

Buenaventura Andreu Morera

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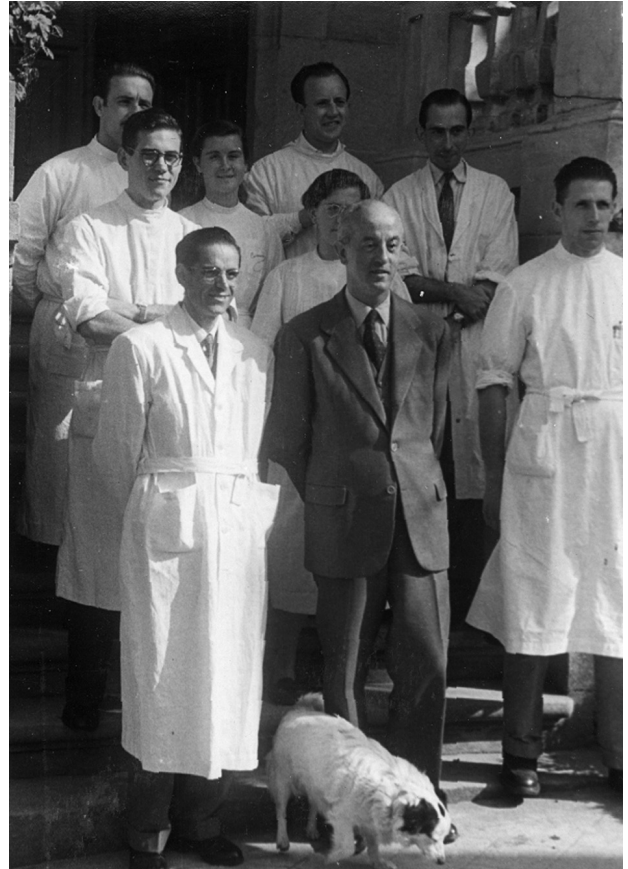
Buenaventura Andreu was born on May 13, 1920 in Albalate de Cinca (Huesca). His father, Alfredo, the village pharmacist, died in an accident in 1923. After being orphaned, with the consent of his mother, María Morera, Andreu was raised by his maternal grandparents. He attended elementary school in Albalate and then went to Huesca and Barbastro for high school.

He was a brilliant student and received an excellent secular and religious education. When he was 18 years old he took part in the Spanish Civil War (1936-1939), the end of which found him in Catalonia. In 1940, he earned an elementary teacher's degree in Lleida but never practised as a teacher because his true vocation was in natural sciences. In the same year, he registered

at the University of Barcelona for a science degree. In his third year at the university he was granted a scholarship to pursue studies of plankton at the laboratory of the Spanish Institute of Oceanography (Instituto Español de Oceanografía, IEO) in the Balearic Islands. In his final year he received another scholarship from the Institute of Applied Biology (Instituto de Biología Aplicada, IBA) of the Spanish National Research Council (Consejo Superior de Investigaciones Científicas, CSIC). The director of the IBA, Prof. García del Cid, sent Andreu to train in marine sciences at the IEO laboratory in Santander, and it was there that Andreu's vocation for marine biology came to the fore. He graduated in 1946. During the summer of that year, he was awarded a further grant by the IBA. This time he furthered his training in Galicia, making contact with the IEO laboratory in Vigo. During these scientific training visits, Andreu also established a life-long friendship with the highest Spanish political authorities in science and fisheries, such as Prof. José María Albareda (secretary general of the CSIC) and Dr. Francisco de Paula Navarro (assistant director of the IEO in Madrid). Navarro gave him the opportunity to move to the IEO laboratory in Malaga (southern Spain), where the weather was milder and would suit him better for a chest infection that he had contracted. However, he suffered a pneumothorax that collapsed a lung and had to undergo surgery at the Valdecilla hospital in Santander. His condition was serious and his recovery in Santander took two years. Nevertheless, the limitations imposed by his bad health were not enough to discourage him. On more than one occasion the doctors gave him only a few years to live, but eventually it was admitted that he enjoyed "a robust bad health".

Late in 1948, through the IBA in Barcelona, Andreu was offered the possibility of setting up a fisheries laboratory in Vinaroz, Castellón in coordination with the company PYBSA. There, at the request of Albareda, Andreu wrote a document with his ideas for establishing a fisheries research centre within the CSIC. The document stated that the mission of the scientific centre should comprise three areas: a) applied research work orientated fundamentally to fisheries, b) educational work aimed at training professional advisors to the fisheries administration throughout Spain, and c) work oriented towards the training of teachers for the fisheries schools and fisheries technicians in private industry.

In 1949, with the establishment of the Marine Biology Section (SMB) within the IBA, García del Cid asked Andreu to organize the course "Introduction to Fisheries Research". Andreu and Miguel Massutí took charge of the theoretical part that was carried out at the University of Barcelona in the spring, while the practical part was carried out during the summer at the facilities of the "Mar i Murtra" botanical garden in Blanes. Andreu and Ramon Margalef taught most of the laboratory part. Meanwhile, on García del Cid's orders, Andreu was also searching for a suitable labo-



Visit to the laboratory in Vigo during the inauguration ceremony on September 23, 1952. From left to right: Pedro Arté, Miquel Durán, Buenaventura Andreu, Ana María Arráiz, Fernando Sáiz, Monserrat Escallart, García del Cid, Josep M. Camps and Ramon Margalef.

ratory location on the eastern coast of Spain, and in late 1949 the coastal laboratory of Grao de Castellón was established. That year, Andreu and several other colleagues became permanent researchers of the CSIC.

One year later, the SMB was composed of four incipient research groups, distributed between Barcelona, Blanes, the city of Castellón and Vinaroz. On October 5, 1949 Andreu was appointed director of the Castellón group. On January 30, 1950, following Andreu's marriage to Julia Puyal, his first daughter, Julia, was born in Albalate. On June 27, 1950 Buenaventura was promoted within the CSIC. One year later, on October 3, 1951 the SMB of the IBA was transformed into the Fisheries Research Institute (Instituto de Investigaciones Pesqueras, IIP), with García del Cid as its director.

Approximately two years after the arrival of the group in Castellón, García del Cid told Andreu that he should move to Vigo as soon as possible to set up a new laboratory. Despite many difficulties and lack of funding, thanks to the great generosity of the pioneer group he formed in Vigo, and particularly Dr. Fernando Fraga, an IIP laboratory located in a former German college was inaugurated by the Spanish Head of State in September 1952. Andreu was appointed director of this laboratory.



Visit of Prince Juan Carlos (middle) and Princess Sofía (left) of Spain to the IIP headquarters laboratory in Barcelona, November 8-9, 1972. Buenaventura Andreu (right).

During the sixteen years that he remained in Vigo, Andreu published over 60 studies on the biology, fishing and ecology of the sardine and the biology and culture of bivalve molluscs in the most prestigious Spanish and foreign journals. He managed to become well-known in the international scientific forums in which he had always had good friends. He also received several distinctions, including the Commission of Alfonso X el Sabio. This foundational period was fruitful in scientific studies published in the *Publicaciones del Instituto de Biología Aplicada* and *Investigación Pesquera*.

In 1955 the Consultative Council for Scientific Fishing Research (Junta Consultiva de la Investigación Científico-Pesquera, JCICP) was created. Complementary to this, the Council for the Study of Maritime Fishing (Junta de Estudios de Pesca Marítima) was operating within the Directorate-General for Fisheries (Dirección General de Pesca, DGP). The meetings of the two agencies, in which Andreu took a very active part, were the principal forums for debate on Spanish scientific fishing policy at this time. On the initiative of the DGP, *Publicaciones Técnicas de la Junta de Estudios de Pesca* (Technical Publications of the Council for the Study of Maritime Fishing) was established in 1962 and Andreu publishing several articles therein. Andreu's contribution in this period was summed up well by Francisco de Paula Navarro, who sometimes told him "You are the workhorse of the Institute".

In 1967, after the former director, Ramon Margalef, occupied a post at the University of Barcelona, Andreu was appointed director of the IIP and moved from Vigo to the headquarters in Barcelona. He obtained his doctoral degree in biological sciences from the University of Barcelona in 1967.

Andreu received the Juan Antonio Suanzes Prize for Research from the Patronato Juan de la Cierva in 1974 and the Francisco Franco National Prize for Technical Research from the CSIC in 1975.

Though obviously limited by the huge burden of science management he had carried since the beginning of the IIP, and particularly as of 1967, Andreu never lost his active interest in research. He published 96 articles,

participated in 44 conferences and gave more than 50 lectures and presentations. His capacity for work and his spirit of service provided a continuing example for his colleagues and the younger researchers.

In 1983, the CSIC replaced Andreu with Dr. Carles Bas as director of the IIP and Andreu retired in May 1986. After his retirement, he returned to live in the village where he had been born. He took care of his sick wife, and devoted himself to his 6 children and 18 grandchildren. He also cultivated his spiritual life, an ever-present aspect in his life, and took care of his orchard and garden, which numbered amongst his keenest interests. In 1999 he was nominated Corresponding Academician of the Reial Acadèmia de Ciències i Arts de Barcelona and Honorary Citizen (*Hijo Predilecto*) of Albalate de Cinca, where he passed away peacefully on May 14, 2001. To mark this event, Dr. Antonio Figueras Monfort, who worked closely with Andreu in the development of the oyster and mussel culture in Galicia, wrote a brief note in the press from which I quote a paragraph: "I hope this note will serve to remind us of the debt of gratitude that [Vigo], the Ría de Vigo and Galicia in general have for a man from Aragón who studied Sciences at the University of Barcelona and played an outstanding role in the advancement of Marine Science in Spain".

DIRECTORSHIP (1967-1983)

On November 13, 1967, the CSIC appointed Andreu director of the IIP when the former director, Ramon Margalef, went to work at the University of Barcelona. Andreu moved with his already numerous family from the laboratory in Vigo to the main laboratory in Barcelona. He had a reputation amongst his companions of being a hard and demanding man, so he was welcomed with reservations by some of them. As director of the IIP, Andreu left his mark on the activities of the Institute. He was strongly in favour of combining basic and applied research with a view to improving the understanding, use and conservation of the marine realm as a source of production and marine natural resources.

Around that time, the Spanish government Development Plans gave an important stimulus to marine research in Spain. The Second Development Plan (1967-1971) granted a credit to build the R/V *Cornide de Saavedra*. Carles Bas, Ramon Margalef and José Antonio Fernández, Andreu's right-hand man in the management of the IIP for many years, played a leading role in the specifications. Andreu participated assertively in some of subcommittees and presentations of the Third Development Plan, which led to the launching of the R/V *García del Cid* in 1979. The funds from both Plans furthered the development of the IIP, allowing it to extend its laboratories and to increase its staff by means of scholarships and contracts. With the two vessels numerous scientific cruises were carried out on the Iberian and African coasts. The multidisciplinary

nature of these cruises clearly benefited the scientific approach of the Spanish marine community.

Under the direction of Andreu, Research Professor of the CSIC since 1971, IIP researchers developed and consolidated, among others, the fisheries groups that continued to study the fisheries resources of the western Mediterranean, the northwestern Iberian Peninsula, the African shelf and the Newfoundland area. One of the challenges for applied science, much to the liking of the Juan de la Cierva Board and Andreu, was the provision of specialists in marine pollution trained at the IIP. The IIP's dependence on the Board, which already had a major dedication to food technology, was also a decisive influence in the creation of the canning technology section in Vigo, a project in which Andreu was deeply involved. In addition, the facilities of the IIP in Castellón were improved twice, the second time in 1979 with the building of the Torre de la Sal aquaculture plant, which was considered exemplary by FAO specialists. Andreu was also proactive in the decision to construct a new building for the Vigo laboratory in Bouzas, which was inaugurated in September 1973, coinciding with the International Exhibition of Fishing. The first director of that new facility was Dr. Manuel Gómez Larrañeta.

The growth and scientific evolution of the IIP and the profound changes that were taking place in Spain with the new democratic regime demanded the modification of the organizational model and management of the IIP through the application of the new Organic Regulation of the CSIC (1977). Andreu summoned an IIP staff meeting in Barcelona on June 20, 1978 that offered all members of the IIP, including graduate students and hired staff, the possibility of participating in the running of the laboratory. Subsequently, local meetings were celebrated at each laboratory of the IIP in the period up to July 4, 1978. The resulting project for restructuring the IIP was sent to the President of the CSIC. It involved autonomy for the laboratories of the IIP, democratic elections to propose laboratory directors to the CSIC, and the participation of the staff on the governing boards and management of each institute. In 1979, Andreu was elected director of the Barcelona laboratory, which kept the name IIP. He sat on

the Management Committee of the National Centre for Fishing Research (Centro Nacional de Investigaciones Pesqueras, CENIP) for four years. In the elections of 1983, Andreu returned another majority, this time by a single vote. However, the CSIC decided to appoint instead the runner-up, Dr. Carles Bas. The new director was well accepted by Andreu and received his full collaboration.

Andreu placed special interest in the journal *Investigación Pesquera* and fostered the creation of *Resultados Científicos de las Expediciones del B/O "Cornide de Saavedra"* (Results of Scientific Expeditions of the R/V *Cornide de Saavedra*) in 1972 and *Informes Técnicos del Instituto de Investigaciones Pesqueras* (Technical Reports of the Institute of Fisheries Research) in 1976. He continued as editor of the three scientific journals of the Institute until his retirement in May 1986.

During the years under his direction, the IIP grew considerably, extending the range of its research. Overall, the rate of scientific production increased from 1.5 publications per person per year for the period 1967-1975 to 2.9 publications in 1978. Between 1972 and 1978 thirteen doctoral dissertations and sixteen master's theses were defended, and twelve industrial patents were registered. The IIP attracted many research students from other countries and visiting scientists from other institutions.

BIBLIOGRAPHY

- Andreu B. 1953. *El Instituto de Investigaciones Pesqueras*. Consejo Superior de Investigaciones Científicas, Patronato Juan de la Cierva, Barcelona, 53 pp.
- Bas, C. 2001. Obituary: Buenaventura Andreu Morera (1920-2001). *Sci. Mar.* 65: 403-404.
- Guerra A., Prego R. 2003. *El Instituto de Investigaciones Pesquera: Tres décadas de historia de la investigación marina española*. Estudios sobre la ciencia: 33. Consejo Superior de Investigaciones Científicas, 341 pp.
- Guerra, A. 1999. *Perfil humano y profesional de Buenaventura Andreu Morera*. Unpublished.
- Pablo Reimat R., Ojeda Fernández I. 2000. *Semblanza humana y científica de Buenaventura Andreu Morera, hijo predilecto de Albalate de Cinca*. Excmo. Ayuntamiento de Albalate de Cinca, 198 pp.
- Biography series ed.: F. Peters.