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DANIEL ELLIOT STUNTZ, 1909–1983

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Professor Daniel Elliot Stuntz died unexpectedly on March 5, 1983. During his long tenure at the University of Washington, Seattle, he was greatly respected by colleagues and students for his extensive knowledge and outstanding ability as a teacher. He was instrumental in developing amateur mycology in the Pacific Northwest and was an eminent North American mycologist. Dan Stuntz was a patient, thoughtful, and understanding individual whose unassuming nature and avid interest in learning and teaching made him unique as an educator and scientist.

BACKGROUND AND FAMILY

Daniel Elliot Stuntz, often called "Bud" by his family and colleagues, was born on March 15, 1909, in Milford, Ohio, a small town near Cincinnati. When Daniel was a young boy his immediate family, along with several other relatives, moved to Seattle where they lived in the Magnolia district. Chauncey Richards Stuntz, Daniel's father, spent many years in the sugarcane business, and during the 1920's was general manager of a sugar mill, "Jobabo," in Oriente Province in Cuba. Evelyn Elliot Stuntz, Daniel's mother, managed the family during his father's long absence. Daniel remembered summer camping expeditions during his father's home leaves. Because Daniel's grandmother, Alice Pownall Elliot, was an accredited school-teacher, she instructed him, his sister Alice Stuntz Marionneaux, and their cousins, through the early grades. Daniel attended Queen Anne High School

before enrolling at the University of Washington in autumn 1931.

Daniel had wide-ranging interests and abilities, and a studious approach to everything, to the point that he was often addressed as "Professor" by his playmates, even in his pre-teen years. He always had a great love for classical music, especially chamber music; he played the piano well, and composed several works. He later became a patron of the Seattle Symphony Orchestra, and according to his cousin Byrd Elliot, might have followed music as a career had it not been for his myopic vision and his father's feeling that the arts were not a practical field of endeavor. His father's lack of encouragement might have been very frustrating for Daniel had it not been for his fascination with nature. Hiking, many other forms of outdoor recreation, and the study of trees and other plants led to his original enrollment in forestry and eventually mycology. Daniel developed a fondness for animals at an early age, and in later years kept dogs and cats, as well as more exotic fauna: birds, iguanas, snakes, turtles, and a nest of praying mantes. Dan's varied interests encompassed languages, both conventional and unusual, gourmet cooking, wines, cheeses, and any number of other subjects. He enjoyed badminton for a number of years, and was reputedly known as an excellent player.

During the "depression years" Dan's immediate family lived in Plaquemine, Iberville Parish, Louisiana; later his sister Alice lived in Pass Christian, Mississippi. Dan visited Mississippi



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and Louisiana on at least a yearly basis and consequently collected a large number of fungi from the Mississippi Gulf region.

TAXONOMIST AND RESEARCHER

Dan Stuntz' interest in the fungi began during his first year as an undergraduate at the University of Washington. As a Forestry major he took the general mycology course offered in the Botany Department by Dr. J. W. Hotson. This sparked his interest in fungi and he soon changed his major to Botany so he could further pursue their study. From this point forward Dan's work with the fungi must have grown rapidly, because by 1934, while still an undergraduate, he began to collect, describe, and photograph agarics as well as other fungi. His first recorded collection was March 30, 1934. By the time he finished his Bachelor of Science degree in 1935 he apparently had started a study of *Inocybe* with Dr. Hotson which he intended to complete for a master's degree. Dan did not complete a master's degree at the University of Washington, however, but instead went to Yale for his doctoral degree.

The move by Stuntz from the University of Washington to Yale was suggested to him by Professor T. C. Frye, University of Washington, who viewed him as a potential replacement for Dr. J. W. Hotson whose health was failing. Stuntz went to Yale to work with Dr. John S. Boyce, a well-known forest pathologist, in order to learn forest pathology and related subjects needed for teaching similar courses at the University of Washington. Because Dan had already started work on *Inocybe* he simply took his *Inocybe* research with him to Yale for his doctoral dissertation. Dr. Boyce accepted Dan Stuntz as a student almost without question, but admitted from the beginning that he knew nothing about *Inocybe*. Stuntz must have had an impressive record since he convinced a forestry professor, John Boyce, to let him work on the *Inocybes* of the Pacific Northwest in New Haven, Connecticut! Dan completed his doctoral degree at Yale in 1940.

Dan Stuntz clearly was influenced to choose agaric taxonomy as a profession by Hotson. In addition, at least two other mycologists encouraged Stuntz to pursue this area of study. From 1935 to 1944 Dan corresponded several times with S. M. Zeller, an outstanding mycologist, at what was then Oregon State College in Corvallis. Not only did Dan seem to be encouraged by this

interaction with Zeller, but Zeller was getting considerable help from him in solving taxonomic problems with agarics. In 1935, Stuntz met Alexander H. Smith, who during that fall season was collecting in the Olympic Mountains. Alex had already begun his program at Michigan and was extremely excited about the western fungi. This meeting was the beginning of a long friendship between these two men. Dan, through working and corresponding with Alex, was encouraged to continue his work on *Inocybe* and other agaric genera and firmly establish himself as an agaric taxonomist. Dr. Stuntz said several times that Alex Smith was the person who really got him started in agaric taxonomy!

From the beginning it seems that Dan Stuntz was gifted with some of the basic tools required by someone interested in the classification of any kind of organisms. He had the ability to observe detail and record it accurately, both descriptively and by illustrations. One needs only to look at the drawings he made for his undergraduate courses in botany and forestry to appreciate his talents as an illustrator. No doubt his nearsightedness, apparently the equivalent of a 15–20× hand lens, aided him in these endeavors. Dan also had an excellent memory for details and names and the ability to organize the structures and concepts that he learned into a framework that was easily recalled and communicated to others. These abilities and his interest in the structure and relationships of fungi, together with his curiosity and patience, are the things that made him an outstanding fungal taxonomist.

Dr. Stuntz began his odyssey as a professional fungal taxonomist by faithfully collecting and describing almost every agaric that he found. He later restricted his agaric collecting, mainly due to teaching commitments, so that eventually he collected only *Pluteus* and *Hebeloma* in addition to *Inocybe*. Finally he concentrated his efforts on *Inocybe* except for general collecting, adding records to the herbarium, gathering specimens for exchange, and looking for those fungi that most interested him at the moment, in terms of his own learning.

Everyone who worked with Stuntz in the field and laboratory was aware of his thorough understanding of the classification of fungi and his ability to identify the genera and species of many diverse groups. Stuntz learned many of his fungi through teaching, but he also studied others simply to increase his own understanding of their relationships. For almost every group of fungi

that Stuntz studied, he collected and examined his own material from the Pacific Northwest and elsewhere. He then developed and wrote his own keys to genera and often to species. These endeavors resulted in a number of manuscripts, a few of which ultimately were published; for example, *How to Identify Mushrooms to Genus IV: Keys to Families and Genera*. Stuntz' interest in learning new fungi continued throughout his lifetime, with his last years spent, at times almost on a daily basis, studying the resupinate, nonporoid Aphylophorales.

The expertise that Stuntz developed in the identification of fungi was well known not only in the Pacific Northwest, but in other parts of North America and internationally as well. Because he was so willing to share his knowledge, he was constantly besieged by professional mycologists and biologists and by amateur mycologists, all seeking his help and guidance with taxonomic problems that involved yeasts, molds, and other higher fungi. He worked with Dr. Dixie Lee Ray on the relationship between marine fungi and *Limnoria* attack on submerged wood, and with a number of researchers including Drs. Lynn Brady, Varro E. Tyler and R. G. Benedict on chemical constituents of agarics. These tasks he often did in lieu of taxonomic papers dealing with *Inocybe* and other mushroom genera. As a result, much of what he published was done jointly with others. Often he was a key person in the project, because without his taxonomic expertise many of his colleagues could not have done their research. Varro E. Tyler, a colleague and friend of Dr. Stuntz expressed the value of Dr. Stuntz as a scientist in a letter he wrote to him at the time of his retirement. "When I pause for a moment to look back over my own career and think about all of the wonderful persons who have influenced it in a positive manner, many of whom I cherish as very dear friends, your name certainly appears with a very few others at the top. Consequently, one of the things I wish to do in this letter is to thank you for your totally unselfish assistance which you provided me, my colleagues, and students when we were developing our program dealing with the physiological constituents of the higher fungi. Without you, it would not have been possible. All of us who were involved in the program were and are appreciative of your efforts." The recognition expressed by Dr. Tyler for Dr. Stuntz's importance as a taxonomist and value as a person has been stated by a number of other individuals.

At the University of Washington, Stuntz developed an excellent fungal herbarium of which he was the curator. It is well organized and easily accessible for both research and teaching. The collections are diverse, representing almost every group of fungi, but he emphasized Basidiomycetes in his collecting, particularly the agarics. Most of the material is identified to genus and in many instances to species. His own personal collections number well over 20,000, many with excellent notes and some documented with black-and-white photographs. His *Inocybe* collection is, of course, outstanding, and while he did not live long enough to complete monographs on this genus the collections and notes are sufficiently well organized, with extensive keys, so that publications of his work can proceed.

Stuntz collected every season and his collection books show continuous fieldwork in Washington from 1934, until his death in March, 1983. Through the years, he collected in various parts of the United States, besides the state of Washington. For some areas he has only a few collections but there are significant numbers of specimens from Michigan, Louisiana, and Mississippi, where he spent several collecting seasons.

In recognition of his knowledge of west coast fungi, the annual foray for the mycologists and their students in western North America was named the D. E. Stuntz Foray in 1971. At the time of his retirement in 1979, many of Dr. Stuntz' students and colleagues compiled "A Festschrift, in Honor of Daniel E. Stuntz" edited by David Largent and David Hosford. Perhaps this gave him more reward and pleasure than any other recognition he could have received, i.e., knowing that others were inspired by him to do research on fungi, and that agaricologists whom he admired, including Alexander H. Smith, Harry D. Thiers, James M. Trappe and Howard E. Bigelow, took the time to write articles in his honor. Of course many species have been named for Dr. Stuntz and recently the genus *Destuntzia* was published by R. Fogel and J. Trappe.

BIBLIOPHILE

For a scholar such as Daniel Stuntz, it seemed natural that he would be a bibliophile of the first order. He loved to learn and increase his knowledge, this was clearly a continuous thread throughout his life. He had many interests both in the sciences and the arts. He was a linguist and

this in itself allowed him to become a bibliophile of great depth and thoroughness.

Stuntz selected mycology, especially fungal taxonomy, as his lifelong endeavor. Fungi intrigued him and so did the literature and history that went along with their study. Taxonomy in particular requires an interest in the past and present. The key to learning and studying thus becomes a library, books and papers that document what people have studied and their observations.

When Stuntz actually decided to put both money and time into building a mycological library is uncertain. Like many people he no doubt collected whatever books and reprints he could to get himself started in mycology. In conversations with him it is clear that he realized early that in terms of the mycological literature he would be isolated in Seattle. Certainly being at Yale and having seen the Michigan mycological library as a student, he was aware of the importance of having the literature available for research and teaching.

The superb mycological library collected by Dr. Stuntz is well documented in a small notebook which provides the date of purchase and cost of almost every item. He signed all of his books and papers and in most instances gave the date of purchase for each one near his signature. His notebook lists purchases from 1940 to 1983. He purchased a variety of books on mycology as well as other areas of biology. He searched the world literature and selected those volumes that were most helpful to his endeavors as well as the fulfilling of his interests. One of his major concerns was keeping his library current as well as filling in the papers and books of early workers.

Stuntz purchased all library items with his own money. According to his records he made *circa* 2500 purchases, a number of them as multiple items, for example subscriptions to periodicals. Among his purchases are a large number of rare and significant publications. Some items of interest, with purchase prices paid by him include: R. Thaxter, *The Laboulbeniaceae, I-V*, \$21.00; R. Ridgway, *Color Standards and Color Nomenclature*, \$50.00; C. H. Persoon, *Mycologia Europaea I-III*, \$78.67; M. C. Cooke, *Illustrations of British Fungi*, \$420.00; and J. Lange, *Flora Agaricina Danica*, \$86.60. From these prices one can see that many of these purchases have increased tenfold in value, for example, M. C. Cooke's beautiful work is valued at around \$5,000.00. It should be noted, however, that rel-

ative to Stuntz' salary at the time of purchase they were fairly expensive and a substantial personal sacrifice!

Of the approximately 1300 books in the D. E. Stuntz library there are not only expensive volumes but rare ones as well. His library, including books, reprints, and journals is the property of the University of Washington. The main series of books, reprints, and journals are in the fungal systematics laboratory, in the Department of Botany. Rare and/or expensive materials are in the rare book room at the Suzzallo Library. As intended by Dr. Stuntz, all books and papers are available for use by scientists, students and others.

TEACHER

One of Daniel Stuntz' greatest gifts was his teaching ability, both in the classroom and informally. He could make science accessible to a wide variety of people: from mycological colleagues and graduate students to the beginner with the least background.

What made him so effective as an instructor? This quality, of course, was due basically to his avid interest in fungi. Beyond this was his belief in the intrinsic intelligence of all students, whatever their level of expertise, and his perception of how to communicate with them. He demystified science. Furthermore, he brought simple consideration into the lecture hall. His lectures were well-paced, clearly organized, and beautifully illustrated. It was a joy to watch Stuntz draw *Taphrina* in a peach leaf, tricornute cystidia, or basidiospores about to be ejected. The laboratory chalkboard—one of the original ones made of slate—was often covered with gorgeous and fantastic murals of arthropodian motif. For Stuntz, it was never too much trouble to make something well, even if evanescent. In addition to his remarkable classroom abilities, Stuntz was an incomparable "one-on-one" teacher. He was never too busy to help a student or even to spend all day in the darkroom teaching one student the art of photography. He made every student feel important and in so doing stimulated him or her to learn and develop to their greatest potential.

Why did Daniel Stuntz become a teacher? He once mentioned a discussion he had with his father who hoped his only son Daniel would follow in his footsteps and work in the sugar industry. "Well, what do you want to do with your life?", asked his father. "I want to be a teacher."

replied Daniel. "Well, then be a good one," said his father. And he was.

Stuntz was hired as an Instructor in Botany in 1940 (at an annual salary of \$2000, to be paid in ten equal installments) and retained this title until 1945 when he became an Assistant Professor. In 1950 he was promoted to Associate Professor, then to Professor of Botany in 1958.

Dr. Stuntz taught a variety of courses in botany, including general mycology, ascomycetes, rusts, smuts, fungi imperfecti, agarics, gasteromycetes and wood rotting fungi, and, in addition, forest pathology for Forestry majors, and yeasts and molds for Microbiology majors. The following, from a letter from Professor C. Leo Hitchcock, Executive Officer, Department of Botany, to Dean Lloyd S. Woodburne of Arts and Sciences, attests to his value as a teacher: "Several members of the Departments of Microbiology, Zoology, and Botany, including myself, have audited one or more of the courses taught by Stuntz and have been as enthusiastic as the students in their appraisal of his ability. He has a wide background in Biology and the knack of presenting material in a lucid manner that never fails to elicit admiration and gratitude from students, both undergraduate and graduate."

By June, 1951, Stuntz was ranked fourth among teachers on the entire University of Washington campus. In 1974, he received widespread public recognition in the form of the 1974 Alumni Distinguished Teaching Award. The selection committee had "received an exceptionally large number of letters testifying to his command of subject and ability to make it exciting to the students as well as to his genuine concern for students as persons."

He commonly taught during summer quarter, in addition to regular session, and did some teaching as an Emeritus Professor as well.

Interspersed with University teaching, Stuntz taught a variety of courses for amateur mycologists of the Puget Sound region. He covered subjects ranging from the most general of wild mushroom identification classes to esoteric classes in ascomycete identification requiring skill with microscopic techniques. Even these classes were always filled to overflowing with students of differing expertise who participated to the extent of their interest and ability.

Stuntz enjoyed his time spent with nonacademic mycological amateurs, he liked the variety of experiences they brought with them, "They are very interesting people."

PUBLIC SERVANT

Most taxonomic mycologists, especially agaricologists, are also "public servants." No one was a better public servant than Stuntz. His knowledge was extensive, his identifications and information accurate, his patience unending, and most of all his availability to the public was unlimited. He helped the average person, the amateur mycologist, physicians, and a multitude of others in a hundred ways. Identifying mushrooms, helping with papers and books, setting up fungus displays, leading forays, giving courses and lectures, and starting mushroom societies, were all in the daily fare of Dr. Stuntz. It was truly a major part of his life and from all indications he loved very much this aspect of being a mycologist.

For years Dr. Stuntz worked with and guided the development of the amateur mycologists in the Pacific Northwest. In 1963, he organized the ever-increasing number of amateur mycologists into the now large (approximately 700 members) Puget Sound Mycological Society. For more than twenty years he was their Scientific Adviser and from this base he was responsible indirectly, if not directly, for developing more than a dozen local mycological societies in Washington and Idaho. For years he provided courses and materials for members of the societies and was instrumental in training some of the better amateur mycologists in North America. He also helped them initiate several studies including a detailed one of morels of the Pacific Northwest.

A major contribution to amateur mycology was the founding and organization of the Pacific Northwest Key Council by Stuntz and members of Pacific northwest mushroom societies. The Key Council worked under his guidance for a number of years developing keys to species of northwest fungi. Many genera have been completed and his original efforts and ideas are continuing to grow toward a volume containing keys to all Pacific Northwest fungi.

Stuntz the public servant, as many others of his kind, did not receive the recognition he deserved. In 1977, The North American Mycological Association bestowed on Stuntz the annual award for Contributions to Amateur Mycology. It seems, like many dedicated people, Stuntz received his pleasure by helping and contributing his knowledge to others. How else would one explain the observation of his former student, David Hosford: "As his former graduate

student, I well recall his unselfish sharing of time and unbelievable patience. At the height of the mushroom season, he would be deluged with phone calls, mail, and personal visits involving mushrooms. However, even though he was strapped with a heavy teaching load, demanding graduate students, and independent research, he always seemed to handle each of these on-the-spot demands both courteously and graciously."

The strongest tribute to Stuntz's public service and teaching was the recent establishment of the Daniel Elliot Stuntz Memorial Foundation by amateur and professional mycologists in the Pacific Northwest. The foundation is organized to recognize and support the efforts by Dr. Stuntz to build a strong mycological interest and awareness in this region. The Foundation, in the tradition of Dr. Stuntz, offers education and service to those interested in fungi.

LIST OF GRADUATE STUDENTS OF D. E. STUNTZ

- Foster, Virginia. 1950. The effects of vitamins on yeast sporulation. (M.Sc.)
- Gilbertson, Robert L. 1951. The Polyporaceae of the Flathead Lake region of western Montana. (M.Sc.)
- Hunt, John N. 1951. An investigation of two species of fungi associated with bark beetles on Pacific silver fir. (M.Sc.)
- Cohen, Leon I. 1954. A study of the anatomy of *Arceuthobium campylopodum* Engelm. forma *typicum* Gill, and the teratology of its host, *Pinus ponderosa* Dougl. (M.Sc.)
- Lorbeer, James W. 1956. Several aspects of the pathology of *Peridermium harknessi* Moore. (M.Sc.)
- Lyman, Harvard. 1957. The ontogeny of the laticiferous system of *Lactarius aurantiacus* (Fries) Fries. (M.Sc.)
- MacLeod, Helen L. 1957. Genetic suppressors of a biochemical mutant in *Neurospora*. (M.Sc.)
- Brough, Sherman G. 1958. The helvelloid operculate discomycetes. (M.Sc.)
- Towe, Agnes M. 1958. Factors influencing crossing over in *Neurospora*. (M.Sc.)
- Buchta, Virginia C. 1959. Cytology of sporulation in *Saccharomyces cerevisiae* Hansen. (M.Sc.)
- Grund, Darryl W. 1962. *Pholiota* of Washington State. (M.Sc.)
- Klett, Hubert C. 1962. A survey of the Tremellales of the Pacific Northwest. (M.Sc.)
- Hall, Dennis M. 1963. A survey of the pileate Hydnaceae of western Washington. (M.Sc.)
- Hoffman, Theodore C. 1963. A survey of the Boletaceae of Washington. (M.Sc.)
- Isaacs, Bill F. 1963. A survey of *Agaricus* in Washington, Oregon, and California. (M.Sc.)
- Klett, Hubert C. 1964. North American species of *Exidia*. (Ph.D.)
- Maas, John L. 1964. A survey of the macrofungi on serpentine and non-serpentine soils in the upper Teanaway River Valley, Washington. (M.Sc.)
- Grund, Darryl W. 1965. A survey of the genus *Russula* occurring in Washington State. (Ph.D.)
- Hicks, Phyllis M. 1965. A taxonomic survey of *Peziza* in western Washington. (M.Sc.)
- Nakamura, Naoshi. 1965. A survey of *Amanita* in western Washington. (M.Sc.)
- Alder, Betty A. 1967. A survey of the genus *Guepinopsis* with comparison of genera *Guepinopsis* and *Dacrymyces*. (M.Sc.)
- Haines, John H. 1967. A survey of the genus *Dasyscyphus* and related genera in western Washington. (M.Sc.)
- Hall, Dennis M. 1968. A survey of the stipitate Hydnaceae of western Washington. (Ph.D.)
- Largent, David L. 1968. *Leptonia* and related genera of the west coast with a preliminary revision of the rhodophylloid fungi. (Ph.D.)
- Marr, Currie D. 1968. *Ramaria* of western Washington. (Ph.D.)
- Pearson, Barbara R. 1970. A survey of the lichen flora of Green Mountain, Washington. (M.Sc.)
- Van De Bogart, Fred, Jr. 1971. A taxonomic survey of the coprophilous taxa of *Coprinus* (Agaricales) in western Washington. (M.Sc.)
- Holman, Robert L. 1972. *Histoplasma capsulatum* in Washington State. (M.Sc.)
- Hosford, David R. 1972. *Rhizopogon* of the northwestern United States. (Ph.D.)
- Escobar, Gustavo A. 1974. Algunos hongos de El Salvador Tremellales, Thelephorales, y Discomycetes. (M.Sc.)
- Davis, Carol Sue. 1975. Studies of the bird's nest fungi of Washington State. (M.Sc.)
- Libonati-Barnes, Susan D. 1975. The fate of the Friesian pleurotoiid fungi. (M.Sc.)
- Van De Bogart, Fred, Jr. 1975. The genus *Coprinus* in Washington and adjacent western states. (Ph.D.)
- Williams, Joanne H. 1975. The collybioid fungi of western Washington. (Ph.D.)
- Escobar, Gustavo. 1978. Contributions towards a monograph of the neotropical species of *Hymenochaete*. (Ph.D.)
- Houck, Leslie V. 1979. Prevalence of genital and non-genital yeast in women with and without vaginitis. (M.Sc.)
- Echeverría, Liliana. 1980. Some Costa Rican polypores. (M.Sc.)
- Velasquez, Guadalupe. 1980. The history of development of taxonomy and nomenclature of *Ganoderma*. (M.Sc.)
- Libonati-Barnes, Susan D. 1981. Systematics of *Tectella*, *Panellus*, *Hohenbuehelia*, and *Resupinatus* (pleurotoiid genera) in the Pacific Northwest. (Ph.D.)

LIST OF PUBLICATIONS

1938. (with J. W. Hotson) The genus *Agaricus* in western Washington. *Mycologia* 30: 204-234.
1940. The genus *Inocybe* in western Washington. Ph.D. thesis, Yale University. 203 p.
1943. (with C. E. Seliskar) A stem canker of dogwood and madrona. *Mycologia* 35: 207-221.

1947. Studies in the genus *Inocybe*. I. New and noteworthy species from Washington. *Mycologia* **39**: 21–55.
1950. (with A. H. Smith) New or noteworthy fungi from Mt. Rainier National Park. *Mycologia* **42**: 80–134.
1954. Studies on the genus *Inocybe*. II. New and noteworthy species from Michigan. *Pap. Michigan Acad. Sci.* **39**: 53–84, pls. I–VI.
1958. (with A. H. Smith) Studies in the genus *Pluteus*. I. Redescription of American species of *Pluteus* based on a study of type specimens. *Lloydia* **21**: 115–136.
1959. (with D. L. Ray) Possible relation between marine fungi and *Limnoria* attack of submerged woods. *Science* **129**: 93–94.
1962. (with B. F. Isaacs) Pacific northwestern fungi. I. *Mycologia* **54**: 272–298.
1962. (with J. K. Brown, M. H. Malone, and V. E. Tyler, Jr.) Paper chromatographic determination of muscarine in *Inocybe* species. *J. Pharm. Sci.* **51**: 853–856.
1962. (with V. E. Tyler, Jr.) Examination of higher fungi for alkaloids. *Lloydia* **25**: 225–230.
1963. (with V. E. Tyler, Jr.) Examination of higher fungi for alkaloids. II. Additional species. *Lloydia* **26**: 158–160.
1964. (with R. G. Benedict, V. E. Tyler, Jr., and L. R. Brady) Preliminary chemotaxonomic appraisal of certain *Tricholoma* species. *Planta Med.* **12**: 100–106.
1965. (with V. E. Tyler, Jr., and R. G. Benedict) Chemotaxonomic significance of urea in the higher fungi. *Lloydia* **28**: 342–353.
1968. (with D. W. Grund) Nova Scotian *Inocybes*. I. *Mycologia* **60**: 406–425.
1969. (with J. L. Maas) Mycoecology on serpentine soil. *Mycologia* **61**: 1106–1116.
1970. (with R. G. Benedict, L. R. Brady, and J. Spurr) Occurrence of the deadly *Amanita verna* in the Pacific Northwest. *Mycologia* **62**: 597–599.
1970. (with D. W. Grund) Nova Scotian *Inocybes*. II. *Mycologia* **62**: 925–939.
1971. (with Margaret McKenny, V. E. Tyler, and A. M. Pellegrini) *The savory wild mushroom*. University of Washington Press, Seattle. 242 p., pls. I–XXII.
1971. (with D. Hall) Pileate Hydnaceae of the Puget Sound area. I. White-spored genera: *Auriscalpium*, *Hericium*, *Dentinum*, and *Phellodon*. *Mycologia* **63**: 1099–1128.
1972. (with D. Hall) Pileate Hydnaceae of the Puget Sound area. II. Brown-spored genus: *Hydnum*. *Mycologia* **64**: 15–37.
1972. (with D. Hall) Pileate Hydnaceae of the Puget Sound area. III. Brown-spored genus: *Hydnellum*. *Mycologia* **64**: 560–590.
1972. (with R. G. Benedict and L. R. Brady) Taxonomic status of *Pholiota aurea*. *Mycologia* **64**: 1167–1169.
1972. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. Oct. p. 22.
1972. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. Dec. p. 27.
1973. (with C. D. Marr) *Ramaria* of western Washington. *Biblio. Mycol.* **38**: 232 p.
1973. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. May p. 29.
1973. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. Sept. p. 38.
1973. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. Nov. p. 42.
1973. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. Dec. pp. 40–41.
1974. (with Puget Sound Mycological Society) Northwest Hygrophori. *Pacific Search*. Feb. p. 32.
1975. (with D. W. Grund) Nova Scotian *Inocybes*. III. *Mycologia* **67**: 19–31.
1975. (with L. R. Brady, R. G. Benedict, V. E. Tyler, and M. H. Malone) Identification of *Conocybe filaris* as a toxic Basidiomycete. *Lloydia* **38**: 172–173.
1977. (with D. W. Grund) Nova Scotian *Inocybes*. IV. *Mycologia* **69**: 392–408.
1977. (with D. L. Largent and R. Watling) *How to identify mushrooms to genus IV: keys to families and genera*. Mad River Press, Eureka, California. 94 p.
1978. Development of the classification of macrobasidiomycetes. *McIlvainea* **3**(1): 15–24.
1980. (with D. W. Grund) Nova Scotian *Inocybes*. V. *Mycologia* **72**: 670–688.
1981. (with D. W. Grund) Nova Scotian *Inocybes*. VI. *Mycologia* **73**: 655–674.
1983. (with D. W. Grund) Nova Scotian *Inocybes*. VII. *Mycologia* **75**: 257–270.
1984. (with D. W. Grund) Nova Scotian *Inocybes*. VIII. *Mycologia* **76**: 733–740.