

Obituary – Dr. Toshiro Saino

by Sanae Chiba



A few months have quickly passed since we lost our colleague, friend and mentor, Dr. Toshiro Saino. He passed away on April 17th in Yokohama, Japan, just one week after the cherry blossom season ended. In Buddhism, one must complete a seven-week journey to reach the Heavens after he/she has left this side of the world. Every

week, a task is given, such as crossing the river by paying special coins to the boatman (so we put a special traveler's burial clothes on him/her with those coins in its wallet). The fifth week is the climax, when one must pass the qualification interview with the Emperor of Hell. I imagine how Saino-san took that interview, and am sure he could outcompete the Emperor in debate quite confidently. Now I can see him enjoying discussions with past famous scientists in history far up there, of course sipping Heaven's best whiskey, sake or whatever.... I just cannot help but imagine it that way.

Saino-san was probably most familiar to the recent PICES community as the Co-Chair of the Section on *Carbon and Climate*. He was Japan's leading biogeochemist and ocean color scientist who had been promoting a number of domestic and international programs in these areas. He was a member of the JGOFS Scientific Steering Committee starting in the 1990s and served on its Executive Committee until the program ended in the mid-2000s. Starting his science career with studies of nitrogen fixation physiology of *Trichodesmium* in the late 1970s at the University of Tokyo, he made important contributions on a wide range of subjects concerning the ocean nitrogen cycle, such as development of a stable isotope technique for measuring nitrogen fixation in the sea and methods for estimating nitrate and new production from remote sensing. More recently, he launched the project for development of an ocean productivity

profiling buoy system, aiming to make possible the semi-real time observation of primary productivity. After moving from Nagoya University to JAMSTEC in 2008, he led time-series observation projects using the profiling buoy system, with one deployed in the subarctic and the other in the subtropical western North Pacific.



Testing the Ocean Productivity Profiling System.

I personally came to know Saino-san when I was a graduate student of the Tokyo University of Fisheries. When I applied for a Postdoc position at JAMSTEC, he was one of the interviewers at that very scary, serious interview session. I successfully got the post and Saino-san became my boss, who was dignified but very approachable. We worked together on the retrospective analysis of long-term ecosystem change over the North Pacific by collecting and re-analyzing historical plankton samples and data such as the Odate Collection that the Fisheries Research Agency possessed. He was an advocate for the Odate Project, by which our understanding of marine ecosystem responses in the western North Pacific to climatic forcing, such as the Pacific Decadal Oscillation, was greatly improved.



Group photo of the Section on Carbon and Climate meeting at PICES-2011 in Khabarovsk, Russia. Left to right: Dong-Jin Kang, Jim Christian (S-CC Co-Chairman), Pavel Tishchenko, Alex Kozyr, Toshiro Saino (S-CC Co-Chairman), Toru Suzuki, Akihiko Murata and Minhai Dai.





Saino-san with Drs. Shuichi Watanabe and Toru Suzuki at PICES-2002.



Saino-san earning the name “in-Saino”, with Alex Kozyr and Alex Bychkov during a JGOFS N. Pacific Synthesis Group meeting, 2003.



Saino-san and Fei Chai enjoying dinner with wine, and watching the sunset on a Maine lake, 2006.



Invited speakers, Drs. Toshiro Saino and Michael Behrenfeld, PICES-2007.

Saino-san always expanded his scientific interests toward new perspectives and methods whenever he found it challenging. He was a fully internationally active oceanographer who conducted his projects in the global context, loved to work with international colleagues, and encouraged others to go global, as ocean science is global. That is why he had so many good friends all over the world. Throughout his professor career at the University of Tokyo and Nagoya University, he played a role as a mentor of many capable young scientists, among which were excellent overseas students who are now world leading oceanographers. It was really impressive that there were so many messages of condolence from overseas at his funeral. I must also mention that he was a supporter of women scientists in Japan, where the ceiling is often visible rather than just made of glass.

Besides science, I should write here about his lovable character. He had a large collection of rhinoceros goods in his office because he related its Japanese name “sai” to himself. On celebration of Saino-san’s Japanese Oceanographic Society Award, one of us even tried to find a gift of a rhino crystal figure in the flagship shop of Swarovski in Vienna where he attended the EGU meeting. He insisted that he desperately needed a rhino, and ended up having thoroughly confused the shop clerk who suggested an elephant and other animals because they had no rhino products and did not understand why it must be a rhino. That anecdote always makes me smile. Saino-san was known as a great host at his home BBQ parties. Yet not so many know that he was a highly skilled Kendo (Japanese fencing) player; the 4th grade is only given to, well, “Samurai-level” competitors. Indeed, he was a Samurai while he was fighting with cancer, brave and positive, and worked hard as always even in such bad condition. Also, he was a scientist, who thoughtfully did the research, critically analyzed the symptoms, and tried new treatments. We believed he could have pulled through.

Saino-san leaves behind his wife Fumiko Saino, a daughter, two sons and two grandchildren. And a third grandchild is expected soon. Saino-san has left us, but he sowed a lot of seeds of ocean scientists over the world. I end this obituary with my favorite quote of Oscar Wilde,

“To live is the rarest thing in the world, most people just exist, that is all.”

Saino-san lived.



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