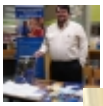
Public Service through Ecology and the Environmental Sciences [1]

Submitted by Wilson Gonzalez-Espada [2] on 2 February 2012 - 12:00am



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Dr. Janice Alers-Garcia achieved a perfect combination by providing public services through ecology and environmental sciences.

Guest Editor Mónica Feliú Mójer | CienciaPR.org [4]

Talking about **Janice Alers-Garcia's** scientific and professional interests entails stories about self-discovery, making the best out of opportunities and appreciation for the inspiration provided by colleagues, students, family and friends.

Janice is an ecologist with the Environmental Protection Agency (EPA) [5] in Washington, D.C. Born in Ponce and raised in the small coastal town of Guánica, Puerto Rico, Janice is proud of having received excellent primary and secondary education from the archipelago's public school system.

During her sophomore year as a Biology major at the University of Puerto Rico [6], Janice discovered her innate passion for field biology and teaching science while working as general biology tutor and a volunteer studying the "coquíes"—arboreal tree frogs in the genus *Eleutherodactylus*—with Dr. Rafael Joglar [7]. During that same year she also discovered her interest in environmental issues. "Back then I understood the importance and the need to closet he gap between scientists and environmental policy-makers and hoped that someday I could help do that," she said.

While she was a teaching assistant in Botany, Dr. Alers-García was offered a research assistant position with Dr. Linda Escobar, which helped her mature emotionally and commit to the challenge of graduate studies in ecology.

During her years in the **Tropical Ecology Program** at the University of Puerto Rico [6], Janice studied the epiphyte plants community ecology. Epiphytes are plants and/or other living organisms that use other plants for mechanical support while obtaining most of their nutrition from air deposition. In one of her projects, Janice discovered that mosses and lichens aided the growth of other epiphyte on the Sierra Palms (*Prestoea montana*) found in the Carite National Forest [8].

As a doctoral student at Indiana University, Bloomington in the Ecology, Evolution and Behavior Program [9], Janice studied the relationship between parasitic plants and their hosts. During her dissertation research, Janice showed that the parasitic plant *Cuscuta gronovii* selects, parasitizes, and achieved greater performance (measured as number of fruits) taller host plants. As part of her doctoral studies, Janice pursued a minor in Environmental Science from the School of Public and Environmental Affairs at Indiana University [10], where she learned about applied ecological research.

As a post-doctoral fellow at the Rowland Institute at Harvard University in Massachusetts [11], **Dr. Alers-García**examined the chemical interactions between host and parasitic plants. One of the most interesting and perhaps novel studies she worked on showed that application of catechins (natural antioxidants present in tea, chocolate and wine) to susceptible host plants inhibits the successful attachment of parasitic plants.

A couple of years ago, she joined the EPA [5], serving primarily in the Office of Water-Office of Science and Technology [12], as part of the Environmental Careers Program [13] (ECP), a professional development program.

Janice pointed out that "so far two of the most exciting and rewarding experiences I have had were coordinating the Nutrient Pollution Website [14]. The website is a communication tool to creates awareness of the extent of nitrogen and phosphorus pollution on water bodies; describes it causes, and provides information on how we can all take action to ameliorate this problem."

Janice also completed an assignment with the United States Department of Agriculture (USDA) [15], in the Conservation Effects Assessment Program under the Natural Resources Conservation Service [16]. The program gave her a comprehensive perspective of the effectiveness of conservation measures on small sized watersheds while drafting insights of their technical reports.

Janice recently worked at with EPA's U.S. -Mexico Environmental Program in the Office on International and Tribal Affairs [17]. This experience provided her insights on the environmental problems, challenges, efforts and progress achieved in protecting the environmental and public health along the U.S.-Mexico border region.

In addition to bringing her scientific skills to water criteria development, Janice is looking forward to improving her knowledge and increasing her participation in policy decisions. She hopes to further learn how to communicate scientific results effectively to environmental officials and the public. Janice believes that it is her responsibility to educate every citizen on their responsibilities

and roles as stewards of the environment.

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