

# RECOLLECTIONS OF SEIJI OHSUMI

## Yong-Rock AN

Cetacean Research Institute, National Fisheries Research and Development Institute, 139–29, Maeam-dong, Nam-gu, Ulsan, Republic of Korea

It is a great honor to remember the life of the late Dr. Oshumi. We have lost the extraordinary life of this remarkable man who devoted his whole life to Cetology.

The first time I met him was when we entered Ishinomaki Port after the JARPN II research cruise in 2003. My first impression of him was that of a very gracious and gentle man, but when we talked about whale research, his eyes were full of energy.

I understand that he and my Japanese leaders and colleagues fully supported me to prepare my post-doctoral study on Cetology. But I gave up the great opportunity to study whales in Japan because at about the same time I got a job as a whale researcher of the Cetacean Research Institute (CRI) in Korea. Nevertheless, he still congratulated and encouraged me.

Dr. Oshumi was always energetic and very active when I met him at the IWC Scientific Committee or the related workshops. He was my great teacher with more extensive experience and deeper knowledge on Cetology than anyone else. Also, he was very interested in the policies and issues of whaling in Korea as well as my research activity.

The citizens of Ulsan, the venue for the 57<sup>th</sup> IWC meeting in 2005, know him very well because he participated in the Whale Festival several times and gave valuable lectures on Cetology and whaling culture. I believe their thoughts and prayers are with his bereaved family and colleagues.

Great man, great loss. I will always be grateful for his contributions to whale research and mentorship. I am missing already his smile and clapping in Kanto style.

Rest in peace Oshumi-sensei.

# IN MEMORY OF DR. SEIJI OHSUMI

### Arne BJØRGE and Tore HAUG

Institute of Marine Research, Nordnesgaten 50, Bergen, Norway

It was with great sadness that we received the message that Dr. Seiji Ohsumi passed away November 2, 2019. We learned to know and admire Dr. Ohsumi at the Scientific Committee (SC) of the International Whaling Commission (IWC), where he participated as a leading scientist over a period of more than half a century and chaired the Japanese delegation in the 1990's.

Dr. Ohsumi had an interest in, and great knowledge of, a variety of scientific aspects of the biology, ecology and management of cetaceans. He published strange details and curiosities such as the finding of visible hind limbs in striped (*Stenella coeruleoalba*) and bottlenose (*Tursiops truncatus*) dolphins (Ohsumi, 1965; Ohsumi and Kato 2008) and the virginal membrane in large rorquals (Ohsumi; 1969). But his most important achievements were on the life history, in particular age determination, of a number of species (e.g., Nishiwaki, Hibiya and Ohsumi, 1958a, 1958b; Ohsumi, Kasuya and Nishiwaki, 1963; Ohsumi, 1964) and his revolutionary studies into the social life of the sperm whale (*Physeter macrocephalus*, Ohsumi, 1971). In recent years during the special permit whaling, his interests were also devoted to the ecological role of cetaceans, especially their feeding habits and consumption, and their role in the ecosystem (Tamura and Ohsumi 2000; Fujise, Hatanaka, and Ohsumi 2010). His publication record spans more than six decades and covered species from the small Dall's porpoise (*Phocoenoides dalli*) to the great blue whale (*Balaenoptera musculus*).

Dr. Ohsumi was one of the most respected members of the IWC/SC. Although members of the SC could have different views on a number of issues, all participants listened carefully when Dr. Ohsumi spoke. His impressive publication record and his life-long experience from surveys at sea, laboratory work and advanced theoretical studies in the office, made him an authority within the SC. His knowledge combined with a well-developed sense of humour made him also one of the best debaters in the SC. And we all loved his funny speeches every year at the traditional dinner party following the closing session of the SC. Dr. Ohsumi will be deeply missed.

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# REMEMBERING DR. SEIJI OHSUMI

## Robert L. BROWNELL Jr.

Former Chair of the IWC Scientific Committee, Southwest Fisheries Science Center, NOAA, USA

Seiji lived a wonderful life and was a great scientist. When Dr. Omura died, I attended his service and there were many people present, including Seiji. During the service, Seiji said to me that "I hope that when I die this many people will attend my service 'to pick my bones'". As it turned out, the number of people at the memorial ceremony for Seiji on 23 December 2019 far exceeded the number that attended Omura's service. Seiji was a great help to me when I was doctoral student at the Ocean Research Institute, University of Tokyo. So that I could survive as a non-working student in 1974, Seiji arranged for me to be Visiting Biologist at the Far Seas Fisheries Research Laboratory in Shimizu via a Japanese Government Research Award for Foreign Specialists.

# RECOLLECTIONS OF SEIJI OHSUMI

## Doug BUTTERWORTH

Professor Emeritus, Department of Mathematics and Applied Mathematics, University of Cape Town, South Africa

I first met Seiji in late 1980 at an IWC workshop held in Seattle, during which he invited me to partake in what was my first sushi meal. The workshop was held to discuss how best to develop estimates of whale abundance from sighting surveys. This topic had come into prominence as a key component of the IWC's International Decade of Cetacean Research, whose flagship programme was annual minke whale assessment surveys in the Antarctic. Seiji was co-convenor of the programme together with my own colleague, Peter Best, and this soon led to many visits to Japan to participate in the meetings that planned these surveys. Seiji would chair these in his customary friendly style, but also took responsibility for organising hospitality for the foreign guests outside meetings' hours. Thus, it was Seiji who took me on my first "tourist trip" around Tokyo, including Tokyo Tower and the Meiji Shrine, and the evenings would often encompass a visit to his favourite robatayaki bar in Shinjuku with its large badger statue outside. Seiji was a great host, and when on one occasion some on my relatives accompanied me on a visit to Tokyo, he insisted on according us the rare privilege of a visit to his own home in Shinjuku. Fortunately, on that occasion we managed to get there without becoming lost in the cavernous underground malls of Shinjuku station, something even Shinjuku-resident Seiji would admit had sometimes happened indeed to him.

For many decades Seiji served as the leading Japanese whale scientist, representing his views and country faithfully and effectively in the cauldron that was the IWC Scientific Committee during those times, as well as tabling the outcomes of his often-substantial studies in that forum. In debates there he frequently clashed with arch-anti-whaler Sidney Holt on a host of issues, gamely responding in interchanges that would play on the subtleties of the English language which, unlike for him, was the mother tongue of his opponents and gave them an undue advantage.

My abiding recollection of Seiji will be of his unchanging pleasant and friendly nature. After his retirement, he would still come through regularly to his work-space at the Institute of Cetacean Research. A visit there would always include catching up with him, when he'd enthusiastically explain what research issue he was working on at the time. Like the late John Bannister, with whom he shared so many IWC/SC meetings, he was the epitome of a gentleman.

# CONDOLENCES ON THE PASSING OF DR. SEIJI OHSUMI

## Phillip CLAPHAM

Alaska Fisheries Center, National Marine Fisheries Service, NOAA, 7600 Sand Point Way NE, Seattle, WA, USA

On behalf of my wife and myself, please accept our sincere condolences for the passing of the great Seiji Ohsumi. It is a very sad day. Seiji's scientific contributions were large, but I will always remember him for his gentle nature and his kindness. We often disagreed at the IWC, but my wife and I always enjoyed our conversations with him, and he always displayed a great courtesy to everyone.

He will be missed. Very sincerely,

Phillip Clapham and Yulia Ivashchenko

# REMEMBERING DR. SEIJI OHSUMI

## Doug DEMASTER

Former Chair of the IWC Scientific Committee, and Director, Alaska Fisheries Science Center, NOAA, USA

In the Alaska Native culture, elders are greatly respected for their wisdom and civility. At the IWC Scientific Committee, while I was chair, I greatly appreciated Dr. Ohsumi's contributions to our deliberations. He was one of our elders. His comments reflected considerable experience and knowledge regarding whales and whaling. He was an elder to be respected. I was very grateful to him for his consistent support of Alaska Native subsistence hunters.

With my deep regards,

Doug DeMaster

# CONDOLENCES ON THE PASSING OF DR. SEIJI OHSUMI

## Greg DONOVAN

Former Head of Science, International Whaling Commission, Cambridge, UK

I was so sorry to hear of the news of the death of Seiji. He was a great man and one of the kindest senior scientists as I began my cetacean career 42 years ago and remained a true gentleman throughout the years. His knowledge of cetacean biology, especially of the large whales was unparalleled and his energy and enthusiasm remained undiminished until the end—an example to all of us. Please pass my sincere condolences to all my Japanese colleagues and especially those at ICR.

With best wishes

Greg

# HOMAGE TO DR. SEIJI OHSUMI

### Yoshihiro FUJISE

Director General, Institute of Cetacean Research, 4–5 Toyomi, Chuo-ku, Tokyo, Japan

Dr. Seiji Ohsumi joined the Institute of Cetacean Research (ICR) in 1991, and from December 1995 to January 2004 he was in charge of the operation of the Institute and the guidance of the staff as its director-general. In addition to his scientific accomplishments as a researcher with more than 700 papers, he was interested in everything related to whales, including whale culture and whales as food, and attended many relevant meetings and never stopped being interested in these things. Especially on the research side, he constantly inspired young researchers with various ideas. Further, the spirit of taking good care of food has been passed on to the institute's staff with the catchphrase "You would be scolded by Dr. Ohsumi if you leave the food you are served." In addition to paying homage to the teacher who pursued his dream throughout his life, I think many of us would like to live such a life.

Ohsumi-sensei, I'm really thankful to you.

# MEMORIES OF SEIJI OHSUMI

## Ray GAMBELL

Former Secretary to the International Whaling Commission (1976–2000), Green End, Landbeach, Cambridge, CB25 9FD, UK

Seiji Ohsumi was already an important figure in the world of whale research when I entered this field in the early 1960s. It was a time of great international pressure to halt the over-catching and decline of whale populations, particularly in the Antarctic. Research on the basic biology and lives of the great whales had been carried out by scientists, mainly from the whaling nations, since the beginning of the Antarctic whaling industry at the beginning of the century. Thus, Japan had a history of such endeavours, and Seiji built on and expanded this knowledge base by his own research.

I was fortunate therefore to work with Seiji, and whale biologists from a rather small group of countries, to bring together the research we carried out on these fascinating and commercially valuable animals. We met at the annual meetings of the Scientific Committee of the International Whaling Commission, at special meetings and working groups around the world, to bring together our knowledge on specific species or populations. We also socialised outside the working hours!

The new science of fisheries population dynamics and the regulation of fisheries was brought to bear on the whaling problem in the 1970s. This required all the available catch statistics and relevant biological information such as growth, age and mortality of the different species and populations to be combined together for analysis. Seiji joined with scientists from other nations to pool these data and prepare them for mathematical analysis.

Despite the pressures of these meetings, Seiji was always a charming and approachable colleague. We kept in touch after I retired in the year 2000 and exchanged cards and news at Christmas. His last message to me was "I go into the office every day—I have no other interest."

# SOME WORDS FOR DR. SEIJI OHSUMI

## John "Craig" GEORGE

Wildlife Biologist (retired), North Slope Borough, Department of Wildlife Management, Utqiagvik, Alaska, USA

It is an honor to offer some words for Dr. Seiji Ohsumi. Like many classically trained whale biologists of his time, Ohsumi understood whales "inside and out." He was knowledgeable about their anatomy, physiology, population dynamics, marine ecology, whaling history and more.

While editing and writing the recently published book "The Bowhead Whale: Biology and Human Interactions" I carefully reviewed the report *Black Right Whales of the North Pacific* by Ohsumi and colleagues<sup>2</sup>. I was astonished at the detail and sheer volume of work they did on this species. I was also impressed that the North Pacific right whales are more similar anatomically to their bowhead cousins than I previously realized; this has important implications to the bowheads' response to climate warming.

Equally important to being an outstanding whale biologist, Seiji Ohsumi was a gentleman. His conduct at the IWC Scientific Committee (SC) meetings was always dignified and respectful even during the many heated debates. I particularly valued his insights on the feeding ecology, reproductive biology, and health assessment of large whales.

I always enjoyed his words at the SC banquet and was impressed by his uncanny oratory skills in English which were far better than my own. He would give a toast or tell a story usually following John Bannister's silly Australian "dunny" joke. He would often say, "I don't understand British humor, but I enjoyed your story nonetheless." Thanks for your honesty, Seiji, no one really understands British humor!

At the IWC meeting in Anchorage he indicated that would like to taste bowhead whale. With the help of an Inupiat friend, we shared some *agviq* (bowhead) Japanese style with soy sauce and wasabi. It was a nice moment as he expressed his impressions and reverence for the whale. I considered Seiji a great friend and greatly miss him. I feel honored to carry on the type of work he did on large whale biology.

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<sup>&</sup>lt;sup>1</sup> George, J. C. and Thewissen, J. G. M. (Eds.), 2020. The Bowhead Whale, *Balaena mysticetus*: Biology and Human Interactions. 1<sup>st</sup> Edition. Elsevier/Academic Press, 668 pp.

<sup>&</sup>lt;sup>2</sup> Omura, H., Ohsumi, S., Nemoto, T., Nasu, K., and Kasuya, T. 1969. Black right whales in the North Pacific. *Sci. Rep. Whales Res. Inst.* 21: 1–78.

# REMEMBERING DR. SEIJI OHSUMI

### Hiroshi HATANAKA

Adviser Emeritus, Institute of Cetacean Research, 4-5 Toyomi, Chuo-ku, Tokyo, Japan

Dr. Ohsumi was a man who walked the straight and narrow path of whale research. He used to say that "my occupation is whale research and my hobby is also whale research" and he never gave a second thought to this path. Nearly 30 years ago, I got to work with whales under the guidance of Dr. Ohsumi, and I was amazed at the breadth and depth of his knowledge of whales. I had the opportunity to travel abroad with him and he was highly regarded and respected by foreign scientists as well.

In the midst of post-war food shortages, we Japanese were on the verge of starvation and, ever since, Dr. Ohsumi kept consistently conducting and leading research to promote the use of cetacean resources to provide animal protein and establish their sustainable use on a scientific basis.

Now that Dr. Ohsumi has passed away, I am immersed in a sense of loss of an excellent leader and a feeling of loneliness for losing an unparalleled friend.

# MOURNING DR. SEIJI OHSUMI

### Yoshihiro HAYASHI

Former President, National Museum of Nature and Science, 7-20 Ueno Park, Taito-ku, Tokyo, Japan

Dr. Ohsumi was a person who never wavered. Although he was 16 years my senior, whenever we met, he always had a smile on his face and spoke in a way that made me feel no age difference. The fact that we studied at the same university, though we were in different departments, and that our birthdays were on the same day, July 12, may have been the reason why I felt particularly close to him. Likewise, Dr. Ohsumi's doctoral dissertation was on the establishment of an age assessment method for fin whales, while my theme was the geographical variation of wild boars, and I needed an accurate age assessment to compare wild boars from different regions. It is said that the age of whales can be accurately estimated even at 100 years old by the annual rings formed on their earwax plugs, but wild boars' age can only be read up to 10 years at most due to the annual rings formed in the cementum of their posterior molars. However, since both fin whales and wild boars are mammals, I remember Dr. Ohsumi's thesis being very helpful for my research.

It was only after I was dispatched to the Southern Ocean as a veterinarian during the 1978–79 whaling season, when the International Whaling Commission (IWC) asked the Fisheries Agency for "an accurate estimation of killing time of Antarctic minke whales" that I became able to talk closely with Dr. Ohsumi. He was always present in the Japanese delegation's waiting room at the annual IWC meetings held at Cambridge University in the UK, Germany, St. Kitts and Nevis, Mexico, and so on. It is thanks to our predecessors that Japan has been able to play an active role in the international community as a sound, unwavering whaling nation, and Dr. Ohsumi was undoubtedly one of our country's foremost figures in this field.

May he rest in peace.

# RECOLLECTION OF SEIJI OHSUMI

### Kazuhiko HIRAMATSU

Associate Professor, Atmosphere and Ocean Research Institute, The University of Tokyo, 5–1–5 Kashiwanoha, Kashiwa, Chiba, Japan

When I got a job at the National Research Institute of Far Seas Fisheries in April 1984 and was assigned to the High Latitudes Oceanography Section, Oceanography and Southern Ocean Resources Division, the division leader was Dr. Seiji Ohsumi. He was my boss's boss. I did not have much opportunity to talk to him because he was promoted to the Research Planning and Coordination Division in a little over a year, but I was impressed with his aggressive appearance. He was already in his mid-50s at that time.

After that, he was the Director General of the National Research Institute of Far Seas Fisheries and there was not much contact between an ordinary researcher and the director. But one day, I was called into the director's office and wondered what was going on. He introduced me to a matchmaking. I declined politely because the marriage was decided just before, but it seems that there was also an aspect of taking care of staff who are unlikely to get married. After he moved to the Institute of Cetacean Research, there was a little interaction, such as attending a meeting when I was involved with research on cetaceans for a short time, and participating in the Fisheries Resources Management Colloquium at the Institute of Cetacean Research. In retrospect, I have had a long relationship with him since I started as a researcher.

# TWO MEMORIES OF DR. OHSUMI

#### Koichi KAJI

Professor Emeritus, Tokyo University of Agriculture and Technology, Director of Wildlife Management Research Center, 940 Aogakicho, Sawano, Tamba, Hyogo, Japan

There are two things that left a strong impression in my memories of Dr. Ohsumi. One is a letter of compassionate encouragement and an expectation that I received from Dr. Ohsumi when I moved from a research institute in Hokkaido to Tokyo University of Agriculture and Technology (TUAT) in April 2006. Every time I encountered a difficult situation, I was able to return to my original intension by rereading the letter many times.

The other is the event at the whaling seminar co-hosted with Professor Hidehiro Kato of Tokyo University of Marine Science and Technology (TUMSAT) in July 2007. In that year, I focused on the whaling controversy in my seminar for six first-year students. As the final touch on the seminar, Professor Kato kindly arranged a joint seminar titled "On the Whaling Issue." This was an exceptional seminar in which graduate students of the TUMSAT commented on the presentation by the TUAT first-year students, and a scientist from the Institute of Cetacean Research (ICR) gave a summary and comment. Dr. Ohsumi, an adviser of the ICR, also participated in the joint seminar and gave warm comments on the three presentations on the "History of Whaling" in Part 1.

However, Dr. Ohsumi seriously argued, "I don't think so," in response to the opposition's allegations in Part 2, "The Controversy over Whaling." Participants praised the student for making such a good presentation that Dr. Ohsumi would seriously argue. I felt the sincerity of the academic discipline when I saw Dr. Ohsumi sincerely facing the presentation of the first grader. I would like to cherish Dr. Ohsumi's message that it is science-based words that can transcend the conflict of values.

### Toshio KASUYA

Retired Professor, Mie University and Teikyo University of Science and Technology, Nagayama, Tama-shi, Tokyo, Japan

In the autumn of 1960 Dr. Masaharu Nishiwaki of the Whales Research Institute (WRI; Director Hideo Omura) invited me to pursue my graduation thesis in his laboratory, where I met Dr. Seiji Ohsumi. The next year I joined WRI as a research staff and received trainings from Ohsumi for cetacean biologists. These included photo film development, photo printing and creating block copies for papers. I also learned from him processing of cetacean gonads and ageing of whales. The experiences at WRI, including two North Pacific and an Antarctic pelagic whaling cruises, formed the foundation of my later activities. Before modern tools such as personal computer and word processor became available in the early 1980s, we biologists used abacus, slide rule, table of logarithms for data analyses, and typewrote manuscript. Recent biologists have an easier work environment and tend to create a flood of papers often with complicated statistical analyses of value I don't know.

After spending 5 years at WRI, I was invited by Nishiwaki to the Ocean Research Institute, University of Tokyo, and worked mainly on biology of Japanese small cetaceans and river dolphins of the world. Then in 1983 Ohsumi invited me to the Cetacean Division of the Far Seas Fisheries Research Laboratory. With the cooperation of my staff, I enjoyed 14 years (1983–1997) of my life in the Laboratory working on the biology and management of cetaceans around Japan. I believe that Ohsumi worked for us during the period as a buffer between our cetacean group and the Fisheries Agency.

After my retirement from educational jobs at Mie (1997–2001) and Yamanashi (2001–2006), I was fortunate to resume regular contacts with Ohsumi with drinking at a buckwheat noodle shop in Shinjuku, usually twice a year. The last was on 10 July 2019, when we talked about inviting some elderly cetacean biologists, but it did not happen.

# FOLLOWING SEIJI OVER 40 YEARS

### Hidehiro KATO

Professor Emeritus, Tokyo University of Marine Science and Technology, Advisor, Institute of Cetacean Research, 4–5 Toyomi-cho, Chuo-ku, Tokyo, Japan

I first met Dr. Seiji Ohsumi (I would refer to him hereafter as "Seiji" for the sake of friendliness) when I was a PhD student majoring in pinnipeds such as seals and sea lions. For some days 40 years ago, Seiji chaired a session at the marine mammal symposium, and I was sitting in the backmost row of the hall. I was intently watching him from the back of the room, and his unique way of speaking in his later days, which you are all familiar with, was already there. Even now, when I close my eyelids, the impressions of that time immediately come to mind. The image brings me back memories!

Although it did not occur to me at the time of the symposium, later on I was hired as a researcher at the former Whales Research Institute, where Seiji had also worked in the past, through the intermediary of the late Dr. Hideo Omura and others, and later moved to the Far Seas Fisheries Laboratory in Shimizu, where I followed Seiji. Even if we continued our research at different institutions for a while, we kept working closely together in the research itself, and after my retirement from Tokyo University of Marine Science and Technology in 2018, I had the honor of working with him as an advisor at ICR.

Seiji's written Japanese was flowing and elegant, beautiful, and grammatically correct. Overseas scientists cannot imagine that one of Seiji's articles on whale enlightenment was used in one of the chapters of a Japanese language textbook selected for junior high school. On the night before Seiji's death, we exchanged passionate opinions as usual about the ideal whale research and their stock



**Fig. 1.** Dr. Seiji Ohsumi at the time of the old Niigata Public High School, 17 or 18 years old. *Courtesy of Seiji's family*.

management. His face was calm, but full of intelligence. Seiji's education was different from the education that we, the younger generation, had. Seiji inherited the liberal arts principles based on the deep philosophical insights of the old high school under the prewar education system. As well as being a preparatory course to enter the imperial university, it was the essence of elite education that has already been lost in Japan. Seiji was from the last student generation to graduate from the old Niigata Public High School in 1949 and went on to the old University of Tokyo, where he met his respected supervisor, the late Professor Masaru Nishiwaki, and Seiji was initiated in cetacean sciences by him there. The image of Seiji singing his favorite dormitory song loudly at the dormitory song festival of the old high school which, like many others in Japan is now closed, is always overlapping in my mind with the image of him at the symposium.

May he rest in peace.

# MEMORIAL REMINDER OF THE LATE DR. SEIJI OHSUMI

### Akito KAWAMURA

Professor Emeritus, Mie University, 1577 Kurimamachi Yacho, Tsu, Mie, Japan 8–9–8 Nanae-cho, Kameda-gun, Hokkaido 041–1111, Japan

More than fifty years ago Dr. Seiji Ohsumi initiated a bio-ecological research on the Antarctic minke whales. During the 1967/68 whaling season a total of 597 minkes were caught by our whaling fleets, and some essentially important biological data were obtained. With these together with some past knowledge and sighting records having been done from time to time, Dr. Ohsumi was very aware of the importance toward establishing a well-designed model for stock management. At that time Dr. Ohsumi foresighted coming future days of minke whale fisheries in the Southern Ocean and reported one of the basic data on the stock of this species while the amount of related data and/or evidence was still very limited. The report was: Stock of the Antarctic Minke Whale. *Sci. Rep. Whales Res. Inst.*, No. 22, (1970).

In this report he estimated the population size of the Antarctic minke whale to be 70,000, mainly based on sighting records obtained. Although the number itself was about one tenth of the later understandings, he suggested that introduction of latitudinal and longitudinal unit areas was undoubtedly possible an important key for stock management in the future. With hope for developing more modernized regulations for whaling fisheries together with what he aimed and described in the report, the story as a whole was full of suggestions.

As one of the younger alumni disciples of the old Whales Research Institute (WRI) I am very proud of him, having co-authored the report mentioned above. At the same time I hope that Ohsumi's foresighted and precursory work on whale stock management and whale fisheries would be reminded widely on this occasion.

We lost a true man of whales and whale fisheries. Recollections around activities and the old WRI always accompany the late Dr. Seiji.

May his soul rest in peace.

# RETROSPECT OF THE LATE DR. SEIJI OHSUMI

## Zang Geun KIM

Senior Scientist, Fisheries Resources Management, National Fisheries Research and Development Institute, 408–1 Shirang-ri, Gijang-Up, Gijang-Gun Busan, Republic of Korea

As a person who was once in charge of cetacean research in Korea, I would like to honor the memory of the late world-renowned whale scientist, Dr. Seiji Ohsumi.

He admitted me as a trainee on cetacean research in the Far Sea Fisheries Research Institute for three months. When I arrived at Shizuoka Station in summer 1988, he came to pick me up and guided me to the Institute and assigned an employee apartment for my accommodation. During the training period there, I met with Drs. Tomio Miyashita and Hidehiro Kato and other colleagues.

Since 1993, Korea and Japan have established scientific cooperation through agricultural and fisheries cooperation as well as science and technology cooperation, as mandated in the Article 65 of the UNCLOS. This, in certain way led to the start of systematic cetacean research in Korea and inspired the establishment of the Cetacean Research Institute (CRI, NFRDI) in 2004. I wish this harmonious friendship may continue (Fig. 1).

I met him for more than 20 years in multiple opportunities such as on the occasion of the IWC meetings or social events and exchange programs (Fig. 2) until I left the Cetacean Research Institute of Korea in 2009. One of the precious memories that comes to my mind is that he liked the Korean soybean paste soup in my house and travelled with me to many places in Korea.

With all these memories, my family and I pray that the deceased may have a rest of peace at God's mercy.

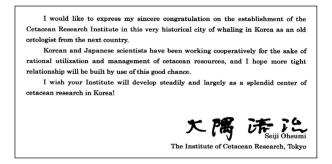


Fig. 1. The message of Dr. Ohsumi to the opening of CRI in 2005.



**Fig. 2.** Group photo at the symposium on cetacean research in the Fisheries Research and Development Institute, February 14, 2001.

# REMEMBERING DR. SEIJI OHSUMI

## Toshiya KISHIRO

Deputy Director, Highly Migratory Resources Division, Fisheries Resources Institute, National Research and Development Agency, Japan Fisheries Research and Education Agency, 2–12–4 Fukuura, Kanazawa-ku, Yokohama, Kanagawa, Japan

I met Dr. Ohsumi for the first time when I joined the National Research Institute of Far Seas Fisheries after graduation in 1989. At that time, he was the director of the Institute, and I received rudimentary guidance as a researcher from him as a newcomer to the Cetacean Lab. He was engaged not only in pursuing research on whales, but also worked to organize research on other international fishery resources sections such as tuna and salmon and nurtured many researchers at the National Institute. In addition, despite his busy schedule, he had written many books on whales aimed for the general public and contributed to the dissemination of whale knowledge in Japanese society. All of us admired his vitality and inclusive, straight personality. After his retirement in 1991, he moved to the Institute of Cetacean Research, and continued to work and enthusiastically guide our cetacean research for many years. He had been literally a living dictionary and a spiritual pillar for us. On behalf of our Institute, I express sincerely respect for his achievements, and deep gratefulness for his leadership and encouragements for us. I feel that he continues to encourage the future progress of the cetacean population studies even after he's gone.

I pray from the bottom of my heart that his soul may rest in peace.

# RECOLLECTIONS OF SEIJI OHSUMI

Rebecca LENT\* and Iain STANILAND\*\*

\*Secretary, International Whaling Commission

\*\*Secretariat Lead for Science, International Whaling Commission
The Red House, 135 Station Road, Impington, Cambridge, UK

Dr. Seiji Ohsumi was a stalwart of the IWC Scientific Committee (SC) because of his long-standing, valued and active participation in the committee. He will be remembered fondly and appreciated for his years of dedication to scientific research and his contributions to the IWC. Between 1967 and 2010 Dr. Ohsumi authored and co-authored 182 papers<sup>3</sup> submitted to the SC collaborating with scientists from all over the world. This impressive body of work spanned a wide range of subject areas, including stock assessments, mathematical modelling, reproduction, feeding, and genetics, and contributed to our knowledge of baleen whales and small cetaceans alike. There are few who have contributed as much to the SC as Dr. Ohsumi.

Dr. Ohsumi was also committed to supporting early career researchers providing mentoring of their studies and research. His legacy lives on in the IWC as many of his former students and collaborators continue to serve with us today. His passing is a great loss to cetacean science and he is already greatly missed by the IWC community.

<sup>&</sup>lt;sup>3</sup> Editor's Note:

CPOPS received with these recollections note from the IWC Office an extensive list of works by Dr. Ohsumi related to the Scientific Committee of the IWC. This list was collated and incorporated into Seiji Ohsumi's bibliography presented in the following section of this issue.

# PERSONAL TRIBUTE TO DR. SEIJI OHSUMI

### Christina LOCKYER

Research Director, Age Dynamics, Huldbergs Alle 42, Kongens Lyngby, Denmark

My first recollection of Seiji Ohsumi was in 1972 when I attended the IWC Scientific Committee for the first time. The IWC SC was a very different body to that existing today with only about two dozen participants from Australia, Canada, Iceland, Japan, Norway, USSR, South Africa, UK, USA and FAO. Seiji was very smart, dark suited, clean-shaven and jet-black hair. He was then in his early 40s. Then in my mid-20s, I looked up to him as a senior scientist. He seemed very inscrutable and I was a little in awe. He was very interested in my age estimation techniques in baleen whales and arranged for me to visit the Far Seas Fisheries Laboratory in Shimizu in 1977 for 3 months to read ear plugs and teach some students. He organised everything for me, right down to the Japanese style apartment. I recall being very sick during a national holiday when I lost much weight. Seiji was concerned and insisted on taking me for a sushi dinner with Suntory whisky to help me recover and lift my spirits. It really worked, and since then he always showed great kindness and hospitality to me. We met many times over the decades we were both active whale scientists, and I visited Japan for research several times when he often invited me to his home and took me sight-seeing (Fig. 1). When working on ear plugs in Tokyo in December 2009, he was a grand host and invited me to dine together with his wife, herself a prominent professor (Fig. 2). In late September 2019, I visited Japan for a first vacation cruising around Japan. We met before I departed and enjoyed a pleasant time together (Figs. 3 and 4). I did not know he would leave us forever some weeks later. Our last contact was by e-mail 2 days before he died, when he wished me a good recovery from breast cancer. He was a special man, and my recollections of him are very personal; now more as a friend and colleague than about his work achievements which were themselves awesome. He became the respected and very kind friend that I knew for 47 years. May he rest in peace.



**Fig. 1.** Seiji acting as tour guide for me on a personal tour of Kamakura.



**Fig. 2.** Dining out with Seiji and his wife in December 2009. I remember this place had a lovely garden where we walked.



**Fig. 3.** Outside a dinner venue in Tokyo, September 2019.



**Fig. 4.** Seiji during a walkabout with me near the Ginza in September 2019.

# IN REMEMBRANCE OF DR. SEIJI OHSUMI

## Koji MATSUOKA

Research Executive Director, Institute of Cetacean Research, 4–5 Toyomi-cho, Chuo-ku, Tokyo 104–0055, Japan

I first met Dr. Seiji Ohsumi when I joined the Institute of Cetacean Research (ICR) back in 1992, while he was the Executive Director there. For the first ten years or so of my working at the Institute, I was constantly shuttling back and forth between the North Pacific and the Antarctic Oceans. Dr. Ohsumi never forgot to encourage us young researchers, often asserting that the field was the basis of whale research and that it was important to write papers even on small topics. During those intense day and night sessions at the annual IWC/SC meetings, we received from him sometimes harsh and sometimes warm guidance on the legitimacy of research whaling and the importance of its continuation. The International Decade of Cetacean Research Program (IDCR) which he helped to launch in 1978/1979, was succeeded by the Southern Ocean Whale and Ecosystem Research Program (IWC/SOWER) and now by the ongoing International Whaling Commission/Pacific Ocean Whale and Ecosystem Research (IWC-POWER). Since my joining ICR, I went to the Antarctic Ocean as much as 15 times, and because of that, every time I had to be away for the New Year festivities. I will never forget that Dr. Ohsumi invited my family to his home on each of those occasions, thus warmly guarding my home front while I was away. I sincerely pray for the repose of his soul.

# IN MEMORY OF DR. OHSUMI

### Tsukasa MURAYAMA

Professor, Department of Marine Biology, School of Marine Science and Technology, Tokai University, 3–20–1 Orido, Shimizu Ward, Shizuoka City, Shizuoka, Japan

I first met Dr. Seiji Ohsumi when I was in my first year of university, participating in a seminar on cetaceans held in Shimizu City (now Shimizu ward), Shizuoka Prefecture. On the second day of the seminar, we visited the Far Seas Fisheries Research Laboratory, where Dr. Ohsumi talked to us about various topics. He was still a young man, but he explained many things to us, fledgling researchers, while holding a handful of materials in front of him. While Dr. Ohsumi had already made many achievements since the 1960s and 1970s, contributing greatly to cetacean research in Japan, at that time I did not know anything about research nor did I know much about him. However, from that day on, I often found the name "S. Ohsumi" in a number of international journals, and as I stumbled upon books written by Dr. Ohsumi in bookstores, I remember being surprised when I realized he was such an outstanding person.

After that, I went on to pursue cetacean research, and we had more opportunities to talk, and I was indebted to him in many ways, which did not change after he moved on to the Institute of Cetacean Research. When I went to visit him at the Institute with my doctoral thesis after receiving my doctorate, he welcomed me with a calm expression and congratulated me.

Dr. Ohsumi also keenly tried to spread the word about his research and whales to young people and the general public who liked natural science. For example, he often visited the activities of groups of people who were interested in dolphin and whale research, and gave them advice on the ecology of cetaceans and their research. He also participated in almost every symposium I organized every year in Tokyo, and gave presentations at some of them. After the symposium, he always talked to the participants, students who had just started their research, and aquarium staff, not only about whales, but also about the sea and ships, including his own experiences. He was never pompous as a great authority on cetacean research, and the young people also entertained friendly feelings toward him.

No matter what I asked him, he always responded with an affable smile and an amiable manner, and I regret and feel sad that I will never see him again.

I sincerely pray for the repose of his soul.

#### Tomio MIYASHITA

Associate Researcher, Fisheries Resources Institute, National Research and Development Agency, Japan Fisheries Research and Education Agency, 5–7–1 Orido, Shimizu, Shizuoka, Japan

I have been indebted to Dr. Ohsumi for his help and support in both my work and private life since I started working at the Far Seas Fisheries Research Laboratory in 1980. When I joined the Laboratory, Dr. Ohsumi was the head of the cetacean resources section, and he taught me about marine mammals, starting with their scientific names, even though I had no connection with those animals. In addition, when I saw him directly typing English documents in preparation for the IWC SC meeting that was just around the corner, he would crack up day and night, typing away on his IBM electric typewriter, and I feel that he taught me by example how to approach my work with a strict attitude. He always asked me "Why?" in response to my doubts. There were times when I was at a loss for an answer, but I believe that I was taught to pursue the truth through these experiences. When I look at the many papers and writings that Dr. Ohsumi has left behind, I am once again amazed at the scientific contributions he has made. He loved to drink, and I was invited by him to drink at many occasions in the past. When I look at the photos, I remember those events such as 'Hanami' to see cherry blossoms and 'Imonikai' to eat boiled taro. He was also from Gunma Prefecture, and when my wife and I were married, he served as our matchmaker. We are very grateful to him for his help in dealing with the situation. Now, we are filled with sadness at the loss of Dr. Ohsumi. May he rest in peace.

# CONDOLENCES ON THE PASSING OF DR. SEIJI OHSUMI

## Sally MIZROCH

Retired Research Biologist, Alaska Fisheries Science Center, NOAA, USA

I met Seiji the very first time I attended the meeting of the International Whaling Commission's Scientific Committee in 1980. I was a new member of the US delegation and Seiji was the head of the Japanese delegation. Back in those days, even though the US and Japanese delegations had very different views on commercial whaling, we enjoyed spending time together after hours singing and drinking. We developed close and long-lasting personal friendships.

I was a young female scientist, one of maybe four women in attendance during those early years, and Seiji was always very supportive of all of us and of me personally. Seiji had an affinity for many young scientists, male and female, and his support contributed to our own growth as scientists.

Seiji and I genuinely enjoyed each other's company each time we met. He was my thoughtful tour guide during my many visits to Japan and we respected each other's viewpoints even when we disagreed.

I also enjoyed Seiji's long great friendship with my friend and long-time collaborator Dale Rice. One of my fondest early memories was sitting with Seiji on a bus ride from Reykjavik to the Icelandic whaling station in 1987 when he told me that he and Dale were exactly the same age. He and Dale Rice were part of a remarkable generation of biologists whose analyses advanced our knowledge of cetacean biology in a breathtaking fashion. Now they are together again. I miss them both very much and was lucky to be friends and collaborators with them.

I've attached a photo of Seiji, Dale, and Gordon Pike from 1963 (Dale Rice's photo collection), a photo of Seiji with a Discovery mark logbook showing mark recovery data for a sei whale Dale had marked off California in 1965, and some recent photos of Seiji when I spent time with him in Tokyo and in Kamakura City.

So sadly,

Your old friend Sally



**Fig. 1.** Seiji Ohsumi, Dale Rice and Gordon Pike (right) having coffee break during the IWC Sperm Whale Workshop in Seattle, WA (1963).



**Fig. 2.** Seiji with the Discovery Mark recovery logbook showing the recovery of a sei whale Dale Rice's marked off southern California in 1965 (2012).



**Fig. 3.** Seiji as tour guide in Kamakura City in 2012.



**Fig. 4.** Seiji and I the last time we met in Tokyo. He is wearing a souvenir hat I gave him in 2012 from my favorite baseball team, the Seattle Mariners (September 4, 2014).

# MEMORIES OF DR. SEIJI OHSUMI

## Joji MORISHITA

Professor, Department of Marine Policy and Culture, Tokyo University of Marine Science and Technology, 4–5–7-Konan, Minato-ku, Tokyo, Japan

When I became a government official at the Fisheries Agency of the Government of Japan in 1982, Dr. Ohsumi was one of the most knowledgeable scientists about whales and whaling. When I attended my first-time International Whaling Commission (IWC) meeting in 1992 held in Glasgow, UK, he was already regarded as a legendary figure in the whale/whaling community of the world. Since then, we attended so many meetings together and travelled around and into many corners of the world (Figs. 1 and 2). Every one of them is memorable and I learned a lot from Dr. Ohsumi.

Two stories among so many remind me of who Dr. Ohsumi was.

He told me that he was criticized by Japanese whalers as anti-whaling when he, as a young scientist, reported to the IWC Scientific Committee about the poor stock status of some whale stocks and supported whaling restrictions targeting those stocks. He was smiling when he told me of this story, but I am sure it was not a pleasant episode for him. However, it was clear to me that his conscience as a scientist was always the most important guiding principle of his activities and statements.

Another story is very much consistent with the above. Dr. Ohsumi had held many important and responsible positions through his professional life, including that of Director General of the National Research Institute of Far Seas Fisheries (NRIFSF, Shimizu Laboratory), and Director General of the Institute of Cetacean Research (ICR), to name a few. But he was most happy when he passed all these responsibilities to his successors and told me then that he finally became one simple scientist again that can contribute to science. He actually contributed to the advancement of science till the last day of his life.

He was stubbornly a pure scientist even when the results of his research and analysis were against the interests of whalers. While he was an excellent manager of the organizations he had led, he preferred to be a simple scientist. He hated "political scientists." He often said to young scientists to be a scientist rather than a scientific technician.

It was my great honor and privilege to have worked with Dr. Ohsumi. His legacy will remain with all of us who met him.



Fig. 1. During a Japan-Russia scientific planning meeting in Moscow (June 1999).



**Fig. 2.** During a trip to Norway to finalize the blue whale skeleton lease contract to Shimonoseki city (July 1999).

## **ONWP**

#### Hideki MORONUKI

Director for Fisheries Negotiations, Fisheries Agency of Japan, Ministry of Forestry, Agriculture and Fisheries, 1–2–1 Kasumigaseki, Chiyoda-ku, Tokyo, Japan

Ohsumi-sensei was not just a scientist but also a man of vital spirit and warm heart. Everybody knows that he was one of the pioneering whale scientists in Japan, who supported Japan's whaling industry from top to bottom. He is also well known to many of us as a "militant" pursuing the sustainable use of whale resources. However, this was not only for the benefit of Japan, but also for all over the world, specifically for developing countries. He advocated his own humanitarian whaling plot where sustainable whaling would be conducted for ample whale resources in the Antarctic Ocean and whale products obtained therefrom would be distributed to developing countries severely suffering from food crisis (Ohsumi's New Whaling Plot). In order to materialize his plot, he devoted himself to the resumption of science-based sustainable whaling and thereby encouraged young scientists, industry colleagues and Government officials to fight together.

On 1 July 2019, more than 31 years after the introduction of the so-called Moratorium on Commercial Whaling, Japan resumed the sustainable whaling based on the best scientific information available. Fortunately, we were able to celebrate the resumption of the sustainable whaling together with you, Ohsumi-sensei. However, it was not in time to materialize your plot. We still have a lot of things to do and a lot of obstacles to overcome before your dream may become true. However, you do not need to worry about it too much, Ohsumi-sensei. Please remember that you brought up so many pupils and followers who will make the most of your will to meticulously seek a way to move your plot forward. Please therefore look forward to a future big news about the sustainable whaling in the Antarctic Ocean being resumed and that the food shortage in some developing countries is being mitigated through ONWP: Ohsumi's New Whaling Plot.

# APPRECIATE THAT I COULD SHARE TIME WITH A GREAT SCIENTIST

## Gen NAKAMURA

Assistant Professor, Laboratory of Cetacean Biology, Tokyo University of Marine Science and Technology, 4–5–7 Konan, Minato-ku, Tokyo, Japan

In my childhood, I occasionally saw the name of Dr. Seiji Ohsumi in some books. But the first contact with him was not until 2006, when I started my Cetology studies at the university. After that, 13 years have passed. I guess it might be a very short time in his life, but it was a very meaningful period for me. Even after he retired, he energetically attended the conferences or meetings and delivered innovative opinions to us, based on his vast knowledge. I feel very sorry that I was unable to talk and discuss with him, but I leverage that with his papers, books, and memories for my life as a researcher. I really appreciate you, Ohsumi-sensei.

# A FEW WORDS IN MEMORY OF DR. SEIJI OHSUMI

### Luis A. PASTENE

Head of Science, Institute of Cetacean Research, 4-5 Toyomi-cho, Chuo-ku, Tokyo, Japan

Seiji was an important person during several stages of my life. The first time I met him was in 1981 during a workshop on cetacean reproduction in the United States. At that time, I was a pre-graduate student at the Concepcion University in Chile. Knowing my interest in cetacean research, he kindly provided information on scholarships and encouraged me to carry out postgraduate studies in Japan. Furthermore, in 1985 he helped me secure a scholarship that allowed me to travel to Japan in October of that year. Then I started postgraduate studies at the Ocean Research Institute (ORI) of the University of Tokyo. Seiji was supportive of me both personally and professionally as I adapted to living in Japan. In 1992, I became a member of the Institute of Cetacean Research (ICR) where Seiji was Executive Director, and we continued to work together at ICR until he died on 2 November 2019. He always supported my research activities in ICR and provided strict but fair criticism of my studies. I was impressed by Seiji's enthusiasm and dedication to cetacean and whaling research, and to the ICR. Until the very last week, he came to the institute almost every day, actively participating in our domestic meetings and providing useful advice and suggestions. I think many colleagues and friends will agree with me that Seiji can be characterized as a great cetacean scientist, a true gentleman and a very enthusiastic person for research and social-related activities. I feel happy that our last work interaction in 2019—on Chilean blue whale research—was a very positive one with Seiji supporting and agreeing with my conclusions on that particular study. I feel a deep respect and gratitude to the memory of Seiji.

# MOURNING THE PASSING OF DR. SEIJI OHSUMI

#### Kazumi SAKURAMOTO

Professor Emeritus, Tokyo University of Marine Science and Technology, 4–5–7 Konan, Minato-ku, Tokyo, Japan

I would like to express my heartfelt condolences on the passing away of Dr. Seiji Ohsumi, who devoted his life to the study of whales and was a world-renowned authority on whale research.

I have been fortunate enough to be involved in cetacean research since 1982, and from then until his demise, I had the opportunity to receive guidance from Dr. Ohsumi both in private and public life. The first meeting of the International Whaling Commission (IWC) that I attended was the Minke Whale Ageing Workshop held in Cambridge, England in April 1983. At that time, the only researchers who participated from Japan were Dr. Seiji Ohsumi, Dr. Hidehiro Kato and myself, but I still remember vividly the gentle and strict guidance I received from him even as a newcomer. Since then, we attended together many meetings of the IWC Scientific Committee while Dr. Ohsumi continued his research activities as Director General of the Institute of Cetacean Research (ICR) and later on as Adviser Emeritus to the ICR, and gave me much guidance until just before he became ill. I also recall with deep emotion the many enjoyable conversations we had at social gatherings.

The image of Dr. Ohsumi that is etched in my mind is his big smile and his gentle gaze. The sadness of losing a great leader and the image of Ohsumi-sensei will never leave my heart. I sincerely pray for the repose of his soul.

# CONDOLENCES ON THE PASSING OF DR. SEIJI OHSUMI

### Hawsun SOHN

Director, Cetacean Research Institute, 139–29 Maeam-dong, Nam-gu, Ulsan, Republic of Korea

First of all, please accept my deepest and heartfelt condolences.

In the face of Dr. Seiji Ohsumi's obituary, all Korean colleagues could not hide their sorrow of losing the great pioneer. Dr. Ohsumi's research has been a valuable reference of information on cetacean for researchers in Korea where the study was still in its early stages but also in Northeast Asia as well. Even after his retirement, we could feel his special affection and warm kindness toward young colleagues at the meeting room. He used to say Hello in Korean, 안녕하세요 (Annyunghaseyo) whenever he met young Korean researchers.

On one side of the lobby in the Cetacean Research Institute, there is a letter written by him, who hopes for a joint cooperation research between Korea and Japan.

Korea remembers Dr. Ohsumi's great achievements and warm heart.

Please rest in peace.

# IN MEMORY OF DR. SEIJI OHSUMI

### Tsutomu TAMURA

Head, Stock Assessment and Management Division/Ecosystem Studies and Population Division, Institute of Cetacean Research, 4–5 Toyomi-cho, Chuo-ku, Tokyo, Japan

The first time I met Dr. Ohsumi was when I was still a graduate student about to participate in one of Japan's whale research program cruises, and he had just become Director General of the Institute of Cetacean Research (ICR). I remember how nervous I was when he said, "I hope you will do your research well", while handing me the researcher's letter of appointment.

Several years later, after completing my doctoral course, I joined the ICR and immediately found myself having lots of work to do. It was the task of collecting all the resource abundance information on cetaceans in the world available then and estimating the amount of their predation. He gave me heaps of advice as I had just joined the Institute and didn't know from my right to my left.

As a result, we were able to report that the world's whale predation amounted to about 300 to 500 million tons, equivalent to three to five times the world's marine fisheries catch at that time. In retrospect, I think it was the inclusion in the paper of the name and essence of the renowned whale scientist Dr. Seiji Ohsumi, that created such a big buzz around the world. Back then, there was a lot of criticism that our whale prey consumption estimation was overrated, but Dr. Ohsumi said that this was because of the great interest that this field of research was arousing worldwide. Recently, other scientists have shown that whales may be eating even larger amounts of prey<sup>4</sup> than our original estimations, and I am glad that my research with Dr. Ohsumi has come back into the spotlight.

In addition, at our repeated drinking parties he would always emphasize to us that "A full-fledged researcher must be able to go into the field, write a paper, and do both". The last time I saw him, glowing with enthusiasm he spoke about his passion for research, and I never thought I would have to say goodbye so suddenly.

I pray for the repose of his soul.

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<sup>&</sup>lt;sup>4</sup> Savoca, M., Czapanskiy, M. F., Kahane-Rapport, S. R., Gough, W. T., Fahlbusch, J. A., Bierlich, K. C., Segre, P. S., Di Clemente, J., Penry, G. S., Wiley, D. N., Calambokidis, J., Nowacek, D. P., Johnston, D. W., Pyenson, N. D., Friedlaender, A. S., Hazen, E. L., and Goldbogen, J. A. (2021). Baleen whale prey consumption based on high-resolution foraging measurements. Nature. 599. 85–90. doi: 10.1038/s41586-021-03991-5.

## Ralph TIEDEMANN

Institute of Biochemistry and Biology, University of Potsdam, Karl-Liebknecht-Str. 24–25, 14476 Potsdam OT Golm, Germany

In the course of my fruitful collaboration with Japanese scientists, I was so lucky (and happy) to have had the opportunity to repeatedly travel to Tokyo in order to work at ICR. At ICR, I very regularly met Seiji Ohsumi who was still doing cetacean research, despite of his age. Seiji always gave me a very warm and friendly welcome in Japan in general and at ICR in particular. It was enlightening to discuss with him cetacean science as well as IWC matters, as he had a rare combination of several decades' research experience, up-to-date-knowledge, and thoughtfully balanced arguments. He was even following the latest genetic technologies in population studies, as I could witness first-hand during a scientific lecture of mine at ICR, which Seiji attended and actively participated during discussion. Most memorable though, is a non-science moment with Seiji: I was invited to a superb sushi restaurant in Tsukiji where I enjoyed the company of my Japanese colleagues and friends and had the privilege to sit next to him (Fig. 1). We were chatting the whole evening about everything but science. I will never forget his deep insights into many aspects of human life, including the history back to the middle of the last century. Many facts and facets I was hardly aware of being within his personal experience and remembrance, and he communicated them with his unique enlightening and whole-hearted attitude. I was deeply impressed. I will miss Seiji.



Fig. 1. A non-science moment with Seiji and colleagues.

# REMEMBERING DR. SEIJI OHSUMI

#### Senzo UCHIDA

Special Advisor, Okinawa Churashima Foundation, 888 Aza Ishikawa, Motobu-cho, Kunigami-gun, Okinawa, Japan

When I was a senior member of the Ito Aquarium in the 1970s, staff scientists of the Whales Research Institute (WRI), led by Director Dr. Hideo Omura including Drs. Masaharu Nishiwaki, Seiji Ohsumi, Tadayoshi Ichihara, Keiji Nasu and some others, visited the aquarium on a comfort trip organized by WRI. At the aquarium, there was also an accommodation facility that relocated the inn where I grew up in Ito Onsen hot spring, and everyone held a big banquet after the duties. Dr. Teruo Tobayama, the head of the aquarium, and Uchida (myself) served as hosts as well and offered a lot of beer and sake for them. At that time, everyone was drinking a lot and making a big fuss.

The next day at a different high-class inn also located in Ito Onsen, it seemed that it was even more than that, and Seiji appeared to have been very active there too. The following day, the president of the inn, an intellectual gentleman, called me and said, "I didn't see that coming!"

It was a long time ago, a long time ago.

## Gísli A. VÍKINGSSON

Head of Cetacean Research, Marine and Freshwater Research Institute, Fornubúðir 5 220, Hafnarfjörður, Iceland

I met Seiji Ohsumi for the first time in 1988, at my first annual meeting of the Scientific Committee (SC) of the International Whaling Commission (IWC). At that time, I had worked on cetacean research for only two years, after completing my thesis on quite a different subject, behavioural ecology of greylag geese! Although naive in this branch, I had learned enough to know the name of Dr. Seiji Ohsumi and I felt a kind of starstruck when Seiji approached me on the first day of the meeting and welcomed me to the Committee with his specially charming and warm attitude. This was the first of many conversations I had with Seiji over the next three decades, mostly within the context of the IWC. Despite all the tensions and politics associated with some discussions taking place within the SC, in particular those concerning the scientific activities of Japan (and sometimes also Iceland and Norway), I always sensed the great respect that Seiji had among almost all the scientists in the SC, irrespective of their position in the often-heated debate. To outsiders, such respect for opponents in a scientific debate could seem a matter of course in a scientific forum, but this could not be taken for granted during some periods of extreme polarization within the Committee.

Dr. Ohsumi was a remarkable scientist that continued to explore new fields in science throughout his career. The great legacy of Seiji Ohsumi as a pioneer in whale research is evident from his large amount of scientific works produced over 60 years, and the memories of a great colleague, and a mentor to many, will live long into the future.

# REMEMBERING SEIJI OHSUMI

### Lars WALLØE

Professor Emeritus, Department of Physiology, University of Oslo, Norway

I met Seiji Ohsumi for the first time in the IWC Scientific Committee meeting in San Diego in 1988, and since then we have met at every IWC/SC meeting and every IWC Commission meeting until quite recently. In addition, I have visited Japan more than 50 times over the last 30 years, and nearly each time I have had the opportunity to discuss whale scientific questions and the related political questions with him. Only during 2019, I met with Seiji in ICR three times, in late February, in mid-June and in July. Every time we had interesting discussions. In the 1990s, he once accompanied me to Taiji and showed me the whale museum there, and he travelled with me to other local communities to meet the local whalers and for them to show me their boats and whaling equipment. We travelled together in Norway also. I wanted to show him our local communities and wanted him to meet our whalers. Together we and Masayuki Komatsu managed to establish a semi-permanent loan of a blue whale skeleton from the university museum in Tromsø to the aquarium in Shimonoseki and with fiber-glass copies of the skeleton on display in four other places in Japan, among them Taiji.

What was my impression of Seiji Ohsumi? Seiji was eight years older than me, and when we met in 1988, he had a life-long experience in whale science. I also had an extensive scientific background, but whale science was new to me. My experience with the subject was about two years old. Despite this difference in age and experience, Seiji from the first meeting treated me as an equal and did never use his longer experience as an argument when we had some small disagreements. Compared to the Norwegian society, the Japanese is in general very hierarchical, but Seiji definitely did not fit into this picture of the Japanese society. He had authority based on knowledge and experience, not on his position in an administrative hierarchy. When he lacked knowledge in a particular scientific discipline, he admitted it; he did not try to bluff, but listened to others who had the knowledge.

Most of the years we interacted, Seiji was head of the Japanese delegation to the IWC/SC, and I was head of the Norwegian delegation. Since our two countries had attitudes to whaling different from most other countries, we had to collaborate. For me this collaboration was a great pleasure. We both had the same attitude and opinions about whaling, and I think we learned a lot from each other. I shall miss Seiji Ohsumi in the future, but I am very happy to have known him.

### Yuri YAKOVLEV

A.V. Zhirmunsky Institute of Marine Biology National Scientific Center of Marine Biology of the Far Eastern Branch of the Russian Academy of Sciences, 690041 Vladivostok, Russian Federation

I met Seiji Ohsumi on the voyage of the *RV Akademik Oparin* in 1993. This expedition was one of the few with scientists from different countries, mostly from Japan. The Tokyo cable TV group, TBS, was also on board. Much attention was paid to underwater photography and video, in which I participated as a professional diver and zoologist. At that time I was not yet engaged in the study of whales, and I saw the work of Japanese cetacean researchers for the first time. In fact, right away I came to the conclusion that this is a very hard work, against the background of which underwater diving seemed to me already an easy and exciting entertainment.

Having participated in many expeditions, I immediately noticed a man whose appearance indicated that he was a scientist with tremendous experience in field research, so I was not at all surprised to learn that he was the foremost expert on the whales of the Pacific Ocean, Professor Ohsumi. It so happened that from the first days of the voyage I became friends with Tsuneo Nakamura, a well-known wildlife and sailing photographer, who taught me the peculiarities of whale photography from the *Achilles* boat (Fig. 1). After work or in inclement weather, Tsuneo and I very often accepted the professor's invitation to stop by his quarters. Such gatherings sometimes ended late. The topics of conversation were very diverse, but not whale-oriented. Unfortunately, the weather conditions on that cruise were extremely unfavourable for whale sightings and we tried not to discuss this circumstance. I remember well as being said in the conversation that whaling in the post-war years made it possible to supply the younger generation with animal protein and keep our countries' populations healthy. Plans were made to carry out regular expeditions on the then numerous ships of the Far Eastern Branch of the Russian Academy of Sciences in subsequent years to the north, to the Arctic. However, these quite realistic projects could not be implemented due to the inept policy of the scientific fleet management.

Later, when I started studying gray whales, I had the opportunity to meet with Professor Ohsumi only at conferences. He said that if I needed his support, I could freely turn to him. But, as they say in Russia, the certainty of getting help from a friend is much more valuable than the help itself.



**Fig. 1.** Tsuneo Nakamura (Volvox Inc.), Yuri M. Yakovlev (Institute of Marine Biology, Vladivostok), Dr. Seiji Ohsumi (ICR). North Kuril Islands, 1993. On board the *RV Akademik Oparin*.

# IN A LAB WITHIN SIGHT OF MOUNT FUJI

### Motoi YOSHIOKA

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Evoking the first time I met Dr. Ohsumi, I wrote the following in a manuscript submitted to a journal in 1990: "I went to visit Dr. Seiji Ohsumi at the Far Seas Fisheries Research Laboratory in Shimizu to see if there was any way I could make a breakthrough in my research. Dr. Ohsumi gave me a lot of advice in his laboratory which had a beautiful view of Mt. Fuji from the window, but his comment about my work on hormones being 'quite interesting' was a great encouragement to me afterwards." I was 24 years old then, and unsure whether I would be able to continue my research on dolphin reproductive hormones in graduate school. He gave me words of encouragement for my research which I had been conducting from a viewpoint that so far had not existed in cetacean research in Japan. However, if I had not visited Dr. Ohsumi that day, I might have given up my research on cetaceans soon after. My encounter with Dr. Ohsumi was a major event at such a crucial moment for me. Forty years have passed since then. During this period, I received from him much scientific advice and guidance from the viewpoint of population biology and reproductive biology, which was his field of specialty, when I became involved in the research of Dall's porpoises and Bryde's whales. However, what left the greatest impression on me during my association with him is that he was very open to students who had just started their cetacean research —just as he was to me when I visited Shimizu, at research meetings and other occasions, and always looked at us warmly and gave us encouragement.

In the days when information on cetacean research was not readily available as it is now on the internet, his many books, translations, and articles were very valuable materials for students to learn. Dr. Ohsumi, who devotedly made many research achievements in whale research contributing greatly to the management of whale resources and the continuation of the whaling industry in Japan, was always thinking about the future of cetacean research in Japan and giving light to us students who did not know what kind of life they would lead in the future. Looking back on my current self as a university faculty member who has been studying whales and dolphins with students for over 30 years, I wonder to what extent I have been able to train the next generation of researchers. I hope I can spend my remaining time as a professor so that I may reduce that doubt as much as possible.

I would like to once again express my deepest gratitude to Dr. Ohsumi for his continuous interest in whales and to young people wanting to study them, and I sincerely pray for the repose of his soul.

# CONDOLENCES ON THE PASSING OF DR. SEIJI OHSUMI

## Alexandre ZERBINI

Chair of the IWC Scientific Committee, Cooperative Institute for Climate, Ocean, and Ecosystem Studies, University of Washington & Alaska Fisheries Science Center, NOAA, USA

Indeed, a rich life and major contributions to cetacean science. Our community lost one of the best and my thoughts and prayers are with his family and friends.

Best wishes, Alex

# MEMORIES OF MY FATHER, DR. SEIJI OHSUMI

### Noriko OSUMI

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In my mind, I still haven't sorted out my father's passing. When I rushed to the hospital on November 2, 2019, he was already out of it and I didn't get to spend his last hours with him. The last time I saw my father before he died was on October 4, 2019, which I could trace from my Google Calendar records. On that day, I had dinner with my high school classmates and visited my parents in Shinjuku late, so we only exchanged a few words before my returning to Sendai the next morning. That day, he said he had plans to go to a gathering of the old Niigata High School, and he showed me his old school cap, laughing as he told me that he was going to wear it and sing the dormitory song.

I can barely remember my childhood. My father had been working alone at the National Research Institute of Far Seas Fisheries (formerly Far Seas Fisheries Research Laboratory) in Shimizu since my early elementary school. I used to complain that I could spend more time with my father if he took the Shinkansen when he came back from Zushi, where we lived at the time. However, after joining the Tohoku University as a professor, I came to realize how difficult it is, physically and financially, for those who work alone to return home to their families every week. Now I understand how much he loved my mother, and me. When my father taught me to play Go and Shogi, he would not let me win, which made me dislike those games. I think my habit of reading books came from watching my father. As a scientist, my father was very strict about the use of words, so from a young age, he would ask me, "What is the definition of that?". Accordingly, I became a very logical child and was rather shunned by other classmates. My mother also worked at Japan Women's University, so weekends were complete rest for my father and mother, while family vacations were rare. However, there were other rare occasions when foreign researchers came to our house as guests. For me, English was not a subject to study for exams, but a means of communication. This experience has helped me in my current career as a neuroscientist. After entering graduate school, I learned that my father's dissertation was on "A study on age determination of the fin whale," and I was depressed at the difference in scale from my own first dissertation. I hoped that it would catch someone's attention, so after my father passed away, I got a copy from the National Diet Library and had it published by the University of Tokyo Repository<sup>5</sup>.

In 1992, when the International Whaling Commission annual meeting was held in Glasgow, UK, I stayed at the same hotel with my father because I also had to attend an international conference that was held at the same time there. My father's snoring was so bad that I didn't want to go with him again, but I was more shocked by the fact that anti-whaling activists were demonstrating around the hotel. I had heard about it indirectly from my father, but it meant a lot to me to know it in real life. I think this experience, in addition to the general books written by my father, was a major factor in my developing a great interest in science communication; scientists in every field need to communicate with the public. Before my father passed away, in August of 2017, I happened to bump into him at the gate of Narita Airport. He was going to visit the Faroe Islands in Denmark, where whales are fished, with a group including Mr. Kazutaka Sangen, the mayor of Taiji, where the Whale Museum is located; my father was the honorary director of the museum at the time. I was going to Sweden via Copenhagen for an international meeting. My father and I never informed each other of our business trip plans in advance, so it must have been a coincidence that God brought us together. I really wish I could have learned more things from my father. He was blessed with the wonderful people around him. I hope that my father's passion for sustainable whaling will lead you to take your own actions.

Rest in peace, my father.

<sup>&</sup>lt;sup>5</sup>Ohsumi, S., n. d. A study on age determination of the fin whale. Doctoral Thesis, The University of Tokyo. UTokyo Repository. https://irdb.nii.ac.jp/00926/0004334795.