

OBITUARY NOTE

DR. G. D. BHALERAO, D.Sc. (Lond. et Alld.)

THE sudden death of Dr. G. D. Bhalerao, due to heart failure, on the 6th of December 1948, has deprived India of one of its enthusiastic investigators in the field of helminthological research. He was only 51 at the time of his death.

Dr. Bhalerao was born on the 10th of December 1897 at Wardha and received his early school education in his home town. He, then, migrated to Hislop College, Nagpur, and obtained the B.Sc. degree of the University of Allahabad in 1920. There were no arrangements for higher studies at Nagpur in Zoology in those days. He, therefore, went to join the Muir Central College, Allahabad, to work under Dr. W. N. F. Woodland and took the M.Sc. degree in Zoology. He was a conscientious devotee to the cause of scientific research and in order to widen his outlook he went abroad in 1935. While in England, he joined the School of Hygiene and Tropical Medicine, London, and worked under the distinguished guidance of the leading Helminthologist, Professor R. T. Leiper, F.R.S., now Director, Commonwealth Bureau of Agricultural Parasitology, at St. Albans and obtained the Ph.D. and later the D.Sc. from the University of London. He also obtained a D.Sc. degree of the University of Allahabad.

Dr. Bhalerao was interested in teaching and soon after his M.Sc. degree he was selected for an appointment as a lecturer in Biology at Hislop College, Nagpur. Subsequently he served successively on the staff of the University College, Rangoon (Burma) and College of Science, Nagpur. It was at Rangoon that he came in contact with Professor F. J. Meggitt who moulded his career and created his interest for research in Helminthology. He published his first few papers on the Trematode Parasites of Vertebrates under the guidance of his chief. His enthusiasm for helminthological research was likely to grow under suitable conditions and he little knew that it would result in a change of his profession. In 1930, he finally gave up teaching Zoology and accepted the post of a Helminthologist at the Indian Veterinary Research Institute, Mukteswar, Kumaon Hills, U.P., which institution he served till his death. Here he had ample opportunities to carry on researches in his favourite subject. There was a huge collection of helminth materials received from all over the country and library and laboratory facilities which could not be had at any place, not only in the country but perhaps in the east. It was best equipped for research. Under such favourable conditions he devoted himself wholeheartedly to research in helminthology. As a result of his investigations on the collection at Mukteswar, he published several papers describing new forms and gave a revised diagnosis of

those forms that were already known. Finally, in 1935, he published a valuable Monograph on the "Helminth Parasites of Domesticated Animals in India," which work he was, at the time of his death, revising for a second edition under the directions of the Indian Council of Agricultural Research. Needless to say that this monograph is widely used by the investigators in the veterinary departments of the country. Although it has its inherent defects in lacking suitable keys, it is also used by the beginners in helminthological studies at the Universities as one of the books of references.

In 1938, Dr. Bhalerao was entrusted with the arduous task of compiling the "Fauna of British India Volume on Trematoda," a work for which he had amassed an enormous collection of material and literature. I understand this work, at the time of his death, was in a fairly advanced stage of preparation. He had made voluminous index cards with figures and descriptions of the various genera and species already known and also brief summaries of the new forms which he intended to describe. It will, therefore, be in the fitness of things if the authorities recognise the work of his several years' labour and pass it on to a senior helminthologist in the country so that the wealth of knowledge obtained and discovered by Bhalerao may be suitably collated.

Ever since his appointment in 1930, Dr. Bhalerao had been connected with the Indian Institute of Veterinary Research, where he occupied severally the positions of a Helminthologist, an Officer-in-charge of the Veterinary Zoology and at the time of the partition of India, as Officiating Director of the said Institute. He carried out all his duties on these posts with conspicuous success and always earned approbation from his superiors.

Dr. Bhalerao was a member of several scientific societies and Government committees. He presided over the Zoology section of the Indian Science Congress in 1947 and subsequently was the President of the Medical and Veterinary Section of the same body in 1948. He thus attained a fairly eminent position in the scientific field in the country.

Dr. Bhalerao had a thorough knowledge of the systematic Helminthology. He was particularly interested in the field of Veterinary Helminthology which he expressed in his numerous original researches published in various journals, foreign and Indian (A list of his published researches is appended). In one of his contributions, Dr. Bhalerao reports the occurrence of *Schistosoma japonicum* from pigs in India. If this is correct there seems to be a danger of the spread of this infection to man, as it is transmitted to man through the intermediary snail host in China and Japan and may possibly infect man here also. A note of warning must, therefore, be given to those

interested in Public Health in the country to guard against this serious menace to human population as well. In his Presidential Address to the Section of Zoology in 1947, he ably summarised the "Position of Applied Helminthology in India" and brought forward the points that need further elucidation, thereby stressing the need for intensive research in the country. In the meetings of the same section he arranged a symposium on the study of Parasitology in India and thus brought forth the necessity for establishing a research centre in Parasitology on a national basis.

Under the inspiring guidance of Professor R. T. Leiper in England, Bhalerao's love for research in Helminthology increased and he devoted more and more time to the study of control measures. For this purpose he also paid a visit to America to study the latest American methods of control against helminthic infections of the domesticated animals, but unfortunately his results on the application of such methods under Indian conditions could not be made available to us.

During the multifarious activities as a Helminthologist, Dr. Bhalerao was associated with me in several committees, and in discussions on important problems connected with the organisation of helminthological research under the Indian Council of Agricultural Research of the Government of India and helminth control it was always a pleasure to note the thoroughness with which he discussed them. Although a bit excitable in temperament, he was always amenable to reason. A little before his death, I had an opportunity of discussing with him the desirability of establishing a Helminthological Society of India and starting a Journal of Helminthology and we both came to the conclusion that for promoting adequate research in the subject in the country both these were extremely necessary. They both started work during his life-time but he is no longer to nourish this infant body.

In the present transitional stage of our country when India's Sciences are being re-organised under National conditions, his presence will be greatly missed. Personally, I was looking forward to his advice in the organisation of the Helminthological Society of India, and the *Indian Journal of Helminthology*. A recent move for the establishment of a National Research Laboratory for Parasitology (in which he was deeply interested during the latter part of his life) has been denied his support by his sudden death.

It is not easy to assess the extent of the loss that Indian Helminthology has sustained by his sudden death, but he has left behind a wealth of knowledge which is likely to keep his memory alive for a long time to come.

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A LIST OF RESEARCH PUBLICATIONS OF THE LATE DR. G. D. BHALERAO

- 1924 "A contribution to the knowledge of the trematode parasites of the food mammals of Rangoon." *Ann. Trop. Med. and Parasit.*, vol. 18.
- 1926 "The intestinal parasites of the bat, with a list of the trematodes hitherto recorded from Burma." *Jour. Burma Res. Soc.*, vol. 15.
- "On the synonymy of the genera *Isoparorchis* and *Leptolecithal*, with a description of the male genitalia of *Isoparorchis trisimilitubis*." *Ann. Mag. Nat. Hist.*, vol. 17.
- "The trematodes of *Corvus insulens*, with a description of four new species." *Parasit.*, vol. 18.
- "A new species of trematode from *Nycticejus pallidus*, with a key to the species of *Lecithodendrium*." *Ann. Mag. Nat. Hist.*, vol. 18.
- "On the trematodes of the digestive tract of a common Indian frog, *Rana tigrina*, with a description of *Centrovitus pentadelphi* n.g., n.sp." *Parasit.*, vol. 18.
- 1927 "A new species of trematode from *Mabuia dissimilis*." *Ann. Mag. Nat. Hist.*, vol. 3.
- 1929 "The genus *Paradistomum* in Burmese Reptiles." *Ibid.*, vol. 3.
- 1931 "Trematode parasites of pigs in Bengal." *Rec. Ind. Mus.*, vol. 33.
- "Two new trematodes from Reptiles." *Parasit.*, vol. 23.
- "A new species of Acanthocephala from *Ophiocephalus striatus*." *Ann. Mag. Nat. Hist.*, series 10, vol. 7.
- "Two new parasites from king cobra." *Ibid.*, ser. 10, vol. 8.
- 1932 "On some nematode parasites of goats and sheep at Mukteswar." *Ind. Jour. Vet. Sci.*, vol. 2.
- "On the identity of the Schistosomes found in cases of bovine nasal granuloma and some observations on a few other members of the family Schistosomidæ." *Ibid.*, vol. 2.
- "A note on the probability of infection of man and Carnivores by *Isoparorchis hypselobagri*." *Ibid.*, vol. 2.
- 1933 "On two unrecorded nematodes from the abomassum of cattle in India." *Ibid.*, vol. 3.
- "The most practical methods of combating parasitic gastritis and fluke infestation of ruminants under field conditions in India." *Agric. and Livest. in India.*, vol. 3.
- "A new species of *Gongylonema* from the domestic fowls." *Ind. J. Vet. Sci.*, vol. 3.

- “The trematode parasites of the Indian elephant, *E. indicus*.” *Ibid.*, vol. 3.
- “Preliminary note on the life-history of the common liverfluke, *Fasciola gigantica* in India.” *Ibid.*, vol. 3.
- 1934 “On the occurrence of *Schistosoma japonica* in India.” *Ibid.*, vol. 4.
- “On the nematode causing stomach tumours of the *Crocodilus palustris*.” *Ibid.*, vol. 4.
- 1935 “On two monostomes from Avian hosts in India.” *Ibid.*, vol. 5.
- “Anthelmintics for the worms occurring in the alimentary canal of horse.” *Ibid.*, vol. 5.
- “Helminth Parasites of Domesticated Animals in India.” Monograph No. 6. Indian Council of Agricultural Research.
- 1936 “Studies on the Helminths of India. Trematoda. I-IV.” *Jour. Helm.*, vol. 14.
- “On some representatives of the Cestode genus *Avitellina* from India.” *Ibid.*, vol. 14.
- 1937 “On the trematode parasites of a water snake, *Tropidonotus piscator*.” *Parasit.*, vol. 18.
- “On *Pneumotrema travassosi* n.g., n. sp. and two other trematode parasites from the animals dying in the Zoological Society’s gardens during 1936-37.” *Proc. Zool. Soc.*, vol. 107.
- “Schistosomes and Schistosomiasis in India.” Moscow.
- “On a remarkable Acanthocephala from a fowl in India.” *Proc. Zool. Soc.*, vol. 107.
- 1938 “On a new trematode *Travassostomum natrix* from the intestine of the Indian snake, *Natrix piscator*.” *Liv. Jub. Prof. Travassos* (1938).
- 1939 “A few unusual Helminths of domestic animals in India.” *Ind. J. Vet. Sci.*, vol. 9.
- “A brief survey of the development of the knowledge of Trematode fauna of India.” *Vol. Jub. Prof. Yoshida.*, vol. 2.
- 1941 “On the occurrence of the bat fluke, *Prosthodendrium ovimagnosum* in dog.” *Rec. Ind. Mus.*, vol. 43.
- “*Subulura minetti* n.sp. from an Indian fowl.” *Proc. Ind. Acad. Sci.*, vol. 14.
- 1942 “On some Trichostrongyles of domestic ruminants in India.” *Parasit.*, vol. 34.
- “On two helminths of domestic ruminants in India.” *Ibid.*, vol. 34.

- “Some metacercarial forms of Clinostomatidæ from India.” *Proc. Ind. Acad. Sci.*, vol. 16.
- “On a new species of trematode from a spoonbill in Afghanistan.” *Ibid.*, vol. 34.
- “On Strigeida from India.” *Rec. Ind. Mus.*, vol. 45.
- 1943 “The cercarial fauna of the irrigated tract of the Nizam’s Dominions with suggestions regarding their relationship to the trematode parasites in man and domestic and other animals.” *Ind. J. Vet. Sci.*, vol. 13.
- “On two trematodes from fishes in India.” *Proc. Ind. Acad. Sci.*, vol. 18.
- 1944 “Some helminth parasites of poultry.” *Ibid.*, vol. 20.
- “Plant Nematodes, a neglected subject in India.” *Curr. Sci.*, vol. 13.
- “On the occurrence of *Psilochasmus longicirratu*s in *Nyroca ferina* in India.” *Proc. Ind. Acad. Sci.*, vol. 20.
- 1945 “Interesting mode of the life-cycle of the lungworm, *Varestrongylus pneumoniae*.” *Curr. Sci.*, vol. 14.
- “*Loimos secundus* from the gills of the common Indian shark (*Scoliodon sorokowah*).” *Proc. Ind. Acad. Sci.*, vol. 22.
- 1947 “Applied Helminthology, its past and future in India.” Presidential Address. *Ind. Sci. Cong.*
- 1948 “Blood Fluke Problem in India.” *Ind. Sci. Cong.*, Patna (Presidential Address).