



**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.



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

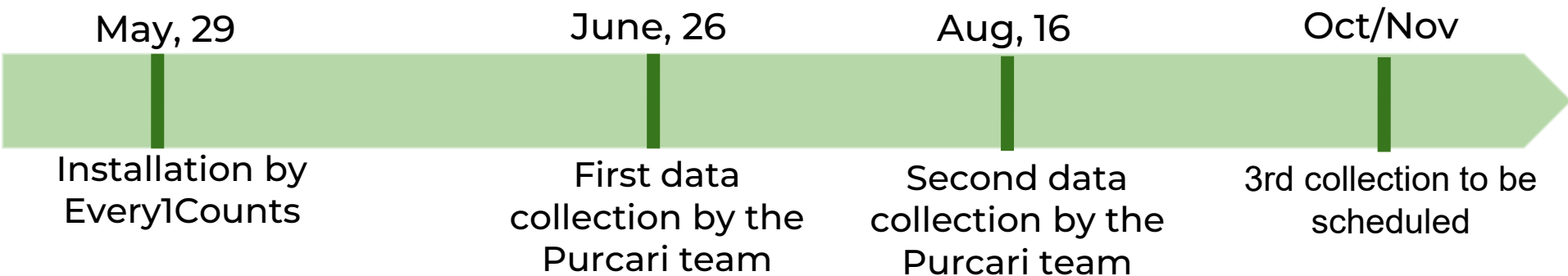


AI analysis (BirdNET): detects bird presence and identifies species



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

5 It all starts now!

A photograph of a brown rabbit standing in a vineyard. The rabbit is positioned in the lower right foreground, facing right. It has long ears and a mix of brown and grey fur. The background consists of rows of grapevines with green leaves, some showing signs of being eaten. The ground is dry and uneven, with patches of grass and soil. The lighting suggests it's daytime, with shadows cast by the vines.

**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

Lapeyruche website statistics



Number of
Media

112427



Number of
Videos/Images

4995



Number of
Sounds

96420



Number of data
Open data

11012

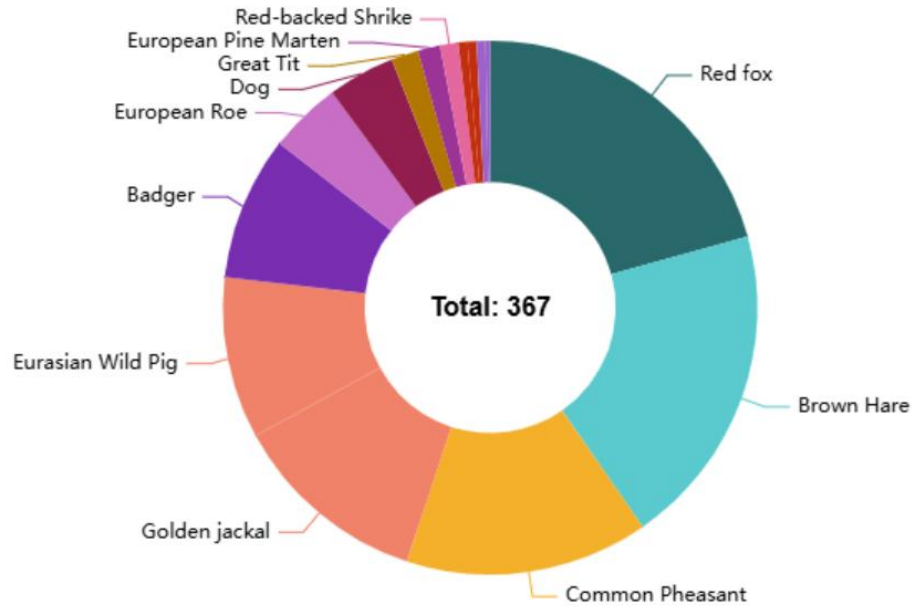
= 600 days of data
collection

350

detections

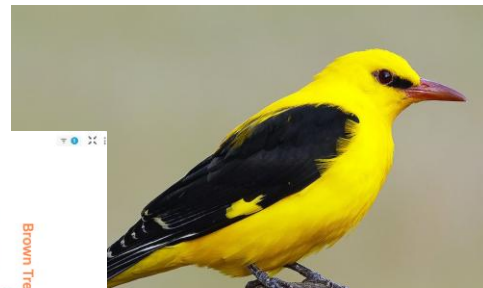
15

*species Including
13 wild species*



7940
detections

113
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:

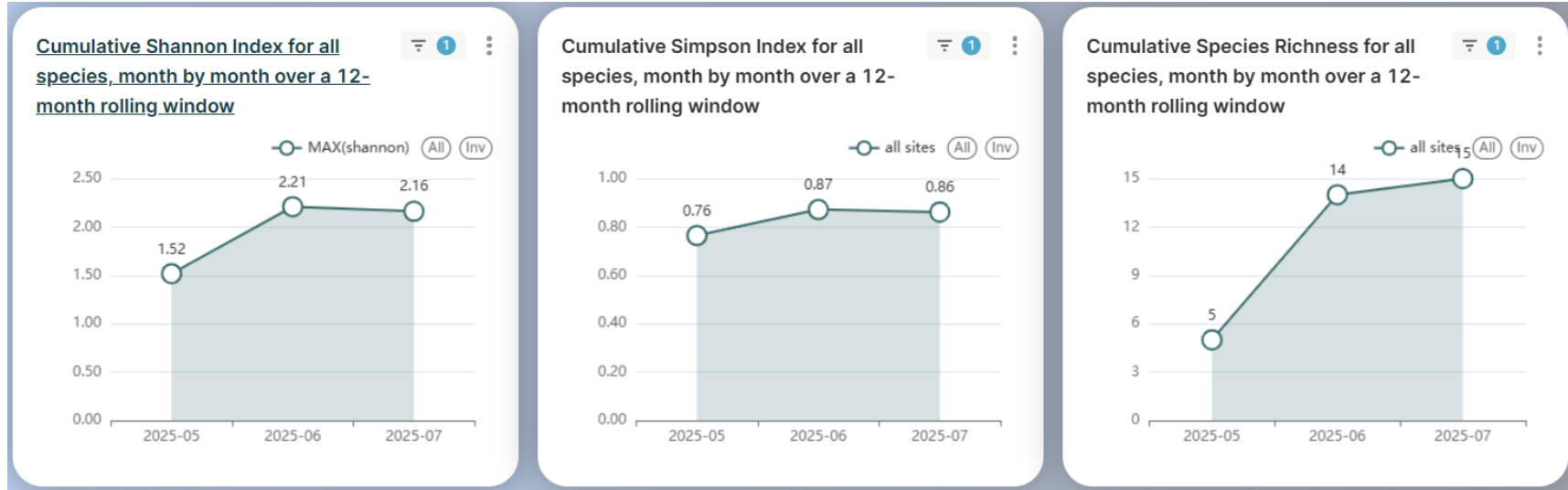
- A good indicator of the **variety of the community**.
- Often used to **monitor the evolution of a site over time** or to **compare different habitats**.

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**.

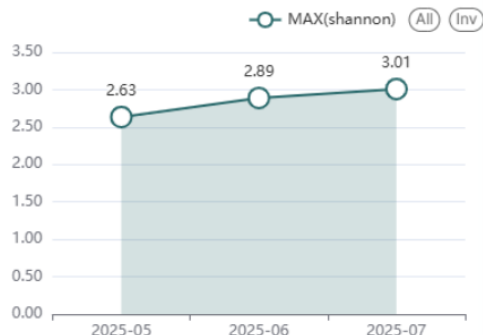
The 3 indices at Purcari, combining camera data



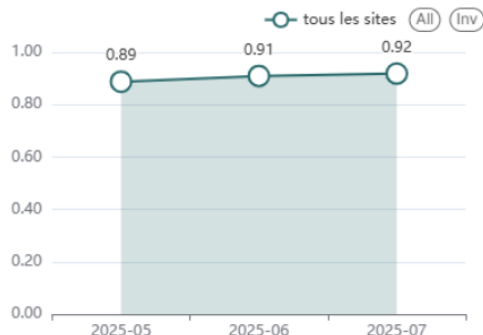
Indices not yet stable – consolidation in progress

The 3 indices at Purcari, combining sound recorder data

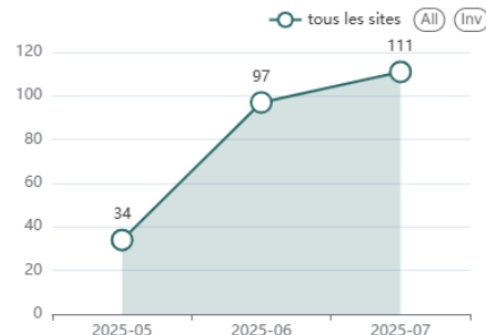
Cumulative Shannon Index for all species, month by month over a 12-month rolling window



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



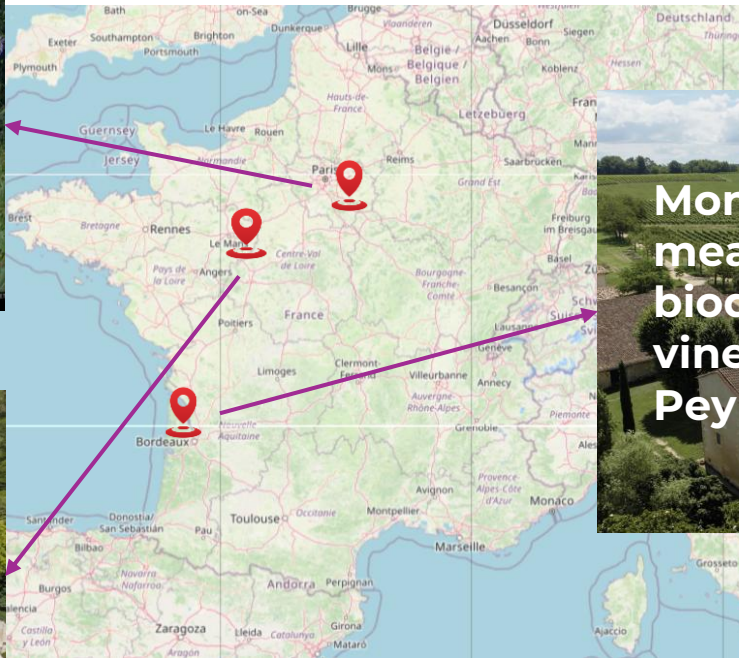
Cumulative Species Richness for all species, month by month over a 12-month rolling window



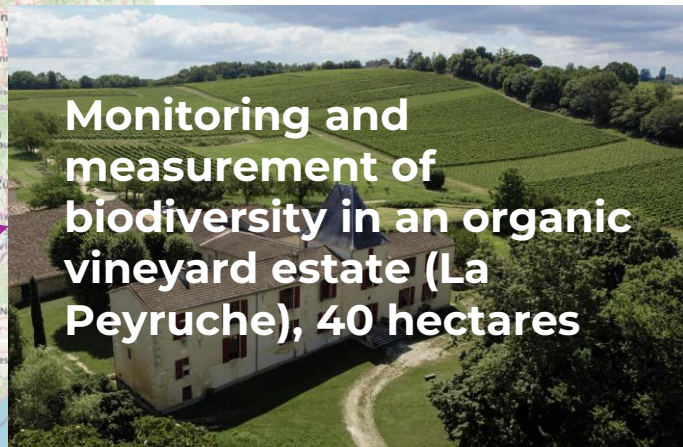
Indices appear to be stabilizing - to be confirmed with upcoming collections

3 Sites for comparison

Observatory of biodiversity in peri-urban areas



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

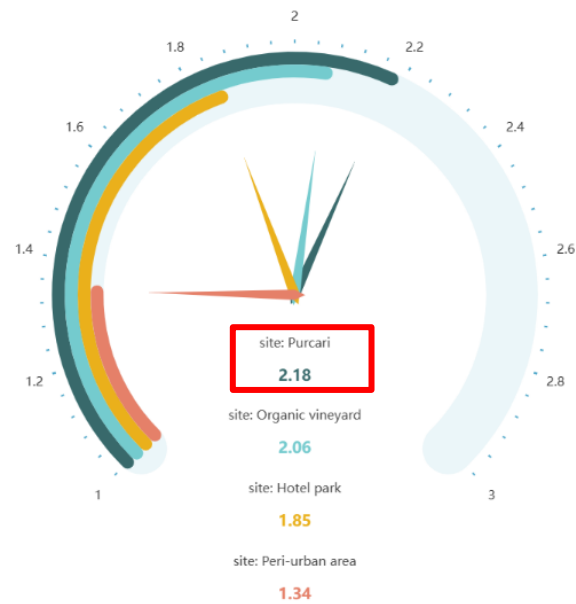


Biodiversity observatory in a park around a hotel

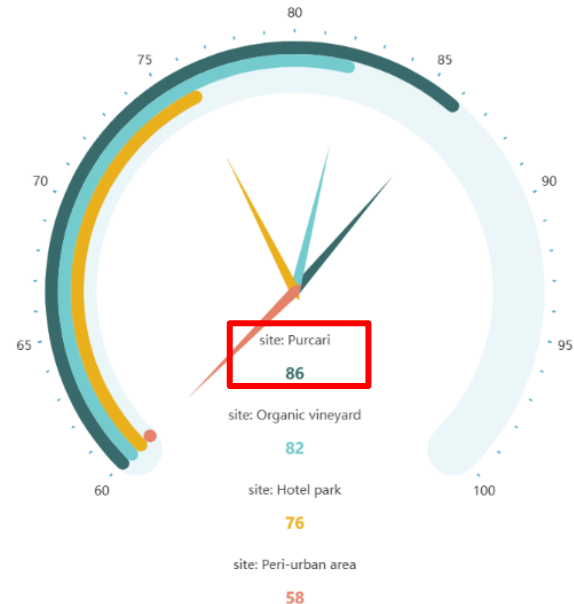


Comparison of "camera indices" with 3 other sites

Comparison of the Shannon Index with other ecosystems



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



Comparison of species richness with other ecosystems



Comparison of “sound indices” with 3 other sites



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