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Identification of major invasive insect pests, diseases and weeds challenging urban forestry plantations across Addis Ababa city, Ethiopia

Weldesensbet Beze Kassie
Forest Entomology Researcher, Ethiopia
weldesensbetbeze@gmail.com



Introduction

- ❑ Urban forestry is one of the six pillars of the 10-years (2024-2033) Ethiopia's Forest Sector Development Program to improve air quality, shade, reducing energy consumption in buildings, mitigating urban flooding and enhance biodiversity.
- ❑ However, prevalence of invasive insect pests, diseases and weeds have been widely establish and spread within plantation sites.
- ❑ Field surveys conducted repeatedly to identify major invasive insect pests, diseases and weed incidence across urban plantations between September, 2022 to September, 2024.



❑ The major identified pests are *Icerya purchasi* from eight tree species;

- *Icerya purchasi* on eight valuable tree species
- *Cypress aphid* affects *Cupressus lustanica*;
- termites pose a threat to *Eucalyptus camaldunesis* and *Gravilia robusta*;
- olive gall insect pest targets *Olea europaea* subsp. *Africana*,
- scale insects are prevalent on various ornamental trees,
- defoliator insect pest impacts the *Ficus benjamina* ornamental tree,
- *Uromycladium acaciae* is found on *Acacia mearnsii*;
- *Botryosphaeria canker* affects *Eucalyptus* species,
- severe infestation of an unidentified pathogen on *Millettia ferruginea*
- Milk thistle, *Silybum marianum*, is also widespread in urban green spaces.





Severe infestation of Cottony cushion scale on *Cordia africana* tree



Severe infestation of Cottony cushion scale on *Acacia melanoxylon* tree





Severe infestation of Cottony cushion scale on *Grevillea robusta* tree





Olive leaf gall insect pest on *Olea europaea*
subsp. *africana*



Defoliator insect pest symptom on *Ficus benjamina* tree planted
for ornamental purposes





Severe infestation of unidentified insect pest symptom on
Casimiroa edulis leave



Severe infestation of Cottony cushion scale on
Acacia mearensii seedlings





Severe infestation of Wattle rust pathogen on
Acacia mearensii tree



Severe infestation of unidentified pathogen on
Millettia ferruginea tree





Severe infestation of pathogen on *Eucalyptus glubulus* tree





Figure 2. Leave. flower and seeds of *Silvbum marianum* (Photos: bv Weldesenbet Beze).



Conclusion and Recommendations

- ❑ Recommended Solutions to minimize the impacts of key insect pests and diseases are
 - Follow the right tree species in the right plantation sites;
 - Avoid improper silvicultural planting practices;
 - Pruning, weeding and removing infested part of trees in plantation sites;
 - Introducing and releasing biological agents for Cypress aphid controlling, rearing lady birds for Cotton cushion controlling;
 - Using safe plant based chemicals/ oils/ soaps for Scale insects infestations
 - wide and repeated field surveys throughout all Addis Ababa ecosystems to determine the extent of damage of major insect pests and diseases on ecologically and economically important trees by containing and reducing existing infestations.
 - Early detection, identification and Preventive measures typically offer the most cost-effective means to minimize or eliminate environmental and economic impacts.



Thank You.

