

| JACOBUS (KOBUS) ELOFF |



TOP THREE AWARDS

- Science-for-Society Gold Medal of the Academy of Science of South Africa, 2012
- Gold Medal of the South African Association of Botanists, 2013
- MT Steyn Prize of the *Suid-Afrikaanse Akademie vir Wetenskap en Kuns*, 2015

DEFINING MOMENT

Being treated by senior scholars with support and generosity.

WHAT PEOPLE DO NOT KNOW

"I'm a dedicated Christian, I believe that where there is love and caring, God is present. But, perhaps people don't know about my regret. There was a time in my life when I was selfish and arrogant. I hope that I have changed. Now, I follow the advice of Ralph Waldo Emerson who said 'Happiness is a perfume you cannot pour on others without getting some on yourself'."

JACK-OF-ALL-TRADES ACHIEVES SUCCESS

Twenty years ago, when the Academy of Science of South Africa was established, Jacobus (Kobus) Nicolaas Eloff, then already in his mid-fifties, was invited, as Director of the National Botanical Gardens, to become a founding member of the Academy. However, once his CV had been reviewed, Eloff's founding membership was declined on the grounds that his scholarly achievements were "rather meagre".

Twenty years later, Professor Eloff is an ASSAf Member and Gold medallist; an Honorary Life Member and Gold Medallist of the South African Association of Botanists; a council member of the *Suid-Afrikaanse Akademie vir Wetenskap en Kuns* (SAAWK); an internationally recognised leader in his field; an NRF B-rated scientist (until 2021); and the author or co-author of over 250 peer-reviewed scientific publications – with 20 more already accepted for publication. This incongruity is probably due to his nature as an archetypal *Lévi Straussian bricoleur* – a man who has, both practically and intellectually, built almost everything he has achieved from what he has found available to him: changing, adding and developing his skills and research foci as his academic and practical career developed.

Eloff was born in Westdene in Johannesburg, attended the three-teacher Boskop Primary School after his family moved to a smallholding in Honeydew, moving on to Helpmekaar High School and then to the Florida Dual Medium School once a school bus service was instituted. He had to cycle a round trip of 20 kilometres so that he could play rugby and cricket. An average student, however, he says that his children once found a school report from an encouraging teacher in matric who wrote "Why not try for 60% next term, Kobus?"

His first year at the Potchefstroom University for Christian Higher Education (PU for CHE – and now North-West University) was filled with trepidation: his school performance had been far from stellar; he was from a working class background; neither of his parents had completed high school; and he was the first person in both of his parental families to attend university. Not surprisingly, he found the university environment to be unfamiliar – even

strange and threatening – and without any family members to whom he could turn for support in this new world. In 1956, PU was a small university – and he notes that the only student in the entire university who had an old car was Andre P Brink – who was already writing for local magazines and earning enough to buy and run the car.

It is most significant, however, that this strange and daunting environment was made first tolerable, and then a happy adventure, by the kindness and support he received from the academic staff with whom he had contact. He was encouraged and, as a result, flourished, and was then further encouraged to extend his course work and to diversify his areas of research. Originally intending to major in chemistry and physiology, the Dean of Science offered him a deal: change your majors to chemistry and botany, and the university will provide a bursary to do an Honours degree in botany. This was the first defining moment in his life: that senior scientists would treat him as they did – with support and generosity despite (or, perhaps, because of?) his background. Those experiences shaped much of his subsequent teaching and research career, his attitude and approach towards his own students and fostered his life as a *bricoleur*.

In 1959, Eloff graduated with a BSc degree in botany and chemistry and, a year later, with a BSc Honours degree in chemistry. In 1961, with his Honours degree completed, he was appointed as a Professional Research Officer by the Agricultural Research Institute (ARI) for the Highveld region and, a year later, he completed an MSc degree in chemistry.

BIRTH OF A BRICOLEUR

Here the role of *bricoleur* began to take shape – his work in the ARI encouraged him to study for a part-time BSc Honours degree in botany, which he completed in 1963 and, in the following year, was appointed as a temporary, stand-in, lecturer in plant physiology and biochemistry at the University of Pretoria (UP).

While lecturing at UP, he completed accreditation for a second Masters degree, this time in plant biochemistry. With two Honours degrees (one in

chemistry and the other in botany) and two Masters degrees to his credit, Eloff completed the DSc degree (in plant biochemistry) and in 1968 returned to his *alma mater* in Potchefstroom as a lecturer in botany. Ever the *bricoleur*, he soon made his way to the University of the Free State, which lured him away from PU to become a Professor of botany (with a great deal more to offer than botany) where he remained for 13 years. During this period he spent a year on sabbatical with his wife and two daughters in Israel and, a few years later, a year in the USA working on the toxic cyanobacterium *Microcystis aeruginosa*.

The need for change led him to Kirstenbosch where, in 1983, he became the Executive Director of the National Botanical Gardens and Harold Pearson Professor of Botany at the University of Cape Town (UCT). In this position, he was primarily a manager, and needed new skills. Eloff completed a certificate in executive management at Stellenbosch University (SU) in 1984 (a year after becoming Executive Director) in order to develop his managerial skills and, in 1986, was awarded a certificate in strategic management. At about that time he started the initiative and was appointed by the Minister for Environmental Affairs and Forestry to merge the National Botanical Gardens (NBG) and the Botanical Research Institute to become the National Botanical Institute (NBI) and advise on changes to the Forestry Act to enable the amalgamation. He was then appointed as Director of Research and moved from Cape Town to Pretoria. At the same time, however, he became an Honorary Professor at SU and UP and at the Rand Afrikaans University (now the University of Johannesburg).

Eloff found this to be a challenging appointment: priorities in the NBI were changed, most of the available funding was directed to the gardens, while he struggled to find funds for research. And so, in 1994, at the age of 55, he decided to take early retirement from the NBI, thinking that his qualifications and managerial experience would ensure him a new position. But in 1994, 55-year old white men were not necessarily considered to be suitable employees. He applied for 20 positions and was turned down in all 20 instances.

In addition to starting a new consultancy, Pro Scientia, he decided to become a builder on the basis of having previously built two houses. He

bought a very difficult steep plot and began building a new house, engaging, as his construction staff, unemployed but skilled people who were looking for work. Then, in 1995, when the house was not yet completed, he was appointed as senior lecturer in pharmacology at UP to teach in the area of medicinal plants (yet another example of bringing his tool bag into use). In this position, he found himself primarily teaching pharmacy students (and later students who had studied in other fields) and, at the same time, spent many hours teaching himself. Through this process, he became acquainted with the research in the field – and it was due to this self-motivated learning that he published two papers dealing with what he discovered to be gaps in the field. Between them, those two papers were cited almost 2 000 times.

By this time, Eloff was nearing 60, and in 1999, he had to retire in line with the UP human resource policy at that stage. He was, however, still supervising many postgraduate students, and the Vice-Principal at UP at the time, Prof Theuns Erasmus, made funding available so that he could be re-employed on the basis of a fixed-term contract that would allow him to continue his supervisory and research responsibilities. After rationalisation of faculties at the university he moved with his group to the Faculty of Veterinary Science at Onderstepoort where he was later promoted to the position that he now still holds at the age of 76, Research Professor, Faculty of Veterinary Science, at UP. As he puts it, his one year fixed-term contract has been renewed 17 times to date.

During the course of his 54 years as a scientist – working in research and management – he has published (as author or co-author) some 250 scholarly papers with more than 200 in the field of phytomedicine. He has also published more than 90 conference abstracts since 1998 and has made almost 400 conference presentations in most cases jointly with his postgraduate students. He has also registered six patents (between 2004 and 2014) with a further two pending. He is or was a member of 20 local and international scholarly associations, for many of which he has served as the Chair, Vice-Chair or a board member. Eloff has also worked jointly with colleagues, as a teacher and researcher, with 20 international universities and commissions. Underscoring his international reputation and the ability

to make the most of what is at hand are the invitations he has received to serve as a reviewer for 266 different scientific journals. He was an Elsevier top reviewer in 2010 and has also been the editor of six volumes of the *Annals of Kirstenbosch Botanical Gardens* and several books. He is presently section Editor of *BMC Complementary and Alternative Medicine*, editor of the *Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie*, a member of the editorial panel of the *South African Journal of Botany*, and of the *African Journal of Traditional Complementary and Alternative Medicine*. He turned down invitations to join editorial boards of 32 other scientific journals.

Asked to identify his most important contributions to scientific knowledge, he identified the amalgamation of the NBG and the NBI, the production of the first *African Herbal Pharmacopoeia* and his decades as editor of scientific journals and several highly cited papers.

Eloff sees this support to students as a reflection of his own experience as an underprepared, estranged student in his first days at PU. He sees himself in his students, even at their relatively advanced level, as young people who could best make progress if they received the understanding, gener-

ous support that he received when, as a 20-year old, he entered a world both foreign and potentially uninviting. For the past 13 years, it has been his aim to make students from all over Africa who are new to postgraduate studies feel that they are at home and supported in an unfamiliar university and facing unfamiliar, even new, scientific languages.

Happy with the honours and awards that he has received, he is quick to point out that it is the work of his students that is rewarded, and that in Ecclesiastes, Solomon is recorded as saying: "I saw that the swiftest person does not always win the race nor the strongest man the battle...but it is all by chance, by happening at the right place at the right time". One of his favourite quotes summarising his life is also from Ecclesiastes: "To enjoy your work and to accept your lot in life – that is indeed a gift from God. The person who does that will not have to look back with sorrow on his past, for God gives him joy".

Although his two daughters and his five grandchildren are overseas, his life is filled with joy especially because he and his wife, Christna, are now even more in love than when they were married 52 years ago.



Academy of Science of South Africa (ASSAf)

ASSAf Research Repository

<http://research.assaf.org.za/>

A. Academy of Science of South Africa (ASSAf) Publications

C. ASSAf Policymakers' Booklets

2017

Legends of South African Science

Academy of Science of South Africa (ASSAf)

Academy of Science of South Africa

Academy of Science of South Africa (ASSAf), (2017). Legends of South African Science.

[Online] Available at: DOI <http://dx.doi.org/10.17159/assaf.2016/0012>

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