The Axolotl-Slow Progress

The word got around. After a few weeks, on 13 November 1950 I was asked to give my first talk on "The Cine Camera as a Scientific Instrument" at the Australian Institute of Instrument Technology, and a month later I talked to the Federation of New South Wales Film Societies about scientific films in general. These were the first of many talks, sometimes more academic, sometimes more popular, about the subject of scientific and research films. They were always illustrated with relevant examples, and thus it was no great chore to show, introduce and enjoy interesting films. I was always pleased with the audience reaction, invariably appreciative.

But this propaganda was to be a subsidiary effort, the main effort had to be to make research films, to demonstrate the real value of cinematography as a research tool. Again I was lucky in finding John Simons, a Senior Lecturer in Professor Murray's Department of Zoology, but unlucky in the choice of the subject, the axolotl. It was to be more a teaching film than a research film, but at least we discovered that facts in textbooks do not always correspond with reality.

The axolotl, Ambystoma mexicanum, is a salamander with short legs and unusual in retaining larval features, such as external gills. It is not an attractive animal, dark brown with black spots and about 25 cm long, including its long tail. The text book (Encyclopaedia Britannica in this case) states "Laboratory specimens sometimes change into a gill-less form, resembling the adult tiger salamander Ambystoma tigrinum." It was our intention to film this change of the axolotl, the time it took to change, and to record the details of the direction of change, from head to tail or in the opposite direction,

But we could not induce this change. John Simons delved deeply into the zoological literature, introduced all possible and impossible chemicals into its watery habitat, but the Sydney variety simply refused to oblige. The camera was set up, the lights were turned on, whenever we thought a slight change in its structure had occurred, but after hours of waiting, nothing happened. Finally we gave up, after several weeks of frustration and failure.

John and I were luckier with our second project, a true research film, to settle the details of the blood's circulation in the heart of the frog. A controversy had arisen between him and Professor Foxon of Guys Hospital, London, and the short strip of film which I could record proved John's point. This even led to a letter in *Nature*. Later when John came to London, he worked in Professor Foxon's department, and John's advanced science talks on the BBC's Third Programme, became famous and a pioneering feature.