



## TRUFFLES OF THE PACIFIC NORTHWEST

*Daniel Winkler – Mushroaming.com*

**T**ruffles are not just hiding in plain sight from the ordinary mushroom hunter; it seems too often they are carving out an underground existence in the mushroom scene of the Pacific Northwest as well. And there is a reason for that. Truffles went underground to fruit in a safe environment, where they are well protected from inadvertently drying out. The fact that truffles opted for underground fruiting, invisible to us bipeds, who usually rely on our sense of sight when foraging for food—praised be the inviting bright yellow of the delightful chanterelle!—makes it very mysterious, often even tedious, to collect truffles. Although with a bit of experience based on much trial and error (frankly in my experience too much trial and error) one is able to dig these culinary gems out of the ground, often where the duff meets the rough, the mineral soil and just a bit deeper. However, this process of extraction is very crude and I have mostly opted out of truffling. It just does not feel right to go excavating in the forest disturbing the soil at the base of Douglas-

firs in hopes of encountering Oregon white or black truffles.

Though I might occasionally get lucky, and the crude process of ploughing the forest soil might yield desired truffles, there is still no guarantee that the morsels are yet mature; to the contrary, often only one member of an underground cluster will have reached maturity. And though an immature truffle might feed you, even add a bit of forest soil taste to your pasta, it will surely not excite your palate.

The peak of truffle hunting corresponds to the peak of truffle maturity: when the chunky truffle oozes its rich aroma, a spore-spreading strategy truffles have developed to attract a range of truly dedicated four-legged truffle aficionados, ranging from small rodents, especially voles and squirrels, up to boars, feral pigs, deer and bears. The key to a successful and gratifying truffle hunt is making use of the truffling skills of one of these animals. Though one can successfully train a squirrel—I recall the cute pictures of a water skiing gray squirrel—the process to train an adventurous squirrel

takes a year. Then the sportive squirrel can enjoy another year of showing off its skills before skiing into hazelnut heaven. Thus, this is a poor cost-to-benefits equation. A better move is to train longer living animals. Traditionally, in the Old World, domesticated pigs have been trained to hunt truffles. The skill comes naturally to them, especially to sows, since one of the aromatic substances produced by a mature truffle is identical to a male pig's pheromone, androstenone. Supposedly, when this illusive perfume is sniffed by a sow in heat, she will assume the mating stance.

Though the love for truffles predestines sows for finding them, the excitement (and especially the size) of sows makes it very difficult to control them. Then there is the ancient trick to look for a cluster of truffle flies hovering in the air over a mature truffle to locate it underground. And as mentioned, mature being the key here, often truffles unearthed by us smell-challenged humans are devoid of the choice aroma. In the 1990's the sale of immature truffles badly undermined the fledging Oregon truffle industry, since most of the truffle harvest, sold to fancy restaurants around the US, did not have a chance to turn the noses (or please the palate) of the expectant consumer.

Some of you might already have realized I am just beating around the



bush here talking about squirrels and sows and bears. Oh my! The short answer of course is dogs: smart, man-pleasing, good-sized creatures with an incredible sense of smell! For the number crunchers, a dog has 220 million olfactory receptors in its nose, while we humans have only 5 million.

Now, I do not have a dog, though I love dogs, but I travel too much to keep a dog happy. However, I am lucky enough that my good friend James “Animal” Novak from Terra Fleurs, who cultivates and forages mushrooms to sell online and at the Seattle farmer markets, has a truffle dog. Animal and his companion August, a Lagotto Ragnagnolo truffle dog, the latter looking quite a bit poodlish, let me tag along hunting for Oregon black truffles, *Leucangium carthusianum*.

“Black truffle” is an otherwise commonly used name for the European black Périgord truffle (*Tuber melanosporum*), the second-most valuable species, after Italy’s “White truffle” (*Tuber magnatum*).

I had contacted Animal to team up for a fire morel hunt; 2013 was an awesome morel year in the Cascade Mountains East of Seattle. (See also the story by Langdon Cook, in this issue.) However, on the phone Animal said, “we do have two options: a black truffle hunt assisted by August half an hour north of Seattle, or a fire morel hunt 2 hours east. I was incredulous that there was such a choice. Mid May and there were still black truffles fruiting? The Trappe’s et al. (2007) *Field Guide to North American Truffles* reports Oregon “blacks” fruiting from September through February. And, as our winter was milder than previous years, if anything, I would have expected the truffles to have fruited earlier. Maybe Animal meant Oregon whites? Oregon whites could be around still, since *Tuber gibbosum* was assumed to fruit from fall through spring and all commercially harvested PNW white truffles were previously regarded one species, *T. gibbosum*.

However, recent research showed morphological differences between those whites fruiting in autumn (*T. oregonense*) versus the actual *T. gibbosum* fruiting in spring (Lefevre, 2012). Furthermore, DNA analysis now reveals four similar but separate species. The two other newly described Oregon white species *Tuber bellisporum* and *T. castellanoi* are much rarer (Trappe et al., 2009) than *T.*



*oregonense* and *T. gibbosum*. However, all things truffle are still in a flow. As Charlie Lefevre points out, “*T. oregonense* is present in the ground for rakes to find from October on, therefore it was also known as the ‘autumn white truffle,’ but it is only ripe and worth harvesting to eat from December through March. And what was labeled for a while as the ‘spring white truffle’ (*T. gibbosum*) can be encountered from January to June when raking. However, the spring truffle should probably be called the ‘summer white truffle’ since it is more likely to be ripe from June through July even though someone with a rake can find it way earlier than that.” Charlie goes on, “The dogs are educating us about the seasonality of these species, and they’re telling us that the seasons are later than we have always thought.”

Whatever the taxonomy might be, I decided to join Animal for the truffle hunt.

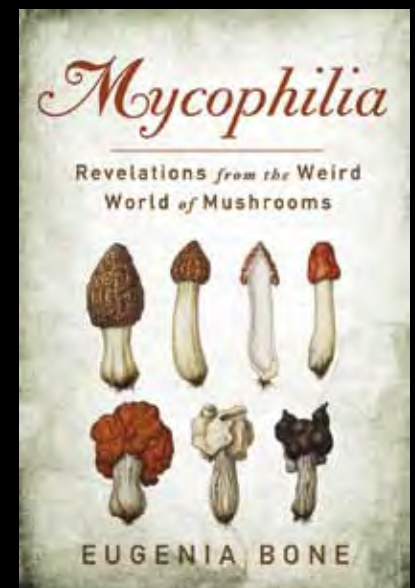
As for me I just had to keep up and pocket the truffles, all the while observing how the curly haired Lagotto got dirtier and dirtier in the process. After an hour and a half we came out with 40 truffles weighing in at about half a pound. We did leave behind a few rodent gnawed, millipede mutilated and slug slimed specimens. And, then we could add to the count the truffles that fueled August’s energetic truffle search and rescue mission.

Training truffle dogs is crucial to growing the Pacific Northwest truffle industry. A truffle dog does not have to be a fancy Lagotto, it can be any breed; but it is necessary to train a dog when it is still young. Knowledge and support

for interested parties is available in the Pacific Northwest, for example at the Truffle Dog Training Seminar at the Oregon Truffle Festival. Trained dogs will successfully, and with kindness to the environment, locate wild culinary truffles as well as cultivated European truffles (especially European black Périgord truffles, *Tuber melanosporum*; Italian white truffles have so far largely resisted cultivation efforts).

Truffle orchards have been planted in the Pacific Northwest since the late 90s, and the very first ones produced Pacific Northwest Périgord truffles for the first time in 2012. Most orchards are still too young, however. It takes at least 5 years for the first truffles to mature. Cultivating truffles is its own art and science and I will not go into details here, but this much needs to be said, it looks like it can be a very lucrative endeavor if one has sufficient resources, know-how and, especially, the time to make it through the first five to ten years before a hazelnut or oak truffle orchard will actually generate more money than it is eating up. However, global demand is so much higher than production, as illustrated by the absurd prices paid for good culinary truffles. We are talking about prices around \$1,000 per pound. And, of course, there are the stories about individual mega-truffles that have fetched \$100,000

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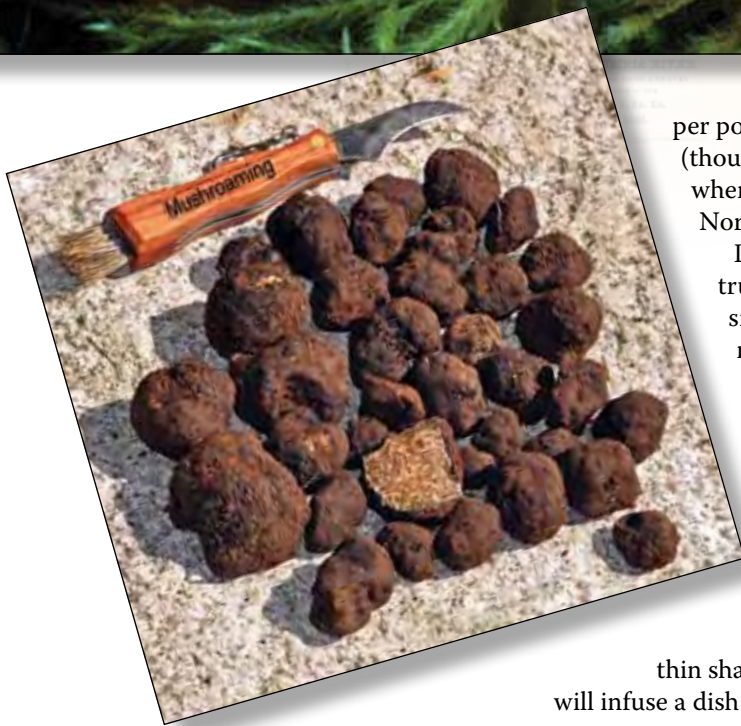


the case of oils **one should not put the truffle into the oil.** That would suffocate the truffle and not transfer its taste. Just let them sit next to each other for a few days and voilà, the oil smells like truffles and you can still slice the truffles over pasta afterwards. Truffles produce their aroma through an active process. If one kills the truffle, it stops producing aroma, so it is best to keep it alive as long as one can.

Truffles have not gone without notice in the culinary traditions of the Pacific Northwest. The rich flavor, earthy in the case of whites, and the “tropical fruit” in the case of black truffles complement and play off of the wide variety of Pacific Northwest wild-crafted foods like salmon, game, mushrooms and greens (like miner’s cress), as well as fresh, locally produced veggies, fruits, berries, and hazelnuts. The umami aroma of Oregon white truffles offers fungally-versed chefs delightful opportunities to come close to paired-perfection when served with an ever growing supply of great Pacific Northwest wines.

Collection of culinary truffles in the Pacific Northwest dates back to the late 1970s. At a conference held in Corvallis, Oregon, in November 1977, entitled “Mushrooms and Man,” the Oregon white truffle was proclaimed by Chef James Beard—one of the most influential chefs in US—to be as good as the Italian white truffle (Pilz et al., 2009). Since 2006, the Oregon Truffle Festival, the first Truffle festival in the English-speaking world, celebrates all things truffle and their use in Pacific Northwest cuisine, culminating in the “Grand Truffle Dinner” prepared by the West Coast’s premier chefs.

While the gourmet appreciation of truffles in the Pacific Northwest is a rather new phenomenon, mycological research on truffles, as underground fruiting fungi, dates back over a century in Oregon. For the average truffle fan that is most easily appreciated in the output of the North American Truffle Society (NATS) that was founded in Corvallis in 1978. NATS has an extensive webpage and some of its chief members, such as Jim Trappe and son Matt, as well as Frank Evans, published in 2007 *The Field Guide to North American Truffles: Hunting, Identifying, and Enjoying the World’s Most Prized Fungi*. This publication has helped to



per pound at truffle auctions (though this is not a reality when talking about Pacific Northwest truffles).

Luckily, to enjoy a truffle it takes only a small amount of the raw material. Truffles are not eaten in quantity like other highly esteemed mushrooms such as porcini, morels or chanterelles; truffles are all about their rich aroma ... Just a few

thin shavings of a mature truffle will infuse a dish sufficiently with its savory aroma, turning a good meal into

a culinary sensation. Also, truffles are commonly used to infuse oil rich foods like cheese, pâté, butter or high end oils. The infusion happens by osmosis, one need only place a mature truffle next to the food within a sealed container. In



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spread the knowledge of truffles to the wider mushrooming community in North America.

While dwelling on the irresistible culinary appeal of truffles one can easily forget about their economic importance and especially their future economic potential. The high dollar value of truffles and the fast growing global demand predestines their collection and production as an important source of rural income. So far we have only scratched the surface of the truffle potential in the Pacific Northwest. Increasing the availability of trained truffle dogs and spreading truffle cultivation, as championed by Charles Lefevre and others, will surely increase the value of the truffle industry. While the global industry is estimated to be annually worth \$1.5 billion, Oregon's truffle industry is currently valued at \$1 million to \$2 million (communication C. Lefevre). However, a study on the future potential suggests that the Oregon truffle industry could contribute \$200 million in the future (Pilz et al., 2009).

Driving back to Seattle, I was curious how Animal loves to enjoy the Oregon black truffle. He recommended using it in a Caesar dressing, substituting the anchovies for the fruity truffle. At home that evening I went right away to work and made a fresh batch of Caesar dressing. The pine-apple note of the Oregon black was a perfect match for the zesty, Parmiggiano rich dressing and was a great hit with the family. Reliving the experience of the truffle hunt afterwards, I came to the conclusion that the only rational and responsible way of enjoying the truffles of the Pacific Northwest is enlisting the help of a truffle dog. Two crucial points serve as arguments for animal assisted truffle collecting: using a trained dog ensures environmentally friendly, sustainable collection, since the truffle habitat is not unnecessarily disturbed, while at the same time ensuring harvesting of only mature specimens in their prime culinary stage.

I hope the days of digging over and raking vast forest areas, as observed in prime habitat in Oregon (often illegally) to extract a mixed bag of mature and immature truffles will soon fade into the past, and that the too often wet-cool darkish winters of the evergreen Pacific Northwest will be brightened by the abundance of fresh taste bud tingling truffles.

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