

Obituary

Louis Gallien (1908–1976)

On September the 6th, 1976, Professor Louis Gallien attended the morning session of the French Zoological Society Centenary Conference, in Paris. He died suddenly in the afternoon. Two days later his saddened colleagues were able to listen to the posthumous reading of his last brilliant lecture on the progress of experimental zoology in France within the last one hundred years.

Louis Gallien was born in Normandy at Cherbourg, in 1908. He was a student first at Caen University, then in Paris, in Professor Maurice Caullery's laboratory, where he was appointed as an assistant to the Marine Biological Station in Wimereux (1932–1937). He retained throughout his life the taste for marine zoology which he had acquired during his youth, and many years later used to spend the summer holidays with his family in Brittany, near the Zoological Station of Dinard.

Gallien's first research work was devoted to the experimental analysis of a Trematode cycle, that of *Polystomum*, a parasite of the brown frog bladder. In his thesis, he demonstrated that the larva gives rise to a neotenus form if the parasite attaches to the external gills of a very young tadpole, instead of to the gill chamber of an older one. To analyse this morphogenetic influence, he began to operate on frogs, then he studied their sexual differentiation. He succeeded in obtaining hormonal sex reversal of the frog and permanent phenotypic sexual inversion. Some years later he extended his work to *Pleurodeles* and *Xenopus*, and became one of the outstanding specialists on sexual morphogenesis in amphibians.

Immediately after World War II he was appointed Professor in Paris and, in a small animal biology laboratory, with a few young collaborators, he worked towards the creation of an embryological laboratory, which he achieved in 1954. Gallien then spent a spring semester in the United States as a Visiting Professor at Iowa University, in Emil Witschi's laboratory. A new period was now opening in his scientific career. His interests were still in sexual differentiation but he became more and more involved in fundamental aspects of nucleo-cytoplasmic relations during morphogenesis. The young embryological laboratory was already attracting well-known American scientists, and I especially remember the stimulating visits of Johannes Holtfreter, Emil Witschi and Beatrice Mintz. In 1957, Gallien became for the first time a member of the Editorial Board of this Journal.

The last scientific period of his career began in 1962, when the embryological laboratory was installed in the new buildings of the Faculty of Science. The



Professor Louis Gallien

management of a modern laboratory, with a much larger number of new research workers, involved in fairly separate fields of investigation, prevented Gallien, as Director, from working by himself as much as he would have liked to do. A large programme of work was now carried out on cytogenetics and nuclear transplantation in *Pleurodeles*, on chimeras, on protein differentiation and on embryonic steroid metabolism. Despite the organizational load that this involved, Gallien still made time to study by himself, in a sea-water aquarium, the differentiation and behaviour of *Podocoryne* explants. For various reasons, general and local, this scientific expansion diminished considerably after 1970, and Gallien was personally affected by this situation.

Louis Gallien was a strong and frank man and he did not easily change his

mode of thinking about the general problems that he studied, or the opinions that he held about people. He inspired his collaborators with enthusiasm for research and his students benefited greatly from his clear and lively lectures. His influence on the spread of embryological teaching and research in French universities was profound and several of his former collaborators became heads of laboratories. The *Pleurodeles* salamanders, which he first raised and improved as a favourite experimental material, have been exported and numerous colonies of this amphibian are now present in several French and other European laboratories.

Professor Gallien died one year before his retirement. As with Professor Ernst Hadorn, whose death occurred a few months earlier, his scientific influence will continue after him. His former students and collaborators will follow the way he had shown and his books will still remind us of the fields he had so brilliantly explored in amphibian developmental biology.

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