



ADDITION TO PLANT GALLS CAUSED BY NON-MIDGES FOUND IN NANDED DISTRICT OF MAHARASHTRA STATE.

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KEY WORDS:

Plant galls, non-midge insects, Nanded, Maharashtra, India.

ABSTRACT:

This research contribution deals with description of some plant galls which are not formed or caused midge fly. Midge flies are major Cecidozoa which cause majority of plant galls. During the studies of plant galls carried out during 2020-2022, some of plant galls were found to be associated with insects other than midge fly from different hot spots of Nanded district of Maharashtra state India.

INTRODUCTION:

Plant galls found on leaf, shoots, stems, roots and inflorescences are develop as a interaction between organisms and plant. The causative organisms of plant galls are known as Cecidozoa or Zooecidia. Protozoas, Nematodes, Mites and Insects are well known Cecidozoans. Plant galls are also caused by Phytoecidia like bacteria and fungi. Over 106 plant galls have been reported from Maharashtra which includes

37 plant galls from Marathwada region (Sharma R.M.2003 and 2009) . More than 25 plant galls previously reported from Nanded district so far.

Family Fabaceae :

Three galls reported from this family include one leaf, one stem gall, one shoot axis galls. These galls are caused by midge (1 gall), coleopteran (1 gal) and one by unknown Agromyzidae. One new and two known galls are reported from study area.

Stem gall of *Butea monosperma* (Lam) Taub. (Unknown beetle: Coleoptera):

Butea monosperma (lam) Taub is a common forest plant found in this part of Maharashtra. It is a medicinally important shrub and leaves are used as astringent, diuretic, tonic and aphrodisiac. The decoction of leaf is used to cure cold, cough related problems. Stem gall caused by an unknown coleopteran insect is reported here with on this host plant species.

Description of gall: stem gall, ovoid or fusiform, sometimes sub-globose; persistent, indehiscent, Solid, woody, some times moniliform series of swellings of the tender branches; gall with same color of the branches, with longitudinal ridges on surface, 30 mm long and 20 mm thick, gall cavity central, narrow, axial, containing a single grub in characteristic double up posture. Pupation in the gall.

Ecological notes: The gall formation was noticed during the months of June-July during 2020, 2021, on both tender and older branches of host plant. Initially galls are of the color of branches but later galls turn brown when old.

Distribution: Earlier a stem gall on *Butea frondosa* Koen, caused coleopteran *Pachyonys quadriders* Chear (Coleoptera) was reported from Deccan & central India. It was also reported from Dhule district of Maharashtra state. A stem gall on *Butea monosperma* (Lam) Taub caused by unknown by beetle is reported herewith, which is the first record of beetle gall from the region on this host plant. This gall is reported for first time from the forests of Barul& Bhokar (Dist.Nanded) Maharashtra, India.

Leaf gall of *Pongamia glabra* Vent Unknown Eriophyes sp (?)(Acarina)

Pongamia glabra Vent. is a common tree that occurs in this region of Maharashtra. It is an economical important plant since the oil extracted from this host plant is used for automobile. **Description of gall:** leaf gall. epiphyllous, rarely hypophyllous, clavate, cylindrical or sub cylindrical, obliform, pedicellate, pouch gall more or less lopsided, usually simple and free, very rarely 2-3 agglomerate, mostly glabrous, green, somewhat pubescent or very rarely tomentose; hard, indehiscent, ostelele hypophyllous, minute nearly obliterated by dense downwardly directed erinial hairs, unilocular spacious cavity; gall tissue simple, large and closely packed parenchyma cell. Some times entire leaf blade is turned in to densely cluster of pubescent and yellowish brown gall, without a trace of free blade. Size 10-12 mm high & 1-2 mm thick at base and 5-6 mm apically.

Ecological notes: The gall formation was observed during throughout the year during study period of 2020-2021; initially the galls are dark green but turn yellow at maturity. Single spacious Gall cavity and lined by dense downwardly directed hairs.

Distribution: leaf gall caused by *Eriophyes cheriani* Masee (Acarini) was reported by Mani (1948) Sunder Raman (1924), Saksena reported from south India. This known mite gall is reported for first time from Vishnupuri, Science College Nanded (Dist. Nanded) Maharashtra state, India. This gall is formed by unknown Eriophyes sp. (?) (Acarinia).

Family Ebenaceae :

Leaf gall on *Diospyros melanoxylon* Roxb (Unknown Homopteran bug)

Diospyros melanoxylon Roxb is common forest tree that occurs in this part of Maharashtra. A leaf gall on *Diosphyros melonoxylon* Roxb is reported as under.

Description: Leaf Gall, epiphyllous, pouch gall, rough, fleshy, indehiscent; Gall usually agglomerate; initially yellowish green but turns yellowish red towards maturity, larval cavity single and surrounded by walls which are rough, tough, dark red. Size variable 8-10 mm diameter.

Ecological notes: The gall formation was noted from October- November during 2020-2022. Emergence was noticed during December, January. Galls develop individually but later 3-4 galls agglomerate. Pupation inside the gall.

Distribution: Earlier a leaf gall on this host tree caused by *Trioza obsoleta* (Buckton) a homoptera was reported from Western Ghats (near Pune) & Melghat tiger reserve (Dist Thane) Maharashtra, India. This known leaf gall is reported for first time from forests of Barul and Kandhar (Dist. Nanded) and caused by an unknown homopteron bug.

ACKNOWLEDGEMENT:

Author express gratitude to Principal, Sharadchandra College, Naigaon (BZ) , Dist., Nanded, for facilities and encouragement.

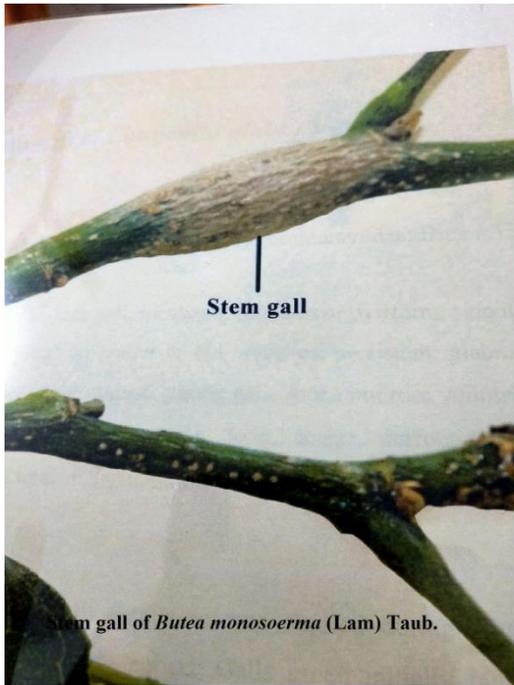
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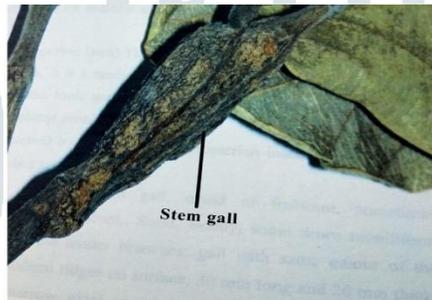
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Leaf gall of *pongamia glabra* Vent



Stem gall of *Butea monosperma* (Lam) Taub.