

## DR. RAFAEL LAMOTHE ARGUMEDO ACADEMIC PROFILE

Dr. Rafael Lamothe Argumedo, distinguished Professor of the Universidad Nacional Autónoma de México (UNAM), has served as an investigator at the Helminthology Laboratory of the Biology Institute and has dedicated 50 years of his life to sharing his expertise with colleagues and students. He has contributed decisively to the training and academic development of several generations of biologists, many of whom are currently involved in research activities at various national and international institutions. Particularly, Dr. Lamothe's major contributions have been within the field of helminthology, and he has trained and has influenced the academic vocation of most of the helminthologists working in Mexican institutions. Moreover, he has directed and shaped the study of parasitology in Mexico and established Mexican helminthology as a discipline with worldwide recognition, not only for the number contributions to that body of knowledge, but also for the high quality of those contributions. For all of these reasons, and more, we, his students, disciples, and colleagues, respectfully refer to him as *el Maestro*. There can be no doubt that he represents the loftiest example of dedication, hard work, and passion for the scientific activity in the field of parasitology that he always has exemplified.

Dr. Lamothe was born in México City on April 25, 1932. His academic studies were realized at the Universidad Nacional Autónoma de México (UNAM). As an undergraduate he was enrolled in the Faculty of Sciences of UNAM, defending his Bachelor's thesis on October 21, 1963. His thesis project focused on the taxonomy of several species of digenetic parasites of marine fishes from Mexico, and thus, he began his illustrious career as a helminthologist. In 1974 he obtained the degree of Master of Science in Biology at the Faculty of Sciences of UNAM by presenting a general examination test. Finally, he obtained the degree of Doctor of Sciences from the Faculty of Sciences of UNAM on March 13, 1990, presenting a thesis on the epizootiology of paragonimiasis, a disease caused by the digenetic *Paragonimus mexicanus* that usually infects gastropods and freshwater crabs as first and second intermediate hosts, and opossums as definitive hosts, with humans becoming accidentally infected by consuming the metacercaria in uncooked crabs.

Dr. Lamothe was the student of Dr. Eduardo Caballero y Caballero and of Margarita Bravo-Hollis, both of whom were pioneers in the establishment of helminthology in Mexico. Dr. Lamothe was an outstanding student and, most importantly, he envisioned the development of the discipline and, building upon what they had instilled in him, he began training a group of students who later became established as independent researchers at other universities and research centers in Mexico. To date, helminthologists trained by Dr. Lamothe at the Helminthology Laboratory of UNAM can be found in 8 different institutions. At the same time, he consolidated the Helminthology Laboratory at UNAM by training investigators that went on to develop independent research programs within the Institute of Biology, UNAM. In this way, realization of Dr. Lamothe's vision produced researchers who are currently training new generations of students who are interested in the discipline.

Currently, Dr. Lamothe is "Investigador Titular 'C'" (equivalent to Full Professor, level "C"), the maximum category that a researcher may obtain at UNAM. In addition, he has risen to the highest category in the incentive program of UNAM (PRIDE level D). He is member of the Sistema Nacional de Investigadores (SNI), researchers who are recognized nationally for their contributions to science since July, 1984, member of the Academia Mexicana de Ciencias since 2007 and an honorary member of the Sociedad Mexicana de Zoología since 1979 and of the Sociedad Mexicana de Parasitología since 2004. Finally, Dr. Lamothe has served as Curator of the National Collection of Helminths (Colección Nacional de Helmintología- CNHE) since December, 1979.

Dr. Lamothe was hired as Associate Professor in the Biology Institute of UNAM in 1960 and charged with the development of a research program on the taxonomic descriptions of helminth parasites of vertebrate wildlife in Mexico. To date, 41 new species, 17 genera and 2 subfamilies have been described by Dr. Lamothe. Dr. Lamothe is recognized worldwide as a leading helminth taxonomist. Additionally, his dedication and hard-work as curator of the National Collection of Helminths has resulted in the consolidation of the collection, making it one of the most important collections in Latin America. Aside from his major research interest in helminth taxonomy, he also has dedicated many years of his academic career to the study of species of parasites that infect humans, and he has developed a research program on the epizootiology of 2 species, the digenetic *Paragonimus mexicanus*, the agent of paragonimiasis, and the nematodes that cause gnathostomosis, *Gnathostoma* spp. He has dedicated time to the understanding of the life-cycles of these parasites. As a result of his contributions in this area, he also is recognized among parasitologists dealing

with medical and veterinary issues. During his career, he has published 107 peer-reviewed papers, 72 in national journals and 35 in international journals, 27 research notes, 13 book chapters, and 4 books.

Dr. Lamothe possesses one of the most outstanding teaching records in Biological Sciences at UNAM. He began as a teaching assistant in the Biology Laboratory of the University High School (Escuela Nacional Preparatoria) in 1958. He taught the Biology course at the same school from 1959 to 1961, and from 1960 to 1966 he also taught Botany, Zoology, General Biology, Basic Biology, the Biology Seminar and Anthropology. At college level, he taught General Parasitology as an Adjunct Professor from 1969 to 1972. Then, from 1972 to 1999, he taught General Parasitology and Zoology for undergraduates. Many generations of undergraduates have benefited by taking Dr. Lamothe's courses. As an interesting anecdote, he never missed a single class, and he always started his class at 7 A.M. sharp! He was always in the classroom from 7 to 10 A.M. on Monday, Wednesday and Friday, teaching and answering questions from students. As his students, we fondly remember his parasitology class even though the course was so demanding that it was almost impossible to get a high grade. Dr. Lamothe was a dedicated professor who didn't abandon teaching and taught courses for 41 years.

A parallel to his outstanding trajectory as a classroom teacher is his impressive role in the training of individual students, serving as thesis director of students at both the undergraduate and graduate levels. He was, and still is, willing to receive new students in his lab., including those interested in conducting their social service as well as thesis students. He is always willing to help students with their respective research projects and he demonstrates and teaches hard work and responsibility while conducting research activities. He can spend several hours looking at specimens with the microscope and he never finishes a session until students observe what they need to see in terms of morphological structures of their worms. His office is always open to students and colleagues who come to him with questions about parasites. During his career, Dr. Lamothe has supervised 59 theses, including 51 Bachelor's theses, 6 Master's theses, and 3 Doctoral theses. This is the major reason why thus far, at least 8 research centres (in the states of Baja California Sur, Colima, Estado de México, Hidalgo, México, D.F., Tabasco and Yucatán) conduct research on different aspects (taxonomy, ecology, histopathology, etc.) of helminth parasites of wild life vertebrates.

There can be no reservations in the recognition of Dr. Rafael Lamothe Argumedo as one of the most influential Mexican helminthologists, not only for his contributions to the knowledge of helminth parasite biodiversity, but also for his role in the establishment and development of helminthology as an important and rigorous discipline in Mexico. He continues to be one of the most prominent researchers at the Biology Institute of UNAM.