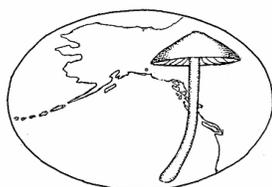


# Pacific Northwest Fungi



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## Western Mycology Loses a Leader and Friend: In Memoriam Orson K. Miller, Jr (1930—2006)

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One of the most well-known figures in North American mycology, Orson Knapp Miller, Jr. passed away June 9<sup>th</sup> 2006 near the western mountains he loved so well. After recovering from surgery to remove a brain tumor just 10 months earlier, Orson donned his field clothes one last time for a mushroom foray in Oregon. He was stricken in the woods while hunting his favorite quarry and rushed to the hospital in Bend. Eventually he was transported back to Boise, Idaho where he was rallying back when his life ceased. Less than 100 miles away, the Miller retirement home built on the tract of land purchased by Orson and

his wife Hope over 40 years ago awaited their return. It was never regained by Orson. Although Orson spent a majority of his 42 years as a mycologist at Virginia Tech on the east coast, his connections to the West remained strong. He produced a significant number of publications on western taxa of macrofungi from Oregon, Montana, Idaho, Colorado, and the especially from the arctic tundra of Alaska and Canada and spread the mycological gospel at numerous western forays for amateur mushroom clubs. With his passing, western mycologists have lost a leader and beloved friend. A gap as big as our western skies

has opened, and will be felt by the many who knew him personally or through his books. The recently published *North American Mushrooms* (Miller & Miller 2006) is a lasting legacy along with the MSA endowment for student travel in his name which carries on his tradition of promoting mycology to students.

### The Early Years

Orson was born in Cambridge, MA on Dec. 19, 1930 and grew up in the area a star baseball player, and even considered this as a career. When a high school teacher suggested he study white pine blister rust for a project, the seed of a different career was planted. After high school, Orson entered the 4 year forestry program at the University of Massachusetts and a burgeoning knowledge of forest pathology set the stage for his eventual encounter with macrofungi. A year after graduation in 1952, he married Hope C. Hartigan, who would become his life long companion. He shipped out to Germany with the U.S. Army as a security guard and Hope joined him as a clerk typist for the CIA.

On his return to the states, Orson moved a step further west and entered graduate school at the University of Michigan to focus on forestry in the School of Natural Resources. Summers found him even further west doing duty as a timber cruiser in Idaho. It was here he encountered Josiah Lowe, a polypore specialist, who excited Orson's interest in the higher fungi. Later, he met a University of Idaho professor by the name of Robert L. Gilbertson who further promoted Orson's passion for wood decomposers, and a life long friendship developed between the two. Orson completed his MS thesis at the University of Massachusetts in 1957, "An analysis of the productive potentialities of two southern Michigan oak-hickory stands".

Orson continued on to PhD work at the University of Michigan, and as fate would have it, attended some of Alexander Smith's courses on fungi and helped curate

polypores for Bessey Kanouse in the herbarium, all of which helped turn Orson towards mycology as a future profession. At that time, the University of Michigan was a beehive of mycological activity and he took classes from A. H. Smith, L. E. Wehmeyer, E. B. Mains, F. K. Sparrow, and A. S. Sussman, a group of teachers who influenced many mycologists around that time including Kent McKnight, Harry Thiers, Howard Bigelow, Joe Ammirati and Dick Homola. He also met aquatic mycologist Robert Paterson at the UM Douglas Lake Field Station, and another life-long friendship took hold.

In 1961, Alex Smith told Orson to "GO WEST" and get a job, which he did as a forest pathologist in Spokane, WA. He spent two years at the Intermountain Forest and Range Experiment station studying white pine blister rust, the topic of his high school project. Orson was later transferred to Moscow, Idaho where he studied heart rot in true firs caused by *Echinodontium tinctorium*, and traveled with his field assistant Hal Burdsall through out Idaho (fig. 1). Here he grew a beard that remained for years, and eventually turned white along with his hair.

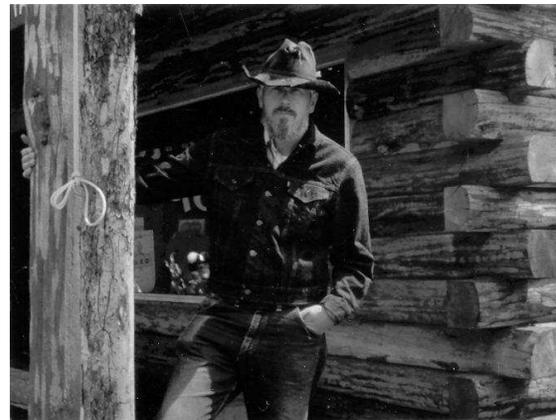


Fig. 1. Orson in western garb in Idaho. Reprinted by permission from Cripps (2004).

While supporting his growing family of three daughters, Orson completed his PhD at the University of Michigan and his dissertation

“The Gomphidiaceae, a monograph of the genus and species and their world distribution” was published in 1963. Forty years later it would be the topic of his presidential address and new molecular data would supported a separate clade for his new genus *Chroogomphus* originally described in 1964.

After graduation, Orson headed west again to work as a forest mycologist in Moscow, Idaho until 1965. At this time he was offered a job at Montana State University, a position that was pulled, in essence, ending an opportunity for Orson and Hope to remain in the West. To keep their western ties, the Millers bought a small piece of the West just outside McCall, Idaho and in 11 days, with the help of Hal Burdsall, built a plywood A-frame that served them for many years with gradual additions. McCall is only a day’s drive from Priest Lake, an area where Orson’s mentor Alex Smith had spent much time at the priest River Experimental Station. Orson accepted a position offered by John Palmer in USFS Forest Disease Lab in Beltsville, MD and moved the family East again. However, he continued to publish papers on western agarics and visited the Alaskan tundra which initiated his life long love of arctic fungi. Many of his early papers were on arctic and alpine agarics, and he later joined with a group of mycologists who promoted fungi in cold climates with an international workshop every four years (International Arctic-Alpine Mycology Symposium, ISAM).

### **A Position at Virginia Tech (VPI)**

In 1970, Orson accepted a position at Virginia Polytechnic Institute and State University (VPI) as an associate professor. Over the years he taught Introductory Mycology, Botany, Advanced Mycology, Lichens, Aquatic Fungi, and a course on Mycorrhizae. In 1972, he published *Mushrooms of North America*, one of the first color-illustrated field guides for our continent. According to Bob Gilbertson, “this book has probably done more to promote mycology and interest in mushrooms than

any other book in American publishing history”. Over 245,000 copies of the book have been sold in eight printings. One of Orson’s trademarks was his unremitting eagerness to teach/preach about mushroom identification to amateurs, students, and colleagues alike and this book allowed him to extend his reach early on. One of Orson’s greatest contributions to mycology was his persistent promotion of the discipline. He was a major link between professional and amateur mycology as well as between mycology in the eastern and western states, and later between North America, Europe, and other areas of the world.

At VPI, Orson gained a reputation as a world class mycologist. He published seven books (now eight), over 150 papers, and gave over 500 (!) presentations at professional meetings, to amateur mushroom clubs, and groups as varied as the girl scouts (to promote natural history) and the Rotary. He mentored 27 graduate students to fruition for a MS or PhD degree in mycology, and many of us are mycologists today. Research in his lab at VPI focused on the taxonomy, physiology, and ecology (particularly ectomycorrhizae) of agarics (Basidiomycota) and later on their molecular systematics (including the Gomphidiaceae). Orson was also a specialist for the genus *Amanita* and the ‘gasteromycetes’. In all, he described over 100 new species of fungi and made over 28,000 collections of higher fungi which are now curated at VPI.

In 1989, Dr. Miller received the William H. Weston for Teaching Excellence in Mycology and in 1997 the Distinguished Mycologist Award from the Mycological Society of America. He served as President of MSA from 2000-2001 and as financial officer for many years. Dr. Miller was elected an American Association for the Advancement of Science Fellow in 1995. His ability as a mentor is renowned, and two years after his retirement in 2002, his students and colleagues presented him with a *Festschrift* or “celebration of writings” in his

honor in a book titled “Fungi in Forest Ecosystems: Systematics, Diversity, and Ecology” (Cripps 2004). The assemblage of technical papers also includes Dr. Miller’s more complete biography (Cripps 2004), a list of the taxa he published (Farr & Farr 2004), a list of his publications and the names and theses of his students (Cripps & H. Miller 2004). We are content that this presentation turned out to be so timely.

### **Flathead Lake Biological Station**

Throughout this long and distinguished career which developed on the East coast in Virginia, the Miller’s did not forget the West! In 1967, Orson had taken over teaching Bob Gilbertson’s field mycology course at Yellow Bay Biological Station on Flathead Lake in Western Montana. Every other year from 1967 until 1991 (with a short version in 1995), Orson and Hope headed west in their VW van to spend two months teaching mycology in the western mountains. Researchers and students alike came to the station to hear his in-depth lectures on mushrooms and to attend his forays into interesting high-elevation habitats. A highlight of the course was the week long trip to the Canadian Rockies with everyone camping along the way. I was privileged to re-live this trip on my way to NAMA as a mycologist just this last summer (2006). The names of collecting, camping, and lunch spots came back: Livingstone Falls, Highwood Pass, Peyto Lake, Parker Ridge, Moraine Lake, and Lake Louise. It was here we learned about the high-elevation mountain fungi, how to collect and identify them, and about Orson’s life-long habit of getting up at 5 am (he would rally us campers shortly thereafter!). A fond memory is Orson suddenly stopping his van in the middle of the Kananaskis Highway, leaping out, and running across the field like a madman shouting “*Dryas, Dryas!*” This was how some of us came to learn this arctic plant which is mycorrhizal with mushroom-forming fungi and also hosts the tiny *Marasmius epidryas* on its leaves and stems. Orson had known the mat plant from Alaska and was thrilled to see it again.

Adding emotional content to teaching was part of his signature, and his excitement at a fungal “find” or “discovery” was contagious.

It was at Yellow Bay that friendships with Marie and Leeds Bailey, and John Olson took root. This led the Millers to a long connection with the Southern Idaho Mycological Society which hosted NAMA in 1976. I remember many pleasant foray afternoons at the church camp with Hope and Marie as SIMA recorders, Leeds and John organizing the fungi and Orson quietly spurring us on to more identifications. Other NAMA forays led by Orson in the West included those in 1973 (Spokane Mushroom Club) and 1983 (Colorado Mycological Society). He was the mycologist for several of the Mushroom Fairs at the Denver Botanical Garden and was an integral part of mushroom forays for numerous amateur mushroom clubs all over the West. At forays, it was Orson who “worked the tables”, sorting and identifying as many species as possible. We learned to come to him with our fungal mysteries, and he would give us direction for identification, confirm our best guess, or at least show enthusiasm for what we had found (even if it was common or rotten). In 1981, the North American Mycological Society honored him with their award for Contributions to Amateur Mycology. It was well deserved.

### **A Return to the West**

At his VPI retirement party, Orson donned western garb and sang a western ballad as part of his transition back to the West. In 2002, the Millers returned to the land which had once supported a tiny plywood cabin that had grown piecemeal over the years (fig. 2). It had served as a Christmas hideaway and summer residence for the Millers for 40 years. It was here the family gathered in summers to hunt mushrooms and to hike the trails. Orson was able to pursue a favorite past time of fly fishing in the high mountain lakes for trout. In winter, the family enjoyed time together at nearby ski resorts, and Orson became an accomplished skier. The cabin was recently

replaced by a spacious retirement home. His retirement was short-lived, just a few years, but during this time he wrote several papers, gave numerous talks, led forays, traveled for research, and completed a last book with Hope. It was a very full life.



Fig. 2. Orson at his cabin in Idaho, circa 1996.

Hope is at the Miller home in McCall ID and she suggests that Orson's new lab is available for those who want to come and study his notes. Daughters Andrea (Andy Onken) and Virginia (Ginny Miller) are close by in Missoula MT, Annelise (Lise Mayer) lives in Richmond VA, and grandchildren are scattered from East to West. An Orson Miller Mentor Travel Fund has been set up with the Mycological Society of America to support student attendance at professional meetings. This fund continues Orson's support of students and to Hope it represents the culmination of a lifetime of mentoring students. You can donate by sending your contribution to: Thomas Harrington, Chair of the MSA Endowment Committee, Dept. of Plant Pathology, 351

Bessey Hall, Iowa State University, Ames, IOWA 50011-1020. You will receive a personal thank you from Hope.

We will miss Orson's social gregariousness, the famed happy hours, that voice at forays leading us towards the correct identification or distilling for us in a few words the features of a mushroom so we can recognize it again. He made mycology fun, and made us all feel we were part of something larger than ourselves. Perhaps our best tribute and celebration of Orson's life is to carry forward the mycological torch he has bequeathed to us.

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