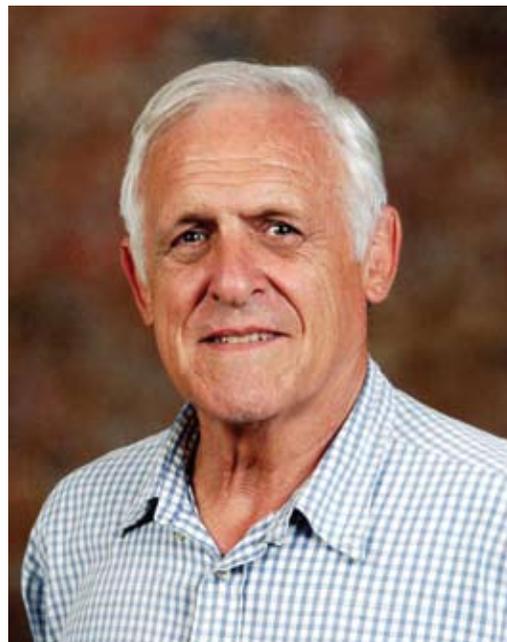


**Jan H. GILIOMEЕ****One of the Fathers of Male Scale Insect Morphology – and Much More***Chris Hodgson*

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It is with great pleasure that I tell you that the Advisory Committee of the XIIIth International Symposium on Scale Insect Studies, held in Sofia, Bulgaria, has decided to honour Jan Giliomee for his life's work, particularly that relating to his studies on the morphology of adult male scale insects.

Although we are now beginning to have a fairly good understanding of the morphology of adult male Coccoidea, remarkably little was known about them back in the 1950's, even though some of the earlier workers considered that their morphology might throw much light on coccoid phylogeny. This situation all changed in about 1960. At this time, K. L. Boratynski was lecturing at Imperial College, London, and he persuaded Johan Theron, from South Africa, followed by three other researchers (of whom Jan was one), to make morphological and taxonomic studies of scale insect families. The resulting monographs have become the bedrock upon which all other studies of males have been based.

Jan Giliomee met Theron in Stellenbosch University and, for his Master's degree, was persuaded to make a morphological and taxonomic study of the males of three mealybug species. Having complet-

ed that, Jan received a Commonwealth Scholarship to study for a PhD at Imperial College, and Theron recommended Jan to study males under Boratynski. Thus, Jan became the third of the four PhD students who studied coccoid males at Imperial College: first Theron, then Ghauri, who studied diaspidid males, and then Jan working on the soft scales (Coccidae). Later, Afifi would study the pseudococcids and eriococcids. These studies transformed our knowledge of male scale insect morphology. I have two copies of Jan's monograph and they are easily the most thumbed and worn papers that I have – indeed one of them is almost falling apart. I think that the best way to judge the quality of a morphological study is whether one needs to borrow specimens to confirm some detail in the published description, something that we all feel necessary from time to time. The detail in Jan's work is such that this is not necessary. Whereas one often has doubts about descriptions in other works, there is never any doubt about details in Jan's male Coccidae descriptions. As an indication of the quality of this work, a recent phylogenetic study of scale insect families based on adult male morphology used data taken mainly from published descriptions. The data matrix for this analysis had

NO gaps for the species studied by Jan, whereas those for most other groups had gaps due to missing data. In addition, the quality of his illustrations was exceptional (although they are printed quite small in his monograph, in fact they were drawn on A2 sheets of paper). Very modestly, he told me that he thinks that his “greatest contribution to the science of coccid males was the discovery that I did not have to label all the characters on all the drawings”! This clearly belittles the quality of the drawings and descriptions. Indeed, shortly after Afifi arrived to study the pseudococcids, Jan met him and discovered that Afifi had *already* started to write his acknowledgments!! – and, in addition to thanking the Egyptian government for sponsoring his studies, he had also thanked Jan for helping him with techniques etc!! A very early endorsement.

Jan’s first degree was in Agriculture and much of his research since has been in the areas of ecology and biological control. However, whilst undertaking these studies, he quickly became aware of the deteriorating environment – long before the Green movement became fashionable – and he became an environmental activist, fighting various battles against developers through the Society for the Protection of the Environment, which he and two friends had founded. This led him to take a Master’s degree in Urban and Regional Development! During this time he also met Ian McHarg, the famous ecological planner and author of “Design with Nature” who, impressed by the combination of natural history and planning, invited Jan to spend a year with him at the University of Pennsylvania as a visiting Professor, which he did in 1975. On his return to Stellenbosch, he had a major career decision to make – to stay with insects or to become a planner. He says that he chose the former “because I loved insects more than roads and sewers”! However, he kept up his involvement in planning in the Cape area, being the Chairman of a series of Environmental Monitoring committees, which considered such major developments as a new steel factory on a Ramsar site at Saldanha, in the Western Cape, and the extension of the iron-ore export harbour, also at Saldanha. It is very clear that Jan is a busy and versatile man, who is very concerned about changes to his bellowed country - but is a biologist at heart.

I am not sure where Jan spent his youth but, apart from many overseas trips, he has spent his life

associated with Stellenbosch University. He took his first degree there – and met Warnia, his future wife in a Zoology class. Apparently, during the holidays, Warnia’s family used to stay with Jan’s uncle close to where Jan worked – and Jan’s uncle asked Jan to teach her how to drive. Jan reports that “The rest is history – the irony is that, after 53 years of marriage, it is Warnia who is now telling me how to drive!” They now live in a beautiful house in the suburbs of Stellenbosch where they make their many guests very welcome.

Jan did not just study the morphology of males of the family Coccidae. On his return to South Africa, he continued to take an interest in this area and, along with Jack Munting (who sadly died earlier this year, see obituary), made the first descriptions of adult male Lecanodiaspididae and Asterolecaniidae. One of the major features that came out of all these studies was that, whilst male scale insects all look very similar at a quick glance, the morphology of each family is so different that unidentified males can usually be placed into a family quite easily.

During his long career, Jan has published 135 papers in peer-reviewed journals, plus many others in semi-technical journals, international conference proceedings and local journals and magazines. Jan has had 12 PhD and 23 MSc students. Most of these have worked on problems associated with agriculture but four of his students have worked on scale insects, namely Loubser, who described the morphology of two *Dactylopius* species (still the only good male descriptions of this family); De Klerk, who worked on the biology and control of *Margarodes capensis*; Wakgari who studied *Ceroplastes destructor* and mealybugs on citrus, and Todd Johnson, who worked on the biology and control of *Paracoccus burnerae*. He and his students published about 35 papers on these various scale insect problems. However, Jan’s entomological interests have been much broader. In addition to approximately 100 articles on agricultural problems (covering stem borers, mites, weevils, thrips, house and other flies, nematodes – and even moles!), he was very interested in ecology and the local environment, particularly Proteas, fynbos and ants and has published a further 35 or so papers in this general area, looking into such subjects as seed dispersal by ants and the effects of fire. This interest in the local environment and conservation has led him to manage (for 20 years) a beautiful nature re-

serve in the centre of Stellenbosch, and prevent it from urban development.

Jan became a full Professor in the University of Stellenbosch in 1987 and is currently a Research Associate there. He has been President of the Entomological Society of South Africa and Chairman or a member of about 15 committees, almost all relating to conservation or planning - but was also a member of the Board of Trustees to the South African National Gallery for 6 years! He has received various awards, including “Golden Protea of the Land Service Movement” (1994), “Distinguished scientist award from the African Crop Science Society” in Lagos (2001), and the “Stals Prize for Environmental Sciences” from the Die Suid-Afrikaanse Akademie

vir Wtenskap en Kuns (The South African Academy of Science and Art) (2004).

Even having achieved all that, Jan is modest and says “Here I am a big frog in a small pond ...” but it is clear that he has made the most of his opportunities to everyone’s benefit. He is a strong family man, and has a great sense of humour. Indeed, on visiting Doug Williams in the Natural History Museum, London, he announced himself as “Targioni Tozzetti to visit Dr. Williams”! Jan is also extremely generous and has entertained many of us over the years at his house in Stellenbosch and continues to have an undiminished love of life. I feel sure that he still has much to offer - I still get scale insects at regular intervals to ID!

