

# Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

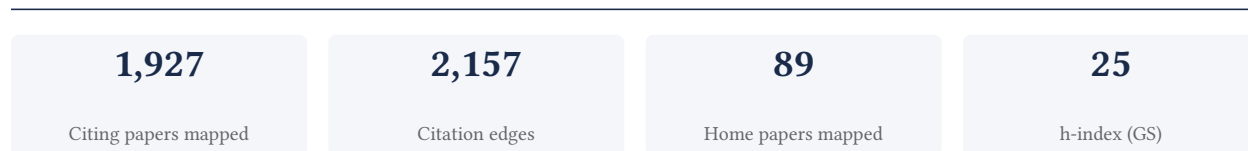
## Bryan A. Endress

Oregon State University

[Google Scholar profile](#)

**Generated 2026-05-30 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.

**88.3% independent** of 1,769 classified citing papers

| Citation type    | Count |
|------------------|-------|
| Independent      | 1,562 |
| Self-citation    | 79    |
| Co-author        | 128   |
| Same-institution | 0     |

132 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 assessing the long-term ecological sustainability and socio-economic viability of non-timber forest product harvesting, specifically focusing on palm species.*

CLAIM: The researcher’s contribution centers on developing rigorous methods to evaluate the sustainability of non-timber forest products, anchored by a seminal 2006 study on the palm *Chamaedorea radicalis* that examined the effects of alternative leaf harvest practices on yield and demography over six years.

ORIGINALITY: This line of work appears to address the critical gap between short-term resource extraction and long-term ecological stability. By extending the analysis from a single species to broader contexts, including the *Mauritia flexuosa* palm in South America, the researcher integrated ecological data with livelihood and indigenous management factors, suggesting a novel interdisciplinary approach to resource governance.

SIGNIFICANCE: The core paper has garnered 155 citations, while subsequent works on *Mauritia flexuosa* have accumulated 137 and 108 citations respectively, indicating sustained scholarly interest. Notably, 88.3% of the 1,769 classified citations originate from independent researchers, demonstrating that this framework has been widely adopted and validated by the broader scientific community beyond the researcher’s immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 346 · 17 flagged influential by Semantic Scholar

#### CORE PAPER

### [Sustainability of a non-timber forest product: Effects of alternative leaf harvest practices over 6 years on yield and demography of the palm \*Chamaedorea radicalis\*](#)

2006 · 155 citations (GS)

Field-normalised: 101 Semantic Scholar citations place it in the top 10% of Environmental Science papers from 2006 indexed by Semantic Scholar, by citation count.

| No. | Citing paper   | Citing institution(s)   | Country               | S2 |
|-----|--|---|-----------------------|----|
| 1   | <a href="#">What do matrix population models reveal about the sustainability of non-timber forest product harvest?</a>   | Brazilian Institute of Environment and Renewable Natural Resources, University of Hawai'i at Mānoa, University of Miami               | Brazil, United States | —  |
| 2   | <a href="#">Tropical montane cloud forests: current threats and opportunities for their conservation and sustainable management in Mexico</a>  | El Colegio de la Frontera Sur, National Commission for the Knowledge and Use of Biodiversity, Universidad Nacional Autónoma de México | Mexico, México        | —  |
| 3   | <a href="#">The role of wild palms in agroforestry systems in the Neotropics: A review</a>   | Aarhus University, Universidad Nacional Autónoma de México  | Denmark, Mexico       | —  |
| 4   | <a href="#">Investigating the effect of resin collection and detecting fungal infection in resin-tapped and non-tapped pine trees, using minimally invasive and non-invasive ...</a> | University of the Aegean  | Greece                | —  |
| 5   | <a href="#">The ecological sustainability of non-timber forest product harvest: Principles and methods</a>   | University of Hawai'i at Mānoa  | United States         | —  |

| No. | Citing paper  | Citing institution(s)   | Country                          | S2          |
|-----|---|---|----------------------------------|-------------|
| 6   | <a href="#">Effects of harvest intensity on the marketable organ yield, growth and reproduction of non-timber forest products (NTFPs): implication for conservation and sustainable ...</a> | Institute of Applied Ecology  | China                            | Influential |
| 7   | <a href="#">Knowledge, Use, and Management of the Babassu Palm (<i>Attalea speciosa</i> Mart. ex Spreng) in the Araripe Region (Northeastern Brazil)</a>                                    | Universidade Federal de Santa Catarina, Universidade Federal Rural de Pernambuco  | Brazil                           | —           |
| 8   | <a href="#">Disturbance and resilience in tropical American palm populations and communities</a>  | Aarhus University, Institut de recherche pour le développement, Pontificia Universidad Católica del Ecuador                         | Congo Republic, Denmark, Ecuador | —           |
| 9   | <a href="#">Interactions among fire, grazing, harvest and abiotic conditions shape palm demographic responses to disturbance</a>  | University of Hawai'i at Mānoa  | United States                    | —           |
| 10  | <a href="#">Conservation of tropical plant biodiversity: What have we done, where are we going?</a>   | National Museum of Natural History  | United States                    | —           |
| 11  | <a href="#">Los bosques de niebla de México: conservación y restauración de su componente arbóreo</a>   | El Colegio de la Frontera Sur, Instituto de Ecología, A.C., Universidad Nacional Autónoma de México                                 | Mexico, México                   | —           |
| 12  | <a href="#">Cultivation can increase harvesting pressure on overexploited plant populations</a>   | —   | —                                | —           |
| 13  | <a href="#">Productos forestales no maderables: importancia e impacto de su aprovechamiento</a>   | Universidad Distrital Francisco José de Caldas  | Colombia                         | —           |
| 14  | <a href="#">Analysis of the structure and diversity of <i>Prosopis africana</i> (G. et Perr.) Taub. Tree stands in the Southeastern Niger</a>   | Institut National de la Recherche Agronomique du Niger, Université Abdou Moumouni, Université de Maradi                             | Niger                            | —           |
| 15  | <a href="#">Use of woody species in the Caatinga dry forest may lead to higher vulnerability to extirpation: An assessment based on ethnobiological, reproductive and ...</a>               | Museu Paraense Emilio Goeldi, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Universidade Federal de Pernambuco | Brazil, Germany, Mexico          | —           |
| 16  | <a href="#">How do fire and harvesting affect the population dynamics of a dominant endemic Velloziaceae species in campo rupestre?</a>   | Brazilian Institute of Environment and Renewable Natural Resources, Universidade Estadual de Feira de Santana                       | Brazil                           | —           |
| 17  | <a href="#">The importance of individuals of different sizes in the population maintenance of a palm species used by the Fulni-ô Indigenous People in northeast Brazil</a>                  | Brazilian Agricultural Research Corporation, Universidade Federal de Pernambuco, Universidade Federal do Rio de Janeiro             | Brazil                           | Influential |
| 18  | <a href="#">Towards a mechanistic understanding of the synergistic effects of harvesting timber and non-timber forest products</a>  | National Institute for Mathematical and Biological Synthe-  | United States                    | —           |

| No. | Citing paper  | Citing institution(s)   | Country               | S2                 |
|-----|---|---|-----------------------|--------------------|
|     |   | sis, University of Hawai'i at Mānoa   |                       |                    |
| 19  | <a href="#">Impact of Leaf Harvest on Populations of <i>Lepidocaryum tenue</i>, an Amazonian Understory Palm Used for Thatching</a>                 | Universidad Nacional de Colombia  | Colombia              | —                  |
| 20  | <a href="#">Pequi Fruit (<i>Caryocar brasiliense</i>) in Minas Gerais: Commercialization and Public Policy</a>                                      | Centro Universitário Santa Rita, Universidade Federal de Minas Gerais, Universidade Federal dos Vales do Jequitinhonha e Mucuri | Brazil                | —                  |
| 21  | <a href="#">Response of a tropical tree to non-timber forest products harvest and reduction in habitat size</a>                                     | Université de Parakou, University of Hawai'i at Mānoa   | Benin, United States  | —                  |
| 22  | <a href="#">Balancing Harvesting and Conservation: Demographic Responses of a Threatened Palm to Anthropogenic Disturbance</a>                      | Universidade Federal do Rio de Janeiro  | Brazil                | —                  |
| 23  | <a href="#">Development strategy of candlenut oil business toward a new paradigm for the utilization of non-timber forest products</a>              | Muhammadiyah University   | Indonesia             | —                  |
| 24  | <a href="#">Managing mistletoes: the value of local practices for a non-timber forest resource</a>  | Ashoka Trust for Research in Ecology and the Environment, Imperial College London, University of Oxford                         | India, United Kingdom | —                  |
| 25  | <a href="#">Predicting the impacts of palm heart and fruit harvesting using Integral Projection Models</a>  | Universidade Federal do Rio de Janeiro  | Brazil                | —                  |
| 26  | <a href="#">Effects of leaf harvest on <i>Thrinax radiata</i> palm: implications for management and conservation</a>                                | —   | —                     | <b>Influential</b> |
| 27  | <a href="#">Patterns of tree community differences in the core and buffer zones of a nature reserve in north-western Vietnam</a>                    | University of Göttingen, Vietnam National University of Forestry  | Germany, Vietnam      | —                  |
| 28  | <a href="#">Harvesting of palm fruits can be ecologically sustainable: a case of buriti (<i>Mauritia flexuosa</i>; arecaceae) in central Brazil</a> | —   | —                     | —                  |
| 29  | <a href="#">Effects of harvest on the sustainability and leaf productivity of populations of two palm species in Maya homegardens</a>               | Universidad Nacional Autónoma de México   | Mexico                | —                  |
| 30  | <a href="#">Vegetative and reproductive phenology of <i>Butia purpurascens</i> Glassman (Arecaceae) under the effects of leaf harvesting</a>        | Universidade Federal de Jataí   | Brazil                | —                  |

Showing the 30 most-cited of 126 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).

## ■ FOLLOW-UP WORK

## Ecology, livelihoods, and management of the *Mauritia flexuosa* palm in South America

2017 · 137 citations (GS)

Field-normalised: 83 Semantic Scholar citations place it in the top 10% of Environmental Science papers from 2017 indexed by Semantic Scholar, by citation count.

| No. | Citing paper  | Citing institution(s)  | Country                 | S2 |
|-----|---|--|-------------------------|----|
| 1   | <a href="#">The palm <i>Mauritia flexuosa</i>, a keystone plant resource on multiple fronts</a>   | Universidad Regional Amazónica Ikiam   | Ecuador                 | —  |
| 2   | <a href="#">Peatlands in the Brazilian Cerrado: insights into knowledge, status and research needs</a>  | Instituto Nacional de Pesquisas Espaciais, Universidade de Brasília, Universidade Federal de Mato Grosso             | Brazil, France, Germany | —  |
| 3   | <a href="#">Sustainable palm fruit harvesting as a pathway to conserve Amazon peatland forests</a>  | Instituto de Investigaciones de la Amazonía Peruana  | Peru                    | —  |
| 4   | <a href="#">Flavonoid/Polyphenol Ratio in <i>Mauritia flexuosa</i> and <i>Theobroma grandiflorum</i> as an Indicator of Effective Antioxidant Action</a>                            | Heidelberg University, University of Caldas  | Colombia, Germany       | —  |
| 5   | <a href="#">Quality characteristics and thermal behavior of buriti (<i>Mauritia flexuosa</i> L.) oil</a>  | Universidade Estadual de Campinas (UNICAMP), Universidade Estadual Paulista, Universidade Federal da Grande Dourados | Brazil, Brazil          | —  |
| 6   | <a href="#">Socio-Economic and Ecological Factors Influencing Rulemaking for Community-Based Forest Management</a>  | —  | —                       | —  |
| 7   | <a href="#">Impact of the mode of extraction on the lipidomic profile of oils obtained from selected Amazonian fruits</a>   | Instituto Sinchi, Universidad de los Andes, Virginia Tech  | Colombia, United States | —  |
| 8   | <a href="#">Ethnobotanical Knowledge in the Peruvian Amazon of the Neglected and Underutilized Crop Sacha Inchi (<i>Plukenetia volubilis</i> L.)</a>                                | Instituto de Investigaciones de la Amazonía Peruana  | Peru                    | —  |
| 9   | <a href="#">Ultrasound-Assisted Enhancement of Bioactive Compounds in Amazonian Fruit Juices (<i>Mamea americana</i>, <i>Solanum sessiliflorum</i>, and <i>Cassia leiandra</i>)</a> | Instituto Federal do Amazonas, Universidade de São Paulo, Universidade Federal do Amazonas                           | Brazil                  | —  |
| 10  | <a href="#">Mechanical properties and statistical analysis of polyester composite reinforced with miriti fibers braided using crochet technique</a>                                 | Instituto Federal de Educação, Ciência e Tecnologia do Pará, Military Institute of Engineering                       | Brazil                  | —  |
| 11  | <a href="#">Biomass and carbon stocks of four vegetation types in the Llanos Orientales of Colombia (Mapiripán, Meta)</a>   | Icesi University   | Colombia                | —  |
| 12  | <a href="#">Scientific and traditional knowledge meet: diet of the lowland tapir <i>Tapirus terrestris</i> in the Orinoquia region of Colombia</a>                                  | Pontificia Universidad Javeriana, Texas Tech University  | Colombia, United States | —  |
| 13  | <a href="#">Amazonian Fibers for Sustainable Packaging Materials and Circular Bioeconomies</a>  | Massachusetts Institute of Technology, New York University, Universidade Federal do Oeste do Pará                    | Brazil, United States   | —  |

| No. | Citing paper  | Citing institution(s)  | Country         | S2 |
|-----|---|--|-----------------|----|
| 14  | <a href="#">Initial assessment of the peatlands of the upper-Ucayali Valley, Central Peruvian Amazon: Basic analysis of geographic products &amp; predictors</a>    | National University of San Marcos, The University of Queensland, Universidad Nacional de Ucayali   | Australia, Peru | —  |
| 15  | <a href="#">Physiological and cytological responses to thermal stress in recalcitrant seeds of <i>Mauritia flexuosa</i> (Arecaceae)</a>                             | Universidade Estadual de Montes Claros, Universidade Federal de Minas Gerais   | Brazil          | —  |
| 16  | <a href="#">Holocene environmental changes inferred from an oxbow lake in a <i>Mauritia</i> palm swamp (aguajal) in the Madre de Dios region, southeastern Peru</a> | Federal Institute for Geosciences and Natural Resources, University of Bayreuth, University of Göttingen   | Germany         | —  |
| 17  | <a href="#">Potencial das palmeiras nativas da Amazônia Brasileira para a bioeconomia: análise em rede da produção científica e tecnológica</a>                     | Instituto Nacional de Pesquisas da Amazônia, Universidade do Estado do Amazonas  | Brazil          | —  |
| 18  | <a href="#">Cytological aspects of pollen germination in <i>Mauritia flexuosa</i> (Arecaceae)</a>   | Universidade Estadual de Montes Claros, Universidade Federal de Minas Gerais   | Brazil          | —  |
| 19  | <a href="#">The Influence of Environmental Features on the Morphometric Variation in <i>Mauritia flexuosa</i> Lf Fruits and Seeds</a>                               | Federal University of Amazonas, Graduate Program in Amazon Biodiversity and Biotechnology, Bionorth Network—Av. Santos Dumond—Cidade Universitária, Cáceres, Mato Grosso State 78200-000, Brazil, Laboratório de Ecologia da Paisagem e Etnobiologia Centro de Pesquisas em Limnologia, Biodiversidade e Etnobiologia do Pantanal Universidade do Estado de Mato Grosso Cáceres Mato Grosso Brazil | Brazil          | —  |
| 20  | <a href="#">Using the petiole of the miriti palm for the core of a small wind turbine blade</a>   | Instituto Federal de Educação, Ciência e Tecnologia do Pará, Universidade Federal do Pará, University of Calgary   | Brasil, Canada  | —  |
| 21  | <a href="#">Seasonal Dynamics of Salt Licks and Their Use by Wildlife in Amazonia</a>   | Universidade Federal da Paraíba, Universidade Federal da Paraíba; Universidade Estadual da Paraíba, Universidade Federal do Rio Grande do Norte  | Brazil          | —  |
| 22  | <a href="#">Late Holocene peatland palm swamp (aguajal) development, carbon deposition and environment changes in the Madre de Dios region, southeastern Peru</a>   | University of Bayreuth, University of Göttingen, University of Hohenheim   | Germany         | —  |
| 23  | <a href="#">Community-Based Field Research and Intercultural Student Experiences: Tropical Rainforest Experiential Learning in the Peruvian Amazon</a>              | Grand Valley State University  | United States   | —  |

| No. | Citing paper   | Citing institution(s)  | Country               | S2 |
|-----|--|--|-----------------------|----|
| 24  | <a href="#">To climb or to fell? Identification of social-ecological conditions that promote sustainable fruit harvesting in Lowland Amazon palm swamps</a>    | Centre de Coopération Internationale en Recherche Agronomique pour le Développement, Temple University | France, United States | —  |
| 25  | <a href="#">Sumideros naturales de carbono: un estudio de caso en morichales de la altillanura colombiana</a>  | Instituto Colombiano del Petróleo y Energías de la Transición - Icpet, Universidad de los Llanos       | Colombia              | —  |
| 26  | <a href="#">Glycerolysis of Buriti Oil (Mauritia flexuosa) by Magnesium Oxide and Immobilized Lipase Catalysts: Reaction Yield and Carotenoids Degradation</a> | Universidade Federal do Rio Grande do Sul  | Brazil                | —  |
| 27  | <a href="#">Fisheries as common-pool resources, its management and impact on fishing ecosystem in Indonesia: A mini-review</a>                                 | Padjadjaran University   | Indonesia             | —  |
| 28  | <a href="#">Factores climáticos, fenología reproductiva y biometría de Mauritia flexuosa (aguaje) en plantaciones forestales de la Amazonía peruana</a>        | Instituto de Investigaciones de la Amazonía Peruana, Palmas del Espino S.A.                            | Peru                  | —  |
| 29  | <a href="#">Evaluación de la eficiencia del carbón activado de semilla de aguaje (Mauritia flexuosa Lf) en la adsorción de cromo (VI)</a>                      | National University of General San Martín  | Argentina             | —  |
| 30  | <a href="#">Estandarización del proceso de extracción de aceite de Mauritia flexuosa del Guaviare, Colombia.</a>   | National Training Service  | Colombia              | —  |

Showing the 30 most-cited of 127 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).

#### FOLLOW-UP WORK

### [Ecological and socio-economic factors influencing aguaje \(Mauritia flexuosa\) resource management in two indigenous communities in the Peruvian Amazon](#)

2012 · 108 citations (GS)

Field-normalised: 78 Semantic Scholar citations place it in the top 10% of Environmental Science papers from 2012 indexed by Semantic Scholar, by citation count.

| No. | Citing paper   | Citing institution(s)                               | Country | S2 |
|-----|--|---|---------|----|
| 1   | <a href="#">Efeitos ecológicos da exploração de produtos florestais não madeireiros: uma revisão sistemática</a>   | Hospital Universitário da Universidade de São Paulo | Brazil  | —  |
| 2   | <a href="#">The palm Mauritia flexuosa, a keystone plant resource on multiple fronts</a>                           | Universidad Regional Amazónica Ikiam                | Ecuador | —  |
| 3   | <a href="#">Socio-Economic and Ecological Factors Influencing Rulemaking for Community-Based Forest Management</a> | —   | —       | —  |

| No. | Citing paper   | Citing institution(s)   | Country                             | S2          |
|-----|--|---|-------------------------------------|-------------|
| 4   | <a href="#">To climb or to fell? Identification of social-ecological conditions that promote sustainable fruit harvesting in Lowland Amazon palm swamps</a>                        | Centre de Coopération Internationale en Recherche Agronomique pour le Développement, Temple University  | France, United States               | —           |
| 5   | <a href="#">Fenologia do buriti (Mauritia flexuosa Lf) no Norte de Minas Gerais</a>  | Universidade Federal de Minas Gerais  | Brazil                              | —           |
| 6   | <a href="#">The three-peat challenge: business as usual, responsible agriculture, and conservation and restoration as management trajectories in global peatlands</a>              | Cranfield University, Royal Holloway University of London, University College Cork  | Ireland, United Kingdom             | —           |
| 7   | <a href="#">Mauritia flexuosa palm swamp communities: natural or human-made? A palynological study of the Gran Sabana region (northern South America) within a neotropical ...</a> | Institut Botànic de Barcelona, The Open University  | Spain, United Kingdom               | —           |
| 8   | <a href="#">Spatial distribution of degradation and deforestation of palm swamp peatlands and associated carbon emissions in the Peruvian Amazon</a>                               | Centre de Coopération Internationale en Recherche Agronomique pour le Développement, Instituto de Investigaciones de la Amazonía Peruana, Temple University | France, Peru, United States         | —           |
| 9   | <a href="#">Peatland forests are the least diverse tree communities documented in Amazonia, but contribute to high regional beta-diversity</a>                                     | Carnegie Institution for Science, Cornell University, Field Museum of Natural History   | Peru, United Kingdom, United States | —           |
| 10  | <a href="#">Biodiversity conservation in home gardens: traditional knowledge, use patterns and implications for management</a>   | Université d'Abomey-Calavi  | Benin                               | —           |
| 11  | <a href="#">Degradation-driven changes in fine root carbon stocks, productivity, mortality, and decomposition rates in a palm swamp peat forest of the Peruvian Amazon</a>         | Center for International Forestry Research  | Peru                                | Influential |
| 12  | <a href="#">Marked reproductive plasticity in response to contrasting fire regimes in a neotropical palm</a>   | University of the West Indies   | Barbados                            | —           |
| 13  | <a href="#">High genetic diversity with low connectivity among Mauritia flexuosa (Arecaceae) stands from Ecuadorean Amazonia</a>   | Pontificia Universidad Católica del Ecuador   | Ecuador                             | Influential |
| 14  | <a href="#">Variabilidad morfológica y productividad de los frutos de Mauritia flexuosa Lf en un gradiente altitudinal en Perú</a>   | —   | —                                   | —           |
| 15  | <a href="#">Estructura poblacional de Mauritia flexuosa y Oenocarpus bataua en tres comunidades de la cuenca alta del Putumayo, frontera Perú-Colombia</a>                         | Instituto de Investigaciones de la Amazonía Peruana, Universidad Nacional de la Amazonía Peruana  | Peru                                | —           |
| 16  | <a href="#">¿Qué sabemos sobre las turberas peruanas?</a>  | Autoridad Nacional del Agua, Autoridad Regional Ambiental, Centre de Coopération Internationale en  | Colombia, France, Japan             | —           |

| No. | Citing paper   | Citing institution(s)   | Country                         | S2                 |
|-----|--|---|---------------------------------|--------------------|
|     |  | Recherche Agronomique pour le Développement   |                                 |                    |
| 17  | <a href="#">Bioeconomy in the Amazon: Lessons and gaps from thirty years of non-timber forest products research</a>  | Universidade Federal de Rondônia, Universidade Federal do Paraná, Universidade Federal do Rio Grande do Norte   | Brazil                          | —                  |
| 18  | <a href="#">Threats to intact tropical peatlands and opportunities for their conservation</a>  | Arizona State University, Carnegie Institution for Science, Field Museum of Natural History   | Peru, U.K, United Kingdom       | —                  |
| 19  | <a href="#">Major carbon losses from degradation of <i>Mauritia flexuosa</i> peat swamp forests in western Amazonia</a>  | Centre de Coopération Internationale en Recherche Agronomique pour le Développement, International Potato Center, Universidad Nacional Autónoma de México | France, Kenya, México           | —                  |
| 20  | <a href="#">Intensive field sampling increases the known extent of carbon-rich Amazonian peatland pole forests</a>   | Arizona State University, Center for International Forestry Research, Centro de Conservación Investigación y Manejo de Areas Naturales                    | Indonesia, Peru, United Kingdom | —                  |
| 21  | <a href="#">Plant diversity in the indigenous home gardens in the Eastern Himalayan Region of Mizoram, Northeast India</a>   | Concordia University, Mizoram University  | Canada, India                   | —                  |
| 22  | <a href="#">Gaps and challenges in harnessing the benefits and opportunities of indigenous certification for a sustainable communal commercial lobster fishery</a> | Brandenburg University of Technology Cottbus-Senftenberg, Dalhousie University, The Confederacy of Mainland Mi'kmaq Mi'kmaq Conservation Group            | Canada, Germany                 | —                  |
| 23  | <a href="#">Modeling the spatial distribution of soil organic carbon and carbon stocks in the casanare flooded savannas of the Colombian Llanos</a>                | Center for International Forestry Research, International Center for Tropical Agriculture, International Potato Center                                    | Kenya, Peru                     | —                  |
| 24  | <a href="#">Water stress resilience in <i>Mauritia flexuosa</i> (Arecaceae) embryos: New insights into the persistence of recalcitrant seed banks</a>              | Universidade Estadual de Montes Claros, Universidade Federal de Minas Gerais  | Brazil                          | —                  |
| 25  | <a href="#">The Peruvian Amazon forestry dataset: A leaf image classification corpus</a>   | Instituto de Investigaciones de la Amazonía Peruana   | Peru                            | —                  |
| 26  | <a href="#">Demography of <i>Euterpe precatoria</i> and <i>Mauritia flexuosa</i> in the Amazon: application of integral projection models for their harvest</a>    | Military University Nueva Granada, Universidad Nacional Autónoma de México, Universidad Nacional de Colombia  | Colombia, Mexico                | <b>Influential</b> |

| No. | Citing paper   | Citing institution(s)   | Country           | S2 |
|-----|--|---|-------------------|----|
| 27  | <a href="#">Why do households depend on the forest for income? Analysis of factors influencing households' decision-making behaviors</a>   | Eberswalde University for Sustainable Development, Shaheed Benazir Bhutto University, The University of Agriculture, Peshawar | Germany, Pakistan | —  |
| 28  | <a href="#">The Contribution of Non-Timber Forest Products (NTFP) Based on the Chilean Hazelnut (Gevuina Avellana) to the Sustainability of Indigenous Collectors' Livelihoods ...</a> | Karlsruhe Institute of Technology, University of Concepción, University of Kassel   | Chile, Germany    | —  |
| 29  | <a href="#">New findings on the pollination biology of <i>Mauritia flexuosa</i> (Arecaceae) in Roraima, Brazil: Linking dioecy, wind, and habitat</a>                                  | Florida International University  | United States     | —  |
| 30  | <a href="#">Cytological aspects of recalcitrance in dormant seeds of <i>Mauritia flexuosa</i> (Arecaceae)</a>  | Universidade Estadual de Montes Claros  | Brazil            | —  |

Showing the 30 most-cited of 93 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 established a foundational framework linking Northwest mountain land-use history to plant invasion patterns, subsequently expanding this analysis to assess biotic integrity and environmental gradients in semi-arid ecosystems.*

**CLAIM:** The researcher's contribution centers on the 2005 paper, "Natural and land-use history of the Northwest mountain ecoregions (USA) in relation to patterns of plant invasions," which serves as the core foundation for a sustained line of inquiry into invasive species dynamics in the Pacific Northwest.

**ORIGINALITY:** This body of work appears to address the complex interplay between historical land use and contemporary biological invasions. By extending the initial 2005 analysis through follow-up studies in 2015 and 2020, the researcher systematically explored how non-native species distribute along environmental gradients and threaten the biotic integrity of remnant prairies, suggesting a comprehensive approach to understanding invasion ecology in semi-arid montane ecosystems.

**SIGNIFICANCE:** The core paper has accumulated 134 citations, indicating substantial recognition within the field. Furthermore, analysis of the researcher's broader citation record reveals that 88.3% of citations originate from independent researchers, demonstrating that this line of work has significantly influenced the wider scientific community beyond the researcher's immediate collaborators.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 137 · 5 flagged influential by Semantic Scholar

### CORE PAPER

#### [Natural and land-use history of the Northwest mountain ecoregions \(USA\) in relation to patterns of plant invasions](#)

2005 · 134 citations (GS)

Field-normalised: 114 Semantic Scholar citations place it in the top 10% of Environmental Science papers from 2005 indexed by Semantic Scholar, by citation count.

| No. | Citing paper  | Citing institution(s)   | Country              | S2          |
|-----|---|---|----------------------|-------------|
| 1   | <a href="#">Invasive grasses: A new perfect storm for forested ecosystems?</a>  | Oregon State University, Pacific Northwest Research Station, Rocky Mountain Research (United States)  | United States        | —           |
| 2   | <a href="#">Disturbance-mediated community characteristics and anthropogenic pressure intensify understorey plant invasions in natural forests</a>                                    | Department of Conservation, Manaaki Whenua – Landcare Research, Manaaki Whenua–Landcare Research  | New Zealand          | —           |
| 3   | <a href="#">Recognition that causal processes change during plant invasion helps explain conflicts in evidence</a>  | ETH Zurich  | Switzerland          | —           |
| 4   | <a href="#">Evidence that cultural food practices of Adi women in Arunachal Pradesh, India, improve social-ecological resilience: insights for Sustainable Development Goals</a>      | Central Agricultural University, Guru Gobind Singh Indraprastha University  | India                | —           |
| 5   | <a href="#">The role of bioclimatic origin, residence time and habitat context in shaping non-native plant distributions along an altitudinal gradient</a>                            | ETH Zurich, Technical University of Munich  | Germany, Switzerland | —           |
| 6   | <a href="#">Invasive plant species and soil microbial response to wildfire burn severity in the Cascade Range of Oregon</a>   | Oregon State University, Pacific Northwest Research Station   | United States        | —           |
| 7   | <a href="#">Variation patterns of plant composition/diversity in <i>Dacrydium pectinatum</i> communities and their driving factors in a biodiversity hotspot on Hainan Island ...</a> | Institute of Forest Ecology, Environment and Protection, Institute of Forest Resource Information Techniques, State Forestry and Grassland Administration | China                | —           |
| 8   | <a href="#">Bark thickness equations for mixed-conifer forest type in Klamath and Sierra Nevada Mountains of California</a>   | Cal Poly Humboldt   | United States        | —           |
| 9   | <a href="#">Similar alpha yet varied beta functional diversities between invasive and native plant species along an elevational gradient</a>  | East China Normal University, Fanjingshan National Nature Reserve, Sun Yat-sen University   | China                | —           |
| 10  | <a href="#">Alien species importance in native vegetation along wadeable streams, John Day River basin, Oregon, USA</a>   | Consolidated Safety Services-Dynamac (United States)  | United States        | Influential |
| 11  | <a href="#">Private forest owners and invasive plants: risk perception and management</a>   | Pacific Northwest Research Station, Western Wildland Environmental Threat Assessment Center   | United States        | —           |
| 12  | <a href="#">Altitudinal patterns illustrate the invasion mechanisms of alien plants in temperate mountain forests of northern China</a>   | Shandong University, The University of Hong Kong  | China                | —           |
| 13  | <a href="#">Environmental gradients shift the direction of the relationship between native and alien plant species richness</a>   | Lincoln Agritech (New Zealand)  | New Zealand          | —           |

| No. | Citing paper  | Citing institution(s)  | Country       | S2                 |
|-----|---|--|---------------|--------------------|
| 14  | <a href="#">Priority effects: How the order of arrival of an invasive grass, <i>Bromus tectorum</i>, alters productivity and plant community structure when grown with native grass species</a> | Thompson Rivers University, University of Alberta  | Canada        | —                  |
| 15  | <a href="#">Trade-offs in forest disturbance management for plant communities and ungulates</a>   | Montana Fish, Wildlife & Parks, University of Montana  | United States | —                  |
| 16  | <a href="#">Evaluating the effects of forestry herbicides on fish development using rapid phenotypic screens</a>  | National Oceanic and Atmospheric Administration  | United States | —                  |
| 17  | <a href="#">Non-native plants and wildlife in the Inter-mountain West</a>   | Montana State University, Rocky Mountain Research Station  | United States | —                  |
| 18  | <a href="#">Linear declines in exotic and native plant species richness along an increasing altitudinal gradient in the Snowy Mountains, Australia</a>  | Australian National University, Griffith University  | Australia     | —                  |
| 19  | <a href="#">Evaluating landscape characteristics of predicted hotspots for plant invasions</a>  | Mississippi State University   | United States | —                  |
| 20  | <a href="#">Land use history alters the relationship between native and exotic plants: the rich don't always get richer</a>   | Smithsonian Environmental Research Center  | United States | —                  |
| 21  | <a href="#">Assessing the influence of historical factors, contemporary processes, and environmental conditions on the distribution of invasive species<sup>1</sup></a>                         | Harvard Forest Long Term Ecological Research, Harvard University   | United States | —                  |
| 22  | <a href="#">Where will Invasive Plants Colonize in Response to Climate Change: Predicting the Invasion of <i>Galinsoga quadriradiata</i> in China</a>   | Shaanxi Normal University  | China         | —                  |
| 23  | <a href="#"><i>Ventenata dubia</i></a>  | Rocky Mountain Research Station  | United States | —                  |
| 24  | <a href="#">Effects of land use and environment on alien and native macrophytes: Lessons from a large-scale survey of Australian rivers</a>   | Commonwealth Scientific and Industrial Research Organisation   | Australia     | —                  |
| 25  | <a href="#">Contrasting patterns of genetic variation and structure in plant invasions of mountains</a>   | ETH Zurich   | Switzerland   | —                  |
| 26  | <a href="#">Assessing the importance of disturbance, site conditions, and the biotic barrier for dandelion invasion in an Alpine habitat</a>  | Centro de Ciencias Ambientales EULA-Chile de la Universidad de Concepción  | Chile         | —                  |
| 27  | <a href="#">Non-native species distribution along the elevation gradient in the western Italian Alps</a>  | BIOCONNET, Biodiversity and Conservation Network, Dipartimento di Scienze Ambientali “G. Sarfatti”, Università di Siena , 53100, Siena, Italy, University of Turin | Italy         | —                  |
| 28  | <a href="#">Non-native vascular flora of alpine areas in the White Mountains, New Hampshire, USA</a>  | Division of Forests and Lands, Department of Natural and Cultural Resources, NH Natural Heritage Bureau, Con-  | United States | <b>Influential</b> |

| No. | Citing paper  | Citing institution(s)  | Country       | S2 |
|-----|---|--|---------------|----|
|     |   | cord, New Hampshire, USA, Massachusetts Natural Heritage and Endangered Species Program, USDA Forest Service |               |    |
| 29  | <a href="#">Risk assessment for biodiversity conservation planning in Pacific Northwest forests</a> | Western Wildland Environmental Threat Assessment Center  | United States | —  |
| 30  | <a href="#">Do local enemies attack alien and native Impatiens alike?</a>                           | Institute of Nature Conservation   Polish Academy of Sciences, University of Bielsko-Biala                   | Poland        | —  |

Showing the 30 most-cited of 101 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).

#### FOLLOW-UP WORK

### [Non-native species threaten the biotic integrity of the largest remnant Pacific Northwest Bunchgrass prairie in the United States](#)

2020 · 20 citations (GS)

| No. | Citing paper   | Citing institution(s)  | Country                    | S2 |
|-----|--|--|----------------------------|----|
| 1   | <a href="#">Mapping an invasive grass in the northwestern US with fused satellite time series and biophysical features</a>                                       | Oregon State University, Pacific Northwest Research Station, Rocky Mountain Research Station     | United States              | —  |
| 2   | <a href="#">Spatiotemporal patterns of rising annual plant abundance in grasslands of the western Pacific Northwest, USA (2023)</a>                              | Oeko Institut, University of Oregon  | Germany, United States     | —  |
| 3   | <a href="#">A decade-long study of repeated prescription burning in California native grassland restoration</a>  | San Diego Natural History Museum, San Diego State University, Western Ecological Research Center | United States              | —  |
| 4   | <a href="#">Does post-fire recovery of native grasses across abiotic-stress and invasive-grass gradients match theoretical predictions, in sagebrush steppe?</a> | Forest and Rangeland Ecosystem Science Center  | United States              | —  |
| 5   | <a href="#">Response of Exotic Plant Species to Forests Disturbances</a>   | Colorado State University, Korea University, United States Geological Survey                     | South Korea, United States | —  |
| 6   | <a href="#">Characterizing an Annual Grass Invasion and its Link to Environmental and Disturbance Factors Using Remote Sensing: New Tools and Applications</a>   | —  | —                          | —  |
| 7   | <a href="#">Draft Biogeoclimatic Zones and Subzones of the Western United States</a>   | BC Ministry of Forests, Meidinger Ecological Consultants Ltd.                                    | Canada                     | —  |

| No. | Citing paper   | Citing institution(s)                               | Country       | S2 |
|-----|--|---|---------------|----|
| 8   | <a href="#">Impact of Invasion by Annual Grasses on Mycorrhizal Inoculation Potential in a Grassland Ecosystem</a>                   | Washington State University                         | United States | —  |
| 9   | <a href="#">Annotated bibliography of scientific research on <i>Ventenata dubia</i> published from 2010 to 2020 (2021)</a>           | U.S. Geological Survey                              | United States | —  |
| 10  | <a href="#">Spatiotemporal patterns of rising annual plant abundance in grasslands of the Willamette Valley, Oregon (USA) (2023)</a> | Institute for Applied Ecology, University of Oregon | United States | —  |
| 11  | <a href="#">Ventenata dubia, ventenata (2022)</a>  | Rocky Mountain Research Station                     | United States | —  |
| 12  | <a href="#">Design of Bionic Knee Joint Structure Based on the Dynamics of Double Rocker Mechanism (2022)</a>                        | Southwest Jiao Tong University                      | China         | —  |

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).

#### FOLLOW-UP WORK

### [Contrasting distribution patterns of invasive and naturalized non-native species along environmental gradients in a semi-arid montane ecosystem](#)

2015 · 25 citations (GS)

| No. | Citing paper  | Citing institution(s)  | Country                       | S2 |
|-----|---|--|-------------------------------|----|
| 1   | <a href="#">Non-native plants in mountain ecosystems. An exploration of plant diversity and its response to road disturbance and alien invasion.</a>                                  | —  | —                             | —  |
| 2   | <a href="#">Invasive alien plant species dynamics in the Himalayan region under climate change</a>  | Asia Network for Sustainable Agriculture and Bioresources, Toi Ohomai Institute of Technology, University of New England | Australia, Nepal, New Zealand | —  |
| 3   | <a href="#">Urban sprawl facilitates invasions of exotic plants across multiple spatial scales</a>  | University of Udine  | Italy                         | —  |
| 4   | <a href="#">Plant diversity patterns along an elevation gradient: the relative impact of environmental and spatial variation on plant diversity and assembly in arid and semi ...</a> | Ningxia Helan Mountain Forest Ecosystem Research Station   | China                         | —  |
| 5   | <a href="#">Environmental filtering influences functional community assembly of epibenthic communities</a>  | UiT The Arctic University of Norway, University of Alaska Fairbanks  | Norway, United States         | —  |
| 6   | <a href="#">Alien plant species that invade high elevations are generalists: Support for the directional ecological filtering hypothesis</a>  | Kiel University, University of Pretoria  | Germany, South Africa         | —  |
| 7   | <a href="#">Diversity and distribution of invasive alien plant species along elevation gradient in Makawanpur district, central Nepal</a>   | Fujian Agriculture and Forestry University   | China                         | —  |

| No. | Citing paper   | Citing institution(s)   | Country        | S2 |
|-----|--|---|----------------|----|
| 8   | <a href="#">Revealing how human activity and native plants outshine climate in shaping new invasive alien plant elevational patterns in nature reserves</a>                                | State Key Laboratory of Environmental Standards and Risk Assessment   | China          | —  |
| 9   | <a href="#">Consistent sorting but contrasting transition zones in plant communities along bioclimatic gradients</a>   | Charles Darwin University, Curtin University, Department of Biodiversity, Conservation and Attractions          | Australia      | —  |
| 10  | <a href="#">Climate projections and the future of invasive plants in the Caatinga</a>  | Universidade Federal do Rio Grande do Norte   | Brazil         | —  |
| 11  | <a href="#">Elevational distribution of alien plant species in the Western Caucasus</a>  | Caucasian State Nature Biosphere Reserve, Maykop State Technological University                                 | Russia         | —  |
| 12  | <a href="#">Diversity and distribution of invasive plant species in suburban vegetation of Kashmir Himalayas</a>   | University of Swat  | Pakistan       | —  |
| 13  | <a href="#">Graminoid invasion in an insular endemism hotspot and its protected areas</a>  | Goethe University Frankfurt, Instituto de Productos Naturales y Agrobiología, University of Bayreuth            | Germany, Spain | —  |
| 14  | <a href="#">Высотное распространение чужеродных видов растений на Западном Кавказе</a>   | Caucasian State Natural Biosphere Reserve named after Kh.G. Shaposhnikov, Maikop State Technological University | Russia         | —  |
| 15  | <a href="#">Identifying habitats and corridors of an invasive plant, <i>Ageratina altissima</i>, in an urban forest</a>  | Cheongju University, Chung-Ang University, Korea University   | South Korea    | —  |
| 16  | <a href="#">Biological control of natural herbivores on ambrosia species at Liaoning Province in northeast China.</a>  | Shenyang Agricultural University  | China          | —  |
| 17  | <a href="#">Leaf traits of the invasive species <i>Bartlettina sordida</i> (Less.) RM King naturalized in Cibodas hiking trail, Mt. Gede Pangrango National Park, West Java, Indonesia</a> | BRIN  | Indonesia      | —  |
| 18  | <a href="#">ENVIRONMENTAL AND HUMAN INFLUENCES ON INDIGENOUS PLANT COMMUNITY STRUCTURE OF EMBOBUT FOREST RESERVE IN ELGEYO MARAKWET ...</a>  | University of Eldoret   | Kenya          | —  |
| 19  | <a href="#">CO-OCCURENCE ANALYSIS AND SPECIES DISTRIBUTION MODEL IN THE BLUE RIDGE PARKWAY FOR THE MANAGEMENT OF INVASIVE PLANT SPECIES</a>  | Appalachian State University  | United States  | —  |
| 20  | <a href="#">MOUNTAIN ROADS AND THE HOMOGENIZATION OF PLANTS. A study on plant communities and their traits along the elevational gradient.</a>   | Chinese Academy of Sciences   | China          | —  |
| 21  | <a href="#">Phytochemical screening, GC-MS profiling of invasive cocklebur (<i>Xanthium strumarium</i>)-in-</a>  | Shenyang Agricultural University  | China          | —  |

| No. | Citing paper  | Citing institution(s)   | Country       | S2 |
|-----|---|---|---------------|----|
|     | <a href="#">sect-pathogen interaction and simulated volatile chemical signaling at ...</a>                                    |   |               |    |
| 22  | <a href="#">Exotic plant invasion in agricultural landscapes: A matter of dispersal mode and disturbance intensity</a> (2018) | Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali di Legnaro, University of Udine | Italy         | —  |
| 23  | <a href="#">Interactions between bee species in relation to floral resources</a> (2017)                                       | —   | —             | —  |
| 24  | <a href="#">Plant and arthropod associations with environmental gradients in a northern tallgrass prairie</a> (2016)          | The University of North Dakota  | 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 isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

### Contribution 3

#### Claim – Contribution 3

*The researcher developed a multiscale aerial detection framework for sulfur cinquefoil, establishing a methodological foundation for subsequent long-term ecological and landscape-level studies of this invasive species.*

The researcher's contribution centers on the 2005 paper 'Multiscale detection of sulfur cinquefoil using aerial photography,' which appears to introduce a novel remote sensing approach for identifying this invasive plant. This core work serves as the methodological anchor for a broader research line focused on the ecology and management of *Potentilla recta*.

This line of work addresses the challenge of monitoring invasive species across varying spatial scales. The chronology suggests a progression from initial detection capabilities to understanding broader ecological dynamics, as evidenced by follow-up studies on landscape factors influencing abundance (2007) and long-term grassland responses to treatment (2012). The titles indicate a shift from pure detection to evaluating management efficacy and environmental drivers.

The significance of this contribution is reflected in its sustained academic uptake. The core paper has accumulated 21 citations, while the follow-up studies have garnered 26 and 36 citations respectively. Notably, 88.3% of the scholar's total citations originate from independent researchers, suggesting that this methodological and ecological framework has been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 59 · 4 flagged influential by Semantic Scholar

#### CORE PAPER

#### [Multiscale detection of sulfur cinquefoil using aerial photography](#)

2005 · 21 citations (GS)

| No. | Citing paper   | Citing institution(s)     | Country        | S2 |
|-----|--|---------------------------|----------------|----|
| 1   | <a href="#">Pollination Biology of <i>Potentilla recta</i> (Sulfur Cinquefoil) and Its Cooccurring Native Congener <i>Potentilla gracilis</i> in Northeastern Oregon</a> | Eastern Oregon University | United States  | —  |
| 2   | <a href="#">A review of potential methods for monitoring rangeland degradation in Libya</a>  | Cranfield University      | United Kingdom | —  |

| No. | Citing paper   | Citing institution(s)   | Country                | S2 |
|-----|--|---|------------------------|----|
| 3   | <a href="#">Ecological sustainability in rangelands: the contribution of remote sensing</a>  | Ben-Gurion University of the Negev, The Volcani Centre, University of Southampton | Israel, United Kingdom | —  |
| 4   | <a href="#">Aerial-image denoising based on convolutional neural network with multi-scale residual learning approach</a>   | Shanghai University of Engineering Science  | China                  | —  |
| 5   | <a href="#">A geographical approach to optimization of response to invasive species</a>  | University of Iowa, University of North Carolina at Chapel Hill                   | United States          | —  |
| 6   | <a href="#">Targeted sheep grazing to suppress sulfur cinquefoil (<i>Potentilla recta</i>) on northwestern Montana rangeland (2017)</a>                          | Montana State University  | United States          | —  |
| 7   | <a href="#">Sulfur cinquefoil (<i>Potentilla recta</i>) response to defoliation on foothill rangeland (2012)</a>   | Montana State University  | United States          | —  |
| 8   | <a href="#">Demography of sulfur cinquefoil (<i>Potentilla recta</i>) in a northern Rocky Mountain grassland (2010)</a>  | University of Montana   | United States          | —  |
| 9   | <a href="#">Examining best management practices to control the invasion of <i>Potentilla recta</i> within northern intermountain grasslands (2022)</a>           | University of Saskatchewan  | Canada                 | —  |
| 10  | <a href="#">Transgenerational Effects of Kin Recognition in Plants: Soil Conditioning by an Invasive Plant (2021)</a>  | —   | —                      | —  |
| 11  | <a href="#">Suppression of <i>Potentilla recta</i> by targeted goat grazing and aminopyralid on northern intermountain rangelands (2022)</a>                     | University of Saskatchewan  | Canada                 | —  |
| 12  | <a href="#">Detecting medusahead (<i>Taeniatherum caput-medusae</i> (L.) Nevski) using high frequency, sequential, globally positioned digital images (2011)</a> | Oregon State University   | United States          | —  |
| 13  | <a href="#">Rangelands and Grazing (2014)</a>  | USDA ARS  | 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 isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

## FOLLOW-UP WORK

### [Grassland response to herbicides and seeding of native grasses 6 years posttreatment](#)

2012 · 36 citations (GS)

| No. | Citing paper  | Citing institution(s)   | Country       | S2                 |
|-----|---|---|---------------|--------------------|
| 1   | <a href="#">Using revegetation to suppress invasive plants in grasslands and forests</a>                                  | Department of Forest Resources University of Minnesota St. Paul Minnesota | —             | —                  |
| 2   | <a href="#">Evaluating native plant community characteristics after restoration efforts in invaded tallgrass prairies</a> | Earlham College, University of Illinois Urbana-Champaign                  | United States | <b>Influential</b> |

| No. | Citing paper  | Citing institution(s)  | Country                       | S2          |
|-----|---|--|-------------------------------|-------------|
| 3   | <a href="#">Assessing factors mediating restoration outcomes of herbicide followed by native seeding in invaded tallgrass prairies</a>                          | University of Illinois at Urbana-Champaign   | United States                 | —           |
| 4   | <a href="#">Examining best management practices to control the invasion of <i>Potentilla recta</i> within northern intermountain grasslands</a>                 | University of Saskatchewan   | Canada                        | —           |
| 5   | <a href="#">A synthesis of plant invasion control: important factors to consider when choosing a control method</a>   | Andong National University   | South Korea                   | —           |
| 6   | <a href="#">Strong indirect herbicide effects on mycorrhizal associations through plant community shifts and secondary invasions</a>                            | Masaryk University, MPG Ranch  | Czech Republic, United States | —           |
| 7   | <a href="#">Effectiveness of burning, herbicide, and seeding toward restoring rangelands in southeastern North Dakota</a>                                       | North Dakota State University, Williston State College   | United States                 | Influential |
| 8   | <a href="#">Direct and indirect effects of plant diversity and phenoxy herbicide application on the development and reproduction of a polyphagous herbivore</a> | University of Münster  | Germany                       | —           |
| 9   | <a href="#">Long-term effects of prairie restoration on plant community structure and native population dynamics</a>  | Fred Hutchinson/University of Washington/Seattle Children's Cancer Consortium, Institute for Applied Ecology, University of British Columbia | Canada, United States         | —           |
| 10  | <a href="#">Do no harm: efficacy of a single herbicide application to control an invasive shrub while minimizing collateral damage to native species</a>        | Southern Illinois University Carbondale  | United States                 | —           |
| 11  | <a href="#">Bird and arthropod response to herbicide and grazing: Trade-offs and time lags in invasive plant management</a>                                     | Earlham College, Montana State University, University of Illinois at Urbana-Champaign  | United States                 | —           |
| 12  | <a href="#">Cutting, herbicide, and fire: a case study for managing woody plants in tallgrass prairies</a>  | Agricultural Research Service, The Johns Hopkins University, University of North Carolina at Greensboro                                      | United States                 | —           |
| 13  | <a href="#">A systematic review and meta-analysis of Old-World bluestem control in the United States</a>  | North Dakota State University, Texas Parks and Wildlife Department, York University  | Canada, United States         | —           |
| 14  | <a href="#">Efficacy of labile carbon addition to reduce fast-growing, invasive non-native plants: A review and meta-analysis</a>                               | New Mexico State University, The University of Arizona   | United States                 | —           |
| 15  | <a href="#">The combination of aminopyralid and metsulfuron is an effective post-seeding strategy to restore native grassland in Canadian Aspen Parkland</a>    | University of Alberta  | Canada                        | —           |
| 16  | <a href="#">Seeding causes long-term increases in grass forage production in invaded rangelands</a>   | Fort Keogh Livestock and Range Research Labora-  | United States                 | —           |

| No. | Citing paper   | Citing institution(s)  | Country       | S2          |
|-----|--|--|---------------|-------------|
|     |  | tory, Missoula County Public Schools, Montana State University |               |             |
| 17  | <a href="#">Native plant establishment success influenced by spotted knapweed (<i>Centaurea stoebe</i>) control method</a>   | Grand Valley State University                                  | United States | —           |
| 18  | <a href="#">Minimal persistence of native bunchgrasses seven years after seeding following mastication and prescribed fire in southwestern Oregon, USA</a>                               | Bureau of Land Management, Southern Oregon University          | United States | Influential |
| 19  | <a href="#">Chemical Load: An Unseen Herbicide Filter in Restored Prairies?</a>  | South Dakota State University                                  | United States | —           |
| 20  | <a href="#">Combining Herbicides and Fertilizers to Enhance Control of Leafy Spurge (<i>Euphorbia virgata</i> Wald &amp; Kit)</a>  | University of Saskatchewan                                     | Canada        | —           |
| 21  | <a href="#">THE INVASION OF ANNUAL GRASSES BROMUS TECTORUM AND VENTENATA DUBIA IN THE AMERICAN WEST: COMPETITION AND MANAGEMENT</a>  | Montana State University                                       | United States | —           |
| 22  | <a href="#">Suppression of <i>Potentilla recta</i> by targeted goat grazing and aminopyralid on northern intermountain rangelands</a>  | University of Saskatchewan                                     | Canada        | —           |
| 23  | <a href="#">Aboveground native plant biomass reduces <i>Potentilla recta</i> growth: the role of a productive native plant community to mitigate reinvasion from the seedbank of ...</a> | University of Guelph, University of Saskatchewan               | Canada        | —           |
| 24  | <a href="#">Restoration of Australian Subtropical grasslands</a>   | The University of Queensland                                   | Australia     | —           |
| 25  | <a href="#">Plant and Soil Characteristics of Rangelands Improved with Different Methods.</a>  | Van Yüzüncü Yıl Üniversitesi                                   | Turkey        | —           |
| 26  | <a href="#">Native Plant Establishment Success Influenced by <i>Centaurea stoebe</i> Control Method</a>  | Grand Valley State University                                  | United States | —           |
| 27  | <a href="#">La aplicación de herbicidas sistémicos de amplio espectro en pastizales naturales: efectos sobre los atributos y procesos del ecosistema</a>                                 | Universidad de Buenos Aires                                    | Argentina     | —           |
| 28  | <a href="#">Elevation gradient drives distribution of soil carbon in a semiarid grassland of British Columbia (2023)</a>   | BC Ministry of Forests, University of British Columbia         | Canada        | —           |
| 29  | <a href="#">DOES TIMING OF HERBICIDE USE INFLUENCE RATES OF GERMINATION OR SEEDLING BIOMASS OF NATIVE PLANTS USED FOR RESTORATION? (2017)</a>  | University of Montana  | 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 isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

## ■ FOLLOW-UP WORK

## Landscape factors influencing the abundance and dominance of the invasive plant *Potentilla recta*

2007 - 26 citations (GS)

| No. | Citing paper  | Citing institution(s)   | Country                  | S2          |
|-----|---|---|--------------------------|-------------|
| 1   | <a href="#">Demography of sulfur cinquefoil (<i>Potentilla recta</i>) in a northern Rocky Mountain grassland</a>  | University of Montana   | United States            | —           |
| 2   | <a href="#">Seeding causes long-term increases in grass forage production in invaded rangelands</a>   | Fort Keogh Livestock and Range Research Laboratory, Missoula County Public Schools, Montana State University                                    | United States            | —           |
| 3   | <a href="#">Aboveground native plant biomass reduces <i>Potentilla recta</i> growth: the role of a productive native plant community to mitigate reinvasion from the seedbank of ...</a>    | University of Guelph, University of Saskatchewan  | Canada                   | —           |
| 4   | <a href="#">The role of topographic and soil factors on woody plant encroachment in mountainous rangelands: A mini literature review</a>  | University of Fort Hare, University of Limpopo  | South Africa             | Influential |
| 5   | <a href="#">Effects of surrounding landscape on the performance of <i>Solidago canadensis</i> L. and plant functional diversity on heavily invaded post-agricultural wastelands</a>         | University of Siedlce, University of Warsaw   | Poland                   | —           |
| 6   | <a href="#">Native congeners provide biotic resistance to invasive <i>Potentilla</i> through soil biota</a>   | Australian Tropical Herbarium, Biology Department, California State University, San Bernardino, California 92407 USA, The University of Montana | Australia, United States | —           |
| 7   | <a href="#">Slope aspect of a mountainous grassland landscape shapes the structure of an encroaching shrub (<i>Euryops floribundus</i> NE Br): insights from communal grazing sites ...</a> | University of Limpopo   | South Africa             | —           |
| 8   | <a href="#">Are dominant plant species more susceptible to leaf-mining insects? A case study at Saihanwula Nature Reserve, China</a>  | Gannan Normal University, Saihanwula National Nature Reserve Administration   | China                    | —           |
| 9   | <a href="#">Human infrastructure and invasive plant occurrence across rangelands of southwestern Wyoming, USA</a>   | Colorado State University, Fort Collins Science Center  | United States            | —           |
| 10  | <a href="#">Pollination Biology of <i>Potentilla recta</i> (Sulfur Cinquefoil) and Its Cooccurring Native Congener <i>Potentilla gracilis</i> in Northeastern Oregon</a>                    | Eastern Oregon University   | United States            | —           |
| 11  | <a href="#">Agronomic evaluation of the growth and productivity of different grass varieties under variable slope conditions</a>  | Instituto Nacional de Investigaciones Agropecuarias   | Ecuador                  | —           |
| 12  | <a href="#">Canyon Grasslands of the Hells Canyon National Recreation Area: How have they</a>   | —   | —                        | —           |

| No. | Citing paper   | Citing institution(s)   | Country       | S2 |
|-----|--|---|---------------|----|
|     | <a href="#">changed over time and what is their future trajectory?</a>   |   |               |    |
| 13  | <a href="#">Do populations of an invasive weed differ greatly in their per-gram competitive effects?</a>   | Agricultural Research Service, University of Alaska Anchorage | United States | —  |
| 14  | <a href="#">OUTCOMES OF INVASIVE PLANT-NATIVE PLANT INTERACTIONS IN NORTH AMERICAN FRESHWATER WETLANDS: A FORE-GONE CONCLUSION?</a>                              | —   | —             | —  |
| 15  | <a href="#">Regional and Historical Influences on Exotic Plant Invasions</a>   | Harvard University  | United States | —  |
| 16  | Modelování potenciálního šíření invazních druhů rostlin v ČR: Porovnání metod a jejich implementací, dostupnost dat a vliv ekologie druhu na přesnost ... (2009) | —   | —             | —  |
| 17  | Modelování potenciálního šíření invazních druhů rostlin v ČR: Porovnání metod a jejich implementací, dostupnost dat a vliv ekologie druhu na přesnost ... (2009) | —   | —             | —  |

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 |
|---|----------------|---|---------------|
| Oregon State University                             | United States  | SCImago #1028 · QS =624                   | 78            |
| Pacific Northwest Research Station                  | United States  | —   | 59            |
| Universidad Nacional Autónoma de México             | México         | SCImago #337 · QS 136                     | 54            |
| Instituto de Investigaciones de la Amazonía Peruana | Peru           | —   | 45            |
| Eastern Oregon University                           | United States  | —   | 41            |
| University of Hawai'i at Mānoa                      | United States  | THE 251–300 · QS =546                     | 36            |
| George Mason University                             | United States  | SCImago #1399 · THE 401–500 · QS 951-1000 | 34            |
| Zoological Society of San Diego                     | United States  | —   | 33            |
| University of California, Irvine Medical Center     | United States  | —   | 32            |
| Montana State University                            | United States  | THE 1001–1200                             | 28            |
| University of St Andrews                            | United Kingdom | SCImago #1863 · THE =162 · QS 113         | 27            |

| Institution                                      | Country       | World ranking                     | Citing papers |
|--|---------------|-----------------------------------|---------------|
| University of Florida                            | United States | SCImago #166 · THE =134 · QS =212 | 27            |
| Universidade Federal de Minas Gerais             | Brazil        | SCImago #739                      | 23            |
| Universidad Michoacana de San Nicolás de Hidalgo | Mexico        | SCImago #6542 · THE 1501+         | 22            |
| Universidad Nacional de Colombia                 | Colombia      | SCImago #1740 · QS =259           | 21            |

## Geographic distribution of citing authors

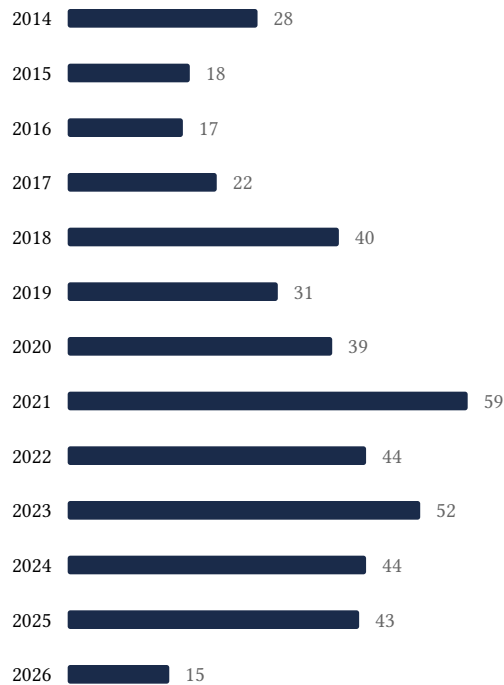
| Country        | Citing papers |
|----------------|---------------|
| United States  | 597           |
| Brazil         | 198           |
| Mexico         | 127           |
| United Kingdom | 121           |
| Peru           | 108           |
| Colombia       | 86            |
| China          | 76            |
| Canada         | 74            |
| Germany        | 69            |
| Australia      | 58            |
| Spain          | 56            |
| France         | 53            |

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

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### 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

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

| <b>Contribution</b> | <b>Core paper</b>  | <b>Indep. cites</b> | <b>Supports</b>                    |
|---------------------|--|---------------------|------------------------------------|
| Contribution 1      | Sustainability of a non-timber forest product: Effects of alternative leaf harvest practices over 6 years on yield and demography of the palm <i>Chamaedorea radicalis</i> | 346                 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |
| Contribution 2      | Natural and land-use history of the Northwest mountain ecoregions (USA) in relation to patterns of plant invasions   | 137                 | 8 CFR 204.5(h)(3)(v) – Criterion 5 |
| Contribution 3      | Multiscale detection of sulfur cinquefoil using aerial photography   | 59                  | 8 CFR 204.5(h)(3)(v) – Criterion 5 |