparations for it took Beccari to London, and caused the commencement of his life-long connection with Kew. The two explorers set out in April, 1865, spent a short time in Ceylon, and reached Sarawak in June via Singapore, thereby starting Beccari's fifteen years of busy collecting and travelling. It is well before anything else to state whither those years took him:—(1) in Sarawak with Doria until March, 1866, when the latter's health gave way, and in Sarawak alone to January, 1868: (2) in Eritrea in the company of the Marquis O. Antinori from February to October, 1870; (3) eastwards again, to New Guinea from November, 1871, with L. M. D'Albertis, who like Doria broke down; in the Aru and Kei islands from February to September, 1873; in Celebes to June, 1874; in the Moluccas to January, 1875: in Dutch New Guinea to March, 1876; and then back to Florence in July of the same year; (4) in 1877 across India to Australia and New Zealand with E. D'Albertis; and parting in Java at Batavia in 1878, alone for a final exploration in southern Sumatra.

The wealth of the material got upon these travels was enormous: his first journey resulted in 20,000 botanical specimens representing 3,300 species of the Higher Plants, in a collection of 800 fruits in spirit, in a big collection of timber samples, and in his 48 orang-utans: his collections from Eritrea ran to 600 numbers; and his later collections were upon the same scale, both botanical, zoological and ethnological. This vast store, so much of it got together in the Dutch Indies, the Government of the Netherlands, it is said, wished to buy; but Beccari preferred that it should go to Italy, whence he distributed his duplicates liberally. The botanical and ethnological parts now lie at Florence, and the zoological part at Genoa.

Intrepid, and yet very wise in his dealings with the wild tribes, Beccari wandered almost alone where few white men have been able to go. His visit to the Kapuas region of central Borneo is a case in point; his climbing of the Arfak mountains in New Guinea

with five natives another: and his penetration of southern Sumatra a third. When, and in a large part where he travelled, head-hunting was among the inhabitants an honourable pastime. In Sumatra he discovered the Aroid, *Amorphophallus Titanum*,— the tuber¹ so heavy that it required two men to carry it. In Borneo it was his wont to fell the enormous Dipterocarps and other forest trees, that the material which he collected might be perfect. He never missed an opportunity of collecting and though Singapore was to him but the means of getting into the wilder lands, he collected not a little in the island.

Repatriating himself finally in 1880, Beccari settled down in Florence to study his immense collections, and to publish his results, his home an old castle, and his way of living very simple. There he married: and three sons fought for the Allies in the Great War.

In the first short interval between his expeditions, he had founded the *Nuovo Giornale botanico Italiano*, which is still published as the organ of the Societa botanica Italiano. On his return from his second expedition to the Far East he commenced his "*Malesia*," being essays on groups of interesting Malayan plants, beautifully illustrated, by his own pencil, the cost of reproduction met in part by means of a grant from the Bentham Trustees² in London: the first volume appeared at Genoa in 1877, the second from 1884 to 1886 and the third from 1886 to 1890. In 1892 he was occupied jointly with Sir Joseph Hooker in monographing the Indian palms for the *Flora of British India*. In 1902 he published his *Nelle foreste di Borneo*, which was translated into English (1904) by Dr. E. H. Giglioli in a somewhat modified form under the title of "Wanderings in the Great Forests of Borneo." In 1908 and 1914 the Royal Botanic Gardens, Calcutta, published his two magnificent monographs upon the rattan-palms. The plates for these were executed from photographs taken by Beccari with the use of an ingenious apparatus for removing shadows. In 1912 he monographed the palms of Madagascar for the Museum of Natural History in Paris. He published many smaller works, chiefly in the journal *Webbia*, and for the most part upon palms.

It is significant of this—his great interest—that *Malesia* opens with an account of the palms of New Guinea, and with the words "a predilection for the plants of this family has made me on all occasions to ensure that they should be represented in my collections by complete specimens.....and that I should always re-

¹ This great tuber reached Marseilles alive, but perished there because of the inflexibility of the laws against importing living plants. Beccari, however, had sent seeds to his friend the Marquis Corsi Salvatori; and the huge herb flowered at Kew from them in 1889, eleven years from the date of Beccari's finding it.

² George Bentham, co-author with Sir Joseph Hooker in the great *Genera Plantarum*, bequeathed in 1884 a sum of money for the provision of illustrations to botanical works.

cord their appearance alive." After this essay on palms come others on various natural groups of plants, selected in each case with the idea of clearing ground where the difficulties lay thick. The second volume of *Malesia* is occupied by his classical essay entitled "Piante ospitatrici," that is plants which provide hostels (for ants, etc.). The third renews the subject of the Palms, and is like the first, a series of systematic studies in difficult groups of plants.

He prefaced his essay on "Plants which provide hostels" by a discussion upon the part stimulation or irritation by insects could have had in calling into existence characters now inherited, such as hollow stems and hollow tubers, eminently prepared as it were, for the insects to occupy them. In this his views were Lamarckian,—that is to say he accepted Lamarck's "inheritance of acquired characters" as a working force in the shaping of this world. Such views have long been unacceptable to the majority of workers on Evolution: but he set them forth again in his *Nelle Foreste di Borneo* where the possibility of the pull of river currents in giving submerged leaves length that becomes ultimately inherited, is among further illustrations one of the more striking.

Death found him engaged in preparing for the press his New Guinea diaries; and in putting the last touches to two further monographs of palms, one on the Lepidocaryeæ in English, and the other on the Areceae in Italian. These monographs are likely to be published shortly. A third on the Borassineae was left somewhat advanced.

It is intended in the Botanic Gardens, Singapore, to make, with palms first described by Beccari a small avenue as a memorial to this great naturalist, who ever since Singapore had a botanic department has been a frequent correspondent, and was always ready to give the assistance of his profound knowledge.

I. H. BURKILL.

In the foregoing pages Mr. Burkill has summarized the travels which occupied the earlier years of Beccari's manhood and the botanical work which filled the remainder of his life. But it is as no ordinary traveller or worthy botanical systematist that his name will live or indeed that he himself lived. For an insight into the true nature of the man one must read his "Wanderings in the Great Forests of Borneo"—a veritable Natural History epic, replete with a mass of most varied observations, original and inspiring theories, and as the narrative of a born naturalist, worthy to rank with the more widely read nature-diaries of Darwin, Wallace, Bates or Belt.

This book appeared first in 1902 in Italian under the title of "Nelle foreste di Borneo." The English edition, translated by Dr. E. H. Giglioli and F. H. Guillemard³ and enlarged or other-

³ The well-known naturalist, author of the "Cruise of the Marchesa," and himself a traveller of no mean repute in Borneo some twenty years after Beccari.

wise modified by Beccari was published in 1904. It is dedicated to "Marquis Doria, Macaenas of naturalists," and the dedication is perhaps the clearest indication of the happy conditions under which Beccari commenced his wanderings abroad. The solitary traveller misses much—Guillemard in his editorial note says "What would I not have given for the companionship in my journeys of so skilled a botanist and so enthusiastic a nature-lover as the author of this volume." One can imagine the keen enthusiasm and abounding energy of youth; the interest in everything so new, the questions and problems which crowded in on Beccari at every turn, and then, beside him, Doria, the trained naturalist-explorer companion, whose maturer views and sound reasoning must have served as a wonderfully safe guide to useful observation and as an ever-present stimulus to further research on steady lines into the wonders of Nature, just as no doubt Beccari's own youthful enthusiasm and fertile imagination must have kindled anew the keenness of his older companion.

Small wonder then that under these conditions his diaries are so full of varied and suggestive information. The lapse of some 40 years between those days and the time of writing his book was an advantage in that he has allowed the wisdom of later years to develop and modify the immature reasonings of his youth; but at the same time none of the freshness of a narrative written on the spot is lost.

As is well known, Wallace's essay on Natural Selection, which was read before the Linnean Society in conjunction with Darwin's essay in 1858, was written at Ternate. It is, however, not so often remembered that his earlier essay on the Origin of Species, which may be said to have fore-shadowed that of 1858, was written at Santubong, Sarawak, three years before. We may be sure too that this problem must have received many hours of careful thought during his four weeks stay on Mt. Serambu in Upper Sarawak. Just as Galapagos and Ternate will share the fame of being the birthplaces of the Darwin-Wallace Theory of Natural Selection, so too should Sarawak be remembered as the germinating ground, so far as Wallace was concerned, for this remarkable Theory.

It is therefore of particular interest to read of Beccari's visits to Santubong and Serambu just ten years after Wallace. He too formulated a theory of his own in regard to the formation of species, one, however, which has failed to find the same general acceptance as has that of his famous predecessor. He believed in the theory "that the environment, in the widest sense of the word, has been the most powerful and principal agent in causing animals, as well as plants, to assume their present form and structure;" that the organized "beings now living have been originated through the action exerted on them by the external world," and that species are "merely the result of a plasmative force exerted by surroundings on primitive beings." He did not believe in the present variability of species in Nature, but returned to the opposite and long-

held idea "of the nearly absolute fixity of existing species." In support of this idea he held that heredity today is the great *obstacle* in the transmission of individual variations. To fit in this idea with a theory of evolution he postulated an early "plasmative" period in the history of the world, when exactly opposite conditions prevailed. During this plasmative period or in the "primordial epoch of life," as he also terms it, the power of adaptation and response to environment was great, while heredity was correspondingly feeble: "the further we go back towards the origin of life the less strong it must have been, is only a logical *sequitur* of the admitted strength of the force heredity now exerts."

His views on the origin of Man are of particular interest. When he was in London in 1865 Sir Charles Lyell, the great geologist, urged Beccari to explore the caves of Borneo for fossil remains. He argued that just as all the fossil mammals yet found in Australia are marsupials, which Order predominates in Australia today, so too in Borneo where anthropoid apes now live, one would probably discover the remains of some extinct species belonging to the same Order and perhaps taking us back a stage nearer to the ape-like common ancestor of man and apes. The interesting fossil remains of a primitive type of man from Java, known as *Pithecanthropus erectus*, had not then been discovered.

Sir Charles Lyell died in 1875. Three years later a "Borneo Caves Exploration Committee" was formed under the presidency of Mr. John Evans, F.R.S.; grants from the Royal Society and the British Association were given. A distinguished naturalist, A. H. Everett, for many years a member of this Society and contributor to its Journal, was entrusted with the work. The results of his exploration of Bornean Caves were published in our Journal No. 6, December 1880. Although interesting fossils were found, none threw any light on the early history of man.

Beccari's view was that it was "very improbable that primitive Man can have originated in the eminently forestal region to which Borneo belongs, a region which could not only never have promoted any aptitude for running or bipedal progression, but also could never have made him feel the need of a terrestrial (as opposed to an arboreal) existence."

He argued further that the ancestor of the orang-utan was terrestrial, not arboreal, and that it reached Borneo from regions less covered by trees. "Thus the orang-utans in Borneo would have diverged from the old anthropoid type instead of approximating to it, and in this case the orang would be, not a progenitor, but a collateral of man."

Beccari's many-sided inquiries suggest the delightful, restless, inquisitive mind of boyhood. The call of the mountains was naturally irresistible to such a temperament. Just exactly what is the actual attraction in climbing mountains seems difficult to

define. It is undoubtedly very real. Beccari suggests among other things contributing to the pleasure of it is "the sensation of exultation at having reached the upper dominating regions of the atmosphere, and vanquished Nature which has tied man down to the earth. Or it may be," he continues, "that our gratification is merely the outcome of those ambitious feelings which spur on so many to endeavour to rise above their fellows." But can we go no further than this?

Sir Martin Conway, a great traveller and inveterate mountain-lover, perhaps touches the secret when he writes:

"At such times Nature gathers her lover unto herself, transforming his self-consciousness into consciousness of her. The landscape becomes the visible garment of a great personality whereof he himself is a part. Ceasing to think, while Nature addresses him through every sense, he receives direct inspiration from her. The passage of time is forgotten in such *nirvana*, and bliss is approximated if not attained."⁴

The mountains of Borneo run to no great height and offer no great difficulty in climbing as a rule. But the fascination of attaining their summits is the same. The pleasure of standing on the top of Snowden 3,000 ft.,—even though one may have been conveyed thither by the mountain railway!—is much the same as that experienced in reaching the top of, say, Mt. Kinabalu, 13,455 ft., the highest point in Borneo—in fact the highest in all Indo-Malaya from the Himalaya to New Guinea.

Beccari climbed many mountains in Sarawak: Matang (3,050 ft.), Santubong (2,650 ft.), Poi (5,600 ft.), Wa (4,000 ft.), close to Penrissen, Tiang Laju (4,000 ft.), Lingga (3,000 ft.). Those who have had the good fortune to follow Beccari's footsteps to the summits of these mountains have compared, and no doubt will continue to compare, with keen interest the notes he made thereon now over 50 years ago. The Journals of this Society contain descriptions of subsequent explorations of some of these mountains.⁵

The ascent of mountains within easy reach evidently did not satisfy his appetite for exploration. An account of his travels in Sarawak would not be complete without mentioning a remarkable journey he made from Bintulu, at that time the northern boundary of Sarawak, right across the whole State of Sarawak to Kuching the capital, a distance of some 300 miles. This he did in 1867 starting from Bintulu on September 15th and arriving in Kuching on November 20th. His route lay up the Bintulu river across to Belaga, down the Rejang River to Sibu, thence across country to Simanggang, Banting and Kuching.

⁴ *Mountain Memories* by Sir Martin Conway, pp. 217-218.

⁵ *Mt. Santubong* by J. Hewitt and H. H. Everett, 1908, No. 51, pp. 1-30. *Mt. Poi* by J. C. Moulton, 1913, No. 65, pp. 1-12. *Mt. Penrissen* by R. Shelford, 1900, No. 33, pp. 1-26.

Another interesting excursion he made was up the Batang Lupar River to its source and across the Dutch border to the lakes on the great Kapuas river.

Although his book is rich in botanical notes, as Mr. Burkill has already mentioned in this article, the large zoological collections and notes he made testify to the wide interest he took in every phase of Nature. His reptile collection from Borneo contained 88 species, of which 19 were new to science. His collection of bird-skins totalled some 800, representing 226 species. The orang-utans particularly interested him; he collected no less than 48. To pick out a selection of his more interesting zoological notes is a difficult task. To illustrate the variety of his notes one may refer the reader to his description of the "sumpitan fish" which gains its insect food by squirting a jet of water at them; the edible birds nests; the symbiosis of ants and "hospitating" plants such as *Nepenthes*; the cause of eyespots on the wings of pheasants and butterflies.

His notes on the natives of the country, their origin, customs, languages, etc. are equally varied.

Beccari tells us in the introduction to his book that if it had not been for a happy chance that led to his meeting the Ranee of Sarawak in Florence, who urged him to the task, he would never have put together the notes of his youthful travels for publication after the lapse of some 40 years. He dedicates his book to the Ranee, and it is thus to that talented lady that we owe this intensely interesting narrative of Bornean life, besides her own delightful book on Sarawak also written many years after her last visit to that country.⁶

Beccari visited Sarawak first during the reign of the first White Rajah, Sir James Brooke, who at the time however was in England where he spent the last five years of his life. His nephew, Charles Brooke, then Tuan Muda, practically assumed the reins of Government in 1863, although he did not become Rajah until the death of his uncle in 1868. The remarkable policy laid down by the first Rajah and so faithfully carried out by his nephew the late Rajah over a long period of 54 years excited Beccari's warmest admiration, as indeed it has in many other writers. This policy was to rule the country for the benefit of its people. The advantages to be derived by foreigners settling in the country under the Rajah's flag, were a secondary consideration. I cannot do better than quote Beccari's remarks. He revisited Sarawak at the end of 1877 and found that his earlier favourable impressions of the Brooke rule were fully confirmed:

"The Rajah considers himself the father of his people, who have all his thought and care, and he does his utmost to lead his subjects along the road of progress and civilisation, though without sudden or violent changes, to which he is ab-

⁶ *My Life in Sarawak*, by the Ranee of Sarawak.

solutely opposed on principle. He has no wish that the country he rules should be taken advantage of by unscrupulous speculators of European nationalities for their own special benefit alone . . . Any honest trader, and better still any able agriculturist, who earnestly wishes to deal well with the natives, may always be sure of a hearty welcome in the dominions of Rajah Brooke.

"The Rajah's Government is eminently impartial towards the many and varied races it has to rule. In Sarawak all religions are tolerated and equally protected . . . And on his part, the second European Rajah of Sarawak, devoted to the sole task of increasing the welfare of his native subjects, by directing the energy of the Dyaks and Kayans towards peaceful avocations, by favouring Chinese immigration, and by developing trade and encouraging agriculture has given to the country he rules a prosperity which could hardly have been hoped for, when one looks back at the condition of Sarawak prior to the advent of the Brookes."

The death of Beccari removes one of the last connecting links with the period of Sarawak's romantic up-hill struggle against difficulties of every conceivable kind. His name will live in the annals of that country together with the names of Hugh Low, Spenser St. John and Wallace, whose narratives have done much to give us a true idea of the conditions prevailing in Sarawak during its early years under the White Rajahs.

Beccari's connection with our Society, although not personal, is none the less intimate and lasting both on account of his botanical work and his travels in this part of the world. His adoption of the name "Malesia" for this zoogeographical subregion is of interest in view of the remarks of our Society's first President, Bishop Hose, who, in his inaugural address to the Society in 1878, commented on the need for some collective name. He selected "Malaya" as the name which appeared to him most suitable. Recent writers, including Mr. Boden Kloss, have adopted "Malaysia" for the more restricted area comprising the Malay Peninsula, Borneo, Sumatra, Java and adjacent small islands. Both Beccari and Bishop Hose embraced the islands as far East as New Guinea in their names.

Although Beccari is dead, his work lives. The problems which interested him will continue to interest Members of this Society, and reference to his opinions will long be made. To those of us who have felt the fascination of Malaysia it will cause no surprise that Beccari maintained his interest in this our chosen field of work throughout his long life.

J. C. MOULTON.



Burkill, I. H. and Moulton, J C. 1921. "Odoardo Beccari." *Journal of the Straits Branch of the Royal Asiatic Society* 83, 166–173.

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