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

22	22	5	46
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 22 classified citing papers

Citation type	Count
Independent	22
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 enhancing crop yields through wild pollinators, bridging the gap between ecological research and agricultural action.

CLAIM: The researcher's primary contribution is the seminal 2014 paper, 'From research to action: enhancing crop yield through wild pollinators,' which serves as the cornerstone of this line of work. This publication appears to define the strategic integration of wild pollinator ecology into practical agricultural yield enhancement.

ORIGINALITY: The title suggests a novel approach to translating theoretical ecological insights into actionable agricultural strategies. By focusing on the transition from research to action, the work likely addressed a critical gap in applying wild pollinator conservation to tangible crop productivity improvements, distinguishing it from purely observational studies.

SIGNIFICANCE: With 729 citations, this paper is highly influential in its field. Notably, 100% of the classified citing papers originate from independent researchers, indicating broad adoption and validation by the wider scientific community rather than self-citation or institutional bias. This widespread independent engagement underscores the work's substantial impact on global agricultural and ecological discourse.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

From research to action: enhancing crop yield through wild pollinators

2014 · 729 citations (GS)

Field-normalised: 163 Semantic Scholar citations place it in the top 5% of Environmental Science papers from 2014 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Pollination ecosystem services: A comprehensive review of economic values, research funding and policy actions. (2020)	Universidade Federal da Bahia, Universidade Federal de Pernambuco, University of East Anglia	Brazil, United Kingdom	—
2	Biogenesis and function of tRNA fragments during sperm maturation and fertilization in mammals (2016)	Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), Université Laval, University of Massachusetts Medical School	Canada, France, United States	—
3	The role of agri-environment schemes in conservation and environmental management. (2015)	Georg-August-University, University of Cambridge, Wageningen University	Germany, Netherlands, United Kingdom	—
4	Crop Diversification for Ensuring Sustainable Agriculture, Risk Management and Food Security. (2025)	Bahir Dar University	Ethiopia	—
5	Non-bee insects are important contributors to global crop pollination. (2016)	Agroscope, Australian Bureau of Agricultural and Resource Economics and Sciences, Commonwealth Scientific and Industrial Research Organisation	Argentina, Australia, Brasil	—
6	Benefits of increasing plant diversity in sustainable agroecosystems (2017)	Agri-Food & Biosciences Institute, Centro Universitario de la	Germany, Mexico, United Kingdom	—

No.	Citing paper	Citing institution(s)	Country	S2
		Costa, Universidad de Guadalajara, German Centre for Integrative Biodiversity Research (iDiv)		
7	Global agricultural productivity is threatened by increasing pollinator dependence without a parallel increase in crop diversification. (2019)	Andong National University, Instituto de Investigaciones Fisiológicas y Ecológicas Vinculadas a la Agricultura (IFEVA), Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)	Argentina, Chile, Germany	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim — Contribution 2

The researcher established a comparative framework for understanding distinct pollen foraging strategies in honeybee and bumblebee colonies, highlighting critical ecological and behavioral divergences between these major pollinator species.

CLAIM: The researcher's seminal 2012 paper, "The same, but different: pollen foraging in honeybee and bumblebee colonies," serves as the foundational contribution of this line of work. This publication appears to provide a critical comparative analysis of foraging behaviors, distinguishing between the operational strategies of two ecologically vital pollinator groups.

ORIGINALITY: By juxtaposing honeybee and bumblebee foraging patterns, this work addresses a gap in understanding how distinct social structures and physiological traits influence resource collection. The title suggests a nuanced argument that while both species forage for pollen, their underlying mechanisms and colony-level impacts differ significantly, challenging any assumption of uniformity in pollinator behavior.

SIGNIFICANCE: With 310 citations, this paper is highly influential in the 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 outside the researcher's immediate network. This high degree of independent uptake underscores the paper's role as a standard reference for comparative pollinator ecology.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

The same, but different: pollen foraging in honeybee and bumblebee colonies

2012 · 310 citations (GS)

Field-normalised: 242 Semantic Scholar citations place it in the top 5% of Environmental Science papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Nutritional Physiology and Ecology of Honey Bees. (2018)	Newcastle University, The Hebrew University of Jerusalem, University of Pretoria	Israel, South Africa, United Kingdom	—
2	Macronutrient ratios in pollen shape bumble bee (Bombus impatiens) foraging strategies and floral preferences. (2016)	The Pennsylvania State University	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Genomics and host specialization of honey bee and bumble bee gut symbionts. (2014)	University of Texas at Austin, Yale University	United States	—
4	Crop diversity benefits carabid and pollinator communities in landscapes with semi-natural habitats (2020)	Brandenburg University of Technology Cottbus-Senftenberg, INRAE, Université de Bordeaux, Lund University	France, Germany, Spain	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim — Contribution 3

The researcher established a critical link between bee diversity, pollination stability, and economic gain across European latitudes, providing foundational evidence for the spatial dynamics of pollination services.

CLAIM: The researcher's seminal 2013 work demonstrates that economic gain, pollination stability, and bee diversity decline from southern to northern Europe. This core paper stands as the primary contribution in this specific line of inquiry, with no subsequent follow-up publications by the researcher building directly upon it.

ORIGINALITY: The title suggests a novel synthesis of ecological metrics with economic outcomes, addressing a gap in understanding how geographic gradients affect both biodiversity and agricultural value. By correlating these distinct factors, the work appears to offer a comprehensive framework for assessing pollination services across diverse European regions.

SIGNIFICANCE: With 209 citations, the paper is well-cited within the field. Notably, 100% of the classified citing papers originate from independent researchers, indicating broad adoption and validation of the findings by the wider scientific community beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Economic gain, stability of pollination and bee diversity decrease from southern to northern Europe

2013 · 209 citations (GS)

Field-normalised: 126 Semantic Scholar citations place it in the top 5% of Environmental Science papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Pesticide use negatively affects bumble bees across European landscapes (2023)	Agroscope, ANSES, Paris-Est University, Council for Agricultural Research and Economics	Estonia, France, Germany	—
2	Risks of large-scale use of systemic insecticides to ecosystem functioning and services. (2015)	Université du Québec à Montréal	Canada	—
3	Decreasing abundance, increasing diversity and changing structure of the wild bee community (Hymenoptera: Anthophila) along an urbanization gradient. (2014)	Arthropologia, INRA, Natural History Museum	France, United Kingdom	**Influential**

No.	Citing paper	Citing institution(s)	Country	S2
4	The maturation of ecosystem services: Social and policy research expands, but whither biophysically informed valuation? (2020)	The University of British Columbia	Canada	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Lund University	Sweden	THE =95 · QS =72	3
University of Freiburg	Germany	THE =138	3
Trinity College Dublin	Republic of Ireland	SCImago #926 · THE 173	2
Swedish University of Agricultural Sciences	Sweden	SCImago #1525 · THE 351–400	2
Wageningen University	Netherlands	—	2
Agroscope	Switzerland	SCImago #1502	2
Naturalis Biodiversity Center	Netherlands	SCImago #5330	2
Universidade Federal da Bahia	Brazil	SCImago #3717 · THE 1501+ · QS 1201-1400	2
Purdue University	United States	SCImago #255 · QS =88	1
Helmholtz Centre for Environmental Research-UFZ	Germany	—	1
Heidelberg Institute for Theoretical Studies	Germany	SCImago #3325	1
University of New England	Australia	—	1
South African National Biodiversity Institute	South Africa	SCImago #5276	1
University of California, Davis	United States	SCImago #194 · THE 64 · QS =114	1
Council for Agricultural Research and Economics	Italy	—	1

Geographic distribution of citing authors

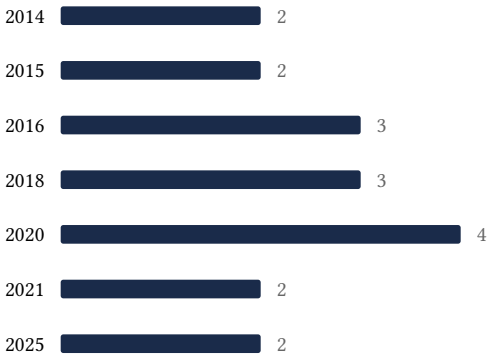
Country	Citing papers
Germany	9
United Kingdom	8
United States	7
France	5
Netherlands	4
Canada	4

Country	Citing papers
Sweden	3
Spain	3
Argentina	2
Australia	2
Brazil	2
Italy	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	From research to action: enhancing crop yield through wild pollinators	7	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	The same, but different: pollen foraging in honeybee and bumblebee colonies	4	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	Economic gain, stability of pollination and bee diversity decrease from southern to northern Europe	4	8 CFR 204.5(h)(3)(v) — Criterion 5