

## Short Note

### **Obituary: Gérard BALVAY (1941–2015)**

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The year 2015 has been a sad one. It has seen the disappearance of two former directors of the INRA Lake Hydrobiology Unit in Thonon-les-Bains (France): Pierre Laurent and Gérard Balvay. This article summarizes the career of the second scientist, a specialist in limnology, zooplankton diversity and ecology.

Gérard Balvay was born on April 29, 1941 in Macon (France), where he received his primary and secondary education, and rapidly became passionate about natural and experimental sciences. He continued his studies with a degree in natural sciences at the Faculty of Sciences of Lyon (1964), a comprehensive study diploma referred to as DEA in France (1965) and a Ph.D. in Biological Sciences (Animal Biology) started in 1965 at the University Lyon I, where he was already attending the Laboratory of Zoology.

By 1965, G. Balvay had found his passion for science by studying plankton from Lake Annecy. In 1966, he joined INRA (the French Institute for Agronomic Research) as an engineer. In 1967, he became a research assistant before being recognized as a full scientist in 1969 following his Ph.D. defence. He became “Chargé de recherches” in 1977 and first-class Chargé de recherches in 1984. He had only one real regret: that of never having succeeded to become Research Director despite a number of attempts.

G. Balvay began working on zooplankton (e.g., microcrustaceans) from Lake Annecy in 1965 as part of his Ph.D. Following the establishment of the sewer around the lake (which ensured it to be named few decades later as the cleanest lake in Europe), G. Balvay had the opportunity in 1966 to give one of the first scientific presentations to the managers of Lake Annecy (SICRLA), a review of the annual physics and chemistry of lake water and possible variations in concentrations of oxygen, phosphorus, nitrogen, etc.

After he completed his Military Service (1968–1969) he began research on aquatic larvae of the mosquito *Chaoborus* and their vertical migrations in the lake. He



G. Balvay, 2 years after he retrieved from INRA, 2006



G. Balvay, J. Leconte and P. Laurent during the 4th international congress of Astacology organized in Thonon-les-Bains, 1978

also focused his activity on zooplankton of Lake Geneva in 1975. He learned a lot on the job, but also in part by teaching courses in plankton taxonomy of B. Dussart (Jacquet, 2009). He developed some of the earliest methods for sampling and studying zooplankton (sorting, identification, counting and exploitation of results).

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He continued monitoring of the seasonal dynamics of zooplankton for nearly 40 years for peri-alpine lakes, especially Annecy and Geneva.

An important part of his work was performed within the CIPEL (International Commission for the Protection of Lake Geneva), a close collaboration between France and Switzerland. Based on the recommendations of this Commission, the governments of France and of the Swiss cantons have imposed effective measures to fight eutrophication, including phosphate removal from wastewater and limiting the employment of fertilizers. G. Balvay played an active role here.

Throughout his career, G. Balvay had many other positions and responsibilities, including:

- Deputy Director (March 1998–2000) and director of UMR CARTEL INRA University of Savoie (2000–2002) and simultaneously Deputy Director (1998–2000) and director of the INRA Lake Hydrobiology Unit in Thonon (2000–2002) which also earned him membership of the Scientific Council and the Council of Management of INRA Dijon.
- He was initiator of eight theses and 38 DEA, the jury of 16 theses and ten INRA contest.
- Participation in thesis juries in France (ten) and abroad (six), DEA (five), internal and external competition from INRA.
- He was a permanent member of many Scientific Committees (CIPEL, Annecy, Bourget, Environment Commission of Haute-Savoie General Council).
- He effectively organized universally recognized training courses for students from different levels of education, office staff, businesses, or the Higher Fishing Council. In addition to the widely used video microscopy at these meetings, he produced a document on lake ecosystems and zooplankton, widely distributed to different trainees.
- In 1990, with another colleague (Jean-Claude Druart), he participated in a mission to Irkutsk to represent France at the International Conference for the creation of the Baikal International Centre for Ecological Research and Expertise in Vienna. In all, G. Balvay conducted 11 missions in the countries of the East, three in the rest of Europe, one in Canada, two in North Africa, all related to his research on food webs and management of aquatic environments.
- He was the organizer and co-organizer of many national and international conferences.
- He served as President of the French Association for Limnology (1990–1995), Vice President (1986–1990), secretary (1997–2000), and was a member since 1970. He was a member of the International Society of Limnology (1970–2008), of the Society of Physics and

Natural History of Geneva (1990–2008), of the Franco-Swedish Research Association (since 1988).

- In total he was an author of over 350 papers in journals, at national or international conferences, reports and research contracts, expert reports, and book chapters.
- He realized lectures, commented video projections (287 to 24214 listeners between 1989 and 2007!), practical work for high school students (Geneva Generation: Youth training in biology lake), cruise conferences on lake ships (116 cruises for 4863 attendees between 1993 and 2007) and trips to the mountain lakes (15 campaigns) for tourists, etc., with many of these volunteer activities completed on his own personal time.

With the management of the INRA Lake Hydrobiology Unit in Thonon from 2001, internal administrative burdens and external relations increased sharply for him, particularly in facilities and maintenance, personnel assessment and evaluation of the laboratory, preparation Commissions, relations with regional and national directions from INRA, with regional authorities, CARTEL attachment of the Doctoral School of the University of Savoie, etc. In 2003, he had to step down from many of these functions due to health problems. Happily, however, he could continue to work during his retirement to continue his science: for example, the publication of books on lakes with his colleague J.-C. Druart, including myself were crafted during this period.

With all this in mind, one can easily understand that G. Balvay was distinguished as Knight of the National Order of Agricultural Merit (January 2003), an award rarely attributed to limnologists. He also received the scientific distinction of the Geneva Crystal Award, from the Rotary Clubs Lémaniques (France, Switzerland, June 2002). We also understand that his retirement party was very moving, with many personalities in attendance.

I am pleased to document the incredible work Gérard Balvay made available not only to the scientific community but also, and perhaps and more importantly, to the general public (for instance in collaboration with the Tourist Office of Thonon). As one of his friends wrote one day “*G. Balvay was characterised by an extraordinary kindness; he could pass on his knowledge without embarrassing his interlocutor.*”

He will be remembered for his kindness, dedication and efficiency, by all who knew him.

## References

- Jacquet, S., 2009. Obituary: Bernard Dussart (1922–2008). *J. Plankt. Res.*, 31, 345–348.