New Jersey Mycological Assn.

NJMA News November 1979
Volume IX No. 11
President: Jim Richards
Editor: Melanie Spock

Dr. Alice Freeman—Nov. 11

The first program in our winter lecture series will be at our meeting on November 11th. Dr. Alice Freeman will give a general survey of the genus Agaricus, with illustrations of collections made in Tennessee, North Carolina, Idaho and Georgia. Alice, our club's expert in this genus, received her Phd. in mycology from the University of Tennessee and published in Mycotaxon on Agaricus. She decided to study the genus because most of the literature available is on European species, with very little on North American species. The program will be held at the Somerset County Environmental Center (SCEEC) at 1:30 p.m. in classroom #3 downstairs. Note: Anyone wishing to submit entries to the photo contest, the deadline is the November 11th meeting. SCEEC DIRECTIONS: From Route 287, take exit 26-A, Basking Ridge. Make a right turn from the exit ramp onto North Maple Ave. (Near AT&T). Follow through the blinking light. At the center of town, veer left onto South Maple Ave. Take South Maple (passing Lord Stirling Riding Stables on the left) to Lord Stirling Rd. Turn left onto Lord Stirling Rd. (airport on right) and follow about a mile to the center on the left.

Dec. 2 – Elections

At the December meeting scheduled for Dec. 2nd, slides from the photo contest will be screened, with commentary by the judges, and prizes will be awarded. Officers for 1980 will be elected. Everyone is asked to bring cookies or desert; the club will furnish coffee and tea for a little holiday party.

Speakers for the other winter programs are being lined up. A tentative schedule will appear in next month's newsletter.

TAXONOMY GROUP

The last two taxonomy committee meetings for the year have been scheduled for this month. On Tuesday, November 13th the meeting will be held at SCEEC, classroom #3, 7:30 p.m. The Tuesday, November 27th session is scheduled for Rutgers University's Cook Campus in New Brunswick. They'll meet at the Administration Building of Cook College, Plant Pathology Department, third floor, room 310, 7:30 p.m.

MYCOLOGICAL NOMENCLATURE BY DAVE PATTERSON

This report discusses three separate topics: (1) the meaning and use of names following the genus and species such as Lactarius deliciosus (Fries)Gray; (2) endings such as -us on Lactarius and -us on deliciosus and (3) syllabification and pronunciation. The article may be read in the usual way; however, it is set up so that each topic may be read separately and independently by reading straight down the same margin, that is, by not indenting. Topic (1) is discussed at the extreme left hand margin. The first indentation lines up the topic of genus and species endings; at the second indentation, the extreme right hand column, read downward for comments on Latin pronunciation. The underlined citation is common to all 3 sections.

Lactarius mucidus Burl. Mem. Torrey Club 14:56 1908

This mushroom was named by the American mycologist, Gertrude Burlingham (1872-1952). In order to validate her claim she published it in a respected botanical journal, Memoirs of the Torrey Club Volume 14 page 56, 1908. In addition she was required to select one representative called the holotype from among several specimens and deposit them in a recognized herbarium. If the holotype is lost or destroyed it may be replaced by a lectotype which is another specimen chosen from among the original material. If no original material remains another specimen called a neotype may be used to serve as the new type specimen. The final step in the validation process is to provide a description of the new species in Latin.

Every mushroom genus has gender--it is either masculine,feminine or neuter. The species is treated as an adjective modifying the genus and therefore must be of the same gender as the genus. The genus ending -us is masculine; therefore mucidus must have a masculine ending. In a Latin dictionary the word is listed as follows:mucidus,a,um adj. This means that it is an adjective of the Class A adjective declension and that mucidus is masculine,mucida is feminine and mucidum is neuter. The other adjective declension,the Class B, will be discussed later.

In order to pronounce a word correctly it must first be broken up into syllables. In Latin there are as many syllables in a word as there are vowels and diphthongs. The vowels are: a,e,i,o,u,y. A diphthong is a special double vowel, such as ae, and will be discussed later. Lactarius contains 4 vowels a,a,i,u (iu is not one of the diphthongs;if it were the word would only contain 3 syllables) Therefore the word must have 4 syllables. The rules for syllabification are simple: try to end a syllable in a vowel if possible; however, if 2 vowels are separated by 2 consonants (as in fulva) the first consonant belongs to the first vowel and the second consonant belongs to the second vowel (hence ful-va). Using these rules Lactarius mucidus is syllabified: Lac-ta-ri-us mu-ci-dus.

Russula integra (L.)Fries

This citation contains 2 names those of Carl Linnaeus (1707-1778) and Elias Fries (1794-1878). In 1753 Linnaeus named this mushroom Agaricus integer. With the passing years the concept of genus began to change and in 1838 Fries assigned it to the genus Russula. However, in order to show that the mushroom was originally named by Linnaeus Fries put the abbreviated name in parentheses. Hence the name of Linnaeus in parentheses showed that he had given the name to the species but in another genus and that Fries was responsible for transferring it to a new genus.

The genus ending -a (but not -ma) is feminine; therefore the species must have a feminine ending. A Latin dictionary would indicate integer to be a Class A adjective with integer as masculine,integra as feminine and integrum as neuter. Linnaeus had used the masculine genus Agaricus (-us is masculine) and hence used the masculine spelling integer.

Both Russula and integra have 3 vowels each and will therefore have 3 syllables; there is a slight exception to the above rules and it

is this: if a consonant is followed by an l or an r the 2 consonants stay together as in Co-pri-nus (not Cop-ri-nus). Hence Russula integra is syllabified: Rus-su-la in-te-gra. A diphthong is a union of 2 vowels but out of a possibility of 36 combinations (6 vowels X 6 vowels =36;aa,ae,ai,ao,au,ay,----yy) there are only 6 recognized diphthongs in Latin: ae,au,ei,eu,oe,ui. They are easily memorized with the mnemonic: Mae taught eight Te Deums to an oboe quintet. In Russula mariae we note that mariae has 2 vowels and the diphthong ae and thus must have 3 syllables, ma-ri-ae, since a Latin word must have as many syllables as it has vowels and diphthongs.

Entoloma sericeum (Bull. ex Fr.) Quél.

Authors' names are usually abbreviated unless they are very short. In general one proceeds with the letters of a name until coming to the first vowel before which onecan stop with clarity. Hence Bull. for Bulliard and Quél. for Quélet. Linnaeus has the honor of being designated by L.; four or five letter words should be spelled out--Peck, Fries, Smith, etc; however it is the custom to abbreviate Fries as Fr.; if the name Smith is cited initials must be used, either A.H.Smith or A.H.Sm. In the parentheses we note the names Bull. ex Fr.; this means that Bulliard first named the mushroom but did not validly publish that name. Later Fries described and published it and gave credit to Bulliard as the original author by placing the connecting word ex after Bulliard. Still later Quélet was responsible for a change in the genus name.

The gender of a word is frequently not determined by the meaning or natural sex but is indicated by the ending. If a word is taken into Latin from another language the gender of the original language is maintained. Greek words ending in -ma and -on are neuter. Hence the following genera are neuter: Entoloma,Hebeloma,Hypholoma, Scleroderma,Tricholoma,Hypoloxon and Lycoperdon. The Latin ending -um is the Class A neuter ending; hence Entoloma sericeum. To recapitulate: over 99% of the Class A adjectives end in -us for the masculine, -a for the feminine and -um for the neuter. Use the following mnemonic: Gus and Gina like rum; Gus is a masculine name ending in -us;Gina is a feminine name ending in -a; rum is neuter ending in -um.

Be careful in the syllabification of sericeum; it is not se-ri-ce-um because eu is a diphthong (Te Deums). Entoloma has 4 vowels and thus 4 syllables; sericeum has 2 vowels and 1 diphthong and thus 3 syllables: En-to-lo-ma se-ri-ceum.

Lactarius trivialis (Fr.) Fries

This citation differs from others only because both names are the same person; we would strongly suspect that Fries changed the name of a genus that he,himself, had previously named. This is actually the case. In 1815 Fries had named the mushroom Agaricus trivialis; in 1838 he changed the genus to Lactarius. The fact that Fries' name is spelled out in one case and abbreviated in another may seem inconsistent; however the section of the code where abbreviations are covered is under recommendations and not rules; therefore individual preferences are allowed.

As noted above the genus Lactarius is masculine and thus the species must have a masculine ending. The previous species,mucidus, had the Class A adjective ending -us; however, trivialis ends in -is. The reason for this is that trivialis is a Class B adjective. Class B masculine adjectives end in -is (mnemonic:the masculine name Chris ends in -is) A Latin dictionary lists the word as : trivialis,is,e adj. This means that the masculine ends in -is, the feminine also ends in -is and the neuter ends in -e.

By inspection Lactarius trivialis contains 3 doubles vowels,iu,ia,is; however, none of these are diphthongs (no Latin diphthong begins with an i). Hence, Lac-ta-ri-us tri-vi-a-lis. After a word is syllabified the next problem is to determine which syllable to

accent. The rules of accent are simple: (a) in words of 2 syllables the accent is on the first syllable; example, fún-gi. (b) if the word has more than 2 syllables the next to last syllable must be inspected; if it is long then it takes the accent (c) if the next to last syllable is short then the accent is placed on the syllable before it. The last syllable is called the ultimate; the next to last syllable is called the penultimate (pen = almost as a peninsula is almost an island); the one before the next to last, the third from the end, is called the antepenultimate (ante = before as in AM) that is, the one before the next to the last. To repeat: In words of more than 2 syllables the accent is upon the penultimate if that syllable is long either because it has a long vowel, as in fron-dó-sus, or a diphthong, as in as-trae-us, or because it is closed by a consonant, as in pe-rén-nis; otherwise the accent will be upon the antepenultimate, as in pa-nǽ-o-lus.

Russula cascadensis Shaffer sp. nov.
The abbreviation sp. nov. stands for species novum--a new species. This species was named by Robert Shaffer and published in Mycologia Vol.56 1960

Russula ends in -a and is a feminine genus; the species ending -is shows that it is a Class B feminine adjective (mnemonic: sis is feminine and ends in -is). Cascadensis is a place name referring to the Cascade Mountain range; note that all species begin with lower case (small) letters--even if a proper name is used. The suffix -ensis is used for place names. In Latin even endings have endings and this one is -ensis,is,e, that is the masculine and feminine would end in -ensis and the neuter in -ense. Other suffixes that may be used to indicate place are: -acus,a,um as in Hypomyces armeniacus; -anus,a,um as in Lepiota americana; -icus,a,um as in Coprinus silvaticus and -inus,a,um as in Polyporus abietinus.

Rus-su-la cas-ca-dén-sis. The syllable which is to be accented is marked with a stress sign, (ˈ); more sophisticated marks are the grave (ˋ) to indicate a long vowel in the stressed syllable and the acute (´) to indicate a short vowel (mnemonics: the 11th hour has always been the hour of crisis--the grave hour--and the grave accent comes down from the 11 o'clock position, (ˋ); a in acute is the 1st letter in the alphabet and this accent mark comes in from the 1 o'clock position, (´). A long vowel takes a little longer to pronounce than a short vowel. In Latin grammars a long vowel is marked with a - over the vowel, as ā; a short vowel with ˘ as ă.

Chaetomium trilaterale Chivers var. cupreum (Ames) Cooke
Originally there were 2 species Chaetomium trilaterale Chivers and Chaetomium cupreum Ames ; however, Cooke determined that the latter was only a variety of the former; Cooke takes credit for this discovery but acknowledges that Ames first used the name cupreum.

The genus ending -um is neuter and therefore both species and variety must have neuter endings. Class B neuter adjectives end in -e (mnemonic: coke is neuter and ends in -e); trilaterale is a Class B adjective. As previously stated Class A neuter adjectives end in -um; thus cupreum The complete mnemonic for the 2 adjective declensions is: Class A: Gus & Gina like rum but, Class B, Chris & sis like coke.

Chae-tó-mi-um tri-la-te-rá-le var. cú-preum; note again the diphthongs ae and eu ; also the syllabification of cu-preum because when a consonant precedes an r or l the two belong in the same syllable.

Russula quéletii Fries apud Quél. Champ. Jura Vosg.
Fries named this mushroom in honor of his contemporary Quélet. It was first published in 1872 in a major work by Quélet entitled: Champignons du Jura et des Vosges (Mushrooms of the Jura and Vosges Regions). To indicate that

Fries was responsible for naming the species but that it was first published in a work by another person the word apud is placed between the 2 names.

When the species is named in honor of a person it will end either in -i or -ii. If the name of the person ends in a consonant add -ii; hence R. queletii. An exception to this rule: if the name ends in -er add only one-i. Example: Amanita cokeri. If the name ends in a vowel add -i as in Suillus grevillei; however,if the name ends in an-a then add an -e instead of an -i. Example: Russula mariae. The reason for the last rule is that the -ae ending in Latin is the first declension ending for the genitive or possessive case; hence Mary's Russula. It is also a more elegant ending. When Singer named a Russula in honor of Gertrude Burlingham he did not call it R. burlinghamii but R. burlinghamae. Over 95% of the endings have been discussed but there are others such as universal endings which do not change regardless of the gender of the genus. Examples; -color as in Boletus bicolor; -ceps as in Clitocybe multiceps; -pes as in Flammulina velutipes; -oides as in Amanita phalloides.

Rús-su-la qu-e-lé-ti-i. Consonants are pronounced the same as in English except for the following:

c is always pronounced like the c in cow, that is as k;no exceptions
g is always hard as in get
v sounds like the w in wall
t as in top; never as in nation
s as in son
j is pronounced like the y in yellow
r is trilled slightly,Scotch style
ph has the sound of f
th is pronounced as t
ch is pronounced as k
su should be pronounced as sw

Little regard is paid to pronounciation in the botanical community. Each person generally pronounces a scientific name in accordance with the sounds of his native language. Those who are interested in at least stressing the correct syllables may consult the popular work The Complete Book of Mushrooms by Rinaldi and Tyndalo 1974 which has a long list of mushrooms with their accent marks. Any standard Latin grammar will give the correct sounds of the alphabet as used in the Classical Period of Rome.

Bibliography

Ainsworth G. and Bisby Dictionary of the Fungi 1971

Bennett C. New Latin Grammar 1963

Gildersleeve B. Latin Grammar 1895

International Code of Botanical Nomenclature 1966

Snell W. and Dick E. A Glossary of Mycology

Stearn W. Botanical Latin 1966

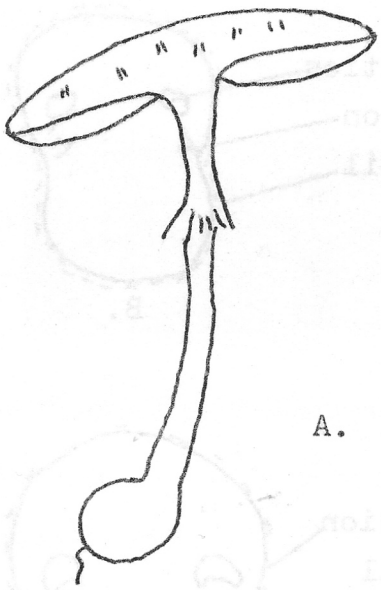
08876

F

New Jersey Mycological Association
c/o Jim Richards, President

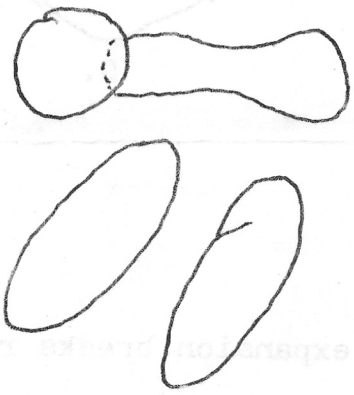
NEW JERSEY MYCOLOGICAL ASSN.
MEMBER

IRON-ON TRANSFERS & PATCHES AVAILABLE @ $ 3.00

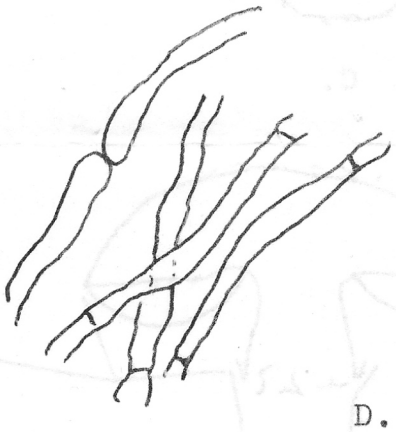


A.

B.



C.



D.

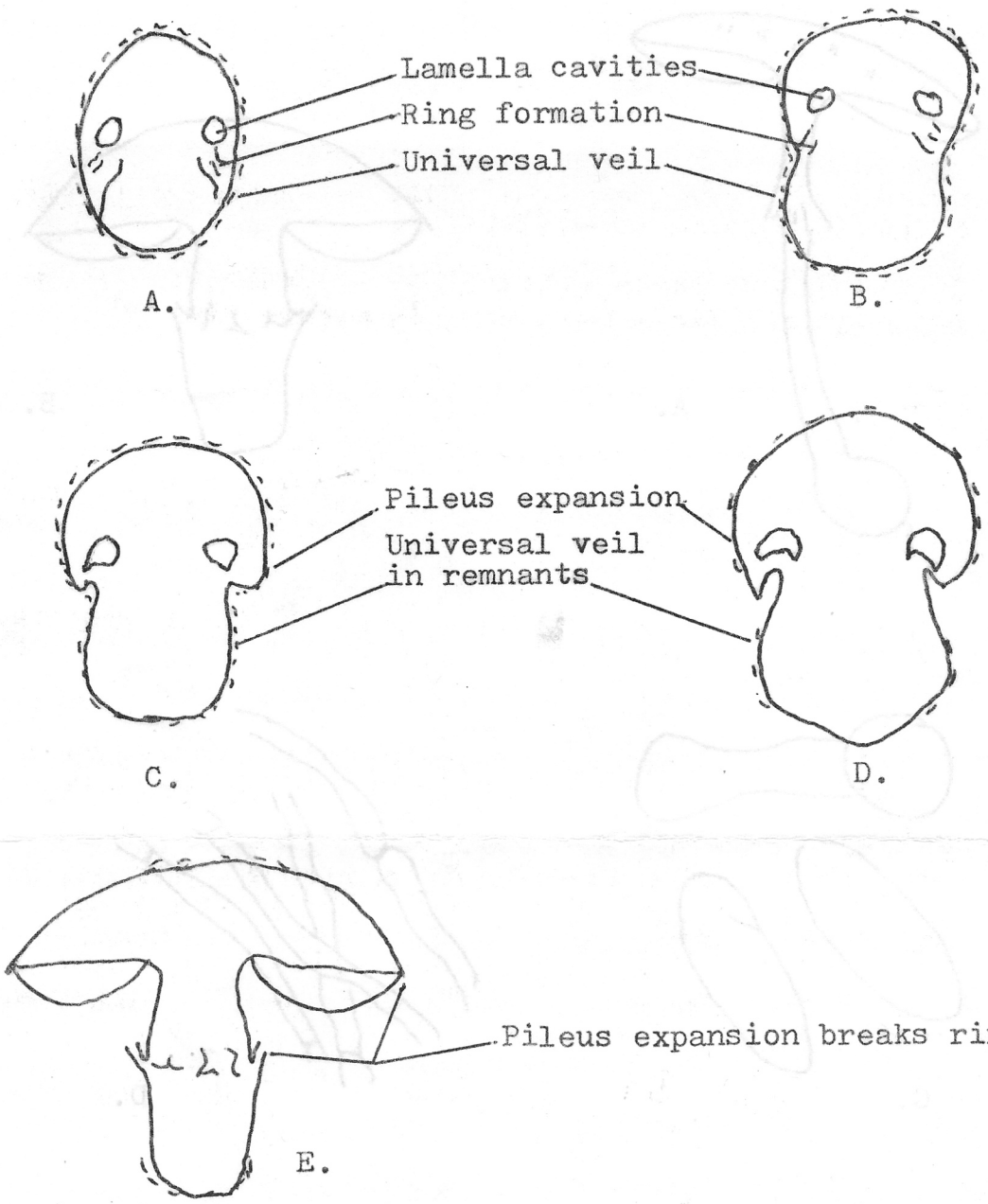
Fruit body form and universal veil types.

A. Placomycetoid stature.

B. Campestroid stature.

C. Cellular universal veil tissue.

D. Hyphal universal veil tissue.



Developmental sequence of A. campestris (ex Atkinson, 1906)

A. Young primordium
B. Young primordium
C. Button stage
D. Button stage
E. Mature

Bivelangiocarpic

LIST OF REFERENCES FOR THE GENUS AGARICUS

Atkinson, G.F. 1906. The development of Agaricus campestris. Botanical Gazette 42(4):241-262.

Barr, P. 1937. Un genre embrouille en mycologie: le genre Psalliota Fr. Bull. Soc. Roy. Belgique, Tems 70.

Bohus, G. 1961. Psalliota studies I. Critical species, critical notes. Ann. Hist.-Nat. Mus. Nat. Hung. pars Bot., 53:187-194.

--------. 1969. Agaricus studies II. Critical species, critical notes. Ann. Hist.-Nat. Mus. Nat. Hung. pars Bot., 61:151-156.

--------. 1971. Agaricus studies III. Critical species, critical notes. Ann. Hist.-Nat. Mus. Nat. Hung. pars Bot., 63:77-82.

Coker, W.C. 1928. The Chapel Hill species of the genus Psalliota. J. Elisha Mitchell Sci. Soc., July, pp. 243-255.

Dillenius. 1719. Catalogus plantarum sponte circa Gissam nascentium, cum appendice qua plantae post editum catalogum. x + 160, xii + 240. Frankfurt am Main.

Donk, M.A. 1962. The generic names proposed for Agaricaceae. Beihefte zur Nova Hedwigia, Heft 5, pp. 11-13.

---------. 1964. Nomina conservanda proposita. Regnum Vegetabile 34:32.

Fries, E.M. 1821. Systema Mycologicum I.

Heinemann, P. 1952. Etudes sur le genre Agaricus Fr. s.s. Bull. Soc. Myc. France 68:4.

----------. 1953. Etat actuel de l'etude systematique du genre Agaricus Fr. s.s. (Psalliota). Mushroom Sci. II. Gembloux.

----------. 1956. Champignon recolte au Congo Belge par Madame M. Goossens-Fontana, II Agaricus Fr. s.s. Bull. Jard. Bot. Etat Brux. 26.

----------. 1956. Flore Icon. des Champ. du Congo. Fascile #5.

----------. 1957. Flore Icon. des Champ. du Congo. Fascile #6.

----------. 1957. Agaricus robynsianus sp. nov. Bull. Jard. Bot. Etat Brux. Sept.

----------. 1961. Agarici-Americani: I Agaricus of Trinidad. Kew Bull. 15:231-248.

----------. 1962a. Agarici-Austro-Americani: II Agaricus de Bolivie. Bull Jard. Bot. Etat Brux.

----------. 1962b. Agarici-Austro-Americani: III Trois Agaricus de la Jamaique. Bull. Jard. Bot. Etat Brux.

----------. 1962c. Agarici-Austro-Americani: IV Quatre Agaricus du Venezuela. Bull. Jard. Bot. Etat Brux.

----------. 1965. Notes sur les Psalliotes (Agaricus) du Maroc. Bull. Soc. Myc. de France 81:3.

----------. 1974a. Agaricus kuehnerianus nov. sp. la Psalliote geante des Alpes de Haute provence. Bull. Soc. Linn. Lyon, Feb.

----------. 1974b. Quelque Agaricus de Nouvelle-Zealande. Bull. Jard. Bot. Not. Belg. Bull. Nat. Plantentuin Belg. 44(3/4):355-366, Dec.

Hotson, J.W. and D.E. Stuntz. 1938. The genus Agaricus in western Washington. Mycologia 30:204-234.

Karsten, P. 1879. Bidr. Kann. Finl. Nat. Folk 32:xxv.

Kauffman, C.H. 1918. The Gilled Mushrooms (Agaricaceae) of Michigan and the Great Lakes Region. Mich. Geo. and Bio. Survey #26, Biological Series 5.

Kimbrough, J.W. (Ed.). 1972. Keys to the Fleshy Basidiomycetes of Florida. Wm. A. Murrill. Institute of Food and Agricultural Sciences. University of Florida.

Kühner, R. and H. Romagnesi. 1953. Flore Analytique des Champignons Superieurs. Libraires de L'Academie de Medecine, Paris. pp. 408-417.

Lange, J.E. 1926. Studies in the agarics of Denmark. Part 6: Psalliota. Dansk. Botanisk Arkiv. Bd. 4 Nr. 12, pp. 1-11.

Lanjouw, J. and F.A. Stafleu. 1964. Index Herbariorum. Regnum Vegetabile 31. Utrect, Netherlands.

Linneaus, C. 1753. Species Plantarum 2:1171.

Møller, F.H. 1950. Danish Psalliota species. Friesia 4:1-60.

----------. 1952. Danish Psalliota species. Friesia 4:135-220.

Murrill, W.A. 1912. The Agaricaceae of the Pacific coast III. Mycologia 4:294-300.

----------. 1918. The Agaricaceae of tropical North America. Mycologia 10:62-85.

----------. 1922. Dark-spored agarics--III. Agaricus. Mycologia 14:200-221.

----------. 1938. Agaricus at Gainesville, Fla. J. Elisha Mitchell Sci. Soc. 54:139-141.

Peck, C.H. "1883" (1884). N.Y. State Mus. Bull. 36:42.

Pegler, D.N. and R.W. Raynor. 1969. A contribution to the agaric flora of Kenya. Kew Bull. 23:351-359.

Pilát, A. 1951. The Bohemian species of the genus Agaricus. Acta Mus. Nat. Pragae. 7 B n° 1:1-142.

Reijnders, A.F.M. 1963. Les problems de developpement des carpophores des Agaricales et de quelque groupes voisins. Uitgeverij Dr. J.W. Junk-den Haag, 412 pp.

Report of the committee for fungi and lichens. 1968. Taxon 17:580-581.