

# William Fergus Perrin - a marine mammalogist 'for all seasons': 20 August 1938 – 11 July 2022

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On 11 July 2022, marine mammalogist Dr. William F. "Bill" Perrin passed away peacefully at the age of 83 in San Diego, California. He is survived by his wife Louella Dolar and two sons, Benedict and Joey. Bill Perrin significantly impacted marine mammal research and conservation throughout the world. He spent almost all his career at the National Oceanographic and Atmospheric Administration (NOAA) Fisheries' Southwest Fisheries Science Center (SWFSC) in La Jolla, California, where he started working as a temporary biological technician in 1966 until he retired as a senior scientist in 2013. He served a total of 45 years as a full-time employee (29 years of which as a senior scientist) and two years as a temporary part-time employee. Before working at NOAA, he was a seasonal aid at the California Department of Fish and Game for two years (1963-1965).

Bill had very humble beginnings. He was born on 20 August 1938, at Oconto Falls, Wisconsin, to Florence Hansen and Robert Perrin. He only had one brother, Dave, nine years his junior. His



**Figure 1.** Bill Perrin and son Joey (age 4) surveying for dugongs in Philippine waters, May 2005 (Photo: Louella Dolar)

mother was a professional singer who sang at nightclubs and, at one point, had her radio show. His father was a carpenter who also worked as a truck salesman. Driven by economic uncertainties, his early life was marked by constant moving, first between their house in Milwaukee and his grandparents' farm in Suring and between Milwaukee and San Diego. His family permanently moved to San Diego in 1956 when he was 18 - the year he went to UC Berkeley. After his first year, he decided to shift direction. He joined the Air Force, where he studied Czech in Berlitz and German at the University of Maryland and was assigned to the Intelligence Department in Germany as a Czech linguist from 1957 to 1961.

After his military service ended, he returned to San Diego. With the GI Bill's help, he returned to school in 1963 - this time at San Diego State University, where he obtained his B.S. in Biology and graduated with Highest Honours and Distinction in Biology in 1966. He received his doctoral degree from UCLA in 1972 under the guidance of Kenneth Norris and Carl Hubbs. His dissertation on the 'Variation and taxonomy of the spotted and spinner porpoises in the Eastern Tropical Pacific and Hawaii' (Perrin, 1975) became a landmark study on the region's taxonomy and biology of stenellid dolphins, and coupled with the extrapolations on dolphin kills became the basis for recognizing the dolphin mortality problem in tuna fishing and later led to a surge of interest that resulted in saving the dolphin stocks. The papers he published on the growth and reproduction of spotted dolphins *Stenella attenuata* (Perrin et al., 1976) and spinner dolphins *Stenella longirostris* (Perrin et al., 1977) in the offshore eastern tropical Pacific were selected as the best publications in the 1976 and 1977 issues of the *Fishery Bulletin*.

Bill considered himself an accidental cetologist. In 1966 he was hired for a summer job at the U.S. Bureau of Commercial Fisheries (now Southwest Fisheries Science Center in La Jolla) to board F/V *Conte Bianca* and collect data on the performance of seine nets in tuna boats in the eastern tropical Pacific. In the course of doing his job, he observed massive dolphin kills during the fishing operations. He estimated that between 1,200 and 2,000 dolphins were killed in 20 sets and reported this observation in an article entitled 'The porpoise and the tuna' (Perrin, 1968).

That same year, while collecting his data and specimens for his dissertation on board F/V *Carol Virginia*, he counted 1,697 dolphins killed in 30 days (Perrin, 2009). Using the observed kills on the two occasions he was on tuna boats and the data obtained from logbooks, he extrapolated that about a quarter of a million dolphins were killed annually. This information was later revealed at the annual Conference on Biological Sonar and Diving Mammals at the Stanford Research Institute in 1969 when he gave a talk entitled 'The problem of porpoise mortality in U.S. tropical tuna fishery.' He nearly got fired if it were not for his boss, Frank Hester, who volunteered to be fired alongside him, and the Center Director, Alan Longhurst, who defended him. By bringing to the fore the tuna-dolphin problem, Bill's work created a surge of public interest. In 1972, he testified at a Senate Subcommittee hearing on the tuna/dolphin issue. With inputs from various groups, the U.S. Marine Mammal Protection Act was signed that same year (Perrin, 2009).

Research to save the dolphins began in 1970 at the NMFS' La Jolla Laboratory, many of which were administered by Bill. These projects resulted in designing fishing gear and techniques that helped preserve and restore porpoise populations and delineate the stocks of currently managed dolphins. From 1976 to 1984, Bill worked with Dick McNeely under the supervision of John Everett and William Fox and with help from Dave Holts, George Kalin, and Jim Coe. The gear they developed reduced dolphin kills from 30 to only three per set, down from the original 300. They built on the industry backdown and fine mesh techniques that had brought it to 30, by adding a shallow "lip" that can be pulled down, allowing the dolphins to escape (John Everett, pers. comm., 09 Sep 2022). With the development of the gear and its success in lowering dolphin kills, the team testified several times to the Senate Sub-committee on tuna/dolphin issues. The gear got approved and implemented, and thus began the new era of dolphin-safe tuna.

Bill's critical work on the tuna-dolphin problem garnered him the Scientific Research and Achievement Award from NOAA in 1979. It helped pave the way for the Marine Mammal Program at the SWFSC in La Jolla. Bill was appointed senior scientist in 1984. In addition to the above contribution, Bill recently created a permanent archive containing copies of relevant correspondence, hearing transcripts, Federal Register notices, cruise reports, published reports, field notes, etc., and a 194-page bibliography of the issue, dating from 1941 to 2001 as a NMFS-NOAA Technical Memorandum (Perrin, 2004). Outside researchers can access the archive.

Bill's research at the La Jolla Laboratory continued, covering various topics such as systematics - integrating traditional morphological approaches with more modern genetic methods, reproductive biology, bycatch, ecology, and conservation biology of marine mammals. He was allowed to pursue research topics that were not necessarily of immediate relevance to the Center's goals but later resulted in 'unanticipated insights' and 'material benefits' that supported a larger body of work at the Center. He also collaborated with many scientists across the globe and helped mentor and encourage young scientists who were starting with their aquatic mammal work (see below).

All this research and collaborative work resulted in numerous scientific publications, book chapters, books, symposium volumes,

reports, book reviews, and conference and seminar presentations. Bill published substantially, an average of two papers yearly in peer-reviewed journals and one book every four years. Overall, he produced 99 scientific articles in peer-reviewed journals and was the primary author in 51% of them. Among some of his most influential papers featured e.g. a detailed account of long-beaked and short-beaked common dolphins in the NE Pacific (Heyning & Perrin, 1994), a redescription of *Stenella clymene* (Perrin et al., 1981), discovery of a dwarf form of spinner dolphin in Thailand (Perrin et al., 1989), the description of spinner dolphin subspecies (Perrin, 1990) and the redescription of Fraser's dolphin (Perrin et al., 1973). Outside the peer-reviewed journals were 39 book chapters, 11 books, 109 reports and meeting documents, 42 articles, technical memoranda, seven symposium volumes, and 20 others (book reviews, etc.), 71 oral and 20 poster presentations in professional meetings and conferences. He was also active in holding and organizing symposia and workshops worldwide that resulted in 30 seminar presentations. Fourteen of these workshops he organized and chaired. One of the most significant of these contributions is the publication of the *Encyclopedia of Marine Mammals* which he co-edited with Bernd Würsig and J.G.M. Thewissen in the 2002 and 2005 editions.

Bill was very heavily involved in numerous conservation societies. Throughout his career, he was a member of the Society of Marine Mammalogy, where he served important roles, such as president of the Society from 1987-1988 and the *Marine Mammal Science* editor from 1996-2000. He was also a member of the American Society of Mammalogists, American Institute of Fishery Research Biologists, Mexican Marine Mammal Society, American Cetacean Society, and Russian Marine Mammal Council. He was a member of several panels and advisory services and assumed significant active roles. He served as chairman of the Small Cetacean Sub-committee (1979-1984, 1987-1990) of the International Whaling Commission Scientific Committee, where he was a member from 1974-2015. Bill was the Convenor, Consultants Group on Small Cetaceans and Sirenians, FAO (1975-1976); Chairman, IUCN Cetacean Specialist Group (1984-1990); member, Scripps Institute of Collections Committee (1987-1988); Chairman, Committee of Scientific Advisors to the U.S. Marine Mammal Commission (1991-1994), Steering Committee, Marine Mammal Project, U.S.-Russian Environmental Agreement (1975-2018), Scientific Councillor for aquatic mammals and large fishes of the Convention on Migratory Species (1991-2014), Chair, Red List Authority, IUCN (2006-2018) and Pew Fellowship Nominating Panel (2005), and many more.

Bill's other contributions were teaching and mentoring, leaving a long-term impact. He was an adjunct professor at Scripps Institution of Oceanography, supervising graduate and post-graduate students; an affiliate associate professor at the School of Fisheries at the University of Washington (1980-2018); and an affiliated scientist at the Institute of Environmental and Marine Sciences, Silliman University, Philippines. He also mentored and supervised students and post-docs from other countries and served on the graduate committees of numerous students. As part of a long career, Bill accumulated in his library thousands of scientific articles, documents, letters, monographs, etc., all relevant to marine mammal research, indexed and well organized, which he made accessible to everyone at the SWFSC. He donated all this to the Center after he retired.

As Bill always said, each scientist who publishes should also consider it part of their obligation to return the favour by reviewing other scientists' work. So, he served as a reviewer/referee in more than 60 scientific journals and granting agencies. He also served as an internal reviewer for SWFSC, reading and editing every manuscript produced by 200 or so scientists in all fields at the Center before they were submitted for publication. Editing was one of his many skills. Aside from serving as editor of *Marine Mammal Science*, he was an Emeritus member of its editorial board (2001-2018), a member of the overseas editorial board of the *Silliman University Journal* (2001-2018) and an associate editor of the *Journal of Mammalogy* (2007-2011).

Bill's life was productive, decorated by several awards. In addition to those mentioned earlier, he was awarded the Department of Commerce Bronze Medal Award in 1994, the Kenneth Norris Life Achievement Award from the Society of Marine Mammalogy in 2011, and the NOAA Distinguished Career Award in 2013. The highest tribute to Bill was the naming of a beaked whale species after him, the Perrin's beaked whale *Mesoplodon perrini* (Dalebout et al., 2002).

Louella wistfully remembers her loving husband and cetologist colleague. "In his personal life, Bill was a doting husband, a loving father, and a caring brother. He was a great time manager who, no matter how busy his professional life was, had time for his family. He took us on road trips across the U.S., vacationed in Hawaii and the Philippines, went junking with his brother, and attended all of the baseball games of our son, Joey. He took care of Joey when I would go on fieldwork or meetings abroad. Bill was a voracious reader and had many interests aside from biology. He loved history, languages, art, antiques, cultures, and old tools. He had a vast collection of stamps, coins, paper bills, books, antique tools, and other types of collectibles. He was a garage sale enthusiast, which he dutifully did at 5 am every Saturday to find old tools, memorabilia, art, and other collectibles. I met Bill at the Smithsonian when he and Alexey Yablokov visited the Natural History Museum to work on the marine mammal collection. I was on a three-month internship learning about marine mammal necropsy, strandings, and identification using skulls. Philippine cetaceans were unknown at the time. Back in the Philippines, I was an assistant professor in Biology at Silliman University specializing in fish biology, but I always wanted to learn about cetaceans. I was assigned to help Bill record the skull and skeleton measurements. Both quiet people, most of our exchanges were numbers read out and numbers read back until the end of his visit when Bill invited me to dinner to thank me. We talked for almost five hours about biology, cetaceans, culture, etc., and had to be chased out of the restaurant because it was closing. Upon return to the Philippines, I found stacks of marine mammal reprints that Bill sent me, just like he did for many others who were starting in the field. A year later, in 1990 he invited me to attend the Gillnet meeting in La Jolla where I presented the information I collected on cetacean bycatch in Philippine tuna boats, local driftnets, and gillnets (Dolar, 1990). The work led to the issuance of the Philippine Fishery Administrative Order 185 protecting dolphins in Philippine waters in 1992. At the meeting, Bill introduced me to Steve Leatherwood, who, with his friend Cindy, visited the Philippines the following year to see my field sites and helped me and colleagues conduct cetacean field surveys. I met Bill again when I went to La Jolla to do my Ph.D. at Scripps Institution

of Oceanography under the guidance of Jerry Kooyman. As a couple, we worked together on several marine mammal projects in the Philippines. After ironing out some kinks that caused conflicts between husband and wife, who are both passionate and strong-willed, we found that we actually enjoyed working with each other. Taking turns being boss, which Bill suggested we would do, it worked! His down-to-earth nature and the ability to laugh at difficult situations suited the Filipino culture, and he was embraced as one of us. He bought a motorcycle and drove like a local, except that he wore a helmet; he ate the local food and didn't complain except for the heat. We co-taught classes in marine mammal biology at the Silliman Marine Laboratory and curated marine mammal specimens collected from the driftnets and beaches on different islands, collected tissue samples that are now deposited at the genetics lab at SWFSC and made available to researchers from all over the world. We helped revise FAO 185 to include all cetaceans, and worked with WWF-Philippines to start community-based ecotourism in Pamilacan Island, Bohol, to give the whale fishermen an alternate livelihood after whale hunting was banned. With the help of the Marine lab staff, we organized the first conference workshop on the biology and conservation of small cetaceans in Southeast Asia in 1995 and then again in 2002. These workshops brought together marine mammal biologists and government representatives from various Southeast Asian countries and started off the SEAMAM (South East Asian Marine Mammal) community. We conducted training

workshops in Sandakan, Borneo in 1996 and Penang, Malaysia in 2014. In addition to cetaceans, we also worked on the satellite tagging of whale sharks in collaboration with Scott Eckert of Hubbs Seaworld and Jerry Kooyman of Scripps Institution of Oceanography in Borneo and the Philippines in 1999. That initial work led to the protection of whale sharks throughout Philippine waters and facilitated whale shark tourism at Donsol, Sorsogon. Our work and personal relationship merged seamlessly, mostly owing to Bill's patience, understanding, fairness, and our love for marine mammals and nature. When Joey was born, we taught him how to swim as soon as possible. We took him to the field during a dugong survey in the Philippines when he was only four years old, in Irrawaddy dolphin work in 2010, and in the Penang training survey in 2014. In his early and mid-adult life, Bill went through several challenges and trials, some very painful. But whenever life knocked him down, he got up and did his work, met deadlines, helped people, inspired them, and did great things. Although he went through several of these upheavals, he remained fair, hopeful, focused, grounded, and never lost faith in the goodness of people."

Furthermore, colleagues and friends from Latin America, Asia, Europe and Togo witness and comment on their professional and personal interactions with Bill and how he inspired and even helped shape careers in marine mammalogy.

Marco Barbieri (Italy) relates: "I have had the opportunity and privilege to know and work with Bill in his capacity as member of the Scientific Council of the Convention on Migratory Species (CMS), a position that he uninterruptedly filled from 1991 until 2014, when he requested to be replaced in view of his increasing difficulties to undertake the tiring travels associated to participation in CMS meetings. At first, he advised the Convention on almost all 'big things that swim', as he once summarized his role, which was later refocused to cover specifically aquatic mammals. Despite the purely advisory role of his position, Bill's contribution to the work of the Convention has been enormous. Within the Scientific Council, he chaired and steered the work of the Marine Mammal Working Group throughout his tenure. Bill was the driving scientific force behind most of the proposals for listing of cetacean species on the CMS Appendices during his tenure, not only making the scientific case for their inclusion, but also motivating governments and other stakeholders to take action for those species. Work of the Convention on the study and conservation of aquatic mammals in SE Asia and western Africa were also inspired and largely steered by Bill, skillfully securing and effectively using resources available through the Small Grant Programme of CMS. Work in western Africa is described below by K. Van Waerebeek. In SE Asia, Bill was the main driving force of the first and second Southeast Asian Marine Mammal Conferences (SEAMAM I (1995) and II (2002)) and the promoter of various cetacean surveys and training courses. Last but not least, Bill acted throughout his tenure as liaison person between the CMS Scientific Council and the IWC Scientific Committee, in an exemplary way. As the longest serving professional in the CMS Secretariat, I can hardly think of another single person having made a greater contribution to CMS. It has really been a pleasure for me to work with Bill (a sentiment shared by all other colleagues in the CMS Secretariat who had an opportunity to



**Figure 2.** Husband and wife team, Bill and Louella supervising a cetacean abundance training survey conducted in the Sulu Sea, in waters shared by Malaysia and the Philippines, 7-21 May 1996.

work with him). He was always responsive, always constructive, with a contagious passion for his work and with a unique sense of humour.”

Enrique ‘Kike’ Crespo (Argentina) reminisces: “I had the honour and pleasure of meeting Bill at the River Dolphins Workshop in Wuhan, China, in 1986. Traveling by train to Nanjing, Bill asked me about my doctoral thesis, which I had abandoned for a long time since I had dedicated myself to the papers about Franciscana to take to Wuhan. Bill recommended me to work at least one hour a day on the thesis, something similar had happened to him with his thesis. The following year, in 1987, Bill became one of the instructors for the course on marine mammals that was given in Ushuaia (Argentina) and Cabo Polonio (Uruguay). One night a party broke out with music and dancing, and with Bill we were playing and singing some old Bob Dylan songs with guitar and harmonica. We met several times in the years that followed. In 1999, when Bill was the editor-in-chief of *Marine Mammal Science*, a reviewer rejected a paper of mine on the abundance of dusky dolphins as a species with no conservation concerns. I argued that this was not an argument to reject it. The work was impeccable from the scientific point of view and MMS was a scientific journal. Bill kept thinking and replied ‘you are right’ and accepted the paper for publication. The last time I saw him was at the IWC meeting in La Jolla in 2015. At that time, I had to tell him the bad news of the death of his friend Natalie Goodall, news that I had received that same day from Ushuaia. Bill was very sorry about the news since he was very fond of Natalie. I will always remember Bill as someone very generous, not only with me but with everyone who came close to him. He was of brilliant intelligence and a very sensitive heart.”

Daniel Palacios shared the following thoughts: “Bill Perrin was a powerful early influence and inspiration in my career, while still an undergraduate student in my native Colombia. His compelling work, starting in the 1970s, on the skull morphology of oceanic dolphins in the eastern tropical Pacific set the standards for measurement and analysis for a whole generation of scientists. But for me, the ecological implications of the differences between species and subspecies in his vast study area set me on a path to study the oceanography of the Pacific Ocean and its influence on cetacean distribution. As a result of this fascination on my part, I came into contact with Bill and many of his colleagues at the SWFSC. Eventually I was fortunate enough to spend a year in La Jolla in the mid-1990s, learning from this outstanding generation of scientists, many of whom are still part of my close professional circle today. My research interests have evolved and branched out since then, but I can still trace their roots to Bill’s seminal body of work. As a personal anecdote from my time in La Jolla, Bill’s cool demeanour could at times seem detached and even intimidating. However, one evening I was invited to a lab party at the home of Greg O’Corry-Crowe, and at one point Greg suggested we all play Tinikling, a traditional Filipino folk dance/game in which two people tap and slide two bamboo poles on the ground and against each other, while one dancer steps over the poles without getting hit. Bill immediately became alive and encouraged me to play, with him and Louella beating the bamboo sticks. While I did very poorly, we all had great fun and the memory of light-hearted and playful Bill is still etched in my mind.”

Luis A. Pastene (Japan) offered the following recollections: “In November 1981, I was an undergraduate student at Concepción University in Chile, where I was completing my degree in Marine Biology based on research on large whales. As a 24-year-old I was full of ideas and dreams for my future professional life, but like many young scientists, I had few real opportunities to pursue them. Fortunately, Bill Perrin changed that. After hearing of my interests, he arranged a trip to La Jolla for me to participate in a workshop on cetacean reproduction organized by the IWC. He not only obtained the funding for my trip but also invited me to stay with him and his family for the period of the workshop! Later, he invited me to travel with him to San Francisco to participate in one of the first meetings of the Society for Marine Mammalogy. Through those meetings, I was able to meet esteemed cetacean scientists from different countries, including those from Japan, who in turn invited me to apply for a scholarship for postgraduate studies in Japan. Four years later, in 1985, this became a reality. Since first meeting Bill in 1981, our paths crossed regularly at annual meetings of the IWC Scientific Committee where we participated in working groups on DNA and RMP’s *Implementation Simulation Trials*, and when Bill visited Japan, the country where I live, or when I visited San Diego. During his visits to Japan, we not only attended meetings, but also went searching for antiques, something Bill was passionate about. The initial professor-student relationship in 1981 transformed into a wonderful friendship. In one of our last conversations, Bill expressed his satisfaction for my scientific achievements, and more importantly, advised me to support younger scientists in the same way as he supported me. My commemoration to Bill is to do my best by following his advice.”

Louisa Ponnampalam (Malaysia) shared her remembrances as follows: “I first met Bill in person at the 2007 SMM Biennial Conference in Cape Town. I had, of course, already known about Bill and his amazing work especially on stenellids, and spinner dolphins in particular, as I was then a Ph.D. student researching spinner dolphins in the Sultanate of Oman. The meeting was my first SMM conference, and I presented a poster. I will never forget that moment when I showed up to stand by my poster, and saw the great Bill Perrin standing by the poster right next to mine! I got so nervous, thinking my poster is going to get critiqued by him, the legend himself. Turns out, he did no such thing. Instead, he offered words of encouragement for the budding cetologist and struggling Ph.D. student that I was at that time. I will cherish that moment always. More recently, I had the opportunity to share a couple of meals with Bill and Louella at their home in San Diego. I will always remember when I asked Bill what his favourite cetacean species was. In my mind, it must be something rare (after all, he has a beaked whale species named after him!). Bill looked at me, and from behind his thick beard, gave a smile and softly said, ‘spinner dolphins’. A lightbulb went off in my head - why, of course, it would be spinners, the delphinid species on which he had done so much incredible work! Having studied spinner dolphins myself, it made me so happy that I should have something in common with the great legend himself. Being an ardent fan of thrift shopping, it was exhilarating to learn that Bill and I shared a common interest in shopping at swap meets and garage sales for unique items - that someone as great as Bill was

also so human, down to earth and relatable. I wish I had had the privilege of spending a lot more time interacting with Bill. While I did not have that chance, I am grateful for the few memories of my short encounters with Bill, but above all, for all that I have been able to learn from the mountain of work he has produced on cetaceans. Thank you deeply, Bill!"

Leela Rajamani (Malaysia) relates that she became interested in marine mammals in 1998 while finishing a Masters in Conservation Biology. "I read journals on marine mammals and Bill Perrin's name came up often. At the time I was interested in pursuing a Ph.D. in marine mammal biology. I wrote to Bill via postal mail asking about marine mammal research and access to journals. There were no online journals then, so he sent a whole package of recent articles from the US. I was very grateful for that. I also had the opportunity to interact with him when he was facilitator for a workshop on cetacean survey techniques that I organized in 2014 (Rajamani, 2014). He was always keen to share his knowledge about cetaceans and his experiences in life. He reflected in one of our conversations 'to plan your career path early because time passes fast and before you know it you will be retired'. Truly, a great mentor and friend, he will be missed."

In 1983, Julio C. Reyes, as a Peruvian biology student seeking literature and information about cetacean research, wrote his first letter to a scientist abroad. That was Bill Perrin. "In a couple of weeks, I got a package full of his papers, while I was not expecting that a reputed cetacean biologist would have the time to respond. Some days later, I got another package with the same papers. As I had not acknowledged the reception, Bill thought I had not received the package the first time! Since then, we kept contact and I could learn about cetaceans through his work and I knew that I had a source of advice and guidance. In 1989 I was selected to prepare a report on the status of some cetacean species for the Bonn Convention. Bill offered me space in his office at SWFSC and to stay at his house while seeking a place to settle. He put his extensive library for me to use, and toured me through the laboratory to meet many scientists about whom I had only read. That was a great experience. Sometimes we spent the evenings listening to good music from the 1950s and 1960s; he asked me which records I liked. I returned to Peru with many papers and books that Bill and researchers at the lab had kindly provided me; these formed the base of my own library that I still have today. In 1990 I was invited to The Netherlands to present my report. While I was at the discussion table with several researchers Bill arrived and the first thing he did was to hand me a pack of tapes with the music I used to listen at his home. Bill was more than a colleague researcher to me, he was a great mentor, and above all, my friend".

Lorenzo Rojas-Bracho (Mexico) commented: "Several weeks ago I received a letter from an undergraduate student who was looking to do a thesis on cetaceans. She explained the topics she was interested in and I suggested two names of researchers. She replied that she had already emailed them 2 or 3 times and received no response. Hugely surprised about the lack of reply, it reminded me of the great contrast with Bill Perrin's response. When Jorge Urbán and I went to visit Bill for the first time in 1986 we were not yet graduates. Jorge was already working on his thesis on *Stenella* of the Mexican Pacific and I was looking for a topic. We already knew who Bill Perrin was. We had seen

him a few times at meetings of the Mexican Society of Marine Mammalogy (SOMEMMA). What made me remember him was the generosity with which he treated us. Two proto-biologists, in our early twenties, from Mexico. Bill gave us all his time. He gave us a tour of the famous marine mammal laboratory at the SWFSC, introduced us to his colleagues, many of them very well-known. He gave us books, those historical volumes of the International Whaling Commission, articles and reports. We needed a couple of boxes to carry his gifts. After several hours of visiting we went back to his office and he brought out a bottle of cognac, a mug for each of us (he had a spectacular collection) and toasted with us to 'the future of marine mammal research in Mexico'. Months after recalling this anecdote, Bill passed away. Andy Read wrote to CSG: 'I will remember Bill as a deeply kind man who spent time encouraging the young scientists working in our field. Despite his sometimes gruff exterior, he was enormously kind with his time and made sure to support the scientists who followed in his footsteps.' Bill was also the voice of reason. In the most complex and angry, even aggressive, debates or discussions, he sought and found those points, lost in the tangles of arguments, that could be brought together to reach an agreement. Always with the best scientific vision. This and his universal culture allowed him to frequently educate those pinheads, which would eventually bring coherence to those long debates. Bill Perrin was always there where his wisdom was needed."

Eduardo Secchi (Brazil) recalls his first encounter with Bill during the Biennial Conference of Marine Mammals in Galveston, Texas, in 1993. "This is a joyful story. I was with my team from the Oceanographic Museum's Marine Mammal Laboratory of the Federal University of Rio Grande (FURG) roaming around Busch Gardens during a conference break and spotted Bill wandering alone. I mentioned to the Director of our museum, Lauro Barcellos, that Bill was 'the father of delphinids'. Lauro, enthused, did not think twice to walk speedily towards Bill while calling him 'hey, Bill, come here please!' Bill stopped and looked at us a bit scared because of our weird approach and asked 'what happened?' Lauro replied 'no worry but would you mind taking a photo with us, please?'. He smiled and kindly agreed. Afterwards, I reencountered Bill a few times professionally. One of these occasions was in Taiwan, in 2007, as both of us were invited by our friend John Y. Wang to attend the Workshop on the Conservation of the Taiwanese white dolphin *Sousa chinensis taiwanensis* (a subspecies of the Indo-Pacific humpback dolphin) (see Wang et al., 2007). That same year, I attended a Red List Workshop held at La Jolla and organized by the IUCN Species Survival Commission/Cetacean Specialist Group with great help from Bill. During that workshop we assessed all cetacean species and I came to fully realize the true depth of Bill's profound knowledge of taxonomy and conservation-related issues. At the conclusion of the workshop, Bill invited some participants for dinner at his place, with his wife Louella and son Joey. It was a very pleasant and unforgettable night. John Wang and I realized how fortunate we were to have been invited by and to be so close to a true giant in our field. Bill is a legend and will forever be remembered by future generations of marine mammal scientists".

Gabriel Hoinsoudé Segniagbeto, from Togo, provided the following thoughts: "We were fortunate to work with Bill during the negotiations of the CMS *Memorandum of Understanding on the*

*Conservation of Manatees and Small Cetaceans of West Africa and Macaronesia*, including two separate Action Plans for, respectively, small cetaceans and manatees. He truly embodied the inspiration of the body of scientific knowledge on cetacean biology and conservation not only in West Africa but also worldwide. We discovered a man whose manuscripts served as tools that we barely have had the chance to exploit, to strengthen efforts in cetacean biology research and conservation along the entire Atlantic coast of Africa. Beyond his scientific contributions, Bill was very active in facilitating not only collaboration with scientific colleagues in Africa but also in providing funding opportunities to improve the status and conservation of cetaceans in Africa. Moreover, his attitude was consistently respectful for traditions, customs and sovereignty of our nations. Thank you, Bill."

Salvatore Siciliano (Brazil) also fondly recalls the memorable experiences he witnessed with Bill Perrin, as a visitor to the Southwest Fisheries Science Center in La Jolla, many years ago. "First, he offered me the bike of his son to use. He said: 'you will need a bike to get around'. Then, after assisting him with dissecting a large bottlenose dolphin, Bill called me and asked me to help check some acronyms and museum numbers in a very large printed document. That was the draft of his authoritative paper on the revision of the spotted dolphins, *Stenella* spp. (Perrin et al., 1987). Also, I can remember him saying 'don't be shy, knock people's door and ask what you need, reprints, lab supply, whatever'. I still have many of these reprints here with me in Rio de Janeiro which Bill and his colleagues in La Jolla kindly gave me. Thank you, Bill, for allowing me this opportunity of meeting you."

Dipani Sutaria (India) wrote: "When I first entered the marine mammal research fraternity, Bill Perrin was someone I never thought I would meet or interact with, while the expanse of his work and his papers kept me curious and inspired. Meeting Bill was unnerving only before meeting him. In 2003, when I was stuck in California with not much to do, I had sent out emails to SWFSC researchers enquiring if I could volunteer on any ongoing projects. Bill replied right away and asked me if I would be interested in learning how to study skulls of different cetaceans and learn how to take measurements. I spent a bit more than a week at the lab (office 315), learning all the minute measurements, then he would come and check if I had done correctly (I still have that .xls sheet). Here was a person who taught passionately without any immediate personal or professional gain. Teaching for the joy of it is a gift only some can pass on. He is one of them. He gifted me a copy of the first *Encyclopaedia of Marine Mammals* and also passed on to me all his files containing communication with biologists in India. Looking back now, I realise he left me a responsibility much larger than I was prepared for then. I can only hope that my actions since then have developed cetacean conservation in a style that honours him and his personality. We talked about how he was introduced to cetacean research and other personal histories, his time on tuna vessels and his time in SE Asia. What was most warming was his respect for cultural differences, acknowledging that academics and research in Asia comes with so much other baggage. He left suddenly, two days before my time was up, as a killer whale had stranded somewhere. One could see the excitement in his eyes. Though I never formally was his or Louella's student, just the respect and

trust he gave is what stays. I think the last time I met him was in 2009. We were talking outside a conference venue and he said to me that I must not stop doing what I do, and that conferences now and then are good to plan and share at, and to meet friends. After that we mainly shared just email exchanges with updates on what was going on in work here in India. His last email to me had said 'Illegitimi non carborundum'. These words ring in my ears, in all walks of life, not just in academia and conservation. He was a true mentor, a friend and a teacher, as and when the circumstance required those roles".

Jorge Urbán's first encounter with Bill was when he visited the former SWFC in 1982: "I was doing my undergraduate thesis about dolphins from the Mexican Pacific. I first remember the beautiful ocean view from his office, his serious face, kindness and his paused talk. Then, the thousands of well-ordered reprints and the smell of the dolphin skulls in the boxes of dermestids. He taught me to measure dolphin skulls and gave me several publications, including my first treasure, his Ph.D. thesis (1975) on spotted and spinner dolphins from the Eastern Pacific. Since then, I have learned from his interventions at the Scientific Committee of the IWC meetings. I remember him sitting in the back left corner during the yearly plenaries. We will miss him."

At the 1990 IWC bycatch workshop at La Jolla, Bill and Jacques Maigret urged Koen Van Waerebeek (Peru) to plan field research and monitor cetacean bycatches in West Africa (WAF). Implementation did not start until 1995 but eventually turned into a decades-long part-time 'assignment'. Later, Bill also got involved and co-sponsored CMS status changes for three WAF cetacean stocks, *i.e.* *Phocoena phocoena*, *Sousa teuszii* and *Stenella clymene* (Van Waerebeek & Perrin, 2007a, 2007b, 2007c) apart from coordinating a concise review (Perrin & Van Waerebeek, 2012). Moreover Bill and Eric Archer participated in, and hugely contributed to, the UNEP/CMS marine mammal conservation meetings in WAF, including 'The Conservation and Management of Small Cetaceans of the Coast of Africa' workshop at Conakry (Guinea) in 2000, the 'Western African Talks On Cetaceans and Their Habitats' at Tenerife in 2007, and the Lomé (Togo) meeting in 2008 where he was a key player in setting up the CMS 'Memorandum of Understanding concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia'. The Conakry workshop was challenging, the chaotic city with rolling black-outs and the venue hotel overflowing with panicky refugees fleeing the terrifying Liberian civil war. Bill, albeit visibly out of his comfort zone, nonetheless advised to proceed normally with the scheduled workshop which we successfully completed. He would later describe the African meetings as among the most inspiring and gratifying he had attended. WAF officials fondly remembered Bill and Eric's dedicated contribution and for years kept enquiring with KVV when they would visit again. The only time when two of us (JCR, KVV) felt a bit disappointed is when Bill, as editor of *Marine Mammal Science*, declined a manuscript describing a distinct mesoplodont calvaria from Chile's Juan Fernández Archipelago despite its unique cranial morphology. We had no other option than to publish the description of Bahamonde's beaked whale *Mesoplodon bahamondi* sp.n. elsewhere (Reyes et al., 1995). However, Bill's decision, in a weird turn of destiny, was somehow premonitory. While nobody could have suspected that a beaked

whale jaw-with-tooth from New Zealand which John E. Gray in an obscure, brief note (Gray, 1874) had named *Mesoplodon traversii*, later (erroneously) synonymized with *M. layardii* at the NZ national museum, archived and forgotten, would eventually result to be the same species of Chile's *M. bahamondi*, leading to the resurrection of *M. traversii* as senior synonym (van Helden et al., 2002). Bill had this uncanny ability to cut to the core in a few words and sometimes challenge your narrative in a no-nonsense way while remaining courteous and friendly. When at the Anchorage Annual IWC meeting (2007) KVV, then alternate Commissioner for Belgium, privately complained about hard political actioning by some members of the US Delegation, Bill pointedly replied, 'perhaps so, Koen, this is the IWC, but I am hearing that you are learning very fast!' Bill as a scientific adviser to his delegation, in fact informally advised members of several other delegations too, and frequently acted as a conciliator as he was equally trusted by everybody. His IWC influence was vast. Bill offered me, straightforwardly, chairmanship of both the IWC Small Cetacean and bycatch subcommittees, which I had to refuse because my government would not support the additional work."

John Y. Wang reminisces "Very early, I spoke with Bill about supervising my Ph.D., but it was not meant to be. A few years after my Ph.D. was completed (Bill was an examiner), I realized I got a much better deal because Bill treated me as colleague and friend. Unfortunately, I did not have the opportunity to publish any scientific work with Bill directly even though we both worked in taxonomy and conservation. But he has supported and influenced my work for decades, sometimes I only found out later about his 'behind-the-scene' support. He (and later Louella) joined our fight to save the Taiwanese white dolphins. These animals are by no means safe but without Bill's involvement, they would be in worse shape. I have two particularly vivid memories, one described by Eduardo Secchi, the other moment was in 2004 during the first international workshop on the Taiwanese white dolphins. Our invitees decided they had had enough of our large arranged banquets. We ended up at a small noodle shop. Completely exhausted as organizer, I remember looking across in disbelief at this 'dream team' of scientists, including Bill, while they enjoyed a humble meal, happily chatting and joking away – it was overwhelmingly emotional. Bill included me in the Society of Marine Mammalogy (SMM) Taxonomy Committee since its inception and he was the reason I participated at many meetings, once remarking 'you know why you are here, right?' He always sought different voices and perspectives, including on his paper proposing a major taxonomic change to resolve paraphyly in Delphininae (Perrin et al., 2013) for which he had strongly urged me to write an opinion letter on the proposal even though I disagreed with it (Wang, 2014). Chatting with Bill was easy because we shared many similarities and interests: background (collecting bycatch data on fishing boats early in our careers); hobbies (fishing – he sent me a bunch of lures), collecting items (stamps, coins, etc. and although my wife may disagree, I do not 'buy junk and sell fine antiques' as Bill proudly proclaimed); and of course, in taxonomy and conservation. However, my office's smell does not betray the more traditional taxonomic aspect of my interests; then again, I didn't have to deal with thousands of specimens and only kept the cleanest ones in my office. Bill was many things to many people. What he meant to me is impossible

to express in just a few lines (or maybe any words at all). He was certainly one-of-a-kind. We can only aspire to follow in a few of the many massive footsteps of this scientist extraordinaire. He will be missed incredibly."

Finally, Tadasu K. Yamada (Japan) remembers Bill as follows: "Among 7,000 marine mammal specimens of the National Museum of Nature and Science in Tokyo, we have more than 100 dolphin skulls of the Eastern Tropical Pacific. These were gifts from Bill to our museum when my predecessor Nobuyuki Miyazaki was then curator. They are a part of more than 2,000 specimens collected as incidental catches of the purse seiners tuna fisheries in the ETP (Perrin & Chivers, 2011). I understand these terrible experiences with incidental catches of dolphins made Bill deeply involved in cetacean conservation issues. Several visiting and internal researchers utilized these specimens, and Ph.D. studies, e.g. by Yao Chiou-Ju (see Yao Chiou-Ju et al., 2008) were accomplished over these valuable specimens. These are the only ETP specimens in our museum. Years ago, Bill wrote to me expressing serious concern about the future of natural history studies based on specimens kept in museums around the world. I was thinking of continuing the discussion, which turned out to be impossible. We miss you, Bill."

Many other colleagues-at-large, e.g. Marie-Francoise Van Bresse, Gill Braulik and Idrissa Lamine Bamy, have enjoyed very similar experiences when even briefly interacting with Bill. His natural friendliness and unusual generosity explain why he endeared hundreds of colleagues on all continents. Rest in Peace dear friend, marine mammalogist 'For All Seasons'.

Louella concludes "Bill was a man modest in his speech but exceeded in his actions, and his life will be well remembered. He left footprints wherever he went - footprints of kindness and love, courage and compassion, humour and inspiration, tenacity and optimism, joy and patience, and faith in those he trusted. Bill's reach is far and wide; even when he is gone, the path he blazed shines bright with hope and invites us to follow. He did not just visit this earth; he left a legacy that will live on."

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