

In the Field...Pathologist Phillip Wharton is On the Hunt

By Janet Fierro

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Help Wanted:
Late Blight Hunter.
Plant pathologist seeks individuals with keen eye and sharp focus to hunt *Phytophthora Infestans* in Indonesia and Bangladesh. No experience necessary, will train. Bring boots and sun hat.
Contact Dr. Phillip Wharton.

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Dr. Phillip Wharton is a Late Blight Hunter. These days you will most likely find him in a SE Asia potato field, his expert eyes trained to spot the circular to irregularly shaped brown lesions that can be a tell-tale sign that the plant has been assailed by late blight disease.

Trailing Phillip are his “hunters”, other pathologists or fellow project team members recruited by Phillip. Although the team members specialties may not even be scientific in nature, Phillip enlists them all. “You don’t have to be a pathologist to track late blight” Phillip says. “You just have to be willing to get your boots a bit muddy or soaking wet if you don’t wear a raincoat.” His UK accent is light and cheery, almost infectious. However, nowhere near as infectious as late blight, the devastating disease that can destroy entire crops within weeks.



Phill and “hunters” out looking for late blight in the Indonesian rain.

In his role as the lead pathologist for the Feed the Future Biotechnology Potato Partnership, Phill is on a crusade to identify, track and document the different strains of late blight across the regions of Indonesia and Bangladesh. Yet the project he supports is expected to put Phill and his team of intrepid Late Blight Hunters out of a job with the commercialization and release of a GMO potato that is resistant to late blight. *“The impact a late blight resistant potato will have on smallholder farmers in Indonesia and Bangladesh will be substantial. The reduction in fungicide use is a real game changer allowing growers to cut sprays by up to 90%, reducing the health risks and protecting the environment, while maintaining or even improving potato yields”* says Wharton. Until then you’ll find Phill amidst the fields, paper bag in hand, searching for just one more late blight sample.

Q&A

Phill takes time out from the field and his lab to answer a few questions about himself:

Tell me what you do for the Feed the Future Biotechnology Potato Partnership project: I am the pathology lead which means that I am overseeing all the pathology aspects of the project. This means I am heavily involved with the running of field trials in Bangladesh and Indonesia and other pathology activities such as collection and characterization of *Phytophthora infestans* isolates from both countries.

What other professional positions do you hold: I am an Associate Professor of Potato Pathology at the University of Idaho.

Why did you decide to get into international work: I got into agriculture to help improve the lives of people and helping subsistence farmers in countries like Indonesia and Bangladesh is very fulfilling. Besides, I like the adventure of visiting new places, meeting new people and experiencing different cultures and call me crazy but being cooped up in an aircraft for 14hrs doesn’t really put me off.

What is your educational background: I have a PhD in plant pathology from the University of Reading in the UK. After graduating in 1997 I did a 2-year postdoc at Purdue University before moving to Michigan State University, where I studied the diseases of tree and small fruit, before focusing on potato diseases such as late blight. In 2008 I moved to the University of Idaho to take a research faculty appointment working on potato diseases so I have now been working on potato diseases for the past 15 years.

Where would you like to visit that you have not: I would like to visit more countries in South America. I have only visited Peru and would like to visit Chile and Argentina one day.

Where did you grow up: I grew up in Liberia, West Africa and Wales in the United Kingdom.

What would be the most amazing adventure to go on: There are so many amazing adventures that one could take in this world that it is hard to pick one. Sometimes I

think it would be more fun just to relax on a beach on some far-flung coral island in the tropical pacific.

Where is the most interesting place you've been: I have been fortunate to visit so many interesting and wonderful places. The most recent and fascinating were the Inca ruins of Machu Picchu and Cuzco in Peru. The Inca civilization was so advanced for its time and seeing the massive structures they assembled without any heavy lifting equipment and with such accuracy that you can't put a razor blade between the 1-10 ton building blocks is amazing.

What's the last adventure you went on: The last adventure I went on was with the amazing team of Late Blight Hunters from the potato project team in Indonesia. We visited potato growers' fields all over East and Central Java, Indonesia searching for plants infected with late blight so we can study the pathogen and its diversity in Indonesia.

What was the last photo you took: It was from a plane about 34,000 ft up of the ice on the edge of lake Michigan.

What's the most amazing place in nature you've been: The coral reefs of the Red Sea. The diversity fish and other marine animals and spectacular colors in a pristine coral reef is amazing to behold. It is truly like being in another world.

Do you have any pets, what are their names: I wish I did but I travel too much to have any mammalian pets. The only pets I have are orchids and they don't have any names.

Which sport is the most exciting to watch, which is the most boring to watch: Rugby is most exciting, American football is the most boring.

What was the last movie you went to, what did you think: Captain Marvel, loved it.

Do you collect anything: I like to collect art and interesting little souvenirs from my travels.



Phill, pictured second from left, poses with project personnel on the way to a local potato field in Indonesia.