

M. S. Mani

Mahadeva Subramania Mani, who passed away at Bangalore on 8 January 2003 was always sure what he would take up next. When he had finished his last research project on insect plant interactions last Fall, he was 94, twice the age of practically everyone else in the field; a time of life when most surviving scientists of that age had retired from even serving on committees, reminiscing at award dinners and toying with left-over problems. That kind of scholarship was impossible for Mani for by then he had already started dictating his new book *Ecology of Early Man and Origin of Religion*, planned earlier.

Mani was a great one for philosophizing about creation and creativity and the aging scientific mind always became uncomfortable when asked to explain his own professional longevity. Not many scientists, after being successful and famous, have survived for long in their professional pursuits. As S. Chandrasekhar put it, 'even the great men of the 1920s who made quantum mechanics – English physicist Paul Dirac, German physicist Werner Heisenberg or even the great Einstein – never equalled themselves'. There are exceptions like Lord Rayleigh, the 19th century physicist. At 67 when his son asked him what he thought about the remark of Thomas Huxley that 'a man of 60 in science does more harm than good', Rayleigh replied 'well I don't see what that should be provided you do what you understand and do not contradict young people'. A modesty towards understanding Nature is a precondition to the continued pursuit of science. It is here that Mani succeeded.

The son of Mahadeva Sarma Iyer, an advocate and senior government official and Saraswathi, Mani was born on 2 March 1908 at Tanjore in Tamil Nadu. After his school and intermediate education he took up medical studies which he discontinued later on the demise of his father, as being the eldest in the family he had to support the medical education of both his younger sisters. In 1933, he was appointed a part-time demonstrator and tutor in physics at Bangabasi College, Calcutta. During this period he also worked with C. V. Raman on insect colouration. Later, he joined the Zoological Survey of India (ZSI) and after post-

graduation by research from the University of Madras and working for a period in the Indian Agricultural Research Institute, Delhi, he joined the faculty of St. John's College, Agra in 1945 where he founded the School of Entomology in 1950. There he embarked on breathtaking and original research that resulted in the development of entirely new lines of enquiry. The world was both his laboratory and lecture hall – species, their interactions, distribution and habitats were



his variables. From the School he led many scientific expeditions to diverse stretches of the Himalaya. This resulted in his pioneering contributions to High Altitude Entomology, embodied in his book by that name. These and later studies in Pamir, Caucasus and other areas helped to crystallize his concepts on the origin, evolution and distribution of the fauna and flora of India and adjacent countries, contained in his book, *Biogeography in India*. The University of Agra awarded him a DSc degree in 1947, on a thesis submitted in 12 volumes.

In 1956, he was invited to join the ZSI where he served as Deputy Director and later as Officiating Director. In 1968, he returned to the School of Entomology where he worked for many years in the position of Emeritus Professor. Later he continued in that position at the ZSI station Madras (now Chennai) and after-

wards at the Botany Department of the Presidency College, Chennai.

In spite of his substantial contributions to diverse areas of biological research, he was primarily a systematic entomologist who had shaped and inspired three generations of entomologists. His pioneering work on the Dipteran family Caecido-myidae and plant galls is considered a masterpiece. Last June when I met him in his laboratory at the Presidency college, he was found, as always, examining an insect under the microscope and typing out his observations. No wonder, by the time he passed away, he had described more Indian taxa, especially insects of diverse groups like Diptera, Hymenoptera, Hemiptera, Coleoptera and many minor orders than any other scientist before him. His bibliography includes more than 450 papers and monographs and 28 books, all covering 20,000 pages and 14,500 illustrations. While most of his books were meant for the specialists and a few for the students, some, like *Your face from Fish to Man*, written in a lighter vein and laced with humour and a touch of intuition, enlivens any reader. Some of his books became instant classics.

In contrast to current scientific environment which encourages large research grants and teams, most of Mani's work was done alone or in collaboration with one or two students or colleagues and with comparatively small sums of money used in imaginative ways.

Mani was a masterly communicator, equally effective at holding the attention of scientific experts and lay audience. Spending a few hours with him in his laboratory or in the field was an enriching and lifetime experience. His letters and lectures, apart from lucidly explaining debatable scientific concepts, were often laced with humorous asides, revealing a subtle, multilayered mind. While the rest of us speak and think in single notes, he thought in chords.

A linguist extraordinaire, he had mastery over more than 20 languages: German, English, French, Latin, Greek, Russian, Spanish, to name a few and many of the Indian languages, including Sanskrit. For a period during the Second World War, he served as interpreter and German language translator for the Cen-

sor Section of the Army HQ at New Delhi. He supervised the doctoral works of scholars from diverse disciplines like Zoology, Botany, Geography, Geology and animal-plant interactions. He had led Indian scientific delegations to USSR and Norway and was Visiting Professor of Entomology at Tribhuvan University, Kathmandu. In a special feature in the *Journal Entomologist*, Gordon Edwards of Colorado named Mani the Dean of High Altitude Entomology in 1971.

In a sense, Mani was a man of contradictions. He was always willing to spare his time for his research students. I gratefully remember his translating for me in 1968 more than 1500 pages of German text from microfilms, using a small handheld lens. Later, he offered and taught three of us, his students, German language for six months. But it is reported that when the governor of the state vis-

ited the School of Entomology, Mani refused to 'waste my time on politicians' and asked one of his junior colleagues to show him round. On another occasion when a senior constitutional dignitary from New Delhi visited the School and on being not much impressed by the edifice remarked, 'is this all you have in the School', Mani retorted, 'we also have some asses from Delhi visiting us at times'. No wonder, national awards were rare coming, though in October 2002, he was conferred the E. K. Janakiammal Award for Taxonomy by the Government of India. But many foreign scientific academies chose him their fellow and life member years before and many post-doctoral fellows from renowned foreign universities requested for a spell of training under him.

Mani was a profound thinker with an enormous intellectual field of play. His

work has helped to put India on the global scientific map. He brought out the best in his students by providing intellectual stimulation and support. Indian biologists of all hues in future may try to emulate him but none may easily surpass him. Substituting Caesar with Mani, with Antony in Julius Caesar one may say, 'here was a Mani, when comes such another'.

His beloved wife, Rajalakshmi and other members of his family, students, former colleagues and friends rejoice in his achievements. They greatly miss this wise, modest, gentle Indian legend.

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Claude Hélène

This is in remembrance of Claude Hélène who made several outstanding contributions towards basic and applied aspects of nucleic acids, protein-nucleic acid interactions and DNA recognition by oligonucleotides. Claude Hélène passed away on 11 February 2003. For the past four years and certainly for the past year and a half, he fought bravely and with dignity against the cancer which had invaded his body, but not his mind.

Claude Hélène was born on 29 January 1938 at Chauvigny (France). After his Agrégation de Sciences Physiques degree obtained at the Ecole Normale Supérieure de Saint-Cloud in 1962, he joined CNRS as a research fellow and started a PhD thesis with Charles Sadron, a well-known polymer chemist, in the Muséum National d'Histoire Naturelle and the Centre de Biophysique Moléculaire (CNRS) and obtained the degree of *Docteur ès Sciences* ('Energy transfer and photochemical reactions in nucleic acids') in 1966. He was promoted as Research Director of CNRS (equivalent to the Council of Scientific and Industrial Research, India) in 1974 and rose quickly as director of the Centre de Biophysique Moléculaire in 1974, and later as Chair of Biophysics in 1976. He

set up and headed an INSERM (equivalent to ICMR, India) research unit in the Laboratory of Biophysics in the Muséum until the end of 2001. He served as Scientific Advisor to many French research



institutions, INSERM, Institut Curie, Ecole Normal Supérieur, Ecole Polytechnique, to name a few. He has also served as a member of the Editorial Board of international journals such as *Biochemistry*, *Nucleic Acids Research*,

Photochemistry and Photobiology, *Antisense and Nucleic Acid Drug Development*, *Bioconjugate Chemistry*, *Chem-BioChem*, *Chemistry and Biology*. Till recently he served as the Chairman of Edmond de Rothschild Foundation and the Director of the program on 'Therapeutic Molecules and Targets' at the French Ministry of Research and Technology. He was a scientific consultant of the well-known French pharmaceutical company, Groupe Rhône-Poulenc from 1983 to 1990, and was its Chief Scientific Officer until the end of 1999. Claude was on the scientific board of several French companies like Aventis, Urogene and Chrysalon, Inc. He successively received several distinctions from the French government such as order of 'Chevalier' (in 1985) and then 'Officer' (in 1994) of the Ordre National de Mérite, and the order of 'Chevalier' (in 1989), then 'Officer' (in 1998) of the *Légion d'Honneur* (the highest French civilian distinctions). He was elected as a member of the French Académie des Sciences in 1988. He was awarded the *Prix Lacassagne* by la Ligue Française contre le Cancer in 1990 and the *Prix de la Fondation de la Maison de la Chimie* (shared with Peter Dervan) in 1995. He