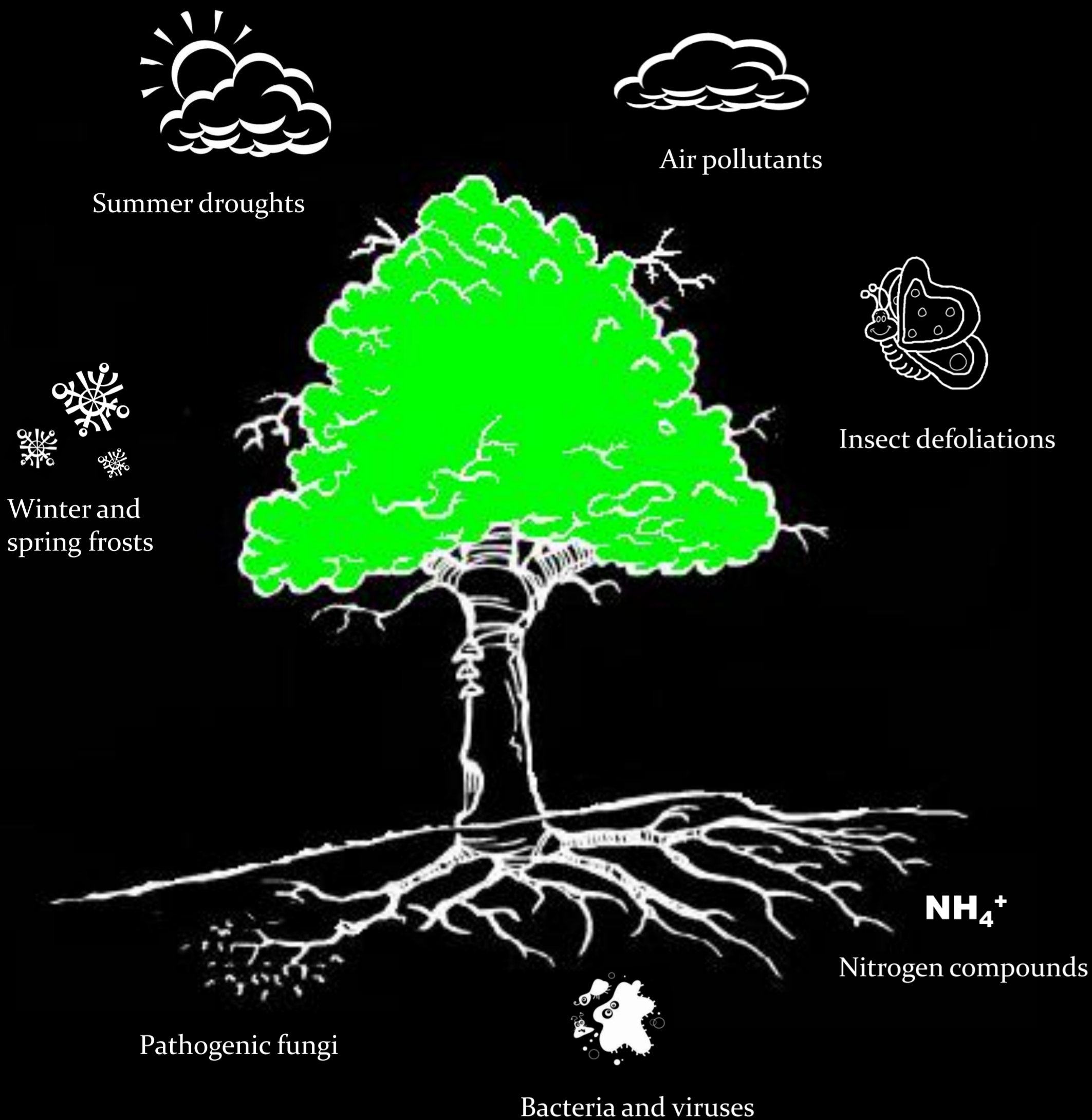


Oak Mortality

-influence of weather and environmental variables

Final thesis. Master's programme in Ecology and the Environment, 2009. Marie Andersson. Supervisor: Karl-Olof Bergman.



Factors that have been shown to influence the oak's vigour.

BACKGROUND

- Severe oak (*Quercus spp.*) declines have been recorded in many parts of Europe.
- The causes of the declines are still poorly understood.

AIM

- Clarifying the temporal process of oak declines.
- Identifying environmental variables that increase the risk of oak mortality.

METHODS

- Growth pattern of 72 dead and 72 living oaks were analyzed using core samples.
- Tree and environmental variables were analyzed for 216 dead and 335 living oaks.

CONCLUSIONS

Oak mortality is caused by a combination of long- and short-term stresses. Equal need of studying present as well as past factors influencing the oak's vigour.

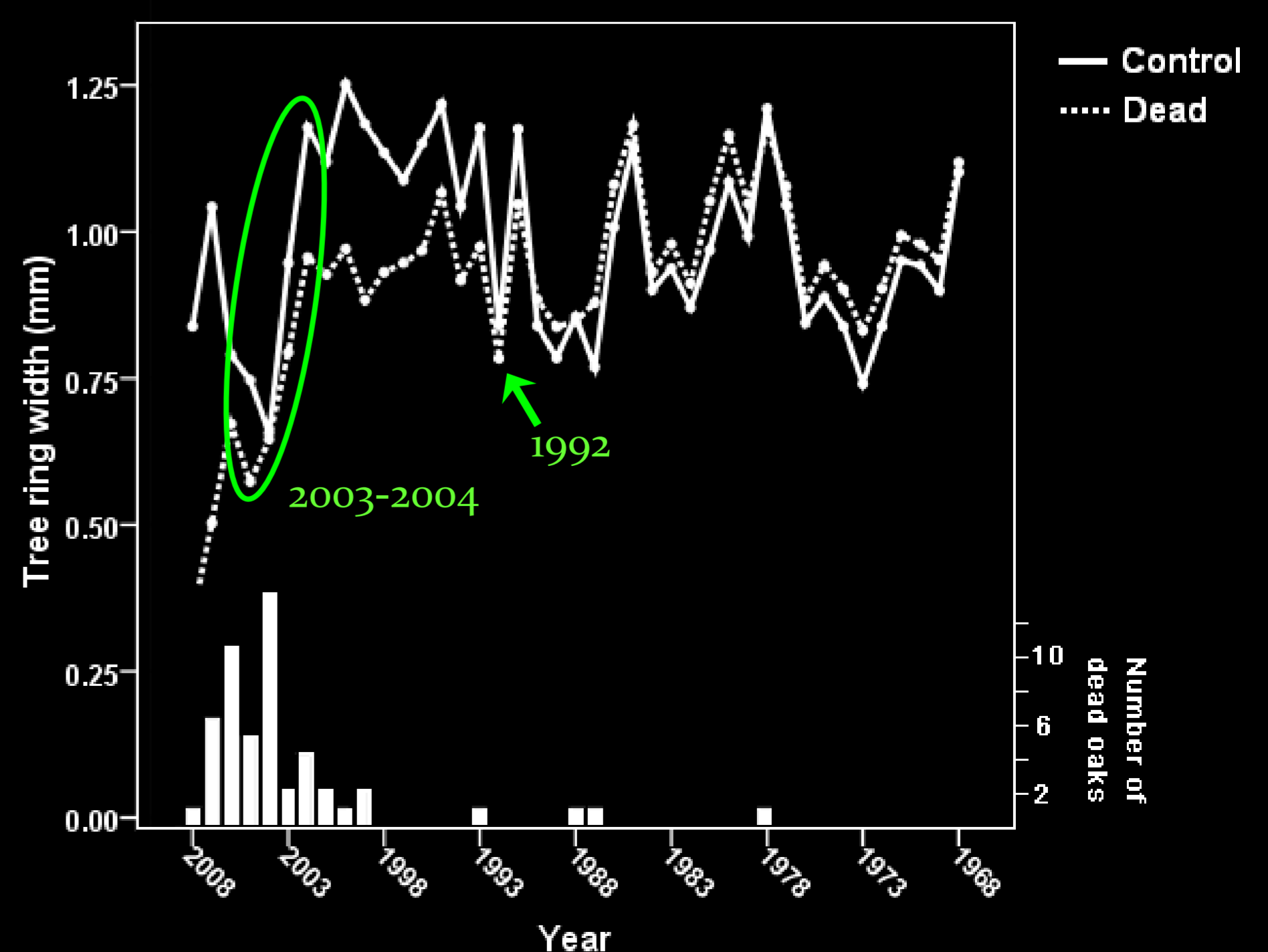
RESULTS & DISCUSSION

Highest mortality:
-during the last decade

Drought in 1992:
-triggering factor

Insect defoliation in 2003-2004:
-further reduced vigour

Environmental variables:
-weak influence



Growth chronologies of dead and control oaks. Bars represent the number of dead oaks per year.