LONG ISLAND MYCOLOGICAL CLUB

http://limyco.org

LI SPOREPRINT

Season's Greetings!

1973-2016

Available in full color on our website

VOLUME 24, NUMBER 4, WINTER, 2016

FINDINGS AFIELD

I-Agaricus floridanus Peck

The photo below was taken over 10 years ago, on July 5, 2006, but I still clearly

***AGARICUS FLORIDANUS* PECK**

remember the excitement I felt upon viewing what was clearly a species we had never come across before on Long Island. Eventually, with the kind help of mycologist and Agaricologist Rick Kerrigan, I came to realize that it had never knowingly been seen before, not only in New York state, but the entire Northeast down as far as Florida, where Peck's type specimen originated. (Although there is a 2003 record from North Carolina, where it was misidentified as *Agaricus comtulus*.) This is *Agaricus floridanus* Peck, originally described and named by Charles Horton Peck, the NYS Botanist, in the state botanist's report of 1911, from specimens submitted from DeFuniak Springs, Florida.

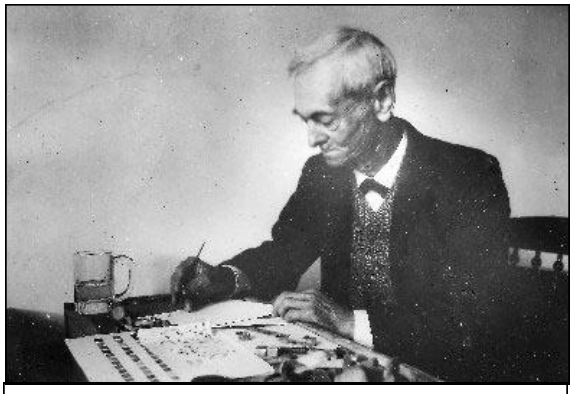
Although Peck did not include an illustration, his description delineates a robust species: "Pileus 9-15 cm broad: stem 5-10 cm long, 1.5-3 cm thick. Single or subcaestipose." Further descriptive details were of a

(Continued on page 6)

Charles Horton Peck- Father of Modern American Mycology

(Reprinted from the Winter 2008 LI Sporeprint for the benefit of our many newer members.)

Amanita abrupta Peck, *Agaricus (Psalliota) placomyces* Peck, *Boletus affinis* Peck, *Boletus auriporus* Peck , *Boletus bicolor* Peck, *Cortinarius luteus* Peck, *Hebeloma sarcophyllum* Peck, *Inocybe intricata* Peck, *Russula aeruginascens* Peck, *Tricholoma equestre v. albipes* Peck. These are but a few of the more than 2,700 new species and varieties of fungi discovered and described by Charles Horton Peck (1833 -1917) the official NYS Botanist at the State Museum in Albany from 1868 until 1913. Despite his monumental contribution to mycology, he was not academically credentialed in the field, but was trained in botany, with a particular interest in the bryophytes, and an autodidact in mycology. Initially, after publishing his first paper in 1865, "The Catalogue of Mosses Presented to the State of NY", one of his friends, Elliot C. Howe, MD, a fellow bryophyte lover, urged him to work on a fungus list for NY state, offering his own collection of 267 species for a starter. Peck acquiesced, estimating that it would take him four or five years to complete; after 45 years, the task was still uncompleted. To a much lesser extent, it remains so today.



Charles Peck, 1904, a hotel in Pt. Jefferson, LI. Photo by G. Atkinson (from NYS Museum website)

The story goes that when Peck was first employed as a schoolteacher one of his duties was to tend the fire; while feeding wood into the stove he was constantly attracted by lichens and mosses growing on the bark. This led him to communicate with fern scholars. Similarly, when he began

(Continued on page 3)

MEMBERSHIP RENEWAL FORM ENCLOSED.

PRESIDENT'S MESSAGE

Seasons greetings to you all!

I think most of us enjoyed seeing the first snowfall this autumn. That along with all the rain we've been having lately should help our little friends the mycelia to produce mushrooms in the spring. One can hope.

At this time of year, it is appropriate to thank all of those who help make this club what it is and keep it running. Thanks go to all the members of the LIMC Board who contribute their time and energy. Although all are doing their bit, I would particularly mention Jacques, our Foray Chief, who spends many hours on the lookout for productive spots. Maria, our Yahoo coordinator, consistently updates contributes and contributes to the site, and thumbs up to all the members who upload their photos as well. Our many designated foray leaders, who diligently reconnoiter their assigned sites, are performing an important task.

Now that it is the quiet season we can take our time and go over mushroom books and maybe get a new one or two. Rick Kerrigan has a new book on Agaricus, Alan Bessette et al is expected to publish a new guide to Boletes of the Northeast, and Tim Baroni, the Entoloma maven, has a new general guide in the works which hopefully will include a fuller treatment of his specialty. . (You can look these up on the web.) We can also look for things we need for next year. I just received a mushroom knife as a gift. It happens that I lost my last one in the woods this fall so that this was most welcome. Collecting bags to keep mushrooms separate is another thing to do. These are the basics that you need. Have fun.

I won't be seeing you along the trail anytime soon unless you like to wander in the winter. There could still be things out there...you never know.

All the best for the new year.

EDITOR'S NOTE

Many of us will be vacationing in southern climes this winter, and this presents an opportunity to see and perhaps collect novel species not present in the Northeast. (See page 3 for one such possibility in California.) The varied forests of Central and South America hold colorful species unfamiliar to us, but of families that we can recognize, such as Stinkhorns. Many countries, e.g., Brazil have web sites devoted to their macrofungi, and Costa Rica has several published paperback guides.

For those who are toughing the Winter out at home, all is not lost. There are expected (and unexpected) thaws when fungi erupt; I recall on several occasions collecting fresh Oysters (*Pleurotus ostreatus)* in January. And even now in December the assiduous collector is likely to find hardy species such as *Cortinarius* and *Hygrophorus*.

If conditions force us to remain indoors, we can turn to books old and new (see above book suggestions) to learn and refresh our memory, as well as innumerable web sites to provide us with our own version of fungal virtual reality.

MATERIAL FOR THE SPRING, 2017 EDITION SHOULD REACH THE EDITOR BY MARCH 1ST.

(Submissions may be forwarded by email in any format or typed.)

(All unsigned articles authored by editor.)

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Charles H Peck *(Cont'd from p.1)*

on fungi, he studied the works of Persoon and Fries, initially sending samples he could not identify to M.C. Cooke, the royal botanist at Kew in London, and to Moses A. Curtis, a church official in North Carolina who studied fungi with Miles Joseph Berkeley in England. Four hundred specimens were sent to Cooke between 1870 -1874, many of which were described in "Grevillea", Cooke's new journal; Peck, in his early work, ascribed many species to "Cooke and Peck". The first new species published by him was *Septoria viridetingens,* a type of leaf spot Ascomycete, indicative of his far ranging interests, although he focused upon the agarics. After 1875 he did not find it necessary to consult others for identification aid and rarely co-authored a species with someone else. He became the final authority on American fungi but his interest in botany continued, and new species of flowering plants were also included in the Annual Reports of the NYS Botanist. He spent considerable time in his later years collecting the Hawthornes for the state herbarium.

During most of his years as the State Botanist he worked "single-handed and alone" without even an assistant, by himself carrying on a vast correspondence, collecting, describing, and caring for not only his own specimens but also those contributed by his many correspondents (one of which was Roy Latham-the North Fork naturalist.). Each of his annual reports scrupulously identifies his correspondents and their contributions. Many were unknown amateurs while others such as C. McIlvaine, C.H. Kaufmann, W.A. Murrill, and R.M. Underwood were of greater renown. During July, August and September he traveled to different parts of NY State, by railroad, stage and private wagon, and walked great distances, carrying with him a portable field microscope. Larger specimens were dried in sunlight or by fire while in the field; smaller ones were remoistened and flattened between herbarium sheets, much like botanical specimens.

His favorite site apparently was North Elba, Essex County, in the Adirondacks, where subsequent collectors included George Atkinson and C.H. Kauffman. Long Island was also often visited, and many of his specimens are labeled Port Jefferson, Orient Pt., etc. On several occasions he was accompanied by George Atkinson, who in 1900 published a popular book, "Studies of American Fungi", featuring his own photographs.

Despite never having written a definitive book and being an ardent anti-evolutionist, he was a major influence on mycology during his lifetime, and his annual report comprises several thousand pages of descriptive mycology. Included in these reports are his drawings and paintings (see above), which still retain their crisp immediacy. His collections are still consulted by scholars and remain an important reference. For example, Prof. Henry Beker, whom we are aiding locally in his worldwide study of the genus Hebeloma, has been sequencing Peck's type specimens of this genus.

Atkinson wrote a touching tribute to Peck concluding with the words, "….mycological science owe(s) Dr. Peck a fund of gratitude for what he has accomplished in spite of the many difficulties and discouragements under which he labored." These words still hold true today.

Looking for a fungal Winter getaway?

One option is the Sonoma County Mycological Association Camp, a three-day weekend (Jan. 14-16) of forays, lectures, workshops, and mycophagy. Located at the CYO Mcgucken Camp near Occidental, an hour north of San Francisco, set in a 225 acre mixed Oak, Redwood and Fir forest.

Price, including lodging, all meals, and workshops, is $350. Lodging is in heated cabins, with 6 bunks per cabin, and shared restrooms. If one opts for offsite lodging, the price is reduced to $245.

Further information and online registration is available at:http://www.somamushrooms.org/camp/

FORAY RESULTS SUMMARY

EDGEWOOD, SEPT 17: Cancelled, no fungi.

CATHEDRAL PINES, SEPT 24: Although the region remained in drought conditions, rainfall approached normal on the East end, resulting in a species total of 71. This included 8 species of Amanita, 7 of Russula, 5 of Lactarius, but only 3 Boletes. Edibles included Meadow mushrooms, and 5 species of Puffballs (4 of Lycoperdon and good quantities of Calvatia cyathiformis. The infrequently encountered *Gerronema strombodes* was collected for only the second time. Finley Monahan , 6 years old, climbed a wood chip pile and found a not as yet identified *Leucoagaricus.*

Gerronema strombodes

MUTTONTOWN EQUESTRIAN, OCT. 2: Once again, exactly 71 species, with good a good amount of Sulphur Shelf, Meadow Mushroom, and *Calvatia cyathiformnis*. Several puzzling Lepiotas are intriguing. One Bolete was collected and that was tentatively identified as *Boletus patrioticus,* new to Long Island.

Southaven CP, Oct 8: A total of 76 species were collected, approaching the previous high of 80 at this site. Edibles were many and varied, with Honey Mushrooms *(A. mellea)* everywhere. There were three species of edible Agaricus, *A. hemmorhoidarius* the most prolific, and more than enough Hen-of-the-Woods to satisfy everyone. Some Russulas, one Cauliflower, Blewits, and five species of Suillus (including the infrequent *S. alutaceous*) rounded out the edibles. One new species, *Boletus rhodosanguineus* with a striking red reticulum, was collected.

Finley & Friends.

Edgewood, Oct 15: Our traditional collecting site for Mushroom Day produced only thirty-five species, the continuing drought showing its effects. But for exhibition purposes we found some striking examples of *Amanita polypyramis, A. muscaria,* and *A. citrina.* Both *Boletellus russellii* and its lookalike *Boletus projectellus* were encountered. *Leccinum aurantiacum* made a good showing. Tricholoma species, normally numerous at this time, were not in evidence.

PECONIC HILLS CP, Oct 22: The target species, *Cortinarius* (formerly *Rozites*) *caperatus,* was superabundant, along with five other Cortinarius, and a total species count of 62. Other edibles were goodly amounts *of Leccinum, Albatrellus (Sheep Polypore), Cantharellus ignicolor, Armillaria ostoyae, Boletus projectellus,* and *Suillus brevipes.* Interesting finds were *Lyophyllum semitale, Inocybe subdecurrens*, and a pure white Amanita sec validae which will take further efforts to identify to species.

Lyophyllum semitale

ROCKY PT, Oct 29: Cancelled, no fungi.

Hydnellum concrescens

ROCKY PT. NOV 5: In a perhaps delayed response to Octobers 3 inches of rain, this site finally produced some of the expected species, but in lesser quantities. We collected ten species of Tricholoma, with adequate amounts of *T. equestre, T. niveipes*, and reduced amounts of *Hygrophorus ponderatus* and *H. hypothejus.* The Sand Laccaria *(L. trullisata)* and the Grayling (*Cantharellula umbonata)* rounded out the edibles. One species new to our list is *Hydnellum concrescens.* Another is close to the European species *Cortinarius hinnuleus,* but that may not occur in NA.

EDGEWOOD, Nov. 12: Cancelled, no new growth.

WELWYN, Nov. 19: Our final foray of the year was conducted in fine Autumn weather, and enjoyed by all despite the absence of Oyster Mushrooms. We did find loads of Brickcaps, and it was instructive for beginners to learn the similar toxic *Galerina autumnalis,* which was abundant. Also collected were Autumn Oysters *(Panellus / Sarcomyxa serotinus*) as well as a small number of *Coprinus comatus,* and *Agaricus bitorquis,* a first for this foray. New to the list was a slime mold, *Trichia varia.*

Trichia varia

GLEANINGS.. from the research literature

- **MYCOLOGICAL FORENSICS:** While we are all nowadays familiar with CSI gathering of DNA and blood evidence, this fascinating article reviews the methods by which trace plant and fungal remains (mostly seeds and spores) are being utilized, particularly at British crime scenes. This type of endeavor is called palynology, previously used at archeological sites, and now adapted to criminal investigations. The main method is light microscopy, scanning electron microscopy usually being unnecessary. The use of fungal spores is relatively recent, as these investigations were carried out mainly by botanically trained examiners. Until recently forensic mycology was employed mainly for identifying mold in buildings and poisonous species in criminal investigations or accidental deaths. More recently, fungal colonies on human remains have provided information of time of death. Several cases are discussed, including one that identified Psilocybe spores from stomach contents in a case of suspicious death. The author concludes that the lack of mycologists with experience of a wide range of taxa greatly limits this application. (*Mycology in palaeoecology and forensic science, Patricia E. J. Wiltshire, Fungal Biology 120, 2016.)*

- **THROUGH THICK & THIN-NUTRIENT SEEKING STRATEGIES OF TREES:** To perform this experiment the researchers used a garden of 13 sympatric tree species (10 to 18 years old) in 8 similar blocks, the trees 3 meters apart and the blocks 5, to keep root systems separate. The trees were found to used different foraging strategies to reach "hot spots", pockets of nutrients in the soil. Trees with thicker roots (Pine, Tulip Poplar) responded weakly or not at all to these patches. In contrast, thinner root tree species readily respond by selectively growing roots [arbuscular mycorrhizal trees (e.g., maple)] or mycorrhizal fungal hyphae [ectomycorrhizal trees (e.g., oak)] in nutrient-rich "hotspots." (*Science Daily, July 18, 2016 based on "Root Morphology and mycorrhizal symbioses together shape nutrient foraging strategies of temperate trees, Welle Chan et al, PNAS, vol 113 no. 31)*

- ***FOMITOPSIS PINICOLA* – NOT IN N. A:** We must bid adieu to another familiar name, now that a broad DNA survey of what the authors call a species complex has uncovered two undescribed North American species. Collections encompassing all known regions where this complex occur, utilizing many DNA subunits and several methods of analysis, have concluded that *F. pinicola* is strictly a European species, and that N.A. hosts three other phylogenetic species, two of which are sympatric to northern areas from Alaska to Maine and further south at high elevations. (Although traditionally thought of as limited to softwoods (e.g., pine) they were found to colonize hardwoods as well.) One of these species is considered to correspond with the recently described *F. ochracea* and the other to be an unnamed species. The third species inhabits the southwest from Arizona to western S. Dakota, and also remains unnamed. *(Phylogeny of Fomitopsis pinicola: a species complex, Mycologia, JE Haight et al, 108(5), 2016, pp.925-938)*

- **29 SPECIES OF CHANTERELLE IN N.A.** In September the journal *Cryptogamie, Mycologie* published a special issue devoted to the genus *Cantharellus,* particularly in Africa and North America, presenting 5 new species from Africa and 6 from America. The authors stress that the difficulty of discerning species of *Cantharellus* is due to their "extremely flexible and variable phenotypes" coupled with limited microscopic detail, in contrast to most species of gilled mushrooms. The use of molecular data has reduced the seeming number of *Cantharellus* species, rather than increase them, as is often the result in other genera, so that in Europe, only 8 species are accepted out of the previous 24. In contrast, 6 newly described species in North America brings our total to 29, and there is a good possibility of further additions in the future. Some of the newly described are "cryptic" species, i.e., not easily differentiated from closely related ones,; for example, the eastern *C. cinnabarinus* has a cryptic relative *C. corallinus* to the West, and the new *C. flavolateritius* is a southern look-alike of *C. lateritius,* the Smooth Chanterelle, which is widespread but absent from Long Island. The most whimsically named of the new species has to be *Cantharellus chicagoensis,* named for the city in which region it was found, and as far as I can tell, the only mushroom named in this fashion.

(Compiled by editor from above cited sources)

Findings Afield *(Continued from page 1)*

"pileus...with a yellow or yellowish center..rimosely aereolate...annulus small.." This matches nicely with our specimens, as shown in the accompanying photos. Moreover, he was remarkably perceptive in noting a close relationship with a South American species, ("*Agaricus campester* ((sic)) *var. americana* Speg.") inasmuch as Kerrigan has placed it in a clade of New World subtropical species based on DNA evidence. This in his just published "*Agaricus of North America, Memoirs of the NYBG, Volume 114, 2016*" a monumental and magisterial work that will remain a permanent mycological milestone.

Kerrigan's description is much more precise and detailed, viz "PILEUS ca. 6-19 cm diam., convex sometimes becoming irregularly subplane, or even lumpy; pileipellis finely fibrillose, "intense yellow" when young, remaining so on the disc, background whitish, developing yellowish-orange to brownish stains on aging; context (whitish) yellowing then becoming orange when cut, odor strongly of "anise/ marzipan." Lamellae pallid when young. STIPE about equal, ca. 6-10 cm long X 12-42 mm; surface white, almost smooth above, distinctly white– to yellow-fibrillose below; interior stuffed-hollow, whitish to ochraceous, yellowing somewhat; base apparently shallowly rooted. VEILS forming a thin, pale yellow, supramedian, pendant annulus, persistently flaring for several mm or more…"

After Rick kindly shared his identification of the 2006 collection with me, I found it again in late June, 2009 (photo right) in wood chipped compost soil. Recently I searched through an old trove of my mushroom photos and came across another unmistakable example dating to 2001 which matched exactly the descriptions given above. So while this species is present here on Long Island, it must be considered uncommon to rare. At this time we are pleased to add it to our species list.

II-Agaricus argenteus Braendle in Peck*

We had encountered this species several times previous to again collecting it at Planting Fields on Mushroom Day this year, but mistakenly dismissed it as an unusually large form of the Meadow Mushroom, *Agaricus campestris.* Now, with Kerrigan's "Agaricus of NA" in hand, we are able to correct our previous error.

This photo was taken several days after collection and the silvery sheen of fresh specimens is reduced, but that and its usually larger size should help to tip us off to its identity in the field. *A.* cf. *campestris* is usually smaller, duller and sometimes fibrillose. Another species, *A. andrewii,* which may occur here, is more similar and may be mistaken for *A. argenteus,* sometimes growing together with it; but spore measurements can differentiate them, the latter species having the largest (mean 8.6 X 6.2), more ovoid spores. None of them have cheilocystidea or a staining reaction and their odor is deemed "less complex" than that of the supermarket *A. bisporus.* The stipe context of *A. argenteus* does react differentially to KOH, particularly in the base.

Spores, *A. argenteus*

These species, and several other as yet unnamed forms in this section cannot be absolutely differentiated in the field. Accordingly, Kerrigan considers the edibility of *A. andrewii* to be unconfirmed, and that of *A. argenteus* to be unknown. While he is no doubt correct in a strictly scientific sense,, there is little doubt that they have been consumed by mushroomers who believed that they were eating Meadow Mushrooms.

And as Kerrigan informs us, the "true" *Agaricus campestris* of Europe is, by DNA analysis, present thus far only in the Rocky Mt area. So at this time, we must continue to qualify our identification of *A. campestris* with the abbreviation "cf." to indicate that it resembles but is not identical to that species.

*(*This unusual nomenclature is due to a collector, F.J. Braendle, proposing the name in a letter to Peck, as a subspecies of A. campestris)*

MUSHROOM DAY 2016 at PLANTING FIELDS

On Oct 16 we were back at our traditional location, the environs of which have been renovated and are now on the main entrance path, so that we attracted many curious viewers and had an improved number of sign-ups. Our membership is at an all time high, amounting to 105 memberships comprising 150 individuals.

LIMC members, our oldest, Bunny Aisenson (pink scarf) center, with Maria (Yahoo coordinator) to the left, then Peggy (Pres). Jacques (Foray chief) extreme left.

Tables open and awaiting visitors.

Members discuss the collections.

Successful public foray led by Jacques (Rt.)

The Plight of our Forests

Efforts continue to contain the infestation of the Southern Pine Beetle on Long Island, both by the DEC and local communities, who are being aided by Gov. Cuomo's establishment of a total of $500,000 in grants. Infected Pitch Pines continue to be cut down in federal, state and county lands throughout Suffolk County, in areas mapped by traps, aerial surveys and ground surveys. To date, more than 10,000 trees have been cut down. Presently, some trails have been closed to allow the work of felling trees to continue. Research into the Southern Pine Beetle's life cycle and mortality is being carried out by the DEC to help develop the most effective management strategies. Additionally, replanting of pines has begun in Connetquot River State Park and elsewhere. Volunteers from the Pine Barrens Commission and others have gathered Pitch Pine cones for the DEC nurseries, so that the resulting seedlings will be genetically consistent with local stock.

Efforts have been complicated by continuing drought conditions, with pines not receiving enough moisture to produce sufficient sap to expel the beetles, which also makes it difficult to detect beetle presence. Lastly, our Oaks may be in danger from oak wilt, a fungal disease causing leaf loss, but thus far this has been limited to a small area in Central Islip. (Although present elsewhere in NYS.)

For further details, access:http://www.dec.ny.gov/nimals/99331.html

IN THIS ISSUE

Only by committing half of the planet's surface to nature can we hope to save the immensity of life-forms that compose it.

Edward O. Wilson, 2016

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MEMBERSHIP RENEWAL FORM ENCLOSED

Kindly respond before Jan. 31