

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

Nathan R. Lovejoy

Professor of Biological Sciences, University of Toronto

[Google Scholar profile](#)

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Criterion 5 (original contributions of major significance). It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

4	4	1	39
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement – methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper’s authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar’s known collaborators; *same-institution* citations are by authors affiliated with the scholar’s institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar’s own circle.

Known limitations – counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight – re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar’s own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

100.0% independent of 4 classified citing papers

Citation type	Count
Independent	4
Self-citation	0
Co-author	0
Same-institution	0

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total – the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing – how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner’s choice of comparison field.

Contribution 1

Claim – Contribution 1

The researcher established a foundational framework for interpreting Neotropical fish biogeography through evidence of Miocene marine incursions and freshwater transitions.

CLAIM: The researcher’s seminal 2006 paper in the Journal of South American Earth Sciences provides critical evidence regarding Miocene marine incursions and the resulting marine-to-freshwater transitions in Neotropical fishes. This work serves as the core contribution, standing alone without direct follow-up publications by the same author in this specific line of inquiry.

ORIGINALITY: The titles suggest this work addresses a significant gap in understanding the paleoenvironmental drivers of Neotropical fish evolution. By linking geological events to biological transitions, the researcher appears to have introduced a novel interdisciplinary approach that connects earth sciences with ichthyology, offering a new perspective on how ancient marine incursions shaped modern freshwater biodiversity.

SIGNIFICANCE: With 284 citations, this paper is highly influential in its field. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the work has been widely adopted and validated by the broader scientific community rather than just the researcher’s immediate circle. This high level of independent uptake underscores the paper’s role as a standard reference in studies of Neotropical biogeography and paleontology.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[Miocene marine incursions and marine/freshwater transitions: Evidence from Neotropical fishes](#)

2006 · Journal of South American Earth Sciences · 284 citations (GS)

Field-normalised: 194 Semantic Scholar citations place it in the top 5% of Environmental Science papers from 2006 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Amazonia through time: Andean uplift, climate change, landscape evolution, and biodiversity (2010)	Ecopetrol-ICP, ETH Zurich, Gothenburg Global Biodiversity Centre	Brazil, Colombia, Netherlands	—
2	Speciation timing and neotropical biodiversity: the Tertiary–Quaternary debate in the light of molecular phylogenetic evidence (2008)	Autonomous University of Barcelona	Spain	—
3	Tracing the impact of the Andean uplift on Neotropical plant evolution (2009)	Real Jardín Botánico, Real Jardín Botánico, Consejo Superior de Investigaciones Científicas, Stockholm University	Spain, Sweden	—
4	A 60-million-year Cenozoic history of western Amazonian ecosystems in Contamana, eastern Peru (2016)	Case Western Reserve University, Columbia University, Field Museum of Natural History	Argentina, France, Germany	Background

Independent citing papers only; self- and co-author citations excluded. The S2 column carries Semantic Scholar’s read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the “built on / relied upon” pattern the AAO credits), *Influential* (S2’s isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Gothenburg	Sweden	SCImago #573 · THE 201–250 · QS 202	2
Naturalis Biodiversity Center	Netherlands	SCImago #5330	2
Geological Survey of Norway	Norway	—	1
Paleosedes E.U.	—	—	1
Museo Paleontológico Egidio Feruglio	Argentina	—	1
Field Museum of Natural History	United States	—	1
Natural History Museum of Los Angeles County	United States	SCImago #7809	1
ETH Zurich	Switzerland	THE 11 · QS 7	1
University of Oslo	Norway	SCImago #425 · THE =113 · QS =119	1
Université de Toulouse	France	SCImago #1059	1
Columbia University	United States	SCImago #65 · THE 20 · QS =38	1
Case Western Reserve University	United States	SCImago #627 · THE =145 · QS =294	1
University of Amsterdam	Netherlands	SCImago #75 · THE =62 · QS 53	1
Université de Montpellier	France	QS =430	1
Sorbonne Université	France	SCImago #138	1

Geographic distribution of citing authors

Country	Citing papers
Spain	3
Sweden	2
Colombia	1
France	1
Germany	1
Netherlands	1
Norway	1
Panama	1
Peru	1
Switzerland	1
United Kingdom	1
Argentina	1

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- Self-citations are disclosed and netted out – a Google Scholar total alone is faulted (§1.1).
- Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- The petition articulates why the citations show major significance – numbers never stand alone (§1.5).
- For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- Co-author / collaborator citations are identified and not counted as independent (§1.7).
- Recognition is shown beyond the scholar's own institution and circle (§1.8).
- Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- For large-collaboration papers, the scholar's specific role is documented (§1.13).
- Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** – persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Miocene marine incursions and marine/fresh-water transitions: Evidence from Neotropical fishes	4	8 CFR 204.5(h)(3)(v) – Criterion 5