STAGES OF TREE RING DEVELOPMENT ALONG ONE CYCLE OF CAMBIAL ACTIVITY

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Main objective: identification and datation of the several stages of tree ring development along one year of tree growth

Task inserted in the project ***Past climate reconstruction and future scenarios of climate changes in Portugal using a dendroclimatological approach***

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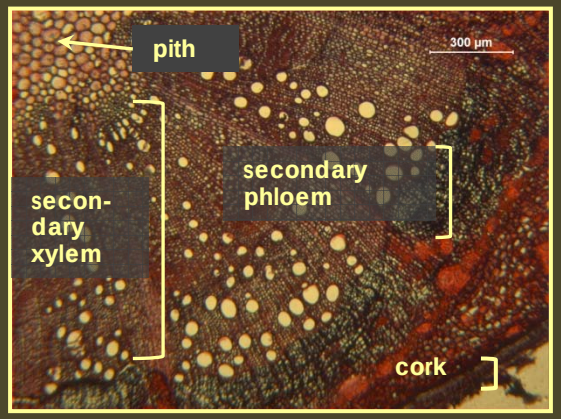
Material and methods

- Sprigs from 12 tree species collected once a month, covering the whole growth season;

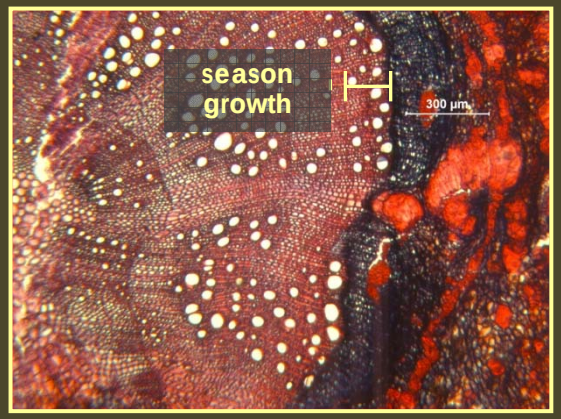
- Sections of about 20 to 30 µm thick were made and observed using microscopic and image analysis techniques to study the characteristics and development of wood tissue.

Results

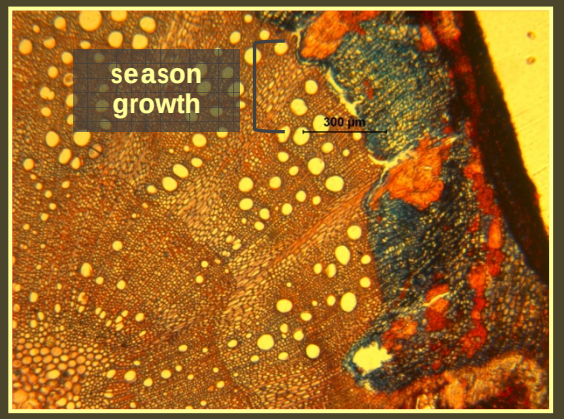
Quercus suber



Sample from the first month of the 2010 growth season (March)



Sample from the third month of the 2010 growth season (May)



Sample from the sixth month of the 2010 growth season (September)

Conclusions

- the beginning of the growth season differs between species;

- ring boundaries are not always sharp and vary along the sprig perimeter;

- the first cross sections did not allow us to distinguish the stages of development in the different tissues.

Next steps...
- finish the sample collection (November)
- use thinner cross sections from where we can get fine tuned images

THANK YOU FOR YOUR ATTENTION

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