Relationship between plant environment and soil animals

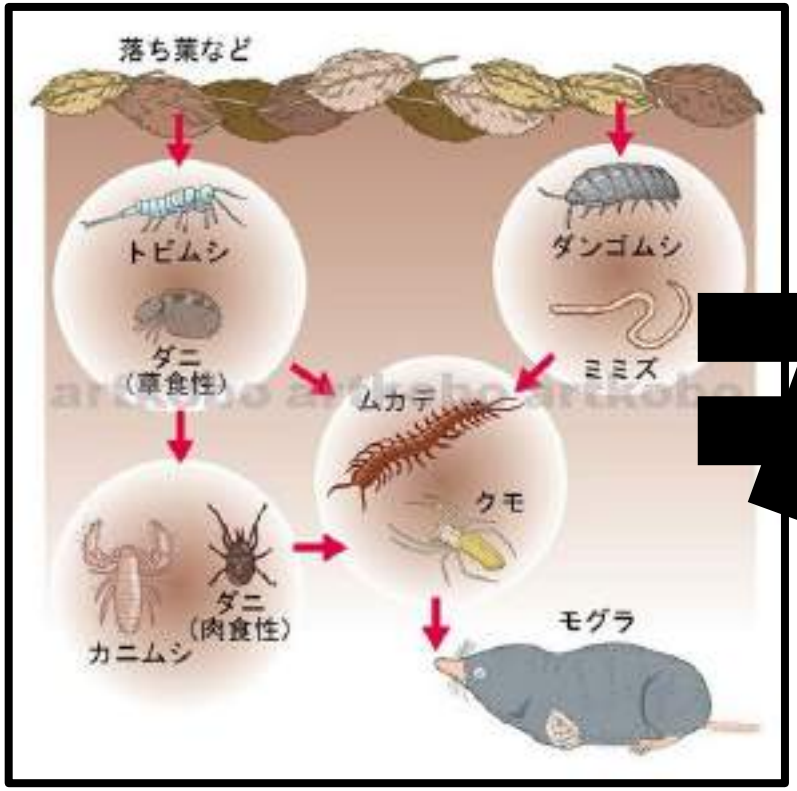
Takefu High School

Introduction

Motive	soil organisms in biology class soil animals are not microorganisms
Background	be interested in this difference in environment

target

soil animals



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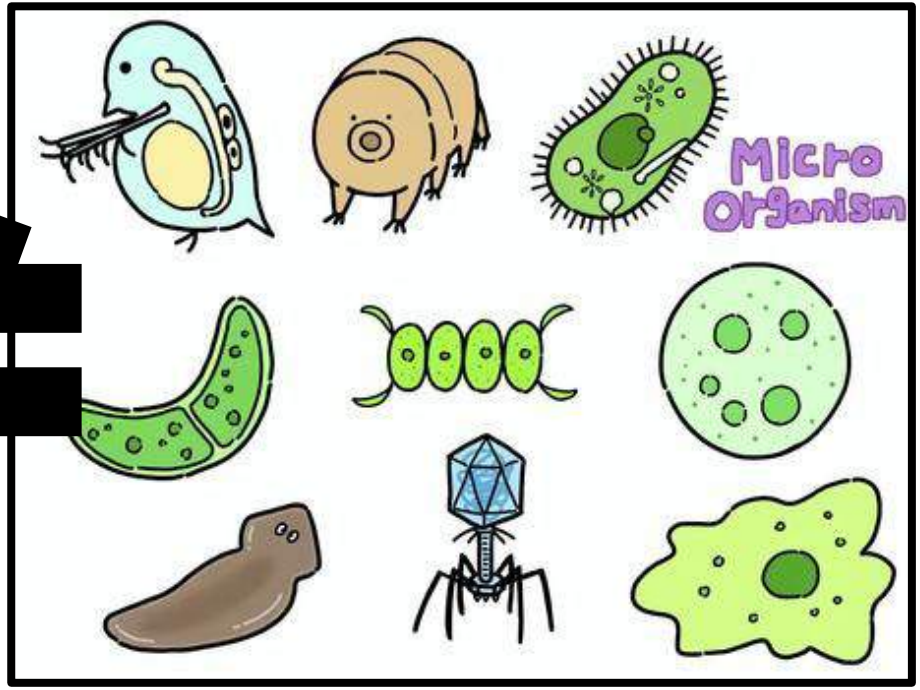
micro organisms



Methods

Going to Mt.Murakuni to collect soil organisms

Collect leaf mold with shovel

Place

broadleaf forest

coniferous forest

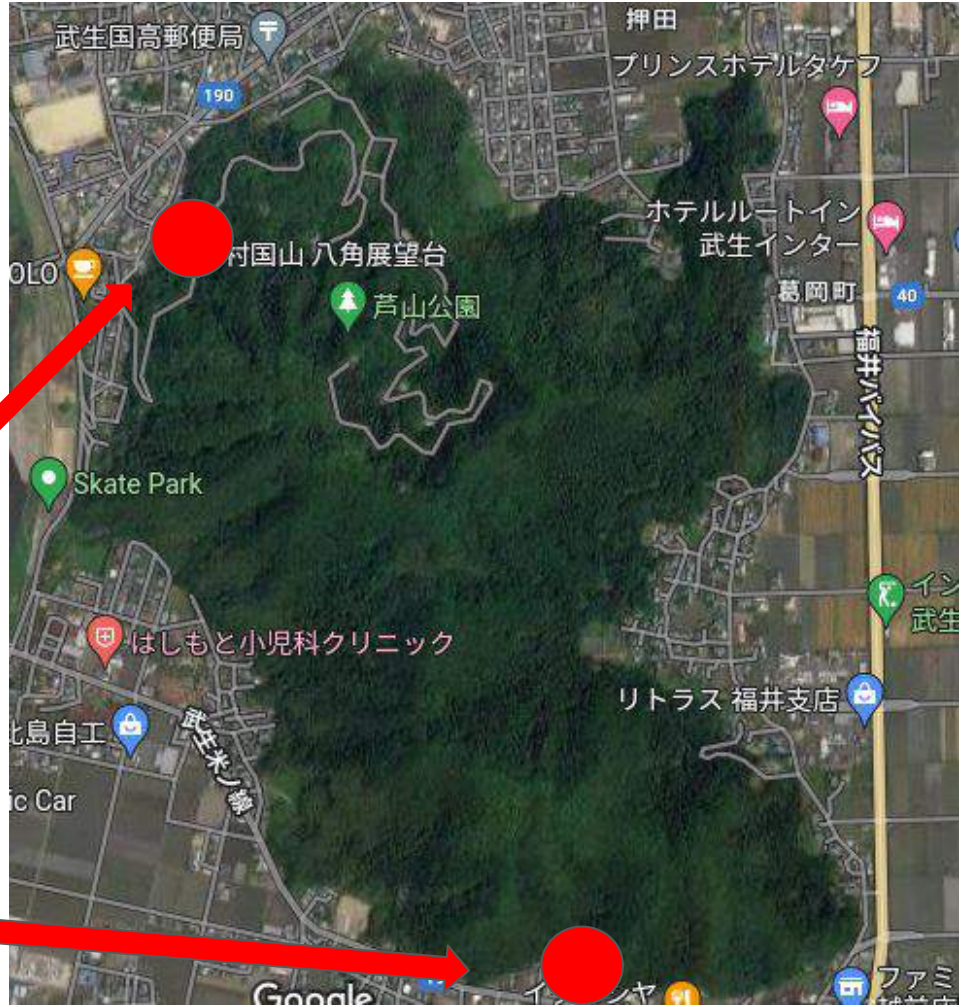
bamboo grove

ground

Location

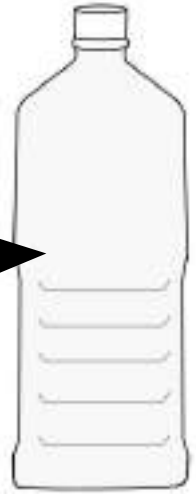
broadleaf and coniferous forest

bamboo grove and ground



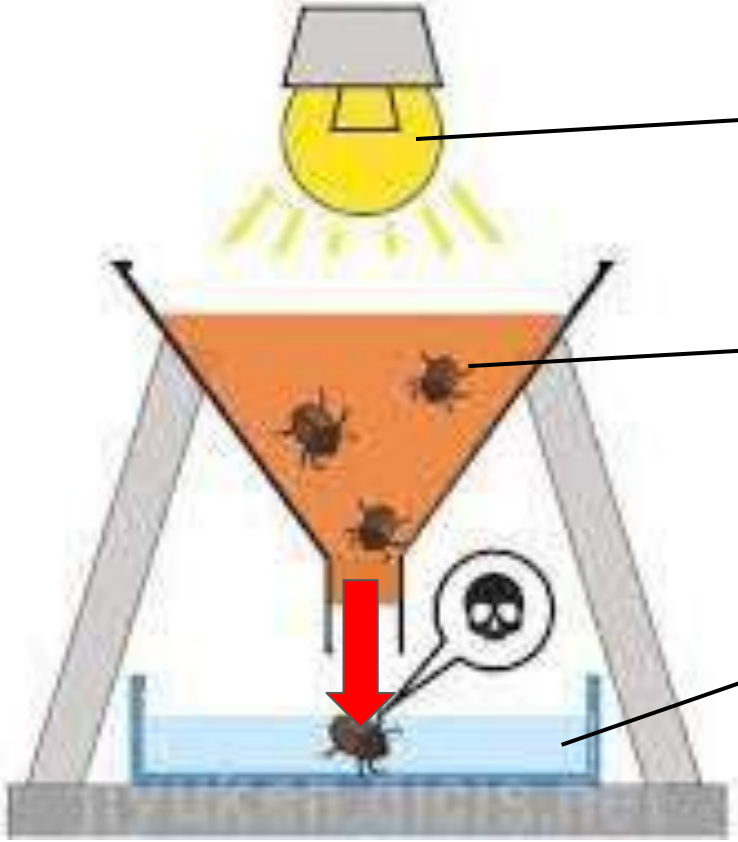
methods

collect leaf mold



500ml plastic bottle

Tullgren Funnel



light and heat sourse

soil sample

70% Ethanol

Methods

- Extract soil animals by tullgren funnels
- Count the number of soil animals by microscope

Species of soil animals

ant

spider

earthworm

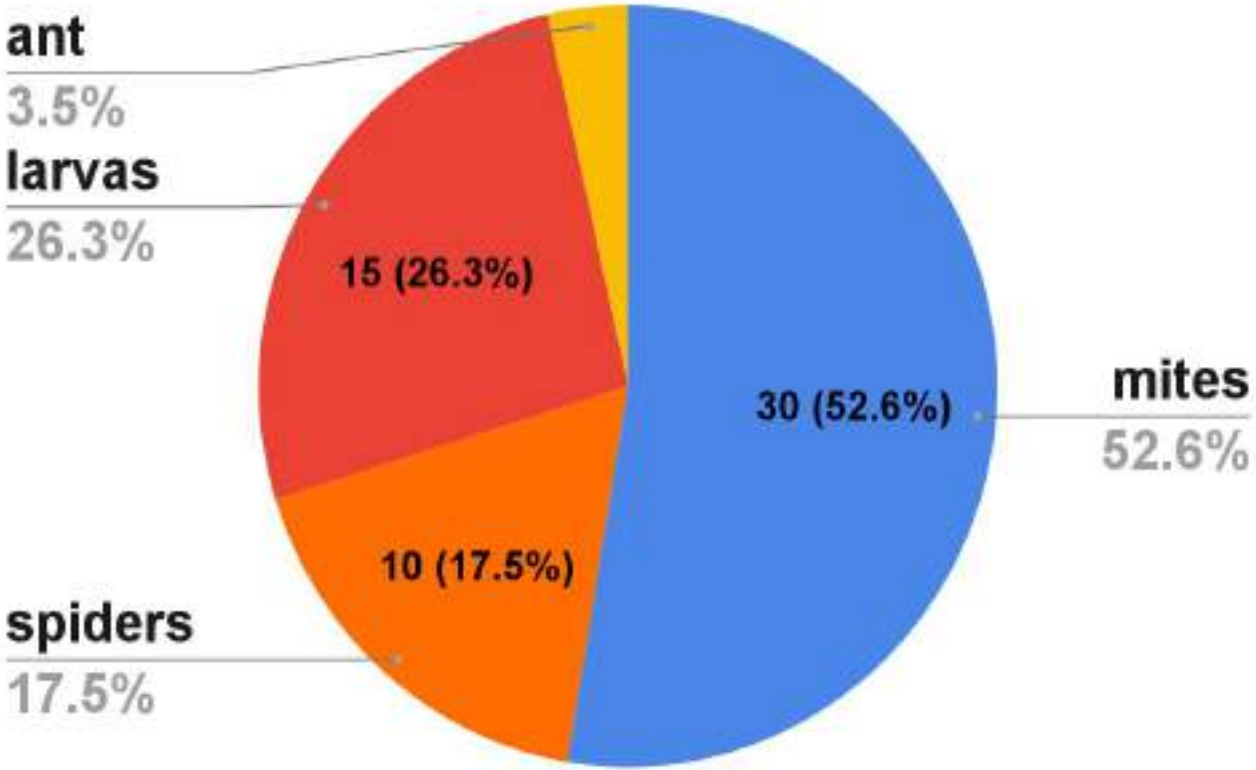
mite

larvas

collembola

Result of first experiment

We collected more than 50 soil animals



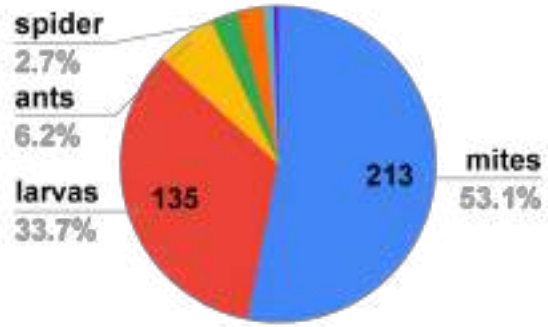
mites

larvas

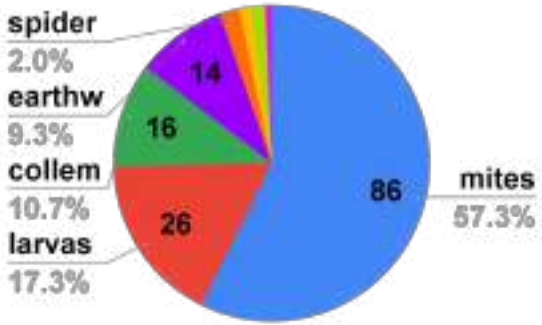
spiders

Result of second experiment

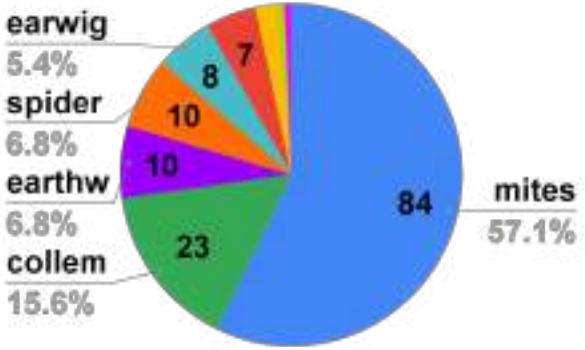
broadleaf forest



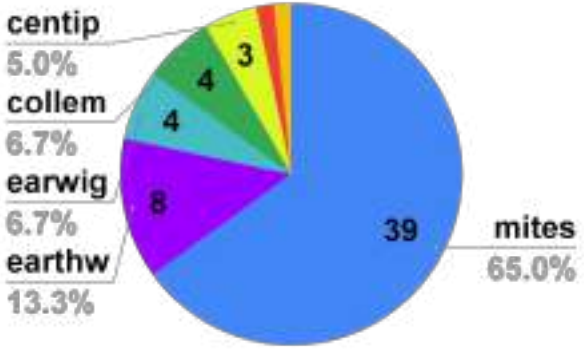
coniferous forest



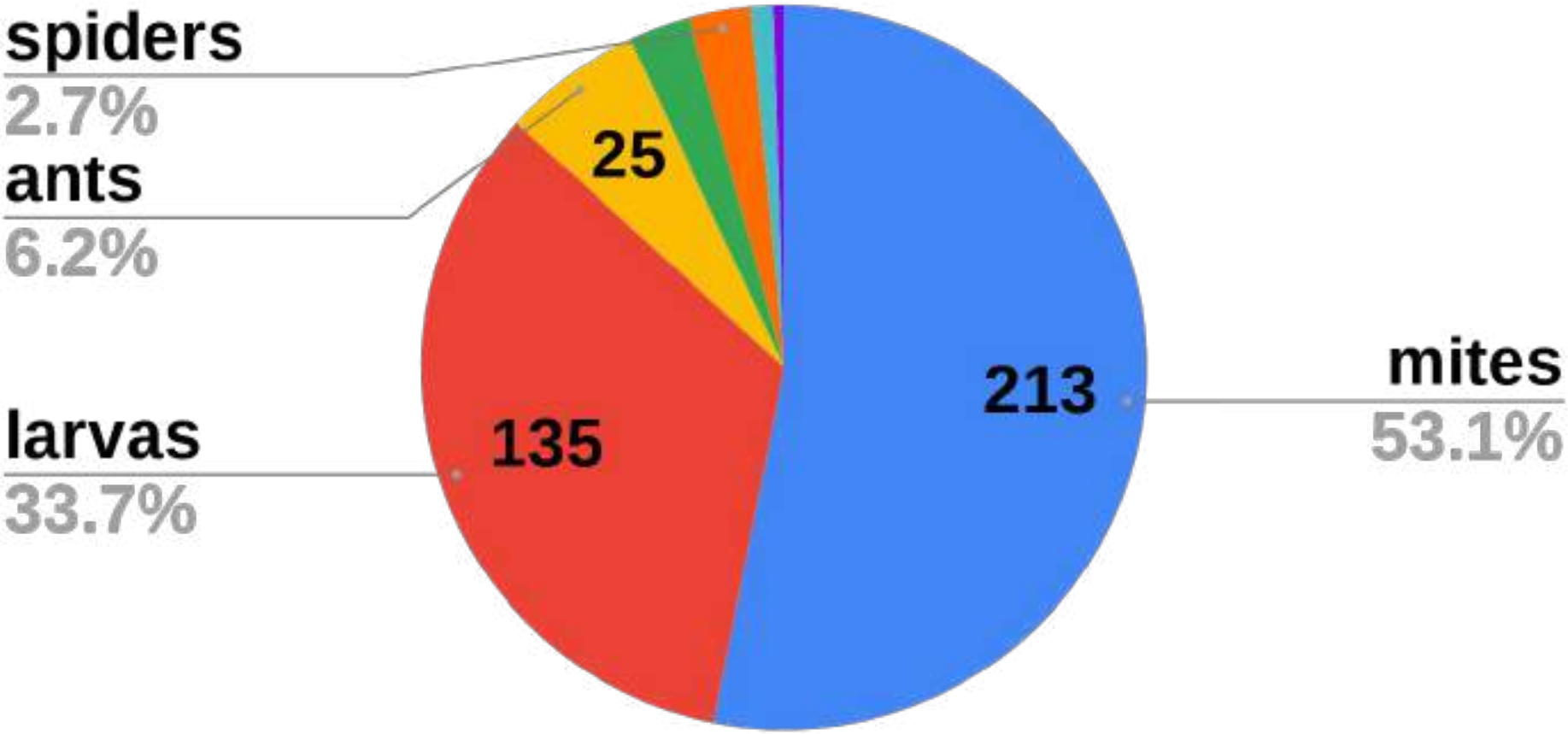
bamboo grove



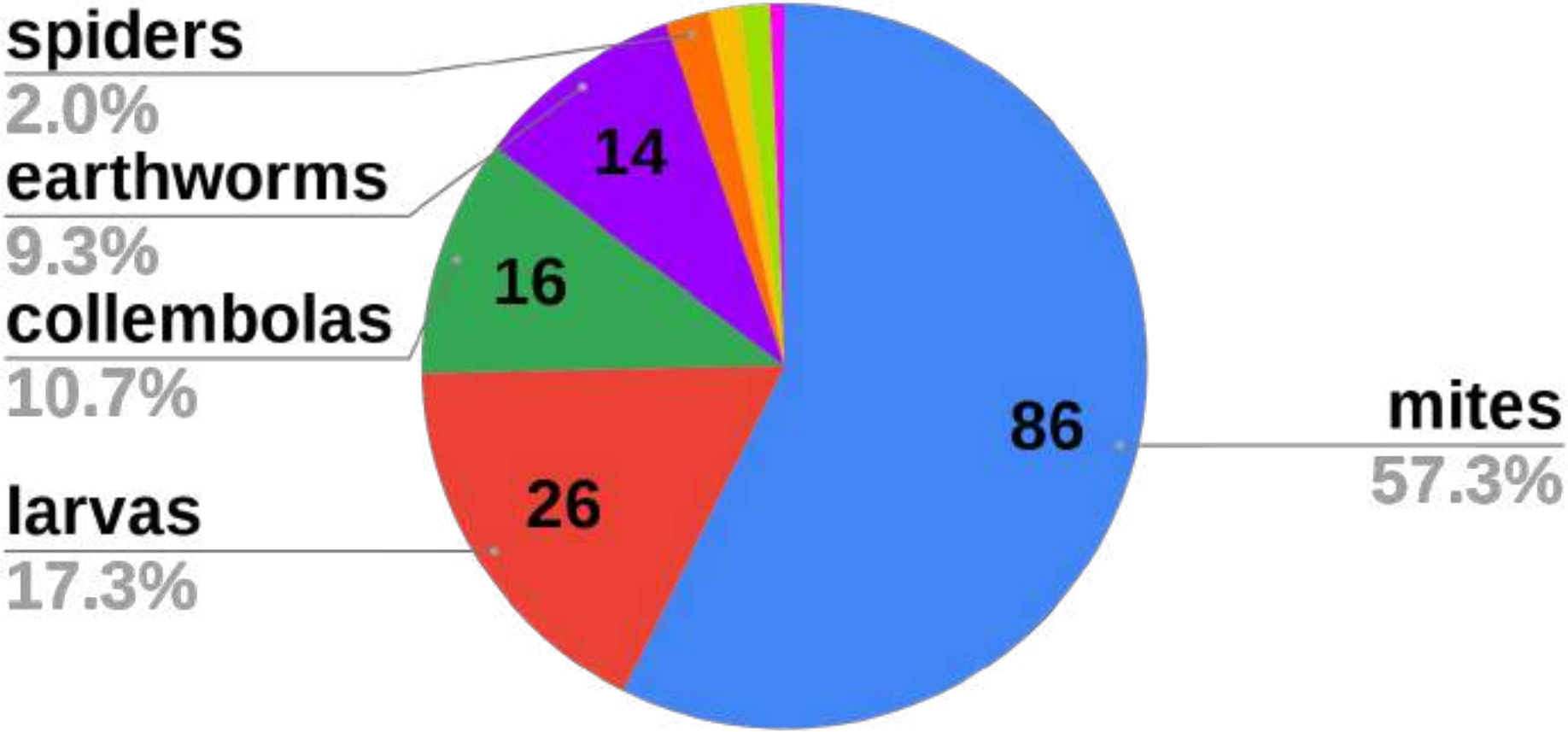
ground



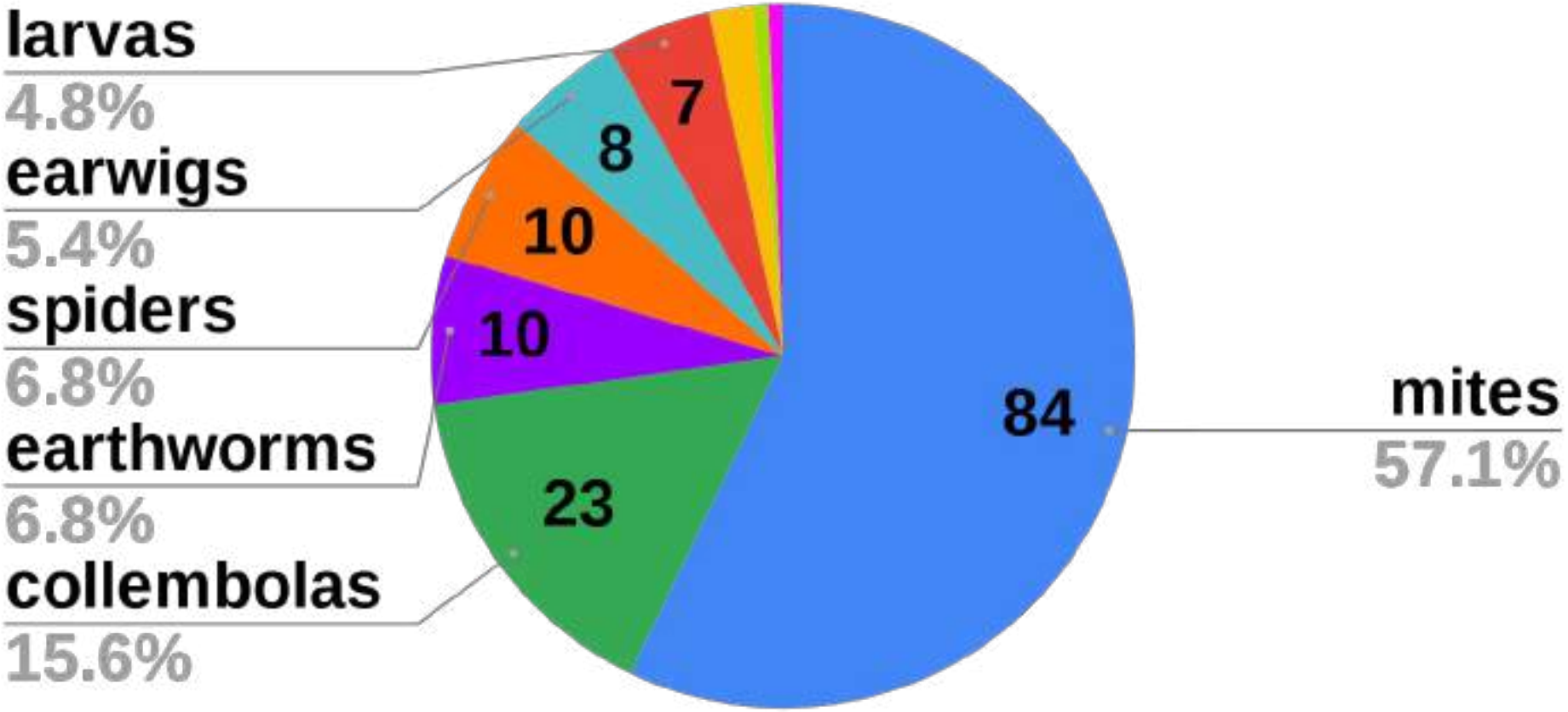
Broadleaf forest (total 401)



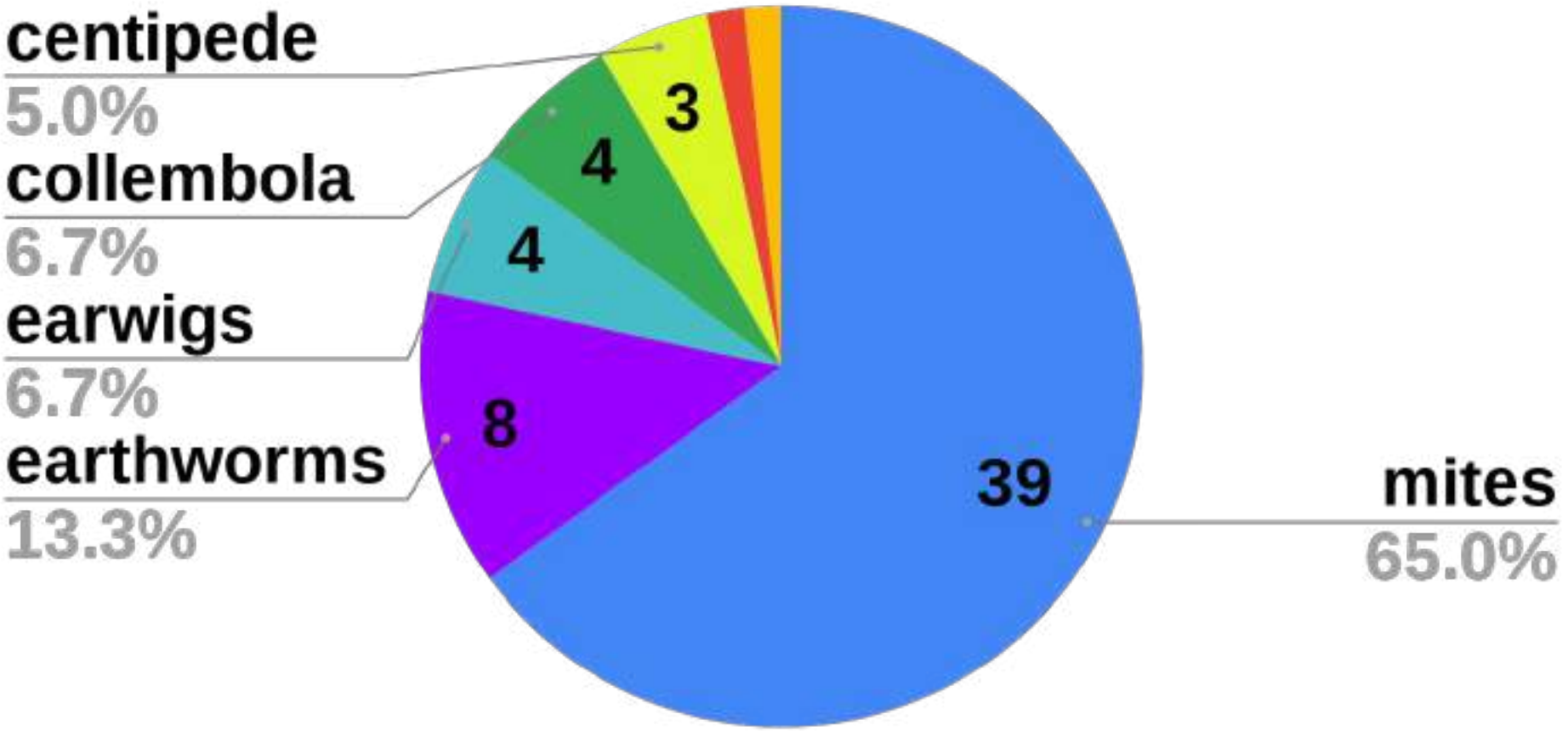
Coniferous forest (total 150)



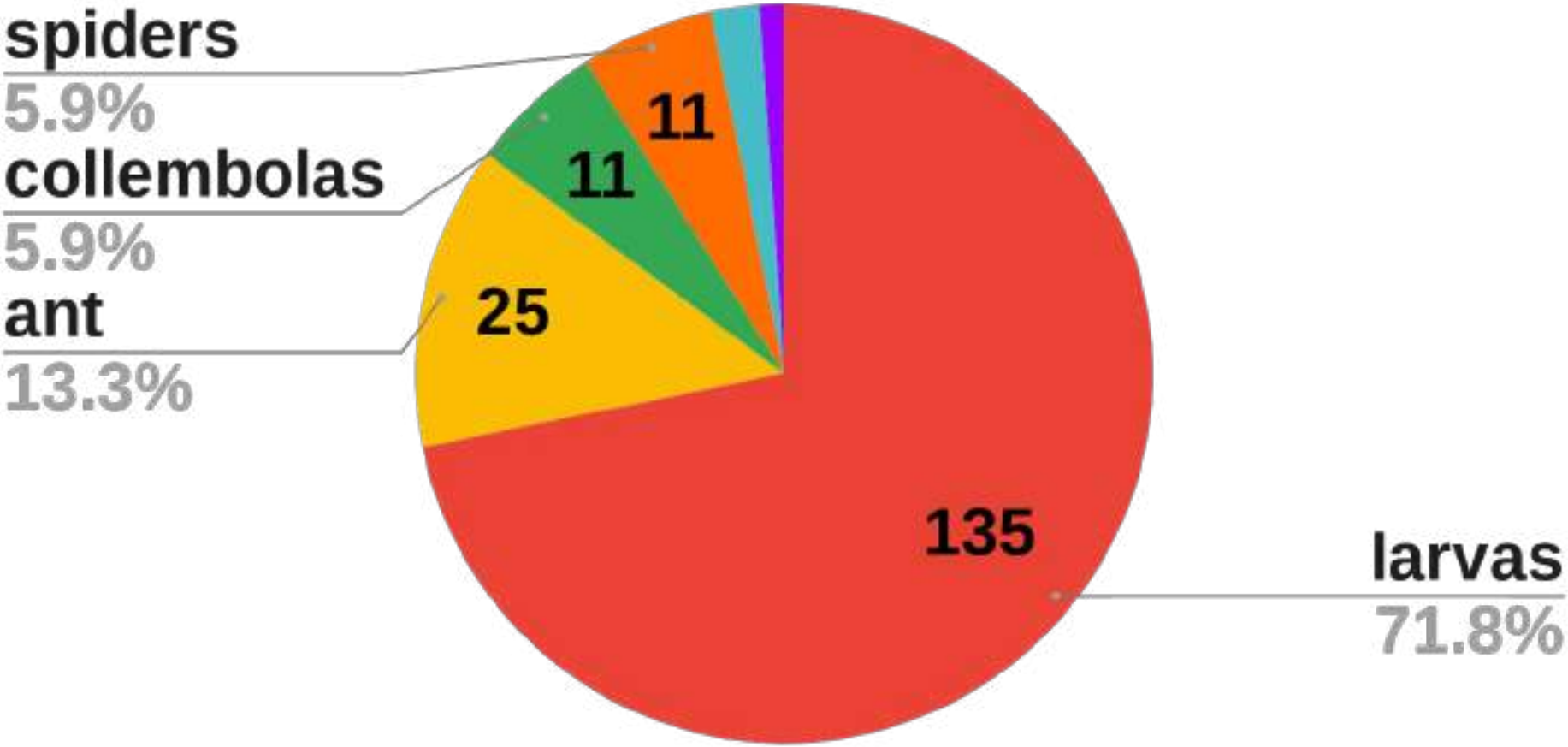
Bamboo grove(total 147)



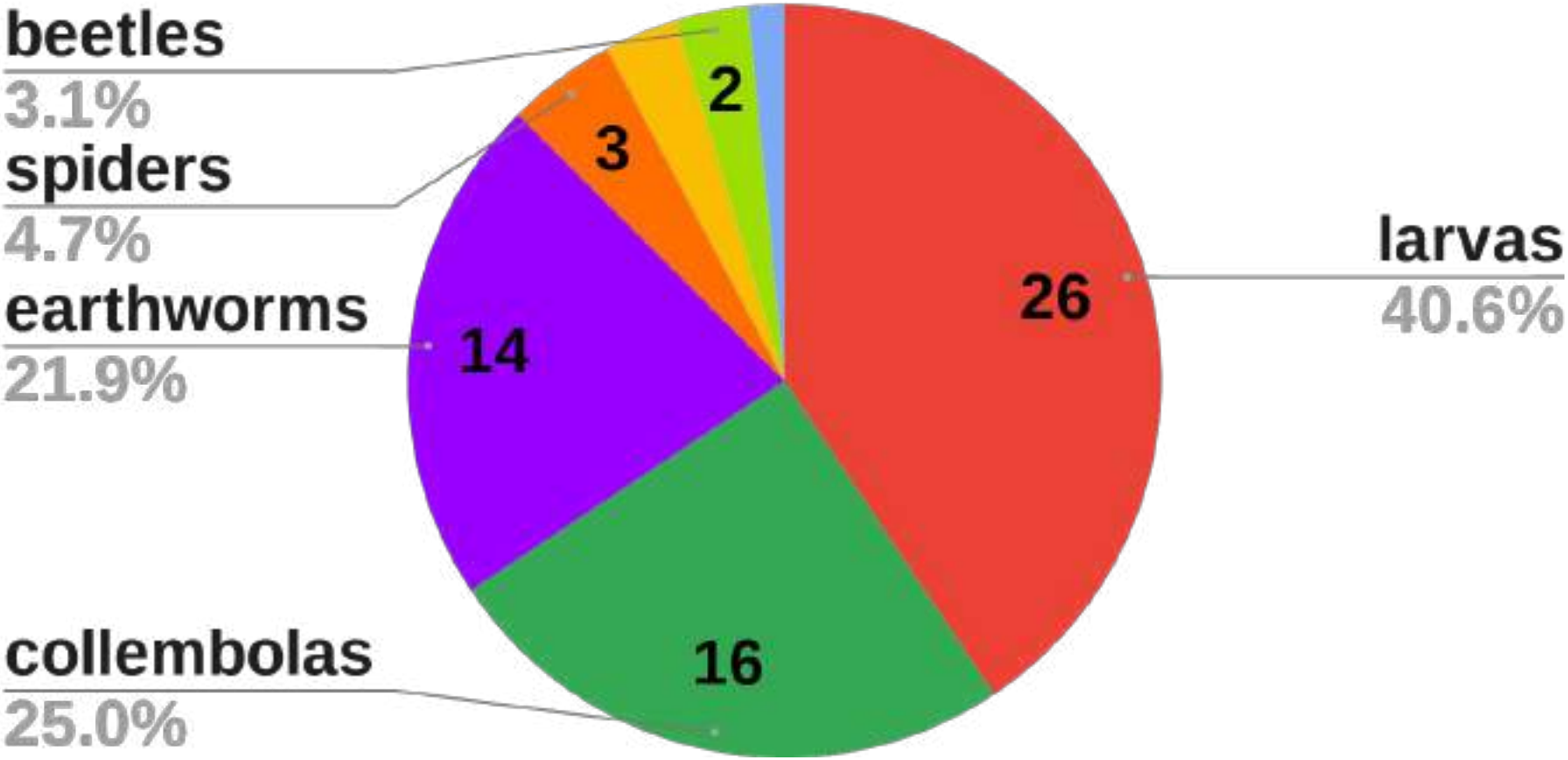
Ground (total 60)



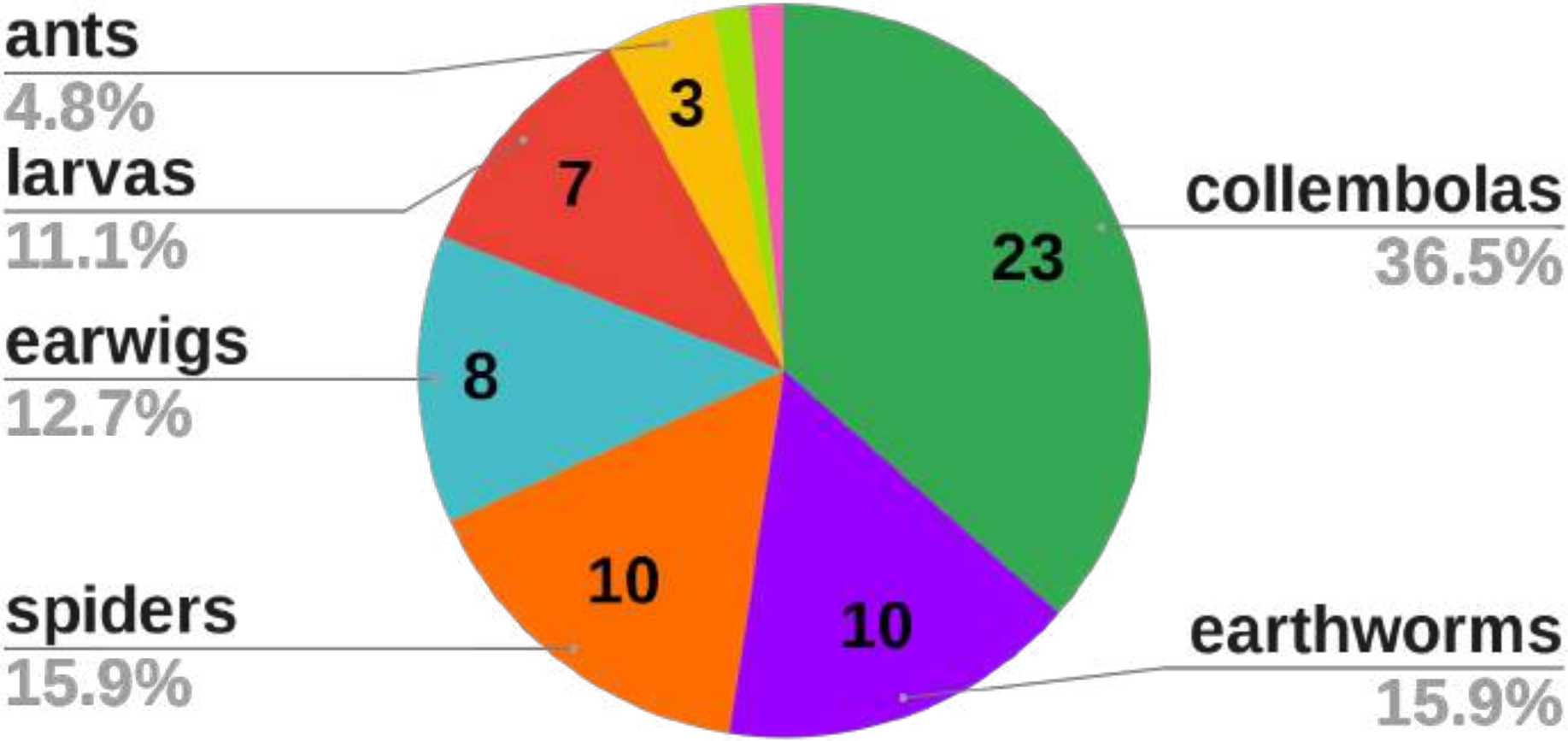
Broaleaf forest (except ants,total 188)



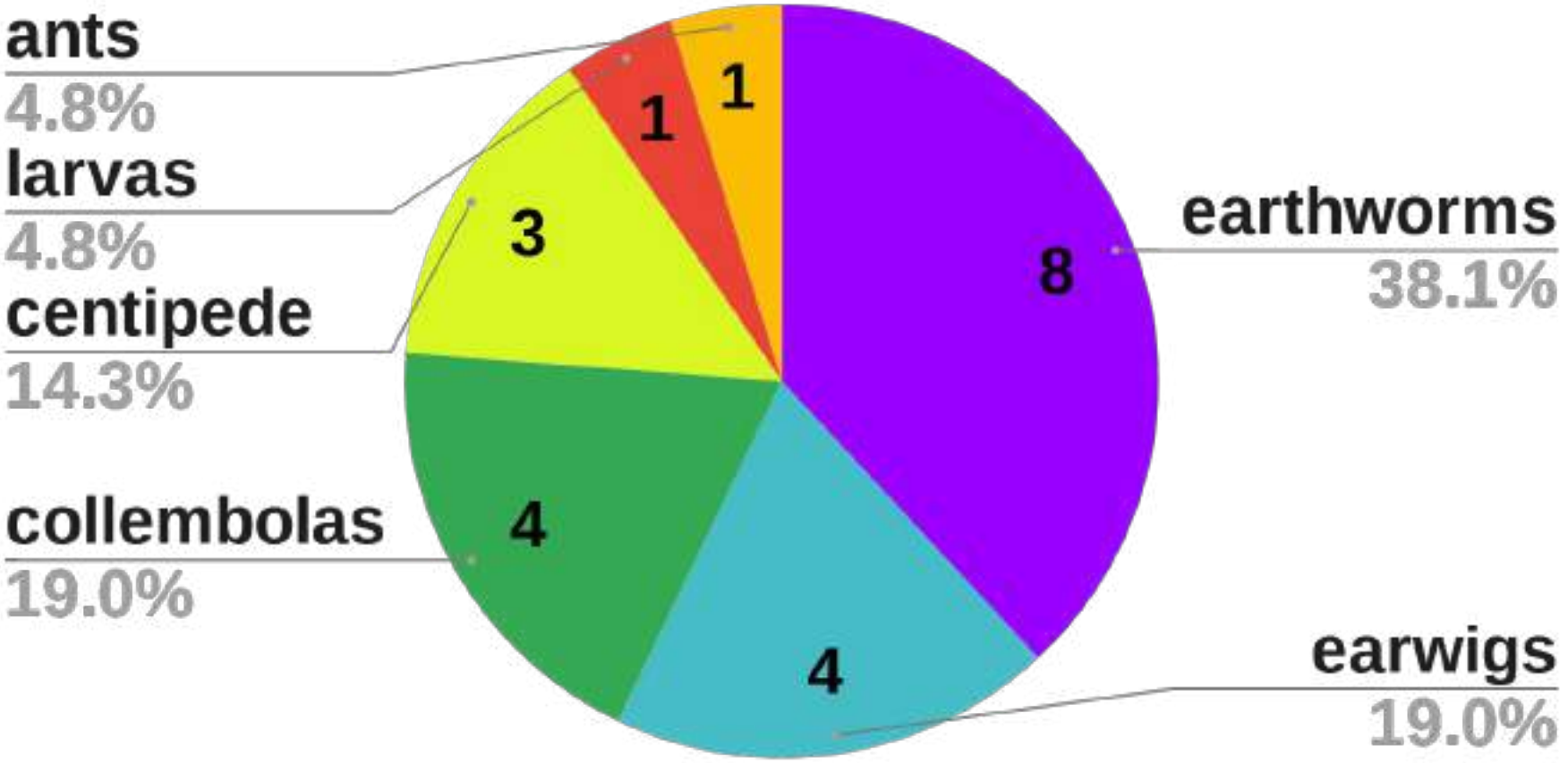
Coniferous forest (except mites,total 64)



Bamboo grove (except mites,total 63)



Ground (except mites,total 21)



Consideration

- the number of soil animals collected from broadleaf forest is the largest because broadleaf forest drops most leaves

- bamboo grove has fewer soil animals than forest, but it is high in the aspect of diversity because it has most species

Conclusion

- We got the largest number of sample at broadleaf forest
- We got the most variable samples at bamboo grove
- more or less, there is relationship between plant environment and soil animals.

Future prospect

fewer times collected

considerations based on season temperature and humidity

fixation of the position to be sampled

quantify the degree of diversity

References

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