



Raymond Gibson (1938–2023): in memoriam

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On 29 January 2023, Raymond (Ray) Gibson (Fig. 1), Professor Emeritus of Liverpool John Moores University, died in a hospital on the Wirral. He lived a very busy life, rich in travels and scientific discoveries, and he was one of the most authoritative world experts in the taxonomy of nemerteans.



FIGURE 1. Professor Emeritus Raymond (Ray) Gibson at his office in Liverpool John Moores University, photo taken in 2005 by Hiroshi Kajihara.

Ray was born on 23 November 1938 in Catterick Village in Yorkshire. He gained his Private Pilot's License aged 17 and had several adventures in the small plane. In 1965 after leaving the Royal Airforce as a qualified pilot he got his B.Sc. in Zoology First class degree from Leeds University and in 1968 gained his Ph.D. from Leeds University. Ray began his interest in nemerteans when he was a student at Leeds University. His Ph.D. supervisor was Dr. Joe Jennings, who at the time was researching the nutrition and digestion of nemerteans and “turbellarians” (a grade of free-living platyhelminths). Ray's first articles on the nutrition and biology of *Malacobdella grossa* were published when he was at Leeds University (Gibson 1967, 1968; Gibson & Jennings 1969). In 1971 Ray joined the Liverpool Regional College of Technology (this became Liverpool Polytechnic and then Liverpool John Moores University), where he worked for 30 years. His first book (Gibson 1972) is an excellent summary of knowledge on nemertean biology at the time and has ‘entangled’ (rather than ‘hooked’) young students worldwide in the following generations into this field. Ray's exploratory enthusiasm was unmatched. He would come early in the morning and spend the day in concentrated writing, microscopy, or figure preparation. An ashtray was ever present next to his microscope and cigarettes and black coffee were all he needed to sustain him through the long days. For a long time, the histology unit was complete with the all-pervasive smell of xylene. He supervised post-graduates from many countries and backgrounds, teaching them the intricacies of paraffin sectioning and histochemistry.

Ray advanced the field of nemertean taxonomy, introducing more thorough descriptions with extensive anatomical details. He (alone or in collaboration) described 125 new species of nemerteans and established 65 new genera. Of about 100 of his works, a significant part was written in collaboration with colleagues from around the world. Especially fruitful was the collaboration with Dr. Janet Moore (senior tutor at New Hall College, Cambridge University, 1926–2014) who co-authored the most significant work on terrestrial and freshwater nemerteans of the 20th century (Gibson & Moore 1976; Moore & Gibson 1981, 1985). These studies have not lost their relevance to this day. Janet Moore and Ray Gibson found that terrestrial nemerteans represent two independent evolutionary lineages: the first one was attributed by them to the family Prosorhochmidae, and the second a separate family Plectonemertidae Gibson, 1990. Modern molecular phylogenetic studies have shown that terrestrial nemerteans of the first group belong to the infraorder Amphiporina, while the family Plectonemertidae belongs to the infraorder Oestediina.

Another direction of his research was the taxonomy of the order Heteronemertea. Ray described 27 new genera of these nemerteans (e.g., Gibson 1985a) and proposed a new family system based on the proboscis' structure (Gibson 1985b). Although this system did not take root, the arrangement of muscle layers in the trunk became the most important

feature in the generic systematics of heteronemerteans. Ray also proposed a new system of hoplonemerteans at the level of sub-order (Gibson 1988). With the advent of molecular phylogenetic studies, this system had to be abandoned, but the differences identified by Ray between the family Cratenemertidae and other monostiliferous nemerteans were reflected in the allocation of the suborder Cratenemertea.

Ray traveled widely for fieldwork in Brazil, Chile, North America, Australia, China, New Zealand, and most parts of Europe. Of particular note is his research on nemerteans from Australia and Hong Kong, which resulted in a series of publications (Gibson 1981, 1982, 1983, 1990a, b, 1999; Gibson & Sundberg 1999, etc.). One of his last major monographs was a book on New Zealand nemerteans (Gibson 2002). This was followed up later by perhaps Ray's final publication, a chapter in the synoptic work *New Zealand Coastal Marine Invertebrates on the Phylum Nemertea* (Gibson *et al.* 2010). His second book was in the Linnean Society Synopses of the British Fauna series on the British Nemerteans (Gibson 1982b). It is still one of the best field guides for this group since the keys are based on features of body colour and external morphology. This work was in such demand that it was republished as an updated version with additional species (Gibson 1994). The annotated checklist of the generic and species names of Nemertea of the World (Gibson 1995) has become his most significant and frequently cited work. His interest and support of the investigation of symbiotic egg predator nemerteans (e.g., Gibson *et al.* 1990) expanded the investigation of these commercially important nemerteans.

In addition to his scientific production, Ray was an outstanding educator. He was very popular with undergraduates and his marine biology course was always oversubscribed. Field courses were enormous fun with Ray like a sea Captain calling his students to order and herding them along rocky shores to find nemerteans and other wonderful animals. His knowledge of coastal marine life of northern Europe resulted in the publication of a popular and attractive photographic guide used by many students and natural historians for a time in the U.K. (Gibson *et al.* 2001). In 1991, Ray, together with Janet Moore and Per Sundberg being co-organizers, hosted the 3rd International Meeting on Nemertean Biology (IMNB) in Bangor (with 24 participants from six countries), where he led an excellent field excursion. He was also a co-organizer of the 2nd IMNB in Tjärnö Marine Biological Laboratory in 1986, together with Per Sundberg (principal organizer) and Gunnar Berg (co-organizer). He was a galvanizing and enthusiastic participant in all the conferences until he retired.

After retiring in 2001, Ray continued to publish some of his research. For over 20 years he had been the subject editor of the Nemertea section at *Zootaxa*. Ray was in every sense a people person. For the rest of his life, he loved to meet old friends and new people, learn their stories, and share an evening or two with wine and banter. Ray liked airplanes; he bought a microlight aircraft and often took flights over into North Wales. He invariably responded to all requests from colleagues to help them with literature or to advise on questions of taxonomy and morphology. For many of us, he became a Master and a friend.

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