

**TAXONOMY & FLOWER STAGES IN *EMBELIA RIBES* BURM F****Syed Asadulla<sup>1\*</sup>, Ramandang<sup>2</sup> and Rajasekharan<sup>3</sup>**<sup>1</sup>Oxbridge (CNK.Reddy). College of Pharmacy, Mahadeshwaranagar, Vishwaneedam Post, Magadi main road, Herohalli Cross, Bangalore, Karnataka, India.<sup>2</sup>Al-Ameen College of Pharmacy Bangalore, Karnataka, India<sup>3</sup>Division of PGR.IIHR, (Indian Institute of Horticulture Research), Bangalore, Karnataka, India.**ABSTRACT**

*Embelia ribes* Burm f. Sample were collected from IIHR fields & study was carried out for Standardization for Taxonomy to develop specific Morphotypes of fruits in which it was found that Raceme type of inflorescence contains atleast one auxiliary bunch 28 Flowers and atleast eight terminal bunches each contain eighteen flowers. In sunshine mature flower size width 7.00mm and height 11mm the magnification measurement is recorded with microscopic camera and camera lucida on black paper. Where calyx (5) in which sepal is a cone shape its base-2524 $\mu$ M and length-3598 $\mu$ M, corolla(5) in which Petal width-6458 $\mu$ M and Length-6872 $\mu$ M, pedicel with Gynocium length is 12mm and the total gynocium-7316 $\mu$ M and ovary diameter-4960 $\mu$ M and length-4712 $\mu$ M, Anther range width(5805-2964-877 $\mu$ M) and length(3556-1514-496 $\mu$ M). The Flower Stages in *Embelia ribes* Burm f. is the influential study in crop ratio fertilizer and hormonal changes selection for altering the secondary constituents in sunshine the bud matures to flower and expose the corolla(5) to start network stages this study is carried out with microscopic camera and Camera Lucida to calculate its measurement by magnification technique. In the early morning corolla whorl is exposed to sunlight which contains a sticky fluid in its network tubules which is activated can be able to detect the pair of red and blue chromatin glands the content of the fluid is pressurized with the network to the filament connective to form the colourfull yellowish pink stamens lead to mature a pair of anthers (10) in each of the corolla (5) by wind or ants pollination spiny ends of the anther (10) rushes to the ovary to form the zygote which develop to fruity berries which contains atleast thousand of seeds.

**INTRODUCTION**

Synonym: *Amogha*, *Bhabhiramg*, *Vidanga*, Habitat are climbing shrub an Altitude in India 1500 m(5000 ft ), stem is long slender brittle, bark studded with lenticels, Leaves simple, coriaceous, asymmetric alternate, elliptic-ovate-lanceolate, smooth leaves gland dotted, short and obtusely acuminate, broad, entire upper surface is perfectly glabrous and shiny, lower surface is buff with nodulated glands.

**OBJECTIVE**

*Embelia ribes* Burm f. fruit is investigated for its superior quality in terms of curing multi-

disease shrub so the demand rises & force to adulterate very easily atleast twenty similar varieties of fruits obtain from various geographical zones In India for which specialized methods are established for propagation to conserve its variety.

**EXPERIMENTAL METHODS**

In sunshine the flowers mature due to its network stages of corolla can be able to distinguish by microscopy at 10x eye piece & 10x objective piece and the size can be able to tabulated with the help of Camera Lucida and black paper drawn with the help of white pencil and the calculation is predicted with the help of

microscopic magnification power as 10 cm line matches with stage micrometer and eye piece micrometer and calculated as stage/eye piece x 100 and result tabulated.

### DISCUSSION AND RESULTS

Mature leaf is about 3 inch long and 1 ½ inches broad, shiny above. Petiole is 1.0cm, midrib is prominent, racemes type of inflorescences shown in “figure no 1” & flower buds in “figure no 2” are small globules greenish yellow before maturing, after maturing in sunshine the sepal from calyx (5) in “figure no 3” and the Petiole is greenish yellow & petal from corolla (5) is whitish pink in which one of the corolla is bigger than 4 number Stamens (5) are dark yellowish-pink arranged radially which is cone shape and spiny structure is inclined & broad structure shows divided into two anthers as projected tapering styloid which is attached dorsifixed stamens with the filament attached at 45° angle The sepals in figure no 4 shows attached to the petiole with a marking above the neck at 45° angle shows a shape of hand as 3 fingers as dentate and short toes.

The flower Stages of the *Embelia ribes* BURM.F. is the tool for the influential study in crop fertilizer and hormonal changes for altering the secondary constituents, first it initiates after the maturation of the budding stage and after sunshine passes for the flowering stages in “figure no 5”

Once the corolla is exposed in sunshine which continues the formation of network shows capillaries and tubular anatomized connections as a white crystal clear tubular filaments which gives rise to the formation of a pair of chromatin bulbular red glands and tubular blue glands which anastomises to inter connects in micro network proceed to form the dorsifixed-stamen with the filament.

For the maturation of the stamen a pair of chromatin glands prepares a sticky fluid which rushes through a filament to stamens in sunshine, the stamens will show the yellowish–pink colour which leads to its maturation and awaiting for ants pollination which helps in fusion of the anther and gynecium (ovary) during which some of the stages are shown below are as follows.

1. Net work of the crystal clear white tubular filaments as plain corolla.
2. Formation of a pair of chromatin bulbular red glands and tubular blue glands in between the crystal clear white tubular filaments in network of plain corolla.
3. Pumping of a sticky fluid through a pair of chromatin bulbular red glands and tubular blue glands through a filament and passes to the stamens.
4. Development of the stamens in the centre of the corolla which shows the brownish black colour at the centre and radiates the blue colour at the borders in the shape of butter fly.
5. Distinguishing stamens as in pink colour and a network in the corolla shows a reddish pink in colour.
6. Stamen as pink colour in heart shape at the centre of the corolla and network of the corolla colour as brownish pink colour.
7. Maturation of stamen as yellowish–pink colour at the centre in the corolla white colour.
8. Stamen in the form of cone shape one end is sharpen at base and the broad end is tapering which connects at the middle to the filament of corolla.
9. Separation of the corolla and stamen with the globular petiole.
10. A brown colour individual anther.
11. Globular round shape Gynecium (ovary) attaches with the help of wind and ants pollination, the petiole and calyx is shown as a cone to triangular shape.
12. Fusion (fig: 6, & 5.12) of anther and gynecium (ovary) are recorded for the formation of fruit and the separation of the stigma and style of gynecium and filament with connective of stamen is recorded in the study with shape and sizes.

### CONCLUSION

The Flower Stages in *Embelia ribes* Burm.f. is the influential study in crop ratio fertilizer and hormonal changes selection for altering or to maintain the percentage of the secondary constituents in the seeds/fruits of *Embelia ribes* Burm.f.

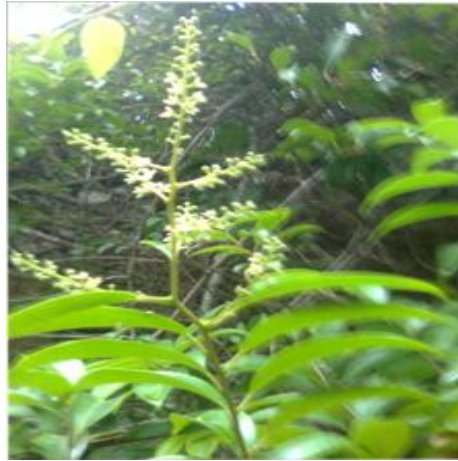


Fig. 1:



Fig. 2:

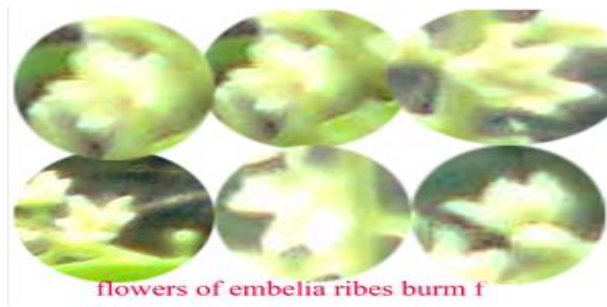
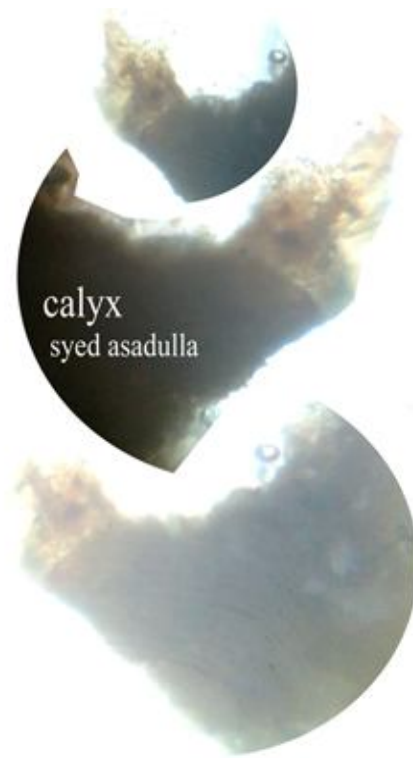


Fig. 3:



**Fig. 4:**

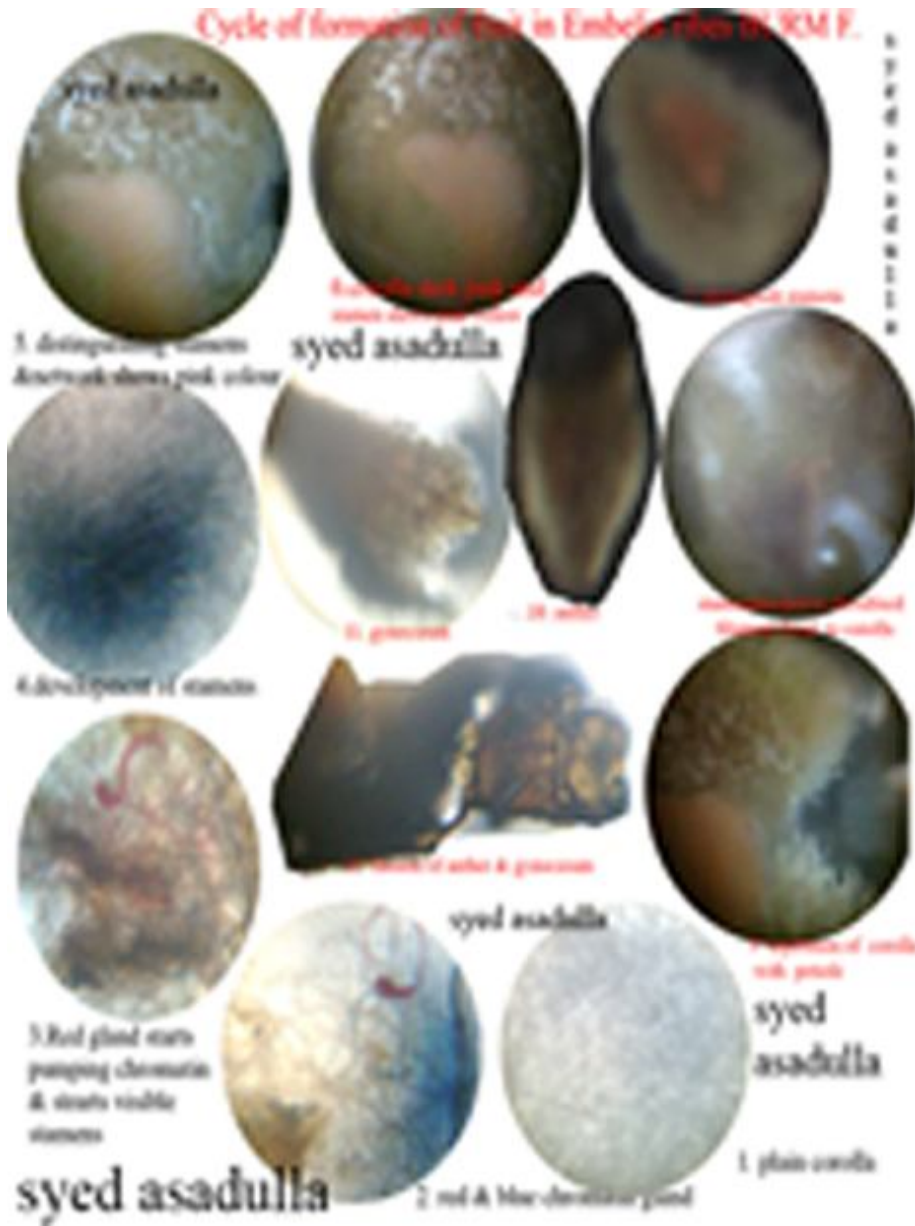


Fig. 5:



**Fig. 6:**

Table

S.No	Taxonomy	Type	Measurement
00	Raceme type inflorescence	Auxiliary flowers*1	28 F
		Terminal*8	18F
01	Mature flower size in daylight	width	7.0 MM
		height	11.00 MM
02	Sepal(cone shape) Mature4+1	Width at base	2523.7 $\mu$ M
		length	3597.9 $\mu$ M
03	Sepal (cone shape) young4+1	Width at base	711.8 $\mu$ M
		length	2523.7 $\mu$ M
04	Petal Mature (4 small + 1 big)	Width at centre	6458.1 $\mu$ M
		length	6872.2 $\mu$ M
05	2no of Blue gland in Petal.	diameter	51.8 $\mu$ M
		length	3740.3 $\mu$ M
06	2no of Red gland in Petal.	diameter	90.6 $\mu$ M
		length	5500.4 $\mu$ M
07	Stamens Mature *5	Width at centre	5805.6 $\mu$ M
		length	3556.1 $\mu$ M
08	Anther.	Width at centre	4928.9 $\mu$ M
		length	3241.84 $\mu$ M
09	Anther.	Width at centre	2963.8 $\mu$ M
		length	1514.3 $\mu$ M
10	Anther. Young.	Width at centre	876.6 $\mu$ M
		length	496.2 $\mu$ M
11	Pistilate	length	1819.4 $\mu$ M
		Width at base	1075.1 $\mu$ M
		Width at centre	810.5 $\mu$ M
		Width at apex	578.9 $\mu$ M
12	Gynocium with Pedicle	Total length	12.00 MM
13	Pedicle	diameter	1,554.8 $\mu$ M
		length	7412.9 $\mu$ M
14	Stigma.	length	1835.9 $\mu$ M
		diameter	479.7 $\mu$ M
15	Stigma projection	extension	181.9 $\mu$ M
		diameter	380.4 $\mu$ M

## REFERENCES

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