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**Baltica**

**BALTICA Volume 29 Number 2 December 2016: 158–159**

<http://dx.doi.org/10.5200/baltica.2016.29.15>

## IN MEMORIAM

### Farewell to Professor Tom Flodén

(1937 11 30–2016 09 07)

A good friend and colleague has departed leaving everybody that knew him wondering why should Tom be the one that is called away? This happened without any pre-warning on the 7<sup>th</sup> of September 2016 while still very actively pursuing his profession and hobby, marine geology and geophysics, and especially doing what he loved most, teaching marine geology and geophysics to eager students this time at the Askö marine laboratory, the Stockholm University Baltic Sea Centre.

Tom's first contact with marine geology dates back to the early summer of 1962 when he together with his professor, Ivar Hessland, from the Geology Department of Stockholm University, boarded the Finnish research ship *ARANDA* for a marine geological cruise to the central part of the Baltic Sea. This was also my first trip on board the *R/V Aranda*, but most important, it was a wonderful opportunity to get acquainted with Tom and also his professor leading to a close friendship that lasted "forever".

Very soon after this cruise marine geology and geophysics evolved quickly at the Stockholm University Geology Department. The first acquisition was an EG&G "Thumper" sound source plus all the paraphernalia that goes with it, including graphic recorders, filters, amplifiers, etc. The first open sea surveys with this equipment were actually also made on board *R/V Aranda* awaiting the badly needed university acquisition of a suitable research vessel. As far as I can recall due to lack of university funding a suitable boat was found but privately funded by the very eager Professor Hessland.

This small trawler, called *Admete*, became the floating lab that Tom quickly converted into a highly efficient platform for single channel seismic reflection profiling. Because the results were very promising, some years later *Admete* was discarded and a larger fishing trawler was acquired and converted into a real research vessel, which was given a more appropriate name *R/V Strombus*. The new *Strombus* was quickly loaded with improved equipment ranging from echo-sounders, side scan sonars, sonobuoy technique for refraction seismics, and also coring and sampling equipment not forgetting SCUBA-diving



Tom Flodén with his best friend in southern Spain, December 2015

gear for sea floor observation and sampling in coastal waters. Considering open sea seismic profiling the larger vessel was much better suited to operate also with more efficient high pressure air sound sources called airguns. This meant better penetration not only in Quaternary sediments but also in sedimentary bedrock ranging from Proterozoic to Paleozoic sediments typically covering large expanses of the Baltic sea floor.

Through the years Tom "the geologist" was not only the captain of the ship but often also the chief engineer. In addition to these qualifications, he also became very proficient in electronics able to keep the increasingly more complex research gear running and even improving the way data was acquired, digitized and interpreted. His proficiency in this new field of research increased rapidly. It has been typical of Tom that he always eagerly shared his knowledge with fellow colleagues.

During the early seagoing years Tom and his crew of geology students criss-crossed the Baltic Sea collecting miles and miles of seismic profiles, which eventually found their way into a multitude of scientific reports published in various national and international scientific journals. Much of the work was both innovative and pioneering providing a completely new vision of the submarine geology of the various parts of the Baltic Sea. Tom was also eagerly cooperating with land-locked researchers by inviting them to participate in cruises on the *Strombus*. This also provided lawful access to areas under national jurisdiction of foreign countries around the Baltic Sea (in accordance with the UN Law of the Seas Treaty).

Tom was an excellent researcher, teacher and also a prolific writer of scientific reports. Most of his published papers were generally not signed by him alone, but by one or more co-authors, thus giving wonderful credit to his students and co-workers. As far as I am concerned at least one of his papers, a monograph, was signed only by Tom Flodén. This was his doctor's thesis on "The Seismic Stratigraphy and Bedrock Geology of the Central Baltic" (*Acta Universitatis Stockholmiensis, Stockholm Contributions in Geology*, 1980, Vol. XXXV). Without exaggeration

this thesis is absolutely the best I have ever had the honour to review and act upon as opponent. It should be a "must to read" by all that want to know facts about the complex geology of the sedimentary rocks covering a major part of the bottom of the Baltic Sea between Sweden, Estonia and Latvia.

There would be much more to tell about Tom, his work as a meticulous scientist, his excellent teaching abilities, and especially his friendly manners, helpfulness to anybody in need, in fact a perfect friend to have. He was from the beginning deeply engrossed in his science, seldom time to relax nor to my knowledge engage in a relation with the opposite sex. Fortunately, until it would have been too late, he was confronted by a lady arousing his latent interest and culminating in marriage in 1982 with wonderful Eva, who paved the road for his science and leisure. The latter finally materialized in a hideaway on the southern coast of Spain where the happy couple together with Bonnie the dachshund spent dreary Swedish winter months often joined by friends and colleagues in science.

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