

TO: PROFESSOR ARTHUR H. WHITELEY

From Dr. Shinya Inoué

Dear Art:

My first encounter with you was in 1953 when I was a young faculty member of the Anatomy Department at the University of Washington. I had the occasion to spend the summer at the Friday Harbor Laboratory with you and other researchers studying rare species of marine invertebrates which could be scooped up from the floating dock in front of the Lab. Our experiments involving the fertilization and development of these organisms were very successful as a result of the high quality of seawater supplied through Pyrex glass tubing, a recent acquisition by yourself and your colleague biologists, Bob Fernald and Dixie Lee Ray. You understood the importance of uncontaminated seawater to biological processes. Not too surprisingly, one day we observed a dramatic drop in the fertilization rate of the jellyfish eggs. Our inspection of the pump house revealed that your efforts had been thwarted by replacement of the Pyrex tubing with galvanized pipe that introduced heavy metal contaminants into the seawater. Though it took strenuous discussion to convince the lab director that the galvanized tubing was responsible for the contamination, when the glass tubing was reinstalled the gametes and embryos became happy again and fully cooperated with our experiments.

Before getting to know you personally at Friday Harbor, I had heard of your wartime work treating gas bubble formation in the blood of high-flying aviators. From 1942 to 1944, you were a member of Prof. H. Newton Harvey's group at Princeton from whom you received your PhD degree in 1945. After coming to the States from Japan in 1948, I myself completed my doctorate at Princeton before coming to the University of Washington. Thus, although you and I had earlier been on opposite shores of the Pacific doing war-related research; this never affected our relation with each other. In fact in 1962, you and your wife Helen took a sabbatical year in Japan where you established longlasting friendships with many prominent Japanese embryologists. In 1981, together with Prof. Eizo Nakano of Nagoya University, you initiated the US-Japan Symposium on Developmental Biology held at the Friday Harbor Laboratory; I had the honor of attending that festive occasion. The following year you and Helen returned to Japan for three months as an awardee of the Japan Ministry of Education Advanced Fellowship to collaborate with Eizo Nakano again.

After Helen passed away in 1990, you planned and developed the Helen Riaboff Whiteley Center on the Friday Harbor Laboratory campus. This cozy center embodies the spirit of community that you wished to promote: to encourage scientists, philosophers, and artists from around the world to spend extended time together in a relaxed atmosphere and exchange views.

On April 15th, 2013, at age 96, Arthur H. Whiteley passed away after experiencing a rich life filled with contributions to science, education and to international collaboration.

Respectfully yours,

Shinya Inoué; May 23, 2013

Distinguished Scientist, Marine Biological Laboratory, Woods Hole, Massachusetts

My remembrance of Dr. Arthur Whiteley: From Dr. Osamu Shimomura

I met Dr. Whiteley for the first time in the summer of 1961, when I and my wife visited the Friday Harbor Laboratories from Princeton, N. J., accompanied by Dr. Frank Johnson. The director of the lab at the time, Dr. Robert Fernald, kindly arranged for us an apartment in the town which is more comfortable than the dormitory. I was strongly impressed by the beautiful beach in front of the lab at low tide, which was decorated with red sea anemones and purple large sea urchins.

We studied the bioluminescent jellyfish *Aequorea* at the lab. When I needed to do centrifugation, I obtained Dr. Whiteley's permission to use his Sorvall refrigerated centrifuge. Since I heard from his students that Dr. Whiteley was very careful to prevent the corrosion of the rotor, I remember that I washed it very carefully and dried after each use.

I visited Friday Harbor Labs 17 times in the next 40 years, but I cannot recall any conversation with Dr. Whiteley longer than 1 minute, probably because we both were busy, and also due to the lack of common topics between us.

When a symposium "Calcium-Regulated Photoprotein and Green-Fluorescent Protein" was held at the lab in 2004 (August 29 - September 3) as a part of Centennial Celebration of the Friday Harbor Laboratories, almost all experts in the field gathered at the lab. When I and my wife arrived and parked our car at the front of the laboratory office, we were surprised that Dr. Whiteley was there to greet us; apparently he was waiting for us. He took us to the dining hall, and ordered some food

for our lunch. Then we talked leisurely for a long time. It was that occasion that I learned his connection with Princeton and with Newton Harvey. We stayed at a cottage in the Whiteley Center during the symposium. One afternoon, Dr. Whiteley invited all conferees to the beach of his house, where we spent very pleasant time. Dr. Whiteley looked happy to chat with his old friend, Dr. Shinya Inoue. I always remember Dr. Whiteley as a most respectable scientist.

Osamu Shimomura, May 4, 2013
Marine Biological Laboratory
Woods Hole, MA

Professor Hironobu (ED) Ozaki, Remembrances

I did my graduate work under Dr. Whiteley at the University of Washington from 1959 to 1964. Not only did he support and guide my research during those years, he continued to help develop my academic career thereafter as well. I can recall many happy memories working with Dr. Whiteley. We collected sea urchins together during the spring low tides in the Olympic Peninsula, transported them on a small plane to the Friday Harbor Laboratories (FHL), and then caught the early morning ferry back to the Seattle campus. I also traveled back from Michigan often and spent many summers with him at FHL. He was a great scientist and teacher; kind, sincere, and very generous. I feel very fortunate to have been a student of Dr. Whiteley's, and I am very grateful for his mentorship and friendship.

Hironobu (ED) Ozaki, May 5, 2013
Professor Emeritus
Michigan State University

Professor Fumio Iwata, Remembrances

I received a lengthy email from Dr. Whiteley in 2011, in which he explained that he was immensely pleased at two recent events: the publication of my paper describing a new Nemertean genus and of a paper co-authored by him and his former graduate student, Dr. Rosalie Langelan (now Duncan). I had honored Dr. Whiteley in the former for his long-standing and generous contributions to the FHL by naming the new species after him, *Peavinenemertes whiteleyi*. It was published in the Proceedings of the Biological Society of Washington that year in 2011. Dr. Whiteley was not only pleased, but he also became excited and curious about the biology of nemerteans. Dr. Steve Stricker, who also works on nemerteans, had conducted a symposium the year before at FHL to share his insights into oocyte maturation. Dr. Stricker asked Dr. Whiteley to put together some old data on the echinoid mitotic gradient and the effects of cell size on the micromere cleavage cycle. What resulted was the publication in 2011, which became Dr. Whiteley's last paper, written when he was 94 years old.

Fumio Iwata, May 3, 2013
Professor Emeritus
Hokkaido University