

HANS FERDINAND LINSKENS: AN APPRECIATION

In the field of angiosperm reproductive physiology and biochemistry Professor Hans Ferdinand Linskens occupies a position of the highest renown: respected and admired in laboratories the world over for his contributions to the science over thirty-five years, and among his personal friends, looked upon with affection for his warm and kindly personality. It is altogether fitting that this special issue of *Acta Botanica Neerlandica* should be dedicated to him by his colleagues and former students as a token of appreciation, and I am myself honoured to have been asked to contribute a few introductory paragraphs.

I first met him at the IXth Botanical Congress in Montreal in 1959, when he gave a paper on biochemical aspects of incompatibility systems. He was reporting on that occasion on several intriguingly new approaches to old but vitally important problems in angiosperm reproduction. His talk was certainly memorable in opening up new vistas for those concerned with research in the field, for he was already at that time an enthusiastic adventurer in what we now call plant cell biology – that fruitful combination of genetics, cytology, biochemistry and physiology that has contributed so much to our understanding of plant developmental processes in the last quarter-century.

From his distinguished teacher, Professor Dr. J. Straub, Linskens had inherited not only an abiding interest in self-incompatibility systems, but also the experimental plant, *Petunia hybrida*, which has served him well throughout his scientific career. It was this plant that he first applied serological methods in the search for the specificities associated with the S-gene system – and with *Petunia*, also, using the then state-of-the-art techniques, he was able to demonstrate some of the major metabolic differences that characterise cross- and self-pollinated styles. This pioneering work of 30 years ago was the first to bring a truly modern viewpoint to bear on the problems of angiosperm self-incompatibility. This is not the place to detail its many aspects; but one may be picked out as quite remarkably forward-looking – namely Linskens' identification at this early date of the stylar glycoproteins as probable factors in the control of pollentube growth and in the inhibitory reactions of self-incompatibility systems. Many theories of the incompatibility reaction have fallen by the wayside, and we still lack a comprehensive explanation of how it all works; but there are few who would contest today that Linskens was correct in supposing that glycoprotein-carbohydrate interactions lie near the heart of the matter. Plant reproductive physiologists will recall many other scientific "firsts" gained during his long career – among them his application, with Mühlethaler, of electron microscopy to elucidate the fine-structure of the pollen tube; his work with Heinen on pollen cutinases; his studies of the function of the tapetum in pollen development; and not least – a scientifically minor but technically most profitable contribution

– the development with Esser of the aniline-blue fluorescence method for detecting pollen tubes in the style.

In the late 1950s and during the 1960s the Botany Department in the University of Nijmegen progressed rapidly to the status of a world centre for work on flowering-plant reproductive biology under Linskens' guidance. One of the high spots of the period was the conference he organised there in 1964 on pollen biology. This was but the first of what has turned into a regular series of such meetings in various parts of the world, but for those who were there it must surely stand out as one of the most memorable. The number of those involved in research on pollen physiology, biochemistry and cytology around the world was then relatively small, and essentially all the active workers attended. Many met there for the first time, and all will surely recall with pleasure not only the invigorating sessions but also the social side – including the splendid evening at the Linskens home.

To the University of Nijmegen Linskens has been faithful throughout the major part of his academic career. He assumed the chair there in 1957, having moved from the Federal Institute of Technology, Zürich, where he had been in Professor Dr. Gäumann's Department. Over the years he has not been without temptation, however, for as his scientific reputation grew he was offered chairs in Fribourg, Munich and Bonn – and I am sure he also had many opportunities put in his way to take up senior appointments in universities and research institutions in the U.S. had he so wished. But Nijmegen has evidently offered him the things he has most desired: congenial colleagues, good students, the freedom to travel, and of course the research opportunities which he has exploited so effectively.

No appreciation of Linskens would be complete without some reference to his editorial activities. His time has been freely given to research journals, at present no less than nine in number. As important has been his editorship of multi-author and encyclopedia volumes. In undertaking work of this kind he has displayed a special devotion to his subject, and a high degree of selflessness in the service of colleagues.

No-one is likely to believe that Linskens' retirement from his department will mean the end of his dedication to science. He has a bent for travel, and I imagine he will be able to indulge this in working visits to laboratories in almost any continent he may choose. So we will look forward to more contributions; and we wish him many happy years ahead in which to make them.

J. Heslop-Harrison

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