

# Taxonomic Study on Thirteen Species of Family Asteraceae from Sagaing and Shwebo District

Tin Win Kyi<sup>1</sup>, Nu Nu Yee<sup>2</sup> and Thi Thi Htun<sup>3</sup>

## Abstract

The taxonomic studies on the family Asteraceae from Sagaing and Shwebo Districts were undertaken. In the present study, 13 species belonging to 10 genera of family Asteraceae were collected, studied and identified during December 2018 to October 2019. One species each from the genera *Cyathocline*, *Grangea*, *Erigeron*, *Laggera*, *Lagascea*, *Melampodium*, *Parthenium* and *Synedrella*, two species from genera *Sphaeranthus*, three species from the genus *Conyza* were collected. Homogamous discoid capitula are found in one species. Heterogamous capitula are found in 12 species. Among them, 6 species possess disciform capitula and 6 species were radiate capitula. The characteristics of the family and detail descriptions of individual species are described with relevant photographs. The collected species were systematically arranged by Jeffery and Kadereit(2007).

**Key words:** Asteraceae, Homogamous, Heterogamous, capitula,

## Introduction

The Asteraceae(Compositae) is one of the largest and best-known families of flowering plants and certainly the largest of the dicotyledonous families (Heywood 2007). A large Asteraceae family of flowering plants is with 1000 to 1500 genera and about 25000 to 30000 species in the world (Bean and Pruski 2009).

Asteraceae is an advanced and botanically highly specialized family of mainly herbaceous plants. They are widely distributed in the tropics and warm temperate regions of South, South-East and East-Asia (Rahman 2008). The family has 12 subfamilies and 43 tribes which are distributed worldwide (Nicholas 2014).

The genus *Melampodium* L. of Asteraceae-Heliantheae is represented by 45 species distributed in tropical and subtropical regions, and Central America (Jagtap 2017). Monika (2014) stated that *Parthenium hysterophorus* L. commonly called as congress grass is among the top ten worst weeds of the world. It is widely occurring and occupied almost around the world such as in Asia, Africa, Australia and the Pacific. *Parthenium hysterophorus* L. is a waste land weed which is known by various local names like Congress grass, Carrot weed, white cap, Chatak, chandni, Star weed, etc. *Parthenium* is capable of growing in all types of soil and throughout the year because it has very low water requirement and a germination temperature of 8- 30 C. It has been growing naturally for centuries in different parts of the world eg. Mexico, Cuba, North and South America, West Indies, Australia, Taiwan, Southern China, East and South Africa and Canada. For the last few years, it has become a growing problem for some places in Pakistan ( Muhammand *et al.* 2017).

The aim is to fulfill the information of taxonomical distinct characters found in Asteraceae for future research works. The objectives of the present study are to classify and identify the members of Asteraceae from Sagaing Region, to record the differences between morphological characters of collected species.

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<sup>1</sup> Lecturer, Department of Botany, Kalay University

<sup>2</sup> Professor and Head, Dr, Department of Botany, University of Mandalay

<sup>3</sup> Associate Professor, Dr, Department of Botany, University of Mandalay

## Materials and Methods

Specimens of Asteraceae were collected from Sagaing and Shwebo Districts during December 2018 to October 2019. Plant parts including leaves, inflorescence, flowers and fruits were collected and recorded in field notes. Habit and distinctive parts of the specimens were recorded by photographs and the specimens were kept immediately into the plastic bags for further study.

Identification of genera and species were carried out by comparison with Hooker (1881), Backer (1965), Dassanayake (1980), Jeffery and Kadereit (2007), Sudhakar *et al.* (2008), Bean and Pruski (2009), Wu (2011), Naidu (2012), Monika (2014) and Titiek *et al.* (2015).

All the collected specimens were identified and described with their characters. The tribe, genera and species of Asteraceae are arranged according to Jeffery and Kadereit (2007).

## Results

### 1. Taxonomic Description

#### 1.1 *Cyathocline lyrata* Cass. in DC., Prod. 5. 374. 1836. ( Figure 1)

*C. stricta* DC., Prod. 5 : 374. 1836.

*C. lawii* Wight., Calc. Nat. Hist. 1846. pt.2. 159. 1836.

Myanmar name : Purple bane

English name : Brazilian Button Flower

Flowering period : September to January

Annual erect herbs, up to 50 cm high; stem and branches, slender, terete, sparsely hairy. Leaves pinnatifid to bipinnatisect, alternate, sessile; blades lyrata pinnatisect; 4 to 7 lobes, lanceolate or oblanceolate, obtuse at the base, dentate along the margin, acute at the apex, veins prominent, pilosa on the upper surface. Inflorescence terminal rounded corymbose heads; peduncle slender. Capitula in small rounded paniced corymbs, subglobose, heterogamous, disciform, purple, pedunculate; involucre broadly campanulate, 2-seriate, green; phyllaries oblong lanceolate, with pubescent. Receptacle convex, epaleaceous. The outer florets, female, tubular; corolla filiform, 2- 3 lobed; purple, glandular pubescent; lobes curved; ovary obovate, glabrous; style exerted, stylar arms with acute tip. Disc florets, tubular, bisexual, corolla tube infundibuliform, 5 lobed, yellow. Stamens 5, inserted; anthers whitish, obtuse at the base, acute at the apex. Ovary ovate. style exerted, pubescent; stylar arms linear, hairy, dark purple. Achenes ovate, brown. Pappus absent.

#### 1.2 *Grangea maderaspatana* (L.) Poir., Enc. Suppl. 2(2): 825.826.1812. ( Figure 2)

*Artemisia maderaspatana* L., Sp. Pl.849.1753.

Myanmar name : Taw- ma- hnyo

English name : Unknown

Flowering period : August to December

Annual suberect or prostrate herbs, up to 40 cm high; stem and branches at basal portion, terete, glandular whitish pubescent. Leaves simple, alternate, sessile; blades lyrate-pinnatifid, or pinnatifid, lobed, terminal segment 3 to many irregularly lobed attenuate at the base, sinuate- pinnatifid along the margin, acute at the apex, pubescent on both surface.

Inflorescence axillary or terminal cyme, solitary. Capitula globose, several in terminal or subterminal solitary, heterogamous, disciform, yellow, pedunculate; involucre bowl-shaped or campanulate, 2-3 seriate, green; phyllaries lanceolate-oblong, with imbricate. Receptacle convex, epaleaceous. The outer florets, female, tubular 2-3 lobed, yellow; ovary oblong, glandular; style exserted, stylar arms bifid, yellow. Disc florets, bisexual, corolla narrowly funnelform, 5-lobed; yellow. Stamens 5, exserted; anthers yellow, obtuse at the base, acute at the apex. Ovary obovate, glandular, greenish; style exserted, stylar arms linear, hairy, white. Achenes obovoid, more or less compressed, brown. Pappus a short tube with fimbriate, copular, irregularly cilia, white.

1.3 *Conyza japonica* (Thunb.) Less. FGD 8;185. 2007. (Figure 3)

*Erigeron japonicum* Thunb., Fl. Jap. 312. 1784.

*Conyza veronicaefolia* Wall. exDc., Prodr. 5:382. 1836.

Myanmar name : Unknown

English name : Unknown

Flowering period : December to February

Annual erect aromatic herbs, up to 45 cm high; stem and branched in lower portion, terete, spreading whitish pubescent. Leaves simple, alternate, sessile; blades oblong, ovate-spatulate, petiolate; lower ones narrowed into the petiole, without lobed, narrowly winged, attenuate at the base, crenate-dentate along the margin, round at the apex, pubescent on both surface. Inflorescence axillary or terminal solitary. Capitula arranged as loose corymbs at terminal, heterogamous, radiate, pedunculate; involucre hemispherical, 2-3 seriate; outer phyllaries ovate-lanceolate, with imbricate. Receptacle concave, epaleaceous. Ray florets, female, half the length of style, 3 lobed, yellow; ovary ovoid, style inserted, stylar arms linear with obtuse tip. Disc florets, bisexual, corolla narrowly infundibuliform, 5 lobed, yellow. Stamens 5, exserted; anthers yellow, obtuse at the base, acute at the apex. Ovary oblong; style exserted, stylar arms linear, yellow. Achenes oblong, with white hair, pubescent, brown. Pappus white, deciduous.

1.4 *Conyza leucantha* (D. Don.) Lundlow & Raven, Kew Bull. 17: 71. 1963. (Figure 4)

*Erigeron leucanthum* D. Don, Prod. Fl. Nepal 171. 1825.

*Conyza vicidula* DC., Prod. 5:383, 1836.

Myanmar name : Unknown

English name : Unknown

Flowering period : January to March

Perennial erect herbs, up to 2.0 m high; stem and usually branched in terminal portion, without glandular, terete, spreading finely whitish pubescent. Leaves simple, alternate, sessile; blades oblong or narrowly elliptic, attenuate at the base, crenate-dentate along the margin, acute at the apex, pubescent on both surface. Inflorescence axillary or terminal solitary. Capitula numerous in corymbose panicles, heterogamous, disciform, 2.0 mm to 3.5 mm in diameter, purple; pedunculate; involucre urceolate, 2 seriate; phyllaries linear, with imbricate. Receptacle flat, epaleaceous. The outer florets, female, filiform, 3 lobed, yellow; ovary ovoid; style inserted, half the length of style, stylar arms linear with obtuse tip. Disc florets, bisexual, corolla tubular campanulate, 5 lobed; pale purple. Stamens 5, exserted; anthers pale yellow, obtuse at the base, acute at the apex. Ovary oblong; style exserted, stylar arms linear, yellow. Achenes oblong, with white hair, pale brown. Pappus silky, white, deciduous.

1.5 *Conyza semipinnatifida* Wall. ex DC. 5:382. 1836. ( Figure 5)

*C. semipinnatifida* DC., Prod. 5:382, 1836.

Myanmar name : Byaing wa pin

English name : Unknown

Flowering period : March to July

Annual erect herbs, up to 50 cm high; stem and usually branched, slightly ribbed, terete, spreading finely whitish pubescent. Leaves simple, alternate, petiolate; attenuate at the base, irregularly crenate or dentate along the margins, acute at the apex, pubescent on both surface. Inflorescence axillary or terminal solitary. Capitula crowded, arranged in corymbs long panicles, heterogamous, raditate, globose, peduncelate; involucre campanulate, 2-4 seriate, phyllaries linear - lanceolate, with imbricate. Receptacle flat, epaleaceous. The ray florets, female, 2 lobed, yellow; ovary oblongoid; style inserted, stylar arms linear with acute tip. Disc florets, bisexual, corolla tubular infundibuliform, 5 lobed, yellow. Stamens 5, exserted; anthers yellow, truncate the base, acute at the apex. Ovary oblongoid, style exserted, stylar arms linear, yellow. Achenes oblong, more or less compressed, pubescent, pale brown. Pappus white.

1.6 *Erigeron sublyratus* Roxb. ex DC. in Wight, Contrib. 9. 1834. ( Figure 6)

*Conyza aegyptiaca* Thw., Enum. Pl. Zeyl. 163.1860, auct. non.DC.

*Erigeron hispidus* DC. in Wight. Contrib. 9.1834. et . Prod. 5: 292. 1836;

Myanmar name : Bying chi

English name : Unknown

Flowering period : July to October

Annual erect aromatic herbs, up to 45 cm high; stem and branches terete, with whitish spreading hairs. Leaves simple, alternate, sessile; blades oblanceolate, auriculate at the base, coarsely toothed or subpinnately lobed along the margin, acute at the apex, vines prominent, pubescent on both surface. Inflorescence axillary or terminal cyme, solitary. Capitula several in terminal or subterminal solitary, heterogamous, radiate, purple, pedunculate; involucre campanulate, 2-3 seriate. Receptacle convex, epaleaceous. Ray florets, female, without lobed, bluish purple; ovary obliquely ovoid, style exserted, stylar arms, linear, short, yellow. Disc florets, bisexual, corolla narrowly campanulate, 5- lobed; yellow. Stamens 5, exserted; anthers yellow, obtuse at the base, acute at the apex. Ovary cylindrical, no ribbed; style exserted, pubescent; stylar arms linear, hairy, white. Achenes obovoid, brown. Pappus linear dirty white, pubescent.

1.7 *Sphaeranthus indicus* L., Sp.Pl. 2: 927. 1753; Moon, Cat. 59. 1824.(Figure 7)

*Sphaeranthus hirtus* Willd., Sp. 3: 2395. 1804.

Myanmar name : Da- naung

English name : Unknown

Flowering period : September to March

Annual erect aromatic herbs, up to 30 cm high; stem and divaricately branches, strongly scented with 4 winged, wings irregularly and sharply dentate, glandular, spreading whitish pubescent. Leaves simple, alternate, sessile; blades obovate- oblong, attenuate at the base, coarsely serrate- dentate along the margin, acute at the apex, minutely glandular on both

surface and spreading whitish pubescent especially on the vine. Inflorescence ellipsoid, axillary or terminal solitary. Capitula ovoid- globose, heterogamous, disciform, pedunculate; with deeply crenate 3 wings; each capitulum sessile, subtending bracts linear, purple; involucre lanceolate, 2 seriate. Receptacle solid conical, paleaceous. The outer florets, female, corolla tubular filiform, 2 lobed, pale yellow. Disc florets bisexual, corolla infundibuliform, 5 lobed; yellow. Stamens 5, exserted; anthers pale yellow, sagittate at the base, obtuse at the apex. Ovary oblong, brown; style exserted, stylar arms linear, purple. Achenes oblong, pale brown. Pappus absent.

1.8 *Sphaeranthus peguensis* Kurz ex C.B. Clarke, Compos., Ind. 97. 1876. (Figure 8)

Myanmar name : Kadu  
 English name : Unknown  
 Flowering period : October to March

Annual erect aromatic herbs, up to 25 cm high; stem and branches winged. Leaves simple, alternate, sessile; blades linear- oblong, decurrent at the base, dentate obtuse coarsely serrate along the margin, acute at the apex, minutely glandular on both surface and spreading whitish pubescent especially on the vine. Inflorescence axillary or terminal solitary. Capitula clusters of broadly ovoid- globose, heterogamous, disciform, pedunculate; subtending bracts linear, purple; involucre campanulate, 2-3 seriate. Receptacle conical, fistular, paleaceous, the paleae linear - lanceolate, flat. The outer florets, female, corolla tubular filiform, 3 lobed, pale yellow; ovary ovoid; style exserted, stylar arms linear with obtuse tip. Disc florets bisexual, corolla infundibuliform, 5 lobed, yellow. Stamens 5, exserted; anthers purple, sagittate at the base, obtuse at the apex. Ovary oblong; style exserted, stylar arms linear, purple. Achenes oblongoid, brown. Pappus absent.

1.9 *Laggera pterodonta* Benth., Gen. Pl.2:290. 1828. (Figure 9)

Myanmar name : Unknown  
 English name : Unknown  
 Flowering period : November to January

Annual erect herbs, up to 80 cm high; stem and branches, flattened with dentate wings, strongly aromatic, glandular whitish pubescent. Leaves simple, alternate; blades lanceolate, attenuate or decurrent at the base, serrate along the margin, acute at the apex, veins prominent, pubescent on the upper surface. Inflorescence terminal panicle cymes, solitary. Capitula terminal or subterminal, solitary, heterogamous, disciform, purple, pedunculate; many seriate. Receptacle concave, paleaceous. The outer florets, filiform, female; 3 lobed, glandular pubescent; lobes linear, dark purple. Disc florets, numerous, bisexual, corolla narrowly infundibuliform, 5- lobed, violet. Stamens 5, exserted; anthers whitish, sagittate at the base, obtuse at the apex. Ovary oblong; style exserted, stylar arms linear, hairy, yellow. Achenes elliptic, brown. Pappus pubescent.

1.10 *Parthenium hysterophorus* L. Fl. Andhra Pradesh 2:533. 1997. (Figure 10)

Myanmar name : Unknown  
 English name : Unknown  
 Flowering period : June to October

Annual erect herbs, up to 2.0 m high; stem and branches angular, grooved, terete. Leaves simple, alternate, pinnatifid, petiolate; blades oblong- lanceolate, decurrent at the base,

entire along the margin, acute at the apex, pubescent on both surface. Inflorescence axillary or terminal solitary. Capitula arising from the leaf forks, panicles, heterogamous, radiate, white or creamy white; involucre hemispheric, ovoid- oblong, mostly 5 in each series, green; phyllaries oblong. Receptacle small, convex, paleaceous. Ray florets, female, tubular 2 lobed, white or creamy white; ovary obovoid, flattened, dorsally compressed and slightly concave, margin with white broad and soft wings, white; style exserted, stylar arms curved, bifid. Disc florets, male, corolla narrowly tubular, 4 - lobed, creamy white. Stamens 4, inserted; anthers white, sagittate at the base, obtuse at the apex. Ovary oblong, white; style inserted, stylar arms curved, white. Achenes 2 spiny, oblong, flattened, triangular and dark brown- black with two thin, white, spoon- shaped appendages, pale brown. Pappus pale brown, persistent.

1.11 *Synedrella nodiflora* (L.) Gaertn. FGD 8:132, ig 68.2007. (Figure 11)

*Verbesina nodiflora* L., Cent. Pl.1:28. 1755.

Myanmar name : Bizat- hpo

English name : Unknown

Flowering period : June to October

Annual erect herbs, up to 60 cm high; stem and branches, terete. Leaves simple, opposite and decussate, petiolate; blades ovate, attenuate at the base, crenulate - serrulate along the margin, acute at the apex, pubescent on both surface. Inflorescence axillary or terminal solitary. Capitula aggregated in axil or at branch terminal, mostly sessile, heterogamous, radiate, yellow; involucre ovoid- oblong, 2-3 seriate. Receptacle small convex, paleaceous. Ray florets, female, tubular 2 lobed, yellow; ovary obovate-oblong, compressed and slightly curved, margin with brownish white broad and hard wings, bearing 4- 6 pairs of upward directed spines, black; style exserted, stylar arms curved, bifid. Disc florets, bisexual, corolla narrowly tubular, 4 - lobed; yellow. Stamens 5, inserted; anthers black, sagittate at the base, obtuse at the apex. Ovary oblong- cuneate, flat or subtrigonous, black or blackish brown; style inserted, stylar arms curved, yellow. Achenes 2-4 spiny, oblong, pale brown. Pappus pale brown, persistent.

1.12 *Lagascea mollis* Cav., Fieldiana Bot.38:75-133 (1978). (Figure 12)

Myanmar name : Unknown

English name : Unknown

Flowering period : August to February

Annual, slender erect herbs with long branches, up to 55 cm high; stems and branches, terete. Leaves simple, alternate, petiolate; blades ovate, obtuse at the base, serrate along the margin, acuminate at the apex, pubescent on both surface. Inflorescence cluster of heads, axillary or terminal solitary. Capitula solitary, terminating in slender naked peduncles, homogamous, discoid, white; pedunculate; involucre leafy bracts, 2 seriate. Receptacle small convex, epaleaceous. Florets all tubular, bisexual, corolla infundibuliform, 5- lobed; white. Stamens 5, inserted; anthers black, sagittate at the base, acute at the apex. Ovary oblong, ribbed, with whitish spreading hairs, green; style exserted, pubescent; stylar arms coiled, with hairy, white. Achenes oblong, ribbed, with hairy, green. Pappus 4, linear, green, pubescent.

1.13 *Melampodium divaricatum* (Rich.) DC., Prod.5: 520. 1836. (Figure 13)

*Dysodium divaricatum* Rich., Syn.PI.2 (2):489.1807.

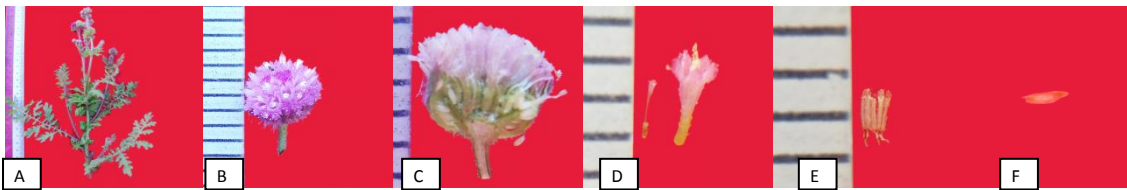
*Melampodium paludosum* HBK., Nov.Gen. et Sp.4:273. 1820.

Myanmar name : Japan ne gya

English name : Unknown

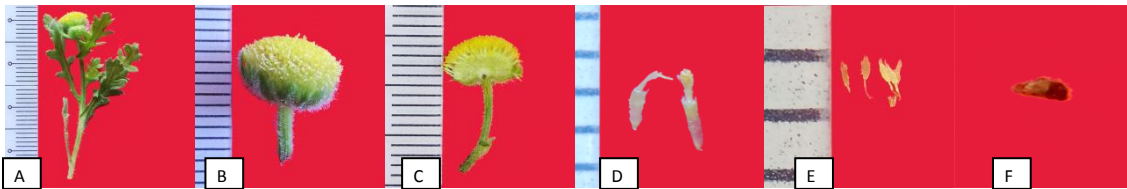
Flowering period : Throughout the year

Annual erect herbs, up to 40 cm high; stem and branches, 4 angular, slightly furrowed, sparsely pubescent or glabrous. Leaves simple, opposite, petiolate; the petioles winged, blades broadly elliptic or ovate, attenuate at the base, entire along the margin, acute at the apex, spreading whitish pubescent on both surface. Inflorescence axillary or terminal solitary. Capitula solitary, terminal on upper branches, heterogamous, radiate, pedunculate;; involucre campanulate, 2 seriate, shortly cilia along margin. Receptacle oblong, paleaceous, the paleae obovate, rounded at the apex, finely lacerate at margin. Ray florets, female, without lobed, yellow; style exserted, stylar arms linear with obtuse tip. Disc florets, bisexual, corolla funnel-shaped, 5 lobed; yellow. Stamens 5, exserted; anthers yellow, obtuse at the base, acute at the apex. Ovary oblong, black; style exserted, stylar arms linear, yellow. Achenes obovoid, black. Pappus absent.



**Figure 1** *Cyathocline lyrata* Cass.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Filiform & Disc floret E. Stamens F. T.S of ovary



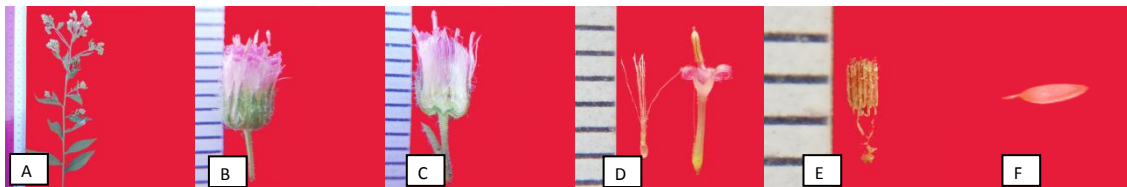
**Figure 2** *Grangea maderaspatana* (L.) Poir.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Filiform & Disc floret E. Stamens F. T.S of ovary



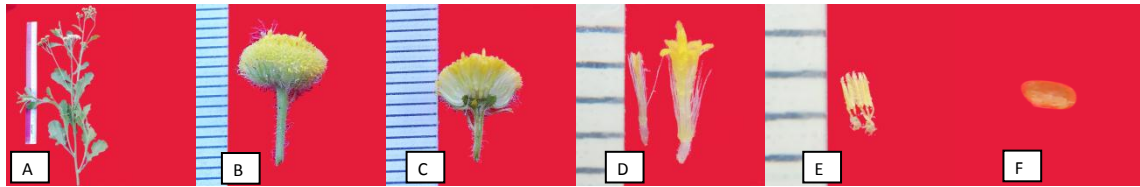
**Figure 3** *Conyza japonica* (Thunb.) Less.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Ray & Disc floret E. Stamens F. T.S of ovary



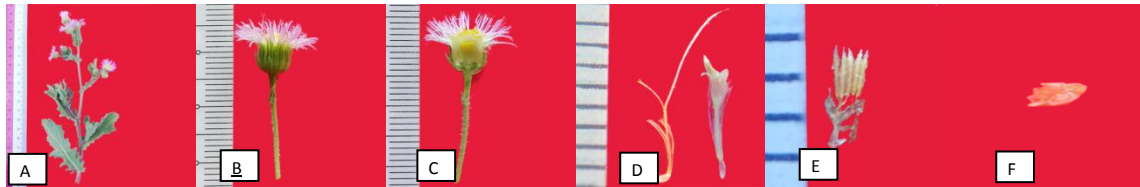
**Figure 4** *Conyza leucantha* (D. Don.) Ludlow & Raven

A. Inflorescence B. Capitulum C. L.S of capitulum D. Filiform & Disc floret E. Stamens F. T.S of ovary



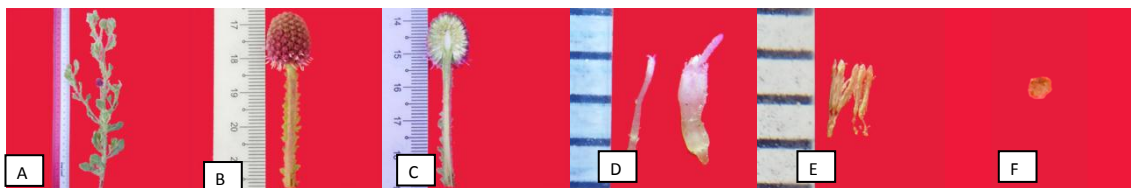
**Figure 5** *Conyza semipinnatifida* Wall.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Ray & Disc floret E. Stamens F. T.S of ovary



**Figure 6** *Erigeron sublyratus* Roxb. ex DC.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Ray & Disc floret E. Stamens F. T.S of ovary



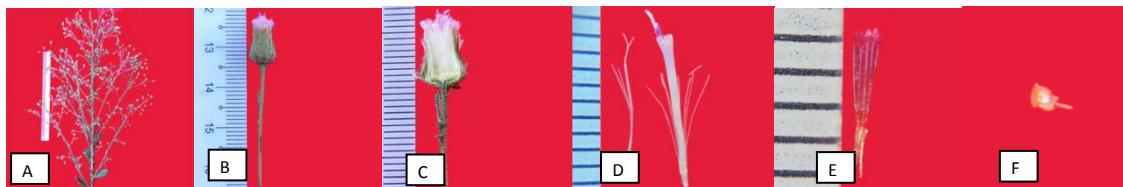
**Figure 7** *Sphaeranthus indicus* L.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Filiform & Disc floret E. Stamens F. T.S of ovary



**Figure 8** *Sphaeranthus peguensis* Kurz ex C.B. Clarke

A. Inflorescence B. Capitulum C. L.S of capitulum D. Filiform & Disc floret E. Stamens F. T.S of ovary



**Figure 9** *Langgera pterodonta* Benth.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Filiform & Disc floret E. Stamens F. T.S of ovary



**Figure 10** *Parthenium hysterophorus* L.

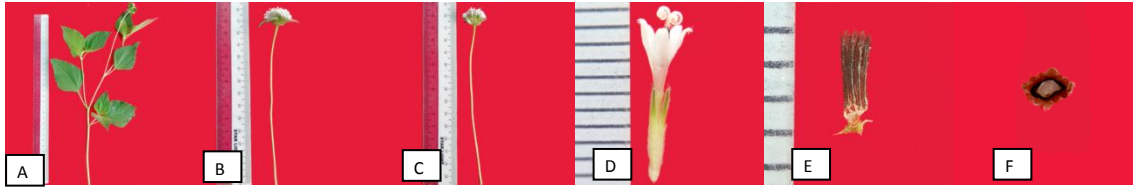
A. Inflorescence B. Capitulum C. L.S of capitulum D. Ray & Disc floret E. Stamens F. T.S of ovary





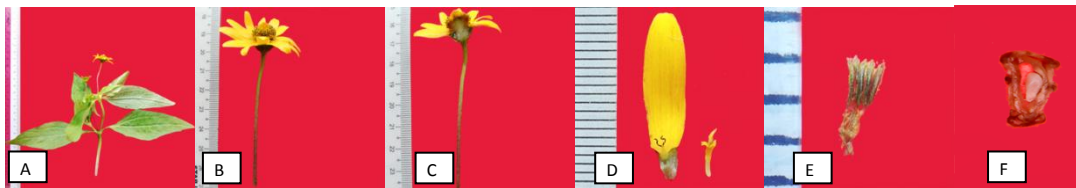
**Figure 11** *Synedrella nodiflora* (L.) Gaertn.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Disc & Ray floret E. Stamens F. T.S of ovary



**Figure 12** *Lagascea mollis* Cav.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Disc floret E. Stamens F. T.S of ovary



**Figure 13** *Melampodium divaricatum* (Rich.) DC.

A. Inflorescence B. Capitulum C. L.S of capitulum D. Ray & Disc floret E. Stamens F. T.S of ovary

### Discussion and Conclusion

The present research work deals with the taxonomic study on Asteraceae growing in Sagaing Region. The species were collected from Sagaing and Shwebo Districts during December 2018 to October 2019 and 13 species belonging to 10 genera of family Asteraceae were recorded.

The collected species of this family were classified and identified according to the type of capitula, shape of involucre, phyllaries, receptacles, type of florets and stamens. The genera and species of this family Asteraceae have been arranged tribes. The tribe Astereae includes six species and one species each from genera *Cyathocline*, *Erigeron* and *Grangea* and three species of *Conyza*. Including the tribe Heliantheae of Asteraceae, these are *Lagascea mollis* Cav., *Parthenium hysterophorus* L., and *synedrella nodiflora* (L.) Gaertn. *Melampodium divaricatum* (Rich.) DC. is the species having under the tribe Millerieae of Asteraceae.

The 6 species have radiate capitula and these species are *Conyza semipinnatifida* Wall. ex DC., *C. japonica* (Thumb.) Less., *Erigeron sublyratus* Roxb. ex DC., *Melampodium divaricatum* (Rich.) DC., *Parthenium hysterophorus* L., and *Synedrella nodiflora* (L.) Gaertn. Heterogamous capitula are found in 12 species. Heterogamous type can also be subdivided into disciform and radiate capitula. Among them, 6 species possess disciform capitula which are *Cyathocline lyrata* Cass., *Grangea mederaspatena* (L.) Poir. *Conyza leucantha* (D. Don.) Lundlow & Raven, *Laggera pterodonta* Benth., *Sphaeranthus indicus* L. and *Sphaeranthus peguensis* Kurz ex C.B. Clarke.

*Cyathocline lyrata* Cass. was found from Shwebo District in Sagaing Region. This species possess the characters of capitula in small rounded paniced corymbs pappus absent.

The characters of *Cyathocline lyrata* Cass. were similar to Hooker (1881) and Aye Aye Thin (2017).

The three genera of *Conyza* under tribe Astereae were distributed and abundantly growing in study area. The distinct characters of *Conyza japonica* (Thunb.) Less. have leaves sessile, upper ones semi-amplexicaul, lower ones narrowed into the petiole, filiform floret, half the length of style. The characters of this species are agreed with the results of Hooker (1881), Bean and Pruski (2009) and Aye Aye Thin (2017). The distinct characters of *Conyza leucantha* (D. Don.) Lundlow & Ravenm and *Conyza semipinnatifida* Wall. are capitula numerous in corymbose panicles, filiform floret, half the length of style, leaves irregularly crenate or dentate along the margins, capitula crowded, ray floret 2 lobed. Hooker (1881), Yin Yin Toe (2010) and Aye Aye Thin (2017) stated that the capitula of this species are heterogamous disciform. Therefore the present studies were agreed with previous findings.

*Erigeron sublyratus* DC. was abundantly growing in wet places in Sagaing and Shwebo District in Sagaing Region. This species has leaves sessile, coarsely toothed or subpinnately lobed, ray floret without lobed. Dassanayake (1980), Yin Yin Toe (2010) and Aye Aye Thin (2017) stated that the ray florets of *Erigeron sublyratus* DC. are absent lobed.

Capitula of *Praxelis clematidea* (Griesb.) R.M. King & H. Rob. was conical and discoid capitula. Therefore, the characters of this species were agreed with Bean and Pruski (2009), Wu *et al.* (2011) and Monika (2014).

*Sphaeranthus indicus* L. has stems with strongly scented 4 winged, the peduncle with deeply crenate 3 wings and yellow anther. The conical receptacle of *Sphaeranthus indicus* L. are absent fistular. This character is agreed with previous findings. *Sphaeranthus peguensis* Kurz. ex C.B Clarke. included tribe Inuleae has the peduncle without wings and yellow florets and purple anthers. The conical receptacle of this species are present fistular. The character of *Sphaeranthus peguensis* Kurz ex C.B Clarke is agreed with Naidu (2012) and Aye Aye Thin (2017).

*Parthenium hysterophorus* L. have female ray florets and male disc florets, achene having spoon-shaped appendages. The species that possess these characters are similar to Muhammad *et al.* (2017), Rahman (2008), Sudhakar *et al.* (2008) and Naidu (2012).

The characters of *Lagascea mollis* Cav. were coiled style, ribbed achenes, black stamens. This distinct characters were agreed with Bean (1965), Rahman (2008) and Naidu (2012).

The species of family Asteraceae are seed dispersal, they grow rapidly and distribute enormously. According to the field studies, members of the family Asteraceae can grow on the climate of the research from the present study. The present study can give valuable information about some members of the family Asteraceae.

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