

# ***Salix* diversity in Belgium and The Netherlands: traditional (basketry) use as a key factor**

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## My research object:

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- Native taxa and escaped willow taxa
- 1997: project native woody species Bert Maes
- 1997: nature management plan borders River Scheldt R. Vanallemeeersch
- 1997: vegetation map borders River Scheldt Maurice Hoffmann
- 1997-2019: transplantation of willows to garden salicetum
- Escapes are mainly former basketry willows
- List is still expanding by constant supply of new ornamental and beekeepers willows, that escape and hybridize

# **Salix diversity: never finishing...**

- Indigenous species and subspecies: 9
- Indigenous crossings: 9?
- Archeophytes: 3?: *x fragilis?*, *triandra*, *viminalis*
- 18th, 19th & 20th century introduced basketry taxa: 18
- Ornamental introductions: 8
- Beekeepers: 4
- Mutual hybrids between this different groups: at least 10

**Sum: at least 60 species and hybrids, without counting the numerous clonal willow cultivars with local names**

**Basketry taxa (osiers) are most important group**

# Indigenous species and subspecies

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1. **S. alba**: Schietwilg: discussion between var. *alba* and var. *caerulea*; artificial limit or result of backcrossings with *S. x fragilis*? Genetical analyses suggest both possibilities
2. **S. aurita**: Geoorde wilg
3. **S. caprea**: Boswilg
4. **S. cinerea subsp. *cinerea***: Grauwe wilg
5. **S. cinerea subsp. *oleifolia***: Rossige wilg
6. **S. pentandra**: Laurierwilg: archeological macro remains river Scheldt; Belgium is southern area boundary
7. **S. purpurea** subspecies *lambertiana*: Bittere wilg
8. **S. purpurea subsp. *purpurea***: Bittere wilg; continuous transition sequence with previous one by use as basketry willow
9. **S. repens** (4 subspecies = ???): subspecies are possibly not more than ecotypes; transplantation experiments

**Native willows: S. repens (Kruip-), S. purpurea (Bittere wilg), S. alba (Schietwilg), S. pentandra (Laurierwilg)**



# ARCHEOPHYTES

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- **Salix viminalis**: already known by the Romans and probably arrived by them. Original distribution is ? In Belgium and the Netherlands tens of local clonal varieties: gele wiedauw, groene wiedauw, rode wiedauw, bruine wiedauw, zwarte wiedauw, Deventer kat, gewoon grauw, Rijsenburgse kat, Groene daggelder, Belgische kat van Hooymans, Meyerijsche katteen, Franse weda, Koningskat, Oeverkat, Hamburgse kat, Freiburgse kat, Silezische kat, ...
- **Salix triandra**: probably also introduced by the Romans, but original distribution also unknown. Again tens of local clonal varieties: beugelgrauw, gele reins, gele tweebast, grauwe steiloor, groene reins, groene tweebast, grote grauwe wis, Hengelaarsgrauw, hoepelgrauw, ijsgrauw, kleine grijze wis, koffiekleur, Langbroeks grauw, Zwarte driebast, ...
- **Salix x fragilis** = *S. euxina* x *S. alba*: Belyaeva 2009; consequences for situation in Belgium and The Netherlands: Arnout Zwaenepoel, Dumortiera 113: *S. x fragilis* var. *fragilis*, *S. x fragilis* var. *furcata*, *S. x fragilis* var. *russelliana*, *S. x fragilis* var. *vitellina*

**Salix viminalis-Katwilg: yellow and red 'wiedauw';  
pollard willow as 'hoop'-willow Biesbos  
ch; female catkin osier**



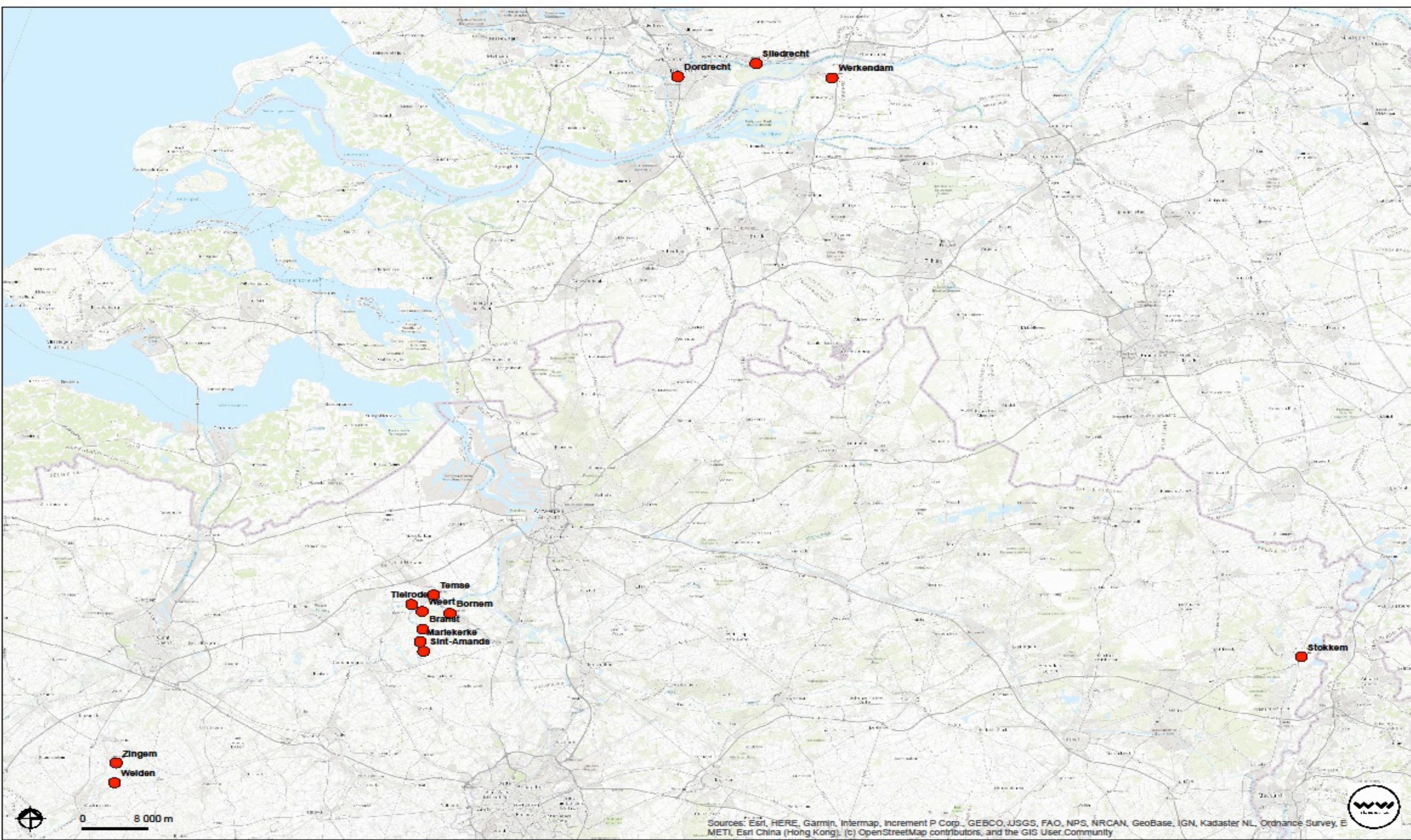
# **Salix triandra-Amandelwilg; two-tone bark ‘tweebast’; pollard for hoopmaking; yellow and black ‘reins’**



# **Salix x fragilis-Basterdkraakwilg: var. fragilis, var. furcata, var. russelliana; var. vitellina**



# Main (former) osier and hoop making centra: Bornem, Zingem, Stokkem, Werkendam Biesbosch



# Basketry, hoop-making, wickerwork for bank defense, wickerwork for trenches



DETAILS..

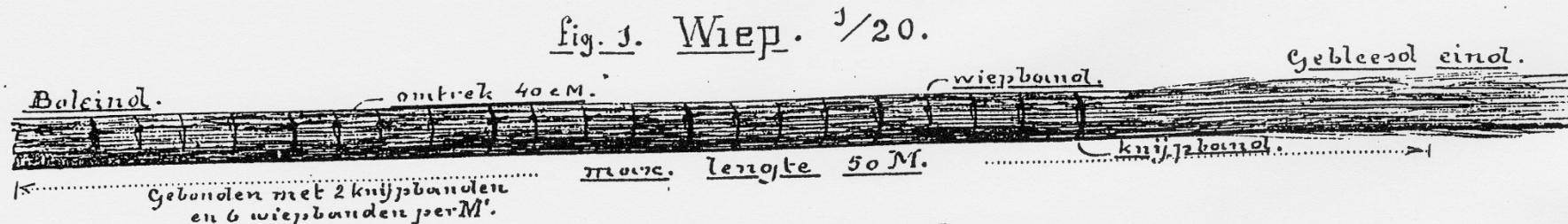


fig. 1. Wiep. 3/20.

Plaat 7

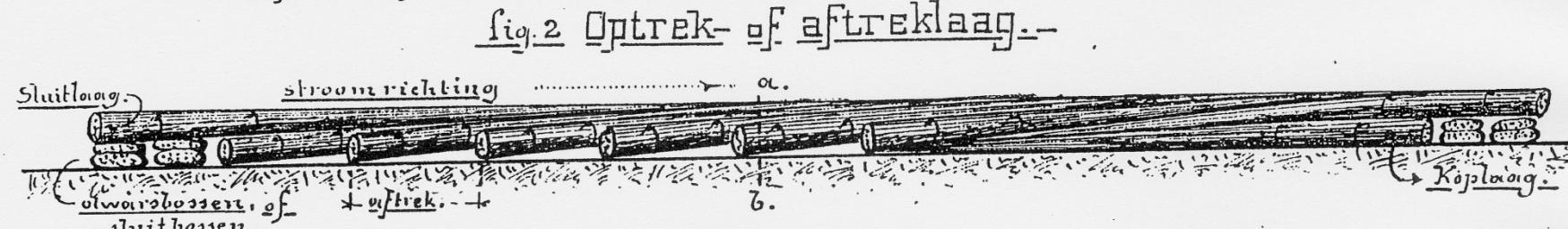


fig. 2 Optrek- of aftreklaag..



fig. 3. Litschotlaag.



fig. 4 Doorsnede ab.

fig. 5 Geschulpte bossen..



# Basketry introductions last three centuries

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- **Salix acutifolia** (Kaspische zandwilg): not successful
- **Salix daphoides** (Berijpte wilg): not successful
- **Salix elaeagnos** (Grijze wilg): not successful
- **Salix eriocephala** (Amerikaantje, Duits rood): very important for fine basketry and still found as an escape of former plantations
- **Salix euxina** (Turkse kraakwilg): very rare in Flanders, more frequent in Wallonia and eastern part of The Netherlands
- **Salix x fragilis var. furcata** (Gevorkte basterdkraakwilg); widespread but not the best basketry willow
- **Salix x fragilis var. russeliana** (Russells basterdkraakwilg): widespread but repressed by S. eriocephala; difficult to recognize
- **Salix x fragilis var. vitellina forma basfordiana** (Gele bindwilg): 18th century; very confusing naming: Salix alba var. vitellina, Salix x rubens var. basfordiana
- **Salix x fragilis var. vitellina forma sanguinea** (Belgisch rood): 19th century; most important basketry willow until decline of basketry in 20th century
- **Salix gmelinii** (Duitse dot): imported from Germany; at least 3 clonal varieties; still widespread; enormous discussions about identity (S dasyclados, S. x dasyclados, ...)

# Basketry introductions last three centuries

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- **S. x forbyana/x leiophylla:** very rare (1 place); S. purpurea x viminalis x cinerea? S. purpurea x triandra?
- **S. x holosericea:** spontaneous hybrid and cultivated osier: more cultivated in The Netherlands than in Belgium
- **S. x mollissima var. mollissima** (lerenband): smae use as secon variety, but less common; female
- **S. x mollissima var. undulata** (lerenband): most common osier from the 3 mollissima-varieties; female
- **S. x mollissima var hippophaeifolia:** frequent mentioned in 19th century literature; nowadays very rare; male
- **S. myiabeana:** ‘Schmidtstam 65’ of the Biesbosch; Japanese
- **S. x rubra:** very commonly mentioned in 19th century, but not frequent as an escape because of lime requirement
- **S. x smithiana:** spontaneous hybrid and cultivated osier: rather rare as osier and exact use not well known any more

**S. eriocephala, S. euxina, S. gmelinii, S. x mollissima  
var. undulata**



**S. mollissima var. hippophaeifolia, S. x rubra, S. daphnoides, S. acutifolia**



# Biodiversity Salix not only by number of willow taxa, but also as host plant for hundreds of other organisms

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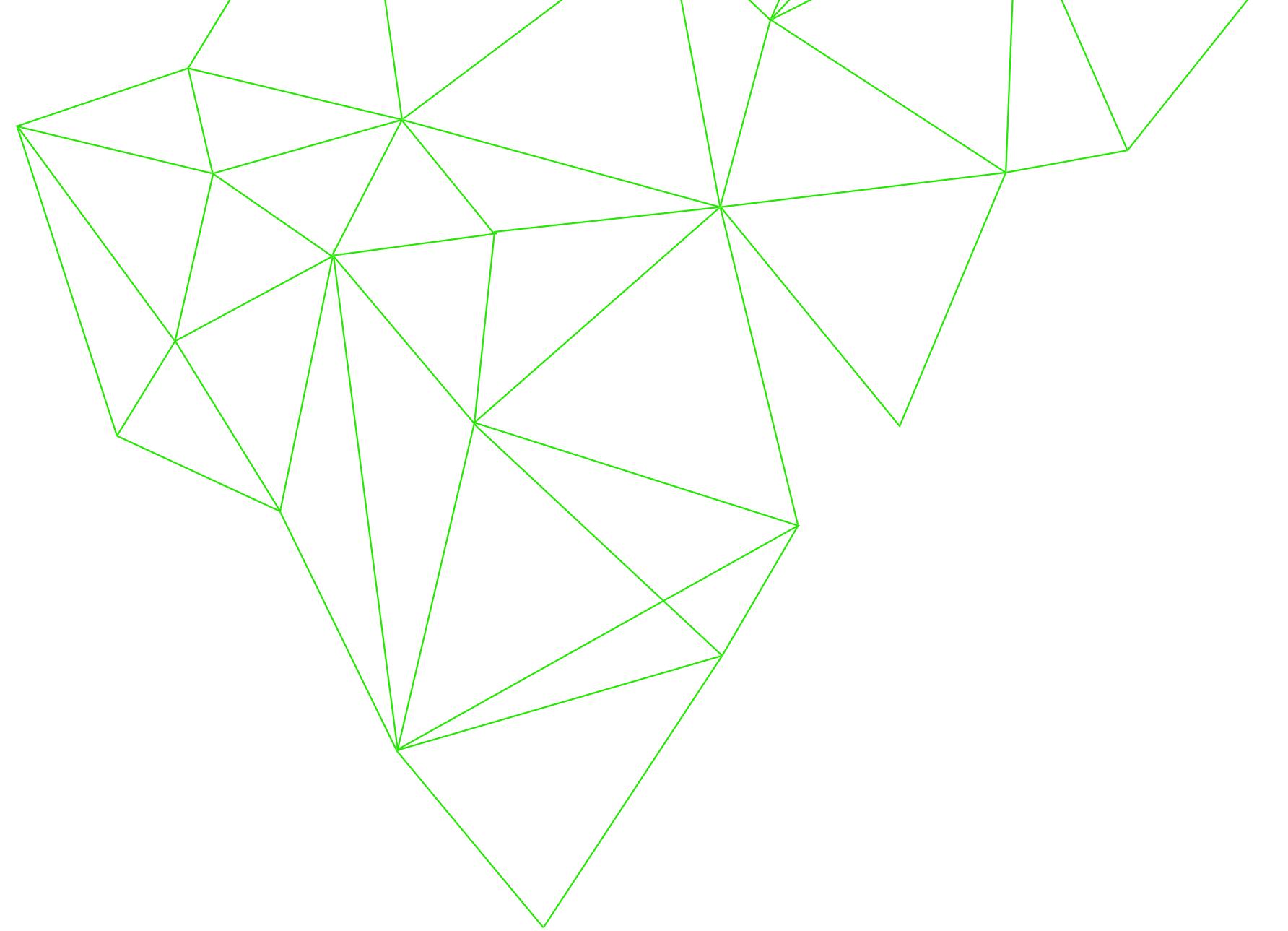
- 184 mushroom species
- 120 beetle species
- 113 moths
- 57 mosses
- 56 lichen species
- 37 bee species
- 28 epiphytes higher plants
- 3 algae

Sum: at least 598 associated species

Number 1 before Quercus, Populus, ...

**THANK YOU FOR THE ATTENTION!**





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