

# Valtakunnallisen Yöperhosseurannan tuloksia

Hyönteisseurantojen yhteisseminaari  
19.11.2022  
Anna Suuronen  
Biodiversiteettikeskus  
Suomen ympäristökeskus, SYKE



S Y K E

# Vaihto pakastinryysiin 2020-2022



SYKE



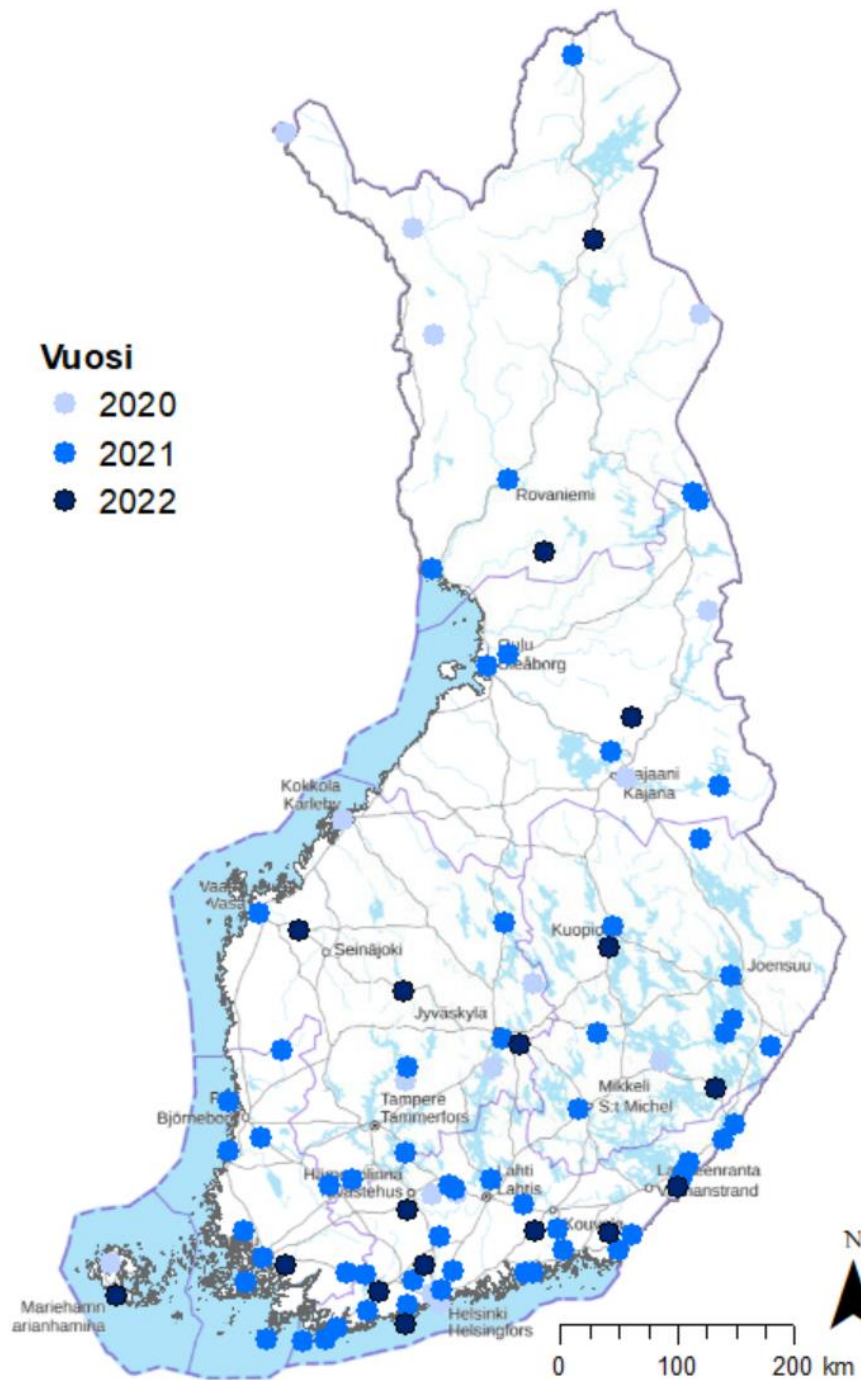
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# Rysän vaihto

- Pakastinrysiä maastossa

- 2020: 25 Pakryä
- 2021: 80 Pakryä
- 2022: 94 Pakryä

**Vuosi**  
● 2020  
● 2021  
● 2022

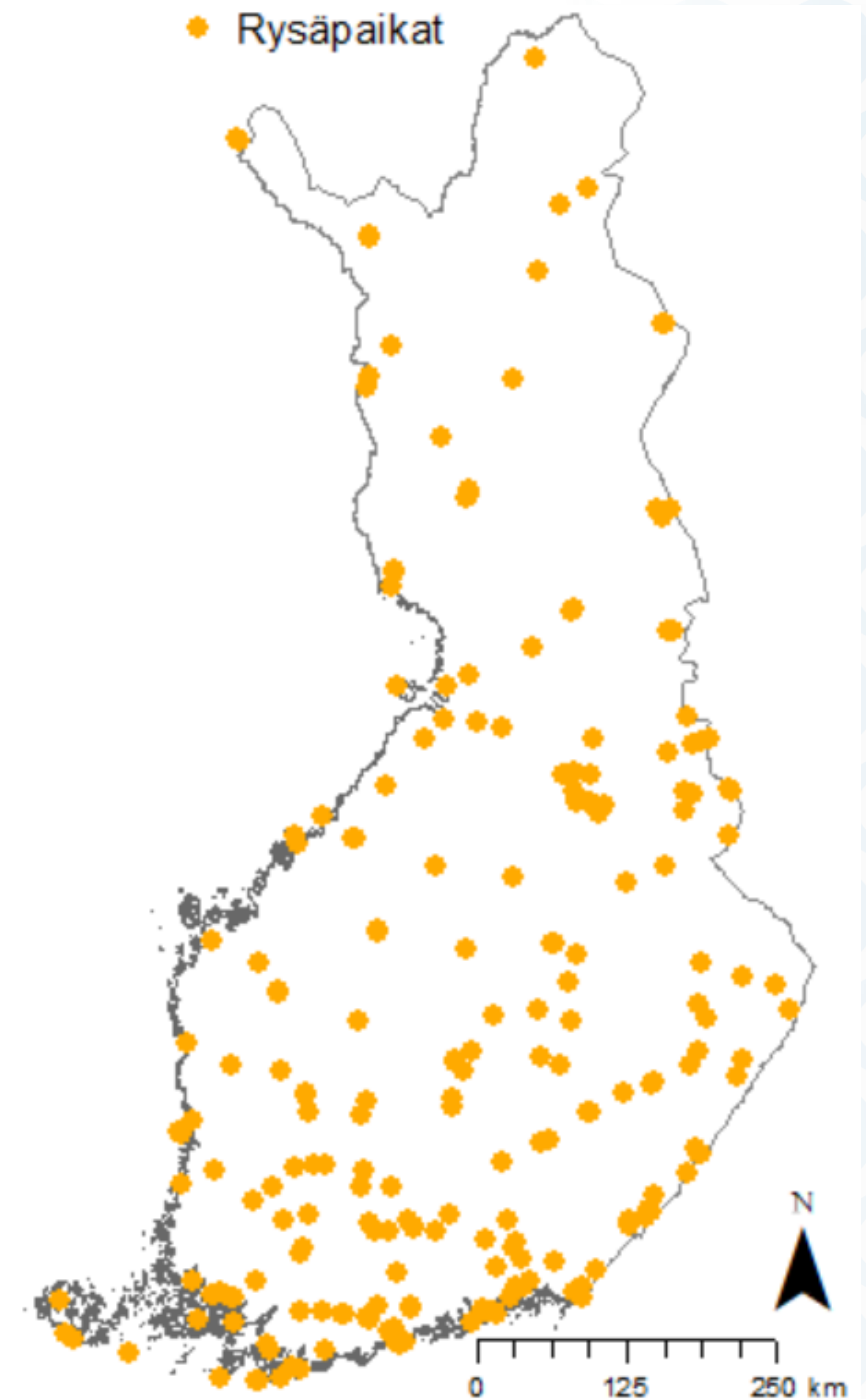


# Valtakunnallinen yöperhosseuranta Nocturna

Rysäpaikat vuosina 1993-2022

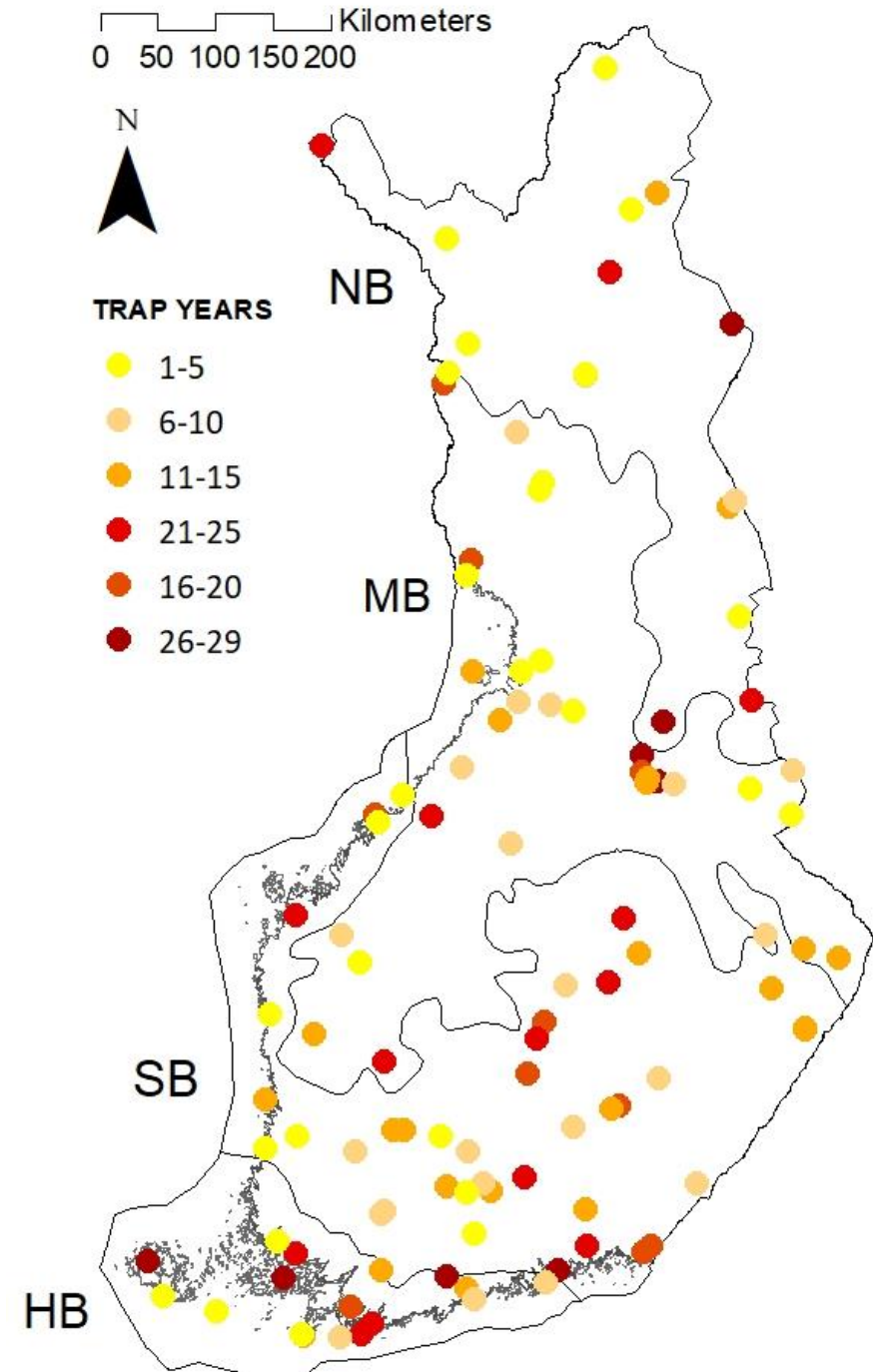
Mukana yhteensä 314 pyydyspaikkaa

2014	47 paikkaa
2015	35 paikkaa
2022	94 paikkaa

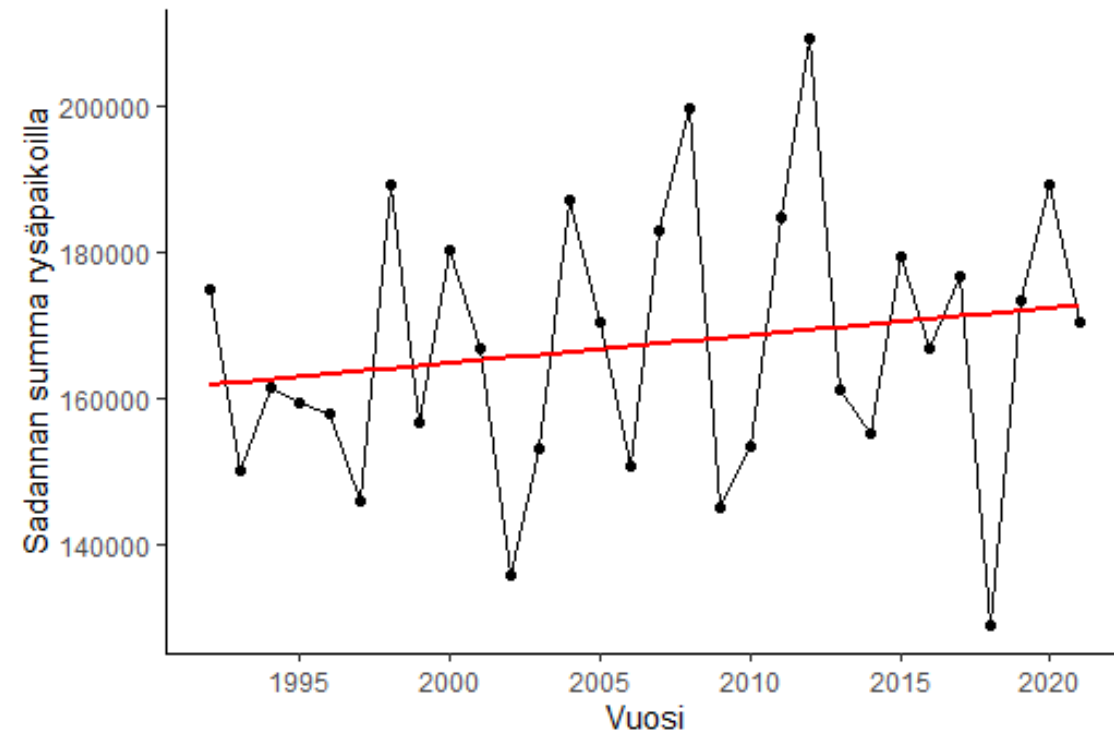
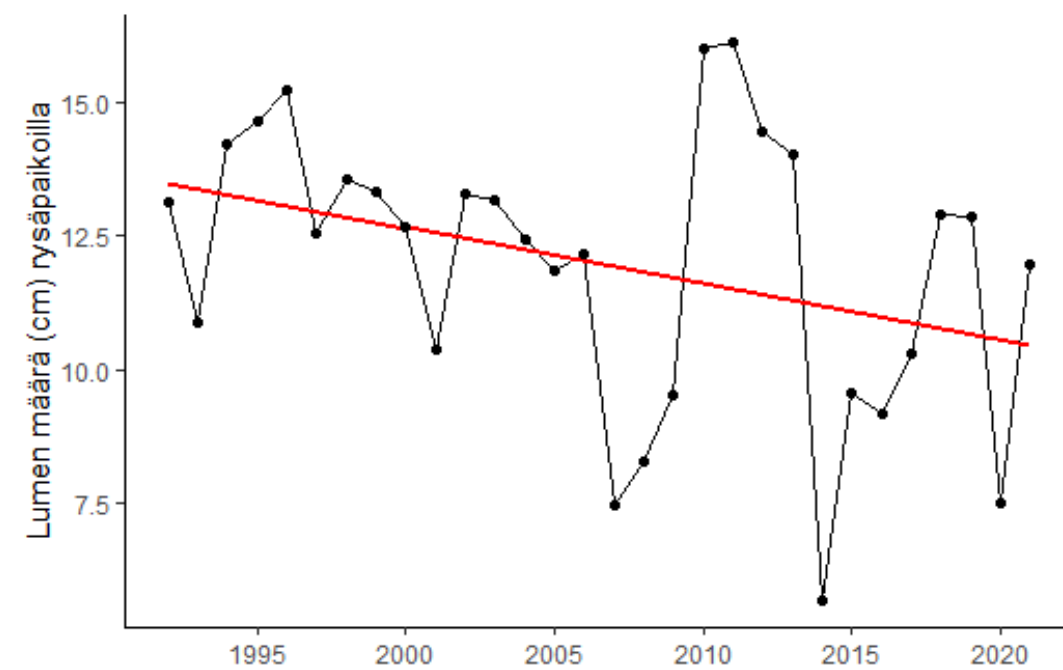
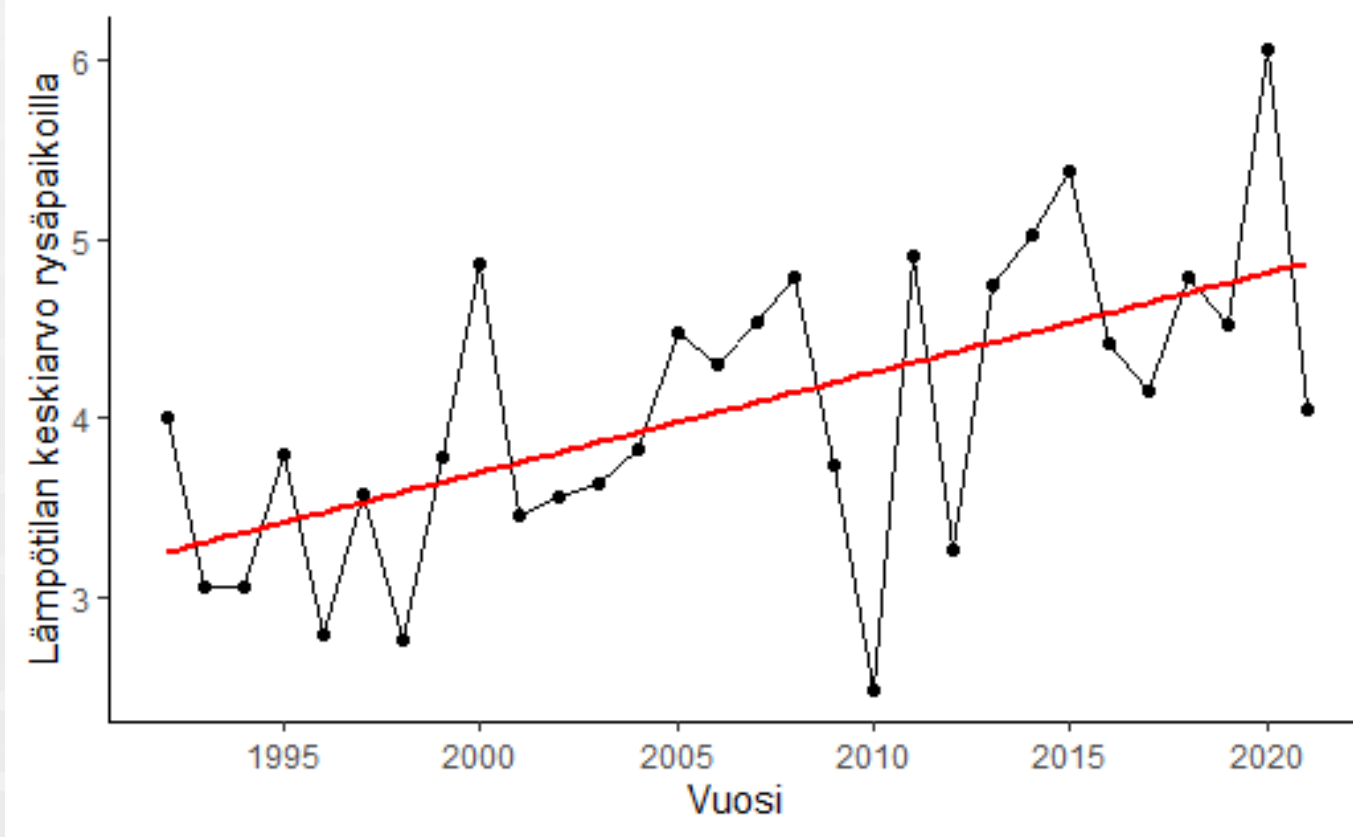


# TRIM-analyysit

- Perustuu lineaariseen regression
  - Vuosittaiset indeksit luottamusväleillä
- Valittu 120 rysäpaikkaa, jotka parhaiten edustavat koko Suomea sekä ajallisesti, että paikallisesti
  - 1 539 vuosi x paikka -yhdistelmää



# 29 vuoden sää rysäpaikoilta



# TRIM trendit

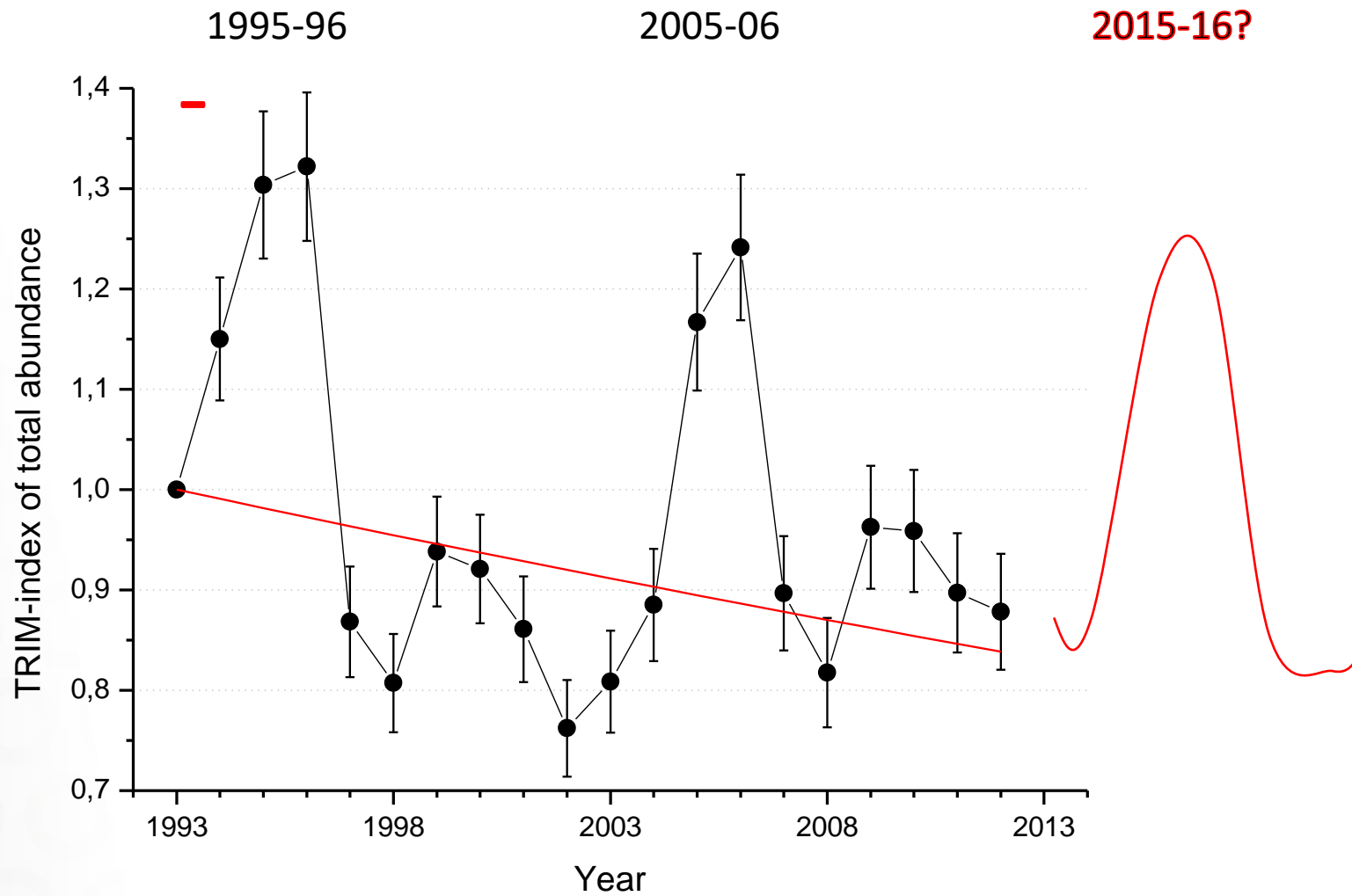
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## Trendit

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--	Strong decrease	upper CI limit $< -0.05$
-	Moderate decrease	upper CI limit $< 0$
0	No trend	$-0.05 < \text{lower} < 0 < \text{upper} < 0.05$
+	Moderate increase	lower CI limit $> 0$
++	Strong increase	lower CI limit $> 0.05$
?	Uncertain	any other case

# Kokonaisyksilömäärä 1993-2012

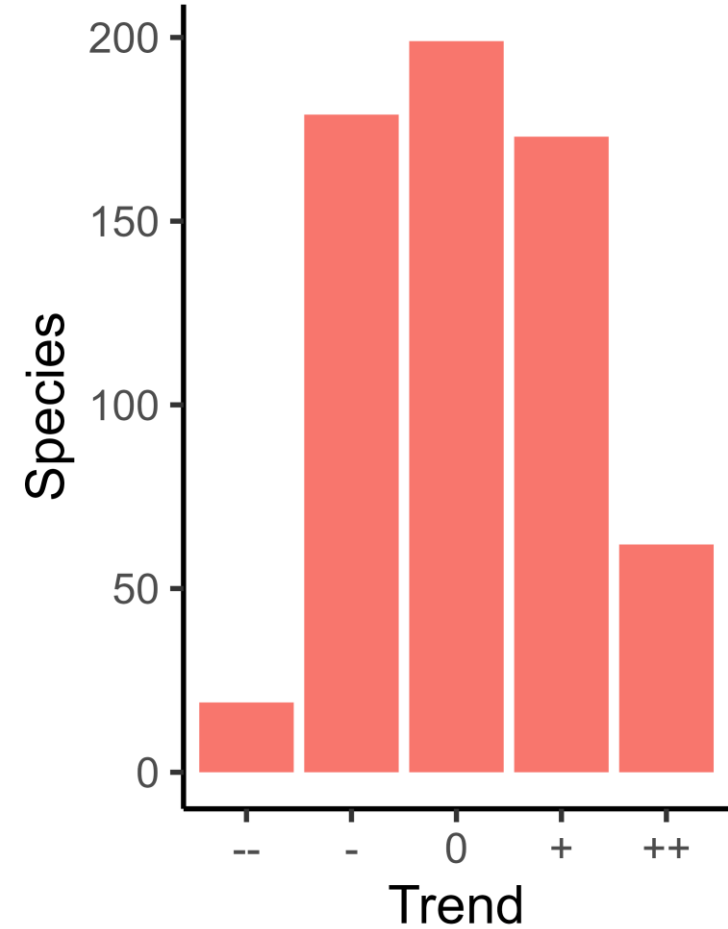
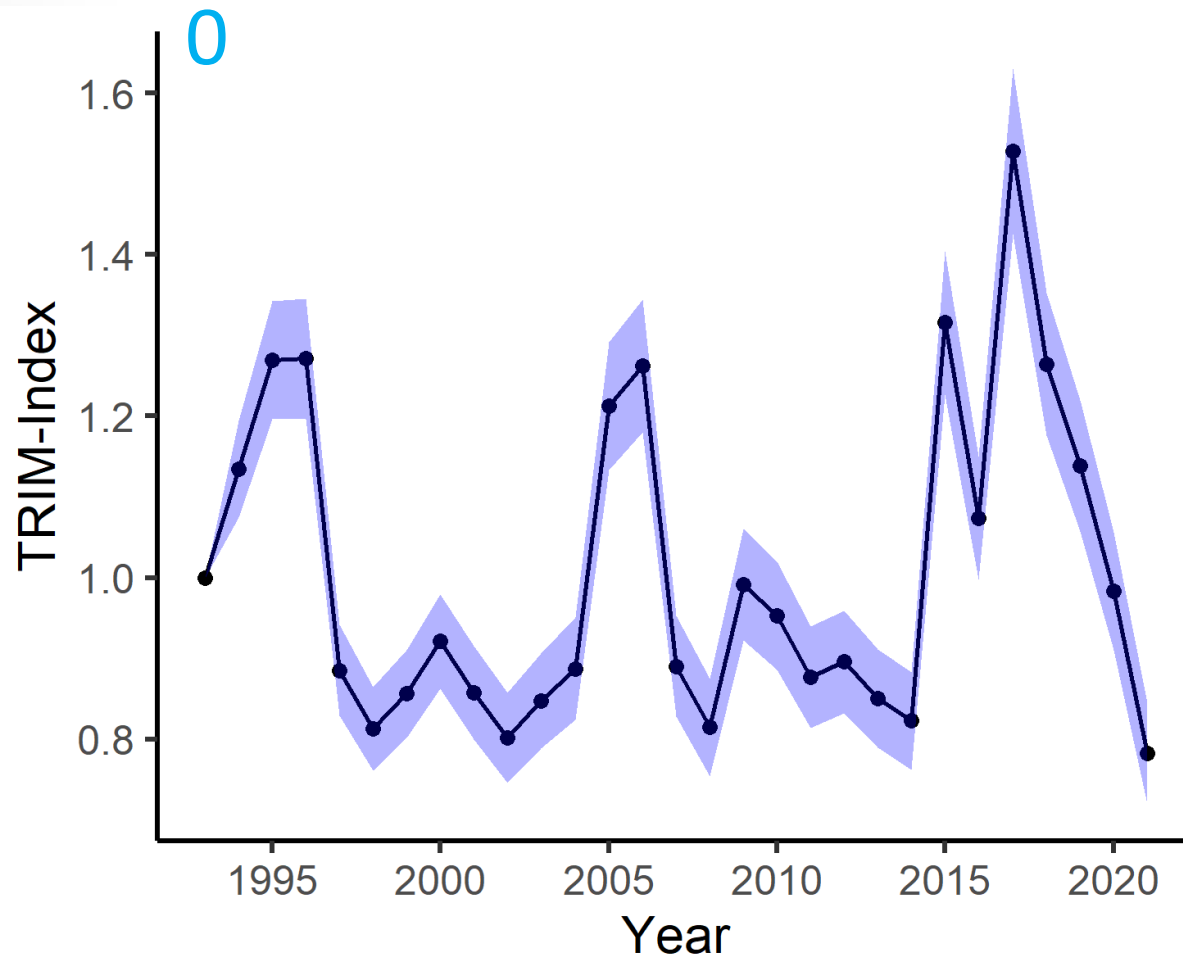


Trend:  $-0.009 \pm 0.002$ , Moderate decline (p < 0.01)

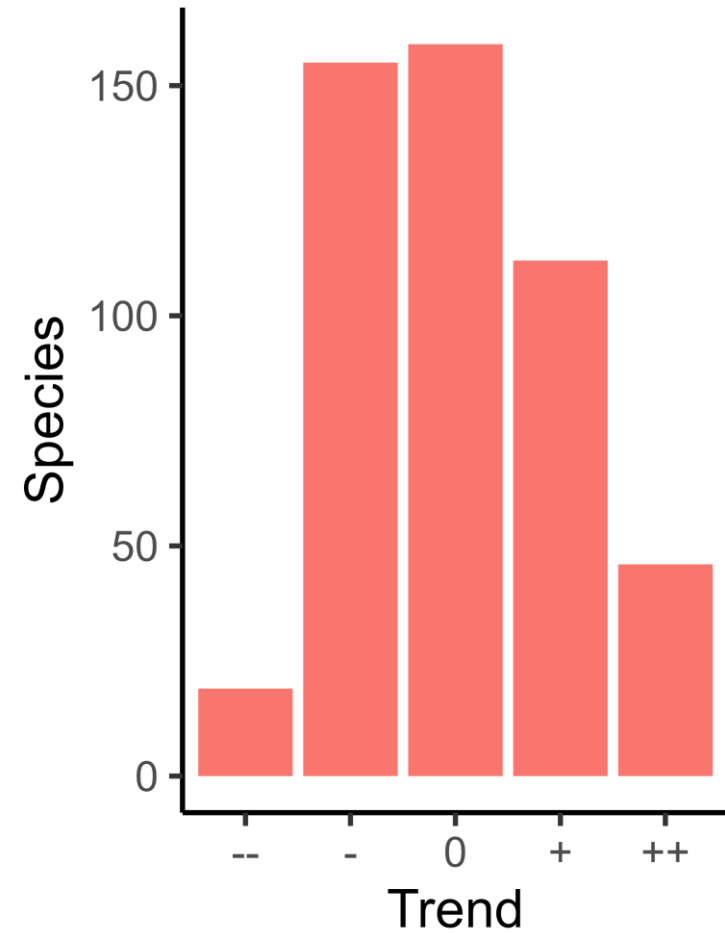
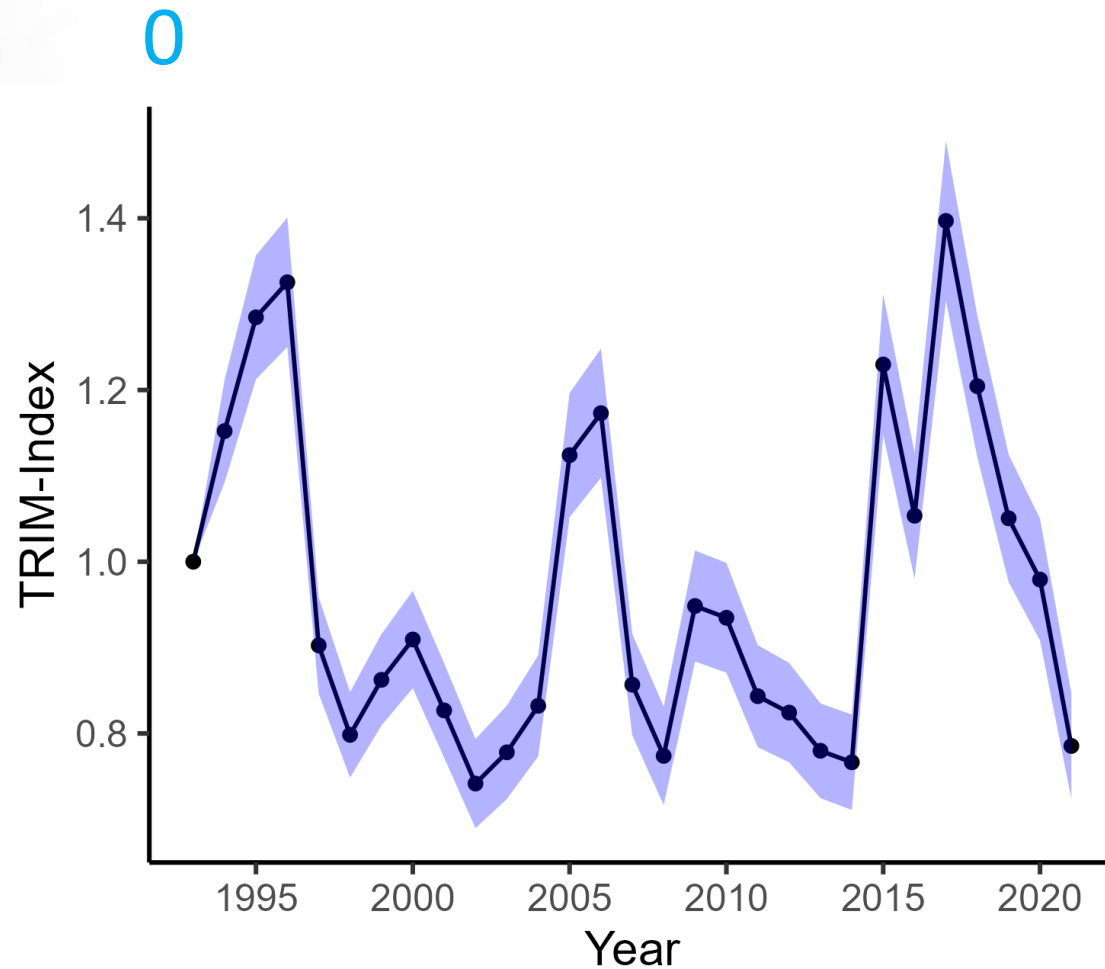
20.11.2022



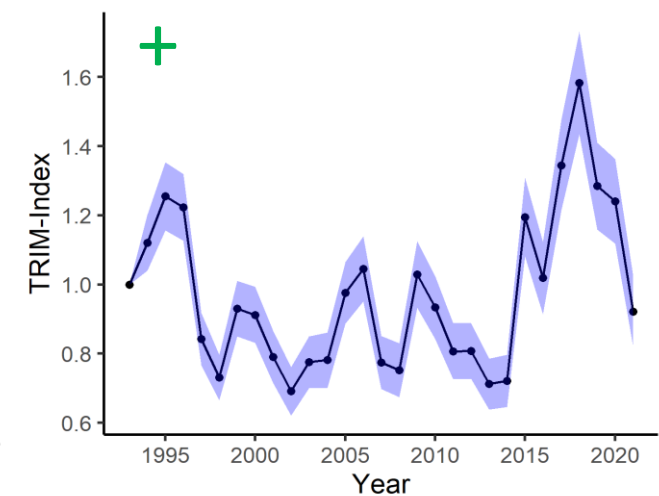
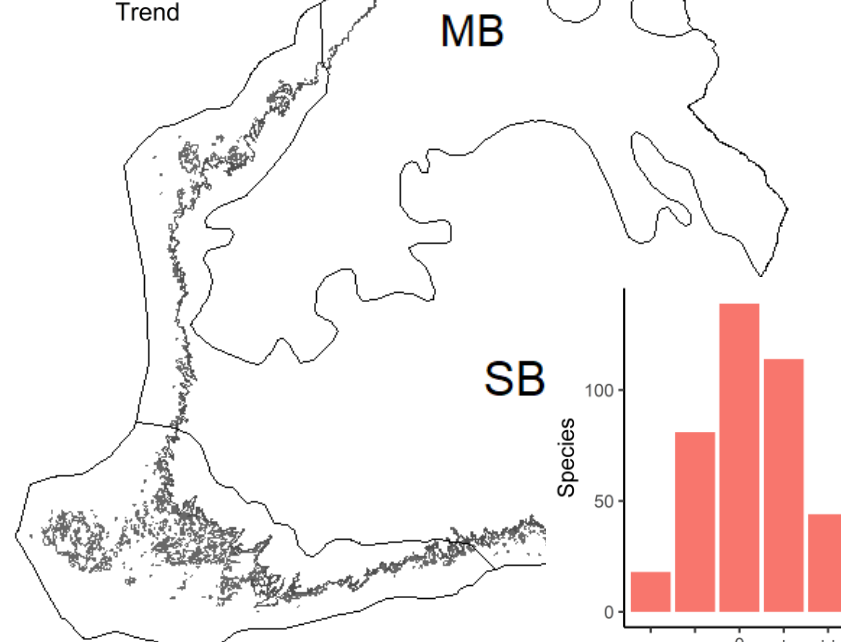
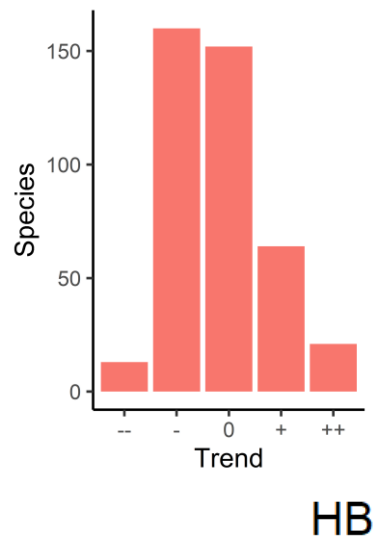
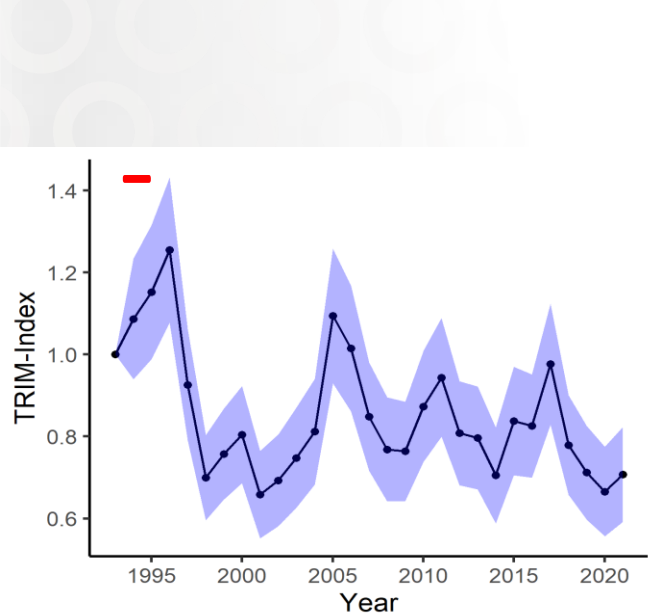
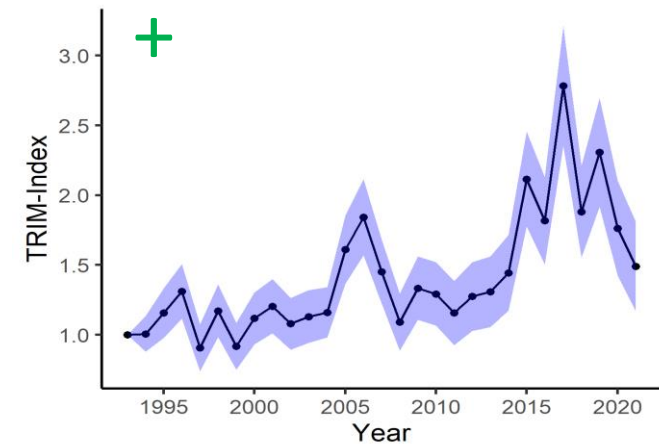
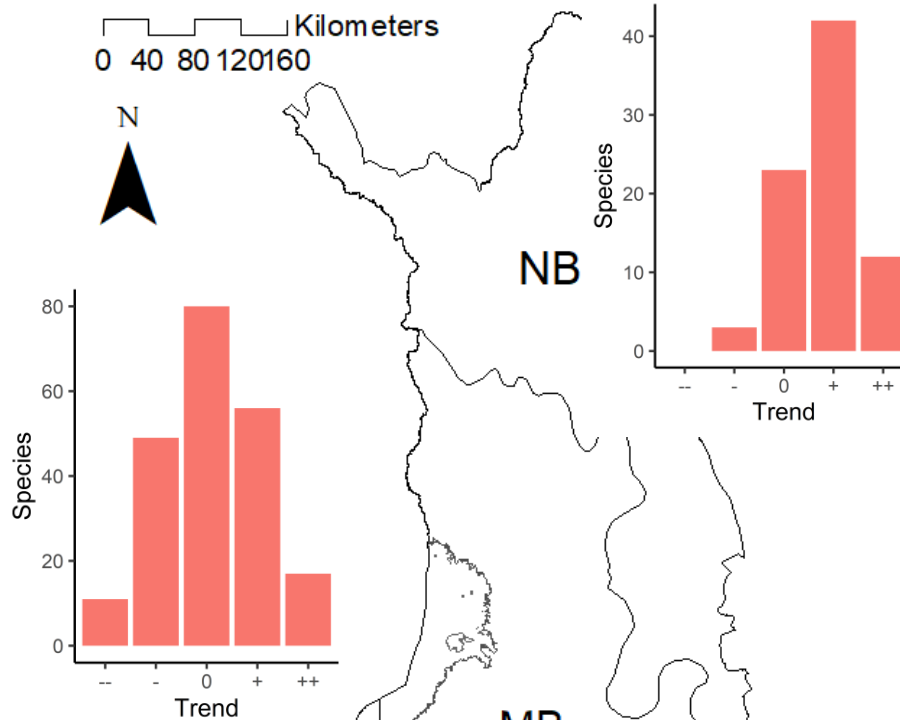
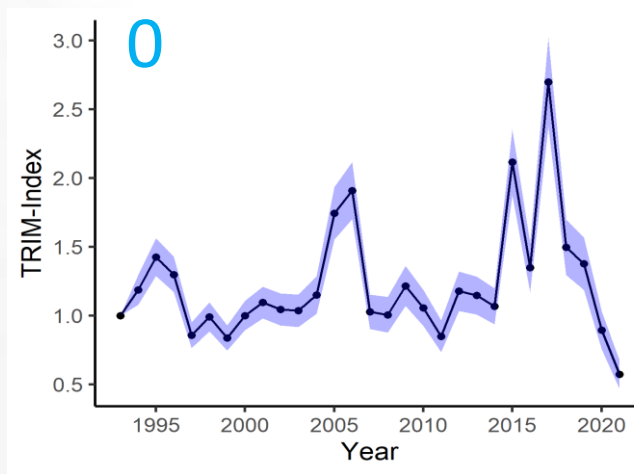
# Kokonaisyksilömäärä mikrot ja makrot pois luettuna *Epirrita autumnata*



# Kokonaisyksilömäärä pelkät makrot pois luettuna *Epirrita autumnata*

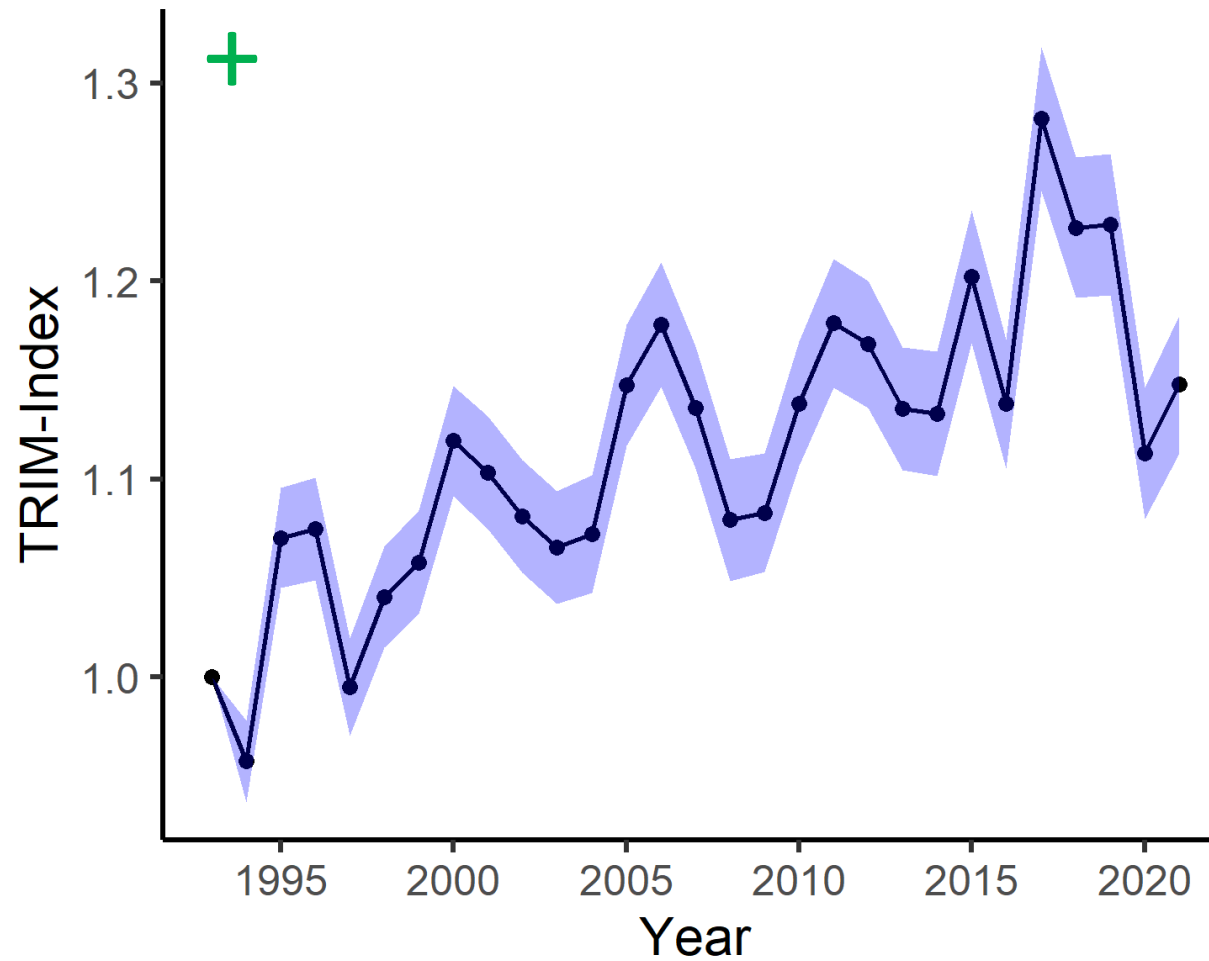


# Kokonaisyksilömäärä kasvillisuusvyöhykkeittäin



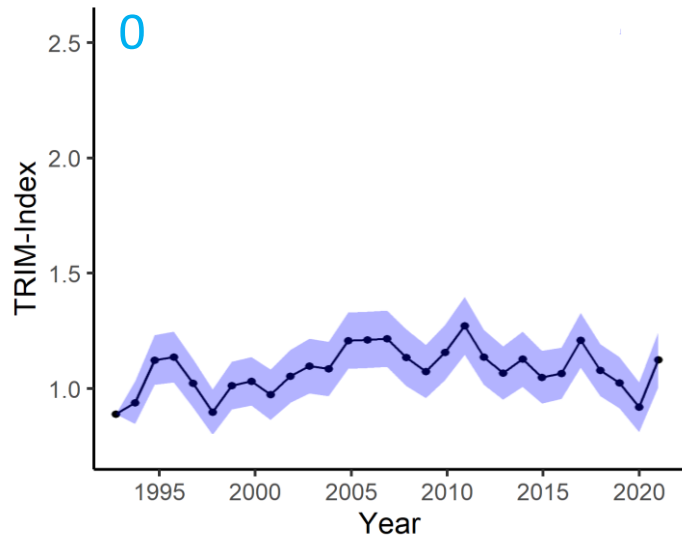
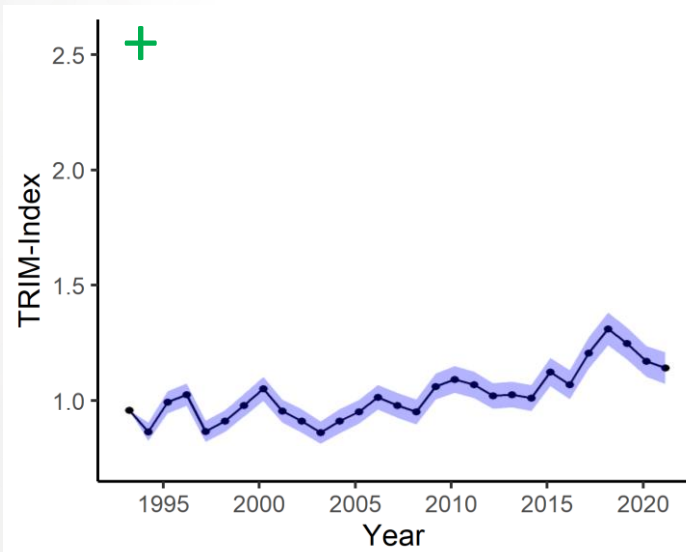
HB

# Lajimäärä on nousussa

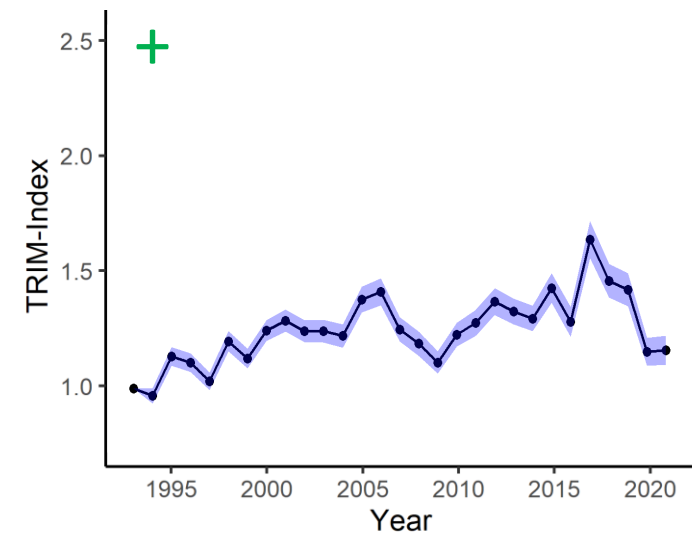
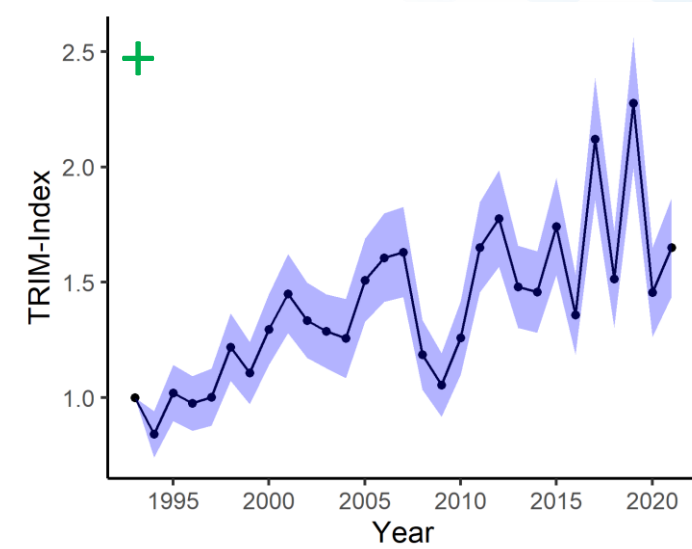
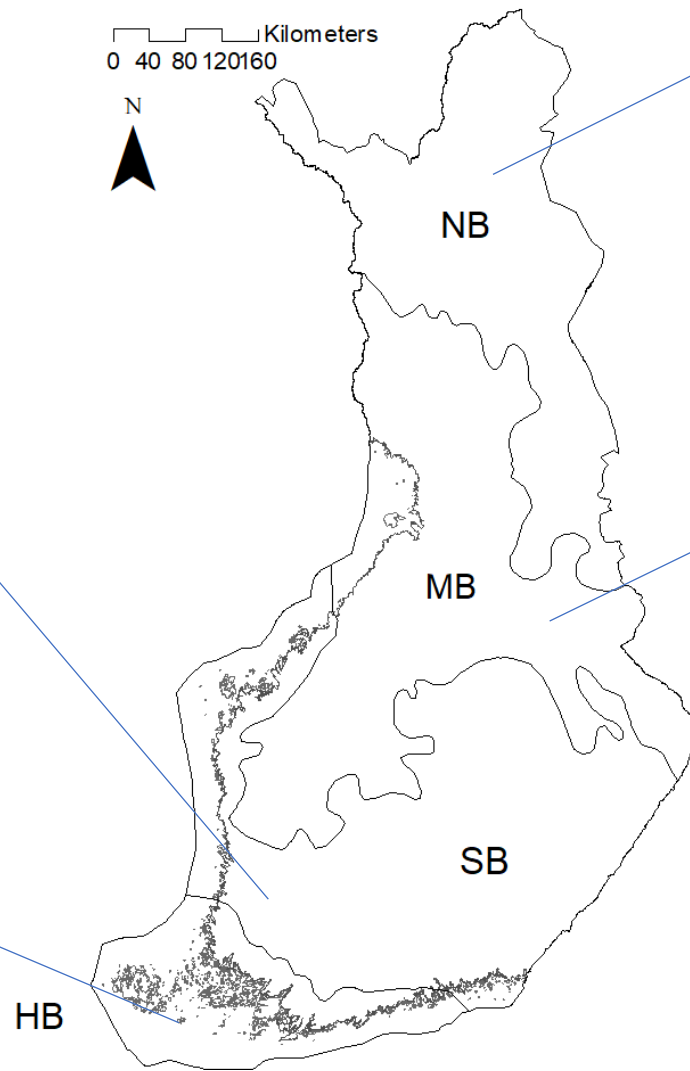


$0.006 \pm 0.001, p < 0.01, n = 302\,700$

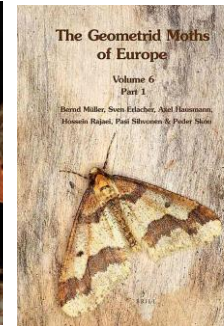
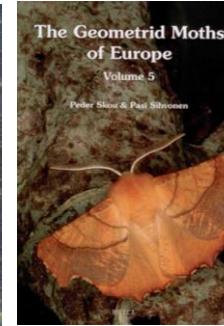
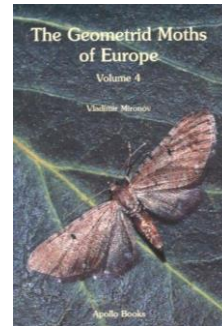
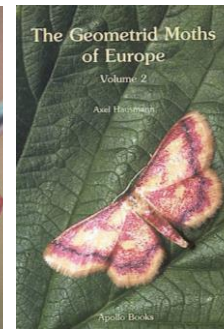
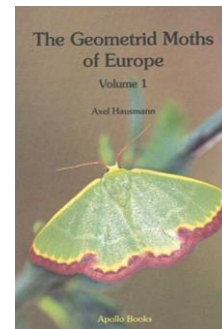
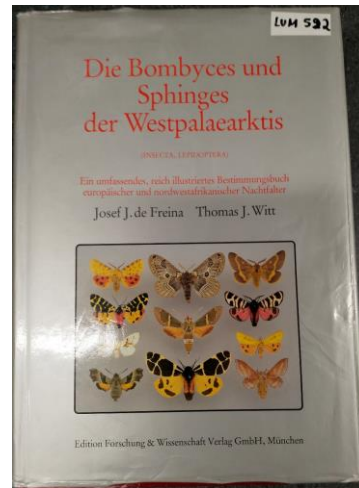
# Lajimäärä Kasvillisuusvyöhykkeittäin



Kilometers  
0 40 80 120 160



# Pohjoiset yöperhoslajit



Kilometers  
0 50 100 150 200



TRAP YEARS

- 1-5
- 6-10
- 11-15
- 21-25
- 16-20
- 26-29

HB

SB

MB

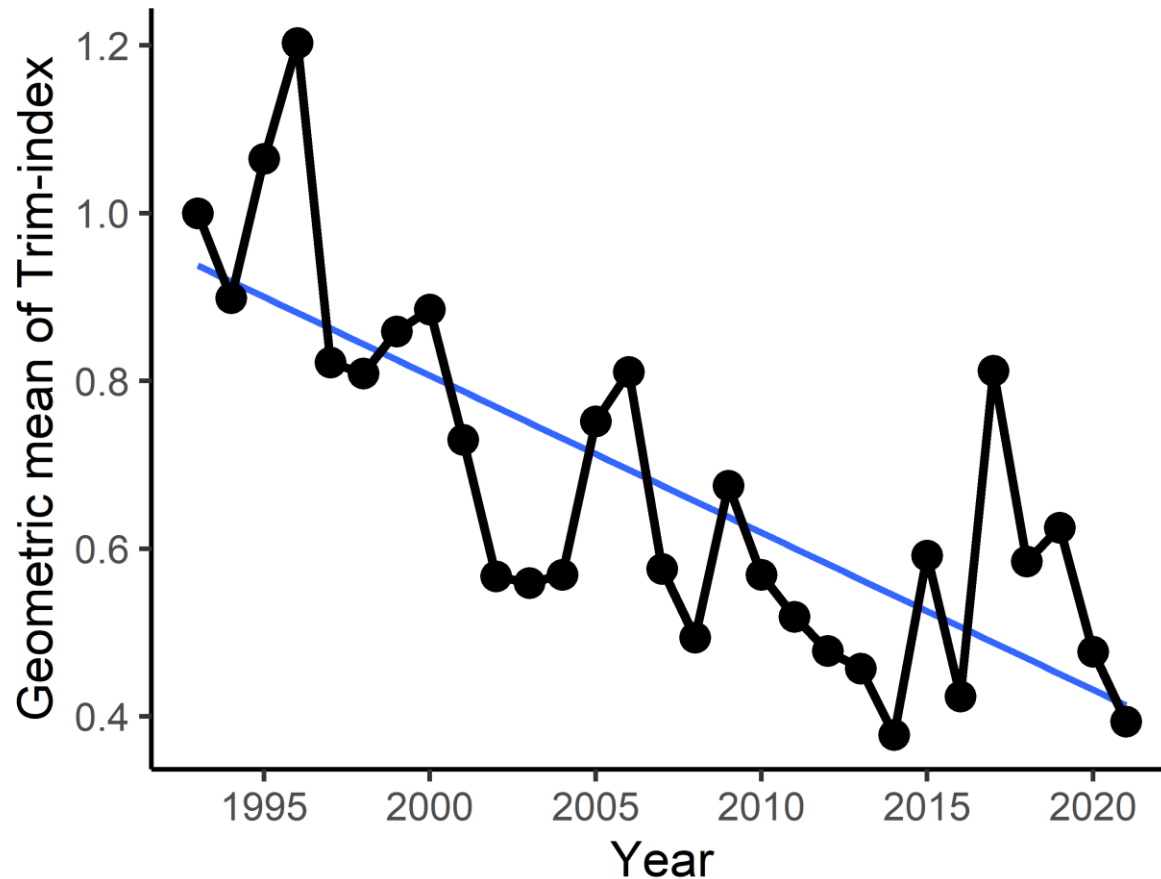
NB

- NB – Pohjoisboreaalinen ja hemiarktinen yhdistetty
- MB – Keskiboreaalinen
- SB – Eteläboreaalinen
- HB – Hemiboreaalinen



SYKE

# Geometrinen keskiarvo kirjallisuuteen perustuvista pohjoisista lajeista (58 lajia)



Boreal species

Boreo-montane Northern species

Boreo-montane Southern species

Boreo-temperate species

$$y = -0,0187x + 38,2566$$

$$R^2 = 0,56$$



# Metsälajien kannanmuutokset

- Lajit joiden habitaatteina on vain metsät
- Lajitietokeskus: punainen lista
- $-0.008 \pm 0.002$ ,  $p=0.002$ ,  $n=220\ 600$
- 44 lajia

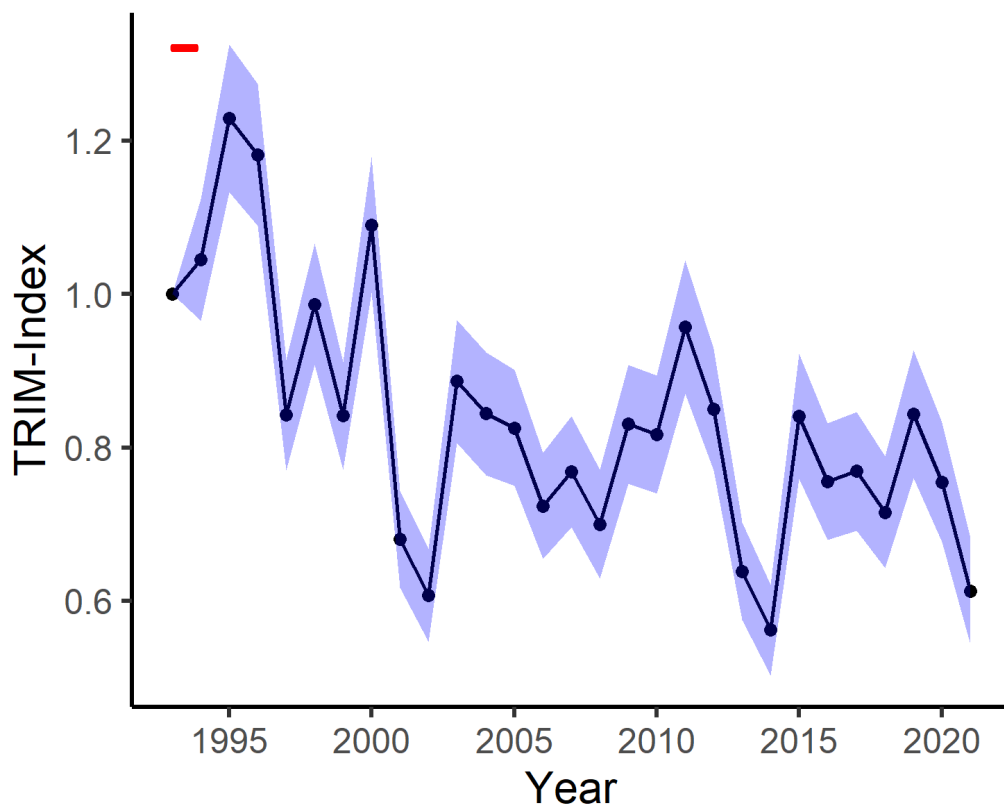
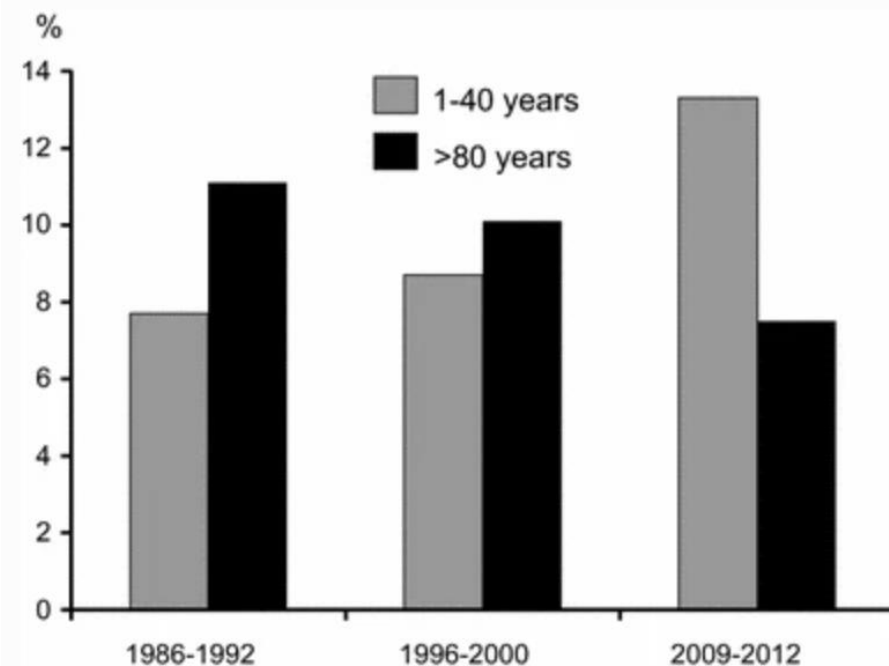


Fig. 3



Source: Virkkala 2016 – Biodiversity and Conservation 25: 151-167.

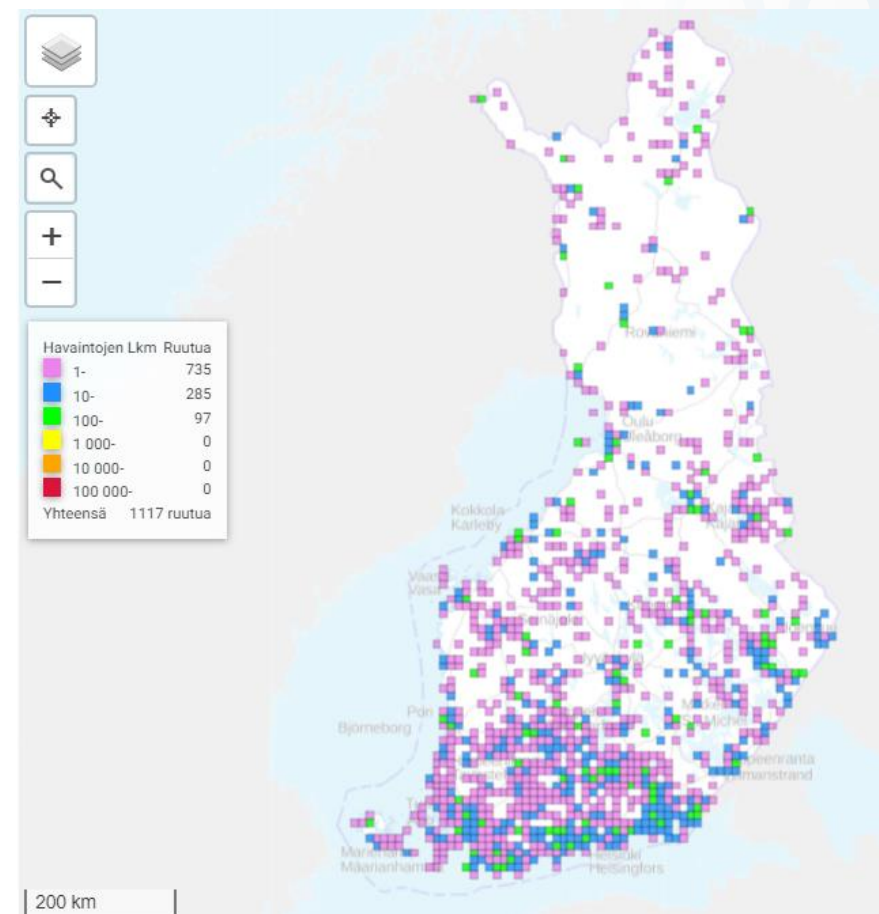
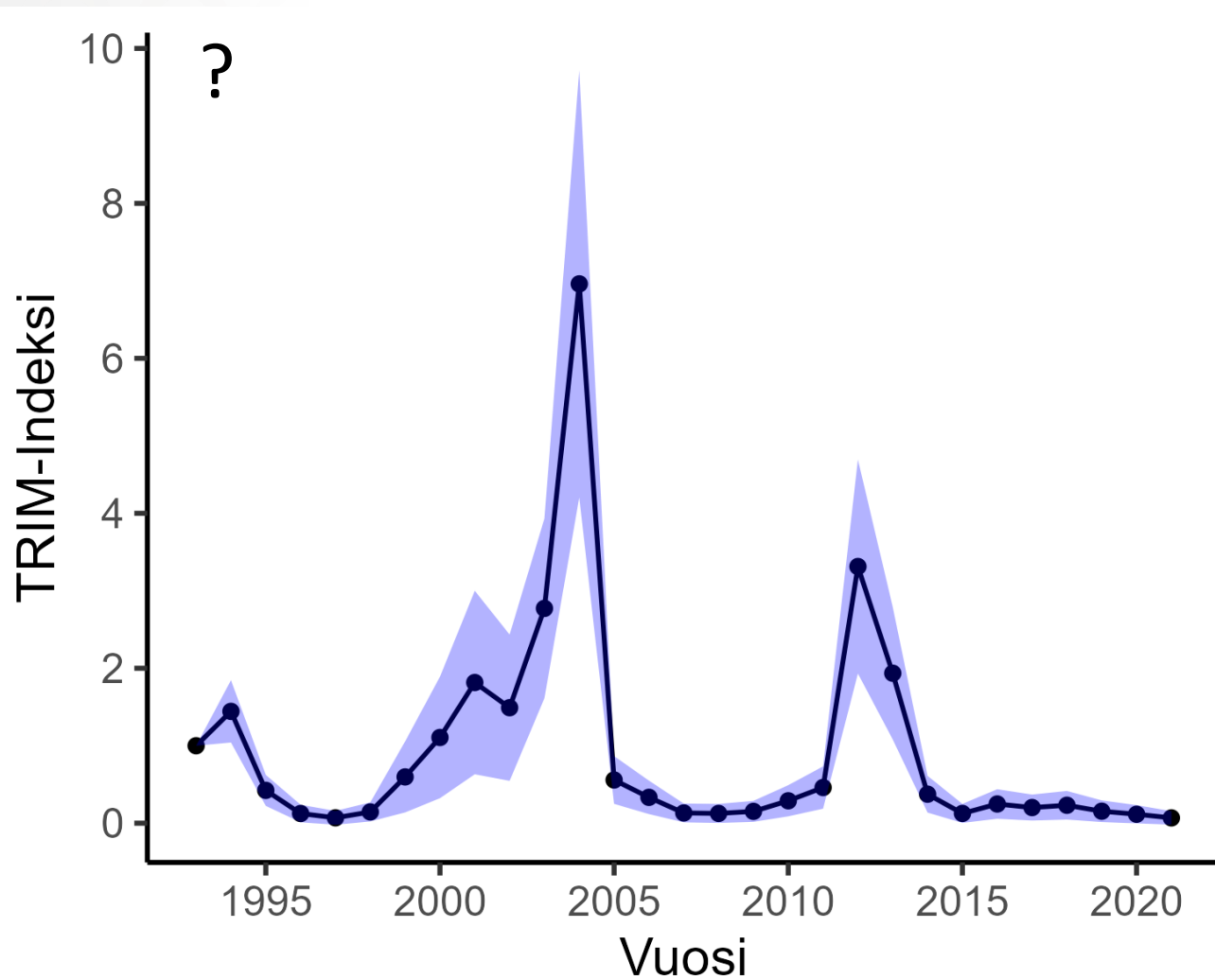
Vanhat kuusivaltaiset metsien määrä on vähentynyt Etelä-Suomessa



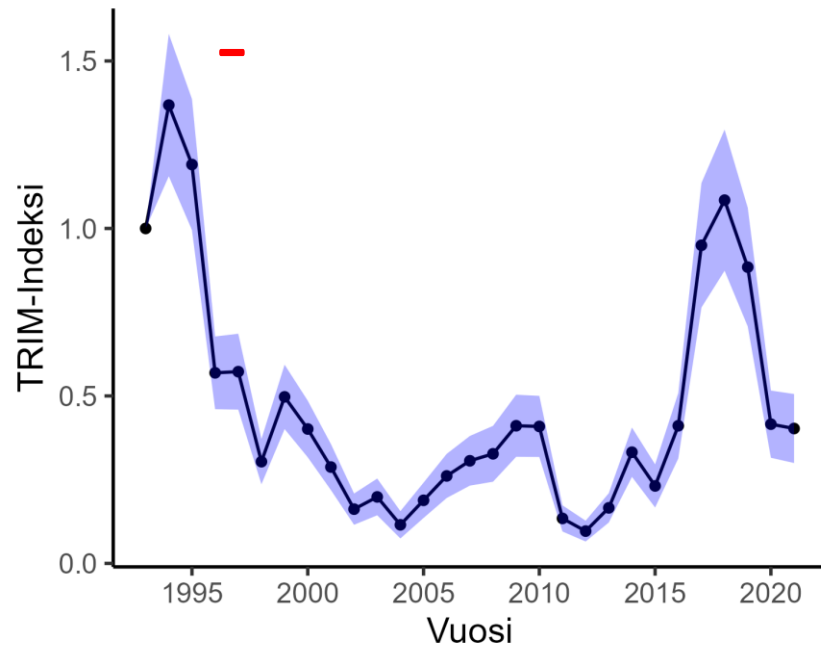
# Metsien tuholaislajit



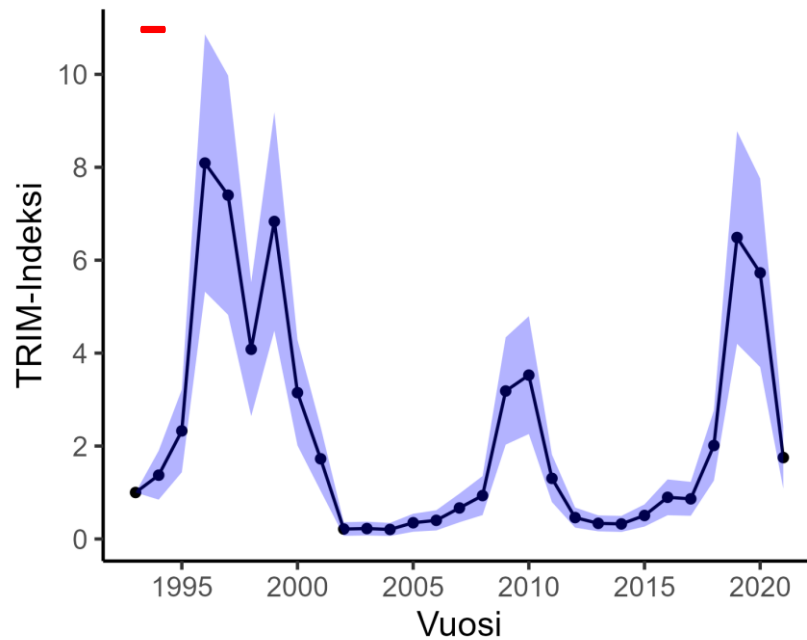
# Epirrita autumnata Tunturimittari



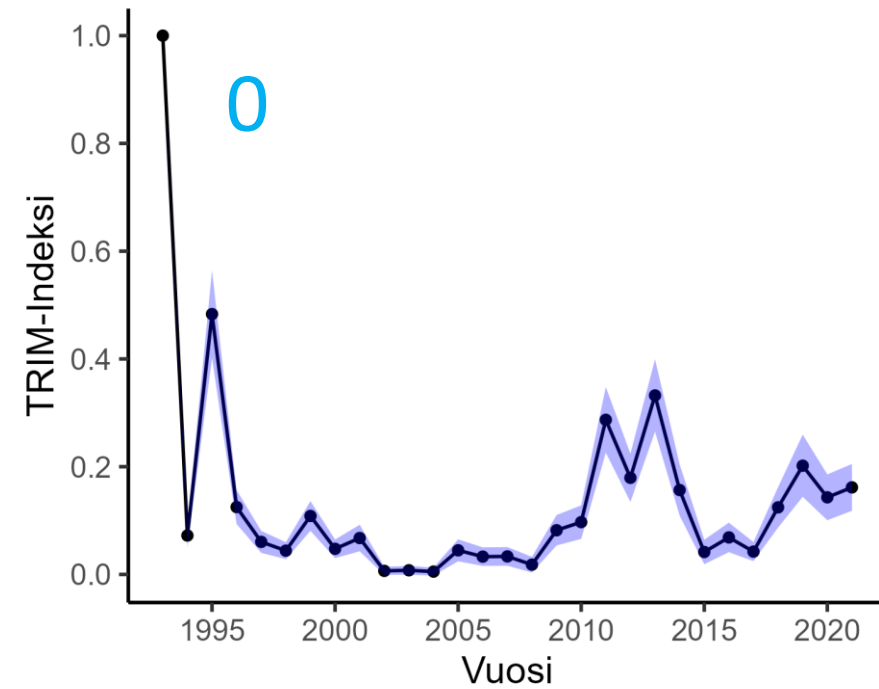
# Operoptera brumata Hallamittari



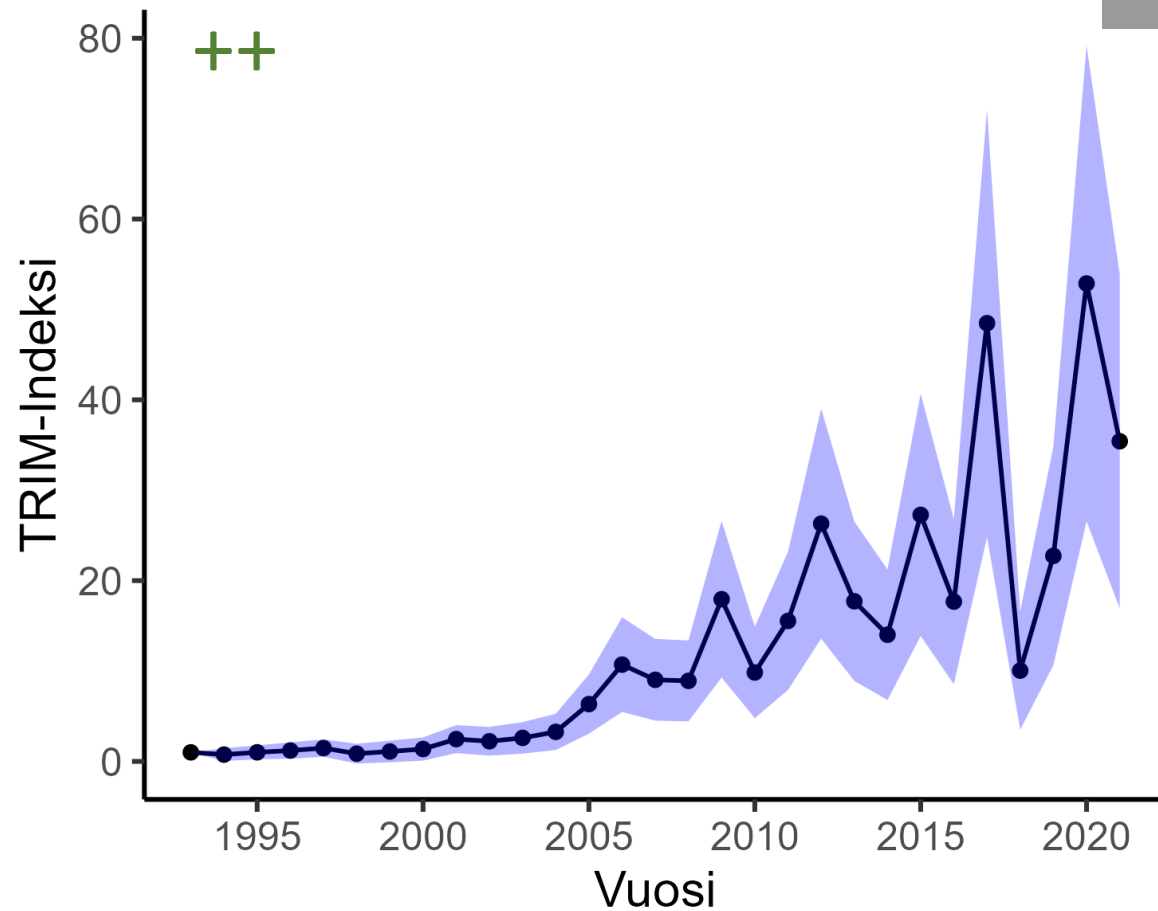
# Operoptera fagata Lumimittari



# Agriopsis aurantiaria Ruskamittari



# Lymantria monacha Havununna



Havaintojen Lkm Ruutua	
1-	285
10-	159
100-	17
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>461 ruutua</b>

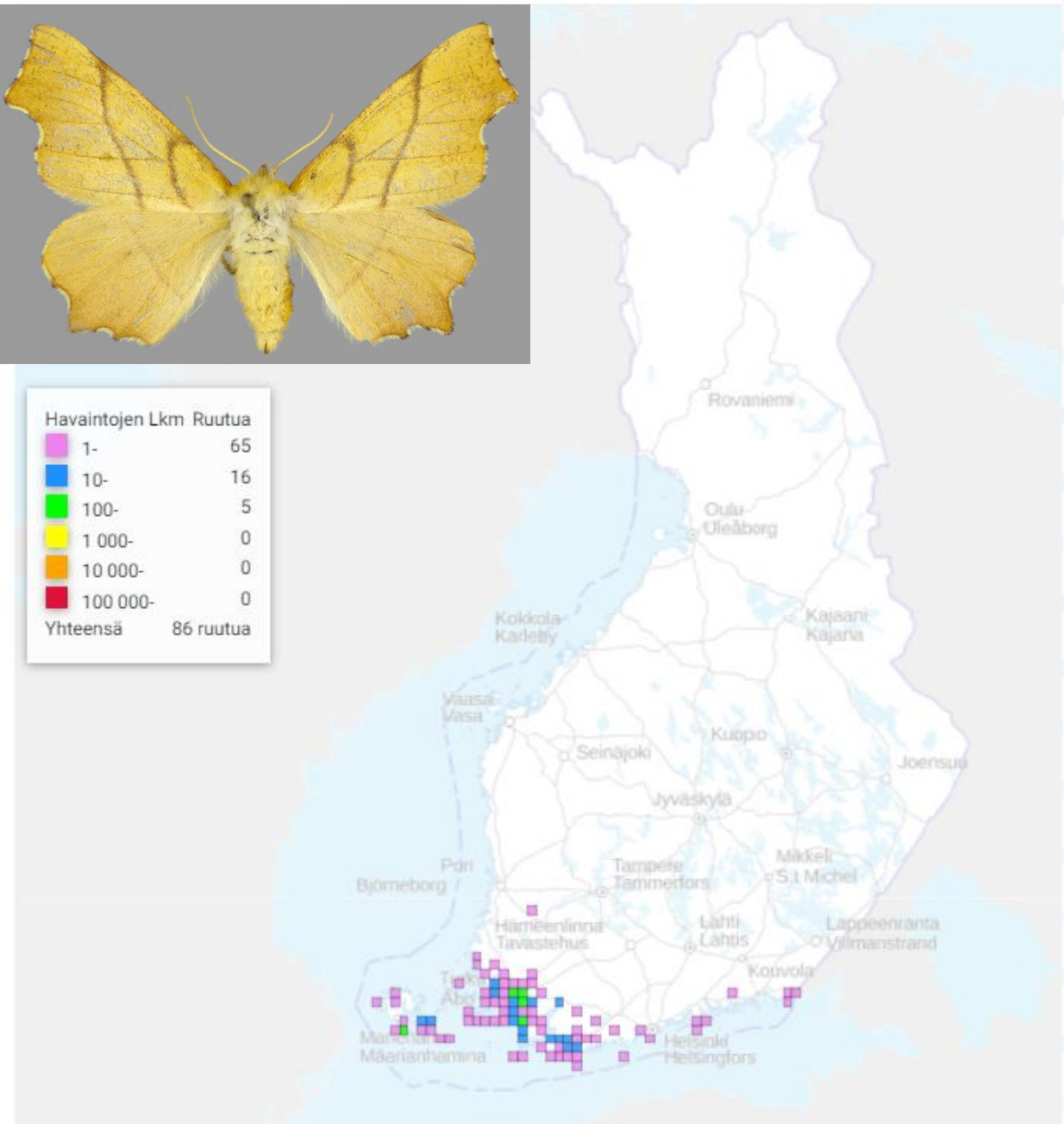
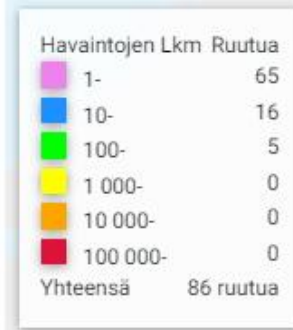
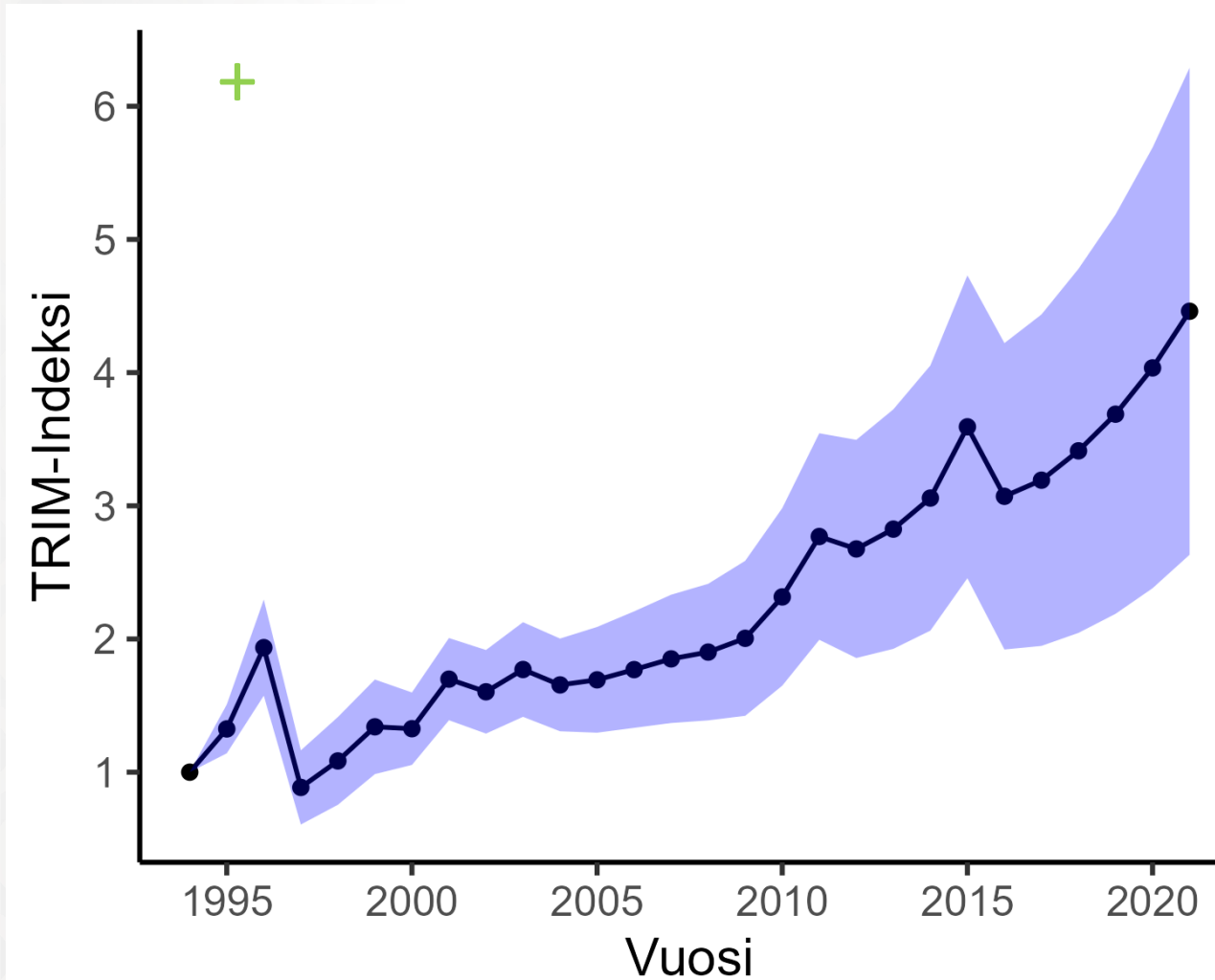
200 km



# Runsastuvia lajeja

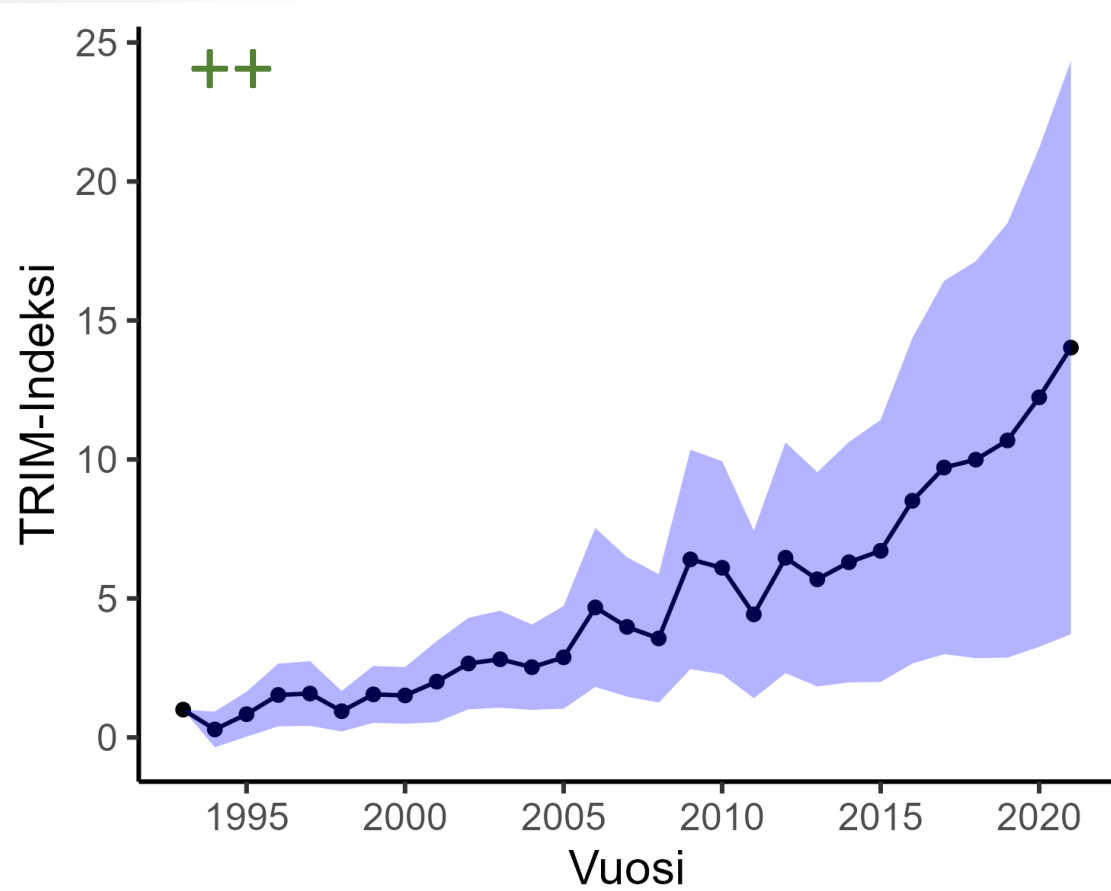


# Ennomos erosarius Tammilovimittari



# Apeira syringaria

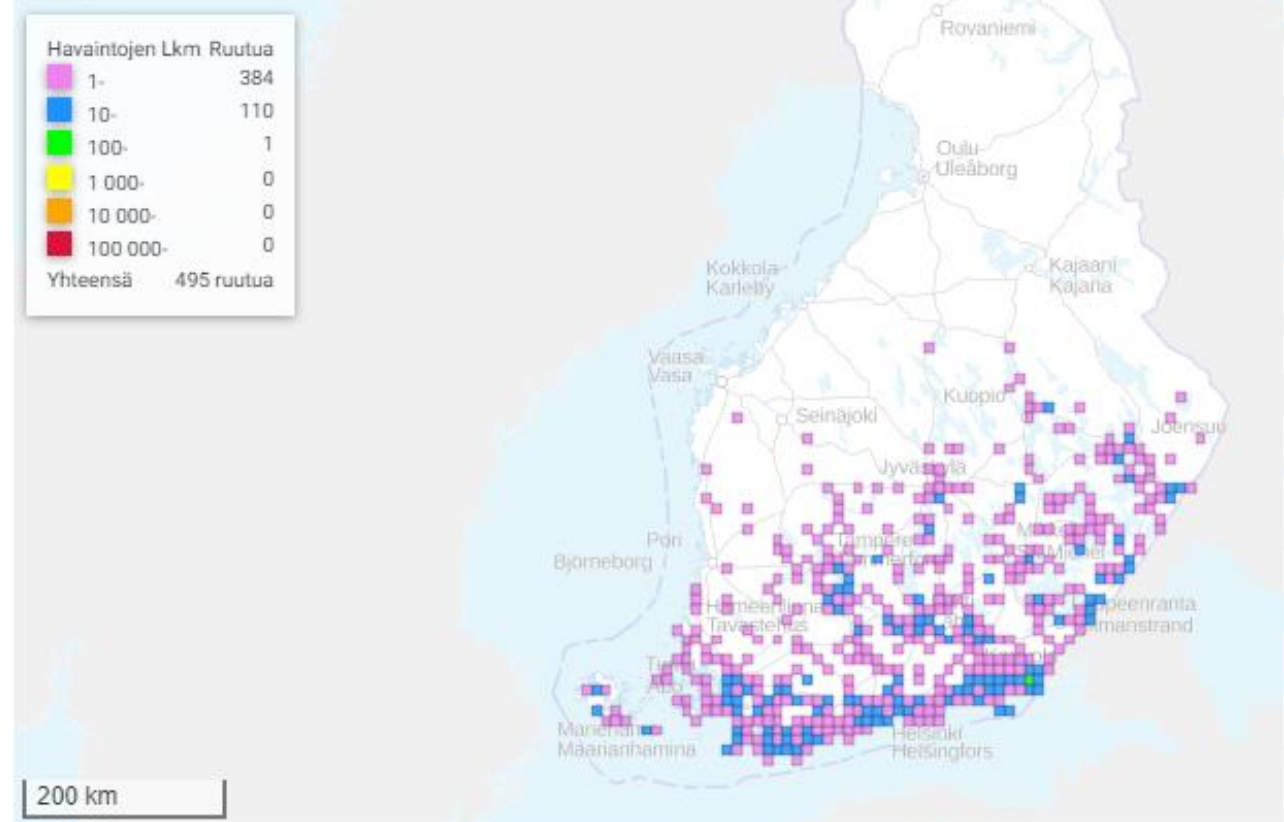
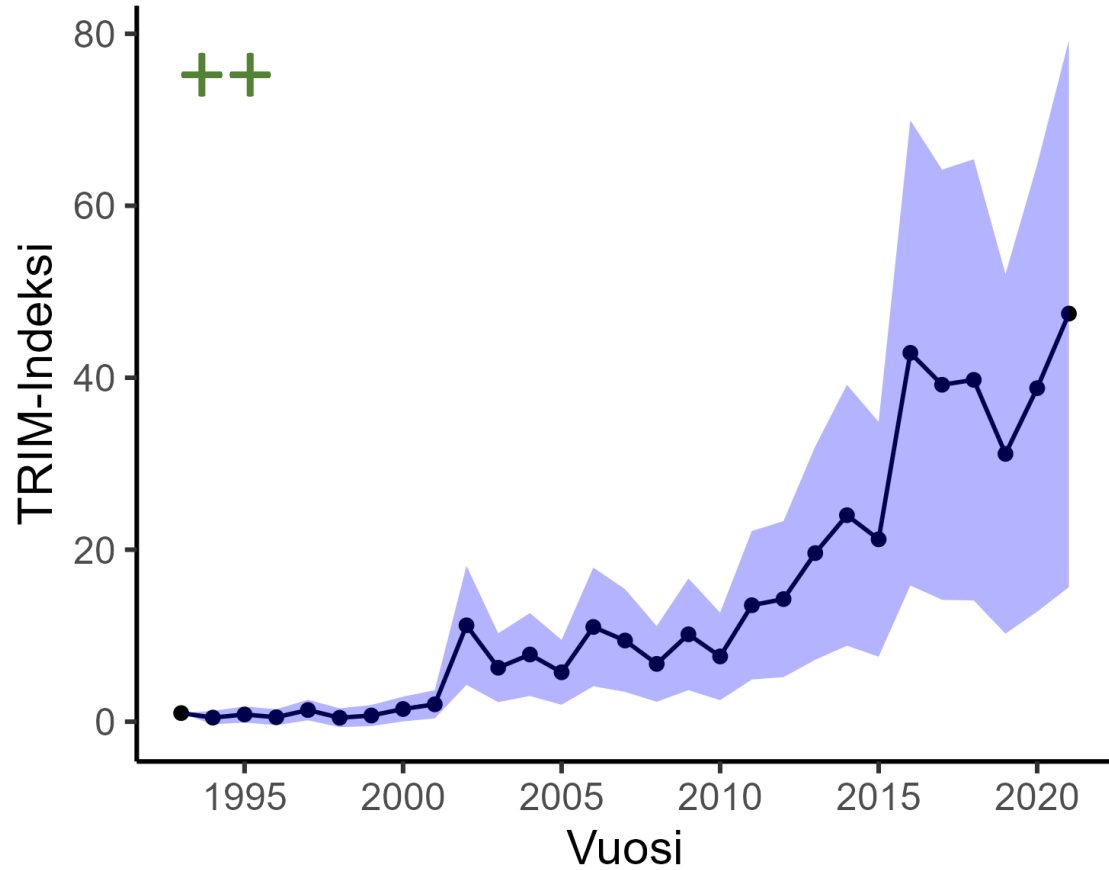
## Kuusamamittari



Havaintojen Lkm Ruutua	
1-	150
10-	33
100-	0
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>183 ruutua</b>

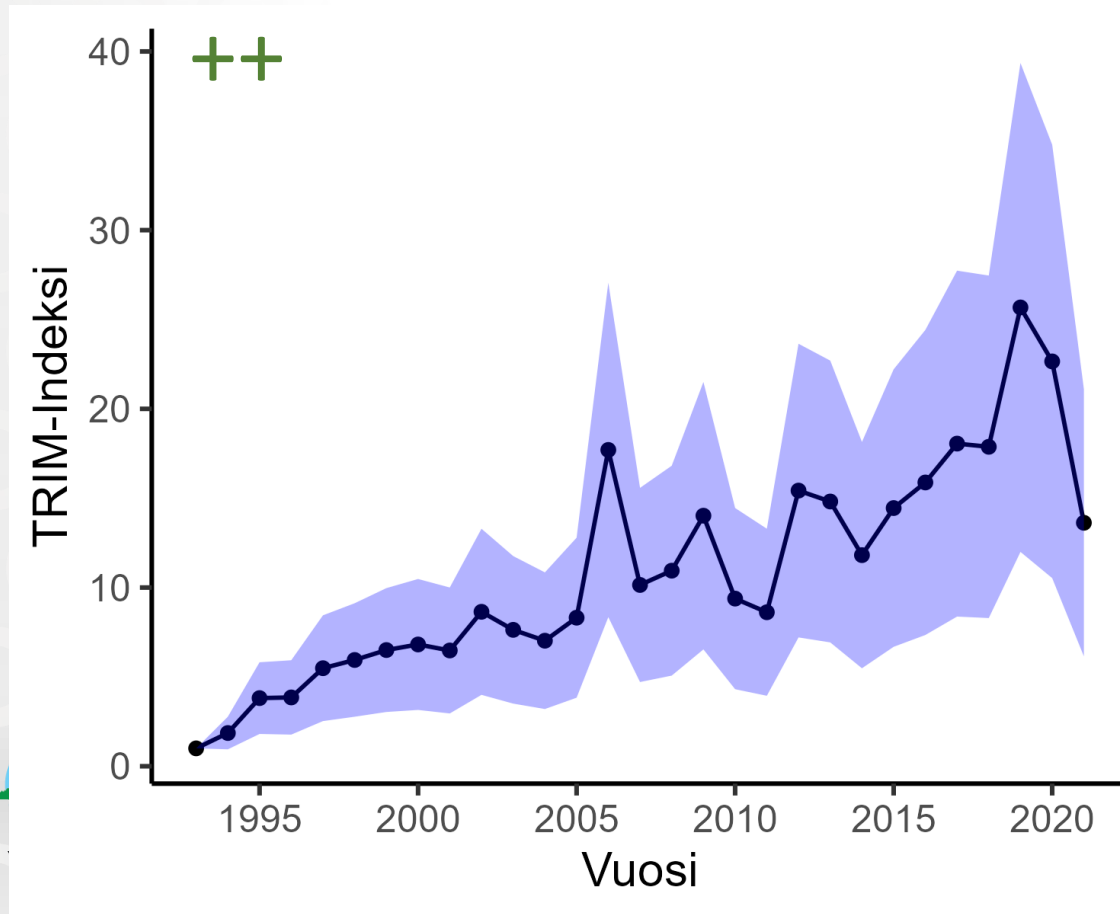


# Calliteara pudibunda Villakarvajalka



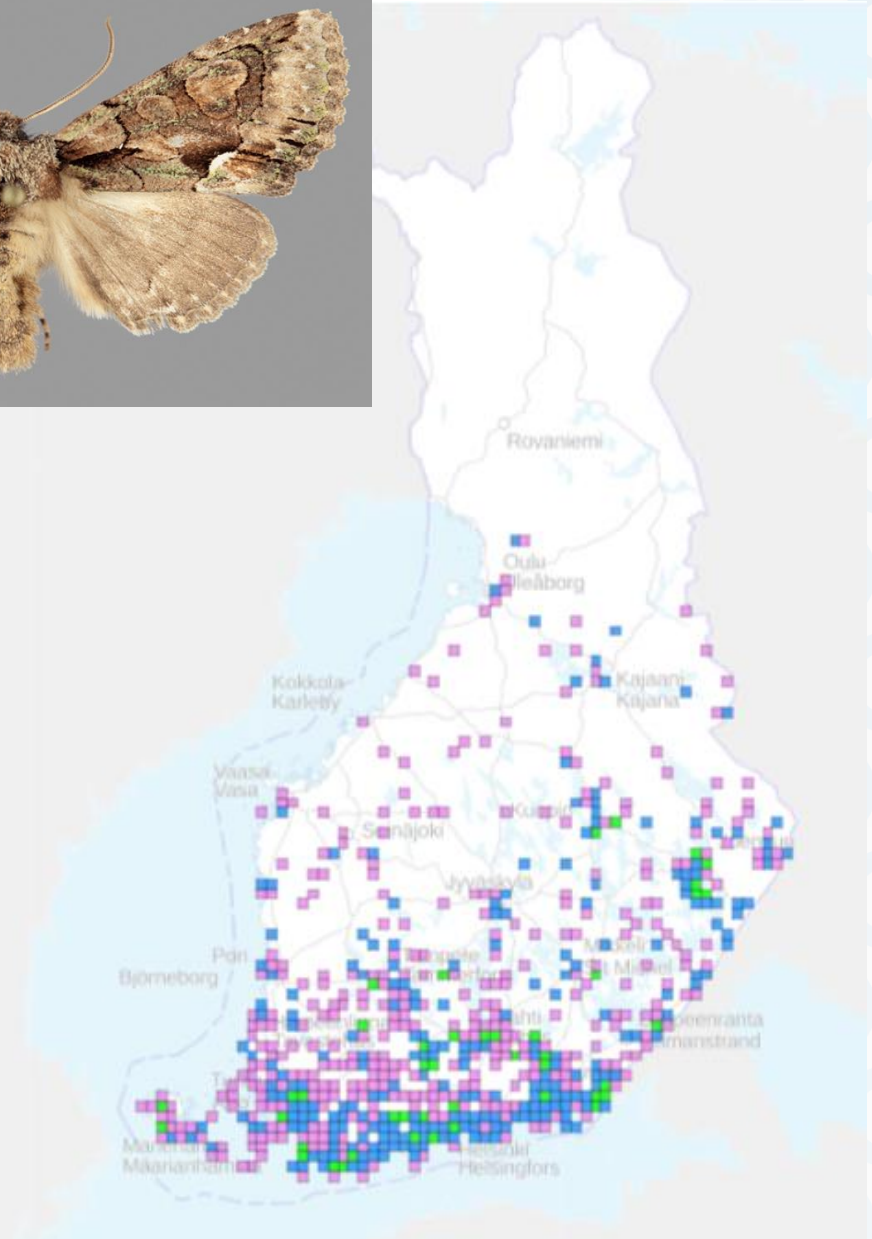


# Allophyes oxyacanthae Orapihlajayökkönen



Havaintojen Lkm	Ruutua
1-	358
10-	230
100-	44
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>632 ruutua</b>

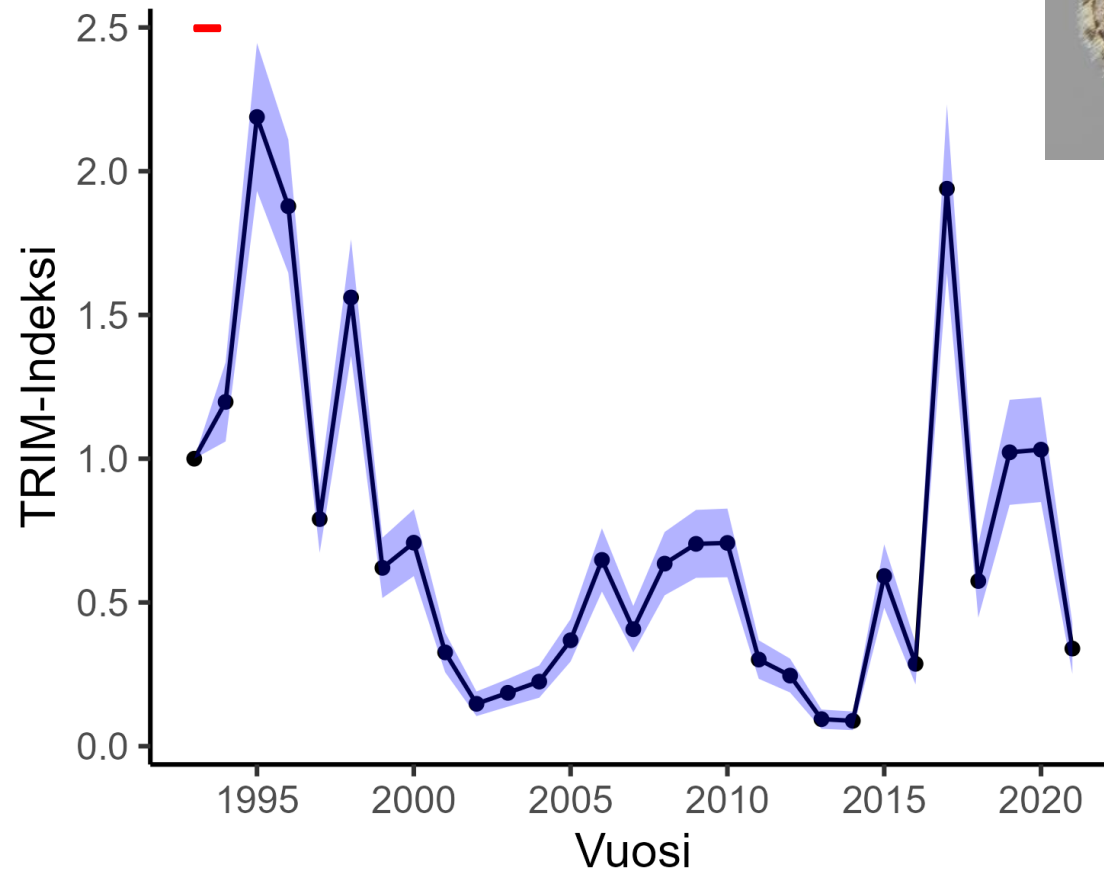
200 km



# Harvinaistuvia lajeja



# Entephria caesiata Metsäpohjanmittari

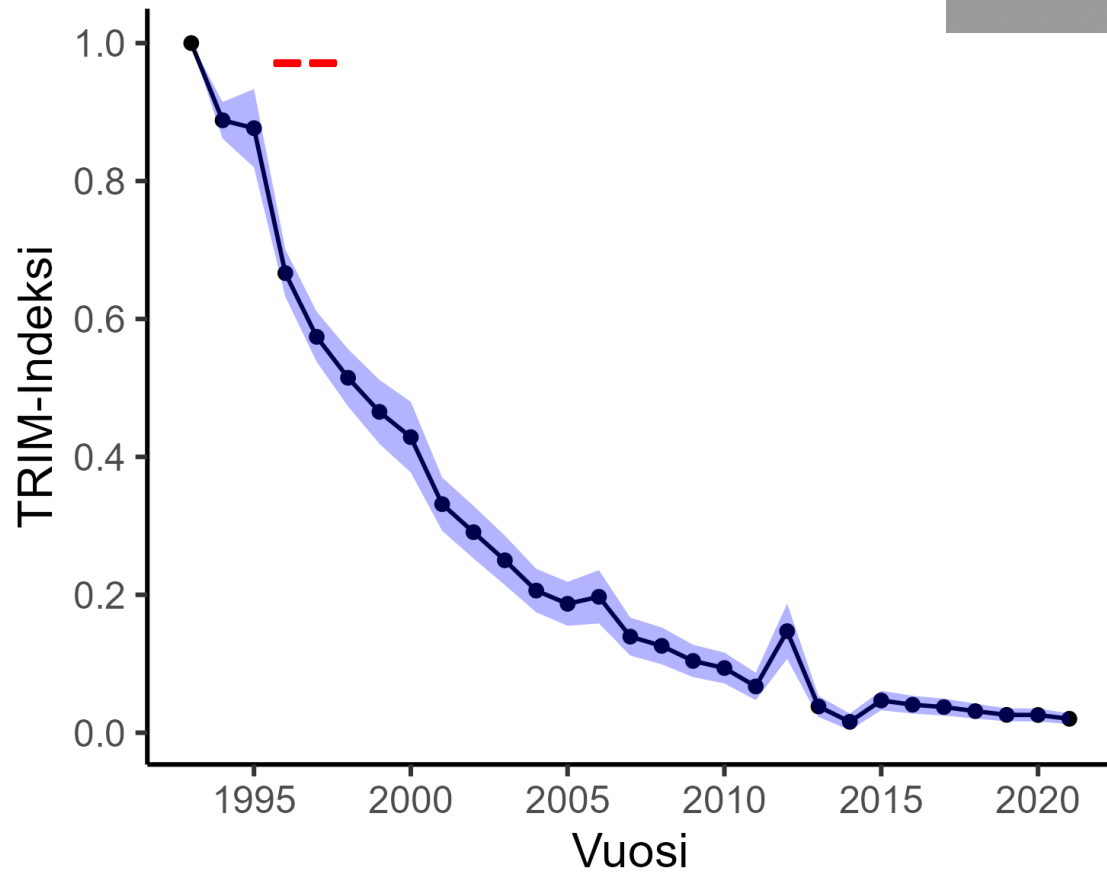


Havaintojen Lkm	Ruutua
1-	982
10-	151
100-	20
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>1153 ruutua</b>

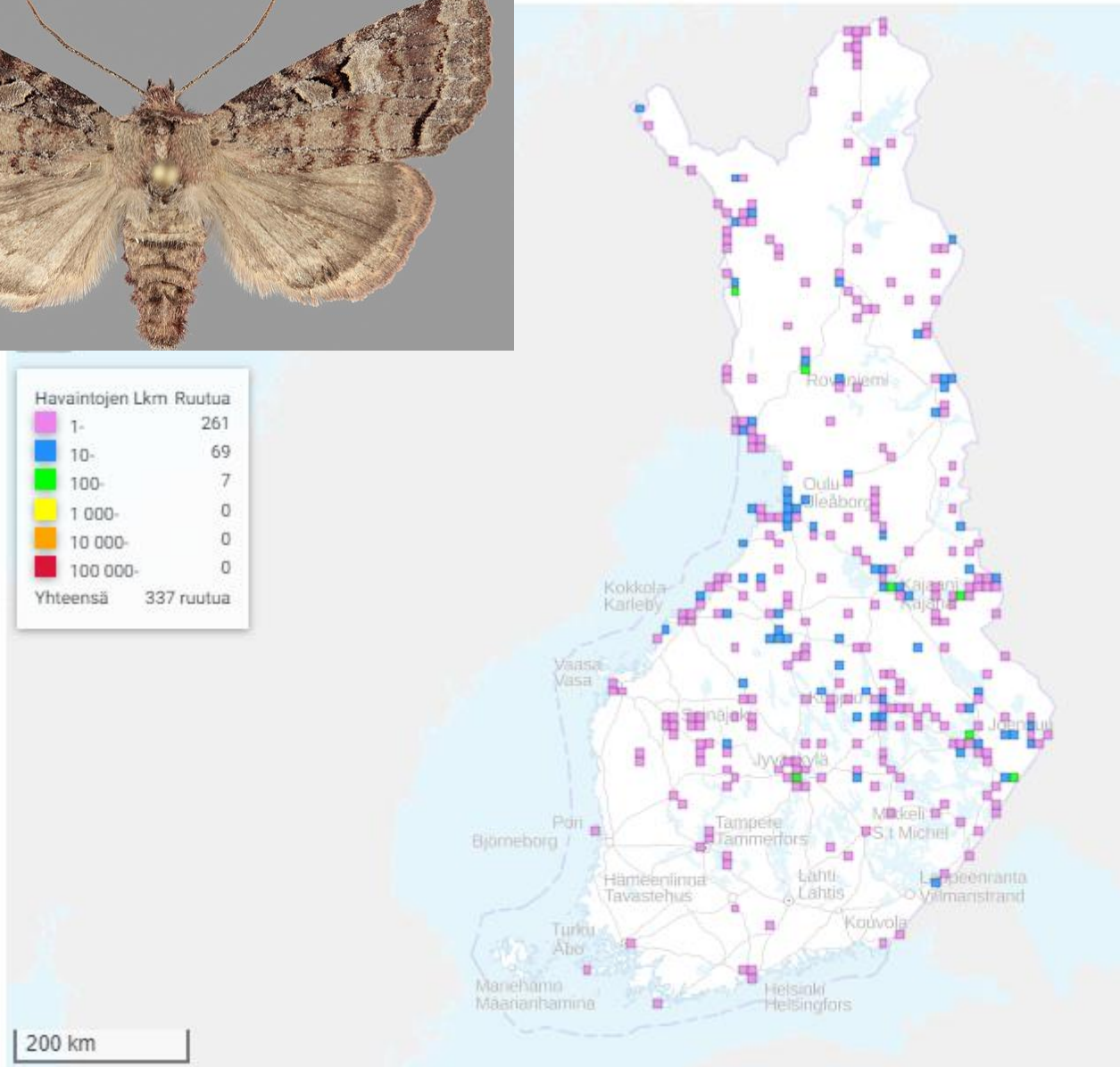
200 km



# Hillia iris Silkkiyökkönen

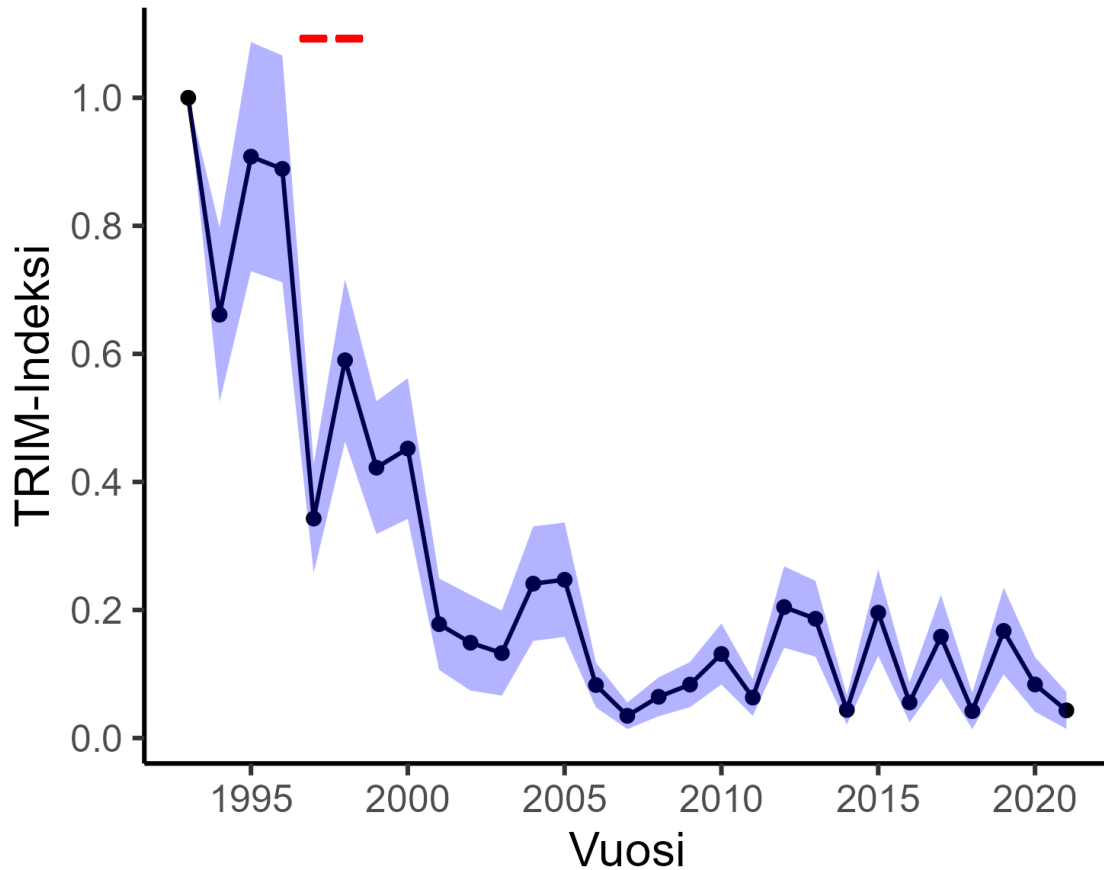


Havaintojen Lkm Ruutua	
1-	261
10-	69
100-	7
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>337 ruutua</b>



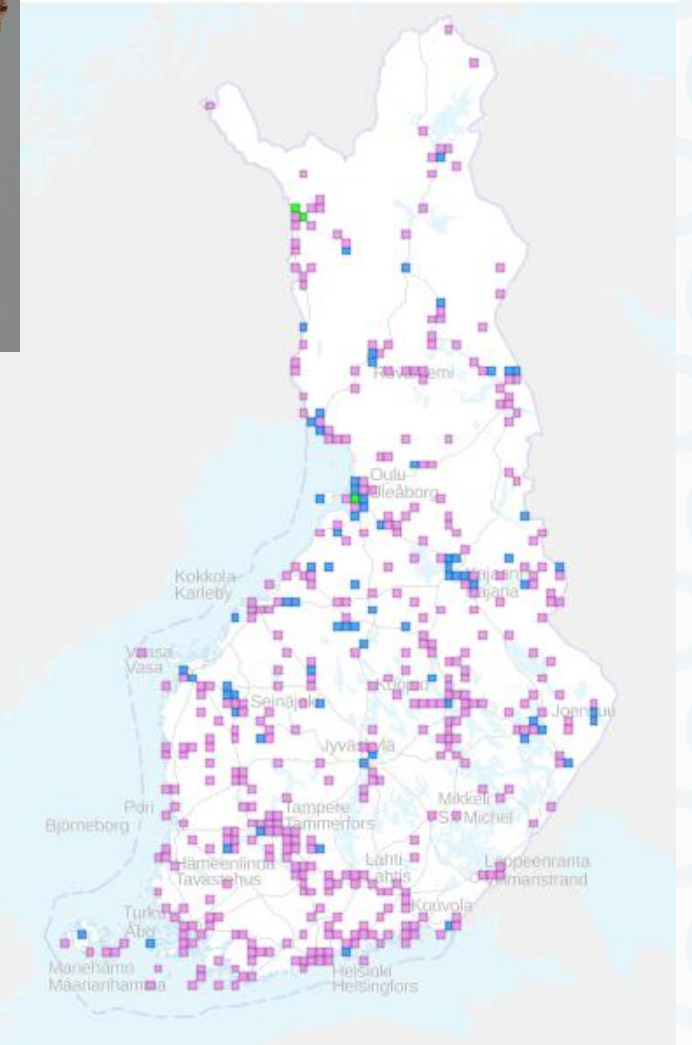
# Autographa macrogamma

## Isovaskiyökkönen

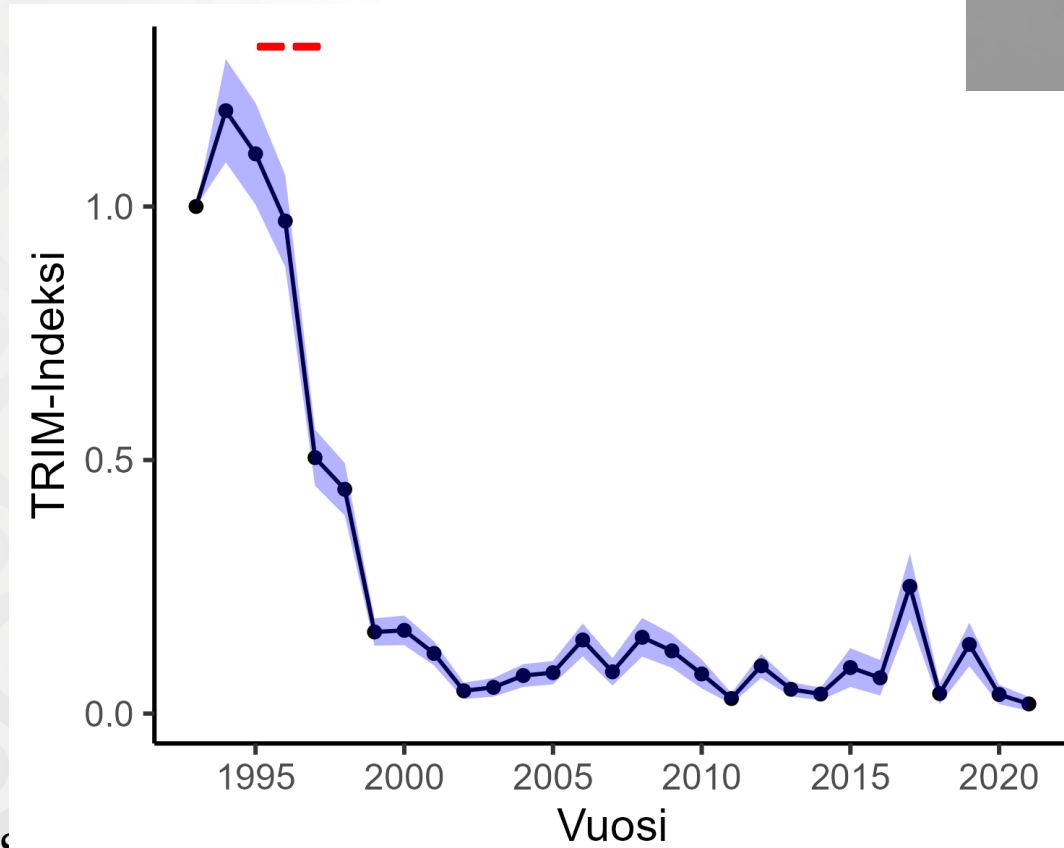


Havaintojen Lkm Ruutua	
1-	395
10-	71
100-	3
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>469 ruutua</b>

200 km

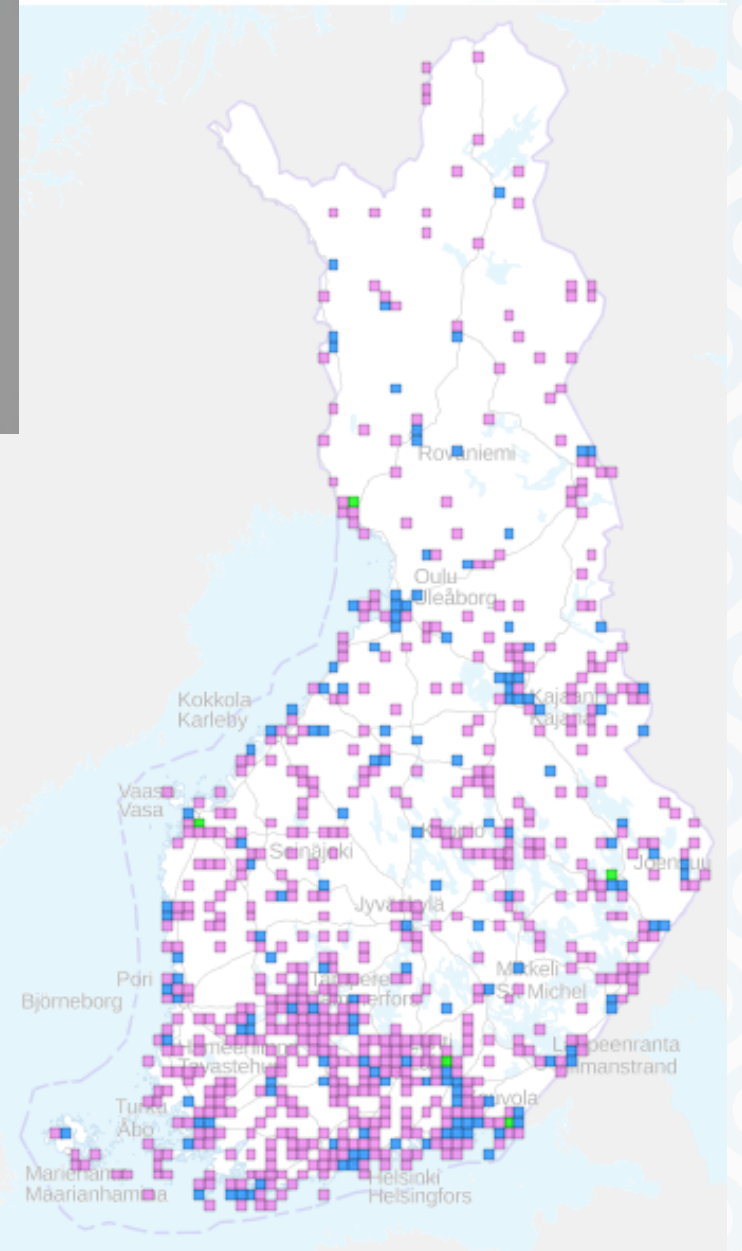


# Macaria loricaria Pajumittari

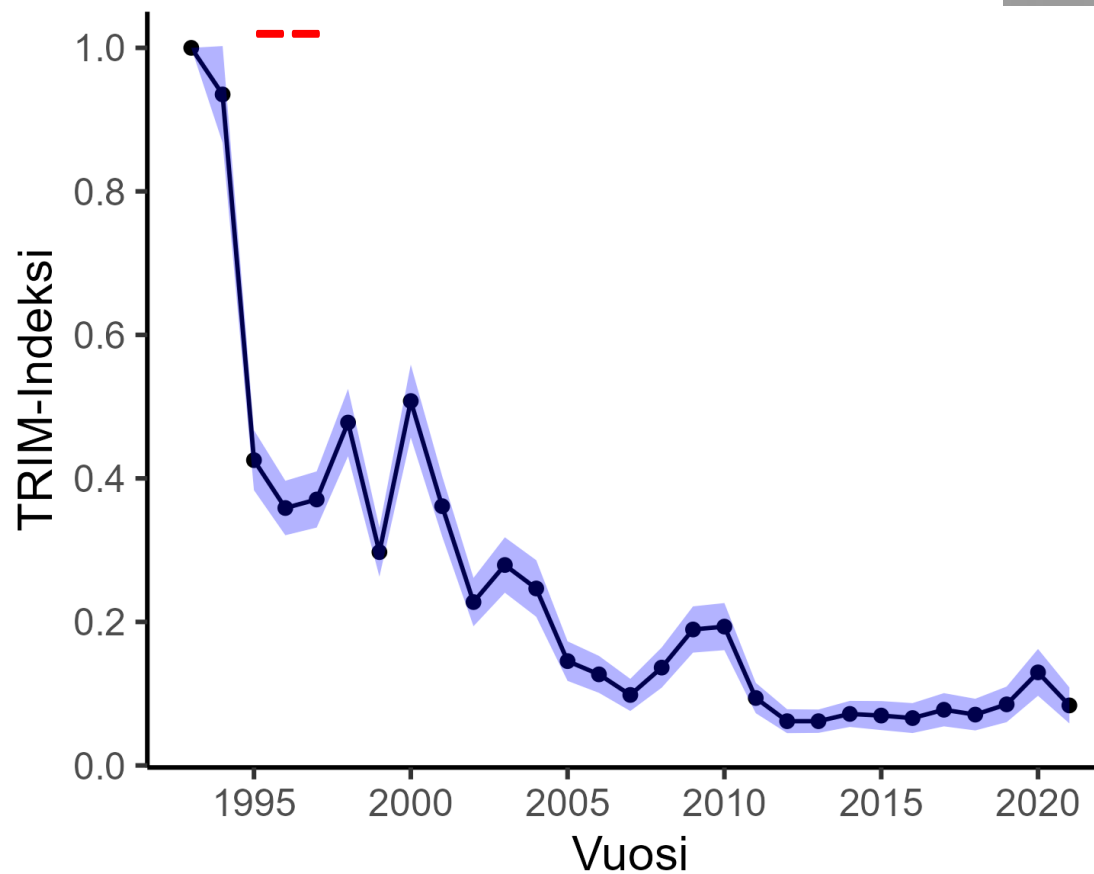


Havaintojen Lkm Ruutua	
1-	598
10-	144
100-	5
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>747 ruutua</b>

200 km

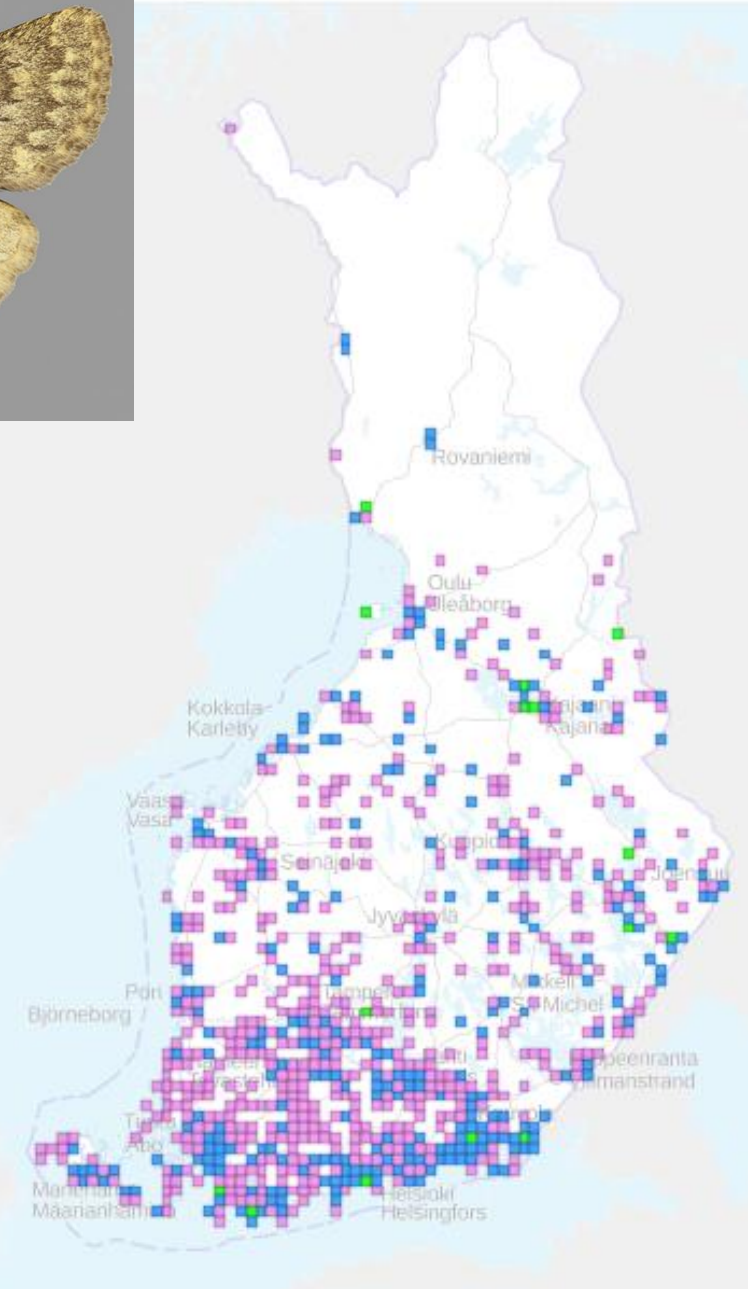


# Dasypolia templi Loimuyökkönen



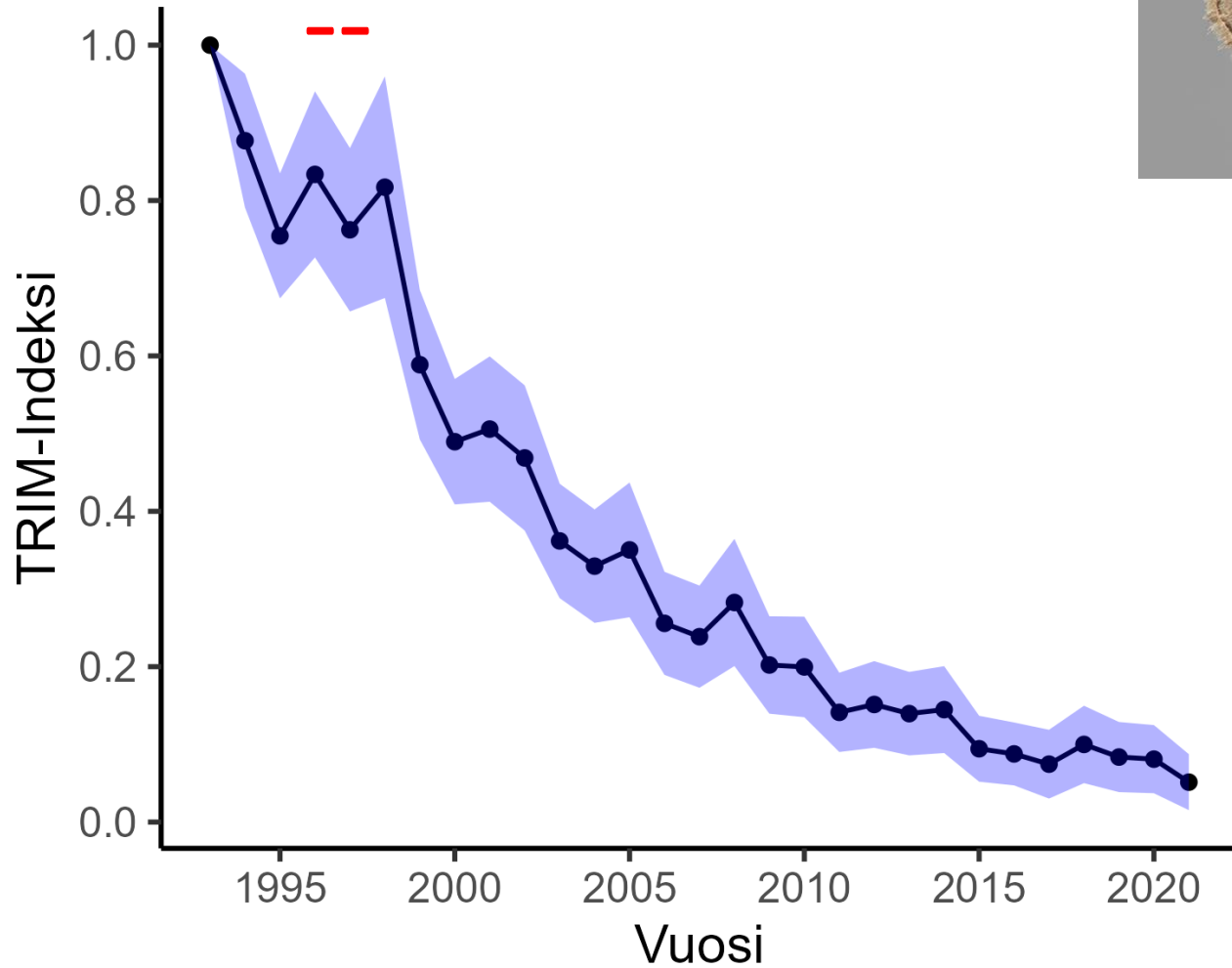
Havaintojen Lkm	Ruutua
1-	540
10-	252
100-	15
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>807 ruutua</b>

200 km



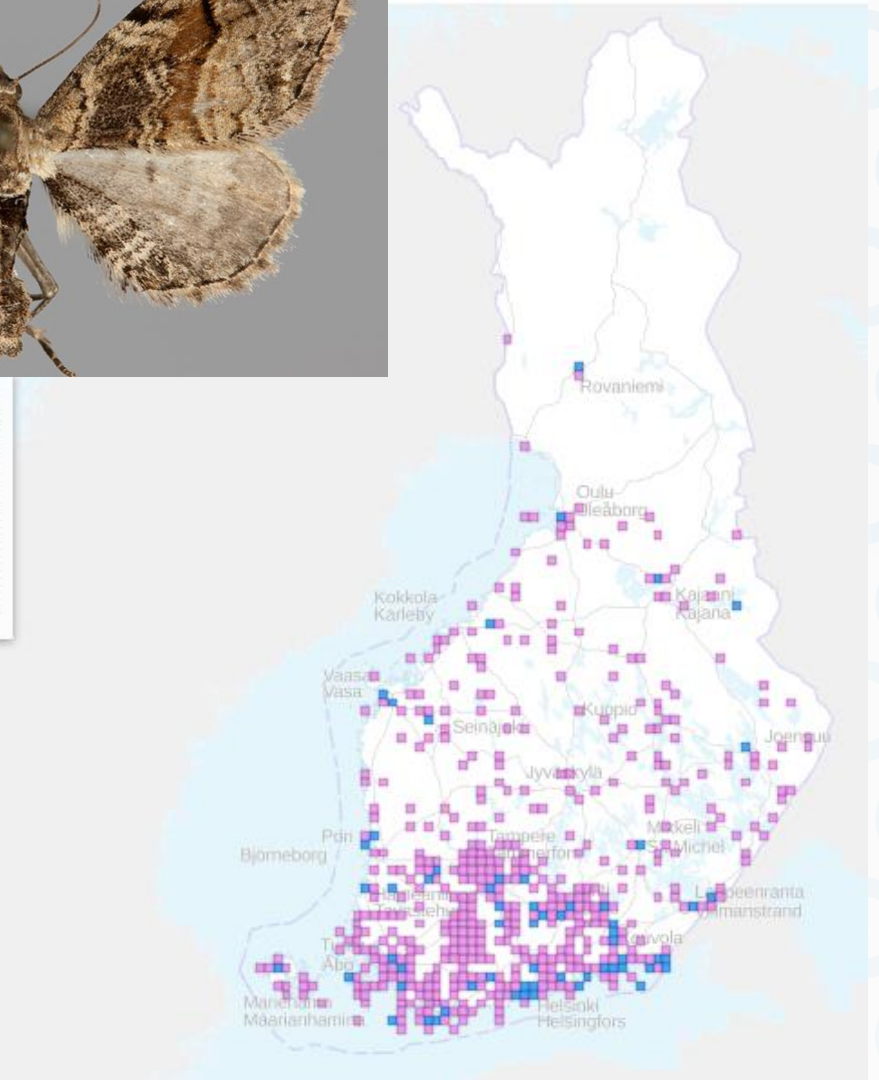
# Eupithecia sinuosaria

## Ruskopikkumittari



Havaintojen Lkm	Ruutua
1-	465
10-	61
100-	0
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>526 ruutua</b>

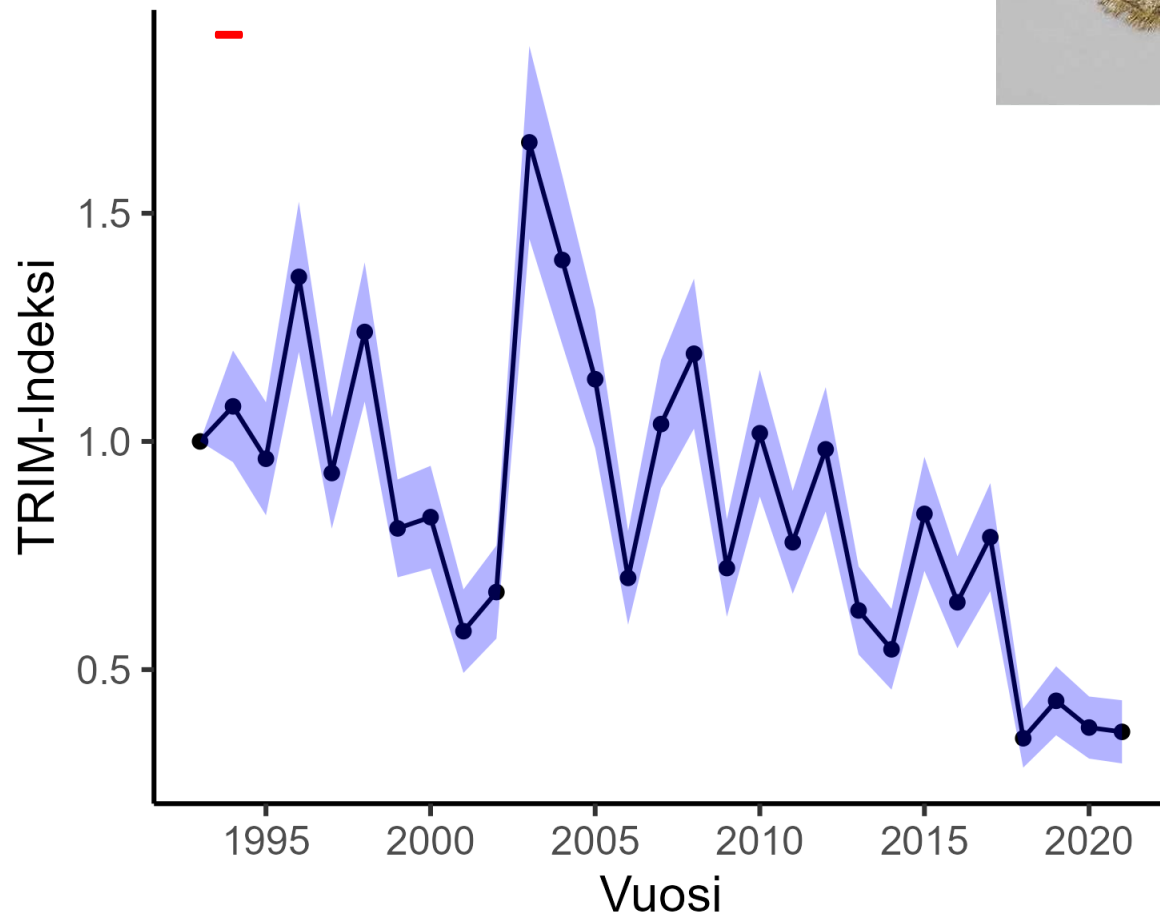
200 km





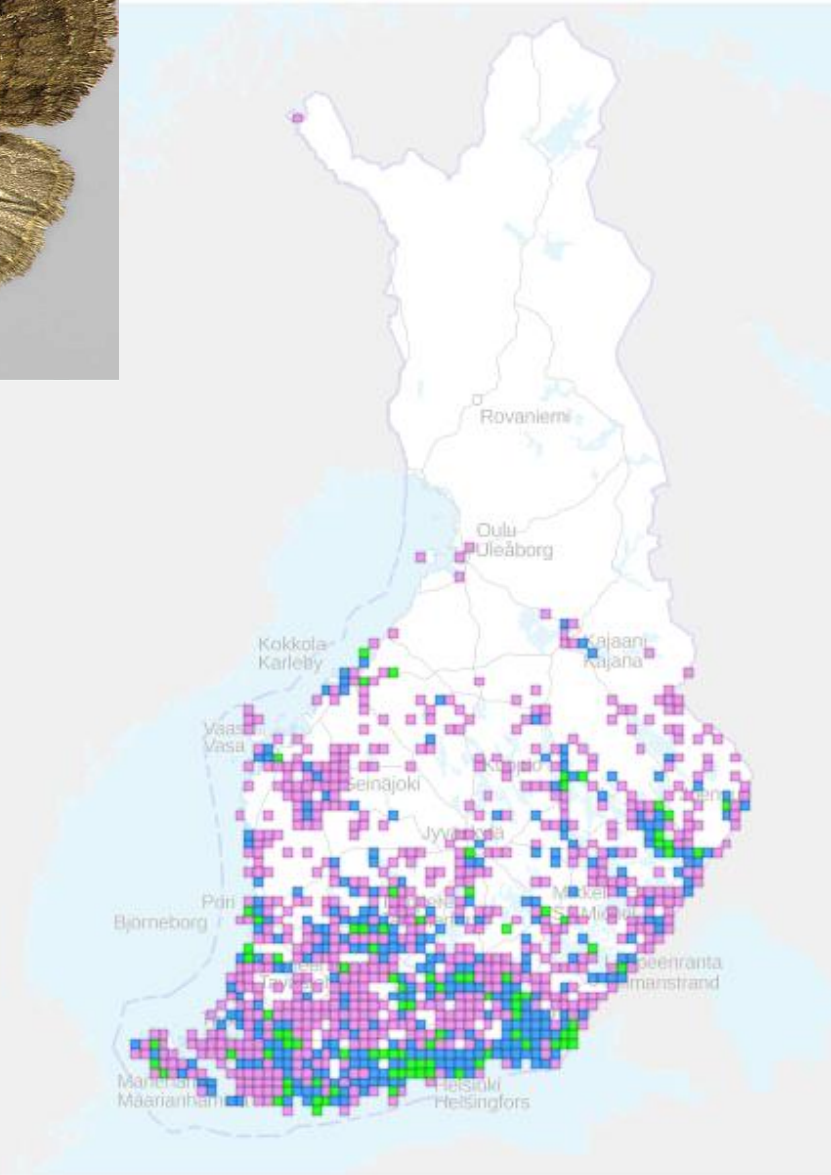
# Rusina ferruginea

## Varjoyökkönen

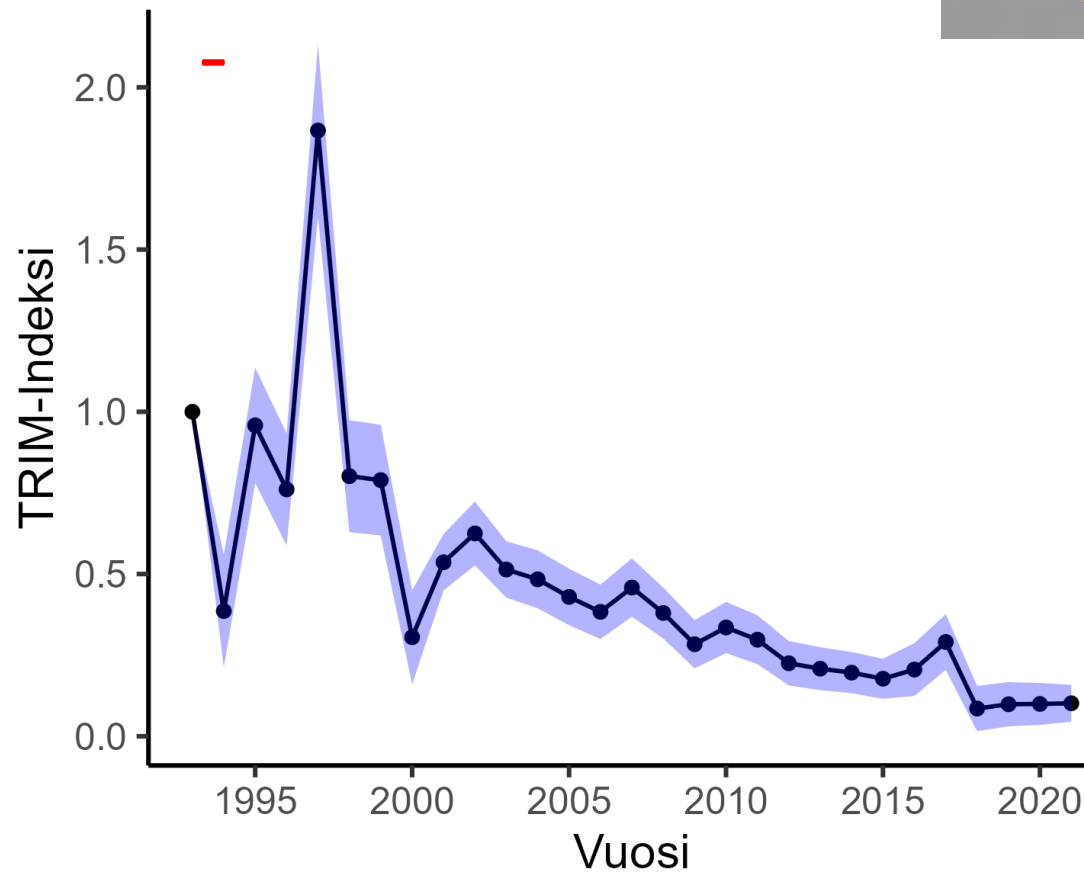


Havaintojen Lkm	Ruutua
1-	631
10-	288
100-	93
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>1012 ruutua</b>

200 km

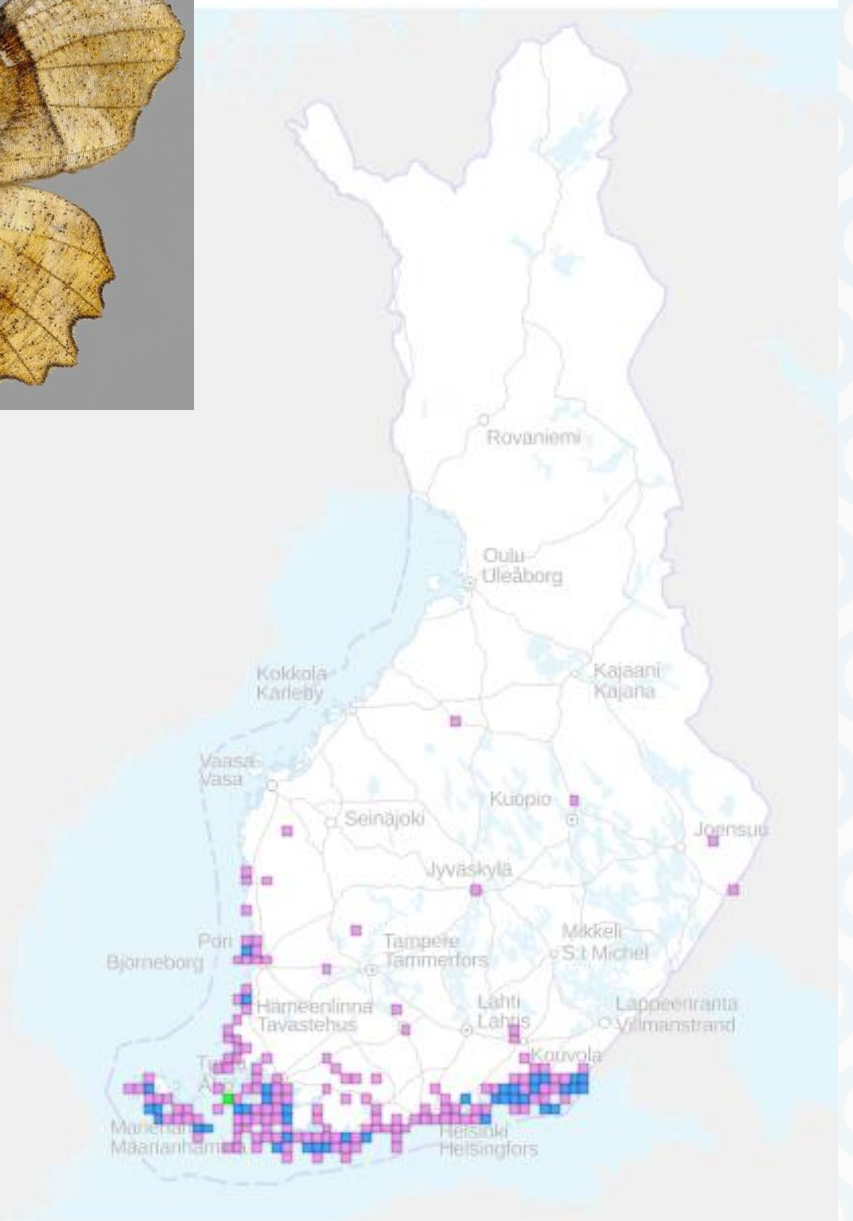


# Selenia lunularia Ykskuumittari



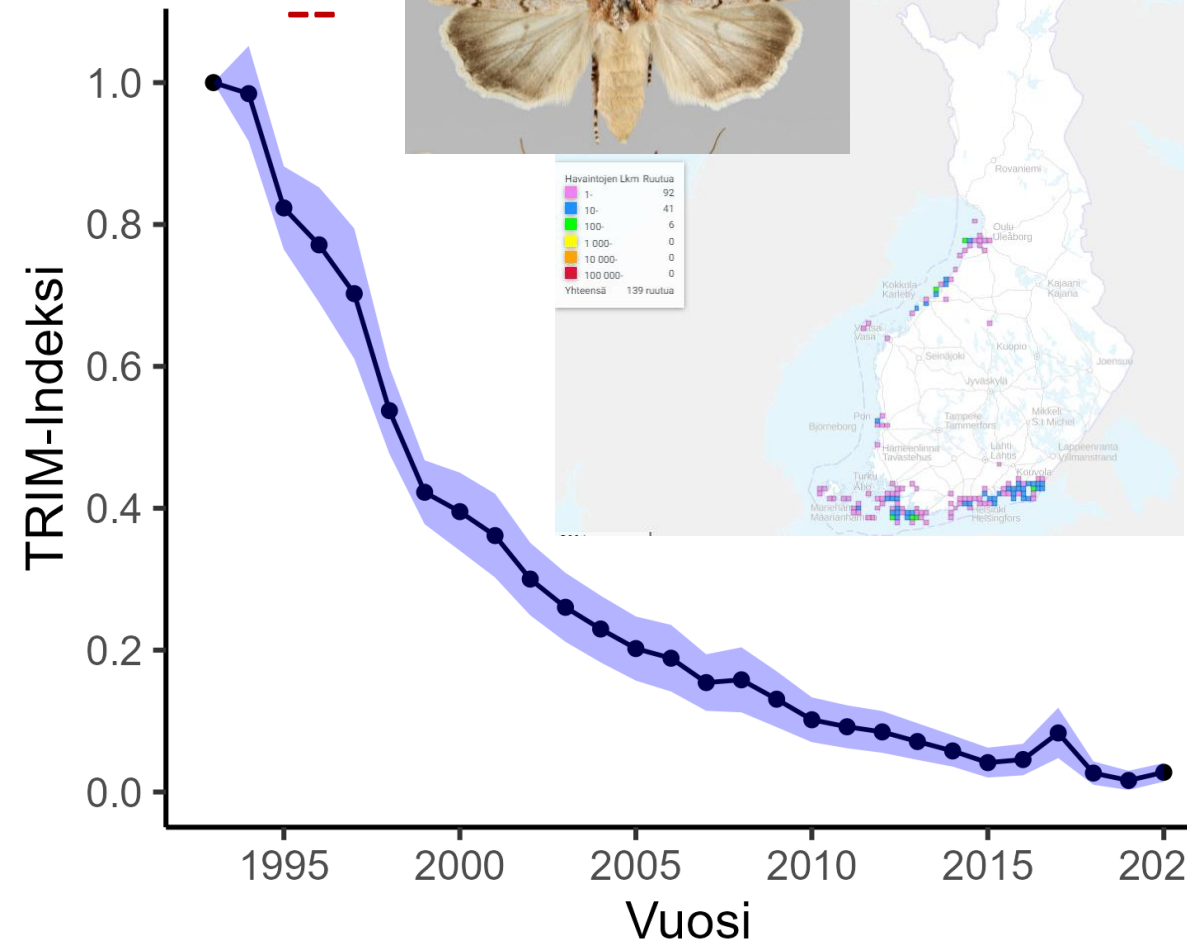
Havaintojen Lkm Ruutua	
1-	147
10-	39
100-	1
1 000-	0
10 000-	0
100 000-	0
<b>Yhteensä</b>	<b>187 ruutua</b>

200 km



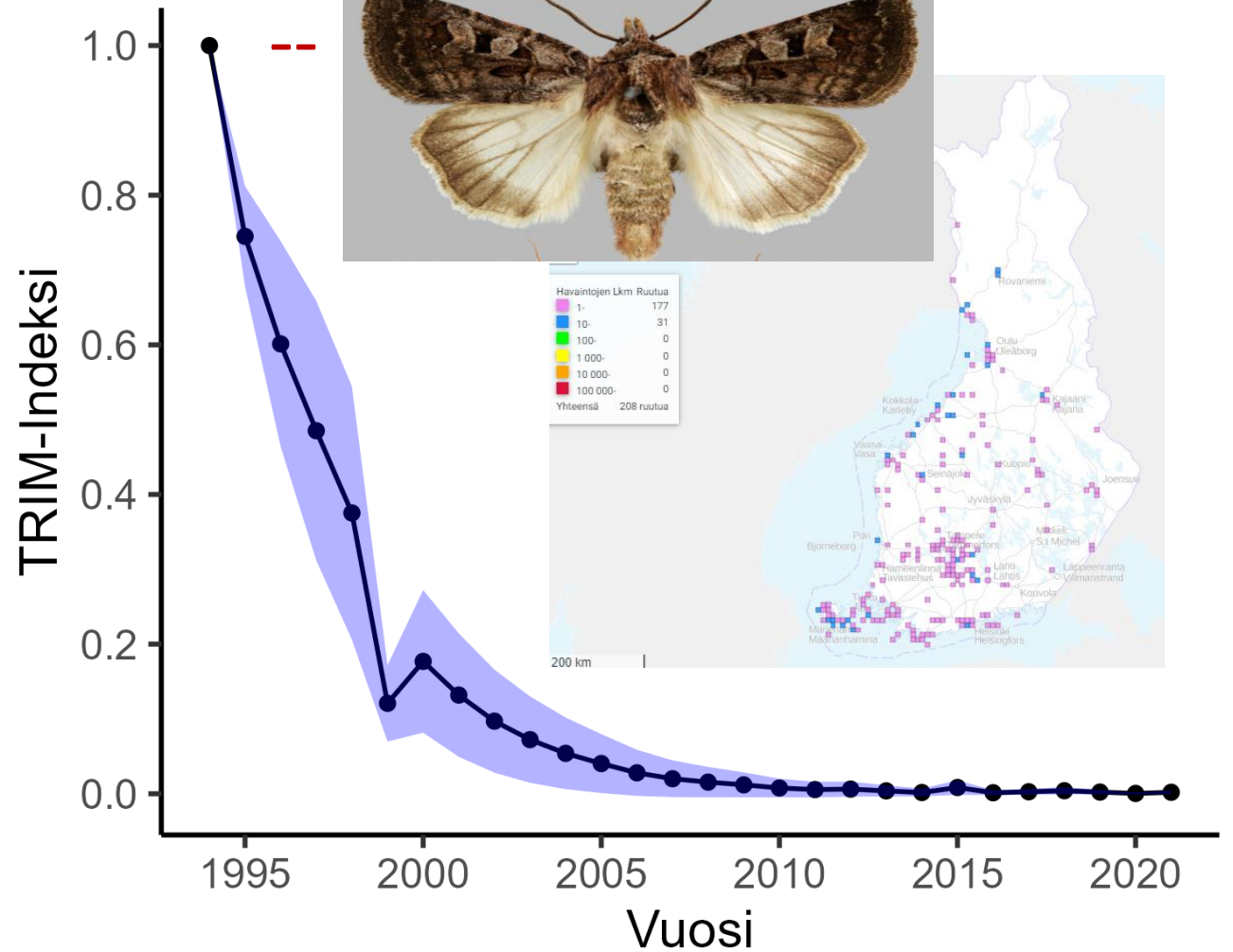
# Euxoa cursoria

## Rantahietayökkönen



# Euxoa recussa

## Sahahietayökkönen



Valtavan iso kiitos !!!

Määrittäjille  
Rysän pitäjille  
Rahoittajille  
Yhteistyökumppaneille

Perhosten kuvat ja kartat: Lajitietokeskus



S Y K E

