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Grădina Botanică “Alexandru Borza”  
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## **MEMORIES ABOUT DR. MARIA S. CELAN, 30 YEARS AFTER HER PASSING INTO ETERNITY**



It was 30 years (in 2019) since the death of our former colleague, Assoc. Prof. Maria S. Celan, an eminent Romanian scientist, who dedicated her entire life to the study of algal flora on the Romanian Black Sea coast and to the training of many generations of students.

Dr. Maria Celan was born on 20 November 1898, in Salcea commune (Soroca county, in Bessarabia, a Romanian territory that was part of the Tsarist Empire at that time), and she attended primary and middle school in Russian. Her father was a priest in a commune not far from Chișinău and gave his children an austere education. In winter, in the morning, she and her brother had to wash with snow and exercise in scant attire. Thus, she was hardened as a girl and as far as I know, she never suffered from any disease in her entire life, but faded away at the age of over 90 years (on 26 May 1989), like a candle that dies out slowly. I still remember with great pleasure how during the breaks she would recall moments of her life, unforgettable memories. These recalls took place in the small laboratory of the Marine Research Station in Agigea (S.C.M. Agigea), which still belongs to the “Alexandru Ioan Cuza” University in Iași.

At the end of World War I, Maria Celan and her brother came to Romania, to Iași, where she became a student of the Faculty of Nature Sciences. Her big problem at the beginning was the fact that she had no knowledge of Romanian. As a result, she had to learn full pages by heart, of which she did not understand much. Her exceptional memory, which never failed her, was of help. From the faculty, she remembered with emotion the special courses of geology held by Professor

Nicolae Simionescu (on whom most of the female students, including her, had a crush!).

Her professors soon noticed her intelligence and training, and consequently, she had the chance to become a teaching assistant, then an instructor at the Department of Botany of the faculty from which she had graduated.

Around 1927, Maria Celan received an interesting proposition from Professor Ioan Borcea (who had set up the Zoological Research Station, which later became S.C.M. Agigea): to start the study of algal flora on the Romanian Black Sea coast. In 1907, only a short list of algal species on the Romanian coast had been published by Professor Emanoil Teodorescu (Bucharest University).

Subsequently, this challenge remained a permanent concern for Maria Celan, becoming her work and “love”, which continued until the end of her life. Her studies remain the most important and complex research regarding the flora of macrophyte algae in Romania.

As a result of these studies and publications, M. Celan won a scholarship at the Natural Science Museum in Vienna (in 1934), where she worked with Professor V. F. Schiffner. This represented for M. Celan a decisive step in approaching the study of macroalgal flora on the Romanian shores. As a recognition of her scientific research and as an appreciation of her work in the universities of Iași (the “Al. I. Cuza” University and the Agricultural Science University), M. Celan received another scholarship (granted by the French-Romanian Association), at Sorbonne University in Paris (1937-1941). There she worked in the laboratories of professors A. Guillermond, G. Mangenot and A. Combes, in the field of plant cytology and histology, a newer specialty at that time. Under the supervision of Prof. A. Guillermond, she elaborated her doctoral thesis “*Cytological studies on red algae*”, through which she managed to evidence by optical microscopy, for the first time in the world, the plasma connections (plasmodesmata) between the cells of red algae. As a result of this success and of the complexity of her work, she was awarded the “*magna cum laude*” distinction for the defense of her doctoral thesis (in 1940), and her diploma was red in color as a sign of appreciation from the commission.

What I found extremely interesting for the period spent in Paris were her many memories, of which some were shared with me with great nostalgia: “*I wandered the boulevards of Paris, the Quai de Seine, where I met and talked about everything with the painters along the Quai. I visited many times the Atelier of Brancusi, who always received me with great pleasure and understanding, and with whom I had a long friendship*”.

Many fellow citizens were intrigued by her decision to come back to Romania after having defended her doctoral thesis, in a period where both France and Romania were in the middle of World War II. Certainly, her decision was due to the patriotism that M. Celan demonstrated on many occasions during her life.

Once returned to Iași, M. Celan started to organize, as she had seen in France, a modern plant anatomy and morphology laboratory, with a well-designed research plan and well trained personnel. Probably, this was the second laboratory organized in Romania, after that of Prof. Ion Grințescu (at Cluj University). However, in the academic Iași of that time, with the trauma left by the war, Maria Celan had a rather troubled life. Wanting to do more than could be done after a devastating war, she made many friends (of which we mention Prof. Ioan Borcea or Acad. Olga Necrasov), but she also attracted many antipathies, even enemies that managed to eliminate her from the Iași University. Consequently, in 1953, she was transferred to the newly created 3-year Pedagogical Institute in Bucharest, then to the “C. I. Parhon” University (with the grade of associate professor, obtained in 1948, but only with a research norm and temporary posting to

S.C.M. Agigea), from where she retired (in 1960). A very detailed presentation of her life and troubles is given by her former collaborator, A.Ș. Bologa (2017, in *Studii și Comunicări/DIS*, vol X : 161-238).

After she retired, she asked for permission to continue research at S.C.M. Agigea. The results of her studies (of taxonomy, embryology, cytology, ecology) rapidly crossed the border of the country, and she became known particularly in the ex-USSR and Bulgaria, where her studies on the algal flora of the Black Sea were well developed. This is how the specialists from the Marine Research Institute in Varna proposed her to write a brochure presenting the Black Sea algal flora, which was published in Bulgaria.

In her over 50 published papers, Dr. Maria Celan described 157 macrophyte algae species on the Romanian Black Sea coast, many of which were reported for the first time, and one of the red algae species – *Gelidiella antipae* Celan – is a new species to science.

Personally, I met Maria Celan during my student years. As a 3<sup>rd</sup> year student, I performed the summer training program at S.C.M. Agigea, passing through several laboratories, among which hers. A few years later, with the foundation of the 3-year Pedagogical Institute in Constanța, more precisely in the summer of 1961, we met again. I was appointed a teaching assistant at the Department of Botany of the Faculty of Natural and Agricultural Sciences, a department initially run by Assoc. Prof. Dr. Maria Celan, who also taught the course of plant anatomy and morphology in the first year. This was the beginning of a long collaboration, from which I had a lot to learn, both regarding teaching and especially scientific research. I cannot forget the surprise and joy experienced by the students, much older than myself, when they saw for the first time under a microscope the anatomical structures of plant organs or when, in the plant cell, they could see differently colored cell organelles. Because at that time microtomes were not available to cut sections, Maria Celan taught us how to cut sections using elder marrow and very sharp razors, and to color them with vital stains (obtained by me from faculty laboratories in Bucharest or from the Biological Research Institute of Bucharest). Furthermore, M. Celan had come from Paris with a list including the specific stains for each cell organelle or for a certain substance accumulated in the plant structures, as well as the concentrations required for staining.

Unfortunately, the stay of Assoc. Prof. M. Celan at the Pedagogical Institute of Constanța was short (less than two years), as a result of the open conflict that she had with the Rector of that time – Prof. Paul Borcea, and she was forced to return again to Agigea. This was a great loss for the quality of education in the faculty, for our students. She was just 63 years old and had a great work capacity, which was demonstrated by her subsequent research.

I continued the collaboration with M. Celan in the field of algal flora, even though the management of the Institute did not approve of this collaboration. In the field of plant morphology and anatomy, Assoc. Prof. Maria Celan was, in my opinion, one of the best trained and most competent university educators across the country.

Having a flexible program and a means of transportation available, I would frequently go to Agigea and we would leave together, accompanied by various divers, for the fishing sites along the entire Romanian coast, where we performed periodic algological profiles and relevés. In this way, we came to know the composition of the algal flora, as well as the algal associations in this part of the country and the changes caused by the action of the anthropic factor. Our studies were published in important scientific journals in Romania and abroad.

Now, when 30 years have passed since Maria Celan stepped into another world, it seems

only natural for us, who knew her personally and collaborated with her scientifically, to remind younger people of this great educator and scientist, who dedicated her entire life to scientific research and to the training of students from Natural Science faculties in Romanian university centers.

**Adrian BAVARU**