

ANTHONY S. AMEND
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DEPARTMENT OF BOTANY
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PROFESSIONAL APPOINTMENTS

2016-present

Associate Professor
University of Hawai'i at Mānoa, Department of Botany

2011-2016

Assistant Professor
University of Hawai'i at Mānoa, Department of Botany

2011-2012

NOAA Post-Doctoral Fellow in Jennifer Hughes Martiny's Microbial Ecology and Global Change Laboratory, UC Irvine

2008-2010

Post-Doctoral Researcher in Thomas D. Bruns' Fungal Ecology and Evolution Laboratory, UC Berkeley

EDUCATION

2003-2008

University of Hawai'i at Manoa
PhD-Department of Botany

1995-1999

Cornell University
BA-College Scholar Program, Mycology Focus
BA-Anthropology (*cum laude*)

PUBLICATIONS¹

¹ All proofed publications are available for download at www.amendlab.com

† Post-Doc co-author

* Graduate Student co-author

§ Undergraduate Student co-author

29) Datlof, E.M., **Amend, A.S.**, Earl, K. *, Hayward, J., Morden, C.W., Wade, R., Zahn, G. † and Hynson, N.A., (2017) Uncovering unseen fungal diversity from plant DNA banks. *PeerJ*, **5**, e3730

28) Wainwright, B.J†, G. Zahnt, H. Spadling, A. Sherwood, C. Smith **A.S. Amend** (2017) Fungi Associated with mesophotic macroalgae from the 'Au'au Channel, west Maui are differentiated by host and overlap terrestrial communities. *PeerJ* **5**, e3532

27) O'Rorke, R.†, B.S. Holland, G.M. Cobian*, K. Gaughen§, **A.S. Amend** (2017) Not just browsing; an animal that grazes microbes facilitates community invasions and instability. *ISME Journal*. **11**, 1788-1798

26) Price M.R., R. O'Rorket, **A.S. Amend**, M.G. Hadfield (2016) Diet selection at three scales: implications for conservation of an endangered Hawaiian tree snail. *Biotropica*. **49**(1) 130-136

25) O'Rorke, R†, B.S. Holland, G.M. Cobian*, K. Gaughen§, **A.S. Amend** (2016) Dietary preferences of Hawaiian tree snails to inform culture for conservation. *Biological Conservation*. **198** 177-182

24) Tishammer K*, G.M. Cobian* and **A.S. Amend** (2015) Global Biogeography of Marine Fungi is Shaped by Environmental Determinates. *Fungal Ecology* **19** 39-46

23) **Amend A.S.**, A. Martiny, S. Allison, R. Berlemont, M. Goulden, Y. Lu, K.K. Treseder, C. Weihe and J.B.H. Martiny (2015) Microbial response to simulated global change is phylogenetically conserved and linked with functional potential. *ISME Journal* **10** 109-118

22) Matulich K.L., C. Weihe, S.D. Allison, **A.S. Amend**, R. Berlemont, M.L. Goulden, S. Kimball, A.C. Martiny, J.B.H. Martiny (2015) Temporal variation overshadows the response of leaf litter microbial communities to simulated global change. *ISME Journal* **9** 2477-2489

21) **Amend A.S.**, K. Matulich and J. Martiny (2015) Nitrogen addition, not initial phylogenetic diversity, increases litter decomposition by fungal communities. *Frontiers in microbiology* **6**. 109.

20) O'Rorke, R.†, G.M. Cobian*, B.S. Holland, M.R. Price, V. Costello and **A.S. Amend** (2015) Dining local: the microbial diet of a snail that grazes microbial communities is geographically structured. *Environmental Microbiology* **17**(5) 1753-1764

19) **Amend, A.S.** (2014) From dandruff to deep sea vents: *Malassezia*-like fungi are ecologically hyper-diverse. *PLoS Pathogens* **10**(8):e1004277

18) Visagie, C.M., Y. Hirooka, J.B. Tanney, E. Whitfield, K. Mwange, M. Meijer, **A.S.**

- Amend**, K.A. Seifert, and R.A. Samson (2014) *Aspergillus*, *Penicillium* and *Talaromyces* isolated from house dust samples collected around the world. *Studies in Mycology* **78** 63-139
- 17) Mouginit C., R. Kiwamura, K. Matulich, R. Berlemont, S.D. Allison, **A.S. Amend**, A.C. Martiny, (2014) Elemental stoichiometry of Fungi and Bacteria strains from grassland leaf litter. *Soil Biology and Biochemistry* **76** 278-285
- 16) Adams RI, **A.S. Amend**, J.W. Taylor, T.D. Bruns (2013) A Unique Signal Distorts the Perception of Species Richness and Composition in High-Throughput Sequencing Surveys of Microbial Communities: a Case Study of Fungi in Indoor Dust. *Microbial Ecology* **66**(4) 735-741
- 15) Bengtsson-Palme, J., M. Ryberg, M. Hartmann, S. Branco, Z. Wang, A. Godhe, P. DeWit, M. Sanchez-Garcia, I. Ebersberger, F. Sousa, **A.S. Amend**, A. Jumpponen, M. Unterseher, E. Kristiansson, K. Abarenkov, Y.J.K. Bertrand, K. Sanli, K. M. Eriksson, U. Vik, V. Veldre and R. H. Nilsson (2013) Improved software detection and extraction of internal transcribed spacer (ITS)1 and ITS2 from ribosomal ITS sequences of fungi and other eukaryotes for analysis of environmental sequencing data. *Methods in Ecology and Evolution* **4**(10) 914-919
- 14) Kerekes, J., M. Kaspari, B. Stevenson, R. Henrik Nilsson, M. Hartmann, **A.S. Amend**, and T.D. Bruns (2013) Nutrient enrichment increased species richness of leaf litter fungal assemblages in a tropical forest. *Molecular Ecology* **22**(10) 2827-2838
- 13) Salick, J., R. K. Moseley and contributing authors: **A.S. Amend**, D. Anderson, A. Byg, W. Law, Ma J., N.J. Ross, Y. Yongping (2012) Khawa Karpo conservation research. In: Salick, J., R. K. Moseley (Eds.) Khawa Karpo: Tibetan traditional knowledge and biodiversity conservation. *Missouri Botanical Garden Press*, St. Louis, USA.
- 12) **Amend, A.S.**, T.A. Oliver, L.A. Amaral-Zettler, A. Boetius, J.A. Fuhrman, M.C. Horner-Devine, S.M. Huse, D.B.M. Welch, A.C. Martiny, A. Ramette, L. Zinger, M.L. Sogin, J.H. Martiny (2012) Macroecology of marine bacteria on a global scale. *Journal of Biogeography* **40**(4) 800-811.
- 11) **Amend, A.S.**, D.J., Barshis, T.A. Oliver (2011) Community Structure, Transcriptomics and Phylogenetics of Symbiotic Coral-Associated Fungi Indicate Novel Nutritional Roles and Deep-Branching Lineages. *ISME Journal*. **6**(7) 1291-1301
- 10) Hynson, N.A., S. Mambelli, **A.S. Amend**, T.E. Dawson (2011) Measuring carbon gains from fungal networks in understory plants from the tribe Pyroleae (Ericaceae): a field manipulation and stable isotope approach. *Oecologia*. **169**(2) 307-317
- 9) **Amend, A.S.**, K.A. Seifert, R. Samson, T. D. Bruns (2010) Indoor Fungal Assemblages are Geographically Patterned and More Diverse in Temperate Zones

than the Tropics. *Proceedings of the National Academy of Sciences USA* **107**(31) 13748-13753

8) **Amend, A. S.**, K.A. Seifert, T. D. Bruns (2010) Quantifying Microbial Communities with 454 Pyrosequencing: Does Read Abundance Count? *Molecular Ecology*. **19**(24) 5555-5565

7) R.H. Nilsson, V. Veldre, M. Hartmann, M. Unterseher, **A.S. Amend**, J. Bergsten, E. Kristiansson, M. Ryberg, A. Jumpponen, K. Abarenkov (2010) An Open Source Software Package for Rapid, Automated Extraction of *ITS1* and *ITS2* from Fungal *ITS* Sequences for use in High-Throughput Community Assays and Molecular Ecology. *Fungal Ecology* **3**(4) 284-287

6) **Amend, A.S.**, Z. Fang, W. McClatchey (2010) Local Perceptions of Matsutake Mushroom Management, in NW Yunnan China. *Biological Conservation* **143**(1) 165-172

5) **Amend, A.S.**, M. Garbelotto, Z. Fang, S. Keeley (2010) Isolation by Landscape in Populations of the Prized Edible Mushroom *Tricholoma matsutake*. *Conservation Genetics* **11**(3) 795-802

4) **Amend, A.S.**, S. Keeley, M. Garbelotto (2009) Forest Age Correlates with Fine-Scale Spatial Structure of Matsutake Mycorrhizas. *Mycological Research* **113**(5) 541-550

3) Salick, J., **A.S. Amend**, D. Anderson, B. Gunn, Z. Fang (2007) Tibetan Sacred Sites Conserve Old Growth Forests and Cover in the Eastern Himalayas. *Biodiversity and Conservation* **16**(3) 693-706

2) Salick, J., A. Byg, **A.S. Amend**, B. Gunn, H. Schmidt (2006) Tibetan Medicine Plurality. *Economic Botany* **60**(3) 227-253

1) Salick, J., Yang Y. P., **A.S. Amend** (2005) Tibetan land use and change near Khawa Karpo, Eastern Himalayas. *Economic Botany* **59**(4) 312-325

MANUSCRIPTS IN REVIEW AND IN REVISION

Zahn, G.† and **A.S. Amend** (2017) Total foliar microbiome transplants confer disease resistance and survival to a critically-endangered Hawaiian endemic. *PeerJ* **In Review**

G Cobian*, Á Láruson, K Remple, S Tucker, K Poff, C Antaky, A Boraks*, C Jones, D Kuehu, B Lensing, M Pejhanmehr, D Richardson, P Riley, **AS Amend**. Divergent impact of space and plant part in distinguishing bacterial and fungal phytobiomes. *ISME Journal* **In Review**

SELECTED AWARDS AND GRANTS

2016-2020

Collaborative Research: Plant and Fungal Diversity of Tafea Province, Vanuatu, a Threatened Pacific Hotspot. **National Science Foundation**, BIO DEB. Co-Principal investigator: \$212,624 to UH

2016

Stabilization of *Phylostegia kaalensis* using fungal foliar endophytes. **US Army Natural Resources Program**. Principal Investigator: \$40,055

2012-2016

Collaborative Research: Evolution and diversity of foliar fungal endophytes in native Hawaiian plants. **National Science Foundation**, BIO DEB. Principal investigator: \$449,997 to UH

2015

Does the introduction of tree snails cause community level succession in the phyllosphere? A short-term longitudinal study, **DLNR DOFAW**. Principal Investigator: \$4,400

2012-2016

Molecular detection of the fungal diet of the critically endangered Hawaiian tree snail *Achatinella mustelina*. **US Army Natural Resources Program**. Principal Investigator: \$301,599

2010-2012

A phylogenetic framework to predict microbial composition and function under global climate change **National Oceanic and Atmospheric Administration, C and GC program**. Fellow: ~ \$130,000

Earlier

| | | |
|---------------|---|-----------------|
| 2008 | University of Hawaii Graduate Student Association Award | \$2,500 |
| 2007 | ARCS Fellowship in Conservation Biology | \$10,000 |
| 2007 | Genetics Society of America Travel Scholarship | \$350 |
| 2006 | Richard Evans Schultes Award, Society for Economic Botany | \$1,500 |
| 2006 | Dai Ho Chun Research Award | \$4,000 |
| 2005/6 | Arts and Sciences Alumni Association Award | \$2,500, \$2500 |
| 2005 | Ecology Evolution and Conservation Biology Research Grant | \$1,500 |
| 2005 | BP Conservation Programme award | \$12,500 |
| 2003 | Beatrice Krauss Research Grant | \$500 |

COURSES TAUGHT

Botany 105, Introductory Ethnobotany
 Botany 454, Natural History of the Hawaiian Islands
 Botany 662, High Throughput Sequencing Approaches for Ecology and Evolution
 Botany 612, The Ecology of Fungal Symbiosis

SELECTED PRESENTATIONS (*INVITED)

2017 Fungal Genetics, Asilomar, CA*
2016 Mycological Association of America, Berkeley, CA
2015 Mycological Association of America/Botanical Society of America, Edmonton, Canada
2014 Ecology Evolution and Conservation Biology program seminar
2014 Oahu Army Natural Resources Program Information Transfer*
2013 University of Hawaii, Manoa Astrobiology Institute*
2013 Hawaiian Ecosystems Meeting, UH Hilo
2012 University of Hawaii, Manoa, Depts. of Biology and Botany*
2011 UC Riverside, Dept. of Biology*
2011 Mycological Society of America, Fairbanks, AK
2011 Symposium on Symbioses, UC Sierra Nevada Research Institute*
2011 University of Hawaii, Dept. of Botany*
2010 Sonoma State University, Dept. of Biology *
2010 International Mycological Congress, Edinburgh, UK *
2010 UC Berkeley, Dept. of Environmental Science Policy and Management *
2010 UC Berkeley, Dept. of Plant and Microbial Biology *
2009 Bay Area Mycological Society *
2009 UC Irvine, Dept. of Ecology and Evolutionary Biology *
2009 Alfred P. Sloan Foundation Indoor Environment Workshop, Chicago, IL *
2009 UNITE/NordForsk Network Meeting, Helsinki Finland *
2009 Agriculture and Agrifoods Canada, Ottawa, Canada *
2009 Mycological Society/Botanical Society of America, Penn State University
2008 Botanical Society of America, Vancouver Canada
2008 Mycological Society of America, Snowbird, UT
2007 University of Hawaii, Ecology Evolution and Conservation Biology Seminar
2007 University of Copenhagen, Copenhagen, Denmark *
2006 International Conference of Mycorrhiza, Granada, Spain
2006 Society for Economic Botany, Chiang Mae, Thailand
2005 2nd Annual Matsutake Festival, Zhongdian, China *
2005 University of Hawaii Dept. of Botany Seminar
2004 International Congress of Ethnobiology, University of Kent, Canterbury, UK

GUEST LECTURES

2016 Botany Graduate Seminar (Bot 610)
2015/2016 Advanced Topics in Marine Biology (Bot 404)
2016/2017 Freshman Botany Seminar (Bot 100)

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| 2014/2015 | Sophomore Botany Seminar (Bot 200) |
| 2014/2016 | Plant Ecology (Bot 454) |
| 2014/2015 | Introductory Ethnobotany Honors (Bot 105a) |
| 2013 | Ecological Statistics with R (Bot 612) |
| 2013/2014/2015 | Plant Ecology (Bot 454) |
| 2012 | Topics in Biocultural Diversity and Conservation (IS 750) |

GRADUATE STUDENT COMMITTEES *ADVISEE

Erin Datlof (MS), Vithangage Nipuni Shalika Srimalwatta (PhD), Emily Johnston (PhD), Emily Johnston (PhD), Christopher Wall (PhD), Jerry Koko (PhD), Rachel Wade (PhD), Shayle Matsuda (PhD), Kirsten Poff (PhD), Kamala Earl (MS)*, Gerry Cobian (PhD)*, Andre Boraks (PhD)*, Mason Kamalii Chock (MS)*

UNDERGRADUATE MENTEES

* PAID RESEARCHERS/REU, † UROP, § RESEARCH CREDIT, ¹ HONORS

Katie Lund^{§†}, Kapono Gaughen[§], Matthew Rademacher^{§*}, Brooke Sedelmeyr[§], Benjamin Hoyt^{§†}, Kayani Singh, Tyler Nardone^{*}, Alysha Mena^{*}, Lauren Calkins[§], Leo Louis¹

SERVICE AND SYNERGISTIC ACTIVITIES

Editorial Board

2015: Editor at PeerJ

Journal article reviews since hire at UH

ISME Journal (6), Microbial Ecology (1), Fungal Ecology (1), New Phytologist (2), Molecular Ecology (3), Mycologia (1), PlosOne (2), FEMS Microbial Ecology (1), Fungal Biology (3), Deep Sea Research (1), Limnology and Oceanography (1), Botanica Marina (1), Msystems (1), FEMS Microbial Ecology (1), Environmental Microbiology (1)

Grant Panel Member

2013: National Science Foundation, Division of Environmental Biology

Grant Proposal Reviews (*ad hoc*)

National Science Foundation (8)
Alfred P. Sloan Foundation (1)
Graduate Women in Science (1)
Austrian Science Fund (1)
National Research Foundation South Africa (1)
Canada Research Chairs (1)

Service to Professional Societies

2016: Chair, Mycological Society of America Ecology Committee
2012-2015: Member, Mycological Society of America Ecology Committee
2012: Judge, student presentation awards committee Mycological Society of America

University Committees and Groups

Botany Department

2016: Organizer, Botany seminar

2015: Member, Wilder Chair faculty search committee

2015-2016: Member Student awards committee

2012-2015: Coordinator, Botany GIS lab

2012: Member, PhD qualifying exam review committee

2012-2014: Member, graduate admissions committee

2012-2014: Member Ethnobotany degree review committee

University-Wide

2017: Chair, Integrative Biology Resources Committee

2017: Panelist EcoDAS

2016: Member, UH Microbiome Initiative

2016: Member, New Faculty Review Committee (Ecology Evolution and Conservation Biology Program)

2015-2016: Panelist, New faculty orientation

External Service

2016: BioBlitz foray leader Hawaii Volcanoes National Park