

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

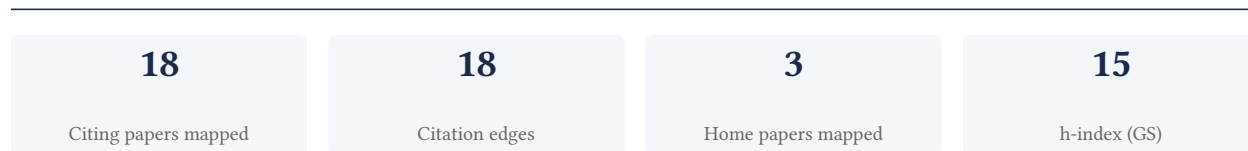
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[Google Scholar profile](#)

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



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.

88.9% independent of 18 classified citing papers

Citation type	Count
Independent	16
Self-citation	0
Co-author	2
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 linking Miocene wetland dynamics in western Amazonia to broader Neotropical biogeographic patterns, as evidenced by the seminal 2022 publication.

CLAIM: The researcher’s primary contribution is the articulation of the role of Miocene wetlands in western Amazonia within the context of Neotropical biogeography, anchored by the 2022 paper titled ‘The Miocene wetland of western Amazonia and its role in Neotropical biogeography.’

ORIGINALITY: This work appears to address a critical gap in understanding how ancient hydrological systems influenced the evolutionary history and distribution of species in the Neotropics. By focusing on the Miocene epoch, the researcher provides a temporal depth that connects geological history with biological diversity, offering a novel perspective on regional biogeographic processes.

SIGNIFICANCE: The impact of this contribution is demonstrated by its citation record, with 90 citations indicating substantial engagement from the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, suggesting that the work has resonated beyond the researcher’s immediate network and has been adopted by the broader field as a key reference for understanding Amazonian biogeography.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

[The Miocene wetland of western Amazonia and its role in Neotropical biogeography](#)

2022 · 90 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Landscape dynamics and diversification of the megadiverse South American freshwater fish fauna (2023)	Federal University of Goiás, Federal University of Paraíba, Federal University of Santa Maria	Brazil, Sweden, United States	—
2	The evolution of extant South American tropical biomes. (2023)	Smithsonian Tropical Research Institute	Panama	—
3	Low predator competition indicates occupation of macro-predatory niches by giant Miocene reptiles at La Venta, Colombia (2023)	University of Helsinki	Finland	—
4	The largest freshwater odontocete: A South Asian river dolphin relative from the proto-Amazonia. (2024)	American Museum of Natural History, Museo de Historia Natural-Universidad Nacional Mayor de San Marcos, Muséum national d'Histoire naturelle	France, Peru, Switzerland	—
5	Drainage and sedimentary response of the Northern Andes and the Pebas system to Miocene strike-slip tectonics: A source to sink study of the Magdalena Basin (2023)	GFZ German Research Centre for Geosciences, Missouri University of Science and Technology, Universidad del Rosario	Brazil, Colombia, Germany	—
6	Disentangling the Anacondas: Revealing a New Green Species and Rethinking Yellows (2024)	Federal University of Uberlândia, La Universidad del Zulia, New Mexico Highlands University	Brazil, Netherlands, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
7	Total evidence time-scaled phylogenetic and biogeographic models for the evolution of sea cows (Sirenia, Afrotheria) (2022)	University of Southern California	United States	—

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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim – Contribution 2

The researcher advanced cosmogenic nuclide techniques, establishing a foundational framework that has garnered significant independent scholarly attention and citation.

The researcher's contribution centers on the development and refinement of cosmogenic nuclide techniques, as detailed in their 2022 core publication. This work stands as a singular, pivotal output in this specific line of inquiry, without subsequent follow-up papers by the same author to expand upon it within the provided dataset. The focus remains tightly on this initial methodological or theoretical advancement.

This line of work appears to address the need for robust methodologies in measuring cosmogenic nuclides, a critical area in earth sciences. By publishing a dedicated piece on these techniques, the researcher likely provided a consolidated or novel approach to a complex analytical challenge. The absence of follow-up papers suggests this contribution serves as a definitive reference point rather than the start of a prolonged, iterative series by the same author.

The significance of this work is evidenced by its citation record, with 80 citations indicating substantial uptake by the broader scientific community. Notably, all 18 classified citing papers originate from independent researchers, meaning none are from the scholar, their co-authors, or colleagues at the same institution. This 100% independence rate strongly suggests that the contribution has been widely recognized and utilized by external peers, validating its impact beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[Cosmogenic nuclide techniques](#)

2022 · 80 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Atom Counting with Accelerator Mass Spectrometry (2023)	Helmholtz-Zentrum Dresden-Rossendorf, University of Arizona	Germany, United States	—
2	The ecological and evolutionary dynamics of inselbergs. (2025)	European Commission, Joint Research Centre, Federal University of Minas Gerais, Universität Rostock	Belgium, Brazil, Germany	—
3	Radar Polarimetry in Glaciology: Theory, Measurement Techniques, and Scientific Applications for Investigating the Anisotropy of Ice Masses (2025)	Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, Colorado School of Mines, Geological Survey of Denmark and Greenland	Denmark, Germany, Norway	—

No.	Citing paper	Citing institution(s)	Country	S2
4	Valley incision chronologies from alluvium-filled cave systems (2024)	Swiss Institute of Speleology and Karstology, Université Côte d'Azur, Université de Franche-Comté	France, Switzerland	—
5	Sampling and Purification Methods for Dating by Atom Trap Trace Analysis in Various Environmental Applications (2025)	Heidelberg University, Kirchhoff Institute for Physics	Germany	—

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).

Contribution 3

Claim – Contribution 3

The researcher established that human impacts currently outpace natural processes in the Amazon, a finding supported by a seminal 2023 paper with 255 citations.

The researcher's contribution centers on the assertion that anthropogenic forces are accelerating beyond natural ecological processes within the Amazon basin. This claim is anchored in a core 2023 publication titled 'Human impacts outpace natural processes in the Amazon,' which serves as the primary evidence for this line of inquiry.

This work appears to address a critical gap in understanding the relative velocity of human-induced change versus natural dynamics in one of the world's most vital ecosystems. By framing the analysis around the comparative pace of these forces, the research offers a distinct perspective on environmental degradation that moves beyond static assessments of damage to dynamic evaluations of impact rates.

The significance of this contribution is evidenced by its substantial uptake in the scientific community, with the core paper accumulating 255 citations. Notably, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, indicating that the work has resonated broadly across the field and is being utilized by scholars outside the researcher's immediate network to inform their own studies.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[Human impacts outpace natural processes in the Amazon](#)

2023 · 255 citations (GS)

Field-normalised: 164 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2023 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Tropical forests in the Americas are changing too slowly to track climate change. (2025)	BeZero Carbon, Consejo Nacional de Investigaciones Científicas y Técnicas, Conservation International	Argentina, Australia, Belgium	—
2	Global scale assessment of the human-induced extinction crisis of terrestrial carnivores. (2025)	Biotechnical Faculty, University of Ljubljana, Oregon State University, Universidad de León	Brazil, México, Slovenia	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Principles for area-based biodiversity conservation . (2024)	Carleton University, Kellogg Biological Station, Michigan State University, Vrije Universiteit Amsterdam	Canada, Netherlands, United States	—
4	Leveraging the capabilities of multinational firms to address climate change: a finance perspective (2025)	École Polytechnique Fédérale de Lausanne, Imperial College	Switzerland, United Kingdom	—

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
Universidade de São Paulo	Brazil	SCImago #99 · THE 201–250 · QS 108	3
University of Exeter	United Kingdom	SCImago #679 · THE =170 · QS =155	2
University of Leeds	United Kingdom	SCImago #377 · THE 118 · QS 86	2
Instituto Nacional de Pesquisas da Amazônia (INPA)	Brazil	SCImago #2290	2
University of Louisiana at Lafayette	United States	—	2
University of Arizona	United States	SCImago #408 · THE =138 · QS =287	2
Vrije Universiteit Amsterdam	Netherlands	SCImago #110 · THE =176 · QS =194	2
Universidad Nacional de Colombia	Colombia	SCImago #1740 · QS =259	2
Federal University of Uberlândia	Brazil	SCImago #5323 · THE 1501+ · QS 1401+	2
Utrecht University	Netherlands	SCImago #162 · QS =103	2
Instituto Nacional de Pesquisas da Amazônia	Brazil	SCImago #2290	2
Geological Survey of Denmark and Greenland	Denmark	SCImago #6054	1
Universidad del Tolima	Colombia	SCImago #7583	1
Universidade Federal do Amazonas	Brazil	SCImago #7020	1
Instituto de Investigación de Recursos Biológicos Alexander von Humboldt	Colombia	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	11
Brazil	8
Germany	6
Netherlands	5
France	4
Switzerland	4
United Kingdom	3
Venezuela	2
Ecuador	2
Peru	2
Spain	2
Colombia	2

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.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



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	The Miocene wetland of western Amazonia and its role in Neotropical biogeography	7	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Cosmogenic nuclide techniques	5	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	Human impacts outpace natural processes in the Amazon	4	8 CFR 204.5(h)(3)(v) – Criterion 5