SPORE PRINTS

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Number 466 November 2010

MUSHROOM HUNTING IN RUSSIA & EASTERN EUROPE, A HISTORY OF FOOD GATHERING

Jennifer Ciotta
*The Spore Prin*t, L.A. Myco. Soc., January 2010

In Eastern Europe, food is of great importance. In the days of the Soviet Union, many Eastern Europeans stood in line for hours, clutching Soviet coupons for basic foodstuffs.

For the West, this is an unfathomable concept; however, in the Soviet Union, starving was a way of life. Salvation came in a most unusual form: mushroom hunting.

Food Shortages, Starvation Statistics, Holodomor Tragedy

After the Russian Revolution of 1917, food shortages began from eastern Russia all the way to the Soviet countries bordering the West. Throughout the turbulent period of Soviet "occupation" in Eastern European countries, many people starved, from the cities to the farms.

Perhaps the most affected were the peasants, especially during the winter months. In history one of the most famous famines of all time was the Ukrainian Peasant Famine from 1932 to 1933. Ukrainians refer to this as Holodomor, which translates to, "death by starvation." Holodomor was ignited by communist leader Joseph Stalin's new policies on economy and trade. The actual number of Ukrainians who starved to death is unknown; however, Dinah Shelton, author of *Encyclopedia of Genocide and Crimes Against Humanity* (2005), estimates the number at 10 million.

In the cities, starvation came in the form of blockades. The Siege of Leningrad lasted from 1941 to 1944. A disturbing memory for many older Russians, Blokada (or The Siege) drastically limited stocks of food and fuel to the city. Beside an absence of food, for long durations (including harsh winters) there was no heat, water, or electricity.

A Traditional Eastern European Food: Mushroom Picking in the Soviet Bloc

During these times of hardship, people learned to go out into the forest for subsistence. Hunting for mushrooms was a tradition in place long before the Soviet era; however, for Eastern Europeans living in the Soviet Bloc, mushrooms were a vital food source. Parents taught children, whether in the city or country, where to look for the fungi, and how to tell a poisonous mushroom from a fatal one.

In fact, a September 4, 2008, article by Daria Chernyshova entitled "Wild about mushrooms" (*The Moscow News*) cites: "One of the most fascinating things about this activity is that even city residents know the most out-of-the-way paths in the forests, the special 'mushroom places,' and which mushrooms are edible and which could literally kill you."

Thus, picking mushrooms became an extremely competitive sport in the Soviet Union. Since food, especially fresh vegetables, was so scarce, "shrooming" became fierce, pitting man against man, family against family. A person had to pick on the sly, not alerting any competitors of the mushrooms' whereabouts. It may sound silly or crazy to a Westerner; yet you must realize that the alternative in many provinces was cooking emaciated cats or rats to feed a whole family, and that was a luxurious meal.

Nowadays, in the new Eastern Europe and Russia, shrooming is a national pastime, a sport for fun and hobby. Traditional holiday soups include mushrooms to infuse history into the festive season. Mushroom hunting for survival is a memory of the past.

FIGHTING THE MOAI LICHEN

Tina Lepri
The Art Newspaper, Oct. 5, 2010

TURIN - Lichens are eating away at the Moai, the 400 volcanic stone heads that dominate the skyline of Easter Island. Earlier treatments to preserve these ancient monoliths called for filling some of the most deeply corroded stones with concrete. Unfortunately, experts think that this treatment might have worsened the damage. In fact, the lichen may even be feeding off the concrete used to save the Moai.

Professor Lorenzo Casamenti from the restoration school Lorenzo de' Medici in Florence visited Easter Island in 2008 and asked for samples of the island's volcanic rock which, like the Moai, are also contaminated by these dangerous lichens. Lengthy research has now produced a "chemical" solution to the problem. "We have at long last discovered a solvent that destroys the lichen but not the statues," said Casamenti.

He will work in collaboration with archaeologists living on Easter Island who have already attended university courses on stone restoration in Florence. The aim of the treatment is to rid the stones of the "white flowers of evil" that leave holes in the colossal statues.

DUES NOTICE

Unless you obtained or renewed your membership at or after the Annual Exhibit in October, it officially ends December 31, 2010.

To renew your membership, send your dues now to

Ann Polin, PSMS Membership Chair
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CALENDAR

Nov. 9 Membership Meeting, 7:30 pm, CUH

Nov. 15 PSMS Board Meeting, 7:30 pm, CUH

Nov. 16 *Spore Prints* deadline (**early**)

Dec. 14 Membership Meeting & Holiday Cookie Bash, 7:30 pm, CUH

THREE WASHINGTON MUSHROOM PICKERS RUN INTO TROUBLE — KELA radio

RANDLE - Three mushroom pickers within two weeks ran into some serious trouble while inside the Gifford-Pinchot National Forest. Two went missing outside of Packwood and Randle last week. Both were found OK. An 85-year-old Lakewood man also recently survived spending two nights outside after getting lost south of Randle while picking mushrooms with friends. Lewis County officials say being prepared and being aware of your surroundings are crucial to make sure you don't get into serious trouble

For some breath-taking photos of biolouminescent fungi, be sure to visit master photographer Taylor Lockwood's website at

http://www.kingdomoffungi.com/c_pages/bioluminescent_mushrooms/bioluminescent_a.php

MEMBERSHIP MEETING

Tuesday, November 9, 2010, at 7:30 pm at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle

This month we would like to welcome Noah Siegel, who will present a talk titled "The Fungi of New Zealand," a land well known for its breathtaking scenery. Most visitors look up at the scenery, but its mushrooms are a reason to look down and never up. His presentation will open your eyes to the fungal world Down Under. Noah is a nationally known, award-winning photographer and mushroom enthusiast. He is mainly based in the northeastern United States, but he has also hunted for mushrooms throughout the U.S. and Canada as well as New Zealand and Australia. Despite his relatively youthful age, Noah is well traveled and highly regarded in the Northeast as an expert identifier and lecturer. He is drawn to fungi by their wide variety and unsung nature. He is expert in fungal taxonomy and is president and a walk leader for the Monadnock Mushroomers Unlimited in Keene, New Hampshire, and a trustee for the North East Mycological Federation (NEMF). He has lectured at noted mushroom forays such as the Connecticut-Westchester Mycological Association (COMA) and NEMF.

Would people with last names beginning with the letters A–K please bring a plate of refreshment to share after the meeting.

PRESIDENT'S MESSAGE — Marian Maxwell

A special *Thank you* to all who helped make our Annual Show a success! Thank you, Kim Traverse, for taking the helm once more and guiding us through the process. Thank you to all the committee chairs, our wonderful volunteers, and our guest speakers: Debbie Viess, Dr. Britt Bunyard, and Taylor Lockwood, who donated their time to our annual fund raiser and public outreach as well. You all helped to make our show great!

November usually brings the hard frosts and closes down the mushroom hunting season; perhaps we will be lucky and the frosts will come late. I hope you have all had the opportunity to get out this fall and experience the wonders of mushrooms and fungi again. I especially like spending time this year with some newer members and reliving that excitement of "*I found my first* (you fill in the blank) *and I have always wanted to find one of those!*

To Dr. Ammirati, Danny Miller, and Patrice Benson: Thank you for helping the Snohomish County Mycological Society with their annual show October 10.

FIELD TRIP REPORT, SEPT. 25 — Marian & Scott Maxwell & Brian Luther

Scott and I arrived early and set out the coffee, hot water, sweet rolls, and hosting supplies. Brian arrived shortly and began splitting firewood and making the fire. Forty-three people signed in, but I know we had more than were registered. Some people chose to camp in the group camp Saturday night; some simply stayed for the day, hunting and enjoying the potluck. The cooler summer worked in our favor for this trip, and those who attended were rewarded with a large assortment of fungi (three picnic tables' worth!). All in all, a hopeful outlook for the start of the mushroom season.

Identifiers were Brian Luther and Danny Miller. Scott and I took out a group of people, largely those who were new to mushroom hunting. We had a great day! They said that they had enjoyed the trip and appreciated Brian and Danny identifying when we got back.

As with most field trips, the potluck was great! Lisa Ramey made a fantastic mushroom soup (which disappeared fast), and Brian and Pam Luther brought a spice cake and fresh corn from their garden. Patrick Ressler and Mary Bhuthimethee brought in chunks of tuna which were fantastic. There were many other great dishes, but I don't know who brought them!

My favorite mushrooms of the weekend were *Chroogomphus pseudo vinicolor*, *Cortinarius californicus*, *Albatrellus subrubescens* (which I found), and three species of *Cortinarius* which I found on Sunday that Dr. Ammirati said are un-named. He went to this area the following weekend and found 25 species of *Cortinarius* to add to his collection. Wow!

Because I (Brian) was so busy helping people with their collections all day, I did not have time to write species ID tags. Good edibles collected included White Chanterelles, some eastern Washington Yellow Chanterelles, Pig's Ears, a few Matsutake, The Prince mushrooms, Oyster mushrooms (two species), several species of *Suillus*, some *Boletus zelleri*, and lots of prime *Boletus edulis*, many of which were found right in the campground area.

Some of the rare or unusual species found included *Limacella glioderma*, a reddish-brown viscid mushroom with free gills, an annulus, and a strong farinaceous odor; *Pluteus petasatus*, a large, beautiful, pure white species found on very rotten, soggy wood; *Pluteus granularis*, with unusual radially arranged brown grainy cap hairs forming a reticulate pattern; *Clitocybula familia*, a pale creamy colored mushroom with very long, fragile narrow stems growing in dense caespitose clusters; four species of *Clavariadelphus*, *Chromosera cyanophila* (=*Mycena lilacifolia*), and a collection of the hair-like *Typhula phacorrhiza*.

FIELD TRIP REPORT, OCTOBER 2 Brian Luther

We had a fabulous field trip, even though it's one of the more distant locations—approximately 125 miles from Seattle.

I was invited to spend Thursday night (Sept. 30) with Kern & Elizabeth Hendricks at their beautiful home in Enumclaw. It was a great chance to catch up on news with long time friends and see their beautiful gardens. Dinner was a delicious chicken and Chanterelle dish that Elizabeth made. Thanks to the Hendrick's hospitality, I was very rested Friday morning and with Hwy. 410 so close by, I got on the road early heading to the field trip location.

This is an especially beautiful spot in the forest with the constant background sound of the river and a wooden footbridge inviting you to enter the William O. Douglas Wilderness. Some members saw it for the first time, and their positive comments were echoed by many others. Doug U-Ren had arrived a couple of days earlier with his RV to reserve the shelter. Doug also brought his portable generator, which allowed me to make coffee refills for everybody. I had brought a chainsaw,

Some matsutake found on the field trip.

and Friday evening Doug and I took Doug's truck, down the road and cut firewood for the shelter fireplace. Once again, the many things that Doug does behind the scenes to help made a big difference on the success of the field trip. Doug and I expected others to arrive Friday, but nobody did. For dinner Friday night I got a fire going and let it die down to glowing coals, then put a stainless steel grate down and barbecued thinly sliced pork loins. We had BBQ pork sandwiches with BBQ sauce, fresh tomato, lettuce, and onions, all on big hamburger buns—yum—just as it was getting dark.

The next morning our hosts, Jim Boril and Anna Possek, arrived early and they made the Saturday hospitality very appealing. It was a welcome spread of coffee and goodies for all to enjoy. Thank you, Anna and Jim.

The fabulous part of the field trip that I mentioned in my first sentence was a combination of having great hosts, a good turnout of 46 members, and the super abundance of fungi all over. Most everyone found *Boletus edulis*, Chanterelles (yellow and white), and Matsutake, but some did better than others.

Kern and Elizabeth came over to the field trip on Saturday and en route they collected a huge basketful of absolutely prime King Bolete buttons. I got a great photo of the two of them with their overflowing basket of *Boletus edulis* outside the shelter. Can you guess where all those gorgeous mushrooms went? Elizabeth and Kern put them in a large open box and donated them to the members—each person getting a couple of prime buttons. Warmest thanks to Kern and Elizabeth for their incredible generosity!

Fungi were everywhere and this was reflected by the 140 species brought in and displayed all around the edges of the shelter. Pacita Roberts volunteered to help me for a few hours in the afternoon on Saturday, so I could sit down and write colored ID tags for all the species found. She brought the specimens to me allowing me to stay seated writing tags, then she neatly displayed them with push-pins. Thanks for your help, Pacita, I couldn't have done it without you.

There was a big selection of tasty food for the potluck around 5:30. I kept a fire going in the fireplace, and it was very comfortable and inviting.

An amazing 12 species of *Suillus* came in, as well as just about every color form of the Woodland Russula (*Russula xerampelina*). Unusual finds included the rare polypore *Albatrellus dispansus*, with multiple yellow pilei; several collections of *Tricholoma caligatum*, which smells exactly like Matsutake and is closely related (but has a smaller stature, a different color and is somewhat bitter tasting); and the beautiful and overpoweringly fragrant *Hydnellum suaveolens*. Rachel and Greg Arnold found an interesting little fungus that looked and smelled truffle-like, with a powerful odor. It turned out to be a puffball called *Calvatia fumosa*, having a very thick peridium (outer rind) and a gleba full of dark brown spores that were 4–5 µm in diameter, globose, and ornamented.

Kern and Elizabeth Hendricks with King Boletes

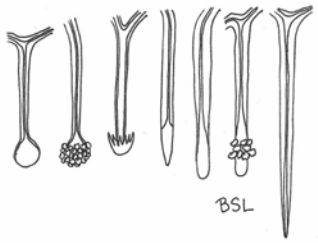
RESUPINATE FUNGUS OF THE MONTH:
THE GENUS *TUBULICRINIS* ©Brian Luther

The resupinate genus *Tubulicrinis* is unremarkable in outward appearance, but microscopically it is remarkable indeed. It is characterized by having very pronounced, thick-walled cystidia which, when mounted in a strong solution of KOH (potassium hydroxide), go through a disappearing act. I would best describe this phenomenon as follows: *Now you see them, now you don't*.

The cystidia are a peculiar kind that we call lyocystidia, meaning they dissolve in a microscopic mount of 5–10% (+) KOH and start disappearing right before your eyes. This does not happen with any of the other common microscopic mounting media, only KOH. In some species (those in my featured genus included), these same cystidia also become noticeably amyloid, or bluish, in iodine-based stains such as Melzer's Reagent or IKI (an iodine, potassium iodide solution), a highly unusual feature for cystidia like this.

The cystidia in this genus also exhibit a wide range of forms, from cylindrical and rounded at the tip, to aculeate (awn-shaped) or subulate (narrower at the base, wider in the middle, and again narrow at the tip) and very sharp pointed, to having tips that are abruptly swollen or capitate, resembling a classic thermometer with a bulbous end, to having a variety of crystalline incrustations, including barb-like hooks resembling those on pork tapeworms.

For comparative purposes, I've drawn a selection of lyocystidia from different species in this genus to give you an idea of some of the great variation seen.



Some examples of differet shapes of lyocystidia seen in the genus Tubulicrinis.

History

Bourdot & Galzin (1927) compiled an early treatment of many of these similar species under the genus *Peniophora*, section Tubuliferae; then the genus *Tubulicrinis* was described by Donk (1956) to accommodate these related resupinates. Christiansen (1960) provides a very nice, but limited treatment of only the Danish species and several other mycologists have done studies on the genus as well, including Weresub (1961), Oberwinkler (1965) and Hjortstam (1979, 2001). The best monographic references with keys, descriptions, and illustrations for *Tubulicrinis* are Hjortstam et al. (1988) and Hansen & Knudsen (1997). Besides these taxonomic references, some of the other sources I use concerning microstructures and their terminology relating to resupinate fungi include Lenz (1954), Talbot (1954), Price (1973), and Hjortstam et al. (1987), with the third reference specifically dealing with and illustrating only different kinds of cystidia in the resupinates.

Materials and Methods

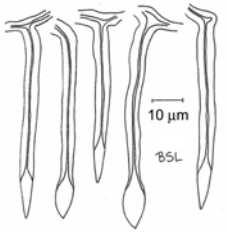
Close fruiting body observations and thin sections were made under magnification on a dissecting microscope. If dried collections were looked at, they were first wetted in 95+% ethanol (ethyl alcohol), then placed in distilled water to rehydrate for a minute; then sections and mounts were made. Microscopic mounts were made with either 3% ammonium hydroxide or 3% KOH along with the stains Phloxine or Congo Red. A stronger solution of KOH was employed for dissolving the lyocystidia. Melzer's Reagent and IKI were used separately to check for amyloidity.

Description of Collection

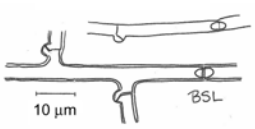
Tubulicrinis sp. similar to *T. effugiens*. Brian S. Luther coll. # 2010-617-21. On the underside of old burned conifer wood, trail along pond off of West Side Road, above Lime Kiln Point State Park, San Juan Island, San Juan Co., WA. June 17, 2010. (See habitat photo at start of article.)

Basidiocarp fully resupinate, granular and finely pilose, forming a very thin coating on the substrate, whitish and not easily removed when fresh, drying creamy or very pale ochraceous with a non-continuous, fine farinose or granular surface as viewed under the dissecting microscope; margin very thin and diffuse without any distinctive features. Overall appearance under the dissecting microscope of being coated with very short, stiff hairs due to the protruding cystidia.

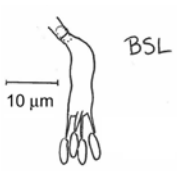
***Microcharacteristics*:** *Hyphal system* monomitic; hyphae up to 8 µm wide, thin to thick-walled, mostly hyaline to lightly colored, all septa with clamp connections; basal hyphae wider and with thickened walls; non-basal and hymenial hyphae much narrower and thin-walled. *Basidia* 16 × 4 µm, short clavate, hyaline, thin-walled, often centrally constricted at maturity, with four sterigmata up to 5 µm long, basally clamped, but difficult to observe. *Basidiospores* 6–7.5 × 2–2.5 µm, cylindrical, hyaline, thin-walled, smooth, inamyloid. *Cystidia* 55–90 x 5–7 µm, very conspicuous, cylindric-aculeate to subulate, thick-walled with the lower capillary lumen usually less than 1 µm wide, hyaline, without any incrustation, arising from thick-walled basal hyphae, distinctly amyloid (pale blue) in Melzer's Reagent, not dissolving in 3% KOH, but dissolving in stronger concentrations of that reagent (=lyocystidia); apex mostly acuminate or occasionally mucronate, also sometimes distinctly swollen and enlarged subapically, but remaining sharp pointed, the wall thinning fairly quickly above toward the tip (but not suddenly or gradually),



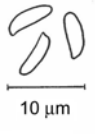
Variation in lyocystidia in BSL coll. #2010-617-21.



Thin and thick walled hyphae



Basidium with spores



Basodopspores

with the thin-walled area 13–16 µm long. Cystidia and slightly enlarged apices visible on the highest power of the dissecting microscope. Refer to the line drawings.

Discussion

The cystidia of *T. effugiens* has a capillary lumen that only very gradually thins out toward the tip. On the other hand *T. hirtellus* has a capillary lumen that suddenly and very abruptly thins above, almost making right angles, and it also has longer spores. *T. confuses* has less pointed cystidia with more obtuse tips and wider spores. *T. chaetophorus* has longer and larger cystidia with a capillary lumen that very slowly continues to thin out almost the entire length to the apex, and has wider spores as well. *T. subulatus* has very similar shaped cystidia, but in that species they're wider, distinctly incrusted, and don't show a tendency to enlarge subapically. They also have slightly narrower spores compared to my collection. However, the subapical swelling seen on some of the cystidia in my collection appears to be rather peculiar. Hjortstam et al. (1988, pp. 1546–1551) devote six pages of text and illustrations to the variations seen in *T. effugiens*, which they consider a "complex," but none of their illustrations show the subapically enlarged cystidia that are often seen in my collection. The amyloid reaction of the cystidia in *T. effugiens* is weak, and although my collection described above has an unmistakable pale blue amyloid reaction for the cystidia in Melzer's reagent and IKI, I would not describe it as strong either. The lengths of the spores in my collection compare favorably with those given for *T. effugiens* in the literature, but the widths are generally narrower.

Ginns & Lefebvre (1993) list twenty species of *Tubulicrinis* as being documented for all of North America, with only two of these having been recorded in Washington State (*T. subulatus* and *T. gracillimus*). Lindsey (1988) lists *T. effugiens* as having been collected in Colorado on *Populus angustifolia* and causing a white rot.

DNA studies currently place this genus in the Class Agaricomycetes (Hibbett, 2006), in the Order Hymenochaetales (Larsson, 2007), and in its own family, the Tubulicrinaceae. This family was first proposed by Jülich (1981) and subsequent DNA studies have confirmed that it is a genetically distinct entity (Larsson, 2007).

Classification hierarchy for the genus *Tubulicrinis*

Phylum Basidiomycota
Subphylum Agaricomycotina
Class Agaricomycetes
Order Hymenochaetales
Family Tubulicrinaceae
Genus *Tubulicrinis*

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BEE COLLAPSE MAY BE CAUSED BY A VIRUS-FUNGUS ONE-TWO PUNCH

Andrew Moseman

Discover Magazine, October 7, 2010

Viruses. Mites. Fungi. Genetically modified crops. Inbreeding because of industrial agriculture. They've all been floated as possible causes of colony collapse disorder (CCD), the mystery affliction that's been wiping out honeybees, and by doing so threatening the agricultural industries that rely on those insects. Despite the flood of reports since 2006 about these suspects (and more absurd ones, like cellphone radiation disorienting the bees), the bee die-off continues without a clear explanation.

A study out this week in *PLoS One* points the finger in a new direction. What's interesting about this explanation is its contention that there's tandem foul play at work in CCD—two of the suggested culprits could be working together. But the mystery isn't solved just yet.

The scientists from the U.S. Army and the University of Montana implicated the dual threat of an invertebrate iridescent virus, or IIV, and a fungi called *Nosema*. Previous studies had found both associated with CCD independently. When these researchers looked at bees from collapsed colonies, healthy colonies, and healthy colonies that collapsed during the course of the study,

cont. on page 6

Bee collapse, *cont. from page 5*

they found that it was both the virus and the fungi together—but not simply one or the other—that was connected to a colony collapse. From their study:

> Interestingly, the presence or absence of IIV in a given honey bee colony may explain why in the USA *N. ceranae* sometimes seems to contribute to severe colony losses (IIV present), and sometimes not (IIV absent), as reported both by researchers and beekeepers.

But which one is the key?

> "It's chicken and egg in a sense—we don't know which came first," Dr. [Jerry] Bromenshenk said of the virus-fungus combo—nor is it clear, he added, whether one malady weakens the bees enough to be finished off by the second, or whether they somehow compound the other's destructive power. "They're co-factors, that's all we can say at the moment," he said. "They're both present in all these collapsed colonies." [*The New York Times*]

The scientists are tip-toeing carefully in their statements, because despite the headlines that come out whenever a new CCD study emerges (see The *Times'* "Scientists and soldiers solve a bee mystery"), bee researchers are still wading through a mess of correlation versus causation:

> "We truly don't know if these two pathogens cause CCD or whether the colonies with CCD are more likely to succumb to these two pathogens," Jerry J. Bromenshenk of the University of Montana said in a statement. [AP]

Also, there may very well be more than two factors at play, especially considering the pile of other things scientists have connected to colony collapse disorder during the past four years. Previous studies that implicated viral infections in bees suggested that perhaps the infections prevented them from producing proteins that would help them resist parasites or pesticides. Those researchers are working to figure out the functions of the genes affected.

In the case of Bromenshenk's team, the scientists' follow-up task to this week's study is to isolate the IIV they found and try to use it in inoculation experiments, hoping that could reveal whether the virus is a key player in causing CCD or just an invader after the fact.

BRIGHTON SCREEN STAR'S GOATS EAT MAGIC MUSHROOMS

The Argus

http://www.theargus.co.uk/news/, Oct. 8, 2010

Seventies screen siren Alexandra Bastedo is keeping a close eye on her pygmy goats after they tripped out on magic mushrooms.

Bastedo, who now runs the Alexandra Bastedo Champions animal sanctuary in West Chiltington, said she was shocked when the three goats—named Homer, Marge, and Lisa after characters in cartoon "The Simpsons"—started stumbling around as if they were drunk.

"We knew something was up straight away. Marge started swaying first. She looked weird, as if she had been drinking.

"Lisa was vomiting and they were all lethargic. It was strange that they were all acting so out of character. They are normally the friendliest animals we have. We even take them to schools and old people's homes."

She called a vet who quickly realized they had been scoffing magic psilocybin mushrooms growing in their paddock. The mushrooms, which contain substances considered Class A drugs, grow naturally in the wild, but it is illegal to pick or possess them.

The goats, Bastedo said, "will eat anything and as much as they can get hold of so you have to control their portions. They obviously found the mushrooms tasty and ate a lot.

"When we looked we found loads in the field. We hadn't ever seen them before. Our volunteers have dug them all up now."

The goats took two days to come down from their trip. Bastedo said they do not seem to have suffered any long-term effects from the experience, but are now being closely watched in case they go looking for more.

Bastedo, 64, shot to fame as secret agent Sharron Macready in the cult series "The Champions" and starred in the 1967 spoof Bond movie "Casino Royale" with David Niven.

The Brighton-born actress started rescuing animals 30 years ago. She set up as a charity two years ago and 55 volunteers help her care for hundreds of unwanted pets and farm animals, including donkeys, cats, pigs, and miniature Shetland ponies.

PRINCE PHILLIP'S TRUFFLE CROP FAILS, SO HE CALLS IN ITALIAN EXPERTS

Nick Pisa

http://www.dailymail.co.uk/, Oct. 3, 2010

Three years ago Prince Phillip planted more than 300 £15 hazel and oak saplings impregnated with *Tuber melanosporum* [black truffle] spores in the Royal Fruit Farm, where he commercially cultivates apples, gooseberries, and black currants. The idea was to grow truffles that could be used in the Royal kitchens or sold through the farm shop for profits to be ploughed back into the estate.

Steve Chadburn

What? No truffles!

Prince Philip chose to cultivate black truffles—nicknamed "black diamonds" and costing as much as £900 a kilo—as they are easier to produce than white ones. They grow round the roots of beech, oak, and hazel trees and favour alkaline soil, of which there is an abundance at Sandringham.

But the truffle trees failed to produce.

Now specialists Giorgio Remedia and Gianluigi Gregori from Acqualagna in central Italy have been called in. The area around Acqualagna produces about two-thirds of Italy's truffles—on average between 60 and 80 tons a year, which are worth more than £50 million.

With them will be Acqualagna's mayor, Andrea Pierotti, who said: "The Duke has long had a desire to create his own truffle orchard and hopefully we will help him achieve this.

"We are flying in to offer our expert help and we will also give him some local white truffles which are our speciality and advise him on how he can grow his own.

"We will take soil samples from the estate and examine them and hope to give an interim report there and then. The samples will then be taken back to Italy where they will be analyzed in a laboratory and we will then send a fuller report in a few weeks' time. We are very experienced when it comes to truffles and we hope to be of help.

"We will also take samples from the tree saplings just to make sure they were of a good quality—it's unlikely but the Prince may have been the victim of a fraud and the spores not up to standard."

The saplings planted by Prince Philip on Sandringham came from Truffle UK Limited. Last night it was unavailable for comment.

MORE ROYAL MUSHROOMS IN THE NEWS

Robert McAulay

The Scottish Sun, Oct. 7, 2010

Two pensioners were left gobsmacked after being accused of nicking Prince Charles's mushrooms while out walking their dog on his estate in Scotland.

Ramblers Rozanne and Denes Petri were accosted by a "burly" royal protection cop after unwittingly straying onto the grounds of Birkhall in Balmoral. Birkhall is the private residence of the Prince of Wales and the Duchess of Cornwall—known as the Duke and Duchess of Rothesay when in Scotland.

The Met officer checked the couple's details, including address and car registration, and held them for an hour on the grounds. He then called in two local cops who confiscated the wild fungi they'd gathered on their walk.

Last night Denes, 64, from Rutherglen, near Glasgow, said: "We strayed on to the estate without knowing. A burly Metropolitan policeman approached and asked what we were doing. He was very intimidating towards us—and pointing to his police helmet said, 'What is this.' I replied, 'A hat.'

"He said, 'Does this helmet not mean anything to you?' I replied, 'No.' The Met policeman accused me of stealing Prince Charles's mushrooms and told me I was breaking the law by opening a small gate on the estate. I told this policeman that in Scotland there were no trespassing laws."

Rozanne, 62, added: "We were told the mushrooms we'd collected would end up on the royal table."

Last night a spokesman for the Royal Family in Scotland and Grampian Police said they could not comment on royal security. A Met Police spokesman said: "Police stopped two walkers. They were escorted to the boundary. Security was not compromised."

A BRUTAL START TO HUNGARY'S 2010 MUSHROOM PICKING DEATH SEASON

http://www.chew.hu/, Sept. 24,2010

With all the damp weather we've recently been having, it's shaping up to be a bumper year for wild mushrooms in Hungary. The good news is that this means lots of tasty dishes made from wild mushrooms. The bad news is that it means lots of cases of people getting sick from picking and eating (or potentially buying and eating) poisonous mushrooms. Or worse. According to vasnepe.hu, a 25-year-old man from Alsóújlak, Vas County, recently died after mistakenly eating "death caps," a.k.a. *Amanita phalloides*. Six other members of his family were also hospitalized for the same reason, including the victim's mother, who was left in critical condition.

Amanita phalloides

Dr. Gábor Zacher, head of the toxicology department at Péterfy Sándor Hospital in Budapest, where the victims were taken, said they thought they were eating *Russula cyanoxantha*, known popularly as "charcoal burner" mushrooms. Zacher added there are four to five patients currently being admitted to the hospital suffering from mushroom poisoning every day, an unusually high number. As we've pointed out before, if you come into a batch of mushrooms you are unsure about, you can take them the mushroom examiners who are stationed in the Nagyvásárcsarnok (central market hall) in Budapest. Or you can take your chances.

Russula cyanoxantha

FUNGI GENERATE THEIR OWN MINI WIND TO GO THE DISTANCE

Nic Fleming

http://www.newscientist.com/, Sept. 27, 2010

A good breeze is just what a fungus needs to spread its seed, but what if the weather doesn't oblige? It turns out some species generate their own jets of air, increasing how far their spores travel more than 30-fold.

Apothecial fungi have cup-shaped fruiting bodies lined with spore-bearing cells called asci. The microscopic size of their spores means they might only travel a few millimeters if ejected individually. To overcome this limitation, the fungi synchronise spore ejections, creating a small, localized air stream.

Marcus Roper of the University of California, Berkeley, and his colleagues used high-speed cameras, lasers and models to film spore ejections and calculate the precise speed and motion of each spore in the crop pathogen *Sclerotinia sclerotiorum* and seven other apothecial fungi.

This showed how the combined effect of thousands of almost simultaneous ejections creates a small air jet, which carries the spores over much greater distances. The team found that synchronised ejections send the spores 10 centimeters away, compared to just 3 millimeters if each asci ejects alone.

The videos also showed how synchronisation is achieved. An external cue—possibly a drop in air pressure—triggers the ejection of pioneer spores, causing mechanical changes in the surrounding tissue that trigger more ejections.

The researchers say the mechanism could be common to all 8000 apothecial species.

US farmers spend around $1 billion per year defending crops including tomatoes and sunflowers from *S. sclerotiorum*. "Understanding the basic biology of dispersal could be enormously advantageous to understanding and improving control," says Roper.

I remember chewing lots of gum, because the freshly harvested psychedelic mushrooms I was eating made my breath smell like cow shit. I also saw a beagle drive a golf cart.

—Mike Riggs, http://www.mediabistro.com/

STUFFED MATSUTAKE MUSHROOMS

http://www.earthydelightsblog.com/, Oct. 1, 2010

2 large matsutake mushrooms,
caps about 4 inches in diameter
1 medium shallot, diced
2 Tbsp pine nuts
3 Tbsp butter
1 cup soft bread crumbs (we used sourdough)
1 egg white, beaten
½ cup panko
1 cup vegetable oil
½ tsp finely chopped fresh rosemary
Salt and pepper to taste
Ponzu* sauce (optional)

Brush any dirt and debris from the mushrooms, rinsing in cold running water if necessary. Carefully remove the stems and peel away the tough outer layer with a vegetable peeler. Chop the stems coarsely and set aside.

Brush the top of each mushroom cap with the beaten egg white and press into the panko. Heat the vegetable oil over high heat in a deep-sided pan large enough to accommodate both mushroom caps. When the oil is very hot, but not smoking, place each cap panko-side down and cook until brown and crisp. Drain the oil from the pan and flip the mushroom caps to cook the bottomside briefly, about one minute. Remove the cooked caps to a baking sheet.

Meanwhile, sauté the chopped stems together with the shallots in 3 Tbsp butter over medium heat. Add the pine nuts and rosemary and continue to cook until the pine nuts are lightly browned. Remove from the heat and toss the mushroom/shallot mixture together with the bread crumbs and season to taste with salt and pepper. Allow to cool slightly and add any remaining panko & egg white and mix well. Generously mound half of the stuffing mixture onto each cap, pressing slightly so the stuffing sticks together.

Preheat the oven to 475 degrees. Place the mushroom caps on a rack in the upper third of the oven. Bake for 15 minutes or until the tops are golden brown. Serve with ponzu sauce on the side.

**Ponzu* is a Japanese sauce made with rice vinegar, mirin (sweet cooking wine), yuzu (citrus juice), soy sauce, and dashi (seaweed and dried bonito stock). Ponzu sauce has been traditionally thought of as a dipping sauce with dishes like sashimi and with one-pot dishes like Chirinabe, but it has since found its own place in the Western pantry.

The unique flavor of ponzu sauce is adaptable to just about any dish. Its blend of sweet, sour, salty (and bitter) flavors goes equally well with grilled meats, seafood, and plain rice.

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