Holstonia Bigfoot Investigations
Foundations Series No. 4

Doing Research Within the Holstonia Framework: A Practical Guide to Method, Ethics, and Uncertainty Management in Anomalous Biological Research

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Version of Record: This document constitutes the authoritative version of this work. Please cite the version available at holstonia-investigations.org. Revised editions, if issued, will be explicitly identified.

Abstract

The Holstonia framework approaches anomalous biological reports as structured data generated under conditions of uncertainty, low detectability, and heterogeneous observation quality. After establishing philosophical foundations, evaluating explanatory filters, and defining exit criteria, this capstone paper outlines how research may be conducted responsibly within that framework. Drawing on wildlife monitoring, citizen science methodology, and epistemology of science, the paper presents practical guidance for study design, field documentation, data handling, analysis, and ethical restraint. The aim is not to resolve anomalous biological claims, but to ensure that inquiry proceeds in a way that is methodologically coherent, transparent, and capable of revision or termination.

1. Purpose and Scope

This paper answers a single question:

If one were to study anomalous biological reports responsibly, given everything already established, how would that work actually be done?

It is written for:

- independent researchers,
- citizen scientists,
- analysts working with report corpora,
- and collaborators seeking methodological clarity.

It is **not** a guide to proving existence, validating experiences, or pursuing extraordinary conclusions.

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2. Core Commitments of the Holstonia Framework

Any work conducted within the Holstonia framework must explicitly commit to the following principles:

1. **Method precedes meaning**
   Interpretation is secondary to documentation and analysis.
2. **Uncertainty is explicit, not minimized**
   Confidence scales with evidence quality and quantity.
3. **Reports are data, not testimony**
   The analytical unit is the report corpus, not individual belief.
4. **Filtering refines; it does not decide**
   Hoaxing, cultural transmission, misidentification, and modality limits are modeled, not weaponized.
5. **Exit criteria exist**
   Continued inquiry is contingent, not guaranteed.

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3. What Kind of Research This Is (and Is Not)

Holstonia-style research resembles work in rare-species ecology and presence-only inference rather than experimental biology.

It is:

- observational,
- probabilistic,
- longitudinal,
- and constraint-driven.

It is not:

- experimental in the laboratory sense,
- confirmatory in structure,
- or oriented toward singular decisive artifacts.

This distinction prevents category error and false expectations (MacKenzie et al., 2006).

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4. Research Questions Appropriate to the Framework

Appropriate questions include:

- Do structured residual patterns persist after conservative filtering?
- How do report features distribute across space, time, and modality?
- Does increased standardization reduce or preserve residual structure?
- How does observer effort correlate with report frequency?

Inappropriate questions include:

- What is the organism?
- How intelligent is it?
- Why does it behave this way?

These latter questions presuppose conclusions not yet justified.

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5. Study Design Under Uncertainty

5.1 Presence-Only Design

Most data are presence-only. Absence must be treated cautiously and only gains inferential weight when effort and detectability are documented (MacKenzie et al., 2006).

5.2 Longitudinal Emphasis

Single events are weak signals. Value accrues through repeated observation using consistent methods over time.

5.3 Replication of Method, Not Outcome

Success is defined by method fidelity, not by “finding something.” Null results are data.

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6. Field Documentation Standards

Field work should prioritize **documentation quality over evidentiary drama**.

Minimum documentation includes:

- date and time,
- precise location (with appropriate privacy protection),
- environmental conditions,
- duration and distance estimates,
- modality-specific metadata (audio settings, substrate type, camera parameters).

Subjective interpretation should be recorded separately from observation.

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7. Modality-Specific Handling

7.1 Audio

- Treat recordings as environmental signals, not identifiers.
- Compare against regional fauna libraries.
- Weight recurrence over novelty (Blumstein et al., 2011).

7.2 Tracks

- Prioritize trackways over isolated prints.
- Document substrate mechanics and taphonomic context.
- Avoid anatomical inference without process modeling (Lockley, 1998).

7.3 Visual Media

- Preserve original files and metadata.
- Model detection limits explicitly.
- Avoid enhancement-driven interpretation (Farid, 2009).

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8. Data Management and Transparency

Data integrity is ethical integrity.

Practices include:

- retaining raw data,
- documenting processing steps,
- recording uncertainty explicitly,
- and avoiding selective reporting.

Interpretive disagreement is expected; undocumented data loss is not.

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9. Analytical Posture

9.1 Pattern Over Anecdote

Analysis focuses on distributions, recurrence, and constraints, not compelling individual cases.

9.2 Cross-Modal Integration

Weak signals gain value through alignment, not escalation.

9.3 Conservative Weighting

When in doubt, weight evidence downward. Confidence must be earned repeatedly.

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10. Ethical Constraints

Ethics are non-negotiable regardless of outcome.

Holstonia research forbids:

- habitat disturbance,
- provocation of wildlife or people,
- trespass or coercion,
- and justification of harm in pursuit of evidence.

Ethical restraint is a methodological safeguard, not a limitation.

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11. The Role of Citizen Science

Citizen participation is essential but must be structured.

Effective contribution emphasizes:

- standardized data collection,
- training in documentation rather than interpretation,
- acceptance of null outcomes,
- and resistance to narrative escalation (Bonney et al., 2009).

Unstructured participation increases noise; structure improves inference.

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12. Interpretation Discipline

Researchers must distinguish clearly between:

- observation,
- inference,
- speculation.

Speculation may be intellectually interesting, but it must never be confused with results.

Language discipline protects both credibility and collaborators.

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13. Review, Revision, and Exit

Holstonia research is provisional by design.

Work should be:

- periodically reviewed,
- re-evaluated under tightened standards,
- and abandoned or redirected if exit criteria are met (Lakatos, 1970).

Persistence without methodological escalation is not rigor.

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14. What This Framework Does *Not* Promise

This framework does not promise:

- discovery,
- validation of beliefs,
- public acceptance,
- or resolution of long-standing debates.

It promises only that inquiry will remain **honest, bounded, and revisable**.

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15. Synthesis: Integrity as the Only Outcome That Matters

In domains where evidence is weak, stakes are high, and narratives are powerful, integrity is the primary scientific achievement.

The Holstonia framework exists to protect that integrity—by privileging method over meaning, restraint over rhetoric, and uncertainty over closure.

Whether anomalous biological reports ultimately resolve to known explanations, unknown explanations, or no explanation at all is secondary.

What matters is that the work can stop, change, or continue **without embarrassment**.

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