



Wespen en Wespeneieven in het dal van de Groote Beerze

Jan Kolsters & Pieter Wouters
Oktober 2025

Wespendief



Buizerd





<https://www.batimiraptorcount.org/>

clypeus



Duitse wesp
Vespula germanica



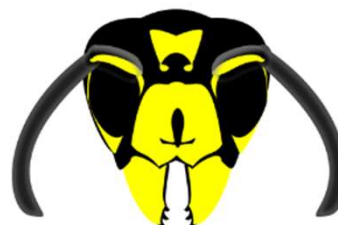
Rode wesp
Vespula rufa



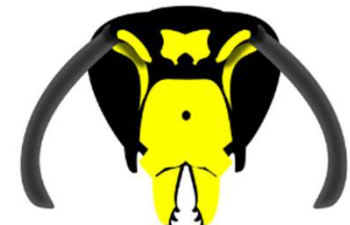
Gewone wesp
Vespula vulgaris



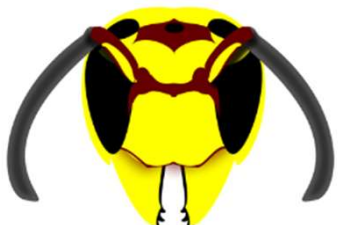
Middelste wesp
Dolichovespula media



Saksische wesp
Dolichovespula saxonica



Boswesp
Dolichovespula sylvestris



Hoornaar
Vespa crabro



Aziatische Hoornaar
Vespa velutina

Gewone Wesp (*Vespula vulgaris*)



**ankertje
op clypeus**



**Ocular sinus
concaaf aan
binnenkant**



**Gele band
op mesocutum
dunne egale lijn**



**Zwarte stippen
op abdomen
vast aan zwarte band**



**Gele rand
achter oog
met zwarte stip**



**Afstand spots
Metatonum en Propodeum
kleiner wordend**

aantal keren klopt	94	92	88	85	84	79
aantal keren klopt niet	1	3	7	10	11	16
percentage klopt	98,95	96,84	92,63	89,47	88,42	83,16
percentage cumulatief	98,9474	99,9668	99,9976	99,9997	100,0000	100,0000

Duitse Wesp (*Vespula germanica*)



**Gele rand
achter oog
zonder zwarte stip**



**3 stippen
op clypeus**



**Afstand spots
Metatonum en
Propodeum
gelijk blijvend**



**Ocular sinus
convex aan binnenkant**



**Gele band
op mesocutum
breed met punt
middenonder**



**Zwarte stippen
op abdomen
los van zwarte band**

aantal keren klopt	44	42	38	27	27	5
aantal keren klopt niet	1	3	7	18	18	40
percentage klopt	97,78	93,33	84,44	60,00	60,00	11,11
percentage cumulatief	97,7778	99,8519	99,9770	99,9908	99,9967	99,9963

Groote Beerze traject 2

320 ha



Wespennesten inventariseren: hoe doe je dat??

2020

nr	datum	afstand (km)	tijd (hr)
1	14-Jul-20	3.5	3.0
2	17-Jul-20	3.5	4.0
3	18-Jul-20	3.0	4.5
4	19-Jul-20	5.0	4.0
5	23-Jul-20	5.5	6.0
6	25-Jul-20	4.5	4.0
7	27-Jul-20	1.0	1.0
8	28-Jul-20	5.0	5.0
9	30-Jul-20	6.0	5.0
10	1-Aug-20	6.0	5.0
11	3-Aug-20	6.0	5.0
12	4-Aug-20	6.0	4.0
13	6-Aug-20	7.0	5.0
14	7-Aug-20	5.5	3.5
15	8-Aug-20	5.5	3.0
16	10-Aug-20	2.0	1.5
17	12-Aug-20	4.5	4.0
18	13-Aug-20	5.5	4.0
19	14-Aug-20	7.0	3.5
20	17-Aug-20	3.5	3.0

totaal 20 95.5 78.0

gemiddelde snelheid = 1.22 km/uur











Spoilers



Blinde bij



Pendelzweefvlieg

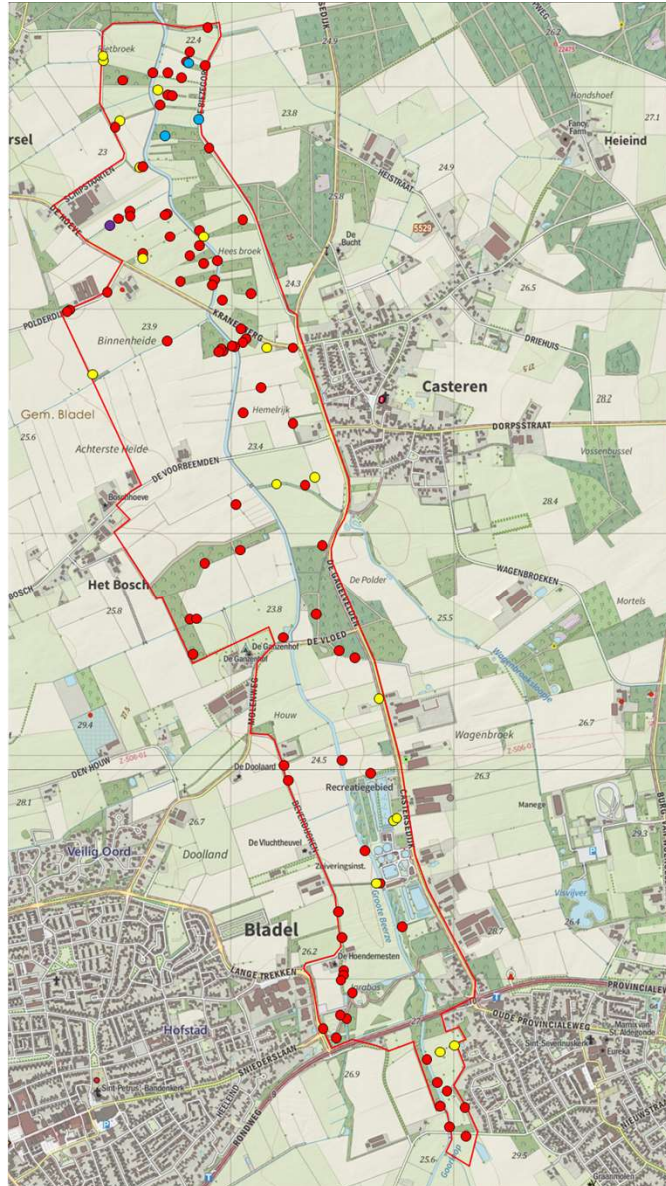


Doodshoofdzweefvlieg





Sociale wespen 2020



● Gewone wesp	81 nesten
● Duitse wesp	21 nesten
● Hoornaar	3 nesten
● Middelste wesp	1 nest

Totaal 106 nesten

Gewone wesp



Duitse wesp



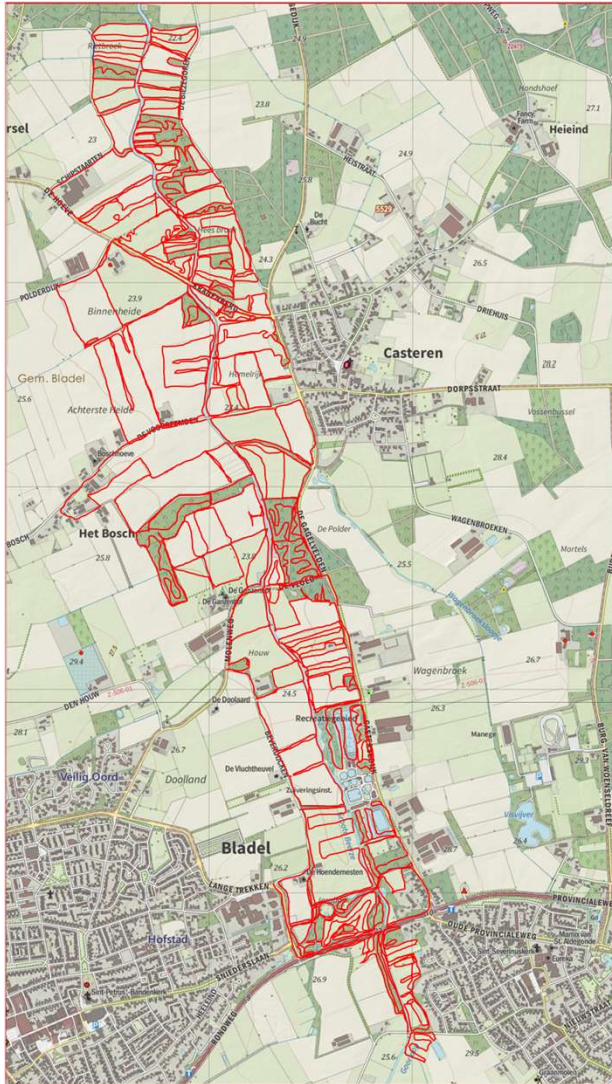
Middelste wesp



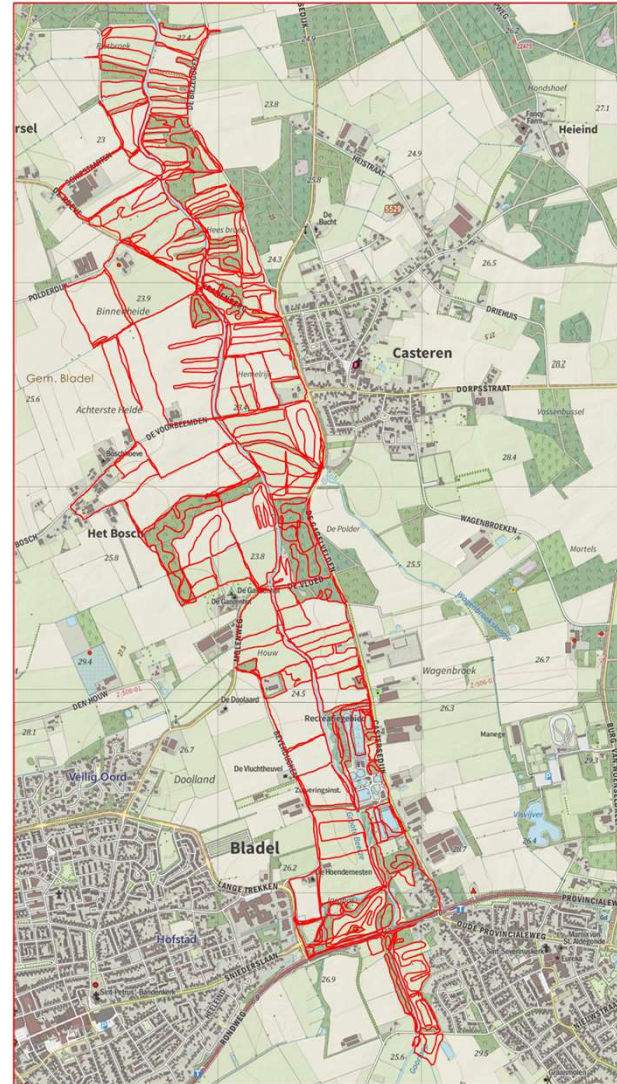
Hoornaar



2020



2021



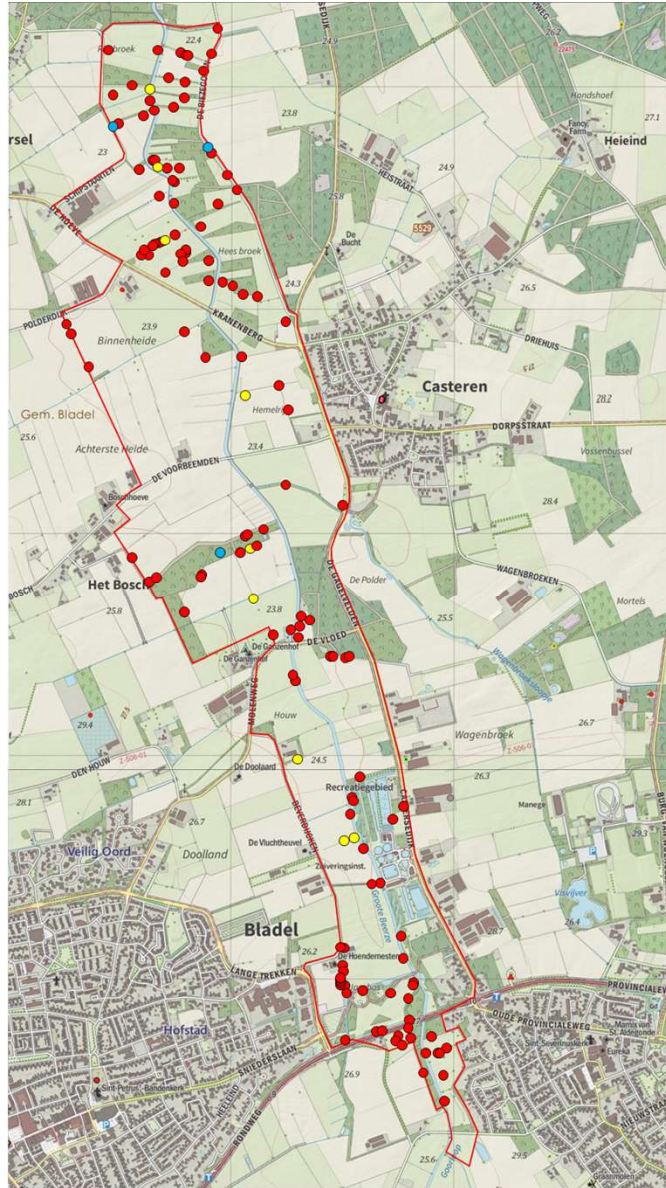
Sociale wespen 2021



- Gewone wesp 1 nest
- Duitse wesp 0 nesten
- Hoornaar 0 nesten
- Middelste wesp 0 nesten

Totaal 1 nest

Sociale wespen 2022



● Gewone wesp	131 nesten
● Duitse wesp	10 nesten
● Hoornaar	3 nesten
● Middelste wesp	0 nesten

Totaal 144 nesten



Portiers

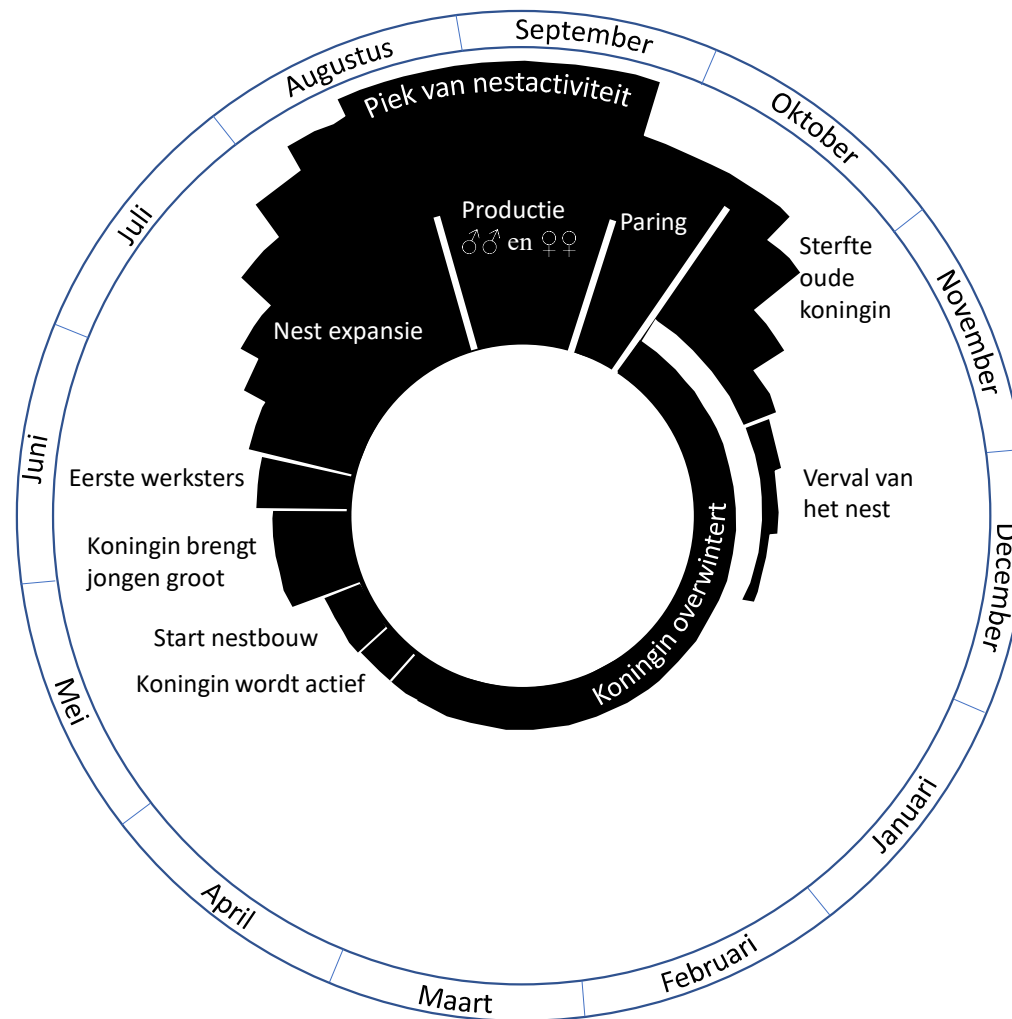


jaarcyclus

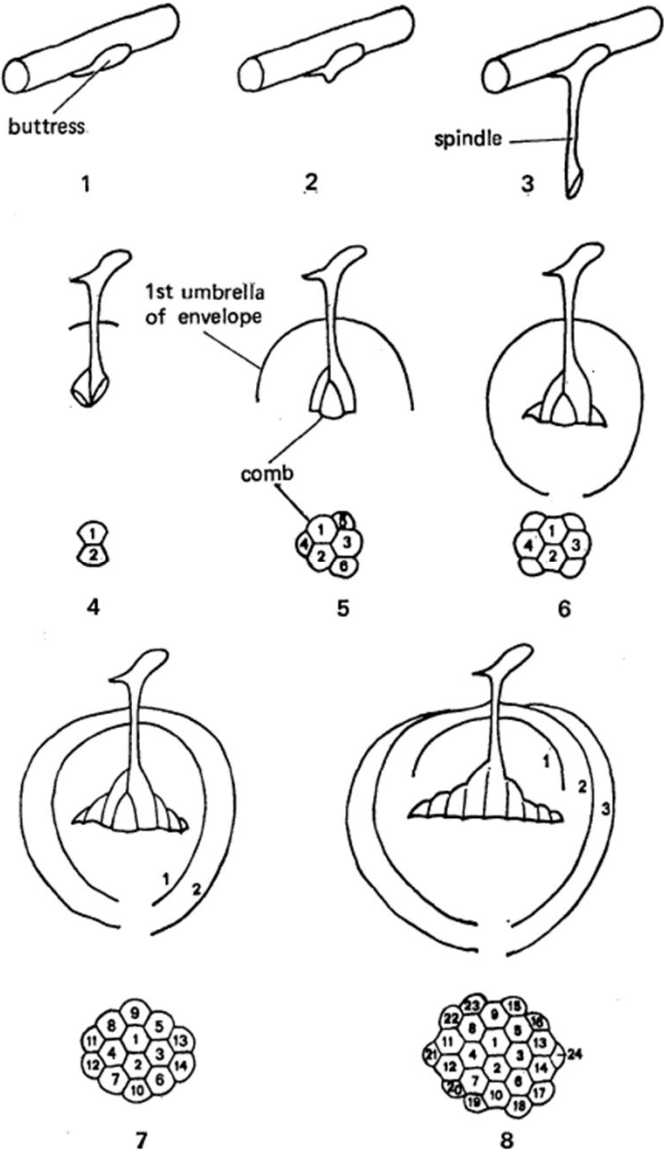
en

nestbouw

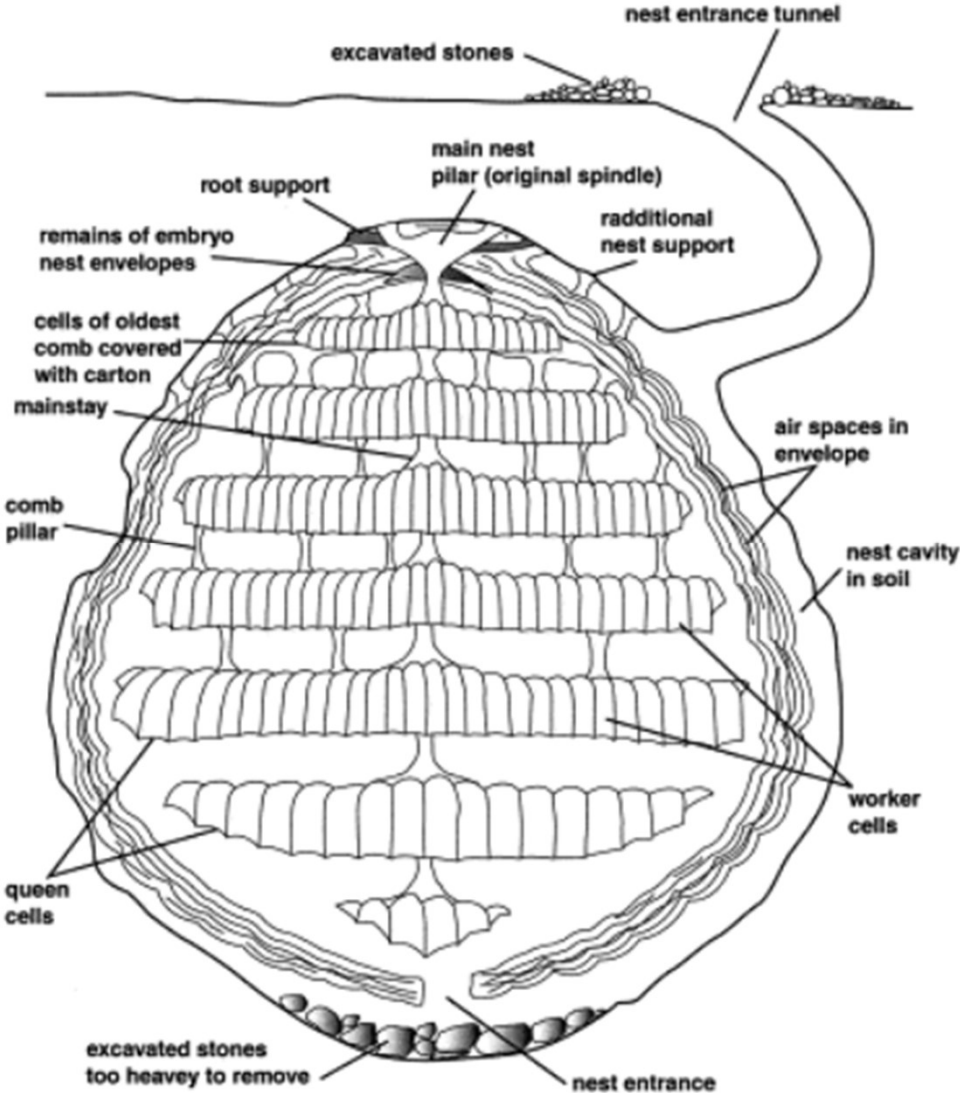
Jaarcyclus



Begin van de kolonie



Het uiteindelijke nest



Steentjes





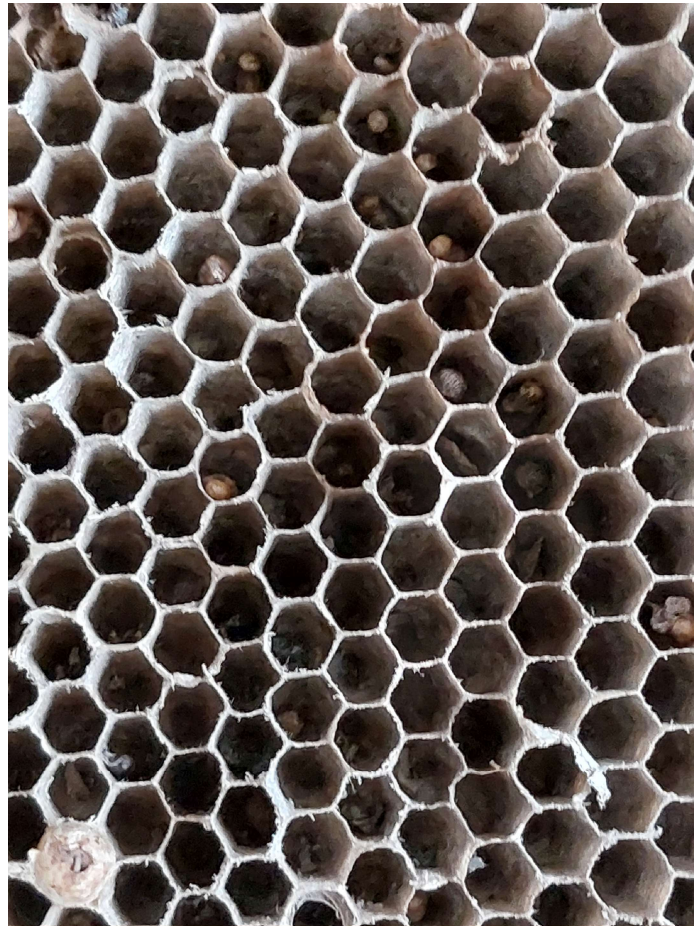


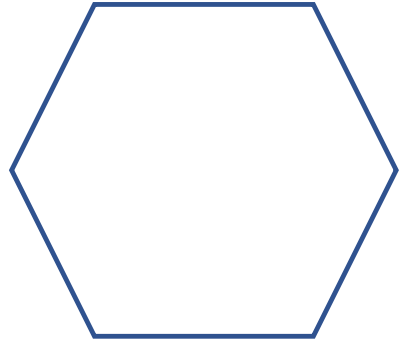
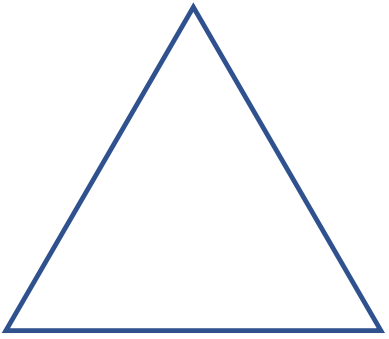


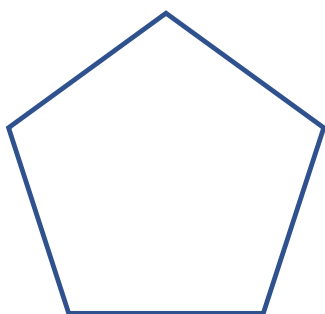
Ingang vrijhouden

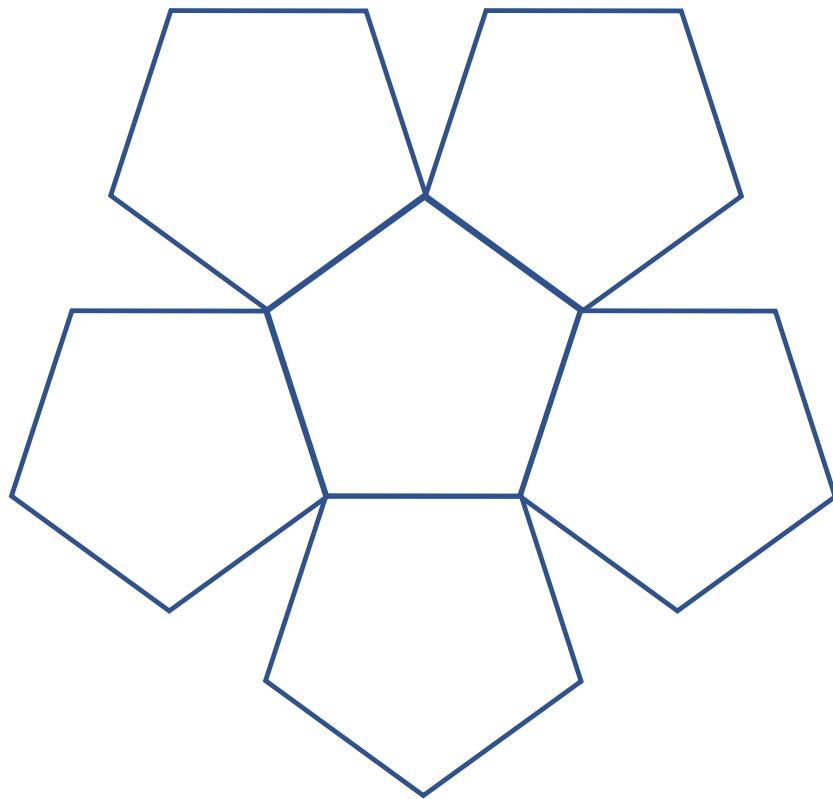


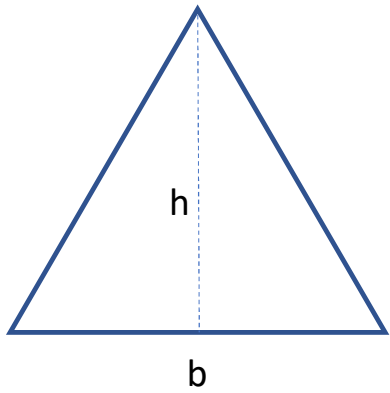
Regelmatige zeshoek











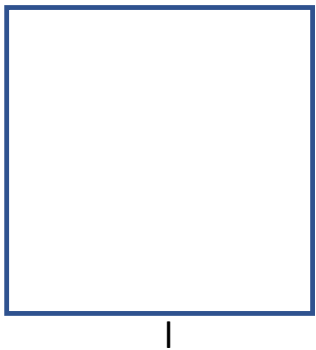
Omtrek = $3 \times b$
Oppervlakte = $b \times \frac{1}{2}h$
Oppervlakte = $b \times 2\sqrt{12}$

12 $b = 4$

Oppervlakte = 6.9

Omtrek/oppervlak

1.73

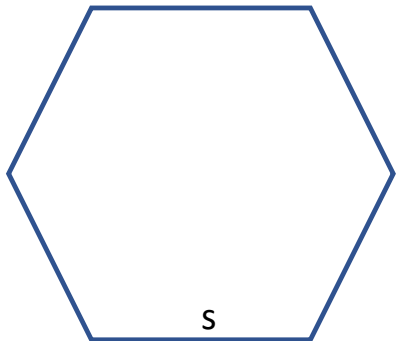


Omtrek = $4 \times l$
Oppervlakte = l^2

12 $l = 3$

Oppervlakte = 9

1.33



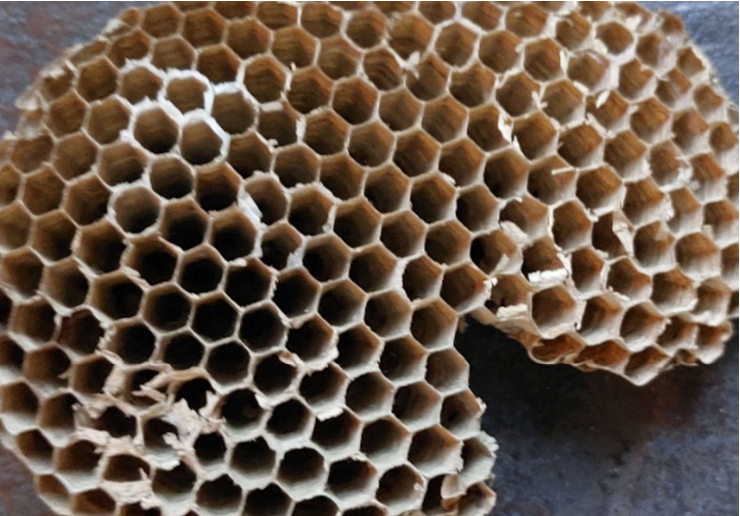
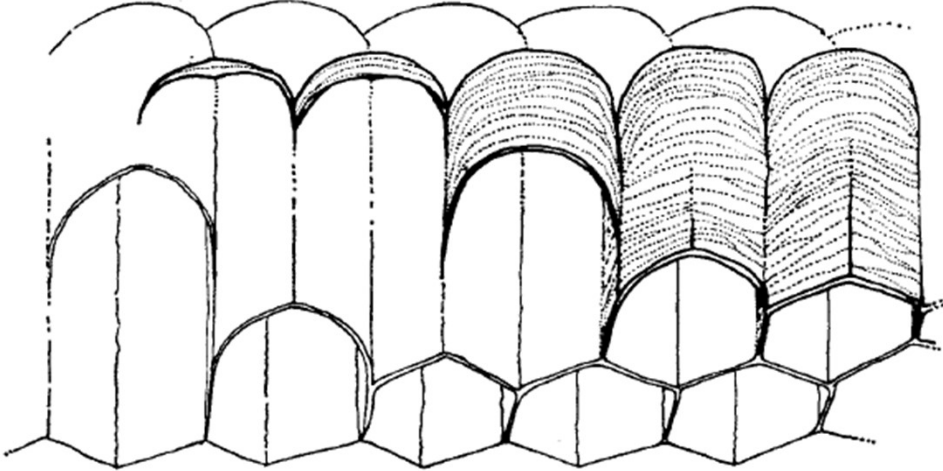
Omtrek = $6 \times s$
Oppervlakte = $\frac{3\sqrt{3}}{2} \times s^2$

12 $s = 2$

Oppervlakte = 10.4

1.15

Het bouwen van de cellen



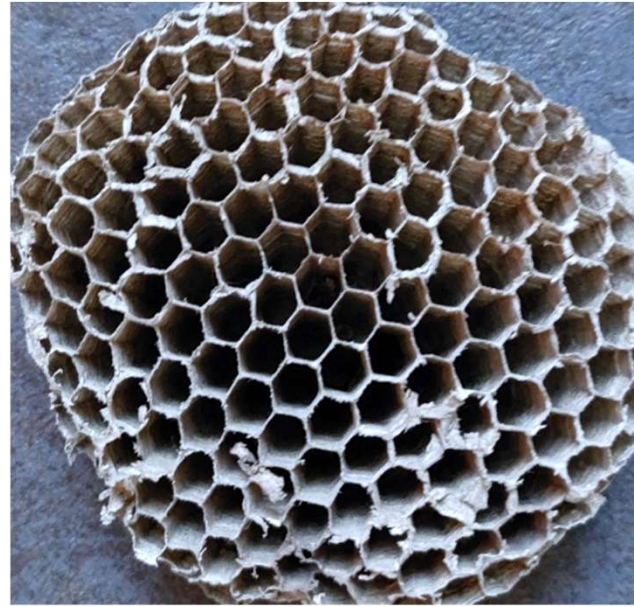
Uit: Spradbery en zelf verzameld materiaal

Gewone wesp



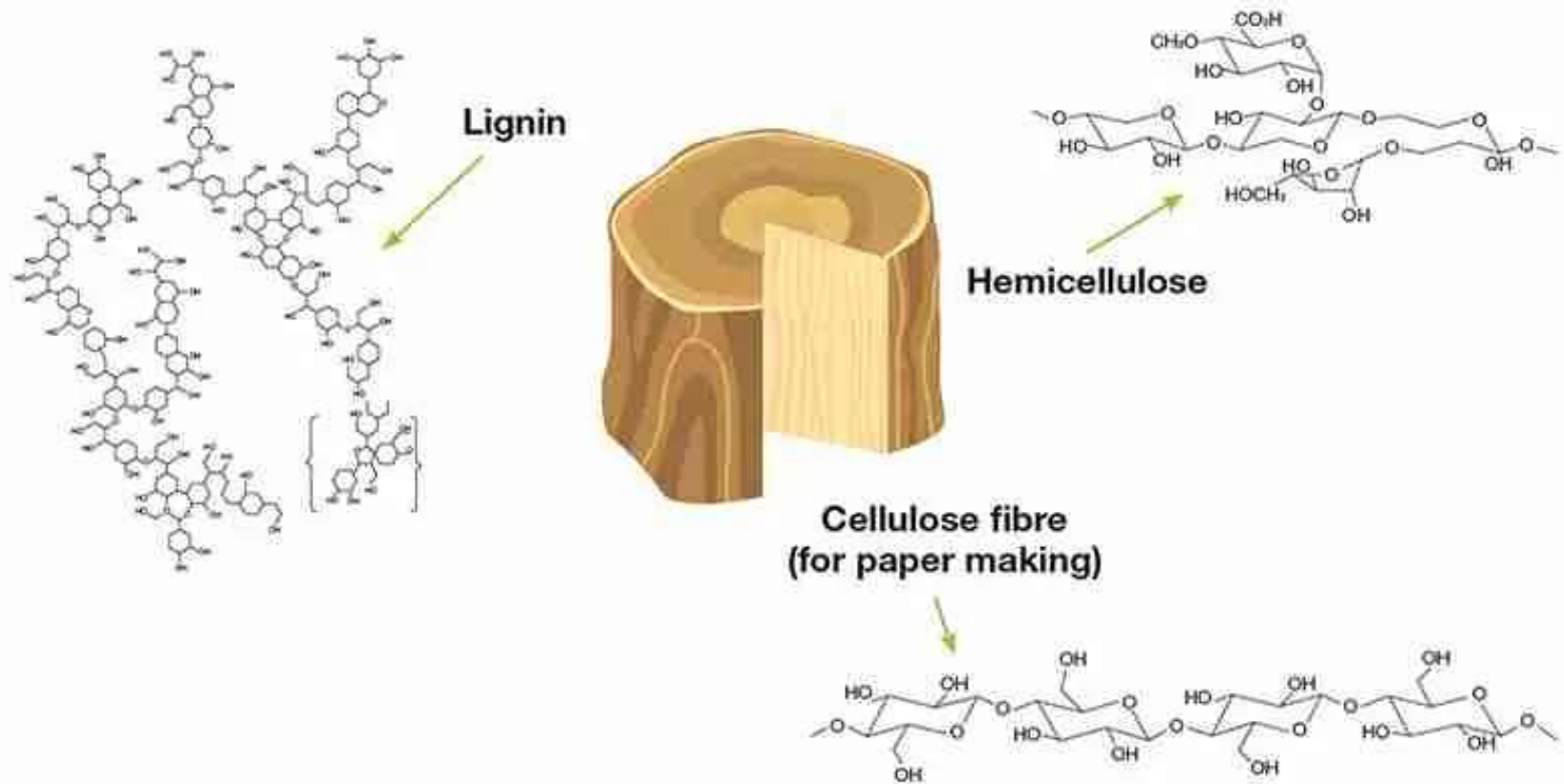
Geel/bruin

Duitse wesp

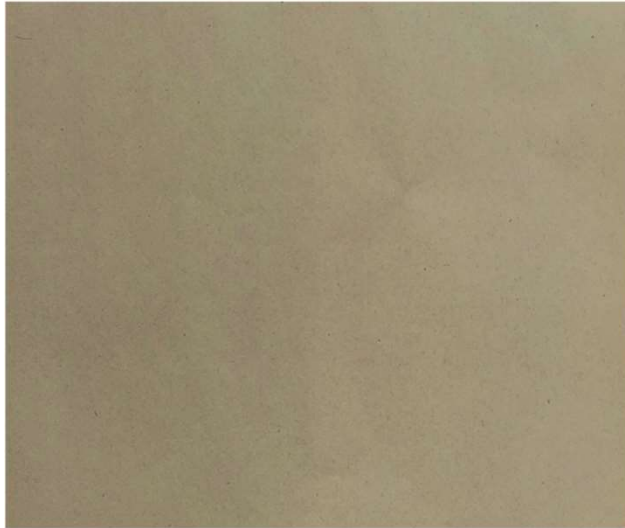


Lichtgrijs

Wood components



kladblok



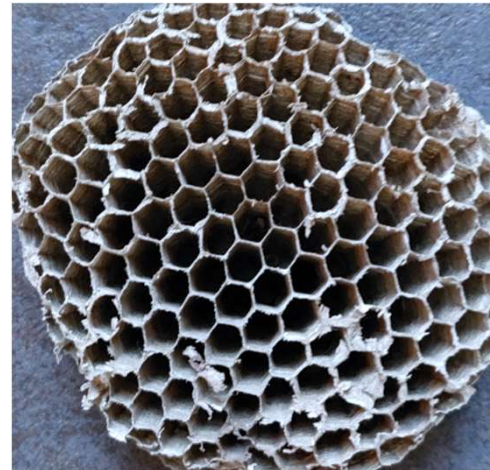
Normaal papier



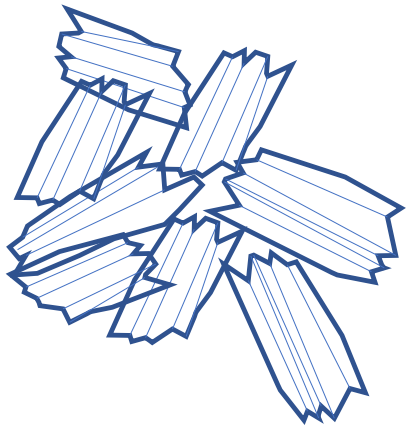
Gewone wesp



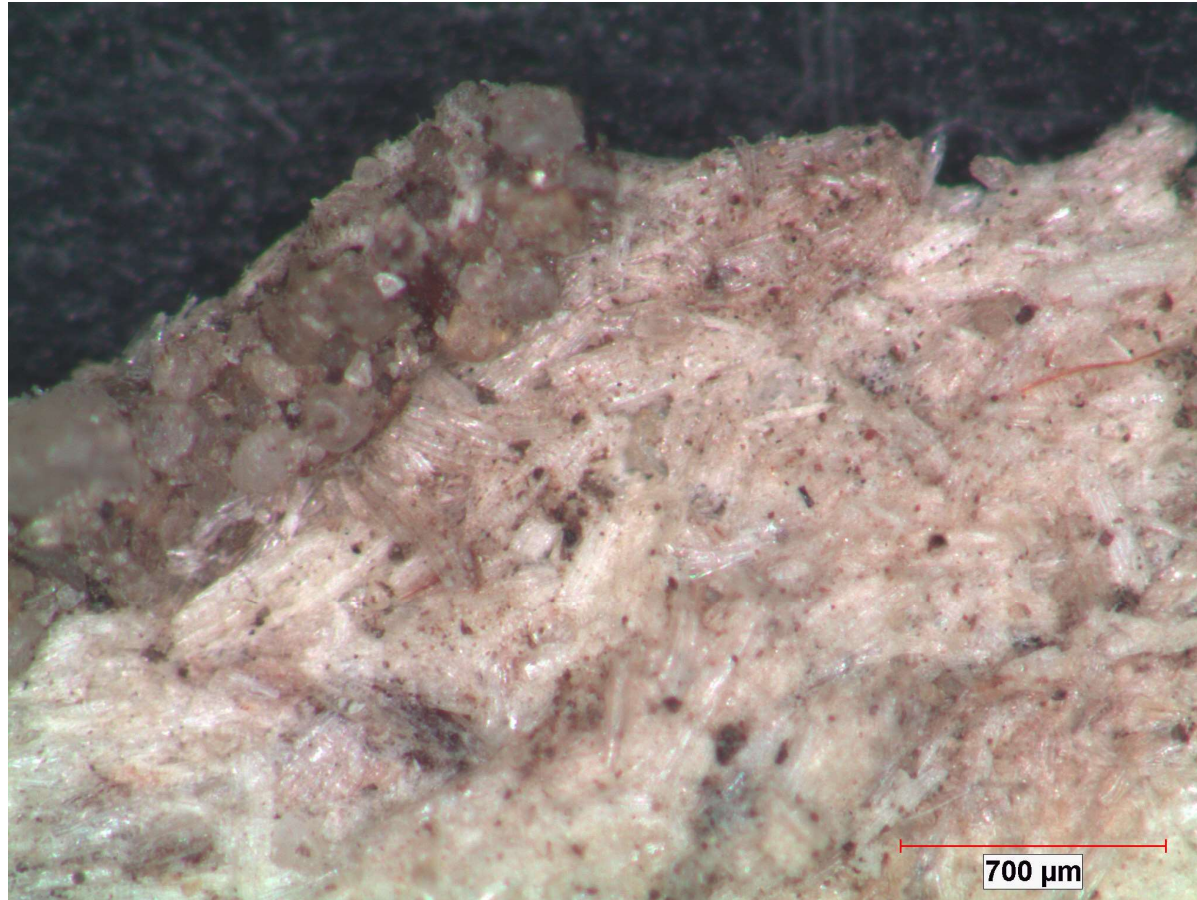
Duitse wesp



Gewone Wesp



Stukjes hout aan elkaar geplakt

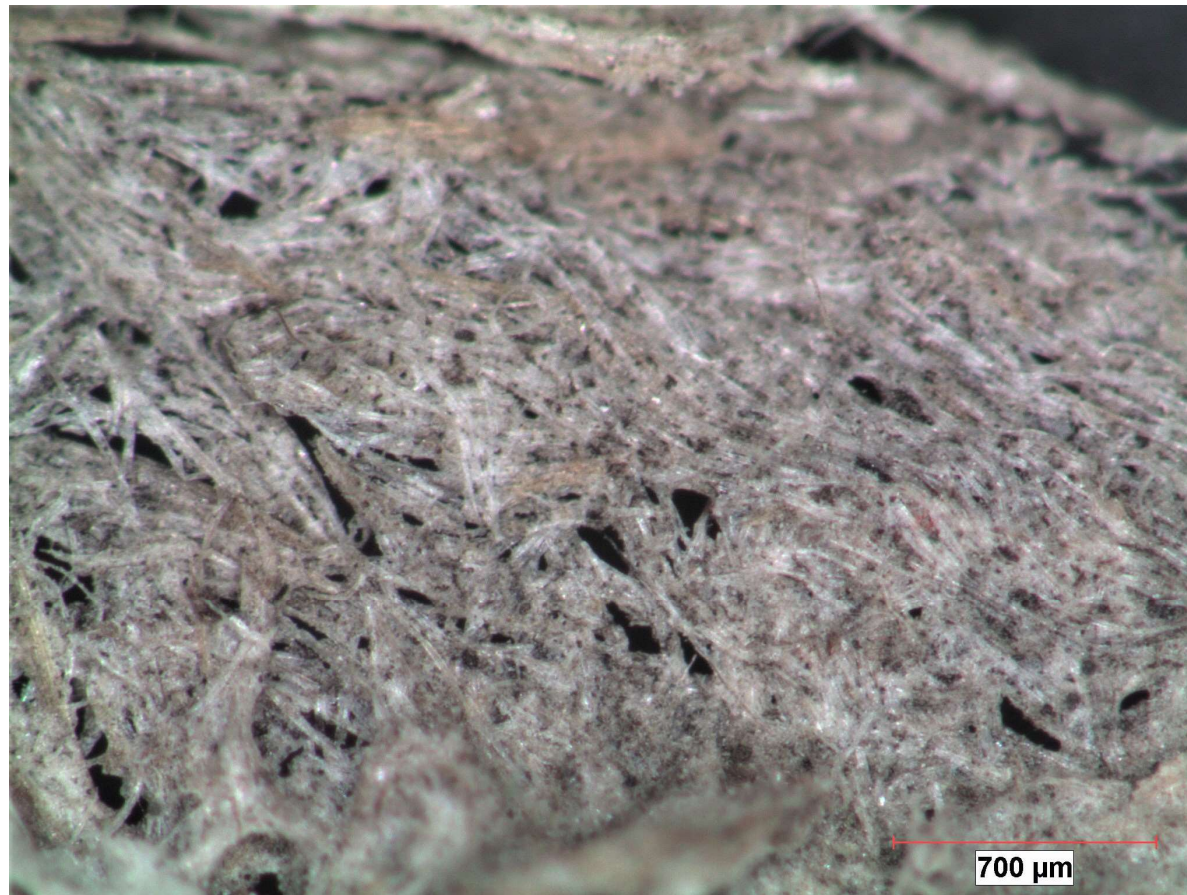


700 μm

Duitse Wesp



Cellulose vervilting



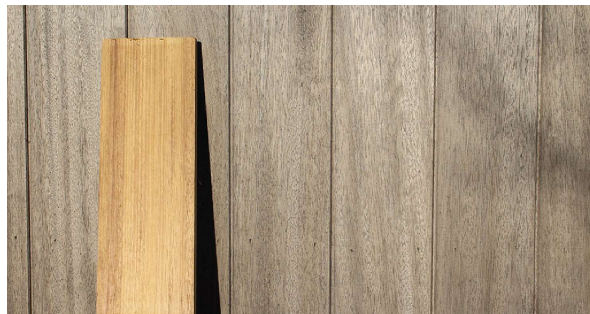
Bruinrot



Witrot



Verweerd hout



door schimmels

door UV licht







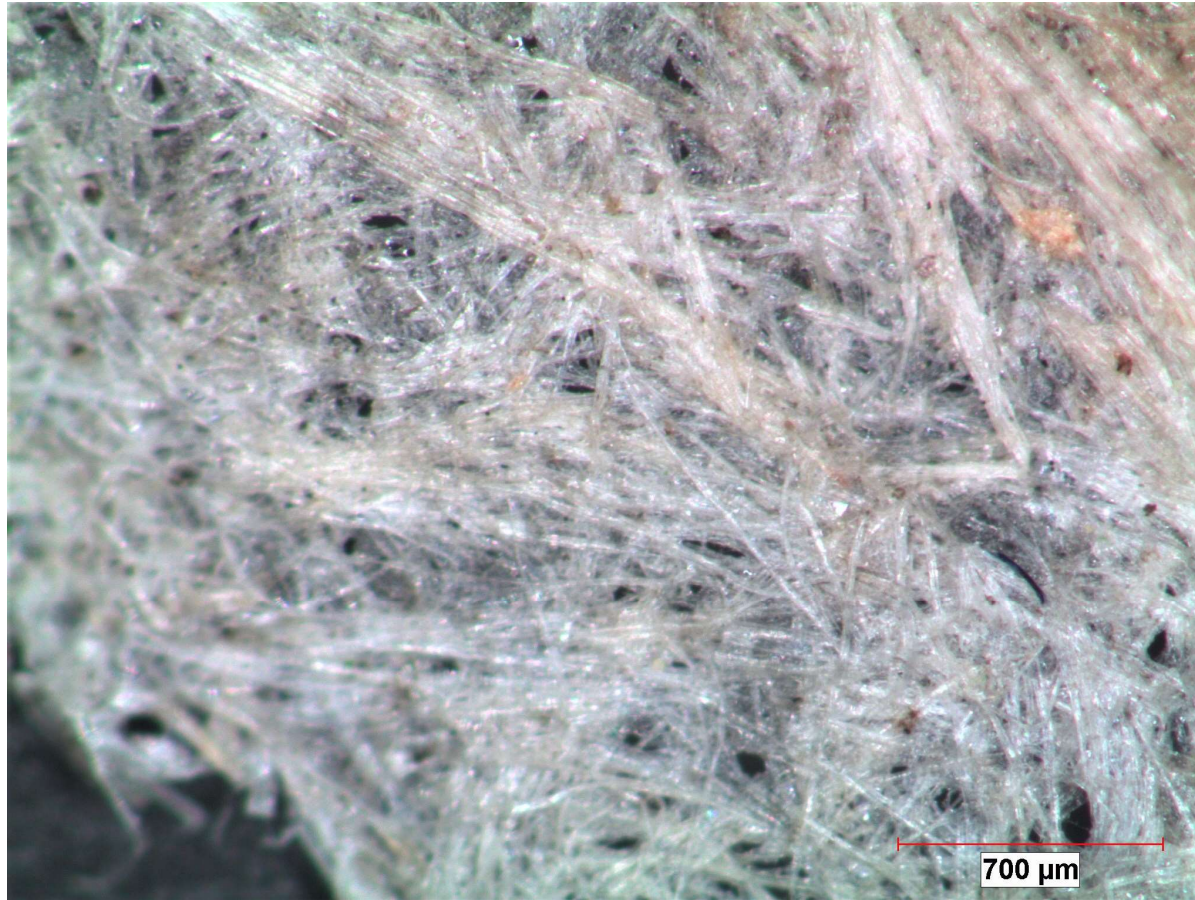




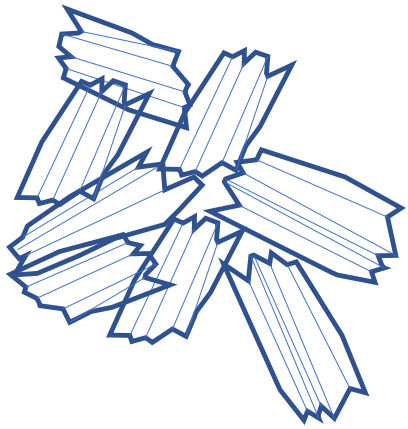
Middelste Wesp



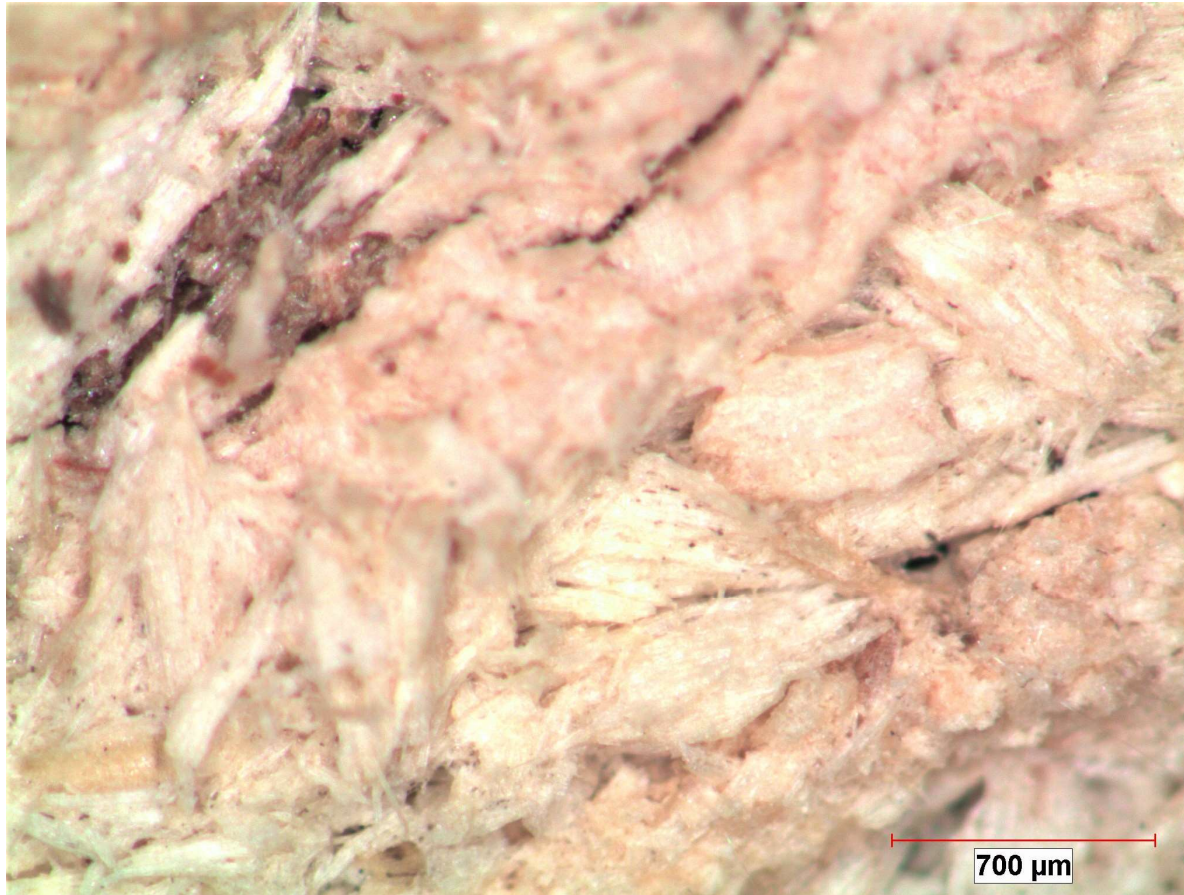
Cellulose vervilting



Europese hoornaar



Stukjes hout aan elkaar geplakt



Nestomhulling

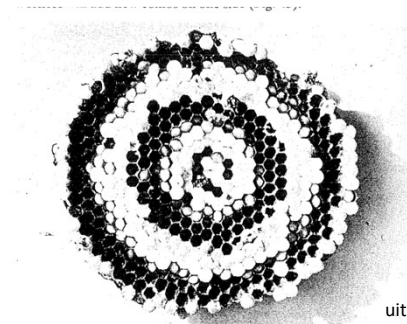
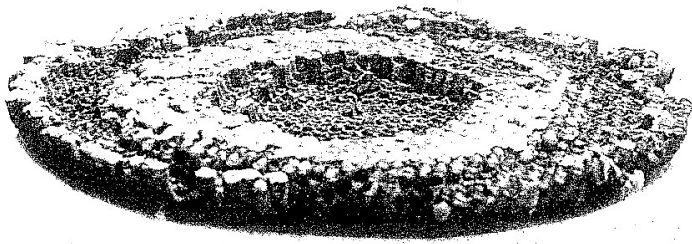
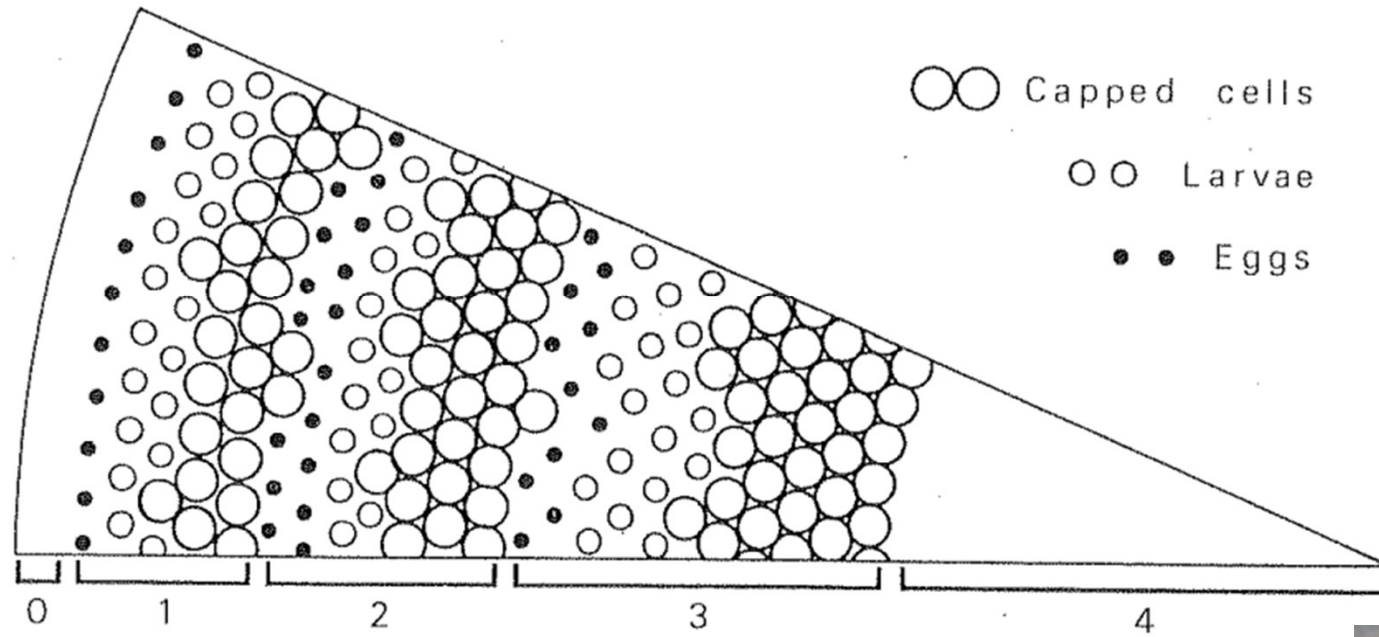
Gewone Wesp
Duitse Wesp
Hoornaar



Middelste Wesp



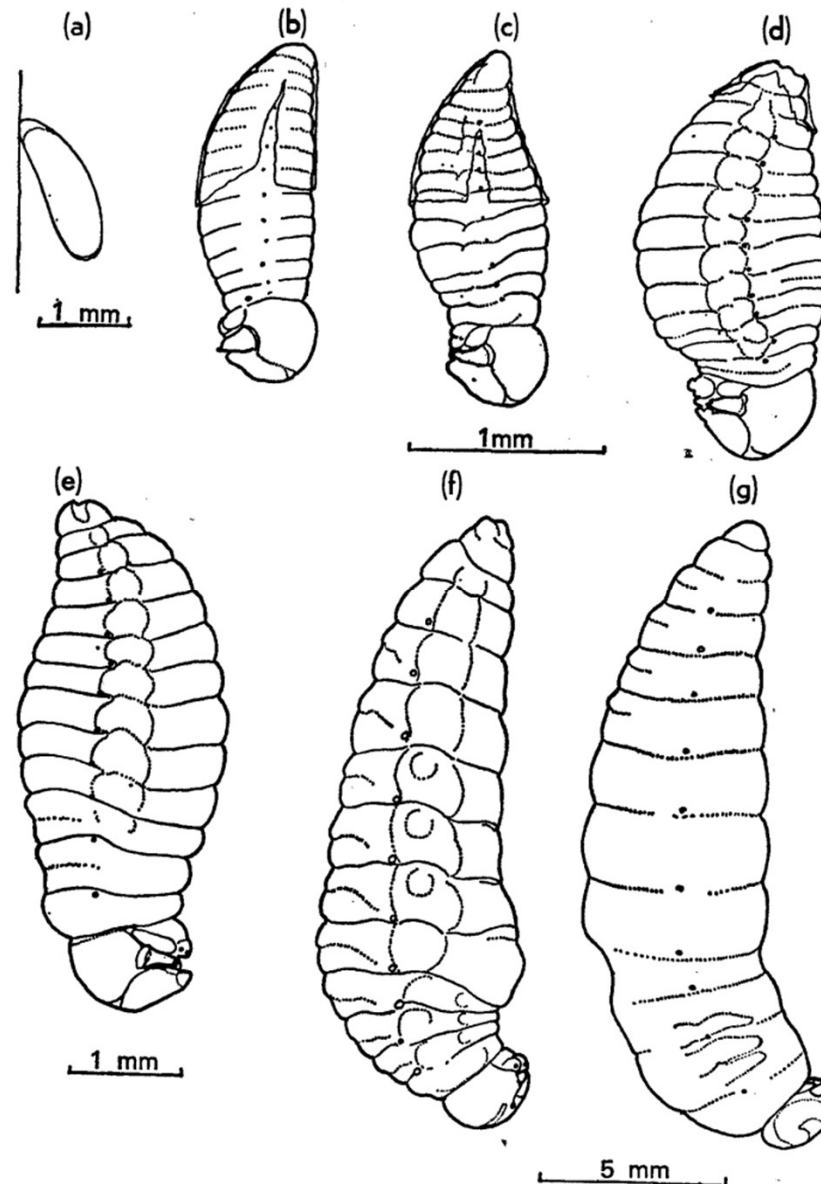
Ontwikkeling in een raat



uit Edwards 1980

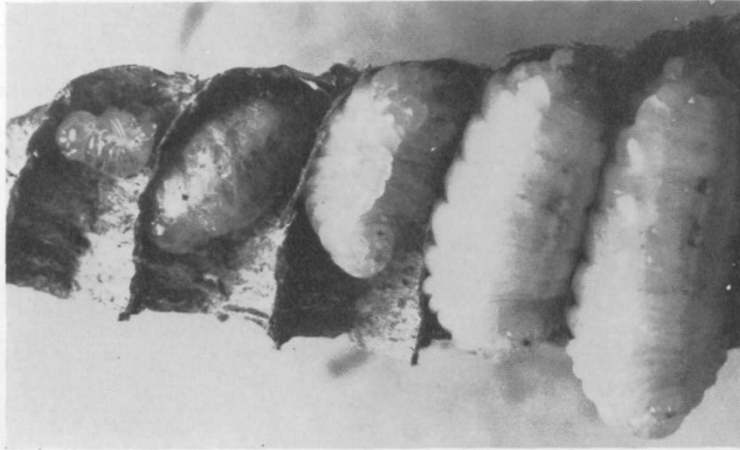


Ei- en larvestadium





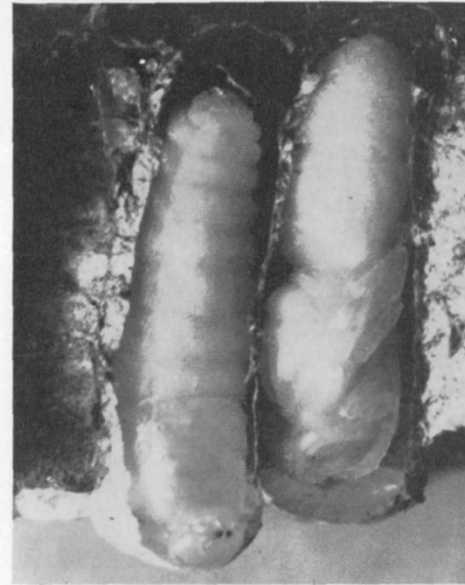
(a) Egg attached to cell wall.

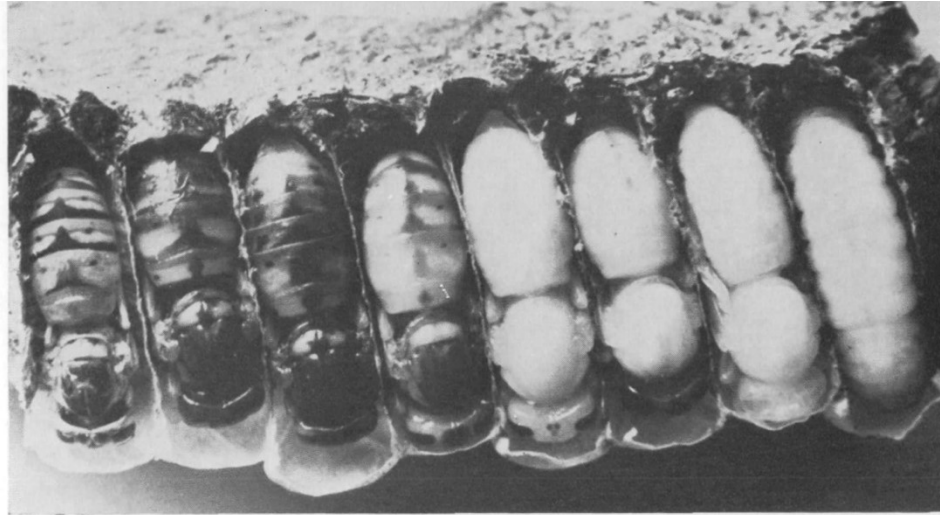


(b) Second to fifth-instar larvae of *Paravespula germanica*.

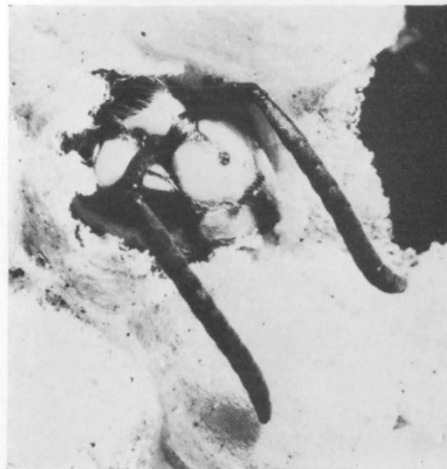


(c) Mature larvae of *P. germanica* spinning cocoons.





(a) Section of *Paravespula vulgaris* comb to illustrate increase in the pigmentation of pupae.

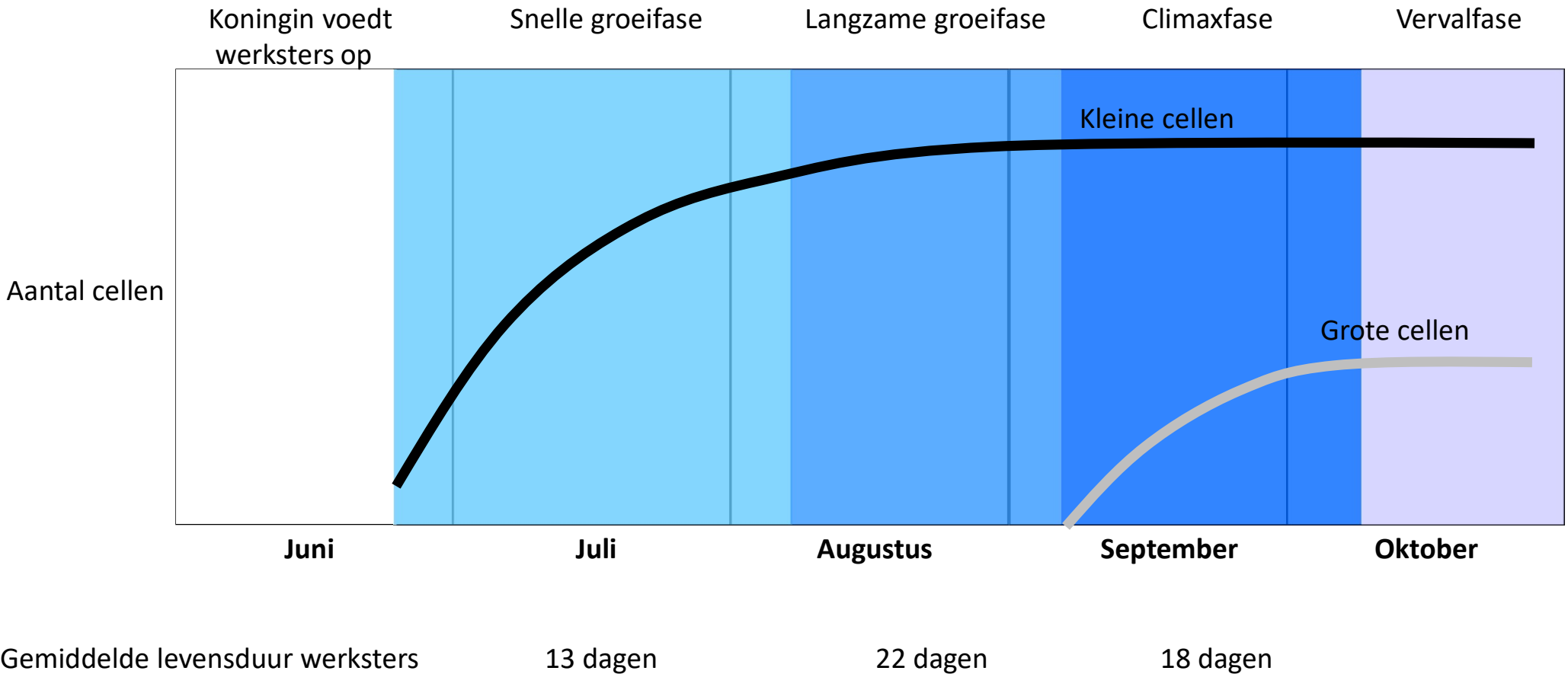


(b) Queen of *P. germanica* chewing away the pupal capping,



(c) Same queen emerging from cell.

Ontwikkeling van het nest en levensduur werkster



Nesten opgraven

Een kwestie van timing



Opgraving 1DW















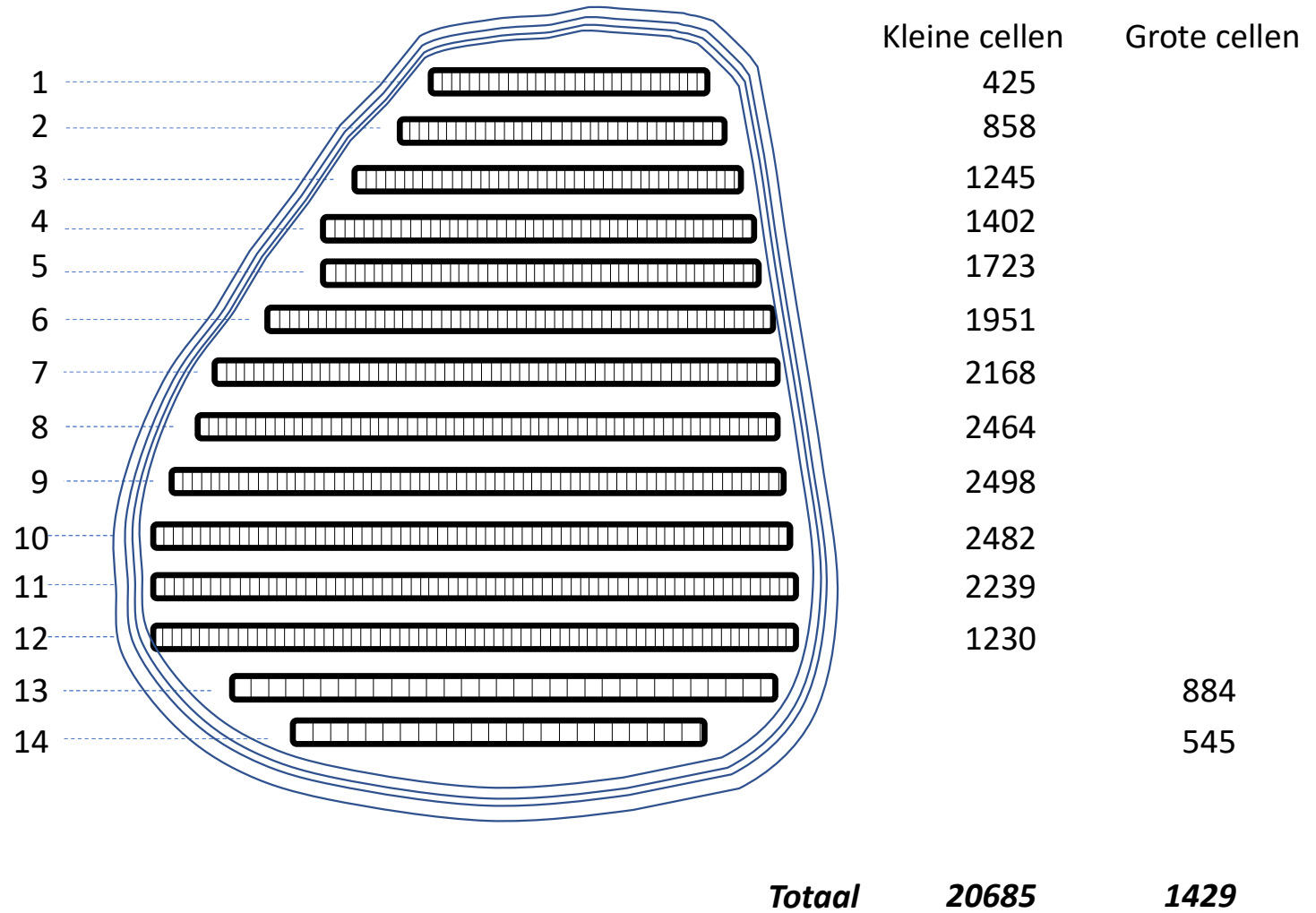
Veel variatie in nesten



67GW



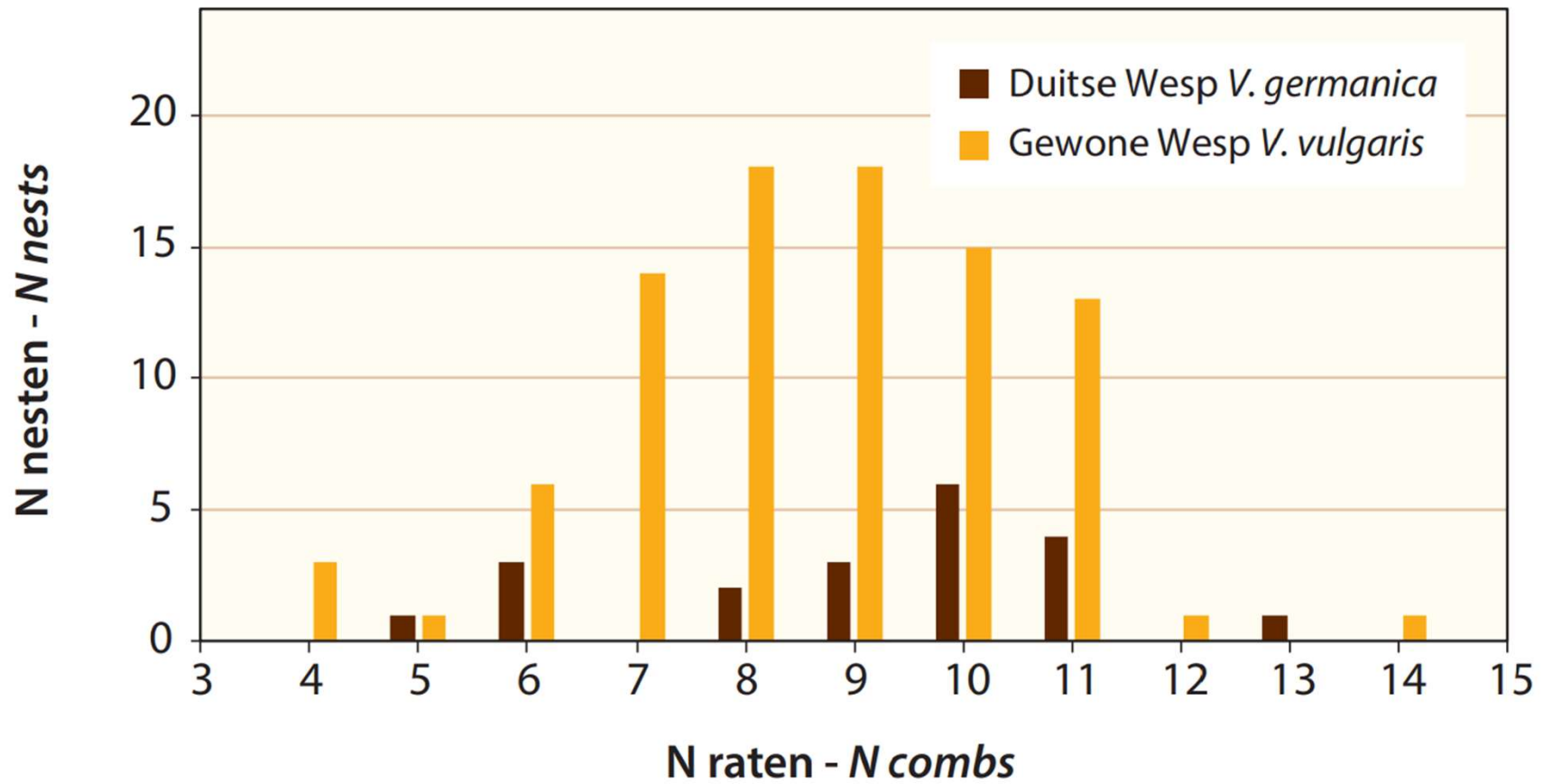
67GW



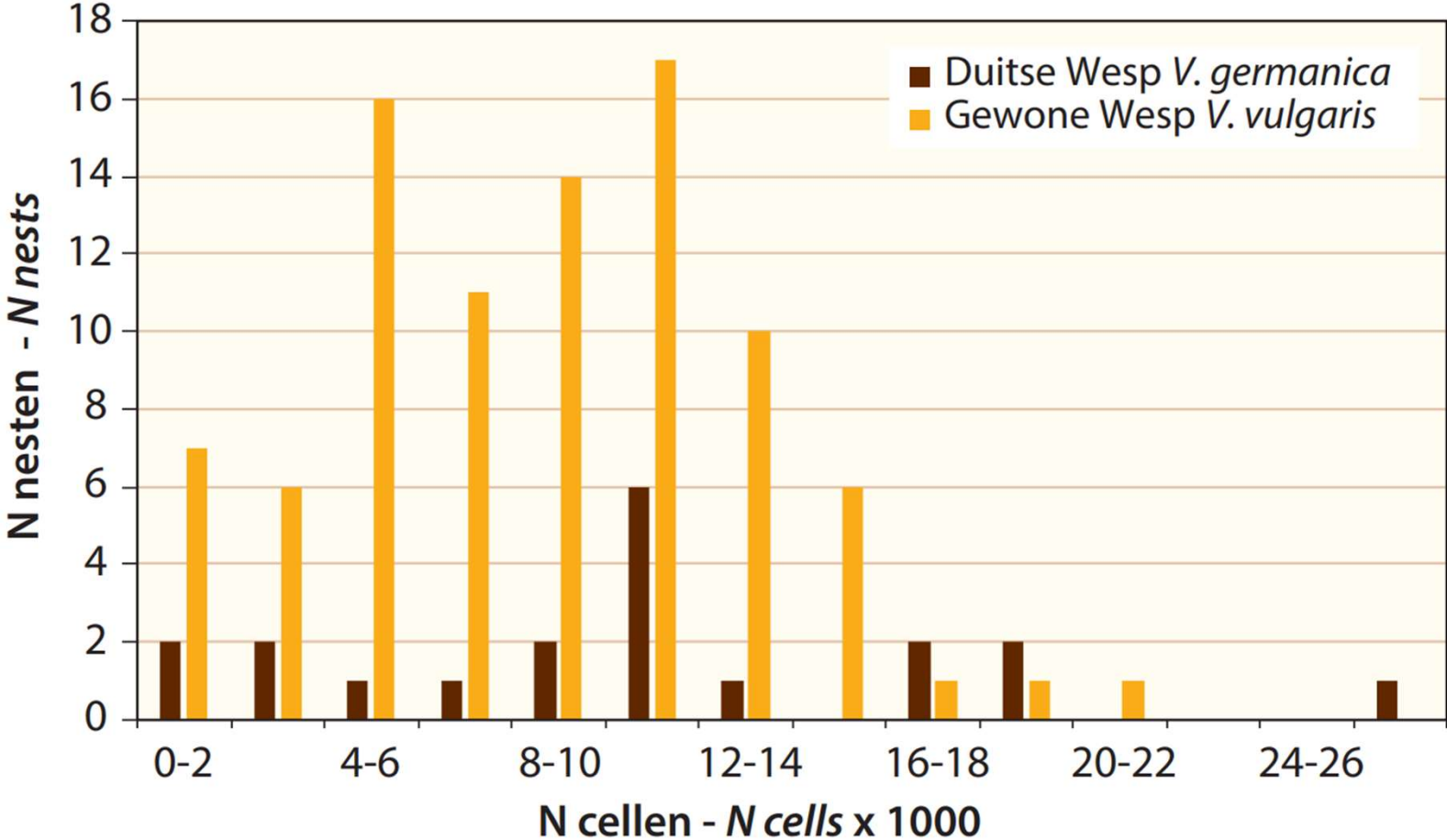
Opgegraven nesten



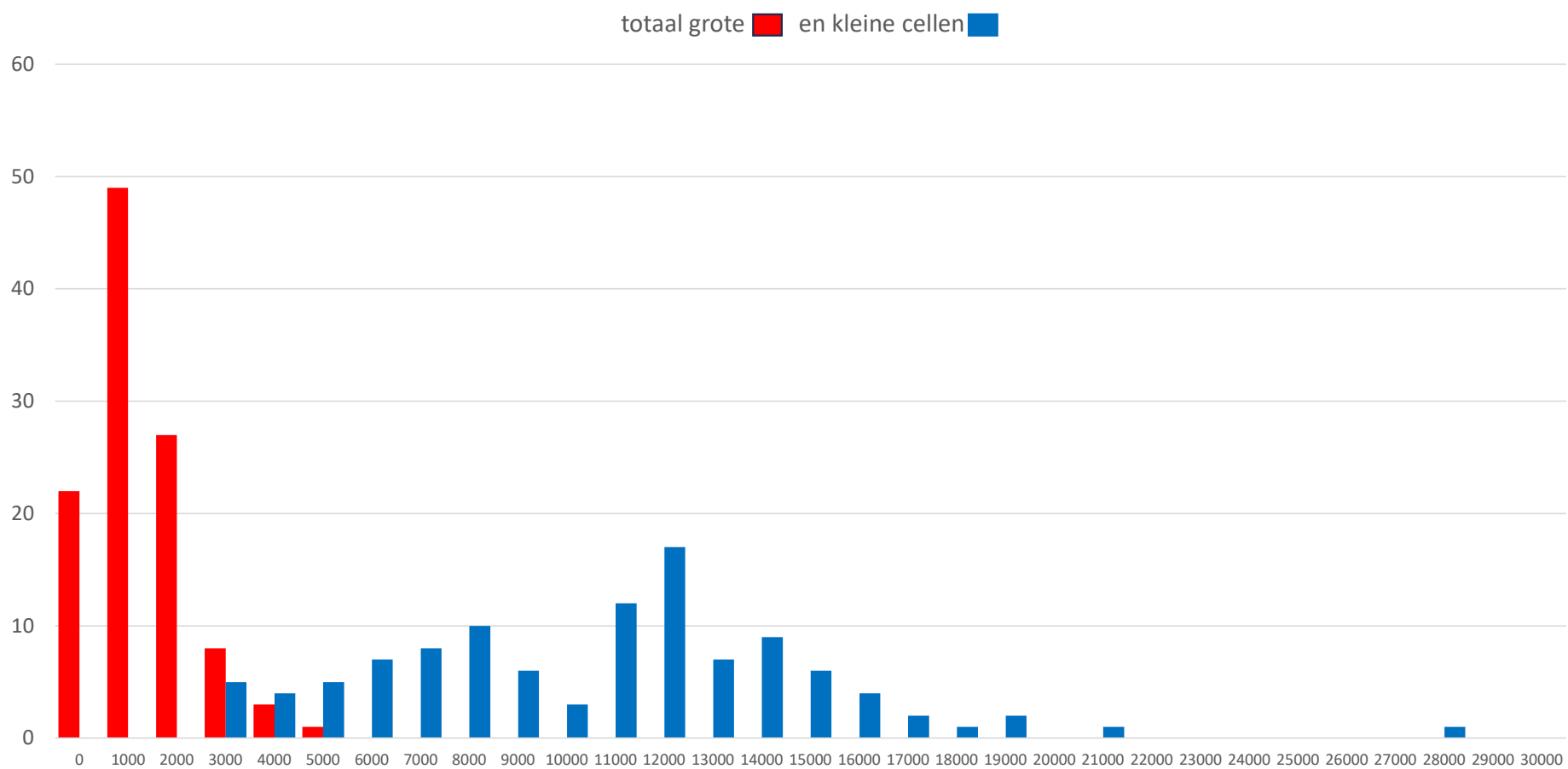
Aantal raten



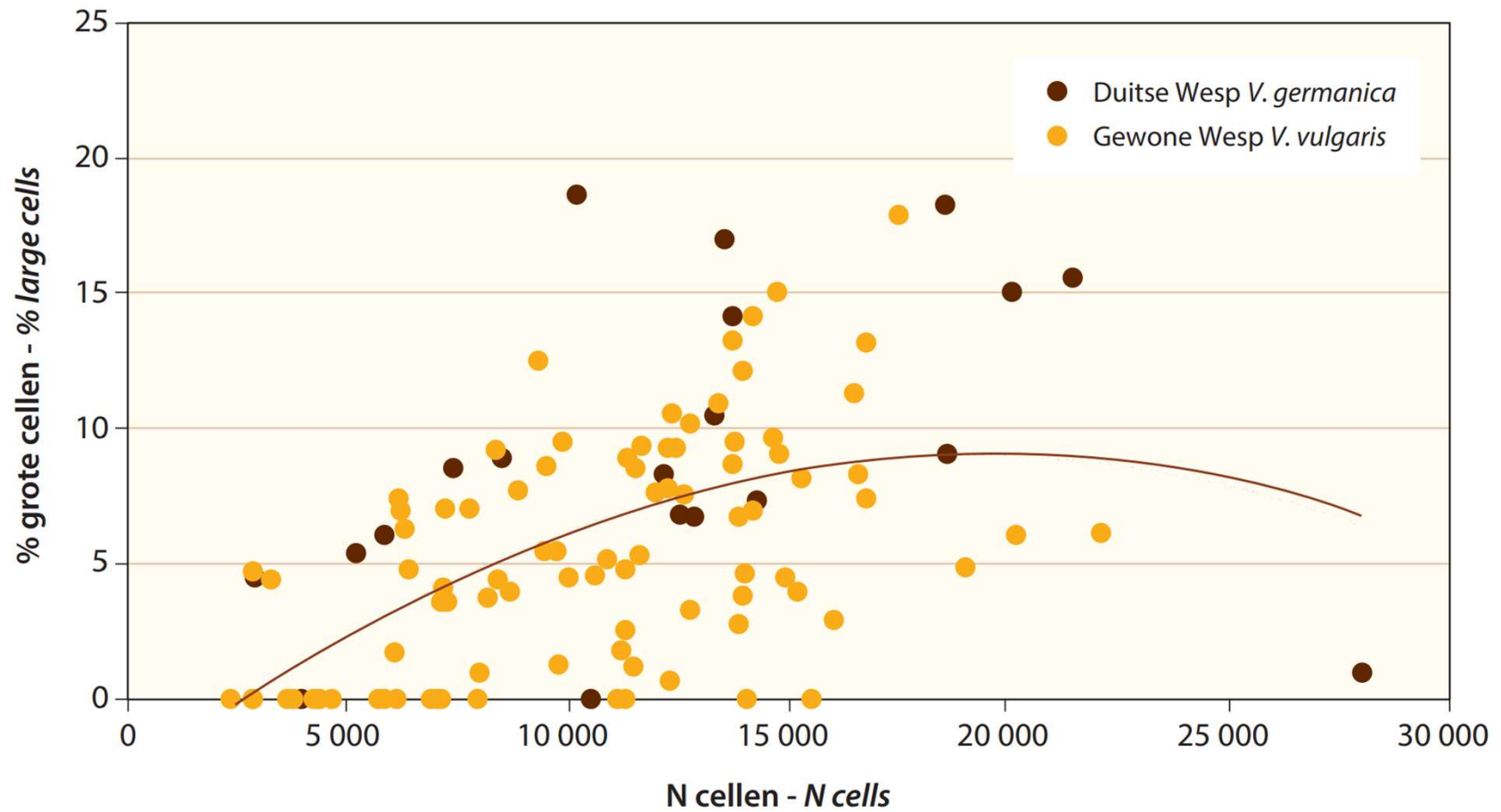
Totaal aantal cellen



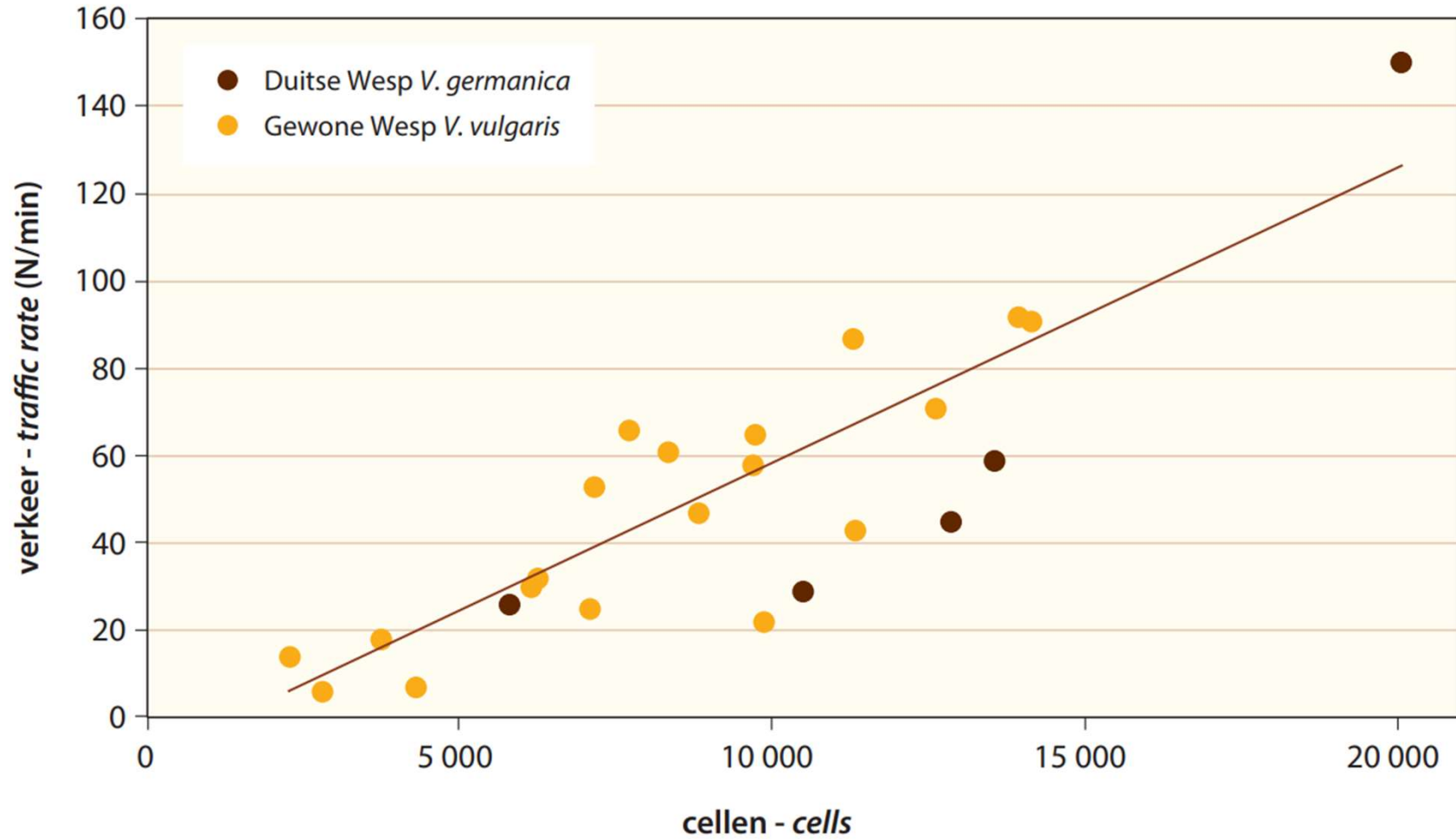
Kleine cellen - Grote cellen



Kleine cellen - Grote cellen



Aantal cellen versus vliegverkeer



Oogstbaarheid van de nesten

Drie aspecten

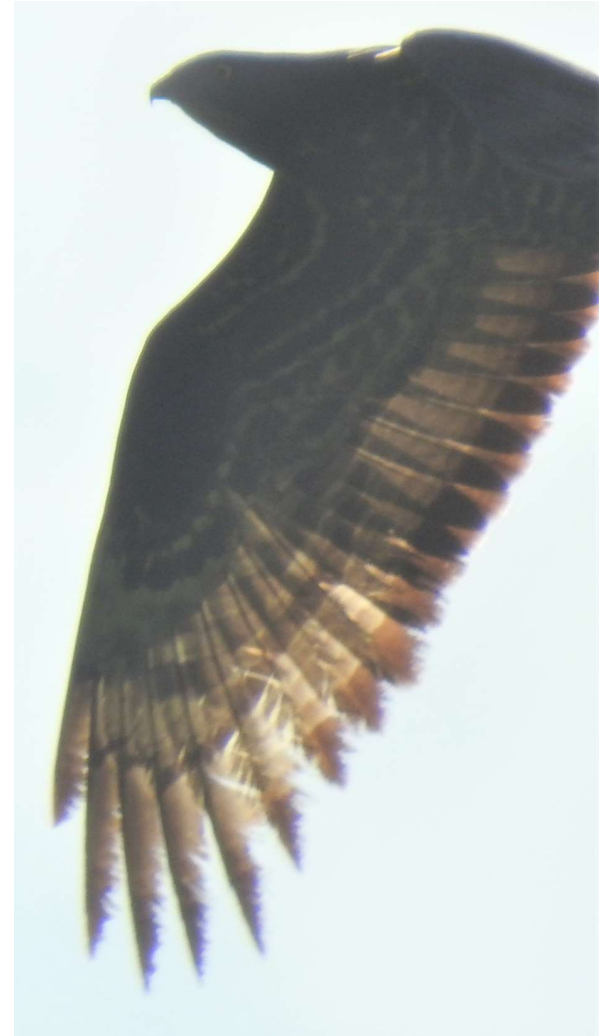
1. Ligging in het veld



2. Bereikbaarheid

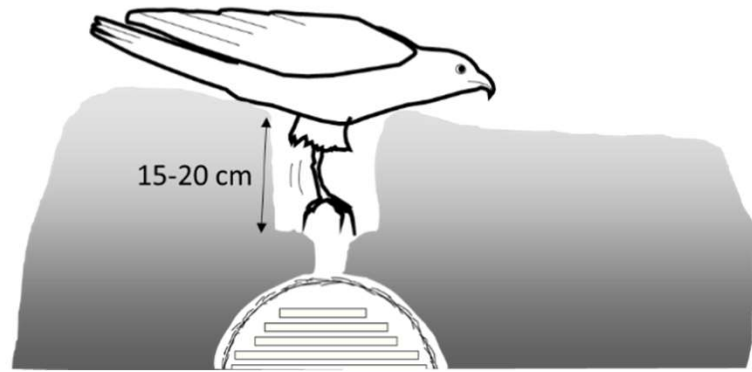
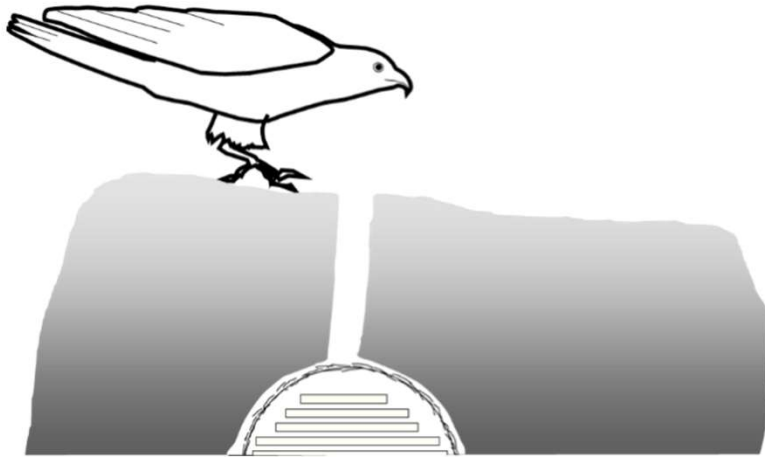


Gerafelde veren



3. Diepte

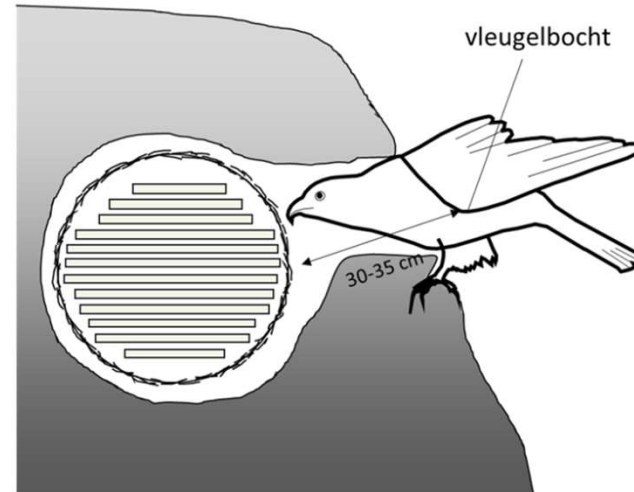
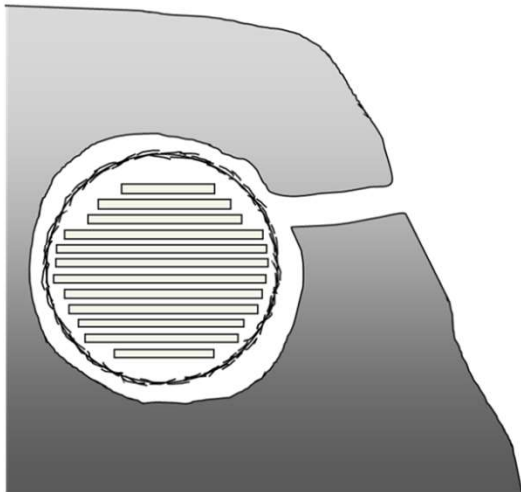






72°F22°C

08-17-2020 19:39:53





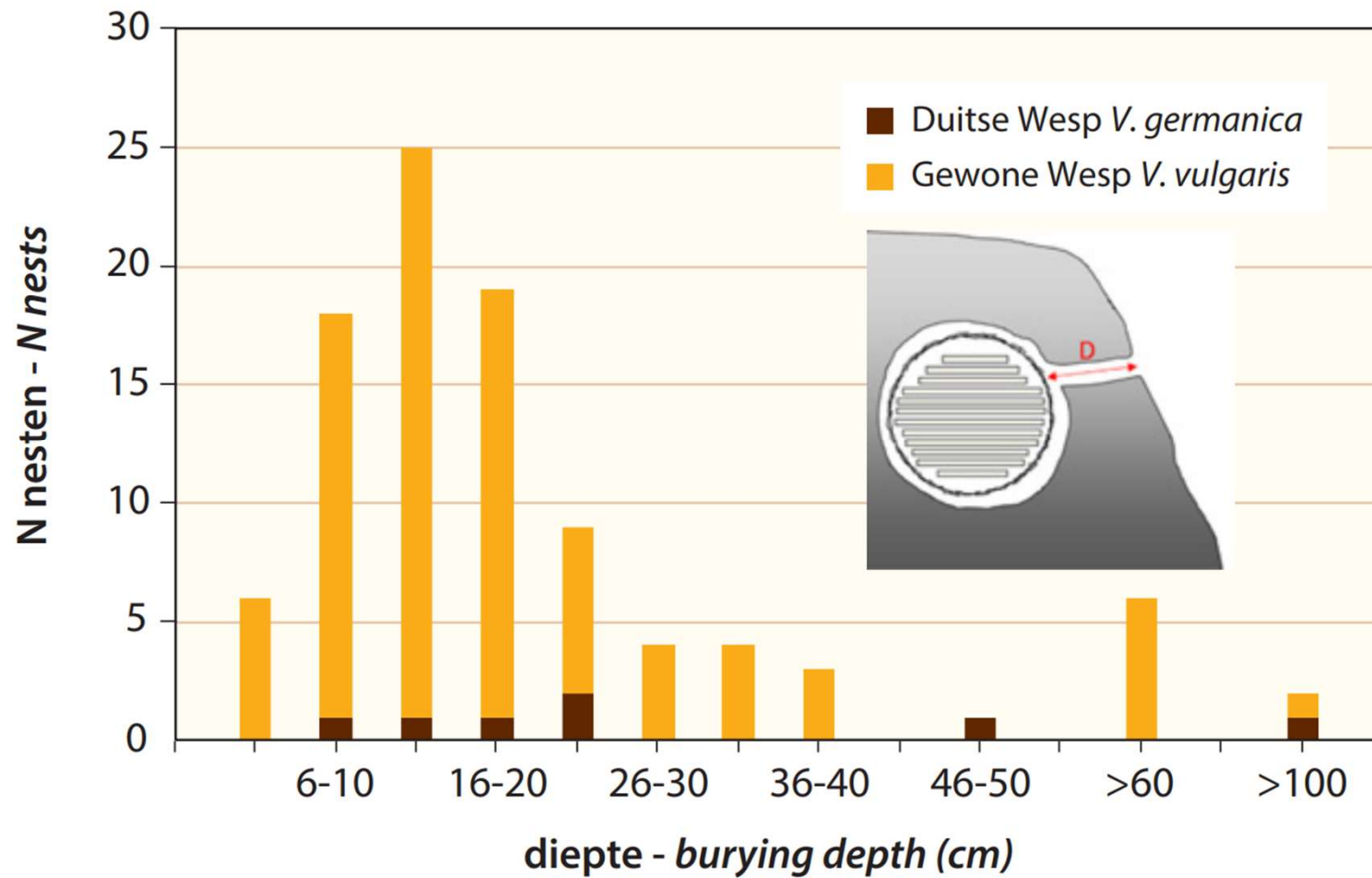
71°F21°C

08-17-2020 20:07:32



Geogste deel

Gemeten diepte







Oogstbaarheid van de nesten

45% gemakkelijk te oogsten

33% met enige moeite te oogsten

22% niet te oogsten



08-19-2020 15:24:33

2020

● Gewone wesp	81
● Duiste wesp	21
● Hoornaar	3
● Middelste wesp	1
Totaal	106

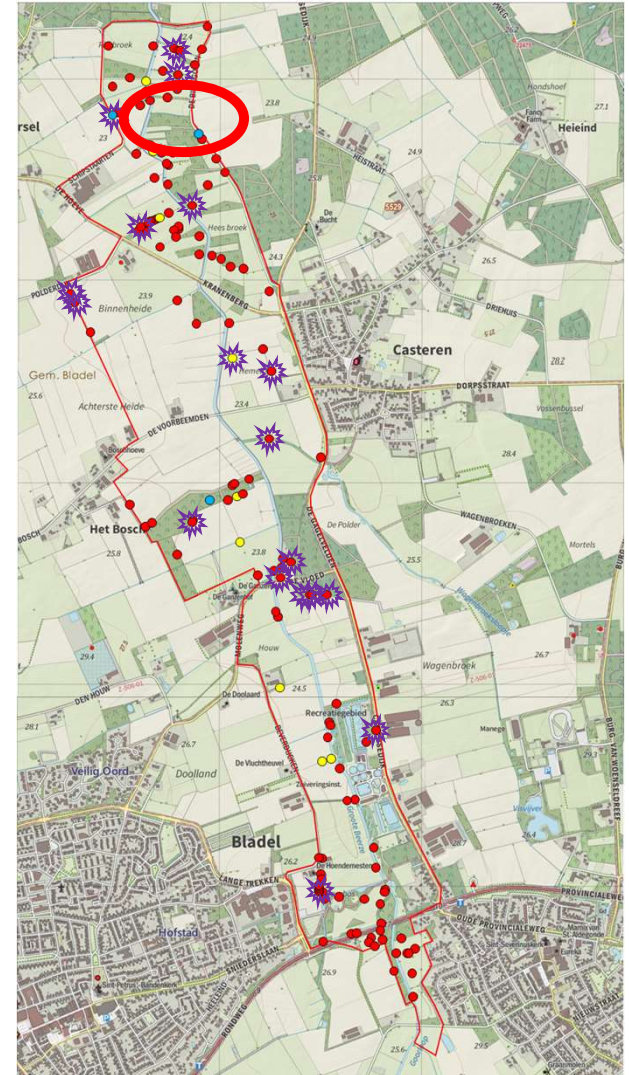
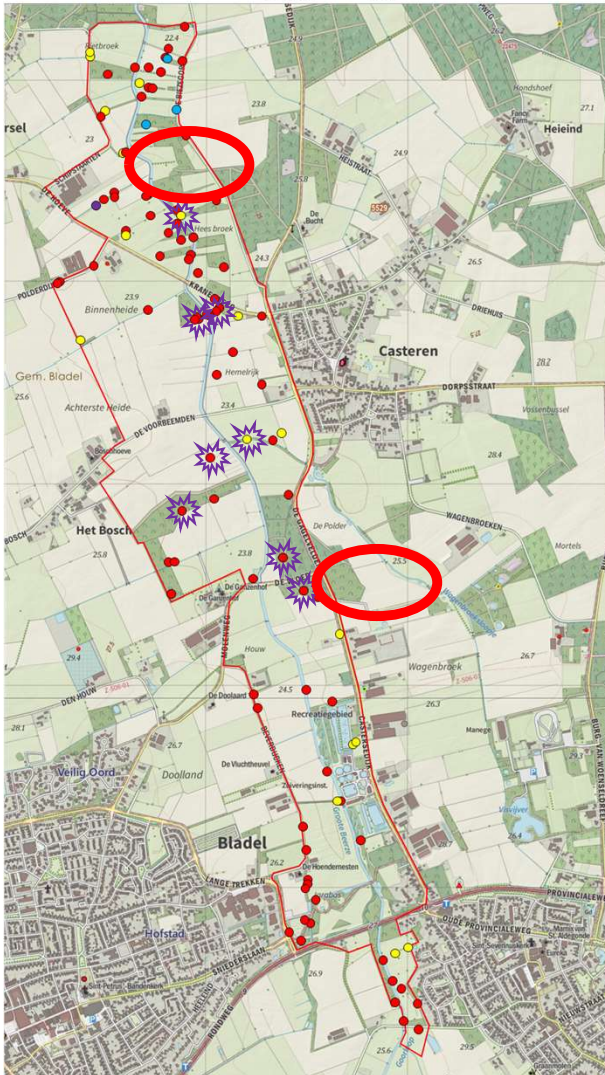
Gepredeerde nesten door Wespendif

2021

● Gewone wesp	1
● Duiste wesp	0
● Hoornaar	0
● Middelste wesp	0
Totaal	1

2022

● Gewone wesp	131
● Duiste wesp	10
● Hoornaar	3
● Middelste wesp	0
Totaal	144



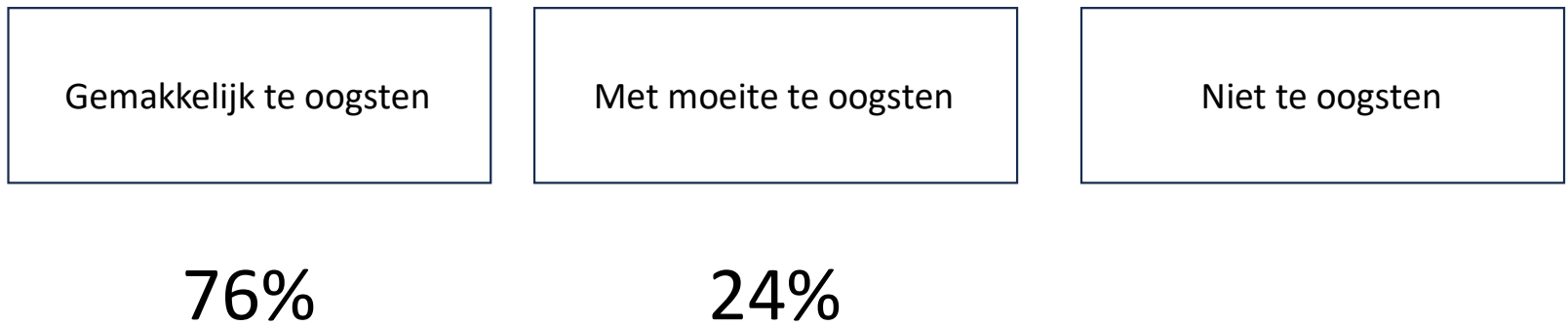
2020

7.5% van de wespennesten gepredeerd

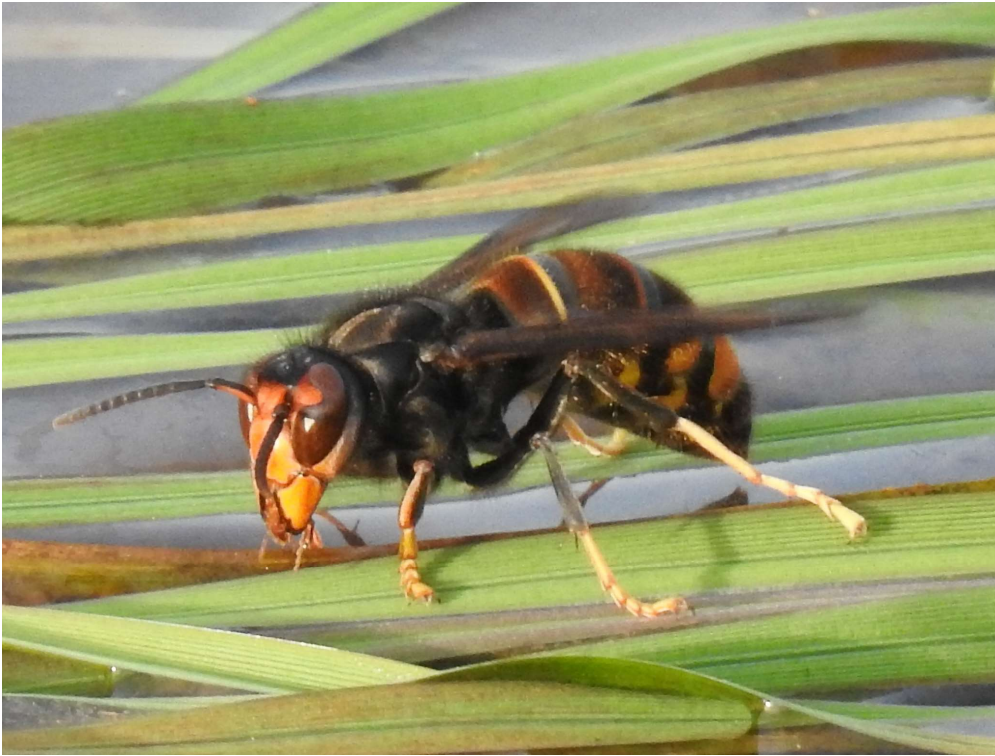
2022

11.8% van de wespennesten gepredeerd

Gepredeerde nesten



Toekomst??



Dank u