

THE PROFESSIONAL CAREER OF JOHN (JACK) H. SIMMONDS

The following discourse was written by Gordon S. Purss in support of an Honorary Doctor of Science for Jack H. Simmonds, former Director of the Plant Pathology Branch of the Queensland Department of Primary Industries. The original, hand-typed document, initialed G.P. and dated 30 May 1969, is now stored in the files of the DPI&F Plant Disease Herbarium.

Andrew D. W. Geering, 29 June 2008

Mr. J.H. Simmonds graduated from the University of Queensland in 1923 completing a 1st class Honours Degree in Science. He was appointed to the staff of the Entomology Branch of the Department of Agriculture and Stock in that year.

In August 1924 he returned to the University to undertake post graduate specialist training in plant pathology. He returned to the Department on 1st January 1923, after gaining his Master of Science degree and was appointed the first full time plant pathologist. He became responsible for the investigation of all plant diseases and produced a steady stream of publications from 1927 until his retirement in 1966.

From March 1931 until April 1932, Mr. Simmonds was granted leave without pay to undertake an overseas tour. This was devoted to visiting institutions carrying out research into Plant Pathology in U.S.A., Canada, Europe, North Africa (Egypt), Palestine, India, Malaya and Java. He undertook a post graduate course at the Imperial College in London for one term. That Mr. Simmonds should undertake such a tour, at considerable personal expense to equip himself more adequately for the task indicates the devotion he had to his profession. This was at a time when there was not the enlightened attitude that exists today towards such tours.

With the advent of World War II Mr. Simmonds joined the A.I.F. as a Captain and rose to the rank of Major. He was appointed to the 11th Malaria Unit and was awarded an M.B.E. for his work on mosquito control carried out at great personal risk. He applied DDT in pioneering field work and his report attracted world attention.

He returned to the Department in 1946 as Officer-in-Charge of the Science Branch. Despite his administrative duties in Plant Pathology, Entomology and Botany he still continued with an active research programme as his publication list testifies. Later the three branches obtained separate status and Mr. Simmonds continued to control Plant Pathology. In 1961, as he approached retirement he relinquished his administrative position in order to complete a number of projects to which he attached great importance. He also felt that this action would mean that younger men would have a chance for advancement.

Research activities

These activities covered a wide field but it is in the field of tropical fruit crop research that Mr. Simmonds left his greatest mark making notable contributions in bananas, pineapples, passion fruit and papaw. Among his outstanding contributions are his studies on leaf spot (*Mycosphaerella musicola*) on bananas under Queensland conditions. His work on the epidemiology of this disease set the pattern for control programmes worked out in later years. He described the fungal species *Alternaria passiflorae* the casual agent of brown spot of the passion vine. He did detailed field studies on the etiology and epidemiology of another new disease of passion fruit, powdery spot and fruit scab (*Cladosporium herbarum*). He was one of the first workers to use the concept of mild strain protection to control a virus disease in the field – the woodiness virus of the passion vine. He was associated with the early work on squinter disease of banana and in 1933 showed that it was caused by a parasitic fungus (*Nigrospora sphaerica*). With R.S. Mitchell he formulated control measures for this disease which are still in use today. With this same author he published a bulletin on the etiology and epidemiology of anthracnose and black-end of banana which was also an outstanding contribution.

His special field was however fruit rots of tropical fruit and he won an international reputation in this work. His paper "Latent infection in tropical fruits discussed in relation to the part played by species of *Gleosporium* and *Colletotrichum*" published in 1941 stands high in the annals of plant pathological literature. In it he described the nature of latent infection in fruit, a matter which had been hypothesized by not clearly demonstrated previously. This paper was supplemented by a further publication in 1963 in which explanations for latent infections were thoroughly investigated. Mr. Simmonds in 1965 published "A Study of the species of *Colletotrichum* causing ripe fruit rots in Queensland" in which his detailed work in the sorting out of the taxonomy of the species of *Colletotrichum* involved in ripe fruit rots is described. He designated a new form of *Colletotrichum gloeosporioides* and a new species, *Colletotrichum acutatum*. There is no doubt that these three papers together constitute a most significant contribution to plant pathological knowledge. Considered in the context of knowledge of the era his paper in 1941 was quite outstanding.

Mr. Simmonds' final contribution before his retirement, the Host Index of Plant Diseases in Queensland, was published in 1966. This was a monumental task requiring an enormous amount of mycological taxonomic work. It is a complete record of all plant diseases and their casual organisms recorded in Queensland and has created intense interest not only in Queensland but throughout Australia and overseas countries. It is one of the best publications of its kind.

Research leadership

Under Mr. Simmonds' leadership the plant pathology section of the Department of Primary Industries developed steadily. At the time of his retirement in 1966 there were twenty scientists in the section with activities ranging from specialist activity in virology, bacteriology and mycology to plant pathologists situated at seven field stations throughout Queensland.

He encouraged an inquiring mind amongst his staff which he administered with a minimum of red tape. He allowed workers to develop their own particular attitudes towards problems encouraging them always to look beneath the surface, to be perhaps a little fundamental in approach. The aim always was a better understanding of diseases and with this a better chance of control. Perhaps the overall approach he encouraged is best illustrated by a statement in the introduction to one of his own papers:

"These questions are of more than academic interest, since a more thorough knowledge of the mechanism of latent infection will contribute very largely towards the practical solution of the ripe rot problem.

Above all the example he set both in originality and application was instrumental in moulding his staff into a fine research team. The reputation of plant pathology in Queensland as a result stands high, not only in the rest of Australia, but in overseas countries as well.

Extension Work In Plant Pathology

In his early days as a plant pathologist Mr. Simmonds was concerned that knowledge of diseases of all crops should be disseminated widely. This meant carrying out many field experiments to demonstrate control in diverse crops. Many advisory leaflets were prepared by him and these were assembled in two publications 1) Pests and Diseases of Queensland Fruits and Vegetables by R. Veitch and J.H. Simmonds in 1929 and 2) "Queensland Plant Diseases and their Control" a section of Qld Agricultural and Pastoral Handbook Volume III in 1938. He was later associated with a revision of this publication with other officers of the Science Branch as a result of which Volume III of the Agricultural and Pastoral handbook was published in 1951. That such publications could be produced by a man carrying on a full time research programme is a tribute to his application and dedication.

In the list of publications that follows extension articles which were later grouped together in the handbooks published in 1929 and 1938 have not been listed.

General

Mr. Simmonds' major contributions to science in general and plant pathology in particular may be listed as follows:-

1. He is regarded as one of the "fathers" of plant pathology in Australia.
2. His untiring efforts and loyalty to Queensland resulted in the development of the Plant Pathology Section within the Department of Primary Industries. It is one of the major groups engaged in plant disease studies in the Commonwealth and certainly the leader in the pathology of tropical crops.
3. Under his leadership and through his own personal effort the Plant Pathology Section has made an immeasurable and lasting contribution to the primary industries of Queensland both in plant disease research and extension activities.
4. His published and unpublished contributions to science are of major and lasting significance.
5. He served with distinction on many industry and Department committees and boards and was a member of the editorial board of the Queensland Journal of Agricultural Science.
6. Mr. J.H. Simmonds is a man of considerable scholarship and although his ability and intelligence are well above average he always found time to foster and encourage the most junior staff member. The award of a military M.B.E. bears testimony to his great personal attributes. He is a humble man imbued with the highest of ideals.

Publications

SIMMONDS, J.H. (1929). – Diseases of pineapples. Qd Agric. J. 32:398-405.

VEITCH, R. and SIMMONDS, J.H. (1929). – Pests and Diseases of Queensland Fruits and Vegetables. Govt. Printer, Brisbane.

SIMMONDS, J.H. (1930). – Brown spot of the passion vine. Qd Agric. J. 34:564-585.

SIMMONDS, J.H. (1931). – Soft rot (water blister) of pineapples. Qd Agric. J. 36:394-398.

DICKSON, B.T., ANGELL, H.R. and SIMMONDS, J.H. (1931). – The control of soft rot (water blister) of pineapples cause by *Thielaviopsis paradoxa*. J. Coun. Sci. Ind. Res. 4:152-161.

- SIMMONDS, J.H. (1932). – Powdery spot and fruit scab of the passion vine. Qd Agric. J. 38:143-152.
- SIMMONDS, J.H. (1933). – Banana leaf spot. Qd Agric. J. 39:21-40.
- SIMMONDS, J.H. (1933b). – Squirter Disease of bananas. Qd Agric. J 40:98-115
- SIMMONDS, J.H. (1935). – Diseases of the banana. Qd Agric. J. 43:254-267
- SIMMONDS, J.H. (1937). – Diseases of the papaw. Qd Agric. J. 48:544-552
- SIMMONDS, J.H., and MITCHELL, R.S. (1937). – The squirter disease in bananas with special reference to its control. Qd Agric J. 47:542-548
- SIMMONDS, J.H. and MANDELSON, L.F. (1937). – the treatment of tobacco seed-bed covers to prolong their useful life. Qd Agric. J. 48:112-115
- SIMMONDS, J.H. (1938). – "Queensland Plant Diseases and their Control". (Government Printer, Brisbane); and in "Queensland Agricultural and Pastoral Handbook, vol. III". (Government Printer, Brisbane).
- SIMMONDS, J.H. (1938b). – *Alternaria passiflorae* n. sp., the causal organism of brown spot of the passion vine. Proc. Roy. Soc. Qd 49:15-151
- SIMMONDS, J.H. (1939). – The influence of seasonal conditions on the development of *Cercospora* leaf spot of the banana, with special reference to the control programme. Qd Agric. J. 52:633-647.
- SIMMONDS, J.H. and MITCHELL R.S. (1940). – Black end and anthracnose of the banana with special reference to *Gloeosporium musarum* Cke. & Mass, Coun. Sci. Industr. Res. Aust. Bull. 131.
- SIMMONDS, J.H. (1941). – Latent infections in tropical fruits discussed in relation to the part played by species of *Gloeosporium* and *Colletotrichum*. Proc. Roy. Soc. Qd 52:92-120.
- SIMMONDS, J.H. (1951). – A little known parasitic flowering plant. Qd Nat. 14:66-68.
- SIMMONDS, J.H. (1959). – Mild strain protection as a means of reducing losses from the Queensland woodiness virus in the passion vine. Qd J. Agric. Sci. 16:371-380.
- SIMMONDS, J.H. (1963). – Studies in the latent phase of *Colletotrichum* species causing ripe rots of tropical fruits. Qd J. Agric. Sci. 20:373-424.
- SIMMONDS, J.H. (1965). – Papaw diseases. Qd Agric. J. 91:666-677.
- SIMMONDS, J.H. (1965b). – A study of the species of *Colletotrichum* causing ripe fruit rots in Queensland. Qd J. Agric. Anim. Sci. 22:437-459.
- SIMMONDS, J.H. (1966) – Host Index of Plant Diseases in Queensland. Govt. Printer, Brisbane.

Type specimens of *Colletotrichum gloeosporioides* var. *minor* and *Colletotrichum acutatum*

By J.H. Simmonds

The above organisms were described in the Queensland Journal of Agricultural and Animal Sciences 22:437-459, 1965. It was there stated that representative dried cultures had been deposited in the Herbaria of the Botany Department of the University of Queensland and the Commonwealth Mycological Institute. Unfortunately no single specimen was designated as a type. The type of the name concerned is as follows:

Colletotrichum gloeosporioides Penz. var. *minor* J.H. Simmonds (Qd J. Agric. Anim. Sci. 22:437-459, 1965). Type: IMI 117612, isolated from *Carica papaya*, Ormiston, 1965. Paratypes: IMI 117613-117616; BRIU 2438-2441.

Colletotrichum acutatum J.H. Simmonds (Qd J. Agric. Anim. Sci. 22:437-459, 1965). Type: IMI 117617, isolated from *Carica papaya*, Ormiston, 1965. Paratypes: IMI 117618-117623; BRIU 2431-2437.