



### Melbourn Romaine Carriker Honored Life Member

Melbourn Carriker, or “Mel” as he is known to his many students, colleagues, and friends is a world recognized student of Malacology, and an authority on marine subjects as diverse as functional morphology, biomineralization, larval ecology, and predator-prey interactions. Mel’s interest in shellfisheries extends from his intense interest in molluscs, their ecology, biology, and morphology. Scientist, scholar, husband, father, and friend—his career and his life have been punctuated by transition and achievement.

Mel’s fascinating story began on February 25th, 1915 when he was born in Santa Marta, Colombia. For the first twelve years of his life, Mel lived on a coffee plantation (called Vista Nieve) with his American parents. His parents, Myrtle Carmela Carriker de Flye and Melbourn Armstrong Carriker, Jr., developed and managed the coffee plantation in the Sierra Nevada de Santa Marta Mountains. During his early years, Mel lived in an agrarian community among crops of coffee and sugarcane. Immersed in rugged surroundings, he and his siblings happily lived on the edge of a tropical paradise. When he was ten, Mel began accompanying his father, an accomplished amateur naturalist and ornithologist, on short field trips to collect birds, birds’ eggs, and small mammals. Undoubtedly, these experiences sparked his interest in the natural world and the seemingly secret lives that animals lead.

In 1927, Mel’s parents sold the coffee plantation and moved the family to southern New Jersey, taking up residence in Beachwood. His father took a position at the Academy of Natural Sciences of Philadelphia as Associate Curator of Ornithology, and Mel was enrolled in Toms River grade school. After struggling through the depression years with his family, Mel graduated from Toms River High School in 1934. Immediately after graduation, he accompanied his father on an ornithological expedition into Bolivia, South America. This “enviable, exhilarating experience” (p. 273, Carriker 2000), reinforced Mel’s desire to further his education in the field of zoology, in particular ornithology. In the fall of 1935 Mel entered Rutgers University, New Jersey, majoring in agricultural research and minoring in zoology. During several summers, he worked as the director of aquatic and recreation programs at the Boy Scout Camp, Burton-at-Allaire in southern New Jersey to earn money for college. It was at Rutgers that Mel met Thurlow C. Nelson, his undergraduate adviser and mentor, who offered him an opportunity that shaped his scientific career. Through Nelson’s urging, Mel began working on Rutgers’ College of Agriculture’s houseboat in Barnegat Bay, New Jersey, in the summer of 1938, studying the life history of oyster larvae. In subsequent summers of 1939 to 1941, he continued this pursuit on the “Cynthia,” broadening his studies to include the general biology and ecology of oysters.

In the fall of 1939, Mel traveled to the University of Wisconsin where he began graduate work with Lowell E. Noland. For his graduate work, he studied the biology of the pond snail, *Lymnaea stagnalis*, a host of the trematode worm that causes swimmer’s itch. It was here that Mel began honing his skills as a scientist, studying invertebrate anatomy and physiology, and prepared his first paper on the boring mechanisms of the oyster drill snail. Wisconsin also introduced Mel to one other love, his future wife Scottie McAllister. In 1942, he participated in his first NSA annual meeting, presenting his first scientific paper on oyster-drill boring mechanisms! Mel graduated (in June of 1943) with a doctoral degree in invertebrate zoology and physiological chemistry, and with the rank of ensign in the U.S. Naval Reserve.

Immediately after graduating from the University of Wisconsin, he entered the Naval Training School, Harvard University, where he was trained in naval communications. During World War II, he served on a PC 780 ship in the Aleutian and Hawaiian Islands as communications officer. Although naval duty interrupted Mel’s career, his love for malacology continued; rumor has it that during his time off Mel would explore the coast around Adak (Aleutian Islands) collecting marine molluscs and their hemolymph to mail to Rutgers



University for ongoing systematic studies. After the War, he returned to the east coast and accepted a position as instructor in the Department of Zoology at Rutgers in 1946.

Mel worked at Rutgers for eight years, being promoted to Assistant Professor before leaving in 1954. During his time as a faculty member at Rutgers, he developed courses (e.g., estuarine ecology graduate course), taught, and, during the summers, worked with T.C. Nelson and Harold Haskin (see Kraeuter and Ford 1999), investigating the biology of the quahog. In the summers of 1947 to 1949, he returned to the houseboat "Cynthia" in Little Egg Harbor, New Jersey, establishing a research program in shellfish biology that would span his career. From a small laboratory in the stern of the houseboat, he studied quahog ecology and continued researching the shell-boring mechanisms of predatory gastropods. This research was the foundation for several classic published works including, "Critical Review of Biology and Control of Oyster Drills *Urosalpinx* and *Eupleura*" (Carriker 1955), and "Interrelation of Functional Morphology, Behavior, and Autecology in Early Stages of the Bivalve *Mercenaria mercenaria*" (Carriker 1961). Mel lived on the boat with his wife Scottie and two children, Eric and Bruce; a happy but nonetheless crowded existence.

In 1954, Mel was offered, and accepted, a position as Associate Professor at the University of North Carolina (UNC), Chapel Hill. He taught marine ecology and conducted marine-related research in the Department of Zoology. During the summers of 1953 to 1955 he also conducted research on pond culture of oysters and clams on Gardiner's Island, New York. This work was sponsored by the J. & J.W. Elsworth Oyster Company and the U.S. Fish & Wildlife Service. Mel's work on Gardiner's Island was productive and brought him in contact with shellfish biologist Victor Loosanoff. In 1956, his research on clam larvae was shifted to the UNC Institute of Fisheries Research in Morehead City. Over the next five years Mel interacted with scientists at the Institute and at Duke University Marine Laboratory a few miles away, focusing his research on larval biology and the predatory drilling snails of oysters. In 1961, due to unfriendly politics that can be encountered in academia, Mel left UNC and took a position with the U.S. Bureau of Commercial Fisheries Biological Laboratory, Oxford, Maryland. At the Oxford Laboratory he began working on an emerging disease of oysters known as MSX, and this research consumed all of his time. The move to Oxford, however, was to be short lived. In 1962, Mel was enticed by an offer to head a new systematics and ecology program at the Marine Biological Laboratory in Woods Hole, Massachusetts.

The Carriker family moved to Falmouth, Massachusetts, in the fall of 1962, where Mel assumed the position as Director of the Systematics-Ecology Program. The long-term goal of this program was to spearhead research and training in marine systematics and ecology, and enhance the scientific knowledge of organisms in the Cape Cod region. This Program turned out to be "highly successful and functioned productively for ten years" (p. 281, Carriker 2000). One of the most recognized accomplishments of the Program was the publication of a set of keys and check lists of the common invertebrates of, essentially, the waters of southeastern New England. First published in 1964, the "Keys to Marine Invertebrates of the Woods Hole Region" (edited by Ralph I. Smith) provided nonsystematists a useful guide for the identification of many common invertebrates in the region, and were invaluable to students and scientists alike. The first complete revision of these keys in 35 y began in 1999, and the first revised sections can be viewed on the Marine Biological Laboratory's web site. Unfortunately, due to a shortage of funds, the Program was closed in 1972. By then, Mel's reputation as an outstanding marine scientist preceded him, and he was offered a full professorship at the new College of Marine Studies (CMS), University of Delaware, in Lewes.

In the fall of 1972, Mel and his wife Scottie moved to Delaware where he taught, conducted research, and helped shape the CMS graduate program for thirteen years. During this time he studied oyster shell ultrastructure and chemistry as related to shell penetration by oyster borers, taught a course in malacology, and supervised the research efforts of many graduate students (including some from Central and South America). Mel officially retired in February 1985 at the age of 70, receiving the title of Professor Emeritus. After retiring, he served as president of the Delaware-Panama Partners of the Americas; he continues his scholarly contributions through his writings about his family and the science he loves. In 2000, Mel published a book concerning the fascinating history of his family and their coffee plantation titled "Vista Nieve," from which much of this biography has been gleaned.

Mel is an accomplished scientist, publishing over 45 abstracts and 160 scientific papers and reports, and coining well-known malacological terms such as the "accessory boring organ" (ABO) of muricids, and the "pediveliger" stage of bivalve molluscs. He has presented technical papers at meetings and chaired scientific session over 255 times. From 1965 to 1977, Mel served as editor for the manuals on the Marine Flora and Fauna series produced by the National Marine Fisheries Service. His dedication to the scientific community is evidenced by the many positions he has held including chairman of the Division of Invertebrate Zoology, American Society of Zoology (now the Society of Integrative and Comparative Biology); vice-president of the Association of Marine Laboratories of the Caribbean; and president of the Institute of Malacology, the American Malacological Society, and the Atlantic Estuarine Research Society.

For almost a 50 y period, Mel has served NSA in various capacities, including: Secretary-Treasurer from 1953 to 1954, Vice President between 1955 to 1957, President from 1957 to 1959, and as a source of trusted advice for many an Executive Committee ever since. As Secretary-Treasurer, he was instrumental in formalizing the regular publication of the Association's meeting notes as the "Proceedings of the National Shellfisheries Association (PNSA)," serving as its first Editor from 1954 to 1957. Mel also served several times on the Publications Committee, including during 1979 to 1980 when the name of the NSA publication was changed from the PNSA to the Journal of Shellfish Research. In 1978, Mel was presented with the Honored Life Member award by NSA, and in 1998 was recognized for his years of dedication and scientific achievement in shellfish research when the first NSA student research award was named in his honor. Presently, Mel serves as Historian of the Association, recently completing an historical account of NSA as it emerged from earlier oyster meetings and groups, titled "Taming of the Oyster" (in press).

Throughout his career Mel has been a teacher, researcher, editor, and mentor. He has supervised 35 graduate students (17 Ph.D., 18 M.S.) and has served on numerous graduate student committees. Those of us who have had the pleasure of being a student of Mel's know his objective, quiet approach to seemingly unsurmountable problems, and his deft ability to hone a piece of writing—with comments neatly scripted in pencil on just about every page of many a proposal or paper (often to the immediate displeasure of his students)—so



that it was clear and concise. Mel is a source of knowledge and encouragement, and continues to mentor, albeit informally, young students, former graduate students, and colleagues at yearly scientific meetings and events. The scientific fields of malacology, shellfish biology, and marine ecology have prospered from his life's work, and all of us who have had the pleasure of interacting with him have benefitted by Mel's wisdom, poise, and grace.

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REFERENCES

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