

ORVILLE C. BALDOS

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EDUCATION

2009 –2013 (scheduled completion): **PhD in Tropical Plant and Soil Sciences (Agronomy, with specialization in Ecology, Evolution and Conservation Biology)**. University of Hawai'i at Manoa, Honolulu, HI. Dissertation: Seed development and dormancy in pilgrass [*Heteropogon contortus* (L.)P. Beauv. Ex Roem. & Schult]: Implications for improved seed production and germination.

2009: **M. Sc. in Tropical Plant and Soil Sciences (Weed Science, with specialization in Ecology, Evolution and Conservation Biology)**. University of Hawai'i at Manoa, Honolulu, HI.

2002: **B. Sc. in Agriculture (Landscape Horticulture), cum laude**. University of the Philippines Los Baños, College, Laguna, Philippines.

PEER REVIEWED PUBLICATIONS

Baldos OC, DeFrank J & G Sakamoto. 2012. Pre- and postemergence herbicide tolerance of tropical fimbry, a native Hawaiian sedge with potential use for roadside revegetation. *HortTechnology* 22(1):126-130.

Baldos OC, DeFrank J & G Sakamoto. 2010. Tolerance of Transplanted Seashore Dropseed to Pre-and Postemergence Herbicides. *HortTechnology*. 20(4):772-777

Naranja LR, Arquiza AL, **Baldos OC**, Sacdalan MM, Soligam-Hadsall, AC & MCE Balladares. 2005. *Dendrobium sibuyanense* Lubag-Arquiza, Naranja, Baldos and Sacdalan sp. nov., A New Orchid Species from the Philippines. *The Philippine Agricultural Scientist* 88(4):484-488

THESES AND OTHER PUBLICATIONS

Baldos OC. 2009. Assessment of hydroplanting techniques and herbicide tolerance of two native Hawaiian groundcovers with roadside re-vegetation potential. MS Thesis. University of Hawai'i at Manoa, Honolulu, Hawaii, United States. pp. 149

Baldos OC. 2002. A Landscape Design Methodology Integrating Public Participation: The University of the Philippines Open University (UPOU) Experience. Undergraduate Thesis. University of the Philippines Los Baños, College, Laguna, Philippines

Naranja LR, Arquiza AL, **Baldos OC**, Sacdalan MM & MCE Balladares. 2005. Native Philippine Orchids with Commercial Potential. AgriNotes: A Digest of Research and Extension Breakthroughs in Agriculture and Food. UPLB College of Agriculture.

ORAL AND POSTER PRESENTATIONS/CONFERENCES/WORKSHOPS ATTENDED

National Science Foundation "Science: Becoming the Messenger" Workshop, January 23, 2012, Waikiki Beach Marriott Resort and Spa, Honolulu, Hawaii, USA

Baldos, OC, DeFrank, J and G Sakamoto. Improving Germination of Piligrass (*Heteropogon contortus*) Seeds Using Liquid Smoke Flavoring (Poster presentation). American Society for Horticultural Science Annual Meeting, September 25-28, 2011, Hilton Waikoloa Village, Waikoloa, Hawaii, USA

Baldos, OC, DeFrank, J, Lukas, S and G Sakamoto. Roadside right-of-way areas: An underutilized native groundcover production site for large scale re-vegetation projects in Hawaii (Poster presentation). National Native Seed Conference, May 17-21, 2010, Cliff Lodge, Snowbird, Utah, USA

Baldos, OC, DeFrank, J and G Sakamoto. Preemergence Herbicide Screening for Transplanted *Sporobolus virginicus* Plugs, a Native Hawaiian Grass with Roadside Revegetation Potential (Oral presentation). 63rd Annual Meeting of the Western Society of Weed Science, March 8-11, 2010, Waikoloa Beach Marriott, Waikoloa, Hawaii, USA

Baldos, OC, DeFrank, J and G Sakamoto. Effect of Pre and Post Emergence Herbicide Application Timing on Hydroseeded *Fimbristylis cymosa* (Poster presentation). 2009 Hawaii Conservation Conference, July 28-30, 2009, Hawaii Convention Center, Honolulu, Hawaii, USA

Baldos, OC, DeFrank, J and G Sakamoto. Screening of Pre-emergence Herbicides to Improve Roadside Establishment of Transplanted *Sporobolus virginicus* (L.) Kunth, a native Hawaiian grass (Oral presentation). 21st Annual CTAHR Student Research Symposium, April 3-4, 2009, University of Hawaii at Manoa, Honolulu, Hawaii, USA

Baldos, OC and J DeFrank. Assessing three hydroplanting techniques for establishing *Fimbristylis cymosa* R. Br., a native Hawaiian sedge (Poster presentation). 20th Annual CTAHR Student Research Symposium, April 11-12, 2008, University of Hawaii at Manoa, Honolulu, Hawaii, USA

Baldos, OC and J DeFrank. The Response of *Fimbristylis cymosa* (A Native Hawaiian Sedge) to Fluazifop-p-butyl and Triclopyr (Poster presentation). 5th International Weed Science Congress, June 23-27, 2008, Westin Bayshore Hotel, Vancouver, British Columbia, Canada

Baldos, OC and J DeFrank. The Response of *Fimbristylis cymosa* R. Br. to Three Methods of Hydroplanting (Poster presentation). 2008 Hawaii Conservation Conference, July 29-31, 2008, Hawaii Convention Center, Honolulu, Hawaii, USA

RESEARCH EXPERIENCE

2009 – 2013 (expected completion): Currently conducting dissertation research on seed development and dormancy of piligrass (*Heteropogon contortus*). This study aims to: 1) observe spike production and seed characteristics (e.g. shedding, seed yield, spike moisture and seed germination) over time (spring and fall of 2 years) to develop a suitable seed harvest maturity index for piligrass; 2) examine the effects of relative humidity and temperature on dormancy loss/afterripening of piligrass seeds and 3) elucidate the factors affecting seed dormancy in piligrass through physical and chemical treatments (e.g. removal of seed parts, application of fluridone, gibberellic acid, karrikinolide and food grade liquid smoke).

2006 – 2009: Studied hydroplanting-compatible propagation methods and screened of pre and post emergence herbicides for establishing the native Hawaiian groundcovers, *Sporobolus virginicus* (Poaceae) and *Fimbristylis cymosa* (Cyperaceae) on Hawaii roadsides. Protocols developed from this research are currently being adopted by the Hawaii Department of Transportation.

2003 – 2004: Worked as a research associate during the final phase of the project on documentation, selection and registration of Philippine orchids. Conducted taxonomic research on native Philippine orchid species through literature reviews, germplasm collection, *in situ* observations and morphological characterization. Also maintained the native orchid species collection at the University of the Philippines Los Baños Orchid Nursery.

2002 – 2003: Worked in cucurbit breeding projects and handled promising variety trials. Main crop in focus was squash (*Cucurbita moschata*). Also conducted some watermelon (*Citrullus lanatus*) variety trials.

2001 – 2002: Studied the integration of public participation in the landscape design process. Developed conceptual landscape, planting and maintenance plans for the University of the Philippines Open University Complex based on inputs given by employees through a written survey and a public hearing.

TEACHING EXPERIENCE/GUEST LECTURES

Spring 2012: **TPSS 421 Tropical Seed Science** – Recalcitrant seeds, their characteristics, distribution and storage.

Fall 2011: **TPSS 654 Communications in the Sciences** – The use of Prezi (a web-based presentation software alternative to Powerpoint) in scientific presentations.

July 2011: **HORT 147 Landscape Management, AGRI 199 Undergraduate Seminar, and ENS 202 Landscape Ecology at the University of the Philippines Los Baños** – Guest lecture on native plant initiatives in Hawaii and potential opportunities in the Philippines.

Fall 2009 and 2010: **TPSS 654 Communications in the Sciences** – The use of video for science research and extension

Fall 2006 and 2008: **TPSS 350 Tropical Landscape Practices** – Lecture and laboratory session on botanical nomenclature and its importance in horticulture.

EMPLOYMENT

2006 – present: **Graduate Research Assistant** – Department of Tropical Plant and Soil Sciences, University of Hawai'i at Manoa, Honolulu, HI

2009: **Research Assistant** – Department of Tropical Plant and Soil Sciences, University of Hawai'i at Manoa, Honolulu, HI.

2005 – 2006: **Graduate Teaching Assistant** – Department of Tropical Plant and Soil Sciences, University of Hawai'i at Manoa, Honolulu, HI

2005: **Management Associate** – Madecor Group of Companies, Los Baños, Laguna, Philippines

2003 – 2004: **University Research Associate** – Department of Horticulture, University of the Philippines Los Baños, College, Laguna, Philippines

2003: **Leadman/Officer-in-Charge/Landscape Supervisor** – LT Dausons Inc., Manila Philippines

2002 – 2003: **Research Assistant** – Allied Agro-Tech Inc., Allied Botanical Corporation, Tayug, Pangasinan, Philippines

WORK EXPERIENCE

2010 and 2012: Served as a graduate student assistant in the Dendrobium and Anthurium breeding programs at the department. Greenhouse and laboratory work done includes composting of seedlings, repotting, plant inventory, pollen extraction, viable seed counts and *in vitro* replanting of germinated Dendrobium seedlings. Also initiated the development of a database for anthurium accessions using FileMaker software.

2006 – present: Research and field experiments (herbicide tolerance and field establishment through hydroseeding/hydromulch capping) on native Hawaiian groundcover species with potential use for roadside re-vegetation. Planted and established seed nurseries of three native grasses (*Heteropogon contortus*, *Sporobolus virginicus* and *Eragrostis variabilis*) and a native sedge (*Fimbristylis cymosa*). Assisted in various weed science projects ranging from selective weed control in sports turf to evaluation of a native grass as living mulch for vegetable crop production.

2005 – 2006: Worked as a teaching assistant at the Department of Tropical Plant and Soil Sciences, University of Hawaii at Manoa. Prepared materials and equipment for class lectures, laboratory, greenhouse and field experiments.

2005: Assisted in the preparation of proposals and expression of interest (EOIs) for bidding and helped in the outsourcing of consultants for development projects funded by agencies such as the Asian Development Bank, World Bank, AusAID and USAID

2004: Worked as an assistant for the National Ornamental Network of the Department of Agriculture – Bureau of Agricultural Research (DA-BAR) based at the Department of Horticulture, University of the Philippines Los Baños. Responsibilities include preparation of communications, installation of exhibits and arrangement of project reviews. Installed exhibits about the network during the Los Baños Flower and Garden Show (October 2003 and March 2004). Also installed an exhibit on native Philippine orchid species at the Flora Malesiana Symposium (September 2004) and at the Los Baños Flower and Garden Show (October 2004).

2004: Co-designed and installed an orchid display booth at the Philippine Orchid Society (POS) Mid-Year Orchid Show.

2003 – 2004: Helped in conceptualization and construction of the 'Philippine Orchid Species Gallery', a component of UPLB Orchid Nursery Orchidarium, which aims to educate students and visitors on the Philippines' indigenous and endemic orchids. Also made posters and brochures about current research projects being done at the Ornamental Crops Nursery. Served as a tour guide at the nursery – giving short lectures about orchids and their culture to students and visitors.

2003: Worked as leadman/officer-in-charge for landscape maintenance at the Ninoy Aquino International Airport (NAIA) terminals. Co-supervised landscape installation and maintenance operations at the NAIA terminals. Observed and evaluated the existing landscape design as well as the current maintenance practices at the NAIA Centennial Terminal 2 and submitted a report with recommendations to improve landscape and indoor plant maintenance. Also did some redesign and replanting of some interior plant patios at the NAIA Centennial Terminal 2 Departure Area.

REFEREE SERVICE

2011: Manuscript reviewer for WeedTechnology Journal.

GRANTS

Development Large Scale Seed Production and Roadside Establishment Protocols for Five Native Hawaiian Groundcovers [Aalii (*Dodonaea viscosa*), Ahinahina (*Achyranthes splendens*), Aweoweo (*Chenopodium oahuense*), Ilima (*Sida fallax*) and Uhaloa (*Waltheria indica*): co-written with Dr. Joseph DeFrank (\$ 249,533.04) – 2012

Developing Large Scale Seed Production and Roadside Establishment Protocols for Four Native Hawaiian Groundcovers [pili grass (*Heteropogon contortus*), emoloa (*Eragrostis variabilis*), kamanomano (*Cenchrus agrimonoides*) and konakona (*Panicum torridum*): co-written with Dr. Joseph DeFrank (\$190,089.03) - 2012

University of Hawaii Graduate Student Organization Travel Grant (\$700) – Summer 2010

COMMITTEE WORK

2007 – present: **Graduate student member**, University of Hawai'i at Manoa Landscape Advisory Committee.

January 2008: **Graduate student representative**. Visioning Workshop for the Development of a Master in Landscape Architecture Degree at the University of Hawai'i at Manoa.

AWARDS, HONORS AND SCHOLARSHIPS RECEIVED

2nd Place (with team member, Scott Lukas), CTAHR Entrepreneurial Video Competition (Native Hawaiian Plants for Established Use) – Spring 2012

Recipient, Departmental Merit Scholarship Award (\$1,000) – Spring 2009

Winner, Hawaii Conservation Conference Logo Contest – 2009

Tropical Plant and Soil Sciences Best Oral Presentation Award (MS), 21st CTAHR Student Research Symposium – 2009

Runner-up, Student Poster Award, 2008 Hawaii Conservation Conference – 2008

Tropical Plant and Soil Sciences Best Poster Presentation Award (MS), 20th CTAHR Student Research Symposium – 2008
Golden Key International Honor Society – Inducted 2007
Third place, Agriculturist's Licensure Exam (Professional Regulatory Commission, Philippines) – 2003
Phi Kappa Phi Honor Society– Inducted 2002
Gamma Sigma Delta Honor Society of Agriculture – Inducted 2002
University President's Medal for Students Graduating with Honors – 2002
Gamma Sigma Delta Honor Society of Agriculture Gold Medal of Excellence – 2002
C.F. Baker Medal from the College of Agriculture and a plaque from the Department of Horticulture for academic excellence – 2002
Received citations as College Scholar and as a University Scholar – 1998 to 2002

PROFESSIONAL MEMBERSHIPS

Western Society for Weed Science (2010)
Society for Ecological Restoration International (2009 – 2011)
American Association for the Advancement of Science (2009 – present)
Friends of Hakalau Forest National Wildlife Refuge (2009 – 2011)
Philippine Native Plant Conservation Society, Inc. (2008)
University of the Philippines Alumni Association (Hawaii Chapter) (2006 – present)
Philippine Orchid Society (2004 – 2005)
Philippine Association of Agriculturists (2003)

COMPUTER/MULTIMEDIA SKILLS

Microsoft Office 2007 (Word, Powerpoint, Excel)
Statistix 8 Software
SAS Software
Video production (powerpoint presentations, recorded seminars and short films) in Windows Live Movie Maker, Adobe Premiere
DVD authoring in Adobe Encore and Windows DVD Maker. Movie editing, uploading using YouTube video editor.
Developing presentations using Prezi.
Familiarity with Adobe Photoshop (photo editing), Adobe Dreamweaver (web design) and FileMaker Pro (database).