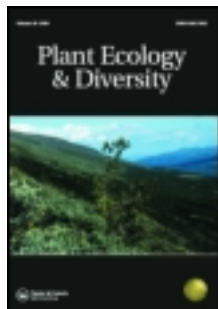


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### I. Obituary Notice of Dr Robert Wight, F.R.S.

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11th July 1872.—Professor WYVILLE THOMSON, LL.D.,  
F.R.SS. L. & E., President, in the Chair.

The following Gentlemen were elected Fellows of the  
Society:—

1. *Resident Fellows.*

J. L. PATERSON, M.D., Boa Vista, Grange, Edinburgh.  
JOHN FRASER, M.B. and C.M., Fife and Kinross Counties' Asylum.

1. *Non-Resident Fellow.*

PETER WHITE, L.R.C.S.E., Rothesay.

The following Communications were read:—

I. *Obituary Notice of Dr Robert Wight, F.R.S.* By  
H. CLEGHORN, M.D. (With Portrait.)

In the death of Dr Robert Wight the Society has lost one of its most industrious and distinguished members. Having been on terms of friendly intercourse with that veteran botanist since 1842, when I entered the Indian Medical Service, and having been profitably associated with him in various Societies at Madras, it is a sad but agreeable duty briefly to review his life, and to draw up a sketch of his gigantic and long-continued labours.

Anglo-Indian exiles, as they were once called (the term is no longer applicable), have in the mountains, forests, and deserts of our Eastern Empire an enormous field of observation connected with the various branches of natural history, which, from their comparative novelty and intrinsic interest, absorb the attention of the student of nature on his first arrival. Among the servants of the East India Company were many celebrated naturalists, who have done much to unfold the beauties of the vegetable kingdom in India, foremost among whom are Roxburgh, Buchanan, Wallich, Griffith, and Wight. It is clear from the great results attained by these distinguished labourers that a tropical climate does not in all cases or necessarily impair European energy.

A summary of the observations and discoveries of Dr Wight may well stimulate the younger members of the Society to ardour and perseverance in research.

Robert Wight, the twelfth child in a family of fourteen, was born at Milton, Duncra Hill, East Lothian, on July 6, 1796, his father being a Writer to the Signet in Edinburgh. The young Wight was educated at the High School of Edinburgh, Sir R. Christison, Bart. and Dr Walker-Arnott, being his school-fellows. He received a surgeon's diploma in 1816, and took his degree in medicine at the University in 1818. After making several voyages as surgeon to a ship, one of which was to America, he obtained an appointment in the East India Company's medical service, and went out to Madras in 1819. He joined the 42d N. I., of which his brother James was subsequently colonel, then stationed in the Northern Division. At this time Wight had little more knowledge of botany than was necessary to enable him to graduate, but on arriving in India he directed his attention to the floral riches around him, making, however, little progress during the first three years, owing to the frequent marches of his regiment and the entire want of books. At length he became possessed of Willdenow's "*Species Plantarum*," Persoon's "*Synopsis*," and an early edition of the "*Genera Plantarum*" of Linnæus. He employed native plant-collectors almost from the time of his arrival, and devoted much labour to the preparation of specimens. In 1823 he despatched a collection of plants to Dr Graham of Edinburgh, but they were lost at sea. In 1826 a considerable herbarium, formed at Samulcotta, Rajamundry, Madras, and Vellore, was sent to England, and reached Dr (Sir W.) Hooker at Glasgow. About this time, Dr Wight was appointed to succeed Dr Shuter as "Naturalist" at Madras, and whilst occupying that important position he formed extensive collections in the different departments of natural history, and made a prolonged tour of investigation in the southern provinces, the outline of which is marked in the map of India published in Wallich's "*Plantæ Asiaticæ Rariores*." He made great exertions to extend the knowledge of botany by sending trained natives to collect plants in various districts, and by employing draughtsmen to delineate the specimens. From 1826 to 1828 Dr Wight had charge of the Botanical Establishment at Madras, and was on the eve of departure on a very extensive tour, calculated to occupy him nearly two years, in which he intended

to visit all the richest botanic districts in the south of India, including the Malabar coast, when circumstances arose which prevented the accomplishment of this project. His feelings on this occasion were expressed in a letter to Sir W. Hooker as follows (Bot. Misc. ii. 95):—"My arrangements were completed. It was my intention to have carried along with me Rheede's "*Hortus Malabaricus*" and Buchanan's "*Travels in Mysore, Malabar, and Canara*," with the view of collecting and describing as many as possible of the plants figured in the former, and making drawings of all the little-known useful plants mentioned in the latter. These most important objects might easily have been accomplished, while at the same time my collection in every branch of natural history might have been augmented to an unlimited extent. In that time I could have accumulated, I am convinced, not fewer than from 5000 to 6000 species of plants, a number which, in my opinion, will be found to fall short of the reality by nearly a half, if the investigation is ever undertaken by an active and enterprising botanist. I once hoped it would have fallen to my lot to make this investigation; but, alas! those hopes are all blasted in the bud." The non-fulfilment of this expedition arose from a mistaken policy of the Government in abolishing the only scientific establishment in the Madras Presidency. A great deal of excellent work was being done by Dr Wight, but there was little display to the outside world, and he was relegated to regimental duties. It may be added, however, that the project outlined in the foregoing letter to Sir W. Hooker was afterwards fulfilled in a remarkable manner.

To illustrate the enthusiasm and zeal with which he botanised, I make the following extracts from a journal written when exploring the Pulney Hills in 1826:—

"*December 11.*—I devoted this day to the ascent of the high hill. From the information received I anticipated a most fatiguing day's work. I carried a supply of provisions sufficient for the day, and started at 7 A.M. provided to the utmost possible extent with boxes, books, &c., to put the plants in, thinking that I was more than amply provided. I soon found, to my no small joy, that I had made a great mistake. Botanical novelties absolutely

flowed upon us, and before we reached a small village two-thirds up the hill we had not accommodation for a single plant, and were therefore obliged to pass many untouched. We arrived at this village about 11 A.M., and after a short halt, to talk to the villagers and deposit part of our loads, we continued our journey. The remaining part of the ascent proved even more fruitful than the first, and long before reaching the top I resolved to prolong my stay in this district, and return to the hill for two or three days, to enable me to reap the full advantages which it presented. At 2 P.M. we reached the first peak, and found it by the barometer to be upwards of 3000 feet above the plain. In this day's tour I gathered between seventy and eighty species, besides those untouched, a convincing proof of the riches of the Flora of these hills. I felt little fatigued from this arduous day's work, during which I was nearly eleven hours on my legs. I can only account for this by the pleasure of seeing so many novelties, and probably in part from the great difference of atmospheric pressure on these heights."

"*December 16.*—I returned home about 3 P.M. laden with plants, almost all different from any that I had before. I met with a remarkable tree, forcibly brought to my knowledge by the following circumstance: It has an acrid milky juice, which the natives told me possessed the property of raising blisters and forming bad sores. When I first heard this I was doubtful, but having sent a coolie to get specimens, a drop of the juice fell on his lip. This day he showed me a blister on the place, and about the same time a bearer told me that he had taken a branch of it to clean his teeth with, and now his gums were so sore that he could scarcely eat. I have examined this tree, but cannot find it described in any of my books; I therefore suspect it forms a new genus of the Euphorbiaceæ. My collection to-day proved too extensive for my means of preservation. Every sheet of paper which I have is filled with plants, and as I can no longer dry what I gather, it appears useless to remain longer here. This I the less regret, as the weather is getting daily worse; we are now either enveloped in a thick fog, or drenched with heavy rain."

In 1828, Dr Wight was appointed garrison surgeon at Negapatam, where for two years and a half he was engaged in medical duties, but his botanical ardour was not diminished. The man of science, by a well-arranged use of his time, usually finds leisure for his favourite pursuit, especially when that is intimately connected with his profession. So it was with Dr Wight; he diligently explored the province of Tanjore, and at Negapatam a large collection of plants was made. He exemplified great generosity in the formation of his collections, numerous duplicates being provided when possible, often at the cost of much trouble and expense to himself, for subsequent distribution to other botanists. Special acknowledgment of his liberality is made in the "*Musée Botanique de Delessert*," p. 142. This earlier extensive herbarium\* he afterwards took to the East India Company's Museum, Leadenhall Street, and the numerous duplicates were distributed by himself, in 1832 and 1833, along with Dr Wallich's collection, to various bodies in Britain and Europe interested in the promotion of science. The details of this collection, of which a lithographed catalogue, comprising 2400 species, was issued in 1833, are enumerated in the "*Prodromus*" of Wight and Arnott, and many of the specimens are described in that work. It was at Negapatam that Dr Wight formed the wish of publishing an illustrated work on Indian plants similar to Sowerby's "*English Botany*." Many of the figures and descriptions made on the spot were published, in 1830-32, by Sir W. Hooker in the "*Botanical Miscellany*,"† vols. ii. and iii., and in the companion to "*Botanical Magazine*," under the head of "*Illustrations of Indian Botany, particularly of the Southern Parts of the Peninsula*." The drawings are excellent, of a 4to size, coloured, and form a connected supplementary series, numbered separately. The publication in this form ceased on account of the expense.

Dr Wight obtained leave to England on sick certificate in 1831, when suffering from the effects of jungle fever; but he still kept up in India his private establishment of

\* The herbarium filled six huge cases, weighing two tons, and was at first deposited in Queen Street, Soho, to be near Wallich, and close to the Linnean and Banksian collections.

† The name is misprinted Richard Wight, and there is a good likeness of our friend, *Æt.* 38.

plant collectors and a draughtsman. During this furlough of three years he lived chiefly in Edinburgh, and in conjunction with the late Dr G. A. Walker-Arnott, prepared the "*Prodromus Floræ Peninsulæ Indiæ Orientalis*," containing descriptions of the plants found in the peninsula of British India, arranged according to the Natural System. Of this work Drs Hooker and Thomson, in the introduction to their "*Flora Indica*," say that it is, "as regards Indian botany, unique; and indeed there are few systematic works in our own or any other language that equal it for accuracy, truly philosophical views of the limits of genera, species, and varieties, and scrupulous attention to the details of nomenclature, synonymy," &c. (p. 44.) And again, that it is "the most able and valuable contribution to Indian botany which has ever appeared; and is one which has few rivals in the whole domain of botanical literature, whether we consider the accuracy of the diagnoses, the careful limitation of the species, or the many improvements in the definition and limitation of genera and the higher group of plants" (p. 48). One volume only was published, the work having been interrupted by Dr Wight's return to India in 1834. It comprises descriptions of about 1400 species. A smaller work, "*Contributions to the Botany of India*," was published in the same year (1834). It contains South Indian *Compositæ* elaborated by A. P. de Candolle; the *Asclepiadææ* by Wight and Arnott, with the addition of extra-peninsular species collected by Wallich and Royle, by Dr Wight alone; and the *Cyperaceæ* of Wallich, Wight, and Royle, by Nees von Esenbeck, with notes by Arnott.

When staying with Sir W. Hooker in Glasgow, he occupied himself with the practice of lithography, and it is believed that he carried out a complete apparatus, stones and all, for commencing operations at Madras.

On his return to India, in 1834, he was posted to the 33d regiment N. I. at Bellary, of which he continued in medical charge for three years, accompanying it on its march to Palamcottá, near Cape Comorin, a distance of 700 miles. An interesting series of letters, addressed to his friend and coadjutor, Dr Arnott, 1834-36 ("*Journal of Botany*," iii. pp. 159-204, 1841), give a lively description

of the zeal and perseverance with which he followed up his botanical pursuits under disadvantageous circumstances. He writes:—"My collections are now very large, and are rapidly increasing. I really think they will not fall short of 2000 species; and, owing to the vast number of specimens, the whole forms so very bulky a concern, that I am anxious to get quit of them, in case I am ordered on a march, as one of our country carts could not contain them, a consideration of some importance, as I already require more than six carts to carry my books and *kit*, when reduced to the smallest possible dimensions. To carry about such a quantity of things would be downright ruin."

In these letters he frequently alludes to his intention of publishing figures of the plants mentioned in Ainslie's "*Materia Medica*," to be arranged according to the "*Prodromus*," and in that way forming a medical and systematic work. As a precursor to this scheme, he published, in the "*Madras Journal of Science*," papers on *Calotropis procera*, *Cassia Burmanni*, *Cambogia gutta*, *Laurus Cassia*, and *L. Cinnamomum*; but though he amassed large materials, the work was not carried out. About the same time Dr Wight had tracings made of Roxburgh's Coromandel plants, and of his unpublished drawings at the Calcutta Gardens. These he arranged systematically in portfolios, and carried them about for reference on his tours. By his advice I adopted the same plan, and have found it most useful. He also contemplated publishing cheap editions of Rheede and Rumphius, but this was not done.

In 1836, Dr Wight while exploring the hills about Courtallum, in Tinnevely, contracted a severe attack of fever, which obliged him to visit Ceylon for a few weeks, where he botanised in company with Colonel Walker.

Early in this year he was removed from military duty, and employed in the Revenue Department, to inquire and report on the cultivation of cotton, tobacco, senna, and generally of all Indian products, an appointment involving a large amount of correspondence with district officers, and also a careful personal observation of many points not detailed in reports. The following extracts from the Minutes of Consultation, 17th November 1835, signed by Chief Secretary H. Chamier, indicate the views of Government in regard



to the new appointment, and show how well fitted our friend was considered to hold it:—

“Dr Wight, surgeon, 33d regiment N.I., a gentleman of distinguished scientific acquirements, and whose pursuits have been directed to these subjects, being eminently qualified for the duty, and now stationed in the Tinnevely district, in which and the neighbouring collectorates great success has already attended the exertions made to improve the products raised for export, the R. H. the Governor in Council resolves to select him for this important service.

“The objects to which his attention should be directed, include a careful condensation of all the documents and replies received from Revenue officers; with his own observations on the cultivation of indigenous and exotic cotton, tobacco, senna, &c.”

The following instructions were furnished for Dr Wight's guidance in conducting inquiries —

“1st, The circumstances in which the experiments with the American cotton and tobacco seeds sent out by the Hon. Court of Directors were made, to be stated.

“2d, The causes which led to their failure should be ascertained.

“3d, When the soil or climate appears to be unfavourable, attention should be paid to the opinions expressed regarding them, and whatever may remain doubtful should be pointed out for future investigation.

“4th, When, notwithstanding the great difficulties attending first experiments, success either partial or complete has attended them, the information on the following points cannot be too minute, viz., the kind of seed—the time of its being received and sent into the district; the season when it was sown, &c.; the nature of the soil and method of agriculture adopted; the quantity and quality of the produce, and its adaptation for the foreign and home markets; its value, and the expenses incurred, and those likely to be incurred when the management is better understood, with the returns that may be then expected. The methods of gathering and preparing produce should be detailed, and suggestions made to improve them. This will include the causes of superiority of the Coimbatore and Tinnevely *country cottons*, with the history of the introduction of the Bourbon cotton plant into these districts.

“5th, With respect to tobacco, the methods of preparation and the qualities for which it is valued in India are not the same as those that will render it a lucrative article of trade with Europe. As this is an article nearly unknown in Indian foreign trade, and which

promises to be very advantageous to the country, it will be necessary to attend to the effects of any existing regulations by which the cultivation, consumption, and export may be obstructed, and to the most eligible means by which extended culture may be secured.

"6th, The condensation of the information on these subjects will contain references to the nature of the soils in which the various productions are most advantageously cultivated. An abstract statement should be given, so as to exhibit in one view the various products for which the soils are severally best suited, the returns received from each, the expenses of cultivation, and the value which should be assigned to lands of different kinds in revenue surveys. In this comparison the nature of the climate as to temperature, and the quantity and distribution of moisture, must be held in view.

"7th, In estimating the several kinds of produce from the different soils, the expenses of cultivation and the profits of the cultivator, many sources of error will have to be considered, and different statements will probably be furnished by the ryot and the servants of the collector. It may be expected that the documents will afford reliable data, from which the real profits of occupiers may be calculated.

"8th, Similar principles are to be attended to in scrutinising replies regarding coffee, senna, dye-stuffs, &c.; and to prevent misapplication of capital or enterprise, it will be useful to record such facts as may appear to show that any article, supposed to deserve attention in commerce, is not likely to succeed, either from defect in its quality, or difficulty in producing it in sufficient quantity.

"9th, It is of great importance to ascertain the causes on which the remarkable differences in the cattle of different provinces depend, with a view to their improvement in those districts in which the soil and climate are not unfavourable; and to their preservation in seasons of drought, which are of such frequent occurrence, and so destructive to agricultural stock. A careful comparison of the reports received, and specimens furnished, of the most remarkable grasses and other fodder plants, cannot fail to lead to important general conclusions.

"10th, For a full illustration of the subject, it is necessary to ascertain the scientific names and characters of the various plants, with the native names in different provinces, their qualities as stated by the ryots, and the soils in which they thrive. It will be convenient to give this information in a separate report, with drawings of the most valuable plants, which may hereafter be lithographed for general use.

"11th, The districts in which the inquiries are to be conducted

contain several ranges of hills of great elevation, and possessing many natural advantages for the cultivation of other valuable productions. Of these, the Courtallum and Pulney hills appear to afford the greatest facilities for successfully prosecuting the inquiries referred to, as their examination can be conducted at the same time with those relating to the cultivation of cotton, tobacco, &c., on the plains.

“12<sup>th</sup>, The principal objects to be attended to in this survey are the history of the spice gardens of Courtallum; the facilities for the production of sugar in the neighbourhood of Bulsumudrum and other places in the Pulney hills, and the measures necessary to improve the quality of the cane, and to introduce more productive varieties, such as that of the South Seas. Attention should also be paid to the manufacture of saltpetre carried on in the same neighbourhood; the facilities for the growth of coffee on the hills; the quality of the hill pastures resorted to by the ryots of Madura, and the character of the more valuable breeds of cattle brought to Pulney for sale from Dorampoory and other places; and the state of agriculture generally in the neighbourhood and on the hills, with the probability of the successful culture of the productions of colder climates, such as tea, madder, cinchona, &c., on the more elevated tracts where wheat and flax are now grown. The characters and qualities of the timber trees with which the hills are covered, and the facilities of turning them to account, are to be ascertained by personal inquiry, and by collecting specimens of the woods, for examination by the superintendent of the gun carriage manufactory or other competent judges. Should any woods not generally known, and having valuable qualities, be discovered, drawings should be made of the trees, and the native and scientific names and characters detailed.

“13<sup>th</sup>, The examination of these objects of immediate utility will afford opportunities for the investigation of others of a more speculative character, but bearing more or less directly on questions of practical interest. It is only requisite to refer to the important additions to science—particularly to geographical botany, on which success in experimental husbandry in a great measure depends—that will result from the examination in detail of the geological structure and of the climate (as ascertained from meteorological observations and an examination of the distribution of various families of plants), of a district of a moderate extent, and well defined geographical limits, in which the transition from the vegetable forms characteristic of the plains of the Carnatic, to those found at great elevations or in more temperate climates, can be conveniently observed.”

The reproduction of these lengthy extracts is not only due to the memory of Dr Wight, but seems justified by its bearing on what has since been accomplished in the Presidency of Madras, as well as throughout India generally, in the formation of the Forest Department, the duty of which is to regulate and control the present and prospective condition of the forests, and also in a more comprehensive manner in the recent establishment by the Government of India of a special department to deal with allied questions, under the title of "Agriculture, Revenue, and Commerce," of which the Forest Department forms only a part, though a very important part.

The results of the experimental farm at Coimbatore, which Dr Wight superintended from 1842 to 1850, are summarised in Royle's exhaustive work on the "Culture and Commerce of Cotton in India," *passim*, pp. 467-523. His reports and correspondence on this subject are very voluminous, and the titles of some of his separate papers are given at the close of this notice. His protracted exertions in the experimental farm yielded a store of valuable facts and observations, which have had an important bearing on the progress of this great industry. It is not, however, on his agricultural labours that we would dwell, but on the great services he rendered to botany.

In the end of 1836 he made an excursion to the Pulney Mountains, an account of which appeared in the "Madras Journal of Science;" and on subsequent occasions he visited other ranges of hills in Southern India, especially the Neilgherry plateau, the productions of which he has fully described. During eight years of residence at Coimbatore, he was most assiduous in the study of botany, devoting every moment he could spare from the duties of the cotton farm to his favourite science, as the following extracts from letters show:—

"COIMBATORE, 7th March 1844.

"To W. GRIFFITH, Esq., Calcutta.

"Rungia came from the hills two or three days ago, bringing a lot of the *Podostemons*. I shall enclose some in this letter; I have, besides, a Ceylon one at least two feet long! From the locality whence they came, I have got a genuine *Borago* with the supplementary process to the stamens. Roxburgh has a *Borago spinulosa*.

What is it? a true species of the genus? I suspect not, but have no materials from which to judge. The fever that has been running riot among our servants has at length found its way to the master. I have had two paroxysms, and do not feel the better for them! I send you specimens of an *Orobanche* common in tobacco fields here. *Orobanche* is said to have the 'calyx bractless;' mine has bracteæ, but no calyx, the bracteæ doing the duty. I thought it Roxburgh's *O. indica*, but find that, according to existing definitions, it is neither an *Orobanche* nor *Philipæa*, to which *O. indica* is now referred. I wish you to compare it with Roxburgh's drawing, and give me any information the comparison may suggest."

"COIMBATORE, 14th July 1844.

"TO DR VON MARTIUS, Munich.

"It is always a source of delight to me to contemplate your unabated zeal and energy in the advancement of science, and of wonder and admiration how you can accomplish so much. I often take shame to myself when I think of the vastness of your labours, as compared with my puny performances, and try to find excuses for the poverty of my results, considering I am always employed, but apparently making no progress. It is true that as director of a large and complex establishment, my time and studies are broken in upon with numerous details, which, added to the enervating effects of residing twenty-two years in a tropical climate, combined with the direct influence of a high temperature on a debilitated constitution, unfits me for continuous application. But still, with the degree of health I enjoy, I should accomplish more than I do, were I only more methodical in the distribution of my leisure. Within the last month I had the gratification of unpacking my herbarium, which has for nearly three years been enclosed in packing-cases; and now I look forward to resuming my Illustrations, which have been so long interrupted, and which I trust will be brought to a speedy close, and ultimately repay the funds sunk in their production, which hitherto have all been drawn from my private resources, often much to my inconvenience.

"You ask me for palms, especially species of *Phoenix*. I have only three species—*P. farinifera*, *acaulis*, and an undescribed one, with long peduncled female spadices. The last I recently sent, my only specimen, to Mr Griffith for publication. I shall try to get specimens for you, but the flowering period is now past. For information regarding Indian palms, I refer you with confidence to Mr Griffith, who is now engaged on a monograph of the Indian ones; and assuredly they could not be in better hands, for he is truly a pre-eminent botanist, a worthy pupil of the Brunonian school, mak-

ing that great man the model whom he delights to imitate, and studies hard to emulate, and even now he bids fair to take his place as *facile princeps* among my countrymen when that greatest of living botanists is taken from us. May it be long ere that day comes !

“The older botanical works are not so scarce in India as you seem to suppose. I possess Bontius’ and Lobel’s works, and also ‘Gartner de Fructibus,’ purchased in India. These old works are very interesting when investigating synonyms,—a kind of labour which my avocations do not permit me to pursue,—so I have as much as possible recourse to modern publications ; were it otherwise, I should have availed myself with the greatest pleasure of your kind offer to procure such works for me. Could I command leisure to go over my collections, I could easily give you a nearly complete set of our peninsular plants, having a large number of duplicates of nearly the whole of the collections made since my return to India, but want of time and strength to go through the duty and work I have always on hand is a great drawback. My herbarium of specimens glued down for ready reference scarcely amounts to one-third of yours, but includes plants from all the four quarters of the globe, besides a few from New Holland, and it is daily increasing, of course not rapidly, in the Indian department, but nothing comes amiss to me provided it is named. Conscious of my incapacity to carry on a system of exchanges, I rarely attempt anything in that way, for when I get plants and fail in my desire to make a return, it vexes myself more than it hurts my friend.”

In 1838, the “Illustrations of Indian Botany” was commenced, and simultaneously its companion, the “Icones Plantarum Indiæ Orientalis.” In a letter to the Editor of the “Madras Journal of Science,” dated 15th October, 1837, giving the prospectus of his “Illustrations,” Dr Wight says, “The insufficiency of language alone, to convey just ideas of the forms of natural objects, has led naturalists, ever since the invention of engraving, to have recourse to pictorial delineation to assist the mind through the medium of the senses ; and, prior to the time of Linnæus, not without good cause, since nothing could be more vague than the language then employed in description. Impelled by this cause, the number of figures some of the older writers published is truly astonishing.” The “Illustrations,” furnished with coloured plates, contains a series

of memoirs on the Natural Orders, full of important information with regard to species, and valuable notes on their affinities; the work commenced as soon as the names of 100 subscribers were recorded, the cost being about Rs. 30 per volume of 100 coloured plates; it terminated with the end of the second volume and 182d plate, in 1850. It formed no part of the author's plan to reap personal profit, and he carried on the work out of his own private resources. The difficulties in obtaining good colours, and a sufficient supply of paper for the work, and the low state of the pictorial and lithographic arts, were obstacles to the publication of these books not easily overcome, but the undertaking proved of immense value to Indian Botany. In the "Icones" the letterpress usually contains only the description of the species, though in the later volumes occasional general details are given, especially in those Natural Orders which are not included in the "Illustrations." The plates of the "Icones" are uncoloured, and amount to 2101, a surprising number to have been completed in fifteen years. The Government of Madras subscribed for fifty copies of both works, otherwise they could not have been completed. A systematic index to the invaluable figures in the "Icones," so essential to every student of Indian botany, was compiled for my own use, and afterwards printed by the Madras Government in 1857. In the preface to the last volume of the "Icones" Dr Wight writes—"But so far is the field from being exhausted that, I may say for myself, had circumstances permitted, my materials are so ample, that I could easily have continued this work through 1500 or 2000 additional plates, the subjects for the most part appertaining to the peninsular flora. It is to be hoped, therefore, that some new aspirant to botanical fame and honours will be induced to resume\* the work thus prematurely dropped, now that such an efficient press exists for carrying it on."

Another letter to Dr Von Martius of Munich describes the difficulties attending the publication of these two works, and the motives for undertaking the "*Spicilegium Neilgherrense*," a third illustrated work, containing much

\* It is satisfactory to add that Major Beddome, Conservator of Forests, Madras, is publishing a series of "*Icones Plantarum*," supplementary to Wight's "*Icones*," and that Part x., reaching 180th plate, has appeared.

valuable matter relating to the Neilgherry Flora, with coloured copies of a portion of the plates of the "Icones."

"COIMBATORE, 15th April 1845.

"MY DEAR FRIEND,—I learn with much gratification that you have at length received the Illustrations and Icones as far as vol. iii. part 2. Part 3 is now passing through the press as rapidly as I can manage, residing 300 miles distant. It is not the plates, so much as the letterpress, that delay the works; twelve pages for the second part of 'Icones' were three months in passing through the press, though I only received two proofs for revision. I am now printing the letterpress of my 'Neilgherry Plants,' and a whole month has been expended on the first three pages. These delays rendered it necessary for me to change my printer, as at the slow rate they have been going on, the whole, barely forty pages, would not be completed in six months. I mention these things, to give you some idea of the difficulties I have to surmount in carrying on such works in India. For your criticisms on the execution of the plates accept my best thanks. I feel that they really are those of a friend, even though I fear I cannot profit by them; while situated at so great a distance from the executives. I do not know how lithography is now executed in Europe; in this country it is still done in the most primitive manner, by means of transfer paper. The drawing is copied on prepared paper, by being held against the light, with lithographic ink, which is communicated to the stone. No corrosion, and indeed very little assistance of any kind is given, so that the loss of tender parts which you observe arises not from corrosion, but from the fine lines coming out in printing, a not unfrequent occurrence in this country, where the great heat softens the ink too much. These explanations will show that we have done nearly all we can effect in lithographic improvement while so opposed by climate. In colouring, great advances have been made. My 'Neilgherry Plants' look, as compared with the 'Illustrations,' quite European. This is a branch from the Icones, undertaken partly to gratify the taste of some persons residing on these magnificent mountains, but principally, if the truth must be told, in the hope of raising a fund to aid in defraying the expenses of the larger works, especially the 'Icones,' the sale of which has not yet equalled the cost, the whole of which is defrayed from my private purse, thereby impoverishing, in place of enriching my family. The impression of the 'Neilgherry Plants' only amounts to 100 copies of 200 plates, and if the whole is sold at sixpence per plate (the price of the 'Botanical Magazine'), it will, owing to the small cost of



preparation, realise a considerable profit to help the others. Of this work I send twenty copies to Europe, anticipating support to that extent among my botanical friends in aid of the 'Icones.' The letterpress is a kind of popular botany, not mere descriptions of the plants figured. I was particularly gratified to find such a master in the science as yourself writing in favourable terms of my 'Illustrations,' especially viewed in connection with the unfavourable position in which I am placed for carrying it on. This work is again in hand, and I hope to have all the Corallifloral Orders through the press this year, and probably many of the Monochlamydeæ in manuscript. During the long interval which has intervened since the publication of the last part, botany has not been neglected, for though unavoidably prevented from writing, I have been studying a good deal, and I trust it will be found that my studies have not been fruitless. I observe you approve of the plates devoted to the elucidation of generic characters, given with Myrtaceæ and Cucurbitaceæ. These I wish to give more abundantly in the subsequent parts, but this requires consideration, as they require time to prepare, and with so much pictorial work that is not easily spared; but still I intend, in large and difficult Orders, to add that kind of illustration. I often wonder that in Europe, where wood-engraving is so cheap, such figures are not more common in botanical works. Endlicher gives characters, many of them too detailed, of about 7000 genera. Woodcuts of three-fourths of these, with essential characters, would produce a work of the greatest value. Endlicher's 'Genera Plantarum' is a most valuable book, and all that is wanted to complete it is a synopsis giving the essential characters of the genera. In its present form it is fatiguing to consult; the essentials, picked out and published separately, which I thought he had done in his 'Enchiridion,' would form an admirable addition to botanical literature. Have you seen Lindley's 'School Botany?' a little work struck off with his usual facility, and, like everything coming from that extraordinary man, presenting many good things. His pencil has produced numerous characteristic diagrams of the essential characters of Natural Orders. These I have lately been studying, and look upon it as the forerunner of a new era in botanical natural classification. Once in use, such illustrations of Orders and Genera will become as indispensable to botany as diagrams to geometry and atomic formulæ to chemistry.

"I mentioned above that I am sole proprietor of all my works, and that I am a pecuniary loser by them. Such being the case, I cannot too warmly thank you for your suggestions for obtaining a sale of some copies in Germany and Russia, and if you will add to

the favour, by kindly taking upon yourself so much trouble, I at once authorise you to enter into engagements in my name and behalf for the supply of any required number of copies."

Before leaving the subject of these important publications of Dr Wight, we quote again from the "*Flora Indica*," p. 50:—"This is not the place to dwell on the extraordinary exertions in the cause of science of the author of these great works. They are themselves the best proof of his wonderful energy, and show what can be accomplished by perseverance under apparently unsurmountable obstacles. At the period of the publication of the earlier numbers, the art of lithography was in a very rude state in India, and the plates are consequently very imperfect, but in the later volumes the improvement is great, and the outline drawings are admirably reproduced. These volumes form the most important contributions, not only to botany, but to natural science, which have ever been published in India."

The following letter was addressed to Captain (General) Munro, when starting on a botanical expedition into the Himalaya.

COIMBATORE, 9th April, 1845.

"MY DEAR MUNRO,—I received yesterday your welcome letter of 12th March from Agra, not less welcome from being unexpected, for, after seeing your name so lately among the severely wounded, I did not expect the pleasure of a letter. Griffith mentions having received from you an *Erodium*, very similar to one he had gathered in Cabul, and that you were going to the hills, where he anticipated you would form excellent collections. . . . Your offer to collect for me is most acceptable, for I have few plants from that part of the world. I cannot, however, think of limiting your operations to any particular Families, for all are good to me, so in place of directing your attention to Tribes, I shall preferably take my chance and trust to your generosity. Even were there Families which I particularly wanted, I should hesitate mentioning them, under the feeling that it might prove a source of vexation your finding that you could not supply my wants. I have made few excursions of any extent on the hills, being so busy here I cannot often get away, and generally when there, have had so much occupation as left little time for going about. When there a fortnight ago, I went to Syspara and descended the Malabar pass several miles, getting a few good plants; but this is not the season for ex-

ploring the botany of that side of the hills. I look forward with much satisfaction to the prospect of a second visit, when I shall allow ten days. When at the Avalanche Bungalow, I had not the good luck to stumble on *Munronia*, but hope to find it next time; lest, however, I should be disappointed, I would like you to give me an idea of the station. How nearly you were cut out of the name! Brown and Bennet found the genus among their Java plants, and had written a long article pointing out its distinctions and affinities with *Naregamia*, when my Illustrations reached them, which they afterwards published, adopting my name. A few weeks later and their memoir would have been published, and the celebrity of the authors would have led to the adoption of their name.

The following letter, written soon after the early death of the lamented W. Griffith to their mutual friend, Dr M'Lelland, Editor of the "Calcutta Journal of Natural History," relates to the disposal of the manuscripts and herbarium of that distinguished botanist:—

OOTACAMUND, 5th May, 1845.

TO DR M'LELLAND, Calcutta.

"I shall endeavour in this letter to offer suggestions for carrying out the proper preservation and disposal of his collections, manuscripts, and drawings, so as to ensure their being rendered as much as possible available to the advancement of the science of which he was such an enlightened and untiring cultivator. To accomplish the wish expressed in his last letter, preservation is the first and grand object, publicity the next, "as you know the trouble I have taken with these collections, and the hopes I have of making them subservient to a general scientific Flora of India, I need not press on you how much I am interested in their proper disposal and their being properly brought before the scientific public, and I would say the same regarding my drawings and manuscripts." The two can easily be combined by printing and publishing the whole in India before sending a single line or drawing out of it. Once published they are for ever safe, and doubtless they will be as carefully edited here as they could be in Europe, where those friends who are really qualified to do them justice, and would be willing for his sake to take the trouble, have for the most part full occupation. But even supposing we had an editor in Europe ready to engage in the duty, which is far from being the case, now that Mr Solly is no more, still as nearly all his labours have reference to Indian botany, his papers, to my mind, ought beyond all question to be first published in India, especially as a proper medium for doing so exists in your

journal, which is very fairly supported by the public. On these grounds I am strongly of opinion, should your view—that the executor has put a wrong construction on that part of the will relating to the papers—prove correct, that an immediate application should be made to Government for them for the purpose of publication in the journal previous to their being sent to Europe, of course giving the assurance that the utmost care will be taken of the originals, and that no pains will be spared towards having them as correctly edited as circumstances permit. It could at the same time be urged, as you observe, that publication here does not interfere with ultimate publication in Europe in a more perfect form, accompanied with all his already published papers, nor do I think that previous publication in the journal would interfere with the sale of a complete edition of all his works, should such be afterwards published. I confess I feel most anxious for the publication of his botanical papers in this country, under the impression that, should they find their way to the India House, before publication, the labours of the greatest botanist that ever set foot in India will be lost, perhaps for ever—swamped amidst the accumulated records of hundreds of men that are daily being added to their stores. So much for papers; now for collections. For the same reasons that it would be wrong to send home his papers uncopied, I think it would be equally wrong to send his collections *en masse*. A complete set of his specimens ought to be retained for India. This might be easily accomplished, as requiring in the person making the division no botanical knowledge—all that is wanted on his part being to lay aside one or two fair specimens, so as to make the set retained for India as nearly a *fac simile* of the other as possible. This suggestion, I think, might be made to Government, both with a view to guard against accidents and to preserve to India a lasting and proud memorial of the almost Herculean labours of one of the most philosophical and industrious men that ever traversed her soil for the purpose of investigating its natural products. It is quite true, supposing the suggestion made and acceded to, that the collection so made and left in India might for a time be virtually useless, seeing that Wallich's day for botanical work is drawing to a close, and that Falconer, who is likely to succeed him, is too much of a geologist to enter cordially into the depths of botanical science. But still these should not stand in the way of doing justice to the memory of Griffith, were it for no other purpose than to act as a stimulus to those who come after. And to ensure this work being done in the best manner, I will readily give my services to see it executed, first by securing the specimens against the attacks of

insects by the application of a poisonous solution, and then having them properly glued down on suitable paper for reference, at the same time arranging them (as correctly as my limited time and imperfect knowledge of many of them will permit) in their proper natural orders and genera. So prepared they might then be deposited in the Calcutta Garden Herbarium, for the benefit of future Indian botanists who might wish to consult them. The cost of securing them against all contingencies, would not, I dare say, exclusive of the paper supplied from the stores, exceed 100 rupees, while the cases to contain them might be provided for 100 or 150 rupees more, and, to Indian botanists, such a collection must be well worth ten times the amount. I would urge the adoption of this plan, for I feel certain that if the specimens once leave India, not one of them ever returns, a contingency not less injurious to the memory of poor Griffith than to all subsequent Indian botanists.

In accordance with the advice here tendered, the Government of India granted to Dr M'Clelland permission to print Griffith's MSS. in Calcutta in the state in which they were left by him at his death, and the services of the painters at the Botanic Garden and the Lithographic Press were placed at his disposal for the purpose. Considering the numerous errors of nomenclature and species not identified, it is doubtful whether the course pursued was the best that could have been adopted, although, as one of the executors, Dr Wight was truly most anxious to establish the reputation of his deceased friend.

Dr Wight remained at Coimbatore till March 1853, when he finally retired from the public service. On the occasion of his leaving India, there was a great gathering of his friends and admirers in Madras, and a valedictory address was presented to him by the committee of the Agricultural Society, in which the following passage occurs:—

“It is recognised with gratitude, that it was your fostering care in the early days of its institution, that brought the Society into a vigorous existence. Throughout the eighteen years that have elapsed since its formation in 1835, you have ever proved its faithful and zealous friend, and have accorded to it your valuable counsel and support in every endeavour made and every measure adopted for improving the Agricultural resources of the Presidency.

“Much however as the Society owes you on this account, the Members are very sensible of the greatly superior claims upon their regard which your other and eminent labours in the field of science command. They do homage to the unshaken perseverance and unwearied industry, with which you have prosecuted Botanical researches for the last thirty-five years, amidst impediments and difficulties that it required no common zeal to surmount, and all this with a successful result, while it has gained its just appreciation in the scientific world, leaves to the members of our Society the particular gratification of seeing it associated with this Presidency. . . . Our members feel that your labours have given to Southern India especially that which was so much needed, and which cannot be too highly appreciated, a standard Botanical work of reference. You have published correct figures and accurate descriptions of between 2000 and 3000 Indian plants within a comparatively limited period, and made them accessible to the public at a moderate price. In fact what Sowerby’s ‘English Botany’ is in Britain, your ‘Illustrations and Figures’ have provided for the Student of the Indian Flora.”

To this Dr Wight made the following reply:—

“As regards the encomiums the Society has been pleased to pass on the extent and value of my contributions to Botanical Science, I will not ape the humility of treating them as wholly undeserved, but I must be permitted to question the justice of their title to be compared, or even placed in juxtaposition, with the justly celebrated ‘English Botany’ of Smith and Sowerby, the former, one of the first Botanists of the time, and the most classical in his style of all English writers on Botany; and the other, the most accomplished Artist of his day as a flower painter. To have my labours named beside that celebrated work, after all allowance for the difference of the times and circumstances in which they were respectively produced, would indeed be a high honour; but while I could not venture to submit my ‘Icones’ to be tried by so high a standard, I do indulge the hope that the Indian botanist will not find the latter valueless in his researches, and will often find cause of thankfulness to the Madras Government, which, by its munificent subscription of fifty copies, has enabled me to carry on this work to its present state of completeness.

“I have spoken of allowing for the difference of the times and circumstances in which the ‘English Botany’ and my figures of Indian plants were respectively produced. These were indeed very great. Sixty years ago, botany, as compared with its present state,

was in its very infancy, and botanical analysis but little attended to in such works. Here, therefore, the advantage to that extent, exists on my side, and I have made it my endeavour to bring my representations up to the highest standard that the state of pictorial art in India permitted. But as regards the determination of the species represented, the advantages were wholly on the other side. Smith had an excellent Library, the most authoritative herbarium in the world, and was surrounded by, or in correspondence with, all the most eminent botanists of the day. In all these I was deficient, my library was small, my herbarium limited, and I was, as it were, alone, with the further impediment of having to conduct the duties of a public office.

"In respect to the future, I appreciate highly the honour of the Society's expression of a hope that my labours may not here terminate, and I am happy to assure the members that, should it please God to spare my life for a few years, much that still remains to be done towards completing my contemplated contributions to the Indian Flora will be happily accomplished."

In the preface to "*Enumeratio Plantarum Zeylanicæ*" (1857), Mr Thwaites acknowledges to have received much valuable assistance from Dr Wight in naming the specimens he found in the Ceylon Herbarium; but the expectations as to the work which Wight hoped to accomplish in continuing his publications were not realised. On his return to England, he found his former coadjutor, Dr Walker-Arnott, engrossed with the study of Diatoms; increasing deafness and failing health, along with family cares, appear to have prevented him from resuming descriptive botany. In 1853 he purchased the estate of Grazeley Lodge, near Reading, where he entered on agricultural pursuits with great zeal and success. His farm of 66 acres was much improved by his skilful treatment, and in 1860 he delivered a spirited address to the Farmers' Club at Reading. In 1861 and 1862 Dr Wight wrote a series of articles in the "*Gardeners' Chronicle*," on the subject of cotton farming, explanatory of the American and East Indian methods, with suggestions for their improvement.

In 1864 it was determined by Government to issue a *Pharmacopœia* for India, and Dr Waring, who was appointed to edit the work, has furnished the following notes of the assistance rendered by Dr Wight:—

“On its being determined that the preparation of the work should be entrusted to a Committee, H.M. Secretary of State for India requested Dr Wight to become one of the members. To this he readily acceded, and from June 1865 to April 1868, he devoted a considerable portion of his time and attention to the work. He was rarely, if ever, absent from the meetings, though his attendance entailed a journey of sixty miles, and in the intervals he evidenced his continued interest by frequent communications on various points.

“Although he naturally directed his attention principally to the botanical matter, he afforded much valuable information regarding the medical properties and uses of the plants of Southern India, the result of his own observation and experience. A long and interesting minute which he drew up had a great effect in determining the arrangement of the materials, and it was mainly owing to him and to Dr Thomas Thomson that the natural, in place of the alphabetical arrangement was adopted. There were some points to which he devoted particular attention : of these may be mentioned the destructive characters of the Genera *Holarrhena* and *Wrightia*, which up to this time had been involved in considerable confusion. His lucid remarks, the result of his personal examination of specimens in the Banksian, Wallichian, and Kew herbaria, will be found at p. 455 of the Pharmacœpia of India. He endeavoured, also, to solve the question what plant yielded the drug met with in the bazaars of India under the Persian name of Gouzaban ; the *Cacalia Kleinii*, L., which Ainslie gives as its source, being a plant of the Canaries, and not of India. The question, however, yet remains to be solved. Another point to which he paid much attention, was aconite root, with reference to the period of growth at which it might be expected to yield the largest amount of its active principle aconitia. His researches tended to confirm the views previously advanced by Mr Herapath (Ibid. p. 433). His interest in the work was sustained throughout, and on all occasions he displayed an untiring energy, a clear judgment, and good sound sense, which are seldom found to be united with high scientific attainments such as were possessed by our lamented friend.”

To conduct the great works by which Wight's name will ever be remembered, required, in a tropical climate, qualities of no ordinary stamp. In addition to an extensive knowledge of botany, Wight possessed extraordinary industry, with great physical power of endurance ; difficulties did not easily thwart him, and he laboured steadily from early morning till late at night with few intermissions. At one time he had about twenty natives employed in a large room



of his house, colouring the plates for his "Illustrations," and mixing their own colours. Of these, two were specially esteemed by their kind master—Rungia and Govindoo. The former prepared the plates for the first three volumes of the "Icones;" and of Govindoo Dr Wight writes as follows:—"I have dedicated it ('Govindooia') to the artist whose facile pencil produced the drawings for the greater part of the plates of the last three volumes of this work, and whose skill in analytical delineation is, I believe, as yet quite unrivalled among his countrymen, and but for his imperfect knowledge of perspective, rarely excelled by European artists."—*Icones*, vi. 34. Dr Wight was in the habit of recording meteorological phenomena in the diary which he kept during all his wanderings. He was in constant communication with the leading European botanists, and on terms of warm friendship with Brown, Royle, Lindley, the Hookers, Wallich, and others.\*

Allusion has already been made to his great liberality in collecting and distributing duplicates for botanical friends; and good evidence is afforded of his public spirit and ardent love of his favourite science by his incurring heavy pecuniary risk in the publication of costly illustrated works, which have been now long out of print.

Professor Reichenbach *filis*, of Hamburg, has printed an Eloge of our departed Fellow in the "Linnea," 1872.

Dr Wight was married, in 1838, to a daughter of L. G. Ford, Esq., of the Medical Board, Madras, and is survived by his widow, four sons, and a daughter.

The following list shows some of the Societies to which Dr Wight belonged, and the dates when he joined them:—

Received Diploma of College of Surgeons, Edinburgh, 1816.

Took degree of M.D., 1818.

Assistant-Surgeon H.E.I.C. Service, 1819.

Member of the Royal Physical Society, Edinburgh, 1819.

Garrison Assistant-Surgeon, Negapatam, 1828.

Member of the Acad. Cæsar. Leopold Nat. Curiosorum, under the cognomen of "Roxburgh," 1832.

Member of Agri.-Hort. Society of India, 1836.

Superintendent of Cotton cultivation, 1836.

Member of Botanical Society of Ratisbon, 1840.

\* *Wightia*. A genus referred by Benthams to Scrophulariaceæ, is founded on a single species (*W. gigantea*) of Nepal.

Fellow of Botanical Society of Edinburgh, 1840.

Corresponding Member of Horticultural Society of London, 1844.

Honorary Member of Agri-Horticultural Society of Madras, 1853.

Fellow of Royal Society, London, 1855.

Honorary Member Asiatic Society of Bengal, 1860.

Vice-President Linnean Society.

# LIST OF BOTANICAL AND OTHER WRITINGS.

1. Illustrations of Indian Botany, principally of the Southern parts of the Peninsula. Bot. Miscellany, vols. ii. and iii. 1831-33.
2. Characters of some new or little known Genera of Plants. (Wight and Arnott). Edin. N. Phil. Jour. vols. xiv. xv. 1833.
3. Prodrômus Flora Peninsulæ Indiæ Orientalis. (Wight and Arnott). Vol. i. 8vo. 1834.
4. Contributions to the Botany of India—*Compositæ*, *Asclepiadææ*, *Cyperaceæ*. London, 1834.
5. Observations on Mudar (*Calotropis procera*), with some remarks on the Medical Properties of Asclepiadææ. Madras Jour. Lit. and Science, ii. 70, 1835.
6. Observations on the Nuth Grass (*Ischaemum pilosum*) of the Ceded districts. Mad. Jour. Lit. and Science, ii. 138. 1835.
7. Suggestions for a new application of Grafting. Mad. Jour. Lit. and Science, iii. 26. 1836.
8. On the cause of the Land winds of Coromandel. Mad. Jour. Lit. and Science, iii. 32.
9. Observations on the Flora of Courtallum. Mad. Jour. Lit. and Science, ii. 380, iii. 84.
10. Observations on the Tree which produces the Gamboge of Commerce. Mad. Jour. Lit. and Science, iv. 300, v. 428. 1836-37.
11. Observations on the Harbour of Tuticorin. Mad. Jour. Lit. and Science, iv. 305. 1836.
12. Statistical Observations on the Varragherries or Pulney Mountains. Mad. Jour. Lit. and Science, v. 280, 433. 1837.
13. Contributions to Indian Botany—No. I., on the genus *Impatiens*. Mad. Jour. Lit. and Science, v. 1. 1837.
14. *Clavis Analytica* of the Indian *Convolvulaceæ* by Arnott, with figures by Wight. Mad. Jour. Lit. and Science, v. 15. 1837.
15. On the Homoöthermal Method of Acclimating plants. Mad. Jour. Lit. and Science, v. 39. 1837.
16. Directions for Preserving Plants. Mad. Jour. Lit. and Science, v. 430. 1837.
17. Notice of the *Cassia obtusa*, with remarks on the Materia Medica of India. Mad. Jour. Lit. and Science, vi. 71. 1837.

18. Remarks on the Culture of Cotton, principally with reference to Foreign varieties. Mad. Jour. Lit. and Science, vi. 79. 1837.

19. On a new Genus of *Asclepiadeæ*. Mad. Jour. Lit. and Science, vii. 142. 1838.

20. Remarks on *Gambogia Gutta*, Linn., *Stalagmitis gambogioides*, Murray, and *Laurus cassia*, Linn. Mad. Jour. Lit. and Science, ix. 121. 1839.

21. Remarks on the Fruit of the Natural Order, *Cucurbitaceæ*. Mad. Jour. Lit. and Science, xii. 43. 1840.

22. Illustrations of Indian Botany, 2 vols. 4to. Madras, 1838-53.

23. *Icones Plantarum Indiæ Orientalis*, 6 vols. 4to. Madras, 1838-53.

24. Suggestions for the Better Transmission of Plants in India. Jour. Agri.-Hort. Soc. Ind. ii. 85. 1843.

25. Progress of Cotton cultivation in the Government Experimental Farms at Coimbatore. Jour. Agri.-Hort. Soc. Ind. ii. App. 2, 158, 281, 321.

26. Practical remarks on the Culture and Preparation of Senna in Madras territories. Jour. Agri.-Hort. Soc. Ind. ii. App. 127. 1843.

27. On American Cotton Agriculture as practised in the Government Cotton Farms in Coimbatore. Jour. Agri.-Hort. Soc. Ind. iii. App. 126.

28. Remarks on Mr Anderson's experiments in England on Joomla Paddy, and on Mr Speede's method of treating Celery. Trans. Agri.-Hort. Soc. Ind. iii. 166.

29. Notes on Indian Botany. On the Genus *Lasianthus*, Cal. Jour. Nat. Hist. vi. 494. On *Viburnum* and *Loranthus*, p. 357. 1846.

30. Observations on the Structure and Affinities of the Genus *Azima* of Lamarek. (Wight and Gardner). Cal. Jour. Nat. Hist. vi. 49. 1846.

31. *Spicilegium Neilgherrense*, or a selection of Neilgherry plants, with brief descriptions, 2 vols. 4to. Madras, 1847-51.

32. Notes on Indian Botany. Cal. Jour. Nat. Hist. vii. xi., 143. On some new species of *Compositæ*, p. 153, 287. 1847.

33. Notes on Cotton Farming. Reading, 1862.

34. List of Plants of Peninsular India, contained in Dr Wight's Herbarium, distributed at Kew, 1869-70.\*

\* The List contains the result of 30 years' investigation of the Flora of South India, upwards of 4000 species, the types of the species published by Dr Wight, and to use the words of Dr Hooker in his Report 1871, "embraces the history of S. Indian botany during nearly half a century."