

# BODEN Biodiversiteit

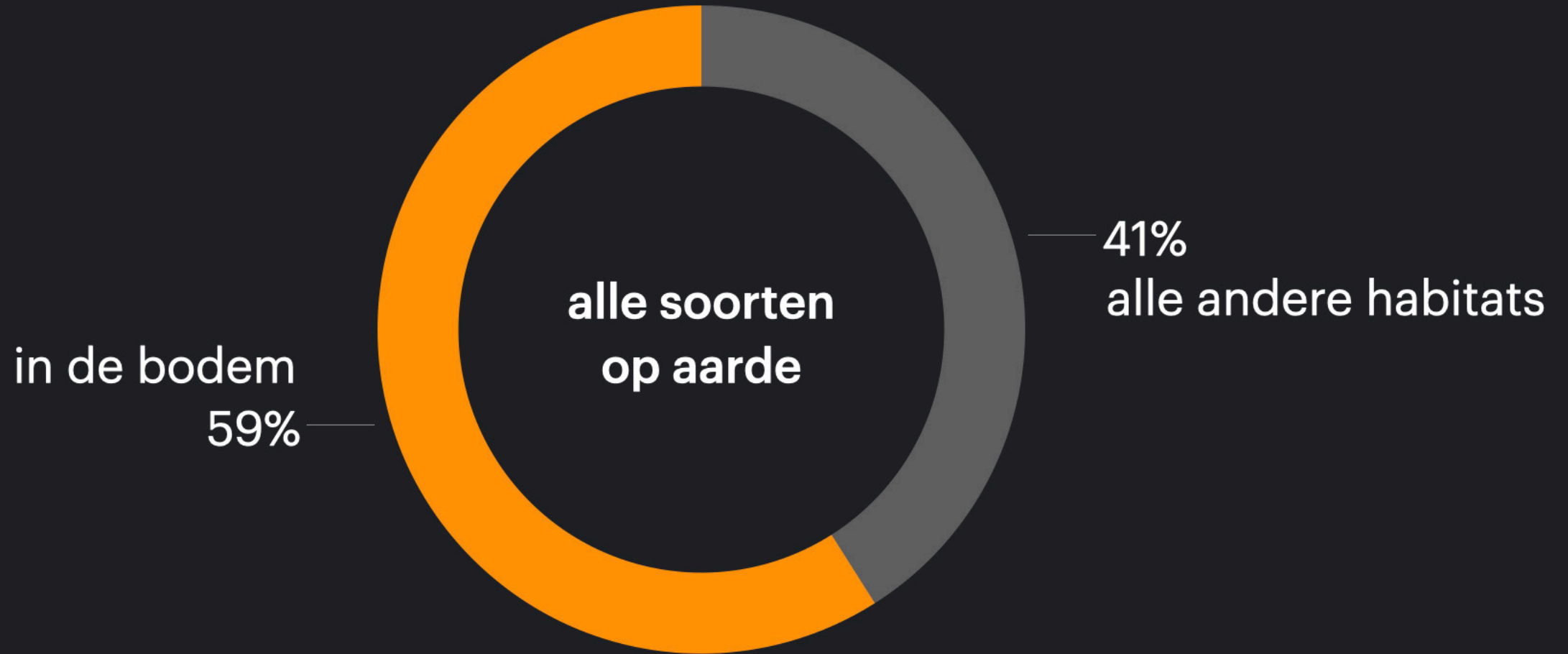
**Vincent Merckx**

Naturalis Biodiversity Center  
& University of Amsterdam

**De bodem leeft!**



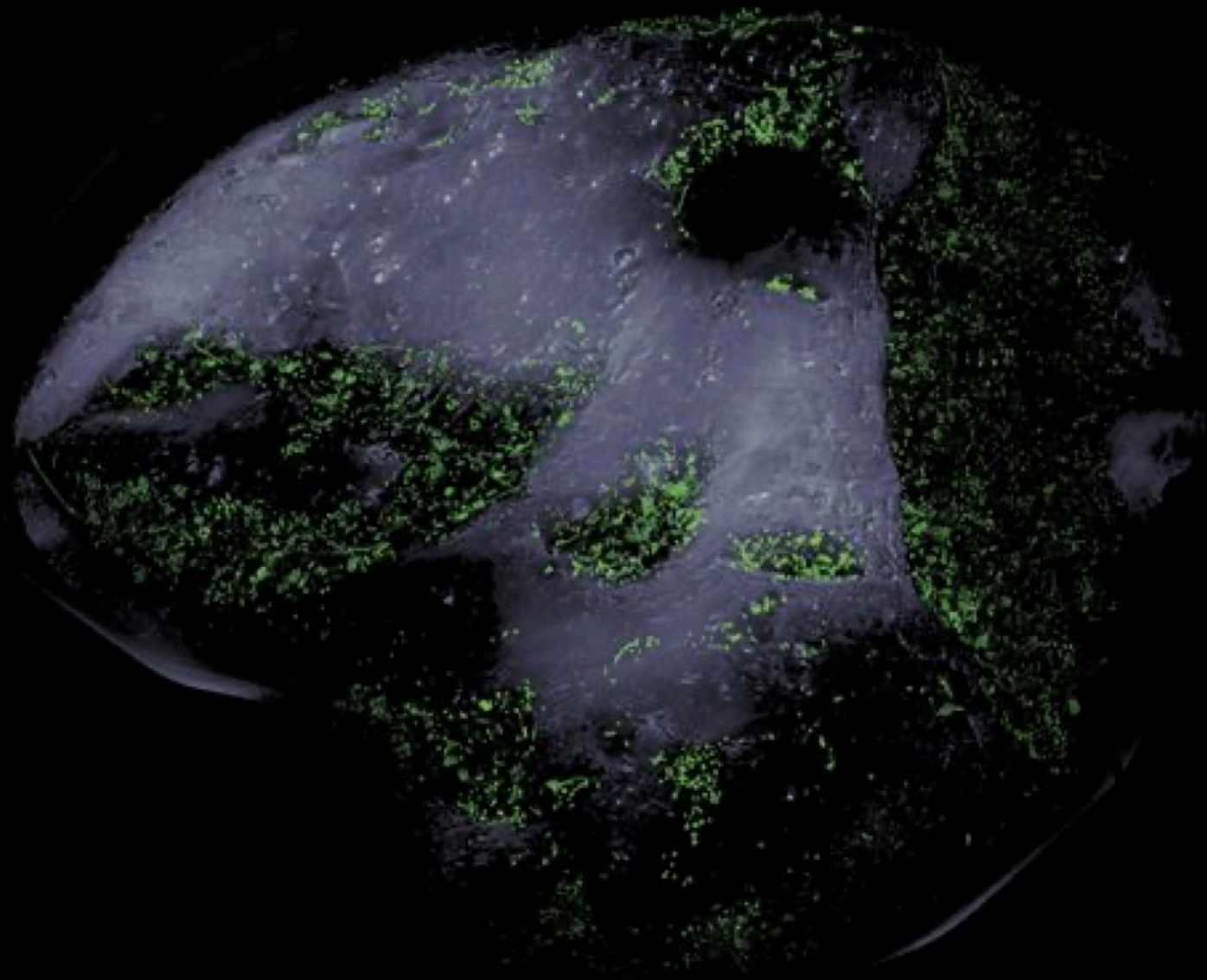
# De bodem leeft!



# De bodem leeft!

meer dan **1000** soorten!





100  $\mu\text{m}$

**groot**

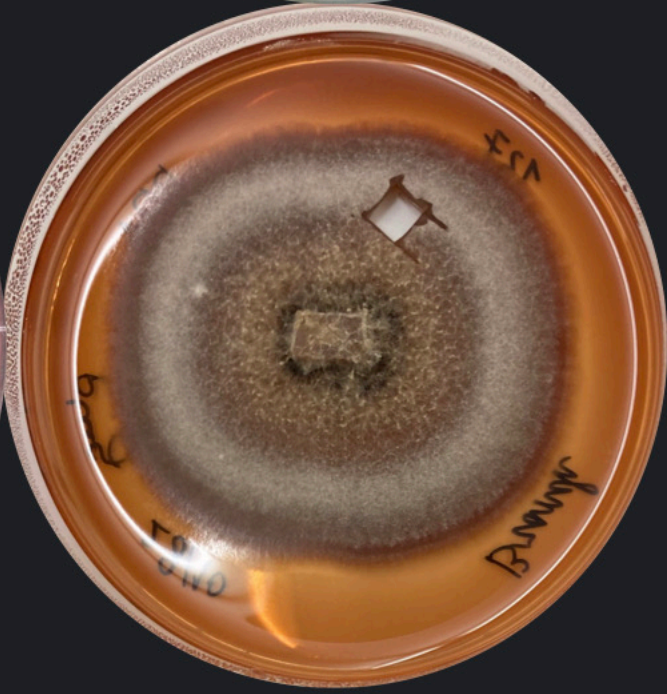
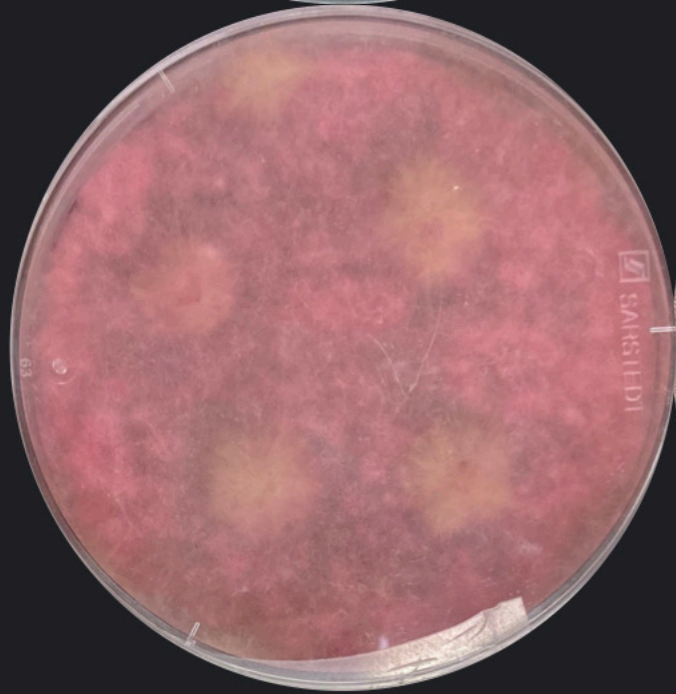
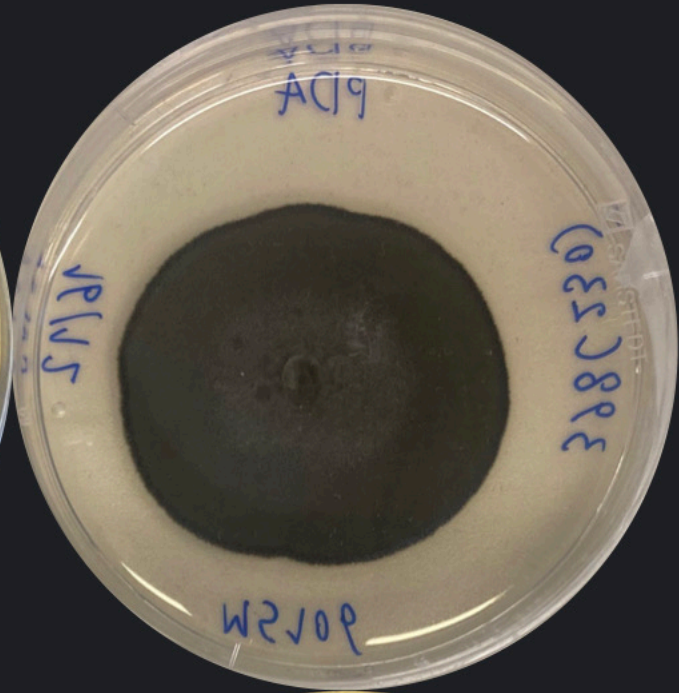


**klein**

<b>Groep</b>	<b>Bekende soorten</b>	<b>Geschatte soorten</b>	<b>% Beschreven</b>
Planten	350 700	400 000	88%
Aardwormen	7 000	30 000	23%
Mieren	14 000	25 000 - 30 000	50 - 60%
Termieten	2 700	3 100	87%
Mijten	40 000	100 000	55%
Springstaarten	8 500	50 000	17%
Nematoden	20 000 - 25 000	1 000 000 - 10 000 000	0.2 - 2.5%
Protisten	21 000	7 000 000 - 70 000 000	0.03 - 0.3%
Schimmels	97 000	1 500 000 - 5 100 000	1.9 - 6.5%
Bacterieën	15 000	> 1 000 000	< 1.5%



*Mycena amoena* Jagers, Aronsen, Holzapfel & Nuytinck sp. nov. – Enschede, Boeldershoek



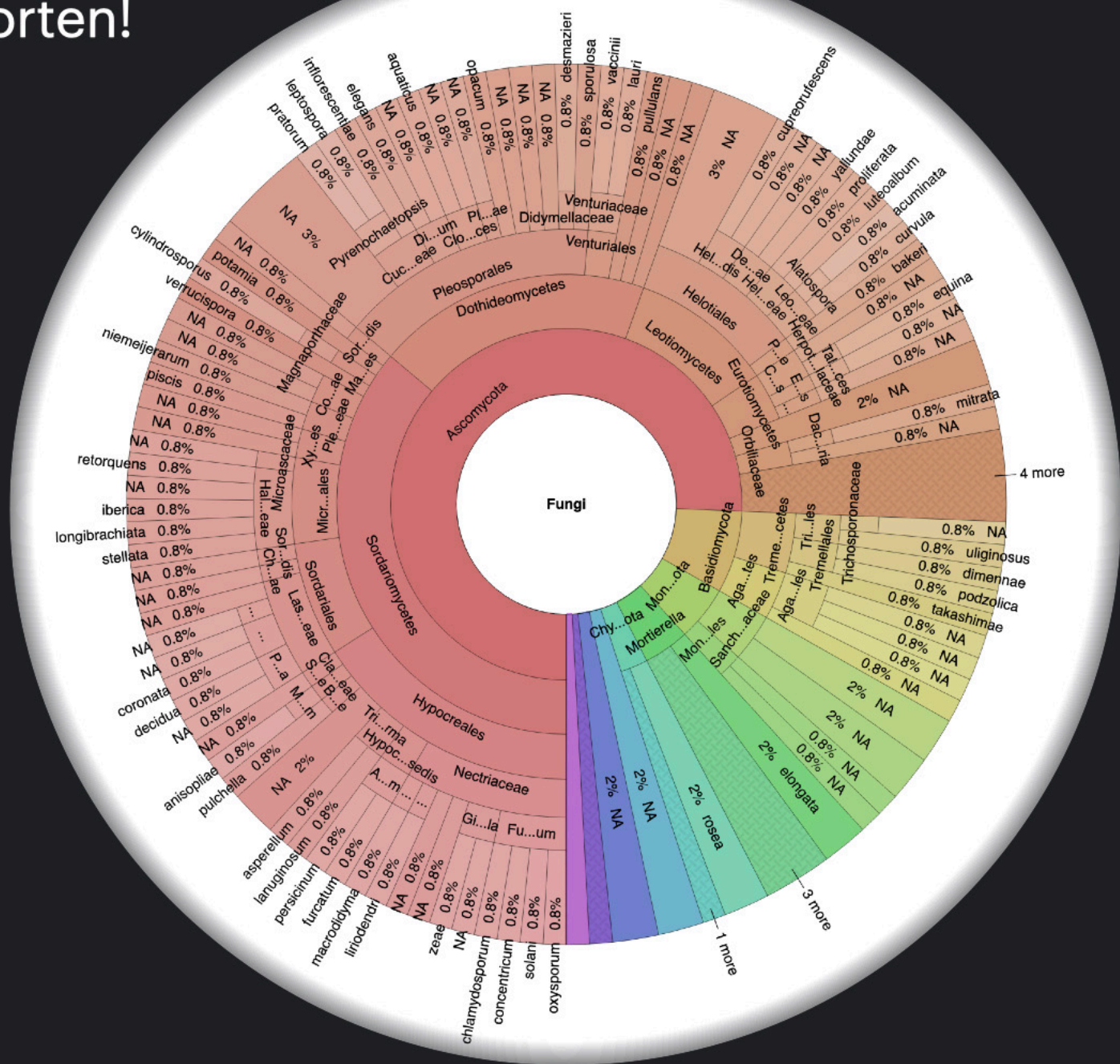


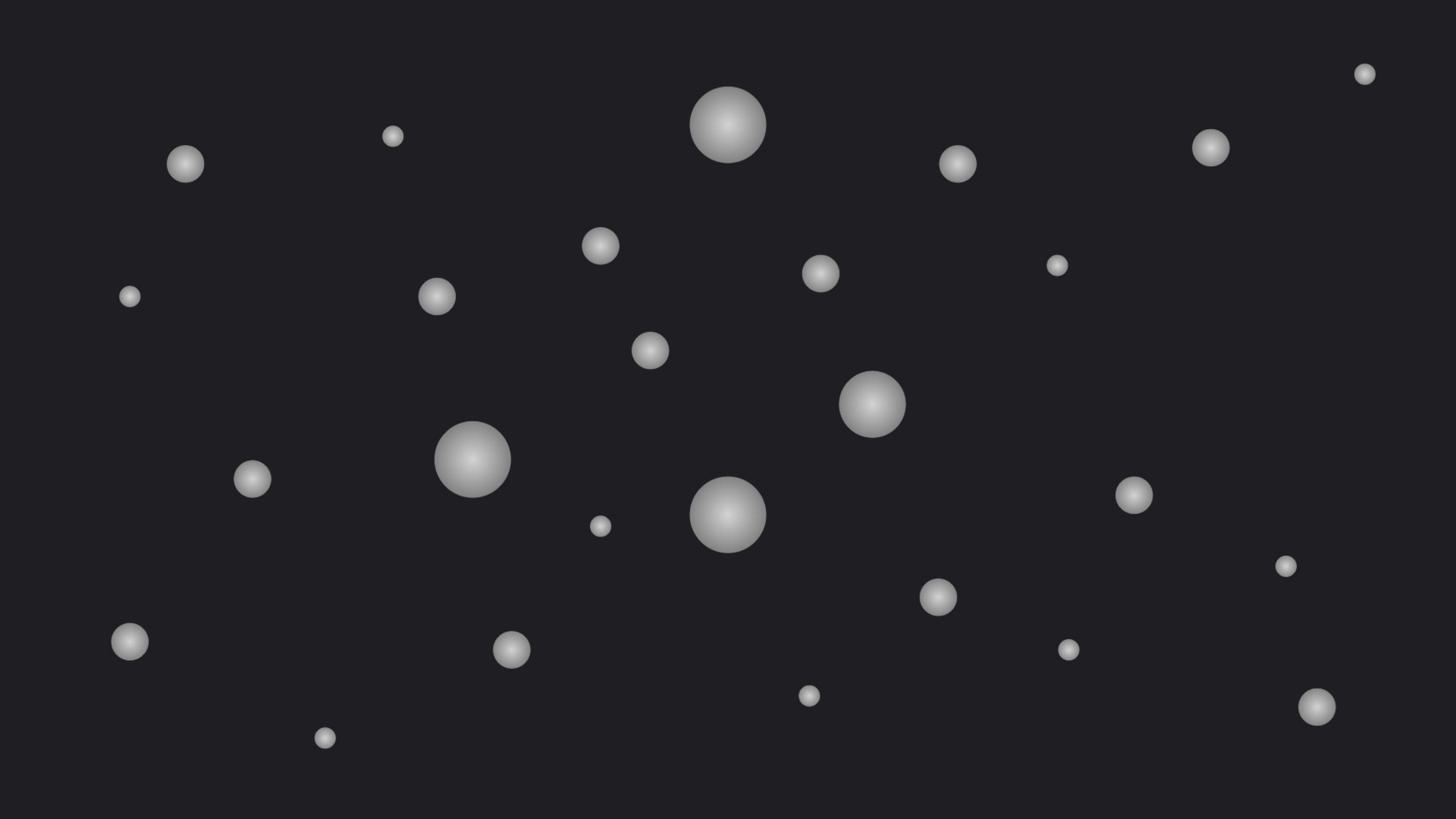


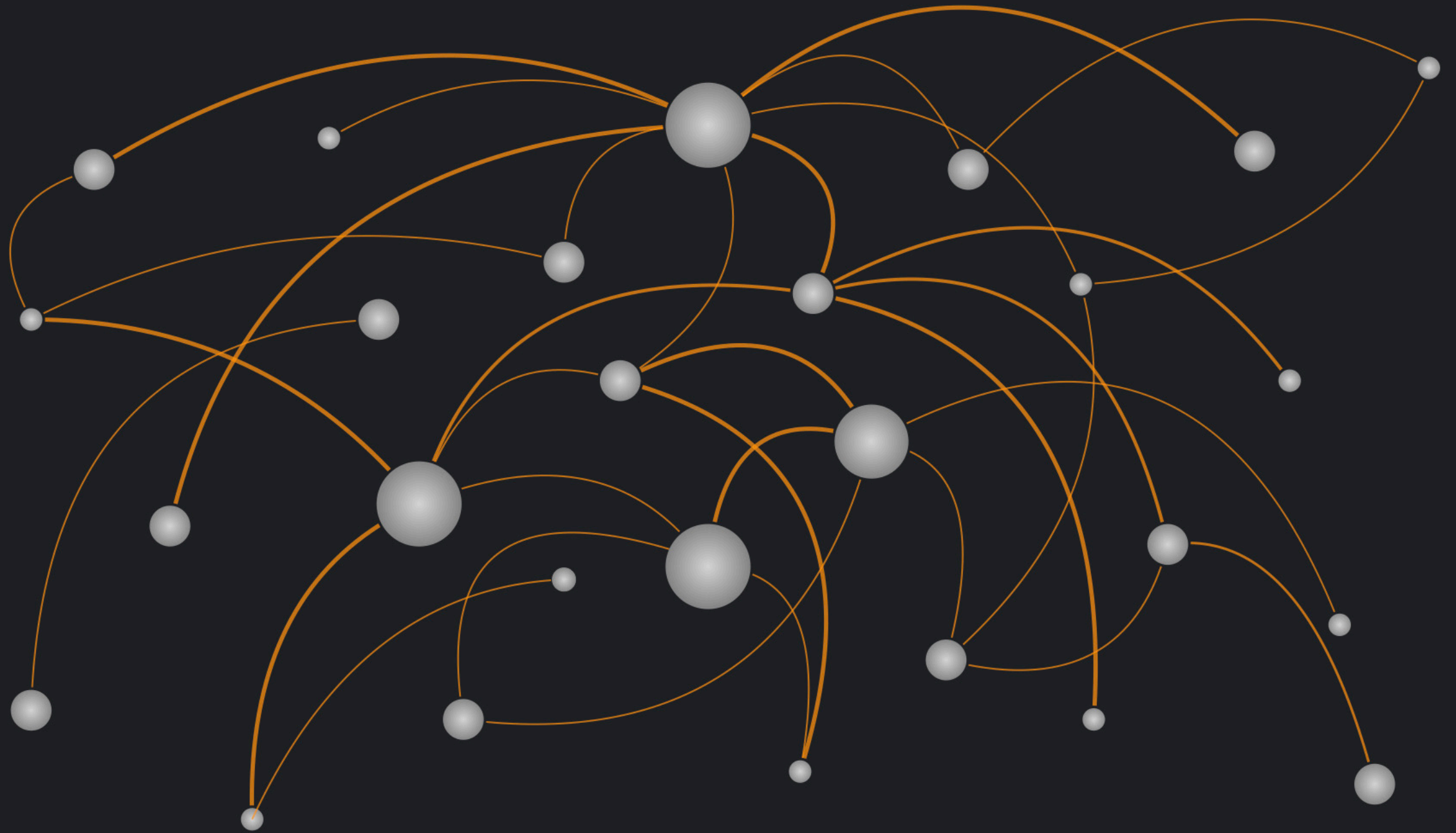
287. Matsushizua\_vespertilionis|MF669380|SH...  
288. Metschnikowia\_kuwniensis|MK394154|...  
289. Massaria\_anomia|HQ599378|SH154284...  
290. Sebaciales\_sp|FN663806|SH1544496.0...  
291. Anzia\_hypoleucoides|AB205352|SH117...  
292. Anzia\_stenophylla|AB205368|SH117637...  
293. Claussenomyces\_sp|MF099779|SH1523...  
294. Chytridiomycota\_sp|HQ191408|SH1243...  
295. Endococcus\_fusiger|JF645262|SH12409...  
296. Pannoparmella\_wilsonii|AB205379|SH1...  
297. Hymenocystus\_sp|KY62797|SH1173...  
298. Chytridiomycota\_sp|HQ194919|SH1240...  
299. Kondoa\_sorbi|AY233343|SH1522620.0...  
300. Chytridiomycota\_sp|HQ191393|SH1242...  
301. Asteromassaria\_ollivaceohirta|AY313953...  
302. Chytridiomycota\_sp|HQ191389|SH1174...  
303. Kondoa\_changbaicensis|AY233339|SH11...  
304. Herpotrichiellaceae\_sp|KF614768|SH11...  
305. Macrohyporia\_sp|MN392912|SH27108...  
306. Chytridiomycota\_sp|HQ219449|SH1247...  
307. Glomus\_sp|AJ699063|SH1142687.0BFU...  
308. Chytridiomycota\_sp|HQ219392|SH1174...  
309. Orbilia\_cejpii|KY419171|SH1506791.0BF...  
310. Chytridiomycota\_sp|HQ191412|SH1515...  
311. Cystobasidiopsis\_lophatheri|AB126046|...  
312. Orbilia\_sp|KY419174|SH1189296.0BFU|...  
313. Chytridiomycota\_sp|HQ191426|SH1149...  
314. Pneumocystis\_wakefieldiae|JL2658|SH1...  
315. Spizellomycesetales\_sp|UDB014646|SH16...  
316. Chytridiomycota\_sp|HQ191367|SH1547...  
317. Talaromyces\_viridis|AF285782|SH15162...  
318. Bannoa\_syzgii|AB035720|SH1538824...  
319. Chytridiomycota\_sp|HQ191296|SH1149...  
320. Chytridiomycota\_sp|HQ191386|SH1529...  
321. Chytridiomycota\_sp|HQ191370|SH1160...  
322. Chytridiomycota\_sp|HQ191382|SH1160...  
323. Boreoplaça\_ultrafrigida|AYS530886|SH1...  
324. Orbilia\_eucalypti|MK473434|SH151745...  
325. Chytridiomycota\_sp|HQ219409|SH1529...  
326. Chaetothyriales\_sp|KF614868|SH15296...  
327. Chytridiomycota\_sp|HQ191339|SH1174...  
328. Syncephalis\_fuscata|KU317675|SH1572...  
329. Chytridiomycota\_sp|HQ191293|SH1547...  
330. GS14\_sp|UDB014658|SH1514669.0BFU...  
331. Serendipita\_sp|FN663803|SH1577285.0...  
332. Serendipita\_sp|EU625947|SH1577267.0...  
333. Serendipita\_sp|EU625989|SH1577329.0...  
334. Mucorales\_sp|UDB014868|SH1557270...  
335. Serendipita\_sp|FN663740|SH1577322.0...  
336. Orbilia\_eucalypti|MK505384|SH270646...  
337. Serendipita\_sp|EU625964|SH1577315.0...  
338. Acidothrix\_acidophila|FJ430780|SH1184...  
339. Serendipita\_sp|EU625939|SH1194021.0...  
340. Serendipita\_sp|EU625981|SH1577258.0...  
341. Serendipita\_sp|FN663808|SH1577308.0...  
342. Papillotrema\_bandonii|GU327539|SH16...  
343. Aspergillus\_fumigatus|JKB09565|SH153...  
344. Lecanoromycetes\_sp|UDB0754951|SH1...  
345. Serendipita\_sp|FN663810|SH1974695.0...  
346. Russula\_sp|UDB014867|SH1569760.08...  
347. Mortierellomycota\_sp|UDB014668|SH1...  
348. Cordyceps\_cylindrica|AB099942|SH164...  
349. Metarhizium\_marquandii|AB114223|SH...  
350. Paraphyton\_sp|EF631613|SH1175576.0...  
351. Ruinenia\_pyrrhosia|AB126045|SH15227...  
352. Neoplaconema\_sp|DQ102374|SH12308...  
353. Serendipitaceae\_sp|FN663657|SH17090...  
354. Claviceps\_pasपालi|AB250409|SH124233...  
355. Chytridiomycota\_sp|HQ191329|SH1244...  
356. Fungi\_sp|KC602370|SH1238203.0BFU|r...  
357. Polycephalomyces\_tomentosus|AB2081...  
358. Serendipitaceae\_sp|EU625978|SH15444...  
359. Conioideorella\_sp|AB294424|SH12343...  
360. Ophiocordyceps\_formicarum|AB222679...  
361. Sebaciales\_sp|EU625966|SH1544521.0...  
362. Glomeraceae\_sp|AJ699065|SH1547511...  
363. GS13\_sp|UDB014650|SH1649646.0BFU...  
364. Knufia\_cryptophialidica|JN040501|SH15...  
365. Sarcinomyces\_sp|AJ972809|SH1648132...  
366. Ophiocordycepitaceae\_sp|AB104725|SH...  
367. Capnobotryella\_sp|AJ972858|SH154973...  
368. Orbilia\_eucalypti|MH221066|SH259373...  
369. Orbilia\_sp|KY419172|SH1244637.0BFU|...  
370. Massaria\_umi|HQ1599428|SH1548638.0...  
371. Graphis\_scripta|MH887487|SH2593458...



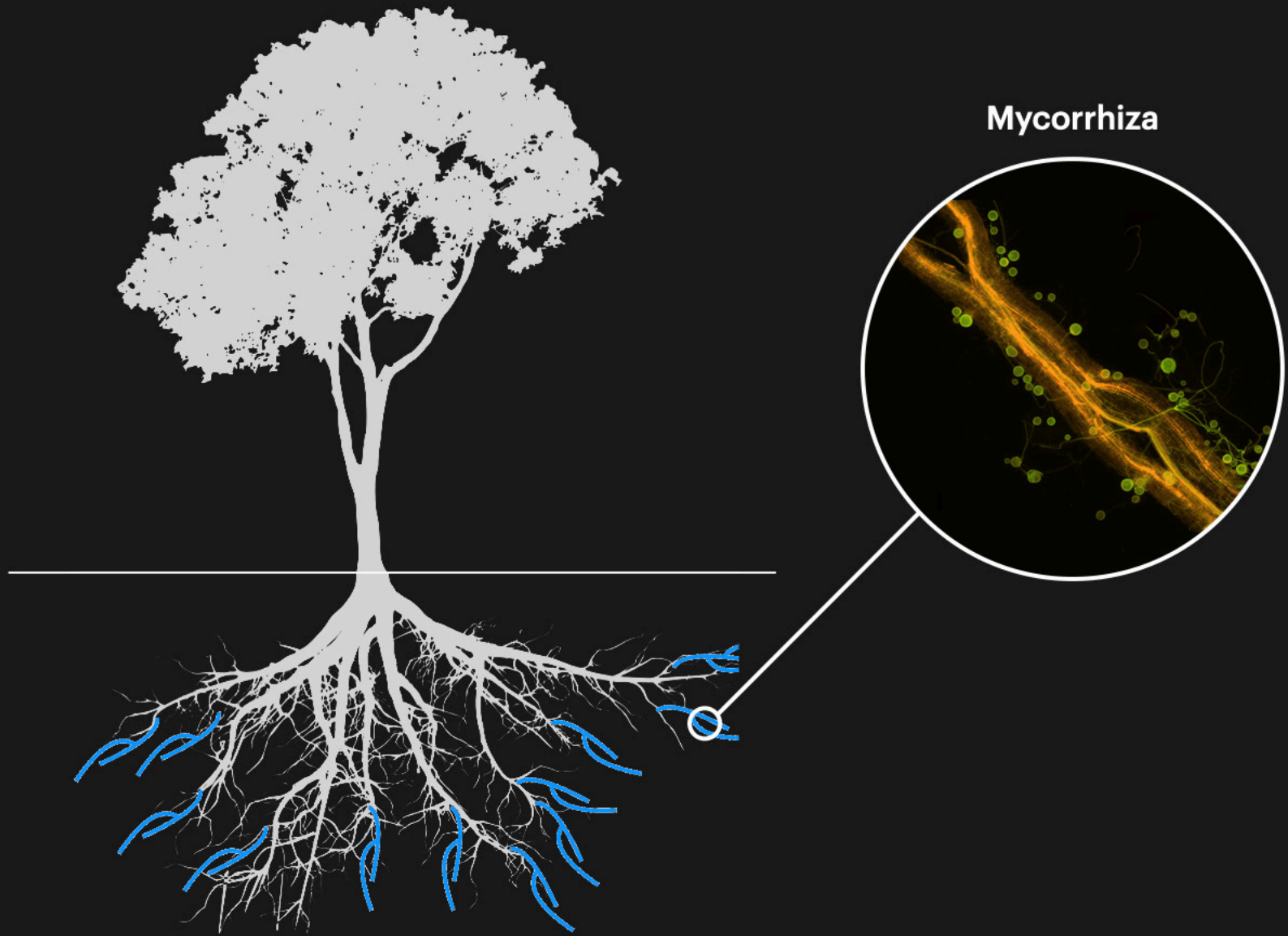
# 119 schimmelsorten!







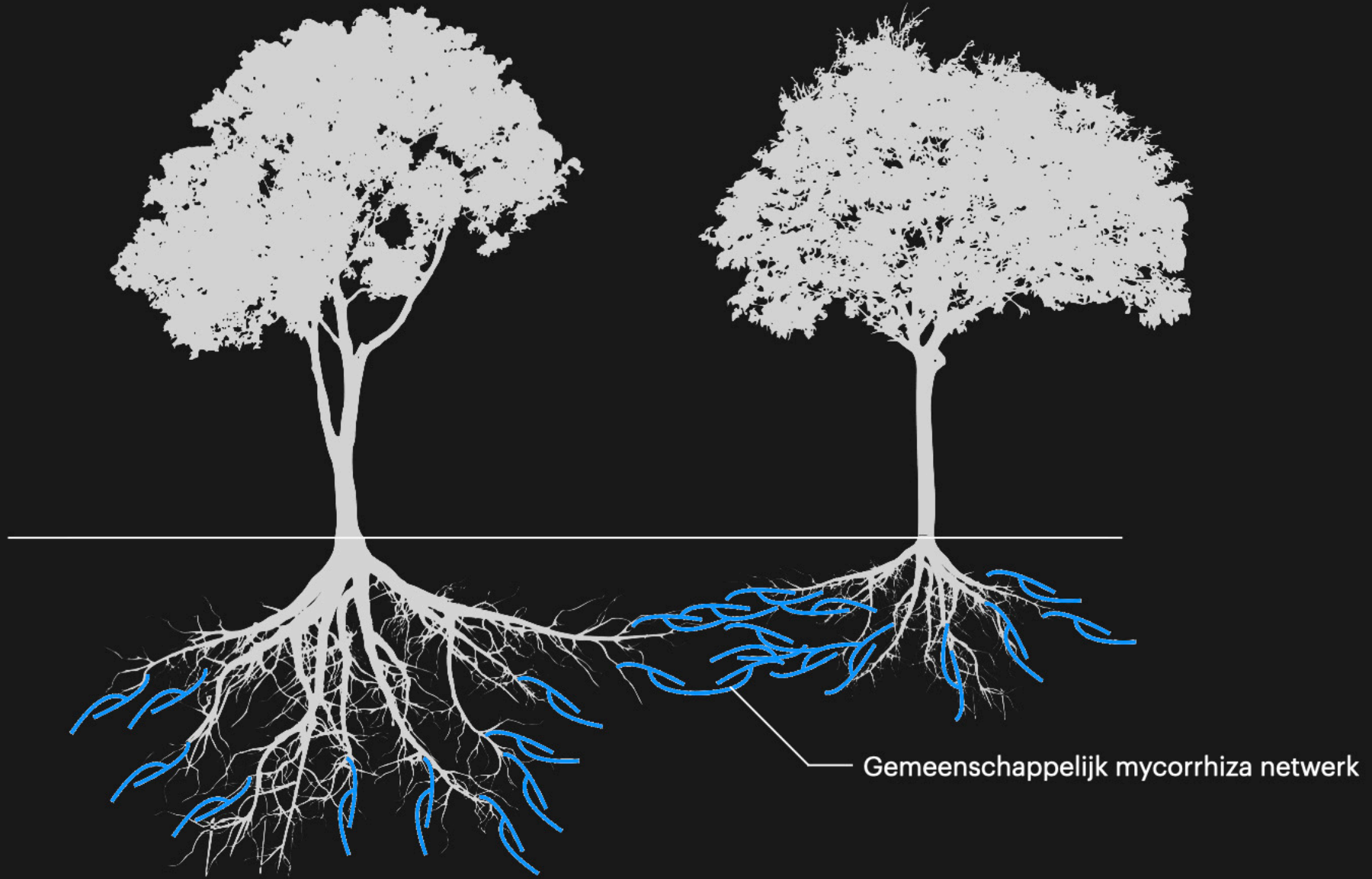




**Mycorrhiza**



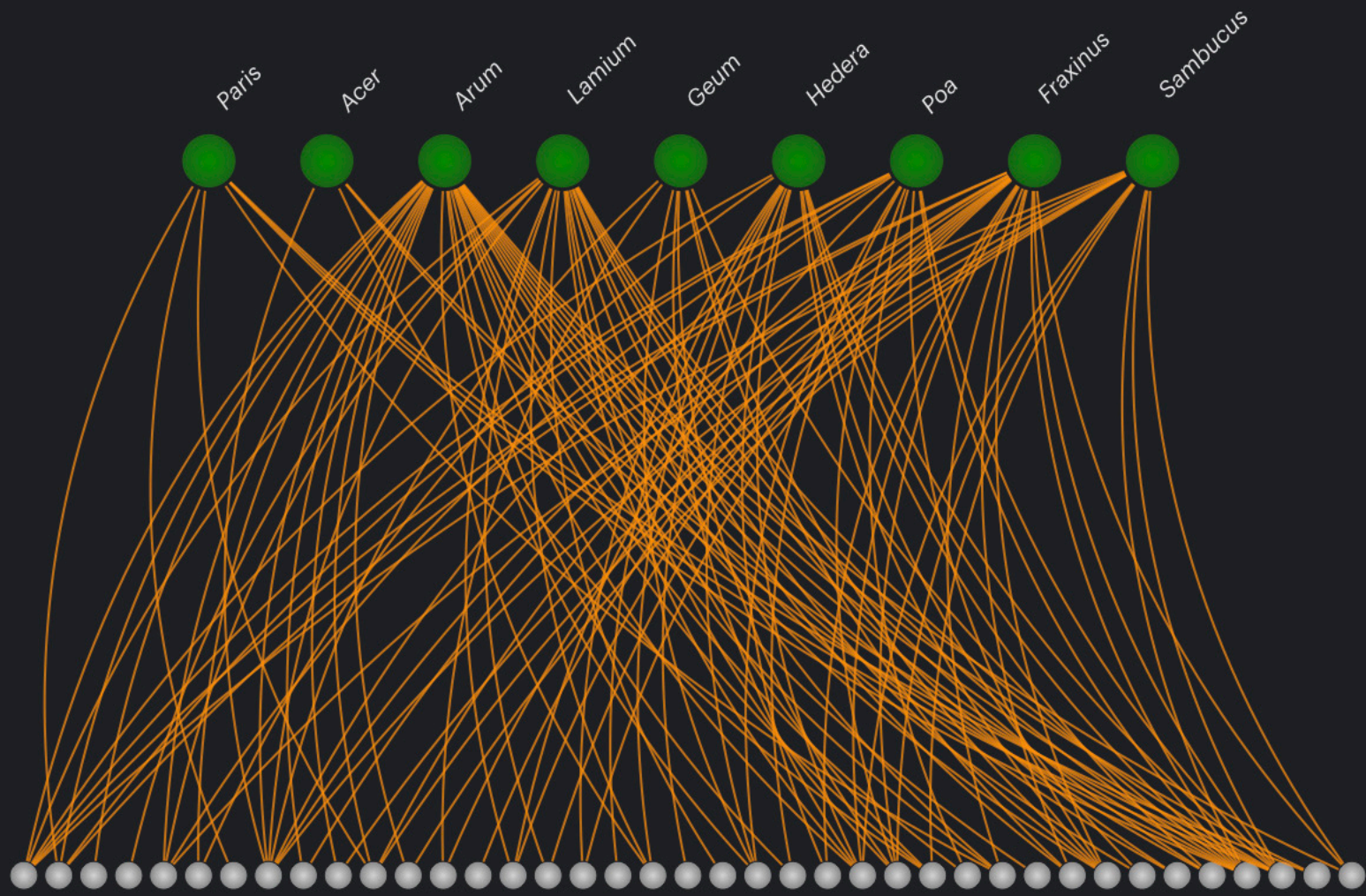




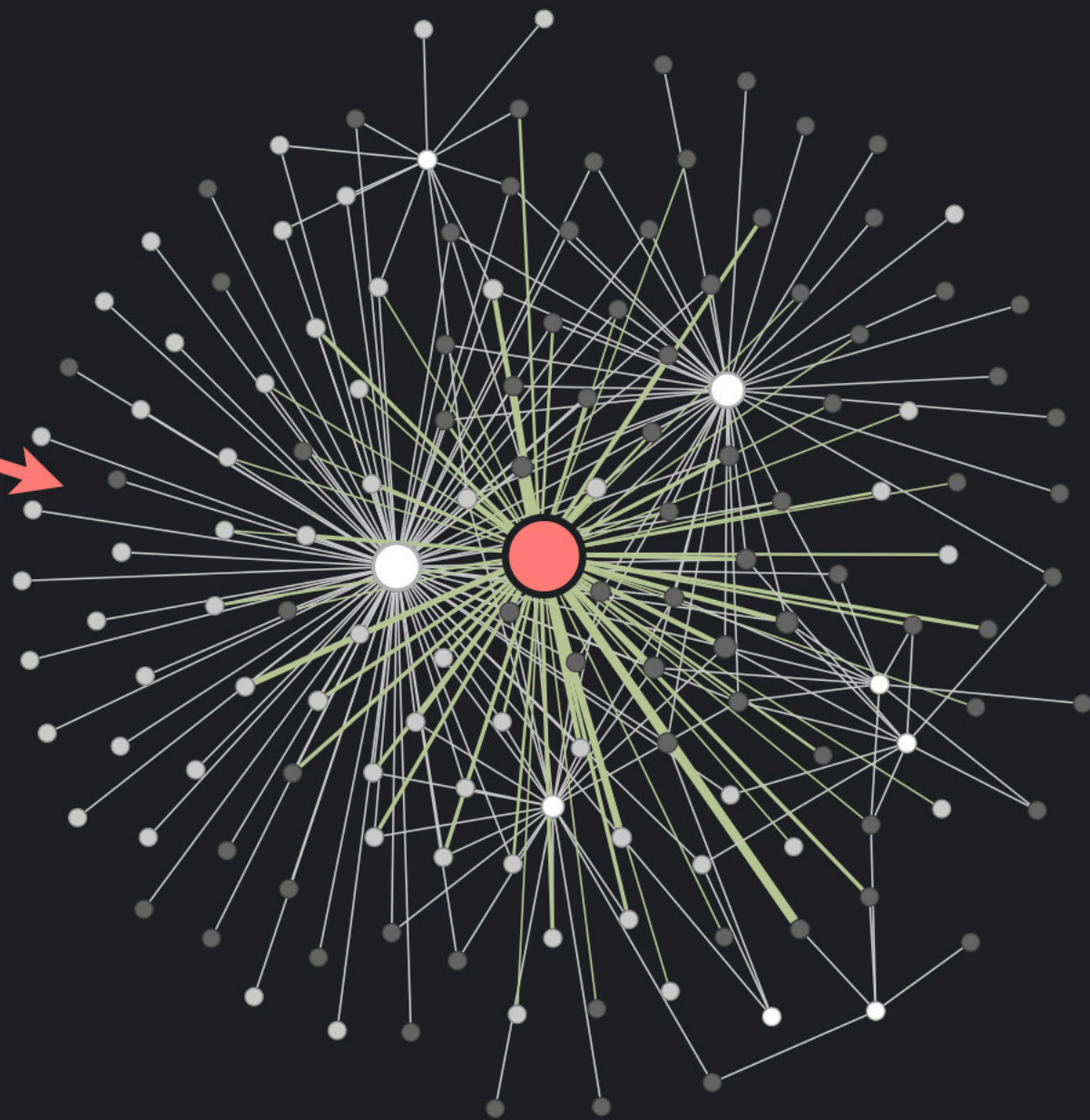
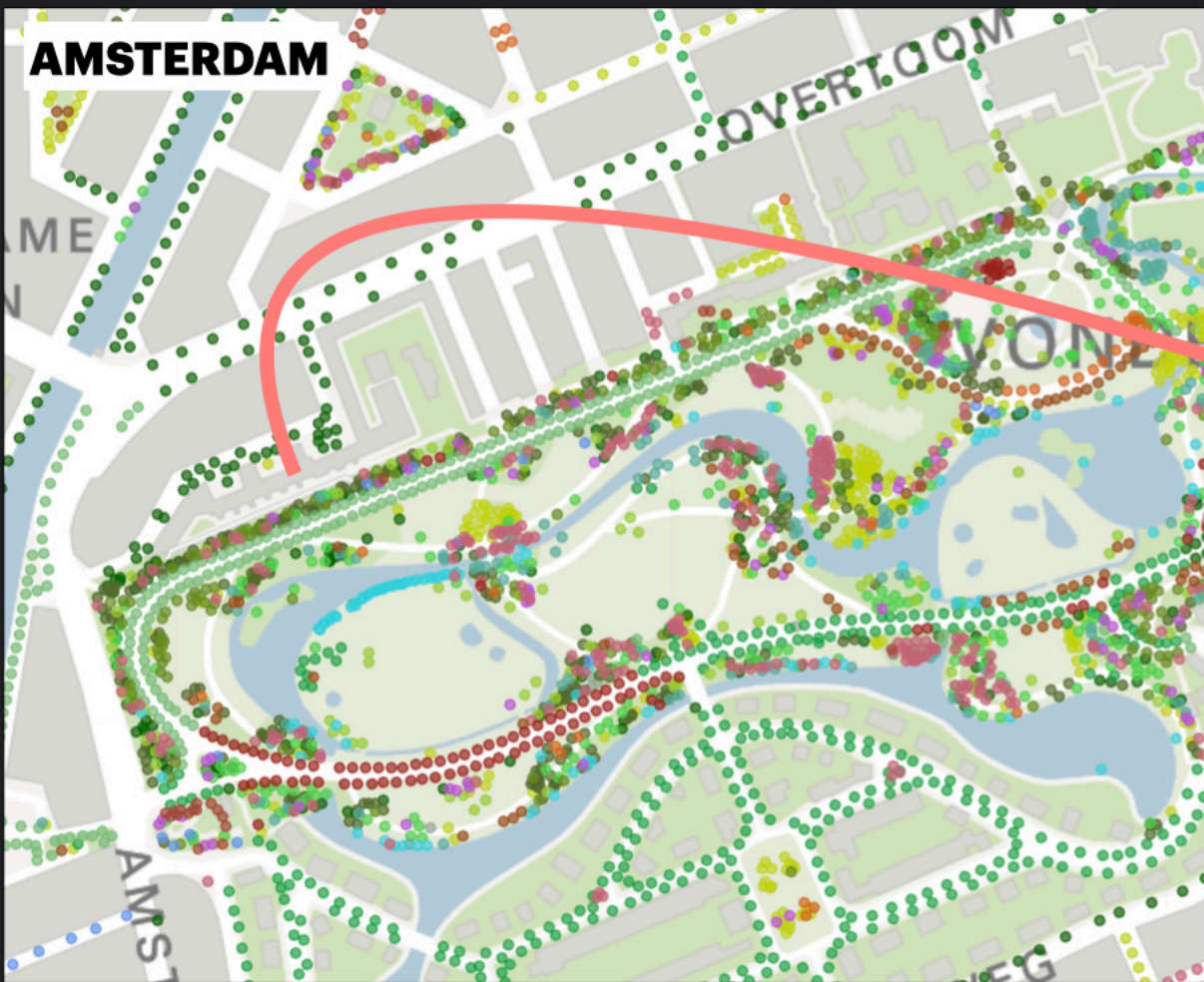


5 m

5 m









**Klimaatverandering**

**Overbegrazing**

**Verlies van bovengrondse  
biodiversiteit**

**Erosie**

**Vervuiling**

**Bodem  
degradatie**

**Introductie  
van exoten**

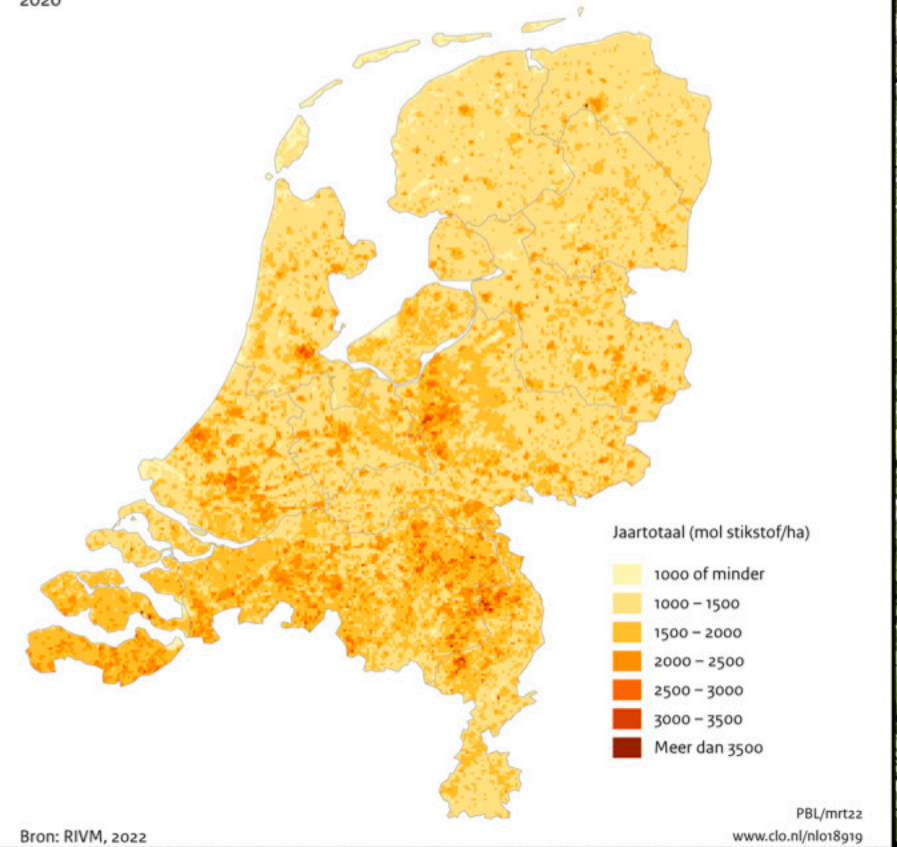
**Landbouw  
praktijken**

**Eutrofiëring**



## Stikstofdepositie

2020

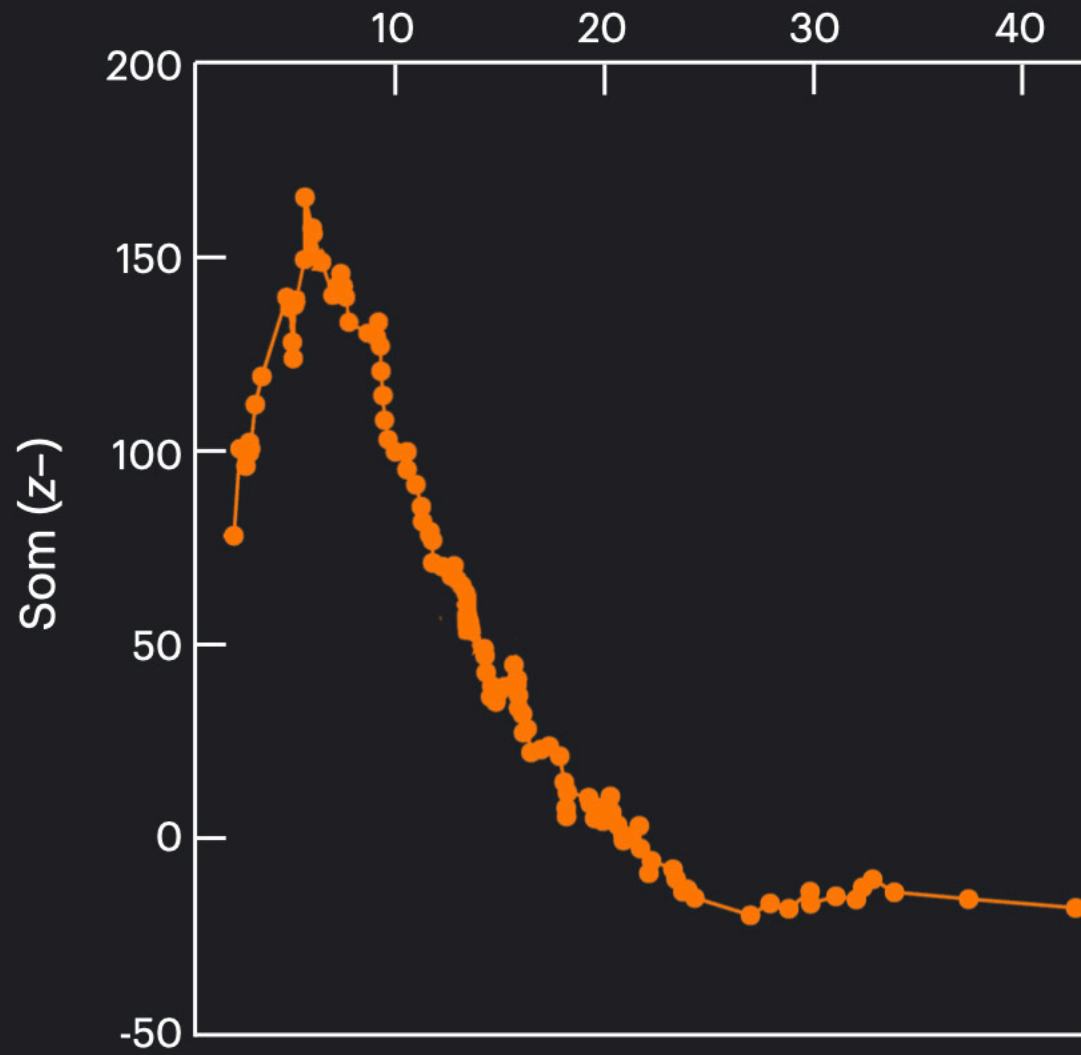


Bron: RIVM, 2022

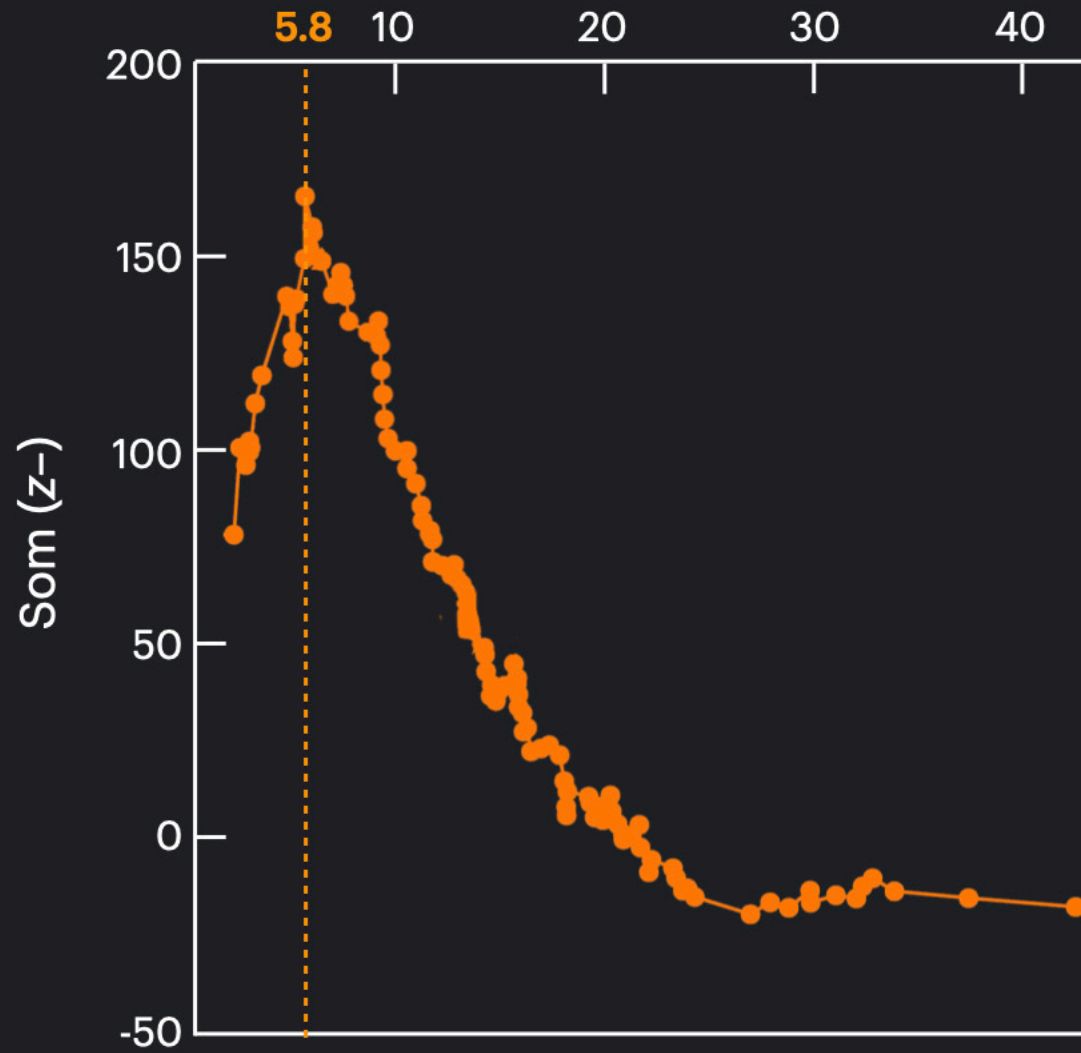
PBL/mrt22  
www.clo.nl/nlo18919



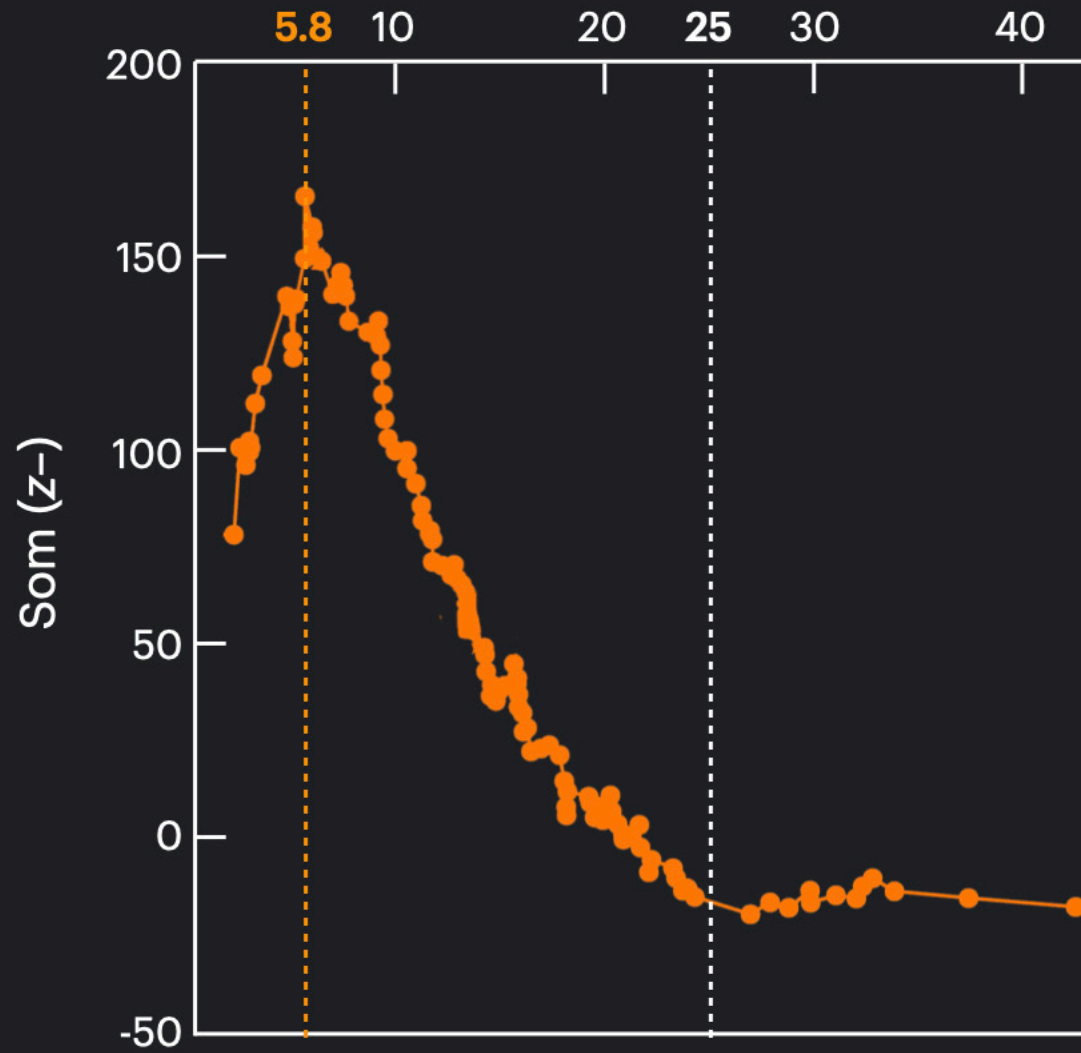
# Stikstofdepositie (kg ha<sup>-1</sup> jaar<sup>-1</sup>)



# Stikstofdepositie (kg ha<sup>-1</sup> jaar<sup>-1</sup>)



# Stikstofdepositie (kg ha<sup>-1</sup> jaar<sup>-1</sup>)



Landelijk gemiddelde Nederland





# Biodiversity

BIO:NL



Overview

Compare

Market Summary > Biodiversity

## 30410 species

-9.66 (-24.11%) ↓ past 6 months

Closed: 22 Sept, 19:59 GMT-4 • Disclaimer

After hours 30,42 +0,010 (0,033%)

1D

5D

1M

6M

YTD

1Y

5Y

Max



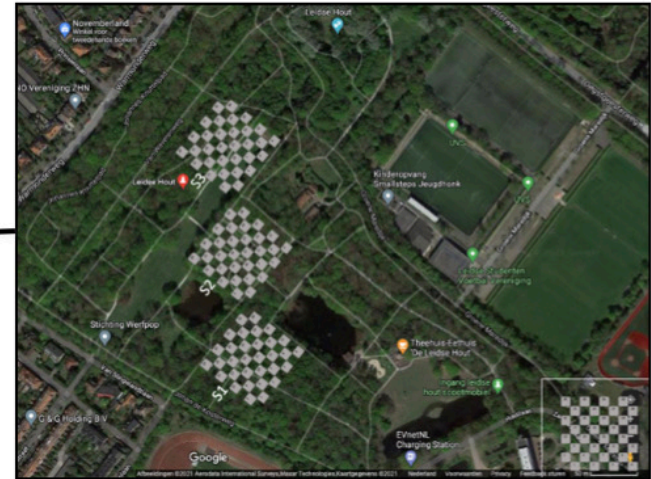


**The ARISE project will build an infrastructure that will identify and monitor all multicellular species in the Netherlands**

[ABOUT US >](#)

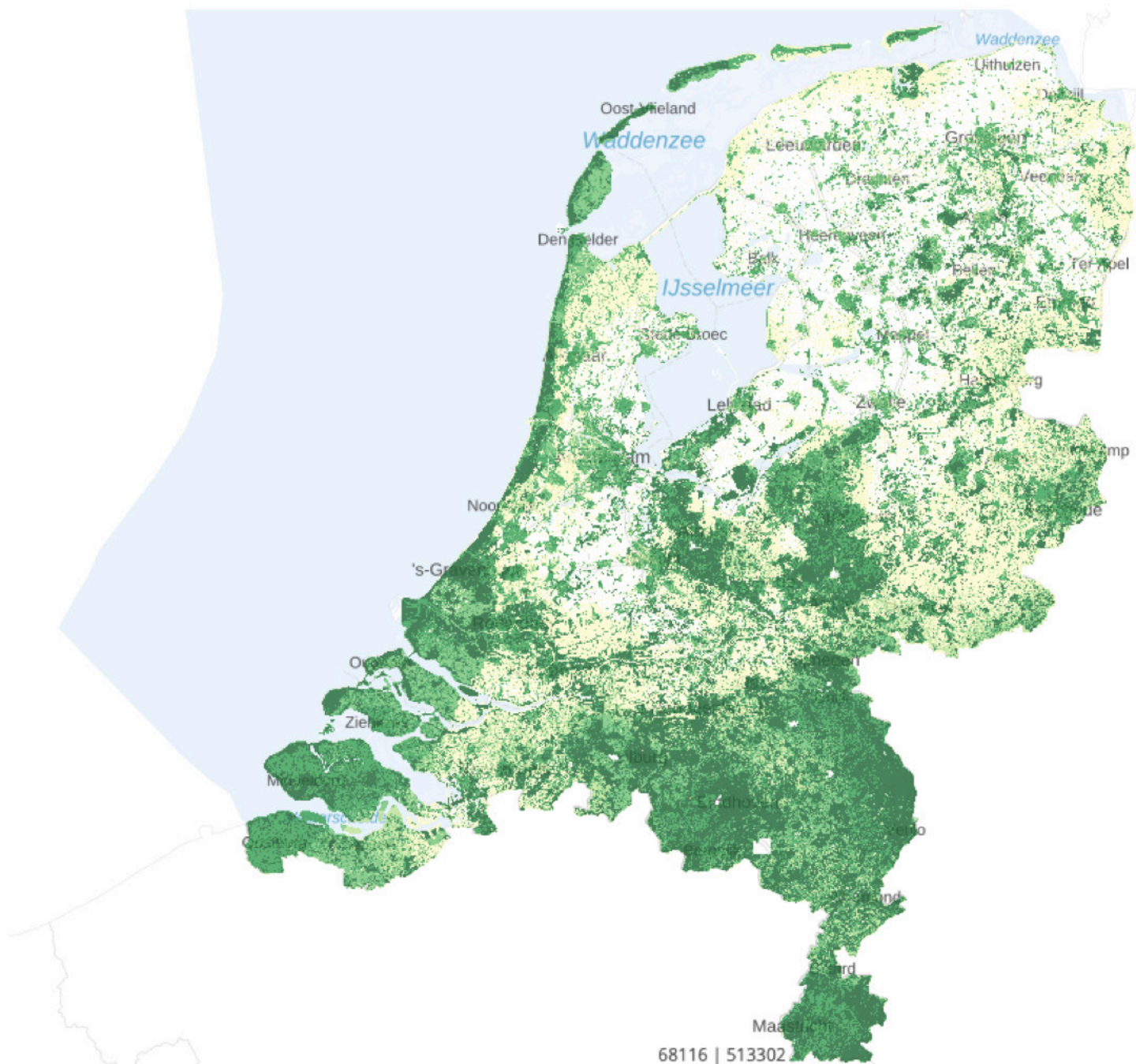
[www.arise-biodiversity.nl](http://www.arise-biodiversity.nl)

## Leidse Hout



## Berkheide





68116 | 513302

### Gekozen kaarten



### Kaarten



Alle kaarten aan/uit

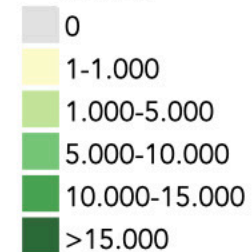
Schimmeldiversiteit in Nederland

Transparantie: 20%



#### Legenda:

Aantal schimmel ASVs per gridcel



#### Bron:

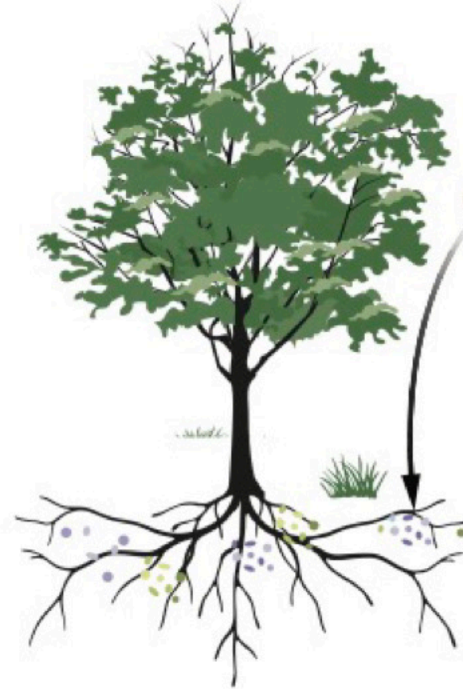
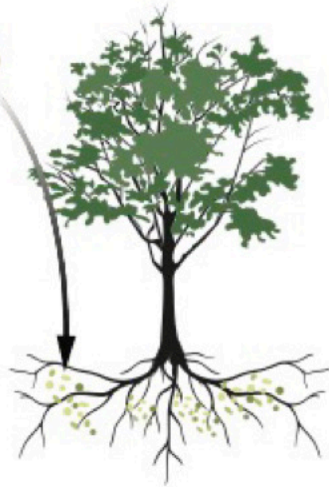
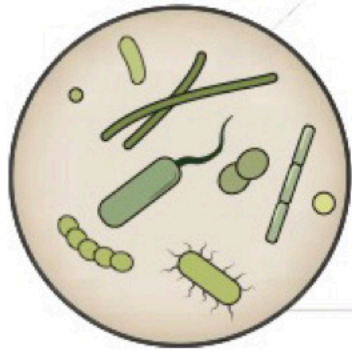
Naturalis Biodiversity Center  
2024





Microbiota  
inoculation

**Low-stress**  
legacy  
microbiota



**High-stress**  
legacy  
microbiota

