(V)

SHIFTING IN FLOWERING BEHAVIOR OF *MYRICA ESCULENTA* BUCH- HAM. EX. D.DON- A REPORT

Kaphal (*Myrica esculenta,* Buch-Ham. Ex. D.Don) is a sub temperate evergreen tree found throughout mid himalaya, starting from 1,300 m upto 2,100 m amsl. It is a moderate sized evergreen 3-15 meter high, dioecious tree, widely distributed from Ravi eastwards Assam and in Khasi, Jaintia, Naga and Lushi hills between altitude 900 and 2100 m amsl (Hooker, 1876, Anon., 1962). In Garhwal and Kumaon Himalaya it is commonly grown under–canopy associate of chir pine and banj oak forests (Bhatt *et al.*, 2000). The tree is well known for its delicious fruit having sourish sweet taste and also used in preparation of refreshing drink.

A field visit was conducted during end of July, for the collection of elite vegetative propagation material for planting out in the nursery beds as well as air layering on the standing *Myrica esculenta* trees at Khirsu forest area near Pauri hill station Uttarakhand. In the Khirsu Pauri and Khirsu Pitundikhal Road, three *Myrica esculenta* trees were observed bearing flowers and one tree was bearing flowers as well as fruits. Some fruits were green (unripe) while others were pinkish and red colour (riped). One tree was seen, badly affected by fire flame, in Khirsu-Pauri road during summer whose upper branches were half dried and resprouted from the bottom side showing new shoots, bearing the panicles as well as ripened and unripe fruits. But at Khirsu Pitundikhal road side a tree was observed bearing the unripe fruits only. After one month, the same area was revisited and it was observed that most of the *Myrica* trees were flowering. Other side i.e. on the way of Shrinagar-Khirsu, the village like Ujjwalpur, Markhora, and Guar, etc. kaphal trees were profusely flowering. When local people were asked about this untimely flowering phenomenon they told that for the first time this type of flowering was seen and only fifteen days ago i.e. during mid August the village children plucked fruits which were full of pulp as well as of big size. They also told that though the fruit bearing percentage was less but the fruits were as tasty as in the mid summer season.

The area was surveyed thoroughly up to 3 Km way from Khirsu to Pitundikhal road to observe the phenomenon of flowering. In that area trees were also profusely flowering. This area was revisited in the first week of October, all the flowers were either shrinking or in drying condition which might be due to low temperature and unsuitable time for the fertilization and fruit development.

As per the literature, flowering season for *Myrca esculenta* starts from the first fortnight of October and continues till the second fortnight of December. Similarly fruiting season starts from the last week of March and continues till the last week of June depending upon the climatic condition and species (Kanjilal, 1969, Patel and De, 2006). In another genera red bayberry (*M. rubra*), the indigenous species of China flowers at the end of winter and fruits born on the panicles are harvested over 2-3 weeks in midsummer (Li and Dai, 1980; Li *et al.*, 2003).

In this area only 3-4 trees were observed flowering at the end of July; then it was thought that one cannot say it a climate change. But when approximately 40% flowering was seen in the trees it might be due to fluctuation in climatic condition.

Few trees of *Rhododendron arboreum* were also observed flowering on the same sites. Though this is not the ideal time of flowering for *Myrica* (kaphal), yet few trees in the big population showed flowering response which might be due to hormonal disbalance or localized change in weather. Generally occur in another forestry and horticultural species comes in news time to time (Abu *et al.,* 2001; Fitter and Fitter, 2002 and Minorsky, 2002). There is need to thorough survey of the area and further study of this unusual shifting in flowering behavior to ascertain actual reasons.

Fig. 1

1. Fruit bearing *Myrica esculenta* tree

2. *M. esculenta* tree with ripe and unripe fruits

3. A twig bearing panicles of *M.esculenta* tree.

4. Close view of flowering twig of *M..esculenta.*

Photograph showing unusual flowering in the Myrica esculenta tree during the end of July.

Fig. 2

1. A complete flowered tree.

2. Close view of flowered tree.

3. Small tree (bush like) also flowered.profusely

4. New inflorescence also emerging in late August.

Photograph showing full flowering in the end of August 2010.

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