



Torleif Holthe (1946–2007) photographed in 2003. Photo: Otto Frensen, NTNU Vitenskapsmuseet.

## Obituary Torleif Holthe (1946–2007)

Professor Emeritus Torleif Holthe passed away on Friday, 22 June 2007 at the age of 61. Torleif had for the last few years suffered from deteriorating health after a stroke eight years ago. He never fully recovered and had several more strokes during the following years. Then in early June he had another that he did not survive.

Torleif was born in Trondheim on 6 April 1946. His interest in zoology began as young boy when visiting the exhibitions of the Royal Norwegian Society of Science and Letters, the Museum in the city center. He finished high school at Trondheim Katedralskole in 1965, and matriculated from the Norwegian Teachers College in Trondheim that autumn. In need of money he took a job as a teacher for two years at the Grammar School, before he got a one-year assistant job in 1967 at the Museum sorting samples in the natural history collection. During this time he also undertook studies in biology and chemistry at the Teachers College. Then in 1968 he obtained a one-year Nordic scholarship at the Marine Biological Laboratory in Helsingør, Denmark, where he discovered the world of polychaete worms in general and the terebellomorphs in particular, and became interested in taxonomy. He returned home to his assistant job at the Museum in 1969. In 1970 he did his military service as a trainee in an infantry military academy becoming a sergeant in the Medical

Corps in 1971. By the end of his service he had the rank of a Second Lieutenant. In later life, after meeting his wife, Toril, he would comment wryly that she had longer seniority than him as a Second Lieutenant!

Throughout these early years he continued taking courses at the Teachers College, and in the autumn of 1971 he only needed a 3-point course in mathematics (MAIII b) to become an M.A. (Cand. mag.). During the years 1967–1972 he also managed to join four courses arranged by the Nordic Collegium for Marine Biology. The first at Kristineberg, Sweden 1967 (Metazoans); Herdla, Norway 1968 (Fauna of the western coast of Norway); Helsingør, Denmark 1969 (Fauna of Öresund), and finally back in Kristineberg, Sweden 1972 (Fauna of the Gullmar fjord).

In the autumn of 1971 he got a one-year scholarship as a Museum trainee and took part in an ecological project investigating the Borgenfjord, a side arm of the Trondheimsfjord. He used the material from this investigation for his thesis titled "*The Polychaeta, Echiurida, Sipunculida, Priapulida, Phoronida, and Enteropneusta of the Borgenfjord.*" He graduated in Science (Cand. real.) in the autumn of 1973. Prior to this, in the spring of 1973 he finished his M.A. with an exam in MAIII b which he just passed!

As well as the Borgenfjord project, in 1972 the Museum became responsible for the biological part of a large-scale environmental inventory of the Trondheimsfjord. Torleif became a Scientific Assistant in the Museum and was in charge of the quantitative grab sampling. During the summers over the next three years he, together with younger students, sampled 30 stations and took 1580 grab samples throughout the whole fjord. This was the first quantitative inventory of the Trondheimsfjord, and later proved to have been a seminal local environmental assessment.

At this time a reorganization of the academic organizations in Trondheim took place, and the Norwegian Technical College, the Royal Norwegian Society of Science and Letters, the Museum, and the Teachers College joined together to form the University of Trondheim. So, when Torleif graduated in 1973, this time with excellent results, it was from the University of Trondheim. He followed the advancement of theoretical systematics and read all the papers published in the field. By studying terebellomorph polychaetes he became very interested in their evolutionary history and saw the potential of using a systematic approach. He got the opportunity to study theoretical systematics, first as a scientific assistant, then when the Trondheimsfjord project ended in 1974, with a Fellowship from the Norwegian Research Council (1974–1976) and from 1976 as a Fellow of the University of Trondheim. A result from these studies was his 1977 publication, "*The systematic position of Artacamella,*" where he applied cladistic analysis. This was probably among the first polychaete studies using cladistic analysis.

In 1978 Torleif gained a position at the newly established University of Tromsø as Assistant Professor, and later Associate Professor, in Marine Biology. He contributed greatly in building up the Marine Biology Unit and also set up a course in systematics. From teaching this course he later published a text book on taxonomy, written in Norwegian. Being situated at 70° north, Tromsø provided good access to the northern seas, and Torleif invited colleagues to participate in deep-sea cruises to investigate the bottom fauna in the depths of the Norwegian Sea. He suffered from claustrophobia, and together with two colleagues, from sea-sickness for the first few days of every cruise on the small, 31-m long, research vessel *Johan Ruud*. On the first cruise in 1978 we learned the importance of securing the equipment before leaving the coast when a whole case of beer bottles was broken in the laboratory when we at last managed to start sampling. These cruises, of course, provided further information on terebellomorph worms which had now become Torleif's main research subject. During his Tromsø period he developed a theory on the evolution of species belonging to the Terebellomorpha. This culminated in the large volume "*Evolution, systematics, and distribution of the Polychaeta Terebellomorpha, with a catalogue of the taxa and a bibliography*"

(published in 1986). This work also became his thesis for the Doctor of Philosophy degree awarded by the University of Trondheim in 1987.

In the 1970s Torleif often joined exercises in the army shooting gallery and here he first set eyes on one of the girls attending. In the summer of 1980 they both joined a military field exercise and, as Torleif during earlier shooting exercises had found her very attractive, he fell immediately deeply in love with her. Unfortunately for him Toril worked in a military office in Trondheim and during the following years he drove the 1270 km from Tromsø to Trondheim without a stop many times a year so that they could spend some time together. He now therefore prepared to leave Tromsø, selling his flat and staying in a camping van on the university campus during the periods he gave lectures to undergraduate students or supervised his master students. In 1987 he left Tromsø and instead gave lectures at the University of Trondheim. He also took part-time curator positions at the Museum together with assignments concerning marine benthic investigations, for instance at Svalbard and in the counties of Trøndelag. In 1988 he spent a month working at the BIOFAR laboratory in Kaldbak on the Faroe Islands. His discussions with Fredrik Pleijel about systematics, especially cladistics, lasted far into the night hours. Torleif was also an exceptionally good cook and the meals at the laboratory were memorable, especially his delicious Peking Duck.

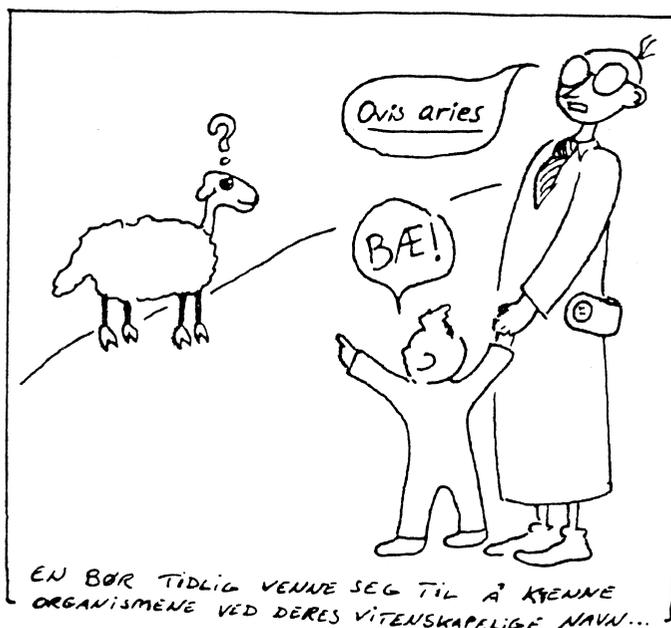
Then, in 1990, he got a position at the Directorate for Nature Management (DN) in Trondheim working on environmental management. When he started his work at the DN they had just begun a project mapping marine habitats suitable as marine reserves along the coast of Norway. A wide-ranging group of colleagues were invited to join this project as a steering group with the remit to collect and systematize knowledge on the marine biodiversity of the Norwegian coast. Torleif became Administrative Secretary for the project and produced reports containing information about the distribution of all known Norwegian marine invertebrates, together with their habitat preferences. These reports have served as baseline surveys and were the direct precursor for the plan for marine sanctuaries and national parks, which are now being set up. In fact, during the time Torleif was at the DN he introduced marine science to the Directorate and those few years became an important period for increasing the knowledge of marine fauna and flora in Norway. With his critical understanding he wrote many articles for the DN Newsletter concerning their approach to marine environmental management, but always gave a positive angle. When writing his articles he used all the knowledge he had acquired from both scientific papers and from his large collection of books of all kinds. Indeed, there was not much space on the walls in his home for anything other than books. In fact he had an encyclopedic memory and could answer most questions even during the last few days before his final stroke.

Since childhood Torleif had dreamt of working at the Natural History Museum in Trondheim, and in 1996 he returned to the Museum where he had started, at the Norwegian University of Science and Technology (former University of Trondheim). Unfortunately he had barely three active years before becoming ill. He still managed a lot of research during these years. He joined a BIOICE workshop at Sandgerdi, Iceland, and took part in two student courses arranged by UNIS, sampling marine fauna all around Svalbard. Finally he could again devote time to polychaete research, which had not been possible during the DN years. By this time he had established himself as one of the leading researchers on terebellomorph polychaetes, and was greatly respected by his polychaete colleagues.

One of the main motivations in Torleif's professional career was students. He was always enthusiastic and willing to share his enormous knowledge of the various marine creatures and environments. His classes for undergraduate students always included anecdotes and stories related to the theme of the lecture. Discussion groups for graduate students often ended up in lively discussions about history or language, not always related to what was planned for the session. For

instance every evening during a Scandinavian student course at Sletvik field station outside Trondheim, he and Tomas Cedhagen used to search for gaps in one another's polyhistoric knowledge. In Tromsø he used to have students home for dinner, where he served his famous oven-baked Bacallao. On another occasion during a course for Finnish students he tried to get them to sing Finnish student songs. They couldn't, so Torleif sang the famous "Iso-Antti Rannanjärvi" for them in their own language. At the end, one of the Finnish students looked up and said "Jag skjems" (I am ashamed). It was these many human sides of his personality that made him such a special and memorable man. He will be much missed by all his colleagues, friends, students, and family alike.

All publications by Torleif Holthe are available at the web pages of the Norwegian Polychaete Forum (<http://polychaeta.no/>).



Torleif Holthe was an avid illustrator. Beside illustrations in scientific papers, he often illustrated articles he wrote. This is an example from his text book in systematics, from the chapter on nomenclature, describing the importance of learning scientific names at an early age

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TORKILD BAKKEN<sup>1</sup> & JON-ARNE SNELI<sup>2</sup>

<sup>1</sup>Museum of Natural History and Archaeology, Norwegian University of Science and Technology  
NO-7491 Trondheim, Norway. E-mail: [torkild.bakken@vm.ntnu.no](mailto:torkild.bakken@vm.ntnu.no)

<sup>2</sup>Trondhjem Biological Station, Department of Biology, Norwegian University of Science and Technology,  
NO-7491 Trondheim, Norway