

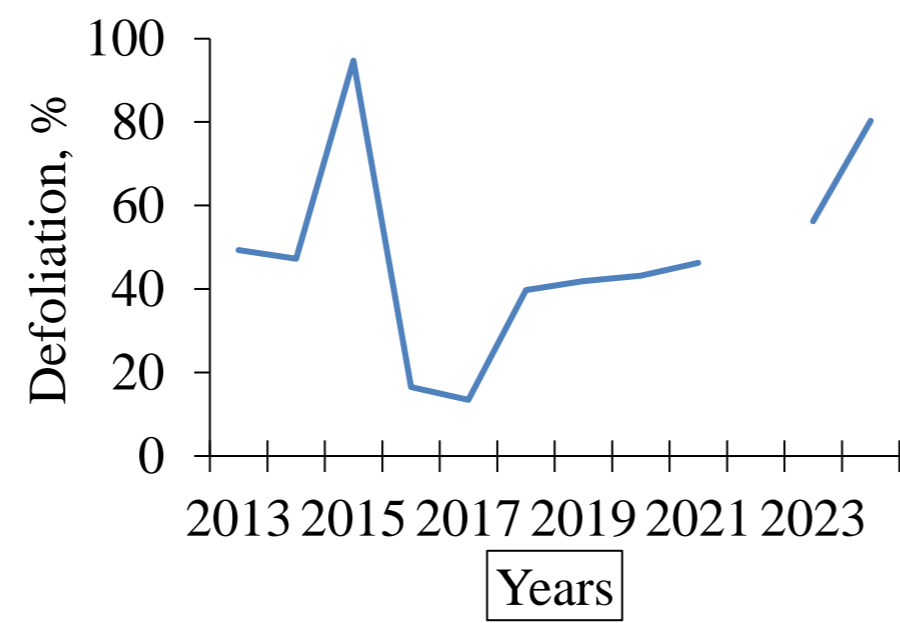
## Emerald ash borer in the park with a long-time history of black ash sawfly defoliation

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### INTRODUCTION & AIM

Emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, 1888 (Coleoptera: Buprestidae) is native to temperate Northeast Asia. In 2019, the pest was found in the Luhansk region of Ukraine, and by 2023 it had spread to Kharkiv and Kyiv regions. Particularly in 2023, EAB began to infest *Fraxinus excelsior* L. in the Molodezhny Park in Kharkiv (50°00' N; 36°25' E) (Ukraine), which had been regularly damaged by the ash black sawfly *Tomostethus nigritus* (Fabricius, 1804) (Hymenoptera: Tenthredinidae) for more than 20 years.



The study aimed to determine tree characteristics that attract EAB

### METHOD

Data about 90 ash trees' defoliation, and health condition were compared to EAB presence in 2023 and 2024, identified by exit holes and indirect symptoms (traces of woodpecker feeding). Epicormic shoots, infestation by *Hylesinus* sp. were also assessed.



Traces of birds feeding

EAB galleries

EAB maturation feeding



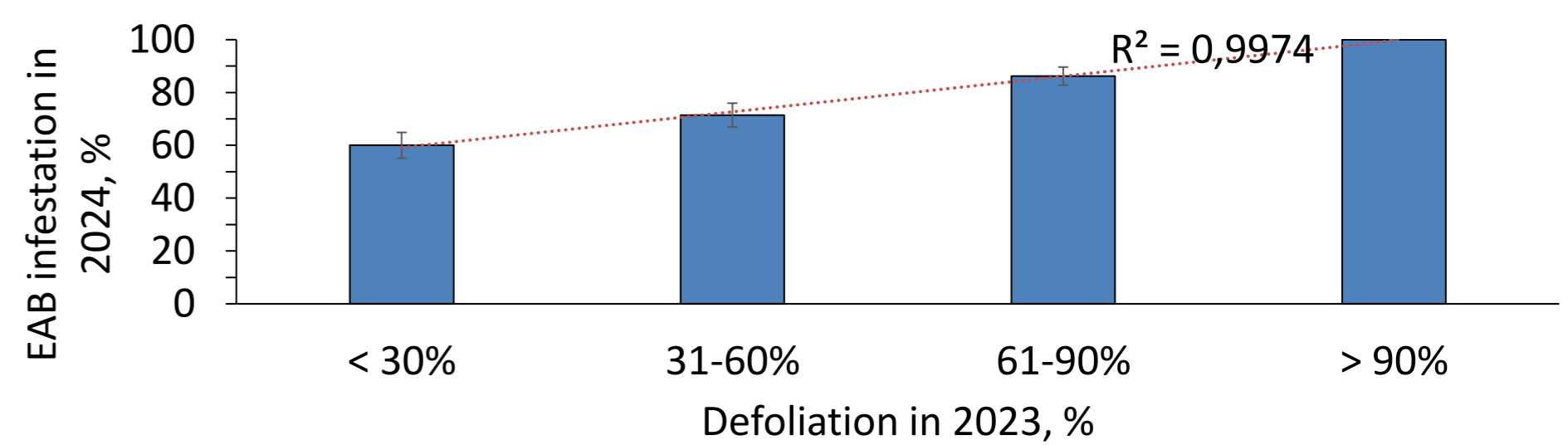
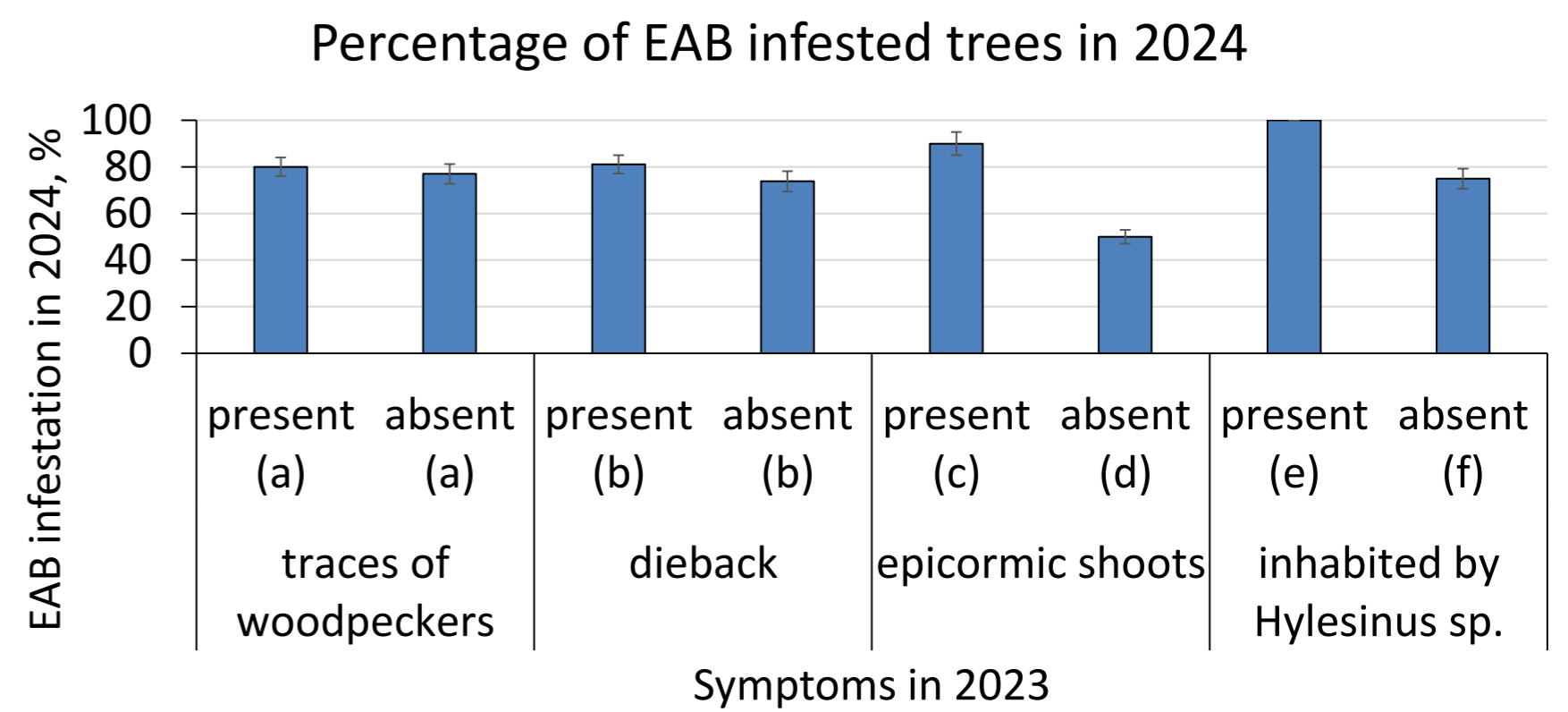
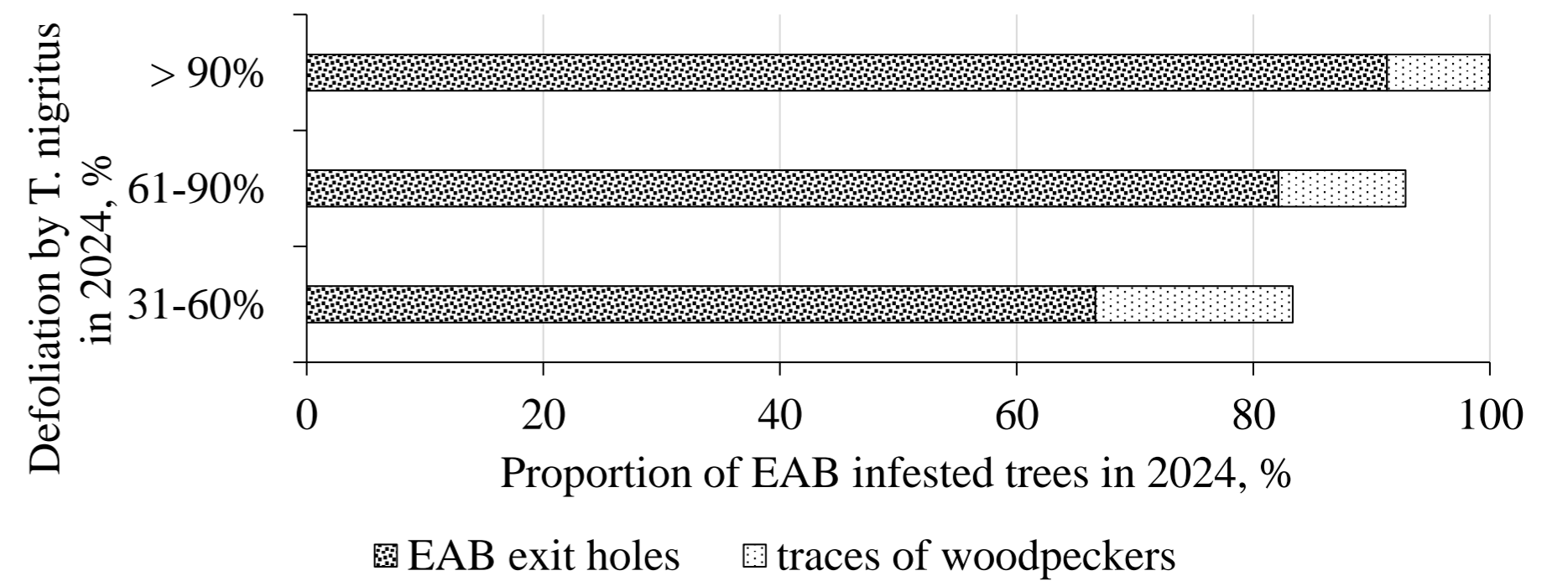
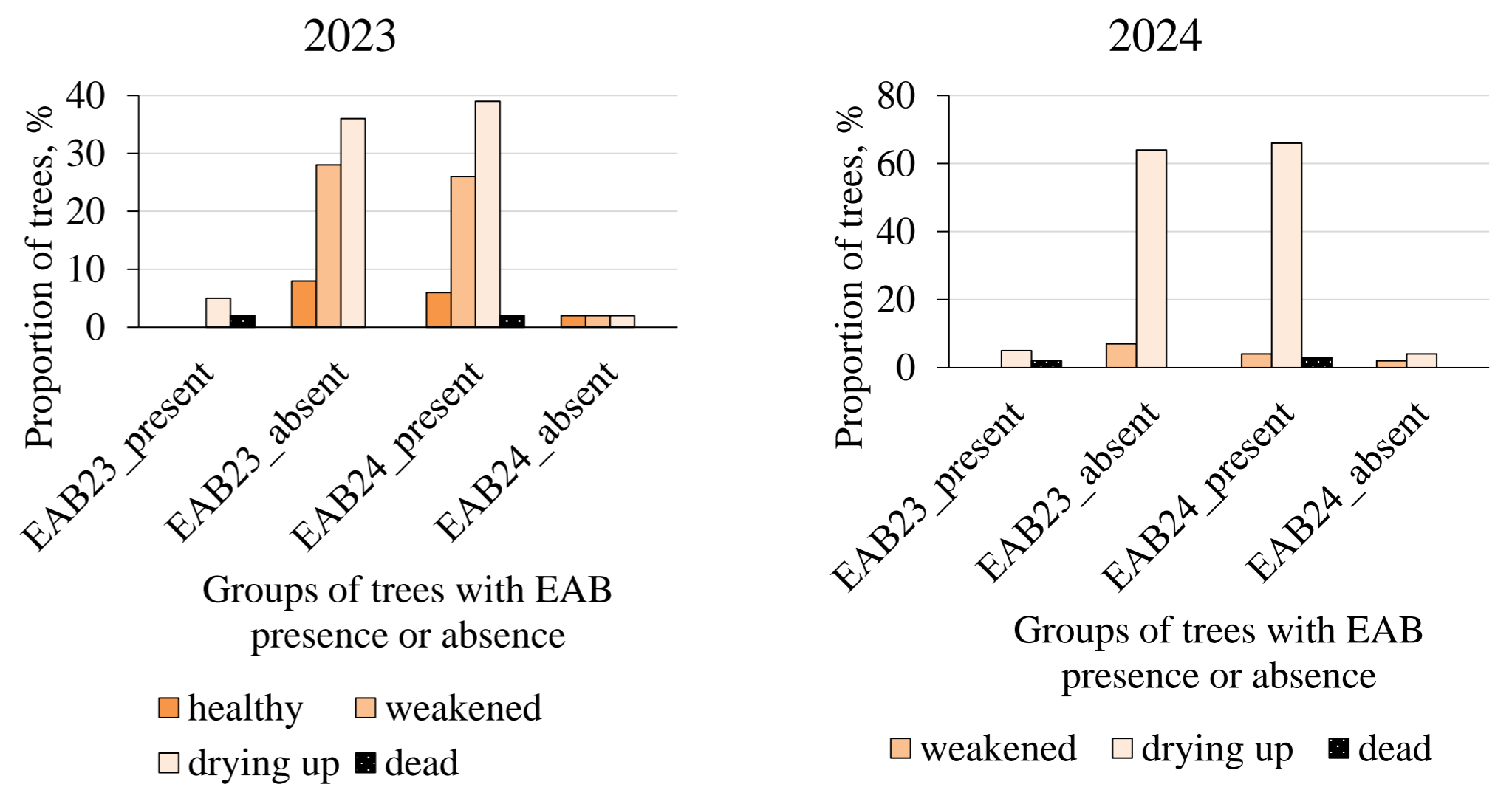
EAB-infested ash tree

EAB exit holes

EAB adults

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### RESULTS & DISCUSSION



### CONCLUSION

In 2024, EAB infested 80% of the trees with traces of woodpeckers feeding, 91.1% with dieback, and 90.6 % with epicormic shoots, as observed in 2023, and all trees colonized by ash bark beetles (*Hylesinus* sp.) in 2023. EAB infestation increased with tree defoliation by ash black sawflies. Indirect symptoms (traces of birds feeding) suggest an additional infestation of more than 13% of trees.

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