Myxo Blitz 2002

by Anita Phillips

Questions or comments should be sent to Anita Phillips at ATCC Mycology Laboratory, 10801 University Blvd., Manassas, VA 20110-2209 or email < phillips@atcc.org >.

On July 26th, approximately two dozen scientists, students and volunteers gathered at the Great Smoky Mountains Institute at Tremont, located in the northwestern corner of the Great Smoky Mountains National Park. Their purpose was to participate in a “Myxo Blitz” being carried out under the auspices of the All Taxa Biodiversity Inventory (ATBI) that has been ongoing in the Park since 1998. The objectives of the Blitz were to add to the already astonishing list of species of myxomycetes known from the Park, while also increasing public awareness of just what is involved in a biological inventory of a little-known groups of organisms.

The Blitz began Friday evening with dinner and an introductory session on the myxomycetes. Dinner began with a brief summary of the ethics and regulations to be followed when working or collecting in the Park. Before dinner we all took part in the traditional verbal recitation of a carefully and thoughtfully selected reading, followed by a moment of silence. The meal was tasty and filling, with an extra effort made to satisfy both the omnivores and the herbivores of the group. Following dinner and a brief break, an entertaining yet comprehensive presentation on the myxomycetes was presented by Dr. Steve Stephenson from Fairmont State College in West Virginia. Details of myxomycete biology, taxonomy, morphology and ecology, along with numerous puns and anecdotes, were accompanied by slides of various types of fruiting bodies, students collecting in the field or working in the lab, features of the myxomycete life cycle, and other myxomycetologists who have

Jeanie Hilten and Kevin Fitz Patrick attempt to photograph a myxomycete in the field.
collected in the Park. Following the presentation attendees were encouraged to visit the laboratory set up for examination of a wide range of Myxomycetes both microscopically and with the naked eye. A large number of dried specimens from Steve Stephenson’s herbarium and several live cultures in Petri dishes, donated by the ATCC, were available for viewing. The audience was captivated and eager for the following day’s trek into the woods.

Morning began with a breakfast as tasty and satisfying as dinner had been the night before (the biscuits were to die for!). We put together our lunches from an assortment of breads, meats, cheeses, chips, crackers, and fruit and planned our attack. One group was to collect in the northern end of the Park, another group in the eastern end, a third group in the Cades Cove region of the Park, a fourth one along the mountain ridges near Clingmans Dome, and a fifth group along hiking trails in and around Tremont itself. The plan was to return to Tremont by 5:00 p.m. and then examine, identify, photograph, box and label the specimens collected as a result of the day’s efforts.

The collecting carried out on Saturday yielded a total of approximately 200 specimens of myxomycetes representing about 50 different species. Two of the species collected were new records for the Park, and several others that turned up are generally considered rare or uncommon. Randy Darrah and Adam Rollins, both former students of Steve Stephenson at Fairmont State College, used a digital camera mounted on a stereomicroscope to capture more than 150 images of various specimens of myxomycetes collected during the Blitz.

Since its inception, scientists, students, and volunteers working with the ATBI project have gathered species inventory data on taxa ranging from snails to protists to moths to bats to fungi. However, except for a few groups, relatively little progress has been made in mycology. The decrease in mycological collection efforts can be attributed, at least in part, to the limited schedules available to experts for identifying the large number of specimens collected in such a short period of time each year; the extended maintenance of cultures prior to identification is at times a difficult task. Also, issues such as the lack of a central repository and limited access to adequate data management tools by mycologists who collect in the Park have been communicated to organizers. The American Type Culture Collection is now working towards initiating a collaborative partnership with the Great Smoky Mountains National Park. If this partnership is established, the ATCC will serve as a collection repository and assist with collection efforts, data record maintenance, and the preservation of selected cultures (to be determined by the mycologists). The biologists of the Mycology Laboratory at the ATCC will contribute their unique knowledge, resources, and skills toward the collection, preservation, and accurate inventory documentation of the Park’s fungi and commonly associated taxa. I encourage and welcome your questions or comments. (<phillips@atcc.org>)

Further Studies of Slime Molds in Puerto Rico

by Ángel M. Nieves-Rivera and Randy G. Darrah

Questions or comments should be sent to Mr Randy G Darrah at the Department of Biology, Fairmont College, Fairmont, West Virginia 26554 or Email <randar@mteer.com>. The authors thank Dr Steve Stephenson for assistance and encouragement to write this article and Ms Nancy N. Mercado for her valuable cooperation during our visit to the Río Camuy Caves Park.

During the period of June 12 to 16 of 2002, we continued traveling through different life zones of Puerto Rico to collect samples of leaf litter, soil, and bat guano for isolation of myxomycetes, dictyostelids, protostelids, and fungi. Investigated on this trip were two upland forests (LTER El Verde Field Station and Mt. Britton Spur, Luquillo Mountains and Toro Negro Commonwealth Forest), two karst forests (Cueva Ventana area and Río Abajo Commonwealth Forest), and a coastal forest site (Cabo Rojo Lighthouse [El Faro], Boquerón Commonwealth Forest). Herein, we record our findings relating to our ongoing studies of the slime molds of Puerto Rico.

We met in San Juan on the 12 of June. Denise Binion, Adam Rollins, Heather McAbee, and Carney “CJ” Broadwater accompanied the authors on the expedition. We began the journey by driving a rented mini club wagon to the Sabana Station in the Luquillo Mountains of northwestern Puerto Rico. We
unloaded our equipment and stored it in the USDA Forest Service house. There were several ecologists and mycologists from the U.S. and Panama at the Sabana Station at the time of our visit.

Quickly depositing our equipment in the dorms and the lab, we proceeded to the LTER El Verde Field Station and the Luquillo Experimental Forest. We parked the vehicle at the station, put on our backpacks and began our trek into the forest. Upon arrival, we followed a foot trail to the previous location of the hanging bridge (now reconstructed) over the Río Sonadora. We made some stops and collected ground and aerial leaf litter of bromeliads (Bromelia sp. and Tillandsia sp.), leaves of Indian plantain (Heliconia caribaea), leaves and bark of “tabonuco” or candlewood (Dacryodes excelsa), and fronds of the sierra palm (Prestoea montana). There were very few fruitings of myxomycetes in evidence, but our collecting efforts produced a few specimens, including Ceratiomyxa fruticulosa and Hemitrichia serpula on old palm fronds. This year, the Mt. Britton Spur was covered by a dense mist and we were greeted by a heavy shower while working our way along the foot trail. Nevertheless, groups of school children, parents, and teachers were wandering around on the trails. The number of people was amazing. Mt. Britton Spur did not provide the conditions required to obtain good photographs and digital images.

The next morning, we proceeded on our second foray. After leaving Sabana, we passed Río Grande, Canovanas, Juncos, and Gurabo. Then we took Highway PR-52, which follows the southern coast, and then continued along on the route from Juana Díaz to Villalba (Road PR-149). The Toro Negro Commonwealth Forest is located in the Central Cordillera between Jayuya and Villalba. Toro Negro has a total extent of approximately 22,400 ha, and the highest elevation is 1338 m above sea level on the summit of Cerro Punta, the highest peak of Puerto Rico. The dwarf or cloud forest developed in the higher peaks of the Cordillera Central are quite different in general appearance from the cloud forest of the Luquillo Mountains due to the less rigorous climate and environment of Toro Negro. This forest has a high diversity of plant species, as well as a number of resident endemic and endangered organisms. Toro Negro is classified as having three life zones—subtropical moist forest (ST-MF), subtropical wet forest (ST-WF), and subtropical lower montane forest (ST-LM)—and has an average of 1600 to 2900 mm of rain annually and an annual average temperature of 20 to 24 °C. The flora of Toro Negro Commonwealth Forest includes the sierra palm (P. montana), tabonuco (D. excelsa), Caribbean pine (Pinus caribaea) along with other plants such as species of Guarea, Inga, Micropholis, Buchenavia, Tabebuia, Swietenia, and Eucalyptus. Among the myxomycetes collected by us from Toro Negro Forest were Didymium squamulosum and Physarum pusillum in leaf litter or aerial litter of Heliconia caribaea, D. excelsa, Pinus caribaea, Prestoea montana, and bromeliads (Bromelia sp. and Tillandsia sp.). Other myxomycetes collected from Toro Negro were Ceratiomyxa fruticulosa and Arcyria sp. Conditions were good enough to take some photographs and digital images of the stream called “Quebrada de Doña Juana”, where CJ and Adam played the roles of Mayan sacrificial victims and leaped into a small cenote. After collecting and driving to Mayagüez, with the exception of the senior author, the rest of the group stayed at “Hotel Colegial”, the hotel of the University of Puerto Rico.
made from dead and decaying seed capsules of the Bixaceae tree known as “achiote”, “bija” or annatto (Bixa orellana).

We then proceeded to Río Abajo Commonwealth Forest, located in the northern karst belt. A recent study by Dr. Ariel Lugo and collaborators in 2001 (USDA For. Serv. Gen. Tech. Rept. WO-65: 1-100), summarized what is known about the karst zone of Puerto Rico (including Río Abajo Commonwealth Forest), its importance and anthropogenic impact. We collected in the forest, next to the biologist house, in a deciduous secondary forest, which was used for agriculture. There we met the fire ant Solenopsis geminata and the “little devils” of CJ, which are locally known as “albayalde” Wasmannia auropunctata, which have a sting that is worse than that of the fire ants. There was no top soil to collect from this at this site, but we collected ground and aerial litter.

The next morning was reserved for a caving expedition to Río Camuy Cave Park (Puerto Rico Park Trust). We went early in the morning and waited for a friend of the senior author to meet us at Lourdes Bakery in Lares. The friend (Ms. Nancy N. Mercado) was, until quite recently, one of the tour guides for the Río Camuy Cave Park. After parking at the Río Camuy Cave Park and picking up our equipment, we talked with Nancy’s supervisor, Lic. Ángel D. López (Director of Río Camuy Cave Park), who received us with an offer of providing whatever assistance we might need. Afterwards, we waited near to the theater for the next assistance we might need. Eventually we entered and viewed a documentary movie to be shown. Eventually we waited near to the theater for the next movie to be shown. Eventually we entered and viewed a documentary movie to be shown. Eventually we waited near to the theater for the next movie to be shown. Eventually we entered and viewed a documentary movie to be shown. Eventually we waited near to the theater for the next movie to be shown.

After entering The Ravine one perceives a soft breeze that is reminiscent of someone breathing. The breeze comes from the misted entrance of Cueva Clara, one of the 16 entrances of the cave system. Río Camuy Cave System, a 15-km long karst feature, is located in the middle of the Tertiary Río Guatemala Formation, which is of Middle Oligocene in age, although the cave itself dates from the Miocene (Lares Limestone). Annual precipitation is 2435 mm and the annual temperature range from 18 to 25 °C. We collected in The Ravine, Clara Cave, Empalme Sink, Tres Pueblos Sink, and Spiral Sink. All these features resulting from karst processes, were carved by the Río Camuy, have resulted in a shaded, cool, moist macroclimate with its characteristic flora. Previous mycological survey in Río Camuy Cave System reported 39 species of fungal species and 11 cellular and plasmodial slime molds from bat-guano enriched soil, leaf litter, dead wood, and river foam. Our collecting efforts were centered around various types of paired aerial litter samples (including lianas and dead but still attached leaves of bromeliads), which were to be examined for the co-occurrence of myxomycetes and protostelids by Dr. Steve L. Stephenson of Fairmont State College and Dr. Fred Spiegel of the University of Arkansas.

Our final collection stop (on June 16) was at the Cabo Rojo Lighthouse, Los Morrillos, located in Boquerón Commonwealth Forest. This forest is under the jurisdiction of the Puerto Rico Department of Natural Resources, and presently the lighthouse is in the process of restoration. The Boquerón Forest consists of mangrove swamps on the coast and is located several km north of the town of Boquerón in the Cabo Rojo municipality, southwestern Puerto Rico. According to the Holdridge System, it is classified as part of the subtropical dry forest life zone (ST-DF). The lighthouse is located on a small summit (27 m elevation) from which most of the reefs, mangrove channels, and the nearby town of El Corozo are clearly visible. Mean monthly temperatures range 26 to 29 °C, and annual precipitation ranges from 136 to 542 mm. Strong trade winds, with speeds of 10 to 35 km/h, are often common from the southeast or east. Temperature and humidity were usually high, but there was a high sea breeze kept conditions tolerable. The breeze also helped to prevent the usually present hordes of mosquitoes from forming. These swamps contain at least 58 species of fish and over 50 species of birds, some...
of which are rare or endangered. Mycological surveys have revealed a yellow *Boletus* sp. under the covering bush or plant grove of the southern waxmyrtle *Myrica* sp. (?) and ephemeral basidiocarps of *Coprinus* sp. in sandy soil. A sooty mold (ascomycete *Asteridiella sepulta*) and planthopper (*Petrusa marginata*) association has been found to occur in the black mangrove *Avicennia germinans* of Los Morrillos. The occurrence of myxomycetes on mangroves is comparatively rare. However, Dr. Jan Kohlmeyer previously collected *Arcyria cinerea* on the dead wood of *Rhizophora mangle* in Hawaii by 1969. In May 2002, the senior author collected *Stemonitis splendens* on a dead upright trunk of *R. mangle* from this forest.

This final day was spent traveling from Mayagüez-Cabo Rojo to San Juan. We passed Mayagüez and entered the road (Highway PR-111) through Moca to Lares, passing close to the Río Camuy Caves Park (Highway PR-129) and then going on to Arecibo. We visited the Arecibo Radio Telescope operated by Cornell University. Also, we traveled among the “mogotes” (conical residual limestone hills), a typical karst feature of northern Puerto Rico. Running short on daylight and having completed our intended field work, we continued our way to San Juan, where Denise, Adam, Heather, CJ, and Randy were safely dropped at their hotel. The senior author then returned to the Sabana Station to pick up some journals left behind and then proceeded on to Mayagüez that same evening.

This was the first visit to Puerto Rico for Heather and CJ, and they were made aware of a few facts that will help when planning their next visit to the island. Among these are (1) Cool beers are sold in bars, not in supermarkets! (2) “Pinchos de pollo” (chicken kabob) and passion fruit juice are good stuff, but are addictive! (3) In Lares it is possible to purchase ice cream with strange flavors such as “rice and beans”, “garlic”, “mofongo”, and different liquors like “Cointreau”. (4) A visit to the Flea Market (“Pulguero”) of San Sebastián, is likely to turn up items ranging from chickens sold from the trunk of the cars to VHS pirated-versions of different recent movies and strange but tasty local foods. (5) Any visitor to Puerto Rico definitely should try the local food in the restaurant by the sea known as “El Bohío” in Joyuda, Cabo Rojo.

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**From The President’s Corner . . .**

_Dear Friends and Colleagues,_

This is my first chance to address the MSA from the President’s Corner of _Inoculum_, and it could not have come during a better year for mycology. We all owe sincere thanks to this year’s officers of the MSA, and Past-President _Tim Baroni_ most of all, for their efforts to make 2002 a banner year.

First, we had two international meetings, the Mycological Congress of the International Union of Microbiological Societies in Paris (IUMS), and the International Mycological Congress of the International Mycological Association (IMC) in Oslo. I can attest that the IUMS meeting in Paris was a success, and all reports are equally positive from those fortunate enough to attend the IMC VII meeting in Oslo. Again, thanks are due to the organizers of both events, _Rob Samson, Patrick Boiron, Carol Shearer_ (MSA President - Elect) and colleagues of IUMS and _Leif Ryvarden, Trond Schumacher, Meredith Blackwell, Jim Anderson_ and colleagues of IMC. It will be three or four years until the next international meetings, when IUMS holds their congress in San Francisco in 2005 and IMC holds theirs in Cairns, Australia in 2006. The IUMS meeting in San Francisco in 2005 is timed to just precede the joint MSA/Mycological Society of Japan meeting to be held in Hawaii, so plan early to attend both.

Electronic publication of _Mycologia_ is another milestone of 2002. If you have not visited the _Mycologia_ website, I urge you to do so immediately at _<http://www.mycologia.org>_.

_Sincerely,_

-- _John Taylor_<br>President (2002-2003)

**MSA Council Email Express**

_August 2002_

Since June 25, Executive Council and Council have taken the following actions:

_Email Council Poll 2001b-01 –_ On July 12, Council approved inclusion of the Hawaii Tourism Authority logo in the “upcoming MSA meetings” brochure (to be disseminated at the Paris IUMS and Oslo IMC 2002 congresses) in recognition of a $500 contribution toward brochure preparation.

(continued next page)
Email Council Poll 2001b-02 – On August 26, Council approved placing on the MSA 2003 ballot consideration of the following By-laws change: henceforth the MSA Fellow awards will be administered by the Honorary Membership Committee, to be renamed the Honorary Awards Committee.

Welcome, New Members! Although candidates for MSA membership may not vote until formally approved at the annual general business meeting, they do receive *Mycologia* and *Inoculum* immediately after Allen Press processes their applications. During July, the following five people applied for MSA first-time membership: United States – Suzanne S. Blevins, Mo-Mei Chen, Ezekiel M Dang, Richard Knight, and Allan R. Rudison.

-- Lorelei Norvell
MSA Secretary
from many members, the nomination process should be streamlined so that each nominator need only forward a one-page overview of a candidate’s qualifications to the committee handling the award.

**MOTION (approved unanimously):** Lorelei Norvell moved, and Jean Lodge seconded, that administration of the MSA Fellow award be incorporated into the Honorary Committee.

Council then discussed Program Chair Keith Egger’s request that Council appoint someone to assume responsibility for the maintenance and upkeep of an abstract submission site. For the past two years, Jim Anderson (MSA 2001 Program Chairman) has handled these duties.

**ACTION TO BE TAKEN:** Council recommended that the membership be polled at the business meeting to see whether a web-savvy volunteer would be willing to act as an overseer of relocating the current submission site to a new server and maintaining that site for subsequent Program chairs. Council also asked that Jim Anderson be solicited for information on how the current site functions and that the possibility of having the site handled by Allen Marketing and Management be investigated.

Having disposed of brief items, Council then turned its attention to financial considerations.

**Treasurer Jim Worrall** delivered his report (to be published in *Inoculum*). He noted that *Mycologia* is both the Society’s main source of income and its main expense. Income to the Society comes from (in order) *Mycologia* institutional subscriptions, annual dues, page charges, and meeting income overflow (including auction items, t-shirt sales, and other miscellaneous items). The Society’s highest expenses originate (in order) from Allen Press, the Editorial office, grants and awards, and online publication of *Mycologia*. The Society currently faces a challenging financial situation because MSA must pay both HighWire and Allen Press to prepare online text in addition to the high online start-up costs distributed over the next few years. At the same time Council must budget for implementation of a much-needed new online manuscript tracking system. During 2002 the Society also is disbursing new foreign travel awards to students and young investigators to attend foreign meetings of affiliated societies. Finally, the 2001-2002 fiscal year covers expenses for both the August 2001 Salt Lake meeting and the June 2002 Corvallis meeting, to which are added deposits for the July 2003 Asilomar MSA-BMS meeting. Nonetheless, while the financial outlook was somewhat gloomy at this February’s Executive Council meeting, Jim added happier late-breaking financial news: the Society has received a donation of ~$20,000 resulting from Gary Samuels’ auction of the Rogerson library. MSA membership is up slightly, more authors are paying page charges, and the Society membership overwhelmingly voted to increase dues and subscription rates. Council, observing that *Mycologia* offers among the lowest institutional subscriber fees for scholarly research journals, noted a need to administer a gradual but steady increase in institutional subscriber fees. Treasurer Worrall finally noted that although Council has approved raising the bankcard limit to $25,000, the bank currently administering our current card sets a limit of $5,000, which is too low for costs associated with the annual meeting. Accordingly, he is investigating other bankcard options.

**MOTION (approved unanimously):** Orson Miller moved, and John Taylor seconded, that Council accept the Treasurer’s Report as given.

**Finance Committee** Chair Orson Miller reprised items covered in his January report delivered to the Executive Council. Council discussed separating the endowment and operating funds but generally agreed with Orson that more interest is accrued by separating various funds on paper but maintaining all Society monies in a common pool. To a query regarding whether the Society owns stock in Sustaining Member corporations, Orson replied that the Society uses only funds and bond-ladders and that it is this conservative stance that has probably protected Society investments during the recent economic downturn and ensuing “Enron” type scandals.

President Baroni then directed Council’s attention to Chair Judi Ellzey’s **Endowment Committee** Report. Jim Worrall noted a better method of tracking endowment funds should be implemented to ensure that treasurer and endowment committee numbers match. Council revisited the need for each Mentor Student Travel Award fund to contain at least $10,000 so that awards can be administered from the interest without decreasing the capital. Council, who encourages the membership to donate (generously! and often!) to the endowment funds, noted that smaller funds may need to be either eliminated entirely or permanently “hyphenated” together so as to generate enough award revenue. Council then considered the Endowment Committee’s request that a Rogerson Endowment Fund be instituted.

**ACTION TO BE TAKEN:** Council, which needs more input regarding the focus of such a fund (e.g. whether to provide research or travel support) before voting formally, noted that it is very amenable to instituting such a fund. The Secretary was directed to contact the Endowment Committee, Gary Samuels, and Amy Rossman to see how they would prefer the proposed new Rogerson endowment fund be administered (e.g. travel, award, or research oriented). Council also would like to hear what the committee, Gary, and Amy think Clark Rogerson would have preferred.

Council next considered the savings to be gained by the Society by either offering members the option of not receiving *Inoculum* hard-copy or by eliminating *Inoculum* entirely as an online-only publication. Savings would accrue primarily from lowered materials, handling, and postage costs. *Inoculum* is currently available to anyone logging onto the MSA website, and some of those present indicated that they use the online version more than the hard-copy.

**MOTION (approved unanimously):** Orson Miller moved, and Iris Charvat seconded, that Council institute a survey to poll the full membership regarding future delivery options for *Inoculum* (the Society newsletter). Incoming Vice-President David McLaughlin agreed to formulate options regarding the future of *Inoculum* [digital availability through email/web-access, elimination of hard copy in part or entirely] and place those options on the MSA website and in Inoculum to elicit member feed-back to see whether to consider implementing a policy change on the MSA 2003 ballot. [NOTE: A show of hands at the Annual Business meeting on June 25 indicated that the membership does NOT wish to eliminate hard-copy of *Inoculum* entirely at this time.]

Councilor Richard Kerrigan then asked whether MSA should continue to index current *Mycologia* volumes now that the journal is accessible online. An opinion was expressed that the search feature does not
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appear to be global on the HighWire site, but Jim Worrall noted that we could save over $5200 annually by not indexing future issues. Background is needed, but a show of hands indicated that most of Council still finds current hard text indices indispensable.

**ACTION TO BE TAKEN:** Council directed Editor-in-Chief Joan Bennett to see how many other scientific journals with online versions still supply annual indices.

**MSA IUMS representative Carol Shearer** proposed sponsoring an MSA member at the upcoming IUMS-affiliated Cuba microbiology meeting designed to build much-needed bridges with Cuban research colleagues. Council was favorably disposed toward supporting a mycologist to attend the workshop, and Councilor Gerry Adams suggested that the Society representative should probably be able to speak Spanish. Council also noted that a US citizen might face difficulties in obtaining a visa in time for the November IUMS meeting. [After the meeting, Shearer noted that all microbiologists now sponsored to attend the meeting are US citizens and that the NAS Committee will facilitate obtaining the visas for US citizens.]

**ACTION TO BE TAKEN:** The Secretary and Shearer were directed to contact the Environmental Health / Medical Mycology and International Advisory Committees for suggestions. Anyone interested in attending the congress should contact Carol Shearer immediately.

Carol Shearer then asked Council whether MSA wished to be included in any proposals that the NAS IUMS Committee sends to NSF regarding funds for sponsoring experts to present workshops in foreign countries (e.g. taxonomic, disease-oriented). MSA has held such workshops in the past (the Basidiomycete and Ascomycete workshops at ALM 2000), the most recent being one held by Maren Klich and Michael McGinnis in Salt Lake a month ago.

**ACTION TO BE TAKEN:** Carol Shearer agreed to write an article alerting MSA members to the possibility of NSF funding for publication in the *Inoculum*.

Council interrupted deliberations at 2:00 for presentation and reports from AMM Sales representative Martha Chapin and AMM Association Manager Linda Hardwick. Chapin presented a demonstration of enhanced online association management services that would cover an online membership directory (currently handled by Online Directory Manager David Farr), online membership maintenance, electronic renewals (including auto-renewals), electronic reporting, online ordering, list service/electronic messaging, and online balloting. She also presented Council with an introductory offer where no fees would be charged during the July-December 2002 implementation, after which $5,000 would be charged for January-June, 2003 enhanced option service. Thereafter, annual fees would follow a sliding scale (estimated annual charges = ~$19,000) based on numbers of MSA members.

Council objected that AMM was incorrect in counting ~800 institutional subscribers as members (brining the “membership” total to just over 2,000 and into a higher rate) because since such subscribers are not members, they would not be utilizing any of the enhanced option features. Chapin noted that she would relay Council’s concern back to her manager. She also fielded questions regarding two other packages (i) Meeting management (that would handle onsite meeting accommodations) and (ii) Meeting ASSYSTant, AMM’s “interactive web-based system designed to collect, edit, and review meeting proposals and abstracts, organize them into a customizable program and schedule, and publish abstracts and program in print and/or online simultaneously.”

After the review of AMM’s new database offerings and online costs, Association Manager Linda Hardwick answered outstanding Council questions. Responding to the hope that the Society might save considerable money by offering an online-only option for *Mycologia*, she cited Councilor Kerrigan’s observation that as the number of issues printed decreases, costs per individual issue actually go up slightly due to non-reducible fixed set-up costs. Agreeing that MSA would not see any dramatic savings in the immediate future by offering an online-only option to *Mycologia* subscribers and MSA members, Hardwick added that there would be eventual savings to the Society after many members converted to online only copy. She also noted that as there are fewer personal computers available overseas, most foreign subscribers would probably continue to request hard copy, with any reduction in hard copy subscriptions seen first in the US and Canada. In response to Worrall’s observation that the new database he recently received is a giant step backward, Hardwick said that including the accounting code omitted in the changeover will render the database much more user friendly. She also suggested that Council consider including membership cards in the new member packets, which are “pretty thin” since MSA has run out of the Careers in Mycology brochure. Council also discussed Hardwick’s recommendation that MSA institute a members-only online directory, eventually agreeing with President-elect Taylor’s assessment that having an “open-to-all” membership directory is a desirable feature for MSA. Council thanked Chapin and Hardwick for their presentations and resumed deliberations.

**Managing Editor Jim Ginns** presented his report, adding that the April 2002 launch of *Mycologia* online by HighWire proceeded fairly smoothly. He noted that currently we have a “bare bones” site and that Council must anticipate the cost needed to pay for HighWire’s placing Volumes 91-93 (MSA does not hold the copyright to volumes published before 1999). Council considered the wisdom of restricting access to past volumes to members only; Rick Kerrigan noted that if lapsed members were barred from the site, they would then not have access to issues that they had essentially “paid” for while members.

Council next deliberated over the AMM enhanced membership management package offer. As MSA currently is experiencing continual problems with the Online Membership Directory (currently overseen by an MSA volunteer) and has no online membership applications, renewal, or auto-renewal options, or online voting potential, the package is very tempting. The high cost (in part resulting from inclusion of institutional subscribers in the “member” count used to determine the package rates) and the possibility of bugs present in a new package were noted, and Council agreed that MSA members might suffer acting as possible “guinea pigs.” Council felt that annual enhanced management costs should be held at ~$5/member.

**ACTION TO BE TAKEN:** Council recommended that Orson Miller, John Taylor, Jim Worrall, Jim Ginns, and David Hibbett investigate the feasibility of adopting the Enhanced Option package outlined above and be charged with the responsibility of negotiating via conference call with AMM Manager Theresa Pickel to elicit more information and negotiate fees.
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This is to be completed and Council to vote online before September 1 to make maximum use of the lowered incentive cost should Council decide to proceed.

Discussion next moved to the web interface content accompanying Mycologia Online, and the problems with the masthead information displayed on Mycologia Online web interface and Mycologia front and back inside covers. Jim Worrall volunteered to serve in this capacity. MOP guidelines will need to be revised accordingly by incoming President-elect Shearer. The Secretary will be in charge of information flow to Mycologia EIC and Editorial Assistant (now Joan Bennett and Mary Langlois), Allen Press (now Beverly Prescott), Inoculum Editor (now Don Ruch), MSA Webmaster (now Roy Halling), as well as the new Information Quality Control Overseer (Jim Worrall).

Council briefly considered the advisability of instituting small “agent” discounts to encourage subscription agents to promote Mycologia. Councilor Gerry Adams noted that if annual meeting registration fees were higher for non-members than members, we could provide an incentive to garner more members. No action on either item was suggested at this time.

Mycologia Editor-in-chief Joan Bennett then gave her report (to be printed in an upcoming Inoculum). She thanked Council for funding her way to the annual meeting and Editorial Assistant Mary Langlois, Secretary Norvell, AMM Association Manager Hardwick, Allen Press Editorial Director Beverly Prescott, and former Mycologia Editor-in-Chief David McLaughlin for support and advice. She noted that she had not foreseen that the amount of time she would be devoting to Mycologia would be so great and that administration of the publication has become a daily concern for her and that three-time proofing of papers and correspondence with authors, editors, and reviewers has become a full-time job for Editorial Assistant Langlois. She thanked Council for agreeing to raise the number of Associate Editors to 18 and asked anyone interested in serving the Society in that capacity to notify her immediately. EIC Bennett added that problems with misinformation on the inside covers partly resulted from staggered terms for Associate Editors; this has now been changed so that henceforth Associate Editor turn-over coincides with the first issue of each new volume on January 1. She thanked the Editorial Advisory Committee for suggesting potential new editors and advising her how to cope with editors who do not return reviews in a timely fashion.

The editorial office’s greatest need continues to be an up-to-date manuscript tracking system. The current system, introduced >8 years ago by then-EIC David McLaughlin, is showing its age. EIC Bennett invited Council to attend the Editorial Meeting on Monday during which AMM would present a demonstration of their electronic tracking, submission and review offerings for consideration by the editorial staff. Council thanked EIC Bennett for her report.

Final agenda items were considered briefly:

(1) A show of hands indicated unanimous Council support for permitting headhunters to post job positions on the MSA Bulletin Board.

(2) MOTION (approved unanimously): John Taylor moved, and Jim Worrall seconded, that the MSA pay up to $500 to develop and print a pictorial brochure publicizing MSA-BMS 2003 in Asilomar, California, MSA 2004 in Asheville, North Carolina, and MSA-MSJ 2005 in Hilo, Hawaii, at the upcoming 2002 IUMS meeting in Paris and IMC in Oslo. Jean Lodge, who will be attending both congresses, volunteered to be a distributor.

ACTION TO BE TAKEN: The Secretary is to send a reminder and a request for gorgeous photos to upcoming Program Chairs Susan Kaminskyj, Jessie Micales, and Jean Lodge and local coordinators Tom Buns, Dennis Drehmel, and Don Hemmes.

(3) Public Policy Officer Linda Kohn recommended that the Editor-in-Chief and Editorial Advisory committee set January 1 as deadline for publication of the presidential addresses from the previous year and the MOP guidelines be modified accordingly. Until recently, the out-going president generally submitted the manuscript to the Editor-in-Chief after the annual meeting in time for publication on the first page of the January-February issue of Mycologia, a tradition the Society would like to resume. Kohn also noted that the NSCA (National Science Collections Alliance) needs interaction from the Society.

(4) Council briefly considered the recent suggested revised FDA code that would institute pre-market expert inspection of mushrooms, but agreed generally that the Society should not be involved with certification of mushroom experts. David Hibbett noted that the FDA should, however, be encouraged to develop molecular protocols for mushroom identification for use in poisonings and other problems arising from mushroom ingestion.

(5) Councilor Kerrigan observed that MSA, which appears to have entered an era of deficits, must choose carefully how to spend its money and noted that the money paid to AMM for marketing activities was not cost-effective.

(6) Treasurer Worrall noted that Council should discuss support for a full-time editorial assistant, as the current contract expires after 2003.

MOTION (approved unanimously): Secretary Norvell exhaustively moved, and entire Council enthusiastically seconded, to adjourn.

President Baroni adjourned the meeting at 6:05 pm.

Tim Baroni, 2001-2002 MSA President
Minutes of the Mycological Society of America Annual Business Meeting
Tuesday, June 25, 2002 -- 8:00 am
Ballroom, CH2M Hill Alumni Center, Oregon State University, Corvallis, OR

1. President Timothy J Baroni called the 2002 annual MSA business meeting to order at 8:03 am. After welcoming members and guests, he thanked the hard-working 2002 Program Committee (Chair Keith Egger, Susan Kaminskyj, Jessie Micales, Jean Lodge), Local Organizers Jeff Stone (absent from Corvallis due to the conflict with the USDA – Invasive Species Advisory Committee Council meeting) and Joey Spatafora, and members of the OSU String Quartet, who added an air of soothing elegance to Sunday’s post-foray publicizing the new website on such short notice. He then introduced those sitting at the head table, which included Past President Baroni thanked Chair Lorelei Norvell, Treasurer Jim Worrall, and Program Committee Chair Keith Egger.

2. The membership approved Secretary Norvell’s minutes of the 2001 MSA Annual Business meeting as printed in Inoculum 52(6):17-18.

3. Vice-President Shearer presented the ballot results (from 370 votes cast). Those elected were: David J McLaughlin, Vice-President; Faye Murrin, Councilor for Cell Biology/Physiology; David Rizzo, Councilor for Ecology/Pathology; Michelle Momany, Councilor for Genetics/Molecular Biology; Sabine Huhndorf, Councilor for Systematics/Evolution. All proposed By-Laws amendments passed, including those supporting dues increases. Vice-President Shearer urged all MSA members to support their Society by nominating qualified fellow members or notifying the Nominations committee or other MSA officers if they are interested in serving MSA in some elected or appointed capacity.

4. Lorelei Norvell presented highlights from the Secretary’s annual report (see Inoculum 53(4): 5-6).

5. Treasurer Worrall presented an overview of the Society’s financial status to accompany the Treasurer’s report he delivered at the Annual Council Meeting (see Inoculum 54(5), this issue). He noted that while MSA has assets worth half a million dollars, Society expenditures come to $300,000 and the Society has entered a challenging period. Most of the Society expenses are dedicated to publication of its journal, Mycologia, which includes the start-up costs associated with the March launch of Mycologia Online by MSA & HighWire Press. Additionally, MSA has committed to paying Allen Press an additional amount for online text preparation, has set-aside funds for installing and activating a new online editorial tracking system, is considering adoption of an electronic manuscript processing system for Mycologia, and continues to budget expenditures for a full time editorial assistant to handle an increased editorial load. Treasurer Worrall also noted that the Society supports costly award programs, including the recently instituted undergraduate research award and the 2002 Foreign Travel Support awards. He urged members to support the award programs by adopting a great “giving” mentality to accompany their great volunteer mentality. He also noted that for the most part, grants and awards are far in excess over the amounts remaining in the endowment funds. George Carroll, who moved that the members accept the Treasurer’s report (granted unanimously), commended Treasurer Worrall for providing such an articulate, comprehensible summary of the Society’s money flow.

6. Secretary Norvell read the minutes from the June 23 MSA 2002 Annual Council meeting (see Inoculum 54(5), this issue).

7. The membership voted unanimously to grant Emeritus Membership status to Donald Ahearn, Joseph Butler, Gwendolyn Caldwell, Ralph Kurtzman, David Largent, Anthony Libert, Larry Don Robertson, Ian Ross, and Robert Ulrich.

Change of Address

Send all corrections of directory information, including e-mail addresses, directly to Allen Press

Mycological Society of America

Attn: Linda Hardwick, Association Manager

PO Box 1897 [810 E 10thSt]
Lawrence, KS 66044-8897

Vox 800.627.0629 (US and Canada)
or 785.843.1221
Fax 785.843.1274
Email lhardwick@allenpress.com

Note: Members may also submit directory corrections via the form included in the MSA directory via the MSA Home Page: http://www.msafungi.org

11.
A donation has been received for the uncommitted endowment funds in memory of Chester Ray Benjamin, given by Marie L. Farr.

**Cellacious Interests**

*Cellacious Interests* is intended to highlight exciting developments in fungal molecular and cellular biology and to give enough information for the interested reader to find out more. I hope this will be the first installment in a regular column and welcome contributions and suggestions for future topics.

Fungally yours,

-- Michelle Momany
Councilor, Genetics/Molecular Biology
momany@botany.uga.edu

**Actin Anchor in the Spitzenkörper?**

Eukaryotic cells use actin to shape areas of growth. So it is no surprise that actin filaments are found in fungi at growing tips and septa. But, until recently it was a mystery how actin filaments associated with areas of growth in fungi. People assumed that there was an anchor attaching actin monomers to the membrane and that filaments would be assembled from this anchor, akin to the nucleation of microtubules by microtubule organizing centers. Recent work shows that proteins known as formins appear to be the anchors needed for assembly of actin filaments in *Saccharomyces cerevisiae*. Loss of the formins Bnr1 and Bni1 eliminates actin filaments in *S. cerevisiae*. Overexpression of Bni1 causes extra actin filaments to form [1]. Bni1 can even nucleate actin filament assembly *in vitro* [2,3].

The *Aspergillus nidulans sepA* gene encodes the homologue of Bni1. SepA is found where the germ tube will emerge from the conidium, at septa and at hyphal tips [4]. Deletion of the *sepA* gene results in hyphae that do not form septa and branch dichotomously. Especially interesting for mycologists, a bright spot of SepA is seen just behind a cap of SepA at the hyphal tip (see photo). This is the position occupied by the Spitzenkörper, a dense collection of vesicles, actin, and microtubules in tips of actively growing fungi [5]. The Spitzenkörper is thought to direct polar growth by organizing vesicles bound for fusion with the membrane at the hyphal tip [6]. Exactly how the SepA formin interacts with actin in hyphal tips is not yet clear. Unlike *S. cerevisiae*, SepA is not needed for actin filament localization at growing tips. But, the SepA spot and the dichotomous branching of *sepA* mutants suggests that this formin is important for maintaining tip integrity in filamentous fungi.

To find out more…


Ancient Starch Research Group Requests Assistance

I am an ethnobotanist studying the history of food and agriculture and am a member of the Ancient Starch Research Group (see [http://www.austmus.gov.au/anthropology/research/starch.htm](http://www.austmus.gov.au/anthropology/research/starch.htm)). We are currently writing a book aiming to introduce the subject of ancient starch in archaeological sites to the world generally. Ancient starch has recently been recovered from many different sites in various countries, but little is known in detail about how or why it survives. It is obviously chemically very stable, having been preserved for at least 28,000 years in one case, and it is also clear that preservation is assisted by arid conditions. However, it also survives in situations that are not completely arid or sterile.

I am responsible for a chapter on how starch may be degraded or preserved in archaeological sites – a subject for which there is precious little information available. We are at still at a very early stage in this new direction of research, and there have been no experimental studies designed specifically for understanding what happens to starch in archaeological contexts.

However, I understand that fungi are likely to be the main decomposers of starch in soils, and wonder if members of the Mycolocial Society of America can recall any publications in which authors have discussed the distribution and degradation of starch in natural or human environments.

If anyone can help us by recommending publications that we should read, or sending relevant reprints, please contact me by email <pjm@gol.com> or by post to the National Museum of Ethnology, Senri Expo Park, Suita City, Osaka 565-8511, Japan.

Thanks for yours sincerely,

-- Peter Matthews
pjm@gol.com

George Carroll Donates His Personal Herbarium to Oregon State University

In the course of the next month I will complete the transfer of my personal herbarium to the mycological herbarium at Oregon State University curated by Joey Spatafora. This collection consists of about 1000 specimens, mostly Ascomycetes. A majority of these specimens were collected between 1963 and 1968 in Europe and Central America. Localities in the United States include those in the vicinity of Austin, Texas, those in the Pacific Northwest, and a few in New Jersey and SE Pennsylvania. The Hypocreales and Xylariaeaceae are especially well-represented. Many of these specimens have been examined and annotated by Ascomycete specialists including: Emil Müller (Ascomycetes in general), Anders Munk (Pyrenomycetes, Loculoascomycetes), Clark Rogerson (Hypocreales, particularly *Hypomyces*), Gary Samuels (Hypocreales), Dean Glawe (Diatrypaceae), and Lilianne Petrini (*Rosellinia* and *Hypoxylon*). The herbarium includes a set of Pyrenomycete specimens collected in Denmark with Anders Munk in 1963, and a *de facto* exsicatti distributed by Emil Müller to participants in the mycological foray in E. Switzerland which he organized prior to the First International Mycological Congress. Mycologists who wish borrow or examine these specimens after they have fully incorporated into the OSU herbarium should contact Joey Spatafora.

-- George Carroll
gcarroll@oregon.uoregon.edu

Mycologists on the Move

**Congratulations John Zak**

John Zak has recently been appointed Chair of Biological Sciences at Texas Tech University. You can contact him at 806-742-2715 or through his new email <john.zak@ttu.edu>.

**Orson Miller has Completed his Move to Idaho**

My full time address is Box 858, McCall, Idaho 83638. We will live at 1075 Meadows Road, McCall Idaho; our phone is 208-634-2597; our email: <orsonk@frontiernet.net>. This is the same address which we have maintained for many years but a remodeled home.

-- George Carroll
gcarroll@oregon.uoregon.edu
Images from MSA 2002, Oregon State University, Corvalis, OR

Images supplied by Lorelei Norvell, MSA Secretary

Opening reception: Salmon dinner plus OSU String Quartet.

Judy Ellzey, outgoing endowment chair, and Hope Miller

Joey Spatafora, Local Arrangements Coordinator (left); Roy Halling, MSA Webmaster (center); Keith Egger, 2002 Program Chair (right).

Big “Puff Daddy” flaunting his ticket in Oregon after his car was apprehended for illegal activities. Shortly after this mugshot was taken, he escaped from the Portland airport disguised as the immediate past-MSA-president and accompanied by former MSA first lady, Lynda Baroni. Last seen in the vicinity of the Volkmuseum in Oslo, Norway in mid-August. New York residents living near rivers and lakes populated by fish are warned to lock their doors and report suspicious activities to their local law enforcement agencies. [Come back, Tim. The fine was paid!]

Tim and Lorelei after Council meeting, June 23.
THE MYCOLOGIST’S BOOKSHELF

In this issue feature books received from June through August 2002, and list previously featured books received since October 2001. Reviews are still needed for several books if you have the time over the next several months. Please check the list, send me an Email at john.zak@ttu.edu and I will try to accommodate your request as soon as possible.

Please note that my e-mail has changed. John Zak, BOOK REVIEW EDITOR

BOOKS AND PUBLICATIONS RECEIVED JUNE THROUGH AUGUST 2002


PREVIOUSLY LISTED BOOKS FROM OCTOBER 2001


• Bio-Exploitation of Filamentous Fungi. 2000. SB Pointing and KD Hyde (eds.), Fungal Diversity Press, The center for Research in Fungal Diversity, Department of Ecology & Biodiversity, Kadoorie Biological Sciences Building, The University of Hong Kong, Pokfulam Road, Hong Kong SAR, China, kdhyde@hkucc.hku.hk, Price: $100 US. +$16 for air mail. Requested from publisher.


• Check List of Hong Kong Fungi. 2000. BS Lu, KD Hyde, WH Ho, JE Taylor, KM Tsui, MKM Wong, Y Zhou and DQ Zhou (eds.), Fungal Diversity Press, The center for Research in Fungal Diversity, Department of Ecology & Biodiversity, Kadoorie Biological Sciences Building, The University of Hong Kong, Pokfulam Road, Hong Kong SAR, China, kdhyde@hkucc.hku.hk, 376 pp. Price: $20 US + $8 for air mail. Requested from publisher.


THE MYCOLOGIST’S BOOKSHELF con’t


- **Genera of Ascomycetes from Palms.** 2000. KD Hyde, JE Taylor, J Frolich (eds.). Fungal Diversity Press, The center for Research in Fungal Diversity, Department of Ecology & Biodiversity, Kadoorie Biological Sciences Building, The University of Hong Kong, Pokfulam Road, Hong Kong SAR, China, kdhyde@hkucc.hku.hk. Price: $100 US. + $16 for air mail. Requested from publisher.


Diversity, Department of Ecology & Biodiversity, Kadoorie Biological Sciences Building, The University of Hong Kong, Pokfulam Road, Hong Kong SAR, China, kdhyde@hkucc.hku.hk, 376 pp. Price: $100 US. + $16 for air mail. Requested from publisher.


- Synopsis of Fossil Fungal Spores, Mycelia and Fructification. 2000. RM Katgutkar and J Jansonius. Order from: Vaughn M Bryant, Jr., Secretary AASP Foundation, c/o Palynology Laboratory, Texas A&M University, College Station, TX 77843-4352, vmbryant@neo.tamu.edu. 422 pp. Price: $33 US. Reviewed in Inoculum 52 (3):74-75.


THE MYCOLOGIST’S BOOKSHELF con’t
**OF RELATED INTEREST . . . .**


- Editors Note: Dr. Robert Lichtwart has informed me that: The Revised Edition of the *Trichomycestes: Fungal Associates of Arthropods* is available to anyone at the following website: www.nhm.ukans.edu/~fungi. Review in progress.

**MYCOLOGICAL CLASSIFIEDS**

Read the Classifieds for announcements of courses, employment, positions available, and mycological goods and services offered or needed.

**MSA Brief Cases and T-shirts Still Available**

The Society has a few brief cases and t-shirts remaining from this year’s meeting. If you would like to purchase some official MSA gear, contact Jeff Stone. The brief cases, which are black and have a MSA 2002 meeting logo, are $10 and the t-shirt, sizes limited to large and XL, are $15.

-- Jeffrey Stone
Dept Botany & Plant Path, Cordley 2082
Oregon State Univ
Corvallis, OR 97331-2902
541-737-5260
stonej@bcc.orst.edu

**Mold Testing and Identification Services**

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Email: <microbe@pioneer.net>; Voice mail: 541.929.5984; Surface mail: Abbey Lane Laboratory, LLC, PO Box 1665, Philomath, OR 97370 USA. For more information see <www.pioneer.net/~microbe/abbeylab.html>.

-- Steven E. Carpenter

**Postdoctoral Associate in Fungal Cell Biology and Nanobiotechnology**

**Cornell University**

A position will be available beginning 1/2003 to investigate fungal cell growth and development using nanofabrication technologies. The investigation will have a clear and purposeful integration of the two disciplines. The overall goal of this project will be to develop and use nanofabricated surfaces and devices to address questions regarding fungal cell interactions with the substratum on which they grow. Of particular interest is to understand how these cells sense topographical features and chemical domains that influence i) spore germination, ii) growth orientation, and iii) appressorium formation.

The person filling this position must have an interest in developing the necessary skills to integrate biology and nanofabrication. Fabrication of devices will be done at Cornell University’s Nanofabrication Facility (www.cnf.cornell.edu), a user-friendly facility where biologists are guided through fabrication processes. It is expected that the individual also will participate in the activities of the Nanobiotechnology Center (NBTC) (www.nbtc.cornell.edu), a National Science Foundation funded Science and Technology Center.

**Desired qualifications for the position include skills and knowledge of general cell biology, fungal cell biology (mycology) and/or microfabrication technologies (lithography, RIE, etc.). The candidate must have a Ph.D. in the biological sciences (e.g., biochemistry, botany, cell biology, mycology, plant pathology, etc.) or in the physical sciences (e.g., applied physics, materials sciences). Salary is commensurate with qualifications and experience. The position will is available for 1-3 years.**

Please send inquiries to Dr. H. C. Hoch, Department of Plant Pathology, Cornell University, NYSAES, Geneva, NY 14456. Phone: 315.787-2332; E-mail: <hch1@nysaes.cornell.edu>.

-- Harvey C. Hoch
hch1@nysaes.cornell.edu

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The following books are for sale. If interested, contact:

**John L. Maas**
4650 Solomons Island Rd.
Huntingtown, MD 20639
301-504-7653

All would be shipping paid by purchaser.


Lloyd’s Photogravures of American Fungi, 32 plates, unbound. Smithsonian Institution, 1890’s.


-- John L. Maas
301-504-7653 (phone)
CALENDAR OF EVENTS

Event dates and descriptions precede event locations (italic boldface), contacts (plain font), and Email/Websites (bold face, no brackets).

Those wishing to list upcoming mycological courses, workshops, conventions, symposia, and forays in the Calendar should submit material formatted as shown below and include complete postal/electronic addresses.

2002 (October 10-13), NAMA Annual Foray.
Diamond Lake, OREGON
Judy Rogers namyco.org
Phyllis Cole yamacole@cruzio.com

2002 (November 4-8), 3rd Asia-Pacific International Mycological Conference on Biodiversity and Biotechnology
Kunming, Yunnan, CHINA
Dr. Dequn Zhou, Secretary
Southwest Forestry College
Kunming, Yunnan, China 650224
Phone: ++86-871-3862737 zhoudq@public.km.yn.cn

Havana, CUBA
Carlos Borrot, President mailto:bioagro@cigb.edu.cu
http://bioagro.cigb.edu.cu Phones: 53-7-218008, 53-7-218466

2002 (December 1-5), VIII International Fungal Biology Conference.
Guanajuato, GTO, MEXICO
Jesus Aguirre and Jose Ruiz-Herrera
VIII IFBC
Centro de Investigacion y de Estudios Avanzados del IPN
Unidad Irapuato
Apartado Postal 629
Irapuato, GTO
36500, Mexico
+52 (462) 623-9653 (phone)
ifbc@ira.cinvestav.mx
www.ira.cinvestav.mx/cr-even/fungal.htm

2003 (January 28-30), 9th International Fusarium Workshop.
DETAILS: Inoculum 52(2): 16
Sydney, AUSTRALIA
Brett Summerell
Royal Botanic Gardens
Mrs Macquaries Rd.
Sydney, New South Wales, 2000, Australia
+61 2 9231 8189 FAX +61 2 9241 1135
Brett.Summerell@rbgsyd.nsw.gov.au

Pacific Grove, CALIFORNIA

MUSHROOM WORLD [NEW KOREAN/ENGLISH SITE IN 2001] (51-6)
www.mushworld.com

2003 (August 10-15), Fourth International Conference on Mycorrhizae (ICOM 4)
Montréal, QUÉBEC
Yolande Dalpé ECORC / AAC
Ottawa K1A OC6 Canada
613-759-1381 (phone)
dalpey@em.agr.ca
http://www.congresbceu.com/icom4

2003 (August 17-23), Fourth International Symbiosis Congress.
DETAILS: Inoculum 53(3):61
Halifax, NOVA SCOTIA
David Richardson
902-420-5493 (phone)
david.Richardson@stmarys.ca
http://people.bu.edu/dzook/

2004

2005.

ASCOMYCOTA – NEW CLASSIFICATION (51-5)
http://194.131.255.3/cabipages/Names/FundicNew.asp

ASOCIACION LATINOAMERICANA DE MICOLOGIA
(51-5)
http://www.ecologia.edu.mx/alm/

AUSTRALIAN MYCOLOGICAL SOCIETY WEBSITE FOR INTRODUCTORY FUNGAL BIOLOGY (53-4)

BIBLIOGRAPHY OF SYSTEMATIC MYCOLOGY (51-6)
http://194.131.255.3/cabipages/BMS/bsm.htm

EUROPEAN POWDERY MILDEWS (52-2)
http://nt.ars-grin.gov

HADRIANUS JUNIUS STINKHORNS (52-2)
http://www.collectivesource.com/hadrianus

IMC7 (51-3)
http://lsb380.plbio.lsu.edu/ima/index.htm

ING (INDEX NOMINUM GENERICORUM) DATABASE (52-5)
http://rathbun.si.edu/botany/ing/ingForm.cfm

INTERACTIVE CATALOGUE OF AUSTRALIAN FUNGI (52-1)

INTERACTIVE KEY, DESCRIPTIONS & ILLUSTRATIONS FOR HYPOMYCETES (52-6)
http://nt.ars-grin.gov/taxadescriptions/hypomyces/

MUSHROOM WORLD [NEW KOREAN/ENGLISH SITE IN 2001] (51-6)
www.mushworld.com

NAMA POISON CASE REGISTRY (51-4)
http://www.sph.umich.edu/~kwcee/mpcr

PATHOGENIC FUNGI FROM SOUTH AFRICA (52-4, page 29)
http://nt.ars-grin.gov/fungaldatabases/southafrica

SYSTEMATICS OF THE SAPROLEGNIACEAE (53-4)
http://www.ilumina-dlib.org

MYCOLOGY ON-LINE DIRECTORY

Below is an alphabetical list of websites featured in Inoculum during the past twelve months. Those wishing to add sites to this directory or to edit addresses should Email <druch@bsu.edu>. Unless otherwise notified, listings will be automatically deleted after one year (at the editors discretion).

∗ ∗ ∗ ∗ ∗ = New or Updated info (most recent Inoculum Volume-Number citation)

http://www.mycologia.org

http://www.mycosearch.com

http://www.mycosearch.com

http://www.mushworld.com

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

MYCOLOGY ON-LINE (53-3, page 18)
http://www.mycologia.org

MYCOLOGICAL PROGRESS (52-3)
http://www.botanik.biologie.uni-muenchen.de/botsyst/mycpro.html

MYCOSEARCH WEB DIRECTORY/SEARCH ENGINE (51-5)
http://www.mycosearch.com

MYCOLOGY ON-LINE (53-3)
http://www.mycologia.org

2005, MSA Annual Meeting.
Ashville, NORTH CAROLINA

2005, MSA Annual Meeting.
HAWAII

Havana, CUBA
Carlos Borrot, President mailto:bioagro@cigb.edu.cu
http://bioagro.cigb.edu.cu Phones: 53-7-218008, 53-7-218466

2002 (December 1-5), VIII International Fungal Biology Conference.
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ifbc@ira.cinvestav.mx
www.ira.cinvestav.mx/cr-even/fungal.htm

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Sydney, New South Wales, 2000, Australia
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2003 (August 17-23), Fourth International Symbiosis Congress.
DETAILS: Inoculum 53(3):61
Halifax, NOVA SCOTIA
David Richardson
902-420-5493 (phone)
david.Richardson@stmarys.ca
http://people.bu.edu/dzook/

2004

2005.
MSA Endowment Funds
Contributions

I wish to contribute $_________ to the following named fund(s):

___Alexopoulos ___Korf
___Barksdale/Raper ___Luttrell
___Bigelow ___Thiers
___Butler ___Trappe
___Denison ___Uecker
___Fitzpatrick ___Wells
___Fuller

Research Funds Other Funds

___Backus Graduate Award ___Alexopoulos Prize
___Martin-Baker ___Uncommitted Endowment
___A.H. & H.V. Smith Award ___Other (specify)

I wish to pledge $________ a year for ________ years

___ to the following fund(s) _______________________________
___ to some other specified purpose _________________________
___ to the uncommitted endowment

Name: _______________________________________________
Address:  _______________________________________________
_______________________________________________
___ Check  ____ Credit Card (Visa, MC, etc): ____________________
Credit Card No. ___________________________Exp. Date: ________
Signature: ____________________________________________

Please send this completed form and your contribution to:

Judi Ellzey, Chair, MSA Endowment Committee
Biological Sciences,
The University of Texas at El Paso
El Paso, TX 79968-0519

Please make checks payable to the
Mycological Society of America
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The Society is extremely grateful for the continuing support of its Sustaining Members. Please patronize them and, whenever possible, let their representatives know of our appreciation.

Amycel Spawn Mate
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P.O. Box 189
Watsonville, CA 95077-0189
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BASF Corporation
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Quakerbridge Rd
P.O. Box 400
Princeton, NJ 08543-0400
www.basf.com/index.html
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BCN Research Laboratories
Attn: Dr. Emilia Rico
P.O. Box 50305
Knoxville, TN 37950
Benlabs@cs.com

Biolog, Inc.
Attn: Brian Sunkel
3938 Trust Way
Hayward, CA 94545
www.biolog.com
Biolog manufactures and sells microbiological identification systems. Their systems have the capability to identify over 2,000 species of aerobic and anaerobic bacteria, yeast, and filamentous fungi.

Carolina Biological Supply Company
Attention: Thomas Register
2700 York Rd
Burlington, NC 27215
Serving science education since 1927.

Dupont Agricultural Products
Attn: Dr. Richard Howard
Experiment Station E402/2231
Powder Mill Rd
Wilmington, DE 19880-0402

EMSL Analytical, Inc
Attn: Dr. Hilisa B. Esteban
107 Haddon Ave
Westmont, NJ 08108
Ph: 1-800-220-3675
www.emsl.com
Laboratory testing since 1981: Asbestos, Lead, Environmental (fungi and bacteria), Materials, and Indoor air quality.

Fungal and Decay Diagnostics, LLC
Attn: Dr. Harold H. Burdsall, Jr.
9350 Union Valley Rd.
Black Earth, WI 53515-9798
Ph: 608-767-3930
Fax: 608-767-3920
Consulting services for: Fungal identifications (mold, mildew, decay fungi), Fungal biology, Wood decay in buildings, Hazard tree analysis, Building mold evaluations, and Mold remediation recommendations.

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Olympia, WA 98507
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mycomedia@aol.com
www.fungi.com
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Nancy Zimmerman, President
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