



Measurements on the greatest trees of Hungary

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The 1st International Electronic Conference on
Biological Diversity, Ecology, and Evolution, 15-31 March 2021

Introduction

- several types of microhabitats
- keystone structures
- cultural–emotional legacies

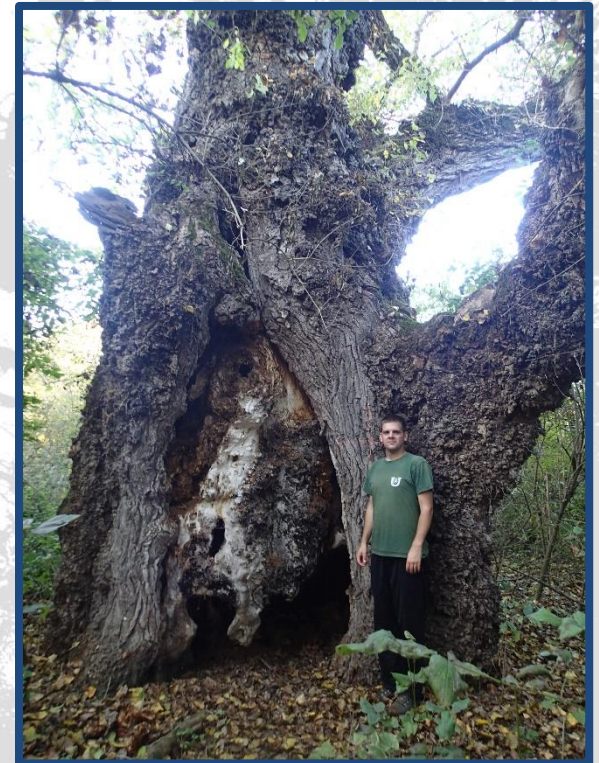
- three nation-wide online databases
- none of them both detailed and thorough



***Mór**, large-leaved lime, 581 cm*

Aims

- rate of different species among the greatest Hungarian trees
- their health status
- accessibility



Drávakeresztúr, black poplar, 1101 cm

Literature review

- great? old? ancient? monumental? veteran?
- timely task to record (accelerating deaths)
- first calls for their protection in Hungary: early 20th century
- greatest database, dendromania.hu started as a private website, now good example of citizen science



Peresznye, sycamore, 1069 cm

Literature review

- András Balogh (1957)



Hédervár, English oak, 772 cm

Methods

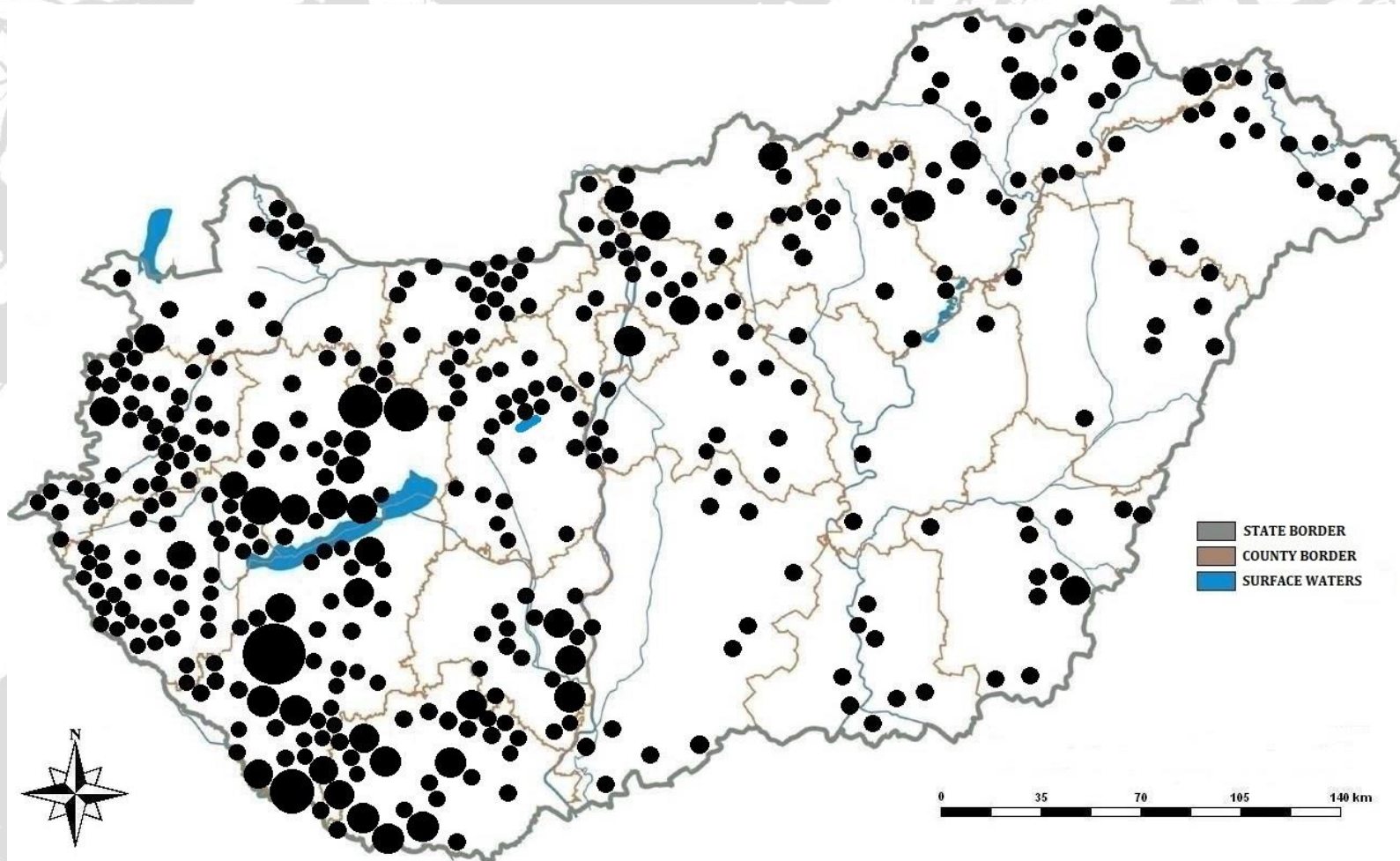
- 'greatest' means great girth
- based on the smallest girth (perimeter) measured between 0 and 130 cm height
- the minimum girth of each specimen to be listed in the database depends on the species, usually 600 cm.
- original aim was to observe every specimen listed in dendromania.hu database



Péterhida, English oak, 861 cm

Methods

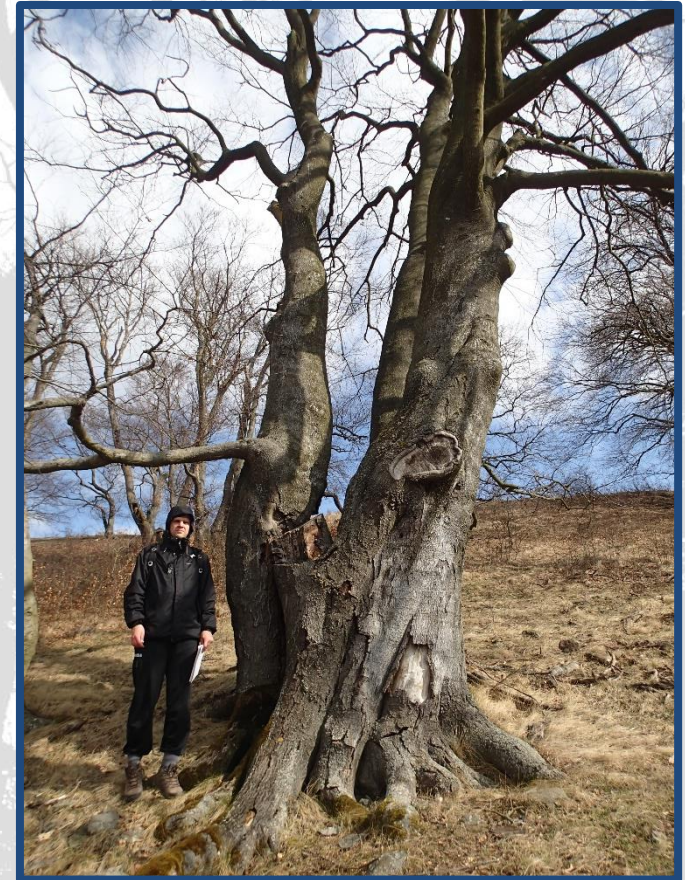
- altogether 2000 trees
- measurements between 2008 and 2017
- surroundings of 531 settlements



Methods

- Health status categories

Name of category	Description
1 = dead	Dried out, fell, or was cut; or still alive but no longer reach the size necessary to be on the nation-wide list.
2 = bad condition	A few branches only, and/or severe infections. Usually solitary trees or beeches covered by several Polypores.
3 = fair condition	Half of the crown dried, bark injury (eg. old trees on wooded pastures). Slight infections, unattainable areas (eg. abandoned castle parks).
4 = good condition	A few scars from brokes, some weeds. Trees of well-kept castle parks, arboretums.
5 = excellent condition	No infection, well-kept environments.



Taliándörög, beech, 603 cm

Methods

- Accessibility categories

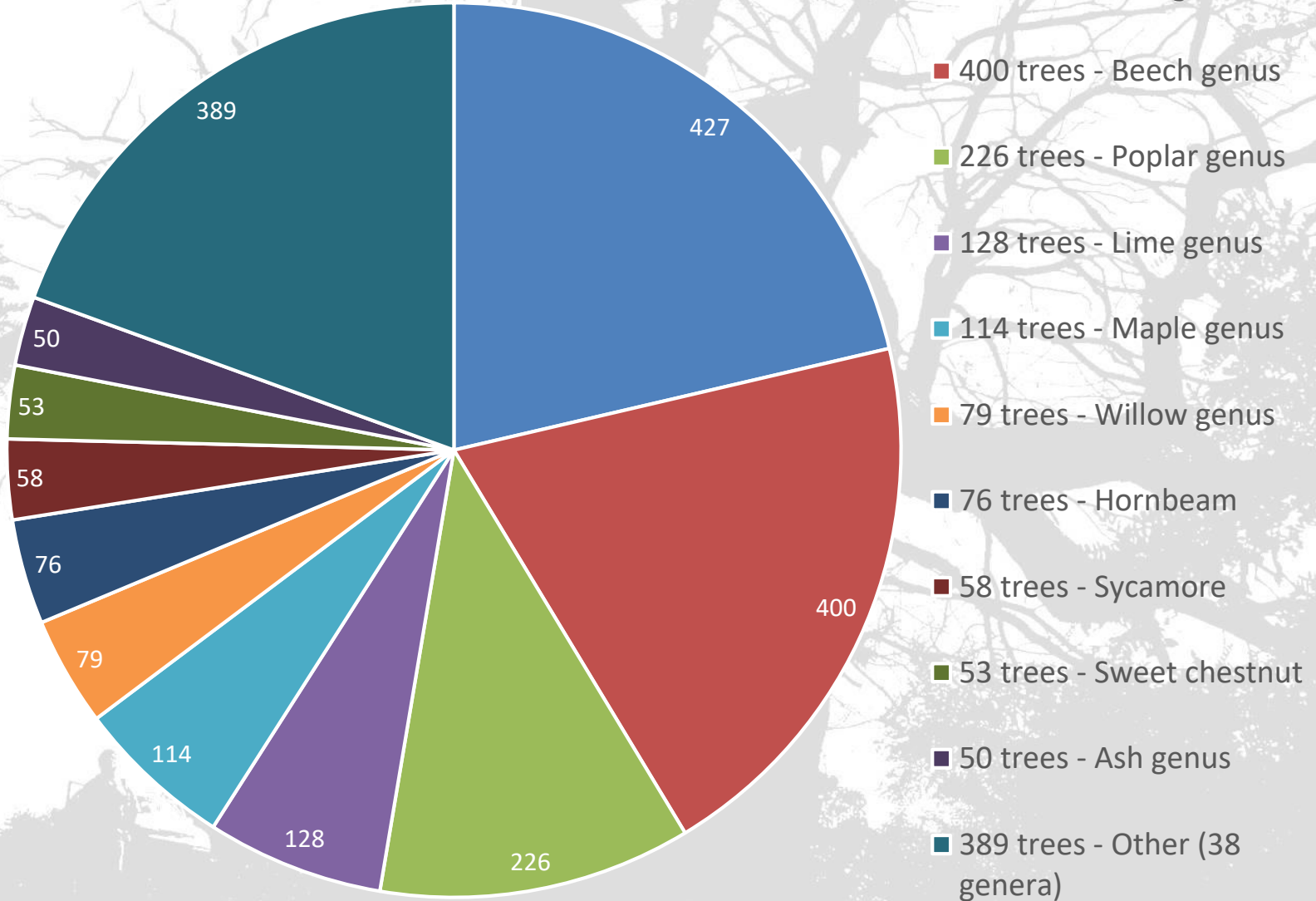
Name of category	Description
1 = very difficult	Almost impossible to observe and measure, even with a permission; or no path (even without touristic signs) leading to the tree.
2 = poor	Permission needed (sometimes verbal is enough), or dense scrub on the floor. Access needs several hours by foot.
3 = medium	Short walk to reach the tree (eg. distant corners in abandoned castle parks; less than one kilometer walk from a forest dirt road). No accessibility by car.
4 = good	Almost accessible by car, or standing in a less well-kept (but still walkable) park.
5 = excellent	Easily accessible by car, or standing in a well-kept, visitable castle park.



Nagykutas,
sweet chestnut, 840 cm

Results

- 48 genera, 72 species



The measured tree species and the number of specimens within each species

Results

- 1550 specimens belong to native species, while 450 are adventive
- 29 native and 43 non-native species
- Most of them stand in a park or forest (not as a solitary tree)

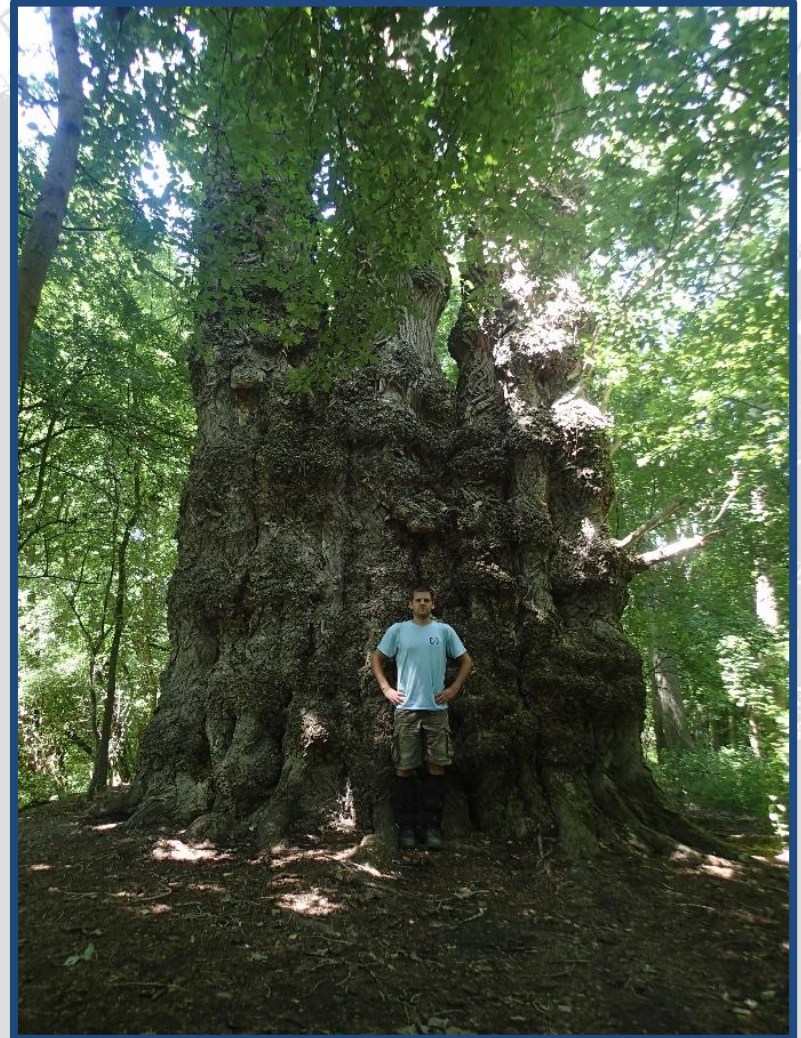


***Surd, sweet chestnut,
762 cm***

Results

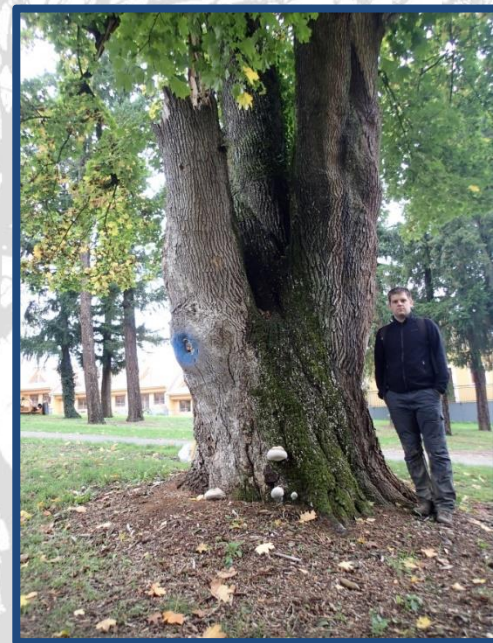
The greatest known tree in Hungary

- black poplar (*Populus nigra*)
- Gemenc forest territory
(Pörböly, Baja)
- alluvial forest
- girth = 1180 cm
- trunk diameter = 5 m
- crown diameter = 40 m
- height = 38 m



Gemenc, black poplar, 1180 cm

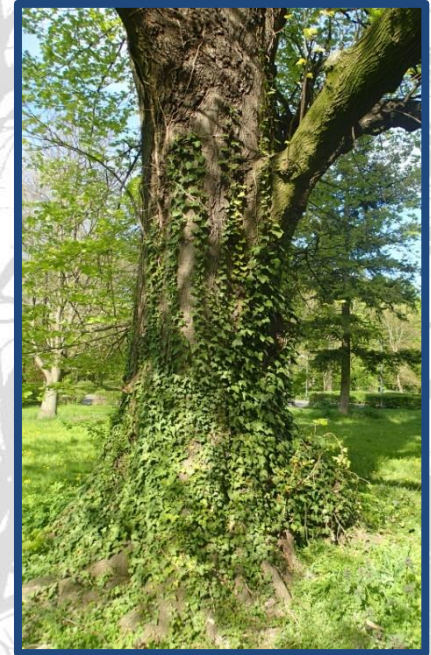
Results



Results

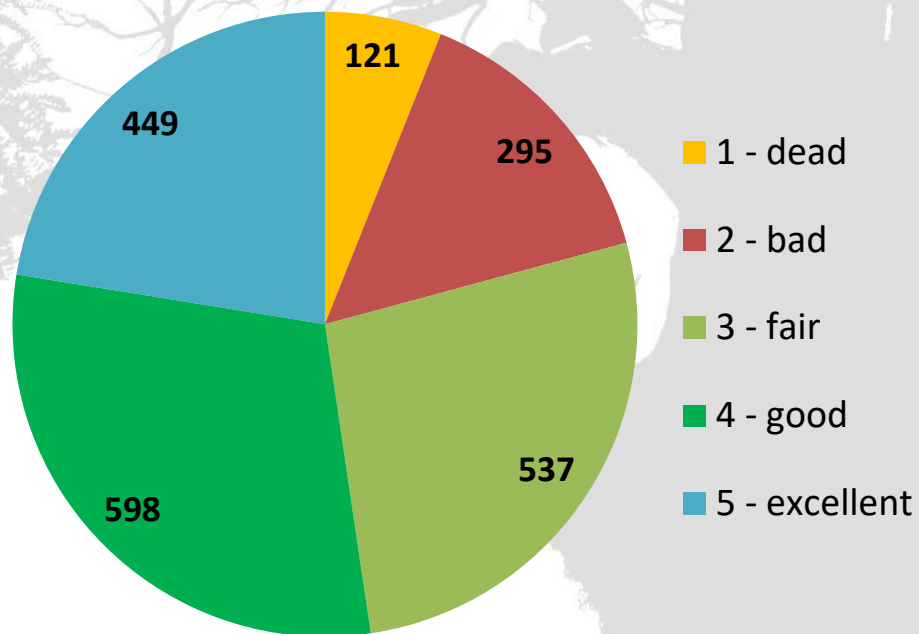


Results



Results

• Health status

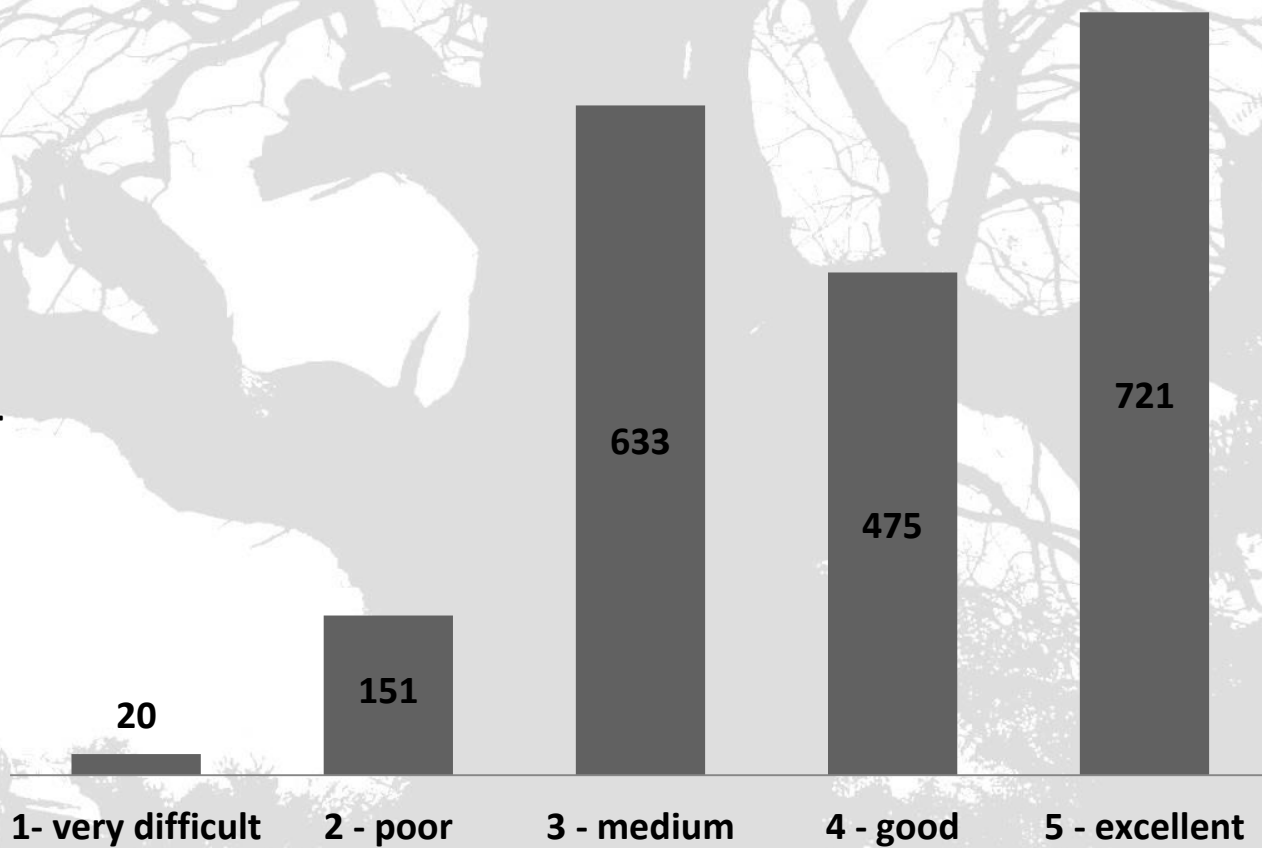


Balkány, giant redwood, 570 cm

Results

- **Accessibility**

specimens



Conclusions

- 121 great trees died between 2000 and 2018, mostly due to natural causes (dehydration, storm damage).
- Only a bit more than half of the measured great trees are in good or excellent condition. This calls attention on their proper treatment, before it is too late.

*Gödöllő, white mulberry,
477 cm*



Conclusions

- More than half of the trees easily accessible,
- about 9% difficult to reach – beneficial?
- 1745 out of the measured 2000 trees can be freely visited.



Szőkedencs,
small-leaved lime,
1148 cm

Conclusions

- Only a very few cases when a great tree receives legal protection:
- on its own (local natural monument – IUCN III category),
- or the habitat where it stands (locally protected castle park or tree line – IUCN III category; forested area in national park or landscape protection area – IUCN IV category).



Lábod, narrow-leaved ash, 727 cm

Thank you for the attention.



Ötvöskónyi,
large-leaved lime,
1057 cm