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# Vocation of teaching marine biology

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My experience of all these years working in relation with the sea, has been difficult, but luckily I have seen a complete change of the roles of men and women in sea activities. I was born in 1939 in London of Spanish parents and after primary school I came to Spain and now I am retired from the University of the Balearic Islands. During all these years I have been teaching and researching in relation with the sea and coasts.

Since I went to school when I was 4 years old I thought that when I grew up I would be a teacher. In my secondary school I was most interested in the so-called “Natural History” and when I went to the University I was completely determined to study Biology, even if I had to leave home and go to Madrid to do it.

The sea had always attracted me. I thought that something that covered so much of our planet must be really interesting. I saw it for the first time when I was already 5 years old, and our parents took us to Brighton. I was completely overwhelmed, especially due to the fact that, unlike the rivers I had seen before, you couldn’t see the other shore.

After living in Madrid for a few years we moved to Santiago de Compostela, in the northwest of Spain. The sea was near and in summer we went frequently to the coast. Once we were let inside a cannery and I was absolutely amazed watching the fishing boats leave their catch and all the treatment until the tins were prepared for the shops. In another of these excursions to the coast, we visited the headquarters of the Navy and the school for officers. I was astonished to learn that there were no girls at all.

In Madrid I had to earn some money so I gave private classes which took up some time, but I managed to study and obtain high marks in order to have scholarships with which I paid for my stay in a student hostel. After studying Zoology in the second course of Biology I began to work in the Natural History Museum in Madrid, under the supervision of a Zoology Professor and to be interested in marine animals.

Although in the Zoology Laboratories there were only men, I didn’t feel uncomfortable at all, I was treated in a respectful and natural way. Sometimes another woman came for some months to learn these methods, but they didn’t stay long. The few women who worked in the university were assistant professors and usually had another job as a secondary school teacher or in a commercial laboratory.

After spending one summer month in a Coastal Laboratory in the north coast of Spain, where I was admitted, I really began to study “*in situ*” all the animals I had observed in books and in the museum. Seeing them alive in their natural environment completely overwhelmed me and I decided that I would do everything I could to study them and teach Marine Biology at the University.

My parents were both professors. My mother was one of the first women who studied at Barcelona University, so I didn’t think that being a woman could be a problem. But when, still a student, I was preparing myself for an exam to be curator of the Museum I thought it could be a good idea, as well as studying hard, get to know the different areas of the Museum, the projects going on and the main methods used. I was well received in all the areas, except in the Taxidermia area, where I wasn’t even let in. I was told that this type of work was only for men and women could not do it.

After finishing my studies in 1961 I tried to work in the Spanish Oceanographic Institute and also was rejected because in those days women were not admitted so I realized that it was not easy.

My father and other professors warned me that even being difficult, if I worked hard and was not in a hurry, I could be a University professor, because things were beginning to change. Some other stays in the Marine Laboratory in Santander gave me the idea not only of the marine animals themselves, but of the whole marine environment. It taught me how the whole marine environment works and all its interrelationships.

Back in Madrid I began to study the Chaetognatha that would be the subject of my doctoral thesis and I started teaching practicals at the University as assistant professor and I married and had two children.

In 1971 I was called from the Oviedo University in the north of Spain, a town very near the coast. There I had to teach Planktonology and Embryology as optional subjects of the final course of the Biology Studies. After a couple of years the subject changed to Marine Biology. In those days there was no Spanish University that taught this subject so I asked to be admitted in Liverpool University, where the subject was given in 5 weeks in Port Erin Laboratory in the Isle of Mann. I enjoyed it ever so much, specially the practicals, visiting and observing the benthos distribution in the wide intertidal areas and I learned not only the subject, but also how to teach it.

Back in Oviedo University I began to teach Marine Biology copying many things I had seen in Port Erin, especially the methods and the visits to the coast with the students, using the wide tidal range to see, collect, study and measure the benthic distribution.

I was very lucky because I got in contact with the Nautical School in the coastal city of Gijón where they had a small tug boat for practicals for their students, they were very helpful and let us use it. So we began to sail in it in order to collect marine samples. To make everything easier I learned to steer small boats and after solving some problems, because I was a woman, I was accepted and passed the exam. By then somethings had changed. In the Spanish Oceanographic Institute, women still were not admitted as researchers, but as assistants could board a Research Vessel. I was invited to some Oceanographic cruises that sailed from Santander. I learned a lot and came back with some material we studied in the laboratory.

In Oviedo University I began to have a small research group and to direct three doctoral theses. We received a grant from a local bank with which we bought some marine equipment and began a study of the plankton temporal and depth variations in the coastal waters off Gijón.

In 1980 I was asked to join the Balearic Islands University that had begun Biology Studies and needed professors. Being in the Mediterranean everything was completely different and it took me some months to get to know the main features of the marine area around the islands. I was asked to write, together with some assistants, a "Field Guide of the Balearic Coastal Waters", which taught me very much of the area. I began to teach Marine Biology and to try to get in touch with the Laboratory of the Oceanographic Institute in the island. At the beginning I was not welcomed by the director, who luckily soon retired and I got in touch with the researchers themselves and we began working together in some

areas and even we were invited to use their ship to sail with my students and collect samples, as well as to use their good library.

I began to work with a small research group and we soon began to publish some papers. For collecting samples for practicals and the thesis going on we asked some fishermen to let us sail with them in their trawler boats. At the beginning they were completely astonished that a woman would be interested in doing so. Even having the idea that women on board brought bad luck and small captures, we were invited to a couple of boats. We worked happily with them, collecting samples that they usually threw back into the sea and were very interesting for us. We widened the collection for the students and had material for the projects going on. We also helped them in their work and learned very much and at the end we became good friends.

In 1988 I passed the exam to become a full professor. At that time very few women were university full professors, and still many people were against it. Luckily, I did not find any obstacles, passed the exam and became the second Spanish Marine Biology full professor and the first woman.

For some years I was chosen as head of the Biology Department. At the beginning some colleagues were against having a woman in that post, but after 4 years they seemed to be happy and I was re-elected unanimously for another four-year period.

In those days a Laboratory of the Spanish Research Council was opened in the island with some marine biologists. Together with them, some from of the Oceanographic Institute and some of the Laboratory in Barcelona we were invited to join in some projects.

Also, in contact with these laboratories in 1991 I was invited to board the Spanish Oceanographic Vessel "Hespérides" in its maiden trip to Antarctica. On board we were only three women, one the head of the scientific team and we did not have any problem at all, we worked hard and enjoyed this new experience. After this cruise I joined two more expeditions, each time with more women on board.

Due to the main environmental problems of the area and being the coastal mismanagement a most important one I began to study coastal problems, especially in relation to the overpopulation and the behavior of the artificial reefs that were being positioned in the area.

I went to a coastal management course in Ecuador organized by Rhode Island University and the following year to another in Rhode Island University itself in USA. Although we were not many women there, it was no problem at all. I learned very much and got in touch with many other professors from all over the world.

Back in Majorca I began to teach Coastal Management as a subject in a Master of Marine Ecology and I was called by an International net of visiting Professors to give courses and lectures on this subject in Latin American universities, mainly Cuba, Argentina and Chile but also in Ecuador and Colombia. In a conference in Brazil and another in Long Island (USA) I got in touch with other European University Professors who invited me to join a European group studying different coastal aspects. I organized a Spanish group and we joined the European one. From Southampton University I was asked to write a chapter in a book on coastal management. My University asked me to write an informative book on this subject called: "Integral Coastal Management, for a more ecological, productive and sustainable coast".

Meanwhile I worked in some special areas with the authorities and an Agenda 21 in the most important touristic area near Palma. Although the local authorities sometimes did not take much into account what we said, in other cases they did, and I am very happy to see some beaches and small areas saved by following our recommendations.

On the whole, in these years since I began having problems everything has changed so much that there is no difference between men and women in relation to Marine Science or marine activities. Therefore, I tell all the young people that are interested in these activities that they should carry on and work in what they are deeply interested as many of my students have done. It is the best thing you can do in your life, makes you happy and feel you have done something for our endangered environment.

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