

James E. Keach  
**College of Tropical Agriculture and Human Resources**  
Tropical Plant & Soil Sciences  
FTE Distribution: 0% I; 0% R; 100% E

**Education**

<u>Degree</u>	<u>University</u>	<u>Major</u>
Bachelors	Hampshire College	Natural Science
Masters	Washington State University	Crop Science
PhD	Cornell University	Plant Breeding

**Lifetime and Fellow Achievement Awards**

N/A

**Professional Appointments**

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Assistant Extension Agent	UHM - TPSS/Kaua'i County	10/02/19-Present
Assistant Professor (Temporary)	UHM - TPSS/Hawai'i County	09/12/17-10/01/19
Researcher	Gardens by the Bay - Singapore	07/05/16-09/08/19
Research Assistant	Pioneer Hi-Bred International	01/2006-05/2007
Nursery Aide	Frankie's Nursery	11/2005-06/2007

**Courses Taught**

Kaua'i Master Gardener Training Course - 2020, 2021, 2022, 2023  
2023 - Statewide Master Gardener Lecture - 'Orchids 101'  
2023 - Statewide Master Gardener Lecture - 'Plant Propagation'  
2023 - Statewide Master Gardener Lecture - 'Vegetables in Hawai'i'  
2023 - Statewide Master Gardener Lecture - 'Intro to the Master Gardener Program'  
2022 - Statewide Master Gardener Lecture - 'Plant Propagation'  
2022 - Statewide Master Gardener Lecture - 'Vegetables in Hawai'i'  
2022 - Statewide Master Gardener Lecture - 'Intro to the Master Gardener Program'  
2021 - Statewide Master Gardener Lecture - 'Plant Propagation'  
2021 - Statewide Master Gardener Lecture - 'Intro to the Master Gardener Program'

TPSS/NREM 475 - Plant Nutrient Diagnosis in the Tropics (3) - 2018, 2019

**Publications**

Conference Proceedings

American Society of Horticultural Science Proceedings.  
'Cultivar/Accession Trials for Weevil Resistance in Sweetpotatoes Grown in Hawai'i'  
James E. Keach\*, Susan C. Miyasaka  
2019

American Society of Horticultural Science Proceedings.  
'Taro Breeding at the University of Hawai'i'  
James E. Keach\*, Roshan Paudel, J. 'Ama Lilly, Susan C. Miyasaka  
2018

Proceedings of the 22nd World Orchid Conference – Guayaquil, Ecuador.  
'Cool at the Equator: The history and potential of species from divergent temperature zones in orchid

breeding'.

James E. Keach\*; Mei Leng Lim; Jassy Phua; Siti Nurziana Yacob; Andrea Kee; Kiat W. Tan.  
2017

Abstracts from the 65th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research.

'Synergistic effect of  $\alpha$ -mangostin on antibacterial activity of tetracycline and erythromycin against acne involved bacteria'.

Md Iftexhar Ahmad; James E. Keach\*; Tapan Behl; Pharkphoom Panichayupakaranantad.  
2017

Proceedings of the 2015 Annual Meeting of the International Plant Propagators' Society. 1140 pp. 317-326.

'Towards Improvement of Impatiens'.

J Keach\*, M Daughtrey, M Bridgen.  
2015

2014 Annual Report, Long Island Horticultural Research & Extension Center Bulletin #87. Page 31.

'Breeding downy mildew resistance in Impatiens walleriana'.

Keach, J.\*, and M.P. Bridgen. (ed.)  
2014

Independent Plant Breeders Conference

'Resistance to Downy Mildew in Diverse Impatiens Species & Hybrids'

James E. Keach\*; Margery Daughtrey; Mark P. Bridgen.  
2014

International Plant Propagators Society

'Integrating Resistance to Downy Mildew in Impatiens'

James E. Keach\*; Margery Daughtrey; Mark P. Bridgen.  
2014

National Association of Plant Breeders Proceedings

'Understanding Resistance to Downy Mildew in Impatiens'

James E. Keach\*; Margery Daughtrey; Mark P. Bridgen.  
2014

Tercer Congreso Nacional de Flora Nativa de Chile

'Explorando, Preservando y Utilizando la Biodiversidad de Chile: Un Curso Novedoso para Estudiantes de Posgrado'

James E. Keach\*; Mark P. Bridgen  
2013

Plant Breeding Coordinating Committee Proceedings

'Resistance to *Tilletia caries* in the USDA *Aegilops tauschii* Collection'

James E. Keach\*; Stephen Jones  
2009

#### Refereed Journal Publications

Breeding and selection of taro (*Colocasia esculenta*) for improved disease-resistance in Hawai'i

R Paudel, B Bartlett, CM Zamora, JE Keach\*, R Gutierrez-Coarite, J Hawkins, A Ahmad, S Motomura-Wages, ER Kirk, MB Kantar, KH Lamour, CP Bernabe, M Shintaku, SC Miyasaka

Plants, People, Planet, 1-23

2022

'Synergistic effect of  $\alpha$ -mangostin on antibacterial activity of tetracycline, erythromycin, and clindamycin against acne involved bacteria'

MA Shah, JE Keach\*, T Behl, P Panichayupakaranant  
Chinese Herbal Medicines 11 (4), 412-416  
2019

'Antidiabetic Naphthoquinones and Their Plant Resources in Thailand'

MA Shah, JE Keach\*, P Panichayupakaranant  
Chemical and Pharmaceutical Bulletin 66 (5), 483-492  
2018

'Synergistic effect of  $\alpha$ -mangostin on antibacterial activity of tetracycline and erythromycin against acne involved bacteria'

Panichayupakaranant, P., Md, I. A., & Keach, J. E.\*  
Planta Medica International Open, 4(S 01), Mo-PO.  
2017

'Susceptibility of Impatiens species to downy mildew caused by *Plasmopara obducens*'

J Keach\*, M Daughtrey, M Bridgen, C Salgado-Salazar.  
Phytopathology 106 (2), 3-3  
2016

### **Extension Publications**

Marielle Hampton, James Keach, and Emilie Kirk. 2023. 'Hawai'i Gardeners Trial Snow Pea Varieties for Community Science Project' Hānai 'Ai - Volume 51.

James Keach, Emilie Kirk. 2023. 'A Vegetable Trial of Neglect: Cultivars producing, while untended, during COVID-19 lockdown' Hānai 'Ai - Volume 50

Eric Collier, James Keach, Emilie Kirk. 2023. 'Featured Farmers: Desmond Ogata, Darren Park, and Glenn Teves University of Hawai'i Seed Lab, University of Hawai'i at Mānoa' Hānai 'Ai - Volume 49

Christine Hanakawa, James Keach, Emilie Kirk, Josh Silva, Marielle Hampton. 2022. 'The Need for Seed: Surveying the Interests of Local Seed Growers'. Hānai 'Ai - Volume 48

Roshan Manandhar, James Keach, Emilie Kirk. 2022. 'Three promising sweet potato varieties for Kaua'i from a 2019 trial'. Hānai 'Ai - Volume 45

Emilie Kirk, Shannon Sand, Joana Bloese, Rosemary Gutierrez-Coarite, James Keach\*, and Sothy Eng. 2021. 'COVID-19 Hawaii Agriculture Survey: Initial and On-going Impacts'. Hānai 'Ai - Volume 44

James E. Keach\*, J. 'Ama Lilly, C. Popo Bernabe, W. Kahua Julian, Roshan Paudel, Achyut Adhikari, Elihu Isele, Susan C. Miyasaka. 2021. 'How To Breed Your Own Taro'. CTAHR Publication  
*Withheld*

James E. Keach. 'A world brought together by orchids: the 22nd World Orchid Conference'. 2018.  
Malayan Orchid Review

James E. Keach. 'Profile of a Young Grower: Edrei Quek – A dedicated Hobbyist-turning-professional'. 2017. Malayan Orchid Review

Vegetable Breeding Resource.com - Seed Saving Sheets

'Organic Broccoli Seed Production'

'Organic Carrot Seed Production '

'Organic Pea Seed Production'

'Organic Pea Seed Production (expanded)'

'Organic Squash Seed Production '

'Organic Sweet Corn Seed Production '

**Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)**

'The Plant Doctor - Orchid Pests & Diseases'

Honolulu Orchid Society Show - 2023

Keach, James.

'How to Plant and Care for a Tree'

Kaua'i Landscape Industry Council Arbor Day Celebration - 2023

Silva, Josh; Keach, James.

'Heat Tolerant Snow Peas and Vegetables to Try'

Kaua'i County Farm Bureau AgWeek @ Kukui Grove - 2023

Keach, James

'Saving seeds from peas'

Seed Saving Hui - Community Science Pea Project - 2023

Keach, James

<https://youtu.be/MaE7jx3SSM4>

'Orchids 101'

'Orchids 101 Demonstration'

Kaua'i Master Gardener Advanced Trainings - 2022

Keach, James

<https://youtu.be/ZKLWqqV6kGg>

<https://youtu.be/4FvEibkmJ0w>

'Orchid Diversity, as Captured through Breeding'

UPLB Museum of Natural History Biodiversity Seminar - 2022

Keach, James

<https://youtu.be/rDwVAZyvi9c>

'Orchids at Gardens by the Bay, Singapore'

Kunia Orchid Society - 2021

Keach, James

<https://youtu.be/Q1jM7m1hrH8>

'Disa: A Beautiful & Underutilized Genus'

Hilo Orchid Society - 2021

Keach, James

[https://youtu.be/84ORImk\\_Gj4](https://youtu.be/84ORImk_Gj4)

'Public Speaking & Academic Presentations: School of Pharmacy, Walailak University'

Keach, James

<https://youtu.be/pPszRclsCU4>

Kaua'i Master Gardener 2020 Training Course Lectures

[https://www.youtube.com/playlist?list=PLg8PqNB4D1D\\_SQr6kdsNJoFdpm1rrJGIR](https://www.youtube.com/playlist?list=PLg8PqNB4D1D_SQr6kdsNJoFdpm1rrJGIR)

'Orchid Pests and Diseases'  
Keach, James  
Kaua'i Orchid Society - 2020

### **Leadership Roles (Committees, Boards, Advisory, etc.)**

CTAHR Senate Executive Committee  
Secretary  
2022-2023

CTAHR Senate Extension Subcommittee  
2021-2022, 2023-Present

American Orchid Society Judging Training  
Associate Judge  
2021-Present  
Student Judge  
2018-2021

CTAHR Extension Reporting Committee  
2020-2022

Kaua'i CARES Act Agriculture Grants Committee  
2020

LGBTQ+ Center at the University of Hawai'i, Hilo  
Advisory Committee Member  
2018

Malayan Orchid Review - Publication of the Orchid Society of Southeast Asia  
Editorial Board Member  
2017

### **Graduate Students**

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
Chair of Master's Committees	0	0
Chair of PhD Committees	0	0
Member of Master's Committees	0	0
Member of PhD Committees	0	0

### **Grant Support**

'Comparing Production of Melons Using Field and Protected Methods under Hawai'i's Conditions'  
USDA-AMS Specialty Crop Block Grant Program  
\$40,000  
4/1/2023-3/31/2025  
PI

'Limited-English and Immigrant Farmer Education (LIFE): Improving Access to Support Services for Hawai'i's Agricultural Population with Limited English Proficiency'  
USDA-OPPE Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers and Veteran

Farmers and Ranchers - 2501  
\$743,667  
10/01/2022-9/30/2025  
co-PI

'Increasing Production and Distribution of Eucalyptus and Other Myrtaceae Products'  
Hawai'i Dept. of Agriculture  
\$27,500  
6/21/2021-6/20/2022  
co-PI

'Ohana Garden & Grindz'  
USDA-NIFA Rural Health & Safety Education  
\$350,000  
9/2021-8/2023  
Key Person/Subject Matter Specialist

'Using Taro Breeding to Overcome Disease and Empower Farmers'  
Hawai'i Dept. of Agriculture R&D - Hawai'i County  
\$12,000  
01/01/2018-12/31/2020  
PI

'Integrating resistance from wild relatives against downy mildew in Impatiens'  
USDA NE SARE  
\$14,999  
01/01/2013-12/31/2015  
PI

### **Presentations at Conferences, Events**

'Promiscuous Orchids Pushing the Line'  
Keach, J.  
Hilo Orchid Society  
2023

'The Goldilocks Zone A Review of Intermediate Orchids & How to Grow Them'  
Keach, James.  
Honolulu Orchid Society  
2023

'Island of Kaua'i'  
Dotty Reynolds-Yadao; Johnny Gordines; James E. Keach; Colin Giliam, Hitomi Giliam.  
HFNA Wedding Celebrations - How to Say 'I Do' with Hawaiian Flowers & Foliage Webinar.  
2023

'Floriculture & Ornamentals'  
Keach, J.  
International Trainee Seminar Series  
2023

'Breeders' & Growers' Forum - The Wants and Needs of the Floral Industry'  
Tessie Amore, Orville C. Baldos, James E. Keach, Hannah Lutgen, Russell Galanti, Joanna Bloese, Gordon Inouye, Thong Teng Neo, Warren Watanabe, Jon Tanouye, Christian Ingalls, David Shiigi.

HFNA Wedding Celebrations - How to Say 'I Do' with Hawaiian Flowers & Foliage  
2023

'Orchid TLC'  
Keach, J.  
Hilo Orchid Show  
2023

'Repotting Orchids'  
Keach, J.  
Kaua'i Agricultural Festival  
2023

'Pests and Diseases of Peas'  
Kirk, E.; Keach, J.  
Community Science Pea Project  
2023

'Seed Saving'  
Keach, J.  
GoFarm Kauai  
2023

'Turf & Q&A'  
Keach, J.  
2023 KMG Training Hands-On  
2023

'Safety in the Garden'  
Greenwood, H; Keach, J.  
'Ohana Gardenz and Grindz  
2023

'Kaua'i Eucalyptus Update'  
Keach, J.  
Kaua'i Eucalyptus Field Day  
2023

'Invasive Species & Weeds'  
Keach, J.  
2023 KMG Training Hands-On  
2023

'Introduction to the Program'  
Greenwood, H; Keach, J.  
'Ohana Gardenz and Grindz - Kaua'i  
2023

'Diagnostic Practice'  
Keach, J.  
2023 KMG Training Hands-On  
2023

'Orchids 101'  
Keach, J.

Seascapes Nursery  
2023

'Variety Trials and Collecting Data'  
Keach, J.  
Community Science Pea Project  
2023

'Kaua'i Eucalyptus Update'  
Keach, J.  
Maui Eucalyptus Field Day  
2023

'Vegetables'  
Keach, J.  
2023 KMG Training Hands-On  
2023

'Vegetables'  
Keach, J.  
2023 MG Statewide Training  
2023

'Introduction'  
Kirk, E; Keach, J.  
Community Science Pea Project  
2023

'Kaua'i Eucalyptus Update'  
Keach, J.  
O'ahu Eucalyptus Field Day  
2023

'Orchids 101'  
Keach, J.  
2023 KMG Training Hands-On  
2023

'Orchids 101'  
Keach, J.  
2023 MG Statewide Training

'Organic Agriculture'  
Keach, J.  
2023 KMG Training Hands-On  
2023

'Plant Propagation'  
Keach, J.  
2023 KMG Training Hands-On

'Plant Propagation'  
Keach, J.  
2023 MG Statewide Training  
2023



'Breeders & Growers Forum'

Tessie Amore, Orville Baldos, Gordon Inouye, Johnny Gordines, Russell Galanti, Alberto Ricordi, James Keach, Hannah Lutgen, Joanna Bloese, Peter Boches, Thong Teng Neo, Matt Keiley, Mario Gaggero.  
HFNA Webinar 2023 Spirit of Hawai'i Neotropica  
2023

'Island of Kauai'

Tim Farrell; Dotty Reynolds-Yadao; Johnny Gordines; James E. Keach; Colin Giliam, Hitomi Giliam  
HFNA Webinar 2023 Spirit of Hawai'i Neotropica  
2023

'Kaua'i KARES Tour'

Keach, J.  
HFNA Webinar 2023 Spirit of Hawai'i Neotropica  
2023

'KARES Ornamental Tour'

Keach, J.  
AgPro  
2023

'Kaua'i County Ornamental Updates'

James E. Keach.  
HFNA's 8th Annual Growers' Import Replacement Educational Research Seminar  
2023

'Hilo Orchid Farm'

Keach, J.; Galanti, R.; Hansen, A.  
HFNA Hawai'i Island Tour'  
2023

'Coconut Rhinoceros Beetle'

Manandhar, R.; Keach, J.  
Pests in Paradise Arborist Training  
2023

'Island of Kauai'

James E. Keach\*  
How to Say 'I Do' with Hawaiian Flowers & Foliage Webinar  
Online  
2022

'Breeders' & Growers' Forum - The Wants and Needs of the Floral Industry'

Tessie Amore, Orville C. Baldos, James E. Keach\*, Hannah Lutgen, Russell Galanti, Joanna Bloese, Gordon Inouye, Thong Teng Neo, Warren Watanabe, Jon Tanouye, Christian Ingalls, David Shiigi  
HFNA Wedding Celebrations - How to Say 'I Do' with Hawaiian Flowers & Foliage  
Hilo, HI, USA  
2022

'Kaua'i Eucalyptus Update'

'Kaua'i County Ornamental Updates'  
James E. Keach\*  
HFNA's 7th annual Growers' Import Replacement Educational Research Seminar  
Hilo, HI, USA  
2022

'Extension and Participatory Breeding: A Strategy for New, Locally-Adapted Cultivars'

James E. Keach\*

Hawai'i Organic Seed Summit

Online

2022

<https://youtu.be/BPc2H1usyMk>

'Participatory Taro Breeding: A Model for the Future?'

James E. Keach\*

Research Update on New Taro Varieties: Mini-Conference

Online

2022

<https://youtu.be/6d7qTRhLEvY>

'Breeder's & Growers' Forum'

'Say 'I Do' Kauai Style'

How to Say 'I Do' with Hawaiian Flowers & Foliage Webinar & Trade Show

Hilo, HI, USA

2021

<https://youtu.be/MBB4A8v5ELg>

'Kaua'i County Ornamental Research Updates'

James E. Keach\*

Grower's Import Replacement Educational Research Webinar

Hilo, HI, USA

2021

<https://youtu.be/RxGiLatJqtM>

'Ornamental Germplasm on Kaua'i'

James E. Keach\*

Hawai'i Ornamental Research Field Day

Hilo, HI, USA

2021

'Breeding Taro & Sweet Potatoes: Tasty and Beautiful'

James E. Keach\*

Grower's Import Replacement Educational Research Webinar

Online

2020

[https://youtu.be/9BPye\\_N5mbM](https://youtu.be/9BPye_N5mbM)

'Cultivar/Accession Trials for Weevil Resistance in Sweetpotatoes Grown in Hawai'i'

James E. Keach\*, Susan C. Miyasaka

American Society of Horticultural Science

Las Vegas, NV, USA

2019

'Taro Breeding at the University of Hawai'i'

James E. Keach\*, Roshan Paudel, J. 'Ama Lilly, Susan C. Miyasaka

American Society of Horticultural Science

Washington, DC, USA

2018

'Cool at the Equator: The history and potential of species from divergent temperature zones in orchid breeding'.

James E. Keach\*; Mei Leng Lim; Jassy Phua; Siti Nurziana Yacob; Andrea Kee; Kiat W. Tan.

World Orchid Conference  
Guayaquil, Ecuador  
2017

'Resistance to Downy Mildew in Diverse Impatiens Species & Hybrids'  
James E. Keach\*; Margery Daughtrey; Mark P. Bridgen.  
Independent Plant Breeders Conference  
Grand Rapids, MI, USA  
2014

'Understanding Resistance to Downy Mildew in Impatiens'  
James E. Keach\*; Margery Daughtrey; Mark P. Bridgen.  
National Association of Plant Breeders  
Minneapolis, MN, USA  
2014

'Explorando, Preservando y Utilizando la Biodiversidad de Chile: Un Curso Novedoso para Estudiantes de Posgrado'  
James E. Keach\*; Mark P. Bridgen  
Tercer Congreso Nacional de Flora Nativa de Chile  
Talca, Chile  
2013

'Resistance to *Tilletia caries* in the USDA *Aegilops tauschii* Collection'  
James E. Keach\*; Stephen Jones  
Plant Breeding Coordinating Committee  
Madison, WI, USA  
2009