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BIODIVERSITY LEADERSHIP

Validating Birdsong Monitoring 2024 Report



A COMPARATIVE ANALYSIS OF CHIRRUP.AI & ECOLOGISTS

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VALIDATING CHIRRUP.AI VS ECOLOGICAL SITE SURVEYS

In June 2024, Chirrup Nature Services partnered with Sylvan, a leading biodiversity consultancy, to assess how its bio-acoustic monitoring technology could complement traditional field surveys conducted by professional ecologists.

The Sylvan team, all Chartered members of the Institute of Ecology and Environmental Management (CIEEM), bring over 80 years of collective experience in designing and implementing ecological field surveys.

The study, conducted on UK farms, evaluated the accuracy and effectiveness of Chirrup's AI-driven bird identification in comparison with expert ecologist-led surveys.

The results demonstrate that Chirrup.ai can serve as a **scalable and cost-effective tool to support biodiversity monitoring in agricultural settings**, offering a **valuable addition to ecologists' methodologies.**

THE CHALLENGE OF NATURE DATA

01. There are **215,000+ farms in the UK** but only **6,000 Chartered Ecologists**, with only a fraction specialising in ornithological surveys.

02. Informed decision making for land managers will increasingly depend on **accurate and relevant biodiversity data**, but many find traditional ecological surveys to be costly, logistically challenging and time consuming.

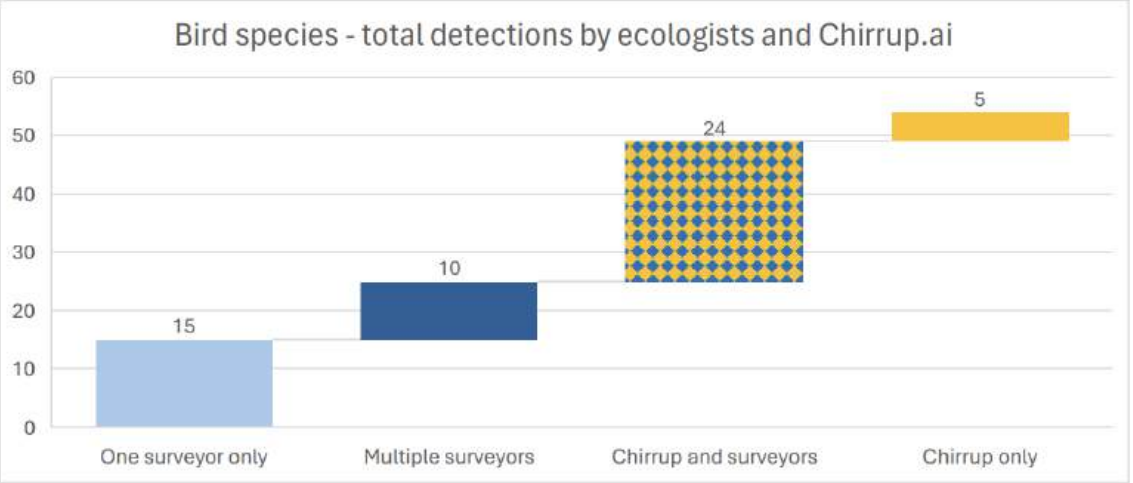
03. Innovation is essential to **bridge this data gap** and enable widespread, standardised biodiversity monitoring and reporting.

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COMPARING CHIRRUP.AI & PROFESSIONAL ECOLOGISTS

	Chirrup.ai	Professional Ecologists
Cost	£545 for 63 hours of recording	£3,775 for 15 hours surveying
Time Taken to Organise	1 Hour	18 hours
Consistency	Validated AI-based analysis	Varies by ecologist expertise
Duration of Monitoring	21 continuous days of recording	3-hour survey per ecologist
Repeatability	Fully repeatable	Varies between ecologists
Auditable Data	Digital records available	No standardised reporting
On Farm Disruption	Minimal	Requires physical presence



KEY FINDINGS FROM THE CHIRRUP.AI VALIDATION STUDY

- **Comparable Performance**: With Chirrup.ai detecting 29 bird species, and the 5 ecologists averaging 26 species, Chirrup's total species diversity number was comparable to the average of the ecologists. On days when ecologists detected fewer birds, so did Chirrup—co-variance demonstrating the AI's precision.
- **Reliable & Accurate**: Of the 29 different species detected by Chirrup.ai during the 21 days, over 80% were also verified by the ecologists, across their five separate visits
- **Reduced cost and less time-intensive compared to organising site visits.** Some farmers prefer Chirrup.ai due to reduced frequency and duration of visitors on land.
- **Standardised and Scalable** : Chirrup.ai is easier to deploy and enables simple benchmarking over time.
- Chirrup.ai is **human-validated**, with annual training cycles to improve accuracy
- **Supporting, Not Replacing:** Chirrup.ai strengthens biodiversity monitoring while expert ecologists provide additional, value-added insights, e.g. regarding rare species.
- **Chirrup.ai is auditable**, so results can be independently checked.

Chirrup.ai is a cost-effective tool for biodiversity monitoring and insight.

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