Holstonia Bigfoot Investigations
Foundations Series No. 3

Exit Criteria and Falsifiability: Conditions That Would Change Our Assessment

Daniel H. Kegley
holstonia-investigations.org
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

Scientific inquiry requires not only standards for evidence, but explicit criteria under which conclusions would be revised, abandoned, or strengthened. In domains characterized by low detectability and high uncertainty, failure to articulate exit criteria risks degenerative research programs that persist regardless of outcome. This paper defines conservative exit criteria for the evaluation of anomalous biological reports associated with Bigfoot. Drawing on philosophy of science, wildlife monitoring, and methodological best practices, the analysis specifies what kinds of evidence, patterns, or sustained absences would meaningfully alter current assessments. The goal is not to predict discovery, but to ensure that continued inquiry remains falsifiable, bounded, and intellectually honest.

1. Introduction: Why Exit Criteria Matter

One of the most persistent criticisms of anomalous biological research is that it lacks falsifiability. Claims are often perceived as insulated from disconfirmation: ambiguous evidence is treated as suggestive, while negative evidence is dismissed as absence of opportunity.

This paper addresses that concern directly. Any responsible framework must specify not only what would count as support, but **what would count as failure**. Without exit criteria, inquiry becomes advocacy by default.

Exit criteria do not require certainty. They require clarity.

---

2. Falsifiability Under Conditions of Low Detectability

Classical falsifiability presumes controlled experimentation and repeatable observation. In low-detectability domains, such conditions are rarely met. However, falsifiability can still be operationalized through **probabilistic and longitudinal criteria** rather than binary tests (Popper, 1959; MacKenzie et al., 2006).

Here, falsifiability concerns whether continued data accumulation meaningfully shifts confidence rather than whether a single observation resolves the question.

---

3. What Would *Strengthen* the Case

It is necessary to specify conditions under which confidence would increase, even if resolution remains out of reach.

Confidence would be meaningfully strengthened by:

- **Cross-modal convergence**: independent alignment of audio, track, and visual data under standardized documentation protocols
- **Constraint-consistent recurrence**: repeated patterns emerging within known environmental and observational limits
- **Independence of observers**: similar patterns reported without contact or shared narrative pathways
- **Persistence under improved methods**: residual patterns surviving after adoption of standardized, conservative research practices

None of these constitute proof. Together, they would justify continued inquiry at increasing resolution.

---

4. What Would *Weaken* the Case

Equally important are conditions under which confidence would decrease.

The case would be weakened by:

- **Progressive collapse of residual patterns** as data quality improves
- **Failure of recurrence** under sustained, standardized observation effort
- **Increasing alignment with cultural motifs** following media exposure
- **Improved explanation by known fauna models** without residual strain

If better methods systematically eliminate previously observed structure, continued inquiry at the same level would no longer be justified.

---

5. Absence as Information (When It Actually Counts)

Absence does not ordinarily imply non-existence in low-detectability contexts. However, **sustained, structured absence** under defined conditions can carry inferential weight.

Absence becomes informative when:

- observation effort is documented and sufficient,
- detection probability is reasonably high for the hypothesized phenomenon,
- multiple modalities fail concurrently,
- and the absence persists over time.

Under these conditions, confidence intervals narrow, and hypotheses must be revised (MacKenzie et al., 2006).

---

6. Why “One Good Piece of Evidence” Is Not an Exit Condition

Public discourse often imagines a single decisive artifact—clear footage, a perfect track, a body. Methodologically, this expectation is misleading.

Extraordinary claims are rarely resolved by isolated evidence. They are resolved by **convergence, replication, and resistance to falsification**. A single dramatic datum, absent context and replication, would increase interest but not settle the question.

This asymmetry protects against both hoaxes and wishful interpretation.

---

7. Time Horizons and Patience as Variables

Exit criteria must include temporal scale. Some questions resolve quickly; others resolve only through prolonged absence of support.

This framework acknowledges that:

- continued low-level residuals may justify slow inquiry,
- but indefinite inquiry without methodological escalation is unjustified,
- and patience must be proportional to improvement in method, not to belief.

Stagnation is itself informative.

---

8. Preventing a Degenerative Research Program

A degenerative research program adapts to protect its core assumption rather than to test it (Lakatos, 1970). Explicit exit criteria prevent this by forcing periodic reassessment.

Signs of degeneration include:

- reinterpretation of all outcomes as supportive,
- resistance to methodological tightening,
- dismissal of null results,
- and narrative escalation in the absence of new data.

The Holstonia framework rejects such moves explicitly.

9. Exit Criteria as Intellectual Safeguards

Exit criteria protect skeptics and proponents alike. They ensure that inquiry is neither prematurely dismissed nor indefinitely prolonged.

They also provide transparency to external observers, clarifying that continued work is contingent, not dogmatic.

10. Synthesis: Knowing When to Stop—or Change Course

This framework does not assume that anomalous biological reports will resolve in any particular direction. It asserts only that resolution, if it comes, must be earned through sustained pattern persistence under increasingly conservative constraints.

Equally, it affirms that **failure to meet these criteria would justify withdrawal or redirection of effort**.

Knowing when to stop is as important as knowing when to continue.

References

Lakatos, I. (1970). Falsification and the methodology of scientific research programmes. In I. Lakatos & A. Musgrave (Eds.), *Criticism and the growth of knowledge* (pp. 91–196). Cambridge University Press.

MacKenzie, D. I., Nichols, J. D., Royle, J. A., Pollock, K. H., Bailey, L. L., & Hines, J. E. (2006). *Occupancy estimation and modeling*. Academic Press.

Popper, K. R. (1959). *The logic of scientific discovery*. Hutchinson.