



MycoAfrica

Newsletter of the African Mycological Association (AMA)

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Index

Website devoted to the Hysteriaceae and Mytiliniaceae	1
The 17 th International Society For Mushroom Science Congress, Cape Town, South Africa, 20 – 24 th May 2008	2
Deposition of New Scientific Names of Fungi in Mycobank	4
Message from the Committee	4
News on our Members	5
Important Dates	5
Useful websites	6
African Library	8
Membership application form	9

Deadline for next MycoAfrica issue:
30 July 2008

Instructions to authors:

Short **mycological pieces** of African relevance are encouraged. These should not be longer than 3 pages/800 words of text

Permanent features that need input from members:

News on our members

Important Dates of upcoming events, forays, workshops, congresses, etc.

Classifieds that can be used to advertise jobs, post-graduate positions, initiatives, etc.

Useful websites relevant to African mycology.

Please submit contributions as doc or txt files and images should be high quality jpg files.

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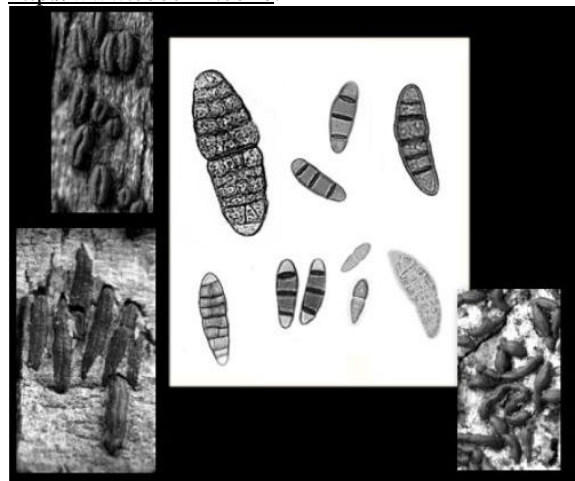
Website:

<http://194.203.77.69/AfricanMycologicalAssociation/>

Website devoted to the Hysteriaceae and Mytiliniaceae

By Eric Boehm

A new mycology website has recently been set up featuring text and illustrations relating to the taxonomy of the Hysteriaceae and Mytiliniaceae (Dothideomycetes, Ascomycota) by Dr. Eric W.A. Boehm (Department of Biological Sciences, Kean University). The site presents a set of updated dichotomous keys enabling workers to arrive at correct species identification for fungi belonging to both families. The original keys by Hans Zogg (1962, Die Hysteriaceae s. str. und Lophiaceae. Beitr Kryptogamenfl Schweiz 11: 1-190) have been translated into English. More importantly, a number of new species described since then have been integrated into the keys. As the site develops, molecular data will be incorporated to determine whether phylogenies based on molecular character states are concordant with previous morphology-based classifications based on peridial wall thickness, hamathecial type and ascospore septation. Additional information can be found at <http://www.eboehm.com/>.



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New Website: <http://www.eboehm.com/>

Old Website: <http://web.mac.com/eboehm1/>

The 17th International Society For Mushroom Science Congress, Cape Town, South Africa, 20 – 24th May 2008

By Martmari van Greuning, Sylvan Africa

The 17th Congress of the International Society for Mushroom Science was held at the Cape Town International Convention Centre in May earlier this year. This major event on the mushroom calendar is held every four years. This was a first for South Africa and hosted by the South African Farmers Association (SAMFA). It provides a vital forum for not only mushroom scientists and growers to share information, ideas and technology, but also for suppliers, marketers and everyone interested in all aspects of edible and medicinal fungi.

The Congress was attended by 338 delegates (excluding accompanying partners) from 38 countries. The academic programme contained over 75 papers and poster presentations by scientists and consultants all over the world. A broad range of topics were covered such as pests and diseases, cultivation & spawn, casing, compost, breeding and germplasm, molecular biology, medicinal aspects and health and marketing. Provision was also made for a growers programme during which presentations were made on the application of science to the practical business of mushroom production.

Six keynote speakers from different parts of the world covered a diverse range of topics that once again proved the dynamic nature of the mushroom industry. The main subject of the sessions were mostly introduced via a keynote lecture and followed by presentations of the similar topic. A notable paper presented by Prof Peter Romaine (Penn State University) revealed that mushrooms can be used as a production platform in the manufacture of biopharmaceuticals, in particular protein-based drugs. Compared to plants and animals, *Agaricus bisporus* has the ability to create a huge amount of biomass in a very short period of time; it grows in enclosed structures (necessary for transgenic crops) and it contains an efficient transformation system for introducing genes, which therefore offers the possibility to transgenetically manipulate the mushroom to create a biopharmaceutical production system.

Gene technology is developing very rapidly and will lead to a better understanding of the life cycle of mushrooms. It can be used to improve production processes and to identify varieties and strains which can be used in breeding projects. The sequence of the model fungus, *Schizophyllum commune*, the

oyster mushroom and the button mushroom will shortly be completely mapped. Prof Han Wosten (University of Utrecht) presented an overview of research into genes involved in mushroom pin formation.

Prof Lise Korsten from the University of Pretoria presented a keynote lecture on food safety in the mushroom industry, explaining it to be a prerequisite for continued growth and to maintain market access and to ensure basic product safety.

A number of presentations, including a keynote, covered the many aspects on pests and diseases, in particular mushroom virus X and *Trichoderma* green mould. A panel discussion formed part of the Wednesday's programme for discussing *T. aggressivum*, the cause of significant losses recently in Europe, the States and also in South Africa.



A topic that was well covered was the nutritional value of mushrooms and its health benefits. Mary Jo Feeney (nutrition consultant, California) emphasized the exceptional nutritional values of mushrooms such as their high vitamin B content, selenium, potassium and others. Notable was the fact that not only so called exotic mushrooms contain nutritional and bioactive substances, but also the common button mushroom. Mushrooms can be turned into an important source of vitamin D2. Research has showed that Vitamin D2 content in mushrooms can be considerably increased by UV light radiation. Research on the role of mushrooms in the treatment of breast cancer also draws attention where mushrooms can act as an aromatase-inhibitor. Mushrooms contain ergothioneine having a significantly high total antioxidant capacity. Various papers on marketing revealed that the latest trend in getting people to eat more mushrooms is to hook onto the scientifically proofed facts about mushrooms and good health.

Liangcheng Chen from China's keynote lecture on the last day reveals astonishing numbers about the mushroom industry in China, the biggest consumer and exporter of mushrooms in the world. China has an annual production of more than 10 million tones of mushrooms with *Pleurotus ostreatus* (Oyster mushroom) at the top of the list followed by *Lentinula edodes* (Shiitake) and *Agaricus bisporus*. This presentation fitted with the announcement that China will be the host for the next ISMS Congress to be held in 2012 in Beijing.

It was a whole week jam packed with activities. Since the event not only catered for the scientists, but also for everyone interested and involved in all aspects of mushrooms, a trade exhibition formed part of the event. About thirty exhibitors showed off their products ranging from spawn, peat, machines to chemicals. Teas and lunches were served amongst the stands which allowed for appropriate networking between all delegates.

The event was also used as an opportunity to accommodate two workshops prior to the formal proceedings, one on composting and the other on mushroom disease diagnostics. The latter involves the development of molecular techniques for rapid identification of mushroom diseases even before symptoms are visible. The project forms part of a global initiative to develop a diagnostic service in collaboration with research groups from Australia, New Zealand, USA, South Africa, The Netherlands and Ireland.

A mushroom congress is never complete without visiting a mushroom farm. The formal activities were ended with visits to Denny Mushrooms' farm near Durbanville and Medallion Mushrooms in Stellenbosh. Both farms grow *Agaricus bisporus* (white and brown strains) and prepare their own compost, as well harvest, sell and market their own mushrooms. Delegates were given some insight in the operations of each facility such as composting, casing, growing, harvesting and packing.

The social side of the proceedings were not neglected one bit. All the functions were excellently planned with plenty entertainment and lots to eat and drink. It allowed even more opportunity to network, to meet more people and to get to know each other better.

The proceedings of the papers and posters presented at the Congress are available on CD. For more information contact secretary@isms.biz.



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Deposition of New Scientific Names of Fungi in Mycobank

Taken from a letter by Pedro Crous, President of the International Mycological Association (IMA)

In order to place fungal nomenclature on a sound basis and take advantage of online databases, the International Mycological Association (IMA), which constitutes the IUBS Section for General Mycology, has assumed responsibility for MycoBank. At present around 1,400 new scientific names for fungi are introduced each year, dispersed through a multitude of scientific journals, and a timely method of co-ordinating information on these names has become essential.

MycoBank was initiated by the Centraalbureau voor Schimmelcultures of the Royal Academy of Science of The Netherlands in 2004. It is a database in which all newly described fungi and new names of fungi can be deposited and stored along with key nomenclatural and descriptive material. Each name is checked against a nomenclatural database (Index Fungorum) and is given a unique reference number. Several leading mycological journals (e.g. *Fungal Diversity*, *Mycological Research*, *Mycotaxon*,

Studies in Mycology) have made the prior deposition of new names in MycoBank a requirement for publication. The deposition numbers are cited when names are published in the journals in a parallel manner to the way GenBank numbers are used. As with GenBank, MycoBank will never apply any form of censorship.

MycoBank has been enthusiastically embraced by mycologists and, while the process is voluntary at present, proposals to make it mandatory after the next International Mycological and International Botanical Congresses in 2010–2011 are in process.

Pedro W. Crous, Ph.D.

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Message from the Committee

Developments on our webpage and the upcoming 6th AMA Congress

Dear AMA members,

Since the distribution of the previous newsletter a couple of exciting developments took place within the AMA camp. We are proud to announce an independent web page and made arrangements for the next AMA congress with a capacity building workshop to start on the Saturday preceding the congress.

Transferring the domain name africanmycology.org to an independent service provider required numerous electronic discussions, too technical for me to keep up with. The outcome of these discussions emanated in the web page changing virtual hands. We are indebted to Dr Paul Kirk of CABI in the United Kingdom for his longstanding support in hosting and maintaining the AMA web page. The new web master is James Mehl who has already spent lots of time setting up our window to the world. The new web page will be expanded to include interesting and relevant information, provide news on mycological related issues from the continent and provide a facility to make contact with other AMA members. Hopefully

this will improve interaction and facilitate research collaboration.

It is the vision of AMA to held conferences in different regions of Africa but in the preceding two years it has been difficult to secure an appropriate venue for a number of reasons. I would in particular like to thank Joyce Jefwa CIAT-Nairobi TSBF, for her support and enthusiasm in this regard. After extensive deliberations the conference will again be held in South Africa in conjunction with the Southern African Society of Plant Pathology conference to be held in 25 - 28th January 2009. We hope to see you all at Gordons Bay in the picturesque Western Cape Province. As aperitif you can visit the <http://www.saspp.co.za/>, and www.gordonsbaytourism.com.

On the Saturday preceding the conference, a workshop will be held on the implication of bar-coding for biodiversity. At this workshop a number of well known mycologists will share their experiences with us. More about this later.

See you there

Dr Isabella Rong, President

News on our Members

Prof. Mike Wingfield has been elected as a Fellow of the American Phytopathological Society (APS) for 2008. This is the highest honor that the APS bestows upon a member and it recognizes an outstanding career and service to APS. Mike have been presented the honor during the Awards and Honors Ceremony at the APS Centennial meeting in Minneapolis, MN (Jul 26-30, 2008). What makes this award even more special is the fact that very few non-americans have received it.

Prof. Jolanda Roux, FABI

Important Dates

Sixth International Congress on the Systematics & Ecology of Myxomycetes

Yalta, Crimea, Ukraine,

Congress: 4-11 October 2008

Registration: 1 May 2008

<http://www.icsem6.org/>

9th International Congress of Plant Pathology (ICPP)

Torino, Italy

Congress: 24-29 August 2008

Abstract deadline: 15 October 2007

<http://www.icpp2008.org/>

21st International ICFMH Symposium "Evolving Microbial Food Quality and Safety (FOOD MICRO 2008)

Aberdeen, UK

Congress: 1-4 September 2008

Abstract deadline: 29 February 2008

<http://www.foodmicro2008.org/>

2nd African Conference on Edible and Medicinal Mushrooms (ACEMM)

Accra, Ghana

Congress: 17-21 November 2008

<http://www.asemm.org/accra2008/index.html>

South African Association of Botanists (SAAB) congress

Stellenbosch, South Africa

Congress: 19-22 January 2009

46th Congress of the South African Society for Plant Pathologists (SASPP), joint with 6th Congress of African Mycological Association (AMA)

Gordonsbay, South Africa

Congress: 25-28 January 2009

<http://www.saspp.co.za>

e-Biosphere 09, the International Conference on Biodiversity Informatics

London, UK

Congress: 1-5 June 2009

<http://tinyurl.com/25e369>

FEMS 2009 - 3rd Congress of European Microbiologists. Microbes and Man-interdependence and future challenges.

Göteborg, Sweden

Congress: 28 June – 2 July 2009

www.kenes.com/fems-microbiology

DIVERSITAS OSC2, Biodiversity And Society: Understanding Connections, Adapting to Change

Cape Town International Convention Centre (CTICC), South Africa

13-16 Oct 2009

www.diversitas-osc.org

International Mycological Congress (IMC9) (hosted by the British Mycological Society)

Edinburgh, Scotland

Congress: 1-6 August 2010

www.imc9.info

Useful websites

AGIS (Agricultural Geo-Referenced Information System)

<http://www.agis.agric.za/agisweb/agis.html>

Agricultural Research Council (ARC)

<http://www.arc.agric.za/>

ASCOfrance (ascomycete taxonomy in Europe and provides a forum for general ascomycete taxonomy)

<http://www.ascofrance.com>

BioNET (global network for taxonomy)

<http://www.bionet-intl.org/>

BPI (including South African phytopathogenic fungi database)

http://www.ars.usda.gov/main/site_main.htm?mode=code=12-75-39-00.

CABI Databases (including **Index fungorum**, **search family names**, **search author names**) (nomenclature of names)

<http://www.indexfungorum.org/Index.htm>

Centraalbureau voor Schimmelcultures (CBS); also houses **Mycobank**, **Mycoheritage** (online versions of scarce and old mycological literature, including Ethel Doidge's monographic work on South African fungi), **polyphasic identification tools**, and **Studies in Mycology** online (including **SIM 55**, an issue devoted to southern African mycology).

<http://www.cbs.knaw.nl>

Forestry & Agricultural Biotechnology Institute (FABI)

<http://fabinet.up.ac.za>

Global Biodiversity Information Facility (GBIF)

<http://www.gbif.org>

Global slime mold project (databases for slime mold collections, images, current taxonomy, protocols and educational resources)

<http://slimemold.uark.edu>

International Mycological Association (with links to **other mycological societies and associations**, and numerous useful mycological links)

<http://www.ima-mycology.org/>

International Society for Plant Pathology

<http://www.isppweb.org/>

Mycology.net (useful mycological links)

<http://www.mycology.net/>

Myconet (online journal, "Outline of Ascomycota" and "Notes on ascomycete systematics")

<http://www.fieldmuseum.org/myconet/>

Mycokey (includes information on the interactive fungal identification program Mycokey, and other research done such as studies on the Fungi of Burkina Faso)

<http://www.mycokey.com/BurkinaFaso.html>

Mycoroot (information on indigenous mycorrhizal fungal products and mycorrhizal analysis services)

www.mycoroot.com

National Center for Biotechnology Information (sequences)

<http://www.ncbi.nlm.nih.gov/>

South African National Biodiversity Institute (SANBI)

<http://www.sanbi.org/>

Southern African Society for Plant Pathology (SASPP)

<http://www.saspp.co.za/>

World Taxonomists Database

<http://www.eti.uva.nl/tools/wtd.php>

Deep hypha (also see Vol. 98, no. 6 issue of Mycologia on Mycological Society of America webpage)

<http://ocid.nacse.org/research/deephyphae/>

Assembling the Fungal Tree of Life

<http://aftol.org/>

Consortium for the Barcode of Life (CBOL)

<http://barcoding.si.edu/>

All fungi Barcoding

<http://www.allfungi.org/index.php>

Cybertruffle's Robigalia: Observations of fungi and their associated organisms

<http://www.cybertruffle.org.uk/robigalia/english/index.htm>

Cyberliber: digital library for mycology, providing scanned images of pages of mycological literature

<http://www.cybertruffle.org.uk/cyberliber/>

Cybernome (a nomenclatural and taxonomic database for fungi and their associated organisms, providing direct onward links to global standard nomenclatural databases

<http://www.cybertruffle.org.uk/cybernome/english/index.htm>

Cybertruffle's Fungal Valhalla (a website providing information about now dead mycologists)

<http://www.cybertruffle.org.uk/valhalla/index.htm>

Darwin Initiative for the conservation of microfungi

<http://www.cybertruffle.org.uk/darwin-microfungi/index.htm>

NZFUNGI - New Zealand Fungi (and Bacteria) Landcare

<http://nzfungi.landcareresearch.co.nz/html/mycology.asp>

Wild Edible fungi. A global overview of their use and importance to people

<http://www.fao.org/docrep/007/y5489e/y5489e00.HTM>

Wild Useful Fungi

<http://82.43.123.182/WildUsefulFungi/>

International Code of Botanical Nomenclature – Vienna code

<http://www.bgbm.org/iapt/nomenclature/code/default.htm>

New websites

African Society for Edible and Medicinal Mushrooms

<http://www.asemm.org/>

Encyclopedia of life

<http://www.eol.org/>

Henry Stewart talks (on various biological topics for lectures)

<http://hst.streamuk.com/bsr/index.asp?chk=1>

Hysteriaceae & Mytilinidiaceae

<http://www.eboehm.com/>

International Field Guides

<http://www.library.uiuc.edu/bix/fieldguides/main.htm>

Lichenology Mart

[\(http://www.bi.ku.dk/lichens/courses/](http://www.bi.ku.dk/lichens/courses/)

Mycology Education Mart

<http://www2.bio.ku.dk/mycology/courses/>

South African Association of Botanists

<http://wolfman.rucus.net/SAAB/>

South African Genetics Society

<http://sagene.co.za/>

South African Society for Microbiology

http://www.uovs.ac.za/fac/natural_agricultural/sasm/index2.php

African Library

Mycotoxins: occurrences in foods and feeds in Africa, and their toxicological implications

We have constructed a database for the Department of Health in South Africa on the topic of South African research on mycotoxins. This is the most complete collection of reports on mycotoxins in South Africa. This database covers publications and reports that have been generated from 1912 up to 1999. The Department of Health is now busy in trying to make this available on their website. We have just completed scanning all these documents as PDF files. All in all this covers 445 publications/reports.

Dr. Gert Marais, Director of the Center of Applied Mycological Studies (CAMS), <http://fabinet.up.ac.za>

Mafouassom Hortense (2007). Evaluation de quelques variétés de quelques variétés de maïs pour leur résistance à la pourriture de l'épi due à *Fusarium verticilloides*. Thèse de Master Degree in Sciences. 2007. FASA, University of Dschang. Supervision: Z. Ngoko.

Ngoko, Z. (1996). Mycotoxins, a threat to health. Presented at the Bioscience meeting. 1996. Hilton. Yaoundé, Cameroon.

Ngoko, Z. (1999). Mycotoxin contamination of maize in relation to insect infestation, agricultural practices and agroecology in the republic of Cameroon. Ph.D. Thesis Bloemfontein South Africa.

Ngoko, Z. (2002). Mycotoxins situation in Cameroon. International workshop on Mycotoxins, Food and Drug Administration (FDA) with the Institute for Food Safety and Applied Nutrition July 22-26, 2002 College Park, Maryland, USA.

Ngoko, Z. (2005). Mycoflora associated with foodstuffs in the Western Highlands of Cameroon. Reducing impact of Mycotoxins in Tropical Agriculture with Emphasis on Health and Trade in Africa, 13-16 September 2005. Accra, Ghana.

Ngoko Z., Daoudou H., Imele P.T., Kamga S., Mendi, M., Mwangi R. Bandyopadhyay, Marasas W.F.O. (2008). Fungi and mycotoxins associated with food commodities in Cameroon. *Journal of Applied Biosciences* **6**: 164 - 168. ISSN 1997 - 5902: www.biosciences.elewa.org

Ngoko Z., Marasas W. F. O., Rheeder J. P., Sherphard G. S., Wingfield M. J. (2001). Fungal infection and mycotoxin contamination of maize in the Humid Forest and the Western Highlands of Cameroon. *Phytoparasitica* **29(4)**: 352-360.

Tagne A., Kongsdal O., Ngoko Z., The C., Mathur S.B. (2003). *Fusarium pallidoroseum* in maize samples of three agro-ecological zones of Cameroon. *Journal of Stored Products Research* **39**:367-374.

QUESTIONNAIRE OF AFRICAN MYCOLOGISTS FOR THE AMA

(please post/fax to Marieka Gryzenhout)

Name:

Title:

Institution and Postal Address:

Country:

Country or origin:

Email:

Website:

Phone number:

Fax number:

Research interests (choose one or between cell biology, physiology, ecology, pathology, molecular biology, systematics, evolution, medical mycology):

Specific interests:

Details of other African mycologists who may want to join AMA:

Skills to offer AMA (committee member, conference organiser, fund raising etc.):
