

THE PEOPLE BEHIND FISHBASE AND SEALIFEBASE

# RODOLFO REYES JR: THE MORPHOLOGY GUY

## RODOLFO REYES,

aka Rudy, joined FishBase in 1993 after working on a series of projects related to coral reef fisheries at the Marine Science Institute of his alma mater, the University of the Philippines.

Although he was hired at FishBase to work on morphology data, Rudy's very first task was completely unexpected. He was asked to "break" a computer program.

"I was assigned to test Mapper, at that time, the mapping software developed in-house for FishBase. I was supposed to test it under different sensible data and settings combinations and find out what would break it and where it would break. And that is what I did, break it - to help improve the software," he said with a smile.

But the data-intense projects didn't take long to arrive. As soon as he was done with Mapper, Rudy started inputting morphology information onto FishBase. This, in turn, happened to be useful for the research he would be conducting for his master's studies in natural resources management.



"I thought of a fish identification tool that would use morphometrics and pictures. Back then FishBase was - and still is - the single largest collection of fish pictures," he said. "At some point, I was also taking measurements on hundreds of fish photos to compile morphometric data. It was a tedious task but somebody had to do it. That dataset is now used for two things: to calculate length-length relationships and as filters in a species identification tool in FishBase."

More recently, his fish identification skills have gone high-tech, working with the baited remote underwater videos that were incorporated in 2021 into the set of tools offered on FishBase. "It is very much like doing underwater visual census using SCUBA, except that one doesn't get wet doing it and there is no SCUBA gear to rinse afterwards," Rudy said jokingly.

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Thinking about the most rewarding task he has had at FishBase, Rudy did not hesitate to bring up his work on life-history data. Initially linked to a specific project, the job evolved from having to provide data points to now collaborating in multidisciplinary analyses that use life-history data. That 'adventure' into fish life-history analyses led him to become an authority on the topic, who now reviews manuscripts for international journals. Nowadays, Rudy is also a member of the editorial board of the *Journal of Applied Ichthyology* and a subject editor for *Acta Ichthyologica et Piscatoria*.

His own professional growth has been intrinsically linked to that of FishBase and, therefore, he can only hope for a bright future for this biodiversity information system.

"The FishBase database now holds a vast amount of data on a good number of aspects of fish biology across virtually all groups. We are now seeing these data being used in modelling to answer a wide variety of research curiosities – from whether fishes living in deeper waters really have larger eyes, to finding out which fishes would probably be more resilient and which ones are more at risk of extinction or reduced range under a changing climate regime. I see FishBase, bringing to the table the data it holds, being more and more involved in multidisciplinary research. I will be there as that happens," Rudy said.



The early days of the FishBase team at the International Center for Living Aquatic Resources Management.



Rudy and part of the FishBase team during a safari in Namibia.

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# LUISA ABUCAY: MISS CATALOGUE OF LIFE

## LUISA ABUCAY,

also known as Isay, is a biologist with a master's degree in food science who started working at the umbrella organization under which FishBase, SeaLifeBase and AquaMaps functioned, FishBase Information, Inc. (FIN), back in 2010.

Her job consisted of maintaining and assembling datasets for the Catalogue of Life (CoL), a comprehensive checklist of all known species on Earth that holds essential information on the names, relationships, distribution and environment groups for many species.

When Isay joined CoL, the database listed 1.25 million species and by the time her project ended, it had 1.8 million species.

"When I joined CoL, the assembly team was composed of only two staff members, Luvie Paglinawan and me. We were not encoding data for FishBase and SeaLifeBase databases but we were responsible for ensuring that FishBase was being updated in the CoL two or three times per year and included in the CoL Annual Checklist," Isay said. "For SeaLifeBase that just started in 2005, we used CoL data to fill in the gaps for the non-fish marine species. AquaMaps, on the other hand, always used Catalogue of Life Annual Checklists as the naming service which allowed users to be directed to the valid name of the species."



After the CoL project ended in 2018, Isay started wearing many hats. She became a research analyst in FishBase and, besides encoding new species and other related biological information, she also began doing image analysis using Baited Remote Underwater Video Systems, carrying out CMSY analyses, and manual and semi-automatic catch reconstructions for FishBase's partner project, the *Sea Around Us*. As of 2020 and up to 2024, she will also be working on a project documenting marine biodiversity through the digitization of invertebrate collections, a partnership with the Florida Museum of Natural History.

"I'm thankful that I was given the opportunity to acquire new skills and knowledge from other assigned work involving GIS, species identification, catch reconstructions and CMSY, new species, taxonomy and distribution," Isay said. "For me, willingness to learn is a choice and there's always 'one more thing' to learn, and you learn something new every day if you pay attention to it."



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In Isay's learning journey there have also been challenges which she has been able to overcome thanks to her own interest and efforts and the support of supervisors and colleagues.

Two issues, in particular, have been pivotal points for her. The first one is arriving at the job with little knowledge on MS Access and species databases but being able to master both with guidance from Yury Roskov, CoL executive editor at the time, and nomenclatural codes such as the International Code of Zoological Nomenclature (ICZN). The second one is keeping taxonomic names in SeaLifeBase as current as possible, something she is able to do with the help of Patricia Sorongon, Emily Capuli and Nicolas Bailly.

But names are not always challenging, they can also be fun. Thinking about lighter moments during her time in FishBase and SeaLifeBase, Isay recalled making a query for a species named after her during her first few months in the CoL project.

Imagining the future of FishBase, SeaLifeBase and AquaMaps, Isay can only see them lasting forever. "As Darth Vader says: 'The force is strong with this one'."



The 2010 CoL team in the Philippines. From left to right - Luvie Paglinawan, Nicolas Bailly and Luisa Abucay with Frank Bisby and Yury Roskov.

"Voilà! I found a few species in Mollusca, Arachnids, Insecta and even in Plantae. I also did that query in the SeaLifeBase and FishBase databases and I found two non-fish but nothing on fish species," she said with a laugh.

Imagining the future of FishBase, SeaLifeBase and AquaMaps, Isay can only see them lasting forever. "As Darth Vader says: 'The force is strong with this one'."



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# AQUE ATANACIO: THE ARTIST BEHIND FISHBASE

## RACHEL 'AQUE' ATANACIO

joined FishBase in 1995 when the project needed a graphic designer and her other contract at the International Center for Living Aquatic Resources Management was ending.

Trained directly under the guidance of professional artists, Aque's skills caught the eye of Rainer Froese who was looking for someone to draw the outlines of the families for the Family Table in FishBase.

"Up until now, we are getting requests from many people for permission to use these family outline drawings for their books or presentations," the graphic artist said.

Although she was a pioneer when it comes to remote working, as she was on a contractual basis, Aque was eventually summoned into the FishBase headquarters. Her first on-site task consisted of scanning over 11,000 slides of Caribbean and Indo-Pacific reef fishes provided by [Jack Randall](#) and entering them in the Picturesmain Table.

This work pushed her to communicate with other people contributing fish pictures and to consult taxonomists on fish IDs.



As she went about doing this, she started accumulating the contact information of many of FishBase's collaborators. Soon enough, Aque was tasked with maintaining the Collaborator Table and, later on, the Sponsors and Common Names tables.

Even though she finds all of these tasks very rewarding, there is one contribution she is particularly proud of: The 'Fishing Down the Marine Food Web' illustration that she created for a presentation linked to the homonymous [paper](#) published by Pauly *et al.* in 1998.

"This illustration can now be found on the internet in various styles and versions but all are based on the very first version that I did for Dr. Pauly. I remember he once said to me my name would forever be associated with his because of that illustration ...but the truth is, no one is aware I did it, except for him!" Aque said with a smile.

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In addition to providing illustrations for papers, she enjoys making the 'size at maturity' posters and fish rulers for other FishBase partners and supporters. She also remembers fondly her participation in a video production course where her final piece was a video titled *Please, don't eat the babies*, which was aimed at discouraging catching young fish.

"The audience was intrigued and everyone was in full attention while watching the video. At the closing ceremony, I was surprised to receive a special award for 'best video production.' It felt like winning the Oscar!" Aque said, laughing.

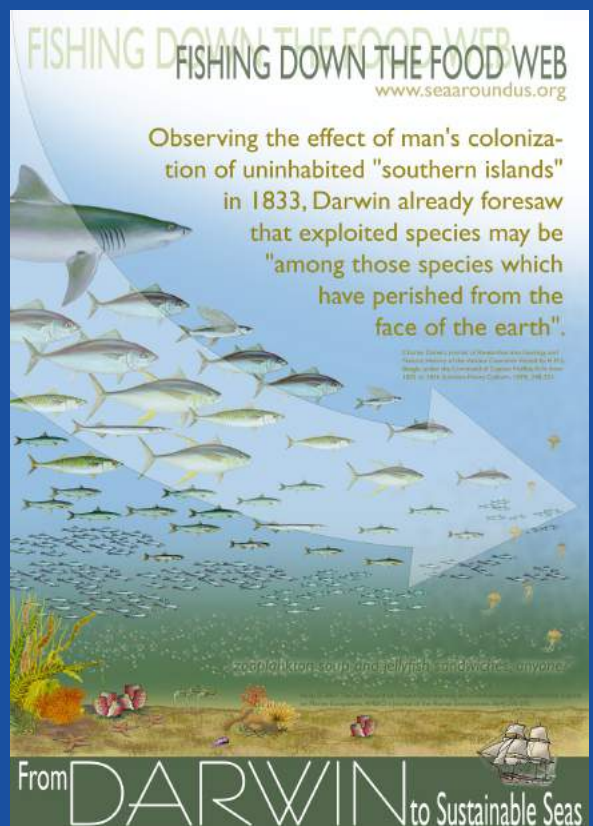
Helping her colleagues and collaborators has always come with a reward. Aque also recalled the time she spent a night on a smelly fishing vessel, doing translations as a BBC filmmaker interviewed local fishers who were supposed to haul a big catch the next day.

"To my surprise, there was not even a single fish caught the entire evening the line was in the water! That was for me witnessing firsthand how real the problem of overfishing is."

For Aque, working at FishBase is never boring and these days she has a big motivation to keep going: "I would still like to continue, even past my retirement age if possible, to help complete the pictures for ALL species in the database," she said.



Aque during her first years working at FishBase.



*Fishing down the food webs* poster created by Rachel Atanacio for the art exhibit "From Darwin to Sustainable Seas," held in Brussels 11-12 February 2010 and organized by Mundus Maris.



# SKIT BARILE: THE PROGRAMMING FORCE BEHIND FISHBASE AND SEALIFEBASE

## WHEN Ma. JOSEPHINE BARILE,

aka Skit, joined FishBase back in 1998, she knew very little about the programming software being used to update the database and make it available to users. Yet, all she needed was a two-week trial period to get a good grasp of it and become the lead person in charge of maintaining the encoding application, the database, and coordinating the CD releases of FishBase.

"I had to make things work for that trial period, with my two besties on hand: The MS Access 97 Step by Step book, and the FishBase Book," she recalls.

From then on, Skit was tasked with handling the programming and production of the releases of FishBase in CD/DVD which were then in MS Access, for versions 1998, 1999, 2000, and 2004. She also supervised the production of the web-based version in 2013.



But it's not like Skit landed in FishBase like a blank sheet of paper. Not only did she have a bachelor's degree in computer science under her belt, but she also had been working for five years as a programmer for a UNDP project titled 'Genetic Improvement of Farmed Tilapia (GIFT),' which was developed at the International Center for Living Aquatic Resources Management (ICLARM), FishBase's first home.

"I developed and maintained the GIFT database on its experimental data, as well as its encoding application. When the project ended in 1997, management kindly offered me to apply to three job openings at that time," Skit says. "Of the three, the programmer position in FishBase was, for me, the right choice for advancing my software development skills."

Moving from one species of fish to virtually all fish species in the world was both challenging and exciting for Skit but – as time would prove –, she excels at dealing with new, unprecedented tasks.

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When FishBase moved to the internet, she was able to continue on with database programming and supported a smooth as possible transition to the web while, at the same time, taking on special projects such as providing programming support for the production of published checklists, working on the Catalog of Fishes with Dr. William Eschmeyer, organizing an Asia regional capacity building workshop on developing aquatic information systems, and developing the prototype of AquaMaps and its early versions.

By the time SeaLifeBase was born in 2005, Skit's professional climb had led her to take on the role of senior research programmer, a position that is called IT theme leader nowadays.

Even though balancing administrative and technical work, taking on bigger responsibilities under funding pressures and keeping FishBase and SeaLifeBase up to date in terms of software technology has been challenging at times, she finds her work very rewarding because she gets to contribute, even if behind the scenes, to the greater good delivered by these global biodiversity information systems.

Reflecting on what she hopes for the future of these two databases, Skit can only think about a famous quote from a beloved movie character: "To infinity and beyond!"



Skit loves the camaraderie that reigns within the FishBase/SeaLifeBase team. She particularly remembers a holiday party organized by the IT Group where everyone wore fun eyewear.

In her view, the fact that FishBase and SeaLifeBase are up and running 30 and 15 years after they were created, is proof of their value.

"You see it in scientific publications, websites that link to them as resources, data requests from different sectors, online communities built around them, projects developed, to mention some," Skit says. "Even with that, there is still more that FishBase and SeaLifeBase can serve. I really hope that there will always be champions who will ensure their continuity."



With Nicolas Bailly at the FishBase 15th anniversary event.



# NINA GARILAO: A SERENDIPITOUS LANDING IN FISHBASE, AQUAMAPS

## CRISTINA GARILAO,

aka Nina, is originally from Manila but has been living in Kiel for nearly 13 years. Her work in Germany revolves around projects that help maintain the database and web interface of AquaMaps, a platform that hosts standardized distribution maps for over 33,500 species of fishes, marine mammals, and invertebrates.

Despite having been in Germany for over a decade now, Nina's work started in the Philippines right after she obtained her bachelor's degree in biology from the Ateneo de Manila University.

She dubs her landing in FishBase a 'story in serendipity.'

"One day close to graduation, I answered a ringing phone at home. Small talk with my dad's friend led to an introduction to [Deng Palomares](#), which later led to a 'tip' to apply for an open position with FishBase. There, Rainer Froese pointed to three volumes of the 'Guía FAO para la Identificación de Especies para los Fines de la Pesca Pacífico Centro-Oriental' and asked to translate a paragraph into English. Little did I know that the interview would land me a FishBase family for the next 26 years," Nina recalls.



Before moving countries and tasks, the biologist took her first professional steps as a data encoder in charge of exhausting information in books such as *Smiths' Sea Fishes* - which covers over 2,200 species - and enter relevant data to the species, synonyms, stocks, FAO, country, and common names tables in FishBase.

"Least to say, many such books and years later, I still have their reference numbers in my head and identify tropical fish by scientific name while diving," Nina says with a smile.

From those times in Manila, Nina particularly remembers the FAO workshop organized in 1995, which brought the FishBase team together with ichthyologists from around the world to work on the FAO Identification Guide for the Western Central Pacific.

"We would do late evening/early morning visits to wet markets to collect fish, watch fish experts do what fish experts do in the lab, finalize manuscripts together, and share a beer or two after a long day's work," she recalls.

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### Collaboration and support

When it comes to the most fulfilling part of her work in these past decades, Nina does not hesitate to respond that it is collaborating with a professional team of people to build up AquaMaps to where it is right now.

“While we are the first to admit that there is still much to improve on, AquaMaps is the largest atlas of the living ocean and is often used by different researchers to answer questions in various fields of research - biodiversity, policy, and even genetics - with some results published in very high-impact journals,” the researcher says. “Special shout-out to Kathy who has been my partner-in-crime the last 11 years for all things AquaMaps!”

Thinking about the future of FishBase, SeaLifeBase, and AquaMaps, Nina hopes that the suite of products offered by the three databases continues to improve and prove itself relevant, while at the same time attracting some permanent funding that secures their existence for the years to come.

Nina hopes that the suite of products offered by the FishBase, SeaLifeBase and AquaMaps continues to improve and prove itself relevant



Nina particularly remembers the FAO workshop organized in 1995, which brought the FishBase team together with ichthyologists from around the world like [Jack Randall](#), pictured here.



Nina together with part of the Los Baños-based FishBase-SeaLifeBase team.

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# KATHLEEN KESNER-REYES: THE AQUAMAPS EXPERT

## KATHLEEN KESNER-REYES

has a background in anthropology, but she has dedicated most of her professional life to working on marine biodiversity information systems.

After spending three years doing fieldwork for the Bolinao Marine Laboratory of the University of the Philippines' Marine Science Institute, in 1995, she joined the International Center for Living Aquatic Resources Management as a research assistant for ReefBase - the electronic encyclopedia on coral reefs modeled after FishBase.

"It was there that I learned more about species databases and how compiling species data in a standardized format was important because it allowed different data to be combined and connected, allowing the development of useful tools, as well as queries that can lead to new knowledge on marine life," Kathleen said.

Following this initial experience, Kathy - as her friends call her - joined FishBase as a senior research assistant in 2003, and two years later she was brought into the AquaMaps project, then known as Half-degree Cell Mapping Model or HCMAP.

From that moment on, acronyms became part of her life.



"In 2005, Dr. Rainer Froese made his annual visit to Los Baños bringing with him his usual list of 'small' projects," Kathy recalls. "He explained the general idea then handed me three thin sheaves of paper that included technical descriptions with strange acronyms in the headings- HSPEC on one, HSPEN on another, and HCAF on the third. I couldn't make heads or tails out of them at first but later began to see that not only were these tables connected but that they were harnessing different global databases. Even if my understanding of the project was very basic at that time, it got me interested as I realized this could be an undertaking with many applications."

This is how Kathy's journey with AquaMaps started.

As soon as she understood what the new endeavour was all about, she started encoding and preparing data related to, for example, depth or FAO areas in FishBase so that those data could be used by the model.



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### Collaboration has been key

In collaboration with Skit Barile, she then worked on the first mass-production of marine AquaMaps.

"Two years later, we also started working with Sven Kullander on the extension of the AquaMaps model for freshwater ecosystems and produced AquaMaps for the Americas. I've been working with AquaMaps for 16 years now!" Kathy said with a smile.

Working closely with Nina Garilao and Rainer, and also in collaboration with FishBase, SeaLifeBase, the FBC, and other experts, the researcher pointed out that she is proud to see AquaMaps grow from covering 691 marine fishes to now showing 33,500 marine species, and from focusing on contemporary species ranges to modelling future species distributions under different climate scenarios.

She is also happy to have been able to expand Freshwater AquaMaps so that it includes the ranges of species in Africa, Europe, China, Brazil, and the Great Lakes.

"Just like FishBase and SeaLifeBase, AquaMaps is a global public good"



Kathleen enjoys impromptu coffee break parties with the FB/SLB teams.

"Just like FishBase and SeaLifeBase, AquaMaps is a global public good. It is nice to see that in recent years, there has been increasing uptake of AquaMaps for different uses, from graduate theses to the development of risk assessment tools and approaches in such areas as fisheries, ship fouling, and biological invasions," Kathy said. "AquaMaps data for tens of thousands of marine species have made possible cutting-edge work such as studies on the potential impacts of climate change on marine biodiversity, as well as analyses for better spatial planning of marine protected areas."

Having been part of the development of AquaMaps and seeing it grow together with FishBase and SeaLifeBase, Kathy wishes that these projects will continue for many years to come, and that they will always have the teams, the partnerships and the funding support to do so.

"These are very important global species databases and will continue to be relevant and useful in the future, maybe even more so," she said.

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# ARMI TORRES: FISHBASE'S FRESHWATER EXPERT

## WHEN ARMI TORRES

joined FishBase at age 25, she couldn't have predicted the turns her career as a marine biologist would take.

For years, the ocean had been the compass that guided her professional path so little did she know that she would end up diving into the depths of research on freshwater fish.

It all started when she decided to work with FishBase while completing her master's degree in marine biology. After spending some time encoding information on the taxonomy and biology of marine fishes, she was put in charge of all the information on fish reproduction and, later on, of the IUCN Red List of Threatened Species.

Then, one day, Dr. Rainer Froese asked her to "migrate" from marine to freshwater and handle the compilation of freshwater information in FishBase.

"I did not see this change coming as my background is in marine science," Armi said. "I was a bit shocked but willingly accepted the new challenge."

After embracing the change and immersing herself in the new topic, Armi discovered two things: a new passion and the fact that there were huge knowledge gaps when it came to freshwater fishes.



"Based on our analysis using biological traits of threatened fishes in the 1996 IUCN Red List, Dr. Rainer Froese and I found trends which indicated that fishes that depend on freshwater at any stage of their life cycle are over 10 times more likely to be threatened than marine and brackish water fishes," she said. "These findings changed my perspective and my desire to seek higher education if I could work on threatened freshwater species to contribute in preventing the escalation of species extinction."

This newfound interest drove Armi back to the University of the Philippines, where she decided to pursue a PhD in environmental science. Upon graduation, she became a post-doctoral research fellow in charge of conducting global assessments of the conservation status of freshwater fishes native to the Philippines, in partnership between the IUCN and Quantitative Aquatics.

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### Challenging and fun times

Along the way, she has faced some challenges such as having to deliver, in a short amount of time, as much information as possible on freshwater fishes of Central and South America to various taxonomic authors for the production of the book Checklist of Freshwater Fishes of South and Central America (CLOFFSCA).

Keeping taxonomic names as current as possible is also a challenging, ongoing task that Armi – together with other members of the [FishBase and SeaLifeBase teams](#) – has to stay on top of.

“The task of splitting and lumping species information when names change is very challenging and requires patience and thoroughness. But I consider this as my favorite task,” she said.

Throughout her 30 years in FishBase, interesting assignments have been paired with stimulating activities such as workshops on fish identification and on how to use the tools in FishBase.

“I look forward to the continuing service of FishBase and SeaLifeBase, two resources that make relevant information on aquatic species accessible to everyone”



An outing of the FishBase team in the 1990s.

There have also been opportunities to build connections and have fun with her coworkers. Armi particularly remembers a December holiday season, when the Kris Kringle game didn't go so well because Rainer kept leaving presents using his usual handwriting, which meant his identity as the “Secret Santa” of one of the team members was revealed at the onset of the game.

“We just burst out laughing,” she recalled.

Looking back and, at the same time, thinking about the future of FishBase and SeaLifeBase, Armi said that even though both projects have served their purpose of providing a wide array of information and tools crucial for the management and conservation of global aquatic ecosystems and species, the reality is that there is still a lot of information out there that is scattered and inaccessible to many.

“Thus, I look forward to the continuing service of FishBase and SeaLifeBase, two resources that are able to make relevant information on aquatic species accessible and understandable to everyone across the world,” she said.



# PATRICIA YAP: PASSIONATE ABOUT SEALIFEBASE

## PATRICIA YAP

has been with SeaLifeBase since its inception in 2005.

Before joining the initial three-person team, while she was doing her undergrad at the University of the Philippines, Los Baños, Pat worked at the WorldFish Center doing literature reviews for coastal management initiatives and training activities. FishBase was in the same building so she was able to connect with their team and become familiar with the work they do.

After graduating, she left and worked in the field for a year, then came back after one of her previous bosses told her about FishBase's new sister project, which would focus on non-fish marine life. She knew she had to join.

"Just the thought of reading about different marine animals every day, and being able to provide the data I read to a bigger audience was a wonderful opportunity," she said. "I believe there is a huge difference between seeing marine life (when you snorkel or dive), and knowing about marine life. It's like taking a peek into their life and the environment they live in and trying to tell their story. That's what I wanted to share with the world by being a part of SeaLifeBase."



As soon as she joined, Patricia was asked to choose the animal group that she loved the most. She chose marine mammals.

What followed was a training process that required adapting and changing the tables that are used in FishBase so that they would fit parameters relevant to non-fish marine organisms.

"My first encoding task was to completely exhaust all data from the FAO catalogue Marine Mammals of the World, which had distribution, ecology, length, common names, and synonym data. It was like an encoding practice while pumping up the data in SeaLifeBase," Pat recalled. "Later on, I was assigned to be in charge of all vertebrate groups in addition to tunicates and nudibranchs. Eventually, our roles evolved and concentrated on specific data encoding/tables."

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As her position evolved, Patricia's responsibilities grew. Just a few years after joining SeaLifeBase, she became the coordinator of all faunal projects, something she did while pursuing a master's degree in environmental science and management.

As expected, the hard work and major efforts to balance out her professional, student, and personal life paid off and in 2013, she was promoted to research analyst, a role that she maintains to date.

"I still handle all faunal work projects in Quantitative Aquatics, involving both FishBase and SeaLifeBase. I try my best to complete the marine biodiversity of specific island ecosystem projects, provide mapping data that feeds into AquaMaps, and complete mandatory information for marine species. All of this is possible because of the team I have by my side." she said.

For Patricia, the most rewarding part of working in SeaLifeBase is providing data to people, governments, agencies, and countries that need them to make informed decisions and protect their marine resources and environments.

Thinking about the future, she wishes that both SeaLifeBase and FishBase go on for eternity and that more people, including the academe, policymakers, scientists, and the wider audience, see the value of having these global databases available to them.



Pat and her team's version of fun is travelling together, scuba diving, and going on food trips.

The most rewarding part of working in SeaLifeBase is providing data to people, governments, agencies, and countries that need them to make informed decisions and protect their marine resources and environments.

# EMILY CAPULI: THREE DECADES AT FISHBASE

## EMILY CAPULI

says that when she started working for FishBase three decades ago, her hair was darker and longer.

She may look different now but her interest in documenting the fishes found globally has not changed a bit. She continues to do this by ‘fishing’ for new species and documenting taxonomic changes in FishBase. This is what Emily has been doing for the past 30 years.

The marine biologist joined the FishBase team right after completing her master’s degree at the University of the Philippines. Her goal was to do something different from the field and lab work she had been conducting during her studies.

“The first work I did for FishBase included documenting the fishes found in the Philippines and I still continue doing it now and find it very important to do for my country,” Capuli said. “Other than this, I enjoy working on the taxonomic aspect of FishBase, the development and creation of tools using the species data.”



### From team leader to ‘theme’ leader

From research assistant at different levels, Emily became a senior research associate in 2003 thanks to the work she started doing with an increasing number of taxonomists, focusing on the development and evolution of the database.

“Rainer (Froese) called me a team leader then and after 30 years of working mainly on species taxonomy, I’m now called a ‘theme leader’ for taxonomy involved with FishBase and SeaLifeBase,” she said. “Come to think of it, the spelling of the title also evolved!”

For Emily, all projects she has worked on have been rewarding in one way or another but one of the things she has come to appreciate the most in her career is the mentorship she acquires from colleagues and other scientists on all-things FishBase/SeaLifeBase.



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Learning more about marine life can be both a lifelong interest and a challenge. Emily believes there are hundreds of projects that can be done using the wealth of information in FishBase and SeaLifeBase but the key is finding the time, resources and people to carry them out.

“I really hope FishBase and SeaLifeBase go on forever and that we are succeeded by a ‘new species’ of dedicated people who will have new vision and foresight to sustain these Global Species Databases,” she said.

### **Remember to have fun**

On the lighter side of things, Capuli has had fun getting to know all the different people that have been involved with the project throughout the years.

Informal settings, such as music jams held at Rainer Froese’s place ‘back in the day’ have been important team-building opportunities where Emily got to know people beyond the professional level and make lasting friends.



The ICLARM band. Emily was one of the backup singers for the group led by Rainer Froese, Roger Pullin and Jay Maclean.

“I really hope FishBase and SeaLifeBase go on forever and that we are succeeded by a ‘new species’ of dedicated people who will have new vision and foresight to sustain the projects”

# SUSAN LUNA: SUPPORTING FISHBASE SINCE THE EARLY DAYS

## SUSAN LUNA,

also known as Tuttay, has been with FishBase even before the project was born.

Back in 1989, she started working with Daniel Pauly at the International Center for Living Aquatic Resources Management ICLARM, and as FishBase was being conceived, she was quickly recruited into the project.

Her job? Testing the database prototype being developed by Rainer Froese, which involved sending printed pages of complete encoded information from the database for different subjects such as species biology, morphology, distribution or countries via snail mail to Rainer in Kiel, Germany.

“When FishBase was finally launched as a project in 1990, I - together with another colleague from the Aquaculture Program at ICLARM, Belen Acosta - began working on the database,” Luna recalled.



After spending almost three decades as a researcher at FishBase, Tuttay - who studied Marine Science at the University of the Philippines - decided to switch gears. In 2018, she became an executive assistant at the recently-created Quantitative Aquatics, an organization that manages FishBase, SeaLifeBase and AquaMaps. At Q-quatics, she provides high-level support to the executive director, Mary Ann Bimbao, on all matters pertaining to administrative, human resources, and financial affairs.

The new role allows her to help address what she perceives to be the biggest challenge these legacy projects are facing nowadays: continuous research funding.

Susan believes that guaranteeing that these databases remain alive is very important for humanity's growing knowledge of marine life.

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“I hope that the legacy of FishBase and SeaLifeBase will continue long after we are gone and that provision for development and maintenance will always come,” she said. “I’m sure that the global scope of FishBase guarantees that work on this database will never cease as information and knowledge are continuously generated.”



Susan Luna and some of the ICLARM staff in 1989.