

NON-INVASIVE LYNX MONITORING THROUGH CITIZEN SCIENCE IN FRANCE

Poster in collaboration with GeCoLAB

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The French Society for the Study and Protection of Mammals (SFEPM) is an NGO created in 1977 that aims to conserve mammals across France through the production of scientific knowledge and the help of the civil society.

Introduction

In France, the Eurasian Lynx is listed as protected and endangered, threatened by illegal killing, vehicle collisions and habitat fragmentation. The SFEPM and two partner labs are working together to **assess the population genetics of French lynx in the Jura and Alps**, and gain a **clearer understanding of its diet** (including the proportion represented by livestock) and its role within trophic networks.

Objective

Sampling lynx' scat through a large citizen-science network to:

- knowledge on lynx genetic health in France
- social acceptance through **factual data** on diet
- inclusion of **civil society** and multiple stakeholders
- **1st test** of a large citizen-science project to **collect lynx non-invasive genetic data in France**
- Contribution to **side projects** on other threatened species (e.g., wildcat, wolf, etc.).

Methods

- 1 Volunteer training** (scat ID and sampling protocol)
- 2 Standardized data collection** (GPS location, date, scat description, environmental context) and picture of the scat to feed an **ID database**
- 3 Scat storage and transfer** at -20°C. Distribution to **focal points** then SFEPM gathers all the samples and transfers them to the labs.
- 4 DNA extraction and analyses** at the labs. [See GeCoLAB's poster.](#)
- 5 Regular feedback** to the network: latest results and refined ID criteria to increase field expertise (fig.3).

→ from 2019 to 2025,
274 volunteers + 1 detection dog trained to collect lynx' scat from southern Vosges to northern Alps.

estimated effective sampling area: 9 400 km² and estimated potential sampling area: 65 000km²

Results

624 scats collected by 115 volunteers **267 lynx scats**
success rate: 43%*

Figure 1. Proportion of volunteers per professional category

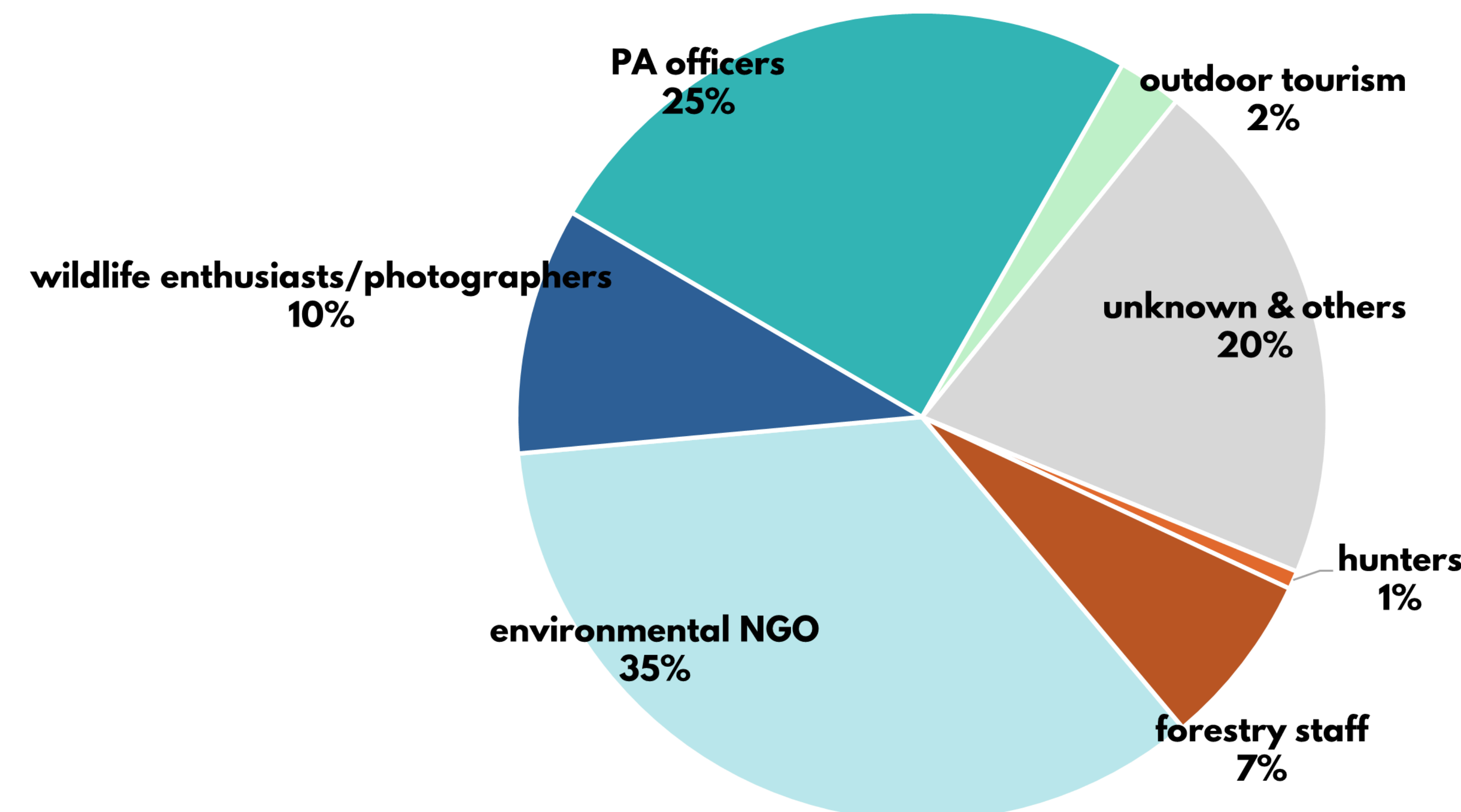


Figure 2. Percentage of lynx scats collected and total number of scats collected from 2019 to 2025

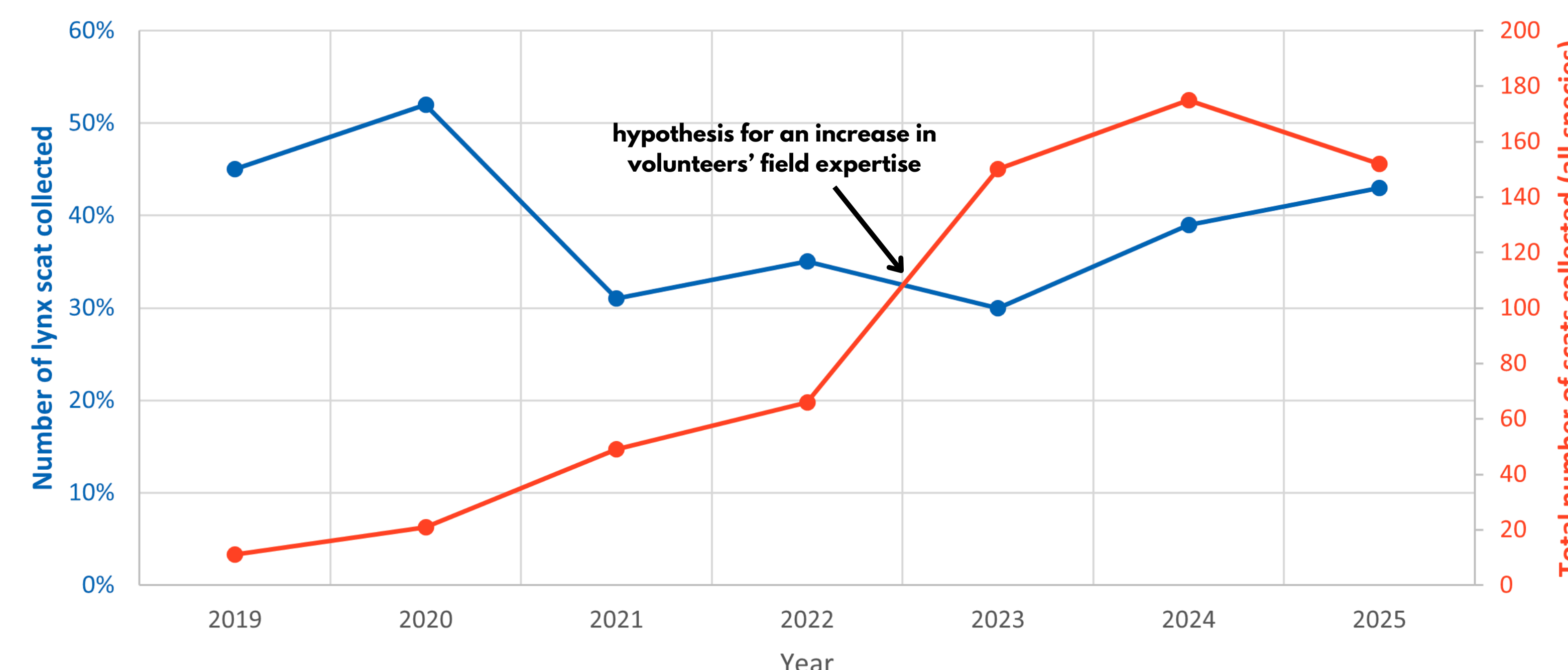
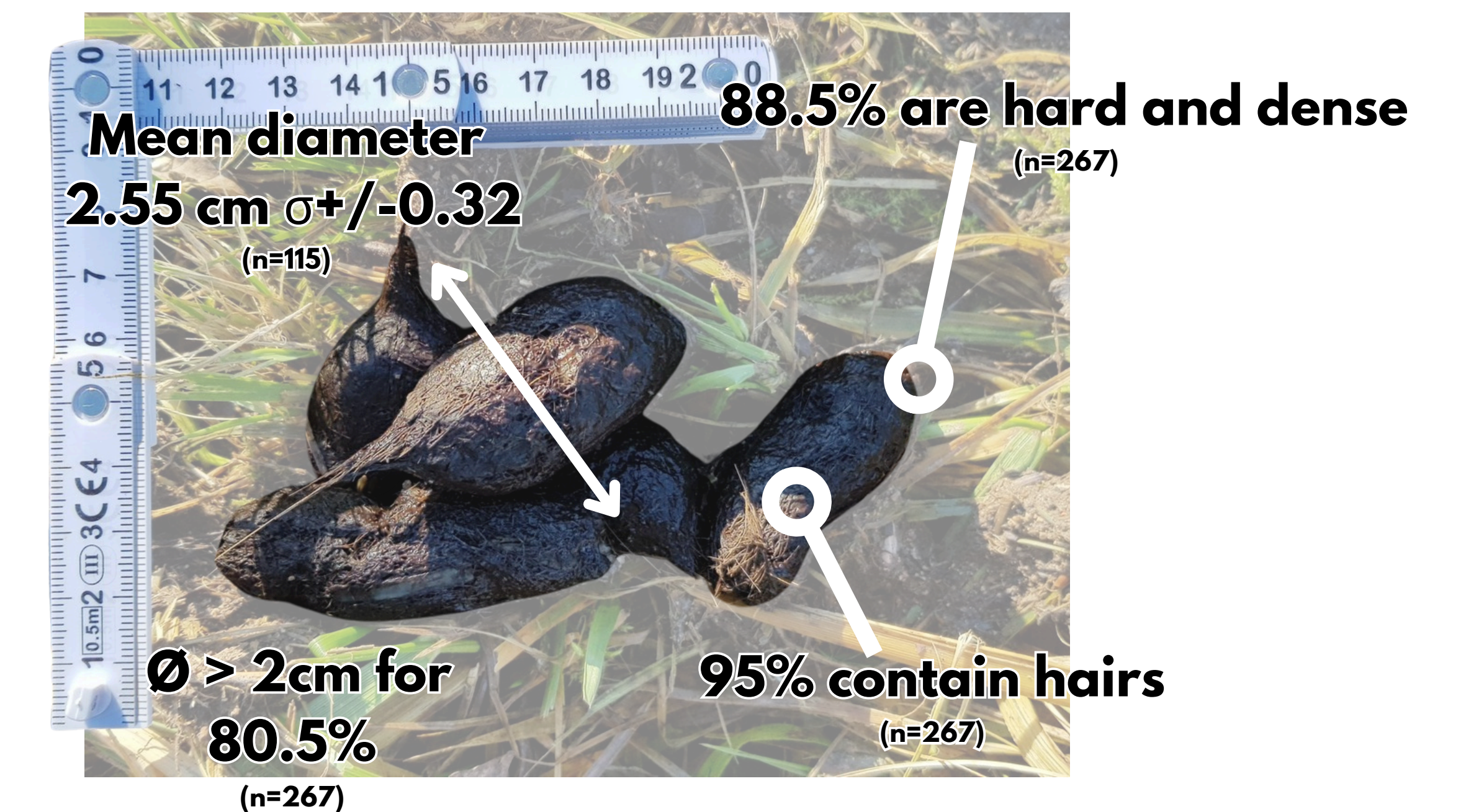


Figure 3. ID criteria of lynx scats based on feedback from genetic analyses



Outcomes

- 1) Better knowledge of lynx spatial use**
 - Data contribute to **national monitoring** of the species over a wide area
 - Better understanding of « **expansion fronts** » and **new detections**
- 2) Increased knowledge and expertise**
 - **Environmental NGO + wildlife enthusiasts** form an **important part of the network**
 - ➤ **individual and collective expertise** to ID lynx scats (Fig. 2)
 - Some « **experts collectors** » collected more scats and allowed for an **increase in global expertise**
 - Ease the **networking and relations between diff. stakeholders** (Fig. 1) -> Better **communication** and **sharing** of information
- 3) Increased awareness of various stakeholders**
 - **Better insight** into **genetic diversity** and **conservation issues** of lynx in France and western Europe, using **large sample-size**
 - ➤ **implication** of civil society in lynx conservation

Conclusion

- Network created a **strong will among volunteers to contribute to more studies on Eurasian lynx**
- **Field expertise from the Jura** (core lynx population in France) started to **spread to other regions** -> **Better monitoring of the species in those regions**
- Citizen science is a **great conservation tool**: diverse, and allows to increase capacity at a low cost
- **Hunters need to be more involved** (only 1% of our volunteer network) as well as **women** (only 27%)

*Similar rates are found in the scientific literature, with 50–60% of success for a study in which sampling was carried out along transects by a group of researchers (Morin et al., 2016)

The SFEPM would like to thank all the volunteers that joined and participated in the network. We would also like to thank all the financial partners for their support since the beginning of the project.

