Obituary

Dr. WINFIELD DUDGEON.

1886—1932

Dr. Winfield Dudgeon, the first President of the Indian Botanical Society, Head of the Department of Biology in The Ewing Christian College, Allahabad, and part-time teacher in the University of Allahabad died in America on December 26, 1932. His premature death is deeply mourned by all of us, and to those who like the present writer, were more intimately associated with him, it is a great personal loss.

I counted it a privilege to be his student, and in this inadequate sketch of his life I have quoted freely from some of his letters, so that the readers may have an opportunity of gaining more intimate knowledge about his life and work.

I first came to know him in 1921, as a professor of Botany in the Ewing Christian College, Allahabad. After my Intermediate I began to come into closer contact with him. I felt so interested in his lectures that after passing my M.Sc. in Botany in 1927 I refused to do anything else and took up research in Angiosperm Morphology under his directions. I continued this for three years at Allahabad and even after my appointment at Agra in 1930 I kept in close correspondence with him and greatly profited by his advice and encouragement. I saw him last on April 28th, 1932, when he came to Agra on his way back from Aligarh to Allahabad only to see me before his departure to America on furlough for one year. But for him I should not have been a teacher of Botany, but should have been somewhere in the Agricultural Department of the Jaipur State.

He was an excellent teacher. While he was not very eloquent, his keenness in the subject gave a reality to it. To the Intermediate students he tried to make the subject as simple as possible. He always avoided technicalities, and presented the fundamental facts of Botany in a way calculated to excite the natural curiosity of his students and to awaken and cultivate in them an increasing love for plants. His lectures were brief but inspiring, and the M.Sc. students were never tired of hearing him. It was, however, in the practical class that he made himself felt most. He would

draw the most complicated figures on the blackboard with remarkable ease. His experience as a technician prompted him to make an excellent set of slides of all kinds for class use, and he took delight in seeing and showing what he taught in his lectures. In trips he showed himself to be more active and hardy than his students who were much younger in years. While others would merely look on, he would climb up a most difficult tree with considerable ease, get the things wanted and place them in the hands of his students. I remember a trip in which he took out his M.Sc. students for a study of the aquatic vegetation of a lake. While he was with me and two others standing knee-deep in water and showing at what depths the different plants occurred and how to look for them, some of the students were merely looking on from a distance lest they might spoil their clothes in the water. This brought a well-deserved rebuke which they may remember even now. He never failed to insist that the subject has other value than mere passing of examinations, and always attached greater importance to an actual study of the plants themselves than mere book-reading and the cramming of notes.

While the number of his contributions is not very large, I know that he had a good deal of unfinished work which may now never come to the notice of others. Like several other people, he would start on a problem but after finding out enough about it to satisfy his curiosity, he would give this up and pass on to a different one. Besides, he spent most of his life in an Intermediate College which could not offer much incentive or facility for research, and his duties left him little time for his work. For some time past he was tired of his administrative work and longed to have more time for his research. During his life-time he published a number of works of which a brief account will be given here.

His first Botanical contribution was on "A study of the variation of the number of ray flowers of certain Compositae", published in the Proceedings of the Iowa Academy of Science, Volume 14. This was followed in 1914 by a note on "A method of handling material to be imbedded in paraffin", published in the *Botanical Gazette,* Volume 57. In 1918 he published a detailed account of the Morphology of *Rumex crispus,* published in the *Botanical Gazette,* Volume 66. This work was done at the University of Chicago and formed the subject of his Doctor's thesis. This opened up on him the problem of the Morphological origin of Dicliny and from this time on he began a number of collections

to carry on this work. After his return to India he became more absorbed in studying the ecological aspects of the local vegetation, and this resulted in a valuable paper entitled "A Contribution to the Ecology of the Upper Gangetic Plain", published in the *Journal of Indian Botany* in 1920. Little more than division into phytogeographic regions had been done for India, and his paper is a valuable addition to Indian Botany. In 1922 he was honoured with the Presidentship of the Botany Section of the Indian Science Congress, and he gave a very thoughtful and stimulating address on "The Botanical Opportunity in India". In this he surveyed the Botanical work done in India up to that time and suggested new lines of work. Younger Botanists might even now read this address with profit, since a great deal of what he said at that time remains true even to this day. He used to spend his summer and Dasehra holidays at Mussourie, and in 1923 he published a paper entitled "Succession of Epiphytes in the *Quercus incana* forests at Landour, Western Himalayas", in the *Journal of the Indian Botanical Society*. During this time he and Dr. L. A. Kenoyer (now in the Western State Normal School, Kalamazoo, Michigan, U.S.A.) used to go out on long trips into the Himalayas and made extensive collections and notes. Their results were published in a joint paper, "The Ecology of Tehri Garhwal", in this Journal in 1925.

In 1922 he published his "Guide to Intermediate Botany", an outcome of 10 years' experience with Indian students and 8 years of development and rearrangement of an original six-page laboratory outline. This has been used with considerable success by several teachers of Botany in these Provinces. For some time past he had intended to write an enlarged edition of this work, but for the last 4 or 5 years he was struggling against time and could not devote as much time to his botanical work as he wished to.

As he had spent several summers at Mussourie, he was very well acquainted with the flora of the place and his book "Keys to Mussourie Plants", published in 1929, can be used with advantage by anyone who wants to identify the plants quickly with the unaided eye, even if he has no previous knowledge of Botany. About a year before his death he told me that in the next edition he would put in some more details so that it could be more useful even to serious students of Botany. He had a similar key in preparation (based on leaf characters alone) for the identification of the trees and shrubs of the Upper Gangetic Plain, and parts of it were already typed out when I saw it last.

During the last 4 years he had become greatly interested in the morphology of the mango and wanted to know the reasons why so many flowers fell off without producing any fruit. In a letter, dated February 5, 1928, he wrote—"The mango has become a fascinating problem. It is the most refractory material I have ever tried to work with. But it has the finest kind of 'Degenerationserscheinungen' imaginable. To the best of my knowledge the morphology of mango, and of most of the Anacardiaceae, is unknown".

On the 10th of March 1932, he wrote: "I seem to be excessively busy these days. We are in the midst of our amalgamation proceedings, and association with the University for degree in Agriculture. I get involved in all of it, and it all takes time. I can hardly find time to get some of my Anacardiaceae material rounded up. Have a pretty good supply of four spp. now—*Mangifera, Odina, Buchanania* and *Spondias*—all of great value in connection with the problem of degenerations. Recent cuts of mango seem to suggest that the fusion nucleus is frequently fertilised, while the egg fails to be fertilised. I have made rather large collections to try to follow this out, and will work on it next winter".

On 2nd May, 1932, only a few days before his departure to America on furlough, he wrote: "I am nearing the end of my packing, and can see now how I could finish in a day if necessary. I have a large batch of material of Anacardiaceae in paraffin. Also a host of cakes of *Mangifera*. It will be a joy really to have time and incentive to work and read".

After reaching America he first spent some time in California, then got his family comfortably settled in AMES, Iowa, and himself went over to the University of Chicago. Instead of taking a well-deserved rest as the conditions of his health demanded, he started his work in full swing in the Hull Botanical Laboratory. On 2nd October, 1932, he wrote: "I have a nice room, shared with a man who will take his Doctor's degree in December. I will be here only till the end of December, then spend the rest of the year at Ames. I am specially anxious to be here for the fall quarter, because of the men who will be here then, and not later. Chamberlain is retired, and will spend the time from January to June in Japan, giving a course of Lectures in Tokyo, then after that travelling over the Cycad world as a guest of the Japanese Government. Yamanouchi will be here only the fall quarter also. I can get along without any of the others".

On November 20th, he wrote to another friend "I shall be glad to get home next month and end this perpetual separation from the

family. It is not the way I think I ought to live. Here I am (University of Chicago) still plugging at the mango problem, working hard and making a little progress. But in time it may open up so that finally I may have a contribution that will have a great effect on the botanical world. I feel that I have material here, which if rightly interpreted, will carry a step forward our conception of the development of plants''.

On the same date another friend wrote about him from Chicago. ''Winfield is with us in our cosy little apartment, but we don't see much of him. He is hard at work on his research problem most of the time. He leaves early in the morning and seldom gets home before we are in bed at night''.

These letters show that he was working hard almost up to the time of his death. I understand that upon the death of Dr. C. A. R. Janvier in 1928, he was offered the Principalship of the Ewing Christian College, but like the true devotee of science that he was, he wrote a long letter to the Directors politely declining the offer on the ground that he was better fitted to be a teacher and would have greater satisfaction in being allowed to continue his work as a Botanist. He was, however, persuaded to accept the Acting Principalship till the appointment of a new man, and he heaved a sigh of relief when Dr. C. H. Rice took over the duties in 1930.

The move for an Indian Botanical Society was first initiated by him and the Society which now has a membership of 150 Botanists was brought into being largely by his own efforts and enthusiasm. He was elected its first President and since then he always maintained a keen interest in it. When this Journal was started, it was a very modest and unpretentious undertaking and it often suffered from lack of good articles. Most of the papers were taxonomic notes or floristic descriptions written by a few Botanists who could be counted on one's fingers' ends. In the year 1923, thanks to the efforts of Dr. Dudgeon and some other Botanists, it was taken over by the Indian Botanical Society. Ever since the Journal began to be issued, Dr. Dudgeon determined not to send his papers to any other place for publication, though he all along continued to be a member of the American Botanical Society as well, and might easily have sent his papers to the American Journal of Botany or some other foreign Journal. To his students who were sometimes anxious to have their papers published abroad, he always said ''You are an Indian and should do your best to encourage your own journal''. Today the Journal of the Indian Botanical Society has grown considerably in size and the number

and quality of its papers is a measure of the progress of the study of Botany in this country. It is well known that Dr. Dudgeon contributed a fair share to its development.

Perhaps a scientific Journal like this is not the place to speak too familiarly of him, yet a few incidents of personal contact may not be out of place as they show the real man in him.

I owe so much to him that after I had finished my educational career at Allahabad, I once asked him if I could do anything for him by way of return. Quick came the answer: "Do for your students what I have done for you". I shall never forget that sentence. To me it is pregnant with meaning. I have kept that as my ideal, and have always tried to work up to it. He knew this, and his letters to me showed that he appreciated it.

On one occasion he spoke to me somewhat to this effect; "Panchanan, a Hindu father thinks he has done enough and his life's aim is served if he has a son born and he has been able to give him a good education and has seen him well settled in life. My son is dead (he was killed in a Railway accident in 1923); I wish to leave behind me at least one student who will carry on my name. It will be a great satisfaction if I could push you ahead of me in my life-time". Who knew that he would pass away at a time when I needed him most?

When I went to him for help, he would sometimes keep on with me for long hours and get delayed in his meals. This irritated Mrs. Dudgeon and she never failed to protest, but in this matter she could not bring him round to her way of thinking. During the years 1928 and 1929 he was excessively busy and would seldom find time to look over my work. As he was always disturbed by students and teachers at his bungalow, he would sometimes come over to my room in the hostel after his evening meal and stay till 12 o'clock in the night looking at my slides, offering suggestions and helping in the interpretation of difficult points.

Whenever he was asked for anything he seldom refused. He gave a lot of financial help to several poor students. Some were too poor to purchase books, but used his and retained them for much longer periods than necessary—sometimes several months. This irritated him when it interfered with his own work, but he seldom spoke an unkind word. He was always willing to sacrifice his own time and work for the sake of a sincere student. He was, however, very hard on sluggards and gave expression to his disapprobation in language which though not intended to be offensive, did inflict wounds at times owing to the precision and em-

phasis with which he gave vent to it. Being a strenuous worker himself, he could hardly be expected to tolerate any symptoms of laziness in his students or assistants.

During his life-time Dr. Dudgeon exercised a considerable influence on the Botany of North India and his students are now scattered all over the United Provinces in various Departments of Botany and Agriculture. If he could have had a very few years more of undisturbed work, he could have securely established his reputation as a Botanist in other countries as well. By his death the Indian Botanical Society has lost one of its most enthusiastic members, a man who was loved and admired not only by his students and fellow-workers but by many others in different walks of life. It was his heart's desire to die in India, serving it through the Ewing Christian College. He has left behind him a devoted wife and two daughters. Their grief is the greatest, but they may derive some consolation from the fact that his death is mourned by many others.

PANCHANAN MAHESHWARI.

AGRA COLLEGE,
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