



**PURCARI**  
· CHATEAU ·

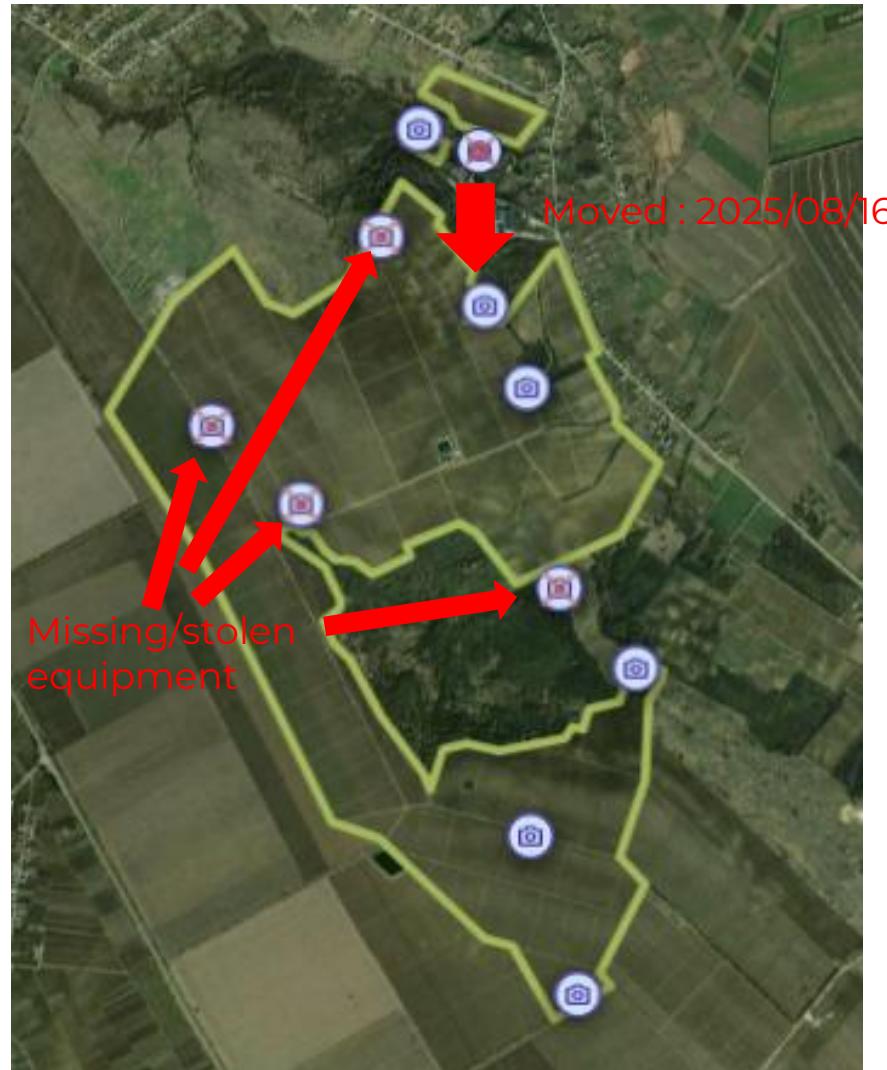
**Presentation of the preliminary results of the  
study in the Purcari vineyard, and future analysis  
opportunities through the Every1Counts platform**

**Purcari  
Sept 18, 2025  
R&D+I**

# Installation

- 10 initial “hotspots” selected with the team as of 2025/05/29
- 6 hotspots in place as of 2025/08/16

1 hotspot = 1 camera + 1 audio recorder





**Camera traps:** automatic triggering by motion detection

**Audio recorders :** programmed to capture one-minute samples every 15 minutes for birds

- + **To be implemented: Bat protocol**, continuous recordings from sunset to sunrise for 3-4 days during bat sessions

Data retrieval is done via SD cards monthly at first, then every 3 months.



CEYOMUR 0 35% 2025/07/30 16:49:11 26C 78F CT45



**Analysis by an AI program  
(Megadetector) → detection of  
animal presence  
Species classification by a  
human observer**

4

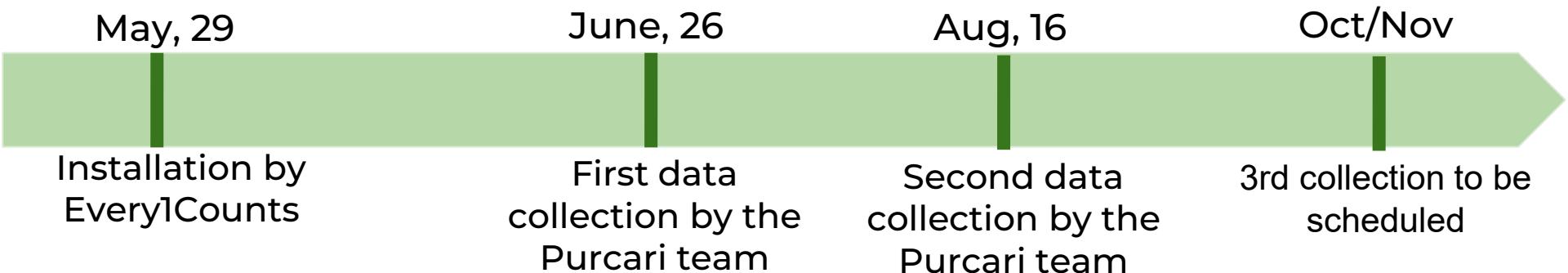


**AI analysis (BirdNET):** detects  
bird presence and identifies  
species



**AI analysis (Kaleidoscope &  
Tadarida):** detects bat  
presence and identifies  
species  
Human validation of  
detected species

# Data collection setup phase



## First Summary

- **Collection network**: OK, but some devices go missing at each retrieval
- **Collection**: OK, but optimizations to extend the autonomy of sound recorders
- **Data transfer**: cumbersome, currently done via DHL! A “peer-to-peer” transfer system should be implemented

It all starts now!

# **Forecast summary of the monitoring**



May 29 – Aug 16, 2025 → 75 days, 2 data collection

### Purcari Site Statistics



Number of  
Media

**32412**



Number of  
Videos/Images

**420**



Number of  
Sounds

**31150**



Number of data  
Open data

**842**

### Lapeyrache website statistics



Number of  
Media

**112427**



Number of  
Videos/Images

**4995**

= 600 days of data  
collection



Number of  
Sounds

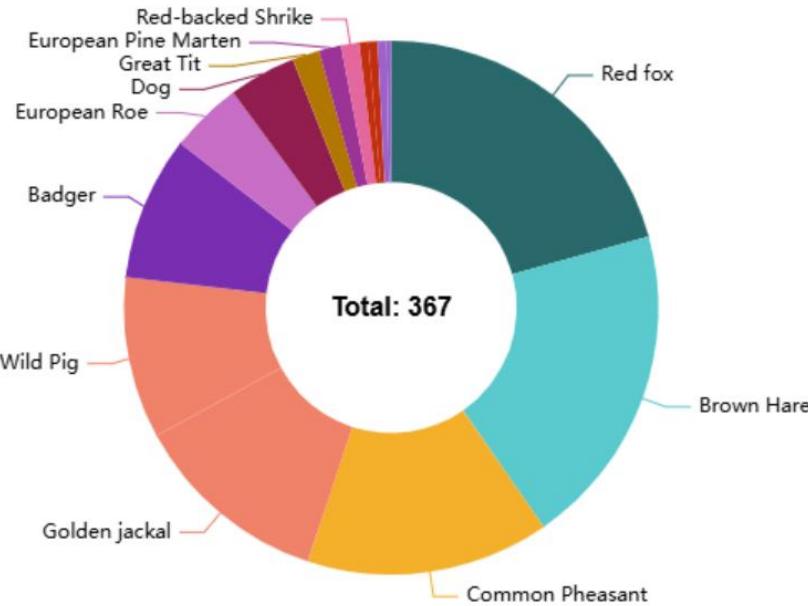
**96420**



Number of data  
Open data

**11012**

**350**      **15**  
*detections*    *species Including  
13 wild species*



**7940**  
*detections*

**113**  
*species*

Wordcloud of species



# Indicators

# The indicators proposed by Every1Counts: biodiversity indices recognized and validated by science

## The Shannon Index: an indicator of ecological diversity

It measures both:

- The number of species present (species richness),
- The distribution of individuals among these species (evenness).

The higher the index, the greater the diversity: this means that **several species coexist** in relatively balanced numbers.

### Good to know:

- A site with few species but well distributed can have an index close to that of a very rich site dominated by a single species.
- The Shannon Index is expressed as a **positive number** (generally between 0 and 3 in terrestrial environments).

### Why is it useful here?

This index makes it possible to objectively compare the observed diversity between several sites of the same type.

## The Simpson Index: measuring the probability of diversity

The Simpson Index assesses the probability that two randomly selected individuals belong to different species.

The closer the index is to 1, the higher the diversity.

### How does it work?

- It takes into account **species dominance**: if one species is very abundant, the index decreases.
- Conversely, if there is a **good distribution among several species**, the index increases.

### Interpretation:

- Index  $\approx 0.5$ : moderate diversity.
- Index  $> 0.7$ : good diversity.
- Index  $> 0.9$ : very high diversity (rare in human-modified environments).

### Why is it useful here?

The Simpson Index complements the Shannon Index:

- Shannon emphasizes **richness and balance**,
- Simpson highlights the presence of **dominant species**.

## Species Richness: the number of species present

Species richness is the total number of different species observed at a site.

It is the simplest indicator of biodiversity: the more species there are, the higher the richness.

### How is it measured?

- Each detected species counts as **1 unit**, regardless of the number of individuals observed.
- It does not take into account abundance or the distribution of species.

### Key points:

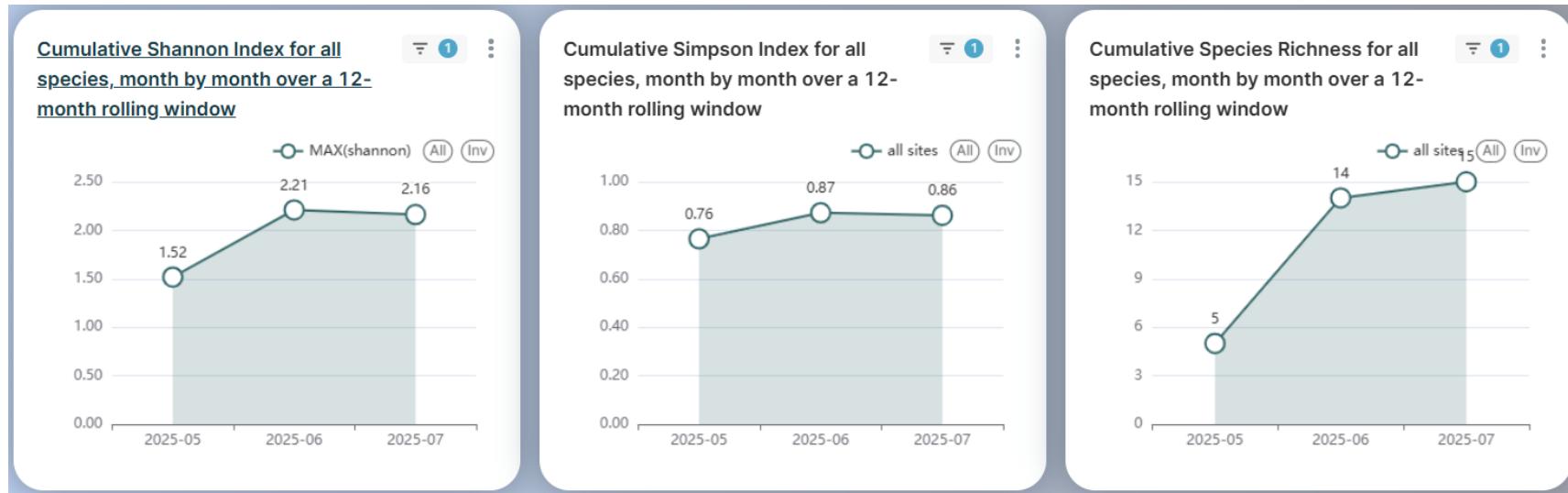
- A good indicator of the variety of the community.
- Often used to monitor the evolution of a site over time or to compare different habitats.

### Why is it useful here?

Species richness provides an instant snapshot of the diversity detected at a site.

Combined with the Shannon and Simpson indices, it enables a more complete analysis of the ecosystem's condition.

# The 3 indices at Purcari, combining camera data



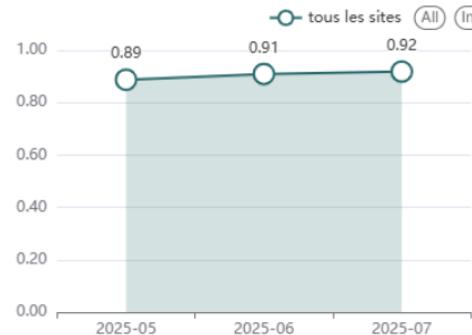
**Indices not yet stable - consolidation in progress**

# The 3 indices at Purcari, combining sound recorder data

Cumulative Shannon Index for all species, month by month over a 12-month rolling window



Cumulative Simpson Index for all species, month by month over a 12-month rolling window



Cumulative Species Richness for all species, month by month over a 12-month rolling window

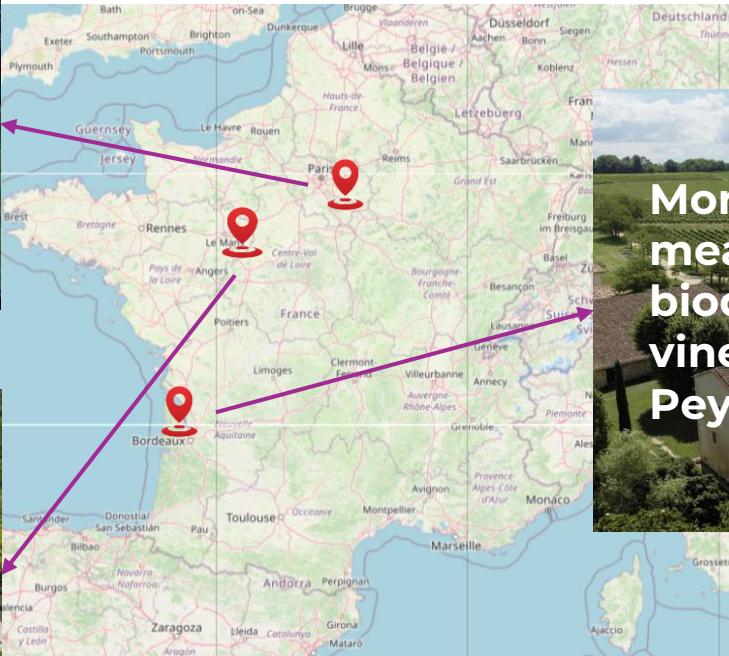


Indices appear to be stabilizing – to be confirmed with upcoming collections

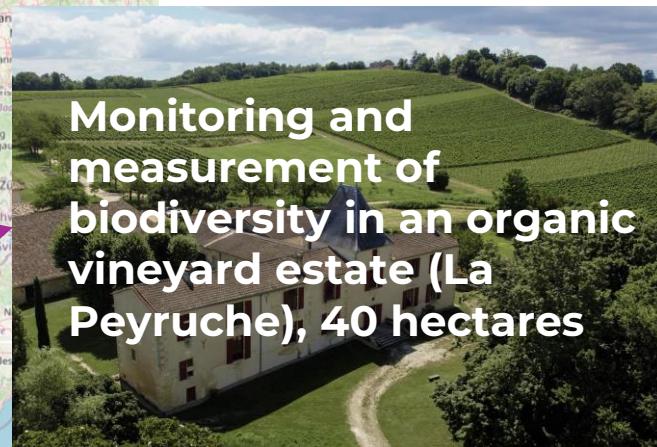
# 3 Sites for comparison



**Observatory of biodiversity in peri-urban areas**



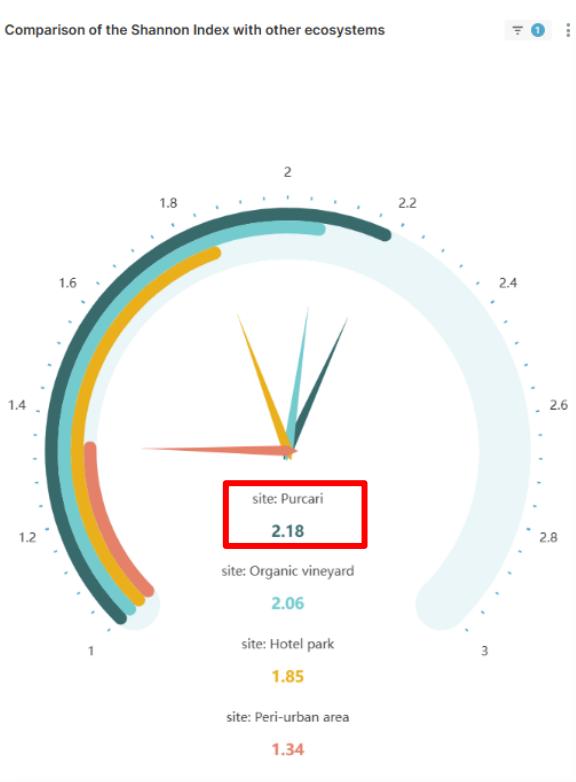
**Biodiversity observatory in a park around a hotel**



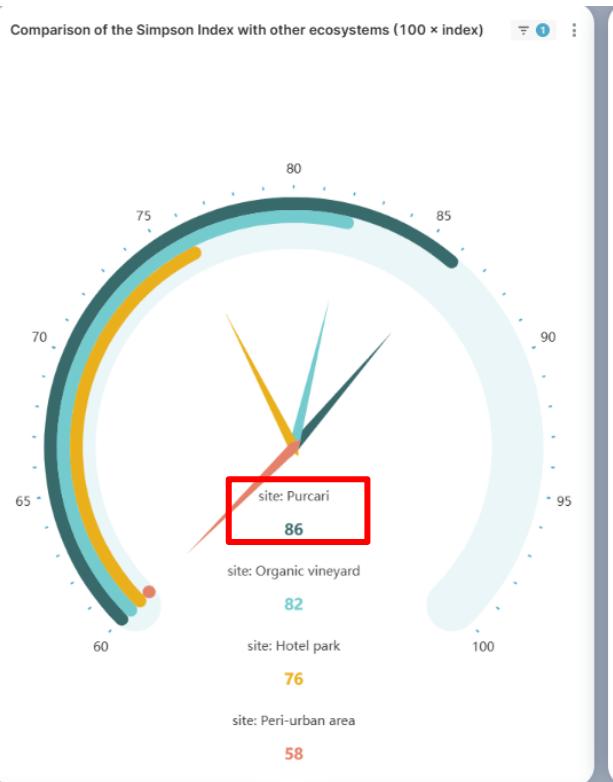
**Monitoring and measurement of biodiversity in an organic vineyard estate (La Peyruche), 40 hectares**

# Comparison of “camera indices” with 3 other sites

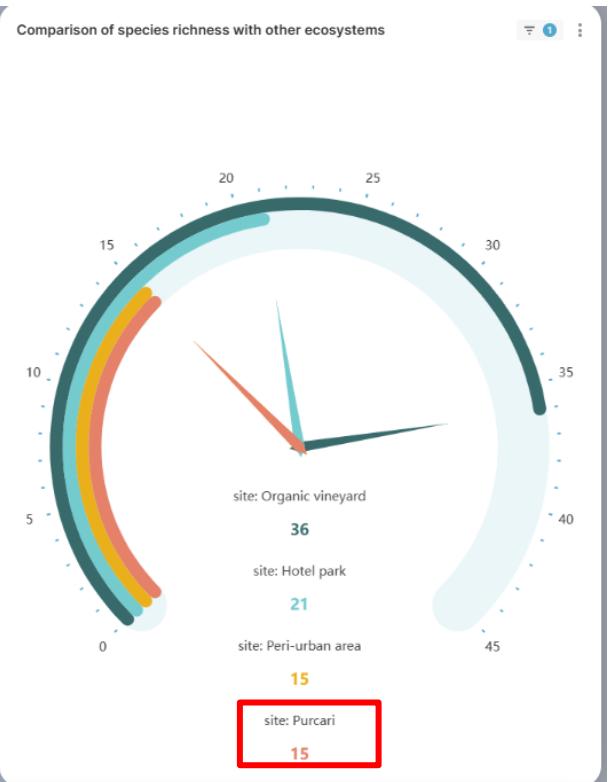
Comparison of the Shannon Index with other ecosystems



Comparison of the Simpson Index with other ecosystems ( $100 \times$  index)

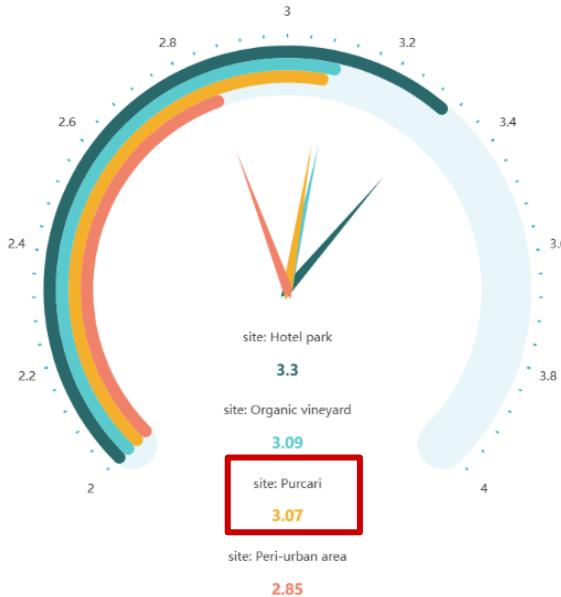


Comparison of species richness with other ecosystems

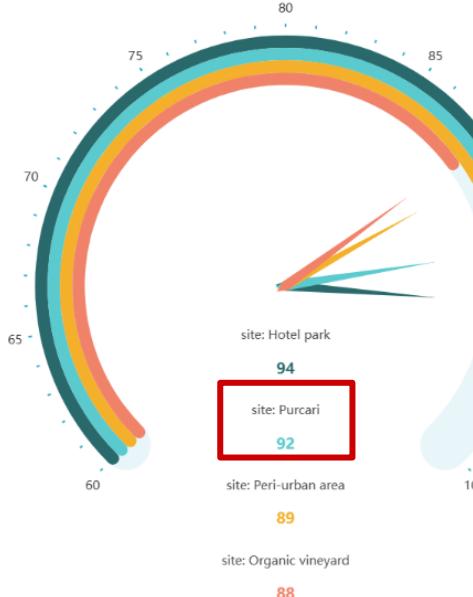


# Comparison of “sound indices” with 3 other sites

Comparison of the Shannon Index with other ecosystems



Comparison of the Simpson Index with other ecosystems (100 × index)



Comparison of species richness with other ecosystems



# EVERY1 COUNTS

Shaping a future where people and nature thrive together



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