

## *In Memoriam*

*Professor Francis Magne (1924-2014)*



Prof. Francis Magne collecting at Widbey Island Washington (XI Botanical Congress Seattle), 1969 (Magne family collection).

Professor Francis Magne passed away on 22 May 2014 in Yerres; he was born January 19, 1924 in Paris. He ended his career as a faculty member (teacher & researcher) in 1992 at the University P. & M. Curie, directing the laboratory on marine plant biology [Biologie Végétale Marine, “BVM”], created by Professor Jean Feldmann.

His parents were shopkeepers and despite the presumably non-scholar atmosphere which prevailed in his family, F. Magne has an exemplary career having participated in the three French educational levels: primary school, secondary school and university, during a particularly difficult period of history. After being awarded the diploma of primary school teacher (1943), he obtained his degrees at the Sorbonne (1945) while monitoring externship Turgot high school, where he met the Professor Marius Chadeauf, who friendly advised him throughout his scientific life. Francis Magne then obtained a *Diplôme d’Etudes Supérieures*

(DES), the gateway to sit the tests of aggregation. He was brilliantly received (1948) in this contest, the royal road to teaching in high schools and, therefore, he was assigned as a high school teacher at Colmar and Sceaux near Paris. By October 1951, he began his career in higher education being appointed assistant at the Sorbonne, where J. Feldmann already taught. This proximity may explain Magne research orientation toward seaweeds. He actually thanked J. Feldmann in each of his first publications.

Shortly after his appointment, F. Magne began to frequent the Biological Station of Roscoff to carry out his research. He was appointed there, in October 1954, because, the director of the station, Georges Teissier, although zoologist, wanted to encourage studies on marine algae. Francis Magne was therefore involved in teaching Botanical courses while also assuming, functions of effective and rigorous intendant! In 1956, he collaborated with J. Feldmann, to launch the organization of specialized courses marine plant biology. His personal research on algae resulted in a thesis which has been considered outstanding at national and international levels (Magne, 1964).

In October 1965 he was appointed at the Faculty of Rennes-Beaulieu and then, in October 1971, at the University of Paris VI-Jussieu (later the University P. & M. Curie). In the latter, he was responsible for coordinating the teaching of botany, while continuing his research in the neighbour labs than the ones that Professor Chadeauf continued to attend assiduously.

In 1976, F. Magne succeeded Professor Jean Feldmann and became the Head of the laboratory “BVM” until his retirement in 1992. Unfortunately he had the sad duty, following new research policies, of closing the “BVM” which had been internationally recognized for having renewed phycology in France for over than 40 years.

With the help of Professor Alain Couté, then director of the “*laboratoire de Cryptogamie*”, Francis Magne continued his research in the National Museum of Natural History, but his forces weakened gradually.

With regard to his scientific activities, in addition to his world-renowned career in phycology, F. Magne should be considered as a pioneer and trailblazer in two specific areas: lichenised fungi on the one hand and diving on the other hand.

– For his DES (Magne, 1947), F. Magne was the first to analyse the apical complex asci in some lichens, extending research by Professor Chadefaud on the structure of the apical system dehiscence in asci ascomycetes fungi. Subsequently, this research theme has been pursued by numerous researchers in lichenology.

– From August 25 to October 6, 1952, he participated to the campaign of the vessel “*Calypto*” at the Grand Congloué located ten kilometres from Marseille. His observations, obtained while diving using the SCUBA “*Gagnan-Cousteau*” (Magne, 1956). He is one of the first phycologists in France to follow the example of professor P. Drach, zoologist, to observe *in situ* populations of marine organisms. While Julius Ernst, in the Channel or Roger Molinier in the Mediterranean, followed by many others, have developed and extended this technique, F. Magne did not pursue this activity and dedicated his career to other topics of research on algae.

Francis Magne was a world-renowned researcher notably for his contribution to the knowledge on life cycles of red algae. His thorough observations followed by rigorous analysis, led to conclusions that have revolutionized concepts conventionally accepted before him. His communication (Magne, 1964) at the 4<sup>th</sup> International Seaweed Symposium (18th-24th September 1961 at Biarritz, France) is an emblematic illustration of his contribution to the shift of paradigm. He stated that based on “*dénombrements chromosomiques pratiqués chez un certain nombre de Rhodophycées à cycle supposé haplophasique ... la méiose n'avait pas lieu comme le veut l'opinion classique immédiatement après la fécondation. [En conséquence] ces algues ne peuvent avoir qu'un cycle haplo-diplophasique et très vraisemblablement un cycle morphologique trigénétique.*” This finding thoroughly changed the way of teaching phycology and stimulated further studies on algal life cycle for many years.

An overview of the main themes he explored was given by Professor Michael Wynne to accompany the publications dedicated to F. Magne, on the occasion of his 75th birthday (Wynne, 2000). A complete list of publications of Francis Magne is being compiled at the National Museum of Natural History (D. Lamy & L. Le Gall). Another evocation, in French, will be available on the website of the *Société Phycologique de France*.

Several taxa were dedicated to F. Magne by other researchers, to express their esteem and recognition, such as: *Rhodosorus magnei* Fresnel & Billard, *Dasya magnei* Ballantine, *Veleroa magneana* A. J. K. Millar.

Francis Magne also described new taxa or participated in the updating of their nomenclature, such as:

*Apistonema aestuari* Magne, *Audouinella boryana* Abdel-Rahman & Magne, *Fucus muscoides* (AD Cotton) Feldmann & Magne alias *Fucus Cottonii* M.J. Wynne & Magne.

His qualities as a teacher have always been appreciated. With a clear mind and strong teaching skills, a nice ease to illustrate his lectures, he motivated many generations of students on botany and phycology. He handled the French language with extreme precision continually seeking the right word and therefore had a recognizable diction. In daily life, he showed the same qualities of rigor and detail, which often led to defend his ideas with great tenacity.

Everything he conducted was thoughtful and completed in the best way. He was a talented handyman and had a passion for doing things well. Numerous practical achievements demonstrate his skills such as his homemade “camper van” so useful for phycological surveys or for some “gourmet” picnics with friends, also the instrument development in his own lab or those given as gifts to colleagues or even his interest and success in the maintenance of a large garden and plant nature in general. His passion for fishing and deep knowledge of trout rivers in Brittany is well known as his taste and his proven expertise in the kitchen he loved to share; he also had a great address book places of good cheer.

Naturally generous, he was involved in the *Secours Catholique* to help the most deprived. He was an active member of the *Société Phycologique de France* of which he was President for several years. These human aspects of his personality conferred him a great popularity among colleagues, students, employees, and even non-scientific neighbours around his residence. This was evidenced, alongside many other examples, by his relations with M. Chadefaud who wrote (letter 26 September 1961 to A. Parguey) « [au 4<sup>e</sup> congrès d'algologie à Biarritz] une communication vraiment importante fut celle de F. Magne qui ose parler en public et le fait sur un ton si docte, avec une telle autorité, qu'on ne peut douter que ce garçon soit bientôt à l'Académie. En tout cas son travail est remarquable, par les horizons qu'il ouvre sur l'évolution des algues au niveau des Rhodophycées »\*. This letter should be considered in regard to the acknowledgments that F. Magne expressed in his DES « [Chadefaud] qui a toujours été un critique et un guide jamais à court de conseils ni d'encouragements » as well as in his thesis « [Chadefaud] qui n'a cessé depuis mes années passées au Lycée, de m'honorer de sa bienveillante amitié. Il a guidé mes premiers pas dans le domaine de la botanique et de la cytologie végétale ; je lui dois mon engagement dans la carrière scientifique et sans son exemple, ses conseils et ses encouragements, cette thèse ... n'aurait probablement pas vu le jour. »

René Delépine get valuable information from the family of F. Magne, the archives of the university and teaching schools as well as many colleagues. He is extremely thankful to all of them.

MAGNE F., 1947 — Anatomie et morphologie des asques de quelques lichens. *Revue bryologique et lichénologique* 15: 203-209.

MAGNE F., 1956 — La végétation marine du Grand Gongloué. Résultats scientifiques des campagnes de la « Calypso ». *Annales de l'institut océanographique* 32(2): 163-184.

MAGNE F., 1964 — Recherches caryologiques chez les Floridées (Rhodophycées). *Cahiers de biologie marine* 5: 461-671, planches I à XVII.

MAGNE F., 1964 — Les Rhodophycées à cycle haplophasique existent-elles ? *Proceedings 4<sup>th</sup> International Seaweed Symposium* pp. 112-116.

WYNNE M.J., 2000 — Francis Magne: a tribute. *Cryptogamie, Algologie* 21(2): 93-95.

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\* In fact Chadefaud refers to conference above cited « Les Rhodophycées à cycle haplophasique existent-elles ? ». During his career, R. Delépine often mention this conference in his classes to illustrate a rigorous scientific thinking based on thorough observations instead of conforming to supposedly logical schema widely admitted.