

## Pedro Crous Academician



Pedro Crous, IMA Secretary-General and Director of the Westerdijk Fungal Biodiversity Institute in Utrecht, has been appointed as one of 21 new members of the Royal Netherlands Academy of Arts and Sciences (KNAW). The KNAW has around 550 members from all walks of the arts and sciences, chosen on the basis of high-quality scientific performance. Members are appointed for life.

After the news broke, the Institute staff made special cakes with the KNAW logo on them and "Pedro Member KNAW" A special surprise was a biking shirt with the Westerdijk logo and in very large letters,

"FUNGI ARE THE FUTURE".

*IMA Fungus* congratulates Pedro on this well-deserved honour. It is especially pleasing to see mycologists being recognized by, or receiving rewards from, international and national multidisciplinary bodies. Such appointments help raise the profile of mycology and indicate its' importance.

The formal citation of Pedro's appointment is available at: <https://www.knaw.nl/en/members/members/5310>.

## Highly Cited Researchers

Clavariate Analytics (<https://clarivate.com/>) produces an annual list recognizing leading researchers in the sciences and social sciences from around the world. The list contains about 3400 researchers in 21 fields of science. The recently released list for 2017 focuses on contemporary research achievements based on highly cited papers indexed in the *Web of Science Core Collection* during the 11 years 2005–15. Highly cited papers are defined as those that rank in the top 1 % by citations for the field and year.

The list considered 134 832 highly cited papers, ranked in the top 1 % by total citations according to their Thomson-Reuters Essential Science Indicators subject field. Mycologists are listed under the

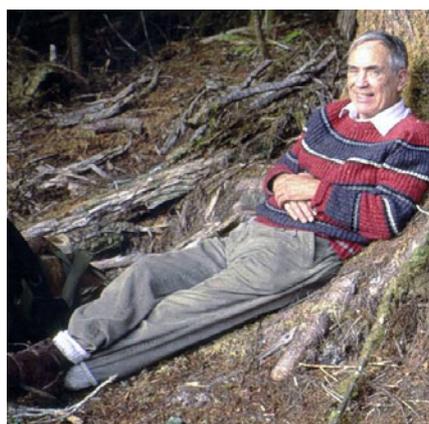
extraordinarily broad subject category "Plant and Animal Science" (!). Even though this classification may seem bizarre in the 21<sup>st</sup> century, it is gratifying to note that a considerable number of mycologists made the list, including (in alphabetical order) André Aptroot, Paola Bonfante, Pedro Crous, David Geiser, Kevin Hyde, Thorsten Lumbsch, Conrad Schoch, Joseph Spatafora, and Mike Wingfield. Whatever one's view of such bibliometric analyses, it was interesting to see that André Aptroot, an independent mycologist lacking institutional support, made this list. This leaves no doubt that with enough energy and expertise, there is still room for independent researchers to make a major contribution to their particular fields.



André Aptroot.

## BIRTHDAY GREETINGS

### George Barron – Nonagenarian



George Barron, who spent his career at the Department of Environmental Sciences of the University of Guelph, Ontario, Canada, celebrates his 90<sup>th</sup> birthday later this year. George is a world authority on fungi predaceous on micro-fauna, famous for his meticulous studies of mechanisms that fungi use for impaling, trapping or sticking to nematodes and rotifers, always illustrated

George Barron in the field on Vancouver Island in 1993 (photo: Tom Hsiang).

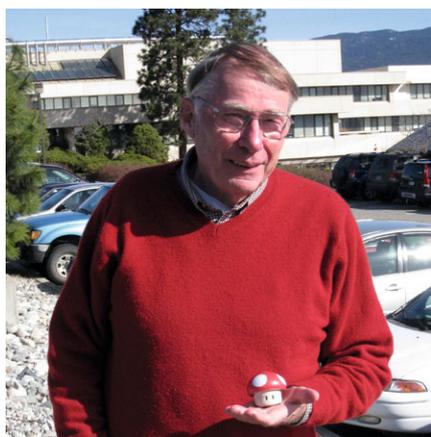
with dramatic photographs and drawings. His 1968 book *Genera of Hyphomycetes from Soil* was a classic and one of the first modern manuals to consistently apply concepts for conidium ontogeny to microfungi identification. Always a pioneer, George established his own company in 1977 to publish his book on *The Nematode-destroying Fungi*. He was one of the first mycologists with a popular website (now archived) and one of the highlights of the 2005 annual meeting of the Mycological Society of America was the unveiling of

George's CD-ROM *MycAlbum* at the poster session. Upon retirement, George applied his love of photography to macrofungi, and his 1999 book *Mushrooms of Ontario and Eastern Canada*, still in print in a revised edition, remains the best-selling popular identification guide for mushrooms

in this part of the world. *IMA Fungus* congratulates George on this milestone, and wishes him continued success in bringing mycology to the masses.

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## Jim Ginns – An authority on wood decay fungi at 80



Jim Ginns celebrates his 80<sup>th</sup> birthday this year. Jim started his career at the Pacific Forest Research Centre of the

Canadian Forest Service in Victoria, British Columbia, then moved on to an illustrious and productive career at the Central Experimental Farm in Ottawa, Canada. He was one of the founders of the Canadian Collection of Fungal Cultures, the curator of the Canadian National Fungal Herbarium DAOM, and president of the Mycological Society of America from 1996–97. A student of Josiah Lowe at Syracuse, Jim studied wood-decaying basidiomycetes, and was the successor to Mildred Nobles, documenting and applying cultural characters to the taxonomy of these fungi, producing several book-length monographs. His 1986 index *Compendium of Plant Disease and Decay Fungi in Canada 1960–1980* and 1993 book *Lignicolous Corticioid*

*Fungi (Basidiomycota) of North America* were massive undertakings, summarizing the literature on economically important fungi for the benefit of regulators concerned with biodiversity and quarantine.

Jim and his master gardener wife Anne lived on a farm in Cantley, Quebec, inviting visiting colleagues to contribute to the All Fungus Biological Inventory of their property, usually attended by a pack of large, friendly dogs. Since his retirement in 1997, Jim has kept active studying his favourite fungi, especially as a member of the South Okanagan Naturalist Club in Summerland, British Columbia.

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## John Haines – Leading specialist of the cup fungi

John H. Haines, retired Curator of Fungi at the New York State Museum (NYS), is turning 80 this year following a career studying the systematics of *Leotiomyces* and airborne fungal spores. John received his PhD in 1972 from Oregon State University providing a monographic account of the genus *Trichopezizella* (Haines 1974). He immediately accepted a job at the New York State Museum in Albany, New York, where he continued his study of these fungi, especially the small inoperculate discomycetes on tropical ferns (Haines 1980). He oversaw the databasing of the type collections of Charles Horton Peck, an important American mycologist who described many new species of fungi in the second half of the 1800s and early 1900s. In 1986 John and Ira Salkin organized a symposium, *History of North American Mycology* (*Mycotaxon* 26: 1–79, 1986), that brought together commentaries on the development of mycology in North America. John recognized the beauty and importance of the 175 water colour paintings of mushrooms by Mary E. Banning of Maryland. In the late 1800s she

had been encouraged in her studies by Peck at the New York State Museum where the paintings are housed. John was able to demonstrate the value of these paintings, some of which were exhibited at the Maryland Historical Society in Baltimore in 1996, thus gaining recognition for Bannings long overlooked mycological contribution (Haines 1996). Through his efforts, Mary Banning was elected to the Maryland Women's Hall of Fame in 1993. In collaboration with Ira Salkin, a medical doctor, John addressed the need for workshops on the identification of airborne fungal spores causing allergic reactions in humans, and published a guide in aid of their study (Haines 2008). John



Jim Haines (seated left) at a workshop held at MicroTrace (Elgin ILL) in May organized by Skip Palenik (standing, second from left).

has helped many mycologists in his most calm and concerned way. We wish him well as he continues to enjoy and teach about the fungi he loves.

Haines JH (1974) Notes on the genus *Trichopezizella* with descriptions of new taxa. *Mycologia* 66: 213–241.

Haines JH (1980) Studies in the *Hyaloscyphaceae* I: Some species of *Dasyyscyphus* on tropical ferns. *Mycotaxon* 11: 189–216.

Haines J[H] (1989) Mary Banning: the woman who painted mushrooms. *Maryland Naturalist* 33: 44–56.

Haines J[H] (2008) *Introduction to Mycology: mold in buildings*. J. Haines.

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## Brian Sutton – World leader in coelomycete classification



By the end of the 20<sup>th</sup> century, Brian Charles Sutton was universally recognized as the world's leading coelomycete expert. Born in Oxford in 1938 and with a first in botany, he joined the then Commonwealth Mycological Institute at Kew in August 1959 as an Assistant Mycologist, with Edmund Mason, 'Dickie' Deighton, and Martin Ellis as mentors. Offered rusts or coelomycetes as a speciality, he chose the latter and was duly registered at Imperial College for a PhD on

*Colletotrichum*. This was completed in 1964. Thereafter, apart from a spell at the Canada Department of Forestry in Winnipeg, Manitoba, from 1965–69, and a sabbatical year in Australia in 1986, his career was made entirely within the Institute. When Martin Ellis retired in 1976, he became Principal Mycologist, and in 1990 he was appointed Deputy Director of the re-named International Mycological Institute.

By the start of his career, conidial development had been brilliantly applied to hyphomycete taxonomy, but the coelomycetes, for which it was also clearly relevant, were widely regarded as impossibly intractable. Brian took up the challenge. His work was characterized by meticulous attention to detail, with patient and systematic examination of type material. A steady stream of publications on conidial fungi appeared, with particular emphasis on coelomycete genera. This led in 1980 to *The Coelomycetes*, his monumental book, still the key reference to this group. He also excelled as an editor, not only of Institute publications including *Ainsworth & Bisby's Dictionary of*

*the Fungi* and the *Index of Fungi*, but also for the *Transactions of the British Mycological Society*. His presidency of the British Mycological Society in 1985 arguably marked the high point of an illustrious career.

Brian's collaborators included Barbara Dyko, Chuck Hodges, Paul Kirk, Ian Pascoe, Kris Pirozynski, Ninoska Pons, K.V. Sankaran, Wu Wen-ping, and myself. The younger mycologists particularly benefitted from this association. In 1995, concerned for his wife's failing eyesight and perhaps sensing the changes which would lead to the Institute's demise, he chose early retirement which has been characterized by time devoted to jazz, his other great interest, and pleasurable continuation of mycology in a less pressurized environment. Brian was my teacher and influenced my life enormously, so it is an honour for me on this occasion to present the congratulations of all mycologists to one of the science's outstanding figures.

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## Roy Watling – Champion of the fungi

I first met Roy Watling at a British Mycological Society Autumn Foray at Kindrogan, Perthshire, Scotland in 1968. I was at that time a PhD student and was advised by John Webster to seek out Roy and find out about his interest and expertise in fungi. John described him as a bright young spark and an up-and-coming star! Over the next few days I learnt much about boletes and agarics and was very impressed by his knowledge and enthusiasm to teach me and many others about his love of fungi and mycology in general. He has not changed and continues today to encourage, inform and teach others about all aspects of fungi. Roy graduated from Sheffield University in 1961 with a first class honours degree in botany, joined the staff at the Royal Botanic Gardens Edinburgh (RBGE)

in 1962, and in 1965 was awarded his PhD from the University of Edinburgh for his studies on the taxonomy of *Bolbitiaceae* and later his DSc from Sheffield University. He certainly proved John to be correct and during an illustrious career at the RBGE, starting as a Scientific Officer, he went on to serve as Head of Mycology and Plant Pathology as well as Acting Regius Keeper.

In 1965 Roy was awarded a research professorship at Michigan State University where he was part of Alexander Smith's impressive research team. This greatly widened his horizons and from his early publication with *The Fungus and Lichen Flora of Halifax Parish 1775–1965* many others followed on British fungi. These included a major role in the *British Fungus Flora* series and major contributions on

the fungi of Mull, and later Orkney and Shetland in 1999. His contribution to our understanding of fungi in Scotland is outstanding and he is still actively promoting the study of fungi both at home and abroad. His Presidential Address to the Botanical Society of Scotland "150 Years of Paddock Stools" in 1986 provided a stimulating overview of Scottish mycology. This theme was continued with his recent article "Links between the old and the new" published in a special issue of the *Journal of Fungal Research* sponsored by Jilin Agricultural University and the Mycological Society of China dedicated to John Webster. He was also a special co-editor for that issue.

Roy, however, has broad global interests and has visited Australia, Cameroon, Denmark, Iceland, India, Malaysia, Norway,



Sweden, Thailand, the USA, and Zambia. He ran forays and workshops, gave lectures at various levels, and provided much needed mycological expertise in these countries. He also promotes fungi through newspaper, radio and television interviews. I have seen Roy in action in both Malaysia and Thailand, and he is as enthusiastic and active today as when I first met him in Kindrogan. He was made Honorary Professor at Ramkhamhaeng University in Thailand in acknowledgement of his contributions to the fungi of Thailand and SE Asia.

Roy also has maintained an ongoing interest in coprophilous fungi perhaps

related to his investigation on the fungi on owl pellets as an undergraduate student at Sheffield. Later he developed a long-lasting collaboration with Mike Richardson resulting in several editions of *Keys to Fungi on Dung*. He is also a leading expert on poisonous fungi advising medical staff and authorities on identification of the species involved, and as a result has developed an invaluable database on case histories, especially in Scotland. He is also an authority on the mycological works of Beatrix Potter, and was largely responsible for the discovery of her mycological studies.

One of his dearest projects has been the long-term study of Heron Wood, Dawyck since the gardens became part of the RBGE in 1969. Roy and a team of biologists have studied the seasonal changes in the mycobiota and other organisms since that time resulting in a number of scientific publications and Roy's book *A National Treasure: Dawyck – Its Fungal Heritage: observations and conservation* (2015) is a wonderful mycological adventure.

His continuing interest and support for the study of fungi in the field started with his association with the Yorkshire Naturalists' Union from his school days, and his friendship with Willis Bramley a leading light in the Union. Years later, he was instrumental in helping the establishment of

the Fungus Groups of Southeast Scotland, with which he remains very active.

Roy's outstanding contribution to mycology has been acknowledged by many honours and awards. He was elected Fellow of the Royal Society of Edinburgh in 1979, and was appointed a Member of the British Empire (MBE) in 1997. The Royal Society of Edinburgh awarded him a Patrick Neil Medal for excellence in mycology in 1998 and he received an Outstanding Contribution to Nature Award from the Royal Society for the Protection of Birds in 2012. He has served as president of the British Mycological Society and of The Botanical Society of Scotland, and was a major contributor to meetings and society activities. Roy had a major role in the British Mycological Society millenium meeting on Tropical Mycology in Liverpool, and has participated in BMS meetings and forays for over 40 years as well as in many overseas events.

Mycologists worldwide thank you Roy for your enthusiasm, expertise and continued interest in fungi, and wish you a very happy 80th birthday and further mycological adventures.

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## IN MEMORIAM

### Cletus P. Kurtzman (1938–2017) – father of modern yeast taxonomy

The father of modern yeast taxonomy, Cletus ("Clete") Kurtzman, passed away on 27 November 2017 after a heart attack, leaving the yeast biodiversity research community in shock. Clete worked for 50 years as a yeast researcher at the US Department of Agriculture Agricultural Research Service laboratory in Peoria, Illinois, of which 29 were as a group leader, and he was internationally recognized for his pioneering contributions to the molecular phylogeny and taxonomy of yeasts, mainly in *Saccharomycotina*. Clete was the first to recognize the power of comparative molecular phylogenetic studies and pursued these from the 1980s. Already in the early days of his career he used DNA-based methods, such as DNA-



DNA reassociation and estimation of Mol. % guanine and cytosine. After the development of PCR, he started to use nucleotide sequence data, particularly of the D1/D2 domains of LSU r DNA, and incorporated this into yeast taxonomy. He assessed the amount of nucleotide divergence at different taxonomic levels, including species, and revised the taxonomy of ascomycetous yeasts with known sexual morphs. His contributions paved the road for many other researchers who started to adopt similar approaches in other yeasts, and, later, also filamentous fungi. Although he clearly saw the importance of molecular studies, Clete was also aware of the need for more classical data on the mode of reproduction and nutritional physiology.

Clete lectured and taught courses on yeast diversity and taxonomy for young scientists from many countries, including Brazil, Mexico, Portugal, and China, and served as an editor for eight scientific journals. He also (co-)edited the 4<sup>th</sup> and the 5<sup>th</sup> editions of *The Yeasts: a taxonomic study* (3 vols, Amsterdam: Elsevier, 2011) the encyclopaedia on yeast diversity. Working at a USDA laboratory, applied features of yeasts, including applications in biotechnology and clinical diagnostics, also had his interest. His mental flexibility became clear as he was still actively involved in the next technical breakthrough in yeast diversity, namely the use of whole genome data for a better understanding of yeast diversity, including functional aspects.

Until the last, Clete was very active and interested in the future of yeast taxonomy,

including nomenclatural aspects, and he interacted with many scientists worldwide. He (co-)authored more than 350 scholarly publications that resulted in > 23 000 citations and is present in the ARS Science Hall of Fame since 2016. Clete was a fellow of the American Academy of Microbiology and in 2008 he was the first recipient of the Josef Adolf von Arx award given by what is now the Westerdijk Fungal Biodiversity Institute. He also served as the USA representative in the IUMS International Commission of Yeasts. In a recent interview (Boekhout & Kurtzman 2016) he remarked “Because I am still quite excited about my work with the yeasts, it is hard to think that I might do something else” – clearly indicating his life-long passion for the fungi he studied.

It was a great pleasure for me to work as a postdoc in his laboratory in 1992, and to enjoy his somewhat dry sense of humour when we met at meetings having a beer (or two). He was always a family man, showing keen interest in the well-being also of my family. He was very worried about his wife Mary Ann as her health deteriorated during the last years, a proud father, and a great grandfather to his five grandchildren. He will be missed by them and by us from the yeast research field.

Boekhout T, Kurtzman CP (2016) Interview with Cletus Kurtzman and Teun Boekhout. *FEMS Yeast Research* 16: fow097.

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## Franz Oberwinkler (1939–2018) – Pioneer in new ways of looking at basidiomycete evolution



Franz with his wife Barbara during a visit to Frankfurt am Main in 2013.

It is with deep regret that we record the death of Franz Oberwinkler on 15 March 2018, at the age of 78 after a short and severe illness. During 34 years, from 1974–2008, he was head of the department of Botany and Mycology as well as director of the Botanical Garden at the Eberhard Karls University at Tübingen, Germany. During this time, he became well known among mycologists worldwide for his tremendous contributions to basidiomycete systematics and evolution. He taught mycology and botany to numerous students, early career researchers, and international guests; 16 of these assumed professorships at universities worldwide.

Born on 22 May 1939, Franz studied at the Ludwig-Maximilians University in Munich, Germany, and obtained a PhD in 1965 with a thesis on the morphology and systematics of heterobasidiomycetes under the guidance of Josef Poelt. As a postdoc, he worked at the University of Tübingen together with Karl Mägdefrau, then as a representative of the Food and Agriculture

Organization of the United Nations (FAO) at the Instituto Forestal Latino-Americano in Mérida (Venezuela), and then again with Josef Poelt in Munich until he assumed a professorship at the University of Tübingen in 1974.

Franz was a great observer and worked in many different ecosystems worldwide. In his investigations of the diversity and evolution of fungi, focusing on *Basidiomycota*, he applied an integrative approach by combining diverse methodologies and markers: field work, collection, cultivation, morphological analysis by light microscopy, scientific illustrations (line drawings), taxonomic identifications, scanning and transmission

electron microscopy, cell wall carbohydrate composition, natural products, and analysis of molecular sequence data. This integrative approach yielded well-founded phylogenetic hypotheses and interesting insights into the evolution of characteristics of fungi in their interplay with their environment.

Alone or together with his collaborators, Franz published more than 340 scientific papers, with the relevance of basidium morphology for the systematics of *Basidiomycota* being a key topic. Our knowledge of the many lineages of *Pucciniomycotina* and other heterobasidiomycetes is directly linked with his name. He established numerous taxa (species, genera, families, orders) new for science, with MycoBank yielding 450 hits including his name. Two genera and six species are named after him by thankful students or colleagues.

Franz Oberwinkler served on several editorial boards of mycological journals, he was an elected member of the board of botany of the German Science Foundation (DFG) for many years, and supported mycology in many countries with generous contributions. He was part of the International Mycological Association (IMA) since the beginning and participated in all IMC congresses to date, from 1971–2014. He always contributed important new results to these occasions, as well as interesting arguments during discussions. He was President of the IMA from 1994–98 and

in 2010 he was awarded the Association's prestigious Anton De Bary Medal for his professional achievements in mycology (*see IMA Fungus* 1(2): (15), Dec. 2010).

His wife Barbara was his reliable partner over all those years. She not only cared for the well-being of their large family, but as a

biology graduate contributed to activities of the Botanical Garden which were directed towards the public. Barbara was an excellent travel companion, and helped Franz publish extensive papers during recent years.

We are very thankful to Franz for sharing his broad and complex mycological

knowledge with us, for imparting his scientific values, and for insights into the fascinating world of fungi and plants.

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## STOP PRESS

It is with deep regret that we learned on 15 May 2018 that Geoffrey ("Geoff") Robson (University of Manchester), the current General Secretary of the British Mycological Society, had suddenly died. He had previously served the Society as President, and the IMA as Secretary-General from 2006–10.