

TAXONOMIC STUDIES OF WILD MUSHROOMS DISTRIBUTED IN BANMAUK AND INNTAW TOWNSHIPS

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Abstract

The taxonomic studies of wild mushrooms distributed in Banmauk and Inntaw Townships were undertaken. Those mushrooms were collected from June to October during the year 2018 and identified in Department of Botany, Monywa University. Fifteen species belonging to 10 genera of 9 families were resulted. The identified species were under the genera *Amanita*, *Termitomyces*, *Tricholoma*, *Auricularia*, *Scleroderma*, *Cantharellus*, *Phallus*, *Lentinus*, *Lactarius* and *Russula*. The volva were present in *Amanita fulva* Fr. and *Phallus indusiatus* Vent. while these were not possessed in remaining species. The stipe was spongy in *Phallus indusiatus* Vent. Among the 15 species, only the members of the genus *Lactarius* have exude of milky latex. According to the literature nine species were edible and six species were inedible. These finding will be one of the valuable information for the future researchers and compilation on mushroom flora of Myanmar.

Keywords: Mushrooms Taxonomy, Banmauk and Inntaw, Myanmar

Introduction

Mushroom is the term applied to the fleshy fruiting bodies of fungi. Under natural conditions, the mycelium lies buried in the soil or in the substratum. When conditions are favourable, it forms the reproductive structure, the fruiting bodies which are fleshy and this structure is generally called the mushroom (Nair 1990). Lacking chlorophyll, mushrooms must obtain their food by absorption from the surrounding medium (usually soil or decaying wood) in which they grow (Krieger & Schaffer 1967).

Weather conditions, especially warmth and moisture, have their usual influence on the production of fruit-bodies, and more than one crop can occur in a year, or, on the other hand, no growth may appear above ground (Ramsbottom 1923).

Equally important is the role of mushrooms and related fungi in nutrient recycling, whereby they make food available for many organisms. Some mushrooms are a primary food source for animals of diverse kinds and others are a preferred food of many animals, including man (McKnight & McKnight 1987). Most fungi will grow between 0° and 35°C, but optimum temperatures lies in the range of 20-30°C. The ability of many fungi withstand extremely low temperatures (as low as -195°C.) (Alexopoulos 1962).

Mushrooms generally grow in the rainy season and prefer to high humidity and moisture level. They usually grow on the ground, organic matter, dead woods, living trees and grass land. The study area is located in Katha District, Sagaing Division. The climatic condition of the study area is the subtropical zone and it has plenty of vegetation. But because of the natural disaster and human impact, the area becoming deforestation and climate change is also affecting on the type of forest. The resources of mushrooms are important information for the study area in the future. Therefore it is needed to be explored and recorded on the wild mushrooms in various area of Myanmar.

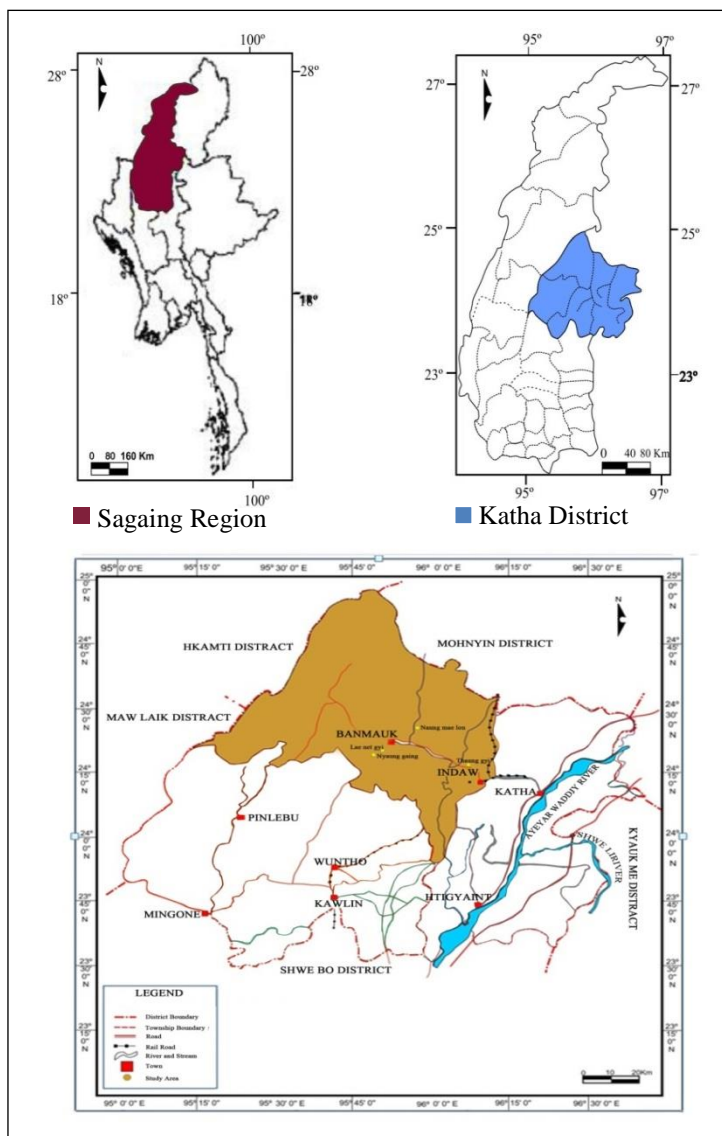
The aim and objectives of the present work are to identify and classify the naturally growing mushrooms, to characterize the mushrooms systematically and to provide the systematic information to others researchers.

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Materials and Methods

The wild mushrooms were collected from the month of June to October during in the year of 2018. The collection and the spore print techniques were followed by Krieger & Schaffer (1967) and Kuo & Methven (2014). To make a spore print, cut the stipe off the mushroom and place the cap with gills or pores downward on a piece of paper or glass slide. And then be covered with a glass petridish to keep air currents from blowing the spores. The spores were measured under the microscope by using stage, ocular micrometer and the objective lens 40 x. The collected specimens were preserved in Formalin-Acetic acid-Alcohol (FAA) by the ratio of 5: 5: 90. The classification and identification of collected specimens were done by referring the literature such as Thomas (1948), Krieger & Schaffer (1967), McKnight & McKnight (1987), Nair (1990), Roger (2006), Davis *et al.* (2012) and Kuo & Methven (2014).



Source: Land Records Department, Katha District, Sagaing Region

Figure 1 Location map of study area in Katha District

Results

According to the morphological and spores characters, 15 species of 10 genera belonging to 9 families and 7 orders were classified and identified. The resulting species were stated in Table 1 and the comparable morphological characteristics were shown in Table 2.

Table 1 List of the collected species

Order	Family	No.	Scientific name
Agaricales	Amanitaceae	1.	<i>Amanita fulva</i> Fr.
	Lyophallaceae	2.	<i>Termitomyces albuminosus</i> (Berk.) R. Heim.
Auriculariales	Tricholomataceae	3.	<i>Tricholoma irinum</i> (Fr.) P. Kumm.
	Auriculariaceae	4.	<i>Auricularia auricular-Juade</i> (Bull.) Quel.
Boletales	Sclerodermataceae	5.	<i>Scleroderma aerolatum</i> Ehrenb.
		6.	<i>S. verrucosum</i> (Bull.) Pers.
Cantharellales	Cantharellaceae	7.	<i>Cantharellus cibarius</i> Fr.
		8.	<i>C. infundibuliformis</i> (Pers.) P. Kumm.
Phallales	Phallaceae	9.	<i>Phallus indusiatus</i> Vent.
Polyporales	Polyporaceae	10.	<i>Lentinus arcularius</i> (Batsch) Fr.
Russulales	Russulaceae	11.	<i>Lactarius camphoratus</i> (Bull.) Fr.
		12.	<i>L. piperatus</i> (L.) Pers.
		13.	<i>L. rubidus</i> (Hesler & A. H. Sm.) Methven
		14.	<i>Russula foetens</i> Pers.
		15.	<i>R. roseipes</i> Scer. ex Bres.

An Artificial Key to the Studied Species

- 1. Volva present..... 2
- 1. Volva absent..... 3
 - 2. Cap conical-shaped; stipe with spongy; spores oblong.....9. *Phallus indusiatus*
 - 2. Cap convex; stipe without spongy; spores globose..1. *Amanita fulva*
- 3. Umbo present.....2. *Termitomyces albuminosus*
- 3. Umbo absent..... 4
 - 4. Stipe absent.....4. *Auricularia auricular-Juade*.
 - 4. Stipe present..... 5
- 5. Latex present..... 6
- 5. Latex absent..... 8
 - 6. Gills decurrent; spores white, smooth.....12. *Lactarius piperatus*
 - 6. Gills adnate; spores pale cream or pale yellow, echinulate..... 7
- 7. Cap red brown; gills yellowish brown; stipe reddish brown.....11. *Lactarius camphoratus*
- 7. Cap yellow; gills pale yellow; stipe yellow.....13. *Lactarius rubidus*

8. Stipe hollow.....7. *Cantharellus cibarius*
8. Stipe solid..... 9
9. Cap globosed..... 10
9. Cap depressed or flattened..... 11
10. Fruiting body yellow patches; spores brown.....
-5. *Scleroderma aerolatum*
10. Fruiting body brown; spores dark brown..6. *Scleroderma verrucosum*
11. Stipe tapered at the base..... 12
11. Stipe equal..... 13
12. Cap flattened; gills sinuate; spores smooth, elliptic.....
-3. *Tricholoma irinum*
12. Cap depressed; gills adnate; spores echinulate, globose.....
-15. *Russula roseipes*
13. Spores echinulate.....14. *Russula foetens*
13. Spores smooth..... 14
14. Gills present; stipe pale yellow; spores globose.....
-8. *Cantharanthus infundibuliformis*
14. Gills absent; stipe brown; spores oblong.....10. *Lentinus arcularius*

1. *Amanita fulva* Fr., Ovserv. mycol. 1:2 (1815) (Figure 2, 3. A)

Cap 3.0-5.0 cm broad, thin, oval at first, then convex, sticky when moist, smooth, margin prominently streaked, yellowish brown. Gills free, white. Stipe 5.5-6.5 cm long, 0.5-0.8 cm thick, equal, hollow, pale cream. Ring absent. Volva present, thin, white. Spores white, smooth, globose, 10.0-12.5 μm .

Habitat : Growing on soil, solitary.

Specimen examined: Inntaw Township, Thaung gyi village; N. 24°21' 06.37", E. 96° 01' 36.36"; 14 August, 2018; Chaw Thiri Mon, collection no. 117.

2. *Termitomyces albuminosus* (Berk.) R. Heim, Mem. Acad., Sci., Paris 44: 72 (1941) (Figure 2, 3. B)

Agaricus albuminosus Berk. 1847.

Cap 6.0-7.5 cm broad, thick, plano-umbonate at first, becoming flattened, margin split when mature, pale brown. Gills free, white and then pale pink as spore mature. Stipe 6.5-14.0 cm long, 1.7-2.0 cm thick, central, equal to tapering at the base, solid, fibrous, pale gray. Ring absent. Spores pink, elliptic, smooth, 7.5-12.5 x 5.0-7.5 μm .

Habitat : Growing on sandy soil and solitary

Specimen examined: Banmawk Township; Nyaung gaing, N. 24°26' 50.20", E. 95° 52' 21.56"; 22 June, 2018; Chaw Thiri Mon, collection no. 49.

3. *Tricholoma irinum* (Fr.) P. Kumn., Fuhr. Pilzk. (Zerbst): 132 1871. (Figure 2, 3. C)

Agaricus irinus Fr. 1838.

Cap 13.5-18.5 cm broad, thick, flattened, smooth, margin incurved, pale brown. Gills sinuate, pale cream. Stipe 20.0-22.0 cm long, 2.0-2.5 cm thick, central, cylindrical, solid, smooth,

tapered at the base, pale cream. Ring absent. Spores pale cream, elliptic, smooth, 7.5-12.5 x 5.0 μm .

Habitat : Growing on soil and solitary

Specimen examined: Banmauk Township, Lae net gyi village; N. 24°23' 18.28", E. 95° 49' 40.89"; 22 June, 2018; Chaw Thiri Mon, collection no. 53.

4. *Auricularia auricula-judae* (Bull.) Quel., fung. 207 (1886) (Figure 2, 3. D)

Tremella auricula-judae Bull. 1789

Cap 2.5-6.0 cm broad, thin, usually hanging downward from a point of attachment, cup or ear shaped, then expanded, texture gelatinous when moist, hard when dry, reddish brown. Gills absent. Stipe absent. Ring absent. Spores white, smooth, elliptic, 15.0-17.5 x 10.0-12.5 μm .

Habitat : Growing on decay wood and living tree, clustered

Specimen examined: Banmauk Township, Naung mae lon hill; N. 24°27' 55.50", E. 95° 52' 23.45"; 23 June, 2018; Chaw Thiri Mon, collection no. 60.

5. *Scleroderma areolatum* Ehrenb., Sylv. mycol. Berol. (Berlin): 27 (1818) (Figure 2, 3. E)

Fruiting body 2.0-3.5 cm across, subglobose, covered with yellow patches, thin wall, brown. Gleba pale brown. Stipe 2.0-3.0 cm long, 0.5-1.2 cm thick, central, equal, solid, yellowish brown. Ring absent. Spores brown, globose, echinulate, 10.0-17.5 μm .

Habitat : Growing on soil and solitary

Specimen examined: Bamauk Township, Naung mae lon village; N. 24°26' 00.42", E. 95° 52' 23.38"; 24 June, 2018; Chaw Thiri Mon, collection no. 69.

6. *Scleroderma verrucosum* (Bull.) Pers., Syn. meth. fung. (Gottingen) 1: 154 (1801) (Figure 2, 3. F)

Lycoperdon verrucosum Bull. 1791

Fruiting body 1.0-2.5 cm across, subglobose, covered with brown scales, thin wall, brown. Gleba brown. Stipe 0.5-0.7 cm long, 0.3-0.5 cm thick, central, equal, solid, brown. Ring absent. Spores dark brown, globose, echinulate, 15.0-20.0 μm .

Habitat : Growing on soil and grouped

Specimen examined: Banmauk Township, Naung mae lon hill; N. 24°27' 55.50", E. 95° 52' 23.45"; 23 June, 2018; Chaw Thiri Mon, collection no. 65.

7. *Cantharellus cibarius* Fr., Syst. Mycol. 1:318(1821) (Figure 2, 3. G)

Cap 1.5-2.0 cm broad, thick, slightly depressed, funnel-shaped, margin incurved and wavy, orange. Gills decurrent, pale yellow. Stipe 2.0-3.5 cm long, 0.3-0.6 cm thick, central, equal, hollow, pale yellow. Ring absent. Spores pale yellow, smooth, oblong, 10.0-15.5 x 7.5-10.0 μm .

Habitat : Growing on soil, grouped

Specimen examined: Inntaw Township, Thaung gyi village; N. 24°21' 06.37", E. 96° 01' 36.36"; 13 August, 2018; Chaw Thiri Mon, collection no. 108.

8. *Cantharellus infundibuliformis* (Scop.) Fr., Epicr. Syst. Mycol. (Upsaliae): 366 (1838) (Figure 2, 3. H)

Merulius infundibuliformis Scop. 1772

Cap 2.5-6.0 cm broad, thin, convex when young, becoming funnel-shaped, centrally depressed, pale cream at the margin, pinkish to the center. Gills decurrent, excentric, pale yellow.

Stipe 4.5-6.0 cm long, 0.5-0.7cm thick, equal, stuffed with fibrous, pale yellow. Ring absent. Spores pale cream, smooth, globose, 7.5 x 12.5 μm .

Habitat : Growing on soil, clustered

Specimen examined: Banmawk Township, Lae net gyi village; N. 24°23' 18.28", E. 95° 49' 40.89"; 22 June, 2018; Chaw Thiri Mon, collection no. 58.

9. *Phallus indusiatus* Vent., Mem. Inst. nat. Sci. Arts 1:520 (1798) (Figure 2, 3. I)

Cap 2.5-2.8 x 2.5-3.0 cm, conical-shaped, white circlet surrounding the open pore at the top of the stem, prominent net-like veil, greenish brown. Gills absent. Stipe 17.5-19.0 cm long, 2.0-2.5 cm thick, hollow, spongy-like structure, tapered at the tip, white. Ring absent. Volva present, thin. Spores greenish brown, oblong, smooth, 5.0-7.5 x 2.5 μm .

Habitat : Growing on dirty places and solitary

Specimen examined: Banmawk Township, Lae net gyi village; N. 24°38' 14.09", E. 95° 49' 35.62"; 25 June, 2018; Chaw Thiri Mon, collection no. 79.

10. *Lentinus arcularius* (Batsch) Fr. Zmitr., 12 (1): 88 (2010) (Figure 2, 3. J)

Boletus arcularius Batsch 1783.

Cap 2.5-4.0 cm broad, thin, convex with shallowly depressed, finely scaly, margin fringed with tiny hairs, brown. Gills absent. Pores running down the stem, white. Stipe 2.5-3.5 cm long, 0.2-0.3 cm thick, central, equal, solid, slightly scaly, brown. Rings absent. Spores white, oblong, smooth, 7.5-10.0 x 3.7 μm .

Habitat : Growing on decay wood and grouped

Specimen examined: Banmawk Township, Naung gaing village; N. 24°21' 07.97", E. 95° 48' 45.59"; 24 June, 2018; Chaw Thiri Mon, collection no. 76.

11. *Lactarius camphoratus* (Bull.) Fr., Epicr. syst. mycol. 346 (1838)

(Figure 2, 3. K)

Agaricus camphoratus Bull. 1793

Cap 4.0-7.0 cm broad, slightly thick, firm, flattened and slightly depressed, latex present, red-brown. Gills adnate, yellowish brown. Stipe 3.5-4.5 cm long, 1.2-1.7 cm thick, acentric, solid, smooth, cylindrical, slightly tapered at the base, reddish-brown. Ring absent. Spores pale cream, subglobose, echinulate, 12.5-17.5 x 10.0-15.0 μm .

Habitat : Growing on soil and grouped

Specimen examined: Inntaw Township, Thaug gyi village; N. 24°21' 06.37", E. 96° 01' 36.36"; 13 August, 2018; Chaw Thiri Mon, collection no. 107.

12. *Lactarius piperatus* (L.) Pers., Tent. disp. meth. fung: 64 (1797)

(Figure 2, 3. L)

Agaricus piperatus L. 1753.

Cap 4.5-7.0 cm broad, thick, convex and then expanded, center depressed, milky latex present, white at first, becoming yellow spotted in age. Gills decurrent, white at first, then pale yellow. Stipe 4.5-6.0 cm long, 1.2-1.4 cm thick, acentric, solid, tapering towards the base, white. Ring absent. Spores white, subglobosed, smooth, 10.0-15.0 x 7.5-10.0 μm .

Habitat : Growing on soil and grouped

Specimen examined: Inntaw Township, Thaug gyi village; N. 24°21' 06.37", E. 95° 00' 36.36"; 13 August, 2018; Chaw Thiri Mon, collection no. 109.

13. *Lactarius rubidus* (Hesler & A.H. Sm.) Methven, Russulaceae II. *Lactarius* 67 (1997) (Figure 2, 3. M)

Lactarius fragilis var. *rubidus* Hesler & A.H. Sm. 1979.

Cap 4.5-6.0 cm broad, slightly thick, firm, flattened and shallowly depressed, latex present, yellow. Gills adnate, closed, pale yellow. Stipe 4.5-8.0 cm long, 1.0-1.3 cm thick, acentric, equal, solid, slightly curved, yellow. Ring absent. Spores pale yellow, subglobose, echinulate, 15.0-20.0 x 12.5-17.5 μ m.

Habitat : Growing on soil and solitary

Specimen examined: Inntaw Township, Thaug gyi village; N. 24°21' 06.47", E. 96° 00' 25.40"; 13 August, 2018; Chaw Thiri Mon, collection no. 110.

14. *Russula foetens* Pers., *Observ. Mycol.* 1: 102 (1796) (Figure 2, 3. N)

Cap 3.5-4.0 cm broad, thick, firm, at first nearly globose, then flattened, slightly depressed, yellowish brown. Gills adnexed, forked at the margin, pale cream. Stipe 2.5-3.5 cm long, 1.2-1.4 cm thick, central, equal, stuffed, pale yellow. Ring absent. Spores pale cream, subglobose, echinulate, 15.0-20.0 x 7.5-10.0 μ m.

Habitat : Growing on soil and solitary

Specimen examined: Inntaw Township, Thaug gyi village; N. 24°20' 50.44", E. 96° 01' 32.69"; 14 August, 2018; Chaw Thiri Mon, collection no. 114.

15. *Russula roseipes* Secr. ex Bres., *Fung. trident.* 1(3): 37 (1883) (Figure 2, 3. O)

Cap 3.0-3.5 cm broad, slightly thin, convex then flattened, slightly depressed, rosy pink. Gills adnate, thin, white. Stipe 3.0-4.0 cm long, 0.7-1.0 cm thick, central, tapered at the base, stuffed, smooth, rosy-pink. Ring absent. Spores white, globose, echinulate, 10.0-15.0 μ m.

Habitat : Growing on soil and grouped

Specimen examined: Inntaw Township, Thaug gyi village; N. 24°21' 06.18", E. 96° 00' 24.87"; 13 August, 2018; Chaw Thiri Mon, collection no. 96.

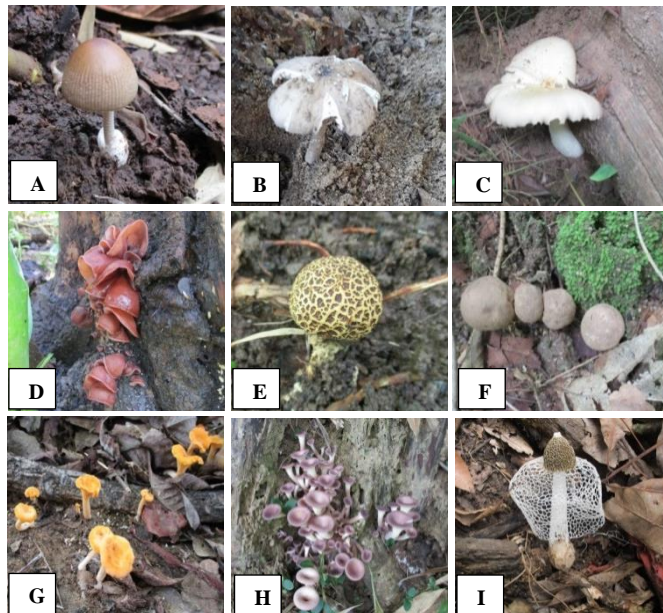
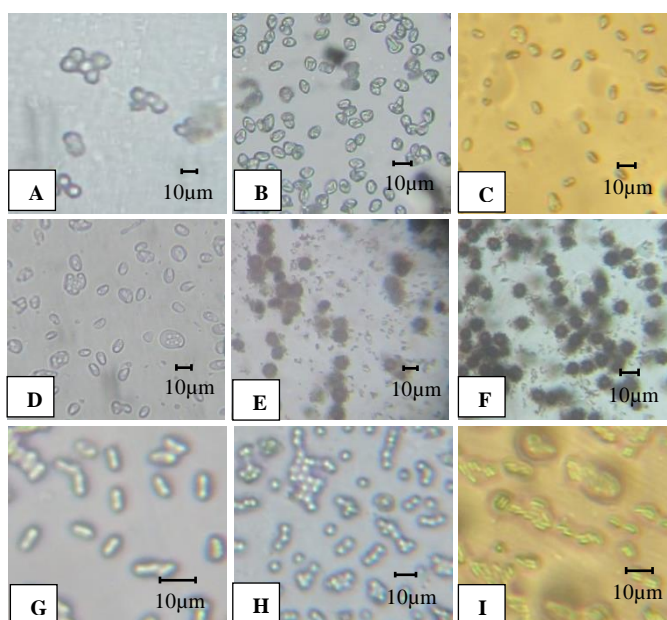




Figure 2 Natural habitat of mushrooms

- | | | | |
|---|--|---|--|
| A | <i>Amanita fulva</i> Fr. | B | <i>Termitomyces albuminosus</i> (Berk.) R. Heim. |
| C | <i>Tricholoma irinum</i> (Fr.) P. Kumm | D | <i>Auricularia auricular-Juade</i> (Bull.) Quel. |
| E | <i>Scleroderma aerolatum</i> Ehrenb. | F | <i>S. verrucosum</i> (Bull.) Pers. |
| G | <i>Cantharellus cibarius</i> Fr. | H | <i>C. infundibuliformis</i> (Pers.) P. Kumm. |
| I | <i>Phallus indusiatus</i> Vent. | J | <i>Lentinus arcularius</i> (Batsch) Fr. |
| K | <i>Lactarius camphoratus</i> (Bull.) Fr. | L | <i>L. piperatus</i> (L.) Pers. |
| M | <i>L. rubidus</i> (Hesler & A. H. Sm.) Methven | O | <i>R. roseipes</i> Scer. ex Bres. |
| N | <i>Russula foetens</i> Pers. | | |



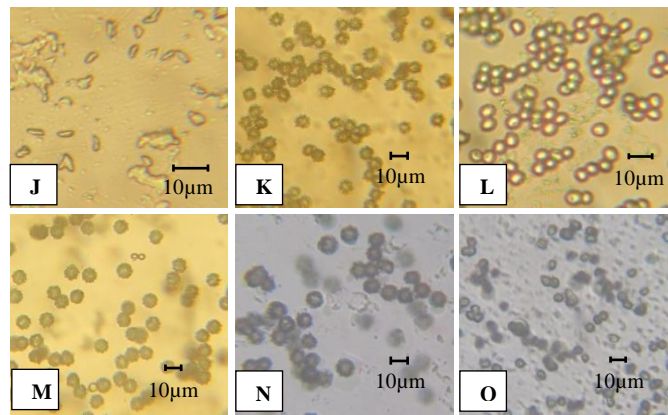


Figure 3 Spores of mushrooms

- | | | | |
|---|--|---|--|
| A | <i>Amanita fulva</i> Fr. | B | <i>Termitomyces albuminosus</i> (Berk.) R. Heim. |
| C | <i>Tricholoma irinum</i> (Fr.) P. Kumm | D | <i>Auricularia auricular-Juade</i> (Bull.) Quel. |
| E | <i>Scleroderma aerolatum</i> Ehrenb. | F | <i>S. verrucosum</i> (Bull.) Pers. |
| G | <i>Cantharellus cibarius</i> Fr. | H | <i>C. infundibuliformis</i> (Pers.) P. Kumm. |
| I | <i>Phallus indusiatus</i> Vent. | J | <i>Lentinus arcularius</i> (Batsch) Fr. |
| K | <i>Lactarius camphoratus</i> (Bull.) Fr. | L | <i>L. piperatus</i> (L.) Pers. |
| M | <i>L. rubidus</i> (Hesler & A. H. Sm.) Methven | O | <i>R. roseipes</i> Scer. ex Bres. |
| N | <i>Russula foetens</i> Pers. | | |

Table 2
Comparable Morphological Characteristics of Mushrooms from the Study Area

No.	Scientific name	Growing habitat	Edible/Inedible	Cap		
				Colour	Shape	Um
1.	<i>Amanita fulva</i> Fr.	soil	inedible	yellowish brown	convex	abs
2.	<i>Termitomyces albuminosus</i> (Berk.) R. Heim.	soil	edible	pale brown	flattened	pres
3.	<i>Tricholoma irinum</i> (Fr.) P. Kumm.	soil	edible	pale brown	flattened	abs
4.	<i>Auricularia auricular-Juade</i> (Bull.) Quel.	decay wood	edible	reddish brown	cup or ear shaped	abs
5.	<i>Scleroderma aerolatum</i> Ehrenb.	soil	inedible	brownish yellow	globose	abs
6.	<i>S. verrucosum</i> (Bull.) Pers.	soil	inedible	brown with scales	globose	abs
7.	<i>Cantharellus cibarius</i> Fr.	soil	edible	orange	depressed	abs
8.	<i>C. infundibuliformis</i> (Pers.) P. Kumm.	soil	edible	pale cream	depressed	abs
9.	<i>Phallus indusiatus</i> Vent.	soil	inedible	greenish brown	conical	abs
10.	<i>Lentinus arcularius</i> (Batsch) Fr.	decay wood	inedible	brown	depressed	abs
11.	<i>Lactarius camphoratus</i> (Bull.) Fr.	soil	edible	red brown	depressed	abs
12.	<i>L. piperatus</i> (L.) Pers.	soil	edible	white	depressed	abs
13.	<i>L. rubidus</i> (Hesler & A. H. Sm.) Methven	soil	edible	yellow	depressed	abs
14.	<i>Russula foetens</i> Pers.	soil	inedible	yellowish brown	depressed	abs
15.	<i>R. roseipes</i> Scer. ex Bres.	soil	edible	rosy pink	depressed	abs

No.	Scientific name	Stipe			Spores	
		Colour	Shape	Hollow/ solid	Colour	Shape
1.	<i>Amanita fulva</i> Fr.	pale cream	equal	hollow	white	globose
2.	<i>Termitomyces albuminosus</i> (Berk.) R. Heim.	pale gray	tapered at the base	solid	pink	elliptic
3.	<i>Tricholoma irinum</i> (Fr.) P. Kumm.	pale cream	tapered at the base	solid	pale cream	elliptic
4.	<i>Auricularia auricular-Juade</i> (Bull.) Quel.	-	-	-	white	elliptic
5.	<i>Scleroderma aerolatum</i> Ehrenb.	yellowish brown	equal	solid	brown	globose
6.	<i>S. verrucosum</i> (Bull.) Pers.	brown	equal	solid	dark brown	globose
7.	<i>Cantharellus cibarius</i> Fr.	pale yellow	equal	hollow	pale yellow	oblong
8.	<i>C. infundibuliformis</i> (Pers.) P. Kumm.	pale yellow	equal	solid	pale cream	globose
9.	<i>Phallus indusiatus</i> Vent.	white	tapered at the tip	hollow	greenish brown	oblong
10.	<i>Lentinus arcularius</i> (Batsch) Fr.	brown	equal	solid	white	oblong
11.	<i>Lactarius camphoratus</i> (Bull.) Fr.	reddish brown	tapered at the base	solid	pale cream	subglobose
12.	<i>L. piperatus</i> (L.) Pers.	white	tapered at the base	solid	white	subglobose
13.	<i>L. rubidus</i> (Hesler & A. H. Sm.) Methven	yellow	equal	solid	pale yellow	subglobose
14.	<i>Russula foetens</i> Pers.	pale yellow	equal	solid	pale cream	subglobose
15.	<i>R. roseipes</i> Scer. ex Bres.	rosy pink	tapered at the base	solid	white	globose

Discussion and Conclusion

The taxonomic studies of wild mushrooms distributed in Banmauk and Inntaw Townships were carried out from June to August during the year 2018. Fifteen species of wild mushrooms belonging to 10 genera and 9 families were collected and identified. Eight species were found in Banmauk Township and 7 species were collected in Inntaw Township. The identified species are *Amanita fulva* Fr., *Termitomyces albuminosus* (Berk.) R. Heim., *Tricholoma irinum* (Fr.) P. Kumm., *Auricularia auricular-Juade* (Bull.) Quel., *Scleroderma aerolatum* Ehrenb., *S. verrucosum* (Bull.) Pers., *Cantharellus cibarius* Fr., *C. infundibuliformis* (Pers.) P. Kumm., *Phallus indusiatus* Vent., *Lentinus arcularius* (Batsch) Fr., *Lactarius camphoratus* (Bull.) Fr. *L. piperatus* (L.) Pers., *L. rubidus* (Hesler & A. H. Sm.) Methven, *Russula foetens* Pers. and *R. roseipes* Scer. ex Br.

According to the present study, *Auricularia auricular-Juade* (Bull.) Quel. and *Lentinus arcularius* (Batsch) Fr. were growing on the decay woods while the other species were growing on the soil. The cap of 8 species are depressed, 4 species are expended, 2 species are globose and 1 species is conical in shape. Among the 15 species, *Termitomyces albuminosus* (Berk.) R. Heim. was plano-umbonate on the cap.

The attachment of gills were free in 2 species, adnate in 3 species, decurrent in 3 species, sinuate in 1 species and adnexed in 1 species. In this study, the stipe shape of 8 species were equal. In *Termitomyces albuminosus* (Berk.) R. Heim., *Tricholoma irinum* (Fr.) P. Kumm., *Lactarius camphoratus* (Bull.) Fr. *L. piperatus* (L.) Pers. and *Russula roseipes* Scer. ex Br., the stipes were tapered at the base and *Phallus indusiatus* Vent. was tapered at the tip. In this study, the spongy stipe was found in *Phallus indusiatus* Vent. The volva were present in *Amanita fulva* Fr. and *Phallus indusiatus* Vent. while the other 13 species were not present.

According to the present study, the most common family was Russulaceae. The common species are *Lactarius camphoratus* (Bull.) Fr., *L. piperatus* (L.) Pers., *L. rubidus* (Hesler & A.H. Sm.) Methven, *Russula foetens* Pers. and *R. roseipes* Scer. ex Bres. All members of the genus *Lactarius* have the milky latex that exudes from all parts of the fruiting body when cut or broken.

Of these 9 species were edible and 6 species were inedible. The edible mushrooms were commonly eaten by local people. Some of the mushrooms are inedible or deadly poisonous that are confused with edible mushrooms. Some edible mushrooms have a pleasant smell and inedible or poisonous have strongly smell. In this study, *Lactarius piperatus* (L.) Pers. have a strongly acrid taste and *L. camphoratus* (Bull.) Fr. and *L. rubidus* (Hesler & A. H. Sm.) Methven have a mild taste. In the present study, the pink spores was found in *Termitomyces albuminosus* (Berk.) R. Heim. which can be eaten without harm by local people. Although Bessey (1960) stated that many of the pink-spored fungi are poisonous.

The study area is in subtropical area and possessing a good condition for the growing of mushrooms in natural. Therefore, it is hoped that there is still many species of wild mushrooms in Banmauk and Inntaw Townships. The study work will provide the valuable taxonomic information and knowledge for future researchers who are interested in mushroom for applied researches. Finally, the resulting data will partially provide for the compilation of Flora of Mushroom in Myanmar.

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