

Prof. dr. Pedro W. Crous

PERSONAL AND CONTACT DETAILS

Married to Karina L. Crous. Two children: a son, Max, and daughter, Mia.
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EDUCATION

B.Sc. Forestry (1985); University of Stellenbosch (Stellenbosch, South Africa)
M.Sc.Agric. (*cum laude*) (1988); University of Stellenbosch (Stellenbosch, South Africa)
Ph.D.(Agric.) (1992); University of the Orange Free State (Bloemfontein, South Africa)
DSc (2009); University of Pretoria (Pretoria, South Africa)

PRESENT POSITION

Director of the CBS Fungal Biodiversity Centre, an Institute of the Royal Dutch Academy of Arts and Sciences, Utrecht, Netherlands, Secretary-General of the International Mycological Association, and Professor at the Universities of Stellenbosch, Pretoria and Free State (South Africa), Utrecht and Wageningen (Netherlands), Melbourne (Australia)

AWARDS AND HONOURS

1994 President's award from the SA Foundation of Research Development
1997 Fulbright Fellowship
1999 Alexopolous Award from the Mycological Society of America
2000 Award for outstanding research from the Rector of Stellenbosch University
2001 Havenga Award for Biological Sciences from the SA Academy for Arts and Science
2002 A-rating from the National Research Foundation in South Africa
2005 Hendrik Persoon Award from the Southern African Society for Plant Pathology
2006 President of International Mycological Association
2007 Fellow of Linnaean Society
2010 Elected Corresponding Member of the Royal Academy for Overseas Sciences
2011 Founders' Award from the European Mycological Association
2012 Honorary membership of the Mycological Society of America
2013 Elected Fellow of the Southern African Society for Plant Pathology

PUBLICATIONS

25+ Books; 9 Chapters in books
500+ Full-length articles in ISI journals; H-index = 53, Av. Citation-index = 25.8

PRESENTATIONS

500+ papers at symposia
Invited lectures in Australia, Brazil, Canada, China, Denmark, England, France, Germany, Italy, Mexico, New Zealand, Norway, Portugal, Scotland, South Africa, Sweden, Switzerland, Taiwan, Thailand, The Netherlands, Tunisia, USA, Zimbabwe.
Organised symposia in the USA, Australia, Italy, Canada, New Zealand, South Africa, and hosted workshops in the USA, Australia and Canada.

SUPERVISION OF POST-GRADUATE STUDENTS

Supervisor or co-supervisor of 26 completed master's theses and promoter or co-promoter of 20 doctoral dissertations.

Research laboratories also include 8 post-doctoral students (NL & SA).

FIELD OF RESEARCH

Teaching

Biosystematics and plant pathology

Research

Systematics and phylogeny of plant pathogenic fungi.

As phytomycologist my main interest lies in the evolution and phylogeny of plant pathogenic fungi, especially *Dothideomycetes*, *Diaporthales* and *Hypocreales*. Understanding and defining

species means that the importance of sex (recombination) cannot be ignored. My research has shown that many plant pathogens have both mating type genes, and may be having cryptic sex, which again has serious implications for disease control and rates of evolution. I am interested in intra- and interspecies variation, and how this relates to host specificity and speciation. I actively pursue integrating DNA data with morphology and ecology. In this regard I initiated MycoBank to capture all fungal names, and now am linking taxa to their DNA data, cultures, specimens and ecology. A main aim of my group is to determine the genetic variation within species and populations, and to develop molecular tools enabling the rapid detection of such pathogens with relation to quarantine and trade. Although situated in the Netherlands, my group consists of postdocs and students in several countries in Europe, Africa, Asia and South America.

Biography

As director of the worlds largest fungal Biological Resource Centre, Pedro Crous has initiated several major activities to facilitate global research on fungal biodiversity. In 2004 he launched MycoBank, a freely available online database to capture all fungal novelties described by the research community, which has since become mandatory in the CODE from 2013 onwards. Prof Crous has played an active role in teaching microbial biodiversity, and other than having a chair at six different universities, also has an international course at the CBS, supplemented by its own textbook, of which he is the primary editor. He has added several thousand cultures to the CBS culture collection, and has described more than 1000 novel fungal taxa, the majority also supplemented with DNA barcodes. He has played a major role in providing cultures for the NSF-funded Fungal Tree of Life, and various whole genome initiatives in the USA, Europe and Asia. He is member of the World Federation for Culture Collections, past president of the International Mycological Association, and editor of several taxonomic journals, three of which he manages in the open access model, to facilitate access to scientists and students from developing nations. From the start he has been a strong supporter to build the library of life for biodiversity on earth, and in this capacity was the European representative in the International Barcode of Life project (Genome Canada), the chair of the European Consortium for the Barcode of Life, served on the Executive of the Consortium for the Barcode of Life, and participated in major projects such as the FES Plant Health, Tree of Life, and FP7- Quarantine Barcode of Life. He has secured funding to ensure that the significant holdings of the CBS culture collection will be completely barcoded by 2015. Under his guidance the CBS has grown to a leader position among BRCs, currently dispatching up to 10000 cultures, and obtaining 3000 odd novel accessions per year, all of which get subjected to DNA sequence analysis to confirm authenticity, and help build the online library of life. He has published more than 500 papers, authored or edited more than 20 books, and monographed several genera of major economic importance.

MEMBERSHIP OF PROFESSIONAL SOCIETIES AND PROFESSIONAL SERVICES

American Phytopathological Society; Australasian Plant Pathology Society; British Mycological Society; British Society for Plant Pathology; International Union of Microbiological Societies (Mycology Division); Mediterranean Phytopathological Union; Mycological Society of America; Netherlands Microbiological Society; Royal Netherlands Society for Plant Pathology; Southern African Society for Plant Pathology.

Reviewer of scientific papers for 35 different international journals on a routinely basis, and associate editor of 7 international journals, editor-in-chief of two international journals.

RESEARCH GRANTS

- 2004 CETAF-SYNTHESYS grant, 6th EU Programme
- NWO-Groot grant, Building the databases of Life
- 2004 KNAW strategic grant : DNA Barcoding and DNA Bank

- 2005 CETAF-EDIT grant, 6th EU Programme
- 2006 FES-programma 'Versterking infrastructuur plantgezondheid'
- 2008 EU 7th Framework – Quarantine Barcode of Life
- 2008 ICI proposal, International Barcode of Life (Canada)
- 2008 EU 7th Framework, Synthesys II
- 2009 FES-programma "Making the Tree of Life Work"
- 2012 KNAW Strategic Fund "From Culture Collection to Genetic Resource Centre"
- 2012 KNAW-SPIN: The Indonesian banana: protecting a staple food from Panama disease collapse and exploiting its genetic diversity for discovery research
- 2012 NWO - JSTP China-Dutch collaboration, Q&Q Fungi
- 2014 Horizon 2020-RISE: GoMyTri, novel product discovery project with Germany and Thailand
- 2014 Citrus Research International (SA)