



Idelisa Bonnelly  
Dominican Republic

“...science is about data,  
perseverance, discipline and often  
about love, and women know a  
lot about all this”

Interview by Odalis Mejía Perdomo\*



Idelisa Bonnelly de Calventi, president of Fundemar



Idelisa with her grand-daughter Isabella and her daughter Laura Calventi (blue blouse), her son Vinicio Calventi and his wife Cinthia Camarena

### Idelisa Bonnelly: a sea enthusiast

Idelisa Bonnelly speaks slowly but is a spirited defender of the causes she has defended and researched for many years. She is notably a pioneer in her country in the protection of marine ecosystems and is particularly renowned for her battle against dolphin centers. She believes that women's great talent, discipline, perseverance, ability and compassion means that they have a great deal to contribute to research.

Bonnelly, a retired professor, was born in the Dominican Republic. She is currently the president of the Dominican Marine Studies Foundation (FUNDEMAR).

Her main field of research is marine biology and the preservation of her country's coastal resources.

She is extremely proud of having pioneered marine sciences in the Dominican Republic from the 1960s onwards, by creating the first university for the study of marine biology, the Marine Biology Research Center (CIBIMA) of the Autonomous University of Santo Domingo (USDA), in 1962. She later promoted the School of Biology at UASD, where the country's biologists are trained. Bonnelly has published widely on the country's marine resources, works that



Idelisa holding her grandson Jaime Vinicio, next to her son-in-law Bela Bartok with Isabella and on the other side her grand-daughter Gabriela, behind are her daughter Laura and her son Vinicio with his wife, Cinthia



From left to right: Cecilia León, Idelisa's assistant; Patricia Lancho; Idelisa Bonnelly; Rita Inés Sellares, director of the Center of Marine Studies in Bayahibe; and Toby Bloom, Wildlife Director of Humane Society International.

have been instrumental in decisions on their management and preservation and in the creation of protected areas such as the Banco de la Plata Humpbacked Whale Sanctuary (1986), now the Banco de la Plata and la Navidad Sanctuary, the first of the Atlantic Ocean and one of the first in the world.

After retiring from the university in 1987, she created the Dominican Marine Studies Foundation, FUNDEMAR, in 1991. A non-profit organization, it has allowed her to continue her research and educational work for the benefit of the Dominican Republic's marine mammals and resources. Since 1991 FUNDEMAR has

undertaken numerous preservation projects throughout the country, in particular in Bayahibe in the Eastern National Park in the south-east of the country. There FUNDEMAR carried out the first dolphin study in the Dominican Republic and today Bonnelly works alongside an excellent research team on adaptation to climate change in coral reefs and coordinates the Marine Mammal Sanctuary Management Plan.

Bayahibe is located in the Eastern tourist hub, where FUNDEMAR has promoted responsible tourism and community development by designing ecological marine excursions

and reaching agreements with the tourism industry. This project involves permanent training programs for the staff to guarantee that they work effectively.

### Distinctions and prizes received

- Medal of Merit for a Woman in Science, from the Government of the Dominican Republic, 1986.
- Distinguished Professor of the Autonomous University of Santo Domingo, 1987.
- Incorporated into the United Nations Environment Program's Global 500 Hall of Fame (UNEP) for the preservation of the environment, 1988.
- Global 500 Prize, from the United Nations Environment Program in 1995, for her contributions to preserving the environment.
- Founder of the Dominican Republic Academy of Science (1974), from which she received an Academic Tribute in 2009
- Member of the Organization of Women in Science in the Developing World (OWSD) and representative at its First General Assembly in 1991.
- National Ecology Prize Corripio Foundation, 2008.
- Madame Curie Medal at the 50th Anniversary of UNESCO, 2009.
- Prize for Distinguished Service in Biology (SCB), from the Society for the Conservation of Biology, Victoria, Canada, 2010.
- Order of Duarte, Sánchez and Mella, with the grade of Commander, 11 September 2011.

Bonnelly's choice of a scientific career can be attributed to her lifelong passion for the sea. As a child she lived very close to the Santo Domingo Jetty and from her early years was curious to fathom the mysteries of the vast sea.

She recounts that she had to travel to the United States to study, and her professors there encouraged her to continue her postgraduate training in Biology. The time that she spent working at the New York Aquarium, working alongside Doctors Ross Nigrelli and Sophie Jakowska, was a decisive moment in her training as a researcher.

There she worked in the laboratory that monitored the health of the species in the aquarium, including penguins, invertebrates and even walrus. "Many problems arose and we had to be dedicated, creative and study constantly."

Along with her academic training this experience provided the impetus for her most ambitious project back in the Dominican Republic, a study on the rational use of marine resources in the country.

Regarding the importance of women working in science, Bonnelly believes that despite the scientific world being generally dominated by men, women have great talent, discipline and ability, and can therefore make a significant contribution as researchers.

Her keenness to work in science was reinforced once she returned to the country at the end of



Idelisa has researched and fought for many years for the conservation and protection of marine ecosystems.



Idelisa Bonnelly works in the field of adaptation to climate change in coral reefs in the region

Rafael Leónidas Trujillo's dictatorship (1930-1961). She observed serious deficiencies in scientific teaching and research, yet among the population there was a desire for change and for the university to help create a new society based on freedom, democracy, equality and criticality. "Science is a means to create knowledge to preserve marine resources and serve society," she declares.

At the time, there was little knowledge about the seas and their resources, but it was evident that many coastal areas had deteriorated and numerous species has decreased in number, fish in particular and there were only limited

specific regulations. Consequently, CIBIMA conducted taxonomic studies on coastal species, studies to establish closed seasons for species such as lobsters, crabs, shrimp and oysters, and biochemical research to control the quality of marine food. There were also innovative studies to find bioactive components of marine origin (algae, mollusks, sea squirts, etc) for potential pharmaceutical use.

Bonnelly encouraged professors and students from other fields to support their research by adapting methodologies to the marine field. Thus was formed a small research team devoted to marine science.

The close ties with a variety of institutions such as the Fishing Department drove not only the research but also the organization of educational courses, workshops and discussions to promote interest in marine science.

Among the main obstacles that Bonnelly has had to overcome is the equipment in the early years of her career, often scarce or in a state of disrepair, and the need to use other laboratories for chemical and microbiological analyses while CIBIMA was being established. She has presented projects to international institutions such as the Organization of American States (OAS), and forged alliances with other universities in the Caribbean such as the Marine Science Department of the University of Puerto Rico and with national organizations. She has also established a marine station on Güibia beach in Santo Domingo, which is now the Professors' Club of the USDA.

In 1979 Hurricane David destroyed CIBIMA's installations, equipment and collections. In three hours the swell destroyed the product of 17 years' work. "This was a very difficult event to overcome", she recalls.

However, despite the heavy blow, with the help of professors, students, employees and friends its activities were resumed and soon after the aquaculture station was opened on the Engombe estate at the USDA, where research continued as before and new,

successful lines of work began. The institution promoted freshwater aquaculture.

### Family environment

The support of Professor Bonnelly's family has been crucial to her life and achievements. Her parents decided to send her to study in the United States, and her colleague and husband Dr Vinicio Calventi, an eminent doctor and researcher, understood and shared her vision and love for science. Finally, her children Laura and Vinicio and grandchildren Gabriela, Jaime Vinicio and Isabella have been a source of affection and support.

Bonnelly is good-natured and permanently active. In her free time she enjoys reading, listening to good music and going to the cinema. Family reunions are another great source of happiness. The "chocolate" celebration she has held for over 30 years with her relatives and close friends has become a tradition.

### Motivation

As advice to young persons wanting to study science, Bonnelly says that it is a fascinating subject that once begun is hard to abandon. There are numerous opportunities for young persons with talent.

Indeed, despite the vast quantity of information and high-technology research being carried out, there is still much to be discovered in all branches of science - natural, exact and



Her research has permitted the conservation of marine resources such as the Humpback Whale Sanctuary in Banco de la Plata. She also conducted the first study on dolphins in the Dominican Republic.

even social. “The early 21st century is the perfect time to achieve this, if we wish humanity to survive and develop peacefully.”

As regards the inclusion of women in a sphere normally dominated by men, and the different criteria that may be imposed on men and women, Bonnelly argues that the scientific world demonstrates women’s successful integration into such spheres. “Scientific information and

opportunities are there for both women and men, and women are very capable of the data management, perseverance, discipline and compassion required by science.”

### Institutions

Bonnelly believes that the most significant obstacles of the Dominican Republic in regard to science are the lack of a clear scientific re-

search strategy and the insufficient incentives for research and innovation from the state and private sectors. Despite the existence of a Higher Education, Science and Technology Department and the financing of research projects, there is no clear, precise definition of the country's research needs, and insufficient training of university staff and young persons interested in becoming researchers. "We must improve school education - that is where the roots are," she says.

Yet in her opinion the government of the Dominican Republic does recognize the work of the Science Academy and frequently seeks its advice on many topics. Among these is the preservation of the environment. The Academy is currently an advisor to Congress. The Women in Science program has been successful thanks to the solidarity of the Education and Women Departments. It is not only run by women but also men with strong, progressive views.

Bonnelly says that collaboration between the academy and government authorities varies depending on the subject.

Regarding the reception of her projects by the authorities, as founder of the Academy she worked for several years as Coordinator of the Biology Commission, now the Natural Sciences Commission. There she organized a series of biology conferences, which had a significant impact on the national environment. The

government also assisted the publication of the Academy's journals.

Among many successful projects are the establishment of the Marine Mammal Sanctuary, the first research on dolphins in the country, campaigns to protect dolphins in captivity and currently, the Marine Mammals Sanctuary Management Plan.

Bonnelly believes that there is an institutional vacuum, as a result of which the government depends more on individual people than the Ministry or technical teams.

Though there have been significant advances in strengthening environmental legislation, there are still many gaps and legal instruments must be improved, such as the Sectoral Law on Protected Areas (2002-2004), which lacks a subsystem of protected marine areas, despite this being crucial for their management. ■

\*Odalis Mejía Perdomo, a science journalist, was born in Santo Domingo, graduated in Social Communication Sciences from the Universidad Autónoma de Santo Domingo and received a Teaching Certificate from the Salomé Ureña Advanced Teacher Training Institute in 2004. She has worked as a journalist for *Hoy* newspaper since 1998. She has also taught Spanish and Natural Sciences to young persons and adults at the Guyana Public School since 2004.