Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

Lars Bejder

Professor, University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Google Scholar profile

Generated 2026-06-07 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. 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

1,749	1,862	6	67
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.

92.0% independent of 1,554 classified citing papers

Citation type	Count
Independent	1,429
Self-citation	47
Co-author	78
Same-institution	0

195 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 longitudinal framework for interpreting short-term wildlife behavioral responses to disturbance, subsequently clarifying the critical misuse of habituation and sensitization concepts in impact assessment.

The researcher's contribution centers on a seminal 2006 paper in Animal Behaviour that interprets short-term behavioral responses to disturbance within a longitudinal perspective. This work serves as the foundation for a subsequent 2009 publication in Marine Ecology Progress Series, which addresses the use and misuse of habituation, sensitization, and tolerance in describing wildlife responses to anthropogenic stimuli.

This line of work appears to address a critical gap in how transient behavioral changes are contextualized over time. By moving from a general longitudinal interpretation to a specific critique of terminology in impact assessments, the researcher likely sought to correct methodological misconceptions regarding how wildlife adapt to or fail to adapt to human-induced disturbances.

The significance of this contribution is evidenced by substantial citation counts, with the core paper cited 503 times and the follow-up paper cited 632 times. Furthermore, 92.0% of the 1,554 classified citations originate from independent researchers, indicating that this framework has been widely adopted and relied upon by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 611 · **34 flagged influential by Semantic Scholar**

CORE PAPER

Interpreting short-term behavioural responses to disturbance within a longitudinal perspective

2006 · Animal behaviour 72 (5), 1149-1158, 2006 · 503 citations (GS)

Field-normalised: 331 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	The modelling and assessment of whale-watching impacts (2015)	College of Charleston, George Mason University, Macquarie University	Australia, United Kingdom, United States	**Influential**
2	Responses of cetaceans to anthropogenic noise	Duke University, Florida State University, University of Hawaii System	United States	Background
3	Effects of recreation on animals revealed as widespread through a global systematic review	Colorado State University, University of California-Berkeley	United States	Background
4	The impacts of anthropogenic ocean noise on cetaceans and implications for management	Dalhousie University	Canada	**Result**
5	The effects of ship noise on marine mammals—a review	Harry Butler Institute, Nelson Mandela University, University of Plymouth	Australia, South Africa, United Kingdom	Background
6	A framework for understanding noise impacts on wildlife: an urgent conservation priority	Boise State University, National Evolutionary Synthesis Center	United States	Background
7	Anthropogenic noise increases fish mortality by predation	ARC Centre of Excellence for Coral Reef Studies, Australian Institute of Marine Science, University of Bristol	Australia, Canada, United Kingdom	Background

No.	Citing paper	Citing institution(s)	Country	S2
8	A new context-based approach to assess marine mammal behavioral responses to anthropogenic sounds	Marine Acoustics (United States)	United States	Background
9	Sustainability in whale-watching: A literature review and future research directions based on regenerative tourism	Universidad de Las Palmas de Gran Canaria	Spain	Background
10	Ecology and conservation of common bottlenose dolphins Tursiops truncatus in the Mediterranean Sea (2009)	Istituto Superiore per la Protezione e la Ricerca Ambientale, Tethys Research Institute	Italy	—
11	Anthropogenic noise as a stressor in animals: a multidisciplinary perspective (2007)	—	—	—
12	Effects of tourist boats on the behaviour of Indo-Pacific bottlenose dolphins off the south coast of Zanzibar (2010)	Stockholm University, University of Aberdeen	Sweden, United Kingdom	—
13	Tourism affects the behavioural budget of the common dolphin Delphinus sp. in the Hauraki Gulf, New Zealand (2008)	Dalhousie University, Massey University, University of Auckland	Canada, New Zealand	—
14	The severity of behavioral changes observed during experimental exposures of killer (Orcinus orca), long-finned pilot (Globicephala melas), and sperm … (2012)	University of St Andrews	United Kingdom	—
15	Hematological differences between stingrays at tourist and non-visited sites suggest physiological costs of wildlife tourism (2009)	Florida International University, Simon Fraser University	Canada, United States	—
16	Behavioral responses of humpback whales (Megaptera novaeangliae) to whale-watching vessels on the southeastern coast of Australia (2010)	Commonwealth Scientific and Industrial Research Organisation, South Australian Museum, UNSW Sydney	Australia	—
17	A scientometrics review of fifty years of whale-watching tourism research (2025)	Universidad de Las Palmas de Gran Canaria	Spain	—
18	Tour boats affect the activity patterns of bottlenose dolphins (Tursiops truncatus) in Bocas del Toro, Panama (2020)	Aarhus School of Architecture, Antioch University New England, Craig Newmark Graduate School of Journalism at the City University of New York	Costa Rica, Denmark, United States	—
19	Effects of non-consumptive wildlife-oriented tourism on marine species and prospects for their sustainable management (2015)	Bond University, University of Kent	Australia, United Kingdom	—
20	Humpback whale movements and behavior in response to whale-watching vessels in Juneau, AK (2019)	Accademia del Leviatano, Mysticetus LLC, Texas A&M University at Galveston	Italy, United States	—
21	Automated identification system for ships data as a proxy for marine vessel related stressors (2023)	University of Victoria	Canada	—
22	Effects of vessels on common dolphin activity patterns in a critical area for the species. Conservation implications (2025)	Universidad de Extremadura, Universidad de Sevilla	Spain	—

No.	Citing paper	Citing institution(s)	Country	S2
23	Dolphin Watching and Compliance to Guidelines Affect Spinner Dolphins' (Stenella longirostris) Behaviour in Reunion Island (2021)	École Pratique des Hautes Études, Écologie Marine Tropicale des Océans Pacifique et Indien, Laboratoire de Biotechnologie et Chimie Marines	France, Réunion	—
24	Dolphin-watching tourism and indo-Pacific humpback dolphins (Sousa chinensis) in Sanniang Bay, China: impacts and solutions (2020)	Beibu Gulf University	China, PR China	—
25	Population genetic structure of the Burrunan dolphin (Tursiops australis) in coastal waters of south-eastern Australia: conservation implications (2015)	Australian Marine Mammal Conservation Foundation	Australia	—
26	Scuba diving tourism with critically endangered grey nurse sharks (Carcharias taurus) off eastern Australia: Tourist demographics, shark behaviour and diver ... (2014)	New South Wales Department of Primary Industries, Victoria University	Australia	—
27	Behavioural responses of spinner dolphins to human interactions (2018)	South Atlantic Environmental Research Institute, Tethys Research Institute, University of Hong Kong	Falkland Islands, Hong Kong, Italy	—
28	Behavioural effects of whale-watching activities on an Endangered population of humpback whales wintering in New Caledonia (2013)	University of Auckland, UNSW Sydney	Australia, New Zealand	—
29	Influence of Vessel Traffic on Movements of Indo-Pacific Humpback Dolphins (Sousa chinensis) Off Lantau Island, Hong Kong. (2012)	—	—	—
30	Dolphin sociality, distribution and calving as important behavioural patterns informing management (2016)	Murdoch University, University of the Sunshine Coast	Australia	—

Showing the 30 most-cited of 252 independent citing papers.

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).

Citing-text excerpts — how the field used this work

RESULT The impacts of anthropogenic ocean noise on cetaceans and implications for management

"Only be- cause of the long-term study of photo-identified dolphins, however, were Bejder et al. (2006b) able to conclude that dolphin-watching tourism contributed to a long-term decline in abundance at the impact site."

FOLLOW-UP WORK

Impact assessment research: use and misuse of habituation, sensitisation and tolerance in describing wildlife responses to anthropogenic stimuli

2009 · Marine Ecology Progress Series 395, 177-185, 2009 · 632 citations (GS)

Field-normalised: 447 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2009 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The soundscape of the Anthropocene ocean	Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung, Australian Institute of Marine Science, Centre for Environment, Fisheries and Aquaculture Science	Australia, Canada, Germany	Background
2	How nature-based tourism might increase prey vulnerability to predators	Universidade Estadual de Ponta Grossa, Universidade Federal de Goiás, Universidade Federal de Mato Grosso	Brazil	Background
3	Natural area tourism: Ecology, impacts and management	—	—	—
4	Rethinking the study of human–wildlife coexistence	Birkbeck, University of London, Indian Institute of Technology Bombay, Voluntary Nature Conservancy	India, United Kingdom	Background
5	Habituation and sensitization: new thoughts about old ideas	—	—	**Influential**
6	A sound approach to assessing the impact of underwater noise on marine fishes and invertebrates	Noise Abatement Society, University of Maryland, College Park	United Kingdom, United States	Background
7	A review of the impacts of nature based recreation on birds	Griffith University	Australia	Background
8	Determinants of uncertainty in wildlife responses to human disturbance	Swiss Ornithological Institute	Switzerland	**Influential**
9	Noise negatively affects foraging and antipredator behaviour in shore crabs	University of Exeter	United Kingdom	Background
10	A phantom road experiment reveals traffic noise is an invisible source of habitat degradation	Boise State University, The Peregrine Fund	United States	—
11	The importance of invertebrates when considering the impacts of anthropogenic noise (2014)	University of Bristol, University of Toronto	Canada, United Kingdom	—
12	A systematic review on the behavioural responses of wild marine mammals to noise: the disparity between science and policy (2016)	Fisheries and Oceans Canada, George Mason University, SMRU Consulting North America	Canada, United States	—
13	Biological effects, conservation potential, and research priorities of shark diving tourism (2015)	Australian Institute of Marine Science, Bimini Biological Field Station Foundation, University of Miami	Australia, Bahamas, United Kingdom	—
14	Repeated exposure to noise increases tolerance in a coral reef fish (2016)	Labex Corail, University of Bristol, University of Exeter	France, United Kingdom	—
15	Movement and seasonal energetics mediate vulnerability to disturbance in marine mammal populations (2021)	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
16	A meta-analysis of human disturbance impacts on Antarctic wildlife (2016)	Monash University	Australia	—
17	Deleterious behaviors and risks related to close interactions between humans and free-ranging dolphins: A review (2023)	Centre de Recherches Insulaires et Observatoire de l'Environnement	French Polynesia	—
18	Effects of whale-based tourism in Vava'u, Kingdom of Tonga: Behavioural responses of humpback whales to vessel and swimming tourism activities (2019)	Auckland University of Technology, NorthTec	New Zealand	—
19	Behavioural responses of harbour seals to human-induced disturbances (2012)	Aarhus University, University of Southern Denmark	Denmark	—
20	Disturbance-specific behavioral responses of giant otters exposed to ecotourism and extractive activities (2022)	Frankfurt Zoological Society, National Service of Protected Natural Areas, National University of Saint Anthony the Abbot in Cuzco	Germany, Peru, United Kingdom	—
21	An updated literature review examining the impacts of tourism on marine mammals over the last fifteen years (2000-2015) to inform research and management … (2018)	—	—	—
22	Looking back to move forward: Lessons from three decades of research and management of cetacean tourism in New Zealand (2021)	Massey University, National Institute of Water and Atmospheric Research, Tethys Research Institute	Italy, New Zealand	—
23	Short term behavioural responses of manta rays, Manta alfredi, to tourism interactions in Coral Bay, Western Australia (2013)	—	—	—
24	Dolphin Watching and Compliance to Guidelines Affect Spinner Dolphins' (Stenella longirostris) Behaviour in Reunion Island (2021)	École Pratique des Hautes Études, Écologie Marine Tropicale des Océans Pacifique et Indien, Laboratoire de Biotechnologie et Chimie Marines	France, Réunion	—
25	Assessment on the effectiveness of vessel-approach regulations to protect cetaceans in Australia: A review on behavioral impacts with case study on the threatened … (2021)	Marine Mammal Foundation, RMIT University	Australia	—
26	Interacting effects of short-term and long-term noise exposure on antipredator behaviour in sand gobies (2021)	Leiden University, Royal Netherlands Institute for Sea Research	Netherlands	—
27	Combined effects of fine-scale intensity and spatial extent of exposure to outdoor recreation shape wildlife responses and tolerance to human activity (2026)	Fondazione Edmund Mach, Parco Nazionale d'Abruzzo, University of California, Irvine Medical Center	Austria, Germany, Italy	—
28	Behavioral hotspots of bottlenose dolphins in industrialized ship channels (2024)	Texas A&M University – Corpus Christi	United States	—
29	Behavioural responses of spinner dolphins to human interactions (2018)	South Atlantic Environmental Research Institute, Tethys Re-	Falkland Islands, Hong Kong, Italy	—

No.	Citing paper	Citing institution(s)	Country	S2
		search Institute, University of Hong Kong		
30	Short-term effects of whale watching boats on the movement patterns of southern right whales in Península Valdés, Patagonia, Argentina (2020)	National University of Patagonia San Juan Bosco	Argentina	—

Showing the 30 most-cited of 359 independent citing papers.

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 2

Claim — Contribution 2

The researcher developed a foundational method for testing association patterns in social animals, establishing a widely adopted analytical framework for behavioral ecology.

The researcher's primary contribution is the development of a method for testing association patterns of social animals, as detailed in their 1998 paper published in Animal Behaviour. This work stands as a seminal core contribution, with no subsequent follow-up papers by the same researcher listed in this specific line of inquiry, indicating the originality and self-contained nature of the methodological advance.

This line of work appears to address the need for rigorous statistical tools to analyze social structures in animal groups. By introducing a specific method for testing these patterns, the researcher provided a novel approach that likely filled a gap in quantitative behavioral analysis, offering a standardized way to assess social associations that was not previously available or widely used.

The significance of this contribution is evidenced by its substantial citation record, with the core paper accumulating 777 citations. Furthermore, citation analysis reveals that 92.0% of the 1,554 classified citing papers originate from independent researchers, demonstrating that the method has been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 290 · **27 flagged influential by Semantic Scholar**

CORE PAPER

A method for testing association patterns of social animals

1998 · Animal behaviour 56 (3), 719-725, 1998 · 777 citations (GS)

Field-normalised: 496 Semantic Scholar citations place it in the top 5% of Biology papers from 1998 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Social network analysis of animal behaviour: a promising tool for the study of sociality	Hungarian Natural History Museum	Hungary	**Methodology**
2	Hypothesis testing in animal social networks	University of Exeter, University of York	United Kingdom	—
3	The bottlenose dolphin community of doubtful sound features a large proportion	University of Otago	New Zealand	**Methodology**

No.	Citing paper	Citing institution(s)	Country	S2
	of long-lasting associations: can geographic isolation explain this unique trait?			
4	Experimentally induced innovations lead to persistent culture via conformity in wild birds	Max Planck Institute for Ornithology, University of Oxford	Germany, United Kingdom	—
5	A guide to null models for animal social network analysis	Max Planck Institute for Ornithology	Germany	—
6	The emergent properties of a dolphin social network	University of Otago	New Zealand	Background
7	The socioecology of elephants: analysis of the processes creating multitiered social structures	Save the Elephants, University of Pretoria	Kenya, South Africa	**Methodology**
8	Exploring animal social networks (2008)	—	—	—
9	Social network position experiences more variable selection than weaponry in wild subpopulations of forked fungus beetles (2021)	Mountain Lake Biological Station, Swarthmore College, The University of Texas at Austin	United States	—
10	Marine mammal ecology and conservation: a handbook of techniques (2010)	—	—	—
11	Using ecotourism boats for estimating the abundance of a bottlenose dolphin population in south-eastern Australia (2023)	Deakin University, Université de Montpellier	Australia, France	—
12	Social structure and spatial distribution of bottlenose dolphins (Tursiops truncatus) along the Croatian Adriatic coast (2019)	Blue World Institute of Marine Research and Conservation, Croatian Natural History Museum	Croatia	—
13	Social structure and abundance of coastal bottlenose dolphins, Tursiops truncatus, in the Normano-Breton Gulf, English Channel (2015)	Centre d'Etudes Biologiques de Chizé, Groupe d'Etude des Cétacés du Cotentin	France	—
14	Grouping behaviors of dolphins and other toothed whales (2019)	Eckerd College	United States	—
15	Abundance and site fidelity of bottlenose dolphins off a remote oceanic island (Reunion Island, southwest Indian Ocean) (2020)	—	—	**Influential**
16	The structure of a bottlenose dolphin society is coupled to a unique foraging cooperation with artisanal fishermen (2012)	Universidade Federal de Santa Catarina, University of Aberdeen, University of Plymouth	Brazil, United Kingdom	—
17	Complex Social Structure of an Endangered Population of Bottlenose Dolphins (Tursiops truncatus) in the Aeolian Archipelago (Italy) (2014)	Filicudi WildLife Conservation, Sapienza University of Rome	Italy	**Influential**
18	Bottlenose dolphin (Tursiops truncatus) social structure in the Shannon Estuary, Ire-	Chicago Zoological Society, Galway-Mayo Institute of	Ireland, United Kingdom, United States	**Influential**

No.	Citing paper	Citing institution(s)	Country	S2
	land, is distinguished by age- and area-related associations (2018)	Technology, Plymouth University		
19	Conservation Status of Australian snubfin dolphin, Orcaella heinsohni, and Indo-Pacific humpback dolphin, Sousa chinensis, in the Capricorn Coast, central … (2010)	—	—	—
20	How can social network analysis improve the study of primate behavior? (2011)	Princeton University	United States	—
21	Individual personalities predict social behaviour in wild networks of great tits (Parus major) (2013)	University of Oxford	United Kingdom	**Influential**
22	Mixed species groups in mammals (2003)	Stockholm University	Sweden	—
23	Network metrics reveal differences in social organization between two fission–fusion species, Grevy's zebra and onager (2007)	Princeton University	United States	**Influential**
24	Evidence of social communities in a spatially structured network of a free-ranging shark species (2012)	École Pratique des Hautes Études	France	—
25	Persistent species relationships characterize migrating bird communities across stopover sites and seasons (2024)	Birds Canada, Braddock Bay Bird Observatory, Michigan State University	Canada, United States	—
26	Sampling animal association networks with the gambit of the group (2010)	University of Bath, University of Glasgow, University of York	United Kingdom	—
27	Permutation tests for hypothesis testing with animal social network data: Problems and potential solutions (2022)	The Ohio State University, University of Zurich	Switzerland, United States	—
28	Wild jackdaws can selectively adjust their social associations while preserving valuable long-term relationships (2023)	University of Exeter	United Kingdom	—
29	The dynamics of social networks among female Asian elephants (2011)	University of Pennsylvania	United States	—
30	BISoN: A Bayesian framework for inference of social networks (2023)	University of Exeter, University of York	United Kingdom, United Kingdom of Great Britain and Northern Ireland	—

Showing the 30 most-cited of 290 independent citing papers.

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).

Citing-text excerpts — how the field used this work

METHODOLOGY The bottlenose dolphin community of doubtful sound features a large proportion of long-lasting associations: can geographic isolation explain this unique trait?

"The significance of all possible dyads in the population, and therefore the significance of the groups discriminated by the cluster analyses, was assessed using a Monte Carlo randomisation approach (Manly 1995; Bejder et al. 1998; Whitehead 1999b)."

Contribution 3

Claim — Contribution 3

The researcher provided seminal evidence for cultural transmission of tool use in bottlenose dolphins, establishing a foundational framework for understanding non-human animal culture.

The researcher's primary contribution rests on the 2005 paper 'Cultural transmission of tool use in bottlenose dolphins,' published in the Proceedings of the National Academy of Sciences. This work appears to document and analyze the social learning mechanisms underlying tool use in this species, offering a critical case study in animal behavior.

This line of work addresses the gap in understanding how complex behaviors spread through social groups in non-primate mammals. By focusing on bottlenose dolphins, the research suggests that cultural transmission is not limited to primates, thereby expanding the theoretical scope of comparative psychology and ethology.

The significance of this contribution is evidenced by its high citation count of 800 and the fact that 92.0% of citing papers originate from independent researchers. This widespread adoption by the broader scientific community indicates that the findings have become a standard reference point for studies on animal culture and social learning.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 307 · **8 flagged influential by Semantic Scholar**

CORE PAPER

Cultural transmission of tool use in bottlenose dolphins

2005 · Proceedings of the National Academy of Sciences 102 (25), 8939-8943, 2005 · 800 citations (GS)

Field-normalised: 506 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2005 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Animal social networks	—	—	—
2	The functional roles of marine sponges	Victoria University of Wellington	New Zealand	Background
3	The animal cultures debate	University of St Andrews	United Kingdom	Background
4	Scale and diversity of the physical technosphere: A geological perspective	Architectural Association School of Architecture, British Geological Survey, Cambridge University	Australia, Brazil, Canada	—
5	The evolution of animal 'cultures' and social intelligence	University of St Andrews, University of Zurich	Switzerland, United Kingdom	**Influential**
6	Food limitation leads to behavioral diversification and dietary specialization in sea otters	Monterey Bay Aquarium, University of California, Irvine Medical Center, Western Ecological Research Center	United States	—
7	Social information use is a process across time, space, and ecology, reaching heterospecifics	University of Jyväskylä	Finland	—
8	The transmission of genes and culture: A questionable analogy (2012)	University of St Andrews	United Kingdom	—
9	Marine mammal ecology and conservation: a handbook of techniques (2010)	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
10	Mark-recapture estimates suggest declines in abundance of common bottlenose dolphin stocks in the main Hawaiian Islands (2021)	Cascadia Research Collective, Whaleman Foundation, Wildlife Information Liaison Development	India, United States	—
11	Animal social networks (2015)	—	—	—
12	Generative artificial intelligence, human agency and the future of cultural heritage (2024)	Charles Sturt University	Australia	—
13	The implications of nongenetic inheritance for evolution in changing environments (2012)	Queen's University, University of New South Wales	Australia, Canada	—
14	Animal cultures: how we've only seen the tip of the iceberg (2019)	University of Zurich	Switzerland	—
15	Tool use aids prey-fishing in a specialist predator of stingless bees (2025)	China Agricultural University, State Key Laboratory of Integrated Management of Pest Insects and Rodents, Xishuangbanna Tropical Botanical Garden	China	—
16	Animal tool use: current definitions and an updated comprehensive catalog (2010)	Emory University, Grinnell College	United States	—
17	Humans and other animals: cross-cultural perspectives on human-animal interactions (2012)	—	—	—
18	Culture is critical in driving orangutan diet development past individual potentials (2026)	Max Planck Institute of Animal Behavior	Germany	—
19	Social learning of diet and foraging skills by wild immature Bornean orangutans: implications for culture (2010)	University of Zurich	Switzerland	—
20	Transmission of multiple traditions within and between chimpanzee groups (2007)	Emory University, The University of Texas MD Anderson Cancer Center, University of St Andrews	United Kingdom, United States	—
21	Structure of the cerebral cortex of the humpback whale, Megaptera novaeangliae (Cetacea, Mysticeti, Balaenopteridae) (2007)	Icahn School of Medicine at Mount Sinai	United States	—
22	Integrating the study of conformity and culture in humans and nonhuman animals. (2012)	University of St Andrews	United Kingdom	—
23	Tradition over trend: Neighboring chimpanzee communities maintain differences in cultural behavior despite frequent immigration of adult females (2014)	Max Planck Institute for Evolutionary Anthropology	Germany	—
24	Mirror neuron forum (2011)	David Geffen School of Medicine at UCLA, University of California, Irvine Medical Center, University of Oxford	Italy, United Kingdom, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
25	Robot tool use: A survey (2023)	Yale University	United States	—
26	Revisiting the definition of animal tool use (2008)	North Carolina Agricultural and Technical State University	United States	Influential
27	The enhanced tool-kit of two groups of wild bearded capuchin monkeys in the Caatinga: tool making, associative use, and secondary tools (2009)	Universidade de São Paulo	Brazil	—
28	Cultural evolution of systematically structured behaviour in a non-human primate (2014)	Centre National de la Recherche Scientifique, University of Edinburgh	France, United Kingdom	—
29	Working-memory capacity and the evolution of modern cognitive potential: implications from animal and early human tool use (2010)	Incyte (United States), St. Jude Children's Research Hospital	United States	—
30	Wild chimpanzees rely on cultural knowledge to solve an experimental honey acquisition task (2009)	Kibale Chimpanzee Project, University of New Mexico, University of St Andrews	Uganda, United Kingdom, United States	—

Showing the 30 most-cited of 307 independent citing papers.

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
Murdoch University	Australia	SCImago #2328 · THE 401–500 · QS =423	50
University of St Andrews	United Kingdom	SCImago #1863 · THE =162 · QS 113	45
University of Exeter	United Kingdom of Great Britain and Northern Ireland	SCImago #679 · THE =170 · QS =155	37
University of Aberdeen	United Kingdom	SCImago #1812 · THE 201–250 · QS =262	30
University of California, Irvine Medical Center	United States	—	29
Dalhousie University	Canada	SCImago #1299 · THE 351–400 · QS 283	27
University of Bristol	United Kingdom	SCImago #478 · THE =80 · QS 51	25
University of Otago	New Zealand	SCImago #1311 · THE 351–400 · QS =197	22
Flinders University	Australia	SCImago #2159 · THE 301–350 · QS 387	21

Institution	Country	World ranking	Citing papers
Macquarie University	Australia	SCImago #1047 · THE =166 · QS =138	18
Aarhus University	Denmark	SCImago #293 · THE 101 · QS 131	18
University of Zurich	Switzerland	SCImago #313 · QS 100	15
Duke University	United States	SCImago #115 · THE 28 · QS 62	14
Woods Hole Oceanographic Institution	United States	SCImago #3606	13
University of Hawai‘i at Mānoa	United States	THE 251–300 · QS =546	13

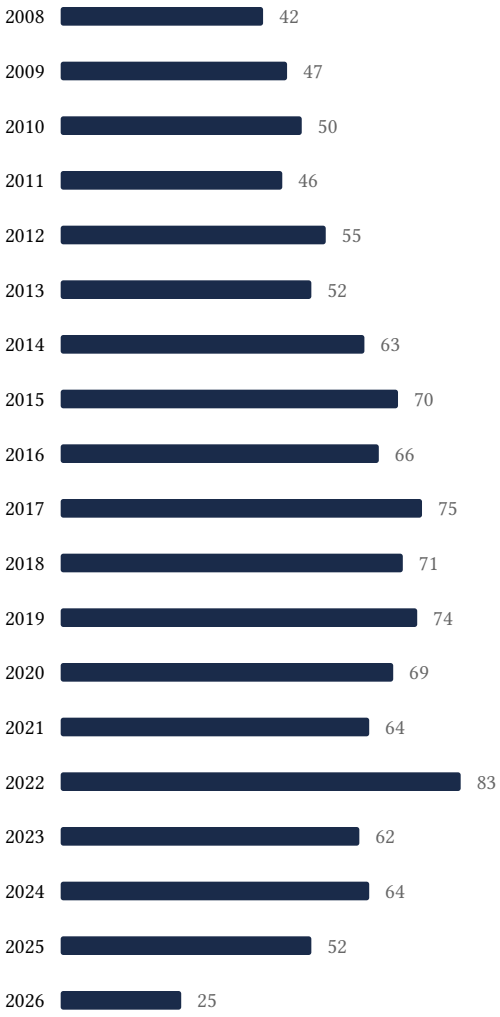
Geographic distribution of citing authors

Country	Citing papers
United States	332
United Kingdom	203
Australia	175
Canada	77
Germany	54
France	52
New Zealand	48
Spain	40
Italy	31
Netherlands	31
Brazil	29
Denmark	27

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	Interpreting short-term behavioural responses to disturbance within a longitudinal perspective	611	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	A method for testing association patterns of social animals	290	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Cultural transmission of tool use in bottlenose dolphins	307	8 CFR 204.5(i)(3) — Outstanding Researcher