

Newsletter of the **FRIENDS**  
OF THE  
**FARLOW**

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Editor

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## A Mycologist Investigates the Farlow Collection

By Don Pfister

In this Newsletter, we will highlight one of the many visitors we have had at the Farlow Library and Herbarium. **Luis Quijada** was a Fellowship awardee and international scholar at the Farlow from March 11-31, 2017. During this time, Luis worked with the collection, primarily in the genus *Tympanis*. Quijada, a native of the Canary Islands of Spain, recently completed his Ph.D. working with inoperculate discomycetes, (Leotiomycetes and Orbiliomycetes) from the Canary Islands. *Tympanis* is a cup-fungus among the Leotiomycetes, the most diverse classes of Ascomycota. Despite the vast diversity within this class, certain orders and families have a high proportion of taxa that have not been investigated using molecular methods. Among the understudied are the eight genera of the *Tympanaceae*: *Claussenomyces*, *Collophora*, *Durandiella*, *Grovesiella*, *Holwaya*, *Myriodiscus*, *Pragmopora* and *Tympanis* (Quijada *et al.* 2015). These fungi are often associated with diseases such as bark and xylem lesions, internal necrosis, vascular streaking, cankers, crown damage and opportunistic lesions. A widespread and very diverse group commonly responsible for forest diseases (e.g. *Tympanis*: ~60 spp., *Durandiella* ~15 spp., etc.), they are often

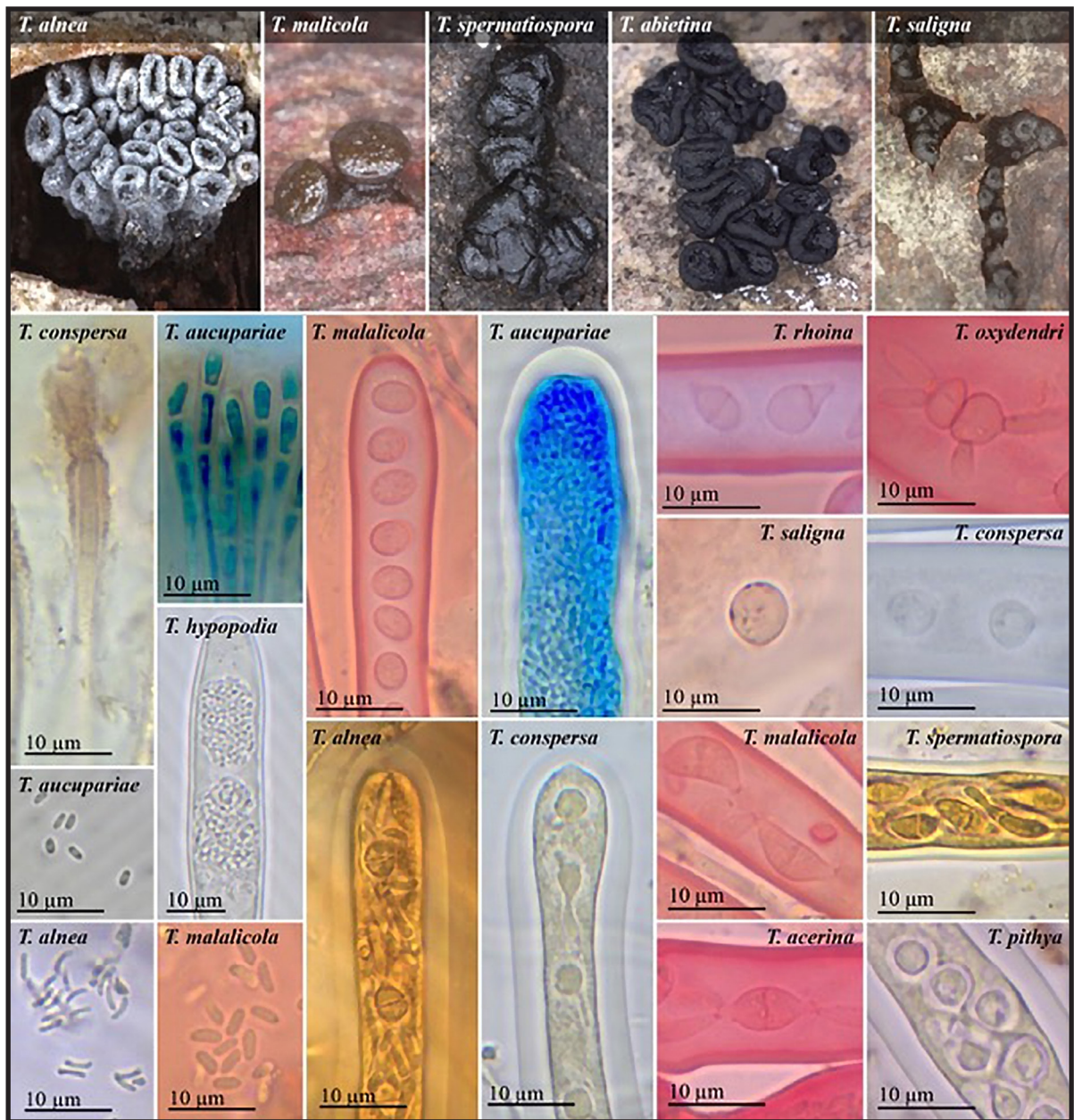
difficult to identify with traditional methods. Moreover, confusion exists over characterization of species and genera (e.g. *Tympanis xylophila* vs. *Claussenomyces xylophila*). There are no sequences available for the genera *Tympanis*, *Durandiella*, *Claussenomyces* p.p. and *Pragmopora*; other genera have only a few species sequenced. At the Farlow Quijada used the collections to continue his more detailed study of these fungi.

Due to the collections made and acquired by our founders, the Farlow offers an abundant and diverse collection for ourselves and our visitors to study. For Quijada, there were fungi collections of interest located within the general fungus herbarium, the exsiccatae collection and among those in the author collections. These are collections which are maintained as separate units because their creators were influential in creating taxonomic systems or because as a unit these collections serve as a reference point for types or critical material. Quijada used several of these special collections during his work at the Farlow. Among them, the collections of M. A. Curtis and the herbarium of Franz von Höhnelt. The Curtis herbarium houses many of the early collections from North America along with type species.

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**FoF Annual Meeting**  
**Saturday, November 4<sup>th</sup>. See page 4 for details!**

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Some of the fungi that Quijada has studied

Curtis, a minister from North Carolina, was a correspondent and co-author with the great English mycologist M. J. Berkeley. The von Höhnel collection is particularly important as a source of expertly studied material of ascomycetes and conidial fungi. Von Höhnel, an Austrian, not only corresponded widely with the important mycologists of the day, but collected in Java and routinely near his home in the Wienerwald.

Among Quijada's discoveries from the general herbarium is a potential new species of *Claussenomyces*.

From the von Höhnel collection, there is a type specimen for a genus that may also provide an older available name for another well-known genus. Findings such as Quijada's enhance our collections by providing expert opinions on the identity of specimens; in turn, such annotations help assure that future identification work will have reliable specimens for comparison. In all, Quijada identified and evaluated nearly 40 specimens during his visit. We were delighted to have him visit the Farlow, and look forward to his return in the fall for a fellowship. †



## Research & Other Activities

In January, **Don Pfister** traveled to Gainesville, Florida, to spend a week in the lab of Matt Smith, a former post-doc at the Farlow. Over the last several years Matt and his lab have worked extensively in South America on a National Science Foundation grant focused on the mycorrhizal fungi of the southern beech, a species of *Nothofagus*. While in Gainesville, Don worked on the identification of several of the fungi that had been collected and prepared for an upcoming trip to Punta Arenas, Chile, where Matt and his group headed to collect in April. Don and Matt had collected there several years before in the footsteps of Roland Thaxter; for them it was a long-awaited reminder of the richness of the fungal diversity and the striking landscapes along the Strait of Magellan. Part of the endeavor was documented by Steven Axford from Australia — fungal photographer par excellence — and Catherine Marciniak — video documentarian — both coincidentally in Punta Arenas at that time. [Catherina Marciniak's video can be viewed at: <https://www.youtube.com/watch?v=NklZ9KkHxw&t=26s>]

In March, Don also traveled to Manila with a group from Harvard, to work on establishing scholarly exchange programs with the University of the Philippines.



*Don at Magellan's Foot, Punta Arenas, April 2017*

Graduate student **Danny Haelewaters** is spending his summer in Panama, where he will be collecting Laboulbeniales on bat flies and ladybird beetles.

Graduate student **James Mitchell** has recently joined our lab from the Harvard Physics Department. James is learning about fungi, and has begun collecting and identifying fungi from the Boston Harbor Islands. 🇺🇸



*Cape Froward, Strait of Magellan, Punta Arenas, Chile, April 2017*

## News & Events from the Farlow

### 2017 Annual Meeting

The 2017 annual meeting will be held on Saturday, November 4th at 3:30pm for the business meeting with a lecture at 4pm in the HUH Seminar Room at 22 Divinity Avenue, Cambridge.

Our annual lecture will feature **Camille Truong**, a post-doctoral fellow from the University of Florida. Her research has been on the ectomycorrhizal fungi associated with the southern beech in Tierra del Fuego. In "*Gondwanan fungi: mycological explorations in southern South America*" Camille will share her experiences and findings from her work from the end of the earth. There will be a reception in the Farlow Library following the lecture. ¶

### Membership & Dues

The FoF will begin collecting membership dues at the end of the calendar year. A notice will be issued in December reminding the membership. ¶

### FoF Book Sale Update

Judith Warnement has prepared a list for the annual FoF book sale which will be distributed separately. The income generated from the sale has traditionally been added to our operating funds in support of activities of the Friends of the Farlow. We hope that you will find items of interest in the forthcoming list. As always, we continue to welcome your book donations, particularly field guides and titles that appeal to the general naturalist. ¶

### Harvard Museum of Natural History Glass Flower Gallery

The next exhibit on rotation at the Harvard Museum of Natural History's Glass Flower Gallery will feature diseased apples models created by German artist Rudolf Blaschka. These models were among the last series crafted by Blaschka for the Museum and have not been on exhibit in their entirety for quite some time. Of particular myco-

logical interest will be the display of a model of an *Aspergillus* conidial head in relation to one of the disease models. ¶



Left:  
One of Blaschka's  
Diseased Apple  
models in the  
Glass Flowers  
Gallery, 2014



## 2017 Clara Cummings Walk

On Sunday, May 21st, a group assembled for the 2017 Clara Cummings Walk at Appleton Farms Grass Rides in Hamilton, MA. Once there, they travelled along the hardwood lined trails of the Grass Rides Loop, to the Long Causeway Brook. At the pinnacle on Pigeon Hill, they were rewarded with spectacular panoramic views of the Great Pasture.

The group compiled a checklist of bryophytes, fungi and lichens found on the site.

The four pinnacles located on the property were salvaged from Harvard's Gore Hall and were given to the Appleton's in recognition of their long association with Harvard University. †



*The pinnacle at Pigeon Hill, 2017  
Photo courtesy of M. Schnull*

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## “Lichens, Biofilms and Stone”

**Judy Jacob** and **Michaela Schnull** will present Lichens, Biofilms and Stone in the Eagle Hill Natural History Science Seminar Series, in Steuben, Maine, from July 23-29, 2017. These lectures will include basic lichen morphology and species identification; biofilm morphology; the role of lichens and biofilms in the environment; basic geology; the history of stone quarrying, finishing, and construction; and the history and contemporary practices of preservation “treatments” for stone. In the laboratory and through various field excursions, students will examine and identify lichens, biofilms, and stones. Furthermore, they will examine the impact of surface manipulation of stone (cutting, polishing, chemical applications) and how these impacts may influence (or not) the growth of lichens and biofilms. Participants will represent a wide variety of disciplines and avocations; prior knowledge of lichens, biofilms, or stone will be useful but not required. †

## Microfungi & Macroalgae

Curatorial assistant **Chelsea Parise** continues to work on two ongoing projects imaging and digitizing collections at the Farlow. Chelsea presented her work with a poster entitled, “The Challenges of Databasing a Historical Herbarium Collection” at the 56th Annual Northeast Algal Symposium (NEAS), Bretton Woods, New Hampshire, April 21-23, 2017. Both projects have been fraught with challenges, most notably, deciphering penmanship on locations, and the sheer vastness of collections to be processed. †

### *Special Thanks*

We wish to express our sincere gratitude to **Martha Finta** for her continued volunteer work at the Farlow. Martha has been a steadfast helper in the fungus herbarium, processing collections and filing specimens. We truly appreciate her time and the dedication she has shown. This has allowed us to address a backlog of specimens that otherwise would not have been managed. Thank you, Martha, for all of your help! †

## Visitors & Researchers

In addition to **Luis Quijada**, another Fellowship awardee who visited the Farlow was **Joseph Paul Cohen**, now of the Montreal Institute for Learning Algorithms at the University of Montreal. Joseph used the Farlow collections to assess ways to develop machine learning computer vision algorithms to automatically identify mushroom and mold spores from digital microscope imagery. To this end, he sampled from our collection and began evaluating his system. Although we may not yet identify fungi in this manner, he was able to do some counting and general sorting based on our samples.

**Johnny Dávila-Sandoval**, an undergraduate from Peru, spent his summer – January through March – with us working in the lab. He worked on our project to examine and identify collections of morels from the southern part of South America. Johnny was able to cultivate many of these from collections we had on site to perform some

sequencing and build a phylogeny.

**Zhang Zhaohui**, a bryologist from Guizhou Normal University in China, was in residence at the Farlow from September 23 – March 22, 2017. Zhang studied mosses from limestone and karst areas and aided us in the identification of mosses in our large, partially identified collection of specimens from China.

**Summaira Shaheen** is a graduate student from Pakistan. Summaira has been studying lichens and molecular techniques at the Farlow since the beginning of February and will remain with us at the Farlow until the end of July.

**Afshan Wahab** is another graduate student visiting us from the University of Peshawar in Pakistan. Afshan will be with us until the autumn working on polypores. †

## Farewell & Best Wishes

We said goodbye to **Barbara Hanrahan**, who retired after 8 years at the front desk of the Harvard University Herbaria.

We also said goodbye to **Alden Dirks**, who floated into mycology and the Farlow during the last academic year. Alden, a graduate of Swarthmore College, became interested in fungi as an undergraduate. At Harvard, he audited the Biology of Fungi (OEB 54) and became involved in a project documenting the fungi of the Boston Harbor Islands. We wish him the best of luck in his studies at the University of Wisconsin.

**Nadia Urrea** graduated from Harvard with a concentration in Integrative Biology (formerly Organismic and Evolutionary Biology). Nadia took every course offered by Don Pfister before continuing on to work with graduate student Danny Haelewaters on a project focused on the cup-fun-

gus genus *Stamnaria*. Nadia was a diligent and meticulous scholar, and we wish her well in her new endeavors in Texas. †



*Alden, Luis and Johnny, March 2017*

## In Memoriam

Bryologist **Benito Tan** was a Research Associate at the Farlow Herbarium from 1990-1997. Ben was a specialist on mosses, particularly Asian mosses. He was an avid collector of these organisms from around the world; not only in his native Philippines, but also in China where he developed fruitful collaborations with many Chinese botanists. At the Farlow, he was involved in a project to reorganize the moss herbarium and in the planning for the renovation of the lower level of the herbarium. He eventually left the Farlow for the Singapore Botanic Gardens, where he remained until his retirement. Ben then retired to California to become a researcher at the Jepson and University Herbaria at the University of California Berkeley. His interests were broader than simply the taxonomy of mosses. In addition, Ben studied ferns and was deeply concerned about nature conservation. In 2004, he received the Richard Spruce Award from the International Association of Bryologists for his important contributions to bryology. He will be remembered here for his many herbarium collections, his distinctive laugh, and his willingness to help students and researchers alike with identifications and advice.

This spring, we also lost **Philip May**, an active member of the Farlow community for many years until he was unable to continue his work in lichenology due to illness. Phil served as the treasurer of the Friends of the Farlow for many years and generously gave his specimens, research equipment and materials to the Farlow when he departed from the field. Phil began studying lichens after taking a course that Don offered at the Harvard Extension School. He was among a small group of students from those courses who embarked on the study of lichens, collecting

and publishing extensively on the subject over the years. In addition to Phil, this group included Elizabeth Kneiper, Elisabeth Lay and Linda Berard.

Phil published a treatment of *Ophioparma* in the Eastern Lichen Network. *Parmelia mayi* is named after him. For a number of years, Phil kept up to date a general reference guide for work with lichens entitled *Identifying North American Lichens: A Guide to the Literature* which was coauthored with Irwin M. Brodo and Theodore L. Esslinger. Furthermore, Phil published an account of the genus *Amandinea* with John Sheard (*The Bryologist*, 100:159-169) in which several new combinations were created. Phil is recognized in numerous papers for specimens and information he provided. For the last several years, Phil and his wife Anne resided in Santa Fe, New Mexico, where they maintained a very active life rich in adventure and travel. In Phil's honor, his friends and family have established a fund with the Friends of the Farlow to promote the study of lichens, the organisms to which he devoted so much of time and effort. We invite others to join us in honoring Phil in this way. ♣



*Phil (left) with Lee Crane, a frequent visitor to the Farlow*



## Join us!

Receive the FOF Newsletter, notification of the annual book sale, discount on Farlow publications and services, invitations to the annual meeting and other events, and a special welcome when visiting the Farlow. *Formal dues notices will be issued in December.* ¶

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