

# DR. ERIC GODWIN SILAS

Chairman, Scientific Advisory Committee

**Rajiv Gandhi Centre for Aquaculture**



*A* Resume



## *Dr. E. G. Silas – a resume*

Dr. Eric Godwin Silas, born on 10 January 1928 at Demodhera, Ceylon (Sri Lanka) completed his schooling at the St. Josephs English High School, Thiruvananthapuram, Kerala; his Intermediate in American Mission College, Madurai and graduated from Madras Christian College, Tambaram, Chennai. After graduation, he completed a two years B.Sc Honours Course at Christian College and registered for the Masters Degree in Science through research with the Madras University under guidance of Late Dr. Sunder Lal Hora, the then Director of the Zoological Survey of India, Calcutta, for which Degree was awarded to him in 1951. He obtained his Ph.D., in 1954 and was awarded D.Sc., Degree of the Madras University in 1972.

During the initial days of his illustrious career, he carried out surveys of the watersheds of the Western Ghats from Tapti River southwards to Kanyakumari to study the hill stream fishes. His revision of fish taxa from the rivers and lakes of the Himalayas, Central Asia – eastwards to China and south to Myanmar, Malaysia and Indonesia combined with his work on fishes from the Western Ghats helped him to contribute to Hora's Satpura Hypothesis of the occurrence of fishes of Malayan affinities in the Western Ghats. His interesting publications include one on "Speciation among the Freshwater Fishes of Ceylon" presented at the International Symposium on Organic Evolution held by NISI (now INSA) New Delhi in 1951. His revision of new fish taxa and descriptions of new genera and species of freshwater fishes has stood the test of time.

Dr. Silas is the recipient of several national and International scholarships, such as the Fellowships from the National Institute of Sciences of India, New Delhi; the Fulbright and Rockefeller Post-Doctoral Research Fellowship in Marine Fisheries from the U.S. Educational Foundation in India and FAO Fellowship for Training on Marine Pollution in Relation to Protection of Living Resources at Goteborg, Sweden.

Prior to being appointed in 1963 as Marine Biologist in erstwhile Central Marine Fisheries Research Station, Mandapam Camp, Ministry of Agriculture, GOI., Dr. Silas served as Honorary Scientist, and as Curator / Registrar of the Bombay Natural history Society and Natural history Section of Prince of Wales Museum, Mumbai which gave him an opportunity to be associated with many eminent and well known scientists in the country and abroad. As Curator, he was privileged to work with the renowned Ornithologist, Dr. A. Salim Ali. His Post-Doctoral work in the USA was with Dr. Carl L. Hubbs, doyen of fishery science, at the Scripps Institution of Oceanography, UCLA. La Jolla, CA.



At Mandapam, CMFRI, Dr. Silas started work on Tunas from the Indian Seas, an area which was not in the programme of the Institute. It however was in tune with his desire to traverse "unchartered grounds", face challenges and discover new things. As Marine Biologist, he nurtured several Ph.D. programmes on primary and secondary production based on oceanographic work and biological samples collected from the Indian Seas during the cruises of R.V. *VARUNA*, many of which he led and participated in. Among his many findings from the Shelf waters, Continental slope and oceanic waters was the study of the Deep Scattering Layers and its constituents. His Report on the "*THE EXPLORATORY FISHING BY R.V. VARUNA*" conducted by him and published as Bulletin 12 of CMFRI in 1969 is a precursor to what we call today as "ecosystem based fisheries."

Dr. Silas also actively participated in a four month tuna long-lining cruise in the Indian Ocean on board the U.S. Research Vessel *ANTON BRUUN* during the International Indian Ocean Expedition in 1964. Fervour for sea life is ingrained in him as even at the age of seventy he spent more than a month on a Korean Fishing vessel *M V AL SARAWAT* fishing from the Wadge Bank northwards to Kori Bank and in the Lakshadweep Sea.

The Mariculture projects and programmes in CMFRI were initiated by Dr. Silas as Head of the Marine Biology and Oceanography Division. Once he assumed charge as Director of CMFRI in June 1975, the developments in research on capture fisheries and mariculture received a boost. Many Inter-organizational collaborative programmes were initiated by him and one such on remote sensing on the west coast of India in collaboration with SAC, NARSA and FSI was the first of its kind towards helping in fishery forecast.

The Marine Biological Association of India owes a lot to Dr. Silas for his untiring support for the Association and its Journal. He was its President, and also functioned as the Editor of its Journal. He also convened the International Symposia on Scombroid Fishes; Endangered Marine Animals and Marine Parks; on Indian Ocean and Adjacent Seas and on Coastal Aquaculture and published the proceedings of these.

Dr. Silas has been a builder of Institutions in Fisheries and Aquaculture, Marine Sciences and Ocean Research, Agriculture and Natural history. His upgrading the Central Marine Fisheries Research Institute as a World Class Centre of Research, training and Extension by improving the physical infrastructure of land, buildings, laboratories and amenities, as well as developing trained manpower, both Scientific and Technical of high competence and calibre is well known. Two of the Units he developed at CMFRI, budded and grew to become



National Research Centres, namely, The National Bureau of Fish Genetic Resources (NBFGR, ICAR) at Lucknow and the Centre for Marine Living Resources (CMLRE) for looking after and managing the research programmes of FORV SAGAR SAMPADA presently under the Ministry of Earth sciences, Government of India. He was the Officer on Special Duty for the Establishment of the Central Agricultural Research Institute (CARI, ICAR) at Port Blair, Andaman and Nicobar Islands. He was also the Founder Director of the Central Institute of Brackishwater Aquaculture (CIBA, ICAR) at Chennai. Being Founder Chairman of The Salim Ali Centre for Ornithology and Natural History (SACON) under the Ministry of Environment, Forests and Wildlife, GOI for five years from its inception in 1991, he moulded it to grow as a National Centre of excellence in Ornithology and Forest and Wetland Ecosystems. He has also served as Chairman, Marine Products Export Development Authority, (MPEDA), Cochin under the Ministry of Commerce and Industries, GOI.

Dr. Silas's role in higher education in fisheries in the country is equally important. He was responsible for starting and nurturing a unique programme aided by UNDP/FAO/ICAR as a Centre of Advanced Studies in Mariculture at the CMFRI in 1979 for Masters (M.Sc Mariculture) and Doctoral (Ph.D. Mariculture) Degree programmes and this was an outstanding success. As of today, three of the ICAR Fisheries Institutions (CMFRI, CIFA and NBFGR) are headed by students who have come out of this programme and a fourth one, CIBA is headed by one who was associated with the programme. The Fisheries and Aquaculture industry, Agricultural Universities; various National Institutions and International Organizations have drawn manpower from this educational programme which Dr. Silas says, is a source of great satisfaction for him.

Dr. Silas took over as Vice-Chancellor of the Kerala Agricultural University when it was at its lowest ebb in all round performance in 1987 and within five years was able to develop it as one of the leading five Agricultural Universities in the country, at par with IARI, IVRI, NDRI and Punjab Agri. University. The work culture and discipline he was able to inculcate were well reflected in the research outputs, up-gradation of the educational system, the six National and International Symposia held during the five-year period of his tenure, the number of funded programmes the University was able to attract and the growth of the University from an annual budget Rs.11 Crores to an annual Rs.47 Crores in the fifth year. No wonder, ICAR found it fit to nominate him as the Chairman of a Review Committee to study and report on the three Agricultural Universities of Utter Pradesh, viz., G. B. Pant University of Agriculture and Technology; Chandrasekhar Azad University of Science and Technology and Narendra Dave University of Agriculture and Technology. He has also served as Chairman of the Quinquennial Review Committees of ICAR



Institutions besides being Chairman of the Research Advisory Committees. He has served on many National and International Committees. He chaired the National Working Group for Revalidating the Potential Fishery Resources of the Indian EEZ in 2000 which was acted on by the Department of Animal Husbandry & Dairying, Ministry of Agriculture, GOI. His review as Co-Chairman of the 2 Member Committee (with Dr. Declan J Walton from UK), on "INTERNATIONALLY COMMISSIONED EXTERNAL REVIEW (ICER) OF PROGRAM STRUCTURE AND THE OFFICES OF THE INTERNATIONAL AND EXTERNAL RELATIONS" of the erstwhile International Centre for Living Aquatic Resources Management (ICLARM), Manila, Philippines in 1997 is a significant event. ICLARM has since been relocated to Penang, Malaysia and functions as the World Fish Centre.

Marine living resources were considered to be inexhaustible and words such as "conservation", "resource management" "ecosystem management", "endangered species", Red list", "Resource depletion" and so on were not in fisheries parlance during the fifties and sixties in the 20<sup>th</sup> century. Dr. Silas had the foresight to talk about and focus research on problems and issues concerning these. He was a delegate from India to the First UN Conference on Human Environment held at Stockholm, Sweden from 5 - 15 June, 1972. On return, he was able to enhance the R & D programmes in marine Fisheries to cover subject areas such as Marine pollution; fish stock assessment; mangrove eco-systems; corals and coral reef habitats in the Bay islands; steering establishment of a national marine Park in the Gulf of Mannar; studies on sea turtles and marine mammals and so on; subjects which were totally alien to the concept of Marine Fisheries in the country. His steadfast and bold approach to take the science of fisheries to new realms has paid dividends.

He represented India at the Meeting of the 15 nation "International Indian Ocean Alliance" held in Seychelles in 1982 and his report and a letter from Sir Peter Scott, Chairman, World Wildlife Fund, UK, resulted in the then Prime Minister of India, Smt. Indira Gandhi deciding that India should join the International Whaling Commission. Consequent to this, Dr. Silas along with the Joint Secretary, Ministry of Environment, Forests and Wildlife, GOI, attended the 34<sup>th</sup> International Whaling Commission Meeting in Brighton, U.K. and India continues to be a Member of this Commission. Dr. Silas initiated the recording of stranding, incidental capture and sightings of marine mammals (Whales, dolphins, porpoises, and the dugong) in the Indian Seas and this has generated a considerable amount of work and publications on marine mammals.

In the mid-seventies, Dr. Silas initiated an active programme on sea turtles and their protection and conservation and organized a number of field trips to



Gahirmatha, Odisha, to study the Olive Ridley turtle and other coastal beaches to study the life habits of sea turtles, develop hatchery programmes for incubating the eggs, thereby saving them from depredation. A number of publications have been generated by this initiative, leave alone research findings, all helping to create a greater awareness for the protection and conservation of this endangered resource.

Dr. Silas has chaired or participated in a number of National level policy making and academic committees and represented India at a number of International meetings, a few of which have already been mentioned here.

In spite of his various commitments, Dr. Silas has all the way through pursued his research interests and has published nearly 300 scientific papers and monographs during his research career of over sixty years. Recently he chaired the national Task Force on "Guidelines for the Green Certification of Freshwater Ornamental Fishes" under the auspices of the Marine Products Export Development Authority (MPEDA), which should go a long way in regulating and implementing protocols in the nascent aquarium trade of ornamental freshwater fishes both within the country and for exports. MPEDA is spearheading this programme and also developing support units at the State level besides seeking inter-organizational co-operation.

Dr. Silas is currently Chairman of the Scientific Advisory Committee of the Centre for Marine Living Resources and Ecology (CMLRE) Kochi (Ministry of Earth Sciences, GOI) and Chairman, Scientific Advisory Committee of the Rajiv Gandhi Centre for Aquaculture (since April 2005) affiliated to the MPEDA (Ministry of Commerce and Industries, GOI). To RGCA, Dr. Silas has been a guiding force for all its scientific programmes in the field of Aquaculture and the inspiration behind technological innovations and breakthroughs. Dr. Silas has contributed his books, journals and publications of over 5000 numbers and reprints to the RGCA Library. This invaluable contribution and his caring and sharing way of life has been an asset to all those who are associated with RGCA.

Dr. Silas says that he owes a lot to his parents for the great confidence reposed in him during his early wandering years. He is ever grateful to his three mentors, Dr. Sunder Lal Hora, Dr. A. Salim Ali and Dr. Carl L. Hubbs. The strong support he has received from his family, especially his wife Mrs. Saradha Silas who is gracing this occasion has been a blessing to him.

We, the RGCA Family, owe a lot to Dr. Silas and wish him many more years of productive life in the cause of science.



*For distribution during*

*The First Dr. E.G. Silas Endowment Lecture*

*5 September 2013*

Technology Transfer Training & Administrative Complex

**Rajiv Gandhi Centre for Aquaculture**

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